

SYSTEM MTD DISCHARGE AIR TEMPERATURE AND DEFROST PARAMETERS																				
CIRCUIT #	APPLICATION	MODEL NUMBER	MFR	EQUIP NUMBER	DISCHARGE AIR TEMP		DEFROST					DEFROST SCHEDULE								
					SETTING FOR CASES/ RETURN AIR TEMP	SETTING FOR WALK-IN BOXES	DEFROST TYPE	FREQUENCY PER DAY	PUMP OUT TIME (MIN)	MAX DURATION (MIN)	TERMINATION TEMP (°F)	DRIP TIME (MIN)	Defrost 1	Defrost 2	Defrost 3	Defrost 4	Defrost 5	Defrost 6	Defrost 7	Defrost 8
08	M.D. Deli	DXSLN	HEATCRAFT REFRIGERATION	RD4018 442- 927/2018	32	32	OT	6	0	25	47	0	1:15	4:15	7:15	10:15	13:15	16:15	19:15	22:15

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F4	Service Deli	SMST	HUSMANN	RD2508 642- 175/2016	24	24	OT	2	0	30	43	0	8:42	16:42	19:56	19:56	23:08	3:08			
F5	M.D. Deli	CONSUMM-NRG	HILL PHOENIX INC	RD4043 042- 1217/2018	31	31	OT	6	0	40	47	0	7:00	11:00	16:40	19:40	23:00	3:40	7:40		
F6	M.D. Deli	CONSUMM-NRG	HILL PHOENIX INC	RD4043 042- 1217/2018	31	31	OT	6	0	40	47	0	11:40	15:40	18:40	23:40	3:40	7:40			

EMS EQUIPMENT SALVAGE REQUIREMENTS

ALL DEMOLISHED NOVAR EMS EQUIPMENT SHALL BE RETURNED TO OWNER'S MECHANICAL SERVICES CONSTRUCTION MANAGER. EQUIPMENT TO BE RETURNED INCLUDES: EXECUTIVE CONTROLLER(S), IOM(S), CIM(S), COM(S), ETC. PROVIDE DOCUMENTATION FOR ALL EQUIPMENT REMOVED IN ACCORDANCE WITH SPECIFICATIONS AND REQUIRED CLOSE-OUT DOCUMENTS.

GENERAL REFRIGERATION EMS NOTES

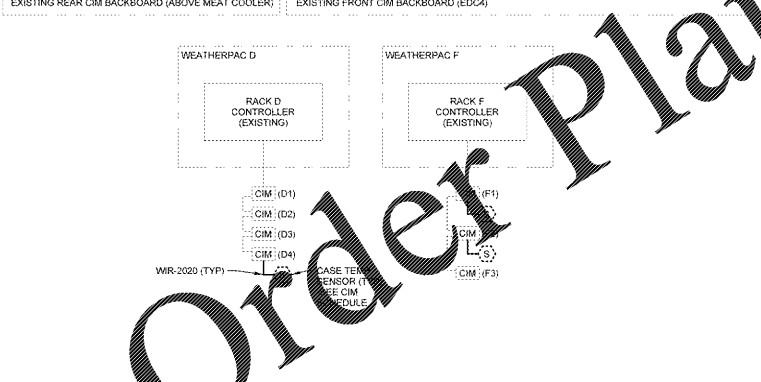
- EMS CONTRACTOR SHALL CONTACT THE EMS SUPPLIER(S) TO OBTAIN A CURRENT MODULE CONFIGURATION PRINTOUT BEFORE TERMINATING SENSOR LEADS AT INPUT MODULES. THE REQUEST FOR THE CONFIGURATION PRINTOUT SHALL BE MADE PRIOR TO THE INSTALLATION OF EMS CABLES. WIRING TERMINATIONS SHALL BE LANDED ACCORDING TO THE EMS SUPPLIER CONFIGURATION SHEETS.
- EMS CONTRACTOR SHALL PROVIDE COMPLETED REFRIGERATION SENSOR INPUT VERIFICATION FORMS TO THE EMS SUPPLIER AT THE BEGINNING OF THE REFRIGERATION EQUIPMENT STARTUP. EMS INSTALLER SHALL PROVIDE ASSISTANCE TO THE EMS SUPPLIER FOR SPOT CHECKING OF SENSORS FOR ACCURACY.
- ALL EMS CABLE ON THE SALES FLOOR SHALL BE ROUTED IN CONDUIT AND CONCEALED FROM VIEW AND ROUTED ALONGSIDE OTHER PIPING OR CONDUIT AS MUCH AS POSSIBLE.
- EMS CONTRACTOR SHALL BE PRESENT AND AVAILABLE TO RESOLVE ISSUES AND PROVIDE REFRIGERATION STARTUP ASSISTANCE UNTIL REFRIGERATION SUPPLIER AND OWNER'S REFRIGERATION CONSTRUCTION COORDINATOR. DURING REFRIGERATION STARTUP, EMS CONTRACTOR SHALL COMPLETE ALL UNRESOLVED REFRIGERATION WORK PRIOR TO WORKING ON OTHER INSTALLATION ITEMS.
- IF THE EMS SUPPLIER IS NOT SCHEDULED TO PERFORM THE ON SITE REFRIGERATION STARTUP, THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL CHECKS AND TEST TO ENSURE A FULLY FUNCTIONAL REFRIGERATION CONTROL SYSTEM. CONTACT THE EMS SUPPLIER FOR THE BLANK TEST VERIFICATION FORMS AND INSTRUCTIONS FOR COMPLETING. ALL COMPLETED TEST VERIFICATION FORMS SHALL BE RETURNED TO THE OWNER'S MECHANICAL SERVICES CONSTRUCTION MANAGER.
- REFER TO ARCHITECTURAL DRAWINGS FOR PIPING INSTALLATION AND SEALING REQUIREMENTS FOR DEVICES SHOWN ON COOLER/FREEZER PANELS. DO NOT INSTALL PIPING WITHIN COOLER/FREEZER PANELS.
- ROUTE ALL UTILITY SERVICE LINES (PIPES AND CONDUIT) WITHIN STUD WALLS WHEREVER POSSIBLE ON COOLER/FREEZER PANELS IN FOOD PREP AREAS WHERE UTILITIES MUST BE EXPOSED, CONTRACTOR TO HAVE THE OPTION OF THE FOLLOWING:
 - SURFACE MOUNT UTILITIES WITH NON-CORROSIVE ANCHORS. SEAL BOTH SIDES OF PIPE/CONDUIT TO PANEL CONTINUOUSLY WITH SEALANT.
 - INSTALL UTILITIES 1/2" OFF FACE OF PANEL TO ALLOW FOR CLEANING. USE ONLY NON-CORROSIVE MATERIALS FOR SPACERS AND ANCHORS.
 - COVER UTILITIES WITH 20 GAUGE STAINLESS STEEL BENT PLATES MOUNTED TO WALL WITH NON-CORROSIVE ANCHORS. APPLY CONTINUOUS SEALANT ALONG EDGES AND JOINTS.
- REFERENCE ARCHITECTURAL DEMOLITION PLANS FOR FULL EXTENT OF DEMOLITION WORK REQUIRED.
- 24 HOURS PRIOR TO SHUTTING DOWN ANY REFRIGERATION SYSTEMS, HVAC SYSTEMS OR ENERGY MANAGEMENT CONTROL SYSTEMS, SEND EMAIL TO NSRM@WALMART.COM. THE E-MAIL SHALL STATE WHAT, WHY, AND WHEN IT IS BEING SHUT DOWN AND HOW LONG IT IS ANTICIPATED TO BE SHUT DOWN. THEN SEND A FOLLOW UP EMAIL TO NSRM@WALMART.COM AFTER THE WORK IS COMPLETE AND THE SYSTEM IS BACK UP AND RUNNING.
- ALL WORK ON THIS SHEET IS TO BE COMPLETED BY AN OWNERS APPROVED CONTRACTOR.

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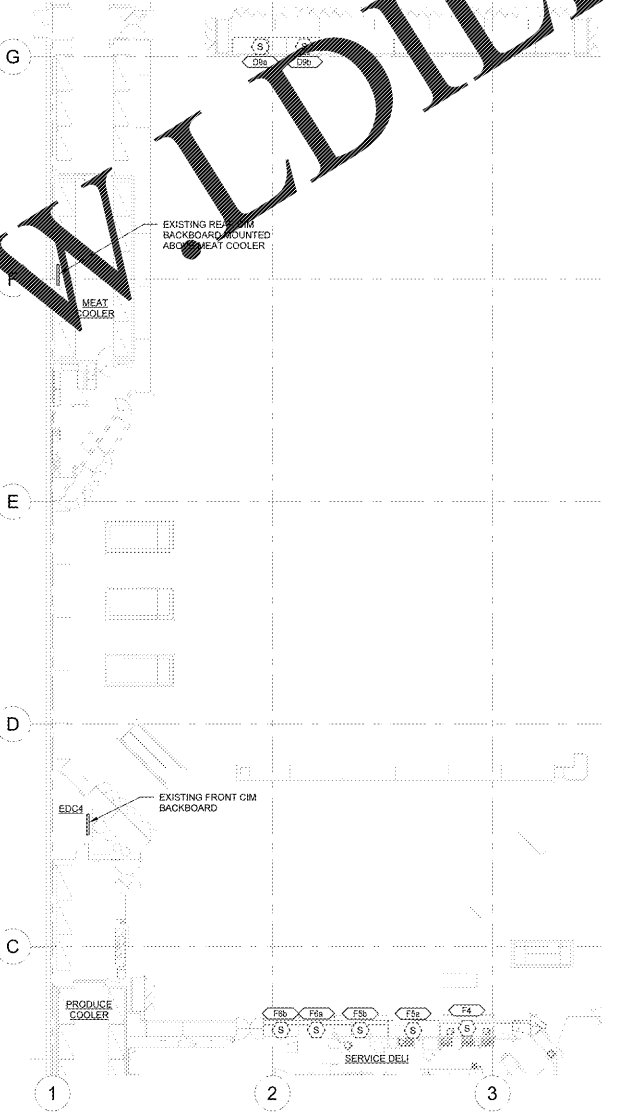
CIM-D4 SCHEDULE (E)		CIM-F1 SCHEDULE (E)		CIM-F2 SCHEDULE (E)	
1	DTa	1	F1	1	F8a
2	DTb	2	F2	2	F8b
3	DTc	3	F3	3	SPARE
4	DTd	4	F4	4	F7a
5	DTe	5	SPARE	5	F7b
6	DTf	6	F5a	6	F10a
7	SPARE	7	F6b	7	F10b
8	SPARE	8	F9	8	F10c
	AUX SPARE		AUX SPARE		AUX SPARE

REFRIGERATION EMS ONE-LINE REFLECTS THE INTENDED DESIGN BASED ON NEW CASES AND EXISTING SYSTEM NUMBER. VERIFY ALL EXISTING CONDITION AND LOCATION. ALL EMS EQUIPMENT PRIOR TO HIGH-RISK.

UNLESS NOTED OTHERWISE DEVICES AND CABLES SHOWN IN THIS ONE-LINE DIAGRAM VENDOR SPECIFIC REFRIGERATION ENERGY MANAGEMENT CONTRACTOR TO INSTALL CABLING AND DEVICES AND MAKE FINAL TERMINATIONS PRIOR TO FINAL DEVICE LOCATIONS.



- WIRE LEGEND**
- NOVAR
 - WR-10 (TAN CABLE 18-2, 20-2 TWISTED PAIR)
 - WR-20 (BLUE CABLE 22-2 TWISTED PAIR)
- NOTES**
- ALL CABLE WIR-20 UNLESS NOTED OTHERWISE
 - ALL CABLE FURNISHED AND INSTALLED BY EMS CONTRACTOR
- EMS ONE-LINE AND SCHEDULE NOTES**
- E: EXISTING EMS DEVICE, SENSOR, OR WIRE FOR REUSE
 - RL: EXISTING EMS DEVICE OR SENSOR TO RELOCATE AND RECONNECT. INSTALL NEW CABLE FOR RELOCATED DEVICE OR SENSOR AS NECESSARY
 - RD: REDEDICATED EMS DEVICE OR SENSOR
 - RP: REPLACED EMS DEVICE OR SENSOR
 - N: NEW EMS DEVICE OR SENSOR
 - F1: NEW FIELD INSTALLED EMS DEVICE, SENSOR, OR WIRE
 - FA: NEW FACTORY INSTALLED EMS DEVICE, SENSOR, OR WIRE
 - M: EMS DEVICE OR SENSOR USED FOR MONITORING ONLY
 - DI: DIGITAL INPUT
 - DO: DIGITAL OUTPUT
 - AI: ANALOG INPUT



2 REFRIGERATION EMS ONE-LINE DIAGRAM

1 REFRIGERATION ENERGY MANAGEMENT PLAN
1/16" = 1'-0"

REM SYMBOLS

ES1	NOVAR EDGE SERVER GATEWAY
E2E	EMERSON RX300 GATEWAY
RCC-NE	NOVAR SPECTRUM RACK CONTROLLER
XCM-20R	NOVAR OPUS RACK CONTROLLER
EMS	ENERGY MANAGEMENT SYSTEM
TEMP	TEMPERATURE
VFD	VARIABLE FREQUENCY DRIVE
XFMR	TRANSFORMER
COMM	COMMUNICATION PORT/MODULE
CIM	CASE INPUT MODULE
LTA-X	REFRIGERATION CIRCUIT
S	REMOTE TEMPERATURE SENSOR
D	DEFROST TERMINATION SENSOR
DTS	DUAL TEMP SWITCH
RIB	RELAY IN BOX
RCC	NOVAR CIRCUIT CONTROLLER
CMS	CASE MANAGEMENT SYSTEM MODULE
ADM	ANALOG OUTPUT MODULE
SM	UNIVERSAL INPUT MODULE
RM	RACK INPUT MODULE
SC	SPORLAN WALK-IN CONTROLLER
SCC	SPORLAN CASE CONTROLLER
EMS BACKBOARD	
DS	DOOR SWITCH
XIO	BACNET INPUT/OUTPUT MODULE
---	NEW FIELD INSTALLED EQUIPMENT
---	EXISTING EQUIPMENT
---	NEW FACTORY INSTALLED EQUIPMENT
---	EQUIPMENT TO BE DEMOLISHED

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E.P. REYES, REGISTERED PROFESSIONAL ENGINEER

2020 SPRB
Walmart
LELAND, NC
1112 NEW POINT BOULEVARD
STORE NO. 4273-26
JOB NUMBER: 2060314232 | PHOTO: 156

ISSUE BLOCK

NO.	DESCRIPTION	DATE	STATUS

CHECKED BY: AB
DRAWN BY: CRA
PROTO CYCLE: 02/28/20
DOCUMENT DATE: 04/28/20

NOT FOR CONSTRUCTION

REFRIGERATION ENERGY MANAGEMENT PLAN

SHEET: REM1

EXISTING CONDITIONS WERE TAKEN FROM ORIGINAL DRAWINGS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING FINAL BIDS. CONTRACTOR SHALL CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.

EACH SUBCONTRACTOR IS RESPONSIBLE FOR HAVING A THOROUGH KNOWLEDGE OF ALL DRAWINGS AND SPECIFICATIONS IN THEIR RELATED FIELD. THE FAILURE TO ACQUAINT THEMSELVES WITH THIS KNOWLEDGE DOES NOT RELIEVE THE RESPONSIBILITY OF PERFORMING THE WORK PROPERLY. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED BECAUSE OF CONDITIONS THAT OCCUR DUE TO FAILURE TO FAMILIARIZE WORKERS WITH THIS KNOWLEDGE.