

# Order Plans

### H1P1 PANELBOARD EXISTING

277/480V, 3PH, 4W  
200A FUSES  
50,000 AIC  
GROUND BAR  
SURFACE MOUNT

LOCATION: EDC1  
SERVES: LIGHTING

DESCRIPTION	WIRE BRKR PL	KVA			PL BRKR WIRE	DESCRIPTION	QTY	
		A	B	C				
1 gm sales floor lg (13)	8 20 1	3.25	0.85		1 20	emergency lighting (13)	2	
3 gm sales floor lg (13)	10 20 1		3.25	0.77	1 20	security lighting (13)	4	
5 gm sales floor lg (13)	10 20 1				1 20	security lighting (13)	6	
7 gm sales floor lg (13)	10 20 1	3.25	2.53		1 20	recalling lighting (13)	6	
9 gm sales floor lg (13)	10 20 1		3.25	2.60	1 20	stockroom lighting (13)	10	
11 gm sales floor lg (13)	10 20 1			3.13	2.07	1 20	CUST. SERVICE/TOILET LTG (19)	12
13 gm sales floor lg (13)	10 20 1	3.13	2.64		1 20	BREAKROOM/TRAINING LTG (19)	14	
15 gm sales floor lg (13)	10 20 1		3.13	0.90	1 20	dairy cooler/stocking lg (13)	16	
17 gm sales floor lg (13)	20 1				1 20	space	18	
19 gm sales floor lg (13)	20 1	3.25	0.00		1 20	space	20	
21 gm sales floor lg (13)	20 1		3.13	0.00	1 20	space	22	
23 gm sales floor lg (13)	20 1			3.13	0.00	space	24	
25 gm sales floor lg (13)	20 1	3.36	0.00		1 20	space	26	
27 gm sales floor lg (13)	20 1		3.36	0.00	1 20	space	28	
29 gm sales floor lg (13)	20 1			3.36	0.00	space	30	
31 gm sales floor lg (13)	20 1	3.36	0.00		1 20	space	32	
33 gm sales floor lg (13)	20 1		3.36	0.00	1 20	space	34	
35 gm sales floor lg (13)	20 1				1 20	space	36	
37 sales floor lighting (13)	8 20 1	3.60	0.00		1 30	space	38	
39 spare (future wire lg) (13)	8 20 1		0.00	0.00	1 30	SPARE	40	
41 spare	20 1			0.00	0.00	1 30	spare	42
TOTAL CONNECTED		29.02		23.90		KVA		
TOTAL CONNECTED		104.77		86.29		AMPS		
TOTAL LOAD		76.31	KVA	61.79		AMPS		
PER NEC ARTICLE 220 FEEDER LOAD		85.59	KVA	114.73		AMPS		

### H1P2 PANELBOARD EXISTING

277/480V, 3PH, 4W  
200A FUSES  
50,000 AIC  
GROUND BAR  
SURFACE MOUNT

LOCATION: EDC1  
SERVES: LIGHTING

DESCRIPTION	WIRE BRKR PL	KVA			PL BRKR WIRE	DESCRIPTION	QTY	
		A	B	C				
1 gm sales floor lg (13)	20 1	3.36	1.53		1 20	perimeter lighting (13)	2	
3 gm sales floor lg (13)	20 1		3.25	1.53	1 20	perimeter lighting (13)	4	
5 gm sales floor lg (13)	20 1				1 20	perimeter lighting (13)	6	
7 gm sales floor lg (13)	20 1	3.13	0.31		1 20	emergency lighting (13)	6	
9 gm sales floor lg (13)	20 1		2.32	0.32	1 20	GROC BUNKER LTG (19)	10	
11 gm sales floor lg (13)	20 1			2.32	0.00	1 20	space	12
13 gm sales floor lg (13)	20 1	2.32	0.00		1 20	space	14	
15 gm sales floor lg (13)	20 1		2.32	0.00	1 20	space	16	
17 gm sales floor lg (13)	20 1			2.55	0.00	1 20	space	18
19 gm sales floor lg (13)	20 1	3.36	0.00		1 20	space	20	
21 PRODUCE CYLINDER LTG (19)	20 1		1.06	0.00	1 20	space	22	
23 PRODUCE BLADE LTG (19)	20 1			4.18	0.00	space	24	
25 space	20 1	0.00	0.00		1 20	space	26	
27 space	20 1		0.00	0.00	1 20	space	28	
29 space	20 1			0.00	0.00	space	30	
31 space	20 1	0.00	3.78		2 20	parking lot lg (13)	34	
33 space	20 1		0.00	3.78	2 20	parking lot lg (13)	36	
35 space	20 1			0.00	2.16	2 20	parking lot lg (13)	38
37 space	20 1	0.60	2.16		2 20	parking lot lg (13)	40	
39 space	20 1		0.00	1.08	2 20	parking lot lg (13)	42	
41 space	20 1			0.00	1.08	2 20	parking lot lg (13)	44
TOTAL CONNECTED		19.95		15.66		KVA		
TOTAL CONNECTED		72.02		56.52		AMPS		
TOTAL LOAD		52.51	KVA	43.16		AMPS		
PER NEC ARTICLE 220 FEEDER LOAD		65.64	KVA	78.95		AMPS		

### H2A PANELBOARD EXISTING

480V, 3PH, 3W  
800A MAIN LUGS ONLY  
50,000 AIC  
GROUND BAR  
SURFACE MOUNT

LOCATION: EDC2  
SERVES: HVAC

DESCRIPTION	WIRE BRKR PL	KVA			PL BRKR WIRE	DESCRIPTION	QTY	
		A	B	C				
1 rlu1 (13)	20 3	3.00	11.50		3 50	rlu2 (13)	2	
3	10 30		3.00	11.50	3 50	rlu4 (13)	4	
5	10 30	6.02	3.00		3 50	rlu6 (13)	6	
7	10 30		6.02	3.00	3 50	rlu8 (13)	8	
9	10 30			3.00	3.00	rlu10 (13)	10	
11	10 30			3.00	3.00	rlu12 (13)	12	
13 rlu5 (13)	20 3	3.00			3 15	rlu6 (13)	14	
15	20 3			2.32	3.00	2.32	rlu8 (13)	16
17	20 3			2.32	2.32	2.32	rlu10 (13)	18
19 rlu7 (13)	10 3	2.32	2.32		3 15	rlu8 (13)	20	
21	20 3		2.32	2.32	3 30	rlu10 (13)	22	
23	20 3	2.32	6.02		3 30	rlu12 (13)	24	
25	15 3		2.32	6.02	3 30	rlu14 (13)	26	
27	15 3		2.32	6.02	3 30	rlu16 (13)	28	
29	15 3		2.32	6.02	3 30	rlu18 (13)	30	
31 rlu13 (13)	8 50	3	11.50	11.50	3 50	rlu12 (13)	32	
33	8 50		11.50	11.50	3 50	rlu14 (13)	34	
35	8 50		11.50	11.50	3 50	rlu16 (13)	36	
37 rlu13 (13)	8 50	3	11.50	11.50	3 50	rlu14 (13)	38	
39	8 50		11.50	11.50	3 50	rlu16 (13)	40	
41 space	3 0	0.00	0.00		3	space	42	
43 space	3 0	0.00	0.00		3	space	44	
45 space	3 0	0.00	0.00		3	space	46	
47 space	3 0	0.00	0.00		3	space	48	
49 space	3 0	0.00	0.00		3	space	50	
51	3 0	0.00	0.00		3	space	52	
53	3 0	0.00	0.00		3	space	54	
TOTAL CONNECTED		87.83		87.83		KVA		
TOTAL CONNECTED		317.06		317.06		AMPS		
TOTAL LOAD		263.48	KVA	216.91		AMPS		
PER NEC ARTICLE 220 FEEDER LOAD		293.48	KVA	241.91		AMPS		

### MSB SWITCHBOARD EXISTING

277/480V, 3PH, 4W  
3000A MAIN BREAKER  
1600A GENERATOR BREAKER  
50,000 AIC  
NEUTRAL BAR, GROUND BAR  
FREE STANDING, NEMA 1 ENCLOSURE

DESCRIPTION	SWITCH SIZE	PL	KVA			FUSES	COMMENTS
			A	B	C		
1 panel h2a (13)	400	3	87.83	87.83	87.83	N/A	
2 panel h1a (13)	400	3	78.56	78.56	78.56	N/A	
3 PANEL H1B (19)	800	3	148.58	138.91	136.48	N/A	
4 dedicated space			0.00	0.00	0.00	N/A	
5 panel h4b1 (13)	600	3	182.28	181.26	180.66	N/A	
6 panel h4b3 (13)	400	3	89.02	87.50	87.50	N/A	
7 panel h2b (13)	400	3	86.91	95.69	93.39	N/A	
8 panel h2c (13)	400	3	99.23	99.19	99.56	N/A	
9 panel h3b (13)	125	3	21.22	19.25	19.02	N/A	
10 phase loss monitor (13)	15	3	0.10	0.10	0.10	N/A	
11 space			0.00	0.00	0.00	N/A	
12 space			0.00	0.00	0.00	N/A	
TOTAL CONNECTED			772.11	768.28	761.19	KVA	
TOTAL CONNECTED			2787.39	2786.56	2747.99	AMPS	
TOTAL LOAD			2290.58	KVA	2785.97	AMPS	
PER NEC ARTICLE 220 FEEDER LOAD			2204.27	KVA	2651.32	AMPS	

PANELBOARD NOTES:  
A. Label "SERVICE DISCONNECT" in accordance with specifications.  
B. Furnish rejection type fuse holders and label all switches "USE ONLY BUSS TYPE... CURRENT LIMITING FUSES... AMPS" for type and size of fuse installed.  
C. Space, if any, shall be only as required for one additional switch, to limit to six disconnects maximum.  
D. Initial provisions only for additional devices, as needed to fill each switchboard section.

### H1A PANELBOARD EXISTING

480V, 3PH, 3W  
400A MAIN LUGS ONLY  
50,000 AIC  
GROUND BAR  
SURFACE MOUNT

LOCATION: HVAC  
SERVES: EDC1

DESCRIPTION	WIRE BRKR PL	KVA			PL BRKR WIRE	DESCRIPTION	QTY
		A	B	C			
1 rlu15 (13)	20 3	3.00	11.50		3 50	rlu16 (13)	2
3	10 30		3.00	11.50	3 50	rlu18 (13)	4
5	10 30	3.00	3.00		3 50	rlu20 (13)	6
7 rlu17 (13)	20 3	11.50			3 50	rlu19 (13)	8
9	20 3		11.50		3 50	rlu21 (13)	10
11	20 3		11.50	11.50	3 50	rlu22 (13)	12
13 rlu19 (13)	20 3	3.00			3 30	rlu20 (13)	14
15	20 3		3.00	6.02	3 30	rlu22 (13)	16
17 rlu21 (13)	20 3	3.00	6.02		3 30	rlu24 (13)	18
19	20 3		3.00	6.02	3 30	rlu26 (13)	20
21	20 3		3.00	6.02	3 30	rlu28 (13)	22
23	20 3		3.00	6.02	3 30	rlu30 (13)	24
25	20 3		3.00	6.02	3 30	rlu32 (13)	26
27	20 3		3.00	6.02	3 30	rlu34 (13)	28
29	20 3		3.00	6.02	3 30	rlu36 (13)	30
31 rlu13 (13)	20 3	3.00	6.02		3 30	rlu26 (13)	32
33	20 3		3.00	6.02	3 30	rlu28 (13)	34
35	20 3		3.00	6.02	3 30	rlu30 (13)	36
37	20 3		3.00	6.02	3 30	rlu32 (13)	38
39	20 3		3.00	6.02	3 30	rlu34 (13)	40
41	20 3		3.00	6.02	3 30	rlu36 (13)	42
43 space			0.00	0.00		space	44
45 space			0.00	0.00		space	46
47 space			0.00	0.00		space	48
49 space			0.00	0.00		space	50
51 space			0.00	0.00		space	52
53 space			0.00	0.00		space	54
TOTAL CONNECTED			79.56	76.56		KVA	
TOTAL CONNECTED			276.39	276.39		AMPS	
TOTAL LOAD			229.58	KVA	276.27	AMPS	
PER NEC ARTICLE 220 FEEDER LOAD			228.68	KVA	276.27	AMPS	

### H1B PANELBOARD EXISTING

277/480V, 3PH, 4W  
800A MAIN LUGS ONLY  
50,000 AIC  
GROUND BAR  
SURFACE MOUNT

LOCATION: EDC1  
SERVES: DISTRIBUTION

DESCRIPTION	WIRE BRKR PL	KVA			PL BRKR WIRE	DESCRIPTION	QTY
		A	B	C			
1 TRANSFORMER T1D (19)	400	225	3	46.76	0.00	dedicated space	2
3				49.15	0.00	dedicated space	4
5				45.99	0.00	dedicated space	6
7 PANEL H1P1 (19)	30	200	3	29.02	0.00	dedicated space	8
9				23.90	0.00	dedicated space	10
11				23.39	0.00	dedicated space	12
13 PANEL H1P2 (19)	30	200	3	19.95	0.00	dedicated space	14
15				15.66	0.00	dedicated space	16
17				16.91	0.00	dedicated space	18
19 rlu2 (13)	4	50	3	20.04	0.00	space	20
21				20.04	0.00	space	22
23				20.04	0.00	space	24
25 rlu3 (13)	4	50	3	20.04	0.00	space	26
27				20.04	0.00	space	28
29				20.04	0.00	space	30
31 baler (13)	10	30	3	3.88	1.12	fan powered terminal (13)	32
33				3.88	1.12	space	34
35				3.88	1.12	space	36
37 compactor (13)	10	30	3	3.88	1.25	wh/ / sub-metering (13)	38
39				3.88	1.25	space	40
41				3.88	1.25	space	42
TOTAL CONNECTED			148.95	136.91		KVA	
TOTAL CONNECTED			537.73	501.49		AMPS	
TOTAL LOAD			424.35	KVA	510.41	AMPS	
PER NEC ARTICLE 220 FEEDER LOAD			451.47	KVA	543.03	AMPS	

NOTES:  
1. EXISTING LOADS TO REMAIN AND BE REFINED FROM SAME CIRCUIT BREAKER IN EXISTING PANELBOARDS ARE SHOWN IN LOWER CASE LETTERS. NEW, RELOCATED, OR MODIFIED LOADS ARE SHOWN IN UPPER CASE LETTERS, TYP.  
2. NEW CIRCUIT BREAKERS SHALL BE LISTED FOR USE IN AND SHALL BE COMPATIBLE WITH EXISTING PANELBOARDS AND WITHSTAND SHORT CIRCUIT AIC RATING.

- ### PANELBOARD NOTES ( )
- 10/28/16 ENH
- 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 (30mA)
  - 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 CURRENT FOR INTERRUPT RATING.
  - REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES.
  - FACTORY WIRE TO LOAD.
  - BREAKER SHOWN AS HIGH MAGNETIC TYPE.
  - NEW PANELBOARD TO MATCH EXISTING PANELBOARD WITH THE SAME NAME. THE PANELBOARD LOCATION WAS DETERMINED BY THE ELECTR