

NEW MEXICO STEAM LOCOMOTIVE RAILROAD HISTORICAL SOCIETY



CELEBRATING NEW MEXICO CENTENNIAL

1912—2012

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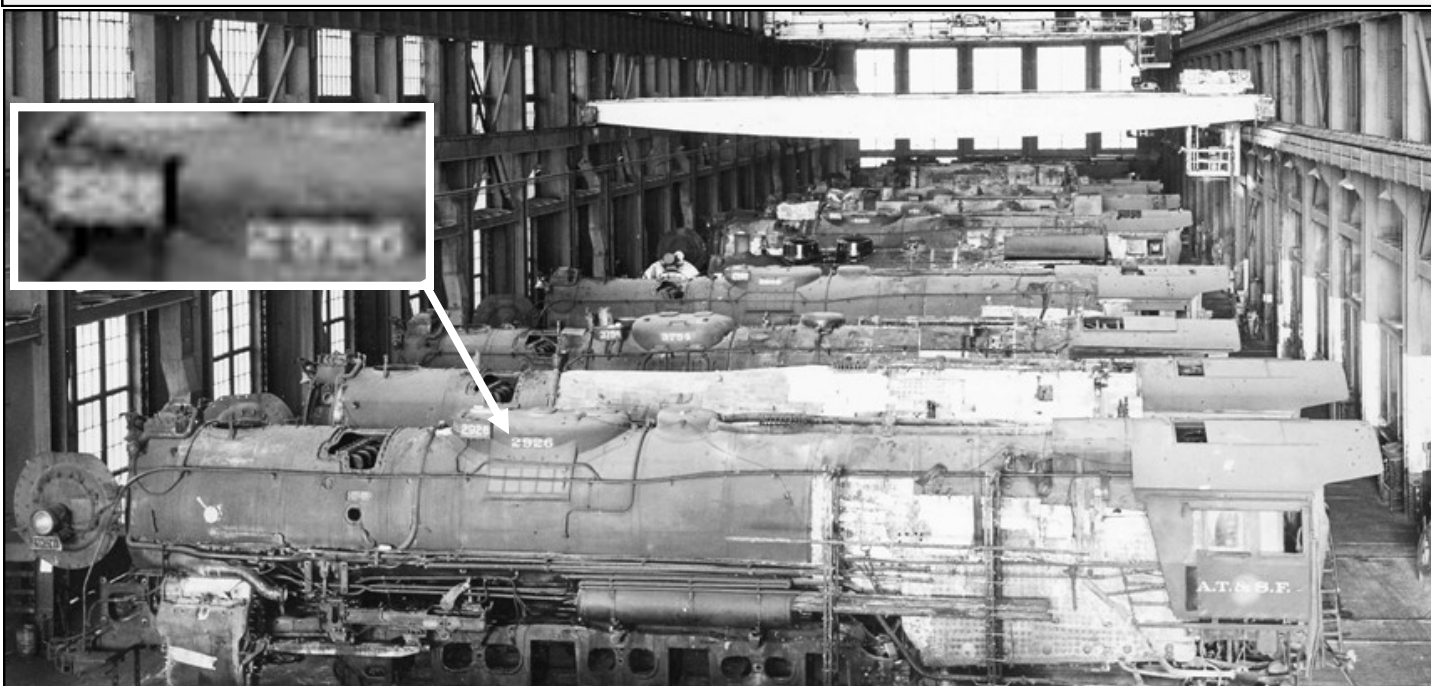
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BRINGING BACK THE BACK SHOPS

The Santa Fe Railroad's large steam locomotive maintenance facility is often referred to as the 'Barelas Railyards', or the 'Back Shops'. The 27+ acre facility, one of the largest steam locomotive repair shops in North America is entering what will probably be a years-long redevelopment. In the following article, NMSLRHS President Mike Hartshorne looks at the options available for a fully restored and operational 2926 and related rolling stock.



AT&SF 2926 (Foreground & Inset) Was Once At Home, Along With Its Siblings In The Santa Fe Back Shops.

The New Mexico Steam Locomotive and Railroad Historical Society has been actively engaged for the last few months as the City of Albuquerque begins to consider redevelopment of the old ATSF back shops south of city center. Samitaur Constructs of Culver City California was selected as the Master Planner after an RFP process. Samitaur's approach to planning got into high gear in August with three open public meetings to take community input. Held at the Hispanic Cultural Center first and the next day at the Barelas and South Broadway Community Centers these input meetings were heavily attended by members of the NMSL&RHS.

Lots of different voices clamored for their individual agendas. Sustainability, Green, Historic, Architecture, Culture, Museum, Neighborhood, Jobs, Work Force Housing and many other drums were beaten. I was personally ready for opposition to the idea of having 2926 return to the backshops. "We don't want a noisy, smoky, steam locomotive in our neighborhood!" was a challenge I anticipated we would need address.

My concern was unwarranted. I couldn't have been more surprised when over and over members of the adjacent Barelas and South Broadway communities stood up spontaneously and endorsed bringing back their family history in the form a steam locomotive. They knew 2926 as "their" locomotive – which it is. Politicians like City Councilor Ike Benton, State Representative Rick Miera, and State Senator Eric Griego as well as multiple Wheels Museum Board members and Wheels President Leba Freed were all for the return of 2926 to a home in the backshops. Not one member of the widely diverse crowd commenting, questioning, suggesting, demanding, or complaining about the plan spoke a word against 2926 coming home.

Now it just so happens that CMO Rick Kirby and member Don McCornack had been looking ahead. They used our detailed requirements to develop a set of plans and elevations for two alternative designs for a permanent home for 2926 at the Rail Yards. The first alternative is a rebuilt wedge segment of roundhouse (plan A), while the second is a rectangular engine house (plan B) each with about 25,000 square feet to be located near and fed by the turntable.

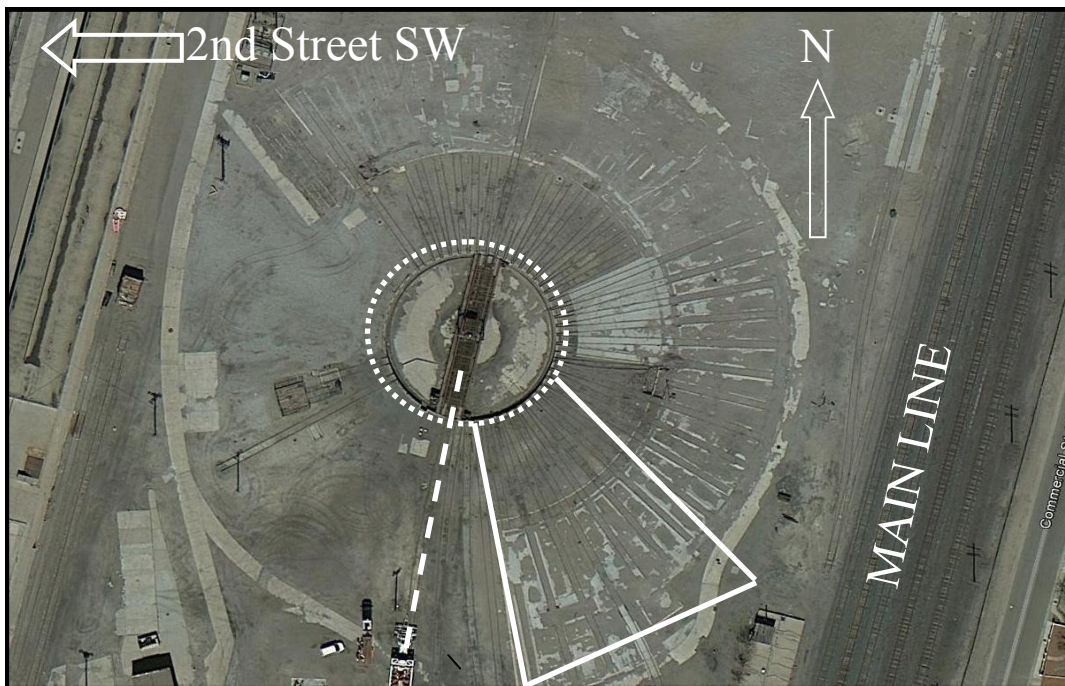
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Multiple tracks entering these buildings are intended to accommodate additional locomotives and rolling stock. The plans also provide public viewing space, gift store, shops, and crew and education areas. We combined these plans into a small briefing book along with a document summarizing a steam locomotive maintenance and display facility created by our business planning team and the funding committee (AKA the “plots and plans committee”).

The book was covered by a letter to Mayor Berry seeking his support and appended by a 1950s photo of 2926 in service and a painting of 2926 by Gayle Van Horn, local artist and member of our Advisory Council. Before Samitaur came to town we had presented them with this book. Copies went out to multiple city officers involved in the Rail Yards Redevelopment project, the Wheels Museum, and the 3751 and 5000 guys. More copies have been requested and provided to key players as the word got out. You can find the Plan A and B on our website. These diagrams are certainly not set in stone but provide an excellent place to stake a claim in the planning process.

On the strength of that effort NMSL&RHS was declared a “stake holder” in the Rail Yards Redevelopment project and follow-up meetings with city officials and Samitaur have been held including many on site at the 2926. After a couple of months to chew on it Samitaur came back to Albuquerque to present their initial plans.



Above is an aerial view of the turntable with an outline of roundhouse footprint, and radial tracks surrounding it. (Roundhouse was razed in 1987). A brief sketch of Plan A to provide a home for 2926 and related rolling stock overlays the aerial view. The dashed line is a rail spur accessing the turntable, dotted line is turntable, and fan shaped outline is space defined in plan submitted to City Officials and planning team. Full details of Plan A and Plan B are on the NMSLRHS web site at www.nmslrhs.org. Additional details and full site graphics regarding railyard development can be found at the Albuquerque City Council web site: <http://www.cabq.gov/council/projects/current-projects/albuquerque-rail-yards-redevelopment/>

On Thursday October 25th at the Barel Community Center about 250 citizens, including at least 20 members of the NMSL&RHS, met to hear and see what Dolan Dagget and John Molloy, architects and planners for Samitaur had come up with. The attached plan took a lot explaining. Commercial redevelopment of the historic buildings to generate as many as 3,000 “good” jobs, lots of new construction to accommodate public uses, acoustic vegetation covered berms around the periphery of the 27.3 acre site, underground parking and a lot of details were summarized.

Some daring architectural features were proposed such as a curved glass “scoop” to collect rainwater over the transfer table turned into a reflecting pond. What is interesting is that the first thing the planners showed was a rebuilt roundhouse with our suggested segment clearly drawn in exactly where we said we would like it. The turntable would function and locomotives could come and go to our end of the roundhouse. The rest of the roundhouse would be “cultural” development likely devoted to a museum function and performing arts.

There is no way that this writing can tell it all. Lots of ideas, especially this first presentation, can look good on paper. Plans will be revised based on more public, government and practical input. The revision will be presented on December 1, 2012. After that the plans will advance to environmental review, city zoning adjustments and finally the Albuquerque City Council for approval.

If Samitaur’s proposed Master Development Plan is approved, the City will move to the second phase of the project, the selection of a master developer for the site. This phase will be open to competitive bidding and Samitaur will undoubtedly compete for the contract. Samitaur thinks that work could begin on the commercial part of the plan as early as 2014. Because this process involves a heavy dose of bureaucracy, it may not move that fast.

So where is the fly in the ointment? Think of it like this. In a complex project like this, the devil is always in the details. Financing is, perhaps, the major issue. Commercial development on the site will depend on private sector investment, in a poor economic climate. Samitaur believes they can get this financing. However, development of public space and non-profit uses on the site cannot rely on private sector investment for funding. Funding for public uses at the site, such as a permanent home for 2926 will have to come from somewhere else, and that pretty much means separate fundraising activities, to include the use of public funds. Just as current economic uncertainty has made for difficult times nationwide in the for-profit private sector, all levels of government have been hit hard. Thus, finding the money to implement the ambitious Samitaur proposal may be the biggest challenge of all.

The NMSL&RHS would love to have some version of our Rail Yards proposal as a purpose built permanent home and our foot is definitely in the door. So, we’ll keep pushing. In the meantime we will continue with the restoration of 2926. It sure would be nice to run under our own steam power to a permanent home at the backshops.



BANGING ON A 2900
FEATURING—TIMKEN BEARING EXPERTS—
And
The NMSLRHS Roller Bearing Team

FIGHTING FRICTION

The conceptual design of tapered roller bearings has been around for more than two centuries. First patented in 1802 by French inventor M. Cardinet, there was little advance in the friction fighting innovation until near the end of the century. On June 28, 1898, Henry Timken and an associate took out a patent for tapered roller bearings in the wheel hub of horse-drawn vehicles. Establishing the Timken Roller Bearing Company plant in Canton, Ohio in 1901, Timken continued the advancement of roller bearing technology.

During the next 30 years, railroads began limited use of roller bearings, often on wheels and axles, while others resisted due to the higher initial cost of roller bearings. The result was a mix of roller bearings and solid bearings, often referred to as ‘friction bearings’. In 1930, Timken took action to bring about change. To do so, the company commissioned American Locomotive Company to build a 4-8-4 steam locomotive with all sealed roller bearings rather than friction bearings, or a mix of the two types.

The locomotive, No. 1111, also called the ‘Four Aces’, was used by several railroads in a variety of services, and under varied conditions. The demonstrations proved that roller bearings were a great improvement over friction bearings, increasing efficiency and significantly reducing labor intensive servicing.

Santa Fe 2926, as initially built, had heavy side rods and friction bearings, it was later retrofitted with Timken Roller Bearings and lighter Timken-designed side rods. Even by today’s standards, the huge roller bearings presented a technological challenge to our all volunteer crew. That is when Timken stepped up and helped meet the challenge. In this issue, Mike Hartshorne’s “Banging On A 2900” article salutes the combined Timken-NMSLRHS crew that addressed the bearing refitting challenge.—Editor



Timken Roller Bearing Company’s Famous Four Aces: *Timken chose the 4-8-4 design so it could be used by a variety of railroad work, including heavy freight and fast passenger service, to demonstrate their roller bearings.*

Timken Roller Bearing Experts Lend A Hand Banging On A 2900.

by Mike Hartshorne

Timken roller bearings for the ATSF 2926 don’t just happen. Those bearings require real experts who are proud of what they know and can do. The first expert recruited by Bob DeGroft was Brian Cave who retired after 51 years with Timken. He got things rolling with his old colleagues.

Dave Aungst was the Timken expert from Texas that visited the 2926 last fall. He watched as the pullers designed by Dave Van de Valde were being put to work getting each bearing off the locomotive. Dave Aungst knew they needed work and who could do it.

The heavy set of roller bearings* in their sturdy Randy-built boxes left Albuquerque for the Timken factory in Union South Carolina months ago. There they were inspected by Jay Alexander and his crew—more of those experts. The factory guys determined that the bearings were in good enough shape to be rehabilitated. They went to work polishing rollers and races. New sleeves were pressed on where needed. When the bearings came back the NMSL&RHS guys needed schooling. Brian Cave and San Diego-based Timken field service representative Anthony “Tony” Iannamorelli answered the call.



Brian Cave, (Right), provides instruction on the 2926 bearings to Dave Van de Valde, Bob DeGroft, and Tony Iannamorelli

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Brian started as an apprentice with a Timken associate company in England, and then spent a year and a half working for the company in France. He had a good time and was happy to move to Canton, Ohio, the home Timken headquarters. The stickers on his helmet show he has been around the world solving bearing problems for big customers. He explained with a delightful English accent his interest in the 2926 bearings with a story about double planetary bearings powering the giant wheels of mining trucks. In the 70s Timken had to re-invent some of the technology that applies to the massive loads and vibrations placed on those wheels. The solution was reminiscent of the 2926 bearings designed in the 40s. Besides that he understandably likes steam locomotives.

Tony speaks with the accent from his homeland Italy and got his start in Canton at the Timken Vocational High School. After the Iran crisis in 1978 he was angry enough to “go to war” so he enlisted in the US Navy as a machinist. His right forearm has an anchor tattoo dated 79-88. Out of the Navy to care for his family in Ohio he was hired by Brian 23 years ago. Timken, he says, favors veterans. His respect for Brian showed through as the two made international jests about each other’s taste in food and other proclivities. More than once Tony called Brian a legend.

At about 8:00 AM on September 17, 2012 a crew of a dozen Society members lead by Bob DeGroft and Dave Van de Valde got introduced to this pair. Dave and Bob and others went to school under Timken tutelage as the bearing set for the #4F was unpacked and “miked” against spread out mechanical drawings. Dave Traudt worked to take documentation photos. Dave and Carlos Osuna and John Mocho managed to get the set of bearings ready while I ran out for dry ice and a chest to hold it. Alternately freezing and heating various rings and plates would be needed each day to make tight tolerance components fit together.



Tony Iannamorelli listens as Brian Cave discusses 2926 bearing design.



Chuck Mangold waits to apply pressure when Dave Van de Valde and John Roberts position the hydraulic ram as Tony Iannamorelli looks on.

or perhaps on an excused absence from his high school) and Chuck Mangold traveling to Clovis for flight duty the next day. The hollow in the #4F crank pin was packed with dry ice and the crew began weight lifting in the side rod stack in container 7. The side rod needed at any given time that day and the next was usually at the bottom of the stack. With the new porta-power ram pushing the bearing moved promptly down the #4F crankpin shaft at 9:00

The #3F bearing was rigged for a porta-power push. It moved steadily until it was just 3/16 of an inch from its seat. Beyond that it would not go. More measurements on the similar bearing from the engineer’s side were made to confirm the correct thickness spacers were in place on. They were. A lot of theories were voiced about that 3/16 inch. The old bearing puller for #3 was located and laboriously applied to remove the #3F bearing. In the meantime the inside #2F bearing was set up to go on, and put onto that crankpin with an inside clearance of 3/16. The tolerances on the drawings were 1/1000’ to 15/1000” so that placement was judged perfect. By 11:00 AM the #3F was off and re-measured until someone realized that the long nut joining two sections of 1.5” threaded rod was blocking the final advance of that bearing. With the nut repositioned it took only a few minutes for #3F go all the way on.

The site cleared out fast at 12:00 noon as most of the crew went to lunch. It was 86 degrees in the shade. When they returned Carlos heated up the inside ring



One of 2926’s Timken Roller Bearings

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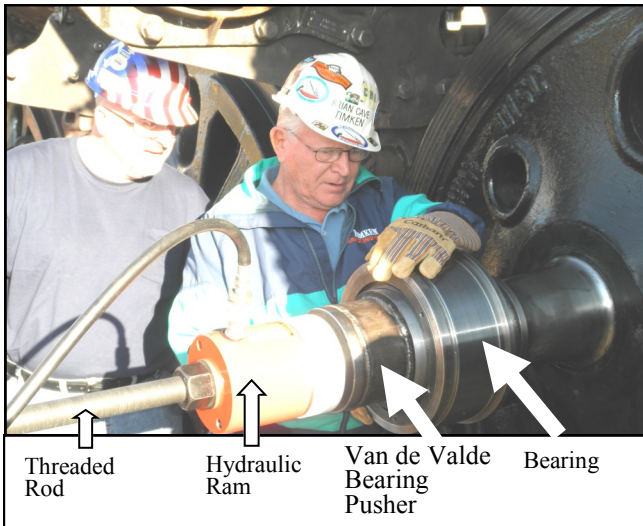
for #4's end of the #3 to #4 side rod and slipped it in place over the #4F bearing. Jeff Schmid, manager of BNSF's Employee Special, and a steam enthusiast, showed up for a visit just about the time the outside assembly of the #2F bearing was pushed on with Henry at the hydraulic pump.

An Armed Response Team representative showed up to check on us, mentioned that his father had been a lifelong Timken employee and was excited to meet Brian. When those visitors were gone the crew hit a snag. Trying to get the threaded rod out of the 3 inch plug on the backside of the #3 crankpin the rod separated at the long nut joining one piece of 1.5 inch to another deep inside the crankpin. That damned nut was messing with us again.

The rest of the afternoon saw more side rod work with forklift Sally to mount #3F to #4F. An effort to mount a #2F to #3F rod was hampered by bushings that were too small to fit over the #3F bearing. The site was secured by 4:30 PM and all went home.



BNSF Observer Jeff Schmid



Timken bearing specialists Tony Iannamorelli and Brian Cave check the process of pushing a bearing into place, using the Dave Van de Valde built bearing pusher, a threaded rod, and a hydraulic ram.

The big Wednesday crew started showing up at 7:30AM on September 20, 2012 and more than 25 cars were parked along the fence. While a number of the Wednesday gang busied themselves mounting the reverse gear, cleaning up parts and such, the bearing boys were back at it trying to solve the stuck 3 inch plug in #2 with its remaining 1.5 inch threaded rod. It seemed that if the locomotive could be rolled forward a few feet the plug could be easily accessed under the frame. That was to be done anyway when the #2 to #3 side rod was on to expose the short crankpin on #1 for its bearing to be installed. With careful measurements made Carlos used a flapper wheel to carefully open the top and bottom faces of the #3 end by 12/1000 of an inch on each side. With the big wood mallet to assist both ends went on by 9:30AM.

Lurch, the car mover, was fired up and rails cleared to pull 2926 a few feet forward. With the front bogies lifted on Lurch to get its coupler over the pilot a short pull stopped when Lurch's front wheels stepped off the rails and dug a hole in the ballast as 2926 would not move further. Big Bird was moved up and the pilot separated and swung out of the way. With the front bogies down Lurch and 2926 were re-coupled as every camera came out to capture the completion of the short pull. But 2926 would not advance. Quick inspection showed the rotation of #2 brought the protruding 1.5" rod and 3" plug into contact with the locomotive frame and mashed threads on both. The rest of the day saw Randy, Carlos and others cutting away that end of the puller.

Brian and Tony were hard at it measuring bearings for the crossheads and helping press them into place. The Society got more exercise moving side rods around while Randy and Dave crawled under 2926 scheming about the demise of that pesky 3" plug stuck on the backside of #2F.

When the day was done at 4:00 PM a lot of progress had been made. Mostly some hard won roller bearing expertise had been gained by the Society thanks to Brian and Tony. ** A small group took the Timken guys out for an evening celebration with beer, gin and tonic, and good food. I have a feeling we will see them again. The Society is getting better at this locomotive business with the help of a lot of good folks like those from Timken. Thanks, Timken, again and again!



Yes, we really do have guys 'Banging On A 2900'. That's Chuck Mangold swinging the enormous wooden mallet.

Postscript:

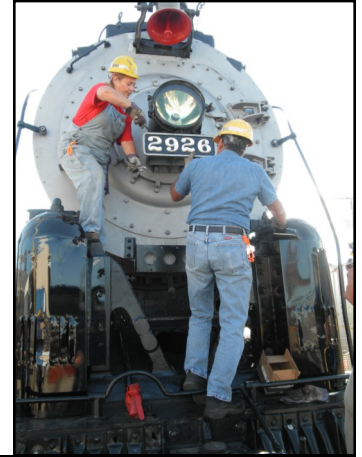
I figure gaining expertise is explained by use of Will Roger's math.
Learning by reading 1%
Learning by observation 1%
Learning by hard experience 98% (Boy, did I clean that one up!)

- For purposes of this article the drivers and roller bearings are referred to as #1, #2, #3, and #4 from front to back with "F" designating fireman side and "E" the engineer side. Side Rods are designated by the drivers/bearings they link.

** The jammed #2F crankpin plug was wrestled out in the next two work sessions by Randy, Dave, and others with a special wrench Carlos built and some lying-on-your-back-in-the-dirt-under-the-locomotive elbow grease. Before the Sept 29th Open House the #1F bearing was installed. The bearings on the engineer "E" side have been pushed.

Open House 2012, The BEST Ever!

The crew worked fast and early to get ready for the Open House. At 0730 a growing number of Society members in hickory pinstripe “dress” uniform overalls and 2926 engineer caps were already lofting tent tops, firing up the grills, icing drinks and getting the convenience store ready. The polished black cab was uncovered. Tarps came off the “jewelry” on the front of the locomotive revealing headlight, bell, and classification lights.



Setting up tents for shade, positioning displays, and reinstalling jewelry: All a part of Open House Preparation.

After an hour of elbows and locomotion we stopped for breakfast burritos and some of Warren Janke’s no-calorie chocolate cake washed down with bring-your-own coffee. A hot air balloon floated straight overhead. We blew the whistle at it. The B&H company set up their free popcorn stand, the Harvey Girls unloaded a big stash of BNSF give-aways, and Jon Spargo’s mobile Lionel layout was rolled into place. The neighbors at the Reliance Steel Company graciously opened their parking to help us out. Parking areas were manned and the National, State and Society flags were run up.

At 0900 the gates were open and in came the first of 988 official visitors. Karen Evans kept a faithful count all day. Kids were everywhere with their parents enjoying the outing. With the three bands, more than sixty members, and our faithful feline colony we had way more than a thousand souls come for the celebration.



Visitors learn about 2926, our restoration project, New Mexico rail history, and related locomotive lore, served up with a side order of good food, good music, good weather, and lots of fun for the kids.

Jim and Debbie Van Drunen with Charlie Joerg. The Van Drunens produced a real neat video of the 2926 restoration. They came out from Ft Lauderdale Florida for the open house,

The weather was ‘Chamber of Commerce’ excellent with a mild little breeze and sunshine. Jon Spargo’s layout became an instant and all day hit with kids and parents. Cameras clicked, folks chatted, and members explained the workings of our restoration effort in hundreds of happy encounters. Hot dogs went down the hatch with a side of tasty popcorn all washed down with cold water and soft drinks.

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Two new attractions joined the Open House activity this year. The BNSF Harvey Girls (Left) brought memories of rail travel when Albuquerque's famous Alvarado Center was the crown jewel of the Harvey House chain of traveler accommodations. New Mexico State Fiddle Champion Emily Anslover, with her brother and sister (Above) added to the musical entertainment.

The BNSF Harvey Girls in uniform charmed hundreds of visitors. The convenience store was next in line doing a steady business in our 2926 memorabilia. Artist Gayle Van Horn signed prints of some of his best RR work. NMSL&RHS T-shirts, RR lanterns, 2926 coffee cups, paintings and books will bring smiles and happy memories until our guests come by again.

New members Jim and Debbie Van Drunen brought their short promotional video about the Society all the way from Florida. While they worked every job from parking to cooking and trash hauling the video played all day to a steady audience. Pat stumped for local RR modelers. Interesting displays of our new Timken roller bearings were on review. The Society's six New Mexico RR historical panels drew serious attention. The Safety Bear was out with the Society's Christmas card sign up list and many new members and friends will receive a unique holiday season reminder of their visit.

The music was great all day. Emily Anslover and her brother and sister started things right in the morning with the Orange Blossom Special and kept up fiddle, base and guitar in one rousing tune after another. They kept the crowd entertained until about noon when the stylishly dressed Territorial Brass Band (including our own machinist Ralph Johnson) entertained for an hour. In the afternoon Holy Water and Whiskey did a bang up job of carrying the celebration. HW&W says that the members restoring the 2926 are 'heroes' on their Facebook page. Come to think of it, they are right!

Ed Strebe commissioned more than 200 members of the ding-a-ling club as one kid after another rang the bell under his tutelage. A couple of times we yelled the warning: "Whistle!" until everybody was ready for some real noise. You could hear it blow a mile away.

When it came time to close up and tear down at 1600 the crew was tired but happy. We could not have had a better day. Next year's Open House will be on September 28th, 2013. See you there! —Mike Hartshorne

* * * * *

THE STORY BEHIND THE 2926 STORY

Friends of the 2926 may have already seen the 18 minute video clip entitled "The 2926 Story" on our web site or YouTube. If you haven't, check it out. You'll like it.

As legendary commentator Paul Harvey said, "Here Is The Rest Of The Story":

A number of weeks ago, Mike Hartshorne received a DVD in the mail. It was from Ft Lauderdale, Florida. On the DVD was a brief clip describing the restoration of 2926. It had been assembled from images on our web site. Even using the low resolution images from the web, IT WAS GREAT! It really told our story.

The producers of the DVD, Jim and Debbie Van Drunen, in searching the internet for an interesting project, saw our web site. Jim, a retired Chicago Fire Captain, and wife Debbie decided that directing their video production talents to 2926 would be a good project. Jim asked Mike for additional pictures and movie clips, and said they planned to attend our Open House to become more acquainted with us. He told Mike that they would park cars, cook hot dogs, or anything else to help. They came out, pitched in and helped with the Open House, and Debbie shot more video and pictures. They went back to Florida and produced "The 2926 Story".

That is the first chapter in the rest of the story. Additional chapters are yet to be done, but it is certain that our two new members from Ft. Lauderdale, Florida will be involved.



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BUKOVE IS BACK

Founder's Return Visit

Ed Bukove, founder of the New Mexico Steam Locomotive & Railroad Historical Society, dropped by the 2926 site for a visit in late September. Ed and wife Marilyn now live in northern Illinois, near their son, Lance.

The visit was the first in several years for the lifelong rail fan. He had a chance to see the progress on bringing his favorite locomotive back to life, to see old acquaintances, and to meet new members who are carrying on his vision of having 2926 back under steam.

We are pretty sure that Ed is expecting a cab ride when 2926 is finished.



Current NMSLRHS President, Dr. Mike Hartshorne stands next to Ed Bukove, Founder and first President of the Society. They are standing on the firebox access platform, near the backhead and firebox. Hopefully, for Ed's next visit, the cab will be finished and remounted where they are standing

RALPH JOHNSON

Death Of A Dedicated Society Member

Ralph (Jason) Johnson died in hospice on October 30, 2012. Ralph was a wonderful friend and productive member of the NMSL&RHS. He worked until just recently in our machine shop making new parts for 2926. Ralph stamped each part with a small "J" somewhere where it would not show. If you find a "J" somewhere on the locomotive remember Ralph. His wife, Kay, says his memorial service will be in December. Watch the website and the TW3 announcements from Rick Kirby for date and details.

Good bye Ralph. We'll miss you.
Mike Hartshorne, President, NMSLRHS
* * * * *

A Quietly Competent Friend Of 2926

Several years ago, we received a call from a Boeing Aircraft Co. retiree living in Louisiana. He was thinking of moving to a new location, and was planning to dispose of some machine tools he owned. Having New Mexico roots, Albuquerque was on the list of locations to which he was considering. That caller was our good friend Ralph Johnson.

A couple of years later, Ralph and wife Kay moved to Albuquerque. He had decided that this was a good place to pursue two of his favorite avocations—steam locomotive history and music. He joined the NMSLRHS, and became a member of the New Mexico Territorial Brass Band. Both organizations found a winner had joined their ranks.

At the 2926 machine shop, Ralph was masterful at machining parts for the ancient locomotive. He never 'blew his own horn' about his machine tool expertise. He quietly produced whatever part was needed. That quiet competence at the lathe was matched by his performance with the Territorial Band at our Open Houses and other local venues. There he did blow a great horn.

We lost a talented machinist, a real friend and an all around great guy.



On a cold Wednesday morning, Ralph is hard at work at his lathe in the NMSLRHS machine shop.



The pictures above depict Ralph enjoying life as a musician and machinist. The picture at top right was taken at the end of a Territorial Band performance at a 2926 Open House. At lower right he is performing at a Civil War Reenactment ceremony.