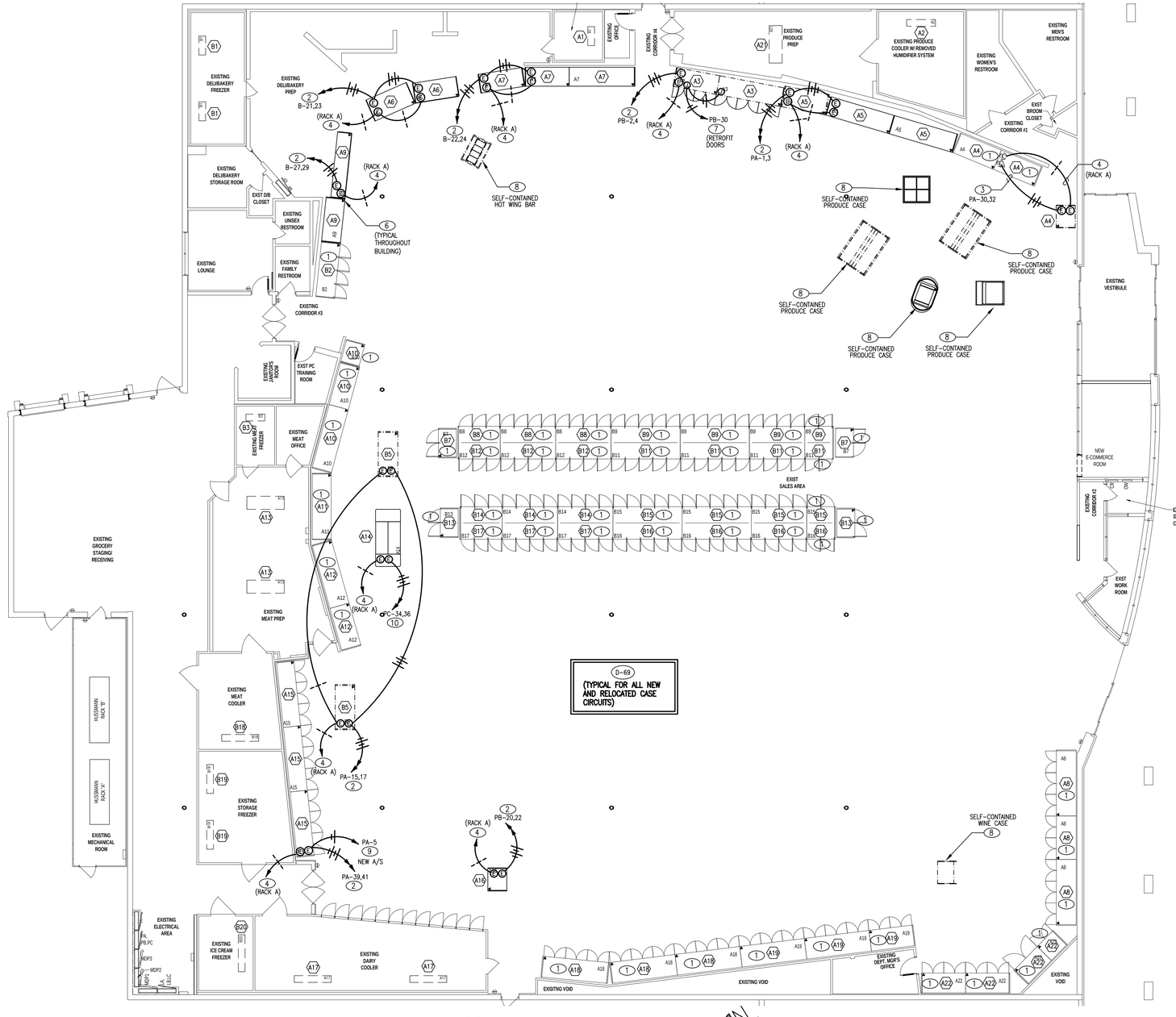


1 REFRIGERATION ELECTRICAL PLAN
E1.03 3/32" = 1'-0"

SPECIAL REPAIR NOTES

(D-XX) INDICATES CRESCENT CONSTRUCTION SERVICES REPORT DEFICIENCY. SEE SHEET E6.03 FOR LIST OF CRESCENT REPAIR NOTES.

GENERAL NOTES

1. MEDIUM TEMPERATURE CASES (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
   - FANS: 12GA 1-BLACK, 1-WHITE
   - LIGHTS: 12GA 1-RED, 1- WHITE, RUN THROUGH EMS LOAD #6
   - ANTI-SWEAT HEATERS: 10GA 1-BLUE, 1-WHITE. FOR NEW OR RETROFITTED GLASS DOOR CASES ONLY. RUN THROUGH THE SWEATMISER PANEL. ONE CIRCUIT FOR DAIRY, ONE CIRCUIT FOR LUNCH MEAT AND ONE CIRCUIT FOR BEER. MARK NEUTRAL WITH PROPER PANEL LETTER AND CIRCUIT NUMBER. THERE WILL BE A 4x4 JUNCTION BOX INSTALLED ON TOP OF THE CASES BY THE RETROFIT DOOR COMPANY THAT THE EC WILL RUN HIS WIRES TO. SEE ENVIRONMENTAL NOTES ON THIS SHEET.
   - 22GA 4-WIRE SHIELDED CABLE (BELDEN CAT-5E) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR SPARES.
2. LOW TEMPERATURE CASES (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
   - FANS: 12GA 1-BLACK, 1-WHITE
   - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #6
   - ANTI-SWEAT HEATERS: 10GA 1-BLUE, 1-WHITE. RUN THROUGH THE SWEATMISER PANEL. MARK NEUTRAL WITH PROPER PANEL LETTER AND CIRCUIT NUMBER.
   - 22GA 4-WIRE SHIELDED CABLE (BELDEN CAT-5E) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR DEFROST TERMINATION.
3. MEDIUM TEMPERATURE WALK-IN COOLERS (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
   - FANS: 12GA 1-BLACK, 1-WHITE
   - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD#1
   - 22GA 4-WIRE SHIELDED CABLE (BELDEN CAT-5E) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR SPARES.
4. LOW TEMPERATURE WALK-IN FREEZERS (PER CIRCUIT ELECTRICAL REQUIREMENTS AND COLOR CODES)
   - FANS: 12GA 2-BLUE (FAN POWER COMES FROM THE LOW-TEMP RACK EVAPORATOR CONTACTOR)
   - LIGHTS: 12GA 1-RED, 1-WHITE, RUN THROUGH EMS LOAD #1
   - 22GA 6-WIRE SHIELDED CABLE (BELDEN CAT-5E) 1-BLACK AND 1-WHITE FOR CASE SENSOR, 1-RED AND 1-GREEN FOR TERMINATION, 1-BROWN AND 1-BLUE FOR MAGNETIC DOOR SWITCH.
5. ALL CONTROL WIRES FOR CASES AND WALK-INS SHALL TERMINATE AT THE ASSOCIATED REFRIGERATION RACK OR REMOTE MANIFOLD.
6. THE EC SHALL MOUNT THE DOOR SWITCH PROVIDED BY THE RACK MFG (IN RC PARTS). EC SHALL PROVIDE WIRE AND CONDUIT FROM FREEZER TO RACK CONTROL PANEL. COORDINATE WITH THE FOOD LION REFRIGERATION REPRESENTATIVE.
7. ALL CONDUIT FOR REFRIGERATED CASES SHALL BE 1". ENTIRE SALES AREA STUB-UP TO 1" OF DIMENSION.
8. DIMENSIONS PULLED FROM INSIDE FACE OF MASONRY WALL UNLESS OTHERWISE INDICATED ON PLANS.
9. ALL WIRING SHALL BE DONE IN ACCORDANCE WITH N.E.C. STANDARDS AND WITH FOOD LION STANDARDS. INSTALL USING PROPER WORKMANSHIP. EC IS TO MAKE SURE THAT NO MC OR BX OR ANY OTHER FLEX CABLES ARE USED UNLESS OTHERWISE NOTED. MC OR BX CAN ONLY BE USED IN SHORT RUNS FOR LIGHTING FEEDS. EMT MUST BE USED TO CONNECT PANEL TO JUNCTION BOX AND HAVE COMPRESSION-TYPE FITTINGS. SEE SPECIFICATIONS FOR STANDARD PRACTICES.
10. RUN A SEPARATE 3/4" CONDUIT FROM EACH REFRIGERATION CONTROLLER TO ITS RESPECTIVE CONDENSER, CONTAINING (1) 4-WIRE SHIELDED CABLE FOR COMMUNICATION. ONLY SHIELDED CABLES SHALL BE RUN IN THIS CONDUIT.
11. ALL WIRE SHALL BE STRANDED FOR CONTROLS AND SOLID FOR BRANCH CIRCUITS.
12. ANTI-SWEAT SENSOR MOUNTED ON TOP OF FROZEN FOOD CASE LINE-UP (ONE PER CIRCUIT), BY ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH REFRIGERATION CONTRACTOR. SEE ENVIRONMENTAL CONTROL NOTES THIS SHEET. ALL REFRIGERATED CASES. THIS INCLUDES NEW, EXISTING-RELOCATED, AND EXISTING TO REMAIN CASES. COOLERS AND
13. PROVIDE SHIELDED CABLE LABELED AS REQUIRED FOR FREEZERS WILL BE INCLUDED IN THIS PROCESS IF NO TEMPERATURE SENSORS EXIST. SEE GENERAL NOTES #1-4. VERIFY EXTENT OF WORK IN FIELD. EACH REFRIGERATION CIRCUIT WILL HAVE ITS OWN ELECTRICAL CIRCUIT. AS AN EXAMPLE, IF ONE REFRIGERATION CIRCUIT IS REMOVED AND IS REPLACED BY TWO REFRIGERATION CIRCUITS AN ADDITIONAL ELECTRICAL CIRCUIT WILL BE REQUIRED. THIS CIRCUIT WILL HAVE LIGHTS AND FANS SEPARATED AND ANTI-SWEAT RUN THROUGH THE ANTI-SWEAT CONTROLLER FOR ALL NEW AND RELOCATED GLASS DOOR FROZEN FOOD CASES.
14. INSTALL A 6" X 6" X 36" WIRING TROUGH WHERE THE CABLES ENTER THE MECHANICAL ROOM, CONDUIT FROM THE TROUGH TO THE RESPECTIVE RACK/HEADER, LABELING BOTH ENDS OF EACH CABLE WITH CIRCUIT DESIGNATION. REFRIGERATION CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING THE SENSOR CABLES TO THE RACK/HEADER AND CASE/COOLERS. IMPORTANT NOTE: ELECTRICAL CONTRACTOR SHALL RUN SENSOR CABLES THE NIGHT OF THE CASE MOVES.
15. BIDDING ELECTRICAL CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE REFRIGERATION INSTALLATION SCOPE OF WORK & SUMMARY TO VERIFY & INCLUDE ANY NEW OR RESIZED BREAKERS. NOTE: NEW LOW TEMP RACK PROVIDE EVAPORATOR POWER TO WALK-IN FREEZERS, INCLUDE RELOCATING EVAPORATOR CIRCUITS WHEN A NEW RACK IS INDICATED. WHEN NEW E2E CONTROLLERS ARE INDICATED IN THE REFRIGERATION SCOPE OF WORK, PROVIDE 3/4" CONDUIT FROM ENVIRONMENTAL CONTROL PANEL.
   - TO A T-11 BOX AT RECLAIM WATER HEATERS, INCLUDE 4 WIRE SHIELDED.
   - TO REFRIGERATION RACKS, DAISY CHAIN RACK TO RACK, INCLUDE (2) 4 WIRE SHIELDED CABLE FOR COM B & C ON CONTROLLERS. IN NEW RACKS PROVIDE 3/4" CONDUIT FROM ANY NEW RACKS TO ROOFTOP CONDENSER (2) 14'S AND (4) WIRE SHIELDED.
16. ALL NEW AND RELOCATED CASE WORK REQUIRES A SEPARATE NEUTRAL FOR EACH: LIGHTS, FANS & ANTI-SWEAT HEATERS. NO DOUBLE POLE BREAKERS ARE ALLOWED FOR SHARED NEUTRALS.

SENSORS

17. ALL NEW AND EXISTING LOW VOLTAGE CABLING SHALL BE PROPERLY SUPPORTED AND NEATLY SECURED. ALL NEW CABLES SHALL BE IN CONDUIT VERTICALLY AND SECURED NEATLY TO STEEL OVERHEAD. ANY NEW CABLING TO BE RUN PARALLEL & PERPENDICULAR TO EXTERIOR WALLS. ALL ABANDONED CABLES TO BE REMOVED.
18. REFRIGERATION SENSOR WIRING MAY BE FREE WIRED AND TIE-WRAPPED TO THE STRUCTURE ABOVE LAY-IN CEILINGS AND IN EXPOSED CEILING BACK ROOM AREAS, IF ALLOWED BY CODE (UNLESS CALLED OUT TO BE UNDER SLAB). SENSOR WIRING IN EXPOSED STRUCTURE CEILINGS (REMODELS) SHALL BE RUN IN EMT CONDUIT. IN MACHINE ROOMS, SENSOR WIRING SHALL BE INSTALLED IN A 6" X 6" X 36" TROUGH WHERE THE CABLES ENTER THE ROOM, IN EMT CONDUIT FROM THE TROUGH TO ABOVE THE RESPECTIVE RACK/HEADER, THEN IN FLEXIBLE CONDUIT TO THE RACK/HEADER, LABELING BOTH ENDS OF EACH CABLE WITH CIRCUIT DESIGNATION. REFRIGERATION CONTRACTOR TO TERMINATE THE SENSOR CABLES TO THE RACK/HEADER AND CASES/COOLERS.
19. REFRIGERATION CONTRACTOR SHALL SUPPLY AND INSTALL SOLENOID VALVE FOR THE GARDEN COOLER & PRODUCE PREP EVAPORATOR COILS.
20. RELOCATE COLUMN MOUNTED SENSORS FOR ANIT-SWEATS WHEN FROZEN FOOD CASES ARE REPOSITIONED IN THE SALES AREA.
21. ALL CATS CABLE SHALL BE BELDEN CAT-5E.
22. THE ELECTRICAL CONTRACTOR WILL REUSE EXISTING STUB-UPS FOR NEW CASES WHERE POSSIBLE. IN THE EVENT THERE'S NO EXISTING STUB UP HE WILL COORDINATE WITH THE FOOD LION CONSTRUCTION MANAGER RUNNING WIRE OVERHEAD, (REFER TO NOTES #1-4). FIELD VERIFY EXTENT OF WORK REQUIRED PRIOR TO BID.
23. THE ELECTRICAL CONTRACTOR TO PROPERLY SEAL ALL CONDUITS ENTERING WALK-IN COOLERS AND FREEZERS TO PREVENT MOISTURE. WHERE A CONDUIT PASSES THROUGH AN INSULATED PANEL AND INTO A REFRIGERATED SPACE; THAT CONDUIT INTERIOR AND PENETRATION SHALL BE SEALED TO PREVENT MOISTURE TRANSFER AND ACCUMULATION. ANY MOISTURE ACCUMULATION / CONDENSATION OR ICE PRESENT WITHIN A REFRIGERATION SPACE, CONDUIT BODY, ELECTRICAL BOX OR FIXTURES SHALL BE REMOVED WHILE ENTRY POINT IS PROPERLY REPAIRED / SEALED.
24. GENERAL CONTRACTOR SHALL PAINT ALL EXPOSED REFRIGERATION LINES IN MEAT PREP, GARDEN COOLER, AND PRODUCE PREP TO MATCH WALL COLOR.

REFRIGERATION ELECTRICAL PLAN KEYED NOTES

1. EXISTING CASE TO REMAIN.
2. EXTEND AND REUSE CIRCUITS MADE SPARE BY DEMOLITION OF EXISTING REFRIGERATED CASES. VERIFY LIGHTING CIRCUITS (CONTROLLED BY EMS) ARE RECONNECTED TO LIGHTING LOADS AND ANTI-SWEAT CIRCUITS (CONTROLLED BY ANTI-SWEAT SYSTEM) ARE RECONNECTED TO ANTI-SWEAT LOADS. REUSE EXISTING UNDERSLAB STUBS WHERE POSSIBLE. REUSE EXISTING SENSOR CABLING WHERE POSSIBLE. SEE GENERAL NOTE #5. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR. RUN CONDUITS OVERHEAD AND DOWN IN WALL OR THROUGH FALSE COLUMN WITH REFRIGERATION PIPING WHERE EXISTING UNDERSLAB STUBS ARE NOT REUSED. FIELD VERIFY EXISTING CONDITIONS AND EXTENT OF WORK. FIELD VERIFY EXACT CIRCUIT NUMBERS. NET LOAD IS REDUCED OR UNCHANGED.
3. EXTEND EXISTING CIRCUITS FOR RELOCATED/NEW CASES UNLESS INDICATED OTHERWISE. CIRCUITS SHOWN ARE BASED EXISTING DRAWINGS (FIELD VERIFY).
4. TEMPERATURE SENSOR CABLE. SEE GENERAL NOTE #10 AND #11. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR.
5. DEFROST CONTROL CABLING. SEE GENERAL NOTES 10 AND 11. REUSE EXISTING WHERE POSSIBLE. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR. SEE DETAIL 3/E6.02.
6. FAN, LIGHT, AND ANTI-SWEAT CIRCUITS FOR ALL CASES ON SAME REFRIGERATION SYSTEM CIRCUIT ARE TIED TOGETHER UNLESS INDICATED OTHERWISE. CIRCUITING BETWEEN ADJACENT CASES IS NOT SHOWN BUT IS REQUIRED.
7. RETROFIT CASE DOOR ANTI-SWEAT CONNECTIONS. VERIFY REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR.
8. SEE SHEETS E1.02 FOR SELF-CONTAINED CASE CONNECTIONS.
9. RUN NEW A/S CIRCUITS THROUGH EXISTING SWEAT-MISER PANEL FOR CONTROL SIMILAR TO EXISTING. PROVIDE AND INSTALL ALL EQUIPMENT NECESSARY. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR. SEE GENERAL NOTE 1.
10. RUN NEW CASE LIGHTING CIRCUITS THROUGH SPARE POLE IN EXISTING CONTACTOR ON EMS LOAD 6. PROVIDE NEW CONTACTOR IN ENCLOSURE AND CONTROL CABLING AS REQUIRED IF NO SPARE POLE IS AVAILABLE. FIELD VERIFY.

ENVIRONMENTAL CONTROL PANEL CONDUIT SYSTEM

(S) = SENSOR (TEMP./HUMIDITY) HANDY BOX MTD.

1. ENTIRE CONDUIT SYSTEM FOR ENVIRONMENTAL CONTROL PANEL SHALL BE SUPPLIED BY THE ELECTRICAL CONTRACTOR (WITH PULL STRINGS). ALL WIRING AND TERMINATIONS FOR THE ENVIRONMENTAL CONTROL PANEL SHALL BE COMPLETED BY THE MECHANICAL CONTRACTOR. ALL WIRING AND TERMINATIONS FOR THE ENERGY MANAGEMENT PANEL SHALL BE COMPLETED BY THE ELECTRICAL CONTRACTOR.
2. ALL CONDUIT FOR ENVIRONMENTAL CONTROL SYSTEM SHALL BE 3/4". DO NOT COMBINE SENSOR AND 120 VOLT CONTROL (VERIFIED BY MECHANICAL CONTRACTOR).
3. ALL MECHANICAL EQUIPMENT SHALL BE FLEXED TO A TERMINATING JUNCTION BOX WITHIN REASONABLE WORKING DISTANCE OF EQUIPMENT.
4. CONDUITS FROM 6'x6'x36" TROUGH TO:
   a. SMOKE DETECTORS (SERIES BETWEEN ALL SMOKE DETECTORS)
   b. AHU MOTOR STARTER & AIR PRESSURE SWITCH
   c. A/C SOLENOIDS AND OUTSIDE AIR DAMPER MOTOR
   d. A/C CONDENSING UNIT ON ROOF. SEAL TITE 3'-0" MAXIMUM TO EQUIPMENT
   e. PRODUCE PREP DAMPER MOTOR, SENSOR AND SOLENOID VALVES
   f. HEAT RECLAIM SOLENOID VALVE
   g. DUCT HEATER #1 (AHU #1)
   h. DUCT HEATER #2 (AHU #2)
   i. SALES FLOOR AND FRONT DOOR SENSORS
   j. MAIN AHU DISCHARGE AIR SENSOR LOCATION
   k. MECHANICAL ROOM & GROCERY STAGING SENSORS
   l. RTU-1 & RTU-DB.

EMS REMODEL NOTES:

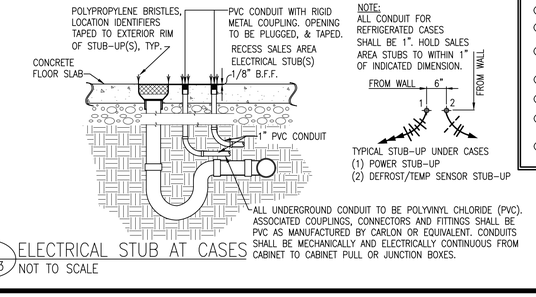
1. ELECTRICAL CONTRACTOR SHALL TIE NEW EQUIPMENT INTO COORDINATING EMS LOADS (EXISTING); COORDINATE WITH SESCO REPRESENTATIVE.
2. EACH REFRIGERATION CIRCUIT WILL HAVE ITS OWN ELECTRICAL CIRCUIT. AS AN EXAMPLE, IF ONE REFRIGERATION CIRCUIT IS REMOVED AND IS REPLACED BY TWO REFRIGERATION CIRCUITS, AN ADDITIONAL ELECTRICAL CIRCUIT WILL BE REQUIRED. THIS CIRCUIT WILL HAVE LIGHTS AND FANS SEPARATED AND ANTI-SWEAT RUN THROUGH THE ANTI-SWEAT CONTROLLER FOR ALL NEW AND RELOCATED GLASS DOOR FROZEN FOOD CASES.
3. IF A CASE(S) REQUIRES AN ANTI-SWEAT CIRCUIT AND THE EXISTING WIRING DOES NOT HAVE THIS AVAILABLE, THEN AN ADDITIONAL CIRCUIT FOR ANTI-SWEAT WILL NEED TO BE PROVIDED AND RUN THROUGH THE ANTI-SWEAT PANEL. ELECTRICAL CONTRACTOR SHALL TO LABEL ALL NEW CIRCUITS WITH BOTH BREAKER AND REFRIGERATION CIRCUIT IDENTIFICATION.
4. IF THE FROZEN FOOD LINEUP HAS CHANGED LOCATIONS, THE ANTI-SWEAT HUMIDITY SENSOR LOCATION MUST BE RELOCATED. CONTACT THE MAINTENANCE SUPERVISOR OR YOUR EMS REPRESENTATIVE FOR LOCATION.
5. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT REQUIRED BY MECHANICAL CONTRACTOR. BX OR FREE AIR CABLE IS NOT ALLOWED. SENSOR AND CONTROL WIRING CANNOT BE IN SAME CONDUIT. NEEDS TO BE COMPLETED IN A TIMELY MANNER. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR.
6. THE LOAD PATTERN SHOWN ON SHEET E6.04 IS TYPICAL OF MOST STORES WITH THE EXCEPTION OF MOST 2500 SERIES STORES. THE 2500 SERIES SHOULD HAVE PRINTS LOCATED IN THE ECP PANEL. FOR ADDITIONAL CLARIFICATION, CONTACT SESCO AT (336) 996-2220.

EMS LOAD QUESTIONS- CONTACT SESCO @ (336) 996-2220.

NOTE:
RELOCATE COLUMN MOUNTED SENSORS FOR ANTI-SWEATS WHEN FROZEN FOOD CASES ARE REPOSITIONED IN THE SALES ARE. COORDINATE REQUIREMENTS WITH THE REFRIGERATION CONTRACTOR.

LEGEND:

- (J) JUNCTION BOX
- FLOOR STUB UP (SEE DETAIL 2/E1.03. REUSE EXISTING WHERE POSSIBLE).
- DROP FROM CEILING
- (XX) REFRIGERATION CIRCUIT NUMBER
- (E) ELECTRICAL CONNECTION UNDER CASE. RUN CONDUITS OVERHEAD WITH REFRIG. PIPING UNLESS INDICATED OTHERWISE. REUSE EXISTING STUB UPS WHERE POSSIBLE COORDINATE CONDUIT ROUTING WITH THE FOOD LION CONSTRUCTION MANAGER.
- SENSOR. SEE NOTES No. 8, 12
- EVAPORATOR COIL
- MAGNETIC SWITCH
- (XX) REFRIGERATION CIRCUIT NUMBER
- REFRIGERATION CIRCUIT BREAK
- EMS LOAD (VERIFY WITH SESCO REPRESENTATIVE, ARCHITECT AND



2 ELECTRICAL STUB AT CASES
E1.03 NOT TO SCALE

NOTE:
ALL CONDUIT FOR REFRIGERATED CASES SHALL BE 1". HOLD SALES AREA STUBS TO WITHIN 1" OF INDICATED DIMENSION.

TYPICAL STUB-UP UNDER CASES
(1) POWER STUB-UP
(2) DEFROST/TEMP SENSOR STUB-UP

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REVISION / ISSUE HISTORY

REV	DATE	REVISION / ISSUE NAME
	04/14/2023	PERMIT

PROJECT NO	DRAWN BY
2220380	KAK
PERMIT SUB DATE	CHECKED BY
04/14/2023	HCK

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SHEET TITLE
REFRIGERATION PLAN

SHEET NO 2594 E1.03_00
E1.03
REV