

Sun-N-Sand Museum Layout Proposal

What a museum does:

1. Display classic or superior examples of a subject.
2. Preserve historical objects.
3. Educate about a subject.
4. Involve the public in the subject.
5. Exhibits change with new arrivals.

What the park museum needs

1. Highly representative work of the model railroad art.
2. Scenes with animated railroading.
3. Detailed scenes attendant to supporting and using the railroad.
4. Some change in the model railroads so the public comes back to see what is new.

What the club needs

1. Model railroad scenes that interest the public.
2. Animation that attract the public to look at and examine the model railroad.
3. Dioramas that educate the public on what is model railroading.
4. Sufficient run room to create a satisfying run distance.
5. Trackage designed to provide operational capabilities.
6. Flexibility to move modules in and out.
7. Permanent model railroad scenes to close up detail and animation.
8. Train placement close to the public where the N scale size and the details that can be incorporated can be appreciated by the public.

Comparison to Lionel an HO plans

1. Larger Scales.
2. Up against viewing area.
3. Sun-N-Sand will be sandwiched between the much larger scales. Our layout will always be compared to the other two.

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The current proposed “E” layout

1. *Pros:*

1. Long track run.
2. Significant number of modules used.
3. DCC and DC operation.
4. New work incorporates NTrak ideas.
5. Tiered rows of modules an interesting concept.
6. No grades on automation sections.
7. New chances to show off modeling skills.
8. Tiered layering of top and bottom legs of “E” is unique.

2. *Neutral*

1. New Union Station modules could be interesting.
2. Five C's will be added.

3. *Cons:*

1. NTrak will not be the featured format.
1. The first row of modules will be 3 feet from the public.
2. The second row of modules will be 7 feet from the public.
3. The main section of animation will be at least 4 feet from the public.
4. No railroad animations will be closer to the public than 3 feet and most will be further away.
5. Two significant grades. (6 inches in 20 feet, $6 / (20 * 12) = 2.5$ percent)
6. Back boards removed from all NTrak modules.
 1. Most of the back boards are integral to the scenery. Some are painted by professional artists.
 2. Removal of back boards and side boards when these are part of the structural integrity of the module.
7. Requires building two new yards. (Blue and Green)
8. Operational capabilities are limited by the grades.
9. Red and yellow yards will have the yard lead removed.
 1. Clifton and the dinosaur modules will be separated from the yard.
 2. Reduces operational opportunities.

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10. Modules inserted into the plan will not be removable for use elsewhere. (Traveling)
11. 135 feet (approximately) of new sections have to be built.
 1. Lumber and other materials need to be purchased.
 2. Two new sections will be difficult integrations of an existing module with two new curved special track work sections.
12. Two existing modules have to be significantly modified and integrated in to other new construction.
13. No option to use the desert ends. These are historical modules. The club owns four of the remaining six modules left from the original NTrak in 1974.
14. Glass wall topping partition will not completely enclose the layout area.
15. Planned crossovers provide electrical control problems.
16. Some people doubt this layout can be up and running within weeks after the opening day.

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New proposal

2. *Summary description*

1. A double track dog bone layout wrapped around the inside of the perimeter wall.
 1. Sections will be bolted together with no scenery or track joiners.
 2. Sections will be built in uniform lengths with a adjustable length module for each wall.
 3. Sections will be of light weight construction.
 4. Loop curves no less than 24 inch radius
 5. Straight section about 30 inches deep.
 6. One track of the two would be designed with automation in mind.
 7. The second new mainline could be designed for member usage.
 8. The two tracks would be planned to separate at times both horizontally and vertically.
 9. Layout built at near wall height of 42 inches.
 10. No twenty inch backboards on the new outer layout. (6 inch max to reduce member accidental damage and to support scenery.
 11. This layout would contain all the five C's scenery. (Plus new C's: Cinema, Construction, Con-men, Cutting timber.)
 12. This layout could include the Union Station.
 13. The Union Station would serve the one sizable town.
 14. The town could have the industries that typically are the receivers of agricultural and mining products.
 1. Gin Mill.
 2. Citrus Packing Plant.
 3. Slaughter house.
 4. Copper Smelter.
 15. Rural scenery would rule for most of the layout.
 1. Orchard groves
 2. Cotton fields
 3. Cattle ranch
 4. Open pit mine in one of the loop areas.
 5. Luxury Spa
 16. Each rural scene could have loading platforms for products headed to the town

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industries.

17. Scenes can be built on separate inserts and added to the scenery when ready.
18. One or two small towns with passenger and freight stations.
19. Sections built using NTrak recommended practices for electrical wiring.
2. An inner layout consisting entirely of existing NTrak modules.
 1. Modules could be raised by leg extensions if experience dictates.
 2. Operational capabilities would be similar to current layout.
 3. Delay modifications to layout modules except as absolutely necessary.
 1. Complete George's Gorge and Canyon farm.
 2. Complete Dave's fault.
 3. Replace switches on transistors.
 4. Rewire current yard and yard lead modules to lower resistance to DCC safe levels.
 4. Delay all modifications and the expenses to modules not scheduled for the inner layout until after opening day
3. *Pros*
 1. Railroading is brought close to the public. (No further away than the thickness of the perimeter wall to no more than 30 inches.)
 2. Mainline run allows 3 or more trains automated close to the public.
 3. An individual may run one hundred car trains.
 4. Second mainline gives membership close up operation to the public.
 5. The central layout eliminates the need to modify existing NTrak modules.
 6. The Red and Yellow yard can have the full corner, four foot, and six foot yard leads.
 7. Inner layout would be changeable.
 8. Significant reduction in layout expenses. Net change \$10,000.
 1. Module modifications: reduce from \$10,000 to less than \$1,000.
 2. DC implantation: reduced to \$3,000.
 3. DCC Cost reduced to \$1600.
 9. Easy access to permanent layout track. (30 inch reach.)
 10. Five C's can be realistically scattered around the layout.
 11. Fewer turnouts
 12. No new crossovers.

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13. Lowered backboard to protect scenery only provides easier access.
14. No module separators on new layout.
15. Can include Improbabilium Mine module in outer layout.
16. Can display the Desert End modules.

4. *Neutral*

1. Similar electrical requirements as the current proposal.
2. The five C's committees would still be needed.
3. The automation methods would still be need.
4. The Union Station sections could still be needed.
5. Diablo Canyon prize winning bridge can still be incorporated.
6. We will still volunteers to build scenery and structures.

5. *Cons*

1. NTrak will not be the featured format.
2. 120 feet of new construction.
 1. We have a volunteer who can build a light weight construction in 6 weeks.
 2. We have a benefactor who will pay for the materials.
3. Requires complete top of wall partitions and the entire perimeter.
 1. Requires modification to the building plans to make the wall top partitions the same as being installed for the HO and Lionel clubs. No variation just for SNS.
 2. Inside of the perimeter wall does not need to be finished.
 3. There is no intention of our sections being support for the wall.
4. Need to develop means of cleaning the inside of the partition glass with out damaging layout.
5. If we decide to raise the inner layout for better viewing then the NTrak modules will need leg extensions added.
6. NTrak Modules used will be a minimum 5 feet away from public.

6. *Future Possibilities*

1. Create a flyover connection between the inner layout and outer layout to extend operational capabilities and run time.
2. Build one or two insert substitution sections to allow removal of outer sections.
3. Add in computer control of turnout controls and power routing.
4. Refurbish and incorporate the desert end modules in the inner layout.

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5. Can add small automated track ovals.
6. Add radio frequency controlled throttles as 'master throttles' for outside the wall operation.
7. Can relay the track with hand a laid code 55 rail.
8. Can automate the second loop of track.

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Implementation Plans

1. Cost reduction.
 1. Reduce complexity.
 2. Eliminate new crossovers.
 3. Reduce reliance on computer control.
 4. Conserves club funds for future additions and changes.
2. Donations
 1. Basic frame work section bases will be donated.
3. Defer expenses.
 1. Implement only the minimum number of DC control blocks, delaying new throttle purchase.
 2. Defer DCC detection.
4. Less expensive methods.
 1. Used fabric screens instead of wood paneling for fascia.
5. Construction Priorities.
 1. Section Bases.
 2. Track base.
 3. Electrical.
 1. Track wired for maximum future control blocks.
 2. Control blocks connected together to reduce throttle requirements.
 3. NTrak RP wiring standards.
 4. Any user controlled electrical circuits will implement latching relay circuit.
 5. Rewire yard modules.
 4. Scenery has a base Arizona theme with open spaces.
 5. Automation.
 6. Scenes.
 7. Details.
 8. New Automation.