

DRY TORTUGAS NATIONAL PARK MONROE COUNTY, FLORIDA

PROJECT SOLICITATION NO. 140P54200028

PRESERVATION OF CIVIL WAR ERA STRUCTURES
AT FORT JEFFERSON

PMIS NO. DRTO TBD

PROJECT SPECIFICATIONS Construction Documents



NATIONAL PARK SERVICE
DENVER SERVICE CENTER
August 31, 2017

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SECTION 01 11 00 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work covered by the Contract Documents.
2. Work phases.
3. Work under other contracts.
4. Government Furnished Materials.
5. Contractor use of premises.
6. Public use of site.
7. Occupancy requirements for buildings.
8. Work Restrictions.
9. Special Construction Requirements.
10. Soils Investigation Report.
11. Additional Reports.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Location: The project is located at Fort Jefferson, Dry Tortugas National Park, Garden Key, in Monroe County, Florida. Garden Key is located in the Gulf of Mexico approximately 68 miles west of Key West. Garden Key is only accessible by boat or seaplane. The logistics of transporting personnel, supplies, materials and equipment to the Dry Tortugas and maintaining a productive construction site far from the mainland will require careful planning and coordination by the Contractor.

B. The Work consists of the following:

1. The Work of this project consists of preserving and stabilizing multiple historic resources at Fort Jefferson including; the Large Detached Magazine, the Small Detached Magazine, the Engineers' Quarters ruin, the Soldiers' Barracks ruin, the Officers' Quarters ruin, a bastion and curtain magazine and the Bakery. The work will focus on the repair, repointing and stabilization of historic masonry to prevent further deterioration and potential loss of historic fabric. Some restorative efforts at the Bastion and Curtain magazines are included in the scope of work to enhance their interpretive value.

Fort Jefferson is listed on the National Register of Historic Places (NR) and managed as a cultural resource asset. Historical significance extends to the entire site including all associated buildings, landscapes, engineering features and marine construction. This significance also extends to subterranean items including undiscovered or unexcavated archaeological resources. During construction care must be taken to protect all cultural and natural resources.

The site's historical and environmental significance must be considered when planning and executing construction means and methods. All proposed work and modifications to historic features shall be in accordance with the Secretary of the Interior's "Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings." Contractor shall proceed with care and attention to preservation concerns. Conservative and cautious approaches when working on or around this resource will be given precedence over radical and unproven methods. Repair and retention of existing historic fabric is a priority. If potential exists for irreversible damage or loss of fabric, Contractor will cease work and seek guidance and approval from Contracting Officer (CO) before resuming work. Actions deemed detrimental to the resource or actions that place the resource at risk of damage or loss to its historic integrity, regardless of cause, will not be undertaken without prior review and approval by the Contracting Officer.

2. Project is designed to comply with a Certification Level according to the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) Rating System, as specified in Division 01 Section "Sustainable Design Requirements."

C. Project may be constructed under multiple contracts.

1.3 WORK PHASES

A. The Work may be conducted in multiple phases.

1. Phasing will be determined based on the priorities and needs of the National Park Service.

1.4 CONTRACTOR USE OF SITE

A. General: Contractor shall have limited use of the site for construction operations during the construction period. Limit use of site to only those areas agreed to in advance with the CMR. Do not disturb portions of the project site beyond areas in which the Work is indicated.

1. Limits: Confine staging and operations to Contractor work area on the North Coaling Dock and other areas indicated on drawings or agreed to in advance with the Contracting Officer.
2. While the Contractor Work Area shown on the drawings will be closed to the public during construction, the sally port entrance to the fort needs to remain open to NPS personnel and the visiting public. If closure of the sally port is necessary for limited periods of time, the Contractor shall coordinate the details of this closure with the Contracting Officer. Use of the sally port will be restricted/limited by NPS from 10:30 am to 3:00 pm.
3. Contractor Mooring Area: Contractor Mooring Area shown on drawings will be available to Contractor vessels on a limited and temporary basis for loading and unloading of materials and equipment. The mooring area will not be available to the Contractor when the tour boat, NPS Ft. Jefferson or other official vessels (such as Coast Guard vessels) are scheduled to use the main dock. Contractor vessels using the mooring area will need to be relocated immediately following completion of their tasks. In order to provide temporary controls and limit public access to the area, the Contractor shall coordinate use of the

mooring location with the Contracting Office. Contractor shall provide a minimum of 48hrs notice of any Contractor vessel arriving at DRTO.

4. Limits on Number of Contractor Personnel: An environmental assessment for the project was performed resulting in a finding of no significant impact (FONSI). This FONSI was based on a limitation being placed on the number of Contractor personnel that can be housed at the site to perform the work of the project. The Contractor's crew (including subcontractor personnel) shall not exceed ten (10) individuals staying overnight on Garden Key and using water and sewage utilities during a 24-hour period.
5. Contractor Housing: There is one dormitory facility referred to as "The Crew's Quarters" with bunk beds (10 beds total) that the Contractor may use to accommodate its staff. The cost of these accommodations is \$30.00 per person/per night. If the Contractor proposes to use these dormitory facilities to accommodate its staff, the Contractor shall include in its technical proposal the number of beds by days that it intends to use. Further, during contract performance, the Contractor is responsible for tracking the number of beds used each month and making payment to Dry Tortugas National Park on a fixed payment schedule (every 3 months). The Contractor shall submit a report to the Government indicating the actual number of beds used by date with each payment. Facilities and supplies available in the Crew's Quarters includes two toilets, two showers, one lavatory, one satellite television, three refrigerator/freezers, one freezer, one ice-maker, one microwave, range/oven, two coffee makers, pots, pans and tableware. The Contractor agrees that its staff shall not damage these accommodations and shall use reasonable amounts of electricity, water, and waste disposal. This requirement for conservation of electricity, water and waste disposal is required due to the remote location of the site and the Park's schedule for waste and water management. No cleaning or other services are provided by the Government.
6. Provisions: The Contractor and or Contractor's personnel shall provide their own food/condiments/drinks/toiletries and any other personal items for the length of their stay. Recreation items desired such as fishing/snorkeling gear, beach accessories, or flashlights must likewise be brought to the site by the Contractor and/or its personnel.
7. Use of Contractor Housing:
 - a. All food and drink containers such as plastic (all types), glass, tin and aluminum is recycled. All recycled containers that have been brought to the island must be carried back to the mainland at the Contractor's expense. Contractor is responsible for all recyclable material.
 - b. Recyclable material and domestic waste must be removed from the island at regular intervals of no more than every three weeks.
 - c. All food must be removed upon departure.
 - d. Water shall be conserved by taking quick showers and consolidating dirty dishes to be washed only once a day.
 - e. Housing units must be thoroughly cleaned daily and upon departure.
 - f. Quiet hours are from 10:00 PM to 7:00 AM.
 - g. Contractor employees are restricted from using the NPS staff Recreation Room.
 - h. Contractor is restricted from using the Park's laundry facilities. The Contractor must arrange to have laundry processed off-site at Contractor's expense.
 - i. Contractor is restricted from using NPS boats without prior approval.

8. Construction Camp: Establishment of a camp within the park will not be permitted. The Contractor may propose to house its staff or subcontractors on boats in the harbor as long as the boats are self-contained and the contractor does not use the park's facilities to dispose of sewage/gray water. If the Contractor proposes to house staff or subcontractors on boats in the harbor, the Contractor shall be responsible for storing and hauling out of the park, and surrounding waterways, the sewage/gray water to an appropriate treatment facility. Contractor shall also be responsible for securing and maintaining any required Special Use Permits from NPS.
9. Telephone/Internet Communications Systems: There is no hard line on site for telephone/internet communications. Contractor shall be responsible for their own telephone and internet communications systems. Close coordination with Park personnel will be necessary to establish where equipment components can or cannot be located. Contractor shall receive approval from the Contracting Officer before installing any communications equipment.
10. Conduct:
 - a. All Park regulations must be followed. Park regulations can be found at the following website <http://www.nps.gov/drto/planyourvisit/upload/Park-Regs-updated-2010-2.pdf> and <http://www.nps.gov/drto/learn/management/compendiumregulations.htm>
 - b. Do not litter.
 - c. All natural, archaeological, and historical features and artifacts are protected. Do not take or collect anything without a permit.
 - d. Avoid interaction or interfering with protected, endangered species. Do not kill, harm or interact with any wildlife. Do not feed or approach any wildlife.
 - e. Do not enter posted closed areas.
 - f. Do not stand on any sea grass or coral.
 - g. Fishing is only allowed with a current Florida State saltwater fishing license.
 - h. Smoking will not be permitted inside the Fort walls.
11. Transportation to the Project Site:
 - a. The Contractor shall be responsible for all transportation of personnel.
 - b. The Contractor shall be responsible for procuring, shipping and handling all construction materials.

The Contractor shall be responsible for packaging, transporting and disposal of all construction debris and personal trash. Due to limited space on site, debris and trash shall be removed from the island at regular intervals throughout the contract period – See 1.5.A.7.c.
 - c. Only USCG-approved vessels shall be used for transport of equipment, material and personnel. Contractor shall provide written verification that vessels used in the completion of this contract are USCG-approved.
 - d. Commercial Modes of Travel: The following schedules may be affected by weather conditions and are subject to cancellation or change.
 - 1) Yankee Freedom III Ferry/Tour Boat Daily Schedule: Boat departs Key West at 8:00 AM with a 7:15 check in time. If any gear or provisions are being transported they must be loaded on the boat by 6:30 am (Gear/provisions

should not exceed 60lbs dry weight – Excess gear/provisions will be charged at a rate of \$0.75/lb). The amount of personal supplies/gear that can be carried on the vessel is limited. Equipment and supplies for construction should be transported via the National Park Service's tender, M/V Fort Jefferson. Transportation of supplies/equipment other than personal gear aboard the Yankee Freedom requires prior approval of the Captain and is subject to availability of space and freight charges. Ferry departs Fort Jefferson at 3:00 PM – check in at 2:45 PM. Approximately 2 ½ hours of travel time (each-way).

- a) As of October 1, 2013, the rate for Contractors is \$99.00 each way. Breakfast and lunch is included on outbound trips. Lunch can be purchased separately for \$7.00.
 - b) Contact Information: By phone at 305-294-7009 or 1-800-634-0939 or visit www.drytortugas.com.
- 2) Key West Seaplane Adventures Daily Schedule: Flight times are subject to availability. Flights leave Key West Airport at 8:00 AM, 10:00 AM, 12:00 PM and 2:00 PM. Flights leave the Fort at 11:00 AM, 1:00 PM, 3:00 PM and 5:00 PM. Approximately 45 min. flight time each way.
- a) As of December 25, 2013, Contractor rates for traveling on the seaplane are \$236 per person each way or the same price for a 4 hour round trip. A full day (8 hour round trip) will cost \$412 and a 10 hour day trip (first flight out, last flight back) will cost \$472.
 - b) Contact Key West Seaplane Adventures for weight limitations and lists of items that can and cannot be transported by air.
 - c) Contact Information: By phone: 1-305-293-9300, by email: info@keywestseaplanecharters.com
- e. National Park Service Crew Boat (Motor Vessel Fort Jefferson): The Government has a crew boat that may be available for the Contractor to arrange transportation for its construction personnel to the site rather than relying only on commercial modes of transportation. While the Contractor may make arrangements for its personnel to be transported to the construction site based on the Government crew boat's availability and schedule, the Government crew boat's schedule and availability is uncertain and subject to weather conditions and other operational requirements such as staff availability, boat repairs, etc. Since this alternative method of transportation might be available but is not being provided as Government-furnished property/services, the Contractor shall be responsible for determining what method to use to transport its personnel to the construction site. If the Contractor chooses to use the Government crew boat and the crew boat is unable to make a trip, the Contractor shall bear all responsibility and expense for transporting its crew to the site; and this shall not be recognized as a Government delay of work or be an acceptable reason for the Contractor to make a request for equitable adjustment or additional time under the contract. The Contractor shall be responsible for making arrangements for the Government crew boat with the park personnel.

Information and restrictions that apply to passengers on the Government crew boat include the following:

- 1) All food items must be placed in cardboard boxes or coolers labeled with the owner's name.
- 2) All other cargo must be labeled and easily identifiable as to the owner of the property.
- 3) Prior Park (and USCG) approval must be obtained in order to gain access to the docking facilities at the West Trumbo Point Naval Annex.
- 4) The trip is approximately 5-1/2 hours of travel time from Key West to Dry Tortugas. The Government crew boat typically departs at 9:00 am from Key West Trumbo Point Naval Annex every other Tuesday. Return trips to Key West are generally the following Thursday, departing at 7:00 am from Dry Tortugas. There would be no charge for use of the Government crew boat when used with the normal operational schedule and solely for the transportation of Contractor personnel, groceries and personal items. Scheduled trips are generally every other week. The Government crew boat is unavailable when the crew have scheduled leave, training, scheduled maintenance at a ship yard or have chartered trips supporting research. On an annual average basis, the Government crew boat will make approximately 18 resupply trips to Dry Tortugas.
- 5) Arrangements for use of the Government crew boat shall be made at least two weeks in advance of travel.
- 6) All Contractor personnel cargo must be loaded, secured and unloaded by the Contractor or its personnel. The Government is not responsible for lost or damaged goods.
- 7) The Contractor and Contractor's personnel or subcontractors' personnel must present proper identification at the naval base gate and be escorted to the boat. The Government will not be responsible for personnel unable to access the boat prior to departure.
- 8) Private vehicles may not be parked overnight on the base. A small parking area is located directly outside the main gate and can be used to park privately owned vehicles. The Government shall not be liable for vehicle damage or theft if the Contractor's or subcontractor's personnel park their vehicle at this site.
- 9) Entry to the naval base may be denied anytime the national security level is elevated to orange or red or the naval base determines the individual(s) may not enter.
- 10) The Contractor shall be responsible for completing liability waivers for each person traveling on the Government crew boat. These waivers must be presented to the captain prior to the Government crew boat getting underway.

12. Hurricane Plan: A copy of the most recent version of the Everglades/Dry Tortugas Hurricane Plan is attached to the solicitation and made a part hereof (See Appendix).
- B. Storage of Materials: Contractor shall work with Contracting Officer to identify areas appropriate for material storage at each of the project locations.
- C. Preservation of Natural Features:
1. Prevent damage to natural surroundings. Restore damaged areas, repairing or replacing damaged trees and plants, at no additional expense to the Government.
 2. Provide temporary barriers to protect existing trees and plants and root zones.
 3. Do not remove, injure, or destroy trees or other plants without prior approval. Consult with Contracting Officer and remove agreed-on roots and branches that interfere with construction.
 4. Do not fasten ropes, cables, or guys to existing trees.
 5. Carefully supervise excavating, grading, filling, and other construction operations near trees to prevent damage.
- D. Walkways, Pathways and Entrances: Keep walkways, pathways, and entrances serving premises clear and available to Government, Government's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
1. Schedule deliveries to minimize use of pathways and entrances during peak visitation times.
 2. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- E. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. Load restrictions on park roads are identical to the state load restrictions with such additional regulations as may be imposed by the Park Superintendent. Information regarding rules and regulations for vehicular traffic on park roads may be obtained from the Office of the Park Superintendent. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment.

1.5 PUBLIC USE OF SITE

- A. Contractor shall at all times conduct his operations to ensure the least inconvenience to the public. If necessary, counterscarp closures will be permitted before 10:00 am and after 3:00 pm, upon specific approval of Contracting Officer (See 1.4.A.2).

1.6 OCCUPANCY REQUIREMENTS FOR BUILDINGS

A. Existing Buildings

1. Full Government Occupancy: Government will occupy buildings that will be under construction during the entire contract period. Cooperate with Government during construction operations to minimize conflicts and facilitate Government usage. Perform the Work so as not to interfere with Government's day-to-day operations. Maintain existing exits, unless otherwise indicated.

- a. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the CO.
- b. Maintain existing building in a weather tight condition throughout construction period. Repair damage caused by construction operations. Protect building and its occupants during construction period.

1.7 CONDUCT OF OPERATIONS

- A. At all times the contractor shall conduct his operations in conformance with the rules and regulations promulgated by the Secretary of the Interior for the National Park Service, and applicable park rules and regulations prescribed by the Park Superintendent.
- B. Work on Saturdays, Sundays, Federal holidays or at night may not be performed without prior consent from the Contracting Officer. Submit requests no less than 48 in advance of the work to the Contracting Officer for approval.
- C. No signs or advertisements (except those specified herein) shall be displayed on the construction site or within the park unless approved by the Contracting Officer.

1.8 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed during normal business working hours of 7:00 a.m. to 6:00 p.m., seven days a week, except when otherwise indicated.
 - 1. Hours for noisy activity shall be limited to the period between 8:00 am and 5:00 pm.
- B. Existing Utilities
 - 1. Existing Utilities: Notify Contracting Officer and utility companies of proposed locations and times for excavation.
 - 2. Contractor shall be responsible for locating and preventing damage to known utilities. If damage occurs, repair utility at no additional expense to the Government.
 - 3. If damage occurs to an unknown utility, repair utility. An equitable adjustment will be made in accordance with the Changes clause of the contract.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Government or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Do not proceed with utility interruptions without Contracting Officer's written permission.
- D. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor air intakes. Smoking is not permitted within the Fort's walls.

1.9 SPECIAL CONSTRUCTION REQUIREMENTS

- A. Seasonal Shutdown: Due to the active tropical hurricane season Atlantic Ocean and Gulf of Mexico, a seasonal shutdown of the work in progress will be required from June 1st through November 1st. Contractor will be required to demobilize during this period. Any extensions or exceptions to this work restriction shall be approved by the Park Site Manager and Contracting Officer.

If project work spans multiple work seasons, temporary on-site storage may be available at the Park. Contractor shall work with the Contracting Officer and Park personnel to identify approved storage areas.

Contractors will be responsible for installing temporary barriers to make a solid enclosure to store their materials and equipment. Barriers must be solid walls painted to blend with the surrounding masonry and minimize their visual impact.

All walls/barriers must be constructed in a manner so that they do not cause damage to the historic fabric or permanently fasten to the existing masonry walls, ceilings or floors. Contractor must operate with care so as not to damage historic fabric during loading and unloading operations. Contractor will be responsible, at no cost to the Government, for repairing any damage to historic fabric in the storage area including the brick pathway leading to the storage area.

Contractor is solely responsible for all contents stored on site and the temporary barriers which shall be designed to withstand extreme weather events such as tropical storms and hurricanes. Barriers shall be maintained in good condition at all times.

- B. Project Website: A project website administered by the NPS will be used for purposes of managing communication and documents during the construction stage.
1. See Section 01 31 00 "Project Management and Coordination" for requirements on using the Project Website.

1.10 ADDITIONAL REPORTS

- A. Individual treatment reports, including some materials analysis data have been prepared.
- B. Copies of these reports are available to all plan holders with this package.
- C. If conflicts occur between the report and drawings or specifications, the drawings and specifications govern.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 11 00

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SECTION 01 26 01 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this section consists of administrative and procedural requirements for contract modifications.

1.2 DEFINITIONS AND ALLOWANCES

- A. Home Office Overhead: Those costs incurred in support of all of a contractor's projects and not attributable to a specific job. The cost for home office overhead is only allowed as a percentage of all direct work excluding profit. The following items represent allowable home office overhead costs identified in Part 31 of the Federal Acquisition Regulation (FAR):

1. Rent
2. Utilities
3. Furnishings
4. Office equipment
5. Executive and management staff not exclusively assigned to the project
6. Support, accounting, and administrative staff
7. Preparation of cost proposals, estimating, and schedule analyses connected with Modifications
8. Estimating and preconstruction services
9. Mortgage costs
10. Real estate and corporate taxes
11. Automobile maintenance and travel costs for home office personnel
12. Home office insurances i.e. structure, automotive, umbrella, flood, etc.
13. Depreciation of equipment and other assets
14. Home office supplies (paper, staples, etc.)
15. Legal services
16. Accounting and data processing
17. Professional fees/registration

- B. General Conditions (Field Office Overhead): Management and administrative costs incurred on site for the designated project. Costs associated with the preparation of modifications will not be allowed. The costs for these items are to be included only in the general conditions of the modification estimate. Only in the case of a contract time extension are additional general conditions included in modifications. The following items, if applicable, are considered allowable costs for calculating General Conditions:

1. Project Manager, Assistant Project Manager
2. Superintendent, Assistant Superintendent
3. Quality Control, Safety Officer, Environmental Manager, etc.
4. Engineers
5. Travel, lodging, and per diem (as established by Federal Travel Regulations)

6. Scheduling
7. Field Office Trailers and associated temporary utilities
8. Field office supplies
 - a. Mailing and couriers
 - b. Reproduction costs
 - c. Storage
 - d. Phones
 - e. Computers
 - f. Copiers
9. Personal vehicles i.e. Superintendent Pickup trucks

C. General Requirements: These are costs directly associated with the project and are necessary to perform the actual work of the modification. These costs shall be shown as direct costs in the estimate. The following items, if applicable, are considered allowable costs for calculating General Requirements:

1. Hoisting
2. Material handling
3. Temporary fencing
4. Port-a-lets
5. Trash removal, dumpsters
6. Barricades
7. Small tools
8. Safety supplies
9. Scaffolding
10. Daily cleaning
11. Traffic control
12. Temporary signage
13. Temporary heating and power

D. Personnel Costs: Costs included in the modification must only be for General Conditions staff and workers actually present and working on the project site. Modification costs for salaried workers are only allowed within the structure of a 40 hour week and no overtime or holiday pay will be allowed.

1. Worker Hourly Rates are costs directly associated with the individual worker and consist of the following:
 - a. Base Rate: This is the hourly rate paid directly to the worker
 - b. Labor Burden: Employer payments of all applicable burdens, this includes insurance and taxes that the business must pay on behalf of the worker to government entities and educational forums , such as:
 - 1) Social Security
 - 2) Medicare
 - 3) Workers Compensation– Policy and company calculation to be made available.
 - 4) FUTA– Cap Rate and percentage to be proportionally allocated over one year.
 - 5) SUTA– Cap Rate and percentage to be proportionally allocated over one year.

- 6) Union agreement costs – Other costs required under an enforceable collective bargaining agreement.
- c. Fringe Benefits: Various non-wage compensations provided to employees such as:
 - 1) Health Care Insurance Premiums
 - 2) Cell Phone
 - 3) Clothing
 - 4) 401K and Pensions
 - 5) Vehicle allowances
 - 6) Gas allowance
 - 7) Life insurance premiums
 - 8) Disability insurance
 - 9) Other Fringe Benefits required under an enforceable collective bargaining agreement
- E. Bonuses or Deferred Compensation: No Bonus or Deferred Compensation will be allowed within any components of pricing including Home Office Overhead, General Conditions, General Requirements, Hourly Worker Rates, or the direct costs of work.
- F. General Liability Insurance: An insurance policy that protects the contractor from claims resulting from bodily injury or property damage to a third party. Include this as a separate line item within all modification proposals and provide a current insurance quote upon request.
- G. Performance and Payment Bonds: A performance bond is a surety bond issued by an insurance company or bank to guarantee satisfactory completion of a project. The Payment Bond guarantees that the contractor will pay the labor and material costs they have incurred. Banks and Insurance companies charge a premium for each individual project based on a sliding scale which relates to the size of the project. Include this as a separate line item in modification proposals and provide current company bonding rates upon request.
- H. Builder's Risk Insurance: This covers the contractor's loss due to fire, high winds, or other natural forces. This is not reimbursed by the National Park Service (NPS) and shall not be included in modification proposals.

1.3 MODIFICATION PROPOSAL PRICING REQUIREMENTS

A. General:

- 1. Your proposal must be received in the format and within the time frame specified in the Request for Proposal letter. Costs or delays resulting from failure of contractor to submit within the time frame specified will not be compensable.
- 2. The proposal must be detailed with itemized lists of equipment, materials, labor, production rates, overhead, profit, and bond markup for each item. Labor costs must be itemized by craft and hourly rate, including Fringe Benefits and Labor Burden. If the costs of Fringe Benefits and Labor Burden are not itemized, it is assumed that they are included in the hourly rate shown, or contractor is not requesting reimbursement. Contractor may utilize the government provided [Contractor Estimate Form](#), or their

own form, provided that it contains the same information and level of detail as the Gov't provided form.

3. Requests for extensions of contract time as a result of this change must be justified with a Time Impact Analysis (TIA). Refer to Division 01 Specification, "Construction Schedule", for time impact analysis requirements. TIA and associated costs must be received with the proposal by the date shown within the Request for Proposal letter. Contractor's failure to submit within the specified time frame will be construed as the Contractor waiving the right for additional time and no time extension will be allowed.
4. All supporting documentation used to justify the proposed modification will be made available to the Contracting Officer upon request.
5. Contractor must review and approve all subcontractor/supplier pricing in detail for proper format, scope, production rates, and pricing prior to submission to the NPS. All delay costs associated with not reviewing and approving subcontractor/supplier pricing will be borne by the Contractor.
6. All pricing and production rates within the estimate must be based on fair and reasonable pricing and cannot include built-in contingency.

B. Labor:

1. Contractor shall estimate the cost of labor by itemizing each craft involved, indicating worker hourly rate (base rate + labor burden + fringe benefits) for each and itemizing the hours required for each craft that will be directly engaged in modification work. Any work proposed that will require overtime work or premium pay shall be itemized separately. All rates shall be in accordance with the Davis-Bacon Act as incorporated herein. Labor Burden may include payroll taxes, Social Security, unemployment insurances, workers compensation insurance, FICA, FUTA, and other direct costs resulting from Federal, State or local laws.
2. Itemize labor costs for equipment operators separate from equipment costs.
3. The labor cost for foremen shall only be costs for related work required for the modification.

C. Materials:

1. The estimated cost for materials shall include quotes from multiple sources. Material prices must include all applicable fees and credits, including but not limited to, sales tax, freight and delivery charges, and tax rebates.
2. No markup shall be applied to any material provided by the NPS.

D. Equipment:

1. Equipment used for the project must be appropriately sized for the work being performed.
2. Do not include costs for "miscellaneous tools and equipment", in your proposal for a replacement value of \$500 or less. Costs shown in excess of \$500 must be broken out separately.
3. Regardless of ownership, the rates to be used in determining equipment rental costs shall be the lowest cost from one of the following sources:
 - a. U.S. Army Corps of Engineers , Ownership and Operating Expense Schedule (use latest edition and applicable region)
 - b. Construction Blue Book

- c. Local equipment rental rates, documented by actual invoice charges, or itemized vendor quotes.
4. The estimated equipment rates shall include the operating costs of all fuel, oil, lubrication, supplies, small tools, necessary attachments, ground engaging components, tires & tracks, routine repairs and maintenance (cost of major repair and overhaul is not allowed per FAR 31.105(d)(2)), depreciation, storage, insurance, and all incidentals. Mobilization, if applicable, may be included for equipment solely used on the modification work but must be listed separately.
5. Estimate the full rate for equipment only for the duration that the equipment will be utilized to accomplish the work of the modification.
6. Standby unit rates used are to be in accordance with paragraph 1.3, D, 2, above. If the US Army Corp of Engineers is utilized then their standby rates prevail. If Bluebook or local equipment pricing is accepted, then ½ of the equipment costs minus any operating costs, major repair and overhaul will be accepted.
7. If equipment is in standby mode due solely to a documented NPS delay, the established standby rate shall apply from the first day of the delay.
8. Equipment that is not used and on the jobsite for up to five consecutive days may be classified at standby rates, provided that the equipment is or has been used solely to perform work on the modification and will be necessary to complete additional modification work. Equipment that is still on the jobsite but not in use after five consecutive days will not be considered in the modification pricing.
9. Requests for compensation for equipment stand by time must be justified, documented and itemized separately.
10. The estimated timeframe (daily, weekly, monthly) for use of the equipment must reflect the lowest cost to the Government.

E. Establishment and Application of Overhead and Profit Percentages:

1. Home Office Overhead and Profit (OH&P) shall be applied to direct costs only. Profit shall not be applied to overhead amounts; and overhead shall not be applied to profit. Home office overhead shall contain only allowable, allocable, and reasonable costs per the contract documents and FAR Part 31. Profit percentages are based on risk factors found in FAR Part 31 which have been applied to the specific type of work included in this project. Negotiated rates shall not exceed the following percentages for OH&P for contractor self-performed work:
Overhead.....10%
Profit.....5.5%
2. Total aggregate limit of markup (OH&P) for contractor and subcontractors on modification work shall not exceed 25%. The NPS will not be responsible for allocation of percentages between contractor and subcontractors at any tier.
3. If contractors form a partnership, than the partnership may only receive home office overhead and profit in the same amount as an individual contractor (refer to par 1.3,E,1 above). It is the responsibility of the partners to decide on the division of revenue.
4. Combined Increases and Decreases: On proposals involving both increases and decreases in the Contract Price, the overhead and profit mark-ups are required on the net increases and deducted on net decreases.
5. At no time can profit be calculated on Overhead or itself, it must be calculated on direct costs of work only.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 012601

SECTION 01 27 00 – DEFINITION OF CONTRACT LINE ITEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. The intent of this section is to explain, in general, what is and what is not included in a contract line item, and the limits or cut-off points where one item ends and another begins.
- B. If no contract line item exists for a portion of the work, include the costs in a related item.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 LIST OF CONTRACT LINE ITEMS

- A. Contract Line Item No. 0001 Officers' Quarters and Kitchens Ruins Repairs.
 - 1. This item consists of stabilizing and repairing the Officers' Quarters and kitchens ruins.
 - 2. Measurement for payment will be per lump sum.
 - 3. Payment will be made at the contract lump sum price.
- B. Contract Line Item No. 002 Soldiers' Barracks Repairs.
 - 1. This item consists of stabilizing and repairing Soldiers' Barracks ruin.
 - 2. Measurement for payment will be per lump sum.
 - 3. Payment will be made at the contract lump sum price.
- C. Contract Line Item No. 0003 Engineers' Quarters Repairs.
 - 1. This item consists of stabilizing and repairing the Engineers' Quarters ruin.
 - 2. Measurement for payment will be per lump sum.
 - 3. Payment will be made at the contract lump sum price.
- D. Contract Line Item No. 0004 Large Detached Magazine Repairs.
 - 1. This item consists of stabilizing and repairing the Large Powder Magazine ruin.
 - 2. Measurement for payment will be per lump sum.
 - 3. Payment will be made at the contract lump sum price.
- E. Contract Line Item No. 0005 Small Detached Magazine Repairs.
 - 1. This item consists of stabilizing and repairing the Small Powder Magazine ruin.
 - 2. Measurement for payment will be per lump sum.
 - 3. Payment will be made at the contract lump sum price.

F. Contract Line Item No. 0006 Bakery Repairs.

1. This item consists of stabilizing and repairing the Bakery.
2. Measurement for payment will be per lump sum.
3. Payment will be made at the contract lump sum price.

G. Contract Line Item No. 0007 Front 4 Curtain Magazine Repairs.

1. This item consists of stabilizing and repairing the Front Four Curtain Magazine.
2. Measurement for payment will be per lump sum.
3. Payment will be made at the contract lump sum price.

H. Contract Line Item No. 0008 Bastion 6 Powder Magazine Repairs.

- a. This item consists of stabilizing and repairing the Bastion 6 Powder Magazine.
- b. Measurement for payment will be per lump sum.
- c. Payment will be made at the contract lump sum price.

END OF SECTION 01 27 00

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Definitions
 - 2. Construction Coordination.
 - 3. Submittals
 - 4. Coordination Drawings.
 - 5. Requests for Information (RFIs).
 - 6. NPS/DSC SharePoint Project Website.
 - 7. Project meetings.
 - 8. Environmental Coordination.
 - 9. Permits
- B. Related Requirements:
 - 1. Section 01 32 16 "Construction Schedule" for preparing and submitting Contractor's construction schedule.
 - 2. Section 01 73 40 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 3. Section 01 77 00 "Closeout Procedures" for coordinating closeout of the Contract.
 - 4. Section 01 91 14 "Total Building Commissioning" for coordinating the work with Owner's Commissioning Authority.

1.2 DEFINITIONS

- A. Authority Having Jurisdiction (AHJ): An AHJ is an agency that has been granted legal authority over a location, action or resource. This authority includes the ability to issue a permit or other legal permission document.
- B. Construction Permits: Are those permits obtained by the contractor based on means and methods used to execute the work. Construction Permits are issued to the Contractor and not to the National Park Service (NPS).
- C. Government Furnished Permits: Are those permits that are obtained by NPS during the design process and provided to the Contractor for compliance with the provisions through construction. These permits may address impacts to natural resources, construction stormwater, etc.

1.3 CONSTRUCTION COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate

construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 2. Coordinate installation of different components with other Contractors to ensure maximum accessibility for required maintenance, service, and repair.
 3. Make adequate provisions to accommodate items scheduled for later installation.
 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
 5. Properly plan construction operations to include permit requirements. Allow enough time to execute permit provisions to maintain work schedule, site visits, inspections, and reporting deadlines.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
1. Preparation of Contractor's Construction Schedule.
 2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Permit requirements.
 7. Pre-installation conferences.
 8. Project closeout activities.

1.4 SUBMITTALS

- A. Division 01 documents: The following items shall be submitted a minimum of one week prior to the Preconstruction Conference. Contracting Officer will notify Contractor of tentative date for the Pre-Construction Conference.
1. Letter designating Project Superintendent.
 2. Construction Schedule.
 3. A comprehensive breakdown of the Schedule of Values.
 4. Accident Prevention Plan.
 5. A list of Subcontractors for this project.
 6. Written statements from subcontractors certifying compliance with applicable labor standard clauses.
 7. Satisfactory evidence of liability insurance coverage and workman's compensation for the Contractor and all subcontractors.
 8. Waste Management Plan.

9. Quality Control Plan.
10. Temporary Storm Water Pollution Prevention Plan (SWPP or UPPP).
11. Historic Preservation Treatment Plan.
12. List of Required Construction Permits. Include the following information for each permit:
 - a. Name of Permit.
 - b. The Agency(ies) with Jurisdiction issuing the permit.
 - c. Information required from the Government to complete the permit application.
13. Emergency Contact Forms for any personnel that will stay overnight on Garden Key or within the Park boundary as part of this contract.

- B. All items listed must be provided to the Contracting Officer before the Pre-Construction Conference is held. If all of these documents have not been received one week prior to the scheduled Pre-Construction Conference date, the conference will be cancelled, Notice to Proceed will not be issued, and the Contracting Officer will consider other contractual remedies. Work shall not commence until written Notice to Proceed has been issued.

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI utilizing the form created on the NPS/DSC SharePoint Project website.
 1. CO will not respond to RFIs submitted by other entities controlled by Contractor.
 2. Coordinate and submit RFIs in a prompt manner to avoid delays in the work.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 1. RFI number, numbered sequentially.
 2. Date.
 3. RFI subject.
 4. Specification Section number and title and related paragraphs, as appropriate.
 5. Drawing number and detail references, as appropriate.
 6. Field dimensions and conditions, as appropriate.
 7. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 8. Contractor's signature.
 9. Requested date for response.
 10. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. RFI Form: Complete the RFI Form on the NPS/DSC SharePoint website as follows:
 1. Enter the general information at the top of the form.

2. Under the “Action” section at the bottom of the form, select “Question” then select “CMR” in the drop-down of the “Send to” box.
 3. Enter the details of the question and attach related documents.
 4. Select “Submit Form” at the bottom of the page.
- D. Contracting Officer’s Action: CO will review each RFI, determine action required, and respond. CO will determine the critical nature of each RFI and issue a response accordingly.
1. The following are not considered to be RFIs and will receive no action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. CO's action may include a request for additional information, in which case time for response will date from time of receipt of additional information.
 3. CO's action on RFIs may result in the need for a change to the Contract Time or the Contract Sum. All contract changes will be processed following the terms and conditions of the contract.

1.6 PROJECT WEB SITE

- A. Use the NPS/DSC SharePoint Project website for communication throughout the contract period. The NPS/DSC SharePoint Project website will be used for the following functions:
1. Project directory.
 2. Project correspondence.
 3. Meeting agendas and minutes.
 4. Contract modifications forms and logs.
 5. RFI form and processing.
 6. Task and issue management.
 7. Photo documentation.
 8. Baseline schedule, schedule updates and calendar management.
 9. Submittal form and processing.
 10. Payment coordination documentation.
 11. Drawing and specification document hosting, viewing, and updating.
 12. Online document collaboration.
 13. Reminder and tracking functions.
 14. Archiving functions.
 15. Notification of submittal and RFI statuses and current responsible party.
 16. Permits and addendums
- B. Some documents however are not suitable to be shared using the NPS/DSC SharePoint Project website. Documents containing Personal Identifying Information (PII) (i.e. certified payrolls) shall not be shared using the NPS/DSC SharePoint Project website and shall be coordinated with the SharePoint Project team as appropriate.

- C. Submit to the CO a list of all employees who will need access to the website. The users will receive an invitation to register from the Department of Interior (DOI). Once the user is registered on the DOI website, they will be given access to the NPS/DSC SharePoint Project website. For login procedures and other SharePoint information, refer to the Workflows website at http://www.nps.gov/dscw/precon_spproj.htm.
- D. All users will be required to have the following software packages:
 - 1. Internet Explorer version 7 or later.
 - 2. Adobe Acrobat Professional (Pro) version 9 or later

1.7 PROJECT MEETINGS

- A. Preconstruction Conference: Before start of construction, Contracting Officer will arrange an on-site meeting with Contractor. The meeting agenda will include the following as a minimum:
 - 1. Roles & Responsibilities/ Lines of Authority.
 - 2. Park rules and regulations.
 - 3. Jobsite Safety.
 - 4. Resolution of comments on required Division 01 documents.
 - 5. Coordination of Subcontractors.
 - 6. Labor law application.
 - 7. Modifications.
 - 8. Payments to Contractor.
 - 9. Payroll reports.
 - 10. Contract time.
 - 11. Liquidated damages.
 - 12. Contractor Performance Evaluation.
 - 13. Display of Hotline posters.
 - 14. Notice to proceed.
 - 15. Correspondence procedures.
 - 16. NPS/DSC SharePoint Project website.
 - 17. Acceptance/rejection of work.
 - 18. Progress meetings.
 - 19. Submittal procedures.
 - 20. NPS Final Accessibility Inspection.
 - 21. Environmental requirements.
 - 22. Permit requirements.
 - 23. As-constructed drawings/operation and maintenance (O&M) manuals.
 - 24. Saturday, Sunday, holiday and night work.
 - 25. Reference materials.
 - 26. Value engineering.
- B. Progress Meetings: The Contracting Officer will schedule weekly meetings with the Contractor.
 - 1. Attendees: In addition to Government Representatives, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.

2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. The meeting agenda will include the following:
 - a. Approval of minutes of previous meetings.
 - b. Submittal status.
 - c. Review of off-site fabrication and delivery schedules.
 - d. Requests for information (RFI) and other issues.
 - e. Modifications.
 - f. Work in progress and projected.
 - 1) Status of required inspections (Special Inspections, Accessibility, etc.)
 - g. Inspections of work in progress and projected (Special inspections,
 - h. Construction Schedule update (provide updated CPM).
 - i. Status of Project Record Drawings and O&M manuals.
 - j. Other business relating to work.
 - k. Permit requirements.
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise CO of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Review of mockups.
 - i. Possible conflicts.
 - j. Compatibility requirements.
 - k. Time schedules.
 - l. Weather limitations.
 - m. Manufacturer's written instructions.
 - n. Warranty requirements.
 - o. Compatibility of materials.
 - p. Acceptability of substrates.
 - q. Temporary facilities and controls.
 - r. Space and access limitations.
 - s. Regulations of agency(ies) with jurisdiction.
 - t. Testing and inspecting requirements.
 - u. Installation procedures.
 - v. Coordination with other work.
 - w. Required performance results.
 - x. Protection of adjacent work.

- y. Protection of construction and personnel.
- 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
- 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
- 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

1.8 ENVIRONMENTAL COORDINATION

- A. Contractor's Environmental Manager: Designate an on-site party responsible for overseeing the Contractor's conformance to environmental goals for the project and implementing procedures for environmental protection.
 - 1. Qualifications: Minimum 3 years Construction experience on projects of similar size and scope; with environmental procedures similar to those of this project; must be familiar with environmental regulations applicable to construction operations.
 - 2. Responsibilities: Responsibilities shall include:
 - a. Compliance with applicable Federal, State, and local environmental regulations, including maintaining required documentation.
 - b. Implementation of the Waste Management Plan(WMP).
 - c. Implementation of the Storm Water Pollution Prevention Plan(SWPPP).
 - d. Present an overview of environmental issues and summarize site specific procedures relating to management plans at the Preconstruction conference.
 - e. Training for Contractor personnel in accordance with their position requirements.
 - f. Monitoring and documentation of environmental procedures.
- B. Perform project quality control in accordance with requirements specified in Related Sections, including:
 - 1. Quality Requirements.
 - 2. Regulatory Requirements.
 - 3. Noise & Acoustics Management.
 - 4. Temporary Storm Water Pollution Prevention Environmental Management.
 - 5. Construction Waste Management.
- C. Contractor's Environmental Training Program: Contractor shall provide environmental training for workers performing work on the project site. Training shall include the following:
 - 1. Overview of environmental issues related to the building industry.
 - 2. Overview of environmental issues related to the Project.
 - 3. Review of site specific procedures and management plans:
 - a. Construction Waste Management.
 - b. Noise & Acoustics Management.
 - c. Temporary Storm Water Pollution Prevention.

4. Pollution Prevention (P2) practices: Submit evidence of P2 training.
 5. Compliance with environmental regulations: As specified in Regulatory Requirements. Submit Contractor 40 CFR employee training records upon request of Contracting Officer.
- D. Provide documentation for environmental procedures as specified herein and in accordance with approved Waste Management Plan, and Storm Water Pollution Prevention Plan.

1.9 PERMITS

- A. General:
1. Permits and Responsibilities: The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the work.
 2. For the purpose of this contract the Contractor will not be considered an agent of the Government. Therefore the Contractor will comply with the appropriate Federal, State and local laws.
- B. Government Furnished Permits: During the development of the project's design the permits listed below were negotiated and agreed to by the Government. The terms and provisions of these permits shall be adhered to for the duration specified in each permit.
1. A permit was acquired for **<Insert type>** with identification number **<Insert ID Number>**. The Agency(ies) with Jurisdiction for this permit is **<Insert Agency(ies) with Jurisdiction >**.
- C. Potential Permits: The permits listed below were identified during the design process as likely to be required based on typical means and methods of construction. The list is provided to assist the contractor in determining which permits will be required for the contract's chosen means and methods. The list shall not be considered complete, as it is the responsibility of the contractor to determine means and methods, and obtain the required permits. It is the responsibility of the Contractor to obtain all permits required to legally conduct the work.
- D. Coordination with Agency(ies) with Jurisdiction Issuing Permits
1. Coordination: Contact the Agency(ies) with Jurisdiction as needed and sufficiently in advance to avoid delaying the work: Coordinate meetings, reporting requirements, inspections, or any other requirements.
- E. Administrative Procedures:
1. Coordinate scheduling and timing of required administrative provisions of project permits with Agency(ies) with Jurisdiction, Construction Manager, and Park to avoid conflicts and to ensure orderly execution of the Work.

2. Supply all needed information to Agency(ies) with Jurisdiction issuing permits, pay any fees required and provide all material needed to comply with the permit's conditions and provisions.
3. Upload permits to the NPS/DSC SharePoint project website when the permits are obtained.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

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SECTION 01 32 16 – CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section consists of Construction Schedule requirements including but not limited to the following:
 - 1. Schedule of Values
 - 2. Construction Schedule Requirements.
 - 3. Construction Schedule Updates.
 - 4. Time Impact Analysis.
- B. Purpose: The purpose of the Construction Schedule is to ensure adequate planning, coordination, scheduling, and reporting during execution of the work by the Contractor. The Construction Schedule will assist the Contractor and Contracting Officer in monitoring the progress of the work, evaluating proposed changes, and processing the Contractor's monthly progress payment.

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by the Contracting Officer.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float: Float is not for the exclusive use or benefit of either the Government or the Contractor but is jointly owned.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.

- 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Resource Loading: The allocation of manpower and equipment necessary for the completion of an activity as scheduled.
- G. Fragnet: A partial or fragmentary network that breaks down activities into smaller activities for greater detail.

1.3 SUBMITTALS

- A. Electronic Copies: All schedules and reports submitted shall be posted on the NPS DSC SharePoint project website, provided in the native electronic file format. It is the intent of the Government to limit the number of printed reports to only those reports determined by the project team to be essential.
- B. Schedule of Values: After contract award and before the Pre-Construction conference submit a schedule of dollar values based on the Contract Price Schedule.
- C. Construction Baseline Schedule: After contract award and before the Pre-Construction conference, submit two paper copies of baseline schedule, large enough to show entire schedule for entire construction period.
- D. CPM Reports: Concurrent with CPM schedule, submit three paper copies of each of the following computer-generated reports. Format for each activity in reports shall contain activity number, activity description, resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
 - 1. Activity Report: List of all activities sorted by activity number and then early start date, or actual start date if known.
 - 2. Logic Report: List of predecessor and successor tasks for all activities, sorted in ascending order by activity number and then early start date, or actual start date if known.
 - 3. Total Float Report: List of all activities sorted in ascending order of total float.
- E. Construction Schedule Updates: On or before the 7th day preceding the progress payment request date, submit estimates of the percent completion of each schedule activity and necessary supporting data. Provide two paper copies.
- F. Construction Schedule Revisions and Time Impact Analysis: For each Construction Schedule revision submit two paper copies of a Time Impact Analysis. Each Time Impact Analysis shall include a Fragmentary Network (Fragnet), incorporated into the currently accepted Construction Schedule, demonstrating how the Contractor proposes to incorporate a modification, change, delay, or Contractor request.

1.4 QUALITY ASSURANCE

- A. The Contractor shall meet with the Contracting Officer on the day of the preconstruction conference to go over the following:

1. Review software limitations, content and format for reports.
2. Verify availability of qualified personnel needed to develop and update schedule.
3. Discuss constraints, including phasing, work stages, area separations, interim milestones and partial Government occupancy.
4. Review delivery dates for Government-furnished products.
5. Review schedule for work of separate Government contracts.
6. Review time required for review of submittals and re-submittals.
7. Review requirements for tests and inspections by independent testing and inspecting agencies.
8. Review time required for completion and startup procedures.
9. Review time required for obtaining and activating permits.
10. Review and finalize list of construction activities to be included in schedule.
11. Review baseline schedule comments, resolve issues and progress on incorporating them
12. Review procedures for updating schedule.
13. Discuss reporting requirements and establish a protocol for naming and transmitting electronic schedules.

- B. Contractor's Schedule Representative: Before or at the preconstruction conference, designate an authorized representative to be responsible for the preparation and maintenance of the Construction Schedule. A resume outlining the qualifications of the Scheduler shall be submitted to the Contracting Officer for acceptance. The Scheduler shall have prepared and maintained at least 5 previous schedules of similar size and complexity similar to this Contract, demonstrating proficiency in the use of scheduling software. The authorized representative will be responsible for preparing the Baseline Schedule, all required updates, revisions, Time Impact Analyses, and preparation of reports.

1.5 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate Contractors.
- B. Coordinate Construction Baseline Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. In developing the Construction Baseline Schedule, ensure that the Subcontractor's work at all tiers, as well as the prime Contractor's work, is included and coordinated.
 2. Secure time commitments for performing critical elements of the Work from parties involved.
 3. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 SCHEDULE OF VALUES

- A. Breakdown each lump-sum item into component work activities used in the schedule, for which progress payments may be requested. The work activities broken out within the schedule of values

shall be integrated into and made a logical part of the construction baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump-sum item. The Contracting Officer may request data to verify accuracy of dollar values. Include mobilization, general condition costs, overhead and profit in the total dollar value of unit price items and in the component work activities for each lump-sum item. Do not include mobilization, general condition costs, overhead or profit as a separate item.

- B. Do not break down unit price items. Use only the contract price for unit price items.
- C. The total cost of all items shall equal the contract price. The Schedule of Values will form the basis for progress payments.
- D. An acceptable Schedule of Values shall be agreed upon by the Contractor and Contracting Officer before the first progress payment is processed.

2.2 CONSTRUCTION SCHEDULE REQUIREMENTS

- A. Construction Baseline Schedule: Prepare Construction Baseline Schedule using a computerized, resource-loaded, time-scaled CPM network analysis diagram for the Work.
 - 1. Develop and finalize Construction Baseline Schedule so it can be accepted for use no later than 30 days after date established for the Notice of Award.
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of Governments acceptance of the schedule.
 - 2. Establish procedures for monitoring and updating Construction Baseline Schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
- B. Construction Baseline Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the preliminary CPM network diagram, prepare a skeleton network to identify probable critical paths.
 - 1. Activities: Indicate the estimated duration, sequence requirements, and relationship of each activity in relation to other activities.
 - 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 - 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 - 4. The Construction Baseline Schedule as developed shall show the sequence and interdependence of activities required for complete performance of the work. Ensure all work sequences are logical and the Construction Baseline Schedule shows a coordinated plan of the work.
 - 5. Resource loading of each activity shall include all personnel by labor category and equipment type and capacity proposed to complete the activity in the duration shown.

6. Consider seasonal weather conditions in planning and scheduling all work influenced by high and low ambient temperatures, wind, or precipitation to ensure completion of all work within the contract time.
7. Time Frame: Proposed duration assigned to each activity shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity.
 - a. An early finish date may be shown but the late finish date must be the same date as the last day of the contract period. An early completion schedule must contain the following:
 - 1) Insert an activity titled "Project Float" as a successor to the last activity in the early project completion schedule network.
 - 2) Add a milestone titled "Contract End Date" as a successor to the activity "Project Float".
 - 3) Add duration to the activity "Project Float" as required so the milestone "Contract End Date" equals the last day of the Contract Period.
 - b. Contract completion date shall not be changed by submission of a schedule that shows an early completion date.
 - c. The Contractor shall limit use of lead or lag duration's between schedule activities.
 - d. Project Calendars: Develop and incorporate the following calendars:
 - 1) Administrative Calendar: Include a calendar that is based on a 7 day week to be used on any activities that are based on calendar days. Apply this calendar to administrative tasks or any other tasks that are not affected by non-working days (Federal Holidays, weather, etc.).
 - 2) Project Calendar: Include a calendar that is based on the planned work week for the project. Include Federal Holidays, weekends, and any other non-work days indicated in the contract documents. Apply this calendar to activities which are not anticipated to be affected by weather.
 - 3) Weather Calendar: Utilize the Project Calendar and show anticipated normal downtime related to weather as non-working time. Weather days shall be based on data for the local area from a reliable source like the National Oceanic and Atmospheric Administration (NOAA), National Park Service records, or source acceptable to the Contracting Officer. Apply this calendar to activities that are anticipated to be affected by weather.
 - e. Activity Duration: Define activities so no activity is longer than 15 days, except for non-construction activities including mobilization, shop drawings and submittals, fabrication and delivery of materials and equipment.
 - f. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 calendar days, as separate activities in the schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 - 1) Required replacement brick
 - g. Submittal Review Time: Include review and re-submittal times indicated. Coordinate submittal review times in Construction Baseline Schedule.

- h. Substantial Completion: Allow time for Government administrative procedures necessary for certification of Substantial Completion. (For more information, refer to Division 01 Specification 01 77 00 Closeout Procedures.)
- 8. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule, and show how the sequence of the Work is affected.
 - a. Phasing: Arrange list of activities on schedule by phase.
 - b. Work under More Than One Contract: Include a separate activity for each contract.
 - c. Work Restrictions: Show the effect of the following items on the schedule:
 - 1) Coordination with existing construction.
 - 2) Limitations of continued occupancies.
 - 3) Uninterruptible services.
 - 4) Partial occupancy before Substantial Completion.
 - 5) Use of premises restrictions.
 - 6) Provisions for future construction.
 - 7) Seasonal variations.
 - 8) Environmental control.
 - 9) Permit provisions.
 - d. Work Stages: Indicate important stages of construction for each major portion of the Work.
 - 1) Subcontract awards.
 - 2) Submittals.
 - 3) Purchases.
 - 4) Mockups.
 - 5) Fabrication.
 - 6) Sample testing.
 - 7) Deliveries.
 - 8) Installation.
 - 9) Tests and inspections.
 - 10) Adjusting.
 - 11) Curing.
- 9. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion and Final Completion.

C. Joint Review, Revision, and Acceptance:

- 1. Within seven calendar days of receipt of the Contractor's proposed Construction Baseline Schedule, the Contracting Officer and Contractor shall meet for joint review, correction, or adjustment of the initial Construction Baseline Schedule. Any areas which, in the opinion of the Contracting Officer, conflict with timely completion of the project shall be subject to revision by the Contractor.
- 2. Within seven calendar days after the joint review between the Contractor and Contracting Officer, the Contractor shall revise and resubmit the Construction Baseline Schedule in accordance with agreements reached during the joint review.

3. In the event the Contractor fails to define any element of work, activity, or logic, and the Contracting Officer review does not detect this omission or error, such omission or error, when discovered by the Contractor or Contracting Officer, shall be corrected by the Contractor within seven calendar days and shall not affect the contract period.
 4. Upon acceptance of the Construction Baseline Schedule by the Contracting Officer, save the schedule as a baseline and update on a monthly basis. The construction schedule update will be used to evaluate the Contractor's monthly applications for payment based upon information developed at the monthly Construction Schedule update meeting.
- D. Recovery Schedule: When periodic schedule update indicates the Work is 14 or more calendar days behind the current accepted schedule, a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule must also be submitted. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.
- E. Computer Software: Prepare schedules using a program that has been developed specifically to manage construction schedules.
1. Use Microsoft Project or approved equal.
 2. The Contractor shall provide to the Contracting Officer a licensed copy of the software used to create the Construction Baseline Schedule and a software reference manual. The software and reference manual will be returned to the Contractor at completion of the Contract.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE UPDATES

- A. Progress Meeting Updates: Provide a 2 week look-ahead schedule, derived from the currently accepted schedule, before each weekly progress meeting. Utilize the look-ahead schedule to facilitate and take notes on discussions held during the progress meeting.
- B. Monthly Schedule Updates:
1. General: Update the Construction Schedule on a monthly basis to reflect actual construction progress and activities throughout the entire contract period and until project substantial completion. The status date of each schedule update shall be the 7th day preceding the progress payment request date.
 2. Procedure: The Contractor shall meet with the Contracting Officer each month at a Construction Schedule update meeting to review actual progress made through the status date of the Construction Schedule update, including dates activities were started and/or completed and the percentage of work completed on each activity started and/or completed.
 3. Reports: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 - a. Identification of activities that have changed.
 - b. Changes in early and late start dates.
 - c. Changes in early and late finish dates.
 - d. Changes in activity durations in workdays.

- e. Changes in the critical path.
 - f. Changes in total float or slack time.
 - g. Changes in the Contract Time.
4. Narrative: The report shall include a brief description of the actual progress made during the update period; actual and potential delaying activities; any impediments to progress; issues related to inclement weather; progress toward established milestones and project float. The report shall include a brief description of the work anticipated to be performed in the next month. Any minor revisions to the schedule should be identified so they can be evaluated and accepted or rejected.
 5. As the Work progresses, indicate Actual Completion percentage for each activity.
 6. If the schedule update shows a late finish date after the contract completion date, at a minimum, include the following in the narrative with your submission:
 - a. Any known delays.
 - b. Actions that will be taken to get back on schedule.
 - c. Pending modifications.
 - d. Impediments or constraints affecting progress.
 7. Progress Payments: The monthly updating of the currently accepted Construction Schedule shall be an integral part of the process upon which progress payments will be made under this contract. If the Contractor fails to provide schedule updates or revisions, then a portion of the monthly payment may be retained until such corrections have been made.
- C. Distribution: Distribute copies of accepted schedule to Contracting Officer, Contracting Officers Representative, Construction Management Representative, Subcontractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
1. Post copies in Project meeting rooms and temporary field offices.
 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.
- D. Construction Schedule Revisions:
1. Required Revisions: If, as a result of the monthly schedule update, it appears the currently accepted Construction Schedule no longer represents the actual prosecution and progress of the work, the Contracting Officer will request, and the Contractor shall submit, a revision to the Construction Schedule. The Contractor may also request reasonable revisions to the currently accepted Construction Schedule in the event the Contractor's planning for the work is revised. If the Contractor desires to make changes, the Contractor shall notify the Contracting Officer in writing, stating the reason for the proposed revision. Accepted revisions will be incorporated into the currently accepted Construction Schedule for the next monthly schedule update.
 2. Procedure: If revision to the currently accepted Construction Schedule is contemplated, the Contractor or Contracting Officer shall so advise the other in writing at least seven calendar days prior to the next monthly schedule update meeting, describing the revision and reasons for the revision. Government-requested revisions will be presented in writing to the Contractor, who shall respond in writing within seven calendar days.

3. Reports: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 - a. Identification of activities that have changed.
 - b. Changes in early and late start dates.
 - c. Changes in early and late finish dates.
 - d. Changes in activity durations in workdays.
 - e. Changes in the critical path.
 - f. Changes in total float or slack time.

3.2 TIME IMPACT ANALYSIS FOR CONTRACT MODIFICATIONS CHANGES DELAYS AND CONTRACTOR REQUESTS:

1. Requirements: When contract modifications or changes are initiated, delays are experienced, or the Contractor desires to revise the currently accepted Construction Schedule, the Contractor shall submit to the Contracting Officer a written time impact analysis illustrating the influence of each modification, change, delay, or Contractor request on the contract time.
2. Time Extensions: Activity delays, which result in projecting a late completion date, shall not automatically mean that an extension of the contract time is warranted or due the Contractor. It is possible that a modification, change, or delay will not affect existing critical path activities or cause non-critical activities to become critical. A modification, change, or delay may result in only absorbing a part of the available total float that may exist within an activity chain of the Schedule, thereby not causing any effect on the contract time. Time extensions will be granted in accordance with the terms of the contract.
3. Extension of the contract time will be granted only to the extent the equitable time adjustments to the activity or activities affected by the modification, change, or delay exceeds the total (positive or zero) float available on a particular activity.
4. Procedure: Each time impact analysis shall be submitted within the time period stated in a request for proposal, or the time period designated under the clauses entitled Changes or Default. In cases where the Contractor does not submit a written request for extension of time and a time impact analysis within the designated time, it is mutually agreed that the particular modification, change, delay, or Contractor request does not require an extension of the contract time. Upon acceptance, the time impact analysis shall be incorporated into the currently accepted Construction Schedule at the next monthly schedule update.
5. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall Construction Schedule.

END OF SECTION 01 32 16

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SECTION 01 32 33 – PHOTO DOCUMENTATION FOR HISTORIC PRESERVATION PROJECTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following: Adjust list below to suit Project.
 - 1. Periodic construction images.
- B. See Division 01 Section "Closeout Procedures" for a complete listing of closeout documents.
- C. See Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of NPS personnel.

1.2 SUBMITTALS

- A. Construction Images: Submit images electronically within 30 days of taking the image. Include the following for each:
 - 1. Include Date, time and number (sequentially number all images) in filename.
 - 2. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
 - 3. Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
- B. Closeout: Submit a complete set of digital image electronic files as a Project Record Document. Submit on either a Compact Disc (CD) or Digital Video Disc (DVD).
 - 1. Provide an index as a separate file on the Disc. List each image as a file name with number, date, and time. Include description and or vantage point image was taken.
 - 2. Submit images that have the same aspect ratio as the sensor, un-cropped.

PART 2 - PRODUCTS

2.1 FORMAT REQUIREMENTS

- A. Media: CD-R Archival Gold or DVD-R Archival Gold
- B. Media Labels: Archival CD/DVD labeling markers, archival labels, or direct print CD
- C. Images: Provide sRGB color images in JPEG format. Minimum sensor size of 8 mega pixels, and at an image resolution of not less than 1600 by 1200 pixels.

PART 3 - EXECUTION

3.1 CONSTRUCTION IMAGES

- A. General: Take digital images using the maximum range of depth of field, and that are in focus, to clearly show the Work. Images with blurry or out-of-focus areas will not be accepted.
 - 1. Maintain index with each set of Construction images that identifies the number, date, time, and description for each.
 - 2. Maintain one set of images accessible in the field office at the Project site, available at all times for reference.
- B. Periodic Construction Images: Take 20 color, digital images to be submitted with each Pay request. Select vantage points to show status of construction and progress since last images were taken. Number images sequentially as follows; for pay request #1 name image files 1_1.jpg through 1_20.jpg. Images submitted with pay request #2 shall be named 2_1.jpg through 2_20.jpg and so on.
- C. Additional Images: Contracting Officer may issue requests for additional images, in addition to periodic Construction images specified.
 - 1. Three days notice will be given, where feasible.
 - 2. In emergency situations, take additional images within 24 hours of request.
 - 3. Circumstances that could require additional images include, but are not limited to, the following:
 - a. Immediate follow-up when on-site events result in construction damage or losses.
 - b. Images to be taken at fabrication locations away from Project site.
 - c. Substantial Completion of a major phase or component of the Work.
 - d. Extra record images at time of final acceptance.

END OF SECTION 01 32 33

SECTION 01 33 23 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

- A. Action Submittals: Written, graphic information, and physical samples that require Government's responsive action.
- B. Informational Submittals: Written information that does not require Government's responsive action. Submittals may be rejected for not complying with the requirements.
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.3 GENERAL SUBMITTAL PROCEDURES

- A. General: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual specific sections.
 - 1. Contracting Officer reserves the right to require submittals in addition to those called for in individual sections.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Review them for legibility, accuracy, completeness, and compliance with Contract Documents.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Contracting Officer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

- C. Submittal List: A submittal list has been attached to the end of this Specification Section. The intent is to provide an overall summary of submittal requirements and not a comprehensive list. The requirements of the individual Specification Sections, terms and conditions of the Contract still apply regardless of what is shown on the submittal list.
- D. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence when an e-mail notification is received by the Contracting Officer (or designee) indicating the submittal has been posted on the NPS SharePoint website and is ready for review. When the Contracting Officer has completed their review, an e-mail notification will be sent to the Contractor indicating the submittal has been processed. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.
1. Action Submittals
 - a. Initial Review: Allow 30 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
 - b. Re-submittal Review: Allow 30 days for review of each re-submittal.
 2. Informational submittals
 - a. Review: Allow 10 days for review of each submittal.
- E. Approved Equals:
1. For each item proposed as an “approved equal,” submit supporting data, including:
 - a. Drawings and samples as appropriate.
 - b. Comparison of the characteristics of the proposed item with that specified.
 - c. Changes required in other elements of the work because of the substitution.
 - d. Name, address, and telephone number of vendor.
 - e. Manufacturer’s literature regarding installation, operation, and maintenance, including schematics for electrical and hydraulic systems, lubrication requirements, and parts lists. Describe availability of maintenance service, and state source of replacement materials.
 2. A request for approval constitutes a representation that Contractor:
 - a. Has investigated the proposed item and determined that it is equal or superior in all respects to that specified.
 - b. Will provide the same warranties for the proposed item as for the item specified.
 - c. Has determined that the proposed item is compatible with interfacing items.
 - d. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.
 - e. Waives all claims for additional expenses that may be incurred as a result of the substitution.
- F. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. CM-SPE Transmittal Form: All submittals shall be transmitted using National Park Service form CM-SPE form. The form is accessed and completed on the NPS/DSC SharePoint Project website. No action will be taken on a submittal item unless accompanied by the CM-SPE transmittal form.
 - a. Complete the general information at the top of the form.
 - b. Provide all required information based on the submittal type
 - c. Attach all related documents.
 - d. Sign the CM-SPE form in the contractor section at the bottom of the form, and select “submit” when complete.
 2. Physical samples: Complete the CM-SPE on the NPS/DSC SharePoint Project website as described above. Deliver the physical sample to the CO (or designee) on site for processing. All comments and actions will be documented on the CM-SPE form on the NPS/DSC SharePoint Project website.
- G. Identification: Submittal number or other unique identifier, including revision identifier.
1. Submittal number shall use a sequential number (e.g., .001). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., .001.A).
- H. Re-submittals: Make re-submittals using the same process used with the initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in the title block on the CM-SPE and clearly indicate the extent of revision.
 3. Re-submit submittals until they are marked “Approved” or “Approved with notations”.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, and others as necessary for performance of construction activities.
- J. Use for Construction: Use only final submittals with mark indicating “Approved” or “Approved with notations”. Ensure all notations have been incorporated and, at a minimum, keep one copy of the final approved submittal on site for use during construction.
- 1.4 CONTRACTOR’S USE OF CAD FILES
- A. General: At Contractor’s written request, copies of CAD files will be provided to Contractor for Contractor’s use in connection with Project, subject to the following conditions:
1. Files will be provided as is; no format or other changes to files or changes to the objects in the drawing will be done by the Government.

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each submittal to show which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's product specifications.
 - b. Manufacturer's installation instructions: When Contract Documents require compliance with manufacturer's printed instructions, provide one complete set of instructions to Contracting Officer and keep another complete set of instructions at the project site until substantial completion.
 - c. Manufacturer's catalog cuts: Submit only pertinent pages; mark each page of standard printed data to identify specific products proposed for use.
 - d. Wiring diagrams showing factory-installed wiring.
 - e. Printed performance curves.
 - f. Operational range diagrams.
 - g. Compliance with specified referenced standards.
 - h. Testing by recognized testing agency.
 - 4. Submit product data in PDF file format before or concurrent with samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Roughing-in and setting diagrams.
 - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
 - f. Shopwork manufacturing instructions.
 - g. Templates and patterns.
 - h. Schedules.
 - i. Notation of coordination requirements.
 - j. Notation of dimensions established by field measurement.
 - k. Relationship to adjoining construction clearly indicated.
 - l. Seal and signature of professional engineer if specified.
 - m. Wiring Diagrams: Differentiate between manufacturer-installed and field-installed wiring.
 - 2. Submit shop drawings as a PDF electronic file.

- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Complete and post the CM-SPE on the NPS SharePoint website for processing and documentation of action on submitted samples.
 3. Identification: Attach label on unexposed side of Samples that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of manufacturer.
 - c. Sample source.
 - d. Submittal Number and title of appropriate Specification Section.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit two full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Contracting Officer will return submittal with options selected.
 6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit four sets of Samples. Contracting Officer will retain three Sample sets; remainder will be returned.
- D. Construction Materials: The Contractor is encouraged to submit for approval products made out of recycled or environmentally responsible material. Every effort will be made by the National Park Service to approve these materials.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by individual Specification Sections.
1. Post informational submittals as PDF electronic files directly to the NPS SharePoint website.

2. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 3. Informational submittals that do not comply with the requirements specified in the Contract Documents will be rejected and one copy will be returned.
- B. Coordination Drawings: Comply with the requirements specified in Section 01 31 00 "Project Management and Coordination."
 - C. Contractors Construction Schedule: Comply with the requirements specified in Section 01 32 16 "Construction Schedule."
 - D. Accident Prevention Plan: Comply with the requirements specified in Section 01 35 23 "Safety Requirements."
 - E. Schedule of Values: Comply with the requirements specified in Section 01 32 16 "Construction Schedule."
 - F. Waste Recycling Plan: Comply with the requirements specified in Section 01 74 19 "Construction Waste Management and Disposal."
 - G. Quality Control Plan: Comply with the requirements specified in Section 01 40 00 "Quality Requirements."
 - H. Storm Water Pollution Prevention Plan: Comply with the requirements specified in Section 01 57 23 "Temporary Storm Water Pollution Prevention" and any storm water permit requirements identified in Section 01 31 00.
 - I. Indoor Air Quality Management Plan: Comply with the requirements specified in Section 01 57 19.11 "Indoor Air Quality Management."
 - J. LEED™ Submittals: Comply with the requirements specified in Section 01 81 13.13 "Sustainable Design Requirements - LEED™ for New Construction and Major Renovations," Section 01 81 13.16 "Sustainable Design Requirements - LEED™ for Commercial Interiors," Section 01 81 13.19 "Sustainable Design Requirements - LEED™ for Core and Shell Development," and Section 01 81 13.23 "Sustainable Design Requirements - LEED™ for Schools."
 - K. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
 - L. Welding Certificates: Prepare written certification that welding procedures and personnel comply with the requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
 - M. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with the requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.

- N. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with the requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- O. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with the requirements in the Contract Documents.
- P. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with the requirements in the Contract Documents.
- Q. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with the requirements in the Contract Documents.
- R. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with the requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- S. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.
- T. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- U. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- V. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with the requirements in the Contract Documents.
- W. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with the requirements specified in Section 01 78 23 "Operation and Maintenance Data."
- X. Design Data: Prepare written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
- Y. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer.

- Z. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Statement on condition of substrates and their acceptability for installation of product.
 2. Summary of installation procedures being followed, whether they comply with the requirements and, if not, what corrective action was taken.
 3. Results of operational and other tests and a statement of whether observed performance complies with the requirements.
- AA. Permit Compliance Products: Prepare required information for compliance with permit provisions. Products include written notification of project startup, suspension, and completion of work; photo documentation of site conditions; reports; and drawings.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

3.2 CONTRACTING OFFICER'S ACTION

- A. General: Submittals will be disapproved without technical review if identification information is missing, not filled in, or if placed on the back of the submittal; an incorrect format of submittals is provided; the transmittal form is incorrectly filled out; submittals are not coordinated; or submittals do not show evidence of Contractor's approval.
1. Any work done or orders for materials or services placed before approval shall be at the Contractor's own risk.
- B. Action Submittals: Contracting Officer will review each submittal, generate comments on corrections or modifications required, and indicate the appropriate action on the CM-SPE Transmittal Form. The submittal will be marked in one of three ways as defined below:
1. APPROVED: Acceptable with no corrections.
 2. APPROVED WITH NOTATIONS: Minor corrections or clarifications required. All comments are clear and no further review is required. The Contractor shall address all review comments when proceeding with the work.
 3. DISAPPROVED - RESUBMIT: Rejected as not in accordance with the contract or as requiring major corrections or clarifications. The Contracting Officer will identify the reasons for disapproval. The Contractor shall revise and resubmit with changes clearly identified.
- C. Informational Submittals: Contracting Officer will review each submittal and will either accept or reject it.
- D. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

END OF SECTION 01 33 23

SUBMITTAL LIST

DRT0 168910

SUBMITTAL			REQUIREMENTS (indicate with an "X")							
Spec. Sec.	Par. No.	Description	INFORMATIONAL				ACTION			
			CERT./LAB TEST	REPORT/CALC. OR PLAN	Mfg. DATA & INSTRUCTIONS		SHOP DRAWING	REPORT/CALC. OR PLAN	SAMPLE	Mfg. DATA & INSTRUCTIONS
13100	1.4.A.1	Letter designating Project Superintendent		x						
13100	1.4.A.2	Construction Schedule and Scheduler's Quals.		x						
13100	1.4.A.3	Comprehensive breakdown of Schedule of Values		x						
13100	1.4.A.4	Accident Prevention Plan		x						
13100	1.4.A.5	List of Subcontractors		x						
13100	1.4.A.6	Written statements from subcontractors certifying compliance with applicable labor standard clauses.	x							
13100	1.4.A.7	Satisfactory evidence of liability insurance coverage and workman's compensation for the Contactor and all subcontractors.	x							
13100	1.4.A.8	Waste Management Plan		x						
13100	1.4.A.9	Quality Control Plan		x						
13100	1.4.A.10	Temporary Storm Water Pollution Prevention Plan		x						
13100	1.4.A.12	List of Required Construction Permits		x						
13216	1.3.A.	Electronic copies of schedules		x						
13216	1.3.B	Schedule of Values (See also 013100 1.4.A.3)		x						
13216	1.3.C	Construction Baseline Schedule		x						
13216	1.3.D	CPM Reports		x						
13216	1.3.E	Schedule Updates		x						
13216	1.3.F	Construction Schedule Updates and TIA		x						
13233	1.2.A	Construction Images		x						
13233	1.2.B	Project Record Documents/Closeout Images		x						
13523	1.2.A	Accident Prevention Plan		x						
13591	1.3.A	Historic Preservation Treatment Plan		x						
13591	1.3.B	Alternative Methods and Materials		x						
13591	1.3.C	Existing Conditions Photographs/Video		x						
14000	1.4.A	Quality Control Plan		x						
14000	1.4.B	Qualification Data		x						
14000	1.4.C	QC Daily Reports		x						
14000	1.4.D	Test Reports	x							
14000	1.4.E	Accessibility Inspection Report		x						
14000	1.4.F	Off-Site Inspection Reports		x						
14000	1.4.H	Permits, Licenses and Certificates	x							
15723	1.3.A	Under-an-Acre-Polution-Prevention Plan (UPPP)		x						
15723	1.3.B	Inspection Scheulde		x						
15723	1.3.C	Erosion Control Products		x						
16700	1.3.A.1	Affirmative Procurement Reporting Form		x						
16700	1.3.A.2	Environmental Data		x						
16700	1.3.A.3	MSDS Sheets			x					
16700	1.3.A.4	Chain of Custody		x						
17329	1.2.A	Cutting and Patching Plan		x						
17340	1.2.A	Landfill Receipts	x							
17340	1.2.B	Quantity Surveys		x						
17419	1.4.A	Waste Management Plan		x						
17419	1.4.B	Progress Documentation		x						
17419	1.4.C	Waste Reduction Calculations		x						
17419	1.4.D	Record of Donations		x						
17419	1.4.E.	Record of Sales		x						
17419	1.4.F	Recycling and Processing Facility Records		x						
17419	1.4.G	Landfill and Incinerator Disposal Records	x							
17419	1.4.E	Progress Payment Requirements		x						
17419	1.4.F	Closeout Submittals		x						
17700	1.3.A.1	Specific Warranties, Guarantees, Workmanship Bonds, and Final Certifications	x							
17700	1.3.A.2	Project Record Documents				x				
17700	1.3.A.3	Environmental Record Documents		x						
17700	1.3.A.4	Tools and spare parts				x				
17700	1.3.A.5	Keys				x				

SUBMITTAL LIST

DRTO 168910

SUBMITTAL			REQUIREMENTS (indicate with an "X")							
Spec. Sec.	Par. No.	Description	INFORMATIONAL				ACTION			
			CERT./LAB TEST	REPORT/CALC. OR PLAN	Mfg. DATA & INSTRUCTIONS		SHOP DRAWING	REPORT/CALC. OR PLAN	SAMPLE	Mfg. DATA & INSTRUCTIONS
17700	1.3.A.6	Remove Temporary Facilities				x				
17700	1.3.A.7	Final cleaning				x				

SUBMITTAL LIST

DRT0 168910

SUBMITTAL									
			REQUIREMENTS (indicate with an "X")						
Spec. Sec.	Par. No.	Description	INFORMATIONAL				ACTION		
			CERT./LAB TEST	REPORT/CALC. OR PLAN	Mfg. DATA & INSTRUCTIONS		SHOP DRAWING	REPORT/CALC. OR PLAN	SAMPLE Mfg. DATA & INSTRUCTIONS
24119	1.3.A	Proposed building protection and demo procedures						x	
24119	1.3.B	Inventory of demolished elements						x	
24119	1.3.C	Landfill records						x	
32050	1.5.A	Product Data							x
32050	1.5.B	Test Reports						x	
33050	1.3.A	Coral Concrete Sample							x
33050	1.3.A	Demonstration of mixing and placing procedures						x	
33050	1.3.B	Oyster Shell Product data							x
40120	1.4.A.1.a	Product Data Sheet for Natural Cement							x
40120	1.4.A.1.b	Manufacturer's storage and shipping requirements for Natural Cement							x
40120	1.4.A.1.c	Manufacturer's climate requirements for installation and curing of Natural Cement							x
40120	1.4.A.2.a	Product Data Sheet for Natural Hydraulic Lime							x
40120	1.4.A.2.b	Manufacturer's storage and shipping requirements for Natural Hydraulic Lime							x
40120	1.4.A.2.c	Manufacturer's climate requirements for installation and curing of Natural Hydraulic Lime							x
40120	1.4.A.3.a	Product Data Sheet for Lime Putty							x
40120	1.4.A.3.b	Manufacturer's storage and shipping requirements for Lime Putty							x
40120	1.4.A.3.c	Manufacturer's climate requirements for installation and curing of Lime Putty							x
40120	1.4.A.4.a	Sieve Analysis of Beach Sand (processed and unprocessed)						x	
40120	1.4.A.4.b	Aggregate void ratio						x	
40120	1.4.A.4.c	Description of Screening Process						x	
40120	1.4.A.5.a	Coral or Shell Product Data						x	
40120	1.4.A.5.b	Aggregate Void Ratio						x	
40120	1.4.A.6.a	Written Procedure for Mixing and Preparing Mortar						x	
40120	1.4.A.4.b	Written Procedure for Obtaining and Distributing Water to the Construction Site						x	
40120	1.4.B.1	1 Cup Sample of Screened Aggregate Sample							x
40120	1.4.B.2	4" x 4" x 4" Dried Mortar Sample							x
40120	1.4.B.2	4" x 4" x 4" Dried Coral Concrete Sample							x
40120	1.4.C.	Review of Tools and Accessories							x
40120	1.6.C.3.a	Shallow Repointing							x
40120	1.6.C.3.b	Deep Repointing							x
40120	1.6.C.3.c	Filling Small Holes with Mortar							x
40120	1.6.C.3.d	Joint Removal							x
40120	1.6.C.3.e	Removal of Mortar from Masonry Surfaces							x
40120	1.6.C.3.f	Handling of salvaged materials							x
40120	1.6.C.3.i	Removal of Mortar from salvaged brick							x
40120	1.6.C.3.j	Preparing Mortar Mixes							x
40120	1.6.C.3.k	Sun and Wind Protection Rigging							x
40120	1.6.C.4.	4' x 4' Areas of Repointing (allowed to cure for 14 days)							x

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SECTION 01 35 13.22 – ARCHEOLOGICAL PROTECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. The work of this section consists of protecting archeological resources contained in soil deposits.

1.2 DEFINITIONS

- A. Archeological Resources: Archeological resources are the physical evidences of past human activity, including evidences of the effects of that activity on the environment. Archeological resources represent both prehistoric and historic time periods. They are found above and below ground and under water.
- B. Archeologically Sensitive Areas: Areas that have the potential to contain significant (National Register eligible) archeological resources. If National Register eligible or listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer and, if necessary, associated American Indian tribes.
- C. Non-sensitive Areas: Areas with little, if any, potential of containing significant (National Register eligible) archeological resources.
- D. Archeological Monitor: Representative of the Government designated to oversee construction activities that could disturb archeological resources.
- E. Archeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95; 93 Stat. 712): defines archeological resources as any material remains of past human life or activities that are of archeological interest and at least 100 years old; Section 4 of the statute describes the requirements that must be met before Federal authorities can issue a permit to excavate or remove any archeological resource on Federal or Indian lands; the curatorial requirements of artifacts, and other materials excavated or removed.

1.3 SUBMITTALS

- A. Daily Work Schedule; Submit a Daily work Schedule detailing construction work in archeologically sensitive areas. Submit to Contracting Officer 30 days before start of ground disturbing site work.

1.4 QUALITY ASSURANCE

- A. At least one week before on-site work begins, Contractor shall meet with Contracting Officer and Archeological Monitor to discuss Daily Work Schedule and equipment and special methods to be used in archeologically sensitive areas. Contractor shall ensure that approved Daily Work Schedule is followed throughout construction.

PART 2 - PRODUCTS

2.1 DAILY WORK SCHEDULE

- A. A Daily Work Schedule is required for all work occurring within archeologically sensitive areas. Include all work that is to occur within the area and key the schedule to the drawings to include the following:
 - 1. Starting and ending dates of ground-disturbing construction.
 - 2. Locations of temporary facilities, such as barriers, field offices, staging areas, sanitary facilities, borrow pits, and haul and access roads.
 - 3. Types of construction, such as clearing, topsoil stripping, structure or trench excavation, landscaping, and post construction clean-up.
 - 4. Methods and equipment used for each type of construction.
 - 5. Plan for relocating work in the event of temporary work stoppages at each archeologically sensitive area

PART 3 - EXECUTION

3.1 BARRICADES

- A. Comply with requirements specified in Division 01 Section “Temporary Facilities And Controls.”

3.2 ARCHEOLOGICAL INVESTIGATION BY NON-NPS PERSONNEL

- A. A permit is required for any archeological investigations (e.g. excavation, shovel testing, coring, pedestrian survey, underwater archeology, rock art documentation, or other types of reconnaissance including the archaeological monitoring of construction) carried out on parklands by non-NPS personnel, unless carried out under a contract or a cooperative agreement specifically written for archeological investigations. Permits are issued under the Archaeological Resources Protection Act of 1979 (ARPA). The NPS does not issue a permit for archeological investigations carried out by NPS archeologists, or to archeologists working on NPS archeological projects under a contract or cooperative agreement.
- B. Applicants should submit a Permit Application (DI Form 1926 (Rev Sept 2004) OMB No. 1024-0037, approved through 1/31/2008 – the Permit Application form is available in pdf format) to the manager of the park in which they propose to work; or to the regional director, with a copy to the park manager.

3.3 OBSERVATION

- A. Archeological Monitor will observe all ground-disturbing site work, including construction of temporary facilities, at all archeologically sensitive areas, from a safe location mutually agreed on by Contractor and Monitor. As new ground is broken, Monitor will examine excavated materials, using construction layout centerline and perimeter staking as a reference point to record locations of findings.

3.4 DISCOVERY OF RESOURCES

- A. If Archeological Monitor discovers resources, immediate relocation of the work to a non-sensitive area may be required to allow Monitor to identify and document resources and, if necessary, develop an appropriate mitigation plan. While Archeological Monitor is documenting resources in sensitive areas, Contractor shall relocate work to non-sensitive areas where monitoring is not normally required.
- B. If resources are discovered while Archeological Monitor is absent, stop work immediately and report the discovery to the Contracting Officer.

3.5 WORK STOPPAGE

- A. The Contractor shall plan, schedule, and execute the work to prevent stoppages at one area from stopping all work at the construction site

END OF SECTION 01 35 13.22

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SECTION 01 35 23 - SAFETY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes establishing an effective accident prevention program and providing a safe working environment for all personnel and visitors.

1.2 SUBMITTALS

- A. Accident Prevention Plan (APP): After contract award and before the Pre-Construction conference, submit for review, an Accident Prevention Plan. The Contracting Officer will review the proposed Plan. If the plan requires any revisions or corrections, the Contractor shall resubmit the Plan within 10 days. No progress payments will be made until the Plan is accepted.

1.3 QUALITY ASSURANCE

- A. Comply with contract clauses entitled "Accident Prevention" and "Permits and Responsibilities". In case of conflicts between Federal, State, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.
- B. Qualifications of Employees:
 - 1. All employees must be physically and able to perform their assigned duties in a safe manner.
 - 2. Do not allow employees to perform work whose ability or alertness is impaired because of prescription or illegal drug use, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.
 - 3. Operators of vehicles, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be fully capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment. Retain copies of all operators licenses and/or certifications onsite.

1.4 ACCIDENT REPORTING

- A. Reportable Accidents (per OSHA 29CFR 1904): A project reportable accident is defined as death, occupational disease, traumatic injury to employees or the public, fires, and property damage by accident in excess of \$100. Notify Contracting Officer immediately in the event of a reportable accident. Within 7 days of a reportable accident, fill out and forward to Contracting Officer an Accident/Property Damage Report (Form CM-22). Form may be obtained from the Contracting Officer.

PART 2 - PRODUCTS

2.1 ACCIDENT PREVENTION PLAN (APP)

- A. The Plan shall be written to comply with OSHA and project requirements (a generic plan is not acceptable) including but not limited to the following:
 - 1. Name of responsible supervisor to carry out the program.
 - 2. Weekly and monthly safety meetings shall be documented with topic and attendees.
 - 3. First aid and rescue procedures.
 - 4. Outline of each phase of the work, the hazards associated with each major phase, and the methods proposed to provide for property protection and safety of the public, National Park Service personnel, and Contractor's employees. Identify the work included under each phase, with an Job Hazard Analysis (JHA)/Job Safety Analysis (JSA), etc.
 - 5. Training, both initial and continuing.
 - 6. Planning for possible emergency situations, such as cave-ins, earthquake, explosions,, fires, floods, power outages, slides, and wind storms. Such planning shall take into consideration the nature of construction, site conditions, and degree of exposure of persons and property.

2.2 FIRST AID FACILITIES

- A. Provide adequate facilities for the number of employees and appropriate to the hazards associated with the types of ongoing construction work at the site.

2.3 PERSONNEL PROTECTIVE EQUIPMENT

- A. Meet requirements of applicable ANSI standards. Selection shall conform to OSHA 29CFR 1926.95 Subpart E.

PART 3 - EXECUTION

3.1 EMERGENCY INSTRUCTIONS

- A. Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

3.2 FIRE AND LIFE SAFETY

- A. Comply with the requirements of NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations).
- B. Store hazardous materials in accordance with manufacturer's and OSHA 29CFR1926 Subpart D requirements. Maintain readily available, on site, MSDS/Safety Data Sheets (SDS) for each chemical.

1. Immediately report all spills of hazardous materials to the park.
2. Maintain a spill emergency response kit.
3. Train employees how to respond to a spill and use the emergency response kit.

3.3 PROTECTIVE EQUIPMENT

- A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair personal items, as appropriate, before issuing them to another individual.
- B. Inspect, maintain, and document other protective equipment and devices before use and on a periodic basis to ensure safe operation. Retain inspection documentation onsite.

3.4 SAFETY MEETINGS

- A. As a minimum, conduct one weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the Contracting Officer within one day after the meeting.
- B. Conduct monthly safety meetings for all levels of supervision. Meetings shall be attended by all contractors and subcontractors performing work on the site. Notify the Contracting Officer of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the Accident Prevention Plan. The Contracting Officers Representative will attend the meeting and enter the results of the meetings into the daily log.

3.5 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

- A. A hard hat use area shall be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the Contracting Officer.
- B. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary personal protective equipment in good repair at all times. As a minimum, maintain six hard hats and all other APP required equipment.

3.6 TRAINING

- A. First Aid: Provide adequate training to an adequate number of personnel to ensure prompt and efficient first aid.
- B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION 01 35 23

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SECTION 01 35 91 - HISTORIC PRESERVATION TREATMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes special procedures for historic treatment on the Project including, but not limited to, the following:
 - 1. Definitions.
 - 2. Submittals.
 - 3. Quality Assurance.
 - 4. Storage and protection of existing historic materials.
 - 5. Project site conditions.
 - 6. Historic Preservation Treatment Plan
 - 7. Protection, General.
 - 8. Protection during application of chemicals.
 - 9. Protection during use of heat-generating equipment.
 - 10. Historic preservation treatment procedures.

1.2 DEFINITIONS

- A. "Preservation": To apply measures necessary to sustain the existing form, integrity, and materials of a historic property. Work may include preliminary measures to protect and stabilize the property.
- B. "Rehabilitation": To make possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.
- C. "Restoration": To accurately return the form, features, and character of a property to its appearance at a particular period of time by means of the removal of features from other periods in its history and the repair and reconstruction of missing and deteriorated features from the restoration period.
- D. "Reconstruction": To reproduce in the exact form and detail a building, structure, or artifact as it appeared at a specific period in time. Reconstructed elements do not possess historic integrity in their own right since it is not original fabric.
- E. "Stabilize": To apply measures designed to reestablish a weather-resistant enclosure and the structural reinforcement of an item or portion of the building while maintaining the essential form as it exists at present. This level of intervention is aimed at retarding or arresting adverse impacts to structures.
- F. "Protect and Maintain": To remove deteriorating corrosion, reapply protective coatings, and install protective measures such as temporary guards; to provide the least degree of intervention.

- G. "Repair": To stabilize, consolidate, or conserve; to retain existing materials and features while employing as little new material as possible. Repair includes patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading materials. Within restoration, repair also includes limited replacement in kind, rehabilitation, and reconstruction, with compatible substitute materials for deteriorated or missing parts of features when there are surviving prototypes.
- H. "Replace": To duplicate in its entirety a historic element or feature by matching its historic pattern, detail and appearance. . Replacement is justified when original or historic elements are damaged beyond repair or are missing. Replacement methods includes the following conditions:
 - 1. Replacement with Original or Historic Fabric: Includes fabric salvaged from other locations or projects having identical architectural qualities. It means duplication of appearance using identical material possessing historical significance.
 - 2. Replacement with New Materials: Includes replacement with new material of like kind (custom fabricated or manufactured) that is currently in production. It means duplication of appearance using like material.
 - 3. Replacement with Substitute Materials: Includes replacement with a compatible substitute that is frequently contemporary and unlike the historic fabric. It means duplication of appearance using modern (non-traditional) material Use of substitute materials is not approved unless matching materials are not available.
- I. "Remove": To demolish or detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- J. "Remove and Salvage": To detach items from existing construction and deliver them to the NPS.
- K. "Remove and Reinstall": To detach items from existing construction, repair and prepare them for reuse, and reinstall them where indicated.
- L. "Existing to Remain" or "Retain": Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled.
- M. "Material in Kind": Material that closely matches existing materials, through comparison of architectural qualities and salient characteristic such as species, cut, color, grain, , dimension, profile, thickness, and finish.

1.3 SUBMITTALS

- A. Historic Preservation Treatment Plan:
 - 1. After the contract award and before the Pre-Construction conference, submit for approval a written Historic Preservation Treatment Plan (HPTP).
 - 2. If the plan requires any revisions or corrections, the contractor shall resubmit the plan within 10 days.
 - 3. No change in the approved plan may be made without written concurrence by the Contracting Officer.
- B. Alternative Methods and Materials: If alternative methods and materials to those indicated are proposed for any phase of work, provide a written description including evidence of successful

use on other, comparable projects, and program of testing to demonstrate effectiveness for use on this Project.

- C. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by historic treatment operations. Submit before work begins.

1.4 QUALITY ASSURANCE

- A. Historic Preservation Treatment Specialist Qualifications: An experienced firm with the required certifications and training that can demonstrate through past performance that they are qualified to perform this work.

1.5 STORAGE AND PROTECTION OF HISTORIC MATERIALS

- A. Removed and Salvaged Historic Materials:

1. Clean salvaged historic items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to the NPS.
4. Transport items to storage area designated by Contracting Officer.
5. Protect items from damage during transport and storage.
6. Do not dispose of items removed from existing construction without prior written consent of Contracting Officer.

- B. Removed and Reinstalled Historic Materials:

1. Clean and repair historic items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- C. Existing Historic Materials to Remain: Protect construction indicated to remain against damage and soiling during historic treatment. When permitted by Contracting Officer, items may be removed to a suitable, protected storage location during historic treatment and reinstalled in their original locations after historic treatment operations are complete.

- D. Storage and Protection: When removed from their existing location, store historic materials within a weather-tight enclosure where they are protected from wetting by rain, snow, or ground water, and temperature variations. Secure stored materials to protect from theft.

1. Identify removed items with an inconspicuous mark indicating their original location.
2. Develop a key plan when many similar items are scheduled for removal and reinstallation.

1.6 PROJECT-SITE CONDITIONS

- A. Exterior Cleaning and Repairing:

1. Proceed with the work only when forecasted weather conditions are favorable.
 - a. Wet Weather: Do not attempt repairs during rainy or foggy weather. Do not apply primer, paint, putty, or epoxy when the relative humidity is above 80 percent. Do not remove exterior elements of structures when rain is forecast or in progress.
 - b. Do not perform exterior wet work when the air temperature is below 40 deg F (5 deg C).
 - c. Do not begin cleaning, patching, or repairing when there is any likelihood of frost or freezing.
 - d. Do not begin cleaning when either the air or the surface temperature is below 45 deg F (7 deg C) unless approved means are provided for maintaining a 45 deg F (7 deg C) temperature of the air and materials during, and for 48 hours subsequent to, cleaning.
 2. Perform cleaning and rinsing of the exterior only during daylight hours.
- B. Conduct historic treatment so National Park Service operations will not be disrupted. Provide not less than 72 hours' notice to Contracting Officer of activities that will affect National Park Service operations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 HISTORIC PRESERVATION TREATMENT PLAN

- A. Prepare a written technical plan for preservation work covering all preservation components of the project. The plan must verify that the construction strategy and the intent is compatible with the Department Of Interior's standards for the Treatment of Historic Properties, guidelines for the Treatment of Cultural Landscapes, and National Park Service management policies for cultural resources. The plan must satisfy both the project scope and resource protection requirements. The plan shall include the following:
1. Organized list of preservation components of the project, systems, and tasks.
 2. Staging and sequence of the work.
 3. Disassembly and reassembly techniques and steps.
 4. Equipment and tools required.
 5. Supplies and materials with manufacturer or supplier identified.
 6. Skilled trades and crafts required.
 7. Anticipated testing and analysis of fabric.
 8. Additional investigations for the extents or magnitude of treatments needed.
 9. Protective measures.
 10. Seasonal limitations on the work.
 11. Alternative means if primary treatment method is unfeasible.
 12. Work conducted off-site (Approval from CO required prior to taking resources off-site).

3.2 PROTECTION, GENERAL

- A. Comply with manufacturer's written instructions for precautions and effects of products and procedures on adjacent building materials, components, and vegetation.
- B. Ensure that supervisory personnel are present when work begins and during its progress.
- C. Temporary Protection of Historic Materials during Construction:
 - 1. Protect existing materials during installation of temporary protections and construction. Do not deface or remove existing materials.
 - 2. Attachments of temporary protection to existing construction shall be approved by Contracting Officer prior to installation.
- D. Protect landscape work adjacent to or within work areas as follows:
 - 1. Provide barriers to protect tree trunks.
 - 2. Bind spreading shrubs.
 - 3. Use coverings that allow plants to breathe and remove coverings at the end of each day. Do not cover plant material with a waterproof membrane for more than 8 hours at a time.
 - 4. Set scaffolding and ladder legs away from plants.
- E. Existing Drains: Prior to the start of work or any cleaning operations, test drains and other water removal systems to ensure that drains and systems are functioning properly. Notify Contracting Officer immediately of drains or systems that are stopped or blocked. Do not begin Work of this Section until the drains are in working order.
 - 1. Provide a method to prevent solids including stone or mortar residue from entering the drains or drain lines. Clean out drains and drain lines that become blocked or filled by sand or any other solids because of work performed under this Contract.
 - 2. Protect storm drains from pollutants. Block drains or filter out sediments, allowing only clean water to pass.

3.3 PROTECTION DURING APPLICATION OF CHEMICALS

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm or damage resulting from applications of chemical cleaners and paint removers.
- B. Comply with requirements in Division 01 Section "Temporary Facilities and Controls."
- C. Cover adjacent surfaces with materials that are proven to resist chemical cleaners selected for Project unless chemicals being used will not damage adjacent surfaces. Use covering materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
- D. Do not clean surfaces during winds of sufficient force to spread cleaning solutions to unprotected surfaces.

- E. Neutralize and collect alkaline and acid wastes and dispose of outside park boundaries.
- F. Dispose of runoff from chemical operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.

3.4 PROTECTION DURING USE OF HEAT-GENERATING EQUIPMENT

- A. Comply with the following procedures while performing work with heat-generating equipment, including welding, cutting, soldering, brazing, paint removal with heat, and other operations where open flames or implements utilizing heat are used:
 - 1. Obtain Contracting Officer's approval for operations involving use of open-flame or welding equipment.
 - a. Notification shall be given for each occurrence and location of work with heat-generating equipment.
 - b. Obtain the appropriate permit from the park as required.
 - 2. As far as practical, use heat-generating equipment in shop areas or outside the building.
 - 3. Before work with heat-generating equipment commences, furnish personnel to serve as a fire watch (or watches) for location(s) where work is to be performed.
 - 4. Do not perform work with heat-generating equipment in or near rooms or in areas where flammable liquids or explosive vapors are present or thought to be present. Use a combustible gas indicator test to ensure that the area is safe.
 - 5. Remove and keep the area free of combustibles, including, rubbish, paper, waste, etc., within area of operations.
 - a. If combustible material cannot be removed, provide fireproof blankets to cover such materials.
 - 6. Where possible, furnish and use baffles of metal or gypsum board to prevent the spraying of sparks or hot slag into surrounding combustible material.
 - 7. Prevent the extension of sparks and particles of hot metal through open windows, doors, holes, and cracks in floors, walls, ceilings, roofs, and other openings.
 - 8. Inspect each location of the day's work not sooner than 30 minutes after completion of operations to detect hidden or smoldering fires and to ensure that proper housekeeping is maintained.
- B. Where sprinkler protection exists and is functional, maintain it without interruption while operations are being performed. If operations are performed close to automatic sprinkler heads, shield the individual heads temporarily with guards.

3.5 HISTORIC PRESERVATION TREATMENT PROCEDURES

The principal aim of preservation work is to halt the process of deterioration and stabilize the item's condition, to sustain the integrity of the historic element, feature or structure being preserved. Cyclic

maintenance is often required as well as repair work. Repair is required where specifically indicated. The following procedures shall be followed:

1. Retain as much existing material as possible; repair and consolidate rather than replace.
 2. Use additional material or structure to reinforce, strengthen, prop, tie, and support existing material or structure.
 3. Use reversible processes wherever possible.
 4. Use traditional replacement materials and techniques if possible. New work shall be distinguishable from old work and original materials and techniques.
 5. Record the existing condition before commencing with repair work; document with preconstruction photos, sketches and field notes. Record repair work during construction with periodic construction photos and daily inspection reporting. Photo documentation is specified in Division 01 Section "Photo Documentation For Historic Preservation Projects".
- B. Prohibit smoking by personnel performing work on or near historic structures.
- C. Notify Contracting Officer of visible changes in the integrity of material or components whether due to environmental causes including biological attack, UV degradation, freezing, or thawing; or due to structural defects including cracks, movement, or distortion.
1. Do not proceed with the work in question until directed by Contracting Officer.
- D. Where Work requires existing features to be removed, cleaned, and reinstalled, perform these operations without damage to the material itself, to adjacent materials, or to the substrate.
- E. Identify new or replacement materials and features with inconspicuous, permanent marks to distinguish them from original materials. Record the legend of identification marks and the locations of these marks on Record Drawings.
- F. When cleaning, match samples of existing materials that have been cleaned and identified for acceptable cleaning levels. Avoid over-cleaning to prevent damage to existing materials during cleaning. Only the gentlest methods available should be attempted. Initiate cleaning using hand cleaning methods before introducing power cleaning methods and equipment.

END OF SECTION 01 35 91

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SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements. The quality of all work shall be the responsibility of the Contractor.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality assurance and control procedures that facilitate compliance with the Contract Document requirements.
- C. See Divisions 02 through 49 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

- A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements.
- C. Mockups: Full-size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on Project site, consisting of multiple products, assemblies, and subassemblies.
- D. Preconstruction Testing: Tests and inspections that are performed specifically for the project before products and materials are incorporated into the work to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by a Nationally Recognized Testing Laboratory (NRTL), a National Voluntary Laboratory Accreditation Program (NVLAP), or a testing agency qualified to conduct product testing, to establish product performance and compliance with industry standards.

- F. Source Quality Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- G. Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the work and for completed work.
- H. Testing Agency or Laboratory: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.” It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

1.3 CONFLICTING REQUIREMENTS

- A. Reference Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.
- B. Minimum Quality Levels: The quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Contracting Officer for a decision before proceeding.

1.4 SUBMITTALS

- A. Quality Control Plan:
 - 1. After contract award and before the Pre-Construction conference, submit for approval a written Contractor Quality Control (CQC) plan.
 - 2. If the plan requires any revisions or corrections, the Contractor shall resubmit the plan within 10 days.
 - 3. The Government reserves the right to require changes in the plan during the contract period as necessary to obtain the quality specified.
 - 4. No change in the approved plan may be made without written concurrence by the Contracting Officer.
- B. Qualification Data: For testing agencies specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- C. Contractor's Quality Control Daily Reports: Submit showing all inspections and tests on the first workday following the date covered by the report. Quality Control Supervisor shall utilize the DSC forms available by accessing the DSC Workflows website, <http://www.nps.gov/dscw/publicforms.htm>.

1. Review CMR Dailies and reconcile any differences prior to posting CQC Dailies on the SharePoint Project Website.

D. Test Reports

1. Test reports shall be completed by the person performing the test.
2. Submit Daily Test Information Sheets with Quality Control Daily Reports.
3. Submit failing test results and proposed remedial actions within four hours of noted deficiency.
4. Submit three copies of complete test results no later than one calendar day after the test was performed.

E. Accessibility Inspection Report:

1. Fill out the applicable sections of the Accessibility Inspection Report and attach to the Quality Control Daily Report.
2. Utilize the attached Accessibility Inspection form to document compliance with the Architectural Barriers Act Accessibility Standards (ABAAS).
3. Inspect at various stages of construction as needed to insure the finished product meets the standards.
4. Submit report not later than one calendar day after the inspection was performed.

F. Off-Site Inspection Reports: Submit prior to shipment.

G. If the CQC plan and Quality Control Daily Reports are not submitted as specified, the Contracting Officer may retain all payments until such time a plan is accepted and implemented, or may retain payments for work completed on days there are no Quality Control Daily Reports.

H. Permits, Licenses, and Certificates: For NPS records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the work.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Contractors Quality Control Staff:

1. The Contractor's Quality Control Supervisor may also perform other duties.
2. The Contractor's designated Quality Control Supervisor shall be on the project site whenever contract work is in progress.
3. The Contractor's job supervisory staff may be used to assist the Quality Control Supervisor supplemented, as necessary, by additional certified testing technicians.

C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

- E. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- F. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated (including Structural Tests and Special Inspections (STSI)). Engineering services are defined as those performed for installations of the system, assembly, or products that are similar to those indicated for this Project in material, design, and extent.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329; and with additional qualifications specified in individual Sections; and where required by Contract, is acceptable to the Contracting Officer.
 - 1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
 - 3. All measuring devices, laboratory equipment, and instruments shall be calibrated at established intervals against certified standards in accordance with NIST requirements. Upon request, measuring and testing devices shall be made available for use by the Government for verification tests.
- H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Mockups: Before installing portions of the work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed work:
 - 1. Build mockups in location and of size indicated or, if not indicated, as directed by Contracting Officer.
 - 2. Notify Contracting Officer seven days in advance of dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Obtain Contracting Officer's approval of mockups before starting work, fabrication, or construction.
 - 5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed work.
 - 6. Demolish and remove mockups when directed, unless otherwise indicated.

1.6 QUALITY CONTROL

- A. The Contractor is responsible for all testing and inspections, including Structural Tests and Special Inspections (STSI), as identified in the attached STSI. Inspect and test work as needed to ensure that the quality of materials, workmanship, construction, finish, and functional performance are in compliance with applicable specifications, drawings, and those required by the Building Code.
 - 1. Engage a qualified testing agency to perform these quality-control services.
 - 2. Submit the appropriate report, for each quality-control service.

3. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 4. The Contracting Officer may designate test locations.
- B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- C. Re-testing/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced work that failed to comply with the Contract Documents.
- D. Testing Agency Responsibilities: Cooperate with NPS and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Contracting Officer and Contractor promptly of irregularities or deficiencies observed in the work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit 3 copies of the certified written report of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the work.
- E. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- F. Coordination: Coordinate sequence of activities to accommodate required quality assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS

2.1 QUALITY CONTROL PLAN

- A. The Quality Control Plan shall include:

1. A list of personnel responsible for quality control and assigned duties. Include each person's qualifications.
2. A copy of a letter of direction to the Contractor's Quality Control Supervisor outlining assigned duties.
3. Names, qualifications, and descriptions of laboratories to perform sampling and testing, and samples of proposed report forms.
4. Methods of performing, documenting, and enforcing quality control of all work.
5. Methods of monitoring and controlling environmental pollution and contamination as required by regulations and laws.

PART 3 - EXECUTION

3.1 OFF-SITE CONTROL

- A. Items that are fabricated or assembled off-site shall be inspected for quality control at the place of fabrication.

3.2 ON-SITE CONTROL

A. Notification:

1. Notify the Contracting Officer at least 48 hours in advance of the preparatory phase meeting.
2. Notify the Contracting Officer at least 24 hours in advance of the initial and follow-up phases.

B. Preparatory Phase: Perform before beginning each feature of work.

1. Review control submittal requirements with personnel directly responsible for quality assurance and quantity control of the work. As a minimum, the Contractor's Quality Control Supervisor and the foreman responsible for the feature of work shall be in attendance.
2. Review all applicable specifications sections and drawings related to the feature of work.
3. Ensure that copies of all referenced standards related to sampling, testing, and execution for the feature of work are available on site.
4. Ensure that provisions have been made for field control testing.
5. Examine the work area to ensure that all preliminary work has been completed.
6. Verify all field dimensions and advise the Contracting Officer of discrepancies with contract documents.
7. Ensure that necessary equipment and materials are at the project site and that they comply with approved shop drawings and submittals.
8. Document all preparatory phase activities and discussions on the Contractor's Quality Control Daily Report.

C. Initial Phase:

1. As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.
2. Review control testing procedures to ensure compliance with contract requirements.

3. Document all initial phase activities and discussions on the Contractor's Quality Control Daily Report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- D. Follow-Up Phase: Inspect and test as work progresses to ensure compliance with contract requirements until completion of work.
- E. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be required on the same feature of work for the following reasons:
 1. Quality of on-going work is unacceptable.
 2. Changes occur in the applicable quality control staff, on-site production supervision, or work crew.
 3. Work on a particular feature of work is resumed after a substantial period of inactivity.

3.3 DOCUMENTATION

- A. Maintain Quality Control Daily Reports, Daily Test Report Information Sheets, and Accessibility Inspection Reports (Forms may be downloaded from the DSC Workflows website, <http://www.nps.gov/dscw/publicforms.htm>.) of quality control activities and tests.
- B. Quality Control Daily Reports may not be substituted for other written reports required under clauses of the contract, such as Disputes, Differing Site Conditions, or Changes.

3.4 ENFORCEMENT

- A. The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff or the Contracting Officer.

3.5 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Comply with the Contract Document requirements for Division 01 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

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SECTION 01 42 00 – REFERENCE STANDARDS

PART 1 - GENERAL

1.1 ENVIRONMENTAL DEFINITIONS

- A. Definitions pertaining to sustainable development: As defined in ASTM E2114 and as specified herein.
- B. Biobased Materials: As defined in the Farm Security and Rural Investment Act, for purposes of Federal procurement of biobased products, “biobased” means a “commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials.” Biobased materials also include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by The Biomass Research and Development Act of 2000.
 - 1. Biobased content: The amount of biobased carbon in the material or product as a percentage of weight (mass) of the total organic carbon in the material or product.
- C. Chain-of-Custody: Process whereby a product or material is maintained under the physical possession or control during its entire life cycle.
- D. Deconstruction: Disassembly of buildings for the purpose of recovering materials.
- E. DFE (Design for the Environment): A technique that includes elements of resource conservation and pollution prevention as applied in various product sectors. A technique that incorporates approaches which are part of product (or assembly) concept, need and design. Considerations involve material selection, material and energy efficiency, reuse, maintainability and design for disassembly and recyclability. Refer to ISO Guide 64 for additional clarification.
- F. Environmentally preferable products: Products and services that have a lesser or reduced effect on the environment in comparison to conventional products and services. Refer to EPA’s Final Guidance on Environmentally Preferable Purchasing at www.epa.gov/oppt/epp.
- G. Non-Renewable Resource: A resource that exists in a fixed amount that cannot be replenished on a human time scale. Non-renewable resources have the potential for renewal only by geological, physical, and chemical processes taking place over of millions of years. Examples include: iron ore, coal, and oil.
- H. Perpetual Resource: A resource that is virtually inexhaustible on a human time scale. Examples include solar energy, tidal energy, and wind energy.
- I. Recycled Content Materials: Products that contain pre-consumer or post-consumer materials as all or part of their feedstock. Recycled content claim shall be consistent with Federal Trade Commission (FTC) Guide for the Use of Environmental Marketing Claims.
- J. Renewable Resource: A resource that is grown, naturally replenished, or cleansed, at a rate which exceeds depletion of the usable supply of that resource. A renewable resource can be

exhausted if improperly managed. However, a renewable resource can last indefinitely with proper stewardship. Examples include: trees in forests, grasses in grasslands, and fertile soil.

1.2 QUALITY ASSURANCE

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two or more standards is specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Contracting Officer for a decision before proceeding.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities found in Section 01 42 00 Sources for Reference Publications at www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs (accessible via <https://specsintact.ksc.nasa.gov/Masters/Masters.shtml> > Downloads section > click on UFGS Master (WBDG website). Names, telephone numbers, and websites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

XX EXAMPLE Association (The)
 www.EXAMPLE.org

- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and websites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

DIN	Deutsches Institut für Normung e.V. www.din.de/en	49 30 2601-3003
IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICC	International Code Council www.iccsafe.org	(888) 422-7233
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543

- C. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, and websites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ABA & ABAAS United States Access Board	Architectural Barriers Act (ABA) Architectural Barriers Act Accessibility Standards (ABAAS) www.access-board.gov
CoE	Army Corps of Engineers www.usace.army.mil
CPSC	Consumer Product Safety Commission www.cpsc.gov
DOC	Department of Commerce www.commerce.gov
DOD	Department of Defense www.defense.gov
DOJ	Department of Justice www.justice.gov
DOE	Department of Energy www.energy.gov
EPA	Environmental Protection Agency www.epa.gov

FAA	Federal Aviation Administration www.faa.gov
FCC	Federal Communications Commission www.fcc.gov
FDA	Food and Drug Administration www.fda.gov
GSA	General Services Administration www.gsa.gov
HUD	Department of Housing and Urban Development www.hud.gov
LBL	Lawrence Berkeley National Laboratory www.lbl.gov
NCHRP	National Cooperative Highway Research Program (See TRB)
NIST	National Institute of Standards and Technology www.nist.gov
OSHA	Occupational Safety & Health Administration www.osha.gov
PHS	U.S. Department of Health and Human Services www.usphs.gov/ophs/
RUS	Rural Utilities Service (See USDA)
SD	State Department www.state.gov
TRB	Transportation Research Board www.trb.org
USDA	Department of Agriculture www.usda.gov
USP	U.S. Pharmacopeia www.usp.org
USPS	Postal Service www.usps.com

- D. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and

regulations in the following list. Names, telephone numbers, and websites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ABAAS	Architectural Barriers Act Accessibility Standards www.access-board.gov
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html
DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil
DSCC	Defense Supply Center Columbus (See FS)
FED-STD	Federal Standard (See FS)
FS	Federal Specification Available from Department of Defense Single Stock Point http://quicksearch.dla.mil/ Available from General Services Administration www.gsa.gov Available from National Institute of Building Sciences www.nibs.org
FTMS	Federal Test Method Standard (See FS)
MIL	(See MILSPEC)
MIL-STD	(See MILSPEC)
MILSPEC	Military Specification and Standards Available from Department of Defense Single Stock Point http://quicksearch.dla.mil
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov (UFAS is only for housing projects per Fair Housing Act. See also the Fair Housing Act Design Manual, www.huduser.gov/portal/publications/destech/fairhousing.html)

1.5 ENVIRONMENTAL REFERENCE STANDARDS

A. American Forest and Paper Association:

1. Sustainable Forestry Initiative
- B. American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE):
 - ASHRAE 52.2, *Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size*
 - ASHRAE 55, *Thermal Environmental Conditions for Human Occupancy*
 - ASHRAE 62.1, *Ventilation for Acceptable Indoor Air Quality*
 - ASHRAE 62.2, *Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings*
 - ASHRAE/IESNA 90.1, *Energy Standard for Buildings, Except Low-Rise Residential Buildings*
 - ASHRAE 90.2, *Energy Efficient Design of Low-Rise Residential Buildings*
- C. American Association of State Highway and Transportation Officials (AASHTO):
 - M288 Geotextile Specification for Highway Applications
 - MP009-06 Standard Specification for Compost for Erosion/Sediment Control (Filter Berms and Filter Socks)
 - MP010-03 Standard Specification for Compost for Erosion/Sediment Control (Compost Blankets)
- D. American Society for Testing and Materials International (ASTM):
 - A478 Standard Specification for Chromium-Nickel Stainless Steel Weaving and Knitting Wire
 - A580/A580M Standard Specification for Stainless Steel Wire
 - A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
 - B813 Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube
 - C1240 Standard Specification for Silica Fume Used in Cementitious Mixtures
 - C128 Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate
 - C131 Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
 - C1319 Standard Specification for Concrete Grid Paving Units
 - C1338 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings
 - C136 Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
 - C1371 Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers
 - C1386 Standard Specification for Precast Autoclaved AERATED Concrete (PAAC) Wall Construction Units
 - C1483 Standard Specification for Exterior Solar Radiation Control Coatings on Buildings
 - C1549 Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
 - C1601 Standard Test Method for Field Determination of Water Penetration of Masonry Wall Surfaces
 - C289 Standard Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method)

- C311 Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland-Cement Concrete
- C33 Standard Specification for Concrete Aggregates
- C593 Standard Specification for Fly Ash and Other Pozzolans for Use With Lime
- C595 Standard Specification for Blended Hydraulic Cements
- C618 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
- C67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
- C739 Standard Specification for Cellulosic Fiber (Wood-Base) Loose-Fill Thermal Insulation
- C936 Standard Specification for Interlocking Concrete Paver Units
- C989 Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
- D1435 Standard Practice for Outdoor Weathering of Plastics
- D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³(2,700 kN-m/m³))
- D1972 Standard Practice for Generic Marking of Plastic Products
- D198 Standard Test Methods of Static Tests of Lumber in Structural Sizes
- D2103 Standard Specification for Polyethylene Film and Sheeting
- D217 Standard Test Methods for Cone Penetration of Lubricating Grease
- D2369 Standard Test Method for Volatile Content of Coatings
- D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- D3786 Standard Test Method for Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
- D3792 Standard Test Method for Water Content of Coatings by Direct Injection Into a Gas Chromatograph
- D3864 Standard Guide for Continual On-Line Monitoring Systems for Water Analysis
- D3960 Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
- D4017 Standard Test Method for Water in Paints and Paint Materials by Karl Fischer Method
- D4263 Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method
- D4444 Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters
- D4491 Standard Test Methods for Water Permeability of Geotextiles by Permittivity
- D4552 Standard Practice for Classifying Hot-Mix Recycling Agents
- D4632 Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
- D4716 Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
- D4833 Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Product
- D4840 Standard Guide for Sampling Chain-of-Custody Procedures
- D4887 Standard Test Method for Preparation of Viscosity Blends for Hot Recycled Bituminous Materials
- D5106 Standard Specification for Steel Slag Aggregates for Bituminous Paving Mixtures
- D5116 Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products
- D5199 Standard Test Method for Measuring the Nominal Thickness of Geosynthetics

- D5261 Standard Test Method for Measuring Mass per Unit Area of Geotextiles
- D5268 Standard Specification for Topsoil Used for Landscaping Purposes
- D5359 Standard Specification for Glass Cullet Recovered from Waste for Use in Manufacture of Glass Fiber
- D5505 Standard Practice for Classifying Emulsified Recycling Agents
- D5509 Standard Practice for Exposing Plastics to a Simulated Compost Environment
- D5512 Standard Practice for Exposing Plastics to a Simulated Compost Environment Using an Externally Heated Reactor
- D5539 Standard Specification for Seed Starter Mix
- D5957 Standard Guide for Flood Testing Horizontal Waterproofing Installations
- D5603 Standard Classification for Rubber Compounding Materials—Recycled Vulcanizate Particulate Rubber
- D5663 Standard Guide for Validating Recycled Content in Packaging Paper and Paperboard
- D5759 Standard Guide for Characterization of Coal Fly Ash and Clean Coal Combustion Fly Ash for Potential Uses
- D5792 Standard Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives
- D5834 Standard Guide for Source Reduction Reuse, Recycling, and Disposal of Solid and Corrugated Fiberboard (Cardboard)
- D5851 Standard Guide for Planning and Implementing a Water Monitoring Program
- D5852 Standard Test Method for Erodibility Determination of Soil in the Field or in the Laboratory by the Jet Index Method
- D6002 Standard Guide for Assessing the Compostability of Environmentally Degradable Plastics
- D6006 Standard Guide for Assessing Biodegradability of Hydraulic Fluid
- D6007 Standard Test Method for Determining Formaldehyde Concentration in Air from Wood Products Using a Small Scale Chamber
- D6046 Standard Classification of Hydraulic Fluids for Environmental Impact
- D6081 Standard Practice for Aquatic Toxicity Testing of Lubricants: Sample Preparation and Results Interpretation
- D6108 Standard Test Method for Compressive Properties of Plastic Lumber and Shapes
- D6109 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber
- D6112 Standard Test Methods for Compressive and Flexural creep and Creep-Rupture of Plastic Lumber and Shapes
- D6117 Standard Test Methods for Mechanical Fasteners In Plastic Lumber and Shapes
- D6155 Standard Specification for Nontraditional Coarse Aggregates for Bituminous Paving Mixtures
- D6245 Standard Guide for Using Indoor Carbon Dioxide Concentrations to Evaluate Indoor Air Quality and Ventilation
- D6261 Standard Specification for Extruded and Compression Molded Basic Shapes Made from Thermoplastic Polyester (TPES)
- D6262 Standard Specification for Extruded, Compression Molded, and Injection Molded Basic Shapes of Poly(aryl ether ketone) (PAEK)
- D6270 Standard Practice for Use of Scrap Tires in Civil Engineering Applications
- D6329 Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers

- D6330 Standard Practice for Determination of Volatile Organic Compounds (Excluding Formaldehyde) Emissions from Wood-Based Panels Using Small Environmental Chambers Under Defined Test Conditions
- D6345 Standard Guide for Selection of Methods for Active, Integrative Sampling of Volatile Organic Compounds in Air
- D6400 Standard Specification for Compostable Plastics
- D6435 Standard Test Method for Shear Properties of Plastic Lumber and Plastic Lumber Shapes
- D6629 Standard Guide for Selection of Methods for Estimating Soil Loss by Erosion
- D6662 Standard Specification for Polyolefin-Based Plastic Lumber Decking Boards
- D6712 Standard Specification for Ultra-High-Molecular-Weight Polyethylene (UHMW-PE) Solid Plastic Shapes
- D6886 Standard Test Method for Speciation of the Volatile Organic Compounds (VOCs) in Low VOC Content Waterborne Air-Dry Coatings by Gas Chromatography
- D692 Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures
- D696 Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C With a Vitreous Silica Dilatometer
- D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³))
- D7186 Standard Practice for Quality Assurance Observation of Roof Construction and Repair
- E1021 Standard Test Methods for Measuring Spectral Response of Photovoltaic Cells
- E1038 Standard Test Method for Determining Resistance of Photovoltaic Modules to Hail by Impact with Propelled Ice Balls
- E1039 Standard Test Method for Calibration of Silicon Non-Concentrator Photovoltaic Primary Reference Cells Under Global Irradiation
- E1040 Standard Specification for Physical Characteristics of Nonconcentrator Terrestrial Photovoltaic Reference Cells
- E1105 Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference
- E1171 Standard Test Method for Photovoltaic Modules in Cyclic Temperature and Humidity Environments
- E1333 Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Under Defined Test Conditions Using a Large Chamber
- E1362 Standard Test Method for Calibration of Non-Concentrator Photovoltaic Secondary Reference Cells
- E1433 Standard Guide for Selection of Standards on Environmental Acoustics
- E1462 Standard Test Methods for Insulation Integrity and Ground Path Continuity of Photovoltaic Modules
- E1596 Standard Test Methods for Solar Radiation Weathering of Photovoltaic Modules
- E1597 Standard Test Method for Saltwater Pressure Immersion and Temperature Testing of Photovoltaic Modules for Marine Environments
- E1609 Standard Guide for Development and Implementation of a Pollution Prevention Program
- E1686 Standard Guide for Selection of Environmental Noise Measurements and Criteria
- E1690 Standard Test Method for Determination of Ethanol Extractives in Biomass
- E1721 Standard Test Method for Determination of Acid-Insoluble Residue in Biomass

- E1755 Standard Test Method for Ash in Biomass
- E1758 Standard Test Method for Determination of Carbohydrates in Biomass by High Performance Liquid Chromatography
- E1780 Standard Guide for Measuring Outdoor Sound Received from a Nearby Fixed Source
- E1799 Standard Practice for Visual Inspections of Photovoltaic Modules
- E1802 Standard Test Methods for Wet Insulation Integrity Testing of Photovoltaic Modules
- E1821 Standard Test Method for Determination of Carbohydrates in Biomass by Gas Chromatography
- E1827 Standard Test Methods for Determining Airtightness of Buildings Using an Orifice Blower Door
- E1830 Standard Test Methods for Determining Mechanical Integrity of Photovoltaic Modules
- E1861 Standard Guide for Use of Coal Combustion By-Products in Structural Fills
- E1918 Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field
- E1971 Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings
- E1980 Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces
- E1991 Standard Guide for Environmental Life Cycle Assessment of Building Materials/Products
- E2047 Standard Test Method for Wet Insulation Integrity Testing of Photovoltaic Arrays
- E2114 Standard Terminology for Sustainability Relative to the Performance of Buildings
- E2128 Standard Guide for Evaluating Water Leakage of Building Walls
- E2129 Standard Practice for Data Collection for Sustainability Assessment of Building Products
- E2397 Standard Practice for Determination of Dead Loads and Live Loads associated with Green Roof Systems
- E2398 Standard Test Method for Water Capture and Media Retention of Geocomposite Drain Layers for Green Roof Systems
- E2399 Standard Test Method for Maximum Media Density for Dead Load Analysis of Green Roof Systems
- E2400 Standard Guide for Selection, Installation, and Maintenance of Plants for Green Roof Systems
- E241 Standard Guide for Limiting Water-Induced Damage to Buildings
- E2432 Standard Guide for General Principles of Sustainability Relative to Buildings
- E408 Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques
- E413 Standard Classification for Rating Sound Insulation
- E477 Standard Test Method for Measuring Acoustical and Airflow Performance of Duct Liner Materials and Prefabricated Silencers
- E648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
- E683 Standard Practice for Installation and Service of Solar Space Heating Systems for One- and Two-Family Dwellings
- E779 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization

- E781 Standard Practice for Evaluating Absorptive Solar Receiver Materials When Exposed to Conditions Simulating Stagnation in Solar Collectors With Cover Plates
 - E782 Standard Practice for Exposure of Cover Materials for Solar Collectors to Natural Weathering Under Conditions Simulating Operational Mode
 - E823 Standard Practice for Nonoperational Exposure and Inspection of a Solar Collector
 - E881 Standard Practice for Exposure of Solar Collector Cover Materials to Natural Weathering Under Conditions Simulating Stagnation Mode
 - E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements
 - E903 Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres
 - E948 Standard Test Method for Electrical Performance of Photovoltaic Cells Using Reference Cells Under Simulated Sunlight
 - F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
 - F2034 Standard Specification for Sheet Linoleum Floor Covering
 - F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
- E. Bat Conservation International:
- Bat Approved Bat Houses
- F. Carpet and Rug Institute
- Green Label & Green Label Plus Testing Programs,
www.carpet-rug.org/green-label-plus.html
- G. Center for Resource Solutions
- Green-e program
- H. EPA:
- Comprehensive Procurement Guidelines
 - ENERGY STAR
 - Environmentally Preferable Purchasing Program Final Guidance
 - GreenScapes program
 - Heat Island Initiative
 - Indoor Air Quality Building Education and Assessment Model (I-BEAM)
 - National Environmental Performance Track
 - Pollution Prevention (P2)
 - Product Stewardship Program
 - Significant New Alternatives Policy (SNAP) Program
- I. Federal Trade Commission:
- Guide for the Use of Environmental Marketing Claims
- J. Forest Stewardship Council:
- Chain-Of-Custody
 - Forest Management
- K. Green Building Initiative (GBI):

- Green Globes - US
- L. Green Seal:
- GC-03 Anti-Corrosive Paints
 - GC-12 Occupancy Sensors
 - GC-13 Split-Ductless Air-Source Heat Pumps
 - GS-05 Compact Fluorescent Lamps
 - GS-11 Paints
 - GS-13 Windows
 - GS-14 Window Films
 - GS-31 Electric Chillers
 - GS-32 Photovoltaic Modules
 - GS-36 Commercial Adhesives
 - GS-37 Industrial & Institutional Cleaners
- M. International Iron and Steel Institute:
- CO2 Breakthrough Program
- N. International Organization of Standardization:
- Guide 64; Guide for Inclusion of Environmental Aspects in Product Standards
 - 9660 Information processing -- Volume and file structure of CD-ROM for information interchange
 - 14001 Environmental management systems – Specification with guidance for use
 - 14004 Environmental Management Systems – General Guidelines on Principles, Systems and Supporting Techniques
 - 14020 Environmental labels and declarations – General principles
 - 14024 Environmental labels and declarations – Type I environmental labelling - Principles and procedures
 - 14040 Environmental management – Life cycle assessment – Principles and framework
- O. National Association of Home Builders:
- Advanced Framing Techniques: Optimum Value Engineering
- P. National Institute of Building Sciences:
- MOIST program for transfer of heat and moisture
 - Whole Building Design Guide
- Q. National Institute of Standards and Technology:
- BEES (Building for Environmental and Economic Sustainability) Lifecycle Decision Support Tool
- R. Sheet Metal and Air Conditioning Contractors' National Association:
- IAQ Guidelines for Occupied Buildings Under Construction
- S. Southcoast Air Quality Management District:
- 1168 Adhesive And Sealant Applications
- T. US Composting Council:

- Seal of Testing Assurance Program
- U. US Department of Agriculture:
 - Biobased Products – Definitions and Descriptions
- V. US Green Building Council:
 - LEED™ 2009 Green Building Rating System

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 42 00

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SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.

1.2 DEFINITIONS

- A. Permanent Enclosure: As determined by Contracting Officer, permanent or temporary roofing is complete, insulated, and weathertight; exterior walls are insulated and weathertight; and all openings are closed with permanent construction or substantial temporary closures.

1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum as required.
- B. Water Service: Reasonable use of water from existing water system is available for use without metering and without payment of use charges. Potable water will be available in housing units provided to contractor. Non potable water to be used for construction will be pumped from cisterns indicated on drawings. Contractor will be responsible for supplying pumps and water containment for duration of contract. Provide connections and extensions of services as required for construction operations.
- C. Electric Power Service: Electrical power will be available in housing unit for domestic/non construction use. Electric power for construction shall be provided by contractor via generators/compressors. Provide connections and extensions of services as required for construction operations.

1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Environmental Protection: Provide environmental protection as required by agency(ies) with jurisdiction and as indicated in the Contract Documents. Coordinate with requirements of the following:
 - 1. Regulatory Requirements.
 - 2. Indoor Air Quality (IAQ) Management.
 - 3. Noise & Acoustics Management.
 - 4. Environmental Management.
 - 5. Construction Waste Management.

- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ABAAS Accessibility Guidelines.

1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before NPS acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Temporary materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.
- B. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.76-mm-) thick, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with OD top rails.
- C. Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide concrete or galvanized steel bases for supporting posts.
- D. Safety Barrier Fence: Orange plastic fence used on site should be kept to a minimum. Where necessary, only the highest grade, most durable, bio-degradable options should be used.
- A. Barrier Tape: Yellow tape Imprinted with "CAUTION: CONSTRUCTION AREA", manufactured by Reef Industries, Inc., Houston, Texas, or approved equal.
- B. Wood Enclosure Fence: Plywood, 6 feet (1.8 m) high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 - 1. Locate facilities to limit site disturbance and as directed by the Contracting Officer.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, NPS, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services. Acquire all necessary permits.
- B. Non-potable water for construction will be provided by the Government. The Contractor will be responsible for pumping and storing the water. Install piping and connections as required.
 - 1. The Government will allow the Contractor to use non-potable fresh water stored in cisterns below multiple casemates (indicated on drawings) if needed, and for cleaning equipment, etc. The main cistern in the parade ground will only be used in the event there is a problem with the other cisterns. There is approximately 90,000 gallons of nonpotable, slightly saline water available.
- C. Potable water for construction activities is not available on site.
- D. Sanitary Facilities:
 - 1. Toilets: Use of existing toilet facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to NPS. At Substantial Completion, restore these facilities to condition existing before initial use.
- E. Electric Power Service: Electrical power for construction shall be provided by the Contractor. Housing units will be equipped with electrical power service available to the Contractor at no charge for reasonable domestic use. (See 1.3.C.)
- F. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- G. Telephone Service: No telephone service is available on site for Contractor's use. Make arrangements with Telephone Company and pay all costs.

3.3 SUPPORT FACILITIES INSTALLATION

A. General: Comply with the following:

1. Provide incombustible construction for offices, shops, and sheds located within construction area or within 50 feet of building lines. Comply with NFPA 241.
2. Maintain support facilities until near Substantial Completion. Remove structures, equipment, and furnishings, and terminate services after punch list is 100 percent completed or when directed by Contracting Officer. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Contracting Officer.

B. Temporary Roads and Paved Areas: Temporary roads and paved areas are not permitted.

1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.

C. Traffic Controls: Erect and maintain barricades, lights, danger signals, and warning signs in accordance with Manual on Uniform Traffic Control Devices (MUTCD), Part IV, latest edition.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.
2. Maintain access for fire-fighting equipment and access to fire hydrants.
3. Illuminate barricades and obstructions at night; keep safety lights burning from sunset to sunrise.
4. Adequately barricade and post open cuts in or adjacent to thoroughfares.
5. Protect pedestrian traffic by guardrails or fences.
6. When pedestrian traffic is detoured onto a roadway, provide temporary walkways with protection as required at ends and overhead. For walkways, use lumber running parallel to direction of traffic movement and provide ramps at changes of elevation.
7. Cover pipes, hoses, and power lines crossing sidewalks and walkways with troughs using beveled edge boards.
8. Install Barrier Tape where directed by Contracting Officer. Keep a minimum of two rolls on site at all times

D. Project Identification and Temporary Signs: Provide Project identification signs. Fence, barricade, or otherwise block off the immediate work area to prevent unauthorized entry.

1. Provide temporary, directional signs for construction personnel and visitors.
2. Maintain and touchup signs so they are legible at all times.
3. Erect and maintain sufficient detour signs at road closures and along detour routes.

E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of agency(ies) with jurisdiction.

F. Existing Stair Usage: Use of existing stairs will be permitted, as long as stairs are cleaned and maintained in a condition acceptable to Contracting Officer. At Substantial Completion, restore stairs to condition existing before initial use.

1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If, despite such protection, stairs become damaged, restore damaged areas so no evidence remains of correction work.

- G. Temporary Use of Permanent Stairs: Cover finished, permanent stairs with protective covering of plywood or similar material so finishes will be undamaged at time of acceptance.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Cleaning of Equipment: The Contractor shall ensure that prior to moving on to the Project Area, all equipment, is free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Ensure that all equipment has been pressure washed and is free of exotic species prior to start-up of operations and moving of equipment to Project Area. Equipment shall be considered free of soil, seeds, and other debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools are not required.
- C. Temporary Erosion and Sedimentation Control: Refer to Section 01 57 23 "Temporary Storm Water Pollution Prevention".
- D. Tree and Plant Protection: Refer to Section 01 11 00 "Summary of Work".
- E. Pest Control: Follow NPS requirements and practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- F. Site Enclosure Fence: Before construction operations begins furnish and install chain link fencing in a manner that will prevent people from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 - 2. Locate vehicular gates to avoid interference with traffic on public thoroughfares.
 - 3. Locate pedestrian entrance gates as required to provide controlled personnel entry.
- G. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- H. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Responsible Person: A capable and qualified person shall be placed in charge of fire protection. The responsibilities shall include locating and maintaining fire protective equipment and establishing and maintaining safe torch cutting and welding procedures.
 - 2. Smoking: Smoking within buildings or temporary storage sheds is prohibited.

3. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of NPS. Check with park; many require “burn permits” for welding.
4. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
5. Hazard Control: Take all necessary precautions to prevent fire during construction. Do not store flammable or combustible liquids in the fort. Provide adequate ventilation during use of volatile or noxious substances.
6. Spark Arresters: Equip all gasoline or diesel powered equipment used during periods of potential fire hazards or in potential forest and grass fire locations with spark arresters approved by the USDA Forest Service.
 - a. Written determinations of periods and areas of potential fire hazard will be issued by Contracting Officer.
7. Buildings: Furnish a minimum of one extinguisher for each 1,500 square feet of area or major fraction thereof.
 - a. Travel distance from any work station to the nearest extinguisher shall not exceed 75 feet.
8. Vehicles and Equipment: Provide one extinguisher on each vehicle or piece of equipment.
9. Service and Refueling Areas: Locate areas a minimum of 50 feet from buildings. Shut down equipment before refueling.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor. NPS reserves right to take possession of Project identification signs.

2. At Substantial Completion, clean and renovate permanent facilities used during construction period.

END OF SECTION 01 50 00

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SECTION 01 57 19.12 – NOISE & ACCOUSTICS MANAGEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Special requirements for noise and acoustics management during demolition and construction operations.

1.2 DEFINITIONS

- A. Ambient noise level: The total noise associated with a given environment, being usually a composite of normal or existing sounds from all sources near and far, excluding the noise source at issue.
- B. Daytime: The hours from 7 a.m. to 10 p.m. on weekdays and 7 a.m. to 10 p.m. on weekends and holidays.
- C. Nighttime: All non-daytime hours.
- D. Property line: The real or imaginary line along the ground surface and its vertical extension, which separates real property owned or controlled by one person from contiguous real property owned or controlled by another person or from any public right-of-way or from any public space.
- E. Receiving noise area: Any real property where people live or work and where noise is heard, excluding the project or source area.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 NOISE MANGEMENT

- A. Noise Control: Perform demolition and construction operations to minimize noise. Perform noise-producing work in less sensitive hours of the day or week as directed by the Contracting Officer.
- B. Repetitive and/or intermittent, high-level noise: Permitted only during Daytime.

1. Do not exceed the following dB(A) limitations at 50 feet:

<u>Sound Level in dB(A)</u>
70
80

<u>Time Duration of Impact Noise</u>
More than 12 minutes in any hour
More than 3 minutes in any hour

2. Maximum permissible construction equipment noise levels at 50 feet:

<u>EARTHMOVING</u>	<u>dB(A)</u>	<u>MATERIALS HANDLING</u>	<u>dB(A)</u>
Front Loaders	75	Concrete Mixers	75
Backhoes	75	Concrete Pumps	75
Dozers	75	Cranes	75
Tractors	75	Derricks Impact	75
Scrapers	80	Pile Drivers	95
Graders	75	Jack Hammers	75
Trucks	75	Rock Drills	80
Pavers, Stationary	80	Pneumatic Tools	80
Pumps	75	Saws	75
Generators	75	Vibrators	75
Compressors	75		

C. Ambient Noise:

1. Maximum noise levels (dB) for receiving noise area at property line shall be as follows:

- a. Residential receiving area

Daytime:	65 dB
Nighttime:	45 dB
- b. Commercial/Industrial receiving area

Daytime:	67 dB
Nighttime:	65 dB

2. In the event the existing local ambient noise level exceeds the maximum allowable receiving noise level (dB), the receiving noise level maximum for construction operations shall be adjusted as follows:

- a. Residential receiving area: Maximum 3 additional dB above the local ambient as measured at property line.
- b. Commercial/Industrial receiving area: Maximum 5 additional dB above the local ambient as measured at the property line.

3.2 FIELD QUALITY CONTROL

- A. Assess potential effects of construction noise on facility occupants in accordance with ASTM E1686 and as follows:

1. Ambient noise measurement: Measure at the property line at a height of at least four (4) feet above the immediate surrounding surface. Average the ambient noise level over a period of at least 15 minutes.
2. Ambient noise measurement at urban sites: Conduct during morning peak traffic hour between 7 A.M. and 9 A.M. and afternoon peak traffic hour between 4 P.M. and 6 P.M. In addition, conduct a 24-hour measurement at the proposed project site to document the noise pattern throughout the day. Adjust and weight for seasonal and climatic variations.

- B. Monitor noise produced from construction operations in accordance with ASTM E1780.

END OF SECTION 01 57 19.12

SECTION 01 57 23 – UNDER-AN-ACRE POLLUTION PREVENTION

PART 1 - GENERAL

1.1 SUMMARY

- A. NPS Standards and Guidelines require that water quality be protected at all times to ensure compliance with the Organic Act. The Contractor shall prepare an Under-An-Acre Pollution Prevention Plan (UPPP) for each project resulting in less than 1 acre of soil disturbance or not otherwise subject to the requirements of the NPDES program. *See https://www.nps.gov/dscw/upload/UnderAnAcre-UPPP_Guideline_3-30-16.pdf*
- B. The work of this section consists of implementing measures to Temporary Storm Water Pollution during construction activities, either through compliance with the NPDES permit program; Or in conformance with NPS guidance for UPPPs.

1.2 DEFINITIONS

- A. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.
- B. UPPP: Developed and implemented pollution prevention plan (including stormwater management measures, if needed) to protect the environment from pollutants on construction projects with less than one acre of disturbance in conformance with NPS guidelines.

1.3 SUBMITTALS

- A. After contract award and before the pre-construction conference, prepare and submit:
 - 1. A UPPP in conformance with NPS guidelines and adherence to all applicable construction storm water management practices.
- B. Inspection Schedule: Submit schedule for inspection and monitoring of all pollution prevention measures.
- C. Erosion Control Products: Submit manufacturer's product information and installation recommendations for silt fence, filter fabric, erosion control blanket, straw bales, and any other materials proposed for use on this project.

1.4 QUALITY ASSURANCE

- A. The Contractor shall prepare and submit a plan to the Contracting Officer (CO) for review and concurrence.
- B. Orientation Meeting: The Contractor shall be responsible for arranging and conducting a Pollution Prevention meeting/briefing to inform all parties scheduled to be on-site during the project of the

measures to be implemented for proper pollution prevention and control (may be included as part of the Pre-Construction Meeting).

1. Installation of silt fences, storm drain protection, and all other forms of pollution prevention controls shall not begin until after this meeting has occurred.
- C. Pollution Prevention Manager: The Contractor shall designate the Pollution Prevention Manager who will be responsible for the implementation, inspection, maintenance, and amendments to the approved plan.
1. The Pollution Prevention Manager shall be familiar with UPPP procedures and Best Management Practices (BMPs) and shall ensure that emergency procedures and the plan are updated as needed and available for inspection.
 2. When changes in the approved plan are required, the Pollution Prevention Manager shall prepare and certify an amendment and submit to the CO for review and concurrence.

PART 2 - PRODUCTS

2.1 UNDER-AN-ACRE POLLUTION PREVENTION PLAN:

- A. Provide a UPPP which conforms to all NPS requirements (utilize [UPPP template](#)) and include the following information and forms:
1. Responsible Parties
 2. General Information: Project Scope, Project Details, Site Information, and Spill Prevention.
 3. Standards and Constraints
 4. Project Scheduling
 5. Known Data on Soil and Fill
 6. Activities with the Potential to Generate Sediment
 7. Activities and Materials with the Potential to Pollute Storm Water
 8. Management and Reporting BMPs
 9. Waste Management BMPs
 10. Non-Storm Water Pollution Control BMPs
 11. Soil Stabilization BMPs
 12. Sediment Control BMPs
 13. Other Pollution Control BMPs
 14. References
 15. Preparer's Certification
 16. Appendices: Contact Information, Pollution Prevention Control Map or Sheet(s), Standard Installation Specifications for each BMP, and Blank forms.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL PROTECTION

- A. Protection of Natural Resources: Comply with applicable regulations and these specifications. Preserve the natural resources within the project boundaries and outside the limits of work performed under this Contract in their existing condition or restore to an equivalent or improved condition as approved by the CO.
- B. Construction Zone: Arrange construction activities to minimize pollution (i.e., erosion, trash, etc.) to the maximum practical extent.
 - 1. Clearing, excavation, and grading shall be limited to those areas of the project site necessary for construction. Minimize the area exposed and unprotected.
 - 2. Clearly mark and delineate the limits of work activities.
 - 3. Equipment shall not be allowed to operate outside the limits of work or to disturb existing vegetation.
 - 4. Excavation and grading shall be completed during the dry season to the maximum extent possible
 - 5. Material should be stored away from locations where water is present to the greatest extent practicable.

3.2 UNDER-AN_ACRE POLLUTION PREVENTION PLAN

- A. Review and Acceptance: The Contractor and the CO will jointly review the draft Plan and agree to any needed revisions. The Contractor shall incorporate all revisions, sign, and submit the final Plan to the CO. The final Plan will be the document enforced on the project.
 - 1. The accepted Plan will describe and ensure implementation of the practices which will be used to reduce the pollutants in storm water discharges.
 - 2. The Contractor shall maintain a current copy of the Plan and all associated records and forms at the jobsite throughout the duration of the project.
 - 3. The Plan shall be available at all times for public inspection and for the inspection and use of the CO.
 - 4. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.
- B. Implementation: Implement the Plan as required throughout the construction period and maintain all erosion control elements in proper working order.
 - 1. Do not perform clearing and grubbing or earthwork until the Plan has been implemented.

3.3 SITE INSPECTIONS AND PLAN REVISIONS

- A. Inspections: The Contractor and the CO will perform a weekly inspection of the site.

1. The inspection shall include disturbed areas that have not been completely stabilized, areas used for storage of materials, locations where vehicles enter or exit the site, and all other erosion and sediment controls that are included in the Plan.
 2. Inspections shall be documented.
 3. The inspection forms shall be retained onsite in the Plan notebook throughout the construction period.
- B. Plan Revisions: It may be necessary to revise the Plan during construction to make necessary improvements, revisions, or to respond to unforeseen conditions noted during construction or site inspections.
1. The Plan shall specify the mechanism whereby revisions may be proposed by the Contractor or the CO.
 2. The Contractor and the CO will jointly review each revision to the Plan before changes are incorporated and implemented. The Contractor will then provide a revised copy of the Plan to the CO.
 3. Accepted modifications will be implemented within 7 calendar days following the date of the inspection when deficiencies or necessary corrections are first noted.
- C. Negligence: Provide additional temporary erosion and pollution controls made necessary by Contractor's errors or negligence at no additional cost to the Government.

3.4 EROSION CONTROL MEASURES

- A. Erosion control measures shall consist of any and all BMPs for storm water discharges, including but not limited to silt fencing, barrier protectors, straw bales, temporary soil retention blankets, excelsior drainage filters, sediment traps and berms.
- B. Berms and excelsior drainage filters shall be used to form sediment traps and to control run-on and run-off into other areas, including creeks, streams, marshes, access roads, well areas, and the staging areas.
- C. Erosion control measures shall be used to contain only direct precipitation in the construction zone. The contained water shall be allowed to percolate into the ground or drain slowly through the drainage filter sediment traps.
- D. Earthen sediment traps or holding ponds shall not be used unless accepted by the CO.
- E. Reduce runoff velocity as well as direct surface runoff around and away from all fuel containment, storage, and borrow areas.
- F. Divert surface runoff around and away from cut and fill slopes.
- G. Place drainage filters around all catch basins to create sediment traps to control run-off from the construction area.
- H. Excess water used for dust control shall be contained within the demolition areas by the erosion control measures.

- I. Furnish, install, maintain, and operate necessary control measures and other equipment necessary to prevent erosion as described in the approved UPPP.
- J. Before the work begins, sufficient equipment shall be available on the site to assure that the operation and adequacy of the erosion control system can be maintained.

3.5 MAINTENANCE OF TEMPORARY FACILITIES

- A. Inspect control structures after each significant rainfall. Promptly repair breaches which occur.
- B. The Contractor shall remove entrapped sediment from behind excelsior drainage filter after each storm.

3.6 REPORTING

- A. If a discharge occurs or if the project receives a written notice or order from any regulatory agency, the Contractor will immediately notify the CO and will file a written report to the Agency(ies) with Jurisdiction within 7 days of the discharge event, notice, or order. Corrective measures shall be implemented immediately following the discharge, notice, or order. The report to the Agency(ies) with Jurisdiction shall contain the following items at a minimum:
 - 1. The date, time, location, nature of operation, and type of discharge, including the cause or nature of the notice or order.
 - 2. The BMPs deployed before the discharge event, or prior to receiving the notice or order.
 - 3. The date of deployment and type of BMPs deployed after the discharge event, or after receiving the notice or order, including additional BMPs installed or planned to reduce or prevent re-occurrence.
 - 4. An implementation and maintenance schedule for any affected BMPs.

3.7 SEDIMENT DISPOSAL

- A. Sediment excavated from temporary sediment control structures shall be disposed on the site with general fill, or with topsoil. Sediment shall be allowed to dry out as required before reuse.
- B. Contractor shall place the sediment removed from traps and other structures where it will not enter a storm drain or watercourse and where it will not immediately reenter the basin.

3.8 REMOVAL OF TEMPORARY POLLUTION CONTROL MEASURES

- A. All temporary control measures shall be removed with permission of the CO within 20 working days after final acceptance of the project, and/or once grading is completed and slopes have stabilized.

END OF SECTION 01 57 23

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SECTION 01 67 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and environmental requirements.

1.2 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.
- C. Definitions pertaining to sustainable development: As defined in ASTM E2114.
- D. Biobased Materials: As defined in the Farm Security and Rural Investment Act, for purposes of Federal procurement of biobased products, "biobased" means a "commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials." Biobased materials also include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by The Biomass Research and Development Act of 2000.
 - 1. Biobased content: The amount of biobased carbon in the material or product as a percentage of weight (mass) of the total organic carbon in the material or product.

- E. Chain-of-Custody: Process whereby a product or material is maintained under the physical possession or control during its entire life cycle.
- F. Environmentally preferable products: Products and services that have a lesser or reduced effect on the environment in comparison to conventional products and services. Refer to EPA's Final Guidance on Environmentally Preferable Purchasing for more information <http://www.epa.gov/oppt/epp/>.
- G. Stewardship: Responsible use and management of resources in support of sustainability.
- H. Sustainability: The maintenance of ecosystem components and functions for future generations.
 - 1. Recycled Content Materials: Products that contain pre-consumer or post-consumer materials as all or part of their feedstock. Recycled content claim shall be consistent with ISO 140001 Standard for the Use of Environmental Marketing Claims.
 - 2. Rapidly Renewable Material: Material made from plants that are typically harvested within a ten-year cycle.
 - 3. Regional Materials: Materials that are manufactured and extracted, harvested, or recovered within a radius of 500 miles from the Project location.

1.3 SUBMITTALS

- A. Record Submittals as specified in – Sustainable Design Close-Out Documentation, submit the following:
 - 1. Affirmative Procurement Reporting Form. Submit on form in Appendix A of this Section, or similar form as approved by Contracting Officer.
 - 2. Submit environmental data in accordance with Table 1 of ASTM E2129 for the following products:
 - a. Any products used in the course of the work that have recycled or biobased content.
 - 3. Material Safety Data Sheets (MSDS): For each product required by OSHA to have a MSDS, submit an MSDS. MSDS shall be prepared no earlier than June 1998. Include information for MSDS Sections 1 – 16 in accordance with ANSI Z400.1 and as follows:
 - a. Section 1: Chemical Product and Company Identification.
 - b. Section 2: Composition/Information on Ingredients.
 - c. Section 3: Hazards Identification.
 - d. Section 4: First Aid Measures.
 - e. Section 5: Fire Fighting Measures.
 - f. Section 6: Accidental Release Measures.
 - g. Section 7: Handling and Storage.
 - h. Section 8: Exposure Controls/Person Protection.
 - i. Section 9: Physical and Chemical Properties.
 - j. Section 10: Stability and Reactivity Data.
 - k. Section 11: Toxicological Information. Include data used to determine the hazards cited in Section 3. Identify acute data, carcinogenicity, reproductive effects, and target organ effects.

- l. Section 12: Ecological Information. Include data regarding environmental impacts during raw materials acquisition, manufacture, and use. Include data regarding environmental impacts in the event of an accidental release.
- m. Section 13: Disposal Considerations. Include data regarding the proper disposal of the chemical. Include information regarding recycling and reuse. Indicate whether or not the product is considered to be "hazardous waste" according the US EPA Hazardous Waste Regulations 40 CFR 261.
- n. Section 14: Transportation Information. Identify hazard class for shipping.
- o. Section 15: Regulatory Information. Identify federal, state, and local regulations applicable to the material.
- p. Section 16: Other Information. Include additional information relative to recycled content, biobased content, and other information regarding environmental and health impacts. Identify the date MSDS was prepared.
- 4. Chain Of Custody: Submit chain-of-custody documentation for sustainable forestry for the following products:
 - a. Rough Carpentry
 - b. Finish Carpentry
 - c. Wood Doors
 - d. Windows
 - e. Wood Flooring
 - f. Furnishings & Accessories

1.4 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 5. Contractor is encouraged to obtain materials in biodegradable or recyclable/reusable packaging which uses the minimum amount of packaging possible.

C. Storage:

1. Store products to allow for inspection and measurement of quantity or counting of units.
2. Store materials in a manner that will not endanger Project structure.
3. Store products that are subject to damage by the elements, under cover in a weather tight enclosure above ground, with ventilation adequate to prevent condensation.
4. Store cementitious products and materials on elevated platforms.
5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
7. Protect stored products from damage and liquids from freezing.
8. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

1.6 PACKAGING

- A. Where Contractor has the option to provide one of the listed products or equal, preference shall be given to products with minimal packaging and easily recyclable packaging as defined in ASTM D5834.
- B. Maximize use of source reduction and recycling procedures outlined in ASTM D5834.
- C. Provide minimum 45 percent post-consumer recycled content and minimum 100 percent recovered fiber content of industrial paperboard in accordance with EPA's Comprehensive Procurement Guidelines and ASTM D5663.
- D. Provide minimum 10 percent post-consumer recycled content and minimum 10 percent recovered fiber content of carrier board in accordance with EPA's Comprehensive Procurement Guidelines and ASTM D5663.
- E. Provide minimum 5 percent post-consumer recycled content and minimum 5 percent recovered fiber content of brown papers (e.g., wrapping papers and bags) in accordance with EPA's Comprehensive Procurement Guidelines and ASTM D5663.

1.7 ENVIRONMENTALLY PREFERABLE PRODUCTS

- A. Provide environmentally preferable products to the greatest extent possible.
 1. To the greatest extent possible, provide products and materials that have a lesser or reduced effect on the environment considering raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and/or disposal of the product.
 2. Eliminate the use of ozone depleting compounds during and after construction where alternative environmentally preferable products are available, consistent with either the Montreal Protocol and Title VI or the Clean Air Act Amendments of 1990, or equivalent overall air quality benefits that take into account life cycle impacts.
 3. Use products meeting or exceeding EPA's recycled content recommendations for EPA-designated products. Use materials with recycled content such that the sum of post-

consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

1.8 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using appropriate form properly executed.
 - 3. Refer to Divisions 02 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 01 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
 - 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 - 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 - 3. Government reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 - 4. Where products are accompanied by the term "as selected," Contracting Officer will make selection.
 - 5. Where products are accompanied by the term "match sample," sample to be matched is Governments.
 - 6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.

B. Product Selection Procedures:

1. Product: Where Specifications name a single product and manufacturer, provide the named product that complies with requirements or approved equal.
2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements or approved equal.
3. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements or approved equal.
4. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements or approved equal.
5. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
6. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
7. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product, system, or approved equal.
8. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers, or approved equal. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.
9. Visual Matching Specification: Where Specifications require matching an established Sample, select a product that complies with requirements and matches Architect's sample. Contracting Officers decision will be final on whether a proposed product matches.
 - a. If no product available within specified category matches and complies with other specified requirements, comply with provisions in Part 2 "Product Substitutions" Article for proposal of product.
10. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.
 - a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Contracting Officer will select color, pattern, density, or texture from manufacturer's product line that does not include premium items.
 - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Contracting Officer will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions: Contracting Officer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Contracting Officer will return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION

3.1 PROTECTION AFTER INSTALLATION

- A. Provide adequate coverings as necessary to protect installed materials from damage resulting from natural elements, traffic, and subsequent construction. Remove when no longer needed.

END OF SECTION 01 67 00

AFFIRMATIVE PROCUREMENT REPORTING FORM
Recycled Content Materials & Biobased Content Materials

Project Name: _____ Project Number: _____

Contractor Name: _____ License Number: _____

Contractor Address: _____

Product	Total \$ value provided	Total \$ value w/ recycled content Pre-con- sumer	Total \$ value w/ recycled content Post- con- sumer	Total \$ value w/ bi- obased content	Exempted indicate 1,2,3,4	Comments
Hydraulic Mulch (paper based)						
Hydraulic Mulch (wood based)						
Compost						
Parking Stops (Concrete w/ fly ash, slag cement or low cement con- tent)						
Parking Stops (Plastic/Rubber)						
Patio Blocks/Rub- ber						
Patio Blocks/Plas- tic						
Playground Sur- faces						
Concrete w/ fly ash						
Concrete w/ slag cement						
Concrete w/ low cement content						
Plastic lumber						
Building Insula- tion						
Rock Wool						
Fiber glass						
Cellulose						
Perlite Comp Board						
Plastic Rigid Foam						

Glass Fiber Reinf Foam						
Phenolic Rigid Foam						
Ceramic tile						
Resilient flooring						
Floor Tiles/Rub- ber						
Floor Tiles/Plas- tic						
Running Tracks						
Carpet (PET)						
Paint						
Reprocessed La- tex Paint White & Light Colors						
Reprocessed La- tex Dark Colors						
Consolidated La- tex Paint						
toilet/shower parti- tions (plastic or steel)						
Other						

CERTIFICATION

I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

1. The product does not meet appropriate performance standards
2. The product is not available within a reasonable time frame
3. The product is not available competitively (from two or more sources)
4. The product is only available at an unreasonable price (compared with a comparable non-recycled content product.)

Signature: _____ Date: _____

END OF
AFFIRMATIVE PROCUREMENT REPORTING FORM
Recycled Content Materials & Biobased Content Materials

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SECTION 01 73 29 - CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes procedural requirements for cutting and patching on buildings that do not contain Historic Fabric.

1.2 SUBMITTALS

- A. Cutting and Patching Plan: Submit a Plan describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
 - 1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
 - 3. Products: List products to be used and firms or entities that will perform the Work.
 - 4. Dates: Indicate when cutting and patching will be performed.
 - 5. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure. Do not cut and patch structural elements in a manner that could change their load carrying capacity or increase deflection.
 - 6. Contracting Officer's: Obtain approval of cutting and patching plan before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.3 QUALITY ASSURANCE

- A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
- B. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
- C. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
- D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Contracting Officer's opinion, reduce the building's

aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
 - 1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.
 - 2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
 - 1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 - 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Proceed with patching after construction operations requiring cutting are complete.
- C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
 - 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
 - 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 4. Ceilings: Patch, repair, or re-hang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 - 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.
- D. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01 73 29

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SECTION 01 73 40 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Coordination with utility service providers.
 - 2. Construction layout.
 - 3. Field engineering and surveying.
 - 4. General installation of products.
 - 5. Progress cleaning.
 - 6. Starting and adjusting.
 - 7. Protection of installed construction.
 - 8. Correction of the Work.

1.2 SUBMITTALS

- A. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- B. Quantity Surveys: Submit 2 copies showing quantities of work performed and actual construction completed and in place.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements, and other construction indicated as existing are not guaranteed.
 - 1. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.
 - 2. Before construction, verify the location and points of connection of utility services.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to the Contracting Officer in accordance with Division 01 Specification 01 31 00 "Project Management and Coordination".

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the existing benchmarks. If discrepancies are discovered, notify Contracting Officer promptly.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations. Controls that are destroyed by Contractor will be replaced by the Contractor at their expense.

1. Existing Monuments: All bench marks, land corners, and triangulation points, established by other surveys, existing within the construction area shall be preserved. If existing monuments interfere with the work, secure written permission before removing them.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by the Contracting Officer.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.
- J. Quantity surveys: Shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

1. The Contractor shall conduct the original and final surveys and surveys for any periods for which progress payments are requested. All these surveys shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. The Government shall make such computations as are necessary to determine the quantities of work performed or finally in place. The Contractor shall make the computations based on the surveys for any periods for which progress payments are requested.
2. Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.
 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 3. Contractor shall provide progress cleaning that minimizes sources of food, water, and harborage available to pests.
- D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
 1. Utilize non-toxic cleaning materials and methods.
 - a. Comply with GS 37 for general purpose cleaning and bathroom cleaning.
 - b. Use natural cleaning materials where feasible. Natural cleaning materials include:
 - 1) Abrasive cleaners: substitute 1/2 lemon dipped in borax.
 - 2) Ammonia: substitute vinegar, salt and water mixture, or baking soda and water.

- 3) Disinfectants: substitute 1/2 cup borax in gallon water.
 - 4) Drain cleaners: substitute 1/4 cup baking soda and 1/4 cup vinegar in boiling water.
 - 5) Upholstery cleaners: substitute dry cornstarch.
- E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
- F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- K. Final Cleaning: At completion of Work, remove all remaining waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave Project clean and ready for occupancy.
1. Provide final cleaning in accordance with ASTM E1971.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 01 Section "Cutting and Patching."
1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01 73 40

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Solid Waste: Garbage, debris, sludge, or other discharged material (except hazardous waste) including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations.
- D. Debris: Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure which exceeds 2.5 inch (60 mm) particle size that is: a manufactured object; plant or animal matter; or natural geologic material (e.g. cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.
- E. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- F. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.
- G. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.
- H. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173, requires a Material Safety Data Sheet (MSDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261.

- I. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- J. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Project shall minimize creation of construction, deconstruction, and demolition waste to protect and restore natural habitat and resources. Factors that contribute to waste such as over packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized. A Waste Management Plan shall be developed to ensure that existing site and building materials are reused, salvaged, or recycled. Waste disposal in landfills shall be minimized.
- B. Salvage /Recycle Requirements: Develop waste management plan that results in end-of-Project rates for salvage/recycling of 50 percent by weight of total waste generated by the Work. The following waste categories, at a minimum, shall be diverted from a landfill:
 - 1. Clean dimensional wood, palettes
 - 2. Plywood, OSB, and particle board
 - 3. Cardboard, paper, packaging, newsprint
 - 4. Metals (from banding, stud trim, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze)
 - 5. Non-hazardous paint and paint cans
 - 6. Beverage containers: Aluminum, glass, and plastic containers
 - 7. Other mixed construction and demolition waste as appropriate
- C. If any waste materials encountered during the deconstruction/demolition or construction phase are found to contain lead, asbestos, PCBs, (such as fluorescent lamp ballasts), or other harmful substances, they are to be handled and removed in accordance with local, state, and federal laws and requirements concerning hazardous waste.
- D. Existing items and material to be removed during the deconstruction/demolition phase shall be reused in the construction phase of the Project. Items that cannot be reused shall be recycled. Items considered for reuse must be in refurbishable condition and must meet the quality standards set forth in these specifications. Contractor shall ensure that the quality of the item(s) in question will meet or exceed accepted industry or trade standards for first quality commercial grade application. During construction, deconstruction, or demolition the Contracting Officer may designate other objects or materials for reuse.
- E. Salvage/Recycle Requirements: Government goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible including the following materials:
- F. Salvage/Recycle Requirements: Government goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible. Government has established minimum goals for the following materials:
 - 1. brick

1.4 SUBMITTALS

- A. Waste Management Plan: After award of contract and prior to the scheduled Pre-Construction Conference, Contractor shall submit a draft Waste Management Plan to the Contracting Officer for approval. Submit 3 copies of plan. Revise and resubmit Plan as required by the Contracting Officer. Approval of Contractor's Plan will not relieve Contractor of responsibility for compliance with applicable environmental regulations.
- B. Progress Documentation: Supplemental to the Waste Management Plan, document solid waste disposal, diversion, and cost/revenue analysis and submit completed worksheet on a monthly basis. Use Appendix A - Project Waste Management Plan Worksheet, and report totals to date for all column headings. Use Appendix B for solid waste volume to weight conversions.
- C. Waste Reduction Calculations: Before request for Substantial Completion, submit three copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Progress payment requirements:
 - 1. With each Application for payment, submit updated Project Waste Management Plan worksheet for solid waste disposal and diversion.
 - 2. With each Application for Payment, submit manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material.
- I. Closeout Submittals
 - 1. With Closeout Submittals, submit a summary of the Project Waste Management Plan worksheet for solid waste disposal and diversion. Submit on form in Appendix A of this Section.

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

- B. Waste Management Meeting: Conduct separate meeting or cover in the Pre-Construction Conference and comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 2. Review requirements for documenting quantities of each type of waste and its disposition.
 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 5. Review waste management requirements for each trade.

PART 2 - PRODUCTS

2.1 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification and waste reduction work plan. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Salvaged Materials for Sale: For materials sold to individuals and organizations, include list of names, addresses, and telephone numbers.
 3. Salvaged Materials for Donation: For materials donated to individuals and organizations, include list of names, addresses, and telephone numbers.
 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 6. Handling and Transportation Procedures: Include method used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Landfill tip fees/ton
2. If diverted, tip fee savings from landfill diversion
3. Costs of recycling, salvage, or reuse
4. Revenue from recycling, salvage, or reuse
5. Total cost or savings from diversion (Calculate by using tip fee savings and subtracting costs of recycling or adding revenue from recycling)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by the Contracting Officer. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Waste Management Coordinator: Engage a waste management coordinator responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Contractor shall establish contacts with local recycling and reuse companies to set up lines of responsibility. Contractor shall be responsible for coordination in terms of identifying materials, pickup schedules, and standard quality for recycled materials.
- D. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- E. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- F. Separation facilities:
 1. Contractor shall designate and Contracting Officer shall approve a specific area or areas to facilitate separation of materials for potential reuse, salvage, recycling, and return.
 2. Waste and recycling bins are to be placed near each other, and close to the point of waste generation but out of the traffic pattern.
 3. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid co-mingling of materials.
 4. Bins shall be protected during non-working hours from off-site contamination.
 5. Garbage dumpsters should be checked periodically to monitor recyclables being thrown away or if there are undocumented materials that could be recycled.
- G. Materials handling procedures: Materials to be recycled shall be protected from contamination and shall be handled, stored, and transported in a manner that meets the requirements set by the designated facilities for acceptance. Establish a defined area for the operations of each trade,

especially woodcutting so that off-cuts will be kept in one area and can be sorted by dimension for future reuse.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until installation.
4. Protect items from damage during transport and storage.
5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for Sale and Donation: Shall be transported off the island.

C. Salvaged Items for Governments Use:

1. Clean salvaged items.
2. Store items where directed by Contracting Officer.
3. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.

C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.

1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
4. Store components off the ground and protect from the weather.
5. Remove recyclable waste off Governments property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 1. Non-salvaged brick and coral concrete may be pulverized on site.
- B. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- C. Metals: Separate metals by type.
 - 1. Remove and dispose of bolts, nuts, washers, and other rough hardware.

3.5 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees on-site.
- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

- B. Burning: Burning of waste materials is allowed only at designated areas on Government property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.
- C. Disposal: Transport waste materials off Governments property and legally dispose of them.

END OF SECTION 01 74 19

017419 - Appendix A
Project Waste Management Plan Worksheet

	A	B	C	D	E	F	G	H	I	J
Material	Quantity Recycled (in tons)	Quantity Salvaged or Reused (in tons)	A + B = Total Quantity Diverted from Landfill	Quantity To Landfill (in tons)	C + D = Total Quantity Generated (in tons)	Tip Fee/Ton at Landfill	C x F = Tip Fee Savings resulting from Landfill Diversion	Cost of Recycling (R), Salvage (S), or Reuse (Re) (Specify R, S, or Re)	Revenue from Recycling, Salvage, or Reuse	G - H + I = Total Cost (-) or Savings (+) from Diversion
Asphalt/Concrete										
Brick/Masonry/Tile										
Building Materials (doors, windows, fixtures, shingles, lumber, insulation, sheetgoods, etc.)										
Carpet										
Carpet Padding, Foam Only										
Cardboard										
Ceiling Tile										
Drywall										
Glass										
Scrap Metal Aluminum										
Copper										
Steel										
Unpainted Wood & Pallets										
Yard Trimmings, Brush, Trees, Stumps, etc.										
Garbage/Trash										
Other										
Column Totals										
	Total Quantity Recycled	Total Quantity Reused or Salvaged	Total Quantity Diverted from Landfill	Total Quantity To Landfill	Total Quantity Generated		Tip Fee Savings from Diversion	Total Cost of Recycling, Salvage, or Reuse	Revenue from Recycling, Salvage, or Reuse	Total Cost (-) or Savings (+) from Diversion

Percentage Diverted = _____ (C divided by E from Column Totals) Should meet specified diversion requirement.

017419 - Appendix B

STANDARD SOLID WASTE CONVERSIONS

The following sections provide conversions for solid waste and recyclable materials. Section 1 provides formulas to convert solid waste volume (cubic yards) into tons. Section 2 includes conversion factors to estimate the volume and weight of a number of solid waste and recyclable materials.

1. To convert cubic yards to tons:

A: For un-compacted trash, to convert the units of cubic yards into tons, using the standard density of trash value of 250 pounds per cubic yard:

Using “X” cubic yards, multiply by 250 pounds per cubic yard, divide by 2000 pounds per ton, to obtain value in tons.

$$\text{“X” cubic yards} \times \frac{250 \text{ pounds}}{\text{cubic yard}} \div \frac{1 \text{ ton}}{2000 \text{ pounds}} = \text{_____ tons}$$

This equals:

$$\text{“X” cubic yards} \times \frac{0.125 \text{ tons}}{\text{cubic yard}} = \text{_____ tons}$$

In this case, 8 cubic yards = one ton.

B: To determine your own density value for un-compacted trash (instead of using the standard value of 250 pounds per cubic yard), using a 32 gallon trash can:

- (1) Weigh the trash can both filled and empty (use a full 32 gallon trash can filled with trash roughly level to the top);
- (2) Subtract the empty weight from the filled weight to get the weight of trash (filled weight – empty weight = weight of trash);
- (3) Use the formula, using “Y” your weight of trash (pounds), divided by 0.15 cubic yards per 32 gallon trash can, to obtain your value in pounds per cubic yard; which equals:

$$\frac{\text{“Y” pounds}}{32 \text{ gallon can}} \div \frac{0.15 \text{ cubic yards}}{32 \text{ gallon can}} = \text{_____ pounds per cubic yard}$$

- (4) Substitute this value for the 250 pounds per cubic yard value in Method A above.

This would be the more accurate measure of your park’s specific waste.

C: For compacted trash, to convert cubic yards into tons:

To use a compaction ratio, multiply the appropriate ratio times the un-compacted trash weight in Formula A to obtain the compacted trash weight.

$$\text{“X” cubic yards} \times \frac{3}{1} (\text{compaction ratio}) \times \frac{250 \text{ pounds}}{\text{cubic yard}} \times \frac{1 \text{ ton}}{2000 \text{ pounds}} = \text{_____ tons}$$

Typical compaction ratios for trash:

3:1 (typical)
4:1 (higher-compaction vehicles)

If you or your hauler don't know the compacting ratio, the typical values for compacted trash are 500 to 1000 lbs./cubic yard, average 700 lbs./cubic yard. **Use 700 lbs. per cubic yard if you don't have more accurate records.**

For compacted trash, 0.4 is used instead of 0.125 in Formula A:

$$\text{"X" cubic yards} \times 0.4 \frac{\text{tons}}{\text{cubic yard}} = \text{_____ tons}$$

D: To convert container size to cubic yards for un-compacted waste:

If you don't have size and weight information on your specific containers, then these typical values can be used:

1 cubic yard = 202 gallons
32 gallon can = 0.15 cubic yards
60 gallon tote = 0.30 cubic yards
90 gallon tote = 0.45 cubic yards

2. EPA's Standard Volume-to-Weight Conversion Factors

Category	Recyclable Materials (u/c = uncompact/ compacted & baled)	Volume	Estimated Waste (in pounds)
FOOD SCRAPS ^A	Food scraps, solid and liquid fats	55-gal drum	412
GLASS	Bottles ^B Whole Bottles A. Semicrushed Crushed (mechanically) Uncrushed to manually broken Refillable Whole Bottles ^C Refillable beer bottles Refillable soft drink bottles 8 oz glass container	1 yd ³ 1 yd ³ 1 yd ³ 55-gal drum 1 case = 24 bottles 1 case = 24 bottles 1 case = 24 bottles	500-700 1,000-1,800 1,800-2,700 300 10-14 12-22 12
LEAD-ACID BATTERIES	Car ^D Truck ^E Motorcycle ^E	1 battery 1 battery 1 battery	39.4 lb 53.3 lb lead and plastic 9.5 lb lead and plastic

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Waste (in pounds)
METALS	Aluminum Cans ^F		
	Whole	1 yd ³	50-75
	Compacted (manually)	1 yd ³	250-430
	Uncompacted	1 full grocery bag	1.5
		1 case = 24 cans	0.9
	Ferrous (tin coated steel cans) ^G		
	Whole	1 yd ³	150
	Flattened	1 yd ³	850
	Whole	1 case = 6 cans	22
	Major Appliances ^E		
	Air conditioners (room)	1 unit	64.2
	Dishwashers	1 unit	92
	Dryers (clothes)	1 unit	130
	Freezers	1 unit	193
	Microwave ovens	1 unit	50
	Refrigerators	1 unit	181.1
	Ranges	1 unit	267
	Washers (clothes)	1 unit	177
	Water heaters	1 unit	131
PAPER	Newspaper ^F		
	Uncompacted	1 yd ³	360-505
	Compacted/baled	1 yd ³	720-1,000
	12 in. stack	-	35
	Old Corrugated Containers ^F		
	Uncompacted	1 yd ³	50-150 (300) ¹
	Compacted	1 yd ³	300-500
	Baled	1 yd ³	700-1,100
	Computer Paper ^F		
	Uncompacted	1 yd ³	655
	Compacted/baled	1 yd ³	1,310
	1 case	2,800 sheets	42
	White Ledger ^F		
	Stacked (u/c)	1 yd ³	375-465/755-925
	Crumpled (u/c)	1 yd ³	110-205/325
	Ream of 20# bond; 8.5"x11"	1 ream = 500 sheets	5
	Ream of 20# bond; 8.5"x14"	1 ream = 500 sheets	6.4
	White ledger pads	1 case = 72 pads	38
	Tab Cards ^F		
	Uncompacted	1 yd ³	605
	Compacted/baled	1 yd ³	1,215-1,350
	Miscellaneous Paper		
	Yellow legal pads ^F	1 case = 72 pads	38
	Colored message pads ^F	1 carton = 144 pads	22
	Telephone directories ^H	1 yd ³	250
	Mixed Ledger/Office Paper ^F		
	Flat (u/c)	1 yd ³	380/755
	Crumpled (u/c)	1 yd ³	110-205/610

Category	Recyclable Materials (u/c = uncompacted/ compacted & baled)	Volume	Estimated Waste (in pounds)
PLASTIC ^J	PET (Soda Bottles) Whole bottles (uncompacted) Whole bottles (compacted) Whole bottles (uncompacted) Baled Granulated Granulated 8 bottles (2 L size) HDPE (Dairy) Whole (uncompacted) Whole (compacted) Baled HDPE (Mixed) Baled Granulated Granulated Other Plastic Uncompacted Compacted/baled Mixed PET and HDPE (Dairy) Whole Film Baled Baled	1 yd ³ 1 yd ³ gaylord 30" x 62" semiload gaylord 16 L 1 yd ³ 1 yd ³ 32" x 60" 32" x 60" gaylord semiload 1 yd ³ 1 yd ³ 1 yd ³ semiload 30" x 42" x 48"	30-40 515 40-53 500-550 30,000 700-750 1 24 270 400-500 900 800-1,000 42,000 50 400-700 32 50 400-700
TEXTILES ^H	Mixed Textiles	1 yd ³	175
TIRES	Car Tires Whole tire ^E Crumb rubber ^K Truck Tires Whole tire ^E Crumb rubber ^K	1 tire 1 tire 1 tire 1 tire	21 12 70 60
WOOD	Wood chips ^L Pallets ^F	1 yd ³ -	725 30-100 (40 avg)
YARD TRIMMINGS ^F	Grass Clippings Uncompacted Compacted Leaves Uncompacted Compacted Vacuumed	1 yd ³ 1 yd ³ 1 yd ³ 1 yd ³ 1 yd ³	350-450 550-1,500 200-250 300-450 350
FURNISHINGS ^E	Foam rubber mattress	1 mattress	55
MUNICIPAL SOLID WASTE ^M	Residential waste (uncompacted at curb) Commercial-industrial waste (uncompacted) MSW (compacted in truck) MSW (landfill density)	1 yd ³ 1 yd ³ 1 yd ³ 1 yd ³	150-300 300-600 500-1,000 750-1,250

- A. Information obtained from Washington State.
- B. Draft National Recycling Coalition Measurement Standards and Reporting Guidelines presented to NRC membership. October 31, 1989.
- C. Personal communication with a representative from Allwaste. November 6, 1995.
- D. Battery Council International. 1995. 1994 National Recycling Rate Study.
- E. U.S. EPA. 1995. Methodology for Characterization of Municipal Solid Waste in the United States: 1994 Update. EPA530-R-96-001. Washington, DC.
- F. U.S. EPA. 1993. Business Guide for Reducing Solid Waste. EPA530-K-92-004. Washington, DC.
- G. Personal communication with a representative from the Steel Recycling Institute. November 1, 1995.
- H. Information obtained from Massachusetts State.
- I. Information obtained from New Jersey and New York States.
- J. Personal communication with a representative from the American Plastics Council. November 2, 1995.
- K. Personal communication with a representative from the Scrap Tire Management Council. November 6, 1995.
- L. Information obtained from Northeast Forest Products, Martin Mulch Company, and the Solid Waste Association of North America.
- M. Solid Waste Association of North America, Manager of Landfill Operations Training and Certification Course. January 1989.
- N. Information obtained from New Jersey and New York States.

SECTION 01 77 00 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Project Record Drawings
 - 2. Closeout Submittals
 - 3. Substantial Completion and Final Inspection
 - 4. Permit Closure and Transfer
 - 5. Final Acceptance of the Work
 - 6. Warranties

1.2 PROJECT RECORD DRAWINGS

- A. Maintain one complete full-size set of contract drawings and one full-size set of vendor-supplied drawings. Clearly mark changes, deletions, and additions using National Park Service drafting standards to show actual construction conditions. Show additions in red, deletions in green and special instructions in blue.
- B. Keep record drawings current. Make record drawings available to the Contracting Officer for inspection at the time of monthly progress payment requests. If project record drawings are not current, the Contracting Officer may retain an appropriate amount of the progress payment.
- C. On completion of the total project, submit complete record drawings. Include shop drawings, sketches, and additional drawings that are to be included in the final set, with clear instructions showing the location of these drawings.

1.3 CLOSEOUT SUBMITTALS

- A. A list of closeout requirements has been attached at the end of the Division 1 specifications for your convenience. The intent is to provide an overall summary of requirements and not a comprehensive list. The terms and conditions of the contract still require you to satisfy the requirements of the individual specification sections regardless of what is shown on the list. Submit the following before requesting final inspection:
 - 1. Specific warranties, guarantees, workmanship bonds, final certifications, and similar documents.
 - 2. Project Record Documents, operation and maintenance manuals, final completion construction digital images recorded on CD-R or DVD-R with index and descriptions, and similar final record information.
 - 3. Environmental Record Documents: As specified in Divisions 016700 and as follows:

- a. MSDS Data: As specified in Section 016700 Environmental Requirements for Products.
 - b. Affirmative Procurement Reporting Form: As specified in Section 016700 Environmental Requirements for Products.
 - c. Environmental Product Data: As specified in Section 016700 Environmental Requirements for Products.
 - d. LCA Data: As specified in Section 016700 Environmental Requirements for Products.
 - e. Chain-of-Custody Data: As specified in Section 016700 Environmental Requirements for Products.
 - f. Final Summary Of Solid Waste Disposal And Diversion: As specified in Section 017419 Construction Waste Management.
- 4. Deliver tools, spare parts, extra materials, and similar items to location designated by Contracting Officer. Label with manufacturer's name and model number where applicable.
 - 5. Keys and Keying Schedule: Return all keys provided during the course of construction.
 - 6. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 7. Complete final cleaning requirements, including touchup painting.

1.4 FINAL INSPECTION, SUBSTANTIAL COMPLETION AND ACCEPTANCE PROCEDURES

- A. Request a final inspection in writing when a project or designated portion of a project is substantially complete. The Contracting Officer will proceed with the inspection within 10 days of receipt of the written request or will advise the Contractor of items that prevent the project from being substantially complete.
- B. If the work is determined to be substantially complete, following the final inspection. Contracting Officer will prepare a Punch List and issue a Letter of Substantial Completion.
- C. If the work is not determined to be substantially complete following the final inspection, Contracting Officer will notify Contractor in writing. Contractor shall request a new final inspection after completing the work. Re-inspection costs may be charged against the Contractor in accordance with the Inspection of Construction contract clause.
- D. Contractor shall complete the Punch List within 30 calendar days, documented weather permitting.
- E. If Contractor completes all items of work on the Punch List and all contractually required items, Contracting Officer will issue Letter of final acceptance of work.
- F. If the Contractor fails to complete the work within the time frame, the Contracting Officer may correct the work with an appropriate reduction in contract price or charge for re-inspection costs in accordance with the Inspection of Construction contract clause.

1.5 PERMIT CLOSURE AND TRANSFER

- A. When the construction work covered by the permits is complete, create a list of tasks required to close or transfer the permits to the Park. Submit to Contracting Officer for approval.
- B. After substantial completion and the Punch List has been completed, the permits shall be closed and documented by the Agency(ies) with Jurisdiction for the permit.
- C. If responsibility for permits is to be transferred to the Park, the Park shall be informed of the permit provisions completed and responsibilities that will transfer to park staff.

1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Contracting Officer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
 - 4. Warranty Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item. Provide bookmarked table of contents at the beginning of document.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. See Division 01 Specification Section "Execution" for information on cleaning agents.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Conduct final cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
 - f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - g. Sweep concrete floors broom clean in unoccupied spaces.
 - h. Remove labels that are not permanent.
 - i. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
 - j. Leave Project clean and ready for occupancy.
- C. Waste Disposal: Comply with requirements of Division 01 section, "Construction Waste Management and Disposal."

END OF SECTION 01 77 00

CLOSEOUT AND OPERATION & MAINTENANCE REQUIREMENTS

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SECTION 02 41 19 – SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 DESCRIPTION

- A. The work of this section consists of the selective demolition and removal work involved in the repair of masonry elements and rehabilitation of multiple historic structures at Fort Jefferson. Fort Jefferson and its associated resources are significant historic structures and therefore all work shall comply with the Secretary of the Interior's Standards for Treatment of Historic Properties. Remove only materials specifically designated for removal in the drawings and specifications. Protect historic materials to remain.

1.2 RELATED SECTIONS

- A. Section 017419 – Construction Waste Management and Disposal.

1.3 SUBMITTALS

- A. Submit proposed methods of building protection and demolition procedures.
- B. Inventory: Upon completion of selective demolition, submit a list of items that have been removed and/or salvaged with approximate quantities.
- C. Landfill Records: Indicate receipt of and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous waste. Comply with requirements of Section 017419.

1.4 QUALITY ASSURANCE

- A. Qualifications: Firm shall be experienced in masonry demolition work similar to that required for this project and have a minimum of five years of experience in selective demolition of historic structures.
- B. Comply with the safety requirements for demolition, NFPA 241, Standard for Safeguarding Construction, Alteration and Demolition Operations.
- C. Comply with governing EPA and other applicable regulations before beginning selective demolition activities. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5 PROJECT CONDITIONS

- A. Hazardous Materials: No hazardous materials are known to be present. Contractor shall comply with all federal, state and local regulations when contacting, handling or disposing of hazardous materials.
- B. Keep dust and dirt pollution to a minimum. Take measures to protect debris from entering moat (See Specification Section 015710).
- C. Provide temporary barricades as required to keep visitors and NPS staff from entering work area.

D. Provide adequate fire protection. Keep area clear of hazardous substances and debris.

E. Maintain access to exits at all times.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.1 EXAMINATION

- A. Survey existing conditions and correlate with drawings and specifications to determine extent of demolition required.

3.2. SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent indicated on the drawings. Use methods to complete the Work within limitations of governing regulations and as follows:

1. Secure areas of delaminated or unstable masonry. Install any necessary bracing and shoring.
2. Proceed with selective demolition systematically, from higher areas to lower level.
3. In accordance with SOI Standards for Treatment of Historic Properties, removal will be done using the gentlest means possible. Customary masonry hand tools; mallet, chisel, pic, rake and trowel devices and wire brushes will be used. Power equipment like hammering tools, reciprocating and grinding tools, and pneumatic tools and compressed air may only be used when situations require added effort and for limited applications (range and depth) until work with hand tools can resume. Saws and drills are not permitted for dislodging deteriorated masonry, mortar, or coral concrete fill. Power equipment will be permitted to the extent approved by the CO in advance, and permission may be revoked if their use results in unnecessary loss of intact wall fabric or other degrading conditions.
4. Demolish masonry in small sections taking measures to salvage as much historic brick as possible. The use of large jack hammers that cause damage to brick and thus reduce the salvage rate will not be permitted.
5. Existing items to remain shall be protected against damage during demolition operations.
6. Historic items, relics or archaeological artifacts encountered during the course of demolition will remain the property of the Government. Notify Contacting Officer if such items are encountered.

3.3 CLEAN UP

- A. Clean areas adjacent to work area of dust, dirt and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.
- B. Remove all unsalvageable material from Park and lawfully dispose of it.

END OF SECTION

SECTION 03 20 50 - FIBER REINFORCED POLYMER (FRP) BARS FOR CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiber reinforced polymer (FRP) bars for concrete reinforcement.

1.2 RELATED SECTIONS

- A. Section 047200 – Concrete Fabrications.

1.3 REFERENCES

- A. ACI 117 - Specifications for Tolerances for Concrete Construction and Materials.
- B. CRSI Placing Reinforcing Bars.
- C. ACI 440.1R-03 “Guide for the Design and Construction of Concrete Reinforced with FRP Bars,” American Concrete Institute, Farmington Hills, Mich.
- D. ACI 318-08, "Building Code Requirements for Concrete" (1995), American Concrete Institute, Farmington Hills, MI, 347 pp.
- E. ACI 440.5R-96, "State-of-the-Art Report on Fiber Reinforced Plastic Reinforcement for Concrete Structures" (1996), American Concrete Institute, Farmington Hills, MI, 68 pp.
- F. ACI 440.3R-04, – “Guide Test Methods for Fiber Reinforced Polymer Matrix Composite Bars”
- G. ACI 440.5-08 – “Specifications for Construction with Fiber Reinforced Polymer Reinforcing Bars”
- H. ACI 440.6-08 – “Specifications for Carbon and Glass Reinforced Polymer Bar Materials for Concrete Reinforcement”
- I. International Building Code.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer’s product data, including material and mechanical properties.
- B. Test Reports: Submit manufacturer’s certified test reports for source quality control testing for material and mechanical properties performed by an independent testing agency.
 - 1. Each bar size.
 - 2. Each type of fiber reinforcement specified.
 - 3. Each type of resin matrix specified.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. General: Deliver, store, and handle FRP bars in accordance with manufacturer's instructions to prevent damage.
- B. Storage:
 - 1. Do not store FRP bars directly on ground. Place timber pallets under bars to keep them free from dirt and mud and to provide easy handling.
 - 2. Store FRP bars under covers to avoid direct sunlight and chemical substances.

PART 2 PRODUCTS

2.1 FIBER REINFORCED POLYMER (FRP) BARS FOR CONCRETE REINFORCEMENT

- A. Fiber Reinforced Polymer (FRP) Bars: FRP Bars for concrete reinforcement. Surface of FRP bar is provided with a sand coating that inhibits longitudinal movement of bar relative to concrete.
- B. Binding Material: Binding material is composed of modified vinyl ester resin with a maximum volume fraction of 35 percent.
- C. Fiber Reinforcement: Continuous E-glass fibers with a minimum volume fraction of 65 percent.

2.3 BAR IDENTIFICATION: FRP bars shall be imprinted with bar identification.

Company Symbol (a)	Fiber Type (b)	Bar Size (c)	Grade (d)	Modulus of Elasticity (e)	Batch Number (f)
XXX	G	#4	F100	6	XX-XX-XX

- a. Company Symbol: Provide symbol to identify approved Manufacturer.
- b. Fiber Type: A symbol to indicate type of fiber (i.e., C for carbon).
- c. Bar Size: A numerical number corresponding to diameter of bar in number of eight of an inch.
- d. Grade: A symbol corresponding to grade of bar corresponding to the minimum guaranteed design strength in units of 10 (minimum of F100 or 100 ksi).
- e. Modulus of Elasticity: A number corresponding to modulus of bar in units of million psi (minimum of 6,000,000 psi).
- f. Batch Number: A batch number identifying manufacturing date and lot number for reference and traceability.
- g. Fiber Type: A symbol to indicate type of fiber (i.e., C for carbon).
- h. Bar Size: A numerical number corresponding to diameter of bar in number of eight of an inch.
- i. Grade: A symbol corresponding to grade of bar corresponding to the minimum guaranteed design strength in units of 10 (minimum of F100 or 100 ksi).

- j. Modulus of Elasticity: A number corresponding to modulus of bar in units of million psi (minimum of 6,000,000 psi).
- k. Batch Number: A batch number identifying manufacturing date and lot number for reference and traceability.

2.4 DIMENSIONS: Nominal Diameter and Sectional Area

US Size	Nominal Diameter (inches)	Area (in ²)
#2	0.250	0.049
#3	0.375	0.110
#4	0.500	0.196
#5	0.625	0.307
#6	0.750	0.442
#8	1.000	0.785

2.6 SHOP BENDING:

- A. Shop bend uncured FRP bars with a gradual transition, avoiding sharp angles that might damage fibers, as specified ACI 440.1R-03.

2.7 COEFFICIENT OF THERMAL EXPANSION (C.T.E.):

- 1. Longitudinal Direction: 8×10^{-6} per degree C (4.5×10^{-6} per degree F).
- 2. Transverse Direction: 32×10^{-6} per degree C (18×10^{-6} per degree F).

2.8 DEVELOPMENT LENGTH:

- A. Develop bars as specified ACI 440.1R-03. A minimum overlap length of 40 diameters is required.

2.10 SOURCE QUALITY CONTROL

- A. Quality Control Testing: Quality control shall be carried out under the requirements of an ISO 9002 certified facility by testing FRP bars before use, to ensure required performance. Test reports from testing conducted by an independent testing agency can be used when available. Perform following quality control tests in accordance with standard test methods (available from Pultrall or ACI):

Tensile strength, tensile modulus of elasticity, and ultimate strain.

Bent bars tensile strength.

Fatigue strength.

Bond strength.

Durability in alkaline environments.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive FRP bars. Notify the Engineer if areas are not acceptable. Do not begin placing FRP bars until unacceptable conditions have been corrected.

3.2 PLACING

- A. Place FRP bars in accordance with CRSI Placing Reinforcing Bars, unless otherwise specified.
 - B. Place FRP bars accurately in accordance with approved placing drawings, schedules, typical details, and notes.
- C. Field Cutting:
 - a. Field cut FRP bars with high speed grinding cutter or saw. Do not shear bars.
- D. Field Bending: Do not field bend FRP bars.
 - E. Securing: Secure FRP bars in formwork to prevent displacement by concrete placement or workers.
 - F. Supports: Place and support FRP bars accurately using plastic or non-corrosive chairs before concrete placement is started. FRP bars should be supported at about 2/3 of the distance normally used for steel rebar, as the FRP bar is much more flexible.
- G. Fastening: Fasten FRP bars with coated tie wire, stainless steel tie wire, or nylon ties.
- H. Form Ties: Use plastic or nylon form ties.
- I. Splicing: Use lap splices, whenever continuity is required in the reinforcement. Do not use mechanical connections or welded splices.
- J. Tolerances: Do not exceed placing tolerances specified in ACI 117.
- K. Cleaning: Remove form oil from FRP bars by wiping bars with solvents before placing concrete.

END OF SECTION

SECTION 03 30 50 – CORAL CONCRETE

PART 1 GENERAL

1.1 DESCRIPTION

- A. The work of this section consists of furnishing and placing cast-in-place coral concrete. Do not proceed with work until Contracting Officer has approved concrete mixing and placing procedures.

1.2 RELATED SECTIONS

- A. Section 040120 – Masonry Repair and Re-Pointing.

1.3 SUBMITTALS

- A. Sample of concrete mix and demonstration of mixing and placing procedures.
- B. Oyster shell product data if required.

PART 2 PRODUCTS

2.1 CORAL CONCRETE

- A. Natural cement used in mortar mix specified in section 040120.

Freedom Cement, LLC, 70 East Brookfield Road, North Brookfield, MA 01535. – Telephone: (866) 294-0462, Fax: (866) 854-8180.

- C. The coarse aggregate used in the historic coral concrete mix was coral shells occurring naturally within the beach sand and found on the island's beaches. Because coral aggregate is only available in very limited quantities on the island the Contractor will be responsible for salvaging and processing existing coral aggregate as part of the sand processing operations or obtaining coral shell aggregate (ranging from approximately marble to fist size pieces) from an outside source. Alternatively the Contractor may substitute coral aggregate with pulverized oyster shell aggregate of the same size indicated above, also obtained from an outside source.
- D. Fine Aggregate: Local sand stockpiled at Fort Jefferson. Contractor shall obtain sand from areas indicated on drawings.

2.2 CURING MATERIALS

- A. Burlap: New and free of any contaminants.

PART 3 EXECUTION

3.1 MIXING OF CONCRETE

- A. Establish new or salvaged coral (or shell) void content: Pre-soak aggregate. When fully saturated, remove it from the water, allow it to stand for thirty minutes, then fill a dry, clean 5 gallon bucket with the aggregate. Fill a separate clean, dry 5 gallon bucket with water. Fill the aggregate filled bucket with water from the water filled bucket. Measure the water needed to fill the voids in the aggregate; this volume of water is the coral (or shell) void content.
- B. Pre-soak aggregate (or shell) prior to incorporating it in the mix. Remove it from the water approximately one half hour prior to adding to the mix. Do not allow to dry out; keep the pre-soaked aggregate in an area that is protected from sun and wind. Aggregate is to be saturated but not dripping wet prior to placing in the mix.
- C. Combine the aggregate (or shell) with the mortar mix specified in section 040120 in proportions determined by the aggregate void content test described above.

3.2 PLACING OF CONCRETE

- A. Prepare surface of existing historic concrete by roughening the surface where it is smooth or lacks voids for mechanical keys.
- B. Form concrete to match existing adjacent conditions and provide adequate support for repaired stone or masonry.

3.3 CURING

- A. Keep concrete from drying out too quickly.
- B. Mist work with water as required by project and weather conditions to insure slow curing of the concrete. Fresh concrete shall be maintained as described below. From the eighth to the thirtieth day, any exposed concrete shall be misted 3 times daily.
- C. Apply water to the new concrete and adjacent masonry in a fine, low-volume mist with a garden sprayer; avoid washing out fresh concrete.
 - 1. During mild weather thoroughly dampen the surface of the wall 3 times per day (early morning, noon, mid-to-late afternoon) for the 2 days following the day of installation.
 - 2. Ensure that dampening occurs on schedule including Saturdays, Sundays, and holidays.
 - 3. During hot or windy weather dampen more frequently.
- D. Protect fresh concrete with damp burlap and fine mist spray for the first seven days after installation. Keep burlap clean.

END OF SECTION

SECTION 04 01 20- MASONRY REPAIR AND RE-POINTING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Removing existing mortar.
2. Removing mortar excess mortar from masonry faces.
3. Re-pointing mortar joints.
4. Masonry reconstruction.
5. Cleaning and salvage of historic brick.

1.2 RELATED SECTIONS

- A. Section 013323 – Submittal Procedures
- B. Section 024119 – Selective Demolition
- C. Section 013216 – Construction Schedule
- D. Section 033050 – Coral Concrete

1.3 REFERENCES

- A. ASTM C 136-96a – Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates; 1996.
- B. EN459/BS459 – European Norm and British Standards for Specifications for Building Limes; 1995.
- C. ASTM C10 – Standard Specification for Natural Cement; 2006.
- D. ASTM C 144-97 – Standard Specification for Aggregate for Masonry Mortar; 1997.
- E. “Restoration Methods and Procedures for Fort Jefferson, Dry Tortugas National Park, *A Chronicle of the Construction Mock-Up of 2004-2005*,” Digital Video Documentary.

1.4 SUBMITTAL

A. Product Data:

1. American Natural Cement:
 - a. Product data sheets.
 - b. Manufacturer’s storage and shipping requirements information.
 - c. Manufacturer’s climate requirements for installation and curing.
2. Natural Hydraulic Lime (3.5)
 - a. Product data sheets
 - b. Manufacturer’s storage and shipping requirements information.
 - c. Manufacturer’s climate requirements for installation and curing.
3. Lime Putty
 - a. Product data sheets
 - b. Manufacturer’s storage and shipping requirements information.
 - c. Manufacturer’s climate requirements for installation and curing.

4. Aggregate (local beach Sand):
 - a. Sieve analysis.
 - b. Aggregate void ratio.
 - c. Description of screening process.
5. Aggregate (Coral or Shell):
 - a. Product Data Sheets.
 - b. Aggregate void ratio.
6. Detailed Written procedure for:
 - a. Mixing and preparing mortar
 - b. Obtaining and distributing water for construction.

B. Samples:

1. 1-cup sample of screened aggregate.
2. 4" x 4" x 4" dried mortar sample.
3. 4" x 4" x 4" dried coral concrete sample.

C. Tools and Accessories to be reviewed on site:

1. Garden Spray Assembly.
2. Very-Low Pressure Spray Assembly.
3. Shims.
4. Chisels: Sway, clean-up, very thin, extended length
5. Pointing irons: 1/16", 1/8", 1/2", 1/4"
6. Arbortech or similar approved masonry cutting tools
7. Brushes.
8. Hand water mister bottles.
9. Grout bags.
10. Soft plastic and wood scrapers.
11. Pool or vessels for soaking masonry.
12. Compressor
13. Pneumatic hammers.
14. Air hose with air pressure adjustor (for pneumatic hammers).
15. Grinder (for grinding chisels and mortar removing tools to proper size).
16. Burlap.

1.5 DEFINITIONS

- A. Garden Spray: Spray hand-pump-up garden-type ("Hudson") sprayer with nozzle adjusted to a cone-shape. Powered garden-type sprayers providing equivalent spray are also acceptable.
- B. Very-Low Pressure Spray: 30 psi (nominal) through a three-fourths inch diameter hose fitted with a nozzle producing a conical spray of approximately 60 degrees applied at a distance not closer than 4 feet from the surface. Provide pressure/volume cut off valve at the discharge end.

1.6 QUALITY CONTROL

- A. It is required that the work of this Section be the responsibility of a single Trade Contractor or Trade Subcontractor.

B. Masons:

1. Raking, re-pointing, removal, material salvage, and finishing operations shall be performed by craftspeople familiar with historic mortar formulations, curing conditions, and performance characteristics.
2. Only masons under the supervision of a skilled journeymen mason who are familiar and experienced with the materials and methods specified and are familiar with the design requirements shall be used for masonry restoration.
3. One skilled journeyman mason, named as key personnel in the contract, shall be present at all times during masonry restoration and shall personally direct the work.
4. Helpers performing support tasks may be trained at the Contractor's option, however all personnel shall be experienced in procedures for handling historic and salvaged materials. During the progress of the project if additional masons are required due to personnel rotation and attrition or changes in the project schedule or the need to increase rate of production, at no time shall the number of trained masons fall below 75% of the masons on the project nor $\frac{2}{3}$ of the masons on any given crew of 3 or more nor $\frac{1}{2}$ of the masons on any given crew of 2.

C. In-situ Mock-ups and Demonstration of Procedures:

1. Each Trade Contractor or Subcontractor shall construct a mock-up and demonstrate satisfactory performance of each activity that they will perform. The Contracting Officer or Contracting Officer's Representative will be present during execution of each required mock-up for quality assurance. Approval of each required mock-up must be obtained from the Contracting Officer.
2. Contractor shall provide 30 days notice prior to scheduling of mock-up and procedures review.
3. As part of the Mock-up process, the following activities shall be completed:
 - a. Shallow (up to 1" deep) re-pointing.
 - b. Deep (exceeding 1" deep or multiple lifts) re-pointing.
 - c. Filling small holes with mortar.
 - d. joint removal including a demonstration of removal of unsound or friable mortar and rinsing of debris from joints.
 - e. Removal of natural cement mortar from masonry surfaces.
 - f. Proper handling and storage of salvaged materials.
 - i. Removal of mortar from salvaged brick.
 - j. Preparing mortar mixes.
 - k. Sun and wind protection.
 - i. Installation and wetting procedures for burlap curing cover.
4. 4' x 4' area of repointing that has been allowed to cure a minimum of 14 days prior to inspection.
5. Mock-ups shall be witnessed by the Contracting Officer.
6. Obtain Contracting Officer's approval of mockups before starting the remainder of the work.
7. Retain approved mock-ups in undisturbed condition, suitably identified, during restoration as a standard for judging completed work.

D. Approvals:

1. Approved samples and mock-ups shall remain as a part of permanent work.
2. Obtain approval of raking out and surfaces preparation before finishing joints.
3. Final viewing of mock-ups for approval will occur approximately 14 days after finishing.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site and store in manufacturer's original unopened containers and packaging, bearing labels as to type and names of products and manufacturers, and which shall show grade, batch, and production data. Deliver, store, and handle material in accordance with Manufacturer's product literature.
- B. Protect restoration materials during storage and construction from wetting by rain, flood or ground water, and from staining or intermixture with sand or other types of materials.
- C. Obtain affidavit from delivery service stating that materials were stored and shipped per manufacturer's requirements.

1.8 PROJECT CONDITIONS

- A. Do not perform any masonry application unless weather conditions meet product specifications.
- B. Provide sun and wind protection prior to beginning masonry work and throughout masonry work until the completion of curing to prevent premature evaporation of the mortar. Cover all curing mortar with wetted burlap and maintain burlap in a damp condition. Keep all masonry work shaded.

PART 2 PRODUCTS

2.1 MORTAR MATERIALS

A. American Natural Cement

- 1. Available from: Freedom Cement, LLC, 70 East Brookfield Road, North Brookfield, MA 01535. – Telephone (866) 854-7277 or email www.freedomcement.com
- 2. Available from: Edison Coatings, Inc., 3 Northwest Drive, Plainville, CT 06062. Telephone: (860) 747-2220.
- 3. Cement shall meet the requirements of ASTM C10 – Standard Specification for Natural Cement; 2006 (cement does not have to meet initial set time requirements).
- 4. The natural cement shall match the color and material properties of the original natural cements extracted from mines near Rosendale, NY and used in the construction of Fort Jefferson

B. Lime Putty

- 1. Available from: DeGruchys Lime Works, Telephone (215) 536-6706 or email www.shoplimeworks.us
- 2. Available from: Edison Coatings, Inc., 3 Northwest Drive, Plainville, CT 06062. Telephone: (860) 747-2220.
- 3. Available from U.S. Heritage Group – telephone (773)-286-2100 or email info@usheritage.com

C. Non-blended Natural Hydraulic Lime (NHL 3.5) – to be mixed with local beach sand aggregate

- 1. Available from: Freedom Cement, 24 East Brookfield Road, North Brookfield, MA 01535, Telephone (866) 854-7277 or email www.freedomcement.com

2. Available from U.S. Heritage Group – telephone (773)-286-2100 or email info@usheritage.com
3. Available from: Edison Coatings, Inc., 3 Northwest Drive, Plainville, CT 06062. Telephone: (860) 747-2220.
4. Available from: DeGruchys Lime Works, Telephone (215) 536-6706 or email www.shoplimeworks.us

D. Sand:

1. Use local sand available within the moat near Bastion 5, in the vicinity of the NPS boat slips and near the old seaplane ramp; See drawings for location. Sand shall be collected from these locations under the direction/guidance of Park staff.

E. Water: Clean, clear, non-potable water is ok for use.

F. Pigments: Not required.

2.2 . TOOLS AND ACCESSORIES

- A. Shims: Wood, removable, size and shape as required for temporary support of masonry and pinning of burlap.
- B. Pneumatic hammer: Trow and Holden Type “B” short stroke Pneumatic Hammer Mortar Removal Set with hose assembly (in line pressure gauge) or equal. Chisel must be hand-held, without a retainer and with an inline pressure gauge at the tool.
- C. Chisels: Carbide-tipped masonry carving chisels by Trow & Holden
- D. (www.TrowandHolden.com) or equal. Modify as necessary to allow removal of mortar without damage to the host masonry.
- E. Hand chisels as required by project conditions.
- F. Pointing irons: Width slightly less than joint width. Various widths required suiting project conditions. Grind pointing tools at the jobsite to achieve suitable widths.
- G. Brushes of various sizes for cleaning raked-out joints.
- H. Garden sprayer, water hose, and compressed air (30 psi) for cleaning raked-out joints.
- I. Hand water mister bottle and garden sprayer for curing, cleaning, and finishing pointed joints.
- J. Soft plastic and wood scrapers.
- K. Burlap sun and wind protection assemblies.
- L. Other tools as necessary for the Work.

2.3 MORTAR MIXES

- A. Preparation of local sand:
 - 1. Grade local sands per limits described in ASTM C-144 for sieve Nos. 8 through No. 30. Retain coral fragments in a separate pile for use as aggregate in coral concrete.
- B. Mortar Mixes.
 - 1. Bedding Mortar Mix Design (for resetting displaced brick/stone):
 - 1. By volume – Two parts sand: One part Natural Cement. Combine sand and cement and add no more than one part water until a homogenous, workable consistency is achieved. Use this mix immediately.
 - 2. Pointing Mortar Mix Design for Engineers' Quarters Ruin:
 - 1. Three parts sand: Two parts lime putty: One part natural cement. Combine sand and putty in roller pan mixer. Knock up mortar for a minimum of 15 minutes. Continue mixing until homogenous and workable. Greater workability and better mortar performance is achieved with longer mixing. (Mortars can be left to stand and fatten up for up to 3 hours depending on the mix; and tempered before use.) Prior to adding the natural cement, the mortar is non-hydraulic and can be stored for extended periods if not exposed to air. The natural cement should be added immediately prior to use and well blended.
 - 3. Pointing Mortar Mix Design for all other structures:
 - 1. By volume – two parts sand: one part Natural Hydraulic Lime (NHL 3.5)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Review procedures demonstrated in “Restoration Methods and Procedures for Fort Jefferson, Dry Tortugas National Park, *A Chronicle of the Construction Mock-Up of 2004-2005*,” Digital Video Documentary.
- C. Examine conditions to confirm compliance with the contract documents. Report unsatisfactory conditions.
- D. Before removing any deteriorated work establish bonding patterns, levels, and coursings.

3.2 PROTECTION

- A. Prior to commencing masonry work assemble sun and wind protection assembly. Keep assembly in place until the completion of curing.
- B. Prevent mortars and grouts, from staining the face of masonry or other surfaces to be left exposed. Remove mortars and grouts that come in contact with such surfaces.
- C. Cover partially completed work with moistened burlap when work is not in progress to prevent premature curing of the mortar. Keep burlap moist.

- D. Protect sills, ledges and projections from droppings.
- E. Secure burlap with wood shims in existing joints. Do not use tapes or adhesive on any masonry surface.
- F. Protect new work per section titled "Curing" below.

3.3 TEMPORARY SUPPORT

- A. Provide temporary bracing and shoring supports where necessary to prevent displacement of masonry during repair work.

3.4 REMOVING ANCHORS

- A. Small anchors, nails, and pins have been driven into the masonry at various locations. Remove and discard anchors, nails, pins, and similar devices.
- B. If anchor is determined by Contracting Officer to be historic, deliver to the Government.
- C. Remove ferrous material completely. Do not allow portions to remain embedded.
- D. Where brittle materials cannot be pulled out intact, remove remaining embedded material by drilling.
- E. Point holes in mortar joint with mortar.

3.5 SALVAGING EXISTING BRICK

- A. Carefully take apart existing brick into individual brick units.
- B. Soak units in water for a minimum of 24 hours for mortar removal.
- C. Carefully remove historic mortar from salvaged brick using hand chisels. Do not saw or grind masonry.
- D. Reinstall salvaged brick in the area of its original location to maintain original color configuration.

3.6 REMOVING EXISTING MORTAR

- A. All existing cement mortar must be carefully removed by a skilled mason. The mortar in head and bed joints shall be removed to the required depth using hand and/or pneumatic masonry chisels. (Approval for use of pneumatic masonry chisels will be based on information included in Historic Preservation Treatment Program and demonstration by Contractor that mortar raking activities can be achieved without damage to historic masonry. Training, qualifications and experience of personnel are essential. Contractor must demonstrate skill as part of review and approval process, prior to use of power equipment.)

Use of power tools is subject to intermittent project inspections by NPS. Extended use of approved procedures and equipment must not result in damage to or loss of adjoining masonry fabric. Loss of fabric, deterioration or loosening intact masonry units from vibration impact, unplanned widening of joints or adverse changes to the character of masonry joints, and irreversible changes to the texture and appearance of brick masonry will not be tolerated. Contracting Officer retains the right to halt unacceptable activity and reassess any prior authorization of power tool use. Use of power tools may be resumed only after Contracting Officer makes final determination about proper adjustments to construction methods to preserve the resource. Contracting Officer will issue final directive that may include additional conditions for continued use of power tools for masonry work.

- B. The ruins are fragile. Mortar removal process shall not loosen or dislodge brick or cause the wall to become unstable.
- C. Do not grind mortar from any surface of the host masonry.
- D. Raking out shall leave a clean, square face of sound mortar at the back of the joint, and clean masonry surfaces. Shallow or feather edging will not be permitted.
- E. Existing historic mortar shall be removed by hand. Use only hand or pneumatic masonry chisels that are no wider than one half the width of the existing masonry joints.
- F.
- G. Do not widen the existing masonry joints. Do not spawl or chip the surrounding masonry edges in the process of mortar removal. Damage to masonry shall not be permitted. Contractor shall replace all brick damaged during mortar removal. Replacement brick shall be:
 - 1. Replaced damaged brick by removing and reversing same brick, or,
 - 2. Replaced with a new brick that matches color and dimensional characteristics of surrounding brick.
- H. Brush joint faces and blow out debris from joint with pressurized air to remove dirt and loose debris, working from top to bottom of wall.
- I. When substantially complete with joint excavation, thoroughly rinse joints with water and saturate the masonry. This step clears dust and debris and allows better evaluation of the joint excavation.
- J. Remove remaining mortar to required depth and rinse again.
- K. Lead mason shall inspect joint excavation and ensure that joints are ready for Contracting Officer's inspection.

3.7 MORTAR REMOVAL DEPTH

- A. Existing mortar joints shall be raked out to whichever depth is greatest:
 - 1. 1 inch.
 - 2. 2-1/2 times the width of the existing mortar joint.
 - 3. Until bonded, cohesive existing mortar is encountered.

3.8 REMOVING MORTAR EXCESS FROM MASONRY FACES

- A. Existing excess mortar from prior masonry work and excess mortar from the work of this contract shall be removed from the faces of the masonry using the gentlest means possible.
- B. Existing excess mortar from prior masonry work shall be carefully picked off taking care not to damage the host masonry. If the mortar cannot be removed from the face of the host masonry without damage, then the mortar shall be left in place with concurrence of the Contracting Officer.

3.9 FULL DEPTH POINTING

- A. Provide temporary support where necessary to prevent displacement of masonry during re-pointing and until mortar has achieved sufficient strength.
- B. Where required to maintain support of units, rake out and re-point each unit in stages, allowing freshly re-pointed portions to cure sufficiently before raking out and re-pointing remaining portion of joints supporting the unit.
- C. Remove temporary shims and supports when no longer necessary, and re-point voids left by temporary shims and supports.

3.10 PREWETTING

- A. Brush joint faces and flush out joints with water to remove dirt and loose debris, working from top to bottom of wall. Rinse stone joints with water to remove dust and mortar particles. Thoroughly wet wall below to avoid soiling. Time the rinsing application so that at the time of pointing excess water has evaporated or run off. Joint surfaces should be damp but free from standing water.
- B. Prior wetting is necessary to achieve the proper absorption rate before masonry repair commences and is essential to good masonry practice. Pre-soak walls and joints with water as required by project and weather conditions. During hot or windy weather, wet walls and joints several times in advance of pointing. Re-wet walls and joints yet to be pointed if masonry dries out before pointing. Masonry units shall be damp but without standing water at the time of pointing.
- C. Maintain hand mister bottles or a garden sprayer with clean, clear, potable water immediately available to masons at all times during the re-pointing process. A very low-pressure spray (30 psi) (garden hose with nozzle adjusted to a fine, low-volume mist) may be used over large areas providing erosion of joints is prevented.
- D. Exposed surface of masonry adjacent to joint shall be wet prior to re-pointing.

3.11 RE-POINTING OF MORTAR JOINTS

- A. Joints shall be pointed in layers or "lifts" where the joints are deeper than 5/8 inch.
 - 1. Joints greater than 5/8 inches deep shall be pointed with an initial lift to bring the joint depth to a uniform 5/8 inches deep.
 - 2. Compact each layer at the time it is placed in the joint by applying firm pressure with the pointing tool.
 - 3. Allow each lift to become thumbprint hard before applying the next lift.

- B. Finishing Face Joints: The brick faces at Fort Jefferson are highly irregular as a result of deterioration. The face joints must accommodate the condition of the brick. Strike the joint so that the face of the joint is deeper than the eroded areas but not more than ¼" back from the face of the host masonry. When mortar is thumbprint hard the joints shall be finished. Brush pound the joint surface.
- C. Finishing Skyward Facing Joints: When mortar is thumbprint hard the joints shall be finished by striking off with a tool, leaving the joint recessed approximately 1/8 inch from the face of the masonry.
- D. Finish joints uniformly. Do not overwork. Leave the surface of the masonry clean.

3.12 REMOVAL AND RESETTING OF LOOSE BRICK

- A. Removal and reinstallation of loose bricks:
 - 1. Only reinstall salvaged brick when its original position in the wall or ruin is known.
 - 2. Remove brick that is not fully adhered to the surrounding mortar.
 - 3. Clean all mortar from adjacent bricks still firmly adhered to ruin wall per sections titled "Removing Existing Mortar" and "Removing Mortar Excess From Masonry Faces."
 - 4. Clean all mortar from removed brick(s) per section titled "Removing Mortar Excess From Masonry Faces."
 - 5. Pre-wet masonry per section titled "Prewetting".
 - 6. Re-set bricks in original location. If bricks are damaged or broken during removal process, see section titled "Removing Existing Mortar".

3.13 REPLACEMENT OF CORAL CONCRETE

- A. Lay coral concrete in lifts matching original lifts.
 - 1. Pre-soak all adjacent surfaces prior to laying coral concrete.
- B. See specification section 033050 for mix requirements.

3.14 CLEANING

- A. Maintain clean surfaces on the face, sills, ledges, and projections of masonry on a daily basis.
- B. With a trowel, strike off minor dabs of adherent mortar from face of masonry.
- C. Remove minor mortar marks from masonry by misting with water and brushing with a small, stiff-bristle brush.

3.15 CURING

- A. Keep mortar from drying out too quickly.

- B. Mist walls with water as required by project and weather conditions to ensure slow curing of the mortar. Freshly pointed mortar shall be maintained as described below. From the eighth to the thirtieth day, mortar shall be misted 3 times daily.
- C. Apply water to the re-pointed joints and adjacent masonry in a fine, low-volume (30 psi) mist with a garden spray; avoid washing out fresh mortar.
 - 1. During mild weather thoroughly dampen the surface of the wall 3 times per day (early morning, noon, mid-to-late afternoon) for 2 days following the day of installation.
 - 2. Ensure that dampening occurs on schedule including Saturdays, Sundays, and holidays.
 - 3. During hot or windy weather dampen more frequently.
- D. Protect freshly pointed areas with damp burlap and fine mist spray for the first seven days after installation. Keep burlap clean.

END OF SECTION

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SECTION 05 12 00 – STAINLESS STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. All labor, materials, equipment and services necessary to complete the structural steel work as shown on the drawings or specified herein.

1.3 QUALITY ASSURANCE

- A. Comply with the provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified: New York City Building Code, Latest Edition; AISC "Code of Standard Practice for Steel Buildings and Bridges", latest edition; AISC "Specifications for Structural Steel Buildings" including "Commentary", latest edition; AWS "Structural Welding Code".

1.4 SUBMITTALS

- A. Shop drawings: Show complete details and schedules for fabrication, assembly and erection. Furnish anchor bolts required for installation in other work; furnish templates for bolt installation.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel shapes, including structural steel wide flange and structural tee rolled shapes, channels, angles, plates, pipe, and hollow structural sections: As noted on structural drawings.
- B. Structural Steel noted on structural drawings to be Stainless Steel shall be ASTM 276 Stainless Steel Grade 316L.
- C. All stainless steel bolts shall conform to ASTM F593 Alloy 316.
- D. All stainless steel nuts shall conform to ASTM F594 Alloy 316.
- E. Welding shall be performed by certified licensed AWS-qualified welders. Electrodes for ASTM 276 Stainless Steel Grade 316 shall conform to AWS A5.4 for shielded metal arc welding, electrode class E316, or AWS A5.9 for gas metal arc welding, electrode class ER30, Ft=70 ksi.

PART 3 - EXECUTION

3.1 FABRICATION

- A. Comply with AISC "Specifications" and final shop drawings. Mark and match-mark units for field assembly.
- B. Comply with AWS Code for procedures, appearance and quality of welds.
- C. Provisions for Other Work: Fabricate structural steel members to provide holes for securing other work and for passage of other work through steel framing as indicated.

3.2 ERECTION

- A. Comply with AISC Code and Specifications and maintain work in safe and stable condition during erection. Provide temporary bracing and shoring as required; remove when final connections placed.
- B. Splice members only where shown on final shop drawings.

3.3 TESTS AND INSPECTION

- A. The contractor shall have available for submission to the architect affidavits from the steel mill attesting to the strength and composition of the structural steel.
- B. All shop and field welding is to be performed by a welder qualified by the American Welding Society and licensed in the local jurisdiction if required by applicable building code (including local amendments).

END OF SECTION

SECTION 06400 - ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Fabrication and installation of architectural woodwork. This section applies new replicated assemblies and to replacement of missing/damaged components of existing historic assemblies.
 - a. Replication of doors, door casings, jambs and frames.
 - b. Wood flooring and floor structure at Curtain Magazine.
 - c. Wood flooring and wall cladding at Bastion Powder Magazine.
 - d. Replication of vent covers at Bastion Powder Magazine.

1.02 REFERENCES

- A. Architectural Woodwork Quality Standards; Architectural Woodwork Institute; 1997.
- B. BHMA A156.9-1994 -- American National Standard for Cabinet Hardware; Builders Hardware Manufacturers Association; 1994.
- C. BHMA A156.18-1987 -- American National Standard for Materials and Finishes; Builders Hardware Manufacturers Association; 1987.

1.03 SUBMITTALS

- A. Shop Drawings: Plans and elevations; details at a large scale; show location of each item, identify components used, indicate all joinery and methods of attachment.
 1. Show field measurements.
- B. Samples: Submit samples for the following:
 1. Lumber: Samples of flooring and door construction. Cut; 1'-0" long by width of item.
 2. Custom bronze hinge and solid rod (6") for bars in replicated doors/windows

1.04 QUALITY ASSURANCE

- A. Quality of Materials and Workmanship: Provide woodwork that complies with requirements of "Architectural Woodwork Quality Standards," published by Architectural Woodwork Institute (AWI) (hereinafter referred to as "woodworking standard").
- B. Where contract documents indicate deviations from the woodworking standard, the contract documents shall govern.
- C. Fabricator / Installer Qualifications: Fabricator shall install his own work.
- D. Preinstallation Meeting: Prior to beginning any work, meet with the Architect to review the requirements of the contract documents.
 1. Examine contract documents and submittals. Review coordination of related work, preliminary schedule, inspection and testing methods.
 2. Document discussions in writing, including actions required, and distribute a copy of report to each meeting participant.

3. Before installation of woodwork, have the woodwork installer meet with installers of related and adjacent work to discuss sequence of installation, protective measures, and consequences of damage to woodwork.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store materials for interior woodwork in spaces maintained within temperature and humidity range of area of final installation.
- B. Deliver, store and handle products as required to prevent damage or deterioration. Comply with requirements of AWI, and recommendations of NWWDA I.S.1-A.
- C. Doors: Clearly label each door with opening number where door will be installed. Use removable, temporary labels or mark on door surface which will be concealed from view after installation.
 1. Coordinate door identification with shop drawing designations.

1.06 PROJECT CONDITIONS

- A. Fit woodwork to actual construction. Take field measurements before fabricating woodwork.
- B. Coordinate installation of woodwork with other work to avoid damage.

PART 2 - PRODUCTS

2.01 WOODWORK

- A. All woodwork:
 1. Grades: Premium.
 2. Species: Longleaf Heart Pine.
 - a. Lumber for sleepers: Pressure treated (ground contact) Longleaf Heart Pine
 3. Conceal all fasteners.
 4. Profiles and dimensions: Match existing original profiles as closely as possible.
- B. Door jambs, frames and casings: Solid lumber and moldings. Match existing original profiles and construction as closely as possible. CMR to identify areas where original historic fabric remains for Contractor inspection.
- C. Stile and rail infill window at Curtain Magazine: Solid lumber and moldings.
- D. Stile and rail wood doors at magazines.
 1. Stiles and rails: Solid lumber and moldings
 2. Jambs and door frames: Solid lumber and moldings
- E. Flooring and wood and ceiling boards at magazines: Solid lumber and moldings.

2.02 WOOD MATERIALS

- A. Lumber and moldings: Species and grade as specified.
 1. Comply with applicable requirements of AWI Section 100.
 2. Moisture content at time of fabrication: Not greater than optimum moisture content as specified in woodworking standard.
 3. Provide lumber dressed on all exposed faces, unless otherwise indicated.
 4. Do not use twisted, warped, bowed, or otherwise defective lumber or moldings.

5. Sizes indicated are actual dimensions, unless otherwise indicated.
6. Do not mark or color lumber or moldings, except where such marking will be concealed in finish work.

2.03 MISCELLANEOUS MATERIALS

- A. Finishing: No finish
- B. Fasteners: Style, size, material, and finish as required for the purpose.

2.04 DOOR HARDWARE

- A. Cabinet Hardware: Provide hardware and accessories indicated.
 1. Custom bronze hinges and bars
 2. Padlock hasp to be selected by CMR.

2.05 FABRICATION

- A. Fabricate in sizes and shapes indicated and using details indicated.
- B. Complete fabrication in shop.
 1. Disassemble units if too large for convenient shipping or installation.
 2. For applied fixtures and fittings, cut openings in shop.
 3. For field-applied hardware, drill mounting holes in shop.
 4. Ease edges of solid lumber members at all outside corners, using:
 - a. 1/16-inch radius.
- C. Doors: Fabricate to provide consistent clearances as indicated.
 1. Make neat mortises and cutouts for door hardware indicated.
 3. Prefitting: Fabricate doors to size at shop to coordinate with field measurement of frame.
 4. Premachining: Make all mortises and cutouts required for hardware at the shop to conform to custom hardware templates, and field dimensions of frames.
- D. Marking: Mark each new assembly (except individual replacement panels) to indicate date of manufacture.
 1. All marks to be located on surfaces to be concealed after installation.
 2. All marks to be permanent; made by carving or wood burning devices.
 3. All marks to identify year of manufacture, such as "2018."

PART 3 - EXECUTION

3.01 PREPARATION

- A. Verify that blocking and backings have been installed at appropriate locations for anchorage.
- B. If shop-fabricated items are not fully fabricated, complete fabrication.
- C. Inspect door frames and doors before beginning door installation.
 1. Verify that frames are properly aligned and are capable of providing trouble free support for doors.
 2. Do not install damaged or defective doors.
- D. Correct unsatisfactory conditions before installing products of this section. Commencement of installation indicates acceptance of conditions.

3.02 INSTALLATION - GENERAL

- A. Do not begin installation of woodwork until potentially damaging construction operations are complete in the installation area.
- B. Field Joinery: Comply with requirements of the woodworking standard for shop joinery.
- C. Make joints neatly, with uniform appearance and to the same level of precision as the original historic joinery.
- D. Install woodwork in correct location, plumb and level, without rack or warp.
 - 1. Install with no variation in flushness of adjoining surfaces.
- E. Conceal all shims.
- F. Secure woodwork to blocking or use anchors.
 - 1. Where anchorage method is not indicated, conceal all fasteners where possible.
- G. Repair damaged and defective woodwork to eliminate visual and functional defects; where repair is not acceptable to the Architect, replace woodwork at no additional cost. Retain existing materials wherever possible. Notify Architect prior to removal of existing members not specifically scheduled for removal.

3.03 INSTALLATION - DOORS

- A. Install doors in accordance with the requirements of the referenced standard.
- C. Fitting of Doors:
 - 1. Accurately align and fit doors for trouble free operation throughout range of door swing.
- D. Clearances:
 - 1. Clearance between door edge and head: 1/8".
 - 2. Clearance between door edge and jamb: 1/8".
 - 3. Clearance between door edge and top surface of flooring: 1/4".
 - 4. Clearance between door bottom edge and flooring: 1/4".
- E. Adjust doors for proper operation; coordinate with hardware adjustment; replace doors which cannot be properly adjusted.

3.04 CLEANING

- A. Clean exposed surfaces.

3.06 PROTECTION

- A. Protect woodwork from damage.
- B. Protect adjacent materials not scheduled for removal, including but not limited to, plaster, hardware and glazing.

END OF SECTION

**Everglades & Dry Tortugas
Hurricane Plan (Version 2014)**

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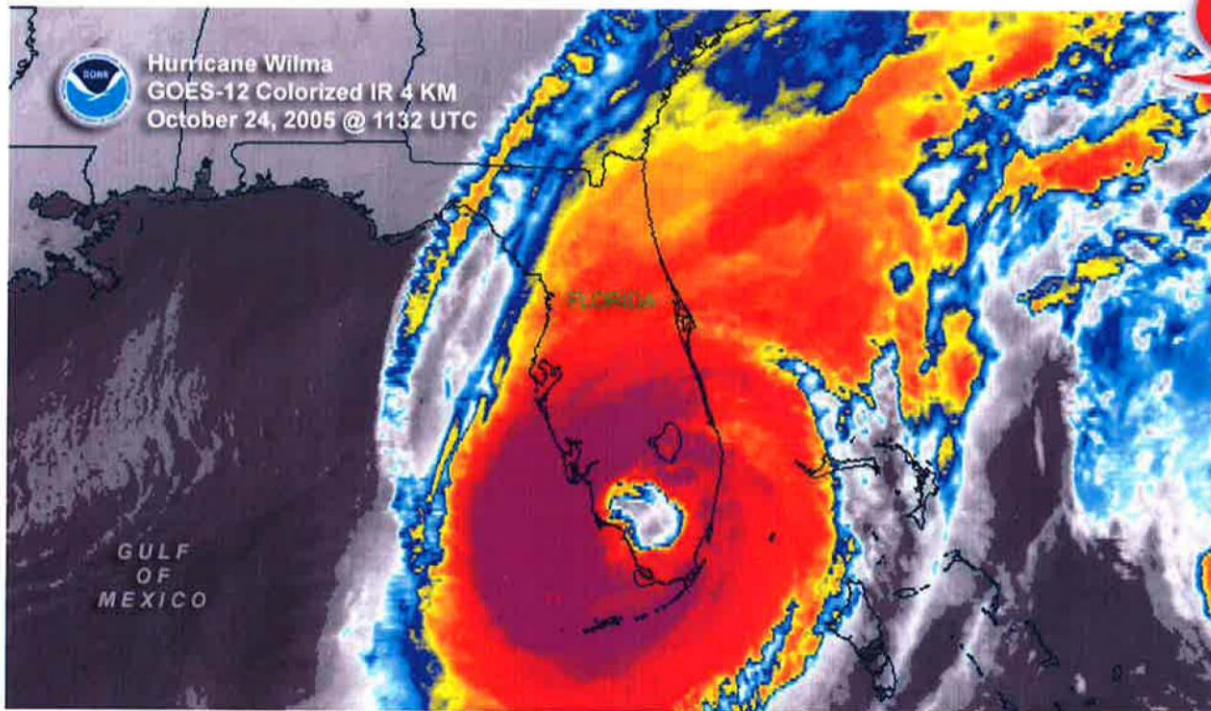
Everglades & Dry Tortugas

National Park Service
U.S. Department of the Interior

Everglades National Park
40001 State Road 9336
Homestead, FL 33034



Hurricane Plan Version 2014



Prepared by:

Aerin Land
Aerin Land, Planning Section Chief

7/2/14
Date

Recommended by:

Mike Jester
Mike Jester, Incident Commander

7/3/14
Date

Concurred by:

Mike Michener
Mike Michener, Chief Ranger

7/3/2014
Date

Concurred by:

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7/3/14
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7/7/14
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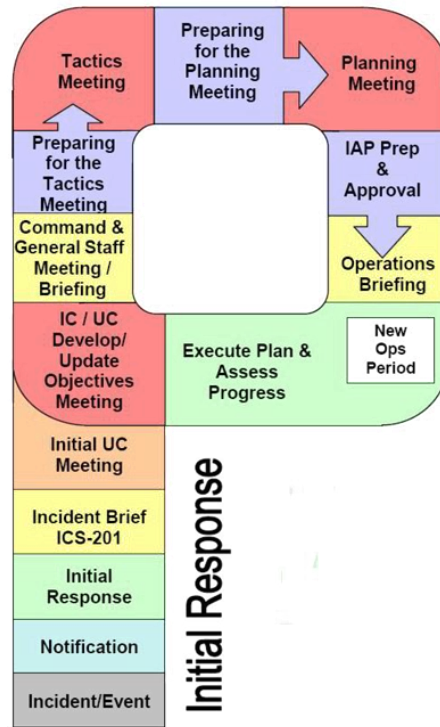
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EXECUTIVE SUMMARY

The Hurricane Plan for Everglades and Dry Tortugas National Parks guides park staff in preparing for severe weather impacts to park resources or threaten the safety of staff and visitors. This plan goes into effect during the annual hurricane season (June 1-November 30). It is a dynamic document that is updated annually. This plan has been implemented 25 times since August of 1992, when Category 5 Hurricane Andrew left its mark on south Florida.

Plan Objectives

- Provide for the safety of all park staff and visitors in preparing for a Hurricane.
- Create a means for the Superintendent to determine acceptable levels of risk to government facilities/property for any given hurricane situation.
- Provide a safe, practical guide for management of hurricane preparations by the staff of Everglades and Dry Tortugas National Parks.
- Assure accountability for preparation and general hurricane season actions.
- Identify the steps and methodology used to trigger plan implementation and ensure each step is consistent with other objectives.
- Provide a schedule of progressive preparation actions that allows the release of most park staff to attend to their personal storm preparations at least 24 hours prior to the expected landfall of tropical storm force winds in the parks and surrounding communities.
- Provide a guideline for actions to be taken immediately after a storm.
- Provide for consistency and coordination of planning and preparation with other NPS units, cooperating agencies, and cooperators in south Florida.



Plan Overview

The parks' highest priority is to provide for the safety of all individuals involved in park operations and park visitors, followed by the securing over 200 buildings, and government-owned equipment spread over 1.5 million acres (approx. 2400 square miles). The plan provides the parks' Hurricane Team a blueprint for progressive preparations to be done in a manner that weighs the risks and needs of people and property during each operational period.

This plan is designed using the Incident Command System (ICS). Once a threat is identified and a need for action determined the Park Superintendent delegates specific authority to an Incident Commander (IC) and his/her staff to prepare for and manage an incident in a manner consistent with overall agency goals. Hurricane preparation is the responsibility of all park staff and cooperators who must maintain readiness throughout the year.

This document serves as a guideline for park operations during hurricane season and as a format for the development of incident action plans for individual hurricanes. This plan specifically addresses the following six distinct periods:

1. **General Hurricane Season** (June 1 – November 30)
2. **Preliminary Hurricane Preparation** (72-48 Hours before hurricane landfall)
3. **Advanced Hurricane Preparation** (48-24 hours before hurricane landfall)
4. **Final Hurricane Preparation** (24 hours - duration of storm)
5. **Post-Hurricane Recovery** (immediate aftermath)
6. **Hurricane Breakdown** (breakdown when a storm does not hit the parks)

**For detailed information, see Operational Period Descriptions (pg. 10)*

June 1 of each year the Superintendent will sign a delegation of authority with the IC making the IC and

all park employees accountable for preparing the park for a hurricane throughout hurricane season. The plan includes a critical list of tasks that must be accomplished in case sufficient warning of a storm is not available.

When a storm arises, the plan uses a proximity/vector system of movement formula to trigger the subsequent actions.

In ICS terms, this plan is based on **geographic branching** combined with **functional grouping**. Many Groups and Divisions will function within their normal geographic zones of operation: Flamingo, Northwest District, Pine Island, etc. Within those areas, the various work groups are divided according to the normal type of work they do (i.e. Visitor Services, Maintenance) or by specific tasks that need to be accomplished (i.e. Office Packing, Equipment Storage). Other Branches have park-wide responsibilities such as the Maintenance Branch which is responsible for utility systems park-wide.

This plan was developed to provide general information and direction for all phases of hurricane preparation and recovery after a storm. Checklists of tasks to be completed for each operational period are included for each Branch as well as for some of the command staff. Each Branch Director and Division or Group Supervisor is encouraged to maintain these checklists and review/ revise them annually and throughout the season.

The plan provides information for Section Chiefs, Command Staff, and Branch Directors as well as all park employees. Information such as the parks' leave policy and housing plans were included to provide individuals in both parks with information that may answer questions before an event takes place. This may diminish fears and make the preparation for hurricanes less stressful. Other information such as the Missile Base Plan, Ground Support Plan, Information Officer Plan, etc., was developed to provide direction for individuals who may be called upon to assist with areas unfamiliar to them.

Weather Prediction Methodology

The Plan goes into effect once the Superintendent has signed a delegation of authority by June 1 of each year. The Superintendent delegates authority only for the portions of the plan that are identified as occurring during the general hurricane season.

In the past, park preparations were based on a Hurricane Watch or Warnings issued by the National Weather Service . In 2001 the NHC began producing 120-hour predictions of storm track and intensity, giving a 5 day advance of their predictions. This is valuable information, but includes a great deal of predictive error.

This technology combined with the simple VECTOR SYSTEM is used to make the decision to implement the next preparation period of the Everglades and Dry Tortugas National Parks Hurricane Plan. Estimates of possible landfall of a hurricane or tropical storm that shows potential to develop to hurricane level is based on a formula using current position, direction, and speed of movement, combined with interpretation of information from the National Hurricane Center.

The location of a tropical system is monitored by dispatch, the Plans Section, and the IC. When it appears that a hurricane/tropical storm is within 100 hours of striking South Florida, using the VECTOR

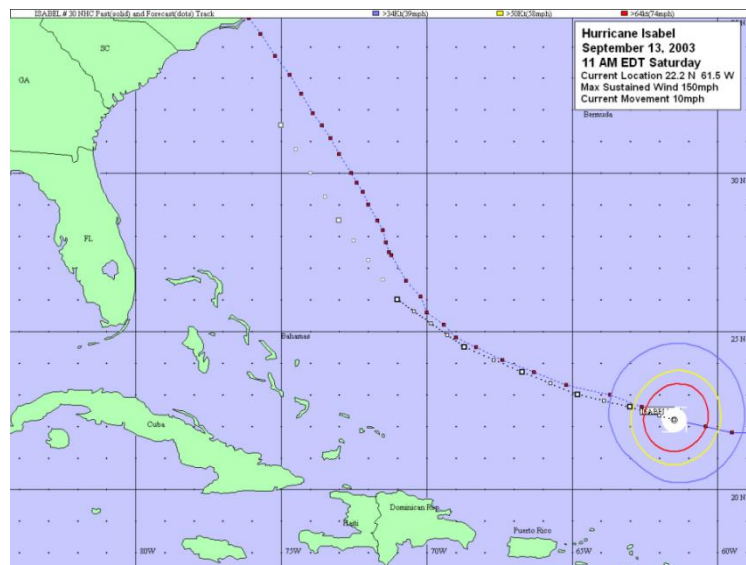
SYSTEM described below, the IC then notifies the Superintendent.

The Superintendent and the Incident Management Team (IMT) Command and General (C&G) Staff convene a Planning Meeting within 12 hours of the storm crossing the 100-hour threshold. The specific dates/hours of the next preparation period are determined at this meeting. The Superintendent provides any additional policy guidance at this time and signs a delegation of authority to the IC for the duration of the specific storm, or until change are deemed necessary.

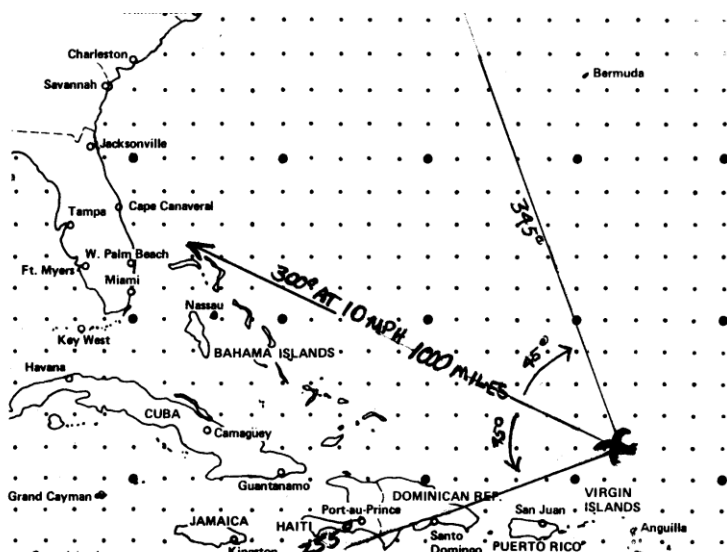
Vector System

The Vector System can be used to estimate the approximate time the tropical storm force winds will hit EVER or DRTO based on the current position of the storm center, speed, and direction of travel. (see image)

- The time estimate is based on taking the current position of nearest tropical storm force winds divided by the forward and determining the expected hours to landfall. speed
- The zone of threat is determined by plotting the current compass direction of movement of the storm, plotting the main vector and allowing 45 degrees either the main vector of movement. If the park is this 90-degree zone it will be considered under threat. side of within be



Below is a simple graphic of this system: In this example, the storm is located 1000 miles from the Parks, with major movement at 300 degrees at 10 mph. This would represent the storm being 100 hours from the Parks.



Throughout the hurricane incident, the Plans Section compute the landfall estimate with each National Weather Service update of the storm position to determine if the parks continues to remain at risk.

Plan Implementation

The implementation of this plan requires activities and a series of meetings and actions at specific times each year in order to facilitate successful implementation of the plan should a hurricane threaten landfall. This includes staffing the Hurricane Team, pre-cleanup actions, orienting staff to protocols, and acquiring appropriate supplies.

Once a storm is on the horizon, the key decision points are then based on a timeframe from when the storm is expected to make landfall. These key time periods and their objectives are listed below. Detailed operations guidelines and checklists are located for each of these time periods can be found in the body of the plan.

100 Hours Before Landfall

- Systematically begin preparations of Everglades and Dry Tortugas NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors
- Ensure all actions are conducted safely.

In the rare situation that there is less than 100 hour notice before landfall, the plan must be modified and the Superintendent will have to identify the most important actions and what can be dropped off the plan with reduced planning time. In this case the safety of staff and visitors is the first priority followed by protection of property to the level that time allows.

72-48 hours before expected landfall - Preliminary Hurricane Preparation Period

- Systematically begin preparations of Everglades and Dry Tortugas NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors
- Ensure all actions are conducted safely.

48-24 Hours Before Expected Landfall - Advanced Hurricane Preparation Period

- Systematically continue preparations of Everglades NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors.
- Ensure all actions are conducted safely.
- Provide for smooth transition to off-site IC (Ex. Establish a conference call schedule so that IMT members can hold meetings from remote locations).

24 hours before landfall through duration of storm - Final Hurricane Preparation Period

- Protect park resources.
- Ensure that property and staff are accounted for during this operational period.
- Provide for well-being of park employees.
- Ensure all actions are conducted safely.
- Maintain contact with Southeast Regional Office.
- Pre-establish a time and method to reassemble the IMT for the Post-Hurricane Recovery Period.

Storm Duration

- During the storm safety of staff is the primary objective. Addressing any damage will come later.

Post-Hurricane Recovery Period - immediate Aftermath of a Storm

- Ensure the safety of all park employees evacuated to park shelters.
- Locate all park employees.
- Contact SERO and advise of current situation and needs.
- Begin assessment of damages to park resources and facilities.
- Protect park resources and facilities.

Hurricane Breakdown Period Return to Normal Operations

- Systematically restore park facilities and park operations to "normal" conditions.
- Protect park resources and park visitors.
- Ensure accountability for park property and staff.
- Ensure all actions are conducted safely.

All hurricanes are dangerous, but some are more so than others. NOAA hurricane forecasters use a disaster-potential scale which assigns storms five categories. Category 1 is a minimum hurricane; category 5 is the worst case. For reference, the criteria for each category are shown below.

SAFFIR-SIMPSON HURRICANE SCALE

CATEGORY ONE (minimal)

Winds 74-95 mph: No substantial damage to building structures. Damage primarily to unanchored mobile homes, shrubbery and trees. Also some coastal road flooding and minor pier damage.

CATEGORY TWO (moderate)

Winds 96-110 mph: Considerable damage to vegetation, mobile homes, and piers. Small craft in unprotected anchorages break moorings.

CATEGORY THREE (extensive)

Winds 111-130 mph: Structural damage to small homes and utility buildings. Major erosion of beach areas. Terrain lower than 10 feet above sea level may be flooded inland 8 miles or more.

CATEGORY FOUR (extreme)

Winds 131-155 mph: Complete roof structure damage on small residences. Major erosion of beach areas. Terrain lower than 10 feet above sea level may be flooded requiring massive evacuation of many residential areas far inland.

CATEGORY FIVE (catastrophic)

Winds greater than 155 mph: Complete roof failure on many residences and industrial buildings. Some complete building failures with structures being completely destroyed.

OPERATIONAL PERIOD DESCRIPTIONS

General Hurricane Season

June 1 – November 30

Objectives:

- Systematically begin preparations of Everglades National Park for hurricane season.
- Ensure that monthly Branch meetings are held to review the Hurricane Plan, identify problems and needs, and assure incident staffing plan is current.
- Ensure monthly meetings are held with Superintendent and Command/General Staff to identify and resolve problems.

Meeting schedule commences:

April – mid-May

The PMT requests that the District Management Teams (DMT) meet and perform the following tasks:

- Schedule a district hurricane preparation day that may include cleanup work and items listed below.
- Review preparation actions for their area and update or revise the procedures and timeframes.
- Assure that local hurricane kits, equipment and caches are prepared and restock/repair as necessary.
- Review the leadership roles needed within their area and make hurricane assignments for team members (Branch Director / Division or Group Supervisor / Task Force Leader / etc.) from their staffs. At least one alternate will be identified for each position.
- Recommend staff members in their area that can serve in other functions within the park-wide team (Incident Commander (IC), Command and General Staff positions, Unit Leaders, specialized single resources).
- Review emergency notification data with their employees and assure that names are current and that contact information is updated.
- Identify individuals within their area that have special needs or commitments that preclude them from participating in hurricane preparations and immediate post storm activities.
- Send the revised work actions / timetables to the IMT Planning Section Chief.
- Send the names of the leadership personnel to the IMT Planning Section Chief including those persons who will be working within the District and those people available for other park-wide team assignments to the Planning Section Chief.
- Supervisors should compile updated employee emergency contact information and forward to Everglades Communications Center for entry into the emergency contact database.

Mid-May – June 1

Planning Section Chief will assemble a roster (ICS 203) of all primary and alternate members of IMT including all supervisors within the Districts / Branches and all members of the park-wide IMT.

The team Incident Commander / Deputy Incident Commander will schedule a working team meeting where all members will review their roles and responsibilities.

The Incident Commander and Planning Section Chief will schedule a meeting for new Everglades and Dry Tortugas National Park employees to

- introduce the IMT for the season
- orient employees to the hurricane plan processes.

Branch Meetings:

Each month during Hurricane Season, Branch Directors in each identified Branch meet, as a minimum, with Group Supervisors to:

- Review their Division Assignment Lists (ICS-204/check lists).
- Revise and update assignments as needed.
- Prepare local checklists.
- Identify and resolve problems locally if possible.
- Identify anticipated staffing problems for the coming month.
- During the monthly branch meetings, branch leaders are to inquire as to individual intents to remain in the area, how much time is needed to prepare personal residences, etc. should a hurricane watch/warning be issued. This information is to assist the branch leaders in assessing personnel resources, which may be available during the preparation and aftermath phases.
- Submit ICS-214, Unit Log, to Operations Section Chief that summarizes the monthly meeting, changes needed to the plan, and identify unresolved problems or long-term projects that the Branch needs the Incident Management Team's assistance with.

Incident Management Team Meetings:

During the last two weeks of each month during Hurricane Season, the Command and General Staff meet along with the Superintendent to:

- Review Unit Logs submitted by Branch Directors.
- Seek resolution of problems, or refers problems/needs to the Superintendent to resolve through normal park channels.

100 Hours Before Landfall (BLF)

- The Dispatch Center, Plans Section and the Incident Commander monitor tropical weather throughout the season. Using the Vector System, when a Tropical Storm/Hurricane crosses the threshold of being within 100 hours of the Park: The Disptach Center will notify the Incident Commander
- The Incident Commander will immediately notify the Superintendent.
- The Incident Commander will also notify the Command/General staff and arrange for a meeting.
- The Incident Commander, Command and General Staff, and the Superintendent will meet within 12 hours.

If it appears that the storm will continue to threaten the park and the 72-hour threshold will be crossed, the Superintendent will delegate authority to fulfill the remainder of the plan, including hurricane breakdown if the storm eventually causes minimal impact.

Operations Section Chief will direct expanded staffing of the Dispatch Center to accommodate the volume of communications that will be needed to begin implementing the plan.

Planning Meeting - 100 hours Before Landfall

Command and General Staff will convene a planning meeting immediately after the delegation to:

- Determine the exact clock hours and duration of the Preliminary Hurricane Preparation Period (72-48 hrs. BLF).
- Make any modifications to the pre-established Incident Action Plans.
- Identify time/place for a briefing with available Branch Directors and Group Supervisors.
- Branch Directors will submit personnel resource assignments and needs for Preliminary Hurricane Prep to Operations Section Chief prior to or immediately after the afternoon Planning Meeting.

Less Than 100 Hours Before Landfall Notification

Occasionally, tropical systems develop rapidly, almost unexpectedly and at much less than "100 hour" distance from the Park. These are usually not Cape Verde type hurricanes that are renowned for their intensity, but are generally Gulf storms of more moderate levels.

In the event of this type storm, with less than 100 hour warning, the Superintendent and Incident Management Team will meet as soon as possible. The Superintendent must clearly define to the IMT an acceptable level of risk to the Park, since all preparations cannot be completed in the shorter time span. After a delegation of authority, the IMT will immediately convene a Planning Meeting. An Incident Action Plan will be produced and distributed that reflects the abbreviated time frame.

Operational Priorities for Planning with less than a 100 hour Notification

Protection of Life

- Evacuation of the park
- Evacuation of park employees

Protection of Property

- Shutter buildings and secure facilities
- Remove vessels, store vessels, vehicles, and other equipment
- Complete other property protection tasks if time allows

Each Branch Director will be responsible for establishing priorities for their branch. They will communicate these priorities to the Operations Section Chief and provide a timeframe in which these duties can be accomplished.

Incident Objectives:

- Systematically begin preparations of Everglades and Dry Tortugas NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors
- Ensure all actions are conducted safely.

Implementation of the Preliminary Preparation Period

Once the time period for the Preliminary Hurricane Preparation Period is determined, an email will be sent out to all park employees notifying them of the implementation of the hurricane plan. If this occurs on a weekend, the Operations Section chief will notify Branch Directors, who will begin contacting branch personnel, advising them of the current situation and of the time and location to report for work. Branch Director will be instructed to notify their employees:

- That the park is about to step up to the next phase of the plan.
- When and where they are to report to work.
- Remind employees to "dress accordingly".
- Tell the employee the name of the person they will be working for during the preparations.
- Remind employees that their incident supervisor will advise them when they are released from assignment instead of the "normal" park supervisor.

The Incident Commander or his designee will also send an email to all employees with the details of the next plan period. The Public Information Officer will activate the Employee EVER/DRTO Emergency Hotlines with a recorded message of the same details.

Once employees have been notified, The Branch Directors will inform the Operations Section Chief accounting for each employee on their staff. The Operations Section will forward this information to Plans Section, Resource Unit Leader to identify available resources.

Prior to every afternoon Planning Meeting, each Branch Director will submit personnel resource assignments and needs for the next operational period to Operations Section Chief. This information will be forwarded to the Resource Unit Leader for resource tracking purposes.

Liaison Officer will notify the Southeast Region Emergency Coordinator (Shenendoah) that the park's hurricane team has been activated and initial preparations for a storm have begun.

Delegation of Authority

See Appendix B for Delegation of Authority letter from Park Superintendent to the Incident Commander. This should be prepared by the IC and signed by the Superintendent and IC before operations commence.

Preliminary Hurricane Preparation Period 72-48 hours before expected landfall

Operational Period Briefing:

The Operations Section Chief will brief Branch Directors and Maintenance Group Supervisor in person or via phone for remote Branches to assure they are aware of all operational concerns including:

- Times of the Preliminary Hurricane Preparation Period.
- Hurricane specific information prior to implementation of this phase of the plan.

Branch Directors / Group Supervisor will be reminded to:

- Notify Operations Section Chief of any change in personnel assignments prior to morning Briefing.
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief before the afternoon planning meeting.
- Complete and transmit Unit Logs to Planning Section at the end of each operational period.
- Commence the operational period by briefing their group supervisors and/or entire branch/group staff.
- Complete/review Crew Time Report for each employee in their Branch or Group.

Command and General staff will fulfill the established ICS responsibilities of their jobs throughout the Preliminary Hurricane Preparation Period.

Planning Meeting:

A Planning Meeting for the next operational period will be held midway through the current operational period. The following items will be included in the normal Plans meeting agenda:

- Work hours of the next operational period will be determined.
- Determine when to move into the Advanced Hurricane Preparation Period
- Modifications and revisions to the preplan will be addressed.
- Time/location/attendees for next briefing will be identified.

Once the Incident Action Plan is consolidated for the next operation period, Plans will prepare the Release Plan that will identify resources to be released during/at end of the Advanced Hurricane Preparation Period.

Operational Period Objectives:

- Systematically begin preparations of Everglades and Dry Tortugas NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors
- Ensure all actions are conducted safely.

Advanced Hurricane Preparation Period 48-24 Hours Before Expected Landfall

Operational Period Briefing:

The Operations Section Chief will brief Branch Directors in person or via phone for remote Branches to assure they are aware of all operational concerns including:

- Times of the Advanced Hurricane Preparation Period.
- Hurricane specific information prior to implementation of this phase of the plan.

Branch Directors will be reminded to:

- Notify Operations Section Chief of any change personnel assignments prior to morning Briefing.
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief before the afternoon planning meeting. Complete and transmit Unit Logs to Plans at the end of each operational period.
- Commence the operational period by briefing their group supervisors and/or entire Branch staff.
- Complete/review Crew Time Reports for employees in their Branch.
- Notify the Operations Section Chief when employees can be released.
- **Branch Directors will assure that all employees are informed about procedures to follow after the storm.**

Command and General staff will fulfill the established ICS responsibilities of their jobs throughout the Advanced Hurricane Preparation Period.

Planning Meeting:

A Planning Meeting for the next operational period will be held midway through the current operational period. The following items will be included in the normal Plans meeting agenda:

- Work hours of the next operational period will be determined.
- Determination when to move into the Final Hurricane Preparation Period.
- Modifications and revisions to the preplan will be addressed.
- Time/location/attendees for next briefing will be identified.

All efforts should be made to release non-essential employees at the end of this operational period to allow them time to complete their personal preparations. If necessary, Planning Section will prepare a Release Plan, indicating which resources will be released from the incident.

During the final hours of this period, the Incident Command Team will begin to make preparations for when the storm actually hits. A small group of essential personnel (mostly consisting of LE and dispatch staff) will remain on site in the HQ shelter during the storm. The Incident Commander will designate a representative within this group who will act as the on-site IC and provide on-site direction, resolve issues and make decisions for the Incident Management Team, in the event that communications with the Incident Commander are not possible during the actual storm and the immediate aftermath.

If the storm is anticipated to make a significant impact on the area, the Incident Commander will notify the Southeast Region Emergency Coordinator of the potential need for a higher level incident management team to take over after the storm.

Operational Period Objectives:

- Systematically continue preparations of Everglades NP for a major storm.
- Ensure that property and staff are accounted for during this operational period.
- Protect park resources and park visitors.
- Ensure all actions are conducted safely.
- Provide for smooth transition to on-site IC.

Final Hurricane Preparation Period

24 hours before landfall through duration of storm

Operational Period Briefing:

The Operations Section Chief will brief Branch Directors in person or via phone for remote Branches to assure they are aware of all operational concerns including:

- Times of the Final Hurricane Preparation Period.
- Hurricane specific information prior to implementation of this phase of the plan.

Branch Directors will be reminded to:

- Notify Operations Section Chief of any change personnel assignments prior to morning Briefing.
- If applicable, submit list of personnel that will staff “Damage Assessment Task Force” to Operations Section Chief.
- Complete and transmit Unit Logs to Plans at the end of each operational period.
- Commence the operational period by briefing their group supervisors and/or entire Branch staff.
- Complete/review Crew Time Reports for each employee in their Branch.
- Assure that all park residents in their Branch have safely evacuated to a Shelter well before the storm reaches landfall.

Final actions are completed as outlined in the Incident Action Plan (IAP) for the Final Hurricane Preparation Period under the guidance of the Deputy Incident Commander.

Planning Meeting:

A planning meeting for Post Hurricane Recovery Period will be held within the first hours of this operational period. The following items will be included in the normal Plans meeting agenda:

- Work hours of the next operational period will be determined.
- Determination when to move into the Hurricane Recovery Period
- Modifications and revisions to the preplan will be addressed.
- Establish staging areas to meet in the event that phone service is down following the storm.
- Time/phone number/attendees for next briefing via conference call will be identified.

In addition to reviewing/finalizing the IAP, the purpose of this meeting is to write the incident action plan for the first operational period immediately after the storm. This allows for the preparation of an IAP based on the best available information about the storm and expected results.

The IMT will compile and order resources for mobilization immediately after the storm has passed based on the determination of needs to assist staff and protect park resources and assets. These resources may consist of communications kits, law enforcement/emergency service strike teams, maintenance strike teams, Critical Incident Stress Debriefing (CISD) strike teams, or Type I/2 IMT depending upon the given storm situation. The Resource Order Planning Grid (**Appendix D**) will be used to assist the IMT in deciding on what types of resources are required.

Command and General (C & G) Staff will be released during this operational period. During the Planning Meeting a conference call line will be established and C&G staff will be instructed to call in at a designated

time to assess weather conditions, receive report of conditions from on-site IC and determine a date/time for the 1st post-storm operational period.

Operational Period Objectives:

- Protect park resources.
- Ensure that property and staff are accounted for during this operational period.
- Provide for well-being of park employees.
- Ensure all actions are conducted safely.
- Maintain contact with Southeast Regional Office.

Storm Duration

Communications Center

Dispatch will continue to function throughout the storm up to a Category II Hurricane. Dispatch will maintain records of radio/telephone communications throughout the storm and provide copies of these records to the Plans Section immediately after the storm. At a Category III Hurricane or higher, Dispatch will cease all operations and no staff will remain in the Park. Dispatch must be staffed immediately after a storm as soon as plausible with the expectation of receiving numerous telephone/radio calls from employees reporting their current status.

Command/General Staff: C&G staff call into conference line at a designated time to assess weather conditions and determine a date/time for the 1st post-storm operational period.

Post-Hurricane Recovery Period Immediate Aftermath of a Storm

The following are general guidelines for the Planning Section to use for this period.

Every storm situation will differ, and the plans for operations during any particular storm must be made during Final Hurricane Preparation Period and revised as needed following the storm.

Post Hurricane Planning Priorities

1. Identify immediate life and safety hazards in occupied areas of the park. Provide immediate assistance. Rectify hazards and/or quarantine these areas.
2. Secure park access points.
3. Locate and assess the well-being of all park employees and their immediate families.
4. Provide emergency assistance to employees and their families as needed.
5. Provide initial assessment of damages to park facilities.
6. Provide assessment of damages/needs to the Southeast Region All-Risk Incident Coordinator in accordance with the NPS Southeast Region (SER) Emergency Operations Plan.
7. Begin process of requesting additional resources or a higher level (Type I or II) incident management team.
8. The Incident Commander and the Park Superintendent will determine necessary park/district closures and appropriate openings.
9. Coordinate with Emergency Operations Centers (EOC) for Miami-Dade, Monroe, and Collier counties and Florida State EOC in Tallahassee to identify resources available for community assistance or to request additional resources to assist the park. Establish liaison with any state emergency response team (SERT) that may have been pre-positioned from State EOC to streamline local area needs in support of FEMA Emergency Support Functions (ESF).

Recommendations for additions to the ICS-203 Organizational Chart

The following Branches or Groups are suggested for most storms that require this recovery phase:

- **Employee Assistance** –contact employees to determine post-storm status and immediate needs, coordinate emergency assistance to employees and families, and provide other assistance as appropriate
- **Facility Management Software System (FMSS)** – conduct thorough damage assessments, enter needs into FMSS, determine project priorities, track projects, etc.

Operational Period Objectives:

- Ensure the safety of all park employees evacuated to commercial lodging.
- Locate all park employees.
- Contact Southeast Regional Office (SERO) and advise of current situation and needs.
- Begin assessment of damages to park resources and facilities.
- Protect park resources and facilities.

Hurricane Breakdown Period Return to Normal Operations

It is recognized that due to the unpredictability of hurricanes, hurricane preparations will be made for Everglades National Park and yet the storm may track in another direction. This section of the Plan was developed to assist the park in returning to normal operations. Bear in mind that post-storm activities will continue to be managed under the delegation of authority to the Hurricane Incident Management team until normal park operations are restored and the team transfers authority back to the Superintendent.

Operational Period Briefing:

Operations Section Chief will establish Staging Area at Pine Island.

The Operations Section Chief will brief Branch Directors and Group Supervisor in person or via phone for remote Branches in advance of this operational period to assure they are aware of all operational concerns including:

- Times of the Hurricane Breakdown Period.
- Hurricane specific information prior to implementation of this phase of the plan.

Branch Directors and Group Supervisors will be reminded to:

- Instruct employees to return to work and to report to their incident supervisor, not their normal job. All employees working in the Pine Island Branch, Flamingo Branch, Research Branch Headquarters Branch and Maintenance Group will be directed to report to a Staging Area established in Pine Island to receive assignments. Gulf Coast Branch and Key Largo Branch employees will report to their respective Branch Directors as established upon release from the prior operational period.
- Submit initial personnel resource assignments and needs to Ops Chief ASAP. All subsequent personnel resource assignments and needs will be submitted to Ops Chief prior to afternoon Planning Meetings. Complete and transmit Unit Logs to Plans at the end of each operational period.
- Commence the operational period by briefing their group supervisors and/or entire branch staff.
- Complete/review Crew Time Reports for each employee in his or her Branch.
- **Branch Directors will assure that all employees are informed about returning to normal work operations.**
- Command and General staff will fulfill the established Incident Command Staff responsibilities of their jobs throughout the Hurricane Breakdown Period.

Planning Meeting:

A Planning Meeting for the period will be held once the decision is made by the IMT that the storm is no longer a threat to Everglades National Park. The following items will be included in the normal Planning meeting agenda:

- Work hours of the next operational period (if any) will be determined.
- Determination when to transition back to normal park operations.
- Modifications and revisions to the preplan will be addressed.
- Time/location/attendees for next briefing will be identified.

Once the Incident Action Plan is consolidated for the next operation period, Planning Section will prepare the Release Plan that will identify when resources can be released back to normal park operations.

At the end of the Hurricane Breakdown Period the Incident Management Team will provide a Transition Plan to the Superintendent. The Incident Commander will meet with the Superintendent to agree upon the Transition Plan and terminate the Delegation of Authority. See Appendix for an example Transition Plan.

Operational Period Objectives:

- Systematically restore park facilities and park operations to "normal" conditions.
- Protect park resources and park visitors.
- Ensure accountability for park property and staff.
- Ensure all actions are conducted safely.

The organizational chart on the following page may change throughout the hurricane season and by incident as needed.

2014 ORGANIZATION ASSIGNMENT LIST			
1. Incident Name		Standing IMT3 Hurricane Team	
2. Date	6/30/2014	3. Time	12:00
4. Operational Period		Hurricane Season 2014	
Position		Name	
5. Incident Commander and Staff			
Incident Commander		Mike Jester	
Deputy IC		Rick Anderson	
Information Officer		Alice Clarke	
Deputy Information Officer		Larry Perez	
Liaison Officer		William Gordon	
Deputy Liaison Officer		Allyson Gantt	
Liaison Assist—DRTO		Nick Fuechsel	
Liaison Assist—Contractors		Mike Savage	
Safety Officer		Jack Weer	
NE Districts Field Safety		Tim Woody	
Gulf Coast Field Safety		Ryan Mayberry	
DRTO Field Safety		Adam Bass	
Resource Advisor		Jeff Kline / Damon Rondeau	
Engineering Advisor		Mike Savage	
6. Agency Representative			
NPS Agency Representative		Bob Krumenaker / Justin Unger	
7. Planning Section			
Chief		Aerin Land	
Deputy PSC		Samantha Towery	
Situation Unit		Caryl Alarcon	
Resource Unit		Melissa Taylor	
Documentation Unit		Sally Hendricks	
Technical Specialist – FMSS-post storm		Willie Synagogue	
Technical Specialist – IT		Carlos Mateo/Josue Urbaz	
8. Logistics Section			
Chief		Will Vazquez	
Deputy LSC		Rick Rivero	
Ground Support Unit—Post storm only			
Supply Unit		Taryn Manzini	
Medical Unit—EVER		Steve Mullet	
Communications Unit		Tim Moore/John Diamond	
9. Finance Section			
Chief		Heather Walker	
Deputy FSC (trainee)		Lesley Sytsma	
Time/Cost Unit		Julie Abreu	
Procurement Unit		Deryck Cruz	
10. Everglades Operations Section			
EVER Operations Section Chief		Collin Johnson / S. Beneway	
Dispatch		Jim Snyder	
Prepared by Aerin Land, Planning Section Chief			

Everglades Operation Branches	
a. Branch I—Gulf Coast	
Gulf Coast Branch Director	Tom Iandimarino/Ryan Mayberry
Gulf Coast Maintenance Group	Ryan Mayberry
Gulf Coast Visitor Services Group	Mike Herrin
b. Branch II—NE Districts	
NE Branch Director	Cindy Morris
Tamiami/SV/Loop Rd. Division	Scott Devore
East Ever Division	Dale Pfau / Marc LeQuieu
c. Branch III—Pine Island	
Pine Island Branch Director	Chris Corrigan / Pat Edwards
Pine Island Visitor Services Division	Mirta Maltes/Al Mercado
Entrance Station Group	Barbara Johnson
RP/HL/LPK Group	Ryan Meyer
Fire Division	Cory Dutton / Jordan Collier
Helibase Group	Andrew Gill
Headquarters Division	Sabrina Diaz / Ryan Meyer
Shutter Group	Rudy Beotegui
Office Group	Fred Herling
Vehicle Group	Tenia Fleming
d. Branch IV—Key Largo	
Key Largo Branch Director	Dan Kiger / Brandon Moore
e. Branch V—Maintenance	
Maintenance Branch Director	Rich Ahern / Glenn Walker
Task Force Coordinator – pre storm	Willie Synagogue
Task Force I—Utilities	Randy Borden
Task Force 2—Special Equipment	Jeff Weinstock/John Hogan
Task Force 3—Shutters	Ray Foster
Task Force 4 – Missile Base/Tie-down	Curtis Powell
f. Branch VI—Research	
Research Branch Director	PJ Walker/Hillary Cooley
Trailing Task Force	Steve Tennis / Damon Rondeau
DBC Office Task Force	Sonja Lederer
DBC Outside Task Force	Jonathan Taylor
Museum/Archives/Library	Nancy Russell
Krome Division	Kim Gomez
Response Team Coordinator	Jessica McHugh
g. Branch VII—Flamingo	
Flamingo Branch Director	Tony Terry/Rob Neuman
Flamingo Visitor Services Group	Steve Mullet
Flamingo Maintenance Group	Mike Lewter
II. Dry Tortugas Operations Section	
DRTO Operations Section Chief	Glenn Simpson/Dave Fuellner
Dry Tortugas Group	Tree Gottshall / John Spade
Key West Group	Kelly Clark
Fort Jefferson Group	Tim Arter
Medical Unit—Garden Key	Adam Bass
Medical Unit – Poinciana	Wayne Mitchel

Command and General Staff - ICS Organizational Roles

Incident Commander:

- Present clear authority and knowledge of agency policy
- Ensure incident safety
- Assess the situation
- Establish immediate priorities
- Determine incident objectives and strategies to be followed
- Establish the level of organization needed and continually monitor the operation and organization effectiveness
- Manage planning meetings as necessary
- Approve and implement the Incident Action Plan
- Coordinate Command and General Staff activities
- Approve requests for additional resources or for the release of resources
- Authorize the release of information to the media
- Order demobilization of the incident when appropriate
- Ensure incident after-action review is complete

Command Staff:

Public Information Officer

- Interface with public, media, and/or other agencies regarding incident related information requirements
- Provide accurate & complete information regarding the current situation—resources committed and matters of general interest for both internal and external consumption

Safety Officer

The Safety Officer - (SO) function is to develop and recommend measures for assuring personnel safety, and to monitor and/or anticipate hazardous and unsafe situations.

General Responsibilities

- Responsible for system and procedure necessary to ensure ongoing assessment of hazardous environments
- Coordinate multi-agency safety efforts
- Implement measures to promote emergency responder safety, as well as general safety of incident personnel
- Exercise emergency authority to stop and/or prevent unsafe acts during incident operations
- Ensure coordination of safety management functions and issues across jurisdictions & functional agencies, within the private-sector, and non-governmental organizations

Specific Responsibilities

- Identify safety and health hazards associated with the incident.

- Review JHA's/Risk Analysis for pre and post hurricane operations
- Continuously monitor workers for exposure to safety or health hazardous conditions.
- Alter, suspend, or terminate activities that may pose imminent safety or health danger to personnel.
- Take appropriate actions to mitigate or eliminate unsafe condition, operations or hazards.
- Perform assessment of work practices during hurricane prep and post hurricane recovery.
- Document both safe and unsafe acts, corrective actions taken on the scene, accidents or injuries, and ways to improve safety on future incidents.
- In the event of staff injury or illness, incident supervisors will ensure that OWCP protocols are followed.
- Participate in planning meetings.
- Review the Incident Action Plan (IAP) for safety implications.
- Exercise emergency authority to stop and prevent unsafe acts.
- Investigate accidents that have occurred within the incident area.
- Assign assistants, as needed.
- Review and approve the medical plan.
- Maintain Unit Log (ICS 214)
- Develop Incident Safety Message/Plan (ICS208)for each incident.

Resource Advisor

- Inform the IC/PSC of planning requirements and the need to direct resources during post storm impacts.
- Assist with and/or direct the assessment of archeological resources, hydro stations and storm impacts to natural resources.

Agency Representative

An Agency Representative is an individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident. This role is particularly important when the incident is being managed by an outside agency and/or Incident Management Team.

- Obtain briefing from the LO or IC.
- Inform assisting or cooperating agency personnel on the incident that the Agency Representative position for that agency has been filled.
- Attend briefings and planning meetings as required.
- Provide input on the use of agency resources unless resource Technical Specialists are assigned from the agency.
- Cooperate fully with the IC and the General Staff on agency involvement at the incident.
- Ensure the well-being of agency personnel assigned to the incident.
- Advise the LO of any special agency needs or requirements.
- Report to home agency dispatch or headquarters on a pre-arranged schedule.

- Ensure that all agency personnel and equipment are properly accounted for and released prior to departure.
- Ensure that all required agency forms, reports and documents are completed prior to demobilization.
- Have a debriefing session with the LO or IC before demobilization.

Engineering Advisor

- Technical specialist that provides expertise and advise related to structural and mechanical engineering activities during pre and post storm operations.

Liaison Officer

- Provide a point of contact for representatives of other governmental agencies, non-governmental organizations, and/or private entities
- Present agency policy or operational issues to the attention of the incident commander
- Establish and maintain communication with cooperating and assisting agency managers
- DRTO Liaison Assistant will stage at the ICP and will act as the liaison between the IMT and Monroe County EOC. The DRTO assistant will also be able to assist the PIO with DRTO/Monroe County public information needs.

General Staff:

Planning Section Chief:

The planning section chief is responsible for providing planning services for the incident. Major responsibilities of the Planning Section Chief are to:

- Collect and manage all incident-relevant operational data
- Provide input to the Incident Commander and Operations Section Chief for use preparing the Incident Action Plan
- Supervise preparation of the Incident Action Plan
- Conduct and facilitate planning meetings
- Establish information requirements and reporting schedules for Planning Section Unit
- Determine the need for specialized resources to support the incident
- Establish specialized data collection systems as necessary (e.g., weather)
- Assemble information on alternative strategies and contingency plans
- Provide periodic predictions on incident potential
- Report any significant changes in incident status
- Compile and display incident status information
- Oversee preparation of the demobilization plan
- Incorporate Traffic, Medical, Communications Plans, and other supporting material into the Incident Action Plan

Logistics Section Chief:

The Logistics Section Chief provides all incident support needs with the exception of logistical

support of air operations. The Logistics Section Chief is responsible for:

- Facilities
- Transportation
- Communications
- Supplies
- Equipment maintenance and fueling
- Food services (for responders)
- Medical Services (for responders)
- All off-incident resources
- Management of all incident logistics
- Logistical input to the Incident Commander in preparing the incident action Plan
- Providing briefings for Logistics Unit Leaders as needed
- Identifying anticipated and known incident service and support requirements
- Requesting additional resources, both internal and external, as needed
- Developing the Communication, Medical, and Traffic Plans, as required
- Oversight of demobilization of the logistics Section

Finance/Administration Section Chief:

The Finance/Administration Section Chief is responsible for managing all financial aspects of an incident. Major responsibilities of the Finance/Administration Section Chief are to:

- Manage all financial aspects of an incident
- Provide financial and cost analysis information as requested
- Ensure compensation and claims functions are being addressed relative to the incident
- Develop operating plan for the Finance/Administration Section, fill section supply and support needs
- Meet with assisting and cooperating agency representatives as needed
- Maintain daily contact with agency administration headquarters on finance matters
- Ensure that all personnel and equipment time records are accurately completed and transmitted according to policy
- Brief agency administrative personnel on all incident-related financial issues needing attention or follow up

Operations Section Chief:

The Operations Section Chief is responsible for managing all tactical operations at an incident and the Incident Action Plan provides the necessary guidance. Major responsibilities of the Operations Section Chief are to:

- Manage tactical operations
- Assist in the development of the operations portion of the IAP—this usually requires filling out the ICS form 215 prior to the Planning Meeting
- Supervise the execution of the operations portion of the IAP
- Maintain close contact with subordinate positions
- Ensure safe tactical operations

- Request additional resources to support tactical operations and approve release of resources from active assignments
- Make or approve expedient changes to the operations portion of the IAP
- Maintain close communication with the Incident Commander

Dispatch

- Dispatch will operate during a **Category 1** Hurricane in their normal duty station at ENP HQ. Two dispatchers and one LE Ranger qualified as an EMT-Basic (at a minimum) will remain at HQ for the duration of the storm.
- In the event of a **Category 2** Hurricane, Dispatch will move their mobile radio unit to the reception area in the LE offices. This room is part of the original building (concrete roof) and has no exterior openings. Two dispatchers and one LE Ranger qualified as an EMT-Basic (at a minimum) will remain in HQ for the duration of the storm.
 - Footprints request will be submitted for a cable to the reception office to connect the mobile unit.
- In the event of a **Category 3 or higher** all dispatch operations would cease and no staff will remain in the park.
 - Liaison Officer will notify all other south Florida Parks about the full shut down of dispatch by the end of the Preliminary Hurricane Prep Operational Period (72-48 hrs BFL) in order to provide sufficient time for them to make other communications arrangements.
 - Commercial Lodging will be provided to qualifying dispatch personnel.

Operations Section Incident Checklists

Everglades Operations Section

Branch I – Gulf Coast

General

Visitor Center/Interpretation

Branch II – NE Districts

(Tamiami, Shark Valley, Loop Road, East Ever, Chekika)

Branch III – Pine Island

Pine Island Visitor Services Division

Fire Division

Headquarters Division

Branch IV – Key Largo

Branch V – Maintenance

Branch VI – Research

Dan Beard Center Division

Krome Division

Museum, Archives, & Library Group

Branch VII – Flamingo

Dry Tortugas Operations Section

Dry Tortugas Group

DRTO & Poinciana Housing Evacuation Plan

NPS M/V *Fort Jefferson*

Gulf Coast Branch Hurricane Checklist

Note: There are many more things to do that are not on this list. This document acts as a rough outline of things that need to be completed. For more detailed preparations for the visitor center/interpretation operations, see the Gulf Coast Visitor Center Check List (Gulf Coast internal document).

General Hurricane Season

- 1) Review the Hurricane Plan. There are blank general messages, unit logs, “red dogs”, and crew time reports (CTR’s).
- 2) Meet with the Maintenance and VP Group Supervisors, as well as the designated ENPBT representative, on general hurricane prep. Review the Hurricane plan and know what the responsibilities are. These individuals will meet as needed throughout the hurricane season to keep informed on new developments.
- 3) Ensure that non-essential equipment is secured upstairs in the maintenance office. Also see that the area is orderly and loose items are strapped or banded together. Branch meetings should address this.
- 4) Schedule a hurricane clean-up day.
- 5) Remove all maintenance equipment from the backcountry, ensure that all building materials being used in backcountry are tied down in the appropriate staging area.
- 6) Ensure that any equipment or PPE short-comings are identified and reported to Operations Section Chief for funding.
- 7) Ensure that all vessels have working trailers. Trailers must be checked for adequate bearings, tires, tire pressure, lights, and chains with shackles. Branch meetings should address this. Report all deficiencies to FMSS via work request.
- 8) Advise residents that they are responsible for securing all accordion shutters, prior to leaving for extended periods (vacation, FLETC, details) during the hurricane season. They are also responsible for securing any items inside their residences prior to leaving.
- 9) Ensure that residents understand that at the time of an evacuation they are required to leave Everglades City and report to the designated shelter area. Ensure all staff residing in Government Housing have access to and are familiar with the Housing Evacuation Plan and Hurricane Shelter Checklist. All employees are responsible for providing their own food, water, personal supplies to last for 3 days. Encourage that they bring with them items of a high monetary or personal value. In addition, they are responsible for evacuating their own vehicles and vessels.
- 10) Ensure that all staff have access to and are familiar with the Appendices A & H – Checklist for Computer Users and Employee Responsibilities.
- 11) Inspect and inventory all shutters and shutter related tools, submit general message resource orders to Operations Section Chief as needed.
- 12) Shutter all non-occupied housing units, with the exception of the front doors.

Preliminary Hurricane Preparation (72-48 hours before Landfall)

- 1) Branch Director participates during the Incident Command briefing/conference call. After the briefing, advise the Maintenance and Visitor Services Group Supervisors and the designated ENPBT representative.
- 2) Contact Logistics to reserve rooms at the Comfort Inn, Fairfield Inn and /or La Quinta (if

- resident has pets) for evacuation of staff.
- 3) During the 100 hr Planning Meeting, Branch Director will have submitted a resource order for special teams or additional personnel if needed.
 - 4) Advise personnel that they are responsible for providing their own food/ personal supplies during this operational period.
 - 5) Assess if there is a need for aircraft to be used for backcountry patrol at the beginning of the next Operational Period. This patrol will include all backcountry areas in Flamingo, Key Largo, and Gulf Coast Districts. Coordinate with Operations and other coastal branches during this effort. Ensure that personnel who will be flying have adequate personal protective equipment and have adequate charts. The CTR must include a notation for hazardous duty for those personnel flying in aircraft.
 - 6) Ensure a backcountry patrol of the Gulf Coast District will be accomplished, at the beginning of the next Operational Period, via a District vessel as well. The District vessel will be in the backcountry as the fly over is conducted. This will coordinate a surface unit with the air unit to notify any vessels of the impending storm.
 - 7) Request TA for all LE rangers to stage “re-entry vehicles” at personal residences.
 - 8) Review all backcountry permits. **All individuals** on the backcountry permits must be accounted for.
 - 9) After the official notification of the backcountry closure, a patrol vessel will remain available for SAR and LE purposes.
 - 10) Ranger Station and Visitor Center staff will start covering items during this Operational Period. All Computers/Battery backups, Fax/Copier/Cash Register etc. are unplugged and covered with plastic or placed in action packer bins under plastic (see Appendix H. Checklist for Computer Users).
 - 11) Staff will begin removing non-essential equipment, vehicles, vessels, and all trailers to Big Cypress Headquarters (BICY) and will tie down all vessels. All vehicles will be parked near the Pole Barn behind BICY maintenance. **DO NOT PARK ANY VEHICLES NEXT TO BIG CYPRESS HQ OR ANY HOTELS WITH GRAVEL ROOFS.** The gravel roof will destroy windows and paint on vehicles.
 - 12) Staff will complete shuttering of all non-occupied housing units and the Ranger Station/Visitor Center during this Operational Period. Residents will be assisted by staff in securing their accordion shutters. Inspect laundry areas. Place washers and dryers on blocks. Check trailer pads for loose material and secure sewage caps.
 - 13) Conduct a walk about and determine any problems. Report to Branch Director and remedy situation.
 - 14) Branch Director will submit personnel resource assignments and needs for Advance Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting.
 - 15) At the end of the Operational Period, CTR’s are faxed or e-mailed to Time Unit at and Unit Logs are faxed or e-mailed to the Planning Section. See IAPs for numbers and contact names.

Advanced Hurricane Preparation (48-24 hours before Landfall)

- 1) Branch Director participates during the Incident Command briefing/conference call. After the briefing, advise the Maintenance and Visitor Services Group Supervisors and the designated ENPBT representative.
- 2) Ensure backcountry is clear by the end of this operational period.

- 3) The evacuation of non-essential vehicles and vessels is completed during this Operational Period.
- 4) The shuttering project is completed. Residents are advised they are responsible for securing the front door shutter after prior to departing for shelter area. **Any problems have to be dealt with now.**
- 5) The items in the Maintenance office and Ranger Station are packed and secured. Backups are made of computer operating systems.
- 6) The park may close during this Operational Period and the visitors will be asked to leave the Park.
- 7) Ensure the trash cans are secured, tied to fence or placed in bathroom. Secure all lids on dumpsters to prevent trash from being blown around.
- 8) Drive around the district. Report any problems that need immediate attention to the GC Branch Director.
- 9) With approval from the Branch Director and once primary tasks have been completed, non-essential employees will be released to complete personal hurricane preparations.
- 10) Branch Director will submit personnel resource assignments and needs for Final Hurricane Prep to Operations prior to the afternoon Planning Meeting.
- 11) At the end of the Operational Period, CTR's are faxed or e-mailed to Time Unit at and Unit Logs are faxed or e-mailed to the Planning Section. See IAPs for numbers and contact names.

Final Hurricane Prep (24-0 hrs BLF)

- 1) The Branch Director receives a final report of the status of the Gulf Coast. Any tasks not accomplished are explained and noted on the Unit Log.
- 2) NO VEHICLES will be left in Everglades City during this operational period.
- 3) All personnel are evacuated. **No exceptions.**
- 4) Identify Post Hurricane Strike Team members and submit their names to Operations Section Chief prior to afternoon Planning Meeting.
- 5) At the end of the Operational Period. CTR's are faxed or e-mailed to Time Unit at and Unit Logs are faxed or e-mailed to the Planning Section. See IAPs for numbers and contact names.

Post Hurricane Recovery

- 1) All Staff call EVER/DRTO Emergency Hotline to receive park closure updates, leave a message reporting post-storm status and to request assistance, if needed. Report to designated work station as directed.
- 2) The Strike Team will drive to Everglades City together. The Strike Team is equipped with the 2 reentry vehicles that can be chain saw equipped and response trailer.
- 3) The Strike Team will identify any immediate life and safety hazards in the occupied areas of the District and will work with Collier County Sheriff's Office in responding to any incident.
- 4) The Strike Team will provide initial assessments of any damage in the District.
- 5) Resource orders are submitted for work crews as problems are encountered. Work crews are to be self-sufficient during this Operational Period.
- 6) Rangers complete a thorough boat patrol of district and check all chickees, Aids to navigation, campsites, and facilities. All damage to Aids to Navigation is reported to U.S.

Coast Guard, Station Fort Myers Beach. Damage to park facilities is reported to maintenance and Operations section. Rangers will retrieve 1-2 boats from Ochopee for initial patrol.

- 7) As time permits, vehicles, vessels and mobile equipment will be brought back.
- 8) Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- 9) At the end of the Operational Period, CTR's are faxed or e-mailed to Time Unit at and Unit Logs are faxed or e-mailed to the Planning Section. See IAPs for numbers and contact names.

Hurricane Breakdown

The final Operational Period is the hurricane breakdown. The following tasks must be accomplished in this time period.

- 1) Removing the Visitor Center and Ranger Station shutters are the first priorities. Occupied housing shutters are the next priority. Unoccupied housing shutters should remain closed throughout the hurricane season.
- 2) The Visitor Center, Ranger Station and Maintenance Office will have items uncovered and computers brought back online.
- 3) Backcountry campsites will be made ready to reopen.
- 4) All bulletins posted during the evacuation are removed.
- 5) Work crews that have completed their tasks are reassigned or released by the Branch Director with advisement from the Group Supervisors.
- 6) Ensuring the District is ready for the visiting public is a priority but safety is the highest priority. Advise the Group Supervisors to instruct their work crews of this goal.
- 7) At the end of the Operational Period, CTR's are faxed or e-mailed to Time Unit at and Unit Logs are faxed or e-mailed to the Planning Section. See IAPs for numbers and contact names.

NE Districts Branch Hurricane Checklist

General Hurricane Season

- Review the Hurricane Plan. Update personal information forms for each park employee, concession employees, and VIP and update lists for distribution. Update Hurricane Plan binders located at Tamiami Ranger Station, Loop Road Environmental Education Center, Shark Valley Interpretive Office, Shark Valley Entrance Station, Shark Valley Visitor's Center and East Everglades Operations Center (EEOC) with information such as crew assignment lists, blank general message forms, unit logs, ect.
- NE Branch Director, Tamiami and East Everglades Division Supervisors, designated Shark Valley Tram Tours representative, and other area supervisors will meet monthly during the hurricane season to review general hurricane preparations, identify and rectify problems or needs, review staffing and provide input for monthly Command/General Staff meetings. After each meeting, a unit log (ICS 214) will be completed by the Branch Director and be submitted to the Operations Section Chief by the 9th of each month.
- Schedule a work day in late May to conduct work projects such as securing areas that are generally closed during the summer months such as Trail Center and Loop Road EE Center by shuttering all unoccupied facilities, securing picnic tables and any other loose items port-a-jons, etc.
 - Inventory and inspect all shutters, submit resource order to replace shutters as needed.
 - The Hernandez House is scheduled for demolition, it will remain shuttered indefinitely.
 - Shutter all unoccupied housing units in the Trail Center and Tamiami.
 - Inspect and clean-up Tamiami and EEOC Facilities, Chekika and Shark Valley Administrative Areas, ensure that all non-essential equipment that is not needed for immediate use is stored. This includes airboats.
 - Store non-essential airboats at the Loop Road Ranger Station in BICY. If not available, then plug the airboats and fill them with water. Ensure that these vessels are in good working order remain available for emergency response throughout the hurricane season.
 - Tie down spots are expected to be installed at the EEOC and available for airboat/trailer storage sometime during the 2014 season.
- Advise NE Branch residents that they are responsible for securing any shutters on their residences that are easily reached prior to leaving for extended periods (annual leave, training, details) during hurricane season. They are also responsible for securing any items inside their residences prior to leaving.

Preliminary Hurricane Preparation 72-48 hours before Landfall

- Branch Director will attend IMT briefing at HQ. Following this meeting information will be relayed to Tamiami and East Everglades Division Supervisors for dissemination at staff meetings. The same information will also be relayed to the designated Shark Valley Tram Tours.

- ☐ Briefings will be held at Shark Valley Interpretive Office in the Tamiami Division, and East Everglades EEOC in the East Everglades Division. Park residents will be advised of hurricane evacuation plans. Primary and secondary post-storm reporting areas will be designated and all staff will be informed. Ensure communication plan is in place.
- ☐ Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- ☐ Completed Crew Time Reports and Unit Logs are faxed to Finance Section Chief and Documentation Unit Leader at the end of the Operational Period. Branch Director will maintain copies of all Crew Time Reports to have a backup in the event that payroll issues arise following the incident. Division Supervisors are responsible for assuring that all personnel under them are accounted for in their divisions Crew Time Report.
- ☐ Information will be made available to visitors at Shark Valley advising of the storm approach and anticipated park closure timetable. The Entrance Station and Visitor Center at Shark Valley will remain open during this Operational Period.
- ☐ Ensure that all portable fuel containers are filled with the appropriate fuel type. Make sure appropriate quantities of Unleaded Gas, Diesel, AV Gas, Chainsaw Mix are on hand at Tamiami and East Everglades EEOC Fuel Sheds.
- ☐ Ensure that all generators and chainsaws are operational, fueled, and ready for use after the storm.
- ☐ As tasks are completed all employees will check-in with their Division Supervisor for further assignments. Employees must be released by the Branch Director through their respective Division Supervisor.
- ☐ Travel Authorizations will be submitted for LE Rangers to stage emergency response vehicles at their homes. Fire Personnel will submit Travel Authorizations as needed to take home an emergency response vehicle loaded with emergency equipment, including a chain saw for post storm operations.

AREA SPECIFIC TASKS:

East Everglades Complex:

- ☐ Shutter all remaining windows and glass doors. Do NOT shutter front doors of occupied buildings at this time.
- ☐ Secure all outdoor equipment and out buildings.

Shark Valley Complex:

- ☐ Shutter all buildings except for the Visitor Center and Entrance Station. Do NOT shutter front doors of any of the buildings at this time.
- ☐ Secure all outdoor equipment and out buildings.

Tamiami Ranger Station Complex:

- ☐ Shutter all buildings. Do NOT shutter front doors of any of the buildings at this time.
- ☐ Secure all outdoor equipment and out buildings, pay particular attention to the Pole Barn, Ranger Shed, and Maintenance Sheds. Store any items that can be stored inside of the sheds.
- ☐ Transport airboats to gliderport in East Everglades.

Loop Road Environmental Education Center:

- ☐ Shutter all buildings. Do NOT shutter front doors of any of the buildings at this time.
- ☐ Ensure port a jons are secured in place, or move to secure location as needed.

Trail Center Complex:

- ☐ Ensure that all buildings are completely shuttered.
- ☐ Ensure that all outdoor equipment and out buildings are secure.

Advanced Hurricane Preparation 48-24 hours before Landfall

- ☐ Branch Director will attend IMT briefing at HQ. Following this meeting information will be relayed to Tamiami and East Everglades Division Supervisors for dissemination at staff meetings. The same information will also be relayed to the designated Shark Valley Tram Tours.
- ☐ Briefings will be held at Shark Valley Interpretive Office in the Tamiami Division, and EEOC in the East Everglades Division. Each Division Supervisor will make assignments of personnel at this time. Park residents will be advised of hurricane evacuation plans.
- ☐ Ensure communication plan is in place.
- ☐ Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- ☐ Completed Crew Time Reports and Unit Logs are faxed to Finance Section Chief and Documentation Unit Leader at the end of the Operational Period. Branch Director will maintain copies of all Crew Time Reports to have a backup in the event that payroll issues arise following the incident. Division Supervisors are responsible for assuring that all personnel under them are accounted for in their divisions Crew Time Report.
- ☐ By end of operational period, cover all items in their offices. Items will be covered with plastic or placed in Action Packers. Each room will have a sheet posted on the wall indicating which items need to be placed in Action Packers. Computers will be have "My Documents" files backed up to CD-R's before being stored. Each CPU will be stored in a water resistant container.
- ☐ When the park closure order is given: The park will close to visitors during this Operational Period. Concession operations will shut down during this Operational Period. All Visitors will be asked to leave. A sign will be posted at the Shark Valley Gate once the gate is closed.

- ☐ Ensure that all Government Vehicles and Vessels have full tanks of fuel.
- ☐ As tasks are completed all employees will check-in with their Division Supervisor for further assignments. Employees must be released by the Branch Director through their respective Division Supervisor. All not essential employees will be released by the end of this Operational Period.
- ☐ Interp Vehicles stage at Shark Valley parking lot and Keys will be stored at the entrance station to Shark Valley.

AREA SPECIFIC TASKS:

East Everglades Complex:

- ☐ Ensure that all buildings are completely shuttered.
- ☐ Ensure that all outdoor equipment and out buildings are secure.
- ☐ Fire Personal will have TAS as needed to take home emergency response vehicle loaded with emergency equipment including a chain saw for post storm operations.
- ☐ One computer with internet access, and the fax machine should remain operational during this period.
- ☐ All other Fire vehicles stage at EEOC.

Shark Valley Complex:

- ☐ Ensure that all buildings are completely shuttered. Keep Entrance Station and Visitor Center staffed until the area closes to visitors.
- ☐ Ensure that all outdoor equipment and out buildings are secure.
- ☐ Ensure that Shark Valley Tram Tours hurricane preparations are complete, and provide assistance as necessary.

Tamiami Ranger Station Complex:

- ☐ Ensure that all buildings are completely shuttered.
- ☐ Ensure that all outdoor equipment and out buildings are secure.

Loop Road Environmental Education Center:

- ☐ Ensure that all buildings are completely shuttered.
- ☐ Ensure that all outdoor equipment and out buildings are secure.
- ☐ Move all remaining government vehicles that will not be needed directly following the hurricane to Shark Valley parking lot AND LEAVE KEYS IN ENTRANCE STATION.

Trail Center Complex:

- ☐ Ensure that all buildings are completely shuttered.
- ☐ Ensure that all outdoor equipment and out buildings are secure.

Final Hurricane Prep 24-0 hrs BLF

- ☐ Branch Director will attend IMT briefing at HQ. Following this meeting information will be relayed to Tamiami and East Everglades Division Supervisors for dissemination at staff meetings. The same information will also be relayed to the designated Shark Valley Tram

Tours.

- ☐ Notify Operations Section Chief at the beginning of the Operational Period if any there are any changes to personnel assignments for this operational period.
- ☐ Completed Crew Time Reports and Unit Logs are faxed to Finance Section Chief and Documentation Unit Leader at the end of the Operational Period. Branch Director will maintain copies of all Crew Time Reports to have a backup in the event that payroll issues arise following the incident. Division Supervisors are responsible for assuring that all personnel under them are accounted for in their divisions Crew Time Report.
- ☐ Ensure communication plan is in place
- ☐ Branch Director and Division Supervisors will review hurricane preparations to ensure that all necessary tasks have been completed. A determination should be made if work should continue if necessary.
- ☐ If not done previously, all non-essential employees should be released ASAP.
- ☐ The Final Inspection Strike Team will conduct a final sweep of Shark Valley, Tamiami, and Loop Road, EEOC facilities to ensure that all Park Residents have evacuated, and that all facilities and gates are secure. This team will depart the area with sufficient time to safely relocate to their designated evacuation location.

Post Hurricane Recovery

- ☐ Call the EMERGENCY Hotline, leave a message about your post storm status and, if able, report to designated work area.
- ☐ Branch Director should make an assessment of available personnel and assign them to various strike teams. It should be expected that there will not be enough personnel to staff all strike teams. Strike teams should be staffed in priority order and personnel reassigned to other teams as tasks are completed.
- ☐ Ensure communication plan is in place.
- ☐ Identify immediate life and safety hazards in occupied areas of the park.
- ☐ Provide initial assessments of the damage incurred to the park. This includes accessibility, safety hazards, and damage to government, concession, and employee property.
- ☐ Personnel should work in teams of at least two employees, qualified staff on each team should carry EMS gear and a chainsaw kits.
- ☐ A list of all personnel working under the NE Branch will be emailed or faxed to the Operations Section Chief through the Branch Director at the beginning of the Operational Period.

- ☐ Consult Branch org chart and identify who will be staffing the following operational period, fax or email to the Operations Section Chief, along with any additional personnel or equipment needs before the afternoon planning meeting.
- ☐ Completed Crew Time Reports and Unit Logs are faxed to Finance Section Chief and Documentation Unit Leader through the Branch Director at the end of the Operational Period. Branch Director will maintain copies of all Crew Time Reports to have a backup in the event that payroll issues arise following the incident. Division Supervisors are responsible for assuring that all personnel under them are accounted for in their divisions Crew Time Report.
- ☐ As tasks are completed all employees will check-in with their Division Supervisor for further assignments. Employees must be released by the Branch Director through their respective Division Supervisor.

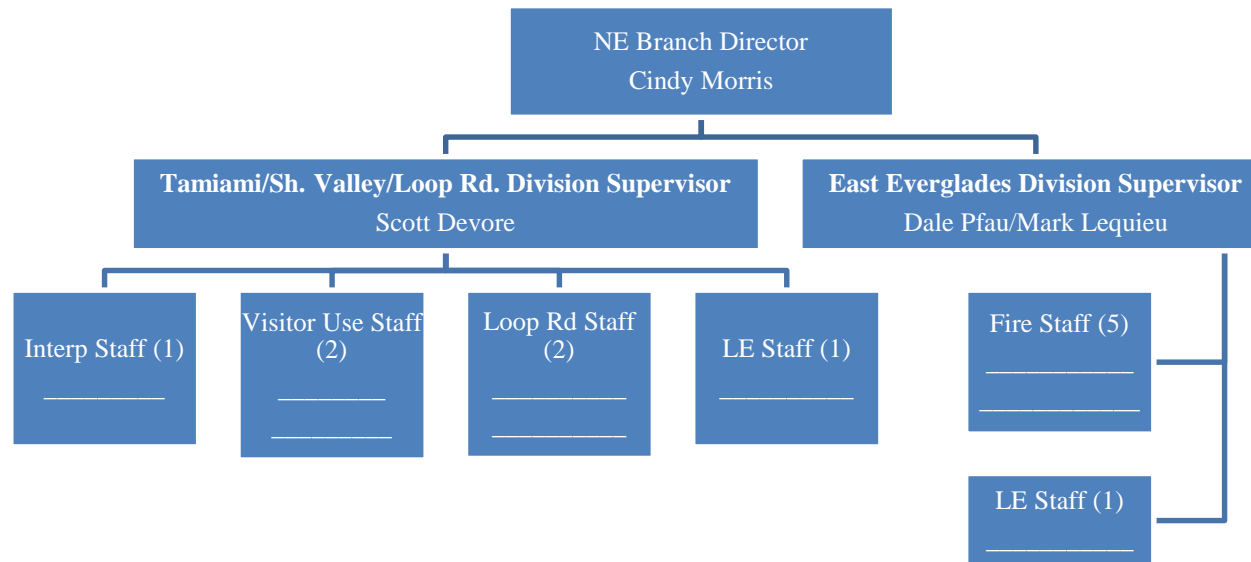
Hurricane Breakdown

- ☐ The goal of this Operational Period will be to return all facilities and equipment to normal operation.
- ☐ Branch Director will contact Division Supervisors to keep them apprised of park opening plans.
- ☐ Branch Director will attend IMT briefing at HQ. Following this meeting information will be relayed to Tamiami and East Everglades Division Supervisors for dissemination at staff meetings. The same information will also be relayed to the designated Shark Valley Tram Tours.
- ☐ Consult Branch org chart and identify who will be staffing the following operational period, fax or email to the Operations Section Chief, along with any additional personnel or equipment needs.
- ☐ Completed Crew Time Reports and Unit Logs are faxed to Operations through the Branch Director at the end of the Operational Period. Branch Director will maintain copies of all Crew Time Reports to have a backup in the event that payroll issues arise following the incident. Division Supervisors are responsible for assuring that all personnel under them are accounted for in their divisions Crew Time Report.
- ☐ Branch Director should make an assessment of available personnel and assign them to various strike teams. It should be expected that there will not be enough personnel to staff all strike teams. Strike teams should be staffed in priority order and personnel reassigned to other teams as tasks are completed.
- ☐ Ensure communication plan is in place.
- ☐ Shark Valley Entrance Station, Shark Valley Visitor Center, Shark Valley Interpretation

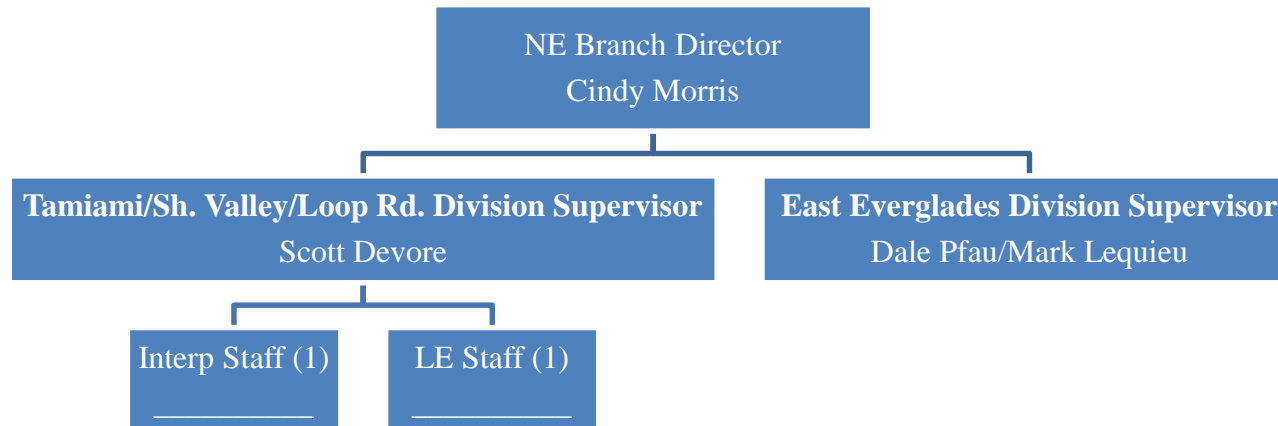
Office, Loop Road Environmental Education Center, Tamiami Ranger Station, and East EEOC should be returned to operational readiness condition.

- ☐ Occupied residences and facilities need to be unshuttered. If other storms are forecasted in the near future careful decision should be made on deciding which shutters should be removed.
- ☐ As tasks are completed all employees will check-in with their Division Supervisor for further assignments. Employees must be released by the Branch Director through their respective Division Supervisor.

Figure XX. NE Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis).
Preliminary Hurricane Preparation Period (72 hrs BLF)



Advance Hurricane Preparation Period (48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BFL) – All preparations should be complete and personnel released as authorized by the IMT.

Pine Island Branch Hurricane Checklists

General Hurricane Season

- Review and revise hurricane plan.
- Throughout the season, meet regularly with the Branch Director and Group Supervisors on general hurricane prep.
- Schedule a hurricane clean-up day.
- Ensure all staff have access to and are familiar with Appendices H – Checklist for Computer Users and Employee Responsibilities.
- Ensure all staff residing in Government Housing have access to and are familiar with the Housing Evacuation Plan and Hurricane Shelter Checklist. All employees are responsible for providing their own food, water, personal supplies to last for 3 days.
- Remove and/or secure all loose items from around buildings.
- Inspect and inventory all shutters, hurricane prep tools, and PPE. Submit Resource Orders to Operations Section Chief as needed.
- Ensure Maintenance has inspected trailers, gates, and barricades, submit work orders for inspections/repairs as needed.

FIRE DIVISION

- Ensure Fire Cache inventory is up to date

Preliminary Hurricane Preparation - 72-48 hours before Landfall

- All PI staff attend 8am incident briefing at the Pine Island Chickee.
- Remove/secure loose items around all buildings.
- Advise Branch Director on status of all assigned tasks.
- Branch Director will submit personnel resource assignments and needs for Advance Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- CTR's are faxed to Finance Section Chief and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.
- Ensure computers are backed-up; secure offices of any employees who will be absent for next 72 hrs.

PINE ISLAND VISITOR SERVICES DIVISION

- Advise individuals in the Campground of the approaching hurricane
- Continue to collect fees; inform visitors of impending storm and possible park closure.
- Work with Fire Division to install gates inside park entrance
- Install shutters on all Entrance Station, Pine Island, Royal Palm, and LPK campground buildings.
- Secure non-essentials LE and Interp boats, and cargo trailers at Nike Missile Base.
- Check EMS and LE equipment
- Begin planning for LE patrol based on park closure schedule established by the IC.

FIRE DIVISION

- Begin to shutter and secure buildings.(restrooms, Iori, flammable storage, Robertson building)
- Move and secure all non-essential trailers, vehicles, and other equipment.
- Begin securing fire records.
- Assign cache manager to maintain integrity of cache and emergency supplies. Items removed from the cache must be signed out with the cache manager.
- Fuel vehicles nightly. Store 10 gallons of diesel fuel and 15 gallons of unleaded fuel in flammable storage shed.
- Coordinate with Visitor Services to install gates
- Helibase Group will coordinate with coastal Branches with back country patrol flights have been approved by the IC.

HEADQUARTERS DIVISION

- Begin shuttering HQ & Coe VC - main entrances are left open and facilities are left operational.
- Pick up water, gatoraid, and ice for HQ teams.
- Computers are left operational. Visitor Center is staffed and provides hurricane updates to visitors.
- Group leaders provide Division Supervisor with crew time reports and resource orders.
- Crews will be released or reassigned by when primary tasks are complete.
- Division staff will check-out with Division Supervisor prior to leaving park.
- Vehicle Group Supervisor will create vehicle inventory sheet and key storage plan.
- Interp bikes and canoes are moved to missile base.

Advanced Hurricane Prep - 48-24 Hours before landfall

- All PI staff attend 8am incident briefing at the Chickee.
- Complete any tasks remaining from the previous operational period.
- Pack offices and secure computers (see Appendix H - Checklist for Computer Users).
- Remove lower file drawers to higher locations and remove all objects off the floor (within reason).
- With consent from Branch Director and Operations Section Chief, when primary tasks are complete, employees should be released or reassigned to other branches.
- Division staff will be given directions for contacting the park after the storm and check-out with their incident supervisor prior to leaving park.
- Advise Branch Director on status of all assigned tasks.
- Branch Director will submit personnel resource assignments and needs for Final Hurricane Prep to Operations prior to the afternoon Planning Meeting.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

PINE ISLAND VISITOR SERVICES DIVISION

- The park may close during this Operational Period and visitors will be asked to leave the Park
- Distribute Park closure info flyers to visitors at Entrance Station.
- Patrol all roads in the district and place barricades at beginning of LPK roads.
- Close gates when directed.
- Coordinate with Fire Division to move water barricades into place and fill them from a fire engine.
- Continue to staff the Main Entrance Station with a Visitor Use Assistant as long as reasonable.

FIRE DIVISION

- Cache manager will check and sign out all items removed from the cache for the hurricane incident.
- Store 15 GAL of diesel fuel and 25 GAL of unleaded fuel.
- Ensure all vehicles and equipment at Homestead Helibase are secured.
- Coordinate with Visitor Services to close gates and install and fill barricades with water.
- Remove weather station and store.

HEADQUARTERS DIVISION

- Shutter team completes shuttering Coe VC & VC is closed. VC team is reassigned or released.
- Vehicle Group Supervisor begins securing vehicles at the HQ parking lot, and collects and stores keys.
- Main entrance to HQ is left open, lunch room is shuttered.
- Group leaders will confirm all tasks are complete and provide Division Supervisor with crew time reports and resource orders.

Final Hurricane Prep - 24-0 hrs before landfall

- All remaining PI staff attend 8am incident briefing at the Chickee.
- Complete any remaining tasks from the previous operational period.
- Ensure all staff are released with adequate time to make personal hurricane preparations.
- CTR's are faxed or delivered to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.
- Advise Branch Director on status of all assigned tasks, any tasks not complete are explained and noted in the unit log(s).
- Division staff will be given directions for contacting the park after the storm and check-out with their incident supervisor prior to leaving park.

PINE ISLAND VISITOR SERVICES DIVISION

- Complete final security check of all buildings
- Secure access points.
- Continue to staff the Main Entrance Station as long as reasonable, while ensuring that staff is released with adequate time to make personal hurricane preparations.
- Fuel and secure patrol vehicles.
- Finalize a Protection Division work schedule to provide coverage/response and submit to Operations Section Chief. Identify which LE and Dispatch Personnel will remain on site during storm duration.
- Last remaining LE personnel is responsible for final shuttering of HQ doors.

FIRE DIVISION

- Assigned cache manager will check/sign out all items removed from the cache for the hurricane incident.
- Cache is secured and final preparations are completed.
- Provide last minute assistance for other branches as directed by P.I. Branch Director.
- Engine 605 staged at Residence 121 with chainsaw kit.

HEADQUARTERS DIVISION

- Facility Unit is responsible for shuttering the main entrance to HQ and lunch room doors
- The Coe Visitor Center should be fully shuttered and powered down.
- The Coe Visitor Center can be used as a shelter as a last resort.

Post-Hurricane Recovery

- All staff call the Emergency Hotline to receive park closure updates and to report status and, if needed, request assistance. Report to designated work station as directed.
- Have all staff attend incident briefing.
- Provide initial assessment of damage/hazards
- Un-pack offices and computers.
- Remove shutters from occupied offices. Shutters will remain on unoccupied offices.
- Uninstall shutters on all occupied buildings in Entrance Station, Pine Island, Royal Palm, and LPK campground.
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.
- Advise Branch Director on status of all assigned tasks.

PINE ISLAND VISITOR SERVICES DIVISION

- Secure access points

- Convert PI Ranger Station meeting area into EMS room.
- Establish LE patrol and Main Entrance Station schedules.
- Open gates inside park entrance when park is officially re-opened. Remove “park closed” signs.
- Return all airboats, vehicles, boats and other equipment.

FIRE DIVISION

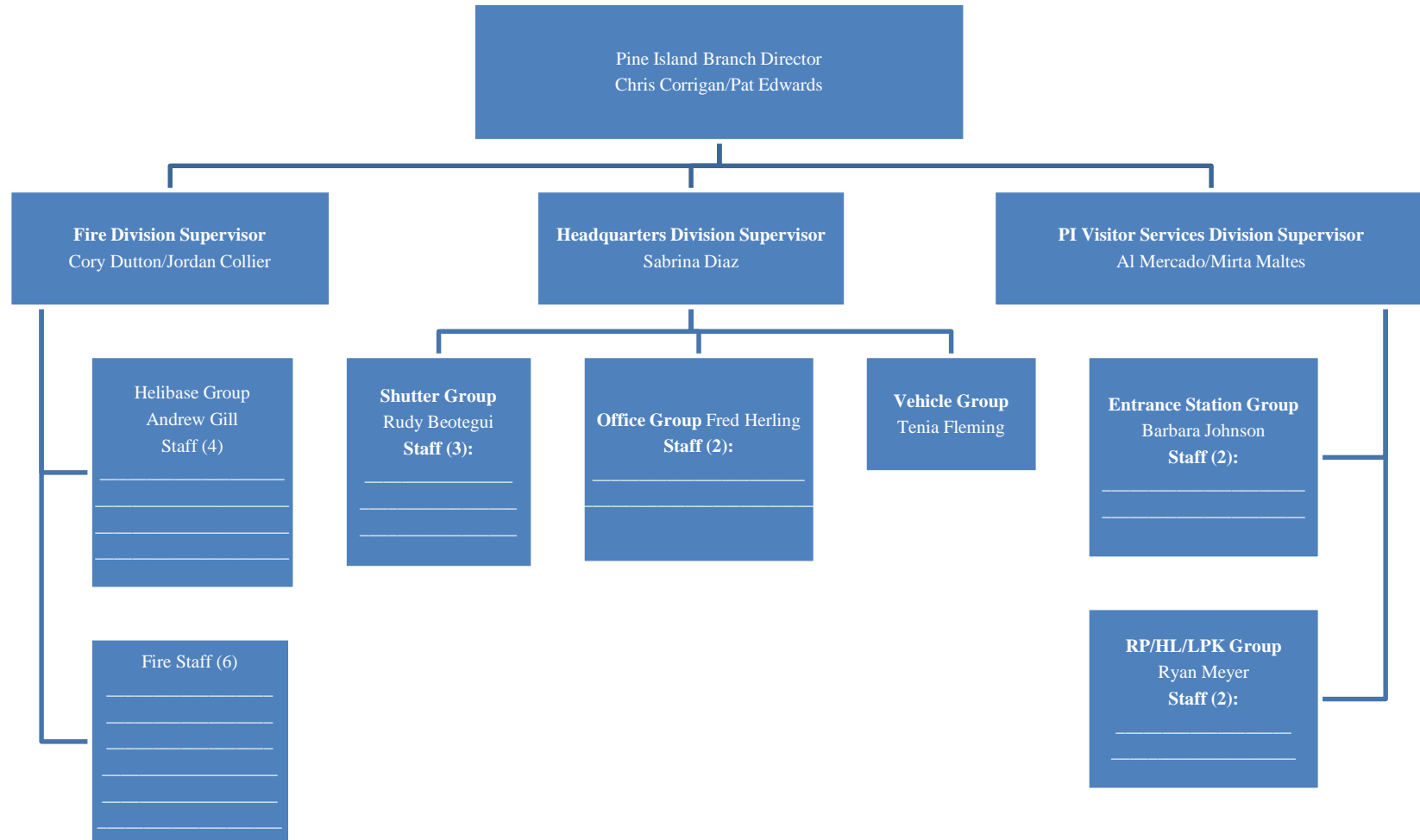
- Engine crews provide assistance with chainsaws as needed to clear roads and trails.
- Engine crews are available to work with Employee Assistance Branch to provide assistance to employee residences and community.
- Remove vehicles from Iori as needed.
- Take complete inventory of cache supplies and equipment.

HEADQUARTERS DIVISION

- Shutter teams remove shutters from Coe Visitor Center and HQ. Shuttering tools are stored for future use.
- Trash receptacles are returned to public spaces around visitor facilities.
- Coe VC is staffed and open as soon as park opens to public.
- Provide water and gatorade for shutter crews.

Figure XX. PI Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis).

Preliminary and Advanced Hurricane Preparation Period (72-48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BFL)

All preparations should be complete and personnel released as authorized by the IMT.

Key Largo Division Hurricane Checklist

General Hurricane Season

- Group supervisor will participate with Branch Director, other supervisors, tenants (FWC, SFWMD), and cooperators in the branch to review preparations, identify and rectify problems or needs, review staffing and provide input for monthly Command/General Staff meetings.
- Update contact list for cooperators and tenants.
- Work with DMT's, tenants, and cooperators to implement Hurricane Cleanup day(s).
- Update roster of Key Largo team members and their contact information.
- Inspect and inventory shutters, submit resource orders for shutters/tools/ppe to Operations Section Chief as needed.
- Test and inspect fluid levels on generator.
- Shutter any unoccupied structures/offices.
- Inventory and identify all sensitive files/items that may need to be secured during a storm.
- Inspect and flag boat tie-down eye-bolts in field, submit work order for the grass to be mowed and resource order for metal detector to Operations Section Chief.
- Inventory tie-down straps and submit resource orders for more, as needed.
- Determine which vessels will need a tie-down space, NPS boats take priority.
- Identify and prioritize extra tie-down spaces for authorized vessels of tenants and cooperators.
- Designate tie-down area for ranger trailer.
- If any extra tie-down spaces remain, provide them to other users as needed.
- Instruct any unauthorized users of tie-down spaces to remove their boat(s).
- Remove or secure any debris on NPS Key Largo property.
- Park Residents submit personal storage request form as needed.
- Ensure all staff have access to and are familiar with Appendices XX – Checklist for Computer Users and Employee Responsibilities.
- Ensure all staff residing in Government Housing, including dormitory, have access to and are familiar with the Housing Evacuation Plan and Hurricane Shelter Checklist. All employees are responsible for providing their own food, water, personal supplies to last for 3 days.

Preliminary Hurricane Preparation 72-48 hours before Landfall

- Branch Director receives morning briefing from IMT and holds briefing for all Key Largo staff (attendance mandatory).
- If needed, identify someone to ensure civilian family members residing in Park residences are aware of the situation and Evacuation Plan.
- Ensure all radios are fully charged and all LE radios turn off encryption for incident communications.
- Remove non-LE and non-essential LE vessels from the water and secure them in tie-down spaces. Secure all vessels already parked in tie-down spaces.
- All vessels should have all loose items secured and remove boat plugs.
- Relocate ranger trailer to tie-down area.
- Secure boat lifts and the dock.

- Assess if there is a need for aircraft to be used for backcountry patrol during the next Operational Period. This patrol will include all backcountry areas in Flamingo, Key Largo, and Gulf Coast Districts. Coordinate with Operations and other coastal branches during this effort. Ensure that personnel who will be flying have adequate personal protective equipment and have adequate charts. The CTR must include a notation for hazardous duty for those personnel flying in aircraft.
- Ensure a backcountry patrol of the Gulf Coast District will be accomplished, at the beginning of the next Operational Period, via a District vessel as well. Coordinate with aviation and Flamingo District to notify any vessels in anchorage areas of the impending storm and park closure.
- Ensure fuel tank is full, including SFWMD water tanks.
- Shutter the Ranger Station, Interagency Science Center, and the two residences.
- Fuel and stage all vehicles in secure location on site. Store keys in a labeled box in the Lab. As needed, stage all other GOVs at Pine Island and submit TA request to stage LE GOV at staff personal residences.
- Begin securing offices (see Appendix H Checklist for Computer Users).
- Verify Key Largo team members' latest emergency contact information and note their specific incident evacuation plan for post incident contact. **Make sure they all know to call the EVER/DRTO Emergency Hotline to report their status following passage of a storm.** Make sure they know to provide their name, park, current location, call back number and status (personal, family, residence) and any need for assistance.
- Branch Director will submit personnel resource assignments and needs for Advance Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- CTR's are faxed to Finance Section Chief and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.
- Due to the potentially problematic evacuation situation/nature of the Florida Keys, the Key Largo Branch Director's main goal is to close down the site ASAP before any storm's anticipated landfall so as to be able to release all non-essential Key Largo team members with at least 48 hours before any landfall- this is to provide adequate time for them to adequately and SAFELY prepare their personal property and themselves and their families for a SAFE evacuation.
- Before evacuating, the Branch Director will notify the IMT of the final pre-storm status of the site and all related personnel.

Advanced Hurricane Preparation 48-24 hours before Landfall

- As stated above, the goal is to have the site closed down and all non-essential personnel released to deal with their personal matters/evacuation needs with 48 hours before any storm landfall.
- If needed, Branch Director will be available to complete any final preparations and coordinate back country overflight and boat patrols.
- Branch Director will submit personnel resource assignments and needs for Final Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- CTR's are faxed to Finance Section Chief and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Final Hurricane Prep 24-0 hrs BLF

- Finalize any remaining items from above list and release all remaining staff ASAP.
- CTR's are faxed to Finance Section Chief and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.
- Identify Damage Assessment Strike Team members and submit names to Operations Section Chief.

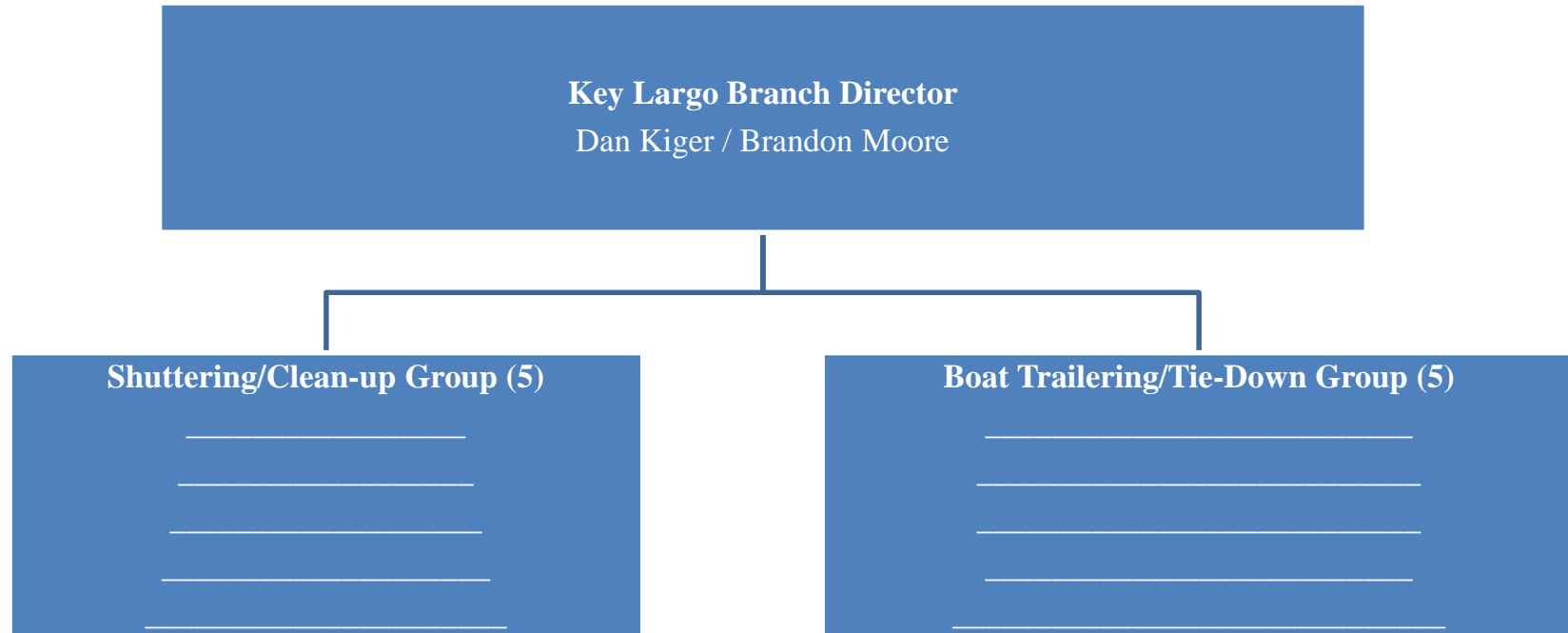
Post Hurricane Recovery

- All Staff call EVER/DRTO Emergency Hotline to receive park closure updates, leave a message reporting post-storm status and to request assistance, if needed. Report to designated work station as directed.
- Coordinate with Incident Command staff to verify status of all Key Largo team members.
- Damage Assessment Strike Team (consisting of Branch Director and other LE staff) will verify status of Key Largo Ranger Station site and homes of Key Largo team members in the area who have not been able to check their homes.
- If the site/area has not been wiped out, inform Operations Chief and Key Largo team members of schedule for returning to normal operations and begin clean-up/opening of site efforts.
- Check FL Bay for derelict vessels, debris/other hazards to navigation (including status of channels).
- If storm has displaced any personnel, provide whatever assistance possible to them. Coordinate recovery efforts, as warranted, with IMT.
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Hurricane Breakdown

- Restock any needed supplies/equipment, submit resource orders as needed.
- Unshutter occupied housing and offices, leave unoccupied houses and offices shuttered throughout the remainder of the season.
- Figure out "lessons learned" and try to provide for improvement for the next incident.

Figure XX. Key Largo Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis).
Preliminary Hurricane Preparation Period (72 hrs BLF)



Advance Hurricane Preparation Period (48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BFL)

All preparations should be complete and personnel released as authorized by the IMT.

Maintenance Branch Checklist

Pine Island Maintenance and Utilities Hurricane Checklist

General Hurricane Season

- Group supervisor will participate with Branch Director and other supervisors in the branch to review preparations, identify and rectify problems as needed, review staffing and provide input for monthly Command/General Staff meetings.
- Work with DMT's to implement Hurricane Cleanup day(s)
- Maintain adequate supply of chemicals, filters and other expendable supplies for the operation of water and wastewater treatment plants.
- Inspect and inventory shutters and tools and plywood, submit general message resource orders as needed.
- Inspect and inventory generators and identify where each will be used.
- Inspect all exterior lighting and ensure that it is operational.
- Train essential staff that will shelter in HQ how to operate generators in Pine Island (3), HQ and DBC post storm.
- Throughout the season maintain emergency generator fuel, including propane, tanks (Flamingo, PI and DBC) at half a tank or above.
- Shutter all unoccupied housing units and nonessential windows of other facilities.
- Locate and mark tie down sites at Robertson Building.
- Ensure 2 Task Force vehicles are designated and supplied with necessary equipment (compressor, jacks, etc.)
- Identify employees who may need more time for personal preparations (reside in a flood/priority evacuation zone or who may otherwise face personal hurricane prep hardships) and prioritize the release of staff once essential tasks are completed.
- Familiarize all staff with communications plan.
- Ensure that maintenance staff residing in government housing have access to and understand the Housing Evacuation Plan and Hurricane Shelter Checklist (pg 126).
- Ensure all staff have access to and are familiar with Appendices A & H – Checklist for Computer Users and Employee Responsibilities.

Preliminary Hurricane Preparation 72-48 hours before Landfall

- All Staff attend 8am briefing at the Pine Island Chickee
- Safety First and foremost, check everyone for PPE and all tools needed to perform tasks, schedule small breaks and check all employees working in the field.
- Top off chemical supply at plants, store and secure chemicals park wide. Move chemicals and all material located outdoors to a secure location.
- Establish a schedule for back up operators.
- Ensure all Task Force Leaders have or are issued radios.
- Check all vehicles for PPE, (including rain gear), and material needed for shut down/recovery of systems.
- Identify state/federal regulators that must be notified about our situation.
- Ensure all fuel and propane tanks are filled, purchase fuel/propane as needed.
- Shutter all buildings and housing in Pine Island

- Ensure Roadside Assistance vehicles are fully stocked and prepared to assist Research Trailing Task Forces as needed.
- When directed, dispatch Tie Down Task Force with radios to coordinate with Trailing Task Force to secure boats and equipment.
- Branch Director will submit personnel resource assignments and needs for Advance Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- Submit CTRs to Finance and Unit Logs to Operations Section Chief at the end of the operational period.

Advanced Hurricane Preparation 48-24 hours before Landfall

- All Staff attend 8am briefing at the Pine Island Chickee
- Check on last minute problems with shutters and material issues.
- Complete shuttering of housing and buildings in Pine Island district.
- Ensure storage of all boats, trailers and equipment is complete at Robertson Building tie downs and Pine Island tie downs.
- Secure loose items around the Maintenance Yard and Recycle Plant.
- Complete preparation of water and wastewater plants for extended operation, parkwide.
- Pack offices and secure computers (see Appendix H - Checklist for Computer Users).
- Collect keys from vehicles stored at PI and store in Maintenance Mechanic's Office on cork board.
- Branch Director will submit personnel resource assignments and needs for Final Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- Designate staff member to take home vehicle and equipment for post storm recovery
- Be prepared to dispatch lowboy trailer to Flamingo to relocate heavy equipment, backhoe, and skid steer loader.
- As tasks are completed, release all non-essential employees with approval from Branch Director, to secure their own personal preparations.
 - Staff will be given directions for contacting the park after the storm and check-out with their incident supervisor prior to leaving park.
- Submit CTRs to Finance and Unit Logs to Operations Section Chief at the end of the operational period.

Final Hurricane Prep 24-0 hours before Landfall

- All staff attend 8am briefing at the Pine Island Chickee.
- Staff will be given directions for contacting the park after the storm (EVER/DRTO Emergency Hotline) and check-out with their incident supervisor prior to leaving park.
- Check personnel for addresses and locations of where they are going to stay, verify emergency contact numbers.
- Advise Branch Director on status of all assigned tasks, any tasks not complete are explained and noted in the unit log(s).
- Ensure all remaining staff are released with adequate time to make personal hurricane preparations.
- Submit CTRs to Finance and Unit Logs to Operations Section Chief at the end of the operational period.

Post Hurricane Recovery

- All staff call the EVER/DRTO Emergency Hotline to receive park closure updates and to report status and, if needed, request assistance. Report to designated work station as directed.
- Have all staff attend incident briefing.
- Check personnel and situations with each person. Schedule accordingly.
- Coordinate with PI Branch Director to conduct initial damage assessments and report any safety hazards.
- If needed, identify and prioritize housing units that may be used to house detailing hurricane response personnel.
- Check water and wastewater Facilities Park wide; sample if needed;
- Assist with post hurricane needs (Generators, repairs, etc).
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Hurricane Breakdown

- Water plant operators will decide to sample or not on water systems Park wide. Water/wastewater systems will be brought up standards according to regulations.
- Shutter teams will un-shutter occupied housing and offices. Unoccupied buildings/offices will remain shuttered throughout the season.
- Schedule licensed operators to check park's water/wastewater systems. Satisfy basic employee/public health and safety needs. Notify state/federal regulators on our situation, request/offer help if needed.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Pine Island Maintenance/ Utilities Group Hurricane Assignments 2014

Pine Island district maintenance group is kept together with familiar maintenance leadership. It's fitted with the tools and equipment to do what is needed. One of its objectives is to provide support park-wide with special tools and equipment. This also includes the Utilities group.

Staffing:

Maintenance Branch Director – Rich Ahern

Deputy Branch Director – Glenn Walker

Branch Director Support Staff

- Willie Synagogue – Task Force Coordinator
 - Maintain CTRs and Unit Logs

Task Force #1 - Utilities

Responsible for the shut down/start-up of utilities park-wide. Assigned to keep utilities running to ensure public safety until time for shut down or start up.

- Task Force Leader – Randy Borden
- Support staff
 - Bret Johnson
 - Mike Savoy

Task Force #2 – Support/Special Equipment

This task force will be responsible for back up operation of all work forces park-wide. These trucks are fitted with special equipment and support items.

- Task Force Leader - Jeff Weinstock / John Hogan
- Support staff
 - Greg Schwarz
 - Jose Carrion
 - Wesley Brady

Task Force #3 – Shutters/Custodial

Assignments may involve securing Pine Island Buildings and housing, Pine Island Chickee, Recycle building, etc. Additional assignments may include securing and storing loose items around buildings and driving/moving vehicles and equipment. This unit will need support from other divisions.

- Task Force Leader – Ray Foster
- Heavy Equipment Operator –TBD
- Support staff
 - Seasonal Staff
 - Staff assigned from other divisions

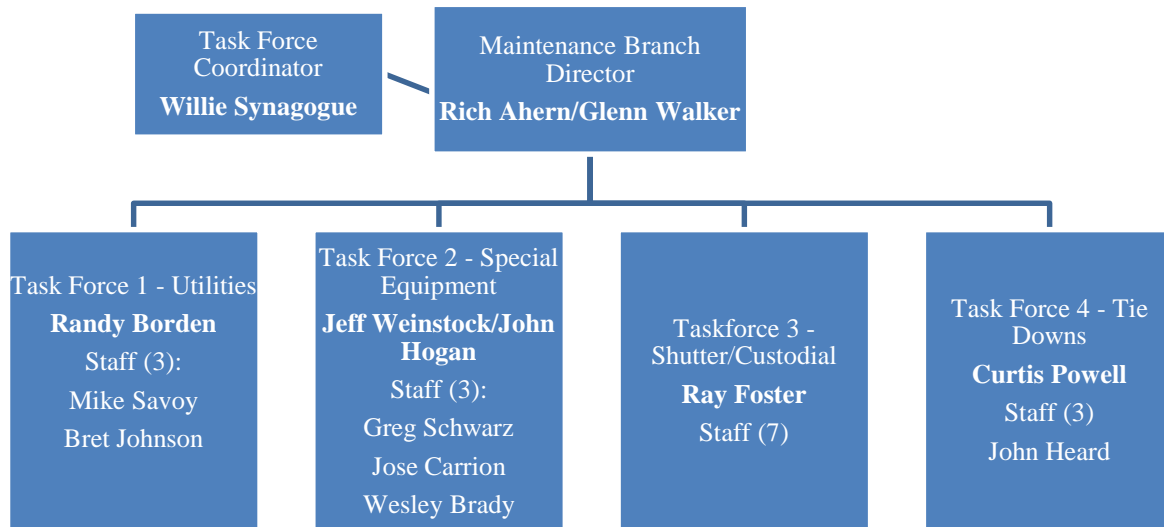
Task Force #4 – Missile Base/Tie Downs

Assignments will be maintaining the auto shop staging vehicles, coordinating vehicle turnovers, boat storage and equipment, generator fuel and maintenance.

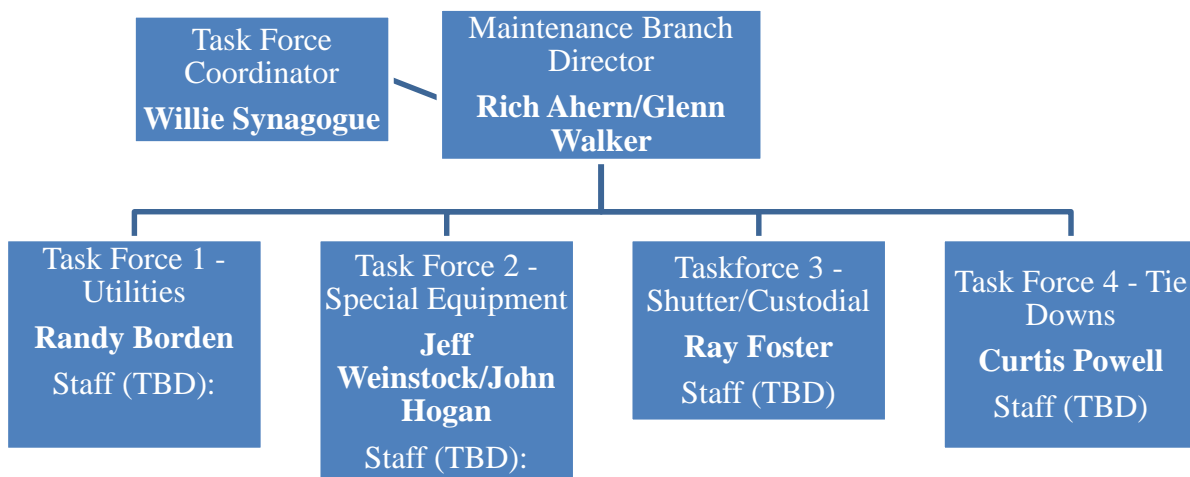
- Task Force Leader – Curtis Powell
- Support Staff
 - John Heard
 - TBD

Figure XX. Maintenance Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis).

Preliminary Hurricane Preparation Period (72 hrs BLF)



Advance Hurricane Preparation Period (48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BFL)

All preparations should be complete and personnel released as authorized by the IMT.

Research Branch

General Hurricane Season

- Group supervisors will participate with Branch Director and other supervisors in the branch to review Hurricane Plan preparations and update as needed, identify and rectify problems or needs, review staffing and provide input for Command/General Staff meetings.
- Throughout the season, meet regularly with the Branch Director and Group Supervisors on general hurricane prep.
- Inventory and inspect hurricane shutters, PPE, tools, bug jackets, mosquito repellent, gloves submit general message resource orders to Operations as needed.
- Schedule Hurricane Cleanup day(s).
- Remove and/or secure all loose items from around buildings.
- Division Chiefs need to schedule with maintenance and take non-essential equipment to the Missile Base. Also, coordinate that surveyed vessels are taken to Supply ASAP.
- Ensure that all RESEARCH vessels have working trailers (Division Chiefs need to assign this to appropriate staff). Trailers must be checked for adequate bearings, tires, tire pressure, lights, and chains with shackles.
- Review personal hurricane preparedness with staff.
- Ensure all staff have access to and are familiar with Appendices A & H – Checklist for Computer Users and Employee Responsibilities.
- Ensure all staff residing in Government Housing have access to and are familiar with the Housing Evacuation Plan (pg 126) and Hurricane Shelter Checklist. All employees are responsible for providing their own food, water, personal supplies to last for 3 days.
- Remove and/or secure all loose items from around buildings.
- Update contact list for cooperating researchers.
- Coordinate with EPMT, I&M Group and USGS to assess their property storage needs and our capabilities.
- All researchers and cooperators must move all their vessels not in summer use from Flamingo to the Missile Base prior to June 1.

Equipment

- Complete up-to-date property inventory of SFNRC items.
- Make sure hazardous materials are accounted for and stored properly.
- Clearly mark all accountable property with EVER SFNRC.
- Ensure monitoring stations are hurricane ready.

Krome Division

- Review the Krome Center hurricane plan with Krome management and staff.
- Identify staff volunteers that meet Flamingo and East Everglades worker requirements.

Preliminary Hurricane Preparation 72-48 hours before Landfall

- All staff attend 8am incident briefing at the Pine Island Chickee.
- Submit a general message resource order for water and Gatorade. Advise personnel that they are responsible for providing their own supplies until, or if, the resource order is filled.

- Group supervisors will participate with Branch Director and other supervisors in the Research Branch to review preparations, identify and rectify problems or needs, review staffing and provide input for the Branch Director to present at Command/General Staff meetings.
- Each group supervisor will review action plans for their assigned tasks and other resource management assignments.
- Ensure park residents within the branch have access to evacuation and sheltering plan and their responsibilities.
- Notify Cooperating researchers of park incident status and need to remove property from the park.
- Begin moving RESEARCH boats/airboats and assist with transporting vehicles and vessels to the Missile Base and Pine Island. All non-essential airboats, vehicles, and other equipment must be moved, secured, and accounted for.
- Issue radios to appropriate staff and ensure everyone knows the communication plan.
- Boat task force leader will coordinate with designated Flamingo and Maintenance Branch. and maintain boat storage inventory.
- Vehicle Task Force Leader will inventory vehicles and designate a key storage area.
- **FUEL VEHICLES NIGHTLY.**
- Secure all research equipment (place in sheds/DBC/Iori buildings).
- Remove all loose items from around SFNRC facilities and secure.
- Begin shuttering SFNRC buildings/facilities.
- Branch Director will submit personnel resource assignments and needs for Advance Hurricane Prep to Operations Section Chief prior to the afternoon Planning Meeting
- Coordinate with Maintenance Branch to ensure generator is functional and propane supply is sufficient
- CTR's are faxed to Finance Section Chief and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Offices/Equipment

- Begin packing offices, (See Appendix A Employee Responsibilities).
- Ensure computers hard drives are backed-up; secure disks and tapes. (see Appendix H Checklist for Computer Users)
- Secure offices of any employees who will be absent for next 72 hrs. Begin securing SFNRC files and records.

Krome Division

- All staff attend 8am briefing at the Pine Island Chickee.
- Notify members of the Krome Hurricane Response team to be prepared to assist with preparations within the Park.
- Deploy Krome Center response team if/when requested.
- Label all computers, flat screen monitors, and critical electronic equipment with staff member name and office number to prepare for movement to server room, as determined by IT.
- Begin securing SFNRC/Krome files and records.

Advanced Hurricane Preparation 48-24 hours before Landfall

- All DBC staff attend 8am incident briefing at the Pine Island Chickee.
- Complete any tasks remaining from the previous operational period.
- Keep Cooperating researchers updated on park incident status.
- With consent from Branch Director and Operations Section Chief, when primary tasks are complete, employees should be released or reassigned to other branches.
- Branch Director will submit personnel resource assignments and needs for Final Hurricane Prep to Operations prior to the afternoon Planning Meeting.
- Division staff will be given directions for contacting the park after the storm and check-out with their incident supervisor prior to leaving park. CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Buildings and Equipment

- Ensure vehicle inventory is complete and all keys are stored.
- Complete securing offices and computers.
- Remove lower file drawers to higher locations as needed. Remove all objects off the floor (within reason).
- Clean out refrigerators and unplug.
- Complete shuttering on all SFNRC buildings/facilities.
- Complete securing of all non-essential research equipment and materials and securely store.

Krome Division

- All staff attend 9am briefing in the 1st floor conference room.
- Deploy Krome Center response team if/when requested.
- Upon orders from IT staff, move computers, flat screen monitors, etc., to server room on 3rd floor.
- For 1st floor offices, remove all objects off the floor (within reason).
- Clean out refrigerators on 1st and 3rd floors and unplug.
- **MOVE GOV'T VEHICLES TO SAFEST AREA WITHIN THE PARKING LOT. MAKE SURE THAT FUEL TANKS ARE FULL. STORE KEYS IN DESIGNATED AREA.**

Final Hurricane Prep 24-0 hrs before Landfall

- All remaining DBC staff attend 8am incident briefing at the Pine Island Chickee.
- Ensure that SFNRC/Krome staff and cooperators have completed essential tasks to protect park resources and assets. Provide assistance if needed.
- Ensure all non-essential electrical equipment and lights are switched off and unplugged to conserve the generator if it kicks on.
- Ensure all staff are released with adequate time to make personal hurricane preparations.
- Division staff will be given directions for contacting the park after the storm and check-out with their incident supervisor prior to leaving park.
- Advise Branch Director on status of all assigned tasks, any tasks not complete are explained and noted in the unit log(s).

- CTR's are faxed or delivered to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Post Hurricane Recovery

After the Incident Commander has determined the Park is SAFE for non-Incident Command Staff to return:

- All Research Branch Personnel call the Emergency Hotline to receive park closure updates and to report status and, if needed, request assistance. Report to designated work station as directed.
- All Research Branch Personnel attend incident briefing at location designated by Emergency Hotline.
- Check to make sure SFNRC/Krome staff and cooperators are safe and accounted for (Branch Director will work with Command Staff to secure this information).
- Conduct damage assessment of SFNRC/Krome buildings and facilities for damage, loss, and power.
- Set up generators to supplement main generator (if needed). Ensure a Resource Order is placed to keep generators fueled and running (as needed).
- Ensure that SFNRC/Krome staff and cooperators can SAFELY begin infrastructure and natural resource damage assessments ASAP.
- Remind Park Staff and Cooperators to carry ID badges and research permits (as applicable) at all times during the Incident.
- Ensure SFNRC/Krome Staff and cooperators file float plans and check in with Park Dispatch prior to entering the park for damage assessments (business as usual).
- In ADDITION if research staff and/or cooperators are going to be conducting field work while the Park is under Incident Command, they should contact the Branch Director personally, via cell phone, or email 24 hours prior to entering park. This will allow the Branch Director to notify Command and General Staff of Researcher locations, to include it on the Incident Action Plan (IAP) for the following day, and to announce it at Morning Briefing.
- SFNRC/Krome staff will provide a list of lost and/or damaged equipment ASAP to Group Supervisors who will process the Resource Order to the Branch Director. (The request should include detailed information on what was damaged/destroyed, where/how it was damaged, what to purchase, and where to purchase the replacement item (exact specifications) and the COST of replacement. (use form)
- Submit personnel resource assignments and needs for the next operational period to Operations Section Chief prior to the afternoon Planning Meetings.
- CTR's are faxed to Finance and Unit Logs are faxed to Documentation Unit Leader at the end of the Operational Period.

Hurricane Breakdown

- Return keys to vehicles
- Remove plastic from occupied offices. Get offices back to "working condition".
- Remove shutters (as needed). Shutters will remain on unoccupied offices.

South Florida Collections Management Center (SFCMC)
Museum & Archives Team Hurricane Procedures
Revised 4/7/2014

INTRODUCTION

Work priorities for the museum & archives team are based on concentrating efforts first on the largest collection areas (i.e. SFCMC spaces at the Beard Center and Robertson Building). After these areas have been prepared, the team works out from the SFCMC, as time permits and depending on the anticipated hurricane track. However, depending on exhibits present in SFCMC parks, the projected path of the storm, amount of advance notice of a storm's approach, the degree of "pre-prep" that has occurred in the storage facilities and other park units, and SFCMC staffing levels, concurrent response teams may be sent from the SFCMC to other parks/areas. The curator will determine how best to utilize available resources as each storm event will be different.

In general, the widening circles of preparation are as follows:

- Museum and archives collections at the Beard Center and archives at the Robertson Building, and associated data (i.e. accession records and ICMS data).
- Museum objects on exhibit at BISC.
- Critical resource management records at BISC that require evacuation.
- Museum objects on exhibit at the EVER Headquarters.
- Museum objects on exhibit at Flamingo. Generally these will not be evacuated before a storm, given time constraints, the nature of the objects on exhibit, and the fact that they are located on the second floor of a facility and therefore are above most expected storm surges.
- Museum archives and artwork at BICY. (Given the inland location of these collections, they are at less risk from storm surge than those at BISC, DESO, DRTO or EVER).

Due to the distances from the SFCMC, hurricane preparations at DRTO and DESO are conducted by on-site staff for all storms. This plan assumes that other staff at all the parks is taking appropriate actions (e.g. installing hurricane shutters) to protect the buildings which house collections. DESO has a separate Museum Emergency Operations Plan which includes hurricanes.

GENERAL PARK PREPAREDNESS PROCEDURES

BICY

When SFCMC staff is duty-stationed at BICY, work at BICY will occur concurrently with that at the Beard Center and Robertson Building. During summer 2014, no one is expected to be stationed at BICY. BICY staff, therefore, will be responsible for securing museum collections in advance of an approaching storm.

Welcome Center

Museum objects on exhibit at the Welcome Center in 2014 include a Seminole canoe (on loan), a rifle and other objects inside an exhibit case, and artwork on exhibit in the WC theatre.

Museum objects inside the exhibit case as the Welcome Center should remain inside the case and should not be removed without curatorial approval. The exhibit case provides additional protection in the event of a roof leak. As part of the closing procedures for the Welcome Center, BICY staff should cover the canoe with the white Tyvek cover provided by the SFCMC. Do not attempt to move the canoe without curatorial approval.

At various times throughout the year, there may be artwork on exhibit in the Welcome Center's theatre. Ideally, these should be covered to protect the artwork in case of a roof leak. In FY2014, SFCMC and BICY staff made covers for all of the BICY artwork. All new artwork will be sent to BICY with covers made, after cataloging at the SFCMC. BICY staff will be responsible for putting the covers in place as part of their hurricane preparations. Note that covers are only available for BICY museum collections. Temporary plastic covers can be easily made by BICY staff for artist-in-residence or other temporary exhibits of non-BICY art.

Swamp Buggy Exhibit

The swamp buggy on exhibit adjacent to the Welcome Center is part of the museum collection. Given its size, it is not feasible to move it before a storm, nor is there a better place to move it to. It is exhibited in a separate building with hurricane impact glass windows. No additional preparedness is needed for this object.

Oasis Visitor Center

Objects on exhibit in the visitor center include the Florida panther and artwork. As temporary exhibits are installed, other objects will also be present inside the museum exhibit case. Museum objects inside the exhibit cases at the Oasis Visitor Center should remain inside the cases and should not be removed without curatorial approval. The exhibit cases provide additional protection in the event of a roof leak.

At various times throughout the year, they may be artwork on exhibit in the visitor center exhibit area and theatre. In FY2014, SFCMC and BICY staff made covers for all of the BICY artwork. All new artwork will be sent to BICY with covers made, after cataloging at the SFCMC. BICY staff will be responsible for putting the covers in place as part of their hurricane preparations. Note that covers are only available for BICY museum collections. Temporary plastic covers can be easily made by BICY staff for artist-in-residence or other temporary exhibits of non-BICY art.

The 2nd floor of Oasis includes the archives "processing room" which is used for both archives and artwork storage. In FY2013 SFCMC staff reorganized the space, added hurricane covers to all the artwork in storage, and ensured that all record storage racks were covered with zippered plastic covers. As a result, BICY staff should complete visual inspections of this room prior to a hurricane to ensure that plastic or Tyvek covers have not been removed by others. Zippered covers should be rolled down and zipped completely.

Headquarters

At various times throughout the year, there may be artwork on exhibit in the superintendent's hallway and/or conference room. In FY2014, SFCMC and BICY staff made covers for all of the BICY artwork. All new artwork will be sent to BICY with covers made, after cataloging at the SFCMC. BICY staff will

be responsible for putting the covers in place as part of their hurricane preparations. Note that covers are only available for BICY museum collections. Temporary plastic covers can be easily made by BICY staff for artist-in-residence or other temporary exhibits of non-BICY art.

Protecting Resource Management Records

Preserve staff should also prepare resource management records which are not yet part of the museum collection as they can also be at risk. If flooding is a risk, employees should remove records from the bottom drawers of filing cabinets. To protect from roof leaks, filing cabinets, bookshelves, and desks should be covered with plastic before a storm. Depending on the storm's track and severity, it may be advisable to remove records deemed critical. Those decisions would need to be made on a case-by-case basis and the preserve staff should discuss concerns with the SFCMC curator or archivist as early as possible.

BISC

For storms approaching from the east, priority will be given to collections at Biscayne National Park, which is located at Biscayne Bay and therefore is subject to storm surge and at greater risk.

Dante Fascell Visitor Center

In April 2013, new exhibits were installed at the Fascell Visitor Center. The exhibit cases are located on the 2nd floor. Depending on the strength, severity, and timing of the approaching storm, objects may be evacuated to the SFCMC for protection. If not evacuated, they should be left in their exhibit cases (with hurricane shutters on the building) or they may be removed by SFCMC staff, working in conjunction with the BISC cultural resource manager. Decisions will be made on a storm-by-storm basis, always erring on the side of caution.

Headquarters

Framed photographs or artwork from the museum collection may be on exhibit in the superintendent's hallway at BISC. Depending on the strength, severity, and timing of the approaching storm, objects may be evacuated to the SFCMC for protection. If not evacuated, they should be covered with plastic to protect from water damage.

Protecting Resource Management Records

Due to the park's location on the bay, critical resource management records in HQ, the maintenance building, the Fascell VC or other park buildings which are not yet part of the collection may also be at risk. Most records at BISC should already be stored on the 2nd floor of buildings but if not, they should be moved before an impending storm. To protect from roof leaks, filing cabinets, bookshelves, and desks should be covered with plastic before a storm.

Depending on the storm's track and severity, it may be advisable to remove records deemed critical to the Beard Center at Everglades National Park. Those decisions would need to be made on a case-by-case basis and park staff should discuss concerns with the SFCMC curator or archivist as early as possible as both space and staffing are always limited.

DESO

As with all emergencies, for hurricanes DESO and SFCMC staff should follow the procedures outlined in the park's approved 2013 *Museum Collection Emergency Operations Plan (MEOP)*.

The distance between the SFCMC and DESO (c. 4.5 hours) limits the ability of the SFCMC to provide hands-on assistance preparing for a storm. Instead, emphasis has been placed on providing better protection in-house, both to preserve the collections and to limit the impact of hurricane preparations on the small number of staff at the park. As a result, the 2013 MEOP and the physical improvements described below should put park staff in a better position to prepare for hurricanes to protect the collections.

In 2010, the SFCMC curator worked with park staff to better protect the objects on exhibit, both on a daily basis and for hurricanes and other storms, given that the visitor center is located adjacent to a large body of water. The 16th century suit of armor and most of the other 16th century objects have been moved to exhibits inside the theatre. The armor is exhibited in its case on top of the stage. The other objects are exhibited in cases which hang on the walls or down from art rails. Some objects may be temporarily stored in cabinets or on shelves in a small closet in this room. The theatre has no windows. The only entrance to the theatre is protected by a roll-down door.

Per the MEOP, if a storm does impact park collections or records, park staff should evaluate the situation and contact the SFCMC which will coordinate response.

DRTO

The distance between the SFCMC and DRTO limits the ability of the SFCMC to provide hands-on assistance preparing for a storm. Instead, emphasis has been placed on providing better protection in-house, both to preserve the collections and to limit the impact of hurricane preparations on the small number of staff at the park.

Visitor Center

New exhibits were installed in 2010. Objects on exhibit in the theatre should be left in their exhibit cases, which will provide some additional protection in the event of a roof leak. Objects on open exhibit (e.g., cannon balls, flank defense Howitzer) should be covered with plastic.

Other Artifacts Around the Fort

In addition to the objects on exhibit in the visitor center, the following is museum property:

- 10 large cannon on top of the fort (6 Rodman gun and 4 Parrotts)
- 3 slide carriages on the ground floor of Bastion 6
- 2 wheeled vehicles in ground floor casemates on Front 6
- Cuban chug on Front 4

The wheeled carts should be moved further inside the fort, towards or even into bastions if possible. No additional hurricane preparedness is feasible for the other objects given size, location, and/or likely greater impact of the attempt to protect them. Emphasis should be placed on post-storm assessments.

Protecting Resource Management Records

Due to the park's location on the water, critical resource management records which are not yet part of the collection are also at risk in both the headquarters and the "bat cave". Given working conditions at the park, it is possible the records could also be in employee quarters. The SFCMC has removed many of the permanent records from DRTO to the archives. However, given that records continue to be created, staff should not assume that everything "important" has gone to the SFCMC.

If records are to remain in place, and flooding is a risk, employees should remove records from the bottom (or more) drawers of filing cabinets. To protect from roof leaks, filing cabinets, bookshelves, and desks should be covered with plastic before a storm. Depending on the storm's track and severity, it may be advisable to move records deemed critical to the park to the 2nd floor of the engineer officer's quarters. What needs to be moved and when needs to be determined on a case-by-case basis by the DRTO Park Manager. If a storm impacts the park, the SFCMC will coordinate (through incident command) response for recovery of museum collections.

EVER

Although the SFCMC is located at EVER, this section focuses on collection on exhibit. Museum storage is considered as part of the overall SFCMC procedures.

Flamingo Museum

Museum objects on exhibit at Flamingo in 2014 include taxidermied animals, archeological artifacts, gun, wooden animal sculptures, and two framed pieces of art. New temporary exhibits are expected to be installed in summer 2014 as well.

The Flamingo Museum is directly on Florida Bay but on the second floor of the visitor center, which provides some protection from storm surge. Objects on exhibit at the Flamingo Museum should be left in their exhibit cases, which will provide some additional protection in the event of a roof leak.

Depending on the track and severity of the storm, the SFCMC curator may determine it is appropriate to evacuate collections from Flamingo and bring them to the SFCMC temporarily. This decision will be made on a case-by-case basis.

Coe Visitor Center

Currently there are no museum objects on exhibit at the Ernest F. Coe Visitor Center.

Shark Valley Visitor Center

Currently there are no museum objects on exhibit at Shark Valley.

Gulf Coast Visitor Center

Currently there are no museum objects on exhibit at the Gulf Coast Visitor Center.

Headquarters

Framed photographs from the museum collection are exhibited in the superintendent's hallway at Headquarters ("the superintendent's heads"). SFCMC staff will cover these objects with plastic hurricane covers.

In addition, the panther statue between the Coe Visitor Center and the Headquarters building is part of the museum collection. No preparations are done for the statue but its condition will be assessed by the curator after each storm.

Protecting Resource Management Records

Critical resource management records which are not yet part of the collection are also at risk, including records at headquarters (e.g. records of the superintendent's office, maintenance records, planning & compliance files, and cultural resource management records, etc.), the Krome Centre, the Beard Center, the Robertson Building (fire and environmental education records), as well as in the various districts of the park. The SFCMC has removed many of the permanent records for the park's archives. However, given that records continue to be created, staff should not assume that everything "important" has gone to the SFCMC.

Depending on the storm's track and severity, it may be advisable to move records deemed critical to the park to other locations within the park. Those decisions would need to be made on a case-by-case basis and park staff should discuss concerns with the SFCMC curator or archivist as early as possible.

If flooding is a risk, employees should remove records from the bottom drawers of filing cabinets. To protect from roof leaks, filing cabinets, bookshelves, and desks should be covered with plastic before a storm. Depending on the storm's track and severity, it may be advisable to remove records deemed critical.

SOUTH FLORIDA COLLECTIONS MANAGEMENT CENTER PROCEDURES

General Hurricane Season Preparation (before June 1)

- Group supervisor (museum curator) will participate with branch director and other supervisors in the branch to review preparations, identify and rectify problems or needs, review staffing and provide input for monthly command/general staff meetings.
- Museum staff will work with DMTs to implement hurricane cleanup day(s), as requested.
- Review contents of the 3 museum emergency supply caches, against the inventory, and purchase additional supplies as needed to ensure caches are complete and ready for use.
- Coordinate with Pine Island maintenance to ensure that the automatic generator for the Beard Center has a full propane tank and that the trailer mounted generator for the Robertson Building is serviced and available, with fuel.
- Update museum hurricane procedures annually at the start of hurricane season to address changes in collection locations, facilities, and staffing. Distribute to SFCMC parks.
- In early June, send a complete backup of ICMS to the SER chief of museum services.
- In early June, make paper copies of the accession book entries since the last hurricane preparation, for each park (BICY, BISC, DESO, DRTO, and EVER). An index card on the bulletin board in the registrar's office lists the last accession copied. Add the copies to the appropriate park folder in the emergency evacuation file box in the curator's office. Update the index card to reflect that

last number copied. Doing this at the start of hurricane season will limit what needs to be done when a storm is approaching.

- Review collections “out and about” in the museum and archives workrooms. Put away collections (or portions thereof) to limit the amount of material which needs to be addressed immediately before a storm.
- As always, ensure that collections are put away as soon as projects are completed.

Preliminary Hurricane Preparation 72-48 hours before Landfall

Safety Note: the hurricane plastic sometimes has a coating that can be irritating to your eyes. Do not wipe your eyes with your fingers when doing hurricane preparations and wash your hands thoroughly with soap afterwards.

Generators: In FY2006, both the Beard Center and the Robertson Building had transfer switches installed. The switch at the Robertson Building works with a trailer-mounted generator to power the entire building (lights, HVAC, electrical outlets, etc.). The generator will need to be brought to the building and plugged in by qualified personnel after the event. This will ensure that the freezers of photographs are not without power for long but it is imperative that the generator use be implemented quickly. In FY2008, the Beard Center had an automatic generator installed to power the entire building. This system operates from a propane tank at the back of the Beard Center. It is tested weekly and should come on automatically in the event of a power loss.

General Equipment

- Coordinate with PI Maintenance regarding trailer-mounted generator for Robertson Building.
- Charge the rechargeable batteries in the 3 cordless drills, walkie-talkies, and the digital cameras.

Multi-Park Coordination

- Determine if artifacts need to be evacuated from BISC. If so, begin that process as BISC is usually 24-hours ahead of EVER for hurricane preparedness.
- If time permits, coordinate with BISC to determine if they wish to evacuate critical active records to the SFCMC for temporary storage.
- Determine if archives need to be evacuated from BICY. If so, schedule/assist as appropriate. Not that BICY is usually 24-hours behind EVER for hurricane preparedness.

Beard Center Museum Storage

- Complete a system backup of each ICMS directory (CR, NH and AR) for each park (BICY, BISC, DESO, DRTO and EVER), as well as any active temporary directories. Burn data to a CD and put into the emergency evacuation file box in the curator’s office.
- If time permits, FedEx a copy of the ICMS backup CD to the regional curator at the following address:

National Park Service
100 Alabama Street SW
1924 Building
Atlanta, Georgia 30303

- Review status of copied accession book entries. As needed, make paper copies of the accession book entries since the done, for each park (BICY, BISC, DESO, DRTO, and EVER). An index card on the bulletin board in the registrar's office lists the last accession copied. Add the copies to the appropriate park folder in the emergency evacuation file box in the curator's office. Update the index card to reflect that last number copied.
- Examine collection storage and work spaces and remove any collections from the fume hood, work spaces, carts, etc. to storage locations on shelves or inside cabinets, wherever possible.
- Begin covering all cabinets, compactor storage units, and other storage units with their plastic hurricane covers. In FY2013-FY2014, custom fitted and zippered plastic covers were made for all of the compactor storage rows and cabinets in the museum. These are labeled and readily available to easily install.
- If using tape, be sure to tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).
- After the accession books have been copied, cover the accession files with plastic and secure with tape.

Beard Center Room C

- Determine if any archives from the archives processing room should be moved back into this room before covering this area with plastic.
- At the time of this writing, not all of the shelving and objects in this room have custom zippered covers. Where were have them (e.g. rows 01-06), they are readily available and easy to install.
- For new shelving or object storage with does not yet have custom covers, cover all shelving units and objects with plastic. Plastic should be draped completely over the front and backs of the shelves. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to shelving units).

Beard Center Archives Processing Room

- Examine collection storage and work spaces and remove any collections from work spaces, carts, etc. to storage locations on shelves, wherever possible. Materials can be moved to Room C as needed.
- Begin covering all storage units with their plastic hurricane covers. In FY2013-FY2014, custom fitted and zippered plastic covers were made most of the shelving units. These are labeled and readily available to easily install.
- If using tape, be sure to tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).
- For shelves without custom covers, cover all shelves and other storage units housing archives with plastic. Plastic should be draped completely over shelves, etc. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).

Robertson Building Museum Archives

- Examine collection storage and work spaces and remove any collections from work spaces, carts, etc. to storage locations on the compactor storage units, whenever possible.

- Begin covering all storage units with their plastic hurricane covers. In FY2014, custom fitted and zippered plastic covers were made most of the compactor storage rows and some of the shelving units. These are labeled and readily available to easily install.
- For shelves without custom covers, cover all shelves and other storage units housing archives with plastic. Plastic should be draped completely over shelves, etc. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).

Advanced Hurricane Preparation 48-24 hours before Landfall

Beard Center Museum Storage

- Complete covering all cabinets, shelves, and other storage units with plastic, if needed. Plastic should be draped completely over cabinets, etc. whenever possible. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to museum cabinets).
- If specimens are in the prep lab freezer, turn it to the **coldest** setting. Do not cover the freezer with plastic as this may create a fire hazard.
- Prepare staff offices and the museum workroom. If flooding is anticipated, remove important files from bottom drawers of filing cabinets, bookshelves, etc. and place inside action packers.
- Remove computers to the IT vault in the GIS Room, if required. If computers are not going to the vault, disconnect them from their power source and ensure that they are sitting on the desk (not on or near the floor).
- If necessary, the curator will shut down the ICMS server (in consultation with IT staff). Do not power down the server unless the IT staff determine this is necessary.
- Cover the staff desks, bookshelves, etc. with plastic.

Beard Center Room C

- Complete covering all shelving units with plastic. Plastic should be draped completely over the front and back of the shelving units. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- Remove any archives from the IPM freezer but keep them. If there is a prolonged power outage, it is likely that water will pool in the base of the freezer and infiltrate the plastic bags. To prevent this, remove the boxes and store them in the DBC Freezer Room. Turn this freezer off once it is empty. Do not cover with plastic.

Beard Center Archives Processing Room

- Complete covering all shelving units with plastic. Plastic should be draped completely over the front and back of the shelving units. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- Prepare the archivist's office and technician work spaces. If flooding is anticipated, remove important files from bottom drawers of filing cabinets, bookshelves, etc. and place inside action packers.
- Remove computers to the IT vault in the GIS Room, if required. If computers are not going to the vault, disconnect them from their power source and ensure that they are sitting on the desk (not the floor).

- If time permits, cover the supplies with plastic. (Although they are not museum objects, they represent a significant financial investment and may be needed for post-hurricane salvage and recovery of the collection).

Beard Center Freezer Room

- Remove any archives from the IPM freezer but keep them bagged. If there is a prolonged power outage, it is likely that water will pool in the base of the freezer and infiltrate the plastic bags. To prevent this, remove the boxes and store them in the freezer room. Once it is empty, turn this freezer off.
- Before covering shelves with plastic, ensure that everything has been removed from the freezer in Room C. Note: if BISC has sent any archives, they should be housed in the freezer room (on available shelving, tables, and carts, or on top of the freezers and then covered with plastic).
- For shelves without custom covers, cover all shelves and other storage units housing archives with plastic. Plastic should be draped completely over shelves, etc. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).

Beard Center Museum Supply Closet

- In FY2014, custom zippered plastic covers were created for this space. These are “permanently” installed and simply need to be dropped down and zipped closed.

Beard Center Archival Supply Closet

- If time permits, cover the supplies with plastic. (Although they are not museum objects, they represent a significant financial investment and may be needed for post-hurricane salvage and recovery of the collection).

Beard Center Curator’s Office

- If flooding is anticipated, remove important files from bottom drawers of filing cabinets, bookshelves, etc. and place inside action packers.
- Remove computer to the IT vault in the GIS Room, if required. If computers are not going to the vault, disconnect the laptop from its power source.
- Cover the staff desks, bookshelves, etc. with plastic.

Robertson Building Museum Archives

- Complete covering the compactor storage units, map cabinets, and other cabinets with custom covers or plastic sheeting, if needed.
- Cover diazzo maps on the rolled map storage rack, using the cut lengths of plastic bagging (i.e. one bag per roll, as with other pre-bagged rolls). These are pre-cut. If additional roll covers are needed, the roll is stored in the DBC archives supply closet.
- Prepare the archivist’s office and technician’s workspace. If flooding is anticipated, remove important files from bottom drawers of filing cabinets, bookshelves, etc. and place inside action packers.

- Remove computers to the IT vault in the GIS Room at the Beard Center, if required. If computers are not going to the vault, disconnect them from their power source and ensure that they are sitting on the desk (not the floor).
- Cover the desks, bookshelves, etc. with plastic.
- If necessary, put spare archival supplies (e.g. boxes, paper, etc.) on top of the work tables and cover with plastic.

Robertson Building Freezer Room

- Turn the acetate storage freezers to the **coldest** setting. Ensure freezers remain locked. Do not cover the freezers with plastic as this may create a fire hazard.
- Remove any archives from the IPM freezer but keep them bagged. Turn this freezer off. If there is a prolonged power outage, it is likely that water will pool in the base of the freezer and infiltrate the plastic bags. To prevent this, remove the boxes and store them in the freezer room.
- The chest freezer used for object storage has racks in place elevating the collection in case of power loss and should not be emptied.
- For shelves without custom covers, cover all shelves and other storage units housing archives with plastic. Plastic should be draped completely over shelves, etc. Trim excess plastic from the bottom or fold under to avoid creating slipping hazards.
- All plastic covering is secured with duct tape. When covering cabinets, etc. tape plastic to plastic (i.e. do not tape plastic to museum cabinets or shelving units).

Headquarters

- Cover the museum artwork at Headquarters with custom-made plastic sleeves. These sleeves are stored at the museum and need to be taken from the Beard Center to HQ.
- This work is most efficiently done at the end of a day, on the way out of the park. Each sleeve is labeled for its object (by description, not catalog number) and can easily be installed by one person in 10 minutes or less.

Final Hurricane Prep 24-0 hrs BLF

- All museum preparations should be completed within 24 hours before expected landfall.
- Prior to leaving the park, secure all museum spaces (including setting security alarms).
- Museum curator takes the emergency evacuation file box home when leaving the park.

POST HURRICANE RECOVERY AT SFCMC

Every storm event will be different and will have different impacts. Exactly how post-hurricane recovery is completed will depend on the impacts, available staffing, etc. **In all instances, employee safety is always the first priority.**

General

- SFCMC curator will contact each SFCMC park (BICY, BISC, DESO, DRTO, and EVER) to determine if collections and/or critical non-museum records were damaged and to determine what additional resources are needed.
- Depending on the path of the storm, the SFCMC registrar will contact other institutions that house SFCMC collections on loan (e.g. Fairchild Tropical Botanic Gardens, Florida Museum of

Natural History, etc.) to determine status of those institutions and NPS collections as well as any assistance they may need.

Beard Center Museum & Archives Spaces

- Examine the facility from outside to be sure it is safe to enter.
- Assess the status of the museum facilities, including storage areas, work rooms, and staff offices.
- In all areas, review functioning of HVAC systems, desiccant wheel, status of water infiltration (e.g. at the ceiling, around windows and doors, etc.), etc. Look for staining on the ceiling and water puddles on the floor to determine if water infiltration has occurred. Check the HVAC ductwork for condensation in the museum storage area as well.
- After the building is running on the generator, ensure that the HVAC, desiccant wheel and freezers are working properly. If problems exist, work through IC to resolve the issues. Use dehumidifiers and fans as needed to stabilize the museum environment, if needed.
- Assess the status of the collection. If the collection has been damaged from the storm, it may be necessary to request the assistance of the Museum Emergency Response Team (MERT) through the IC.
- Ensure that the building has electrical power. If main power to the building has been lost, ensure that the automatic backup generator is functioning.
- Ensure that the freezer in the lab has power to prevent loss of the unprepared specimens inside.
- When power permits, download the datalogger to determine the environmental impacts of the storm on the museum collection.
- Record event incident(s) in the Daily Environmental Log, as appropriate.

Robertson Building Archives Spaces

- Examine the facility from outside to be sure it is safe to enter.
- Assess the status of the archives facilities, including HVAC systems, desiccant wheel, water infiltration (e.g. at the ceiling, around windows and doors, etc.). Look for staining on ceiling tiles and carpets to determine if water infiltration has occurred.
- Assess the status of the collection. If the collection has been damaged from the storm, it may be necessary to request the assistance of the Museum Emergency Response Team (MERT) through the IC.
- If electrical power has been lost, coordinate with IC to have the portable trailer mounted generator brought to the Robertson Building to power the facility. Determine the timeframe for delivery of the trailer mounted generator. Stress the urgency to IC of getting that generator in place. If there will be a long delay, it will be necessary to use a portable generator from Pine Island maintenance to run dehumidifiers and fans.
- If power has been lost at the Robertson Building, do not open the freezers. Keeping the freezers closed will ensure the negatives stay cold longer until power is restored. In addition, the shelves have been set to ensure no boxes are resting directly on the base of the freezer so any water that might pool on the base as a result of the power loss will not get those collections wet.
- After the building has been hooked up to the generator, ensure that the HVAC and freezers are working properly. If problems exist, work through IC to resolve the issues. Use dehumidifiers and fans as needed to stabilize the museum environment.
- After the power has been restored, clean any water out of the base of the freezers before it freezes.
- When power permits, download the datalogger to determine the environmental impacts of the storm on the museum collection.
- Record event incident(s) in the Daily Environmental Log, as appropriate.

- Remove the plastic sheeting tubes from the rolled diazotypes. Do not remove them from the other types of rolled maps.

POST HURRICANE RECOVERY AT OTHER AREAS

Given distances between parks, it will be necessary for staff at the various parks to conduct initial evaluations of storm impacts and report information to the SFCMC curator.

BICY

- Assess the status of the Welcome Center and Oasis VC facilities, including structural integrity, status of systems (e.g. HVAC, fire and security systems, etc.), and water infiltration (e.g. at the ceiling, around windows and doors, etc.).
- Look for staining on ceiling tiles and carpets to determine if water damage has occurred.
- Assess the status of the collection. Are exhibits cases intact? Has artwork fallen off walls or been damaged by leaks? Is the canoe damaged? Etc.
- Report the status of the facilities and collections to the SFCMC curator, who will coordinate appropriate response.
- Determine if resource management records are damaged and coordinate with SFCMC accordingly.

BISC

- Assess the status of the Fascell Visitor Center and HQ buildings, including structural integrity, status of systems (e.g. HVAC, fire and security systems, etc.), and water infiltration (e.g. at the ceiling, around windows and doors, etc.).
- Look for staining on ceiling tiles and carpets to determine if water damage has occurred.
- Assess the status of the collection. Are exhibits cases intact? Has artwork fallen off walls or been damaged by leaks? Etc.
- Report the status of the facilities and collections to the SFCMC curator.
- Determine if resource management records are damaged and coordinate with SFCMC accordingly.

DESO

Following a hurricane or other emergency, DESO staff should implement the assessment actions outlined in the *2013 Museum Emergency Operations Plan* and provide information to the SFCMC curator who will coordinate response as appropriate.

DRTO

- Assess the status of the exhibits in the museum, including structural integrity, status of air conditioning, and water infiltration (e.g. at the ceiling, around windows and doors, etc.).
- Assess the status of the collection. Are exhibits cases intact? Has there been water infiltration? Etc.
- Review the condition of the objects around the fort (e.g. slide carriages in Bastion 6, wheeled vehicles on Front 6, Cuban chug, and the 10 large cannon on the terreplein).
- It may be necessary to take pictures of the artifacts (particularly the cannon) and send them to the SFCMC curator (if internet is available).

- Report the status of the facilities and collections to the SFCMC curator.
- Determine if resource management records are damaged and coordinate with SFCMC accordingly.

Flamingo Museum

- Assess the status of the building, including structural integrity, status of HVAC systems and water infiltration (e.g. at the ceiling, around windows and doors, etc.).
- Look for staining on ceiling tiles and floor to determine if water damage has occurred.
- Assess the status of the collection. Are exhibits cases intact? Has artwork fallen off walls or been damaged by leaks? Etc.
- Report the status of the facilities and collections to the SFCMC curator. If necessary, the SFCMC may send dehumidifiers and fans or evacuate collections if utilities will not be functioning for some time or if the museum facility is damaged.
- Determine if resource management records are damaged and coordinate with SFCMC accordingly.

HURRICANE BREAKDOWN

- Due to the intensive nature of hurricane preparations to ensure the preservation of the museum collection, most collections at the Beard Center and Robertson Building will remain under plastic throughout the hurricane season, after they have been prepared for the first approaching storm. The use of the custom zippered covers was designed to help with access while hurricane plastic is up, while preventing microclimates from forming.
- Unzip custom covers, and roll plastic up and out of the way.
- To ensure safe access and handling of the some collections, however, following return to normal duties, it may be necessary to remove plastic from selected areas depending on which staff is working on which projects and with which collections. Staff should only remove the plastic they need to until the official end of hurricane season. A museum staff work day will be scheduled in November of each year to remove all of the hurricane plastic at the end of hurricane season.
- The hurricane plastic at the BICY archives processing room will also remain on throughout the hurricane season and should only be removed to access collections as needed. Following a storm event, the plastic covers should be zipped up and rolled up. The covers are left on year round.

Other post-incident activities include:

- Remove plastic sheeting from desks and other work spaces. Leave plastic on bookshelves until the end of hurricane season.
- Remove plastic sleeves from rolled diazzo maps.
- Retrieve and/or set up computers, if needed.
- Remove the plastic sleeves from the museum artwork at EVER HQ, BICY Welcome Center, BICY HQ and BICY Oasis VC.
- Turn on IPM freezers and start new freezing cycles for any archives removed from the IPM freezer.
- If collections were evacuated from Flamingo post-incident, return them to exhibit when the facility and/or HVAC can sustain them.
- Return fans, dehumidifiers, extension cords, and other equipment used during the incident to their storage locations.
- Return any non-museum records evacuated from BISC or BICY.

SFCMC EMPLOYEES—SUMMER 2014 (as of 4/7/2014)**(See Appendix J for EVER Staff Cell #'s)**

Nancy Russell	museum curator
Bonnie Ciolino	archivist
Jennifer Stafford	registrar
Jean Schardt	volunteer
Bob Gross	volunteer
Asusena Reyes	volunteer

IMPORTANT PHONE NUMBERS FOR MUSEUM OPERATIONS**BICY**

Pedro Ramos (superintendent)	239-695-1102
JD Lee (deputy superintendent)	239-695-1103
Ron Clark (chief of resource mgmt.)	239-695-1106
Bob DeGross (chief of interpretation)	239-695-1107
Bob DeGross (cell)	239-695-3901
Isobel Kalafarski (interpretive ranger)	239-695-1229
Archives Processing Room	239-695-1219

BISC

Brian Calstrom (superintendent)	786-335-3646
Vacant (deputy super.)	786-335-3653
Elsa Alvear (chief of resource mgmt.)	786-335-3623
Charles Lawson (CR manager)	786-335-3676
Main Number	305-230-1144

DESO

Jorge Acevedo (superintendent)	941-792-0458 x101
Vacant (lead ranger)	941-792-0458 x105
Vacant (park ranger)	941-792-0458 x102
Michelle Marc (AO)	941-792-0458 x103
Chuck Oshaben (chief of maint.)	941-792-0458 x104

DRTO

Administration/General Inquiries	305-224-4277 or 305-293-0152
Glenn Simpson (Park Manager)	305-224-4255
Tree Gottshall (maintenance super.)	305-224-4255
Kelly Clark (cultural resources)	305 296-5578

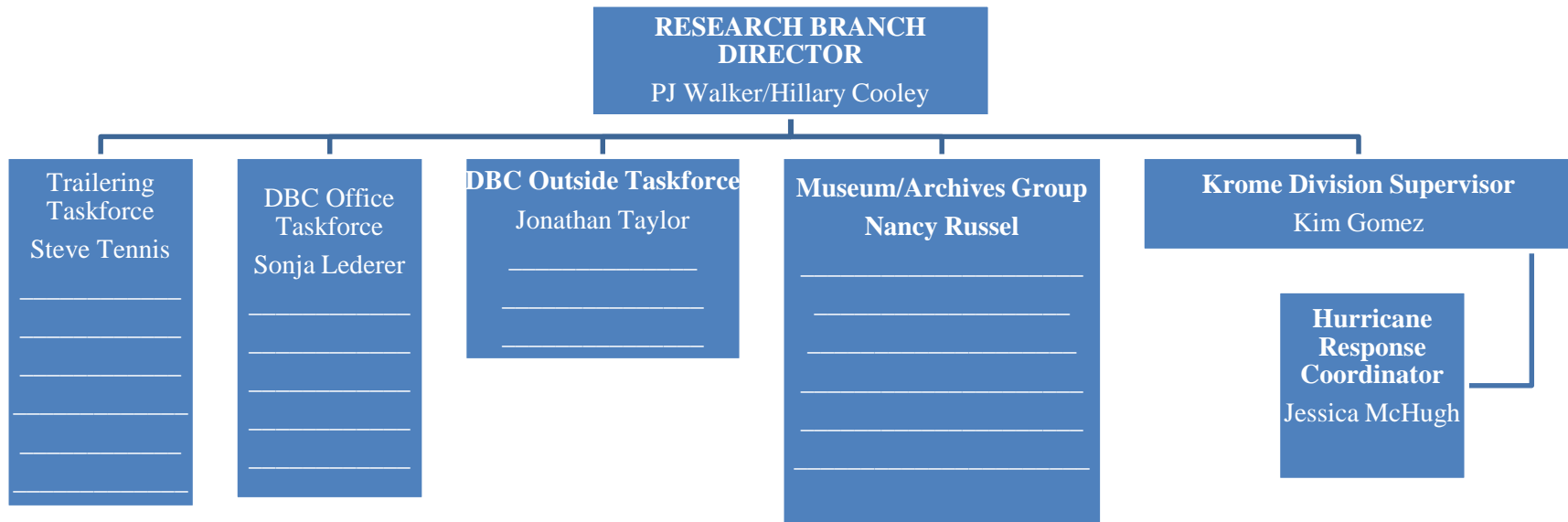
EVER

Dispatch	305-242-7740
Shawn Benge (acting superintendent; cell)	
Justin Unger (deputy super; cell)	
Vacant (chief of CR; cell)	

Southeast Region

Mary Troy, SER chief curator	404-507-5802
Ryan Polk, SER staff curator	404-507-5786
Aaron Richardson, archivist	404-507-5774
SERO Museum Fax	404-562-3202

Figure XX. Research Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis).
Preliminary and Advanced Hurricane Preparation Period (72 – 48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BFL)

All preparations should be complete and personnel released as authorized by the IMT.

Flamingo Branch Hurricane Checklist

General Hurricane Season

- 1) Review the Hurricane Plan. In the Flamingo Branch V hurricane plan book there is information in the appendix section, such as an updated Flamingo assignment list, employee injury check list, misc. memos, Incident Command System (ICS) booklets, shelter checklist, hurricane tracking map, copies of bulletins to post, and information from past hurricanes. In the front of the folder there are blank general messages, unit logs, and crew time reports (CTR's).
- 2) Meet with the Maintenance and Visitor Protection Group Supervisors, as well as the designated concession representative on general hurricane prep. Review the concession's hurricane plan and know what their responsibilities are. Regularly hold meetings with these individuals during the hurricane season to keep informed on changes and updates.
- 3) Picnic tables in the walk in sites and B-C loop should be taken to the road edge and secured together by rope. The only picnic tables that remain in place are in A and T loop (the only open loops during the summer).
- 4) Ensure that maintenance takes non-essential boats and equipment to the Missile Base. All interpretation program canoes should already be stored at the Missile Base for the summer season. Also, ensure that surveyed vessels are taken to Supply as soon as possible. General Season meetings should address this.
- 5) Ensure that Rangers take lost and found items to supply as soon as possible.
- 6) Inventory and inspect all shutters and tools, submit general message resource orders to Operations Section Chief as needed.
- 7) Maintenance staff will shutter all non-occupied housing units.
- 8) Ensure that all Flamingo vessels have working trailers. Trailers must be checked for adequate bearings, tires, tire pressure, lights, and chains with shackles. General Season meetings should address this.
- 9) Ensure that the 2-3 vessels (F4, F7, and F9) that will be left in Flamingo during a hurricane evacuation, as well as the 16' Skiff, are in good working condition throughout the hurricane season.
- 10) Establish a hurricane cache of water, Gatorade, gloves, insect repellent, insecticide (repel wasps while moving shutters), sunscreen and plastic, submit a general message resource order to Operations Section Chief as needed.
- 11) Advise Flamingo residents that they are responsible for securing any shutters that are easily reached prior to leaving for extended periods (vacation, Federal Law Enforcement Training Center, details) during the hurricane season. They are also responsible for securing any items inside and around their residences prior to leaving. Notify residents they risk loss or destruction of all items left on the first level of their housing unit due to wind and potential flooding of the housing area.
- 12) Rangers will ensure civilian family members in Park residences are aware of evacuation plan and have staff point of contact.
- 13) Ensure that Flamingo residents have access to and understand the evacuation plan (pg 126). In time of an evacuation, they are required to leave Flamingo; Pine Island HQ is designated shelter, if they choose to shelter elsewhere they must notify the Branch Director. They are responsible for providing their own supplies to last several days. Encourage that they bring with them items of a high monetary or personal value. In addition, they are responsible for

evacuating their own vehicles and vessels.

- 14) All staff in Flamingo Branch update Emergency Contact Forms.
- 15) Advise all staff that they are responsible for backing up their computer's hard drive (Appendix H Refer to Checklist for Computer Users).
- 16) Complete general hurricane preps by June 1st, if by May 31st all tasks have not been completed, request assistance from Operations Section Chief, who may send staff from other branches to help complete the remaining tasks.

Preliminary Hurricane Preparation 72-48 Hours Before Landfall

- 1) Flamingo Branch V Director attends the Incident Command briefing. After the briefing the branch director advises the Maintenance and Visitor Services Group Supervisors and the designated concession representative on operations for the 72 – 48 hour period.
- 2) Branch Director will have submitted personnel resource assignments and needs during the previous day's planning meeting. It is anticipated that 4 people will be needed to assist with shuttering and 4 people will be needed to assist with equipment relocation. These people will arrive at Flamingo at the beginning of the operational period and should meet the following worker requirements:
 - a. Able to lift 50 pounds
 - b. No duty restrictions
 - c. Arrive with work gloves
 - d. Arrive with power screw gun and two battery packs with wingnut driver for shutter installations
- 3) Submit general message order for water and Gatorade. Advise personnel that they are responsible for providing their own supplies until, or if, the resource order is filled. Personnel are responsible for their own lunches.
- 4) At the beginning of this operational period, consider if a resource order to deliver Genie Boom Lift from Pine Island is needed.
- 5) Review all backcountry permits. All individuals on the backcountry permits must be accounted for.
- 6) Branch Director will coordinate with Helibase Group when back country flights have been approved. Ensure that personnel who will be flying have successfully completed B-3 training, have adequate personal protective equipment and have adequate charts. The CTR must include a notation for hazardous duty for those personnel flying.
- 7) If needed, prepare a backcountry patrol of the Flamingo District for the beginning of the Advanced Hurricane Prep Operational Period, via a District vessel.
- 8) Advise individuals in the Campground of the approaching hurricane and shutdown schedule for the park.
- 9) Have the campground supervisor remove any money from the campground safe.
- 10) Load "low boy" trailers with 2 T70s, Machette, etc and designated CDL drivers will transport to PI.
- 11) The backcountry may be closed for day and overnight use, as directed by the IC. Post bulletins, informing visitors of the approaching hurricane, at both ramps, fish cleaning station, campground kiosk, campground bulletin board, visitor center, Coot Bay, West Lake, and Hell's Bay. Call the Entrance Station and ensure the staff is aware of the closure.

- 12) Flamingo residents are responsible for securing their own, easily reached, shutters.
- 13) Shutter crew will shutter the Ranger Station/Visitor Center and any necessary housing units during this Operational Period.
- 14) All staff are responsible for backing up the hard drives on their computers. (refer to hurricane plan for instructions). Ranger Station and Visitor Center staff will start securing offices that are not in use during this operational period; cover with plastic or place inside the action packers important items in each room. Computers/Battery backups are moved off the floor and covered with plastic. Workout room equipment is unplugged and covered with plastic.
- 15) Move golf carts inside the old restaurant.
- 16) Non-essential vessels, trailers and equipment will be staged for Research Trailing Task Force (Ideally consisting of 12 people with 6 vehicles properly equipped with towing capabilities and supplies) to transport to secure location in Pine Island district. A Flamingo personnel supplied with a radio and boat checksheet will be designated to coordinate with this crew.
- 17) Secure all loose items (wood, PVC, Special Projects items, etc.) during this Operational Period.
- 18) Coordinate with Utilities staff to ensure fuel tanks have access to sewage and water treatment area. Drive around the District; report any problems to the Maintenance and Visitor Protection Group Supervisors. Ensure any problems are taken care of immediately.
- 19) Both the Liaison Officer and the Flamingo Branch Director will be in contact with concession location management regarding shutdown procedures.
- 20) Ensure the mosquito sprayer is serviced, secured, and ready to be used after the storm.**
- 21) Branch Director will submit personnel assignments and needs for the Advanced Hurricane Prep Operational Period to the Operations Section Chief prior to the afternoon planning meeting. Ideally the same individuals who assisted with Shuttering and Equipment Relocation during preliminary will be retained. .
- 22) CTR's are faxed to Finance and Unit Logs are faxed to Operations at the end of the Operational Period.

Advanced Hurricane Preparation 48-24 Hours Before Landfall

- 1) Complete aircraft and vessel patrols of the backcountry, ensuring all parties are accounted for.
- 2) Complete the evacuation of non-essential vehicles and vessels, including VIP and park resident boats and trailers.
- 3) Move heavy equipment to Flamingo Whales.
- 4) Turnout gear is placed in "red bags" and secured in the fire engine and patrol SUV. Medical Unit gear is loaded in the ambulance along with the Hazmat suits.
- 5) Any extra chain saws/pole saws should be placed in on the second floor of the warehouse or other second floor storage location accessible to the ranger staff.
- 6) The fire engine, ambulance, one patrol car, and one vehicle will remain in the District until the very end of this Operational Period. The safety of concession and Park Service personnel remaining in the District is the first consideration.
- 7) Load a chain saw with fuel tank (with pre-mixed fuel), supply kit, loppers, and Personal Protective Equipment into two appropriate vehicles (SUV, Fire Truck).
- 8) The 2-3 vessels that were left in Flamingo (F4, F7, F9) are stored in the emergency storage building.

- 9) Any remaining canoes, Jon Boats, etc., are filled partially with water to prevent them blowing away.
- 10) The wind sock at the helispot is dropped to the ground and secured.
- 11) The flag in front of the Visitor Center is lowered, folded and stored in the Interpretation office.
- 12) The shuttering project is completed. Residents are again advised they are responsible for securing front and rear porch shutters (those that are easily reached) and those shutters that are controlled from inside. **Any problems have to be dealt with now.**
- 13) Complete securing of all offices (refer to Checklist for Computer Users in the Hurricane Plan). The items in the Maintenance office and Ranger Station are packed and secured. Backups have been completed on all District computer operating systems. Backups, external drives and the server backup tape are all placed in the action packer that will be taken to headquarters with the strike team.
- 14) The park may close during this Operational Period. Visitors will be asked to leave the Park.
- 15) Ensure the trash cans at West Lake are secured inside the bathrooms. Throughout the District, secure all lids on dumpsters to prevent trash from being blown around.
- 16) The sewage and water shutdown process is ongoing during this Operational Period.
- 17) Liaison Officer and Branch director will coordinate contact with the concession designated representative about concession personnel evacuation.
- 18) Drive around the District; report any problems to the Maintenance and Visitor Protection Group Supervisors. Ensure any problems are taken care of immediately.
- 19) National Park Service employees living at Flamingo will be notified when they are to report to their assigned hurricane shelter at headquarters or Pine Island.
- 20) Branch Director will submit personnel assignments and needs for the Final Hurricane Prep Operational Period to the Operations Section Chief prior to the afternoon planning meeting.
- 21) CTR's are faxed to Finance and Unit Logs are faxed to Operations at the end of the Operational Period.
- 22) During final evacuation of Flamingo staff, all non-essential vehicles will be relocated to PI Maintenance.

Final Hurricane Prep 24-0 Hours Before Landfall

- 1) All personnel are evacuated except for the Strike Team (typically consists of 1 utility person, Branch Director and Visitor Services Group Supe). **No exceptions.**
- 2) 2-3 staff from other branches may be needed to help shuttle vehicles.
- 3) The Branch Director receives a final report of the status of Flamingo. Any tasks not accomplished prior to the 24 hour mark are explained by the Group Supervisors and noted on the Unit Log.
- 4) Personal vehicles belonging to the Strike Team (Branch Director, Utility System Operator, and Visitor Protection Group Supervisor) are taken to Pine Island. The only vehicles remaining in Flamingo are the patrol SUV/pickup (chain saw equipped), patrol car, and utility truck. **No exceptions.**
- 5) The utility system is shut down.
- 6) The Strike Team departs Flamingo together. The District roads are patrolled on the way to Pine Island, checking every turnoff.
- 7) Individuals assigned to the Strike Team will be identified and their names will be submitted

to the Operations Section Chief prior to afternoon Planning Meeting.

- 8) CTR's are faxed to Finance and Unit Logs are faxed to Operations at the end of the Operational Period.

Post Hurricane Recovery

- 1) All Staff call EVER/DRTO Emergency Hotline to receive park closure updates, leave a message reporting post-storm status and to request assistance, if needed. Report to designated work station as directed.
- 2) The Strike Team will drive to Flamingo together, where they will be equipped with the SUV/pick up (chain saw equipped), patrol car, and utility truck.
- 3) The Strike Team will identify any immediate life and safety hazards in the occupied areas of the District.
- 4) The Strike Team will provide initial assessments of any damage in the District and submit any needed resource orders to Operations Section Chief
- 5) Personnel will drive vehicles back to Flamingo. Ranger staff ensures the first priority is the fire truck, ambulance, patrol vehicles and bug sprayer. Patrol boats will be brought back to Flamingo and put back in water as needed. As time permits, maintenance vehicles and mobile equipment will be brought back.
- 6) Resource orders are submitted for work crews as problems are encountered. Work crews are instructed to be self-sufficient during this Operational Period.
- 7) Liaison is notified when it is safe for concession personnel to have access to the area for facility assessments.
- 8) Standing orders are initiated for two 240 – 3 phase generators and six or eight residential generators as needed.
- 9) CTR's are faxed to Finance and Unit Logs are faxed to Operations at the end of the Operational Period.
- 10) Rangers complete a thorough boat patrol of the District and check all chickees, Aids to Navigation, campsites, and facilities. All damage to Aids to Navigation is reported to U.S. Coast Guard, either Station Marathon or ATON section Miami. Damage to park facilities is reported to Maintenance and Operations section. Rangers can employ the 2-3 boats that were kept in the emergency storage building for the initial patrol. Rangers should take a digital camera to assist with facilities assessment. A complete assessment of District facilities may require several operations periods at least.

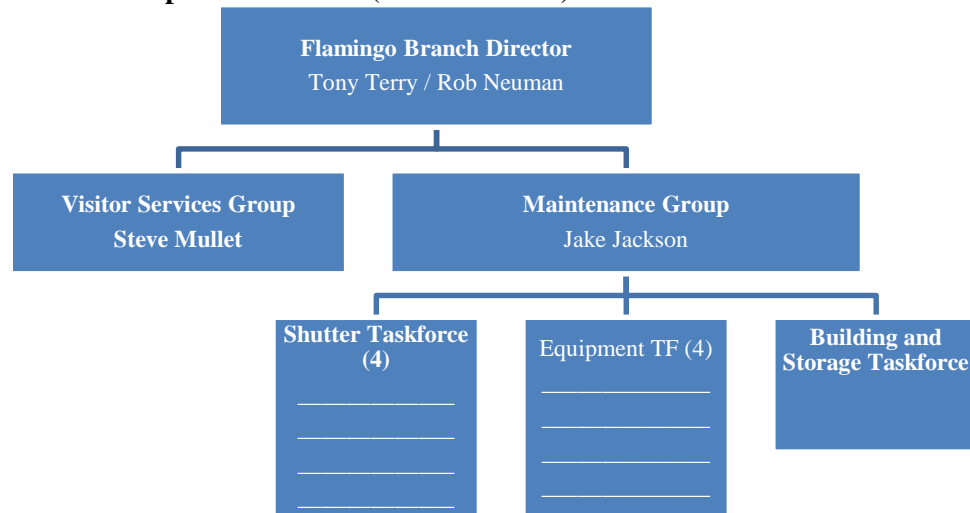
Hurricane Breakdown

The final Operational Period is the hurricane breakdown. The following tasks must be accomplished in this time period.

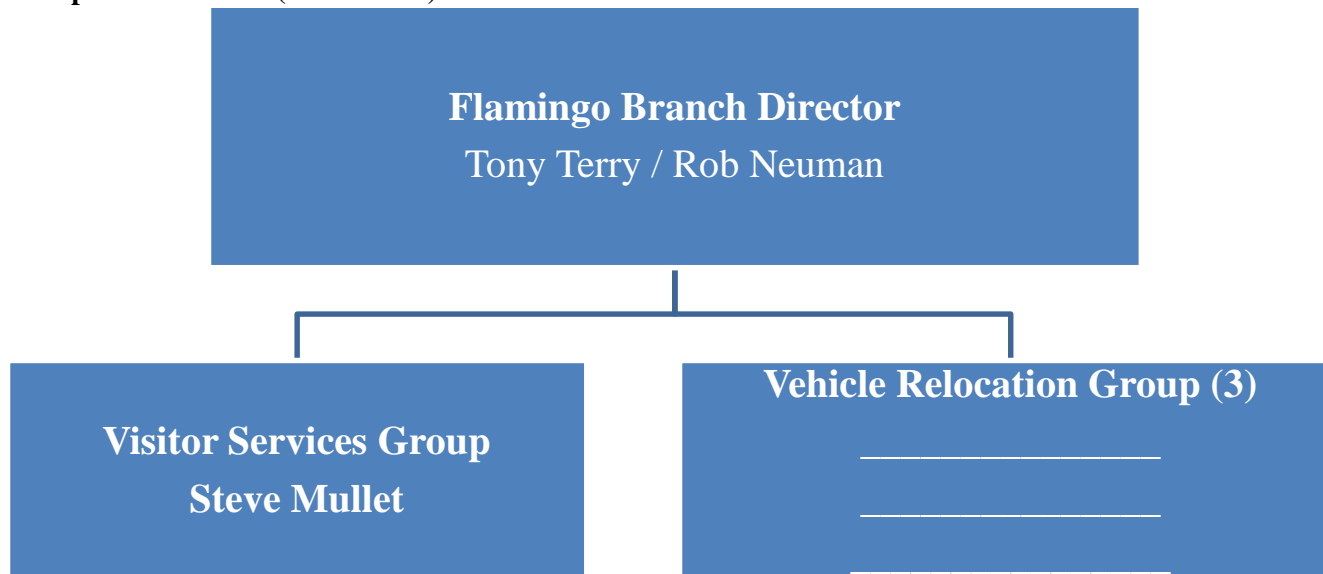
- 1) Institute standing order for water, and Gatorade. Advise personnel that they are responsible for providing their own supplies until, or if, the resource order is filled
- 2) Prior to afternoon Planning Meetings, submit resource assignments and requests for personnel to drive Flamingo vehicles and vessels back to Flamingo. For transporting vehicles and vessels, standing order for personnel needs must include personnel that: 1) have knowledge about how to trailer a vehicle, and 2) bring at least 30' of rope for emergencies. Vehicle priorities are the fire engine, ambulance, and patrol cars. Staff should drive enough commuter vans to ensure that they can return at the end of the work day. When possible use the same individuals who assisted during the hurricane prep.

- 3) Prior to afternoon Planning Meetings, submit resource assignments and requests for personnel to take shutters down. When possible, use the same individuals who assisted during the hurricane prep and the same worker restrictions apply: 1) lift 50 pounds, 2) come with no duty restrictions, 3) arrive with work gloves, 4) personnel must arrive with a power screw gun and two battery packs with wingnut driver for the gun to uninstall shutters.
- 4) Ensuring the District is ready for the visiting public is a priority but safety is the highest priority. Advise the Group Supervisors to instruct their work crews of this goal.
- 5) The Visitor Center and Ranger Station shutters have first priority. Occupied housing shutters are the next priority. Unoccupied housing shutters should remain closed throughout the hurricane season.
- 6) The Visitor Center, Ranger Station and Maintenance Office will have items uncovered and computers brought back online.
- 7) The campground is made ready for the public. Only picnic tables in open loops are returned to the sites.
- 8) All bulletins posted during the evacuation are removed.
- 9) Work crews that have completed their tasks are reassigned or released by the Branch Director with advisement from the Group Supervisors.
- 10) Any items secured in elevated storage locations are returned to their regular storage area.
- 11) The “red bags” stored in the fire engine are removed and the items replaced in the fire lockers.
- 12) Advise the Operations Section Chief about the level of guest services the concession can provide prior to reopening to the public.
- 13) CTR’s are faxed to Finance and Unit Logs are faxed to Operations at the end of the Operational Period.

Figure XX. Flamingo Branch Organization Chart and anticipated staffing needs (subject to change on an incident by incident basis)
Preliminary and Advanced Hurricane Preparation Period (72-48 hrs BLF)



Final Hurricane Preparation Period (24 hrs BLF)



Dry Tortugas Operations Section Hurricane Checklist

Dry Tortugas National Park functions as an Operations Section under the EVER/DRTO Hurricane Incident Management Team. The DRTO Operations Section includes the Dry Tortugas Group, the Key West Group and the M/V Fort Jefferson Group. As with all sections of the hurricane plan, these checklists were developed with input from park staff and acknowledge the issues of geography, isolation and limited manpower at DRTO. As this is part of the overall EVER/DRTO Hurricane Plan, employees should also refer to the introduction, appendices, and other relevant sections. To prevent property loss and damage to DRTO resources, early season preparation is essential to minimize the work needed to be accomplished as the storm approaches. Tasks to be completed are prioritized and identified in the following checklists by operational period.

DRTO Operations Section General Season Preparations

- DRTO Operations Section Chief reviews hurricane plan and checks group assignments with all staff and contractors.
- Review hurricane and evacuation plan with staff.
- DRTO Operations Section Chief reviews hurricane plan with concession ferry and seaplane company.
- DRTO staff review the hurricane plan including the introduction, the DRTO Operations Section, Employee Responsibilities, Hurricane Shelter and Info Checklist, and Appendix A Personnel Policy and Information.
- Complete and update all employee emergency contact information sheets for all personnel working in the park (NPS, VIPs, SCAs, family members in housing etc.) throughout hurricane season. Submit sheets to designee on incident team and retain a copy at DRTO.
- Employees should locate hurricane shutters for their own housing units and ensure that they still fit and are serviceable. Notify maintenance staff of problems so that immediate action may be taken.
- When departing housing for extended periods, ensure that quarters and patio areas are storm ready. Secure all outdoor items, such as patio furniture, and close shutters before departure.
- Employees who are away for training or leave during a storm should check in with their supervisor.
- If an employee has family in government housing, designate someone to keep family members updated on hurricane status while employee is away for training/detail.
- Notify onsite Med Unit Leader of any special medical conditions or needs, submit info in confidential "Blue Envelope".
- Employees are advised to keep personal vehicle tanks topped off with fuel during the season.
- All staff members prepare personal hurricane kit supplies for evacuation. See appendix.
- Obtain Monroe County Hurricane Re-entry stickers for personal vehicles (available after June 1st at Courthouse or DMV office by airport).
- All non-DRTO employees staying overnight must check in at the DRTO HQ office upon arrival during hurricane season. Transient Hurricane Check-In Sheet located on a clip

board, self- sign in. Employees sponsoring visiting parties should ensure that they check in.

Dry Tortugas Group

General Season Preparations

Garden Key

- Begin filling sandbags and staging on pallets. Purchase additional bags, if needed.
- Check park hurricane cache supplies (plastic wrap, action packers, radio batteries, duct tape, first aid supplies) and make necessary purchases. Shutters to all buildings on Garden Key will be distributed and stored at each building, ready for installation.
- Check boat tie down straps, ratchets, and D-rings and purchase new equipment if necessary.
- Ensure that all boat trailers are marked clearly with the name of the corresponding vessel. This will help ensure that each vessel is put on the proper trailer.
- Vessels will be stored and secured on trailers if not needed for immediate use.
- Keep inventories of gas and diesel at Garden Key main storage topped off throughout the hurricane season.
- If a tropical system begins developing more than 100 hours out, ensure Edgewater is fueled to no more than ½ of a tank.
- Clean and stock hurricane shelters.
- Check fire extinguishers in shelters.
- Remove excess/surveyed equipment from coal docks/casemates and send away on M/V Fort Jefferson for disposal.
- Ensure contractors properly secure equipment and supplies.
- Ensure that each housing unit has a spare set of keys in the headquarters office key box.
- Ensure that additional keys are made, if needed.
- Compile a set of CTRs, Unit Logs and General Message forms in hard copy.
- Collect and store copies of all critical paperwork such as maintenance manuals, EMS forms, charts, etc. in the Bat Cave.
- Ensure that helipad is properly painted; repaint if necessary.
- Secure “display chugs” at interpretive casemates.
- Ensure other agencies/groups secure and remove as much as possible of their gear from the park. All gear left behind must be consolidated and secured.
- Remove all empty propane cylinders and replace with new when possible. Secure.
- Ensure iridium satellite telephones are in good working order and subscriptions are current.
- Prepare whip antennae or alternative radio base station setup in case tower loss occurs.
- Relocate excess radio equipment to Bastion 1 hurricane shelter.
- Inform staff of evacuation timeline and identify DRTO hurricane shelter assignments.
- Walk entirety of Fort Jefferson and Garden Key and identify loose items to be relocated or secured.
- Store MRE and water supply for Hurricane Shelters in rat-proof containers.

Loggerhead Key Preparations

- Distribute and store shutters to all buildings on Loggerhead Key, ready for installation.
- Shutter unused buildings.
- NPS gator must be stored inside Generator Room overnight for duration of hurricane season.
- Remove all empty propane cylinders and replace with new when possible and secure.
- Keep inventories of gas and diesel at Loggerhead Key main storage topped off throughout the hurricane season.
- All patio furniture or other outdoor equipment should be stored inside the boat house when not in use.
- Ensure water storage tanks remain full throughout the season.

Priority 1 Actions: (100-72 hours)

Garden Key

- DRTO Operations Section Chief holds briefing for all DRTO staff.
- Maintain Fuel in all patrol vessels at ½ tank.
- Inform boaters of storm situation in person/radio and advise them to return to mainland if time allows.
- Post info on dock board.
- Raise Marine advisory (hurricane/tropical storm) flags.
- Advise that park resources, including boats, will be unavailable to assist the public during the duration of the storm.
- Empty shed on north coaling dock and shutter door.
- Maintain radio contact with EVER and Loggerhead.
- Designate 2-4 employees who will complete final preparations and be the last to evacuate. These employees may remain on site for the duration of the storm, depending on forecasted conditions.
- All other staff may have the option to take annual leave and evacuate DRTO prior to the mandatory evacuation order.
- Initiate decision process for personnel evacuation from the park (contractors, VIP's, NPS staff, etc.) based on the specific information related to the storm.
- Coordinate with IC and Logistics to implement evacuation plans.
- Fuel tractor, Bobcat, forklift, portable generators, tools.
- Transfer as much gasoline as possible to equipment and holding tanks. Move portable gasoline storage totes into designated fort casemates.
- Shut off dock fresh water supply valve to campground restrooms (located under dock).
- Secure embrasure windows in maintenance area.
- Fill and assemble additional sandbags and place on pallets. Deploy sandbags to areas where they will be needed (doors, windows, cistern covers, etc.).
- Install shutters on inner fort windows (office, crew's, residences).
- Transfer EMS kits to shelters.
- Move hurricane Shelter 1 and Shelter 2 totes from storage area in old Quarters 1702 to corresponding shelters. Totes are not being stored in Shelters 1 and 2 to deter rodents from entering the shelters.
- Cover bookstore and VC equipment with plastic and tape.

- Turn all replica Totten shutters to the closed position (Front 5).
- Discuss alternate communication plans (with Coast Guard, etc.) in advance with the incident team.
- In consultation with the IC, the DRTO OSC will determine the closure schedule of the park.
- DRTO OSC will submit personnel resource assignments and needs for the next operational period to the IC prior to the afternoon Planning Meeting.

Loggerhead Key

- Secure hurricane shutters on little house and big house.
- Transport personnel from Loggerhead to Garden Key for evacuation to Key West.
- Volunteers will be evacuated with DRTO staff to park provided shelter. The volunteer agreement may also be terminated at the volunteer's request or at the DRTO Operations Chief discretion.
- Shut off all propane tanks.

Priority 2 Actions: 72-48 hours

- DRTO Operations Section Chief receives morning briefing from IMT and holds briefing for all DRTO staff.
- Move and secure boats as previously determined. Leave one vessel for response to be pulled during the 48-24 hour period. Remove loose equipment (PFDs, flares, etc.) from boats and store in the fire cache. Secure electronics and wiring compartments with plastic wrap and tape.
- Complete shuttering.
- Collect all monies and unused fee envelopes (dock and campground) from iron rangers and place in safe.
- Fill 5 five gallon tanks with gasoline and diesel and store in flammable lockers.
- At the dock, secure all benches, fire extinguishers (including helicopter pad extinguishers) inside dock house.
- Install shutters on dock house doors and windows.
- Turn campground picnic tables upside down. Any tables without chain anchors should be secured.
- Broadcast weather reports to boaters. Contact any remaining boaters. Broadcast on Channel 68 as well as 16 and in English and Spanish to alert fishermen in the area.
- Secure lighthouse shutters and doors.
- Secure LP gas cylinders in storage bastion 3.
- Secure composting toilets.
- Secure any loose items inside fort. Turn picnic tables upside down and secure.
- Transfer portable generator, fuel and oil to area outside of second tier shelters, Bastion 1 and/or 3.
- Fully charge all spare radios, batteries and flashlights. This includes camera and video equipment.
- Remove signs from Bush Key and store in sign cache.

- DRTO OSC will submit personnel resource assignments and needs for the next operational period to the IC prior to the afternoon Planning Meeting.
- Remove all fire extinguishers mounted on exterior of new housing 6-plex (Q1718-1723) and plan inside housing unit to the left of mounting location.
- Ensure all windows and doors in new housing 6-plex (Q1718-1723) are closed/latched/locked.

Priority 3 actions: 48-24 hours

- DRTO Operations Section Chief receives morning briefing from IMT and holds briefing for all DRTO staff.
- Remove last patrol boat.
- Shut off diesel supply to dock.
- Disconnect all radio, TV and video equipment in offices and residences to prevent gear being damaged by lightning strikes.
- Take down all signs (VC, office, etc.) and store by Bastion 3.
- Sandbag the pump station, cistern covers, and generator room windows.
- Cover office with plastic and tape.
- Pack small office equipment and files (office, archival, interpretive) in action packers and drums.
- Residents fill available containers with water.
- Cover valuable personal items with plastic and tape.
- Staff that will remain in shelters will transport food/personal items to shelters.
- Stage plastic buckets and coolers in quarters to collect water from leaking casemates.
- DRTO OSC will submit personnel resource assignments and needs for the next operational period to the IC prior to the afternoon Planning Meeting.

Final Hurricane Preparation: Condition 1 (24-0 hours before landfall)

Garden Key

- DRTO Operations Chief receives morning briefing from IMT and holds briefing for all remaining DRTO staff.
- Lower hurricane flags to prevent breakage of flag pole.
- Remaining employees carry computer server with them to hurricane shelter or off island.
- Shut off all propane tanks.
- Notify EVER dispatcher when preparations are complete. Maintain contact every two hours or as agreed upon. If regular communications are not feasible, initiate alternate plans (with Coast Guard, etc.).
- In the event that staff members use the hurricane shelters, staff with EMS training should be split evenly between the two shelters.
- Go to storm shelters based on the evacuation plan. Designated personnel should be prepared to report to storm shelter in Bastion 1 or 3. This should include food, water, foul weather gear, communications equipment, lighting, sleeping gear, medicine/first aid supplies, radio batteries, and Iridium portable telephone. See Evacuation Plan for personal items checklist.

Storm Duration

- Personnel designated to remain on Garden Key may shelter in their own residences up to a Cat 1. However, if the storm is upgraded to Cat 2 or higher, personnel will relocate to shelters before conditions deteriorate. Exercise caution and use personal protective equipment.
- Maintain radio contact with EVER dispatch every two hours or as agreed.
- If staff is housed in both shelters, conduct hourly checks between shelters by radio or as agreed.
- All personnel should remain safely indoors for the duration of the storm or until released.

Post Hurricane Recovery

- All personnel should remain safely indoors until given clearance to exit by DRTO Operations Section Chief.
- Address any injuries or medical issues.
- Clear helipad of debris to provide for evacuation of any parties injured during storm or recovery operations.
- Conduct headcount/roll calls of staff at DRTO and notify Dispatch.
- Contact Dispatch and advise IMT of status.
- Evacuated employees will call the EVER/DRTO Emergency Hotline to check in.
- Submit an initial resource order, if necessary, for food, water, personnel, equipment, and or tools through IMT.
- Photograph damages and report to IMT as soon as possible. Submit resource order for FMSS specialist. Priority placed on utility/communications systems and housing units needed to safely support personnel.
- As soon as weather and conditions permit, begin initial assessment of Garden Key.
- As soon as weather and conditions permit, launch vessel and assess Loggerhead, Bush, Long, Hospital, Middle, and East Keys and all navigational aids and regulatory buoys.
- Clear any fallen trees or branches. Assess utility systems/equipment and vessels for electrical problems.
- Contractors will be responsible for providing assessment and any necessary removal/replacement of damaged contractor equipment.
- Provide estimate to IC of when Park would be able to re-open.

Hurricane Breakdown (after cleanup or if storm does not impact)

- Begin uncovering computers and electrical equipment.
- Prepare public use areas for opening such as dock, Fort, VC, swim beach, and campground.
- Replace signs and missing swim buoys with floats.
- Place government vehicles back in parking spaces at Poinciana and Coast Guard base.
- Residents may open shutters of occupied housing.
- Maintain CTRs and Unit Logs.
- Hold safety briefing at beginning of operational period.
- Remember that completing operations safely is the number one objective.

Key West Group

Key West General Preparations – also see Dry Tortugas Operation Section

- DRTO Operations Section Liaison Officer (LOFR) will review Florida Keys Area Committee incident plans and locate Emergency Operations Centers in Lower Florida Keys.

Poinciana General Preparations

- Close all shutters on vacant apartments at Poinciana housing units.
- Dry lube shutters.
- Ensure that all second floor shutters are closed and locked whenever vacating Poinciana for an extended period.
- Secure all loose outdoor items, such as patio furniture, whenever vacating Poinciana units for extended for an extended period.
- Place a spare set of labeled personal vehicle keys in unit 1644D large key box so that vehicles may be moved from the parking lot or USCG base. Only the DRTO OSC and DRTO DIVS have the code for the key box.
- Motorcycles and scooters may be stored inside individual units but must be drained of fuel. Cardboard must be placed beneath the vehicle to prevent damage to the floor.
- Fuel including propane tanks may not be stored in Poinciana units. Fuel should be stored in the locked storage shed adjacent to the structures or in the outside fenced enclosures at front entrances.

Preliminary & Advanced Hurricane Preparations

- DRTO Operations Section LOFR will make contact with EOCs.
- Conduct necessary hurricane preparations to NPS offices/areas at Eco Discovery Center and NOAA Office. Defer to hurricane plan of agencies in charge of those facilities. Secure NPS documents, equipment, and materials.
- Once NPS preparations are completed, available staff may provide assistance to Eco-Discovery Center, Eastern National Museum Store, and NOAA facilities as appropriate.

Final Hurricane Preparations

- DRTO Operations Section LOFR will provide DRTO OSC and Liaison Officer at the ICP of advanced notice of Monroe County evacuation orders. Once evacuation order is given DRTO LOFR will transfer to ICP. LOFR may be transferred sooner by DRTO OSC.
- All non-essential personnel should be released from the incident to complete their personal preparations.

Storm Duration

- Follow evacuation plan.

Post Hurricane Recovery

- DRTO Operations Section LOFR will rejoin Monroe County EOC to coordinate
- Employees call-in to EVER/DRTO Emergency Hotline to notify incident team of status.
- Assess Poinciana government vehicles, office buildings and equipment and advise DRTO OSC of FMSS needs.

Hurricane Breakdown

- Residents may remove hurricane shutters from occupied Poinciana Housing.
- Return equipment, documents, and materials to offices, if removed during preparation.

Protection of South Florida Collections Management Center (SFCMC) Items Located at DRTO

The distance between the SFCMC and DRTO limits the ability of the SFCMC to provide hands-on assistance preparing for a storm. Instead, emphasis has been placed on providing better protection in-house, both to preserve the collections and to limit the impact of hurricane preparations on the small number of staff at the park.

Visitor Center

New exhibits were installed in 2010. Objects on exhibit in the theatre should be left in their exhibit cases, which will provide some additional protection in the event of a roof leak. Objects on open exhibit (e.g., cannon balls, flank defense Howitzer) should be covered with plastic.

Other Artifacts Around the Fort

In addition to the objects on exhibit in the visitor center, the following is museum property:

- 10 large cannon on top of the fort (6 Rodman gun and 4 Parrotts)
- 3 slide carriages on the ground floor of Bastion 6
- 2 wheeled vehicles in ground floor casemates on Front 6
- Cuban chug on Front 4

The wheeled carts should be moved further inside the fort, towards or even into bastions if possible. No additional hurricane preparedness is feasible for the other objects given size, location, and/or likely greater impact of the attempt to protect them. Emphasis should be placed on post-storm assessments.

Protecting Resource Management Records

Due to the park's location on the water, critical resource management records which are not yet part of the collection are also at risk in both the headquarters and the "bat cave". Given working conditions at the park, it is possible the records could also be in employee quarters. The SFCMC has removed many of the permanent records from DRTO to the archives. However, given that records continue to be created, staff should not assume that everything "important" has gone to the SFCMC.

If records are to remain in place, and flooding is a risk, employees should remove records from the bottom (or more) drawers of filing cabinets. To protect from roof leaks, filing cabinets, bookshelves, and desks should be covered with plastic before a storm. Depending on the storm's track and severity, it may be advisable to move records deemed critical to the park to the 2nd floor of the engineer officer's quarters. What needs to be moved and when needs to be determined on a case-by-case basis by the DRTO Park Manager. If a storm impacts the park, the SFCMC will coordinate (through incident command) response for recovery of museum collections.

M/V Fort Jefferson Group

Hurricane preparations for the M/V Fort Jefferson are unique because movement of the vessel to a safe location is required. The voyage to safe harbor may take considerable time for preparation and transit. These tasks are in addition to the duties all other branches encounter such as home, personal and work site preparations. This situation demands that we have a full complement of crew available during the hurricane season. In addition to the 3 crewmembers of the FJ we must have 1 more on standby throughout the hurricane season. The purpose is so we have two people on watch at all times while underway. We can run 24 hours per day but each crew member can only operate the boat for 12 hours.

Crew/phone/email

(For Personal Contact #'s, See Appendix I: DRTTO Operations Personnel List)

Vessel Phone
305-215-4767

Captain – Tim Arter
tim_arter@nps.gov

Operations Officer – Jim Nimz
jim_nimz@nps.gov

Standby Crew – Kayla Nimmo
kayla_nimmo@nps.gov

Standby Crew – Tracy Ziegler
tracy_ziegler@nps.gov

General Season Preparations

- Review hurricane plan with crew and other DRTTO Groups.
- Maintain 60% minimum fuel level in ships tanks, not cargo tanks.
- Insure adequate supplies of dry food goods for 4 people for 5 days.
- Keep water tanks full.
- Crew meeting to establish several potential “hurricane holes”
- Other than yard work undertake no projects to critical systems that will take more than 48 hours to complete.
- Secure all miscellaneous equipment/supplies stored on vessel or dockside.
- Ensure enough oil/filters are aboard for two complete generator oil changes, one engine oil change and one transmission oil change.
- Ensure four complete sets of generator and 2 main engine fuel filters are onboard.
- Ensure two complete filter sets of RO filters are onboard
- Ensure a full set of spare impellers for generators and main engines are onboard.
- While berthed in Key West maintain waste water connection to Coast Guard base and keep waste water holding tanks empty.
- All crew members will keep passport current and readily available for the unlikely event that the vessel is forced to dock at a foreign port.
- Ensure storage shed on Coast Guard base is clean and organized.

Preparation Actions: 96 hours

- Check that crew is prepared to depart when called.
- Attend USCG Sector Key West hurricane brief.
- Top off all diesel tanks.
- Top off gasoline for skiff.
- If generators are within 10 hours of oil change, change oil/filters and fuel filters.
- Move vehicles to Poinciana.
- Clear dock area and secure shed.
- Prepare vessel for heavy weather.
- Submit crew list for crew list and evacuation plan to DRTO OSC.
- Submit crew list for evacuation to USCGKW 305-292-8727.

Due to the geographical position of Key West we must take action far in advance to avoid being in harm's way. This is especially true if the threat is approaching from the east. Our escape may require that we steam east toward the storm for 150nm before we can turn north away from the path. Steaming 150nm takes us roughly 10 hours. A large tropical storm can have a 250 mile radius. Typically forward speed is 12-15 NMH. Assume a storm center 1000 miles distant near San Juan PR the outer bands would be 750 miles from our location in Key West. Projected track is the Florida Keys and into the Gulf of Mexico. Gulf ports are a poor option as only Mobile and New Orleans offer an exit if the storm follows. If we are traveling east for 10 hours to Miami (900 nm from hypothetical storm center) we reduce the closet point of approach to the outer bands to 506-530 nm or 33-42 hours before we can begin to turn out of the path. ***Therefore, the crew should be ready to depart 72 hours prior to landfall.***

Evacuation Actions: 72 hours

- All crew report to vessel.
- Report vessel/crew readiness to USCGKW and DRTO Ops Chief.
- Determine whether or not to go with USCG vessels. While we welcome the opportunity to go with them if offered the chance we have to consider the following factors.
 - USCG vessels are much faster than our boat.
 - We might hinder their operation.
 - They have large crews and we do not.
 - We have different missions.
 - USCG may not have dock space available for us at their destination.
- In the unlikely event that we are forced to proceed to a foreign port all crew must have passports. In this case every effort will be made to inform DRTO OSC of our situation prior to leaving USA waters. If DRTO OSC cannot be reached, then contact the IC or Superintendent.

After Reaching Safe Harbor

- If Possible, notify Ops Chief of arrival, failing that, contact EVER dispatch of arrival.
- Make any final preparations such as extra lines, or clearing decks.

Post Hurricane

- Call EVER/DRTO Emergency Hotline and report status and receive park closure status.

- Establish contact with EVER dispatch regarding condition of crew/vessel.
- Top off fuel and supplies.
- Determine any immediate needs of DRTO.
- Take action necessary to assist DRTO ASAP.

DRTO Operations Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Planning Section Chief.

Resource	Division	Availability
Arter, Tim	MVFJ	
Bass, James (Adam)	DRTO	
Clark, Kelly	DRTO	
Fuellner, David	DRTO	
Fueschel, John (Nick)	DRTO	
Gottshall, Tree	DRTO	
Mitchell, Wayne	DRTO	
Moran, Patrick	DRTO	
Nimmo, Kayla	MVFJ	
Nimz, Jim	MVFJ	
Simpson, Glenn	DRTO	
Spade, John	DRTO	
Ziegler, Tracy	MVFJ	
Vacant Seasonal Ranger (I) (To be filled during this hurricane season)	DRTO	
Vacant Seasonal Ranger (I) (To be filled during this hurricane season)	DRTO	
Vacant LE Ranger (To be filled during this hurricane season)	DRTO	
Vacant Maintenance Mechanic (To be filled during this hurricane season)	DRTO	

Availability: D = Assigned to DRTO Operations, A = Available to assist EVER, U = Unavailable

DRTO & Poinciana Housing Evacuation Plan

The Evacuation Plan is based on the assumption that storm intensity can increase suddenly, therefore the Park will prepare for a storm that is one category higher than forecasted to make landfall. For purposes of this Evacuation Plan, employees include: permanent and temporary employees, Everglades Association employees, Eastern National employees, SCA's, interns, volunteers, their spouses and any dependent family members.

Timeframe

The plan calls for preparations to begin at 100 hours before landfall; however, often storms arise with less notice. Since every storm track and development is different, the incident team will evaluate timeframes, storm track, and other situational information to establish a conservative timeframe that meets incident objectives.

Evacuation Methods

- Ferry – operates until park closes
- Employees may be evacuated up to the last ferry.
- Seaplane – Will assist with evacuations from Garden Key as much as they are able. The DRTO OSC will stay in contact with the seaplane company to determine timing of

seaplane evacuations, which will depend on weather conditions and the forecast track of the storm.

- Government vehicles – In the event of mandatory relocation, government vehicles are authorized to provide transport to an IMT-provided shelter.

Evacuations from DRTO may be staggered to provide support for Key West operations and to make use of available seats on the ferry and seaplane. All employees will be expected to assist with park preparations. The IC and the DRTO OSC will evaluate preparation priorities, timeframes, and arrange for release of employees to coordinate with ferry and seaplane schedules. The DRTO OSC will also notify IC of transportation plans.

Loggerhead Key

All residents will evacuate from Loggerhead Key for a Tropical Storm or higher category. At 100-hours BFL or first sign of a storm less than 100 hours, the team will initiate evacuation.

For a tropical storm, evacuation options include:

- Poinciana Housing or homes in Key West (until evacuation of Keys are ordered)
- Crew's Quarters on Garden Key if available.

Garden Key

Tropical Storm – Employees may remain at the Fort. The DRTO OSC will determine whether employees in transition between work and lieu days will remain at the Fort or in Key West.

Category 1-2 – All but 2-4 designated employees will evacuate Garden Key after the majority of hurricane preparations are completed. The 2-4 designated employees will remain at the Fort and evacuate to the hurricane shelter in Bastions 1 and 3.

Category 3-5 – If transportation is feasible, all employees will evacuate Garden Key. All but 2-4 designated employees will evacuate Garden Key after the majority of hurricane preparations are completed. The 2-4 designated employees will remain to complete final preparations and be the last to evacuate. If conditions do not permit evacuation, employees will ride out the storm in the onsite hurricane shelters. Employees will install the gate in the sally port before final evacuation.

Poinciana

Residents may remain in Poinciana Housing until Monroe County issues a mandatory evacuation of Key West. See the Monroe County evacuation plan for “Phased Evacuation”

(<http://www.monroecounty-fl.gov/index.aspx?NID=462>). The Incident Management Team may also initiate a mandatory evacuation of Poinciana Housing sooner for employee safety and logistics.

Hurricane Shelter Details

The Incident Management Team will arrange shelter for residents of park housing, if requested.

Shelter options:

- Hurricane-rated hotels (location to be determined by the incident team based on storm track).
- Park Headquarters shelter (if room is available).
- Public shelters (last resort)

The DRTO OSC will notify the Logistics Section Chief at the start of the incident with the names of park residents needing shelter, number of family members and pets, and provide updates if that information changes. Employees will be expected to check-in with the Incident Management Team representatives upon arrival at the designated shelter. DRTO OSC will designate a group leader who will communicate with the incident management team representative. Employees should evacuate with their own personal preparedness kit and be prepared to provide for themselves for 72 hours after the storm.

Evacuation

- Bring identification and food, water, bedding, entertainment, and medicines to last at least 72 hours in the shelter. Refer to the Hurricane Shelter Info Sheet and Checklist for additional items.
- Ensure vehicle has a full tank of fuel before beginning evacuation with a full tank of fuel.
- Follow established evacuation routes.
- Ensure that the vehicle used for evacuation has a Monroe County Hurricane Re-entry sticker properly displayed (available after June 1st at Courthouse or DMV office by airport).

Park residents also have the option to make their own arrangements; however, the government will not pay for those arrangements and employees may be expected to take leave, especially if requesting to leave before being released from storm preparations.

Time constraints permitting, all staff will be given the option to take leave or use comp time and evacuate the potential storm area. The Superintendent determines when to provide administrative leave for part or all of an evacuation.

Post storm

The DRTO Operations Section LOFR will advise DRTO OSC and Liaison Officer at the ICP of status of re-entry into Monroe County. Evacuated employees may not return to Poinciana housing or Key West until the Monroe County evacuation order has been lifted. After the storm, employees should follow check-in procedures. (See Appendix A. Employee Responsibilities) DRTO employees should call the EVER/DRTO Emergency Hotline to report post-storm status and receive park closure status before returning to Key West.

Garden Key Hurricane Shelter Inventories 2014

For the 2014 Hurricane Season, DRTO has changed for a module cache system for its hurricane shelters. Shelters 1 and 2 will have identical sets of totes with supplies cached in each tote. The tote inventories will be inspected and managed by the DRTO LE Staff prior to the beginning of each hurricane season and then monthly during hurricane season.

Shelter 1		Shelter 2	
Description	Quantity	Description	Quantity
Tote 1		Tote 1	
MRE Case (12 meals)	2	MRE Case (12 meals)	2

Water (gallon jug)	8	Water (gallon jug)	8
Tote 2		Tote 2	
MRE Case (12 meals)	2	MRE Case (12 meals)	2
Water (gallon jug)	8	Water (gallon jug)	8
Tote 3		Tote 3	
coleman stove	1	coleman stove	1
stove fuel	1	stove fuel	1
Pot, cooking	1	Pot, cooking	1
lamp, coleman	1	lamp, coleman	1
toilet paper	4	toilet paper	4
paper towels	4	paper towels	4
Tote 4		Tote 4	
Pads, sleeping	6	Pads, sleeping	6
Cot, sleeping	3	Cot, sleeping	3
flashlight	2	flashlight	2
batteries	2	batteries	2
first aid kit	1	first aid kit	1
pump hand sanitizer	1	pump hand sanitizer	1
portable crank radio	1	portable crank radio	1
General Shelter 1		General Shelter 2	
portable toilet	1	portable toilet	1
trash cans	2	trash cans	2
folding table	1	folding table	1

Distribution List

Flamingo Ranger Station (Interp & LE)
 Flamingo Maintenance
 Gulf Coast Ranger Station (Interp & LE)
 Gulf Coast Maintenance
 East Everglades Fire
 East Everglades Ranger Station
 Tamiami Ranger Station (LE & Maint)
 Shark Valley Interp
 Loop Road EE
 Hidden Lake EE
 Pine Island Ranger Station

Pine Island Maintenance
Supply
Robertson Bldg Fire
Dan Beard Center
Krome Center
HQ Branch Director
Key Largo Ranger Station
Dry Tortugas Group
Key West Group
M/V Fort Jefferson Group
Incident Commander
Incident Command Post
Superintendent's Office
SERO
SER Emergency Coordinator

Dry Tortugas National Park Employee Hurricane Preparedness Guideline

(Additional preparedness recommendations may be found at <http://www.ready.gov/hurricanes>)

Remember to put important papers in plastic, zippered storage bags and put in a secure place in the event your quarters are flooded. Keep receipts for personal items that could be damaged during a hurricane.

In the event that you leave the park during hurricane season, such as to visit Key West on lieu days, please ensure that your housing unit is prepared for a storm prior to departure. Hurricanes and tropical storms may develop or change track very quickly. Ensure that hurricane shutters are in place, particularly in areas that cannot be accessed by other personnel (e.g. balconies). Secure all patio furniture, barbecue grills, and other outdoor items. Place buckets in areas of known leaks inside your unit.

Employee personal hurricane cache checklist:

Ensure that you have enough food, water and personal supplies on hand to last 5 days. Refrigeration, cooking facilities, and electricity may not be available.

Listed are items that each employee should gather in preparation for a hurricane or severe storm event. This is in addition to the park supply cache. This is intended as a guideline and is not necessarily a comprehensive list. Please refer to the Hurricane Plan 2010 for a list of steps to take and to be better prepared. (Copies were sent by email and there is a hard copy in the Office)

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| ___ Non-perishable foods such as canned meats and fish, canned or dried fruit and vegetables, soups, canned or powdered milk and juice, cereal, cookies, crackers, bread, coffee, tea, trail mix, granola bar— remember special dietary needs (Be sure to include some items that do not require cooking.) | ___ Battery operated clocks and radios |
| ___ Water: 1.5 gallons per person per day (If you will be filling containers from park tap water, be sure to have Gatorade or another electrolyte source on hand.) | ___ Headlamp and/or flashlight |
| ___ Disposable plates and utensils or mess kit | ___ Small battery operated fan |
| ___ Can opener, bottle opener | ___ Extra batteries (if using rechargeable batteries, ensure that all have a full charge) |
| ___ 1 set of sheets, blanket, pillow or sleeping bag | ___ Battery operated lanterns |
| ___ Towel & washcloth | ___ Candles, matches in plastic bag |
| ___ Toothpaste, toothbrush, soap and other personal hygiene items | ___ Reusable water bottle |
| ___ Pain relievers, prescription drugs, any other medical needs. | ___ Plastic garbage bags and zippered storage bags |
| ___ Change of clothing including rain gear, sturdy shoes, hat | ___ Knife or scissors |
| ___ Cards, books, magazines, games, videos, music | ___ Flushable wet wipes |
| | ___ Copy of Car Keys in Poinciana lock box in case vehicles have to be moved. |
| | ___ Make sure all electronics are unplugged and stored safely. (Especially important ones, i.e.: Computer, TV, Radios) |
- In the event of evacuation from DRTO, also add:**
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|-----|---|
| ___ | Emergency cash or traveler's checks (Cash machines may be inoperable and credit may |
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|-----|---|-----|--|
| | not be accepted on Key West or the mainland.) | | |
| ___ | Identification / Important documents | ___ | Camp stove & fuel |
| | | ___ | Bathe and have a good meal before leaving home |
| ___ | First aid kit | ___ | Full tank of gas in vehicle/s |

Planning Section

Plan Preparation and Distribution

General Hurricane season planning begins in April and May. Planning Section Chief coordinates meeting with Incident Commander and Operations Section Chief (at a minimum) to review and update the Organizational Chart and identify issues for the upcoming season.

Planning Section Chief emails members of the Command and General Staff to review relevant checklists and submit revisions. Planning Section staff compile checklists, revise the guide, and submit it for review by the Incident Commander, the Superintendent, Deputy Superintendent, and the Chief Ranger. Once signatures are obtained, the plan is emailed to all employees if possible, or produced on CD and distributed to employees by division and district. The electronic files are posted on the HQ and Research shared drives. If email is not possible, CDs are also sent to the Emergency Manager and other interested parties in the Southeast Regional Office, through the Superintendent's Secretary.

Distribution List

Flamingo Ranger Station (Interp & LE)
Flamingo Maintenance
Gulf Coast Ranger Station (Interp & LE)
Gulf Coast Maintenance
East Everglades Fire
East Everglades Ranger Station
Tamiami Ranger Station (LE & Maint)
Shark Valley Interp
Loop Road EE
Hidden Lake EE
Pine Island Ranger Station
Pine Island Maintenance
Supply
Robertson Bldg Fire
Dan Beard Center
Krome Center
HQ Branch Director
Key Largo Ranger Station
Dry Tortugas
Key West Group
M/V Fort Jefferson
Incident Commander
Incident Command Post
Superintendent's Office
SERO
SER Emergency Coordinator

Planning Meetings

The Planning Section Chief will be responsible for running the morning All-Employee Briefings and the Planning Meetings. Each member of the Incident Management Team should be prepared to brief other members on the current status of their sections. Briefings and Planning meetings should last no longer than ½ hour. Multiple briefings may be held to accommodate park staff and districts. In the past, the Pine Island Chickee is the standard place for briefings. Members of the IMT may also split up to offer another briefing at the Krome Center.

Agenda for Briefings

• Opening Remarks	IC
• Incident History/Update	IC or Operations SC
• Incident Objectives	Planning SC
• Weather	Planning SC
• Safety Concerns	Safety Officer
• Logistics Concerns	Logistic SC
• Finance Status	Finance SC
• Liaison Concerns	Liaison Officer
• Information Concerns	IO
• Status of Park Neighbors	Agency Representative
• Operational Assignments	Operations SC
• “Housekeeping” Items	Planning SC
• Closing Remarks	IC

The Planning Section Chief, the Resource Unit Leader, and the Operations Section Chief will meet prior to the Planning Meeting to discuss assignments for the next operational period. They will present these to the rest of the Command and General Staff at the Planning Meeting.

The Command and General Staff should be present at all Briefings and Planning Meetings as well as those individuals that will assist with the planning efforts and production of the Incident Action Plan.

Planning Meeting Agenda

• Opening Remarks	IC
• Brief on Situation/Resources	Operations SC & Plans SC
• Weather	Plans SC
• Safety Concerns	Safety Officer
• Review Objectives	IC
• Determine Strategy	Operations SC & Plans SC
• Specify Tactics	Operations SC
• Determine ability to support the Plan	All Section Chiefs
• Period specific decision making issues	All Section Chiefs
• Concerns	All Section Chiefs
• Closing Remarks	IC

Here is a schedule for Incident Meetings and the Planning Process:

Time	Meeting	Location	Participants
7 AM	Command & General Staff	ICP	C&G staff, Branch Directors
8 AM	All-Employee Briefings	PI chickee Districts	All C&G staff, all employees Branch Directors & Group/Division Supervisors
9:30	Krome Center Briefing	Krome conf room	IC, Plans, Ops, PIO, Safety (primary or deputies)
2 PM	Tactics (pre-planning) Meeting	HQ Supt conf room	IC, Plans, Ops, Safety
3 PM	Planning Meeting	ICP	C&G staff, Branch Directors

Tactics Meeting may be held in Superintendent's conference room.

Resource Unit

The Resource Unit Leader (RESL) is responsible for maintaining the status of all assigned resources at the incident. The Check-in and Check-out procedures are described below and will assist the RESL in tracking resources. A master list of resources will be maintained in Microsoft Excel by the RESL. Due to the flexibility of most resource commitment during the hurricane preparation stage, Excel is a better resource tracking tool than ISUITE. However, should the incident progress the RESL should be prepared to load resources into ISUITE. The RESL will also work with Operations and PSC on the ICS-204 forms in the IAP.

Check-in and Check-out Procedures

The following are check-in and check-out procedures for incident indicated in this plan. If the scope of the incident increases, for example during post-hurricane recovery, then check-in/out procedures may need to be modified to accommodate the additional resource tracking.

Check In

At the end of each operational period each Branch Director will submit a Resource Tracking Form to the Plans section. This form includes the names of all Branch personnel, their availability, and division assignment for the next operational period.

Check Out

All employees are required to check out with their incident supervisor before leaving the park. The incident supervisor should:

- Check that the employees' emergency contact information is accurate.
- Find out where the employee will be staying during the storm.
- Provide the employee with "Check Out Information" (Employee Responsibilities and What Will I Do After The Storm)
- Remind employees to call the EVER/DRTO Emergency Hotline after the storm.

If the employee will not be checking out in person, the individual must call the incident supervisor on the phone to provide the required information. Copies of the information can be faxed or emailed to outlying areas.

Evacuation Check-in Procedures

The Logistics Section Chief should notify the Resource Unit Leader about the location of park residents during the storm (hotel, out-of-town, park housing).

Documentation Unit

The Documentation Unit Leader (DOCL) is responsible for maintaining incident documentation including copies of the Incident Action Plan for each operational period, maps of the storm predictions, weather reports, general messages, meeting notes, and other necessary planning documents. Files should be set up at the beginning of each incident following the established NWCG Incident Documentation Filing Plan (see S:\Hurricane\Blank ICS Doc Structure\Sample ICS Structure for E-File Storage). The DOCL must combine all paperwork at the end of the incident into the Incident Package which will be filed in the file cabinet in the Chief Ranger's Conference Room. There are some documents that must be saved in their original paper form, however majority of incident documentation can and should be saved in electronic form saved on

the HQ Shared drive. Necessary hard copies include all documents with signatures (IAP's, Delegation of Authority, Transfer of Command and the Close of Delegation of Authority). These signed documents should be scanned and saved electronically as well. The Documentation Unit Leader will also attend monthly and incident Planning Meetings and take notes, which will be filed on the S drive.

For post-storm events, the FMSS Technical Specialist will use incident documentation to track labor costs, damage, repairs, and facility conditions. On more severe incidents, additional resources may be called in to assist with documenting facility damage and repairs.

Unit Logs

At start of an incident, DOCL will create a list of all those who should submit Unit Logs, will check them off for each period, and follow up with reminders.

Logistics Section – Support Branch

Facilities Unit

Incident Facility Locations

Incident Command Post

EVER – Chief Ranger’s conference room at Headquarters with work stations for the IC, Operations, Planning, & Logistics.
DRT0 – Administrative Office

Communications - Pine Island Radio Shop

Information Officer, Liaison Officer, Safety Officer, Resource Advisor, and Finance will use other available offices in EVER Headquarters.

Housing for Park Residents

At the beginning of each hurricane season, the park housing officer will send out a short memo and checklist to park residents to help in their preparation for the hurricane season.

The Logistics Section Chief will complete the list of personnel and hotel assignments at the 100-hour mark. **Under NO circumstances is any individual to remain in housing alone.**

A Hurricane Evacuation Info Sheet and Checklist (pg 106) will be provided to affected employees at STAGE I and a reminder sent out at STAGE II with information on check-in and items that they need to bring with them.

- **Pine Island, Flamingo, Key Largo & East Everglades**

Park housing residents, including those in the Florida Bay District (Key Largo), Flamingo District, East Everglades District and Pine Island District will be housed in commercial lodging. Park residents also have the option to make their own arrangements at their own expense.

Pine Island personnel may remain in their assigned housing, with the exceptions of personnel in trailers, modular structure #105, and structure #108, if the storm is predicted to be a Category II or less. If weather conditions are predicted to reach Hurricane Category III, all Pine Island residents will be evacuated from Park Housing.

The Flamingo, Pine Island, Key Largo, and Northeast District Branch Directors will contact the Logistics Section with names of individuals evacuating, which the Logistics Section Chief will confirm with the park housing director.

- **...Gulf Coast District & Tamiami Subdistrict**

The Logistics Section will secure hotel rooms inland at pet-friendly and hurricane-rated facilities for Gulf Coast, Shark Valley, and Loop Road personnel.

- **DRTTO – Garden Key and Poinciana (see DRTTO Section, pg. 79-84)**

Four options will be available to employees and will be determined by storm conditions. Dry Tortugas Operations Section Chief will work with the IC, the Logistics Section Chief, and the employees to determine the best option for the particular storm event.

- Fort
- Commercial lodging
- County shelter

Only required, permitted, seasonal, and volunteer-in-park employees will be allowed to remain in the park. The Incident Commander, based on a critical need for the park, may grant exceptions. Contractors, cooperators, etc. who may be living within the park on a temporary basis will need to seek safe refuge outside the park, with the exception of a few identified employees who will be on assignment.

Files Storage

Important Florida Bay and Flamingo District files storage is available if necessary. Contact the Logistics Section Chief for storage location.

Medical Unit

For Everglades National Park, the medical unit will be located in the Chief Ranger's Office and the Flamingo Ambulance will be staged at HQ after Flamingo is evacuated. Refer to the Medical Plan. At Dry Tortugas National Park, the medical unit will be located in the Dr. Mudd Memorial Clinic at the Fort; Due to the isolated nature of DRTTO, their Medical Unit will fall under the command of the DRTTO Operations Section Chief.

Post-Hurricane Alternate Facilities

Depending on the nature of the storm and subsequent power outages, it may be beneficial for incident operations to relocate to alternate facilities:

Krome Center - This is a good central location in Homestead which could be used as a meeting point for employees if all communications are disabled. ICP could be relocated here if HQ is disabled or the incident grows in size. The 1st Floor training room can be set up with tables, computers, phones, and other necessary equipment. The parking lot could also be used as a Staging Area and employee status check-in. Tents could be set up if the building is not accessible. However, without power, this building may be difficult to use and secure properly.

PI Maintenance & Supply – These areas have been set up for the Logistics Section on larger incidents.

Note: Everglades HQ has backup generator power to the entire building. An adequate gas supply will enable operations to continue at the park if the building is secure and accessible.

Hurricane Evacuation Info Sheet & Checklist

What to do if you are asked to evacuate your residence:

1. Bring enough food, water, and personal supplies to last three (3) days. Do not forget your pet food. Refrigeration, cooking facilities and electric may not be available. Items you will need include:

- ☐ Non-perishable foods, such as canned meats, fish, fruit, vegetables, and soups; canned, powdered, or shelf pack milk and juices; dried fruit, cereal, cookies, crackers and other snacks; peanut butter & jelly, etc.
- ☐ Baby food and formula, if applicable
- ☐ Pet foods
- ☐ Water (1 1/2 gallons per person per day)
- ☐ Can opener
- ☐ Disposable plates, glasses, & utensils
- ☐ 1 set of sheets, blanket (or a sleeping bag), pillow, towel and washcloth for each member of your family
- ☐ Toothpaste, toothbrush and other personal hygiene items
- ☐ Clothing
- ☐ Cards, books, magazines, board games, videos, etc.
- ☐ Non-electric clocks and radios
- ☐ Small fan and desk light
- ☐ Batteries
- ☐ Cash - ATM machines may be inoperable after the storm. Plan accordingly.

If staying in a designated shelter:

2. Report to the designated check-in area. They will direct you to the shelter.
3. When you arrive at your designated shelter, the you will be assigning a sleeping area, shown where to find restrooms, showers, eating areas, the community use area, and the medical unit.
4. Please respect the privacy of other people. Be considerate, not everyone will be sleeping at the same time you will.
5. If you forgot something or require other assistance, please contact a shelter employee.

Property Storage Plan

The care and storage of government owned property (vehicles, heavy equipment, boats/trailers, office equipment, records, and supplies) will be the responsibility of the Ground Support Unit. The Lower Missile Base will be the primary BOAT and TRAILER storage area. The Pine Island Maintenance Compound will be the primary VEHICLE storage area. An Equipment Site Manager will manage each area.

Pine Island Site

The Pine Island Site will be used primarily for the storage of government and a minimum of privately owned vehicles (park residents only).

Missile Launch Area (Lower Missile Site)

The Missile Launch Area (Lower Missile Site) also has been selected as the site for storage of office equipment, boats/trailers, and some heavy equipment from the Research, Fire, Pine Island, Flamingo and Key Largo Branches. Biscayne NP also uses one hanger of the Missile Site for their hurricane storage needs. The NW Branch will coordinate storage of this type property at Big Cypress facilities at Oasis. Please keep in mind that the site is a National Register Historic Site, and buildings and features should be treated accordingly. The following procedures are established to ensure proper security and accountability at the Missile Launch Area

Check-in to Missile Site

All equipment must be logged in with the Equipment Site Manager. Information requested will be name of person checking-in equipment and the time and date. The Site Manager will provide each item with an ID number which will be on the windshield in shoe polish. If you have a large group of equipment or vehicles, it would help to have an inventory list to leave with the Site Manager. Each individual box or other container (e.g. Action Packers) must be labeled on its side with office of origin and basic contents prior to delivery to the Missile Site (preferably by the person packing it). Recommended procedure is to either label with masking tape and indelible marker or use packing labels with ties. The Site Manager will seal Action Packers at the latches with tamper-proof seals to ensure accountability.

Accountability

All personnel will be issued a DI-105 for items turned in at the Missile Site. The DI-105 will include the name of the Site Manager, name of employee checking in property, name of liaison officer, date and time of check-in and current condition. Once storage is complete, two inventory lists will be prepared by the Site Manager...one of vehicles/vessels/trailers, the second of equipment/property/supplies. The vehicle/vessel/trailer list (and associated DI 105's) will be turned over to the Ground Support Unit Leader; the equipment/property/supplies list (and associated DI 105's) will be turned over to the Supply Unit Leader. The Missile Site Manager will secure all buildings and gates with combination locks prior to departure.

During the Final Hurricane Preparation Period the Logistics Section will prepare a plan for re-issuance or utilization of vehicles and property based upon the expected impacts of the storm. If little or no impacts are expected, property may simply be re-issued, through the Site Manager, back to the people of origin. If there are severe impacts expected, vehicles and equipment may need to be

issued out to others to meet resource needs of post hurricane operations. In the event that a different Incident Management Team is sent in after the storm to take over management of the incident, the Logistics Section Chief will assure that all inventories and property receipts are properly transferred to relief resources of the new team.

Keys/Security

All equipment keys will be turned in to the Site Manager who will have a key log which corresponds with equipment and vehicles stored on site.

Interior Storage

Small equipment, such as generators and pumps, will be stored off the floor on shelves. Boats and trailers will be secured with cargo straps.

Exterior Storage

All boats, trailers and trailered equipment will be secured to anchors with heavy-duty cargo straps. Make sure canoes, bikes, etc. in or on trailers are secure. Any other items stored inside of boats or trailers must be secured or enclosed to prevent movement during high winds.

Personal Property of Park Residents

Personal property of both required and permitted occupants residing in park housing may seek approval from the Superintendent to store personal property in designated areas of the park. Personal property including, but not limited to, POVs, RVs, boats, and trailers may NOT be stored at the Missile Site. POV's will be parked at Pine Island in the open areas in the vicinity of the dormitory (see Ground Support Plan).

Residents requesting in-park storage of POVs or equipment must submit the Personal Property Storage Request Memo (Appendix G) through their Division Chief to the Superintendent for approval at the beginning of the hurricane season. The Superintendent will forward all approved requests to the Incident Commander. The team will make every effort to accommodate personal property storage, but residents should note that government property will be the first priority. Once government property is secured, additional tie-downs at the Robertson Building may then be assigned to personal property for that storm. **All property must be removed after an incident, or with IC approval, at the end of the hurricane season.**

Missile Base Storage Plan

From Everglades National Park Policy Memorandum EVER 5281-51, Operation and Management of the Nike Missile Base Site

Approved Use

The long-term goal of the park is to eliminate the use of HM-69 as a routine storage area. The site will continue to be used for storage during hurricanes, but the objective is to remove non-historic equipment, supplies and other materials from the site, secure the site and facilities and to conduct preservation and environmental assessments and mitigation as appropriate. Emptying the three missile barns will enable more boats and other equipment to be stored inside during hurricane events, preventing damage to government property and protecting the historic site from equipment which, if tied down outside the barns, may become flying debris during a hurricane, causing additional damage.

A key purpose of this policy is to ensure that all uses of HM-69 comply with NPS policies for management of historic sites and park use of the site does not degrade the integrity of the site or threaten the values which make the site eligible for the National Register. HM-69 is a historic site, not merely a storage area. As such, there are general concerns that all employees should be aware of to ensure sensitive use and management of the site:

- Maintenance or repair projects at HM-69 will require NEPA and Section 106 Compliance. Employees must consult the park's Planning and Compliance Branch **before** beginning any action that alters the historic fabric or cultural landscape of the site.
- Do not attach anything to walls or other structural elements. Do not bolt shelves to walls or floors.
- Do not drag equipment and scrape the floors. Floors include original paint and other details.
- Do not scrape walls, doors or other original fabric when moving equipment into facilities.
- Do not store government records at HM-69.
- Do not store hazardous chemicals at the site. HM-69 does not have fire detection or suppression systems.
- All storage areas at HM-69 are currently designated for government property. **Personal property will not be stored at HM-69. without prior, written approval by the Superintendent.** The Superintendent may still approve personal property storage at HM-69 if vehicles or other personal property storage provides a compelling advantage to the US Government that cannot be provided in other ways or accommodated at other locations in the park. Alternative areas for personal property will be developed by the Park outside of the historic district.
- All buildings closed for safety reasons require approval by the Safety Officer before entry, and then only with appropriate personal protective equipment (PPE) as determined by the Safety Officer.
- Law enforcement personnel will access these facilities to address physical security concerns, as needed. The Chief Ranger and the Safety Officer will coordinate employee hazard awareness for rangers who may need to access facilities for law enforcement purposes.

HM-69 is used for temporary storage of critical park equipment during hurricanes. This use of the site can continue without threatening original fabric and site integrity but to do so requires sensitive management and use on the part of all EVER and BISC employees. General considerations that all employees should be aware of include:

1. **No additional hurricane tie-downs can be installed at HM-69 without Section 106 Clearance.** Installation of non-historic features and damage to original fabric requires Section 106 Compliance. The need for additional tie-downs will be addressed in an overall site assessment of tie-down needs. No tie-downs are to be added before this review, including during hurricane events, until the State Historic Preservation Office (SHPO) has concurred with the action.
2. In the event of a hurricane, every effort should be made to get as much equipment as safely possible into the missile barns. Equipment left outside must be tied down to avoid becoming projectiles in a storm. Flying debris is a threat to safety and can result in significant damage to the Launch Area during a hurricane.
3. Equipment must be removed as soon as is practical following the hurricane event, depending upon the impact and severity of the storm.

The approved uses of each facility are listed below. No other use is authorized.

Missile Assembly and Warheading Building (#191)—This facility is closed for resource protection and safety reasons. No tours (including VIP tours) are allowed and no storage of property will occur in this facility. This facility will not be used for hurricane storage and will remain locked at all times.

Missile Barn A (#194)— In the short term, this facility will continue to house resource management, maintenance and housing office equipment until it can be moved to another location. It will be used for hurricane storage as space allows. In the longer term, this facility will be used for hurricane storage only. No tours (including VIP tours) are allowed.

Missile Control Room A—This facility is closed for resource protection and safety reasons. No tours (including VIP tours) are allowed and no storage of property will occur in this facility. It will not be used for hurricane storage. Missile Control Room A will remain locked at all times.

Missile Barn B (#193)— This facility will be used for hurricane storage. This building may be used for tours of the site (see “Access” below).

Missile Control Room B—The facility is closed for resource protection and safety reasons. No tours (including VIP tours) are allowed and no storage of property will occur in this facility. It will not be used for hurricane storage. Missile Control Room B will remain locked at all times.

Missile Barn C (#192)—This facility is dedicated to the Nike Missile and is no longer available for storage of any kind.

Missile Control Room C—This facility is closed for resource protection and safety reasons. No tours (including VIP tours) are allowed and no storage of property will occur in this facility. It

will not be used for hurricane storage. Missile Control Room C will remain locked at all times.

Canine Kennel—This facility will not be used for storage. or hurricane storage. The Canine Kennel will remain locked at all times.

Berms—The berms are an important part of the historic site. They may not be used as borrow material, painting backdrops, firing range targets or for any other purpose.

Access

Indiscriminant access to the site in the past has resulted in damage to original fabric and the continued addition of inappropriate equipment and supplies to the site, as well as exposure to potential health and safety risks. To ensure that the approved uses in this policy memorandum are implemented and that this important resource is protected, the facilities will be keyed as followed:

Main Gate, Missile Barn A, Missile Barn B and Missile Barn C—one key, outside of existing park system. The Chief of Cultural Resources and Pine Island District Ranger will have keys and another key will reside at park Dispatch. Individuals seeking access to the site will check out the key from park Dispatch, as needed.

The Missile Assembly Building, Missile Control Room A, Missile Control Room B, Missile Control Room C and Canine Kennel will be cored for a single key, outside of existing park system and different from gate and barn keys. Due to safety concerns, the Chief of Cultural Resources will retain the key to these structures and must approve all access, except immediate law enforcement needs, to these facilities.

Administrative Access—Access to the site for new employee orientation or other legitimate needs will be approved by a PMT member. The key to the gate and barns will be checked out from park Dispatch for this access.

Emergency Access—Dispatch will have keys to the gate and barns. During hurricane preparation, access to the site will be provided by the Pine Island Hurricane Team, which includes the Pine Island District Ranger. In the event of another type of genuine emergency (i.e. threat to life, health or safety or fire event), emergency responders will cut padlocks if necessary. All other access must be planned and will require checking out a key from Dispatch.

Responsibilities

All Park staff are responsible for ensuring that all areas within and around HM-69 site fence are maintained in a clean and orderly manner.

The Chief of Cultural Resources is responsible for the overall management of the historic complex and coordinating maintenance, interpretive activities, and preservation of the site. She will also review all work orders to the site prior to submission into FMSS by maintenance staff.

The Chief Ranger is responsible for maintaining security of keys to the site. All use of the keys must be documented on an appropriate sign-out sheet. Employees checking out a key must provide Dispatch with an approving authority for access to the site (i.e. member of PMT authorizing access to the site).

The Hurricane Team is responsible for ensuring that **no new hurricane tie-downs** are installed, that use of the facilities during hurricanes corresponds to the uses outlined in this policy for maintaining the interior and paved exterior of storage areas in a clean, safe and orderly manner during an incident.

Property Storage Inventory - 2014

Description	EVER ID#	NPS Number	Present Location	Hurricane Storage Location	Property Officer
Boats					
18' Boston	F1	60009	Flamingo	Nike Missile Hanger	Tony Terry
24' Sea Hunter	F2	63132	Flamingo	Remain In Flamingo	Tony Terry
21' Carolina	F3	59936	Flamingo	To Nike Hanger June 12th	Tony Terry
16' Carolina	F4	60062	Flamingo	Remain In Flamingo	Tony Terry
16' Dolphin	F6	71619	Flamingo	To Nike Hanger June 12th	Tony Terry
17' Dolphin	F7	60167	Flamingo	Stay In Flamingo	Tony Terry
20' Dolphin	F8	60203	Flamingo	Nike Hanger June 12th	Tony Terry
18' Boston	F9	71339	Flamingo	Remain In Flamingo	Tony Terry
25' Boston	F10	60043	Flamingo	Tie Down Robertson	Tony Terry
24' Sea Hunter	F12	63017	Flamingo	Tie Down Robertson	Tony Terry
19' Boston	K1	60006	Key Largo	Tie Down Key Largo	David Fowler
18' Dolphin	K2	71620	Key Largo	Tie Down Key Largo	David Fowler
18' Dolphin	K3	60011	Key Largo	Tie Down Key Largo	David Fowler
20' Lake&Bay	K5	60080	Key Largo	Tie Down Key Largo	David Fowler
20' Lake&Bay	K6	60072	Key Largo	Tie Down Key Largo	David Fowler
20' Intruder	E2	63074	Gulf Coast	Tie Down BICY	Tom Iandmarino
18' Boston	E3	60003	Gulf Coast	Tie Down BICY	Tom Iandmarino
18" Sea Ark	E4	63068	Gulf Coast	Tie Down BICY	Tom Iandmarino
16' Carolina	E5	63055	Gulf Coast	Tie Down BICY	Tom Iandmarino
22' Pathfinder	E6	60205	Gulf Coast	Tie Down BICY	Tom Iandmarino
22' Pathfinder	E7	60222	Gulf Coast	Tie Down BICY	Tom Iandmarino
18' Boston	I1	60005	Flamingo	Nike Missile Hanger	Bob Showler

16' Sea Ark	I2	60164	Gulf Coast	Tie Down BICY	Susan Reece
22' Hurricane	I3	63122	Key Largo	Tie Down Key Largo	Alan Scott
16' Canoe Trailer		None	Gulf Coast	Tie Down BICY	Susan Reece
24' Sea Hunter	R1	63138	Flamingo	Nike Missile Hanger	Damon Rondeau
18' Sea Hunter	R2	63146	Flamingo	Nike Missile Hanger	Damon Rondeau
17' Mako	R3	54948	Flamingo	Nike Missile Hanger	Mark Parry
15' Boston	R4	59964	Key Largo	To Nike Hanger	Damon Rondeau
15' Guardian	R5	63159	Key Largo	Tie Down Key Largo	Damon Rondeau
18' Boston	R6	60214	Key Largo	Tie Down Key Largo	Damon Rondeau
19' Boston	R7	60179	DBC	Tie Down Key Largo	Vicki McGee-Absten
15' Guardian	R10	63062	Key Largo	Tie Down Key Largo	Vicki McGee-Absten
18' Sea Hunter	R11	63047	DBC	Nike Missile Hanger	Mark Parry
14' Alumacraft	R12	60153	DBC	Iori Building	Damon Rondeau
18' Maverick	R15	63026	Key Largo	Tie Down Key Largo	Vicki McGee-Absten
30' Houseboat and Pontoon	R17	60016	Flamingo	Tie Down Robertson	Damon Rondeau
16' Oquawka	R18	63153	DBC	Nike Missile Hanger	Jeff Kline
Airgator w/Jon Boat on top		7472/36237	DBC	Nike Missile Hanger	Damon Rondeau
USGS Jon Boat		N/A	DBC	Nike Missile Hanger	Damon Rondeau
26' SEA ARK	M1	60157	Gulf Coast	Tie Down BICY	William Wagner
16' Carolina	M2	60186	Gulf Coast	Tie Down BICY	William Wagner
24' Barge EC	M7	63071	Gulf Coast	Tie Down BICY	William Wagner
22' Boston	M4	42865	Flamingo	Nike Missile Hanger June 1st	Robert Neuman
24' Barge	M5	63046	Flamingo	Tie Down Robertson	Robert Neuman
25' Carolina	F11	63082	Flamingo	To Nike Hanger June 12th	Robert Neuman
17' Boston	F5	60010	Flamingo	To Nike Hanger June 12th	Robert Neuman
16' Carolina Skiff	TBD	TBD	Flamingo	To Nike Hanger June 12th	Robert Neuman

Airboats

12' Kline Airboat		59872	Iori Building	Iori Building	Damon Rondeau
12' DiamondBack		63085	Iori Building	Iori Building	Damon Rondeau
18' DiamondBack		63020	Iori Building	Iori Building	Damon Rondeau
12' Antique Arms		59971	Iori Building	Iori Building	Jeff Kline
12' Kline Airboat	Excess	54847	Chekida Glider Port	Chekika Glider Port	Cindy Morris
13' Floral City		60149	Tamiami	East Everglades	Cindy Morris
13' Floral City		60150	East Everglades	East Everglades	Cindy Morris
13' Floral City		60152	East Everglades	East Everglades	Cindy Morris
10' Diamondback		71681	East Everglades	East Everglades	Cindy Morris
12' Diamondback	Excess	59999	Al Mercado Diamond Back	?	Al Mercado/Cindy Morris
14' Diamondback		63076	Cocoa	Cocoa Beach	Al Mercado
12' Panther		36445	Pine Island Chekida Glider	PI Ranger's Garage	Al Mercado
12' Airboat		47901	Port	Chekika Glider Hanger	Hillary Cooley

Flamingo Maint Heavy Eqp

New Holland DA70 w/bushhog	60140	FLAM Maint Yard	Drive To The Wells	Robert Neuman
New Holland DA70 w/bushhog	60141	FLAM Maint Yard	Drive To The Wells	Robert Neuman
New Holland Backhoe	60142	FLAM Maint Yard	Drive To The Wells	Robert Neuman
Kubota M110 w/batwing	60020	FLAM Maint Yard	Drive To The Wells	Robert Neuman
Skid Steer loader	60139	FLAM Maint Yard	Drive To WWTP	Robert Neuman
Forklift	59970	FLAM Maint Yard	Drive To WWTP	Robert Neuman
Toro Motors	N/A	FLAM Maint Yard	Trailer To Pine Island Maint	Robert Neuman

Cargo & Travel Trailers

CRO Trainee Travel Trailer	60147	Gulf Coast	Tie Down BICY	Tom Iandmarino
CRO Trainee Travel Trailer	60148	Florida Bay	Tie Down Robertson	Dave Fowler
Maint SP Cargo Trailers (2)	None	Pine Island	Tie Down Robertson	Glenn Walker
PI Maint Recycle Trailers (4)	None	Pine Island	Tie Down Robertson	Glenn Walker
Generator Fuel Trailers (3)	None	Pine Island	PI Mantence Garage	Glenn Walker
Flam Canoe Trailers (2)	None	Nike Site	To Nike Hanger June 12th	Bob Showler
EE Canoe Trailer (1)	None	Robertson	To Nike Hanger June 12th	Allyson Gantt
S/V Recycle Trailer (1)	None	Shark Valley	Tie Down BICY	William Wagner
CRO MOCC Trailer (1)	None	Pine Island	To Nike Hanger	Bruce Gantt
PI Interp Cargo Trailer (1)	None	Pine Island	To Nike Hanger June 12th	Sabrina Diaz
PI Interp Bicycle Trailer (1)	None	Nike Hanger	To Nike Hanger June 12th	Sabrina Diaz
Concessions Travel Trailer	60232	East Ever OC	Tie Down East Ever OC	Tim Woody
Concessions Travel Trailer	60233	Pine Island Maint Pine Island Housing Trailer	Tie Down In Place	William Gordon
Concessions Travel Trailer	60234	Pad	Tie Down In Place	William Gordon
Concessions Travel Trailer	60235	Key Largo	Tie Down Key Largo	David Fowler

Iori Warehouse #181

Fire Cache, Superintendent's Office, Division of Administration, Division of Interpretation, and Division of Maintenance will utilize the Iori warehouse in the following manner:

The Fire Cache will continue to utilize one half of the structure for day to day activities and storage.

The remaining one half of the structure would be shared (one quarter each) by Division of Maintenance, Superintendent's Office, Division of Administration, and Division of Interpretation for storage purposes.

Maintenance Standards and Requirements

No burning allowed. No debris stockpiled in the area. Debris disposal will be handled at the specific job site and will include the cost of dumpsters.

No storage of obsolete or excess property. These items must be reported and delivered to property management for disposal.

Store materials within buildings, whenever feasible.

Designated employees will purge files and remove other expended materials yearly.

Items will be stored with like items in a neat and orderly fashion.

Ground Support Unit Plan

The Ground Support Unit will control and manage the use of all vehicles and heavy equipment during the incident. This Unit will also ensure that fueling and equipment servicing needs are met. The Ground Support Unit will be based at the Pine Island Maintenance office.

Check-in

All government vehicles from Flamingo, Pine Island, Headquarters, Research and Key Largo will be checked into the Equipment Site Manager for storage during the storm, except for emergency and special use vehicles, which will be used throughout the incident. Besides the emergency fleet, special use vehicles include the wrecker, stake trucks, certain utility trucks and carryalls/vans.

All vehicles and equipment will be topped off with fuel, oil and other fluids checked by the operator prior to check in. Vehicle keys will be given to the Equipment Site Manager.

Fueling

All gas tanks at Pine Island will be filled to near capacity. Keys for the fuel pumps will be controlled by Ground Support. In the event of a power failure, the tanks are on-line with back up generator.

Privately-Owned Vehicles (POVs)

During Hurricane Preparations Periods POV's that will remain through the storm will be parked at Pine Island in the vicinity of the dormitory in open areas. Name of POV owner, license plate number and make of vehicle will be turned in at Ground Support immediately after parking. No personnel or pets will be allowed to remain in vehicles.

During the General Hurricane Season park residents who would be sheltered in Pine Island during a storm who are on leave/training/details may park POV's and boats in the parking areas by the Pine Island Chickee. Since this is not secured area with limited access, contact the Ground Support Unit Leader in advance to assure the location will be appropriate. It would be advisable to leave a set of keys with an in-park resident "friend" who might move your vehicle to another designated area during the Hurricane Preparation/Recovery Periods.

Emergency Vehicles

At the beginning of the Final Hurricane Preparation Period the **Flamingo Ambulance** will be stationed at Park Headquarters for use by the Medical Unit Staff in the event of a medical emergency. The **Flamingo Structural Fire Engine** will be in an enclosed bay at the PI Ranger Station. If these vehicles are needed in emergencies contact DISPATCH who will notify PI Branch Director/Ground Support Unit Leader.

Flamingo Equipment

Flamingo Maintenance will move all Heavy Equipment (Kubota Tractor and 580K Case Backhoe) to the Mahogany Hammock parking lot to be pre staged for recovery efforts.

All other medium and small mowers and tractors will be taken to the Pine Island Maintenance yard.

Roadside Service/Recovery

The Park Wrecker will be staged with Ground Support at Pine Island and will be dispatched by calling Ground Support.

Emergency Generators

Maintenance and Operation of emergency generators is the sole responsibility of Ground Support/Pine Island Maintenance. This includes all Administrative Buildings and Housing.

Missile Site

Once the Missile Site is secured, the Missile Site Manager will turn in the inventory of property/equipment stored there to the Ground Support Unit Leader for maintaining a consolidated inventory of all available equipment.

Supply Unit

The Supply Unit is headed by the Supply Unit Leader. The Supply Unit is located at the Pine Island Supply Building and will be the storage area and issuance site for property and equipment that may be needed during Operational Periods 2-5 and beyond. It is set up to assure accessibility and accountability of that property both during the preparation and post hurricane phases.

All branches except Gulf Coast will use the Supply Unit as a cache of emergency supplies located at Pine Island. The Fire Cache at the Robertsons Building maintains items such as Flight Suits and Helmets; most of the inventory of the Fire "50 person" cache, drinks and medical supplies, chain saw kits and batteries. The Gulf Coast Branch will maintain its own cache of emergency supplies and equipment in its own facilities, but may resource order equipment/supplies through the Supply Unit.

The Supply Unit Leader will issue a DI-105 for items with Property Numbers issued from the Supply Unit. The DI-105 will include the name of the Supply Unit Leader, Name of the person turning in or checking out the property, name of the property Liaison officer who is responsible for the property, date and time of turn-in and current condition. The Supply Unit Leader will maintain an inventory of all property as well as maintain an accountable issuance system for property re-issued.

When supplies are needed, a General Message is filled out from the requesting party and sent to Logistics for processing with a number for tracking purposes. Purchases that do not come through the Logistics Branch will not be paid for by the Incident - no exceptions. The Supply Unit will notify the requestor when supplies/materials are available for pickup.

During the Final Hurricane Preparation Period the Logistics Section will prepare a plan for re-issuance or utilization of property/equipment based upon the expected impacts of the storm. If little or no impacts are expected, property may simply be re-issued, through the Supply Unit Leader, back to the people of origin. If there are severe impacts expected, supplies and equipment may need to be issued out to others to meet resource needs of post hurricane operations. In the event that a different Incident Management Team is sent in after the storm to take over management of the incident, the Logistics Section Chief will assure that all inventories and property receipts are properly transferred to relief resources of the new team.

Logistics Section – Medical Plans

Medical Plan Gulf Coast District	1. Incident Name General Hurricane Season	2. Date Prepared May 2014	3. Time Prepared	4. Operational Period				
5. Incident Medical Aid Station								
Medical Aid Stations	Location			Paramedics Yes No				
Park Headquarters	Chief Ranger Office (Park Headquarters, Pine Island) 40001 State Route 9336, Homestead FL			X				
6. Transportation								
A. Ambulance Services								
Name	Address	Phone	Paramedics Yes No					
Collier County Sheriff Dispatch	3301 Tamiami Trail East, Building J	239-774-4434	X					
Collier County EMS	8075 Lely Cultural Parkway, Suite: #267 Naples, FL 34113	305-718-6444	X					
			X					
B. Incident Ambulances								
Name	Location			Paramedics Yes No				
Collier EMS	Everglades City or Port of the Islands			X				
7. Hospitals								
Name	Address	Travel Time		Phone	Helipad		Burn Center	
		Air	Grnd		Yes	No	Yes	No
Naples Community Hospital	350 7 th Street North Naples, FL	15 min	50 min	239 436 5000	X			X
Physicians Regional Hospital	8300 Collier Blvd, Naples FL	15 min	35 min	239-354-6000	X			X
Jackson Memorial Hospital	1611 NW 12 th Avenue Miami, FL	20 min	75 min	305 585 1111	X		X	
Jackson South Community Hospital	9333 SW 152 nd Street, Miami FL	NA	40 min	305 251 2500		X		X
Baptist Hospital	8900 Kendall Drive Miami, FL	35 min	90 min	305-596-1960	X			X
8. Medical Emergency Procedures								
- Contact EVER dispatch (radio call number 784) during medical emergencies, EMT on scene and/or medical unit leader to determine appropriate transportation. - Notify injured person's supervisor - Prepare necessary documentation								
9. Prepared by (Medical Unit Leader) Tom Iandiamario					10. Reviewed by (Safety Officer)			

Medical Plan East Everglades District	1. Incident Name General Hurricane Season	2. Date Prepared May 2014	3. Time Prepared	4. Operational Period				
5. Incident Medical Aid Station								
Medical Aid Stations	Location			Paramedics Yes No				
6. Transportation								
A. Ambulance Services								
Name	Address	Phone	Paramedics Yes No					
Miami-Dade Fire/Rescue	Station 60, 17605 SW 248 th Street Additional stations throughout Dade county	EVER dispatch 305-242-7740 Ground rescue 9-1-1 Air rescue 305-506-8576	X					
American Medical Response (AMR)	7255 NW 19 th Street, Miami, FL 33126	305-718-6444	X					
B. Incident Ambulances								
Name	Location			Paramedics Yes No				
7. Hospitals								
Name	Address	Travel Time		Phone	Helipad		Burn Center	
		Air	Grnd		Yes	No	Yes	No
West Kendall Baptist	.9555 SW 162 nd Ave Miami, FL 33196	10 min	30 min	(786) 467-2000	X			X
Baptist Hospital	8900 Kendall Drive Miami, FL	15 min	45 min	305 596 1960	X			X
Homestead Hospital	975 Baptist Way Homestead, FL 33033 Intersection of Campbell Dr. & SW 147 th Ave	15 min	45 min	786 243 8000	X			
Jackson South Community Hospital	9333 SW 152 nd Street, Miami FL	NA	35 min	305 251 2500		X		X
Jackson Memorial Hospital	1611 NW 12 th Avenue Miami, FL	15 min	60 min	305 585 1111	X		X	
8. Medical Emergency Procedures								
- Contact EVER dispatch (radio call number 784) during medical emergencies, EMT on scene and/or medical unit leader to determine appropriate transportaion - Notify injured person's supervisor - Prepare necessary documentation								
9. Prepared by (Medical Unit Leader)					10. Reviewed by (Safety Officer)			

Pine Island / Maintenance / Reasearch MEDICAL PLAN	1. Incident Name	2. Date Prepared	3. Time Prepared	4. Operational Period							
5. Incident Medical Aid Station											
Medical Aid Stations		Location			Paramedics Yes No						
On-site		Engines / Patrol Vehicle will have crew first aid kits.				x					
6. Ground Ambulances											
Name		Address		Phone		Paramedics Yes No					
Miami Dade Fire Rescue		STATION 16 NW 2 nd Street, Homestead, FL		Everglades Dispatch 784		X					
Miami Dade Fire Rescue – Venom Response Team		MIAMI DADE COUNTY		786-336-6600		X					
7. Air Ambulance Services											
Name		Address		Phone		Paramedics Yes No					
Miami Dade Air Rescue South		TAMIAMI AIRPORT		Everglades Dispatch 784		X					
8. Fireline Resources											
Name		Location			Paramedics Yes No						
Assigned Engines		Engines have crew first aid kits.				X					
Assigned / Available LE Resources		Flamingo / Pine Island				X					
9. Hospitals											
Name		Address		Travel Time Air Ground		Phone		Helipad Yes No		Trama/Burn	
Homestead Hospital		975 Baptist Way Homestead, FL. 33033 25°28'47.17"N 80°25'48.99"W		10 min 60 min		786-243-8000		X		NO	
West Kendall Baptist Hospital		9555 Southwest 162nd Court Miami, FL 33196 25°40'41.29"N 80°27'21.21"W		15 min 1.5 hours		786-467-2000		X		NO	
Baptist Hospital		8900 North Kendall Drive Miami, FL 33176 25°41'3.98"N 80°20'18.97"W		20 min 1.5 hours		786-596-1960		X		NO	
Kendall Regional		11750 SW 40 Street Miami, FL 33175 25°43'50.62"N 80°23'10.55"W		30 min 2 hours		305-223-3000		X		2 NO	
Jackson Memorial		1611 NW 12 th Avenue Miami, FL 33136 25°47'31.39"N 80°12'47.57"W		45 min 2.5 hours		305-585-1111		X		1 YES	
10. Medical Emergency Procedures											
<p>Upon occurrence of a “MAJOR” medical or accident involving significant injury on the fireline, the closest <i>Group Supervisor</i> should respond directly to the scene to take control of the situation and direct necessary actions. If the <i>Group Supervisor</i> is unavailable, the <i>nearest fireline Supervisor</i> needs to take charge.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clear all radio traffic on incident “Command Channel” – Use command freq to co-ordinate response <input type="checkbox"/> Obtain and facilitate nearest EMT’s to the scene. <input type="checkbox"/> If additional medical assistance or transportation is necessary contact EVER COMM Center (784). <input type="checkbox"/> Provide 784 with Nature of Problem <input type="checkbox"/> # Injured <input type="checkbox"/> Condition & Vitals <input type="checkbox"/> Location (GPS coordinates). <input type="checkbox"/> Coordinate and facilitate appropriate transportation for injured, EMT will remain in charge of patient(s) <input type="checkbox"/> Remove all unnecessary personnel from the accident scene – notify Burn Boss. <input type="checkbox"/> Secure the scene area and identify witnesses, keep a log <p><u>Dan Beard Helispot available for medivac operations:</u> N 25’ 23.16 W 80’ 41.00</p>											

Medical Plan Florida Bay District	1. Incident Name General Hurricane Season	2. Date Prepared May 2014	3. Time Prepared	4. Operational Period				
5. Incident Medical Aid Station								
Medical Aid Stations	Location			Paramedics Yes No				
Park Headquarters	Chief Ranger Office (Park Headquarters, Pine Island) 40001 State Route 9336, Homestead FL			X				
6. Transportation								
A. Ambulance Services								
Name	Address	Phone	Paramedics Yes No					
Miami-Dade Fire/Rescue	Station 16, 325 NW 2 nd Street, Homestead, FL 33034 Additional stations throughout Dade county	EVER dispatch 305-242-7740 Ground rescue 9-1-1 Air rescue 305-596-8576	X					
Key Largo Volunteer Ambulance	98700 O/S Hwy, Key Largo, FL 33037	FHP-EMS, 305-451-2766	X					
American Medical Response	7255 NW 19 th Street, Miami, FL 33126	305-718-6444	X					
LifeNet Air Med	Key West	1-800-806-1916 or 911	X					
Monroe City Trauma Star	Marathon	305-289-8728 or 911	X					
B. Incident Ambulances								
Name	Location			Paramedics Yes No				
NPS Flamingo Ambulance	Flamingo During evacuation: Park Headquarters (Pine Island) Rear Parking Lot			X				
7. Hospitals								
Name	Address	Travel Time		Phone	Helipad		Burn Center	
		Air	Grnd		Yes	No	Yes	No
Homestead Hospital	975 Baptist Way Homestead, FL 33033 Intersection of Campbell Dr. & SW 147 th Ave.	20 min	35 min	786 243 8000	X			X
Baptist Hospital	8900 Kendall Drive Miami, FL	20 min	60 min	305 596 1960	X			X
Jackson Memorial Hospital	1611 NW 12 th Avenue Miami, FL	20 min	75 min	305 585 1111	X		X	
Jackson South Community	9333 SW 152 nd Street, Miami FL	NA	60 min	305 251 2500		X		X
Fisherman's Hospital	Mile Marker 48.7, Marathon, FL	20 min	60 min	305 743 5533	X			X
Naples Community Hospital	350 7 th Street North Naples, FL	45 min	180 min	239 436 5000	X			X
Mariners Hospital	Mile Marker 91.5, Tavernier, FL	5 min	15 min	305 434 3000	X			X
Lower Keys Med Center	5900 College Rd, Key West, FL 33040	30 min	120 min	305-294-5531	X			X
8. Medical Emergency Procedures								
<p>- Contact EVER dispatch (radio call number 784) during medical emergencies, EMT on scene and/or medical unit leader to determine appropriate transportation.</p> <p>- Medical Unit located in Chief Ranger Office, Park Headquarters (Pine Island)- Supplies and equipment staged in Chief Ranger Office- Flamingo Ambulance staged in Park Headquarters (Pine Island) rear parking lot- Notify injured person's supervisor</p> <p>- Prepare necessary documentation- Closest Ambulance service, Key Largo Ambulance Corps across US1.- Closest Hospital, Mariners in Tavernier.</p>								
9. Prepared by (Medical Unit Leader)					10. Reviewed by (Safety Officer)			
Tom Iandiamario					Robert Trincado			

Medical Plan Flamingo District	1. Incident Name General Hurricane Season	2. Date Prepared May 2014	3. Time Prepared	4. Operational Period
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5. Incident Medical Aid Station				
Medical Aid Stations	Location	Paramedics		
		Yes	No	
Park Headquarters	Chief Ranger Office (Park Headquarters, Pine Island) 40001 State Route 9336, Homestead FL		X	

6. Transportation				
A. Ambulance Services				
Name	Address	Phone	Paramedics	
			Yes	No
Miami-Dade Fire/Rescue	Station 16, 325 NW 2 nd Street, Homestead, FL 33034 Additional stations throughout Dade county	EVER dispatch 305-242-7740 Ground rescue 9-1-1 Air medical 305-506-8576	X	
Collier County Sheriff Dispatch	3301 Tamiami Trail East, Building J	Police-Fire-EMS	X	
American Medical Response	7255 NW 19 th Street, Miami, FL 33126	305-718-6444	X	
LifeNet Air Med	Key West	1-800-806-1916 or 911	X	
Monroe City Trauma Star	Marathon	305-289-8728 or 911	X	
B. Incident Ambulances				
Name	Location	Paramedics		
		Yes	No	
NPS Flamingo Ambulance	Flamingo During evacuation: Park Headquarters (Pine Island) Rear Parking Lot		X	

7. Hospitals								
Name	Address	Travel Time		Phone	Helipad		Burn Center	
		Air	Grnd		Yes	No	Yes	No
Homestead Hospital	975 Baptist Way Homestead, FL 33033 Intersection of Campbell Dr. & SW 147 th Ave.	15 min	20 min	786 243 8000	X			X
Baptist Hospital	8900 Kendall Drive, Kendall, FL 33176	15 min	60 min	786 596 1960	X			X
Jackson Memorial Hospital	1611 NW 12 th Avenue Miami, FL 33136	20 min	75 min	305 585 1111	X		X	
Jackson South Community Hospital	9333 SW 152 nd Street, Miami FL 33157	NA	40 min	305 251 2500		X		X
Fisherman's Hospital	3301 Overseas Hwy Marathon, FL 33050	15 min	60 min	305 743 5533	X			X
Naples Community Hospital	350 7 th Street North Naples, FL 34102	20 min	40 min	239 436 5000	X			X
Mariners Hospital	Mile Marker 91.5, Tavernier, FL	20 min	90 min	305 434 3000	X			X
Lower Keys Med Center	5900 College Rd, Key West, FL 33040	30 min		305-294-5531	X			X

8. Medical Emergency Procedures	
- Contact EVER dispatch (radio call number 784) during medical emergencies, EMT on scene and/or medical unit leader to determine appropriate transportation. - Medical Unit located in Chief Ranger Office, Park Headquarters (Pine Island) - Supplies and equipment staged in Chief Ranger Office - Flamingo Ambulance staged in Park Headquarters (Pine Island) rear parking lot	
9. Prepared by (Medical Unit Leader) Tom Iandiamario	10. Reviewed by (Safety Officer) Robert Trincado

INCIDENT RADIO COMMUNICATIONS PLAN				1. INCIDENT NAME 2014 Hurricane Season	2. DATE/TIME PREPARED April 2011	3. OPERATIONAL PERIOD (DATE/TIME)
4. BASIC RADIO CHANNEL UTILIZATION						
BRANCH/SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/TONE	ASSIGNMENT	REMARKS	
Everglades NP Command Net	1 Local/Simplex	Command	TX 172.525 RX (293) 172.525 (293)	All Zones (Everglades NP)	Incident Communication	
Everglades NP Command Net	2 Repeater	Command Repeater	TX 171.625 (555) RX 172.525 (555)	LPK Repeater	Incident Communication	
Everglades NP Tactical Net	3 Repeater	Command Repeater	TX 171.625 (4F9) RX 172.525 (555)	Flamingo Repeater	Incident Communication	
Everglades NP Tactical Net	4 Repeater	Command Repeater	TX 171.625 (4A4) RX 172.525 (555)	Key Largo Repeater	Incident Communication	
Everglades NP Tactical Net	5 Repeater	Command Repeater	TX 171.625(5B6) RX 172.525 (555)	Pinecrest Repeater	Incident Communication	
Everglades NP Command Net	6 Repeater	Command Repeater	TX 171.625 (61F) RX 172.525 (555)	Gulf Coast Repeater	Incident Communication	
Everglades NP Command Net	7 Repeater	Command Repeater	TX 171.625(656) RX 172.525 (555)	East EVER Repeater	Incident Communication	
Everglades NP Local Net	8 Simplex	Fire Mgt. Local	TX 171.775 (293) RX 177.775 (293)		Fire and Aviation Mgt.	
Everglades NP	9 Repeater	Fire Mgt. Repeater	TX 171.775(61F) RX 177.775 (61F)	LPK Fire Repeater	Fire and Aviation Mgt.	
Everglades NP	10 Repeater	Fire Mgt. Repeater	TX 171.775(4F9) RX 177.775 (61F)	East EVER Fire Repeater	Fire and Aviation Mgt.	
205 ICS 9/86	5. PREPARED BY (COMMUNICATIONS UNIT) John Diamond					

INCIDENT RADIO COMMUNICATIONS PLAN				1. INCIDENT NAME 2014 Hurricane Season	2. DATE PREPARED April 2011	3. TIME PREPARED 1500
4. BASIC RADIO CHANNEL UTILIZATION						
BRANCH/SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/T ONE	ASSIGNMENT	REMARKS	
Dry Tortugas NP Simplex	Channel 4	Local use	TX 171.2625 NAC293 RX 171.2625 NAC293	Simplex DRTO	Incident communication	
Dry Tortugas NP Local Repeater	Channel 5	Local Repeater	TX 168.225 NAC555 RX 171.2625 CG555	DRTO Local Repeater	Incident communication	
Dry Tortugas NP Dispatch	Channel 6	EVER Dispatch	TX 168.2625 NAC61F RX 171.2625 NAC4A4	DRTO Dispatch	Incident communication	
Marine	81A	Fed. Gov. Environ. Operat.	TX 157.075MHz RX 157.075	Fed. Gov. Environ. Operat.	For interagency use on incident marine activites	
Marine	82A		TX 157.125 RX 157.125		For interagency use on incident marine activites	
Marine	83A		TX 157.175 RX 157.175		For interagency use on incident marine activites	
Marine	71		TX 156.575 RX 156.575		For interagency use on incident marine activites	
Marine	72		TX 156.625 RX 156.625		For interagency use on incident marine activites	
205 ICS 9/86		5. PREPARED BY (COMMUNICATIONS UNIT) Tim Moore				

**Phone List
Hurricane Incident Command Post**

Incident Command Post	305-242-7758
Fax for Crew Time Reports	305-242-7716
Fax for Resource Orders	305-242-7716
Incident Commander	305-242-7007
Public Information Officer	305-297-0026 (cell)
Operations – EVER	305-242-7758
Operations – DRTO	305-224-4222 Administration office 305-224-4256 Maintenance office 305-224-4255 LE office
Logistics & Plans	305-242-7008
National Weather Service	305-229-4523
Dispatch (emergencies)	305-242-7740

For recorded message updates during and after the hurricane:

Everglades/DRTO Employee Hotline	305-242-7719
Alternate Hotline number	305-224-4280
NPS Emergency Coordination Center	1-800-901-3880 1-202-351-6185

Finance Section

Guidelines for Payroll and Purchasing during All-Risk ICS Events

From this date forward, whenever the Everglades National Park Hurricane Plan is implemented, or whenever an Incident Team is activated, **the following guidelines must be followed to ensure the proper filing and processing of payroll paperwork and purchase requests.**

Payroll:

On small, geographically restricted incidents, **all Crew Time Reports (SF-261) must be signed and approved by the Incident Commander (IC).**

On **larger incidents**, more than 30 employees or greater than two geographical areas, the SF-261 may be signed and approved by the appropriate Branch Director and/or Section Chief. **(Branch Directors' time must be approved by the appropriate Section Chief or the IC; Section Chiefs' time must be approved by the IC). NO EXCEPTIONS!**

If the Finance Section receives any SF-261's without the appropriate signature, they will be returned to the issuing person without being processed. The employee(s) on this form will not be given credit for any premium hours until the Finance Section has processed the SF-261.

It is the responsibility of the Section Chiefs and the IC to assure that SF-261's are completed which list all employees at the beginning of each operational period. This will facilitate the processing of any overtime hours, and will allow the Plans Section and Incident Command Team (ICT) to account for all assigned employees.

Once hours have been approved and processed through the Finance Section, the time reports will be forwarded to either the divisional timekeepers, if operations have returned to normal, or to the time unit recorders for payroll entry in FPPS.

Travel:

Required Travel Authorization Prior to Departure

A travel authorization is required only for those employees whose assignment is to move the Ft. Jefferson Boat to a safe harbor. A Travel Authorization will be issued no more than three days prior to departure.

AUTHORIZED

- Lodging
- Meals or incidentals'
- Rental Car
- Taxi Fare

NOT AUTHORIZED

- POV Parking
- POV Mileage

A Travel Authorization is not required for the following:

Government Housing evacuees are not required to have a travel authorization in spite of where they choose to take shelter. If they choose to take shelter in a government provided hotel/motel, the following is applicable.

Authorized – Hotel/Motel

The Everglades Contracting Officer pays for the hotel accommodations for Government Housing Occupants evacuees. The logistics section chief will establish blocks of rooms at various hotels and locations to accommodate the evacuees. Employees ARE NOT authorized to pay for motel rooms on their government credit card. If an employee chooses not to stay at one of the hotels that is established by the logistics section chief, then the employee is responsible for the cost of their own accommodations.

Established Shelters i.e. HQ Building/hotel/motel:

Not Authorized

- POV Parking
- POV Mileage
- Meals or incidentals'

Point of contact for travel assistance: Motor Vehicle Ft. Jefferson Personnel ONLY

- First Point of Contact - Park Travel Coordinator, Sally Hendricks (305-242-7736)
- Secondary Point of Contact: Julie Abreu (305-242-7750)

Purchasing:

Requests for purchases must be submitted by General Message to the Logistics Branch. The Incident Commander must sign and approve all purchases. The purchasing limit will be established on the Delegation of Authority.

The Logistics Branch Supply Unit will make approved purchases less than \$3000 by Government Purchase Card (GPC).. Vendors should have a tax ID or DUNS number for purchases over \$2500.

All purchase requests over \$3000 must be submitted to the technical specialist – requisitioner via email. The requisitioner will input purchase requests into the Financial and Business Management System (FBMS) . Purchases in excess of \$3000 must be pre-approved and made by the CO.

Purchase requests should be submitted in writing or email via General Message through the Logistics Branch. Emergency requests, approved by the IC may be accepted by the CO via telephone on a case-by-case basis.

The EVER Contracting Officer, serving on the team as the Procurement Unit Leader, is Deryck Cruz and may be reached at (305) 242-7796 or by email Deryck _Cruz@nps.gov.

Public Information Officer Checklist

General Hurricane Season

- Review the Hurricane Plan
- Acquire updated list of media contacts from park PIO
- Forward current digital PIO files to Deputy PIO
- Ready an ample supply of Employee Emergency Hotline cards for distribution to staff.
- Arrange access to the Incident Command Post (Chief Ranger's conference room).
- Review operational status of all IC communications equipment and become familiar with their operation.
- Dispense information to park employees regarding the general activities of the ICT.
- Prepare three issues of Hurricane Line for distribution to all park staff during the season.

Preliminary Hurricane Preparation 72-48 hours before Landfall

- Attend Command & General Staff meetings, morning briefings and planning meetings. Communicate information to all employees, volunteers, through e-mail. Request supervisors to provide to anyone without email access.
- Initiate the use of temporary information boards in VCs park-wide to inform current visitors of park/storm status.
- Begin drawing up external News Releases reflecting anticipated closures of park areas.
- Coordinate the update of external outgoing messages on visitor information phone line(s) (ex. 7700) to reflect operational status of park.
- Initiate use of the park's "EVER/DRTO Emergency Hotline" with status of park operations.
- Update IMT social media sites.
- Send out park-wide memo on behalf of IC alerting employees to details of the next plan period.
- Send out a memo to NPS Morning Report, Regional and Washington Public Affairs personnel on behalf of the IC alerting them to park operations

Advanced Hurricane Preparation 48-24 hours before Landfall

- Attend Command & General Staff meetings, morning briefings and planning meetings. Communicate information to all employees, volunteers, through e-mail.
- Continue the use of temporary information boards in VCs park-wide to inform visitors of park/storm status.
- Send out News Releases reflecting closures of park areas.
- Coordinate the update of external outgoing phone messages to reflect operational status of park.
- Update the park's "EVER/DRTO Emergency Hotline" with status of park operations.
- Update IMT social media sites.
- Send out park-wide memo on behalf of the IC alerting employees to details of the next plan period.
- Send out a memo to NPS Morning Report, Regional and Washington Public Affairs personnel on behalf of the IC alerting them to park operations
- Assist in final preparations of the Incident Command Post (ICP) & HQ for landfall.

Final Hurricane Prep 24-0 hrs BLF

- Attend Command & General Staff meetings, morning briefings and planning meetings. Communicate information to all employees, volunteers, cooperators and concessions through e-mail.
- Prepare temporary information boards in VCs park-wide to inform visitors of park/storm aftermath.

- Send out final News Releases reflecting full closure of the park.
- Coordinate the update of external outgoing messages on visitor information phone line(s) (ex. 7700) to reflect operational status of park.
- Update the park's "EVER/DRTO Emergency Hotline" with status of park operations, and requirements for employee check-in.
- Update IMT social media sites
- Send out a memo to NPS Morning Report, Regional and Washington Public Affairs personnel on behalf of the IC alerting them to park operations.

Post Hurricane Recovery

- Attend Command & General Staff meetings, morning briefings and planning meetings. Communicate information to all employees, volunteers, cooperators and concessions through e-mail.
- Update temporary information boards in VCs park-wide to inform visitors of park/storm aftermath and recovery.
- Coordinate the documentation of aftermath through representative photos and/or video.
- Prepare news releases detailing the extent of park damage, status of park resources, and recovery efforts for media outlets.
- Coordinate the update of external outgoing messages on visitor information phone line(s) (ex. 7700) to reflect operational status of park.
- Utilize the park's "EVER/DRTO Emergency Hotline" to compile the status of all employees.
- Update IMT social media sites
- Field media requests for information as appropriate.
- Send out a memo to NPS Morning Report, Regional and Washington Public Affairs personnel on behalf of the IC alerting them to storm aftermath and park operations.

Hurricane Breakdown

- Attend Command & General Staff meetings, morning briefings and planning meetings. Communicate information to all employees, volunteers, cooperators and concessions through e-mail.
- Update temporary information boards in VCs park-wide to inform visitors of park/storm status.
- Prepare News Releases regarding the opening visitor facilities.
- Send out a memo to NPS Morning Report, Regional, and Washington Public Affairs personnel on behalf of the IC alerting them to the status of park operations.

Liaison Officer Checklist

General Hurricane Season

- Make and update contacts with NPS and other agencies.
- Obtain their Hurricane plans.
- Attend appropriate meetings.
- Confirm appointment of liaisons for concessions and contractors.

Hurricane Preparation Periods

- Attend planning meetings, keep Unit Log ICS-214.
- Start initiating contacts with agencies upon Incident Commanders approval and brief them status of operations.
 - Establish a liaison with the Miccosukee Police Department during each Operational Period to keep them abreast of NE district operations.
 - Establish a liaison with Concessionaires within the park and keep them abreast of operations and park closures.
 - During final Hurricane Preps maintain contact with BICY Rangers to ensure that they do not need any further assistance from NE district staff.
- Update contacts once per operational period.
- Brief agency representative, if assigned.
- Brief concession and contractor liaisons.
- Obtain a vehicle; cell phone and portable radio.
- In the event of a full shut down of dispatch, notify other south Florida parks by the end of Preliminary Hurricane Prep Ops Period 1 (72-48 hours BLF) in order to provide sufficient time to make other communications arrangements.

Liaison Contacts

Your job is to make and keep these contacts. Once the team is activated, all outside contacts will flow through you to/from the Incident Commander or Agency Administrator. It is very important that you keep currently informed of all park and other agency plans and actions. An agency representative may be assigned to work for you and be located in one of the County Emergency Operations Centers. You need to work closely with the Information Officer in preparation of written reports to be sent to SERO and WASO. Always check with the IC prior to release of information or resource requests to/from other agencies.

Biscayne National Park.

Big Cypress National Preserve.

Dry Tortugas National Park.

Northwest District, (liaison for Collier County)

Florida National Park and Monument Association (FNPMA)

Dade County Emergency Operations Office, Fire Department.

Monroe County Emergency Operations Office.

Southern Area Coordination Center

FEMA Representatives at County Emergency Operations Centers

- Dade County

- Collier County
- Monroe County

Other Gulf/Florida Interior areas at discretion of Incident Commander.

Post Hurricane Recovery Period

In the event a Type I or II All Risk Team is assigned, you will probably be assigned as a Deputy to ensure a smooth transition or act as a local advisor.

Contact List (See Appendix I)

Appendices

Appendix A	Employee Responsibilities
Appendix B	Personnel Policy
Appendix C	Delegation of Authority Letter
Appendix D	Transition Plan
Appendix E	Resource Planning Grid
Appendix F	Employee Emergency Contact Information Form
Appendix G.....	Personal Property Storage Request Memo
Appendix H.....	Checklist for Computer Users and IT Task Force
Appendix I.....	Liaison Contact List
Appendix J.....	Resource Tracking – Branch Personnel Lists
	(Includes Personal Cell #'s, DO NOT DISTRIBUTE)

Appendix A: Employee Responsibilities

Depending upon the severity and path of the storm, communications with the park may be difficult.

General Hurricane Season

- Update your Emergency Contact Information with your timekeeper and Employee Express.
- Be aware of changes to your information and update as needed throughout the season.
- Begin your own preparations at your work location and at home, so you have less to do when a storm arises.
- Read the Hurricane Plan.
- Know your role in the Hurricane Incident Management Team.

Preliminary & Advanced Hurricane Preparation

- Once notified to do so, report to your incident supervisor and follow their directions.
- Notify your regular-work and your incident supervisor of your plans during the storm.
- Also notify supervisors of any special needs, family considerations, etc.

Post-Hurricane

1. If you have access to a working telephone, **contact the park using the**
Employee EVER/DRTO Emergency Hotline **305-242-7719**
Alternate number **305-224-4280**
 - The hotline will have a recording asking for your information, informing you of the park's status, and providing information about post-storm activities and returning to work. Please leave your information and needs in a message after the recording.
 - The park and Incident Team need to:
 - 1) assess the well-being of you and your family
 - 2) provide emergency relief to you and your family if needed
 - 3) find out when you may be able to return to work
 - 4) obtain work-related information from you
 - You may also be called by a park employee to verify your status.
 - **If you cannot get through to the Employee EVER/DRTO Emergency Hotline, please call:**

NPS Emergency Coordination Center	1-800-901-3880
Alternate Line:	1-202-351-6185
Last Resort Number: Park Dispatch	305-242-7740
 2. Follow the directions on the Employee EVER/DRTO Emergency Hotline about returning to work.
- Other options if you cannot contact the park by telephone:**
- If you have access to a park radio, call Park Dispatch (784) on either your area repeater or local channel. Be aware that repeaters may be out of service after the storm and local transmissions may be necessary.

- Report in person to Park HQ (or normal duty station for remote areas).
- Listen for "official bulletins" regarding South Florida National Park Service employees on AM radio stations. These official bulletins may provide special emergency phone numbers.

Appendix B Personnel Policy and Information

Because of the potential threat to the park resources during hurricane watches and warnings, a personnel policy is included in this plan to define the responsibilities and expectations of our employees. Management has a responsibility to take all necessary measures to protect and/or minimize the damage to the resources in the park. Therefore, employees are expected to report to duty on workdays or when called back for overtime unless leave (annual or leave without pay) has been requested prior to the absence and granted by the employee's supervisor. Supervisors may liberally grant leave at the 72-hour mark unless individual skills are needed to minimize the impact upon the resources. If employees are needed to assist with implementing this plan, leave and training maybe canceled. If training is canceled, supervisors will notify the employee. The employee will be responsible for contacting the necessary personnel so the training and related travel arrangements can be cancelled.

At the 24-hour mark or anytime thereafter, the Superintendent (or Incident Commander in his stead) may release employees on administrative leave in order to attend to personal and/or community hurricane preparations. This administrative leave policy extends during the time that the hurricane hits and the immediate aftermath. However, nothing in this policy implies or otherwise grants administrative leave to employees without specific authorization by the Superintendent or his designee. Those employees who have been granted leave will remain in a leave status until such time as the Superintendent determines, if he does so, that the leave should be converted to administrative leave due to disastrous conditions or other special circumstances, or until the employee returns to work.

Presidential or other higher-level directives may supersede this policy for leave.

Overtime will be paid to employees who are called back to work by their supervisors (or under the Incident Command System) either before, during, or after a hurricane when such work is outside their regular tour of duty. Local hires (ADs) may be hired to assist with the preparation or cleanup efforts when the Everglades' staff is insufficient to perform the necessary functions to protect, secure, clean up, or stabilize the resources. Paid employees of Everglades National Park or other Federal employees called out under the Incident Command System will be utilized first before any AD's are hired. AD's are only to supplement employees already in the workforce.

During the monthly branch meetings, branch leaders are to inquire as to individual intents to remain in the area, how much time is needed to prepare personal residences, etc. should a hurricane watch/warning be issued. This information is to assist the branch leaders in assessing personnel resources, which may be available during the preparation and aftermath phases.

Appendix C Delegation of Authority

Memo from Superintendent to Incident Commander giving authority to make specific decisions about park resources and personnel with respect to the hurricane incident. The memo here is an example that has been used in the past for hurricane incidents. This memo can be tailored to the specific needs of the park, the incident command team, and/or the park superintendent.



United States Department of the Interior
NATIONAL PARK SERVICE



In Reply Refer to:

A7627

Date: _____

To: _____, Incident Commander, Everglades and Dry Tortugas National Parks
Hurricane Incident Management Team

From: _____, Superintendent, Everglades and Dry Tortugas National Parks

Subject: Delegation of Authority, Everglades and Dry Tortugas National Parks Hurricane
Incident Management Team

On (date) at (time) hours, (storm name), predicted to become a hurricane, is threatening to strike South Florida. In accordance with the Everglades and Dry Tortugas National Parks Hurricane Plan, I am delegating authority to you to carry out that Plan.

As Incident Commander, you are hereby delegated full responsibility and authority for the management of hurricane preparations as outlined in the approved Everglades and Dry Tortugas National Parks Hurricane Management Plan. To that end I authorize and direct you to do the following:

Conduct the operations outlined in the Hurricane Plan for all Operational Periods.

- Close all or parts of the parks as needed to provide visitor safety and resource protection.
- In accordance with the approved hurricane plan, you may authorize overtime and premium pay. Work periods for employees should not exceed 12 hours, should be scheduled during daylight hours as much as possible and will follow the NPS Official Travel Driving Policy if working under official travel status.
- Maintain employee timekeeping and document employee claims that arise from this incident.
- Provide for the safety and well-being of employees involved in preparation work by providing food and beverages as deemed appropriate for the operational period.
- Hire casual employees (AD's) when deemed necessary and beneficial to the interests of the Government and assure they are compensated in accordance with agency policy for the types of work they perform.
- Utilize government-owned property throughout the park for the purposes of this operation, and make determinations based on the approved hurricane plan as to where vehicles, equipment and supplies may be cached or stored for their immediate use during and after the storm.
- Establish a system of accountability for such property and maintain that accountability until relieved of the responsibilities of this delegation.

- Over and above personnel costs you may expend funds of up to \$3000.00 without further approval. Any expenditure above that level will require my permission.
- Handle all hurricane-related dealings with the press, including authorizing media releases. Establish guidelines for media visits within the park.
- Assume the responsibility as liaison with all Park Concessionaires, assuring that all concession operations are implementing their hurricane plans, closing facilities and completing evacuation procedures as identified.
- Notify NPS Emergency Management, SERO, and advise the Superintendents (or their designates) at Biscayne National Park and Big Cypress National Preserve of hurricane actions taken.
- Coordinate hurricane preparedness activities with Biscayne National Park, Big Cypress National Preserve, the Miccosukee Tribe, and Miami-Dade, Monroe and Collier Counties to assure that most effective utilization of resources is accomplished.
- Contact the MV Fort Jefferson and determine actions planned by the captain to assure the safety of the vessel and crew. Establish status check in procedures for the duration of the incident.
- Prepare a release plan identifying when resources may be released from the incident.
- Monitor meteorological information and announcements from the National Weather Service, National Hurricane Center and other State and Local public management agencies and use this information in planning and strategy to determine the continuation of actions identified in the Plan.
- Prior to onset of the storm, prepare and distribute an Incident Action Plan for the immediate aftermath of the storm. It will be based on the current information of expected landfall, severity, duration and other special characteristics of the storm utilizing any locally available resources. The plan must provide for the safety and well being of Park employees and protection of government property and resources.

As Superintendent, I will:

- Retain the authority to approve leave as documented in the Hurricane Plan Personnel Policy.
- Approve the ordering of resources from outside of Everglades and Dry Tortugas National Parks.
- Approve the ordering of any overhead management team from outside of Everglades and Dry Tortugas National Parks.

_____, Deputy Superintendent, will work with the overhead team as my representative when I am unavailable.

This delegation becomes effective immediately and continues until you are relieved of your responsibility by myself or by the designation of another Incident Commander. The time and date that you relinquish this authority are to be documented in a memorandum to me.

Superintendent
Everglades and Dry Tortugas
National Park

Incident Commander

Date/Time

Appendix D

Example **Transition Plan for Hurricane _____ (Date)**

Hurricane _____ has continued to take a _____ track and is no longer considered a threat to Everglades National Park. As a result, effective __ hours on _____ the Park Hurricane Management Team will transition management responsibilities to the Park Superintendent and the Park Management Team. In an effort to minimize the impacts of this transition on Park operations, the following plan was developed.

The Incident Management Team Responsibilities:

- Prepare a case incident report and turn all documentation over to the Chief Rangers Office.
- Ensure that all property has been returned to the responsible property managers and property receipts are included in documentation.
- Place all surplus supplies in the Pine Island Hurricane Cache.
- The Liaison Officer will send notification of transition to the SERO and other South Florida Parks.
- The Incident Commander will notify SER Fire Management Officer of the transition.
- The Incident Commander will prepare a termination of the Delegation of Authority for the Superintendent's and IC's signatures.
- The Incident Information Officer will draft a memorandum from the Superintendent thanking employees for their outstanding performance during Hurricane _____.
- The Logistics Section will prepare DI-1's to replace items used during the incident

Park Management Responsibilities:

- Schedule an Incident Review
- Research Division will remove all boats from the Missile Base during normal park operations.
- Park General will unshutter 12 residences and the Reef Comber, as needed; secure boat tie downs from the Missile Base; fix, repair, replace broken shutters on Park Facilities during normal park operations.
- The Budget Office will complete the finance responsibilities for the incident in conjunction with Division Timekeepers including time and attendance reports and outstanding procurement items.
- Supply will track unfilled replacement orders and Ensure that they are turned over to Logistics when received.
- Personnel will be responsible for insuring that OWCP requirements are completed for incident related injury.
- All employees, except the members of the IMT, will return to normal tour of duty and supervision as of start of business on _____. Members of the IMT will return to normal duty as of _____ hours.

Appendix E

RESOURCE ORDER PLANNING GRID

On the following page is a resource order planning grid designed to assist in planning for ordering of resources. During Final Hurricane Preparation Period, the IMT should review this to begin the process of ordering resources to arrive immediately after the storm. With current fiscal management systems within the Service, where there is no emergency fund to allow deployment of disaster resources prior to an impending disaster, the actual ordering of these resources must be closely coordinated with the Superintendent and Southeast Field Office. To do otherwise will create a financial liability to the effected park area.

The horizontal axis of the grid represents the expected force level of the storm (Category 1-5) and the expected proximity of landfall to areas of Everglades National Park (direct hit vs. close hit). For these purposes, a direct hit means that the major forces of the storm were directed upon one or more major park facilities or areas. A close hit assumes that major park facilities or areas were affected by the storm, but were spared the major brunt. If the storm had no direct impacts upon any areas of the park, it would be classed as a "miss", and misses are not factored on this chart.

The chart is based on the assumption that if either a Type I or II All Risk Management Team is ordered, they will undoubtedly order other ICS Unit Leaders/Units/Teams or other resources they deem necessary to manage the incident. If the incident remains managed a park IMT, they will need to order single resources that would be needed to manage the situation at hand.

Resource Order Planning Grid

Category of storm Proximity	1 DIR	1 CLOSE	2 DIR	2 CLOSE	3 DIR	3 CLOSE	4/5 DIR	4/5 CLOSE
Resource Type								
All Risk Team T1	N	N	N	N	Y	N	Y	N
All Risk Team T2	N	N	Y	N	N	Y	N	Y
Single ARM Res.	?	?	N	Y	N	N	N	N
Operations								
Security(SET team)	?	N	Y	N	Y	Y	Y	Y
Crew TYPE I	N	N	?	N	Y	Y	Y	Y
Maint Strike Team	?	N	Y	N	Y	Y	Y	Y
Air Operations	Y	N	Y	Y	Y	Y	Y	Y
Staging Area Manager	N	N	Y	N	Y	Y	Y	Y
C.I.S.D. Team	Y	N	Y	N	Y	Y	Y	Y

Appendix F

Emergency Notification Information (Revised as of 2014)

This form is used for emergency informational purposes only. The information will not be distributed except in emergency circumstances and then only to those who need the information. This information would be used to help find and assist you and your family in an emergency event. Furnishing this information is voluntary; however, failure to do so may result in not receiving assistance when needed. Please complete the form and if you are checking in as a new employee you may return it with the rest of your sign-in paperwork to the Human Resources Office (who in turn will forward it on the Dispatch) – otherwise – return the form to the Park's Dispatch Office. Please remember to update as information changes.

Date: _____

Name (Last, First, MI): _____

Home Telephone #: _____

Cellular Phone #: _____

Non-GOV Email Address: _____

Division in which Employed: (check one)

- ☐ Office of the Superintendent
- ☐ Administration
- ☐ Interpretation & Visitor Services
- ☐ Resource & Visitor Protection
- ☐ Fire Operations
- ☐ Research

- ☐ Maintenance
- ☐ South Florida Natural Resources Center
- ☐ Dry Tortugas National Park
- ☐ Everglades Association
- ☐ Concessions
- ☐ SFL Ecosystem Restoration Task Force

Supervisor: Rich Ahern _____

Current Local Residence:

#/Street: _____

City/State: _____

Zip Code: _____

Mailing Address: (if different from residence)

Street/PO Box: _____

City/State: _____

Zip Code: _____

Directions to your home from the nearest major intersection (be brief, but specific):

GPS Coordinates of Home (if unknown, can acquire at GOOGLE Earth)

Latitude: __° __' __" Longitude: __° __' __" (degrees, min, seconds)

OR

Latitude: __° __' __" (degrees, min, seconds)

Longitude: __° __' __" (degrees, decimal min.)

Type of Home: (check one)

☐ **Single Family**

☐ **Trailer**

☐ **Condo**

☐ **Townhouse**

☐ **Apartment**

☐ **Other (specify) _____**

Number of Adults in home:

Number of Dependents in home:

Do you want your home, pager, or cellular phone # given out to....? (check one)

☐ **Park employees only**

☐ **Anyone who calls**

☐ **Do NOT give out**

Your Title:

Duty Station: (check one)

☐ **Dan Beard Center**

☐ **Dry Tortugas NP**

☐ **East Everglades** ☐ **M/V Fort Jefferson (Key West)**

☐ **Entrance Station**

☐ **Everglades Association**

☐ **FIU**

☐ **Flamingo**

☐ **Gulf Coast**

☐ **Headquarters**

☐ **Key Largo**

☐ **Key West**

☐ **Krome Center**

☐ **Loop Road**

☐ **Pine Island**

☐ **Robertson Building/Fire Cache**

☐ **Royal Palm**

☐ **Shark Valley**

☐ **Supply**

☐ **Tamiami**

☐ **West Palm Beach**

Office Telephone #

Employment Status: (check one)

☐ **Permanent**

☐ **Temporary**

☐ **Volunteer**

☐ **Term**

☐ **Seasonal**

Physician's Name: _____ Telephone #: _____

Special information or needs (medical conditions, prescriptions, care provider for sick/elderly,

etc.): _____

Local Emergency Contact (first, last name): _____

Home Telephone #:

Work/Other Phone #: _____

Relationship to you:

Address:

#/Street:

City/State: _____

Zip Code: _____

NON-Local Emergency Contact (first, last name): _____

Home Telephone #: _____

Work/Other Phone #: _____

Relationship to you: _____

Address:

#/Street: _____

City/State: _____

Zip Code: _____

Special Skills: (Please list any special skills you might have such as carpentry experience, EMT, electrician, etc.)

Appendix G. Personal Property Storage Request

Any employee living in government housing who wishes to store personal property in Everglades National Park secure storage facilities (example: storing a personal water vessel in a designated tie-down spot), must receive permission from the Superintendent by submitting the following form. Space is limited and provided on a first come, first serve basis.



United States Department of the Interior
NATIONAL PARK SERVICE



Everglades and Dry Tortugas National Parks

In Reply Refer

Date:

Memorandum

To: Superintendent, Everglades National Park

From:

Through: Division Chief, Everglades National Park
Hurricane Incident Commander, Everglades National Park

Subject: Storage of Personal Property during Hurricane Shut-down

Pursuant to the park's hurricane plan, park residents are required to obtain Superintendent's consent to store personal equipment at a park-designated facility during a hurricane shut-down.

I am requested approval to store the following equipment:

Your consideration is appreciated.

Employee (print name)

Signature

District

Date

- ☐ Approved
- ☐ Not Approved

Superintendent

Date

Received by: _____

Appendix H

Checklist for Computer Users (Updated: 6-8-2013)


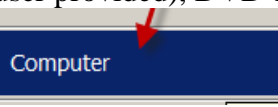



Individual Responsibilities

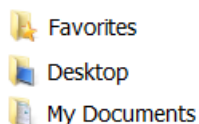
Upon implementation of the EVER/DRTO Hurricane Plan, all employees with files on a NPS laptop or desktop shall protect and secure them according to these instructions.

I. Computer Users are responsible for backing up their important work files to their Home Directory. Instructions are provided below and also on SharePoint:

(<http://share.inside.nps.gov/sites/EVER/Ever%20HQ/Admin/IT%20Shared%20Documents/Forms/AllItems.aspx>)

1. Do not wait until the day before a hurricane to back up your files! Backup all your data files at least once per month to prevent loss of data.
2. **Backup all important data files to your Home** directory. Backup only important work files on the file server and not on your computer hard drive. Personal files shall be written to a USB thumb drive (user provided), DVD-R, CD-R.

3. Go to Start , Computer  (red arrow points to Computer button)
4. Double click on the C drive , open the Users  Folder, open your profile folder  amorrison
5. Right click of the folders and copy to your home directory. If you do not have a Home directory, copy files to an USB flash drive, DVD, or CD-R.



II. Secure Your Computer Equipment

1. Properly shut down and disconnect all electrical equipment from the power source and set on your desk, cover with plastic.
2. Document what computer equipment you have (i.e., one Dell desktop and monitor, keyboard, mouse, printer, etc...)
3. If you do not have a Home Directory, then store your backups in the safest place possible.
4. Again, user is responsible for backing up work files on the Home directory or your Division folders on the file server.
5. These operational data files are consistently being backed up to tape media and stored off-site.

III. Network Services

The Information Technology Branch will keep all mission critical systems in service as long as possible. However, certain components will need to be brought off-line and/or shutdown before the storm hits. This is necessary to ensure that equipment and components are safe from the effects of the storm.

IV. Post-Storm

The Information Technology Branch will work as quickly as the circumstances permit to restore network connectivity and services throughout the park. You may set your PC and monitor backup once the “all clear” has been sounded. Only the computer and monitor are plugged into the backup side of the UPS, the rest of the power cords should be plugged into the power surge side. If needed you may contact your IT person for assistance with this. Beyond that, expect power surges, brownouts, and fluctuations for at least several days or longer after power has been restored.

Please use this checklist as a guideline to prepare your site or office space(s).

HURRICANE DAMAGE PREVENTION PLAN CHECKLIST for Computers

Degree of precautions will depend on the direction and category of storm.

Areas to Secure	Items of Concern	Preventative Measures to Take For This Area (Depending on severity/category of storm)	Procedures Used to Take These Precautions	Items to Purchase For Prevention & Security	Persons Responsible For Designated Areas	Specific Instructions or Comments
All office spaces where there are PC's, Printers, Monitors, UPS's, phones, FAXes, switches, routers, etc..	-Equipment -Windows -Computer systems	-Unplug & move equipment away from windows -Protect/cover equipment		Plastic bags/tape to cover equipment	Individual users of PC's and office spaces	Prepare to have enough plastic, tape, and DVD-R's on hand -PC's and equipment will remain in the office spaces.
All common spaces where there are PC's and electric equipment. Conference Rooms, Copier rooms, and common areas The Superintendent, Deputy, SFNRC Director, and Deputy will be secured by an IT person.	-Computers -Printers -Fax -Windows -Equipment -TVs and VCRs -Files -Disks -Maintenance contracts -Inventory lists -Security Identification like Photos., etc.) -Any personal items -Media cart -Digital cameras -Scanners -Video cameras -AV equipment	-Unplug & move all equipment away from windows -Sandbag exterior doorways -Cover all electrical equip., desks, filing cabinets with plastic covering & tape securely -Unplug all electrical equip. -Store contracts DI-1's, inventory lists, in water-tight containers and place in cabinet. Cover cabinets with plastic covering if possible. -Any valuable personal items should be removed from the premises -Place all floor level equipment on top desks or tables to prevent damage from flooding. -Secure all hard copy files & cabinets.	-Copy all important files onto disks; store in water-tight containers. (Make an extra disk copy of any extremely valuable file and store in off-site location). -Re: Database and files - After each revision to data base immediately print a new copy. Hold one copy at park location and one copy at an off-site location. -Maintain this list and its supporting documents on file as a paper trail for a period of one year. -Update all computer & equipment inventory lists (include serial #) - Remove pictures from walls & place personal items in boxes. Remove personal belongings from premises.	-Plastic bags & tape to cover equipment -Extra disks -Sealable plastic bags	Computer Equipment: IT Branch Task Force will assist when available to do so. They will be mobilized; securing servers, databases, switches, routers, and satellite dishes. All data backups will be in full data backup mode. Tapes will be stored off-site.	-Store all important files, documents, disks, & contracts in plastic sealable bags. -Maintain copies of important documents and disks at locations off site. -Prior to leaving park for shelter, all personnel should print two weeks of Lotus Notes calendar since system will be taken down & may not be available for period of time following storm Keep personnel master phone list in case of emergencies
Human Performance	-Equipment -Computers -Files -Disks	-Same precautions as office spaces		Large pieces of plastic and masking tape.	Self or assigned teams	See hurricane plan and assigned team responsibilities

Information Technology Task Force (Rapid Response Team)

The IT Branch will mobilize to shut down or remove; satellite dishes, servers, switches, and other networking equipment. Due to leave and unplanned events these Task Force members and scheduled locations could change.

DRTO / Key West: On-Site NPS personnel

Krome:

Allan Morrison - Chief, Information Systems - (305)224-4202

Headquarters:

Elizabeth Ross - Information Technology Supervisor - (305)224-4219

Pine Island:

Timothy Moore - Telecommunications Specialist – (305)242-7784

Daniel Beard:

Miles Anderson - Information Technology Specialist - (305)224-4259

Gulf Coast:

Carlos Mateo - Information Technology Specialist - (305)242-7738

Robertson & Fire Cache Building:

Miles Anderson - Information Technology Specialist - (305)224-4259

Flamingo Areas:

Allan Morrison - Chief, Information Systems - (305)224-4202

Shark Valley, Tamiami, Loop Road

Josue Urbaez - Information Technology Specialist - (305)242-7022

Key Largo:

John Lara - Information Technology Specialist - (305)224-4225

Loxahatchee:

Luis Pacheco - Information Technology Specialist - (305)224-4248

NE Branch Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief)

NAME	Contact #	Division	Availability
Cano, Yvette		Tamiami/Sh. V./Loop rd	
Densel, Darrell		East Ever	
Diaz, Augustin		Tamiami/Sh. V./Loop rd	
Hoopes, Erika		East Ever	
Hunkler, Lucas		East Ever	
Jagielski, Lauren		Tamiami/Sh. V./Loop rd	
LeQuieu, Marc		East Ever	
MacKarvich, Christine		Tamiami/Sh. V./Loop rd	
Miller, Shaun		Tamiami/Sh. V./Loop rd	
O'Dell, William		Tamiami/Sh. V./Loop rd	
PFAU, DALE			
Smith, Lydia		Tamiami/Sh. V./Loop rd	
Smith, Waylon		Tamiami/Sh. V./Loop rd	
Walker, Lloyd (Charles)		Tamiami/Sh. V./Loop rd	
Woody, Timothy		East Ever	

Availability:

NE = Assigned to NE branch

A = Available to assist other branches

U = Unavailable

Pine Island Branch Personnel Availability List

Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief.

(Availability: PI = Assigned to Pine Island branch, A = Available to assist other branches, U = Unavailable)

Resources	Contact #	District	Availability
Adams, Jennifer		FIRE	
Alexander, Paul		PINE	
Anderson, Bernard		HDQT	
Anderson, Janet		HDQT	
Baerga, Jose A.		HDQT	
Baxter, Paula		HDQT	
Bell-Willock, Jacqueline		HDQT	
Beotegui, Rudy		HDQT	
Bowles Mohr, Kevin		HDQT	
Burgos, Juan		PINE	
Burgos-Morales, Grace		HDQT	
Camblin, Clayton		ARPT	
Ciolino, Bonnie		ARCH	
Collier, Jordan		FIRE	
Colucci, Linda		HDQT	
Corrigan, Chris		FIRE	
Culhane, Brien		HDQT	
Diaz, Sabrina		HDQT	
Dillard, Leslie		HDQT	
Dutton, Cory		FIRE	
Echeverria, Eduardo		PINE	
Edwards, Pat		FIRE	
Effert, Randy		HDQT	
Everett, Whitney		HDQT	
Fay, Carmen		HDQT	
Fitz, Chris		HDQT	
Fleming, Tenia		HDQT	
Friar, Linda		HDQT	
Gantt, Allyson		FIRE	
Gantt, Robert (Bruce)		HDQT	
Genao, Orlando		ARPT	
Gill, Andrew		ARPT	
Gonzalez, Jeffrey		FIRE	
Heard, Charlotte		HDQT	
Hendricks, Sally		HDQT	

Herling, Fred		HDQT	
Hicks, Celinda		PINE	
Howell, Leon		HDQT	
Irey, Linda		HDQT	
Johnson, Barbara		ENTR	
Keady, JoAnn		HDQT	
Konicek Moran, Dick		HDQT	
Lane, Debbie		HDQT	
Lane, Tracie		FIRE	
Leady, William (Bill)		PINE	
Lewis, Kathy		HDQT	
Maltes, Mirta		PINE	
Mamuyac, Betty		ENTR	
Manzini, Taryn		PINE	
Markson, Sam		FIRE	
Mateo, Samuel		HDQT	
Mercado, Adalberto (AL)		PINE	
Meyer, Ryan		HDQT	
Morgan, Patricia		PINE	
Newland, Steve		FIRE	
Pedrajo, Dario		PINE	
Perez, Maria K		HDQT	
Porter, Abby		HDQT	
Rengifo-Aguilar, Ocie		HDQT	
Roark, Jack		HDQT	
Roberts, Suzanne		HDQT	
Rodriguez, Christina		HDQT	
Roehrig, Linda		HDQT	
Savage, Mike		HDQT	
Selent, Carmen		PINE	
Serna, Javier (Jay)		HDQT	
Shelley, William (Bill)		HDQT	
Skinner, Leslie		PINE	
Smith, Gloria		HDQT	
Snyder, Jim		HDQT	
Souva, John		HDQT	
Stebner, John		FIRE	
Sutton, James (Jim)		PINE	
Tupaj, Maya		FIRE	
Wagner, John		PINE	
Walters, William (Bill)		HDQT	

Webb, David		HDQT	
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Key Largo Branch Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief)

Resource	Contact #	District	Availability
Fowler, Dave		FBAY	
Kelley, Ivy		FBAY	
McGee-Absten, Vicki		FBAY	
Moore, Brandon		FBAY	

Availability:

KL = Assigned to Key Largo branch

A = Available to assist other branches

U = Unavailable

Maintenance Branch Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief)

Resource	Contact #	District	Availability
Borden, Randy		PINE	
Brady, Wesley		PINE	
Carrion, Jose		PINE	
Foster, Raymond		PINE	
Heard, John		PINE	
Hogan, John		PINE	
Powell, Curtis		PINE	
Savoy, Mike		PINE	
Schwarz, Greg		PINE	
Walker, Glenn		PINE	
Weinstock, Jeff		PINE	

Availability:

M = Assigned to Maintenance Branch

A = Available to assist other branches

U = Unavailable

Research Branch Personnel Availability List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief)

Resource	Contact #	District	Availability
Alvarado, Mario		KROM	
Armel, Dawn		KROM/ETF	
Balentine, Karen		DBC	
Barr, Jordan		KROM	
Beeler-Kanderski, Carrie		KROM/ETF	
Castro, Joffre		KROM	
Ciolino, Bonnie	732-779-1150	DBC	
Cooley, Hillary		DBC	
Davis, Colin		DBC	
Dean, Tylan		KROM/DBC	
Edwards, Jenna		DBC	
Falk, Brian		DBC/CO-OP	
Fennema, Robert		KROM	
Fratto, Nicole		KROM	
Fratto, Zachary (Zach)		DBC	
Gamble, Brandon		KROM	
Gomez, Kim		KROM	
Hardy, Ellen		KROM	
Howington, Savannah		KROM	
Johnson, Bob		KROM	
Kahn, Fabian		DBC	
Kline, Jeff		DBC	
Kotun, Kevin		KROM	
Kozma, Elizabeth		DBC	
Lara, John		KROM	
Lederer, Sonja		DBC	
LoGalbo, Alicia		KROM	
McEachern, Michelle		DBC/CO-OP	
McHugh, Jessica		KROM	
McLean, Agnes		KROM	
Melo, Maria		KROM	
Mitchell, Carol		KROM	
Morrison, Al		KROM	
Mullins, Troy		KROM	

Navarro, Phil		DBC	
Oberhofer, Lori		DBC	
Osborne, Jason		DBC	
Pacheco, Luis		KROM	
Parry, Mark		DBC	
Parsons, Janice		KROM	
Pearlstine, Leonard		KROM	
Perez, Larry		KROM	
Renshaw, Amy		KROM	
Reynolds, Gregg		KROM	
Rondeau, Damon		DBC	
Rudnick, David		KROM/LOX	
Russell, Nancy	305-975-2656	DBC	
Sadle, Jimi		DBC	
Schardt, George		DBC	
Schardt, Jean		DBC	
Seavey, Jean		DBC/VIP	
Seavey, Rick		DBC/VIP	
Shinde, Dilip		KROM	
Smith, Dewitt		KROM	
Snow, Skip		DBC/VIP	
Stabenau, Erik		KROM	
Stafford, Jennifer	402-212-7611	DBC	
Sytsma, Lesley		KROM/HQ	
Taylor, Jonathan		DBC	
Tennis, Steve		DBC	
Walker, Christa		DBC	
Walker, PJ		DBC	

Availability:

R = Assigned to Research branch

F = Assigned to Flamingo Branch

A = Available to assist other branches

U = Unavailable

Flamingo Branch Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Operations Section Chief)

Resource	Contact #	District	Availability
Carmichael, Christi		FLAM	
Davis, Charles		FLAM	
Terry, Tony		FLAM	
Helmets, Daniel		FLAM	
Jackson, Jacob (Jake)		FLAM	
Johnson, Brett		FLAM	
Johnson, Charles		FLAM	
Lewter, William (Mike)		FLAM	
Montanez, Angel		FLAM	
Mullett, Steve		FLAM	
Neuman, Robert		FLAM	
Fhaner, Rich		FLAM	
Sanz, Guido		FLAM	
Showler, Bob		FLAM	
Taylor, Joe		FLAM	

Availability:

F = Assigned to Flamingo branch

A = Available to assist other branches

U = Unavailable

DRTO Operations Personnel List

(Use this list and the above org chart to determine staff availability and plan the next day's operational period staffing and fax/email to Planning Section Chief.

Resource	Contact Info	Division	Availability
Arter, Tim	305-797-7550	MVFJ	
Bass, James (Adam)		DRTO	
Clark, Kelly		DRTO	
Fuellner, David		DRTO	
Fueschel, John (Nick)		DRTO	
Gottshall, Tree		DRTO	
Mitchell, Wayne		DRTO	
Moran, Patrick		DRTO	
Nimmo, Kayla	315-729-8014	MVFJ	
Nimz, Jim	786-353-8756	MVFJ	
Simpson, Glenn		DRTO	
Spade, John		DRTO	
Ziegler, Tracy	305-394-0137	MVFJ	
Vacant Seasonal Ranger (I)		DRTO	
Vacant Seasonal Ranger (I)		DRTO	
Vacant LE Ranger		DRTO	
Vacant Maintenance Mechanic		DRTO	

Availability: D = Assigned to DRTO Operations, A = Available to assist EVER, U = Unavailable