

State of Nevada  
Department of Tourism & Cultural Affairs  
Division of Museums & History

# MARJORIE RUSSELL RESEARCH CENTER SITE

2351 Arrowhead Drive  
Carson City, Nevada 89701

**Site Number: 9852**  
**STATE OF NEVADA PUBLIC WORKS DIVISION**  
**FACILITY CONDITION ANALYSIS**



Report distributed in December 2021

State of Nevada  
Department of Tourism & Cultural Affairs  
Division of Museums & History

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: 9852

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
0208	MARJORIE RUSSELL RESEARCH CENTER 2351 Arrowhead Drive Carson City	6000	1968	2/26/2021	\$15,200	\$458,900	\$211,400	\$685,500	\$1,800,000	38%
9852	MARJORIE RUSSELL RESEARCH CENTER SITE 2351 Arrowhead Drive Carson City		1968	2/26/2021	\$0	\$180,000	\$0	\$180,000		0%
Report Totals.....:		6,000			\$15,200	\$638,900	\$211,400	\$865,500	\$1,800,000	48%

### 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.

Table of Contents

Building Name	Index #
MARJORIE RUSSELL RESEARCH CENTER SITE	9852
MARJORIE RUSSELL RESEARCH CENTER	0208

**MARJORIE RUSSELL RESEARCH CENTER SITE**

SPWD Facility Condition Analysis - 9852

Survey Date: 2/26/2021

**MARJORIE RUSSELL RESEARCH CENTER SITE****BUILDING REPORT**

The Research Center site is located on Arrowhead Drive in Carson City, Nevada. There is a paved parking area which is in need of replacement. The designated ADA parking spaces are not fully compliant but there is an ADA compliant route of travel into the facility. The building is served by city water and sewer services as well as electric and natural gas service. The north side of the site which borders the roadway is a mix of gravel, trees and planters which are located adjacent to the building. It is recommended that the planters be removed. The site also needs some drainage improvements at the gutter downspout locations to prevent further erosion. These items will be addressed in the report.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$180,000****Necessary - Not Yet Critical****Two to Four Years****DRAINAGE / LANDSCAPE IMPROVEMENTS****Project Index #: 9852SIT2****Construction Cost \$20,000**

The west side of the building has some areas in need of drainage improvements where the roof drainage down spouts terminate at grade. This project would provide for down spout extensions to a gravel drywell capable of handling runoff from rain and snow melt.

This project or a portion thereof was previously recommended in the FCA report dated 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

**PAVING REPLACEMENT****Project Index #: 9852SIT1****Construction Cost \$160,000**

The existing asphalt concrete paving is in poor shape. There are large cracks and areas of alligating and is showing signs of failure. This project would provide for the removal and replacement of AC paving. Also included is PC concrete ADA accessible parking, striping, signage and wheel stops. 30,000 square feet was used to generate this estimate. This project should be implemented within the next 2 - 3 years.

This project or a portion thereof was previously recommended in the FCA report dated 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 06/26/2021.

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

<b>Priority Class 1:</b>	<b>\$0</b>
<b>Priority Class 2:</b>	<b>\$180,000</b>
<b>Priority Class 3:</b>	<b>\$0</b>
<b>Grand Total:</b>	<b>\$180,000</b>

## MARJORIE RUSSELL RESEARCH CENTER BUILDING REPORT

The Marjorie Russell Clothing and Textile Research Center is located in the northern industrial area of Carson City on Arrowhead Drive. This research center was created in 1992 under the direction of the Nevada State Museum and the Nevada Historical Society. The purpose of the Marjorie Russell Center is to enhance the awareness of fashion history as it relates to society, history, and material culture. The building is constructed of painted concrete masonry unit walls, wood roof trusses and a single ply-membrane roofing system on a concrete slab-on-grade foundation. The roofing was replaced in 2001 with a 15 year warranty. There is a small library area for presentations and warehouse area for storage, photographing and cataloging of items. The facility has a fire sprinkler and alarm system and an ADA compliant unisex restroom. Another restroom is not ADA compliant. Heating and cooling is provided by 3 roof mounted packaged units which are over 20 years old. The facility is open to the public by appointment only.

**PRIORITY CLASS 1 PROJECTS** **Total Construction Cost for Priority 1 Projects: \$15,200**  
**Currently Critical** **Immediate to Two Years**

### REMOVE PLANTERS

**Project Index #: 0208SIT2**  
**Construction Cost \$10,000**

This building has planters across the front of the building that extend up onto the exterior wall. This practice promotes water infiltration through the side of the building and has been known to cause mold growth along the exterior walls of buildings. This project recommends that the planters be removed as soon as feasible and replaced with xeriscaping. This project or a portion there of was previously recommended in the FCA report dated 02/12/2003, 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

### SEISMIC GAS SHUT OFF VALVE

**Project Index #: 0208SFT4**  
**Construction Cost \$5,200**

Agreements reached between the Nevada Risk Management Office and the State of Nevada's Insurance Underwriter require Seismic Gas Shutoff Valves (SGSV's) on all gas services to all State buildings. This project would install a SGSV to the gas line serving the building. This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

**PRIORITY CLASS 2 PROJECTS** **Total Construction Cost for Priority 2 Projects: \$458,900**  
**Necessary - Not Yet Critical** **Two to Four Years**

### BREAK ROOM REMODEL

**Project Index #: 0208INT5**  
**Construction Cost \$25,000**

The kitchenette and associated cabinets in the employee break room are original to the building. The quality of construction and installation were inadequate for the high usage at this facility, and the cabinets and countertops are delaminating and failing. This project recommends the replacement of the existing kitchen countertops, cabinets, and associated equipment with heavy duty, quality components. The cabinets should be finished inside and outside with a melamine or similar finish which encapsulates the door, frame, and shelving. The countertops should be constructed of a highly durable product, such as stainless steel, over a moisture resistant underlayment to minimize swelling and damage from water exposure. ADA compliance according to NRS 338.180, IBC - 2018, ICC/ANSI A117.1 and the most current version of the ADA Standards for Accessible Design should be incorporated into the design such as providing an accessible sink. This estimate includes removal and disposal of the existing materials. This project should be implemented concurrently with the EXHAUST HOOD INSTALLATION project.

## **EXHAUST HOOD INSTALLATION**

**Project Index #: 0208HVA2**

**Construction Cost \$3,500**

The building contains an electric stove top in the kitchen area. The 2018 Uniform Mechanical code requires an exhaust hood to be installed. This project would provide for the purchase and installation of exhaust hood including the required ducting to the exterior of building.

This project should be implemented concurrently with the BREAK ROOM REMODEL project.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013 . It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **EXTERIOR ENERGY RETROFIT**

**Project Index #: 0208ENR1**

**Construction Cost \$150,000**

The building is constructed of concrete masonry units (CMU) with no insulation. The windows are original to the building, and of single pane construction. Buildings of this type are not energy efficient. This project recommends adding an exterior insulation and finish system (EIFS) over the CMU, replacing the storefront window systems and doors with a dual pane insulated storefront window system and removing and replacing the windows in the rear of the building. This work will make the building more energy efficient.

This project or a portion there of was previously recommended in the FCA report dated 02/12/2003, 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **HVAC SYSTEM REPLACEMENT**

**Project Index #: 0208HVA1**

**Construction Cost \$139,400**

The three HVAC roof top units are over 20+ years old. They are not energy efficient, need constant repairs and have reached the end of their expected and useful life. This project would provide for installation of three new HVAC packaged units and cleaning of the existing duct work. This project includes removal and disposal of the existing HVAC units and all required connections to utilities.

This project or a portion there of was previously recommended in the FCA report dated 02/12/2003, 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **JANITOR CLOSET WALL PROTECTION**

**Project Index #: 0208SFT3**

**Construction Cost \$1,500**

The mop sink in the Janitor's Closet is mounted adjacent to gypsum board that is showing signs of water damage. This project would provide fiberglass reinforced panels (FRP) to be installed on the walls adjacent to the mop sink. The FRP shall extend two feet beyond the edge of the sink and a minimum of 54" above the floor finish.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **LIGHTING UPGRADE**

**Project Index #: 0208ENR2**

**Construction Cost \$21,000**

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 low occupancy areas for additional savings. Electrical wiring upgrades are not included in this estimate.

## **REPLACE CABINETS**

**Project Index #: 0208INT3**

**Construction Cost \$65,000**

The wood cabinets located in warehouse are used to store and protects artifacts. These cabinets are in poor shape, prone to fire and water damaged, the plywood is falling apart, doors do not close properly and the artifacts are subject to the environmental elements. Poor-quality storage enclosures accelerate the deterioration of the materials they are intended to protect. This project would provide for the purchase of 30 steel cabinets which will provide a stable environment for archived and stored items.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.



## **REPLACE WATER HEATER**

**Project Index #: 0208PLM1**

**Construction Cost \$3,500**

The water heater tank is showing signs of wear and deterioration. It appears this appliance is original to the building and has reached the end of its expected life. This project would provide for the purchase and installation of a new 75 gallon gas fired water heater tank including seismic bracing and drain pan. Removal and disposal of the existing tank is included in this estimate.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **WAREHOUSE FLOOR FINISH**

**Project Index #: 0208INT4**

**Construction Cost \$50,000**

The warehouse concrete floor area is painted and/or stained and has floor mounted electrical duplex outlets throughout. The painted and/or stained floor in the warehouse is showing signs of wear. The concrete area around the floor mounted electrical outlets has been chipped away causing a tripping hazard. This project would provide for patching the concrete around the electrical outlets and the painting of the floor surface with a paint designed for use on concrete. Included in the estimate is prep work as needed.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

## **PRIORITY CLASS 3 PROJECTS**

**Total Construction Cost for Priority 3 Projects: \$211,400**

### **Long-Term Needs**

### **Four to Ten Years**

## **EXTERIOR FINISHES**

**Project Index #: 0208EXT3**

**Construction Cost \$30,000**

The exterior finishes were in fair condition. It is important to maintain the finish, weather resistance and appearance of the building. The exterior finishes on the building is starting to peel and bluster. This project would provide funding to protect the exterior building envelope, other than the roof, including painting, staining, or other applied finishes, and caulking around windows, flashing, fixtures, and other penetrations to maintain the building in good, weather tight condition. This project will protect the building envelope. This project would not be required if the exterior energy retrofit project is implemented. This project should be completed in the next 4 - 5 years.

## **INTERIOR FINISHES**

**Project Index #: 0208INT2**

**Construction Cost \$30,000**

The interior finishes were in fair condition. The ceilings show minor water stains from past water leaks. This project would provide for the painting of the interior walls and ceiling. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project should be completed in the next 3 - 4 years.

## **REPLACE GUTTERS AND DOWNSPOUTS**

**Project Index #: 0208EXT2**

**Construction Cost \$32,700**

The building's gutters have been damaged and show wear and tear from environmental conditions. Many are leaking. In several locations, downspouts have been damaged or are missing. This project would provide for the purchase and installation of seamless gutters and down spouts to divert the water away from the building and building entrances and exits.

This project should be implemented concurrently with the ROOF REPLACEMENT project.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 02/28/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

**Project Index #: 0208EXT4**  
**Construction Cost \$118,700**

## **ROOF REPLACEMENT**

The roof on this building was in fair condition at the time of the survey. The statewide roofing program has set the useful life of an average roof at 20 years. The roof warranty expires at the end of the same time frame. The temperature fluctuations throughout the year, consistent wind which blows sand and dirt on to the roof membrane, and constant exposure to the sun are contributing factors to wear and deterioration. The current roofing system was installed in 2001. It is recommended that this building be re-roofed in the next 6 - 10 years to be consistent with the roofing program and the end of the warranty period.

This project should be implemented concurrently with the REPLACE GUTTERS AND DOWNSPOUTS project.

## **BUILDING INFORMATION:**

<b>Gross Area (square feet):</b> 6,000	<b>IBC Occupancy Type 1:</b> 40 % B
<b>Year Constructed:</b> 1968	<b>IBC Occupancy Type 2:</b> 60 % S-1
<b>Exterior Finish 1:</b> 100 % Painted CMU	<b>Construction Type:</b> Concrete Masonry Units and Wood
<b>Exterior Finish 2:</b> %	<b>IBC Construction Type:</b> V-A
<b>Number of Levels (Floors):</b> 1	<b>Percent Fire Suppressed:</b> 100 %
<b>Basement?</b> No	

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

<b>Priority Class 1:</b> \$15,200	<b>Project Construction Cost per Square Foot:</b> \$114.25
<b>Priority Class 2:</b> \$458,900	<b>Total Facility Replacement Construction Cost:</b> \$1,800,000
<b>Priority Class 3:</b> \$211,400	<b>Facility Replacement Cost per Square Foot:</b> \$300
<b>Grand Total:</b> \$685,500	<b>FCNI:</b> 38%

## **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	515 E. Musser Street, Suite 102	(775) 684-4141 voice
Facilities Condition Analysis	Carson City, Nevada 89701-4263	(775) 684-4142 facsimile



Marjorie Russell Research Center Site – FCA Site #9852  
Description: Paving Replacement Needed.



Marjorie Russell Research Center Site – FCA Site #9852  
Description: Drainage / Landscape Improvements Needed.





Marjorie Russell Research Center – FCA Building #0208  
Description: Planter Removal Recommended.



Marjorie Russell Research Center – FCA Building #0208  
Description: Seismic Gas Isolation Valve Needed.



Marjorie Russell Research Center – FCA Building #0208  
Description: Breakroom Remodel and Exhaust Ventilation Recommended.



Marjorie Russell Research Center – FCA Building #0208  
Description: Exterior Insulation & Finish (EIFS) & Window Replacement Needed.





Marjorie Russell Research Center – FCA Building #0208  
Description: Interior LED Lighting Upgrade Recommended.



Marjorie Russell Research Center – FCA Building #0208  
Description: Water Heater Replacement Recommended.