PANELBOARD SCHEDULE H1

36,000 A.I.C. BREAKER MINIMUM

277 / 480 VOLTS | 3 PHASE | 4 WIRE SOLID NEUTRAL | SURFACE MOUNTED | 225A MLO MAINS | NEHB TYPE

MARK	WIRE SIZE	USE AND / OR AREA SERVED	C / B	CKT NO	LOADS Ph A	LOADS Ph B	LOADS Ph C	CKT NO	C / B	USE AND / OR AREA SERVED	WIRE SIZE	MARK
1	12	LIGHTS-122-123,125,127-131	20/1	1	2375 / 582			2	15/3	FC-1	12	
1	12	LIGHTS-110,113-115,118,120,124,129-131	20/1	3		1875 / 582		4	"	1 HP	12	
1	2	LIGHTS-101,105-107,PATIO	20/1	5			4563 / 582	6	"		12	
1	2	LIGHTS-APPARATUS BAY	20/1	7	3900 / 1524			8	15/3	FC-2 AND FC-4	12	
1	12	LIGHTS	20/1	9		2688 / 1524		10	"	2 HP AND 1 HP RESPECTIVELY	12	
1,2	10	SPARE	20/1	11			0 / 1524	12	"		12	
1,2	10	SPARE	20/1	13	0 / 1164			14	15/3	FC-6 AND FC-8	12	
1,2	10	LIGHTS-MECHANICAL RM	20/1	15		1250 / 1164		16	"	1 HP EACH	12	
		SPARE	20/1	17			0 / 1164	18	"		12	
		SPARE	20/1	19	0 / 1330			20	15/3	SF-2	12	
		SPARE	20/1	21		0 / 1330		22	"	3 HP	12	
	12		20/3	23			3769 / 1330	24	"		12	
	12	(3) APPARATUS BAY DOOR OPERATOR 2HP EACH (DOORS 5, 6, &7)	"	25	3769 / 2633			26	15/3	EF-6	12	1
	12		"	27		3769 / 2633		28	"	5 HP	12	1
	12		20/3	29			4711 / 2633	30	"		12	1
	12	(4) APPARATUS BAY DOOR OPERATOR 2HP EACH (DOORS 1, 2, 3, &4)	"	31	4711 / 3720			32	20/1	POLE LIGHTS	10	
	12		"	33		4711 / 0		34		SPARE	12	
		SPACE		35			0 / 1600	36		EXT BLDG LIGHTS	10	
		SPACE		37	0 / 0			38		SPACE		
		SPACE		39		0 / 0		40		SPACE		
		SPACE		41			0 / 0	42		SPACE		
TOTAL LOAD PER PHASE					25738	21526	21876			69140 VA / 277 V =	83.2 AMPS	

PANELBOARD SCHEDULE H1E

42,000 A.I.C. BREAKER MINIMUM

277 / 480 VOLTS | 3 PHASE | 4 WIRE SOLID NEUTRAL | SURFACE MOUNTED | 200A MLO MAINS | NEHB TYPE

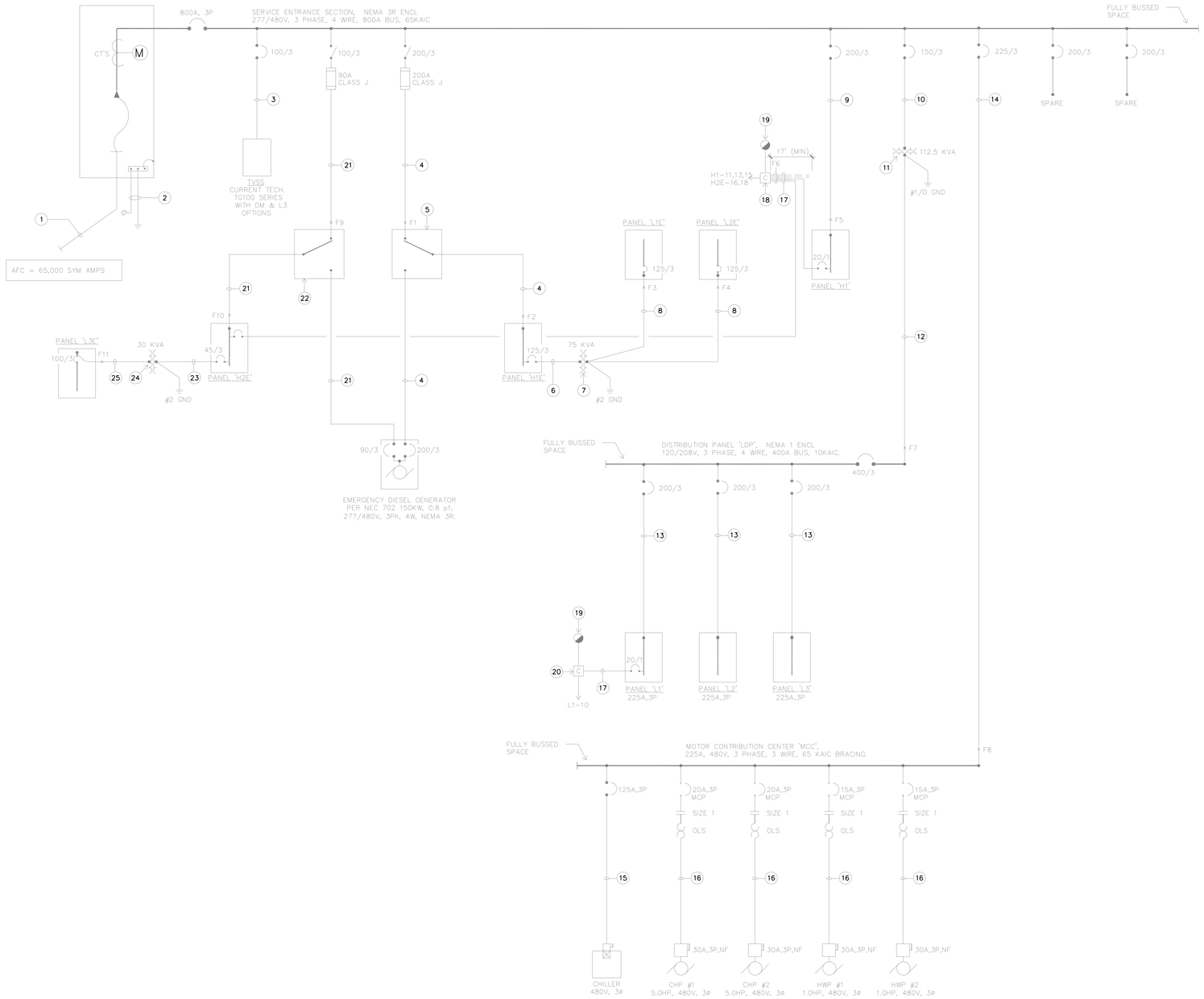
MARK	WIRE SIZE	USE AND / OR AREA SERVED	C / B	CKT NO	LOADS Ph A	LOADS Ph B	LOADS Ph C	CKT NO	C / B	USE AND / OR AREA SERVED	WIRE SIZE	MARK
1	12	**APPARATUS BAY DOOR 9 OPERATOR**	20/3	1	**3324** / 1250			2	20/1	OUTSIDE LIGHTS		
1	12	**5 HP**	"	3		**3324** / 1000		4	20/1	ENTRANCE LIGHTS		
1	12		"	5			**3324** / 1250	6	20/1	OUTSIDE LIGHTS		
	12	**APPARATUS BAY DOOR 10 OPERATOR**	20/3	7	**3324** / 1250			8	20/1	OUTSIDE LIGHTS		
	12	**5 HP**	"	9		**3324** / 0		10	20/1	SPARE		
	12		"	11			**3324** / 1250	12	20/1	POLE/EXTERIOR		
	12	**APPARATUS BAY DOOR 8 OPERATOR**	20/3	13	**3324** / 0			14	20/1	SPARE		
	12	**5 HP**	"	15		**3324** / 0		16	20/1	SPARE		
	12		"	17			**3324** / 0	18	20/1	SPARE		
	12	**APPARATUS BAY DOOR 11 OPERATOR**	20/3	19	**3324** / 0			20	20/1	SPARE		
	12	**5 HP**	"	21		**3324** / 0		22	20/1	SPARE		
	12		"	23			**3324** / 0	24	20/1	SPARE		
	12	GATE CONTROLLER-EAST SIDE	15/3	25	942 / **3324**			26	**20/3**		**12**	
	12	2 HP	"	27		942 / **3324**		28	"	**APPARATUS BAY DOOR 12&13 OPERATOR, 5HP EACH**	**12**	
	12		"	29			942 / **3324**	30	"		**12**	
	12	GATE CONTROLLER-NORTH SIDE	15/3	31	942 / 0			32		SPACE		
	12	2 HP	"	33		942 / 0		34		SPACE		
	12		"	35			942 / 0	36		SPACE		
		SPACE		37	0 / 24880			38	125/3	PANEL L1E / L2E	1/0	
		SPACE		39		0 / 24036		40	"	75 KVA TRANSFORMER	1/0	
		SPACE		41			0 / 22956	42	"		1/0	
TOTAL LOAD PER PHASE					45884	43540	43960			133384 VA / 277 V =	160.5 AMPS	

1 - CONTINUOUS LOAD OR LARGEST MOTOR TAKEN AT 125%

2 - VIA PHOTOCELL INITIATED TIMECLOCK.

LOAD SUMMARY

	EXISTING	NEW
PANEL H1	62 AMPS	83.2 AMPS
PANEL 'H1E'	163 AMPS	160.5 AMPS



EXISTING ONE LINE DIAGRAM (REFERENCE ONLY)

N.T.S.

KEYED NOTES:

1. 2-4" CONDUITS WITH 4 #600 KCMIL TO POWER CO. PAD MOUNT TRANSFORMER. TRENCH AND BACKFILL PER POWER COMPANY REQUIREMENTS. (VERIFY CONDUCTOR REQUIREMENTS WITH MLGW.)
2. 1 #2/0 BARE CU. UFER GRD., 1 #2/0 BARE CU. BOND TO METALLIC PIPING SYSTEMS AND BUILDING STEEL, 1 #2/0 MAIN BOND.
3. 4 #1 XHHW CU., 1 #6 CU. GRD., 1-1/2"C.
4. 4 #4/0 XHHW CU., 1 #6 CU. GRD., 2-1/2"C.
5. AUTOMATIC TRANSFER SWITCH, 300A, 277/480V 3ø, UNSWITCHED NEUTRAL, NEMA 3R ENCL, 200 KAIC BRACING.
6. 3 #1/0 XHHW CU., 1 #6 CU. GRD., 1-1/2"C.
7. 75 KVA TRANSFORMER, 480V DELTA PRIMARY, 120V/208V, 3ø, 4W, GROUNDED WYE SECONDARY. PROVIDE WITH 4" THICK CONCRETE RAISED PAD.
8. 4 #1/0 XHHW CU., 1 #6 CU. GRD., 2"C.
9. 4 #4/0 XHHW CU., 1 #6 INSULATED GRD., 2-1/2"C.
10. 3 #3/0 XHHW CU., 1 #6 CU. GRD., 2"C.

KEYED NOTES: (CONTINUATION)

11. 112.5 KVA TRANSFORMER, 480V DELTA PRIMARY, 120V/208V, 3 ø, 4W, GROUNDED WYE SECONDARY. PROVIDE WITH 4" THICK CONCRETE RAISED PAD.
12. 2 SETS OF 4 # 4/0 XHHW CU., 1 #2/0 CU. GRD., 2-1/2"C EACH.
13. 4 #4/0 XHHW CU., 1 #6 INSULATED GRD., 2-1/2"C.
14. 3 #300 KCMIL CU., 1 #2 CU. GRD., 3"C.
15. 3 #1/0 XHHW CU., 1 #6 CU. GRD., 1-1/2"C.
16. 3 #12 XHHW CU., 1 #12 CU. GRD., 3/4"C.
17. 2 #12 THHN CU., 1 #12 GRD., 3/4"C.
18. 12 POLE, 20A, ELEC. HELD LIGHTING CONTACTOR IN NEMA 1 ENCL,. 65 KAIC BRACING. CONNECT TO CIRCUIT L2E-22.
19. PHOTOCELL ON ROOF FACING NORTH. COORDINATE LOCATION WITH ARCHITECT.
20. 12 POLE, 20A, ELEC. HELD LIGHTING CONTACTOR IN NEMA 1 ENCL,. 65 KAIC BRACING. CONNECT TO CIRCUIT L2E-30.
21. 4 #1 XHHW CU., 1 #6 CU. BOND., 1-1/2"C.

KEYED NOTES: (CONTINUATION)

22. AUTOMATIC TRANSFER SWITCH #2 (ATS2), 100A, 480V, 3 Ph, UNSWITCHED NEUTRAL, NEMA 3R ENCL. 200 KAIC BRACING. PROVIDE LABEL "FOR EMERGENCY LIGHTING".
23. 3 #6 XHHW CU., 1"C.
24. 30 KVA TRANSFORMER, 480V DELTA PRIMARY, 120/208V, 3Ph, 4W, GROUNDED WYE SECONDARY. PROVIDE WITH 4" THICK CONCRETE RAISED PAD.
25. 3 #1/0 XHHW CU., 1 #6 CU. BOND, 1-1/2"C.

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ARCHITECT JOB NO. 20008-T 47

DRAWN BY: PH

CHECKED BY: RJH

APPROVED BY: RJH

RYAN J. HERTER REGISTERED ENGINEER NO. 108919 STATE OF TENNESSEE 10/22/24

CONSULTANT JOB NO. 19015-13

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REVISIONS

NO.	DESCRIPTION	DATE

MSCAA NO. 19-1423-00 (19-1423-47)

PROJECT:

ARFF OVERHEAD DOOR REPLACEMENT

SET:

FOR BID

SHEET TITLE:

ELECTRICAL PANELS

RVT. FILE NAME: -

DATE: 11.15.2024

SCALE: N.T.S.

DWG NO. E2