

Build a Timber RR Bridge

Make & Take Clinic

SSR Convention, May 2009

Build a Timber RR Bridge

- Kit Provided to save time
- Distress wood as desired
- Stain wood
- Assemble stringers
- Assemble bridge piers
- Apply ties to stringers

Build a Timber RR Bridge

- Lay walkways
- Glue piers to bridge
- Build railings
- Sit back and glow in your accomplishment

Kit Provided to save time

- Dimensional wood can be purchased, i.e., 2x4, 2x6, 6x12, etc.
- Wood can be ripped from basswood sheet stock
- Chose a mix of both
 - Buy small dimensional lumber, 4” or less
 - Rip larger dimensional lumber from sheets

To Make 15 kits	# bds/kit	Bds/cut	# cuts	Cuts/sheet size
1/16" Sheet (5.44"=6")				
6x12 stringers, 20'6" long	6	8	12	12
3/32: sheet (8.16"=8")				
8x8 long ties, 17' long	4	10	10	
8x8 short ties, 10'6" long	15	16	15	
6x8 guard, 20'6" long	2	8	8	33
1/8" sheet (10.88"=12")				
4x12 Railing Posts, 4'6" long	4	9	7	
4x12 spacer, 4'6" long	1	9	2	9
3/16" sheet (16.31"=16")				
12x16 piers, 16'6" long	6	10	9	9

Bridge Kit Contents

- 6-6x12 stringers, 12'6" long
- 4-8x8 Long ties, 17' long
- 15-8x8 short ties, 10'6" long
- 2-6x8 rail guards, 19' long
- 6-2x8 walkway planks, 19' long (purchased)
- 6-12x16 piers, 16'6" long
- 6-2x6 tie plates, 4' long (purchased)
- 4-4x12 railing posts, 4'6" long
- 8-2x4 railings, 19' long (purchased)
- 20-NBW (purchased)
- 1-4x12 spacer, 4'6" long
- Stringer Spacer Jig
- #56 drill bit (purchased)

General Supplies Provided

- White glue
- Stain
- Grimy Black Paint
- Paint brush
- Rust chalk & brush w/ sandpaper
- Pin vise
- Extra drill bits

Modeler to bring

- Craft knife with #5 blades
- Tweezers
- Small machinist square
- Scale rule
- Opti-visor if you need it

Distress wood as desired

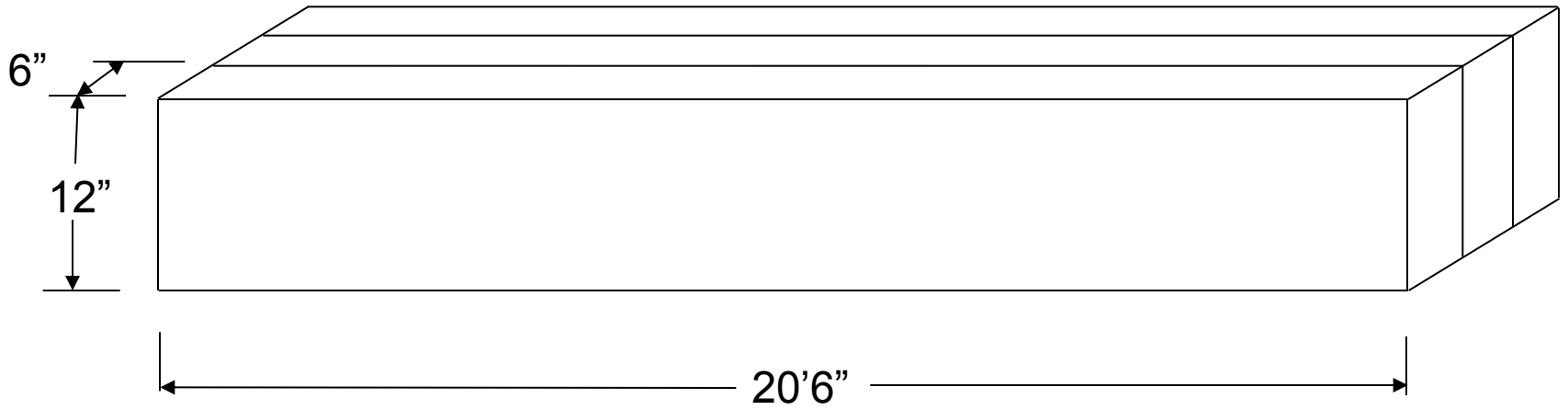
- Can be new, seen some wear, or old and well worn
- Fast, general distressing can be done with a saw scraped along the grain
- Details can be added with a craft knife for cuts, knot holes, etc.
- Do no distress tie plates

Stain wood

- Don't use water based stains for wood
- Types of Stain
 - Alcohol and India Ink, light or dark
 - Alcohol and Leather Dye, several colors
- Do not stain tie plates
- Dump distressed wood in pan of dye, color of your choice
- Remove to paper towels using tweezers

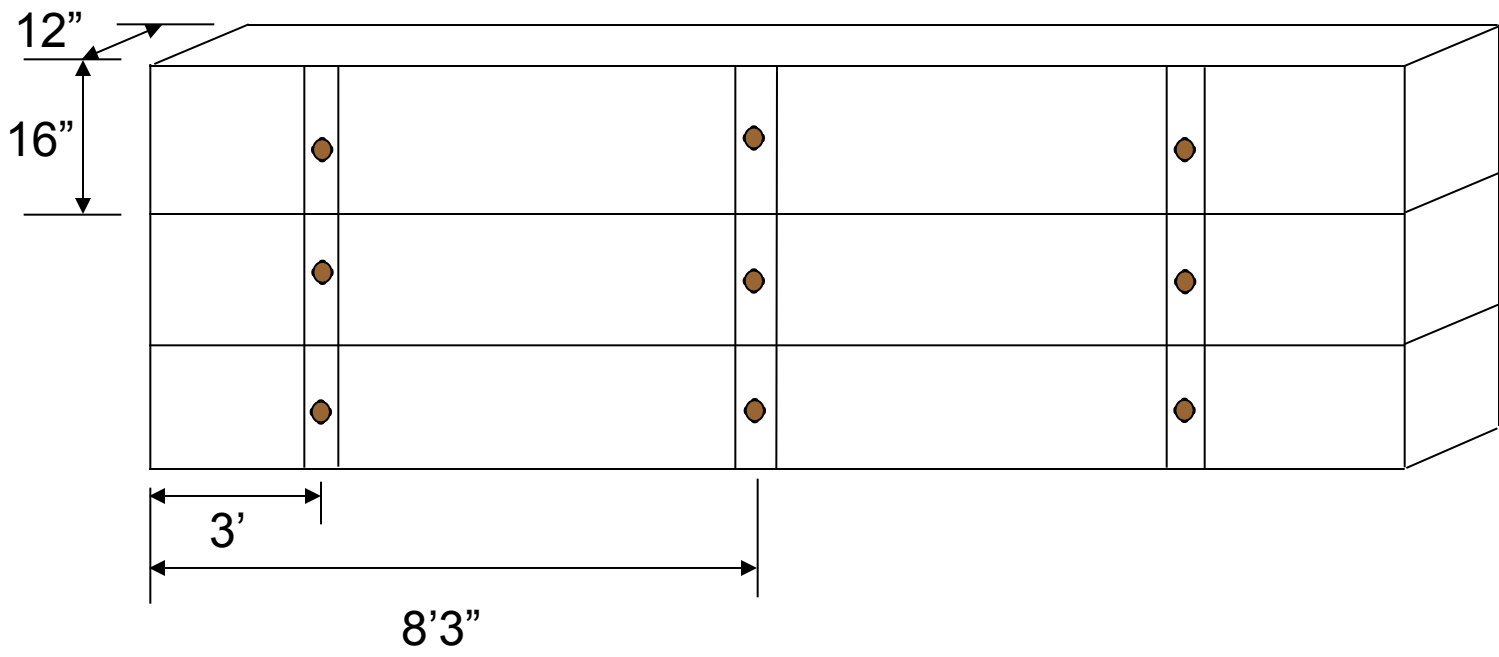
Assemble stringers

- Stringers are heavy beams assembled from individual boards on which the ties are placed
- Prototype uses spacers between boards to allow water drainage. Skip this
- Assemble two stringers using 3 6x12s, 20'6" feet long for each stringer



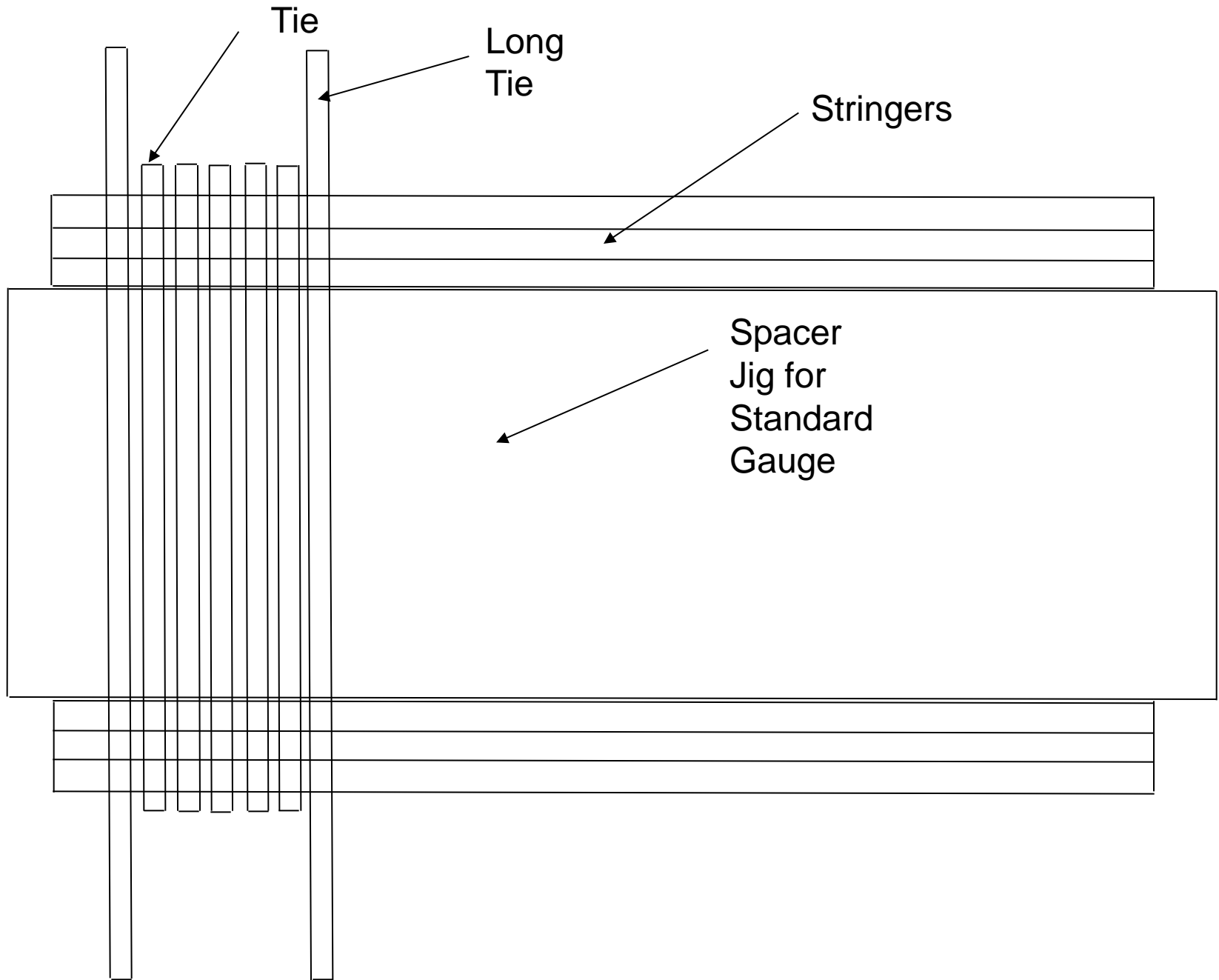
Assemble bridge piers

- Bridge piers made from three 12x16s, 16'6" long
- Assemble to make 12 x 48 pier, 16'6" long
- Apply three tie plates to each pier, spaced as per drawing
- Drill three holes thru each tie plate and into pier
- Insert NBW with CA



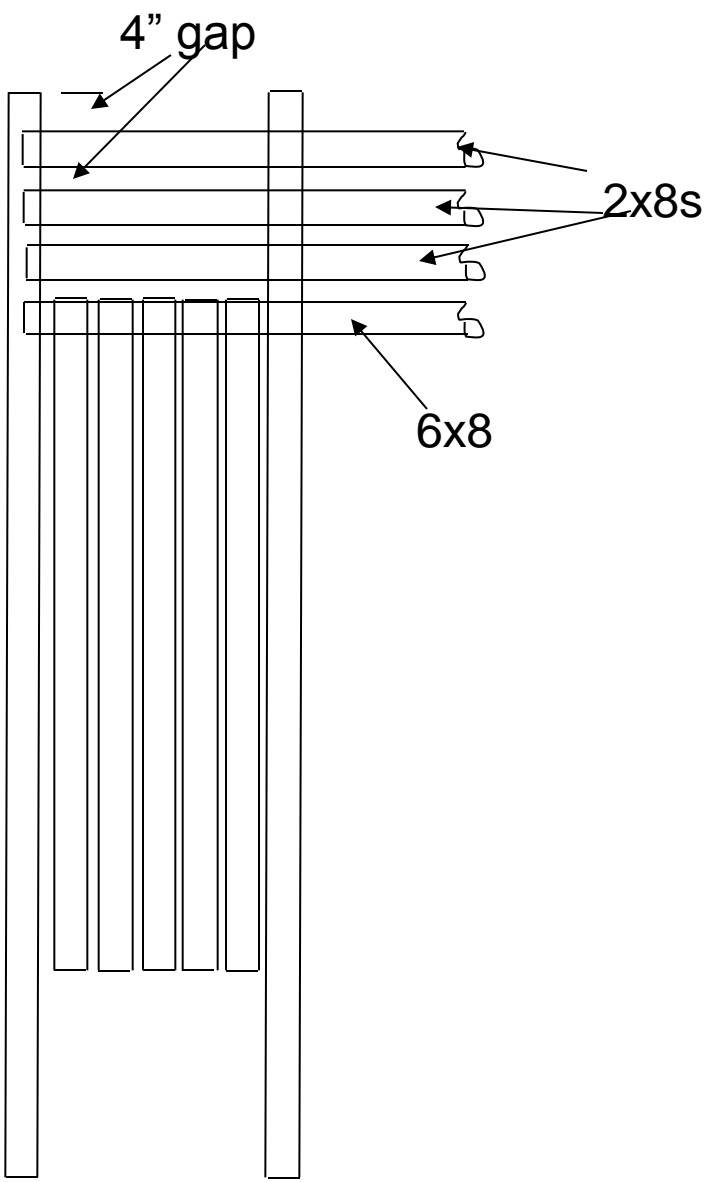
Apply ties to stringers

- Std Gauge- 5' 8.5"
- Narrow Gauge- 2', 3', 3.5' are common
- Std Gauge spacer jig provided
- Use 4x12 to space between ties
- Long tie, then 5 short ties, repeated



Lay walkways

- Use 4x12 for spacer
- Glue first 2x8 plank 4' in from each end of bridge, 4 " in from end of long ties
- Glue two more 2x8s
- Glue one 6x8 closest to rail head

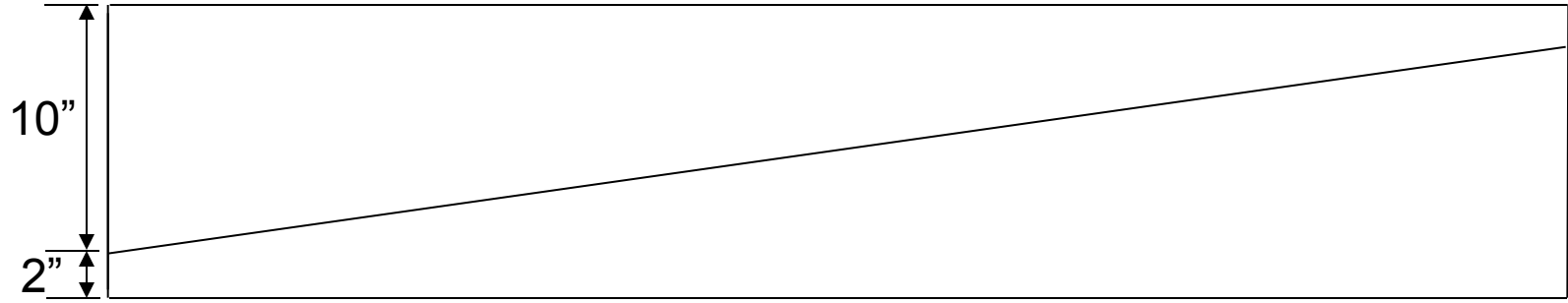


Glue piers to bridge

- Use square to align piers to underside
- Align pier with end of ties
- Glue in place
- Exact position is your choice, but you want about 4' past pier for transition to balance of track

Build railings

- Cut 8 support posts from 4x12 stock
- Glue posts so tapered side is on rail side of bridge
- When glue is dry add 2x4 railings, 3 on side and 1 on top



Scratch Built Timber Bridge

Sit back and glow in your accomplishment

- You just scratch built a RR bridge
- Be Proud
- Be Confident you can do more