

State of Nevada  
Cultural Affairs  
Facility Condition Analysis

# BOULDER CITY RAILROAD MUSEUM

600 Yucca Street  
Boulder City, Nevada 89005

**Site Number: 9951**

**STATE OF NEVADA PUBLIC WORKS DIVISION  
FACILITY CONDITION ANALYSIS**



Report distributed in February, 2018

State of Nevada  
Cultural Affairs  
Facility Condition Analysis

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 the 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: 9951   |  | Facility Condition Needs Index Report |          |             |                    |                    |                    |                      |                 |      |
|---------------------|--|---------------------------------------|----------|-------------|--------------------|--------------------|--------------------|----------------------|-----------------|------|
| Index #             | Building Name  | Sq. Feet                              | Yr. Buil | Survey Date | Cost to Repair: P1 | Cost to Repair: P2 | Cost to Repair: P3 | Total Cost to Repair | Cost to Replace | FCNI |
| 2208                | BOULDER CITY MUSEUM SHADE STRUCTURE #4<br>600 Yucca Street<br>Boulder City | 880                                   | 2001     | 12/14/2016  | \$20,000           | \$3,520            | \$0                | \$23,520             | \$35,200        | 67%  |
| 2205                | BOULDER CITY MUSEUM SHADE STRUCTURE #1<br>600 Yucca Street<br>Boulder City | 880                                   | 2001     | 12/14/2016  | \$20,000           | \$3,520            | \$0                | \$23,520             | \$35,200        | 67%  |
| 2207                | BOULDER CITY MUSEUM SHADE STRUCTURE #3<br>600 Yucca Street<br>Boulder City | 1280                                  | 2001     | 12/14/2016  | \$20,000           | \$5,120            | \$0                | \$25,120             | \$51,200        | 49%  |
| 2206                | BOULDER CITY MUSEUM SHADE STRUCTURE #2<br>600 Yucca Street<br>Boulder City | 1280                                  | 2001     | 12/14/2016  | \$20,000           | \$5,120            | \$0                | \$25,120             | \$51,200        | 49%  |
| 2202                | BOULDER CITY MUSEUM GIFT SHOP<br>600 Yucca Street<br>Boulder City          | 144                                   | 2001     | 12/14/2016  | \$4,500            | \$1,440            | \$3,440            | \$9,380              | \$36,000        | 26%  |
| 2203                | BOULDER CITY MUSEUM TICKET STATION<br>600 Yucca Street<br>Boulder City     | 144                                   | 2001     | 12/14/2016  | \$4,250            | \$1,440            | \$1,440            | \$7,130              | \$36,000        | 20%  |
| 2204                | BOULDER CITY MUSEUM CREW QUARTERS<br>600 Yucca Street<br>Boulder City      | 144                                   | 2001     | 12/14/2016  | \$1,250            | \$1,440            | \$3,440            | \$6,130              | \$36,000        | 17%  |
| 2201                | BOULDER CITY MUSEUM COMFORT STATION<br>600 Yucca Street<br>Boulder City    | 144                                   | 2001     | 12/14/2016  | \$0                | \$2,940            | \$5,440            | \$8,380              | \$57,600        | 15%  |
| 0841                | BOULDER CITY MUSEUM MAINTENANCE<br>600 Yucca Street<br>Boulder City        | 9200                                  | 1996     | 12/14/2016  | \$46,450           | \$298,900          | \$0                | \$345,350            | \$2,760,000     | 13%  |
| 3039                | BOULDER CITY MUSEUM TRAIN PAVILION<br>600 Yucca Street<br>Boulder City     | 11102                                 | 2007     | 12/14/2016  | \$20,000           | \$0                | \$44,408           | \$64,408             | \$555,100       | 12%  |
| 9951                | BOULDER CITY RAILROAD MUSEUM SITE<br>600 Yucca Street<br>Boulder City      |                                       | 1996     | 12/14/2016  | \$0                | \$197,000          | \$40,000           | \$237,000            |                 | 0%   |
| Report Totals.....: |  | 25,198                                |          |             | \$156,450          | \$520,440          | \$98,168           | \$775,058            | \$3,653,500     | 21%  |

## Acronyms List

| Acronym   | Definition   |
|---|--|
| <i>Building Codes, Laws, Regulations and Guidelines</i> |  |
| AWWA  | American Water Works Association                                     |
| 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<br>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 in the construction industry. Some or all of these acronyms are used throughout the report.

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**BOULDER CITY RAILROAD MUSEUM SITE**

SPWD Facility Condition Analysis - 9951

Survey Date: 12/14/2016

**BOULDER CITY RAILROAD MUSEUM SITE****BUILDING REPORT**

The Boulder City Railroad Museum facility is situated on 40 acres of property that was donated to the State of Nevada by the Union Pacific Railroad. The site includes four miles of the Boulder Branch Railroad Line between Railroad Pass and Boulder City. There is a large Maintenance Shop, with an office and associated parking, on the west side of Yucca Street. There are 4 individual buildings and 5 shade structures, which includes parking, ADA parking and restrooms on the east side of Yucca Road. The facility is extremely busy on weekends and select days and the site could use additional parking for busses and large recreational vehicles. The State of Nevada is responsible for the railroad crossing and guard on Yucca Street.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$197,000****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 9951SIT5****CONCRETE PAVILION REPAIRS****Construction Cost \$5,000**

The exterior concrete sidewalks and platforms in the train pavilion are due for repairs. This project would provide for removing and replacing the expansion joints in the concrete and replacing the broken concrete curbing at the entrance to the parking lot.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**Project Index #: 9951SFT1****EXTERIOR SITE LIGHTING INSTALLATION****Construction Cost \$112,000**

The site has minimal site lighting in the public parking area and between the buildings which is a security and safety concern. This project will provide funding for the purchase and installation of 12 additional LED fixtures; 30' light poles and 30" diameter raised concrete bases, electrical trenching, conduit, wiring, and required connections to the existing utilities.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**Project Index #: 9951SIT6****RAILROAD TRACK REPLACEMENT****Construction Cost \$80,000**

The site has 5 miles of railroad tracks that were in poor condition and were not in compliance with Federal standards at the time of the survey. This project would remove and replace the existing railroad tracks and replace them with new tracks that meet or exceed the Federal Railroad design standards.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$40,000****Long-Term Needs****Four to Ten Years****Project Index #: 9951SIT1****SLURRY SEAL ASPHALT PAVING****Construction Cost \$40,000**

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and slurry 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. 32,000 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 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                  |
|--------------------------|------------------|
| <b>Priority Class 1:</b> | <b>\$0</b>       |
| <b>Priority Class 2:</b> | <b>\$197,000</b> |
| <b>Priority Class 3:</b> | <b>\$40,000</b>  |
| <b>Grand Total:</b>      | <b>\$237,000</b> |

**BOULDER CITY MUSEUM TRAIN PAVILION**

SPWD Facility Condition Analysis - 3039

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM TRAIN PAVILION****BUILDING REPORT**

The Boulder City Museum Train Pavilion is a steel post and beam structure which provides protection from the elements for the trains on display in the eastern portion of the site.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$20,000****Currently Critical****Immediate to Two Years****Project Index #: 3039ADA1****ADA ACCESS PROGRAM ACCESSIBILITY****Construction Cost \$20,000**

The Boulder City Museum is open to the public and does not have designated ADA access to the Train Pavilion. This project would provide for ADA access inside of the public area of this building and additionally for an audio/ visual presentation at the Train Pavilion areas, which may not be ADA accessible. This project includes funds for an audio/ visual consultant to outline and document the Boulder City Railroad Museum operations and to purchase and install required audio/ visual equipment, needed signage, TDD equipment and any minor remodeling of the public area of the building, as required, to accommodate this program. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$44,408****Long-Term Needs****Four to Ten Years****Project Index #: 3039EXT1****EXTERIOR FINISHES****Construction Cost \$44,408**

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet): 11,102****Year Constructed: 2007****Exterior Finish 1: 100 % Steel Post & Beam /****Exterior Finish 2: 0 %****Number of Levels (Floors): 1 Basement? No****IBC Occupancy Type 1: 100 % U****IBC Occupancy Type 2: 0 %****Construction Type: Steel Post & Beam****IBC Construction Type: III-B****Percent Fire Suppressed: 0 %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                 |  |                  |
|--------------------------|-----------------|--|------------------|
| <b>Priority Class 1:</b> | <b>\$20,000</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$5.80</b>    |
| <b>Priority Class 2:</b> | <b>\$0</b>      | <b>Total Facility Replacement Construction Cost:</b> | <b>\$555,000</b> |
| <b>Priority Class 3:</b> | <b>\$44,408</b> | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$50</b>      |
| <b>Grand Total:</b>      | <b>\$64,408</b> | <b>FCNI:</b>   | <b>12%</b>       |

**BOULDER CITY MUSEUM SHADE STRUCTURE #4**

SPWD Facility Condition Analysis - 2208

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM SHADE STRUCTURE #4****BUILDING REPORT**

The Shade Structure #4 is a steel post and beam structure which is located along the railroad loading/ unloading zone in the eastern portion of the site.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$20,000****Currently Critical****Immediate to Two Years****Project Index #: 2208ADA1****Construction Cost \$20,000****ADA ACCESS PROGRAM ACCESSIBILITY**

The Boulder City Museum Shade Structure #4 is open to the public and does not have designated ADA access to the Shade Structure. This project would provide for ADA access inside of the public area of this building and additionally for an audio/ visual presentation at the Shade Structure areas, which may not be ADA accessible. This project includes funds for an audio/ visual consultant to outline and document the Boulder City Railroad Museum operations and to purchase and install required audio/ visual equipment, needed signage, TDD equipment and any minor remodeling of the public area of the building, as required, to accommodate this program. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$3,520****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2208EXT1****Construction Cost \$3,520****EXTERIOR FINISHES**

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet): 880****Year Constructed: 2001****Exterior Finish 1: 100 % Steel Post & Beam /****Exterior Finish 2: %****Number of Levels (Floors): 1 Basement? No****IBC Occupancy Type 1: 100 % U****IBC Occupancy Type 2: %****Construction Type: Steel Post & Beam****IBC Construction Type: III-B****Percent Fire Suppressed: 0 %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                 |  |                 |
|--------------------------|-----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$20,000</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$26.73</b>  |
| <b>Priority Class 2:</b> | <b>\$3,520</b>  | <b>Total Facility Replacement Construction Cost:</b> | <b>\$35,000</b> |
| <b>Priority Class 3:</b> | <b>\$0</b>      | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$40</b>     |
| <b>Grand Total:</b>      | <b>\$23,520</b> | <b>FCNI:</b>   | <b>67%</b>      |

**BOULDER CITY MUSEUM SHADE STRUCTURE #3**

SPWD Facility Condition Analysis - 2207

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM SHADE STRUCTURE #3****BUILDING REPORT**

The Shade Structure #3 is a steel post and beam structure which is located along the railroad loading/ unloading zone in the eastern portion of the site.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$20,000****Currently Critical****Immediate to Two Years****Project Index #: 2207ADA1****ADA ACCESS PROGRAM ACCESSIBILITY****Construction Cost \$20,000**

The Boulder City Museum is open to the public and does not have designated ADA access to the Shade Structure. This project would provide for ADA access inside of the public area of this building and additionally for an audio/ visual presentation at the Shade Structure areas, which may not be ADA accessible. This project includes funds for an audio/ visual consultant to outline and document the Boulder City Railroad Museum operations and to purchase and install required audio/ visual equipment, needed signage, TDD equipment and any minor remodeling of the public area of the building, as required, to accommodate this program. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$5,120****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2207EXT1****EXTERIOR FINISHES****Construction Cost \$5,120**

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet): 1,280****Year Constructed: 2001****Exterior Finish 1: 100 % Steel Post & Beam /****Exterior Finish 2: %****Number of Levels (Floors): 1      Basement? No****IBC Occupancy Type 1: 100 % U****IBC Occupancy Type 2: %****Construction Type: Steel Post & Beam****IBC Construction Type: III-B****Percent Fire Suppressed: 0 %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                 |  |                 |
|--------------------------|-----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$20,000</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$19.63</b>  |
| <b>Priority Class 2:</b> | <b>\$5,120</b>  | <b>Total Facility Replacement Construction Cost:</b> | <b>\$51,000</b> |
| <b>Priority Class 3:</b> | <b>\$0</b>      | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$40</b>     |
| <b>Grand Total:</b>      | <b>\$25,120</b> | <b>FCNI:</b>   | <b>49%</b>      |

**BOULDER CITY MUSEUM SHADE STRUCTURE #2**

SPWD Facility Condition Analysis - 2206

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM SHADE STRUCTURE #2****BUILDING REPORT**

The Boulder City Shade Structure #2 is a steel post and beam structure which is located along the railroad loading / unloading zone in the eastern portion of the site.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$20,000****Currently Critical****Immediate to Two Years****Project Index #: 2206ADA1****Construction Cost \$20,000****ADA ACCESS PROGRAM ACCESSIBILITY**

The Boulder City Museum is open to the public and does not have designated ADA access to the Shade Structure. This project would provide for ADA access inside of the public area of this building and additionally for an audio/ visual presentation at the Shade Structure areas, which may not be ADA accessible. This project includes funds for an audio/ visual consultant to outline and document the Boulder City Railroad Museum operations and to purchase and install required audio/ visual equipment, needed signage, TDD equipment and any minor remodeling of the public area of the building, as required, to accommodate this program. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$5,120****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2206EXT1****Construction Cost \$5,120****EXTERIOR FINISHES**

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet): 1,280****Year Constructed: 2001****Exterior Finish 1: 100 % Steel Post & Beam /****Exterior Finish 2: %****Number of Levels (Floors): 1      Basement? No****IBC Occupancy Type 1: 100 % U****IBC Occupancy Type 2: %****Construction Type: Steel Post & Beam****IBC Construction Type: III-B****Percent Fire Suppressed: 0 %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                 |  |                 |
|--------------------------|-----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$20,000</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$19.63</b>  |
| <b>Priority Class 2:</b> | <b>\$5,120</b>  | <b>Total Facility Replacement Construction Cost:</b> | <b>\$51,000</b> |
| <b>Priority Class 3:</b> | <b>\$0</b>      | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$40</b>     |
| <b>Grand Total:</b>      | <b>\$25,120</b> | <b>FCNI:</b>   | <b>49%</b>      |

**BOULDER CITY MUSEUM SHADE STRUCTURE #1**

SPWD Facility Condition Analysis - 2205

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM SHADE STRUCTURE #1****BUILDING REPORT**

The Boulder City Shade Structure #1 is a steel post and beam structure which is located along the railroad loading/unloading zone in the eastern portion of the site.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$20,000****Currently Critical****Immediate to Two Years****Project Index #: 2205ADA1****ADA ACCESS PROGRAM ACCESSIBILITY****Construction Cost \$20,000**

The Boulder City Museum is open to the public and does not have designated ADA access to the Shade Structure. This project would provide for ADA access inside of the public area of this building and additionally for an audio/ visual presentation at the Shade Structure areas, which may not be ADA accessible. This project includes funds for an audio/ visual consultant to outline and document the Boulder City Railroad Museum operations and to purchase and install required audio/ visual equipment, needed signage, TDD equipment and any minor remodeling of the public area of the building, as required, to accommodate this program. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$3,520****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2205EXT1****EXTERIOR FINISHES****Construction Cost \$3,520**

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet): 880****Year Constructed: 2001****Exterior Finish 1: 100 % Steel Post & Beam /****Exterior Finish 2: %****Number of Levels (Floors): 1 Basement? No****IBC Occupancy Type 1: 100 % U****IBC Occupancy Type 2: %****Construction Type: Steel Post & Beam****IBC Construction Type: III-B****Percent Fire Suppressed: 0 %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                 |  |                 |
|--------------------------|-----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$20,000</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$26.73</b>  |
| <b>Priority Class 2:</b> | <b>\$3,520</b>  | <b>Total Facility Replacement Construction Cost:</b> | <b>\$35,000</b> |
| <b>Priority Class 3:</b> | <b>\$0</b>      | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$40</b>     |
| <b>Grand Total:</b>      | <b>\$23,520</b> | <b>FCNI:</b>   | <b>67%</b>      |

**BOULDER CITY MUSEUM CREW QUARTERS**

SPWD Facility Condition Analysis - 2204

Survey Date: 12/14/2016

## **BOULDER CITY MUSEUM CREW QUARTERS BUILDING REPORT**

The Boulder City Museum Crew Quarters is a wood framed structure with a standing seam metal hip roof on a slab-on-grade concrete foundation and is located on the east side of the railroad pavilion. It provides a breakroom and small office space for the crews that operate the trains. It has a small wall mounted HVAC packaged unit and also has two exits.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$1,250****Currently Critical****Immediate to Two Years****EGRESS STORAGE REMOVAL****Project Index #: 2204SFT2****Construction Cost \$500**

The exit is currently blocked by items that are being stored in this area. The 2012 IBC Chapter 10 Means of Egress explains that exit routes cannot be blocked, reduced or altered. This project would provide for the removal of all items in conflict with this code requirement to ensure that egress and exit routes are not impeded.

**PROVIDE CLEARANCE AT ELECTRICAL PANELS****Project Index #: 2204ELE1****Construction Cost \$250**

There is an electrical panel in the building which does not have the proper clear floor space surrounding it. The 2012 IFC Section 605.3 states that, A working space of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space. This project would provide funds to relocate the tables, microwaves and other items currently blocking the working space.

**STORAGE REMOVAL****Project Index #: 2204SFT1****Construction Cost \$500**

Items in this building are stored too close to the ceiling. The 2012 IFC Section 315.3.1 states that, Storage shall be maintained 2 feet or more below the ceiling in non sprinklered areas of buildings or a minimum of 18 inches below sprinkler head deflectors in sprinklered areas of buildings. This project would provide for the removal of all items in conflict with code requirements to ensure that the fire suppression system operates correctly.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$1,440****Necessary - Not Yet Critical****Two to Four Years****INTERIOR FINISHES****Project Index #: 2204INT1****Construction Cost \$1,440**

It is recommended to paint the interior walls and ceilings at least once in the next 2-3 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.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects:     \$3,440****Long-Term Needs****Four to Ten Years****Project Index #:    2204EXT1****EXTERIOR FINISHES****Construction Cost     \$1,440**

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, painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 4-5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**HVAC EQUIPMENT REPLACEMENT****Project Index #:    2204HVA1****Construction Cost     \$2,000**

The building is heated and cooled by a wall-mounted combination unit. The average life span of this type of unit is fifteen years. This unit is original to the building and should be scheduled for replacement in the next 2-4 years. This project includes removal and disposal of the existing HVAC unit and all required connections to utilities.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:****Gross Area (square feet):    144****Year Constructed:    2001****Exterior Finish 1:    100 %    Painted Hardipanel****Exterior Finish 2:     %****Number of Levels (Floors):    1        Basement?    No****IBC Occupancy Type 1:    100 %    B****IBC Occupancy Type 2:     %****Construction Type:    Wood Framing****IBC Construction Type:    V-N****Percent Fire Suppressed:    0     %****PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                          |                |  |                 |
|--------------------------|----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$1,250</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$42.57</b>  |
| <b>Priority Class 2:</b> | <b>\$1,440</b> | <b>Total Facility Replacement Construction Cost:</b> | <b>\$36,000</b> |
| <b>Priority Class 3:</b> | <b>\$3,440</b> | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$250</b>    |
| <b>Grand Total:</b>      | <b>\$6,130</b> | <b>FCNI:</b>   | <b>17%</b>      |

**BOULDER CITY MUSEUM TICKET STATION**

SPWD Facility Condition Analysis - 2203

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM TICKET STATION****BUILDING REPORT**

The Boulder City Museum Ticket Station is a wood framed structure with a standing seam metal hip roof on a slab-on-grade concrete foundation which is located on the east side of the railroad pavilion. It provides for ticket sales and other museum related services to the public. It has a small wall mounted HVAC packaged unit and also has two exits.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$4,250****Currently Critical****Immediate to Two Years****Project Index #: 2203ADA1****Construction Cost \$4,000****ADA ACCESSIBLE COUNTER**

The ADA provides for accessibility to sites and services for people with physical limitations. The building is used to sell tickets to the general public visiting the museum. The service counter on the front of the building does not meet the current ADA requirements. Section 904.4 of the ADA Standards for Accessible Design states that a portion of the counter surface that is 36" long minimum and 36" high maximum above the finish floor shall be provided. This project will provide accessible counter space in accordance with this requirement. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**Project Index #: 2203ELE1****Construction Cost \$250****PROVIDE CLEARANCE AT ELECTRICAL PANELS**

There is an electrical panel in the building which does not have the proper clear floor space surrounding it. The 2012 IFC Section 605.3 states that, A working space of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space. This project would provide funds to relocate the tables, microwaves and other items currently blocking the working space.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$1,440****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2203INT1****Construction Cost \$1,440****INTERIOR FINISHES**

It is recommended to paint the interior walls and ceilings at least once in the next 2-3 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.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$1,440****Long-Term Needs****Four to Ten Years****Project Index #: 2203EXT1****Construction Cost \$1,440****EXTERIOR FINISHES**

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, painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 4-5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:**

Gross Area (square feet): 144  
Year Constructed: 2001  
Exterior Finish 1: 100 % Painted Hardipanel  
Exterior Finish 2: %  
Number of Levels (Floors): 1 Basement? No  
IBC Occupancy Type 1: 100 % B  
IBC Occupancy Type 2: %  
Construction Type: Wood framing  
IBC Construction Type: V-B  
Percent Fire Suppressed: 0 %

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                   |         |   |          |
|-------------------|---------|---|----------|
| Priority Class 1: | \$4,250 | Project Construction Cost per Square Foot:    | \$49.51  |
| Priority Class 2: | \$1,440 | Total Facility Replacement Construction Cost: | \$36,000 |
| Priority Class 3: | \$1,440 | Facility Replacement Cost per Square Foot:    | \$250    |
| Grand Total:      | \$7,130 | FCNI:   | 20%      |

**BOULDER CITY MUSEUM GIFT SHOP**

SPWD Facility Condition Analysis - 2202

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM GIFT SHOP****BUILDING REPORT**

The Boulder City Museum Gift Shop is a wood framed structure with a standing seam metal hip roof on a concrete slab-on-grade foundation which is located on the east side of the railroad pavilion. It provides for gift shop sales and other museum related services to the public. It has a small wall mounted HVAC packaged unit and also has two exits.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$4,500****Currently Critical****Immediate to Two Years****ADA ACCESSIBLE COUNTER****Project Index #: 2202ADA1****Construction Cost \$4,000**

The ADA provides for accessibility to sites and services for people with physical limitations. The building is used to sell souvenirs to the general public visiting the museum. The service counter in the building does not meet the current ADA requirements. Section 904.4 of the ADA Standards for Accessible Design states that a portion of the counter surface that is 36" long minimum and 36" high maximum above the finish floor shall be provided. This project will provide an accessible counter space in accordance with this requirement. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

**EGRESS STORAGE REMOVAL****Project Index #: 2202SFT1****Construction Cost \$500**

The exit is currently blocked by items that are being stored in this area. The 2012 IBC Chapter 10 Means of Egress explains that exit routes cannot be blocked, reduced or altered. This project would provide for the removal of all items in conflict with this code requirement to ensure that egress and exit routes are not impeded.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$1,440****Necessary - Not Yet Critical****Two to Four Years****INTERIOR FINISHES****Project Index #: 2202INT1****Construction Cost \$1,440**

It is recommended to paint the interior walls and ceilings at least once in the next 2-3 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.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$3,440****Long-Term Needs****Four to Ten Years****EXTERIOR FINISHES****Project Index #: 2202EXT1****Construction Cost \$1,440**

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, painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 4-5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## HVAC EQUIPMENT REPLACEMENT

**Project Index #: 2202HVA1**

**Construction Cost \$2,000**

The building is heated and cooled by a wall-mounted combination unit. The average life span of this type of unit is fifteen years. This unit is original to the building and should be scheduled for replacement in the next 5-6 years. This project includes removal and disposal of the existing HVAC unit and all required connections to utilities.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## BUILDING INFORMATION:

**Gross Area (square feet): 144**

**Year Constructed: 2001**

**Exterior Finish 1: 100 % Painted Hardiboard**

**Exterior Finish 2: %**

**Number of Levels (Floors): 1 Basement? No**

**IBC Occupancy Type 1: 100 % B**

**IBC Occupancy Type 2: %**

**Construction Type: Wood Framing**

**IBC Construction Type: V-B**

**Percent Fire Suppressed: 0 %**

## PROJECT CONSTRUCTION COST TOTALS SUMMARY:

|                          |                |  |                 |
|--------------------------|----------------|--|-----------------|
| <b>Priority Class 1:</b> | <b>\$4,500</b> | <b>Project Construction Cost per Square Foot:</b>    | <b>\$65.14</b>  |
| <b>Priority Class 2:</b> | <b>\$1,440</b> | <b>Total Facility Replacement Construction Cost:</b> | <b>\$36,000</b> |
| <b>Priority Class 3:</b> | <b>\$3,440</b> | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$250</b>    |
| <b>Grand Total:</b>      | <b>\$9,380</b> | <b>FCNI:</b>   | <b>26%</b>      |

**BOULDER CITY MUSEUM COMFORT STATION**

SPWD Facility Condition Analysis - 2201

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM COMFORT STATION****BUILDING REPORT**

The Boulder City Museum Comfort Station is a wood framed structure with a standing seam metal hip roof on a slab-on-grade concrete foundation which is located on the west side of the railroad pavilion. There is a wall mounted HVAC packaged unit for each restroom. It also has a drinking fountain on the exterior.

**PRIORITY CLASS 2 PROJECTS****Total Construction Cost for Priority 2 Projects: \$2,940****Necessary - Not Yet Critical****Two to Four Years****INTERIOR FINISHES****Project Index #: 2201INT1****Construction Cost \$1,440**

The interior finishes are in fair condition. It is recommended that the interior walls and ceiling be painted at least once in the next two to four years. Prior to painting, all surfaces should be repaired and prepped.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**WATER HEATER REPLACEMENT****Project Index #: 2201PLM1****Construction Cost \$1,500**

There is a 15 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 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**PRIORITY CLASS 3 PROJECTS****Total Construction Cost for Priority 3 Projects: \$5,440****Long-Term Needs****Four to Ten Years****EXTERIOR FINISHES****Project Index #: 2201EXT1****Construction Cost \$1,440**

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. Included in the cost is sanding, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 5-6 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**HVAC EQUIPMENT REPLACEMENT****Project Index #: 2201HVA1****Construction Cost \$4,000**

The building is heated and cooled by two wall-mounted combination units. The average life span of this type of unit is fifteen years. These units are original to the building and should be scheduled for replacement in the next 2-3 years.

This project includes removal and disposal of the existing HVAC units and all required connections to utilities.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BUILDING INFORMATION:**

Gross Area (square feet): 144  
Year Constructed: 2001  
Exterior Finish 1: 100 % Painted Hardipanel  
Exterior Finish 2: %  
Number of Levels (Floors): 1 Basement? No  
IBC Occupancy Type 1: 100 % B  
IBC Occupancy Type 2: %  
Construction Type: Wood Framing  
IBC Construction Type: V-B  
Percent Fire Suppressed: 0 %

**PROJECT CONSTRUCTION COST TOTALS SUMMARY:**

|                   |         |   |          |
|-------------------|---------|---|----------|
| Priority Class 1: | \$0     | Project Construction Cost per Square Foot:    | \$58.19  |
| Priority Class 2: | \$2,940 | Total Facility Replacement Construction Cost: | \$58,000 |
| Priority Class 3: | \$5,440 | Facility Replacement Cost per Square Foot:    | \$400    |
| Grand Total:      | \$8,380 | FCNI:   | 14%      |

**BOULDER CITY MUSEUM MAINTENANCE**

SPWD Facility Condition Analysis - 0841

Survey Date: 12/14/2016

**BOULDER CITY MUSEUM MAINTENANCE****BUILDING REPORT**

The Boulder City Museum Maintenance is an insulated engineered metal structure on a concrete foundation which contains a large fabrication and repair area for railroad engines and cars. There is a small office, locker and ADA accessible unisex restroom also located inside of the building. It has a complete fire protection system including sprinklers and alarms, 8 radiant gas fired heaters, two evaporative coolers and a small split HVAC system for the office/locker/restroom areas. There is parking for staff which includes an ADA parking space.

**PRIORITY CLASS 1 PROJECTS****Total Construction Cost for Priority 1 Projects: \$46,450****Currently Critical****Immediate to Two Years****ADA UPGRADES****Project Index #: 0841ADA2****Construction Cost \$500**

ADA regulations pertaining to building access, route of travel and restrooms 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. This project would provide funding for purchase and installation of ADA signage including directional signage from parking to accessible building entrances, route of travel inside the building and restrooms. It is recommended that applicable signage be installed where required. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**BACKFLOW PREVENTER REPLACEMENT****Project Index #: 0841SFT7****Construction Cost \$5,000**

There is a backflow preventer for the fire suppression system in the building. It is leaking and should be scheduled for replacement. This project would provide for replacing the backflow preventer by a licensed fire suppression contractor.

**EMERGENCY EYE WASH STATION REFURBISHMENT****Project Index #: 0841SFT1****Construction Cost \$500**

The emergency eye wash station is original to the building and the domestic water supply piping should be scheduled for replacement. The galvanized pipe is rusting on the inside and contaminating the water rendering the station useless. This project would provide for the removal of the existing piping and installation of new copper domestic water supply.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**EVAPORATIVE COOLER REPLACEMENT****Project Index #: 0841HVA2****Construction Cost \$8,000**

There are two evaporative coolers that at the time of the survey were not working. They are severely scaled and have reached the end of their serviceable life. This project would provide for two new evaporative coolers to be installed, and includes removal and disposal of the old evaporative coolers and utility connections to the new units.

**EXIT SIGN AND EGRESS LIGHTING UPGRADE****Project Index #: 0841SFT2****Construction Cost \$9,200**

The emergency egress lighting is insufficient and the exit signs do not meet current standards. This project would provide for the purchase and installation of self-illuminated or LED style exit signs with battery-backed internal systems as well as emergency egress lighting to provide illumination along the egress route. IBC 2012 Chapter 10 was referenced for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## **FIRE SUPPRESSION OBSTRUCTION INVESTIGATION**

**Project Index #: 0841SFT5**  
**Construction Cost \$9,000**

This building has an automatic fire suppression system. Per NFPA 25 Obstruction Investigation and Prevention an inspection of piping and branch line conditions shall be conducted every 5 years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of inspecting for the presence of foreign organic and inorganic material. It is recommended that this project be completed within the next year and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

## **PROVIDE CLEARANCE AT ELECTRICAL PANELS**

**Project Index #: 0841ELE2**  
**Construction Cost \$250**

There is an electrical panel in the building which does not have the proper clear floor space surrounding it. The 2012 IFC Section 605.3 states that, a working space of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space. This project would provide funds to relocate the miscellaneous items blocking the working space.

## **RATED ELECTRICAL ROOM**

**Project Index #: 0841ELE3**  
**Construction Cost \$5,000**

NFPA 13 requires a fire sprinkler in electrical rooms or if the electrical room complies within NFPA Section 5-13.11, which allows an exception to installing fire sprinklers in an electrical room, the electrical room shall meet all of the following requirements: the electrical room is dedicated to electrical equipment only; only dry-type electrical equipment is used; equipment is installed in a 2-hour fire rated enclosure including the floor and deck above and includes protection for penetrations; no combustible storage is permitted to be stored in the electrical room; any openings (doors) in the room must be properly fire rated at 90-minutes and must be self-closing and positive latching; any ventilation ductwork which penetrates the 2-hour barrier must be equipped with the appropriate fire dampers, and all penetrations must be properly fire stopped. This project would provide a 2 hour separation or a fire sprinkler to be installed in the electrical room per NFPA.

## **SAFETY CABINETS**

**Project Index #: 0841SFT6**  
**Construction Cost \$5,000**

The building contains many different paints, stains, and other hazardous products located on open shelves. This does not meet OSHA standards or IFC for hazardous materials containment. This project would provide a self-closing hazardous storage container in the building and install placards on the building exterior in accordance with OSHA 1910.106 (d) and IFC Chapter 57 Section 5704.3.2.1.3.

## **SEISMIC GAS SHUT-OFF VALVE INSTALLATION**

**Project Index #: 0841SFT4**  
**Construction Cost \$4,000**

This project would provide for the installation of a seismic gas shut-off valve on the main gas service piping just prior to entering the building. This estimate is based on the manufacturer Pacific Seismic Products or approved equal, equipped with the optional Model MS remote monitoring switch (to be interfaced with the direct digital control system and/or with an audible alarm). The gas piping immediately adjacent to the seismic gas valve shall be secured to the building utilizing unistrut channel bracing.

## **PRIORITY CLASS 2 PROJECTS**

**Total Construction Cost for Priority 2 Projects: \$298,900**

**Necessary - Not Yet Critical**

**Two to Four Years**

## **EXTERIOR FINISHES**

**Project Index #: 0841EXT3**  
**Construction Cost \$36,800**

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. Included in the cost is the caulking and sealing of the windows, flashing, fixtures and all other penetrations. Special attention should be given to the flashing and seams on the south side of the building where large gaps are visible from inside the building. It is recommended that the building be caulked and sealed in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Replacing all of the weather striping on the overhead coiling doors is included in this estimate. This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## **EXTERIOR LANDING INSTALLATION**

**Project Index #: 0841SFT8**  
**Construction Cost \$10,000**

Section 1008.1 of the 2012 IBC describes the requirements for doors including floor elevations and landings. The floor or landing shall be at the same elevation on each side of the doors, the exterior landing shall not exceed a 2-percent slope and shall have a length measured in the direction of travel of not less than 44 inches. The landing at the doors on the building does not comply with this code and poses a safety hazard. This project would provide for the installation of compliant landings for both doors.

## **EXTERIOR LIGHTING REPLACEMENT**

**Project Index #: 0841ENR3**  
**Construction Cost \$12,000**

The building has perimeter lighting on the exterior of the building, but the light fixtures are old, failing and not energy efficient. This project would provide for the replacement of the exterior lighting fixtures with new LED light fixtures, using existing wiring.

## **FIRE SUPPRESSION SYSTEM MAINTENANCE**

**Project Index #: 0841SFT3**  
**Construction Cost \$10,000**

The fire suppression system is a wet system and the corrosive water is causing damage. With each annual test, the corrosion is accelerated and has recently caused failures in some of the valves and pipes. The system is about 21 years old. It is recommended to perform a five year flush on the system with an inspection of the sprinkler heads at the cost of about \$3,500. Should the inspection deem it necessary, a full flush and replacement of the heads would follow at the cost of about \$6,500. The five year flush should be scheduled every five years thereafter to maximize the lifecycle of the system.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## **HVAC EQUIPMENT REPLACEMENT**

**Project Index #: 0841HVA3**  
**Construction Cost \$15,000**

The HVAC split system was installed in 1999. It is not energy efficient and has reached the end of its expected and useful life. This project would provide for the installation of a new HVAC split system and cleaning of the existing duct work and grilles. This project includes removal and disposal of the existing equipment and all required connections to utilities.

## **INTERIOR FINISHES**

**Project Index #: 0841INT1**  
**Construction Cost \$10,000**

The interior of the building is unfinished except for the office, the restrooms and portions of the metal shop area which together account for about 1,000 square feet of area. The interior finishes are in fair condition. It is recommended that the interior walls be painted at least once in the next 2-4 years. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## **LIGHTING UPGRADE**

**Project Index #: 0841ENR2**  
**Construction Cost \$73,600**

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. Any electrical wiring upgrades are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## **OVERHEAD DOOR REPLACEMENT**

**Project Index #: 0841EXT4**  
**Construction Cost \$80,000**

There are four overhead coiling doors which are damaged and do not function properly. Exposure and wind have caused the doors to bend, crack and lose their finish. They are original to the building and should be scheduled for replacement. This project would provide for the removal and disposal of the manually operated overhead coiling doors and replacement with new manually operated overhead coiling doors.

## RADIANT HEATER REPAIRS

**Project Index #: 0841HVA1**

**Construction Cost \$20,000**

The building is heated by eight wall-mounted natural gas fired radiant heaters. Three of the heaters were not operating at the time of the survey and all eight should be scheduled for replacement. This project provides for the disposal of the existing radiant heaters and replacement with eight new gas fired radiant heaters including connections to utilities.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## REPLACE INSULATION

**Project Index #: 0841ENR1**

**Construction Cost \$30,000**

The walls and ceiling in the building have a layer of batt insulation installed that is not enclosed by a finish system. The insulation batts are deteriorating and large sections have fallen out of the walls and ceiling. The existing insulation is R-24 in the ceiling and R-15 in the walls. This project recommends replacing all of the insulation with a foil-backed R-30 batt insulation which will increase the energy efficiency of the building. It may be possible to use a foamed-in system to fill the cavities where applicable; costs are similar to the batt insulation provided for in this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/24/2010. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

## WATER HEATER REPLACEMENT

**Project Index #: 0841PLM1**

**Construction Cost \$1,500**

There is a 30 gallon gas-fired 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 gas-fired water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

## BUILDING INFORMATION:

**Gross Area (square feet): 9,200**  
**Year Constructed: 1996**  
**Exterior Finish 1: 100 % Metal Siding**  
**Exterior Finish 2: %**  
**Number of Levels (Floors): 1      Basement? No**  
**IBC Occupancy Type 1: 100 % F-1**  
**IBC Occupancy Type 2: %**  
**Construction Type: Engineered Metal Building**  
**IBC Construction Type: III-B**  
**Percent Fire Suppressed: 100 %**

## PROJECT CONSTRUCTION COST TOTALS SUMMARY:

|                          |                  |  |                    |
|--------------------------|------------------|--|--------------------|
| <b>Priority Class 1:</b> | <b>\$46,450</b>  | <b>Project Construction Cost per Square Foot:</b>    | <b>\$37.54</b>     |
| <b>Priority Class 2:</b> | <b>\$298,900</b> | <b>Total Facility Replacement Construction Cost:</b> | <b>\$2,760,000</b> |
| <b>Priority Class 3:</b> | <b>\$0</b>       | <b>Facility Replacement Cost per Square Foot:</b>    | <b>\$300</b>       |
| <b>Grand Total:</b>      | <b>\$345,350</b> | <b>FCNI:</b>   | <b>13%</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   | 515 E. Musser Street, Suite 102 | (775) 684-4141 voice     |
| Facilities Condition Analysis | Carson City, Nevada 89701-4263  | (775) 684-4142 facsimile |



Boulder City Railroad Museum - Site #9951  
Description: Exterior site lighting installation needed.



Boulder City Railroad Museum - Site #9951  
Description: Railroad track replacement needed.



Boulder City Railroad Museum - Site #9951  
Description: Site Drainage.



Boulder City Railroad Museum - Site #9951  
Description: Slurry seal asphalt paving needed.



Boulder City Museum Maintenance - Building #0841  
Description: Fire suppression system maintenance needed.



Boulder City Museum Maintenance - Building #0841  
Description: Overhead door replacement needed.



Boulder City Museum Maintenance - Building #0841  
Description: Emergency eye wash station refurbishment needed.



Boulder City Museum Maintenance - Building #0841  
Description: Safety Cabinets needed.



Boulder City Museum Maintenance - Building #0841  
Description: Clearance at electrical panels needed.



Boulder City Museum Gift Shop - Building #2202  
Description: ADA accessible counter needed.



Boulder City Museum Crew Quarters - Building #2204  
Description: Exterior finishes.



Boulder City Museum Train Pavilion - Building #3039  
Description: Exterior finishes.