

three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one sixteenth inch = one foot

A

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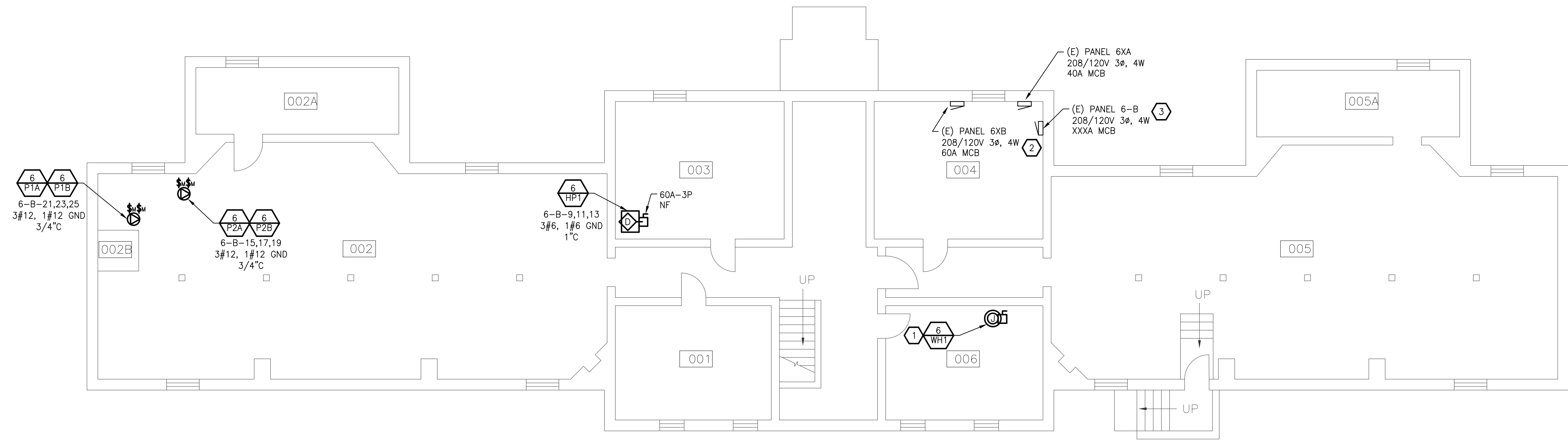
J

K

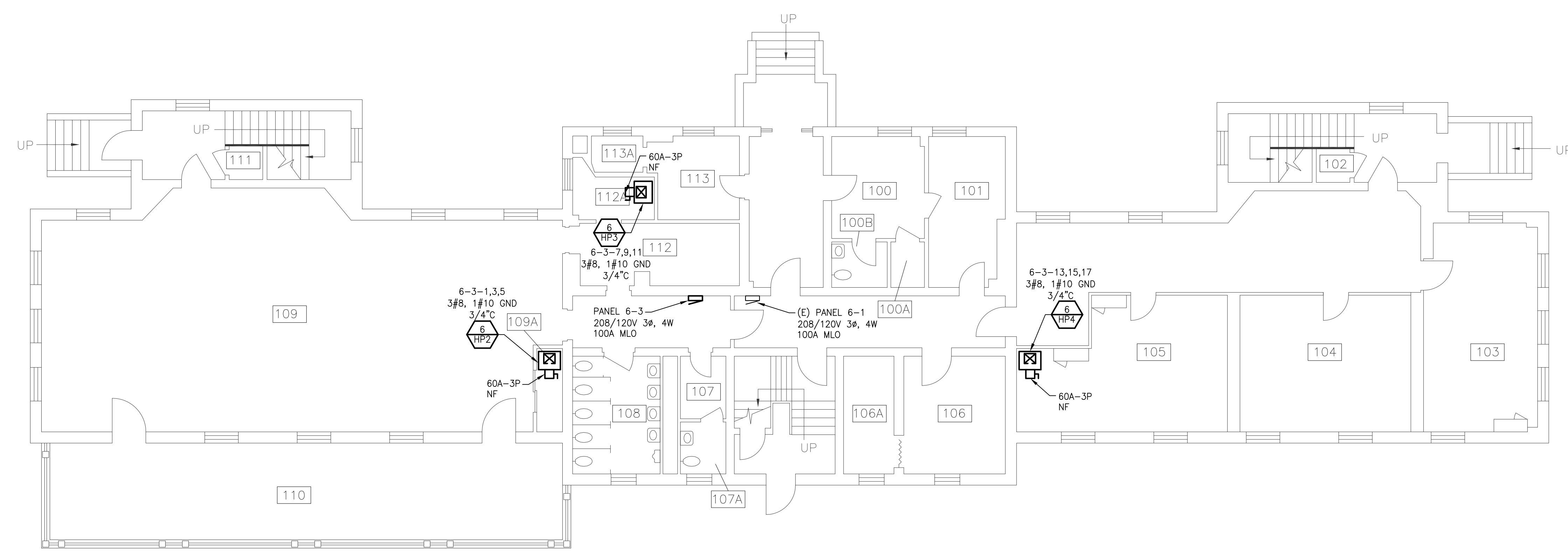
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M

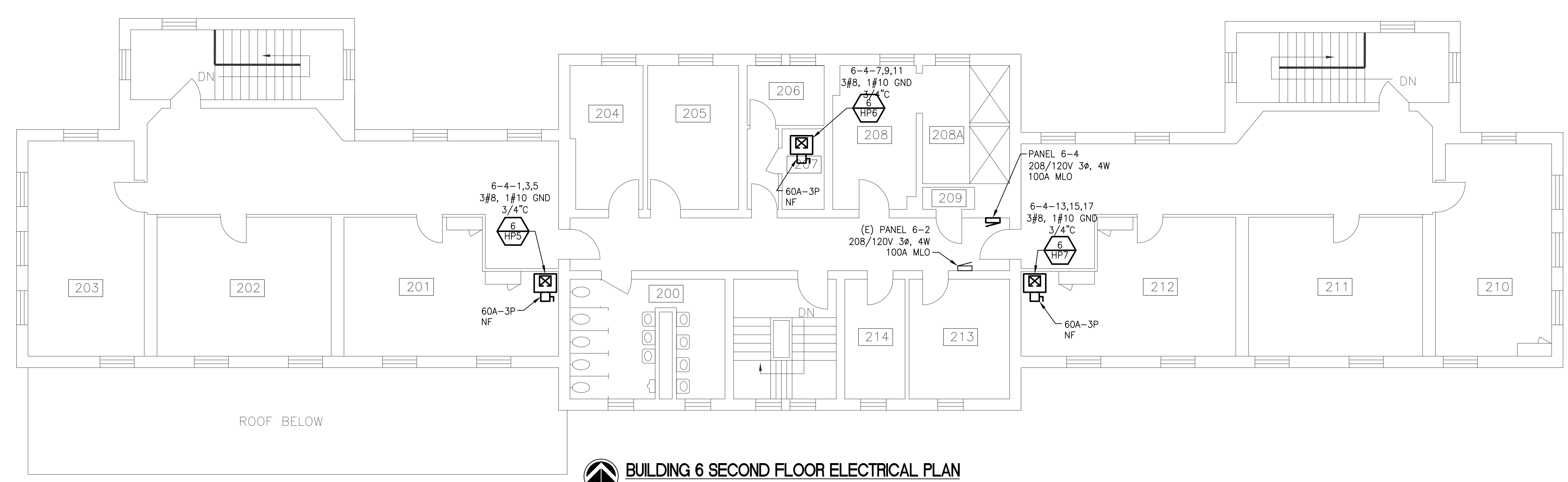
N



**BUILDING 6 BASEMENT ELECTRICAL PLAN**  
SCALE 1/8" = 1'-0"



**BUILDING 6 FIRST FLOOR ELECTRICAL PLAN**  
SCALE 1/8" = 1'-0"



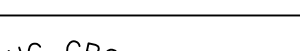
**BUILDING 6 SECOND FLOOR ELECTRICAL PLAN**  
SCALE 1/8" = 1'-0"

**GENERAL POWER NOTES**

1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED. 6-3-13,15,17
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. ALL RECEPTACLES SHALL BE 20A. RATED.
4. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
5. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
6. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
7. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
8. ALL 120 VOLT CIRCUITS SHALL UTILIZE A SEPARATE NEUTRAL.
9. ALL CONDUITS SERVING 120 VOLTS OR GREATER SHALL INCLUDE A GROUND WIRE.
10. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
11. ALL RECEPTACLES INSTALLED IN THE ELEVATOR PIT(S), ELEVATOR MACHINE ROOM(S), CONTROL ROOM(S)/SPACE(S) SHALL BE GROUND FAULT CIRCUIT INTERRUPTER TYPE (GFCI).
12. A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING A ELEVATOR PIT SUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.
13. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
14. ALL FIRE ALARM DEVICES SHALL BE 15 CANDELA RATED UNLESS NOTED OTHERWISE.

**ELECTRICAL KEYED NOTES**

- 1 NEW ELECTRIC WATER HEATER SHALL UTILIZE THE EXISTING CIRCUIT OF THE REMOVED WATER HEATER. EXTEND WIRING AND CONDUIT AS REQUIRED.
- 2 PROVIDE NEW UTILITY GRADE ELECTRICAL SERVICE METER. METER SHALL BE LOCATED ON INCOMING SERVICE AND BE CAPABLE OF DETAILED CONSUMPTION RECORDING/LOGGING AND HAVE BUILDING MANAGEMENT SYSTEM (BMS) INTERFACE. REFER TO SPECIFICATIONS. FIELD VERIFY EXACT LOCATION.
- 3 PROVIDE (2) NEW 100 AMP 3 POLE BREAKERS IN EXISTING PANEL 6-B FOR FEED TO NEW PANELS 6-3 & 6-4. PROVIDE 4#3, 1#8GND IN 1-1/4" CONDUIT TO NEW PANEL LOCATIONS. COORDINATE FINAL LOCATIONS WITH OWNER BEFORE INSTALLATION.

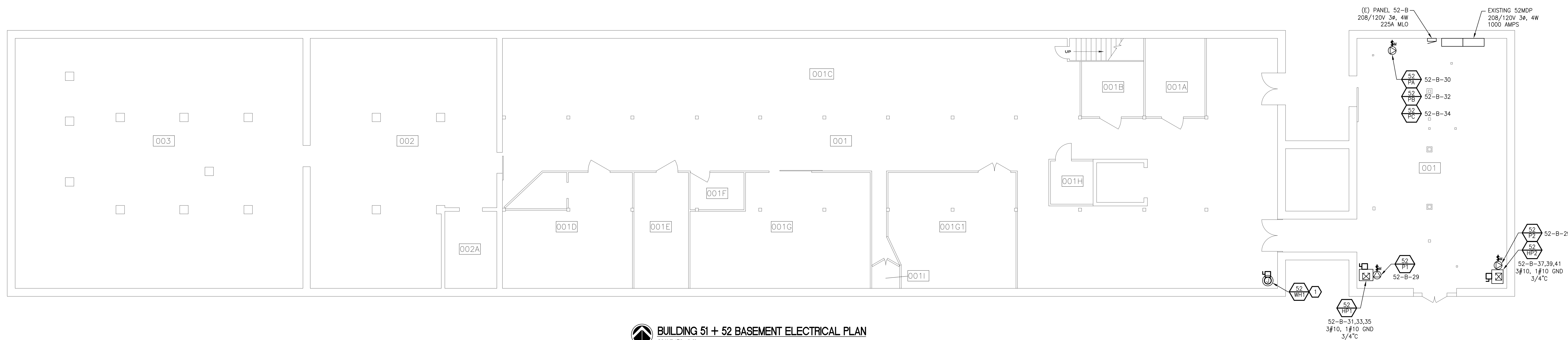
		<b>CONSULTANTS: MONUMENT ENGINEERING GROUP ASSOCIATES</b>				<b>ARCHITECT/ENGINEERS:</b>		<b>Drawing Title:</b> BUILDING 6 ELECTRICAL PLANS		<b>Project Title</b> GROUND SOURCE HEAT PUMP PHASE II VA HEALTH CARE SYSTEM -		<b>Project Number</b> 2010 536 02		<div>Office of Construction and Facilities Management</div>	
		<div><div><div>ENGINEERING GROUP ASSOCIATES, LLC</div><div></div><div>MONUMENT</div></div><div>P.O. BOX 1039 SOUTH GRAND AVE. FOWLERVILLE, MICHIGAN 48836 (OFFICE) 517-223-3512 (FAX) 517-223-9987  Copyright, © MEGA, L.L.C.</div></div>								<b>Building Number</b> 6		<b>Drawing Number</b> E101			<div>Department of Veterans Affairs</div>
<b>BID DOCUMENTS</b>		08-14-11						<b>Approved: Project Director</b>		<b>Location:</b> VA - MARION, INDIANA		<b>Dwg. 28 of 34</b>			
<b>100% CONSTRUCTION DRAWINGS</b>		07-14-11								<b>Date</b> 02-22-11		<div><b>Checked</b> JTA</div> <div><b>Drawn</b> RWC</div>			
<b>90% CONSTRUCTION DRAWINGS</b>		06-08-11													
<b>Revisions:</b>		<b>Date</b>													

1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. ALL RECEPTACLES SHALL BE 20A. RATED.
4. ALL DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE.
5. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
6. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES
7. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED WITH CIRCUITS SERVED.
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10. ALL CONDUITS SHALL BE ROUTED CONCEALED UNLESS NOTED OTHERWISE.
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12. A DEDICATED SINGLE PHASE RECEPTACLE SUPPLYING A ELEVATOR PIT SUMP PUMP SHALL NOT BE A GFCI TYPE RECEPTACLE.
13. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOLE KEEPING PAD.
14. FIRE ALARM DEVICES SHALL BE 15 CANDELA RATED UNLESS NOTED OTHERWISE.

1 NEW ELECTRIC WATER HEATER SHALL UTILIZE THE EXISTING CIRCUIT OF THE REMOVED WATER HEATER, EXTEND WIRING AND CONDUIT AS REQUIRED.



 **BUILDING 51 + 52 FIRST FLOOR ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"

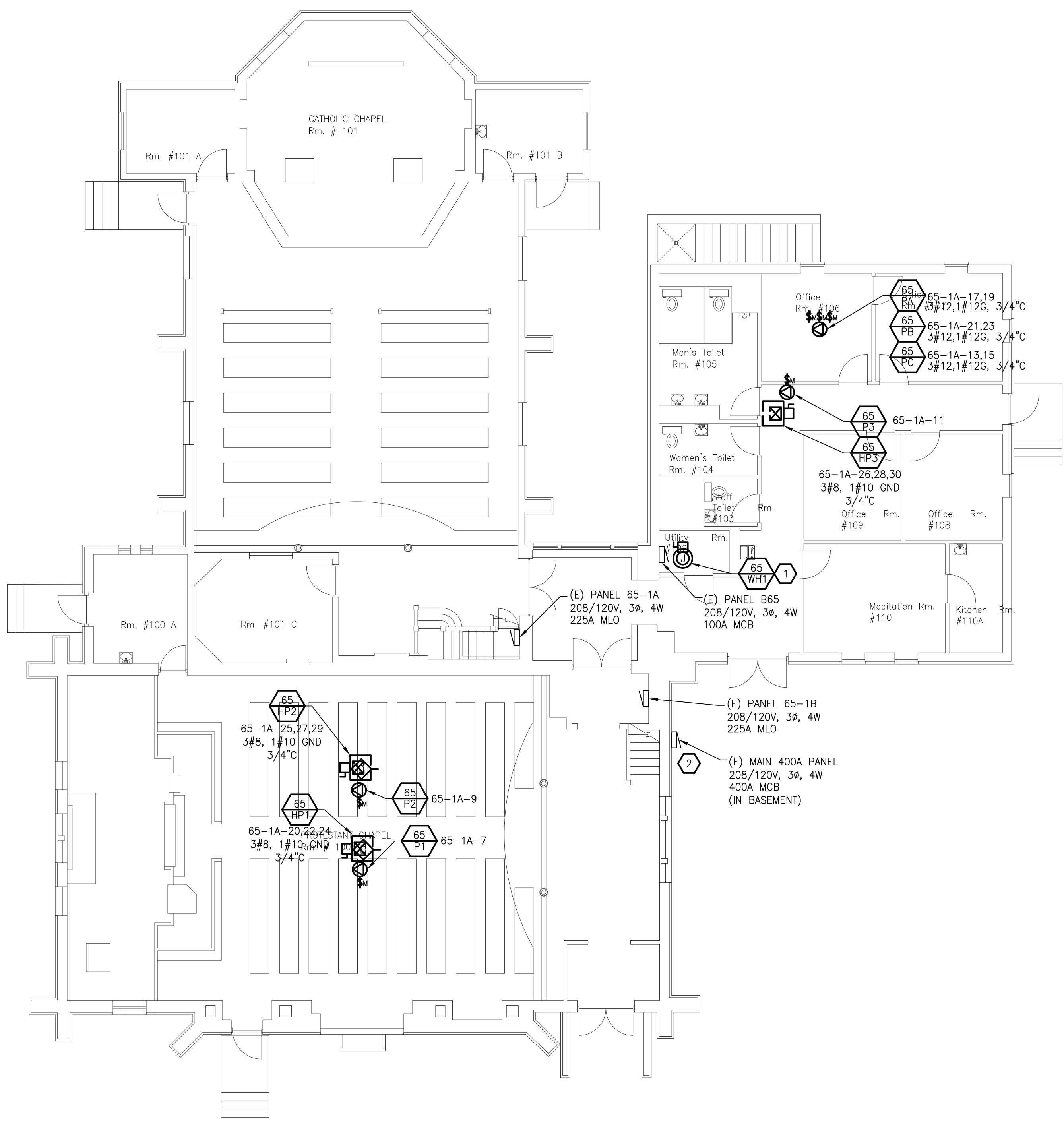


 **BUILDING 51 + 52 BASEMENT ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"

[illegible]

A  
B  
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three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one sixteenth inch = one foot




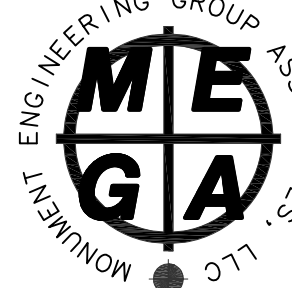
 **BUILDING 65 FIRST FLOOR ELECTRICAL PLAN**  
SCALE 1/8" = 1'-0"

**GENERAL POWER NOTES**

1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
3. ALL RECEPTACLES SHALL BE 20A. RATED.
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5. ALL RECEPTACLES WITHIN 6'-0" OF SINK OR OTHER WATER SUPPLY SHALL BE GFCI TYPE RECEPTACLE.
6. REFER TO ARCHITECTURAL FLOOR PLAN AND ELEVATIONS FOR EXACT LOCATION OF DEVICES.
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13. ALL ELECTRICAL EQUIPMENT MOUNTED ON THE FLOOR SHALL BE MOUNTED ON A 4" CONCRETE HOUSE KEEPING PAD.
14. ALL FIRE ALARM DEVICES SHALL BE 15 CANDELA RATED UNLESS NOTED OTHERWISE.

**ELECTRICAL KEYED NOTES**

1. NEW ELECTRIC WATER HEATER SHALL UTILIZE THE EXISTING CIRCUIT OF THE REMOVED WATER HEATER. EXTEND WIRING AND CONDUIT AS REQUIRED.
2. PROVIDE NEW UTILITY GRADE ELECTRICAL SERVICE METER. METER SHALL BE LOCATED ON INCOMING SERVICE AND BE CAPABLE OF DETAILED CONSUMPTION RECORDING/LOGGING AND HAVE BUILDING MANAGEMENT SYSTEM (BMS) INTERFACE. REFER TO SPECIFICATIONS. FIELD VERIFY EXACT LOCATION.

		<b>CONSULTANTS: MONUMENT ENGINEERING GROUP ASSOCIATES</b>				<b>ARCHITECT/ENGINEERS:</b>		<b>Drawing Title:</b> BUILDING 65 FIRST FLOOR ELECTRICAL PLAN		<b>Project Title</b> GROUND SOURCE HEAT PUMP PHASE II VA HEALTH CARE SYSTEM -		<b>Project Number</b> 2010 536 02		<div>Office of Construction and Facilities Management</div> <div> Department of Veterans Affairs</div>	
		<div><b>MONUMENT ENGINEERING GROUP ASSOCIATES, LLC</b> P.O. BOX 1039 SOUTH GRAND AVE. FOWLERVILLE, MICHIGAN 48836 (OFFICE) 517-223-3512 (FAX) 517-223-9987 Copyright, © MEGA, L.L.C.</div>						<b>Building Number</b> 65		<b>Drawing Number</b> <b>E103</b>		<b>Dwg.</b> 30 of 34			
<b>BID DOCUMENTS</b> 08-14-11 <b>100% CONSTRUCTION DRAWINGS</b> 07-14-11 <b>90% CONSTRUCTION DRAWINGS</b> 06-08-11 <b>Revisions:</b> Date						<b>Approved: Project Director</b>		<b>Location:</b> VA - MARION, INDIANA							
								<b>Date</b> 02-22-11		<b>Checked</b> JTA		<b>Drawn</b> RWC			

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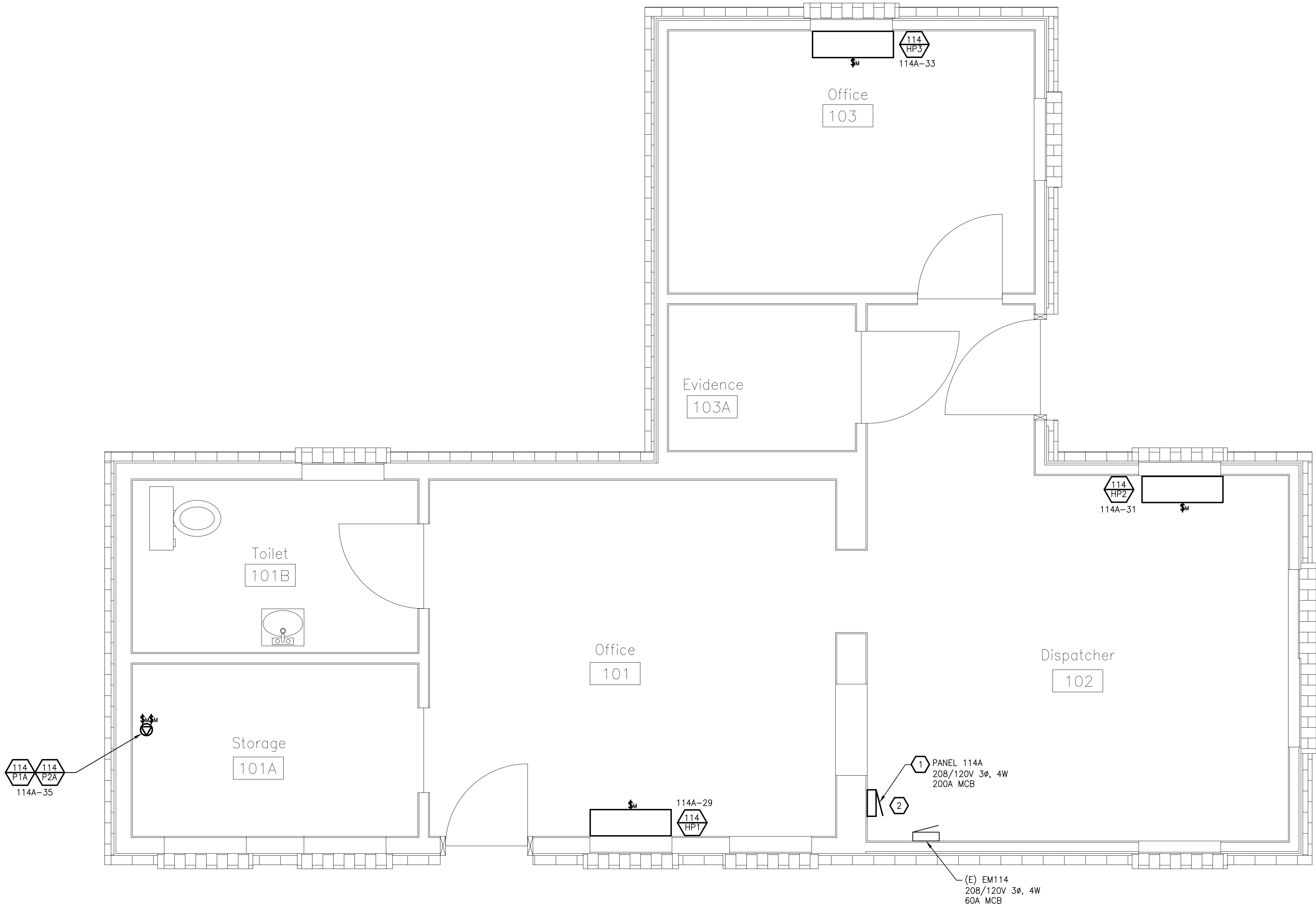
three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot  
one sixteenth inch = one foot

GENERAL POWER NOTES



1. ALL ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE NEW UNLESS OTHERWISE NOTED.
2. ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
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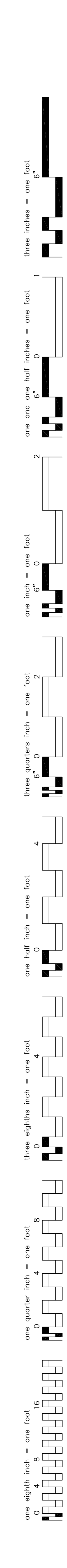
ELECTRICAL KEYED NOTES

1. EXISTING PANEL 114A TO BE REMOVED AND REPLACED WITH NEW PANEL. CONTRACTOR TO VERIFY BREAKER TYPES AND QUANTITIES NEEDED OF EXISTING TO REMAIN LOADS BEFORE ORDERING. PANEL SHALL UTILIZE EXISTING FEED.
2. PROVIDE NEW UTILITY GRADE ELECTRICAL SERVICE METER. METER SHALL BE LOCATED ON INCOMING SERVICE AND BE CAPABLE OF DETAILED CONSUMPTION RECORDING/LOGGING AND HAVE BUILDING MANAGEMENT SYSTEM (BMS) INTERFACE. REFER TO SPECIFICATIONS. FIELD VERIFY EXACT LOCATION.



 **BUILDING 114 FIRST FLOOR ELECTRICAL PLAN**  
SCALE 1/2" = 1'-0"

		<b>CONSULTANTS: MONUMENT ENGINEERING GROUP ASSOCIATES</b>		<b>ARCHITECT/ENGINEERS:</b>		<b>Drawing Title:</b> BUILDING 114 ELECTRICAL PLAN		<b>Project Title</b> GROUND SOURCE HEAT PUMP PHASE II VA HEALTH CARE SYSTEM		<b>Project Number</b> 2010 536 02		<b>Office of Construction and Facilities Management</b>	
		 P.O. BOX 1039 SOUTH GRAND AVE. FOWLERVILLE, MICHIGAN 48836 (OFFICE) 517-223-3512 (FAX) 517-223-9987 Copyright, © MEGA, L.L.C.						<b>Building Number</b> 114		<b>Drawing Number</b> E104			
<b>BID DOCUMENTS</b>				08-14-11				<b>Approved: Project Director</b>		<b>Location:</b> VA - MARION, INDIANA		<b>Date</b> 02-22-11	
<b>100% CONSTRUCTION DRAWINGS</b>		07-14-11								<b>Drawn</b> RWC			
<b>90% CONSTRUCTION DRAWINGS</b>		06-08-11											
<b>Revisions:</b>		Date											



Category	Response Count (approx.)
A	10
B	8
C	7
D	6
E	5
F	3

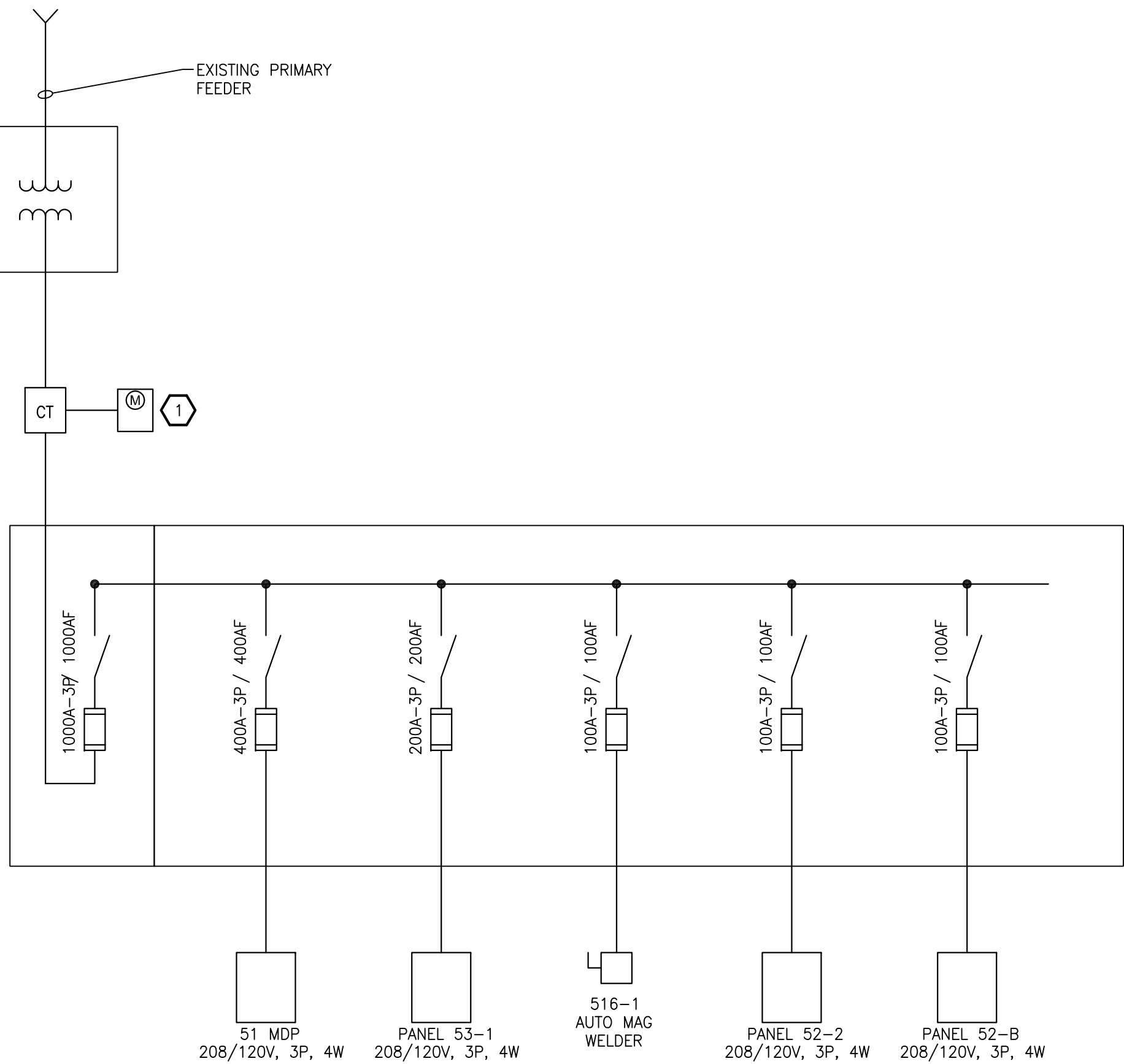
- ## ELECTRICAL KEYED NOTES

-  BUILDING 170 FIRST FLOOR ELECTRICAL PLAN  
SCALE: 1/8" = 1'-0"





three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one quarter inch = one foot  
one eighth inch = one foot



BUILDINGS 51 & 52 ONE LINE DIAGRAM

ONE LINE DIAGRAM KEYED NOTES

- 1 PROVIDE NEW UTILITY GRADE ELECTRICAL SERVICE METER. METER SHALL BE CAPABLE OF DETAILED CONSUMPTION RECORDING/LOGGING AND HAVE BUILDING MANAGEMENT SYSTEM (BMS) INTERFACE. REFER TO SPECIFICATIONS.

PANEL 6-3			NUMBER OF POLES: 24		
VOLT: 208/120			SIZE (AMPS): 100 MLO		
PHASE: 3			GROUND BUS: YES		
HERTZ: 60			ISOLATED GROUND: NO		
			BUSSING SIZE: 100A		
			NEUTRAL SIZE: 100%		
			MOUNTING: SURFACE		
			LOCATION:		
CIRCUIT NUMBER:	OKT BKR SIZE	DESCRIPTION	PHASE A	PHASE B	PHASE C
1					
3	35-3	6-HP2	2954	2954	
5					2954
7			2954	2954	
9	35-3	6-HP3			2954
11					
13			2954	2954	
15	35-3	6-HP4			2954
17					
19		SPACE			
21		SPACE			
23		SPACE			
2		SPACE			
4		SPACE			
6		SPACE			
8		SPACE			
10		SPACE			
12		SPACE			
14		SPACE			
16		SPACE			
18		SPACE			
20		SPACE			
22		SPACE			
24		SPACE			
TOTAL VA EACH PHASE			8862	8862	8862
TOTAL KVA (CONNECTED)				26.59	
TOTAL AMPS (CONNECTED)			73.88		

PANEL 6-4				NUMBER OF POLES: 24			
VOLT: 208/120				SIZE (AMPS): 100 MLO			
PHASE: 3				GROUND BUS: YES			
HERTZ: 60				ISOLATED GROUND: NO			
				BUSSING SIZE: 100A			
				NEUTRAL SIZE: 100%			
				MOUNTING: SURFACE			
				LOCATION:			
CIRCUIT NUMBER	OKT BKR SIZE	DESCRIPTION		PHASE A	PHASE B	PHASE C	
1					2954		
3	35-3	6-HP5			2954		
5						2954	
7					2954		
9	35-3	6-HP6			2954		
11						2954	
13					2954		
15	35-3	6-HP7			2954		
17						2954	
19		SPACE					
21		SPACE					
23		SPACE					
2		SPACE					
4		SPACE					
6		SPACE					
8		SPACE					
10		SPACE					
12		SPACE					
14		SPACE					
16		SPACE					
18		SPACE					
20		SPACE					
22		SPACE					
24		SPACE					
TOTAL VA EACH PHASE				8862	8862	8862	
TOTAL KVA (CONNECTED)					26.59		
TOTAL AMPS (CONNECTED)				73.88			

52-B		NUMBER OF POLES: 42			
VOLT: 208/120		SIZE (AMPS): 225 MLO			
PHASE: 3		GROUND BUS: YES			
HERTZ: 60		ISOLATED GROUND: NO			
		BUSSING SIZE: 225A			
		NEUTRAL SIZE: 100%			
		MOUNTING: SURFACE			
		LOCATION: 1			
CIRCUIT NUMBER	OKT BKR SIZE	DESCRIPTION	PHASE A	PHASE B	PHASE C
			VA		
1	20	EXISTING LOAD	750		
3	20	EXISTING LOAD		750	
5	20	EXISTING LOAD			750
7	20	EXISTING LOAD	750		
9	20	EXISTING LOAD		750	
11	20	EXISTING LOAD			750
13	20	EXISTING LOAD	750		
15	20	EXISTING LOAD		750	
17		SPACE			
19		SPACE			
21	20	EXISTING LOAD		750	
23	20	EXISTING LOAD			750
25	20	EXISTING LOAD	750		
27	20	EXISTING LOAD		750	
29	20	52-P1 / 52-P2			1500
31			2065		
33	25-3	52-HP1		2065	
35					2065
37			2065		
39	25-3	52-HP2		2065	
41					2065
2	20	EXISTING LOAD			
4	20	EXISTING LOAD	750		
6	20	EXISTING LOAD		750	
8	20	EXISTING LOAD			750
10	20	EXISTING LOAD	750		
12	20	EXISTING LOAD		750	
14	20	EXISTING LOAD			750
16	20	EXISTING LOAD	750		
18	20	EXISTING LOAD		750	
20	20	EXISTING LOAD			750
22	20	EXISTING LOAD	750		
24		SPACE		750	
26	20	EXISTING LOAD		750	
28	20	EXISTING LOAD			750
30	25	52-PA			1587
32	25	52-PB		1587	
34	25	52-PC			1587
36		SPACE			
38		SPACE			
40		SPACE			
42	20	EXISTING LOAD			750
TOTAL VA EACH PHASE			12467	13217	12467
TOTAL KVA (CONNECTED)				38.15	
TOTAL AMPS (CONNECTED)			106.02		