

PANEL "BDL" NORMAL POWER										PANEL RATING & FEEDER									
PANEL INFORMATION										PANEL AMPACITY									
MAIN TYPE: 100A MLO, 120/208 VOLTAGE, SURFACE MOUNT, AIC RATING: 10000, ENCL. TYPE: NEMA-1										PANEL AMPACITY: PHASE CONDUCTORS: (3), NEUTRAL: (1), # OF SETS: (1 SET), SOURCE: SEE RISER									
LOAD IN VOLT AMPS (VA)										LOAD IN VOLT AMPS (VA)									
CKT	DESCRIPTION	CB AMPS	WIRE SIZE	LTG (125%)	RECEPT.	KITCHEN	HVAC	MISC	PHASE	MISC	HVAC	KITCHEN	RECEPT.	LTG (125%)	WIRE SIZE	CB AMPS	DESCRIPTION	CKT	
1	RECEPTACLES	20	#12	180					A	2600					#8	40	DS-1 (DUCTLESS SPLIT SYSTEM)	2	
3	RECEPTACLES	20	#12	180					B	2600					#8	40	CU-1 (CONDENSING UNIT)	6	
5	RECEPTACLES - RESTROOM/UTILITY	20	#12	540					C	2600					#8	40	EF-1 EXHAUST FAN	10	
7	RECEPTACLES - EXTERIOR	20	#12	360					A	2600					#12	20	SPACE ONLY	12	
9	LIGHTING - INTERIOR	20	#12	200					B	100					#12	20	SPACE ONLY	14	
11	LIGHTING - EXTERIOR	20	#12	400					C						#12	20	SPACE ONLY	16	
13	SPACE ONLY								A						#12	20	SPACE ONLY	18	
15	SPACE ONLY								B						#12	20	SPACE ONLY	20	
17	SPACE ONLY								C						#12	20	SPACE ONLY	22	
19	SPACE ONLY								A						#12	20	SPACE ONLY	24	
21	SPACE ONLY								B						#12	20	SPACE ONLY	26	
23	SPACE ONLY								C						#12	20	SPACE ONLY	28	
25	SPACE ONLY								A						#12	20	SPACE ONLY	30	
27	SPACE ONLY								B						#12	20	SPACE ONLY	32	
29	SPACE ONLY								C						#12	20	SPACE ONLY	34	
31	SPACE ONLY								A						#12	20	SPACE ONLY	36	
33	SPACE ONLY								B						#12	20	SPACE ONLY	38	
35	SPACE ONLY								C						#12	20	SPACE ONLY	40	
37	SPACE ONLY								A						#12	20	SPACE ONLY	42	
39	SPACE ONLY								B						#12	20	SPACE ONLY	44	
41	SPACE ONLY								C						#12	20	SPACE ONLY	46	
TOTAL LOADS				600	1260	0	0	0			10500	0	0	0			TOTAL LOADS		

Estimated Voltage Drop Calculator

Input

Load Voltage: 208V 3Ø
 Conductor Size: 3
 Conductor Type: Cu
 Number of Sets: 1
 Distance (one way): 230 Feet
 Load (A): 37.7 A

Output

Utility Power Factor: 85% PF
 Voltage Drop (V): 3.7V
 Voltage Drop (%): 1.8%
 Voltage at Load: 204.3V
 Minimum Conductor Size for 3% VD: 4
 Minimum Conductor Size for 5% VD: 6

SIEMENS

B7 BUS DEPOT VOLT DROP CALCULATION
NO SCALE

- ### GENERAL ELECTRICAL LIGHTING PLAN NOTES
- A. REFER TO SHEET E-901 FOR PHOTOGRAPHS OF EXISTING ELECTRICAL DEVICES AND EQUIPMENT.
- ### RISER DIAGRAM NOTES
- PROVIDE ELECTRICAL PANEL AS INDICATED, SEE PANEL SCHEDULE ON THIS SHEET FOR FURTHER INFORMATION.
 - PROVIDE SPD (SURGE PROTECTION DEVICE) AS INDICATED, SHALL BE 125KA. REFER TO SURGE PROTECTION DEVICE SCHEDULE C4/THIS SHEET FOR FURTHER INFORMATION.
 - PROVIDE NEW GROUNDING SYSTEM, INSTALL PER ARTICLE 250.66 OF NEC.
 - MOUNT SURGE PROTECTION DEVICE "SPD-BDL" TO BOTTOM OF PANEL. REFER TO SURGE PROTECTION DEVICE SCHEDULE C4/THIS SHEET FOR FURTHER INFORMATION.
 - PROVIDE TIME CLOCK AS INDICATED, MOUNT AS CLOSE TO PANEL AS POSSIBLE, SHALL BE: 20 AMP CONTACTS, 120 VOLT OPERATION, 4-POLE, NEMA 1 ENCLOSURE WITH ASTRO-DIAL FUNCTION.
 - EXISTING "DOCTORS ROW 210-214" DISTRIBUTION PANELBOARD TO REMAIN. LOCATED ADJACENT TO BLDG. 400. REPLACE EXISTING 225/3 CIRCUIT BREAKER FEEDING BUS DEPOT WITH NEW 100/3 CIRCUIT BREAKER. NEW CIRCUIT BREAKER TYPE SHALL MATCH EXISTING. EXISTING DISTRIBUTION PANELBOARD IS MANUFACTURED BY CUTLER-HAMMER, SERIES "C" CATALOG NO. LD3600F, STYLE: 6633C81G03, 35KAIC.

PANEL NOTES
NEW PANEL
PROVIDE HACR TYPE BREAKERS FOR HVAC LOADS

LOAD CALCULATION (NEC 2008 - ARTICLE 220)

LOAD TYPE	LOAD (kVA)	DEMAND %	DEMAND LOAD	kW
LIGHTING	0.60	1.25		0.8
RECEPTACLES	1.26	1.00		1.3
RECEPTACLES > 10000	0.00	0.50		0.0
KITCHEN EQUIPMENT	0.00	0.65		0.0
MISC.	0.00	1.00		0.0
HVAC	10.50	1.00		10.5
TOTAL kW DEMAND				12.3
TOTAL DEMAND AMPS		100%		34.72

C1 CONDENSING UNIT SCHEDULE

ITEM	DESCRIPTION	VOLTAGE	PHASE	VA	STARTER	DISCONNECT	LOCATION	CONNECTION TYPE	MOUNTING HEIGHT	PANEL FED FROM	CIRCUIT NUMBER	CONDUIT SIZE	WIRE SIZE	GROUND SIZE	CIRCUIT BREAKER
DS-1	DUSTLESS SPLIT SYSTEM	208	1	5,200	NONE	60 AMP NON-FUSED DISCONNECT SWITCH NEMA 1	WAITING AREA ROOM NO. 101	FLEXIBLE CONDUIT FROM DISCONNECT SWITCH TO MOTOR	FIELD COORDINATE	BDL	2,4	3/4"	2#8	1#10	40/2
CU-1	CONDENSOR UNIT	208	1	5,200	NONE	60 AMP NON-FUSED DISCONNECT SWITCH NEMA 3R	EXTERIOR	FLEXIBLE CONDUIT FROM DISCONNECT SWITCH TO MOTOR	FIELD COORDINATE	BDL	6,8	3/4"	2#8	1#10	40/2

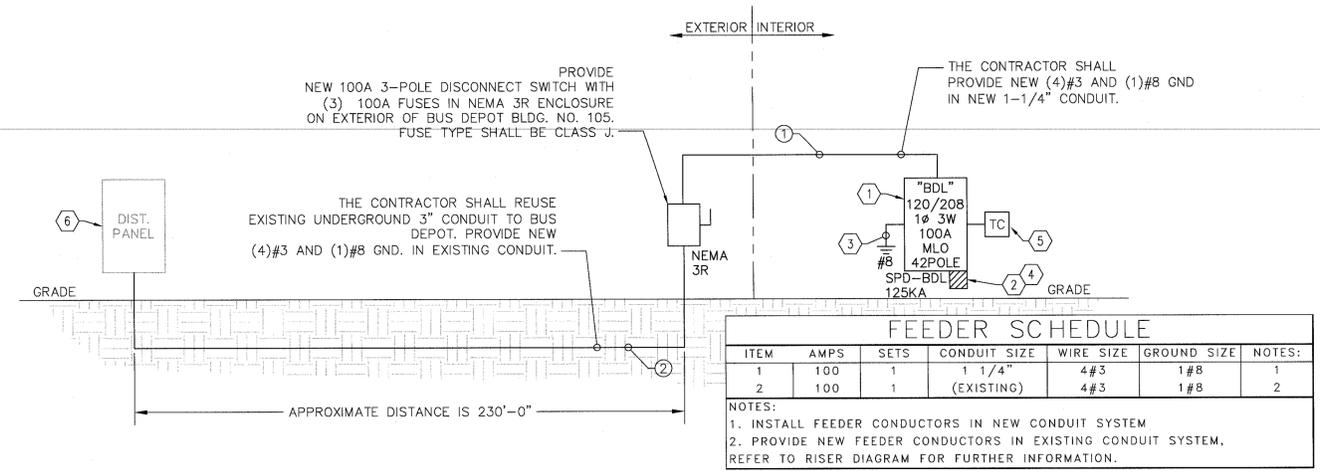
C1 CONDENSING UNIT SCHEDULE
NO SCALE

EQUIPMENT DESIGNATION	EQUIPMENT OR PANEL SERVED	VOLTAGE RATING	PHASE	WIRE CONFIGURATION	PROTECTION MODES	ENCLOSURE	CATEGORY	SHORT CIRCUIT RATING	CIRCUIT BREAKER	LOCATION	MOUNTING	NOTES
SPD-BDL	SURGE PROTECTION PANEL BOARD "BDL"	120-208	3	5W	L-G, L-N, L-L, N-G	NEMA 1	TYPE 3	125,000	30/3	MOUNTED EXTERNAL TO "BDL"	SURFACE	1
SPD-GGP	SURGE PROTECTION PANEL BOARD "GGP"	120-208	2	5W	L-G, L-N, L-L, N-G	NEMA 3R	TYPE 3	125,000	30/3	MOUNTED EXTERNAL TO "GGP"	SURFACE	1
SPD-LVP	SURGE PROTECTION PANEL BOARD "LVP"	120-208	3	5W	L-G, L-N, L-L, N-G	NEMA 3R	TYPE 3	125,000	30/3	MOUNTED EXTERNAL TO "LVP"	SURFACE	1

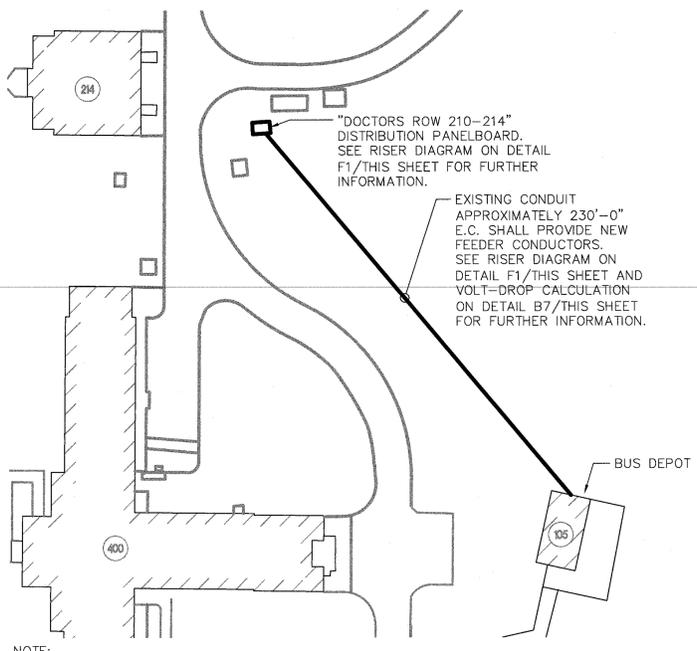
C4 SURGE PROTECTION DEVICE SCHEDULE
NO SCALE

ITEM	DESCRIPTION	VOLTAGE	PHASE	HP	STARTER	DISCONNECT	LOCATION	CONNECTION TYPE	MOUNTING HEIGHT	PANEL FED FROM	CIRCUIT NUMBER	CONDUIT SIZE	WIRE SIZE	GROUND SIZE	CIRCUIT BREAKER	NOTE
EF-1	EXHAUST FAN	120	1	FRAC.	NONE	20 AMP MANUAL MOTOR RATED SWITCH	TOILET ROOM NO. 103	FLEXIBLE CONDUIT FROM MMSS SWITCH TO MOTOR	FIELD COORDINATE	BDL	10	3/4"	2#12	1#12	20/1	1

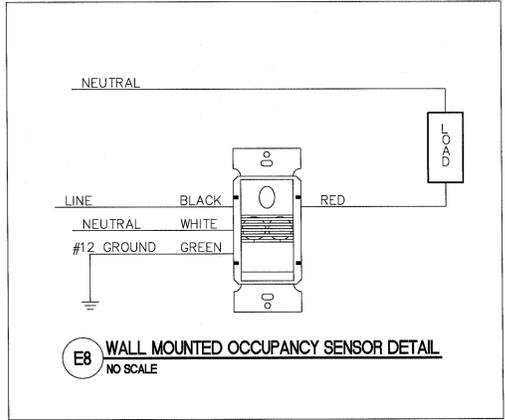
D1 EXHAUST FAN SCHEDULE
NO SCALE



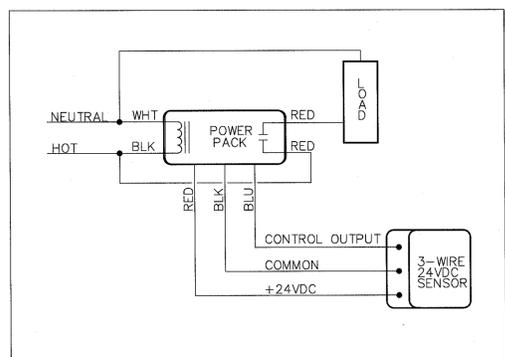
F1 BUILDING 105 (BUS DEPOT) RISER DIAGRAM
NO SCALE



F6 BUILDING 105 POWER ROUTING
1/32" = 1'-0"



E8 WALL MOUNTED OCCUPANCY SENSOR DETAIL
NO SCALE



F8 CEILING MOUNTED OCCUPANCY SENSOR WIRING DIAGRAM
NO SCALE

CONSULTANTS: 		ARCHITECT/ENGINEERS: Architecture Engineering Design-Build 200 Emory Circle #201, Louisville KY 40299 - PH: 502.539.8511 - www.paradigmusa.com		Drawing Title ELECTRICAL DETAILS AND SCHEDULES BUILDING 105		Project Title IMPROVE CAMPUS ACCESS AND SECURITY		Project Number 552-16-101		Office of Construction and Facilities Management	
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