

# THE CLEARBOARD



Rod Diridon, President

<http://www.ctrc.org>

Larry Murchison, Editor

## NEWS FROM THE PRESIDENT FROM ROD DIRIDON

**Happy Hollow Trolley Line Electrification:** The City has certified the installation plans and SBC has agreed to install the system! We meet with SBC Regional VP Birt Johnson on Monday, 12/5, to make the final construction arrangements. Bob Schneider and the Trolley Volunteers are confirming the parts availability and developing a list of those that will be ordered, including about 3,000 feet of Number 2 conducting wire. A general target for the construction completion is the spring of '06 when the ground is dry. Finally!!!

### Special points of interest:

- What is the progress for locating the Steam Railroad Museum?
- Will the primary location for the museum be an A's parking lot?
- Who is working diligently to provide us with a museum site?
- What are the new vice presidents?
- How many parts are there to the locomotive braking system?
- How many round hole are in various brake parts?



This image of Lee and Doug has nothing to do with anything Rod is saying but this front page needed a picture.

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**Steam Railroad Museum:** Several meetings have been held with Vice Mayor Cindy Chavez and Councilmember Ken Yeager and both are strongly supportive of a site for the San Jose Steam Railroad Museum. Vice Mayor Chavez is arranging a meeting with new Councilmember Madison Nguyen. In order of preference, the sites under consideration are: 1) the current Firefighters' Training Facility at Park and Montgomery Street; 2) the former UP Basset Street Yards under and to the west of the Coleman over crossing, and 3) the triangular-shaped UP parcel north of the San Jose Public Works Building across Senter Road from History San Jose. Each site has impediments but our City patrons are working on a solution.

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# CTRC BOARD MEETING MINUTES

**CTRC Board of Directors**  
**Pacific Hotel, History San Jose**  
**Board Meeting Minutes**  
**August 18, 2005**

**Attendance:** Marv Bamburg, David Crosson, Rod Diridon, Mac Gaddis, Mike Kotowski, Ken Middlebrook, Larry Murchison, Bob Schneider, Gary Hunter, Hugh Crawford, Tom Anderson, John Zielinski, George Rollins, Denis Murchison, Bob Stromsted, Charley Wynn, Jack Young, Leslee Hamilton, and Brendan McCarthy

Meeting was called to order at 3:11pm.

**Minutes:** VP Middlebrook moved that the following change be made to the minutes for the 5/19 CTRC Meeting regarding Locomotive 2479. The change would be to the following:

“We will hold off on putting the wheels on until the Locomotive is moved to the new site at which time Franzen will be invited back to oversee the mating process.” VP Middlebrook moved that “will hold off” be changed to “may hold off”. The change was unanimously approved.

**Chair’s Report:** Chair Diridon reported on the changes to the CTRC Board and submitted the updated list of Board members for approval. Chair Diridon suggested that Jim Cunneen be removed from the Board as he is no longer the head of the San Jose/Silicon Valley Chamber of Commerce. The decision as to whether to approach Pat Dando, the new director of the Chamber, to see if she would like to be a member of the Board, will be made by the Board at a future time. Additions/Adjustments to the Board were as follows: Bob Schneider will be elevated to VP – Trolleys, David Bottomley will be added, David K. Ginsborg (Deputy SC County Assessor) to be added, David Knight to be added, Joel Maniaci to be added, Bob Stromsted to be added, Neil Struthers to be added as Ex-Officio member. The list was unanimously approved by the Board.

**Financial Report:** Chair Diridon did not have financials available due to a clerical oversight but CTRC records indicated that there was currently just over \$225,000.00 in the bank and \$250,000.00 pending reimbursements from the county. President Diridon has been in touch with the county several times to attempt to speed up the reimbursement process, but has been, as of yet, unsuccessful. Diridon will continue to push the county to provide CTRC the reimbursements to which it is entitled, emphasizing the problem that is created by the interest collected by the County on the money as it sits in their bank account rather than the CTRC bank account.

Dan Moors of Berger Lewis Accountancy delivered a clean audit provided pro bono. Berger Lewis also provide year ending accounting services. CTRC was only charged:

\$1,150 for the cost of completing the non-profit tax returns and corporate filings. Formerly this had cost CTRC \$2,500 annually.

## Current Projects:

- A. Trolley Barn/History San Jose – The concrete trolley inspection pit was completed and set to be unveiled to gathering dignitaries following the meeting. Thirty seven yards of concrete had to be used instead of 22. Mac Gaddis indicated that stairways would likely be needed on both ends of the pit and that Gene Martin would come up with a design. Rod received the go ahead from the City of San Jose for the designs on the Happy Hollow Line electrification. The next step is for SBC or PG&E to schedule the work while the remaining City actions are taken.
- B. Locomotive 2479 – Jack Young – Passed out pictures of the work as it is progressing. Young gave a quick overview of the history of 2479 for the new Board Members and estimated that approximately 3124 man hours have been put into the project. After receipt of the renovated drive wheels, shoes, and wedges from Robert Franzen, the volunteers have been working on reinstalling them. This has been the crux of the project for the past year. Regarding the brake rigging, Young recognized the work of John Zielinski and Art Randall. Zielinski presented a spreadsheet that spelled out the serviceability and machining status for 143 parts for the brake rigging. (See story by John in this issue.) Work is also progressing on re-assembling the power reverse. Young also reported that for the work on the boiler to commence, form 4 calculations had to be made according to the rules put forward by the Federal Rail Association. Both Young and VP Middlebrook gave the Board an overview of this daunting task and Chair Diridon lauded their continued work on the project.
- C. SCC Rail Museum – Marv indicated that Vice Mayor Chavez seemed to be enthusiastic about the Firefighter Training Facility site. If that location turned out to be unworkable, the fallback would be under the Coleman Ave. over crossing, next to the PG&E substation. Both are being pursued by Vice Mayor Chavez and Council member Yeager.
- D. Happy Hollow Rail Extension – Once the plans have been approved to the City of San Jose, Rod and Mac Gaddis will need to have a meeting with Julie Marks, Deputy Director of Parks. Rod has met with her before and she already gave her OK to the project in concept. Rod is also working with SBC to obtain their agreement to do the construction pro bono.
- E. Volunteers Report – VP Middlebrook stressed the importance of the need for growing the volunteer ranks. He re-

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ported that volunteers were constantly on site at the fairgrounds, which indicated that progress was being made. Chair Diridon suggested that he may do some appeals to local SIRs groups that may not already be aware of the work being done by CTRC. VP Middlebrook suggested that his traveling to the American Railroad Museums Convention would be helpful and made a motion to approve the travel costs. M/S/Unanimously approved.

**New Business**

- A. Acquisitions – VP Middlebrook reported that the asbestos abatement project for CTRC’s Steam Locomotive 1215 would be moving forward in the months ahead. He estimated that it would require approximately \$10 -15K to complete and noted that amount was in the original total acquisition authorization and not yet used.
- B. Historic Heritage Commission/Grant Applications – VP Jack Young recommended that CTRC apply for a grant next year when Rod noted that the 2006 Parks Charter Measure would hopefully pass creating more funding. The Board agreed.
- C. Fundraising Efforts –  
Nothing new to report

Work on the Recognition plaques for the pit continues. The plaque will be placed where the public can see it, not down in the pit. Brendan continues to work to get the plaque completed. A sample will be shown to the BBQ attendees, giving board members the opportunity to have some input on the final product. Coast Engraving and Kearney Pattern Works are committed to donate the pattern and casting.

**Next Meeting** – The next CTRC Board Meeting will be Thursday, November 17<sup>th</sup> at 7:30am at the Pacific Hotel, History San Jose.

Meeting was adjourned at 4:55pm

Respectfully Submitted:

Brendan J. McCarthy



**A NOTE FROM THE EDITOR**

"Bob Schneider received special recognition at the History San Jose Volunteers' Recognition Picnic for his extra effort on installation of the Trolley Barn Maintenance Pit and his ongoing support to the Trolley Barn. This was followed by his recognition at the RSVP Annual Volunteers' Lunch with a Commendation. Seventy Five organizations are members of RSVP, 30 submitted candidates and 7 were selected for this Commendation."



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**Locomotive 2479:** The 2479 Volunteers, assisted by Robert Franzen, have progressed remarkably in the process of restoring and reinstalling the drive wheels, shoes, wedges, suspension, brake rigging and much more. That will be presented in more detail in Vice President Jack Young's article.

**Trolley Volunteers:** Led by Vice President Bob Schneider, the Trolley Barn continues to produce remarkable benefits to both CTRC and City projects. Those will be covered in more detail in Bob's column.

**Happy Hollow Train:** The last CTRC newsletter covered the status of the possible transfer of the small Happy Hollow Train to CTRC. Mac Gaddis and I have inspected the system and note that the transfer would require some track redesign and significant reconstruction of the remaining track and rolling stock. Though not an easy task, the project would include some new funding and an infusion of new volunteers and donor contractors that may also support other CTRC programs. The City is reviewing ways that the transfer might occur and will discuss this further after the first of the year.

**Membership:** Membership Vice President Ken Middlebrook continues to maintain the volunteers' enthusiasm for the many CTRC program during this period of transition when so many projects are maturing at the same time. Appreciation for Ken and the Volunteers is expressed whenever the Board of Directors meet.



Don't read the following until you've read the beginning on page 6. No cheating now!

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design size. The list of the necessary bushings numbers 60 pieces. Most are one of a kind sizes so the time to make each one is quite long. The bushing being bored as this article is being written is about four inches outside diameter, three and one half inches inside diameter, and 5-1/2" long. This is being turned from solid, 4-1/2" bar stock so there is a lot of machining time to make just one part. Lee and Doug are again doing the lathe work on our big South Bend machine at the fairgrounds site.

We are at approximately the 1/3 point on bushings with 20 turned from the list of 60 needed. When all the bushings are turned, they will need to be heat treated to harden them for increased wear resistance. The final task will be to press all the bushings into their respective holes. As you can tell from the numbers scattered through this article, there is no lack of opportunity for a volunteer to still make a contribution to this part of the locomotive restoration. Please consider coming out to join us as we work to make sure that we have the means to stop this beast once she moves under her own power again. Please accept my apologies if your name didn't appear in this article and you worked on the brake rigging at some point. Almost everyone working on the #2479 has made contributions to the brake rigging restoration. Every volunteer task completed is appreciated whether my memory retained it or not.





## LOCOMOTIVE NEWS

By Jack Young

### Shoes & Wedges status:

The restoration crew has been focused on measuring the



shoes and wedges to ascertain their final dimensions. This is done with the shoes and wedges mounted in the locomotive frame. Oh by the way did I mention that each shoe



weighs in excess of 145 lbs. and the wedge is slightly lighter at 125 lbs. Once all the measurements are completed the shoes and wedges will be machined one more to their final dimensions. To facilitate the measurements two additional string lines have been erected on the out side of the frame and a device called a wheelygig (which we borrowed from the Golden Gate Railroad Museum) was employed to make the measurements( see picture). This required the removal of the pistons from the locomotive this task started in late July with many attempts at breaking the union between the crosshead and the piston rod a grease pump was finally manufactured employed to break the union and the pistons were remove. Each piece of the assembly was documented and stored in the containers.



### Brake Rigging:

This task continues we continue to make bushings and pins on the lathe for the many different links and hangers on the locomotive. We employ 2 -3 machinists per weekend on this project. The picture illustrates the manufacture of some large bushings.

### Boiler:

A number of flexible stay bolt sleeves have been installed on the firebox. There is still 50 -60 more to be installed on the firebox. About 80 stay bolts have been installed in the firebox but have not yet been set. Work on the form 4 continues around the steam dome area. Thickness measurements have been taken on both the cover and the steam dome and some of the calculations on the riveted seam have been complete.

### Pot Luck

I just wanted to mention all the routine things that never get mentioned maintenance on equipment, cleaning the site, organizing the tool and parts containers. These activities happen on a regular basis



without any mention. Thanks everybody for making this part of the organization seamless.



# TROLLEY BARN NEWS

By Bob Schneider

**PIT:** The Pit was dedicated on August 18 during our Annual Volunteer Recognition Picnic. A sign was hung near the Pit recognizing the event. A brass plaque is being made that recognizes the pit dedication as well as the original dedication of the Trolley Barn in 1984. The Time Capsule will be mentioned to ensure that it is not forgotten. The first actual use of the Pit occurred on October 14. What a wonderful asset.

**ARM Conference:** Ken Middlebrook from the 2479 Team and Bob Schneider from the Trolley Barn Team attended the annual ARM (Association of railway Museums) Conference in Strasburg, Pennsylvania 10/5 – 9. Fred was at the conference and we sat at the same table during the Conference Banquet. David, Fred's son, was there to help Fred get around. Fred was as alert as ever (including a few, brief cat naps), moved a bit more slowly, but seemed to enjoy the program. He told me that his bedroom at home was finished and he is using it. He suggested a new project for us: building a 2-foot gauge Shay locomotive from scratch. After 2479 is completed, of course.

David was very attentive to Fred, so Fred was able to take in most lectures and field trips; a tough schedule if there ever was one. The schedule included:

Thursday:

2 sets of 3 concurrent sessions in the morning: A field trip to Philadelphia to visit a private train collection (Juniata Terminal Company), the Franklin Institute and the 30<sup>th</sup> Street Train Station. Home about 9 pm.

Friday:

2 sets of 3 concurrent sessions in the morning: Committee meetings (Parts (Bob) and Education (Ken)) in the afternoon along with visiting the Strasburg Railway Shops and several smaller, local museums. The Conference Banquet was held in the evening where we sat on the floor of the Railroad Museum of Pennsylvania among the engines. Tours of displays and shops followed. An incredible facility. Home after 10 pm.

Saturday:

2 ½ hour bus trip (each way) to East Broad Top Railroad and Rockhill Trolley Museum in central Pennsylvania. The railroad was started in 1856 and bought by a scrap dealer in 1956 after the railroad stopped operating. He never scrapped anything and in 1964 the railroad was started up as a tourist attraction. The steam engines are safe but the passenger cars are tired and creaky. Restoration of the shops has started, but all of the old-line shafting, pulleys, and belting are still there. It was truly like stepping into yesteryear. There were dusty, dark, uneven floorboards, sun peeking through dirty windows, tools left where they were back then. Home about 7 pm.

Ken went early, visited Steamtown (a National Historic Site) and participated in the pre-conference excursion of four nearby museums/railroads.

**STEAM SCHOOL:** Jack Stallard and Steve Raby attended a "Steam School", at their own expense, in September in Wisconsin. They did this to be more knowledgeable operators of our Port Huron steam tractor and because they wanted to learn more about a subject they enjoy. The school was held at Rock Creek Park in Jamesville, Wisconsin and consisted of 9 hours of lecture and 6

hours of running various pieces of equipment. The lectures included such topics as properties of steam, boiler construction, injector operational description, boiler maintenance, water treatment and emergency procedures. The hands-on operation consisted of pre-fire up procedures and checks, actual operation of the steam tractors and practice of operation procedures. Handouts they received included "Steam Traction Engineer's Checklist".

The Case Steam Engine Manual and class notes. The class of 40 consisted of a family of 4, a man and his wife and 8 state of Wisconsin boiler inspectors.

**1905 CADILLAC:** The Muster Team's 1905 Cadillac, restored by Trolley Barn volunteers, was entered in the Air Systems Car Show and won FIRST PLACE in the Antique Auto category.



**BLACKSMITH SHOP:** An experienced blacksmith has agreed to work in the shop next to the Trolley Barn. In preparation for his first appearance at the Antique Autos in History Park, the inside was cleaned up and the sign on the front of the building was given a fresh coat of paint. Appearance of the blacksmith on other weekends is a possibility.

**MOTORMEN:** Heiner Eichermueller, a new volunteer, has passed his tests and is now a fully qualified motorman. The qualification process includes a test on the "Book of Rules", an operating test and an informal peer assessment. Jim Maurer conducts the tests so that we have consistency and rigor in our qualification process. Congratulations, Heiner.

**RAUCH & LANG ELECTRIC AUTOMOBILE:** Restoration of this car is moving right along. This car is owned by the Campbell Historical Museum and is being restored by our volunteers because of their experience on our Detroit Electric Car. The work is approximately 50% done.

**TROLLEY BARN SIGN:** The carved sign mounted on the West door has been taken down and is being refinished by a new volunteer, Bruce Bartlett. This sign is very visible by everyone and was suffering serious peeling of the paint. The sign was originally made in 1984 as noted by stamped information on the back of the sign.



## LATE BRAKING NEWS

By John Zielinski

The brake system on the #2479 is composed of two, separate subsystems. One of the subsystems serves the lead truck and is powered by a single cylinder. As reported in previous issues, Art Randall led a team that completely restored the lead truck, including the brakes. This article will focus on the other subsystem which is located in the locomotive frame and applies braking force to the six drivers and the two trailer truck wheels.

The main brake subsystem is powered by twin air cylinders which are mounted to the locomotive frame just behind the steam cylinders and the smoke box. These air cylinders are linked to a series of levers and rods which transfer the force from the air cylinders to a single brake shoe located behind each of the eight wheels. At each joint in this mechanism, pins are inserted through holes

to provide rotary motion. This mechanism was designed to be operated without lubricated. Its position on the engine, under the frame and boiler, makes it subject to all the grit and dirt that steam railroading has to offer. It isn't difficult to see why all of these parts would wear during use, even with the most meticulous maintenance schedule. This engine was scheduled for scrapping long before the final days of its boiler certification so almost all maintenance was deferred during the final months in anticipation of that event. This meant the brake rigging was in very poor condition when the locomotive was donated to the county.

The author is a comparative new arrival to the #2479 project so the entire brake assembly was taken apart and stored several years before I arrived to work on the #2479 for the first time. Fortunately, volunteer Larry Murchison has created a set of computer-aided drawings for the brake system. Those drawings have proven invaluable to the team in visualizing the various parts of the brake system, understanding their relationships, and locating them in our storage areas. To provide some sense of the scope of this activity, the bill of materials for the brake rigging includes 143 pieces. This includes some parts as simple as springs and flat washers but does not include any of the myriad cotter keys which hold most of the assembly together. Many of the larger parts are steel castings and forgings which would be very difficult to reconstruct from scratch, so rework and refurbishment is the preferred technique for restoration.

A considerable amount of work had been done before the author was asked to manage the rest of the project. In particular, Art Randall had initiated work on the brake beams which tie the left and right sides of the system together at each axle. These are among the largest and heaviest parts in the brake system. The trunnions at each end of these beams were very badly worn and required either weld metal build up and remachining or sleeving and remachining in order to restore their original design dimensions.

Among the first tasks I felt needed to be done was to locate all of the parts and assess their condition. Art Randall provided a copy of the spreadsheet created during the locomotive disassembly which listed each of the

brake parts by name and number. Both Art and the author have continued to expand that spreadsheet as work has progressed. Just over 2/3's of the parts in the brake assembly have been completely restored. All of the parts have at least been assessed and a decision made about how they will be restored.

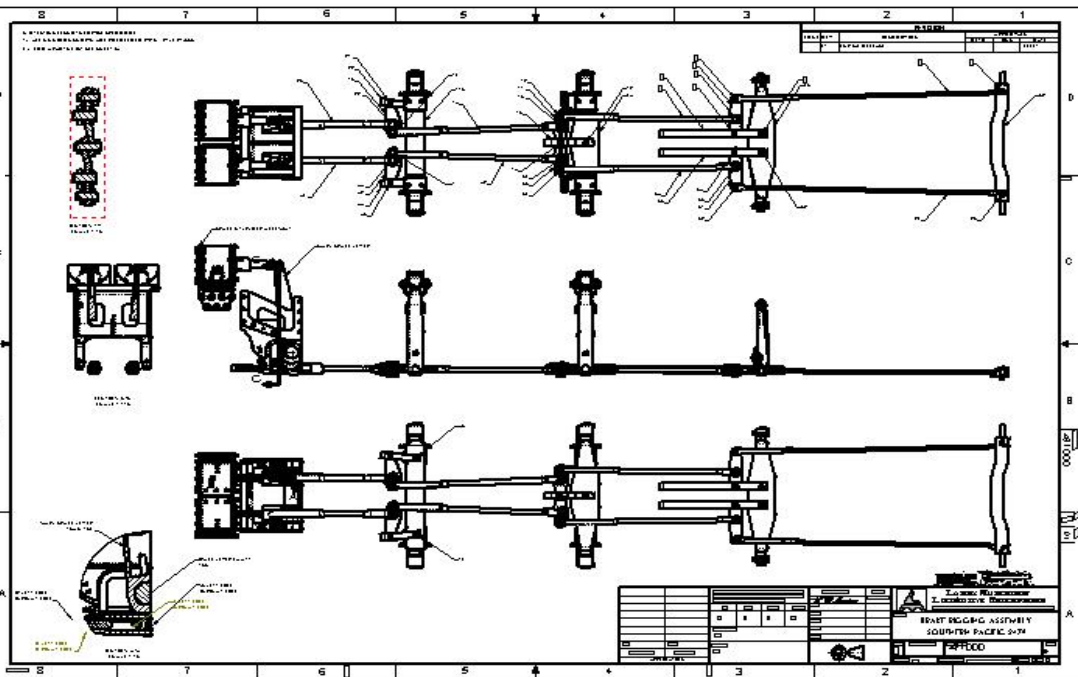
Mechanical inspection and measurement showed that many of the pins in the brake system were very badly worn. Since pins are a relatively simple component

to create, a decision was made that we would build a complete set of new pins. CTCRC member Gene Martin volunteered to do that job. In the spring of 2005 he delivered the last of 34 new pins. While Gene turned pins, the rest of the team moved on to refurbishing the many holes in the parts.

There are approximately 118 round holes in the various brake parts. Each of these holes was measured for size, then compared to the original design to determine whether or not rework was needed. The design clearance for these joints is 1/32". The condemning clearance limit is 1/16". Since we were building all new pins, the holes could be as much as 1/16" over design nominal without requiring rework. This may seem like a large tolerance but on this engine the vast majority of the holes still needed rework. In addition to oversized holes we also found holes with cracked bushings. Still other locations showed evidence of shims being used to retain the bushings in their bores. This was a common railroad practice but not a short cut which we felt should be preserved.

Many of the holes have been repaired by welding up the hole, grinding the weld metal to an approximate cylinder, then boring the hole back to original size. Much of the welding and grinding has been done by John Ezovski, with Lee Westfall and Doug Dean performing a lot of the boring work. The brake heads were in particularly bad shape and required much weld buildup and machining. Several members were involved in that effort last winter, including John Ezovski and Lee Westfall. The remaining holes are being repaired by boring the hole to round shape and either buying or making a bushing which can be pressed into the hole to return the part to

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## Information

Membership Meetings: First Monday of each month at 7:00pm at the Santa Clara Train Depot.

Work Schedule: Saturday and Wednesday after work of each week.

CTRC Office: 1600 Senter Road, San Jose, CA 95112.

Mailing Address: CTRC, c/o MTI, 210 Fourth Street, 4th Floor, San Jose, CA 95112

Membership: \$25.00 regular, \$10.00 Seniors. All memberships expire December 31 yearly. To join please send dues, name, address, phone number, and e-mail address if available to the mailing address above.

The CTRC is a California 501(c)(3) not for profit educational corporation established in 1982. The organization is the official support group for the Trolley Barn at History San Jose and the Santa Clara County Railroad Museum currently in the early stages of development.

### MISSION STATEMENT

The mission of the California Trolley and Railroad Corporation (CTRC) is to restore, preserve and interpret railroad, trolley, and related equipment as it was used to serve the people in Santa Clara Valley, California.

### CTRC BOARD OF DIRECTORS

Rod Diridon, President; Fred Bennett, David Crosson, Jack Ybarra, Marvin Bamburg, Peter Cipolla, Mac Gaddis, and Charlie Wynn, are the Executive Committee; Dick Campisi, Carl Cookson, Sr., Brenda Davis, Mignon Gibson, Robert Kieve, Mike Kotowski, Kit Menkin, Greg Mitchell, David Niederauer, David Sylva, Chuck Toeniskoetter, Larry Pederson, Beth Wyman, Tim Starbird, Tom Collins, John Davis, Jerry Estruth, Rick Kitson, Art Lloyd, Ken Middlebrook, John Neece, Gary Ross, Steve Tedesco, Leigh Weimers, Glen Simpson, Pat Restuccia, and Jack Young are the Board Members.

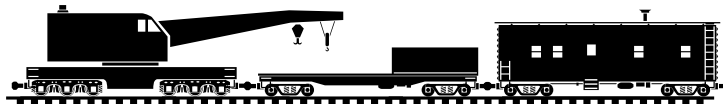


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## COMING EVENTS

- ▶ Remember the Saturday workdays and the Wednesday work evenings. Check with John Ezovski at SLBTrainer@aol.com. All very important events. See you there.
- ▶ The first Monday of the month 7:00pm CTRC meeting at the Santa Clara train depot. Be there for a lively discussion about something.
- ▶ The next CTRC board meeting will be November 17th, 2005 at 7:30am at the History San Jose Pacific Hotel first floor conference room.



**D**o you want to view this lovely newsletter in color? Why of course you do! I don't know of anyone who wouldn't. You can even zoom in on the images to see them better? Isn't technology wonderful?

**On your computer go to:  
[www.ctrc.org/newsletter.html](http://www.ctrc.org/newsletter.html)**

