



Upper Cumberland Railroad Society

A Chartered Tennessee Non-Profit Corporation, IRC 501(c)(3) designated

MODEL RAILROAD – TRACK

Part II

Installation

Nov 9, 2024

INSTALLATION – GENERAL

Still More DECISIONS as
Installation Methods are Influenced by

- Layout Base Construction & Size
Spline L-girder vs Flat platform
- Track Scale, Type, Code
- Attachment options available
- Wiring techniques
- Weathering Yes/No
- Ballasting Yes/No
- Others?

INSTALLATION – GENERAL

- Plan
- Design Paper or Software
- Gather Materials & Supplies
- Be Patient
- Be Meticulous
- Test before Scenery
- Don't fear changing, Designs Evolve
- Enjoy the process! Remember You Like This

Installation - Tools

- Pliers: Grasping and holding small parts, bending wire, spiking track
- Rail cutters: Trimming and cutting track rails
- Soldering iron: For reliable electrical connections
- Scale rule: Measuring dimensions in scale sizes
- Craft knife: Cutting small parts and making precise slices
- Pin vice: Drilling small holes with various sized drill bits
- Straight edge: Creating clean straight lines for cutting
- Tweezers: Picking up tiny parts with delicate precision
- Sanding tools: Smoothing surfaces and shaping components
- Voltage tester: Checking for electrical issues on the track
- NMRA Gauges, levels
- **And every thing else you don't have, but still need!**

INSTALLATION – Sequence

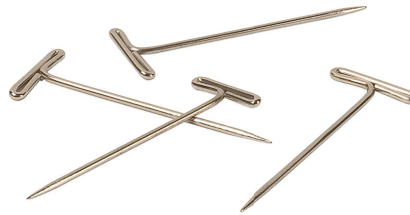
- Painting First Yes / No
- Transfer Plan to Layout
- Locate Turnouts (be aware of obstructions below)
- Locate critical features: trestles crossings tunnels turntables
- Transfer track center lines to layout
- Take time to review..does the plan need revision before anything is attached

INSTALLATION - Flex

- Flex track is a popular choice that needs special attention
- Stagger joints on flex- solder before flexing
- Use easements into and out of curves, just like the prototype railroads
- Minimize 'S' Curves
- Avoid curves too tight for intended use
- Consider using curve templates

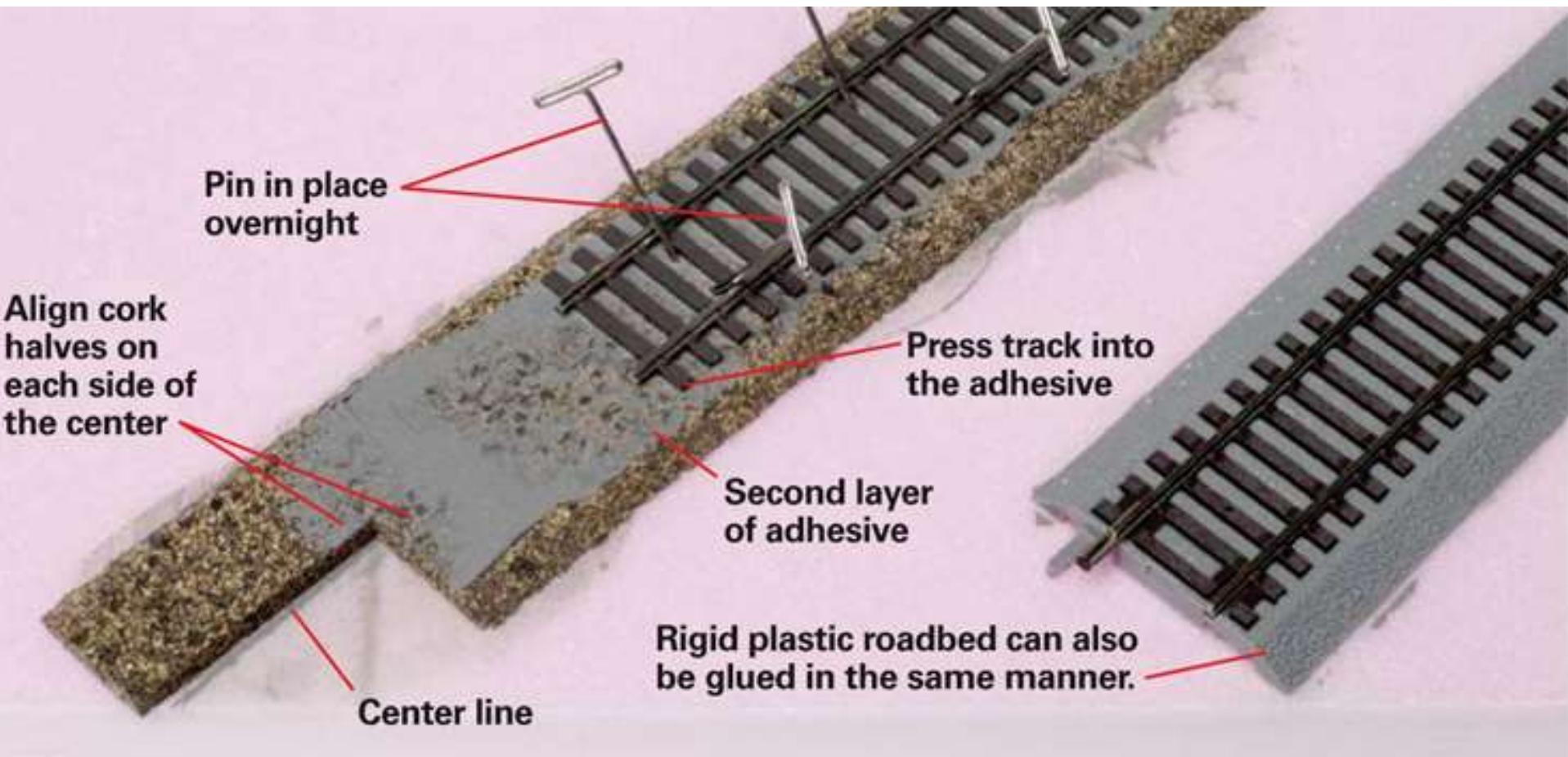
Nails/Adhesives

Assure Adhesives are compatible with materials in use. Example: foam safe.



Adhesives done right don't show

Roadbed & Track



Roadbed Considerations

Work Shaped & Sheet
Shaped Rolled Foam
serves to replicate prototype
shape of track installation.



Can also absorb rolling noise
before transfer to the layout

Handlaid Demo

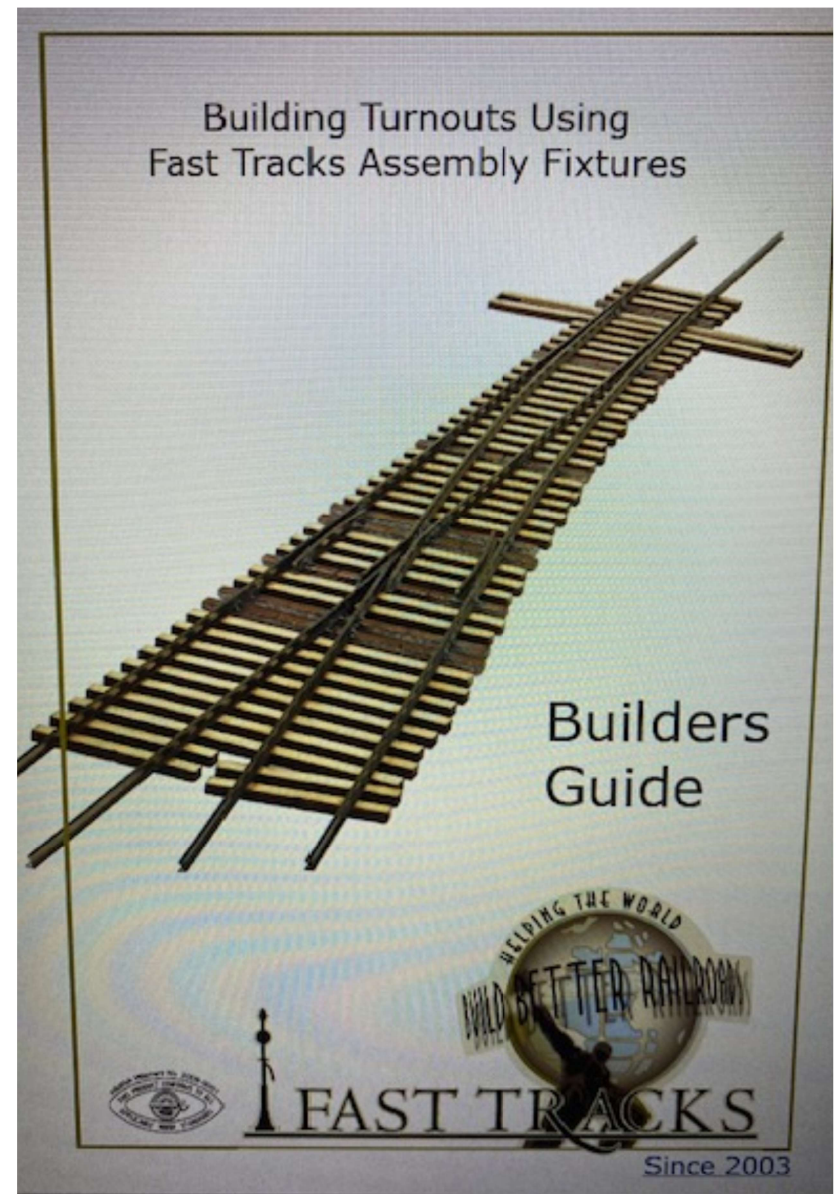
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Building a Turnout in a Fast Tracks Assembly Fixture

This document details the construction of a turnout using a Fast Tracks assembly fixture, tools and supplies.

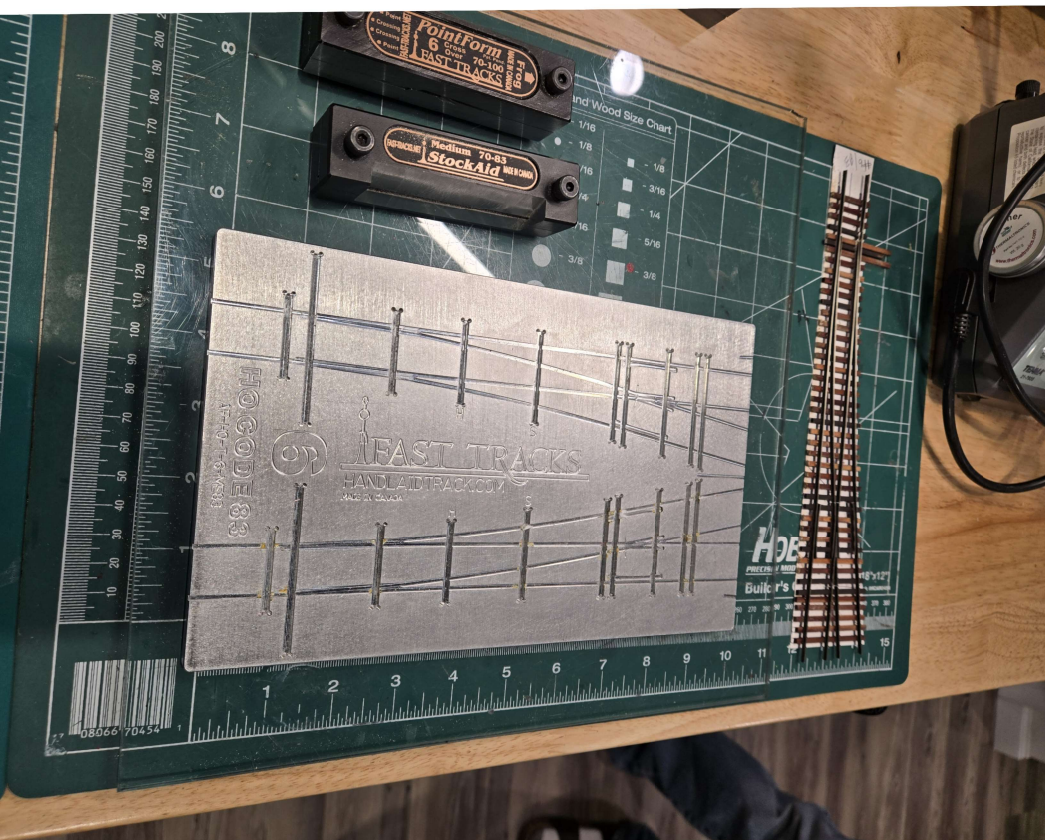
There are 10 parts to building a Turnout including:

1. Form The Guard Rails
2. Form & Solder The Frog Points
3. Prepare & Insert The PC Board Ties Into The Assembly Fixture
4. Prepare & Install The Stock Rails
5. Prepare and Install The Switch Points
6. Install The Guard Rails & Frog Points
7. Complete The Switch Points
8. Re-Enforce The Frog Points
9. Cleaning The Turnout



Handlaid Demo

ou Nigro

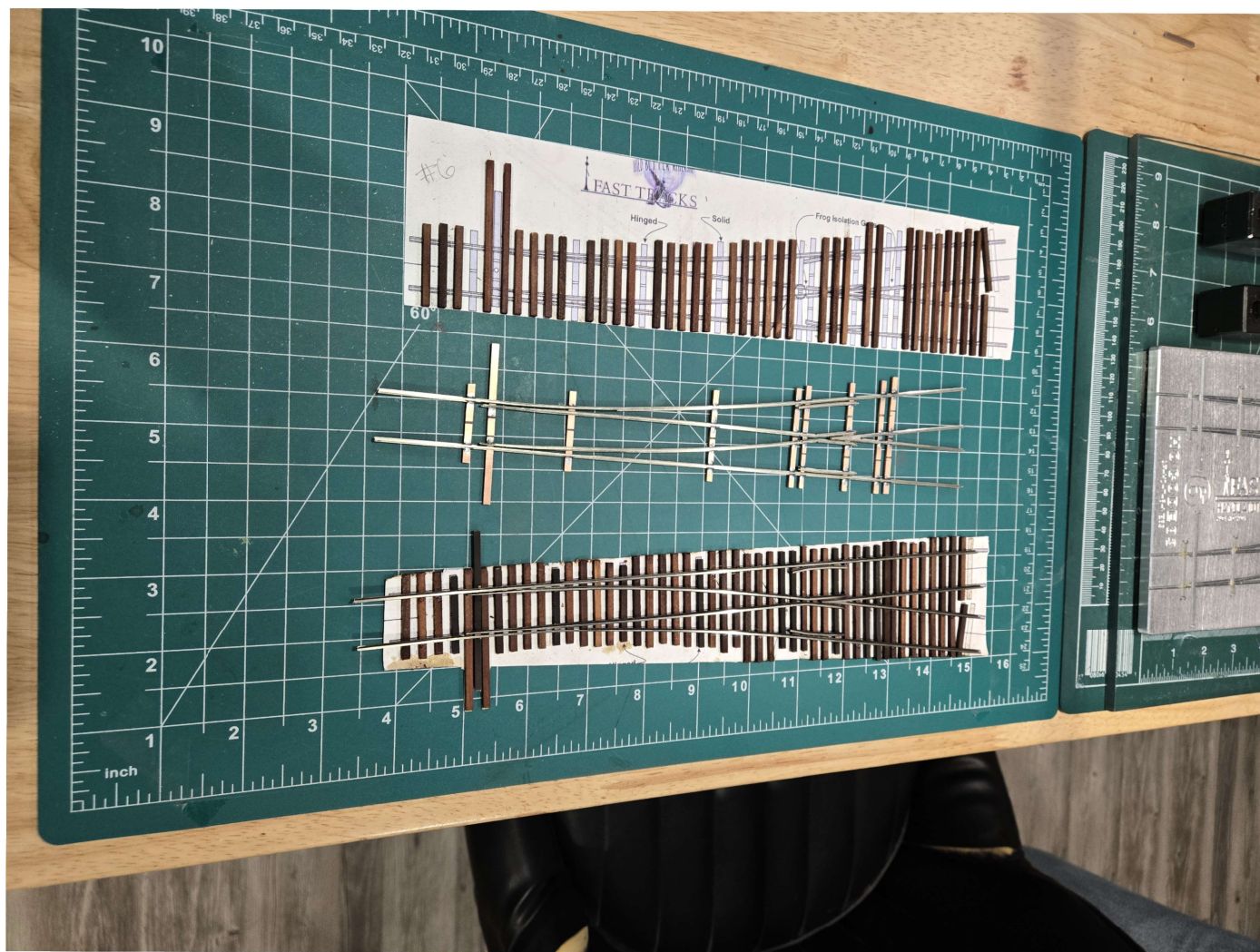


Starter tool kit



Handlaid Demo

ou Nigro



Turnouts Installation

- Float or not
- How controlled
- Ground throws
- Mechanical operation
- Electrical operation
- Frog type determines other needs
- Test extensively

Electrical Connections

- Drops can be soldered to track or joiners
- Consider soldering all track before ballasting to improve reliability over time
- Buss technique vs star pattern under the layout
- Wire nuts, suitcase connectors, wago connectors and soldering are among the choices under the layout
- Develop and maintain color coding for easy identification under the layout
- Document & Label what is installed

Test – Inspect - Test

- Joint misalignment
- Track Still in Gauge
- Grades & super elevations okay
- Clearances Okay
- Car Operation at joints and turnouts
- Electrical Opens & Shorts
- Electrical Voltage Level
- Engine Operation (USE your least tolerant loco)

Weathering & Ballasting

- Weathering pens and sprays
- Scale appropriate ballast size
- Even Built-in roadbed can have ballast added



Final Clean & Maintenance

- NO SANDPAPER NO Bright-boy
- NO STEEL WOOL
- The more polished the rails are, the easier to keep clean
- 91% Isopropyl Alcohol-safe for most plastics
- Rail Zip 2
- Others ??





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Questions & Comments

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