

SAGEBRUSH HEADLIGHT

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THE NEVADA STATE RAILROAD MUSEUM
An Agency of the Division of Museums and History
Nevada Department of Cultural Affairs

WINTER 2004

Glenbrook: A Restoration Saga-Part II

by *Chris DeWitt*,
Restoration Supervisor

This is the second installment of the saga of the *Glenbrook*. This installment will examine the tender, its condition, and what happened to it after its arrival at NSRM.

The tender arrived at NSRM with the locomotive in 1981. While the locomotive was being examined for its proposed restoration, a contract was let for the restoration of the tender by Shortline Enterprises. The restoration was handled as a separate contract from the locomotive.

When the *Glenbrook* was built, there was an understanding that locomotives were finished differently depending on anticipated service. Passenger locomotives were commonly the 4-4-0 American configuration and freight locomotives were often the 2-6-0 mogul design. (This is not to say that there weren't other configurations.) The passenger locomotives were typically more ornate than the freight locomotives. The customer had the choice of several different finishes. The *Glenbrook* being a freight locomotive is not as fancy as the V&TRR's *Inyo* or the Eureka & Palisade Railroad's (now owned by Dan Markoff of Las Vegas) narrow gauge locomotive, *Eureka*, both 1875 Baldwin's.

The task of researching and restoring the *Glenbrook* tender was simplified because there are existing records of factory option paint schemes. In addition, the tender, having had a relatively short operating life retained a large percentage of the original fabric. Although this material was not salvageable, it served as an accurate record

of original details. Given the goal to return the *Glenbrook* to operational status, the tender had to be restored to operational condition as well.

In the beginning of any restoration, components not having historic value are removed and discarded. The historic components not slated for reuse are removed, labeled, and saved. Among the items not germane to the history of the locomotive were the railings installed by the Nevada State Museum that allowed access by the public. An example of historic components added by the railroad but not intended for reuse in the restoration were the air brakes. The remaining parts and pieces are then evaluated for condition. The components that are missing are identified and a schedule is established for reproduction. The reusable parts are cleaned and prepared for installation. Other necessary components are reproduced.

The frame of the tender had been repaired during its working life by replacing material; the remaining original wood was in poor condition. It was determined that if the tender were to see service a new tender frame would need to be built. Following standard practice of the day a new wooden frame was built. For those who are interested in structural details it is interesting to note that none of the wooden components is subject to tension or the pulling force of the train. All the force to pull the train is through the four steel rods that run the length of the tender. Conversely braking and shoving was transmitted through the timbers. The frame was built of fir timbers. Although there is a lot of hardwood on the East Coast, the tenders

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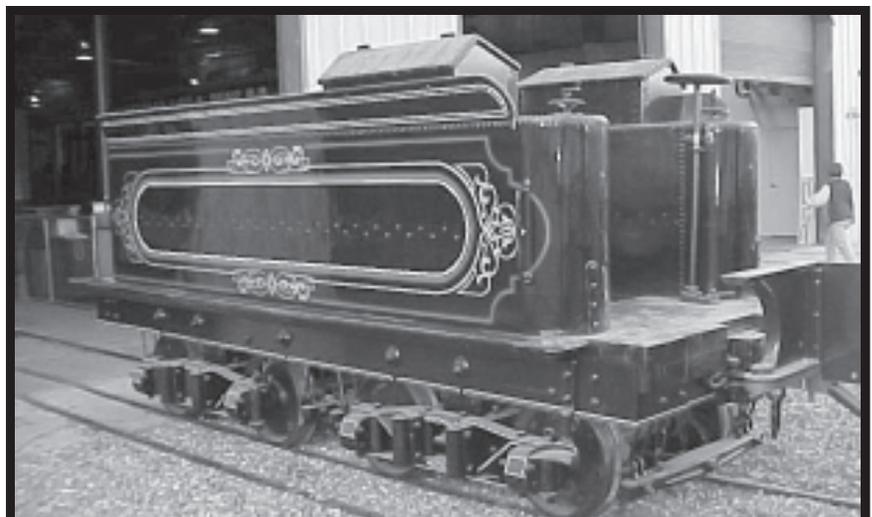


Photo: NSRM.

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Adults \$4
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Symposium 2005 *Milestones on the Railroad: Dates in Railroad History*

The Nevada State Railroad Museum and the Friends of the Nevada State Railroad Museum invite you to attend the 34th Annual Virginia and Truckee Railroad Symposium held October 20-23, 2005, in Carson City. The 2005 Symposium will continue a year-long theme celebrating many anniversaries and milestones including the 25th anniversary of the Nevada State Railroad Museum, the 100th birthday of V&T locomotive No. 25, and the 120th birthday of V&T locomotive, *Inyo*.

WATCH THIS SPACE FOR FURTHER DETAILS AND:

Plan to attend Symposium 2005!

NEVADA STATE RAILROAD MUSEUM 2005 OPERATING SCHEDULE

STEAM UPS

SORRY, NO STEAM UPS ARE SCHEDULED UNTIL MAY 2005

Steam Train operates 10:00 am - 4:00 pm

Steam Train Fares, as of January 1, 2005:
Adults- \$5.00, Seniors (65 and above)-\$4.00,
Children 6-11- \$3.00, 5 and under FREE

SCHEDULE SUBJECT TO CHANGE

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On Track with the Department of Cultural Affairs

By *Scott K. Sisco,*
Interim Department Director

The temperature may be dropping, but the Department of Cultural Affairs is working at a fever pitch in its mission to enrich the lives of Nevada residents and visitors. All agencies of the Department - the State Historic Preservation Office, Nevada Arts Council, Nevada State Library and Archives, and Division of Museums and History - have been hard at work, promoting culture and protecting our past while planning for the future.

Nevadans were treated to a rare opportunity to watch history in the making when the Department hosted a public art studio for artist Benjamin Victor to complete the clay mold for the statue of Sarah Winnemucca that will represent Nevada in the U.S. Capitol's Statuary Hall. Thousands of schoolchildren and others came to the State Library and Archives' exhibit hall to see Victor work on the sculpture. Visitors were charmed by the artist and expressed considerable pride in the project. Many returned to view the masterful transformation as the statue came to existence virtually before their eyes. The statue is currently being bronzed at a foundry in Colorado and is scheduled to be placed in the Capitol in early March.

A groundbreaking ceremony took place on October 28, 2004, for the Department's new History and Interpretative Center in Virginia City. This facility will house public exhibits, including one of the locomotives from the Nevada State Railroad Museum, and encourage sightseers to also visit our museums in Carson City and Reno.

The Nevada State Museum in Carson City is undergoing a facelift on both the exteriors and interiors of its two major buildings. Galleries torn down to remove asbestos flooring are being completely updated as they are rebuilt, offering new and enhanced experiences for visitors. The Department is pursuing funding for a connecting structure

and new museum entrance on the north side of the historic mint building.

Preliminary designs for the new state museum in Las Vegas were recently approved by the Department. The museum is scheduled to be completed in 2007 as part of the new Las Vegas Springs Preserves cultural center where the 70,000 square foot facility will serve as a primary showcase for Nevada history and culture in the southern part of the state.

The new State Railroad Museum in Boulder City is wrapping up its first operational season. We look forward to planning the future of this popular attraction as interest in the excursion train grows throughout the Southwest.

As the Department moved forward with many substantial projects, administration and staff have also been busy submitting and defending the agency budget requests to the State Budget Division for the 2006/2007 biennium so that we can continue to provide services important to the state's tourism, heritage and cultural growth.

Staff from throughout the Department are also planning the 2005 Oasis Conference that will be held April 5-7 in Carson City. Oasis celebrates the sense of community and common purpose of those concerned with the arts, education, libraries, archives, humanities, museums, historic preservation and archaeology. Call 775-687-8393 to be placed on a mailing list for the conference - we hope you'll join us.



Artist Benjamin Victor puts final touches on the statue of Sarah Winnemucca.

UPCOMING EVENTS

Wed. Evening Program (7:00 p.m.)

January 12
Chinese Woodcutters' Camps

February 9
*Virginia City
Archaeological Excavations*

March 9
*Railroad Rhythms
By The Little Toots*

Friends' Board Meeting

February 3
6:00 p.m. at the Museum

Oasis Conference

April 5-7, 2005

Symposium

October 20-23, 2005

For information, please call 687-6953.

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were not typically hardwood but rather fir. This was demonstrated on the several wooden tender frames that have been rebuilt at NSRM and the California State Railroad Museum. The corner brackets are original as is some other iron. Most bolts were replaced as the old bolts were rusted and could not be saved.

The locomotive was built prior to the widespread acceptance of air brakes. Air brakes were added in 1899. The engine received an air pump and engine brakes and the tender received a cylinder and reservoir. The air brake components were removed from the tender and the engine. The tender originally had hand brakes on all four axles and the engine had no brakes. The brake beams were wooden and three were most probably original. It is unusual that the brake beams were not changed to steel after the application of air because air brakes apply substantially more force than hand brakes. All the brake beams were remade in wood to match the original example.

The tender frame was decked with the original details. The deck between the water legs has wide gaps between the boards, a common practice by Baldwin. They allow for the escape of detritus that collects from handling wood fuel. Just forward of the fuel well is the tender deck plate. It is new and indicative of deck plates built by Baldwin.

The water tank is original with a modification. At some time the rear wall of the fuel well was moved forward increasing the capacity of the tank by approximately 200 gallons. The vertical sheet was removed and relocated forward. The rivets were chiseled off and driven out. The angle iron that connected this sheet to the floor sheet was reused. The rivet holes in the floor sheet were used to connect the new floor sheet. The sides were removed and discarded. The work, done in this manner, allowed for a footprint easily followed in the restoration process. The original back wall was removed and it, with the original angle iron, was returned to its original location. The floor and roof sheets were discarded. Of course, new side sheets were installed. The repair was done with rivets to be accurate to the original construction.

While the sheets were out of the tank, the interior was sand blasted in preparation for coating to prevent rust. The decision was made to use Gilacoat, a Gilsonite-based product suitable for the coating of water tanks (see *Uintah Railway: The Gilsonite Route*, by Henry Bender). At this time, the tender valves, which control the water to the injector and crosshead pump, were resurfaced. (This engine had one injector and one crosshead pump as delivered from the factory. This is a rare situation and will be discussed at length in a future installment). The valve stems which rise out of the top of the tank at the front were corroded and were replaced. One wheel was missing, as was one crank. These were replicated. The braces, which prevent the sides of the tank from bulging, were renewed, as were the tee irons to which they connected.

It is interesting to note that on the front of the water legs (the most forward part of the tank) and on the rear sheets are rivets by themselves. There are two rivets on each water leg and four on the rear sheet. These rivets, upon investigation, are solely to plug the holes they fill. There is nothing riveted to the tanks at these locations. If an examination of other Baldwin tender tanks is made, these rivets are also found. It is theorized that the holes they fill are a factory addition, somehow used to hold and align the tank during construction. The specific manner in which the factory used the holes isn't clear.

The tender arrived at NSRM with racks made of pipe riveted to the tender flare sheets to increase the firewood carrying capacity. They are not original factory equipment. The question to ponder is, were the racks added at the same time as the water capacity was increased? The Carson Tahoe Lumber and Fluming Company's railroad was 8.75 miles long, not a particularly long run. The gain in elevation was impressive at 800 feet. The speculation is that the engines, hauling a capacity load of 70 tons, would consume slightly more water than the tender held. So rather than stopping along the route to take on water, the tender tank was expanded and no water stops were necessary. Conversely, if the water tank was increased in volume the fuel supply would also need to be increased, therefore the racks were added to accommodate the change. NSRM

believes this is what the modifications accomplished.

The locomotive and tender had been converted to knuckle couplers during its life, very likely when it was put into service at The Tahoe Railway and Transportation Company. A rear link and pin pocket was fabricated for the restoration. The locomotive will have a link and pin drawbar when it is complete. At the front of the tender is the original draw bar casting. The safety chains are also thought to be original.

The tender had two tool boxes mounted on top of the tender tank. They had long since been removed. The boxes were reproduced and installed. It is interesting to note that the top of these boxes open on the side facing in, where as the boxes on other Baldwin locomotive restorations have opened on the outside. Which side of the box should open has long been a subject of controversy. The arguments are that if the inside top opens and there is a full tender of wood then the tender would need to be unloaded in part to access the contents. The other side of the argument is that if the outside opened then it would require someone to hang on the side of the tender to remove something from the box. There has been no definitive conclusion to this argument as of yet.

The final detail to attend to was the painting. As mentioned before, there are existing records of Baldwin finishes and colors. During the physical research, an original paint sample was not found. Using the documentation available, a color was decided upon. The tender was painted and prepared for striping. Jim Ingrams from Loomis, California, was contracted to stripe the tender and he did an excellent job. During the disassembly of the engine, a good original sample of paint was found. It was hidden and could not have been found during research without the disassembly of the engine. The selected color of the tender is a close match but not exactly what the original sample is.

The tender was completed under the Shortline Enterprises contract. It has waited for years to be reunited with its engine. In the next installment, we will discuss the historic significance of details discovered during the engines disassembly.

PRESIDENT'S MESSAGE

Dear Friends-

Happy New Year to everyone. With a new year we all face new challenges and the Museum is no different. As you all know by now, Mr. Peter Barton is the new director and, as is the case with new leadership, he is facing many new challenges and challenging times. It is most important for him, and all of the staff, to know that they have the complete support and cooperation from the Friends and the volunteers. We are most fortunate to have Peter's leadership capabilities, as he has made many impressive contributions to railroading and museums. So let's all get behind him and give him all of our support and assistance.

Overall the museum had a great year in 2004. Many new and exciting programs were initiated and hopefully will become "old standards" as the years go by. One of those new programs was the motorcar training session. It was a huge success and is in the works for a repeat in 2005, so if you or a friend always wanted to become an operator of a piece of rail equipment, here is your chance (contact the museum for pertinent information).

Another great project that the Friends have undertaken is the interpretation of the Wabuska Depot to a 1910 to 1920 time period. We are in the process of completing various projects, which when completed will allow the general public to experience something of life in that era. It will also include some interactive exhibits for the younger visitors to help make their visits more interesting, fun, and educational. Your assistance would be greatly appreciated, as there are many areas needing volunteer participation (see "Short Lines" for specific projects). Do not be shy, volunteer! Remember, many of the tasks do not require expertise, but just some elbow grease and perseverance.

At this time I want to remember our members, volunteers, and spouses who passed on in 2004. And to thank all of the volunteers who have worked so hard to make the museum the great success that it is. Please bring one friend or co-worker into the membership of the Friends so that even more great things can be accomplished!

- Ron Allen, President.

Spotlight on Volunteer Bryan Berry *by John Frink*

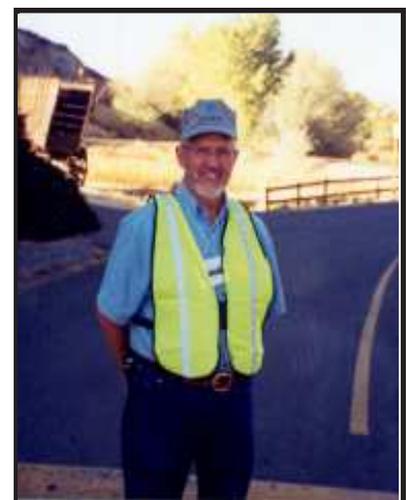
Since the mid-1980s, Bryan Berry has accumulated over 4,400 volunteer hours at the museum. Starting out as a motor car operator, along the way he has done just about everything else a volunteer can do here – and then some! This includes the usual litany of things – working the admission desk, in the annex, handcar operations, school tour guide. For many years, he headed up the depot platform crowd control posse during the annual Santa Train operations. Even shoveling snow from the sidewalks during winter weekends was not beneath him!

In the days when the museum opened only a few days a week, he also scheduled volunteers for the various duties here and coordinated special events. For many years, he coordinated the museum's monthly Wednesday Evening Programs, which involved finding and scheduling interesting people to talk about a wide variety of

railroad-related subjects. All this occurred while holding down a full-time job as a State Fire Marshall. Eventually, these activities became much too time-consuming for a volunteer and the museum had to create the paid position of program coordinator to take over most of them on a regular daily basis! After that position was created, he still continued to do the taping of the above mentioned monthly programs (and the yearly Symposium); until turning it over to someone else a few years ago. This included editing the finished product complete with credits, and delivering same to the local community access television station.

Retiring in 2000 after 10 years with the State Fire Marshall's Office, Bryan and wife Darlene spent several months traveling all over the U.S. after she retired in 2001. They currently spend several weeks every summer in Oregon at the Heceta Head Lighthouse State Park and Fort Stevens State

Park, where - you guessed it - they conduct visitor tours. He currently spends two days a week assisting Jane O'Cain in collections management and still finds the time to get involved in many, many other museum activities.



Railroad Freight Rates: Not Always Pure and Never Simple

by Lloyd Shanks,

Restoration Shop Volunteer

In the latter part of the nineteenth century, or the "golden days" of railroading in the United States, passenger traffic was the sought after prize for the newly constructed railroads. The country was expanding and moving westward, and traveling by rail was the fastest and most comfortable way to get there. However, once settled, this population of newcomers created a demand for manufactured products that needed to be met. Farm equipment, mining machinery, hand tools, and other dry goods needed to be moved from the industrial centers in the East, and the railroads were equal to that task.

Determining the charges for transporting passengers was simple. Everyone traveling to the same destination paid the same charge based on the accommodations provided. If you wanted to get there, you came up with the fare. Charges for the transportation of freight were another matter. There could be other ways to have a product shipped, or if the cost of transporting was too high, people made do! That is, they simply did without that product or, if possible, they made it themselves or had it made locally. Economists term this an "elastic demand" and the way the railroads dealt with it was to "charge all the traffic would bear." As a result, the charges for transporting some goods from point A to point B was set higher for some products than it was for others. The goal was to charge as high as you could, or up to the point where the freight (or traffic) would not be offered for shipment by rail. The title for

the person who determined this was a "Traffic Manager."

In these early days each railroad established their own charges for transporting over the length of their road. Passenger charges were "fares" per passenger and freight charges were based on "rates" that were charged for each one hundred pounds (*hundredweight*) of goods to be transported. Rates for transport between points located on one railroad were referred to as "local rates." This stems from the fact that originally freight was tendered to each railroad at their origin for transport to a point on their line. Even after railroads started connecting with other lines at

example of this might be a for a shipment of mining equipment from San Francisco, California, via the Southern Pacific to Reno and from Reno to Virginia City via the Virginia City and Truckee Railroad. The combination of the rates and charges via each railroad was prepaid (paid in advance) by the consignor (offerer) or collected by the railroad agent at destination from the consignee (receiver) for such transportation.

Where there was only one railroad connecting an origin and destination, and the only other means of transport was horse and wagon, the railroad was a monopoly. In some cases the railroad could control the destiny of businesses, farms, or even towns located on their line. There were resulting abuses of this power, the greatest of these were experienced by a number of farming communities in the Midwest where there was no other way to move their grain crops from the fields to distant urban markets. It was essentially move it by rail or let it rot. In 1887 the U.S. Congress was pressured to find a solution and

passed an Act to Regulate Commerce, which established the Interstate Commerce Commission or ICC. The ICC was given the power to grant railroads, which were deemed to be common carriers, a Certificate of Convenience and Necessity. These certificates authorized a carrier to serve the public between specified points in the U.S. The ICC was also given the power to require that rail freight rates be published and to determine the reasonableness of freight rates. Published rates were to be contained in a schedule (*tariff*) filed with the ICC no later than 30 days in advance of their effective date, and the Commission was given the power to suspend any rates

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SCHEDULE OF LOCAL FREIGHT RATES (IN CENTS PER HUNDREDWEIGHT)

<u>Between Reno, Nevada and</u>	<u>Carson City</u>	<u>Virginia City,</u>
For Less-than-carload Lots of:		
Foodstuffs, dried or canned	140	165
Freight, not otherwise specified	170	195

Note: Unless otherwise specified above, consignments must be in bags, bales, barrels, boxes, bundles, crates, firkins, kegs, kits, puncheons, sacks, suitcases or steamer trunks. Loose articles will not be accepted. Minimum charge is for one hundred pounds at the rate stated above.

<u>Between Reno, Nevada to</u>	<u>Carson City</u>	<u>Virginia City</u>
For Carload Lots of:		
Foodstuffs, dried or canned	45	60
Freight, not otherwise specified	50	65

Minimum weight for carload shipments is 30,000 pounds. Rates apply on cars loaded on team track or on cars tendered to carrier at the interchange points with the Southern Pacific or Western Pacific railroads.

"interchange points" they still charged their local rate for their portion of the "haul." There were higher levels of rates for "less-than-carload" freight, which required physical handling on and off baggage cars. Lower rates were charged for *full carload* freight loaded on box or flat cars, which did not have to be loaded or unloaded by railroad personnel. A (fictitious) example of local rates for the Virginia and Truckee Railroad is provided in the table above.

When the charges for a shipment via more than one railroad from origin to destination were based on the local rates of each railroad, it was termed a "combination rate." An

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deemed unreasonable. Such findings were subject to review in a federal court, and many suspended rate cases were decided there. Rates could be alleged to be unreasonably high, by shippers, or low, by competing carriers.

Eventually, the ICC required the establishment and publication of "*joint rates and routes*" that applied from point of origin to destination via two or more railroads. This also resulted in the establishment of many "*through rates*" as opposed to combination rates. The share of revenue resulting from a joint-through rate accruing to each of the participating railroads was called their "*division*." Divisions reflected the mileage operated on the joint route by each participating railroad with additional percentages for the railroad on which the shipment originated. Publication of joint rates also required the publication of the "route" over which the joint rate applied. This included the naming of each of the railroads and the interchange points between the railroads. An example of this would be the route for a joint carload rate on redwood lumber from Duncan Mills, California, to Carson City, Nevada. The published route would read "*Northwestern Pacific Railroad Company - Schellville, California - Southern Pacific Railroad - Reno, Nevada - Virginia & Truckee Railroad.*"

In order to avoid the expense of each railroad having to file joint rates, *Freight Rate Bureaus* were established to act as publishing agents for groups of railroads. These tended to be regional in nature, and the largest of these was the *Transcontinental Freight Bureau*.

Certain railroads were given voting rights on rate bureaus and were exempted, by Congress, from the antitrust laws that would otherwise apply to such pricing practices. Even though reasonable through rates were required, some railroads found other ways to economically justify charging more for freight which originated at or was destined to areas of high cost or low volume operations. An example is the "*arbitraries*" published for freight handled to or from points on the Southern Pacific Railroad's now abandoned branch line from Mojave to Laws, California. An arbitrary was added to the rate applicable to or from Mojave. Then there were additional handling charges

for freight physically transferred at Laws to the narrow gauge line operating through the Owens Valley north of Laws.

Another type of rail rate was a "*proportional rate*." This was essentially a rate that was published as tied to other transportation, such as that provided by a privately owned railroad operated by a lumber company or freight that had prior or subsequent movement by steamship companies. A proportional rate could be higher or lower than other rates between the same points, dependant on the competitive situation. Although "special" reduced rates for particular (large) shippers were not permitted by the ICC as a rule, they were allowed to stand if they could be justified by economics. Consequently, over time such things as *multiple car rates*, *trainload rate*, and eventually "*annual volume*" rates subject to minimum number of carload shipments or tonnage were published and approved.

One of the famous ICC and court cases in the twentieth century was the "Big John case" which occurred after the ICC's suspension and investigation of the reduced rates filed by the Southern Railway for carloads of grain loaded in their "Big John" jumbo hopper cars and shipped between points served by barge lines. The Southern won that one based on the existing competition. Following the "Big John" decision was the infamous "Yak Fat case." It seems a railroad freight bureau published and filed a low rate on Yak Fat between an origin and destination in the Midwest. After the Midwestern Motor Freight Tariff Bureau filed a petition for investigation and suspension, the ICC suspended the rate and was intending to investigate it when the proponent withdrew the filing. Then everyone caught on to the hoax, since no one in the U.S. commercially raised yaks. The ICC ended up with egg (or yak fat) on their faces as a result of this incident.

After World War II, the rapid growth of comfortable and reasonably priced air passenger services and pent up demand and sales of millions of new automobiles resulted in the decline of long distance passenger revenues for U.S. railroads. Then, in the next two decades, the building of the interstate highway system across the nation made coast to coast truck service speedier, more reliable, and affordable for "long-haul" freight shipments. This heralded a period

of financial decline for the railroads and resulted in the merger of hundreds of railroads into a handful. Finally, in the 1980s the need for tariffs with published joint freight rates was eliminated, as was the Interstate Commerce Commission itself. Today most rates for freight traffic shipped by rail are published in contracts with shippers. Once, no common carriers were permitted to file contractual rates, except for freight shipped by the U.S. government. Now rail rate contracts are a commonplace commercial practice.

IT'S THE WATER!

By Bill Kohler, Volunteer

The steam locomotive has always had a love affair with water. While a locomotive tender is usually associated with carrying fuel (and often erroneously referred to as the "coal car"), in actuality, water is it's primary commodity. During a typical day of operations at the Nevada State Railroad Museum the locomotive will use about 3000 gallons of water compared to about 250 gallons of fuel oil.

Furnishing a reliable supply of good quality water offered a challenge to many railroads. Many rail lines were located where only poor quality or virtually no water at all was available. Some railroads went as far as building staffed treatment plants next to the water tower. In extremely dry areas water had to be shipped to remote locations in tank cars.

Even in the best circumstances water was never taken for granted. All water, even good quality water needs to be analyzed and treated to prevent problems before being used in locomotive boilers. While most water from the tap appears crystal clear and pure, in reality there are dissolved minerals and gasses that are carried with it. These impurities, when introduced into the hostile environment of a locomotive boiler, can cause a number of problems.

An example of dissolved minerals can be demonstrated by taking a look inside a teakettle. The white coating that develops is the mineral deposit that is left when the water is converted to steam. When this happens in a steam locomotive there are adverse and sometime dangerous results. Unlike the teakettle, which uses only a small

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amount of water at no pressure, the locomotive uses massive amounts of water at high pressure and temperature. In a relatively short period of time the minerals will concentrate and coat the boiler with a significant amount of scale.

Scale in a locomotive boiler reduces effective heat transfer. It acts like insulation. This causes a couple of problems. The first and most obvious is that more fuel is needed to boil the water in the boiler. The second problem relates to the first. Locomotive boilers depend on water to conduct the heat of the fire away from the metal surfaces. Without water these surfaces will overheat and fail. Scale, when heavily deposited, will

changed to non-hardness-producing minerals that will not bond to the hot boiler surfaces. Sounds kind of magic, doesn't it?

To further insure that any hardness that sneaks past the softener (nothing is 100% effective) is taken care of, a phosphate compound is added to the water. This compound, when used in conjunction with sodium hydroxide to control the pH, will precipitate calcium and magnesium hardness as a nonadherent sludge before they form harmful scale. Much of this sludge can be removed from the boiler using regular draining of water (blowing down) from the mud ring, which is the lowest part of the boiler and where sludge is most likely to

All of these treatment methods would be useless without a regular testing program to insure that chemical residuals are correct. If concentrations of the chemicals used to solve the problems were to become too high they could actually cause more problems than they solve.

Modern chemicals are formulated to prevent many of the problems encountered in the early days of railroading. The most significant result is the added safety that is afforded by knowing and reacting to the negative effects that water and its inherent impurities have on steam boilers. A good water treatment program will help insure that the Nevada State Railroad Museum steam locomotives will continue to run down the tracks for everyone's enjoyment.



prevent adequate heat transfer from the metal to the water and in extreme cases has caused catastrophic boiler explosions due to metal failure.

The Nevada State Railroad Museum uses an aggressive water treatment program to preserve and protect the locomotive boilers. The water used during operations is first softened using a zeolite water softener. The softener uses an ion exchange material, which removes calcium and magnesium scale-forming ions in the incoming water by exchanging them for non-scale-forming sodium ions. The total amount of minerals in the water is the same, but they are

accumulate. The locomotive boilers are regularly opened up and given a complete wash to insure that the sludge is removed.

Also used to treat locomotive water at the museum is a sodium sulfite compound. Oxygen, when it reacts with iron, causes rust. When dissolved oxygen is injected into a locomotive boiler it can cause corrosion at an accelerated rate due to the high temperature of the environment. This can cause deterioration of the boiler that could also lead to catastrophic failure. The sulfite treatment scavenges the dissolved oxygen before it can react with the metal surface of the boiler.

Periodicals Available through the Museum's Reference Library

The Museum library has the following periodicals on hand. Photocopies of articles from these periodicals will be made available for a nominal fee (\$0.25 per page). For further information please contact Jane O'Cain at email address jlocain@clan.lib.nv.us or telephone 775/687-8291.

American Railway Engineering Association Bulletin (1980-1994)
Brotherhood of Locomotive Fireman and Enginemen's Magazine (1923, 1924 and 1939)

Carter Narrow Gauge Chronicles (1988-2000; many gaps)
Classic Toy Trains (1987 [first issue]-1995)

Classic Trains (Spring 2002-Fall 2004)
CTC Board (1979-2000; many gaps)
Interchange [formerly *Railway Clerk Interchange*] (1971-1987; gaps)
Live Steam (1972-1999; 1976 and 1996 missing)

The Locomotive Engineer (1965-1969)
Locomotive Engineer's Journal (1924-1950 and 1992-1993)

Locomotive & Railway Preservation (1986-1997[*last issue*])

Mainline Modeler (1980-2003)

Mining and Scientific Press (1916-1922)

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The Modelmaker (1925-1935)
Model Railroader [formerly *The Model Railroader*] (1934-2003)
Model Railroading (1982-2003)
Modeler (March 1987-March 1988)
Model Trains [formerly *HO Scale Model Trains*] (1952-1960)
Nailer News (1971-1982)
Narrow Gauge and Short Line Gazette (1975-2003)
National Railway Bulletin [formerly *The Bulletin of the National Railway Historical Society*] (1959-1998)
Nevada Historical Society Quarterly (1979-2003)
Passenger Train Journal (1980-1996)
Prototype Modeler (1978-1979 and 1987 partial)
Rail Classics 1973-1978; 1987-1990)
Railfan & Railroad [formerly *Railfan*] (1977-2004)
Railmodel Journal (1989)
Rail Travel News (1982-1984)
Rail News [formerly *Pacific Rail News*, formerly *Pacific News*] (1969-1999)
Railroad Heritage (2000-2003)
Railroad Magazine [formerly *Railroad Stories*] (1938-1979)
Railroad Man's Magazine [title changed to *Railroad Stories* late 1931 or early 1932] (1918, 1931)
Railroad Model Craftsman (1948-2003)
Railroad Modeler (1972-1978; gaps)
Railroad Stories [formerly *Railroad Man's Magazine*] (1932-1937)
The Railroad Telegrapher (1917-1963)
Rail Travel News (1982-1984)
Railway Age (1981; 1994-1999)
Railway & Locomotive Historical Society (1988-1994)
Railway and Locomotive Historical Society Bulletins (Vol. 1; Volume 25-178)
Sagebrush Headlight (1979-present)
Santa Fe Magazine (1953-1977)
Southern Pacific Annual & Statistical Reports (1945-1981)
Technology and Culture (1991-1994)
Train Line (1985-2002)
Trains (1941-2004)
Vintage Rails (1995-1999)
Western Pacific Mileposts (1952-1983 [last issue])
Western Railroader (1939-1998)

Central Pacific Land Office Records-Part I

By Joe Bensinger,
 Collections Volunteer

We are currently arranging and cataloging a large accession of Central Pacific/Southern Pacific Land Office records donated by the Nevada Land and Resource Company of Carson City. In the process of this work I became interested in establishing the provenience and history of the company's need, generation, and maintenance of these documents. The first installment of this article discusses, very briefly, the general background which gave rise to them. The second installment will look at certain aspects of these documents and the Land Office.

A Revolution in the Making

Some say there is no history where change has not occurred. But history has been constantly in the making in this country as change has been abundant, perhaps even overly abundant, during the past 200+ years. There are, of course, many areas where changes can occur. Among them can be changes in technology and the application of technology. These can be particularly significant if they create ripples throughout the cultural and social arenas. To this extent they can become the corner stones of history.

Technological changes can not only change the socio-cultural arena but are themselves the products of a socio-cultural context. Thus they not only tell us what we may become, but may also define who we are. Yet, conservative factors such as tradition and fear generally attempt to slow down or even stifle change.

One such change of significant magnitude was the advent and expansion of the railroads in this country. When railroads were thrust into the industrialized world in the early 19th century they transformed and expanded the limits of its horizon. All areas of Western culture were affected from the business world and economics, to the migration of peoples into new geographical areas with the sociopolitical consequences that followed. They, at once, made the world a smaller place. John Stilgoe, in his book, "Metropolitan Corridor," elegantly notes that, "The development of the railroad-shaped environment coincided with other changes,

particularly the growth of cities, the spread of heavy industry, and the expansion of "American" civilization across the High Plains, changes interrupted but not stayed by the Civil War." Along the "...railroad rights-of-way... flowed the forces of modernization, announcing the character of the twentieth century..." Yet, as Stilgoe surmises, the age of railroads prior to their ultimate capitalistic establishment and consolidation in the 1880s was one of "romantic era distrust... of novelties..." As he notes, "...industrial enterprise disconcerted a nation respectful of agriculture and of tradition."¹

Considering specifically the economic impetus, Mark Reutter notes that, "Railroads were to the second half of the nineteenth century what the computer and telecommunications industries were to the final quarter of the twentieth - the drivers of economic change. Railroads provided the linkages that allowed the Industrial Revolution to gain traction."² What he means by this is amply put by Nicholas Faith who points out that "the first industrial revolution depended on coal, iron and steel, and railways played a crucial role in developing all three, especially the first."³ Paramount to this was the ability to transport these materials, from raw material to finished goods, even though the demand by the railroads and associated industries was significant in itself. In terms of numbers, by the middle of the 1800s railroads accounted for 15% of all the capital investments in the country - in and of themselves. They were a tremendous instrument of economic development because of this large financial investment, the industrial and organizational requirements, management, the impetus for new and future economic activity, and the development of related technologies. In fact, modern methods of production could only have been possible with the volume, distribution, and communication spurred by telegraph lines, steam ships...and railroads. This dynamic potential was well recognized at the time, but certainly not to its ultimate outcome.

From the social and sociopolitical standpoint, there was also tremendous change in the making. Demographics changed radically. For one, railways encouraged existing centralization of populations because, to minimize costs and overcome terrain

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problems, they typically followed roads, canals and rivers where they existed, furthering transport in these areas. Areas that supported railroad traffic and had navigable waters become key centers.

For another, the empty West of prairie, desert, and mountains provided promise to immigrants looking for a better life, and became an outward expression of Manifest Destiny. The colonizing of the West was significantly sped up by the transport and promotion offered by railroads. Sir Arthur Helps in his commentary on early railroading wrote, "In America a railway is like a river and is regarded as a natural channel of civilization; it precedes population; and is laid down even before common roads are thought of."⁴ The traffic created by railroads into areas of the West was not only providing settlers' access to unsettled land, but also by providing goods and commodities to the settlers, and then carrying back the settlers' produce.

Aside from demographics, the railroads affected other areas of life. As a mass transport system, they began to create a leveling field for rich and poor, reducing stratification and class structures. Furthermore, as was typical around the world, they became a way of uniting people of nations, generating national pride and development. In this they were, and are, a highly visual sign of progress and modernity.

Even today many nations define themselves by their railways. As Faith notes, "Railway systems represent a country's capacity to organize its transport - and thus, by implication, many less obvious public functions - in a sane and economic manner... Railways represent a society, a community, in motion..."⁵

America still heavily relies on railroads for mass transport. And, although American railroads have generally been considered outmoded in the recent past, when issues of "pollution, safety, land use, even the establishment of a basic economic equation between rival forms of transport" are taken into account then "...the limitations and inconveniences of the motor car have become increasingly apparent."⁶

The Transcontinental Railroad: The Race from the West

The need -

When we stood for the first time on the iron-bound shores of the Pacific a generation ago and looked upon their desolate mountains, after a voyage of more than half a year, we thought in our forlorn hearts that the last tie that bound us to our native land was broken... Would I accept an invitation to go to the "front" and see the last spike driven? ...Could I refuse to share in this triumph on the great day, long prayed for, that was to witness the finishing blow to the greatest enterprise of the age? ...I was off.

Dr. J. D. B. Stillman, July 1869. ⁷

The promise -

...a great continental system, reaching from ocean to ocean, eventually intersecting every political subdivision of the United States, thereby giving impetus to domestic trade and intercourse, opening new fields of labor and prosperity within our limits, whilst our wealth will be increased by the rich eastern trade, through our mercantile marine on the Pacific, with Japan, and distant India.

The advantages of the Pacific railway will be felt, not merely in carrying with its progress at an early period extensive lines of settlement, thereby subjecting to the toil of husbandman, with corresponding rewards, plains over which the Indian and buffalo now roam, thus strengthening the foundations of the republic, but it will bring to light and develop the mineral interests now held as a proprietary right by the nation in the public domain.

Commissioner of the General Land Office, November 29, 1862. ⁸

Thus, from a national view point the idea of a transcontinental railroad had many positive factors influencing its promotion. These would include spurring feelings of national unity, reaching California (after the discovery of gold in 1849), reaching the Pacific and Pacific Rim for more efficient handling of through freight, allowing growth of Western grain production and trade, helping satisfy the need for large-scale troop and supply movement (Civil War), and the benefit of having a compatible national system of standard gauge. Yet, although it had been discussed off and on in Congress since around 1845, it was beleaguered with competing interests both railroad and otherwise. But this was nothing compared to the opinions and competing interests bombarding the project during its construction.

Long ago the public have justly rewarded this much-lauded and patronized transcendental enterprise

as a merely private affair to be used for the enrichment of a very few individuals, without anything like compensating returns to the liberal public, by whom it was started, and by whose money built... [Those] reflecting people, who know better, will be apt to regard it as merely another link completed in the chain whereby a couple of selfish corporations are endeavoring to prove to all the world that gratitude is weaker than avarice, and that it is dangerous to trust any private individuals with the management of such vast public interests.

James Anthony, June 19, 1868. ⁹

... the concern is a most dangerous monopoly and an outrageous swindle...

Placer Herald (Auburn), February 3, 1866. ¹⁰

Everywhere along the line, and at its termini, the people looked upon its coming as the second advent of a Saviour. They had tired of their wagon roads, over which all could go alike, and prayed for the one of iron and steam. Like frogs in the fable, who, tired of the log they had erected as their king, upon which they had sported and rested at their will, chose a stork, which with long bill and ravenous appetite proceeded to feed upon his subjects.

History of Nevada, Thompson & West, 1881. ¹¹

This is not merely the difference between dream and reality. For truth lies somewhere amongst all the lines of commentary and criticism, or between them. Certainly, opinions and points of view are issue or interests driven. Needless to say, some hampered and some hastened the undertaking. This small sampling does little justice to the complexity of the issues or the enterprise. For, in fact, the undertaking was one of colossal proportions in terms of engineering, finance, and management. And, it provides heavy weight to Mark Reutter's comment that "...technological change is a political process."¹²

The story of the western end of the Transcontinental Railroad begins with U.S. Congressional manipulations and the start up of the Central Pacific Railroad Company of California in 1861 by a railroad engineer irreverently nicknamed Crazy Judah and four Sacramento storekeepers. But they were merely the catalyst for a railroad agenda championed by Abraham Lincoln and his Republican Party.

Abraham Lincoln was a former railroad lawyer. As such, if he wasn't sympathetic to railroad causes, he was at least familiar

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with their potential as economic movers and as a means of uniting the country from east to west. The Republican Party for its part (a party primarily representing a Northern swatch of interests) foresaw the economic advantage and adopted a plank staunchly advocating the "Pacific Railroad."

When Lincoln was inaugurated on March 4, 1861 many of the Southern states had already seceded from the Union. With the House and Senate emptying of Southern interest, the potential southern routes for the Pacific Railroad were no longer argued. This was important because, as Bain notes, "Most of the second session of the Thirty-second Congress (1852-53) was devoted to furious debates over a Pacific rail route."¹³ Furthermore, with the coming turmoil, the railroad could be argued as having military importance for tying the far Western states to the Union, and in the movement of troops.

The Pacific Railroad Act was passed in 1862 with Lincoln's strong encouragement. It, along with several following acts, did two very important things. First, the Act of 1863 overrode Lincoln's decision to make the standard gauge 5 feet and instead made it 4 feet 8½ inches. However, the gauge was not so important as the fact that it was standardized for compatibility amongst the various interests and thus provided for a continuous line. Secondly, between the Act of 1862 and the Act of 1864, significant financial incentives were established for constructing the road. This cannot be overestimated as many railroads failed financially in their construction phases.

Specifically, the Acts of 1862 and 1864 authorized the Union Pacific Railroad Company to start building the Transcontinental Railroad in the Territory of Nebraska and work west while the Central Pacific Railroad Company of California was authorized to start in either San Francisco or Sacramento and work its way east (the C.P. assigned its rights to the, then to be formed, Western Pacific Railroad to build the line from San Francisco to Sacramento). There were certain provisos that had to be met to, including one that mandated that a telegraph line also be constructed along the right of way.

Amongst the financial incentives were a right of way through public lands of two

hundred feet on each side of the road along with the use of any natural materials within that band that might aid in construction, the ownership of every alternate section (1 square mile) of public land to the amount of ten alternate sections per mile of length on each side of the road, \$16,000 in U. S. government bonds for every mile laid with provisos for additional bonds for construction in rough terrain, the right to sell company stock, and the right to issue first mortgage bonds in like amount as the government bonds. Furthermore, they were free to forge alliances with, and gain franchises and concessions from, the towns, territories and states in which they passed.

This was big business the likes of which had never been seen before. As Taylor notes, "During the nineteenth century there took place in this country a gradual transition from merchant to industrial and finance capitalism... On the one hand the railroads helped to effect this change; on the other their growth was significantly affected by it."¹⁴ The railroads helped to create international markets, helped expand capitalism to the creation of investment banker institutions because of the huge financing, and, as Faith notes, dominated stock markets around the world for a good half century.¹⁵

Notes

1. John R Stilgoe, "Metropolitan Corridor: Railroads and the American Scene," x-3. This book focuses on the cultural aesthetics associated with trains during the period, 1880-1930.

2. George Rogers Taylor and Irene D. Neu, "The American Railroad Network: 1861-1890", introduction by Mark Reutter, xi. This book is concerned with the unification of the railroads through a process of standardization.

3. Nicholas Faith, "The World the Railways Made," 132. An excellent book on the general socio-cultural aspects that trains brought to a fore around the world. It also provides a very good history of early locomotives and railroads (particularly English) for the non-technically inclined.

4. Ibid., quote of Sir Arthur Helps, 67.

5. Ibid., 5.

6. Ibid., 6.

7. Web site: family of Lewis Metzler Clement (CPRR.ORG), "Central Pacific Railroad Photographic History Museum." Address: <http://www.cpr.org>. Link to University of Michigan Library. Article from "Out West" magazine by Dr. J. D. B. Stillman, "The Last Tie," published July 1869. This is a very nice website for C. P. fans and includes a brief history, many photographs and commentaries, and links to other web sites of interest.

8. Web site: family of Lewis Metzler Clement (CPRR.ORG), "Central Pacific Railroad Photographic History Museum." Address: <http://www.cpr.org>. General Land Office, "Excerpt from the Report of the Commissioner of the General Land Office made to the Secretary of the Interior relating to the Land Grants made for the Pacific Railway under the Pacific Railroad Act of 1862, and to the management and increased value of the retained Mineral Rights to the Government of these lands." Published November 29, 1862.

9. Ibid., James Anthony, editor of the Sacramento Union, editorial comment upon arrival of the first through train to Reno, June 19, 1868.

10. Ibid., Placer Herald (Auburn), February 3, 1866, (1866-02-03).

11. Thompson & West, "History of Nevada: 1881 with Illustrations and Biographical Sketches of its Prominent Men and Pioneers," 272. The first state-wide history of Nevada. Published in 1881 it is a fascinating accounting although not always accurate.

12. George Rogers Taylor and Irene D. Neu, "The American Railroad Network: 1861-1890," introduction by Mark Reutter, xiii.

13. David Haward Bain, "Empire Express: Building the First Transcontinental Railroad," 48. At 797 pages this is the tome concerning the Transcontinental Railroad. There are many details provided, all of them very interesting. A good read.

14. George Rogers Taylor and Irene D. Neu, "The American Railroad Network: 1861-1890," 3.

15. Nicholas Faith, "The World the Railways Made," 89.

NSRM ALBUM

(Right)
The Artist's Reception and Book Signing on December 8th was a great success with 22 authors autographing their books for visitors.



The *Polar Express: Reading and Riding Adventure*, a children's educational program, took its maiden voyage on November 18th. Twenty-four children joined staff and volunteers for a fun evening of story time, crafts, and a ride on the motor car. If the program is a success NSRM will implement a yearly holiday program for children.

(Below) Santa Train on December 11 & 12 was blessed with great weather and one of the largest crowds ever according to long-time volunteers.



There was great excitement on December 10th when a major corporate client shot a commercial at the museum. The commercial, recreating the Golden Spike Ceremony, will air nationally in early 2005. Museum volunteers "go Hollywood," appearing as extras.

Symposium 2004: A "Smash Hit"

By Stan Cronwall,
Symposium Committee Member

Despite Sunday's blustery weather that heralded the first major winter storm of the season in the Sierras, the 33rd Annual V & T History Symposium was a rousing success. More than 200 people attended the various activities which ranged from a special Thursday evening workshop to the Symposium Banquet.

Preparations began more than a year ago with a review of the Symposium 2003



Survey results, selection of the Steering Committee co-chairs from the NSRM staff and the Friends, and rounding out the various sub-committees with volunteers. This all paid off with perhaps the smoothest running Symposium ever.

The first event was the special Thursday evening photographic workshop. The driving force behind this activity was staff member Jeremy Harding. He, together with Nevada State Museum Staff Photographer, Scott Kelette, orchestrated a unique opportunity for the nearly 30 people who attended. Starting about 3 p.m., V & T loco No. 25 was pulled out of the annex and fired. Shortly thereafter, V&T No. 27 was pulled out into the sunlight. Rarely seen by the public in the light of day, this in itself was a rare photo opportunity. As the vintage consist of V & T cars were assembled, more and more shutter-bugs showed up to take advantage of the brilliant sunlight and the vintage locomotives.

Around 4 p.m., Scott Kelette, began his classroom instruction devoted largely to

nighttime photography techniques and tips. After a dinner break, all waited as the sun went behind the hills and finally in the dusk the class set up in front of the engines just to the north of the Wabuska Depot. The headlights on No. 25 and No. 27 pierced the dusk and darkness. Through the efforts of the staff, No. 27 had a working headlight, light in the cab, and even the stack emitted "smoke." Shortly after 8 pm the equipment was re-positioned into a "double-header" with No. 27 in the

lead position along the tree line below Curry Street. The class members continued to burn film until well after 9 p.m.

The Symposium proper began Friday morning at the Carson Nugget with an introduction by our new Museum Director, Peter Barton. Using visuals, he outlined his wide range of experience in railroad museum management

with particular emphasis on his exceptional results from fund raising, and separately his background in exhibit design, development and production.

The individual presentations on both Friday and Saturday were well received. Most speakers switched to power-point this year resulting in much sharper and brighter visuals. Attendance at these sessions was perhaps the largest ever exceeding 160 people. (For a DVD of the Symposium sessions, please contact the museum at 775/687-8291.)

On Friday evening, the Friends Annual Board Meeting held at the Museum was well attended, and highlighted by the election results which returned Ron Allen and Jerry Hoover to the Board along with

newcomer Geoff Brunner. A reception with light refreshments followed.



Saturday evening, more than 160 people attended the Symposium banquet. The results of the Silent Auction were announced, and about ten people received prizes from a drawing. The evening wrapped up with Chris DeWitt, aka "Chris de wit," bringing down the

house with his Year In Review visuals, and wonderfully incisive comments on life, the Museum, state governance, and insurance.

We went from shirt-sleeve weather for the afternoon portion of Thursday's workshop to sweaters and jackets on Sunday's mid-40s temperatures that featured drizzling rain, wind gusts, and scudding clouds. About 50 or so of the hardy gathered in the Restoration Shop as Chris DeWitt elaborated on the status and resources needed to complete the McKeen car, and what might be next in line for the Shop. Clearly, if the McKeen car is to run again on its own power, major funding infusions are needed.

Meanwhile, outside, V & T No. 25 and NSRM locomotive No. 8 were being readied to run as a "double-header" for the steam up, the final Symposium activity. Thank you to all who attended, we hope to see you back next year. And for those who didn't, we hope to see you at Symposium 2005!



MUSEUM STORE

The Museum Store is operated by Nevada State Railroad Museum, and is staffed by museum personnel and volunteers of the Friends. The store specializes in railroad books for adults and children, train videos and DVD's, audio tapes and CD's, toys, train models, hats and apparel, railroad pins and jewelry, train novelties and souvenirs, note cards and artworks, and calendars.

We invite you to visit the store while at the museum or visiting Carson City. If you don't have the opportunity to visit us in Carson City, we offer a few of our interesting selections on this page. Telephone call inquires about railroad merchandise are always invited, and may be directed to Museum Store Manager Rich Reitnauer (775) 687-8292.

And, remember, members of the Friends of NSRM are entitled to a 15% discount on all museum store purchases. Proceeds from sales are used by NSRM to fund a variety of museum projects and interpretive programs.

G-SCALE V&T INYO LOCOMOTIVE: A Hollywood Star and NSRM's pride and joy, the Virginia & Truckee 4-4-0 locomotive INYO can now be yours, for your G-scale garden or indoor model railroad. Hartland Locomotive Works, of La Porte, Indiana, has added the INYO to their fine line of American-built large scale products. This smooth running, affordable engine features an industrial grade motor, highly wear resistant materials, brass hardware, working lights, and is suitable for indoor or outdoor use. Price: \$399.00.

Hartland also produces a quick and easy **CLICK & GO G-SCALE TRACK SET**, with **DELUXE POWER PACK**, consisting of 8 curved and 4 straight pieces of track, which forms a basic small oval layout. Price: \$44.95.

Additionally, four compatible Virginia & Truckee cars are now available for a limited time. Included are a V&T Combination Car, \$149.00; a V&T RPO Car, \$149.00; a V&T Cattle Car, \$69.95; and a V&T Flat Car, \$39.95.



VIRGINIA & TRUCKEE 440 AMERICAN

New INYO T-SHIRTS AND SWEATSIRTS: We've designed a beautiful NSRM-inspired t-shirt, with full-color artwork, depicting the INYO at the museum's restored Wabuska Station. The design is also available on sweatshirts. Both are top quality 100% pre-shrunk cotton, color ash. T-shirts are available in youth sizes, (6-8), (10-12) and (14-16) for \$15.50. Adult T's are available in M, L, and XL at \$16.95; XXL at \$19.95. Adult sweatshirts are available in M, L and XL at \$25.95; XXL at \$28.95.



COMMEMORATIVE V&T SOUVENIR NEVADA LICENSE PLATES
A unique way to display your loyalty and support of the V&T reconstruction project, between Carson City and Virginia City, is by displaying a V&T Souvenir Nevada license plate. These plates are a fundraising project of the Northern Nevada Railway Foundation. They are not legal for vehicle licensing requirements. The following license plate varieties are currently available for \$12.00 each: NSRM, INYO, NO. 18, NO. 22, NO. 25, STEAM, TRAIN, or VTRR. Additionally, a license plate frame, with the slogan "Proud Supporter... The V&T Lives" is available for \$10.00 each.

NSRM EQUIPMENT GUIDE

Hot off the press! The second edition of the *Equipment Guide* is now available. The 54 pp. booklet with historic and present day photographs of NSRM's rolling stock is still only \$4.95.

MAIL ORDER FORM

Mail to: **NEVADA STATE RAILROAD MUSEUM**
2180 South Carson Street
Carson City, NV 89701

Phone orders to: 775-687-6953 (9:00am-4:00pm daily)

Ordered By: _____
NAME: _____

UPS SHIPPING ADDRESS: _____
CITY, STATE, ZIP CODE: _____

TELEPHONE (DAYTIME): _____
Member of the *FRIENDS* (Please Circle): YES NO

ITEMS ORDERED:

Quantity	Item	Description	Price Each	Total

MERCHANDISE SUBTOTAL: _____
LESS 15% DISCOUNT IF APPLICABLE: _____
SUBTOTAL AFTER DISCOUNT: _____
SHIPPING: **\$4.95**
TOTAL PAYMENT ENCLOSED: _____

Payment Method (Circle one): Check Credit Card:
Visa or Master Card
Credit Card #: _____ Exp. Date MM/YY: _____

Short Lines

NSRM RECEIVES TOURISM DEVELOPMENT AWARD

New businesses or those that added new facilities to attract visitors and enhance Nevada's tourism economy in 2004 received Tourism Development Awards at the annual Governor's Conference on Tourism in Reno on December 7. The awards went to 105 businesses.

Among recipients this year is the Nevada State Railroad Museum, being recognized for the construction of the new passenger platform at the Wabuska Depot, the starting point for the museum's seasonal train operations. The new platform, constructed in late 2003, enhances the historic context for the trains while providing more efficient and safer train loading and unloading.

Director Peter Barton and Friends of the NSRM volunteer Russ Tanner accepted the award on behalf of the museum at the December 7 reception.



New Display To Open on January 12, 2005

The exhibit *Tireless and Unremitting: The Chinese and Nevada's Railroads* will have a fresh new look for the new year. Museum staff in conjunction with personnel at the Humboldt-Toiyabe Carson Ranger District are installing a display in the exhibit that will examine the lives of Chinese immigrant woodcutters who cut the wood necessary to support the railroads, mining industry, and the domestic needs of northern Nevada's businesses and families.

These changes will include a new display in what has been the "camp" scene. A partial log cabin will be built in this space.

Volunteer Opportunities with the Wabuska Depot Interpretive Project

As discussed in the President's Message, the Friends of the Nevada State Railroad Museum are working towards authentically furnishing the original Southern Pacific Wabuska Depot to a 1910-1920 appearance. Over the past couple of months Russ Tanner has been working diligently on restoring an order board for the depot. This is a very big project and he could use assistance with cleaning metal parts.

In addition, assistance is needed in painting signs and benches. Remember, these projects don't require an ongoing time commitment, and are a great opportunity to "work with your hands" under the expert supervision and guidance of the restoration shop staff. If you would like to participate in one of these projects, please contact Chris DeWitt at the Nevada State Railroad Museum Shop, 775/684-8281. Thank you for your support!

Museum's Nevada Day Parade Entry Earns a Second Place Result

Museum volunteers and staff braved the brisk morning temperatures to make an appearance at the Nevada Day parade on October 30th. NSRM's entry was the handcar powered down the parade route by a young contingent of volunteers. Adult volunteers and staff were available to get the recalcitrant handcar going in the right direction; it tended to want to list a bit to one side!

The parade committee looked favorably on the entry by awarding it second place in the Historical Division.



NSRM Welcomes Jessica Sanders

Jessica Sanders joined the staff of the Nevada State Railroad Museum on September 29, 2004. She took the position of Museum Attendant replacing Melissa Hogue who left the museum in June. Jessica has extensive experience in retail; she came to the museum from Big 5 Sports. If you haven't met Jessica, please stop by the office when you're at the museum and introduce yourself!



Department of Cultural Affairs to Host Oasis Conference in April 2005

The Nevada Department of Cultural Affairs in cooperation with the Nevada Humanities Council will host an Oasis Conference April 5-7, 2005 in Carson City. The Oasis conferences began in the mid-1980s to bring the state's entire cultural community together. In cooperation with one another, supporters of the arts, libraries, museum, historic preservation, and archaeology hoped to demonstrate that Nevada was a cultural oasis, not a wasteland as was often incorrectly asserted.

Oasis ran for several years and proved an outstanding success. In 2003, the conference came back to life, and now in 2005, the Department plans to host another Oasis. The theme of this year's conference is "Rich in Culture--Nevada's Agenda for Vital Communities." Additional information will be forthcoming about the conference.

NEVADA STATE RAILROAD MUSEUM

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 (775)687-6953

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FRIENDS OF THE NEVADA STATE RAILROAD MUSEUM

MEMBERSHIP APPLICATION

Please select desired membership category (membership is renewable annually)

Certificate, membership card, voting privileges, SAGEBRUSH HEADLIGHT newsletter, *Railroad History* (for all memberships over \$35), free Museum admission, 15% discount in Museum Store.

INDIVIDUAL/GENERAL

- Senior (62+) or Student.....\$20
- Senior Couple.....\$40
- Individual.....\$35
- Family.....\$50
- Sustaining.....\$100
- Contributing.....\$250

CORPORATE

- Regular.....\$100
- Fireman's Roster.....\$250
- Engineer's Roster.....\$500
- Conductor's Roster.....\$1000
- Lifetime.....\$1200

(includes above with framed certificate)

Name (Please Print) _____

Spouse (if family membership) _____

Address _____

City/State/Zip _____

Phone () _____

Amount enclosed: _____ Check here if renewal _____ Date _____

Make checks payable to: FRIENDS, PO Box 1330, Carson City, NV 89702 or _____

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Last Three-Digits From Credit Card Number On The Reverse of Credit Card _____