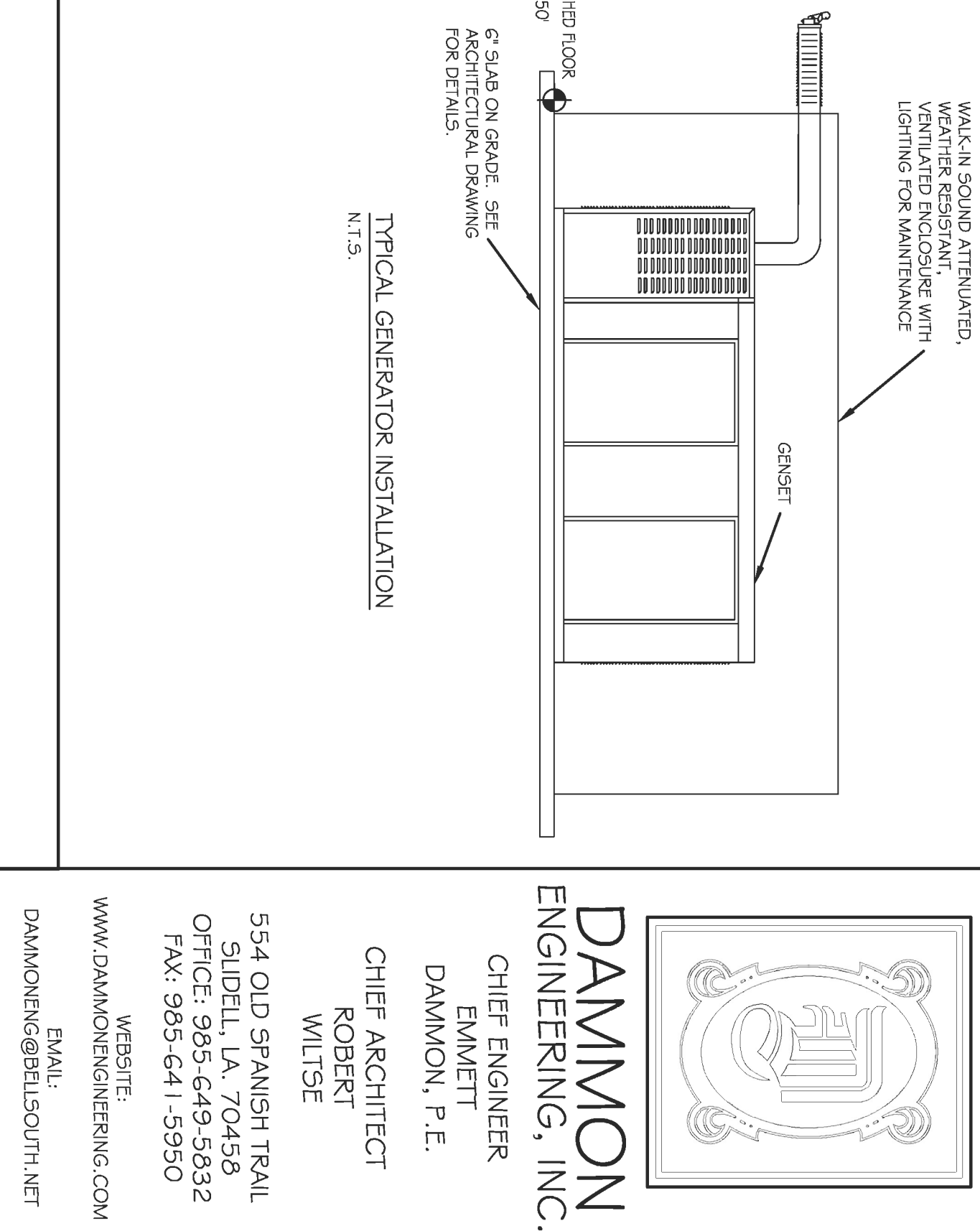


QTY	THHN SIZE	LOAD DESCRIPTION	AMP POLE	LOAD (KW)	#4 B9 C9	BREAKER POLE AMP	LOAD DESCRIPTION	THHN SIZE	QTY
1	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	2
3	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	4
5	12	WAREHOUSE OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	6
7	12	RM CDA OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	8
9	12	P-3 OUTLETS	20	1.0	0.5	1	WAREHOUSE OUTLETS	12	10
11	12	OUTLETS ON ROOF TOP FOR RUS	20	0.7	0.4	1	WAREHOUSE OUTLETS	12	12
13	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	14
15	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	16
17	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	18
19	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	20
21	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	22
23	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	24
25	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	26
27	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	28
29	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	30
31	---	SPACE	20	1	---	1	SPACE	---	32
33	---	SPACE	20	1	---	1	SPACE	---	34
35	---	SPACE	20	1	---	1	SPACE	---	36
37	12	EF-6	20	2	0.9	2	SUITE 13 POWER PANEL	400	38
39	---	SPACE	20	1	---	1	SPACE	---	40
41	---	SPACE	20	1	---	1	SPACE	---	42
				TOTAL CONNECTED LOAD (KW)	30.9				
				TOTAL CONNECTED LOAD (VA)	48.84KVA	BP 91.9KVA	CP 83.8KVA		

QTY	THHN SIZE	LOAD DESCRIPTION	AMP POLE	LOAD (KW)	#4 B9 C9	BREAKER POLE AMP	LOAD DESCRIPTION	THHN SIZE	QTY
1	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	2
3	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	4
5	12	WAREHOUSE OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	6
7	12	RM CDA OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	8
9	12	P-3 OUTLETS	20	1.0	0.5	1	WAREHOUSE OUTLETS	12	10
11	12	OUTLETS ON ROOF TOP FOR RUS	20	0.7	0.4	1	WAREHOUSE OUTLETS	12	12
13	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	14
15	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	16
17	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	18
19	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	20
21	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	22
23	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	24
25	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	26
27	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	28
29	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	30
31	---	SPACE	20	1	---	1	SPACE	---	32
33	---	SPACE	20	1	---	1	SPACE	---	34
35	---	SPACE	20	1	---	1	SPACE	---	36
37	12	EF-6	20	2	0.9	2	SUITE 13 POWER PANEL	400	38
39	---	SPACE	20	1	---	1	SPACE	---	40
41	---	SPACE	20	1	---	1	SPACE	---	42
				TOTAL CONNECTED LOAD (KW)	30.9				
				TOTAL CONNECTED LOAD (VA)	48.84KVA	BP 91.9KVA	CP 83.8KVA		

QTY	THHN SIZE	LOAD DESCRIPTION	AMP POLE	LOAD (KW)	#4 B9 C9	BREAKER POLE AMP	LOAD DESCRIPTION	THHN SIZE	QTY
1	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	2
3	12	WAREHOUSE LIGHTS	20	1.7	1.3	1	WAREHOUSE LIGHTS	12	4
5	12	WAREHOUSE OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	6
7	12	RM CDA OUTLETS	20	1.5	0.8	2	WAREHOUSE OUTLETS	12	8
9	12	P-3 OUTLETS	20	1.0	0.5	1	WAREHOUSE OUTLETS	12	10
11	12	OUTLETS ON ROOF TOP FOR RUS	20	0.7	0.4	1	WAREHOUSE OUTLETS	12	12
13	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	14
15	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	16
17	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	18
19	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	20
21	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	22
23	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	24
25	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	26
27	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	28
29	10	WAREHOUSE IMPROVED HEATER 6.0 KW	20	2.0	2.0	3	WAREHOUSE IMPROVED HEATER 6.0 KW	10	30
31	---	SPACE	20	1	---	1	SPACE	---	32
33	---	SPACE	20	1	---	1	SPACE	---	34
35	---	SPACE	20	1	---	1	SPACE	---	36
37	12	EF-6	20	2	0.9	2	SUITE 13 POWER PANEL	400	38
39	---	SPACE	20	1	---	1	SPACE	---	40
41	---	SPACE	20	1	---	1	SPACE	---	42
				TOTAL CONNECTED LOAD (KW)	30.9				
				TOTAL CONNECTED LOAD (VA)	48.84KVA	BP 91.9KVA	CP 83.8KVA		



1. CONTRACTOR SHALL PROVIDE A GENERATOR CAPABLE OF 120/240V 3Ø CLOSED DELTA, 60 CYCLE AND A MINIMUM OF 105KW SUSTAINED POWER WITH A LOAD POWER FACTOR OF 0.8. THE GENERATOR SHALL OPERATE ON DIESEL FUEL FOR 24 HOURS OF CONTINUOUS USE AT 75% POWER. THE GENERATOR SET SHALL MEET THE ISO8528-5, B55514, 5WE J1349, ISO 3046, AND DING271 STANDARDS.

2. THE GENERATOR SHALL BE HOUSED IN A WALK-IN SOUND ATTENUATED, WEATHER RESISTANT, VENTILATED ENCLOSURE WITH LIGHTING FOR MAINTENANCE OF GENSET.

3. THE GENERATOR SUPPLIED SHALL BE FROM A MANUFACTURER THAT PRINCIPALLY MANUFACTURES GENERATOR SETS. THE UNIT SHALL BE ASSEMBLED IN THE U.S. WITH OVER 50% OF THE COMPONENTS SUCH AS THE ENGINE, GENERATOR, AUXILIARY EQUIPMENT, ETC., MANUFACTURED IN THE U.S. BY A MANUFACTURER CURRENTLY ENGAGED IN THE PRODUCTION OF SUCH EQUIPMENT.

4. CONTRACTOR SHALL PROVIDE A LUL LISTED 120/240V 3Ø 400A 4-POLE AUTOMATIC TRANSFER SWITCH (ATS) WITH AN EXERCISE FUNCTION. THE ATS SHALL INCLUDE A BYPASS ISOLATION SWITCH THAT ALLOWS MANUAL BYPASS OF THE NORMAL AUTOMATIC EMERGENCY POWER SOURCE TO INSURE CONTINUED MAINTENANCE.

5. IN THE EVENT OF AN ATS FAILURE OR REQUIRED MAINTENANCE, THE GENERATOR SHALL BE INSTALLED OUTSIDE THE WAREHOUSE IN ACCORDANCE WITH NFPA 1110. STANDARDS FOR EMERGENCY AND STANDBY POWER SYSTEMS. FUEL TANKS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 30 FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE AND NFPA 304 MOTOR FUEL DISPENSING FACILITIES AND REPAIR GARAGES. THE GENERATOR AND ANY FUEL STORAGE SHALL BE PLACED ON A PLATFORM ABOVE THE FLOOD PLAIN ELEVATION FOR THE SITE.

6. PROVIDE A RECHARGING KIT AND WATER JACKET HEATER WITH GENERATOR.

7. PROVIDE THE ENGINEER A SPEC SHEET ON ATS AND GENERATOR FOR APPROVAL.

GENERATOR NOTES:

GENERATOR CAPABLE OF 120/240V 3Ø CLOSED DELTA, 60 CYCLE AND A MINIMUM OF 105KW SUSTAINED POWER WITH A LOAD POWER FACTOR OF 0.8. THE GENERATOR SHALL OPERATE ON DIESEL FUEL FOR 24 HOURS OF CONTINUOUS USE AT 75% POWER. THE GENERATOR SET SHALL MEET THE ISO8528-5, B55514, 5WE J1349, ISO 3046, AND DING271 STANDARDS.

THE GENERATOR SHALL BE HOUSED IN A WALK-IN SOUND ATTENUATED, WEATHER RESISTANT, VENTILATED ENCLOSURE WITH LIGHTING FOR MAINTENANCE OF GENSET.

THE GENERATOR SUPPLIED SHALL BE FROM A MANUFACTURER THAT PRINCIPALLY MANUFACTURES GENERATOR SETS. THE UNIT SHALL BE ASSEMBLED IN THE U.S. WITH OVER 50% OF THE COMPONENTS SUCH AS THE ENGINE, GENERATOR, AUXILIARY EQUIPMENT, ETC., MANUFACTURED IN THE U.S. BY A MANUFACTURER CURRENTLY ENGAGED IN THE PRODUCTION OF SUCH EQUIPMENT.

CONTRACTOR SHALL PROVIDE A LUL LISTED 120/240V 3Ø 400A 4-POLE AUTOMATIC TRANSFER SWITCH (ATS) WITH AN EXERCISE FUNCTION. THE ATS SHALL INCLUDE A BYPASS ISOLATION SWITCH THAT ALLOWS MANUAL BYPASS OF THE NORMAL AUTOMATIC EMERGENCY POWER SOURCE TO INSURE CONTINUED MAINTENANCE.

IN THE EVENT OF AN ATS FAILURE OR REQUIRED MAINTENANCE, THE GENERATOR SHALL BE INSTALLED OUTSIDE THE WAREHOUSE IN ACCORDANCE WITH NFPA 1110. STANDARDS FOR EMERGENCY AND STANDBY POWER SYSTEMS. FUEL TANKS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 30 FLAMMABLE AND COMBUSTIBLE LIQUIDS CODE AND NFPA 304 MOTOR FUEL DISPENSING FACILITIES AND REPAIR GARAGES. THE GENERATOR AND ANY FUEL STORAGE SHALL BE PLACED ON A PLATFORM ABOVE THE FLOOD PLAIN ELEVATION FOR THE SITE.

PROVIDE A RECHARGING KIT AND WATER JACKET HEATER WITH GENERATOR.

PROVIDE THE ENGINEER A SPEC SHEET ON ATS AND GENERATOR FOR APPROVAL.

SEE ARCHITECTURAL DRAWING FOR DETAILS.

TYPICAL GENERATOR INSTALLATION N.T.S.

WWW.DAMMONENGINEERING.COM

EMAIL: DAMMONEN@DRELSOFT.NET

ARCHITECTURE

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EXPERT WITNESSES

US DEPARTMENT OF AGRICULTURE

APHIS FACILITY

924 KENNER AVE.

KENNER

LOUISIANA

70062

ELECTRICAL DETAILS

REV#3- 4/27/2012

SCALE: AS NOTED

JOB#:

DATE: 1/15/2012

SHEET

E-2

DF

QTY	THHN SIZE	LOAD DESCRIPTION	AMP POLE	LOAD (KW)	#4 B9 C9	BREAKER POLE AMP	LOAD DESCRIPTION	THHN SIZE	QTY
1	12	V V T #1, 2KW HEATER	20	1.0	1.3	3	100 RUS **	1	4
3	12	V V T #1, 2KW HEATER	20	1.0	1.3	3	100 RUS **	1	6
5	12	P-3 LIGHTS & EXERCISE LIGHT	20	1.5	0.8	1	P-20 MISC LIGHTS	12	8
7	12	CORRIDOR LIGHT (NIGHT LIGHT) OUTLETS ON CORRIDOR WALL	20	1.5	0.8	1	P-20 MISC LIGHTS	12	10
9	12	P-20 FINE HOOD DECKED OUTLET	20	1.5	0.8	1	P-20 COUNTER OUTLETS	12	12
11	12	P-20 COUNTER OUTLETS	20	1.5	0.8	1	P-20 COUNTER OUTLETS	12	14
13	12	P-20 COUNTER OUTLETS	20	1.5	0.8	1	P-20 COUNTER OUTLETS	12	16
15	12	P-20 LIGHTS	20	1.3	0.8	1	P-20 LIGHTS	12	18
17	12	EF-5 & EF-8	20	1.0	0.5	1	P-20 LIGHTS	12	20
19	10	V V T #2, 2KW HEATER	20	2.5	1.6	1	P-4 & P-6 CIRCLES	12	22
21	10	V V T #2, 2KW HEATER	20	2.5	1.6	1	P-4 & P-6 CIRCLES	12	24
23	---	SPACE	20	1	---	1	P-4 & P-6 CIRCLES	12	26
25	---	SPACE	20	1	---	1	P-4 & P-6 CIRCLES	12	28
27	12	P-20 COUNTER OUTLETS	20	1.3	0.8	1	P-4 & P-6 CIRCLES	12	30
29	12	P-20 COUNTER OUTLETS	20	1.3	0.8	1	P-4 & P-6 CIRCLES	12	32
31	12	V V T #1, 2KW HEATER	20	1.0	1.3	1	P-4 & P-6 CIRCLES	12	34
33	12	EF-7	20	1.1	0.6	1	P-4 & P-6 CIRCLES	12	36
35	12	P-20 COUNTER OUTLETS	20	1.0	0.5	1	P-4 & P-6 CIRCLES	12	38
37	12	P-20 COUNTER OUTLETS	20	1.0	0.5	1	P-4 & P-6 CIRCLES	12	40
39	12	NIGHT LIGHTS IN LOBBY & WAREHOUSE	20	0.6	0.4	3	COMPUTER ROOM (CMR)	6	42
41	---	SPACE	20	1	---	1	COMPUTER ROOM (CMR)	6	44
				TOTAL CONNECTED LOAD (KW)	30.9				
				TOTAL CONNECTED LOAD (VA)	48.84KVA	BP 91.9KVA	CP 83.8KVA		

QTY	THHN SIZE	LOAD DESCRIPTION	AMP POLE	LOAD (KW)	#4 B9 C9	BREAKER POLE AMP	LOAD DESCRIPTION	THHN SIZE	QTY
1	10	RUS #2	20	2.8	2.8	2	1-2 OUTLET	2	2
3	10	RUS #2	20	2.8	2.8	2	1-2 OUTLET	2	4
5	12	LOW VOLT RE-START HEATER SENSER RM 1-2	20	5	2.5	2	20 2KW UPS **	10	6
7	12	SPACE	20	1	---	1	20 1-2 OUTLET	12	8
9	---</								