

**HISTORIC STRUCTURE REPORT DELIVERABLES – 05/11/04**  
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## 0.2 PREPARE HISTORIC STRUCTURE REPORT FRONT MATTER

### 0.2.1 Prepare Cover Page:

- Include the report title, name(s) of structure(s), name(s) of primary authors and investigators with affiliated office, regional office, department, and, date of report.
- List project managers, and other contributors who did not prepare the text, in an acknowledgement section.
- Provide a signature page to follow the cover page with “recommended by” and “approved by” signature lines to document acceptance of the HSR (*Traditionally the HSR is recommended by the office preparing the report and approved by a park superintendent and/or regional director*).
- List most current date of report
- List project managers and other contributors in an acknowledgement section.

### 0.2.2 Prepare Table of Contents:

- Format according to the main Historic Structure Report section headings and include appropriate sub-headings based on the report’s content
- When Appropriate, Include List of Illustrations and their Credits

### 0.2.3 Prepare Executive or Management Summary:

- Summarize Research Done To Produce the HSR
- Summarize Major Research Findings
- Summarize Major Issues Identified In the Project Agreement
- Summarize Recommendations for Treatment or Use (Deviations from general planning documents shall be identified here and discussed more fully in the body of the report.).

### 0.2.4 Prepare Administrative Data:

- List Names, Numbers, and Locational Data [List Of Classified Structures LCS] Used To Refer to the Structure
- Describe the Proposed Treatment of The Structure Referencing the Park Planning Document or Other Source When It Is Identified
- List Related Studies
- Document Cultural Resource Data, Including Date Listed In the National Register, Period Of Significance, and Context of Significance
- Document Recommendations for Documentation, Cataloging, and Storage of Materials Generated by the HSR

## 1.0 PREPARE PART 1-DEVELOPMENTAL HISTORY

### 1.1 Describe Historical Background and Context

- Clarify and refine the significance and contextual associations of the structure
- Briefly describe the people and events associated with the structure
- Establish a recommended period or periods of significance if not already stated in the National Register Nomination or Historic Resource Study (HRS)

### 1.2 Summarize Chronology of Development and Use:

- Document the evolution of the historic structure, its current condition, and causes of deterioration (based on documentary research and physical examination).
- Summarize Physical Construction
- Summarize Modification
- Summarize Use of the Structure

### 1.3 Document Physical Description:

- Technically evaluate the physical condition of the historic structure utilizing experienced professionals in each respective category, i.e. historic architecture, civil, structural, mechanical, electrical, safety.
- Document all features, materials, and spaces according to age, significance and condition.
- Document causes of structural deterioration and inadequacy.

### 1.4 Describe All Character Defining Features

- List and describe salient characteristics of all interior and exterior features that significantly contribute to the physical character and historic significance of the structure.

### 1.5 Prepare Condition Assessments

- As appropriate, prepare a discipline-by-discipline, component-by-component, narrative assessment (by each professional) of their respective responsibility.

#### 1.5.1 Civil

##### 1.5.1.1 Assess the Following Water System Components

- Water source (surface water or ground water source) – size, materials, capacity, condition, age, etc.

- Transmission system evaluation – size, materials, capacity, condition, etc.
- Water treatment evaluation – objectives, design, performance, age, condition, etc.
- Distribution system evaluation – size, materials, capacity, condition, etc.
- Water storage evaluation – condition, storage capacity, etc.
- Pumping systems evaluation – age, condition, capacities, etc.

#### 1. 5.1.2 Assess the Following Wastewater System Components

- Collection system evaluation – size, materials, capacity, condition, etc...
- Wastewater treatment evaluation – objectives, design, performance, age, condition, etc.
- Pumping systems evaluation – age, condition, capacities, etc...
- Wastewater disposal evaluation - objectives, design, performance, age, condition, etc.

#### 1. 5.2.3 Assess the Following Motor Vehicle Access and Pedestrian Access

- Roadway evaluation – age, condition, capacity, materials, etc...
- Parking areas evaluation – capacity, age, condition, materials, etc...
- Pedestrian access (walkways, sidewalks, and trails) – capacity, age, condition, materials, etc.

### 1.5.2 Site

#### 1.5.2.1 Assess the Following Site Conditions

- Site drainage evaluation – culvert age, capacity, condition, materials, etc.
- Storm sewer evaluation – age, capacity, condition, materials, etc.
- Site landscaping, vegetation, fencing – type, location, age, condition, etc.

### 1.5.3 Architecture

#### 1.5.3.1 General Building Assessment (Overall Condition of Materials and Integrity)

##### 1.5.3.1.1 Assess the Following Exterior Elements

- Roofing material, roof gutters and downspouts, roof flashing and combs, lightning protection.

- Roof system to include the original and subsequent (if known) and current system including components such as deck, insulation, vapor barrier and roof type.
- Rooftop mechanical and electrical equipment including under deck ventilation and lightning protection.
- Flashing material of original (if known) and current material and flashing heights.
- Drainage system for original (if known) and current including drains, scuppers, gutters, downspouts and drain leaders.
- Unusual features of the roof including but not limited to coursing, slope changes, unique profiles and shapes.
- Roofing assessment shall include:
  - Leaking history and source of leaks if known.
  - Extent of ponding water.
  - Descriptions of the 5 previous items.
  - Overall weather tightness of roof.
- Overhangs and soffits.
- Wall finishes, paint, wood siding, plaster, stucco, brick, stone and all other veneers.
- Chimneys.
- Porches and associated columns, railings, newels, balustrades, steps, and decking.
- Trim and millwork.
- Window sash, frames, casement, trim, glazing, and window hardware, shutters.
- Door leafs, frames, casement, trim, glazing, and door hardware.
- Light fixtures.

#### 1.5.3.1.2 Assess the Following Interior Elements

- Door leafs, frames, casement, trim, glazing, and associated door hardware.
- Stairs and associated railings, newels, balustrades, steps.
- Doors and associated hardware.
- Interior wall and ceiling finishes.
- Wall and ceiling coves.
- Trim and millwork.
- Finish floors.
- Fireplaces and associated millwork.
- Casework and associated millwork.
- Kitchen and bath plumbing fixtures.
- Light fixtures.
- Window sash, trim, hardware.
- Borrowed lights, glazing, associated trim.
- Furnishings.

- Elevators.
- Decorative radiators or vent registers.

#### 1.5.3.1.2 Assess the Overall Existing Accessibility

### 1.5.4 Structural

#### 1.5.4.1 Building Description

##### 1.5.4.1.1 Assess General Structure Information (Size, Type of Structure, Date of Construction, Materials, Etc).

##### 1.5.4.1.2 Assess the Following Specific Information on Structural Systems (Member Sizes, Spans, and Support Conditions).

- Foundation (based on investigation or historical data).
- Floor framing.
- Roof framing.
- Wall framing/gravity load system.
- Lateral system.

#### 1.5.4.2 Assess Existing Structural Condition

##### 1.5.4.2.1 Assess Structural Elements (Condition, Likely Causes for Damage/Deterioration)

- Foundation (based on investigation or historical data).
- Floor framing.
- Roof framing.
- Wall framing/gravity load system.
- Lateral system.

##### 1.5.4.2.2 Summarize General Building Condition

#### 1.5.4.3 Perform Load Bearing Analysis

##### 1.5.4.3.1 Perform Comparison with Building Minimum Snow and Live Load Requirements (Based on Proposed Use) for the following:

- Foundation (based on investigation or historical data).
- Floor framing.
- Roof framing.
- Wall framing/gravity load system.

##### 1.5.4.3.2 Perform Lateral Load Analysis

## 1.5.5 Mechanical

### 1.5.5.1 Assess Historic Conditions of Mechanical Systems (From Historic Construction Drawings or Other Sources - This Should Include Descriptions of General and Special Features of the Historic Mechanical Systems)

#### 1.5.5.1.1 Assess the following Plumbing Systems

- Domestic water systems.
- Sanitary sewer systems.
- Plumbing fixtures.

#### 1.5.5.1.2 Assess the following Heating, Ventilating, and Air Conditioning (HVAC) Systems

- Heating systems.
- Ventilation systems.
- Air-conditioning systems (if any).

#### 1.5.5.1.3 Assess the Fire Suppression Systems (if any)

### 1.5.5.2 Assess Existing Conditions of Mechanical Systems (from field survey)

#### 1.5.5.2.1 Assess Plumbing Systems for the following

- Domestic water systems.
- Sanitary sewer systems.
- Plumbing fixtures.

#### 1.5.5.2.2 Assess Heating, Ventilating, and Air Conditioning (HVAC) Systems for the following

- Heating systems.
- Ventilation systems.
- Air conditioning systems (if any).

#### 1.5.5.2.3 Assess Fire Suppression Systems (if any)

## 1.5.6 Electrical

### 1.5.6.1 Provide Building Description

#### 1.5.6.1.1 Document General Electrical Information (Size, Type of Facility, Date of Construction, Materials, Etc.)

1.5.6.1.2 Document Specific Information on Electrical Systems (Service Size, System Phase & Voltage, Wiring Method) for the following:

- System configuration.
- Power distribution.
- Overcurrent protection.
- Lighting systems.
- Telecommunication systems.

1.5.6.2 Document Existing Electrical System Condition

1.5.6.2.1 Document Electrical Elements (Relative Age, Condition, Noted Areas of Damage/Deterioration, and System Life Expectancy) for the following:

- System configuration.
- Conductor insulation type & condition).
- Overcurrent protection (type & condition).
- Lighting systems (fixture condition).
- Telecommunication systems (type & condition).

1.5.6.2.2 Summarize General Electrical System Condition

1.5.6.3 Perform Electrical System Analysis

1.5.6.3.1 Perform Comparison with Current NEC Requirements & Best Practices (Based on Proposed Use) with the following:

- Fire Alarm Systems
- Security Systems.
- Lightning Protection Systems
- System configuration.
- Power distribution.
- Overcurrent protection.
- Lighting systems.
- Telecommunications.
- Load calculations.

1.5.7 Safety

1.5.7.1 Document Hazardous Materials

- Asbestos.
- Lead based paints.
- Chemicals that may have been used in this facility.

### 1.5.7.2 Design Codes

## **2.0 PREPARE PART 2.-EVALUATE TREATMENT AND USE**

- Evaluate alternative treatments by discipline

### 2.1 Discuss and Analyze Ultimate Treatment and Use

- Discuss and analyze the ultimate treatment and use of the structure as defined in park planning documents.
- Present alternative approaches

#### 2.1.1 Civil

##### 2.1.1.1 Provide Recommendations for Water System Components

- List recommendations for existing system repairs/rehabilitation.
- List recommendations for new water system components.
- List recommendations for further analysis, investigation.

##### 2.1.1.2 Provide Recommendations for Wastewater System Components

- List recommendations for existing system repairs/rehabilitation.
- List recommendations for new wastewater system components.
- List recommendations for further analysis, investigation.

##### 2.1.1.3 Provide Recommendations for Motor Vehicle Access and Pedestrian Access

- List Recommendations for Existing Motor Vehicle Access and Pedestrian Access Repairs/ Rehabilitation
- List Recommendations for New Motor Vehicle Access and Pedestrian Access
- List Recommendations for Further Analysis, Investigation

#### 2.1.2 Site

##### 2.1.2.1 Provide Recommendations for Site Condition Improvements

- List recommendations for site drainage and storm sewer repairs, rehabilitation.
- List recommendations for new site drainage and storm sewer system components.
- List recommendations regarding site landscaping, vegetation and fencing.
- List recommendations for further analysis, investigation.

### 2.1.3 Architecture

#### 2.1.3.1 Provide Recommendations Repair / Replacement of the following Damaged/Deteriorated Elements:

- Existing materials.
- New materials.
- Roofs.
  - Additional insulation.
  - Increasing slope.
  - Raising flashing heights.
  - Relocating or remounting rooftop equipment.
  - Reconstructing or adding expansion joints.
  - Changing roof materials.
  - Adding more primary drains or scuppers.
  - Adding overflow drains and scuppers.
  - Repair or replacement of roof.
- For accessibility.

#### 2.1.3.2 Provide Recommendations for Further Investigation / Analysis

### 2.1.4 Structural

#### 2.1.4.1 Provide Recommendations for the following:

- Discussion of applicable codes (IEBC, IBC, NFPA, ASC 7, ASCE 31).
- Existing conditions.
- Recommendations for repair/replacement of damaged/deteriorated elements.
- Load bearing analysis.
- Recommendations for strengthening.
- Recommendations for further investigation/analysis.

### 2.1.5 Mechanical

#### 2.1.5.1 Provide Recommended Treatments (Suitable Options for Each Mechanical System Should Be Listed Along With Pros and Cons for Each Option)

- Perform code analysis and requirements (including requirements specific to NPS, e.g., D.O. 58).

### 2.1.6 Electrical

#### 2.1.6.1 Prepare Recommendations for the Following:

- List recommendations for repair/replacement of electrical systems.

## 2.1.7 Safety

2.1.7.1 Prepare NPS RM 58 [Structural Fire] compliant Fire Safety Plan to address the unique fire and life safety issues. The Fire Safety Plan consists of the following elements:

- INTRODUCTION
- DESIGN TEAM
- APPLICABLE CODES
- FIRE PROTECTION/LIFE SAFETY APPROACH
  - General Description
  - General Fire Resistive Construction Aspects
  - Occupancy Classifications
  - Fire Resistive Separations
  - Doors and Windows
  - Interior Wall, Ceiling and Floor Finishes
  - Decorative Structures Within Buildings
  - Egress
  - Special Design
  - Emergency Signage
  - Suppression Systems
  - Fire Department Access
  - Fire Detection and Alarm System
  - Emergency Communication Systems
  - Smoke Management Description
  - Central Control Station
  - Emergency and Standby Power
  - Elevators
- ACCEPTANCE TESTING
- PERIODIC OPERATION AND MAINTENANCE
- CONCLUSION

## 2.2 Specify Requirements for Treatment

- Outline compliance requirements to applicable laws, and regulations surrounding issues of life safety, fire protection, energy conservation, abatement of hazardous materials, and universal accessibility.

## 2.3 Specify Alternatives for Treatment

Present and evaluate alternative approaches to the ultimate treatment in both narrative and graphic form.

## Prepare Alternatives for Treatment Matrix

List alternative Treatments with Advantages and Disadvantages, i.e.:

<b>Alternative Treatment</b>	<b>Advantages (Beneficial Effects)</b>	<b>Disadvantages (Adverse Effects)</b>
Replace Exposed Roof Rafters	Stronger than repair	Higher Cost
Repair Exposed Roof Rafters	No loss of historic Fabric, Lower cost	Not as strong, structurally

Typical Disciplines:

- Civil
- Site
- Architecture
- Structural
- Mechanical
- Electrical
- Safety

## 2.4 Specify Assessment of the Effect of Recommended Treatments

Prepare Assessment of Effect for Recommended Treatments Matrix.

Assess recommended treatments and their effect on character-defining features—qualities that make the structure eligible for the National Register of Historic Places, i.e.:

<b>Recommended Treatment</b>	<b>Potential Effects</b>	<b>Mitigating Measures</b>	<b>Beneficial Effects</b>
Repair Exposed Roof Rafters	Repair will be visible	Repair shall be done in such a way that it is less visible	No loss of historic Fabric
Replace Exposed Roof Rafters	Loss of historic fabric	Replace in-kind with the same species	No visible repair

Typical Disciplines:

- Civil
- Site
- Architecture
- Structural
- Mechanical
- Electrical

- Safety

### **3.0 PREPARE APPENDIX**

#### 3.1 Prepare Bibliography

- List all documentary sources that were consulted for the preparation of the document.

#### 3.2 Prepare and Insert Photographs and Images

- Attain, duplicate, and insert historic photographs.
- Create, duplicate, and insert existing condition photographs/images.

#### 3.3 Prepare and Insert Drawings

- Attain, duplicate, and insert historic drawings.
- Prepare and insert existing condition drawings.

#### 3.4 Insert Historical Documents

- Attain, duplicate, and insert historical documents.
  - National Register Nomination Form

#### 3.5 Insert Historic Materials Analysis

- Attain, duplicate, and insert historic materials analysis.
  - Paint
  - Masonry
  - Plaster
  - Mortar
  - Wood
  - Metal
  - Glass

#### 3.6 Insert Supplementary Reports

- Attain, duplicate, and insert supplementary reports.
  - Seismic
  - Hazmat