A. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR THE FINAL SELECTION, QUANTITY AND MOUNTING DETAILS OF LIGHTING FIXTURE. FOR MORE DETAILS REFER TO LIGHT FIXTURE SCHEDULE IN THE PLAN.

B. SWITCHES LOCATION SHOWN IN THE DRAWINGS ARE DIAGRAMMATIC,FOR ACTUAL LOCATION AND MOUNTING HEIGHTS OF SWITCHES REFER TO ARCHITECTURAL PLANS.

C. E.C TO COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS OF FIXTURES WITH ARCHITECT/OWNER.

D. REFER TO DWG. E-001.00 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS.

E. REFER TO DWG. E-002.00 & E-003.00 FOR ELECTRICAL SPECIFICATIONS.

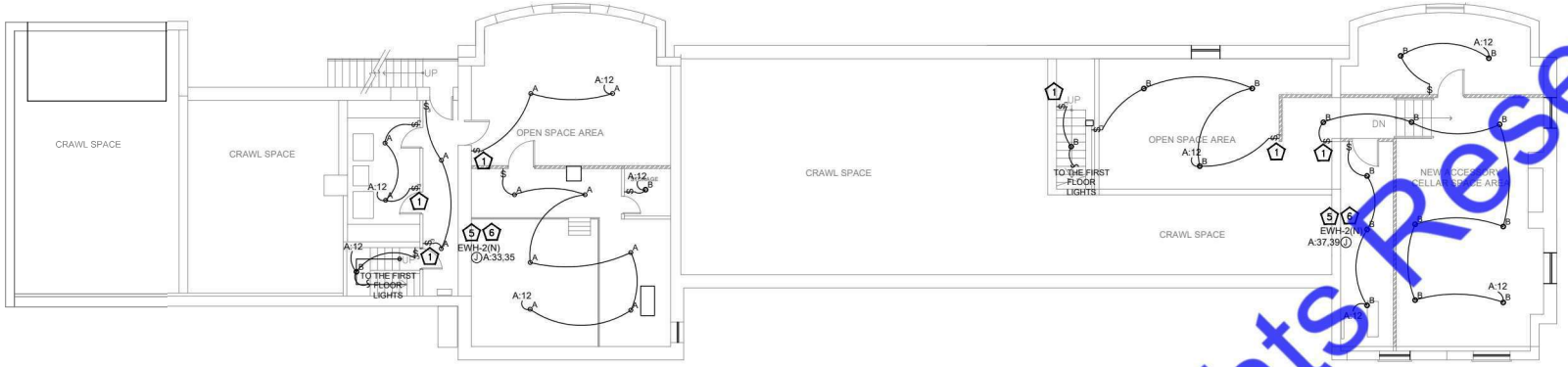
F. CIRCUITING FOR LIGHTING FIXTURES IN ROOMS/AREA WITH SWITCHES SHALL BE CONTROLLED BY DESIGNATED SWITCHES. IF SPECIFIC DESIGNATION IS NOT INDICATED, ALL LIGHTING FIXTURES IN ROOM/AREA SHALL BE CONTROLLED BY THE SWITCH INDICATED.

G. ALL BRANCH CIRCUITS LOCATED IN THE DWELLING UNIT SHALL BE CIRCUITED TO RESPECTIVE UNITS PANEL, CIRCUIT NUMBERS INDICATED, U.O.N.

H. NOT LESS THAN 75 PERCENT OF AMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURE SHALL BE HIGH-EFFICACY OR NOT LESS THAN 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURE SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.

ELECTRICAL POWER PLAN KEY NOTES:

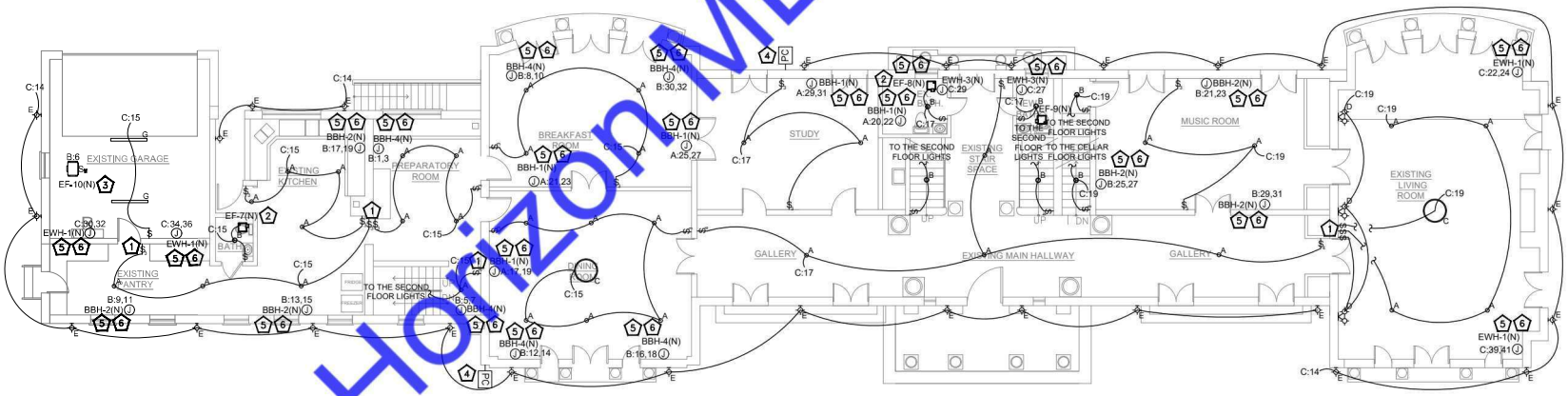
1. E.C. SHALL COORDINATE THE EXACT LOCATION OF THE SWITCHES WITH ARCHITECT/OWNER IN FIELD.
2. NEW EXHAUST FANS INTERLOCKED W TH LIGHT SWITCH. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION AND SPECIFICATIONS.
3. INTERCONNECT EXHAUST FAN EF-10(N) WITH THE CO/NO2 SENSOR WITH CONTROLLER IN SPACE. E.C SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR ADDITIONAL INFORMATION.
4. EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL, E,C SHALL COORDINATE EXACT LOCATION AND MOUNTING HEIGHT IN THE FIELD.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL/PLUMBING EQUIPMENTS WITH MECHANICAL/PLUMBING DRAWINGS.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL/PLUMBING UNIT WITH MECHANICAL/PLUMBING CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.



CELLAR FLOOR LIGHTING PLAN

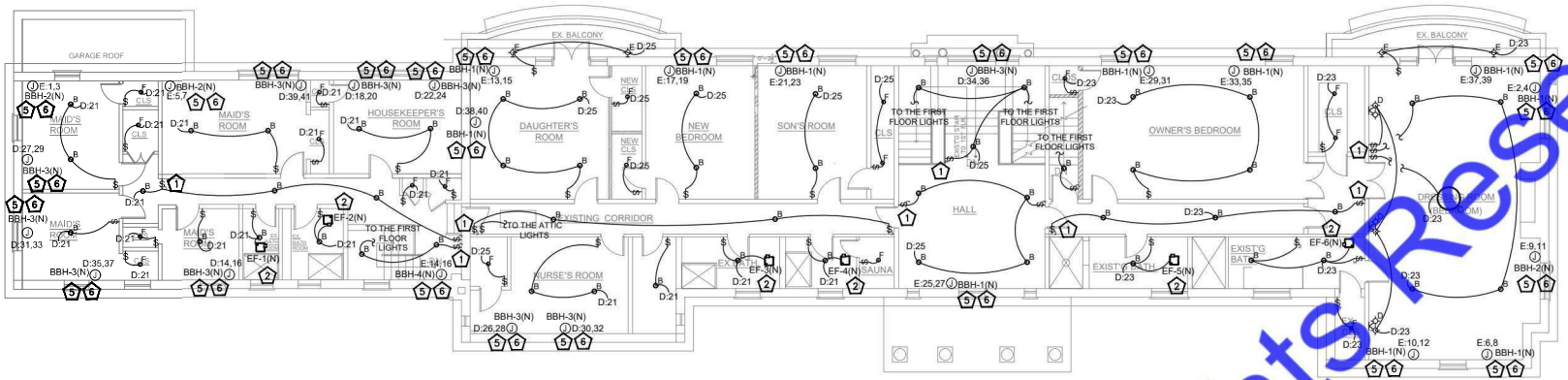
SCALE: 1/8"=1'-0"

LIGHT FIXTURE SCHEDULE				
TAG	MANUFACTURER	DESCRIPTION	MODEL NUMBER	WATTAGE
A	PROLIGHTS	ECLPENDANTSVW_BLACK	ECLPENDANTSVW_4000K_60DEG	60.5 W
B	PROLIGHTS	ECLPENDANTJRFC_WHITE_BRACKET	ECLPENDANTJRFC_GREEN_60DEG	34.3 W
C	FRANKLITE	MONDRIAN 12 LIGHT FITTING	FL2450-12	48.6 W
D	FRANKLITE	TAFFETA 2LT BRACKET	FL2155/2	8.2 W
F	MODULAR LIGHTING INSTRUMENTS	THIMBLE 74 LED DE 2700K MEDIUM BLACK STRUC	11620032	8.5 W
E	LEDSC4	MAX BIG SINGLE EMISSION	AT19-18X9S3OSZ5	19.7 W
G	LENA LIGHTING	TUBA IP69K PC 1220MM 8200LM 840 LS2 (1F) 120D IK10 46W	772528	46 W



FIRST FLOOR LIGHTING PLAN

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



SECOND FLOOR LIGHTING PLAN

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

A. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR THE FINAL SELECTION, QUANTITY AND MOUNTING DETAILS OF LIGHTING FIXTURE. FOR MORE DETAILS REFER TO LIGHT FIXTURE SCHEDULE IN THE PLAN.

B. SWITCHES LOCATION SHOWN IN THE DRAWINGS ARE DIAGRAMMATIC,FOR ACTUAL LOCATION AND MOUNTING HEIGHTS OF SWITCHES REFER TO ARCHITECTURAL PLANS.

C. E.C TO COORDINATE EXACT LOCATION AND MOUNTING HEIGHTS OF FIXTURES WITH ARCHITECT/OWNER.

D. REFER TO DWG. E-001.00 FOR ELECTRICAL GENERAL NOTES, SYMBOL LIST & ABBREVIATIONS.

E. REFER TO DWG. E-002.00 & E-003.00 FOR ELECTRICAL SPECIFICATIONS.

F. CIRCUITING FOR LIGHTING FIXTURES IN ROOMS/AREA WITH SWITCHES SHALL BE CONTROLLED BY DESIGNATED SWITCHES. IF SPECIFIC DESIGNATION IS NOT INDICATED, ALL LIGHTING FIXTURES IN ROOM/AREA SHALL BE CONTROLLED BY THE SWITCH INDICATED.

G. ALL BRANCH CIRCUITS LOCATED IN THE DWELLING UNIT SHALL BE CIRCUITED TO RESPECTIVE UNITS PANEL, CIRCUIT NUMBERS INDICATED, U,O,N,

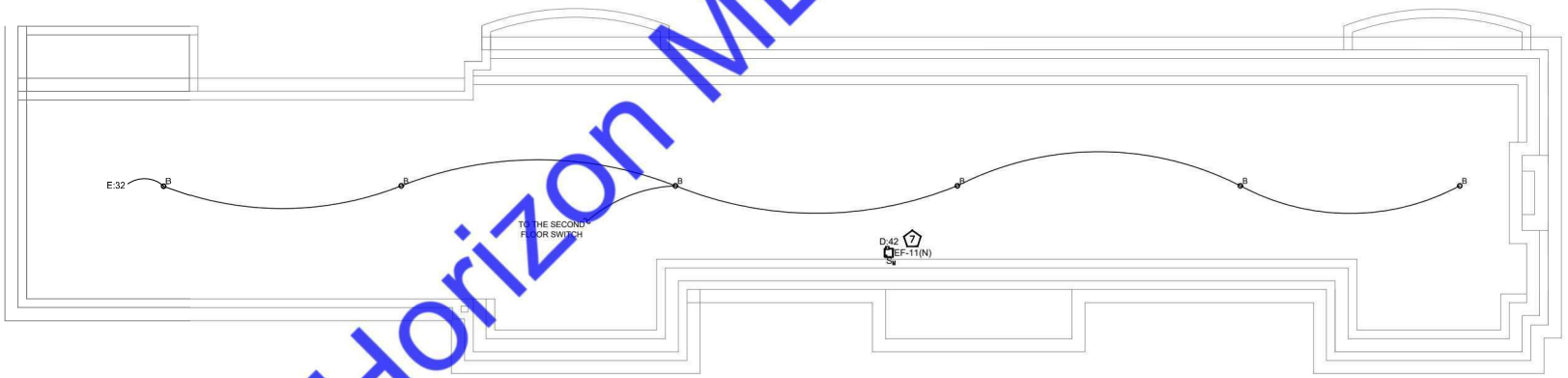
H. NOT LESS THAN 75 PERCENT OF AMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURE SHALL BE HIGH-EFFICACY OR NOT LESS THAN 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURE SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.

ELECTRICAL POWER PLAN KEY NOTES:

1. E.C. SHALL COORDINATE THE EXACT LOCATION OF THE SWITCHES WITH ARCHITECT/OWNER IN FIELD.
2. NEW EXHAUST FANS INTERLOCKED W TH LIGHT SWITCH. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION AND SPECIFICATIONS.
3. NOT USED.
4. EXTERIOR LIGHT FIXTURES SHALL BE CONTROLLED VIA PHOTOCELL. E.C SHALL COORDINATE EXACT LOCATION AND MOUNTING HEIGHT IN THE FIELD.
5. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL/PLUMBING EQUIPMENTS WITH MECHANICAL/PLUMBING DRAWINGS.
6. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECTOR AND FUSE REQUIREMENT FOR MECHANICAL/PLUMBING UNIT WITH MECHANICAL/PLUMBING CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
7. INTERCONNECT EXHAUST FAN EF-11(N) WITH THE THERMOSTAT FOR THE SAUNA. E.C SHALL COORDINATE WITH THE MECHANICAL DRAWING FOR ADDITIONAL INFO.

LIGHT FIXTURE SCHEDULE

TAG	MANUFACTURER	DESCRIPTION	MODEL NUMBER	WATTAGE
A	PROLIGHTS	ECLPENDANTSVW_BLACK	ECLPENDANTSVW_4000K_60DEG	60.5 W
B	PROLIGHTS	ECLPENDANTJRFC_WHITE_BRACKET	ECLPENDANTJRFC_GREEN_60DEG	34.3 W
C	FRANKLITE	MONDRIAN 12 LIGHT FITTING	FL2450-12	48.6 W
D	FRANKLITE	TAFFETA 2LT BRACKET	FL2155/2	8.2 W
F	MODULAR LIGHTING INSTRUMENTS	THIMBLE 74 LED DE 2700K MEDIUM BLACK STRUC	11620032	8.5 W
E	LEDSC4	MAX BIG SINGLE EMISSION	AT19-18X9S3OSZ5	19.7 W
G	LENA LIGHTING	TUBA IP69K PC 1220MM 8200LM 840 LS2 (1F) 120D IK10 46W	772528	46 W



ATTIC FLOOR LIGHTING PLAN

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

A. COORDINATE WITH THE ARCHITECT/OWNER FOR FINAL LOCATION OF A OUTLET & MOUNTING HEIGHTS.

B. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER/EQUIPMENT MANUFACTURER FOR FINAL ELECTRICAL REQUIREMENT INCLUDING RECEPTACLE, PLUG, CORD, DIRECT CONNECTION, CABLE, BREAKER ETC. OF EQUIPMENTS IN FIELD AND PROVIDE THE ELECTRICAL CONNECTION PER MANUFACTURER RECOMMENDATIONS IN FIELD. BASE BID ACCORDINGLY.

C. E.C. SHALL PROVIDE THE ELECTRICAL OUTLETS/RECEPTACLE DATA CONNECTION BASED ON FINAL EQUIPMENT SELECTION.

D. FINAL CONDUIT/CABLE ROUTING SHALL BE DETERMINED IN FIELD, AND PRIOR TO THE COMMENCEMENT OF WORK. COORDINATE WITH OTHER TRADE CONTRACTORS AND THE OCCUPANT.

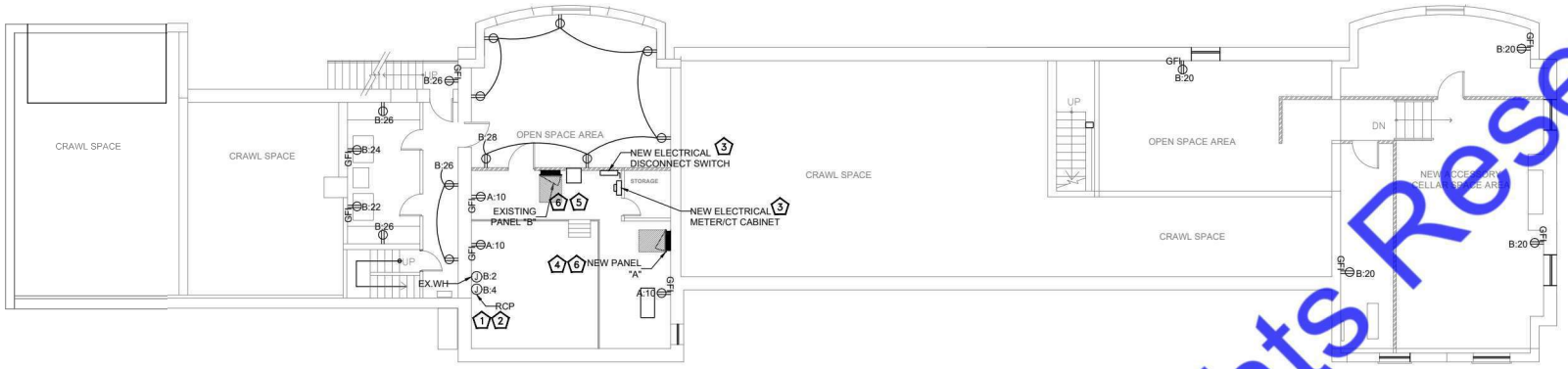
E. THE RECEPTACLES MARKED AS GFI ON THE FLOOR PLAN INDICATES THAT THE RECEPTACLES SHALL BE GFI PROTECTED. E.C SHALL PROVIDE GFI BREAKER IN PANEL IF GFI RECEPTACLES IS NOT READILY ACCESIBLE OR FOR THE RECEPTACLE OTHER THAN 20A.

F. THE EC MUST FIELD-VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO INSTALLATION.

G. ALL RECEPTACLES IN HABITABLE ROOMS MUST BE ARC-FAULT CIRCUIT-INTERRUPTER (AFCI) PROTECTED.

H. ALL REQUIRED 125V RECEPTACLES MUST BE OF THE TAMPER-RESISTANT (TR) TYPE.

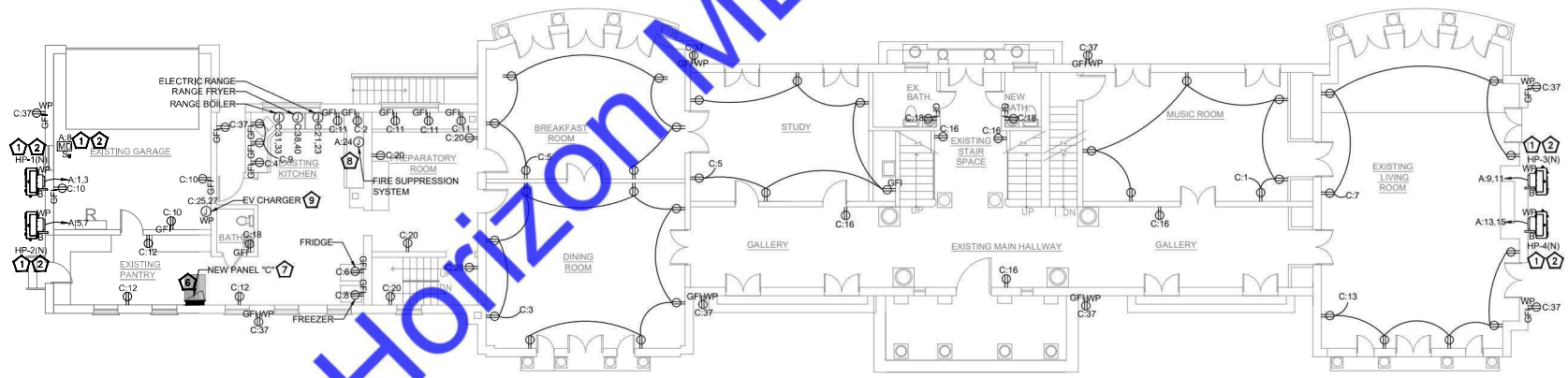
I. ALL MATERIALS AND EQUIPMENT USED MUST BE NEW, UL LISTED, AND PROPERLY LABELED.



CELLAR FLOOR POWER PLAN

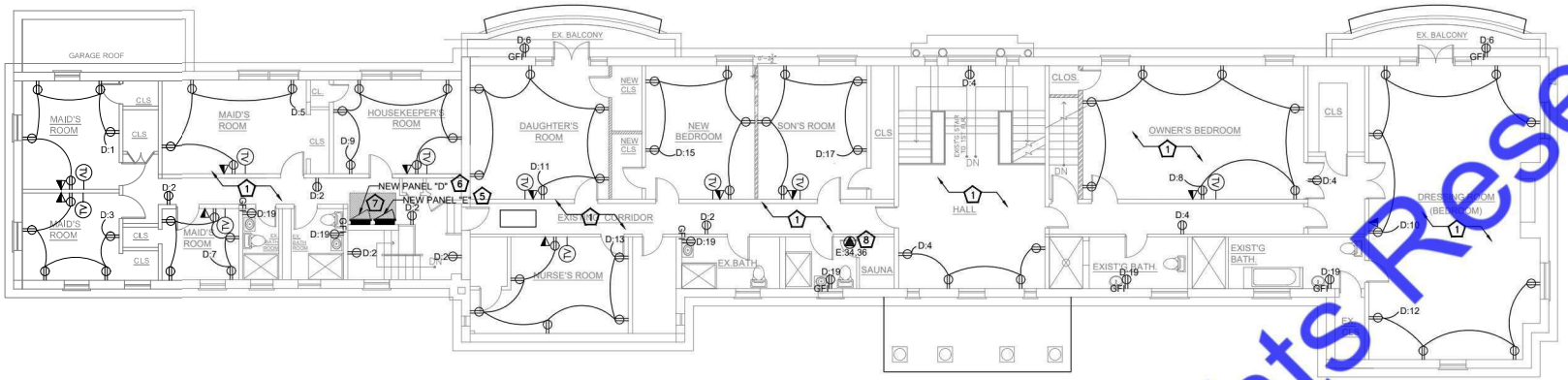
SCALE: 1/8"=1'-0"

1. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL/PLUMBING EQUIPMENTS WITH MECHANICAL/PLUMBING DRAWINGS.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL/PLUMBING UNIT WITH MECHANICAL/PLUMBING CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
3. NEW 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER, CT CABINET & THE DISCONNECT SWITCH FOR THE PROJECT SPACE, E,C, SHALL COORDINATE WITH OWNER /UTILITY COMPANY FOR LOCATION.
4. NEW 600AMP (MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD.
5. EXISTING 150A(M.L.O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B"(NAME TO BE VERIFY ON FIELD) TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
6. E.C. SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.
7. NEW 200AMP (MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD.
8. ELECTRICAL CONTRACTOR TO COORDINATE WITH FIRE SUPPRESSION SYSTEM VENDOR FOR ITS POWER REQUIREMENT AND OTHER DETAILS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.
9. PROVIDE OUTLET FOR ELECTRIC VEHICLE CHARGER. E.C SHALL COORDINATE WITH THE OWNER/ARCHITECT FOR THE EXACT REQUIREMENT LOCATION OF THE CHARGER IN THE FIELD. BASE BID ACCORDINGLY.



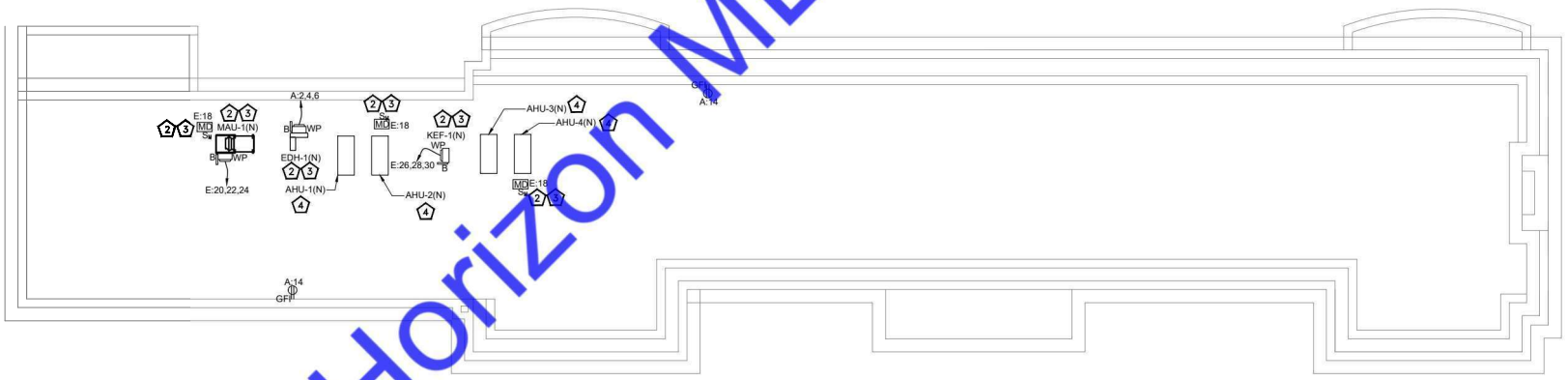
FIRST FLOOR POWER PLAN

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



SECOND FLOOR POWER PLAN

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



ATTIC FLOOR POWER PLAN

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

A. COORDINATE WITH THE ARCHITECT/OWNER FOR FINAL LOCATION OF A OUTLET & MOUNTING HEIGHTS.

B. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER/EQUIPMENT MANUFACTURER FOR FINAL ELECTRICAL REQUIREMENT INCLUDING RECEPTACLE, PLUG, CORD, DIRECT CONNECTION, CABLE, BREAKER ETC. OF EQUIPMENTS IN FIELD AND PROVIDE THE ELECTRICAL CONNECTION PER MANUFACTURER RECOMMENDATIONS IN FIELD. BASE BID ACCORDINGLY.

C. E.C. SHALL PROVIDE THE ELECTRICAL OUTLETS/RECEPTACLE DATA CONNECTION BASED ON FINAL EQUIPMENT SELECTION.

D. FINAL CONDUIT/CABLE ROUTING SHALL BE DETERMINED IN FIELD, AND PRIOR TO THE COMMENCEMENT OF WORK, COORDINATE WITH OTHER TRADE CONTRACTORS AND THE OCCUPANT.

E. THE RECEPTACLES MARKED AS GFI ON THE FLOOR PLAN INDICATES THAT THE RECEPTACLES SHALL BE GFI PROTECTED. E.C SHALL PROVIDE GFI BREAKER IN PANEL IF GFI RECEPTACLES IS NOT READILY ACCESIBLE OR FOR THE RECEPTACLE OTHER THAN 20A.

F. THE EC MUST FIELD-VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO INSTALLATION.

G. ALL RECEPTACLES IN HABITABLE ROOMS MUST BE ARC-FAULT CIRCUIT-INTERRUPTER (AFCI) PROTECTED.

H. ALL REQUIRED 125V RECEPTACLES MUST BE OF THE TAMPER-RESISTANT (TR) TYPE.

I. ALL MATERIALS AND EQUIPMENT USED MUST BE NEW, UL LISTED, AND PROPERLY LABELED.

1. E.C SHALL COORDINATE WITH ARCHITECT/OWNER FOR THE EXACT RECEPTACLE MOUNTING HEIGHT. BASE BID ACCORDINGLY.

2. ELECTRICAL CONTRACTOR SHALL COORDINATE FOR EXACT LOCATION OF MECHANICAL/PLUMBING EQUIPMENTS WITH MECHANICAL/PLUMBING DRAWINGS.

3. ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENT FOR MECHANICAL/PLUMBING UNIT WITH MECHANICAL/PLUMBING CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.

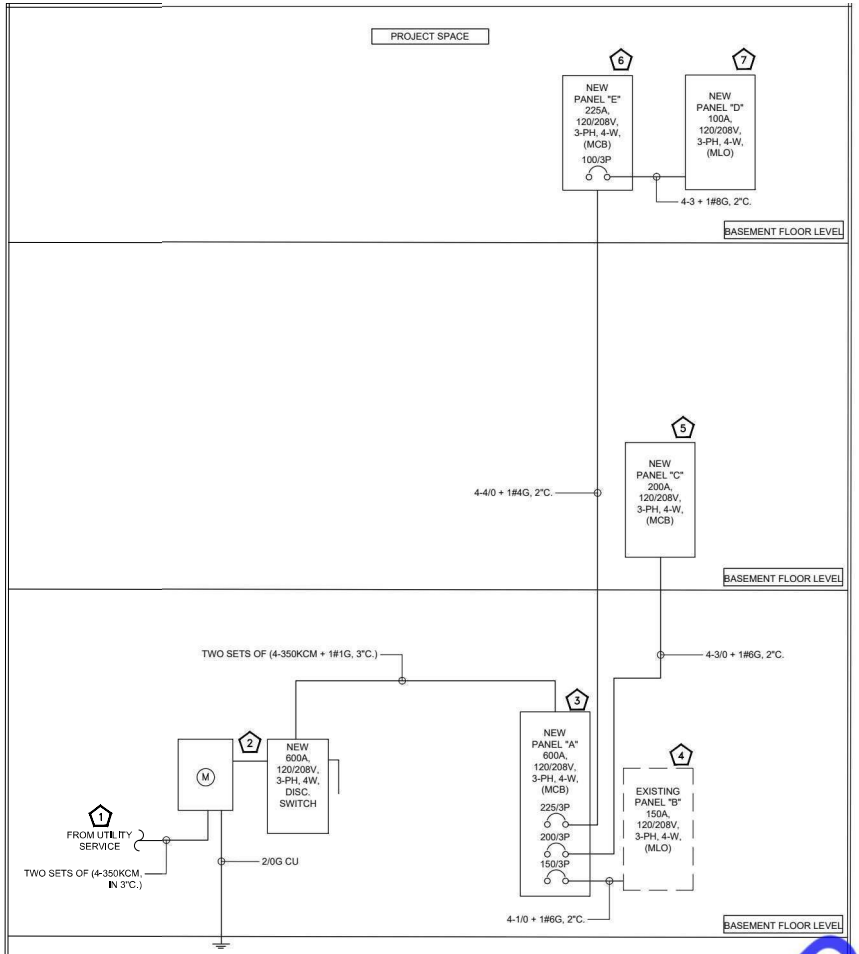
4. AHU UNITS SHALL BE FED FROM THE OUTDOOR HP UNITS. E.C SHALL COORDINATE WITH THE MECHANICAL DRAWINGS FOR THE EXACT REQUIREMENT OF MECHANICAL UNITS. BASE BID ACCORDINGLY.

5. NEW 225AMP (MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "E" FOR THE PROJECT SPACE. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD.

6. NEW 100AMP (MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "D FOR THE PROJECT SPACE. E.C. SHALL COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION IN FIELD.

7. E.C. SHALL VERIFY/PERFORM THE INSTALLATION OF ELECTRICAL PANELS IN COMPLIANCE WITH NEC ARTICLE 110.26(A) AND (B). E.C. SHALL FIELD VERIFY THAT THE PANELS ARE UNOBSTRUCTED AND THE AREA WHERE THE PANELS ARE PLACED SHALL NOT BE USED AS A STORAGE SPACE.

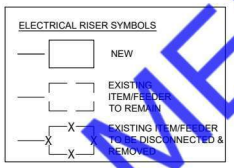
8. PROVIDE NEMA 6-20R RECEPTACLE FOR THE "CLEARLIGHT SANCTUARY RETREAT FULL SPECTRUM 4 PERSON INFRARED SAUNA". E.C SHALL COORDINATE WITH THE OWNER FOR THE EXACT SAUNA REQUIREMENT & SPECS BEFORE COMMENCING ANY WORK. BASE BID ACCORDINGLY.



ELECTRICAL RISER KEYED NOTES:

1. NEW 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL SERVICE FOR THE PROJECT SPACE. E.C. SHALL COORDINATE WITH OWNER/UTILITY COMPANY FOR THE EXACT LOCATION IN FIELD. E.C SHALL COORDINATE WITH UTILITY COMPANY FOR EXACT INCOMING SERVICE CONDUCTOR SIZE IN FIELD. REPORT TO ENGINEER ON RECORD FOR ANY DISCREPANCIES. E.C TO COORDINATE ALL INSTALLATION REQUIREMENT WITH UTILITY COMPANY PRIOR TO BIDDING. BASE BID ACCORDINGLY.
2. NEW 600A, 120/208V, 3-PHASE, 4-WIRE ELECTRICAL METER, THE DISCONNECT & CT CABINET FOR THE PROJECT SPACE. E.C SHALL COORDINATE WITH UTILITY FOR CT CABINET EQUIPMENT & ITS REQUIREMENT. PROVIDE PER UTILITY SPECIFICATIONS. E.C. SHALL ALSO COORDINATE WITH OWNER /LANDLORD/UTILITY COMPANY FOR LOCATION AND EQUIPMENT INSTALLATION. BASE BID ACCORDINGLY.
3. NEW 600A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "A". E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
4. EXISTING 200A(M,L,O), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "B"(NAME TO BE VERIFY ON FIELD) TO REMAIN. E.C. TO FIELD VERIFY THE EXACT SIZE, LOCATION & OPERABLE CONDITION OF THE PANEL, REPLACE IF INOPERABLE. BASE BID ACCORDINGLY.
5. NEW 100A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "C". E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
6. NEW 200A(MCB), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "E". E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.
7. NEW 100A(MLO), 120/208V, 3-PHASE, 4-WIRE ELECTRICAL PANEL "D". E.C. TO COORDINATE EXACT LOCATION WITH ARCHITECT/OWNER.

ELECTRICAL RISER SYMBOLS



ELECTRICAL GENERAL NOTES:

A. ELECTRICAL CONTRACTOR TO COORDINATE FAULT CURRENT (ISC) RATING WITH UTILITY COMPANY AND AHJ PRIOR TO COMMENCING ANY WORK.

B. ABOVE RISER DIAGRAM IS FOR REFERENCE PURPOSE ONLY. E.C. SHALL VERIFY EXACT POWER DISTRIBUTION IN FIELD & CONFIRM ENGINEER ON RECORD FOR ANY DISCREPANCY.

C. E.C. SHALL VERIFY INCOMING SERVICE AMPERAGE, WIRE SIZING AND DISTRIBUTION.

D. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER/LANDLORD/BASE BUILDING FOR THE EXACT SCOPE OF WORK/LIABILITIES.

RISER DIAGRAM

SCALE: N.T.S

PANEL: A(N) — MOUNTING: SURFACE

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BASEMENT FLOOR

MAIN CB: 600A — MLO: NA — BUS: 600A, MIN, — FED FROM: NEW METER & DISCONNECT

NOTE: L : LIGHTING, R : RECEPTACLES, H : HVAC LOAD, M : MOTOR LOAD, E : EQUIPMENTS, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	B	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	40/2P	HP-1(N)	H	3.33	2-8 + 1#10G, 3/4"C.	13.33			3-3 + 1#8G, 1"C.	10.00	H	EDH-1(N)	100/3P	2
3			H	3.33			13.33			10.00	H			4
5	40/2P	HP-2(N)	H	3.33	2-8 + 1#10G, 3/4"C.			13.33		10.00	H			6
7			H	3.33		4.33			2#12, #12G, 3/4"C	0.20	M	MOTORISED DAMPER	20	8
9	40/2P	HP-3(N)	H	3.33	2-8 + 1#10G, 3/4"C.		3.87		2#12, #12G, 3/4"C	0.54	R	RECEPTACLE - LEFT BASEMENT -3	20	10
11			H	3.33				4.33	2#12, #12G, 3/4"C	1.00	L	LIGHTING - BASEMENT	20	12
13	35/2P	HP-4(N)	H	3.33	2-8 + 1#10G, 3/4"C.	4.05			2#12, #12G, 3/4"C	0.72	R	RECEPTACLE - ATTIC	20	14
15			H	3.33			3.33					SPARE	20	16
17	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C			1.25				SPARE	20	18
19			H	1.25		2.50			2#12, #12G, 3/4"C	1.25	H	BBH-1(N)	20/2P	20
21	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C		2.50			1.25	H			22
23			H	1.25				0.75	2#12, #12G, 3/4"C	0.50	O	FIRE SUPRESSION SYSTEM	20	24
25	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C	11.25			4-1/0 + 1#6G, 2"C.	10.00	O	PANEL B(E)	150/3P	26
27			H	1.25			11.25			10.00	O			28
29	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C			11.25		10.00	O			30
31			H	1.25		15.89				14.64	O			32
33	20/2P	EWH-2(N)	H	0.86	2-12 + 1#12G, 3/4"C.		15.50		4-3/0 + 1#6G, 2"C.	14.64	O	PANEL C(N)	200/3P	34
35			H	0.86				16.50		14.64	O			36
37	20/2P	EWH-2(N)	H	0.86	2-12 + 1#12G, 3/4"C.	10.95			4-4/0 + 1#4G, 2"C.	10.09	O	PANEL E(N)	225/3P	38
39			H	0.86			10.95			10.09	O			40
41	20	SPARE						10.09		10.09	O			42
TOTAL CONNECTED LOAD (KVA)						63.29	60.72	57.49						

LOAD CLASSIFICATION		CONNECTED LOAD (KVA)	DEMAND FACTOR	DEMAND LOAD (KVA)
TOTAL LIGHTING	L	1.00	125%	1.25
TOTAL RECEPTACLE	R	1.26	>10KW=10+[0.4*(KW-10)]	1.26
TOTAL HVAC	H	72.56	100%	72.56
TOTAL MOTOR	M	104.69	100%	1.00
TOTAL KITCHEN/EQUIPMENTS	E	0.00	100%	0.00
TOTAL OTHER/MISCILLANEOUS	O	104.69	100%	104.69

PANEL TOTAL LOAD		
TOTAL CONNECTED LOAD	180.50	KVA
TOTAL DEMAND LOAD (NEC 220.82)	185.25	KVA
TOTAL CONNECTED CURRENT	501.05	AMP
TOTAL DEMAND CURRENT	514.21	AMP
SYSTEM VOLTAGE	120/208V	

PANEL: B(E) — MOUNTING: SURFACE

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: BASEMENT FLOOR

MAIN CB: NA — MLO: 150A — BUS: EXISTING, MIN, — FED FROM: PANEL A

NOTE: L : LIGHTING, R : RECEPTACLES, H : HVAC LOAD, M : MOTOR LOAD, E : EQUIPMENTS, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	B	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20/2P	BBH-4(N)	H	0.50	2#12, #12G, 3/4"C	1.00			2#12, #12G, 3/4"C	0.50	O	GAS WATER HEATER	20	2
3			H	0.50			0.58		2#12, #12G, 3/4"C	0.08	O	RCP	20	4
5	20/2P	BBH-4(N)	H	0.50	2#12, #12G, 3/4"C			0.70	2#12, #12G, 3/4"C	0.20	M	EF-10(N)	20	6
7			H	0.50		1.00			2#12, #12G, 3/4"C	0.50	H	BBH-4(N)	20/2P	8
9	20/2P	BBH-4(N)	H	1.04	2#12, #12G, 3/4"C		1.54			0.50	H			10
11			H	1.04				1.54	2#12, #12G, 3/4"C	0.50	H	BBH-4(N)	20/2P	12
13	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C	1.54				0.50	H			14
15			H	1.04			1.54		2#12, #12G, 3/4"C	0.50	H	BBH-4(N)	20/2P	16
17	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C			1.54		0.50	H			18
19			H	1.04		1.76			2#12, #12G, 3/4"C	0.72	R	RECEPTACLE - RIGHT BASEMENT	20	20
21	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C		2.84		2#12, #12G, 3/4"C	1.80	O	WASHER-1	20	22
23			H	1.04				2.84	2#12, #12G, 3/4"C	1.80	O	WASHER-2	20	24
25	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C	1.94			2#12, #12G, 3/4"C	0.90	R	RECEPTACLE - LEFT BASEMENT -1	20	26
27			H	1.04			2.30		2#12, #12G, 3/4"C	1.26	R	RECEPTACLE - LEFT BASEMENT -2	20	28
29	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C			1.54	2#12, #12G, 3/4"C	0.50	H	BBH-4(N)	20/2P	30
31			H	1.04		1.54				0.50	H			32
33		SPACE					0.00					SPACE		34
35		SPACE						0.00				SPACE		36
37		SPACE				0.00						SPACE		38
39		SPACE					0.00					SPACE		40
41		SPACE						0.00				SPACE		42
TOTAL CONNECTED LOAD (KVA)						8.78	8.80	8.16						

PANEL: C(N) — MOUNTING: SURFACE

208Y/120 VOLTS, 3 PHASE, 4 WIRE — PANEL LOCATION: FIRST FLOOR

MAIN CB: 200A — MLO: NA — BUS: 225A, MIN, — FED FROM: PANEL A

NOTE: L : LIGHTING, R : RECEPTACLES, H : HVAC LOAD, M : MOTOR LOAD, E : EQUIPMENTS, O : OTHER/MISC. (TYPICAL)

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA) A	B	B	MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
1	20	RECEPTACLE - MUSIC ROOM	R	1.08	2#12, #12G, 3/4"C	2.28			2#12, #12G, 3/4"C	1.20	E	DISHWASHER	20	2
3	20	RECEPTACLE - DINING	R	1.44	2#12, #12G, 3/4"C		2.54		2#12, #12G, 3/4"C	1.10	E	MICROWAVE	20	4
5	20	RECEPTACLE - BREAKFAST SPACE	R	1.08	2#12, #12G, 3/4"C			2.28	2#12, #12G, 3/4"C	1.20	E	FRIDGE	20	6
7	20	RECEPATCLE - EXISTING LIVING ROOM-1	R	0.72	2#12, #12G, 3/4"C	2.22			2#12, #12G, 3/4"C	1.50	E	FREEZER	20	8
9	20	RECEPTACLE - SMALL APPLIANCES	R	1.50	2#12, #12G, 3/4"C		1.86		2#12, #12G, 3/4"C	0.36	R	RECEPTACLE -GARAGE	20	10
11	20	RECEPTACLE - SMALL APPLIANCES	R	1.50	2#12, #12G, 3/4"C			2.40	2#12, #12G, 3/4"C	0.90	R	RECEPTACLE - PANTRY & KITCHEN	20	12
13	20	RECEPATCLE - EXISTING LIVING ROOM-2	R	0.90	2#12, #12G, 3/4"C	1.98			2#12, #12G, 3/4"C	1.08	R	LIGHTING- EXTERIOR	20	14
15	20	LIGHTING + EF-7(N)	L	1.10	2#12, #12G, 3/4"C		2.00		2#12, #12G, 3/4"C	0.90	R	RECEPTACLE - MAIN HALLWAY	20	16
17	20	LIGHTING, EF-8 & 9(N)	L	1.20	2#12, #12G, 3/4"C			1.56	2#12, #12G, 3/4"C	0.36	R	RECEPTACLE - FIRST FLOOR BATHROOM	20	18
19	20	LIGHTING	L	1.00	2#12, #12G, 3/4"C	1.90			2#12, #12G, 3/4"C	0.90	R	RECEPTACLE - KITCHEN & NEAR STAIR	20	20
21	60/2P	ELECTRIC RANGE	E	4.80	2-6 + 1#10G, 3/4"C.		6.88		2-10 + 1#10G, 3/4"C.	2.08	H	EWH-1(N)	30/2P	22
23			E	4.80				6.88		2.08	H			24
25		SHUNT TRIP				4.16				4.16	R	EV CHARGER	50/2P	26
27	20	EWH-3(N)	H	1.00	2#12, #12G, 3/4"C		5.16		2-8 + 1#10G, 3/4"C.	4.16	R			28
29	20	EWH-3(N)	H	1.00	2#12, #12G, 3/4"C			3.08		2.08	H	EWH-1(N)	30/2P	30
31	40/2P	ELECTRIC BOILER	R	3.00	2-8 + 1#10G, 3/4"C.	5.08			2-10 + 1#10G, 3/4"C.	2.08	H			32
33			R	3.00			5.08			2.08	H	EWH-1(N)	30/2P	34
35		SHUNT TRIP						2.08		2.08	H			36
37	20	RECEPTACLE- EXTERIOR	R	1.62	2#12, #12G, 3/4"C	7.62			2-4 + 1#8G, 1"C.	6.00	E	ELECTRIC FRYER	80/2P	38
39	30/2P	EWH-1(N)	H	2.08	2-10 + 1#10G, 3/4"C.		8.08			6.00	E			40
41			H	2.08				2.08				SHUNT TRIP		42
TOTAL CONNECTED LOAD (KVA)						12.54	18.44	16.20						

PANEL SCHEDULE

SCALE: N.T.S

PANEL:	D(N)											MOUNTING:	SURFACE		
208Y/120	VOLTS,	3	PHASE,	4	WIRE							PANEL LOCATION:	SECOND FLOOR		
MAIN CB	NA	MLO:	100A	BUS:	125A	MIN,						FED FROM:	PANEL A		
NOTE:	L : LIGHTING, R : RECEPTACLES, H : HVAC LOAD, M : MOTOR LOAD, E : EQUIPMENTS, O : OTHER/MISC. (TYPICAL)														
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	B							
1	20	RECEPTACLE- MAID'S ROOM 1	R	1.08	2#12, #12G, 3/4"C	2.16			2#12, #12G, 3/4"C	1.08	R	RECEPTACLE - SECOND FLOOR HALLWAY -1	20	2	
3	20	RECEPTACLE- MAID'S ROOM 2	R	1.08	2#12, #12G, 3/4"C		2.34		2#12, #12G, 3/4"C	1.26	R	RECEPTACLE - SECOND FLOOR HALLWAY -2	20	4	
5	20	RECEPTACLE- MAID'S ROOM 3	R	1.08	2#12, #12G, 3/4"C			1.44	2#12, #12G, 3/4"C	0.36	R	RECEPTACLE - SECOND FLOOR BALCONY	20	6	
7	20	RECEPTACLE- MAID'S ROOM 4	R	1.08	2#12, #12G, 3/4"C	2.16			2#12, #12G, 3/4"C	1.08	R	RECEPTACLE - OWNER'S BEDROOM	20	8	
9	20	RECEPTACLE- HOUSEKEEPER'S ROOM	R	0.90	2#12, #12G, 3/4"C		1.80		2#12, #12G, 3/4"C	0.90	R	RECEPTACLE - DRESSING ROOM	20	10	
11	20	RECEPTACLE- DAUGHTER'S ROOM	R	0.90	2#12, #12G, 3/4"C			1.62	2#12, #12G, 3/4"C	0.72	R	RECEPTACLE - DRESSING ROOM	20	12	
13	20	RECEPTACLE- NURSE'S ROOM	R	0.90	2#12, #12G, 3/4"C	1.65			2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	14	
15	20	RECEPTACLE- NEW BEDROOM	R	0.90	2#12, #12G, 3/4"C		1.65			0.75	H			16	
17	20	RECEPTACLE- SONS'S ROOM	R	0.90	2#12, #12G, 3/4"C			1.65	2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	18	
19	20	RECEPTACLE – SECOND FLOOR BATHROOMS	R	1.08	2#12, #12G, 3/4"C	1.83				0.75	H			20	
21	20	LIGHTING + EIF-1 TO 4	L	1.30	2#12, #12G, 3/4"C		2.05		2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	22	
23	20	LIGHTING + EF-5 & 6	L	1.20	2#12, #12G, 3/4"C			1.95		0.75	H			24	
25	20	LIGHTING	L	1.00	2#12, #12G, 3/4"C	1.75			2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	26	
27	20/2P	BBH-3(N)	H	0.75	2#12, #12G, 3/4"C		1.50			0.75	H			28	
29			H	0.75				1.50	2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	30	
31	20/2P	BBH-3(N)	H	0.75	2#12, #12G, 3/4"C	1.50				0.75	H			32	
33			H	0.75			1.50		2#12, #12G, 3/4"C	0.75	H	BBH-3(N)	20/2P	34	
35	20/2P	BBH-3(N)	H	0.75	2#12, #12G, 3/4"C			1.50		0.75	H			36	
37			H	0.75		2.00			2#12, #12G, 3/4"C	1.25	H	BBH-1(N)	20/2P	38	
39	20/2P	BBH-3(N)	H	0.75	2#12, #12G, 3/4"C		2.00			1.25	H			40	
41			H	0.75				0.95	2#12, #12G, 3/4"C	0.20	M	EF-11(N)	20	42	
TOTAL CONNECTED LOAD (KVA)						9.55	9.34	8.16							

PANEL:	E(N)											MOUNTING:	SURFACE		
208Y/120	VOLTS,	3	PHASE,	4	WIRE							PANEL LOCATION:	SECOND FLOOR		
MAIN CB	225A	MLO:	NA	BUS:	225A	MIN,						FED FROM:	PANEL A		
NOTE:	L : LIGHTING, R : RECEPTACLES, H : HVAC LOAD, M : MOTOR LOAD, E : EQUIPMENTS, O : OTHER/MISC. (TYPICAL)														
CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD TYPE	LOAD (KVA)	MINIMUM BRANCH CIRCUIT	PER PHASE (KVA)			MINIMUM BRANCH CIRCUIT	LOAD (KVA)	LOAD TYPE	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.	
						A	B	B							
1	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C	2.29			2#12, #12G, 3/4"C	1.25	H	BBH-1(N)	20/2P	2	
3			H	1.04			2.29			1.25	H			4	
5	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C			2.29	2#12, #12G, 3/4"C	1.25	H	BBH-1(N)	20/2P	6	
7			H	1.04		2.29				1.25	H			8	
9	20/2P	BBH-2(N)	H	1.04	2#12, #12G, 3/4"C		2.29		2#12, #12G, 3/4"C	1.25	H	BBH-1(N)	20/2P	10	
11			H	1.04				2.29		1.25	H			12	
13	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C	1.75			2#12, #12G, 3/4"C	0.50	H	BBH-4(N)	20/2P	14	
15			H	1.25			1.75			0.50	H			16	
17	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C			2.25	2#12, #12G, 3/4"C	1.00	M	MOTORISED DAMPERS	20	18	
19			H	1.25		1.68			3-3 + 1#8G, 1"C.	0.43	H			20	
21	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C		1.68			0.43	H	MUA-1(N)	20/3P	22	
23			H	1.25				1.68		0.43	H			24	
25	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C	2.04			3-3 + 1#8G, 1"C.	0.79	H			26	
27			H	1.25			2.04			0.79	H	EF-1(N)	20/3P	28	
29	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C			2.04		0.79	H			30	
31			H	1.25		2.25			2#12, #12G, 3/4"C	1.00	L	LIGHTING -ATTIC	20	32	
33	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C		2.82		2#12, #12G, 3/4"C	1.57	H	SAUNA	20/2P	34	
35			H	1.25				2.82		1.57	H			36	
37	20/2P	BBH-1(N)	H	1.25	2#12, #12G, 3/4"C	11.34			4-3 + 1#8G, 1 1/2"C.	10.09	O	PANEL D(N)	100/3P	38	
39			H	1.25			11.34			10.09	O			40	
41	20	SPARE						10.09		10.09	O			42	
TOTAL CONNECTED LOAD (KVA)						10.04	10.04	10.54							

Location	NEC 2008	NEC 2011	NEC 2014	NEC 2017	NEC 2020
Family Rooms	AFCI	AFCI	AFCI	AFCI	AFCI
Dining Rooms	AFCI	AFCI	AFCI	AFCI	AFCI
Kitchens - 125V Receptacles	GFCI	GFCI	AF/GF	AF/GF	AF/GF
Kitchens - 250V Receptacles	TM	TM	TM	TM	GFCI1
Bedrooms	AFCI	AFCI	AFCI	AFCI	AF/GF1
Living Rooms	AFCI	AFCI	AFCI	AFCI	AFCI
Garage – 125V Receptacles	GFCI	GFCI	GFCI	GFCI	GFCI
Garage – 250V Receptacles	TM	TM	TM	TM	GFCI
Sunrooms	AFCI	AFCI	AFCI	AFCI	AFCI
Parlors	AFCI	AFCI	AFCI	AFCI	AFCI
Libraries	AFCI	AFCI	AFCI	AFCI	AFCI
Dens	AFCI	AFCI	AFCI	AFCI	AFCI
Recreation Rooms	AFCI	AFCI	AFCI	AFCI	AFCI
Closets	AFCI	AFCI	AFCI	AFCI	AFCI
Hallways	AFCI	AFCI	AFCI	AFCI	AF/GF1
Laundry Areas – 125V	GFCI3	GFCI3	AF/GF	AF/GF	AF/GF
Laundry Areas – 250V	TM	TM	TM	TM	GFCI
Basements	GFCI2	GFCI2	GFCI2	GFCI2	AF/GF
Bathrooms	GFCI	GFCI	GFCI	GFCI	GFCI
Dishwasher	TM	TM	AFCI	AF/GF	AF/GF
Outdoor Outlets4 (i.e. A/C unit)	TM	TM	TM	TM	GFCI
Sump Pump	TM	TM	TM	TM	GFCI
Outdoor Receptacles – 125V	GFCI	GFCI	GFCI	GFCI	GFCI
Outdoor Receptacles – 250V	TM	TM	TM	TM	GFCI

TM = Thermal-Magnetic Breaker
AF / AFCI = Arc-Fault Circuit-Interrupter
GF / GFCI = Ground-Fault Circuit-Interrupter
1: GFCI protection required if receptacle outlet is within 6ft of edge of sink (i.e. bedroom bathroom; hallway bathroom, etc.)
2: Unfinished basements
3: Where the receptacle is installed within 6ft of the outside edge of the sink
4: Example of outdoor outlet loads (150V to ground or less; 50A or less; single-phase) are Air Conditioner unit, Septic Aerator, etc.
Refer to the appropriate section of the NEC for further details on the specific requirements.

PANEL SCHEDULE

SCALE: N.T.S