

# Curecanti National Recreation Area Comprehensive Preservation Study Train Related Resources



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## Executive Summary

The purpose of this plan is to create a stewardship guide for preserving the rolling stock assets and railroad bridge located at the Cimarron Rail Exhibit (the “Site”) within the Curecanti National Recreational Area (Curecanti “NRA”). In doing so, first, a conservation strategy was developed in order to serve as a guide for the conservation efforts to be pursued pertaining to the rolling stock assets, railroad bridge, and their interpretation and display within the Site. All conservation efforts should be in keeping with the Secretary of Interior’s Standards for the Treatment of Historic Properties.

To fully understand the context and the interpretive possibilities of the rolling stock assets and truss bridge housed within the Site, this conservation plan examines the history and context surrounding the significance of the Denver & Rio Grande Railroad with relation to the Town of Cimarron, Colorado, between 1882 and 1949; the era of the railroad. During this period important economic factors were present in Cimarron: the railroad, ranching and scenic tourism, all of which are associated with the presence of the Denver & Rio Grande Railroad (“D&RG”) and are pertinent to understanding an effective interpretation of the assets within the Site.

This conservation plan also describes and assesses the current conditions of the rolling stock assets, railroad bridge, and infrastructure within the Site. The plan recognizes that certain areas including the existing infrastructure of the Site are in a state of degradation and disjointedness. This conservation plan seeks to remedy these problems and makes preliminary recommendations for the initial structural stability of the rolling stock assets and truss bridge within the Site.

This conservation plan aims at creating a distinct sense of place for the exhibit within the Curecanti NRA. In doing so, this plan presents three scenarios for the conservation of the rolling stock assets and truss bridge, and their interpretive incorporation within the Site. For the purposes of recommending these scenarios, while many possibilities exist, three options are presented, each a point on a continuum of conservation efforts. Each of the scenarios is considered and discussed in depth with regards to their cost-benefits, design, and interpretive display.

Finally, this conservation plan offers an opinion of costs and next steps to be taken for the conservation of the rolling stock assets, truss bridge, and amenities within the Site.

## Vision Statement

The D&RG rolling stock and truss bridge are important historic assets located at the Cimarron Rail Exhibit within the Curecanti NRA in Cimarron, Colorado. These assets represent a late age of western expansion in Colorado. They are remnants of late 19<sup>th</sup> century science and engineering, people and economics, technology and industrialization. This conservation plan is meant to provide direction to those involved with regard to the preservation, interpretation, connectivity and on-going stewardship of these historic resources. This plan promotes long-term stability and structural integrity of the resources, and further accommodates a wide variety of interests through direct enhancement of the preservation effort currently underway.

The National Park Service (“NPS”) has utilized preservation plans to understand and interpret historic sites or structures, the goal being proper management of significant remnants of our past. The vision of this plan is to create a distinct sense of place for the rail exhibit within the Curecanti NRA. Following this logic, the plan recognizes that certain areas of the Cimarron site are in a state of degradation and disjointedness; the plan seeks to remedy these problems. The plan also explores a broad range of issues centered on preservation, interpretation, connectivity and on-going stewardship of all aspects of the Cimarron Rail Exhibit. To promote and maintain the distinct cultural history of Colorado narrow-gauge rail, the plan creates a unique sense of place for the exhibit within the Curecanti NRA. It is crucial that the Cimarron Rail Exhibit retain and enhance its independent identity, even as it becomes more closely connected with the rest of Curecanti NRA. This argument is based on interpretation of the distinguishing socioeconomic and cultural influences that are found at the site that are not present anywhere else in Curecanti, or the Black Canyon of the Gunnison National Park (“NP”).

In crafting a plan for the Cimarron Rail Exhibit we conclude preservation, interpretation, connectivity and on-going stewardship of the historic rolling stock assets result in a sensible and sustainable use of the site, supporting the existing and historic ties between people and place. Resource allocation and sustainable use are crucial to the efficient and effective implementation of this plan.



# Conservation Strategy

## The Need for a Conservation Strategy

The treatment philosophy upon which this conservation plan is based is that of stabilization and protection of the integrity of the assets located at the Cimarron Rail Exhibit in the Curecanti NRA. Integrity is defined as the extent that the physical characteristics of a building, structure, district, site, or object are complete or uncorrupted in location, design, setting, materials, workmanship, feeling and association, and are representative of a period of significance. The period of significance as identified by NPS is 1882-1949. Three areas of interest were also specified by the NPS, economics, railroad, and ranching. The D&RG influenced the development and settlement of Cimarron and the surrounding region through the transport of freight, livestock, and people across the country. It was also known as the “Scenic Line of the World”, attracting tourists from all around.

Today, the rolling stock and bridge no longer serve any of these purposes. The cars and truss serve a modern day purpose of interpretation, a symbolic and communicative function for which they were never originally intended. Moreover, their presence embodies reality in a way that documentation, however thorough, cannot replicate. Conservation of historical artifacts addresses this change in meaning to protect physical characteristics, not so the object can serve its original purpose, but the new purpose that has made it worthy of conservation. In the case of the rolling stock and truss bridge, conservation of the physical material is prescribed to protect the new symbolic and communicative function. That is, stabilization and protection of the resources communicates to modern day society the historical significance of the D&RG in regards to the transport of freight, livestock, and people; the importance of Cimarron as a regional, economic, and social hub, and the evolution of both during the period of significance.

In their current condition, the rolling stock is compromised due to exposure to elements, as well as inconsistent maintenance. The truss bridge was originally intended to connect two sides of the canyon so the train could pass over the river. Engine #278

and its tender were designed to pull loads from one place to another, and the cars served various functions associated with transporting freight, livestock, and people.

The conservation methods, materials and timing have failed to address the change in meaning and the conditions associated with inactivity. Andrew Dahm in his 1997 Assessment Report states, “[W]hile it is true that railroad repairs were meant to ensure that the equipment would be operational, equipment parked on a static display requires the same class of structural repairs in order to maintain the form of the equipment.” The deterioration to the physical components of the rolling stock and truss bridge demonstrate the exactness of Dahm’s statement. As such, this conservation plan fosters two principles that address these concerns. They are stabilization and protection by way of physical interventions that address the current conditions.

## Defining the Principles

This plan is fundamentally a long-term prescription, recognizing that protection is key to physical longevity. John Ruskin, notable architect and author of the *Seven Lamps of Architecture*, said, "Take care of your monuments and you will not need to restore them." Maintaining the rolling stock and truss bridge is crucial; it protects physical fabric from continued degradation, and the NPS from escalating costs associated with repair. Proper maintenance of the rolling stock will ensure that the second principle of the plan, stabilization, is not revisited in the future.

The amount of physical deterioration to the rolling stock and truss bridge is severe in some cases and minimal in others. Although a complete assessment has yet to be conducted, instances of degradation have been visually inventoried and included in this document. Additionally, the 1997 and 2001, Dahm reports (Appendix A), determined that degradation to the cars is present. It is essential that the NPS proceed with a full-scale repair of the cars (undercarriage, roof, interior, exterior, A and B ends, windows, doors, etc.) at the outset of the conservation effort. Protection cannot proceed until the physical fabric is restored to a condition determined to represent the period of significance. The two guiding principles of stabilization and protection promote longevity of the historic assets, and represent an investment in the future. All efforts in conservation should be in keeping with the Secretary of Interior's Standards for the Treatment of Historic Properties.

## Establishing Goals: The Three Scenarios

The principles detailed above were used to devise three treatment scenarios, goals that embody conservation of the material fabric. Two of the three scenarios also address the interpretation of the associated history of Cimarron and the D&RG. These scenarios recognize that the visitor experience and education are important facets of conservation in that modern society is the reason for the new symbolic and communicative function of the cars and truss bridge. The historic assets are cultural property, their significance determined by history and the modern culture that surrounds them. These two scenarios also address site connectivity and the importance of design in a successful planning effort. The last scenario details a set of recommendations that capitalize on the long-term goals of this conservation plan. It recognizes potential outcomes associated with protection and stabilization, how these principles can assist with a modern cultural understanding of conservation methods and technologies.

Imbedded in the philosophy of the treatment scenarios is an understanding that conservation is dictated largely by variables that impact the outcomes. Time, budget, coordination, policy, and the general public, all carry considerable weight-and must be addressed to reach the desired outcomes of the adopted conservation plan. As such, the three scenarios differ considerably, resulting in the consideration of the variables listed above. Scenario one details a plan of “in-situ” maintenance with initial off-site repair of the rolling stock. The philosophy embodies a minimalistic approach, rational recommendations that address protection, and the stabilization of the historic resources. Site alteration is minimal, with no changes to interpretation, connectivity, or the visitor experience.

The second treatment strategy is that of on-site conservation. The scenario is centered on the construction of a roundhouse treatment facility and site improvements that address connectivity, interpretation, and the visitor’s experience. The roundhouse serves as a learning center, as well as conservation, storage, and display facility for the rolling stock. Under this treatment strategy, movement of the rolling stock is essential. Installation of a narrow-gauge rail line addresses this important facet, enhances interpretation and the visitor experience, and solves the issues of site connectivity.

Vehicular transportation is also detailed in this scenario, as it is a viable solution and applies to the issues of site connectivity within this plan.

The third strategy speaks to the grander scheme in that it capitalizes on the long-term nature of protection and stabilization. This strategy is an investment in conservation methods and technologies, envisioning an on-site conservation laboratory that is regionally recognized as an authority on narrow gauge rail, and serves as a learning center for preservationists and rail aficionados. The site design features an observation deck and archeological excavation. It also includes the unearthing of original building foundations once located in the Town of Cimarron. The foci under this treatment strategy are site interpretation, enhancement of educational opportunities and rolling stock conservation.



## Overall Recommendations

Each of the three scenarios has common recommendations that affect the conservation effort. To ensure the longevity of these historic resources, it is imperative that cyclical maintenance and inspections are conducted. Also, when addressing deterioration of physical components, solving the issue of repair versus replacement is crucial. When dealing with repair versus replacement, use of historically accurate materials maintains integrity and is therefore recommended. Lastly, staffing is integral to the second and third scenarios, and marketing is an important facet considered for the positive impacts associated with it.

### ***Assessment and Maintenance***

Assessment and maintenance is conducted to inventory, detect, and repair deficiencies before they reach the magnitude of degradation, and should be conducted every two to five years. Monitoring the deficiencies of the rolling stock serves an important purpose; it is a device for recording and controlling environmental effects and processes, accounting for seasonal change and exposure. Inventories from previous annual assessments are utilized in the maintenance and conservation actions of the current year. Inspection intervals may be modified to fit with existing NPS standards, ensuring that maintenance cycles are in accord with protocol, and are flexible to the needs of the historic resources and its stewards. During inspections the observer utilizes the general inspection checklist provided by the Root and Norton Assayers report, 1983, (Appendix B). Repair and maintenance is carried out in a manner that respects and results in historically accurate interventions.

The cost of the recommended cyclical maintenance is front-loaded, meaning that the majority of the cost is accrued during the initial conservation efforts due to the current condition of the rolling stock. Cost is positively correlated with the condition of the rolling stock, and therefore will diminish overtime as the cars become adequately repaired.

### ***Replacement versus Repair***

There are three general levels of restoration; cosmetic, structural, and operational. At this time, only the first two pertain to the Cimarron display. Before any work begins, the extent and nature of repair and replacement must be decided. For purposes of this plan, “repair” is used as a general description and applies to both repair and replacement.

Dahm recommends, and we concur, all restoration work should mirror D&RG standard procedures. When the D&RG repaired rolling stock for operational use they were governed by the Master Car Builder and American Association of Railroads Standards of Repair. These rules continue to apply, and guarantee the structural and operational integrity of each car. D&RG would replace badly split or rotten wood, especially in areas that were structurally unsound, and splice other sections of wood when feasible. This method is not only historically accurate, but it also ensures structural soundness.

All restoration work will need to meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties.

### ***Materials***

Whenever possible, historically accurate materials should be used. The form and finish should reflect the same techniques used by the D&RG. For example, a piece of wood that is specified as one inch thick should be a full one-inch thick. In addition, all wood materials should be purchased as early as possible to cure and adapt to the weather conditions of the site (Appendix A).

A metal roof, while not historically accurate, is much easier to maintain than canvas and roof tar. Being that only the maintenance staff is allowed on the roofs of the cars, using modern materials would not be a detriment to the integrity of the rolling stock and could be cost effective depending on the scenario chosen.

### ***Staffing***

Scenarios two and three require additional staffing above and beyond the current quota of Curecanti NRA. It is necessary that a rolling stock expert be obtained with a

background in conservation technologies and methods. This individual focuses primarily on physical interventions, protection and stabilization of the historic resources. Additional staffing of the facility is also recommended in that it creates interpretative opportunities such as conservation seminars, informational lectures, and guided tours of the cultural and natural resources of Cimarron. Interpretation is a means of communicating information, ideas and feelings that enrich and promote an understanding and appreciation of cultural property and historic resources.

### ***Marketing***

The three scenarios seek to increase the visitor attendance at Curecanti NRA. Each addresses the marketing of the site insofar as site visibility, regional connectivity of surrounding parks, and heritage tourism are concerned. In 2004, NPS reported 5,000 visitors to the Cimarron Rail Exhibit. This report also estimated 300,000 visitors to the nearby Black Canyon of the Gunnison NP. It is recommended that an informational "link" be created to capitalize on regional tourism and the proximity of Black Canyon of the Gunnison NP and Curecanti NRA.

### ***Short-term Activities***

A few short-term activities can take place to advance the project forward. The first of these should be a nomination to the National Register of Historic Places. Consultation with the Office of Archeology and Historic Preservation at the Colorado Historical Society will facilitate this action. National Register listing will assist with fundraising for the activities proposed in this report.

A thorough re-assessment of the rolling stock prior to restoration work, particularly those pieces in poor condition, should occur. This will help ensure that proper restoration measures are carried out and that accurate cost estimates are established. In addition, a feasibility study on a method to connect the bridge to the visitor's center will also greatly benefit the future of this project.

Due to the reduced resources of the National Parks, investigating methods to share knowledge and technicians and other resources between western parks will greatly enhance the feasibility of the proposed items in this report.

## Conclusion

In all, the three scenarios have been developed to protect and stabilize the D&RG rolling stock and truss bridge, incorporating two principles on which the plan was built. They are based on a shift in meaning and the physical consequences as a result of the change. The principles promote integrity, defined as the extent that the physical characteristics are complete or uncorrupted in location, design, setting, materials, workmanship, feeling and association, and are representative of a period of significance. Integrity is important because of the historical significance of the rolling stock and bridge, and it is essential that they serve their modern day function as communicative and symbolic examples of the past. The scenarios can be approached as “self contained” plans in and of themselves. However, they can also be adopted as a unified plan, taking elements from each to form an overall “phased” system of conservation, an evolution of designed goals. In all, this plan provides decision-makers with rational, defensible approaches that foster long-term protection and short-term stabilization of the historic resources located at Cimarron.

## History Overview

Why do we choose to save remnants of our collective past? How do we determine what should be conserved and what should be left to the ravages of time? Why does a site, structure, or object merit conservation while another does not? These are questions that historic preservationists seek to answer. We save historical objects because they help us understand what past societies were like, and by understanding the past it helps to understand the world today. For some, the conservation of history is for nostalgic reasons. While working on the condition assessment for the rolling stock assets at the Cimarron Rail Exhibit a local resident drove up and visited us. He remembered from his youth riding on the last train out of Cimarron. He continues to visit the site because it evokes memories of a different era.

The conservation of historic sites allows us as a society to return to the memories of the past and build upon them; and future generations a sense of who we once were. This conservation plan endeavors to answer these questions and make a case for the conservation of the historic railroad assets located at Cimarron.



## History and Context

### Significance and Integrity

There are two key concepts established under the National Historic Preservation Act of 1966, which preservationists use to establish whether a site is suitable for listing on the National Register of Historic Places: historic significance and historic integrity. Historic significance means the importance of a site in the context of American history, architecture, archaeology, engineering, or culture on a national, state, or local level. Historic integrity is defined as: “the authenticity of a property’s historic identity” meaning the extent that the physical characteristics of a site are complete or uncorrupted in “location, design, setting materials, workmanship, feeling and association”<sup>1</sup> within the chosen period of significance. While this plan is not a nomination to the National Register, it is these criteria which form the basis of this conservation plan.

The “period of significance is the length of time when a site was associated with important events, activities or persons, or attained the characteristics which qualify it for a National Register listing.”<sup>2</sup> For the purposes of this conservation plan the period of significance is the railroad era in Cimarron: 1882-1949. Cimarron depended on the railroad for its existence. It did not develop until the railroad entered on the scene and it quickly declined after the railroad tracks were taken up in 1949. This period encompasses all of the important economic factors in Cimarron: the railroad, ranching, and scenic tourism.

### ***Significance***

The Secretary of the Interior, who maintains the register, uses four criteria to determine the significance of a site:

- Association with important historic events;
- Association with important persons;
- “Distinctive characteristics of a type, period, or method of construction;” and
- The probability that it may yield information “important in prehistory or history.”<sup>3</sup>

Using these criteria Cimarron could be considered a significant site based on the first three criteria. It is associated with events in the broad patterns of history: exploration and settlement, agriculture, and transportation. It is associated with William Jackson Palmer, the leading advocate of the railroad; and Milton William Cline who was an early pioneer in Cimarron. Finally, the remnants of the narrow gauge history at Cimarron – the narrow gauge railroad and rolling stock, as well as existing evidence of the Cimarron town site – embody “distinctive characteristics” of railroad era construction.

## Association with Historic Events

Cimarron is significant because it was associated with events that contributed to the broad patterns of Colorado and American History. Explorers passed through the area in search of a path for the transcontinental railroad. Once located on the Ute Indian Reservation, Cimarron is representative of the pattern of settlement in the area. As the second largest shipper of livestock in Colorado, Cimarron played an important role to agriculture. Most importantly, transportation was a dominant theme in Cimarron’s existence and is an important part of its contribution to history.

### ***Exploration***

Captain John Gunnison was the first Anglo American to explore the Black Canyon of the Gunnison in 1853, and was the first of many explorers to consider the canyon to be impassable. Gunnison’s expedition was one of six expeditions sent out in the 1850s to explore possible routes for a transcontinental railroad. Heeding the advice of the Ute Indians that the Black Canyon was impossible to pass through, Gunnison skirted the canyon before proceeding to Utah where he and his party met their demise at the hands of the Paiutes.

## **Settlement**

The ancestral home of the Ute Indians was in the southern and western sections of Colorado. After the discovery of gold on Clear Creek in 1859, a series of treaties forced the Utes onto a reservation in the western third of Colorado. The Treaty of 1868, promised that this area would be their home for “as long as the rivers might run and the grasses might grow.”<sup>4</sup> That all changed on September 29, 1879, when the Ute Indians at the White River Agency rebelled against Nathan Meeker, an Indian Agent, as he tore up the grounds where they raced ponies in order to teach them how to plant crops, which braves considered to be women’s work. The braves killed Meeker and seven agency men and took the women as hostages. Public outrage forced a new treaty, the Treaty of 1879, which removed the Utes from their homeland to a reservation in northeastern Utah in 1882. This opened the Western Slope to white settlement and changed the destiny of Cimarron, which was located on the old reservation.

The treaty that meant the end of the northern Ute’s presence on the Western Slope meant opportunity for men eager to take advantage of the region’s bounty. Joseph Selig saw the potential for a new freighting center to take advantage of the valuable trade to and from the San Juan mining districts. In April 1882, only eight months after the Utes left Colorado, he and other civic leaders incorporated the town of Montrose. William Jackson Palmer saw the potential of developing his narrow gauge railroad into a transcontinental route. He bought railroads in Utah to make the transcontinental connection to the Central Pacific in Ogden and began surveying a route through the Black Canyon in 1881.

## **Agriculture**

Cimarron has a long history in agriculture. Before the railroad arrived there were cattle ranches in the area. Sheep, grain and dairy farms were also primary sources of revenue. *Croft’s Grip-Sack Guide of Colorado, 1885*, notes that in 1884, there were 9,202 head of sheep and 4,867 head of cattle in Montrose County. A 1907, article in the *Creede Candle* comments, “Cimarron is showing oats that stand seven and one-half feet high and potatoes that weigh three and one-half pounds each.”<sup>5</sup> When local rancher Mike Maurer’s family moved to Cimarron in 1911, there were about twenty-five families that lived near the town, “and pert near everyone...milked a few cows and they’d haul the cream to Cimarron and ship it, most of it went to Denver.”<sup>6</sup> Another old-timer, Arthur Carmichael, remembered up to a quarter million sheep

grazed in the area when he had a ranch near Cimarron in the 1930's.<sup>7</sup> This proud ranching heritage is commemorated by the brands on doors near the stock car exhibit at Cimarron.

There were 7,500 square feet of stockyards at Cimarron. Shepherders, who were predominantly Basques, Mexicans, and Peruvians, took their stock by trail to Utah in the fall, then brought them back by train in the spring. Cimarron was the second largest shipping point in the state next to Placerville. When it was time to ship the livestock to markets in Denver and Kansas ranchers had a choice of either riding in the stock cars with their livestock, or riding in the caboose. After one such trip in October 1919, local rancher Sam Flohr complained:

Figure 1: Sheep await loading at Cimarron Stockyards

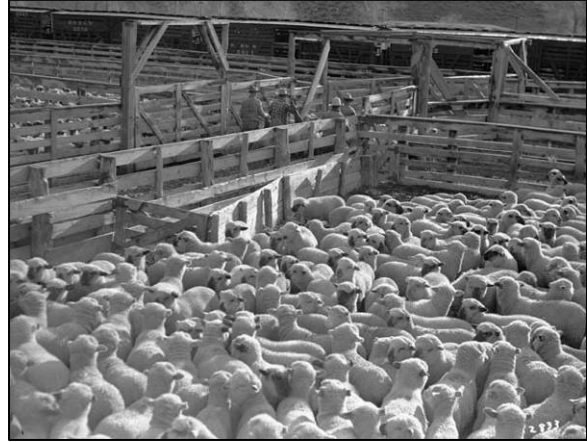


Photo Courtesy of the Denver Public Library, Western History Department.

Traveling in a small caboose where 19 men are huddled, is but one of the many trying ordeals through which we had to pass.... If we were supplied with chairs, and could sit it would not be so trying, but to take turns sitting and be subjected to jerking and jolts, where we frequently are thrown headlong, is hard on us. If we were provided with a stock car, well bedded down with straw, and hitched onto the train with our cattle, we would fare much better.<sup>8</sup>

## ***Transportation***

Cimarron was a transportation hub even before the railroad came on the scene. Otto Mear, the “Pathfinder of the San Juans,”<sup>9</sup> developed the toll road system that opened the San Juan Mountains to miners. Congress granted the charter for the roads ostensibly for transportation of Indian supplies. An 1877, article in the *Saguache Chronicle* describes the trek from Gunnison to Cimarron:

At the very onset he encountered the famous Gunnison or Lake Fork hill, three miles long, and a “holy terror” to freighters. Next came the hills known, in the pious vernacular of the San Juan, as “the Son of a B\_\_\_\_\_ No. 1 and 2” terminating at the “middle cabin.” Beyond this he toiled laboriously up the divides of the Little Blue, the Big Blue, the Cottonwood and the Cimarron – terrible in their ascent and worse in their descent – until having exhausted his entire repertoire of oaths, and worn out one or two “black snakes” upon his animals, he finally began the long and gradual descent into the Uncompahgre valley, meditating upon the wear and tear of conscience and team.<sup>10</sup>

Cimarron continued to have stagecoach service after the railroad was built. In a 1981, interview with Mike and Ruby Maurer, Mike Maurer mentions that the old stage station was on the north side of the road and that it was there “at the same time that this corral ‘n stuff was on down there by the corner.”<sup>11</sup>

The arrival of the narrow gauge on August 9, 1882, changed the mode of transportation in the Black Canyon area for the next sixty-seven years. There were many incentives for building the railroad. As previously mentioned, William Jackson Palmer, the president of the D&RG, wanted to make a transcontinental connection at Ogden, Utah. He saw the need for agricultural transport and carriage of supplies to and hard minerals out of the San Juan mining districts. More importantly, he wanted access to the coalfields north of Delta, Colorado. Of course, the coal was fuel for the D&RG trains; but also, it was a supply for another one of his companies, Colorado Coal and Iron in Pueblo.



Palmer had another vision beyond normal freight and passenger service; he saw the potential for scenic tourism. In the 1881, D&RG Annual Report Palmer wrote, "There is also the special attraction to the traveling public of the extraordinary scenic grandeur of the route."<sup>12</sup> Hidden in the depths of the gorge were such natural wonders as Chipeta Falls and the Curecanti Needle the image of which the D&RG took as part of their masthead. The Black Canyon of the Gunnison and Cimarron Canyon were to become part of the D&RG's 1,000-mile "Circle" tour. Additionally, the Cimarron Canyon was an attraction for hunters and fisherman. Until upstream mining tainted it, it was commonplace to find eighteen-inch trout in the river.<sup>13</sup>

Fledgling towns eagerly anticipated the arrival of the railroad. Having a railroad meant that citizens could buy goods from eastern suppliers and reach new markets for their own goods. It brought vital communication not only through the telegraph that came with the rails, but also mail that was delivered in days instead of weeks.

Where the railroad located its depot could mean the difference of success or failure for a community. For example, East Gunnison competed with West Gunnison to see where the D&RG would locate its depot. The two towns raced to make their town the most attractive to the railroad. East Gunnison got the depot and today, Boulevard Street in Gunnison is the only reminder of the rivalry.

For Cimarron there was no question where the town would be located. The railroad came and the town developed around it. Prior to the arrival of the railroad it was simply a section camp made of tents. The town developed because it was determined that there would need to be a helper station to add and remove locomotives for the trip over Cerro Summit. The railroad was the principal mode of transportation for the community and, as such, the town built around the railroad. The railroad was Cimarron's main street. Early Cimarron was a typical railroad town. Buildings included a depot, an agent's house, a section house, a bunkhouse, and an icehouse. According to Gilbert Lathrop, a railroad man turned author who grew up in Cimarron, there was no electricity or running water except at the hotel and the agent's house.<sup>14</sup> The buildings were of vernacular construction in the National architectural style.<sup>15</sup> They were wood frame buildings with simple lines and no ornamentation. According to Arthur Carmichael,

a local rancher, the depot and the hotel were the “standard D&RG color(s),” orange with black trim.<sup>16</sup>

The railroad was the primary transport in and out of Cimarron until automobiles entered the scene and old stage routes were replaced by dirt roads. A newspaper article dated May 14, 1909, relates, “Dr. J. Q. Allen in Montrose this morning saying the road from Montrose over Cerro Hill to Cimarron was badly in need of repair,” and that, “the famous Blue Mesa road on which the Montrose commissioners spent so much money last summer to make it a link in the chain of national highways across Colorado was not hardly passable for a horse.”<sup>17</sup>

Better roads were built though, and eventually the automobile and truck whittled away at the railroads revenues. The D&RG discontinued regular passenger service in 1936. A final excursion train passed through the canyon in late March in 1949;<sup>18</sup> the last sheep run was in May of 1949; and the tracks were taken up in July of the same year. The railroad transferred the right-of-way to the Colorado Department of Fish and Game. It became a scenic drive with access for fishing on the Gunnison River, and was named Trout Drive Hi-way.<sup>19</sup>

## Association with the Lives of Important Persons

Cimarron is significant for its association with the lives of important persons. William Jackson Palmer, an entrepreneur and visionary, had the insight to see the need for and appeal of having a narrow gauge route through the Black Canyon. Milton William Cline was a pioneer who played a role in Colorado history through his association with the Ute Indians.

### ***William Jackson Palmer***

Born in 1836, to Quaker parents, William Jackson Palmer began his railroad career at the age of seventeen when he joined the Hempfield Railroad engineering Corps. He rose to the position of private secretary to the president of the Pennsylvania Railroad. In 1862, he volunteered for the Union Army where he attained the rank of Brigadier General and earned a Congressional Medal of Honor for his bravery at the Battle of Red Hill in Alabama.

After the war he returned to railroad work, this time as treasurer of the Kansas Pacific Railroad. When the Kansas Pacific completed construction to Denver, Palmer decided to form his own railroad company. While other railroad companies focused on extending their rails to the West, Palmer envisioned a railroad running north and south from Denver to El Paso, Texas, with branch lines extending into the mining regions of Colorado.

Palmer was the leading advocate of the narrow gauge railroad in the United States. As a young man he traveled to England and France to learn about their railroad techniques and saw the advantages of a narrower track that was three feet wide as opposed to the standard gauge of four feet eight and one-half inches. The narrow gauge was more economical to build and better suited to tight mountain curves.

Two months after the Kansas Pacific completed construction to Denver in 1870, Palmer, with financial backing from the East Coast and Europe, incorporated the Denver & Rio Grande Railroad. His grand plans to build his railroad to El Paso, Texas, were stymied at Raton Pass.

Figure 2: William Jackson Palmer



Photo courtesy of the Denver Public Library, Western History Department

Palmer then turned his attention to the west and the mining districts of the San Juans. The discovery of silver in Leadville enticed Palmer to build another line up the Arkansas River. Construction stalled when the D&RG crews met head to head with the crews of the Atchison, Topeka & Santa Fe in the Royal Gorge. After a lengthy legal battle, the D&RG gained the Royal Gorge right-of-way, but Palmer had to give up his plans for any further construction into New Mexico and Texas.

With the end of the Royal Gorge war Palmer and the D&RG were free to continue their drive toward Leadville; the tracks reached Salida, then known as South Arkansas, in May, 1880, and pushed on to Leadville. At Salida crews commenced work on the Gunnison line. Salida became a hub on two main narrow gauge lines.

As crews worked to build over the precipitous 10,858 foot Marshall Pass an advance team of surveyors traveled to Gunnison to begin surveying the Black Canyon of the Gunnison. Surveying began January 8, 1881. Upon completing the survey the engineers reported to Palmer:

We have been over the ground and have made careful surveys which will show the impossibility of laying tracks in the Black Canyon. If men could work on the face of a cliff or in a roaring river, they might build a railroad through the gorge, but while the present laws of nature are in operation, it can't be done.

Hearing this Palmer thanked his engineers and replied, "but it's going to be done."<sup>20</sup>

### **Milton William Cline**

When the narrow gauge emerged from the Black Canyon it came into a large grain and cattle ranch owned by Captain Milton William Cline. Although all of the locals referred to him as “Cap” Cline, he actually served as a sergeant in the Union army as is indicated on his gravestone at Cimarron. Cline would slip behind Confederate lines for days at a time. Traversing the enemy lines he gathered intelligence on supplies and the morale of the enemy that assisted the Union army.<sup>21</sup>

He came to Colorado in the 1870’s and settled near the Cimarron River on the Ute reservation. Probably out of necessity, he became a friend of the Utes and their Chief of Chiefs, Ouray.

A year later, Captain Cline interceded in a dispute with the Utes. A freighter shot a Ute Indian named Johnson, who was the son of War Chief Shavano, near Cline’s Ranch. Johnson died that night and the Ute chiefs wanted revenge. Soldiers took the freighters to Cline’s ranch where they were disarmed and dismissed to make their way to their destination defenseless. Captain Cline with the help of the Indian agent, two other settlers, and an Indian took A.D. Jackson, the man who shot Johnson, and started toward Gunnison to seek justice through a court of law. They only got three miles before Indians overtook them. The Indians took Jackson to the edge of a cliff where they shot him and let his body topple into the gulch. Some people blamed Captain Cline for not doing more to protect the prisoner.

Figure 3: Cline’s Ranch

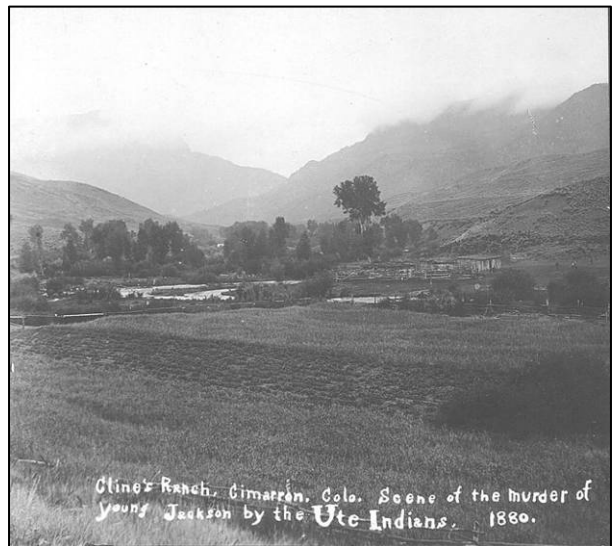


Photo courtesy of the Denver Public Library, Western History Department.



Cline's popularity did not greatly suffer after the killing of Jackson, because two years later, after the railroad's arrival, and article in the *Gunnison Daily Review Press* notes that an election that was held to choose Cimarron's town officers declared Captain Cline "chosen marshal and appointed deputy sheriff."<sup>22</sup>

## Embodies Distinctive Characteristics of a Type, Period, or Method of Construction

Cimarron is significant under the third criteria because it is representative of narrow gauge construction during the late nineteenth century.

Surveying in the Black Canyon was an engineering feat in itself. Surveyors began their work in January, 1881; the coldest part of a Colorado winter. In portions of the chasm sun never reached the places where the crews worked. One January day passed without the temperature in the canyon ever rising above thirty-three degrees below zero.<sup>23</sup> The advantage was that surveyors could stand on the frozen ice in the middle of the river to take their measurement. During warmer weather boats had to be anchored with rocks for the surveyors to do their work. In places where the walls of the canyon were perpendicular grading crews lowered boys hundreds of feet down the canyon walls in order to mark blasting spots.

Figure 4: Surveying the Black Canyon

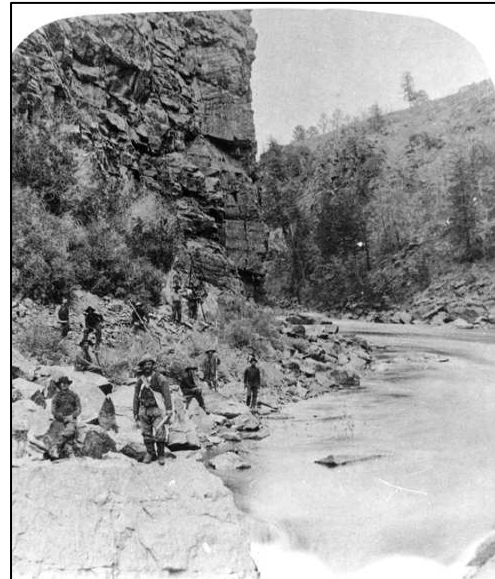


Photo courtesy of the Denver Public Library, Western History Department.

Crews began excavating in June 1882<sup>24</sup>. The contractors in the canyon included crews who had built the railroad over Marshall Pass; Carrico & Fay, McGavock and Tate, and J.J. Cummings; as well as new contractors: W. L. Hoblitzell and Company, Hammond, Hendricks and Company, and Dunbar and Shafer.<sup>25</sup> Most of the laborers were Irish or Italian.

Work in the Canyon was hazardous and many men lost their lives. They used highly volatile nitroglycerine, which was a new chemical utilized in railroad construction. Just handling nitroglycerine could detonate the deadly liquid, so idle hands were a sought after commodity. In one explosion the foreman, Sweeney, was blown into the river and his body was never recovered. In the same blast another worker was so badly injured that he died within an hour and another man's arm was blown off.<sup>26</sup> Dead Man's Point, just five miles east of Cimarron, was a particularly dangerous section. According to Gilbert Lathrop thirteen men "fell several hundred feet to their deaths when the scaffolding rope broke!"<sup>27</sup>

While the sights in the canyon awed tourists, engineers dreaded the perilous run. Trains frequently derailed at the sharp curve at Dead Man's point and the locomotives plunged into the river taking mail and baggage cars with them. Rock and snow slides were frequent, especially during the spring thaw when every train had a crew of snow shovelers aboard. On one March day in 1916, there were nine slides in the canyon that pummeled a westbound train.

Figure 5: Bridges at Lake Fork



Photo courtesy of the Denver Public Library, Western History Department.

William Jackson Palmer and the D&RG preferred narrow gauge to standard gauge because it was less expensive to build and it could negotiate tight mountain curves easier. It required less rail and the smaller cars were more economical to build. Additionally, the narrow tracks required less blasting which was of particular importance in an area like the Black Canyon. Nonetheless, construction through the canyon cost about \$165,000 per mile. The railroad arrived in Gunnison

on August 8, 1881. It took another year to construct the road through the Black Canyon arriving in Cimarron on August 9, 1882. When the line could be extended no further in the Black Canyon the line emerged from a "crack in the wall" at Cimarron Canyon. This last mile into Cimarron cost more to build than construction through the entire Royal Gorge. In comparison, it only took one month for the tracks to be laid over Cerro Summit to Montrose where they were

completed on September 8, 1882. By November 21, 1882, the tracks reached Grand Junction completing the transcontinental link with the D&RG tracks in Utah.

There were seven bridges in the canyon including three at Lake Fork. Of those only one span of the truss at Cimarron Canyon remains. This truss was listed on the National Register of Historic Places in 1976. Since the rest of the Black Canyon route now lies at the bottom of Morrow Point Reservoir, the truss is the only remaining structure in the Black Canyon representing the history of the narrow gauge line.

Most railroad section camps disappeared as the tracks were completed. Cimarron was different though. Early on, the railroad determined that additional locomotives were required to ascend the four percent grade over Cerro Summit. According to Mike Maurer, it took three locomotives to take twenty cars over the hill.<sup>28</sup> As a result, Cimarron became a helper station, which contributed to the town enduring for as long as it did. The D&RG built a four-stall roundhouse at Cimarron in 1882. On February 9, 1892, the roundhouse, which was saturated with ten years of oil and soot burned down, and four locomotives were consumed in the conflagration.<sup>29</sup> A five-stall roundhouse replaced it the same year. That roundhouse burned down in August, 1920. Arthur Carmichael recalled arriving in Cimarron the same year saying, "The stoves and stuff was still there just like it burned."<sup>30</sup> After the second fire, the railroad decided to build a roundhouse in Montrose instead of replacing the Cimarron roundhouse.<sup>31</sup>

Figure 6: Cimarron 1886 with 1882 Roundhouse and Hotel

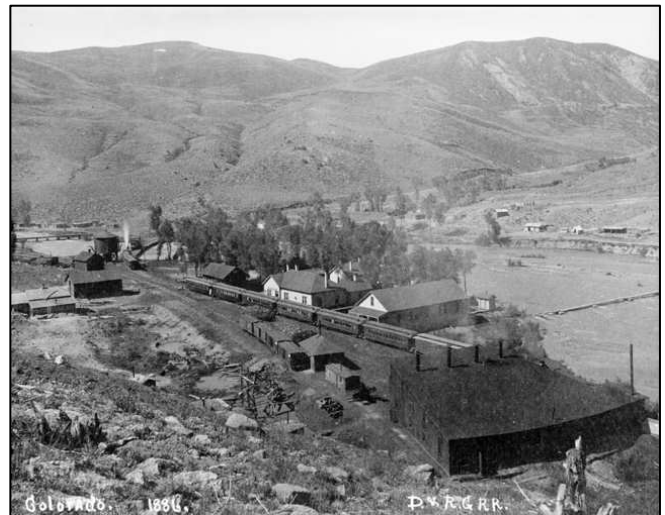


Photo courtesy of the Denver Public Library, Western History Department.

Every train that passed through Cimarron stopped for twenty minutes and all the passengers disembarked. While locomotives were added or removed, the passengers ate lunch at the Black Canyon Hotel, which was operated by a subsidiary of the D&RG, the Rio Grande Company.

The railroad abandoned the narrow gauge line in 1949, and shifted business to its standard gauge line over Tennessee Pass. Rock slides, snow slides, and derailments that plagued the line since its inception were factors in the decision. Increased automobile and truck traffic was another factor that led to the abandonment of the rail line. The Cimarron population dwindled to seven residents and in 1962, with the construction of Morrow Point Dam most of the remnants of the railroad resources in Cimarron were lost or destroyed.

Figure 7: Last Train out of Cimarron pulling up tracks along the way



## Site Assets

### On-Site Development

#### ***Access Road***

There is only one access road to the Cimarron site from Highway 50, which also connects all other areas of the site from the maintenance area to the dam. The existing vehicular thoroughfares located within the Cimarron Rail Exhibit site are presently in good condition. At this time the existing roadways do not appear to need work.

#### ***Interpretive Livestock Pens***

The interpretive livestock pens located at the front of the site, next to the visitors center are in need of minor repair. The fence itself needs nails to be re-driven, this will ensure that boards do not fall off and decreases the potential for injury to both staff and visitors. The plank boards for the interpretive sheep loading ramp are in need of replacement due to rotting and weathering. All replacement materials should be the same in both species and texture to the original materials used; which will allow for a seamless integration with the older materials.

#### ***Campground***

The campground at Cimarron is in good condition. It is recommended to do end of the year service to all sites (i.e. leveling, cleaning fire pits, etc.).

#### ***Maintenance & Picnic Areas***

Other than deficiencies identified on the corral fence, maintenance on infrastructure appears to be adequate at this time. However, depending on the amount of added infrastructure there will be a need for maintenance on all existing and new development.

## Off-site Development

### ***Signage***

Traveling southwest on Highway 50 there is an existing sign informing travelers of the Cimarron Rail Exhibit. However, this sign is extremely deteriorated, and is need of either a refinishing or total replacement.

### ***Salvage Yard***

Another off site development that needs to be addressed is a salvage yard located to the north of the entrance to the site. The presence of this site is a detriment to visibility and increased visitation. We were informed during our meeting that the Colorado Department of Transportation (CDOT) is currently working with the owner of the salvage yard who has agreed to either clean-up the property or screen the property. Further evaluation and mediation might be necessary for this site to progress along with any work at Cimarron.

## Rolling Stock Assessment

The following is an assessment of the current conditions of the rolling stock housed within the Curecanti National Recreation Area as the Cimarron Rail Exhibit (the "Site"), including the Locomotive and Tender, Boxcar, Caboose, Cattle Stock Car, Sheep Stock Car, Work Car and Crane Car. For the purpose of this analysis, Andrew Dahm's report compiled in 1997, (Appendix A), is utilized as an expert opinion and reference throughout this plan's assessment of the rolling stock and the current condition of both structural and aesthetic members.

All of the rolling stock assets located within the Site was once utilized by the D&RG. Currently, the City of Montrose owns the Locomotive, Tender, and Caboose, which the NPS leases. The NPS owns the Boxcar, Cattle Stock Car, Sheep Stock Car, Work Car, and Crane Car.

## Locomotive #278

Figure 8



### **Dimensions:**

Weight: 69,110 lbs.

Length: 31'2"

Height: 10'5-1/2"

Width: 8'3"

Materials: Iron, Steel, & Wood



### ***Historical Background***

Built in 1882 by the Baldwin Locomotive Works at a cost of \$4,290.67, locomotive #278 is one of the few remaining narrow gauge locomotives. It was one of only sixty "Class 60" series locomotives built in the 1880s. For sixty-seven years it ran on the D&RG tracks between Salida, Gunnison, and Montrose. Locomotive #278 was taken out of service in March of 1953 after the D&RG decided to make the move away from narrow gauge to standard gauge tracks. Today it stands in-situ on the last remaining bridge in the Black Canyon of the Gunnison.

### ***Interior***

- Cab armrests are rotten on both sides;
- Wood in the rear of the cab appears to be in better condition and relatively free of rot;
- The engineer's door is splitting and rotting;
- The cab floors are rotten and need to be repaired or replaced;
- Both cab seats are missing;
- The Independent brake gauge and one of the feed valves are missing, and
- There is asbestos in the boiler jacket, and wrapping the cab steam pipes.

### ***Exterior***

- Pilot beam is rotten;
- Fake lenses in classification lights and mounting brackets for the lights are rusting;
- Front smokebox is rusting due;
- Headlight is missing the outer lens and is rusting;
- The steam air compressors have torn and rusted jackets;
- The fireman's side cylinder jacket is completely rusted out;
- The front of the cab is rotten;
- The plexiglass has become opaque;
- Interior slide blocks are rotten or missing;
- Wood on the fireman's side of the cab is rotten;
- The fireman's wind visor is falling off;
- Wood on the engineer's side of the cab is rotten; and
- Cab side gutters are falling off.

## **Roof**

Historically the cab roofs on D&RG locomotives were covered with canvas and tar. The current roof is wood sheathing.

- Wood sheathing is rotten at the sides and needs to be repaired or replaced;
- The sheet metal covering, if not corroded, should be scraped and painted;
- Rear roof bow is split and rotten and needs to be repaired or replaced;
- The rear cab extension is split and rotten and needs to be repaired or replaced; and
- The cab roof vent frame and cover are rotten and need to be repaired or replaced.

## **Paint Chronology**

- 1882: Boiler Jacket-Russia iron, Cab-varnish, Tender-black, Letters-aluminum leaf  
1903: Boiler-black, Cab-black, Letters-yellow  
1921: Boiler-green, Cab-black, Letters-yellow  
1940: Boiler-black, Cab-black, Tender-black, Letters-white, trim aluminum

## **Known History**

- 1882: Built by Baldwin Locomotive Works, Philadelphia, PA  
1903: KC Brakes applied, 8-1/2" pump Applied, Tower coupler applied, new shortened wood pilot  
1905: Iron plat applied on cab sides  
1906: ICC outlaws iron boilers, steel boiler applied. Steam pressure increased from 145 to 160 pounds per square inch. Russia iron jacket changed to sheet iron, painted  
1911: U.S. Safety Appliance Standards applied; new foot boards, running boards, grabirons;  
1913: Straight jacket applied with new longer smokebox and internal screening system; oil headlight replaced with Pyle Electric Arc type  
1918: Hadlamp changed to incandescent bulb in the old arc box; steel tube pilot applied; air sanders, air bell ringer, consolidated safety valve, economy air firebox door added  
1920: D&RG back in control; two 9-1/2" air pumps applied to left side; air reservoir added to right side; new running boards; improved G type train brake controls in cab  
1935: New tender tank from locomotive #460 added (August)  
1936: Pyle-National Type I turbo generator and new headlight applied; smokestack cinder screen and cab vent cover added  
1946: Sand dome rebuilt to larger capacity; foot boards added on pilot

- 1949: Eleven inch air pumps replace the 9-1/2" type scrapped from Locomotive #360
- 1953: Last run on March 1953; footboards removed; donated to the City of Montrose for display
- 1973: Leased to NPS on August 16, 1973, for 20 years
- 1974: Placed on the truss where it stands today
- 1991: Short curtain was installed on the cab roof line to keep snow and rain from getting into the cab; epoxy reconsolidation and painting of the cab roof line

### ***Preliminary Recommendations***

The locomotive is in poor overall condition. Paint is peeling and many of the wood components are rotting. In many places in the locomotive there is asbestos. Additionally, asbestos retains water and will continue to contribute to corrosion. As such all asbestos needs to be removed.

- Re-upholster cab armrests;
- Repair or replace Engineers door;
- Repair or replace the cab floors and do a further analysis of the cab subfloor;
- Replace cab seats;
- Replace the missing Independent brake gauge and one feed valves;
- Remove all asbestos;
- Replace pilot beam;
- Replace lenses in the classification lights;
- Scrap and wirebrush all rust;
- Replace outer lens of the outer lens;
- Replace or repair steam air compressors jackets;
- Replace or repair front of the cab;
- Replace the opaque plexiglass throughout the cab;
- Repair or replace interior side blocks;
- Remount fireman's wind visor;
- Remount cab side gutters;
- Repair wood side sheathing;
- Replace rear roof bow;
- Repair rear cab extension; and
- Repair cab roof vent and cover.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.

## Engine Coal Tender #278

Figure 9



### Dimensions:

Length: 20'10-1/2"

Height: 10' 1-1/2"

Width: 8' 3"

Materials: Wood structure, iron and metal walls and coal bin.

### ***Historical Background***

The Coal Tender for Engine #278 is not the original. This Coal Tender was added to this locomotive after locomotive #460 was scrapped in 1935. Like the locomotive, it is also in poor condition. Paint is chipping nearly throughout the car. Rust is evident in many places including the top and bottom four corners of the cars' walls. The wood center beam that is the main structural support is rotting and has signs of pucking. Bolts are loose and broken in the undercarriage.

### ***Interior***

- Front deck boards are rotting; and
- The fireman's coal pocket is missing.

### ***Exterior***

- The front end beam is rotten;
- Front end of the tender tank and coal pocket doors need to be scraped and painted;
- Side tender tank needs to be scraped and painted;
- Side deck trim is rusted ;
- Engineer's tender side sill is rotten at the front end; and
- The rear end beam and the last deck board are rotten.

### ***Undercarriage***

- Trucks are in fair condition; and
- The main truck bolster beams are split and rotten.

### ***Roof***

- Trucks are in fair condition; and
- The main truck bolster beams are split and rotten.

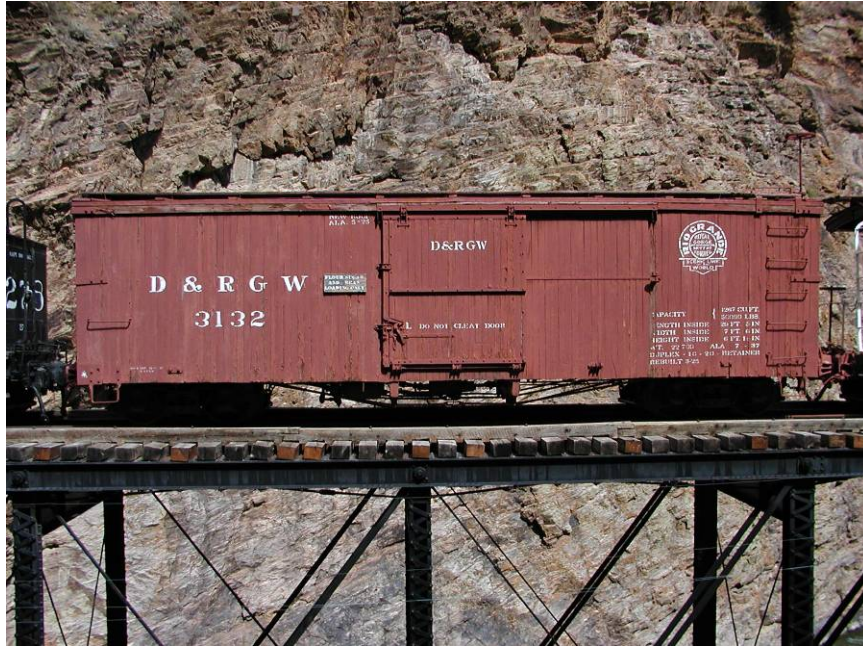
***Preliminary Recommendations***

- Front deck boards need to be repaired or replaced;
- The fireman's coal pocket needs to be replaced;
- The front end beam needs to be repaired or replaced;
- Scrape and paint all rusted areas;
- Repair side deck trim; and
- Repair main truck bolster beams.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.

## Boxcar #3132 3000 Series Boxcar

Figure 10



### Dimensions:

Weight: 22,700

Length inside: 29' 5"

Length outside: 30' 0"

Materials: Oregon Pine and Oak

Width inside: 7' 6"

Width outside: 7' 7"

Height inside: 6' 1 3/4"

Capacity: 50,000 lbs.



## ***Historical Background***

Built in 1903, by American Car and Foundry Co., Boxcar #3132 was one of 750 cars in the 3000 series. Initially used for hauling flour, sugar and beans, the D&RG later modified #3132 for hauling silica sand. An 'S' in front of the number indicated the modification. The 'S' was painted over in a later restoration and a "Flour, sugar and beans loading only" sign was added to identify it with an earlier period. The car has sliding doors on both left and right sides. Ladder rungs are attached on both sides at the A and B ends as well as on each end for access to the roof walk. The siding is tongue and grooved wood. The roof is metal.

Boxcars such as #3132 moved loads throughout the D&RG narrow gauge system, being switched to other trains according to their final destination. As such, there is no complete history of the travels and destinations of these cars. There is, however a record of physical changes as indicated on the cars themselves.

## ***Interior***

Railing stored in the Boxcar impeded a close inspection of the interior. This material, used for guardrails on the truss during a previous restoration, is sitting and rotting. As such, it needs to be removed. In general, the interior appeared to be free of deterioration; however, there were what appeared to be cross braces at the B end of the car. With further assessment it could be determined whether the braces are a temporary repair or a preventive measure.

## ***Exterior***

The A end is weathered and some of the boards should either be repaired or replaced with historically accurate materials. It is recommended that boards that are not too severely deteriorated should be spliced to fill gaps or holes.

The fascia needs to either replacement with historically accurate materials, or where possible, splicing and consolidation may be all that is necessary. The tongue and groove siding is in overall good shape except for weathering at the bottom edges.

On the B end the hand brake was broken during a previous repair and re-welded. According to Andrew Dahm's 1997 report, this weld should be checked, ground flush,

and painted. Also, a bolt fastening the brake chain to the brake staff is missing and needs to be replaced.

### ***Undercarriage***

The undercarriage appears to be in good shape.

### ***Roofwalk***

There are some holes in the metal roof that need patching and sealing. The roofwalk is severely deteriorated and is in need of repair or replacement.

### ***Paint***

Three colors have been used in the history of the car. The original 1903 color was Prince's Mineral Brown with Ironwork-Black. In 1921, they used a brown shade of Boxcar Red. Then, in 1936 and 1946, a red shade of Boxcar Red was used with white lead lettering.

### ***Known History***

1903: American Car and Foundry Co., New York builds 750 cars numbered 3000 to 3749; Complying with standards of the time, they have Sharon couplers, and National Safety door locks

1911: U.S. Safety Appliances Standard compliance

1925: New siding, new Camel door locks (Dunham patent), possible new draft gear, new outside Murphy Roof (manufactured by Standard Railway Equipment Mfg. Co., Hammond, Illinois), K-1 triples added; Car and truss removed

1940: Flour, sugar, and bean loading only service sign added

1960: New floor for silica sand loading use

1968: Last used in service on the Alamosa, Farmington, and Durango lines

1970: Body sold to Jim Coleman; steel scrap sold to American Compressed Steel Co.

1971: Jim Coleman purchases steel scrap; car sold to the National Park Service

### ***Preliminary Recommendations***

- Tighten all nuts and bolts throughout the car, replace when necessary;
- Repair or replace boards located on the A end;
- Spot replacement of fascia;
- Treat tongue and groove bottom edges to negate current weathering;
- Clean and repaint undercarriage;
- Patch and seal holes in roof or replace with historically accurate materials;
- Replace roofwalk; and
- Repair or replace wither.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.

## Caboose: Car # 0577

Figure 11



### Dimensions:

Weight: 18,900 lbs.

Length Outside: 19' 11"

Width Outside: 8' 3"

Capacity: Unknown

Doors: 2

Materials: White Oak, Fir

Length Inside: 16'

Width Inside: 8"

Height Inside: 5' 11"

Windows: 2' 4" x 1' 8"

### ***Historical Background***

D&RG Car #0577 was originally car #97 in 1886 and is a common caboose model utilized on Colorado Narrow Gauge rail lines. Later in August, 1887 all D&RG cabooses were renumbered in the 0500 series to avoid potential conflicts with the new refrigerator car series 1-150. Car #0577 was utilized by the D&RG until 1952 when it was retired and sold to Andy Sorenson of Montrose, Colorado. The caboose was a significant part of ranching life.

The historic record of the car during its service years for the D&RG is minimal at best. This is typical of railroad stock, being that most repairs were done through the cannibalization of other similar stock. However, after it was retired there have been several reports on the physical condition of 0577 including a survey conducted in 1997 by Dahm on all rolling stock assets located at the Cimarron Rail Exhibit located in Cimarron, Colorado.

The one material and labor estimate found regarding car #0577 was written by Dahm. The study conducted by Dahm in 1997 states the total cost estimate to restore the car would be in excess of \$27,500 for complete restoration. Based on this information from Dahm's 1997 report and the current market for material, labor, along with the continued deterioration of 0577 there is a predicted increase in these estimates. Unfortunately, this will continue to be the trend until the National Park Service can allocate funds for the commencement of work.

### ***Interior***

- Large part of the left side in the caboose is missing. Evidence on the left wall indicates there were two cupola seats and a bunk towards the A end of the car;
- While the stove is present inside the car it is missing the pipe that runs from the top of the stove to the ceiling;
- The original cast steps that lead up to the cupola are missing requiring a new casting and pattern to be made to replace it;
- The interior cupola window trim boards are splitting;
- The cupola B end wall support has rot damage from a leak in the roof located at the B end cupola wall and main wall joint; and
- The conductor's air gauge, located in the cupola, is missing.

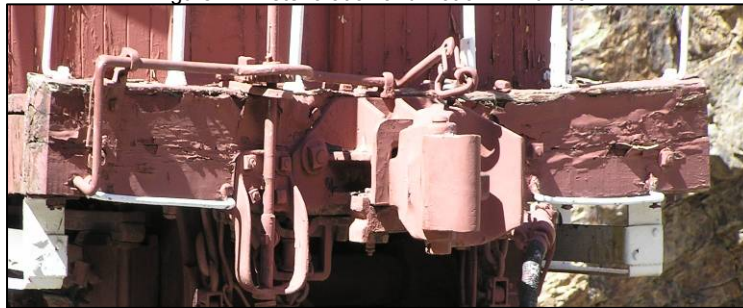
Overall, the interior of the caboose remains in a relatively poor condition due to neglect and natural weathering, according to Dahm's report it is missing one-third of its original pieces, and is in need of a thorough cleaning. A thorough cleaning will be needed to bring the interior of 0577 back to an acceptable state.

### ***Exterior***

The exterior of the caboose is in very poor condition. The frame ends, window trim and cupola are extremely deteriorated or rotten in some places.

The same issues appear on both the A and B ends of the caboose. On both ends the end beams are rotting from both sides and the top, both end decks are rotten, and both roof drips are incorrect and need replacing.

Figure 12: Deterioration and Rot of B End Beam



Both the A and B end doors have been replaced and are historically inaccurate.

On the right side of the caboose the following deterioration was observed:

- Side window sill and trim are badly split and are falling apart;
- Roof drip boards are incorrect to period;
- Letterboard is split;
- Siding below the platform decks is badly split;
- On the left side of the caboose the following deterioration was observed;
- Siding below platform decks is badly split and rotten on both ends;
- Window sills and trim are badly split and rotten; and
- Roof drip boards are incorrect to period.

The windows in car #0577 have been replaced while under the stewardship of the NPS, however, the existing historically inaccurate plexiglass needs to be replaced as they have become opaque.

Overall, the exterior of the caboose needs an extensive amount of work to conserve and preserve it. The poor condition of the exterior has an adverse affect on the condition of the interior by allowing insects, avian species, dirt, and water to penetrate and cause accelerated deterioration.

### ***Undercarriage***

The undercarriage of 0577 has signs of water retention in the cross members and rust is found on various parts of the trucks.

### ***Roof***

Currently, the roof is not consistent with what the D&RG would have done; the materials they would use were canvas covering coated with roofing tar. Today the roof is metal, which is easier to maintain and tends to work in the favor of preservation, and is in decent shape except where the cupola end walls meet the main roof where water damage is evident. Depending on the scenario chosen it could be left as it currently is or taken back to what it was historically.

### ***Paint***

Subject to the era chosen for interpretation the NPS has a choice in the trim color of car #0577. In 1886 the caboose had a black trim. Later in 1921 the trim was white and before it was retired the car had a metallic aluminum trim. The color of the car was constantly red but until 1921 it was Indian red and after that it was Boxcar red.

### ***Known History***

1886: Eight wheel cabooses built # 85-96

1887: Car # 93 number changed to 0577

1903: KC brakes and Tower couplers applied

1911: U.S. Safety Appliance Standards applied

1925: Cast steel coupler pockets, open pockets draft gear, new draw stem and new coupler (Sharon National) applied along with K-1 triple siding

- 1940: Roof lamp removed
- 1952: Car retired, sold to Andy Sorenson, Montrose, Colorado
- 1955: Donated to Montrose Garden Club information center and later to the Montrose Chamber of Commerce
- 1973: Leased to the NPS for twenty years

### ***Preliminary Recommendations***

- Replace both A and B end beams with white oak;
- Replace A and B end deck with half lapped fir;
- Replace both A and B end doors;
- Replace plexiglass in all windows and doors;
- Do spot replacement of siding where needed;
- Repair right and left side window sill and trim;
- Clean and replace missing pieces of interior;
- Replace and reconnect stove pipe to ceiling;
- Interior cupola window trim boards need repair;
- Replace conductor's air gauge in the cupola; and
- Scrape, wirebrush, and repaint interior and exterior.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.



## Cattle Car #5620 D&RGW 5500 Stock Car Series

Figure 13



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### Dimensions:

Weight: N/A

Outside Length: 30 ft.

Inside Length: 20 ft. 4 in.

Inside Width: 7 ft. 3 in.

Outside Width: 7 ft. 9 in.

Capacity: 50,000 lbs., 1210 cubic ft.

Inside Height: 7 ft. 3 in.

Doors: 2 sliding, left side and right side

Materials: White Oak and Fir

### ***Historical Background***

The Cattle Car #5620 was built by the American Car and Foundry Company, New York, with 350 other cars numbered 5500 through 5849 in 1904, for the purposes of transporting cattle to and from the market and pastures. Its most frequent passengers were that of cattle and sheep. An “open air” design was used in order to keep the animals in transport somewhat happy for the duration of their travels.

Material and labor costs were estimated by Dahm’s report, which stated, that a total cost of \$32,279.50 would restore the car completely. However, inflation and further deterioration will have adverse effects on this estimation.

### ***Interior***

The interior of the car is covered with oak planks, which appear to be in good condition. The interior was varnished when built with clear spar varnish (Appendix C).

Figure 13: 5620 Interior looking A end to B end



- Various specimens of scat and nests were observed in the corners of the car. The inhabitation of animals is a contributing factor to further deterioration, including rotting of the interior of the car.
- The ends of many of the floor boards are rotten, especially at the doorways and that the entire floor must be removed before replacing the side sills.

## **Exterior**

The following list of existing exterior conditions are taken from Dahm's 1997, report including both the A and B ends, and left and right sides of 5620, all of which address the structural integrity of the car:

### **A End**

- Rotting beams from the ends and top inward;
- Cross bracing blocks are split and in need of replacement;

Figure 15: A end left side



- Coupler pivot mounting block is rotten;
- Upper exterior siding is split and rotten; and
- Left side angled wall post is split and rotten as are the ends of the A end top plate.

Dahm noted that replacing the wall posts is necessary for maintaining the structural integrity of the car.

### **Right Side A End**

- Doorway support block is rotten and has fallen off;
- Sill is rotten at the doorway, ends and where metal truss rods go through;
- Vertical wall post closest to the door is rotten;
- Door is rotten at the bottom;
- Door mounting block is rotten; and

Figure 16: Left side door sill



- Two angled wall post towards the center of the car are rotten at the bottom.

#### Left Side A End

- Rotten door post;
- Angled wall posts closest to the door rotten at the bottom;

Figure 17: Left side angled wall post



- Rotten vertical wall post closest to the door; and
- Split and rotten upper side boards.

The remaining wood on the A end appears to be in good condition. Dahm states, that both A and B end side doors have been replaced with incorrect materials: “The D&RG used oak to frame the doors and fir for the vertical slats”.

**B End**

- Rotten beams;
- Replacement of coupler lever pivot mounting block due to rotting;
- Lumber door is split and falling apart;
- Replacement of cross block due to splitting; and
- Rotten top plate along top and ends.

**Right Side B End**

- Vertical wall post closest to the door is rotten at the bottom.

**Left Side B End**

- Corner post is split and rotten at bottom;
- Angled wall post is rotten at bottom;
- Sill rotten at the doorway, ends, and top;
- Rotten doorway support block;
- Rotten vertical wall posts at bottom;
- Split and rotten angled wall posts closest to the door;
- Planks forming area for flying "Rio Grande" badly split and rotting;
- Grab iron mounting block rotten;
- Door mounting block rotten; and
- Metal door post protectors rusted out at the bottom.

Dahm noted, that the left side top plate has had a piece of fir incorrectly spliced into the center, and that as is it may compromise the structural integrity of the car during moving or restorative activities. Dahm recommended that the piece be either redone or that the entire top plate be replaced. The remainder of the right side of the B end appears to be in good condition.

The exterior wood of the car is weathered including rotting, rusting, and splitting with several parts needing replacement. The exterior paint and lettering of the car is peeling and chipping in places.

## ***Undercarriage***

No information is available at this time with regards to the undercarriage of 5620.

## ***Roofwalk***

The roof of the car appears to be covered with tarred sheet metal. The sheet metal was noted as having rust in spots, and the coating as being weathered in places as well. Dahm noted that, "the roof to the car is incorrectly covered with sheet metal.

Further in his report, Dahm recommended that the metal stay in place and that the coating of the sheet metal with fibered roof coating and plastic roof cement would help to protect the roof of the car from further weathering. Overall, the roof walk appears to be in good condition with minor weathering, including rotting.

## ***Paint***

As noted in Jones' report, there are two possibilities for the exterior paint colors. Restoration to the pre-1920's would mean a mineral brown color, with a white lead lettering. After the mid-twenties the car was recorded as being black with white lead lettering.

The exterior paint tested positive for lead based paint. Overall, the exterior paint appeared to be in good condition with minor chipping, peeling, and cracking.

### Chronology Exterior Paint:

1904: Prince's Mineral Brown, black iron, white lead lettering

1925-1967: Black, black iron, white lead lettering

Interior Paint: Interior varnished when built, clear spar varnish.

***Known History***

- 1904: Built by American Car and Foundry Co., New York, with 350 cars numbered 5500 to 5849
- 1911: U.S. Safety Appliance Standards applied
- 1925: Double-deck added, combined brake cylinder and K-1 triple added
- 1939: Lettering placards added
- 1967: Last revenue use by D&RGW Rail road
- 1970: Sold to Floyd Reed, Alamosa, Colorado for scrapping
- 1973: Sold to Scenic Railway Inc., Chama, New Mexico
- 1980: Used in special run, Chama to Antonito and return
- 1981: Sold to National Park Service

***Preliminary Recommendations***

- Clean interior;
- Replace A and B end cross bracing block;
- Replace A and B end coupler pivot mounting block;
- Replace all rotten angled wall posts;
- Replace doorway support block;
- Repair right and left side door sills and trim;
- Clean and replace missing pieces of interior;
- Reapply tar to sheet metal on roof;
- Repair or replace left side top plate; and
- Scrape, wire brush, and repaint interior and exterior, including lettering.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.



## Sheep Car #5679D D&RGW 5500 Stock Car Series

Figure 18



Photograph by Dave Dye 2004

### Dimension

Weight: 22,200 (Before rebuilding)

Length outside: 31' 7½"

Length inside: 29' 4"

Width inside: 7' 3"

Material: White Oak, Fir

Height inside: 6' 1¾"

Capacity: 50,000

Cubical Contents: 1,310 cu.ft

Height outside: 10' 11/16"

Width outside: 8' 5"

## ***Historical Background***

D&RG car #5679D was a part of the 5500 Series built by American Car and Foundry Co., New York. In 1904, American Car and Foundry Co., built 350 cars and numbered them 5500 to 5849. The 5679D was a single deck when it was originally built, and later, in 1925, it was converted to a double deck. This car was used by D&RG in the early 20<sup>th</sup> century, after which it was sold to Floyd Reed of Alamosa, Colorado for scrapping. The car was sold again to the Scenic Railway Inc., located in Chama, New Mexico, in 1973, and operated on the Cumbres and Toltec rail line until 1980. The National Park Service purchased 5679D in 1981 from Scenic Railway, Inc.

Currently, 5679D is displayed at the visitor's center at the Cimarron Rail Exhibit in the Curecanti NRA in a setting interpreting the process of loading sheep onto the cars. This car was recently repaired by the NPS, and is in better overall condition than most other rolling stock assets.

Material and labor costs estimated in Dahm's 1997 report, were totaled at \$35,269.49 for a complete restoration. However, inflation and further deterioration will increase this estimation. No information could be gathered as to the total cost of the recent repairs done to car #5679D; but, following the maintenance cycle outlined in each scenario the car will continue to be sound.

## ***Interior***

The overall condition of the interior of the car is better than the other rolling stock located at the exhibit. Many parts of this car seem to have been recently replaced with new materials. Currently there are signs of animal infestation, and the interior needs cleaning.

- The B end upper interior siding is severely split.
- The right side B end lower interior side planks are loose and need tightening.

## ***Exterior***

The exterior of the Sheep car is currently in good condition. On the A end, new wood members can be seen in the middle and upper side. Six horizontal wood panels, two main posts, two side posts, and diagonal wooden posts seem to be newly applied members as well. The metal elements are sound as are the wooden members. The condition of the B end is similar to that of the A end. Many parts of this car, including wooden members and metal parts, seem to be replaced after the initial assessment provided by Dahm's report.

- The post on A end's left side has a long vertical crack;
- The letters on A end's right upper end seems to be newly painted. The six lines letters on the middle showing this car's specification are disappeared after the repaint;
- The middle and lower siding boards of the A end are slightly deteriorated;
- The metal parts and coupler of A end are in good condition;
- The upper siding boards and sliding door of B end are replaced with new parts;
- The wooden roof members have been replaced; and
- The side posts and upper sidings on both the left and right side of #5679D have been replaced.

## ***Undercarriage***

No information is available at this time with regards to the undercarriage of 5679D.

## ***Roofwalk***

As reported by Dahm, the roof appears to be in good condition, but it is recommended to recover with at least two coats of fibered roof coating and plastic roof cement at the seams.

## ***Paint***

Originally, 5679D was painted Prince's Mineral Brown with black iron members, and white lead lettering. Between 1925 and 1967, a black, black iron, white lead lettering paint scheme was applied. The current paint appears to be in good condition.

***Known History***

- 1904: Built by American Car and Foundry Co., New York, with 350 cars numbered 5500 to 5849
- 1911: U.S. Safety Appliance Standards applied
- 1925: Double-deck added, combined brake cylinder and K-1 triple added
- 1939: Lettering placards added
- 1967: Last revenue use by D&RGW Railroad
- 1970: Sold to Floyd Reed, Alamosa, Colorado for scrapping
- 1973: Sold to Scenic Railway Inc., Chama, New Mexico
- 1980: Used in special run, Chama to Antonito and return
- 1981: Sold to NPS

***Preliminary Recommendations***

With the recent repair work done to Sheep car #5679D, there are no obvious deficiencies. However, further evaluation of the undercarriage and trucks is recommended.

## Maintenance of Way (MOW) Car #04414 4000 Series Outfit Car

Figure 19



### Dimensions:

Weight: 22,000 lbs.

Length outside: 30' 1 9/16"

Width outside: 7' 5 1/2"

Capacity: 40,000 lbs.

Materials: White Oak, Ash, Fir

Length inside: 29' 6"

Width inside: 6' 9 3/4 "

Height inside: 5' 11 1/2"

Windows: 1' 10 7/8" x 2' 6 7/8"

Doors: 5'5 1/4" x 2'8"

## ***Historical Background***

D&RG car #04414 is an example of the typical Maintenance of Way (MOW) cars used on the narrow gauge railroad. This 4000 series car was built in 1895, and assumed the number of a previous car that was retired.<sup>32</sup> It served the D&RG until 1952, when it was transferred to Durango Bridge and Building. The “0” that precedes the number indicates that this car was an “outfit” car.<sup>33</sup> Car #04414 is distinctive in that it was used by the employees of the railroad as a rolling maintenance shed. The interior in its heyday would have been furnished with two beds, a pantry closet, a heating stove, and cabinets for personal gear and necessities. Two windows and one door are located on both sides of the car, making each side of the railroad bed visible.

The historic record of the car during its service years for the D&RG is almost nonexistent. This is typical for railroad stock, yet it does not detract from the historical value of the car. However, a great deal of documentation exists in regards to the physical condition of car #04414, including Dahm’s 1997 survey of the D&RG assets at Cimarron. Consequently, the majority of the documentation here considers the recent past of car #04414, and the current conditions.

Two separate material and labor estimates were found in document research. The first, Dahm’s report, states that a total estimated cost of \$25,380.60 would restore the car completely.<sup>34</sup> The later report states a total estimated cost of \$58,936.67.<sup>35</sup> The difference in cost estimates is due to the fact that materials and labor continue to increase along with the continued degradation of the car.

## ***Interior***

The coal stove is intact but unusable due to insulation problems as a result of the removal of sheet metal covering the walls around the stove. The stovepipe is historically inaccurate and leaking, warranting replacement.

Several of the interior ceiling boards in the center of the car have sustained water damage due to leaking roofwalk mounting bolts.

The interior of the car was tested June, 2003, for lead paint. The results were negative. However, several paint tests on the exterior of the car tested positive for lead.

During our assessment we did not have access to the interior of 04414; however, according to Dahm the interior is in fair condition only needing a thorough cleaning.

### ***Exterior***

The left and right side windows, four in all, were replaced sometime in the history of the car after it was taken out of service. The replacement windows are historically inaccurate and therefore warrant replacement.

Both A and B ends as well as both sides of the car were rebuilt sometime during its 120 year history, evidenced by the different widths of the siding.

- The left side doorstep is historically inaccurate;
- The right side fascia drip rail is historically inaccurate; and
- Dahm reports that the B end beam is split and broken. His educated guess is that “this damage is likely the reason the D&RGW retired the car.”<sup>36</sup>

### ***Undercarriage***

The freight trucks that are currently on the car are not the original type used on the 4000 series maintenance cars. However, the original series trucks no longer exist according to the report.

### ***Roofwalk***

The entire roofwalk and mounting blocks are rotten, although this presents an opportunity to replace the historically incorrect planks. The D&RG used 32' long one-piece wooden planks, and although the milling of a historically accurate piece of wood is expensive, proper materials need to be used.

Dahm states, “the roof covering of this car has been changed since it left railroad service and is historically inaccurate. The D&RG used a canvas covering that was

coated with roofing tar.” However, due to advances in preservation technology, the report suggests that the roof be covered using modern methods.

It is evident from Dahm’s report that the roof and roofwalk have sustained a heavy amount of damage, perhaps the most degraded elements of the car. It is recommended that proper care should be taken in restoring the roof structure, as all other systems below it are susceptible to further damage.

### ***Paint***

There are two possible paint schemes employed on car #04414. Restoration to the pre 1940 era would mean a mineral red base paint with white, round herald lettering. The second paint scheme is post 1940, a gray base with black lettering.<sup>37</sup>

The exterior paint has been tested several times for lead, all of which were positive. There is documentation in Dahm’s report of at least five separate paint schemes. The most recent paintwork is undocumented, although it is clear that this layer of paint is latex, evidenced by the peeling.

### ***Known History***

- 1883: Original 24-foot boxcar built under the Colorado Rolling Stock Trust
- 1895: Original car # rebuilt to 30 foot long car with the same number. The rebuild was actually a whole new car built by the D&RG. The original car was scrapped, but the original number was used on the new car, allowing for the mortgage to continue under the Colorado Rolling Stock Trust.
- 1902: D&RGW renumbered all boxcars to make way for ACF series on order. One of the 1895 built “original” cars becomes #04414, a 30-foot long, 20,000-pound MOW with a 40,000-pound capacity.
- 1903: New drawbar and tower coupler installed; KC brakes installed
- 1911: U.S Safety Appliance Standards applied
- 1925: Car refitted as box outfit #04414. It was in service in the Salida-Gunnison area. Combined brake cylinders were added, as well as a K-1 triple.
- 1952: Car was transferred to the Durango Bridge and Building outfit train
- 1971: Sold to Jim Coleman, body to Gunnison, trucks were scrapped



1981: Sold to NPS, set on trucks from Chama, New Mexico

***Preliminary Recommendations***

- Replace left side doorstep with historically accurate materials;
- Replace right side fascia drip with historically accurate materials;
- Repair B end beam; and
- Repair roof and roofwalk.

These recommendations are preliminary and certain aspects of the car will need further analysis. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.

## Crane Car

Figure 20



### Dimensions:

Weight: Unknown

Length: Unknown

Width: Unknown

Capacity: 3,000 lbs.

Doors: N/A

Materials: Steel, Fir

Length Inside: N/A

Width Inside: N/A

Height Inside: N/A

Windows: N/A

### ***Historical Background***

In 1930, the Crane Car was built by Fairmont Manufacturing Company. The crane car was primarily used by track and bridge gangs for lifting and laying rail, bridge timbers, cross ties, and deadmen which were used in fill construction. It has a hoist capacity of 3,000 pounds.

In 1945, the Crane Car was sold to the D&RG Southern Railroad. Eight years later the car was sold to a local Rancher from Montrose, Colorado, named Fred Carlson. In 1975 Mr. Carlson donated the Crane Car to the NPS.

In Dahm's report he estimates the entire cost for labor and materials for the crane car is \$ 1853.00.

### ***Interior***

NONE

### ***Exterior***

Being that the Crane Car has very little material that is subject to deterioration when compared to the other pieces of rolling stock at Cimarron; it has minimal visual signs of deterioration. It is currently in very good condition, only needing wire brushing and new applications of paint.

### ***Undercarriage***

There is no sign of significant deterioration to the undercarriage of the Crane Car.

### ***Paint***

The paint on the exterior of the car is in good condition; only needing wire brushing and reapplication.

***Known History***

- 1930: Built by Fairmont Manufacturing Company, painted safety orange with black lettering
- 1940: Painted Grey
- 1945: Sold to Rio Grande Southern Railroad, painted red oxide
- 1953: Sold to Fred Carlson, Shavano Valley Ranch, Montrose, Colorado
- 1975: Donated to the NPS, repainted safety orange, with black letters

***Preliminary Recommendations***

- Scrape and repaint metal surfaces; and
- Replace floor beams.

These recommendations are preliminary and certain aspects of the car will need further evaluation. All recommended wood replacement should be consistent with the historical materials. These recommendations expand upon those highlighted by the 1997 Dahm Report.

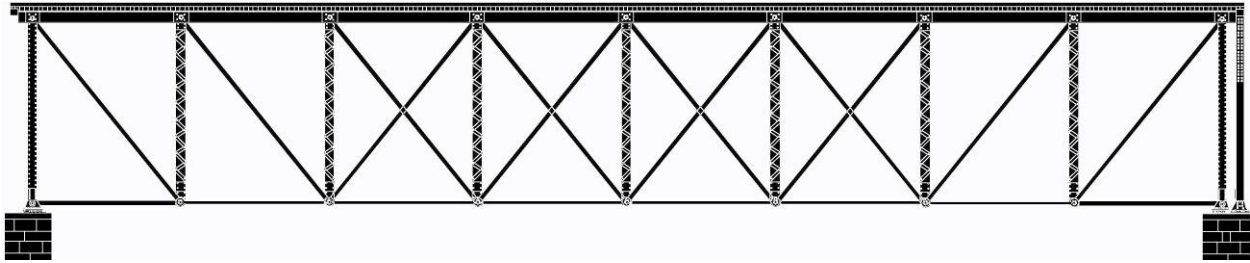
**Table 1: Rolling Stock Assessment**

<b>Rolling Stock Assessment Summary</b>						
	<b>Interior</b>	<b>Exterior</b>	<b>Undercarriage</b>	<b>Roof</b>	<b>Paint</b>	<b>Overall Car Condition</b>
<b>Cars</b>						
<b>Locomotive #278</b>	Poor	Poor	N/A	N/A	Poor	Poor
<b>Coal Tender</b>	Poor	Poor	Poor	N/A	Poor	Poor
<b>Boxcar #3132</b>	Good	Fair	Good	Poor	Poor	Fair
<b>Caboose Car #0577</b>	Poor	Poor	N/A	Fair	Good	Fair
<b>Cattle Car #5620</b>	Good	Poor	N/A	Fair	Fair	Fair
<b>Sheep Car #5679D</b>	Good	Good	N/A	Good	Fair	Good
<b>MOW Car #04414</b>	Fair	Fair	Fair	Poor	Fair	Fair
<b>Crane Car</b>	N/A	Good	Good	N/A	Good	Good

The above table is a summary of the overall assessment of the rolling stock. The terms good, fair and poor were chosen as descriptors in order to convey the overall existing condition of each of the particular cars displayed within the Site. If 'N/A' is displayed, that particular category was either not applicable for an assessment of the car, or there was not enough information available to make a plausible conclusion with regards to the current condition of the car. Poor is defined as needing extensive repair or replacement of materials; Fair is categorized by the need of general repair such as splicing of split materials; and Good is defined as having minimal deficiencies.

There are only two cars that were rated as being in good condition; the Crane Car and the Sheep Car #5679D. The Locomotive #278 and its Coal Tender were determined to be in poor condition. The remaining cars were given the rating of fair.

## Pratt Truss Bridge



### History

The existing bridge was not the first to cross the Cimarron River at this point. Examination of the photo to the right<sup>38</sup> reveals a timber truss under the train and timber trestle in the foreground at the approximate location of the existing bridge. These structures were presumably constructed for the original railroad in 1882. The bridge was built on top of piers of cut granite that match the pigmented pink in the Cimarron River Canyon.

Figure 23: Train crossing current span



Photo Courtesy of NPS and  
the Denver Public Library  
Western History Collection

referred to by “the 1891 Drawings”. From west to east, the spans are noted as the following on these plans:

- “54’ deck span built by Edge Moor Iron Works in January 1880. Formerly Bridge No. 73A, First Division, Denver & Rio Grande Railroad. Removed in 1888, and

Figure 21: Train on old span

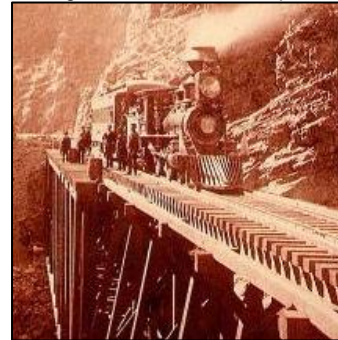


Photo Courtesy of NPS and  
the Denver Public Library  
Western History Collection

The bridge that exists today serves as a replacement for the timber truss constructed in 1891. It is a Pratt truss and is presumably made of wrought iron. The photo to the left shows two western spans of the bridge in service in 1940.<sup>39</sup> A drawing by the consulting engineer J.C. Bland of the bridge titled

“Reconstruction of Bridge 329 C.3<sup>rd</sup> Div.-Div. Denver & Rio Grande Railroad” dated March 15, 1891, indicates four spans that all came from the D&RG. These drawings will be

sent to Gunnison Yards where it now lays. Used here without change.” The 54’ plate girder bears on a cut rock ledge at its west end and a “new iron” column on the east end. This span, like the two others east of the truss was removed sometime after 1962. The rust marks from the column bearing plates are revealed today on top of the west limestone pier. The cut rock ledge may be under rubble from the shoulder of the current road.

- “119-1/3’ deck pin connected span built when D&R.G.R.R. was under management of A.T. & S.F. Railroad. Two spans: formerly bridge No. 231A and 243A – second division, Denver & Rio Grande Railroad. Used here the old span now piled near Nathrop Station without change.” This truss is the only span existing in the Cimarron Canyon today. It rests on a limestone piers built during the reconstruction of 1891. The east limestone pier was built on top of the granite pier for the 1881 trestle mentioned earlier and pictured in Figure 24.

Figure 24: remnants of old granite pier



- A 60’ plate girder from a “span of 69’3” out to out was formerly the main central span (78’6”) of the old Chalk Creek Bridge on second division of Denver & Rio Grand Railroad. 9’3” is cut off west end and used here. The span was originally 80’0” out to out and was built by Keystone bridge Co. in 1880.” The girder supported by a new iron column on the limestone pier of the truss on the west and new iron towers of two columns on the east.
- A “40 0-1/2” deck plate girder span built by Detroit Bridge Co. in 1885: Formerly the tail girder spans to the Old Chalk Creek Bridge” near Mt. Princeton. This span was held up by the aforementioned iron towers on the west end and a “new stone abutment” on the east end”

## ***Historical Timeline***

In 1949, train traffic ceased rolling over the bridge.<sup>40</sup>

In 1962, the bridge was put to use by serving as a temporary automobile bridge for the Morrow Point Dam, which was being constructed.<sup>41</sup> Later that year, 55 feet of the decking over the west span was damaged by fire.<sup>42</sup>

Then, in 1963, the Cimarron River was routed through a culvert by the Bureau of Reclamation and buried under a large rock fill to create a roadway near the present automobile bridge crossing. Photos of this road reveal the western third of the bottom chords of the truss buried by the rock fill.<sup>43</sup> A flood washed out the roadway and culvert in 1984,<sup>44</sup> which created the need for the present day automobile bridge built the next year. The culvert, flattened and rusted, remains in the middle of the river bed.

Figure 25: Current display



In 1973, 91 each 8" x 6" ties were replaced. An additional 28 were replaced in 1987.<sup>45</sup>

In June, 1974, the Locomotive #278 and the associated rolling stock were placed on the truss bridge.

On June 18, 1976, the truss bridge was entered into the National Register of Historic Places.<sup>46</sup>

On May, 8 through 10, 1987, the remaining two limestone abutments were pointed with mortar. Two capstones were noted to be missing at the time of this work.<sup>47</sup>



## Description

The bridge is a pin-connected Pratt deck truss of 119'-4" span, 12'0" wide and 19'6" deep as measured from the centerlines of the pins. The narrow gauge rails are supported by timber ties spaced 1'-0" apart on top of the upper chords of the bridge and 'I' beams located approximately below each rail. The photo to the right depicts the east bay of the bridge and shows the following members:

- The 'I' beams are built-up plate girders which frame into the vertical members of the truss.
- The vertical members are built from channels laced together on both sides.
- There are built-up members, similar to the verticals in the end bays of the bottom chords.

Figure 26: pin connections



Figure 27: Eyebars



The primary load-carrying bottom chords are eyebars shown in the photo to the left at the connecting points of the built-up verticals and the double membered eyebars on both sides of the vertical connected by a pin. (See the 1891 Drawings, Appendix D, for overall information and As

Built Drawings for a more detailed and current description Appendix E).

The west supports are anchored below to the limestone masonry pier. The east supports are on the roller bearings shown in the photo to the right of a type known as a roller nest. The roller bearing is to accommodate both thermal expansion and contraction of the bridge, and longitudinal movements induced by deflections due to the application and removal of trains.

Figure 28: Roller bearings



The superstructure material appears to be wrought iron, not steel. While metallurgical testing would be necessary to confirm wrought iron, due to the fact that the structure appears to pre-date 1890, when many bridge fabricators changed from the use of wrought-iron to steel argues in support of wrought iron. The 1891, drawings state that the material of each span as being iron. That current rust is minimal because wrought iron corrodes at a much slower rate than steel also favors the argument in favor of wrought iron.

Figure 29: Missing capstone



Pictured at the left is the west pier. The piers are of limestone masonry except for the lowest two visible courses of the east pier which are granite from the 1882, trestle. The upper 10' of the east pier is limestone. The entire west pier matches the upper part of the east. One capstone is missing from the top of the north end of the west pier. Both piers need some pointing, but are in otherwise good condition.

### **Observations**

**Ties:** Pictured to the right are examples of weathered ties with checks from underneath the front of the engine. All of the ties are weathered to some degree. Many of the 8" x 6" timber ties are soft and many show water stains when viewed from below.

Figure 30: Weathered ties



Figure 31: Bent members

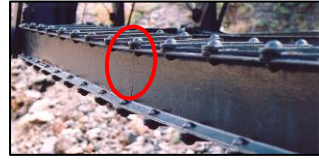


**Bent Members:** Some of the lower members including bottom chord eyebars, diagonal rods, and the built-up bottom end chords are bent to one degree or another. The photo to the left shows all three types of members mentioned being bent in the western bay.

The reason behind the bent members seems to be from the construction of the rock filled roadway built in 1962. Photos from as late as the mid-1980's show rocks on top of the members that were bent. The western bays of the truss were buried in the rock fill of the roadway.

**Cracked Member:** Encircled in the photo to the right is the crack observed in the north side built-up bottom end chord of the west bay. It has a crack at approximately mid-length. The crack extends from the bottom flange up to about the centerline of the north channel. Both of the built-up bottom chord members in the west end bays are bowed downwards.

Figure 32: Cracked member



**Roller Bearing:** While the roller nests at the east end (non-existent at the west end) appear to be of heavy construction and exhibit no apparent damage as shown in the photo to the right. They also show no sign of movement in recent years. Therefore, we suspect that the bearings are frozen.

Figure 33: Roller bearing



**Chipped Paint:** Some of the paint in the lower parts of the west end has been chipped off. Minor rusting has occurred at these chips. The chips were probably the result of 1962, rock fill of the roadway. Shown to the right is chipping at one of the eyebar connections on south side and west end of the bridge.

Figure 34: Chipped paint



Figure 35: Rust



**Rust:** Most of the paint appears to be performing well. Only a few areas were observed where rusting has occurred. The worst case of observed rusting is illustrated in the photo the left taken of the north end of the west bay.

## ***Evaluation and Recommendations***

The bridge appears to be generally in good condition. The principal problems are the ties, bent members, cracked member that is also bent and rusting, minor rusting, and frozen roller bearings.

**Ties:** The weathered ties should be replaced. While some ties are not yet weathered sufficiently to warrant replacement at this time, we believe replacement of all of the ties is appropriate. Partial replacement has not been done in 18 years and a nearly full replacement has not been administered in nearly 33 years. Tie replacement could be a relatively easy operation once the rolling stock is removed from the bridge. Even if the rolling stock is left in place, the ties could be removed and replaced as was done in 1987.

**Bent Members:** Impacts by rocks when the culvert and embankment were constructed appear to be the cause of all the bent members. Because they are subject only to tension forces, the bent bottom chord eyebars may be left as-is. The bent diagonal rods, also tension members, should be straightened as much as possible both for appearance and to improve their performance under lateral loads such as wind. Fortunately, significant wind in a direction transverse to the bridge seems improbable due to the topography of the canyon and the bridge's position within it. So lateral wind pressure, while technically a code requirement, does not appear to be a significant issue for this specific site. The built-up members at the west end of the bay of the bottom chords are both bowed downwards. They can probably be heat-straightened. Such straightening should only be done in concert with the repair of the roller bearings.

**Cracked member:** The cracked member is one of the built-up bottom chords in an end bay. As such, it is not a primary load-carrying member, it is subject to loads from wind or seismic. Due to the confines of the canyon site, it is speculated that the member has only experienced low transverse wind loads. Because cracks tend to propagate, we recommend that the crack be repaired. The repair will require engineering, but would be relatively simple, and would probably consist of bolting a steel plate over the cracked region or possibly welding the crack. Welding would necessitate metallurgical testing of the member to confirm that it is a weldable alloy. The

engineering firm of KKBNA of Wheat Ridge, Colorado recommended that the crack be spliced with two pieces of 3/8" A36 steel plate and 10 each 3/4" A325 H.S. Bolts (5 on each side of the splice).<sup>48</sup>

**Rust:** The existing rust within areas of chipped paint and in several other locations can be removed either by sandblasting, or wirebrushing with a power tool. Once the rust is cleaned away and shiny bare metal surface is obtained, the metal should be primed and painted with a matching color. The existing paint may be lead based, so enamel paints should suffice for these 'touch-up' areas. Painting will both arrest further corrosion and improve the bridge's appearance. Painting of the entire structure is not necessary at this time.

**Roller Bearings:** The roller bearings appear to be frozen. There is no indication that the stone masonry in the abutments has moved. We conclude that the thermal expansion/contraction is presently being taken up in the bent bottom chords. Thus, those members appear to be flexing over annual thermal cycles. Continual flexing is detrimental to the members and could lead to more cracking and enlargement of the existing crack. Therefore, we recommend that the provision for thermal expansion/contraction be reestablished. While roller nests of this type were a standard treatment in that period, they are considered archaic today. Restoration of the roller nests might be possible, but even if returned to operating condition, they would only be subject to eventually freezing again. For the roller nests, we recommend compromising the historic accuracy of bridge repair for the benefit of a bearing that would continue to perform properly over the long term, such as a neoprene pad type of bearing. Engineering will be required to design the replacement bearings.

**Piers:** Replace missing capstone at west pier. Some pointing is necessary at both piers. The 1987 pointing did not match the original mortar in color and probably content. We recommend that a mortar analysis be done in order to make a material match with the original mortar to maintain the historical integrity of the structure.

**Cost Estimate****Table 2: Cost Estimates For Truss Bridge**

<b>Cost Estimate</b>			
	<b># of Members</b>	<b>Cost per Member</b>	<b>Total Cost Estimate</b>
<b>Members</b>			
<b>Ties</b>			
If rolling stock left in place	119	\$120	\$14,280
If rolling stock removed	119	\$120	\$28,560
<b>Bent Rods</b>			
Straighten & Tighten	6	\$200	\$1,200
<b>Bent Built-up Bottom Chords Members</b>			
Heat Straighten	2	\$2,000	\$4,000
<b>Cracked Members</b>			
Repair with Bolted Plate		\$500	\$500
<b>Rust Removal</b>			
Paint Touch-up			\$1,000
Roller Bearings	2	\$5,000	\$10,000
West Pier Capstone	2	\$500	\$1,000
Pier Pointing			\$4,000
Engineering L.S.			\$20,000
<b>Total Cost Estimate if Rolling Stock Left in Place</b>			<b>\$74,260</b>
<b>Total Cost Estimate if Rolling Stock Removed</b>			<b>\$59,980</b>

# Conservation Scenarios

## Introduction

The core of the Cimarron conservation plan is a series of “scenarios” that foster long-term conservation and short-term stabilization goals. All three scenarios protect the historic assets of Cimarron, and delineate the options available to the NPS and the City of Montrose. This section describes the various methods and processes of conservation and stabilization. The scenarios can be approached as “self contained” plans in and of themselves. However, the scenarios can also be adopted as a unified plan, taking elements from each to form an overall “phased” system of conservation, an evolution of designed goals. In all, the plan will discuss the effectiveness of the preservation, interpretation, connectivity and on-going stewardship of these historic resources. The “right” approach is elusive and difficult to discern with these variables dictating the course of action. However, a sound approach utilizes conservation as a means to protect the cultural significance and historic integrity of the rolling stock and bridge regardless of the variables. The three scenarios detailed in this conservation plan protect and stabilize the significance and integrity of the physical fabric, ensuring longevity and future use.

There are common recommendations of the scenarios that provide for the overall protection of the historic railroad assets. Cyclical maintenance ensures that on-going stabilization is accounted for regardless of the adopted course of action. Cyclical maintenance is a direct outcome of an established annual assessment program, a critical component of these scenarios that emphasizes on-going inspection of the rolling stock to mitigate costly repairs associated with degradation. Whenever possible, historically accurate materials should be used, and the form and finish should reflect the same techniques that governed D&RG. All three scenarios seek to increase the visitor attendance at Curecanti NRA. Each addresses the marketing of the site insofar as site visibility, regional connectivity of surrounding parks, and heritage tourism are concerned. Scenarios two and three require additional staffing above and beyond the current quota of Curecanti NRA. It is necessary that a rolling stock expert be obtained with a background in conservation technologies and methods. Additional staffing of the facility is also recommended in that it creates interpretative opportunities such as conservation

seminars, informational lectures, and guided tours of the cultural and natural resources of Cimarron.

### **Scenario #1**

The first scenario details a program of in-situ maintenance, with initial repair and conservation occurring at an off-site facility. Interpretation of Cimarron and the D&RG rolling stock remains the same, as well as the physical elements of the site including the corral and visitors center, making this treatment cost effective in that it addresses the pressing issues of repair and conservation. This is a sound approach with short and long-term objectives of stabilization and protection. The strengths and weaknesses of the treatment are detailed below and require careful consideration before it is adopted.

Accessibility to the undercarriages compromises the quality of conservation and repair that can be accomplished if work is done on-site and in-situ. This is a significant issue that can only be addressed with initial repair off-site. Adoption of this treatment requires moving the cars to a facility that has the ability to repair and mitigate further degradation to the undercarriages. It is rational to proceed with a complete repair of the cars including undercarriage, interior, exterior, A and B ends, and roofs at this time. This diminishes the amount of work that is performed in-situ. If the cars are repaired to an acceptable level at an off-site facility, in-situ work is minimal, performed on an as needed basis to maintain the rolling stock long-term.

Current infrastructure and conditions are reasonable in regards to maintaining and protecting the integrity of the cars and bridge once initial repair is completed. In-situ is a realistic approach to repair and maintain components including roofs, interiors, and in some cases exteriors. The cars located at the corral area are accessible; long-term repair and maintenance can proceed with nominal risk to the rolling stock or workers. The cars located on the bridge however will require a delicate approach that minimizes environmental and worker hazards. These hazards may also interfere with the quality and quantity of work performed. Space is limited, weather conditions can change rapidly, footing is compromised on the deck of the bridge and access to the truss is difficult. Each of these hazards can be controlled and limited to an extent, however associated costs with the prescribed interventions begin to rise in regards to the level of



mitigation required. Worker safety is enhanced with the implementation of a safety plan based on OSHA standards. Access to the truss, footing on the span and space is improved with the construction of walkways, scaffolding and an approach to the bridge. Careful consideration of these hazards and mitigation costs need to be addressed before this treatment is adopted.

The two options that are recommended regarding initial removal from the display are contracting with a crane operator, or constructing an approach span (Appendix F) to remove and reinstate the cars on the bridge. Both options will also require a transportation vehicle from the site to a facility capable of completing the work. Below are two tables with rough cost estimates of both recommendations.

**Table 3: Crane**

<b>Associated Costs</b>		
Crane <sup>49</sup>	4 cars @ \$17,000 each x 2 (pick & reinstatement)	\$136,000
Transport	7 cars @ \$4,000 each x 2 (to & from off-site)	\$56,000
Initial Repair*	7 cars @ \$41,311 each (approximated)	\$289,170
<b>Total</b>		<b>\$481,170</b>

\* Repair estimate based on Dahm 1997 report + annual 3% material inflation + annual 3% labor

**Table 4: Approach Span**

<b>Associated Costs</b>		
Approach	1 span @ \$45,000 + \$1,000 installation	\$46,000
Transport	7 cars @ \$4,000 each x 2 (to & from off-site)	\$56,000
Initial Repair*	7 cars @ \$41,311 each (approximated)	\$289,170
<b>Total</b>		<b>\$391,170</b>

\* Repair estimate based on Dahm 1997 report + annual 3% material inflation + annual 3% labor inflation + 10% contingency.

Utilizing an approach span results in the savings of approximately \$90,000; holding the cost of initial repair and transportation constant. However, using an approach span assumes that some method is in place to move the cars from the bridge, to the approach span, than onto a low-boy for transportation. The condition of the A and B ends on the caboose and car 3312 compromise any effort for self-propulsion. Additionally, there is no evidence at this time, based on the physical assessment and Dahm's report, to suggest that the trucks on any car are capable of moving. With these

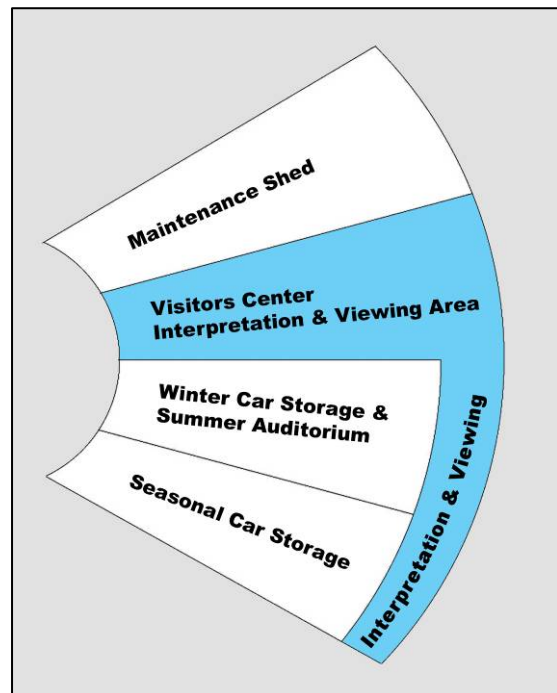
factors in mind, the cost of using a crane to pick the cars may result in a more cost effective approach. Scenario #2 however offers a third solution to this problem, as well as a series of recommendations that enhance on-site infrastructure, thereby improving conservation and maintenance of the rolling stock.

## **Scenario #2**

The second Scenario details a set of recommendations centered on augmenting the physical infrastructure of the site, affecting site connectivity and the actions that can be performed on the historic assets in regards to conservation and repair. The elements in this scenario are also beneficially add indirect value to Cimarron and the D&RG assets via an interpretation program and physical enhancement of the visitor experience. The benefits derived from the investment in time, budget and coordination result in an efficient and effective plan that respects long-term protection.

The cornerstone of this Scenario is the construction of a roundhouse facility on-site, allowing for conservation, repair, maintenance, assessment and protection of the rolling stock assets in a controlled environment suited to these efforts. On-site conservation via a roundhouse is an investment not only in the conservation of the historic assets, but also in the visitor experience and the interpretive opportunities associated with preservation practices and technologies, narrow gauge railroad history and use, and the history of Cimarron as a place that was crucial to the development of the region. Central to this plan is movement from the display areas to the newly constructed roundhouse, staffing of the facility for conservation and maintenance, and the costs both monetary and non-monetary in regards to the options that exist. Issues that require careful analysis are associated with financial feasibility,

Figure 36: Programming the Roundhouse

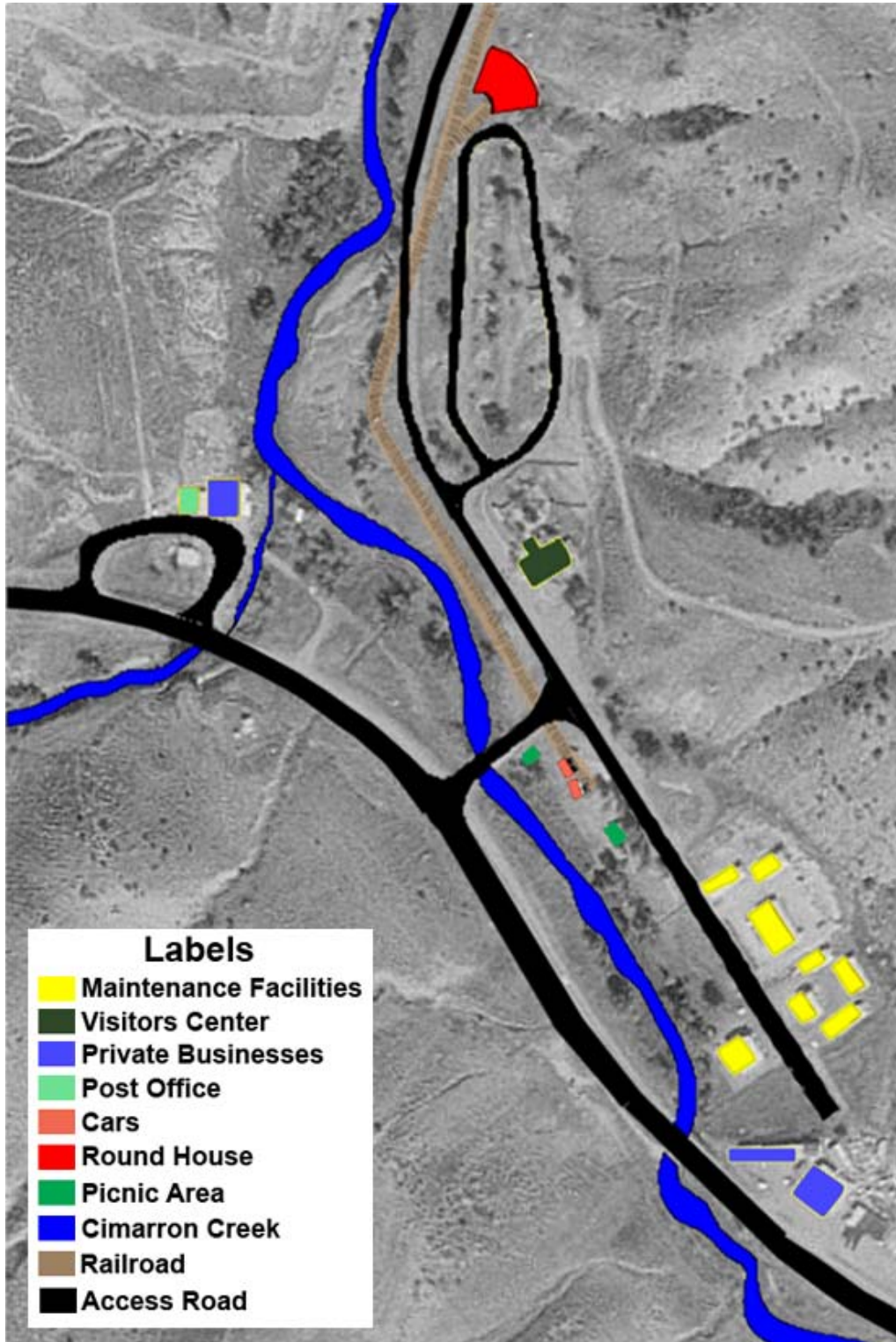


including building and maintaining a roundhouse, devising a transportation and movement strategy, and staffing the facility.

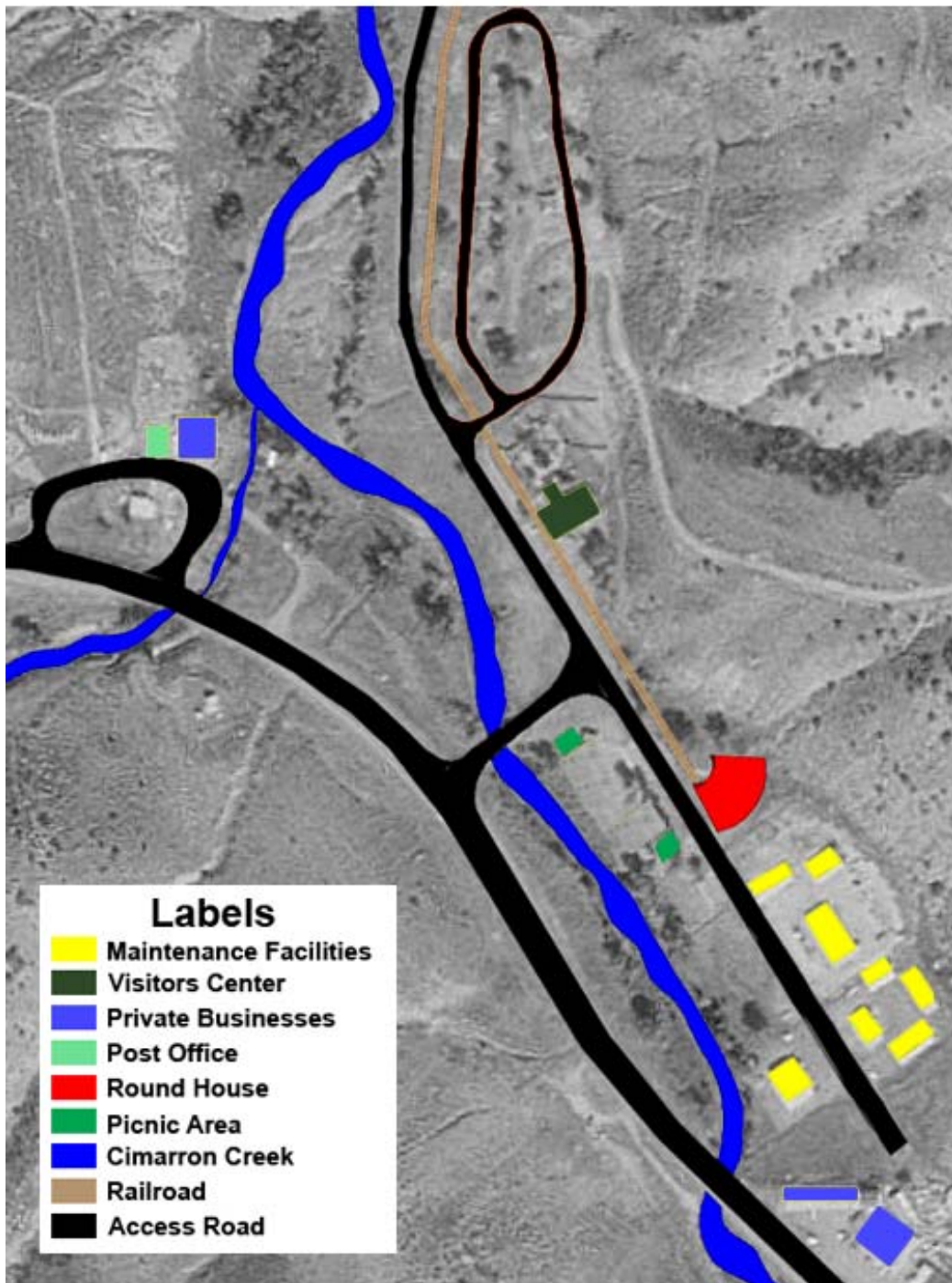
The roundhouse, as noted above, has a great deal of potential. Figure 36, is an example of how the uses within the facility are programmed according to the needs of the site. Note the emphasis is given to all aspects of the plan, conservation, maintenance, protection and interpretation. The facility is approximately 10,000 square feet, with four bays roughly 75 feet in depth. This allows for the storage of two cars per bay with room to work around the cars. A great deal of emphasis is given to the visitor experience, with a middle bay designated as an interpretation center and viewing area.

Another consideration of the roundhouse is site location. There are several options that exist including the 1882 (Plan B-1) and 1892 (Plan B-2) historical site locations. The 1882 site is currently the RV dump station, and the 1892 site is now the backside of campsite ten and is unoccupied. The 1892 site would require an archeological assessment before construction could begin due to potential artifacts (structural foundations). The 1882 site would require moving the RV dump station to another location. Another option is constructing the facility where the current picnic area resides (Plan B-3). This location would potentially require an Environmental Impact Study (EIS) before construction, due to the proximity to the Cimarron River and its existing floodplain.

## Plan B-1: 1882 Roundhouse Location

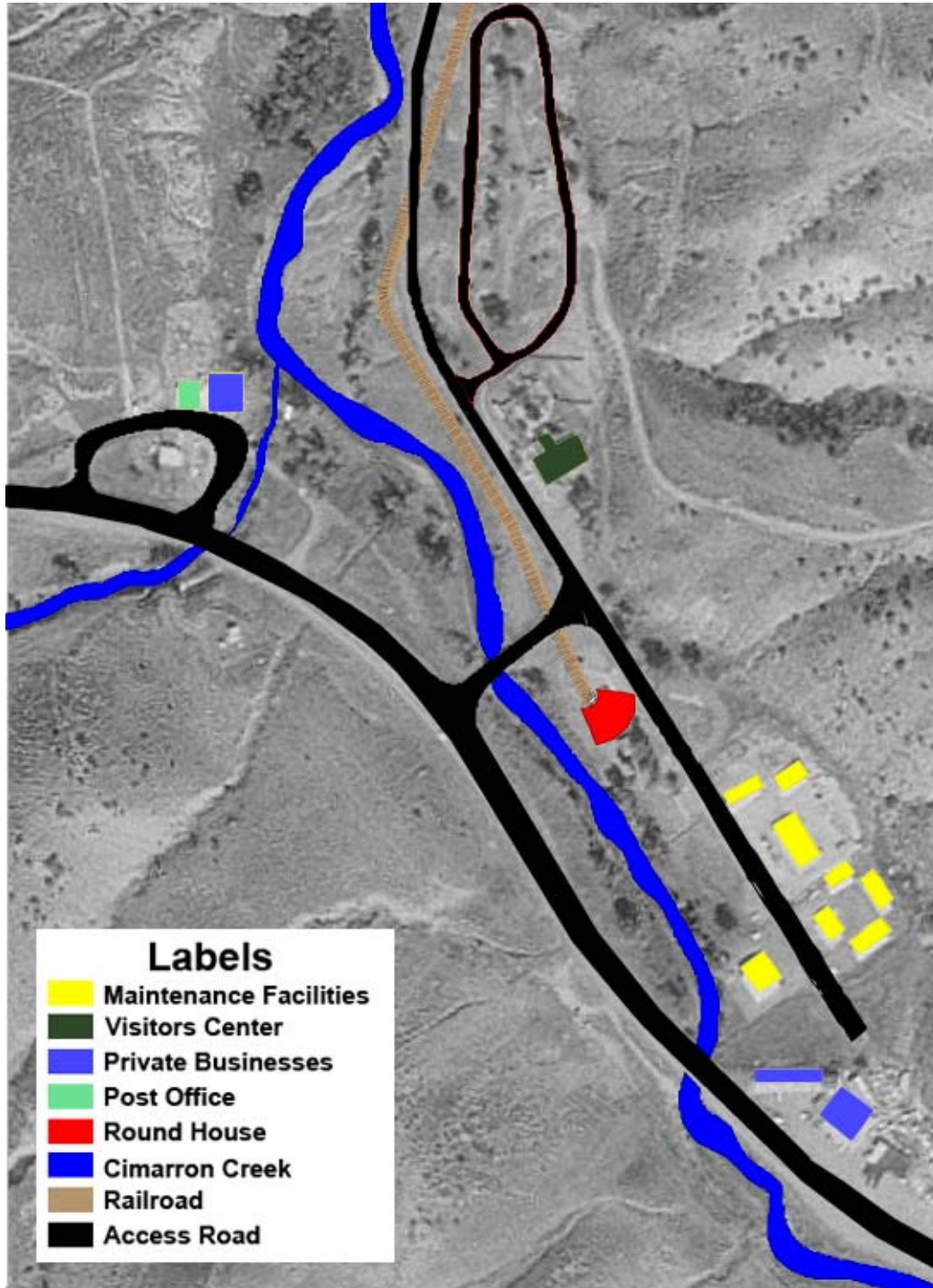


## Plan B-2: 1892 Roundhouse Location





### Plan B-3: Roundhouse at Picnic Area



Movement of the rolling stock is the greatest cost consideration that decision-makers face. This plan advocates the installation of a rail line on-site to serve as the primary means of movement (Plans B-1, 2, 3). Construction of a rail line is rational, taking into account the long-term objectives of this plan. Although the cost of construction is tremendous, this method of movement is efficient and effective in regards to both conservation and interpretation. Without a line, NPS must consider moving the rolling stock using either a crane or low-boy (refer to cost estimates in Scenario 1). The rail line comes at a cost of approximately \$800,000 per linear mile<sup>50</sup>. Once the infrastructure is in place, minimal cost exists in regards to long-term maintenance or replacement. Also, a rail line enriches the uniqueness of the site. Cimarron presents a rare opportunity and glimpse into the past, it serves as an example of how technology was adapted and used to overcome environmental challenges. Installing a rail line aids the interpretive effort, doubling as a "rail trail" in a historically accurate manner. These benefits will need to be carefully weighed against initial costs of installation.

The rail line is designed to stretch from an approach span connected to the truss, through the canyon along the road currently in place, all the way to the roundhouse facility. The line is placed in the middle of the road at grade. After crossing the vehicular bridge, traversing the Cimarron River at the mouth of the canyon, the rail is placed along the side of the road with an independent right of way. At this point the line doubles as an interpretation trail and pedestrian right of enhancing the visitor experience.

In regards to moving the rolling stock between facility and display areas, the two methods described in Scenario 1 fail to capitalize on the integrated site improvements described here. Additionally, the crane to low-boy method becomes costly in the long-term and should not be incorporated into the plan beyond its usefulness as a means to complete initial repair work. As such, this scenario advocates using either hydraulic jacks that have the capability of lifting and supporting the weight of each individual car, or a vehicle that has the ability to tow. Both methods are based on the installation of a rail line which also bolsters site connectivity and interpretation. Using a vehicle to tow the rolling stock is cost effective and rational, although the structural integrity of each car will need to be examined to determine if independent physical movement can be achieved. The hydraulic jack method, while costly in the short-term compared to

purchasing a vehicle to tow, is an effective way of transporting the rolling stock from display to roundhouse over the long-term. It capitalizes on the addition of the rail line, and protects the structural components of the rolling stock from physical forces associated with movement.

The construction of an on-site facility requires employment of professional conservationists who specialize in rolling stock. Whether full or part time, having professional conservationists on staff minimizes costs associated with contracted labor, and adds to the technical knowledge base of the NPS. This scenario recommends at least one expert, on staff who specializes in conservation and narrow gauge technology. Additional labor for quarterly assessments and movement is facilitated on an as needed employment basis, potentially using staff currently on the NPS payroll. Additional staffing of the facility is also recommended in that it creates interpretative opportunities such as conservation seminars, informational lectures, and guided tours of the cultural and natural resources of Cimarron. Interpretation is a means of communicating information, ideas and feelings that enrich and promote an understanding and appreciation of cultural property and historic resources.

In all, this scenario is an efficient and effective way to repair, maintain, assess and protect the rolling stock assets. The recommendations provide enhancements to site interpretation, connectivity and visitor experience through the construction of a roundhouse and installation of a rail line. The roundhouse facility supports long-term protection and short-term stabilization, recognizing the uniqueness of the resources and their importance to the people and culture found throughout the region.

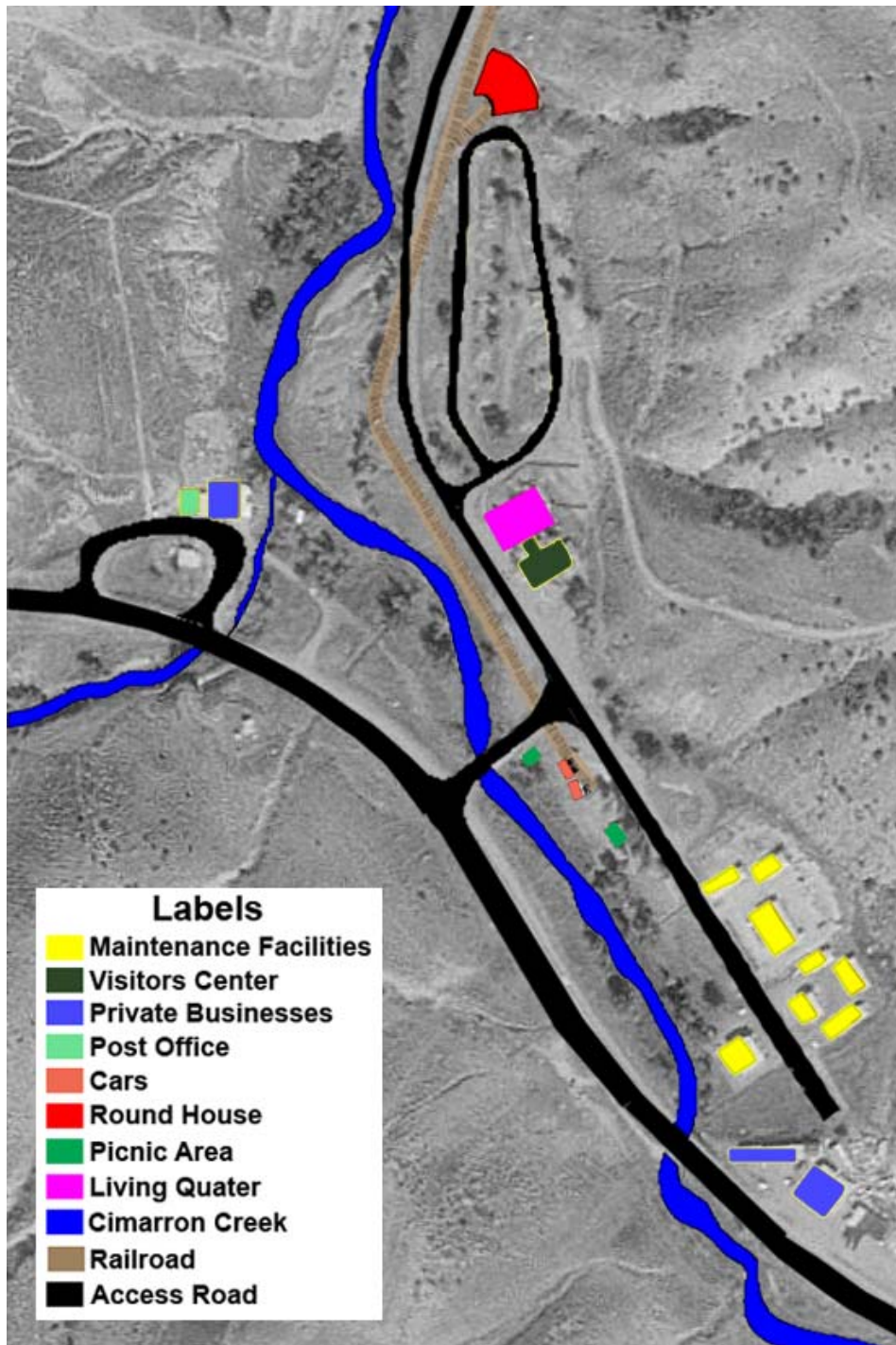


### **Scenario #3**

Scenario 3 recognizes potential outcomes of an already established conservation plan. These recommendations identify the opportunity decision-makers have at the outset of the adopted plan to create a nationally recognized resource and training center for narrow gauge conservation technology and methods. These are recommendations, not methods of conservation. Commitment from the NPS, the City of Montrose, regional and statewide interests, and the general public is needed for these events to unfold. The recommendations reach beyond the boundaries of the site and identify with a greater objective of protecting cultural regional resources. The focus of these recommendations, like the first two scenarios, is protection and stabilization, recognizing that such efforts present opportunities to develop a complete understanding of narrow gauge technology and conservation. Narrow gauge railroads were employed primarily in the west to overcome environmental factors and accommodate the events that occurred during western expansion. There are few examples that remain of this technology, Cimarron being one of them. The conservation of the resources located at the site coincides with the efforts of those whose main occupation is railroad preservation.

There are significant physical changes made to the site beyond the recommendations described in Scenario 2. Construction of a housing facility for visiting conservationists and scholars replaces the existing corral area. As such, the second major change is moving the corral area to the existing picnic area (Plan C). The site design features an observation deck and archeological excavation findings. It also includes unearthing the original building foundations once located in the Town of Cimarron. Construction of a roundhouse, rail line and approach span, as described in Option #2, are fundamental to the success of this option. Staffing of the facility shifts from having a conservationist on staff to coordinated teams of preservationists drawn from the national level.

### Plan C: National Resource Center



These recommendations require long-term investment and a clear set of goals that reach beyond conservation of the historic assets. Although the planning process must begin early on, these long-term possibilities should not detract from prescribed short and mid-term goals. The construction of an on-site facility requires employment of professional conservationists who specialize in rolling stock. Whether full or part time, having professional conservationists on staff minimizes costs associated with contracted labor off-site. This treatment approach recommends at least one train conservation expert on staff who focuses on physical interventions (repair and maintenance) to the historic rolling stock. Quarterly assessments and movement are facilitated on an as needed employment basis, potentially using staff currently on the NPS payroll. As such, the process of reaching these goals should not affect conservation and protection of the rolling stock and bridge. Lastly, the political will is dependent on the citizens of Montrose, the State, and the NPS. The issues are not isolated from one another; they need to be addressed together. The viability of such an approach is dependent on the success of all interested parties working in unison.

## Incorporating the Scenarios via Phasing

The following is a discussion detailing how the scenarios have the ability to manifest into a long-term conservation plan, taking objectives from each and incorporating them into an overall plan. The plan, as described below, is one of many opportunities decision-makers have of integrating the various recommendations above into a cohesive, structured and long-term effort.

**Table 5: Phase Option**

Phase I	Phase II	Phase III	Phase IV	Phase V
Initial offsite repair				
Approach span				
Annual rotation				
Cyclical maintenance in-situ				
Rail line				
Roundhouse				
Interpretation program				
Cyclical maintenance, repair in roundhouse				
Training program				
Relocate corral				
Housing facility				

### **Phase I**

The Conservation Plan begins with initial offsite repair of the rolling stock, as well as any necessary treatments to the truss bridge. Towards the middle of Phase I, the approach span for the bridge is constructed, a long-term improvement to infrastructure that alleviates contracting with a crane operator in the future. Also, annual rotation of the rolling stock begins, assuming Phase I takes longer than one year, necessitating the construction of an approach span. Cyclical maintenance also takes place in-situ, again assuming Phase I extends beyond one year.

### **Phase II**

Once repair to the historic resources is complete, maintenance and annual rotation are underway. With the approach span in place, construction of the rail line from the truss to the mouth of the canyon begins, as well as construction of the roundhouse.

***Phase III***

Construction of the roundhouse and installation of the rail line is complete by the middle of Phase III. At this time the interpretation program begins to take shape as space becomes available in the roundhouse. Cyclical maintenance and protection shifts to the roundhouse facility, alleviating in-situ efforts. The initial development of the site as a national training center is addressed.

***Phase IV***

Cyclical maintenance, repair and protection of the rolling stock are done entirely in the facility at this point of the plan. The interpretation program is fully developed and incorporated in the roundhouse, opening the facility to visitors. Lastly, the training program is growing in popularity, the implications being a complete understanding of narrow gauge conservation technology and methods.

***Phase V***

With infrastructure in place, maintenance and repair work well established, visitors experiencing the depth of education available and technical training programmed, the emphasis of the plan shifts to housing and display. In this phase the housing component is added to the current visitors center and the corral area is moved to the entrance of the site, adding visibility and an opportunity to showcase the work being done at Cimarron. Visiting scholars, conservationists, rail heritage experts and NPS officers have on-site lodging, easing transportation to and from the site and setting the stage for years of on-going work.

## Conclusion

In all, the three scenarios have been developed to protect and stabilize the D&RG rolling stock and truss bridge, two of the many principles on which the conservation plan is built. They are based on a shift in meaning and the physical consequences as a result of the change. The principles promote integrity, defined as the extent that the physical characteristics are complete or uncorrupted in location, design, setting, materials, workmanship, feeling and association, and are representative of a period of significance. Integrity is important because of the historical significance of the rolling stock and bridge, and it is essential that they serve their modern day function as communicative and symbolic examples of the past. The scenarios can be approached as “self contained” plans in and of themselves. However, they can also be adopted as a unified plan, taking elements from each to form an overall “phased” system of conservation, an evolution of designed goals. In all, this plan provides decision-makers with rational, defensible approaches that foster long-term protection and short-term stabilization of the historic resources of Cimarron.

## Endnotes

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- <sup>1</sup> National Park Service, *Guidelines for Completing National Register of Historic Places Forms* (Washington, DC: U.S. Department of Interior, National Park Service, 1997), 4.
- <sup>2</sup> *Ibid*, 42.
- <sup>3</sup> *Ibid*, 37.
- <sup>4</sup> Sidney Jocknick, *Early Days on the Western Slope of Colorado* (Ouray, CO: Western Reflections, 1998), 24.
- <sup>5</sup> *Creede Candle*, September 21, 1907, 5.
- <sup>6</sup> Mike and Ruby Maurer, interview by Don Hill and Tim Sandsmark, November 16, 1981, National Park Service.
- <sup>7</sup> Arthur Carmichael, interview by District Ranger Robert Cornelius and Interpretative Ranger Bill Johnson, July 21, 1988, National Park Service.
- <sup>8</sup> Dona Mullikin Freeman, *Curecanti Ranch* ([Montrose, CO?]: C.L. Werner, 1998), 35.
- <sup>9</sup> Jocknick, 73.
- <sup>10</sup> *Saguache Chronicle*, August 18, 1877.
- <sup>11</sup> Maurer interview, November 16, 1981.
- <sup>12</sup> Robert G. Athearn, *The Denver and Rio Grande Western Railroad: Rebel of the Rockies* (Lincoln, NE: University of Nebraska Press, 1962), 115.
- <sup>13</sup> Gilbert A. Lathrop, *Rio Grande Glory Days* (San Marino, CA: Golden West Books, 1976), 45.
- <sup>14</sup> Lathrop, 22.
- <sup>15</sup> Virginia and Lee McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 1984), 89-100.
- <sup>16</sup> Carmichael interview.
- <sup>17</sup> *Telluride Daily Journal*, May 9, 1914.
- <sup>18</sup> During that last ride a woman fell off the train. They found her frozen body near the East Portal of the Gunnison tunnel a week later.
- <sup>19</sup> Laurence W. Steele, *Cimarron, Colorado: Back Door to the Black Canon; A Chronological, Social, and Economic History of Cimarron Townsite, Montrose County, Curecanti National Recreation Area, Colorado* (n.p.: Denver City Restorations, May 1980), 33.
- <sup>20</sup> Lois Borland, "The Narrow Gauge Country Protests" (n.p.: 1942). Submitted to *The Kansas City Star*, *The Milwaukee Journal*, *The Denver Post*, *The Baltimore Evening Sun*, and *The Atlanta Constitution*. Article included in appendix to Laurence Steele, *Back Door to the Black Canon*.
- <sup>21</sup> "NCOs: the MI Tradition"  
<https://huacws6r145211.hua.army.mil/static/anonymous/content/history/PDFS/ncos.pdf>
- <sup>22</sup> *Gunnison Daily Review Press*, August 14, 1882. Included in appendix to Laurence Steele, *Back Door to the Black Canon*.
- <sup>23</sup> Freeman, 82.
- <sup>24</sup> *Ibid*. 82.
- <sup>25</sup> Gordon Chappell and Cornelius W. Hauck, *Scenic Line of the World and Black Canon Revisited* (Golden, CO: Colorado Railroad Museum, 1970), 44.
- <sup>26</sup> *Ibid*, 44.
- <sup>27</sup> Lathrop, 58.
- <sup>28</sup> Maurer interview.
- <sup>29</sup> *White Pine Cone*, February 19, 1892. (White Pine, Gunnison County).

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- <sup>30</sup> Carmichael interview.
- <sup>31</sup> *Weekly Ignacio Chieftain*, August 20, 1920.
- <sup>32</sup> Dahm, Andrew. 1997 Report page 21
- <sup>33</sup> *ibid.* page 21
- <sup>34</sup> *ibid.* page 44
- <sup>35</sup> Dahm, Andrew. 2001 Report. Page 20
- <sup>36</sup> Dahm, Andre. 1997 Report. Page 41
- <sup>37</sup> Dahm, Andrew. 2001 Report. Page 18.
- <sup>38</sup> [www.ghostdepot.com](http://www.ghostdepot.com)
- <sup>39</sup> *ibid.*
- <sup>40</sup> NPS interpretive photo.
- <sup>41</sup> Bureau of Reclamamtion Photo by V. Jetley
- <sup>42</sup> Bureau of Reclamamtion Photo by V. Jetley, P622B-427-2183 & caption of photo P622B-427-2183, August 6, 1962
- <sup>43</sup> NPS interpretive photo
- <sup>44</sup> Joseph A. Alston, , Memorandum H3015, U.S. Dept. of the Interior, NPS, Curecanti National Recreation Area, Subject: Historic Railroad Trestle, January 6, 1987
- <sup>45</sup> Donald C. Hill, Memorandum H3015, U.S. Dept. of the Interior, NPS, Curecanti National Recreation Area, Subject: Historic Railroad Trestle, August 27, 1986
- <sup>46</sup> Letter from Stephen H. Hart, Colorado SHPO, to Karl T. Gilbert, Genral Supt. Colorado West Group, NPS, July 14, 1976
- <sup>47</sup> Robert E. Cornelius, Memorandum S72, U.S. Dept. of the Interior, NPS, Curecanti National Recreation Area, Subject: Contract Completion Repointing of Masonry on Trestle Abutments; Cimarron river Crossing PX 1379-6-2019, May 28, 1987
- <sup>48</sup> *ibid.*
- <sup>49</sup> Perry Crane cost estimate. September 18, 2005.
- <sup>50</sup> Forrest, Ken. Colorado Railroad Museum. Telephone Conversation.



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## **Appendix A: Drawings and Additional Photographs**

## **V. Appendices**

1) References

2) Drawings

(a) Historic Drawings

(i) Site Drawings

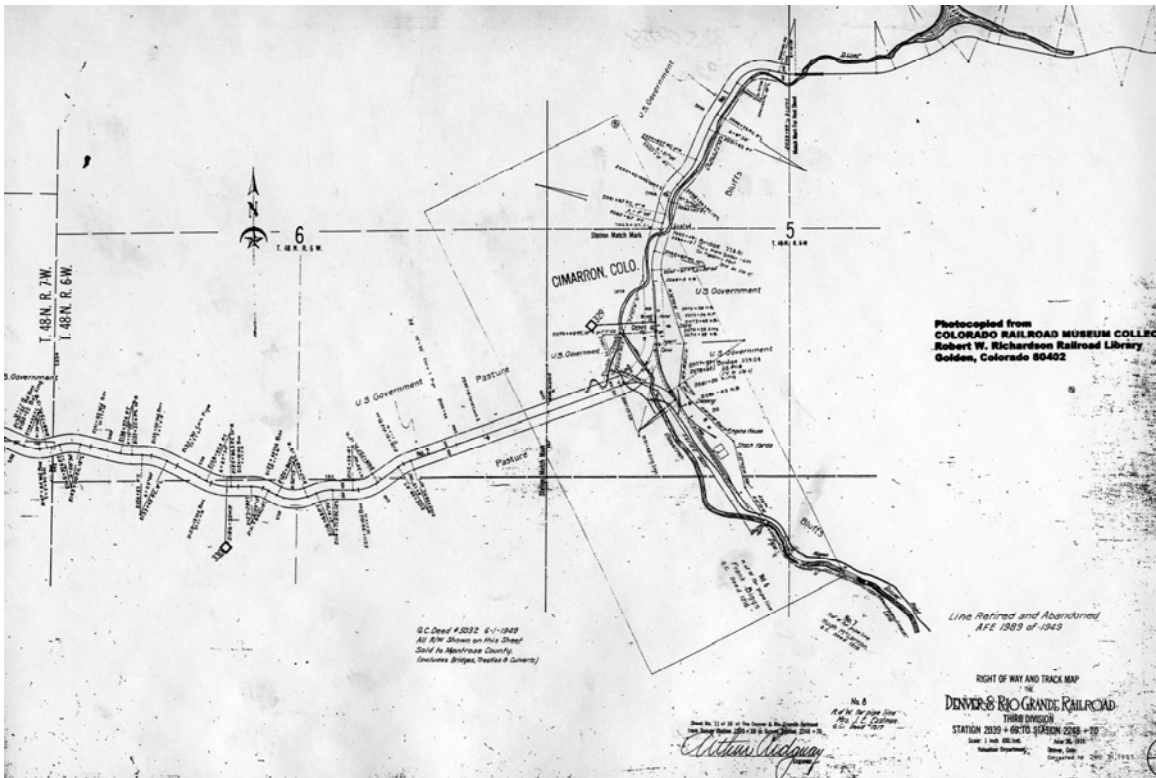


Figure 1. Cimarron site drawing in 1919, Colorado Railroad Museum

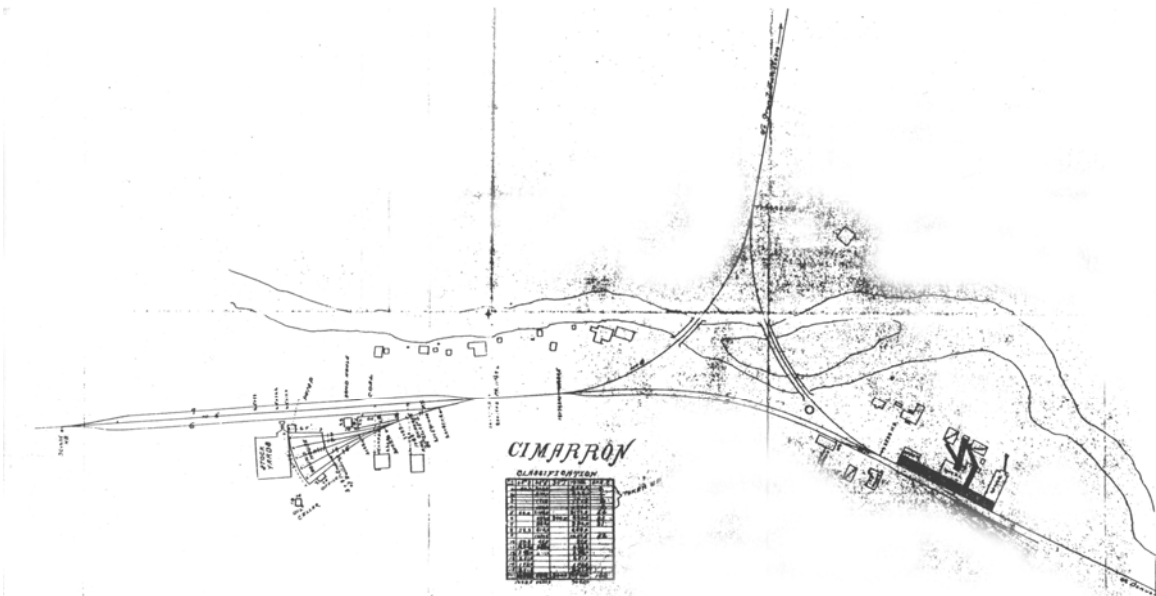


Figure 2. Drawing of secondary five stall round house, Data from NPS

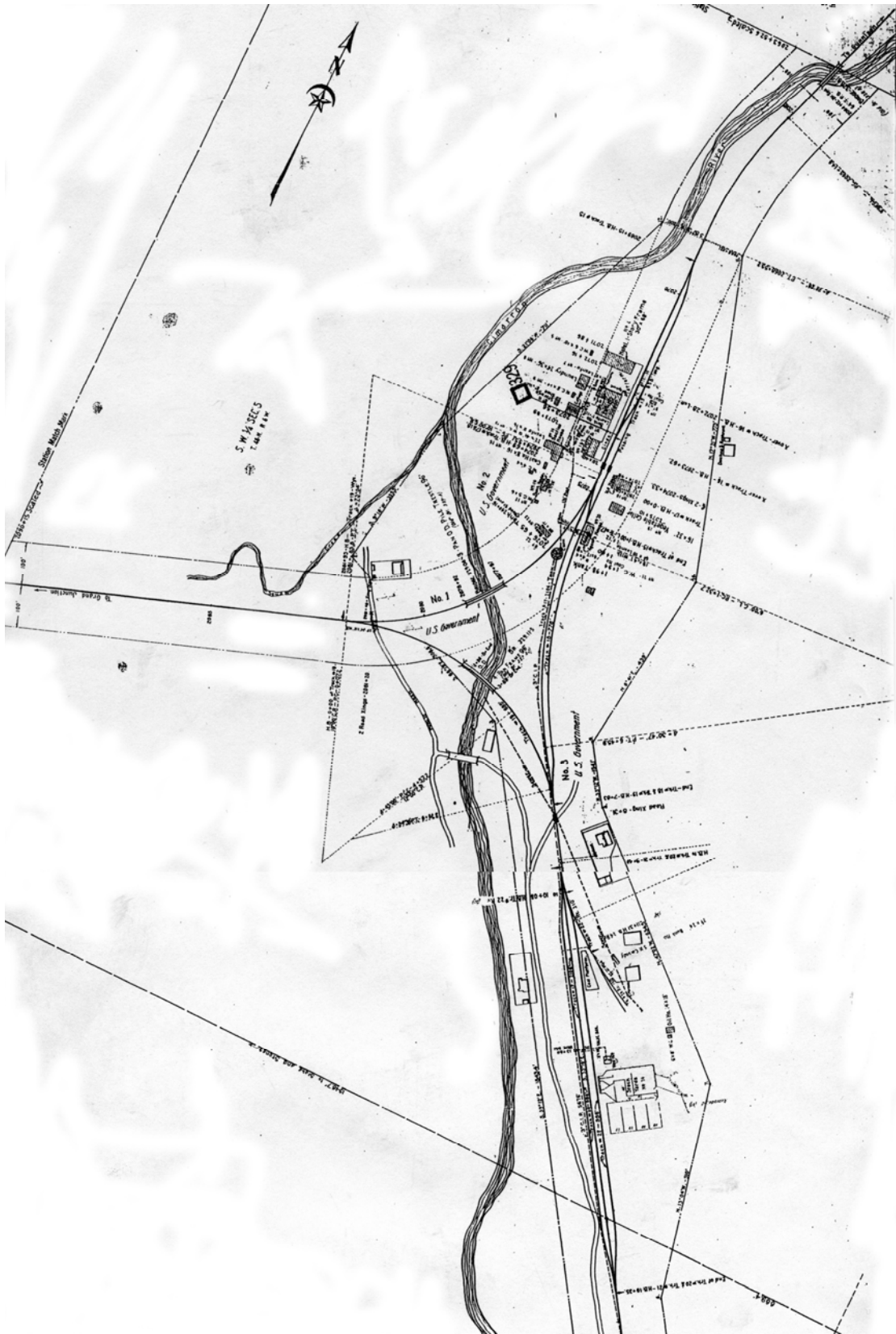


Figure 3. Cimarron site drawing in 1919, Colorado Railroad Museum

(ii) Cars Drawings

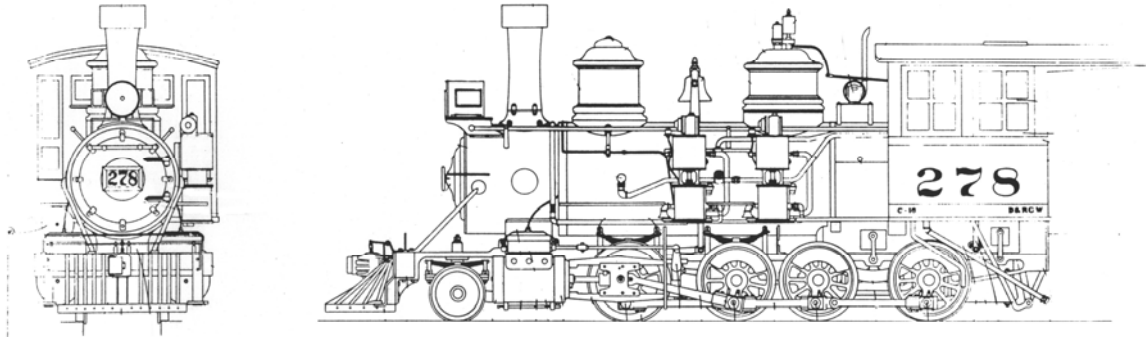


Figure 4. Drawing of locomotive 278, Memorandum of Joseph F. Alston

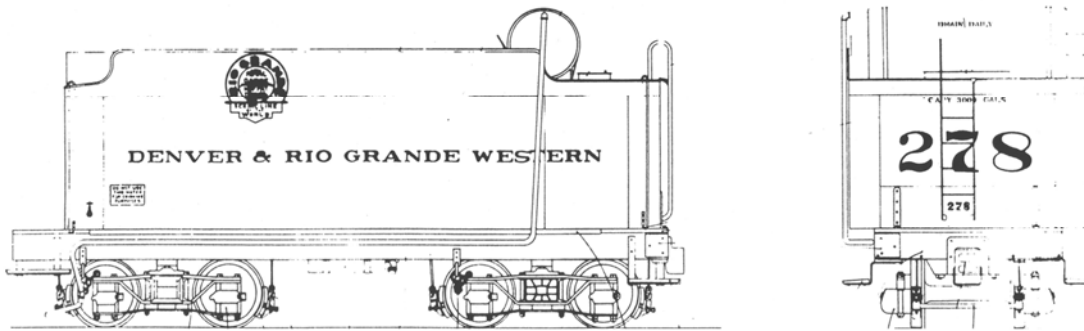


Figure 5. Drawing of tender, Memorandum of Joseph F. Alston

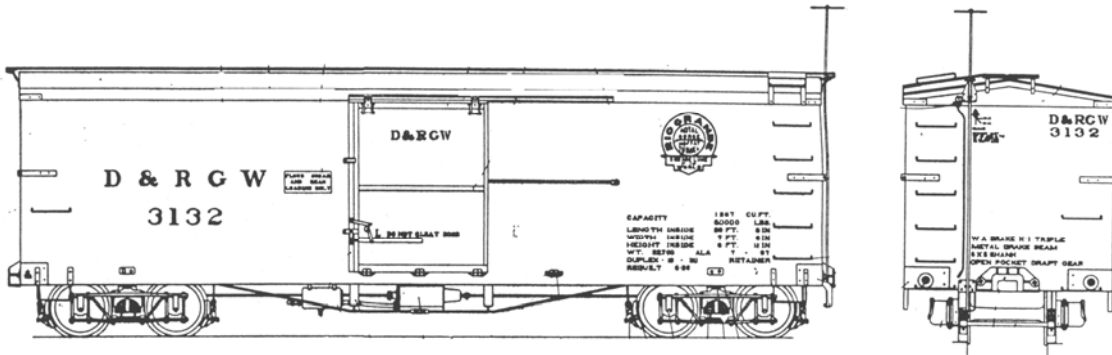


Figure 6. Drawing of box car 3132, Memorandum of Joseph F. Alston



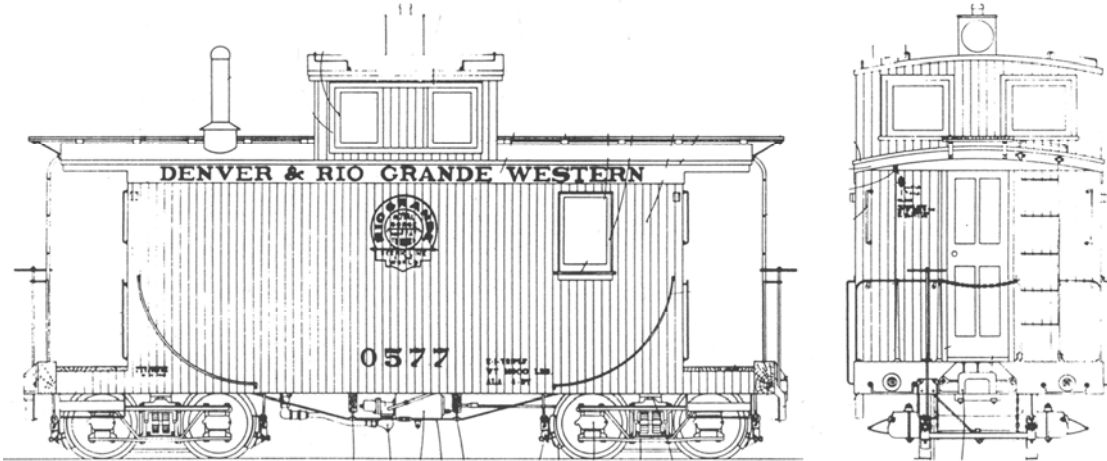


Figure 7. Drawing of Caboose 0577, Memorandum of Joseph F. Alston

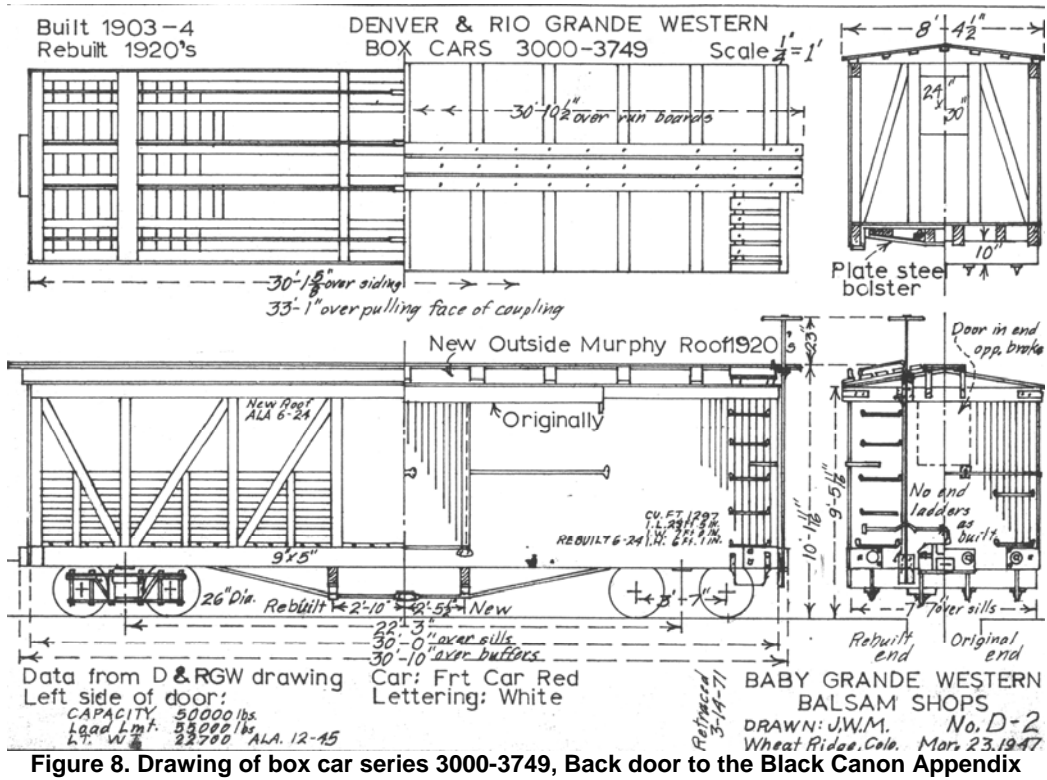


Figure 8. Drawing of box car series 3000-3749, Back door to the Black Canon Appendix

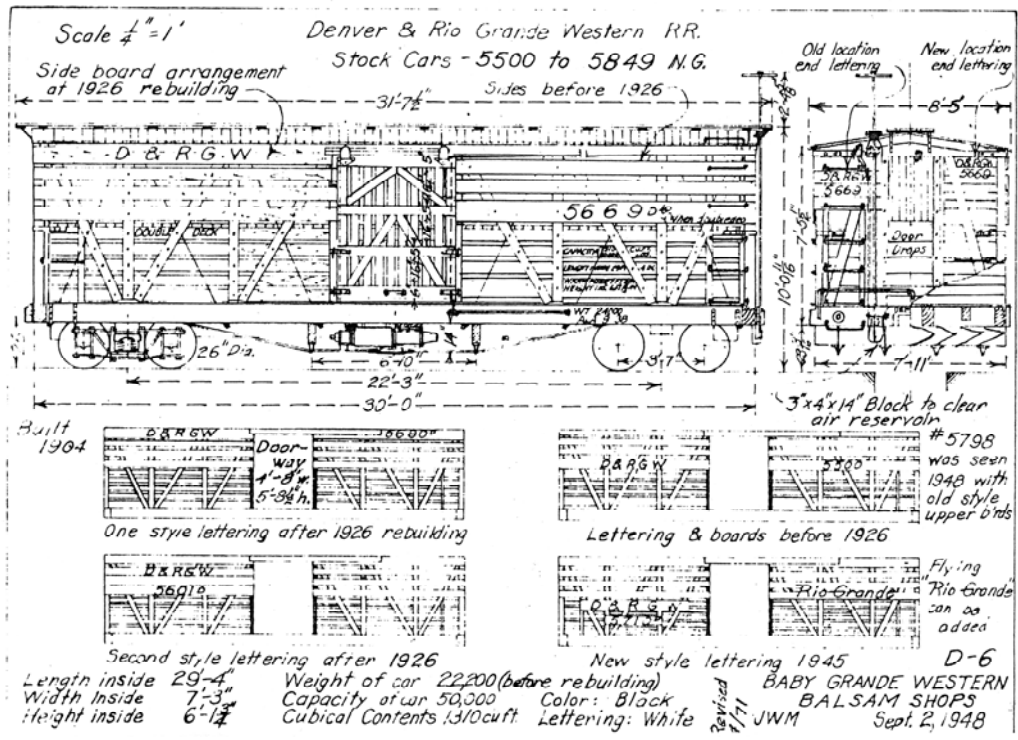


Figure 9. Drawing of Box Car Series 5500-5849, Back door to the Black Canon Appendix

(b) New Drawings  
(i) Site Drawings

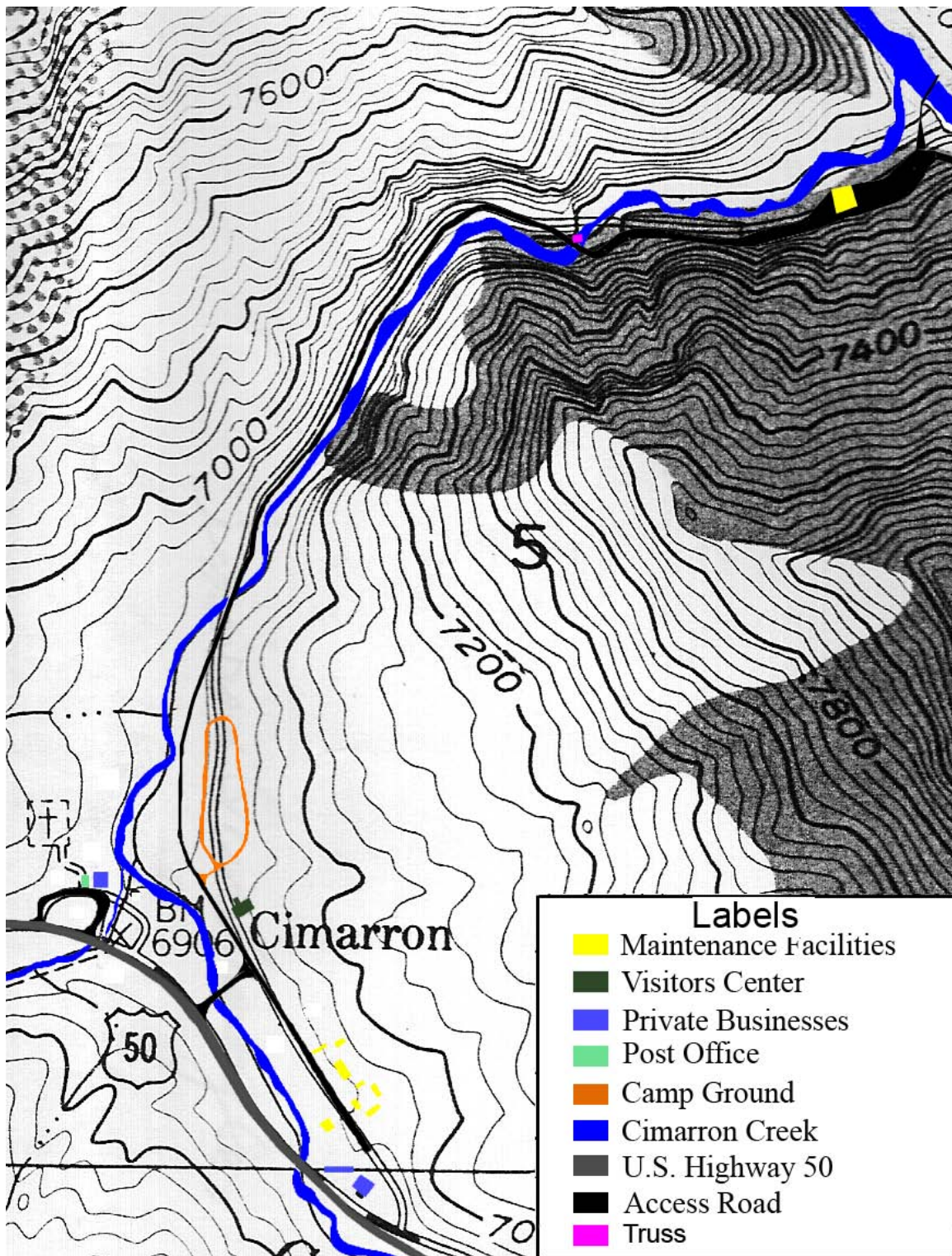


Figure 10. Current Land Use



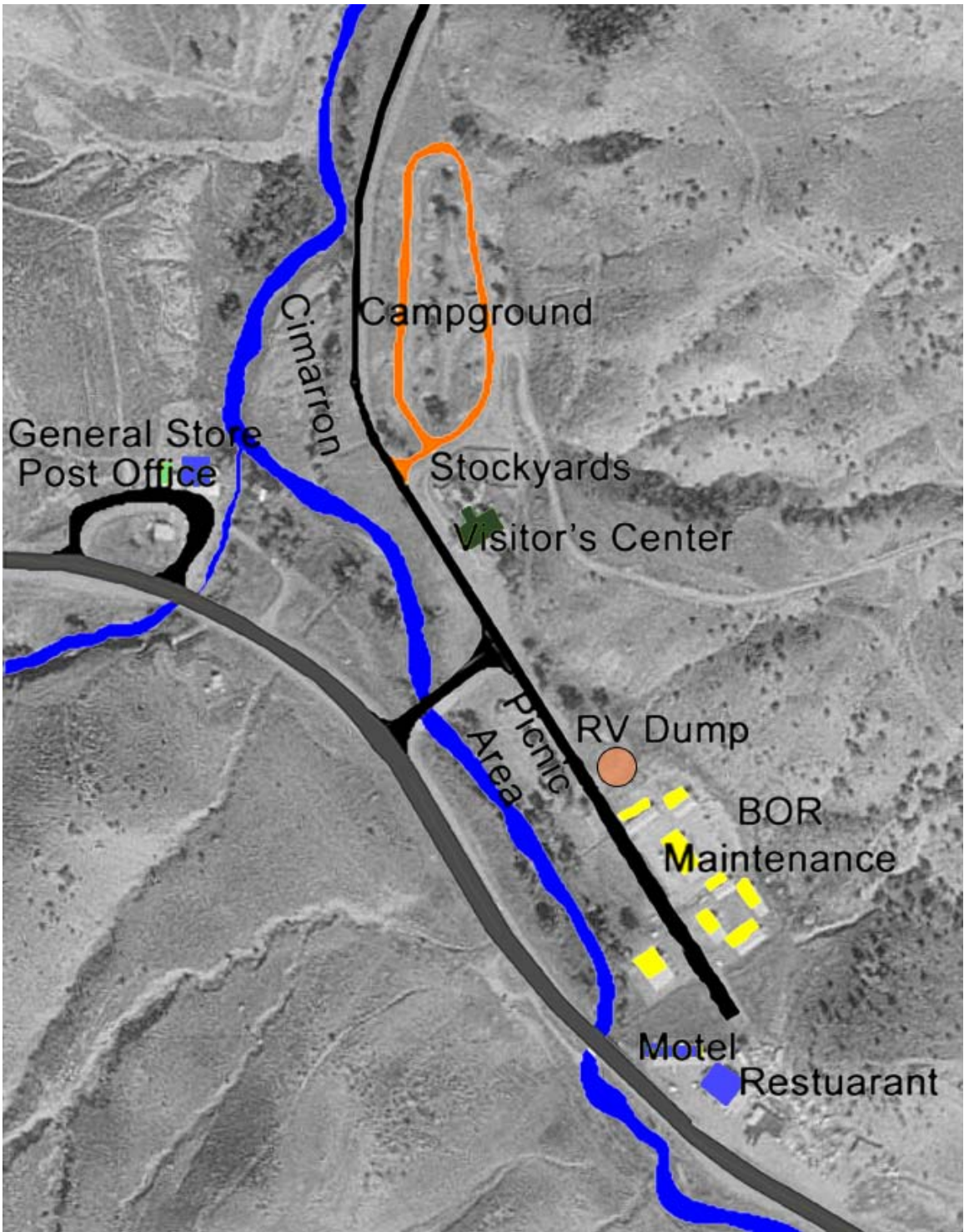


Figure 11. The details of Current land use

(ii) Planning for Cimarron Site

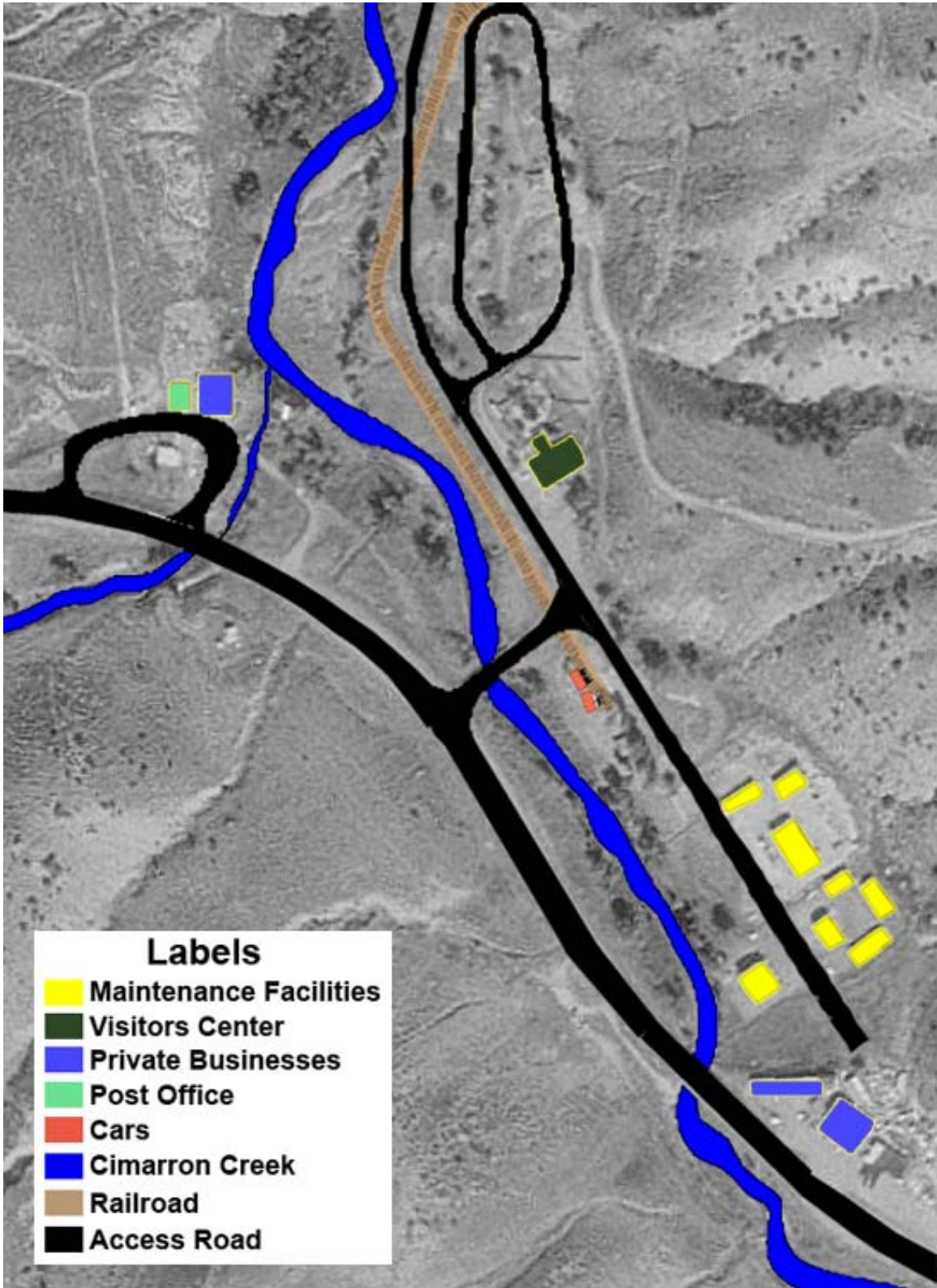


Figure 12. Proposal A



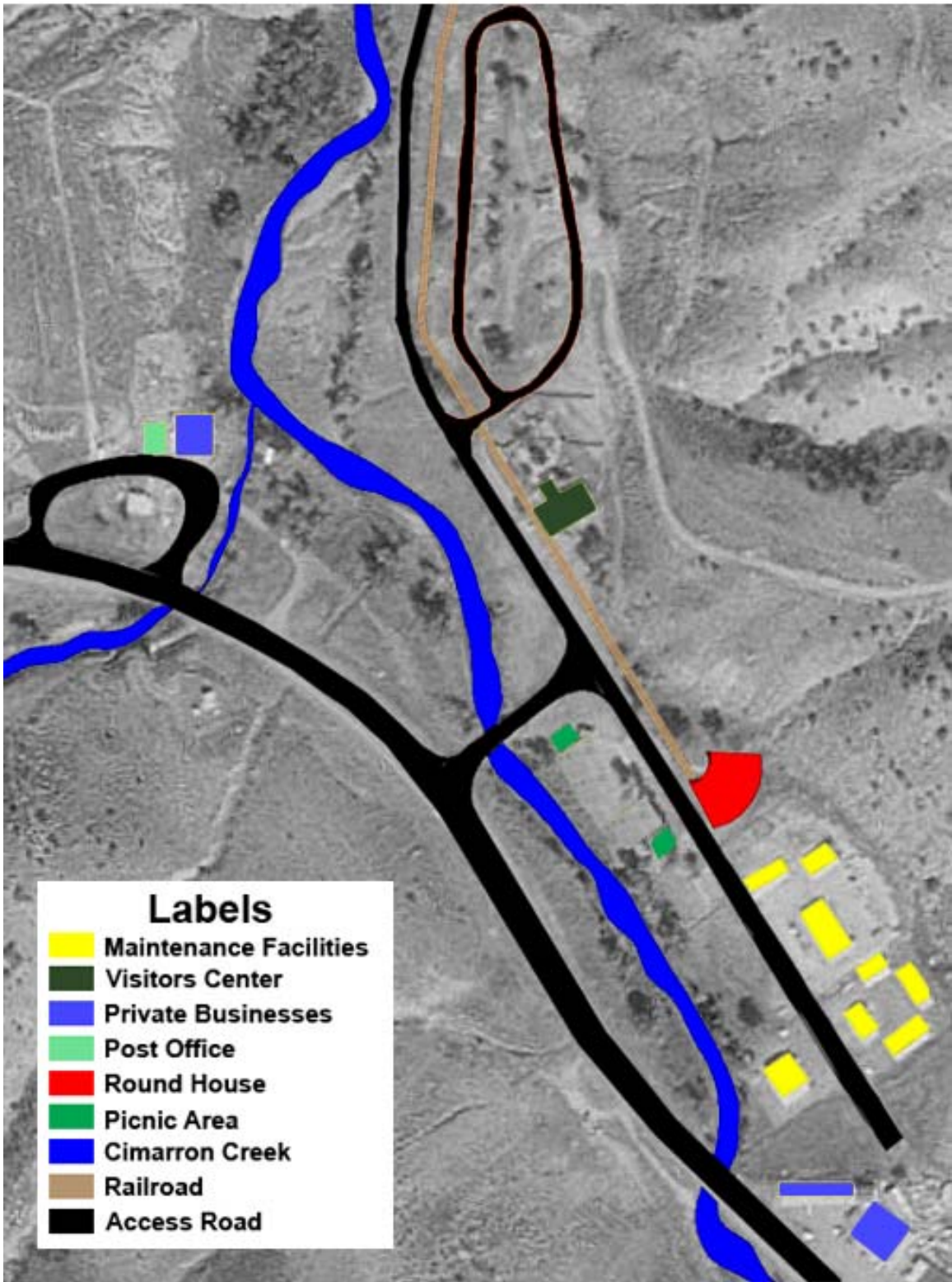


Figure 13. Proposal B-1

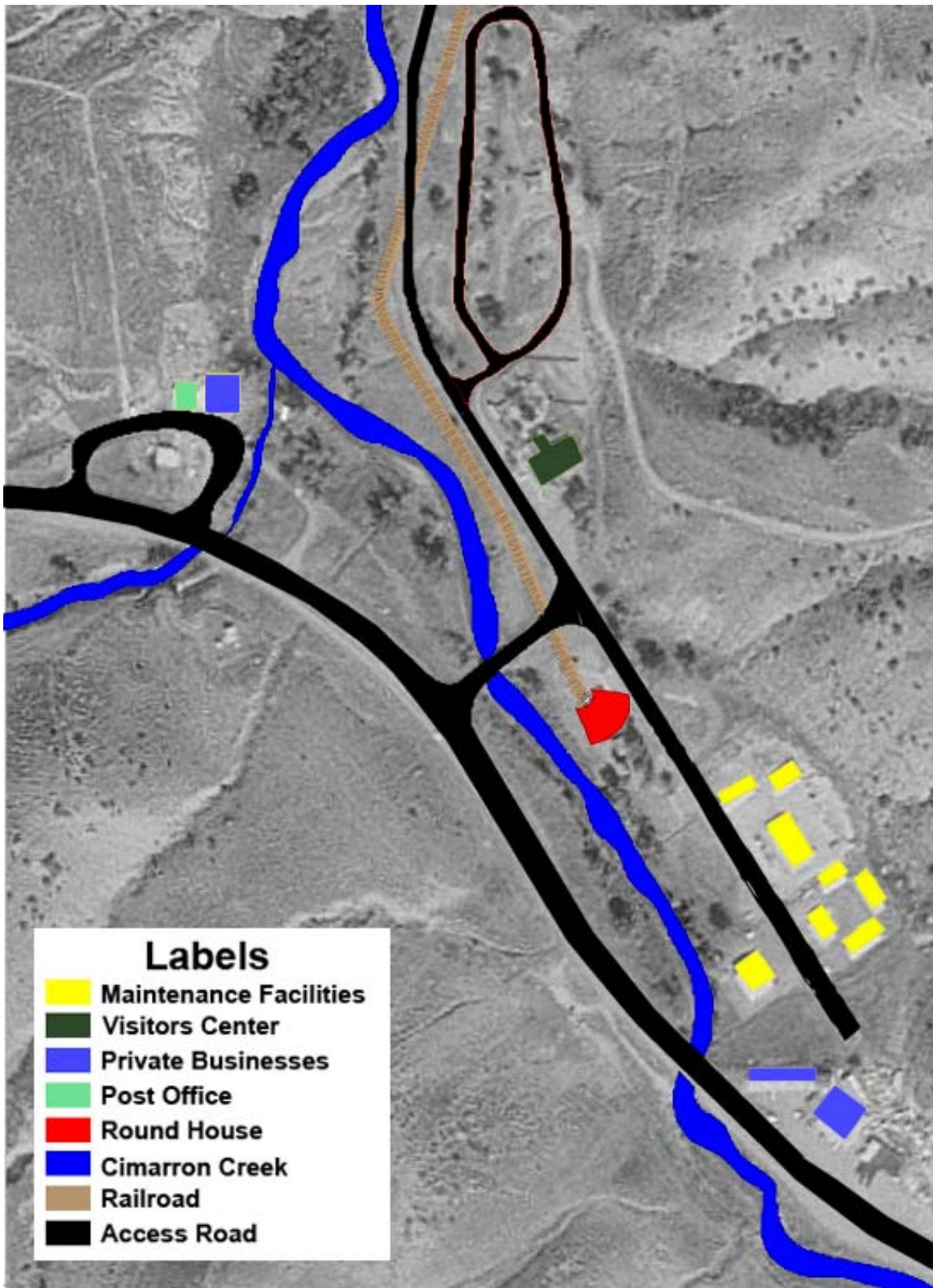


Figure 14. Proposal B-2



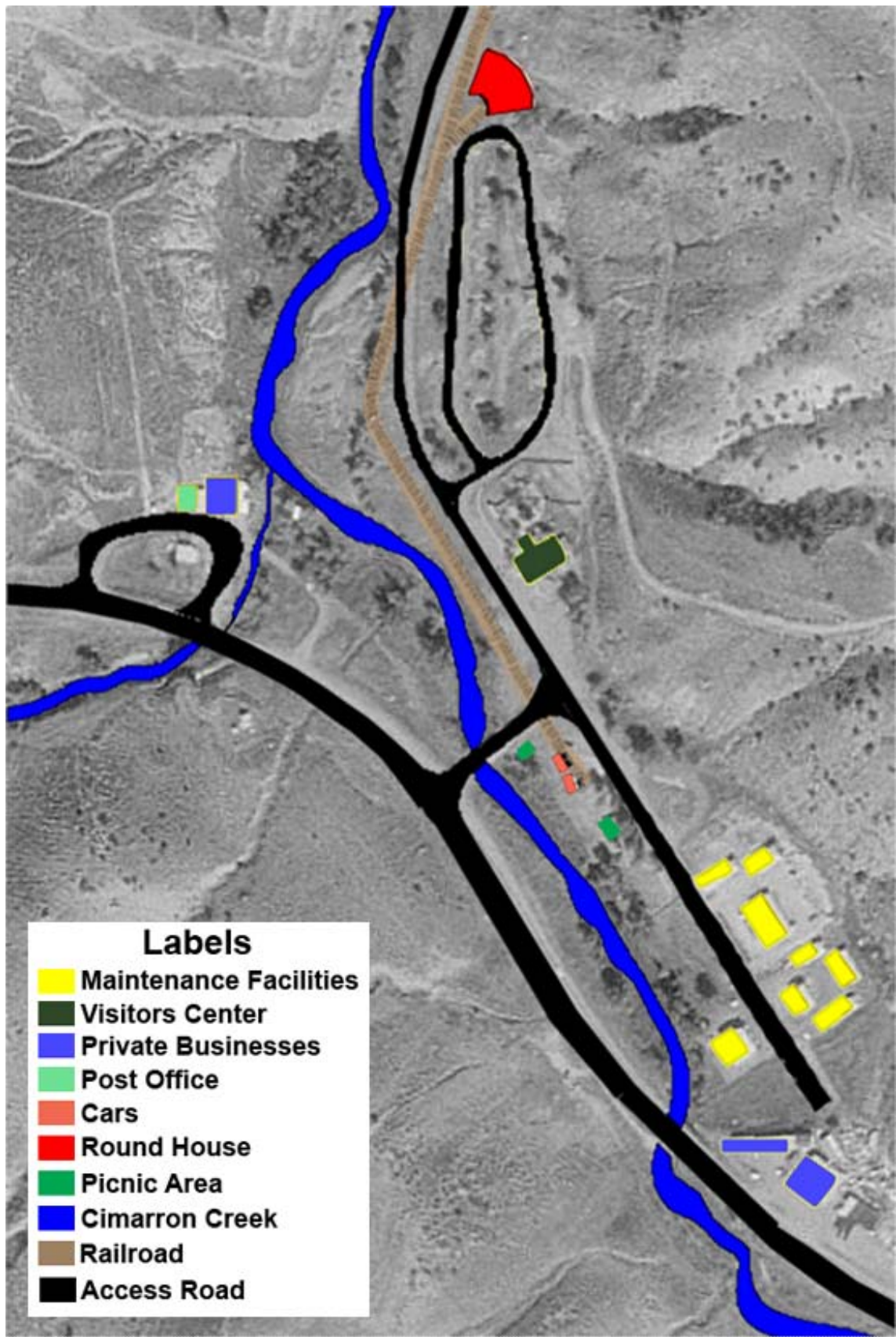


Figure 15. Proposal B-3



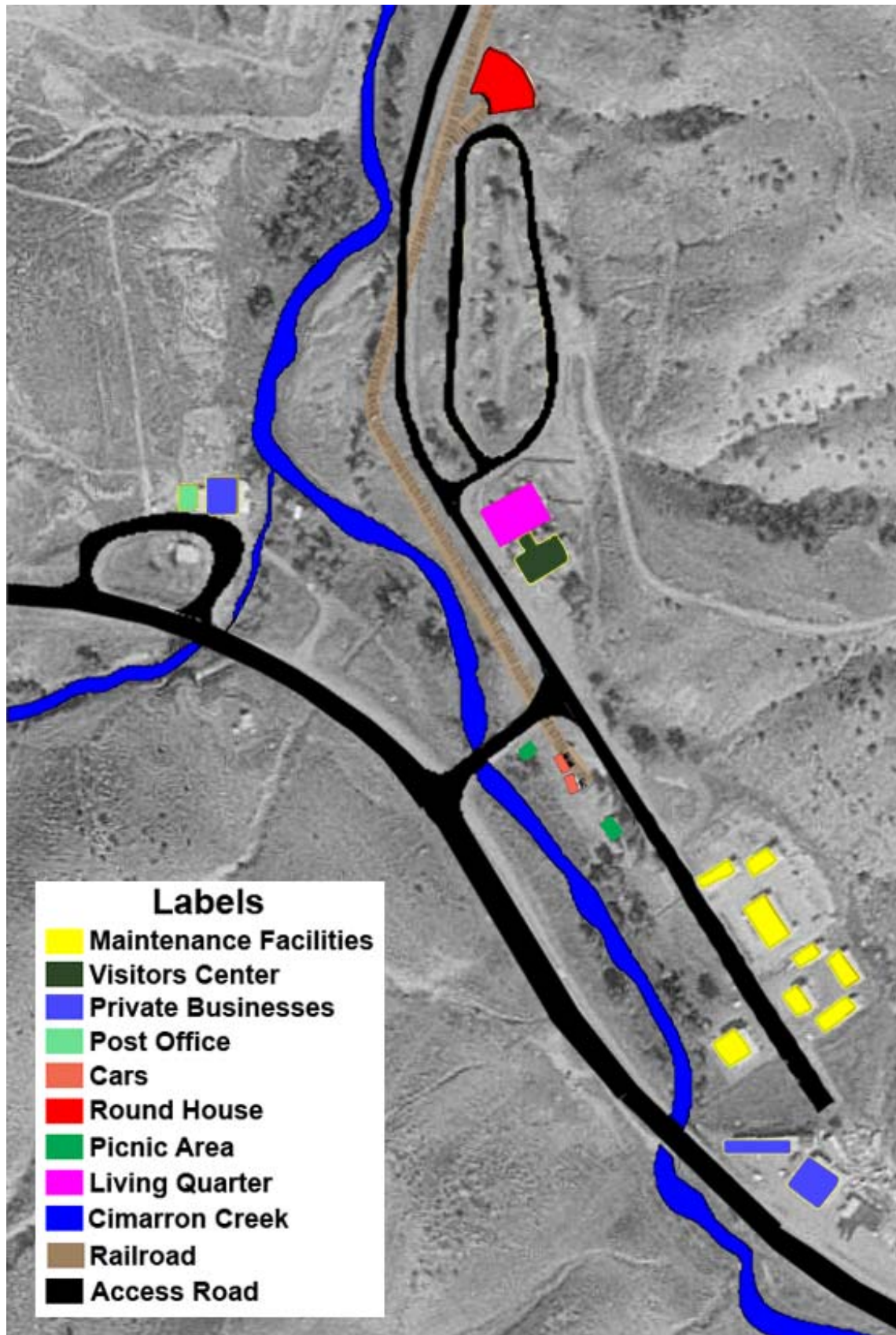


Figure 16. Proposal C

3) Historic Photographs  
(a) Historic Photographs



**Figure 17. Cattle ranch near Cimarron, circa late 1890s –photograph by William Henry Jackson courtesy Denver Public Library, Western History Collection**



**Figure 18. 2005 photo of site where cattle ranch was once located**





Figure 19. "Cline's Ranch, Cimarron, Colo. Scene of the murder of young Jackson by the Ute Indians. 1880" – photograph by Will Torrance courtesy Denver Public Library, Western History Collection



Figure 20. Cimarron Canon circa 1880s – photograph by William Henry Jackson courtesy Denver Public Library, Western History Collection



Figure 21. 1886 photograph of Cimarron – photograph by William Henry Jackson courtesy Denver Public Library, Western History Collection



Figure 22. 1886 photograph of Cimarron – 1882 roundhouse in the foreground, Black Canon Hotel in the center, depot, and water tank – photograph by William Henry Jackson courtesy of Denver Public Library, Western History Collection



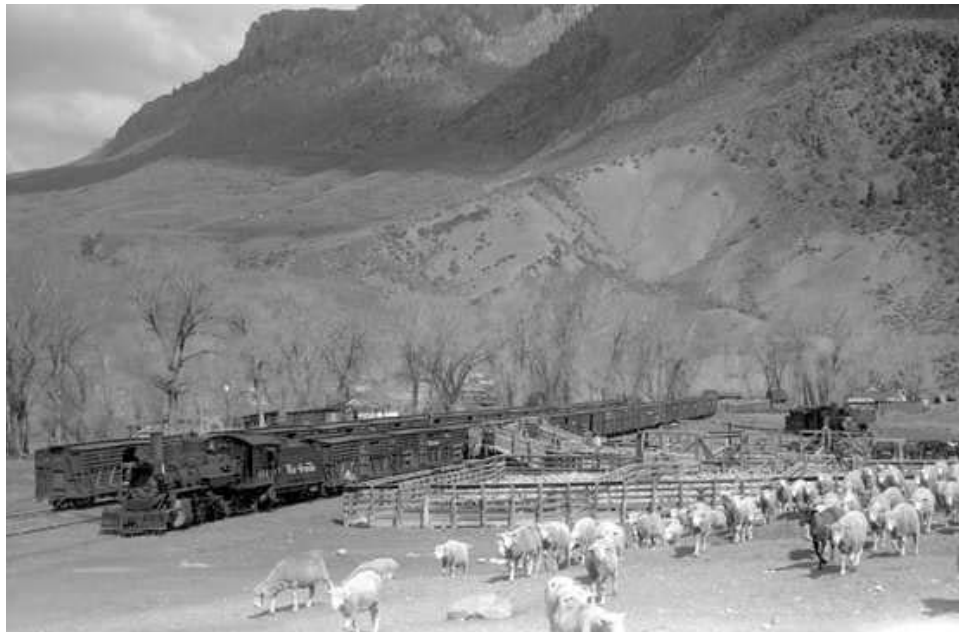
**Figure 23. Fishing in the Black Canon of the Gunnison near Sapinero circa late 1800s – photograph by William Henry Jackson courtesy of the Denver Public Library, Western History Collection**



**Figure 24. Cimarron circa 1880s showing railroad tracks, depot, water tank, Black Canon Hotel – photograph by William Henry Jackson courtesy Denver Public Library, Western History Collection**



**Figure 25. Cimarron circa 1930s – photograph by Walker Art Studio courtesy Denver Public Library, Western History Collection**



**Figure 26. Stockyards at Cimarron, eastbound train unloading sheep, May 8, 1949 – photograph by Otto Perry courtesy Denver Public Library, Western History Collection**





Figure 27. Sheep in stockyards at Cimarron, circa 1940s – photograph courtesy of Denver Public Library, Western History Collection



Figure 28. Last train out of Cimarron taking up track as it goes, July 1949 – photograph by Bob Richardson, *The Rio Grande Pictorial*, p. 182.

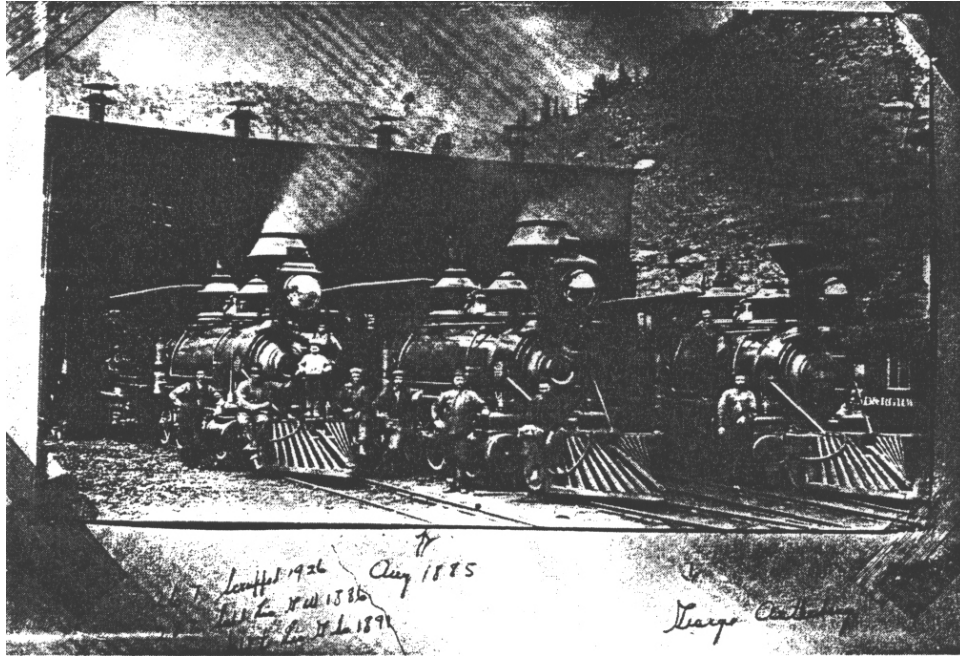


Figure 29. First round house, Back door to the Black Canon P16

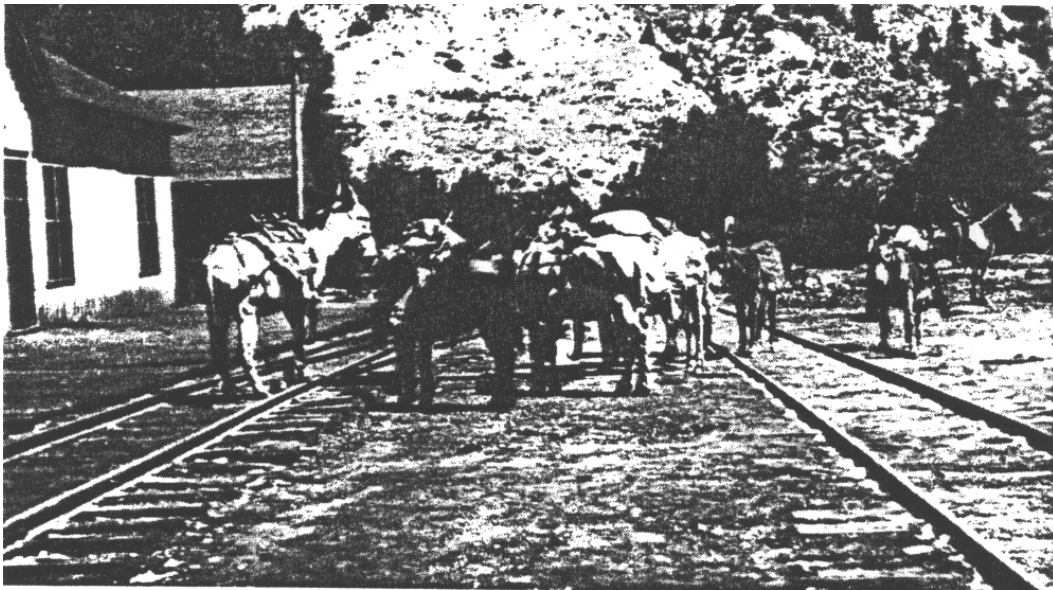


Figure 30. Around station, Back door to the Black Canon P20



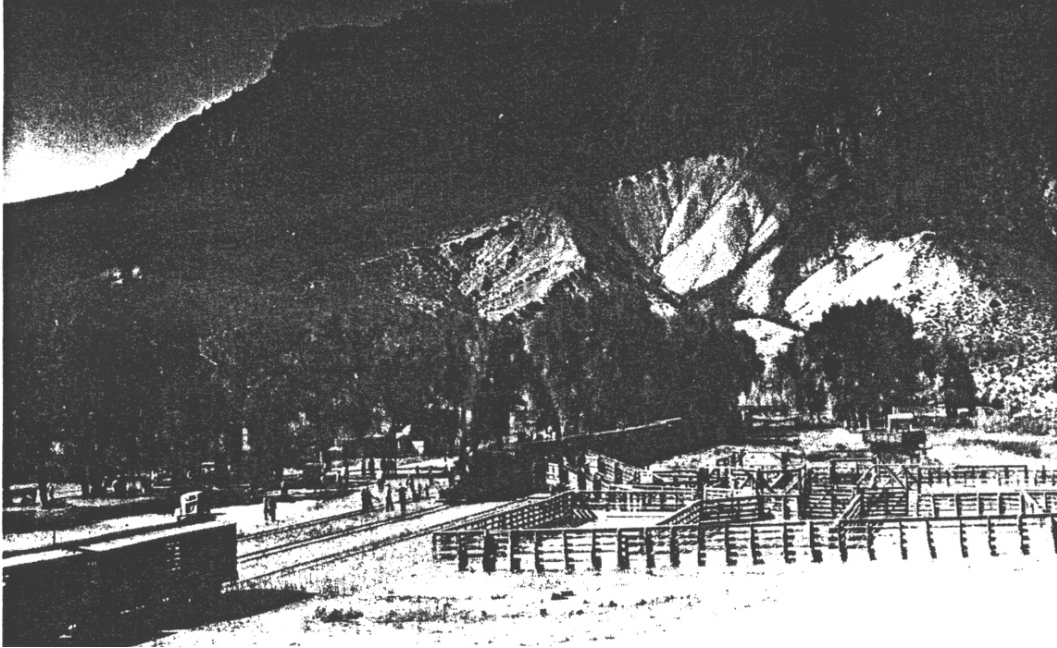


Figure 31. Stock yard, Back door to the Black Canon P31

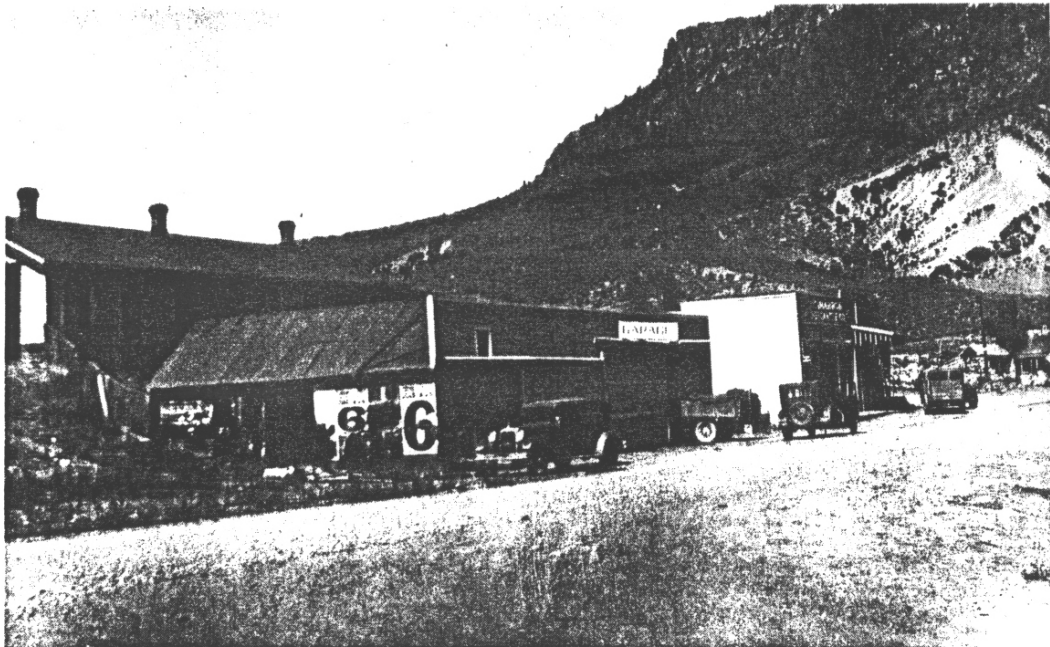


Figure 32. Cimarron town in 1934, Back door to the Black Canon P32



Figure 33. Cimarron station & water tower, Back door to the Black Canon P77

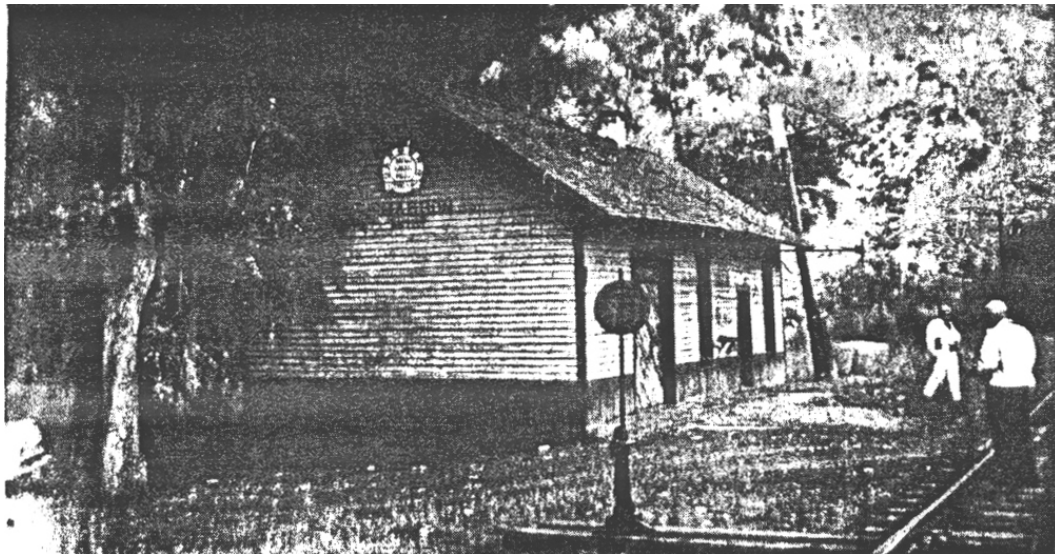


Figure 34. Cimarron station, Back door to the Black Canon P79

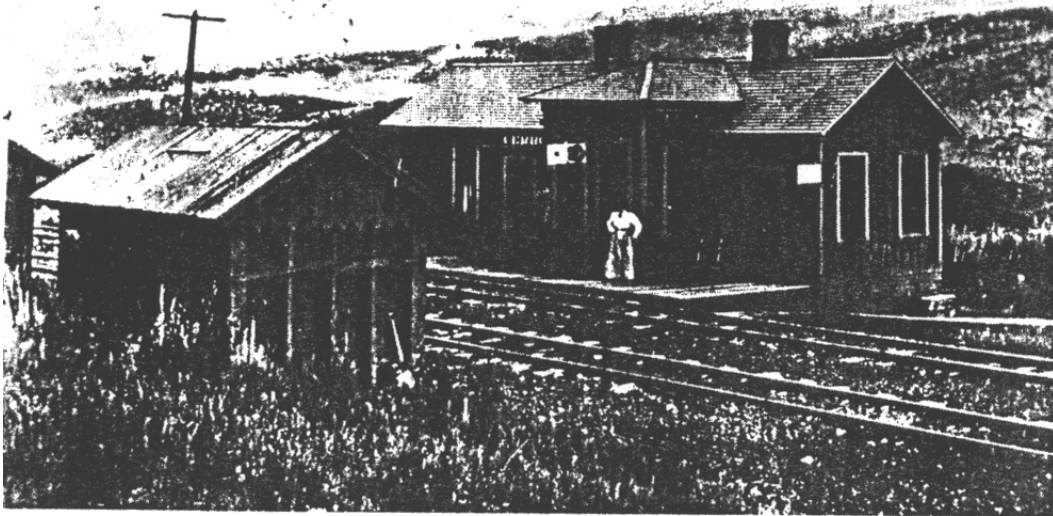


Figure 35. Cimarron station, Back door to the Black Canon P80

- (b) New Photographs  
(i) Site View



**Figure 36. Overview of Cimarron Site**



**Figure 37. Overview of Cimarron from US 50**



**Figure 38. Off-site development, Private businesses (Motel and restaurant)**



**Figure 39. Junk yard behind motel and restaurant**



**Figure 40. Signboard of Cimarron site**



**Figure 41. Entrance to Cimarron site**





**Figure 42. Off-site development, Post office and general store**



**Figure 43. U.S 50, entrance, Cimarron creek, and access road**



**Figure 44. Cimarron creek**



**Figure 45. Recreational area**



**Figure 46. Visitors center**



**Figure 47. Loading deck for display**



**Figure 48. Camping site**



**Figure 49. Old railroad remain**



**Figure 50. Maintenance facilities(Left) and RV dump(Right)**





Figure 51. Off-site development, Morrow point dam

(ii) Truss



Figure 52. Overview of Locomotive on Truss



Figure 53. Overview of Truss



Figure 54. Under view of Truss



(iii) Cars



Figure 55. Front View of 278



Figure 56. Side View of 278



Figure 57. Tender Box



Figure 58. Box Car 3132





Figure 59. Caboose 0577



Figure 60. Stock Car 5620





Figure 61. Stock Car 5679D, Photo by Dave Dye 2004



Figure 62. Box Car 04414





Figure 63. Crane car

(iv) Car Assessment

**Locomotive 278 and Tender Box**



**Figure 64. Corrosion has left a growing hole in the steam piston barrel**



**Figure 65. Peeling paint and rust materials**



**Figure 66. Engine room ceiling, peeling paint and rotting wood**





**Figure 67. Dirt and animal droppings in the engineer's cab**



**Figure 68. Rust on smoke box front**



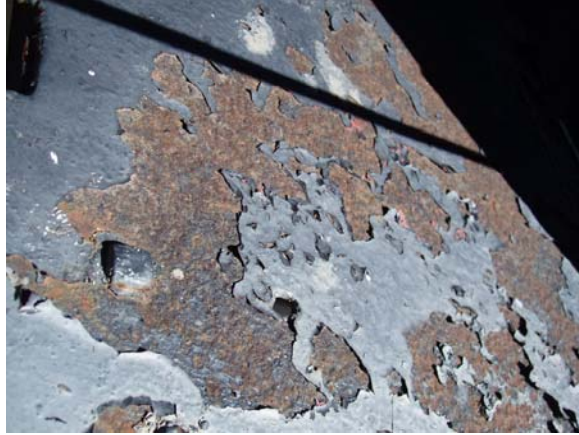
**Figure 69. Paint peeling and rust on pilot and bars**



**Figure 70. Rust on both sides' lamps**



**Figure 71. Paint peeling underneath bell**



**Figure 72. Chipping paint on plate in driver's room**



**Figure 73. bent metal part on window of engineer cab**



**Figure 74. Weathered window frame**



Figure 75. Peeling paint and rotten wood on engineer's cab

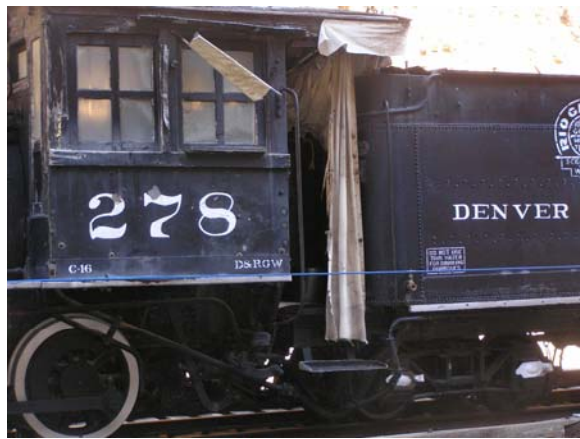


Figure 76. Scrapped cloth cover between locomotive and tender



Figure 77. Weathered roof of engineer cab





**Figure 78. Paint peeling on side letters**



**Figure 79. Weathered wood frame**



**Figure 80. Rust under smoke box**



**Figure 81. Rust and paint peeling on wheels**





**Figure 82. Rust and paint peeling on wheels**



**Figure 83. Roof top of engineer cab in bad condition**



**Figure 84. Roof top of engineer cab in bad condition**

Box Car 3132



Figure 85. A end, Boards are weathered and either need to be repaired or replaced



Figure 86. A end, sidings are weathered



Figure 87. Fascia is rotten and needs to be either repaired or replaced with in-kind materials



**Figure 88. Paint on eaves moulding is peeling**



**Figure 89. Re-welded hand brake needs to be ground flush and repainted**

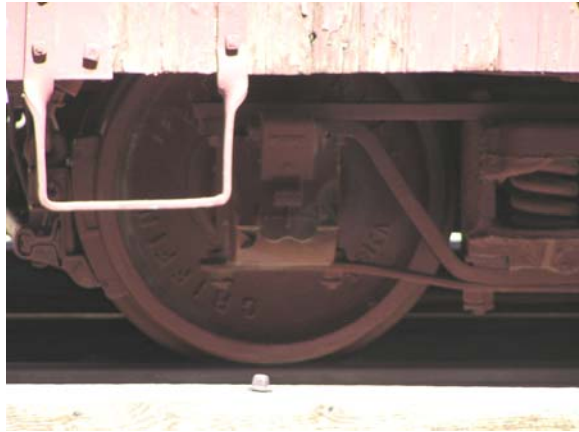


**Figure 90. Rotten A end beam**





**Figure 91. Rust and paint peeling on coupler pocket**



**Figure 92. Undercarriage looks good**



**Figure 93. Some parts have rust**



Figure 94. Brake beam and shoe are in good shape



Figure 95. Paint on roofwalk is peeling



Figure 96. Inside view of B end under restoration work



Figure 97. Old letters on the side





**Figure 98. The inside of A end is newly repainted**



**Figure 99. Paint is weathered**

**Caboose 0577**



**Figure 100. Wood Rot and paint peeling on the A end deck and end beam**



**Figure 101. Wood Rot and paint peeling and bubbling on the right side**



**Figure 102. Bent B end's sill**



**Figure 103. Paint peeling on windows and window sash**



**Figure 104. Deterioration and neglect found in the Caboose. Notice the roof rot and the left side is missing most of its interior integrity.**



**Figure 105. Debris and neglect accelerating deterioration**



**Stock Car 5620**



**Figure 106. B end cupola, end beam**



**Figure 107. Right side B end rotten cross bar**



**Figure 108. Right side A end rotten end beam**



Figure 109. Rotten door sill



Figure 110. Inside view toward A end



Figure 111. Inside view toward B end





**Figure 112. Undercarriage and rotten A end beam**



**Figure 113. Truss rod and break cylinder**



**Figure 114. Roofwalk looking A end to B end**

**Stock Car 5679D**



**Figure 115. View of A end, Conditions of A, B end are good comparing to the other cars**



**Figure 116. Vertical crack on the post of A end**



Figure 117. View of B end, A, B end are repaired recently



Figure 118. Inside view, newly changed material on the top and upper deck

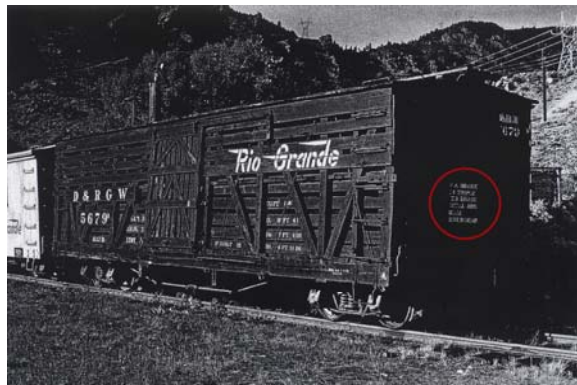


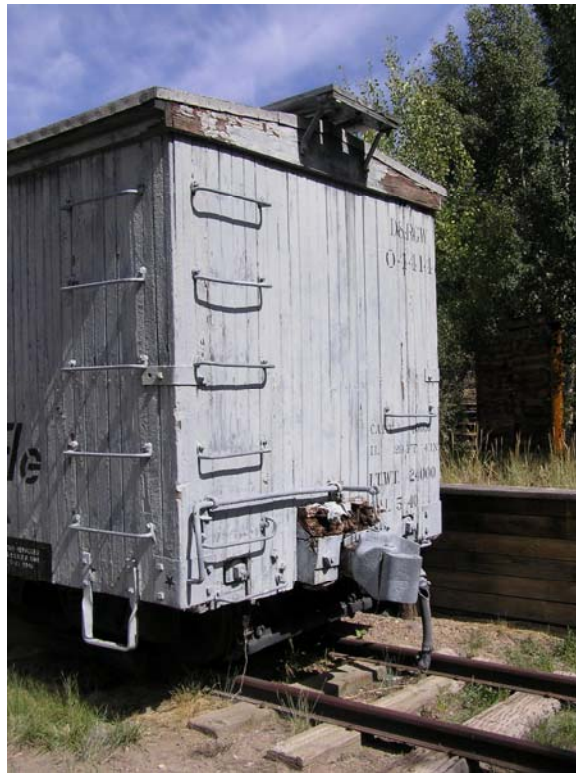
Figure 119. Specification mark on A end is missing, The 2004 Narrow Gauge Annual, P30



**MOW Car 04414**



**Figure 120. Rotten wooden part around coupler pocket of B end**



**Figure 121. A end beam Broken, Peeling paint**



Figure 122. Rotten wooden part around coupler pocket of A end



Figure 123. Deteriorated foot board on the side



Figure 124. Rotten wooden beam



**Figure 125. Undercarriage**



**Figure 126. Roof view from B end to A end**



## Crane Car



Figure 127. Crane car and aberration of steel wire



Figure 128. Undercarriage of crane car

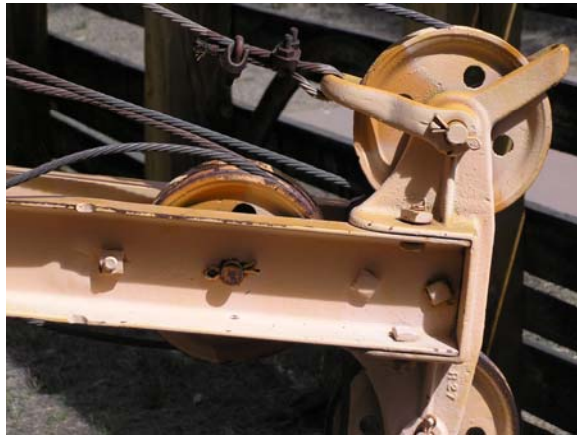


Figure 129. Steel wire and pulley

(v) Truss and Pier Assessment



Figure 130. Ties damaged by water and rotten metal parts

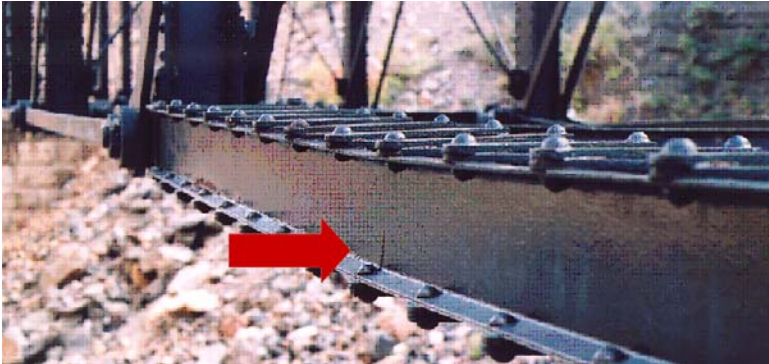


Figure 131. Cracked I beam north side and south end



Figure 132. Downward bent cross tie bars





**Figure 133. Diagonally bent cross tie bar**



**Figure 134. Piers are overall good condition, however, two missing cap stones are found on west pier**



**Figure 135. broken stone**



**Figure 136. Newly repaired pier**



**Figure 137. Roller bearings are frozen due to lack of movement**

## **Appendix B: Updated Estimated Restoration Costs**



## Appendix B Updated Estimated Restoration Costs

2 April 2007

The following updated restoration cost estimates follow Andrew Dahm's original 1997 report (Appendix A) in both structure and intent. His original recommendations remain the basis for the materials list presented below. His caveat concerning estimations of prices and costs ("Notes on Layout of Reports" on page 13 of Appendix A) is also repeated here and emphasized. As a matter of fact, all of his warnings and provisos are still relevant. All that has changed from Appendix A to Appendix B are the estimated amounts of the various items and materials.

Because of the vagaries of time and commerce, not all of the estimates listed below originate with the same, specific suppliers referred to in the original assessment; most, however, do. Only the prices for items and materials are detailed here; the original descriptions and assessments of component conditions and material needs are assumed to remain substantially unchanged. Because costs and prices listed below are in the same categories and in the same order as they are in the original report (pp. 14 - 44), reference can be made to those assessments and estimates of necessary work and materials in it. No items or materials have been omitted from the original, and none have been added to it. Surprisingly enough, lumber prices for the kinds of materials itemized in the restoration plan have changed little in the period between the original estimates and those listed below. Where the estimated cost difference amounts to less than about 3%, the original estimated cost has been retained. For some other non-lumber items, estimates vary so widely that an inflationary estimate of market value of 10 % to 20% has been used to update cost approximations.

**Steam Locomotive** (C-16; 2-8-0)                      Denver & Rio Grande Western 278

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	9" x 13" x 8'	120.00	120.00
1	metal plate	1/8" x 2' dia.	25.00	25.00
1	safety glass or Plexiglas	1/4" x 2' dia.	30.00	30.00
2	16 gauge sheet metal	14" x 30"	5.00	20.00
4	16 gauge sheet metal	1 1/4" x 30"	1.50	6.00

**Steam Locomotive**

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
1	16 gauge sheet metal	30" x 48"	19.00	19.00
1	ash arch	2" x 14" x 7'	3.28/bf	59.04
1	ash panel	2" x 15" x 1'	3.28/bf	9.84
1	ash cross piece	2" x 7" x 1'	3.28/bf	26.24
1	ash window post	2" x 4" x 4'	3.28/bf	13.12
2	ash door post	2" x 4" x 6'	3.28/bf	29.52
2	ash fill block	2" x 8" x 3'	3.28/bf	29.52
2	ash panel	2" x 8" x 3'	3.28/bf	29.52
1	ash top	2" x 10" x 8'	3.28/bf	49.20
2	ash corners	2" x 6" x 6'	3.28/bf	42.64
1	ash cross piece	2" x 10" x 6'	3.28/bf	36.08
1	ash window divider	2" x 5" x 4'	3.28/bf	13.12
1	ash bottom	2" x 8" x 6'	3.28/bf	29.52
2	ash panel	2" x 8" x 6'	3.28/bf	55.76
1	ash trim	1" x 4" x 6'	3.28/bf	8.58
1	canvas sun shade			25.00
1	ash top	2" x 10" x 8'	3.28/bf	49.20
2	ash corners	2" x 6" x 6'	3.28/bf	42.64
1	ash cross piece	2" x 10" x 6'	3.28/bf	36.08
1	ash window divider	2" x 5" x 4'	3.28/bf	13.12
1	ash bottom	2" x 8" x 6'	3.28/bf	55.76
2	ash panel	2" x 8" x 6'	2.86/bf	8.58
1	canvas sun shade			25.00
2	white oak	1" x 4" x 2'	3.77/bf	7.54
1	ash top arch	2" x 15" x 7'	3.28/bf	62.32
2	ash corners	3" x 3" x 6'	3.28/bf	22.96
2	ash door posts	2" x 4" x 6'	3.28/bf	29.52
1	ash cross piece	2" x 8" x 6'	3.28/bf	29.52
1	ash	1½" x 4" x 6'	3.28/bf	13.12
1	Plexiglas	entire cab		195.00
1	canvas water repellent			25.00
10	tongue and groove fir	2" x 4" x 6'	6.08/bf	249.28

Steam Locomotive and tender

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
10	tongue and groove fir	7/8" x 4" x 8'	11.81/bf	118.10
4	ash spacer	1" x 2" x 8'	2.86/bf	22.88
4	ash keeper	1" x 2" x 8'	2.86/bf	22.88
4	ash spacer	1" x 2" x 8'	2.86/bf	22.88
4	ash keeper	1" x 2" x 8'	2.86/bf	22.88
2	tongue and groove fir	2" x 7" x 2'	6.08/bf	48.64
4	fir	2" x 4" x 6'	6.08/bf	48.64
4	white oak	1/2" x 1" x 2'	1.90/bf	1.90
32	tongue and groove fir	7/8" x 4" x 8'	11.81	377.92
4	ash	2" x 6" x 9'	3.28/bf	124.64
1	ash	2" x 7" x 9'	3.28/bf	36.08
2	fir	2" x 10" x 10'		35.00
1	ash	2" x 6" x 8'	3.28/bf	29.52
1	tongue and groove fir	7/8" x 4" x 8'		11.81
2	ash	1" x 2" x 2'	2.86/bf	2.86
2	black fibered roof coating	gallons	7.49	14.98
1	black plastic roof cement	gallon	6.49	6.49
4	half-lapped fir	2" x 8" x 7'	25.52	102.08
1	white oak	7" x 10" x 8'		80.60
1	metal plate	1/4" x 12" x 2'		35.00
4	white oak	3" x 7" x 6'	40.62	162.48
1	fir	4" x 10" x 24'		119.19
1	fir	4" x 10" x 24'		119.19
1	white oak	7" x 12" x 8'		90.87
1	half-lapped fir	2" x 8" x 8'		25.52
2	black fibered roof coating	gallons	7.49	14.98
1	black plastic roof cement	gallon	6.49	6.49
	"unforeseen materials" cost (25%)			805.92
20	gloss black paint	gallons	22.00	440.00
2	cab green paint	gallons	26.00	52.00
1	silver paint	gallon		26.00
5	linseed oil	gallons	12.85	64.25

**Steam Locomotive and tender**

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
5	"woodlife"	gallons	15.00	75.00
	lettering paint and supplies			30.00
10	Rustoleum spray primer	cans	5.00	50.00
	sandblasting			200.00
	misc. metal items			<u>500.00</u>

Total materials cost for locomotive **\$ 5,466.00**Labor costs: 730 hrs @ 40.00/hr = **\$ 29,200.00**"unforeseen labor factor (10%) = **\$ 2,920.00**Total estimated materials & labor costs for locomotive and tender = **\$ 37,586.00****Box Car**

Denver &amp; Rio Grande Western

3132

quantity	material	amount	unit cost (\$)	total cost (\$)
5	tongue and groove fir	7/8" x 4" x 8'	11.81	59.05
1	fir	1" x 8" x 8'		7.19
1	fir	1" x 9" x 2'		5.00
1	fir	2" x 6" x 14'		38.28
22	tongue and groove fir	7/8" x 4" x 8'	11.81	259.82
7	fir	1" x 8" x 8'	7.19	50.33
1	fir	1" x 9" x 2'		5.00
4	fir	1" x 8" x 2'		7.19
6	fir	1" x 6" x 2'	7.19	14.38
2	white oak	2" x 3" x 3'	5.04/bf	20.16
2	white oak	1" x 4" x 2'	1.90/bf	3.80
	"unforeseen materials" costs (25%)			328.00

**Box Car**

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
	metal parts sand blasting	estimate		75.00
4	Rustoleum spray primer	cans	5.00	20.00
	Misc. metal parts (bolts, etc.)			150.00
25	box car red paint	gallons	25.00	625.00
2	linseed oil	gallons	12.85	25.70
2	"Woodlife"	gallons	15.00	30.00
	Lettering paint and supplies			<u>30.00</u>

Total materials cost for box car = **\$ 1753.90**

Labor costs: 175 hrs @ 40.00/hr = **\$ 7000.00**

"unforeseen labor" factor (10%) = **\$ 700.00**

Total estimated materials & labor costs for box car = **\$ 9453.90**

**Caboose**

Denver &amp; Rio Grande Western

0577

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	7" x 12" x 8'		90.87
4	half-lapped fir	2" x 8" x 8'	25.52	102.08
2	fir	1" x 6" x 6'	4.00	8.00
2	fir	1" x 4" x 14'	8.19	16.38
2	fir	1" x 10" x 14'	14.00	28.00
2	tongue and groove fir	7/8" x 4" x 8'	11.81	23.62
1	white oak sill	2" x 6" x 3'	5.04/bf	20.16
3	fir	1" x 3" x 8'	2.89	8.67
1	white oak	7" x 12" x 8'		90.87
4	half-lapped fir	2" x 8" x 8'	25.52	102.08
2	fir	1" x 6" x 6'	4.00	8.00
	ash	enough to build door		100.00

## Caboose

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
1	fir	4" x 10" x 10'		49.67
2	tongue and groove fir	7/8" x 4" x 8'	11.81	23.62
2	white oak	2" x 6" x 3'	5.04/bf	35.28
3	fir	1" x 3" x 8'	2.89	8.67
2	fir	1" x 4" x 14'	8.19	16.38
	cushions	replace all		250.00
2	ceiling cream color paint	gallons	25.00	50.00
4	light green paint	gallons	27.00	108.00
2	floor red paint	gallons	29.00	58.00
1	linseed oil	gallon		12.85
2	stove pipe	6" sections	7.19	14.38
1	stove pipe damper	6"		8.00
1	step pattern and setup			845.00
3	step casting		20.00	75.00
	Plexiglas	all windows and doors		225.00
4	fir	1" x 4" x 8'	2.89	11.56
1	cupola air gauge			25.00
4	black fibered roof coating	gallons	7.49	29.96
2	black plastic roof cement	gallon	6.49	12.98
1	stove pipe			30.00
1	round steel brace			10.00
2	tongue and groove fir	7/8" x 4" x 8'	11.81	82.67
2	white oak sill	2" x 6" x 3'	5.04/bf	35.28
3	fir	1" x 3" x 8'	2.89	8.67
1	fir	2" x 3" x 5'	6.08/bf	18.24
2	fir	1" x 3" x 5'	2.89	5.78
4	fir	1" x 6" x 6'	4.00	16.00
6	fir	1" x 8" 10'	10.69	64.14
2	white oak	3" x 4" 12'	42.47	84.94
2	white oak	1" x 6" x 2'	1.90/bf	9.50
2	white oak	2" x 6" x 3'	5.04/bf	35.28
3	fir	1" x 3" x 8'	2.89	8.67



**Caboose** continued

quantity	material	amount	unit cost (\$)	total cost (\$)
2	tongue and groove fir	7/8" x 4" x 8'	11.81	23.62
	"unforeseen materials" cost (25%)			1082.51
	sand blasting of metal parts			150.00
20	caboose Tuscan red paint	gallons	26.00	520.00
1	silver or white paint	gallon		26.00
3	linseed oil	gallons	12.85	38.55
3	"Woodlife"	gallons	15.00	45.00
	Lettering paint and supplies			30.00
6	Rustoleum spray primer	cans	5.00	30.00
	Misc. metal parts (bolts, washers, etc.)			400.00

Total materials cost for caboose = **\$ 5,577.27**

Labor costs: 780 hrs @ 40.00/hr = **\$ 27, 200.00**

"unforeseen labor" factor (10%) = **\$ 2,700.00**

Total estimated materials & labor costs for caboose = **\$ 35,477.27**

**Stock Car** Denver & Rio Grande Western 5620

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	6" x 10" x 8'		73.00
1	fir	3" x 3" x 6'		14.36
3	tongue and groove fir	7/8" x 6" x 8'	18.87	56.61
1	fir	3" x 5" x 8'		19.14
1	white oak	3" x 12" x 8'		55.67
7	tongue and groove fir	7/8" x 6" x 8'	18.87	132.09
6	white oak	2" x 8" x 8'	5.04/bf	322.56
1	fir	2" x 3" x 6'		9.57

## Stock Car

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
1	fir	5" x 9" x 30'		328.00
1	fir	1" x 4" x 3'	1.90/bf	1.90
2	fir	3" x 5" x 8'	19.14	38.28
1	white oak	3" x 5" x 8'		40.27
1	white oak	4" x 5" x 8'		49.93
2	steel plates	¼" x 8" x 3'	30.00	60.00
1	white oak	1" x 2" x 12'	1.90/bf	7.60
1	white oak	4" x 5" x 8'		49.93
1	white oak	3" x 5" x 8'		40.27
1	fir	4" x 6" x 30'		134.70
1	white oak	6" x 10" x 8'		73.27
1	white oak	4" x 5" x 8'		49.93
1	fir	3" x 5" x 8'		19.14
5	tongue and groove fir	7/8" x 4" x 8'	11.81	59.05
1	fir	1" x 8" x 8'		7.19
1	white oak	3" x 12" x 8'		55.67
1	fir	3" x 3" x 4'		9.57
3	tongue and groove fir	7/8" x 6" x 8'	18.87	56.61
7	tongue and groove fir	7/8" x 6" x 8'	18.87	132.09
6	white oak	2" x 8" x 8'	5.04/bf	322.56
1	fir	5" x 9" x 30'		328.00
1	fir	2" x 3" x 6'		9.57
2	white oak	3" x 5" x 8'	40.47	80.54
1	fir	3" x 5" x 8'		19.14
1	fir	1" x 6" x 14'		8.19
1	fir	1" x 3" x 14'		8.19
1	fir	1" x 3" x 4'		2.89
1	white oak	1" x 2" x 12'	1.90/bf	7.60
1	fir	4" x 6" x 30'		134.70
2	steel plates	¼" x 8" x 4'	30.00	60.00
1	white oak	4" x 5" x 8'		49.93
2	fir	3" x 5" x 8'	19.14	38.28

**Stock Car**

continued

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	3" x 5" x 8'		49.93
2	fir	1" x 6" x 14'	8.19	16.38
52	half-lapped fir	2" x 8" x 10'	31.90	1658.80
5	black fibered roof coating	gallons	7.49	37.45
2	black plastic roof cement	gallon	6.49	12.80
1	fir	1" x 8" x 14'		12.49
1	fir	1" x 6" x 8'		4.39
	"unforeseen materials" cost (25%)			1581.00
	sand blasting of metal parts			175.00
8	Rustoleum spray primer	cans	5.00	40.00
	Misc. metal parts (bolts, washers, etc.)			500.00
35	gloss black paint	gallons	22.00	750.00
5	linseed oil	gallons	12.85	64.25
5	"Woodlife"	gallons	15.00	75.00

Total materials cost for stock car = **\$ 8,294.25**

Labor costs: 740 hrs @ 40.00/hr = **\$ 29,600.00**

"unforeseen labor" factor (10%) = **\$ 2,960.00**

Total estimated materials & labor costs for stock car = **\$ 40,854.25**

**Double Deck Stock Car**

Denver &amp; Rio Grande Western

5679

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	6" x 11" x 8'		77.67
1	fir	3" x 5" x 8'		19.14
3	tongue and groove fir	7/8" x 6" x 8'	18.87	56.61
7	tongue and groove fir	7/8" x 6" x 8'	18.87	132.09
6	white oak	2" x 8" x 8'	5.04/bf	322.56

Double Deck Stock Car continued

quantity	material	amount	unit cost (\$)	total cost (\$)
1	fir	3" x 6" x 6'		14.36
5	tongue and groove fir	7/8" x 4" x 8'	11.81	59.05
1	fir	5" x 9" x 30'		328.00
1	white oak	4" x 10" x 8'		58.60
3	fir	3" x 5" x 8'	19.14	57.40
2	white oak	3" x 5" x 8'	40.27	80.54
1	white oak	4" x 5" x 8'		49.93
1	fir	1" x 6" x 14'		8.19
1	fir	2" x 6" x 6'		14.36
2	steel plates	1/4" x 8" x 4'	30.00	60.00
	oak	for two doors		300.00
1	white oak	1" x 2" x 12'	1.90/bf	7.60
1	fir	2" x 3" x 6'		9.57
1	white oak	1" x 2" x 12'	1.90/bf	49.93
2	fir	3" x 5" x 8'	19.14	38.28
2	white oak	3" x 5" x 8'	40.27	80.54
1	white oak	3" x 3" x 6'		18.76
1	fir	1" x 3" x 6'		2.89
3	fir	1" x 6" x 14'	8.19	24.57
1	white oak	6" x 11" x 8'		77.67
1	white oak	4" x 5" x 8'		49.93
1	fir	3" x 5" x 8'		19.14
3	tongue and groove fir	7/8" x 6" x 8'	18.87	56.61
7	tongue and groove fir	7/8" x 6" x 8'	18.87	132.09
6	white oak	2" x 8" x 8'	5.04/bf	322.56
1	fir	5" x 9" x 30'		328.00
2	fir	3" x 5" x 8'	19.14	38.28
1	white oak	3" x 5" x 8'		40.27
1	white oak	1" x 2" x 12'	1.90/bf	7.60
1	white oak	3" x 3" x 2'	5.04/bf	10.08
1	fir	2" x 3" x 6"		9.57
2	steel plates	1/4" x 8" x 4'	30.00	60.00

**Double Deck Stock Car**      continued

quantity	material	amount	unit cost (\$)	total cost (\$)
2	white oak	3" x 5" x 8'	40.27	80.54
1	fir	3" x 5" x 8'		19.14
1	fir	1" x 3" x 6'		2.89
2	fir	1" x 6" x 14'		8.19
52	half-lapped fir	2" x 8" x 10'	31.90	1658.80
2	white oak	3" x 12" x 8'	55.67	111.34
2	fir	4" x 6" x 30'	134.70	269.40
5	black fibered roof coating	gallons	7.49	37.45
2	black plastic roof cement	gallon	6.49	12.98
8	fir	1" x 8" x 14'	12.49	99.92
2	white oak	1" x 4" x 2'	1.90/bf	3.80
1	fir	1" x 6" x 8'		4.39
	"unforeseen materials" cost (25%)			1651.00
	Misc. metal parts (bolts, washers, etc.)			500.00
	sand blasting of metal parts			175.00
8	Rustoleum spray primer	cans	5.00	40.00
35	gloss black paint	gallons	22.00	770.00
5	linseed oil	gallons	12.85	25.00
5	"Woodlife"	gallons	15.00	75.00
	Lettering paint and supplies			30.00

Total materials cost for double deck stock car = **\$ 8,643.74**

Labor costs: 820 hrs @ 40.00/hr = **\$ 32,800.00**

"unforeseen labor" factor (10%) = **\$ 3,280.00**

Total estimated materials & labor costs for double deck stock car = **\$44,723.74**

**MOW Sleeper**

Denver & Rio Grande Western

04414

quantity	material	amount	unit cost (\$)	total cost (\$)
1	white oak	5" x 14" x 3'		33.89
1	steel plate	½" x 6" x 3'		19.19
1	white oak	6" x 10" x 8'		73.27
30	tongue and groove fir	7/8" x 6" x 8'	11.81	354.30
2	fir	2" x 6" x 6'	4.00	8.00
1	fir	4" x 10" x 10'		49.67
1	fir	4" x 10" x 10'		49.67
1	truss rod mount pattern and setup			775.00
1	truss rod mounting casting			20.00
1	white oak	4" x 8" x 8'		52.73
2	white oak	1" x 4" x 3'	1.90/bf	5.70
2	white oak	1" x 8" x 5'	1.90/bf	15.20
1	white oak	5" x 14" x 3'		33.89
1	steel plate	½" x 6" x 3'		19.19
1	white oak	6" x 10" x 8'		73.27
30	tongue and groove fir	7/8" x 6" x 8'	11.81	354.30
2	fir	2" x 6" x 6'	4.00	8.00
1	air hose	narrow gauge		30.00
1	ash	2" x 12" x 8'	3.28/bf	55.76
4	ash	1" x 6" x 8'	2.86/bf	48.62
16	safety glass	¼" x 10" x 1'	12.00/bf	192.00
7	tongue and groove fir	7/8" x 6" x 8'	18.87	132.09
1	fir	1" x 6" x 8'		4.39
	wood	replace interior fittings		150.00
2	fir	2" x 8" x 8'	7.19	14.38
5	black fibered roof coating	gallons	7.29	36.45
2	black plastic roof cement	gallon	6.49	12.98
8	fir	1" x 8" x 14'	12.49	99.92
2	white oak	1" x 4" x 2'	1.90/bf	3.80
2	white oak	3" x 4" x 12'	42.47	84.94
1	roof stove pipe			25.00
4	Rustoleum spray primer	cans	5.00	20.00



**MOW Sleeper**

continued

<u>quantity</u>	<u>material</u>	<u>amount</u>	<u>unit cost (\$)</u>	<u>total cost (\$)</u>
25	red or gray paint	gallons	25.00	625.00
4	black paint (if gray is used)	gallons	22.00	88.00
4	interior floor red paint	gallons	26.00	104.00
4	interior green or yellow paint	gallons	28.00	112.00
2	linseed oil	gallons	12.85	25.70
3	"Woodlife"	gallons	15.00	45.00
	lettering paint and supplies			30.00

Total materials cost for MOW Sleeper car = **\$ 5,268.70**

Labor costs: 740 hrs @ 40.00/hr = **\$ 24,800.00**

"unforeseen labor" factor (10%) = **\$ 2,480.00**

Total estimated materials & labor costs for MOW Sleeper car = **\$ 32,548.70**

## **Appendix C: Dahm Assessment 1997**

## **Appendix D: Funding Sources**

## **Appendix D: Potential Funding Sources**

*See the following pages for details on funding sources.*

### **Federal/State Funding:**

Colorado Scenic and Historic Byways Program, Colorado Department of Transportation

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) Enhancement Funds, Administered by the Colorado Department of Transportation

Save America's Treasures, National Park Service

State Historical Fund, Administered by the Colorado Historical Society

### **Foundations/Trusts/Corporations:**

Boettcher Foundation

Bonfils-Stanton Foundation

El Pomar Foundation

Robert and Elizabeth Fergus Foundation

Gates Family Foundation

The Kerr Foundation

Key Foundation

The Andrew W. Mellon Foundation

Edmund T. & Eleanor Quick Foundation

Union Pacific Foundation

United Airlines Foundation



## Colorado Department of Transportation

### Colorado Scenic & Historic Byways Program

Category: Government

#### CONTACT

<b>Address:</b>	Ms. Sally Pearce Program Coordinator Colorado Department of Transportation 4201 E. Arkansas Ave., EP606 Denver, CO 80222	<b>Phone:</b> (303) 757-9786 <b>Fax:</b> (303) 757-9727 <b>Email:</b> <a href="mailto:sally.pearce@dot.state.co.us">sally.pearce@dot.state.co.us</a> <b>Web:</b> <a href="http://www.coloradobyways.org">www.coloradobyways.org</a>
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#### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Contact Funder for Deadline

**Purpose:** The Program is a statewide partnership intended to provide recreational, educational, and economic benefits to Coloradans and visitors through the designation, interpretation, protection, promotion, and infrastructure development of outstanding touring routes in Colorado. The Program was established under Section 1047 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The Program was re-authorized under the Transportation Equity Act for the 21st Century (TEA-21) and is expected to continue to provide grants to states to assist in the development of statewide programs under the new highway program pending Congressional approval.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching; General Operating Support; Project/Program Support; Technical Assistance

**Primary Areas:** Arts, Culture, Humanities; Arts:Historic Preservation; Education; Environment, Conservation

**Past Grantees:** The Program has received over \$10.1 million in federal grants from the National Scenic Byways Program, matched with almost \$3.3 million in local and state funds to implement the Colorado program. Over the past eight years, a total of 149 unique and creative projects have been developed by the Byways Commission and the local byway organizations, and include development of byway management and interpretive plans, development of brochures, historical guides, videos, educational materials, interpretive markers and kiosks, and the construction of interpretive centers, pullouts, and restroom facilities. Recent grants include: Los Caminos Antiguas (\$23,200); Grand Mesa (\$25,000); San Juan Skyway (\$25,000); Frontier Pathways (\$25,000); Santa Fe Trail (\$25,000); Frontier Pathways (\$25,000); Top of the Rockies (\$25,000); Guanella Pass (\$36,560); Gold Belt Tour (\$55,480); Lariat Loop Heritage Alliance (\$100,000)

#### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Projects are prepared by the local byways organization and submitted to the Scenic and Historic Byways Commission for review, evaluation, and prioritization. A single grant application from the State of Colorado is prepared and submitted to the Federal Highway Administration in Washington DC for final review and approval. The Secretary of Transportation makes the grant awards.

**Restrictions:** Limited to eligible projects submitted by local byway organizations of designated Scenic and Historic Byways. Only one project per byway is generally accepted for each grant cycle. Funding is 80% federal (maximum) with required 20% (minimum) local match. In-kind services and federal cash is allowed as part of the 20% match requirement. Federal in-kind match and state or local government in-kind matches are not allowed. Grant proposals must be sponsored by one of the 24 designated scenic byways. Eligible grant project types and priorities are set by the Federal Highway Administration. Visit the website for more information.

**Trustees:** This Program is overseen by the Scenic and Historic Byways Commission.

**Additional Information:** Project activities considered most appropriate include those associated with the planning, design and development of state scenic byways programs, developing corridor management plans, and providing tourist-related information (sign, brochures, pamphlets, tapes, maps). Other categories include: making safety improvements to the scenic byway to accommodate increased traffic due to designation; construction of facilities for pedestrians and bicyclists including rest areas, pullouts, shoulder improvements, passing lanes, overlooks, and interpretive facilities; roadway improvements to enhance access to a recreation area; and protecting historical, archaeological, and cultural resources in areas adjacent to the scenic byway through use-restrictions such as easements or acquisition.

## FINANCIALS (Derived from 990PF or other annual report)

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### Year for Financials (Date of 990):

#### Total Number of Grants:

Number of Grants in CO: 11

Total Net Assets (Fair Market Value): \$0

Total Grants Awarded in CO: \$440,240

Highest Grant: \$100,000

Lowest Grant: \$23,200

Average Grant Range: \$12,000 - \$75,000



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# SAFETEA-LU

## Eligible Activities [Revised Jan 19, 2006]

The list of qualifying TE activities provided in 23 U.S.C. 101(a)(35) is intended to be exclusive, not illustrative. That is, only those activities listed therein are eligible as TE activities. They are listed below. [This paragraph and the list below were revised on November 4, 2005]

### TE Activities Defined-

- A. Provision of facilities for pedestrians and bicycles.
- B. Provision of safety and educational activities for pedestrians and bicyclists.
- C. Acquisition of scenic easements and scenic or historic sites (including historic battlefields).
- D. Scenic or historic highway programs (including the provision of tourist and welcome center facilities).
- E. Landscaping and other scenic beautification.
- F. Historic preservation.
- G. Rehabilitation and operation of historic transportation buildings, structures, or facilities (including historic railroad facilities and canals).
- H. Preservation of abandoned railway corridors (including the conversion and use of the corridors for pedestrian or bicycle trails).
- I. Inventory, control, and removal of outdoor advertising.
- J. Archaeological planning and research.
- K. Environmental mitigation
  - i. to address water pollution due to highway runoff; or
  - ii. reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.
- L. Establishment of transportation museums.

TE funds may be used for workforce development, training, and education under 23 U.S.C. 504(e), provided the activity specifically benefits eligible TE activities. See Transportation Enhancements Guidance Supplement - Workforce Development, Training, and Education.

Many projects are a mix of elements, some on the list and some not. Only those project elements which are on the list may be counted as TE activities. For example, a rest area might include a historic site purchased and developed as an interpretive site illustrating local history. The historic site purchase and development would qualify as a transportation enhancement activity.

Activities which are not explicitly on the list may qualify if they are an integral part of a larger qualifying activity. For example, if the rehabilitation of a historic railroad station required the construction of new drainage facilities, the entire project could be considered for TE funding. Similarly, environmental analysis, project planning, design, land acquisition, and construction enhancement activities are eligible for funding.

The funded activities must be accessible to the general public or targeted to a broad segment of the general public.

Source: <http://www.fhwa.dot.gov/environment/te/guidance.htm#eligible>

For information on TPR District #9:

<http://www.dot.state.co.us/StateWidePlanning/PlansStudies/Docs/FinalTPRAAtAGlance05-18-06.pdf>



## Save America's Treasures



### FREQUENTLY ASKED QUESTIONS

1. [Who may apply for SAT grants?](#)
2. [Is my property or collection eligible for SAT grant funding?](#)
3. [What is the National Register of Historic Places and how do I determine if my property is listed at the national level of significance?](#)
4. [Are religious properties eligible for SAT funding?](#)
5. [How soon after applying are grant awards announced?](#)
6. [What are the rules for the required matching share?](#)
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1. **Who may apply for SAT grants?** [Top](#)

State Historic Preservation Offices, Tribal Historic Preservation Offices, Certified Local Governments, educational institutions, nonprofit 501c organizations and

federal, state, and local governments may apply for Save America's Treasures grants.

Individuals and for-profit businesses are not eligible for funding.

## 2. **Is my property or collection eligible for SAT grant funding?** [Top](#)

### **Properties**

Properties must be listed in the National Register of Historic Places at the national level of significance or be designated as a National Historic Landmark at the time of application in order to be eligible for Save America's Treasures grants. (For more information on the National Register, see below.)

Properties currently "determined eligible" for listing in the National Register of Historic Places or as National Historic Landmarks are not eligible for funding.

### **Collections**

A determination of a collection's significance is made by the National Endowment for the Arts, the National Endowment for the Humanities or the Institute of Museum and Library Services. If you have questions regarding the eligibility of a collection please [contact one of these agencies](#).

## 3. **What is the National Register of Historic Places and how do I determine if my property is listed at the national level of significance?** [Top](#)

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

Each property listed in the National Register is determined to have a specific level of significance - local, state or national significance. To qualify for a Save America's Treasures grant, the property must be listed at the national level of significance.

There are a several ways to find out if your property is listed on the National Register and, if so, its level of significance:

- Go to the [National Register Information System database](#). Choose to

search by property name, location, or state, and then select the option that provides "Database Details."

- Contact your [State Historic Preservation Office](#).

For more information about National Register listings, please contact the National Register of Historic Places directly.

- General questions may be sent to [nr\\_info@nps.gov](mailto:nr_info@nps.gov).
- Questions about using the National Register collection and requesting copies of nominations may be sent to [nr\\_reference@nps.gov](mailto:nr_reference@nps.gov).
- Questions about the NRIS Database may be sent to [waso\\_nrhe\\_nris\\_info@nps.gov](mailto:waso_nrhe_nris_info@nps.gov).

#### 4. **Are religious properties eligible for SAT funding?** [Top](#)

Yes, religious properties are eligible for Save America's Treasures grant funding provided that they are listed in the National Register of Historic Places at the national level of significance.

#### 5. **How soon after applying are grant awards announced?** [Top](#)

Typically, announcements are made six to eight months after the applications are received.

#### 6. **What are the rules for the required matching share?** [Top](#)

Save America's Treasures is a matching grant program. For every dollar of federal funds awarded, the grantee must supply a dollar for dollar match of nonfederal funds.

The basic rule regarding matching share (of cash or of necessary non-cash donations of services, equipment use, or supplies) is that it must be necessary to achieve the objectives of the project and must share the cost of performing the grant-assisted work. The matching share requirement is essential because it creates a strong partnership that financially connects the grant-recipient to achieving the work of the project.

Costs and matching share contributions must be incurred during the grant period, unless an exception is approved by the Federal grantor agency to allow what are termed "pre-award costs," or "pre-agreement costs." These costs hinge upon the requirement that matching share must be: 1) directly related, 2) necessary, and 3) reasonable for the proper and efficient accomplishment of

project objectives. NPS customarily allows costs contributed or incurred up to one year preceding the award of the grant as being reasonable and allowable pre-award costs.

## 7. **What type of work is eligible for funding?** [Top](#)

Preservation and conservation work on nationally significant intellectual and cultural collections and nationally significant historic properties are eligible for Save America's Treasures funding. Intellectual and cultural artifacts and collections include artifacts, collections, documents, sculpture, and other works of art. Historic properties include historic districts, buildings, sites, structures and objects

Save America's Treasures grants **do not** fund:

- Acquisition (i.e. purchase in fee simple or interest) of collections or historic properties.
- Survey or inventory of historic properties or cataloging of collections.
- Long-term maintenance or curatorial work beyond the grant period.
- Interpretive or training programs.
- Reconstruction of historic properties (i.e. recreating all or a significant portion of a historic property that no longer exists).
- Moving historic properties or work on historic properties that have been moved.
- Construction of new buildings.
- Historic structure reports and collection condition assessments, unless they are one component of a larger project to implement the results of these studies by performing work recommended by the studies.
- Cash reserves, endowments or revolving funds. Funds must be expended within the grant period, which is generally 2 to 3 years, and may not be used to create an endowment or revolving fund or otherwise spent over many years.
- Costs of fund-raising campaigns.
- Costs of work performed prior to announcement of award.
- For Federal agency grantees - Federal salaries, agency overhead, or administrative costs.

## 8. **SAT grant recipients are required to obtain a 50-year preservation easement on the property. What is a preservation easement and how is it obtained?** [Top](#)

A preservation easement is a voluntary legal agreement that protects a significant historic, archaeological, or cultural resource. An easement provides assurance to the owner of a historic or cultural property that the property's intrinsic values will be preserved through subsequent ownership. Under the terms of an easement, a property owner grants a portion of, or interest in, their property rights to an organization whose mission includes historic preservation.



Once recorded, an easement becomes part of the property's chain of title and usually "runs with the land" in perpetuity, thus binding not only the owner who grants the easement but all future owners as well.

Grantees who accept SAT funding must agree to obtain a preservation easement on the property. It must run for no less than 50 years from the date it is registered with the county and must cover the entire property (unless the NPS feels that a partial easement would be acceptable, though this is unusual). Most easements are held by the State Historic Preservation Office in which the property is located; however, NPS will approve other entities if they are determined capable of holding and enforcing an easement. [Download a sample preservation easement](#) (PDF format).

#### 9. **What conditions are included in an SAT grant agreement?** [Top](#)

Historic property projects grant agreements are administered by the National Park Service. [Download a sample historic property grant agreement](#) (PDF format).

Collections projects grant agreements are administered by the the National Endowment for the Arts, the National Endowment for the Humanities or the Institute of Museum and Library Services. For a sample collections agreement, please [contact one of these agencies](#).

#### 10. **May I see a sample of a funded SAT application?** [Top](#)

Historic property projects are administered by the National Park Service. [Download a sample historic property grant application](#) (PDF format).

Collections projects are administered by the National Endowment for the Arts, the National Endowment for the Humanities or the Institute of Museum and Library Services. For a sample collections grant application, please [contact one of these agencies](#).

# Colorado Historical Society State Historical Fund:

## Background

- The State Historical Fund was established by the passage of the 1990 constitutional amendment legalizing gambling in Central City, Black Hawk and Cripple Creek.
- The Colorado Historical Society is statutorily designated by the General Assembly to administer the State Historical Fund (Limited Gaming Act of 1991 as amended, CRS 12-47.1-1201 and 1202).
- 28% of the tax revenue generated from gaming is paid into the State Historical Fund.
- Of the 28% disbursed to the State Historical Fund: 20% is returned to the gaming towns for historic preservation purposes. 80% is directed to the statewide grants program (SHF receives 22.4% of total tax revenues for grants program).

In 1999, the State Historical Fund passed [rules and procedures](#) (PDF) to define who may apply for grants from the State Historical Fund, the types of projects that qualify for funding, the basic application procedures, and the standards to be applied to funded projects.

## Project Types

- Acquisition and Development - Those projects that involve the excavation, stabilization, restoration, rehabilitation, reconstruction, or acquisition of a designated property or site are considered "acquisition and development." Archaeological projects are considered Acquisition and Development when the level of investigation is "intensive excavation." In such cases, the affected site must be designated before the application is submitted. Designated properties include those listed on one or more of the following:
  1. National Register of Historic Places, which is administered by the National Park Service
  2. State Register of Historic Properties, which is administered by the Colorado Historical Society
  3. Local Landmark lists, which are administered by local governments
- Education - Those projects that provide historic preservation information or information about historic sites to the public. Includes publications, videos, brochures, markers, exhibits and other interpretive programs.
- Survey and Planning - Those projects that involve identification, recording, evaluation, designation, and planning for the protection of significant historic buildings, structures, sites, and districts. For archaeological projects, all levels of survey and test excavations are considered Survey and Planning projects and prior historic designation is not required.

However, once testing reveals eligibility for designation, further excavation may not occur without designation.

## **Grant Types**

- General Grants - Are made for any of the listed project types with no defined dollar limit. Additional information concerning the selection process is available for grant requests for \$25,000 or less or grant requests greater than \$25,000.
- Archaeological Assessment Grants - Are made for the collection and evaluation of archaeological information for the purpose of creating a plan for preservation or additional work. Applications are accepted anytime during the year.
- Historic Structure Assessment Grants - Are made for the preparation of a Structure Assessment by an architect licensed in the state of Colorado; where the request is \$10,000 or less. Applications are accepted anytime during the year.
- Emergency Grants - Are made exclusively for interim stabilization of a historic property which has been damaged due to some unforeseeable event and typically do not exceed \$10,000. No cash match is required. Applications are accepted anytime during the year. If you think you might need an Emergency Grant contact Alyson McGee at 303.866.2809.

## **Grant Requirements**

- Grants are made only to public and non-profit entities.
- Individuals and businesses must find a public entity or appropriate non-profit organization to apply for and administer the funds on their behalf.
- See [Applications and Guidelines](#) for the most up-to-date and detailed information regarding the SHF grant program.

Source: <http://www.coloradohistory-oahp.org/programareas/shf/>



## Boettcher Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 84-0404274

### CONTACT

CGA CGRF

**Address:**

Ms. Katie Kramer  
Vice President  
600 17th St., Ste. 2210 S  
Denver, CO 80202-5422

**Phone:** (303) 534-1937

**Fax:**

**Email:** [grants@boettcherfoundation.org](mailto:grants@boettcherfoundation.org)

**Web:** [www.boettcherfoundation.org](http://www.boettcherfoundation.org)

### INTERESTS

**Geographic:**

Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:**

Accepts Proposals Year-Round

**Purpose:**

The Foundation's granting is limited to the State of Colorado and is focused on capital grantmaking in four broad categories: education; arts and culture; community and social service; and health care.

**Grant Types:**

Capital Improvement/Purchase

**Primary Areas:**

Arts, Culture, Humanities; Education; Health; Human Services

**Past Grantees:**

Dental Aid, Inc. (\$15,000); Rocky Mountain School of Expeditionary Learning (\$25,000); Mountain Family Health Center (\$25,000); La Veta Regional Library District (\$25,000); American Red Cross, Mile High Chapter (\$25,000); Thunder River Theatre Company (\$60,000); La Puente Home (\$60,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Submit a brief letter describing the project and its intended purpose. This will initiate a request for a formal application if the Foundation determines the project is within its current scope of giving.

**Restrictions:** The Boettcher Foundation does NOT accept proposals or provide grants for the following giving interests: purchase of tables or tickets for dinners/events; individuals; out-of-state projects; small business start-ups; conferences, seminars, workshops; debt reduction, endowments, scholarships; gymnasiums/athletic fields; housing; large urban hospitals; media presentations; organizations that primarily serve animals; pilot programs; religious groups or organizations for their religious purposes; travel, parks & open space.

**Trustees:** Pamela Davis Beardsley; Russell George; Claudia Boettcher Merthan; M. Ann Penny; Theodore Schlegel; Harris Sherman; J. William Sorensen; Edward White III; Thomas Williams

**Additional Information:** The majority of grants awarded are for capital projects, typically building construction, purchase, or remodeling and improvements.

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2005
<b>Total Number of Grants:</b>	121
<b>Number of Grants in CO:</b>	121
<b>Total Net Assets (Fair Market Value):</b>	\$244,323,681
<b>Total Grants Awarded in CO:</b>	\$10,823,926
<b>Highest Grant:</b>	\$500,000
<b>Lowest Grant:</b>	\$700
<b>Average Grant Range:</b>	\$20,000 - \$75,000

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## Bonfils-Stanton Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 84-6029014

### CONTACT

**CGA CGRF**

**Address:** Ms. Susan France  
 Vice President of Programs  
 1601 Arapahoe St., Ste. 500  
 Denver, CO 80202

**Phone:** (303) 825-3774  
**Fax:** (303)825-0802  
**Email:**  
**Web:** [www.bonfils-stanton.org](http://www.bonfils-stanton.org)

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** October 31; January 31; April 30; July 31

**Purpose:** The Foundation is a private, nonprofit corporation created to enhance the quality of life for residents of Colorado. The focus of the Foundation is to advance excellence in the areas of arts and culture, community service, and science and medicine through strategic investments resulting in significant and unique contributions in these fields.

**Grant Types:** Capital Improvement/Purchase; Project/Program Support; Technical Assistance

**Primary Areas:** Arts, Culture, Humanities; Arts:Performing Arts Organizations; Emergency Assistance; Health: Medical Research; Science, Technology Research; Youth Development Activities

**Past Grantees:** La Puente Home (\$10,000); Warren Village (\$10,000); ArtReach (\$15,000); Boys and Girls Clubs of Pueblo (\$15,000); Central City Opera (\$40,000); Denver Botanic Gardens (\$32,000); Eleanor Roosevelt Institute (\$35,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting



**How to Apply:** The Bonfils-Stanton Foundation accepts the Common Grant Application and similarly formatted grant requests that are received in advance of quarterly deadlines. The Foundation sends letters outlining trustee decisions within two weeks following each trustee meeting. A grant evaluation must be completed when the grant funds have been expended.

**Restrictions:** The following are generally not eligible for funding: loans, grants or scholarships to individuals; fundraising events, media productions, seminars, conferences; activities that have a religious purpose; endowment funding; funding to retire operating debt; requests from organizations outside of Colorado or that are not for the benefit of Colorado citizens.

**Board Chair:** J. Landis Martin

**Trustees:** Louis Duman; W. Eileen Greenawalt; Flaminia Odescalchi Kelly; Johnston Livingston; Harold Logan Jr.; John Repine

**Additional Information:** The Foundation's specific areas of interest are as follows: arts, culture, humanities: artistic productions/performances, artist training, audience development, community service: self-sufficiency, youth development, emergency services, science and medicine: research, equipment.

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2005
<b>Total Number of Grants:</b>	74
<b>Number of Grants in CO:</b>	74
<b>Total Net Assets (Fair Market Value):</b>	\$76,182,040
<b>Total Grants Awarded in CO:</b>	\$2,625,818
<b>Highest Grant:</b>	\$500,000
<b>Lowest Grant:</b>	\$1,500
<b>Average Grant Range:</b>	\$10,000 - \$20,000

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## El Pomar Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 84-6002373

### CONTACT

CGA

**Address:** Mr. William Hybl  
Chairman and CEO  
10 Lake Cir.  
Colorado Springs, CO 80906

**Phone:** (719) 633-7733 or (800) 554-7711  
**Fax:** (719) 577-5702  
**Email:** [grants@elpomar.org](mailto:grants@elpomar.org)  
**Web:** [www.elpomar.org](http://www.elpomar.org)

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Contact Funder for Deadline

**Purpose:** The Foundation's mission is to most effectively assist, encourage and promote the general well-being of the inhabitants of the State of Colorado.

**Grant Types:** Capital Improvement/Purchase; General Operating Support; Project/Program Support

**Primary Areas:** Arts, Culture, Humanities; Community, Public Affairs; Education: Higher; Health; Human Services

**Past Grantees:** Creede Arts Council (\$2,500); High Valley Community Center (\$4,500); Boys Hope Girls Hope (\$5,000); John C. Fremont Library Distirct (\$5,000); Morgan County Family Center (\$5,000); Marillac Clinic (\$15,000); Community Food Share (\$20,000); Crow Canyon Arachelological Center (\$25,000); Salida Hospital Foundation (\$50,000); and Colorado Springs Fine Arts Center (\$5,000,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details

Hosts community meeting

**How to Apply:** Guidelines and application requirements are listed on the website at [www.elpomar.org](http://www.elpomar.org). There is no specific form for grant applications. Applications are generally acted upon within 90 days of receipt.

**Restrictions:** For capital projects of \$250,000 and greater, the Trustees will consider capital grant requests not to exceed the lesser of: 20% of the total campaign project cost or an amount no greater than the single largest grant, contribution, or donation received from private sources (excluding government funds) to include foundations, corporations or individuals. The Foundation generally does not accept grant applications for grant support to: other foundations or nonprofits that distribute money to recipients of their own selection; endowments; individuals; organizations that practice discrimination of any kind; organizations that do not have fiscal responsibility for the proposed project; organizations that do not have an active 501(c)(3) nonprofit IRS determination letter; camps, camp programs, or other seasonal activities; religious organizations for support of religious programs; cover deficits or debt elimination; cover travel, conferences, conventions, group meetings, or seminars; influence legislation or support candidates for political office; produce videos or other media projects; fund research projects or studies; primary or secondary schools (K-12). El Pomar will consider, on a limited basis, capital requests from non-publicly funded secondary schools.

**Board Chair:** William Hybl

**Trustees:** Judith Bell; Cortlandt Dietler; Robert Hilbert; David Palenchar; Brenda Smith; R. Thayer Tutt Jr.; William Ward

**Additional Information:** The assets and grant program of the former Anna Keesling Ackerman Trust have been given to El Pomar Foundation and will continue on as the Anna Keesling Ackerman Fund within El Pomar Foundation. The Fund has its own separate proposal process and timelines. Nonprofits with 501(c)(3) tax status and that serve the Pikes Peak Region, primarily El Paso County, are eligible to apply for funding. See the El Pomar Foundation website for more information.

#### FINANCIALS (Derived from 990PF or other annual report)

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<b>Year for Financials (Date of 990):</b>	2005
<b>Total Number of Grants:</b>	650
<b>Number of Grants in CO:</b>	650
<b>Total Net Assets (Fair Market Value):</b>	\$500,113,836
<b>Total Grants Awarded in CO:</b>	\$14,236,020
<b>Highest Grant:</b>	\$5,000,000
<b>Lowest Grant:</b>	\$500
<b>Average Grant Range:</b>	\$10,000 - \$50,000

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## Robert and Elizabeth Fergus Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 31-6087932

### CONTACT

**Address:** Ms. Elizabeth Fergus  
P.O. Box 1515  
Aspen, CO 81612

**Phone:** (970) 925-7716

**Fax:**

**Email:**

**Web:**

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Accepts Proposals Year-Round

**Purpose:** The Foundation provides support for a variety of charitable purposes.

**Grant Types:** Capital Improvement/Purchase; General Operating Support; Project/Program Support

**Primary Areas:** Arts:Media, Broadcasting; Education; Environment, Conservation

**Past Grantees:** Rocky Mountain PBS (\$500); Earth Justice (\$592); Aspen Education Foundation (\$1,000); Aspen Valley Land Trust (\$1,000); Cate School (\$3,000); Colorado Mountain College Foundation (\$10,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** The Foundation requires written applications, but does not have a specific format.

**Trustees:** Corwin Fergus; Elizabeth Fergus; Sylvia Fergus; Catherine Garber

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	79
<b>Number of Grants in CO:</b>	17
<b>Total Net Assets (Fair Market Value):</b>	\$2,698,989
<b>Total Grants Awarded in CO:</b>	\$24,592
<b>Highest Grant:</b>	\$10,000
<b>Lowest Grant:</b>	\$500
<b>Average Grant Range:</b>	\$500 - \$3,000

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## Gates Family Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 84-0474837

### CONTACT

**CGA CGRF**

**Address:** Mr. C. Thomas Kaesemeyer  
Executive Director  
3575 Cherry Creek N. Dr., Ste. 100  
Denver, CO 80209

**Phone:** (303) 722-1881  
**Fax:** (303) 316-3038  
**Email:** [info@gatesfamilyfoundation.org](mailto:info@gatesfamilyfoundation.org)  
**Web:** [www.gatesfamilyfoundation.org](http://www.gatesfamilyfoundation.org)

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** January 15; April 1; July 1; October 1

**Purpose:** The mission of the Foundation is to invest in Colorado-based projects and organizations primarily through capital grants which have meaningful impact and enhance the quality of life for those who live in, work in and visit the state. The Foundation seeks to promote self-sufficiency, excellence and innovation in education, healthy lifestyles, community enrichment, connection to nature and stewardship of the state's natural inheritance. The Foundation's actions will remain consistent with the founders' intentions and the principles of citizenship, entrepreneurship and free enterprise.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching

**Primary Areas:** Arts, Culture, Humanities; Arts:Historic Preservation; Arts:Museums; Children & Youth Services; Community, Public Affairs; Education; Education:Higher; Education:K-12; Environment, Conservation; Health; Human Services; Recreation, Sports; Youth Development Activities

**Past Grantees:** Denver Santa Claus Shop (\$4,000); Boulder Shelter for the Homeless (\$18,000); Northwest Colorado Dental Coalition (\$38,542); Tri-Lakes Cares (\$82,000); Denver Zoological Foundation (\$100,000); Conservation Fund (\$210,000); Girl Scouts Mile Hi Council (\$1,000,000)

### DETAILS



- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Request Common Grant Application and guidelines. Call program officer to review proposed project, or send initial written inquiry. Requires Common Grant Application.

**Restrictions:** No funding or loans to: individuals; projects that have been completed prior to next trustees' meeting; conferences; meetings; or studies not initiated by the trustees. Does not consider more than one proposal from an organization per calendar year or make grants to other foundations or organizations engaged in grantmaking. No funds: to retire operating debt; to purchase vehicles or office equipment; or grants directly to individual public schools or public school districts. No grants for construction of medical facilities/medical research or for social fundraising events. Few grants are awarded for operating expenses or programs.

**Board Chair:** Diane Wallach

**Trustees:** George Beardsley; Charles Cannon; Valerie Gates; Donald Elliman Jr.; Thomas Stokes; Mike Wilfleyfley

**Additional Information:** Capital grants for: art, culture, and historic preservation including libraries, museums, and archeological sites; education including K-12, colleges, and universities; conservation and recreation including parks, open space and trails; health and human services including transitional housing, senior centers and organizations promoting self-sufficiency; youth services including boys and girls clubs, scouting and youth centers. Consideration by Gates is made after organizations have secured one-third of their funding.

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2005
<b>Total Number of Grants:</b>	144
<b>Number of Grants in CO:</b>	119
<b>Total Net Assets (Fair Market Value):</b>	\$345,539,032
<b>Total Grants Awarded in CO:</b>	\$10,134,017
<b>Highest Grant:</b>	\$1,000,000
<b>Lowest Grant:</b>	\$1,000
<b>Average Grant Range:</b>	\$20,000 - \$40,000

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## The Kerr Foundation, Inc.

**Category:** National Foundations

**EIN:** 73-1256122

### CONTACT

**Address:** Mr. Louis Kerr  
Chair President  
12501 N. May Ave.  
Oklahoma City, OK 73120

**Phone:** (405) 749-7991  
**Fax:** (405) 749-2877  
**Email:** [lkerr@thekerrfoundation.org](mailto:lkerr@thekerrfoundation.org)  
**Web:** [www.thekerrfoundation.org](http://www.thekerrfoundation.org)

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Contact Funder for Deadline

**Purpose:** The Foundation gives primarily for education, the fine arts and other cultural activities, and health; generally all grants are challenge grants.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching; General Operating Support; Technical Assistance

**Primary Areas:** Arts, Culture, Humanities; Arts:Museums; Arts:Performing Arts Organizations; Education; Education:Libraries; Health; Human Services; Youth Development Activities

**Past Grantees:** Colorado Springs Dance Theatre (\$5,000); Colorado Boys Ranch Foundation (\$5,000); Urban Impact Foundation (\$9,000); Mesa Verde Foundation (\$10,000); National Cowboy and Western Heritage Museum (\$50,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Contact funder for specific application process.

**Board Chair:** Lou Kerr

**Trustees:** Cody Kerr; Steven Kerr; Ray Kline; Ruth Levenson; Laura Ogle

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	35
<b>Number of Grants in CO:</b>	3
<b>Total Net Assets (Fair Market Value):</b>	\$27,639,899
<b>Total Grants Awarded in CO:</b>	\$79,000
<b>Highest Grant:</b>	\$50,000
<b>Lowest Grant:</b>	\$5,000
<b>Average Grant Range:</b>	\$10,000 - \$20,000

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## Key Foundation

**Category:** Corporations

**EIN:** 23-7036607

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### CONTACT

<b>Address:</b>	Contributions Committee 1675 Broadway, Ste. 500 Denver, CO 80202	<b>Phone:</b>	(303) 329-5376
		<b>Fax:</b>	
		<b>Email:</b>	
		<b>Web:</b>	<a href="http://www.key.com">www.key.com</a>

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### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Contact Funder for Deadline

**Purpose:** The Foundation focuses its giving on projects in workforce development and financial education, but also provides support for a wide variety of charitable purposes.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching; General Operating Support; Project/Program Support

**Primary Areas:** Arts, Culture, Humanities; Arts:Media, Broadcasting; Arts:Museums; Arts:Performing Arts Organizations; Children & Youth Services; Economic Development; Education; Education: Libraries; Food, Agriculture, Nutrition; Housing, Homeless Shelters; Youth Development Activities

**Past Grantees:** American Heart Association (\$25); Holy Family High School (\$750); Colorado School of Mines Foundation (\$2,000); Partners in Housing (\$5,000); Mizel Center for Arts and Culture (\$25,000); Young Americans Center for Financial Education (\$30,000)

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### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Submit a request that includes a brief history and purpose of the organization, the requested amount, a list of officers, directors and trustees, a complete project budget, financial statement, evidence of 501(c)(3) nonprofit status, and any additional information that will aid the Foundation in its decision-making. See the website for additional information.

**Restrictions:** The Foundation generally does not provide support for: political or controversial projects; churches or religious programs; preschool or primary education institutions; fraternal, social, labor, or veterans organizations; individuals; private foundations; trade or professional associations; or athletics organizations.

**Board Chair:** Margot Copeland

**Trustees:** Patrick Auletta; Steven Bulloch; John Burmaster; George Emmons; Linda Friedlander; Karen Haefling; Paul Harris; Robert Heisler; Thomas Helfirch; James Hoffman; Bruce Murphy

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	2,850
<b>Number of Grants in CO:</b>	62
<b>Total Net Assets (Fair Market Value):</b>	\$17,569,860
<b>Total Grants Awarded in CO:</b>	\$166,853
<b>Highest Grant:</b>	\$30,000
<b>Lowest Grant:</b>	\$25
<b>Average Grant Range:</b>	\$500 - \$10,000

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## The Andrew W. Mellon Foundation

**Category:** National Foundations

**EIN:** 13-1879954

### CONTACT

<b>Address:</b>	Ms. Michelle Warman General Counsel and Secretary 140 E. 62nd St. New York, NY 10021	<b>Phone:</b>	(212) 838-8400
		<b>Fax:</b>	
		<b>Email:</b>	
		<b>Web:</b>	<a href="http://www.mellon.org">www.mellon.org</a>

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Accepts Proposals Year-Round

**Purpose:** The Foundation makes grants to build, strengthen, and sustain institutions and their core capacities.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching; General Operating Support; Project/Program Support

**Primary Areas:** Arts:Historic Preservation; Arts:Museums; Arts:Performing Arts Organizations; Education: Higher; Education:Libraries; Environment, Conservation

**Past Grantees:** University of Colorado, Boulder (\$300,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting



**How to Apply:** Send a one-page letter that sets forth the need, nature, and amount of the request to the appropriate program officer, as listed on the website. Also include IRS classification letter.

**Restrictions:** The Foundation does not make grants to individuals and rarely funds unsolicited requests.

**Board Chair:** Anne Tatlock

**Trustees:** Lewis Bernard; Drew Gilpin Faust; Paul LeClerc; Collin Lucas; Walter Massey; Don Michael Randel; W. Taylor Reveley III; Lawrence Ricciardi

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	485
<b>Number of Grants in CO:</b>	1
<b>Total Net Assets (Fair Market Value):</b>	\$5,301,066,615
<b>Total Grants Awarded in CO:</b>	\$300,000
<b>Highest Grant:</b>	\$300,000
<b>Lowest Grant:</b>	\$300,000
<b>Average Grant Range:</b>	\$300,000 - \$300,000

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## Edmund T. & Eleanor Quick Foundation

**Category:** Colorado Foundations and Trusts

**EIN:** 74-2250297

### CONTACT

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**Address:** Mr. J. Jay Shoemaker  
Executive Director  
7700 E. Arapahoe Rd., Ste. 100  
Centennial, CO 80111

**Phone:** (303) 898-8445  
**Fax:** (720) 713-9150  
**Email:** [jayshoemaker@earthlink.net](mailto:jayshoemaker@earthlink.net)  
**Web:** [www.quickfoundation.org](http://www.quickfoundation.org)

### INTERESTS

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**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Accepts Proposals Year-Round

**Purpose:** The Foundation funds organizations with interests in religion, education, conservation, public recreation and historic preservation.

**Grant Types:** Capital Improvement/Purchase; Challenge/Matching; Project/Program Support

**Primary Areas:** Arts:Historic Preservation; Education; Environment, Conservation; Recreation, Sports; Religion, Spirituality

**Secondary Areas:** Animal Protection & Welfare; Arts, Culture, Humanities; Health; Hospices; Youth Development Activities

**Past Grantees:** Women's Resource Center (\$2,500); Dolores County Resources Center (\$3,000); Up Close and Musical (\$5,000); Centro San Juan Diego (\$10,000); Friends of Historic Ft. Logan (\$16,500); Capuchin-Franciscan Friars (\$20,000)

### DETAILS

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- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Send a letter requesting guidelines, application and procedure. Applications are accepted throughout the year, but must be received at least one month prior to semi-annual board meetings which are scheduled on the second Wednesday of May and November each year. Communicate with the Foundation in writing only. No phone calls.

**Restrictions:** No funds: to purchase tickets to any event or function; support conduit organizations; support special benefit programs, fundraising projects, special appearances by groups or individuals or for parties; for research or evaluation projects; for construction of statues, memorials; to cover deficits or for placement in escrow or endowment funds; for film or other media projects; for projects involving court actions; to retire debt; or for annual operating expenses. Applicants must have 501(c)(3) designation.

**Board Chair:** Robert Wham

**Trustees:** W. Joseph Shoemaker; Frank Southworth; Marie Standefer; Marilyn Thomig

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2005
<b>Total Number of Grants:</b>	20
<b>Number of Grants in CO:</b>	20
<b>Total Net Assets (Fair Market Value):</b>	\$3,502,616
<b>Total Grants Awarded in CO:</b>	\$129,800
<b>Highest Grant:</b>	\$20,000
<b>Lowest Grant:</b>	\$2,500
<b>Average Grant Range:</b>	\$5,000 - \$7,500

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## Union Pacific Foundation

**Category:** Corporations

**EIN:** 13-6406825

### CONTACT

<b>Address:</b>	Ms. Darlynn Herweg Director 1400 Douglas St., Stop 1560 Omaha, NE 68179	<b>Phone:</b>	(402) 544-5600
		<b>Fax:</b>	
		<b>Email:</b>	<a href="mailto:upf@up.com">upf@up.com</a>
		<b>Web:</b>	<a href="http://www.up.com/found">www.up.com/found</a>

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** August 15

**Purpose:** The Foundation wisely invests funds provided by the Union Pacific Corporation in communities where the company has certain business interests. The Foundation awards grants to a diverse number of local programs. The corporation has limited operating facilities in Colorado and thus provides funding for organizations in a limited number of communities.

**Grant Types:** Capital Improvement/Purchase; General Operating Support; Project/Program Support

**Primary Areas:** Arts, Culture, Humanities; Arts:Historic Preservation; Education; Education:Adult Continuing (Literacy, ESL); Education:Higher; Environment, Conservation; Health; Human Services; Public Policy, Society Benefit; Youth Development Activities

**Secondary Areas:** Abuse & Neglect Prevention; Children & Youth Services; Community, Public Affairs; Disabled Persons; Domestic Violence Shelters, Services; Education:Early Childhood; Emergency Assistance; Food, Agriculture, Nutrition; Health:AIDS/HIV; Health:Alcohol, Drug & Substance Abuse; Health:Mental Health Treatment; Housing, Homeless Shelters; Minorities; Public Safety, Emergency Relief; Senior Citizens, Aging; Women

**Past Grantees:** Pikes Peak United Way (\$500); United Way of Mesa County (\$3,000); Howard Dental Center (\$4,000); Care and Share, Inc. (\$5,000); Family Tree, Inc. (\$10,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting

**How to Apply:** Interested organizations should visit the website to complete preliminary application form. If the project is judged to be within the Foundation's fields of interest, the applicant will be sent a URL link to application online. A committee meets in early February to make final decisions on awards.

**Restrictions:** Funding is for communities served by Union Pacific.

**Board Chair:** R.W. Turner

**Trustees:** J.J. Koraleski; B.W. Schaefer; J.R. Young

**FINANCIALS (Derived from 990PF or other annual report)**

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	570
<b>Number of Grants in CO:</b>	13
<b>Total Net Assets (Fair Market Value):</b>	\$19,531
<b>Total Grants Awarded in CO:</b>	\$60,000
<b>Highest Grant:</b>	\$10,000
<b>Lowest Grant:</b>	\$500
<b>Average Grant Range:</b>	\$2,000 - \$7,000

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## United Airlines Foundation

**Category:** Corporations

**EIN:** 36-6109873

### CONTACT

CGA

**Address:** Ms. Sonya Jackson  
P.O. Box 66100  
Chicago, IL 60666-6100

**Phone:** (847) 700-5970  
**Fax:** (847) 700-7345  
**Email:** [community.support@ual.com](mailto:community.support@ual.com)  
**Web:** [www.ual.com/page/article/0,,1367,00.html](http://www.ual.com/page/article/0,,1367,00.html)

### INTERESTS

**Geographic:** Adams County; Alamosa County; Arapahoe County; Archuleta County; Baca County; Bent County; Boulder County; Broomfield County; Chaffee County; Cheyenne County; Clear Creek County; Colorado Statewide; Conejos County; Costilla County; Crowley County; Custer County; Delta County; Denver County; Dolores County; Douglas County; Eagle County; El Paso County; Elbert County; Fremont County; Garfield County; Gilpin County; Grand County; Gunnison County; Hinsdale County; Huerfano County; Jackson County; Jefferson County; Kiowa County; Kit Carson County; La Plata County; Lake County; Larimer County; Las Animas County; Lincoln County; Logan County; Mesa County; Mineral County; Moffat County; Montezuma County; Montrose County; Morgan County; National; Otero County; Ouray County; Park County; Phillips County; Pitkin County; Prowers County; Pueblo County; Rio Blanco County; Rio Grande County; Routt County; Sagauche County; San Juan County; San Miguel County; Sedgwick County; Summit County; Teller County; Washington County; Weld County; Yuma County

**Deadlines:** Contact Funder for Deadline

**Purpose:** The Foundation's mission is to develop, implement, and communicate United's commitment to community service by sponsoring and supporting charitable organizations, as well as programs and activities that improve the communities where its customers and employees live and work.

**Grant Types:** Capital Improvement/Purchase; General Operating Support; Project/Program Support

**Primary Areas:** Arts, Culture, Humanities; Education; Education:Higher; Group, Race Relations; Health

**Past Grantees:** CASA of Colorado Springs (\$1,000); Friends in Transition (\$1,000); Colorado UPLIFT (\$20,000)

### DETAILS

- Does not accept unsolicited proposals
- Accepts Letters of Intent
- Accepts Common Grant Application
- Has specific grant guidelines
- Accepts Common Report Format
- Has specific reporting requirements
- Always call before applying
- Issues Requests for Proposals
- Check annual report for details
- Check website for details
- Hosts community meeting



**How to Apply:** Send a Common Grant Application including purpose of grant and amount requested. Also send proof of 501(c)(3) status. Send the proposal sixty days prior to quarterly meetings in March, June, September and December. Allow at least 90 days for the Foundation to review and respond to the proposal. Visit its website, call, or email for more details.

**Restrictions:** Applicants must have 501(c)(3) status. Support is generally limited to communities served by United Airlines Corporation (Chicago, Denver, Los Angeles, New York, San Francisco and Washington D.C). No grants for: capital and building funds; development campaigns; individuals; political or fraternal organizations; United Way-funded agencies; religious institutions, or individual, public or private schools.

**Board Chair:** John Kiker

**Trustees:** Christopher Bowers; Frederic Brace; David Coltman; James Goodwin; Douglas Hacker; William Hobgood; Stuart Oran; Eileen Sweeney; Eileen Younglove

#### FINANCIALS (Derived from 990PF or other annual report)

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<b>Year for Financials (Date of 990):</b>	2004
<b>Total Number of Grants:</b>	69
<b>Number of Grants in CO:</b>	4
<b>Total Net Assets (Fair Market Value):</b>	\$2,714,593
<b>Total Grants Awarded in CO:</b>	\$0
<b>Highest Grant:</b>	\$862,750
<b>Lowest Grant:</b>	\$1,000
<b>Average Grant Range:</b>	\$1,000 - \$50,000

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## **Appendix E: Railroad Approach Span**

# STRUCTURAL GENERAL NOTES

## DESIGN CRITERIA

DESIGN STANDARDS  
AMERICAN RAILWAY ENGINEERING AND MAINTENANCE OF WAY ASSOCIATION, 1984  
AISC MANUAL OF STEEL CONSTRUCTION ALLOWABLE STRESS DESIGN, 1989  
NDS NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 1997

## LOADING

BASIC WIND SPEED = 30 MPH

## TRAIN LIVE LOADS:

1. WT ON ENGINE TRUCK = 10000 LBS
2. WT ON FIRST DRIVERS = 15000 LBS
3. WT ON SECOND DRIVERS = 17000 LBS
4. WT ON THIRD DRIVERS = 15000 LBS
5. WT ON FOURTH DRIVERS = 14000 LBS

## MATERIAL GRADES

## STRUCTURAL STEEL

1. HOT ROLLED STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, EXCEPT AS FOLLOWS OR AS OTHERWISE NOTED ON PLANS.
2. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992.
3. TUBULAR STRUCTURAL STEEL SECTIONS SHALL CONFORM TO ASTM A500, GRADE B.
4. BOLTS SHALL CONFORM TO ASTM A325.
5. WELDS SHALL BE MADE WITH E70XX ELECTRODES.
6. ROOF DECK SHALL CONFORM TO THE SPECIFICATIONS OF THE STEEL DECK INSTITUTE.
9. OPEN WEB STEEL JOISTS SHALL CONFORM TO THE SPECIFICATIONS OF THE STEEL JOIST INSTITUTE.

## COLD-FORMED STEEL

1. ALL COLD FORMED STEEL JOISTS, HEADERS, AND STUDS SHALL CONFORM TO ASTM A570 IN THE FOLLOWING GRADES UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE DETAILS:
  - 12 THRU 16 GAGE SHALL BE 50 KSI.
  - 18 GAGE AND LIGHTER SHALL BE 33 KSI.

## WOOD

1. FRAMING LUMBER, DRY (19% MAXIMUM MOISTURE) DOUGLAS FIR/LARCH IN THE FOLLOWING GRADES (OR BETTER):

DOUGLAS FIR  
BENDING; FB = 2400 PSI  
HORIZ SHEAR; FV = 165 PSI  
MODULUS OF ELASTICITY; E = 1,800,000 PSI  
COMPRESSION PERP TO GRAIN; FC = 650 PSI

## EPOXY

1. EPOXY SHALL CONFORM TO ASTM C-881 TYPE IV, GRADE 2.
2. EPOXY CLASS SHALL BE SUITED TO ENVIRONMENTAL CONDITIONS.

## CONSTRUCTION PROVISIONS

### GENERAL CONSTRUCTION PROVISIONS

1. ALL DIMENSIONS ON STRUCTURAL DRAWINGS SHALL BE FIELD VERIFIED AND CHECKED AGAINST THE ARCHITECTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY. IN CASE OF CONFLICT BETWEEN NOTES, DETAILS, PLANS AND SPECIFICATIONS THE MOST RIGID REQUIREMENTS SHALL GOVERN UNTIL SUCH TIME AS A CLARIFICATION IS ISSUED BY THE ARCHITECT.
2. ENGINEER'S APPROVAL MUST BE SECURED FOR ALL SUBSTITUTIONS.
3. THE REQUIREMENTS OF THE LATEST EDITION OF THE "OSHA CONSTRUCTION STANDARDS SHALL BE FOLLOWED BY ALL CONTRACTORS, FABRICATORS, AND SUPPLIERS.
4. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SHORING TO THE EXISTING STRUCTURE WHERE REQUIRED TO PERFORM MODIFICATIONS OR WORK ADJACENT TO SAME.
5. CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER OF ANY OBVIOUSLY DAMAGED STRUCTURE NOT NOTED ON THE DRAWINGS PRIOR TO PROCEEDING WITH RELATED OR AFFECTED CONSTRUCTION. LIKEWISE, CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER OF ANY DISCREPANCIES BETWEEN THE ASSUMED EXISTING STRUCTURE SHOWN ON THE DRAWINGS AND THAT FOUND AT THE CONSTRUCTION SITE.
6. DURING ERECTION OF THE FRAMING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY BRACING TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED, INCLUDING LATERAL LOADS, STOCKPILES OF MATERIALS, AND EQUIPMENT. SUCH BRACING SHALL BE LEFT IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL ALL STRUCTURAL FRAMING IS IN PLACE WITH CONNECTIONS COMPLETE AND ALL AT SUFFICIENT STRENGTH.
7. REPRODUCTION OF STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED.

### STRUCTURAL STEEL CONSTRUCTION REQUIREMENTS

1. ALL WELDS SHALL BE 1/4" FILET WELDS WHERE NO SIZE IS PROVIDED, AND ALL WELDS SHALL BE CONTINUOUS WHERE NO LENGTH IS PROVIDED.
2. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH LATEST PROVISIONS OF AISC CODE OF STANDARD PRACTICE.
3. ALL WELDERS SHALL HAVE EVIDENCE OF PASSING THE A.W.S. STANDARD QUALIFICATION TESTS FOR THE WELDS THEY WILL BE PERFORMING.
4. ALL WELDS EXPOSED TO VIEW SHALL BE CLEANED, GROUND SMOOTH AND PAINTED.
5. CONNECTIONS MADE WITH HIGH STRENGTH STEEL BOLTS SHALL CONFORM IN ALL RESPECTS TO THE CURRENT SPECIFICATIONS FOR STRUCTURAL JOINTS AS ENDORSED BY AISC.
6. OPEN WEB STEEL JOISTS SHALL BEAR 2" MINIMUM ON STEEL AND 4" MINIMUM ON MASONRY. WELD ALL JOISTS TO STEEL MEMBERS, EXCEPT AT COLUMNS, WHERE BOLTED CONNECTIONS SHALL BE PROVIDED.

### COLD FORMED STEEL

1. STUDS SHALL BE PLUMB, ALIGNED, AND FULLY NESTED IN BOTH THE UPPER AND LOWER TRACK.
7. WEB STIFFENERS SHALL BE INSTALLED PER THE MANUFACTURER'S STANDARD DETAILS AT BOTH ENDS OF ALL COLD-FORMED STEEL HEADERS.

### WOOD CONSTRUCTION REQUIREMENTS

1. TIES SHALL BE BOLTED TO BOTH OF THE STEEL GIRDERS. BOLTS SHALL BE ARRANGED TO VARY FROM ONE SIDE OF THE FLANGE TO THE OTHER ON EVERY TIE.

### EXPANSION BOLT AND EPOXY ANCHOR INSTALLATION REQUIREMENTS

1. HOLES SHALL BE DRILLED AT A DIAMETER AND DEPTH SPECIFIED BY THE MANUFACTURER USING A COARSE CUTTING ROCK CHISEL OR HAMMER DRILL. CORE DRILLS OR OTHER SMOOTH CUTTING DRILLS ARE NOT ALLOWED.
2. HOLES SHALL BE THOROUGHLY CLEANED WITH A BRUSH, THEN VACUUMED OR BLOWN CLEAN WITH OIL FREE COMPRESSED AIR TO REMOVE ALL RESIDUE FROM THE DRILLING OPERATION.
3. EXPANSION BOLTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
4. NOTIFY ENGINEER TO INSPECT HOLES FOR DEPTH, DIAMETER, AND CLEANLINESS PRIOR TO THE PLACEMENT OF EPOXY.

25-1512(N)-5

# CIMMARON RAILROAD BRIDGE

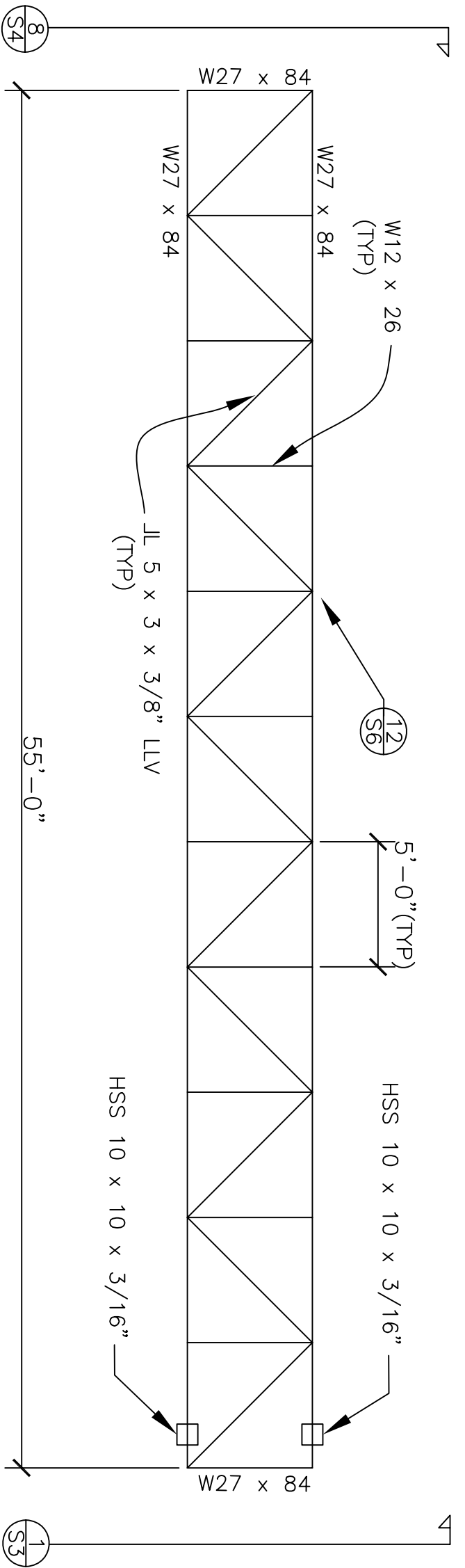
PREPARED FOR: NATIONAL PARK SERVICE  
CURECANTI NATIONAL RECREATIONAL AREA  
CIMMARON, CO

PREPARED BY:  
CHRISTOPHER AKINS  
DANNY TRUJILLO

JOS #:	1001
DATE:	DEC. 9, 2005
DRAWN:	A & D
CHECKED:	A & D

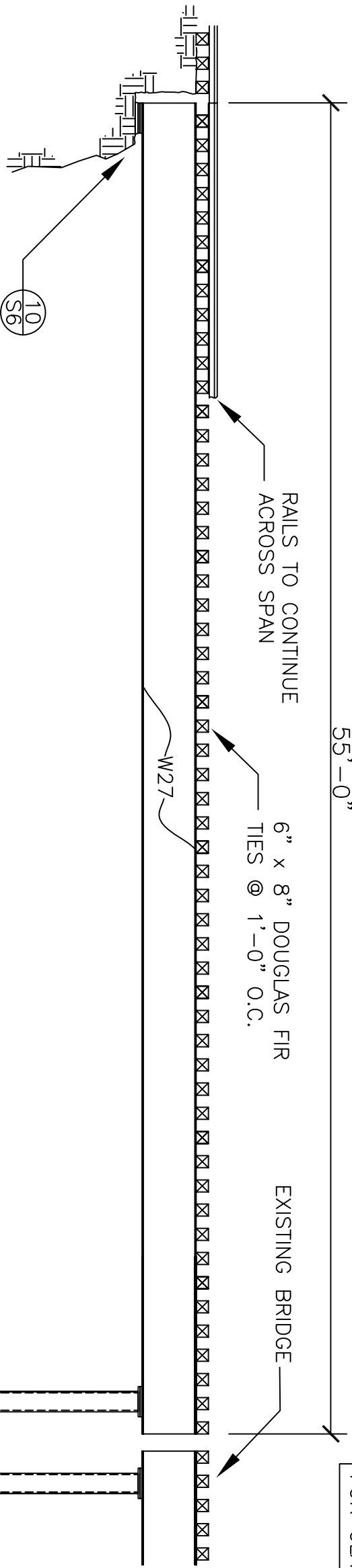
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GENERAL NOTES  
S 1

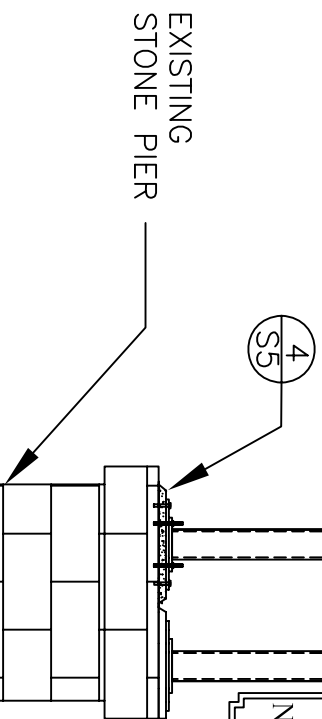


PLAN VIEW  
SCALE: 3/16" = 1'

NOTE: TIES AND  
RAILS OMITTED  
FOR CLARITY



ELEVATION  
SCALE: 3/16" = 1'



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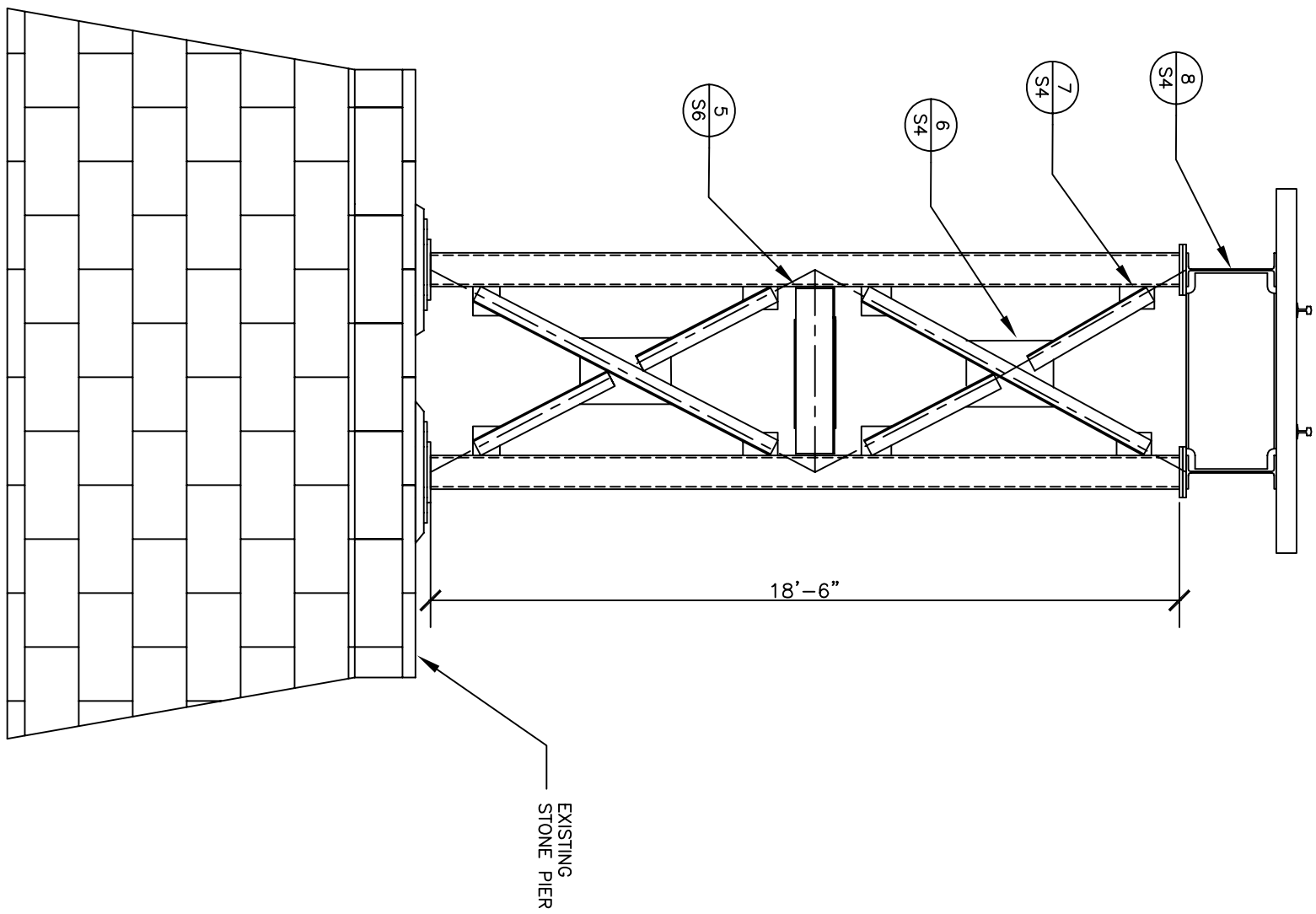
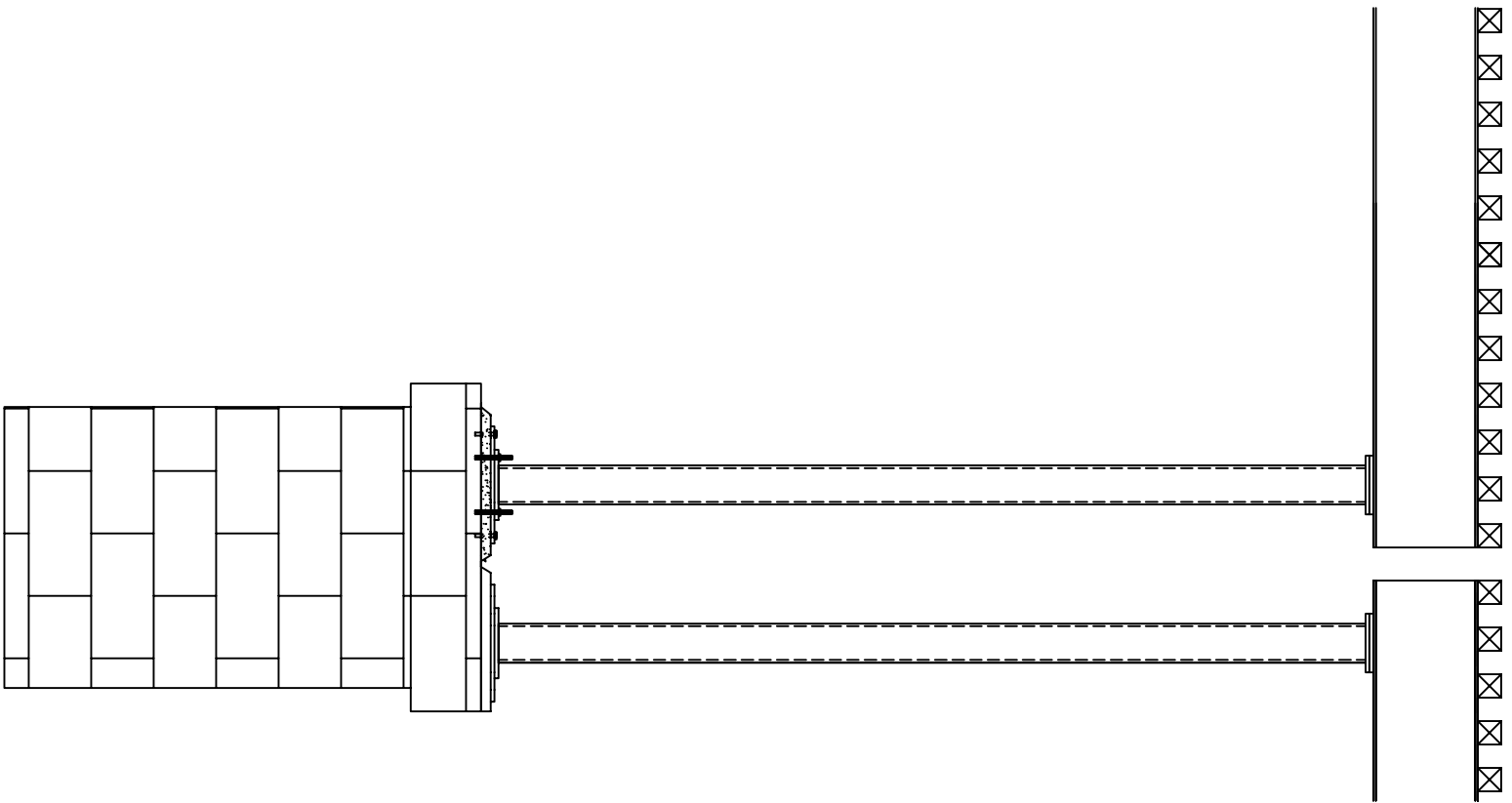
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DANNY TRUJILLO

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PLAN & PROFILE  
S2

REVISIONS:

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1 EAST ELEVATION  
S3  
SCALE: 1/4" = 1'

REVISIONS:

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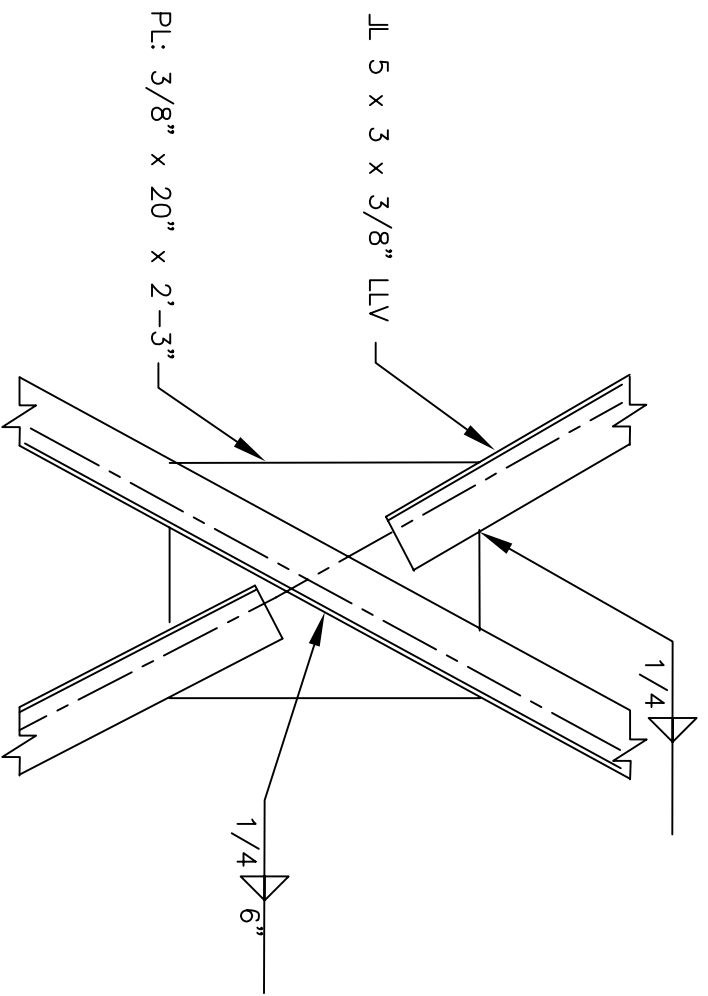
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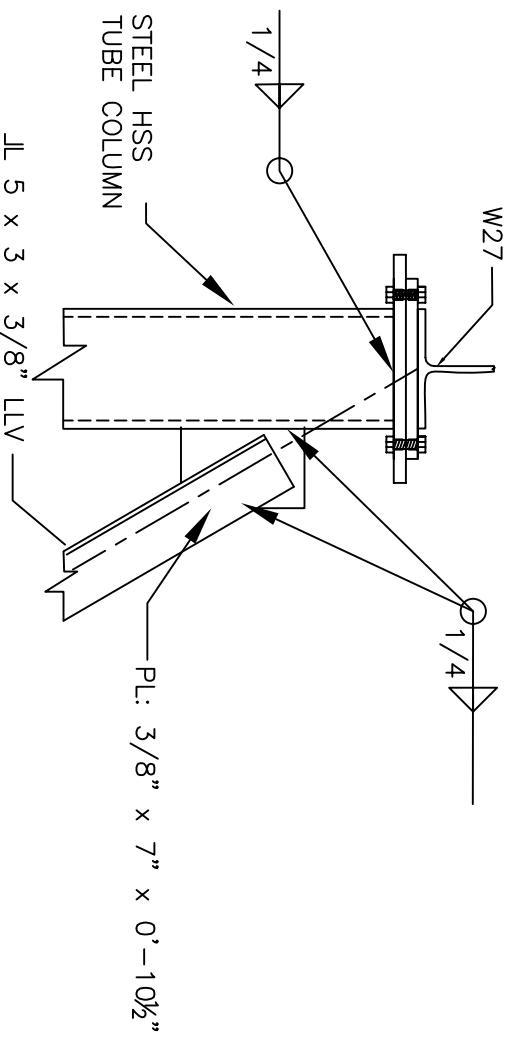
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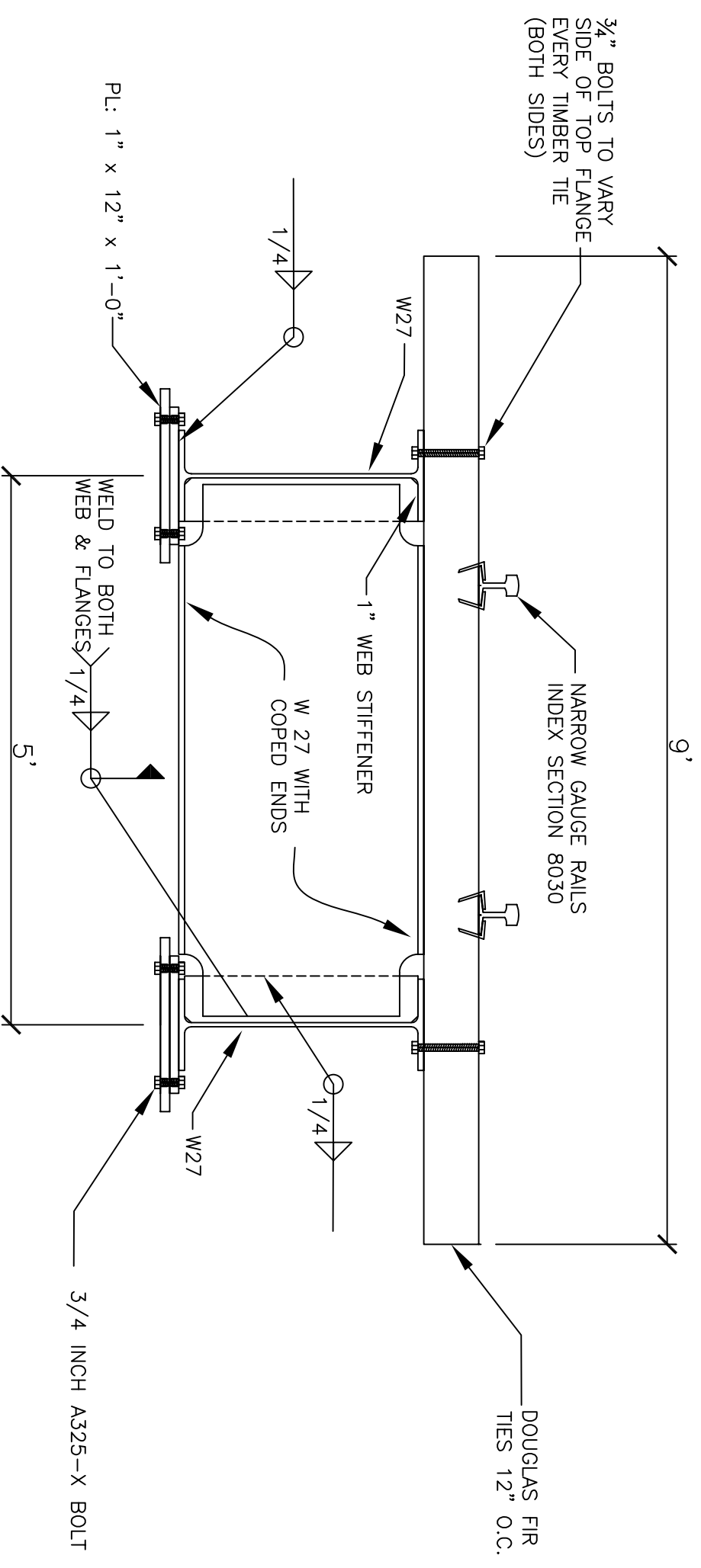
WEST ELEVATION  
S3



6 CENTRAL PLATE DETAIL  
S4 SCALE: 1/2" = 1'



7 TOP PLATE DETAIL  
S4 SCALE: 1/2" = 1'



8 TOP EAST ELEVATION  
S4 SCALE: 3/4" = 1'

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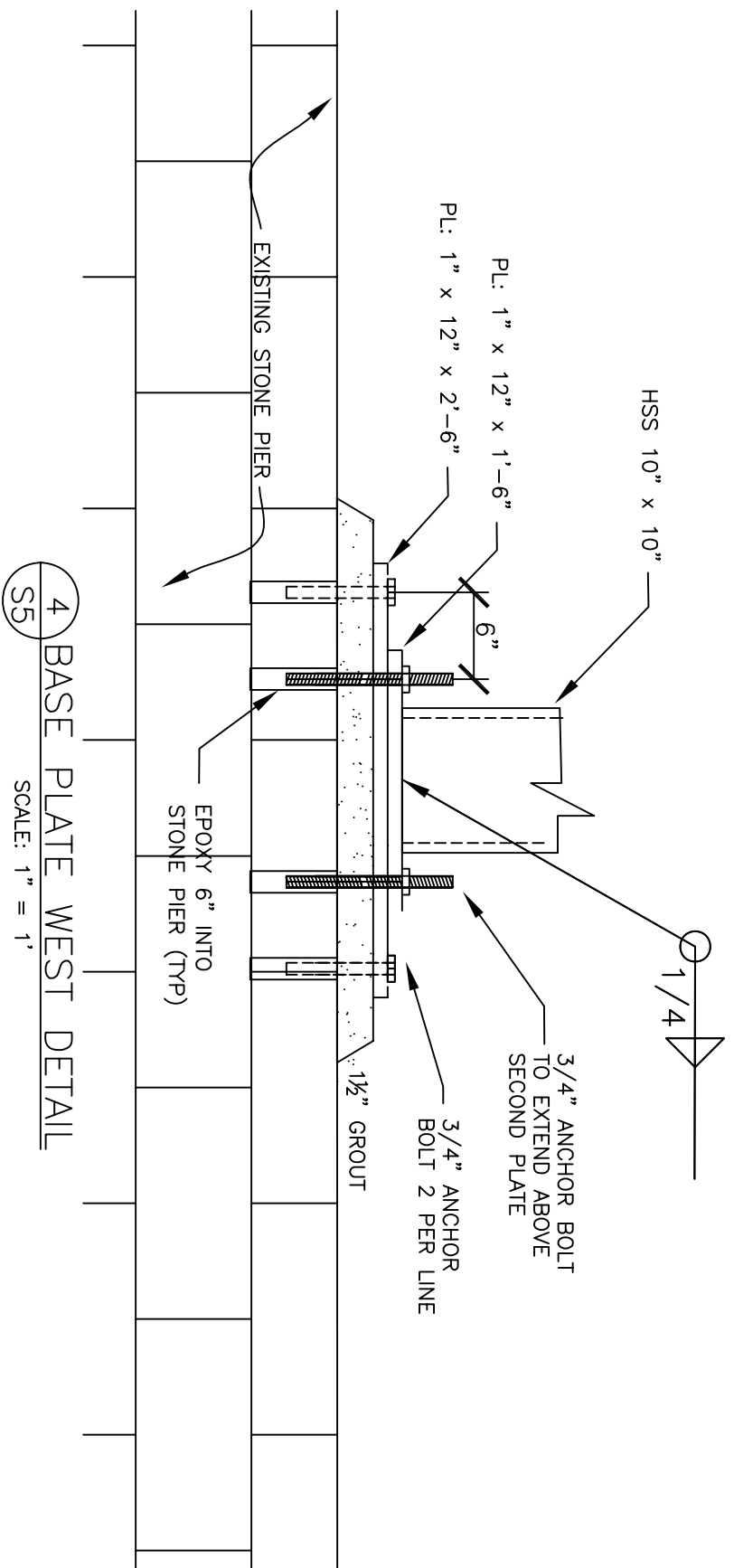
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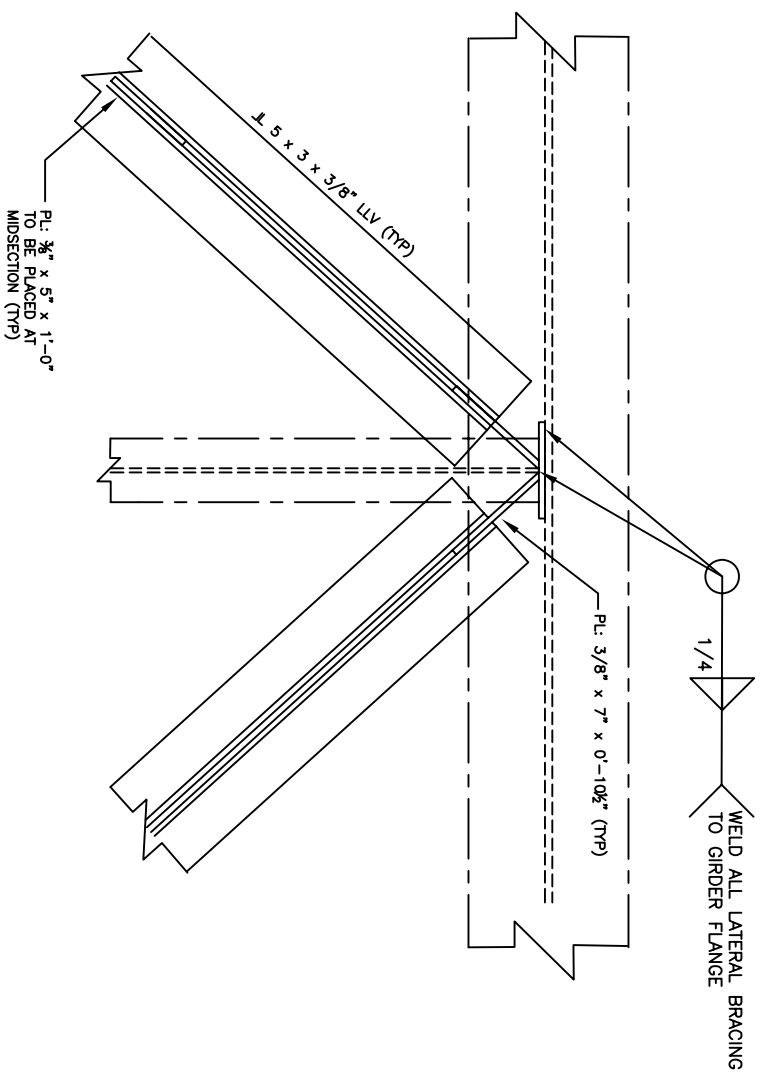
STANDARD DETAILS  
S4

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4 BASE PLATE WEST DETAIL  
SS  
SCALE: 1" = 1'



12 LATERAL BRACING PLAN DETAIL  
SS  
SCALE: 1" = 1'

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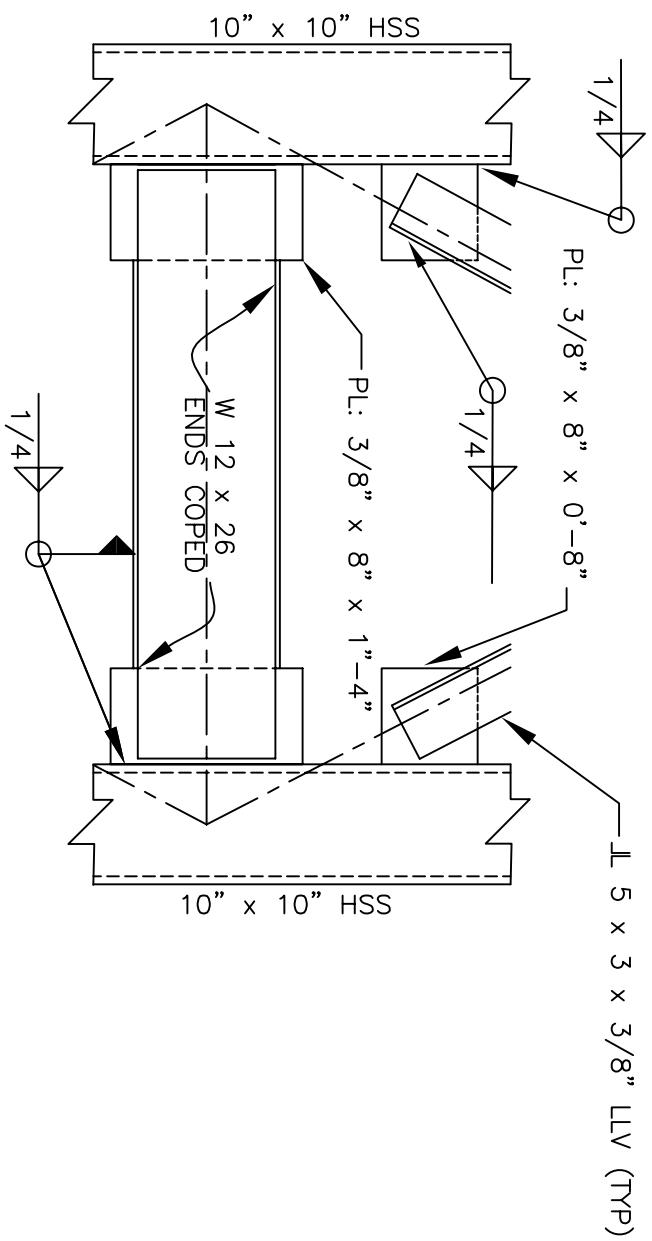
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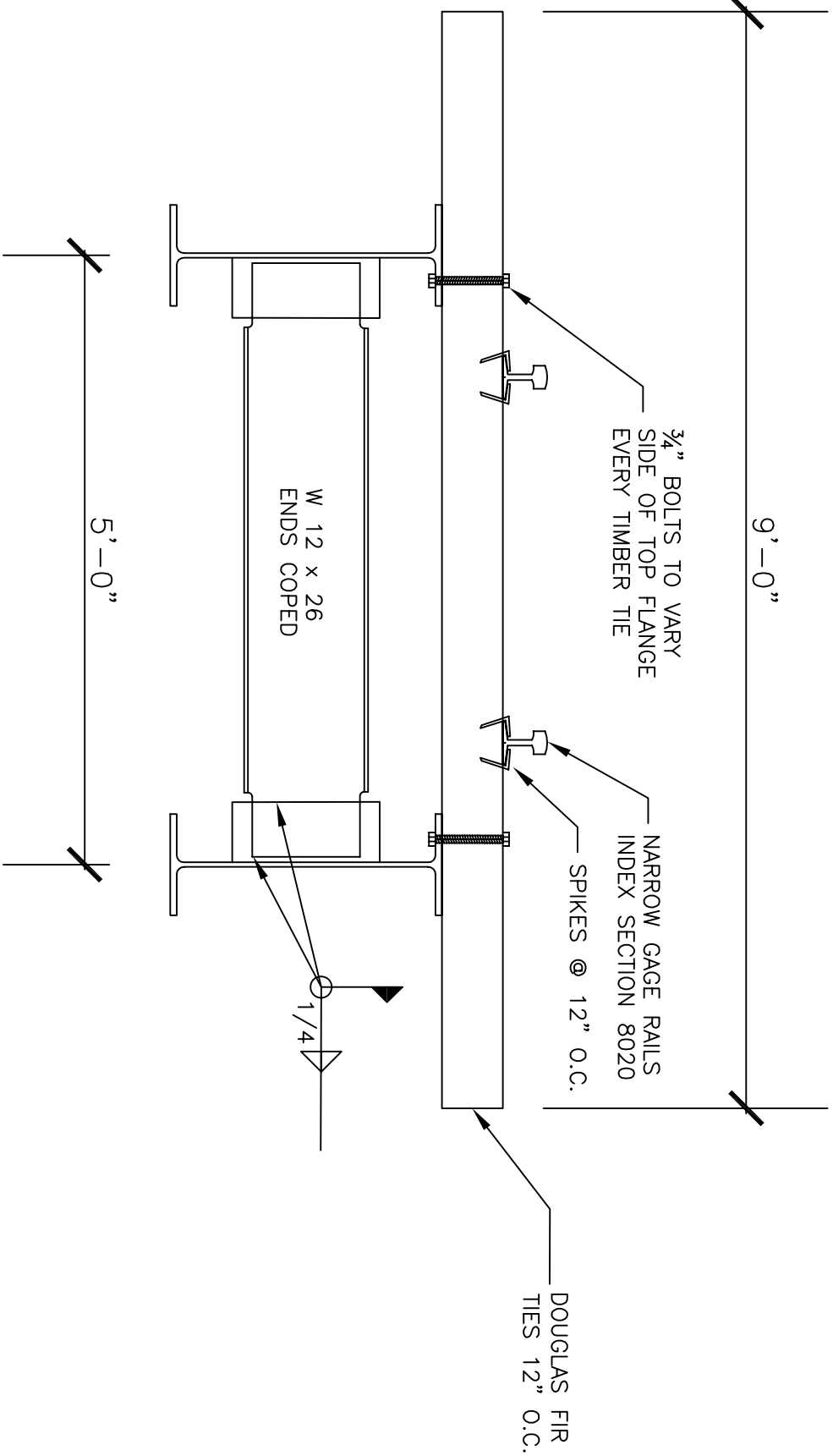
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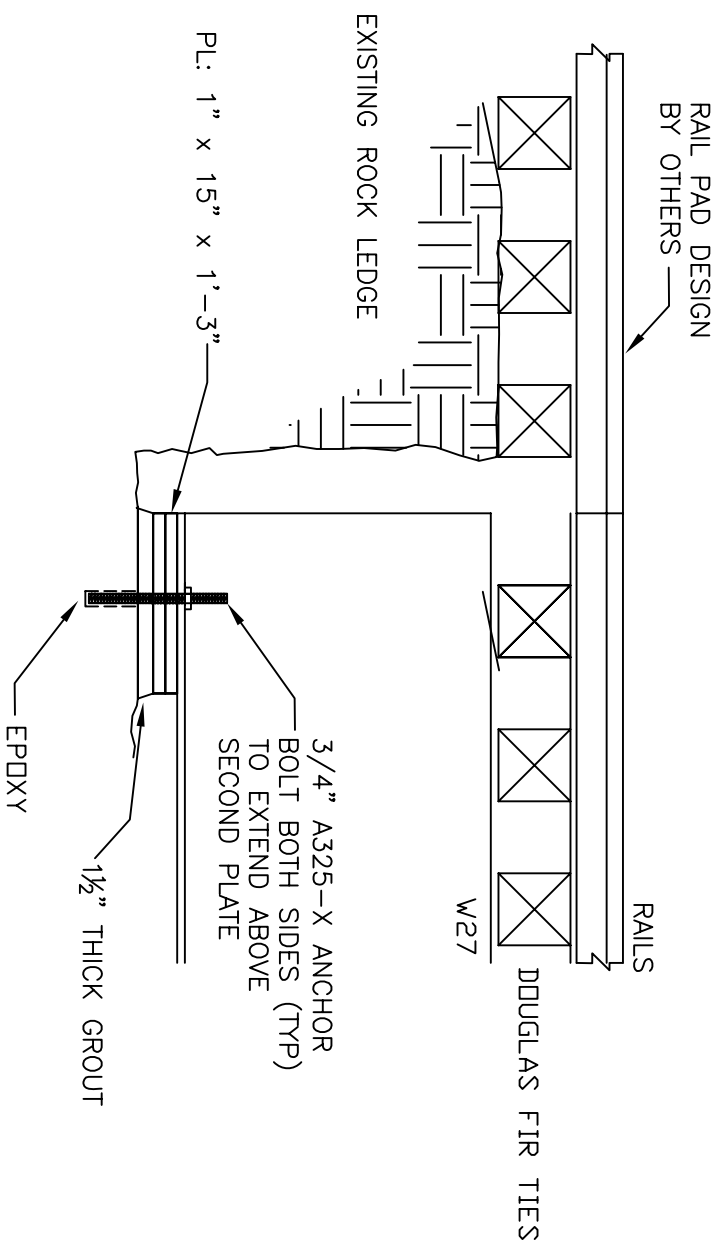
STANDARD TERMS



5 BOTTOM PLATES & W12x26 DETAIL  
SCALE: 3/4" = 1'



8 TOP EAST ELEVATION  
SCALE: 3/4" = 1'



10 TOP EAST ELEVATION  
SCALE: 3/4" = 1'

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