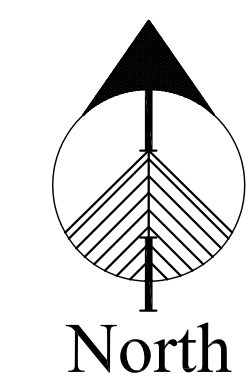


BASEMENT



A

BASEMENT ELEC. FLOOR PLAN

SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION

Development Consultant
SHINBERG CONSULTING
 477 CONGRESS ST.
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RENOVATIONS TO
 645 CONGRESS ST.
 PORTLAND, ME 04101

Project No: 08.436

Drawing Title:

BASEMENT
 ELEC. FLOOR
 PLAN

Scale: AS NOTED

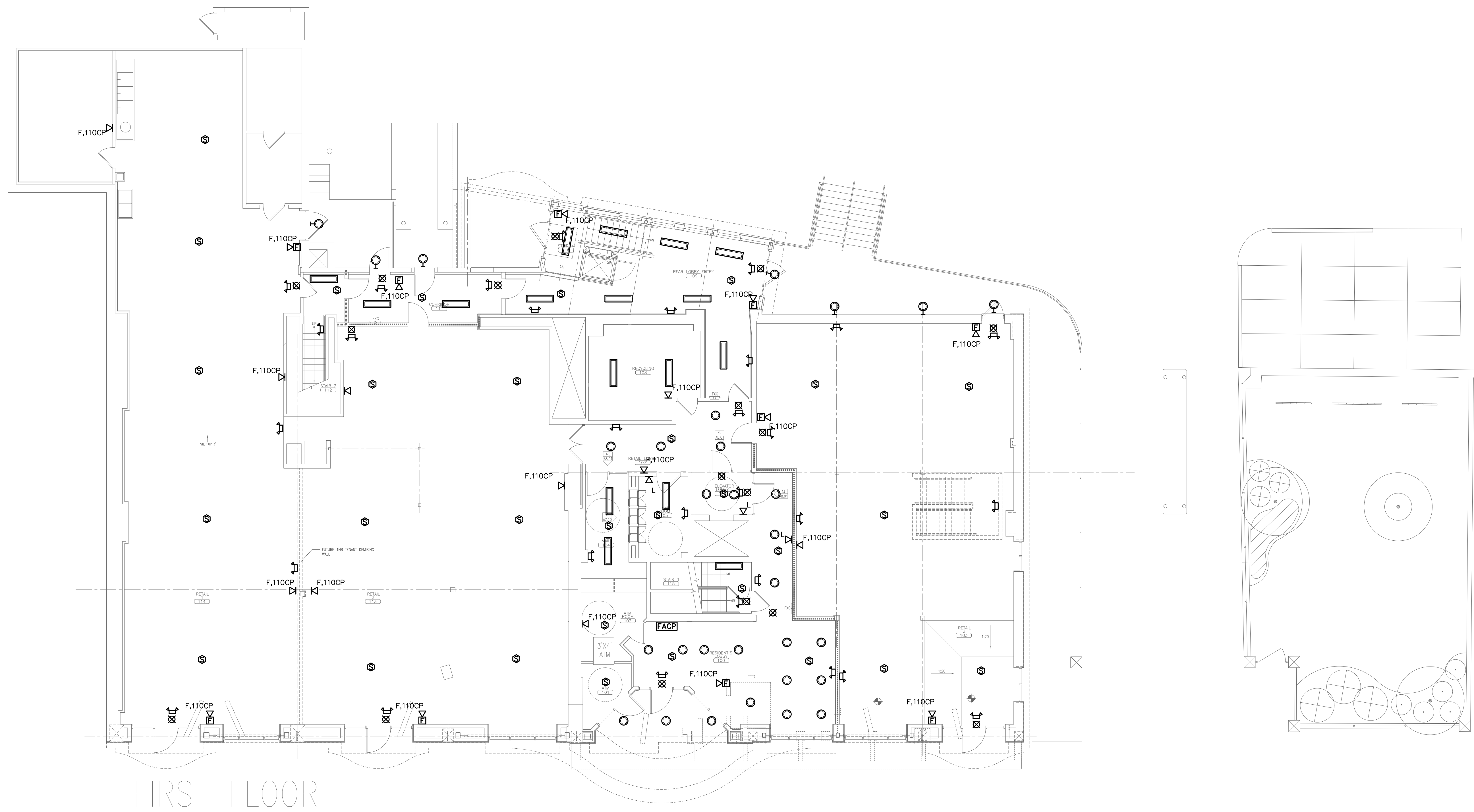
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Revisions:

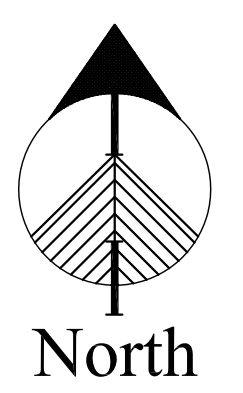
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Drawing Number:

E1.0



FIRST FLOOR



A FIRST FLOOR ELEC. PLAN

SCALE: 1/8" = 1'-0"

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Project No: 08.436

Drawing Title:

FIRST FLOOR ELEC. PLAN

Scale: AS NOTED

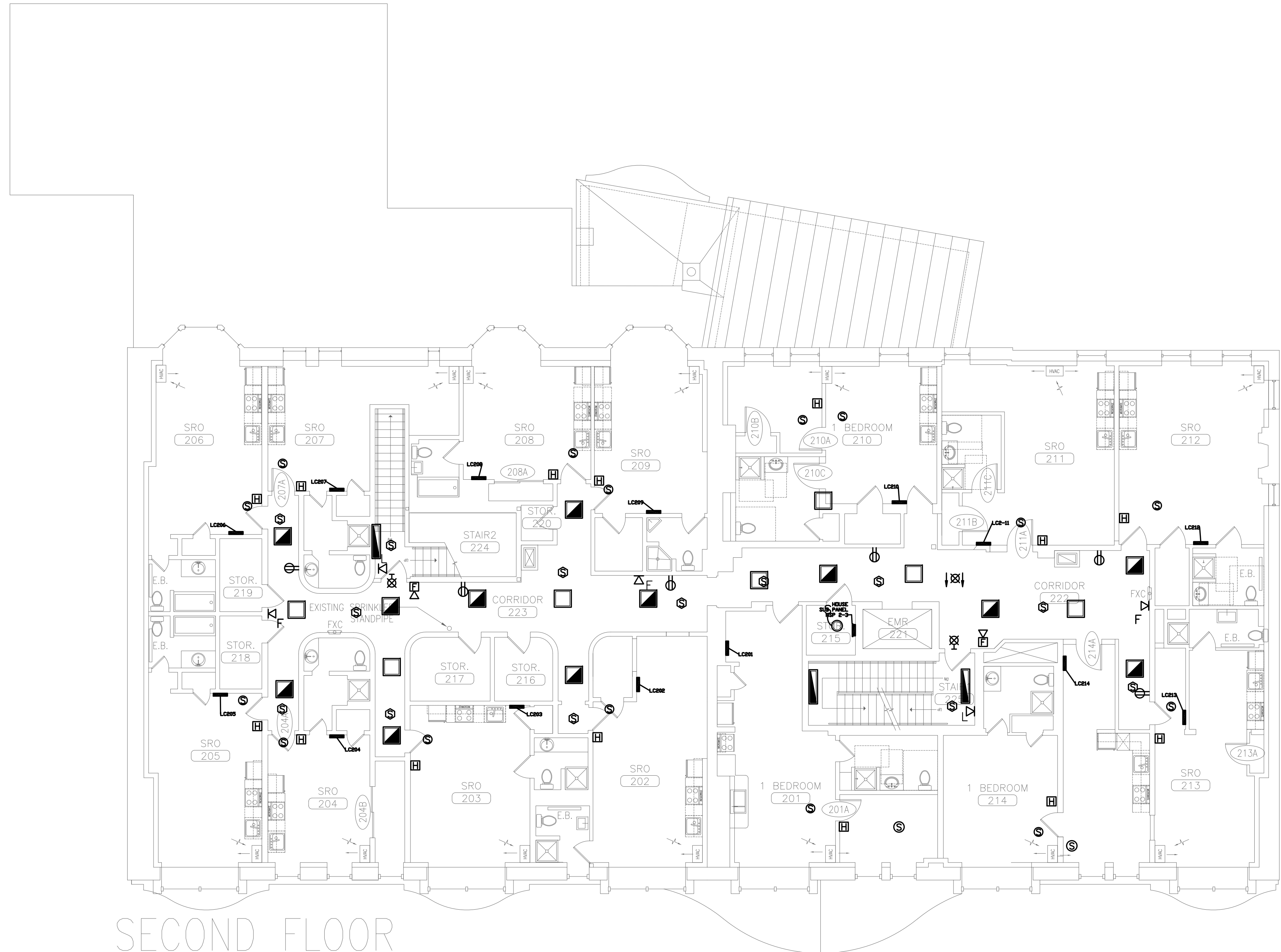
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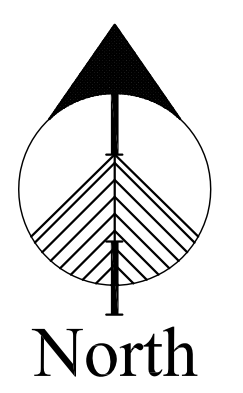
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Drawing Number:

E1.1



SECOND FLOOR



SCALE: 1/8" = 1'-0"

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Drawing Title:

SECOND FLOOR ELEC. PLAN

Scale: AS NOTED

Date: 5-27-09

Revisions:

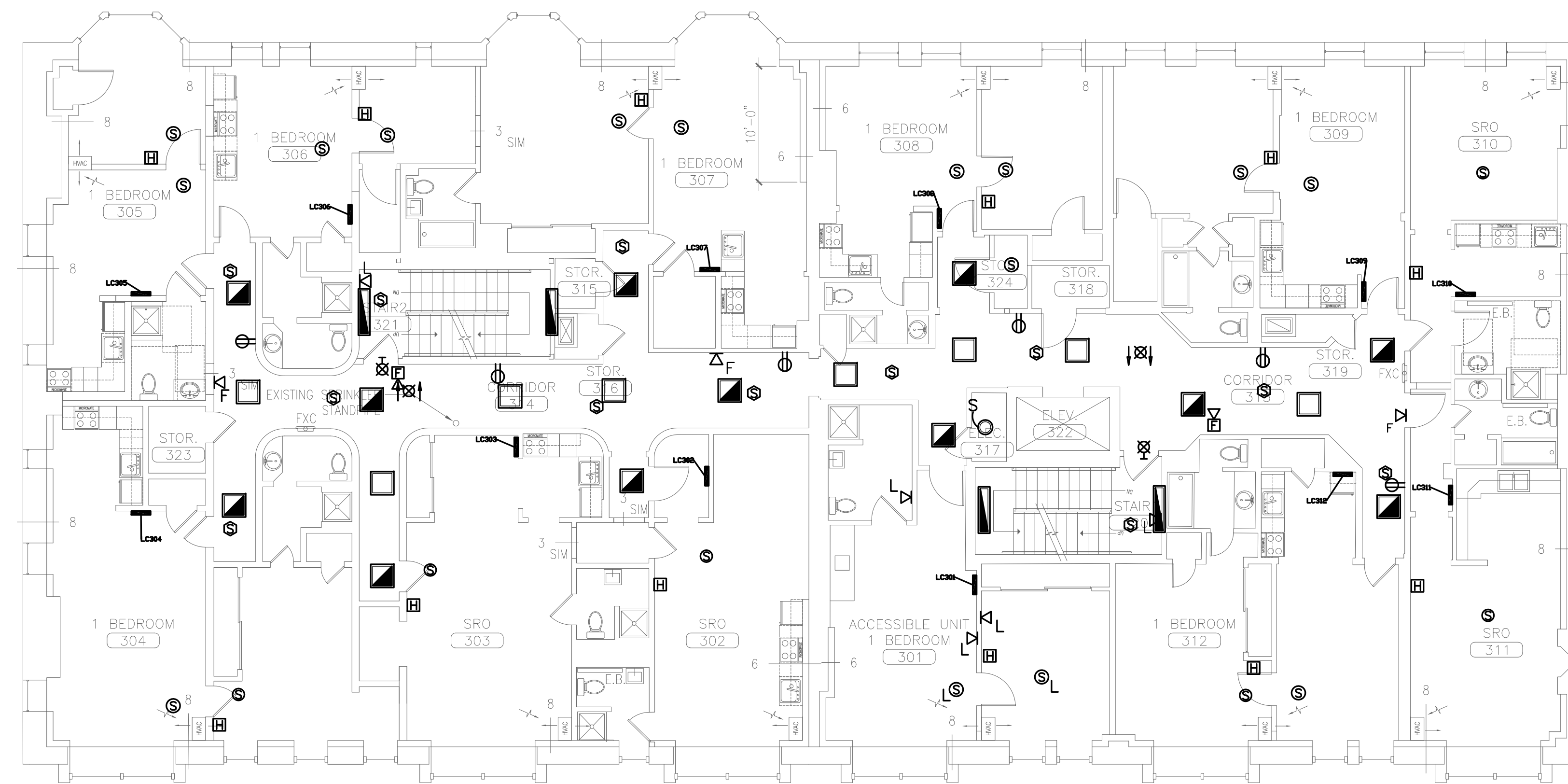
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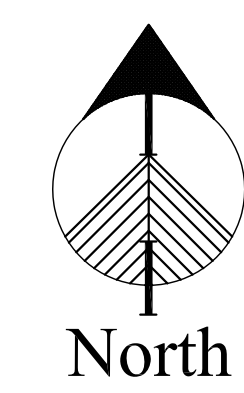
E1.2

A SECOND FLOOR ELEC. PLAN

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THIRD FLOOR



SCALE: 1/8" = 1'-0"

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Project No: 08.436

Drawing Title:

THIRD FLOOR ELEC. PLAN

Scale: AS NOTED

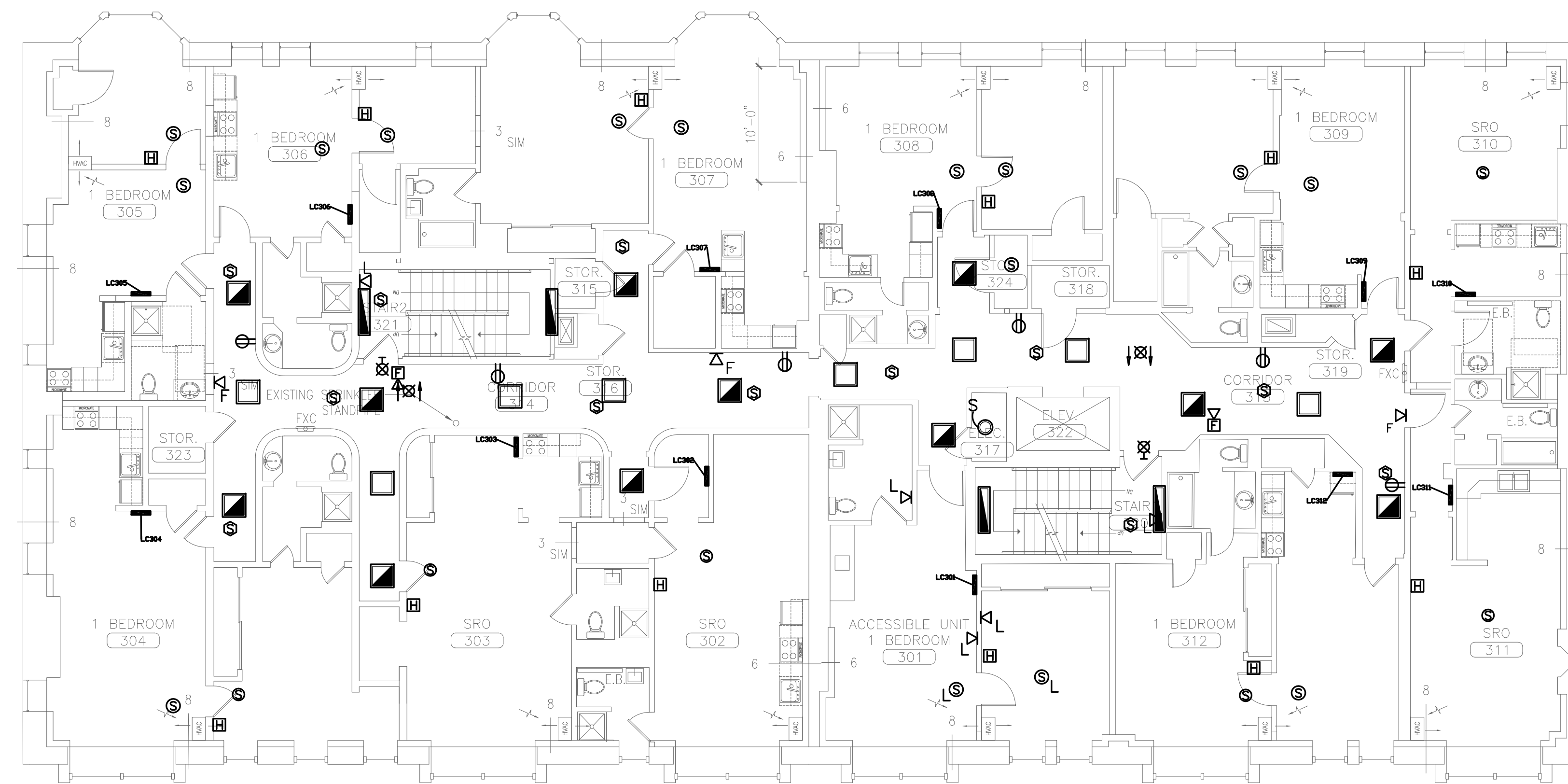
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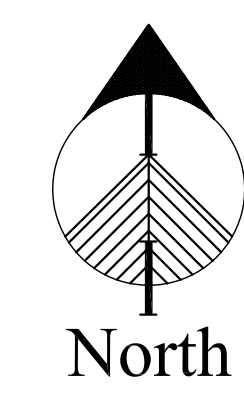
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Drawing Number:

E1.3



THIRD FLOOR



A FOURTH FLOOR ELEC. PLAN

SCALE: 1/8" = 1'-0"

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Project No: 08.436

Drawing Title:

FOURTH FLOOR ELEC. PLAN

Scale: AS NOTED

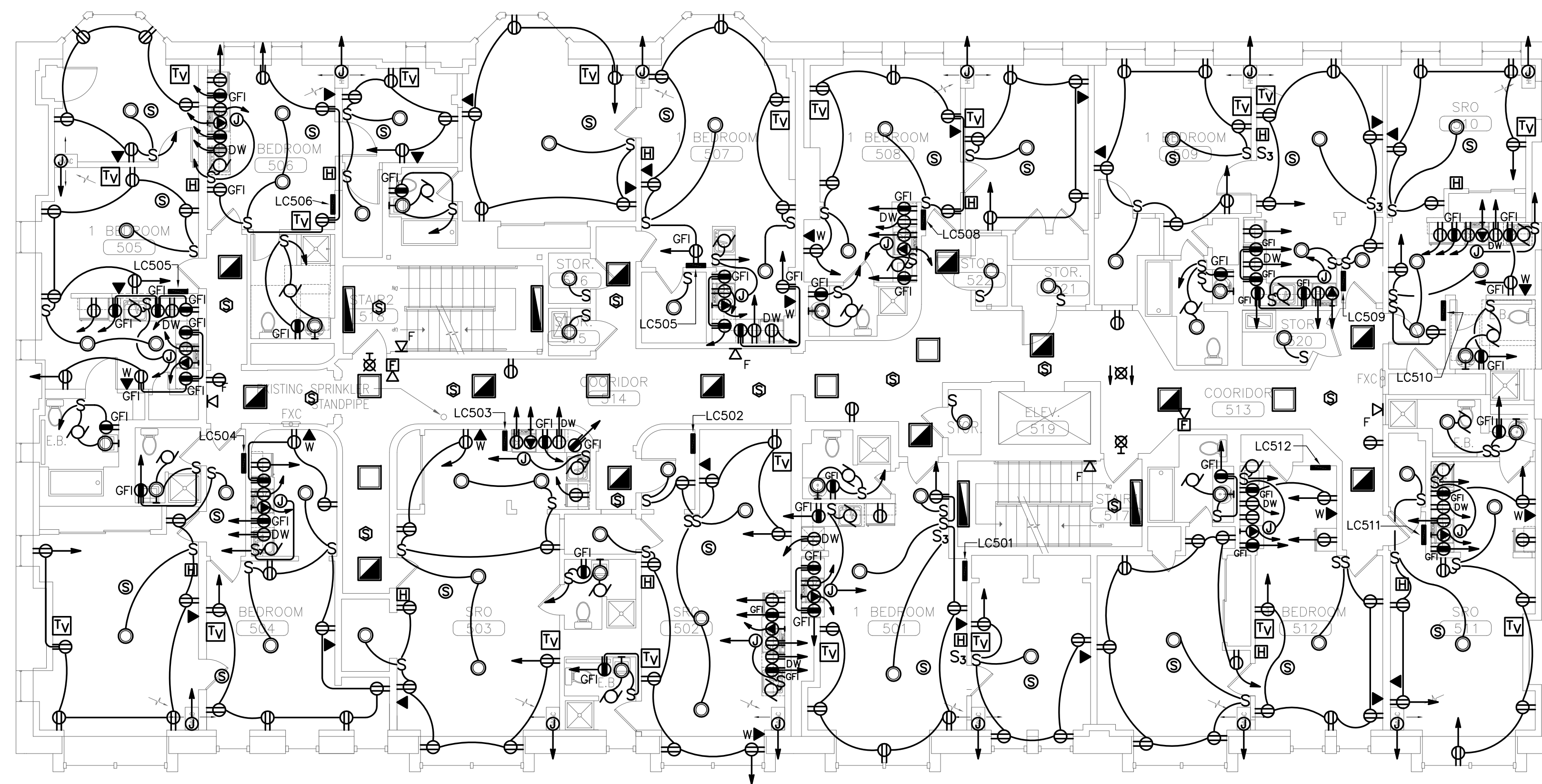
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Revisions:

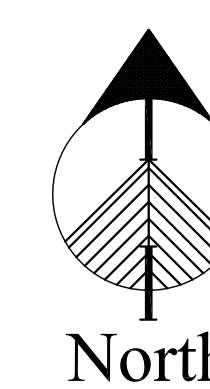
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Drawing Number:

E1.4



FIFTH FLOOR



A

FIFTH FLOOR ELEC. PLAN

SCALE: 1/8" = 1'-0"

NOT FOR CONSTRUCTION

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Project No: 08.436

Drawing Title:

FIFTH
 FLOOR ELEC.
 PLAN

Scale: AS NOTED

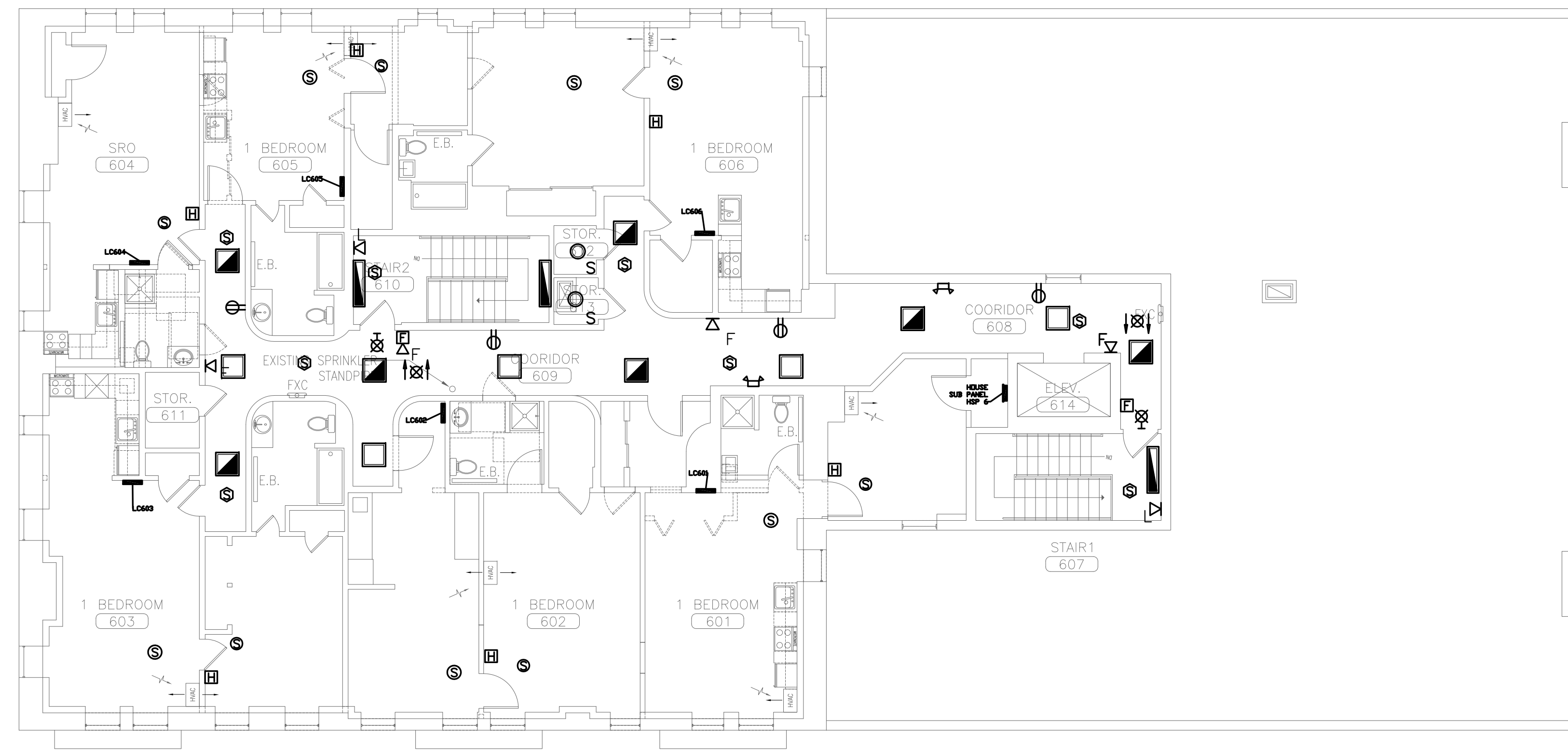
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Revisions:

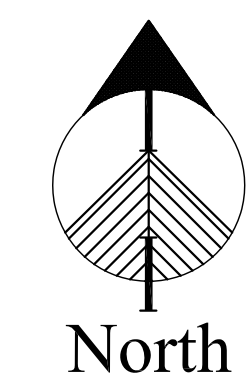
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Drawing Number:

E1.5



SIXTH FLOOR



SCALE: 1/8" = 1'-0"

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Project No: 08.436

Drawing Title:

SIXTH
 FLOOR ELEC.
 PLAN

Scale: AS NOTED

Date: 5-27-09

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Drawing Number:

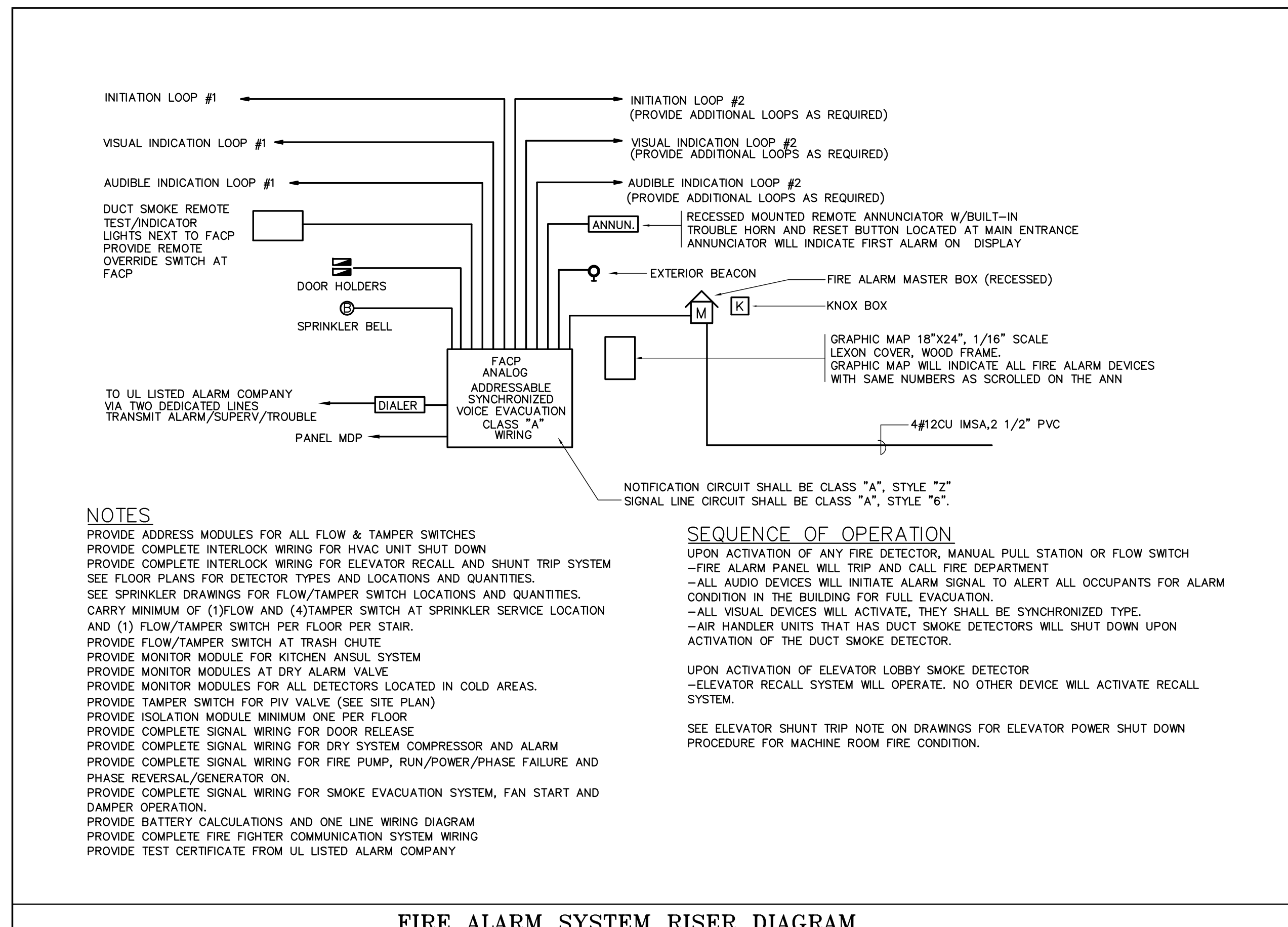
E1.6

WIRE SCHEDULE		
AMPS CB	P/W	WIRE AND CONDUIT
20	3/4	4#12 CU+#12 GRD, 3/4' EMT
30	3/4	4#10 CU+#10 GRD, 3/4' EMT
40	3/4	4#8 CU+#10 GRD, 3/4' EMT
50	3/4	4#6 CU+#10 GRD, 3/4' EMT
60	3/4	4#6 CU+#10 GRD, 3/4' EMT
70	3/4	4#4 CU+#8 GRD, 1' EMT
80	3/4	4#3 CU+#8 GRD, 1 1/4' EMT
100	3/4	4#3 CU+#8 GRD, 1 1/2' EMT
125	3/4	4#1 CU+#6 GRD, 1 1/2' EMT
150	3/4	4#1/0 CU+#6 GRD, 1 1/2' EMT
200	3/4	4#3/0 CU+#6 GRD, 2 1/2' EMT
225	3/4	4#4/0 CU+#4 GRD, 2 1/2' EMT
300	3/4	4#300 MCM CU+#4 GRD, 3' EMT
350	3/4	4#400 MCM CU+#3 GRD, 3' EMT
400	3/4	4#500 MCM CU+#2 GRD, 4' EMT
600	3/4	<2>4#350 MCM CU+#1/0 GRD, 3' EMT
800	3/4	<2>4#500 MCM CU+#1/0 GRD, 4' EMT

FOR SINGLE PHASE TO NEUTRAL CIRCUITS DELETE TWO WIRE
 FOR SINGLE PHASE TO PHASE NO-NEUTRAL CIRCUITS DELETE TWO WIRES
 FOR SINGLE PHASE TO PHASE WITH NEUTRAL CIRCUITS, DELETE ONE WIRE

-FEEDERS ARE SIZED BASED ON 1/3 V.D.
 CONTRACTOR SHALL FOLLOW THE FOLLOWING CRITERIA.

50A, UP TO 100FT #6, INCREASE BY ONE SIZE FOR EVERY 30FT.
 100A, UP TO 100FT #3, INCREASE BY ONE SIZE FOR EVERY 30FT.
 200A, UP TO 150FT #3/0, INCREASE BY ONE SIZE FOR EVERY 50 FT.
 400A, UP TO 200FT #500, INCREASE BY ONE SIZE FOR EVERY 50FT.



NOTES
 PROVIDE ADDRESS MODULES FOR ALL FLOW & TAMPER SWITCHES
 PROVIDE COMPLETE INTERLOCK WIRING FOR HVAC UNIT SHUT DOWN
 PROVIDE COMPLETE INTERLOCK WIRING FOR ELEVATOR RECALL AND SHUNT TRIP SYSTEM
 SEE FLOOR PLANS FOR DETECTOR TYPES AND LOCATIONS AND QUANTITIES.
 SEE SPRINKLER DRAWINGS FOR FLOW/TAMPER SWITCH LOCATIONS AND QUANTITIES.
 CARRY MINIMUM OF (1)FLOW AND (4)TAMPER SWITCH AT SPRINKLER SERVICE LOCATION
 AND (1) FLOW/TAMPER SWITCH PER FLOOR PER STAIR.
 PROVIDE FLOW/TAMPER SWITCH AT TRASH CHUTE
 PROVIDE MONITOR MODULE FOR KITCHEN ANSUL SYSTEM
 PROVIDE MONITOR MODULES AT DRY ALARM VALVE
 PROVIDE MONITOR MODULES FOR ALL DETECTORS LOCATED IN COLD AREAS.
 PROVIDE TAMPER SWITCH FOR PIV VALVE (SEE SITE PLAN)
 PROVIDE ISOLATION MODULE MINIMUM ONE PER FLOOR
 PROVIDE COMPLETE SIGNAL WIRING FOR DOOR RELEASE
 PROVIDE COMPLETE SIGNAL WIRING FOR DRY SYSTEM COMPRESSOR AND ALARM
 PROVIDE COMPLETE SIGNAL WIRING FOR FIRE PUMP, RUN/POWER/PHASE FAILURE AND
 PHASE REVERSAL/GENERATOR ON.
 PROVIDE COMPLETE SIGNAL WIRING FOR SMOKE EVACUATION SYSTEM, FAN START AND
 DAMPER OPERATION.
 PROVIDE BATTERY CALCULATIONS AND ONE LINE WIRING DIAGRAM
 PROVIDE COMPLETE FIRE FIGHTER COMMUNICATION SYSTEM WIRING
 PROVIDE TEST CERTIFICATE FROM UL LISTED ALARM COMPANY

SEQUENCE OF OPERATION
 UPON ACTIVATION OF ANY FIRE DETECTOR, MANUAL PULL STATION OR FLOW SWITCH
 -FIRE ALARM PANEL WILL TRIP AND CALL FIRE DEPARTMENT
 -ALL AUDIO DEVICES WILL INITIATE ALARM SIGNAL TO ALERT ALL OCCUPANTS FOR ALARM
 CONDITION IN THE BUILDING FOR FULL EVACUATION.
 -ALL VISUAL DEVICES WILL ACTIVATE, THEY SHALL BE SYNCHRONIZED TYPE.
 -AIR HANDLER UNITS THAT HAS DUCT SMOKE DETECTORS WILL SHUT DOWN UPON
 ACTIVATION OF THE DUCT SMOKE DETECTOR.
 UPON ACTIVATION OF ELEVATOR LOBBY SMOKE DETECTOR
 -ELEVATOR RECALL SYSTEM WILL OPERATE. NO OTHER DEVICE WILL ACTIVATE RECALL
 SYSTEM.
 SEE ELEVATOR SHUNT TRIP NOTE ON DRAWINGS FOR ELEVATOR POWER SHUT DOWN
 PROCEDURE FOR MACHINE ROOM FIRE CONDITION.

FIRE ALARM SYSTEM RISER DIAGRAM

SYMBOL LIST	
	CEILING MOUNTED LIGHT FIXTURE.
	WALL MOUNTED LIGHT FIXTURE.
	2'x2' OR 2'x4' FLUORESCENT LIGHT FIXTURE.
	1'x4' FLUORESCENT WALL/CEILING MOUNTED LIGHT FIXTURE.
	SINGLE POLE LIGHT SWITCH
	THREE-WAY LIGHT SWITCHES
	DIMMER SWITCH MINIMUM 1000W OR AS REQUIRED PER CIRCUIT
	DOOR JAMB SWITCH
	DUPLEX RECEPTACLE, 120V,18" AFF.
	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER 8" ABOVE COUNTER TO C
	DUPLEX RECEPTACLE, 120V,18" AFF., ONE OUTLET SWITCHED
	120V DOUBLE DUPLEX CONVENIENCE RECEPTACLE
	DUPLEX RECEPTACLE ABOVE COUNTER, 8" ABOVE COUNTER TO C
	120V CONVENIENCE RECEPTACLE - 18" AFF UNLESS OTHERWISE NOTED 'I' INDICATES ISOLATED GROUND. RUN HOT-NEUTRAL-GROUND-GROUND
	DUPLEX RECEPTACLE, 120V, MTD. IN CEILING
	DUPLEX RECEPTACLE, 120V, MTD. IN CEILING, ONE OUTLET SWITCHED
	120V DOUBLE DUPLEX RECEPTACLE, MTD. IN CEILING
	TELEPHONE JACK COMPLETE W/JACK AND COVER, ('W' WALL MOUNTED @ 4'-0" A.F.F)
	DATA OUTLET, COMPLETE W/JACK AND COVER, HEIGHT AT 18" TO C AFF.
	MOTOR
	FUSED DISCONNECT SWITCH, (3R RAIN-PROOF).
	STARTER
	SYSTEM TYPE SMOKE DETECTOR
	DUCT SMOKE DETECTOR W/REMOTE TEST SWITCH
	HEAT DETECTOR
	FIRE ALARM PULL AND A/V DEVICE
	FIRE ALARM PULL STATION CENTERLINE 4'-0" AFF
	FIRE ALARM AUDIO/VISUAL UNIT, MTD. @ 6'-8" AFF
	FIRE ALARM LIGHT, MTD. @ 6'-8" AFF
	110V LOCAL TYPE SMOKE DETECTOR W/BATTERY
	FIRE ALARM MINI HORN
	MAGNETIC DOOR HOLDER
	MASTER BOX
	TYPICAL WIRING, DIAGONAL LINES INDICATES QUANTITY OF CONDUCTORS.
	HOMERUN TO PANEL WITH ISOLATED GROUND CONDUCTOR.(HOT, NEUTRAL, GROUND)
	HOMERUN TO PANEL WITH CONDUCTOR.(HOT, NEUTRAL, GROUND)
	JUNCTION BOX
	LIGHTING & POWER PANEL, RECESSED
	FIRE ALARM CONTROL PANEL
	FIRE ALARM ANNUNCIATOR
	TAMPER SWITCH
	FLOW SWITCH
	RACEWAY CONCEALED IN CEILING, PLENUM OR WALLS
	RACEWAY CONCEALED IN SLAB (FLOOR)
	TIME SWITCH
	DRY TYPE TRANSFORMER
	120V PLUGMOLD - 36" AFF UNLESS OTHERWISE NOTED
	UNIVERSAL MOUNTING EXIT SIGN (DOUBLE FACED), ARROWS AS INDICATED.
	EMERGENCY BATTERY UNIT WITH MOUNTING BRACKET AND VOLTMETER.

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RENOVATIONS TO
 645 CONGRESS ST.
 PORTLAND, ME 04101

Project No: 08.436

Drawing Title:

RISER DIAGRAMS,
 SCHEDULES &
 NOTES

Scale: AS NOTED

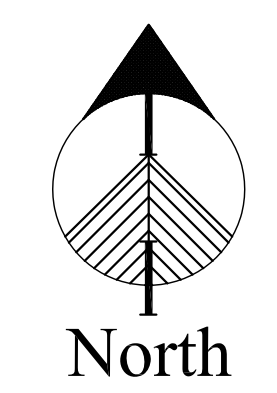
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Drawing Number:

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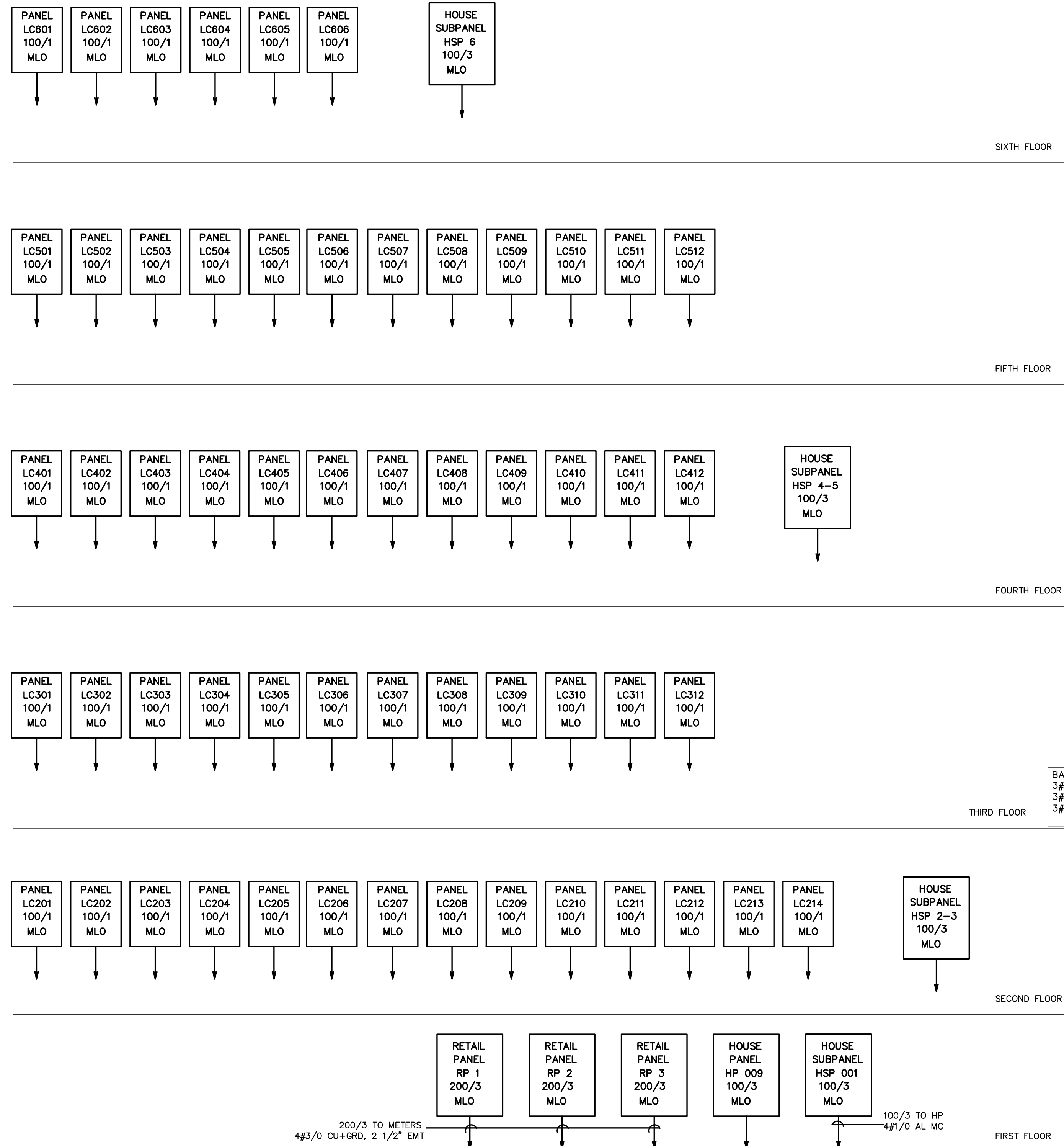


SCALE: 1/8" = 1'-0"

A

RISER DIAGRAMS, SCHEDULE & NOTES

NOT FOR CONSTRUCTION



PANEL SCHEDULE

ITEM	VOLT/PHS/W	MLO	MCB	CIRC	F:Flush S:Surf.	P:Plug B:Boit	BRANCH BREAKERS	SPR=SPARE SPC=SPACE
PANEL HP	208/3/4	400	-	42	S	B	(1)150/3 SHUNT, (5)100/3, (27)20/1 FIELD VERIFY	
PANEL HSP-1	208/3/4	100	-	30	S	B	(30)20/1 FIELD VERIFY	
PANEL HSP-2/3	208/3/4	100	-	30	S	B	(30)20/1 FIELD VERIFY	
PANEL HSP-4/5	208/3/4	100	-	30	S	B	(30)20/1 FIELD VERIFY	
PANEL HSP-6	208/3/4	100	-	30	S	B	(30)20/1 FIELD VERIFY	
PANEL HSP-LDR	208/3/4	100	-	30	S	B	(5)30/2, (5)20/1, (14)20/1 FIELD VERIFY	
PANEL RP-1	208/3/4	200	-	42	S	B	(1)20/3, (1)60/3, (20)20/1	
PANEL RP-2	208/3/4	200	-	42	S	B	(1)20/3, (1)60/3, (20)20/1	
PANEL RP-3	208/3/4	200	-	42	S	B	(1)20/3, (1)60/3, (20)20/1	
PANEL LC	208/1/3	100	-	16	F	P	(1)50/2, (4)20/1, (4)20/1 AFI, (4)15/1AFI	

SWITCHGEAR AND PANELBOARDS SHALL BE MANUFACTURED BY SQUARE D, SIEMENS OR GENERAL ELECTRIC
 PANELBOARDS MAY BE SERIES RATED OR FULLY RATED FOR AVAILABLE SHORT CIRCUIT RATINGS.
 IF SERIES RATINGS ARE APPLIED SUPPLIER SHALL BE RESPONSIBLE FOR PROVIDING PROPER SERIES RATED EQUIPMENT AS REQUIRED.
 AVAILABLE SHORT CIRCUIT CURRENT FOR THE MAIN SERVICE IS 65KA.
 DOWNSTREAM PANELS SHALL BE SERIES RATED ACCORDINGLY.
 SEE RISER DIAGRAM FOR CONNECTION DIAGRAM OF THE PANELS. NO LINE IMPEDANCES ARE TO BE CONSIDERED IN SERIES RATING APPLICATIONS.
 FOR ALL RESIDENTIAL LOAD CENTERS, 15A AND 20A CIRCUITS SERVING THE UNIT EXCEPT KITCHENS AND BATHROOMS CIRCUITS SHALL BE ARC FAULT
 INTERRUPTER TYPE AS REQUIRED PER NEC 210-12(B)

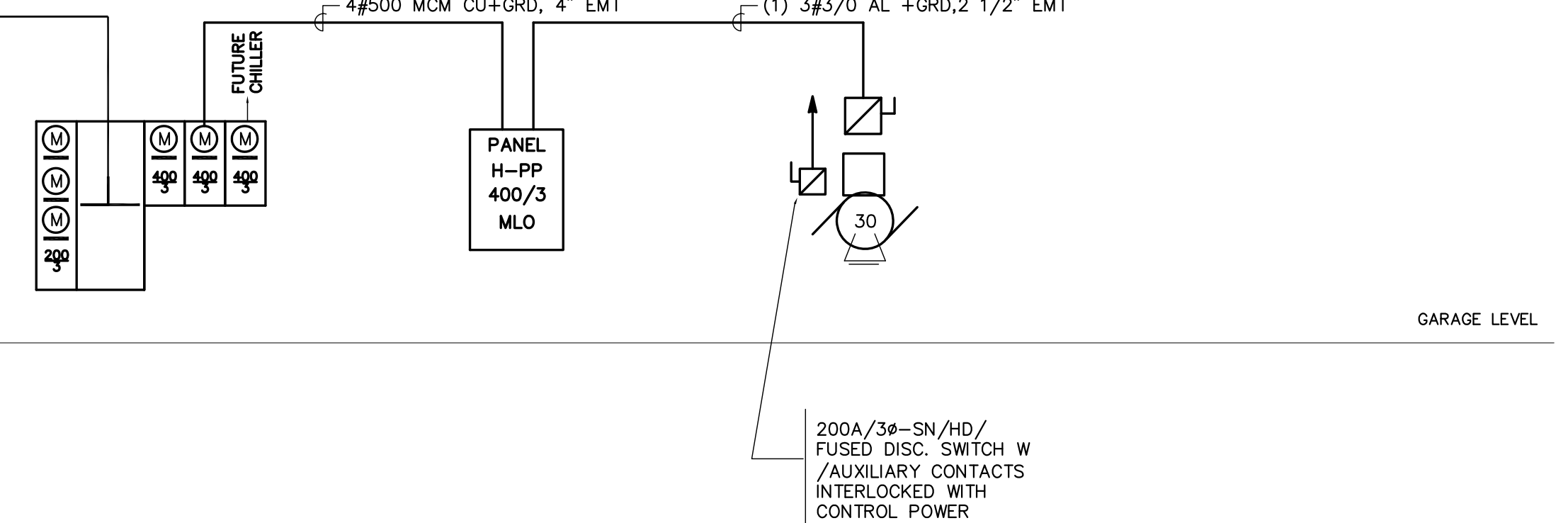
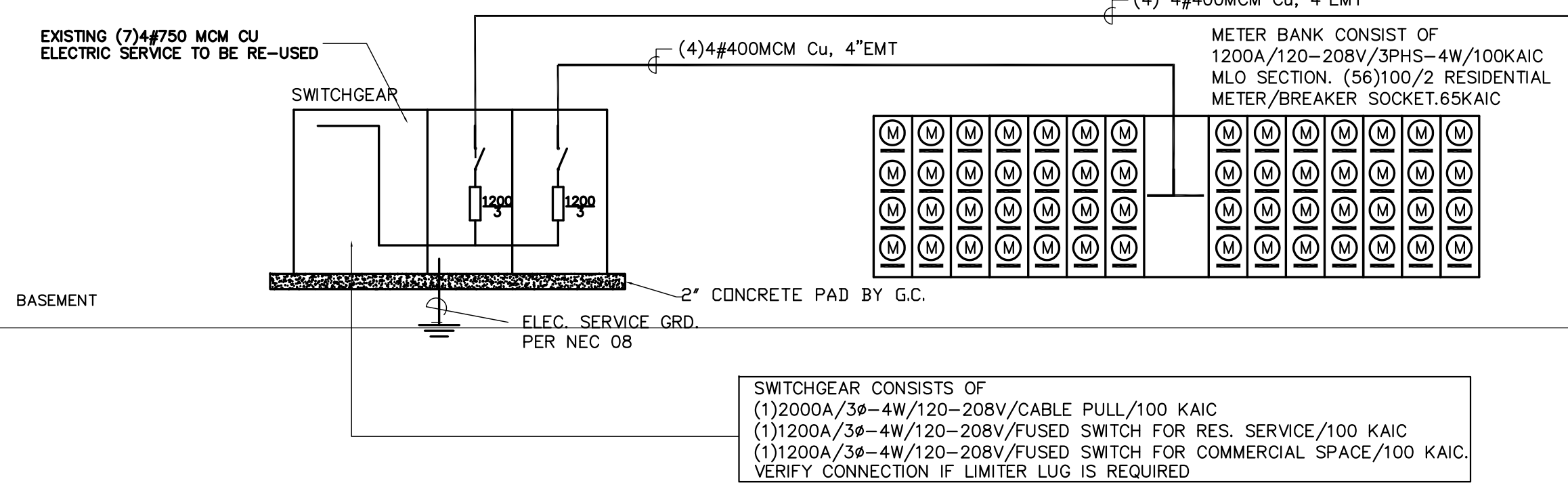
LOAD BREAKDOWN

LOAD	KVA	FACTOR	KVA
RESIDENTIAL	1200	0.25	300
COMMON	100	0.80	80
RESTAURANT	100	1.00	100
RETAIL	50	1.00	50
CHILLER	200	1.00	200
TOTAL	1650		730

TYPICAL APARTMENT LOAD, 1500SF
 LIGHTING AND POWER: 1500W
 KITCHEN : 3000W
 RANGE : 1200W
 DISHWASHER/DISP : 200W
 WATER HEATER : COMMON
 WASHER/DRYER : COMMON
 AIR CONDITIONING : 500W
 TOTAL : 19,000W
 DEMAND : 14,000W
 SERVICE : 100A

BASED ON 100A SERVICE, 3% VOLTAGE DROP AND 14 KW LOAD DEMAND
 3#1 AL+G6 GRD UP TO 175 FEET RUN (UNITS WITHIN 150 FEET OF ELECTRIC ROOM)
 3#1/0 AL+G6 GRD UP TO 225 FEET RUN (UNITS WITHIN 200 FEET OF ELECTRIC ROOM)
 3#2/0 AL+G6 GRD UP TO 275 FEET RUN (UNITS WITHIN 250 FEET OF ELECTRIC ROOM)

(6) 2 1/2" EMT WITH PULL FOR FUTURE ROOF EQUIPMENT CONNECTION



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Drawing Number:
E1.8



SCALE: 1/8" = 1'-0"