#### Addendum No. 003

January 18, 2022

ADDENDUM TO PLANS AND SPECIFICATIONS FOR:

ODOT - Eaton Outpost DOT-200023

Prepared For: Ohio Department of Transportation / Ohio Facilities Construction Commission

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This Addendum is included in the work as noted in the Notice to Bidders and Form of Proposal. Each item refers to drawing sheet numbers, specification numbers, or general comments.

To All Bidders: This addendum supplements and amends the original bid documents dated December 17, 2021 and shall be taken into account in preparing proposals and shall become a part of the contract documents.

Receipt of this Addendum shall be acknowledged by inserting its number and date in the space provided on the Bid Form.

This Addendum consists of 12 pages (6-8.5x11 sheets and 6-24x36 sheets) included herein.

#### PROCUREMENT/CONTRACTING/SPECIFICATIONS:

#### Section 07 41 13 – Standing-Seam Metal Roof Panels

Amend specification to include gutter and downspout sizes and profiles. Add Item 2.5-D-1 and 2.5-D-2 and amend Item 2.5 E to read as follows:

- D. Gutters: Formed from same material as roof panels, complete with end pieces, outlet tubes, and other special pieces. Fabricate in minimum 96-inch- (2400-mm-) long sections, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Furnish gutter supports spaced a maximum of 36 inches (914 mm) o.c., fabricated from same metal as gutters. Provide wire ball strainers of compatible metal at outlets. Finish gutters to match roof fascia and rake trim.
  - 1. Box-Style
  - 2. Minimum 4" depth and 5" bottom width.
- E. Downspouts: 3"x4" corrugated rectangular, formed from same material as roof panels. Fabricate in 10-foot- (3-m-) long sections, complete with formed elbows and offsets, of size and metal thickness according to SMACNA's "Architectural Sheet Metal Manual." Finish downspouts to match metal wall panels.

#### Section 23 83 00.01 – Radiant Heating Units (Revised Specification Attached)

Revised spec to remove vacuum pump system.

#### **DRAWINGS:**

#### **Revise Sheet H600 – HVAC Schedules (Revised Sheet Attached)**

Revise voltage for EF-1 and EF-2 as clouded.

#### Revise Sheet ESU – Electrical Site Utility Plan (Revised Sheet Attached)

Revise Plan Note S1 to underground feed as clouded.

#### **Revise Sheet E000 – Electrical Legends (Revised Sheet Attached)**

Add symbols for CO and NO2 detectors as clouded.

#### **Revise Sheet E101 – First Floor Lighting Plan (Revised Sheet Attached)**

Revise fixture identification to 'C1' as clouded to match Lighting Fixture Schedule.

#### **Revise Sheet E201 – First Floor Power Plan (Revised Sheet Attached)**

Add locations for CO and NO2 sensors as clouded.

Update symbology for disconnects as clouded.

Revise feeds for EF-1 and EF-2 as clouded.

Revise Plan Note E11 as clouded.

Add Plan Notes E27 and E28 as clouded.

#### **Revise Sheet E501 – Electrical Schedules (Revised Sheet Attached)**

Revise Equipment Starters and Disconnects schedule as clouded.

Revise feeds for EF-1 and EF-2 in Panel EL1 as clouded.

#### **BIDDER QUESTIONS AND ANSWERS:**

- Q1: "The venting material for the IRH units is called out to be sch 80 CPVC in spec section 238300.01, 2.01-D-3. When I checked the basis of design manufacturer's installation manual, CPVC is not listed as one of the materials that they recommend using. Please confirm that single wall pipe (type-C) that the manufacturer recommends is an acceptable material to be used for venting material."
  - A. The portion of the specification referenced is in regard to vacuum pumps, which are not applicable to the system shown in the drawings. A revised specification has been included in this addendum for clarification.
- **Q2:** "Is concrete encasement required for all underground conduits or only conduits under paved areas?"
  - A. Concrete encasement is required for all conduit under driveable surfaces. Sand may be used in non-driveable (i.e., grass) areas.

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- **Q3:** "Are aluminum conductors allowed per the feeder schedule on E500?"
  - A. Yes. Aluminum conductors are permitted where wire sizes are provided on the feeder schedule.
- **Q4:** Sheet E201 "The disconnect switches on this sheet for various equipment use the symbol for a fused disconnect switch. The notes and one-line call for non-fused. Are fused disconnect switches required?"
  - A. A fused disconnect is only required on the secondary of the transformer feed which feeds the pole barn panel. An updated drawing has been included in this addendum for clarification.
- **Q5:** Sheet E201 "Are there locations for the CO and NO2 sensors for the gas detection system?"
  - A. See drawings included herein updated to show locations of CO & NO2 sensors; one of each just inside the wash bay and one of each at the gas detection control panel.
- **Q6:** Sheet E101 "There is a type R5 light fixture shown but it is not on the fixture schedule."
  - A. This is fixture C1 on the fixture schedule. This has been revised for clarification in the drawings included in this addendum.
- **Q7:** Sheet E201 "There is a symbol marked NPBI-1. Can this be identified to what this is?"
  - A. This is a 24V in-duct air purifier 120/24V transformer provided by manufacturer. Make final connections. See note H15 on Drawing H101 and revised drawing E201 included in this addendum for further information.
- **Q8:** Sheet E601 "Fuel Station Grounding Plan Is this work part of the contract or is it existing?"
  - A. Existing grounding is sufficient. Grounding diagram and associated notes are provided as reference when providing new feeders to existing equipment.

#### END OF ADDENDUM NO. 003

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#### SECTION 238300.01 - RADIANT HEATING UNITS

#### PART 1 GENERAL

#### 1.01 DESCRIPTION

A. Provide a gas-fired infrared tube heating system, including all required tubing, reflector, hangers, burners, combustion chambers, controllers, temperature sensors, etc.

#### 1.02 SUBMITTALS

- A. Submit Manufacturer's mechanical product data, including product description, technical data and installation instructions.
- B. Submit shop drawings showing complete details of installation of gas-fired radiant systems, including layout, suspension, connections, burners, heat exchangers and controls.
- C. Submit wiring diagrams indicating power and control wiring required for system. Clearly differentiate between portions of wiring that are factory installed and portions to be field installed.
- D. Submit copy of Manufacturer's current design certification from Canadian Standards Association International (CSA), covering all components approved for use as a gas-fired radiant system.
- E. Submit maintenance data and parts list for each type and size of radiant heaters, including troubleshooting guide. Include this data, product data, shop drawings, and wiring diagrams in maintenance manual, in accordance with requirements of Schedule E, "Materials Approval Submittal."

#### 1.03 WARRANTY

- A. Provide a written Manufacturer's warranty agreeing to replace/repair, within warranty period, components of gas-fired radiant systems furnished by Manufacturer, which are defective in either material or workmanship, provided Manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to for (3) years from date of Contract Completion of entire radiant heating system, including electrical components. Minimum warranty period shall be Ten (10) years on the heater's burner core, heat exchanger, and combustion chamber tubes
- B. Burner combustion chambers shall have a warranty period of (15) years from date of Contract Completion.

#### 1.04 ACCEPTABLE MANUFACTURERS

- A. Roberts Gordon
- B. Detroit Radiant
- C. Superior Radiant Products

#### PART 2 PRODUCTS

#### 2.01 RADIANT PIPE HEATING SYSTEM

A. Burner Assemblies: Heavy-duty cast iron burner heads, pre-wired gas controls with direct spark ignition module, combustion air filters with MINIMUM filtering surface area of 106 sq. in., cast iron combustion chambers with 5/32 in. minimum thickness, and threaded 4 in. pipe fitting for upstream and downstream tubing connection. Steel combustion chambers are not acceptable.

System shall vent all products of combustion outdoors per unit manufacturer's recommendation. Provide minimum number of burners indicated:

- 1. To ensure proper heat distribution. Fewer burners of larger capacity will not be accepted. Design firing rate of burners shall be as stated on Drawings.
- 2. To totally pre-mix air and gas required for combustion.
- 3. To maintain constant proportion of fuel gas to filtered combustion air. Introduce both fuel gas and air at atmospheric pressure. If combustion air flow is impeded for any reason, ensure that gas flow rate will decrease in constant proportion to maintain proper gas/air mixture for complete combustion.
- B. Burner Controls: All burners shall be factory-wired for 115 volts AC with transformer for 24 volts AC direct spark ignition (DSI) module operation and supplied with a grounded 24 in. to 30 in. 3-wire pigtail located at rear of burner.
  - 1. Fail-Safe Controls: To ensure a high degree of fail-safe operation, system shall shut off main flow of gas if any or all of the following abnormal conditions occur:
    - a. Power fails. (Gas valves in burners close in safe position.)
    - b. Main valve fails in open position.
  - 2. DSI Module: All gas vacuum-firing burner units shall be equipped with a DSI module with a (15) second flame response time per ignition trial before lockout occurs. DSI module shall be capable of a minimum of (3) trials for ignition. Spark shall shut off when burner flame is established.
- C. Radiant Piping Heat Exchanger: 4 in., 16 ga. heat-treated aluminized steel radiant pipe tubing. 4 in., 16 ga. steel tail pipe tubing with acid-resistant porcelain coating, and 0.92 or greater emissivity factor. All connections shall be made with stainless steel couplings. Each open-end combustion chamber shall have an approved end vent. Reflector shall terminate with an end cap. All piping must be supported in accordance with acceptable practices, local codes, seismic requirements, applicable standards, and as shown on Drawings. Pipe shall pitch down at least 1/2 in. in 20 ft. on radiant lines, and 1 in. in 20 ft. on tail pipe lines toward end vent.
- D. Reflectors: 0.024 1100 H18 mill finish aluminum, or other highly radiant reflective material reflectors, installed over complete exchanger, using a deep-dish design with lower edge of reflector extending beyond bottom of heat exchanger tube. Standard reflectors shall be installed on all radiant pipe and tail pipe over entire pipe network. Provide reflector joint pieces over heat exchanger fittings such as elbows, crosses, and tees, end vents, and pipe, so reflector covers heat exchanger continuously.
- E. Outside Air: Provide CSA-approved fresh outside air system to supply each burner and end vent for support of combustion, if required.
- F. Control Panel Indoor Electric Zone Temperature Sensors: Standard panel with 12 vdc. programmable sensor. Mount sensors 4 ft. above finished floor, or otherwise as noted. Provide insulated base where sensor is mounted on an exterior wall.

#### PART 3 EXECUTION

#### 3.01 INSTALLATION

- A. Install gas-fired radiant pipe systems as indicated, in accordance with Manufacturer's installation instructions, in compliance with applicable codes and approvals, and as shown on Drawings.
- B. Suspend heat exchangers, burners, gas piping, conduit, and reflectors from building structure as specified elsewhere, in order to provide a durable and safe installation, in accordance with Manufacturer's installation instructions, and as shown on Drawings.

- C. Do not exceed minimum clearance to combustibles outlined and printed on burner nameplate, and in Manufacturer's product data. Measure clearance distance from surface of heat exchangers.
- D. Install vent piping as indicated. Terminate where indicated with bird screen cover.
- E. Plumbing Contractor shall install gas piping in accordance with Manufacturer's installation instructions.
  - 1. Connection from supply line to burner unit must be made in accordance with installation instructions.
  - 2. Gas shut-off cock, as supplied with unit, and controls in unit must not be subjected to more than 1/2 lb. or 14 in. W.C. pressure. If high pressure testing of gas supply line is required, this test must be made with a plug in 1/2 in. branch line to each burner. Never test gas line with shut-off cock installed or burner unit connected.
- F. Mount electronic zone temperature sensors 4 ft. above finished floor, if not otherwise indicated.

#### 3.02 FIELD QUALITY CONTROL

A. Start up and adjust gas-fired radiant heaters in accordance with Manufacturer's instructions and Gas Utility Company's requirements. Check and calibrate controls. Adjust burners for maximum efficiency.

#### 3.03 TRAINING

A. Provide services of Manufacturer's Technical Representative to instruct the Owner's operating personnel in operation and maintenance of gas-fired radiant heaters.

#### 3.04 WIRING

A. Electrical Contractor shall wire sensors using shielded cable, Belden 8451, or equivalent.

**END OF SECTION 238300.01** 

# DUCT CONSTRUCTION/SEALING

DUCT SYSTEM	SMA	CNA	NOTES
DOCT STSTEW	SP CONST	SEAL CL	NOTES
MEDIUM VELOCITY SUPPLY	+3"	Α	-
LOW VELOCITY SUPPLY	+1"	А	-
RETURN / RELIEF	-1"	А	-
GENERAL EXHAUST	-0.5"	А	-
OUTSIDE AIR	-0.5"	A	-

NOTES

### AIR DISTRIBUTION DEVICES

OWBE - OFF WHITE BAKED ENAMEL FINISH, ECL - ETCHED CLEAR LACQUER FINISH

ALL EXPOSED AIR DEVICES SHALL HAVE A BACKED ENAMEL FINISH, COLOR TO BE SELECTED BY ARCHITECT.

TAG	DESCRIPTION	MODULE SIZE	MOUNT	ING TYPE	CONSTRUC	TION TYPE		FINISH		CATALOG	NUMBER	REQ'D
IAG	DESCRIPTION	IVIODOLE SIZE	LAY-IN	SURFACE	ALUM.	STEEL	O.W.B.E.	E.C.L.	BY ARCH.	MFR**	MODEL	ACCY
S1	CEILING SUPPLY DIFFUSER	24x24	0			0	0			PRICE	SPD	1
S2	CEILING SUPPLY DIFFUSER	12x12	0			0	0			PRICE	SPD	1
S3	VAV DIFFUSER	24x24	0			0	0			PRICE	PPD	1,2
R1	FIXED BLADE RETURN GRILLE	24x24	0			0	0			PRICE	630	1

REQ'D ACCESSORIES:

- 1.- COORDINATE MOUNTING WITH ARCHITECTURAL CEILING PLANS. WHERE REQUIRED, PROVIDE SURFACE MOUNTING FRAME FOR LAY-IN FIXTURE.
- 2.- PROVIDE WITH WALL MOUNTED THERMOSTAT.
- 3.- PROVIDE WITH NECK MOUNTED OPPOSED BLADE DAMPER. 4.- PROVIDE WITH TAMPER RESISTANT SCREWS.

\*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

### **ELECTRIC HEATING UNITS**

- VERIFY/COORDINATE CABINET DIMENSIONS MOUNTING AND RECESS REQUIREMENTS - RECESSED UNITS TO HAVE FOUR (4) SIDE OVER LAP UNLESS OTHERWISE NOTED WITH ARCHITECTURAL DWGS PRIOR TO ORDERING

- LINTELS FOR FULL & SEMI-RECESSED UNIT WALL OPENING PROVIDED BY GTC

TAG	DESCRIPTION	SERVICE	CFM	МВН	HEATING KW (MIN)	KW (MAX)	+	EC SERV VOLT	CE PHASE	MFR**	MODEL	REQ'D ACCESS
EWH-1	HD ELECTRIC WALL HEATER	RR	-	5	1.5	1.5	12.5	120	1	QMARK	AWH3150F	1, 3, 4
EWH-2	HD ELECTRIC WALL HEATER	VESTIBULE	-	5	1.5	1.5	12.5	120	1	QMARK	AWH3150F	1, 3, 4
EUH-1	SUSPENDED HORIZ. PRO.	MEP AREA	400	17.1	5	5	20.8	240	1	RAYWALL	H1HUH05003	1, 6-8

REQ'D ACCESS

1. ARCH TO SELECT FINISH

2. SEMI-RECESSED MOUNTING 3. FULLY RECESSED MOUNTING

4. PROVIDE INTEGRAL DISCONNECT SWITCH.

8. PROVIDE VIBRATION ISOLATION SPRINGS FOR SUSPENDED UNIT HEATER

6. PROVIDE DISCONNECT SWITCH

7. PROVIDE UNIT MOUNTED THERMOSTAT

5. CONVERT UNIT IN FIELD TO WATTAGE LISTED.

\*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

## **OUTDOOR HEAT PUMP UNIT**

- DISCONNECT BY ELECTRICAL CONTRACTOR

- HEATING CAPACITY BASED ON INDOOR CONDITIONS OF 68.0°F DB AND OUTDOOR CONDITIONS OF 0°F DB / 0°F WB

- HEAT PUMP UNITS WITH HEAT RECOVERY SHALL PROVIDE SIMULTANEOUS COOLING AND HEATING - COOLING CAPACITY BASED ON INDOOR CONDITIONS OF 80.0°F DB / 67.0°F WB AND OUTDOOR CONDITIONS OF 95°F DB & 75°F WB

TAG	UNITS	REFRIG LI (TOTAL S			TY MBH SYSTEM)	ELECTRICAL DATA				DINAFNICIONI	MODEL	REQ'D
IAG	SERVED	GAS	LIQUID	CLG CAP MIN	HTG CAP MIN	VOLTS	PHASE	MCA	МОСР	DIMENSION	MITSUBISHI**	ACCESS
			1									
HP-1	FC-1	5/8"	3/8"	33.28	35.7	230	1	26	40	53"H x 42"W x 14" L	TRUZH0361KA00NA	ALL

1. - PROVIDE HOUSEKEEPING PAD TO MOUNT OUTDOOR HEAT PUMP UNIT ON GRADE.

2. - REFRIGERATION SYSTEM CONTROLS INCLUDING CONDENSER FAN, COMPRESSOR CONTRACTORS, EVAPORATOR FREEZE THERMOSTAT, WINTER START CONTROL KIT.

3. - SOUND LEVELS REQUIREMENTS: SOUND PRESSURE 63 dBA MAX. AND SOUND POWER LEVEL 82 dBA MAX.

4. - PROVIDE SNOW HOOD AND DAMPER KIT. \*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

# INDOOR FAN COIL UNIT SCHEDULE

- HEATING CAPACITY BASED ON INDOOR CONDITIONS OF 70.0°F DB

- COOLING CAPACITY BASED ON INDOOR CONDITIONS OF 80.0°F DB / 67.0°F WB AND OUTDOOR CONDITIONS OF 95.0°F DB / 75°F WB

TAG	LOCATION	MITSUBISHI** MODEL	MIN. TOT. CLG	CAPACITY(N SEN. CLG	MBH) HTG.	SUPPLY MIN (CFM)	O/A (CFM)	VOLT	ELECTR PHASE	MCA	TA   MOCP	RUNOUT SIZE ( LIQ GAS.)	REQ'D ACCESS
FCU-1	CONFERENCE ROOM	TPEADA0361AA70A	33.28	24.1	35.7	925	200	230	1	*	*	3/8" - 5/8"	ALL
-	-	-	_	-	-	-	-	-	-	-	-	-	-

# REQ'D ACCESS.

1. ALL TEMPERATURE SENSORS AND FC CONTROLS SHALL BE PROVIDED BY THE UNIT MANUFACTURER.

2. DIRECT EXPANSION COIL PACKAGE WITH FACTORY MOUNTED THERMAL EXPANSION VALVE AND EQUALIZING TUBE. 3. PROVIDE (1) SOLENOID VALVE KIT PER DX FAN COIL. WASHABLE FILTERS. UL LISTED. CONDENSATE INTEGRAL TO UNIT.

4. PROVIDE RETURN AIR FILTER BOX WITH MERV-13 FILTER.

5. INTEGRAL CONDENSATE PUMP.

\*INDOOR UNIT IS POWERED FROM OUTDOOR UNIT \*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

## **EXHAUST FAN SCHEDULE**

FAN TYPES: PRV - POWER ROOF VENTILATOR IL - INLINE CENTRIFUGAL ILD - INLINE DUCT BLOWER CE - CEILING MOUNTED EXHAUST

US - UTILITY SET SWV - SIDEWALL VENTILATOR PB - PRESSURE BLOWER UBE - UP BLAST EXHAUSTER

PF - PLENUM FAN SWP - SIDEWALL PROPELLER HPRE - HOODED PROPELLER ROOF EXHAUSTER

20.- HAND/OFF/AUTO SWITCH INTERLOCK TO

TAC	TYPE	SERVICE / LOCATION	CENA	ECD (INI)	MAX	WHEEL	DDM	M	OTOR DATA		MFR **	MODEL	FAN	REQ'D
TAG	ITPE	SERVICE / LOCATION	CFM	ESP (IN)	SONES	DIA(IN)	RPM	HP	VOLTAGE	PHASE	IVIFK · ·	MODEL	CONTROL	ACCY
$\overline{}$									$\sim$	$\sim$				
EF-1	IL	VEHICLE STORAGE	3,500	0.5	25	14.625	1725	1.5	208	3	GREENHECK	BSQ-140-15	20	1,5,8,11
EF-2	IL	VEHICLE STORAGE	3,500	0.5	25	14.625	1725	1.5	208	کہ قدم	GREENHECK	BSQ-140-15	20	1,5,8,11
EF-3	UBE	WASH BAY	1,000	0.5	9.6	11.125	1725	0.25	4 120	1	GREENHECK	CUBE-100-4	21	1-4,11
EF-4	CE	RESTROOM	150	0.4	4.4	7.94	1050	0.17	120	1	GREENHECK	SP-B150	22	1,2,8,11
EF-5	IL	MECHANICAL AREA	400	0.5	10.9	11.19	1725	0.25	120	1	GREENHECK	BSQ-80-4	23	1,5,8,11

### REQ'D ACCY:

- 1.- STANDARD DISCONNECT, FACTORY MOUNTED & WIRED
- 2.- BACKDRAFT DAMPER 3.- ALUMINUM CONSTRUCTION
- 4.- PROVIDE WALL BRACKET SUPPORT & MOUNTING FLANGE
- 5.- STANDARD FINISH, COLOR BY ARCHITECT 6.- SPUN ALUMINUM W/ALUMINUM BIRDSCREEN.
- 7.- AIR DRIED EXPOXY FINISH ENTIRE FAN INCL ACC
- 8.- R-I-S VIBRATION ISOLATION HANGERS 9.- ALUM. CANTED ROOF CURB W/INSULATION 18" H &
- 11.- SPEED CONTROLLER.
- W/WOOD NAILER 10.- ALUMINUM STEEL CAP & BOLTED INSPECTION DOOR.
- DIV I CIRCUITRY, MOUNTED EXTERNALLY IN NEMA 3R OUTDOOR ENCLOSURE. 14.- SIDEWALL MOUNTED W/WEATHERHOOD

13.- FACTORY MOUNTED & WIRED DISCONNECT: CLASS I,

- & EXPLOSION RESISTANT, AMCA SPARK PROOF B FAN.
- 15.- THREADED PIPE DRAIN CONNECTION.

12.- ALUMINUM BIRDSCREEN

- 16.- WEATHERHOOD. 17.- SPARK RESISTANT CONSTRUCTION.
- 18.- FACTORY MOUNTED & WIRED DISCONNECT

\*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

FAN CONTROL BY EC:

GAS DETECTION SYSTEM

22.- INTERLOCK WITH LIGHTING

23.- WALL MOUNTED THERMOSTAT.

21.- MANUAL SWITCH

### INFRARED HEATER SCHEDULE

TAG	SERVES	GAS INPUT BURNER	RADIANT LENGTH FT	HEAT EX RADIANT	CHANGER TAILPIPE			CAL DA	TA AMPS	GAS SIZE	MFR**	MODEL	REO'D ACCESS
IRH-1	VEHICLE STORAGE	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	1, 2, 3
IRH-2	VEHICLE STORAGE	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	1, 2, 3
IRH-3	VEHICLE STORAGE	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	1, 2, 3
IRH-4	VEHICLE STORAGE	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	1, 2, 3
IRH-5	WASH BAY	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	ALL
IRH-6	WASH BAY	125 MBH	40 MAX	4" DIA.	4" DIA.	120	1	60	1	1/2"	ROBERTS GORDON	CTH2V-125-40	ALL

### **REQ'D ACCESS:**

1.- PROVIDE IRH BURNERS WITH DIRECT SPARK ELECTRONIC IGNITION CONTROL, 120V, 1.3 AMP CORD WITH THREE PRONG MOLDED PLUG.

2.- PROVIDE WALL VENT CAP FOR OUTSIDE AIR INTAKE.

3.- PROVIDE REFLECTOR & SHIELD ASSEMBLIES AS NECESSARY. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

4.- PROVIDE WATER RESISTANT BURNER AND EQUIPMENT IN WASH BAY. \*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

LOUVER SCHEDULE	
LOUVER SCHLDULE	

TAG	ТҮРЕ	SERVICE	DP	SIZE(IN) W	)   H	AIR FLOW (CFM)	PD (IN)	VELOCITY (FPM)	FREE AREA (FT^2)	MFR**	MODEL	REQ'D ACCESS
L-1	EXHAUST	EF-1	6	42	36	3,500	0.05	600	5.87	GREENHECK	ESD-635	
L-2	EXHAUST	EF-2	6	42	36	3,500	0.05	600	5.87	GREENHECK	ESD-635	1
L-3	INTAKE	VEHICLE STORAGE, EF-1	6	42	36	3,500	0.05	600	5.87	GREENHECK	ESD-635	1,2
L-4	INTAKE	VEHICLE STORAGE, EF-2	6	42	36	3,500	0.05	600	5.87	GREENHECK	ESD-635	1,2
L-5	TRANSFER	WASH BAY, EF-3	6	24	20	1,000	0.08	738	1.37	GREENHECK	FDS-602	2,4
L-6	EXHAUST	EF-5	6	16	16	400	0.07	707	0.57	GREENHECK	ESD-635	1
L-7	EXHAUST	EF-4	6	16	16	240	0.02	424	0.57	GREENHECK	ESD-635	1
L-8	INTAKE	FCU-1	6	16	16	200	0.02	353	0.57	GREENHECK	ESD-635	1,3

1.- INCLUDE BIRD SCREEN. BAKED ENAMEL FINISH AND COLOR BY ARCHITECT.

2.- INCLUDE 120 VOLT, MOTOR OPERATED DAMPER TO BE INTERLOCKED WITH CORRESPONDING EXHAUST FAN.

3.- INCLUDE 120 VOLT, MOTOR OPERATED DAMPER TO BE INTERLOCKED WITH FCU-1. 4.- STAINLESS STEEL CONSTRUCTION.

\*\* - REFER TO SPECIFICATIONS FOR LIST OF APPROVED MANUFACTURERS

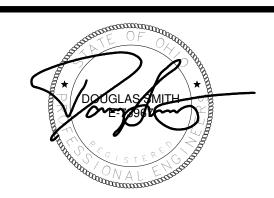


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DEL #21-179



DOT-200023 ODOT -**EATON OUTPOST** 

CONSTRUCTION DOCUMENTS

5656 US-127 Eaton, Ohio 45320

4 01/17/22 Addendum 003 12/17/21 Revision 1 Permit/Bid Set 12/10/21 | Bid Set 11/12/21 | Permit Set

DESCRIPTION MARK DATE PROJECT NO: DOT-200023 DATE: 12/17/2021 DRAWN BY:

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SHEET TITLE

HVAC SCHEDULES







A VEREGY COMPANY

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DEL #21-179



# DOT-200023 ODOT -EATON OUTPOST

CONSTRUCTION DOCUMENTS

5656 US-127 Eaton, Ohio 45320

4	01/17/22	Addendum 003
2	01/07/22	Addendum 001
1	12/17/21	Revision 1 Permit/Bid Set
	12/10/21	Bid Set
	11/12/21	Permit Set

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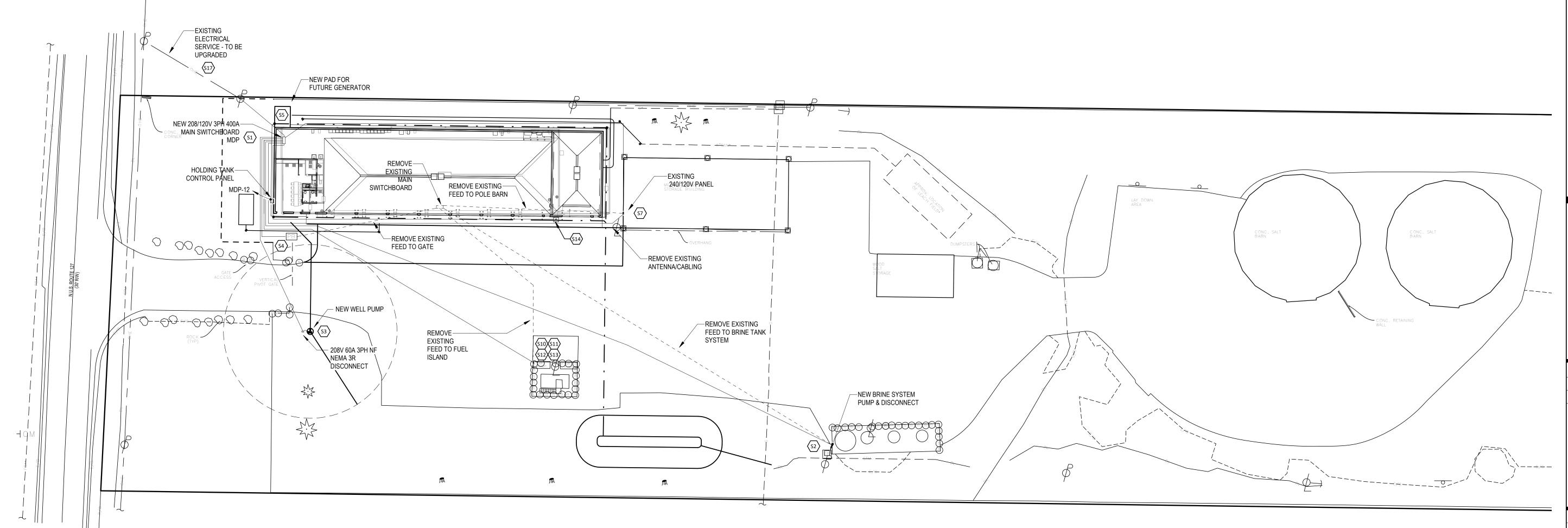
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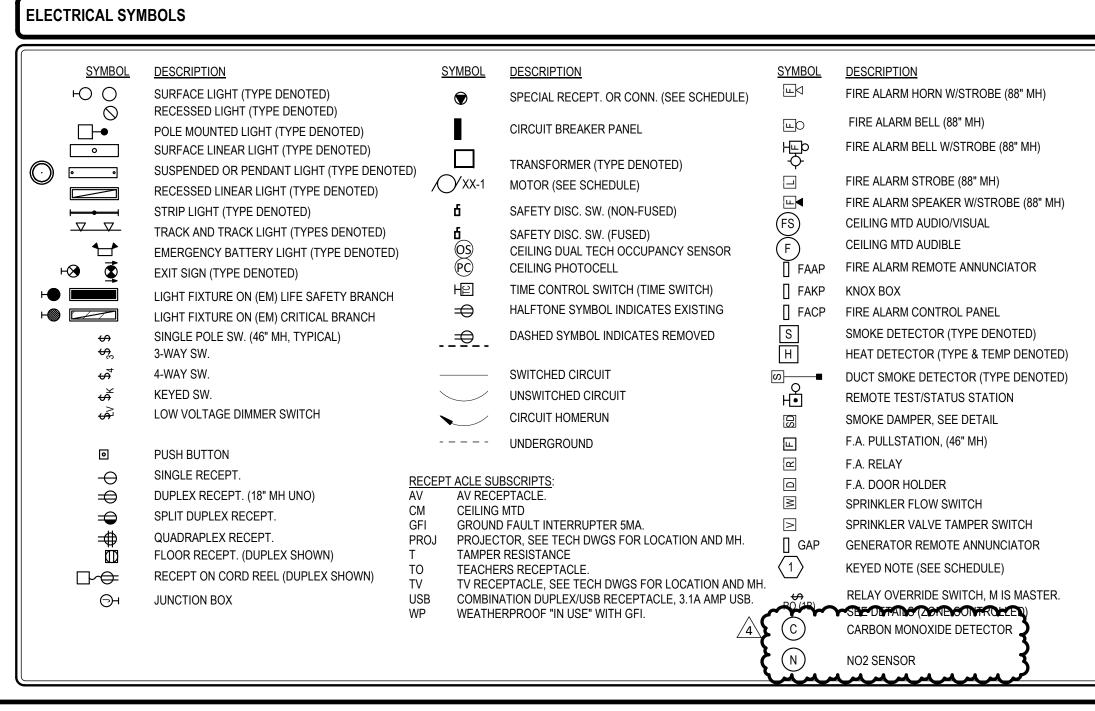
SHEET TITLE

MARK DATE

ELECTRICAL SITE UTILITY PLAN

ESU





### **ELECTRICAL ABBREVIATIONS LIST**

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1P	1 POLE (2P, 3P, 4P, ETC.)	DCP	DOMESTIC WATER CIRCULATING PUMP	HT	HEIGHT	NEMA	NATIONAL ELECTRICAL	SWBD	SWITCHBOARD
A	AMPERE	DEPT	DEPARTMENT	HTG	HEATING		MANUFACTURER'S ASSOCIATION	SYM	SYMMETRICAL
AC	ABOVE COUNTER OR AIR	DET	DETAIL	HTR	HEATER	NFDS	NON-FUSED SAFETY	SYS	SYSTEM
	CONDITIONER	DIA	DIAMETER	HV	HIGH VOLTAGE		DISCONNECT SWITCH	TEL	TELEPHONE
ACLG	ABOVE CEILING	DISC	DISCONNECT	HVAC	HEATING, VENTILATING AND	NIC	NOT IN CONTRACT	TERM	TERMINAL
ADO	AUTOMATIC DOOR OPENER	DIST	DISTRIBUTION		AIR CONDITIONING	NL	NIGHT LIGHT	TL	TWIST LOCK
AF	AMP FRAME	DN	DOWN	HWP	HYDRONIC WATER PUMP	N.O.	NORMALLY OPEN	T	TAMPER RESISTANT
AFF	ABOVE FINISHED FLOOR	DPR	DAMPER	IC	INTERRUPTING CAPACITY	NPF	NORMAL POWER FACTOR		THERMOSTAT
AFG	ABOVE FINISHED GRADE	DS	SAFETY DISCONNECT SWITCH	IG	ISOLATED GROUND	NTS	NOT TO SCALE	TTC	TELEPHONE TERMINAL CABINET
AFI	ARC FAULT CIRCUIT INTERRUPTER	DT	DOUBLE THROW	IMC	INTERMEDIATE METAL CONDUIT	OH	OVERHEAD	TV	TELEVISION
AHU	AIR HANDLING UNIT	DWG	DRAWING		INCANDESCENT	OL	OVERLOADS	TVTC	TELEVISION TERMINAL CABINET
AL	ALUMINUM	E EC	EXISTING TO REMAIN	IR	INFRARED	PA	PUBLIC ADDRESS	TYP	TYPICAL
ALT	ALTERNATE		ELECTRICAL CONTRACTOR	I/W	INTERLOCK WITH	PB	PULL BOX OR PUSHBUTTON	UC	UNDER COUNTER
AMP	AMPERE	ELEC	ELECTRIC, ELECTRICAL	J-BOX	JUNCTION BOX	PE	PNEUMATIC ELECTRIC	UE	UNDERGROUND ELECTRICAL
AMPL		ELEV	ELEVATOR	KV	KILOVOLT	PED	PEDESTAL	UG	UNDERGROUND
	N ANNUNCIATOR	EM	EMERGENCY	KVA	KILOVOLT-AMPERE	PF	POWER FACTOR	UH	UNIT HEATER
	OX APPROXIMATELY	EMS	ENERGY MANAGEMENT SYSTEM	KVAR	KILOVOLT-AMPERE REACTIVE	PH	PHASE	UNO	UNLESS NOTED OTHERWISE
	AT AQUASTAT	EMT	ELECTRICAL METALLIC TUBING	KW	KILOWATT	PIV	POST INDICATING VALVE	UT	UNDERGROUND TELEPHONE
ARCH	ARCHITECT, ARCHITECTURAL	EP	ELECTRIC PNEUMATIC	KWH	KILOWATT HOUR	PNL	PANEL	UTIL	UTILITY
AS	AMP SWITCH	EQUIP	EQUIPMENT	LOC	LOCATE OR LOCATION	PP	POWER POLE	UV	UNIT VENTILATOR OR ULTRAVIOLE
AT	AMP TRIP	EWC	ELECTRIC WATER COOLER	LT	LIGHT	PR	PAIR	V	VOLT
ATS	AUTOMATIC TRANSFER SWITCH	EX	EXISTING	LTG	LIGHTING	PRI	PRIMARY	VA	VOLT-AMPERES
AUTO	AUTOMATIC	EXH	EXHAUST	LTNG	LIGHTNING	PROJ	PROJECTION	VDT	VIDEO DISPLAY TERMINAL
AUX	AUXILIARY	EXP	EXPLOSION PROOF	LV	LOW VOLTAGE	PRV	POWER ROOF VENTILATOR	VERT	VERTICAL
AV	AUDIO VISUAL	FA	FIRE ALARM	MAX	MAXIMUM	PT	POTENTIAL TRANSFORMER	VFD	VARIABLE FREQUENCY DRIVE
AWG	AMERICAN WIRE GAUGE	FABP	FIRE ALARM BOOSTER POWER	MAG.S	MAGNETIC STARTER	PVC	POLYVINYL CHLORIDE (CONDUIT)	VOL	VOLUME
BATT	BATTERY		SUPPLY PANEL	M/C	MOMENTARY CONTACT	PWR	POWER	W	WATT
BD	BOARD	FACP	FIRE ALARM CONTROL PANEL	MC	MECHANICAL CONTRACTOR	QUAN	QUANTITY	W/	WITH
BLDG	BUILDING	FCU	FAN COIL UNIT	MCB	MAIN CIRCUIT BREAKER	R	RELOCATE	WG	WIRE GUARD
BMS	BUILDING MANAGEMENT SYSTEM	FIXT	FIXTURE	MCC	MOTOR CONTROL CENTER	RCPT	RECEPTACLE	WH	WATER HEATER
C	CONDUIT	FLR	FLOOR	MDC	MAIN DISTRIBUTION CENTER	RD	RELOCATED	W/O	WITHOUT
CAB	CABINET	FLUOR	FLUORESCENT	MDP	MAIN DISTRIBUTION PANEL	REQD	REQUIRED	WP	WEATHERPROOF
CAT	CATALOG	FU	FUSE	MFR	MANUFACTURER	RM	ROOM	XFMR	TRANSFORMER
CATV	CABLE TELEVISION	FUDS	FUSED SAFETY DISCONNECT SWITCH	MFS	MAIN FUSED DISCONNECT SWITCH	RSC	RIGID STEEL CONDUIT	XFR	TRANSFER
СВ	CIRCUIT BREAKER	GA	GAUGE	MH	MOUNTING HEIGHT, CENTERLINE	RTU	ROOF TOP UNIT	@	AT
CCTV	CLOSED CIRCUIT TELEVISION	GAL	GALLON	MIC	MICROPHONE	SC	SURFACE CONDUIT	'	FEET
CKT	CIRCUIT	GALV	GALVANIZED	MIN	MINIMUM	SEC	SECONDARY	"	INCHES
CLG	CEILING	GC	GENERAL CONTRACTOR	MISC	MISCELLANEOUS	SHT	SHEET	#	NUMBER
COMB		GEN	GENERATOR	MLO	MAIN LUGS ONLY	SIM	SIMILAR	Ø	PHASE
	COMPRESSOR	GFI	GROUND FAULT CIRCUIT	MMS	MANUAL MOTOR STARTER	S/N	SOLID NEUTRAL	С	CENTER LINE
	CONNECTION		INTERRUPTER	MOA	MULTIOUTLET ASSEMBLY	SPEC	SPECIFICATION	Р	PLATE
CONS	Γ CONSTRUCTION	GFP	GROUND FAULT PROTECTOR	MSP	MOTOR STARTER PANELBOARD	SPKR	SPEAKER		
CONT	CONTINUATION OR CONTINUOUS	GND	GROUND	MSBD	MAIN SWITCHBOARD	SP	SPARE		
	R CONTRACTOR	GRS	GALVANIZED RIGID STEEL (CONDUIT)	MT	MOUNT	SR	SURFACE RACEWAY		
CONV	CONVECTOR	GYP BD	GYPSUM BOARD	MT.C	EMPTY CONDUIT	SS	STAINLESS STEEL		
CP	CIRCULATING PUMP	HOA	HANDS-OFF-AUTOMATIC SWITCH	MTS	MANUAL TRANSFER SWITCH	SSW	SELECTOR SWITCH		
CRT	CATHODE-RAY TUBE	HORIZ	HORIZONTAL	MTR	MOTOR, MOTORIZED	S/S	STOP/START PUSHBUTTONS		
СТ	CURRENT TRANSFORMER	HP	HORSEPOWER	N.C.	NORMALLY CLOSED	STA	STATION		
CTR	CENTER	HPF	HIGH POWER FACTOR	NEC	NATIONAL ELECTRICAL CODE	STD	STANDARD		
CU	COPPER					SURF	SURFACE MOUNTED		
						SW	SWITCH		

### **ELECTRICAL GENERAL NOTES**

- GENERAL NOTES APPLY TO ALL SHEETS. THE PLANS ARE INTENDED TO COMPLY WITH FEDERAL, STATE, AND LOCAL CODES, GUIDELINES, AND REGULATIONS, AS WELL AS THE HEALTHCARE FACILITIES GUIDELINES AND JOINT COMMISSION STANDARDS (FOR HEALTHCARE PROJECTS). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL OF THE PLANS AND SPECIFICATIONS, NOT
- SOLELY THOSE OF THEIR TRADE. SEE THE ARCHITECTURAL PLANS FOR A LEGEND OF WALL PARTITION TYPES. PROVIDE A UL RATED FIRESTOPPING ASSEMBLY TO MEET THE RATING OF THE WALLS REQUIRING SUCH. SEE DETAILS AND SPECIFICATIONS FOR ADDITIONAL
- THE CONTRACTOR SHALL LAY OUT AND COORDINATE ALL LINES, LEVELS, ELEVATIONS, AND MEASUREMENTS FOR ALL THE WORK, AND NOTIFY THE ENGINEER OF DISCREPANCIES AND CONFLICTS BEFORE PROCEEDING WITH INSTALLATION OR EXCAVATION. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR THE EXACT LOCATIONS AND QUANTITIES OF
- IN THE EVENT OF INCONSISTENCY OR CONFLICT WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROVIDE THE BETTER QUALITY OR GREATER QUANTITY OF WORK AND COMPLY WITH THE STRICTER REQUIREMENT. REFER TO ARCHITECTURAL ELEVATIONS FOR DEVICE LOCATIONS AND MOUNTING HEIGHTS WHEN LOCATED AT OR ABOVE CASEWORK, COORDINATE EXACT DEVICE LOCATIONS PRIOR TO ROUGH-IN AND INSTALLATION, COORDINATE MOUNTING HEIGHTS WITH DEVICES OF OTHER TRADES IF NOT ELEVATED.
- SEE ARCHITECTURAL ELEVATIONS FOR ALL WALL MOUNTED DEVICES (I.E. HAND DRYERS, PHONES, ETC). COORDINATE LOCATIONS IN FIELD FOR EXACT PLACEMENT. RECEPTACLES IN ROOMS WITH SINKS ARE NOTED AS "GF" WHERE WITHIN SIX FEET OF A WATER SOURCE. IF RECEPTACLES SHOWN WITHOUT "GF" ARE LOCATED CLOSER TO SINK, GROUND FAULT MUST BE ADDED TO THE DEVICE. ARCHITECTURAL ELEVATIONS SHALL TAKE PRECEDENCE. EC TO COORDINATE ALL OUTLETS LOCATED ABOVE SINKS AND COUNTERTOPS WITH ARCHITECTURAL ELEVATIONS OF THE RESPECTIVE AREA AND ALL OTHER TRADES. IF NO ELEVATION EXISTS, LOCATE RECEPTACLES TO AVOID ALL MIRRORS, DEVICES, ETC. LOCATED ON
- BACK WALL OF SINK. DO NOT MOUNT ANY OUTLETS DIRECTLY OVER SINKS. COORDINATE EXACT LOCATIONS OF LIGHTING FIXTURES TO BE INSTALLED IN MECHANICAL ROOMS WITH OTHER TRADES
- AND BUILDING CONDITIONS. ALL FIRE ALARM STROBE LIGHTS SHALL BE SYNCHRONIZED (INCLUDING ROOMS WHERE THERE ARE OPERABLE PARTITIONS
- FURNISH AND WIRE ALL DUCT SMOKE DETECTORS, INSTALL AS SHOWN ON DRAWINGS. F/A VENDOR SHALL COORDINATE WITH HC ON ALL LOCATIONS OF SMOKE DAMPERS PRIOR TO SUBMITTAL (AS LOCATIONS AND QUANTITIES MAY VARY FROM ALL FLUSH MOUNTED PANEL BOARDS, PROVIDE 1 SPARE 3/4" CONDUITS FOR EVERY 3 SPARE CIRCUIT BREAKERS OR
- PROVISIONAL SPACES OUT TO ABOVE ACCESSIBLE CORRIDOR CEILING SPACE. PROVIDE 1/4" THICK STEEL PLATE TO BACK OF ELECTRICAL PANELS. THE OVERALL DIMENSION OF THE PLATE IS TO BE THE SIZE OF THE ELECTRICAL PANEL. COORDINATE WALL THICKNESS FOR PANELBOARDS WITH ARCHITECT AND GC.
- ALL RECEPTACLES CIRCUITED TO "C", "E" AND "L" SERIES PANELS (ANY PANEL WITH DESIGNATION WHICH STARTS WITH THE LETTER 'C', 'E' AND 'L') SHALL BE RED IN COLOR UNO IN SPECIFICATIONS. ALL EXTERIOR BUILDING-MOUNTED RECEPTACLES SHALL BE WEATHER RESISTANT, GROUND FAULT INTERRUPT UNLESS
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ONE EXTRA EXIT SIGN AND 50' OF 3/4" CONDUIT AND WITH (2) #10'S AND #10 GND AS PART OF THEIR BID FOR ADDITIONAL EXIT SIGNS THAT MAY BE REQUIRED BY FIELD AHJ WALK-THRU. LIGHT FIXTURES ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND
- ELEVATIONS FOR EXACT LOCATION OF FIXTURES. EXTERIOR MOUNTING HEIGHTS INDICATED ON PLANS ARE FOR REFERENCE ONLY. COORDINATE ALL HEIGHTS AND LOCATIONS WITH ARCHITECT PRIOR TO ROUGH-IN. ALL EMERGENCY LIGHTING FIXTURES, NIGHT LIGHTS, EXITS SIGNS, AND GTD'S SHALL BE CONNECTED TO UNSWITCHED LEGS OR THROUGH AN EMERGENCY LIGHTING SPECIFIC RELAY CIRCUIT, UNLESS NOTED OTHERWISE. LIGHT FIXTURES
- CONNECTED TO A LIFE SAFETY BRANCH CIRCUIT ARE TO HAVE A "GLR" IN LINE FUSE UNO. MOUNT GTD (OR REMOTE BATTERY PACK) FOR EMERGENCY EXTERIOR FIXTURES IN INTERIOR SPACE ABOVE ACCESSIBLE CEILING. PROVIDE STICK ON LABEL ON GRID NOTING GTD ABOVE.
- COORDINATE ALL TASK LIGHTING WITH CASEWORK CONTRACTOR PRIOR TO ROUGH-IN. SEE ARCHITECTURAL ELEVATIONS FOR FIXTURE LOCATIONS AND MOUNTING DETAILS. REFER TO POWER PLANS FOR ACTUAL PANEL LOCATION. GENERAL LOCATION OF PANELS MAY BE SHOWN ON LIGHTING
- ALL CABLE CONNECTIONS TO GROUND RODS, STRUCTURAL STEEL OR REINFORCING STEEL SHALL BE BY CADWELD,
- HERMOWELD OR HELIARC WELDING PROCESS. SEE DIV 26 GROUNDING SPECIFICATION. THIS CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. SPACE EXITING BUILDING MAY HAVE STORM/WATER AND POWER CONDUITS. COORDINATION DRAWINGS SHALL BE DONE AND APPROVED PRIOR TO INSTALLATION AND SHALL SHOW
- BUILDING FOOTERS, ALL PIPING, ETC. SEAL ALL CONDUITS TO FUEL OIL TANKS AND AT FIRE WALLS. ALSO, SEAL CONDUITS BETWEEN EXTERIOR SPACES AND INTERIOR SPACES, CONDUITS THAT ENTER WALK-IN COOLERS/FREEZERS, OR CONDUITS BETWEEN SPACES THAT ARE JUST
- HEATED VS HEATED AND COOLED.
- PROVIDE 4" HOUSEKEEPING PADS FOR ALL EQUIPMENT THAT IS FLOOR SET UNO. VERIFY ALL EQUIPMENT CONNECTION LOCATIONS WITH SUPPLIER PRIOR TO ROUGH-IN AS EQUIPMENT MAY CHANGE.
- INTERLOCK CONTROL WIRING FOR EQUIPMENT WITH EQUIPMENT SERVED (MOTORIZED LOUVERS AND SHAFT FANS WITH GENERATOR START CONTROLS) SHALL BE BY EC UNO. COORDINATE ALL MOUNTING HEIGHTS BETWEEN ALL TRADES. COORDINATE PANEL LOCATION WITH PC/HC/FPC TO ENSURE
- NO FORGEIN SYSTEMS ARE WITHIN 6' OF THE TOP OF THE PANEL PER NEC 110. AND PIPING BEYOND 6' ABOVE PANELS ARE REQUIRED TO BE SLEEVED. PROVIDE FACEPLATES FOR ALL OUTLET COVERS LISTED WITH PANEL AND CIRCUIT NUMBERS. ALL EMERGENCY OUTLETS

SHALL BE SUPPLIED WITH RED COVER PLATE AND UPS SHALL BE BLUE. ALL NORMAL RECEPTACLES SHALL BE SUPPLIED

- WITH COVER PLATE MATCHING DEVICE COLOR. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. COORDINATE ALL LIGHT SWITCHES, ELECTRICAL PANELS, AND OTHER ELECTRICAL EQUIPMENT LOCATIONS WITH HVAC. FPC. AND PLUMBING CONTRACTORS PRIOR TO ROUGH-IN. VERIFY SPACE FOR EQUIPMENT THROUGH COORDINATION DRAWINGS. ALL WALLS THAT HAVE MULTIPLE DEVICES (RECEPTACLES, DATA, LIGHT SWITCHES, THERMOSTATS, FIRE ALARM DEVICES, ETC) SHALL BE ALIGNED. RECEPTACLES SHALL BE MOUNTED AT THE SAME HEIGHT AS DATA OUTLETS IF NOT SHOWN ON THE ARCHITECTURAL ELEVATIONS. MOUNT ALL DATA OUTLETS AND RECEPTACLES AT SAME HEIGHTS AND
- CLOSE TO ONE ANOTHER WHENEVER POSSIBLE (ALLOWING FOR SPACE FOR LARGER COVERPLATES). EC TO HARD PIPE ALL LIFE SAFETY CIRCUITS ('L' PREFIX PANELS). NO FLEXIBLE RACEWAY TO BE USED (EXCEPT TO CEILINGS AND MOVING EQUIPMENT WITHIN THE ROOM). CRITICAL BRANCH PANELS ('C' PREFIX) AND LIFE SAFETY CIRCUITS SHALL NOT SHARE WIRING WITH ANY EQUIPMENT, OPTIONAL, OR NORMAL POWER SYSTEMS. OUTPUT WIRING FROM 20A
- GTD'S SHALL BE CLASSIFIED AS LIFE SAFETY (FOR INTERIOR OR EXTERIOR LIGHTING CIRCUITS). OBTAIN SITE SPECIFIC CUT SHEETS FOR OWNER FURNISHED EQUIPMENT. PROVIDE POWER CIRCUIT AND CONNECTIONS AS SHOWN ON DRAWINGS. EC TO REFERENCE ARCHITECTURAL PLANS FOR RECEPTACLE HEIGHTS PRIOR TO ROUGH-IN.
- SPECIAL RECEPTACLES IN DATA ROOMS ARE TO BE NEMA L6-20R (U.N.O.). VERIFY LAYOUT WITH RACKS AND EQUIPMENT.
- COORDINATE MOTORIZED DOOR OPERATORS WITH ARCHITECTURAL DRAWINGS. PROVIDE POWER TO ALL MECHANICAL\PLUMBING EQUIPMENT THAT REQUIRES POWER. THIS INCLUDES ANY VENDOR SPECIFIC ADDITIONAL EQUIPMENT THAT IS NOT SHOWN. POWER SHALL BE SOURCED TO MATCH THE REST OF THE SYSTEMS BRANCH REQUIREMENTS (FROM LIKE PANELS, IF 'C' PANEL FED HEADEND, THEN 'C' SHALL FEED ADDITIONAL EQUIPMENT), UNO. COORDINATE ALL EQUIPMENT LUGS WITH SAID CONTRACTOR PROVIDING EQUIPMENT. EQUIPMENT IS
- ASSUMED TO BE PROVIDED WITH LUGS TO CONNECT TO WIRING PROVIDED ON THESE DRAWINGS. ANY DAMAGE CAUSED BY THIS CONTRACTORS SCOPE OF WORK SHALL BE THIS CONTRACTORS RESPONSIBILITY. DO NOT SCALE PLANS WHEN DIMENSIONS EXIST OF EQUIPMENT. ANY DISCREPANCIES IN DIMENSIONS SHALL BE NOTED AT
- IN SUBMITTALS. PROVIDE RFI WHEN SPACE DOES NOT ALLOW FOR INSTALLATION (AT TIME OF SUBMITTAL). ALL EQUIPMENT LOCATIONS ARE APPROXIMATE, COORDINATE EXACT LOCATION IN FIELD. THIS CONTRACTOR SHALL BE REQUIRED TO COORDINATE ALL LOCATIONS OF ALL DEVICES, PIPING, CONDUITS, DUCTS,
- CLEARANCES, ETC. WITH ALL OTHER TRADES. HVAC, STORM AND SANITARY PIPING SHALL HAVE RIGHT OF WAY FOR SLOPE AND SPACE REQUIREMENTS. ALL DEVICES THAT REQUIRE WORK FROM OTHER TRADES (THE FOLLOWING IS AN EXAMPLE BUT NOT A COMPLETE LIST): EQUIPMENT, DEVICES, SMOKE DETECTORS, SMOKE DAMPERS, ETC. SHALL BE COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION. SEE SPECIFICATIONS FOR PHASING REFERENCES.
- COORDINATE ALL CEILING INSTALLATIONS DEVICES WITH CEILING TILE SUPPLIER. INSTALL DEVICES ON QUARTER POINTS IF SCORE TILE IS INSTALLED. INSTALL MULTIPLE DEVICES IN ONE TILE WHERE POSSIBLE (TO LIMIT THE NUMBER OF INACCESSIBLE TILES) AND SHALL BE COORDINATED IN FIELD WITH VENDORS. THIS SHALL INCLUDE, BUT NOT LIMITED TO: SPRINKLER HEADS, SPEAKERS, F/A DEVICES, LIGHTING CONTROLS, ETC.
- REFER TO SPECIFICATIONS FOR VOLTAGE DROP REQUIREMENTS AS THEY ARE DIFFERENT FROM THE NEC MINIMUMS. OO. CABLE TRAY SHALL BE USED FOR VOICE AND DATA CABLING ONLY. CENTRAL SOUND, VIDEO, AND ALL OTHER CABLING SHALL BE RUN IN SEPARATE AND INDEPENDENT J-HOOK STRAPS AND NOT IN THE CABLE TRAY.
- PROVIDE TWO (2) 2" CONDUIT SLEEVES ABOVE THE ENTRY DOOR OF EACH ROOM FOR VOICE, DATA, AND ALL OTHER
- QQ. EC IS REQUIRED TO WALK THRU WITH OWNER TO VERIFY ALL DEVICE LOCATIONS AFTER INSTALLATION OF STUDS BEFORE ANY CONDUIT OR BOXES INSTALLED (PER ROOM TYPE). RR. SEE VIDEO IMAGING SITE SPECIFIC DRAWINGS FOR ALL CLIENT CONTRACTOR WORK REQUIRED, RACEWAY BOXES,
- SS. SEE SITE SPECIFIC DRAWINGS FOR ALL CLIENT CONTRACTOR WORK REQUIRED, RACEWAY BOXES, CABLES, ETC TT. VERIFY ALL OWNER PROVIDED AND RELOCATED ITEMS/EQUIPMENT IN FIELD. REFER TO SITE SPECIFIC DRAWINGS WERE
- UU. ALL TRENCH WIDTHS ARE SHOWN FOR ITEMS ONLY. ANY REQUIREMENTS FOR SLOPING WALLS OR TO MAKE WIDER FOR CODES/WORKING/SAFETY ARE BY THE CONTRACTOR.
- MAINTAIN 18" SEPARATION BETWEEN CONDUITS OF MEDIUM VOLTAGE AND LOW VOLTAGE. WW. THE ELECTRICAL CONTRACTOR SHALL ALSO INCLUDE ROUGH-INS (CONDUIT WITH PULL-STRINGS) FOR THERMOSTATS AND OTHER HVAC WALL MOUNTED CONTROL DEVICES. REFER TO MECHANICAL PLANS AND COORDINATE WITH THE CONTROLS
- XX. PROVIDE ROUGH IN OF ALL TECHNOLOGY DEVICES SHOWN ON THE POWER AND TECHNOLOGY PLANS. YY. WHERE ROOMS ARE PRESSURE SENSITIVE, INTERIOR OF CONDUITS SHALL BE SEALED AS WELL AS EXTERIOR
- PENETRATIONS THRU WALL. ZZ. LIGHTING CONTROL SYSTEM STARTUP AND COMMISSIONING SHALL BE BY THE LIGHTING CONTROL MANUFACTURER. ANY DAYLIGHT HARVESTING SYSTEMS (WHEN INSTALLED), SHALL BE PROVIDED TO SPECIFICATIONS. ANY CHANGES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR FOR A COMPLETE AND FUNCTIONING SYSTEM MATCHING EXISTING DESIGN
- AAA. THE EC SHALL COORDINATE NEW SERVICE WITH UTILITY(S). ONCE THE CONTRACTOR HAS BEEN AWARDED, A SCHEDULE SHALL BE SET TO DETERMINE THE WORK REQUIRED BY THE UTILITY(S). NEW/CHANGE OF SERVICE SHALL BE FILED BY THE CONTRACTOR. THE ARCHITECT/OWNER/ENGINEER SHALL PROVIDE LOAD BREAKDOWNS, ACCOUNT INFORMATION, ETC AS REQUIRED TO APPLY FOR NEW/CHANGE OF SERVICE AS NOTED ON DRAWINGS. ANY UTILITY INFORMATION SHOWN ON DRAWINGS IS APPROXIMATE AND SUBJECT TO CHANGE. ENGINEER MAY COORDINATE INTENT WITH UTILITY (DUE TO MOST UTLITIES HAVING A 6 MONTH EXPIRATION ON ANY REQUESTS).

#### **ELECTRICAL PHASING GENERAL NOTES**

- PROVIDE A LIST OF SHUTDOWNS. ALL SHUTDOWNS NEED TO BE APPROVED 2 WEEKS PRIOR BY THE OWNER UNO. ALL SHUTDOWNS REQUIRE A MOP (METHOD OF PROCEDURE) DOCUMENT GENERATED BY THE CONTRACTOR WITH DESCIRPTIONS OF THE ACTIVITIES AND DURATIONS OF EACH EVENT, POINT OF NO RETURN, AND TOTAL DURATION OF THE SHUTDOWN. THIS MUST BE APPROVED BY THE OWNER AND ENGINEER 30 DAYS PRIOR TO SHUTDOWN.
  - F.C. SHALL DISCONNECT ALL POWER TO EQUIPMENT OF OTHER TRADES DESIGNATED FOR DEMOLITION OR RELOCATION. COORDINATE ALL WORK REQUIRED WITH CONTRACTORS OF OTHER TRADES. IN SUCH CASES WHERE THE EQUIPMENT IS BEING REMOVED, E.C. SHALL REMOVE ALL ASSOCIATED WIRING, CONDUIT, AND BOXES BACK TO SOURCE. TURN OVER ALL REMOVED ELECTRICAL EQUIPMENT TO OWNER.
  - REFER TO ARCHITECTURAL PHASING PLANS FOR SCHEDULE OF WORK.
  - EXISTING LIGHTING TO REMAIN IN OPERATION THRU ALL PHASES OF CONSTRUCTION. RECONNECT ALL EXISTING AND RELOCATED DEVICES AND EQUIPMENT TO ORIGINAL PANEL UNLESS OTHERWISE NOTED ON
  - PLANS. RECONFIGURE AND EXTEND CIRCUIT AS NECESSARY. PROVIDE OWNER WITH UPDATED, TYPED PANEL SCHEDULE. POWER TO EXISTING HVAC EQUIPMENT, VAV BOXES, AND HEATERS (UNIT OR OTHERWISE) TO REMAIN IN OPERATION DURING COLD MONTHS OF CONSTRUCTION. IF ANY HEATING UNITS/SYSTEMS ARE REMOVED OR TURNED OFF, CONTACTOR MUST PROVIDE TEMPORARY HEATING TO ENSURE PIPES TO NOT FREEZE
  - COORDINATE ALL CEILING REPLACEMENTS WITH ARCHITECTURAL PLANS FOR LOCATION OF CEILING REPLACEMENTS. DEMOLITION OF FIXTURES SHALL BE SIMILAR TO SPACES NOTED. DEMOLISHED CEILING SHALL HAVE ALL DEVICES PROTECTED AND REINSTALLED TO NEW CEILINGS. LIGHTING SHALL BE REMOVED AND REPLACED WITH NEW FIXTURES AS NOTES OR WITH SIMILAR TYPE FOR CEILING. CURRENTLY ALL CEILINGS ARE NOT SHOWN ON ELECTRICAL PLANS. LIGHT FIXTURES SHALL BE CONNECTED BACK TO THE SAME CIRCUIT/SWITCHING, UNO. WHERE NEW CIRCUITING IS SHOWN USING LESS CIRCUITS THAN EXISTED PREVIOUSLY, UNUSED CIRCUITS SHALL BE DEMOLISHED BACK TO LAST USED DEVICE OR
  - BREAKER. UPDATE PANEL SCHEDULES AS REQUIRED WITH NEW TYPE WRITTEN SCHEDULES. THIS CONTRACTOR WILL BE RESPONSIBLE FOR THEIR CUTTING AND PATCHING AND HIRING A QUALIFIED
  - CAPRENTER/CONTRACTOR TO PERFORM SAID CUTTING AND PATCHING. BUILDING IS REQUIRED TO BE OPEN FOR BUSINESS DURING OWNER'S NORMAL WORK SCHEDULE. THIS CONTRACTOR SHALL PROVIDE ANY PROTECTION REQUIRED FOR THE SAFETY OF OCCUPANTS WORKING IN RENOVATED AREAS. SHUTDOWNS WILL BE DONE AT NIGHT OR WEEKENDS (OUTSIDE OF OWNER'S NORMAL BUSINESS HOURS UNLESS OWNER APPROVED). SERVICES SHALL BE RESTORED BY NEXT BUSINESS DAYS OPERATING HOURS (PLUS ANY TIME THE OWNER NEEDS TO VERIFY ALL SYSTEMS ARE RESTORED). EXTENDED (LONG) SHUTDOWNS/OUTAGES SHALL BE PLANNED OVER LONGER WEEKENDS (HOLIDAYS) OR BREAKS (IF APPLICABLE).
  - WORK REQUIRED WITH CONTRACTORS OF OTHER TRADES. COORDINATE PHASING OF EQUIPMENT OF OTHER TRADES WITH SPECIFIC CONTRACTORS AND GC. PERFORM ELECTRICAL WORK ASSOCIATED WITH EQUIPMENT AS REQUIRED BY PHASING PLAN BY OTHERS. EC SHALL ALSO COORDINATE WITH THEIR SUPPLIERS/VENDORS ON ANY PHASING TO ENSURE COSTS ARE IN BID (MULTIPLE STARTUPS, EXTRA COMPONENTS

EC SHALL DISCONNECT ALL POWER TO EQUIPMENT OF OTHER TRADES DESIGNATED FOR RELOCATION. COORDINATE ALL

- TO ALLOW FOR PARTIAL OPERATION, ETC). COORDINATE ALL PHASING IN FIELD. WORK THAT CAUSES SERVICE DISRUPTIONS SHALL ONLY BE DONE DURING OFF HOURS. ALL SHUTDOWNS SHALL BE FIELD AND APPROVED BY OWNER PRIOR TO WORK PERFORMED (ALLOW TWO WEEKS
- FOR OWNER TO APPROVE SUBMITTALS). COORDINATE PHASING OF EQUIPMENT OF OTHER TRADES WITH SPECIFIC CONTRACTORS AND GC. PERFORM ELECTRICAL WORK ASSOCIATED WITH EQUIPMENT AS REQUIRED BY PHASING PLAN BY OTHERS.
- THIS CONTRACTOR SHALL SUBMIT A PRELIMINARY SCHEDULE WITH BID FOR PHASING WORK INDICATING MAJOR SHUTDOWNS PLANNED AND A GENERAL CONSTRUCTION TIMEFRAME. ANY AREAS WHERE FAILURE TO MEET A SHUDOWN WOULD CAUSE PROJECT EXTENSION SHALL BE NOTED TO THE COORDINATING CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL ALSO PROVIDE A DETAIL PHASED SCHEDULE WORKING WITH THE OTHER CONTRACTORS TO DERIVE AN OVERALL PROJECT SCHEDULE.
- ANY PHASING DOCUMENTS PROVIDED (ARCHITECTURALLY, MECHANICALLY, ETC AS PART OF THE BID SET) SHALL BE CONSIDERED PART OF THE ELECTRICAL CONTRACTORS DRAWINGS. REFER TO PHASING DOCUMENTS AS PART OF COORDINATION AND INSTALLATION OF WORK. ANY PHASING SCHEDULES AND OUTLINE NOTES ARE TO ASSIST THE CONTRACTOR IN THEIR BID TO HELP DETERMINE SHUTDOWNS (AND ANY ROUGH OUTLINES NOTED). METHOD OF PROCEDURES SHALL BE SUBMITTED WITH IDENTIFICATION OF EQUIPMENT, FLOORS, ETC IN THE OUTAGE TO THE OWNER AND ENGINEER FOR REVIEW AND OWNER APPROVAL. PHASING MAY BE ADJUSTED BUT MUST BE DOCUMENTED AND SIGNED OFF BY ALL TRADES, OWNER, AND ENGINEER (CONTRACTORS SHALL WORK TO DETERMINE A FULL PHASED SCHEDULE BASED ON EQUIPMENT ARRIVAL TO MEET THE FINAL FINISH DATE. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS ON METHOD OF PROCEDURES.

# **INDEX OF ELECTRICAL DRAWINGS** E000 ELECTRICAL LEGENDS ESU | ELECTRICAL SITE UTILITY PLAN E101 FIRST FLOOR LIGHTING PLAN E201 FIRST FLOOR POWER PLAN E500 SINGLE LINE DIAGRAM E501 ELECTRICAL SCHEDULES

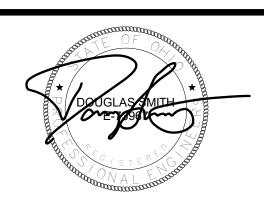
E601 ELECTRICAL DETAILS



Jerome M. Scott 1020 Goodale Blvc Columbus, Ohio



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DOT-200023 ODOT -**EATON OUTPOST** 

CONSTRUCTION DOCUMENTS

5656 US-127 Eaton, Ohio 45320

4 01/17/22 Addendum 003 12/17/21 | Revision 1 Permit/Bid Set 12/10/21 | Bid Set 11/12/21 | Permit Set

**DESCRIPTION** MARK DATE PROJECT NO: DOT-200023 DATE: 12/17/2021 DRAWN BY:

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SHEET TITLE

**ELECTRICAL LEGENDS** 

PLAN NOTES

PROVIDE FEED FROM LIGHTING INVERTER & EMERGENCY CIRCUIT EL1-27.

JIMS A R C H I T E C T II R E

Jerome M. Scott
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1020 Goodale Blvd
Columbus, Ohio
43212







CONSTRUCTION DOCUMENTS

5656 US-127 Eaton, Ohio 45320

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MARK DATE

FIRST FLOOR LIGHTING PLAN

2.- ALL CONDUITS REQUIRING SEALING FITTINGS

3.- THE FUEL ISLAND SHALL BE CONSIDERED TO PROOF SEALING FITTINGS AT EACH END OF ALL

HAZARDOUS LOCATIONS (APPLIES TO ALL SHEETS):

1.- IN WASH BAY ALL AREAS LOCATED BELOW 18" A.F.F. ARE CLASSIFIED AS CLASS 1, DIVISION 2 LOCATIONS. CONTRACTOR SHALL COMPLY WITH NEC ARTICLE 511.4
ALL CONDUITS SHALL BE CONCEALED IN MASONRY WALLS; OTHERWISE SEALING FITTINGS PER NEC 501.5 ARE REQUIRED WHERE CONDUITS EXTEND THROUGH THE CLASS 1 DIVISION 2 AREA LOCATED UP TO 18" A.F.F.

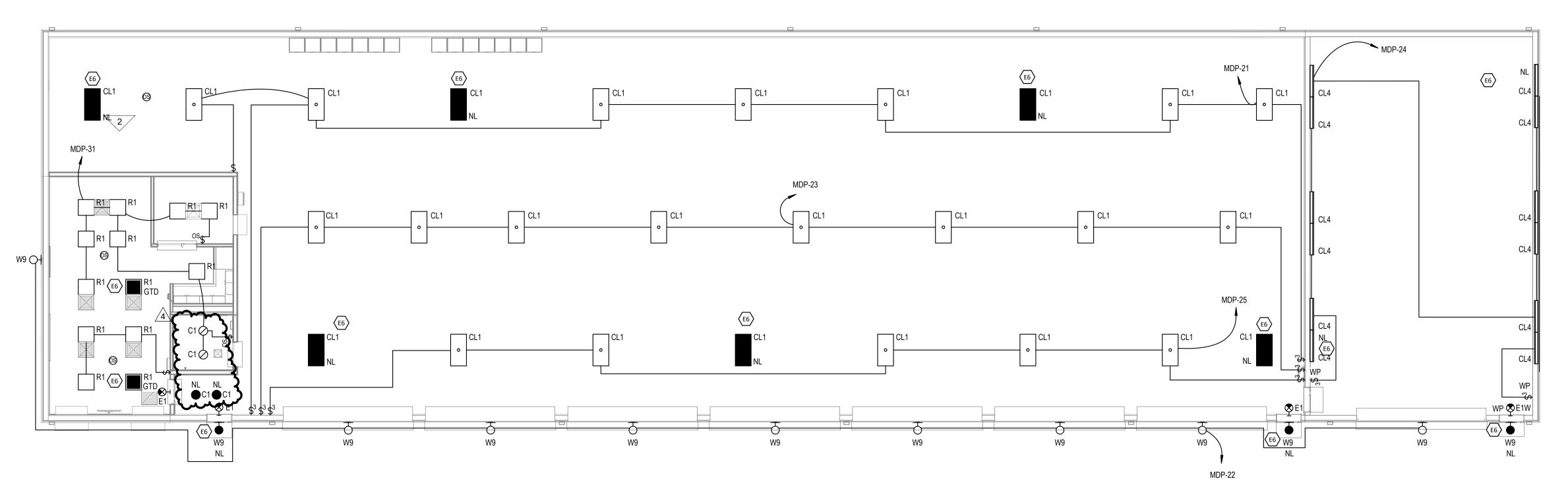
2.- ALL CONDUITS REQUIRING SEALING FITTINGS WHICH ARE TO BE LEFT EMPTY ARE TO BE INSTALLED WITH THREADED CAPS IN LIEU OF SEALANT.

3.- THE FUEL ISLAND SHALL BE CONSIDERED TO BE A CLASS 1, DIVISION 1 AND 2 LOCATION. ELECTRICAL CONTRACTOR SHALL COMPLY WITH NEC REQUIREMENTS, INCLUDING ARTICLES 501 AND 514. PROVIDE EXPLOSION PROOF SEALING FITTINGS AT EACH END OF ALL CONDUITS ORIGINATING AT THE FUEL ISLAND AS REQUIRED PER NEC ARTICLE 514.9.

4.- ALL WIRING AND EQUIPMENT IN SPACES ABOVE CLASS 1 LOCATIONS, SHALL BE INSTALLED ACCORDING ALL FIXED WIRING ABOVE TO NEC 511.7 AND NEC 501. (NEC 511.7.A.1: CLASS 1 LOCATIONS SHALL BE IN METAL RACEWAYS, RNC, ENT, FMC, LIQUIDTIGHT FMC, LIQUIDTIGHT FNC, OR TYPE MC, AC, MI, MANUFACTURED WIRING SYSTEMS, OR TYPE PLTC CABLE IN ACCORDANCE WITH ARTICLE 725, ALL WIRING TYPE TC OR ITC CABLE IN ACCORDANCE WITH ARTICLE 727. AND EQUIPMENT SHALL ALSO BE INSTALLED PER THE GOVERNING TECHNICAL SPECIFICATIONS.

5.- CONTRACTOR SHALL COMPLY WITH ALL NEC 501 & 511 REQUIREMENTS, INCLUDING AND NOT LIMITED TO THOSE REQUIREMENTS SPECIFICALLY OUTLINED ON THESE PLANS.

6.- ALL ELECTRICAL EQUIPMENT IN SPACES ABOVE CLASS 1 LOCATIONS, SHALL BE INSTALLED ACCORDING TO NEC 511.7 AND NEC 501. (NEC 511.7.B.1.a: ARCING EQUIPMENT. EQUIPMENT THAT IS LESS THAN 3.7m (12 FT) ABOVE THE FLOOR LEVEL THAT MAY PRODUCE ARCS, SPARKS, OR PARTICLES OF HOT METAL, SUCH AS CUTOUTS, SWITCHES CHARGING PANELS GENERATORS, MOTORS OR OTHER EQUIPMENT (EXCLUDING RECEPTACLES, LAMPS AND LAMPHOLDERS) HAVING MAKE-AND-BREAK OR SLIDING CONTACTS, SHALL BE OF THE TOTALLY ENCLOSED TYPE OR CONSTRUCTED SO AS TO PREVENT THE ESCAPE OF SPARKS OR HOT METAL PARTICLES. NEC 511.7.B.1.b: FIXED LIGHTING. LAMPS AND LAMPHOLDERS FOR FIXED LIGHTING THAT IS LOCATED OVER LANES THROUGH WHICH VEHICLES ARE COMMONLY DRIVEN OR THAT MAY OTHERWISE BE EXPOSED TO PHYSICAL DAMAGE SHALL BE LOCATED NOT LESS THAN 3.7m (12 FT) ABOVE THE FLOOR LEVEL, UNLESS OF THE TOTALLY ENCLOSED TYPE OR CONSTRUCTED SO AS TO PREVENT THE ESCAPE OF SPARKS OR HOT METAL PARTICLES.)





# HAZARDOUS LOCATIONS (APPLIES TO ALL SHEETS):

1 \ FIRST FLOOR POWER PLAN

1.- IN WASH BAY ALL AREAS LOCATED BELOW 18" A.F.F. ARE CLASSIFIED AS CLASS 1, DIVISION 2 LOCATIONS. CONTRACTOR SHALL COMPLY WITH NEC ARTICLE 511.4
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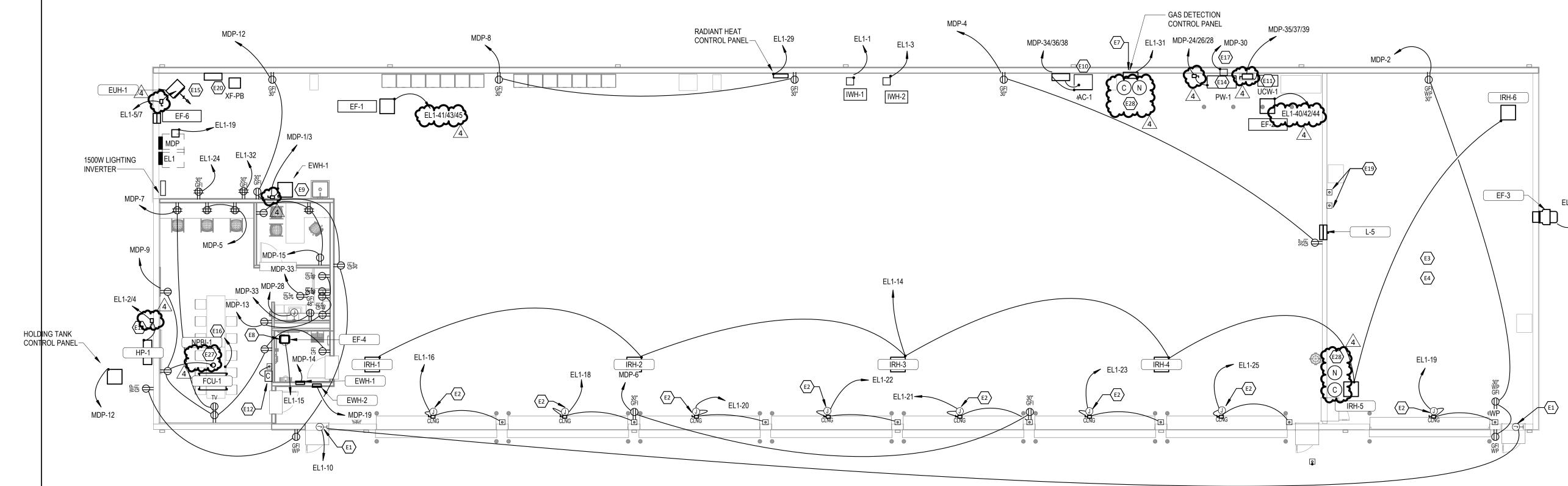
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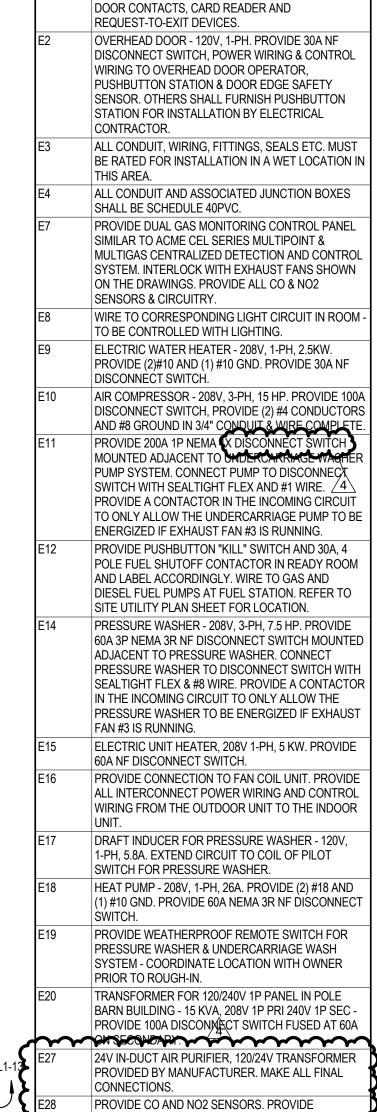
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CIRCUITRY TO THE FUAL GAS CONTROL PANEL.

**PLAN NOTES** 

DOOR ELECTRONICS - 120V, 1-PH. PROVIDE ALL INTERFACE WIRING BETWEEN ELECTRIC STRIKE,

JMS.

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SHEET TITLE

MARK

DATE

FIRST FLOOR POWER PLAN

E201

					VOLTA	AGE			STA	RTEF	₹			DIS	CO	NNE	CT M	1EAI	NS	CC	TNC	RO	L	
EQUIPMENT DESIGNATION	EQUIPMENT SERVED	HP (KVA)	NOTES	120V-1PH	208V-1PH 208V-3PH	277V-1PH 480V-3PH	NEMA SIZE	MAGNETIC	MANUAL MANUAL STARTER AND CONTACTOR	VAR FREQ DRIVE	INTEGRAL OVERLU	IN MCC	SEE NOTE FURNISHED BY	DISCONNCET SW	MANUAL STARTER	CORD & PLUG	SWITCH OR BRKER	SEE NOTE	FURNISHED BY	MANUAL	INTEGRAL	SEE NOTE	FURNISHED BY	FEEDER SIZE
			<u></u>	$\sqrt{}$							T										T	T	$\overline{\gamma}$	
EF-1	EXHAUST FAN #1	1.5			$\sim$	$\sim$	0	·	~~	~	~		8 EC		~	~	°	8	EÒ	0	1	2 E	EC	2 - #10, 1 - #10 GRD, 3/4" (
EF-2	EXHAUST FAN #2	1.5		5	0		0	0			Ť		8 EC				0	8	ΕŽ	0	1	2 E	EC	2 - #10, 1 - #10 GRD, 3/4" (
EF-3	EXHAUST FAN #3	1/4			مهد	بار	•	•	~~	4	•	~	نار	~	4	س.	<b>↓</b>	مه	5	0	1	1 [	EC	2 - #10, 1 - #10 GRD, 3/4" (
EF-4	EXHAUST FAN #4	(.128)		0							0		EC				0	5	EC	0	1	7 E	EC	2 - #10, 1 - #10 GRD, 3/4" (
EF-5	EXHAUST FAN #5	1/4		0							0		EC				0	5	EC	0		3 E	EC	2 - #10, 1 - #10 GRD, 3/4" (
FCU-1	FAN COIL UNIT #1	2.88A			0						5		НС	0				6	EC		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4" (
HP-1	HEAT PUMP #1	26A			0						0		НС	0				4	EC		0	ŀ	НС	2 - #8, 1 - #10 GRD, 3/4" (
EWH-1	ELECTRIC WALL HEATER #1	(1.5)		0							0		НС	0					НС		0	ŀ	НC	2 - #10, 1 - #10 GRD, 3/4" (
EWH-2	ELECTRIC WALL HEATER #2	(1.5)		0							0		НС	0				I	НС		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4"
EUH-1	UNIT HEATER #1	(5)			0						0		НС	0					EC		0	ŀ	НС	2 - #8, 1 - #10 GRD, 3/4" (
IRH-1	INFRARED HEATER #1	.3A		0							0		НС			0			EC		0	ŀ	НC	2 - #10, 1 - #10 GRD, 3/4"
IRH-2	INFRARED HEATER #2	.3A									0		НС			0			EC		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4"
IRH-3	INFRARED HEATER #3	.3A		0							0		НС			0			EC		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4"
IRH-4	INFRARED HEATER #4	.3A		0							0		НС			0			EC		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4" (
IRH-5	INFRARED HEATER #5	.3A		0							0		НС			0			EC		0	ŀ	НС	2 - #10, 1 - #10 GRD, 3/4"
IRH-6	INFRARED HEATER #6	.3A		0							0		НС			0			EC		0	ŀ	HC	2 - #10, 1 - #10 GRD, 3/4"
EH-1	ELECTRIC WATER HEATER #1	(2.5)			0						0		НС			0			EC		0	ŀ	HC	2 - #10, 1 - #10 GRD, 3/4"

VIDE A MOTOR RATED TOGGLE SWITCH	ADJACENT TO EQUIPMENT.			
		•		
-1 FED FROM OUTDOOR UNIT HP-1.				
	$\sim\sim\sim\sim$	$\sim\sim\sim$	$\gamma \gamma $	
VIDE 30A, 3P NEMA 3R COMBINATION S	TARTER DISCONNECT WITH	1 24 VAC CONTROL COIL.	PROVIDE STARTER WITH SOLID	STATE OVERLOAD PROTECTION.
MANAMANA	MAMAMA	MMMMMM	MANAMAN	WALLEL WALLE
	VIDE 30A, 3P NEMA 3R COMBINATION S	VIDE 30A, 3P NEMA 3R COMBINATION STARTER DISCONNECT WITH	VIDE 30A, 3P NEMA 3R COMBINATION STARTER DISCONNECT WITH 24 VAC CONTROL COIL.	VIDE 30A, 3P NEMA 3R COMBINATION STARTER DISCONNECT WITH 24 VAC CONTROL COIL. PROVIDE STARTER WITH SOLID

3.- PROVIDE ELECTRONIC TIMER SWITCH.

			LIGHTING FIXTURE	S			
				LAMPS	MOUNTING OPTIONS AC - AIRCRAFT CABLE		(S)
FIXTURE DESIGNATION	VOLTAGE	MANUFACTURER AND CATALOG NUMBER	FIXTURE DESCRIPTION	CATALOG NUMBER	C - CHAIN CM - CEILING MOUNT P - STEM R - RECESSED S - SURFACE UC - UNDER CABINET W - WALL UV - UNIVERSAL	APPROVED EQUALS	REFER TO NOTE(S)
E1	120	LITHONIA LQMSW3R-120/277	THERMO PLASTIC LED EXIT W/ RED LETTERS	3W LED	S	DUAL-LITE, CHLORIDE, SURE-LITES	
E1W	120	TLS CEX-L	THERMO PLASTIC LED EXIT W/ RED LETTERS, WASHDOWN AREA	6W LED	S	DUAL-LITE, CHLORIDE, SURE-LITES	
R1	120	LITHONIA 2GTI 2 40I GZ10 LP840	2X2 LED LAY-IN TROFFER WITH ACRYLIC LENS	35W LED	R	COLUMBIA, METALUX, DAY-BRITE	
CL1	120	LITHONIA IBH-9000LM-SD080-MD-MVOLT-OZ10-40K-80CRI-LAOZU	HIGH BAY RECTANGULAR LED FIXTURE, ACRYLIC LENS. 9,000 MIN. LUMENS, DAMP LOCATION, CHAIN HUNG, 4000K, 360 MOTION SENSOR 120V	112W LED	С	COLUMBIA, METALUX, DAY-BRITE	2
C1	120	LITHONIA LDN6 40/15 LO6AR LSS MVOLT GZ10	6" DOWNLIGHT, 4000K, 1500 LUMENS	22.5W LED	С	COLUMBIA, METALUX, DAY-BRITE	
W9	120	GARDCO 101L-32L-530-NW-G1-4-UNV-BZ	POLYCARBONATE LED WALL PACK, TYPE IV DIST, BRONZE FINISH	27W LED	W	LITHONIA, KIM, LUMARK	1
CL4	120	FEM L48 6000LM IMAFD MD MVOLT GZ10 40K 80CRI WLF STSL	4' ENCLOSED GASKETED, WET LOCATION FIXTURE WITH ACRYLIC LENS 6000 LUMENS, CHAIN HUNG, STAINLESS STEEL LATCHES, 80 CRI DIRECTIONAL SPOTLIGHT, SLIPFITTER MOUNT, 18,000 LUMENS,	37.2W LED	С	COLUMBIA, METALUX, DAY-BRITE	2
SP1	120	RAB X34-150L SF U	DIRECTIONAL SPOTLIGHT, SLIPFITTER MOUNT, 18,000 LUMENS, 80 CRI, 5000K, BRONZE	160W LED	С	COLUMBIA, METALUX, DAY-BRITE	2

1.- PROVIDE WITH INTEGRAL PHOTOCELL. 2.- COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL ELEVATIONS.

MDP B3:N36 12/9/2021 10:54:12 AM			F	PANE	ΞL:		MDF	)				
	CONN. LOAD:	101.4	KW	DEMAN	ID LOAD	):		100.8	KVA			NF TYPE
		281.5	AMPS					279.8	AMPS			SQUARE D
MAIN:	400A MLO	V	OLTAGE:	208	120	, 3P	H, 4W.			AIC:	25,000	
MTG:	SURFACE	LOCA	TION:	MEP AR	REA						NEMA 1	
LOAD	REMARKS	KW	BKR.	CIRCUIT NUMBER AND PHASE		OPT	BKR.	KW	REMARKS	LOAD		
Н	EH-1	1.25	20/2		1	Α	2		20/1	0.54	WASH BAY RCPTS	R
Н		1.25			3	В	4		20/1	0.36	TRUCK STORAGE RCPTS	R
R	READY ROOM RCPTS	0.72	20/1		5	С	6		20/1	0.36	TRUCK STORAGE RCPTS	R
R	READY ROOM RCPTS	0.90	20/1		7	Α	8		20/1	0.36	TRUCK STORAGE RCPTS	R
R	READY ROOM RCPTS	0.90	20/1		9	В	10		20/1	0.90	TRUCK STORAGE RCPTS	R
R	KITCHENETTE RCPTS	0.54	20/1		11	С	12		20/1	0.50	HOLDING TANK CTRL PNL	S
R	KITCHENETTE RCPTS	0.72	20/1		13	Α	14		20/1	1.50	EWH-1	Н
R	OFFICE RCPTS	0.72	20/1		15	В	16		125/2	7.50	POLE BARN PANEL	S
R	MICROWAVE	1.20	20/1		17	С	18			7.50	TRANSFORMER 15 KVA	S
Н	EWH-2	1.50	20/1		19	Α	20		20/1	1.54	WASH BAY LTS	L
L	TRUCK STORAGE LTS	0.63	20/1		21	В	22		20/1	0.22	EXTERIOR LTS	L
L	TRUCK STORAGE LTS	0.63	20/1		23	С	24		40/3	2.04	PRESSURE WASHER	M
L	TRUCK STORAGE LTS	0.63	20/1		25	Α	26			2.04		M
	SPARE		20/1		27	В	28			2.04		M
	SPARE		20/1		29	С	30		20/1	0.70	PW DRAFT INDUCER	M
L	OFFICE LTS	0.55	20/1		31	Α	32		20/1		SPARE	
М	GARBAGE DISPOSAL	0.56	20/1		33	В	34		70/3	3.73	AIR COMPRESSOR	M
М	UNDERCARRIAGE WASH	6.21	125/3		35	С	36			3.73		M
М	SYSTEM	6.21			37	Α	38			3.73		M
М	-	6.21			39	В	40		20/1		SPARE	
	SPARE		20/1		41	С	42		20/1		SPARE	
	SPARE		20/1		43	Α	44		20/1		SPARE	
	SPARE		20/1		45	В	46		20/1		SPARE	
	SPARE		20/1		47	С	48		20/1		SPARE	
	SPARE		20/1		49	Α	50		200/3		PANEL EL1	
	SPARE		20/1		51	В	52					
	SPARE		20/1		53	С	54				1	

EL1 B3:N36 1/17/2022 2:23:09 PM			F	PANI	EL:		EL1					
	CONN. LOAD:	30.6	KW	DEMAN	ND LOAD	):		31.1	KVA			NF TYPI
		85.1	AMPS					86.3	AMPS		SQL	UARE D
MAIN:	200A MLO	V	OLTAGE:	208	120	, 3P	H, 4W.			AIC:	25,000	
MTG:	SURFACE	LOCA	TION:	MEP A	REA						NEMA 1	
LOAD	REMARKS	KW	BKR.	OPT		IT NU D PH	JMBER ASE	OPT	BKR.	KW	REMARKS	LOAD
Н	IWH-1	0.18	20/1		1	Α	2		40/2	2.43	HP-1	Н
Н	IWH-2	0.18	20/1		3	В	4		,	2.43	_	Н
Н	EUH-1	2.50	40/2		5	С	6		20/1		SPARE	
<b>~~</b>	~~~~~	~~2.50			7	Α	8		20/1		SPARE	
	SPARE		20/1		9	В	10		20/1	0.50	ELECTRONIC LOCKS	R
	SPARE		20/1		11	С	12		20/1	0.50	CARD READER	R
	EEG. LANDERS OF THE SECOND OF	سوموس	20/1		13	Α	14		20/1	0.25	IRH-1 THRU IRH-6	Н
М	EF-4	0.13	20/1		15	В	16		20/1	0.37	TRUCK STORAGE DOOR	N
M	EF-5	0.19	20/1		17	С	18		20/1	0.37	TRUCK STORAGE DOOR	N
M	WASH BAY DOOR	0.37	20/1		19	Α	20		20/1	0.37	TRUCK STORAGE DOOR	N
M	TRUCK STORAGE DOOR	0.37	20/1		21	В	22		20/1	0.37	TRUCK STORAGE DOOR	l N
	TRUCK STORAGE DOOR	0.37	20/1		23	С	24		20/1	1.20	TECH PANEL	R
M	TRUCK STORAGE DOOR	0.37	20/1		25	A	26		20/1	0.25	FUEL ISLAND LTS	L
L	EMERGENCY LIGHTING	1.50	20/1		27	В	28		20/1	0.50	GAS DISPENSER	R
R	RADIANT HEAT CTRL PNL	0.80	20/1		29	С	30		20/1	0.50	DIESEL DISPENSER	R
R	GAS DETECTION PANEL	0.50	20/1		31	Α	32		20/1	1.00	SECURITY PANEL	R
M	GATE CONTROL	0.50	20/1		33	В	34		20/1	0.50	FUEL E-STOP	R
M	WELL PUMP	1.24	30/3		35	C	36		20/2	1.25	BRINE MAKER	Н
M		1.24			37	Α	38		$\sim$	~~5	$\sim\sim\sim\sim\sim$	~~~
<b>→</b>	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~		39	В	40		20/3	0.37	EF-2	N
M	EF-1	0.37	20/3		41	C	42			0.37		IV
M		0.37	,	3	43	Α	44	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		0.37		IV
М		0.37	•	1	45	В	46	1	20/1	آسير	SPARE	سسر
سس	SPARE	سسب	س1/20	<b>/</b>	47	С	48		20/1		SPARE	
	SPARE		20/1		49	Α	50		20/1		SPARE	
	SPARE		20/1		51	В	52		20/1		SPARE	
	SPARE		20/1		53	С	54		20/1		SPARE	

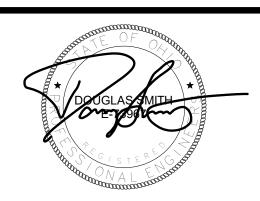
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CONSTRUCTION DOCUMENTS

5656 US-127 Eaton, Ohio 45320

4 01/17/22 Addendum 003 1 12/17/21 Revision 1 Permit/Bid Set 12/10/21 Bid Set 11/12/21 | Permit Set

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