PANEL: PP3
LOCATION: BAY AREA 'A'
SUPPLY FROM: MDP
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208
PHASES 3
WIRES: 4

K.I.C. RATING: 22 KIC
MAIN BREAKER: 200A
PANEL RATING: 200A

NOTES:
BRANCH CIRCUIT BREAKERS SHALL BE RATED 22 KAIC MINIMUM

	CKT.	DIRECTORY	TRIP	POLES	Leg A (VA)		Leg B (VA)		Leg C (VA)		POLES	TRIP	DIRECTORY	CKT.	
	1	BAY AREA LT	20A	1	664	864					1	20A	UH-1(A)	2	
	3	BAY AREA LT	20A	1			630	864			1	20A	UH-1(B)	4	
	5	BAY AREA LT	20A	1					630	864	1	20A	UH-1(C)	6	
	7	BAY AREA LT	20A	1	630	864					1	20A	UH-1(D)	8	
	9	BAY AREA REC	20A	1			540	864			1	20A	UH-1(E)	10	
	11	BAY AREA REC	20A	1					720		1	20A	SPARE	12	
	13	BAY AREA REC	20A	1	540						1	20A	SPARE	14	
	15	GFI FOR SHOP VAC	20A	1			180	1392			1	20A	ERV-1(A) AND (B)	16	
BHC	17	BLOCK HEATER	20A	1					1500	1392	1	20A	ERV-1(C) AND (D)	18	
BHC	19	BLOCK HEATER	20A	1	1500	696					1	20A	ERV-1(E)	20	
	21		20A	1			864	440			1	20A	PF-1(A) THRU (D)	22	
	23	BAY DOORS B10 THRU B14	20A	1					864		1	20A	SPARE	24	
	25		20A	1	864						1	20A	SPARE	26	
	27		20A	1			864				1	20A	SPARE	28	
	29	BAY DOORS B15 THRU B19	20A	1					864		1	20A	SPARE	30	
	31		20A	1	864						1	20A	SPARE	32	
	33	BLOCK HEATER CONTACTOR	20A	1							1	20A	SPARE	34	
	35	SPARE	20A	1							1	20A	SPARE	36	
	37	SPARE	20A	1							1	20A	SPARE	38	
	39	SPARE	20A	1							1	20A	SPARE	40	
	41	SPARE	20A	1							1	20A	SPARE	42	
			TOTAL LOADS		7.49		6.64		6.83		KVA				
			TOTAL AMPS		62.4		55.3		57.0		AMPS				

BHC - CIRCUITS CONTROLLED BY BLOCK HEATER CONTACTOR

* GFI CIRCUIT BREAKER

PANEL: PP4
LOCATION: BAY AREA 'A'
SUPPLY FROM: MDP
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208
PHASES 3
WIRES: 4

K.I.C. RATING: 22 KIC
MAIN BREAKER: 200A
PANEL RATING: 200A

NOTES:
BRANCH CIRCUIT BREAKERS SHALL BE RATED 22 KAIC MINIMUM

CKT.	DIRECTORY	TRIP	POLES	Leg A (VA)		Leg B (VA)		Leg C (VA)		POLES	TRIP	DIRECTORY	CKT.	
1	WASH BAY REC	20A	1	360	440					1	20A	PF-1(E) THRU (H)	2	*
3	WASH BAY LT	20A	1			1048	864			1	20A	UH-1(F)	4	*
5	WASH BAY LT	20A	1					1048	864	1	20A	UH-1(G)	6	*
7	WASH BAY REC	20A	1	540	864					1	20A	UH-1(H)	8	*
9						2906	864			1	20A	UH-1(I)	10	*
11	POWER WASHER	30A	3					2906	864				12	
13				2906	864					3	20A	ERV-1(F)	14	
15						864	864						16	
17	BAY DOORS B20 B21 B22	20A	3					864	864				18	
19				864	864					3	20A	ERV-1(G)	20	
21						864	864						22	
23	BAY DOORS B23 B24 B25	20A	3					864	3540				24	
25				864	3280					2	60A	PPY	26	
27	SPARE	20A	1							1	20A	SPARE	28	
29	SPARE	20A	1							1	20A	SPARE	30	
31	SPARE	20A	1							1	20A	SPARE	32	
33	SPARE	20A	1							1	20A	SPARE	34	
35	SPACE	20A	1							1	20A	SPACE	36	
37	SPACE	20A	1							1	20A	SPACE	38	
39	SPACE	20A	1							1	20A	SPACE	40	
41	SPACE	20A	1							1	20A	SPACE	42	
		TOTAL LOADS		11.85		9.14		11.81		KVA				
		TOTAL AMPS		98.7		76.2		98.5		AMPS				

BHC - CIRCUITS CONTROLLED BY BLOCK HEATER CONTACTOR

* GFI CIRCUIT BREAKER

PANEL: EVM
LOCATION: ELECTRICAL ROOM
SUPPLY FROM: MDP
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208
PHASES 3
WIRES: 4

K.I.C. RATING: 22 KIC
MAIN BREAKER: 300A
PANEL RATING: 300A

NOTES:
BRANCH CIRCUIT BREAKERS SHALL BE RATED 22 KAIC MINIMUM

CKT.	DIRECTORY	TRIP	POLES	Leg A (VA)		Leg B (VA)		Leg C (VA)		POLES	TRIP	DIRECTORY	CKT.
1	EMPLOYEE EV CHARGER ①	50A	2	4160	4160					2	50A	VISITOR EV CHARGER ⑨	2
3						4160	4160						4
5	EMPLOYEE EV CHARGER ①	50A	2					4160	4160	2	50A	VISITOR EV CHARGER ⑨	6
7				4160	4160								8
9	EMPLOYEE EV CHARGER ②	50A	2			4160	4160			2	50A	VISITOR EV CHARGER ⑩	10
11								4160	4160				12
13	EMPLOYEE EV CHARGER ②	50A	2	4160	4160					2	50A	VISITOR EV CHARGER ⑩	14
15						4160	4160						16
17	SPACE	20A	1						180	1	20A	GATEWAY #2	18
19	SPACE	20A	1							1	20A	SPACE	20
21	SPACE	20A	1							1	20A	SPACE	22
23	SPACE	20A	1							1	20A	SPACE	24
25	SPACE	20A	1							1	20A	SPACE	26
27	SPACE	20A	1							1	20A	SPACE	28
29	SPACE	20A	1							1	20A	SPACE	30
31	SPACE	20A	1							1	20A	SPACE	32
33	SPACE	20A	1							1	20A	SPACE	34
35	SPACE	20A	1							1	20A	SPACE	36
37	SPACE	20A	1							1	20A	SPACE	38
39	SPACE	20A	1							1	20A	SPACE	40
41	SPACE	20A	1							1	20A	SPACE	42
		TOTAL LOADS		24.96		24.96		16.82		KVA			
		TOTAL AMPS		208.0		208.0		140.2		AMPS			

* GFI CIRCUIT BREAKER

PANEL: PPY
LOCATION: STORAGE CONTAINER
SUPPLY FROM: PP4
MOUNTING: SURFACE
ENCLOSURE: TYPE 1

VOLTS: 120/208
PHASES: 1
WIRES: 3

K.I.C. RATING: 22 KIC
MAIN BREAKER: 60A
PANEL RATING: 100A

NOTES:
BRANCH CIRCUIT BREAKERS SHALL BE RATED 22 KAIC MINIMUM

CKT.	DIRECTORY	TRIP	POLES	Leg A (VA)		Leg B (VA)		POLES	TRIP	DIRECTORY	CKT.
1	STORAGE CONTAINERS 1,2	20A	1	282	1500			1	20A	BLOCK HEATER REC	2
3	STORAGE CONTAINERS 3,4	20A	1			282	1500	1	20A	BLOCK HEATER REC	4
5	HOOP STRUCTURE LIGHTS	20A	1	260	1500			1	20A	BLOCK HEATER REC	6
7	SPARE	20A	1				1500	1	20A	BLOCK HEATER REC	8
9	SPARE	20A	1					1	20A	SPARE	10
11	SPARE	20A	1					1	20A	SPARE	12
		TOTAL LOADS		3.54		3.28		KVA			
		TOTAL AMPS		29.5		27.4		AMPS			

* GFI CIRCUIT BREAKER

THE DESIGN APPEARS TO CONFORM TO APPLICABLE CRITERIA. APPROVAL IS NOT TO BE CONSTRUED TO MEAN THAT ALL ASPECTS OF THE DESIGN HAVE BEEN PERSONALLY CHECKED BY THE UNDERSIGNED.

Adam Fox
2022.05.16
12:51:42-04'00'

TRANSPORTATION PRINCIPAL ENGINEER

ADDENDUM NO. 1

REV.	DATE	REVISION DESCRIPTION
1	5/11/22	INCLUDE PANEL SCHEDULE PPY

DESIGNER/DRAFTER: JC CHECKED BY: MPW

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0042-0324
PROJECT DESCRIPTION: EAST HARTFORD MAINTENANCE FACILITY AND SIGNS AND MARKING FACILITY
TOWN(S): EAST HARTFORD
DRAWING TITLE: PANEL SCHEDULES 2

DRAWING NO. EM-511
SHEET NO. 06F.20.A1

LASTED SAVED BY: ComeauJ **FILE NAME:** C:\Users\comeauj\State of Connecticut\0042-0324 - Design\F_Elect\Contract_Plans\Maintenance Facility\FD_CP_ELE_0042_0324_EM-511 A1.dgn
PLOTTED DATE: 5/12/2022

GROUNDING AND BONDING KEY NOTES:

1. BURIED GROUNDING RING CONSISTING OF #2 AWG BARE STRANDED COPPER 12" FROM TANK FOUNDATION AND 30" DEEP MINIMUM. (2) 3/4" X 10' COPPER CLAD GROUND RODS AT OPPOSING CORNERS CONNECTED TO GROUNDING RING

2. BOND TANK PER MANUFACTURES SPECIFICATIONS TO GROUND ROD WITH #2 AWG BARE STRANDED COPPER. GROUND WIRE SHALL BE CONTINUOS TO GROUND ROD.SEE DETAIL 4 ON DRAWING NO. EM-602 FOR TANK GROUND PENETRATIONS THROUGH SLAB.

3. BOND STAIRS/FALL PROTECTION/FENCE WITH UL LISTED MECHANICAL GROUNDING CONNECTOR AND #2 AWG BARE STRANDED COPPER CONDUCTOR TO GROUNDING ROD/RING.

MOTOR FUEL ISLAND GENERAL NOTES:

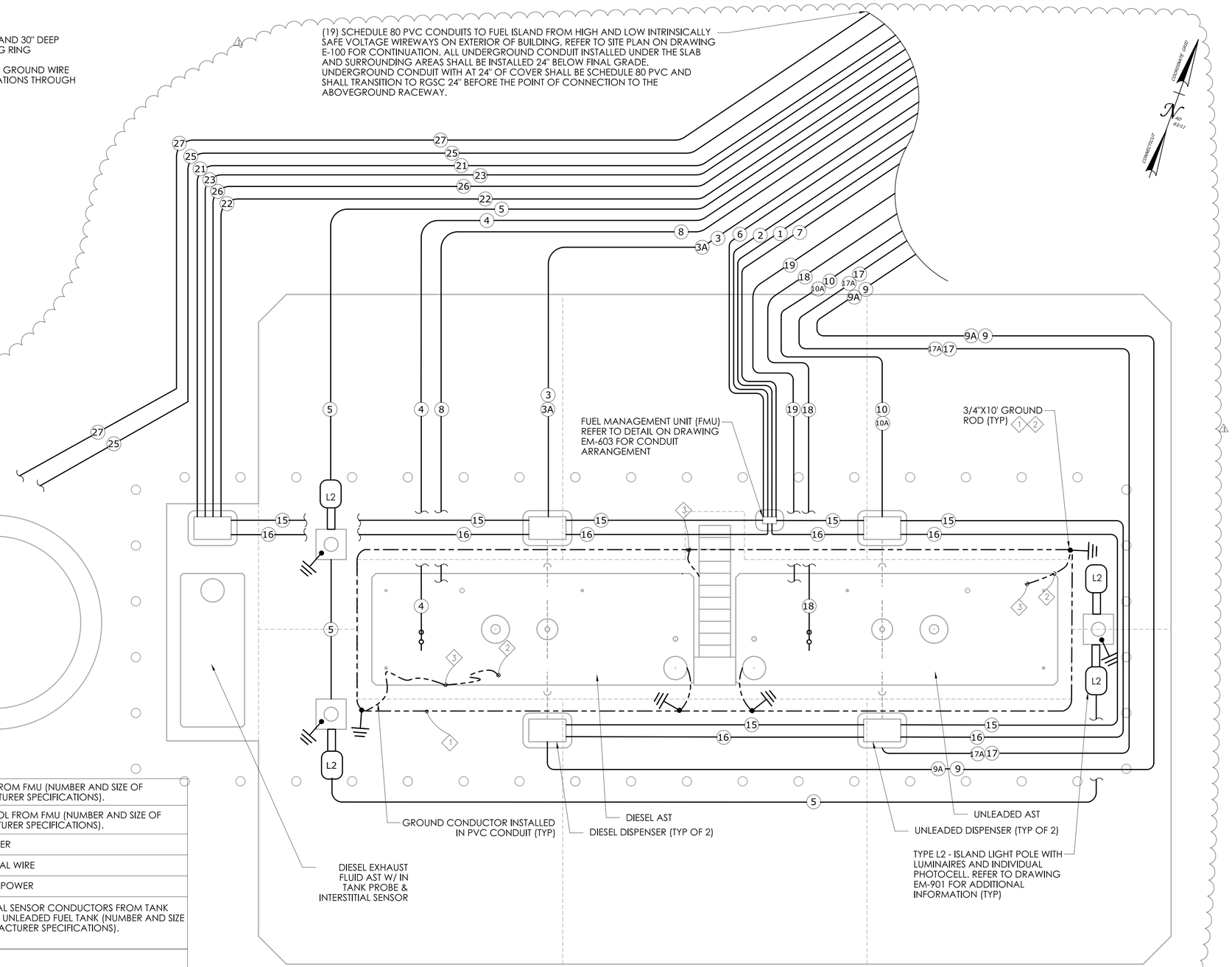
1. ALL UNDERGROUND CONDUIT INSTALLED UNDER THE SLAB AND SURROUNDING AREAS SHALL BE INSTALLED 24" BELOW FINAL GRADE. UNDERGROUND CONDUIT WITH AT LEAST 24" OF COVER SHALL BE SCHEDULE 80 PVC AND SHALL TRANSITION TO PVC COATED RGSC 24" BEFORE THE POINT OF CONNECTION TO THE ABOVEGROUND RACEWAY.

2. ALL CONDUITS SHALL BE PROVIDED WITH EXPLOSION PROOF FITTINGS WITHIN 18" OF WIREWAYS OR DEVICES AND SEALED AS REQUIRED IN ACCORDANCE WITH NFPA-70, STATE, AND LOCAL CODES. CONDUIT STUB-UPS ABOVE GROUND WITHIN 20 FEET PROXIMITY OF FUELING SHALL BE TERMINATED AT 6-18 INCHES (UNLESS OTHERWISE NOTED) ABOVE GRADE WITH E.Y. FITTINGS. THIS INCLUDES CONDUITS THAT ENTER THE FUEL MASTER AND DISPENSERS.

3. SEE CIVIL DRAWINGS FOR MOTOR FUEL TANK, FUEL ISLAND DETAILS AND LOCATIONS OF EXPLOSION PROOF FITTINGS INSTALLED ON TOP OF TANK.

4. CONDUIT AND CONDUCTORS MOUNTED ON TANK SHALL BE ROUTED TO ASSOCIATED DEVICES. PERFORM ALL FINAL CONNECTION PER MANUFACTURER'S SPECIFICATIONS. COORDINATE WITH TANK LAYOUT PER CIVIL DRAWINGS.

(19) SCHEDULE 80 PVC CONDUITS TO FUEL ISLAND FROM HIGH AND LOW INTRINSICALLY SAFE VOLTAGE WIREWAYS ON EXTERIOR OF BUILDING, REFER TO SITE PLAN ON DRAWING E-100 FOR CONTINUATION. ALL UNDERGROUND CONDUIT INSTALLED UNDER THE SLAB AND SURROUNDING AREAS SHALL BE INSTALLED 24" BELOW FINAL GRADE. UNDERGROUND CONDUIT WITH AT 24" OF COVER SHALL BE SCHEDULE 80 PVC AND SHALL TRANSITION TO RGSC 24" BEFORE THE POINT OF CONNECTION TO THE ABOVEGROUND RACEWAY.



MOTOR FUEL ISLAND CONDUIT CODED NOTES:

1	SPARE WITH PULL STRING FROM WIREWAY TO FMU (POWER)
2	FMU POWER
3	DIESEL #1 DISPENSER POWER
3A	DIESEL #1 DISPENSER SIGNAL WIRE
4	DIESEL SUBMERSIBLE PUMP POWER
5	ISLAND LIGHTING POWER
6	SPARE COMMUNICATION CAT-6A CABLE TO FMU
7	FMU AND TANK MONITORING SYSTEM COMMUNICATIONS (4-CONDUCTOR SHIELDED #24 AWG OR AS PER MANUFACTURER SPECIFICATIONS). FMU AND NETWORK COMMUNICATIONS CAT-6A CABLE RATED FOR UNDERGROUND INSTALLATION.
8	IN TANK PROBE AND INTERSTITIAL SENSOR CONDUCTORS FROM TANK MONITORING SYSTEM (TMS) TO DIESEL FUEL TANK (NUMBER AND SIZE OF CONDUCTORS PER MANUFACTURER SPECIFICATIONS).
9	DIESEL #2 DISPENSER POWER
9A	DIESEL #2 DISPENSER SIGNAL WIRE
10	UNLEADED #1 DISPENSER POWER
10A	UNLEADED #1 DISPENSER SIGNAL WIRE
15	DISPENSER PULSER CONTROL FROM FMU (NUMBER AND SIZE OF CONDUCTORS PER MANUFACTURER SPECIFICATIONS).
16	DISPENSER AC POWER CONTROL FROM FMU (NUMBER AND SIZE OF CONDUCTORS PER MANUFACTURER SPECIFICATIONS).
17	UNLEADED #2 DISPENSER POWER
17A	UNLEADED #2 DISPENSER SIGNAL WIRE
18	UNLEADED SUBMERSIBLE PUMP POWER
19	IN TANK PROBE AND INTERSTITIAL SENSOR CONDUCTORS FROM TANK MONITORING SYSTEM (TMS) TO UNLEADED FUEL TANK (NUMBER AND SIZE OF CONDUCTORS PER MANUFACTURER SPECIFICATIONS).
21	DEF DISPENSER POWER
22	DEF SUBMERSIBLE PUMP POWER
23	IN TANK PROBE AND INTERSTITIAL SENSOR CONDUCTORS FROM TANK MONITORING SYSTEM (TMS) TO DEF FUEL TANK (NUMBER AND SIZE OF CONDUCTORS PER MANUFACTURER SPECIFICATIONS).
25	MAGNESIUM CHLORIDE TANK PUMP POWER
26	DEF TANK HEAT TRACE
27	MAG TANK LEVEL SENSOR

ADDENDUM NO. 1

REV.	DATE	REVISION DESCRIPTION
1	5/11/22	MIRRORED ELECTRICAL ROUTES

DESIGNER/DRAFTER: MA CHECKED BY: MPW

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

SIGNATURE/ BLOCK:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

PROJECT NUMBER: 0042-0324
PROJECT DESCRIPTION: EAST HARTFORD MAINTENANCE FACILITY AND SIGNS AND MARKING FACILITY
TOWN(S): EAST HARTFORD
DRAWING TITLE: FUEL ISLAND CONDUIT PLAN

DRAWING NO. EM-600
SHEET NO. 06F.24.A1

LASTED SAVED BY: ComeauJ **FILE NAME:** C:\Users\comeauj\State of Connecticut\0042-0324 - Design\F_Elect\Contract_Plans\Maintenance Facility\FD_CP_ELE_0042_0324_EM-600 A1.dgn
PLOTTED DATE: 5/12/2022