

**GENERAL ELECTRICAL NOTES**

1. PROVIDE ALL MATERIALS FOR A COMPLETE INSTALLATION IN ALL ASPECTS READY FOR INTENDED USE AND IN STRICT ACCORDANCE WITH STATE AND LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS.
2. EACH CONTRACTOR IS RESPONSIBLE FOR HAVING THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS AS THEY RELATE TO THIS WORK. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED DUE TO LACK OF THIS KNOWLEDGE.
3. COORDINATE THE ROUTING OF ALL CONDUITS TO THE SERVICE BUILDING WITH BOLLARD LOCATIONS AND CIVIL PLANS.
4. REF FSE4 FOR CONDUIT LOCATIONS INSIDE EQUIPMENT ROOM.
5. DO NOT POWER SITE MONITOR PANEL AND DISPENSERS UNTIL CHECKED AND APPROVED BY AUTHORIZED SERVICE ORGANIZATION (ASO). LOCK-OUT BREAKERS FEEDING SITE MONITOR PANEL AND DISPENSERS UNTIL INSTALLATION IS APPROVED BY ASO.
6. DO NOT SCHEDULE INSPECTION VISIT BY ASO UNTIL ALL THE FOLLOWING ARE MET:  
A. REMAINER POWER IS OFF SITE (NO GENERATORS)  
B. ALL BREAKERS FEEDING LOW VOLTAGE IS TERMINATED TO SITE MONITOR PANEL AND DISPENSERS ARE LOCKED-OUT
7. MINIMUM ALLOWED CONDUCTOR SIZE SHALL BE #12 AWG THIN UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL FUELING STATION CONDUCTORS SHALL BE STRANDED.
8. INSTALL A PULL WIRE IN EACH EMPTY RACEWAY THAT IS LEFT FOR INSTALLATION OF CONDUCTORS OR CABLES UNDER OTHER DIVISIONS OR CONTRACTS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 20-LS TENSILE STRENGTH. LEAVE AT LEAST 24 INCHES OF SLACK AT EACH END OF PULL WIRE.
9. RIGID NONMETALLIC CONDUIT (RNC) IS ALLOWED FOR UNDERGROUND RUNS IF CONDUIT IS BURIED AT A MINIMUM OF 2" WITH THE EXCEPTION OF THE LAST 2' OF THE UNDERGROUND RUN WHERE RNC IS ALLOWED.
10. WHERE A CONDUIT ENTERS A BOX, FITTING OR OTHER ENCLOSURE PROVIDE A BUSHING TO PROTECT THE WIRE FROM ABRASION. UNLESS THE DESIGN OF THE BOX, FITTING OR ENCLOSURE IS SUCH AS TO AFFORD EQUIVALENT PROTECTION.
11. GRC SHALL BE "HEAVY-WALLED RIGID HOT-DIP GALVANIZED" CONDUIT.
12. CONTRACTOR IS RESPONSIBLE FOR ALL CABLING INSTALLATION AS REQUIRED FOR A COMPLETE AND OPERABLE FUEL STATION UNLESS NOTED OTHERWISE ON THE PLANS.
13. NO FLEXIBLE CONDUIT SHALL BE INSTALLED WITHIN THE DISPENSER CABINET OR IN THE TURBINE SUBMERSIBLE PUMPS.

**KEYNOTES**

- 16.800 CLASSIFIED AREA AS DEFINED BY NEC ARTICLE 514. REF 5-FSE1. CLASSIFIED AREA 1, DIVISION 1 ANY PIT OR BOX BELOW GRADE LEVEL OR SPACE WITHIN DISPENSER ENCLOSURE AND ALL ELECTRICAL EQUIPMENT INTEGRAL WITH DISPENSING HOSE OR NOZZLE. CLASSIFIED AREA 1, DIVISION 2 WITHIN 18" HORIZONTALLY IN ALL DIRECTIONS EXTENDING TO GRADE FROM THE DISPENSER ENCLOSURE, ALSO UP TO 18" ABOVE GRADE LEVEL WITHIN 20 FT HORIZONTALLY OF ANY EDGE OF ENCLOSURE.
- 16.810 PROVIDE 1" GRC TO POWER CONDUIT WIRING CABINET. PROVIDE SEAL-OFF AT POWER CONDUIT WIRING CABINET AND TERMINATE CONDUCTORS AT LIGHTING CONTACTORS AS APPLICABLE. REF 2-FSE3 FOR CONTACTOR SCHEMATIC. SEAL AFTER CIRCUIT HAS BEEN PULLED, TESTED AND IS FUNCTIONING PROPERLY.
- 16.811 1 - 1" CONDUIT WITH SEAL-OFF INSIDE COLUMN BY CANOPY MANUFACTURER. REF TO CANOPY MANUFACTURER'S DRAWINGS FOR EXACT LOCATION OF COLUMN. SEAL AFTER CIRCUITS HAVE BEEN PULLED, TESTED, AND ARE FUNCTIONING PROPERLY.
- 16.813 ROUTE CANOPY LIGHT AND SIGN CIRCUITRY THRU CONDUITS AT COLUMNS.
- 16.824 TWO PRODUCT DISPENSER. PULL (1) HOT CONDUCTOR, (1) NEUTRAL, (1) EQUIPMENT GROUND, (2) PRODUCT SELECT WIRES, AND (2) SPARES. ALL #12 AWG THRU-TURN GAS AND OIL RESISTANT IN A 1" GRC FROM POWER INTEGRITY PANEL WITH SEAL-OFFS AT POINT OF EMERGENCE FROM DISPENSER SUMP AND AT POWER CONDUIT WIRING CABINET LOCATED AT REAR OF SERVICE BUILDING. REF 1-FSE3.
- 16.825 THREE PRODUCT DISPENSER. PULL (1) HOT CONDUCTOR, (1) NEUTRAL, (1) EQUIPMENT GROUND, (2) PRODUCT SELECT WIRES, AND (2) SPARES. ALL #12 AWG THRU-TURN GAS AND OIL RESISTANT IN A 1" GRC FROM POWER INTEGRITY PANEL WITH SEAL-OFFS AT POINT OF EMERGENCE FROM DISPENSER SUMP AND AT POWER CONDUIT WIRING CABINET LOCATED AT REAR OF SERVICE BUILDING. REF 1-FSE3.
- 16.840 PROVIDE 1" GRC FROM SECURITY CAMERA IN CANOPY DECK TO DATA CONDUIT WIRING CABINET. WITH SEAL-OFFS AT EACH END. CONTRACTOR TO MAKE CONNECTION AT EACH COLUMN BASE AND CONTINUE CONDUIT FROM TOP OF COLUMN TO JUNCTION BOX AT DECK PAN. SECURITY CAMERA CABLING AND EQUIPMENT SUPPLIED AND INSTALLED BY OWNER. REF 1-FSE1 FOR EXACT CANOPY COLUMN LOCATIONS.
- 16.845 INSTALL ETHERNET CABLE BELDEN #8311A CAT6 PAIRED CABLE IN 1" GRC FROM WIREWAY BELOW GAS SWITCH TO EACH DISPENSER AND 3/4" GRC FROM WIREWAY BELOW GAS SWITCH TO THE SITE MONITORING SYSTEM. INSTALL TRIP AT EACH END OF CAT6 CABLES THEN MEASURE EACH CABLE FOR CONDUCTIVITY. AT EACH DISPENSER ROUTE THE CAT6 CABLE TO THE HEAD OF THE DISPENSER VIA THE MANUFACTURER SUPPLIED CONDUIT STUBBED OUT FROM DISPENSER HEAD AND CONNECT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. INSTALL AND CONNECT TWO CAT6 CABLES FROM THE GAS SWITCH TO THE SITE MONITORING SYSTEM PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. MAKE CONNECTIONS AT THE GAS SWITCH FOR EACH CABLE FROM DISPENSERS AND SITE MONITORING SYSTEM. REF DISPENSER AND SITE CONTROLLER WIRING DIAGRAM AND GAS SWITCH DETAIL ON SHEET FSE6.
- 16.846 PROVIDE 1" GRC TO DISPENSER HEAD VIA MANUFACTURER SUPPLIED CONDUIT STUBBED OUT FROM LOW VOLTAGE DISCONNECT IN EQUIPMENT ROOM. PROVIDE SEAL-OFFS AT EACH END. ROUTE (1) BELDEN #8311A CABLE (1) FOR CALL BUTTON AND (1) FOR SPEAKERS.
- 16.847 PROVIDE 1" GRC TO SUMP FOR SUMP SENSOR FROM SITE MONITOR PANEL. PROVIDE SEAL-OFFS AT EACH END. ROUTE (1) BELDEN #8311A CABLE. REF DISPENSER SUMP SENSOR DETAIL ON SHEET FSE5.

ESTIMATION FOR REUSE

CONSULTANTS

Charlotte, NC

CLUB#: 6540

ISSUE BLOCK

1 REV #1 10/18/19

CHECKED BY: SAG

DRAWN BY: JUN

FILE NAME: FSE1

PROTO CYCLE: 10/25/19

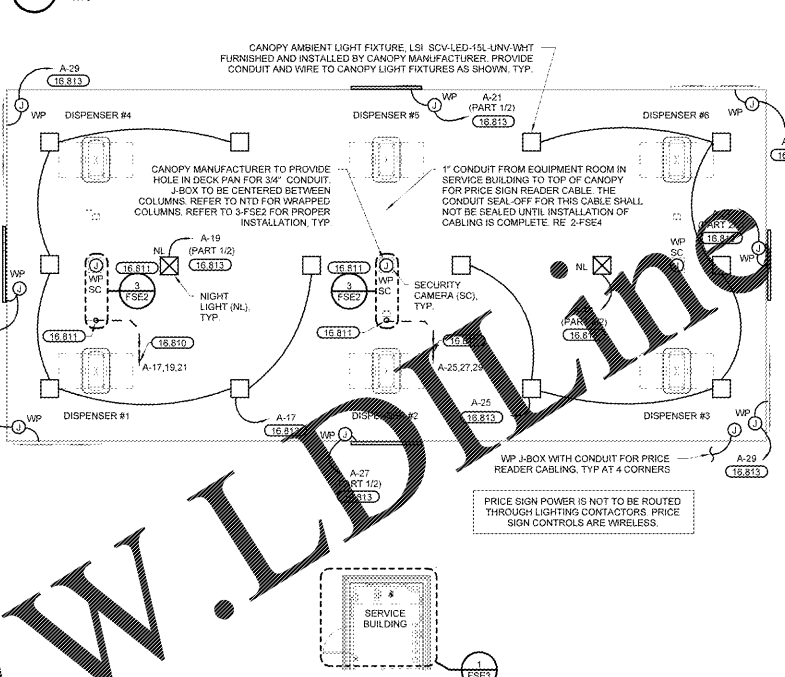
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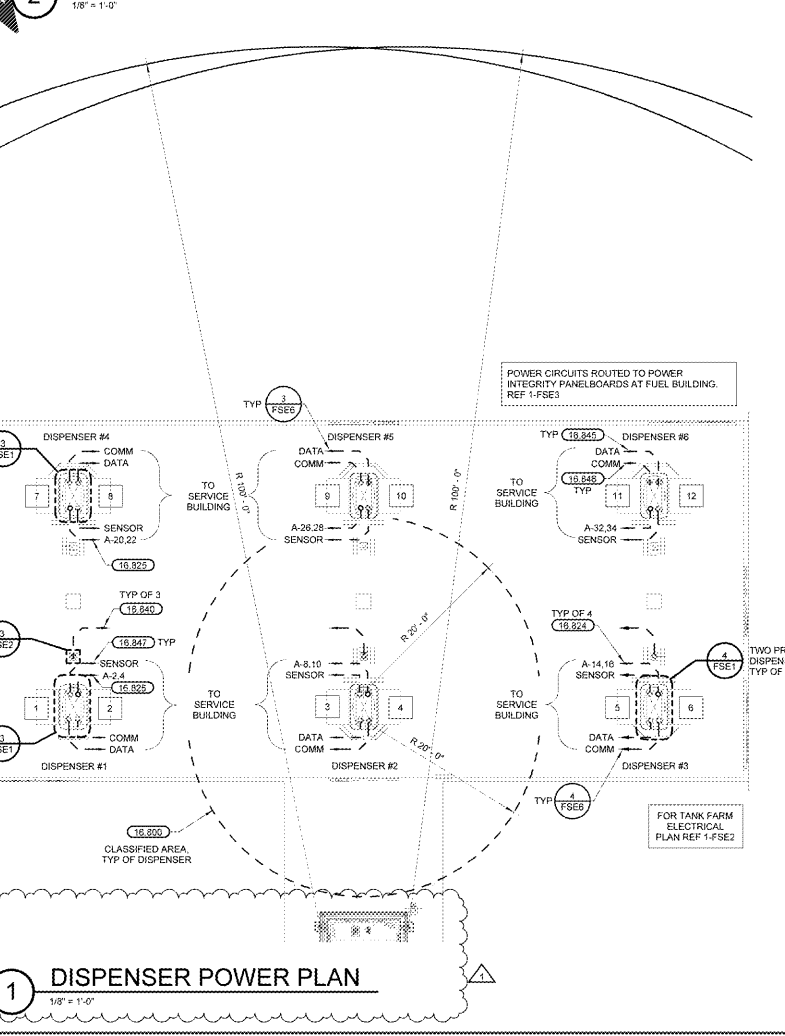
SITE ELECTRICAL PLANS

SHEET: FSE1

**5 AREA CLASSIFICATION BOUNDARY**



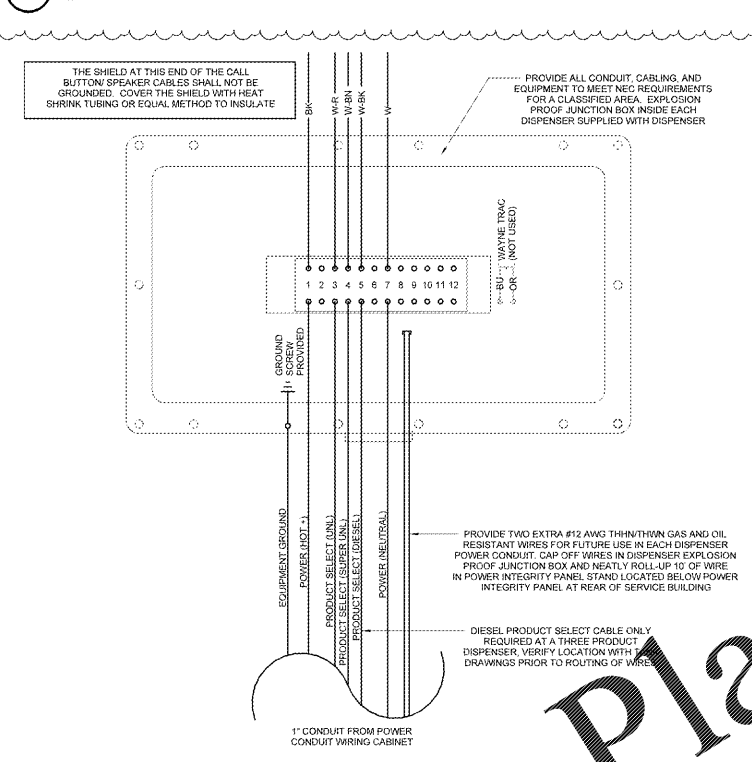
**2 CANOPY LIGHTING PLAN**



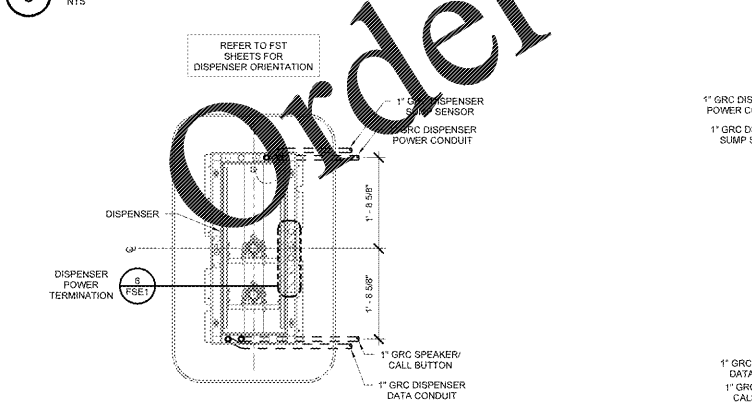
**1 DISPENSER POWER PLAN**



**7 AC / LOW VOLTAGE EMERGENCY STOP SYSTEM DETAIL**



**6 DISPENSER POWER TERMINATION DETAIL (ID#20)**



**4 TWO PRODUCT DISPENSER PLAN**



**3 THREE PRODUCT DISPENSER PLAN**



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