

addendum 01

number name	date	sent by
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contractor	contact	email
Gramoll Construction	Dustin Gramoll	dustin.gramoll@gramoll.com

This addendum issued with written comments, drawings and/or specifications is for all persons preparing Bids for the Dumke Gymnastics Training Center Remodel and Addition and, as enumerated herein, shall be included in the Contractor's Bid; this addendum becomes a part of the Contract Documents and modifies the original bidding documents. Bidders should acknowledge receipt of this Addendum on the Contractors Bid Form. Failure to do so may subject the Bidder to disqualification. In case of any conflict between the drawings, specifications and this addendum, the latest addendum shall govern. All changes, corrections, deletions and/or additions to the initial bidding documents shall govern. All changes, corrections, deletions and/or additions to the initial bidding documents shall be included in the Bidder's proposal. This review does not relieve the contractor or supplier of the responsibility of conforming to the drawings and specifications, nor does it relieve the contractor of the requirements of the specifications for coordination with other trades. All dimensions shall be confirmed and correlated at the job site. The Contractor shall be responsible for verifying existing conditions and the suitability of "equivalent" products for the specified application.

attachments

This Addendum consists of:

- This cover sheet – **(2)** 8-1/2" x 11" pages.
- Project Manual Table of Contents – **(6)** 8-1/2" x 11" pages.
- Section 087100 – DOOR HARDWARE – **(18)** 8-1/2" x 11" pages.
- Section 221316 – SANITARY WASTE AND VENT PIPING – **(12)** 8-1/2" x 11" pages.
- Section 329450 – WELDED WIRE PANEL PLANT SUPPORT SYSTEM – **(6)** 8-1/2" x 11" pages.
- Architectural Sheets – **(3)** full size drawings.
- Mechanical cover sheet – **(1)** 8-1/2" x 11" page.
- Mechanical Sheets – **(3)** full size drawings.
- Electrical cover sheet – **(1)** 8-1/2"x11" page.
- Electrical Sheets – **(4)** full size drawings.

***Gramoll Subcontract Agreement**
***Project Anticipated Schedule**
***Q/A Responses**

revisions to the project manual

Architectural

1. Project Manual Table of Contents. The project manual table of contents has been updated to include section 329450 – Welded Wire Panel Plant Support System.
2. Section 087100 – DOOR HARDWARE. The door numbers have been updated to match the drawing set. Please see attached SECTION 087100.

3. Section 221316 – SANITARY WASTE AND VENT PIPING. This section has been edited to conform to the University of Utah Design Requirements – University of Utah Supplement.
4. Section 329450-WELDED WIRE PANEL PLANT SUPPORT SYSTEM. This section has been added to the project manual.

revisions to the project drawings

Architectural

1. Sheets AE103, AE411, and AE551 have been updated to reflect open shelving rather than space saver shelving. Please see attached sheets.

Mechanical

1. Please see attached cover letter and updated sheets

Electrical

1. Please see attached cover letter and updated sheets.

Dumke Gymnastics Training Center Bidding Q/A

- Alternate #4, is the intent to provide a cost to eliminate the sauna final connections only so a unit can be installed at a later time, or to eliminate the sauna entirely including services for the unit? **Gramoll Response – Please run gas line to sauna for connection in the future. No exhaust fan or ducting to be provided in base bid.** **ajc response – agreed.**
- The specifications for waste and vent piping indicate PVC is acceptable above ground spaces that are not plenums. This project has ducted returns. We have not been permitted to use PVC above ground on prior campus projects. Please confirm if PVC is acceptable on this project. **Gramoll Response – NA** **ajc response – See attached Addenda Narrative**
- If the folding partition door is not included in the base bid, should we account for a stud wall in place of the folding partition – **Gramoll Response – Yes. Please provide a stud wall at perimeter of the second floor office area with drywall on the outside wall, doors and frames at the two openings, with no drywall on the interior side of the second floor offices.** **ajc response – agreed.**
- Is it ok to leave the spray foam exposes on the second floor if the offices are not built? **Gramoll Response – Correct** **ajc response – agreed.**
- Is there going to be access on the west side of the building for a crane? Can the sidewalk be closed down for a period of time? **Gramoll Response – Yes, the West sidewalk should be able to be shut down for crane and concrete/staging access.** **ajc response – NA**
- Are the second floor windows to be part of the base bid or the alternate? **Gramoll Response – Base bid** **ajc response – agreed.**
- Are there sizes for the stair landing concrete treads? **Gramoll Response – NA** **ajc response – Please provide stair landing as one piece and landings as designed.**
- Is restroom 100A to be demolished? It calls for new ceramic tile but not to demo. **Gramoll Response - Yes, please plan to demo the finishes in the space, but leave the walls/ceiling.** **ajc response – agreed.**
- Are the SC-1 columns for the bid alternate patio part of the base bid or alternate. **Gramoll Response – Columns, beams and deck for patio are part of the alternate. Footings are part of the base bid.** **ajc response – agreed.**
- Is level 5 finishes required at all exposed painted walls? **Gramoll Response – NA.** **ajc response – The intent is for all exposed walls to be Level 5 finish.**

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University of Utah

Dumke Gymnastics Training Center Remodel and Addition

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SECTION 087100 - DOOR HARDWARE**PART 1 - GENERAL****1.1 SUMMARY**

- A. Section includes:
 - 1. Mechanical and Electrical door hardware for the following:
 - a. Swinging doors.
 - 2. Cylinders for door hardware specified in other Sections.
- B. Products furnished under this Section include the products listed below. Coordinating and scheduling the purchase and delivery of these products remain requirements of this Section.
 - 1. Permanent cores and keys.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Details of electrified door hardware, indicating the following:
 - 1. Wiring Diagrams: Power, signal, and control wiring. Include the following:
 - a. System schematic.
 - b. Point-to-point wiring diagram.
 - c. Riser diagram.
 - d. Elevation of each door.
 - 2. Detail interface between electrified door hardware and security system.
 - 3. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.
- C. Other Action Submittals:
 - 1. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - a. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
 - b. Content: Include the following information:

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- 1) Identification number, location, hand, fire rating, size, and material of each door and frame.
 - 2) Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
 - 3) Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
 - 4) Description of electrified door hardware sequences of operation and interfaces with other building control systems.
2. Keying Schedule: Prepared by or under the supervision of hardware consultant, detailing Owner's final keying instructions for locks.

1.3 QUALITY ASSURANCE

- A. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as follows:
 1. For door hardware, an Architectural Hardware Consultant (AHC).
- B. Source Limitations: Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- C. Fire-Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware rated for use in assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C, unless otherwise indicated.
- D. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use. Provide to the greatest extent possible plug connector applications. Furnish wire harnesses for internal transfers and as required for access system final connections.
- E. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meet requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
 1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. at the tested pressure differential of 0.3-inch wg of water.
- F. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
- G. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines ICC/ANSI A117.1.

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1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
 2. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
 - b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
 3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
 4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.
- H. Keying Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination."

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.
- C. Deliver keys to Owner by registered mail or overnight package service.

1.5 COORDINATION

- A. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware along with connections to power supplies and security system.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fails in materials or workmanship within specified warranty period.
 1. Warranty Period: Two years from date of Substantial Completion, unless otherwise indicated.

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PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. Provide door hardware for each door as scheduled in Part 3 "Door Hardware Schedule" to comply with requirements in this Section.
 - 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products. Products complying with BHMA designations referenced.
 - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.

2.2 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames. Provide 5 knuckle ball bearing design. Provide with additional features as scheduled.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by following:
 - a. Bommer Industries (BB)
 - b. Hager Hinge Co.; (BB)
 - c. Ives Hardware; an Allegion Company. (5BB)
 - d. McKinney Products Company; an Assa Abloy Group company (TB)
 - e. Stanley Commercial Hardware; Div. of Stanley Security Solutions. (FBB)

2.1 LOCKS AND LATCHES, GENERAL

- A. Accessibility Requirements: Where indicated to comply with accessibility requirements, comply with ANSI A117.1. FED-STD-795, "Uniform Federal Accessibility Standards."
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
- B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

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- C. Lock Trim:
 - 1. Levers: Cast, plated to finish specified.
 - 2. Escutcheons: Wrought
 - 3. Lockset Designs: Provide design indicated.
- D. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 - 1. Bored Locks: Minimum 1/2-inch (13-mm) latchbolt throw.
 - 2. Deadbolts: Minimum 1-inch (25-mm) bolt throw.
- E. Backset: 2-3/4 inches, unless otherwise indicated.
- F. Strikes: Manufacturer's standard strike with strike box for each latchbolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, and as follows:
 - 1. Strikes for Locks and Latches: BHMA A156.2.
- G. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:
 - 1. Bored Locks: BHMA A156.2.
- H. Bored Locks: BHMA A156.2, Grade 1; Series 4000
 - 1. Available Manufacturers:
 - a. Best Access; a Dormakaba Group company. 9K Series
 - b. Schlage Lock; an Allegion Group company. ND Series
 - c. Sargent Manufacturing; an Assa Abloy Group company. 10 Line Series

2.2 AUXILIARY LOCKS AND LATCHES

- A. Auxiliary Locks: BHMA A156.5
 - 1. Available Manufacturers:
 - a. Accurate Lock & Hardware Co.
 - b. Adams Rite Manufacturing Co.

2.3 EXIT DEVICES

- A. Exit Devices: BHMA A156.3, Grade 1
- B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with ANSI A117.1.

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1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).
- C. Exit Devices for Means of Egress Doors: Comply with NFPA 101. Exit devices shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
- D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.
- E. Fire Exit Devices: Devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- F. Outside Trim: Lever with cylinder, Pull with cylinder; material and finish to match locksets, unless otherwise indicated.
 1. Match design for locksets and latchsets, unless otherwise indicated.
- G. Through Bolts: For exit devices and trim on all types of doors.
- H. Available Manufacturers:
 1. Precision Hardware; a Dormakaba Group company; 2000 Series
 2. Sargent Manufacturing; an Assa Abloy Group company; 19-80 Series.
 3. Von Duprin; an Allegion Group company. 99 Series

2.4 LOCK CYLINDERS

- A. Cylinders: BHMA A156.5, Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:
 1. Number of Pins: Six.
 2. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
 3. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
- B. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Provide all cylinders and keys with high restricted feature to prevent unauthorized key duplication. Keyed Cylinders and Cores are Specified for Bid Purposes. Coordinate with University Key Control Department for keying system requirements prior to submittal. No additional cost for compliance will be allowed. Incorporate decisions made in keying conference, and as follows:
 1. Grand Master Key System: Cylinders are operated by a change key, a master key, and a grand master key.
- C. Permanent Cylinders: Manufacturer's standard; finish face to match lockset; complying with the following:

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1. Bored Type Locksets: Cylinder for use in Key-In-Lever Set Standard Type with proper tailpieces.
 - D. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
 1. Removable Cores: For Exit Devices and as required for Locksets Scheduled. Core insert, removable by use of a special key; for use only with core manufacturer's cylinder and door hardware.
 - E. Keys: Nickel silver.
 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
 - a. Notation: "DO NOT DUPLICATE."
 2. Quantity: Provide the following:
 - a. Cylinder Change Keys: Three.
 - b. Master Keys: Three
 - c. Control Keys: Two
 - F. Construction Keying: Comply with the following:
 1. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 5 construction master keys, 2 construction control keys.
 2. Replace construction cores with permanent cores as directed by Owner.
 3. Construction Cylinders: Provide temporary cylinders in Bored Locksets for contractor use during construction, all Keyed Alike with 10 Keys.
 - G. Required Manufacturer for Permanent Cylinders and Cores:
 1. Medeco; an Assa Abloy Group company. 20, 32
- 2.5 PROTECTIVE TRIM UNITS
- A. Size: 2 inches (51 mm) less than door width on push side and 1 inch (25 mm) less than door width on pull side, by height specified in door hardware sets.
 - B. Fasteners: Manufacturer's standard self-tapping countersunk screws.
 - C. Metal Protective Trim Units: BHMA A156.6; beveled top and 2 sides; fabricated from the following material:
 1. Material: 0.050-inch- (1.3-mm-) thick stainless steel.
 2. Available Manufacturers:

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- a. Burns Manufacturing Incorporated.
- b. Don-Jo Manufacturing
- c. Hiawatha, Inc.
- d. IVES Hardware; an Allegion Company.
- e. Rockwood Manufacturing Company.
- f. Trimco.

2.6 STOPS AND HOLDERS

- A. Stops and Bumpers: BHMA A156.16 Grade 1 unless Grade 2 is indicated.
 1. Provide floor stops for doors unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders.
- B. Silencers for Metal Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum diameter 1/2 inch (13 mm); fabricated for drilled-in application to frame.
 1. Available Manufacturers:
 - a. Burns Manufacturing Incorporated.
 - b. Don-Jo Manufacturing
 - c. Hiawatha, Inc.
 - d. Ives Hardware; an Allegion Company.
 - e. Rockwood Manufacturing Company.
 - f. Trimco.

2.7 SLIDING DOOR HARDWARE

- A. General: BHMA A156.14; consisting of complete sets including rails, hangers, supports, bumpers, floor guides, and accessories indicated.
- B. Bypassing Sliding Door Hardware: Rated for doors weighing up to 250 lb.
- C. Available Manufacturers:
 1. Cox, Arthur & Sons, Inc.
 2. Hager Companies.
 3. Johnson, L. E. Products, Inc.
 4. National Guard Products.
 5. Stanley Commercial Hardware.

2.8 DOOR GASKETING

- A. Standard: BHMA A156.22.
- B. General: Provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners as indicated.

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1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 2. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.
- C. Air Leakage: Not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.
- D. Smoke-Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.
1. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors.
 2. Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches or less above the sill.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Gasketing Materials: ASTM D 2000 and AAMA 701/702.
- G. Available Manufacturers:
1. National Guard Products.
 2. Pemko Manufacturing
 3. Reese Enterprises.

2.9 THRESHOLDS

- A. Standard: BHMA A156.21
- B. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with ANSI A117.1.
1. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
- C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.
- D. Provide Thermal-break type as listed.
- E. Provide stainless steel fasteners and lead shields for all thresholds.
- F. Available Manufacturers:
1. National Guard Products.
 2. Pemko Manufacturing
 3. Reese Enterprises.

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2.10 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
 - 1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 - 2. Fire-Rated Applications:
 - a. Wood or Machine Screws: For the following:
 - 1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
 - 2) Strike plates to frames.
 - 3) Closers to doors and frames.
 - b. Steel Through Bolts: For the following unless door blocking is provided:
 - 1) Surface hinges to doors.
 - 2) Closers to doors and frames.
 - 3) Surface-mounted exit devices.
 - 3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
 - 4. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."
 - 5. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.11 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

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- B. Wood Doors: Comply with DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
- C. Mounting Heights: Mount door hardware units at to comply with the following unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- D. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- E. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- F. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- G. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings and verify location with Architect.
 - 1. Configuration: Provide the least number of power supplies required to adequately serve doors with electrified door hardware.
- H. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.2 DOOR HARDWARE SCHEDULE

Manufacturer List:

<u>Code</u>	<u>Name</u>
AB	ABH MANUFACTURING INC.
AC	ACCURATE LOCK & HARDWARE CO.
AD	ADAMS RITE
BE	BEST ACCESS SYSTEMS
BY	BY OTHERS

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LX	LOCKINOX
DE	DETEX
DM	DORMA DOOR CONTROLS
HS	HES
ME	MEDECO
NA	NATIONAL GUARD
RC	RCI
SD	STANLEY DOOR CLOSERS
SH	STANLEY COMMERCIAL HARDWARE
SN	SENTROL
ST	STANLEY
TR	TRIMCO
VO	VON DUPRIN

Finish List:

<u>Code</u>	<u>Description</u>
26	SATIN CHROME
AL	ALUMINUM
130	RITECOAT PAINTED - SATIN ALUMINUM
32D	SATIN STAINLESS STEEL
603	ZINC PLATED
619	SATIN NICKEL PLATED, CLEAR COATED
626	SATIN CHROMIUM PLATED
628	SATIN ALUMINUM, CLEAR ANODIZED
630	SATIN STAINLESS STEEL
689	ALUMINUM PAINTED
711	SATIN BLACK, ANODIZED
GRAY	GRAY
GREY	GREY
626AM	SATIN CHROME - ANTIMICROBIAL COATING
US26D	CHROMIUM PLATED, DULL
US32D	STAINLESS STEEL, DULL
602	ZINC PLATED

Option List

<u>Code</u>	<u>Description</u>
R	FULL SIZE ROUNDED PLASTIC COVER
W	WEATHERIZED
S3	ANSI STRIKE PACKAGE
CSK	COUNTER SINKING OF KICK AND MOP PLATES
SCH	NON-IC SCHLAGE CYLINDER (SGL)
SSMS/LA	STAINLESS MACHINE SCREWS/LEAD ANCHOR
425-SNB (QTY-2)	SEX BOLTS (2)

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Hardware Sets**SET #D-1 - Alum Entry (CR)**

Doors: 100G, 110C

1 Continuous Hinge	661HD	AL	ST
1 Exit Device	99NL-OP x 110MD-NL	US26D	VO
1 LFIC Core	32 SERIES	26	ME
1 Rim Cylinder Housing	32-0475H	26	ME
1 Electric Strike	9600 LBM	630	HS
1 Door Closer	QDC119 R	689	SH
1 Angle Bracket	P45HD-112	689	SD
1 Spacer Block	P45HD-110	689	SD
1 Door Pull	1192-3 x CONC MTG	630	TR
1 Drop Plate	8Q00471	689	SH
1 Door Sweep	202 NA		NA
1 Threshold	8424 x SSMS/LA	AL	NA
1 RQE Scanner	915-G	GRAY	RC
1 Door Contact	1076	G	SN
1 Card Reader	BY SECURITY PROVIDER		BY

SET #D-2 - Alum - Ext Deck

Doors: 203

1 Continuous Hinge	661HD	AL	ST
1 Deadlock	MS1850S	628	AD
2 LFIC Core	32 SERIES	26	ME
1 Mortise Cylinder Housing	32-0275	26	ME
1 Push Bar	1741 33" x CONC MTG	630	TR
1 Concealed Closer	RTS/25	689	DM
1 Floor Stop	1291	603	TR
1 Door Pull	1192-3 x CONC MTG	630	TR
1 Lock/Unlocked Indicator	4089-00	130	AD
1 Lever Operator	4550-01 (FUTURE - DNI)	130	AD
1 Gasket	BY ALUM FRAME MFG		BY
1 Door Sweep	200 NA		NA
1 Threshold	8424 x SSMS/LA	AL	NA
1 Door Contact	1076	G	SN

SET #D-M1 - Alum - ETR

Doors: 100C, 102.2, 102.3

NOTE: All Hardware Existing to Remain In-Place

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SET #D-M2 - Alum - ETR

Doors: 100

1 Card Reader	BY SECURITY PROVIDER	BY
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NOTE: All Hardware Existing to Remain In-Place
Card Reader - To Be Upgraded by Security

SET #D-100 - HM - Lng Entry (CR)

Doors: 110A

3 Hinges	FBF168 4 1/2 X 4 1/2	US26D	ST
1 Storeroom Lockset	9K3-6D15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Electric Strike	F2164	32D	RC
1 Door Closer	QDC111 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Floor Stop	1291	603	TR
1 Gasketing	5040 B (HEAD & JAMBS)		NA
1 RQE Scanner	915-G	GRAY	RC
1 Door Contact	1076	G	SN
1 Card Reader	BY SECURITY PROVIDER		BY

SET #D-101 - Alum - Office Suite Entry (CR)

Doors: 200.3

1 Continuous Hinge	661HD	AL	ST
1 Exit Device	99NL-OP x 110MD-NL	US26D	VO
1 Rim Cylinder Housing	32-0475H	26	ME
1 LFIC Core	32 SERIES	26	ME
1 Electric Strike	9600 LBM	630	HS
1 Door Closer	QDC119 R	689	SH
1 Drop Plate	8Q00471	689	SH
1 Door Pull	1192-3 x CONC MTG	630	TR
1 Spacer Block	P45HD-110	689	SD
1 Angle Bracket	P45HD-112	689	SD
1 RQE Scanner	915-G	GRAY	RC
1 Door Contact	1076	G	SN
1 Card Reader	BY SECURITY PROVIDER		BY

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SET #D-102 - Alum - Office Suite Entry

Doors: 200.4, 202

1 Continuous Hinge	661HD	AL	ST
1 Exit Device	99NL-OP x 110MD-NL	US26D	VO
1 Rim Cylinder Housing	32-0475H	26	ME
1 LFIC Core	32 SERIES	26	ME
1 Door Closer	QDC115 R	689	SH
1 Wall Bumper	1270CV	626	TR
1 Drop Plate	8Q00471	689	SH
1 Spacer Block	P45HD-110	689	SD
1 Gasket	BY ALUM FRAME MFG		BY

SET #D-103 - HM - Lng Exit

Doors: 110B

3 Hinges	FBF168 4 1/2 X 4 1/2	US26D	ST
1 Exit Device	99L x 996L-R&V 425-SNB (QTY-2)	US26D	VO
1 Rim Cylinder Housing	32-0475H	26	ME
1 LFIC Core	32 SERIES	26	ME
1 Door Closer	QDC115 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5040 B (HEAD & JAMBS)		NA

SET #D-104 - HM - Stor/Lndry

Doors: 115

3 Hinges	FBF168 4 1/2 X 4 1/2	US26D	ST
1 Entry Lockset	9K3-6UA15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Door Closer	QDC111 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5040 B (HEAD & JAMBS)		NA

SET #D-105 - HM - Sauna

Doors: 130

3 Hinges	FBF191 4 1/2 X 4 1/2	US32D	ST
1 Clsm. Lockset	9K3-6R15D S3 SCH	626AM	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Door Closer	QDC115 R	689	SH
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5040 B (HEAD & JAMBS)		NA
1 Brush Sweep	600 A		NA

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SET #D-106 - HM - Shwr

Doors: 125A, 125B

3 Hinges	FBB191 4 1/2 X 4 1/2	US32D	ST
1 Privacy Set	9K3-0L15D S3	626AM	BE
1 Overhead Stop	9020 SERIES	US32D	AB
3 Door Silencers	1229A	GREY	TR

SET #D-107 - HM - Trn Storage

Doors: 100D

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Storeroom Lockset	9K3-6D15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GREY	TR

SET #D-108 - HM - Cust

Doors: 106, 100B, 200.2, 200.1

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Storeroom Lockset	9K3-6D15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Overhead Stop	9020 SERIES	US32D	AB
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
3 Door Silencers	1229A	GREY	TR

SET #D-109 - HM - A/V

Doors: 104

3 Hinges	FBB179 4 1/2 X 4 1/2	US26D	ST
1 Storeroom Lockset	9K3-6D15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Overhead Stop	9020 SERIES	US32D	AB
3 Door Silencers	1229A	GREY	TR

SET #D-110 - HM - Coach Lkr

Doors: 102A

3 Hinges	FBB168 4 1/2 X 4 1/2	US26D	ST
1 Entry Lockset	9K3-6UA15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Door Closer	QDC111 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GREY	TR

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SET #D-111 - HM - Couch Shwr.

Doors: 102B

3 Hinges	FBF191 4 1/2 X 4 1/2	US32D	ST
1 Privacy Set	9K3-0L15D S3	626AM	BE
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GREY	TR

SET #D-112 - HM - Vest Exit

Doors: 102.4

3 Hinges	FBF168 4 1/2 X 4 1/2	US26D	ST
1 Exit Device	99L x 996L-R&V 425-SNB (QTY-2)	US26D	VO
1 Rim Cylinder Housing	32-0475H	26	ME
1 LFIC Core	32 SERIES	26	ME
1 Door Closer	QDC115 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GREY	TR

SET #D-113 - HM - RR

Doors: 202R, 202S

3 Hinges	FBF179 4 1/2 X 4 1/2	US26D	ST
1 Privacy Set	9K3-0L15D S3	626AM	BE
1 Door Closer	QDC111 R	689	SH
1 Kick Plate	K0050 - 10" x 2" LDW CSK	630	TR
1 Wall Bumper	1270CV	626	TR
3 Door Silencers	1229A	GREY	TR

SET #D-114 - HM - War Rm

Doors: 201.1

3 Hinges	FBF179 4 1/2 X 4 1/2	US26D	ST
1 Entry Lockset	9K3-6UA15D S3 SCH	626	BE
1 KIK Cylinder	20 SERIES	26	ME
1 Wall Bumper	1270CV	626	TR
1 Gasketing	5040 B (HEAD & JAMBS)		NA

SET #D-115 - Alum - Office

Doors: 205, 207, 209, 211, 213, 215

1 Continuous Hinge	661HD	AL	ST
1 NB Lockset	8824 x 1-3/4" BS x 39L-1R	626	AC
1 Mortise Cylinder Housing	32-0275	26	ME
1 LFIC Core	32 SERIES	26	ME
1 Wall Bumper	1270CV	626	TR
1 Gasket	BY ALUM FRAME MFG		BY

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SET #D-116 - WD - Closet Bi Pass

Doors: 201A

2 Set Sliding Door Hardware	BPC250N-00-60		ST	
1 Fascia Strip	BP250N-02-120		ST	
2 Flush Pull	1060	619	TR	
2 Door Pull	AP774 12 (MIDDLE PANEL - EACH END)	630		TR

SET #D-117 - Alum - Folding

Doors: 201.2

1 Mortise Cylinder Housing	32-0275	26	ME
1 LFIC Core	32 SERIES	26	ME

NOTE: Coordinate Cylinder Type Required
All Remaining Hardware by Folding Door Manufacturer

SET #D-M101 - HM - ETR

Doors: 100A, 202F, 202B, 202A

NOTE: All Hardware Existing to Remain In-Place

END OF SECTION 087100

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SECTION 221316 - SANITARY WASTE AND VENT PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pipe, tube, and fittings.
2. Specialty pipe fittings.

B. Related Section:

1. Section 221313 "Facility Sanitary Sewers" for sanitary sewerage piping and structures outside the building.

1.2 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Soil, waste, and vent piping and support and installation shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Seismic Qualification Certificates: For waste and vent piping, accessories, and components, from manufacturer.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
2. Detailed description of piping anchorage devices on which the certification is based and their installation requirements.

- B. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Piping materials shall bear label, stamp, or other markings of specified testing agency.

- B. ~~Comply with NSF/ANSI 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping and "NSF-sewer" for plastic sewer piping.~~

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PART 2 - PRODUCTS

2.1 PIPING MATERIALS

- A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.

2.2 HUB-AND-SPIGOT, CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A 74, class.
- B. Gaskets: ASTM C 564, rubber.

2.3 HUBLESS, CAST-IRON SOIL PIPE AND FITTINGS

- A. Pipe and Fittings: ASTM A 888 or CISPI 301.
- B. CISPI, Hubless-Piping Couplings:
 - 1. Standards: ASTM C 1277 and CISPI 310.
 - 2. Description: Stainless-steel corrugated shield with stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve with integral, center pipe stop.
- C. Heavy-Duty, Hubless-Piping Couplings:
 - 1. Standards: ASTM C 1277 and ASTM C 1540.
 - 2. Description: Stainless-steel shield with stainless-steel bands and tightening devices; and ASTM C 564, rubber sleeve with integral, center pipe stop.

2.4 STAINLESS-STEEL PIPE AND FITTINGS

- A. Pipe and Fittings: ASME A 112.3.1, drainage pattern with socket and spigot ends.
- B. Internal Sealing Rings: Elastomeric gaskets shaped to fit socket groove.

2.5 ~~ABS PIPE AND FITTINGS~~

- ~~A. Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping and "NSF-sewer" for plastic sewer piping.~~
- ~~B. Solid Wall ABS Pipe: ASTM D 2661, Schedule 40.~~
- ~~C. Cellular Core ABS Pipe: ASTM F 628, Schedule 40.~~

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- D. ~~ABS Socket Fittings: ASTM D 2661, made to ASTM D 3311, drain, waste, and vent patterns.~~
- E. ~~Solvent Cement: ASTM D 2235.~~

2.6 ~~PVC PIPE AND FITTINGS~~

- A. ~~Comply with NSF 14, "Plastics Piping Systems Components and Related Materials," for plastic piping components. Include marking with "NSF-dwv" for plastic drain, waste, and vent piping and "NSF-sewer" for plastic sewer piping.~~
- B. ~~Solid-Wall PVC Pipe: ASTM D 2665, drain, waste, and vent.~~
- C. ~~Cellular-Core PVC Pipe: ASTM F 891, Schedule 40.~~
- D. ~~PVC Socket Fittings: ASTM D 2665, made to ASTM D 3311, drain, waste, and vent patterns and to fit Schedule 40 pipe.~~
- E. ~~Adhesive Primer: ASTM F 656.~~
- F. ~~Solvent Cement: ASTM D 2564.~~

2.7 COPPER TUBE AND FITTINGS

- A. Copper DWV Tube: ASTM B 306, drainage tube, drawn temper.
- B. Copper Drainage Fittings: ASME B16.23, cast copper or ASME B16.29, wrought copper, solder-joint fittings.
- C. Copper Flanges: ASME B16.24, Class 150, cast copper with solder-joint end.
 - 1. Flange Gasket Materials: ASME B16.21, full-face, flat, nonmetallic, asbestos-free, 1/8-inch maximum thickness unless thickness or specific material is indicated.
 - 2. Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.
- D. Solder: ASTM B 32, lead free with ASTM B 813, water-flushable flux.

2.8 SPECIALTY PIPE FITTINGS

- A. Transition Couplings:
 - 1. General Requirements: Fitting or device for joining piping with small differences in OD's or of different materials. Include end connections same size as and compatible with pipes to be joined.
 - 2. Fitting-Type Transition Couplings: Manufactured piping coupling or specified piping system fitting.
 - 3. Unshielded, Non-pressure Transition Couplings:

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- a. Standard: ASTM C 1173.
 - b. Description: Elastomeric, sleeve-type, reducing or transition pattern. Include shear ring and corrosion-resistant-metal tension band and tightening mechanism on each end.
 - c. Sleeve Materials:
 - 1) For Cast-Iron Soil Pipes: ASTM C 564, rubber.
 - 2) ~~For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.~~
 - 3) ~~For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.~~
4. Shielded, Non-pressure Transition Couplings:
- a. Standard: ASTM C 1460.
 - b. Description: Elastomeric or rubber sleeve with full-length, corrosion-resistant outer shield and corrosion-resistant-metal tension band and tightening mechanism on each end.

PART 3 - EXECUTION

3.1 EARTH MOVING

- A. Comply with requirements for excavating, trenching, and backfilling specified in Section 312000 "Earth Moving."
- B. Provide a minimum of 6" sand bedding below all below grade piping. Provide backfill free of boulders larger than two (2") inches. Compact and test all backfill according to ASTM compaction standards or provide pea gravel backfill.
- C. Provide a minimum trench width of not less than 1.5 times the pipe outside diameter plus 12 inches for all below grade piping.

3.2 PIPING INSTALLATION

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.
- B. Install piping in concealed locations unless otherwise indicated and except in equipment rooms and service areas.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
- E. Install piping at indicated slopes.

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- F. Install piping free of sags and bends.
- G. Install fittings for changes in direction and branch connections.
- H. Install seismic restraints on piping. Comply with requirements for seismic-restraint devices specified in Section 220548 "Vibration and Seismic Controls for Plumbing Piping and Equipment."
- I. Make changes in direction for soil and waste drainage and vent piping using appropriate branches, bends, and long-sweep bends. Sanitary tees and short-sweep 1/4 bends may be used on vertical stacks if change in direction of flow is from horizontal to vertical. Use long-turn, double Y-branch and 1/8-bend fittings if two fixtures are installed back to back or side by side with common drain pipe. Straight tees, elbows, and crosses may be used on vent lines. Do not change direction of flow more than 90 degrees. Use proper size of standard increasers and reducers if pipes of different sizes are connected. Reducing size of drainage piping in direction of flow is prohibited.
- J. Lay buried building drainage piping beginning at low point of each system. Install true to grades and alignment indicated, with unbroken continuity of invert. Place hub ends of piping upstream. Install required gaskets according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Maintain swab in piping and pull past each joint as completed.
- K. Install soil and waste drainage and vent piping at the following minimum slopes unless otherwise indicated:
 - 1. Building Sanitary Drain: 2 percent downward in direction of flow for all piping.
 - 2. Horizontal Sanitary Drainage Piping: 2 percent downward in direction of flow.
 - 3. Vent Piping: 1 percent down toward vertical fixture vent or toward vent stack.
- L. Install cast-iron soil piping according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook," Chapter IV, "Installation of Cast Iron Soil Pipe and Fittings."
- M. Install aboveground copper tubing according to CDA's "Copper Tube Handbook."
- N. Plumbing Specialties:
 - 1. Install backwater valves in sanitary waste gravity-flow piping. Comply with requirements for backwater valves specified in Section 221319 "Sanitary Waste Piping Specialties."
 - 2. Install cleanouts at grade and extend to where building sanitary drains connect to building sanitary sewers in sanitary drainage gravity-flow piping. Comply with requirements for cleanouts specified in Section 221319 "Sanitary Waste Piping Specialties."
 - 3. Install drains in sanitary drainage gravity-flow piping. Comply with requirements for drains specified in Section 221319 "Sanitary Waste Piping Specialties."
- O. Do not enclose, cover, or put piping into operation until it is inspected and approved by authorities having jurisdiction.

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- P. Install sleeves for piping penetrations of walls, ceilings, and floors. Comply with requirements for sleeves specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."
- Q. Install sleeve seals for piping penetrations of concrete walls and slabs. Comply with requirements for sleeve seals specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."
- R. Install escutcheons for piping penetrations of walls, ceilings, and floors. Comply with requirements for escutcheons specified in Section 220518 "Escutcheons for Plumbing Piping."

3.3 JOINT CONSTRUCTION

- A. Join hub-and-spigot, cast-iron soil piping with gasket joints according to CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for compression joints.
- B. Join hubless, cast-iron soil piping according to CISPI 310 and CISPI's "Cast Iron Soil Pipe and Fittings Handbook" for hubless-piping coupling joints.
- C. Join copper tube and fittings with soldered joints according to ASTM B 828. Use ASTM B 813, water-flushable, lead-free flux and ASTM B 32, lead-free-alloy solder.
- D. Flanged Joints: Align bolt holes. Select appropriate gasket material, size, type, and thickness. Install gasket concentrically positioned. Use suitable lubricants on bolt threads. Torque bolts in cross pattern.

3.4 SPECIALTY PIPE FITTING INSTALLATION

- A. Transition Couplings:
 - 1. Install transition couplings at joints of piping with small differences in OD's.
 - 2. In Drainage Piping: Unshielded, non-pressure transition couplings.

3.5 VALVE INSTALLATION

- A. Backwater Valves: Install backwater valves in piping subject to backflow.
 - 1. Horizontal Piping: Horizontal backwater valves. Use normally closed type unless otherwise indicated.
 - 2. Floor Drains: Drain outlet backwater valves unless drain has integral backwater valve.
 - 3. Install backwater valves in accessible locations.
 - 4. Comply with requirements for backwater valve specified in Section 221319 "Sanitary Waste Piping Specialties."

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3.6 HANGER AND SUPPORT INSTALLATION

- A. Comply with requirements for seismic-restraint devices specified in Section 220548 "Vibration and Seismic Controls for Plumbing Piping and Equipment."
- B. Comply with requirements for pipe hanger and support devices and installation specified in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment."
 - 1. Install carbon-steel pipe hangers for horizontal piping in noncorrosive environments.
 - 2. Install stainless-steel pipe hangers for horizontal piping in corrosive environments.
 - 3. Install carbon-steel pipe support clamps for vertical piping in noncorrosive environments.
 - 4. Install stainless-steel pipe support clamps for vertical piping in corrosive environments.
 - 5. Vertical Piping: MSS Type 8 or Type 42, clamps.
 - 6. Install individual, straight, horizontal piping runs:
 - a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
 - c. Longer Than 100 Feet if Indicated: MSS Type 49, spring cushion rolls.
 - 7. Multiple, Straight, Horizontal Piping Runs 100 Feet or Longer: MSS Type 44, pipe rolls. Support pipe rolls on trapeze.
 - 8. Base of Vertical Piping: MSS Type 52, spring hangers.
- C. Support horizontal piping and tubing within 12 inches of each fitting, valve, and coupling.
- D. Support vertical piping and tubing at base and at each floor.
- E. Rod diameter may be reduced one size for double-rod hangers, with 3/8-inch minimum rods.
- F. Install hangers for cast-iron soil piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/2 and NPS 2: 60 inches with 3/8-inch rod.
 - 2. NPS 3: 60 inches with 1/2-inch rod.
 - 3. NPS 4 and NPS 5: 60 inches with 5/8-inch rod.
 - 4. NPS 6 and NPS 8: 60 inches with 3/4-inch rod.
 - 5. Spacing for 10-foot lengths may be increased to 10 feet. Spacing for fittings is limited to 60 inches.
- G. Install supports for vertical cast-iron soil piping every 15 feet.
- H. Install hangers for stainless-steel piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 2: 84 inches with 3/8-inch rod.
 - 2. NPS 3: 96 inches with 1/2-inch rod.
 - 3. NPS 4: 108 inches with 1/2-inch rod.

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4. NPS 6: 10 feet with 5/8-inch rod.
 - I. Install supports for vertical stainless-steel piping every 10 feet.
 - J. ~~Install hangers for ABS and PVC piping with the following maximum horizontal spacing and minimum rod diameters:~~
 - ~~1. NPS 1-1/2 and NPS 2: 48 inches with 3/8-inch rod.~~
 - ~~2. NPS 3: 48 inches with 1/2-inch rod.~~
 - ~~3. NPS 4 and NPS 5: 48 inches with 5/8-inch rod.~~
 - ~~4. NPS 6 and NPS 8: 48 inches with 3/4-inch rod.~~
 - ~~5. NPS 10 and NPS 12: 48 inches with 7/8-inch rod.~~
 - K. ~~Install supports for vertical ABS and PVC piping every 48 inches.~~
 - L. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
 1. NPS 1-1/4: 72 inches with 3/8-inch rod.
 2. NPS 1-1/2 and NPS 2: 96 inches with 3/8-inch rod.
 3. NPS 2-1/2: 108 inches with 1/2-inch rod.
 4. NPS 3 and NPS 5: 10 feet with 1/2-inch rod.
 5. NPS 6: 10 feet with 5/8-inch rod.
 6. NPS 8: 10 feet with 3/4-inch rod.
 - M. Install supports for vertical copper tubing every 10 feet.
 - N. Support piping and tubing not listed above according to MSS SP-69 and manufacturer's written instructions.
- 3.7 CONNECTIONS
- A. Drawings indicate general arrangement of piping, fittings, and specialties.
 - B. Connect soil and waste piping to exterior sanitary sewerage piping. Use transition fitting to join dissimilar piping materials.
 - C. Connect drainage and vent piping to the following:
 1. Plumbing Fixtures: Connect drainage piping in sizes indicated, but not smaller than required by plumbing code.
 2. Plumbing Fixtures and Equipment: Connect atmospheric vent piping in sizes indicated, but not smaller than required by authorities having jurisdiction.
 3. Plumbing Specialties: Connect drainage and vent piping in sizes indicated, but not smaller than required by plumbing code.
 4. Install test tees (wall cleanouts) in conductors near floor and floor cleanouts with cover flush with floor.
 5. Install horizontal backwater valves with cleanout cover flush with floor.
 6. Comply with requirements for backwater valves cleanouts and drains specified in Section 221319 "Sanitary Waste Piping Specialties."

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7. Equipment: Connect drainage piping as indicated. Provide shutoff valve if indicated and union for each connection. Use flanges instead of unions for connections NPS 2-1/2 and larger.
- D. Where installing piping adjacent to equipment, allow space for service and maintenance of equipment.
- E. Make connections according to the following unless otherwise indicated:
 1. Install unions, in piping NPS 2 and smaller, adjacent to each valve and at final connection to each piece of equipment.
 2. Install flanges, in piping NPS 2-1/2 and larger, adjacent to flanged valves and at final connection to each piece of equipment.

3.8 IDENTIFICATION

- A. Identify exposed sanitary waste and vent piping. Comply with requirements for identification specified in Section 220553 "Identification for Plumbing Piping and Equipment."

3.9 FIELD QUALITY CONTROL

- A. During installation, notify authorities having jurisdiction at least 24 hours before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction.
 1. Roughing-in Inspection: Arrange for inspection of piping before concealing or closing-in after roughing-in and before setting fixtures.
 2. Final Inspection: Arrange for final inspection by authorities having jurisdiction to observe tests specified below and to ensure compliance with requirements.
- B. Reinspection: If authorities having jurisdiction find that piping will not pass test or inspection, make required corrections and arrange for reinspection.
- C. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
- D. Test sanitary drainage and vent piping according to procedures of authorities having jurisdiction or, in absence of published procedures, as follows:
 1. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit separate report for each test, complete with diagram of portion of piping tested.
 2. Leave uncovered and unconcealed new, altered, extended, or replaced drainage and vent piping until it has been tested and approved. Expose work that was covered or concealed before it was tested.
 3. Roughing-in Plumbing Test Procedure: Test drainage and vent piping except outside leaders on completion of roughing-in. Close openings in piping system and fill with water to point of overflow, but not less than 10-foot head of water.

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From 15 minutes before inspection starts to completion of inspection, water level must not drop. Inspect joints for leaks.

4. Finished Plumbing Test Procedure: After plumbing fixtures have been set and traps filled with water, test connections and prove they are gastight and watertight. Plug vent-stack openings on roof and building drains where they leave building. Introduce air into piping system equal to pressure of 1-inch wg. Use U-tube or manometer inserted in trap of water closet to measure this pressure. Air pressure must remain constant without introducing additional air throughout period of inspection. Inspect plumbing fixture connections for gas and water leaks.
5. Repair leaks and defects with new materials and retest piping, or portion thereof, until satisfactory results are obtained.
6. Prepare reports for tests and required corrective action.

- E. ~~Do not expose ABS or PVC piping to direct sunlight for more than 30 days. If construction delays are encountered, provide cover to portions of piping exposed to direct sunlight.~~

3.10 CLEANING AND PROTECTION

- A. Clean interior of piping. Remove dirt and debris as work progresses.
- B. Protect drains during remainder of construction period to avoid clogging with dirt and debris and to prevent damage from traffic and construction work.
- C. Place plugs in ends of uncompleted piping at end of day and when work stops.
- D. ~~Exposed ABS and PVC Piping: Protect plumbing vents exposed to sunlight with two coats of water-based latex paint.~~
- E. Repair damage to adjacent materials caused by waste and vent piping installation.

3.11 PIPING SCHEDULE

- A. Flanges and unions may be used on aboveground pressure piping unless otherwise indicated.
- B. Aboveground, soil and waste piping shall be any of the following:
 1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
 2. Hubless, cast-iron soil pipe and fittings; heavy-duty hubless-piping couplings; and coupled joints.
 3. Copper DWV tube, copper drainage fittings, and soldered joints.
 4. ~~Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.~~
 - a. ~~When used in plenum returns piping to be completely enclosed in insulation that meets the flame spread index of not more than 25 and a smoke-developed index of not more than 50.~~
 5. ~~Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.~~
 - a. ~~When used in plenum returns piping to be completely enclosed in insulation that meets the flame spread index of not more than 25 and a smoke-developed index of not more than 50.~~

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- C. Underground, soil, waste, and vent piping shall be any of the following:
1. Service class, cast-iron soil pipe and fittings; gaskets; and gasketed joints.
 2. Hubless, cast-iron soil pipe and fittings; heavy-duty hubless-piping couplings; and coupled joints.
 3. ~~Solid-wall PVC pipe, PVC socket fittings, and solvent-cemented joints.~~
 4. ~~Solid-wall ABS pipe, ABS socket fittings, and solvent-cemented joints.~~

END OF SECTION 221316

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SECTION 329450 – WELDED WIRE PANEL PLANT SUPPORT SYSTEM**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Welded wire grid panels, including gate panels.
- 2. Panel channel and angle trim.
- 3. Panel posts.
- 4. Necessary clips, straps and spacers.
- 5. Powdercoat finish.

- B. Related Requirements:

- 1. Section 033000 "Cast-In-Place Concrete" for concrete footings.
- 2. Section 329300 "Landscape Planting" for furnishing and installing related plants.

1.3 ACTION SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog details for specified products demonstrating compliance with referenced standards. Provide list of fittings being provided with descriptions and either photographs or drawings for each type.

- B. Shop Drawings: Submit Shop Drawings for fabrication and installation. Include the following:

- 1. Plans, elevations, and detail sections showing sizes, critical dimensions, panel layout constraints using a 2 x 2 inch modular grid, and details and locations of accessories.
- 2. Indicate materials, methods, finishes, fittings, fasteners, anchorages, and accessory items.

- C. Verification Samples: Two samples representing actual products and finishes as follows:

- 1. Welded wire grid panel, 6 in. x 6 in., with one edge of channel trim and one edge of angle trim, all as one unit.
- 2. Color Submittals: Submit metal chips, 2 in. x 3-1/2 in. minimum, showing color and texture to be provided.

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1.4 QUALITY ASSURANCE

- A. Manufacturer: Minimum 10 years experience in manufacturing and supplying welded wire panel systems of the type required for this Project.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect materials from damage. Store panels flat. Provide edge protection when strapping is used. Do not apply loads to panel edges.
- B. Inspect products upon delivery in order to submit timely freight claim for any damaged materials.
- C. Store products in manufacturer's packaging until ready for installation.
- D. Handle and store products according to manufacturer's recommendations. Leave products wrapped or otherwise protected and under clean and dry storage conditions until required for installation.
- E. Exercise care not to scratch, mark, dent, or bend metal components during delivery, storage, and installation.

1.6 PROJECT CONDITIONS

- A. Verify actual openings by field measurements before fabrication; show recorded measurements on shop drawings.
- B. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Greenscreen Fencing or a comparable product.

2.2 PANELS

- A. Panels shall be rigid, three-dimensional welded wire grid fabricated of 14 gauge galvanized steel wire.
 - 1. Metallic-Coated Steel Wire: Welded-wire, galvanized in accordance with ASTM A641.
- B. Face Grid: Wires shall be welded at each intersection to form a 2 x 2 inch face grid on the front and back of panels,

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- C. Trusses: Face grids shall be separated by bent wire trusses spaced at 2-inch centers and welded to front and back face grids at each truss apex.
- D. Thickness: 3 inches.
- E. Length and Width: As indicated on the Drawings.
- F. Tolerance: 1/8 inch in width and 1/8 inch in length.

2.3 ACCESSORIES

- A. Trim:
 - 1. Fabricate from 20-gauge ASTM A879 galvanized steel.
 - 2. Types:
 - a. Channel Trim: Thickness of panel x 1/2 inch legs.
 - b. Angle Trim: 1/2 inch x 1/2 inch legs.
 - 3. Locations:
 - a. As indicated on the Drawings.
- B. Clips and Straps: Provide manufacturer's standard types of clips and straps suitable for mounting conditions. Fabricate from ASTM A879 galvanized steel. Adjustable clips shall have 1/4 inch diameter 18-8 stainless steel bolt, washer, and nut.
- C. Plastic Spacers: Provide 1/2 inch thick black Ultra High Molecular Weight polyethylene (UHMW) washers [to hold clips away from mounting surface].
- D. Fence Posts: 3-inch steel tube. The steel strip used in the manufacture of the post shall conform to ASTM A1011. Minimum yield strength shall be 45,000 psi. Provide steel post caps. Overall post length shall be as indicated on the Drawings.
- E. Fasteners for Mounting Clips to Fence Posts: Self drilling, self tapping hex washer head screws, with strength of Type 410 stainless steel, and corrosion resistance of Type 304 stainless steel.
- F. Fasteners for Attachment to Structure Pull Out Value:
 - 1. To Concrete or Masonry: 480 lbs.
 - 2. To Structural Steel: 480 lbs.

2.4 FABRICATION

- A. Cut to size.
- B. Weld trim to panels and grind smooth exterior surfaces of welds.

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- C. Curved Panels: All curved panels shall be fabricated in the factory using approved "Cut-to-Curve" or "Crimped-to-Curve" procedures as recommended by manufacturer for diameter of curve and conditions of use prior to application of powder coat finish to ensure that all wire edges are coated and protected. The use of "Cut-to-Curve" or "Crimped-to-Curve" fabrication technique is dependent on the specific radius and the direction of the curve relative to the flat panel layout.

2.5 FINISH

- A. Metal components (except fasteners) shall receive commercial grade finish system after fabrication.
- B. Finish System:
 - 1. Pretreat with general purpose, alkaline, water based cleaner / degreaser applied at 240 degrees F.
 - 2. Prime with fusion bond epoxy powder coat.
 - 3. Topcoat with TGIC polyester or polyester-urethane powder coat with a minimum total dry film thickness of not less than 6 mils (0.15 mm).
- C. Salt Spray Resistance: Finish shall remain rust free when tested 1680 hours in accordance with ASTM B117.
- D. Finish and Color: Color selected by Architect from manufacturer's standards.
- E. Touch-Up Paint: Provide high quality, exterior-grade spray paint suitable for conditions of use.

2.6 WARRANTY

- A. Standard 1 year warranty is available from the date of substantial completion or 18 months from the date of shipment, whichever comes first. greenscreen® warrants against defects in workmanship and materials that would result in failure under intended application and use as exterior fabricated wall grillage. "Failure" is defined as structural failure of the wire of sufficient incidents in any panel that would result in the panel not performing in a structural or safe manner under the intended application and use. Installation is excluded. Contact greenscreen® for further information, and extensions.

2.7 MISCELLANEOUS MATERIALS

- A. Concrete: Refer to Section 03 30 00, CAST-IN-PLACE CONCRETE.
- B. Concrete: Normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi (20 MPa), 3-inch (75-mm) slump, and 1-inch (25-mm) maximum aggregate size or dry, packaged, normal-weight concrete mix complying with ASTM C 387 mixed with potable water according to manufacturer's written instructions.

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PART 3 - EXECUTION**3.1 EXAMINATION**

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Stake locations of fence lines and posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
 - 1. Construction layout and field engineering are specified in Division 01 Section "Execution".
- B. Verify alignment, support dimensions, and tolerances are correct.
- C. Inventory components to ensure all required items are available for installation. Inspect components for damage. Remove damaged components from site and replace.

3.3 INSTALLATION - GENERAL

- A. Spans: For freestanding fences and screens, span between structural supports should not exceed 8' for 3" thick panels without thorough review of specific site conditions and mounting details. For overhead horizontal or inclined panels span between structural supports should not exceed 4'. All curved panel spans should be reviewed based on specific panel radius and center to center of proposed structural support spacing.
- B. Install panels plumb and square, centered within area designated for panels, and aligned to maintain modular grid.
- C. Avoid cutting panels in field. Where field cutting is essential, clean and dry area and apply touch-up paint to cut edges.
- D. Install securely with fasteners located To meet manufacturer's requirements.
- E. Repair bent or damaged panels. If panels cannot be repaired to satisfaction of Architect, remove from jobsite and replace with new panels.

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3.4 INSTALLATION

- A. Install welded wire panel plant support system according to manufacturer's written instructions.
- B. Install welded wire panel plant support system by setting posts as indicated on the Drawings and fastening panels to posts according to manufacturer's written instructions.

3.5 ADJUSTING AND CLEANING

- A. Remove temporary coverings and protection of adjacent work areas. Clean installed products in accordance with manufacturer's instructions before Owner's acceptance.
- B. Do not use abrasive cleaners.
- C. Remove from project site and legally dispose of construction debris associated with this work.

3.6 PROTECTION

- A. Protect installed products until completion of Project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.
- C. Protect installed products and finished surfaces from damage during construction.
- D. Replace defective or damaged components as directed by Architect.

3.7 PLANT INSTALLATION

- A. Refer to Section 329300 "Landscape Planting".

END OF SECTION 329450

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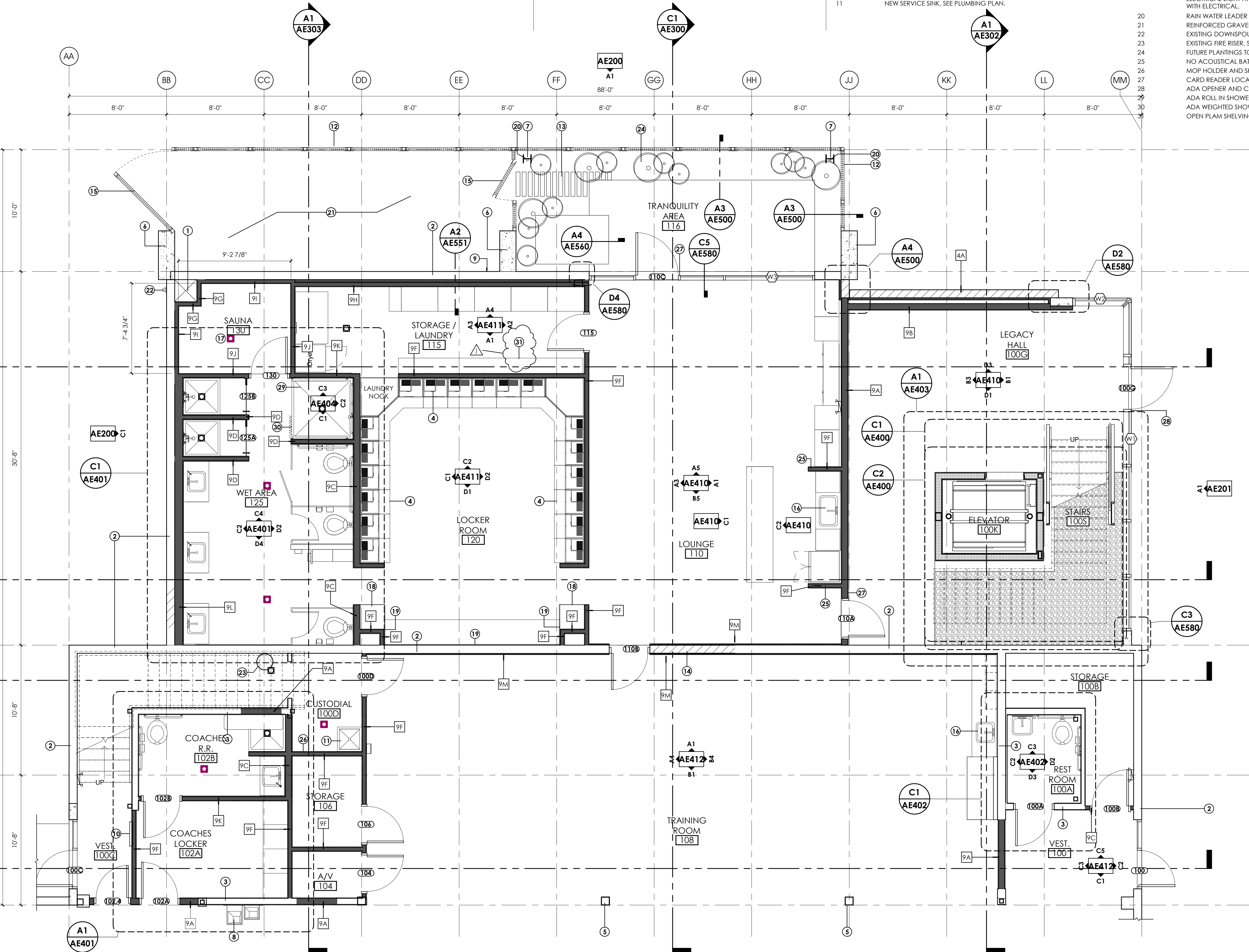
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A1 PARTIAL ANNOTATED FLOOR PLAN - LEVEL 01
1/4" = 1'-0"

GENERAL NOTES:

- SEE SHEET G1003 FOR GENERAL NOTES LEGENDS AND ABBREVIATIONS.
- SEE G1002 FOR DRAWING INDEX.
- DO NOT SCALE DRAWINGS.
- CONTRACTOR / SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK, AND SHALL REPORT TO THE ARCHITECT ANY ERRORS, INCONSISTENCIES OR OMISSIONS BEFORE BEGINNING WORK. SEE GENERAL NOTES AND SPECIFICATIONS.

KEYED NOTES:

- EXISTING ROOF DRAIN LINE DROP. PROTECT.
- EXISTING ATLAS BRICK WALL TO REMAIN. PROTECT.
- EXISTING INTERIOR WALLS TO REMAIN. PROTECT. REPAINT.
- LOCKERS.
- EXISTING STEEL COLUMN TO REMAIN. PROTECT. PAINT.
- EXISTING CONCRETE COLUMN TO REMAIN. PROTECT.
- STRUCTURAL STEEL COLUMN. SEE STRUCTURAL DRAWINGS. PAINT.
- NEW BI-LEVEL DRINKING FOUNTAIN.
- HOSE BIB. SEE PLUMBING DRAWINGS.
- FIRE ALARM PANEL. SEE FIRE ALARM DRAWINGS.
- NEW SERVICE SINK. SEE PLUMBING PLAN.

- MODULAR WELDED WIRE PLANT SUPPORT SYSTEM. SEE SPECIFICATIONS.
- STONE WALKWAY. SEE SPECIFICATIONS.
- NEW STRUCTURAL ATLAS BRICK TO MATCH EXISTING. SEE STRUCTURAL DRAWINGS.
- CUSTOM GATE TO MATCH WELDED WIRE PLANT SUPPORT SYSTEM.
- SINK AND FAUCET. SEE PLUMBING DRAWINGS.
- BUILT-IN SAUNA KIT IS ADD ALT. #4.
- CASEWORK. SEE INTERIOR ELEVATIONS AND FINISH SCHEDULE.
- FIELD VERIFY CONDITIONS FOR MIRROR LOCATIONS. ALL MIRROR TO BE CENTERED ON PLUMBING FIXTURE. COORDINATE MIRROR SIZES WITH ELECTRICAL LIGHT FIXTURE LOCATIONS AND SIZES. COORDINATION REQUIRED WITH ELECTRICAL.
- RAIN WATER LEADER.
- REINFORCED GRAVEL. SEE CIVIL DRAWINGS.
- EXISTING DOWNSPOUT NOZZLE.
- EXISTING FIRE RISER. SEE MECHANICAL DRAWINGS.
- FUTURE PLANTINGS TO BE ADDED BY OWNER.
- NO ACOUSTICAL BATT INSULATION REQUIRED IN THIS WALL.
- MOP HOLDER AND SHELF. SEE ACCESSORY SCHEDULE.
- CARD READER LOCATION.
- ADA OPENER AND CARD READER LOCATION.
- ADA ROLL IN SHOWER.
- ADA WEIGHTED SHOWER CURTAIN.
- OPEN PLAM SHELVING. SEE AE551 FOR DETAILS.

ARCHITECT

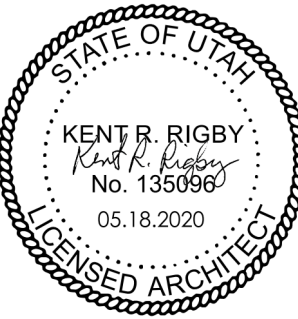
1877



ajc architects

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salt lake city, utah 84105
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fx: 801.466.4411
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ARCHITECT / CONSULTANT



OWNER INFORMATION

PROJECT DESCRIPTION

DUMKE GYMNASTICS TRAINING CENTER

1825 E. SOUTH CAMPUS DRIVE
SALT LAKE CITY, UT 84112

AHJ STAMP

SHEET NAME:

PARTIAL ANNOTATED FLOOR PLAN - LEVEL 01

REVISIONS

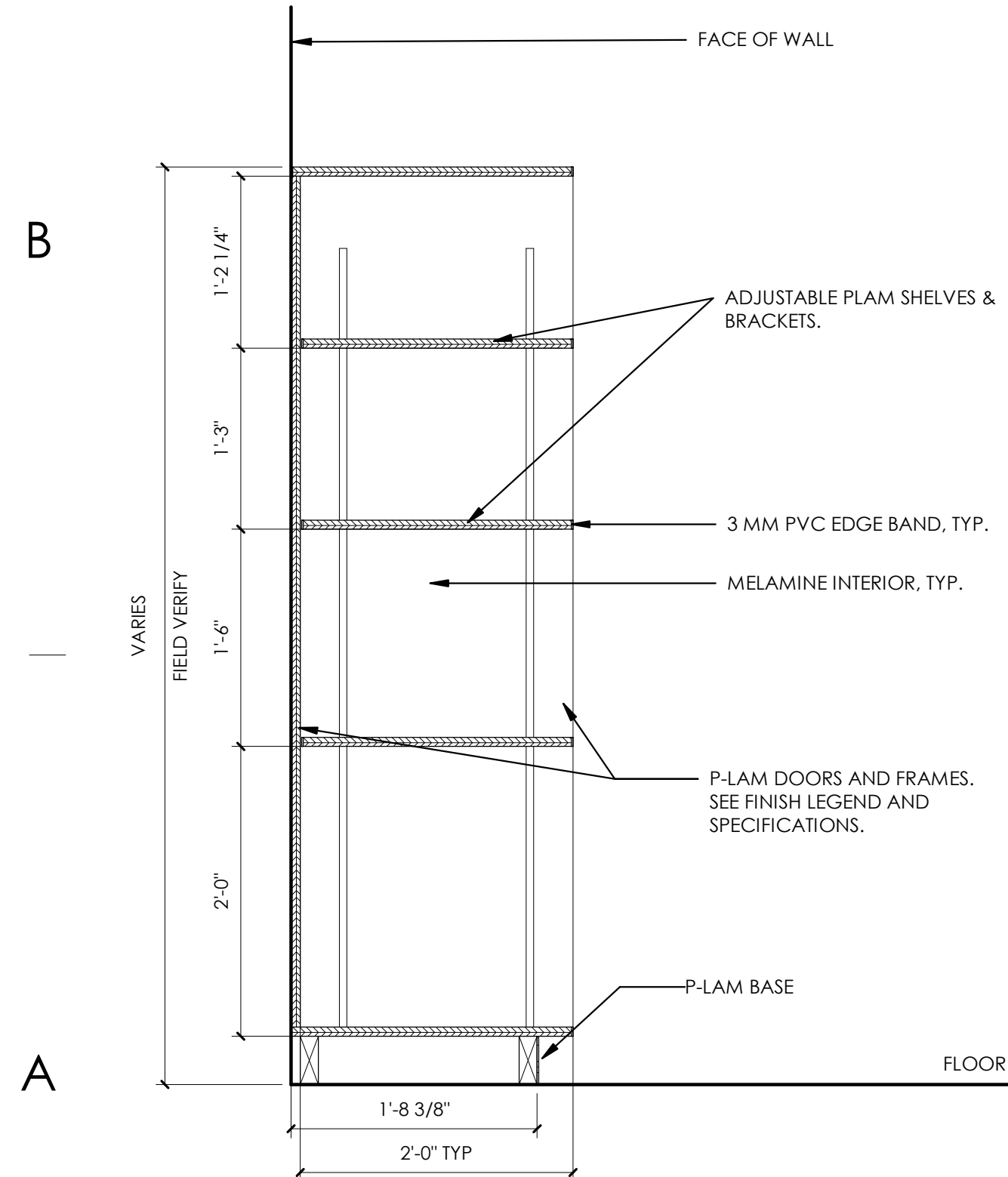
MARK	DATE	DESCRIPTION
1	11.02.21	ADDENDUM 1

ISSUE DATA

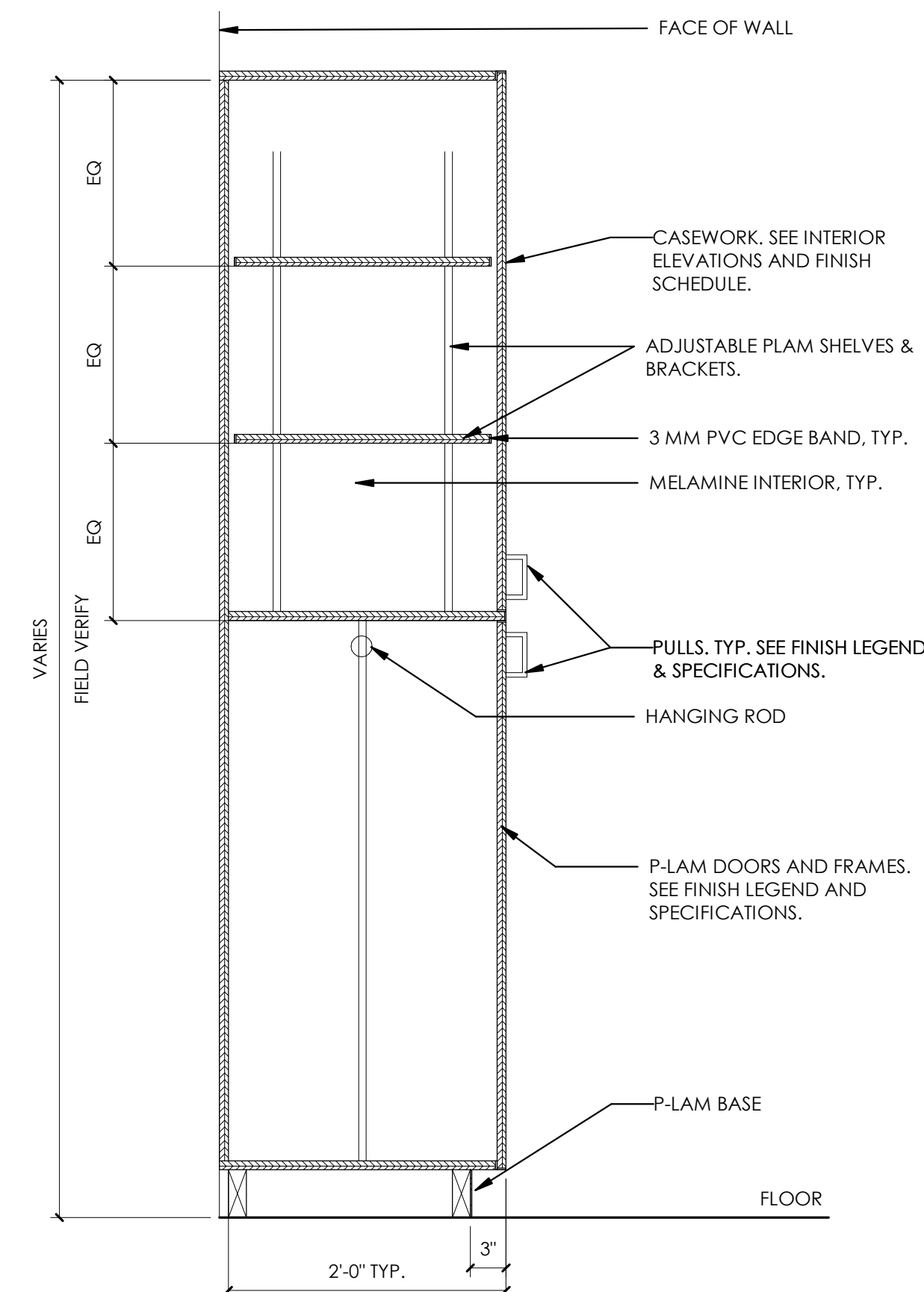
ISSUE DATE:	10.18.21
ISSUE TYPE:	CD
DRAWN BY:	AT JG
CHECKED BY:	KR
PROJECT#:	1877

SHEET NUMBER:

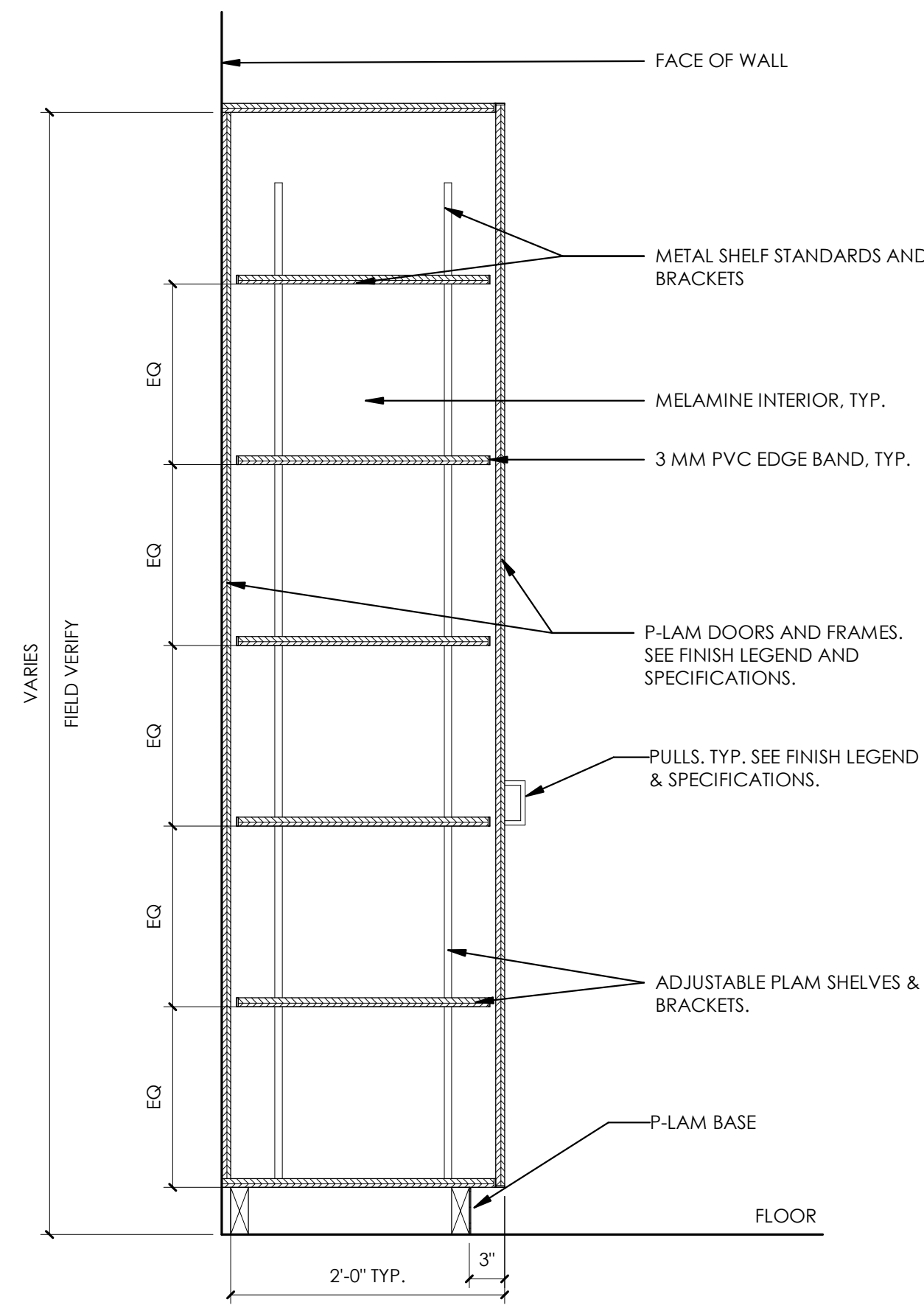
AE103



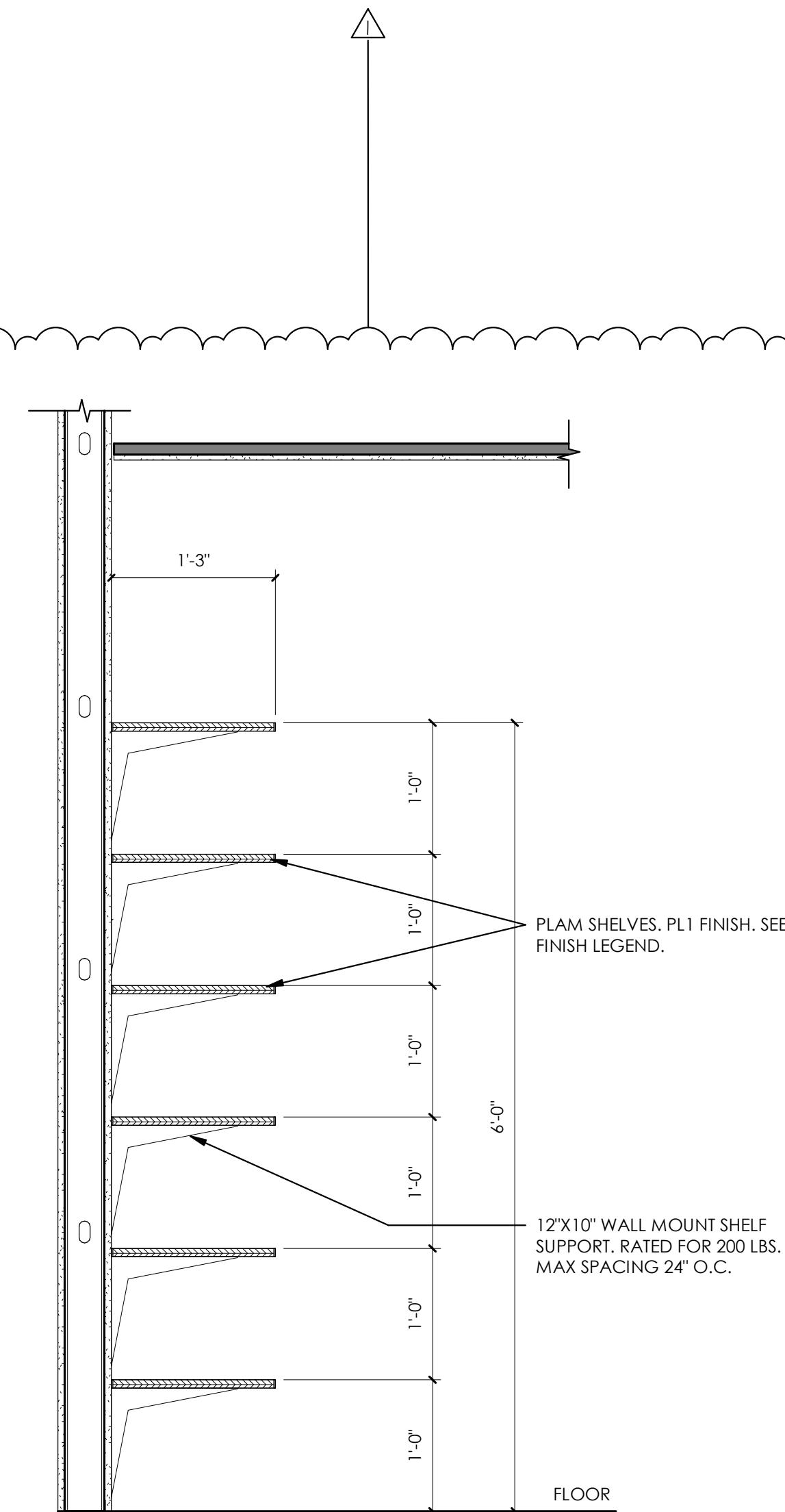
A1 TALL STORAGE CABINET
1" = 1'-0"



A2 TALL CABINET DBL 8FT
1" = 1'-0"



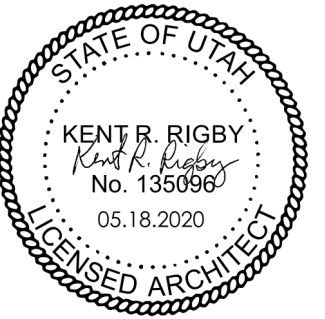
A4 CASEWORK SECTION
1" = 1'-0"



A5 CASEWORK - SHELVING
1" = 1'-0"



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DUMKE
GYMNASTICS
TRAINING
CENTER

1825 E. SOUTH CAMPUS DRIVE
SALT LAKE CITY, UT 84112

CASEWORK DETAILS

MARK	DATE	DESCRIPTION
1	11.02.21	ADDENDUM 1

ISSUE DATE: 10.18.21
ISSUE TYPE: CD
DRAWN BY: AT|DG
CHECKED BY: KR
PROJECT#: 1877



Mechanical Engineering
Electrical Engineering
Technology Engineering
Acoustical Engineering
Lighting Design
Theatre Design
Fire Protection Engineering
Building Commissioning

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Dumke Gymnastics Center - Mechanical Addendum #1

Date:	November 2, 2021	From:	Ryan Boogaard, PE, LEED AP
To:	Alan Taylor	Email:	rhb@spectrum-engineers.com
Company:	AJC Architects	Phone:	(801) 401-8420
Job:	Dumke Gymnastics Center	Re:	Dumke Gymnastics – Addendum #1
Job No:	20191093		
Cc:			

This Addendum shall be considered part of the Contract Documents and Project Manual for the above mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Contract Documents and Project Manual, the Addendum shall govern and take precedence.

ME001 – MECHANICAL COVER SHEET

- Mechanical General Note #12 has been updated to clarify the controls requirements and to specify a local Johnson Controls vendor to be engaged.

MH101 – LEVEL 1 MECHANICAL PLAN

- A 'Lounge 110' return grille has been relocated to the exterior wall to accommodate a University review comment. Associated return ducting has been extended accordingly.
- Exhaust fan ductwork size has been reduced from 12" wide to 10" wide.
- A 'Locker Room 120' return grille has been relocated to 'Wet Area 125'. The Locker Room exhaust grille has been relocated. Associated ducting has been added from the new Wet Area return grille.

MH102 – LEVEL 2 MECHANICAL PLAN

- Exhaust fan ductwork through roof has increased in size from 10" wide to 12" wide.

Thank you,

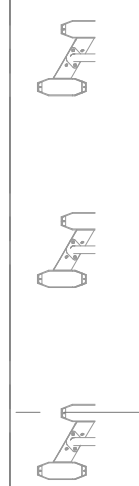
Spectrum Engineers

A handwritten signature in black ink that reads "Ryan Boogaard".

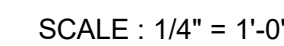
Ryan Boogaard, P.E., LEED AP

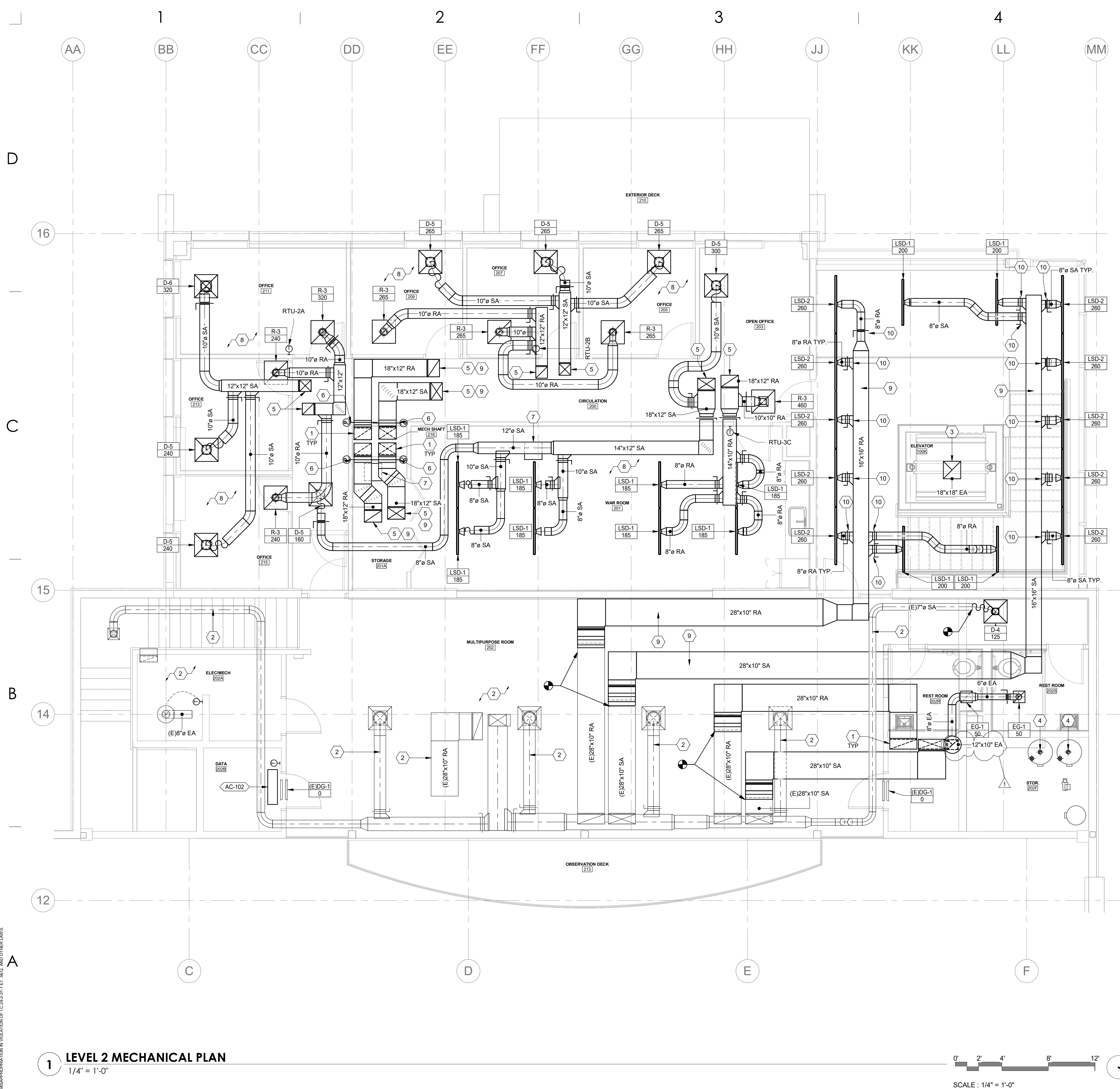


- 1 DUCT UP TO FLOOR ABOVE IN THIS APPROXIMATE LOCATION. SEE FLOOR ABOVE FOR CONTINUATION.
- 2 ELEVATOR THERMOSTAT TO TIE INTO EXHAUST FAN ON ROOF. COORDINATE WITH ELEVATOR SUBCONTRACTOR FOR THERMOSTAT LOCATION.
- 3 PROVIDE UL LISTED FIRE SMOKE DAMPER AT THE RATED ASSEMBLY IN THIS APPROXIMATE LOCATION.
- 4 PROVIDE 18" X 18" ACCESS PANEL IN THIS APPROXIMATE LOCATION.
- 5 OUTSIDE AIR DUCT TO DROP TO INTAKE GRILLE BELOW SAUNA HEATER. CONFIRM SIZES AND LOCATIONS WITH SAUNA AND SAUNA HEATER SHOP DRAWINGS. FOR BIDDING ASSUME 14"x3" AND 6"x6" DUCTING FROM AN XVENT 6" SINGLE OUTLET LOUVER.
- 6 SAUNA COMPONENTS TO BE BID AS ADD ALTERNATE 4.
- 7 PROVIDE LAUNDRY EXHAUST WITH EXTERIOR WALL TERMINATION KIT IN THIS APPROXIMATE LOCATION.
- 8 DUCT THROUGH EXISTING STRUCTURAL WALL IN THIS APPROXIMATE LOCATION. COORDINATE LOCATION WITH STRUCTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO CUTTING.



1/4" = 1'-0'





 SHEET KEYNOTES

- 1 DUCT DOWN TO FLOOR BELOW IN THIS APPROXIMATE LOCATION. SEE FLOOR BELOW FOR CONTINUATION.
- 2 EXISTING DUCTWORK TO REMAIN.
- 3 DUCT FROM EXHAUST FAN ON ROOF STUBBED INTO SPACE. COORDINATE SPACE REQUIREMENTS WITH ELEVATOR SUBCONTRACTOR.
- 4 CONCENTRIC VENT THROUGH ROOF IN THIS APPROXIMATE LOCATION.
- 5 DUCT UP TO FLOOR ABOVE IN THIS APPROXIMATE LOCATION. SEE FLOOR ABOVE FOR CONTINUATION.
- 6 PROVIDE UL LISTED FIRE SMOKE DAMPER AT THE RATED ASSEMBLY IN THIS APPROXIMATE LOCATION.
- 7 PROVIDE 18" X 18" ACCESS PANEL IN THIS APPROXIMATE LOCATION.
- 8 DUCTING, DIFFUSERS, HANGERS, ETC. SERVING THIS AREA TO BE BID AS ADD. ALTERNATE 1. ROOFTOP UNITS AND ALL ASSOCIATED COMPONENTS INCLUDING ALL DUCT CONNECTIONS AND DROPS FROM THE EQUIPMENT INTO THE 2ND FLOOR CEILING SPACE TO BE INCLUDED IN THE BASE BID. ALL DUCTING AND ASSOCIATED EQUIPMENT SERVING THE FIRST FLOOR TO BE INCLUDED IN THE BASE BID.
- 9 DUCTING AND ALL ASSOCIATED COMPONENTS TO BE INCLUDED IN THE BASE BID.
- 10 PROVIDE CABLE OR LINKAGE OPERATED DAMPER FOR REMOTE DAMPER ADJUSTMENT.



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☐ CONSULTANT

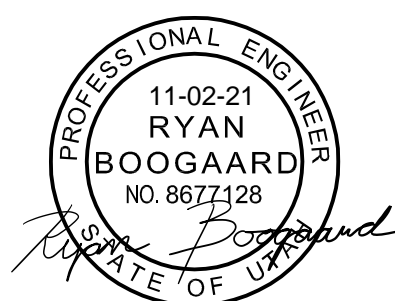
	OWNER INFORMATION
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PROJECT DESCRIPTION

DUMKE
GYMNASTICS
TRAINING
CENTER

1825 E. SOUTH CAMPUS DRIVE
SALT LAKE CITY, UT 84112

AHJ STAMP



SHEET NAME:

LEVEL 2
MECHANICAL PLAN

	REVISIONS
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MARK	DATE	DESCRIPTION
1	11/02/20	Addendum 1

ISSUE DATA

ISSUE DATE: 10.01.21
ISSUE TYPE: CD
DRAWN BY: CLD
CHECKED BY: RHB
CLIENT PROJECT#:

	SHEET NUMBER:
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MH102



Mechanical Engineering
Electrical Engineering
Technology Engineering
Acoustical Engineering
Lighting Design
Theatre Design
Fire Protection Engineering
Building Commissioning

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Dumke Gymnastics Center - Electrical Addendum #1

Date:	November 2, 2021	From:	Isaiah Crespo
To:	Alan Taylor	Email:	ibc@spectrum-engineers.com
Company:	AJC Architects	Phone:	(801) 401-8426
Job:	Dumke Gymnastics Center	Re:	Dumke Gymnastics – Addendum #1
Job No:	20191093		
Cc:			

This Addendum shall be considered part of the Contract Documents and Project Manual for the above mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Contract Documents and Project Manual, the Addendum shall govern and take precedence.

Drawings

1. EL101 – Revised fixtures “P2”.
2. EL601 –
 - a. Revised fixture “P2”.
 - b. Revised multiple approved light fixture options.
3. EL602 – Added approved light fixture option for fixture “W1E”.
4. EL603 – Added approved lighting controls manufactures.

Attachments<EL101, EL601, EL602, EL603>

11/2/2021 11:34:22 AM C:\Users\lbc\Desktop\Revit Local Files\2020\20191093 ELEC Central_ IBC-Spectrum.rvt
UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN IN DARK AND SOLID LINES ARE NEW AND THE CONTRACTOR SHALL PROVIDE THEM. ITEMS SHOWN IN SOLID LIGHT LINES ARE TO REMAIN.
COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHT FIXTURES ON THIS LEVEL WITH MECHANICAL EQUIPMENT, DUCT, PIPE, PLUMBING, ETC. PRIOR TO ROUGH-IN.
CONTRACTOR SHALL UPDATE PANEL SCHEDULES WITH NEW CIRCUIT DATA TYPED ON CARD STOCK TYPE MATERIAL.
ALL EXPOSED CONDUITS ROUTED IN CEILING SHALL BE PAINTED TO MATCH CEILING.
ALL CEILING MOUNTED DEVICES LOCATED IN LAY-IN GRID CEILINGS SHALL BE INSTALLED CENTERED IN CEILING TILES AND/OR ALIGNED WITH OTHER FIXTURES WITHIN THE SAME PLANE AND CEILING SPACE.
LIGHTING CONTROL DIMMING AND ROOM CONTROLLER SHALL BE LOCATED AS FOLLOWS WHERE POSSIBLE UNLESS NOTED OTHERWISE. LOCATE ABOVE ACCESSIBLE CEILING NEAR THE DOOR THAT CONTROLLER SERVES BUT OUT OF THE PATH OF EGRESS, REFER TO DETAIL FOR ADDITIONAL INFORMATION.
PROVIDE UNSWITCHED EMERGENCY HOT CIRCUIT TO ALL LIGHT FIXTURES WITH EMERGENCY TRANSFERS TO ALLOW FOR POWER LOSS SENSING.
REFER TO EE701 FOR TYPICAL MOUNTING AND ALIGNMENT OF ELECTRICAL DEVICES.
CONTRACTOR SHALL BE REQUIRED TO PROVIDE ALL MOUNTING HARDWARE ALONG WITH REQUIRED SEISMIC BRACING FOR EACH FIXTURE.
ALL EXPOSED RACEWAYS LOCATED IN LABS SHALL BE ROUTED HORIZONTALLY 8FT OR HIGHER UNLESS NOTED OTHERWISE.
ALL PATHWAYS FOR LOW VOLTAGE CABLING NOT REQUIRED TO BE IN CONDUITS SHALL BE ROUTED IN J-HOOK PATHWAYS. CONCEAL ALL PATHWAYS ABOVE ACCESSIBLE CEILING SPACES. DO NOT RUN CABLES IN EXPOSED AREAS. WHERE CONCEALMENT IS NOT POSSIBLE IN EXPOSED AREAS, CONTRACTOR SHALL PROVIDE CONDUIT TO ROUTE CABLING WHERE VISIBLE. ALL CONDUIT SHALL BE PAINTED TO MATCH CEILING AND PROVIDED WITH PROTECTIVE BUSHINGS.

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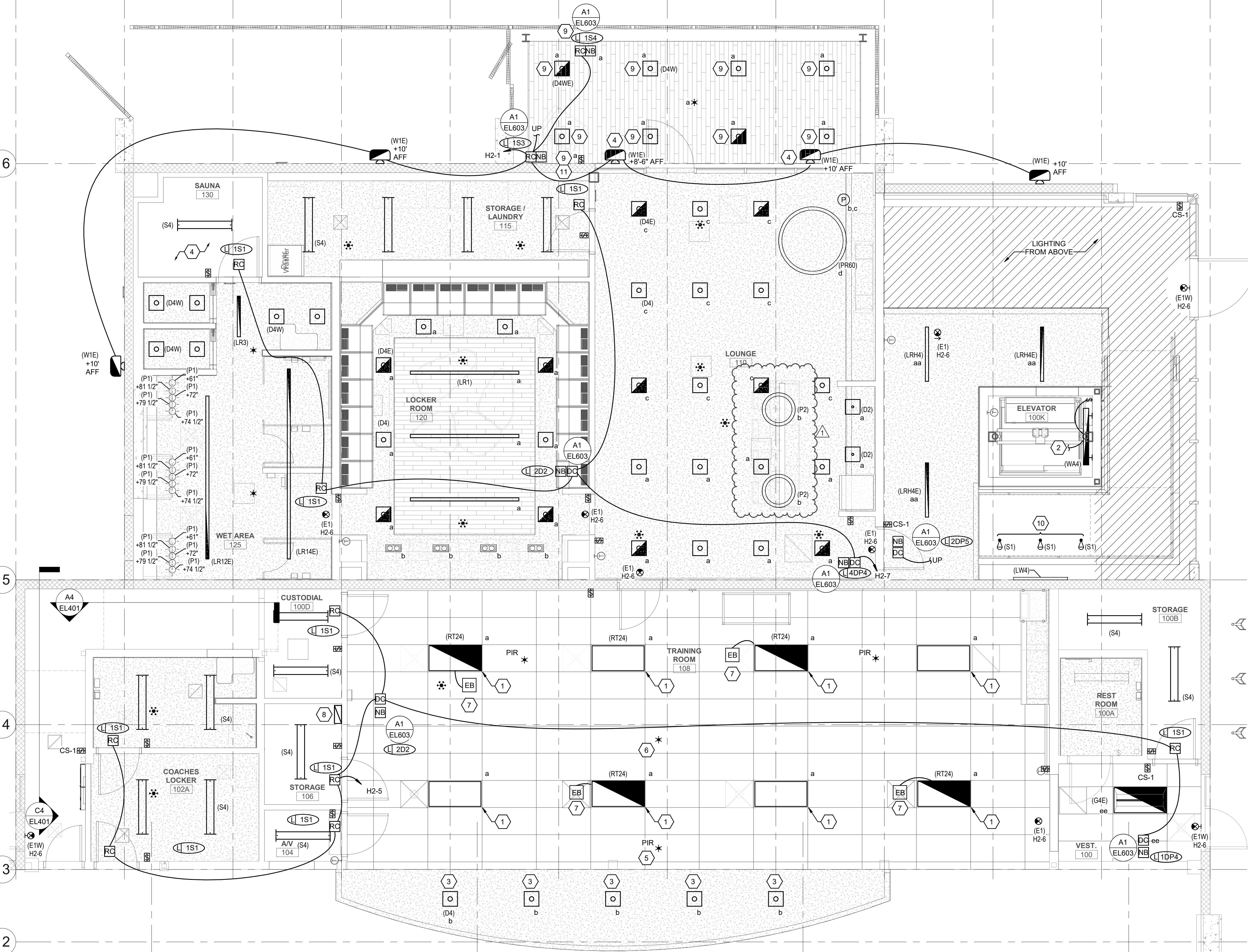
14

13

12

A1 LEVEL 1 LIGHTING PLAN

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



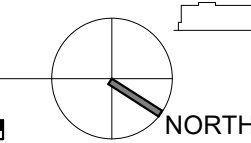
GENERAL SHEET NOTES

- UNLESS NOTED OTHERWISE, ELECTRICAL ITEMS SHOWN IN DARK AND SOLID LINES ARE NEW AND THE CONTRACTOR SHALL PROVIDE THEM. ITEMS SHOWN IN SOLID LIGHT LINES ARE TO REMAIN.
- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHT FIXTURES ON THIS LEVEL WITH MECHANICAL EQUIPMENT, DUCT, PIPE, PLUMBING, ETC. PRIOR TO ROUGH-IN.
- CONTRACTOR SHALL UPDATE PANEL SCHEDULES WITH NEW CIRCUIT DATA TYPED ON CARD STOCK TYPE MATERIAL.
- ALL EXPOSED CONDUITS ROUTED IN CEILING SHALL BE PAINTED TO MATCH CEILING.
- ALL CEILING MOUNTED DEVICES LOCATED IN LAY-IN GRID CEILINGS SHALL BE INSTALLED CENTERED IN CEILING TILES AND/OR ALIGNED WITH OTHER FIXTURES WITHIN THE SAME PLANE AND CEILING SPACE.
- LIGHTING CONTROL DIMMING AND ROOM CONTROLLER SHALL BE LOCATED AS FOLLOWS WHERE POSSIBLE UNLESS NOTED OTHERWISE. LOCATE ABOVE ACCESSIBLE CEILING NEAR THE DOOR THAT CONTROLLER SERVES BUT OUT OF THE PATH OF EGRESS, REFER TO DETAIL FOR ADDITIONAL INFORMATION.
- PROVIDE UNSWITCHED EMERGENCY HOT CIRCUIT TO ALL LIGHT FIXTURES WITH EMERGENCY TRANSFERS TO ALLOW FOR POWER LOSS SENSING.
- REFER TO EE701 FOR TYPICAL MOUNTING AND ALIGNMENT OF ELECTRICAL DEVICES.
- CONTRACTOR SHALL BE REQUIRED TO PROVIDE ALL MOUNTING HARDWARE ALONG WITH REQUIRED SEISMIC BRACING FOR EACH FIXTURE.
- ALL EXPOSED RACEWAYS LOCATED IN LABS SHALL BE ROUTED HORIZONTALLY 8FT OR HIGHER UNLESS NOTED OTHERWISE.
- ALL PATHWAYS FOR LOW VOLTAGE CABLING NOT REQUIRED TO BE IN CONDUITS SHALL BE ROUTED IN J-HOOK PATHWAYS. CONCEAL ALL PATHWAYS ABOVE ACCESSIBLE CEILING SPACES. DO NOT RUN CABLES IN EXPOSED AREAS. WHERE CONCEALMENT IS NOT POSSIBLE IN EXPOSED AREAS, CONTRACTOR SHALL PROVIDE CONDUIT TO ROUTE CABLING WHERE VISIBLE. ALL CONDUIT SHALL BE PAINTED TO MATCH CEILING AND PROVIDED WITH PROTECTIVE BUSHINGS.

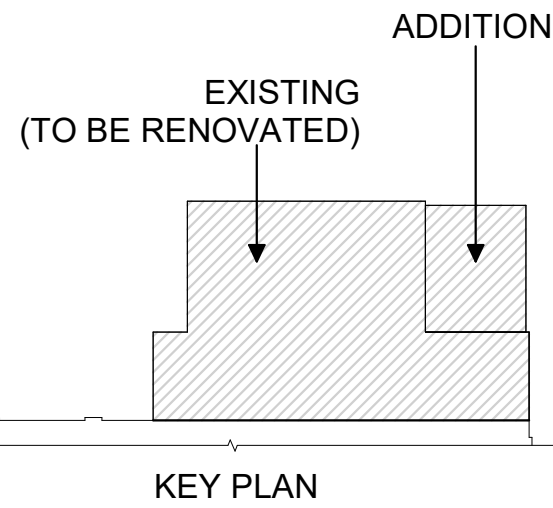
SHEET KEYNOTES

- INSTALL SALVAGED LIGHT FIXTURE.
- CONTINUE CIRCUIT TO RECEPTACLE LOCATED DIRECTLY BELOW REFER TO ASSOCIATE "EP" SHEET FOR CONTINUATION OF CIRCUIT.
- PROVIDE AS PART OF ADD ALTERNATE #3.
- PROVIDE AS PART OF BASE BID.
- INSTALL SALVAGED PIR SENOR.
- INSTALL SALVAGED ULTRASONIC SENOR.
- PROVIDE REMOTE EMERGENCY BATTERY FOR LIGHT FIXTURE.
- UV LIGHT FIXTURE CONTROLLER HOUSING LOCATION.
- PROVIDE AS PART OF ADD ALTERNATE #2.
- COORDINATE WITH PLATFORM FOR INSTALLATION.
- PROVIDE WEATHER PROOF COVER FOR LOW VOLTAGE SWITCH.

0 2' 4' 8'



KEY PLAN



ARCHITECT

1877



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salt lake city, utah 84105
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10.01.21

CONSULTANT



324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

OWNER INFORMATION

PROJECT DESCRIPTION

DUMKE
GYMNASTICS
TRAINING
CENTER:

1825 E. SOUTH CAMPUS DRIVE
SALT LAKE CITY, UT 84112

AHJ STAMP

SHEET NAME:

LEVEL 1 LIGHTING
PLAN

REVISIONS

MARK	DATE	DESCRIPTION
1	11.02.21	ADDENDUM 01

ISSUE DATA

ISSUE DATE: 10.01.21
ISSUE TYPE: CD
DRAWN BY: IBC
CHECKED BY: LSK
PROJECT#: 1877

SHEET NUMBER:

EL101

SUBCONTRACT AGREEMENT

THIS SUBCONTRACT AGREEMENT ("Subcontract") by and between GRAMOLL CONSTRUCTION COMPANY, a Utah corporation, hereinafter referred to as "Contractor," and (SUBCONTRACTOR NAME AND ADDRESS) hereinafter referred to as "Subcontractor," is entered into and shall be effective as of the date it has been signed by both parties hereto (the "Subcontract Date"). If Subcontractor commences work prior to signing this Subcontract, the Subcontract Date shall be deemed to be the date Subcontractor commenced the Work.

RECITALS

1. Contractor has entered into a contract with UNIVERSITY OF UTAH for the construction, performance and completion of a certain project known as DUMKE GYMNASTICS TRAINING CENTER REMODEL & ADDITION said contract being hereinafter referred to as the "General Contract".

2. Subcontractor desires to furnish, and Contractor desires to have Subcontractor furnish a portion of the work for Contractor. Contractor and Subcontractor desire to establish the terms and conditions that govern the relationship between them when Subcontractor furnishes such labor, materials, and equipment pursuant to this Subcontract.

ARTICLE I

1.1 **Scope of Work.** Subcontractor shall furnish all labor, materials, permits, tools, machinery, equipment, facilities, supplies and services, pay all applicable taxes, and comply with any and all additional requirements imposed by the jurisdiction in which the work is performed, and to do all things necessary to complete the following items of work under the General Contract (the "Work"):

Furnish all labor, materials, equipment and supervision required to complete all [LABOR TYPE] work required, as described in specifications sections [SECTION NUMBER AND DESCRIPTION] and as shown on the drawings in [BID PACKAGE] and comply with all other sections of the specifications and the drawings dated [DATE], for DUMKE GYMNASTICS TRAINING CENTER REMODEL & ADDITION prepared by AJC ARCHITECTS, as related to such work.

Addenda: 1, 2, 3, 4

Alternates:

Includes:

Excludes: SALES TAX

Hereinafter, all such documents, plus this Subcontract and the General Contract are collectively referred to as the "Subcontract Documents." All Subcontract Documents other than this Subcontract are incorporated herein by reference and hereby adopted and made a part of this Subcontract as fully as if it were set forth in full herein, subject to the limitations set forth in Article I hereof. All General, Supplemental General, and Special Conditions of the specifications and all terms and conditions of the General Contract shall apply to this Subcontract, except where ambiguous or inconsistent with this Subcontract, in which case the provisions of this Subcontract shall control. Subcontractor acknowledges that the Work to be performed by Subcontractor is not confined to any particular portion of the drawings or section of the specifications, but may be scattered throughout those documents. In the performance of this Subcontract, Subcontractor binds itself to Contractor to comply fully with all undertakings and obligations of the Contractor to the extent that they apply to the scope of the Work.

ARTICLE II

2.1 **Subcontract Price.** Contractor shall pay Subcontractor for completion of the Work in accordance with the Subcontract Documents the lump sum of [Subcontract Price] (the "Subcontract Price.") The Subcontract Price includes all costs and expenses to perform the Work, and associated with the performance of the Work, including, without limitation, (1) all applicable transportation charges, costs and expenses, and (2) all applicable taxes including, without limitation, applicable taxes under any law now existing, or which may hereafter be adopted by federal, state, local or other governmental authorities, taxing the labor, materials, or equipment furnished, or any other tax levied as a result of performance of the Work. The Subcontract Price may be adjusted only as provided for in Article V.

ARTICLE III

3.1 Independent Contractor. The relationship of Subcontractor to Contractor during the term of this Subcontract shall be that of an independent contractor. Subcontractor shall take any and all actions necessary to maintain that independent contractor relationship throughout the term of the Subcontract, and neither Subcontractor nor its employees shall be considered employees of Contractor. Subcontractor shall exercise exclusive control for the means, methods, techniques, and procedures in performance of the Work.

3.2 Examination of Subcontract Documents/ Site. Subcontractor has examined the Subcontract Documents and the applicable Laws and Regulations, as that term is defined below, and has examined the site of the work and satisfied itself as to all conditions to be encountered in the performance of the Work. Subcontractor enters this Subcontract on the basis of its own examination, investigation and evaluation of all such matters, and not in reliance on the opinions or representations of Contractor or Owner. If there are any inconsistencies between the Subcontract Documents or ambiguities in any Subcontract Document, Subcontractor shall bring such inconsistencies or ambiguities to the attention of Contractor before the execution of this Subcontract; otherwise, Subcontractor shall be bound by Contractor's resolution of such inconsistencies or ambiguities.

In the event of any discrepancy (1) in the Subcontract Documents, or (2) between the Subcontract Documents and the Laws and Regulations, those which are more stringent, provide persons and property with greater protection, or provide for a better product shall govern. In the event of any discrepancy in the Subcontract Documents between dimensions and measurements for the Work based on scaling, the Work shall comply with the dimensions for such Work. Subcontractor shall promptly notify Contractor in writing of any such discrepancy. To the extent that the Subcontract Documents include plans, specifications or other documents that depict, refer or relate to mechanical, plumbing, electrical or fire protection systems, such documents are diagrammatic only, and are not intended to show the precise alignment, physical locations, or configurations of such Work. The Subcontract Price includes all costs and expenses for such systems to be installed such that they clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance.

Before commencing Work, Subcontractor will satisfy itself as to the location of all utilities that may affect or interfere with Subcontractor's Work. Subcontractor will fully protect all utilities, and keep them operating at all times, unless otherwise provided in the Subcontract Documents. Subcontractor shall take such field measurements as are necessary for the proper execution of its work. It shall be assumed that the Subcontractor has fully accepted the work of others as being satisfactory and he shall be fully responsible thereafter for the satisfactory performance of the work covered by this Agreement, regardless of the defective work of others.

3.3 Lines, Levels, Dimensions and Measurements. Subcontractor assumes full responsibility for the proper interpretation and interpolation of all lines, levels, dimensions, and measurements and their relation to bench marks, property lines, reference lines and the work of Contractor and other trades. In all cases where dimensions are governed by conditions already established, the responsibility for correct knowledge of the conditions rests entirely on Subcontractor. The Work shall comply with the dimensions provided in the Subcontract Documents and shall not be performed based on scales indicated in those documents. No variations from specified lines, levels or dimensions shall be made except on prior written approval of Contractor clearly setting forth the variation.

3.4 Shop Drawings/ Submittals. Shop drawings and submittals shall be provided in a minimum of one (1) digital copy to Contractor's office in North Salt Lake. Additional copies shall be provided if required by the Subcontract Documents. Shop drawings and/ or submittals and/ or samples are due within fourteen (14) days of Subcontract's date of issuance. At the time of submission, Subcontractor shall clearly identify in writing any deviation in its shop drawings/ submittals/ samples from the requirements of the Subcontract Documents and must receive from Contractor specific written approval for any deviation.

3.5 Warranty. Subcontractor warrants that:

- 3.5.1 all materials and equipment furnished under this Subcontract will be of good quality and new, unless otherwise required or permitted by the Subcontract Documents;
- 3.5.2 the materials and equipment provided as part of the Work will be suitable for the purposes intended in the Subcontract Documents;
- 3.5.3 the Work will be performed in a good and workmanlike manner;
- 3.5.4 the Work will conform to the requirements of the Subcontract Documents; and

3.5.5 the Work will be free from defects.

Work not conforming to these requirements including, without limitation, substitutions not properly approved and authorized, shall be considered defective (all such work, "Defective Work"). Subcontractor shall (1) execute any special guarantees, and (2) assign to Contractor all warranties, as required by the Subcontract Documents.

3.6 Correction and Replacement of Defective Work. During performance of the Work, Subcontractor shall promptly correct or replace Defective Work. Contractor shall determine whether Work is defective and whether work performed by Subcontractor to correct or replace Defective Work complies with Subcontractor's warranty obligations.

3.6.1 If, within the greater of (1) the period established in the Subcontract Documents, or (2) one year after the Completion Date, (hereinafter the "Warranty Period"), any of Subcontractor's Work is found to be defective, Subcontractor shall correct or replace it promptly after receipt of written notice of the Defective Work. If Contractor prefers to accept, rather than correct or repair Defective Work, Contractor may, in its sole discretion, accept the work subject to its right of reimbursement, as set forth below.

3.6.2 Subcontractor shall pay all costs to correct or replace Defective Work without any adjustment to the Subcontract Price or Subcontract Time. If Subcontractor fails to correct Defective Work within the time allowed by Contractor, or if no time is specified, a reasonable time after receipt of notice of such defects, Contractor may correct or replace the Defective Work. Subcontractor shall reimburse Contractor for (1) the costs to correct or replace defective Work, including, without limitation, the costs of additional sampling, testing and inspections, if any, made necessary by Defective Work, corrections or replacements, (2) all Losses that Contractor incurs that arise out of or result from Defective Work, (3) any amounts assessed and collected by Owner from Contractor for acceptance of Defective Work, and (4) any other amounts for which Subcontractor is responsible at law or in equity.

3.7 Safety. Subcontractor shall initiate, maintain and supervise all safety precautions and programs in connection with the Work including, without limitation, such precautions and programs as necessary to comply with the Gramoll Project Safety Rules and Regulations that are expressly made a part of the Subcontract Documents. Subcontractor shall take all necessary precautions to prevent damage, injury or loss to (a) all persons performing the Work or who may be affected by the Work; and (b) all Work, whether stored on or off the Project site. Subcontractor shall promptly report to Contractor all accidents incidental to the Work which result in death or injury to persons or in damage to property. Subcontractor shall provide to Contractor any reasonable documentation requested by Contractor related to any such death, injury, damages.

3.8 Compliance with Laws and Regulations. Subcontractor shall comply with and give all notices required by all federal, state, local, and municipal laws, regulations, codes, ordinances, and orders that directly or indirectly bear on the Work and/or the performance of the Work including, without limitation:

3.8.1 building codes and ordinances;

3.8.2 worker's compensation laws and regulations;

3.8.3 safety laws, codes, regulations and orders, including, without limitation, the Occupational Safety & Health Act of 1970, as enacted and amended, and regulations issued under that act;

3.8.4 environmental laws including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, the Clean Water Act, the Clean Air Act, and the Resources Conservation and Recovery Act, as enacted and amended, regulations issued under those acts, and counterpart state laws;

3.8.5 wage, hour, labor, and anti-discrimination laws, including, without limitation, the Equal Employment Opportunity (EEO) Executive Order 11246, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, the Equal Pay Act of 1963, the Family and Medical Leave Act, the Americans with Disabilities Act, the National Labor Relations Act, the Fair Labor Standards Act; Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, the Immigration Reform Control Act of 1986, as enacted and amended, and all regulations issued under those acts; and

3.8.6 tax laws and regulations; all as enacted and amended, and all regulations issued under such acts

Collectively, these are referred to in this Subcontract as the "Laws and Regulations."

3.9 Subcontractors. Subcontractor shall not assign this contract, in part or in whole, without Contractor's prior written consent, nor shall Subcontractor assign any monies due or to become due to it hereunder, without Contractor's prior written consent. Subcontractor shall, upon request from Contractor at the inception of this Subcontract, provide to Contractor or supplier a written list of sub-subcontractors or suppliers that Subcontractor intends to use in connection with the performance of its obligations under this Subcontract where the dollar amount individually or in the aggregate with the same sub-subcontractor will exceed 5% of the Subcontract Price. Subcontractor shall require all of its sub-subcontractors to comply with the Subcontract Documents to the extent that they apply to the scope of work of such sub-subcontractor. Subcontractor shall not change sub-subcontractors without prior written approval of Contractor.

Upon Contractor's request, Subcontractor agrees to provide documentation evidencing full payment of all sub-subcontractors and/or suppliers engaged by Subcontractor with respect to its performance of this Subcontract.

If this Subcontract is terminated, each of Subcontractor's contracts for performance of the Work shall be assigned to Contractor, provided that Contractor accepts such assignment in writing and assumes all rights and obligations of Subcontractor pursuant to each such contract.

3.10 Cleanup. Subcontractor will continuously clean, and remove from the jobsite, its debris and excess materials and at the end of each day will leave its working areas in broom-clean condition. Also, he shall clean up to the satisfaction of the inspectors, all dirt, grease marks, etc., from walls, ceilings, floors, fixtures, etc., deposited or placed thereon as a result of the execution of this Subcontract. If Subcontractor fails to do so, Contractor may perform the cleanup and backcharge Subcontractor for the cost of performing such clean-up.

3.11 Supervision. Subcontractor shall have available on the project, at all times, a qualified superintendent, who is acceptable to Contractor, to coordinate the Subcontractor's work with that of the Contractor and of the other subcontractors, and any instruction given by the Contractor to said representative on the project shall have the same force and effect as if given to the Subcontractor either at the project or at the Subcontractor's office away from the project site.

ARTICLE IV

4.1 Subcontract Time. Subcontractor shall commence and complete the Work in accordance with the most current schedule prepared by Contractor, as may be revised from time to time during the course of the Project (the "Project Schedule"). Subcontractor shall commence and complete all activities in compliance with the time periods expressly provided for such activities in the Project Schedule. The periods of time provided in the Project Schedule for commencement and final completion of all activities that comprise the Work shall constitute the "Subcontract Time." Except as otherwise expressly noted, as used herein and in the Project Schedule, the term "day" shall refer to a calendar day. The date on which all of the work performed by Contractor and its subcontractors is completed and accepted by the Owner shall be referred to hereinafter as the "Completion Date."

Subcontractor's commencement, prosecution, and completion of the Work in the Subcontract Time and in compliance with the Project Schedule is of the essence of this Subcontract.

Subcontractor acknowledges that the precise time periods scheduled for its performance are estimates only. Subcontractor shall cooperate with Contractor in scheduling and performing its work to avoid conflict or interference with the work of Contractor or other trades. Contractor reserves the right, in its sole discretion, to extend or to delay the scheduling of Subcontractor's work if such extension or delay becomes necessary in the opinion of Contractor. Each Subcontractor shall review the schedule of all items of work other than his own, to anticipate completion of specific items of its Work as it affects other trades, to be certain that work following Subcontractor's Work is not delayed. In the event of any conflicts in the Project Schedule between the work of Subcontractor and Contractor or another trade, Contractor shall determine, in its sole discretion, which work shall have precedence and how the parties will coordinate their respective work. All other work not specifically scheduled shall be coordinated as necessary to avoid delaying Work as scheduled. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time based on the coordination of such activities with Contractor or any determination by Contractor concerning coordination of the work.

If Contractor determines, in its sole discretion, that Subcontractor has failed to diligently prosecute the Work in accordance with the Project Schedule, or that Subcontractor will not complete the Work within the Subcontract Time, Contractor may, in its sole discretion, (1) require Subcontractor to work overtime and/or use such additional labor and equipment as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule, (2) supplement Subcontractor's work by furnishing additional labor and equipment to the Project as necessary to accelerate the Work and bring Subcontractor's performance into compliance with the Project Schedule,

(3) require Subcontractor to provide reasonable assurances of timely performance in accordance with the Project Schedule, (4) terminate this Subcontract pursuant to Article X, and/ or (5) exercise all other rights and remedies available under this Subcontract. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time as a result of any such action by Contractor.

ARTICLE V

5.1 Changes and Modifications to Subcontract. Without invalidating the Subcontract and without notice to any surety, Contractor may, at any time or from time to time, order additions, deletions or revisions in the Work or acceleration of the Work. Any such additions, deletions, revisions, or acceleration shall be binding upon Contractor and Subcontractor exclusively when made in writing executed by James Gramoll. Upon receipt of such an order, Subcontractor shall promptly proceed with the Work involved, which shall be performed under the applicable conditions of this Subcontract and the Subcontract Documents, except as otherwise specifically provided. Subcontractor shall not proceed to perform changes in the Work without prior written authorization from Contractor as provided herein. Subcontractor shall not be entitled to an adjustment in the Subcontract Price or the Subcontract Time for any work performed without such prior written authorization. Except as provided in this Article V or Section 12.1, the terms and conditions of this Subcontract are not otherwise subject to addition, modification, or change.

5.2 Claims. The Subcontract Price and the Subcontract Time may be changed only by a written directive by Contractor, change order, or written Amendment to this Subcontract signed by James Gramoll. Within seven (7) working days of an occurrence or event giving rise to a claim for an adjustment in the Subcontract Price or Subcontract Time, Subcontractor shall provide to Contractor written notice (hereinafter, a "Claim") stating the nature of the Claim and the adjustment in Subcontract Price and Subcontract Time requested, accompanied by supporting documentation. All Claims shall include and/ or be accompanied by the following supporting information and/ or documents: (a) the specific amount of the requested adjustment in the Subcontract Price, if any, (b) the specific number of days' adjustment in the Subcontract Time requested, if any, (c) the reasons justifying the request for an adjustment in the Subcontract Price and the Subcontract Time, including a CPM analysis demonstrating a critical path delay for any requested adjustment in the Subcontract Time, if any, (d) the party or parties whose orders, decisions, acts or omissions give rise to the requested adjustment in the Subcontract Price and/ or the Subcontract Time, and (e) a revised schedule based on the requested adjustments in the Subcontract Time, if any.

A Claim shall be deemed to include all adjustments in Subcontract Price and/ or Subcontract Time to which the claimant is entitled as a result of the occurrence or events giving rise to the Claim. No Claim by Subcontractor for an adjustment of the Subcontract Price or Subcontract Time will be valid if not delivered to the Contractor within the seven (7) working day period prescribed above. Subject to Contractor's right to terminate Subcontractor's rights under this Subcontract, Subcontractor shall continue performance of its obligations under this Subcontract notwithstanding any dispute between Contractor and Subcontractor concerning a Claim asserted by either party.

Subcontractor's sole and exclusive right to an adjustment in the Subcontract Price and/ or the Subcontract Time shall be the adjustment in the contract price and/ or the contract time to the General Contract actually received by Contractor from Owner on behalf of Subcontractor as a result of any such Claim. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time or any other remedy under this Subcontract or remedy for breach thereof as a result of any event, occurrence, or act or omission of Contractor or Owner beyond such adjustment in the contract price and/ or the contract time to the General Contract received by Contractor from Owner. Receipt by Contractor of a fully-executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time, a remedy under this Subcontract, or remedy for breach of this Subcontract. Subcontractor's right to recover for such change, remedy, or breach shall be limited to the adjustment in contract price and/ or contract time received by Contractor from Owner for such change, remedy or breach.

5.3 Delays If events, occurrences, acts, or omissions beyond the control of Subcontractor including, without limitation, the work of other trades or contractors, fire, earthquake, acts of God, terrorist acts, riots, war, strikes or other force majeure events delay Subcontractor's Work, the Subcontract Time and/ or the Subcontract Price will be adjusted to the extent of any adjustment in the contract price and/ or the contract time in the General Contract received by Contractor from Owner on behalf of Subcontractor. Subcontractor may make a Claim for an adjustment in the Subcontract Time and/ or the Subcontract Price if, and only if, Subcontractor timely presents to Contractor a Claim in compliance with Section 5.2. Any such adjustment in the contract price and/ or the contract time under the General Contract received by Contractor from Owner shall be Subcontractor's sole and exclusive remedy for such delays, if any, to Subcontractor's Work on the Project. Receipt by Contractor of a fully-executed written change order from Owner is a condition precedent to Subcontractor's right, if any, to an adjustment in the Subcontract Price and/ or the Subcontract Time for delays of any kind or nature.

The Subcontract Time and the Subcontract Price shall not be adjusted and Subcontractor shall not be entitled to any remedy under this Subcontract, or for breach of this Subcontract for (a) delays caused concurrently by Subcontractor

and Contractor, Owner or any other person, or (b) any other delays to Subcontractor's Work on the Project for any other events, occurrences, acts or omissions of any person or entity or of any other kind or nature other than that for which an adjustment in the Subcontract Price and/ or the Subcontract Time are expressly authorized in this Section.

5.4 Subcontractor-Caused Delays. Subcontractor recognizes and acknowledges that Contractor will suffer substantial Losses if Subcontractor fails to perform the Work in compliance with the Project Schedule. Subcontractor shall indemnify and hold Contractor harmless from and against any and all Losses and liquidated damages that are attributable to or caused by Subcontractor's failure to perform the Work in compliance with the Project Schedule. In addition to liquidated damages, such Losses may include, without limitation, direct jobsite overhead costs such as costs for project management and supervision, quality control, utilities, and other costs such as home office overhead, attorneys' and other professional fees, and other usual and customary mark-ups. If Contractor incurs Losses and/ or is assessed liquidated damages as a result of delays caused concurrently by Subcontractor and other trades or contractors, such Losses and/ or liquidated damages shall be pro rated by Contractor, in its sole discretion, between Subcontractor and all other responsible parties. Contractor's allowing Subcontractor to proceed with Work beyond the time specified for Subcontractor's performance of that Work shall not constitute a waiver of any rights by Contractor to recover damages for Subcontractor's delay.

ARTICLE VI

6.1 Payment. Contractor shall pay Subcontractor in monthly payments of 95% percent of the work performed in any preceding month, in accordance with estimates prepared by Subcontractor. All such pay estimates shall be made on the sample form provided, entitled "Subcontractor's Application for Payment." Contractor has the unfettered right, at its discretion, to adjust Subcontractor's statements to reflect any overestimation of the percent of work complete made by Subcontractor in a pay estimate.

6.2 Pay-If-Paid. When such pay estimates are approved by Contractor and/ or the Owner, Contractor will pay Subcontractor as payments are received by Contractor from the Owner covering the monthly pay estimates of the Contractor, including the approved portion of Subcontractor's monthly pay estimate.

All payments to Subcontractor will be made only from a special fund, namely, from payments made by Owner to Contractor in respect of work performed by Subcontractor. No payments will be made to Subcontractor unless that fund comes into existence. Owner's payment to Contractor for Subcontractor's Work is an express condition precedent to Contractor's obligation to make any payment to Subcontractor.

6.3 Delayed Pay Estimate/ Retainage. If the Subcontractor fails to submit a timely request for payment in an amount approved by Contractor, Subcontractor's payment may be delayed. Contractor shall have the right to withhold from any payment the percentage of retention set forth in the General Contract between Contractor and the Owner, but in no case less than five percent of all amounts due Subcontractor until the project is fully completed and accepted by the architect or Owner, and Contractor has received final payment from the Owner.

6.4 Payroll Summaries/ Prevailing Wages. Subcontractor agrees to furnish to Contractor one copy of each weekly payroll summary within seven days after the date of payment. Subcontractor agrees to comply with any and all provisions in the General Contract relating to labor standards, minimum wages and other wage and hour provisions to the same extent as they are binding upon Contractor. In the event the Owner requires Contractor to furnish payroll affidavits, subcontractor agrees to furnish similar affidavits to the Contractor.

6.5 Withholding. Contractor may withhold payment to Subcontractor in whole or in part to the extent necessary, in Contractor's sole discretion, to protect Contractor against Losses for which Subcontractor is responsible as a result of any Default, as that term is defined below.

If, at any time prior to final payment, Contractor determines, in its sole discretion, that it is insecure regarding Subcontractor's ability, willingness, or intent to fulfill its warranty obligations under the Subcontract Documents, Contractor may, at its option, withhold final payment during the entire Warranty Period. Subcontractor waives any right to recover interest on the amount withheld during that time. Contractor shall make final payment for Subcontractor's Work within ten (10) days of (1) expiration of the Warranty Period, or (2) Contractor's receipt of adequate assurances from Subcontractor of its ability, willingness and intent to perform the warranty work, subject to receipt of by Contractor of final payment from Owner as provided in Section 6.2.

6.6 Backcharges. Where feasible, Contractor shall use reasonable efforts to give Subcontractor notice before any costs are incurred which will be offset against the Subcontract Price. If Subcontractor disagrees with the nature or amount of costs to be incurred, it shall advise Contractor promptly in writing, and in no event later than three (3) days after its receipt of notice from Contractor. Such notification shall include reasons for Subcontractor's dispute and shall propose a reasonable and acceptable alternative along with an estimate of the cost of the alternative, where applicable.

If Contractor receives no protest to a proposed backcharge or Subcontractor protests and does not provide an alternative to Contractor's proposed action, Contractor may proceed to incur the costs and offset them against the Subcontract Price. Costs so offset shall be deemed to be reasonable and beyond dispute by Subcontractor. If Subcontractor timely protests and proposes a reasonable alternative that Contractor rejects, the disputed costs incurred shall be subject to the dispute resolution procedure outlined in Article XI, if Subcontractor gives Contractor written notice within ten (10) days of such rejection.

6.7 **Lien Waivers.** Subcontractor shall present to Contractor lien waivers for all labor, materials and equipment furnished by others in connection with this Subcontract prior to receiving each payment hereunder. Contractor may require such lien waivers as a condition of progress or final payment.

6.8 **Liens.** Subcontractor shall timely pay all claims for labor, materials, and equipment incurred in the performance of the Work and shall (1) keep the property on which the Project is situated (the "Property") free from mechanic's liens or attachments, and (2) prevent the filing of any claim or stop notice against funds or the payment of funds owed to Contractor, by any person or entity performing a portion of the Work. If any mechanic's lien, attachment, claim against funds, or stop notice is filed against the Property or funds owed to Contractor arising out of or related to performance of the Work, Subcontractor shall, within ten (10) days after written demand by Contractor, take all reasonable steps necessary to cause the effect of such lien, attachment, claim, or stop notice to be released. Upon request by Contractor, Subcontractor shall obtain a lien release or discharge bond or other bond satisfactory to Contractor in the amount of 150% all liens, attachments, claims, or stop notices so recorded or served.

6.9 **Acceptance of, or payment for, Subcontractor's defective or late work shall not constitute a waiver of any claim or offset that Contractor may have under the terms of this Subcontract.**

ARTICLE VII

7.1 **Indemnification.** To the fullest extent allowed by law, Subcontractor shall indemnify and hold harmless Contractor, Owner, the project architects and engineers, and all of their respective agents and employees (the "Indemnitees") from and against all claims, damages, losses and expenses including, without limitation, attorney's fees ("Losses"), arising out of or resulting from (1) any Default, or failure by Subcontractor to comply with any express duty, warranty, representation, acknowledgment or covenant in this Subcontract, (2) any charges, claims, or liquidated damages assessed and collected by the Owner against Contractor as a result of and to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees; (3) personal or bodily injury to or death of any person, including, without limitation, any agent, employee, guest or invitee of Subcontractor or its sub-subcontractors, other contractors, Contractor, or Owner, to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees, regardless of whether or not they are caused in part by a party indemnified hereunder, (4) damage to or loss of property to the extent caused by any act or omission of Subcontractor or its sub-subcontractors, guests or invitees, regardless of whether or not they are caused in part by a party indemnified hereunder, (5) any use of Contractor's equipment, tools, rigging, blocking, hoists, or scaffolding, (6) liens, attachments, claims, or stop notices against funds or payments owed to Contractor, recorded or served by any of Subcontractor's sub-subcontractors, or (7) infringement of any patent or copyright by Subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

The indemnity agreement shall be covered by Subcontractor's comprehensive general liability insurance policy. The indemnity obligations set forth in this Subcontract shall not be limited by (1) the Subcontract Price, or (2) the amount or type of proceeds, compensation, or benefits available to Subcontractor under any insurance policy including, without limitation, any self-insurance or similar program or policy maintained by Subcontractor.

At the request of an Indemnitee, Subcontractor shall defend any claim for Losses against an Indemnitee. The Indemnitee shall be entitled to approve the legal counsel to be paid for by Subcontractor for the purpose of defending such claims for Losses. No claim for Losses shall be settled or discontinued, nor shall judgment be permitted to be entered without the written consent of the Indemnitee, which consent shall not be unreasonably withheld.

ARTICLE VIII

8.1 **Insurance.** Unless otherwise specified in the Subcontract Documents indicating that insurance shall be provided pursuant to an owner-controlled or contractor-controlled insurance program, Subcontractor shall purchase and maintain the following insurance coverages for itself and the Additional Insureds during the course of the Work and during the Warranty Period, and shall maintain completed operations coverage for itself and the Additional Insureds for the length of time necessary to cover any manifestation date within the applicable statutes of limitations and/ or repose which pertain to the Work. If additional insurance coverage or greater limits of liability are required by the General Contract Documents, such provisions shall control.

- 8.1.1 **Commercial General Liability** coverage on an occurrence basis with a deductible not to exceed \$1,000 per occurrence that includes coverage for liability assumed under any oral or written contract relating to the conduct of Subcontractors' business, including this Subcontract, and also including (1) broad form property damage liability coverage; (2) premises-operations coverage; (3) explosion and collapse hazard coverage; (4) underground hazard; (5) products and completed operations hazard coverage, and (6) independent contractor coverage. The limit of liability shall be not less than \$1,000,000 each occurrence, \$2,000,000 general aggregate (subject to a per project general aggregate provision applicable to the project per ISO form CG 2503 or its equivalent), \$2,000,000 products/completed operations aggregate and \$1,000,000 personal and advertising injury.
- 8.1.2 **Automobile Liability** coverage in comprehensive form affording coverage for owned, hired, and non-owned vehicles. The limit of liability shall not be less than \$1,000,000 for bodily injury and property damage combined, \$1,000,000 for each accident. (No aggregate on automobile insurance).
- 8.1.3 **Workers Compensation and Employers Liability** coverage with Workers Compensation limits complying with statutory requirements, and Employers Liability Insurance limits of at least \$500,000 each accident, \$500,000 for bodily injury by accident, and \$500,000 each employee for injury by disease. Workers' compensation insurance shall comply with the statutory form.

The liability insurance policies, including commercial general liability, automobile liability and excess liability, shall be endorsed to provide: (1) that Contractor and Owner are additional insureds (the "Additional Insureds") per ISO form CG 20 10 07 04 and CG 20 37 07 04 or their equivalent, (2) that the insurance afforded by the policies shall apply to Contractor as though a separate policy had been issued to Contractor, and (3) that the coverage afforded to Contractor is primary and any other insurance in force for Contractor will be excess and will not contribute to the primary policies. All required insurance shall be provided by insurance companies with a rating of A- VII or better by A.M. Best Company.

Prior to performing any Work, Subcontractor shall provide Contractor with a certificate of insurance demonstrating that Subcontractor has obtained all of the insurance coverages required by this Section. An additional insured endorsement shall be attached to such certificate of insurance. The certificate of insurance and the insurance policies effectuating coverages required by this Section shall contain a provision that coverage afforded under the policies will not be canceled or allowed to expire until at least 30 days prior written notice has been given to Contractor.

8.2 Subcontractor waives all rights against Contractor, Owner and Architect and their respective agents, officers, directors and employees for recovery of damages to the extent these damages are covered by commercial general liability, commercial umbrella liability, business auto liability or workers compensation or employers liability insurance.

8.3 Subcontractor will protect the job site, the work of Contractor and subcontractors, and its own work until completion and acceptance of the entire project. Subcontractor will obtain property insurance covering subcontractor's interest in the Work. If subcontractor's Work is damaged or destroyed before it is finally completed and accepted by contractor, subcontractor will look to its insurance carrier for compensation and will promptly commence and diligently proceed to re-accomplish the Work at no expense to the Contractor.

8.4 **Health Insurance Certification.** Subcontractor hereby certifies that the Subcontractor and all applicable subcontractors and suppliers at any tier that is subject to UCA 63A-5-205 and Utah Administrative Code Rule R23-23, has and will maintain for the duration of this contract, an offer of qualified health insurance coverage for their employees; all in accordance with UCA 63A-5-205, and Utah Administrative Code Rule R23-23.

ARTICLE IX

9.1 **Default.** The following acts or omissions by Subcontractor shall constitute events of default ("Default") under this Subcontract and shall give rise to all rights and remedies for material breach of this Subcontract, including, without limitation, termination of this Subcontract:

- (a) failure to perform the Work in strict compliance with this Subcontract and the Subcontract Documents;
- (b) failure to promptly and diligently correct or replace Defective Work;
- (c) failure to diligently perform the Work in compliance with the Project Schedule including, without limitation, failure to supply sufficient skilled laborers, materials or equipment;

- (d) failure to provide reasonable assurances of timely performance;
- (e) failure to provide timely submittal information for review and approval as provided in the Subcontract Documents;
- (f) failure or evidence of failure to timely pay workers, subcontractors, or health, welfare, pension or other benefit funds for labor, materials or equipment furnished as part of the Work;
- (g) failure to keep the Property free from mechanic's liens;
- (h) third party claims or evidence indicating, in Contractor's sole discretion, probable filing of such claims unless Subcontractor provides security against such claims in a form acceptable to Contractor;
- (i) failure to pay prevailing wages, if required;
- (j) assignment or subcontracting the majority of the Work without prior written authorization from Contractor;
- (k) failure to perform the Work in strict compliance with the Laws and Regulations or the Safety Rules and Regulations;
- (l) evidence that the Work can not be completed for the unpaid balance of the Subcontract Price, as determined by Contractor in its sole discretion;
- (m) evidence that the Work will not be completed within the Subcontract Time, and/ or that the unpaid balance will not be adequate to cover actual or liquidated damages for the anticipated delay, as determined by Contractor in its sole discretion;
- (n) damage to the work of Contractor or others on the Project;
- (o) insolvency, inability to pay its current obligations, filing of any action seeking the protection of a bankruptcy court where this Subcontract is rejected by the trustee or the Subcontractor is unable to satisfy the requirements for assuming this Subcontract under the applicable provisions of the bankruptcy code, seeking to effect reorganization or workout with its creditors, filing in bankruptcy court by its creditors seeking to compel Subcontractor to reorganize or liquidate assets, appointment of a receiver or trustee related to any insolvency of Subcontractor, and garnishment of any amounts owed by Contractor to Subcontractor;
- (p) any other material breach of this Subcontract or the Subcontract Documents; and
- (q) any act, occurrence or event that places Subcontractor in default under any agreement between Contractor and Subcontractor other than this Subcontract.

9.2 Notice of Default. Upon written notice of Default, Subcontractor shall, within forty-eight (48) hours of receipt of such notice, take all actions requested by Contractor and such other actions as may be necessary to cure such Default. Subcontractor shall not be entitled to any adjustment in the Subcontract Price or the Subcontract Time as a result of any efforts to cure such Default.

9.3 If Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notice of Default, Contractor may cure or remedy any Default by Subcontractor. Subcontractor shall reimburse Contractor and/or Contractor may backcharge Subcontractor for, any and all Losses it incurs, plus a reasonable allowance for profit, to cure or remedy any Default, or as a result of any other failure of Subcontractor to comply with the terms and conditions of this Subcontract or the Subcontract Documents. Contractor may offset against the Subcontract Price any Losses incurred as a result of a Default or any amounts owed to Contractor pursuant to this Section.

ARTICLE X

10.1 Termination for Cause. If (1) Subcontractor fails to cure any Default within forty-eight (48) hours after receipt of written notification of such Default, or (2) a Default threatens to cause immediate personal or bodily injury or death, Contractor may terminate Subcontractor's rights under this Subcontract in its entirety and Contractor shall

have all the rights and remedies available under this Subcontract and at law or in equity including, without limitation, those remedies specified below.

If Contractor terminates this Subcontract for cause as provided herein, Contractor may, without prejudice to any other of its rights or remedies, perform and complete the Work and in connection therewith, Contractor may do any or all of the following:

- 10.1.1 exclude Subcontractor from the Project;
- 10.1.2 take possession of all materials, equipment, and tools intended for performance of the Work including materials and equipment at the Project site, stored materials and equipment, and materials and equipment in the course of preparation wherever located (without liability to Subcontractor for trespass or conversion),
- 10.1.3 accept assignment of Subcontractor's rights under all of Subcontractor's contracts with sub-subcontractors for performance of the Work, pursuant to Section 3.9 and/ or
- 10.1.4 otherwise obtain materials and equipment and employ persons which, in Contractor's sole discretion, are necessary to complete the Work.

Upon termination for cause as provided herein, Subcontractor shall not be entitled to receive any further payment until completion of all of the Work and acceptance of the entire Project. Subcontractor shall reimburse Contractor for all Losses it incurs to complete Subcontractor's Work, plus a reasonable allowance for overhead and profit. If the unpaid balance of the Subcontract Price exceeds the Contractor's Losses, plus allowance for overhead and profit, Contractor shall pay such excess to Subcontractor. If such Losses, overhead, and profit exceed the unpaid balance of the Subcontract Price, the Subcontractor shall pay the difference to Contractor. In addition, Contractor shall be entitled to such other and further remedies available at law or in equity.

10.2 Suspension for Convenience. Contractor may, without cause, suspend, delay or interrupt the Work in whole or in part for such period of time as the Contractor may determine and/ or as provided in the Subcontract Documents. Subject to the requirements and limitations of Article V, the Subcontract Price and Subcontract Time may be adjusted for increases in the cost and time to complete the Work caused by such suspension. No adjustment shall be made, however, to the extent that (a) performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Subcontractor is responsible, (b) an adjustment is made or denied under another provision of this Subcontract, or (c) Contractor is not entitled to a adjustment in the contract price and/ or the contract time under the General Contract on behalf of Subcontractor as a result of such suspension.

10.3 Termination for Convenience. The Contractor may, at any time, terminate this Subcontract for the convenience of Contractor and without cause. Subcontractor's sole and exclusive right to compensation for Losses resulting from such termination shall be the compensation actually received by Contractor from Owner on behalf of Subcontractor as a result of any such termination. Subcontractor shall not be entitled to any compensation for Losses or any other remedy under this Subcontract or for breach thereof as a result of such termination beyond such adjustment in the contract price and/ or the contract price to the Prime Contract received by Contractor from Owner on behalf of Subcontractor. Receipt by Contractor of such compensation is a condition precedent to Subcontractor's right, if any, to compensation for Losses resulting from such termination. Subcontractor's right to recover for such termination shall be limited to the compensation received by Contractor from Owner for such termination on behalf of Subcontractor.

ARTICLE XI

11.1 Dispute Resolution. Disputes, if any, between Subcontractor and Contractor arising out of or relating to this Subcontract or the Work shall be resolved as provided in this Article .

11.2 Disputes Involving the Owner or the Architect. Any disputes in which the Owner or the Architect is a party shall be governed by the dispute resolution procedures in the Subcontract Documents other than this Subcontract. If those Subcontract Documents contain no dispute resolution procedures, such disputes shall be resolved as provided in Section 11.3 below.

11.3 Disputes Not Involving the Owner or the Architect. At the sole and exclusive discretion of Contractor, all disputes in which neither the Owner nor the Architect is a party shall be resolved in (1) binding arbitration, or (2) litigation in a state or federal court of competent jurisdiction situated in the state of the location of the Project. If Contractor determines to resolve disputes under this Subcontract by binding arbitration, the following rules shall apply.

- 11.3.1 Binding Arbitration shall be pursuant to the current Construction Industry Arbitration Rules of the American Arbitration Association unless the parties mutually agree otherwise. A written demand for arbitration shall be filed with the American Arbitration Association and the other party within a reasonable time after the dispute or claim has arisen, but in no event after the applicable statute of limitations for a legal or equitable proceeding would have run.
- 11.3.2 Any Arbitration pursuant to this Subcontract may be joined or consolidated with any arbitration involving (1) any other person or entity necessary to resolve the claim, dispute or controversy, (2) the same transaction or series of related transactions as those in the Arbitration, or (3) a common issue of law or fact with those in the Arbitration creating the possibility of conflicting rulings by more than one arbitrator or panel of arbitrators. The location of the arbitration proceedings shall be in the state of the location of the Project. The arbitration award shall be final.
- 11.3.3 Arbitration pursuant to this Section shall be governed by the applicable version of the Uniform Arbitration Act in enacted by the state of the location of the Project. The arbitrator, in determining an award, shall be without jurisdiction to enter any award not in conformity with the laws determined by the parties to be controlling pursuant to Section 12.4. The arbitrator shall have all authority necessary to enforce all the terms and conditions of this Subcontract and provide for all remedies available hereunder including, without limitation, interim relief, if appropriate. The arbitrator shall prepare a (1) reasoned award, or (2) findings of fact and conclusions of law, applying the governing laws to the facts of the case.
- 11.3.4 Notwithstanding the foregoing, the arbitrator shall be deemed to have exceeded the authority granted under this Subcontract if, and to the extent, an award does not comply with the requirements of this Subcontract. The Parties consent to the jurisdiction of the state and federal courts of the state in which the Project is located for the purposes of (1) enforcing the parties' obligation to arbitrate disputes, claims and controversies under this Subcontract, (2) determining the scope of the matters that are subject to arbitration, (3) requiring the joinder and/ or consolidation of matters subject to arbitration, and (4) enforcing and entering judgment upon the arbitration award entered by the arbitrator. Each Party waives any objection that it may now have or hereafter have to venue in such courts.
- 11.3.5 If any action or proceeding is brought in connection with this Subcontract, the prevailing party shall be entitled to recover its costs and reasonable expert and attorneys' fees.

ARTICLE XII

12.1 This Subcontract and the Subcontract Documents constitute the final, complete, and exclusive statement of the agreement between the parties, and supersedes and replaces in their entirety all prior oral or written agreements, including but not limited to, bids and bid acceptances. This Subcontract may not be altered, amended or extended, except by written agreement of the parties hereto executed by James Gramoll on behalf of Contractor.

12.2 This Subcontract shall inure to the benefit of and be binding upon the parties hereto, their successors and permitted assigns.

12.3 Delay by Contractor in enforcing any rights or remedies in the event of Default or a breach of any term or condition of this Subcontract or any other contract between Contractor or Subcontractor, shall not be construed as a waiver of such Default or breach. Payment by Contractor of progress payments or final payment shall not be construed as acceptance of any work for which payment is made or waiver of any Claims, rights or remedies under this Subcontract.

12.4 This Subcontract shall be construed and interpreted as a whole in accordance with its fair meaning and in accordance with the laws of the state of the location of the Project. Under no circumstances, however, shall such laws be interpreted to apply conflict of laws principles to require the laws of another state to determine the interpretation or construction of this Subcontract.

12.5 **Performance Guaranty.** If Subcontractor operates as a corporation, limited liability company, partnership or a business entity other than as an individual or sole proprietor, this Subcontract will be signed by the President and Secretary of the corporation, the managing member(s), partners, or other authorized principals of Subcontractor's company, and the officers, managing member(s), partners, and/ or other principals signing this Subcontract on behalf of the corporation, limited liability company, partnership or other business entity do jointly and severally, guarantee to the Contractor the full and faithful performance of this Subcontract by Subcontractor, and do further agree, jointly and severally, that they shall be personally liable to Contractor for the full and faithful performance of Subcontractor's obligations under this Subcontract. Failure of Contractor to request a performance bond from

Subcontractor shall not affect the obligation assumed by the officers, managing members, partners or other principals signing this Subcontract on behalf of Subcontractor.

IN WITNESS WHEREOF, this Subcontract has been executed by the Contractor and Subcontractor as of the day and the year below.

SUBCONTRACTOR: (SUBCONTRACTOR NAME)

By _____

Print _____

Its _____

Date: _____

CONTRACTOR: GRAMOLL CONSTRUCTION COMPANY

Auth _____

Print James C. Gramoll, President

Date: _____

Description	Orig Dur	Rem Dur	Early Start	Early Finish	Total Float	2021					2022												2023	
						El	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEE	
Bidding	30d	30d	27SEP21	05NOV21	0																			
Bidding Review	5d	5d	08NOV21	12NOV21	229d																			
Contracts	10d	10d	15NOV21	26NOV21	229d																			
Submittals/Material Order	30d	30d	29NOV21	07JAN22	229d																			
Mobilize	2d	2d	14MAR22	15MAR22	0																			
Site Prep	10d	10d	16MAR22	29MAR22	0																			
Exterior Demolition	7d	7d	30MAR22	07APR22	158d																			
Interior Slab Demo	10d	10d	30MAR22	12APR22	0																			
Utility relocation	7d	7d	08APR22	18APR22	158d																			
Excavate for footings	10d	10d	13APR22	26APR22	0																			
Underslab East Utilities	10d	10d	13APR22	26APR22	152d																			
Footings	15d	15d	27APR22	17MAY22	0																			
Extend parapet/New Beam	20d	20d	11MAY22	07JUN22	122d																			
Foundation	8d	8d	18MAY22	27MAY22	114d																			
Underslab West Utilities	10d	10d	18MAY22	31MAY22	0																			
Demo Areobics Roof	7d	7d	25MAY22	02JUN22	125d																			
Masonry	15d	15d	30MAY22	17JUN22	114d																			
Pour slab	8d	8d	01JUN22	10JUN22	0																			
Set steel for 2nd floor	15d	15d	13JUN22	01JUL22	0																			
Pour 2nd floor slab	4d	4d	05JUL22	08JUL22	0																			
Frame first floor	8d	8d	08JUL22	19JUL22	17d																			
Roof structural framing	20d	20d	11JUL22	05AUG22	0																			
Rough in MEPS 1st floor	5d	5d	20JUL22	26JUL22	17d																			
Frame ceilings 1st floor	6d	6d	20JUL22	27JUL22	87d																			
Rough in overhead 1st floor	5d	5d	20JUL22	26JUL22	19d																			
Hang and tape 1st floor	8d	8d	27JUL22	05AUG22	17d																			
Hang and tape ceilings 1st floor	6d	6d	27JUL22	03AUG22	19d																			
Frame 2nd floor	5d	5d	08AUG22	12AUG22	41d																			
Curtain wall	15d	15d	08AUG22	26AUG22	0																			
Paint first floor	4d	4d	08AUG22	11AUG22	17d																			
Rough in MEPS 2nd floor	5d	5d	15AUG22	19AUG22	43d																			
Roofing	10d	10d	15AUG22	26AUG22	51d																			
Set and pour stairs	5d	5d	15AUG22	19AUG22	70d																			
Frame ceilings 2nd floor	5d	5d	15AUG22	19AUG22	41d																			
Elevator shaftwall	4d	4d	15AUG22	18AUG22	52d																			
Hang and tape 2nd floor	8d	8d	22AUG22	31AUG22	43d																			
Meps in ceiling 2nd floor	4d	4d	22AUG22	25AUG22	41d																			

Start date 27SEP21

Finish date 25NOV22

Data date 27SEP21

Run date 02NOV21

Page number 1A

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Early bar

Progress bar

Critical bar

Summary bar

Start milestone point

Finish milestone point

