

**Lessons Learned Meeting Notes  
Locomotion Weekend – Carnegie Science Center**

**January 26, 2023**

Attendees: Josh Hall @joshhall  
Michael Lynes @playingwitthechoes  
Mitch Sanders @mitsbricks  
Kevin Main @mrmmain18  
Bob Grier @rcgrier3406

1) Event Stats:

- 2 day event – January 14-15, 2023.
- Overall Footprint: 24' x 10', (156) equivalent 32x32 MILS'd baseplates, but we actually had over 200 baseplates of various sizes in the layout!
- Set-up took approximately 5 hrs. for track & roads (3 people), plus another 1 hr. for trains & modulares. Teardown took around 2 hrs. (5 people).
- (8) moving elements – 6 Trains, Incline, Trolley.
- (17) LUG participants total, including Display, Staffing and Build Days.
- Overall attendance at Science Center for 2 day event ~ 6,500 people.

2) Inventory Updates:

- a) As-built Layout Update - Josh (Mac) @jupdyke is working on this, and we'll post this once it's complete.
- b) MILS'd Inventory Spreadsheet – Developed and reviewed by Bob. We will post this under the Inventory Tracker page on the LUG website, and continue to update as more progress is made. As a note, we still needed (47) straights, (8) 90° R40 curves and (2) switches of Phil's @pnbrenum stuff to finish the layout for this event, so there's is still a lot MILS'd base and track ballast work to do.
- c) Modular Inventory Spreadsheet – Josh has started this and posted a new thread to capture what individual members have and are willing to provide for displays. This should include both train-related and non-train related modulares, landscaping modulares (like ponds), etc.
- d) Mitch suggested that we set up a Google Drive folder to capture items such as Lessons Learned meeting notes, past events Bluebrick files, display case dimensions, etc. for easy access and future reference.

3) Lessons Learned Discussion Items:

- a) Long Radius Curves on Perimeter. Agreed that this worked well. When planning a layout using Venue tables (i.e. no sneeze guards), leave space from the edge of the table to the MILS'd bases (we left 5") as a place for "small hands" to go.
- b) MILS'd Base Perimeter Treatment. Two issues here, aesthetics and protection of our rolling stock:
- On aesthetics, discussed pros and cons of using a single color brick on one or more sides of MILS'd bases (similar to what Phil has done). When we use LUG tables, this is not an issue in that the sneeze guards cover the edges of the MILS'd bases, so this only matters when we use Venue tables which may only be 1-2 times per year. No real consensus was reached, other than to discuss further.
  - On protection, discussed possibility of using brick or even Duplo to build up small walls that could be pinned to the MILS'd bases to cover the exposed edge, and even extend higher to help protect rolling stock from "reaching hands". Any exterior treatment will have interference issues with the sneeze guards on LUG tables, and will also add another item to be stored, transported, assembled and then disassembled. It was agreed that this is not a path we want to pursue.
- c) Ballasted Track Handling, Set-up and Teardown Tips:
- Leave ballasted curves on the MILS'd bases.
  - Hold ballasted curves down and connect ballasted straight track.
  - Then put MILS'd straight bases under ballasted straight track.
  - No need to pin straight track bases together, the track will hold it.
  - Pull ballasted straight track off of MILS'd bases during teardown, but leave ballasted curves and switches on the bases.
  - Make sure 1x2 plates at ends stay with MILS'd base, and not under track.
- d) Ballast Modifications for 9v Wires. Agreed that we need to make intentional modifications (instead of tearing something apart at the event) to ballast and/or bases to accommodate feeding 9v wires underneath to connect to the inner rail for single track, and to the inner track for double track. Agreed we should set-up (1) 9v double straight, (2) 9v single straights sections.
- e) 16x32 Inside Corner Bases on Long Radius Curves. Bob recommended that pieces K and L should be rotated 90° to provide more space coming out of these curves for roads or modulars. There is minimal tile on these pieces, so changes

will be easy, but it will also require changing the template maps on the back of all the long radius curve MILS'd bases to show the new configuration.

- f) Shims for Venue Table Leveling. Agreed that leveling Venue tables using conventional wood shims works better than leveling individual MILS'd bases using either wood shims or LEGO plates. Glenn did this the morning of the event, and Josh reiterated that this is the way PennLUG does it. There is a pack of shims in the ballasted track bin for this purpose.
- g) 9v Speed Controllers, Connecting Wires, Power Supplies. For the last few events we've relied on individual member equipment to power the 9v tracks because the LUG's equipment either incomplete or not working. Josh (Mac) is currently making repairs to the (2) sets of non-working connecting wires that the LUG has. Once complete, we'll add these to the inventory, determine how many complete sets the LUG wants to have on hand, and what components are needed to get us there.
- h) Back Table for Non-Running Trains and Maintenance. For train displays, especially those using long radius rolling stock, all agreed that this worked well and is preferable to having an expanded center space in the middle of these displays. During this event it gave us space to display non-running trains, and for Glenn and Michael to perform train maintenance. In addition, the Visitors enjoyed getting up close to trains and watching our guys work on them.
- i) Expanded Rail Yard. We also discussed expanding the rail yard for storage of non-running trains. For this event, we had (2) sidings connected to the R104 loop using R40 switches for storing and displaying non-running trains. Michael noted that some of the long radius rolling stock could have physical issues negotiating the R40 switches (Michael and Glenn physically lifted trains from the main line to the sidings for this event), and that if we truly wanted to be able to roll from the main line to the sidings we should consider R56 switches. In addition, we discussed having the rail yard on the outside of the long radius loops made more sense for lifting trains off to go to the back table.
- j) Spy Kit/Scavenger Hunt Concept Going Forward. All agreed that this was a good idea to incorporate. Krista is setting one up for Ross Park Mall event this weekend, so we'll gain more experience from that.

#### 4) Short Term Goals Going Forward.

- For MILS'd Roads, we're on track to have (24) straights, (6) tees, (4) 4-way intersections, and (3) parking lots completed after this weekend. This should give us enough to work with for the near term. We discussed the need for some 90° corners (we haven't found a standard yet), and Bob has built a prototype corner for further review.
- For Ballasted 9v Track, we agreed that we should ballast all that the LUG currently has. Once complete, this will give us (136) 9v straights, (4) 90° R120/R104 double curves, (4) 90° R40 9v double curves, (8) 90° R40 9v single curves, and (6) 9v switches (3R, 3L). It's expected that the materials we purchased through Project Support will not be sufficient to complete this effort, and that more will be needed.
- For MILS'd Track Bases, we're on track to have (40) double straights, (10) single straights, (4) 90° R120/R104 double curves, (4) 90° R40 9v double curves, (4) 90° R40 9v single curves and (2) 9v switches (1R, 1L) completed after this weekend. We will need to build MILS'd bases for (4) more 90° R40 9v single curves, (4) more 9v switches (2R, 2L) and (46) more single straights to use up all the ballasted 9v track above. Again, the materials purchased through Project Support will not be sufficient to complete this effort, and more will be needed.

#### 5) Other Considerations Longer Term:

- Single and double track road crossings? Bob built one single track crossing that we used for this event and could be used as a prototype.
- Draw Bridge with hinge for access to the middle for layouts using LUG tables? Josh is exploring how to this for the Home and Garden Show in March, and will reach out to Glenn to see how PennLUG does this. His would have to be for RC track only.
- Ballasting RC straight track for the rail yard? The LUG has a bunch of RC track, but it hasn't been inventoried yet. Bob will do that.
- Ballasting RC Flex Curves for more versatility on layouts? Trix Brix was mentioned as a European alternative, but that it's non-LEGO and is expensive.
- Using Copper tape on RC track in lieu of 9V? Michael commented that this his experience is that has questionable reliability and tends to wear out quickly.

Submitted by:  
Bob Grier