

Foamboard Layout Construction

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Clinic Overview

- Introduction
- Example Foamboard Layouts
- Pros and Cons
- Materials and Tools
- How-To Steps
- Live Demonstration



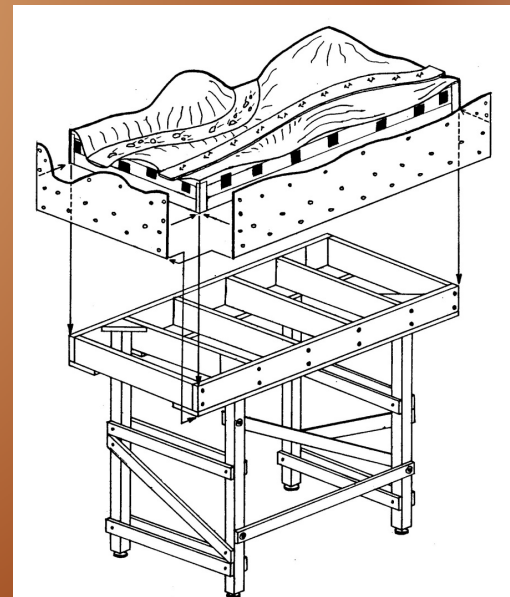
Foamboard Layout Construction

- Horizontal laminations of thick foamboards as base for both track roadbed and scenery
- No plywood, splines or wood risers
- Since late 1970's John Burchnall and then the Eastern Loggers pioneered this now proven method



Basic Concept

- Fill the entire area with horizontal layers of foamboard
- Carve scenery and sub-roadbed (trench) profiles
- Cover the foamboard with roadbed, scenery and profile boards (encapsulate it)



The Eastern Loggers Layout

- 10'x20' portable HO/HOn3 sectional layout
- 1920's era logging in central Pennsylvania
- Emphasis on wood products industries
- Pioneering design and construction features



The Eastern Loggers Layout

- Inspired by *"The Logging Railroad Era of Lumbering in Pennsylvania"* book series by Benjamin Kline, Walter Casler and Thomas Taber
- Featured in GMR, RMC and NMRA magazines
- Other photos in NMRA Calendar, NMRA Bulletin, Narrow Gauge & Shortline Gazette, Walthers
- Displayed at 2 NNGC's, 3 NMRA Nationals, Cass Scenic Railway and Pa. Lumbering Museum



The Logging Railroad Era of Lumbering in Pennsylvania



- 13 "Unpublished" Books – plus:
- Introduction/Table of Contents
 - Addenda/Index/Chapter 14



Timber Bridge



Leetonia, PA



Lou Sassi photo



Layout Design Principles

- Scenery and wood industries focus
- View blocks and compression
- Undulating elevation changes
- No tracks parallel to front edges
- No ballast, just dirt under ties
- Summer foliage (previously Fall)
- Scratch built wood structures



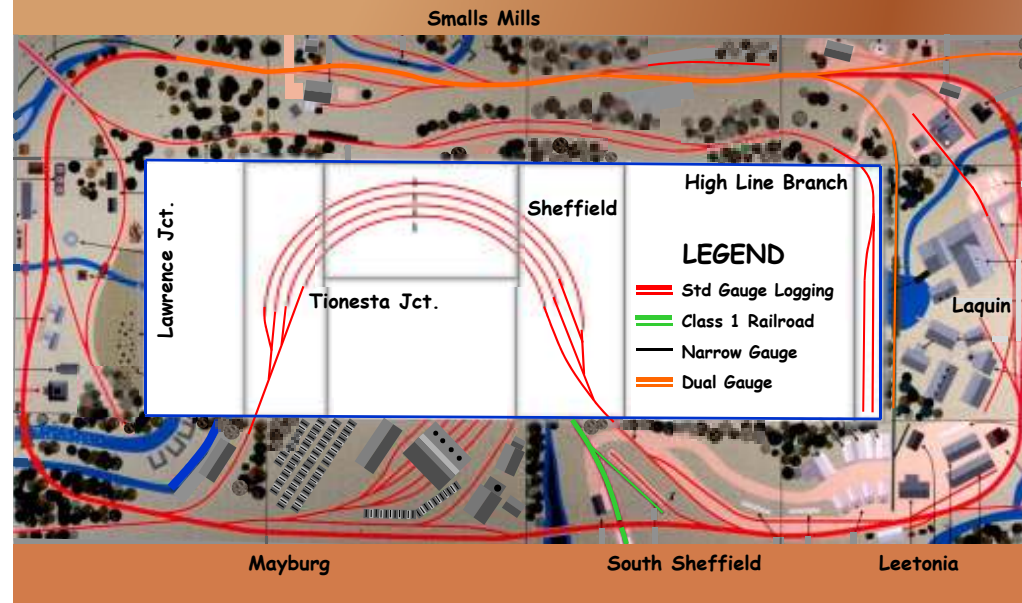
Layout Track Plan Features

- Single track loop, plus high line
- Point-to-point narrow/dual gauge
- 5 passing sidings, plus staging
- Hidden interior staging yards
- Water and switching on each section
- Class I railroad interchange
- Handlaid code 70 track



Eastern Loggers Track Plan

10 x 20 feet with 10 visible sections + 4 staging sections



Other Example Layouts



Two 4' x 6' door prize layouts



4' x 6' Layout



Custom 4' x 8' Layout



Foamboard Advantages

- Simultaneous construction of both sub-roadbed and scenery
- Realistic 3D scenery and contours
- Solid track/scenery bases (not hollow)
- Easy to build/modify
- Very rigid, durable, and often lightweight layout or module



Foamboard Disadvantages?

- Messy shavings - unless you know the secret to avoiding this
- Wires and linkages go through thick layers – but, easy methods handle this
- Possibly more costly raw materials – not really, and surplus boards possible
- Need to think upside down on computing roadbed elevations



Materials & Tools

- Foamboard
 - Types
 - Thicknesses
- Foamboard Adhesives/Glues
- Carving/Shaping Tools
- Roadbed



Foamboard Types

- 2" white beaded foam works best!
- Extruded foam too hard to hand carve!
- Florists foam too weak and brittle



Foamboard Adhesives

- Use non-solvent based thick adhesives



Foamboard Carving Tools

- Stanley Surform Tool #21-115 a must!
- Small saws and rotary rasp also helpful
- Fish filleting knives also great
- If hot cut, use hot knives, not hot wires



Foamboard Carving Secret

- Spray wet water while carving!
- Cuts static + makes shavings heavier

Net Result =

No nasty flying shavings +
easy clean-up with wet/dry
shop vacuum



Commercial Roadbeds



Make It Yourself Roadbeds



“How To” Steps

- 1) Construct simple and light weight wood support grid (benchwork)
- 2) Add horizontal foamboard layers
- 3) Cut cookie-cutter style roadbed or purchase pre-made roadbed



Laminations on Wood Grid

Horizontal layers of foamboard glued on top of grid and each other

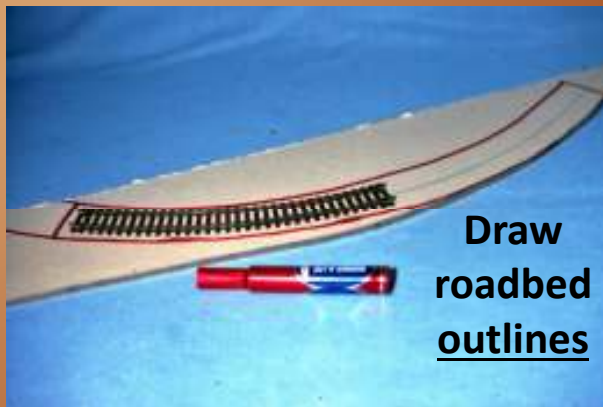


Simple
lightweight
wood grid
benchwork



Cookie Cut Roadbed

Use compass or template to draw track centerlines onto Upron board or Homasote sheet



Draw
roadbed
outlines

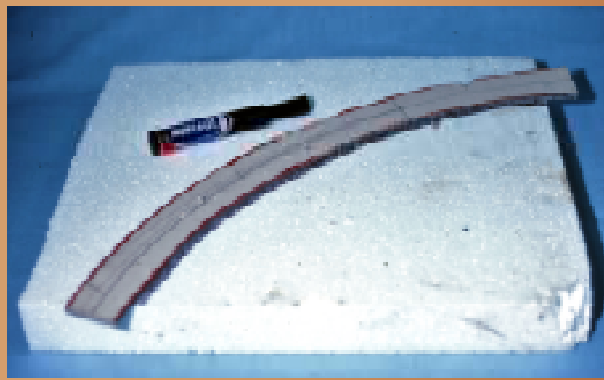
Tip: Use knife blade in saber saw to cleanly cut out the roadbed (no sawdust)



“How To” Steps

- 4) Trace roadbed onto foamboard and mark desired elevation depths
- 5) Carve down to roadbed elevations (creating trenches)
- 6) Glue down (and clamp) roadbeds





First trace the outline of the cookie-cut roadbed onto foamboard



Carve the roadbed areas down to the marked elevations

Then mark your desired elevation depths



Pause occasionally to measure your progress on both sides of trench



Use foamboard adhesive to glue the roadbed to the "trench" base



Use foamboard adhesive to glue the roadbed to the "trench" base



Tip: Use pairs of common nails to pin the roadbed down until the glue dries



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Alternative for carving larger area



GGERS
No Too Small
No Too Large



Bring out the power tool !

Fine tune by hand with Surform tool



“How To” Steps

- 7) Add remaining foamboard layers
- 8) Carve remaining scenery contours
- 9) Cut and apply profile boards (encapsulate foamboard sides)

GGERS
No Too Small
EASTERN LOGGERS
No Too Large



Note the smooth contours, tunnels, bridge spans and waterway





Tip: Glue in square blocks (not round dowels!) to screw profile boards to



“How To” Steps

10) Lay trackage

11) Start scenery

12) Fabricate and install turnout mechanisms

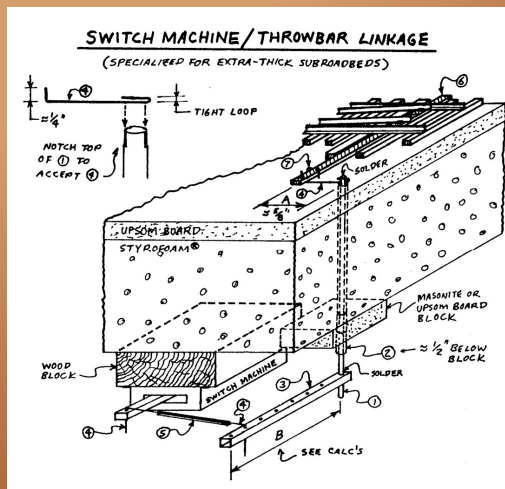


Simultaneous track and scenery work



Deep Switch Machine Linkages

Use nested brass tubes for switch throws





Tip:
Over carving
trench depth
easily fixed
with shim in
any layer
below



“How To” Steps

- 13) Complete electrical installations
- 14) Complete scenery
- 15) Marvel at your creation!



**Underside items
glued to foamboard**



**Fully recessed
controls**



**When done, why not take some pics
and write an article or do a clinic?**

