

**EXHIBIT F**

**QUINTANA CANAL & CYPREMORT  
POINT PROTECTION PROJECT (TV-0072)**



State Park

Nav Aids

(Locations not exact)

Beach Ln

Center Dr

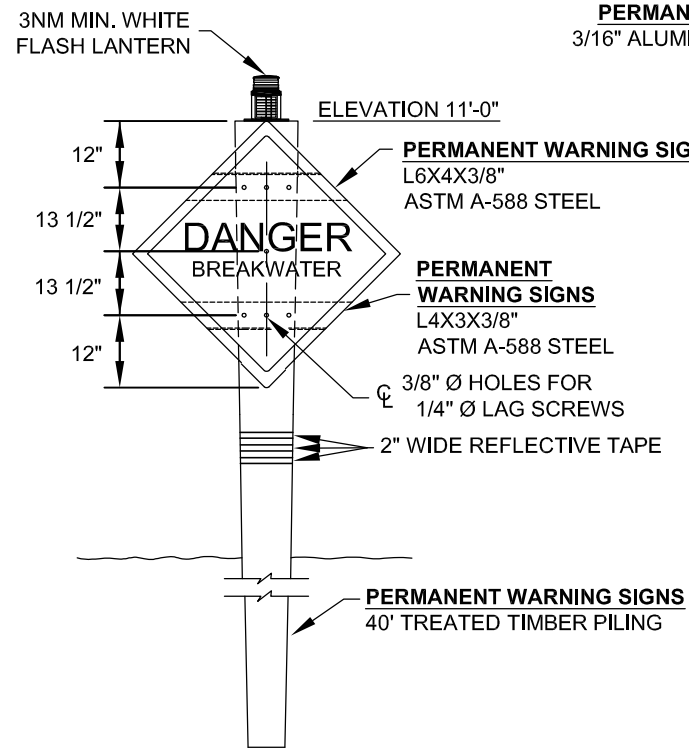
Bo...

Cypremort Point 319

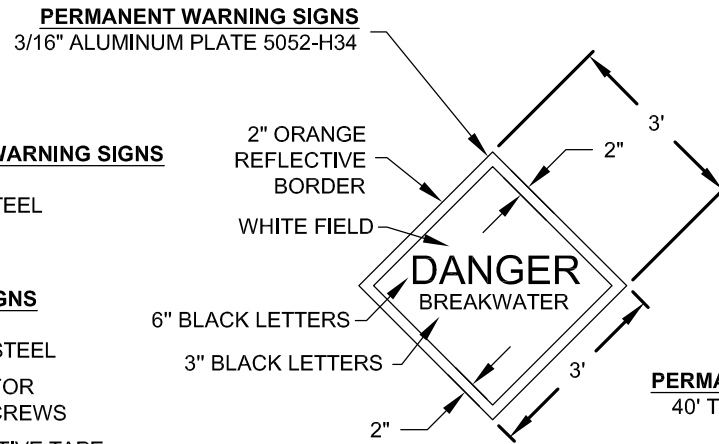
Cypremort Point

Sunset Blvd

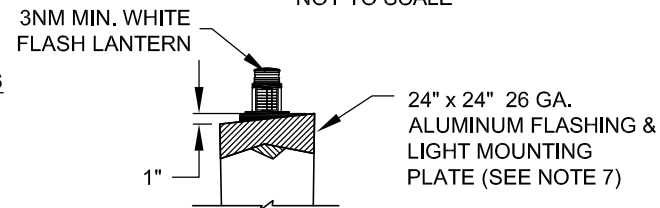
Gove Row



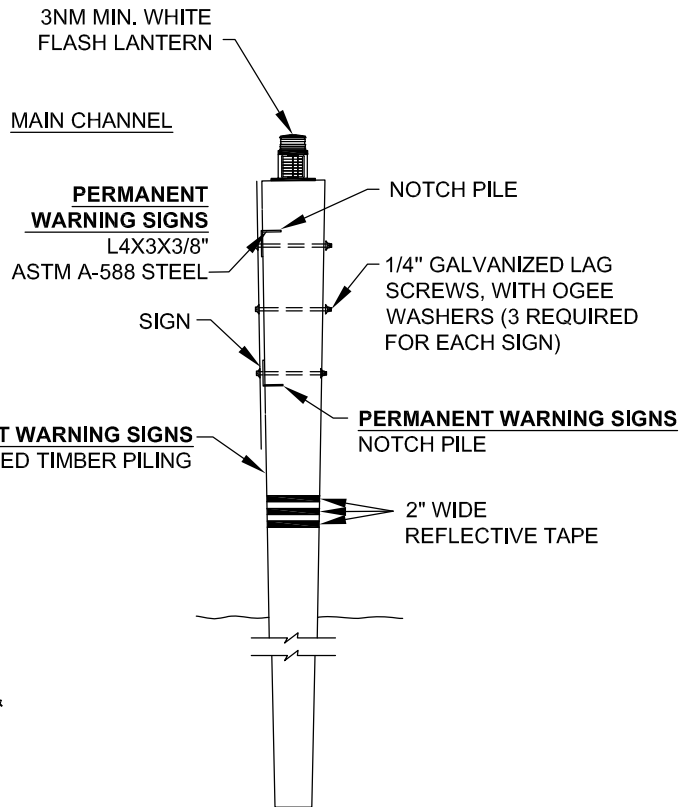
**WARNING SIGN ELEVATION**  
NOT TO SCALE



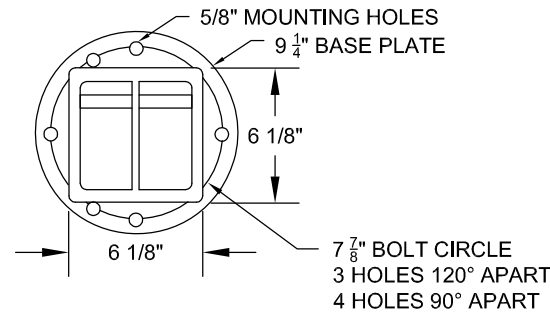
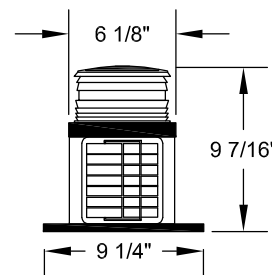
**SIGN DETAIL**  
NOT TO SCALE



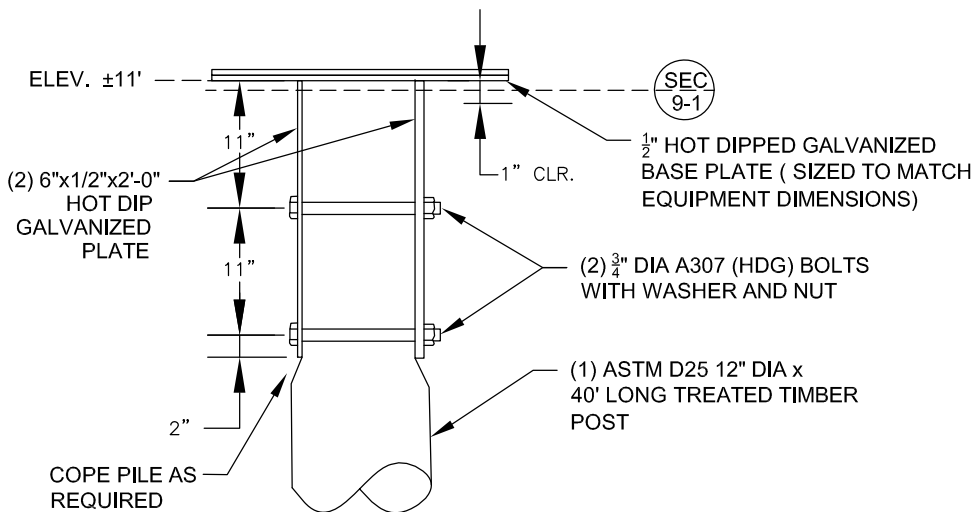
**TYPICAL TIMBER PILE CAP**  
NOT TO SCALE



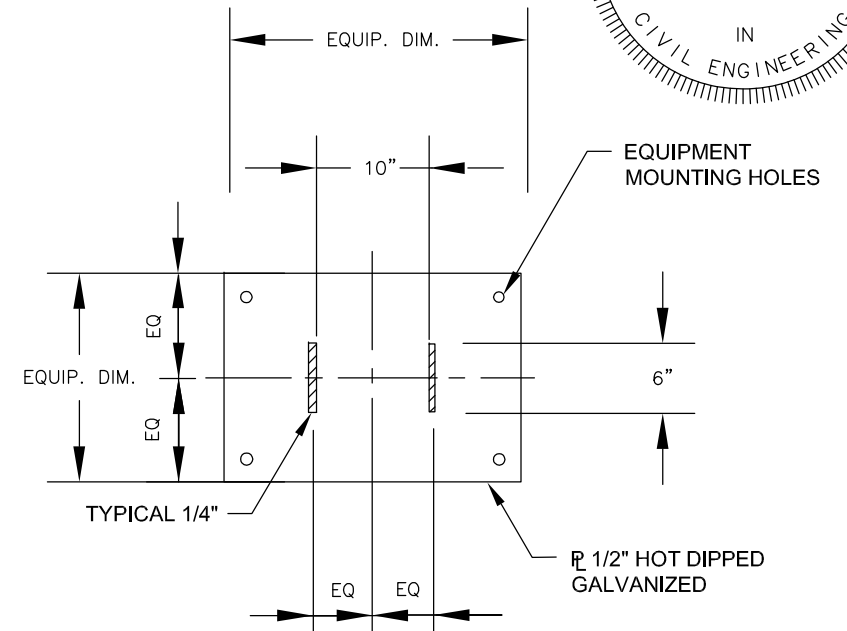
**WARNING SIGN SIDE DETAIL**  
NOT TO SCALE



**TYPICAL MARINE LANTERN DETAIL**  
NOT TO SCALE

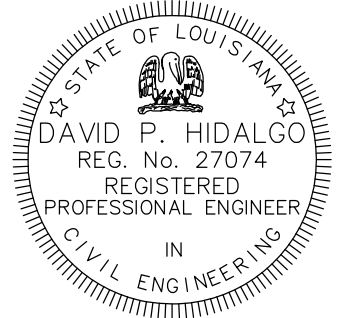


FOR CLARITY SIGN FACE NOT SHOWN  
**LANTERN MOUNT DETAIL**  
NOT TO SCALE



**LANTERN BASE PLATE DETAIL 9-1**  
NOT TO SCALE

- WARNING SIGN NOTES:**
1. THE 2" BORDER ON THE WARNING SIGN WILL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD WILL BE A REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS WILL BE BLACK. ALL SIGNS MUST MEET U.S. COAST GUARD STANDARDS; IN ACCORDANCE WITH 33 CFR 330.4 (a) (1) WHICH CAN BE DOWNLOADED AT [http://www.access.gpo.gov/nara/cfr/waisidx\\_02/33cfr330\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr330_02.html)
  2. NEOPRENE WASHERS SHALL BE PLACED BETWEEN THE SIGN AND THE PILING AT ALL POINTS OF CONTACT.
  3. HARDWARE FOR TIMBER CONNECTIONS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SECTION 811.5 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, LATEST EDITION.
  4. TIMBER PILES SHALL CONFORM TO SECTIONS 804 AND 1014 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, LATEST EDITION. PILES SHALL BE TREATED WITH A CREOSOTE SOLUTION CONFORMING TO AWPA P2 TO A MINIMUM RETENTION OF 20 PCF AND CAPPED ACCORDING TO LA DOTD SPECIFICATION 812.06.
  5. TIMBER PILING SHALL BE 40' IN LENGTH WITH A NOMINAL 12" DIAMETER BUTT AND 7" MINIMUM DIAMETER AT THE TIP.
  6. THE TOP OF THE PILES SHALL BE COATED WITH COAL TAR EPOXY PAINT PRIOR TO PLACING CAP. THE PILE CAP SHALL BE ATTACHED USING ALUMINUM OR STAINLESS STEEL NAILS.
  7. ALL MARINE LANTERNS ARE TO BE U.S. COAST GUARD APPROVED, MINIMUM 3NM VISIBILITY. FLASH CHARACTERISTIC: FL2.5S (WHITE). CARMANAH MODEL M701-5 OR APPROVED EQUAL.



REV.	DATE	DESCRIPTION	BY
1	3/26/12	CHANGED SIZE OF ANGLE	DPH



**COASTAL PROTECTION AND RESTORATION AUTHORITY**

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

MAINTENANCE OF THE QUINTANA CANAL & CYPREMORET POINT SHORELINE PROTECTION RESTORATION PROJECT

WARNING SIGN DETAILS

STATE PROJECT NUMBER: TV-xx

FEDERAL PROJECT NUMBER:

DATE: 2011

DRAWN BY: BETH FOGLEMAN

DESIGNED BY: DAVID P. HIDALGO, P.E.

APPROVED BY: DAVID P. HIDALGO, P.E.

SHEET 9 OF 9

**ASBUILT**

# User Guide

M701-5, M702-5 & 702-5 GPS:  
3NM Solar-Powered LED Marine Lanterns



Carmanah®

## INSTALLATION

### 1 Complete and Send in Your Warranty Card

Your product warranty is activated upon receipt of your warranty registration. For your convenience, you can also register online at: <http://www.solarmarinelights.com/warranty>

### 2 Activate Your Lantern

Remove your solar-powered LED lantern from its box and expose the unit to light (sunlight, incandescent or halogen) for approximately one minute. The unit will self-activate.

GPS Equipped Units: Once activated, these lanterns will automatically synchronize with all GPS-equipped lanterns operating with the same flash pattern, however it can take several minutes for a lantern to synchronize. This activation period is dependent on the number of satellites overhead and any obstruction from buildings or mountainous terrain.

**Note: The top solar panel is not intended to be a lift point, so please do not lift in this way.**

### 3 Confirm Color Output and Flash Code

Once your lantern is activated, cover solar panels to simulate darkness. After a few moments, the unit will come on automatically and produce the correct color output and flash code. Please refer to the owner's manual for full instructions and to change the flash code if desired.

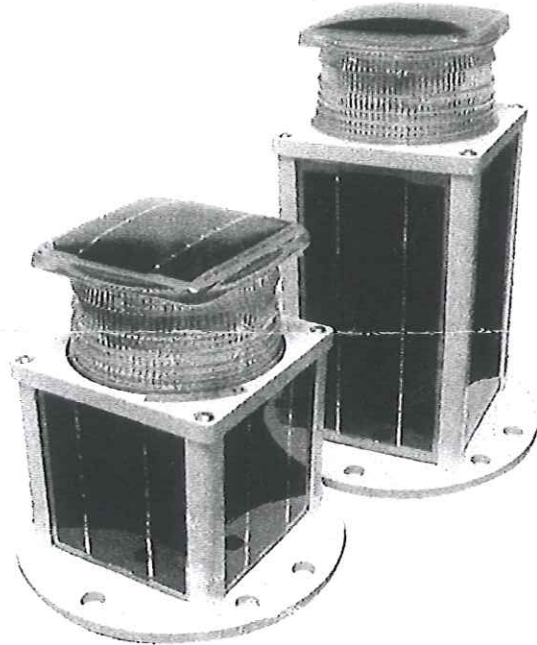
### 4 Install Your Lantern

Evaluate the suitability of your installation location. Your lantern is solar-powered and, for optimal performance, the lantern should be installed in a location that is shade-free and allows for unobstructed solar charging.

Install your lantern using the pre-drilled holes. Drilling new holes in the base plate will void the warranty and may jeopardize the integrity of the unit. For additional vandal-resistance, use security screws or bolts for mounting.

**Warning: Do not glue the unit to any surface. This obstructs a one-way valve on the base of your lantern, which is necessary for venting during hot weather. Gluing the unit to a surface will void your product warranty.**

In addition, ensure that nylon washers are used as spacers between the lantern and the mounting surface.



Model M701-5, 702-5, 702-5 GPS

***This solar-powered LED lantern complies with the requirements of the US Coast Guard in 33 CFR part 66 for Private Aids-To-Navigation.***

## STORAGE

Make sure your lantern is fully charged before storing it, as this will optimize battery system life. Simply place the unit back in its box or a black plastic bag. The unit will automatically deactivate after 24 hours in complete darkness.

Always store your lantern in a cool location until ready to use again. If the unit is stored for an extended length of time, it will require periodic recharging to maintain the health of the battery system. See "Charging" on Page 2.

## SERVICE LIFE

It is recommended that the battery pack in your solar-powered LED lantern is replaced after 5 years of service. Replacement packs are available through your Authorized Carmanah Distributor (the used battery packs are fully recyclable and should be accepted by your local lead acid battery recycler). Many of the components in Carmanah marine lanterns are replaceable if damaged. Contact your Authorized Carmanah Distributor for more information.

Canada & US: 1-877-722-8877

Worldwide: 1 + 250-380-0052

[www.carmanah.com](http://www.carmanah.com)

# User Guide

M701-5, M702-5 & 702-5 GPS:  
3NM Solar-Powered LED Marine Lanterns



# Carmanah

## CHARGING

Depending on the temperature where you store your lantern, the unit will require periodic recharging to maintain the life of its battery system. *Table 1: Recharge Intervals* provides the recommended storage periods, depending on the ambient temperature of the storage location.

### Recharging your lantern

Remove the unit from its box and place it under the light source. The unit will automatically start to charge. Follow one of the charging recommendations outlined in *Table 2: Charging Alternatives*. Once the unit is fully charged, you can replace it in its box for further storage.

**Warning:** If you place your lantern closer to the light source than recommended in Table 2, you may overheat it and damage one or more of the solar panels.

If you plan on storing your lantern for extended periods and then recharge the unit periodically under sunlight, it is recommended that you contact your Authorized Carmanah Distributor and obtain the optional infrared programmer. You will then be able to deactivate the unit so that it will not turn on at night, but will continue to charge during the day. **Note: When finished charging, do not lift the lantern by the potted solar panel on the top.**

## OUTPUT PERFORMANCE

*Table 3: Minimum Effective Intensity* provides common flash codes available and the corresponding effective intensity in Candela. Effective intensity depends on the output color and flash pattern. Using either Allard's Law or Schmitt-Clausen's Law, nominal range can be calculated using the effective intensity and the transmissivity factor (T) for your region (T = 0.74 in North America). Contact Carmanah for more detailed information.

## CUSTOMER SERVICE

Do you have any comments or questions about your lantern? You are encouraged to contact your Authorized Carmanah Distributor or a Carmanah customer service representative at:

Carmanah Technologies Corp.  
Building 4, 203 Harbour Road  
Victoria, British Columbia, Canada V9A 3S2

Toll-free (US & Canada): 1-877-722-8877  
Worldwide: + (250) 380-0052  
Fax: + (250) 380-0062  
E-mail: [customerservice@carmanah.com](mailto:customerservice@carmanah.com)  
Web: [www.solarmarinelights.com](http://www.solarmarinelights.com)

Online Warranty Registration:  
[www.solarmarinelights.com/warranty](http://www.solarmarinelights.com/warranty)

Submit Customer Feedback:  
[www.solarmarinelights.com/feedback](http://www.solarmarinelights.com/feedback)

**Table 1: Recharge Intervals**

Storage Temperature		Check / Recharge Interval
° C	° F	Months
20 or lower	68 or lower	12
25	77	6
30	86	6
35	95	3
40	104	3
45	113	1
>50	>122	weekly audit

**Table 2: Charging Alternatives**

Light Source	Distance from Solar Panels	Hours to Charge from 10% to 100%
500 W halogen	60cm (24")	250 (Model 701-5) 300 (Model 702-5)
60 W tungsten in reflector housing (desk lamp)	5cm (2")	
Direct sunlight (unit should be deactivated)	-	75

**Table 3: Minimum Effective Intensity [Candela]\***

Carmanah Flash Code	IALA Designation	Effective Intensity [Cd]
001	Fixed	8
055	FI2(0.5)	22
064	FI4(0.5)	22
066	FI4(1)	26
072	FI6(0.5)	22
129	Q1	16
147	Q(5)20	19

\* Calculated for lights with green LED output, T = 0.74

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