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THIS DRAWING WAS PREPARED FOR USE IN A SPECIFIC PROJECT AND IS NOT SUITABLE FOR REUSE IN A LATER PROJECT. THE USER OF THIS DRAWING FOR REUSE OF PROJECTS OR FOR ANY OTHER PROJECT REQUIRES THE REPRODUCTION OF THIS DRAWING FOR REUSE AND MAY BE CONTRARY TO THE LAW.

Walmart
Neighborhood Market
FORT WORTH, TX
STORE NO. 2979-211
JOB NUMBER: USMP-006304
GENERAL REMODEL

ISSUE BLOCK

02/12/18	PERMIT/ BID
03/02/18	ADD #1
30 X 42	SHEET SET

CHECKED BY: BLW
DRAWN BY: NSW
PROTO: 52
PROTO CYCLE: 12/29/17
DOCUMENT DATE: 02/12/18

DOCUMENTS WITHOUT SIGNATURE AND REQUIRED SEAL OF AOR/EOR ARE NOT FOR CONSTRUCTION

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ELECTRICAL ONE-LINE DETAILS AND SCHEDULES

SHEET: E4

ELECTRICAL KEYNOTES

16.472 PROVIDE NEW (#8A-#P) CIRCUIT FROM PANEL INDICATED. PROVIDE NEW (#8A-#P) CIRCUIT BREAKER FOR CIRCUITS DENOTED WITH AN (N). REUSE EXISTING CIRCUIT BREAKER FOR CIRCUITS DENOTED WITH AN (E). EC SHALL MATCH TYPE AND AIC RATINGS OF EXISTING CIRCUIT BREAKERS. EC SHALL VERIFY PRIOR TO ROUGH-IN THAT EXISTING PANELBOARD HAS SPARE CAPACITY TO ACCOMMODATE ADDITIONAL LOAD.

NOTE

ARRANGE ALL WORK THAT REQUIRES POWER INTERRUPTIONS TO THE STORE TO BE ACCOMPLISHED AFTER NORMAL STORE BUSINESS HOURS. NOTIFY THE STORE MANAGER AND THE WALMART CONSTRUCTION MANAGER A MINIMUM OF 48 HOURS IN ADVANCE OF ALL STORE POWER INTERRUPTIONS. STORE MANAGER MUST ALLOW FOR POWERING DOWN OF COMPUTER SYSTEMS, MOVING AFFECTED PRODUCT, MODIFICATION OF WALMART AFTER-HOURS WORK SCHEDULES, COORDINATION WITH OTHER TRADES, AND OTHER CRITICAL SCHEDULING CONCERNS. PROVIDE TEMPORARY POWER AS REQUIRED. INSTALLATION OF NEW EQUIPMENT SHALL BE COMPLETED AND THE POWER SYSTEM TESTED AND RE-ENERGIZED PRIOR TO START OF BUSINESS THE FOLLOWING MORNING NO LATER THAN A TIME ESTABLISHED BY THE STORE MANAGER AND THE WALMART CONSTRUCTION MANAGER.

EQUIPMENT LABELS

ALL SWITCHBOARDS, PANELBOARDS AND TRANSFORMERS AFFECTED BY THE SCOPE OF WORK IN THIS DRAWING SET SHALL BE LABELED IN ACCORDANCE WITH NEC 408.4 (B). REFERENCE DETAIL 3-E4.

LOW VOLTAGE WIRING

06.01.07 EN11

ALL LOW VOLTAGE WIRING AND CABLE IS REQUIRED TO BE PLENUM RATED. COORDINATE PROPER CABLE TYPES REQUIRED WITH WAL-MART ALARM DIVISION AND WAL-MART CONSTRUCTION MANAGER PRIOR TO INSTALLATION.

ONE-LINE DIAGRAM LEGEND

11.19.10 ES6

— NEW EQUIPMENT
- - - EXISTING EQUIPMENT
- - - - - EQUIPMENT TO BE DEMOLISHED

PANELBOARD NOTES ()

05.22.12 EN04

- TERMINATE GROUND ON ISOLATED GROUND BUS.
- INSTALL LOCKING DEVICE (LOCK-OFF FOR MAINTENANCE). LOCKING DEVICE SHALL BE UL LISTED. MANUFACTURER SHALL MATCH EXISTING PANELBOARD MANUFACTURER.
- INSTALL LOCKING DEVICE (LOCK-ON FOR CRITICAL LOAD).
- GFI BREAKER FOR PERSONNEL PROTECTION (5mA).
- GFI BREAKER FOR EQUIPMENT PROTECTION (30mA)
- CONDUCTOR SIZE HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUNDING CONDUCTOR PROPORTIONATELY PER NEC.
- REFER TO ONE-LINE DIAGRAM FOR AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS.
- REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
- FACTORY WIRE TO LOAD.
- BREAKER SHALL BE HIGH MAGNETIC TYPE.
- NEW PNLBD TO REPLACE EXISTING PNLBD WITH THE SAME NAME. NEW PNLBD POPULATION WAS DETERMINED BY ORIGINAL CONSTRUCTION DRAWINGS. E.C. SHALL VERIFY THAT ALL EXISTING BRANCH CIRCUITS ARE EXTENDED TO NEW PNLBD LOCATION. E.C. SHALL VERIFY CONDITION OF EXISTING BRANCH CIRCUIT CONDUIT AND WIRE TO EXTEND PRIOR TO USE. TO INSURE THAT THEY MEET ALL U.L. RATINGS AND REPLACE AS REQUIRED.

- ROUTE CIRCUIT THROUGH "SWEATMISER PNLBD"
- EXISTING CIRCUIT TO REMAIN.
- ROUTE CIRCUIT THROUGH NEW CONTACTOR
- PROVIDE INTERLOCK WIRING WITH EXHAUST HOOD ANSUL SYSTEM.
- RELOCATE CIRCUIT FROM EXISTING PANELBOARD.
- PROVIDE LUG ADAPTERS AS REQUIRED.
- HACR CIRCUIT BREAKER.
- EXISTING CIRCUIT BREAKER TO REMAIN. VERIFY CONDITION OF CIRCUIT BREAKER TO ENSURE THAT IT IS OPERATIONAL AND MEETS ALL U.L. RATINGS.
- ROUTE CIRCUIT THROUGH EXISTING LCU CABINET UTILIZING EXISTING RELAY AND CONTROLS. UPDATE LCU IDENTIFICATION SCHEDULE WITH LOAD IDENTIFICATION.
- PROVIDE HANDLE LOCK OFF DEVICE TO LOCK "SPARE" CIRCUIT BREAKER IN THE "OFF" POSITION. IF CIRCUIT BREAKER IS IDENTIFIED AS "EXISTING", FIELD VERIFY CIRCUIT BREAKER INDICATED IS NOT CONNECTED TO ANY LOAD AND UPDATE PANELBOARD CIRCUIT DIRECTORY IDENTIFYING CIRCUIT AS "SPARE".
- PROVIDE UL LISTED OVERCURRENT DEVICE TO COORDINATE AND MAINTAIN MANUFACTURER'S SERIES RATED SYSTEM.
- SOLENOID OPERATED CIRCUIT BREAKER. REFER TO ENERGY MANAGEMENT PLANS FOR CIRCUIT BREAKER CONTROL.
- TRACE EXISTING CIRCUIT, IDENTIFY LOAD AND PROVIDE COMPLETE TYPED WRITTEN PANELBOARD IDENTIFICATION SCHEDULE AND PLACE ON INTERIOR OF PANELBOARD DOOR. IF CIRCUIT IS A "SPARE" THEN REFER TO PANELBOARD NOTE (21).
- PROVIDE LISTED HANDLE-TIE BETWEEN CIRCUIT BREAKERS SHARING COMMON NEUTRAL FOR SIMULTANEOUS TRIP.
- PROVIDE BLANK CIRCUIT BREAKER FILLER PLATE FOR EXPOSED SPACE IN PANELBOARD.

GENERAL NOTES:

- E.C. SHALL ADD OR REARRANGE CIRCUIT BREAKERS WITHIN PANELBOARDS AS REQUIRED TO MATCH NEW CIRCUIT DESIGNATIONS SHOWN ON DRAWINGS.
- NEW OVERCURRENT PROTECTIVE DEVICES PLACED IN EXISTING PANELBOARDS OR DISTRIBUTION BOARDS SHALL MATCH THE TYPE AND AIC RATING OF EXISTING OVERCURRENT PROTECTION DEVICES IN SAID BOARD.
- E.C. SHALL TRACE ALL ELECTRICAL CIRCUITS FOR ALL EXISTING ELECTRICAL PANELBOARDS AFFECTED BY THE REMODEL AND IDENTIFY LOADS ON EACH CIRCUIT. PROVIDE A COMPLETE TYPED WRITTEN PANELBOARD IDENTIFICATION SCHEDULE FOR ALL AFFECTED PANELBOARDS.
- ALL OVERCURRENT DEVICES ARE NEW UNLESS NOTED OTHERWISE.

20A WIRE SIZING SCHEDULE

ALL WIRE SIZES SHOWN ON PANEL SCHEDULES AND PLANS ARE INTENDED TO BE MINIMUM ACCEPTABLE WIRE SIZE. THE FOLLOWING SCHEDULE IS TO BE USED TO SIZE WIRE FOR 20 AMP CIRCUITS (120 AND 277 VOLT). LENGTHS (IN FEET) ARE INTENDED TO BE MAXIMUM.

120 VOLT	#12	#10	#8	#6
1-5 AMPS	200 FT.	325 FT.	490 FT.	770 FT.
6-10 AMPS	100 FT.	160 FT.	245 FT.	385 FT.
11-15 AMPS	70 FT.	110 FT.	165 FT.	255 FT.

277 VOLT	#12	#10	#8	#6
1-5 AMPS	480 FT.	760 FT.	1170 FT.	1865 FT.
6-10 AMPS	240 FT.	380 FT.	585 FT.	930 FT.
11-15 AMPS	160 FT.	250 FT.	390 FT.	620 FT.

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.

WARNING

ARC FLASH AND SHOCK HAZARD. APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIRED.

NOTES:

A. ALL SWITCHBOARDS AND PANELBOARDS SHALL HAVE A COMMERCIALY PRODUCED PERMANENT LABEL APPLIED, SIMILAR TO THE ABOVE, TO WARN OF POTENTIAL ARC FLASH HAZARDS, IN ACCORDANCE WITH NEC 110.16 AND NFPA 70E.

B. LABELING MAY BE COMPLETED BY EQUIPMENT MANUFACTURER, EQUIPMENT VENDOR/SUPPLIER, OR THE CONTRACTOR. THE CONTRACTOR SHALL VERIFY THAT ALL SWITCHBOARDS AND PANELBOARDS ARE PROPERLY LABELED IN THE FIELD.

FEEDER POWER SUPPLY FOR PANEL (NAME) ORIGINATES AT PANEL (NAME)

NOTES:

A. PROVIDE LAMINATED PLASTIC LABEL WITH 1/2" MINIMUM CONTRASTING COLOR ENGRAVED LETTERS.

B. THE CONTRACTOR SHALL VERIFY THAT ALL REQUIRED SWITCHBOARDS, PANELBOARDS AND TRANSFORMERS ARE PROPERLY LABELED IN THE FIELD.

3 POWER SUPPLY LABEL DETAIL

2 ARC FLASH DETAIL

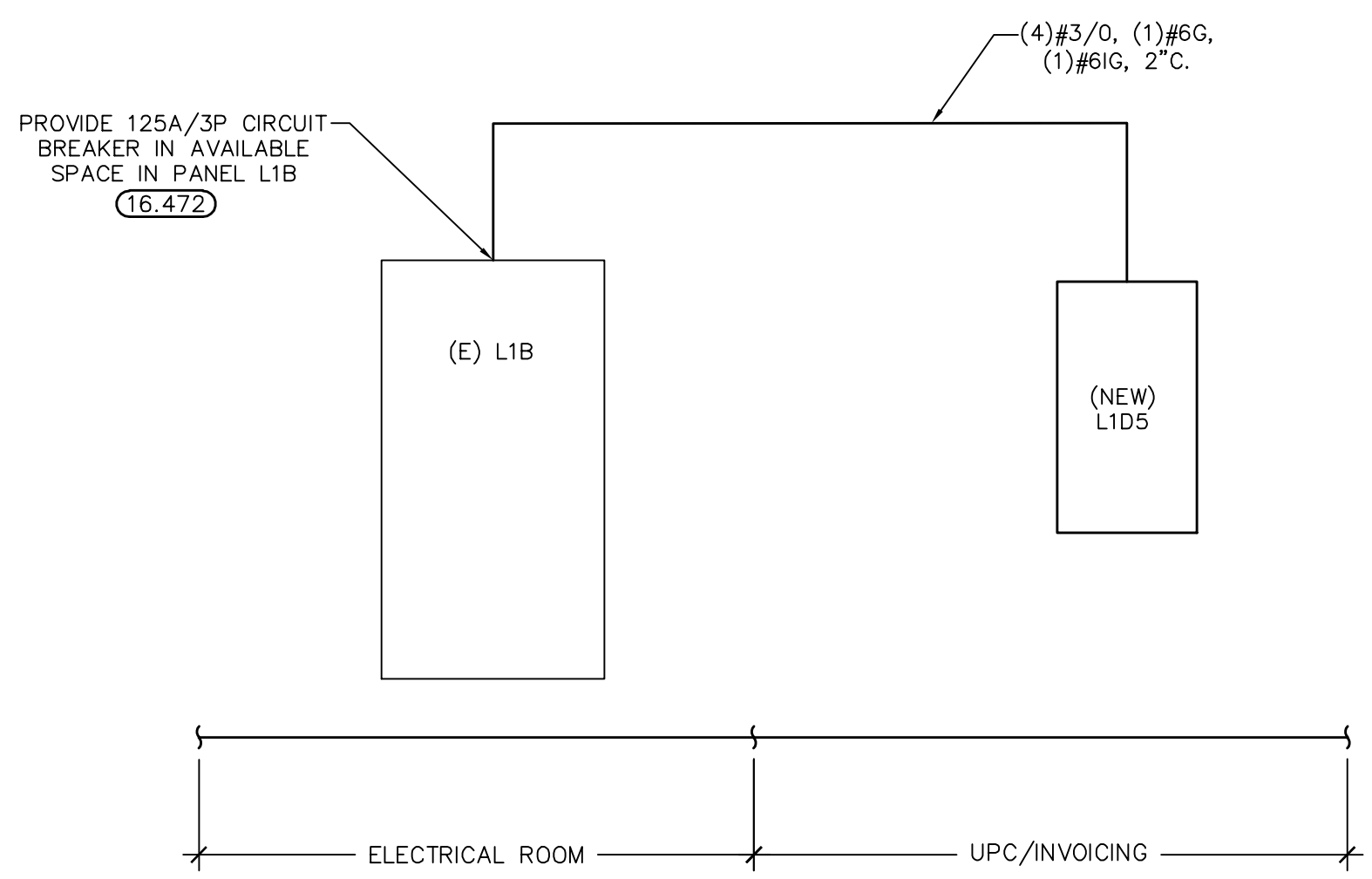
L1D5 PANELBOARD(NEW)

SERVES: GENERAL POWER
LOCATION: UPC/INVOICING

208/120V, 3PH, 4W
125A, M.L.O.
10,000 AIC
GROUND BUS
ISOLATED GROUND BUS
SURFACE MOUNT

DESCRIPTION	WIRE	BRKR	RT	KVA			RT	WIRE	DESCRIPTION
				A	B	C			
1 CHECKOUT		20	1	0.66	0.90		1	20	DIGITAL MENU BOARDS
3 SELF CHECKOUTS		20	1		1.04	0.72		1	DIGITAL MENU BOARDS
5 SELF CHECKOUTS		20	1			1.04	0.72	1	CUSTOMER SERVICE DESK
7 SELF CHECKOUTS (1)		20	1	0.96	0.90			1	CUSTOMER SERVICE DESK
9 SELF CHECKOUTS (1)		20	1		0.96	0.18		1	ATM
11 SELF CHECKOUTS (1)		20	1			0.48	1.44	1	SERVICE KIOSK (4)
13 PHARMACY COUNTER RCPPT		20	1	0.90	1.44			1	SERVICE KIOSK (4)
15 PHARMACY COUNTER RCPPT		20	1		0.90	1.44		1	SERVICE KIOSK (4)
17 PHARMACY COUNTER RCPPT		20	1	0.90	0.18		0.90	1.44	SERVICE KIOSK (4)
19 PHARMACY COUNTER RCPPT		20	1		0.72	1.00		1	SITE TO STORE RCPPT
21 PHARMACY COUNTER RCPPT		20	1					1	COSMETICS 46E (6)
23 PHARMACY COUNTER RCPPT		20	1			0.72	1.00	1	COSMETICS 46E (6)
25 PHARMACY COUNTER RCPPT		20	1	0.72					SPACE
27 HEALTH SERVICE LTG		20	1		0.06				SPACE
29 SPACE									SPACE
31 SPACE									SPACE
33 SPACE									SPACE
35 SPACE									SPACE
37 SPACE									SPACE
39 SPACE									SPACE
41 SPACE									SPACE
TOTAL				7.56	7.02	7.74			KVA
PER NEC ARTICLE 220				63.00	58.50	64.50			AMPS
TOTAL LOAD				22.32	KVA	61.95			AMPS
FEEDER LOAD				17.71	KVA	49.14			AMPS

LOAD	CONNECTED LOAD KVA	DIVERSITY FACTOR	DIVERSIFIED LOAD KVA
LIGHTS	2.06	125%	2.58
GENERAL RECEPTACLES	20.26	75%	15.13
SPECIAL PURPOSE	0	100%	0
HWAC HEATING +	0	100%	0
HWAC COOLING +	0	100%	0
REFRIGERATION	0	100%	0
MOTORS	0	100%	0
KITCHEN APPLIANCES	0	100%	0
LARGEST MOTOR	0	25%	0
DIVERSIFIED VA DOES NOT INCLUDE NON-COINCIDENT HEATING/COOLING LOAD	22.32		DIVERSIFIED KVA 17.71
			DIVERSIFIED AMPS 49.14



1 PARTIAL ELECTRICAL RISER DIAGRAM

THIS PARTIAL ELECTRICAL RISER DIAGRAM SHOWS ONLY THE WORK THAT IS REQUIRED ON EQUIPMENT SHOWN. THERE ARE OTHER PANELS AND EQUIPMENT (NOT SHOWN) IN THE STORE THAT ARE TO REMAIN OPERATIONAL AS A PART OF THE COMPLETE ELECTRICAL SYSTEM.