

AIR UNIT DEFINITION AND LOCATION

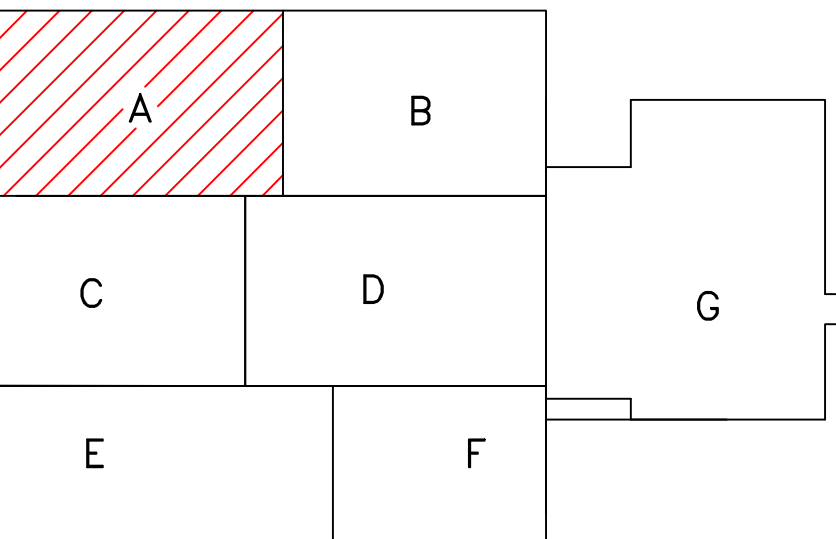
SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
A-1	1	01	VAV	4"		88	179	6	NR	Corridor	A-1-01-VAV	
A-1	1	02	RH	8"	0.9			4	NR	1012,1013	A-1-02-RH	VG7842CT+7150G
A-1	1	03	RH	8"	1.0	75	150	2	NR	Corridor	A-1-03-RH	VG7842CT+7150G
A-1	1	04	RH	8"	0.8	57.5	115	4	NR	1016	A-1-04-RH	VG7842CT+7150G
A-1	1	05	RH	8"	0.9	64.5	129	4	NR	1017	A-1-05-RH	VG7842CT+7150G
A-1	1	06	VAV	4"		56	113	2	NR	Corridor	A-1-06-VAV	
A-1	1	07	VAV	4"		107	188	6	NR	1018	A-1-07-VAV	
A-1	1	08	VAV	4"		70	93	6	Neg	1010	A-1-08-VAV	
A-1	1	09	VAV	4"		75	150	2	NR	Corridor	A-1-09-VAV	
A-1	1	10	VAV	6"		150	350	6	NR	1007,1009,1011	A-1-10-VAV	
A-1	1	11	VAV	4"		50	93	4	Pos	SPD Supply	A-1-11-VAV	
A-1	1	12	RH	8"	0.8	60	120	4	Pos	1022	A-1-12-RH	VG7842CT+7150G
A-1	1	13	VAV	4"		75	150	2	NR	Corridor	A-1-13-VAV	
A-1	1	14	VAV	6"		90	200	4,15	Positive	1020, 1023	A-1-14-VAV	
A-1	1	15	VAV	6"		267	492	6	NR	1034,1035,1036	A-1-15-VAV	
A-1	1	16	VAV	6"		138	268	6,2	NR	1033, 1031	A-1-16-VAV	
A-1	1	17	VAV	4"		150	161	6	NR	1025	A-1-17-VAV	
A-1	1	18	VAV	4"		53	105	4	NR	1003, 1024	A-1-18-VAV	
A-1	1	19	VAV	6"		175	396	4,6,2	NR	1002,1004,1006	A-1-19-VAV	
A-1	1	20	VAV	4"		50	266	12	Neg	1025	A-1-20-VAV	
A-1	3	21	RH	8"	5.1			4	Neg	Waiting Area	A-1-21-RH	VG7842GT+7150G
A-1-AHU-1 CFM TOTAL:					3718	= 3718						

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
A-2	1	01	RH	8"	0.9	64.5	129	4	NR	1037	A-2-01-RH	VG7842CT+7150G
A-2	1	02	RH	8"	0.9	57.5	115	4	NR	1038	A-2-02-RH	VG7842CT+7150G
A-2	1	03	RH	8"	0.9	63.5	127	4	NR	1039	A-2-03-RH	VG7842CT+7150G
A-2	1	04	VAV	4"		57	113	2	NR	Corridor	A-2-04-VAV	
A-2	1	05	VAV	4"		53	105	4	NR	1040	A-2-05-VAV	
A-2	1	06	VAV	4"		60	120	4	NR	1060	A-2-06-VAV	
A-2	1	07	VAV	4"		89	164	6	NR	1061	A-2-07-VAV	
A-2	1	08	VAV	4"		56	113	2	NR	Corridor	A-2-08-VAV	
A-2	1	09	VAV	4"		75	150	2	NR	Corridor	A-2-09-VAV	
A-2	1	10	RH	8"	1.5	246	300	15	Pos	1043	A-2-10-RH	VG7842CT+7150G
A-2	1	11	VAV	4"		50	93	2	NR	Corridor	A-2-11-VAV	
A-2	1	12	VAV	4"		50	135	4	NR	1056	A-2-12-VAV	
A-2	1	13	VAV	4"		75	150	2	NR	Corridor	A-2-13-VAV	
A-2	1	14	VAV	6"		267	492	6	NR	1041,1042,1044	A-2-14-VAV	
A-2	1	15	VAV	6"		187	373	6,4,2	NR	1052,1053,1054	A-2-15-VAV	
A-2	1	16	VAV	6"		120	268	6,2	NR	1046,1048	A-2-16-VAV	
A-2	1	17	VAV	4"		160	300	15	Pos	1045	A-2-17-VAV	
A-2	1	18	VAV	6"		150	300	15	Pos	1045	A-2-18-VAV	
A-2	1	19	VAV	4"		50	118	4	NR	1030	A-2-19-VAV	
A-2	3	20	VAV	10"		347	660	4	Neg	Waiting Area	A-2-20-VAV	
A-2	3	21	VAV	4"		75	150	2	NR	Corridor	A-2-21-VAV	
A-2	3	22	VAV	4"		75	150	2	NR	Corridor	A-2-22-VAV	
A-2	3	23	VAV	4"		75	150	2	NR	Corridor	A-2-23-VAV	
A-2-AHU-1 CFM TOTAL:					3265	= 4375						
A-2-AHU-3 CFM TOTAL:					1110							

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
A-3	1	01	VAV	4"		57	113	2	NR	Corridor	A-3-01-VAV	
A-3	1	02	RH	8"	0.8	60	120	4	NR	1062	A-3-02-RH	VG7842CT+7150G
A-3	1	03	RH	8"	1.1	93	175	6	NR	1063	A-3-03-RH	VG7842CT+7150G
A-3	1	04	RH	8"	1.2	113	195	6	NR	1064	A-3-04-RH	VG7842CT+7150G
A-3	1	05	RH	8"	1.3	132	238	6	Pos	1084	A-3-05-RH	VG7842CT+7150G
A-3	1	06	VAV	4"		57	113	2	NR	1039A,Corridor	A-3-06-VAV	
A-3	1	07	VAV	4"		80	243	6	NR	1055A	A-3-07-VAV	
A-3	1	08	VAV	4"		57	113	2	NR	Corridor	A-3-08-VAV	
A-3	1	09	RH	8"	2.4	487	574	6,2	NR	1055,55C,55B	A-3-09-RH	VG7842ET+7150G
A-3	1	10	VAV	6"		240	360	6	NR	1070,1072,1074	A-3-10-RH	
A-3	1	11	VAV	6"		325	360	6,4,6	NR	1066,1067,1068	A-3-11-VAV	
A-3	1	12	VAV	6"		120	250	15	Pos	1069	A-3-12-VAV	
A-3	1	13	VAV	4"		75	150	2	NR	Corridor	A-3-13-VAV	
A-3	1	14	VAV	6"		180	330	6	NR	1071,1073,1075	A-3-14-VAV	
A-3	3	15	VAV	4"		90	220	4	NEG	Waiting Area	A-3-15-VAV	
A-3	3	16	VAV	4"		110	220	4	NEG	Waiting Area	A-3-16-VAV	
A-3	3	17	VAV	4"		75	150	2	NR	Corridor	A-3-17-VAV	
A-3	3	18	VAV	4"		75	150	2	NR	Corridor	A-3-18-VAV	
A-3-AHU-1 CFM TOTAL:					3584	= 4324						
A-3-AHU-3 CFM TOTAL:					740							

AHU-1 CFM TOTAL: 10,567  
AHU-3 CFM TOTAL: 1,850  
MAX CFM TOTAL = 12,417

- Notes:
1. Thermostat is the common name of the space sensor.
  2. Re-Heat boxes only have a re-heat valve.
  3. Re-Heat boxes numbers from original plans.
  4. Pressure Relationships noted are dependant upon existing return ducting.
  5. Asterisks noted on table indicate that all re-heats in this area were left "as-is"
  6. A-1-01 moved grill and temp. thermostat into corridor.
  7. A-1-02 added grill into room 1012.
  8. Office created in room 1000.
  9. Office number correction for 1055B and 1055D.
  10. A-3-06 moved thermostat and grill in office 1039A.
  11. A-3-08 capped off grill in corridor. Added grill and moved thermostat into room 1055C.
  12. Created (3) offices 1029A, 1029B, and Storage.
  13. Any instance of a doubled up thermostat has been removed. All VAV and RH boxes have independent thermostats.



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AS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ A  
SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

Drawn	By	Date	Approved	By	Date
KAS		09NOV12			
Released by:					
Contract Number: 11-DC012					
Office Information: TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7364					
Drawing Number: 1 of 7					

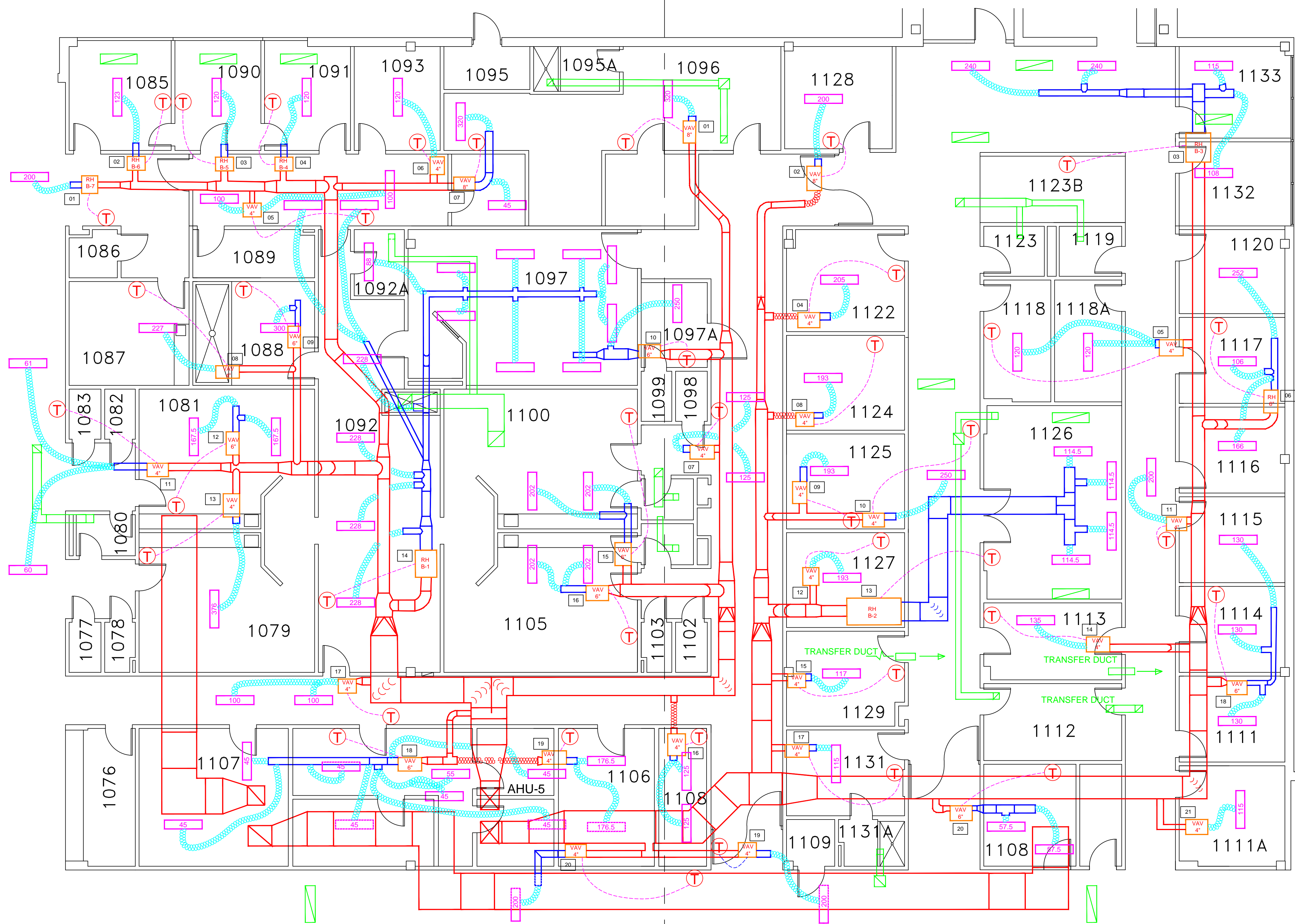
**TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS  
TL SERVICES, INC  
ENGINEERING GROUP

Project Title	REPLACE ROOF DAMPERS AND CONTROLS	Project Number	675-11-209	Office of Facilities Management
Location	ORLANDO VA MEDICAL CENTER	Building Number	500	
Date	11/09/12	Drawing Number	M-VM-1	Department of Veterans Affairs
Checked				
Drawn	KAS			
		VA248-C-1793		



SUB AREA B-1

SUB AREA B-2

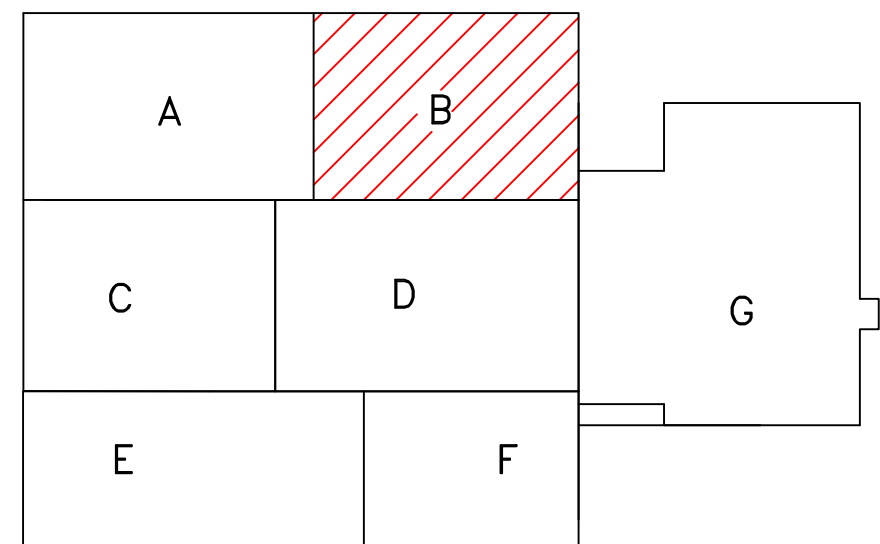


AIR UNIT DEFINITION AND LOCATION

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
B-1	5	01	RH	8"	1.1	100	200	2	NR	Corridor	B-1-01-RH	VG7842ET+7150G
B-1	5	02	RH	9"	0.8	62	123	3	NR	1085	B-1-02-RH	VG7842CT+7150G
B-1	5	03	RH	9"	0.7	55	120	3	NR	1090	B-1-03-RH	VG7842CT+7150G
B-1	5	04	RH	8"	0.7	55	120	3	NR	1091	B-1-04-RH	VG7842CT+7150G
B-1	5	05	VAV	4"		100	200	2	NR	Corridor	B-1-05-VAV	
B-1	5	06	VAV	4"		53	120	3	NR	1093	B-1-06-VAV	
B-1	5	07	VAV	4"		45	365	6	NR	1096	B-1-07-VAV	
B-1	5	08	VAV	4"		124	227	10	Pos	1087	B-1-08-VAV	
B-1	5	09	VAV	6"		150	300	15	NR	1088	B-1-09-VAV	
B-1	5	10	VAV	6"		70	250	6	Pos	1097A	B-1-10-VAV	
B-1	5	11	VAV	4"		61	121	2	NR	Corridor	B-1-11-VAV	
B-1	5	12	VAV	6"		218	375	6	Pos	1081	B-1-12-VAV	
B-1	5	13	VAV	4"		219	376	6	Pos	1079	B-1-13-VAV	
B-1	5	14	RH	16"	3.8			10	NEG	1092 1092A	B-1-14-RH	VG7842ET+7150G
B-1	5	15	VAV	6"		240	404	6	Pos	1100	B-1-15-VAV	
B-1	5	16	VAV	6"		240	404	6	Pos	1105	B-1-16-VAV	
B-1	5	17	VAV	4"		100	200	2	NR	Corridor	B-1-17-VAV	
B-1	5	18	VAV	6"		183	325	3	NR	1107	B-1-18-VAV	
B-1	5	19	VAV	4"		120	353	3	NR	1106	B-1-19-VAV	
B-1	5	20	VAV	4"		100	200	2	NR	Corridor	B-1-20-VAV	
B-1-AHU-5 CFM TOTAL:												= 4783

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
B-2	5	01	VAV	8"		265	320	6	Pos	1096	B-2-01-VAV	
B-2	5	02	VAV	8"		75	200	4	Pos	1128	B-2-02-VAV	
B-2	5	03	RH	16"	2.2	240	479	3.3,2	NR	1132,1133,Corridor	B-2-03-RH	VG7842ET+7150G
B-2	5	04	VAV	4"		102	205	6	NR	1122	B-2-04-VAV	
B-2	5	05	VAV	4"		120	240	12	NEG	1118,118A	B-2-05-VAV	
B-2	5	06	RH	4"		313	539	6.3,12	NR,NR,Neg	1167,1117,1120	B-2-06-VAV	VG7842CT+7150G
B-2	5	07	VAV	4"		125	250	2	NR	Corridor	B-2-07-VAV	
B-2	5	08	VAV	4"		80	193	6	NR	1124	B-2-08-VAV	
B-2	5	09	VAV	4"		50	193	6	NR	1125	B-2-09-VAV	
B-2	5	10	VAV	4"		125	250	2	NR	Corridor	B-2-10-VAV	
B-2	5	11	VAV	4"		100	200	2	NR	Corridor	B-2-11-VAV	
B-2	5	12	VAV	4"		80	193	6	NR	1127	B-2-12-VAV	
B-2	5	13	RH	16"	2.2	259	458	6	NR	1126	B-2-13-RH	VG7842ET+7150G
B-2	5	14	VAV	4"		53	135	3	NR	1113	B-2-14-VAV	
B-2	5	15	VAV	4"		55	193	3	NR	1129	B-2-15-VAV	
B-2	5	16	VAV	4"		55	250	3	NR	1108	B-2-16-VAV	
B-2	5	17	VAV	4"		58	115	3	NR	1131	B-2-17-VAV	
B-2	5	18	VAV	6"		270	390	6	NR	1111	B-2-18-VAV	
B-2	5	19	VAV	4"		100	200	2	NR	Corridor	B-2-19-VAV	
B-2	5	20	VAV	6"		58	115	2	NR	1108	B-2-20-VAV	
B-2	5	21	VAV	6"		58	115	2	NR	111A	B-2-21-VAV	
B-2-AHU-5 CFM TOTAL:												= 5157

MAX CFM TOTAL = 9,940



Notes:

1. Thermostat is the common name of the space sensor.
2. Re-Heat boxes only have a re-heat valve.
3. Re-Heat boxes numbers from original plans.
4. Pressure Relationships noted are dependant upon existing return ducting.
5. Asterisks noted on table indicate that all re-heats in this area were left "as-is".
6. B-1-05 moved to room 1089.
7. B-1-09 removed one grill.
8. Offices created in corridor outside room 1093.
9. B-1-10 moved thermostat to room 1097A.
10. B-1-11 added a grill, dividing the airflow.
11. Room 1121A corrected to 1123B.
12. Room 1096 floor plan changed. Now secure IT Computer room.
13. B-1-12 added room number 1081.
14. Rooms 1106 and 1107 layout altered by VA and shown with new grill placement.
15. Storage room 1108 split into two rooms, main room being the only conditioned.
16. Room 1118 split in two, creating room 1118A, adding a grill and splitting the airflow.
17. B-1-17 added a grill, dividing the airflow.
18. B-1-19 removed a grill.
19. B-2-06 VAV turned into re-heat box.
20. B-2-07 added a grill, dividing the airflow.
21. B-2-16 removed a grill.
22. B-2-21 added VAV in room 111A.

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AS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ B  
SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

Drawn By: KAS	Date: 09NOV12	Approved By:	Date:
Reviewed by:			
Contract Number: 11-DC012	Office Information: TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7964		
Drawing Number: 2 of 7			



Project Title: REPLACE ROOF DAMPERS AND CONTROLS	Project Number: 675-11-209	Office of Facilities Management
Location: ORLANDO VA MEDICAL CENTER	Building Number: 500	
Date: 11/09/12	Drawing Number: M-VM-2	Department of Veterans Affairs
Checked: KAS	VA248-C-1793	



SUB-AREA C-1

SUB-AREA C-2

SUB-AREA C-3

FEED TO  
SECTION  
"A"  
AHU-3FEED FROM  
SECTION  
"A"  
AHU-1FEED TO  
SECTION  
"E"  
AHU-3

## AIR UNIT DEFINITION AND LOCATION

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
C-1	3	01	VAV	4"		71	165	3	NR	1202A	C-1-01-VAV	
C-1	3	02	VAV	4"		52	110	3	NR	1206	C-1-02-VAV	
C-1	3	03	VAV	4"		90	180	4	NR	1202B	C-1-03-VAV	
C-1	3	04	VAV	4"		60	200	4	NR	1207	C-1-04-VAV	
C-1	3	05	VAV	6"		100	180	4	NR	1202B	C-1-05-VAV	
C-1	3	06	RH	16"	1.3	130	250	4	NR	1209T	C-1-06-RH	VG7842CT+7450G
C-1	3	07	VAV	8"		125	342	3	NR	1202, 1202A, 1202B	C-1-07-VAV	
C-1	3	08	VAV	6"		100	180	4	NR	1202B	C-1-08-VAV	
C-1	3	09	VAV	6"		75	180	3	NR	1202B	C-1-09-VAV	
C-1	3	10	VAV	4"		35	103	3	NR	1209S	C-1-10-VAV	
C-1	3	11	VAV	4"		49	97	3	NR	1201	C-1-11-VAV	
C-1	3	12	VAV	4"		35	96	3	NR	1209R	C-1-12-VAV	
C-1	3	13	VAV	4"		100	375	6	Neg	1301A	C-1-13-VAV	
C-1	3	14	VAV	4"		50	197	10	Neg	1301G	C-1-14-VAV	
C-1	3	15	VAV	4"		105	375	6	Neg	1301A	C-1-15-VAV	
C-1	3	16	VAV	4"		35	96	3	NR	1209Q	C-1-16-VAV	
C-1	3	17	RH	21"	7.0	811	2000	4	NR	Waiting	C-1-17-RH	VG7842CT+7450G
C-1	3	18	VAV	8"		150	375	6	Neg	1301A	C-1-18-VAV	
C-1	3	19	VAV	4"		45	200	6	Neg	1301A	C-1-19-VAV	
C-1	3	20	VAV	4"		80	240	10	Neg	1301B	C-1-20-VAV	
C-1	3	21	VAV	6"		160	298	6	Neg	1209N	C-1-21-VAV	

C-1-AHU-3 CFM TOTAL: 6419

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
C-2	3	01	VAV	4"		134	223	6	NR	1209U	C-2-01-VAV	
C-2	3	02	VAV	6"		78	156	4	NR	1209B	C-2-02-VAV	
C-2	3	03	VAV	4"		78	156	4	NR	1209B	C-2-03-VAV	
C-2	3	04	VAV	6"		127	254	3.2	NR	1209, Corridor	C-2-04-VAV	
C-2	1	05	RH	14"	1.0	114	175	6	Neg	1210B	C-2-05-RH	VG7842CT+7450G
C-2	1	06	VAV	4"		150	187	4	NR	1210	C-2-06-VAV	
C-2	1	07	VAV	4"		47	93	4	NR	1210D	C-2-07-VAV	
C-2	1	08	VAV	6"		75	225	4	NR	1210A	C-2-08-VAV	
C-2	1	09	VAV	4"		47	80	3	NR	1210F	C-2-09-VAV	
C-2	3	10	RH	8"	1.1	60	200	6	Neg	Urinalysis	C-2-10-RH	VG7842CT+7450G
C-2	1	11	VAV	6"		100	278	6	Pos	1210H	C-2-11-VAV	
C-2	1	12	VAV	6"		100	288	6	Pos	1210G	C-2-12-VAV	
C-2	3	13	RH	8"	1.3	80	250	6	Neg	Urinalysis	C-2-13-RH	VG7842CT+7450G
C-2	1	14	VAV	4"		65	130	2	NR	Corridor	C-2-14-VAV	
C-2	3	15	RH	24"	10.4	1638	2277	6	Neg	1209D	C-2-15-RH	VG7842CT+7450G
C-2	3	16	RH	10"	1.5	120	302	6	Neg	1209J	C-2-16-RH	VG7842CT+7450G
C-2	3	17	RH	12"	0.8	100	268	4	NR	1209H	C-2-17-RH	VG7842CT+7450G
C-2	1	18	VAV	4"		56	150	6	NR	1303B	C-2-18-VAV	
C-2	1	19	VAV	4"		56	150	6	NR	1303B	C-2-19-VAV	
C-2	1	20	VAV	6"		125	350	2.4	NR	1303A, 1303H	C-2-20-VAV	
C-2	3	21	RH	10"	1.2	116	232	2	NR	1209K	C-2-21-RH	VG7842CT+7450G
C-2	1	22	VAV	4"		51	176	6	NR	1303D	C-2-22-VAV	
C-2	1	23	VAV	4"		45	127	4	NR	1303P	C-2-23-VAV	
C-2	1	24	VAV	4"		40	139	3	NR	1303G	C-2-24-VAV	
C-2	1	25	VAV	6"		60	130	2	NR	Corridor	C-2-25-VAV	

C-2-AHU-1 CFM TOTAL: 2587

C-2-AHU-3 CFM TOTAL: 4409

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
C-3	1	01	VAV	4"		45	138	4	NR	1304D	C-3-01-VAV	
C-3	1	02	RH	9"	0.8	63	126	3	NR	1304E	C-3-02-RH	VG7842CT+7450G
C-3	1	03	VAV	8"		65	130	2	NR	Corridor	C-3-03-VAV	
C-3	1	04	RH	14"	2.2	219	438	3	NR	1304F	C-3-04-RH	VG7842CT+7450G
C-3	1	05	VAV	4"		45	130	3	NR	1304C	C-3-05-VAV	
C-3	1	06	VAV	6"		90	300	3	NR	1304B	C-3-06-VAV	
C-3	1	07	VAV	4"		75	150	2	NR	Corridor	C-3-07-VAV	
C-3	1	08	VAV	6"		195	345	4.4	NR	1304R, 1304A	C-3-08-VAV	
C-3	1	09	RH	8"	0.6	92	176	6	NR	1304I	C-3-09-RH	VG7842CT+7450G
C-3	1	10	VAV	6"		125	305	6	NR_Pos	1304K, 1304L	C-3-10-VAV	
C-3	1	11	VAV	6"		62	311	6.2.2	Pos.NR.NR	1304M, 1304N	C-3-11-VAV	
C-3	1	12	VAV	4"		75	150	2	NR	1304K	C-3-12-VAV	

C-3-AHU-1 CFM TOTAL: 2699

AHU-1 CFM TOTAL: 5,286

AHU-3 CFM TOTAL: 10,828

MAX CFM TOTAL = 16,114

Property of TL Services  
Do Not Replicate or CopyAS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ C  
SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

Drawn	Approved
By: KAS	Date: 09NOV12
Reviewed by:	
Contract Number:	Office Information:
11-DC012	TL Services, Inc.
Drawing Number:	4733 Kibler Rd.
3 of 7	Van Buren, AR 72956
	PH: 501-474-7222
	FAX: 501-471-7984



Project Title	REPLACE ROOF DAMPERS AND CONTROLS	Project Number	675-11-209	Office of Facilities Management
Location	ORLANDO VA MEDICAL CENTER	Building Number	500	
Date	11/09/12	Checked	KAS	
Drawing Number		VA248-C-1793	M-VM-3	Department of Veterans Affairs
Drawing Number		VA248-C-1793	M-VM-3	





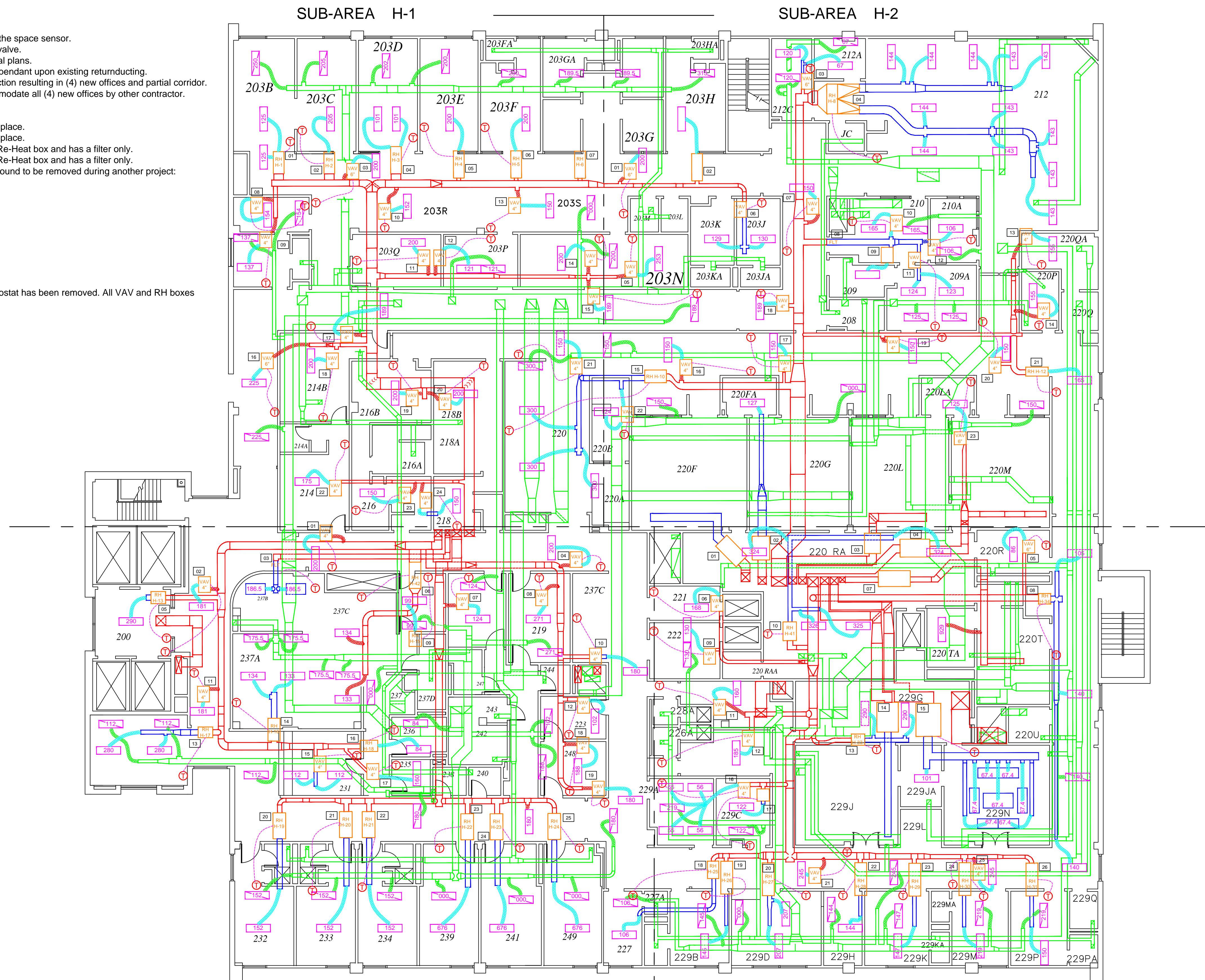
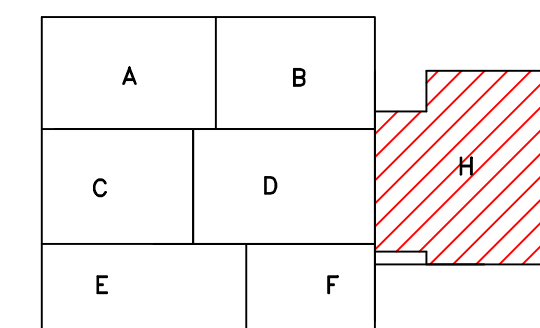


1. Thermostat is the common name of the space sensor.
2. Re-Heat boxes only have a re-heat valve.
3. Re-Heat boxes numbers from original plans.
4. Pressure Relationships noted are dependant upon existing returnducting.
5. Room 203G underwent new construction resulting in (4) new offices and partial corridor.

An electric reheat was installed to accomodate all (4) new offices by other contractor.

6. H-01-01 added a grill.
7. H-01-04 added a grill.
8. H-01-07-RH has been abandoned in place.
9. H-02-02-RH has been abandoned in place.
10. H-03-08-RH was found not to be a Re-Heat box and has a filter only.
11. H-03-03-RH was found not to be a Re-Heat box and has a filter only.
12. The following Re-Heat boxes were found to be removed during another project:

H-02-08-RH  
H-02-09-RH  
H-04-01-RH  
H-04-02-RH  
H-04-03-RH  
H-04-04-RH  
H-04-07-RH  
H-04-14-RH  
H-04-15-RH  
H-04-17-RH



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Do Not Replicate or Copy**

[illegible]

# AS-BUILT DRAWINGS

## SECOND FLOOR AREA ~ H

### SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

Drawn		Approved	
By:	Date:	By:	Date:
KAS	09NOV12		
Reviewed by:			
Contract Number:		Office Information:	
11-DC012		TL Services, Inc. 4733 Kibler Rd.	
Drawing Number:		Van Buren, AR 72956	
5 of 7		PH: 501-474-7222 FAX: 501-474-7066	



**TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS

**TL SERVICES, INC**  
**ENGINEERING GROUP**



# Project Title

## REPLACE ROOF DAMPERS AND CONTROLS

Location	

Date 11/09/12

Project Number	075-11-000
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500

$$M \quad \sim \quad \nabla M \quad \in$$

M-VM-5

Office of  
Facilities  
Management



AIR UNIT DEFINITION AND LOCATION												
SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
H-1	8	01	RH	16"	1.3	191	250	4	NR	203B	H-1-01-RH	VG7842ET+7150G
H-1	8	02	RH	16"	1.1	102.5	205	3	NR	203C	H-1-02-RH	VG7842ET+7150G
H-1	8	03	VAV	6"	84	200	2	NR	Corridor	H-1-03-VAV		
H-1	8	04	RH	16"	1.1	101	202	3	NR	203D	H-1-04-RH	VG7842ET+7150G
H-1	8	05	RH	9"	1.1	100	200	3	NR	203E	H-1-05-RH	VG7842ET+7150G
H-1	8	06	RH	9"	1.1	100	200	3	NR	203F	H-1-06-RH	VG7842ET+7150G
H-1	8	07	RH	10"	1.0	204	975	5	NR	203G	H-1-07-RH	VG7842ET+7150G
H-1	8	08	VAV	4"	80	154	6	NR	203A	H-1-08-VAV		
H-1	8	09	VAV	4"	80	137	3	NR	202	H-1-09-VAV		
H-1	8	10	VAV	4"	76	152	3	NR	203R	H-1-10-VAV		
H-1	8	11	VAV	4"	142	200	6	NEG	203P	H-1-11-VAV		
H-1	8	12	VAV	4"	60.8	121	3	NEG	203Q	H-1-12-VAV		
H-1	8	13	VAV	4"	75	150	4	NEG	203S	H-1-13-VAV		
H-1	8	14	VAV	4"	95	200	3	NR	203N	H-1-14-VAV		
H-1	8	15	VAV	4"	80	189	2	NR	Corridor	H-1-15-VAV		
H-1	8	16	VAV	6"	80	225	2	NR	Corridor	H-1-16-VAV		
H-1	8	17	VAV	4"	80	189	2	NR	Corridor	H-1-17-VAV		
H-1	8	18	VAV	4"	110	200	3	NR	214B	H-1-18-VAV		
H-1	8	19	VAV	4"	100	200	4	NR	216B	H-1-19-VAV		
H-1	8	20	VAV	4"	75	200	4	NR	216B	H-1-20-VAV		
H-1	8	21	VAV	4"	128	150	2	NR	Corridor	H-1-21-VAV		
H-1	8	22	VAV	4"	112	175	3	NR	214	H-1-22-VAV		
H-1	8	23	VAV	4"	123	150	10	NEG	216	H-1-23-VAV		
H-1	8	24	VAV	4"	128	150	10	NEG	218	H-1-24-VAV		

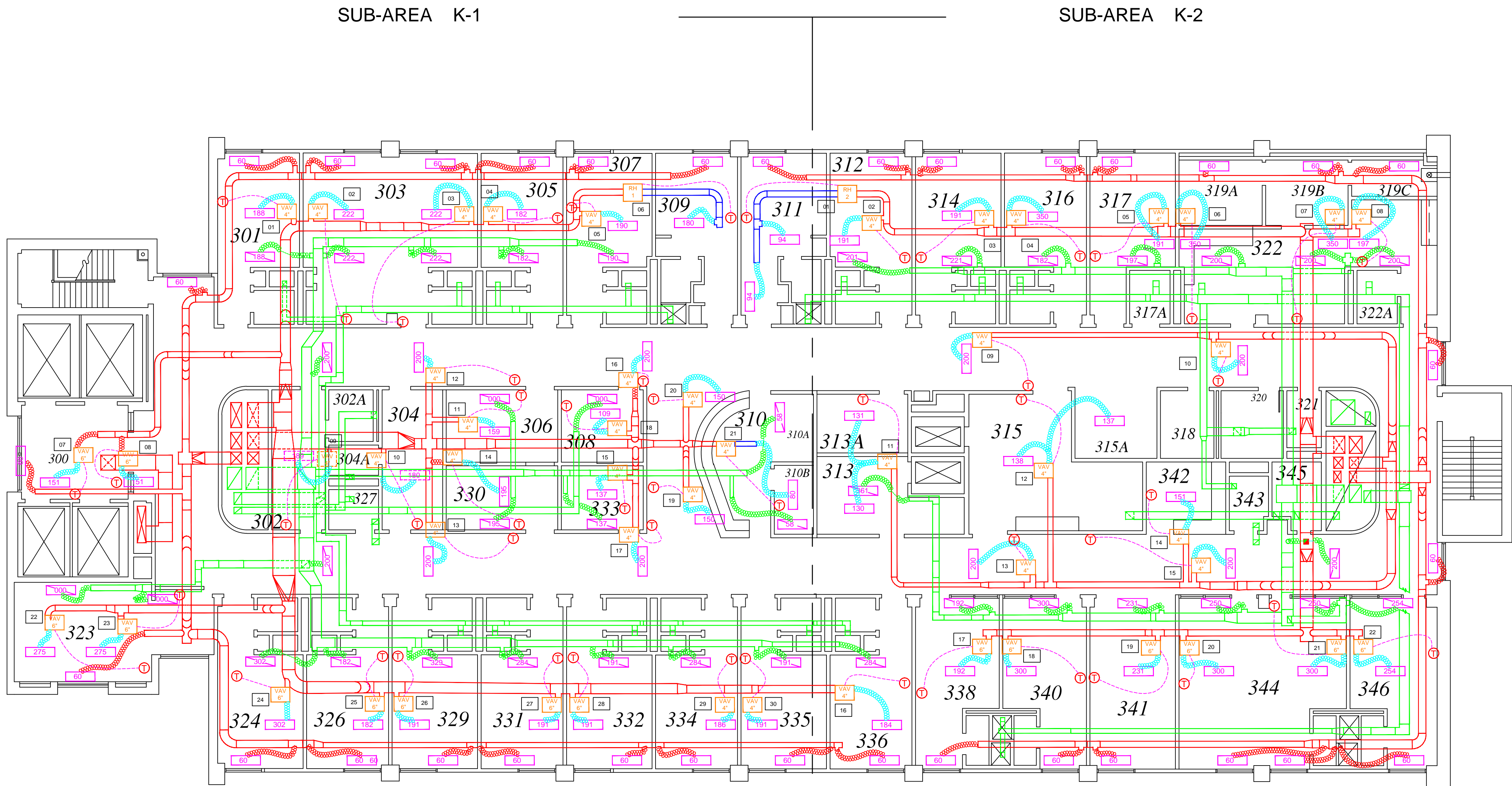
	SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	Min ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
ABANDONED	H-2	9	01	VAV	6"	7.2	94	200	2	NR	Corridor	H-2-01-VAV	
	H-2	9	02	VAV	6"	7.2	94	200	2	NR	Corridor	H-2-02-VAV	VG7842ET+150G
	H-2	9	03	VAV	6"	7.2	95	187	2.3	NR	212A,212C	H-2-03-VAV	
	H-2	9	04	RH	36"	7.2	1204	1721	6	NR	212	H-2-04-RH	VG7842CT+1750G
	H-2	9	05	VAV	4"	1	134	253	3	NR	203N	H-2-05-VAV	
	H-2	9	06	VAV	4"	1	97	259	10	NEG	203J,203K	H-2-06-VAV	
	H-2	9	07	VAV	4"	1	75	150	2	NR	Corridor	H-2-07-VAV	
	H-2	9	08	VAV	4"	1	66	150	2	NR	Corridor	H-2-08-VAV	
REMOVED	H-2	9	09	VAV	4"	1	67	138	0	NR	889	H-2-09-VAV	
	H-2	9	10	VAV	4"	1	85	165	3	NR	210	H-2-10-VAV	
	H-2	9	11	VAV	4"	1	85	240	4	NR	208A	H-2-11-VAV	
	H-2	9	12	VAV	4"	1	53	106	3	NR	210A	H-2-12-VAV	
	H-2	9	13	VAV	4"	1	75	155	4	POS	220QA	H-2-13-VAV	
	H-2	9	14	VAV	4"	1	111	155	10	NEG	220P	H-2-14-VAV	
	H-2	9	15	RH	12	2.3	536	900	3,2,6,3	NR	220B,Corridor,220,220A	H-2-15-RH	VG7842ET+1750G
	H-2	9	16	VAV	4"	1	75	150	2	NR	Corridor	H-2-16-VAV	
	H-2	9	17	VAV	4"	1	75	150	2	NR	Corridor	H-2-17-VAV	
	H-2	9	18	VAV	4"	1	115	189	2	NR	Corridor	H-2-18-VAV	
	H-2	9	19	VAV	4"	1	124	124	2	NR	Corridor	H-2-19-VAV	
	H-2	9	20	VAV	4"	1	75	150	2	NR	Corridor	H-2-20-VAV	
REMOVED	H-2	9	21	RH	8"	0.8	82.5	165	2	NR	Corridor	H-2-21-RH	VG7842CT+1750G
	H-2	9	22	VAV	4"	1	64	124	3	NR	220B	H-2-22-VAV	
	H-2	9	23	VAV	6"	1	62.5	125	6	NR	220LA	H-2-23-VAV	

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
H-3	8	01	VAV	4"	85	200	2	NR	Corridor	Corridor	H-3-01-VAV	
H-3	8	02	VAV	4"	75	181	2	NR	Corridor	Corridor	H-3-02-VAV	
H-3	8	03	FILTER	11"	1.8	373	6	NR	237B	Corridor	H-3-03-VAV	
H-3	8	04	VAV	4"	85	200	2	NR	Corridor	Corridor	H-3-04-VAV	
H-3	8	05	RH	10"	1.2	110	280	2	NR	200	H-3-05-RH	VG7842CT+7150G
H-3	8	06	RH	12"	1.4	175.5	267	6	NR	237A	H-3-06-RH	VG7842CT+7150G
H-3	8	07	VAV	4"	62	124	3	NR	Procto Office	Corridor	H-3-07-VAV	
H-3	8	08	VAV	4"	135.5	271	4	NEG	213	Corridor	H-3-08-VAV	
H-3	8	09	10"	0.7	50	93	3	NR	237C	Corridor	H-3-09-RH	
H-3	8	10	VAV	4"	75	180	2	NR	Corridor	Corridor	H-3-10-VAV	VG7842CT+7150G
H-3	8	11	VAV	4"	75	181	2	NR	Corridor	Corridor	H-3-11-VAV	
H-3	8	12	VAV	4"	51	102	3	NR	223	Corridor	H-3-12-VAV	
H-3	8	13	RH	12"	2.1	150	560	4	NEG	230	H-3-13-RH	VG7842ET+7150G
H-3	8	14	RH	11"	1.4	175.5	267	6	NR	237A	H-3-14-RH	VG7842CT+7150G
H-3	8	15	VAV	4"	112	224	6	NR	231	Corridor	H-3-15-VAV	
H-3	8	16	RH	9"	0.6	42	84	3	NR	236	H-3-16-RH	VG7842CT+7150G
H-3	8	17	VAV	4"	50	100	3	NR	235	Corridor	H-3-17-VAV	
H-3	8	18	VAV	4"	75	188	6	NR	248	Corridor	H-3-18-VAV	
H-3	8	19	VAV	4"	75	180	2	NR	Corridor	Corridor	H-3-19-VAV	
H-3	8	20	RH	10"	0.9	76	152	3	NR	232	H-3-20-RH	VG7842CT+7150G
H-3	8	21	RH	10"	0.9	76	152	3	NR	233	H-3-21-RH	VG7842CT+7150G
H-3	8	22	RH	10"	0.9	76	152	3	NR	234	H-3-22-RH	VG7842CT+7150G
H-3	8	23	RH	10"	2.7	534	676	15	POS	239	H-3-23-RH	VG7842ET+7150G
H-3	8	24	RH	10"	2.7	534	676	15	POS	241	H-3-24-RH	VG7842ET+7150G
H-3	8	25	RH	10"	2.7	534	676	15	POS	249	H-3-25-RH	VG7842ET+7150G

H-3-AHU-3 CFM TOTAL:
= 6615

	SUB-AREA	AHU#	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
REMOVED	H-4	12	01	RH	10'	0.4	1004	1255	20	N EG	220T	H-4-01-RH	VG7842CT+71500
REMOVED	H-4	12	02	RH	10'	0.6	0.4	127	0	NR	220R	H-4-02-RH	VG7842CT+71500
REMOVED	H-4	12	03	RH	10'	0.4	1000	1255	20	N EG	220T	H-4-03-RH	VG7842CT+71500
REMOVED	H-4	12	04	RH	10'	0.6	0.4	127	0	NR	220R	H-4-04-RH	VG7842CT+71500
	H-4	12	05	VAV	6"	50	86	2	NR	220R	H-4-05-VAV	H-4-05-VAV	
	H-4	12	06	VAV	6"	121	168	10	NEG	221	H-4-06-VAV	H-4-06-VAV	
REMOVED	H-4	12	07	RH	14'	0.8	704	925	29	N EG	220T	H-4-07-RH	VG7842CT+71500
	H-4	12	08	RH	10'	1.9	175	420	2	NR	Corridor	H-4-08-RH	VG7842CT+71500
	H-4	12	09	VAV	4"	60	130	3	NR	222	H-4-09-VAV	H-4-09-VAV	
	H-4	12	10	RH	13'	5.2	894	1299	6	NR	220R	H-4-10-RH	VG7842ET+71500
	H-4	12	11	VAV	4"	80	160	10	NEG	228	H-4-11-VAV	H-4-11-VAV	
	H-4	12	12	VAV	4"	55	185	6	NEG	226	H-4-12-VAV	H-4-12-VAV	
	H-4	12	13	RH	11'	1.5	162	290	3	NR	229S	H-4-13-RH	VG7842CT+71500
REMOVED	H-4	12	14	RH	10'	0.4	1004	1255	20	N EG	220T	H-4-14-RH	VG7842CT+71500
REMOVED	H-4	12	15	RH	10'	0.4	1004	1255	20	NR	220R	H-4-15-RH	VG7842CT+71500
	H-4	12	16	VAV	6"	130	219	6	NR	225A	H-4-16-VAV	H-4-16-VAV	
REMOVED	H-4	12	17	RH	9'	0.6	0.4	122	5	NR	220T	H-4-17-RH	VG7842CT+71500
	H-4	12	18	RH	11'	0.6	53	106	3	NR	227	H-4-18-RH	VG7842CT+71500
	H-4	12	19	RH	11'	0.9	72.5	145	3	NR	229B	H-4-19-RH	VG7842CT+71500
	H-4	12	20	RH	11'	1.0	175	414	4	NEG	229D	H-4-20-RH	VG7842CT+71500
	H-4	12	21	VAV	6"	100	245	2	NR	Corridor	H-4-21-VAV	H-4-21-VAV	
	H-4	12	22	RH	11'	0.9	72	144	4	NR	229H	H-4-22-RH	VG7842CT+71500
	H-4	12	23	RH	11'	0.9	73.5	147	3	NR	229K	H-4-23-RH	VG7842CT+71500
	H-4	12	24	RH	11'	1.2	128	218	6	NR	229M	H-4-24-RH	VG7842CT+71500
	H-4	12	25	VAV	6"	100	245	2	NR	Corridor	H-4-25-VAV	H-4-25-VAV	
	H-4	12	26	RH	9'	1.2	65	150	3	NR	229P	H-4-26-RH	VG7842CT+71500
	H-4-AHU-12 CFM TOTAL:								= 9,948				





AIR UNIT DEFINITION AND LOCATION

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
K-1	10	01	VAV	4"	94	188	3	NR	301	K-1-01-VAV		
K-1	10	02	VAV	4"	111	222	3	NR	303	K-1-02-VAV		
K-1	10	03	VAV	4"	111	222	3	NR	303	K-1-03-VAV		
K-1	10	04	VAV	4"	91	182	3	NR	305	K-1-04-VAV		
K-1	10	05	VAV	4"	92	190	3	NR	307	K-1-05-VAV		
K-1	10	06	RH	8"	1.0	90	180	3	NR	309	K-1-06-RH	VG7842CT+7150G
K-1	10	07	VAV	4"	75.5	151	4	NR	300	K-1-07-VAV		
K-1	10	08	VAV	6"	75.5	151	4	NR	300	K-1-08-VAV		
K-1	10	09	VAV	6"	94.5	189	4	NR	302	K-1-09-VAV		
K-1	10	10	VAV	4"	75	180	3	NR	304	K-1-10-VAV		
K-1	10	11	VAV	4"	75	159	3	NR	306	K-1-11-VAV		
K-1	10	12	VAV	4"	100	200	2	NR	Corridor	K-1-12-RH		
K-1	10	13	VAV	4"	100	200	2	NR	Corridor	K-1-13-VAV		
K-1	10	14	VAV	4"	100	195	6	NR	330	K-1-14-VAV		
K-1	10	15	VAV	4"	70	137	4	NR	333	K-1-15-VAV		
K-1	10	16	VAV	4"	100	200	2	NR	Corridor	K-1-16-VAV		
K-1	10	17	VAV	4"	100	200	2	NR	Corridor	K-1-17-VAV		
K-1	10	18	VAV	4"	55	109	3	NR	308	K-1-18-VAV		
K-1	10	19	VAV	4"	60	150	2	NR	310	K-1-19-VAV		
K-1	10	20	VAV	4"	60	150	2	NR	310	K-1-20-VAV		
K-1	10	21	VAV	4"	50	80	3	NR	310B	K-1-21-VAV		
K-1	10	22	VAV	6"	120	275	4	NEG	323	K-1-22-VAV		
K-1	10	23	VAV	6"	120	275	4	NEG	323	K-1-23-VAV		
K-1	10	24	VAV	6"	185	302	6	NR	324	K-1-24-VAV		
K-1	10	25	VAV	6"	91	182	3	NR	326	K-1-25-VAV		
K-1	10	26	VAV	6"	95.5	191	3	NR	329	K-1-26-VAV		
K-1	10	27	VAV	6"	96	191	6	NR	331	K-1-27-VAV		
K-1	10	28	VAV	6"	95.5	191	3	NR	332	K-1-28-VAV		
K-1	10	29	VAV	6"	175	186	6	NR	334	K-1-29-VAV		
K-1	10	30	VAV	6"	95.5	191	3	NR	335	K-1-30-VAV		

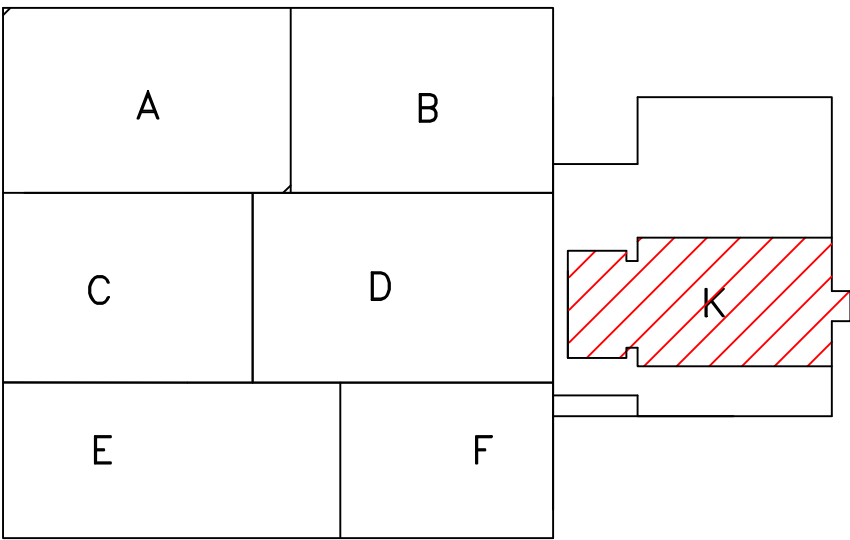
K-1-AHU-10 CFM TOTAL: = 5620

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
K-2	11	01	RH	8"	1.0	94	188	3	NR	311	K-2-01-RH	VG7842CT+7150G
K-2	11	02	VAV	4"	96	191	3	NR	312	K-2-02-VAV		
K-2	11	03	VAV	4"	85	191	4	NR	314	K-2-03-VAV		
K-2	11	04	VAV	4"	150	350	3	NR	316	K-2-04-VAV		
K-2	11	05	VAV	4"	85	191	3	NR	317	K-2-05-VAV		
K-2	11	06	VAV	4"	150	350	10	NR	319A	K-2-06-VAV		
K-2	11	07	VAV	4"	150	350	10	NR	319B	K-2-07-VAV		
K-2	11	08	VAV	4"	37	197	3	NR	319C	K-2-08-VAV		
K-2	11	09	VAV	4"	100	200	2	NR	Corridor	K-2-09-VAV		
K-2	11	10	VAV	4"	100	200	2	NR	Corridor	K-2-10-VAV		
K-2	11	11	VAV	4"	130.5	261	3	NR	313,313A	K-2-11-VAV		
K-2	11	12	VAV	4"	210	275	6	NR	315	K-2-12-VAV		
K-2	11	13	VAV	4"	100	200	2	NR	Corridor	K-2-13-VAV		
K-2	11	14	VAV	4"	75.5	151	6	NR	342	K-2-14-VAV		
K-2	11	15	VAV	4"	100	200	2	NR	Corridor	K-2-15-VAV		
K-2	11	16	VAV	4"	80	184	6	NR	336	K-2-16-VAV		
K-2	11	17	VAV	6"	96	192	3	NR	338	K-2-17-VAV		
K-2	11	18	VAV	6"	190	300	6	NR	340	K-2-18-VAV		
K-2	11	19	VAV	6"	120	231	3	NR	341	K-2-19-VAV		
K-2	11	20	VAV	6"	140	300	4	NEG	344	K-2-20-VAV		
K-2	11	21	VAV	6"	140	300	4	NEG	344	K-2-21-VAV		
K-2	11	22	VAV	6"	135	254	4	NR	346	K-2-22-VAV		

K-2-AHU-11 CFM TOTAL: = 5,256

AHU-10 CFM TOTAL: 5,620  
AHU-11 CFM TOTAL: 5,256

MAX CFM TOTAL = 10,876



- Notes:
1. Thermostat is the common name of the space sensor.
  2. Re-Heat boxes only have a re-heat valve.
  3. Re-Heat boxes numbers from original plans.
  4. Pressure Relationships noted are dependant upon existing return ducting.
  5. Floor plan revisions for rooms 317,317A,319A,319B,319C,322, and 322A.
  6. Any instance of a doubled up thermostat has been removed. All VAV and RH boxes have independent thermostats.
  7. K-1-06 removed a grill.
  8. K-2-11 added a grill.
  9. K-2-12 added a grill.

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AS-BUILT DRAWINGS  
THIRD FLOOR AREA ~ K  
SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

Drawn		Approved	
By:	Date:	By:	Date:
KAS	09NOV12		
Reviewed by:			
Contract Number:		Office Information:	
11-DC012		TL Services, Inc.	
Drawing Number:		4733 Kibler Rd.	
6 of 7		Van Buren, AR 72956	
		PH: 501-474-7222	
		FAX: 501-471-7964	

**TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS

TL SERVICES, INC  
ENGINEERING GROUP

Project Title			
REPLACE ROOF DAMPERS AND CONTROLS			
Location		Drawing Number	
ORLANDO VA MEDICAL CENTER		M-VM-6	
Date	Checked	Drawn	
11/09/12		KAS	

Project Number	675-11-209
Building Number	500
Drawing Number	M-VM-6

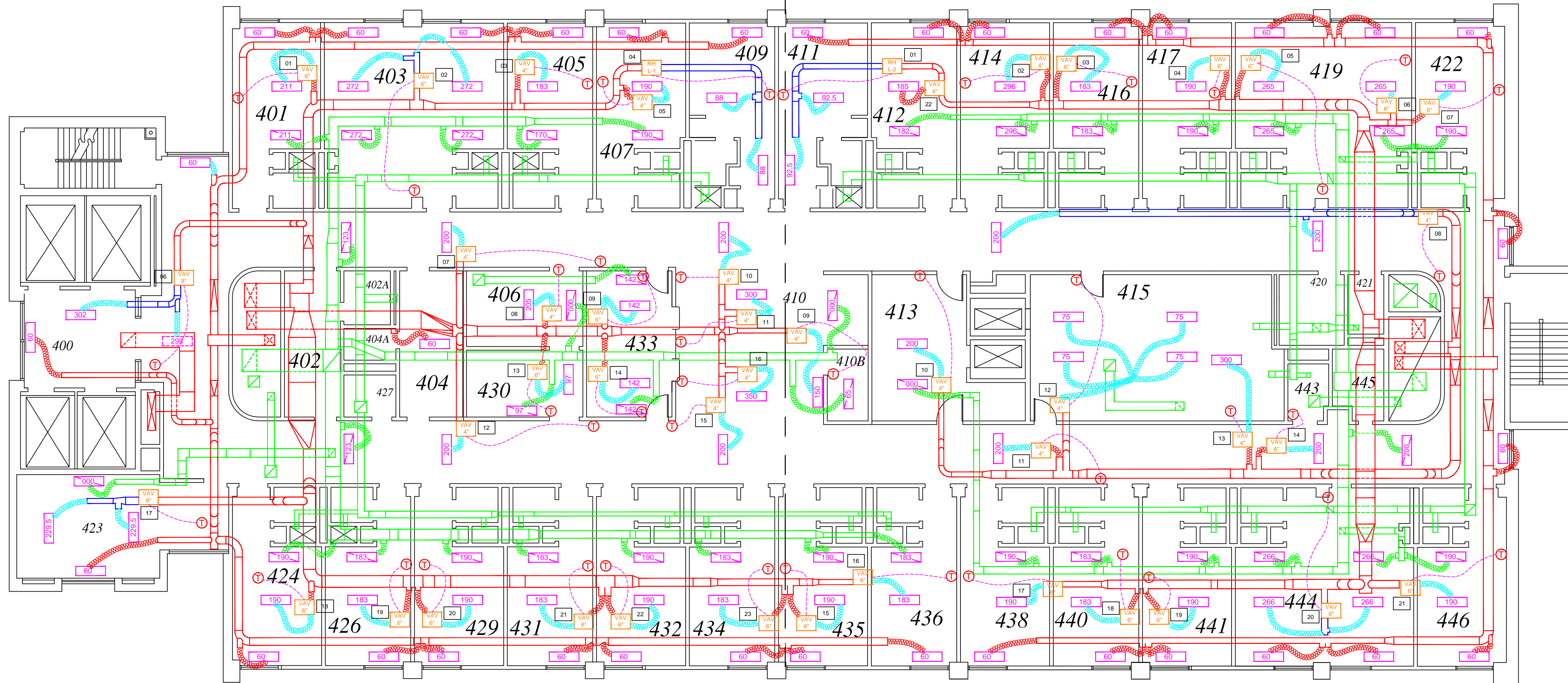
Office of  
Facilities  
Management

Department of  
Veterans Affairs



SUB-AREA L-1

SUB-AREA L-2



### AIR UNIT DEFINITION AND LOCATION

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
L-1	10	01	VAV	6"		105.5	211	3	NR	401	L-1-01-VAV	
L-1	10	02	VAV	6"		280	544	4	NR	403	L-1-02-VAV	
L-1	10	03	VAV	4"		91.5	183	3	NR	405	L-1-03-VAV	
L-1	10	04	RH	8"	1.0	88	176	3	NR	409	L-1-04-RH	VG7842CT+7150G
L-1	10	05	VAV	4"		95	190	3	NR	407	L-1-05-VAV	
L-1	10	06	VAV	8"		250	600	3	NR	400, Corridor	L-1-06-VAV	
L-1	10	07	VAV	4"		100	200	2	NR	Corridor	L-1-07-VAV	
L-1	10	08	VAV	4"		75	205	4	NEG	406	L-1-08-VAV	
L-1	10	09	VAV	6"		71	142	2	NR	403	L-1-09-VAV	
L-1	10	10	VAV	4"		100	200	2	NR	Corridor	L-1-10-VAV	
L-1	10	11	VAV	4"		175	300	4	NEG	410	L-1-11-VAV	
L-1	10	12	VAV	4"		100	200	2	NR	Corridor	L-1-12-VAV	
L-1	10	13	VAV	6"		50	97	3	NR	430	L-1-13-VAV	
L-1	10	14	VAV	6"		71	142	2	NR	433	L-1-14-VAV	
L-1	10	15	VAV	4"		100	200	2	NR	Corridor	L-1-15-VAV	
L-1	10	16	VAV	8"		175	350	4	NEG	410	L-1-16-VAV	
L-1	10	17	VAV	6"		230	459	4	NEG	423	L-1-17-VAV	
L-1	10	18	VAV	6"		95	190	3	NR	424	L-1-18-VAV	
L-1	10	19	VAV	6"		91.5	183	3	NR	426	L-1-19-VAV	
L-1	10	20	VAV	6"		95	190	3	NR	429	L-1-20-VAV	
L-1	10	21	VAV	6"		91.5	183	3	NR	431	L-1-21-VAV	
L-1	10	22	VAV	6"		95	190	3	NR	432	L-1-22-VAV	
L-1	10	23	VAV	6"		91.5	183	3	NR	434	L-1-23-VAV	

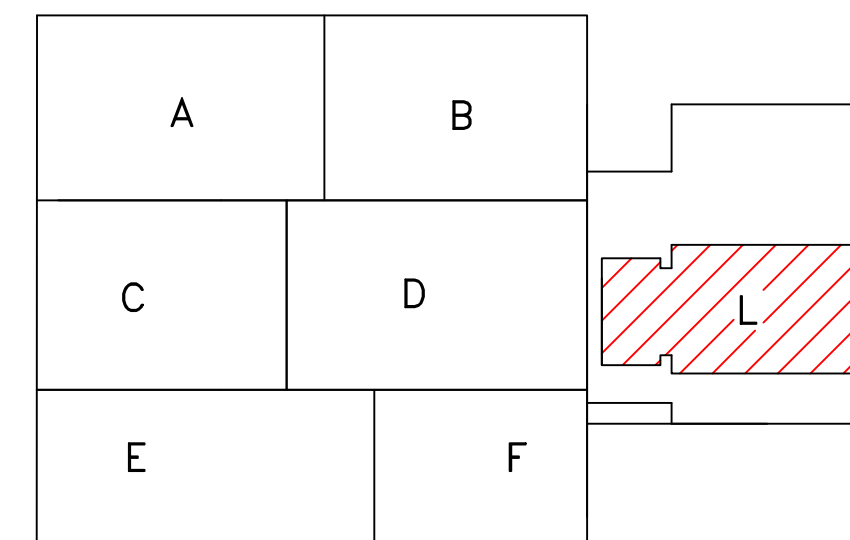
L-1-AHU-10 CFM TOTAL: =5518

SUB-AREA	AHU #	UNIT #	DEVICE	SIZE	GPM	MIN CFM	MAX CFM	MIN ach	PRESSURE	LOCATION	I.D. MARK	PRODUCT NUMBER
L-2	11	01	RH	8"	1.0	92.5	185	3	NR	411	L-2-01-RH	VG7842CT+7150G
L-2	11	02	VAV	4"		185	296	6	NR	414	L-2-02-VAV	
L-2	11	03	VAV	6"		91.5	183	3	NR	416	L-2-03-VAV	
L-2	11	04	VAV	6"		95	190	3	NR	417	L-2-04-VAV	
L-2	11	05	VAV	6"		135	265	4	NR	419	L-2-05-VAV	
L-2	11	06	VAV	6"		135	265	4	NR	419	L-2-06-VAV	
L-2	11	07	VAV	6"		95	190	3	NR	422	L-2-07-VAV	
L-2	11	08	VAV	4"		200	400	2	NR	Corridor	L-2-08-VAV	
L-2	11	09	VAV	4"		50	150	4	NR	410B	L-2-09-VAV	
L-2	11	10	VAV	4"		95	200	6	NR	413	L-2-10-VAV	
L-2	11	11	VAV	4"		100	200	2	NR	Corridor	L-2-11-VAV	
L-2	11	12	VAV	4"		180	300	4	NR	415	L-2-12-VAV	
L-2	11	13	VAV	4"		180	300	4	NR	415	L-2-13-VAV	
L-2	11	14	VAV	6"		100	200	2	NR	Corridor	L-2-14-VAV	
L-2	11	15	VAV	6"		95	190	3	NR	435	L-2-15-VAV	
L-2	11	16	VAV	6"		91.5	183	3	NR	436	L-2-16-VAV	
L-2	11	17	VAV	6"		95	190	3	NR	438	L-2-17-VAV	
L-2	11	18	VAV	6"		91.5	183	3	NR	440	L-2-18-VAV	
L-2	11	19	VAV	6"		95	190	3	NR	441	L-2-19-VAV	
L-2	11	20	VAV	8"		275	532	4	NR	444	L-2-20-VAV	
L-2	11	21	VAV	6"		95	190	3	NR	446	L-2-21-VAV	

A-3-AHU-1 CFM TOTAL: = 5,037

AHU-10 CFM TOTAL: 5,518  
AHU-11 CFM TOTAL: 5,037

MAX CFM TOTAL = 10,555



#### Notes:

1. Thermostat is the common name of the space sensor
2. Re-Heat boxes only have a re-heat valve.
3. Re-Heat boxes numbers from original plans.
4. Pressure Relationships noted are dependant upon existing return ducting.
5. New 4" VAV installed in room 412 labeled L-2-22.
6. Any instance of doubled up thermostats have been removed, making each respective VAV or RH box have it's own respective thermostat.

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## AS-BUILT DRAWINGS FOURTH FLOOR AREA ~ L SUPPLY/RETURN MECHANICAL DRAWING LAYOUT

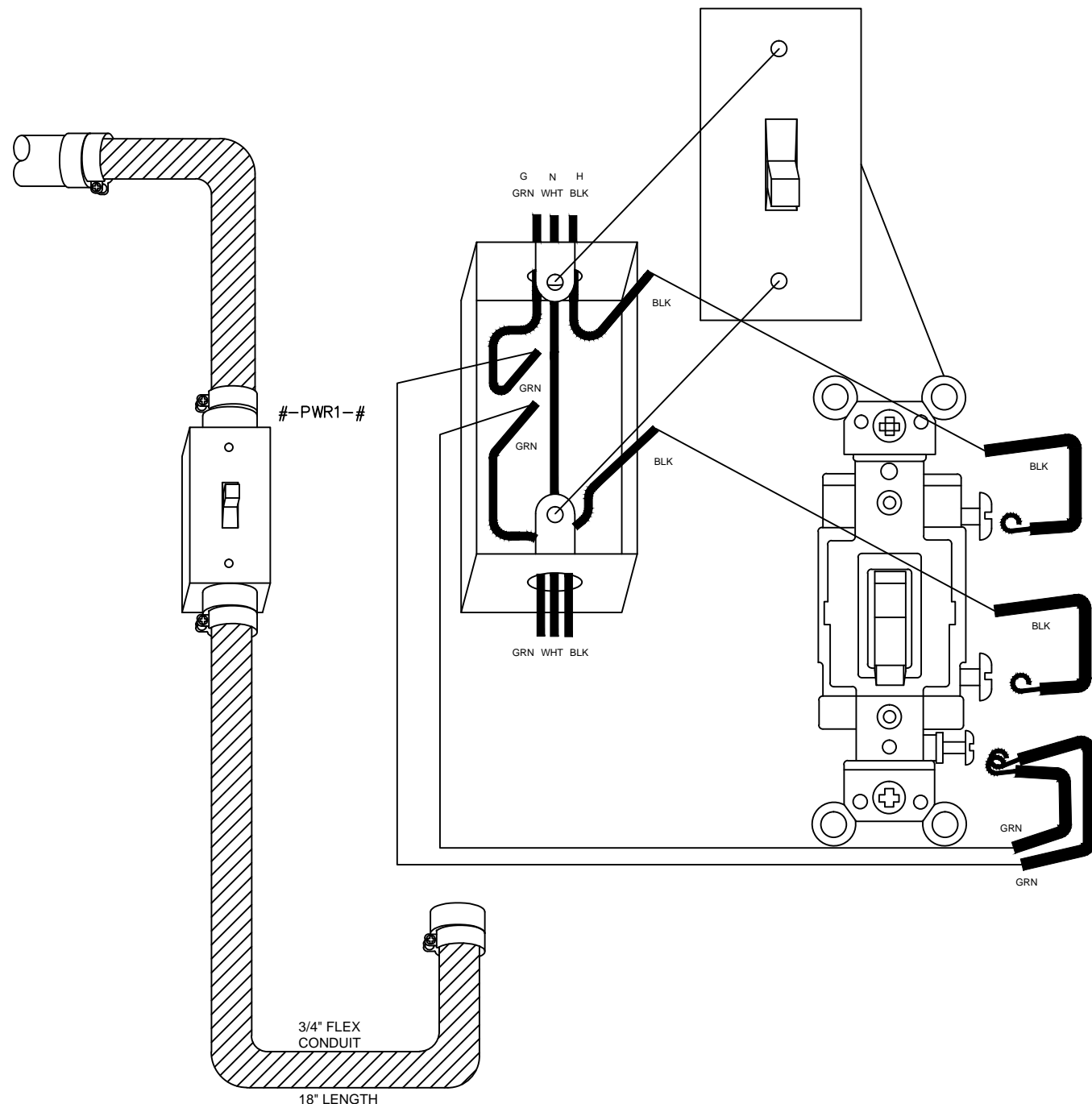
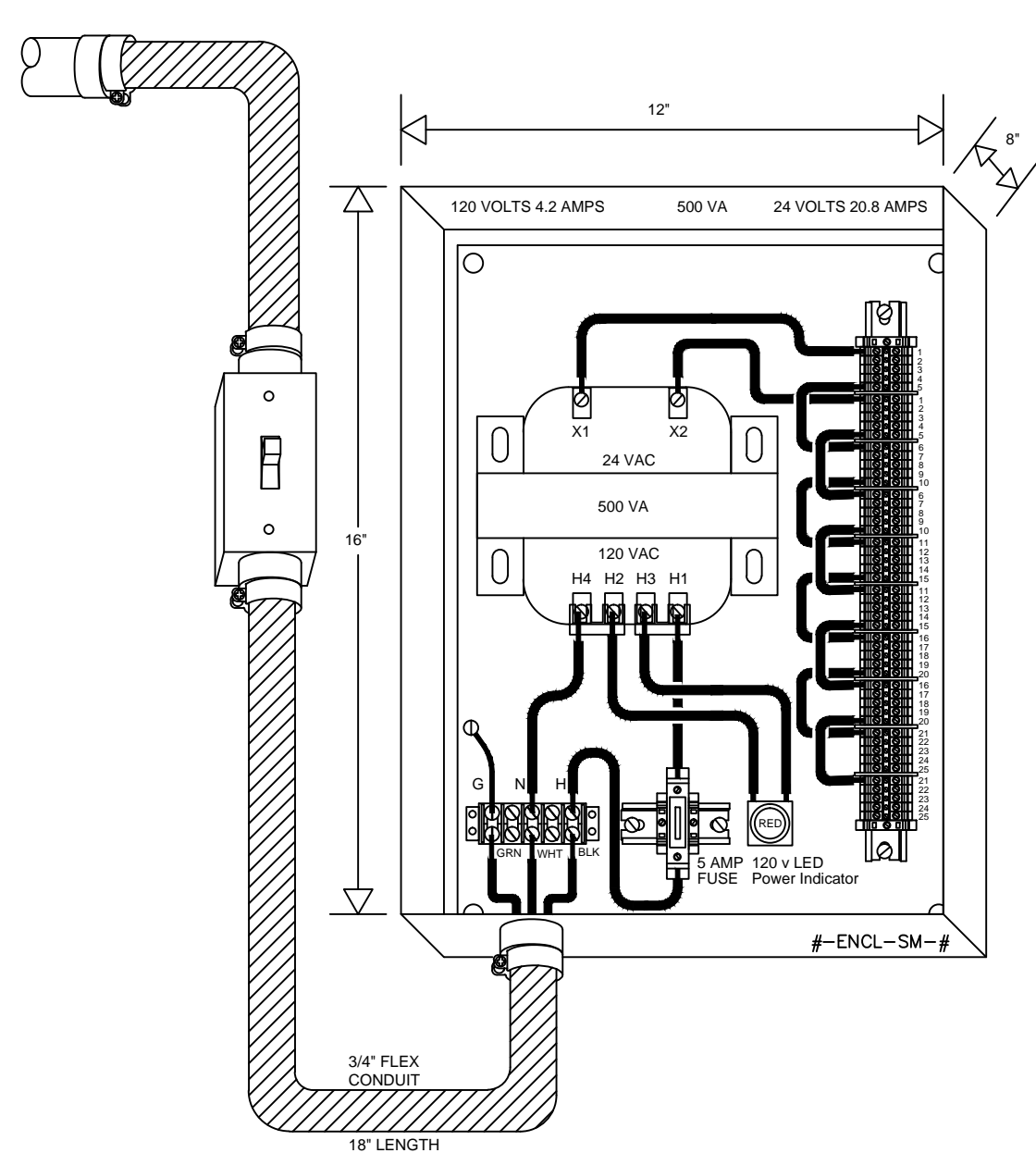
Drawn	Approved
By: KAS Date: 09NOV12	By: Date:
Reviewed by:	
Contract Number: 11-DC012	Office Information: TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7964
Drawing Number: 7 of 7	



Project Title	REPLACE ROOF DAMPERS AND CONTROLS	Project Number	675-11-209	Office of Facilities Management  Department of Veterans Affairs
Location	ORLANDO VA MEDICAL CENTER	Building Number	500	
Date	11/09/12	Drawing Number	M-VM-7	
Checked		Drawn	KAS	

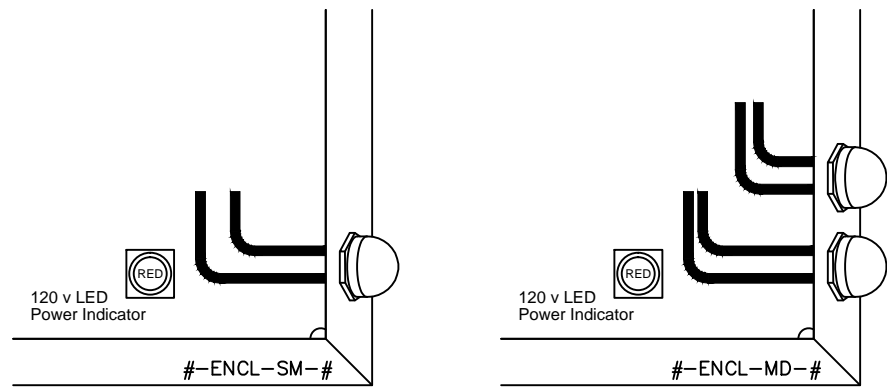


120 VAC  
VA SUPPLIED  
CIRCUIT



Notes:

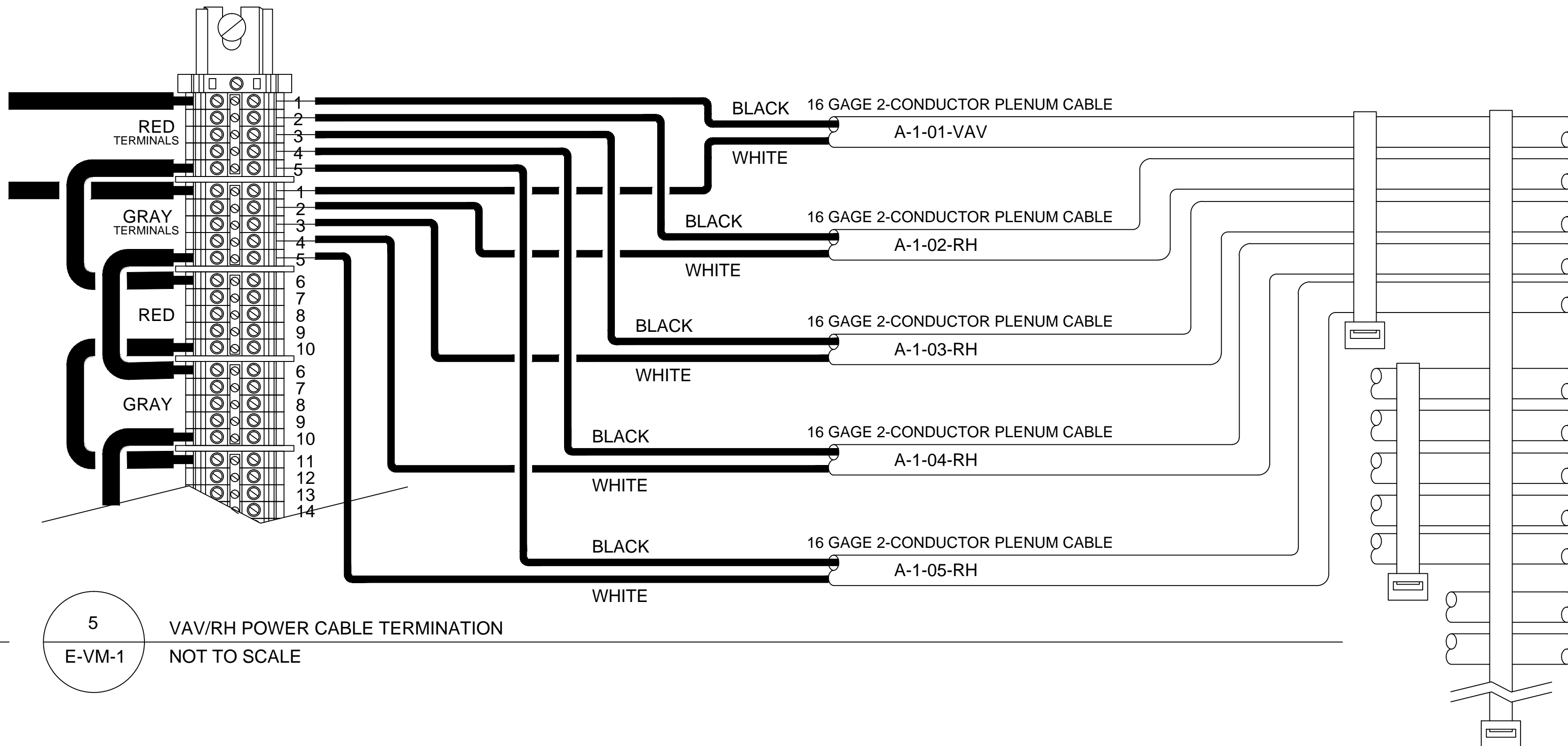
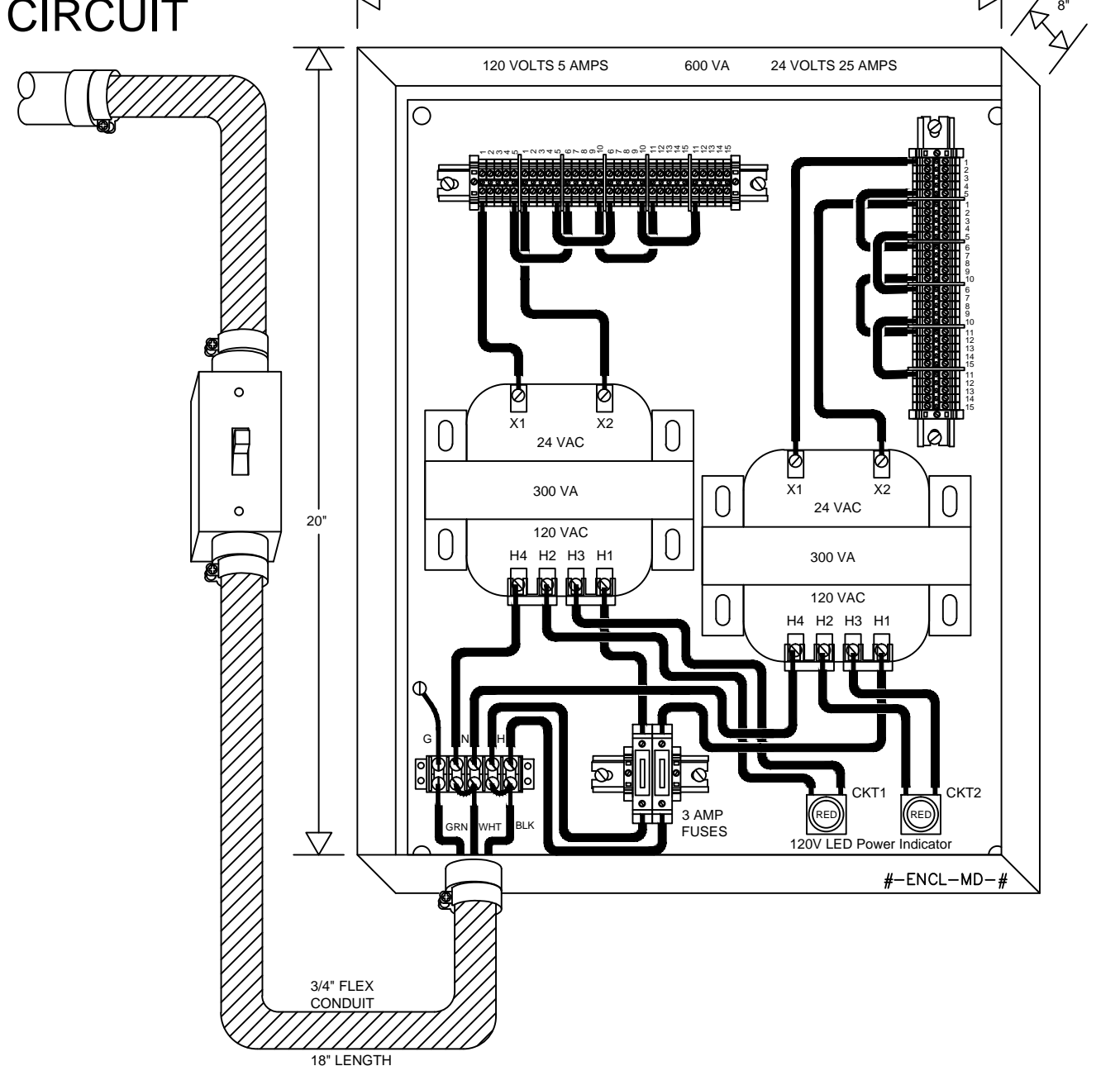
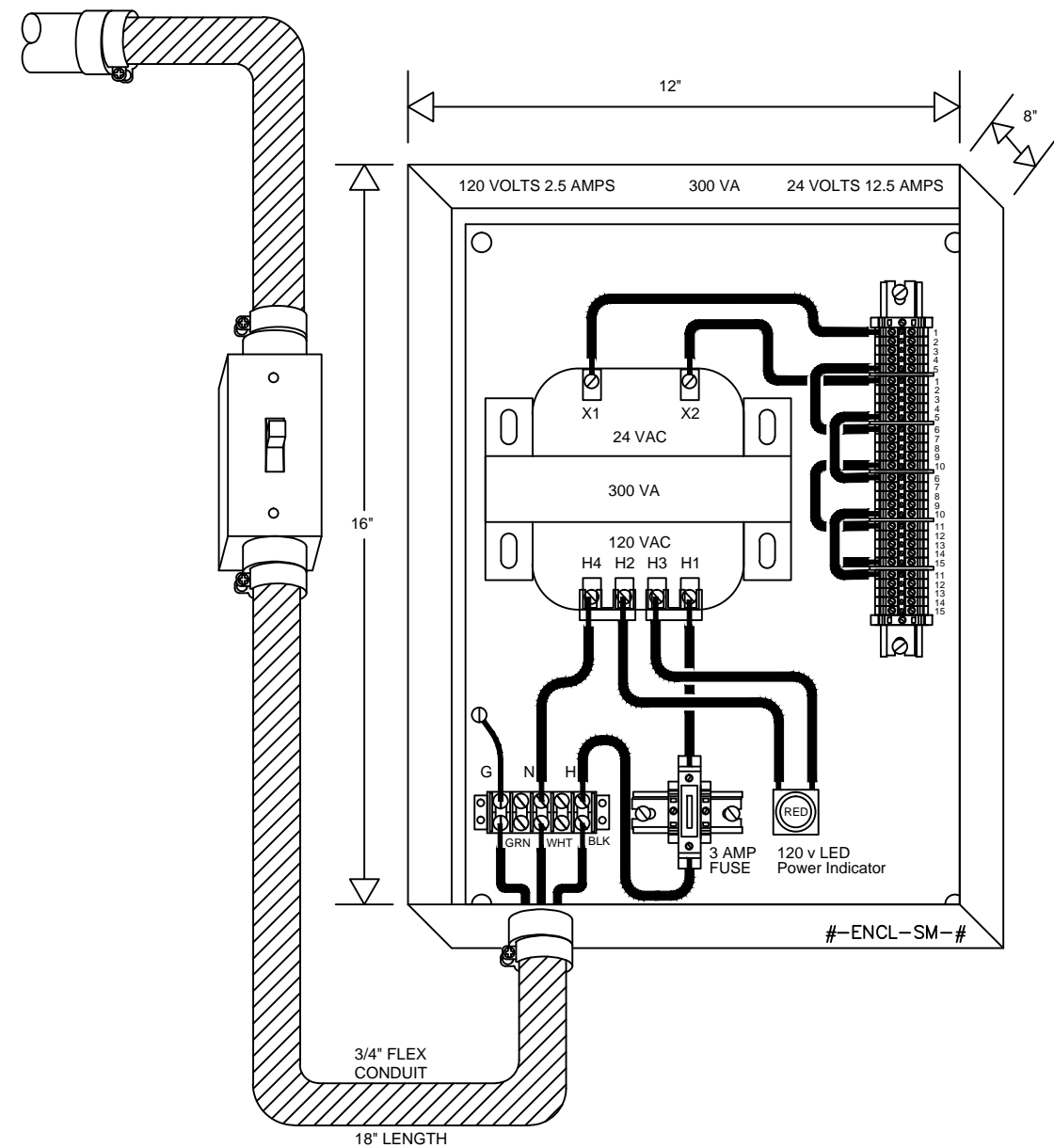
1. Actual electrical circuit numbers to be determined by the Contractor during the install phase, but that the Contractor shall coordinate with COTR. The Contractor is responsible to identify, select, and ensure adequate power availability for the VAVs and any additional equipment installed as part of this contract. Actual circuit number shall be recorded in As-Built drawings
2. A single 20 amp 120 volt circuit for every 2100VA of transformer. Will be confirmed by Electrical Engineer to the Government COTR.
3. Standard Plenum cable conductors are Black/White, in some cases Red/Green. Black/Red is typically HOT. White/Green is typically Neutral. Any deviation should be carried through-out the entire project and noted on the As-Built.
4. LED power indicator lamps to be mounted externally on the panel box for visual indication of power availability and status.
5. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
6. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
7. All work shall be in contract compliance and in accordance with applicable Code and references.
8. The Contractor shall coordinate with NFPA, NEC, and the TIL for connection and communications as necessary to the Fire Alarm system as a result of HVAC contractual work.
9. Contractor will coordinate with Architectural trades regarding any wall penetrations through fire rated partitions, fire barriers, and/or fire walls. Contractor is responsible to seal and maintain all fire/smoke barriers impacted by the execution of the contract work. Contractor shall provide all UL-listed fire/smoke stopping details, cut sheets, and products for review to the COTR.



DEVICE ID	QTY	PART (DEVICE) MFG NUMBER	SUPPLIER (VENDOR)	DESCRIPTION
#-ENCL-SM-#	17	A-16N12BLP Enclosure / A-16N12MP Back Panel	Hoffman (KELE)	NEMA 1 Enclosure H-16" x W-12" x D-8.62"
#-ENCL-MD-#	2	A-20N16BLP Enclosure / A-20N16MP Back Panel	Hoffman (KELE)	NEMA 1 Enclosure H-20" x W-16" x D-8.62"
#-XFMR5-#	16	E500E	EGS (KELE)	500 VA 120/240 Volt to 24 Volt transformer D-6.32" x W-5.25" x H4.45"
#-XFMR3-#	5	E300E	EGS (KELE)	300 VA 120/240 Volt to 24 Volt transformer D-5.09" x W-5.25" x H4.45"
#-PWR1-#	19	S1T20W	KELE	Single Pole 20 amp toggle switch, 20 amp 120-277 volt, white
	19	HBX21834	KELE	2-1/8" X 4" Handy Box with 3/4" electrical knockouts.
	19	HBX7G	KELE	2-1/8" X 4" Handy Box Cover, one toggle switch
	19	FLEX34 (Approximately 57')	KELE	3/4" Flexible Steel Conduit, 36" per panel.
	76	FLEXCN34	KELE	3/4" Flexible Steel Conduit Straight Connector
#-120PWR1B-#	19	105SP	KELE	5 Terminal Double Row Terminal Block.
	21	APW299D-R-120	IDEC (KELE)	Power 'ON' Indicator lamp
#-24PWR1B-#	10	DIN-3F	IDEC (KELE)	35 mm Steel DIN Mounting Rail, 39.4"
	475	M4/6-RD	IDEC (KELE)	24 Volt 'Hot' terminal, Red
	475	M4/6	IDEC (KELE)	24 Volt 'Neutral' terminal, Gray
	169	SCF6	IDEC (KELE)	Circuit Separator
	21	FEM6	IDEC (KELE)	Block and cover
	80	BAM2	IDEC (KELE)	Terminal End Stops
	190	BJS6-5	IDEC (KELE)	5 Pole Terminal Shorting Bar
	10	EV6	IDEC (KELE)	Terminal Shorting Bar Hardware (screw and Post, 20 cnt per package)
	21	M10/16SFL	IDEC (KELE)	Transformer 120 Volt Fuse Holder
	16	OF-5	IDEC (KELE)	500 VA Transformer 120 Volt Fuse, 5 amp Max
	5	OF-3	IDEC	300 VA Transformer 120 Volt Fuse, 3 amp Max

Type	Count	Type	Room Number	VAV Count	AREA	SECT	Circuit Number	Elect Room Number	Note
300	1	500	XXXX	21	A	1	CKT-##	1208	
500	16	500	XXXX	23	A	2	CKT-##	1208	
600	2	500	XXXX	18	A	3	CKT-##	1208	
		500	XXXX	21	C	1	CKT-##	1208	
		500	XXXX	23	C	2	CKT-##	1208	
		300	XXXX	12	C	3	CKT-##	1208	
		500	XXXX	23	E	1	CKT-##	1429	
		500	XXXX	24	E	2	CKT-##	1429	
		600	XXXX	27	E	3	CKT-##	1429	
		500	XXXX	24	E	4	CKT-##	1429	
		500	XXXX	22	H	1	CKT-##	240	
		500	XXXX	23	H	2	CKT-##	240	
		500	XXXX	24	H	3	CKT-##	240	
		600	XXXX	28	K	1	CKT-##	345	
		500	XXXX	22	K	2	CKT-##	345	
		500	XXXX	23	L	1	CKT-##	445	
		500	XXXX	22	L	2	CKT-##	445	

120 VAC  
VA SUPPLIED  
CIRCUIT



1  
E-VM-1  
500 VA TRANSFORMER PANEL  
NOT TO SCALE

3  
E-VM-1  
CUTOFF SWITCH WIRING  
NOT TO SCALE

6  
E-VM-1  
LED Power Indicator  
NOT TO SCALE

2  
E-VM-1  
300 VA TRANSFORMER PANEL  
NOT TO SCALE

4  
E-VM-1  
600 VA TRANSFORMER PANEL  
NOT TO SCALE

5  
E-VM-1  
VAV/RH POWER CABLE TERMINATION  
NOT TO SCALE

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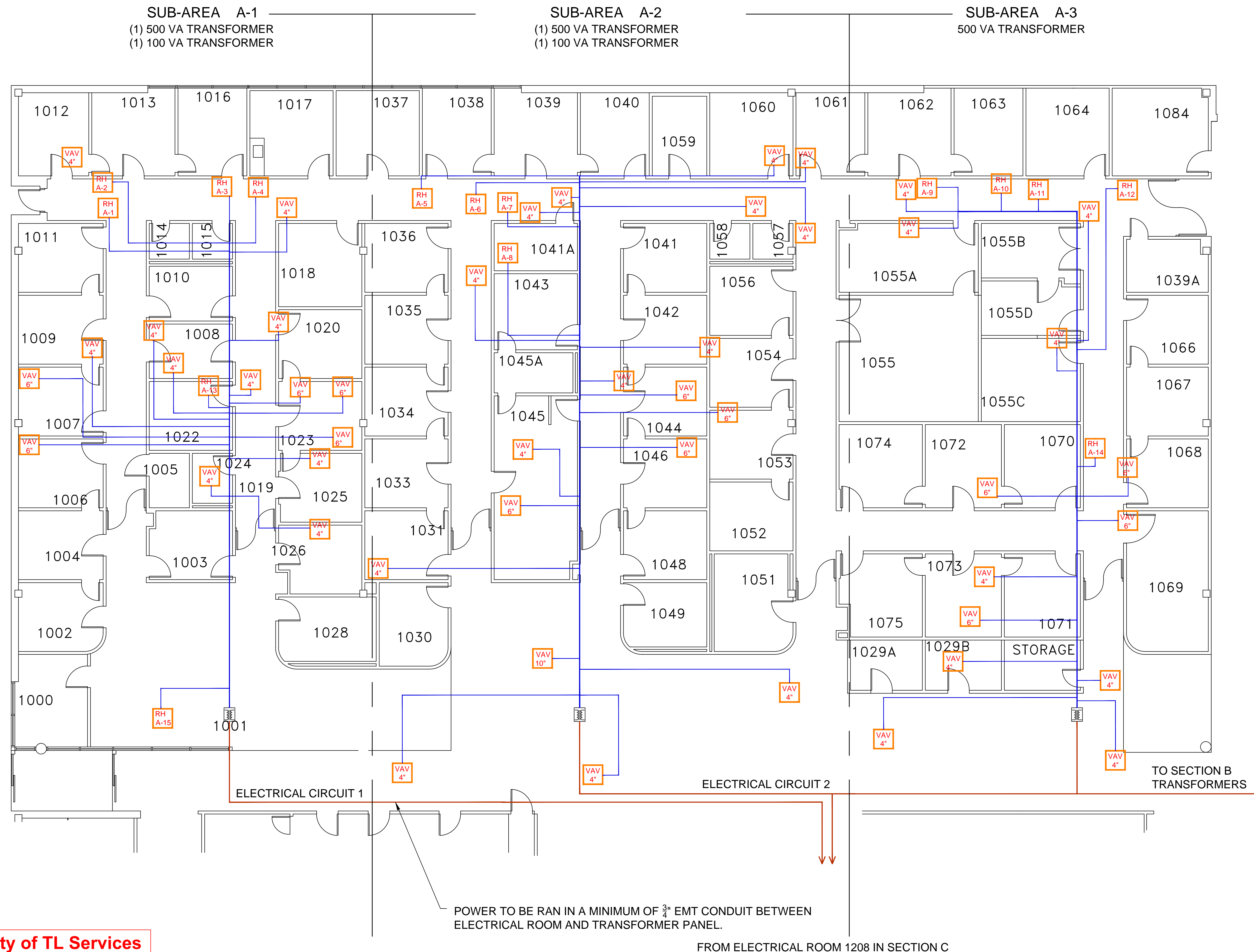
AS-BUILT DRAWINGS  
VAV/RH TRANSFORMER PANEL DIAGRAMS

Drawn	Approved
By: JNS Date: 15AUG11	By: Date:
Reviewed by:	
Contract Number: 11-DC012	Office Information: TL Services, Inc. 4733 Ridder Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7964
Drawing Number: 1 of 8	

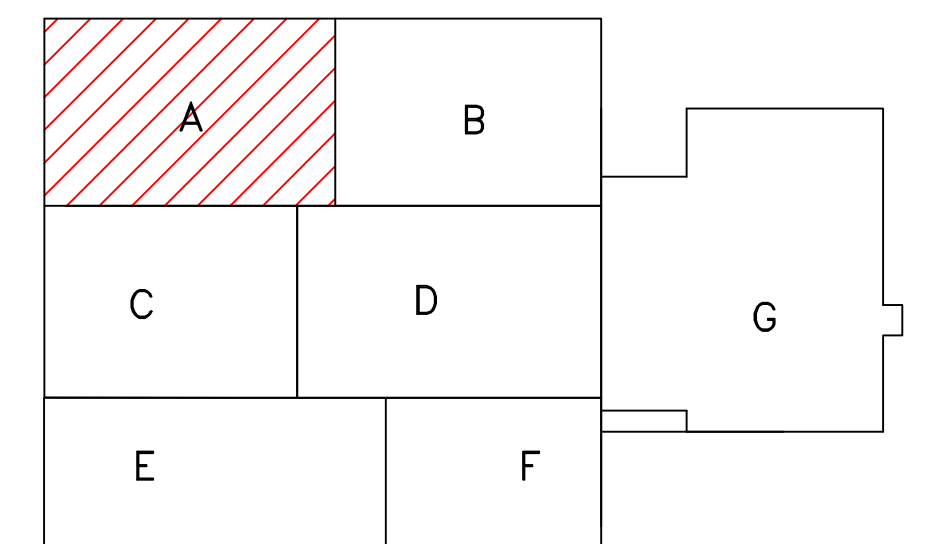


Project Title REPLACE ROOF DAMPERS AND CONTROLS	Project Number 675-11-209	Office of Facilities Management
Location ORLANDO VA MEDICAL CENTER	Building Number 500	
Date 11/09/12	Checked JNS	Drawing Number E-VM-1
	Drawn JNS	Department of Veterans Affairs





- Notes:
1. There is one electrical closet for areas A, B, and C. It is located in Area C, Room 1208.
  2. Due to the location of the electrical closet, there will be a requirement for 2 circuits from Room 1208.
  3. Circuit 1 shall feed Area C and Section A-1 of Area A.
  4. Circuit 2 shall feed Area B and Section A-2 and A-3 of Area A.
  5. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
  6. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
  7. All work shall be in contract compliance and in accordance with applicable Code and references.
  8. The Contractor shall coordinate with NFPA, NEC, and the TIL for connection and communications as necessary to the Fire Alarm system as a result of HVAC contractual work.
  9. Contractor will coordinate with Architectural trades regarding any wall penetrations through fire rated partitions, fire barriers, and/or fire walls. Contractor is responsible to seal and maintain all fire/smoke barriers impacted by the execution of the contract work. Contractor shall provide all UL-listed fire/smoke stopping details, cut sheets, and products for review to the COTR.



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Reference Drawing	NO	Revision	ECN	Date	By

AS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ A  
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

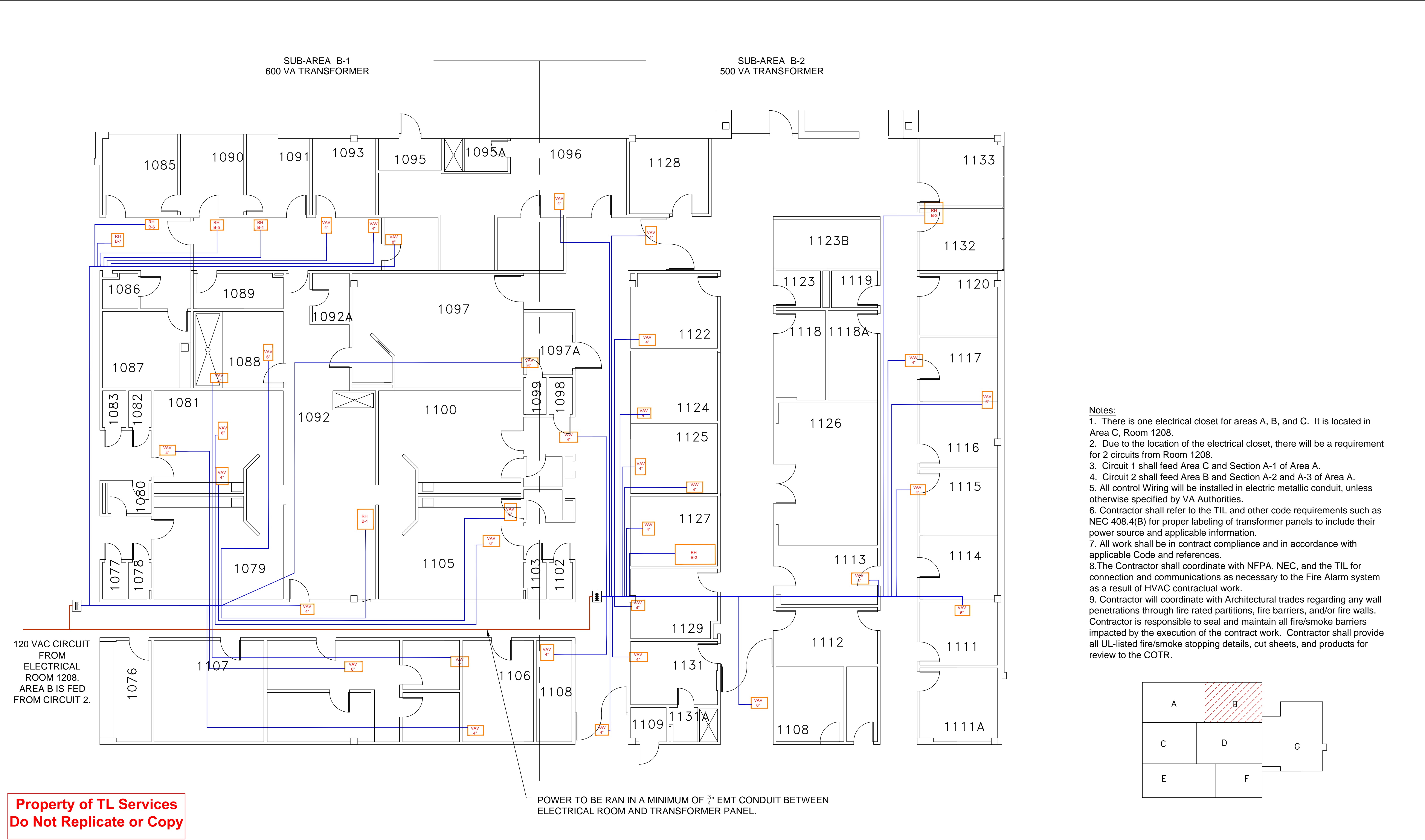
Drawn	By	Date	Approved	By	Date
KAS		22AUG11			
Reviewed by:					
Contract Number:			Office Information:		
11-DC012			TL Services, Inc.		
Drawing Number:			4733 Kibler Rd.		
2 of 8			Van Buren, AR 72956		
			PH: 501-474-7222		
			FAX: 501-471-7964		

 **TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS  
TL SERVICES, INC  
ENGINEERING GROUP

Project Title			
REPLACE ROOF DAMPERS AND CONTROLS			
Location			
ORLANDO VA MEDICAL CENTER			
Date	Checked	Drawn	
11/09/12		KAS	

Project Number	Office of Facilities Management
675-11-209	
Building Number	
500	
Drawing Number	
E-VM-2	
	Department of Veterans Affairs





- Notes:
1. There is one electrical closet for areas A, B, and C. It is located in Area C, Room 1208.
  2. Due to the location of the electrical closet, there will be a requirement for 2 circuits from Room 1208.
  3. Circuit 1 shall feed Area C and Section A-1 of Area A.
  4. Circuit 2 shall feed Area B and Section A-2 and A-3 of Area A.
  5. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
  6. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
  7. All work shall be in contract compliance and in accordance with applicable Code and references.
  - 8.The Contractor shall coordinate with NFPA, NEC, and the TIL for connection and communications as necessary to the Fire Alarm system as a result of HVAC contractual work.
  9. Contractor will coordinate with Architectural trades regarding any wall penetrations through fire rated partitions, fire barriers, and/or fire walls. Contractor is responsible to seal and maintain all fire/smoke barriers impacted by the execution of the contract work. Contractor shall provide all UL-listed fire/smoke stopping details, cut sheets, and products for review to the COTR.

Reference Drawing	NO	Revision	EON	Date	By


AS-BUILT DRAWINGS

FIRST FLOOR AREA ~ B

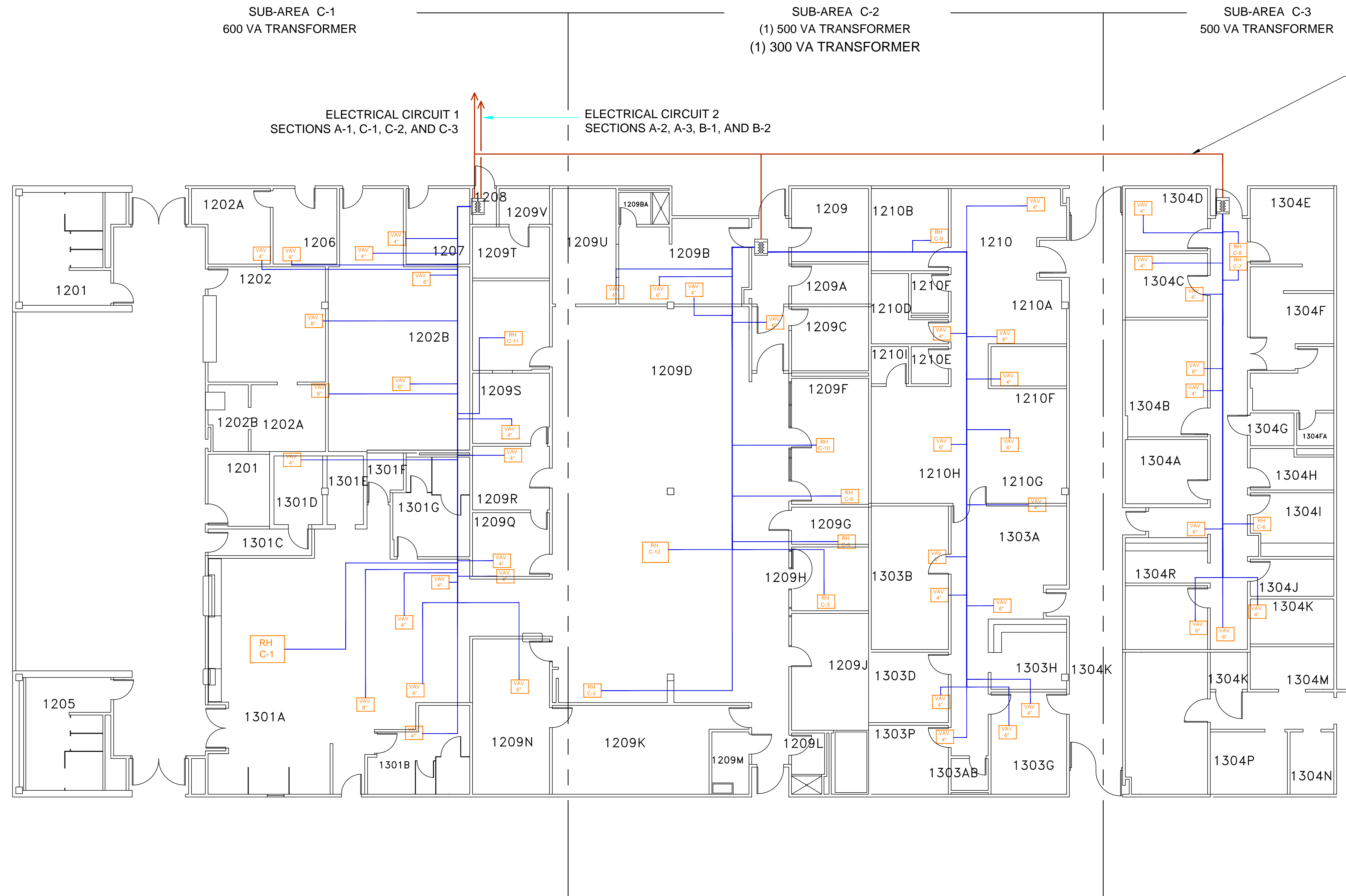
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

Drawn		Approved	
By:	Date:	By:	Date:
KAS	22AUG11		
Reviewed by:			
Contract Number:		Office Information:	
11-DC012		TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7964	
Drawing Number:			
3 of 8			

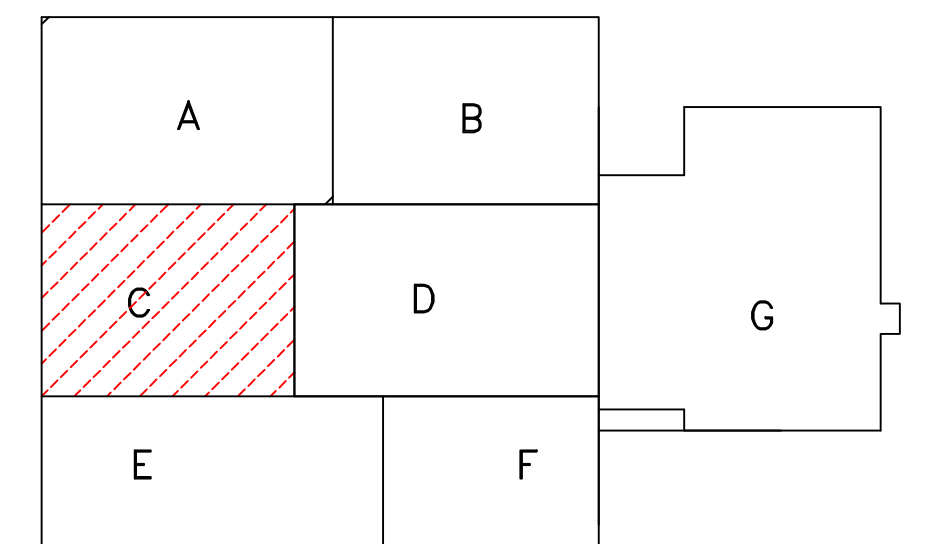
TL SERVICES, INC  
ENGINEERING GROUP

Project Title			Project Number		Office of Facilities Management
REPLACE ROOF DAMPERS AND CONTROLS			675-11-209		
			Building Number 500		
Location ORLANDO VA MEDICAL CENTER			Drawing Number		
Date 11/09/12	Checked KAS	Drawn KAS	VA248-C-1793	E-VM-3	 Department of Veterans Affairs





- Notes:**
1. There is one electrical closet for areas A, B, and C. It is located in Area C, Room 1208.
  2. Due to the location of the electrical closet, there will be a requirement for 2 circuits from Room 1208.
  3. Circuit 1 shall feed Area C and Section A-1 of Area A.
  4. Circuit 2 shall feed Area B and Section A-2 and A-3 of Area A.
  5. Transformer for Section C-1 is mounted in the electrical room 1208.
  6. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
  7. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
  8. All work shall be in contract compliance and in accordance with applicable Code and references.
  9. The Contractor shall coordinate with NFPA, NEC, and the TIL for connection and communications as necessary to the Fire Alarm system as a result of HVAC contractual work.
  10. Contractor will coordinate with Architectural trades regarding any wall penetrations through fire rated partitions, fire barriers, and/or fire walls. Contractor is responsible to seal and maintain all fire/smoke barriers impacted by the execution of the contract work. Contractor shall provide all UL-listed fire/smoke stopping details, cut sheets, and products for review to the COTR.



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AS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ C  
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

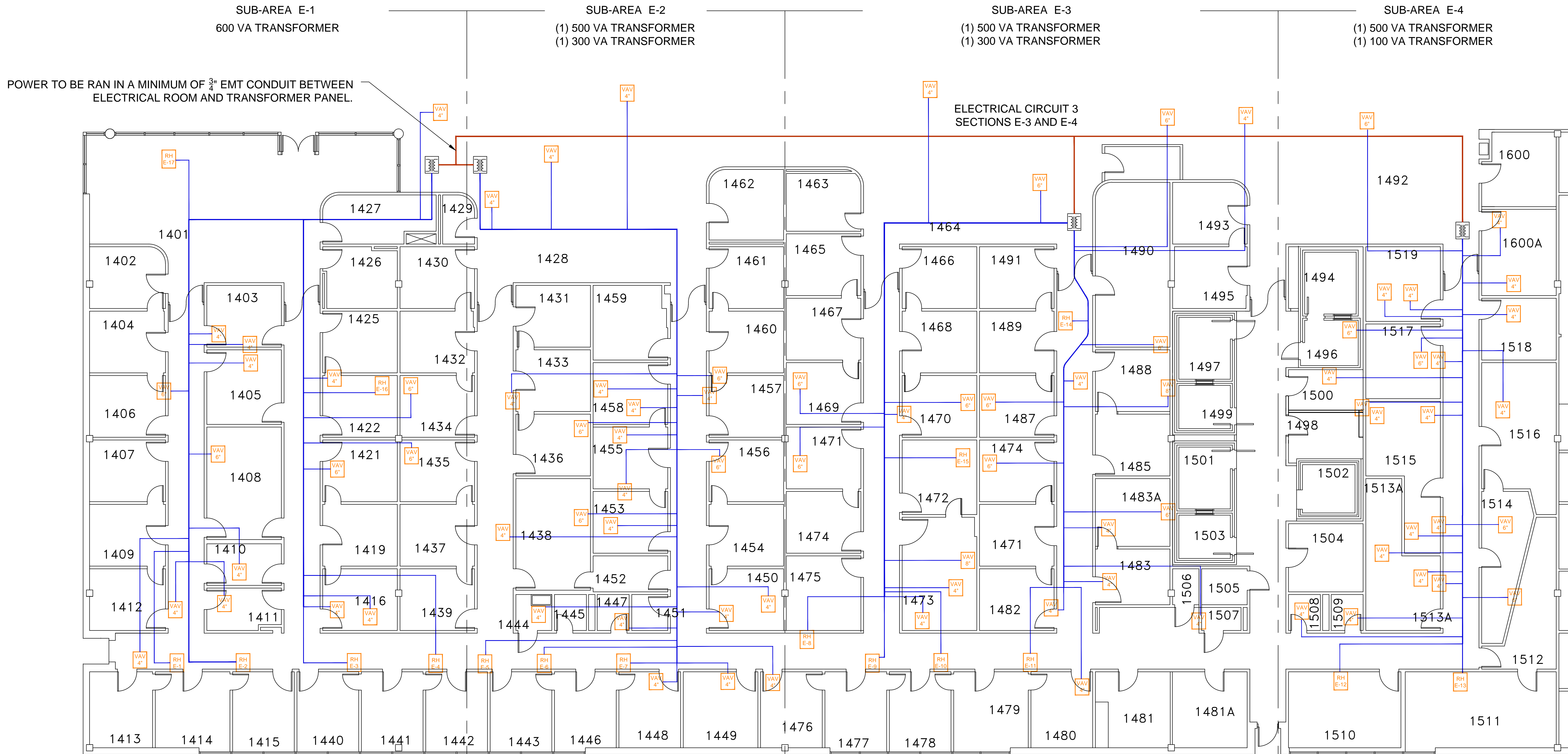
Drawn		Approved	
By:	Date:	By:	Date:
KAS	22AUG11		
Reviewed by:			
Contract Number: 11-DC012			
Office Information: TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7964			
Drawing Number: 4 of 8			



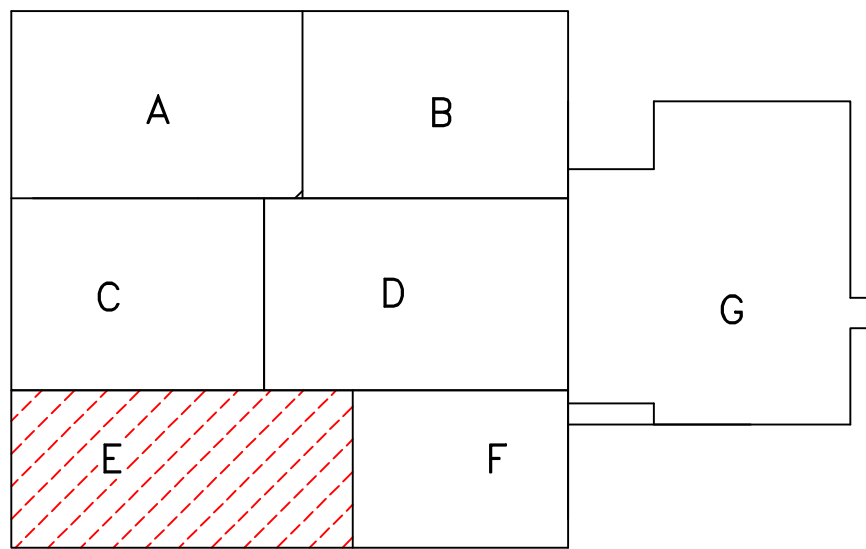
Project Title		Project Number	
REPLACE ROOF DAMPERS AND CONTROLS		675-11-209	
Approved Project Director		Building Number	
		500	
Location		Drawing Number	
VAMC ORLANDO, FLORIDA		E-VM-4	
Date	Checked	Drawn	
11/09/12		KAS	

Office of Facilities Management  
Department of Veterans Affairs





- Notes:
1. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
  2. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
  3. All work shall be in contract compliance and in accordance with applicable Code and references.
  4. The Contractor shall coordinate with NFPA, NEC, and the TIL for connection and communications as necessary to the Fire Alarm system as a result of HVAC contractual work.
  5. Contractor will coordinate with Architectural trades regarding any wall penetrations through fire rated partitions, fire barriers, and/or fire walls. Contractor is responsible to seal and maintain all fire/smoke barriers impacted by the execution of the contract work. Contractor shall provide all UL-listed fire/smoke stopping details, cut sheets, and products for review to the COTR.



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Do Not Replicate or Copy

Reference Drawing	NO	Revision	EON	Date	By

AS-BUILT DRAWINGS  
FIRST FLOOR AREA ~ E  
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

Drawn		Approved	
By:	Date:	By:	Date:
KAS	22AUG11		
Reviewed by:			
Contract Number:		Office Information:	
11-DC012		TL Services, Inc.	
Drawing Number:		4733 Kibler Rd.	
5 of 8		Van Buren, AR 72956	
		PH: 501-474-7222	
		FAX: 501-471-7984	



Project Title				Project Number		Office of Facilities Management
REPLACE ROOF DAMPERS AND CONTROLS				675-11-209		
				Building Number		
500				Drawing Number		
Location				VA248-C-1793		E-VM-5
ORLANDO VA MEDICAL CENTER						
Date	Checked	Drawn				
11/09/12		KAS				

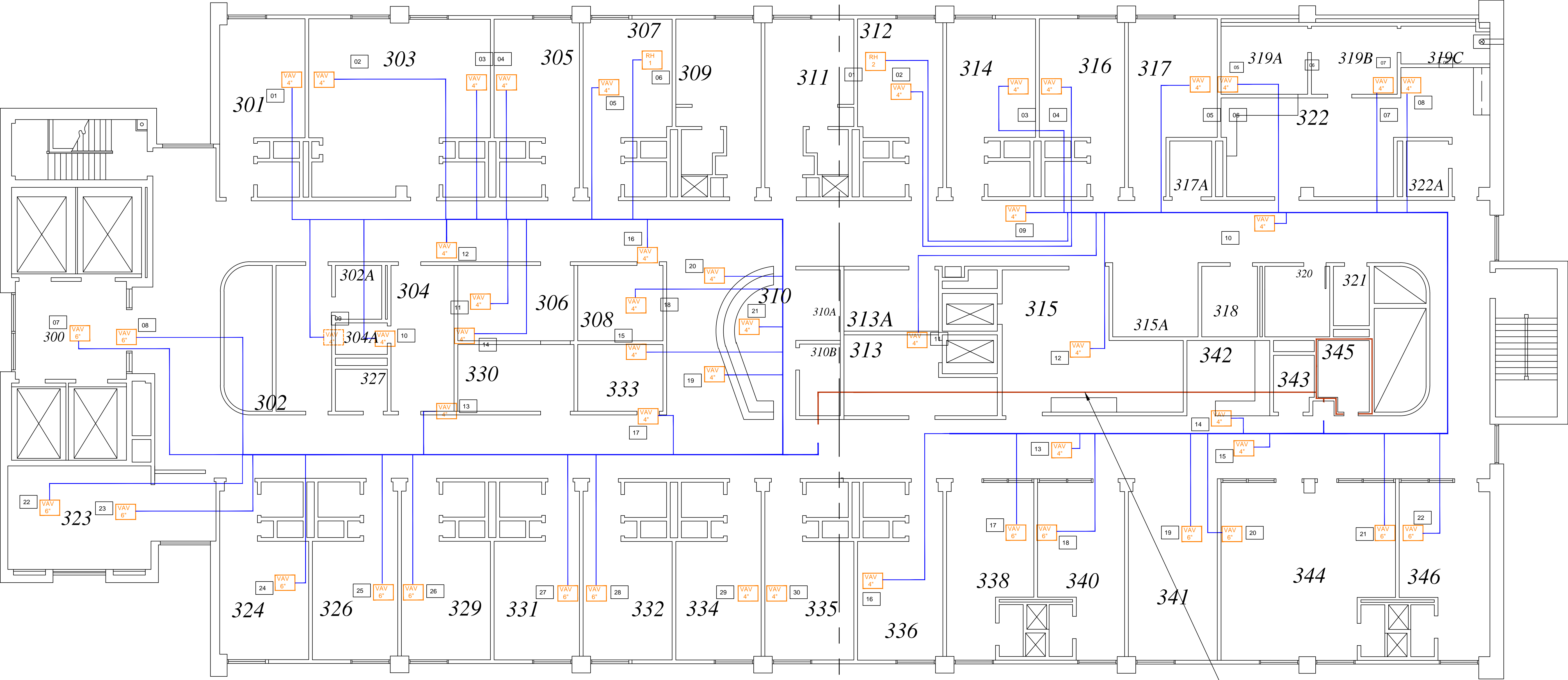






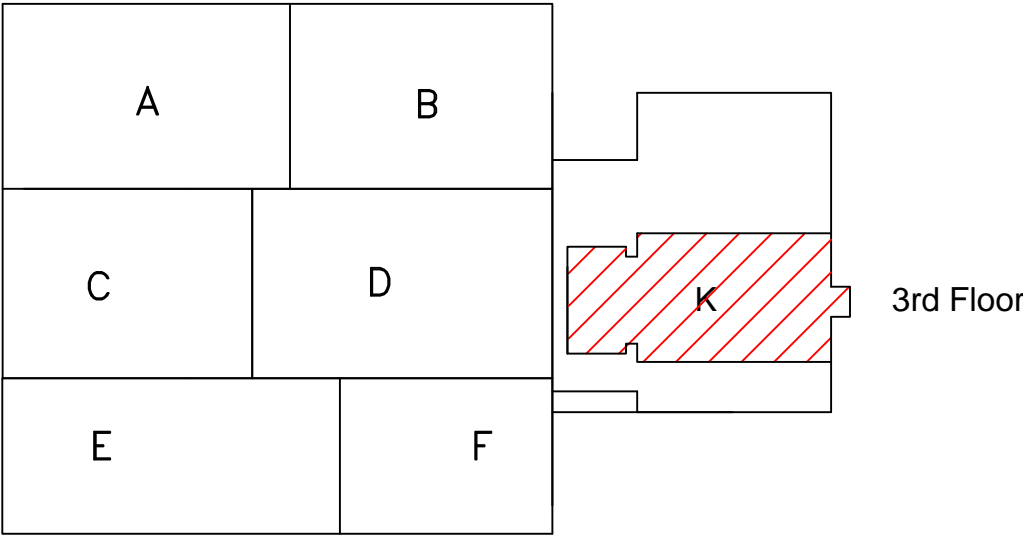
SUB-AREA K-1  
(1) 500 VA TRANSFORMER  
(1) 300 VA TRANSFORMER

SUB-AREA K-2  
600 VA TRANSFORMER



Notes:

- 1. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
- 2. Contractor shall refer to the TIL and other code requirements such as NEC 408.4(B) for proper labeling of transformer panels to include their power source and applicable information.
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AS-BUILT DRAWINGS  
THIRD FLOOR AREA ~ K  
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

Drawn		Approved	
By:	Date:	By:	Date:
KAS	16AUG11		
Reviewed by:			
Contract Number: 11-DC012			
Office Information: TL Services, Inc. 4733 Kibler Rd. Van Buren, AR 72956 PH: 501-474-7222 FAX: 501-471-7984			
Drawing Number: 7 of 8			



**TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS

**TL SERVICES, INC**  
ENGINEERING GROUP

Project Title REPLACE ROOF DAMPERS AND CONTROLS			
Location ORLANDO VA MEDICAL CENTER			
Date 11/09/12	Checked	Drawn JNS	VA248-C-1793

Project Number 675-11-209
Building Number 500
Drawing Number E-VM-7

Office of  
Facilities  
Management

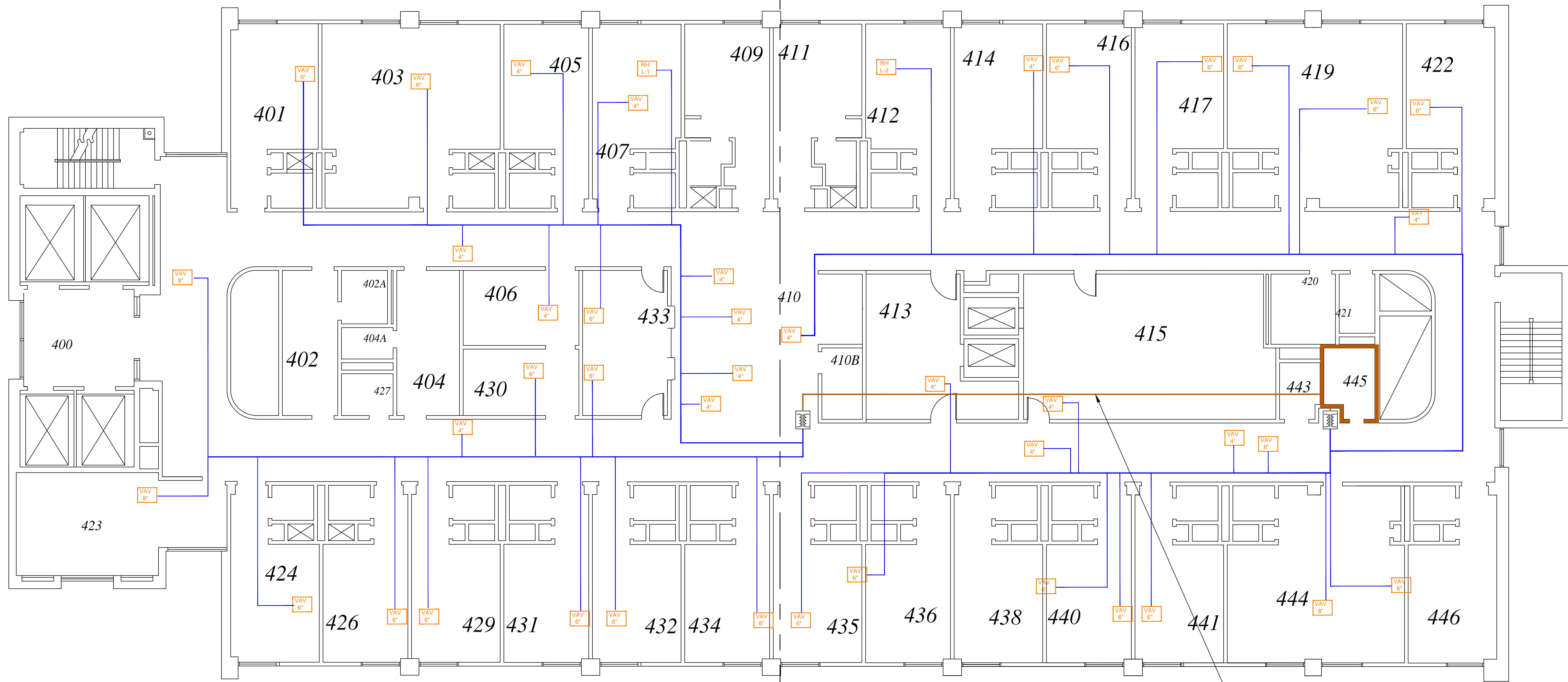
 Department of  
Veterans Affairs

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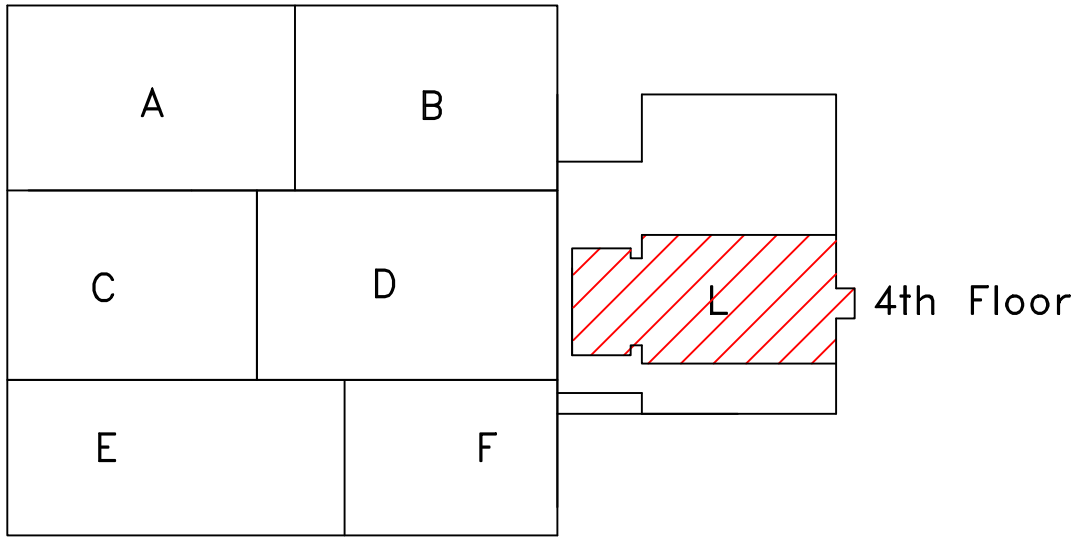
SUB-AREA L-1  
600 VA TRANSFORMER

SUB-AREA L-2  
500 VA TRANSFORMER



Notes:

1. All control Wiring will be installed in electric metallic conduit, unless otherwise specified by VA Authorities.
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POWER TO BE RAN IN A MINIMUM OF 3/4" EMT CONDUIT BETWEEN ELECTRICAL ROOM AND TRANSFORMER PANEL.

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Reference Drawing	NO	Revision	ECH	Date	By


AS-BUILT DRAWINGS  
FOURTH FLOOR AREA ~ L  
VAV/RH POWER WIRING TRUNK LAYOUT DIAGRAM

Drawn		Approved	
By:	Date:	By:	Date:
KAS	16AUG11		
Reviewed by:			
Contract Number:		Office Information:	
11-DC012		TL Services, Inc.	
Drawing Number:		4733 Kibler Rd.	
8 of 8		Van Buren, AR 72956	
		PH: 501-474-7222	
		FAX: 501-471-7964	

 **TL SERVICES**  
INCORPORATED  
A SERVICE DISABLED VETERAN OWNED SMALL BUSINESS

TL SERVICES, INC  
ENGINEERING GROUP



Project Title				Project Number		Office of Facilities Management
REPLACE ROOF DAMPERS AND CONTROLS				675-11-209		
				Building Number		
500				Drawing Number		
Location				VA248-C-1793		E-VM-8
ORLANDO VA MEDICAL CENTER						
Date		Checked	Drawn			
11/09/12			JNS			
						 Department of Veterans Affairs