

Department of Cultural Affairs
Division of Museums & History
East Ely Railroad Depot Museum
Facility Condition Analysis

EAST ELY RAILROAD DEPOT MUSEUM

1100 Avenue A
Ely, Nevada 89301

Site Number: 9857

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



Report Printed in November 2011

Department of Cultural Affairs
Division of Museums & History
East Ely Railroad Depot Museum
Facility Condition Analysis

The Facility Condition Analysis Program was created under the authority found in NRS 341.201. 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: 9857

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
2227	EAST ELY RAILROAD DEPOT 1100 Avenue A Ely	8600	1907	8/25/2011	\$50,000	\$461,900	\$0	\$511,900	\$2,795,000	18%
2128	EAST ELY RAILROAD FREIGHT BARN 1100 Avenue A Ely	12865	1906	8/25/2011	\$91,555	\$175,414	\$139,325	\$406,294	\$2,573,000	16%
9857	EAST ELY RAILROAD DEPOT MUSEUM SITE 1100 Avenue A Ely		1906	8/25/2011	\$0	\$0	\$0			0%
Report Totals.....:		21,465			\$141,555	\$637,314	\$139,325	\$918,194	\$5,368,000	17%

SPWD Facility Condition Analysis

Table of Contents

Building Name	Index #	
EAST ELY RAILROAD DEPOT MUSEUM SITE	9857	No Current Projects
EAST ELY RAILROAD DEPOT	2227	
EAST ELY RAILROAD FREIGHT BARN	2128	

EAST ELY RAILROAD DEPOT

SPWD Facility Condition Analysis - 2227

Survey Date: 8/25/2011

EAST ELY RAILROAD DEPOT**BUILDING REPORT**

The Ely Railroad Depot is located at the railhead of the former Kennecott Mine railway. When the mine closed in the early 1980s, the site was transferred to a local non-profit agency. In turn, the depot and freight barn were brought under the auspices of the State of Nevada, and have operated as a museum and display since 1992. The site was designated a National Historical District in 1993.

The depot was constructed in 1907 and is presently used for offices, display and storage. The building is a two level wood and stone framed building with a composition roofing system at the main roof and a metal roof at the north facing shed roof. There is a partial basement used primarily for storage. It has electric baseboard heaters, a new fire alarm system and the lower level museum store is mostly ADA compliant. The upper level offices and displays are not accessible as the only access is a stairway. The facility is well maintained.

PRIORITY CLASS 1 PROJECTS**Total Construction Cost for Priority 1 Projects: \$50,000****Currently Critical****Immediate to Two Years****Project Index #: 2227ADA1****Construction Cost \$25,000****ADA AUDIO/ VISUAL PRESENTATION**

The Railroad Depot is open to the public for tours and train rides. The second floor is home to most of the historical Depot artifacts and where a large portion of the tour takes place. There is no ADA access to this area. This project would provide for an ADA accessible location inside the lower level of the building for an audio / visual (A/V) presentation of the inaccessible portions of the Depot and site. This project includes funds for an audio / visual consultant to outline and document the exhibits and purchase and installation of all required A/V equipment including signage, TDD equipment and minor remodeling of the public area of the building as required to accommodate this program. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate. The 2006 IBC, ICC/ANSI A117.1 - 2003, NRS 338.180 and the most current version of the Americans with Disabilities Act Accessible Guidelines (ADAAG) was used as a reference for this project.

Project Index #: 2227EXT4**Construction Cost \$25,000****SHED ROOF REPLACEMENT**

The metal roof on the north elevation of the building was in poor condition at the time of the survey and had active leaks. This shed roof partially covers the boarding platform and has a gutter and downspout system that is in poor condition. When the gutters leak, water pools up and freezes on the boarding platform creating a safety hazard. The gutters and downspouts around the rest of the building are also in poor condition with active leaks. It is recommended to re-roof the metal shed roof and repair or replace the gutters and downspouts around the entire building. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

PRIORITY CLASS 2 PROJECTS**Total Construction Cost for Priority 2 Projects: \$461,900****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 2227EXT5****Construction Cost \$43,000****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 and painting the wood trim and soffits, power washing and painting the stucco, cleaning and sealing the stone masonry and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted, sealed and caulked in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

Project Index #: 2227HVA1
Construction Cost \$172,000

HVAC SYSTEM UPGRADE

The existing HVAC system consists of electric baseboard heaters and several window mounted air conditioners. The electric heaters are inefficient and the air conditioners only cover small areas of the building. There is a need for cooling equipment throughout the building to provide a comfortable interior environment in the summer. This project would provide for replacing the existing equipment with a central HVAC system including exterior ground mounted propane fired packaged units that provide heating as well as air conditioning and installing duct work and controls. Propane gas service will be required and is included in the cost. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

Project Index #: 2227INT1
Construction Cost \$43,000

INTERIOR FINISHES

The interior finishes are in good condition. It is recommended that the interior walls and ceilings be painted 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 should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

Project Index #: 2227ENR1
Construction Cost \$12,900

LIGHTING UPGRADE

The existing lighting fixtures are the older fluorescent and incandescent type, and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. F28 T-8 lamps with electronic ballasts and compact fluorescent lights are suggested. Occupancy sensors will be installed in low occupancy areas for additional savings. Any electrical wiring upgrades are not included in this estimate. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

Project Index #: 2227STR1
Construction Cost \$125,000

STRUCTURAL REPAIRS

Due to the age of the building and the structural codes at the time, the structural system may be deficient and should be evaluated and repaired. Some shoring work has been done in the basement by applying gunite to the foundation walls, but no other major structural upgrades have taken place since the State acquired the building in 1992. The estimate is a general figure representing a likely scenario of installing blocking, steel structural ties, cables, etc... to increase the lateral and vertical load resistance. An evaluation and design must be conducted by a licensed structural engineer, of which the costs are not included in this estimate. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

Project Index #: 2227EXT3
Construction Cost \$66,000

WINDOW REPLACEMENT

The windows are original, single pane construction in a wooden frame. These older windows are drafty, not energy efficient and the wooden frames have deteriorated significantly. This project recommends replacing the windows with dual pane, higher efficiency units. This estimate is for the replacement of 44 units including wooden frames and includes additional costs for the unique historical nature of the building. Removal and disposal of the existing windows is included in this estimate. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements for this building.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

BUILDING INFORMATION:

Gross Area (square feet): 8,600
Year Constructed: 1907
Exterior Finish 1: 60 % Painted Stucco / EIFS
Exterior Finish 2: 40 % Stone Masonry
Number of Levels (Floors): 2 Basement? Yes
IBC Occupancy Type 1: 100 % B
IBC Occupancy Type 2: %
Construction Type: Stone Masonry & Wood
IBC Construction Type: V-B
Percent Fire Supressed: 0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$50,000	Project Construction Cost per Square Foot:	\$59.52
Priority Class 2:	\$461,900	Total Facility Replacement Construction Cost:	\$2,795,000
Priority Class 3:	\$0	Facility Replacement Cost per Square Foot:	\$325
Grand Total:	\$511,900	FCNI:	18%

EAST ELY RAILROAD FREIGHT BARN

SPWD Facility Condition Analysis - 2128

Survey Date: 8/25/2011

EAST ELY RAILROAD FREIGHT BARN

BUILDING REPORT

The Freight Barn is located at the railhead of the former Kennecott Mine railway. When the mine closed in the early 1980s, the site was transferred to a local non-profit agency. In turn, the freight barn and nearby railroad depot were brought under the auspices of the State of Nevada, and have operated as a museum and display since 1992. The site was designated a National Historical District in 1993.

The freight barn was constructed in 1906 and is presently used for storage and as the maintenance shop. There are plans for public display areas and a portion of the structure is open to the public. It is a wood framed structure with a stone and concrete foundation and a metal roofing system. The facility has undergone a remodel including ADA access, Men's and Women's restrooms, some wood plank flooring replacement and rehabilitation, structural stabilization, a new fire alarm and detection system and new exterior painted metal siding. The restrooms have a small electric heating unit, but the rest of the building does not have an HVAC system nor fire sprinklers. The facility is well maintained.

PRIORITY CLASS 1 PROJECTS

Total Construction Cost for Priority 1 Projects: \$91,555

Currently Critical

Immediate to Two Years

ADA SIGNAGE

Project Index #: 2128ADA1

Construction Cost \$1,500

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 and that the restroom ADA signs be moved to a compliant location. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate. NRS 338.180, IBC - 2006, ICC/ANSI A117.1 - 2003 and the most current version of the Americans with Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project.

FIRE SUPPRESSION SYSTEM INSTALLATION

Project Index #: 2128SFT3

Construction Cost \$90,055

This building houses irreplaceable records for the site dating back to the early 1900s. The square footage of the building exceeds 12,000 square feet and does not have an automatic fire suppression system. Pursuant to the Nevada State Fire Marshal Regulation, NAC 477.915 (c) states, that every building owned or occupied by the state which is designated as a B occupancy, or has a floor area greater than 12,000 square feet on any floor or 24,000 square feet on all floors or is an R-1 or R-2 occupancy, must have sprinklers installed when the building is remodeled or an addition is proposed. This project would provide funding for the installation of a fire sprinkler system and backflow prevention in the event the building is remodeled or an addition is undertaken. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

PRIORITY CLASS 2 PROJECTS

Total Construction Cost for Priority 2 Projects: \$175,414

Necessary - Not Yet Critical

Two to Four Years

DUAL LEVEL DRINKING FOUNTAIN INSTALLATION

Project Index #: 2128ADA2

Construction Cost \$4,000

This building does not contain a drinking fountain. It is recommended to install a drinking fountain for the comfort of the occupants. The 2006 IBC Section 1109.5 states where a water fountain is provided, at least half should be accessible.

This project would provide funding for the purchase and installation of an accessible fixed high/ low ADA drinking fountain.

Project Index #: 2128EXT4

Construction Cost \$7,500

EXTERIOR DECK REPAIRS

The building has a boardwalk on the street side of the building and a loading dock on the track side. They were recently refurbished with new wood planks that were nailed to the framing. The nails are proving to be insufficient and should be replaced with screws. As the wood ages, it pushes the nails out and causes a safety hazard. This project provides for removing the nails and replacing them with deck screws along the entire boardwalk and loading dock.

Project Index #: 2128INT2

Construction Cost \$8,400

FLOORING REPLACEMENT - FREIGHT OFFICE

The "Battleship" linoleum flooring in the Freight Office is damaged and reaching the end of its useful life. It is recommended that the flooring be replaced. This project would provide for removal and disposal of the existing flooring and installation of new "Battleship" linoleum. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

Project Index #: 2128HVA1

Construction Cost \$77,190

HVAC SYSTEM INSTALLATION

This building is equipped with a wood burning stove in the freight office and two wall mounted electric heaters in the restrooms and does not have any cooling equipment. The rest of the building is not conditioned space. Future plans for the building include interactive displays, a community center, and special events which would all benefit from adding heating and cooling for the entire building. This project would provide for replacing the existing heaters with roof mounted propane fired packaged units that provide heating as well as air conditioning to the entire building. Propane gas service will be required and is included in the cost. This project should be implemented after or concurrent with the Insulate Building project and coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

This project or a portion thereof was previously recommended in the FCA report dated 06/03/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 08/25/2011.

Project Index #: 2128ENR1

Construction Cost \$45,027

INSULATE BUILDING

This building has no insulation. The temperature extremes are contributing to accelerated decay of the contents, which include historical artifacts awaiting restoration and/or on display. This project will install batt insulation in the walls and ceilings to help moderate temperature fluctuations. 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 should be implemented before or concurrent with the HVAC System Installation project and coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

Project Index #: 2128INT3

Construction Cost \$5,000

INTERIOR FINISHES

The interior finishes are in fair condition. Most of the walls and ceilings are unfinished wood, but there are painted walls and ceilings in the restrooms and the shop areas. It is recommended that the finished interior walls and ceilings be painted at least once in the next 3-4 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.

Project Index #: 2128ENR2

Construction Cost \$19,297

LIGHTING UPGRADE

The existing lighting fixtures are the older fluorescent and incandescent type, and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. F28 T-8 lamps with electronic ballasts and compact fluorescent lights are suggested. Occupancy sensors will be installed in restrooms and other low occupancy areas for additional savings. Any electrical wiring upgrades are not included in this estimate. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements which are not included in this estimate.

Project Index #: 2128EXT3

Construction Cost \$9,000

WINDOW REPLACEMENT

The windows are original, single pane construction in a wooden frame. These older windows are drafty, not energy efficient and the wooden frames have deteriorated significantly. This project recommends replacing the windows with dual pane, higher efficiency units. This estimate is for the replacement of 6 units including wooden frames and includes additional costs for the unique historical nature of the building. Removal and disposal of the existing windows is included in this estimate. This project should be coordinated with the Nevada State Historical Preservation Office for possible restrictions or requirements for this building.

PRIORITY CLASS 3 PROJECTS

Total Construction Cost for Priority 3 Projects: \$139,325

Long-Term Needs

Four to Ten Years

Project Index #: 2128EXT2

Construction Cost \$64,325

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 painting the metal panels and wood and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 9-10 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

Project Index #: 2128CUL1

Construction Cost \$75,000

KITCHEN INSTALLATION

The building does not have any culinary equipment. There are many special events held in the Freight Barn each year that benefit the museum through exposure and rental fees. Equipping the building with culinary equipment would provide additional accommodations for future special events. This project recommends installing mid range, high quality culinary equipment, a sink, cabinets and the plumbing and electrical utilities that they would require.

BUILDING INFORMATION:

Gross Area (square feet): 12,865

Year Constructed: 1906

Exterior Finish 1: 90 % Painted Metal Siding

Exterior Finish 2: 10 % Painted Wood Siding

Number of Levels (Floors): 1 Basement? Yes

IBC Occupancy Type 1: 50 % S-2

IBC Occupancy Type 2: 50 % A-3

Construction Type: Wood Framed

IBC Construction Type: V-B

Percent Fire Supressed: 0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$91,555	Project Construction Cost per Square Foot:	\$31.58
Priority Class 2:	\$175,414	Total Facility Replacement Construction Cost:	\$2,573,000
Priority Class 3:	\$139,325	Facility Replacement Cost per Square Foot:	\$200
Grand Total:	\$406,294	FCNI:	16%

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 341.201 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



East Ely Railroad Depot Museum Site - Site #9857
Description: Grate on south side in need of modifications.



East Ely Railroad Depot - Building #2227
Description: Water damage on north shed roof.



East Ely Railroad Depot - Building #2227
Description: View of the basement.



East Ely Railroad Depot - Building #2227
Description: Upper level interior hallway.



East Ely Railroad Depot - Building #2227
Description: Lower level interior.



East Ely Railroad Freight Barn - Building #2128
Description: Exterior of the building.



East Ely Railroad Freight Barn - Building #2128
Description: Interior view of restrooms.



East Ely Railroad Freight Barn - Building #2128
Description: Exterior of the building.