





hatch+ulland owen  
architects

702 San Antonio Street  
Austin, Texas 78701  
T: 512.474.8548  
F: 512.474.8643  
www.huoaarchitects.com

CIVIL ENGINEER:  
TEXAS DESIGN INTERESTS  
6001 W. WILLIAM CANNON  
AUSTIN, TX 78749  
512-301-3389

STRUCTURAL ENGINEER:  
TEXAS DESIGN INTERESTS  
6001 W. WILLIAM CANNON  
AUSTIN, TX 78749  
512-301-3389

MECHANICAL, ELECTRICAL &  
PLUMBING ENGINEERS:  
AYS ENGINEERING, LLC  
595 Round Rock West Dr.  
ROUND ROCK, TX 78681  
512-961-6835

LANDSCAPE ARCHITECT:

HOUSTON  
GATEWAY  
ACADEMY  
INC

BOWIE  
CAMPUS

7310 BOWIE ST  
HOUSTON, TX 77012

CITY OF HOUSTON  
PROJECT # 09044674

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shown on the drawings and specifications shall be  
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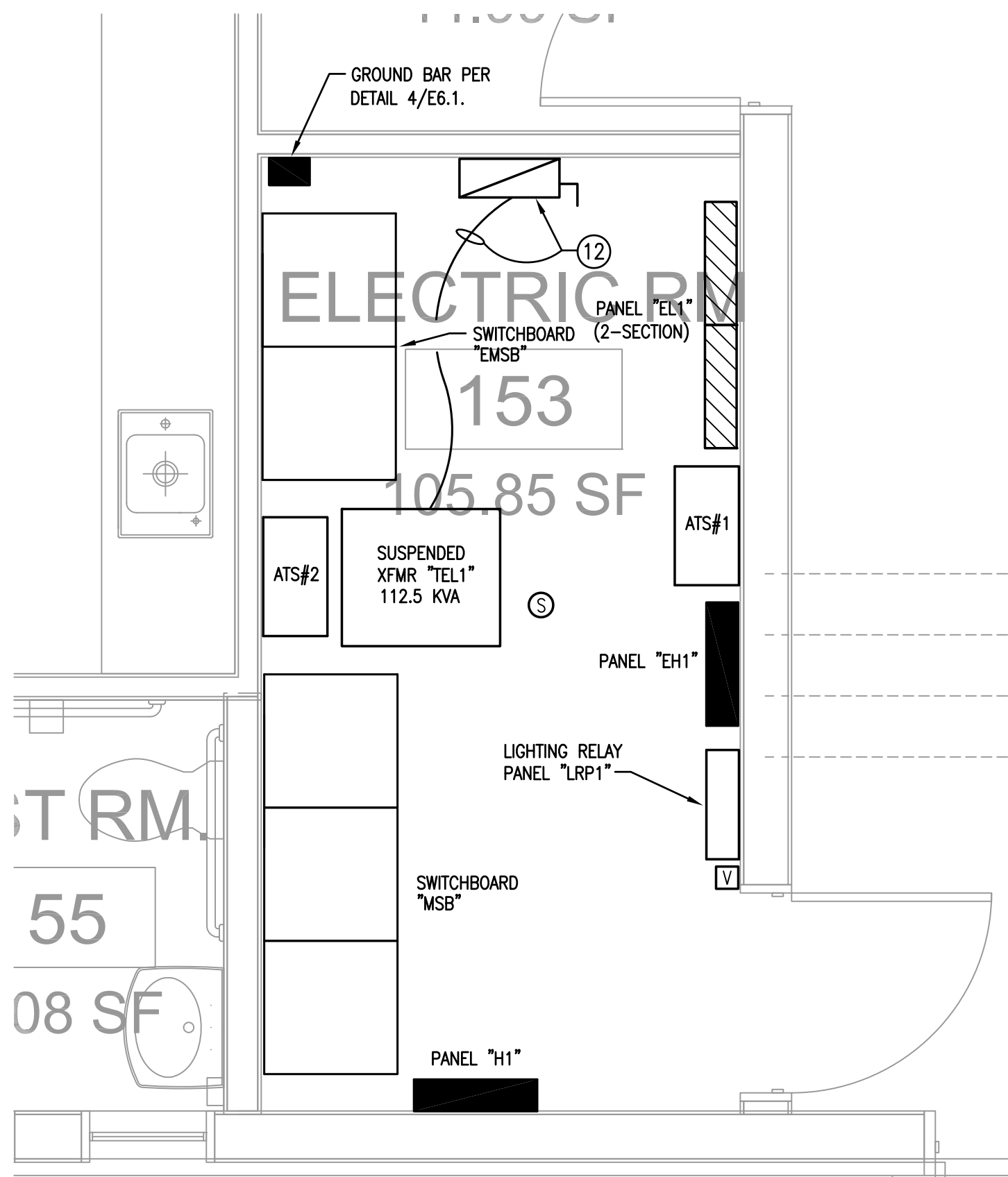
STATE OF TEXAS  
REGISTERED PROFESSIONAL ENGINEER  
R. ROSS ALEMAN  
98427  
12/2/01

PROJECT MGR:  
DRAWN BY: AYS  
CHKD BY: AYS

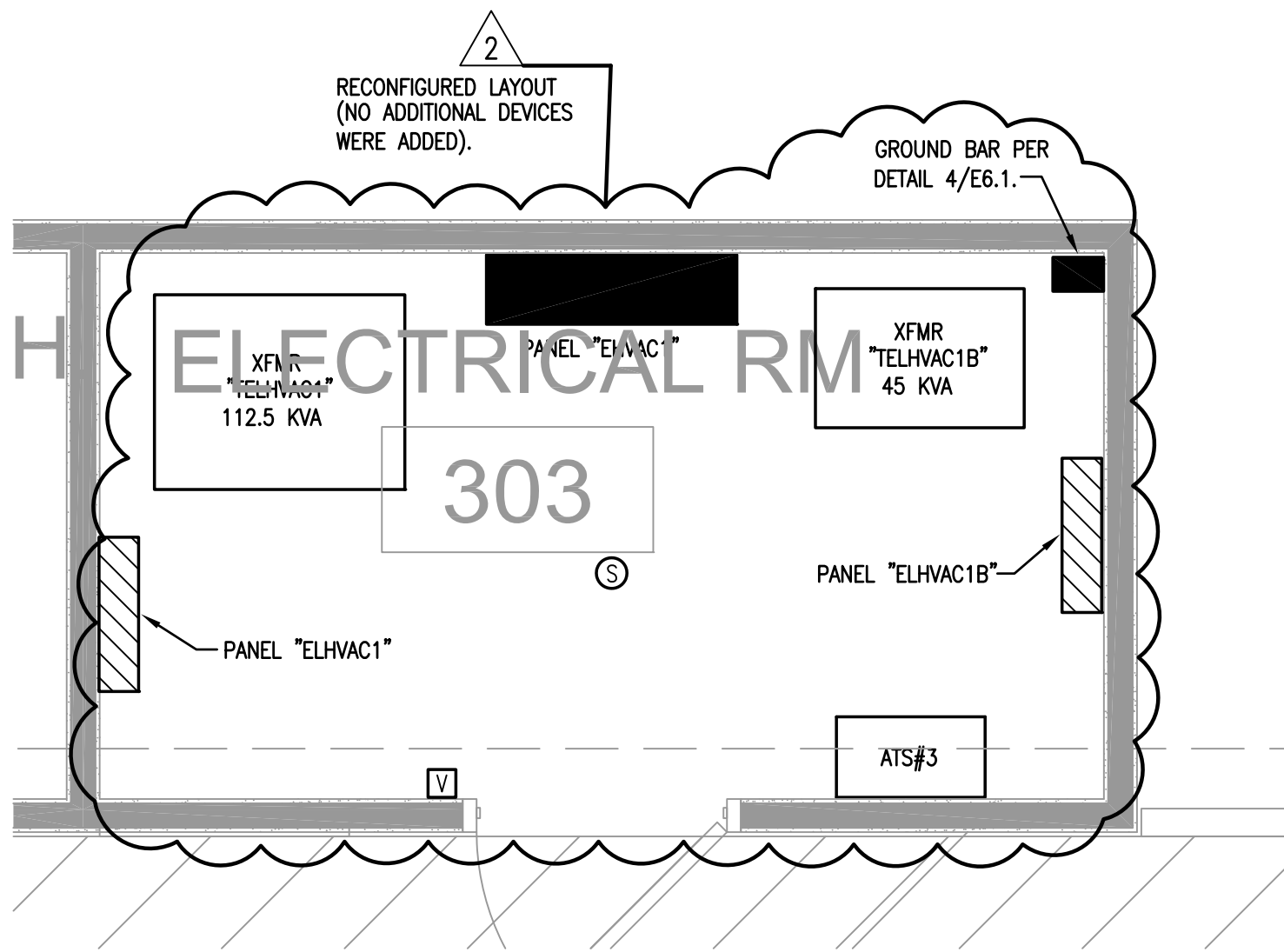
ISSUE DATES:  
date issue  
06.5.09 Permit Set  
08.21.09 COH REVIEW 1  
10.30.09 COH REVIEW 2

ENLARGED  
ELECTRICAL ROOMS  
& KITCHEN - POWER

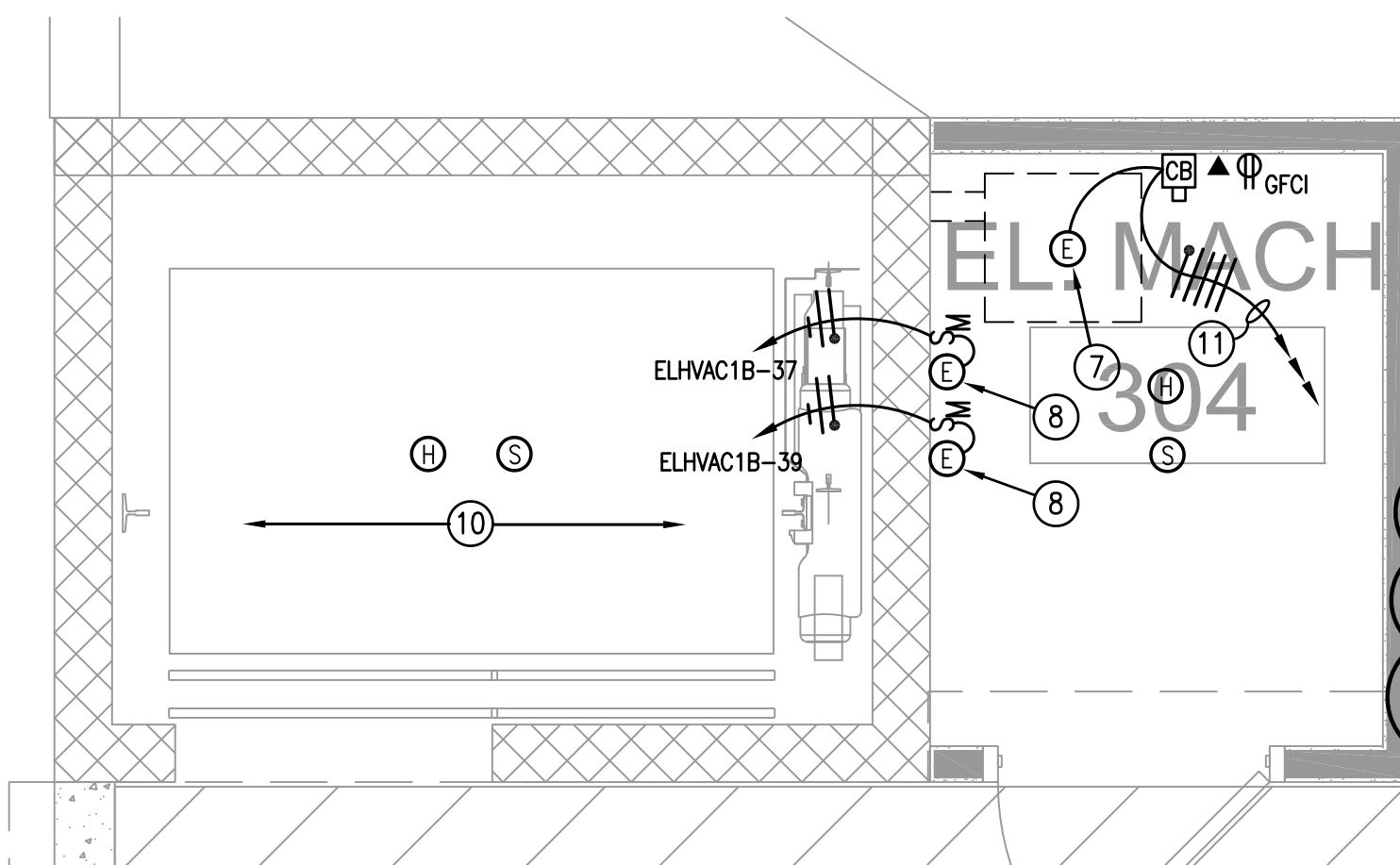
E3.2



**1 ENLARGED ELECTRICAL ROOM #153 - POWER**  
SCALE: 1/2" = 1'-0"



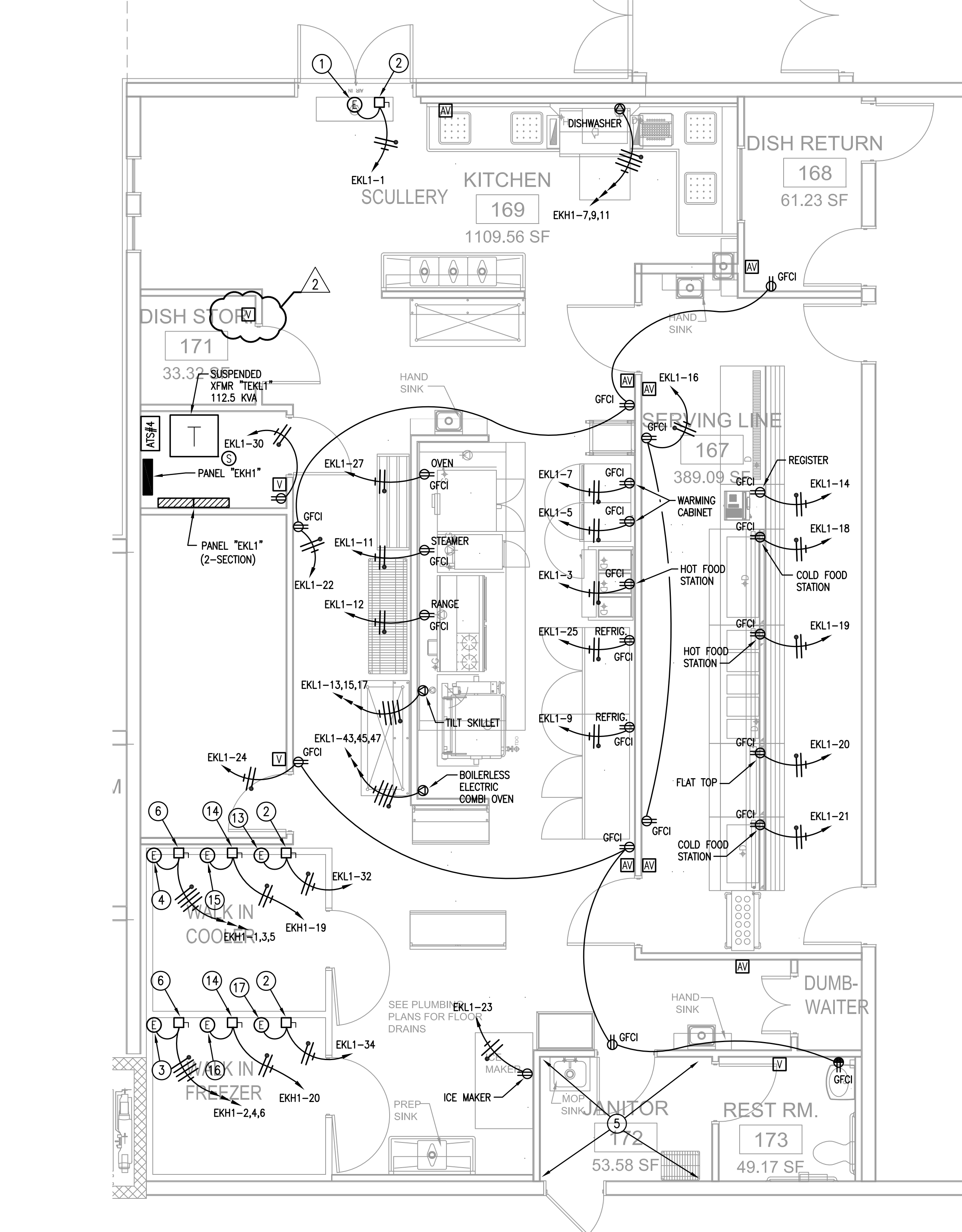
**3 ENLARGED ELECTRICAL ROOM #303 - POWER**  
SCALE: 1/2" = 1'-0"



**4 ENLARGED ELEVATOR ROOM - POWER**  
SCALE: 1/2" = 1'-0"

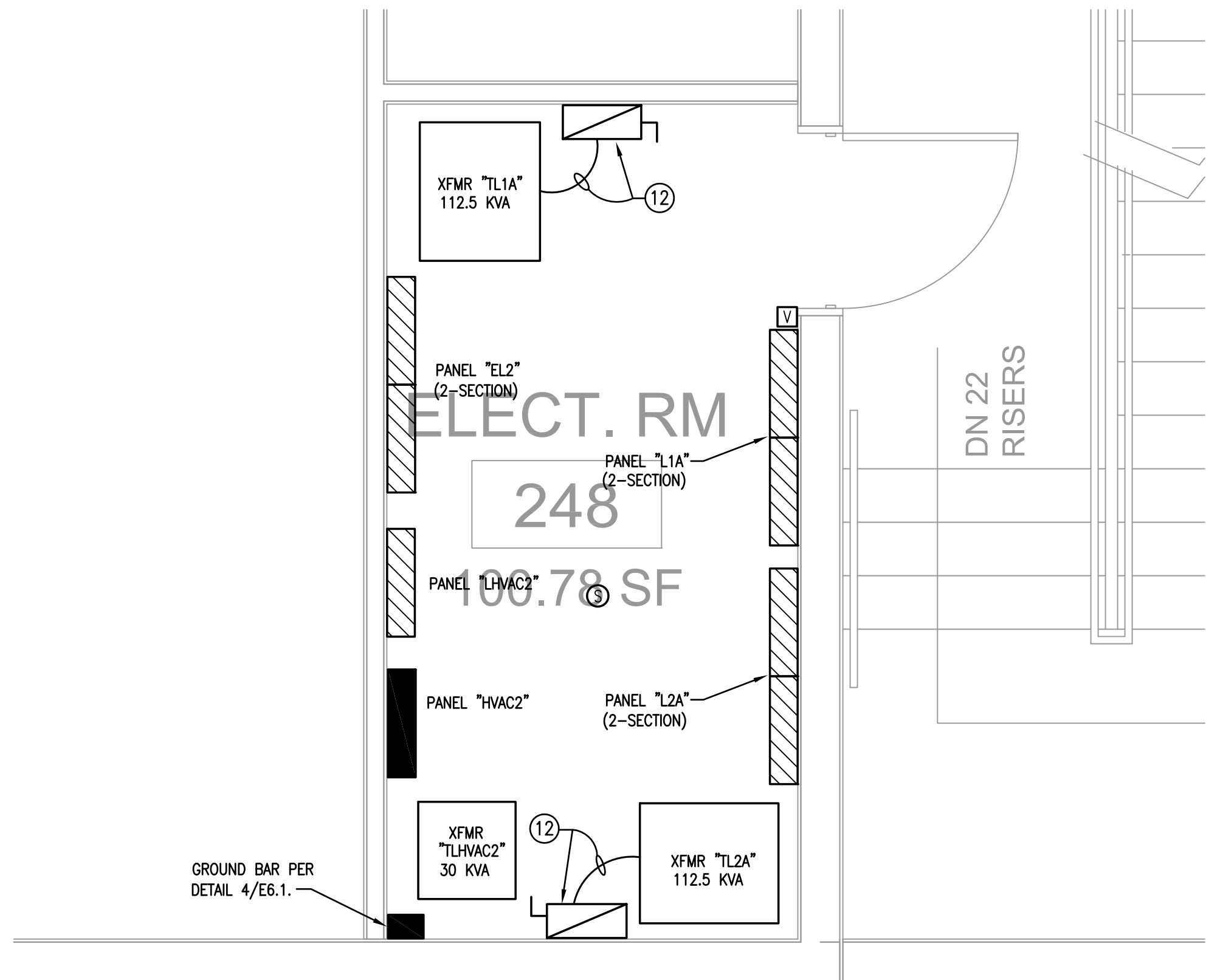
#### KEYED NOTES

- ELECTRICAL CONNECTION TO AIR CURTAIN, 120 VOLT, 1-PHASE. COORDINATE POWER POINTS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE A 30 AMP, 2-POLE, 208 VOLT, HEAVY DUTY, NON-FUSED DISCONNECT SWITCH IN A NEMA "1" ENCLOSURE.
- ELECTRICAL CONNECTION TO WALK-IN FREEZER, 480 VOLT, 3-PHASE. VERIFY POWER REQUIREMENTS WITH MANUFACTURER PRIOR TO BID. CONTRACTOR SHALL PROVIDE ADDITIONAL COMPONENTS AND DEVICES THAT ARE REQUIRED TO BE INSTALLED.
- ELECTRICAL CONNECTION TO WALK-IN COOLER, 480 VOLT, 3-PHASE. VERIFY POWER REQUIREMENTS WITH MANUFACTURER PRIOR TO BID. CONTRACTOR SHALL PROVIDE ADDITIONAL COMPONENTS AND DEVICES THAT ARE REQUIRED TO BE INSTALLED.
- REFER TO DRAWING E2.0 & E3.0 FOR LIGHTING AND POWER WORK IN THIS AREA.
- PROVIDE A 30 AMP, 3-POLE, 480 VOLT, HEAVY DUTY, NON-FUSED DISCONNECT SWITCH IN A NEMA "1" ENCLOSURE.
- ELECTRICAL CONNECTION TO ELEVATOR, 480 VOLT, 3-PHASE.
- ELECTRICAL CONNECTION TO ELEVATOR CAB LIGHTING, 120 VOLT, 1-PHASE. VERIFY POWER POINTS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.
- ELECTRICAL CONNECTION TO ELEVATOR CAB VENTILATION, 120 VOLT, 1-PHASE. VERIFY POWER POINTS WITH EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN.
- REFER TO DRAWING E3.0 FOR SUMP PUMP, POWER, & LIGHTING IN ELEVATOR PIT.
- REFER TO ELECTRICAL RISER DIAGRAM ON DRAWING E5.0 FOR CIRCUIT POSITION.
- 200 AMP, 3-POLE 480/277V, HEAVY DUTY, FUSED DISCONNECT. FUSED AT 175 AMPS. REFER TO ELECTRICAL RISER DIAGRAM ON DRAWING E5.0.
- ELECTRICAL CONNECTION TO WALK-IN COOLER LIGHTING, 120 VOLT, 1-PHASE. VERIFY POWER REQUIREMENTS AND CONNECTION POINTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- PROVIDE A 30 AMP, 2-POLE, 480 VOLT, HEAVY DUTY, NON-FUSED DISCONNECT SWITCH IN A NEMA "1" ENCLOSURE.
- ELECTRICAL CONNECTION TO WALK-IN COOLER EVAPORATOR, 277 VOLT, 1-PHASE. VERIFY POWER REQUIREMENTS AND CONNECTION POINTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- ELECTRICAL CONNECTION TO WALK-IN FREEZER EVAPORATOR, 277 VOLT, 1-PHASE. VERIFY POWER REQUIREMENTS AND CONNECTION POINTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
- ELECTRICAL CONNECTION TO WALK-IN FREEZER LIGHTING, 120 VOLT, 1-PHASE. VERIFY POWER REQUIREMENTS AND CONNECTION POINTS WITH MANUFACTURER PRIOR TO ROUGH-IN.



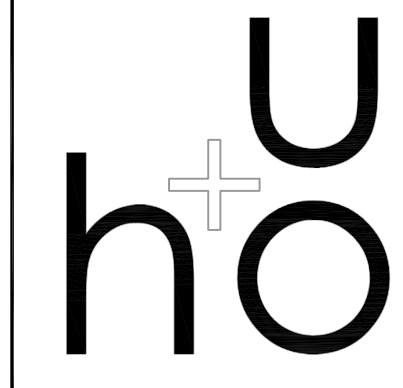
**5 ENLARGED KITCHEN PLAN- POWER**  
SCALE: 1/4" = 1'-0"

- GENERAL NOTE:**
- REFER TO PANELBOARD SCHEDULE FOR WIRE & CONDUIT SIZES.
  - VERIFY WITH EQUIPMENT MANUFACTURER THE EXACT NEMA CONFIGURATION AND MOUNTING HEIGHTS OF ALL KITCHEN EQUIPMENT OUTLETS.
  - REFER TO KITCHEN EQUIPMENT PLAN & SCHEDULE FOR EXACT EQUIPMENT LOCATIONS AND POWER REQUIREMENTS.
  - ALL 20/1-POLE RECEPTACLES LOCATED IN KITCHEN SHALL BE GFCI PROTECTED.
  - CONTRACTOR SHALL PROVIDE SHUNT TRIP ON ALL ELECTRICAL EQUIPMENT CIRCUITS LOCATED UNDER KITCHEN HOOD. INTERFACE WITH HOOD FIRE EXTINGUISHER SYSTEM.
  - ALL RECEPTACLE COVERS IN KITCHEN AREA SHALL BE STAINLESS STEEL.
  - CONTRACTOR SHALL SEAL EXPOSED CONDUIT ABOVE WALK-IN FREEZER AND COOLER. SEAL ALL CONDUITS EXPOSED TO A WIDE VARIETY OF DIFFERENT TEMPERATURES, CIRCULATION OF AIR FROM WARMER TO A COLDER SECTION SHALL BE PREVENTED. SEAL IN COMPLIANCE OF ARTICLE 300.7(A) N.E.C.



**2 ENLARGED ELECTRICAL ROOM #248 - POWER**  
SCALE: 1/2" = 1'-0"





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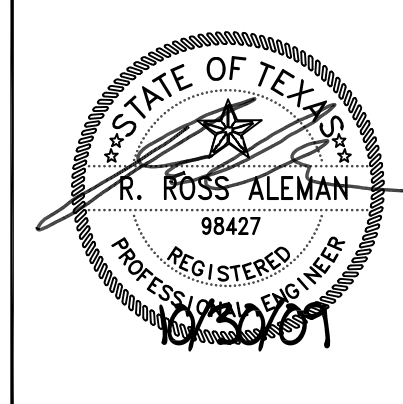
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PROJECT MGR:

DRAWN BY: AYS CHKD BY: AYS

ISSUE DATES:

06.5.09 Permit Set  
08.21.09 COH REVIEW 1  
10.30.09 COH REVIEW 2

RELAY NO.	ZONE DESCRIPTION	REMOTE STATION	CIRCUIT NO.
1	LOBBY	DRS-1	EH1-26
2	HALL, EAST 179 & HALL 181	DRS-2	EH1-6
3	HALL, EAST 179 & HALL 181	DRS-3	EH1-6
4	HALL, EAST 179 & HALL 181	DRS-4	EH1-6
5	HALL, SOUTH 178 & HALL, WEST 177	DRS-5	EH1-7
6	HALL, SOUTH 178 & HALL, WEST 177	DRS-6	EH1-7
7	HALL, SOUTH 260 & HALL, EAST 259	DRS-7	EH1-21
8	HALL, SOUTH 260 & HALL, EAST 259	DRS-8	EH1-21
9	HALL, WEST 262	DRS-9	EH1-20
10	HALL, WEST 262	DRS-10	EH1-20
11	HALL, WEST 262	DRS-11	EH1-20
12	HALL, NORTH 258	DRS-12	EH1-26
13	EXTERIOR LIGHTING	DRS-13	EH1-30
14	EXTERIOR LIGHTING	DRS-14	EH1-32
15	EXTERIOR LIGHTING	DRS-15	EH1-34
16	SPACE		
17	SPACE		
18	SPACE		
19	SPACE		
20	SPACE		
21	SPACE		
23	SPACE		

ELECTRICAL  
PANELBOARD  
SCHEDULES

E7.1

PNL:	EL1	MAIN:	400MCB	VOLTS:	120/208	3P/4W	MOUNT:	Flush	14 KA/C	Nema 1	
CKT	SERVES		WATTS	BKR	WIRE	PH	CKT	SERVES	WATTS	BKR	WIRE
1	Computers	1600	201	2#12,1#12G,1/2"	A	2	Computers	1600	201	2#12,1#12G,1/2"	
3	Computers	1600	201	2#12,1#12G,1/2"	B	4	Computers	1600	201	2#12,1#12G,1/2"	
5	Computers	1600	201	2#12,1#12G,1/2"	C	6	Computers	1600	201	2#12,1#12G,1/2"	
7	Computers	1600	201	2#12,1#12G,1/2"	A	8	Computers	1600	201	2#12,1#12G,1/2"	
9	4- Recept.	720	201	2#12,1#12G,1/2"	B	10	4- Recept.	720	201	2#12,1#12G,1/2"	
11	4- Recept.	720	201	2#12,1#12G,1/2"	C	12	4- Recept.	720	201	2#12,1#12G,1/2"	
13	5- Recept.	900	201	2#12,1#12G,1/2"	A	14	5- Recept.	900	201	2#12,1#12G,1/2"	
15	5- Recept.	900	201	2#12,1#12G,1/2"	B	16	5- Recept.	720	201	2#12,1#12G,1/2"	
17	4- Recept.	720	201	2#12,1#12G,1/2"	C	18	Refrigerator	1200	201	2#12,1#12G,1/2"	
19	Refrigerator	1200	201	2#12,1#12G,1/2"	A	20	Computers	1600	201	2#12,1#12G,1/2"	
21	Computers	1600	201	2#12,1#12G,1/2"	B	22	Computers	1600	201	2#12,1#12G,1/2"	
23	Computers	1600	201	2#12,1#12G,1/2"	C	24	Computers	1600	201	2#12,1#12G,1/2"	
25	Computers	1600	201	2#12,1#12G,1/2"	A	26	Computers	1600	201	2#12,1#12G,1/2"	
27	Computers	1600	201	2#12,1#12G,1/2"	B	28	Computers	1600	201	2#12,1#12G,1/2"	
29	4- Recept.	720	201	2#12,1#12G,1/2"	C	30	2- Recept.	360	201	2#12,1#12G,1/2"	
31	3- Recept.	540	201	2#12,1#12G,1/2"	A	32	3- Recept.	540	201	2#12,1#12G,1/2"	
33	2- Recept.	360	201	2#12,1#12G,1/2"	B	34	4- Recept.	720	201	2#12,1#12G,1/2"	
35	7- Recept.	1260	201	2#12,1#12G,1/2"	C	36	4- Recept.	720	201	2#12,1#12G,1/2"	
37	1- Recept.	180	201	2#12,1#12G,1/2"	A	38	1- Quad.	360	201	2#12,1#12G,1/2"	
41	Space		1P			42	Space		1P		
TOTALS PER PHASE											
S	LIGHTINGS	0	1.25	0							
U	RECEPTACLES	42380	NEC	26190							
M	NON-CONTINUOUS	0	0.65	0					15620		
M	HEATING	0	1.00	0					19740		
A	SUB-TOTAL	42380		26190					12820		
R	LARGEST MOTOR	0	0.25	0					42380		
Y	TOTAL WATTS			26190							
	AMPERES										
NOTES: TWO SECTION											

PNL:	EL1	MAIN:	400MCB	VOLTS:	120/208	3P/4W	MOUNT:	Flush	14 KAIC	Nema 1	
CKT	SERVES		WATTS	BKR	WIRE	PH	CKT	SERVES	WATTS	BKR	WIRE
43	7-Recept.	1260	201	2#12,1#12G,1/2"	C	A	44	Computers	1600	201	2#12,1#12G,1/2"
45	Computers	1600	201	2#12,1#12G,1/2"	B	A	46	Computers	1600	201	2#12,1#12G,1/2"
47	Computers	1600	201	2#12,1#12G,1/2"	C	A	48	Computers	1600	201	2#12,1#12G,1/2"
49	Computers	1600	201	2#12,1#12G,1/2"	C	A	50	1-Quad.	360	201	2#12,1#12G,1/2"
51	1-Quad.	360	201	2#12,1#12G,1/2"	B	A	52	1-Quad.	360	201	2#12,1#12G,1/2"
53	3-Recept.	540	201	2#12,1#12G,1/2"	C	A	54	1-Recept.	1500	201	2#12,1#12G,1/2"
55	FACP	500	201	2#12,1#12G,1/2"	C	A	56	1-Recept.	1500	201	2#12,1#12G,1/2"
57	1-Recept.	180	201	2#12,1#12G,1/2"	C	A	58	Hand Dryer	1200	201	2#12,1#12G,1/2"
59	Drinking Fountain	500	201	2#12,1#12G,1/2"	C	A	60	Hand Dryer	1200	201	2#12,1#12G,1/2"
61	Drinking Fountain	500	201	2#12,1#12G,1/2"	C	A	62	Annunciator Panel	500	201	2#12,1#12G,1/2"
63	Fire Smoke Damper	300	201	2#12,1#12G,1/2"	C	A	64	Copy Machine	1800	201	2#12,1#12G,1/2"
65	Fire Smoke Damper	200	201	2#12,1#12G,1/2"	B	A	66	Recept.	540	201	2#12,1#12G,1/2"
67	Space		1p			A	68	Space		1p	
69	Space		1p			A	70	Space		1p	
71	Space		1p			A	72	Space		1p	
73	Space		1p			A	74	Space		1p	
75	Space		1p			B	76	Space		1p	
77	Space		1p			B	78	Space		1p	
79	Space		1p			C	80	Panel "EL2"	24800	225/3	4#40,1#4G,2-1/2"
81	Space		1p			B	82	"	24160		
83	Space		1p			C	84	"	27530	*	*
TOTALS PER PHASE											
S	CONTINUOUS	0	1.25	0							
U	RECEPTACLES	63780	NEC	36890							
M	NON-CONTINUOUS	76950	1.00	76950			A		48540		
M	HEATING	0	1.00	0			B		45300		
A	SUB-TOTAL	140730		113840			C		46880		
R	LARGEST MOTOR	0	0.25	0					140730		
Y	TOTAL WATTS			113840							
	AMPERES	391.1		316.4							
NOTES:											

PNL	EL2	MAIN	225 MCB	VOLTS:		120/208	3P/4W	MOUNT	Flush	14 KAIC	Nema 1
CKT	SERVES		WATTS	BKR	WIRE	PH	CKT	SERVES	WATTS	BKR	WIRE
1	Computers	1600	201	2#12,1#12G,1/2"	A	2	Computers	1600	201	2#12,1#12G,1/2"	
3	Computers	1600	201	2#12,1#12G,1/2"	B	4	Computers	1600	201	2#12,1#12G,1/2"	
5	Computers	1600	201	2#12,1#12G,1/2"	C	6	Computers	1600	201	2#12,1#12G,1/2"	
7	Computers	1600	201	2#12,1#12G,1/2"	A	8	Computers	1600	201	2#12,1#12G,1/2"	
9	Computers	1600	201	2#12,1#12G,1/2"	B	10	6- Recept.	1080	201	2#12,1#12G,1/2"	
11	6- Recept.	1080	201	2#12,1#12G,1/2"	C	12	6- Recept.	1080	201	2#12,1#12G,1/2"	
13	5- Recept.	900	201	2#12,1#12G,1/2"	A	14	4- Recept.	720	201	2#12,1#12G,1/2"	
15	3- Recept.	540	201	2#12,1#12G,1/2"	B	16	4- Recept.	720	201	2#12,1#12G,1/2"	
17	Computers	1600	201	2#12,1#12G,1/2"	C	18	Computers	1600	201	2#12,1#12G,1/2"	
19	6- Recept.	1080	201	2#12,1#12G,1/2"	A	20	Computers	1600	201	2#12,1#12G,1/2"	
21	Computers	1600	201	2#12,1#12G,1/2"	B	22	4- Recept.	720	201	2#12,1#12G,1/2"	
23	Vending	1500	201	2#12,1#12G,1/2"	C	24	Vending	1500	201	2#12,1#12G,1/2"	
25	1- Recept.	1500	201	2#12,1#12G,1/2"	A	26	1- Recept.	1500	201	2#12,1#12G,1/2"	
27	Refrigerator	1200	201	2#12,1#12G,1/2"	B	28	4- Recept.	720	201	2#12,1#12G,1/2"	
29	4- Recept.	720	201	2#12,1#12G,1/2"	C	30	5- Recept.	900	201	2#12,1#12G,1/2"	
31	Space		1P			32	5- Recept.	900	201	2#12,1#12G,1/2"	
33	4- Recept.	720	201	2#12,1#12G,1/2"	A	34	6- Recept.	1080	201	2#12,1#12G,1/2"	
35	7- Recept.	1260	201	2#12,1#12G,1/2"	B	36	3- Recept.	540	201	2#12,1#12G,1/2"	
37	4- Recept.	720	201	2#12,1#12G,1/2"	C	38	4- Recept.	720	201	2#12,1#12G,1/2"	
39	6- Recept.	1080	201	2#12,1#12G,1/2"	A	40	5- Recept.	900	201	2#12,1#12G,1/2"	
41	4- Recept.	720	201	2#12,1#12G,1/2"	B	42	Space		1P		
TOTALS PER PHASE											
S	CONTINUOUS		0	1.25							
U	RECEPTACLES		47080	NEC		28540					
M	NON-CONTINUOUS			0.65					A	16220	
M	HEATING			1.00					B	15160	
A	SUB-TOTAL		47080			28540			C	15700	
R	LARGEST MOTOR			0	0.25	0				47080	
Y	TOTAL WATTS					28540					
	AMPERES										
NOTES: TWO SECTION											

PNL:	EL2	MAIN:	225 MCB	VOLTS:	120/208	3P/4W	MOUNT:	Flush	14 KAIC	Nema 1	
CKT	SERVES		WATTS	BKR	WIRE	PH	CKT	SERVES	WATTS	BKR	WIRE
43	3- Recept.		540	201	2#12,1#12G,1/2"C	A	44	Server	1800	201	2#12,1#12G,1/2"C
45	Server		1800	201	2#12,1#12G,1/2"C	B	46	Server	1800	201	2#12,1#12G,1/2"C
47	Server		1800	201	2#12,1#12G,1/2"C	C	48	Server	1800	201	2#12,1#12G,1/2"C
49	Server		1800	201	2#12,1#12G,1/2"C	A	50	1-Quad.	360	201	2#12,1#12G,1/2"C
51	1-Recept.		1500	201	2#12,1#12G,1/2"C	B	52	1-Recept.	180	201	2#12,1#12G,1/2"C
53	1-Recept.		1500	201	2#12,1#12G,1/2"C	C	54	1-Recept.	180	201	2#12,1#12G,1/2"C
55	3-Recept.		360	201	2#12,1#12G,1/2"C	A	56	2-Quad.	720	201	2#12,1#12G,1/2"C
57	4-Recept.		720	201	2#12,1#12G,1/2"C	B	58	3-Recept.	900	201	2#12,1#12G,1/2"C
59	4-Recept.		900	201	2#12,1#12G,1/2"C	C	60	4-Recept.	720	201	2#12,1#12G,1/2"C
61	Drinking Fountain		500	201	2#12,1#12G,1/2"C	A	62	Hand Dryer	1200	201	2#12,1#12G,1/2"C
63	Drinking Fountain		500	201	2#12,1#12G,1/2"C	B	64	Hand Dryer	1200	201	2#12,1#12G,1/2"C
65	Refrigerator		1200	201	2#12,1#12G,1/2"C	C	66	Dishwasher	1000	201	2#12,1#12G,1/2"C
67	Refrigerator		1200	201	2#12,1#12G,1/2"C	A	68	Solenoid Valve	200	201	2#12,1#12G,1/2"C
69	Solenoid Valve		200	201	2#12,1#12G,1/2"C	B	70	Solenoid Valve	200	201	2#12,1#12G,1/2"C
71	Recept.		200	201	2#12,1#12G,1/2"C	C	72	Copier	1800	201	2#12,1#12G,1/2"C
73	Fire Smoke Damper		900	201	2#12,1#12G,1/2"C	A	74	Fire Smoke Damper	900	201	2#12,1#12G,1/2"C
75	Fire Smoke Damper		600	201	2#10,1#10G,1/2"C	B	76	Recept.	360	201	2#12,1#12G,1/2"C
77	Space		1P			C	78	Space	540	201	2#12,1#12G,1/2"C
79	Space		1P			A	80	Space	1P		
81	Space		1P			B	82	Space	1P		
83	Space		1P			C	84	Space	1P		
S CONTINUOUS			0	125	0	TOTALS PER PHASE					
U	RECEPTACES		74630	NEC	42315						
M	NON-CONTINUOUS		3780	0.65	2457				A	26300	
M	HEATING		900	1.00	900				B	25120	
A	SUB-TOTAL		79310		45672				C	28070	
R	LARGEST MOTOR		0	0.25	0					0	79490
TOTAL WATTS					45672						
Y	AMPERES		220.4		126.9				NOTES:		