



ADDENDUM #2

DATE:	May 10, 2018	PROJECT NO.:	DFCM Project # 18012250 CRSA Project # 18-008
TO:	Gramoll Construction Attn: Troy North 175 West 1100 North North Salt Lake City, UT 84054	PROJECT:	Uintah Basin Technical College Welding Technology Building 1100 E Lagoon St., Roosevelt, UT 84066

This Addendum forms a part of the Contract Documents and modifies the original Bid Documents dated October 20, 2017 as noted below.

This Addendum consists of (17) 8-1/2" x 11" Addendum narrative pages, and all modified specifications and drawings have been replaced in the respective sets, or are described in this narrative.

I. CHANGES TO PRIOR ADDENDA:

I-1 None

II. CHANGES TO BIDDING REQUIREMENTS:

II-1 None

III. CHANGES TO AGREEMENT & OTHER CONTRACT FORMS:

III-1 None

IV. CHANGES TO CONDITIONS OF THE CONTRACT:

IV-1 None

V. CHANGES TO SPECIFICATIONS:

V-1 Table of Contents: updated.

V-2 SECTION 054000 COLD-FORMED METAL FRAMING
Add entire section to the specification book. The index does not need to change.

V-3 SECTION 072100 - THERMAL INSULATION

V-3.1
2.2 GLASS-FIBER BLANKET
Delete the following:

A. Insulation shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

B. Recycled Content: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than **<Insert value>** percent.

V-3.2 Revise to read as per the following:

2.2 GLASS-FIBER BLANKET

A. Glass-Fiber Blanket

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

V-3.3 Revise to read as per the following:

2.3 INSULATION FASTENERS

A. Adhesively Attached, Spindle-Type Anchors.....

2. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Insulation-Retaining Washers:

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

C. Insulation Standoff:.....

1. **Manufacturers:** Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

V-4 SECTION 072726 FLUID APPLIED MEMBRANE AIR BARRIERS

Add entire section to the specification book. The index does not need to change.

V-5 SECTION 075423 - THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING

Revise to read:

3.11 FIELD QUALITY CONTROL

- B. Perform the following tests:

V-6 SECTION 084313 - ALUMINUM-FRAMED STOREFRONTS

Revise to read:

3.5 FIELD QUALITY CONTROL

- B. Field Quality-Control Testing: Perform the following test on representative areas of aluminum-framed storefronts.

1. In accordance with Section 019117 Functional Performance Testing.

V-7 SECTION 086200 - UNIT SKYLIGHTS

3.3 FIELD QUALITY CONTROL Performance Testing.

Revise to read:

- C. Tests: In accordance with Section 019117 Functional Performance Testing.

V-8 SECTION 105113 – METAL LOCKERS

3.3 FIELD QUALITY CONTROL Performance Testing.

Revise to read:

- D. Tests: In accordance with Section 019117 Functional Performance Testing.

V-9 SECTIONS 224000, 226213, 230513, 230548, 230900, – See attached Mechanical and Plumbing Narrative.

V-10 SECTIONS 26000 – See attached Electrical Narrative.

V-11 SECTION 329119 – FINE GRADING AND SOIL PREPARATION

2.3 WELDED ATHLETIC LOCKERS, revised to KNOCKED-DOWN ATHLETIC LOCKERS

- B. Perforated Doors section and sub paragraphs removed.
- F. Perforated Sides section removed.
- G. Expanded Metal Sides section removed.
- K. Recessed door handle and latch: 2. Single Point Latching section removed.
- N. Locks: Revised to read Combination padlocks.
- 2.4 LOCKS
- B. Built in Combination Lock paragraph removed.

VI. CHANGES TO DRAWINGS:

- VI-1 General:
 - a) GI001: Corrected building name on cover sheet. Reordered Architectural Site drawings on drawing index. SE005 renamed to SE004.

- VI-2 Architectural Site:
 - a) AS101: Detail B4/AS101 added to clarify sidewalk ramp. Fencing symbols updated to match floor plan. Dimensions added.
 - b) AS501: Monument sign details added. ADA Parking sign details added.

- VI-3 Civil:
 - a) C100: Added North and South storm drain piping. Added yard drain in the area southwest of the building. Added sanitary sewer lateral details and elevations. Added note at existing sewer stub for contractor to verify invert elevation of stub. Added sanitary sewer cleanouts. Added benchmark locations. Added hatching to identify site flatwork and sidewalks. Extended North concrete apron to back of new laydown curb. Clarified waterline scope of work (in contract vs. not in contract). Added detail callouts.
 - b) C102: Revised sidewalk grades / TOC elevations. Revised accessible ramp at west tie-in to existing parking area. Extended North concrete apron to back of new laydown curb and referenced detail.
 - c) C201: Added storm sewer and sanitary sewer profile views.
 - d) C501: Removed details that were not applicable to the project.
 - e) C502: Added additional construction details.

- VI-4 Structural:
 - a) SE005: Sheet SE005 has been renamed to SE004. All sheets included to updated drawings with consultant logo moved out of DFCM stamp location.

- VI-5 Architectural:
 - a) AE001: Restroom sign note added to match existing signs.
 - b) AE002: Wall type F removed. Wall type P Alternate #1 designation removed. Clarification of stud spacing added to wall type S. Gauge added to stud. Type "X" note added to gypsum board.
 - c) AE102: Cricket added. Callout added at skylight. Keynote added at gutter and downspout. Dimension added at roof access ladder. Detail callout added.
 - d) AE151: P2 finish callout removed at locations clouded. P3 finish callout added to walls indicated. Stained & Sealed concrete (SS) tag corrected to indicate Stained Concrete. Locker Room 105 floor finish changed to Sealed Concrete (SC).
 - e) AE201 & AE202: Dimensions added to clarify metal panel size and layout. Elevation targets added. Callout added for soffit C4/AE502.
 - f) AE310: Dimensions added. Keynotes added. Elevation target added. Deflection track keynote added.
 - g) AE311: Elevation target added for top of parapet and top of wall. Keynote verbiage modified. Irrelevant elevation target removed.

- h) AE312: Wall type callout added to clarify wall section.
 - i) AE313, AE314: Wall sections added. Elevation targets added to wall sections and irrelevant elevation targets removed.
 - j) AE402: Keynote added to clarify location of floor mounted ADA compliant bench.
 - k) AE501: Metal panel details added to clarify spacing and detailing. Wall corner detail added. Clarifying notes added and verbiage revised on footing details.
 - l) AE502: Fascia detail added to clarify detailing.
 - m) AE503: Soffit detail added. Clarifying notes added and verbiage revised on parapet details. Deflection track detail corrected to reflect correct roof condition. Ships ladder notes added to clarify handrail and detailing dimensions.
 - n) AE504: Deflection clip added to details.
 - o) AE505: Skylight detail and skylight curb details added.
 - p) AE590: Mounting plate detail added. Casework notes changed as indicated in drawings to match information in specification.
 - q) AE601: Mullions removed from window types B, C, & D. Head, jamb, and sill detail callouts updated for window types D & E. Frame material clarification added below window type. Glazing legend updated & glazing tag added to window types.
 - r) AE603: Window glazing details updated to reflect correct frame type and wall assembly. Flashing with drip edge added at head details. Window sill edge changed from radiused to eased. Window frame support added at detail B2/AE603.
 - s) AE611: Sealed concrete and stained concrete basis of design information in finish schedule updated to reflect information in specifications. E16 equipment clarified in equipment schedule.
- VI-6 Mechanical & Plumbing: See attached narrative. All sheets included to move engineer logo out of DFCM stamp location.
- VI-7 Electrical: See attached narrative. All sheets included to move engineer logo out of DFCM stamp location.

END OF ADDENDUM

UBTC WELDING TECHNOLOGY BUILDING
ADDENDUM No. 2
MAY 10, 2018

Bidders on the above captioned project will be governed by the following corrections and/or clarifications to the original issue of specifications and drawings. This addendum becomes part of the Contract Documents.

All changes included herein shall not be limited to the sheet, page, detail, or paragraph indicated, but shall apply to all references to that item in any part of the contract documents.

Drawings:

Mechanical:

Drawing M-001:

1. Changed RTU-1 schedule to show relief fan BHP and HP.
2. Eliminated Note 15 on RTU-1 Schedule C.
3. Changed MAU schedule to show BHP, HP, and MCA.
4. Eliminated Note 11 on MAU Schedule.
5. See attached drawing M-001 for additional clarification.

Drawing MH101:

1. Shifted the 10" welding exhaust duct at column line A between 5.5 and 6 so it doesn't run above any electrical gear.
2. Mounted ATC panels to opposite welding booth enclosure wall at column line A and 6.
3. Located sensor for MAU-1 on column line 2 and B.S.
4. Located sensor for MAU-2 on column line D and 4.25.
5. Add "Use Fiberglass Underground Duct" to drawing Note 23.
6. Changed "Force" to "Four" on Drawing Note 49.
7. Added Drawing Note 66.
8. See attached drawing MH101 for additional clarification.

Drawing MH102:

1. Show VFD location by RTU1, 2, 3, and 4.
2. See attached drawing MH102 for additional clarification.

Drawing MI601:

1. Changed General Note to read:
 - a. All Control conduit wiring, installation, connections, etc. shall be by Division 23.
2. Added Digital on output A9 to enable/disable Heat Tape in drains.
3. Eliminated "Located Near RTU-1 in IT Room" under Direct Digital Control Panel No. A.
4. Changed "Control wiring by Division 23, Division 26 to provide conduit" to "Control conduit and wiring by Division 23" for Split System Air Conditioning Unit.

5. Changed ground to roof for Split System Air Conditioning Unit.
6. See attached drawing MI601 for additional clarification.

Drawing MI602:

1. Changed General Note to read:
 - a. All Control conduit wiring, installation, connections, etc. shall be by Division 23.
2. Added Direct Digital output B9 to Enable/Disable Heat Tape in roof drain.
3. See attached drawing MI602 for additional clarification.

Drawing MI603:

1. Changed General Note to read:
 - a. All Control conduit wiring, installation, connections, etc. shall be by Division 23.
2. Added Direct Digital output C9 to Enable/Disable Heat Tape in roof drain.
3. See attached drawing MI603 for additional clarification.

Drawing MI604:

1. Changed General Note to read:
 - a. All Control conduit wiring, installation, connections, etc. shall be by Division 23.
2. Added Direct Digital output D9 to Enable/Disable Heat Tape in roof drain.
3. See attached drawing MI604 for additional clarification.

Drawing MI605:

1. Added Direct Digital Controller "E".
2. Changed note under evaporated cooler switch to read "Wall switch provided, installed and wired by Division 23".
3. Added callouts for E-9, through E-20 for fill and drain valves on evaporative cooler EC-1, 2, 3, and 4.
4. Changed note above evaporative cooler fill/drain valve assembly to read "Provide DDC Control from digital output on DDC controller E to fill valve, drain valve and fill line, drain valve serving evaporative coolers in order to open/close valves. Typical for EC-1, 2, 3 and 4.
5. Add signal to DDC controller from each evaporative cooler to indicate it is running.
6. Changed note below evaporative cooler control diagrams to read "Motor with built-in overload protection furnished, installed and wired by Division 23.
7. Added controls to each VFD for REF-1, 2, 3 and 4.
8. Changed note for REF's to read "Damper opens when fan runs from auxiliary contact on fan motor VFD. Control damper conduit, wiring, and connection by Division 23.
9. See attached drawing MI605 for additional clarification.

Plumbing:

Drawing PL001:

1. Changed MV-2 on the Thermostatic Mixing Valves Schedule from an emergency shower mixing valve (Bradley S19-2200) to an emergency eye/face wash mixing valve (Bradley G3600LF).
2. Removed the Pipe Material Schedule.
3. Removed note 7 under the General Plumbing Notes
4. Changed trench drain width from 12" to 6" on the Plumbing Fixture Schedule.
5. Updated Air Compressor schedule to match newest air compressor selection.
6. Added Refrigerated Air Dryer schedule
7. See attached drawing PL001 for additional clarification.

Drawing PL101:

1. Changed drawing notes 5 through 7 and 14.
2. Added drawing notes 16 through 27.
3. Added large scale column plumbing plan 2/PL101.
4. Added water and drain piping serving evaporative coolers.
5. Extended welding gas piping loop.
6. Changed roof drain drop locations on grid line 1.
7. Added 2" RD drop between grid lines 3 and 4 and below grid line F.
8. Changed tepid water line size from 1-1/4" to 3/4".
9. See attached drawing PL101 for additional clarification.

Drawing PL102:

1. Added drawing notes 5 through 9.
2. Changed drawing notes 1-4.
3. Changed GPM and SQ. FT. calculations per roof drain.
4. Rerouted roof drain piping and drop locations.
5. Changed roof drain drop sizes.
6. Added notes and piping serving evaporative coolers on roof.
7. Added notes and piping serving MAU and RTU units on roof.
8. See attached drawing PL102 for additional clarification.

Drawing PL401:

1. Added drawing notes 8 through 12.
2. Changed drawing note 7 from 4" RD to 3" RD.
3. Removed compressed air piping between grid lines 1 and 2 on 1/PL401.
4. Rerouted vent piping serving P-4B on 1/PL401.
5. Changed PRV and air compressor locations in mechanical room.
6. Added electrical equipment in mechanical room.
7. Added 1" drain piping from evaporative coolers on grid line D.
8. Relocated DHW piping serving P-4B.
9. Added roof drain and secondary roof drain drop locations between grid lines 3-4 and F-G.
10. See attached drawing PL401 for additional clarification.

Drawing PL502:

1. Changed pipe sizes on welding gases detail 4/PL502.
2. Changed FS to FD-2 on gas water heater detail 2/PL502.
3. Changed ductile iron grate to heel-proof ductile slotted grate on trench drain with sand/oil catch basin detail 3/PL502.
4. See attached drawing PL502 for additional clarification.

Drawing PL503:

1. Added column hose bibb detail 4/PL503.
2. Changed compressed air piping detail 1/PL503 to include refrigerated air dryer.
3. See attached drawing PL503 for additional clarification.

Specifications:

Mechanical:

General:

1. The following warranty periods for noted pieces of equipment shall govern. All other warranty periods shall be as specified.
 - a. All HAVC Compressors - 5 years parts and labor.
 - b. Water heaters – 5 years warranty parts replacement.
 - c. DDC Control System – 2 years parts and labor.
 - d. VFD Warranty – 2 years parts and labor.
 - e. Air Handling Device Warranty (Including RTU, MAU's, REF's and Evaporative Coolers) – 2 years parts and labor.

230513 Motor, Drives and Electrical Requirements for Mechanical Work:

1. 2.3 Variable Frequency Drives. This specification pertains to factory Installed VFD's in packaged equipment, such as RTU and MAU's, VFD's for REF's are by Division 26.

230548 Mechanical Sound, Vibration and Seismic Control:

1. 3.6 Vibration Isolation C.1. Eliminate reference 1 and 5 to utility exhaust fans. There are no utility exhaust fans. Add rooftop exhaust fans.

230900 Mechanical Control Systems:

1. 1.2, D. Add 3. Control conduit for control wiring.
2. 1.2, D, 3, b. Include using conduit in open areas.
3. 2.1 Change BYU-Idaho to Uintah Basin Technical College.
4. 3.5, C. Change to "Makeup Air Unit MAU-1 and MAU-2 shall interlock to run through the DDC system and whenever their local welding fume extractors are running."
5. 3.5, D. Change to "Makeup Air Unit MAU-3 shall be interlocked to run through DDC system when the restroom exhaust fan runs and when it's local welding fume extractor runs."
6. In 3.5 E. change space static pressure set point of +0.5 to -0.05 compared to office/classroom space and +0.05 compared to outside.

7. 3.3.F. Delete from paragraph “during occupied hours. The relief fans shall be allowed to operate whenever the welding fume exhausters are off. Interlock MAU-1 to the west welding fume exhauster and MAU-2 to the east welding fume exhauster.
8. Add L During winter months when less air is needed to heat the space, each units VFD’s shall slow down while still maintaining adequate air flow across the burner.
9. Each mixed air controller shall be adjustable.
- 10.3.4 A Add In night setback, the units shall operate if the space temperature drops below 55°F (Adj.)
11. 3.8 Add H. For each REF-1through REF4 provide in parallel with each manual timer switch a DDC start/stop signal, speed control and feedback. This will allow the RFI’s to start when the evaporative cooler runs and lets the owner remotely set the speed.
- 12.3.7 Add D. For each EC-1 through EC-4 add an interlock to let the DDC know when any evaporative cooler is running.
13. Add each evaporative cooler’s set of fill and drain valves, to the DDC system. Set to operate when outside air drops to 40°F (Adj.)

Plumbing:

224000 Plumbing Fixtures:

1. In section II C:2 changed Sensor Faucet Model number from Sloan “Optima” Model No ETF-610-8-B-BDT to Moen Model No. CA8302.
2. In section II D:5 changed Circular Wash Station model number from Intersan Model IF6SM-2L to Bradley WF2705.
3. In section II G changed Emergency Eye Wash and Shower to Emergency Eye/Face Wash

Added the following Specification Section

SECTION 226213 -AIR COMPRESSORS

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To

1. Furnish and install air compressors as described in Contract Documents.

B. Related Sections

1. Section 221500 apply to this section.

PART 2 - PRODUCTS

2.1 MANUFACTURED UNITS

A. Compressor

1. Single stage reciprocating type pressure lubricated of capacity shown on Drawings and following
 - a. Working pressure - 150 psig (adjustable).
 - b. Include pressure reducing valve with filters, pressure gauges, ball valves, moisture condenser, automatic drain and accessories to maintain 100 psig (adjustable) at equipment.
2. Approved Manufacturers & Models -
 - a. Ingersoll Rand Model No UP6 25
 - b. Quincy
 - c. Engineer approved equal prior to bidding

B. Tank

1. ASME rated, stamped and constructed with ASME rated and labeled pressure relief valve.

C. Intermittent Stop/Start Control – Provide with factory starter designed to cut-out at 150 psig (adjustable), cut-in at 110 psig (adjustable).

D. Motor

1. As specified in Section 230513.
2. Equip with motor overload protection.
3. Provide with enclosed belt guard.

2.2 ACCESSORIES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering piping products which may be incorporated in the work are, but not limited to:

1. Filter -
 - a. ARO
2. Quick Couplings -
 - a. ARO, Series 310
3. Pressure Regulating and Reducing Valves -
 - a. ARO, 127241-010, 5-125 psi
4. Combination Filter Regulator -
 - a. Watts
 - b. ARO, 129241-002, 5-125 psi
5. Solenoid Valve -
 - a. ASCO, 8210 Series, 120 volt, normally closed, 150 psi operating differential, brass body.

6. Desiccant Filter - Wall or frame mounted packed column, Desiccant media filter to adsorb/absorb moisture and oil replaceable media to change color as exhausted. By Deltech, Balston. Capacity to match compressor capacity.

2.3 REFRIGERATED AIR DRYER

- A. General: Air dryers shall be of the continuous duty mass refrigerated dryer type and shall maintain the air in the system with a dew point low enough to prevent condensation within the piping at line pressure in a cold building ambient environment. (40 degrees F ambient) at 125 psi main pressure, 20 psig sub-main pressure. Locate air dryer(s) off of the outlet of the compressor(s).] Control air delivered to the system shall conform to ISA 7.0.01.
- B. Type: Provide self-contained, cabinet housed, mechanical refrigeration type units complete with heat exchanger, refrigeration compressor, condensing coil and fan(s), automatic controls, moisture removal trap, internal power and control wiring, internal piping, and full refrigerant charge.
 1. Air Connectors: Inlet and outlet connections at same level, factory insulated.
 2. Heat Exchangers: Air to air pre-cooling/recovery coil and refrigerant to air cooling and condensing coils. Provide heat exchangers with automatic control system to bypass refrigeration system on low or no load condition.
 3. Moisture Separator: Centrifugal type located at discharge of heat exchanger.
 4. Refrigeration Unit: Hermetically sealed type to operate continuously to maintain specified 21 degrees F (-6 degrees C) dew point. House unit in steel cabinet provided with access door and panel for maintenance and inspection.
 5. Accessories: Air inlet temperature gage, air inlet pressure gage, on/off switch, high temperature light, power on light, refrigerant pressure gage, air outlet temperature gage, air outlet pressure gage.
 6. Motor: Refer to Section NEMA MG1.
 7. Controls: Set up units for automatic control and operation whenever activated.
 8. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.
 8. Disconnect Switch: Provide unit with factory mounted disconnect switch in control panel.
 9. Cord and Plug: Provide unit with 3-wire (#12) plus ground cord and plug for connection to electric wiring system, including grounding connector.

- C. Capacity and electrical characteristics: As scheduled
- D. Acceptable Manufacturers
 - 1. Hankison
 - 2. Ingersoll-Rand
 - 3. Quincy
- E. Installation:
 - 1. Set and secure units on the frame on a reinforced concrete pad
 - 2. Pipe unit dry compressed air discharge with union, spring loaded check valve, and isolating ball valve at compressed air discharge outlet.
 - 3. If there is a drain connection on the unit, pipe same to nearest oil/water separation unit.
 - 4. Connect units to provided power.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount air compressor on concrete housekeeping pad. Mount compressor on vibration isolation pads.
- B. Provide quick connect stub-outs in shop area as shown on the drawings.
- C. Connect compressed air piping to compressor with flexible piping connection.

END OF SECTION

PRIOR APPROVALS

The following manufacturers, vendors, etc., are noted in compliance with the Instructions to Bidders.

Furnish only equipment and materials from among those listed in the specifications or in this prior approval list. Any furnished item shall comply with the criteria and character of the basic specification, fully adapted to the actual project conditions. Costs of accommodating equipment which varies from that indicated shall be the responsibility of the Contractor.

These items shall be reflected in the bid breakdown form as indicated.

Product
Kitchen Sink

Manufacturer
Bradley
Just

Service Sink

American Standard
Commercial Enameling
Eljer
Kohler
Crane
Acorn

Electric Water Cooler

Oasis
Sunroc
Haws
Filtrine

Rooftop Units

Aaon

Makeup Air Unit

Daikan
Carrier
Trane
York

Rooftop Exhaust Fan

Cook

Ventilation Fan

Greenbeck
Twin City
Penn Barry
New York Blower

END OF ADDENDUM 2



Mechanical Engineering
Electrical Engineering
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Electrical Addendum

To: Jeff Cramer
Company: CRSA

phone: 801.355.5915
email: jeff@crsa-us.com

copied: ken@crsa-us.com
lsk@spectrum-engineers.com

Job: UBTC Welding Building

Job No. 20170763

Re:

From: David Hawkes

phone: (801) 401-8416

Date: 05/10/2018

email: dah@spectrum-engineers.com

Distributed Via: Email

page: 1 of 4

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.

Electrical Addendum

Drawings

1. SPECS – 262923 – variable-frequency motor controllers added. See attached.
2. EE001 – Symbol for THERMOSTATE was changed to be a symbol for TEMPERATURE SENSOR. Following contact information for Moon Lake Electric was added.

ELECTRIC UTILITY

MOON LAKE ELECTRIC
ASSOCIATE INC.
ROOSEVELT, UTAH
84066

PERSON CONTACTED: BRANDON SHOLES
DATE: -
PHONE NUMBER: (435) 722-5454
EMAIL: BSCHOLES@MLEAINC.COM

3. EE502 – Removed cable tray details due to no cable tray in project.
4. EE601 – Contractor shall provide system bonding jumper on main electrical gear per NEC. Bonding jumper shall not be provided at transformer. SSBJ not needed.
5. EE702 – Detail A4, base of transformer shall be 13' 9" above finished floor.



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6. ES501 – Has the following clarifications and changes.
 - a. Light pole base shall be 6' below grade.
 - b. Provide in grade pull box next to irrigation pull box that has (1) 1" CND from panel OP1 and (1) 1" CND from IT room.

7. EP101 – Has the following clarifications and changes. See attached.
 - a. WAP locations clarified.
 - b. Clarification that 1" conduit from controller to extraction system units for controls is in addition to required power connections.
 - c. Fan shutdown relays for extraction system units.
 - d. Receptacles in rooms 200O, 200EE, and 200U changed to GFCI.
 - e. Data and power for irrigation controller.
 - f. Added connection for overhead crane controls.

8. EP102 – Has the following clarifications and changes. See attached.
 - a. VFDs added for relief exhaust fans
 - b. Fan shutdown relays
 - c. Temperature meters added for heat trace system.
 - d. Clarified that contractor will provide raceway, branch circuiting, and termination for heat trace.
 - e. Keynote 7 clarified that heat trace will join lower roof pipe and continue to bottom of pipe.
 - f. West heat trace changed to run on exterior pipe all the way down to bottom of pipe.

9. EP601 – As the following clarifications and changes. See attached.
 - a. Voice/data riser clarified that conduits will run back to IT room and not have cable tray.
 - b. Panels S1 and S2 changed to 225A.
 - c. Breaker for panel MEC to be 100% rated.
 - d. Transformers shall be K-1 rated.
 - e. Panels SP1, SP2, and OP1 shall all have 200% neutrals and size SE ground.
 - f. Main breaker shall be 1000A with LSIG GFP and Arc Flash reduction.
 - g. Main gear shall be NEMA 3R and 65000AIC rated.

10. EP602 – Has following clarifications and changes. See attached.
 - a. cable and fuse sizes clarified.
 - b. Starters provided by dev 26 NEMA size clarified.
 - c. Disconnect for SAC-2 shall be NEMA 3R rated.
 - d. Overhead crane voltage and load updated.
 - e. Connection added for overhead crane controls.



- f. VFDs provided for REF-1, REF-2, REF-3, REF-4.
 - g. Note 7 removed for heat trace.
 - h. Clarified disconnects for large grinders.
11. EP603 – Panel OP1 shall have bus for 200% neutral and 125A main breaker. Panel MEC main breaker shall be 100% rated. Welders on panel S3 shall have breakers with Time-Current curves comparable to recommended fuse and have been derated in accordance with NEC 630.11(B).
12. EP604 – Panel SP1 And SP2 shall have bus for 200% neutral. Panels S1 and S2 have changed to 225A main breakers and welders on panels have been derated in accordance with NEC 630.11(B).
13. EL101 – Has the following clarifications and changes.
- a. Emergency lighting in the classroom will be the following fixture positions
 - i. Middle row far right
 - ii. Middle row third from the right
 - iii. Southern row second from the left
 - b. Downlights in restrooms do not need to be wet listed. Types changed to D4A and D4E (D4A with battery pack).
 - c. Lights in custodial (200EE) and tool storage (200Z) do not need battery packs.
 - d. Grinding room (200L) shall have control type of “1S3”. And will not have override switch S4 but a normal lighting station. All lighting shall be pendant mounted at 10’ above finished floor.
 - e. ACAC (200I) will not have override switch S4 but a normal lighting station. All lighting shall be pendant mounted at 10’ above finished floor.
 - f. Welding Lab (200H) lights shall be mounted 26’ 6” above finished floor.
 - g. Welding Lab (200BB) lights shall be mounted 13’ above finished floor. The three fixtures in the lower roof section on south east corner of room lights shall be mounted 12’ 6” above finished floor.
 - h. North exterior wall packs shall be mounted at 17’ above grade.
14. EL601 – Has the following clarifications and changes. See attached.
- a. Fixture type (D4E) added which is the same as (D4A) but with battery pack.
 - b. Fixture (IN-USE) clarified to have custom lettering of “IN USE”.
 - c. Fixture (LW8) Option 2 changed.
 - d. Fixture (SL4) and (SL8) changed to not have battery packs. Fixture (SL4E) added which is same as (SL4) but with battery pack.
 - e. Fixture (SW4E) changed to (PW4E) and will be pendant mounted.
 - f. Fixture (TL) clarified as being theatrical spotlight. Option 1 for fixtured changed.
 - g. Fixture (XP4) will be pendant mounted.
 - h. Fourth option added for all interior lights.



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15. EL603 – Control type “1S1” shall turn lights on with “MANUAL & OCCUPANCY”.
16. EL605 – Has the following clarifications and changes.
 - a. All exterior lights shall be multi-volt with 0-10v dimming 10%.
 - b. All blank spaces on the relay panel shall be spares that match the relay diagram.
 - c. Photocell controlling zone “j” on relay panel diagram shall control zone “e”.
 - d. Override switch engravings shall go as follows:
 - i. Zone: Welding Lab 200H; Engraving: LAB W-ON
 - ii. Zone: Welding Lab 200BB; Engraving: LAB E-ON
 - iii. Zone: Locker Room; Engraving: LCKR-ON
 - iv. Zone: Lobby Lighting; Engraving: LOBBY-ON
 - v. Zone: Breakroom Lighting; Engraving: BRK RM-ON
 - vi. Zone: Exterior Building LTG; Engraving: BLD-ON
 - vii. Zone: Exterior Site LTG; Engraving: SITE-ON
17. EY101 – Relay and Control Modules for air supply units. Door hardware added for exterior door to mechanical room. Smoke added near FPP panel. See attached.

END OF ADDENDUM

Attachments <SPEC 262923, EP101, EP102, EP601, EP602, EL601, EY101>