# Layout Design and Operation Design Challenge At the Bay Area Layout Design & Operations Meet February 1, 2026


This is information about the layout design challenge for the 2026 PCR Layout Design and Operations meet, to be held in Santa Clara January 31 - February 1, 2026. Information about the meet is available at http://bayldops.com/2026/index.html This year's meet will be held in person

Most model railroaders have a strong interest in locomotives, but not all of us have the space for a full engine terminal so we can display all our locomotives. What if the engine terminal was our whole layout? How would you design a layout that only had locomotives, and how would you operate such a layout with prototype layout movements? What surprises would you encounter designing such a layout?

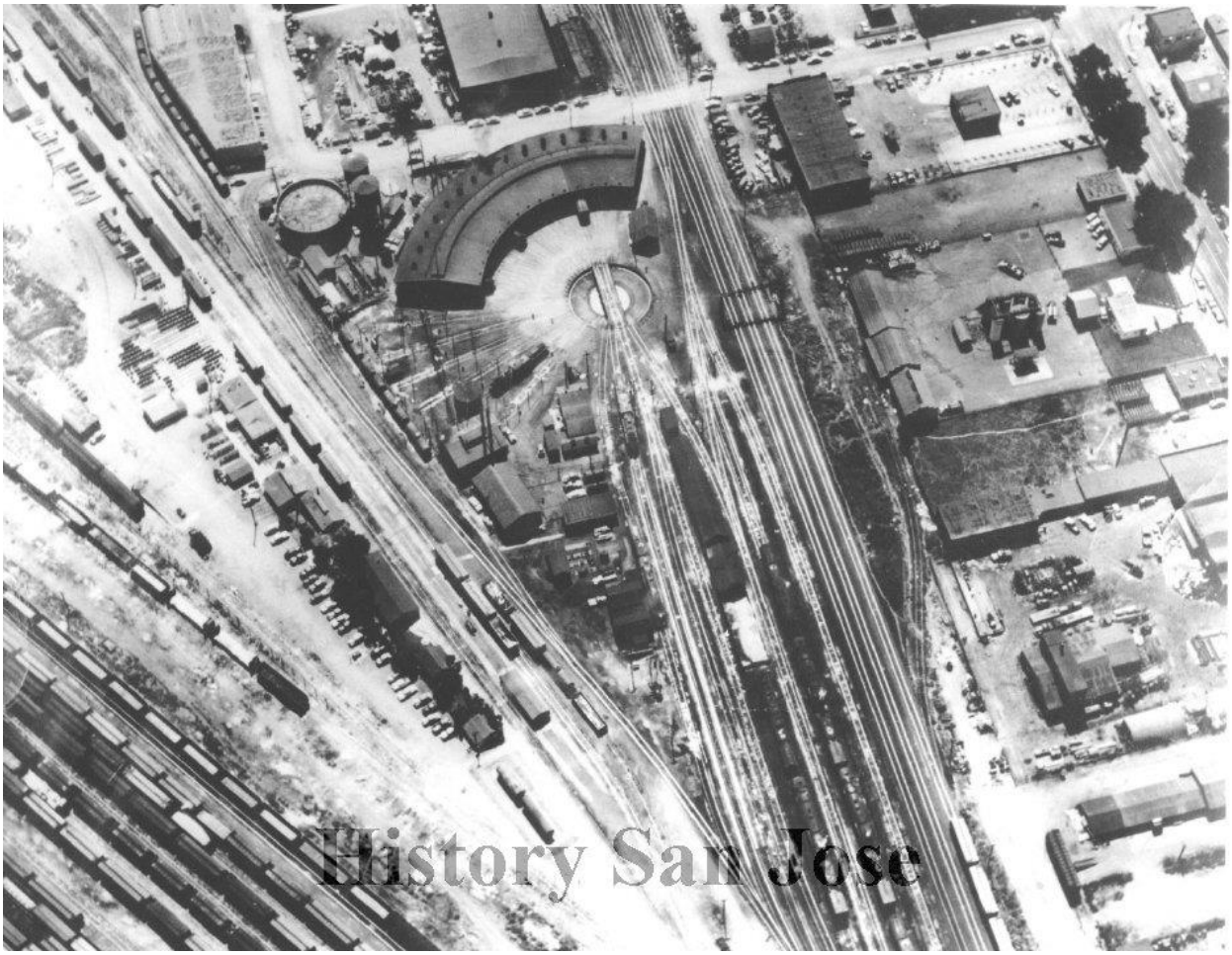
This year's challenge is to design a layout and/or an operation plan based on the San Jose Roundhouse and engine servicing facility at Lenzen Ave. The space for the challenge is 10 feet by 12 feet of a typical bedroom. For the challenge you can choose any scale and era. Because the facility has been in continuous use from 1899 to the present, any era in this range is acceptable. All plans should reflect the prototype as much as possible. Selective compression is allowed.

**History**

The roundhouse was built in 1899 as a wood-frame and brick structure on Lenzen Avenue, it served the Southern Pacific standard gauge San Jose-San Francisco commuter line and the narrow gauge South Pacific Coast Railroad, which made it one of the few roundhouses to serve two different gauges. The roundhouse was damaged in the 1906 earthquake and later deemed structurally unsound after the 1989 Loma Prieta earthquake, leading to its closure around 1991/1992. The building was disassembled by the Southern Pacific Railroad in 2000 and moved to the Santa Clara County Fairgrounds for a planned museum. Unfortunately, the planned railroad museum at the fairgrounds was canceled by the county board of supervisors, leaving the disassembled roundhouse in storage. The components of the roundhouse were eventually moved to the Niles Canyon Railway in Sunol. The California Trolley and Railroad Corporation (CTRC) plans to reassemble and restore it in a new museum there.

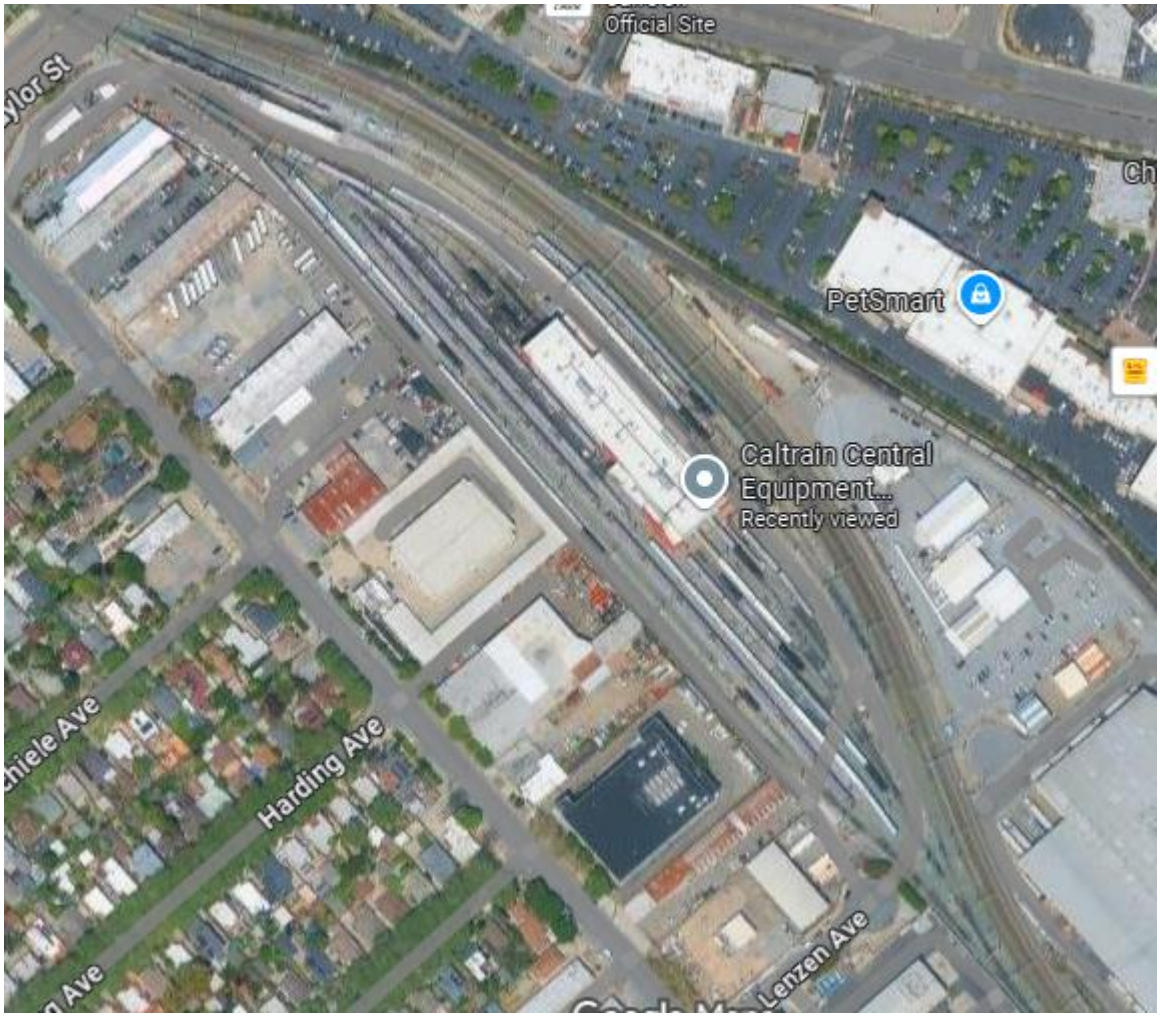
EO Gibson has several pages on his Dome of Foam website [ **https://wx4.org** ] that may be helpful in designing a layout reflecting the prototype. Here are a couple track diagrams from 1958.
**https://wx4.org/to/foam/sp/maps/santaclara2rh/1958nh2cp08.jpg**
**https://wx4.org/to/foam/sp/maps/santaclara2rh/1958nh2cp06.jpg**
Here are some photos
**https://wx4.org/to/foam/sp/san_jose/roundhouse/gallery.html**


ROUND HOUSE
https://wx4.org/ photo




The engine facility served as a maintenance facility on the south end of the commuter line through the end of steam and continued into the diesel era. Southern Pacific  transitioned the line's operation to CalTrain after 1977. CalTrain completely revamped the Lenzen Ave yard starting in 2004.  The Caltrain **Centralized Equipment Maintenance and Operations Facility** (**CEMOF**) was completed in 2007 and now serves as the maintenance facility for CalTrain – both diesel and electric.  The line was electrified from San Francisco to San Jose in August 2024.

Wikipedia has some information including a keyed map showing details within CEMOF
https://en.wikipedia.org/wiki/Caltrain_Centralized_Equipment_Maintenance_and_Operations_Facility




**How to Participate in the Challenge**

It's easy to participate: simply develop a layout design or a general operations plan or both for the Lenzen Ave facility along with a page or two of supporting information. Draw your plan. Create your operation plan. Be as detailed as you desire. Put it into a presentable format. We will be holding the Bay Area SIG meet both in person and virtually this year. If you can attend, you will be able to present your design in person, If you plan to attend virtually, we can present it for you. Send your designs to Bruce Morden brucedmorden@gmail.com

The organizers will pull submissions together into a computer presentation for discussion with the group. Each challenger will have eight to ten minutes to present his or her design to the meeting on Sunday, February 1st. After the presentations of the designs, there may be discussion of the various approaches. The good news is that there is no winning or losing ... the bad news is you will not receive any lovely gifts for participating.

If you are interested in participating in the challenge or have questions regarding the challenge, please let Bruce Morden [brucedmorden@gmail.com] know by email as soon as possible. A list of resources along with some maps and photos are available to serious challengers. Most will be part of the presentations on the Sunday of the meet. If you have questions, e-mail Bruce. Your submissions for the Design Challenge are due no later than January 19, 2026. This is not a lot of time so we are looking at rough sketches and design thoughts and operational concepts not a finished ready to build design or operating scheme. Our goal is three or four participants.

So pull out your design tools and operations resources and let's have some fun!