## PANEL "A"

MOUNTING: SURFACE
SHORT CIRCUIT RATING: 22K AIC
LOCATION: GARAGE (SEE FLOOR PLAN)
TYPE: SIEMENS OR SIMILAR

CU BUS/GND. BUS

BASED ON: 120/240V, 1ø, 3W
MAIN BUS AMPS: 200A
MAIN: MLO

| LOAD | COND. | WIRE | TRIP | POLE | DESCRIPTION | CKT No. | CKT No. | DESCRIPTION | POLE | TRIP | WIRE | COND. | LOAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (ENTRY FOYER RECS) ③ | 1 | 2 | GEN LTG (GARAGE LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| 1200 | 3/4" | 12 | 20 | 1 | GATE DOOR ② | 3 | 4 | GEN LTG (THEATRE/OFFICE LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (THEATRE RECS) ③ | 5 | 6 | GEN LTG (FOYER/STAIRS LTS/SD) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (BATHROOM) | 7 | 8 | GEN LTG (KITCHEN LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (BAR RECS) ③ | 9 | 10 | GEN LTG (LIVING ROOM LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (LIVING ROOM RECS) ③ | 11 | 12 | GEN LTG (EXTERIOR LTS) | 1 | 15 | 14 | 1/2" | (*) |
| 900 | 1/2" | 12 | 20 | 1 | HOOD ②⑤ | 13 | 14 | RANGE ②④⑥ | 2 | 50 | 8 | 1" | 12000 |
| 1500 | 1/2" | 12 | 20 | 1 | SMALL APPLIANCE ③ | 15 | 16 | | | | | | |
| 1500 | 1/2" | 12 | 20 | 1 | SMALL APPLIANCE ③ | 17 | 18 | DOOR OPENER ②④ | 1 | 20 | 12 | 1/2" | 1000 |
| 1500 | 1/2" | 12 | 20 | 1 | SMALL APPLIANCE ③ | 19 | 20 | DOOR OPENER ②④ | 1 | 20 | 12 | 1/2" | 1000 |
| 1000 | 1/2" | 12 | 20 | 1 | FREEZER ②③ | 21 | 22 | CU-1 ②④ | 2 | 60 | 6 | 1" | 7752 |
| 1000 | 1/2" | 12 | 20 | 1 | REFRIGERATOR ②③ | 23 | 24 | (HACR TYPE BREAKER) | | | | | |
| 1200 | 1/2" | 12 | 20 | 1 | DISHWASHER ②⑤ | 25 | 26 | AHU-1 ② | 2 | 60 | 6 | 1" | 11632 |
| 800 | 1/2" | 12 | 20 | 1 | GARBAGE DISPOSAL ②⑤ | 27 | 28 | NON-CONCURRENT | | | | | |
| 800 | 1/2" | 12 | 20 | 1 | WINE COOLER ②⑤ | 29 | 30 | EV CAR CHARGER | 2 | 50 | 8 | 1" | 7200 |
| 9000 | 1" | 8 | 40 | 2 | OVEN ②④⑥ | 31 | 32 | | | | | | |
| | | | | | ⑦ | 33 | 34 | I.T. EQUIPMENT | 1 | 20 | 12 | 1/2" | 500 |
| 2800 | 3/4" | 12 | 20 | 2 | IRRIGATION PUMP ②④ | 35 | 36 | UND.REFRIGERATOR ②④ | 1 | 20 | 12 | 1/2" | 800 |
| | | | | | | 37 | 38 | ICE MAKER ②④ | 1 | 20 | 12 | 1/2" | 800 |
| -- | – | – | – | – | SPACE | 39 | 40 | SPACE | – | – | – | – | -- |
| -- | – | – | – | – | SPACE | 41 | 42 | SPACE | – | – | – | – | -- |

TOTAL CONNECTED LOAD: SEE LOAD ANALYSIS

① (*) PART OF THE 3W/SQ.FT. LOAD (GRAL LIGHTING)
② VERIFY WITH EQUIPMENT PLATE PRIOR TO ORDERING AND INSTALLATION.
③ CONTRACTOR TO PROVIDE COMBINATION AFCI TYPE BREAKERS AS PER NEC-210.12.
④ CONTRACTOR TO PROVIDE COMBINATION GFCI TYPE BREAKERS AS PER NEC-210.8.
⑤ PROVIDE COMBINATION GFCI-AFCI TYPE BREAKER.
⑥ THE FRAME OF RANGE & ELECTRIC CLOTHES DRYER SHALL BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR BY NEC-250.140 & 250.134 OR 250.138.
⑦ SMM-PROVIDE SMART MANAGEMENT MODULE.

## PANEL "B"

MOUNTING: SURFACE
SHORT CIRCUIT RATING: 22K AIC
LOCATION: GARAGE (SEE FLOOR PLAN)
TYPE: SIEMENS OR SIMILAR

CU BUS/GND. BUS

BASED ON: 120/240V, 1ø, 3W
MAIN BUS AMPS: 200A
MAIN: MLO

| LOAD | COND. | WIRE | TRIP | POLE | DESCRIPTION | CKT No. | CKT No. | DESCRIPTION | POLE | TRIP | WIRE | COND. | LOAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (G.BEDROOM RECS) ③ | 1 | 2 | GEN LTG (GUEST BEDROOM LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (G. BATHROOM) | 3 | 4 | GEN LTG (CORRIDOR LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (GAME ROOM RECS) ③ | 5 | 6 | GEN LTG (BEDROOM 2 LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (BEDROOM 2 RECS) ③ | 7 | 8 | GEN LTG (BEDROOM 1 LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (BATHROOM 2) | 9 | 10 | GEN LTG (M.BEDROOM LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (BATHROOM 3) | 11 | 12 | GAS WATER HEATER ② | 1 | 20 | 12 | 1/2" | 200 |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (BEDROOM 1 RECS) ③ | 13 | 14 | GAS WATER HEATER ② | 1 | 20 | 12 | 1/2" | 200 |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (M. BEDROOM RECS) ③ | 15 | 16 | CU-2 ②④ | 2 | 50 | 6 | 1" | 5304 |
| (*) | 1/2" | 12 | 20 | 1 | GEN LTG (M. BATHROOM) | 17 | 18 | (HACR TYPE BREAKER) | | | | | |
| (*) | 1/2" | 14 | 15 | 1 | GEN LTG (CORRIDOR RECS) ③ | 19 | 20 | AHU-2 ② | 2 | 60 | 6 | 1" | 11632 |
| 1500 | 1/2" | 12 | 20 | 1 | WASHER ②⑤ | 21 | 22 | NON-CONCURRENT | | | | | |
| 1500 | 3/4" | 12 | 20 | 1 | GAS DRYER ②④⑥ | 23 | 24 | CU-3 ②④ | 2 | 50 | 6 | 1" | 6365 |
| 1500 | 1/2" | 12 | 20 | 1 | LAUNDRY CIRCUIT ③ | 25 | 26 | (HACR TYPE BREAKER) | | | | | |
| 800 | 3/4" | 12 | 20 | 1 | LANDSCAPE LIGHTING ② | 27 | 28 | AHU-3 ② | 2 | 60 | 6 | 1" | 11464 |
| 800 | 3/4" | 12 | 20 | 1 | LANDSCAPE LIGHTING ② | 29 | 30 | NON-CONCURRENT | | | | | |
| 1500 | 1/2" | 12 | 20 | 1 | JACUZZY ②④ | 31 | 32 | CU-4 ②④ | 2 | 60 | 6 | 1" | 7752 |
| 500 | 3/4" | 12 | 20 | 1 | SEPTIC TANK CONTROLLER ② | 33 | 34 | (HACR TYPE BREAKER) | | | | | |
| -- | – | – | – | – | SPACE | 35 | 36 | AHU-4 ② | 2 | 60 | 6 | 1" | 11632 |
| -- | – | – | – | – | SPACE | 37 | 38 | NON-CONCURRENT | | | | | |
| -- | – | – | – | – | SPACE | 39 | 40 | SPACE | – | – | – | – | -- |
| -- | – | – | – | – | SPACE | 41 | 42 | SPACE | – | – | – | – | -- |

TOTAL CONNECTED LOAD: SEE LOAD ANALYSIS

① (*) PART OF THE 3W/SQ.FT. LOAD (GRAL LIGHTING)
② VERIFY WITH EQUIPMENT PLATE PRIOR TO ORDERING AND INSTALLATION.
③ CONTRACTOR TO PROVIDE COMBINATION AFCI TYPE BREAKERS AS PER NEC-210.12.
④ CONTRACTOR TO PROVIDE COMBINATION GFCI TYPE BREAKERS AS PER NEC-210.8.
⑤ PROVIDE COMBINATION GFCI-AFCI TYPE BREAKER.
⑥ THE FRAME OF RANGE & ELECTRIC CLOTHES DRYER SHALL BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR BY NEC-250.140 & 250.134 OR 250.138.
⑦ SMM-PROVIDE SMART MANAGEMENT MODULE.

## DEMAND LOAD

BASED ON 120/240V, 1ø, 3W — 240

**I.PANEL "A"**

| | | | |
|---|---|---|---|
| GENERAL LIGHTING*3VA/SQF | = | 9874 | VA |
| SMALL APPLIANCE (3) | = | 4500 | VA |
| LAUNDRY CIRCUIT | = | 0 | VA |
| **SUB-TOTAL #1** | = | **14374** | **VA** |
| FIRST 3 KW @ 100% | = | 3000 | VA |
| 11374 REMAINDER AT 35% | = | 3981 | VA |
| HVAC @ 100% | = | 11632 | VA |
| **SUBTOTAL #2** | = | **18613** | **VA** |
| DOOR OPENER (2) | = | 2000 | VA |
| REFRIGERATOR | = | 1000 | VA |
| FREEZER | = | 1000 | VA |
| DISHWASHER | = | 1200 | VA |
| WINE COOLER | = | 800 | VA |
| GAS IGNITION | = | 200 | VA |
| HOOD | = | 800 | VA |
| GARBAGE DISPOSAL | = | 800 | VA |
| EV CAR CHARGER | = | 7200 | VA |
| GATE DOOR | = | 1200 | VA |
| IRRIGATION PUMP | = | 2800 | VA |
| I.T. EQUIPMENT | = | 500 | VA |
| REFRIGERATOR | = | 800 | VA |
| ICE MAKER | = | 800 | VA |
| **SUB-TOTAL #3** | = | **21100** | **VA** |
| DRYER | = | 0 | VA |
| RANGE & OVEN | | 11000 | VA |
| **SUB-TOTAL #4** | = | **11000** | **VA** |
| **SUB-TOTAL #2** | = | **18613** | **VA** |
| **SUB-TOTAL #3 @ 75%** | = | **15825** | **VA** |
| **SUB-TOTAL #4** | = | **11000** | **VA** |
| **TOTAL DEMAND LOAD** | = | **45438** | **VA** |
| | = | **189** | **A** |

## DEMAND LOAD

BASED ON 120/240V, 1ø, 3W — 240

**II.PANEL "B"**

| | | | |
|---|---|---|---|
| GENERAL LIGHTING*3VA/SQF | = | 9257 | VA |
| SMALL APPLIANCE | = | 0 | VA |
| LAUNDRY CIRCUIT | = | 1500 | VA |
| **SUB-TOTAL #1** | = | **10757** | **VA** |
| FIRST 3 KW @ 100% | = | 3000 | VA |
| 7757 REMAINDER AT 35% | = | 2715 | VA |
| HVAC @ 100% | = | 34728 | VA |
| **SUBTOTAL #2** | = | **40443** | **VA** |
| WASHER | = | 1500 | VA |
| GAS DRYER | = | 1500 | VA |
| GAS WATER HEATER (2) | = | 400 | VA |
| LANDSCAPE LIGHTING (2) | = | 1600 | VA |
| JACUZZY | = | 1500 | VA |
| SEPTIC TANK CONTROLLER | = | 500 | VA |
| **SUB-TOTAL #3** | = | **7000** | **VA** |
| DRYER | = | 0 | VA |
| COOKTOP | = | 0 | VA |
| **SUB-TOTAL #4** | = | **0** | **VA** |
| **SUB-TOTAL #2** | = | **40443** | **VA** |
| **SUB-TOTAL #3 @ 75%** | = | **5250** | **VA** |
| **SUB-TOTAL #4** | = | **0** | **VA** |
| **TOTAL DEMAND LOAD** | = | **45693** | **VA** |
| | = | **190** | **A** |

## DEMAND LOAD

BASED ON 120/240V, 1ø, 3W — 240

**III. PANEL "C"**

| | | | |
|---|---|---|---|
| LIGHTS & RECS | = | 2469 | VA |
| SAUNA EQUIPMENT | = | 8000 | VA |
| A/C | = | 2887 | VA |
| INSTA-WATER HEATER | = | 12000 | VA |
| POOL LOADS | = | 3660 | VA |
| **CONNECTED TOTAL** | = | **29016** | **VA** |
| | = | **121** | **A** |

## TOTAL GENERAL LIGHTS & RECEPTACLES LOADS

(*) PART OF THE 3 VA/SQ.FT. LOAD

| Total sq. ft | 7200 | Total sq. ft. * 3 VA/sq. ft. NEC Table 220.12 | 21600 |
|---|---|---|---|
| General Lights & Receptacles Circuits on: | No. Circuits | VA/Cts | VA on Panel |
| I. Panel "A" | 16 | 617 | 9874 |
| II. Panel "B" | 15 | 617 | 9257 |
| III. Panel "C" | 4 | 617 | 2469 |

## DEMAND LOAD

BASED ON 120/240V, 1ø, 3W — 240

**SERVICE LOAD**

| | | | |
|---|---|---|---|
| GRAL LTG SQ.F.*3VA/SQ.F. | = | 21600 | VA |
| SMALL APPLIANCE (3) | = | 4500 | VA |
| LAUNDRY CIRCUIT | = | 1500 | VA |
| DOOR OPENER (2) (PANEL "A") | = | 2000 | VA |
| REFRIGERATOR (PANEL "A") | = | 1000 | VA |
| FREEZER (PANEL "A") | = | 1000 | VA |
| DISHWASHER (PANEL "A") | = | 1200 | VA |
| WINE COOLER (PANEL "A") | = | 800 | VA |
| UND.REFRIGERATOR (PANEL "A") | = | 800 | VA |
| HOOD (1) (PANEL "A") | = | 800 | VA |
| GARBAGE DISPOSAL (PANEL "A") | = | 800 | VA |
| RANGE (PANEL "A") | = | 12000 | VA |
| OVEN (PANEL "A") | = | 9000 | VA |
| EV CAR CHARGER (PANEL "A") | = | 7200 | VA |
| GATE DOOR (PANEL "A") | = | 1200 | VA |
| IRRIGATION PUMP (PANEL "A") | = | 2800 | VA |
| I.T. EQUIPMENT (PANEL "A") | = | 500 | VA |
| ICE MAKER (PANEL "A") | = | 800 | VA |
| REFRIGERATOR (PANEL "A") | = | 800 | VA |
| WASHER (PANEL "B") | = | 1500 | VA |
| GAS WATER HEATER (PANEL "B") | = | 400 | VA |
| LANDSCAPE LIGHTING (2) (PANEL "B") | = | 2000 | VA |
| GAS DRYER (PANEL "B") | = | 1500 | VA |
| JACUZZY (PANEL "B") | = | 1500 | VA |
| INSTA-WATER HEATER (PANEL "C") | = | 12000 | VA |
| POOL LOADS | = | 3460 | VA |
| **CONNECTED LOAD** | = | **92660** | **VA** |
| FIRST 10 KW @ 100% | = | 10000 | VA |
| 82660 REMAINDER AT 40% | = | 33064 | VA |
| 46360 VA HEAT @ 65% | = | 30134 | VA |
| 2887 HEAT PUMP @100% | = | 2887 | VA |
| SAUNA EQUIPMENT @ 100% | = | 8000 | VA |
| **TOTAL DEMAND LOAD** | = | **84085** | **VA** |
| | = | **350** | **A** |

## DEMAND LOAD

BASED ON 120/240V, 1ø, 3W — 240

**GENERATOR**

| | | | |
|---|---|---|---|
| GRAL LTG SQ.F.*3VA/SQ.F. | = | 21600 | VA |
| SMALL APPLIANCE (3) | = | 4500 | VA |
| LAUNDRY CIRCUIT | = | 1500 | VA |
| DOOR OPENER (2) (PANEL "A") | = | 2000 | VA |
| REFRIGERATOR (PANEL "A") | = | 1000 | VA |
| FREEZER (PANEL "A") | = | 1000 | VA |
| DISHWASHER (PANEL "A") | = | 1200 | VA |
| WINE COOLER (PANEL "A") | = | 800 | VA |
| WINE COOLER (PANEL "A") | = | 800 | VA |
| HOOD (1) (PANEL "A") | = | 800 | VA |
| GARBAGE DISPOSAL (PANEL "A") | = | 800 | VA |
| RANGE (PANEL "A") | = | 12000 | VA |
| OVEN (PANEL "A") | = | 0 | VA |
| EV CAR CHARGER (PANEL "A") | = | 7200 | VA |
| GATE DOOR (PANEL "A") | = | 1200 | VA |
| IRRIGATION PUMP (PANEL "A") | = | 2800 | VA |
| I.T. EQUIPMENT (PANEL "A") | = | 500 | VA |
| ICE MAKER (PANEL "A") | = | 800 | VA |
| REFRIGERATOR (PANEL "A") | = | 800 | VA |
| WASHER (PANEL "B") | = | 1500 | VA |
| GAS WATER HEATER (PANEL "B") | = | 600 | VA |
| LANDSCAPE LIGHTING (2) (PANEL "B") | = | 2000 | VA |
| GAS DRYER (PANEL "B") | = | 1500 | VA |
| JACUZZY (PANEL "B") | = | 1500 | VA |
| INSTA-WATER HEATER (PANEL "C") | = | 0 | VA |
| POOL LOADS | = | 660 | VA |
| **CONNECTED LOAD** | = | **69060** | **VA** |
| FIRST 10 KW @ 100% | = | 10000 | VA |
| 59060 REMAINDER AT 40% | = | 23624 | VA |
| 34728 VA HEAT @ 65% | = | 22573 | VA |
| 2887 HEAT PUMP @100% | = | 0 | VA |
| SAUNA EQUIPMENT @ 100% | = | 0 | VA |
| LOAD MANAGED THRU SMART MANAGEMENT MODULE | | | |
| OVEN PANEL "A" (2P-40A) | = | 9000 | VA |
| INSTA-WATER HEATER (2P-50A) | = | 12000 | VA |
| POOL PUMP (2P-20A) | = | 2800 | VA |
| SAUNA (2P-40A) | = | 8000 | VA |
| LOAD MANAGED THRU INTEGRATED SMART MANAGEMENT MODULE | | | |
| AC-5 | = | 2887 | VA |
| AC-2 | = | 11632 | VA |
| **TOTAL DEMAND LOAD** | = | **56197** | **VA** |
| | = | **234** | **A** |

## PANEL "C" [NEMA 3R]

MOUNTING: SURFACE
SHORT CIRCUIT RATING: 22K AIC
LOCATION: EXTERIOR FLOOR PLAN)
TYPE: SIEMENS OR SIMILAR

CU BUS/GND. BUS

BASED ON: 120/240V, 1ø, 3W
MAIN BUS AMPS: 200A
MAIN: 2P-200A

| LOAD | COND. | WIRE | TRIP | POLE | DESCRIPTION | CKT No. | CKT No. | DESCRIPTION | POLE | TRIP | WIRE | COND. | LOAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8000 | 1" | 8 | 40 | 2 | SAUNA EQUIPMENT ②④ | 1 | 2 | GEN LTG (GYM RECS) ③ | 1 | 20 | 12 | 1/2" | (*) |
| | | | | | LOCKABLE BRANCH CIRCUIT ⑤ | 3 | 4 | GEN LTG (GYM LTS) ③ | 1 | 15 | 14 | 1/2" | (*) |
| 2887 | 3/4" | 10 | 25 | 2 | CU-5/AHU-5 ②④ | 5 | 6 | GEN LTG (BATHROOM CIRCUIT) | 1 | 20 | 12 | 1/2" | (*) |
| | | | | | (HACR TYPE BREAKER) ③ | 7 | 8 | GEN LTG (EXTERIOR RECS) | 1 | 20 | 12 | 1/2" | (*) |
| 12000 | 1" | 6 | 50 | 2 | INSTA-WATER HEATER ②③ | 9 | 10 | GEN LTG (STORAGE LTS) | 1 | 20 | 12 | 1/2" | (*) |
| | | | | | LOCKABLE BRANCH CIRCUIT | 11 | 12 | FUT. POOL EQUIP. PUMP (GFI) ①②③ | 2 | 20 | – | – | 2800 |
| 300 | – | – | 20 | 1 | FUT. POOL LTS(GFI) ② | 13 | 14 | | | | | | |
| 200 | – | – | 20 | 1 | FUT. GAS POOL HEATER (GFI) | 15 | 16 | FUT. POOL REC(GFI) ② | 1 | 20 | – | – | 360 |
| -- | – | – | – | – | SPACE | 17 | 18 | SPACE | – | – | – | – | -- |
| -- | – | – | – | – | SPACE | 19 | 20 | SPACE | – | – | – | – | -- |
| -- | – | – | – | – | SPACE | 21-23 | 22-24 | SPACE | – | – | – | – | -- |

TOTAL CONNECTED LOAD: SEE LOAD ANALYSIS

① VERIFY WITH EQUIPMENT PLATE PRIOR TO ORDERING AND INSTALLATION.
② POOL EQUIPMENT BY NEC-680.
③ SMM-PROVIDE SMART MANAGEMENT MODULE.

## APPLICATION IN THE HOME AFCI NEC-210.12

DWELLING UNITS: ALL 120V SINGLE-PHASE 15 AND 20 AMPS BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT SHALL BE PROTECTED BY ARC-FAULT CIRCUIT INTERRUPTER PROTECTION INSTALLED IN A READILY ACCESSIBLE LOCATION BY ANY OF THE SPECIFIED MEANS DESCRIBED IN NEC-210.12(A), (B) & (C).

SHOW HERE FOR REFERENCE ONLY

AFCI REQUIRED

FAMILY ROOM, DINING ROOM, LIVING ROOM, DENS, BEDROOMS, CLOSETS, RECREATION ROOM, LIBRARIES, BREAKFAST ROOM, SUNROOMS, PARLORS ROOM, HALLWAY, KITCHEN, LAUNDRY ROOM, FINISHED/UNFINISHED BASEMENT

INCLUDE: TRASH COMPACTOR, GARBAGE DISPOSAL, DISHWASHER, WASHER MACHINE & MICROWAVE

AFCI NOT REQUIRED

BATHROOM, GARAGE, OUTDOOR

## APPLICATION IN THE HOME GFCI NEC-210.8

DWELLING UNITS: ALL 120V THROUGH 250V RECEPTACLES SUPPLY BY A SINGLE-PHASE BRANCH CIRCUIT RATED 150V TO GROUND OR LESS AND LOCATED IN THE BELLOW LOCATIONS, SHALL HAVE GFCI PROTECTION AS DESCRIBED IN NEC-210.8, 215.9, 422.5(A), 555.9.

SHOW HERE FOR REFERENCE ONLY

GFCI REQUIRED

KITCHEN: WHERE RECEPTACLES ARE INSTALLED TO SERVE THE COUNTERTOP SURFACES
SINKS: WHERE RECEPTACLES ARE INSTALLED WITHIN 6' FROM THE TOP INSIDE EDGE OF THE BOWL
BEDROOMS: IF RECEPTACLE OUTLET IS WITHIN 6' OF EDGE OF SINK
LAUNDRY: FOR RECEPTACLE OUTLETS 120V THROUGH 250V
BATHROOM
KITCHEN DISHWASHER
GARAGE & ACCESSORY BLDG THAT HAVE A FLOOR AT OR BELOW GRADE LEVEL NOT INTENDED AS HABITABLE ROOM AND LIMITED TO STORAGE, WORK AREAS, & SIMILAR USE.
OUTDOOR
CRAWL SPACES
BASEMENTS
BOATHOUSES
INDOOR DAMP & WET LOCATIONS
SUMP PUMPS
CONDENSING UNITS

## GENERATOR ADDITIONAL NOTED

NEW STAND-BY GENERATOR PROVIDED BY: GENERAC RESIDENTIAL "LP"
VERIFY DIMENSIONS & WEIGHT AS PER MANUFACTURER SPECIFICATION.
PROVIDE GROUNDING BONDING AND CONNECTIONS AS PER NEC-250.32.
PROVIDE DISCONNECT IDENTIFICATION PLAQUES AS PER. NEC-225.37.
PROVIDE WITH RESIDENTIAL MUFFLER W/ NOISE SUPPRESSION INSULATION WEATHER PROOF ENCLOSURE AND AUTOMATIC TRANSFER SWITCH.
CONTRACTOR SHALL PROVIDE MEANS OF SCREENING EQUIPMENT FROM PUBLIC VIEW AS DIRECTED BY OWNER TO MEET CITY CODE.
PROVIDE (CO) DETECTORS INSIDE LIVING SPACE AS REQUIRED BY APPLICABLE CODES.
PROVIDE MANUFACTURER INSTALLATION AND MAINTENANCE MANUALS TO OWNER.
CONTRACTOR SHALL REORGANIZE ALL LISTING BRANCH CIRCUIT APPROVED A NEW TAPE PANEL INDEX.
PROVIDE GENERATOR ENCLOSURE COMPLYING WITH MIAMI DADE COUNTY NOA.

## AUTOMATIC TRANSFER SWITCH

VERIFY EXACT LOCATION WITH OWNER PRIOR TO ORDERING AND INSTALLATION.
SMART ATS 400A/2P 120/240V, 1ø, WITH SMART A/C MODULE & SMART MANAGEMENT MODULES. COORDINATE WITH GENERATOR SUPPLIER. TRANSFER SWITCH INSTALLED BY ELECTRICAL CONTRACTOR COMPLY WITH MANUFACTURER SPECS AND EQUIPMENT INSTALLATION MANUAL.
SMART MANAGEMENT MODULES COORDINATE WITH GENERATOR SUPPLIER. "SMM" INSTALLED BY ELECTRICAL CONTRACTOR COMPLY WITH MANUFACTURER SPECS AND EQUIPMENT INSTALLATION MANUAL.
GENERATOR MUST BE SET AT OR ABOVE FLOOD ELEVATION. COORDINATE WITH OWNER FOR APPLICABLE FLOOD ZONE.
GENERATOR TRANSFER SWITCH INSTALLATION AS A NON SEPARATELY DERIVED SYSTEM.
PROVIDE VERIFY LUG CONNECTORS AS NOTED
GENERATOR EXHAUST LOCATION AND ORIENTATION BY EC COORDINATE AT SITE.

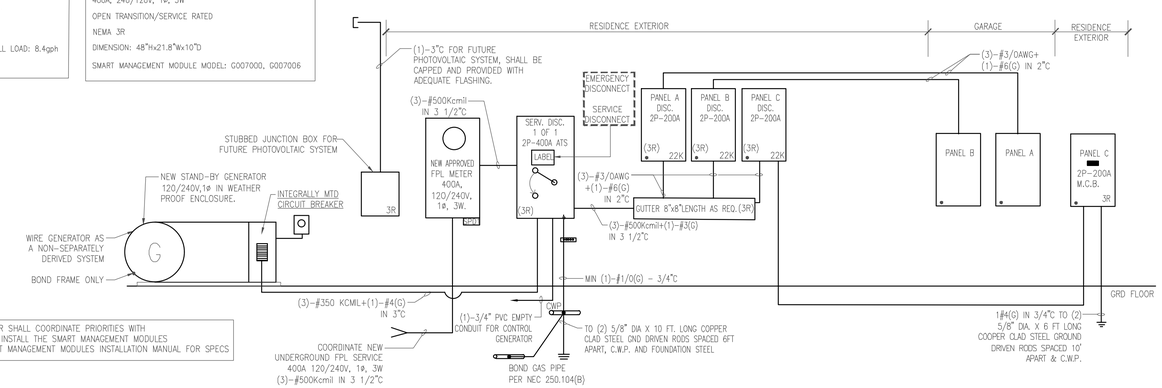
## GENERATOR

GENERAC LP MODEL: RG060
60KW/60KVA, 250A, 240/120V, 1ø, 3W, 2P-300A CB FOLLOW GENERATOR MANUFACTURER
SOUND LEVEL FULL LOAD: 68 dB @ 23"
CORROSIVE RESISTANT ENCLOSURE
LIQUID PROPANE FUEL CONSUMPTION FULL LOAD: 8.4gph
DIMENSION: 38"Wx48.9"Hx97.7"L

## SMART ATS & SMART MANAGEMENT MODULE

ELECTRICAL CONTRACTOR SHALL VERIFY COMPATIBILITY WITH GENERATOR CONTROLLER

MODEL: RTSW400A3
400A, 240/120V, 1ø, 3W
OPEN TRANSITION/SERVICE RATED
NEMA 3R
DIMENSION: 48"Hx21.8"Wx10"D
SMART MANAGEMENT MODULE MODEL: G007000, G007006




THE CONTRACTOR SHALL COORDINATE PRIORITIES WITH OWNER BEFORE INSTALL THE SMART MANAGEMENT MODULES REFER TO SMART MANAGEMENT MODULES INSTALLATION MANUAL FOR SPECS

# NEW ELECTRICAL RISER DIAGRAM

SCALE: N.T.S.

NOTES:
1. ENGINEER ASSUMED A FAULT CURRENT OF 22KAIC. CONTRACTOR SHALL COORDINATE WITH FPL FOR ACTUAL FAULT CURRENT. EQUIPMENT INSTALLED SHALL WITHSTAND FPL'S AVAILABLE FAULT CURRENT. PRIOR TO ORDERING THE ELECTRICAL SWITCHGEAR THE CONTRACTOR SHALL OBTAIN FROM FPL A LETTER STATING THE AVAILABLE FAULT CURRENT. NO EXTRAS WILL BE ALLOWED FOR FAILURE TO DO SO.
2. ALL EQUIPMENT AND DEVICES SHALL BE MOUNTED ABOVE FLOOD CRITERIA.
3. COORDINATE NEW SERVICE REQUIREMENTS WITH FPL.

(◆) CONTRACTOR TO PROVIDE AND VERIFY EQUIPMENT GROUNDING CONDUCTOR AS PER NEC-250-122 AND GROUNDING OBJECTIONABLE AS PER-NEC-250.6

PROVIDE INTERSYSTEM BONDING COMPLY NEC-250.94 (NEMA) ERICO "#IBTB" or SIMILAR

PROVIDE SPD TYPE 1 or 2 COMPLYING WITH NEC-230.67

PROVIDE EMERGENCY GENERATOR SHUTDOWN COMPLY W/NEC-445.18(D)

COMPLYING WITH NEC-230.85 PROVIDE LABEL AT OUTDOOR READILY ACCESSIBLE SERVICE DISCONNECT & NEC-702.7(A) INDICATED THE LOCATION OF PERMANENTLY INSTALLED ON-SITE OPTIONAL STANDBY GENERATOR

JOSE M. MARTINEZ LICENSE No.56018 STATE OF FLORIDA PROFESSIONAL ENGINEER
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JOSE M. MARTINEZ ON DATE ADJACENT TO SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND ALL SIGNATURE MUST BE VERIFIED ON ELECTRONIC COPIES.

Digitally signed by Jose M. Martinez
PE56018
Date: 2024.11.15 06:58:24-05'00'

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TEL (305) 255-1621 FAX (305) 271-0090
Certificate of Authorization #9692
Jose M. Martinez, Mech. P.E. #56018
To the best of my knowledge, the plans and specifications submitted hereweth comply with existing interpretations and provisions of the applicable building codes. This drawing is the sole property of JMM Consulting Engineers, LLC and is an instrument of service not to be reproduced in whole or in part without express written permission of JMM Consulting Engineers, LLC

#26000522

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FERNANDA ROCA
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CASA PA' FERNANDA

NEW SINGLE-FAMILY RES.
EU-1 RESIDENTIAL
SUBURBAN ESTATE

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PHASE: PERMIT SET
FILE NAME:
PROJECT NO: 2304
DRAWN BY: JMM
CHECKED BY: JMM
ISSUE DATE: 11/14/24
REVISIONS

SHEET TITLE: PANEL SCHEDULE RISER DIAGRAM

SHEET: E-400 OF: