

STRUCTURE

**MAINTENANCE
STANDARDS**

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NATIONAL PARK SERVICE

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STRUCTURES

HISTORIC AND PREHISTORIC STRUCTURES

Level I

1. Comply with the applicable structural and operational standards.
2. Maintenance repairs and housekeeping inconspicuous and maintain historical integrity, according to standards developed by historical architect or archeologist at time of restoration.
3. Create as little as possible an intrusion on the interpretive scene.
4. Quarterly inspection to insure conformance.

HISTORIC AND PREHISTORIC STRUCTURES

Level II

1. Comply with the applicable structural and operational standards.
2. Maintenance repairs and housekeeping inconspicuous and maintain historical integrity, according to standards developed by historical architect or archeologist at time of restoration.
3. Create as little as possible an intrusion on the interpretive scene.
4. Quarterly inspection to insure conformance.

HISTORIC AND PREHISTORIC STRUCTURES

Level III

1. Comply with the applicable structural and operational standards.
2. Maintenance repairs and housekeeping inconspicuous and maintain historical integrity, according to standards developed by historical architect or archeologist at time of restoration.
3. Create as little as possible an intrusion on the interpretive scene.
4. Quarterly inspection to insure conformance.

TOWERS AND LOOKOUTS

Level I

1. Concrete free of cracks, breaks or spalls, exposed reinforcing, settlement or frost heaving.
2. Anchor bolts, splices, straps, steel members free of rust, corrosion, loose or missing and broken elements.
3. No bowed, cracked, split or rotten timber elements; no termites or insect infestation.
4. Guys and anchorage have no frayed, broken or loose strands.
5. Paint free from rust, corrosion, cracking, scaling, chalking and fading.
6. No dirt, grease or deposits on ladders and access walks.
7. All lamps operational.
8. Decking free of protruding fasteners, worn and rotten members.
9. Monthly inspection to insure conformance.
10. Wooden ladders, steps, stairways protected with a chemical preservative and free of paint. All members sound and free of cracks, splits, warp, rot or other damage.

TOWERS AND LOOKOUTS

Level II

1. Concrete free of settlement or frost heaving and breaks.
2. Anchor bolts, splice, straps, steel members, no missing or broken elements.
3. Timber elements free of splits or rot, no termites or insect infestation.
4. Guys and anchorage no broken or loose strands.
5. Paint coatings free of rust and corrosion; no cracking.
6. No dirt, grease or deposits on ladders and access walks.
7. All lamps operational.
8. Decking free of protruding fasteners, worn and rotten members.
9. Semi-annual inspection to insure conformance.
10. Same as Level I.

TOWERS AND LOOKOUTS

Level III

1. Concrete free of settlement or frost heaving.
2. Anchor bolts, splice, straps, steel members, no missing or broken elements.
3. Timber elements free of termites or insect infestation; no rot.
4. Guys and anchorage no broken or loose strands.
5. Paint coatings free of rust and corrosion.
6. No dirt, grease or deposits on ladders and access walks.
7. *All lamps operational.*
8. Decking free of protruding fasteners, worn and rotten members.
9. Annual inspection to insure conformance.
10. Same as Level I.

AMPHITHEATERS AND CAMPFIRE CIRCLES

Level I

1. Benches clean; free of cracks, breaks, splintering, loose bolts. Wooden parts on ground, free of dampness, termites and other insects.
2. Metal features no rusting nor corrosion.
3. Painted surface no blistering, checking, cracking, scaling and flaking.
4. Aisles and walks clear of debris; surface smooth.
5. Campfire circle clear of ashes and debris, masonry units free of cracks.
6. Screen and AV equipment serviced by technicians to insure peak performance. See Fixed Audiovisual Installation section.
7. Lighting system and fixtures in operating condition.
8. Daily inspection to insure conformance.

AMPHITHEATERS AND CAMPFIRE CIRCLES

Level II

1. Benches clean, free of breaks and splintering; no loose bolts, termites and insect infestations.
2. Metal features no rusting nor corrosion.
3. Painted surfaces free of checking and cracking.
4. Aisles and walk clear of debris.
5. Campfire circles clear of ashes; masonry units free of cracks.
6. Screen and AV equipment serviced by technicians to insure peak performance. See Fixed Audiovisual Installation section.
7. Lighting system and fixtures in operating condition.
8. Semi-weekly inspection to insure conformance.

AMPHITHEATERS AND CAMPFIRE CIRCLES

Level III

1. Benches clean, free of breaks, loose bolts, termites and insect infestations.
2. Metal features no rusting nor corrosion.
3. Aisles and walk clear of debris.
4. Campfire circles clear of ashes.
5. Screen and AV equipment serviced by technicians to insure peak performance.
6. Lighting system and fixtures in operating condition. See Fixed Audiovisual Installation section.
7. Weekly inspection to insure conformance.

PIERS, WHARVES, BULKHEADS,
ETC.

Level I

1. Wood stringers, piles, bracing, decking free of lose, missing, cracked, broken, splintering, decay, termite and other pest infestation, rotted bolt holes, worn members; reduction of cross section by deterioration not to exceed 15%.
2. Drains, free of loose, missing, or broken fasteners, debris. Covers and grating no rust, corrosion, bent and worn pins.
3. Steel members free of rust, corrosion, cracks, bends, loose plates and defective connections. Repaint when 15% or more of area is corroded.
4. Concrete free of breaking, cracks, spalling, exposed reinforcing.
5. Protective coatings free of rust, corrosion, peeling and flaking.
6. Area clear of combustibles, debris, and drift materials.
7. Quarterly inspection to insure conformance.

PIERS, WHARVES, BULKHEADS,
ETC.

Level II

1. Wood members free of termites and other pest infestations, rotten and worn elements; reduction of cross section by deterioration not to exceed 25%.
2. Drains free of debris and missing or broken fasteners. Covers and grating no rust and corrosion.
3. Steel members no rust or corrosion, free of defective connections. Repaint when 25% or more of area is corroded.
4. Concrete free of breaks and exposed reinforcing.
5. Protective coatings free of rust corrosion, and peeling.
6. Area clear of debris.
7. Semi-annual inspection to insure conformance.

PIERS, WHARVES, BULKHEADS, ETC.

Level III

1. Wood members free of termites and other pest infestations, rotten and worn elements; reduction of cross section by deterioration not to exceed 30%.
2. Drains free of debris. Covers and grating no rust and corrosion.
3. Steel members no rust or corrosion. Repaint when 50% or more of area is corroded.
4. Concrete free of breaks and exposed reinforcing.
5. Protective coatings free of rust and corrosion.
6. Area clear of debris.
7. Annual inspection to insure conformance.

DOCKS – FIXED AND FLOATING

Level I

1. Clear of drifts, logs, stumps, brush and debris.
2. Bents, handrails, stringers, and railing free of loose, warped, or broken members. Fastenings, bolts, rivets tight and free of vibration. All wood elements free of decay, termites and insect infestations.
3. Piles secure, sound, and free of insect infestations.
4. Decking no ponding water; no cracked decaying or broken elements, and excessive wear.
5. Drains, water outlets, gates, downspouts clear of debris and obstructions. Securely fastened.
6. Concrete member free from cracks, spalling; no exposed reinforcing.
7. Lights and navigation aids clean and operational.
8. Steel members free from rust and corrosion; pittings, cracking, and peeling coatings.
9. All flotation units completely watertight, structurally sound, free of rust or corrosion, and rigidly secured to dock.
10. Semi-annual inspection to insure conformance.

DOCKS – FIXED AND FLOATING

Level II

1. Clear of drifts, brush and debris.
2. Bents, handrails, stringers, and railing free of loose, or broken members. Fastenings, bolts, rivets tight. All wood elements free of termites and insect infestations, no decay.
3. Piles sound and free of insect infestations.
4. Decking no ponding water; no cracked or broken elements.
5. Drains, water outlets, gates, downspouts clear of debris and obstructions. Securely fastened.
6. Concrete member; no exposed reinforcing or cracks.
7. Lights and navigation aids clean and operational.
8. Steel members free from rust and corrosion; peeling coatings.
9. All flotation units completely watertight, structurally sound, free of rust or corrosion, and rigidly secured to dock.
10. Annual inspection to insure conformance.

DOCKS – FIXED AND FLOATING

Level III

1. Clear of drifts, brush and debris.
2. Bents, handrails, stringers, and railing free of lose or broken members. Fastenings, bolts, rivets tight. All wood elements free of termites and insect infestations.
3. Piles sound and free of insect infestations.
4. Decking no ponding water; no cracked or broken elements.
5. Drains, water outlets, gates, downspouts clear of debris and obstructions. Securely fastened.
6. Concrete member; no exposed reinforcing.
7. Lights and navigation aids clean and operational.
8. Steel members free from rust and corrosion.
9. All flotation units completely watertight, structurally sound, free of rust or corrosion, and rigidly secured to dock.
10. Annual inspection to insure conformance.

MARINE RAILWAYS

Level I

1. Cradle superstructure and substructure clean; paint free of rust and corrosion.
2. Blocking system, wood cradle, dock and walkways and platforms, free of excessive wear, rot and termite infestation, cracked and broken members, loose bolts and connections.
3. Motors, controls, hoists, chain and sheaves free of rusted and corroded elements, missing or loose bolts, improper sequence, roughness, deficiencies of speed.
4. Chain troughs, rails and roller plates, free of rust and corrosion, loose members.
5. Semi-annual inspection to insure conformance.

MARINE RAILWAYS

Level II

1. Cradle superstructure and substructure clean; paint free of rust and corrosion.
2. Blocking system, wood cradle, dock and walkways and platforms, free of excessive wear, rot and termite infestation, cracked and broken members, loose bolts and connections.
3. Motors, controls, hoists, chain and sheaves free of rusted and corroded elements, missing or loose bolts, improper sequence, roughness, deficiencies of speed.
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MARINE RAILWAYS

Level III

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3. Motors, controls, hoists, chain, sheaves free of rusted and corroded elements, missing or loose bolts, improper sequence, roughness, deficiencies of speed.
4. Chain troughs, rails and roller plates, free of rust and corrosion, loose members.
5. Semi-annual inspection to insure conformance.

FLAGPOLES

Level I

1. Surface coatings free from pitting, chipping, peeling, stains and discoloration.
2. Pulleys and blocks secure and free.
3. Halyard free of worn and frayed strands.
4. No settlement, cracking and spalling of concrete foundations and base support.
5. Ornamental fixtures secure, clean and free of breaks, cracks, stains and discoloration.
6. Semi-annual inspection to insure conformance.

FLAGPOLES

Level II

1. Surface coatings free from stains and discoloration, no peeling.
2. Pulleys and blocks secure and free.
3. Halyard free of worn and frayed strands.
4. No settlement or cracking of concrete foundations and base support.
5. Ornamental fixtures secure, clean of stains and discoloration.
6. Annual inspection to insure conformance.

FLAGPOLES

Level III

1. Surface coatings free from peeling, stains and discoloration.
2. Pulleys and blocks secure.
3. Ornamental fixtures secure.
4. Annual inspection to insure conformance.

DAMS

Level I

1. Earth surfaces free of holes, cracks, leaks, vines and trees. Mowed to 8-10 inch height. No burrowing animals.
2. Concrete and masonry elements free of open cracks, spalling and breaks.
3. Spillways, drainage, channel inlets and outlets free of debris, deposits and obstructions, gulleys and bank erosion.
4. Water surface free of debris, floating logs, stumps or undergrowth.
5. Valves and gates operational.
6. Rip rapping in place.
7. Monthly inspection to insure conformance.

DAMS

Level II

1. Earth surfaces free of leaks, vines and trees. Mowed twice a growing season. No burrowing animals.
2. Concrete free of leaks.
3. Spillways, drainage, channel inlets and outlets free of obstructions and debris, bank erosion.
4. Valves and gates operational.
5. Rip rapping in place.
6. Semi-annual inspection to insure conformance.

DAMS

Level III

1. Earth surfaces free of leaks, vines and trees.
2. Concrete free of leaks.
3. Spillways, drainage, channel inlets and outlets free of obstructions and debris.
4. Valves and gates operational.
5. Rip rapping in place.
6. Annual inspection to insure conformance.

