

Requirements for electrical facilities on government fee and easement lands and/or waters:

1. All installations and materials must comply with the National Electric Code, (N.E.C.), and/or Marinas and Boatyards and Wet Locations. Our requirements may exceed the N.E.C.
2. A weatherproof breaker box must be located on private property, as near to the Corps fee or easement line as practical. The breaker box must be identified as weatherproof and must be mounted on a pressure treated post not less than five (5) feet high and anchored in the ground 24 inches. The box must contain a ground fault breaker which will protect the entire electrical system on project land or waters and must be properly grounded using an eight (8) foot (minimum) ground rod driven into the ground two (2) feet from the post. Wiring entering and leaving the box must be in conduit.
3. Wiring leaving the box and installed underground must be direct burial type wire. UF type wire with a bare ground will be approved from the breaker box to the junction box on the permanent walkway. The distance of the run and load will determine the wire size. This wiring must be buried a minimum of two (2) feet below the surface with warning tape buried one (1) foot below the surface. UF and USE type wire are approved for direct burial without conduit. THW or equal stranded wire may be used for the entire installation provided that it is color coded black for hot, white for neutral, and green for ground and installed underground in electrical conduit. Aluminum wire is not approved.
4. All above-ground wiring must be in approved water tight electrical conduit with proper connections. Non-metallic rigid electrical conduit or metallic rigid threaded type conduit may be used. Conduit which leads to receptacles or switches must be supported by pressure treated wood posts with sufficient clamps installed to prevent movement. Flexible conduit must be used at all moveable joints. PVC waterpipe is not allowed to be used in lieu of electrical conduit.
5. All excess openings in receptacle boxes, junction boxes, lighting fixture boxes or any other fixture must be plugged with a threaded plug and sealed with a waterproof sealant to insure that they are watertight. The number of lights approaching a floating facility will be determined by the minimum number necessary to access the facility safely.
6. All switches must be installed in waterproof boxes and be mounted at least three (3) feet above the land or normal water surface. Switch covers must be rated for "Wet locations when cover is closed."
7. Receptacle covers which are rated as approved for "Wet locations when cover closed" may be used if properly installed and if used only for temporary hookup. They will not be allowed for hookups which are left unattended or that could be rained upon. Receptacle covers which are subjected to rain or will be left unattended must be approved for "Wet locations when cover is open and outlet is in use." All receptacles must be mounted at least three (3) feet above the land or normal water surface.
8. When the UF wire reaches the walkway to the boathouse or boat dock, a junction box must be installed and THW stranded wiring spliced to the UF conductors with wire nuts. The THW wire must be color coded black (hot), white (neutral), and green (ground). The UF cable must be- in conduit prior to entering the junction box. The TIN wire must be in conduit with flexible conduit being installed at each hinged or moveable joint in the walkway.
9. The THW wire must be properly wired with polarity checked. The green (ground) wire must be connected to the ground terminal of all receptacles and also to the ground LUG inside the receptacle box and/or lighting fixture box. In addition, when metal poles are grandfathered for lighting fixtures, the pole must be grounded using the same green wire. The metal light pole should not be directly connected to the water. When metal framing is used on the dock superstructure, the framing must also be grounded. This will insure continuity of the ground. The ground wire must run continuous back to the breaker box which protects the entire system.
10. Only treated wood poles, for light fixtures, will be allowed for new installations. Lights on wood poles over land must be at least twelve (12) feet above the ground . Lights on wood poles mounted on docks, or dock walkways, must be twelve (12) feet above the facilities deck. All lights must be a minimum of 60 feet apart. Installing a light under a boat house roof is permitted. Mercury vapor another approved type outside lights may be used provided all wiring is protected by conduit and the facility approved prior to installation.
11. The electrical system must be certified by a State Licensed and Corps approved electrician upon initial installation, change of ownership, or at which time an existing system as been modified, tampered with, or damaged in any way.

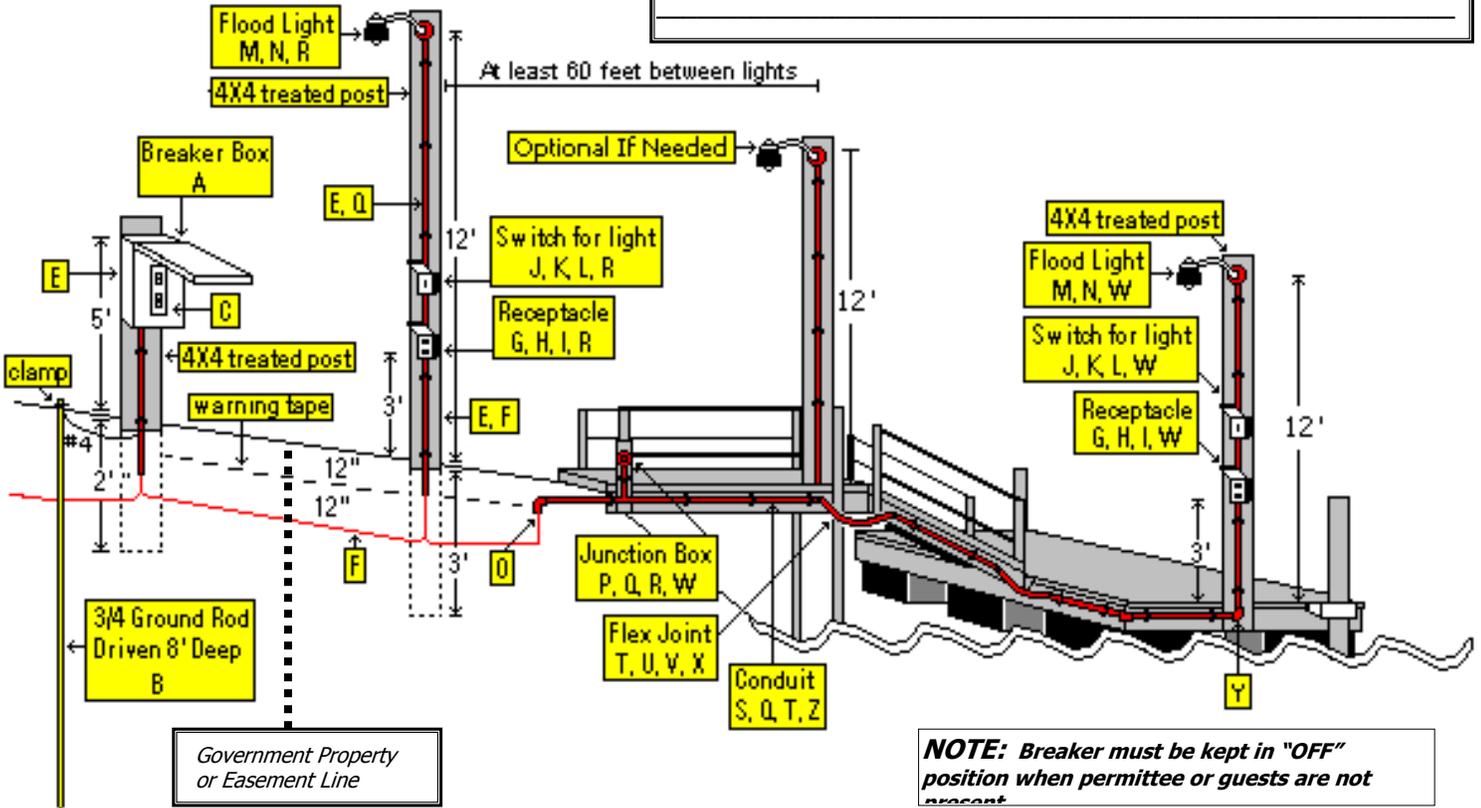
ELECTRICAL PLAN

Exhibit A-1

I CERTIFY THAT THIS ELECTRIC SYSTEM AS INSTALLED COMPLIES WITH SPECIFIED CORPS OF ENGINEERS REQUIREMENTS AND THE N.E.C. FOR WET LOCATIONS, MARINAS AND BOAT YARDS REQUIREMENTS.

X _____

Electrician's Signature



All Material Must Comply With National Electric Code For Wet Locations

Item Quantify

A	1	Breaker Box
B	1	8' Galvanized pipe, 3/4"
C	1	Ground Fault Breaker, 20 amp
E		3/4" PVC Sch. 40 Electrical Conduit
F		UF or USE Underground wire, 12/2 WG or larger
G	2	Receptacle
H	2	Receptacle Box, Wet Location
I	2	Receptacle Box Cover, Wet Location
J	2	Switch
K	1	Receptacle Box, Wet Location
L	2	Switch Cover, Wet Location
M	2	Lamp w/Holder, Wet Location
N	2	Junction Box w/Cover, Wet Location

Item Quantify

O	1	LB, 3/4" PVC 90 degree, Sch. 40 Conduit
P	1	Junction Box w/Cover, Wet Location
Q	10	Strap 3/4" 2-hole PVC (every 2')
R	7	3/4" PVC Adapter
S		Elec. Conduit PVC Sch. 40
T		Wire, Stranded THW, Black, 12 AWG or Larger
U		Wire, Stranded THW, Black, 12 AWG or Larger
V		Wire, Stranded THW, Black, 12 AWG or Larger
W	6	Adapters, PVC (use with flex)
X	4	Female adapters, PVC (use with flex)
Y	2	LB 90 degree PVC Sch. 40
Z	6	Compiling, PVC Sch. 40

PVC Cement, 1 pint PVC Cleaner

CONCEPTUALLY APPROVED

for

U.S. Army Corps of Engineers, Mobile District

BY: _____

DATE: _____

NOTICE: This approval stamp DOES NOT certify an engineering review. The builder should rely on professional engineering services to certify that the design is suitable for intended purposes and meets minimum standards including those related to the safety of the users.

DISTANCES 120 VOLTS AT 20 AMPS CAN BE PUSHED THROUGH WIRE BEFORE THE VOLTAGE DROPS 3 PERCENT.

12 AWG COPPER IS CAPABLE OF 110. FEET
10 AWG COPPER IS CAPABLE OF 175. FEET
8 AWG COPPER IS CAPABLE OF 280. FEET

NOTICE: For NEW Lines, attach a detailed Site Plan with a Layout Diagram of your Electric Line on Public