



**MARINA MAINTENANCE**

***AND***

**ANNUAL RESERVE PLANS**

ADOPTED: 3-8-12

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## HARBOR POINTE MARINA FACILITY MAINTENANCE

Maintenance is the cornerstone of facility safety and long-term survival. Maintenance monitoring shall be part of an organized, regularly scheduled routine regarding the observation of marina components and the recording of deficiencies that are observed.

Maintenance should be generally classified as (1) unscheduled and (2) scheduled. Unscheduled maintenance items are of a nature that immediate attention is required to protect life or property. Examples include loose or missing deck planks that can cause an immediate tripping hazard, a broken power post with exposed wiring that could electrocute an unsuspecting user, or a mooring piling that has been severely damaged by an owner's boat during the docking process. Examples of scheduled maintenance include the complete deck refastening and/or the replacing of all decking at the end of its normal useful life.

The best way to address maintenance is to develop a program that works for our facility. A maintenance plan should be developed by the Harbor Pointe Marina Committee and presented to the Board for approval and implementation.

The drafting of the proposed Marina Maintenance Plan should be a team effort to assure that all items requiring scrutiny are evaluated for inclusion into the plan. The plan should include time frames for inspection surveys, forms for reporting data, task initiation forms and completion forms, as well as cost itemization for all defined maintenance tasks.

The initial efforts for developing a Marina Maintenance Plan is to obtain an up-to-date set of plans of the facility, including accurate site plan of the marina layout, with the slip identifications noted, location of all utility systems serving the slips, hydrographic soundings for all areas where dredging took place, and construction details for all typical details used throughout the design of the marina. Examples of these typical details would include main walkway details, finger pier details, wave attenuation details...etc.

Once the drawing package has been assembled, these documents should be used to define the components to be inspected as part of the maintenance monitoring program and the time intervals associated with the inspections.

Upon determination of the components to be inspected, a checklist should be developed to be followed during maintenance inspection. These checklists should be used to perform the actual inspections in accordance with the inspection time interval that is adopted.

Upon completion of each maintenance inspection, a prioritized list of actions should be prepared with an implementation plan and schedule established. Cost estimates for the

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maintenance actions must be prepared, and these costs figured into the marina operations budget or special allocation request.

A regularly scheduled underwater inspection is crucial in seawater environments. This inspection can often be overlooked because they are not easily inspected without the use of a diver who understands the construction of these types of facilities. The inspection diver should be familiar with the type of construction material used and should be able to recognize if problems exist or have developed since the last inspection.

For those items which are defined as scheduled maintenance items, the maintenance plan and the marina operations budget should include those items scheduled for maintenance, with defined useful life of the materials, and a cost sharing plan for all owners to meet these scheduled maintenance cost items.

Attached herewith to provide guidance to the Harbor Pointe Marina Committee in the determination of those items which should be included in Marina Facility Maintenance Plan and Inspections is Exhibit "A" – Suggested Routine Maintenance checklist items to be included in facility inspections.

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EXHIBIT "A"  
HARBOR POINTE MARINA  
SUGGESTED ROUTINE MAINTENANCE CHECKLIST ITEMS

DOCKS

- Decking condition and fastenings
- Cleat conditions and fastenings
- Connection hardware – unit to unit
- Utilities – water, electrical, pump-out facility and fire protection
- Power post condition
- Metering operable and accurate
- Lockouts operable
- Dock lighting
- Electric receptacles and circuit breakers operable
- Correct polarity
- Condition of slip assignee's electric cable
- Water main shut off valves
- Water pressure flow
- Water system backflow valves
- Water system leakage
- Water system hose bibs
- Cable and pipe conduit
- Fire extinguishers
- Security locks and signage
- Wave attenuators
- Trash receptacles
- Water access ladders
- Buoy rings for life safety

MOORING PILES

- Marine borer activity in wood piles
  - Below water condition
  - Vertical alignment – plumbness
  - Pile butt protection
  - Dents, chaffing or splintering
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EXHIBIT "A"  
HARBOR POINTE MARINA  
SUGGESTED ROUTINE MAINTENANCE CHECKLIST ITEMS

DREDGING

- Bathymetry Plan – Soundings before and after dredging and periodic checks.
- Siltation Rate – Buildup of material over time to estimate intervals between future dredging.
- Flushing – Maintenance of water circulation through marina basin.

SLOPES AND EMBANKMENTS

- Slope stability
  - Erosion
  - Vegetation
  - Storm water runoff control
  - Stone size and stability
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**HARBOR POINTE MARINA ANNUAL INSPECTION PLAN REPORTING FORM**

**INSPECTION TEAM:** \_\_\_\_\_

**DATE OF INSPECTION:** \_\_\_\_\_

**DOCK COMPONENT INSPECTIONS**

ELEMENT INSPECTED	CONDITIONS FOUND	SITE LOCATION IN MARINA	REMARKS
<u>Deck Condition &amp; Fastenings</u>	_____	_____	_____
<u>Cleat Condition &amp; Fastenings</u>	_____	_____	_____
<u>Utility - Water, Electrical And Fire Protection</u>	_____	_____	_____
<u>Power Post Condition</u>	_____	_____	_____
- Metering Operable	_____	_____	_____
- Lockouts Operable	_____	_____	_____
- Dock Lighting	_____	_____	_____
- Elec. Recept, & Cir. Breakers	_____	_____	_____
- Correct Polarity	_____	_____	_____

**DOCK COMPONENT INSPECTIONS (continued)**

ELEMENT INSPECTED	CONDITIONS FOUND	SITE LOCATION IN MARINA	REMARKS
<u>Slip assignee electrical cable condition</u>	_____	_____	_____
<u>Water Main Shut Off Valves</u>	_____	_____	_____
<u>Water System Hose Bibs</u>	_____	_____	_____
<u>Cable and Conduit</u>	_____	_____	_____
<u>Fire Extinguishers</u>	_____	_____	_____
<u>Security Locks and Signage</u>	_____	_____	_____
<u>Trash Receptacles</u>	_____	_____	_____
<u>Water Access/Egress Ladders</u>	_____	_____	_____
<u>Buoy Rings for Life Safety</u>	_____	_____	_____
<u>Channel Markers</u>	_____	_____	_____
<u>Manatee &amp; Navigation Info Box</u>	_____	_____	_____

NOTES:

1. See marina plans for noted locations of suggested areas or elements requiring maintenance or repair.
2. See task initiation and cost itemization forms for suggested maintenance tasks to be undertaken.
3. See task completion forms for description, final cost and date of completion of maintenance tasks.

**HARBOR POINTE MARINA ANNUAL INSPECTION PLAN REPORTING FORM**

**INSPECTION TEAM:** \_\_\_\_\_

**DATE OF INSPECTION:** \_\_\_\_\_

**MOORING PILES, DECK SUPPORT PILES AND SUBSTRUCTURE CONDITION INSPECTION**

ELEMENT INSPECTED	CONDITIONS FOUND	SITE LOCATION IN MARINA	REMARKS
<u>Hardwood Pilings</u>	_____	_____	_____
<u>Concrete Pilings</u>	_____	_____	_____
<u>Timber Substructure</u>	_____	_____	_____
<u>Pile Butt Protection</u>	_____	_____	_____
<u>Wave Attenuation System</u>	_____	_____	_____
<u>Substructure Hardware Connections</u>	_____	_____	_____
<u>Boardwalk Railing System</u>	_____	_____	_____
<u>Underwater Piling Inspection</u>	_____	_____	_____

**NOTES:**

1. See marina plans for noted locations of suggested areas or elements requiring maintenance or repair.
2. See task initiation and cost itemization forms for suggested maintenance tasks to be undertaken.
3. See task completion forms for description, final cost and date of completion of maintenance tasks.



**HARBOR POINTE MARINA ANNUAL INSPECTION PLAN REPORTING FORM**

**INSPECTION TEAM:** \_\_\_\_\_

**DATE OF INSPECTION:** \_\_\_\_\_

**DATE OF BATHYMETRY SURVEY:** \_\_\_\_\_

**DREDGING MARINA BASIN INSPECTION**

ELEMENT INSPECTED	CONDITIONS FOUND	SITE LOCATION IN MARINA	REMARKS
<u>Bathymetry Plan</u>	_____	_____	_____
<u>Siltation Rate &amp; Location</u>	_____	_____	_____
<u>Inspect Marina Basin Flushing</u>	_____	_____	_____
<u>Proposed Dredging Plan</u>	_____	_____	_____

- NOTES:
1. See marina basin plan for noted locations of suggested areas requiring dredging maintenance efforts.
  2. See task initiation and cost itemization forms for suggested dredging efforts in marina basin.
  3. See task completion forms for description, final cost and date of completion of dredging tasks.

**HARBOR POINTE MARINA ANNUAL INSPECTION PLAN REPORTING FORM**

**INSPECTION TEAM:** \_\_\_\_\_

**DATE OF INSPECTION:** \_\_\_\_\_

**SLOPES AND EMBANKMENT INSPECTION**

ELEMENT INSPECTED	CONDITION FOUND	SITE LOCATION IN MARINA	REMARKS
<u>Slope Stability</u>	_____	_____	_____
<u>Erosion</u>	_____	_____	_____
<u>Vegetation</u>	_____	_____	_____
<u>Storm Water Runoff Control</u>	_____	_____	_____
<u>Revetment Stone Size &amp; Stability</u>	_____	_____	_____

**NOTES:**

1. See marina plans for noted locations of suggested areas or elements requiring maintenance and/or repairs.
2. See task initiation and cost itemization forms for suggested maintenance tasks to be undertaken.
3. See task completion forms for description, final cost and date of completion of maintenance tasks.

HARBOR POINTE MARINA  
MAINTENANCE TASK INITIATION FORM

TASK FORM NO. 001-2001

Inspection Team : \_\_\_\_\_

Date of Inspection : \_\_\_\_\_

Element Inspected : \_\_\_\_\_

Type of Maintenance : \_\_\_\_\_ Scheduled      \_\_\_\_\_ Unscheduled

Description of Element  
And It's Condition: \_\_\_\_\_

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HARBOR POINTE MARINA  
MAINTENANCE TASK INITIATION FORM  
TASK FORM NO. 001 – 2011 CONT'D.

Recommended Maintenance  
And/Or Replacement Task : \_\_\_\_\_  
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For Location of Maintenance/Replacement Task, See Marina Plan Attached

HARBOR POINTE MARINA

MAINTENANCE TASK INITIATION TASK FORM

TASK FORM NO. 001 – 2011 CONT'D

Estimate of Cost  
To Provide Maintenance  
Or Replacement  
(Itemize all cost ) : \_\_\_\_\_  
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Proposed Start /  
Completion Date : \_\_\_\_\_ Start                  \_\_\_\_\_ Completion

Marina Committee  
Recommendation \_\_\_\_\_ Approved                  \_\_\_\_\_ Disapproved

Marina Chairman \_\_\_\_\_                  \_\_\_\_\_ Date

Date Submitted To  
HOA Board                  \_\_\_\_\_ Action Taken                  \_\_\_\_\_ Approved  
By HOA Board                  \_\_\_\_\_ Disapproved

HOA Board Pres. \_\_\_\_\_                  \_\_\_\_\_ Date

HARBOR POINTE MARINA

TASK COMPLETION FORM

Inspection Team : \_\_\_\_\_

Date of Inspection : \_\_\_\_\_

Element Inspected : \_\_\_\_\_

Date of HOA Approval : \_\_\_\_\_

Date of Notice To Proceed : \_\_\_\_\_

Date of Final Inspection : \_\_\_\_\_

Date of Final Completion : \_\_\_\_\_  
( Including Punchlist Items)

Original Estimated Cost  
To Perform : \_\_\_\_\_

Final Cost To Perform:  
Maintenance \_\_\_\_\_

Amount Over/Under  
Approved Budget : \_\_\_\_\_

Reason for Any  
Budget Overruns : \_\_\_\_\_  
\_\_\_\_\_

Marina Chairman  
Signature \_\_\_\_\_ Date \_\_\_\_\_

## HARBOR POINTE ANNUAL MARINA RESERVE PLAN

In order to appropriately apply the results of a good maintenance plan, it is necessary to have available funding to implement the maintenance operation. A maintenance and operations account should be developed and updated from the conditions discovered in the maintenance surveys. Major maintenance items should be implemented in a time frame acceptable from both a financial standpoint as well as from a need prospective. Assessing maintenance needs will allow for incremental funding into a reserve account and will not require major capital expenditures on short notice. Major emergency items will require immediate attention, but these can be minimized by conscious application of preventive maintenance and periodic maintenance surveys and inspections.

Attached herewith as Exhibit " B ", for use by the Harbor Pointe Marina Committee, is a study to determine the Annual Marina Reserves Fund which must be set up and funded annually in order to properly maintain the capital improvements contained in Phase 4 of the Harbor Point Condominium Development.

This exhibit has been developed to set up a means of determining the necessary annual reserve funds which are required to fund required capital improvement replacements in the future , to provide regularly scheduled maintenance items , and to allow for estimated funds to address any unscheduled maintenance items which occur.

Scheduled maintenance reserve monies were identified by determining the useful life and replacement costs of all marina capital improvement elements. These factors were used in order to calculate the amount of annual funds which must be placed in the reserve fund in order to replace that particular capital improvement element at the end of its useful life.

Unscheduled maintenance items, being items that require immediate attention to protect life or property were also budgeted in the marina reserve fund calculations based on an annual estimated budget amount and on marina operational experiences. The monies annually placed in the marina reserve for unscheduled maintenance are small in magnitude compared to the funds placed in the reserves to address scheduled maintenance items and replacement of capital improvement replacement elements,

Annual reserve funds for replacement of capital improvements were calculated based on the estimated replacement cost divided by the estimated useful life of the item.

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EXHIBIT "B" PROPOSED ANNUAL MARINA RESERVE PLAN  
2012

MARINA ELEMENT	USEFUL LIFE	PRESENT AGE	REPL'MT YEAR	COST / REPAIR	ANNUAL RESERVE	REMARKS
Wood Decking	12	3	2020	\$90,000	\$7,500	Composite Life 35 Years
Mooring Piles	35	3	2043	\$132,000	\$3,771	Replace with Timberguard
Conc. Piles/ Structure	50	3	2059	\$975,000	\$9,750	Piles/ Substructure
Wave Attenuators	30	3	2038	\$166,000	\$5,533	Vert./ Horiz. Members
Potable Water	20	3	2028	\$10,000	\$500	Unsch. Maint./ Replacement
Fire Protection	20	3	2028	\$10,000	\$500	Unsch. Maint./ Replacement
Electrical Serv. Distribution	20	3	2028	\$200,000	\$10,000	Unsch. Maint./ Replacement
Dredging Basin	8	3	2014	\$48,400	\$6,036	Maint. 7 Ft.
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TOTAL MARINA ANNUAL RESERVES =					\$43,590	



ANNUAL MAINTENANCE EXPENSES IN OPERATING BUDGET  
2012

MARINA ELEMENT	ESTIMATED COST IN OPER. BUDGET
Fire cabinets/Extinguishers	\$100
Power Poles	\$3,000
Butt Pile Protection	\$250
Utility Maintenance	\$1,000
Dock Maintenance	\$3,000
Dock Structure Maintenance	\$2,000
Hazard Repair	\$2,000
Cleats	\$230
Trash Receptacles	\$280
Water Access Ladders	\$200
Ring Buoy & Bracket	\$160
Security Locks	\$70
Annual Maintenance Survey	\$1200
TOTAL MARINA MAINTENANCE COST IN 2012 OPERATING BUDGET	\$13,490

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