The Liberty Dock Company

"DOCK RESPONSIBLY"

Custom Winchless Break Water Systems

Custom Breakwater Systems is another specialty that Liberty Dock Company and Rayco Marinas have teamed up to provide customers. Rayco Marinas Custom Break Water Systems are designed, manufactured, transported and installed all by the same crew. With over 30 years in the business, you can bet your Custom Break Water System will work efficiently and easily.

All Break Water Systems are designed with the same emphasis; to protect docks that the system outlines. Our Custom Breakwater System does just that! The difference is with no extra effort on the part of your Marina or Resort maintenance personnel. No winches are used in our design. No extra parts to replace or maintain.

AWS certified welders weld the critical parts to ensure the life of the Custom Breakwater System. Internal quality control measures are taken to ensure it floats properly and the buoyancy is correct.

All manufactured parts are designed to last . All parts are made of heavy gauge materials and element favorable fasteners. 12” channel with ½” plate gussets and 3-1/2 Schedule 80 pipe.

White Foam is inserted into the full length of tube.
The weight of an 80’ section is 10,200lbs.
We build the sections in the longest sections as possible so they move as a unit – the less joints the better.
Length is determined by build site.

Each Breakwater Section is securely braced and reinforced. Angle 2x2x1/4 is placed in two areas for every 16’.

Picture is a 160’ section.

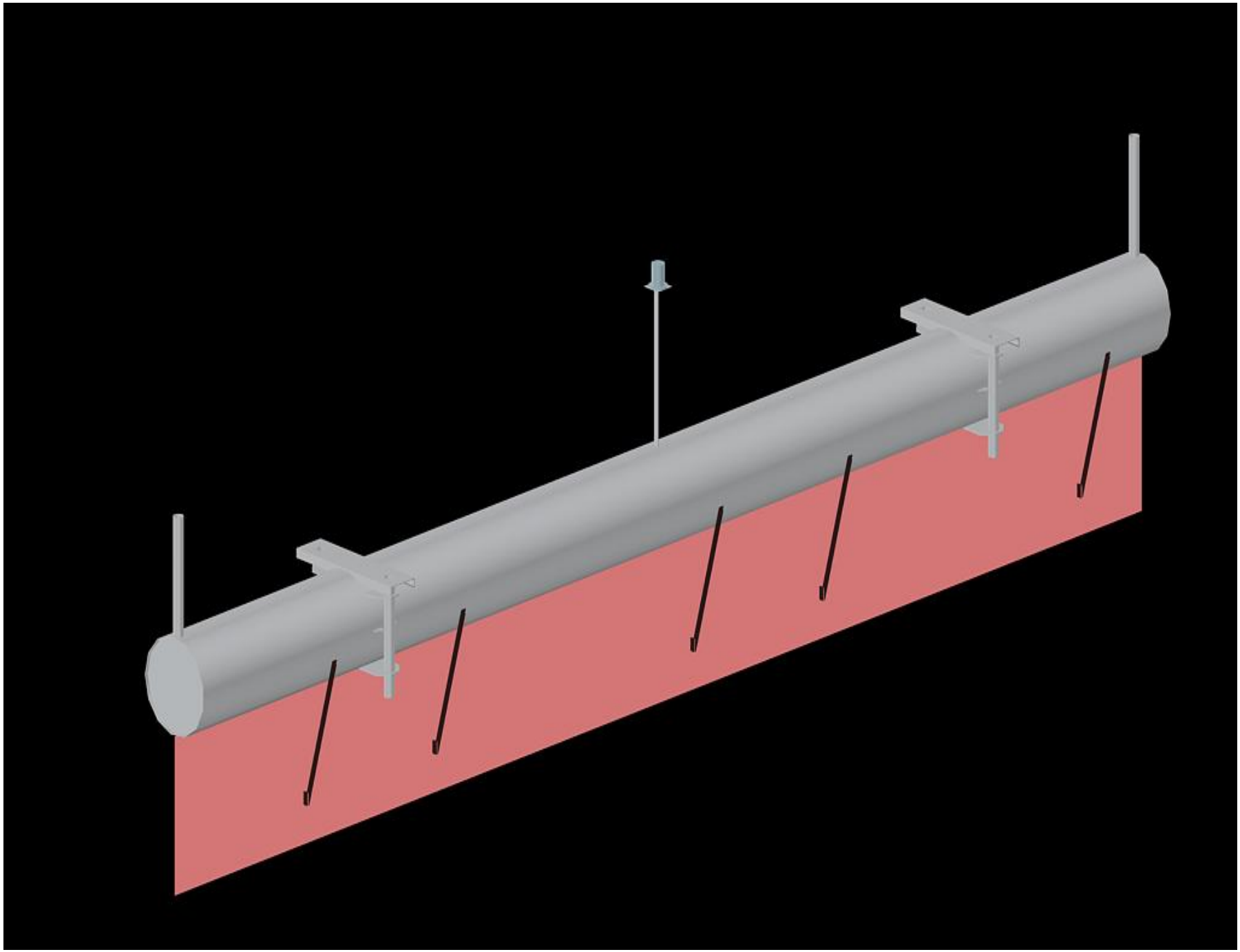
Each Section is painted and finished off with lights for safety and protection.

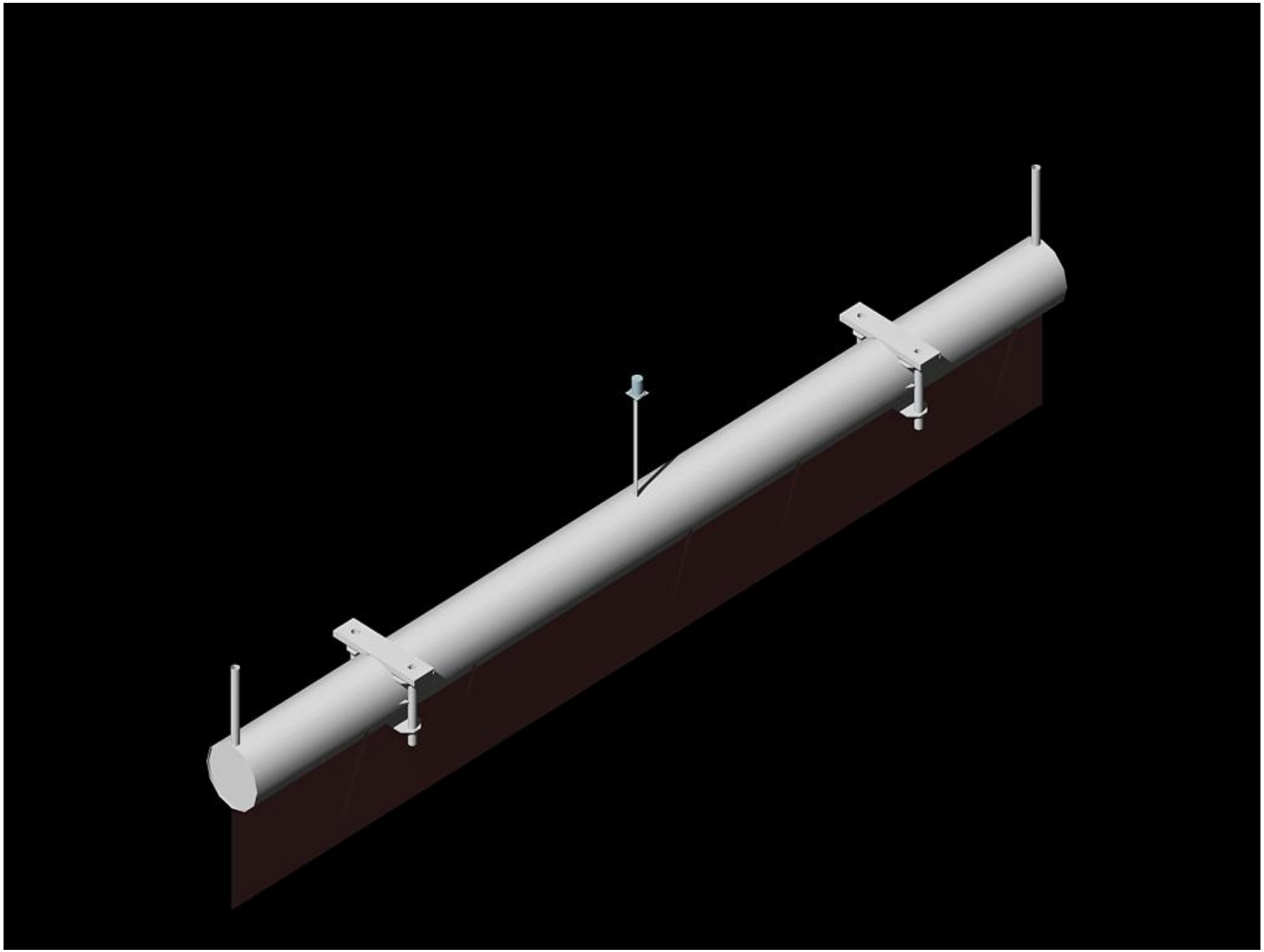
Another Successful Break Water Installation

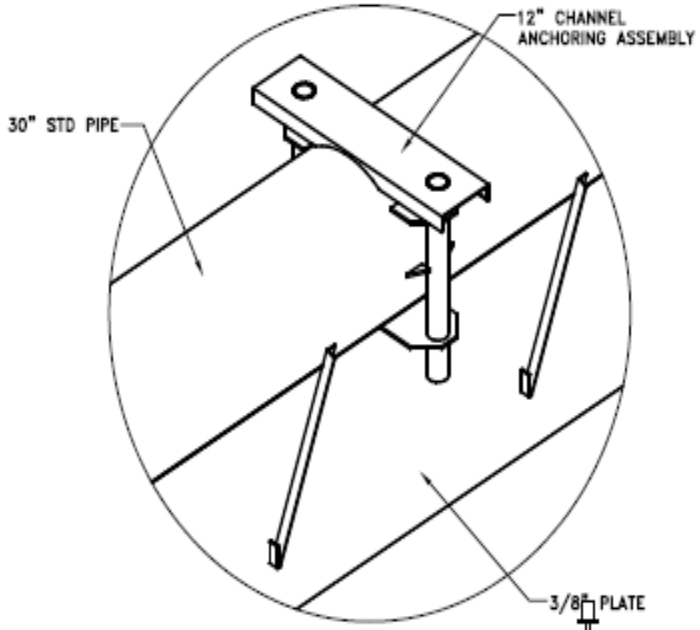
References

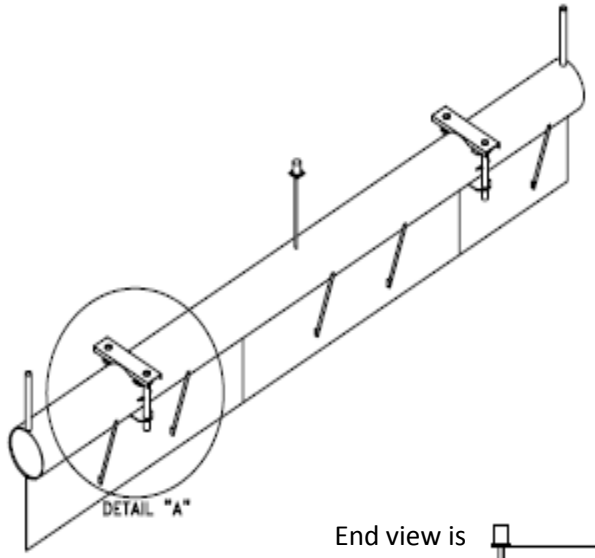
Brady Mountain Resort – Arkansas
Phone : 501-767-3422
Fax: 501-767-6506
Marina Manager: Joe-D Belknap
Break Water Length 420’

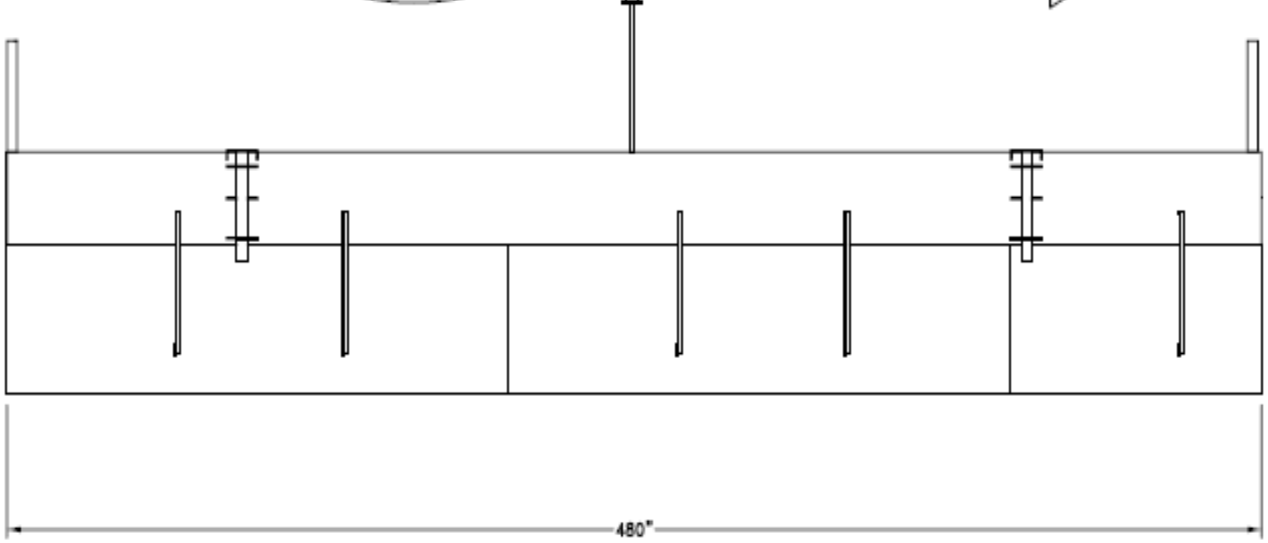
Pier 121 Marina – Texas
Phone: 972-406-5223
Ask for Mr. Mark Stafford
Break Water Length 420’



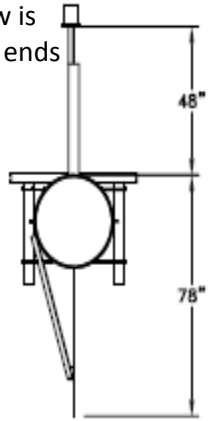








End view is
on both ends



The Liberty Dock Company

PROJECT #	40' PIPE BREAK WATER
DATE 05/10/10	
DRAWN BY SSJ	PROPOSAL DRAWING
	SHEET 1 OF 1 REVISION A

Frequently asked questions about our Break Water System

- Where does the cable attach for the sea anchors?
- The cable is strung through the tube up and across below the channel to the other tube.
- What keeps the cable from breaking?
- The tube acts as a cable guide keep the rub to a minimum.
- How many cables do you use?
- We recommend 4 per 80 ft section – you have the option to put more but is really not necessary.
- How much does each anchor weigh?
- Each anchor weighs 4000lb – 9000lb anchors are available for additional cost.
- Does the system "right" itself after a big roller wave?
- This system weighs a lot. No reason to "right" itself – it won't move.
- What about large waves that will break over the top?
- Our customers have told us that it will handle 4' waves over the top very well. Especially in an active storm that constantly is hitting the wave break – Brady Mountain customer.
- How big of a wave will it handle?
- A complete scientific study of this question has not been performed. We do know that it will handle significant waves with constant repeat action.
- What is the warranty of your product?
- The warranty that comes with the install of our break water is three (3) years.
- What do you mean by "low maintenance"?
- Our break water system has no winches to constantly maintain, No panels that can break off, and solar lights as opposed to electrical. Many break water systems out in the market today – do work well, but have yet to answer the maintenance question. Truss systems also have a lot of weak points that over time will become faulty after repeated wave action.
- Where will you build this if my site cannot accommodate a shoreline build?
- Most jobs can be built in a parking lot area and then we "roll" each section down to the ramp. In extreme situations we can build off site and truck the sections in – we prefer to build on a parking lot of some sort as the sections are extremely long. The long sections are the back bone of strength for our break water system.
- Why is the better than the box truss with hanging concrete panel design?
- As discussed earlier there are weak points in a truss system as well as the connectors that hold the concrete panels will eventually lose their strength and fail causing the panels to fall off.
- Is this engineered?
- No, but the system can be PE stamped – it just works. A large amount of docks and marinas in the state of KY use this similar format with pipe. Some of those systems have been around 25 plus years.
- How many lights will be on the wave break?
- One (1) solar light is installed every 80 ft section. More can be added for additional cost.

•Will this be sufficient for someone to see it in the fog?
•See answer to question 13.
•What if someone drives their boat over the wave break?
•While the wave break is designed with safety in mind i.e.; solar lights and the color it is painted, you might have a customer that does drive over the wave break – the wave break will not be hurt badly, but the customers boat will be. If a very large boat hits the wave break some damage may occur to the wave break. Owners of the wave break system as with any dock, gas dock, swim dock, etc must assume that customers will be customers and take the necessary precautions to make sure everyone knows where the wave break is located. We have had customers whom after install of the wave break have printed up new dock layouts for their customers, so that everyone is aware of the addition to the dock or marina.
•What is the biggest problem(s) we might face with a design of this type?
•Replacing the cables every 5-10 years on the anchors. This all depends on the acid content of the water where the wave break is installed.
•This is not galvanized will it rust?
•The thickness of the pipe makes this non-galvanized application last a long time. Once the unit is in the water, and not exposed to air, it won't rust. One of the boat docks for example at Pier 121 Marina in TX is built with this same "pipe" type structure and thickness – painted only not galvanized. The dock was built in 1960 and is still a functioning dock for the marina.
•It looks just painted on the top. Why just the top?
•The paint on the top is strictly for safety reasons more than a rust inhibitor – see answer to above question. Paint on the bottom can be applied if customer so chooses, but is really not necessary.
•What colors are available?
•Paint is for safety. Colors can be available but we suggest bright colors. White works well in the night time, so we've always painted our systems white.
•Is the unit air tight? Is the foam just a backup system?
•Yes and Yes
•How many of these systems are in existence?
•The state of Kentucky has dozens of these similar systems. Texas and Arkansas have a few. They are becoming more and more popular due to the simplicity, low maintenance, and the fact that they just work! Our division had been building these systems for over four years.
•Is this a patented system?
•No it is not.
•How long will it take to install after we give you an order?
•Once a deposit for the job is on file, we order the pipe and steel and foam. Approximately 5 weeks after the first load of pipe is delivered, your system will be installed.
•Will it disrupt the flow of traffic in my cove while you are building it?
•No, you will have disruption for a short time in a parking lot area – this area can be roped off to minimize interaction with the install crew.