

DEPARTMENT OF HOMELAND SECURITY
U.S. COAST GUARD

ATON STRUCTURE INSPECTION FORM

Date of Inspection:	Aid Name/Aid Number:
Inspector (Name, Rank, Unit):	Description of Structure (Type, Height, Location):

Overall Assessment (Select One): Good Satisfactory Fair Poor Critical
(For a definition of these terms, see COMDTINST M16500.25, Appendix A, Page A-2)

Overall Comments:

SSMR Submitted? Yes No

STRUCTURE COMPONENTS

Timber Piles	Condition Rating (Select One): <input type="checkbox"/> NI <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 (See COMDTINST M16500.25, Appendix A, Page A-10)
	Comments:
Steel Piles	Condition Rating (Select One): <input type="checkbox"/> NI <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 (See COMDTINST M16500.25, Appendix A, Page A-17)
	Comments:
Concrete Piles	Condition Rating (Select One): <input type="checkbox"/> NI <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 (See COMDTINST M16500.25, Appendix A, Page A-25)
	Comments:



Other Construction Materials	Comments:
Ladder	Comments:
Platform	Comments:
Tower	Comments:
Concrete Foundation	Comments:
Guy Anchors and Hardware	Comments:
Other Components Not Listed Above	Comments:



INSPECTION CHECKLIST

Use this checklist to generate comments for the Inspection Form.

TIMBER PILES

- Check the tops of piles for physical damage, dry rot, and termite or pest infestation. Determine the depth of deterioration.
- Check for cracked, rotted, loose, or worn piles or connecting braces.
- Check pile and mast alignment. If the aid is a multi-pile structure, are the piles angled toward each other evenly? Is the mast out of plumb?
- Visually examine piling in the tidal zone for marine borer damage.
- Sound the piles with a hammer and carefully probe with a thin-pointed tool such as an ice pick to look for internal decay and soft timber.
- Check for member damage due to overload or impact.
- Clear a section of the structure of all marine growth and visually inspect for surface deterioration.
- Check for corrosion of steel fasteners, including bolts, drift pins, and wire rope.

STEEL PILES

- Check for corrosion evidence: rust, scale, and holes, especially in the splash zone and at extreme low water level.
- Check the extent of steel member corrosion in the splash zone. Hammer the surface corrosion (*use safety glasses*) to remove corrosion byproducts and expose the steel below.
- Check for deformation, distortion, or deflection.
- Check for abrasion of steel structures as indicated by a worn, smooth, or polished appearance.
- Inspect welds for signs of corrosion, cracking, or breakage.
- Inspect coating for any peeling, blistering, etc.
- Check for loss of foundation material and/or scour.

CONCRETE PILES

- Inspect for cracks, spalling, corrosion of reinforcing steel, and visual signs of rust staining.
- Check for evidence of chemical deterioration, abrasion wear, and overload damage.
- Sound the piling with a hammer to detect any loose layers of concrete or delaminations.

OTHER CONSTRUCTION MATERIALS

- **Masonry:**
 - Check for missing or displaced blocks.
 - Check for wall movement.
- **Aluminum:**
 - Check for corrosion.
 - Check for abrasion and wear.
 - Check for cracked welds.
- **Fiberglass:**
 - Check for broken members.
 - Check for loose connections.
 - Check for damage to the surface finish.
- **Plastics:**
 - Check for broken or damaged members.
 - Check for cracking.
 - Check for loose bolted connections.
- **Rudder:**
 - Check for rudder deterioration - hardening, cracking, swelling, softening.

INSPECTION CHECKLIST

(Continued)

LADDER

- Check horizontal and vertical alignment. Is the ladder misaligned?
- Does the ladder vibrate or move from the current or waves, or when the boat berths against it?
- Are there signs of damage caused by vessel impact, ice, logs, or other debris?
- Check ladders for corroded, broken, bent, or missing rungs.
- Check for corroded, loose, or failed connections.
- Inspect welds for signs of corrosion, cracking, or breakage.
- Inspect the ladder safety device to ensure the safety rail is properly mounted on the tower. The rail sections should be installed right-side up (notches are at the bottom of the tapered cuts vice the top). Look for worn, broken, or defective notches.
- Check the ladder safety device to ensure the sliders ride freely on the rail.
- Inspect the clamps, studs, bolts, and nuts, which secure the safety device to the ladder for corrosion, looseness, and breakage.
- Ensure the top of the safety rail is capped with a through bolt or other device to prevent the removal of the slider from the top of the rail.
- Ensure the safety rails are not painted, as this will cause problems with the passage of sliders.

PLATFORM

- Inspect the platform decking or grating for structural integrity and soundness.
- Check the railings for deterioration and parts that are broken, severely bent, or otherwise considered unsafe.

TOWER

- Inspect structural members and connections for corrosion, deformation, fatigue, and differential movement.
- Look for corrosion at the bolts and joints that are bolted together, and for missing, loose, or damaged bolts.
- Check the plumb (*straightness*) of the tower.
- Check drain holes on hollow rod towers to make sure they are not obstructed. The amount of rust leaking out can be an indication of the extent of the rust damage inside the hollow member.

CONCRETE FOUNDATION

- Inspect the concrete foundation above grade for signs of crackling or spalling. If conditions of the above grade concrete are poor, an area adjacent to the foundation should be excavated to check the condition of the below concrete grade.
- Inspect the soil surrounding the tower foundation for evidence of settlement or upheaval.
- Inspect the anchor bolts, connecting the concrete foundation to the steel tower for deformation, loose nuts, corrosion, or defects.

GUY ANCHORS AND HARDWARE

- Inspect guy anchors, turnbuckles, thimbles, shackles, preformed dead end guy grips, shear pins, and cotter pins for signs of corrosion, deformation, and fatigue.
- Check preformed guy grips to ensure there is no change in surface appearance of the guy strand immediately next to these grips.
- Ensure turnbuckles are properly moused with safety wire to prevent loosening of the turnbuckles. Also, turnbuckle threads should be coated with a light coat of petroleum based grease to prevent their bindings.
- Inspect structural guys for signs of bird caging, corrosion, fatigue, deformation, and broken strands. In weather conditions where there is no wind, a slack guy wire can be an indication that something is wrong.
- Make sure that all safeties are installed and check the anchor where it enters the ground for corrosion.