



**Dean M. Nimax, PWC-QE  
ASO-PWC Division 8  
Fifth Coast Guard District, Southern Region  
Sector Hampton Roads**



27 August 2009

To: Marty Hallgren, OIC SML AuxSARDet Division 8  
Vince Popowitch, Asst. OIC SML AuxSARDet

From: Dean M. Nimax, ASO-PWC Operations Division 8

Subject: Upgrades and additions to the SML AuxSARDet docks

I have been asked by the Assistant OIC to look at the possibility of adding finger slips to the current configuration of the facility docking at the Smith Mountain Lake AuxSARDet. Since I have the station and docks already converted to CAD, it shouldn't be very difficult to come up with several different scenarios to get the most optimum boat space.

**Current Configuration**

• **Primary Docks**

The station has three separate areas for docking. The primary dock is in the middle of the cove. It consists of a fixed dock, 5' x 50' from the shoreline out to the array of attached floating docks, See Figure 1. The floating dock consists of the following sections, from left to right:

- Floating Dock #1 – 8' x 20'-4"
- Floating Dock #2 – 12' x 12'
- Floating Dock #3 – 8' x 16'-1"
- Floating Dock #4 – 8' x 16'-4"
- Floating Dock #5 – 8' x 16'-4"

Most if not all the facilities that patrol SML are at this docking area. As of this report, there are (3) vessel facilities, (2) PWC facilities and the station boat 212055 docked there. The current arrangement works for now provided that we do not have visiting facilities from other flotillas for the weekend. The water depth on the inside of the docks varies with the water level of the lake. At full pond, it is approximately 8 feet deep at FD #5 and between 10-15 feet at FD #1. The problem arises when the water depth during a drought is 5-6 feet below that level. Any facility berthed on the inside of the docks from FD #2 to FD #5 is subject to being beached or land locked when this happens. PWC facilities rested on the sand bottom, as well as FD #5, the last time this happened 2 years ago. There are now steps at the end of the fixed dock attached to FD #4 for water level changes.

- **Auxiliary Dock**

This dock is located at the point and at the mouth of our cove. See Figure 2. To my knowledge this is the original dock and has been named “039 Dock” because of where our old facility 222039 was docked at for years. This is a fixed dock is 5’ x 65’-6”. At full pond the depth at end of the dock is between 15-20 feet. There are docking whips attached on the cove side and large bumpers on the lake side. The lakeside can get very ruff as to wake and motion either from the weather or from the boat traffic. This dock has not been a choice of docking for anyone. During the patrols, the station boat is usually docked there for the day until the patrol has been terminated for the evening. The boat is then moved back to the primary dock. Also, when the water level is down, you have to climb down to the boat. There are no steps or ladders to compensate for this.

- **Backup Docking**

This area is where the boat ramp used to be. See Figure 3. The boat ramp and docks were constructed by the USMC Combat Engineers in one weekend when the USCG Reserve had the station when the lake was first opened. Over the years, one side of the boat ramp docks has rioted and fallen apart. During one the AuxSARDet cleanup weekends, the boards were removed and all that remains are the pilings. The other dock closest to the primary docks is still usable and could use some new deck boards. There is an array of attached floating docks. These are the older floating docks that were replaced about 2 years ago. The floating docks consist of the following sections, from left to right:

- Backup Floating Dock #1 – 12’ x 40’
- Backup Floating Dock #2 – 12’ x 12’
- Backup Floating Dock #3 – 10’ x 14’
- Backup Floating Dock #4 – 3’ x 20”
- Backup Floating Dock #5 – 8’ x 16’-4”

These docks are different stages of deterioration. BFD #1 was the original dock before it was replaced. The covering consists of <sup>3</sup>/<sub>4</sub>” pressure treated plywood, stained or painted. I do recall that it was re-covered with new plywood twice in the last 10 years. The flotation barrels need replacing and are not in compliance with AEP. Some are missing. The other floating docks need to have the deck boards replaced and some of the flotation looked at. BFD #1 is temporarily attached to the pilings of the fixed dock and has steps attach to it. The remainder of the docks needs to be better attached to BFD #1 to be better utilized. There is also (1) drive on PWC lift that needs to be reconfigured for a 3-seater PWC. As of this report, there is (1) vessel facility docked there, provided that the water level is up. 2 years ago, docks BFD #1 and several others were beached due to the shallow water of the boat ramp. The boat ramp itself as issues. It does have a concrete slab that runs out approximately 25 feet from the shore, but it has been covered up with about 2 feet of silt from the weather and wake. If a breakwater could be constructed utilizing the current pilings, the boat ramp could be dug out and used again to launch the smaller vessels and PWC facilities.

## **Proposed Configurations**

There are several different scenarios and arrangements that can be utilized to get the most dock space for our growing number of facilities, both who patrol there and for transient facilities patrolling for the weekend. Some could be come with a substantial cost, but it would be more feasible and better in the long run.

- **Primary Docks**

Since these docks were the last to be upgraded and reconfigured, we would need to add finger or slip docks to get more facilities tied up. See Figure 4. By adding on (6) 4 x 20 flinger docks, we can increase our docking capabilities from at total of (6) facilities to (11) facilities. All vessels on the inboard side of the floating docks would move to the cove side with the larger facilities placed on the FD #1 where the deeper water is. The inside areas could be used for PWC facilities since they require shallower water. The station boat, 212055 would then be moved to the 039 dock.

- **Auxiliary Dock**

Since there are no steps at the end of the fixed dock, I would propose adding one or several of the floating docks from the boat ramp area to the end of the 039 dock. This would be used to dock the station boat and be in a position for a quick response. See Figure 5. Steps would have to be added to accommodate the water level changes. This area could also be used for visitors docking during Vessel Safety Checks or for other PWC facilities.

- **Backup Docking**

There are many scenarios that could be done with this area. I would see the possibility of the USMC Combat Engineers revisiting this project for renovations. These CE units are the USMC Reserve units located in Roanoke and Lynchburg. My contacts with the local USMC Recruiters have stated that they are always looking for projects to do during their weekend drills. The Boy Scouts are also looking for Eagle Scout projects to do with the local community. Now that the USCG Auxiliary has a working agreement with BSA, this option should be looked at. The docks here should be properly attached to each other and have the deck boards should be fixed and/or replaced. The drive on PWC lifts should be attached at the ends, not to take up docking space for the larger vessels. A breaker wall should be constructed using the current pilings to prevent silt from building up on the boat ramp. We could also reuse the current pilings by rebuilding the second fixed dock. Gravel would then be needed to replace the driveway and to fill in the trenches at the bottom of the hill. See Figure 6.

These are just some of the suggestions. The configurations of the floating docks can changed on CAD first to get the idea and best location. We can then use the PWC's and the station boat to place them where we need to. We can always move them if it does work. With the patrol season coming to end soon, this would be the best time to start moving the docks around. There is also the funding problem. Some things we can replaced with the AuxSARDet funds we now have. Sector Hampton Roads, Station Portsmouth and Division 8 have helped in the past with the badly needed upgrades to the station.

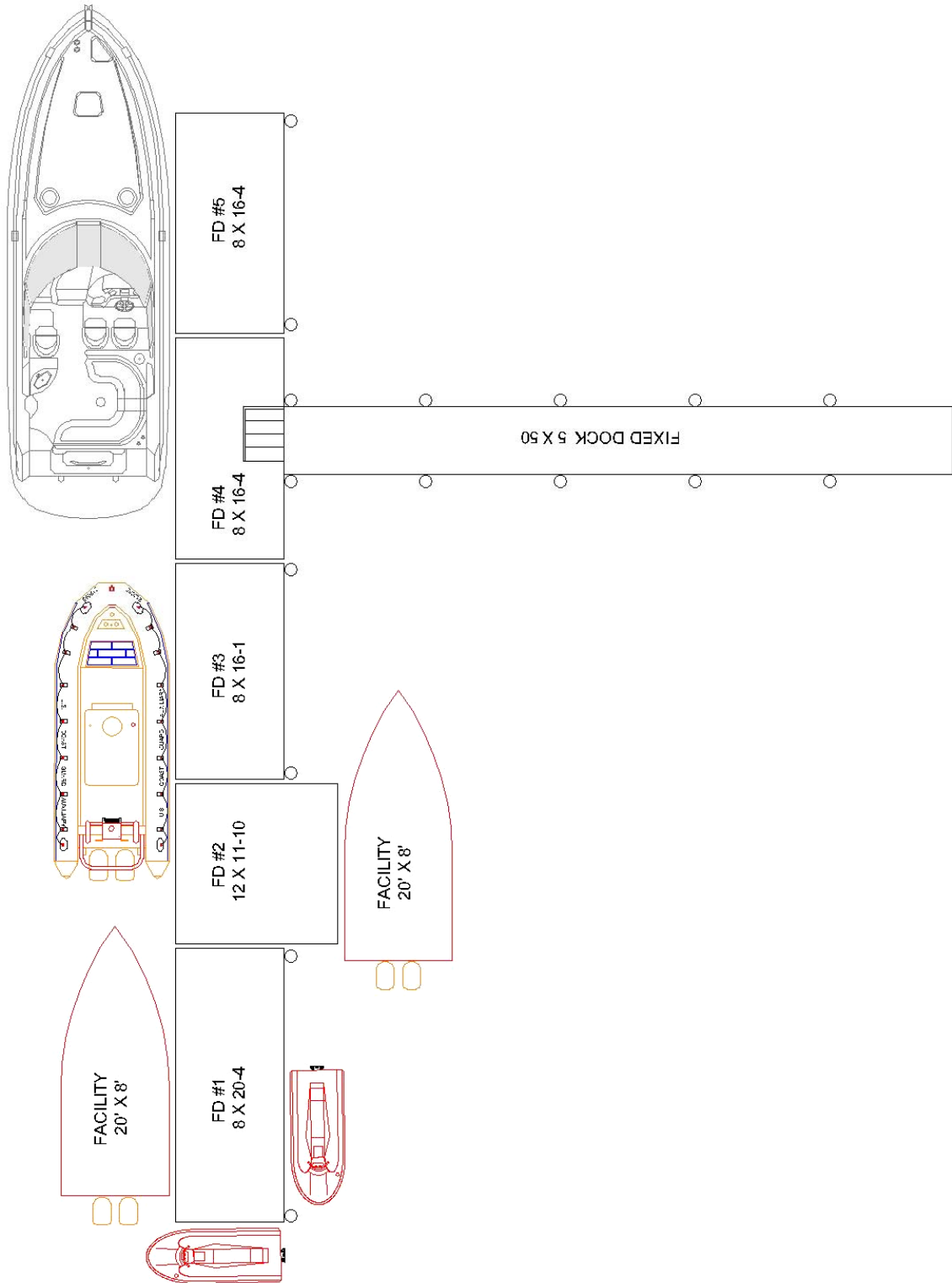
In the last two years, great improvements and strides have been made with the small work crew we have available. Since I do come down to the station once a month, year round to work on the station, my camper and my facility, I will make myself available on those weekends, weather permitting. There is no reason why it cannot get done, other than some of the members complaining about changes.

We can go over several different docking scenarios and I can make changes at the station on my laptop. The CAD system I use at work, AutoCAD, is also on my laptop. We can make changes down there, and I can print out scaled drawings at work and send them to you for review. I am used to making changes by phone and email since I do work with architects in several different states. If it were me, for the first phase I'd move some of the extra floating docks to the 039 dock and move the station boat there to free up space at the primary docking area and reconfigure the whips on the floating dock.

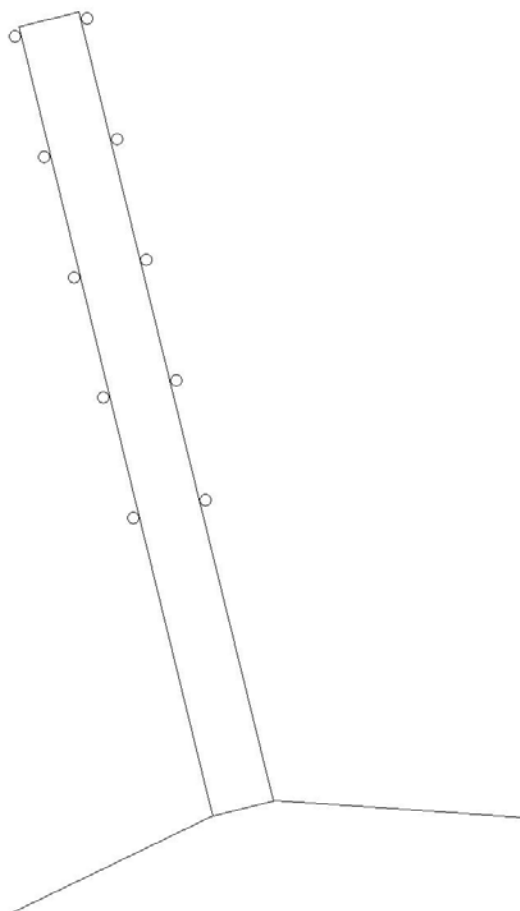
If you have other questions and/or comments concerning this project, please contact me by phone, fax, or email.

Dean M. Nimax  
ASO-PWC  
PWC-QE Division 8

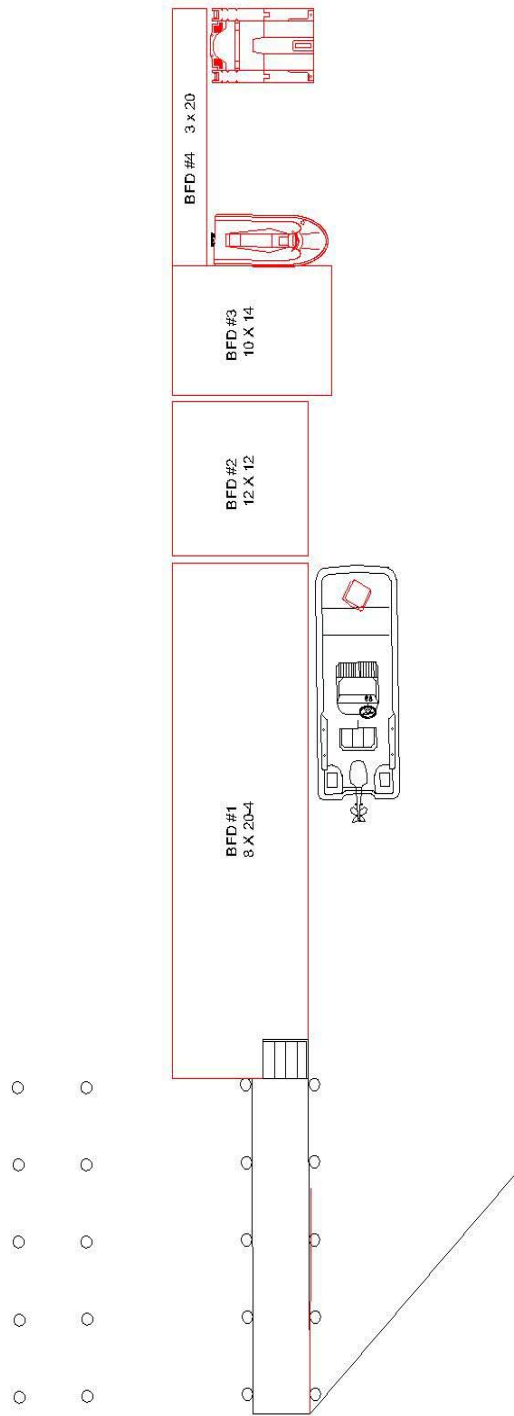
Attachments: Figure 1: Primary Docks  
Figure 2: Auxiliary Dock  
Figure 3: Backup Docking  
Figure 4: Revised Primary Dock  
Figure 5: Revised Auxiliary Dock  
Figure 6: Revised Backup Dock



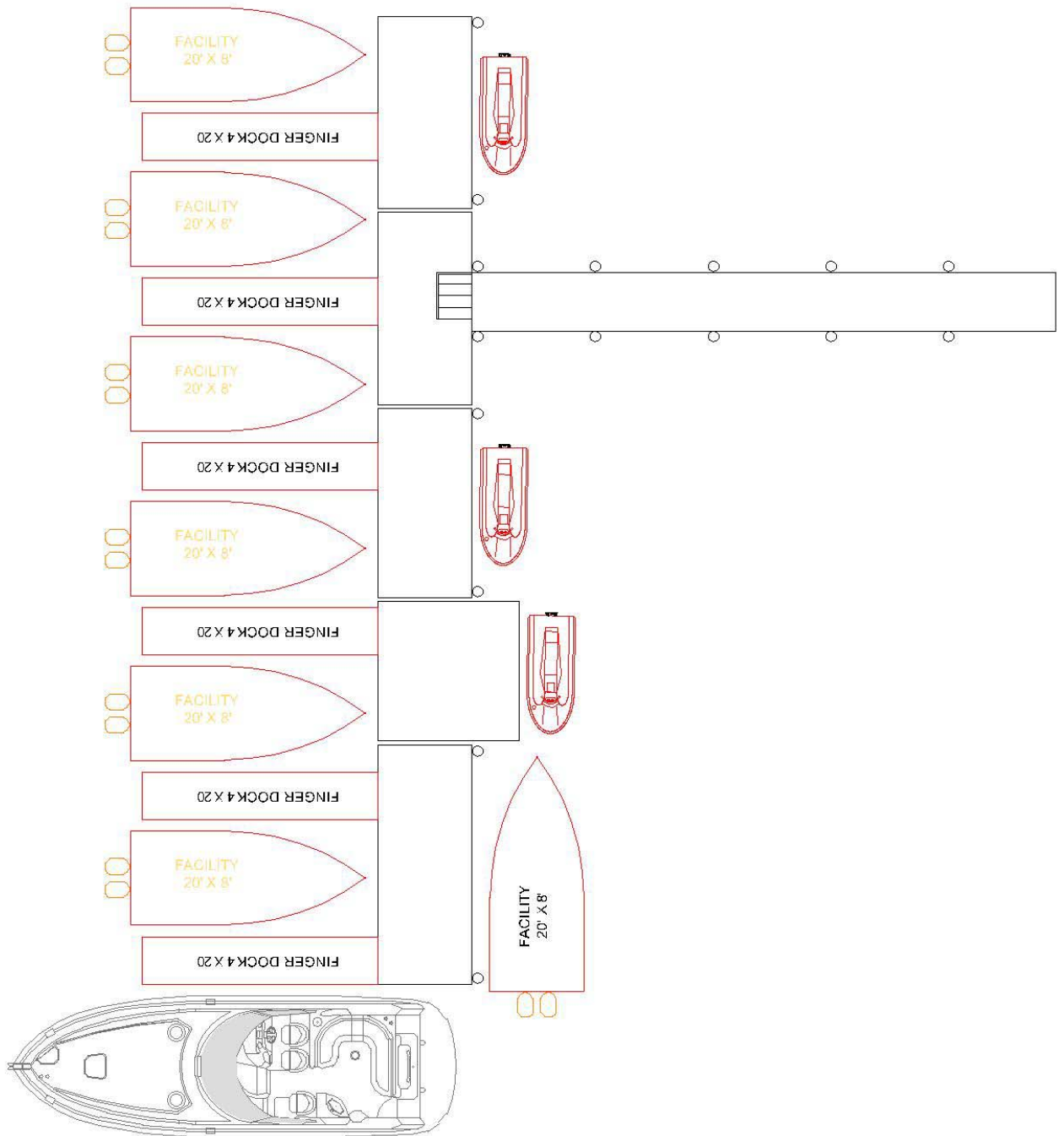
**Figure 1: Primary Docking**



**Figure 2: Auxiliary Docking (039 Dock)**

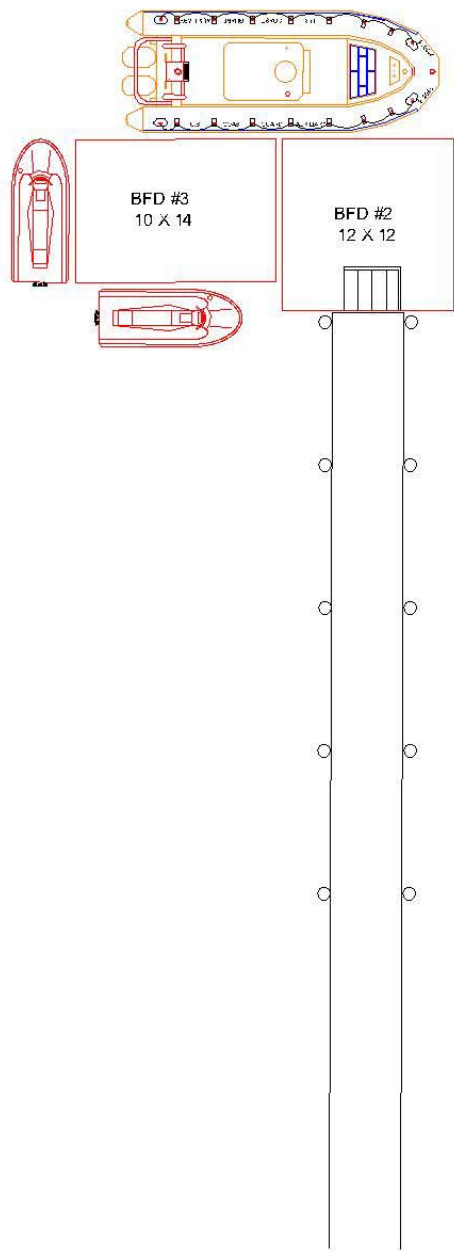


**Figure 3: Backup Docking (Boat Ramp)**

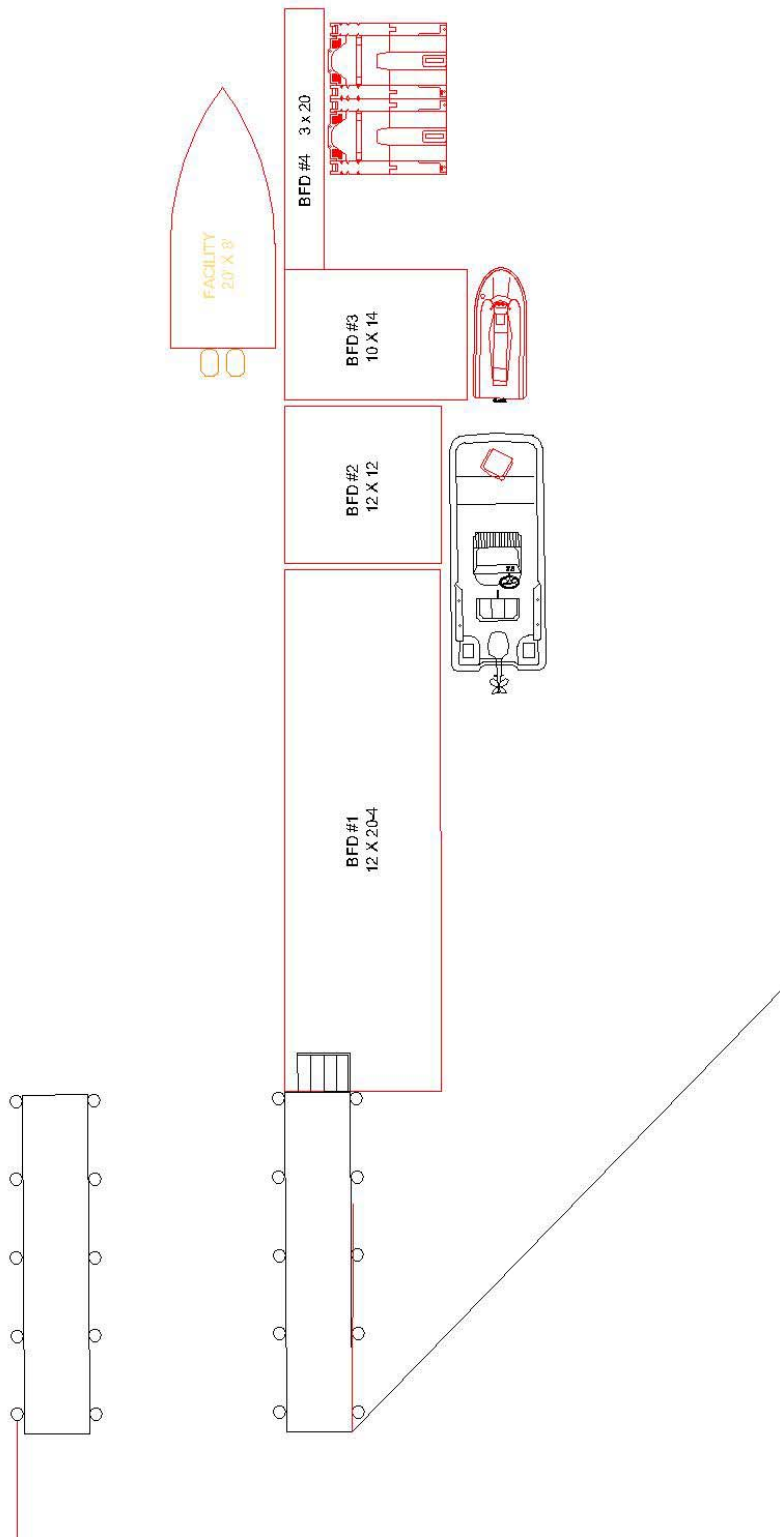


**Figure 4: Proposed Primary Docking**





**Figure 5: Proposed Auxiliary Docking (039 Dock)**



**Figure 6: Proposed Backup Docking (Boat Ramp)**