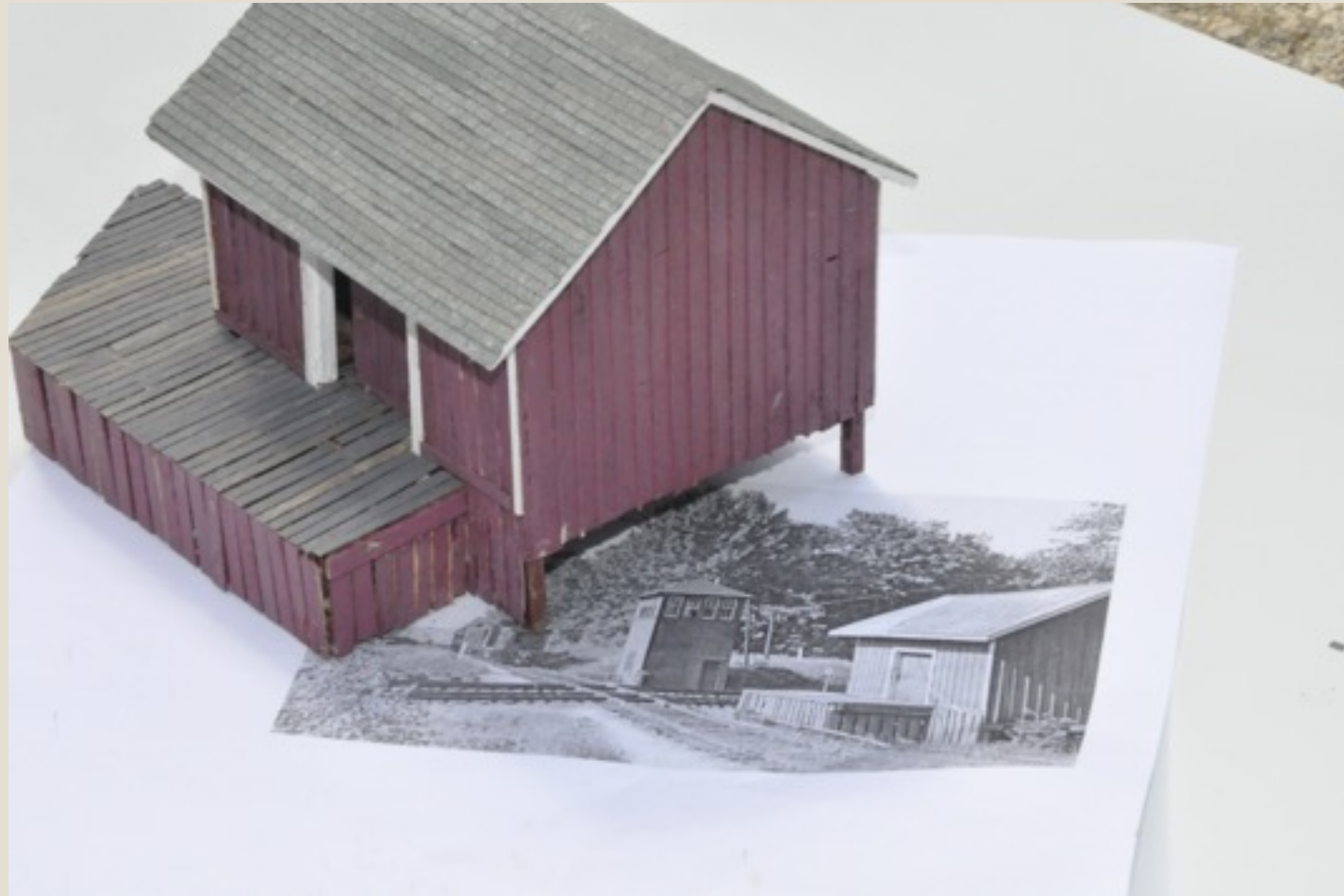


# *Proto-type Modeling Tips and Techniques*

*by Andy Reynolds*



# Overall Objectives:

- 1.) Have a better understanding on what proto-type building is all about.
- 2.) Have a better understanding as to research techniques related to proto-type modeling.
- 3.) Have a better understanding as to the requirements in attaining your AP on Proto-type modeling.
- 4.) Pick up some tips and techniques for scratch-building a freight house or similar structure.

# Model Railroad Achievement Program - **Master Builder - Prototype Models**

***To qualify for this certificate:***

Construct an animated or static model of a prototype scene containing at least six models of prototype equipment or structures. [Note per the Statement of Qualifications two of the six models “must be scratch-built”](#)

The first difference that you should notice between this category and [Master Builder - Scenery](#) is that there is no minimum size requirement for your prototype scene. The only requirement is that it **be big enough to adequately display the required models, and give the overall effect of the intended scene.**

At least four different types of models must be represented:

- Rolling stock
- Railroad structure
- Caboose or passenger car
- Motive power.

# Grading System:

## **Terrain (35 pts)**

The ground and all natural features such as rocks, water, trees, hills and depressions, as well as manmade features such as railroad roadbed, cuts, fills, drainage ditches, embankments, streets and roads, etc.

Also remember different types of vegetation and the effects of weather animals and humans. Remember the detail on streets and roads, whether in urban or rural areas: sewers / storm drains, man-hole covers, shoulders, drainage ditches, cracks, patches, road wear marks, oil stains, and tire ruts in dirt roads. Look at the photograph(s) that you are working from, and notice the details there, then work to recreate them. If your model includes areas which are not included in the photographs, make sure to carry the same level and type of detail throughout.

## **Structures (35 pts)**

Structures are considered from the standpoint of prototypical suitability, placement, and appearance as scenic effects - Not as to construction, which is covered under [Master Builder - Structures](#). This includes **bridges, trestles, culverts, buildings and all other types of structures (towers, power lines, signs, fences, retaining walls, etc.)**, track and right-of-way features such as turnout controls, signaling structures, crossing gates and shanties, turntables and other service structures, etc.

Structures should be *in* the ground, not sitting on top of it. Again, notice the little things about the structure that you are trying to model, such as the number of chimneys and other roof details. It is those things which will give your model the look and feel of the prototype. Selective compression is acceptable as long as the character of the original is preserved (modeling a six-door prototype freight house as having only four doors to save space, for example). If you are in doubt, consult your local or regional AP Manager. Note: Per the Statement of Qualification Form – Any two of the six models “:must be” scratch-built.

## **Background (15 pts)**

Treatment of the wall, backdrop, and/or ceiling to realistically depict depth, distance, horizon, and sky.

This doesn't mean that you have to have a photographic quality background. Your background should continue the 'illusion of reality' that you are trying to create with your scenery. Make sure that the background matches the scenery, and the transition where the two of them meet is smooth and/or hidden. Skyboards behind the model are a good way to control the background.

## **Lighting (5 pts)**

Illumination effects from three aspects:

Railroad cars, signals, etc. Buildings, streets, and roads, etc. Overall lighting effects - day and/or night.

## **Realism / Conformity (35 pts)**

# ***Final Steps to receive your Master Builder - Prototype Models AP certificate:***

2. Prepare a written description along with photographs, documented evidence and/or maps, which will verify the actual prototype scene, used as a basis for the modeled scene.

3. You must submit a completed Statement of Qualifications (SOQ) which shall include the following:

The signed [Merit Judging forms](#).

The supplemental material with the photographs of both the model and the prototype attached

## HANDY TOOL FOR TRACKING ACHEIVEMENTS

<http://www.hubdiv.org/articles.htm>

Spring TRAINing 2012 Clinic: "Along the Way to Master Model Railroader", presented by Charles Stevens Jr, Mar 10, 2012 ([Powerpoint \[.pptx\]](#)). Mr. Stevens also provided an [Excel spreadsheet \[.xlsx\]](#) for tracking your progress through the series of required certificates.

| Master Builder Prototype Models  |                          |          |                   |             |
|--|--------------------------|----------|-------------------|-------------|
| Master Builder Prototype Models<br>(4 different types), 2 scratch, entire scene judged for Merit Award |                          | 6 models | Merit Award Score | Date Judged |
| 1  | Scratch-built            |          |                   |             |
| 2  | Scratch-built            |          |                   |             |
| 3  | Railroad Structure       |          |                   |             |
| 4  | Caboose or Passenger Car |          |                   |             |
| 5  | Rolling Stock            |          |                   |             |
| 6  | Motive Power             |          |                   |             |

## **Purpose of a clinic:**

*The purpose of this clinic is to offer some tips on how to make your model railway a more realistic miniature of the prototype.*

## **Purpose of a model railway layout:**

*The purpose of any model railway is to be an enjoyable hobby in creating, in miniature, a railway scene that gives pleasure.*

*Think for a moment about what attracts you to a particular model railway layout at a hobby show:*

*Chances are:*

- 1.) It will be "finished", i.e., fully "scenicked"*
- 2.) You will be intrigued by some detail that brings the scene close to real life.*
- 3.) You will be impressed by one or more aspects of the scene before you: ie:  
  
    *The coloring of the "countryside",  
    The meticulous creation of a particular model.  
    The professional appearance of the track work - and so on and so forth**
- 4.) You will like the panorama of the overall scene.*
- 5.) But likely most of all because the layout evokes memories of railroading that are familiar and that you enjoy.*

*With permission from [Charles Cooper](http://www.railwaypages.com/the-credible-model) at <http://www.railwaypages.com/the-credible-model>*

Narrow down your possible choices:





Narrow down your possible choices:



# Narrow down your possible choices:



the work of one man—and also misunderstandings with regard



such as Beebe's—focus  
railroaders, to take in the  
scene of American railroads  
doing so, he was one of the  
photographers working as  
the staff photographer to take  
the railroad scene into the  
photographic process. It  
been popularized by maga-  
zines such as *Life*, and gives  
context by photographs wo-  
for the FSA and its succe-  
and apply them to photogra-  
American railroading. And  
his first such photos taken in  
1940, and published begin-  
the mid-1940s, he came to  
scene a bit before eminent  
Stieglitz, Shaughtnessy,  
His influence on others  
because of the bitterness  
Morgan/Hastings field to  
American and Canadian  
articles inspired a generation  
focusing on the American  
So, Hastings' photos v  
views of American rail-  
contemporaries had ever  
fires—they were, if Beebe  
that gathered around Rail-  
Beebe/Clegg books of d  
views taken by FSA and p  
beginning in the mid-1930s  
railroad photography was  
that was also driven by a

Narrow down your possible choices:



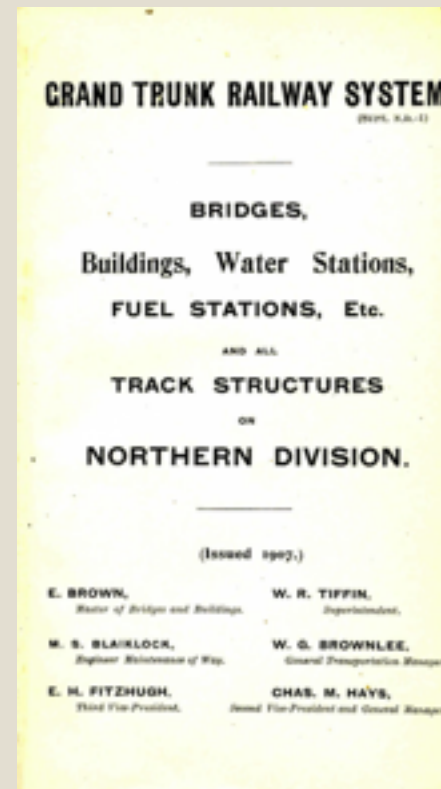
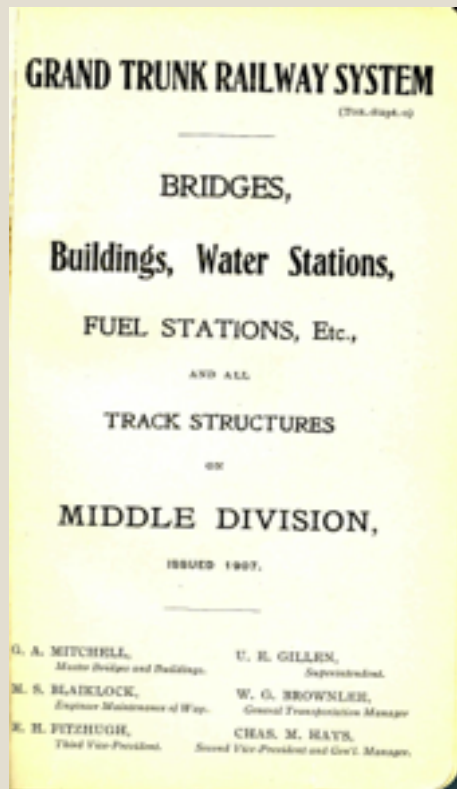
# FINAL PICK



This Inventory was rescued by former CNR employee and dedicated railway history researcher Art Clowes during a paper purge at one of the CNR's Division points, and is posted on this website with his kind permission. It is a priceless record of every GTR structure of the Middle, Northern, Southern, Eastern and Ottawa Divisions as of 1907, a pivotal year in a massive GTR structure renewal program between around 1900 and the outbreak of WWI.

**Note by Art:**

"The GTR had a series of these inventory books that were issued every few years. I expect the information in them was not bad, especially dates around the period of issue and shortly before. These books were not "a headquarters" produced book, but a combination including information from road masters and engineers. Some of my copies have plenty of notes, and I can recall coming across letters where some of this info was forwarded to headquarters."



Station at mile from Hamilton of: 25.13  
22' x 44' x 16'

Watchman's shed at 25.41  
(old signal tower - gone by 1959)  
was 10'x12'x 8'

Freight Transfer Shed at 25.41  
17 1/2" x 21 1/2" ht. 12'  
with a platform of 648 sq. ft.

108

| Mileage from Toronto | STATIONS AND BUILDINGS                                | DESCRIPTION AND DIMENSIONS.   | When Built. | REMARKS (CONDITION)      |
|----------------------|---|---|-------------|--------------------------|
|                      | <b>Callander--Cont.</b>                               |   |             |                          |
|                      | Section tool house                                    | Fr., shingle roof<br>16'x29', ht 8'   | 1886        | Fair                     |
| 22.39                | <b>Nipissing Jct.</b>                                 |   |             |                          |
|                      | Station   | Sill fdn, fr., shgle roof<br>24'x28', ht 29'                                    | 1904        | Good                     |
|                      | Dwelling  | Sill fdn, fr., shgle roof<br>24'x32', ht 12'                                    | 1904        | Good                     |
|                      | Oil house   | 3768 sq ft platform<br>Fr., shingle roof<br>6'x8', ht 8'                        | 1888        | Fair<br>Closet           |
|                      | <b>BURLINGTON CROSSING to ALLAN DALE -13th Distri</b> |   |             |                          |
|                      |   |   |             |                          |
| 11.25                | <b>Burlington Crossg</b>                              |   |             |                          |
| 11.25                | Section tool house                                    | Fr., shingle roof<br>16'x29', ht 8'   | 1891        | Good<br>Closet           |
| 16.85                | <b>Tansley</b>  |   |             |                          |
|                      | Shelter & freight house                               | Sill fdn, fr., shgle roof<br>14 1/2'x24 1/2', ht 10 1/2'<br>1440 sq ft platform | 1828        | Poor                     |
| 16.96                | Section tool house                                    | Fr., shingle roof<br>16'x29', ht 8'   | 1890        | Good                     |
| 18.75                | <b>Ash</b>  |   |             |                          |
|                      | Shelter & ft. ho.                                     | Sill fdn, fr., shgle roof<br>14 1/2'x24 1/2', ht 11 1/2'<br>1090 sq ft platform | 1879        | Poor                     |
| 24.86                | Section tool house                                    | Fr., shingle roof<br>16'x29', ht 8'   | 1892        | Good                     |
| 25.13                | <b>Milton</b>   |   |             |                          |
|                      | Station   | Sill fdn, fr., shgle roof<br>22'x44', ht 16'                                    | 1903        | Good                     |
|                      | Stock yard  | 32'x40', 24'x40'<br>10'x32'   |             | Double chute<br>Good     |
| 25.41                | Watchman's shelter                                    | Fr., shingle roof<br>10'x12', ht 8'   | 1887        | Fair                     |
|                      | Ft transfer shed.                                     | Fr., shingle roof<br>17 1/2'x21 1/2', ht 12'<br>648 sq ft platform              | 1880        | Good. C.P.R.<br>crossing |
| 25.14                | <b>Mansewood</b>                                      |   |             |                          |
|                      | Shelter   | Fr., shingle roof<br>12'x16', ht 11'<br>701 sq ft platform                      | 1879        | Poor                     |

Plate Girder Bridge at mile from Hamilton of: 25.25  
**built in 1897** (Bridge # 257)  
 Length 59 ½ ft.

\* **Height of Rail above water – “15 feet”**

90

| Mileage from Hamilton | STATIONS, SECTIONS, Kind of Structure | Name and No. of Structure |            | No. of Spans | Length of Spans and Dimensions of Culverts |     | Total Length of Structure | Height of Rail above low water | When Built | REMARKS                  |
|-----------------------|---------------------------------------|---------------------------|------------|--------------|--|-----|---------------------------|--------------------------------|------------|--------------------------|
|                       |                                       | NAME                      | Bridge No. |              | feet.                                      | ft. |                           |                                |            |                          |
| 20.50                 | Open wood                             | Culvert                   |            | 1            | 8  |     | 11                        | 6 1888                         |            | on timber walls          |
| 20.75                 | Rolled beams                          | Bridge                    | 256        | 1            | 12½  |     | 16                        | 6 1890                         |            | Tim. walls               |
| 21.20                 | Open wood                             | Culvert                   |            | 1            | 8  |     | 10                        | 4 1885                         |            | Rail str on timber walls |
| 22.01                 | Wood                                  | "                         |            |              | 2x3  |     | 34                        | 6 1894                         |            | Rail str on timber walls |
| 22.50                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 6 1888                         |            | Rail str on timber walls |
| 22.71                 | Wood                                  | "                         |            |              | 1x1  |     | 23                        | 3 1888                         |            | Rail str on timber walls |
| 22.90                 | Wood                                  | "                         |            |              | 2x2  |     | 31                        | 3 1890                         |            |                          |
| 23.05                 | Wood                                  | "                         |            |              | 2x3  |     | 31                        | 6 1890                         |            | Rail str on timber walls |
| 23.00                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 2 1889                         |            |                          |
| 24.20                 | Wood                                  | "                         |            |              | 2x2½                                       |     | 34                        | 6 1890                         |            | Rail str on timber walls |
| 24.75                 | Wood                                  | "                         |            |              | 2x3  |     | 37                        | 5 1890                         |            |                          |
| 25.05                 | Wood                                  | "                         |            |              | 2x3  |     | 40                        | 4 1904                         |            | <i>Genie</i>             |
| 25.15                 | <b>Milton</b>                         |                           |            |              |  |     |                           |                                |            |                          |
| 25.15                 | Wood                                  | Culvert                   |            |              | 2½x4                                       |     | 10                        | 5 1904                         |            |                          |
| 25.25                 | Plate girder                          | Bridge                    | 257        | 2            | 29½  |     | 162                       | 15 1891                        |            | On masonry               |
| 25.41                 | Wood                                  | Culvert                   |            |              | 1x2½                                       |     | 28                        | 4 1878                         |            |                          |
| 25.85                 | Wood                                  | "                         |            |              | 3x4  |     | 43                        | 5 1897                         |            |                          |
| 26.00                 | Plate girder & cedar pile trestle     | Bridge                    | 258        | 2            | 35   |     | 84                        | 16 1897                        |            | Plate girder             |
|                       |                                       |                           |            |              | 2-18                                       |     |                           |                                |            |                          |
| 26.25                 | Wood                                  | Culvert                   |            |              | 2x2½                                       |     | 20                        | 4 1904                         |            | Rail str on timber walls |
| 26.50                 | Open wood                             | "                         |            | 1            | 9½   |     | 117                       | 7 1895                         |            | Rail str on timber walls |
| 27.00                 | Wood                                  | "                         |            |              | 2x2  |     | 21                        | 5 1893                         |            |                          |
| 27.50                 | Wood                                  | "                         |            |              | 2x2  |     | 33                        | 5 1893                         |            |                          |
| 27.90                 | Wood                                  | "                         |            |              | 2½x2½                                      |     | 34                        | 4 1892                         |            |                          |
| 28.04                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 5 1892                         |            | Rail str                 |
| 28.04                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 5 1892                         |            | Rail str                 |
| 28.14                 | <b>Mansewood</b>                      |                           |            |              |  |     |                           |                                |            |                          |
| 28.25                 | Stone arch                            | Culvert                   |            |              | 10x18                                      |     | 170                       | 28 1880                        |            |                          |
| 28.27                 | Rolled beams                          | Bridge                    | 259        | 1            | 14   |     | 18                        | 7 1890                         |            | On pile seats            |
| 28.55                 | Wood                                  | Culvert                   |            |              | 2x2  |     | 25                        | 6 1890                         |            |                          |
| 28.55                 | Wood                                  | "                         |            |              | 2x2  |     | 25                        | 5 1890                         |            |                          |
| 28.85                 | Wood                                  | "                         |            |              | 1½x2                                       |     | 35                        | 6 1877                         |            |                          |
| 29.15                 | Cast iron pipe                        | "                         |            |              | 2  |     | 57                        | 15 1893                        |            |                          |
| 29.45                 | Wood                                  | "                         |            |              | 2x2  |     | 46                        | 8 1877                         |            |                          |
| 29.90                 | Wood                                  | "                         |            |              | 2x2  |     | 37                        | 5 1877                         |            |                          |
| 30.00                 | Wood                                  | "                         |            |              | 5x6  |     | 79                        | 23 1877                        |            |                          |
| 30.50                 | Wood                                  | "                         |            |              | 2x2  |     | 45                        | 16 1877                        |            |                          |
| 30.67                 | Wood                                  | "                         |            |              | 2x2  |     | 49                        | 11 1877                        |            |                          |
| 30.85                 | Wood                                  | "                         |            |              | 2x3  |     | 36                        | 11 1905                        |            |                          |
| 31.04                 | Wood                                  | "                         |            |              | 2x2  |     | 28                        | 4 1891                         |            |                          |
| 31.05                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 6 1892                         |            | Rail str                 |
| 31.05                 | Open wood                             | "                         |            | 1            | 6  |     | 8                         | 4 1892                         |            | Rail str                 |
| 31.50                 | Cedar pile trestle                    | Bridge                    | 260        | 2            | 14   |     | 33                        | 6 1897                         |            |                          |
| 32.00                 | Wood                                  | Culvert                   |            |              | 2x2  |     | 34                        | 6 1906                         |            |                          |
| 32.00                 | Cedar pile trestle                    | Bridge                    | 261        | 2            | 14   |     | 33                        | 5 1897                         |            |                          |

Canadian Pacific (double track) passing over CN line (formally The Hamilton & North Western Railway- formerly the Grand Trunk Railway GTR) in Milton, Ontario, Canada.



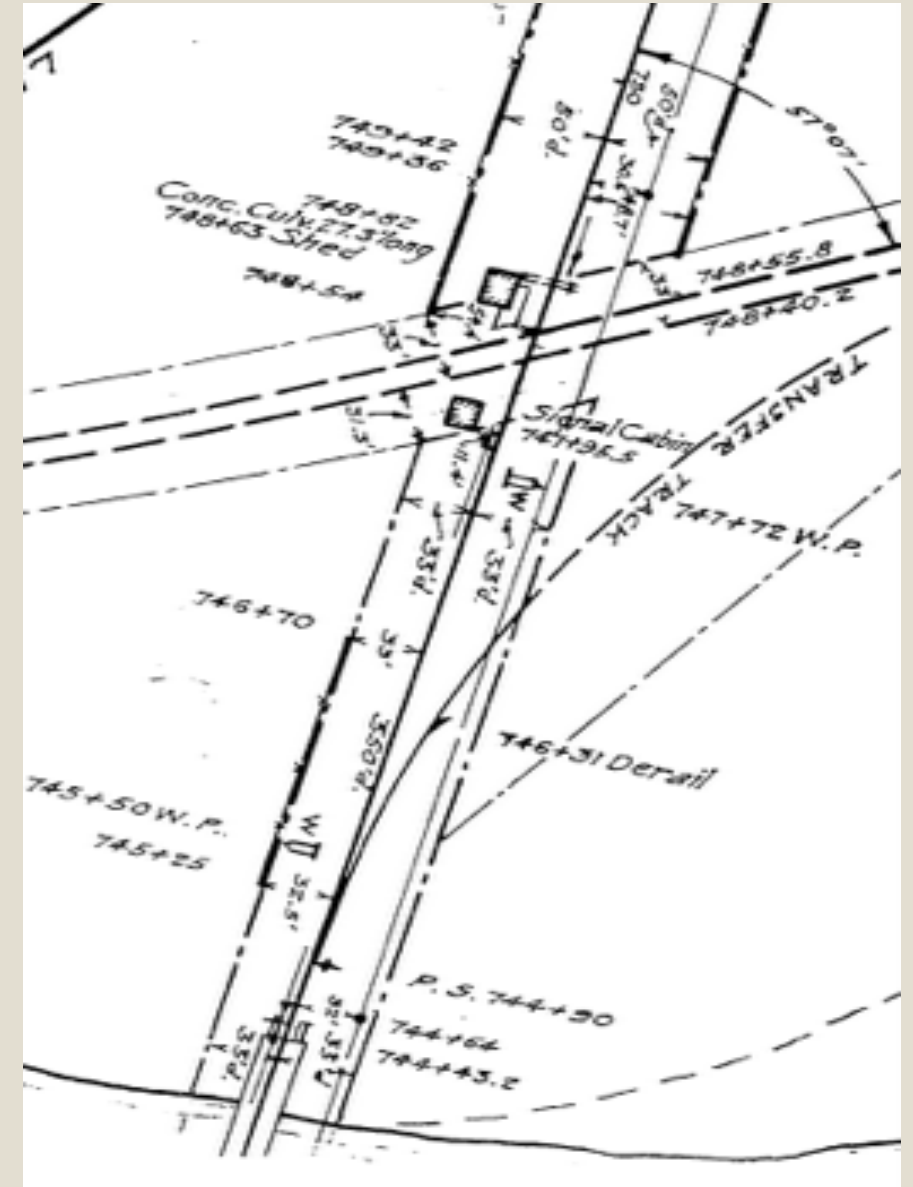


# Scope of Diorama:

To begin at the right of the shed (at mile 25.41) and go up to and include bridge #258 (at mile marker 25.25) at the Sixteen Mile Creek Bridge.

This also includes the “signal cabin”, later rebuilt from the 10x12x8 ft. high to the tall tower in the 1959 picture.

Also note the culvert at the end of the shed (28' in length)



Picture with caption taken from page 126, "Hamilton's Other Railway" by Charles Cooper.



In the last year or so of passenger service, the SW1200 road switchers took over from the "oil-electric" generation of motive power. Here #1318 is northbound at the Milton grade crossing with the CPR. The station and following way freight (with #1267 in charge) appear in the distance beyond the semaphore. The crossing tower, tool shed and CNR track shown here have now been gone for many a year. The only trace today is a very narrow path in dense foliage. June 13, 1959. Robert J. Sandusky photo



The CNR's daily except Sunday wayfreight has departed Milton station in the distance and is about to cross the double-tracked CPR Toronto to London mainline on June 6, 1959. This train operated from Hamilton to Allandale via Milton, Georgetown, Inglewood and Caledon. The signals protecting this crossing were manually operated with long rods stretching from the signal to huge levers located upstairs in the interlocking tower and required much strength to move.

© Robert Sandusky

# Find the engine:

Actual engine at Milton Crossing on June 6, 1959 was SW9/1200 #1318 running Canadian National green and yellow colors



28264 CPR EMD SW9 #7402 SEPT.1981

ALLAN CAMPBELL PHOTO

## Deck Plate Girder Bridge (Sixteen Mile Creek \*\*)

Picture taken from page 129 of Hamilton's Other Railway by Charles Cooper.

Photograph is taken looking north from interlocking signals to Milton CPR crossing.

Note the rodding for the signals runs across the deck of Sixteen Mile Creek bridge to the left.

\*\* Sixteen Mile Creek is a river in Hamilton Region in the Greater Toronto area of Ontario, Canada. It is in the Great Lakes Basin, and flows from the Niagara Escarpment through the towns of Milton, and Oakville to Lake Ontario. It was previously known to the Mississauga Indians in their language as *Ne-sauga y-onk* or *niizhozaagiwan* ("having two outlets") and to the French as *Rivière de Gravois* ("gravelly river").

[Ref: Wikipedia.org](https://en.wikipedia.org)



**Google Earth** – Search for Mill Pond, Milton, Ontario, Canada – Follow the word date on the bottom up. A faint line runs straight up the page, and intersects with a double train track. All original structures are gone. The diamond crossing was taken out by the mid-1970s. “Today the wooded area between the Sixteen Mile Creek trestle and the CPR tracks, the roadbed is heavily overgrown”. (see page 131 – HOR)



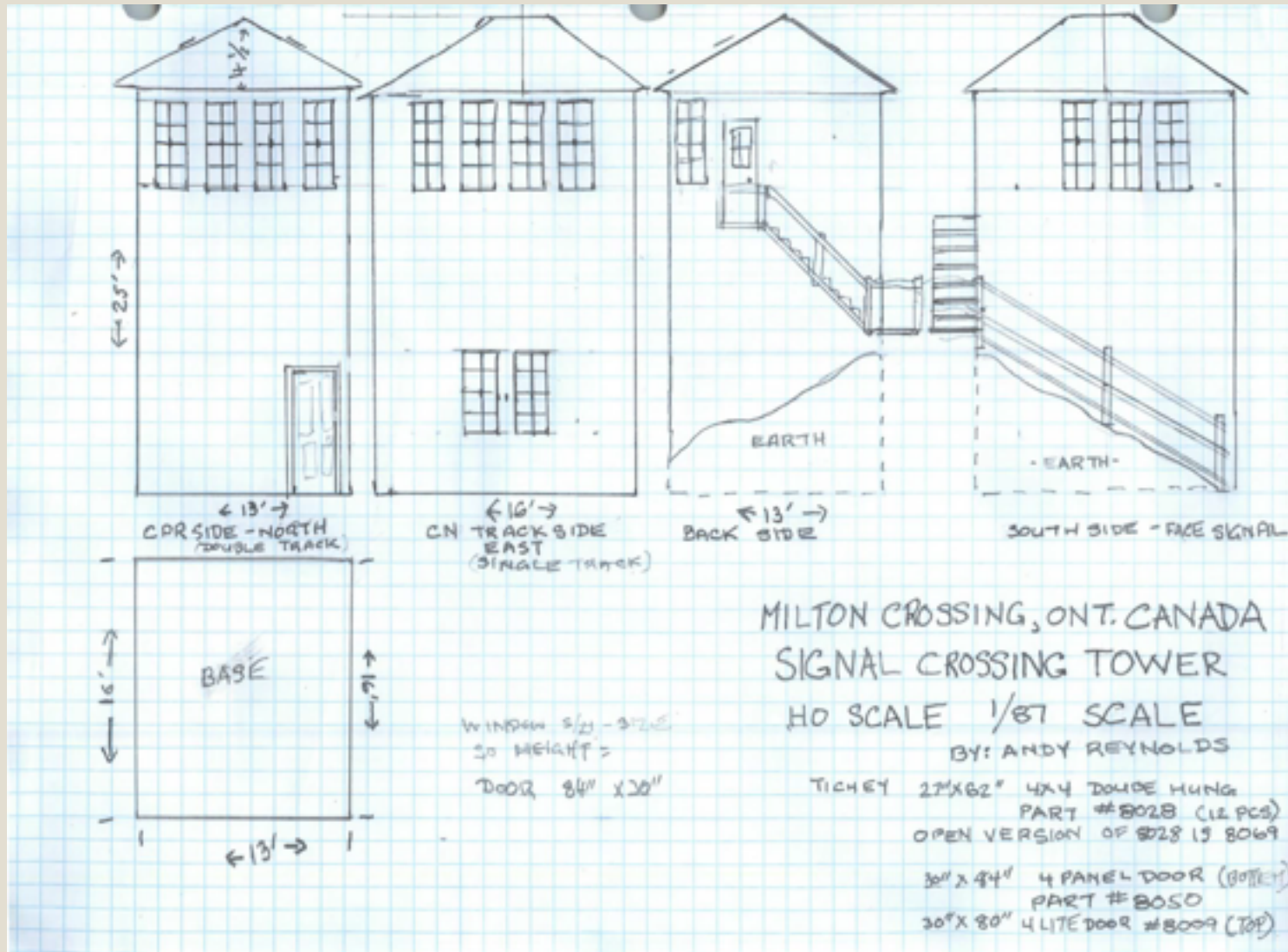
# Getting Started

I purchased the CN SW9/1200 (Proto 2000) from Ebay and added my CN 1920's era Mail and Passenger cars (Rivarossi).

This allowed me to get a sense of size for the diorama.



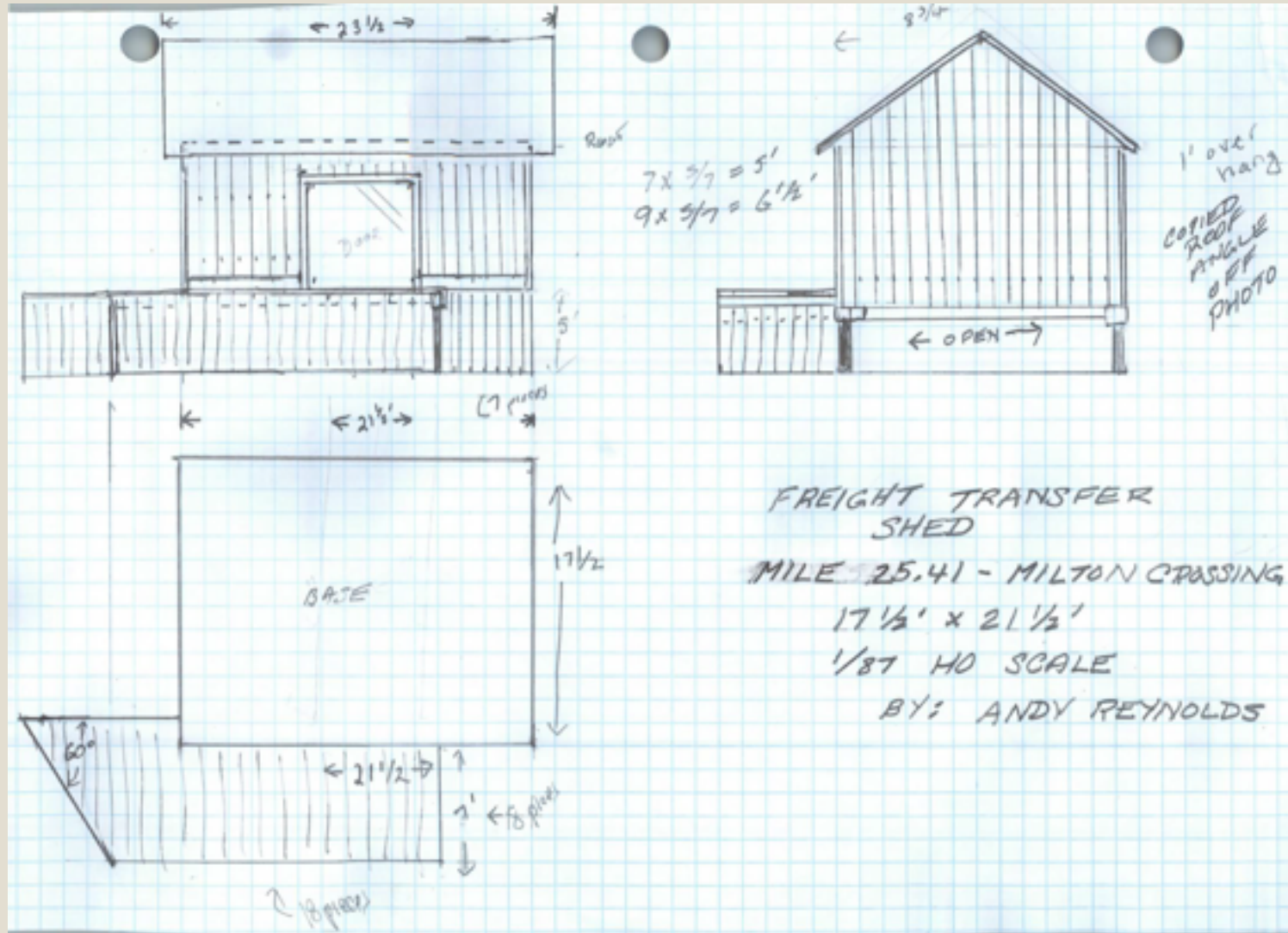
# Diagram - Signal Tower created in HO Scale





# Where to get started?

Diagram - Freight Transfer Shed created in HO Scale



# Where to get started?

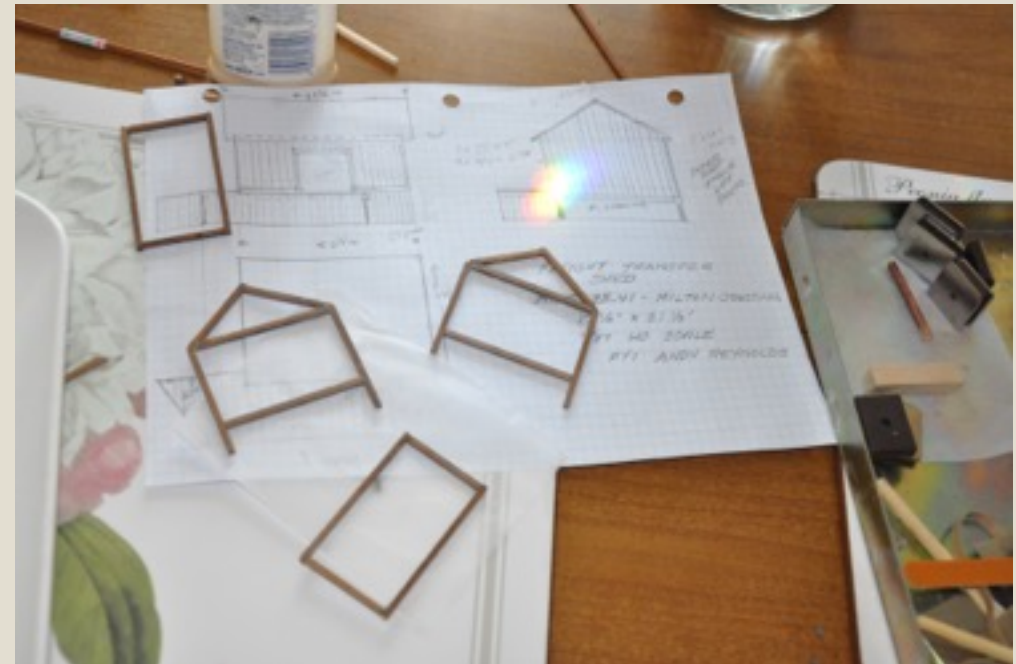
Start by creating a framework

August 4th



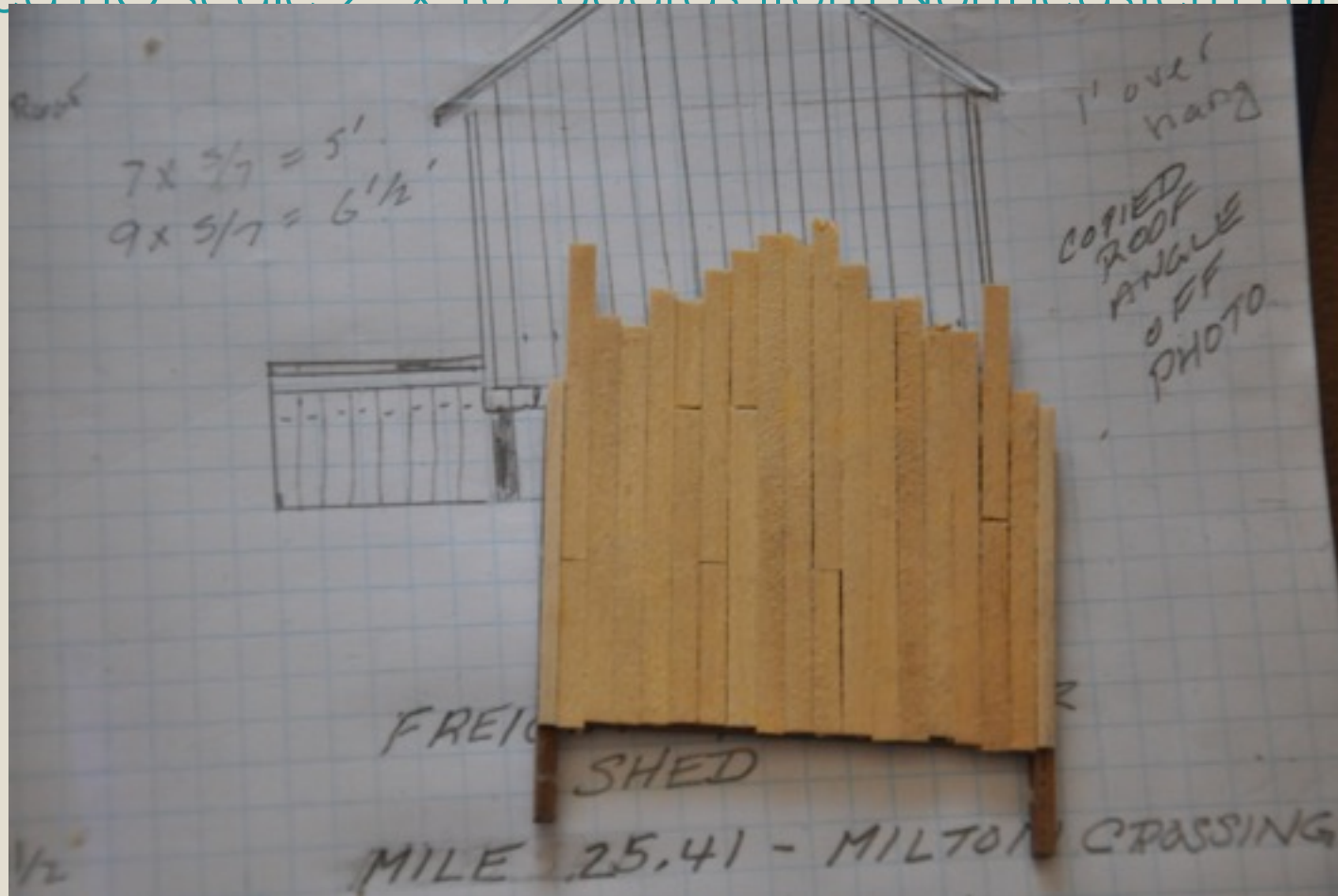
Duplicate the corresponding walls

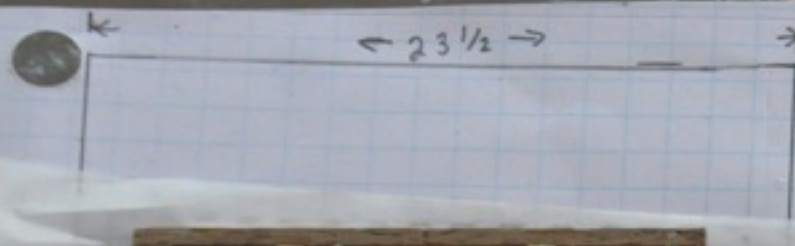
August 4th



# Where to get started?

I added HO scale 2" x 10" boards from Northeastern Lumber





$5/7 = 5'$   
 $9 \times 5/7 = 6' 1/2''$



1" overhang  
 COPIED ROOF ANGLE OFF PHOTO



**NORTHEASTERN SCALE LUMBER CO.**  
 www.northeasternscalelumber.com  
 12 PIECES  
 #OSCAL21011  
 HO 2" X 10" 11" LENGTH  
 SCALE LUMBER  
 7 68975 83815 9



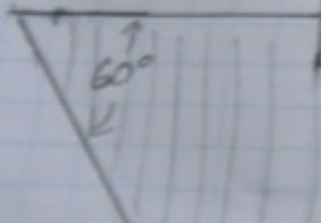
**NORTHEASTERN SCALE LUMBER CO.**  
 www.northeasternscalelumber.com  
 12 PIECES  
 #OSCAL 3811  
 HO 3" X 8" 11" LENGTH  
 SCALE LUMBER  
 7 61975 83822 7



17 1/2' x 21 1/2'  
 1/87 H SCALE



REYNOLDS



← 2 1/4 →  
 7' ← 8 pieces

# Structural building balance

I added the deck in front as I thought it would be easier to carry it into the building and have it at a 90 degree angle by fitting it on the work surface, rather than waiting and adding it in later.



# Adding 1'x2" Board-and-batten

Board and batten, or board-and-batten, describes a type of exterior siding or interior paneling that has alternating wide boards and narrow wooden strips, called battens. The boards are usually (but not always) one foot wide. The boards may be placed horizontally or vertically ... and are placed "over" the seams between the boards. <http://architecture.about.com>

*Tip – Do not cut to size first. Glue on with Elmer's white glue and cut to size after they have had a chance to dry.*



# Give the walls a good coat of paint.

*Tip – I used a darker coat first, but will lighten up the final coat and weather once I have the structure nearly completed.  
This will bring the structure into a more realistic weathered look..*



# Building the door framework

Start by adding extra depth and reduce the size of the door to plans.

**Note: I have allowed thickness around the door for the trim**

August 10th



Add your trim paint "before" adding the painted board-and-batten siding!

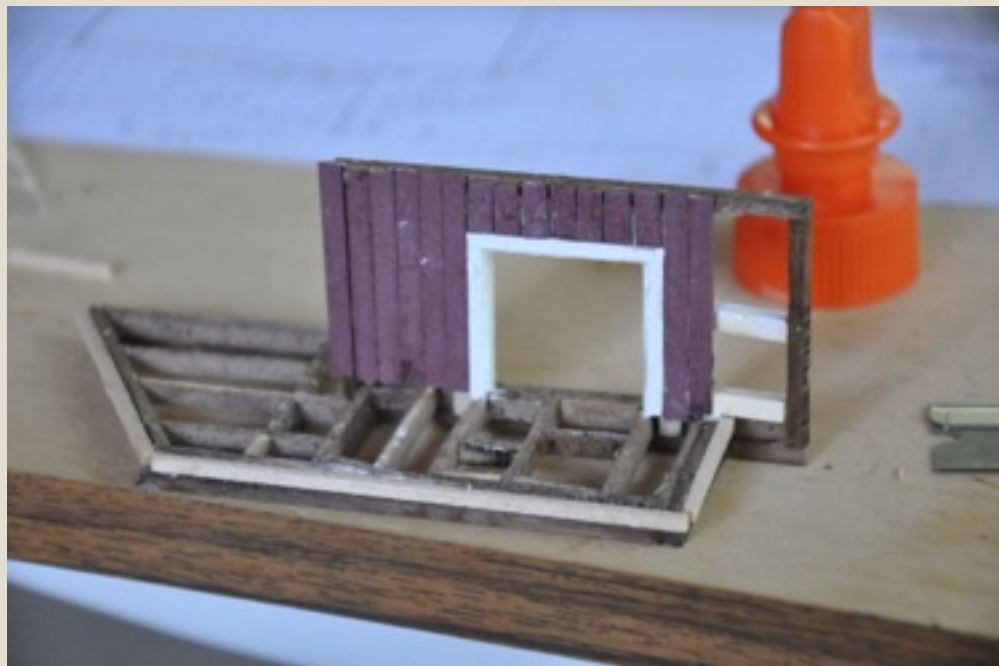
August 10th



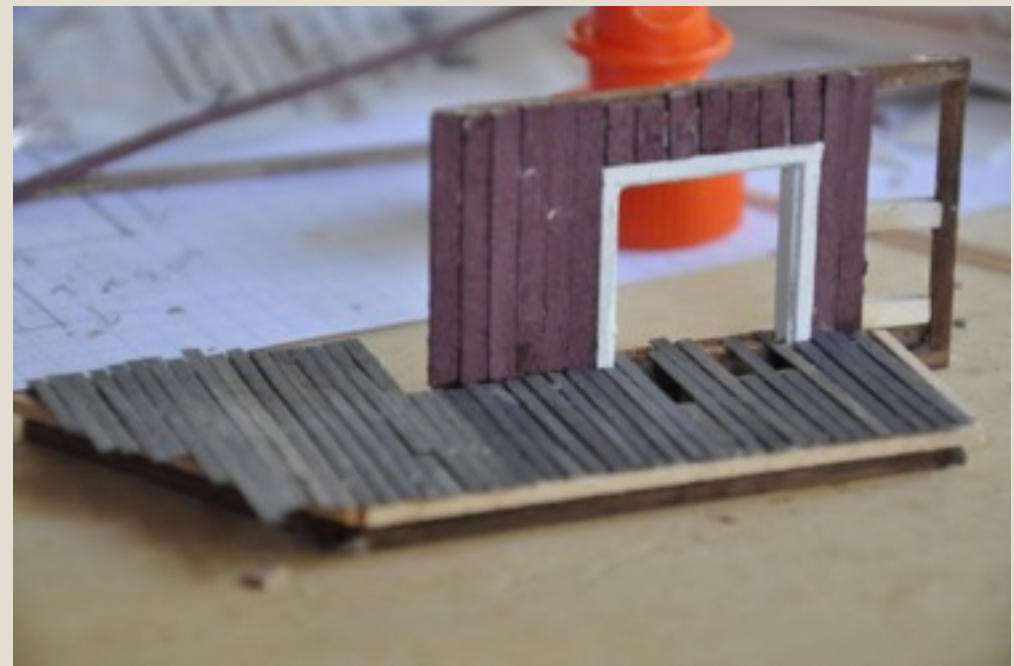


# Finishing up the front deck.

Now add your painted board-and-batten "except for the longer right side boards, that will extend to the ground later."  
August 4th



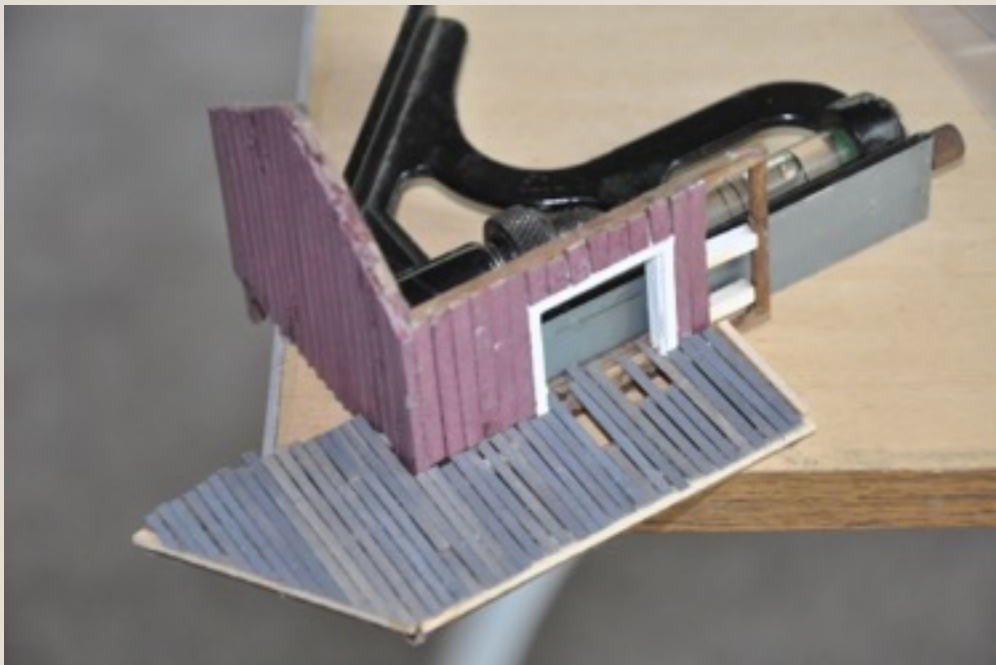
Start by creating a framework  
August 4th



# Wall Construction

Only build two walls at a time and make sure you have a good fit.

August 12th



Keep the 90 degree angles with the use of a square.

Note: Go back before this completely dries to make sure your wall angles

**have not moved.**

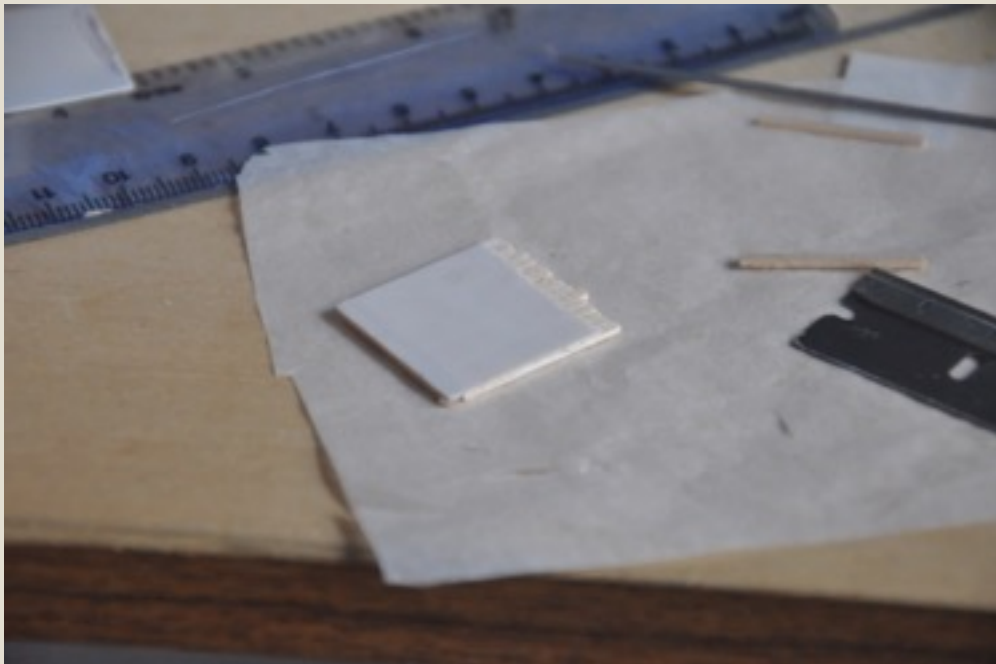
August 12th



# Scratch-building the door.

I started with a piece of styrene to get a good square surface.

August 12th



I added a wall of 3"x4" lumber for the door.

**Note: leave small spaces between the board for better detail.**

August 12th

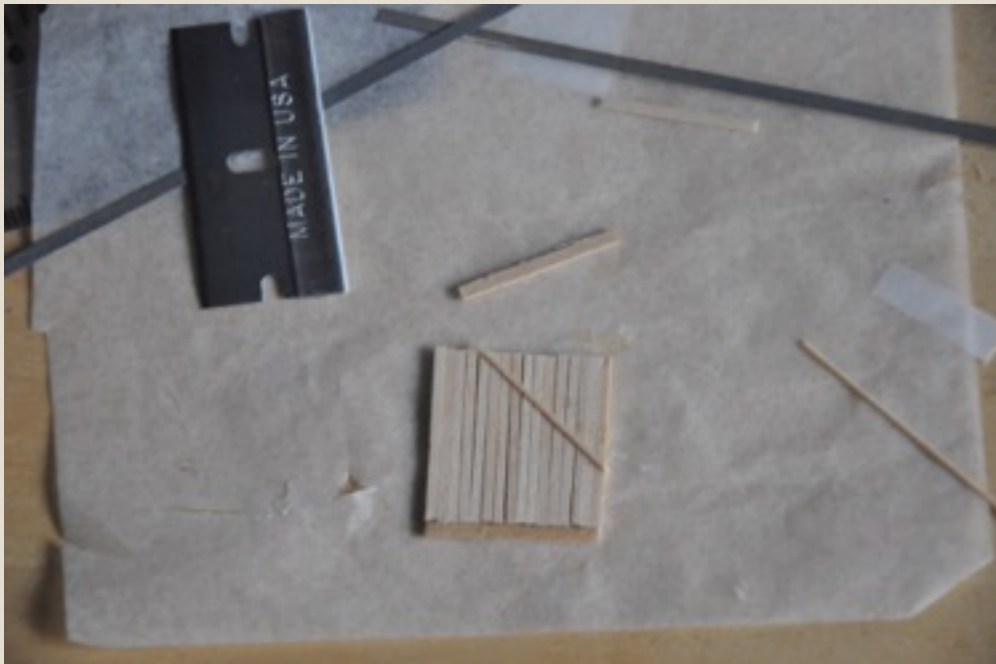


# Scratch-building the door.

Add the angled support as noted in the proto-type.

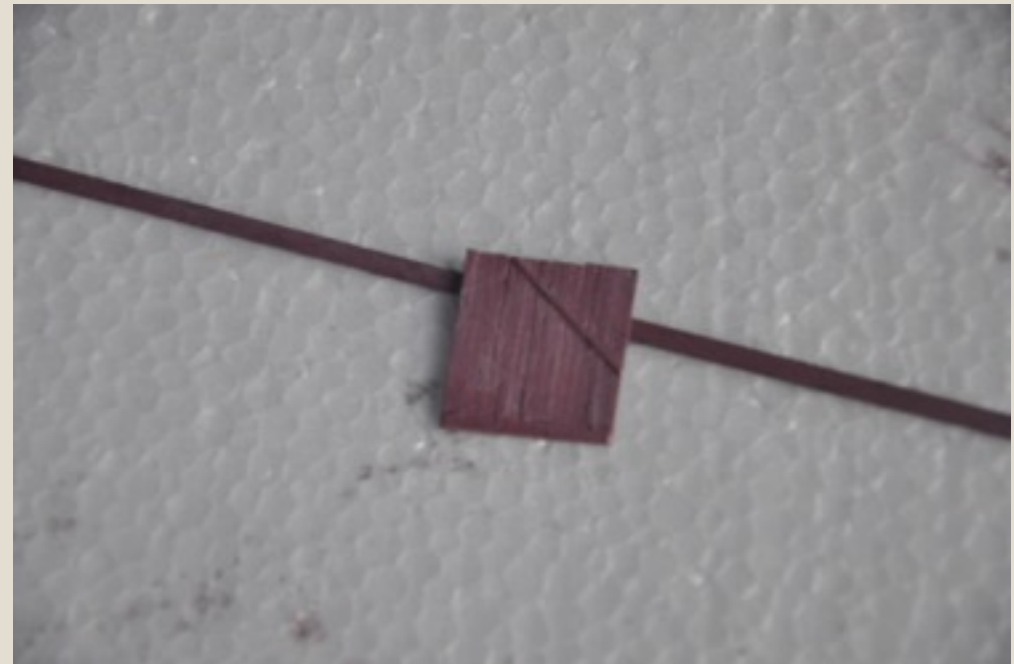
**Note: I will add a door handle later on. I used a lard NBW**

August 12th



Add a nice coat of paint "before" placing in the white trim of the doorway.

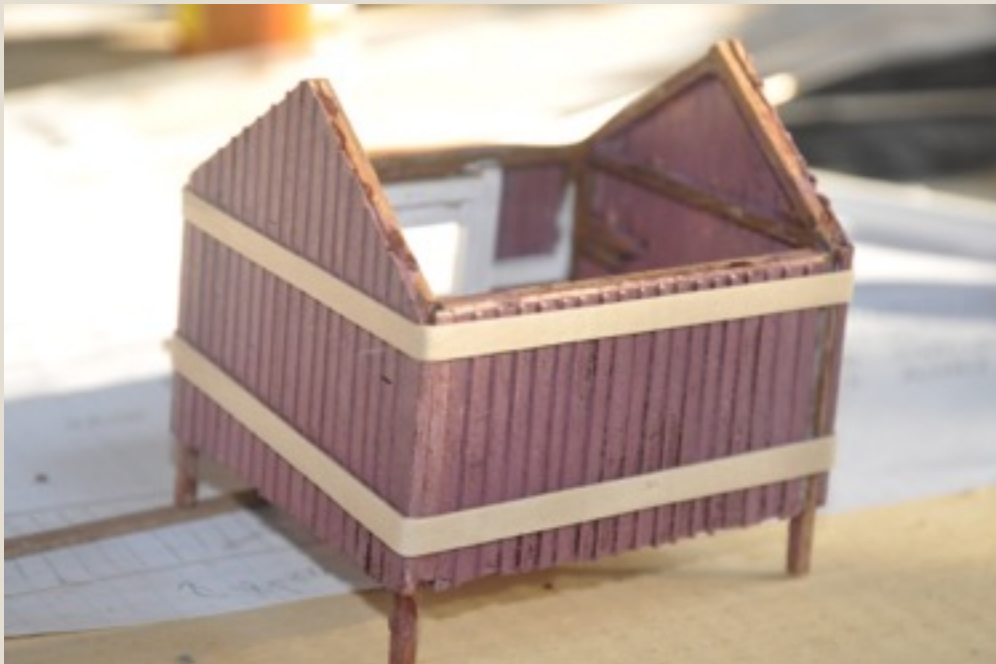
August 12th



# Squaring up and finishing the walls.

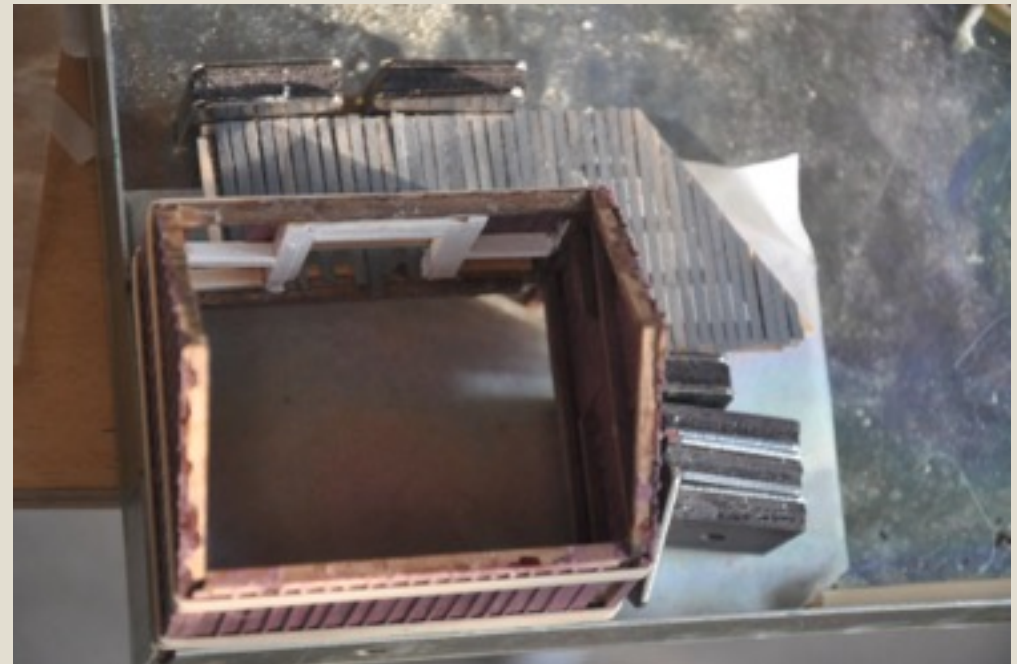
I used a set of very stretchable elastic band to grip and hold the two sets of walls together.

August 12th



I placed in a jig purchased from Micro-Mark to square up the sides.. Magnetic Gluing Jig (Item #60304 – MSRP \$25.95)

August 12th



# Squaring up and finishing the walls.

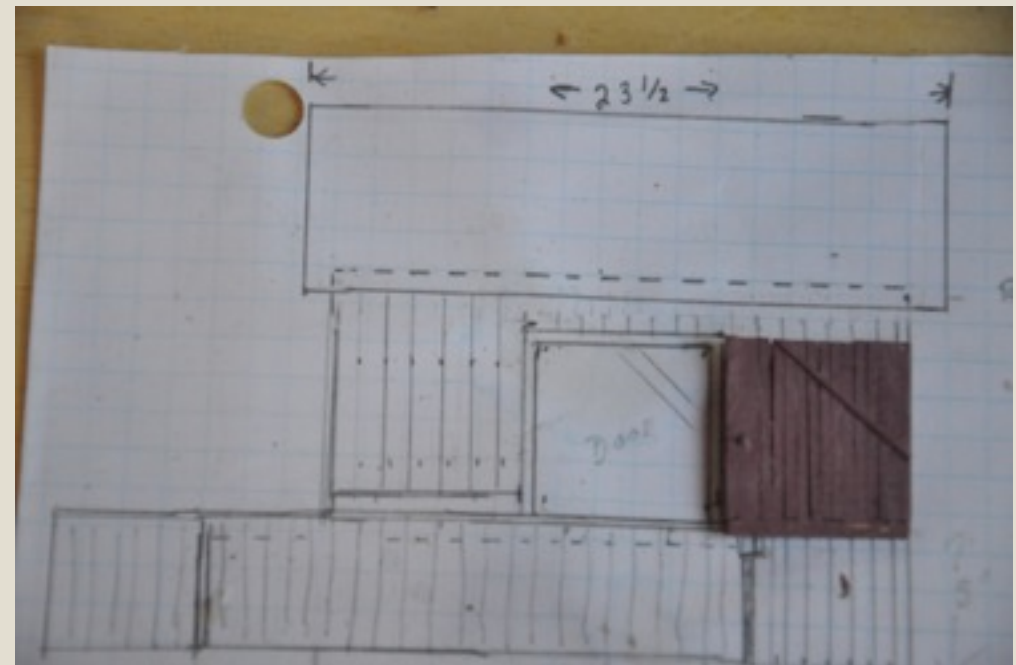
Continue the flooring into the freight house. This will add strength and allow you to add an "inside scene".

**Note: I left a small opening in the back for my lighting effects.**

August 13th

Size up your door and make last minute size adjustments.

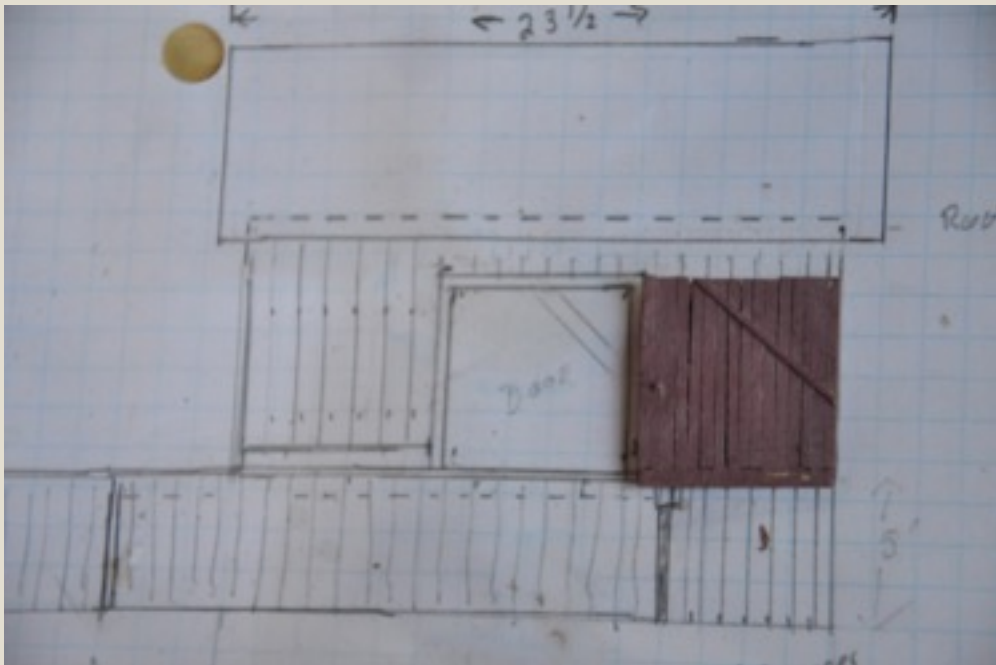
August 13th



# Door installation

Last minute review of the door before installation.  
**Note: I added a door knob and added a wash of India Ink and alcohol.**

August 13th



Test fit the finished door and decide if you will have it open, closed or opened slightly.

August 13th

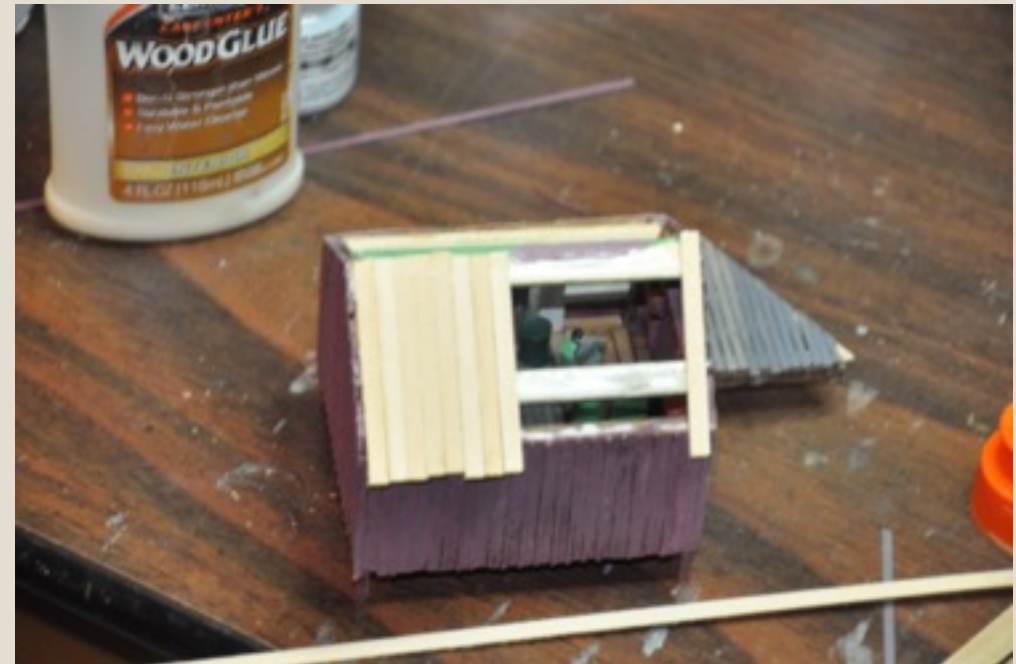


# Roof Construction -101

I have always used wood for my roofs.  
Tip: This helps keep the roof completely square by measuring  
up the  
August 14th



I added 2"x10" boards vertically.  
Tip: Adding them parallel to the roof line with room later for the overlapping board, will guarantee  
proper roof overhangs.  
August 14th





# Roof Construction -101

Finish the overhang and add the front.

Tip – Always start with the back of your buildings to experiment, before you get to what people will be seeing.

August 14th

I added a “second” roof layer horizontally. This adds strength to the overhang, and give the front a very straight parallel overhang as well.  
Tip: By using two layers of 2” wide wood, I get a nice 4” ending which I will use to add my trim.

August 14th



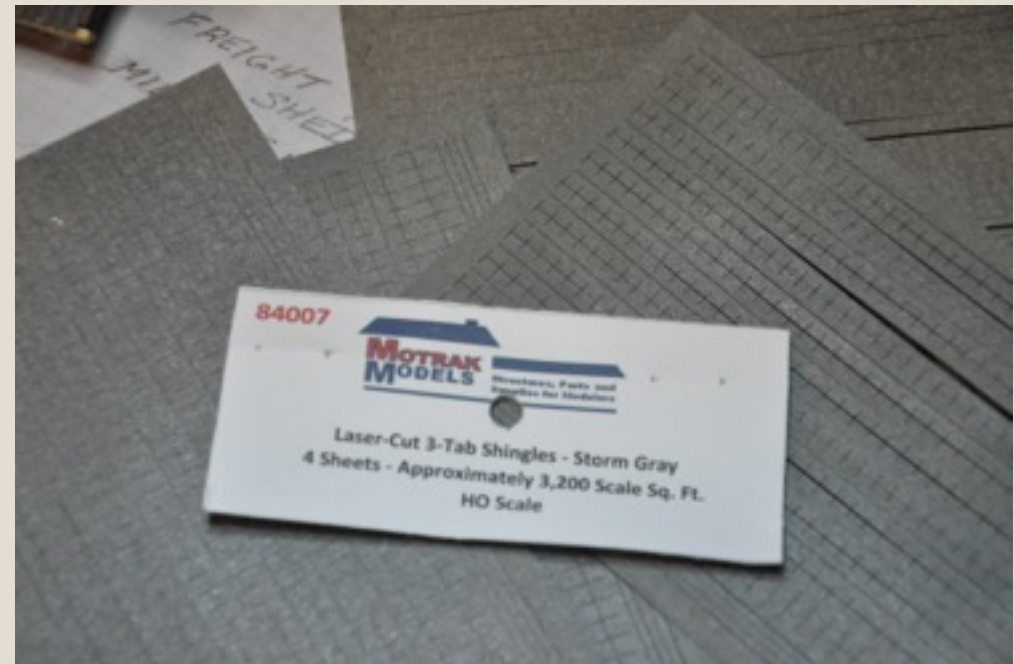
# Roof Construction -101

Stain your roof and add your already painted trim work.

August 15th

Get out your laser-cut shingles. Lightly spar them over with primer. I used light grey, black and white. This adds texture and thickness to the shingles.

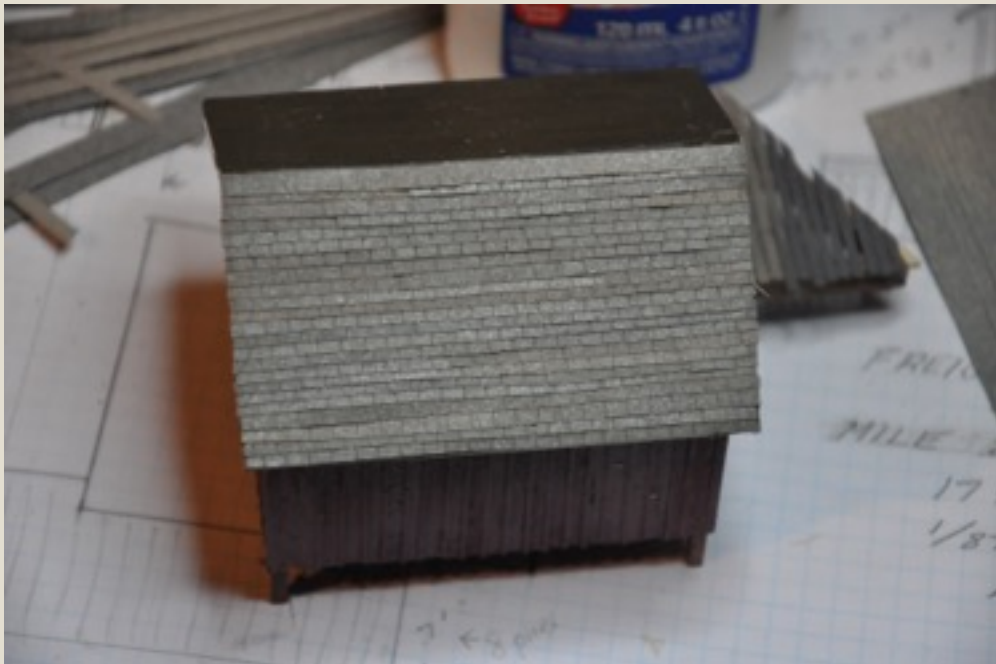
August 15th



# Roof Construction -101

Start shingling the back. Get your spacing right.

August 15th



Now finish off the front.  
Note: I dabble a few rows at a time of white Elmer's glue.  
Tip: Overlap a few shingles to give more depth and realism to the structure.

August 15th



# Final details

Add the front decking and right corner.

August 16th



Photo shoot and compare to the proto-type.

August 16th



# Final review

Note the texture to the roof and shingles.

August 16th



Taken from another angle.

August 16th



# Test fit to the diorama

*Note- I added extra support for under the building.*



# Comparing the freight house to the actual building – June 1959.

