

# Building Billboards for the Baden, Vogt & DeSmet

Dave Ackmann, September 2019

## Collecting Billboard Images

Yahoo search on "Vintage Images Circus" or "Vintage Billboards Circus"

"Right click" and save Image to a folder

Visit [www.faststone.org](http://www.faststone.org) to get their "viewer" and build contact sheets of a folder

## Importing and sizing images

Decide on what image height(s) will be your standard

Image Scale Height (HO)	8'	10'	12'	14'	16'
Actual Height of Artwork	1.10"	1.38"	1.65"	1.93"	2.20"

Use PowerPoint or download LibreOffice ([www.libreoffice.org](http://www.libreoffice.org))

Import, resize (use "size and position" property)

## Printing Decals

Use White Waterslide Decal Transfer Paper or equivalent, or even cardstock

Use decal sheets economically, place multiple images per sheet

Print to ink jet printer, dry overnight and spray with automotive lacquer

## Building Support Structure

Build brass gauges for vertical & sloped legs, cross-member and diagonal support

Score & snap face board (Evergreen 9040) with hobby knife

## HO Billboard Dimensional Calculations - 8' Rise

	Scale Feet	Actual Inches	Scale Feet	Actual Inches	Scale Feet	Actual Inches
How tall is your art work?	8	1.10	10	1.38	12	1.65
Length of Upright		2.62		2.89		3.17
Length of Sloped Leg (cut at 60°)		3.02		3.34		3.66
Cross-member length (cut at 30°)		1.42		1.62		1.75
Cross-member distance from peak		1.52		1.79		2.07
Cross-member distance from bottom*		2.39		2.12		1.84
Diagonal Support Length (cut at 30°)		0.86		1.10		1.25

I like NWSL "Chopper III" for cutting styrene sticks; buy extra handles, stops

Cut, miter, and glue face frame (Evergreen 8210), back stiffeners (Evergreen 8206)

Cut, glue leg components (Evergreen 164); a fixture really helps

Tape, cut and glue boardwalk (Evergreen 8210, 8104)

Cut and glue back brace (Evergreen 144)

## Building Fixtures

SAFETY FIRST ! **Must** have Cabinet Grade Router Table, 3/32" straight bit  
UHMW (Ultra High Molecular Weight from Woodcraft, Rockler, Amazon, ptreeusa.com)  
Start with 4" by 5.5" piece of 3/4" thick UHMW  
Cut 30° straight through center on table saw, resulting in 2 trapezoids; use hold down!  
Shorten trapezoid base to  $3.481" \pm 0.001"$  (must be as accurate as possible)  
Mark back of Trapezoid with "TOP"  
Route Trapezoidal leg fixture along 2 longest sides, NE to SW, 1/2 " from edges  
Route deeper cross-member slots 1.29", 1.57", 1.84", 2.12", 2.39" from bottom  
Use brass setup blocks; Remember caliper and index card trick  
Boardwalk fixture (1/8" bit, very shallow)  
Final assembly fixture: 1" spacing for legs, offset cross member, base 0.160" trough

Complete billboard dimension are available in spreadsheet form from the Gateway Division at  
<http://www.gatewaynmra.org/2019/building-billboards-baden-vogt-desmet>  
Visit YouTube.Com and search for "Baden Vogt DeSmet Billboards" for narrated slide tutorial

