

# Bridging the Gap on the M<sub>3</sub>R Mobile Railroad

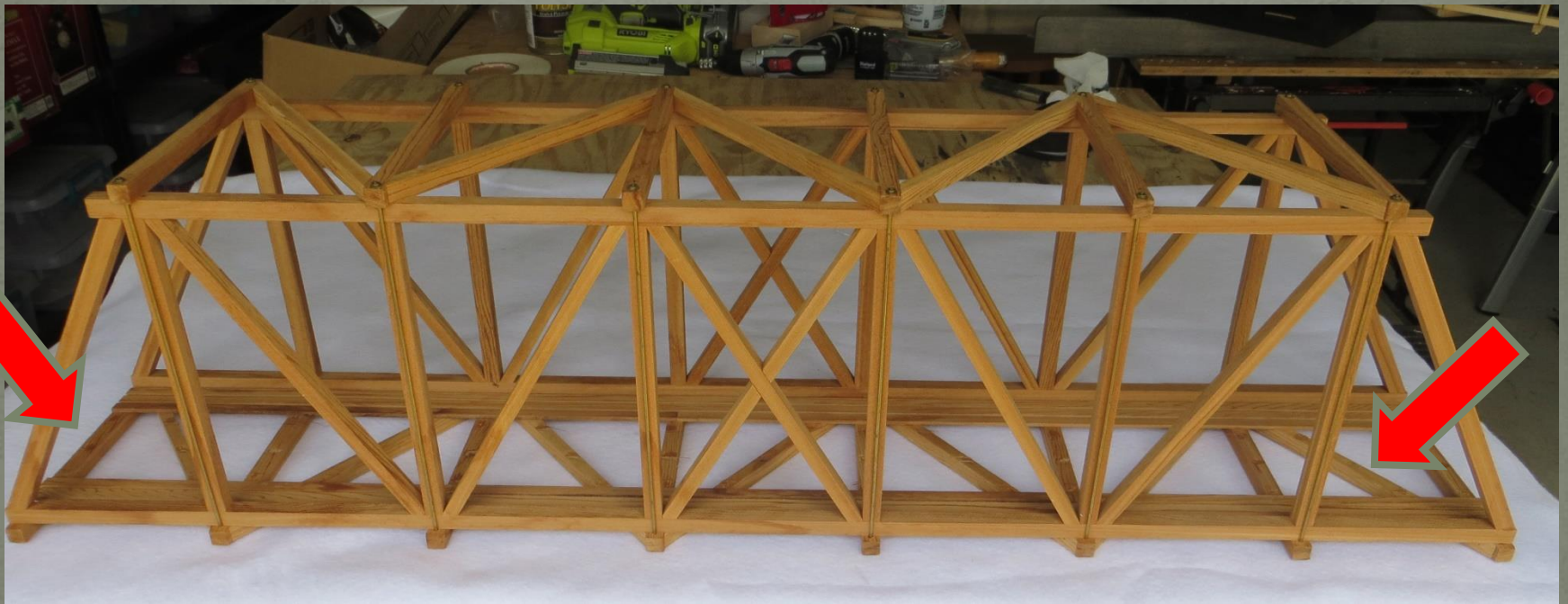
Truss Bridges, Girder Bridges, and Trestles:  
Design Evolution, Drawings, and Helpful  
Hints

Presented by Art Shean

**NEED  
DRIVES  
INNOVATION!**



# 42" Single Track G-scale Truss Bridge

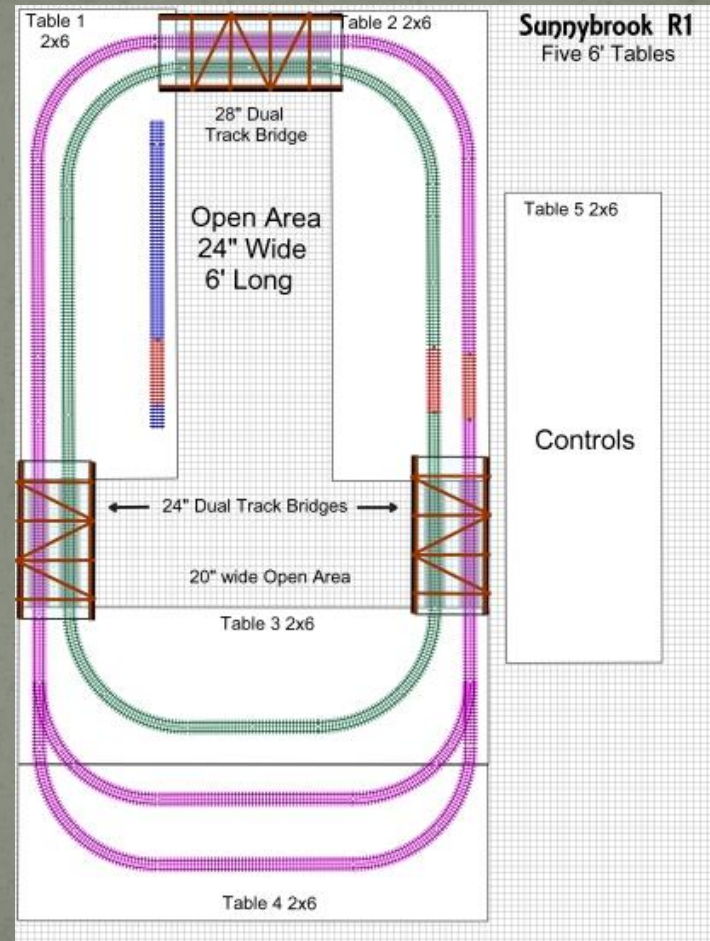
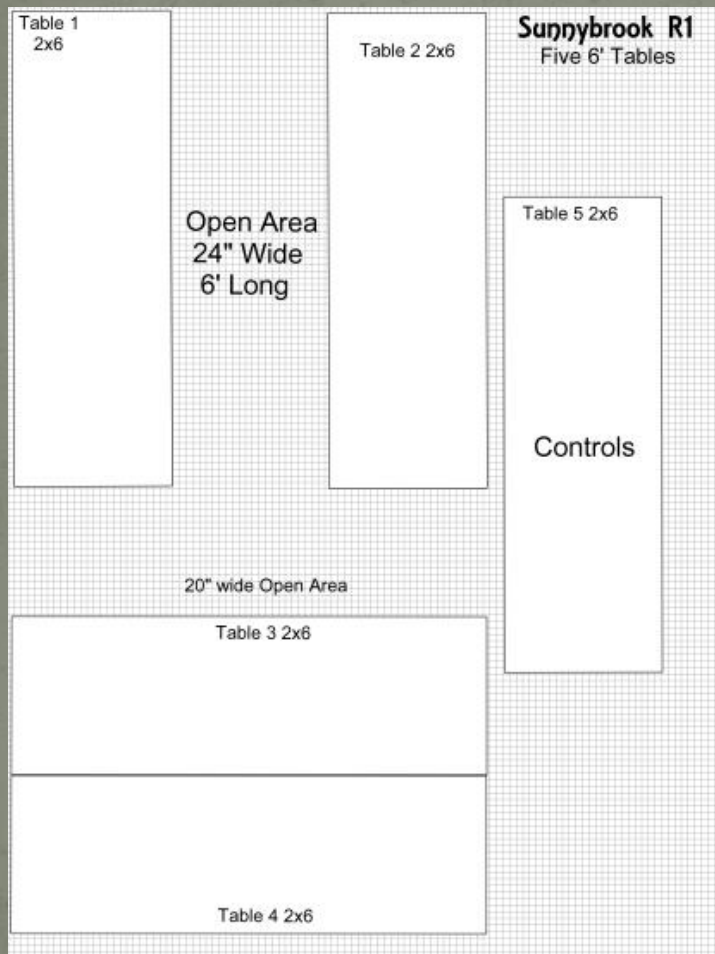


**Base cross members cause 1/2" raised bed**

# 2018 Whitefield Lions

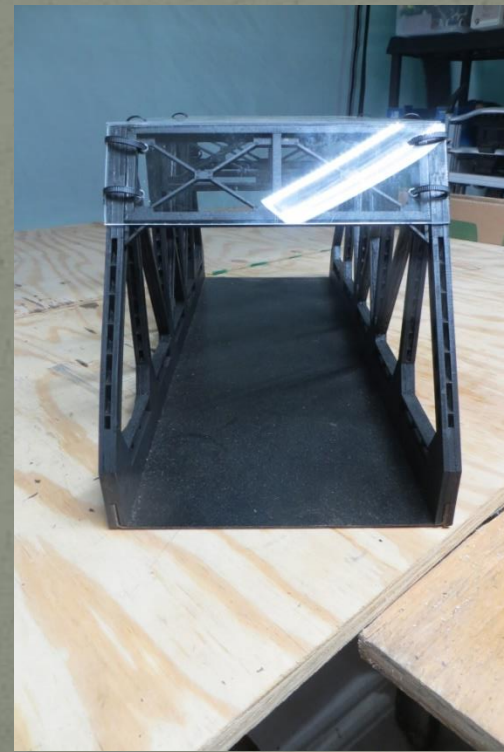
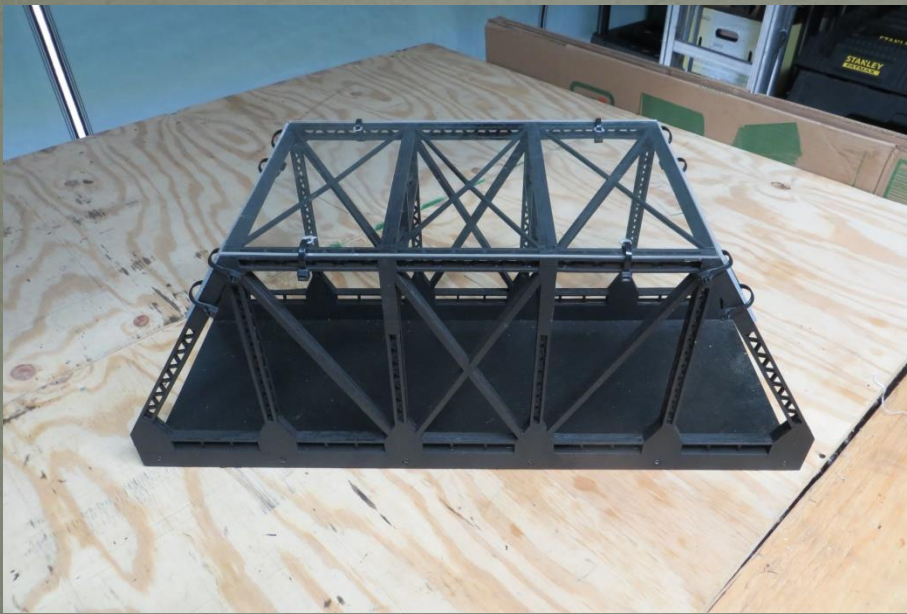


# NEED: Bridges for Mobile Layout



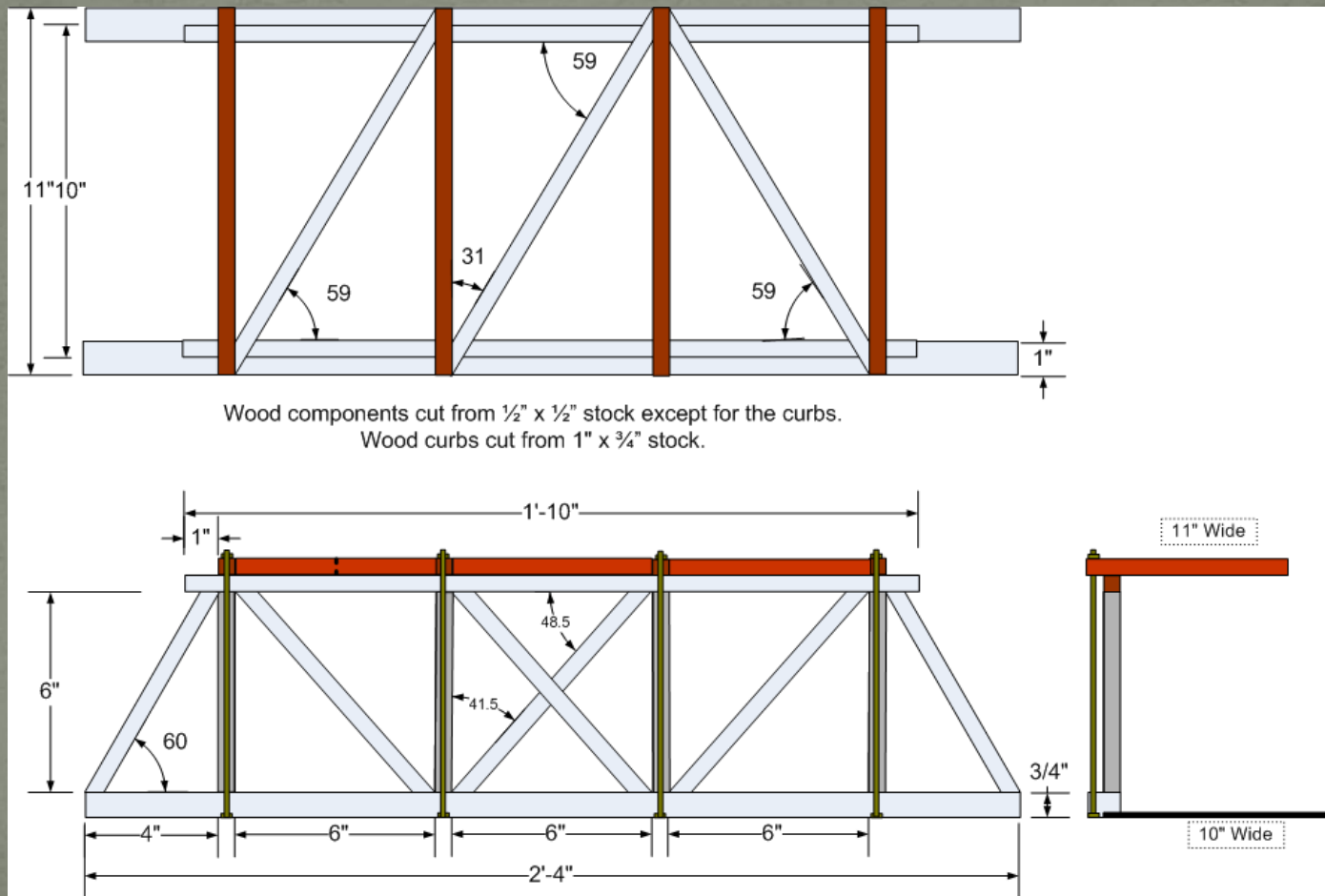
# Sam's First Bridges

- Menard's 24" Dual Track O-scale Truss Bridge



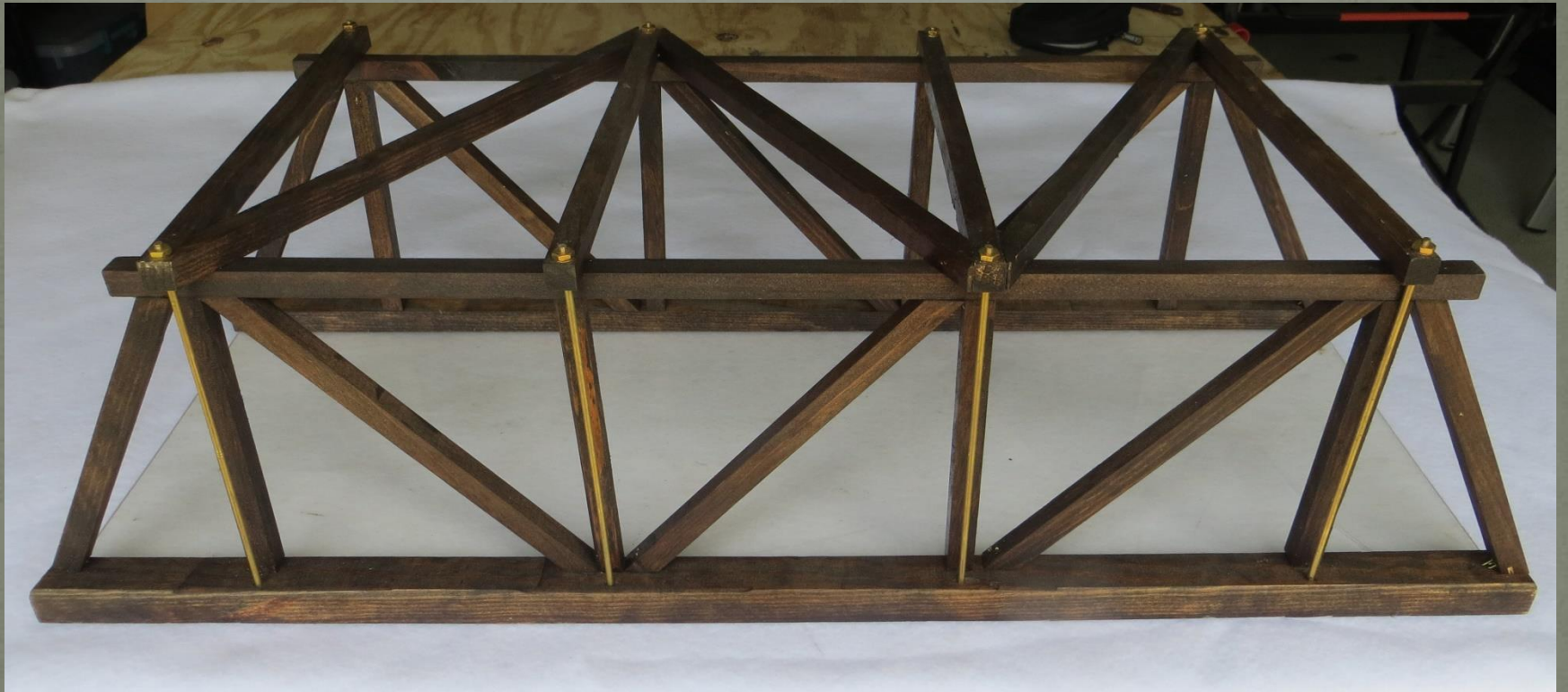
# NEED: Sturdy 28" Dual Track, Flat Bottom Bridge

## M<sub>3</sub>R 28" Dual Track O-scale Wood Truss Bridge





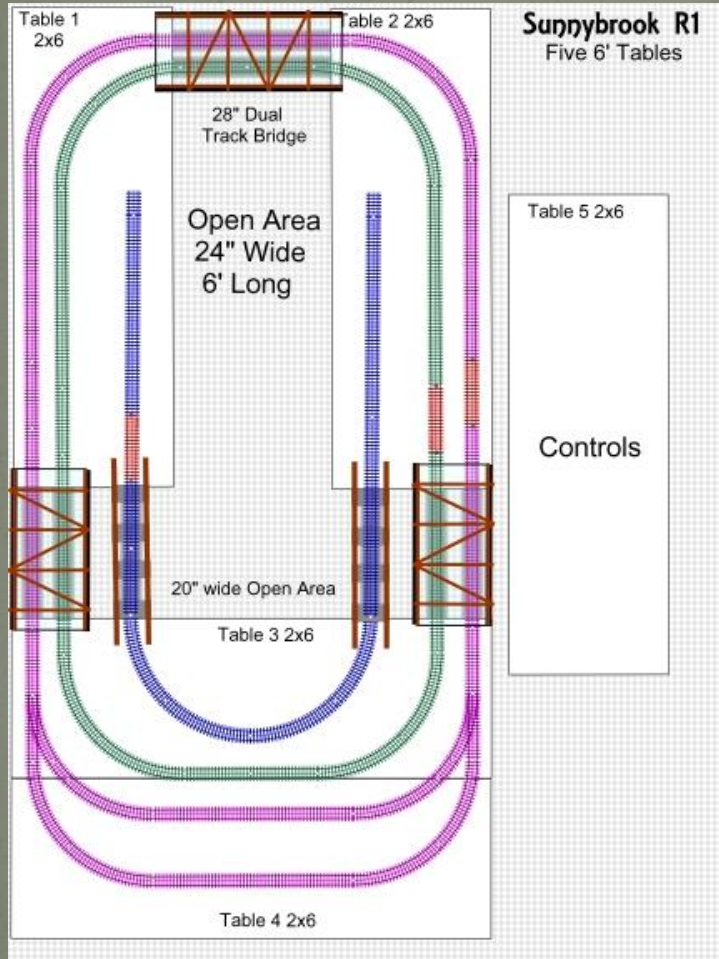
# 28" Dual Track O-scale Truss Bridge



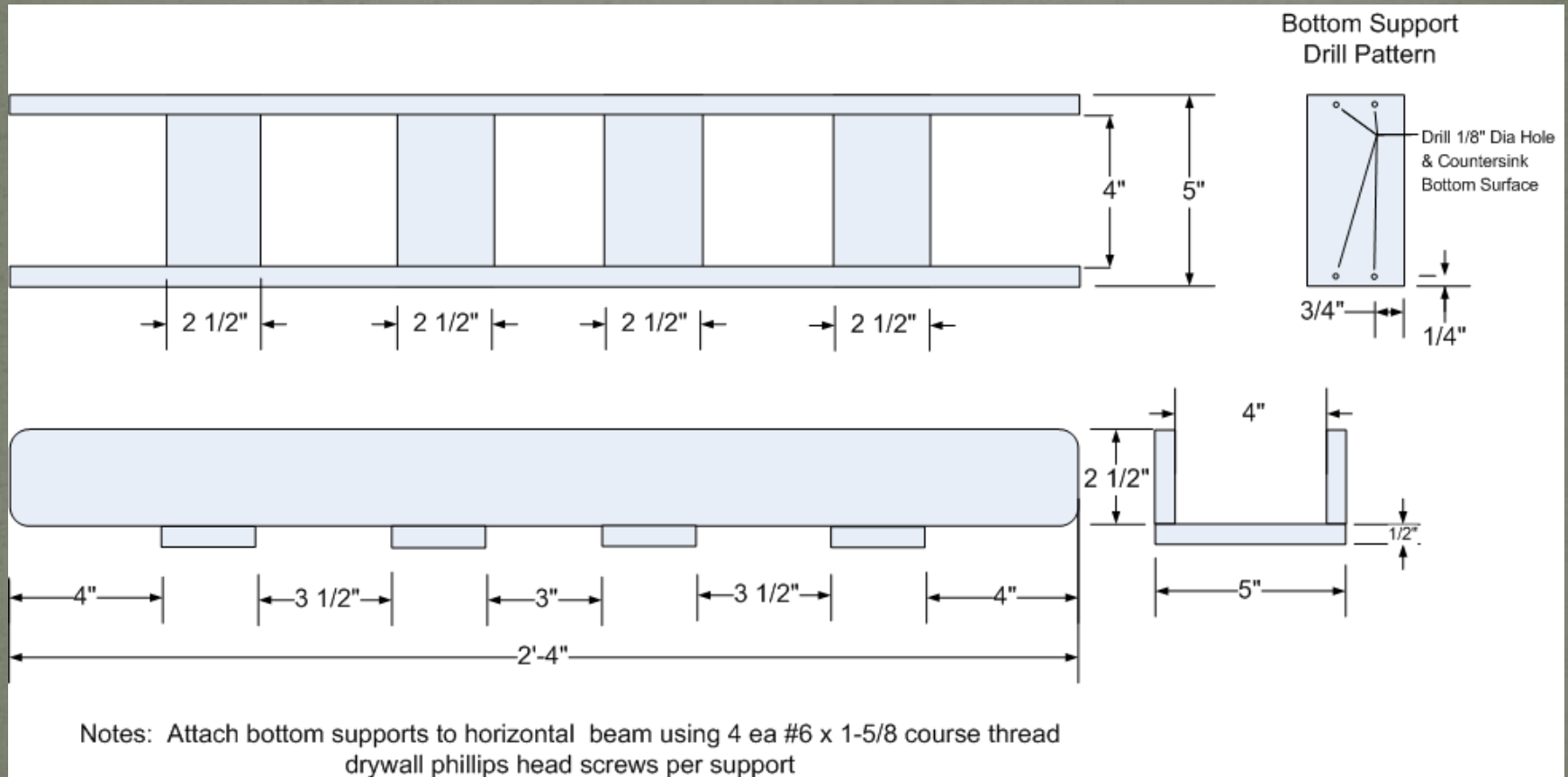
# 2019 Togus VA Hospital



# NEED: Extend Trolley Across Gap



# 28" Single Track O-scale Girdler Bridge



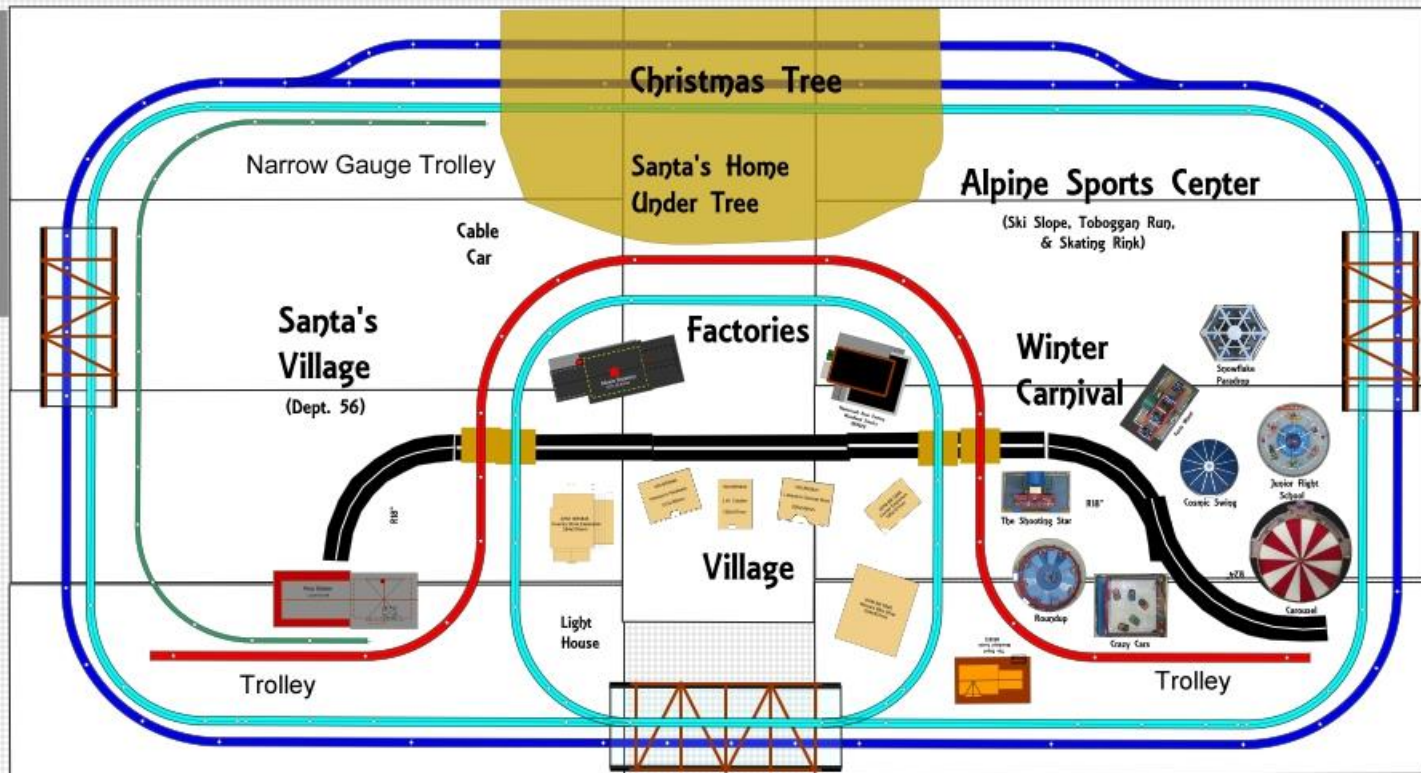
# 2019 Patton Free Library Bath, ME



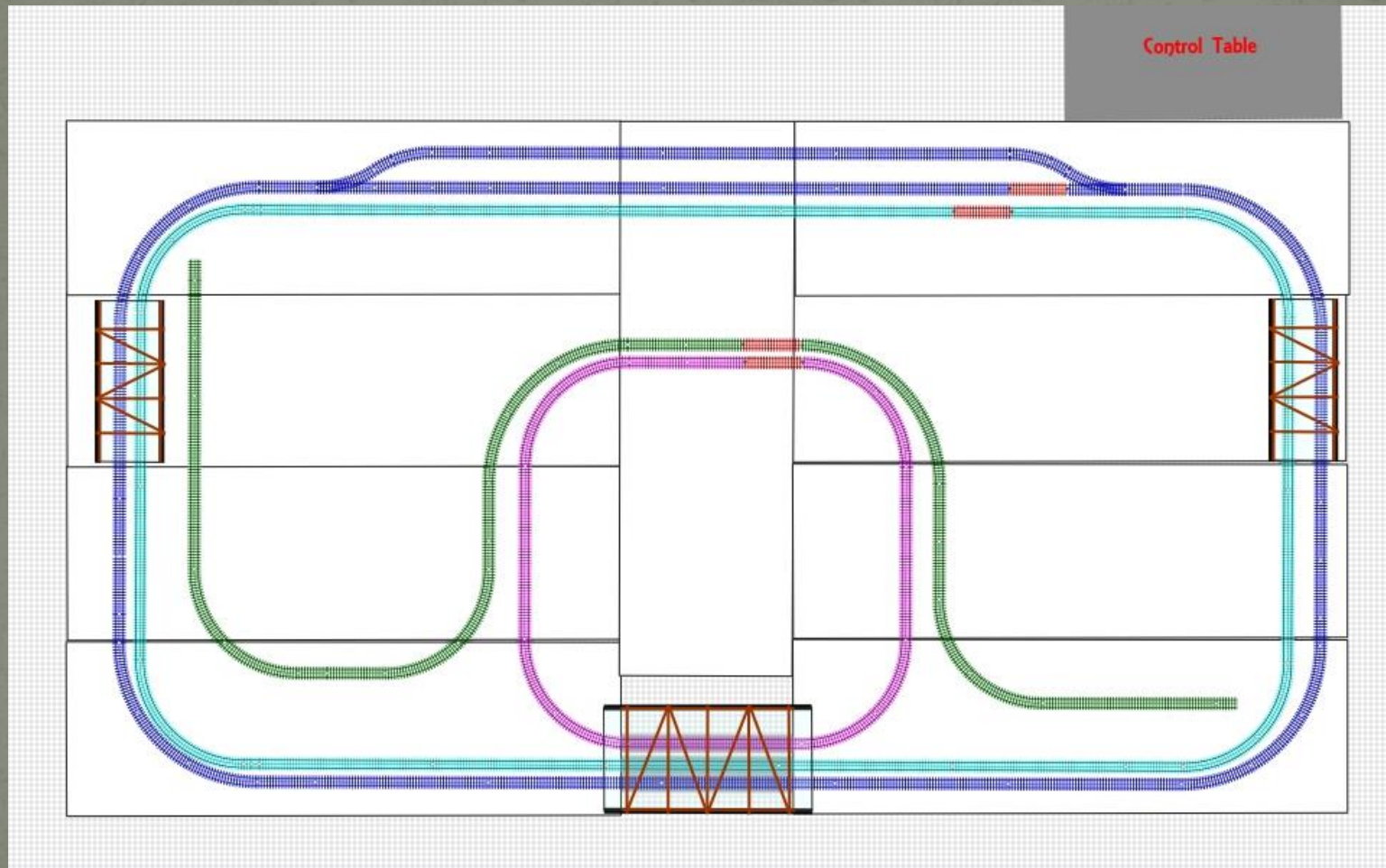
# NEED: Run 3 Tracks Over Same Bridge

2018 Maine State Museum Rev 0

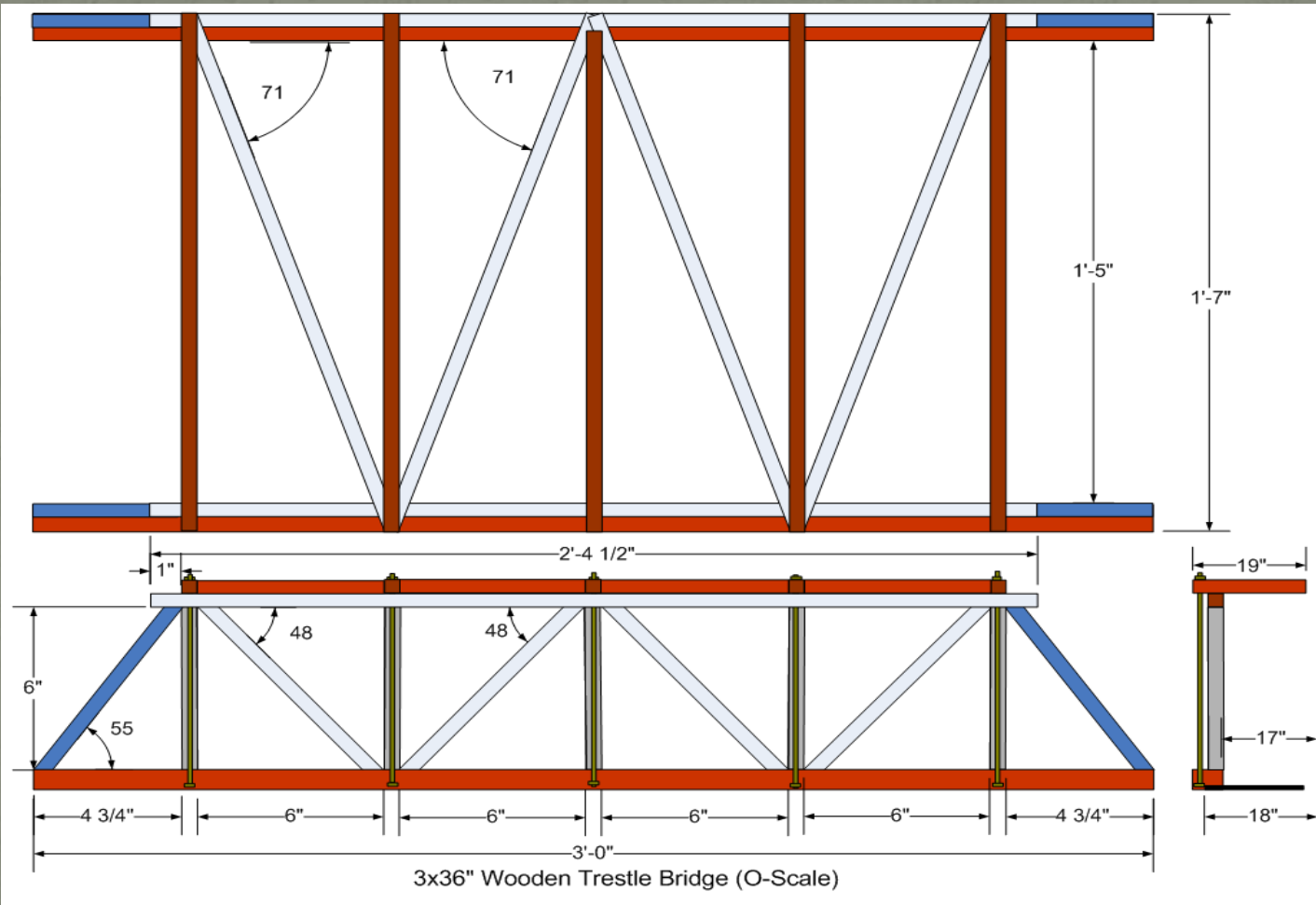
10' x 18.5'



# 2018 Maine State Museum Final Design



# 36" Triple Track O-scale Truss Bridge





# 36" Triple Track O-scale Truss Bridge



# 2018 Maine State Museum

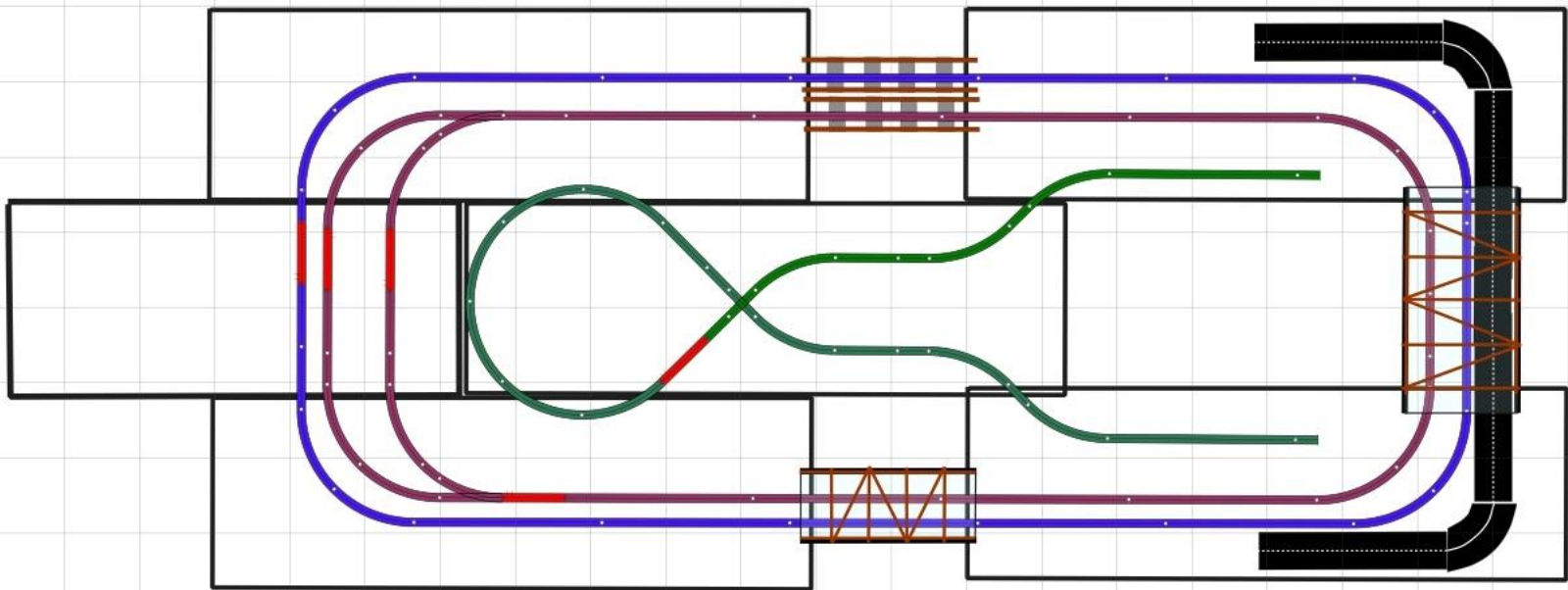


# 2019 Maine Veteran's Home Augusta



# Example of Three Track Bridge Variant

2019 Woods at Canco



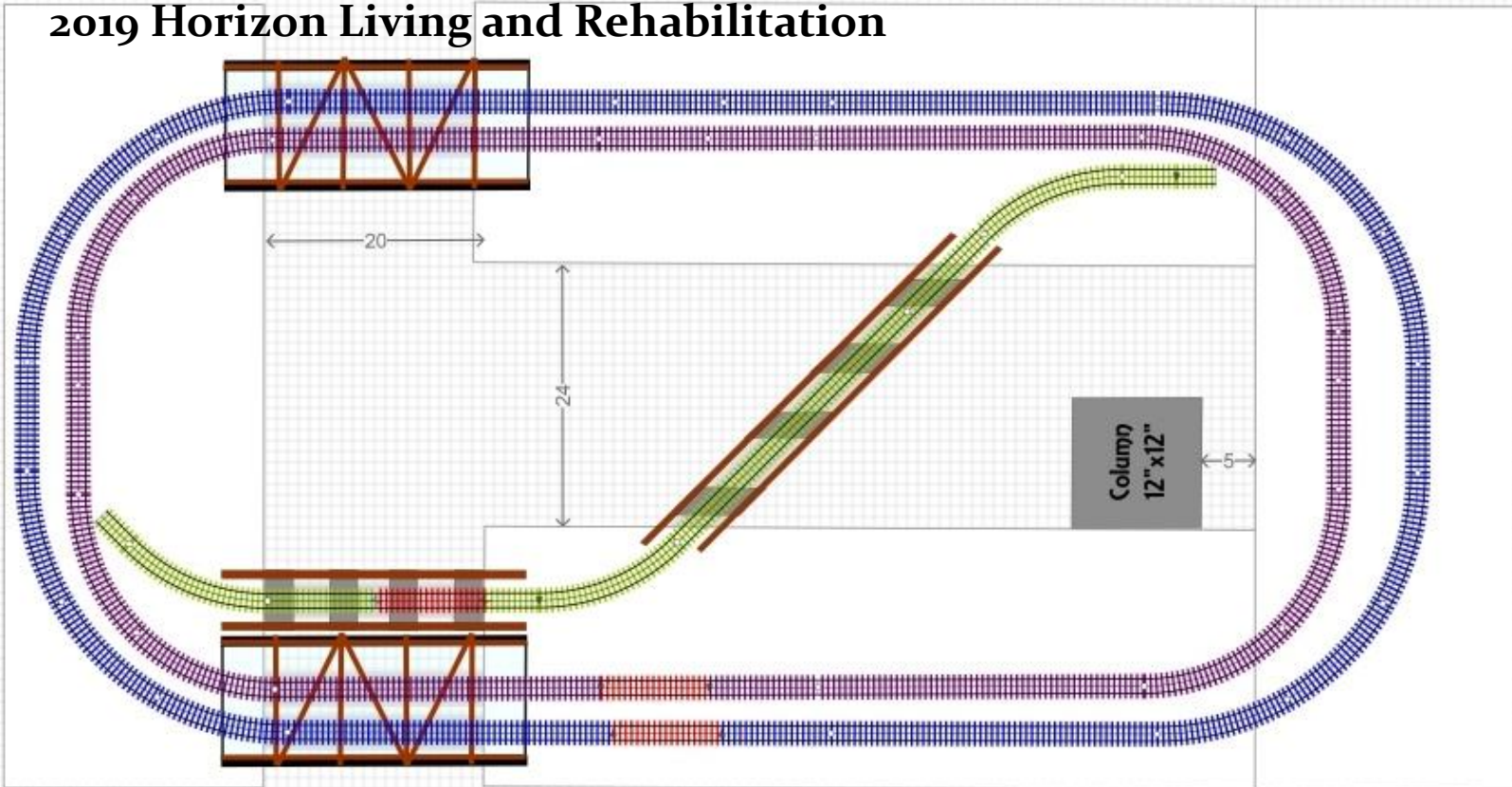


# 2019 Patten Free Library

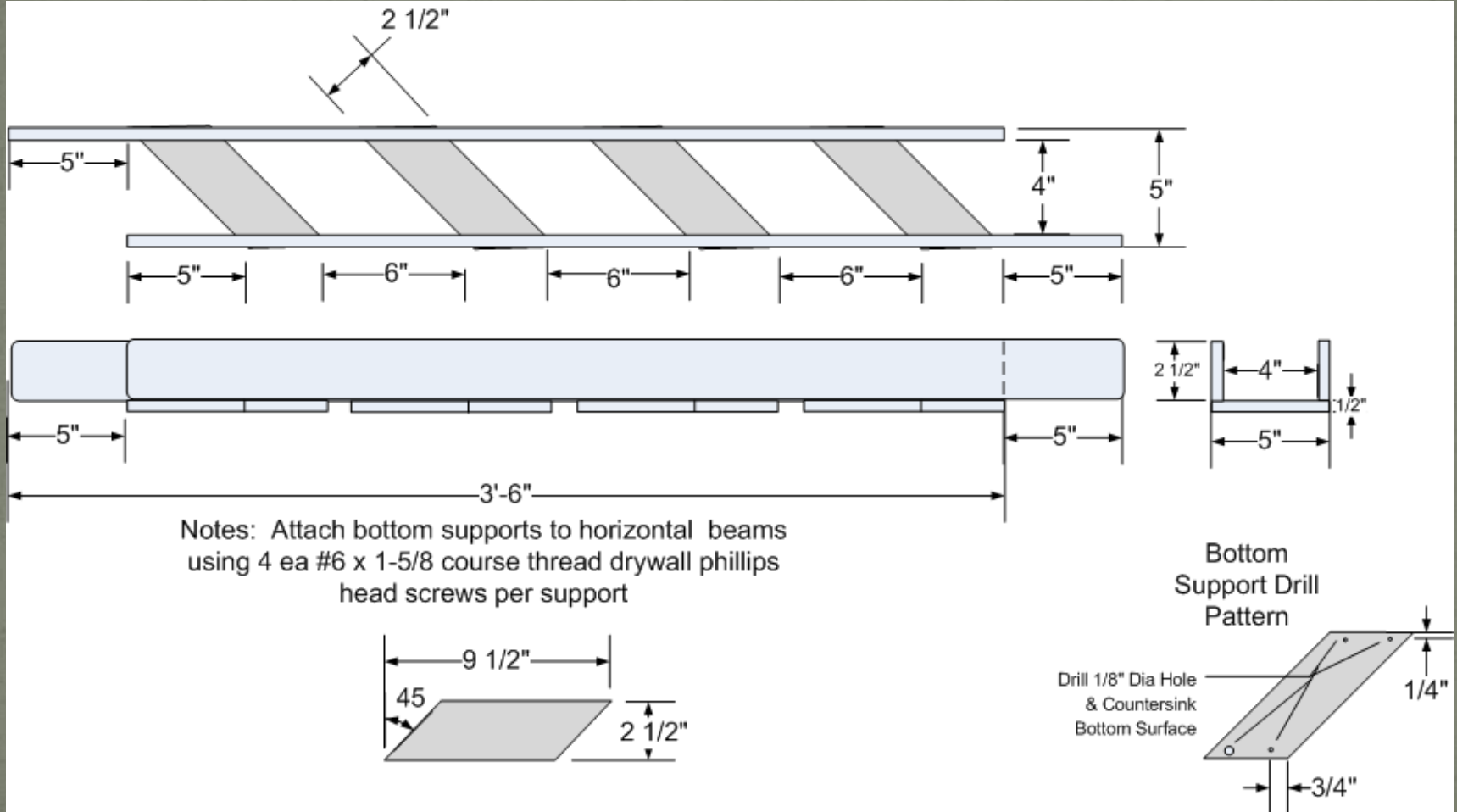


# NEED: Diagonal Bridge for small layout

## 2019 Horizon Living and Rehabilitation



# 24" Single Track O-scale Girder Bridge Slanted 45 degrees Right





# 2019 Horizon Living and Rehabilitation



# Girder Bridge Variants:



28" Dual Track Girder Bridge  
w/Thin Base Rails



36" Dual Track  
Girder Bridge



28" Dual Track Girder Bridge  
w/ Thin Notched Side Girders



90 Degree Crossing  
Girder Bridge

# **NEED:** Retrofit 42' Single Track G-Scale Truss Bridge to remove raised bed



# **NEED:** Resolve Truss Bridge Plexiglas Base cracking failures.



Large Triangular Corner Broke Free during transport

Cracks emanating from Counter Sunk Screw Holes



# Plexiglas Cracking Solution



**Replaced Plexiglas base with  
Galvanized Sheet Metal**

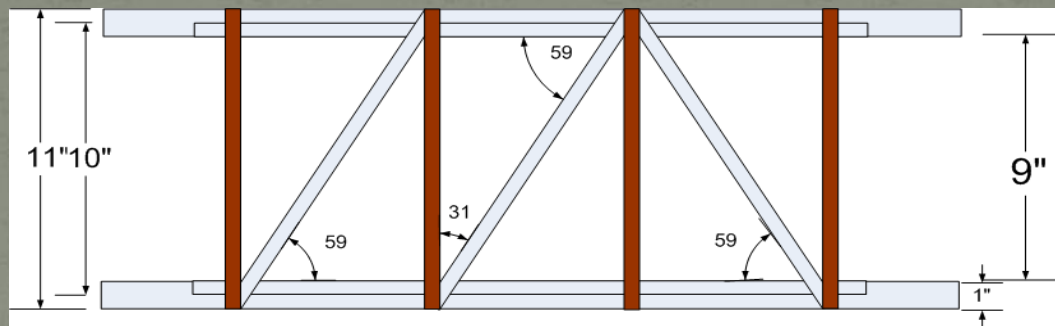
**Painted Sheet Metal  
w/ Flat Black Rust-oleum  
Spray Paint**



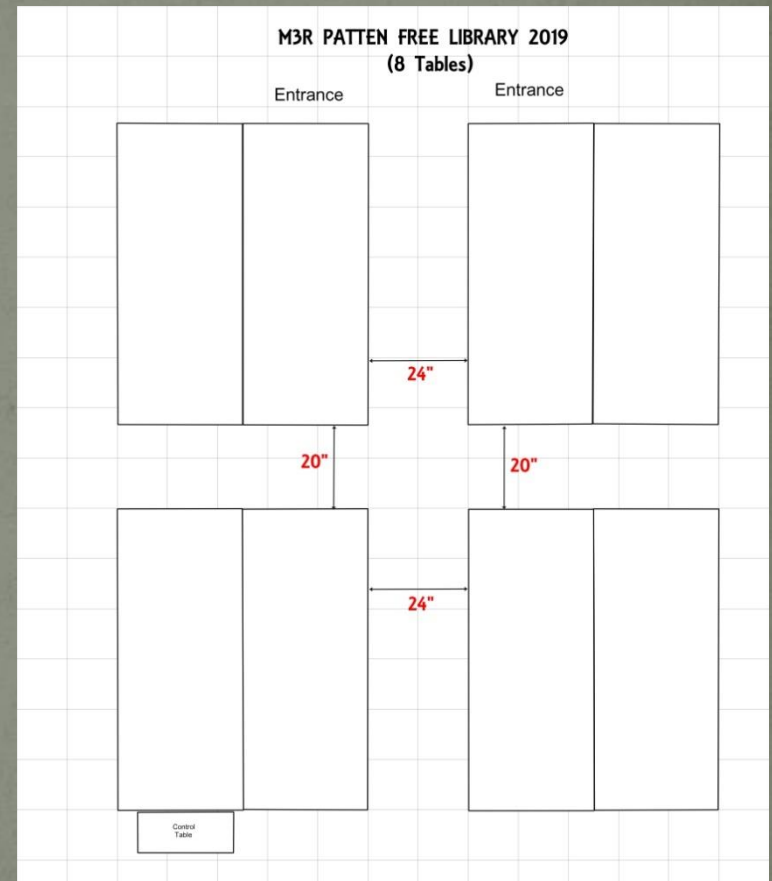
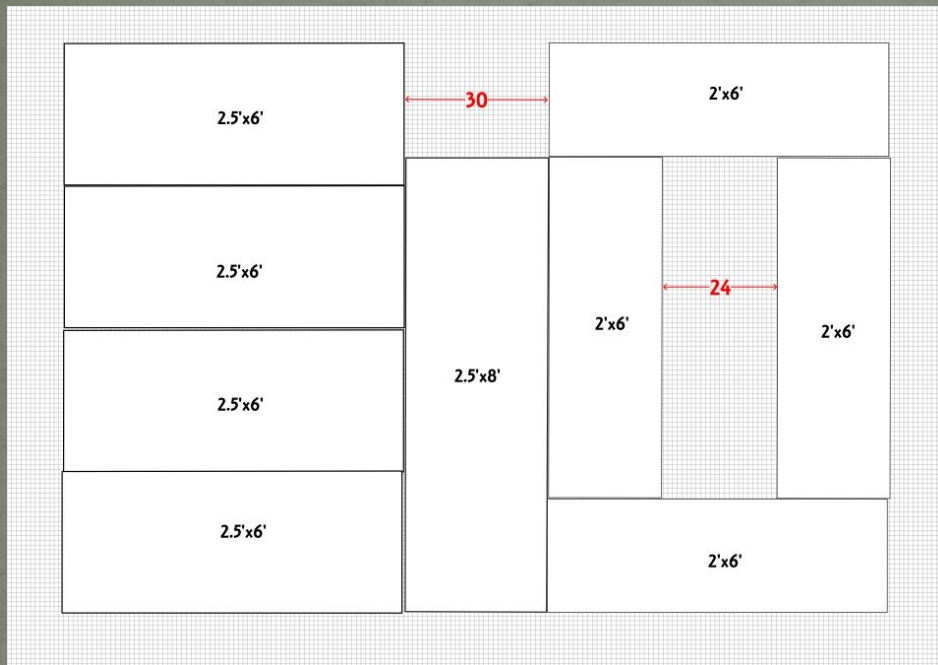
# Helpful Hint: Bridge Width

- Fastrack O-scale:  $3\frac{1}{2}$ " per track
- Add  $\frac{1}{2}$ " between curb and Outside tracks
- Add 1"-2" spacing between tracks
- Example: Dual track bridge  $2 \times 3\frac{1}{2}$ " for tracks +  $2 \times \frac{1}{2}$ " curb space + 1" track separation = 9"

28" Dual Track O-scale Truss Bridge



# Helpful Hint: Typical Gaps



- 20" + 4" - 6" Overhang
- 24" + 4" - 6" Overhang
- 30" + 4" - 6" Overhang
- None-Architectural Interest

# NEED:

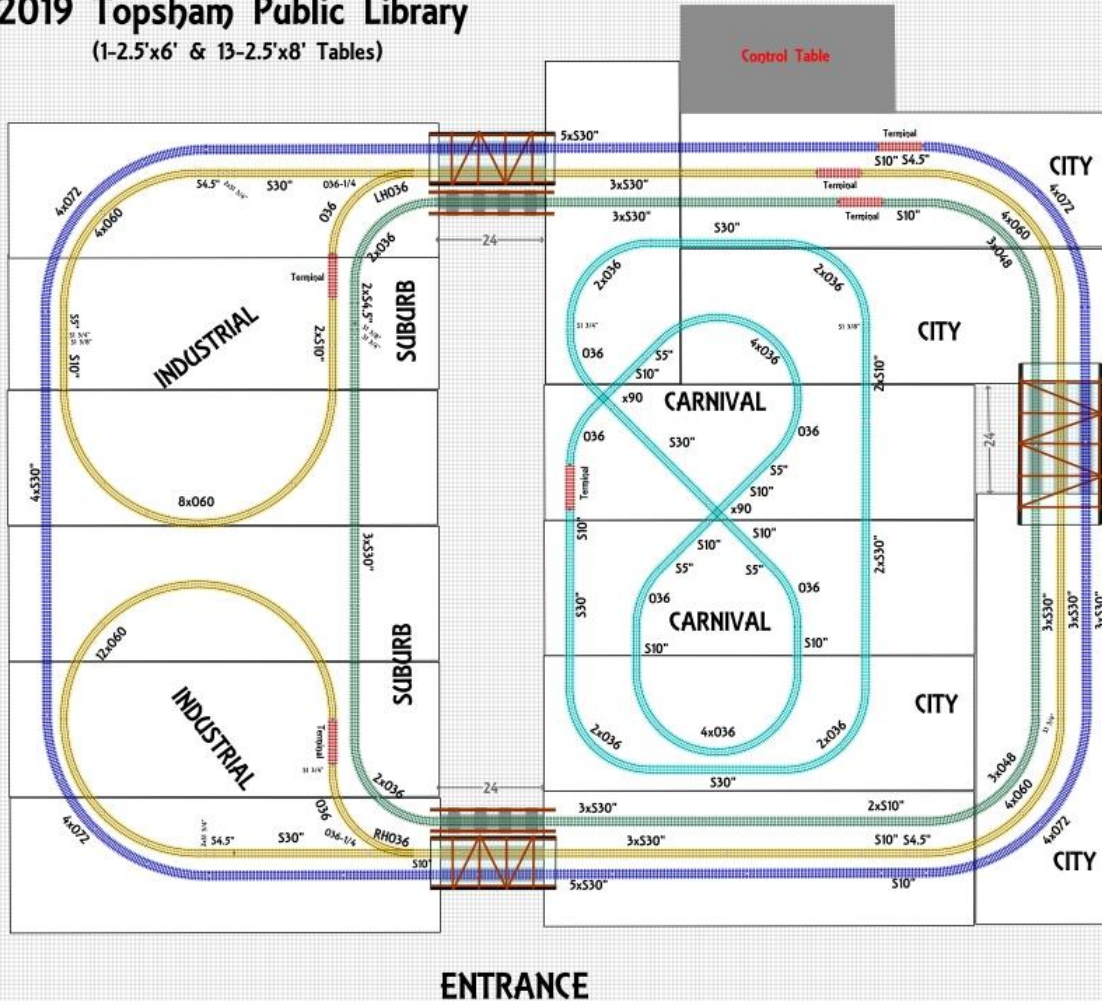
Find more layout alternatives / ideas to add pizzazz to M3R Mobile Layouts – more action in less space.



# Pretzel Loop Track

2019 Topsham Public Library  
(1-2.5'x6' & 13-2.5'x8' Tables)

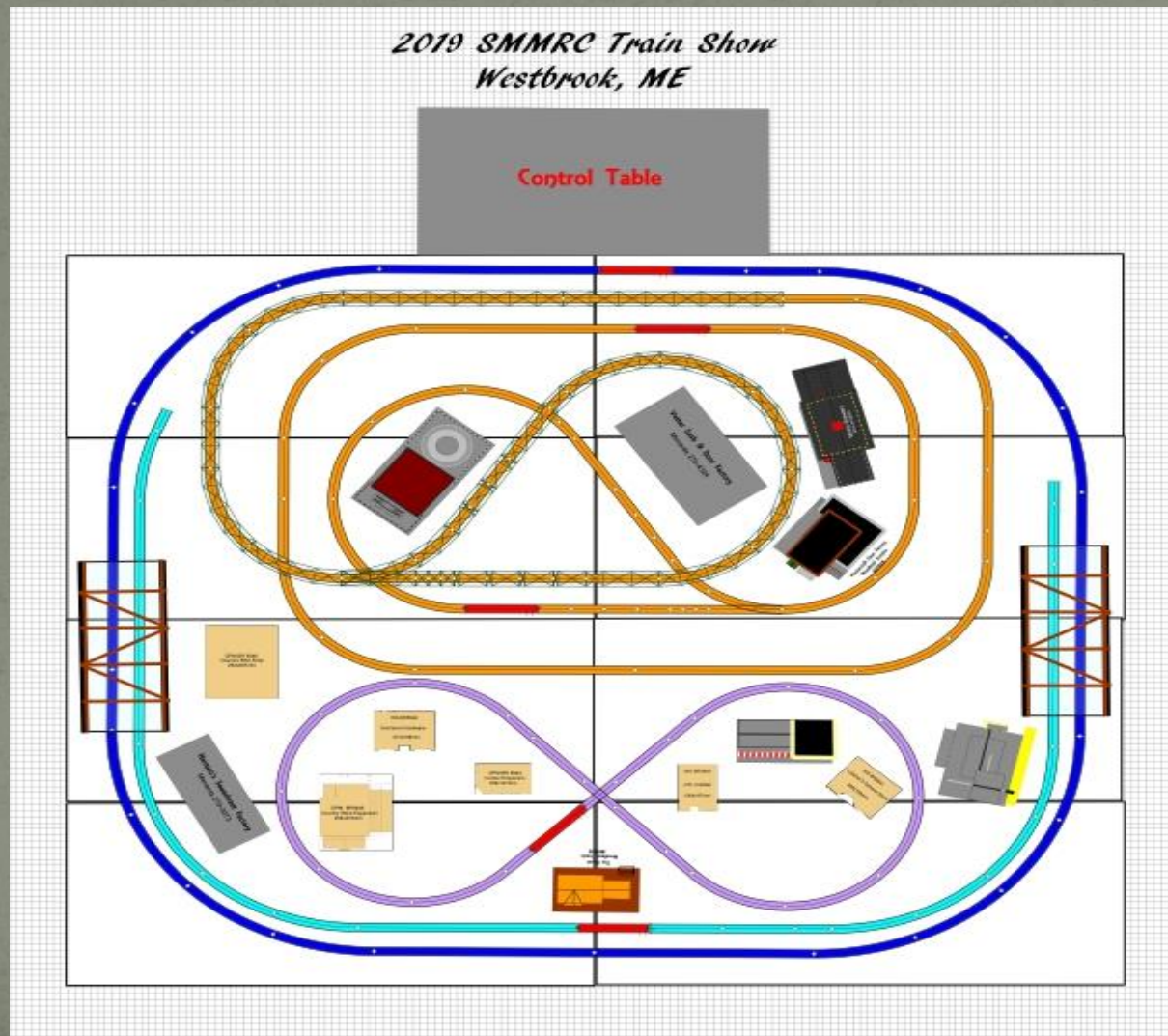
BACK  
ENTRANCE



# 2019 Topsham Public Library



# Raised Double Reversing Loop Dog Bone



# NEED: Raise Reversing Loop

- Lionel 6-12037 – Graduated Trestle Set (22 Trestles)



# Trestles

- Lionel 6-12038 – Elevated Trestle Set (8 Trestles)



# 2019 SMMRC Train Show Layout



# Helpful Hint: Trestle Assembly

- Match # under trestle base to trestle #. For example, 9/10 base for #10 (tallest) trestles.
- Back off top bracket screws on Graduated Trestles  $\frac{1}{4}$  to  $\frac{1}{2}$  turn to allow mounting bracket to rotate . This is necessary to accommodate the sloping track.
- Place Trestles ~10" apart.
- Used  $\frac{1}{2}$  of Graduated Trestle set and 2 Elevated Trestle sets at 2019 SMMRC Train Show.

# Thank You for Listening

- Need
- Innovate
- Adapt
- and Adapt Again!