

State of Nevada  
Department of Conservation & Natural Resources  
Division of State Parks

# **OLD LAS VEGAS MORMON FORT STATE HISTORIC PARK**

500 East Washington Ave.  
Las Vegas, Nevada 89101

**Site Number: 9913**  
**STATE OF NEVADA PUBLIC WORKS DIVISION**  
**FACILITY CONDITION ANALYSIS**



Report distributed in October 2021

State of Nevada  
Department of Conservation & Natural Resources  
Division of State Parks

The Facility Condition Analysis Program was created under the authority found in NRS 341.128. The State Public Works Division develops this report using cost estimates based on contractor pricing which includes materials, labor, location factors and profit and overhead. The costs of project design, management, special testing and inspections, inflation and permitting fees are not included. Cost estimates are derived from the R.S. Means Cost Estimating Guide and from comparable construction costs of projects completed by SPWD project managers.

The deficiencies outlined in this report were noted from a visual survey. This report does not address routine maintenance needs. Recommended projects do not include telecommunications, furniture, window treatments, space change, program issues, or costs that could not be identified or determined from the survey and available building information. If there are buildings without projects listed, this indicates that only routine maintenance needs were found. This report considers probable facility needs for a 10 year planning cycle.

**This report is not a guarantee of funding and should not be used for budgeting purposes. This report is a planning level document for agencies and State Public Works Division to assess the needs of the Building and/or Site and to help support future requests for ADA upgrades / renovations, Capital Improvement Projects, and maintenance. The final scope and estimate of any budget request should be developed by a qualified individual. Actual project costs will vary from those proposed in this report when the final scope and budget are developed.**

**Establishing a Facility Condition Needs Index (FCNI) for each building**

The FCA reports identify maintenance items and establish construction cost estimates. These costs are summarized at the end of the report and noted as construction costs per square foot. A FCNI is commonly used by facility managers to make a judgment whether to recommend whole replacement of facilities, rather than expending resources on major repairs and improvements. The FCNI is a ratio between the proposed facility upgrade costs and facility replacement costs (FRC). Those buildings with indices greater than .50 or 50% are recommended to be considered for complete replacement.

**Class Definitions**

**PRIORITY CLASS 1 - Currently Critical (Immediate to Two Years)**

Projects in this category require immediate action to return a facility to normal operation, stop accelerated deterioration, correct a fire/life safety hazard, or correct an ADA requirement.

**PRIORITY CLASS 2 - Necessary - Not Yet Critical (Two to Four Years)**

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

**PRIORITY CLASS 3 - (Four to Ten Years)**

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 3 projects will either improve overall usability and/or reduce long-term maintenance.

Site number: 9913

Facility Condition Needs Index Report

Index #	Building Name	Sq. Feet	Yr. Built	Survey Date	Cost to Repair: P1	Cost to Repair: P2	Cost to Repair: P3	Total Cost to Repair	Cost to Replace	FCNI
1905	HISTORIC FORT MUSEUM	1000	1855	12/12/2017	\$0	\$56,400	\$0	\$56,400	\$250,000	23%
	500 E. Washington Ave Las Vegas									
1681	MORMON FORT VISITORS CENTER	5000	2005	12/12/2017	\$3,250	\$4,300	\$234,500	\$242,050	\$1,450,000	17%
	500 E. Washington Ave Las Vegas									
2864	MORMON FORT PUMP HOUSE	140	1999	12/12/2017	\$0	\$1,400	\$1,400	\$2,800	\$28,000	10%
	500 E. Washington Ave Las Vegas									
2900	MORMON FORT SOUTH RESTROOM	600	2005	12/12/2017	\$1,100	\$1,400	\$6,000	\$8,500	\$120,000	7%
	500 E. Washington Ave Las Vegas									
2398	MORMON FORT RESTROOM	240	1999	12/12/2017	\$0	\$700	\$2,400	\$3,100	\$48,000	6%
	500 E. Washington Ave Las Vegas									
2397	MORMON FORT VEHICLE SHOP	1176	1999	12/12/2017	\$0	\$7,000	\$11,760	\$18,760	\$294,600	6%
	500 E. Washington Ave Las Vegas									
2399	MORMON FORT TOWER	200	1999	12/12/2017	\$0	\$1,000	\$0	\$1,000	\$20,000	5%
	500 E. Washington Ave Las Vegas									
9913	OLD LAS VEGAS MORMON FORT STATE PARK		0	12/12/2017	\$176,900	\$103,800	\$125,000	\$405,700		0%
	500 E. Washington Ave Las Vegas									
Report Totals.....:		8,356			\$181,250	\$176,000	\$381,060	\$738,310	\$2,210,600	33%

### Acronyms List

Acronym	Definition
<i>Building Codes, Laws, Regulations and Guidelines</i>	
AHJ	Authority Having Jurisdiction
AWWA	American Water Works Association
HVAC	Heating, Ventilating & Air Conditioning
IBC	International Building Code
ICC	International Code Council
IEBC	International Existing Building Code
IECC	International Energy Conservation Code
IFC	International Fire Code
IFGC	International Fuel Gas Code
IRC	International Residential Code
NFPA	National Fire Protection Association
NEC	National Electrical Code
OSHA	Occupational Safety and Health Administration
SAD	Standards for Accessible Design
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
<i>State of Nevada</i>	
CIP	Capital Improvement Project
FCA	Facility Condition Analysis
FCNI	Facility Condition Needs Index
FRC	Facility Replacement Cost
NAC	Nevada Administrative Code
NDEP	Nevada Department of Environmental Protection
NRS	Nevada Revised Statutes
SFM	State Fire Marshal
SHPO	State Historic Preservation Office
SPWD	State Public Works Division
<i>Miscellaneous</i>	
DDC	Direct Digital Controls
FRP	Fiberglass Reinforced Plastic
GFCI	Ground Fault Circuit Interrupter
LED	Light Emitting Diode
PRV	Pressure Regulating Valve
TDD	Telecommunications Device for the Deaf
VCT	Vinyl Composite Tile

This is a generic acronym list of commonly used terms throughout the Facility Condition Analysis report.

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**OLD LAS VEGAS MORMON FORT STATE PARK**

SPWD Facility Condition Analysis - 9913

Survey Date: 12/12/2017

**OLD LAS VEGAS MORMON FORT STATE PARK****BUILDING REPORT**

The Old Las Vegas Mormon Fort State Historic Park is located in downtown Las Vegas, at the intersection of Las Vegas Boulevard and East Washington Avenue. The first permanent non-native settlers in the Las Vegas Valley were a group of Mormon missionaries who built an adobe fort along Las Vegas Creek in 1855. They successfully farmed the area by diverting water from the creek. Today, the park includes a remnant of the original adobe fort, which serves as a museum with interpretive displays. The Park contains re-creations of many historic features. Historic interpretation is and will remain the focus of the park. There is also a Visitor's Center, a new mostly ADA compliant restroom and a paved parking area with ADA accessible parking spaces and route of travel to the Visitor's Center. The park is served by City water and sewer, and does not have any natural gas services. The site is fully fenced.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$176,900****Currently Critical****Immediate to Two Years****ADA SIGNAGE****Project Index #: 9913ADA3****Construction Cost \$3,100**

The Americans with Disabilities Act (ADA) provides for accessibility to sites and services for people with physical limitations. The criteria includes: sign mounting heights and locations; character heights and proportions; raised and Braille characters/pictograms; and sign contrast and finish. The signage in this facility does not comply with this criteria. This project would provide funding for purchase and installation of ADA signage including directional signage from parking to accessible building entrances. NRS 338.180, IBC - 2018, ICC/ANSI A117.1 and the most current version of the Americans with Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**ADA SITE IMPROVEMENTS****Project Index #: 9913ADA1****Construction Cost \$123,000**

The Americans with Disabilities Act (ADA) provides for accessibility to sites and services for people with physical limitations. Access to the various features throughout the site is necessary to comply with ADA accessibility requirements. This project would provide for an accessible path of travel to the adobe fort, tower, group use area and to a platform to view the battle re-enactments and other performances on the upper portion of the site. This will require regrading, placement of P.C. concrete, signage, ramps, handrails, a concrete viewing platform and any other necessary upgrades. The 2018 IBC, ICC/ANSI A117.1 and the most current version of the Americans With Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project.

This project or a portion thereof was previously recommended in the FCA report dated 10/15/2003 and 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**FENCE UPGRADE****Project Index #: 9913SEC1****Construction Cost \$20,000**

The landscape fence on the south side of the site is not tall enough to keep people from climbing over it. Vandals and thieves have accessed the property by climbing over the fence and it is recommended to add height to the fence to prevent this. This project would provide for adding concrete masonry units to the existing fence to raise the height of the fence by 3 feet.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**Project Index #: 9913ADA2**  
**Construction Cost \$30,800**

#### **GROUP USE AREA IMPROVEMENTS**

The group use area is not ADA compliant and is not functional as is. This area should be scheduled for improvements. Currently, the picnic tables are under wooden grape vine trellises. The tables are also worn and deteriorated and there are no ADA tables or access. This project would provide for the purchase and installation of 10 new picnic tables including one accessible table, a new shade ramada to cover all of the tables and flatwork to provide ADA access between the new tables and the restroom.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

#### **PRIORITY CLASS 2 PROJECTS**

**Total Construction Cost for Priority 2 Projects: \$103,800**

**Necessary - Not Yet Critical**

**Two to Four Years**

**Project Index #: 9913SIT2**  
**Construction Cost \$64,500**

#### **ASPHALT PAVING INSTALLATION**

The access road from the parking lot to the Maintenance Shop and the parking area in front of the Maintenance Shop are not paved. This project would provide asphalt cement paving for a 10' wide access road and paving the parking area at the maintenance shop. The estimate includes grading, 6" base, compaction and installation of 4" thick asphalt cement paving. A drainage swale should be incorporated into the access road at the slope going down to the parking lot.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**Project Index #: 9913SIT1**  
**Construction Cost \$39,300**

#### **SLURRY / CRACK SEAL ASPHALT PAVING**

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and fog sealing of the paved parking lot. Striping is included in this estimate. This project should be scheduled on a 5 year cyclical basis to maintain the integrity of the paving and prevent premature failure. 25,000 square feet of asphalt area was used to generate this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 10/15/2003 and 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

#### **PRIORITY CLASS 3 PROJECTS**

**Total Construction Cost for Priority 3 Projects: \$125,000**

**Long-Term Needs**

**Four to Ten Years**

**Project Index #: 9913SIT8**  
**Construction Cost \$125,000**

#### **RESEAL ASPHALT PARKING AND ROADS**

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and sealing of the paving site wide including access roads, parking areas and the maintenance yard. Striping is included in this estimate. This project should be scheduled on a 5 year cyclical basis to maintain the integrity of the paving and prevent premature failure. 100,000 square feet of asphalt area was used to generate this estimate.

#### **PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$176,900</b>
<b>Priority Class 2:</b>	<b>\$103,800</b>
<b>Priority Class 3:</b>	<b>\$125,000</b>
<b>Grand Total:</b>	<b>\$405,700</b>

**MORMON FORT SOUTH RESTROOM**

SPWD Facility Condition Analysis - 2900

Survey Date: 12/12/2017

## **MORMON FORT SOUTH RESTROOM BUILDING REPORT**

The Mormon Fort South Restroom is a concrete masonry unit and wood framed structure with a single-ply roofing system on a concrete foundation. It provides Men's and Women's restroom facilities and is mostly ADA compliant. There is a small electric forced air unit in the attic space above.

**PRIORITY CLASS 1 PROJECTS** **Total Construction Cost for Priority 1 Projects: \$1,100**  
**Currently Critical** **Immediate to Two Years**

**ADA SIGNAGE**

**Project Index #: 2900ADA1**  
**Construction Cost \$1,100**

Americans with Disabilities Act (ADA) regulations pertaining to building access has established building signage criteria for permanent spaces in buildings. The criteria includes: sign mounting heights and locations; character heights and proportions; raised and Braille characters/pictograms; and sign contrast and finish. The signage in this facility does not comply with this criteria. It is recommended that applicable signage be installed where required. NRS 338.180, IBC - 2018, ICC/ANSI A117.1 and the most current version of the Americans with Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**PRIORITY CLASS 2 PROJECTS** **Total Construction Cost for Priority 2 Projects: \$1,400**  
**Necessary - Not Yet Critical** **Two to Four Years**

**COUNTERTOP MAINTENANCE**

**Project Index #: 2900INT3**  
**Construction Cost \$400**

The concrete countertop sealant is damaged and reaching the end of its useful life. It is recommended that the concrete be stripped and re-sealed in order to extend the concrete's useful life. This project would provide for stripping the concrete and applying a new coat of sealant in the next 2 - 3 years.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**OCCUPANCY SENSOR INSTALLATION**

**Project Index #: 2900ENR1**  
**Construction Cost \$1,000**

There are no occupancy sensors installed in the building to control lighting. It is recommended to install sensors in order to reduce energy costs. Occupancy sensors will be installed in each restroom. This project provides for purchase and installation of 2 sensors.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**PRIORITY CLASS 3 PROJECTS** **Total Construction Cost for Priority 3 Projects: \$6,000**  
**Long-Term Needs** **Four to Ten Years**

**EXTERIOR FINISHES**

**Project Index #: 2900EXT1**  
**Construction Cost \$3,000**

The exterior finishes are in fair condition. It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost are cleaning and sealing the concrete masonry units, painting or sealing the exposed wood and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be sealed and caulked in the next 4 -5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.



**Project Index #: 2900INT1**  
**Construction Cost \$3,000**

## **INTERIOR FINISHES**

The interior finishes are in fair condition. It is recommended that the interior concrete masonry unit walls are cleaned and sealed at least once in the next 4 - 5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

## **BUILDING INFORMATION:**

<b>Gross Area (square feet): 600</b>	<b>IBC Occupancy Type 1: 100 % B</b>
<b>Year Constructed: 2005</b>	<b>IBC Occupancy Type 2: 0 %</b>
<b>Exterior Finish 1: 100 % Masonry</b>	<b>Construction Type: Concrete Masonry Units &amp; Steel</b>
<b>Exterior Finish 2: 0 %</b>	<b>IBC Construction Type: I-B</b>
<b>Number of Levels (Floors): 1</b>	<b>Percent Fire Suppressed: 0 %</b>
<b>Basement? No</b>	

## **PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$1,100</b>	<b>Project Construction Cost per Square Foot:</b>	<b>\$14.17</b>
<b>Priority Class 2:</b>	<b>\$1,400</b>	<b>Total Facility Replacement Construction Cost:</b>	<b>\$120,000</b>
<b>Priority Class 3:</b>	<b>\$6,000</b>	<b>Facility Replacement Cost per Square Foot:</b>	<b>\$200</b>
<b>Grand Total:</b>	<b>\$8,500</b>	<b>FCNI:</b>	<b>7%</b>

**MORMON FORT PUMP HOUSE**

SPWD Facility Condition Analysis - 2864

Survey Date: 12/12/2017

## **MORMON FORT PUMP HOUSE BUILDING REPORT**

The Mormon Fort Pump House is a concrete masonry unit and steel framed structure with a metal roofing system on a concrete foundation which is partially below grade and accessed by a concrete stairway. It contains the water pumping system for the stream and pond feature in the park. The equipment is basically designed for a swimming pool and has been maintenance intensive according to staff.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$1,400****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2864INT1****INTERIOR FINISHES****Construction Cost \$1,400**

The interior finishes are in fair condition. It is recommended that the interior walls be painted at least once in the next 4 - 5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$1,400****Long-Term Needs****Four to Ten Years****Project Index #: 2864EXT1****EXTERIOR FINISHES****Construction Cost \$1,400**

The exterior finishes are in good condition. It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is sanding, priming and painting the exposed wood features, repairing and sealing the stone and masonry work and caulking of the flashing, fixtures and all other penetrations. It is recommended that the building be painted and sealed in the next 8 - 9 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

**BUILDING INFORMATION:**

<b>Gross Area (square feet): 140</b>	<b>IBC Occupancy Type 1: 0 % U</b>
<b>Year Constructed: 1999</b>	<b>IBC Occupancy Type 2: 0 %</b>
<b>Exterior Finish 1: 100 % Stone Masonry</b>	<b>Construction Type: Concrete Masonry Units</b>
<b>Exterior Finish 2: 0 %</b>	<b>IBC Construction Type: V-B</b>
<b>Number of Levels (Floors): 1</b>	<b>Percent Fire Suppressed: 0 %</b>
<b>Basement? No</b>	

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$0</b>	<b>Project Construction Cost per Square Foot:</b>	<b>\$20.00</b>
<b>Priority Class 2:</b>	<b>\$1,400</b>	<b>Total Facility Replacement Construction Cost:</b>	<b>\$28,000</b>
<b>Priority Class 3:</b>	<b>\$1,400</b>	<b>Facility Replacement Cost per Square Foot:</b>	<b>\$200</b>
<b>Grand Total:</b>	<b>\$2,800</b>	<b>FCNI:</b>	<b>10%</b>

**MORMON FORT TOWER**

SPWD Facility Condition Analysis - 2399

Survey Date: 12/12/2017

## **MORMON FORT TOWER**

### **BUILDING REPORT**

The Mormon Fort Tower is an adobe masonry re-creation of a portion of the old fort. It has a wood framed roofing system and a dirt floor. It is open to the public for tours.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$1,000****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2399EXT1****Construction Cost \$1,000****EXTERIOR/ INTERIOR FINISHES**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior and interior of the building excluding the roof. Included in the cost is cleaning and repairing the brick masonry as needed and caulking of any penetrations. It is recommended that the building be repaired and caulked in the next 2 - 3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

**BUILDING INFORMATION:**

<b>Gross Area (square feet): 200</b>	<b>IBC Occupancy Type 1: 100 % U</b>
<b>Year Constructed: 1999</b>	<b>IBC Occupancy Type 2: %</b>
<b>Exterior Finish 1: 100 % Adobe Masonry</b>	<b>Construction Type: Adobe Masonry</b>
<b>Exterior Finish 2: 0 %</b>	<b>IBC Construction Type: V-B</b>
<b>Number of Levels (Floors): 2</b>	<b>Percent Fire Supressed: 0 %</b>
<b>Basement? No</b>	

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$0</b>	<b>Project Construction Cost per Square Foot:</b>	<b>\$5.00</b>
<b>Priority Class 2:</b>	<b>\$1,000</b>	<b>Total Facility Replacement Construction Cost:</b>	<b>\$20,000</b>
<b>Priority Class 3:</b>	<b>\$0</b>	<b>Facility Replacement Cost per Square Foot:</b>	<b>\$100</b>
<b>Grand Total:</b>	<b>\$1,000</b>	<b>FCNI:</b>	<b>5%</b>

**MORMON FORT RESTROOM**

SPWD Facility Condition Analysis - 2398

Survey Date: 12/12/2017

**MORMON FORT RESTROOM****BUILDING REPORT**

The Mormon Fort Restroom is a brick masonry and wood framed structure with a foam roofing system on a concrete foundation. It is located on the west side of the site adjacent to the fort tower and gazebo area. The restroom is identified as an ADA accessible restroom but does not have a route of travel to the facility from the site attractions.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$700****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2398ENR1****LIGHTING UPGRADE****Construction Cost \$700**

The existing lighting fixtures are the older fluorescent type, and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. 5,000K LED lamps, without the ballasts are suggested, and new tombstones (if needed). Occupancy sensors will be installed in the restrooms for additional savings. Any electrical wiring upgrades are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$2,400****Long-Term Needs****Four to Ten Years****Project Index #: 2398EXT1****EXTERIOR FINISHES****Construction Cost \$1,200**

The exterior finishes are in fair condition. It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting the stucco walls and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 4 - 6 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

**Project Index #: 2398INT1****INTERIOR FINISHES****Construction Cost \$1,200**

The interior finishes are in fair condition. It is recommended that the painted interior walls be painted at least once in the next 4 - 6 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

**BUILDING INFORMATION:**

<b>Gross Area (square feet): 240</b>	<b>IBC Occupancy Type 1: 100 % B</b>
<b>Year Constructed: 1999</b>	<b>IBC Occupancy Type 2: %</b>
<b>Exterior Finish 1: 100 % Painted Brick Mason</b>	<b>Construction Type: Brick Masonry &amp; Wood</b>
<b>Exterior Finish 2: 0 %</b>	<b>IBC Construction Type: V-B</b>
<b>Number of Levels (Floors): 1</b>	<b>Percent Fire Suppressed: 0 %</b>
<b>Basement? No</b>	

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1: \$0</b>	<b>Project Construction Cost per Square Foot: \$12.92</b>
<b>Priority Class 2: \$700</b>	<b>Total Facility Replacement Construction Cost: \$48,000</b>
<b>Priority Class 3: \$2,400</b>	<b>Facility Replacement Cost per Square Foot: \$200</b>
<b>Grand Total: \$3,100</b>	<b>FCNI: 6%</b>

**MORMON FORT VEHICLE SHOP**

SPWD Facility Condition Analysis - 2397

Survey Date: 12/12/2017

**MORMON FORT VEHICLE SHOP  
BUILDING REPORT**

The Mormon Fort Vehicle Shop is a concrete masonry unit and steel framed structure with a metal roofing system on a concrete foundation. It contains a large single bay for equipment and vehicle repair, storage areas and office space with a restroom which is mostly ADA compliant. The heating and cooling is provide by a split system with 2 exterior ground mounted AC condensers and a small electric forced air unit mounted in a closet in the shop area. The facility is lacking a fire alarm and sprinkler system. The building is well maintained.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$7,000****Necessary - Not Yet Critical****Two to Four Years****GUTTER INSTALLATION****Project Index #: 2397EXT2****Construction Cost \$4,000**

The building does not have gutters or downspouts to control the runoff from the roof. The water currently sheet drains off the roof causing extensive erosion to the built-up dirt slope around the foundation. This will eventually lead to failure of the foundation undermining the integrity of the entire structure. This project would provide funding for the installation of a seamless gutter and downspout system for the building.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**LIGHTING UPGRADE****Project Index #: 2397ENR1****Construction Cost \$3,000**

The existing lighting fixtures are the older fluorescent type, and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. 5,000K LED lamps, without the ballasts are suggested, and new tombstones (if needed). Occupancy sensors will be installed in the restroom and office areas for additional savings. Any electrical wiring upgrades are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$11,760****Long-Term Needs****Four to Ten Years****EXTERIOR FINISHES****Project Index #: 2397EXT1****Construction Cost \$5,880**

The exterior finishes are in good condition. It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting the stucco, sealing the concrete masonry units and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 7 - 9 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

**INTERIOR FINISHES****Project Index #: 2397INT1****Construction Cost \$5,880**

The interior finishes are in good condition. It is recommended that the interior walls and ceilings be painted at least once in the next 8 - 9 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

**BUILDING INFORMATION:**

Gross Area (square feet): 1,176	IBC Occupancy Type 1: 60 % S-1
Year Constructed: 1999	IBC Occupancy Type 2: 40 % B
Exterior Finish 1: 100 % Painted Stucco / EIFS	Construction Type: Concrete Masonry Units & Steel
Exterior Finish 2: 0 %	IBC Construction Type: V-B
Number of Levels (Floors): 1	Percent Fire Supressed: 0 %
Basement? No	

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

Priority Class 1:	\$0	Project Construction Cost per Square Foot:	\$15.95
Priority Class 2:	\$7,000	Total Facility Replacement Construction Cost:	\$295,000
Priority Class 3:	\$11,760	Facility Replacement Cost per Square Foot:	\$251
Grand Total:	\$18,760	FCNI:	6%

**HISTORIC FORT MUSEUM**

SPWD Facility Condition Analysis - 1905

Survey Date: 12/12/2017

**HISTORIC FORT MUSEUM****BUILDING REPORT**

The Historic Fort Museum is an adobe and wood framed structure and is the only original remnant on the site. It contains interpretive displays that are open to public. The building is not ADA accessible and is in good shape considering it's age.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$56,400****Necessary - Not Yet Critical****Two to Four Years****ELECTRICAL UPGRADE****Project Index #: 1905ELE1****Construction Cost \$31,400**

The building is equipped with a knob and tube electrical system. This type of system is no longer used and replacement parts are impossible to find. The main disadvantage of this electrical system is that there is no safety grounding conductor. Also, as the cotton and rubber wire insulation ages, it becomes dry and brittle and becomes easily damaged. It is recommended the entire system be upgraded to a modern electrical system. The existing knob and tube system could remain in place to display the historical nature of the Museum. Due to the historical nature of the building, this project is subject to review and approval from the State Historical Preservation Office.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**EXTERIOR/ INTERIOR FINISHES****Project Index #: 1905EXT1****Construction Cost \$25,000**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior and interior of the structure. Included in the cost is basic adobe maintenance by the staff as well as funds for adobe specialists to come out once a year. These costs should be sufficient to allow the specialists to spend two days per year at the Museum over the next four years. This project should be scheduled on a cyclical basis to maintain the integrity of the Museum. Due to the historical nature of the building, this project is subject to review and approval from the State Historical Preservation Office.

**BUILDING INFORMATION:**

<b>Gross Area (square feet):</b> 1,000	<b>IBC Occupancy Type 1:</b> 100 % A-3
<b>Year Constructed:</b> 1855	<b>IBC Occupancy Type 2:</b> %
<b>Exterior Finish 1:</b> 100 % Adobe	<b>Construction Type:</b> Adobe
<b>Exterior Finish 2:</b> %	<b>IBC Construction Type:</b> V-B
<b>Number of Levels (Floors):</b> 1	<b>Basement?</b> No
	<b>Percent Fire Suppressed:</b> 0 %

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$0</b>	<b>Project Construction Cost per Square Foot:</b>	<b>\$56.40</b>
<b>Priority Class 2:</b>	<b>\$56,400</b>	<b>Total Facility Replacement Construction Cost:</b>	<b>\$250,000</b>
<b>Priority Class 3:</b>	<b>\$0</b>	<b>Facility Replacement Cost per Square Foot:</b>	<b>\$250</b>
<b>Grand Total:</b>	<b>\$56,400</b>	<b>FCNI:</b>	<b>23%</b>

**MORMON FORT VISITORS CENTER**

SPWD Facility Condition Analysis - 1681

Survey Date: 12/12/2017

## **MORMON FORT VISITORS CENTER BUILDING REPORT**

The Mormon Fort Visitor's Center is wood, concrete and steel framed structure with a single-ply roofing system on a concrete foundation. It contains a small gift shop, display areas and staff offices. It has a fire alarm and sprinkler system as well as a security system, but the security system is not adequate according to staff. The building's HVAC system is an all electric packaged system with collapsible ducting. There are no restrooms present in the building. The facility is mostly ADA compliant and is well maintained.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$3,250****Currently Critical****Immediate to Two Years****ADA SIGNAGE**

**Project Index #: 1681ADA1  
Construction Cost \$750**

Americans with Disabilities Act (ADA) regulations pertaining to building access has established building signage criteria for permanent spaces in buildings. The criteria includes: sign mounting heights and locations; character heights and proportions; raised and Braille characters/pictograms; and sign contrast and finish. The signage in this facility does not comply with this criteria. It is recommended that applicable signage be installed where required. NRS 338.180, IBC - 2018, ICC/ANSI A117.1 and the most current version of the Americans with Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**BACKFLOW PREVENTER INVESTIGATION**

**Project Index #: 1681PLM2  
Construction Cost \$2,500**

There is a backflow preventer on the main water line coming into the building. It is leaking and should be scheduled for replacement. There may be a pressure problem with the incoming water main. The psi valve is maxed out indicating the pressure is above 100 psi. This may be the cause of the broken prevention valve and should be analyzed by a licensed plumber. This project would provide for employing a licensed plumber to replace the backflow preventer and to analyze the system.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$4,300****Necessary - Not Yet Critical****Two to Four Years****OCCUPANCY SENSOR INSTALLATION**

**Project Index #: 1681ENR1  
Construction Cost \$1,800**

There are no occupancy sensors installed in the building to control lighting. It is recommended to install sensors in order to reduce energy costs. Occupancy sensors will be installed in restrooms, conference rooms, utility rooms and other low occupancy. This project provides for purchase and installation of 6 sensors.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.



## **WATER HEATER REPLACEMENT**

**Project Index #: 1681PLM1**  
**Construction Cost \$25,500**

There is a 5 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 2-3 years. It is recommended that a new on-demand electric water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

## **PRIORITY CLASS 3 PROJECTS**

**Total Construction Cost for Priority 3 Projects: \$234,500**

### **Long-Term Needs**

### **Four to Ten Years**

## **EXTERIOR FINISHES**

**Project Index #: 1681EXT1**  
**Construction Cost \$25,000**

The exterior finishes are in good condition. It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost are cleaning and sealing the concrete masonry units and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be sealed and caulked in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

## **INTERIOR FINISHES**

**Project Index #: 1681INT1**  
**Construction Cost \$25,000**

The interior finishes are in good condition. It is recommended that the painted interior walls and ceilings be painted at least once in the next 7 - 9 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

## **PHOTOVOLTAIC POWER SYSTEM INSTALLATION**

**Project Index #: 1681ENR2**  
**Construction Cost \$184,500**

There is no natural gas service to the site. All of the equipment including HVAC and water heating is powered solely by electricity. This makes the building an ideal candidate for photovoltaic power which could be installed on the roof. A photovoltaic power system would eliminate electricity costs and could be fitted with a reverse power meter to sell power back to the electric company. This project would provide for the purchase and installation of a 15 kW photovoltaic system including solar panels, deep cycle solar batteries, a reverse power meter and all associated electrical boxes and hardware to connect it to the main electrical service.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/12/2017.

## **BUILDING INFORMATION:**

<b>Gross Area (square feet): 5,000</b>	<b>IBC Occupancy Type 1: 70 % A-3</b>
<b>Year Constructed: 2005</b>	<b>IBC Occupancy Type 2: 30 % B</b>
<b>Exterior Finish 1: 75 % Concrete Masonry U</b>	<b>Construction Type: Wood &amp; Steel</b>
<b>Exterior Finish 2: 25 % Concrete &amp; Metal Sid</b>	<b>IBC Construction Type: I-A</b>
<b>Number of Levels (Floors): 1</b>	<b>Percent Fire Suppressed: 100 %</b>
<b>Basement? No</b>	

## **PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1: \$3,250</b>	<b>Project Construction Cost per Square Foot: \$48.41</b>
<b>Priority Class 2: \$4,300</b>	<b>Total Facility Replacement Construction Cost: \$1,450,000</b>
<b>Priority Class 3: \$234,500</b>	<b>Facility Replacement Cost per Square Foot: \$290</b>
<b>Grand Total: \$242,050</b>	<b>FCNI: 17%</b>

**NOTES:**

The deficiencies outlined in this report were noted from a visual survey. The costs do not represent the cost of a complete facility renovation or maintenance needs. Recommended projects do not include telecommunications, furniture, window treatment, space change, program issues, relocation, swing space, or costs that could not be identified or determined from the survey and available building information.

Individual projects and costs noted herein may be impacted by new construction materials or methods, agency projects, and pending or proposed Capital Improvement Projects (CIP).

This report was created under the authority found in NRS 341.128 by the State Public Works Division and should be utilized as a planning level document.

**REPORT DEVELOPMENT:**

State Public Works Division  
Facilities Condition Analysis

515 E. Musser Street, Suite 102  
Carson City, Nevada 89701-4263

(775) 684-4141 voice  
(775) 684-4142 facsimile



Old Las Vegas Mormon Fort State Historical Park - Site #9913  
Description: Paving Access Road Recommended.



Old Las Vegas Mormon Fort State Historical Park - Site #9913  
Description: Crack Fill & Slurry Seal Needed.





Mormon Fort Visitor's Center - Building #1681  
Description: Exterior View of the Building & Public Entrance.



Mormon Fort Visitor's Center - Building #1681  
Description: View of the Interior.



Mormon Fort Visitor's Center - Building #1681  
Description: Leaking Back Flow Prevention Assembly.



Mormon Fort Visitor's Center - Building #1681  
Description: Water Heater Replacement Needed.





Historic Fort Museum - Building #1905  
Description: Exterior of the Building.



Historic Fort Museum - Building #1905  
Description: Electrical Upgrade Needed.



Mormon Fort Vehicle Shop - Building #2397  
Description: Exterior of the Building & Need for Drain Gutters.



Mormon Fort Vehicle Shop - Building #2397  
Description: Lighting Upgrade.





Mormon Fort Restroom - Building #2398  
Description: Exterior of the Building.



Mormon Fort Restroom - Building #2398  
Description: Entry into the Building.





Mormon Fort Tower - Building #2399  
Description: Exterior of the Building.



Mormon Fort Pump House - Building #2864  
Description: Exterior of the Building.





Mormon Fort South Restroom - Building #2900  
Description: Exterior / Entrance of the Building.



Mormon Fort South Restroom - Building #2900  
Description: Interior of the Building.