

TRANSFORMER LOAD SUMMARY						
DESCRIPTION	ACTUAL CONNECTED (KW/KVA)	POWER FACTOR	ACTUAL DEMAND (KVA)	NEC CONNECTED (KW/KVA)	NEC DEMAND FACTOR	NEC DEMAND (KVA)
LIGHTING	9.706	1.0	9.706	9.706	1.25	12.133
RECEPTACLES	9.780	1.0	9.780	9.780	1.0	9.780
MOTORS	1.420	1.0	1.420	1.420	1.25	1.775
AIR CONDITIONING	0.000	1.0	0.000	0.000	1.0	0.000
WATER HEATER	7.200	1.0	7.200	7.200	1.0	7.200
MISCELLANEOUS	4.160	1.0	4.160	4.160	1.0	4.160
TOTAL	32.266		32.266	32.266		35.048
USE	45		KVA 480-120/208V, 3 PHASE TRANSFORMER			

ELECTRICAL LOAD SUMMARY						
DESCRIPTION	ACTUAL CONNECTED (KW/KVA)	POWER FACTOR	ACTUAL DEMAND (KVA)	NEC CONNECTED (KW/KVA)	NEC DEMAND FACTOR	NEC DEMAND (KVA)
LIGHTING	4.696	1.0	4.696	4.696	1.25	5.870
TRACK LIGHTING	5.010	1.0	5.010	5.010	299 FT 150VA/2FT ***	22.425
SHOW WINDOW	0.000	1.0	0.000	0.000	0 FT 200VA/FT **	0.000
RECEPTACLES	9.780	1.0	9.780	9.780	100-100W 0.5 REMAINING	9.780
MOTORS	7.736	1.0	7.736	7.736	1.25	9.670
AIR CONDITIONING *	30.373	1.0	30.373	30.373	1.0 ****	30.373
ELECTRIC HEATING *	6.997	1.0	0.000	6.997	1.0	0.000
WATER HEATER	7.200	1.0	7.200	7.200	1.0	7.200
MISCELLANEOUS	4.160	1.0	4.160	4.160	1.0	4.160
TOTAL	75.952		68.955	75.952		89.478
NOTES:						
* USE GREATER LOAD OF THE TWO CATEGORIES						
** NEC ARTICLE 220-43 REQUIREMENT (200VA PER FOOT OR ACTUAL CONNECTED)						
*** NEC ARTICLE 220-43 REQUIREMENT (150VA/2FT OR ACTUAL CONNECTED)						
**** 125% OF THE LARGEST MOTOR OR COMPRESSOR IN SYSTEM						
NEC DEMAND KW *1000 = MINIMUM FEEDER AMPERAGE						
SYSTEM VOLTAGE * 1.732						
89.478 *1000 = 108 A						
480 *1.732						
NEW 200A SERVICE						

CURRENT LIMITING BREAKERS		
CIRCUIT NUMBER	BREAKER SIZE	
A-10	1	10A
A-12	2	10A
NOTE: PROVIDE EATON PRC LIMITER PANEL WITH BREAKERS SHOWN. ROUTE CIRCUITS THROUGH CURRENT LIMITING BREAKER PRIOR TO LANDING ON BRANCH CIRCUIT BREAKER.		

PANELBOARD B													
LOCATION: WR ENCLOSURE (IFS)													
VOLTAGE 120/208V, 3PH, 4W													
MOUNTING SURFACE													
BUS RATING 100A													
LCL	LTG	CC	LOAD	CB	LOAD	CB	LOAD	CC	LTG	LCL			
ZONE	NO	NO	DESCRIPTION	AMP	POLE	AMP	POLE	DESCRIPTION	NO	ZONE			
	1		SPARE	20	1	2,100							
	3		MANAGER'S RCPT	20	1	540	2,100			4			
	5		MANAGER'S IG RCPT	20	1		180	540		6			
	7		BACKWRAP RCPT	20	1	1,080	540	20	1	SALES AREA RCPT. 8			
	9		WALKIE TALKIE	20	1	360	0	20	1	SPARE 10			
	11		MUSIC/SOUND SYSTEM	20	1		500	500	20	1	IP CAMERA POWER 12		
	13		(WR) TEMP. CONTROLS	20	1	900	500	20	1	SECURITY PNL/MONITOR 14			
	15		CASHWRAP IG	20	1		900	500	20	1	BURGULAR ALARM 16		
	17		CASHWRAP RCPT	20	1			720	1,500	20	2	WATER HEATER 18	
	19		NON SALES RCPT	20	1	540	1,500					20	
	21		SPARE	20	1		0	600		20	1	DRINKING FOUNTAIN 22	
	23		SPARE	20	1			0	0	20	1	SPARE 24	
	25		SPARE	20	1	0	180					RTU RCPT. 26	
	27		(WR) TELEPHONE BRD.	20	1		360	200		20	1	FACP 28	
	29		A.L.L. SYSTEM	20	1			180	0	20	2	SPARE 30	
	31		SPARE	20	1	0	0			20	2	SPARE 32	
	33		SPARE	20	1		0	1,600		20	1	ROLLING GRILLE 34	
	35		SPARE	20	1			0	0	20	1	SPARE 36	
	37		SPARE	20	1	0	0			20	1	SPARE 38	
	39		SPARE	20	1		0	660		20	1	FPVAV-1 40	
	41		SPARE	20	1			0	660	20	1	FPVAV-2 42	
LOAD/PH: (NEC CONNECTED)				7,340	7,820	4,780	TOTAL VA: 19,940 VA						
LCL @ 25% PER PHASE				0	0	0	TOTAL AMPS: 55 A						
TOTAL LOAD/PH: (NEC DEMAND)				7,340	7,820	4,780							
NOTES:													
ALL CIRCUITS BREAKERS TO BE 20 AMP, 1-POLE UNLESS OTHERWISE NOTED.													
BREAKER OPERATIONS:													
ACTUAL LOAD				A 7,340 kW	NEC CONNECTED TOTALS				A 7,340 kW	BABR - SOLENOID OPERATED BABR			
				B 7,820 kW					B 7,820 kW	LO - HANDLE LOCK-OFF DEVICE			
				C 4,780 kW					C 4,780 kW	ST - SHUNT TRIP			
				TOTAL 19,940 kW					TOTAL 19,940 kW	AUX - AUXILIARY CONTACTS			
(ALL PHASES SHALL BE BALANCED WITH 7% USING ACTUAL LOAD TOTALS)													
PA - HANDLE PADLOCK ATTACHMENT													
GFCI - GROUND FAULT INTERRUPT													
HACR - HEATING, A/C & REFRIGERATION													
LCL - CONTINUOUS LOAD													

PANELBOARD A													
LOCATION: WR ENCLOSURE (IFS)													
VOLTAGE 120/208V, 3PH, 4W													
MOUNTING SURFACE													
BUS RATING 225A													
LCL	LTG	CC	LOAD	CB	LOAD	CB	LOAD	CC	LTG	LCL			
ZONE	NO	NO	DESCRIPTION	AMP	POLE	AMP	POLE	AMP	POLE	ZONE			
	1		STORE N/LEM LTS/FAN	20	1	1,304	416			2			
X	A	3	SHOW WINDOW LTS	20	1	140	500			4			
X	A	5	STORE SIGN	20	1	1,200	969			6			
X	C	7	TRANSITION LTS	20	1	476	816			8			
X	C	9	CABINET LTS	20	1	120	774			10			
X	C	11	CABINET LTS	20	1	120	774			12			
X	C	13	CABINET LTS	20	1	120	0			14			
X	C	15	CABINET LTS	20	1	160	954			16			
X	C	17	CABINET LTS	20	1	120	723			18			
D	19		FLOORBOX	20	1	540	0			20			
D	21		FLOORBOX	20	1	180	0			22			
D	23		FLOORBOX	20	1	180	0			24			
D	25		FLOORBOX	20	1	180	0			26			
X	C	27	CABINET LTS	20	1	120	0			28			
	29		SPARE	20	1	0	0			30			
	31		VIDEO WALL	20	1	720	0			32			
	33		VIDEO WALL	20	1	720	0			34			
	35		SPARE	20	1	0	0			36			
	37		SPARE	20	1	0	0			38			
	39		SPACE ONLY			0	0			40			
	41		SPACE ONLY			0	0			42			
LOAD/PH: (NEC CONNECTED)				4,572	3,668	4,086	TOTAL VA: 14,778 VA						
LCL @ 25% PER PHASE				783	692	977	TOTAL AMPS: 41 A						
TOTAL LOAD/PH: (NEC DEMAND)				5,355	4,360	5,063							
NOTES:													
ALL CIRCUITS BREAKERS TO BE 20 AMP, 1-POLE UNLESS OTHERWISE NOTED.													
BREAKER OPTIONS:													
ACTUAL LOAD				A 4,572 kW	NEC CONNECTED TOTALS				A 5,355 kW	BABR - SOLENOID OPERATED BABR			
				B 3,668 kW					B 4,360 kW	LO - HANDLE LOCK-OFF DEVICE			
				C 4,086 kW					C 5,063 kW	ST - SHUNT TRIP			
TOTAL 12,326 kW								TOTAL 14,778 kW	AUX - AUXILIARY CONTACTS				
(ALL PHASES SHALL BE BALANCED WITH 7% USING ACTUAL LOAD TOTALS)													
PA - HANDLE PADLOCK ATTACHMENT													
GFCI - GROUND FAULT INTERRUPT													
HACR - HEATING, A/C & REFRIGERATION													
LCL - CONTINUOUS LOAD													

LIGHTING TIME CONTROL LEGEND:	
A1 - EXTERIOR SIGNAGE BLADE SIGN INTERNALLY ILLUMINATED TRANSOMS STOREFRONT DOWNLIGHTING	C - TASK LEVEL 1/2 SALES FLOOR LIGHTING EVENLY DISTRIBUTED (BBW, PINK & BEN) - INCLUDING CABINET LIGHTING GENERAL SALES FLOOR RECEPTACLES DISPLAY CABINET LIGHTING RECEPTACLES
A - MARKETING LEVEL LIGHTING SHOW WINDOW LIGHTS SHOW WINDOW RECEPTACLES	D - SALES LEVEL LIGHTING BALANCE OF SALES FLOOR LIGHTING INTERIOR DISPLAY LIGHTING (CHANDLERS, NEON, ETC)
B - STOCKING STOCKROOM (NON-SALES) LIGHTING	
NOTE: ALL LIGHTING CIRCUITS CONNECTED TO LIGHTING ZONES ARE CONNECTED AND CONTROLLED AUTOMATICALLY THROUGH THE H.V.A.C BUILDING CONTROL TIME CLOCK. REFER TO ELECTRICAL POWER GENERAL NOTE #13 ON THIS SHEET.	

ELECTRICAL EQUIPMENT DATA												
SYM.	ITEM	VOLTAGE	HP.	KW.	F.L.A.	FEEDERS		TYPE OF CONN.	BRANCH BREAKER	DISC. SW.	BUS/ FUSES	REMARKS
						WIRE	COND.					
①	WATER HEATER	208V, 1Ø	--	4.16	--	2Ø12 THHN 1Ø12 G	1/2"	"AC" TOGGLE SWITCH	20A-2P	---	---	SEE NOTE NO. 1 BELOW
②	WATER HEATER	208V, 1Ø	--	3.0	--	2Ø12 THHN 1Ø12 G	1/2"	"AC" TOGGLE SWITCH	20A-2P	---	---	SEE NOTE NO. 1 BELOW
③	FPVAV-1	120V, 3Ø	--	--	5.5	2Ø12 THHN 1Ø12 G	1/2"	THRU UNIT DISC. SW.	20A-1P	---	---	SEE NOTE NO. 2 BELOW
④	FPVAV-2 (ELECTRIC HEAT)	480V, 3Ø	--	7.00 ELEC. HEAT	--	3Ø10 THHN 1Ø10 G	3/4"	THRU UNIT DISC. SW.	25A-3P	---	---	SEE NOTE NO. 2 BELOW
⑤	FPVAV-2 (MOTOR)	120V, 1Ø	--	--	5.5	2Ø12 THHN 1Ø12 G	1/2"	THRU UNIT DISC. SW.	20A-1P	---	---	SEE NOTE NO. 2 BELOW
⑥	RTU-1	480V, 3Ø	--	--	46.6	3Ø4 THHN 1Ø6 G	1-1/4"	THRU UNIT DISC. SW.	70A-3P	---	---	SEE NOTE NO. 2 BELOW
NOTE:												
1. "AC" TOGGLE SWITCH TO BE FURNISHED BY LSD&C AND INSTALLED BY ELECTRICAL CONTRACTOR.												
2. DISCONNECT SWITCH TO BE FURNISHED AND INSTALLED BY MECHANICAL SUPPLIER.												