MDP

ROOM: ELECTRICAL ROOM
MOUNTING: FLOOR
FED FROM: ATS
NOTE:

VOLTS: 208Y/120V 3P 4W
BUS AMPS: 1000
NEUTRAL: 100%

AIC: 22,000
MAIN BKR: MLO
LUGS: STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	100/3	PANEL L	9.5			2	90/3	TRANSFER SWITCH MTS	1.2		
3	|			7.38		4	|			1.2	
5	|				7.81	6	|				0
7	225/3	PANEL M	24.4			8	–/3	SPACE	0		
9	|			24.2		10	|			0	
11	|				24.6	12	|				0
13	225/3	PANEL A	17.9			14	–/3	SPACE	0		
15	|			18.8		16	|			0	
17	|				18.1	18	|				0
19	100/3	PANEL A2	1.29			20	–/3	SPACE	0		
21	|			1.35		22	|			0	
23	|				3.2	24	|				0
25	225/3	PANEL A3	22			26	–/3	SPACE	0		
27	|			23.9		28	|			0	
29	|				24.8	30	|				0
31	225/3	PANEL B	10.9			32	–/3	SPACE	0		
33	|			11.6		34	|			0	
35	|				11.1	36	|				0
37	100/3	PANEL B2	2.47			38	225/3	(**) ELEVATOR	11.1		
39	|			5.32		40	|			11.1	
41	|				3.31	42	|				11.1
43	225/3	PANEL B3	9.08			44	125/3	OLD PANEL C	1.67		
45	|			14.3		46	|			1.67	
47	|				15.7	48	|				1.67
49	60/3	SPD–MDP	0			50	225/3	OLD ELEVATOR	18		
51	|			0		52	|			18	
53	|				0	54	|				18
								TOTAL CONNECTED KVA BY PHASE	130	139	139
								TOTAL CONNECTED AMPS BY PHASE	1,080	1,160	1,160

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	28.1	35.2	(125%)	CONTINUOUS	21.6	27	(125%)
LARGEST MOTOR	17.5	4.36	(25%)	NONCONTINUOUS	18	18	(100%)
MOTORS	59.2	59.2	(100%)	HEATING	48.5	48.5	(100%)
RECEPTACLES	45	27.5	(50%>10)	COOLING	38.8	0	(0%)
KITCHEN EQUIPMENT	1	1	(100%)	DIVERSE	186	66.1	(36%)
				TOTAL LOAD		287	
				BALANCED 3–PHASE AMPS		796	

(**) THERMAL ONLY C/B; VERIFY WITH ELEVATOR VENDOR IF INVERSE TIME/THERMAL ONLY C/B IS REQUIRED

A

ROOM: ELECTRICAL ROOM
MOUNTING: SURFACE
FED FROM: MDP
NOTE:

VOLTS: 208Y/120V 3P 4W
BUS AMPS: 225
NEUTRAL: 100%

AIC: 18,000
MAIN BKR: MLO
LUGS: STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	20/1	(**) REC RM #126	0.6			2	30/3	SPD–A	0		
3	20/1	(**) REC RM #120		0.6		4	|			0	
5	20/1	(**) REC RM #120			0.6	6	|				0
7	20/1	(**) REC RM #119	0.6			8	20/1	(**) REC RM #122	0.8		
9	20/1	(**) REC RM #121		1		10	20/1	(**) REC RM #122		0.6	
11	20/1	(**) FAN & HEATER RM #124			1	12	20/1	(**) REC RM #119			1
13	20/1	(*) EWC	0			14	20/1	(**) REC RM #121	0.6		
15	20/1	(**) FAN & HEATER RM #125		1		16	20/1	(**) REC RM #123		0.4	
17	20/1	REC			0.54	18	20/1	REC			0.36
19	20/1	REC	0.54			20	20/1	ELEV SHAFT LTG, REC–GFCI	0.36		
21	20/1	SPARE		0		22	20/1	REC		0.72	
23	20/1	SPARE			0	24	20/1	REC			0.72
25	20/1	BOILER#1	0.324			26	15/2	(**) HEAT PUMP RM #122	0.6		
27	20/2	PUMP P–4		0.828		28	|			0.6	
29	|				0.828	30	15/2	(**) REC BAILIFF			0.1
31	20/1	REC	1.28			32	|		0.1		
33	20/1	REC		1.28		34	20/1	CIRC. PUMP		0.1	
35	20/1	(*) REC–EWC			1.2	36	20/1	AUX J–BOX			0.15
37	35/3	PUMP P–2	3.05			38	20/1	AUX J–BOX	0.15		
39	|			3.05		40	20/1	AREA OF RESCUE ASSISTANCE SYSTEM		0.2	
41	|				3.05	42	20/1	REC			0.36
43	35/3	PUMP P–3	3.05			44	20/1	REC	0.72		
45	|			3.05		46	20/1	SMOKE CURTAIN		0.18	
47	|				3.05	48	20/1	SPARE			0
49	30/3	WSHP–1	2.58			50	30/3	WSHP–2	2.58		
51	|			2.58		52	|			2.58	
53	|				2.58	54	|				2.58
								TOTAL CONNECTED KVA BY PHASE	17.9	18.8	18.1
								TOTAL CONNECTED AMPS BY PHASE	149	156	151

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.18	0.225	(125%)	NONCONTINUOUS	1.7	1.7	(100%)
LARGEST MOTOR	9.15	2.29	(25%)	HEATING	11.3	11.3	(100%)
MOTORS	20	20	(100%)	COOLING	8.07	0	(0%)
RECEPTACLES	13.9	11.9	(50%>10)	DIVERSE	7.75	5.43	(70%)
				TOTAL LOAD		52.9	
				BALANCED 3–PHASE AMPS		147	

(*) PROVIDE GFCI TYPE C/B; (**) LOADS RECONNECTED FROM OLD PANEL A

L

ROOM: ELECTRICAL ROOM
MOUNTING: SURFACE
FED FROM: MDP
NOTE:

VOLTS: 208Y/120V 3P 4W
BUS AMPS: 100
NEUTRAL: 100%

AIC: 18,000
MAIN BKR: MLO
LUGS: STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	30/3	SPD–L	0			2	20/1	(**) LTS RM #123,124,125,126	0.6		
3	|			0		4	20/1	(**) LTS RM #121 EGRESS, LTG		1.14	
5	|				0	6	20/1	(**) LTS RM #119			0.4
7	20/1	(**) LTS COMPUTER RM, WOMENS BATH (NORTH) EXH FAN, LTG	0.162			8	20/1	(**) LTS RM #120	0.4		
9	20/1	(**) LTS RM #110		0.5		10	20/1	(**) LTS OUTSIDE UPLIGHTS		0.8	
11	20/1	(**) LTS RM #110,113 & VAULT			0.5	12	20/1	(**) LTS RM #122 LTG			0.78
13	20/1	(**) FIRE ALARM SYSTEM	0.4			14	20/1	(**) LTS HALL	0.6		
15	20/1	(**) LTS EMERGENCY / STAIRS		0.3		16	20/1	(**) LTS RM #118		0.3	
17	20/1	(**) LTS NORTH END HALL			1.1	18	20/1	(**) TIME CLOCK			0.1
19	20/1	(**) LTS RM #106, MENS BATH EXH FAN, LTG	0.862			20	30/2	(**) CAB PANEL	2.5		
21	20/1	(**) LTS RM#107		0.4		22	|			2.5	
23	20/1	(**) LTS RM #115			0.3	24	30/2	(**) ELEVATOR ROOM A/C			2.5
25	20/1	(**) LTS HALLWAY	1			26	|		2.5		
27	20/1	(**) LTS CHANDELIER LTG		0.1		28	20/1	(**) MISC. LOAD		1	
29	20/1	(**) LTS OUTSIDE UP LIGHTS			0.8	30	20/1	(**) MISC. LOAD			1
31	30/3	(**) LTS OUTSIDE	0.133			32	20/1	(*) LTG	0.14		
33	|			0.133		34	20/1	SPARE		0	
35	|				0.133	36	20/1	SPARE			0
37	30/3	(**) LIGHTING CONTACTOR	0.2			38	20/1	SPARE	0		
39	|			0.2		40	20/1	SPARE		0	
41	|				0.2	42	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	9.5	7.38	7.81
								TOTAL CONNECTED AMPS BY PHASE	79.1	62.6	66.2

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	14.1	17.6	(125%)	CONTINUOUS	5.4	6.75	(125%)
LARGEST MOTOR	5	1.25	(25%)	HEATING	5	5	(100%)
MOTORS	0.2	0.2	(100%)	COOLING	5	0	(0%)
				TOTAL LOAD		30.8	
				BALANCED 3–PHASE AMPS		85.5	

(*) PROVIDE GFCI TYPE C/B; (**) LOADS RECONNECTED FROM OLD PANEL L

M

ROOM: ELECTRICAL ROOM
MOUNTING: SURFACE
FED FROM: MDP
NOTE:

VOLTS: 208Y/120V 3P 4W
BUS AMPS: 225
NEUTRAL: 100%

AIC: 18,000
MAIN BKR: MLO
LUGS: STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	30/3	SPD–M	0			2	20/1	SPARE	0		
3	|			0		4	20/1	SPARE		0	
5	|				0	6	20/1	SPARE			0
7	60/3	PUMP P–1	3.05			8	40/3	(**) COOLING TOWER HEATER	4.67		
9	|			3.05		10	|			4.67	
11	|				3.05	12	|				4.67
13	60/3	COOLING TOWER CT–1 FAN	9.49			14	20/1	(**) HEAT TAPE COOLING TOWER	0.2		
15	|			9.49		16	20/1	PANEL OTHLAP		0	
17	|				9.49	18	20/1	(**) ELEVATOR LTS & ALARM			0.4
19	20/1	SPARE	0			20	20/1	(*) REC CRAWL SPACE	0.2		
21	20/1	SPARE		0		22	20/1	SPARE		0	
23	20/1	SPARE			0	24	20/1	(**) BOILER			0.4
25	20/1	(**) PUMP P5	0.7			26	20/1	(**) RM #122 DEDICATED CIRCUIT	0.6		
27	20/1	(**) REC ELEVATOR		0.2		28	20/1	(*) REC CRAWL SPACE		0.2	
29	20/1	(**) TELEPHONE SYSTEM			0.4	30	20/1	(*) REC CRAWL SPACE			0.2
31	20/1	(**) REC BASEMENT	0.4			32	15/2	(**) AIR UNIT SOUTH SIDE	0.5		
33	20/1	(**) LTS BASEMENT		0.6		34	|			0.5	
35	20/1	(**) CLERKS OFFICE			0.6	36	20/1	(**) REC SERVER			0.4
37	20/1	(**) ELEVATOR EXHAUST FAN	0.4			38	20/1	(**) REC EQUIPMENT IN TRAFFIC COURT	0.6		
39	20/1	(**) COOLING TOWER PANEL		0.4		40	20/1	SPARE		0	
41	20/1	(**) COOLING TOWER PANEL			0.4	42	20/1	SPARE			0
43	20/1	REC–BATTERY CHARGER	1			44	20/1	SPARE	0		
45	20/1	REC–BLOCK HEATER		1.5		46	20/3	EUH–1		1.1	
47	20/1	REC–BATTERY CHARGER			1	48	|				1.1
49	20/1	REC–BLOCK HEATER	1.5			50	|		1.1		
51	20/2	WH–1		1.25		52	40/1	ESPCP		2.4	
53	|				1.25	54	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	24.4	25.4	23.4
								TOTAL CONNECTED AMPS BY PHASE	203	211	195

	CONN KVA	CALC KVA			CONN KVA	CALC KVA	
LIGHTING	0.8	1	(125%)	RECEPTACLES	3.8	3.8	(50%>10)
LARGEST MOTOR	17.5	4.36	(25%)	CONTINUOUS	12	15	(125%)
MOTORS	31.5	31.5	(100%)	NONCONTINUOUS	4	4	(100%)
				DIVERSE	21	0.5	(2%)
				TOTAL LOAD		60.2	
				BALANCED 3–PHASE AMPS		167	

(*) PROVIDE GFCI TYPE C/B; (**) LOADS RECONNECTED FROM OLD PANEL M

PE

ROOM: ELECTRICAL ROOM
MOUNTING: SURFACE
FED FROM: MTS
NOTE:

VOLTS: 208Y/120V 3P 4W
BUS AMPS: 100
NEUTRAL: 100%

AIC: 14,000
MAIN BKR: MLO
LUGS: STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CKT #	CKT BKR	CIRCUIT DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C
1	40/1	BSPCP	2.4			2	20/1	SPARE	0		
3	20/1	SPARE		0		4	20/1	SPARE		0	
5	20/1	SPARE			0	6	20/1	SPARE			0
7	20/1	SPARE	0			8	20/1	SPARE	0		
9	20/1	SPARE		0		10	20/1	SPARE		0	
11	20/1	SPARE			0	12	20/1	SPARE			0
13	20/1	SPARE	0			14	20/1	SPARE	0		
15	20/1	SPARE		0		16	20/1	SPARE		0	
17	20/1	SPARE			0	18	20/1	SPARE			0
19	20/1	SPARE	0			20	20/1	SPARE	0		
21	20/1	SPARE		0		22	20/1	SPARE		0	
23	20/1	SPARE			0	24	20/1	SPARE			0
								TOTAL CONNECTED KVA BY PHASE	2.4	0	0
								TOTAL CONNECTED AMPS BY PHASE	20	0	0

	CONN KVA	CALC KVA			CALC KVA
LARGEST MOTOR	1.2	0.3	(25%)	TOTAL LOAD	2.7
MOTORS	2.4	2.4	(100%)	BALANCED 3–PHASE AMPS	7.49

PENDER COUNTY COURTHOUSE

PENDER COUNTY

PENDER COUNTY NC

LS3P

101 NORTH THIRD STREET SUITE 500
WILMINGTON, NORTH CAROLINA 28401
TEL. 910.790.9901 FAX 910.790.3111
WWW.LS3P.COM

CHEATHAM & ASSOCIATES, P.A.
CONSULTING ENGINEERS
3412 ENTERPRISE DRIVE
WILMINGTON, NORTH CAROLINA 28405
(910) 452–4210
FAX: (910) 452–4211
OFFICE@CHEATHAMPA.COM
NC LICENSE# C–1073

JOB # 19060

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER 17995 MARK A. CIARROCCA

No.	Description	Date
1	Addendum No. 3	04-14-2020

PROJECT: 7702-185550
DATE: 3/29/20
DRAWN BY: KAF/MPS/FM/DCB
CHECKED BY: M. CIARROCCA

ELECTRICAL-PANEL SCHEDULES

E-602

BID DOCUMENTS