

PHOTO GROUP A EXISTING CONDUITS, WIRING AND CABLES TO FUEL ISLAND

DEMOLITION NOTES:

- EXISTING UNDERGROUND 10,000 GAL. GASOLINE TANK AND MONITORING WELL TO BE REMOVED. REMOVE ALL UNDERGROUND CONDUIT AND WIRING ASSOCIATED WITH THE TANK IN ITS ENTIRETY BACK TO SOURCE.
- EXISTING UNDERGROUND 10,000 GAL. DIESEL TANK AND MONITORING WELL TO BE REMOVED. REMOVE ALL UNDERGROUND CONDUIT AND WIRING ASSOCIATED WITH THE TANK IN ITS ENTIRETY BACK TO SOURCE.
- EXISTING UNDERGROUND 6,000 GAL. HEATING OIL TANK AND MONITORING WELL TO BE REMOVED. REMOVE ALL UNDERGROUND CONDUIT AND WIRING ASSOCIATED WITH THE TANK IN ITS ENTIRETY BACK TO SOURCE.
- REMOVE CONDUITS AND WIRING UNDER EACH FUEL DISPENSER.
- ALL EXISTING UNDERGROUND CONDUIT AND WIRING TO BE REMOVED IN ITS ENTIRETY BACK TO SOURCE.
- EXISTING COMMUNICATIONS BOX FOR INCOMING TELEPHONE SERVICE TO REMAIN. SEE PHOTO GROUP B, #4A.
- EXISTING INCOMING ELECTRICAL POWER WIRE TROUGH (WIRE TROUGH TAG NO. 00196638) AND CONDUIT AND WIRING TO REMAIN. SEE PHOTO GROUP B, #4A.
- NOT USED.
- DISCONNECT AND REMOVE EXISTING FUEL MASTER CARD READER. SALVAGE CARD READER AND DELIVER TO HOWARD COUNTY FLEET SERVICES FOR TEMPORARY STORAGE UNTIL READY FOR RE-INSTALLATION BY CONTRACTOR AT THE NEW FUEL SERVICE ISLAND. SEE PHOTO GROUP B, #5. EXISTING CARD READER CONNECTED TO EXISTING ELECTRICAL PANEL EDP-1, CIRCUIT BREAKER NO. 4 IN EXISTING ELECTRICAL ROOM.
- EXISTING VEEDER ROOT EQUIPMENT TO REMAIN. SEE PHOTO GROUP B, #6. EXISTING VEEDER ROOT EQUIPMENT CONNECTED TO EXISTING ELECTRICAL PANEL EDP-1, CIRCUIT BREAKER NO. 14. REMOVE EXISTING LABELS AND PROVIDE A NEW ELECTRIC PANEL AND CIRCUIT DESIGNATION LABEL.

DEMOLITION NOTES CONTINUED:

- REMOVE EXISTING ENCLOSURE AND SALVAGE AND TURN OVER TO HOWARD COUNTY. SEE PHOTO GROUP B, #10A, #10B AND #10C.
- EXISTING FUEL DISPENSER HOSE SUPPORT PIPE TO BE REMOVED.
- EXISTING DIESEL FUEL DISPENSER/PUMP'S NO.'S 2, 3 AND 4 TO BE REMOVED. EXISTING FUEL PUMPS CONNECTED TO EXISTING ELECTRICAL PANEL EDP-1, CIRCUIT BREAKER NO.'S 6 AND 8.
- EXISTING GASOLINE FUEL DISPENSER/PUMP NO. 1 TO BE REMOVED. EXISTING FUEL PUMP CONNECTED TO EXISTING ELECTRICAL PANEL EDP-1, CIRCUIT BREAKER NO. 6.
- EXISTING THRU THE WALL LOUVER TO REMAIN. SEE PHOTO GROUP B, #4B AND #4C.
- REMOVE EXISTING EMERGENCY FUEL SHUT OFF SWITCH, CONDUIT AND WIRING IN ITS ENTIRETY. SEE PHOTO GROUP B, #9.
- EXISTING SUPPORT COLUMN FOR EXISTING CANOPY TO BE REMOVED. SEE MECHANICAL AND CIVIL DRAWINGS.
- EXISTING ABANDONED, FUEL DAY TANK FOR EXISTING ABANDONED DAY TANK TO REMAIN.
- EXISTING ABANDONED, EMERGENCY GENERATOR AND CONCRETE PAD TO REMAIN. SEE PHOTO GROUP B, #2.
- EXISTING EMERGENCY GENERATOR TAP BOX TO REMAIN. SEE PHOTO GROUP B, #3.
- EXISTING BGE OWNED ELECTRIC METER AND ELECTRIC METER SOCKET (TAG #0019638) TO REMAIN. SEE PHOTO GROUP B, #4A.
- REMOVE EXISTING CONDUIT AND WIRING TO EXISTING CARD READER STATION ON THE FUEL ISLAND IN ITS ENTIRETY FROM EXISTING CARD READER TO EXISTING VEEDER ROOT EQUIPMENT.
- EXISTING CONDUITS AND PULL BOX, SEE PHOTO'S GROUP A. REMOVE EXISTING CONDUITS WIRING AND CABLING SUPPLYING POWER, COMMUNICATIONS, DATA AND SECURITY TO THE EXISTING FUEL ISLAND.

GENERAL DEMOLITION NOTES:

- ALL EXISTING ELECTRICAL POWER EQUIPMENT, COMMUNICATIONS, TELEPHONE EQUIPMENT TO REMAIN IN PLACE UNLESS OTHERWISE NOTED ON DRAWING.
- FIELD VERIFY EXISTING CONDITIONS. ORIGINAL BUILDING CONSTRUCTION DRAWINGS DATED 1982 AND FIELD VISUAL OBSERVATIONS PROVIDED SOME LIMITED INFORMATION.
- CONTRACTOR SHALL TRACE THE ENTIRE LENGTH AND ROUTE OF THE EXISTING CONDUITS WITHIN THE BUILDING SERVING THE FUEL SYSTEM FROM EXISTING PANEL EDP-1, LOCATED IN THE MAIN ELECTRICAL ROOM TO THE EXISTING FUEL ISLAND.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CARRY OUT DEMOLITION WITHOUT AFFECTING EXISTING UTILITIES, UNLESS SHOWN OR AUTHORIZED.

EXISTING BUILDING F GARAGE STORAGE

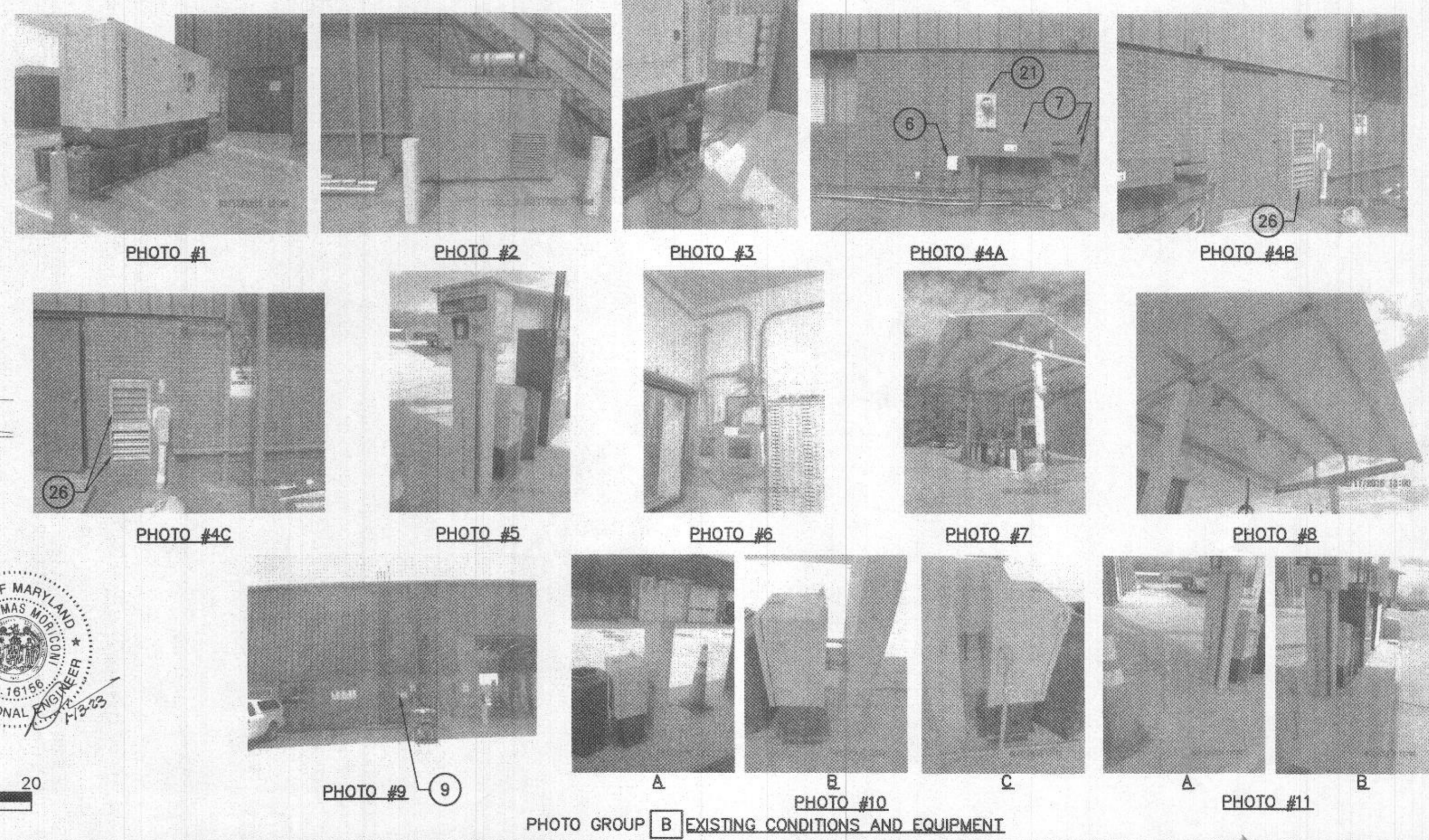
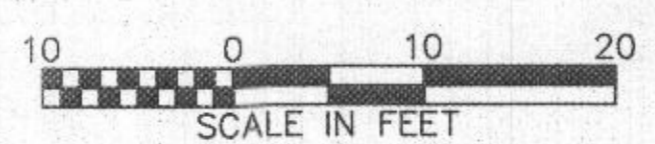


PHOTO GROUP B EXISTING CONDITIONS AND EQUIPMENT

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
 LICENSE NO. 21631
 EXPIRATION DATE: 6/22/2021



1 ELECTRICAL DEMOLITION PLAN
 E-2 SCALE: 1" = 10'-0"

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: [Signature] 8/23/19
 Chief, Design & Construction: [Signature] 08-14-2019
 Chief, Operations & Maintenance: [Signature] 08-12-2019



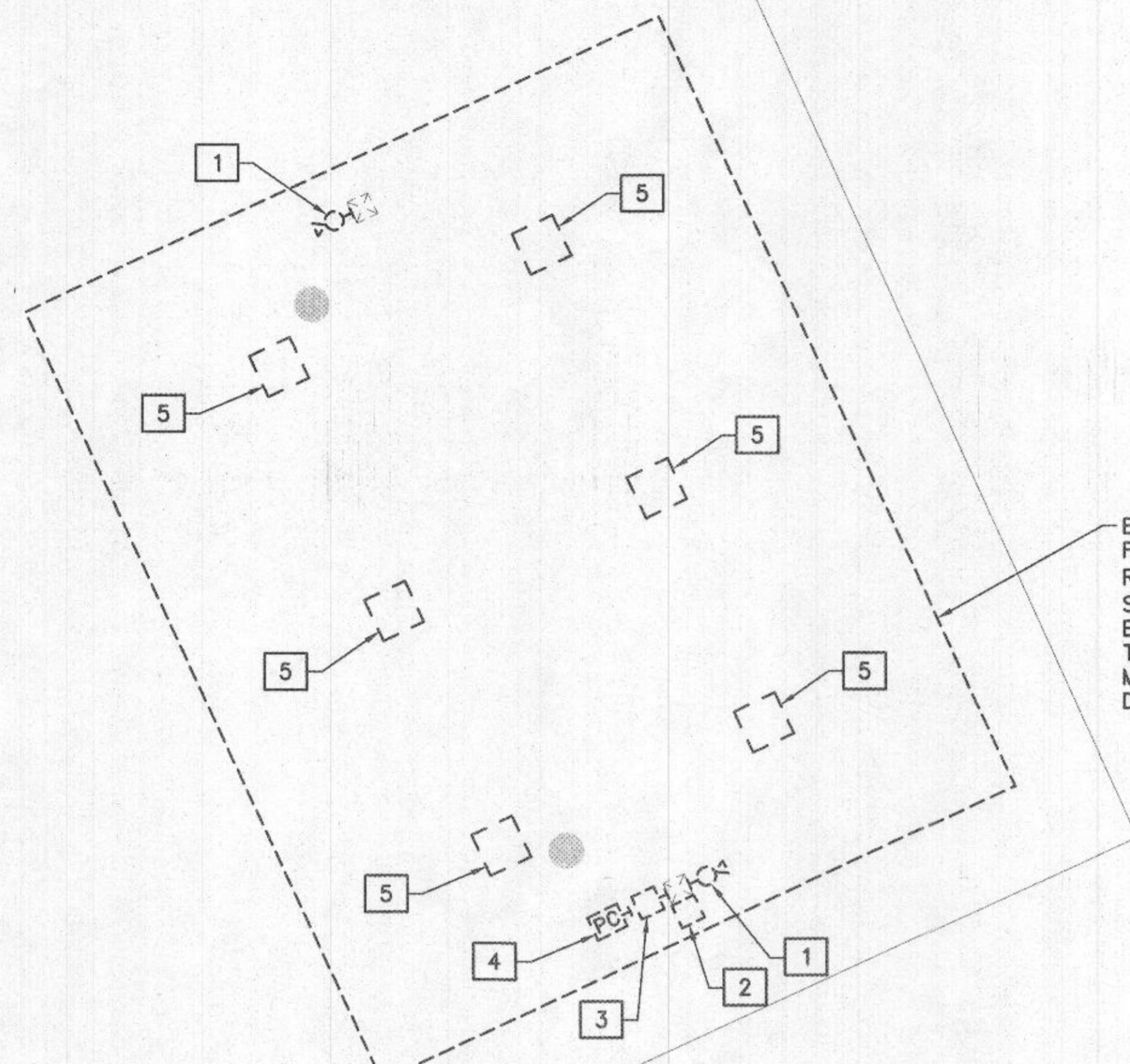
DES:	SLW			
DRN:	LEF			
CHK:	AA			
DATE:	08/20/19			
BY:	NO.	REVISION	DATE	

ELECTRICAL DEMOLITION PLAN

**DAYTON HIGHWAY MAINTENANCE FACILITY
 UPGRADED FUEL STORAGE &
 DISPENSING SYSTEM**

CAPITAL PROJECT NO. C-0322
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE: 1"=10'
 DWG NO.: E-2



1 EXISTING CANOPY - ELECTRICAL DEMOLITION - PART PLAN
E-3 SCALE: 1" = 5'-0"

EXISTING CANOPY - ELECTRICAL DEMOLITION - PART PLAN NOTES:

- 1 CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING SECURITY CCTV CAMERA AND TURN OVER TO HOWARD COUNTY. SEE PHOTO GROUP A, #1 AND #6.
- 2 CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING SECURITY CCTV EQUIPMENT ENCLOSURE AND TURN OVER TO HOWARD COUNTY. SEE PHOTO GROUP A, #2.
- 3 CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING SECURITY/ELECTRONIC EQUIPMENT AND TURN OVER TO HOWARD COUNTY. SEE PHOTO GROUP A, #3.
- 4 REMOVE AND DISPOSE OF EXISTING PHOTO-CELL, CONDUIT AND WIRING IN IT'S ENTIRETY BACK TO SOURCE. SEE PHOTO GROUP A, #4.
- 5 CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING LIGHT FIXTURE AND TURN OVER TO HOWARD COUNTY. SEE PHOTO GROUP A, #5.

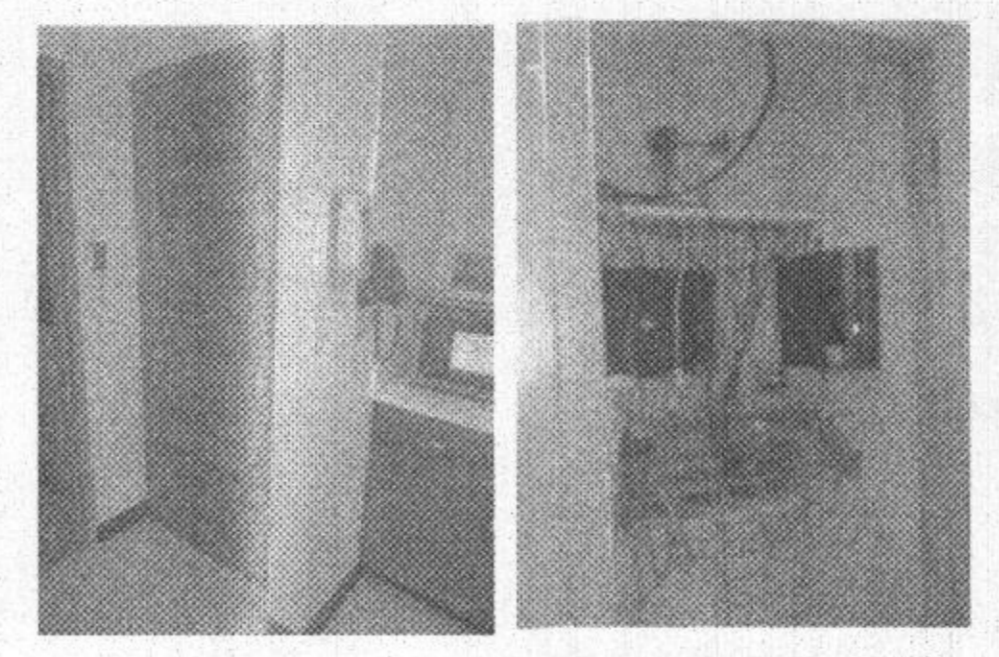
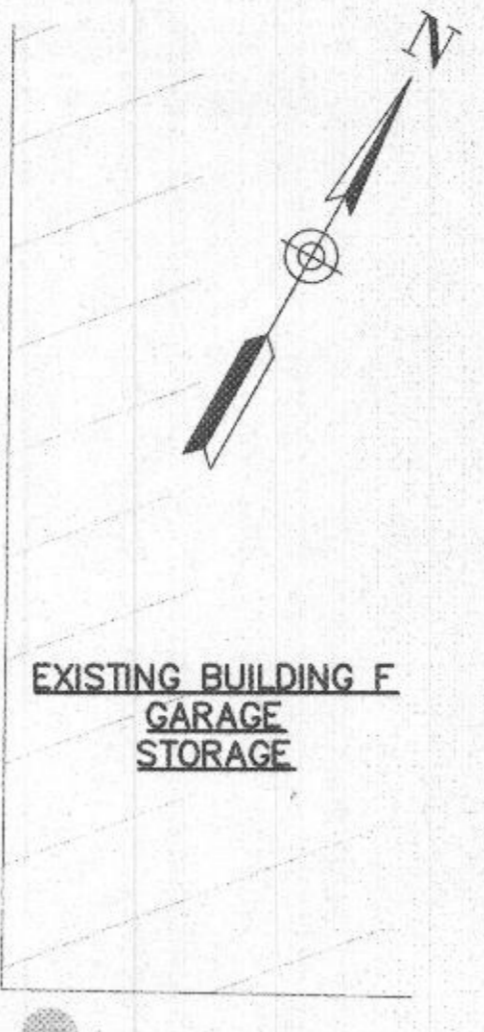
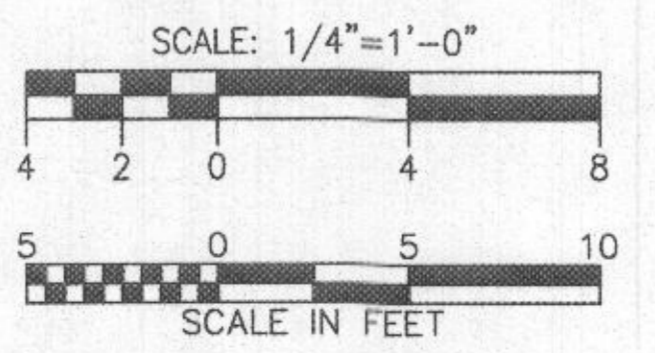


PHOTO #1 PHOTO #2
PHOTO GROUP D EXISTING IT/DATA EQUIPMENT CLOSET

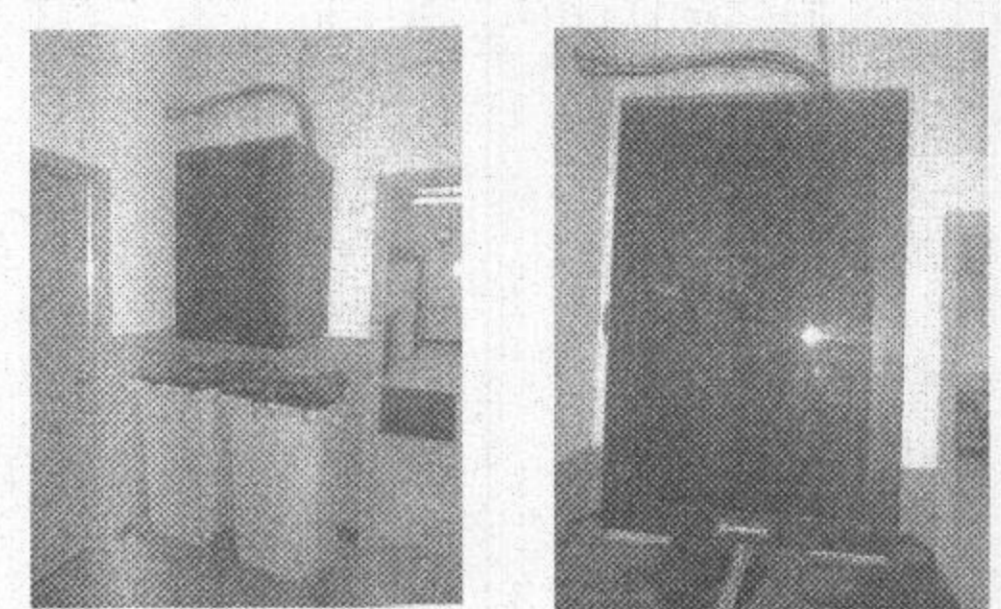


PHOTO #1 PHOTO #2
PHOTO GROUP C EXISTING HALLWAY



PHOTO #1 PHOTO #2 PHOTO #3

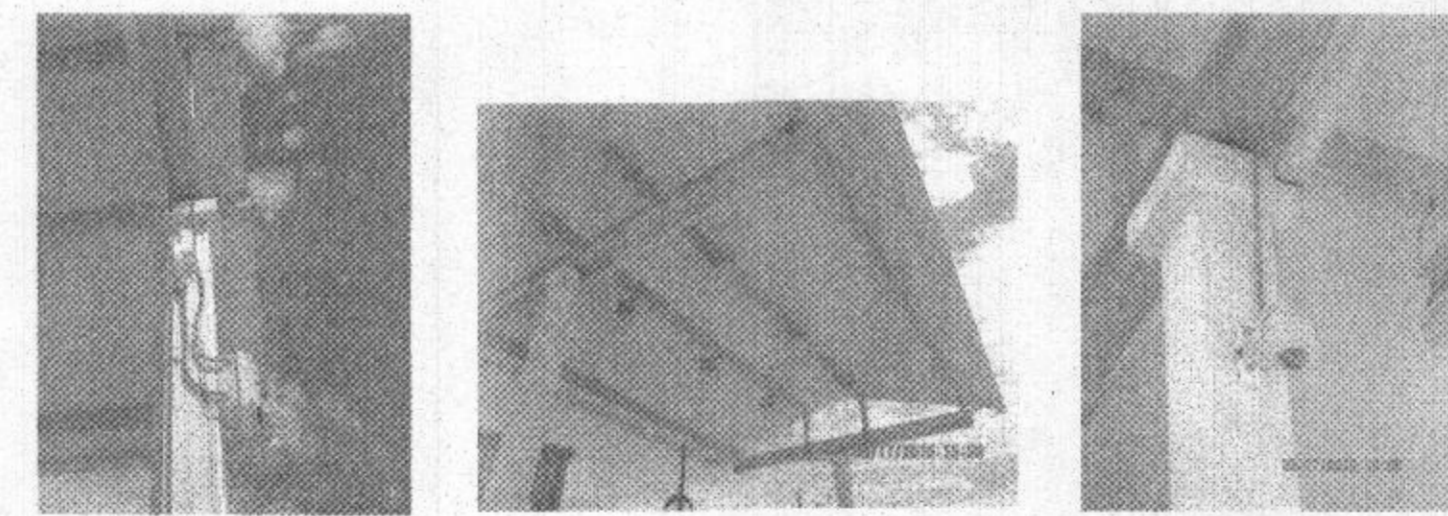
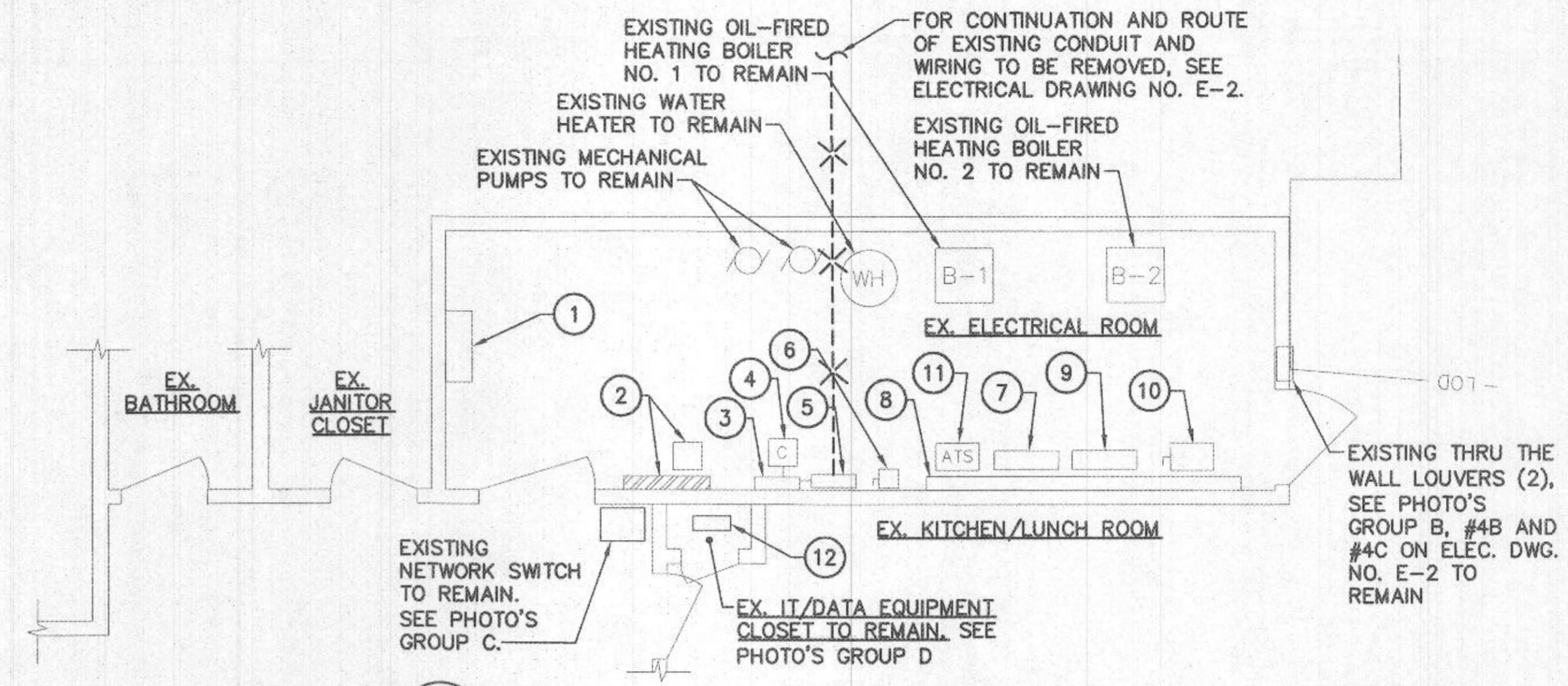
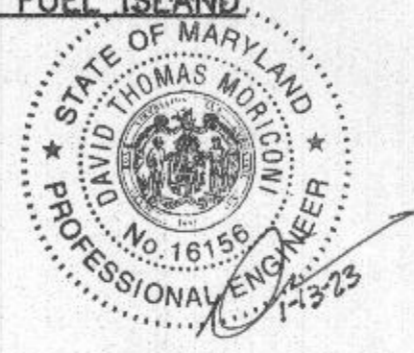


PHOTO #4 PHOTO #5 PHOTO #6
PHOTO GROUP A EXISTING CANOPY OVER FUEL ISLAND

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LICENSE NO. 21631
EXPIRATION DATE: 6/22/2021



2 EXISTING ELECTRICAL ROOM - PART PLAN
E-3 SCALE: 1/4" = 1'-0"

EXISTING ELECTRICAL ROOM - PART PLAN NOTES:

- 1 EXISTING ELECTRICAL PANEL (NO LABEL/DESIGNATION ON PANEL), 120/208V, 3 PHASE, 4 WIRE TO REMAIN. SEE PHOTO GROUP B, #1.
- 2 EXISTING TELEPHONE AND COMMUNICATIONS EQUIPMENT TO REMAIN. SEE PHOTO GROUP B, #2.
- 3 EXISTING ELECTRICAL PANEL ODL-1 (OUTDOOR LIGHTING) 120/208V, 3PHASE, 4 WIRE TO REMAIN. SEE PHOTO GROUP B, #3 AND #4.
- 4 EXISTING LIGHTING CONTACTOR TO REMAIN.
- 5 EXISTING ELECTRICAL PANEL EDP-1 (EMERGENCY DISTRIBUTION PANEL) 120/208V, 3 PHASE, 4 WIRE TO REMAIN. SEE PHOTO GROUP B, #4.
- 6 EXISTING WELDER DISCONNECT TO REMAIN. SEE PHOTO GROUP B, #4, #5 AND #6.
- 7 EXISTING ELECTRICAL PANEL P-1, 120/208V, 3 PHASE, 4 WIRE TO REMAIN.
- 8 EXISTING WIREWAY TO REMAIN. SEE PHOTO GROUP B, #7.
- 9 EXISTING ELECTRICAL PANEL M, 120/208V, 3 PHASE, 4 WIRE TO REMAIN. SEE PHOTO GROUP B, #7.
- 10 EXISTING 600A, 3 POLE ELECTRIC SERVICE DISCONNECT SWITCH TO REMAIN. SEE PHOTO GROUP B, #7 AND #8.
- 11 EXISTING AUTOMATIC TRANSFER SWITCH TO REMAIN. SEE PHOTO GROUP B, #6 AND #7.
- 12 EXISTING IT/DATA PATCH PANELS AND ACCESSORIES TO REMAIN. SEE PHOTO GROUP D, #1 AND #2.



PHOTO #1 PHOTO #2 PHOTO #3 PHOTO #4

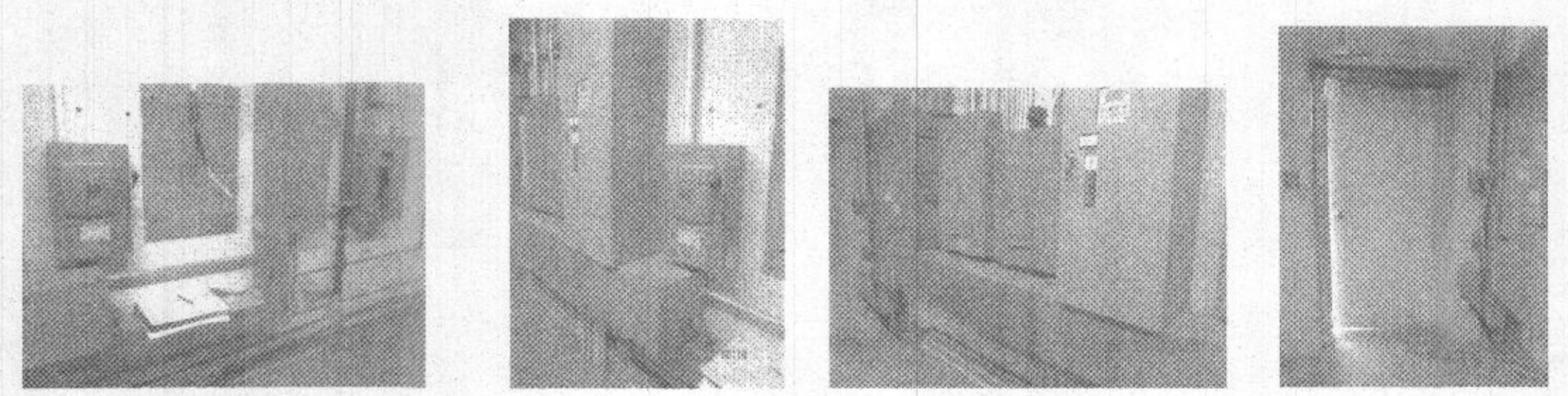


PHOTO #5 PHOTO #6 PHOTO #7 PHOTO #8
PHOTO GROUP B EXISTING ELECTRICAL ROOM (SEE PART PLAN 2/E-3 FOR EXISTING EQUIPMENT DESIGNATION ON THIS DRAWING)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: *John A. Walsh* 08/14/2019
Chief, Design & Construction, Bureau of Facilities
Chief, Bureau of Facilities: *David A. John* 08/12/2019
Chief, Operations & Maintenance, Bureau of Facilities



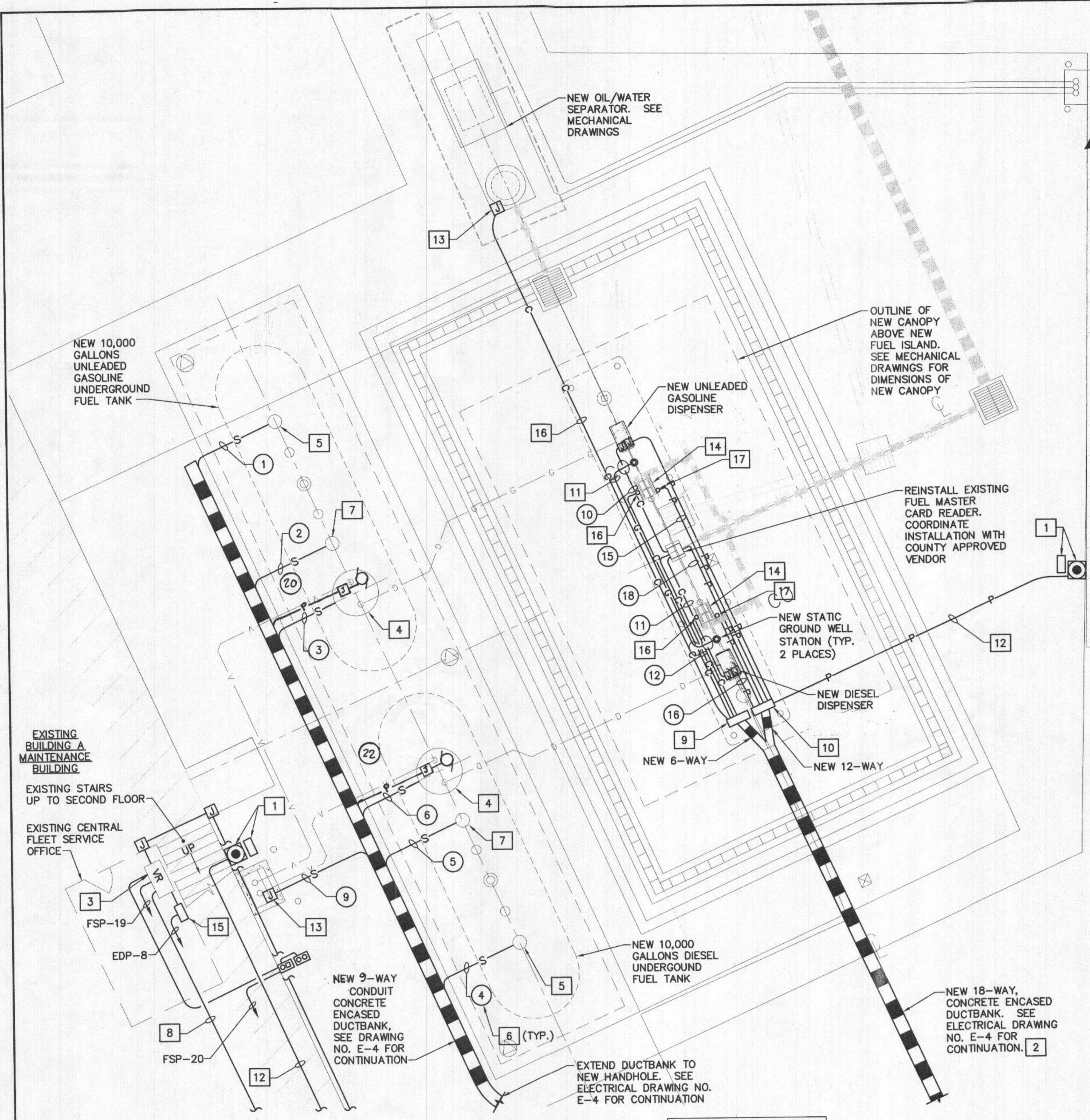
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DATE:	08/20/2019		
BY:	NO.	REVISION	DATE

ELECTRICAL DEMOLITION PART PLANS

**DAYTON HIGHWAY MAINTENANCE FACILITY
UPGRADED FUEL STORAGE &
DISPENSING SYSTEM**

CAPITAL PROJECT NO. C-0322
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS NOTED
DWG NO. E-3



GENERAL NOTES:

- CONTRACTOR SHALL COORDINATE WITH FUEL EQUIPMENT SUPPLIER, HOWARD COUNTY, FLEET SERVICES & SHOP DRAWINGS FOR FINAL DESIGN AND LAYOUT.
- ANY CONDUITS PASSING THRU THE 20 FOOT CLASS 1, DIVISION 2 RADIUS AROUND EACH DISPENSER PER NEC ARTICLE 514 SHALL BE PROVIDED WITH CONDUIT SEAL-OFF AT BOTH ENDS.
- THE FUEL DISPENSER PIT AND FUEL TANK JUNCTION BOX ARE CLASS 1, DIVISION 1 LOCATIONS, ALSO THE 18 INCH AREA AROUND EACH FUEL DISPENSER AND 18 INCH AREA ABOVE GRADE OUT TO A 20 FOOT RADIUS FROM THE DISPENSER ARE CLASS 1, DIVISION 2, AREA'S PER NEC ARTICLE 514.
- ALL CONDUITS TO FUEL ISLAND AND TO UNDERGROUND FUEL STORAGE TANKS SHALL BE PVC COATED RIGID GALVANIZED STEEL WITH CONDUIT SEAL-OFF'S AT BOTH ENDS. CONDUITS SHALL BE INSTALLED A MINIMUM 30" BELOW GRADE.

DRAWING NOTES:

- NEW EMERGENCY SHUT-OFF PUSHBUTTON, WITH PROTECTIVE WEATHER-RESISTANT, CLEAR, HEAVY-DUTY, PLASTIC COVER AND SIGN FOR SHUTTING DOWN NEW ELECTRICAL PANEL 'FSP' LOCATED IN THE EXISTING MAIN ELECTRICAL ROOM INSIDE OF EXISTING MAINTENANCE BUILDING. SEE DRAWING NO. E-4, OVERALL PLAN AND SEE DRAWING NO. E-9, ELECTRICAL DETAILS.
- SEE ELECTRICAL DRAWING NO. E-4 FOR CONTINUATION AND ROUTE OF DUCTBANK FROM NEW FUEL ISLAND TO MAINTENANCE BUILDING.
- EXISTING VEEDER ROOT EQUIPMENT. PROVIDE A NEW ELECTRICAL IDENTIFICATION LABEL INDICATING FEED FROM NEW ELECTRICAL PANEL FSP.
- NEW PUMP MOTOR, SUMP LEAK SENSOR. SEE DETAIL ON MECHANICAL DRAWINGS.
- NEW INTERSTITIAL MONITORING TANK LEAK DETECTION SENSOR. SEE DETAIL ON MECHANICAL DRAWING.
- SEE EQUIPMENT CONNECTION SCHEDULE FOR WIRE TYPE, CONDUIT SIZE, EQUIPMENT SERVED AND ROUTE (TO AND FROM) FOR EACH PIECE OF EQUIPMENT. SEE ELECTRICAL DRAWING NO. E-8, TYPICAL.
- NEW VEEDER ROOT INVENTORY.
- SEE ELECTRICAL DRAWING NO. E-4 FOR CONTINUATION AND ROUTE OF CONDUIT AND CABLING FROM EXISTING VEEDER ROOT EQUIPMENT TO NEW FUEL ISLAND.
- NEW COMMUNICATIONS WIRE TROUGH, NEMA 3R, ENCLOSED, GASKETED, HEAVY-DUTY WITH LABEL TO READ 'COMMUNICATIONS'.
- NEW ELECTRICAL WIRE TROUGH, NEMA 3R, ENCLOSED, GASKETED, HEAVY-DUTY WITH LABEL TO READ 'ELECTRICAL'.
- CLASS 1, 3/0 BARE COPPER DIRECT BURIED GROUND LOOP.

- ELECTRIC AND COMMUNICATIONS CONDUITS ARE SHOWN SCHEMATIC ONLY. ACTUAL LOCATIONS SHALL BE FIELD SET AND ADJUSTED.
- CONTRACTOR TO PROVIDE NEW PROBES, SENSORS AND 18 GAUGE INTRINSICALLY SAFE SHIELD CABLE FOR NEW USTS, DISPENSER SUMP AND VENT SUMP. COORDINATE WITH HOWARD COUNTY VENDOR.
- REFER TO EQUIPMENT CONNECTION SCHEDULE ON SHEET E-8 FOR WIRE TYPE, CONDUIT SIZE, ETC.
- REFER TO ONE-LINE DIAGRAM ON DWG. NO. E-9 AND NEW WORK RISER DIAGRAM ON DWG. NO. E-6.
- GROUND AND BOND NEW FUEL DISPENSERS, EXISTING/REINSTALLED FUEL MASTER CARD READER AND NEW CANOPY COLUMNS PER THE NEC 2017.

- 2#10, 1#10 GND. IN 3/4" RGS CONDUIT THROUGH MAINTENANCE BUILDING TO NEW CONTACTOR MOUNTED WITHIN NEW ELECTRICAL PANEL FSP (FUEL SERVICE PANEL) LOCATED IN ELECTRICAL ROOM.
- NEW NEMA 4X EXPLOSION PROOF, STAINLESS STEEL JUNCTION BOX IN TANK VENT TRANSITION SUMP. SEE MECHANICAL DRAWINGS.
- NEW CANOPY COLUMN AND FOUNDATION. SEE MECHANICAL DRAWINGS.
- NEW OIL WATER SEPARATOR ALARM PANEL.
- ROUTE AND EXTEND 1" RGS CONDUIT FROM 'COMMUNICATIONS WIRE TROUGH' TO NEW CANOPY COLUMN, EXTEND 18" HIGH ABOVE FINISHED ISLAND AND PROVIDE AN EXPLOSION-PROOF SEAL-OFF FITTING WITH PLUG AND PROVIDE A LABEL ON CONDUIT TO READ 'SPARE'. PRIME AND PAINT CONDUIT TO MATCH COLOR OF NEW COLUMN.
- ROUTE AND EXTEND 1" RGS CONDUIT FROM 'ELECTRICAL WIRE TROUGH' TO NEW CANOPY COLUMN, EXTEND 18" HIGH ABOVE FINISHED ISLAND AND PROVIDE AN EXPLOSION-PROOF SEAL-OFF FITTING WITH PLUG AND PROVIDE A LABEL ON CONDUIT TO READ 'SPARE'. PRIME AND PAINT CONDUIT TO MATCH COLOR OF NEW COLUMN.

CANOPY PLAN NOTES:

- ROUTE AND EXTEND 1" RGS CONDUIT UP NEW CANOPY COLUMN 14'-0" ABOVE FINISHED ISLAND FOR SECURITY CCTV/DATA CABLE. PRIME AND PAINT CONDUIT TO MATCH COLOR OF NEW COLUMN.
- ROUTE AND EXTEND 1" RGS CONDUIT UP NEW CANOPY COLUMN 14'-0" ABOVE FINISHED ISLAND FOR SECURITY CCTV/POWER CONDUCTORS.
- ROUTE AND EXTEND CONDUIT AND WIRING UP NEW CANOPY COLUMN TO NEW CANOPY LED LIGHT FIXTURES.
- NEW PHOTO-CELL, PARAGON, MODEL CW201-00 WITH MANUALLY ADJUSTABLE LEVEL SIDE OR APPROVED EQUAL BY TORK. MOUNT ON CANOPY NORTH EDGE.
- NEW SURFACE MOUNTED CANOPY STYLE LED LIGHT FIXTURE AS MANUFACTURED BY WHITEWAY LIGHTING, CATALOG NO. CLED-LW(33 WATTS)-7 (700 MA DRIVER)-UNV(UNIVERSAL VOLTAGE)-S (SURFACE MOUNT)-5(CCT5100K)-4397 (LUMENS)-32 WATTS-WH(WHITE)-MP(MOUNTING PLATE)-OCC (PROGRAMMABLE MOTION CONTROL) OPTION OR APPROVED EQUAL. CONTRACTOR SHALL FIELD ADJUST THE MOTION CONTROL TO 50% LIGHT OUTPUT WHEN NO VEHICLES OR OCCUPANCY ARE IN/UNDER THE CANOPY AREA.

1 ELECTRICAL NEW WORK ENLARGED PLAN
SCALE: 1" = 5'-0"

2 ELECTRICAL NEW WORK ENLARGED CANOPY PLAN
SCALE: 1" = 5'-0"

PROFESSIONAL CERTIFICATION
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LICENSE NO. 21631
EXPIRATION DATE: 6/22/2021

LEGEND. ONLY FOR THIS SHEET:
(X) DENOTES EQUIPMENT CONNECTION ID (REFER TO SHEET E-8)



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
J. J. Van... 8/23/19
S. A. Walsh... 8/14/2019
DAVID A. JOHN... 8/12/2019

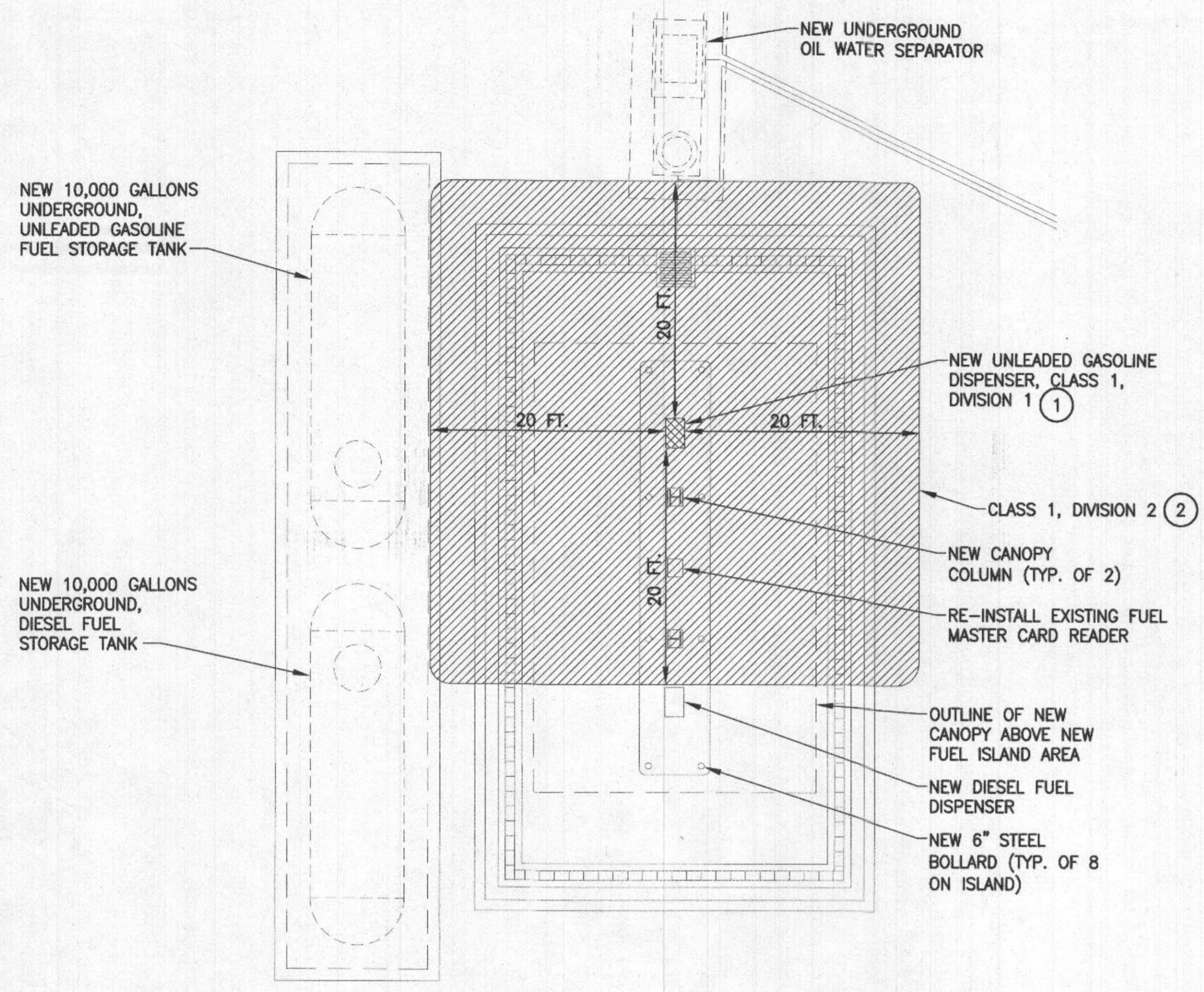


DES:	SLW
DRN:	LEF
CHK:	AA
DATE:	08/2019
BY:	NO.
REVISION:	

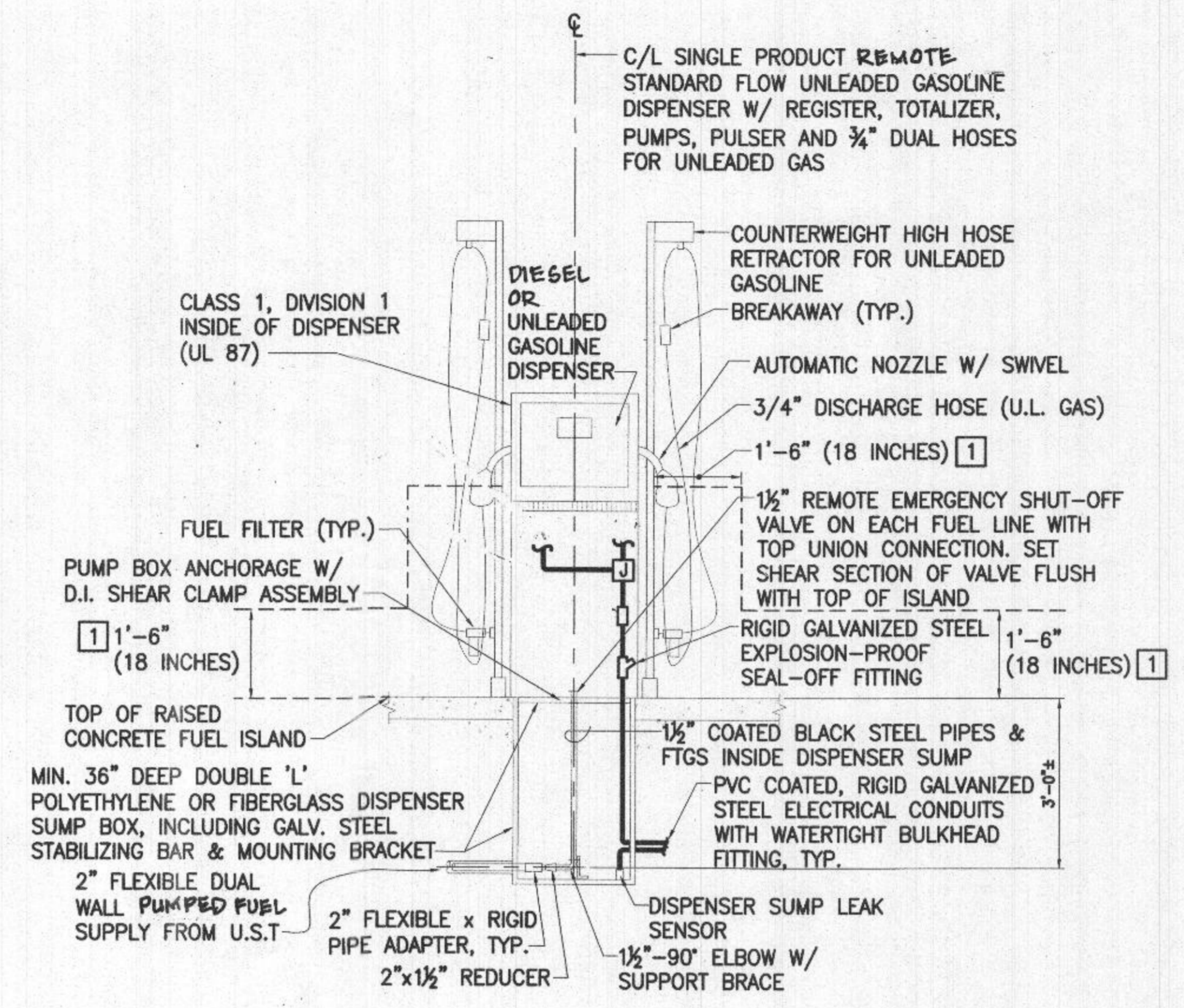
ELECTRICAL NEW WORK ENLARGED PLAN
SCALE MAP NO. _____ BLOCK NO. _____

DAYTON HIGHWAY MAINTENANCE FACILITY UPGRADED FUEL STORAGE & DISPENSING SYSTEM
CAPITAL PROJECT NO. C-0322
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG NO. E-5



1 HAZARDOUS AREA CLASSIFICATION
 E-6 SCALE: 1/8" = 1'-0"



2 TYPICAL FUEL DISPENSER DETAIL & SUMP DETAIL
 E-6 SCALE: 1/4" = 1'-0"

DETAIL NOTE:
 1 HAZARDOUS LOCATION AREA. CLASS 1, DIVISION 2. NEC (2017) 514.3, CLASSIFICATION AREA.

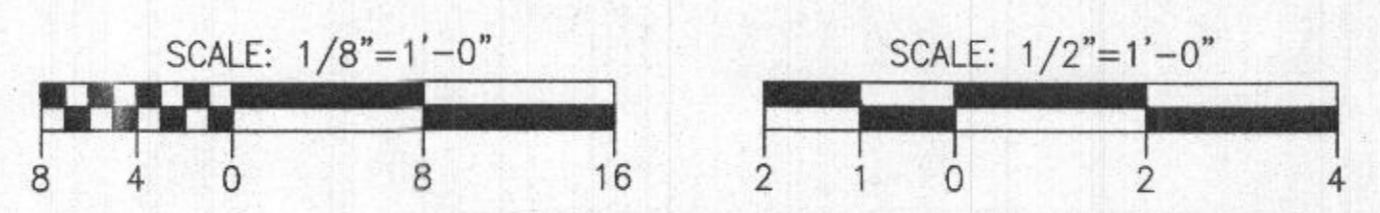
GENERAL NOTES:
 1. SEE MECHANICAL AND CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
 2. SEE NATIONAL ELECTRIC CODE (NEC) 2017, ARTICLE 514.3, CLASSIFICATION OF LOCATIONS.

HAZAROUS AREA CLASSIFICATION NOTES:
 1 ENTIRE SPACE WITHIN DISPENSERS.
 2 WITHIN 18" OF DISPENSER ENCLOSURE OR THAT PORTION OF DISPENSER ENCLOSURE CONTAINING LIQUID HANDLING COMPONENTS, EXTENDING HORIZONTALLY 20' IN ALL DIRECTIONS AND DOWN TO GRADE LEVEL, SEE FUEL DISPENSER DETAIL BELOW THIS DRAWING.

LEGEND (APPLIES TO THIS DRAWING ONLY)
 [Cross-hatched] CLASS 1, DIVISION 1 AREA
 [Diagonal lines] CLASS 1, DIVISION 2 AREA



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 LICENSE NO. 21631
 EXPIRATION DATE: 6/22/2021



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: [Signature] DATE: 3/23/19
 Chief, Bureau of Facilities: [Signature] DATE: 08/12/2019
 Chief, Design & Construction, Bureau of Facilities: [Signature] DATE: 08-14-2019
 Chief, Operations & Maintenance, Bureau of Facilities: [Signature] DATE: 08-12-2019



DES:	SLW				
DRN:	LEF				
CHK:	AA				
DATE:	08/2019				
BY:	NO.	REVISION	DATE	SCALE MAP NO.	BLOCK NO.

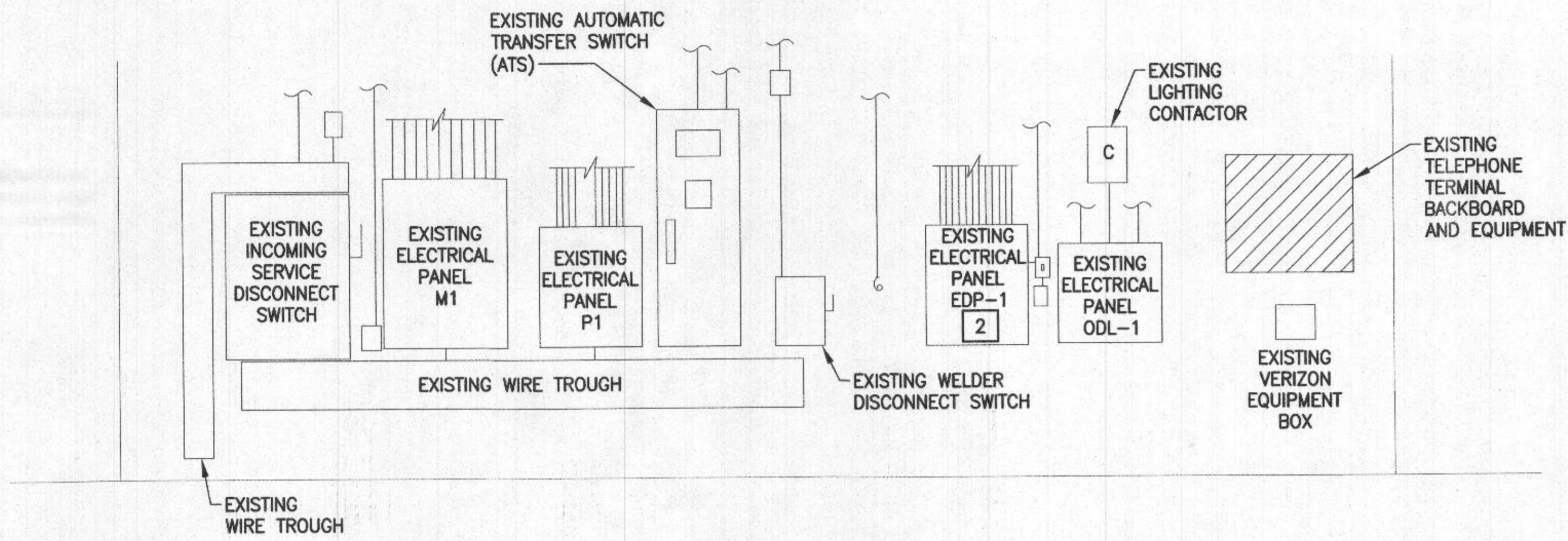
FUEL ISLAND CLASSIFIED AREAS PLAN

DAYTON HIGHWAY MAINTENANCE FACILITY UPGRADED FUEL STORAGE & DISPENSING SYSTEM
 CAPITAL PROJECT NO. C-0322
 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 DWG NO. E-6

RECEIVED
 11/17/2023
 SUPPLIES & PERMITS
 LUDWIG DIVISION

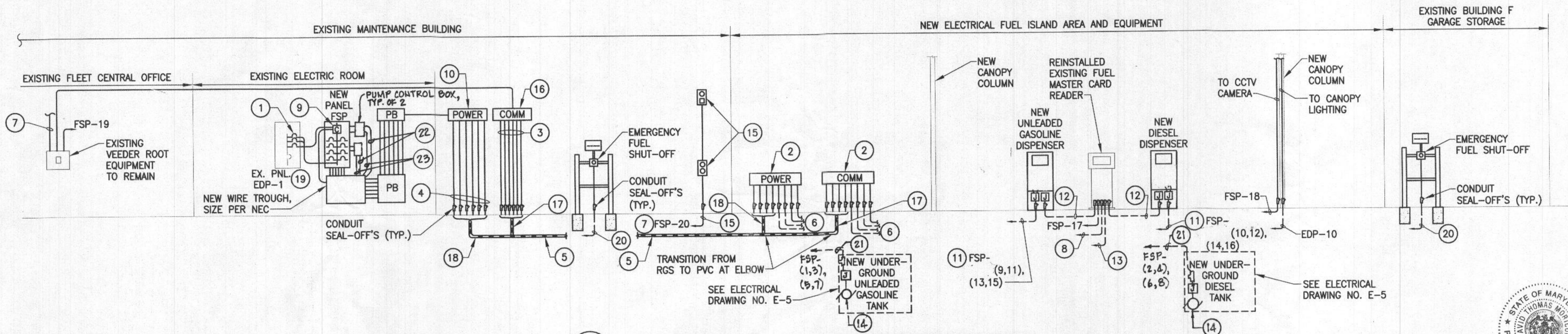
EXISTING ELECTRICAL AND COMMUNICATIONS EQUIPMENT



EXISTING ELECTRICAL ROOM RISER DIAGRAM NOTES:

- 1 ALL EXISTING ELECTRICAL AND COMMUNICATIONS EQUIPMENT TO REMAIN UNLESS NOTED OTHERWISE.
- 2 SEE ELECTRICAL DRAWING NO. E-8 FOR MODIFIED/REVISED EXISTING ELECTRICAL PANEL EDP-1.

1 EXISTING ELECTRICAL ROOM RISER DIAGRAM 1
E-7 SCALE: NONE



2 NEW ELECTRICAL FUEL ISLAND EQUIPMENT RISER DIAGRAM
E-7 SCALE: NONE

NEW ELECTRICAL FUEL ISLAND RISER DIAGRAM NOTES:

- 1 NEW 80 AMP, 3 POLE CIRCUIT BREAKER. SEE REVISED/MODIFIED ELECTRIC PANEL EDP-1 SCHEDULE ON ELECTRICAL DRAWING E-8.
- 2 NEMA 3R WIREWAY FOR POWER AND COMMUNICATIONS WIRING. SIZE PER THE NEC.
- 3 VEEDER-ROOT COMMUNICATIONS CONDUITS: 6-1" CONDUITS, (1-1" GAS TANK AND DIESEL TANK LEAK DETECTION SENSORS & INVENTORY PROBE, 1-1" DIESEL DISPENSER AND GAS DISPENSER LEAK SENSORS, 1-1" FMCR MONITORING, 1-1" OIL WATER SEPARATOR, 1-1" SPARES).
- 4 POWER CONDUITS FOR FUEL ISLAND, 12 CONDUITS: 4 CIRCUITS FROM NEW ELECTRIC PANEL FSP, 2 CIRCUITS FROM EXISTING ELECTRIC PANEL EDP-1, 1-CONDUIT FOR EMERGENCY POWER OFF PUSHBUTTON, AND 5 SPARE CONDUITS.
- 5 18 WAY, SCHEDULE 40 PVC CONDUITS CONCRETE ENCASED DUCTBANK FOR COMMUNICATIONS AND POWER.
- 6 PVC COATED RIGID STEEL CONDUITS BURIED MINIMUM 24" BELOW FINISHED GRADE TO FUEL EQUIPMENT. SEE CONDUIT, WIRING AND CABLES ON ELECTRIC DRAWING NO. E-5.
- 7 CIRCUIT FSP-12 OVERFILL ALARM CIRCUIT, ROUTE FROM CIRCUIT BREAKER THROUGH VEEDER ROOT ALARM RELAY THROUGH DUCTBANK TO OVERFILL ALARM STATION. MOUNT ON MAINTENANCE BLDG.
- 8 MONITORING CABLE PER MANUFACTURER'S RECOMMENDATIONS FROM EXISTING VEEDER ROOT TO EXISTING, REINSTALLED FUEL MASTER CARD READER.
- 9 208V, 4P, 100 AMP MECHANICALLY HELD CONTACTOR MOUNTED WITHIN PANELBOARD.
- 10 NEW ELECTRIC WIRE TROUGH, MOUNT ON EXTERIOR OF BUILDING. SIZE PER THE NEC. COORDINATE WITH EXISTING FIELD CONDITIONS.
- 11 DISPENSER POWER - CONNECT TO ELECTRONICS & DISPLAY LIGHTING.
- 12 DISPENSER PULSER COMMUNICATIONS CABLE AND PUMP CONTROL CABLE PER MANUFACTURER'S RECOMMENDATIONS TO EXISTING REINSTALLED CARD READER IN 1" PVC COATED RIGID GALVANIZED STEEL CONDUIT.
- 13 1" PVC COATED RIGID STEEL CONDUIT WITH WHITE CATAGORY 5E TELEPHONE CABLE FOR THROUGH WIREWAY TO FUEL MASTER CARD READER TERMINATION POINT.
- 14 3/4 HP PUMP AT 7.6 FLA PER NEC 2014 208V, SINGLE PHASE, WITH SWITCHED NEUTRAL.
- 15 OVERFILL ALARM WITH LIGHT & HORN AND ACKNOWLEDGEMENT SWITCH WITH LIGHT AND PUSHBUTTON. ROUTE CIRCUIT THRU VEEDER ROOT ALARM RELAY. SEE MECHANICAL DRAWINGS.
- 16 NEW COMMUNICATIONS CABLE TROUGH, MOUNT ON EXTERIOR OF BUILDING. SIZE PER THE NEC. COORDINATE WITH EXISTING FIELD CONDITIONS.
- 17 SIX (6)-WAY, CONCRETE ENCASED DUCTBANK.
- 18 SIXTEEN (12)-WAY, CONCRETE ENCASED DUCTBANK.
- 19 SEE ELECTRICAL DRAWING NO. E-8 FOR MODIFIED/REVISED EXISTING ELECTRICAL PANEL EDP-1.
- 20 2#10, 1#10 GND IN A 3/4" PVC COATED RIGID STEEL CONDUIT THROUGH WIREWAY TO NEW ELECTRICAL PANEL FSP CONTACTOR CONTROL CIRCUIT.
- 21 UNDERGROUND TANK PUMP MOTOR POWER.
- 22 PUMP POWER WIRING TO UNDERGROUND TANK.
- 23 PUMP CONTROL WIRING TO UNDERSE. TANK.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 21631
EXPIRATION DATE: 6/22/2021



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works: *Sharon Walsh* 08-14-2019
Chief, Design & Construction, Bureau of Facilities
Chief, Operations & Maintenance, Bureau of Facilities: *David A. John* 08-12-2019



DES:	SLW				
DRN:	LEF				
CHK:	AA				
DATE:	08/2019	BY:	NO.	REVISION	DATE

ELECTRICAL RISER DIAGRAMS

DAYTON HIGHWAY MAINTENANCE FACILITY
UPGRADED FUEL STORAGE & DISPENSING SYSTEM
CAPITAL PROJECT NO. C-0322
5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

RECEIVED
DIVISION
11/17/2023
SCALE: NONE
DWG NO.: E-7

EXISTING PANEL EDP-1 (SQUARE D TYPE NQOB, CAT NO. NQOB-424)																												
POLES 42		VOLTAGE 208 /120 VOLTS				MOUNTING SURFACE				SURFACE				SECTION 1 OF 1				BUS 225 AMP				LOCATION MAINTENANCE BLDG. ELEC. RM						
AIC 10K		MAIN MAN LUGS ONLY				WIRE 4 WIRE (A, B, C, G)				PHASE				FED FROM				EX. ALTO. TRANS. SW. (ATS)										
CKT #	BREAKER	POLES	TRIP	DESCRIPTION	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	PHASE	KVA	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	DESCRIPTION	BREAKER	POLES	TRIP	CKT #									
2	1	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	4	1									
2	3	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	6	1									
2	5	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	8	1									
2	7	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	10	1									
2	9	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	12	1									
2	11	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.			EX.	EX.	EX.	EX.	EX-HEATER	1	20	14	1									
13	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX-HEATER	1	20	16	2									
15	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX-HEATER	1	20	18	2									
17	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX-HEATER	1	20	20	2									
19	3	100	EX. ELEC. PANEL P-1 MAIN C.B.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX. ELEC. PANEL P-1 MAIN C.B.	1	20	22	2									
21	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. PANEL P-1 MAIN C.B.	1	20	24	2									
23	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. PANEL P-1 MAIN C.B.	1	20	26	2									
25	3	60	EX. ELEC. PANEL ODL-1	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX. ELEC. PANEL ODL-1	1	20	28	2									
27	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. PANEL ODL-1	1	20	30	2									
31	2	50	EX. ELEC. RANGE	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	32	2									
33	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	34	2									
35	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	36	2									
37	3	60	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	38	2									
39	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	40	2									
41	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	EX. ELEC. RANGE	1	20	42	2									
					0.0			0.0			0.0			0.0			TOTAL CONNECTED KVA			0.00			TOTAL AMPS			0.0		

REVISED EXISTING PANEL EDP-1 (SQUARE D TYPE NQOB, CAT NO. NQOB-424)																												
POLES 42		VOLTAGE 208 /120 VOLTS				MOUNTING SURFACE				SURFACE				SECTION 1 OF 1				BUS 225 AMP				LOCATION MAINTENANCE BLDG. ELEC. RM						
AIC 10K		MAIN MAN LUGS ONLY				WIRE 4 WIRE (A, B, C, G)				PHASE				FED FROM				EX. ALTO. TRANS. SW. (ATS)										
CKT #	BREAKER	POLES	TRIP	DESCRIPTION	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	PHASE	KVA	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	DESCRIPTION	BREAKER	POLES	TRIP	CKT #									
1	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	3	80	2	5									
3	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	-	-	4	5									
5	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	-	-	6	5									
7	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	1	20	8	5									
9	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	1	20	10	5									
11	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW ELECTRIC FUEL SUPPLY PANEL (FSP)	1	20	12	5									
13	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	14	2									
15	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	16	2									
17	1	20	EX. BAY HEATER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	18	2									
19	3	100	EX. ELEC. PANEL P-1 MAIN C.B.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	20	2									
21	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	22	2									
23	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	24	2									
25	3	60	EX. ELEC. PANEL ODL-1	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	26	2									
27	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	28	2									
29	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	30	2									
31	2	50	EX. ELEC. RANGE	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	32	2									
33	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	34	2									
35	1	20	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	36	2									
37	3	60	NO LABEL FIELD VERIFY	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	38	2									
39	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	40	2									
41	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW LED CANOPY LIGHTS	1	20	42	2									
					5.3			4.0			2.4			11.70			TOTAL CONNECTED KVA			44.1			TOTAL AMPS			44.1		

REVISED EXISTING PANEL EDP-1 NOTES:

- 1 PROVIDE NEW 20A, 1 POLE CIRCUIT BREAKER AS MANUFACTURED BY SQUARE D COMPANY. PROVIDE NEW LABEL TO READ 'CONTACTOR COIL'.
- 2 PROVIDE NEW 20A, 1 POLE CIRCUIT AS MANUFACTURED BY SQUARE D COMPANY. PROVIDE NEW LABEL TO READ 'OIL WATER SEPARATOR CONTROL PANEL'.
- 3 THERE IS NO 'EXISTING PANEL DIRECTORY' INSIDE OF THE EXISTING PANELBOARD. CONTRACTOR SHALL TRACE OUT, VERIFY AND CONFIRM IN THE FIELD, ON SITE, WHAT EQUIPMENT AND DEVICES ARE BEING SERVED FOR/BY EACH CIRCUIT BREAKER IDENTIFIED AS 'NO LABEL, FIELD VERIFY'.
- 4 PROVIDE NEW 20A, 1 POLE CIRCUIT BREAKER AS MANUFACTURER BY SQUARE D COMPANY. PROVIDE NEW LABEL TO READ 'NEW LED CANOPY LIGHTS'.
- 5 PROVIDE NEW 80A, 3 POLE CIRCUIT BREAKER AS MANUFACTURER BY SQUARE D COMPANY. PROVIDE NEW LABEL TO READ 'NEW ELECTRIC FUEL SUPPLY PANEL (FSP)'.

PANEL SCHEDULES

GENERAL NOTES:

1. PROVIDE NEW TYPEWRITTEN DIRECTORIES FOR REVISED PANELBOARD. PROVIDE DETAILED DESCRIPTION FOR EACH CIRCUIT PER NEC, SECTION 408.4 IDENTIFICATION REQUIRED (A) CIRCUIT DIRECTORY OR CIRCUIT IDENTIFICATION.



PHOTO #1 PHOTO #2 PHOTO #3

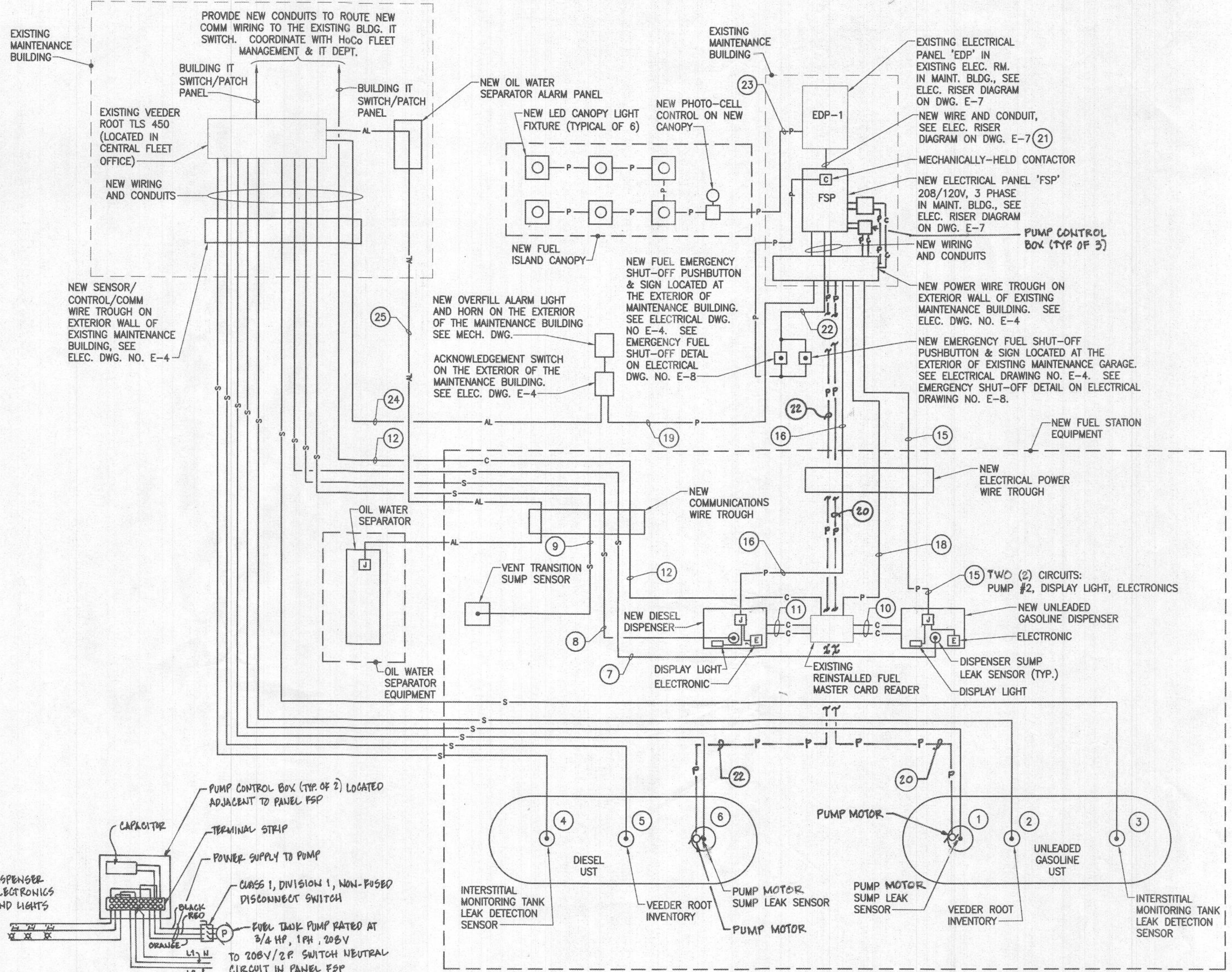
PHOTO GROUP A EXISTING ELECTRICAL PANEL EDP-1

EXISTING PANEL EDP-1 NOTES:

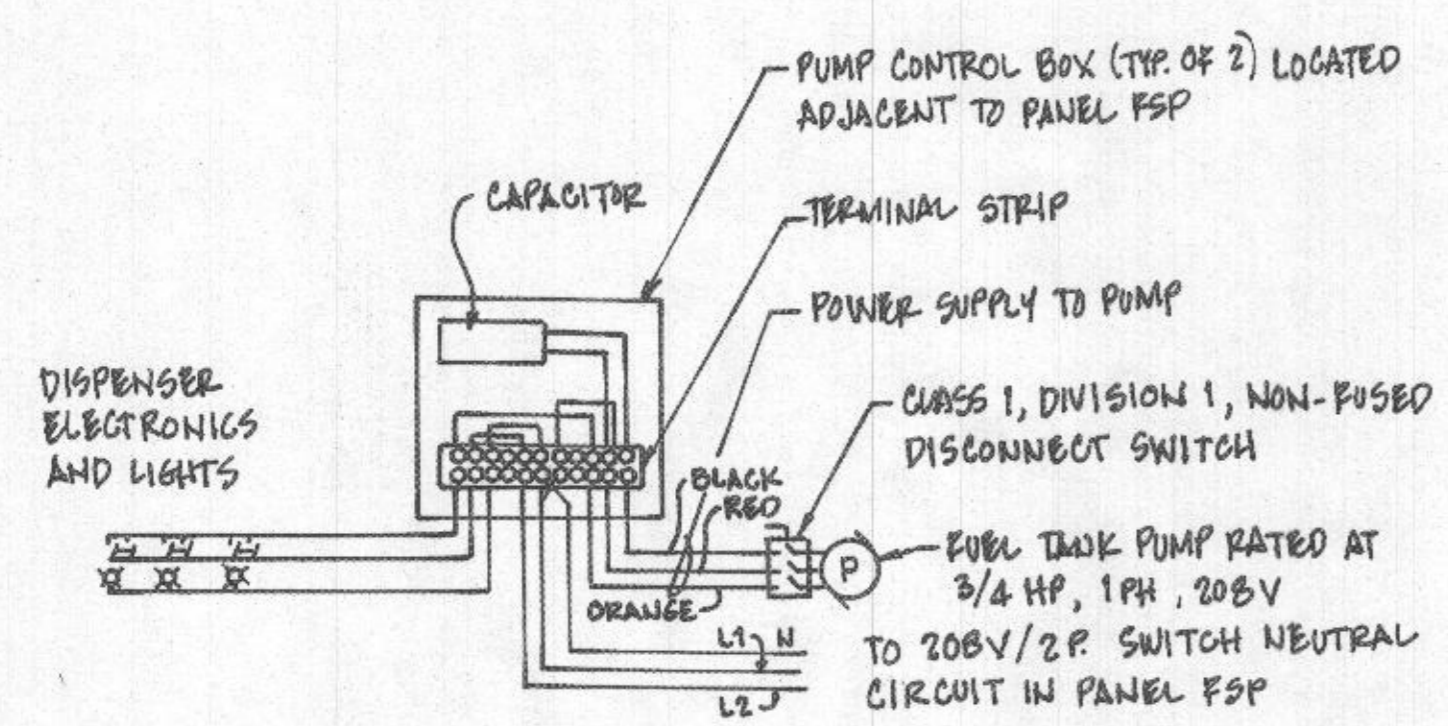
- 1 SHUT-OFF EXISTING CIRCUIT BREAKER, DISCONNECT AND REMOVE EXISTING CONDUCTORS IN THEIR ENTIRETY FROM EXISTING ELECTRICAL PANEL EDP-1 TO EXISTING FUEL PUMPS LOCATED AT THE EXISTING FUEL ISLAND FROM EXISTING CIRCUIT BREAKER. SHUT BREAKER OFF AND REMOVE EXISTING CIRCUIT BREAKER FROM PANEL. EXISTING SPACE TO BE MADE READY TO RECEIVE NEW FUTURE CIRCUIT BREAKER.
- 2 THERE IS NO 'EXISTING PANEL DIRECTORY' INSIDE OF THE EXISTING PANELBOARD. CONTRACTOR SHALL TRACE OUT, VERIFY AND CONFIRM IN THE FIELD, ON SITE, WHAT EQUIPMENT AND DEVICES ARE BEING SERVED FOR/BY EACH CIRCUIT BREAKER IDENTIFIED AS 'NO LABEL, FIELD VERIFY'.

NEW FUEL SERVICE PANEL (FSP) (SQUARE D, SERIES NQOD - BASIS OF DESIGN)																												
POLES 30		VOLTAGE 208 /120 VOLTS				MOUNTING SURFACE				SURFACE				SECTION 1 OF 1				BUS 80 AMP IN LINE WITH CONTACTOR				LOCATION MAINTENANCE BLDG. ELEC. RM						
AIC 10K		MAIN MAN LUGS ONLY				WIRE 4 WIRE				PHASE				FED FROM				EXISTING ELEC. PNL EDP-1										
CKT #	BREAKER	POLES	TRIP	DESCRIPTION	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	PHASE	KVA	WIRE NO.	GROUND NO.	CON. NO.	CON. SIZE	DESCRIPTION	BREAKER	POLES	TRIP	CKT #									
1	2	20	NEW GASOLINE PUMP #1 W/ SW. NEUT.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW DIESEL DISPENSER PUMP #1 W/ SW. NEUT.	2	20	2	2									
3	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW DIESEL DISPENSER PUMP #1 W/ SW. NEUT.	-	-	4	4									
5	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW DIESEL DISPENSER PUMP #1 W/ SW. NEUT.	-	-	6	6									
7	1	-	BLANK	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	BLANK	-	-	8	8									
9	2	20	NEW GASOLINE DISP. LIGHT W/ SW. NEUT.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW DIESEL DISP. LIGHT W/ SW. NEUT.	2	20	10	10									
11	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW DIESEL DISP. LIGHT W/ SW. NEUT.	-	-	12	12									
13	2	20	NEW GASOLINE DISP. ELECT. W/ SW. NEUT.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW DIESEL DISP. ELECT. W/ SW. NEUT.	2	20	14	14									
15	-	-	-	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	NEW DIESEL DISP. ELECT. W/ SW. NEUT.	-	-	16	16									
17	1	20	EX. REINSTALL CARD READER	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW CCTV CAMERAS	1	20	18	18									
19	1	20	EX. VEEDER ROOT EQUIP.	EX.	EX.	EX.	EX.				EX.	EX.	EX.	EX.	NEW OVER FILL ALARM/ALT. HORN	1	20	20	20									
21	1	20	SPARE	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	SPARE	1	20	22	22									
23	1	20	SPARE	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	SPARE	1	20	24	24									
25	1	-	BLANK	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	BLANK	1	-	26	26									
27	1	-	BLANK	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	BLANK	1	-	28	28									
29	1	-	BLANK	-	-	-	-	-	-	-	EX.	EX.	EX.	EX.	BLANK	1	-	30	30									
					2.1			1.0			0.6			4.5			TOTAL CONNECTED KVA			12.9			TOTAL AMPS			12.9		

EQUIPMENT CONNECTION SCHEDULE SEE NOTE(1) BELOW					
TAG ID	EQUIPMENT SERVED	FROM	TO	WIRE TYPE	CONDUIT SIZE
SENSOR CABLES (5)					
1	GASOLINE TANK - PUMP SUCTION SUMP LEAK SENSOR	VEEDER ROOT T15-450	PUMP SUCTION SUMP LEAK SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN GASOLINE LST AND SENSOR WIRE TROUGH
2	GASOLINE TANK - VEEDER ROOT INVENTORY PROBE	VEEDER ROOT T15-450	VEEDER ROOT INVENTORY PROBE	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN GASOLINE LST AND SENSOR WIRE TROUGH
3	GASOLINE TANK - INTERSTITIAL TANK MONITORING LEAK DETECTION SENSOR	VEEDER ROOT T15-450	INTERSTITIAL MONITORING SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN GASOLINE LST AND SENSOR WIRE TROUGH
4	DIESEL TANK - INTERSTITIAL TANK MONITORING LEAK DETECTION SENSOR	VEEDER ROOT T15-450	INTERSTITIAL MONITORING SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN DIESEL LST AND SENSOR WIRE TROUGH
5	DIESEL TANK - VEEDER ROOT INVENTORY PROBE	VEEDER ROOT T15-450	MAGNETOSTRICTIVE PROBE	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN DIESEL LST AND SENSOR WIRE TROUGH
6	DIESEL TANK - PUMP SUCTION SUMP LEAK SENSOR	VEEDER ROOT T15-450	PUMP SUCTION SUMP LEAK SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN LST AND SENSOR WIRE TROUGH
7	DIESEL DISPENSER - SUMP LEAK SENSOR	VEEDER ROOT T15-450	SUMP SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN DIESEL DISP. AND SENSOR WIRE TROUGH
8	DIESEL DISPENSER - SUMP LEAK SENSOR	VEEDER ROOT T15-450	SUMP SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN DIESEL DISP. AND SENSOR WIRE TROUGH
9	VENT SUMP LEAK SENSOR	VEEDER ROOT T15-450	VENT SUMP LEAK SENSOR	18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE	1" PVC COATED, RGS COND. BETWEEN VENT SUMP LEAK SENSOR AND SENSOR WIRE TROUGH
COMM CABLES (4)					
10	GASOLINE DISPENSER	FUEL MASTER CARD READER	GASOLINE DISPENSER	(2) 18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE (FOR PULSER/SOLENOID)	1" PVC BETWEEN GASOLINE DISPENSER AND FUELMASTER 2
11	DIESEL DISPENSER	FUEL MASTER CARD READER	DIESEL DISPENSER	(2) 18 GAUGE INTRINSICALLY SAFE TWISTED SHIELDED CABLE (FOR PULSER/SOLENOID)	1" PVC BETWEEN DIESEL DISPENSER AND FUELMASTER 2
12	FUEL MASTER CARD READER (EXISTING/RE-INSTALLED)	BUILDING IT SWITCH	FUEL MASTER CARD READER	CAT 5E CABLE	1" PVC BETWEEN BUILDING IT AND FUELMASTER 4
13	(NOT USED)	-	-	-	-
14	(NOT USED)	-	-	-	-
POWER WIRING (P)					
15	GASOLINE DISPENSER	DISP. LT. ELECTRONICS	NEW PANEL FSP	4#10 1810 GND.	1-1/2" PVC CONDUIT IN DUCT BANK 3
16	DIESEL DISPENSER	DISP. LT. ELECTRONICS	NEW PANEL FSP	4#10 1810 GND.	1-1/2" PVC CONDUIT IN DUCT BANK 3
17	REINSTALLED FUEL MASTER CARD READER	NEW PANEL FSP	REINSTALLED FUEL MASTER CARD READER	2#10, 1#10 GND.	1" PVC CONDUIT IN DUCT BANK
18	ACKNOWLEDGEMENT SWITCH AND OVERFILL ALARM AT EXTERIOR OF MAINTENANCE BUILDING	NEW PANEL FSP	ACKNOWLEDGE SW AND O/F ALARM ON EXTERIOR OF MAINTENANCE BUILDING	2#12, 1#12 GND.	3/4" RGS CONDUIT
19	GASOLINE DISPENSER - PUMP #1 AND PUMP #2	NEW PANEL FSP	GASOLINE DISP. - PUMP #1 AND PUMP #2	4#10, 1#10 GND	1 1/2" PVC CONDUIT IN DUCT BANK 6
20	NEW PANEL FSP	EXISTING PANEL EDP-1	NEW PANEL FSP	3#5, 1#10 GND	NEW CONDUIT BETWEEN EXISTING PANEL EDP-1 AND NEW PANEL FSP
21	DIESEL DISPENSER - PUMP #1 AND PUMP #2	NEW PANEL FSP	DIESEL DISP. - PUMP #1 AND PUMP #2	4#10, 1#10 GND	1 1/2" PVC CONDUIT IN DUCT BANK 6
NEW CONDUIT IN BLDG FROM EXISTING ELECTRICAL PANEL EDP-1 TO THE EXTERIOR WIRE TROUGH. PROVIDE NEW 2-1/2" PVC CONDUITS (ONE SPARE) BETWEEN OUTDOOR WIRE TROUGH AND CANOPY COLUMN. STUB OUT SPARE CONDUIT AT THE BOTTOM OF COLUMN ABOVE THE FUEL ISLAND FOUNDATION. PROVIDE NEW LIGHTING CIRCUIT CONDUIT BENEATH THE BASE OF COLUMN FOOTING. ROUTE NEW CONDUIT AT THE TOP OF COLUMN TO THE NEW LED LIGHT FIXTURES. PROVIDE NEW WIRING FROM EXISTING ELECTRICAL PANEL EDP-1. PROVIDE PHOTOCELL CONTROL AT THE CANOPY ROOF EDGE ON NORTH SIDE.					
CAN					



- GENERAL NOTES:**
- REFER TO EQUIPMENT CONNECTION SCHEDULE ON ELECTRICAL DWG. NO. E-8 FOR WIRE TYPE, CONDUIT SIZE, ETC. (DRAWING TAGS ID INFO.)
 - REFER TO ELECTRICAL DWG. NO. E-5 FOR NEW FUEL SYSTEM PLAN.
 - REFER TO ELECTRICAL PANEL SCHEDULES ON ELECTRICAL DWG. NO. E-8.



2 TYPICAL PUMP CONTROL SCHEMATIC FOR FUEL ISLAND
E-10 SCALE: NONE

1 ONE-LINE DIAGRAM - POWER, SENSOR AND COMM.
E-10 SCALE: NONE

NOTE: PROVIDE EQUIPMENT GROUND CONDUCTOR IN ALL BRANCH CIRCUITS.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 21631
EXPIRATION DATE: 6/22/2021



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>Shawn Walsh</i> 8/14/2019 Chief, Design & Construction, Bureau of Facilities		BUREAU OF FACILITIES Chief, Operations & Maintenance: <i>David A. John</i> 8/12/2019 Bureau of Facilities		AECOM		PROFESSIONAL ENGINEER KEVAL K. KAPOOR No. 21631 LICENSE NO. 21631 EXPIRATION DATE: 6/22/2021		DES: SLW DRN: LEF CHK: AA DATE: 08/20/19		ELECTRICAL ONE-LINE DIAGRAM		DAYTON HIGHWAY MAINTENANCE FACILITY UPGRADED FUEL STORAGE & DISPENSING SYSTEM CAPITAL PROJECT NO. C-0322 5TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND		SCALE: NONE DWG. NO.: E-10
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