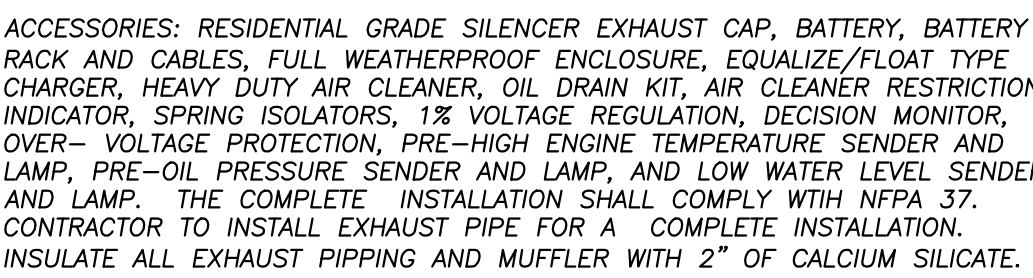


ELECTRICAL RISER AND NOTES
SCALE: NTS

32. CIRCUIT BREAKERS SHALL BE BOLT-ON U.O.I., INVERSE TIME-TYPE (THERMAL-MAGNETIC), TWO AND THREE-POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIP. ALL PANELBOARDS SHALL HAVE COPPER BUS.
33. UNLESS NOTED AS EXISTING, ALL EQUIPMENT, WIRING, DEVICES, ETC. SHALL BE NEW.
34. WHERE CORE DRILLING OF FLOOR/WALLS IS REQUIRED, CONTRACTOR SHALL SEAL OPENINGS WATERPROOF AFTER FLUTES HAVE BEEN INSTALLED. LOCATION OF CORED HOLES SHALL BE COORDINATED WITH LOCATION OF EQUIPMENT IN A MANNER TO BE CLEAN AND FUNCTIONAL. THE CONTRACTOR SHALL INSTALL ONLY ONE CONDUIT PER HOLE AND SEAL THE OPENING AROUND THE CONDUIT AS SPECIFIED.
35. PROVIDE FIRE RESISTANT U.L. APPROVED SEALANT ON ALL PENETRATIONS OF FIRE RATED PARTITIONS, WALLS AND CEILING JOINTS. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO VERIFY PRIOR TO SUBMITTING BID, LOCATIONS OF ALL SUCH FIRE RATED PARTITIONS, WALLS, AND STRUCTURAL SLABS.
36. BALLASTS SHALL HAVE MIN. POWER FACTOR OF 0.90. BALLASTS FOR METAL HALIDE AND HIGH PRESSURE SODIUM FIXTURES SHALL BE CONSTANT WATTAGE TYPE WITH SIX LAMP WATTS FOR 10% NOMINAL LINE VOLTAGE VARIATION.
37. THE EQUIPMENT GROUNDING TERMINAL BARS OF THE NORMAL AND EMERGENCY ELECTRICAL SYSTEM PANELBOARDS SERVING THE SAME BUILDING SHALL BE BONDED TOGETHER WITH AN INSULATED, CONTINUOUS, COPPER CONDUCTOR NOT SMALLER THAN NUMBER 6.
38. PROVIDE LAMPS WITH FIXTURES, SEE LUMINAIRE SCHEDULE FOR LAMP TYPE. CONTRACTOR SHALL VERIFY EACH FIXTURE VOLTAGE PRIOR TO ORDERING.
39. ALL CONNECTIONS TO GROUND ROUS & BUILDING STEEL SHALL BE MADE WITH U.L. APPROVED WELODED CONNECTS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL FORM A GROUNDING ELECTRODE SYSTEM AS PER NEC 250-50.
40. PROVIDE MOUNTING BACKGROUNDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKGROUNDS SHALL BE OF TYPE "M" POLYURETHANE PAINTED ON BOTH SIDES AND EDGES WITH TWO COATS OF LIGHT GREY PAINT.
41. PROVIDE A FIRE HOLDER AND USE IN THE PRIMARY SIDE OF EACH UNGROUNDING CONDUCTOR FOR EACH TYPE OF FIRE (WET AND DRY) OR EQUAL AT THE HAND HOLE OF EACH EXTERIOR POLE MOUNTED LIGHTING FIXTURE OR A BOX FOR WALL OR SECOND MOUNTED EXTENSION OF FIRE PROTECTION.
42. PROVIDE TEMPORARY ELECTRICAL SERVICE USING FIRE AL TRACES DURING CONSTRUCTION AND REMOVE SAME AT COMPLETION OF PROJECT.
43. THE ELECTRICAL CONTRACTOR SHALL FURNISH A COMPLETE SET OF AS-BUILT DRAWINGS, SHOWING ALL CHANGES AND DEVIATIONS TO THE ARCHITECT/ENGINEER PRIOR TO COMPLETION OF FIRE PROTECTION.
44. PREPARE AND AFFIX A TYPEWRITTEN DIRECTORY TO THE INSIDE COVER OF EACH PANELBOARD INDICATING LOADS SERVED BY EACH CIRCUIT AND PANEL FEEDING THE BOARD.
45. PROVIDE U.L. LISTED COMPONENT APPLIED TO BACK OF "BACK TO BACK" BUSES IN RATED WALLS WHERE THE BOXES ARE LESS THAN 24 INCHES APART MEASURED HORIZONTALLY.
46. NOT USED.
47. METAL CAN, HUBS, & LUGS FOR SERVICE ARE TO BE FURNISHED & INSTALLED BY CONTRACTOR.
CONTRACTOR TO VERIFY SPECIFIC TYPE OF METTER CAN TO BE USED WITH F.F.L. PRIOR TO BID. ALL THREE PHASE WIRE AND COMMERCIAL USE SHALL HAVE LEVELER BY PASS PER PPL REQUIREMENT.
A. PROVIDE A PERMANENT SIGN AT THE MAIN ELECTRICAL ROOM DOOR TO THE BLDG. STATING THERE ARE SERVICE DISCONNECTS ARE LOCATED INSIDE.
B. SIGNS SHALL BE PLACED AT THE MAIN DISCONNECT EQUIPMENT INDICATING TYPE AND LOCATION OF ON-SITE EMERGENCY POWER SOURCES.
C. VOLTAGE AND SERVICE NUMBER SHALL BE INDICATED AT EACH DISCONNECT.
48. NOT USED.
49. THE CONTRACTOR SHALL SUBMIT 6 COPIES OF EQUIPMENT SHOP DRAWINGS FOR ELECTRICAL EQUIPMENT TO THE ENGINEER FOR REVIEW, PRIOR TO ORDERING SUCH EQUIPMENT.
50. ELECTRICAL SYSTEM COMPLIANCE WITH FRC ENERGY CONSERVATION CODE
A. CONTRACTOR SHALL WITHIN 30 DAYS OF SYSTEM ACCEPTANCE PROVIDE RECORD DRAWINGS TO THE OWNER.
B. CONTRACTOR SHALL PROVIDE TO THE BUILDING OWNER OPERATION MANUAL AS PART OF THE SYSTEM ACCEPTANCE.
C. THE MAXIMUM VOLTAGE DROP FOR FEEDER SHALL NOT EXCEED 3%.
D. THE MAXIMUM VOLTAGE DROP FOR BRANCH CIRCUITS SHALL NOT EXCEED 3%.
E. CONTRACTOR SHALL PROVIDE A MEANS OF SPACE LIGHTING CONTROL FOR ALL SPACES OCCUPIED BY CEILING HEIGHT PARTITIONS VIA MOTION SENSOR SET TO A MAXIMUM OF 30MIN. OF ALL OCCUPANTS EXITING THE SPACE.
F. CONTRACTOR SHALL PROVIDE FOR ALL OTHER SPACES, EACH OTHER DEVICE SHALL BE ACTIVATED AUTOMATICALLY BY AN OCCUPANT OR 24 MONTHS AFTER AN OCCUPANT. EACH CONTROL DEVICE SHALL CONTROL A MAXIMUM OF 2500 SF AREA AND BE CAPABLE OF OVERRIDING ANY DAY SCHEDULE SHUT OFF CONTROL FOR MORE THAN 4 HOURS.
51. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING MAINTAINED AT BOTH ENDS.
CONTRACTOR SHALL PROVIDE PULL STRING TO REMAIN UNTIL DEMAND FOR THE SAME.
DOORS AND GATES CONTROL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
CONTRACTOR SHALL PROVIDE TAMPER RESISTANT RECEPTacles IN DWELLING UNITS AS REQUIRED BY NEC 406.12.
52. PROVIDE ARC FAULT PROTECTION TO ALL OUTLET LOCATED AT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, TOWNS BEDROOMS, SUNROOMS, RECREATION ROOMS, CLUBS, HALLWAYS, LAUNDRY AREAS AND ALL OTHER SIMILAR ARE PER NEC 210.12.
53. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY AVAILABLE FAULT CURRENT WITH UTILITY COMPANY FOR EQUIPMENT SELECTION.
54. ALL OUTDOOR ILLUMINATION SHALL BE CONTROLLED VIA TIME SWITCH AND PHOTOCELL U.O.M. PROVIDE ASTRONOMICAL TIME SWITCH CAPABLE OF RETAINING PROGRAMMING AND THE TIME SETTING DURING LOSS OF POWER FOR A PERIOD OF AT LEAST 10 HOURS. AS PER FLORIDA BUILDING CODE FC C405.24.4. EXTERIOR LIGHTING CONTROL.
55. ON DWELLING UNITS WHEN MORE THAN 12 SMOKE ALARMS ARE TO BE CONNECTED TOGETHER, CONTRACTOR SHALL PROVIDE LOW VOLTAGE HOUSEHOLD FIRE ALARM SYSTEM AS PER NFPA72 SECTION 29.8.2.2.
56. ALL EXTERIOR LIGHT FIXTURES EXPOSED TO WEATHER, SHALL BE WEATHER PROOF.

FLUORESCENCE	= NOTE ON PLAN
POLYESTER	= NOTE ON PLAN
FUSE	= INF-HOOD
	= PROMOTE FUSE AS PER MANUFACTURER SPECIFICATION.
57. CONTRACTOR SHALL PROVIDE A BOX-AHEAD OF EACH EXISTING TO COMPLY WITH NEC 410.21 UNLESS FLEXTURE IS RATED FOR FEED THRU.
58. ALL ELECTRICAL EQUIPMENT TO BE INSTALLED HT. ABOVE BASE FLOOR ELEVATION.
59. ALL LIGHTING ON THERMAL ENVELOPE SHALL BE IC RATED AND MEETING ANSI E-283 FOR LEAKAGE. ARRESTED AIR INTAKE AND HOUSING SHALL BE SEALED WITH A CASSETT OR CRANK TO CENTRAL OR RESIDENTIAL STAIR ILLUMINATION SHALL BE MINIMUM 5W. INTERIOR AND EXTERIOR OF HOUSE. F.P.R. 10.337 AND PER 10.33.6
60. PROVIDE ARC FLASH HAZARD SIGNAGE ON ALL ELECTRICAL EQUIPMENT PER NEC 110.16
61. PANELS ARE TO BE FULLY RATED TO MATCH KVA AS LISTED ON PANELS. SYSTEM NOT DESIGNED AS SERIES RATED PANELS.
62. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE SHOP DRAWING PRIOR TO ORDERING ELECTRICAL GEAR IN ORDER TO VERIFY AVAILABILITY. FAULT CURRENT.
63. BOX OF ALL LIGHTING FIXTURES SHALL HAVE AN EFFECTACY OF AT LEAST 45 LUMENS PER WATT (LED) OR NOT LESS THAN 65 LUMENS PER WATT AND SHALL COMPLY WITH FRC 2020 ENERGY CONSERVATION ELEC 2020 IV F.3.1.1
64. ELECTRICAL INSTALLATION MUST COMPLY WITH 25013.40 FRAMES OF RANGES AND CLOTHES DRYERS, FRAMES OF ELECTRIC RANGES, WALL-MOUNTED Ovens, COUNTERTOP-COOKING UNITS, CLOTHES DRYERS, AND OUTLET TO JUNCTION BOARDS THAT ARE PART OF THE CIRCUIT. THESE APPLIANCES SHALL BE INSTALLED TO THE EQUIPMENT GROUNDING CONDUCTOR IN THE MANNER SPECIFIED BY 25013.4 OR 25013.8.
65. CONTRACTOR SHALL PROVIDE A GROUND CONDUCTS (NEUTRAL) AT LIGHTING SWITCHES OUTLETS AS PER NEC 404.2(C).



(ENV) may be used on interior walls or ceilings where NOT SUBJECT TO SPALLING.
DAMAGE TO EXISTING SURFACES SHALL BE REPAIRED BY THE CONTRACTOR PRIOR TO
REQUIRED). (F) FLEXIBLE METALLIC CONDUIT (W/CABLE W/BROWNDUING CONDUITS),
WERE REQUIRED IN DRY LOCATIONS ONLY. ALL CONDUITS IN HAZARDOUS AREAS (PER NEC)
SHALL BE RIGID METALLIC CONDUIT. (G) CONDUCTORS SHALL BE USED FOR INDIVIDUAL
DWELLING UNITS WHEN PROVIDED BY CDR.

21. FOR UNDERGROUND ELECTRICAL CONDUITS, PROVIDE PULL BOXES THAT DO NOT
SUPPORT WEIGHT OF OVERHEAD LINES OR EQUIPMENT. CONDUITS MUST BE
SUITABLE AND APPROVED FOR THE INTENDED USE. WHERE CONDUITS PASS UNDERNEATH
PAVED AREAS THEY SHALL BE RGS. WHERE UNDERGROUND CONDUITS ARE NOT
ALLOWED, CONDUITS SHALL BE PROTECTED BY A MINIMUM OF TWO FEET OF COVER. IF
SCHEDULE 40 PVC, BUT A CONDUIT RISERS SHALL BE RGS. RGS CONDUITS SHALL
EXTEND TO THE SURFACE OF THE GROUND.

22. APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS IN SLABS OR UNDERGROUND.
ALL CONDUCTORS SHALL BE COPPER, UNLESS TYPE THHN OR THW INSULATOR, RATE
75% MFT/DIE/EXCEPT WHERE OTHERWISE REQUIRED BY UL CODES UNLESS
OTHERWISE NOTED. MINIMUM WIRE SIZE SHALL BE #12 AWG EXCLUDING CONTROL WIRING.

23. WIREWAYS SHALL BE SIZED AS REQUIRED, PER NEC, UNLESS OTHERWISE NOTED.

24. ALL ELECTRICAL EQUIPMENT SHALL BE RAINTIGHT (NEMA 4) WHEN EXPOSED TO THE WEATHER.
ALL FLUX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT.

25. OUTLET BOXES SHALL BE PRE-CASTED STEEL. IN DRY LOCATIONS, CAST ALLOY WITH
THICK WALLS. SET ON TOP OF FOUNDATION OR OTHER SUPPORT. IN OTHER
CLASSIFIED AREAS, PROPER PLASTER RINGS SHALL BE USED WITH OUTLET BOXES.
PROPER PLASTER RINGS SHALL BE USED IN ALL LOCATIONS WHERE PLASTER IS
REQUIRED FOR PLASTER RING INSTALLATION WILL BE REQUIRED. NO "GOOF" RINGS
SHALL BE ALLOWED. ALL OUTLET BOXES SHALL BE SECURELY FASTENED.

26. ALL FACE PLATES SHALL BE WHITE DECORA UNLESS OTHER WERE INDICATED IN THE DRAWING.

8. MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, AS INDICATED OR REQUIRED, WITH OVERLOAD PROTECTION FOR EACH PHASE. ALL MOTOR SHALL BE EQUIPED WITH DISCONNECT MOTOR STARTER COMBINATION.

POLE AS NOTED ON PLAN
 * FRAME AS NOTED ON PLAN
 FUSE NF-NO FUSE
 * PROVIDE FUSE AS PER MANUFACTURER SPECIFICATION.

FOR THIS PROJECT THE EMERGENCY GENERATOR SHALL BE A 80KW LP GAS GENERATOR AS SHOWN ON CUT SHEET, KOHLER K880R WITH ALTERNATOR 4T9X 120/240V, 1Ø 3W STANDBY, AUTOMATIC TRANSFER SWITCH. 600A 120/240V 1Ø, NEMA4X. KOHLER KEP, PROVIDE LP GAS CONNECTION PIPE SIZED AS PER MANUFACTURER REQUIREMENTS.

ACCESSORIES: RESIDENTIAL GRADE SILENCER EXHAUST CAP, BATTERY, BATTERY RACK AND CABLES, FULL WEATHERPROOF ENCLOSURE, EQUALIZE/FLOAT TYPE CHARGER, HEAVY DUTY AIR CLEANER, OIL DRAIN KIT, AIR CLEANER RESTRICTION INDICATOR, SPRING ISOLATORS, 1% VOLTAGE REGULATION, DECISION MONITOR, OVER- VOLTAGE PROTECTION, PRE-HIGH ENGINE TEMPERATURE SENDER AND THERMISTOR, LOW OIL PRESSURE SENDER, LOW WATER TEMPERATURE SENDER AND LAMP, THE COMPLETE INSTALLATION SHALL COMPLY WITH NFPA 37. CONTRACTOR TO INSTALL EXHAUST PIPE FOR A COMPLETE INSTALLATION. INSULATE ALL EXHAUST PIPING AND MUFFLER WITH 2" OF CALCIUM SILICATE.