

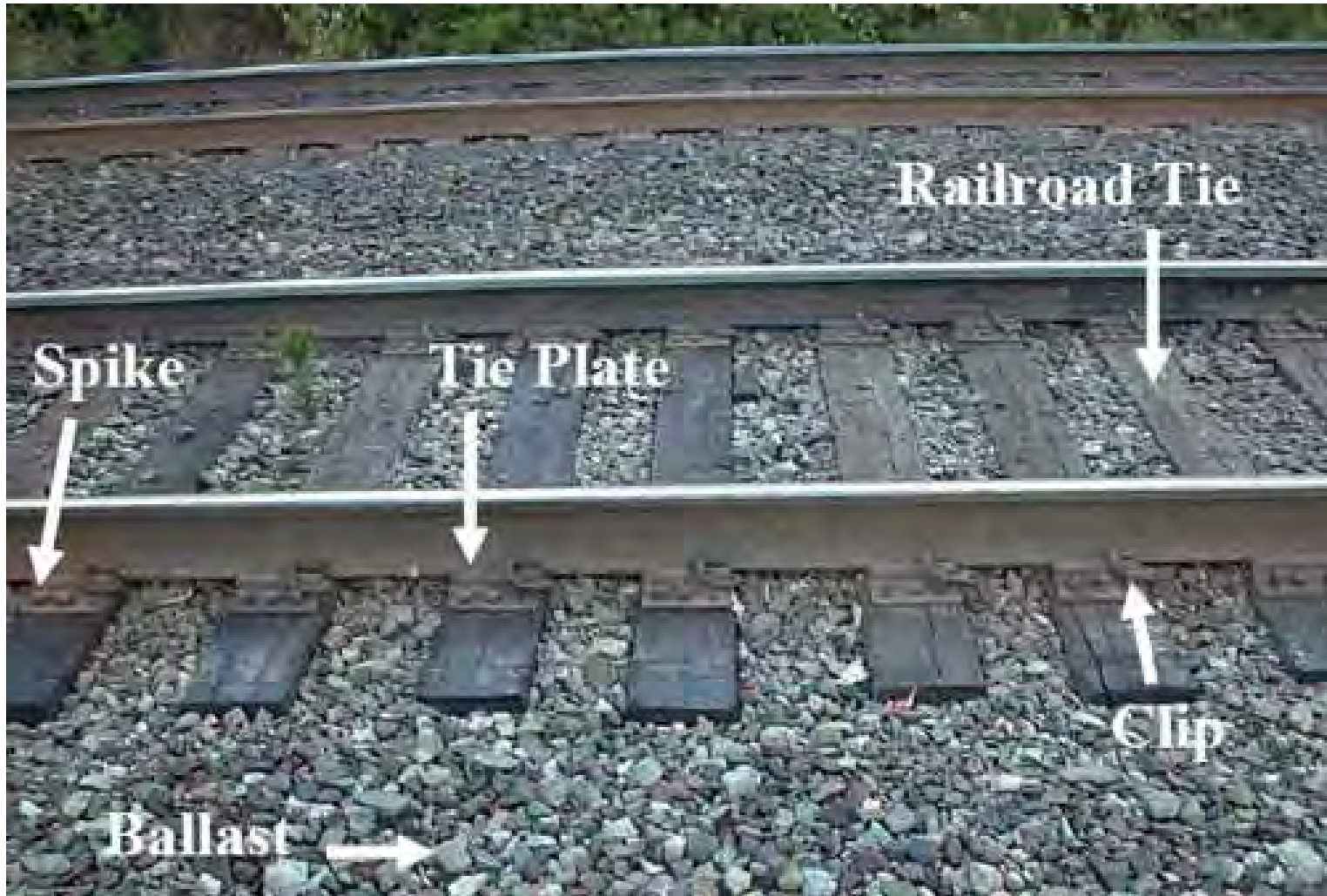
# How to Weather and Ballast Track



*Presented by Jeffrey Jarr*

# Weathering Track

What is a train track comprised of?





# Weathering Track

What does real weathered track look like?

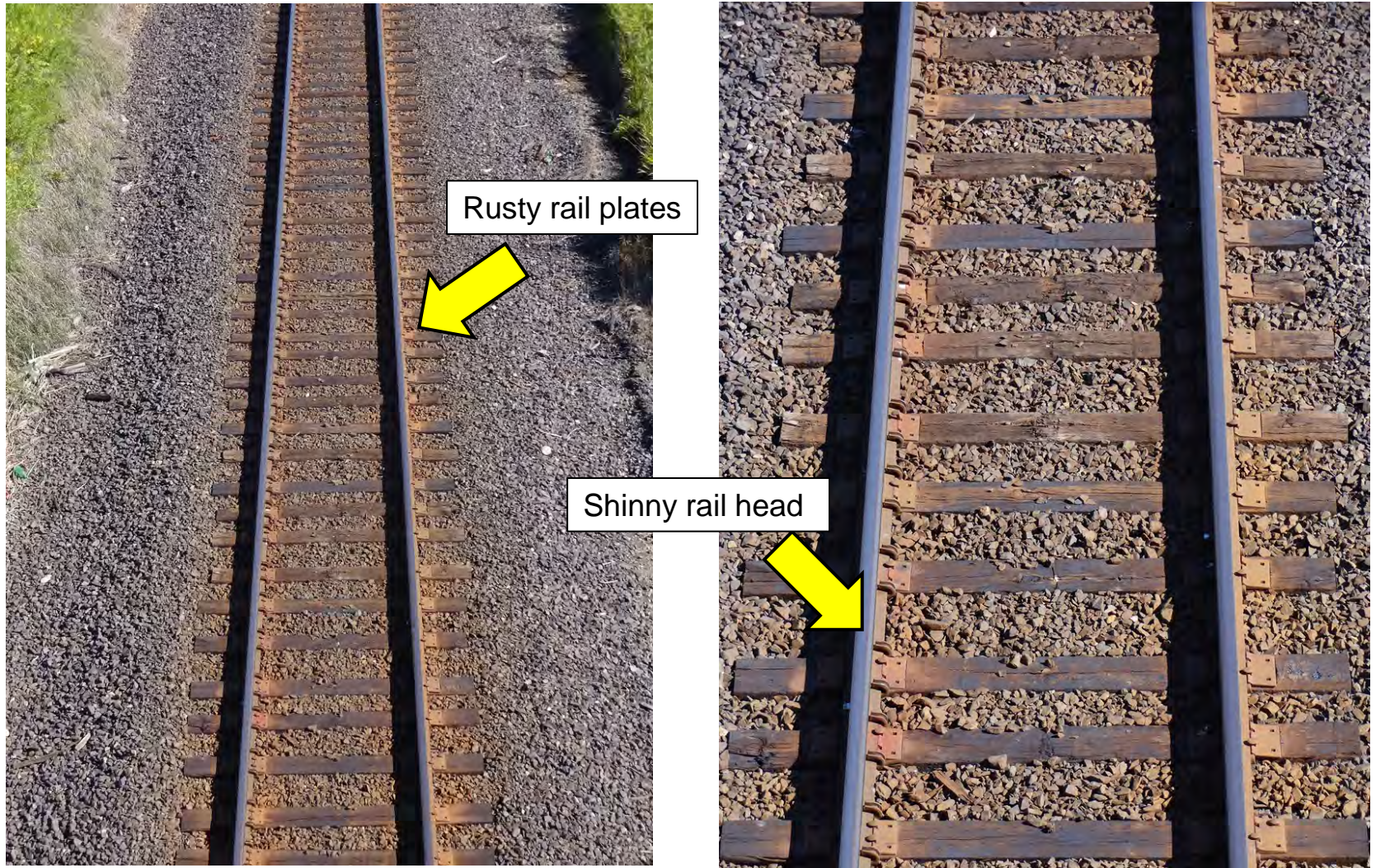


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# Weathering Track

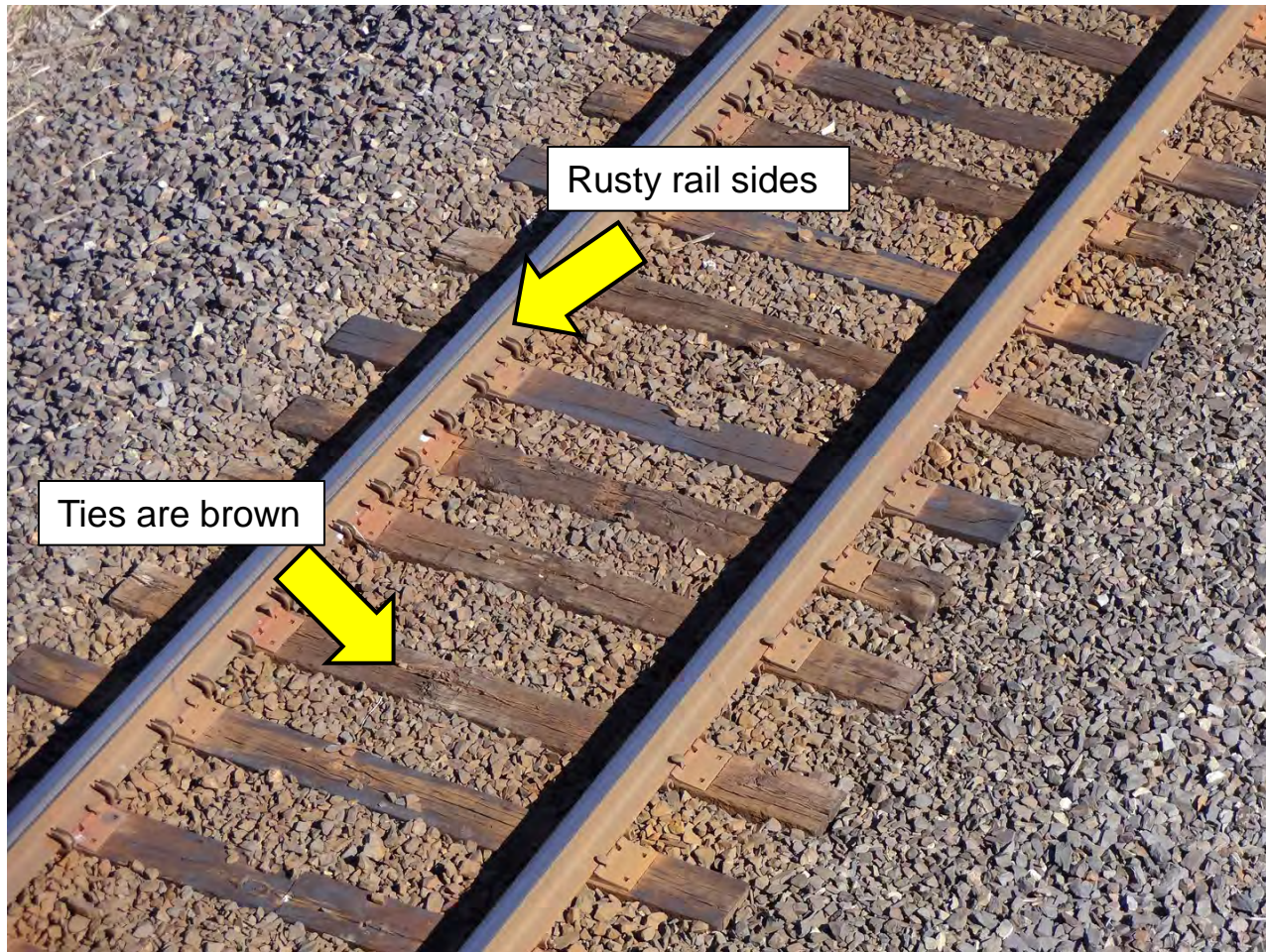
What does real weathered track look like?





# Weathering Track

What does real weathered track look like?

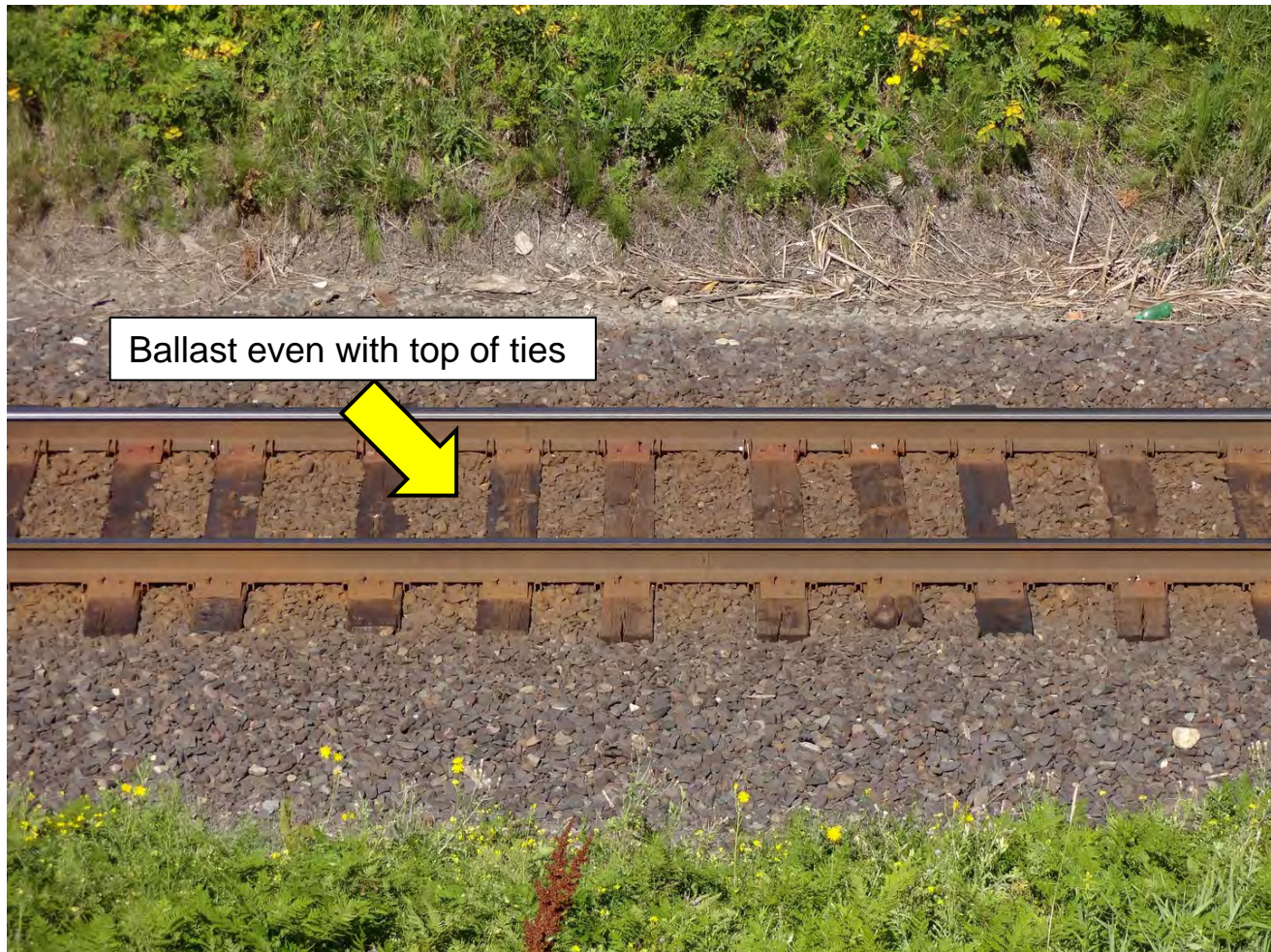


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# Weathering Track

What does real weathered track look like?



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# Weathering Track

What does real weathered track look like?



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# Weathering Track

Why ballast our track?

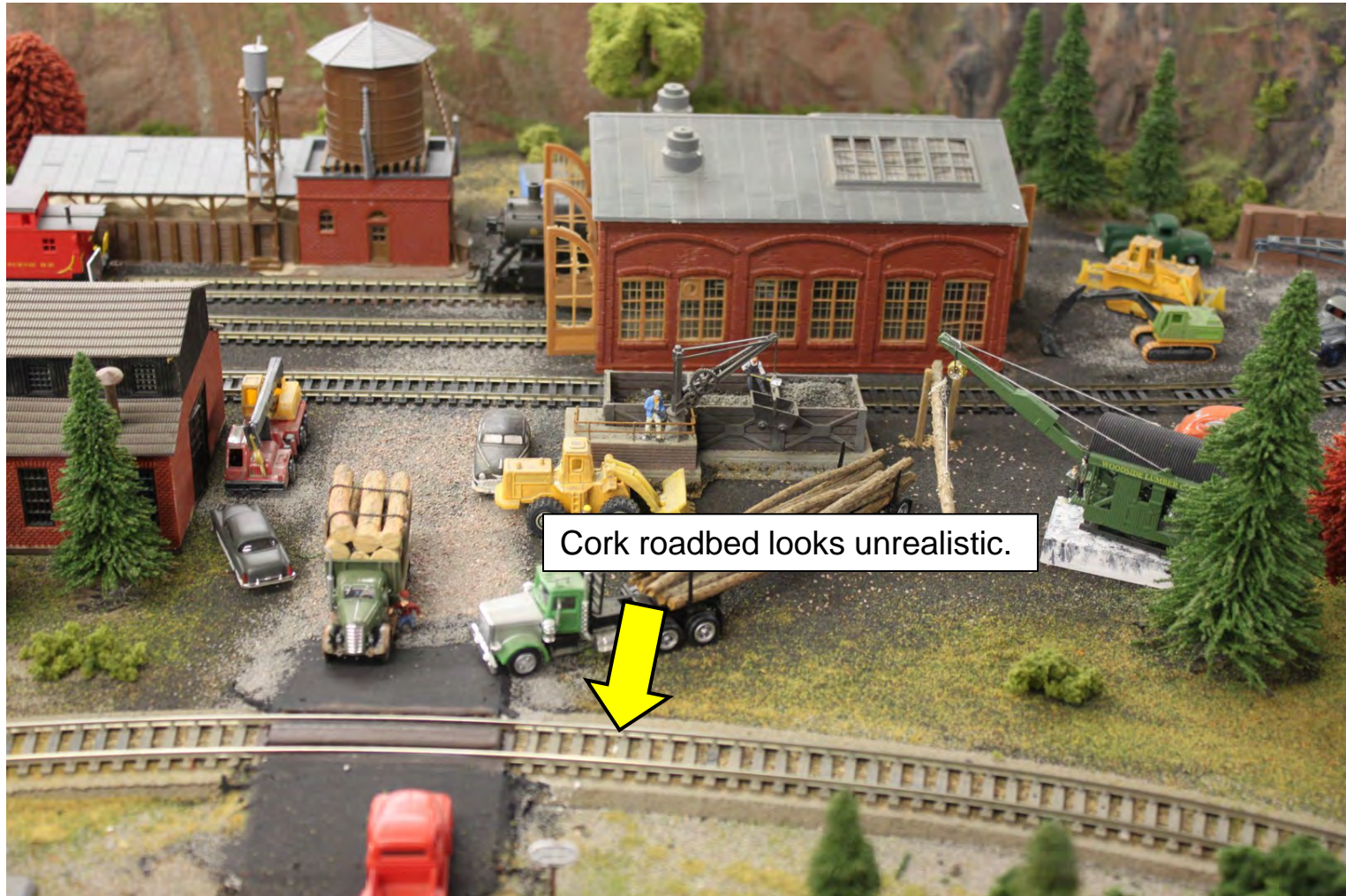


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# Weathering Track

Why ballast our track?

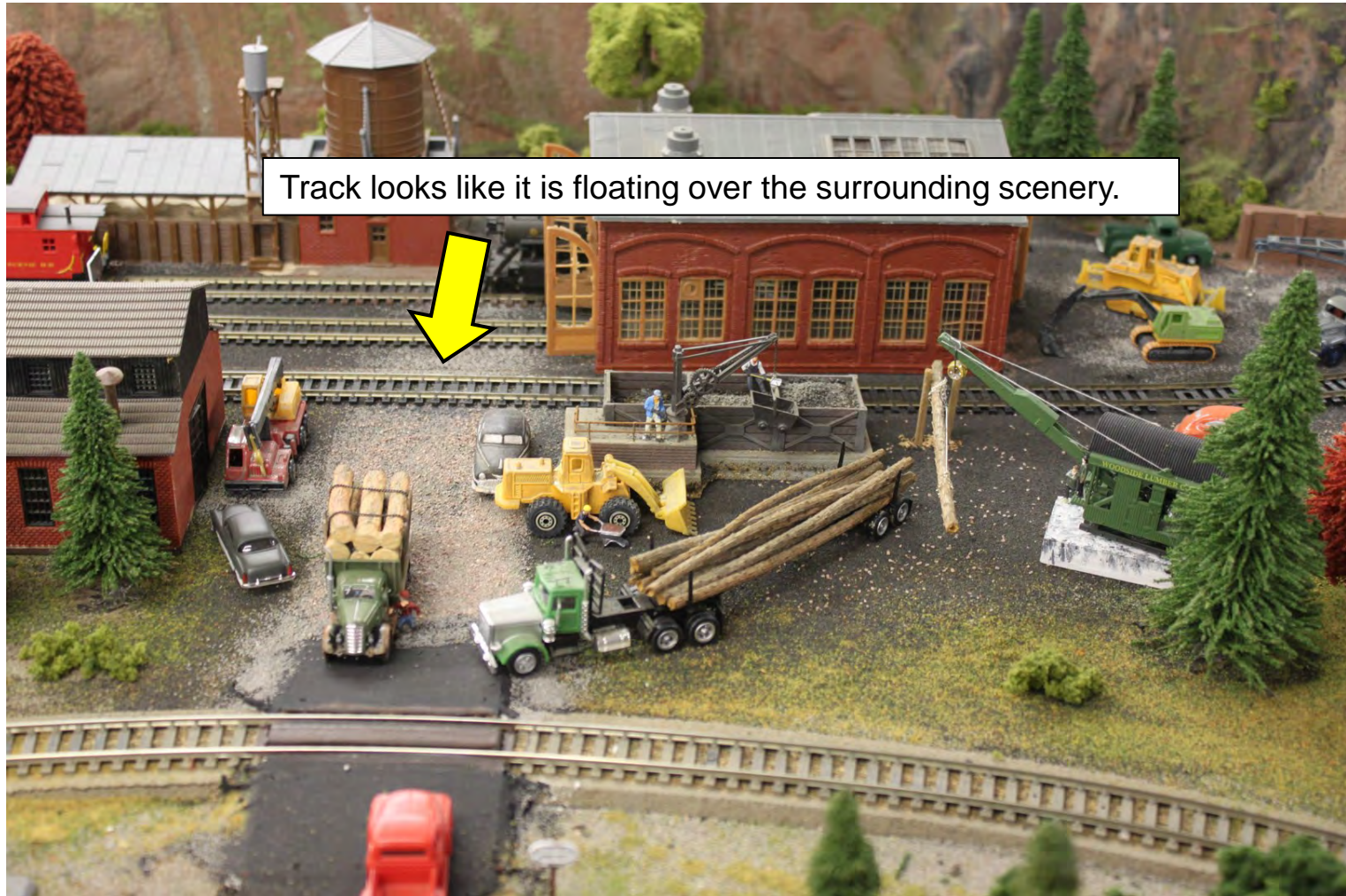


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# Weathering Track

Why ballast our track?



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# Weathering Track

Why weather our track?

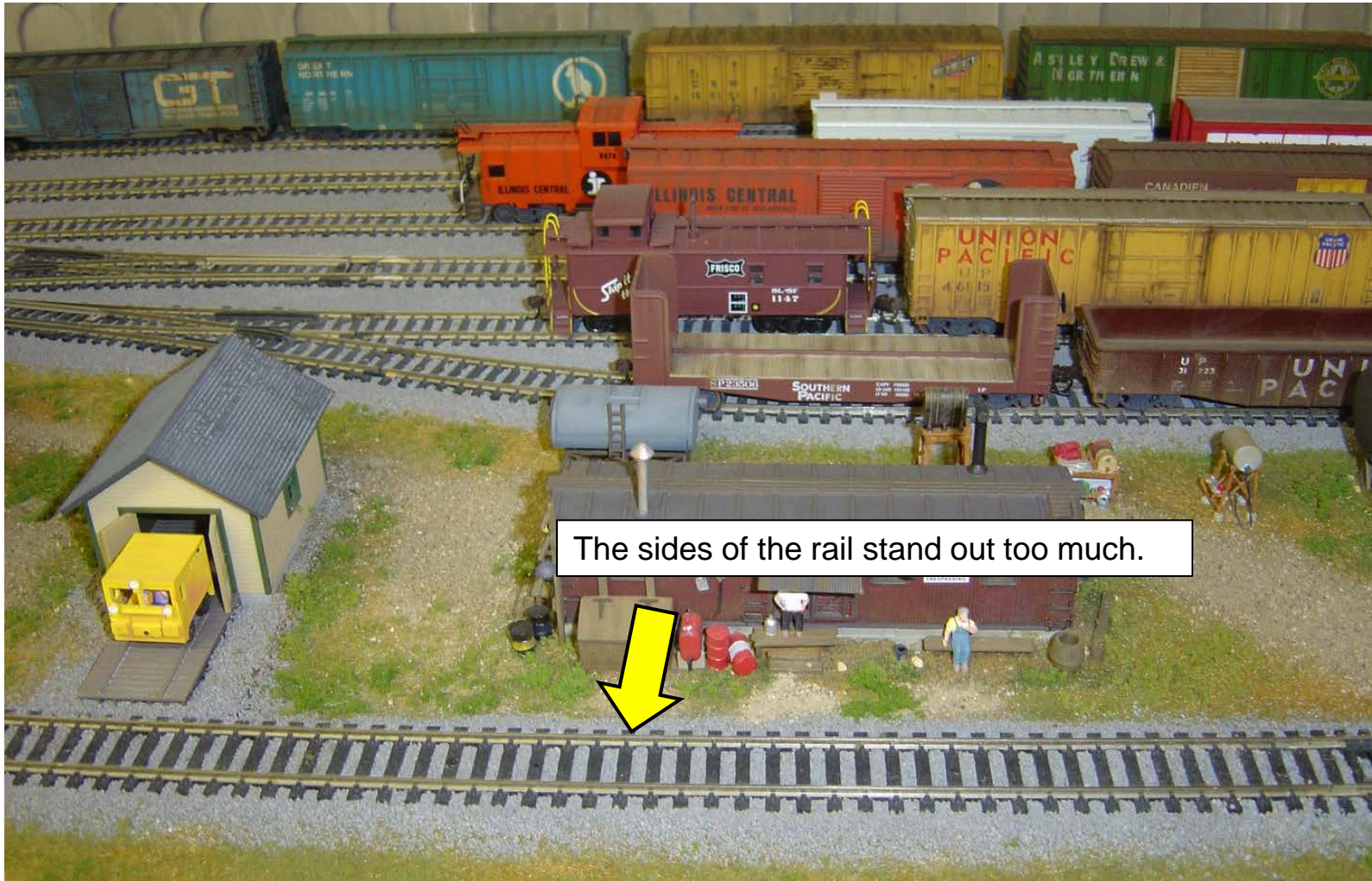


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# Weathering Track

Why weather our track?

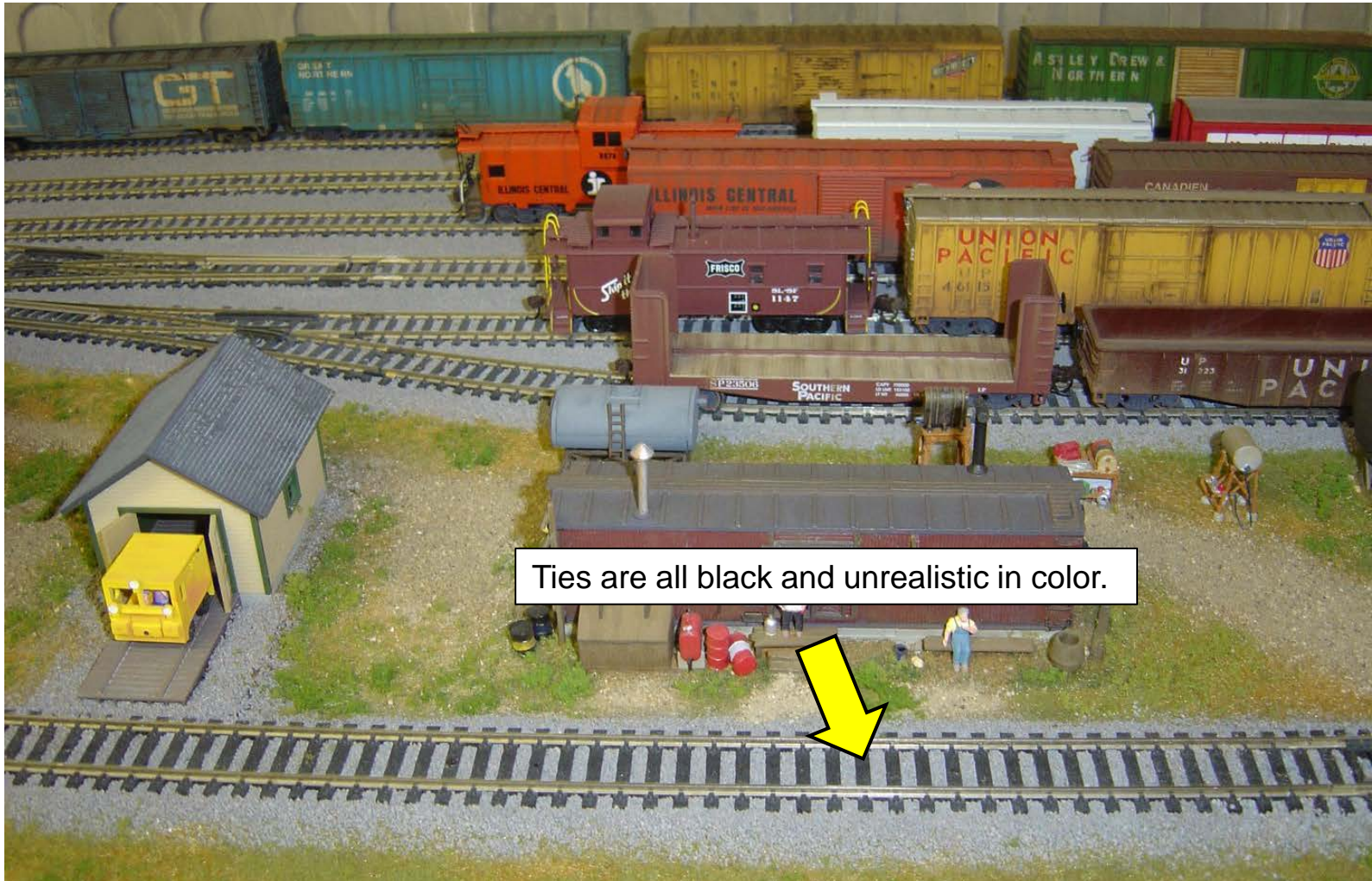


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# Weathering Track

Why weather our track?



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# Weathering Track

Why weather our track?

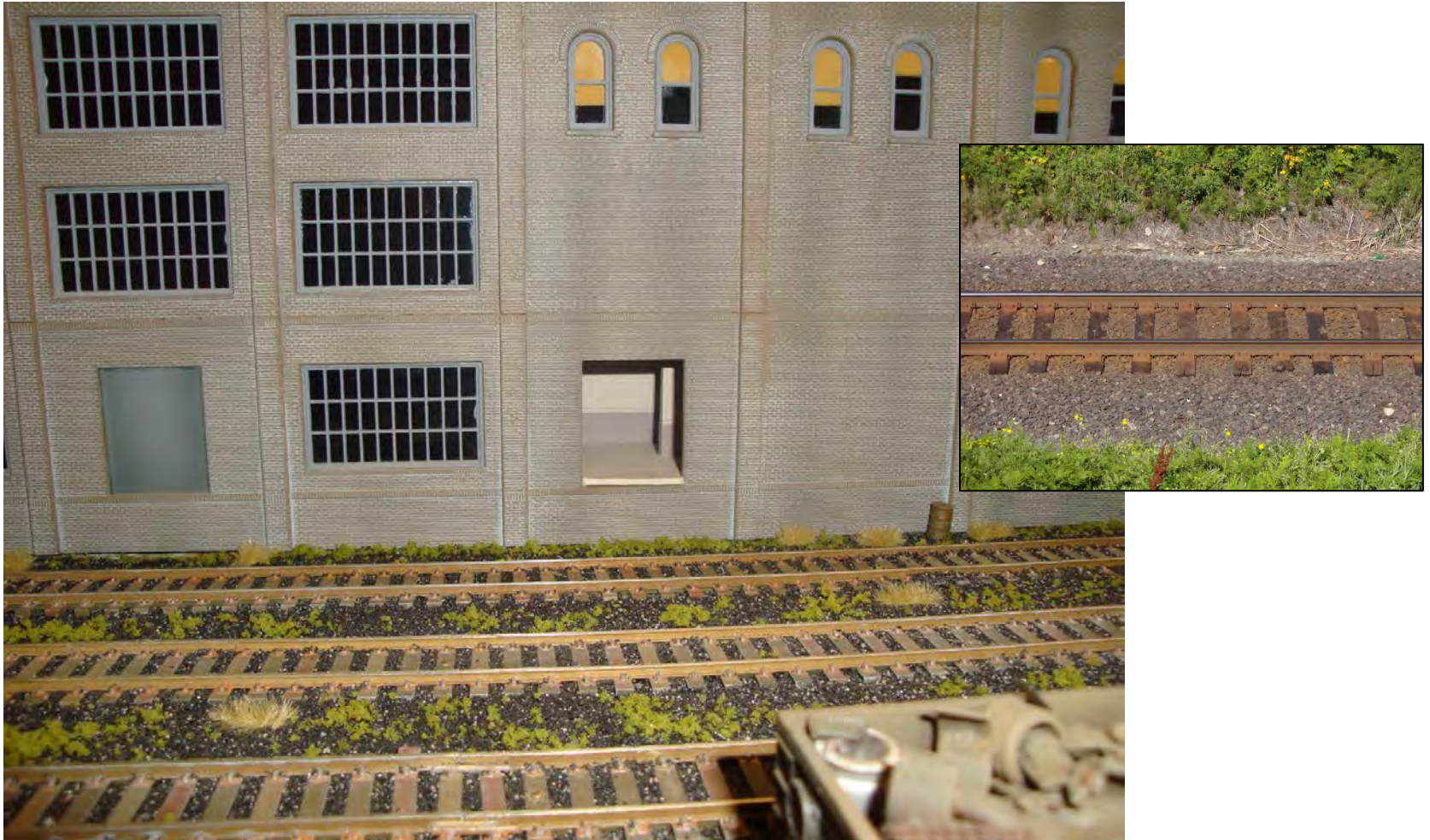
The track stands out too much and does not blend into the surrounding scenery naturally.





# Weathering Track

The color of the track should match the prototype and should blend into the surrounding scenery naturally.



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# Weathering Track

Good weathered track will not distract the viewer from the rest of the scene.



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# Weathering Track

So how do we weather our track?



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# Weathering Track

Four step process:

- Step 1 – Paint the ties





# Weathering Track

Four step process:

- Step 2 – Paint the rail

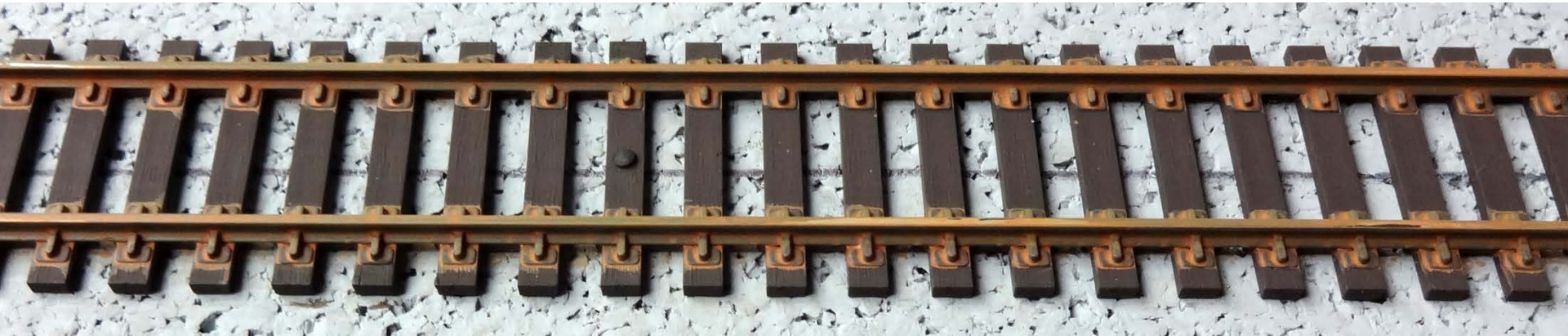




# Weathering Track

Four step process:

- Step 3 – Apply rust to tie plates and sides of rails

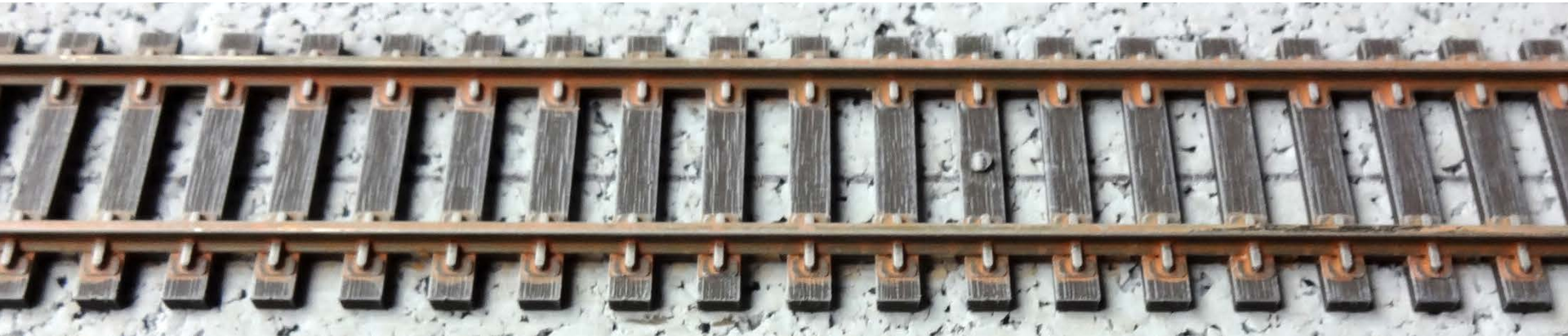




# Weathering Track

Four step process:

- Step 4 – Age the ties and highlight the track spikes





# Painting the Track Ties

## Tools & Materials:

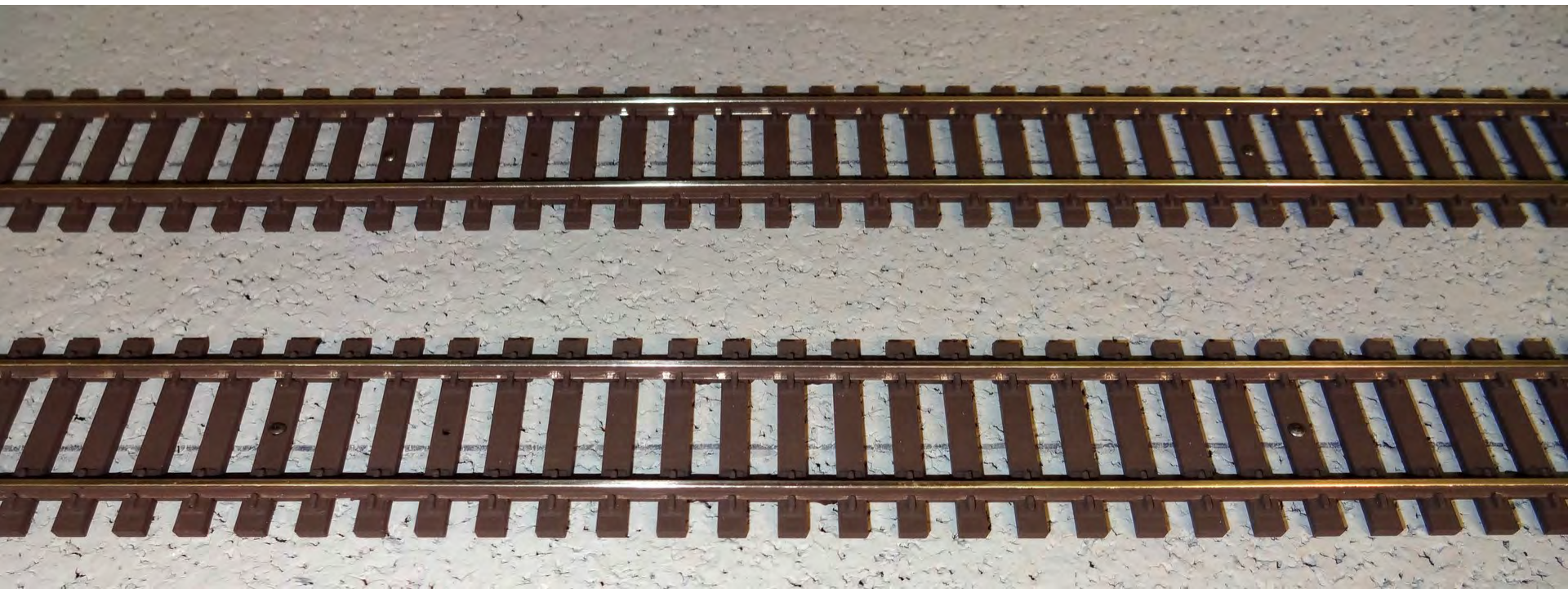
- Rust-Oleum Camouflage Spray Paint  
#1918 Earth Brown  
(buy at Menards)





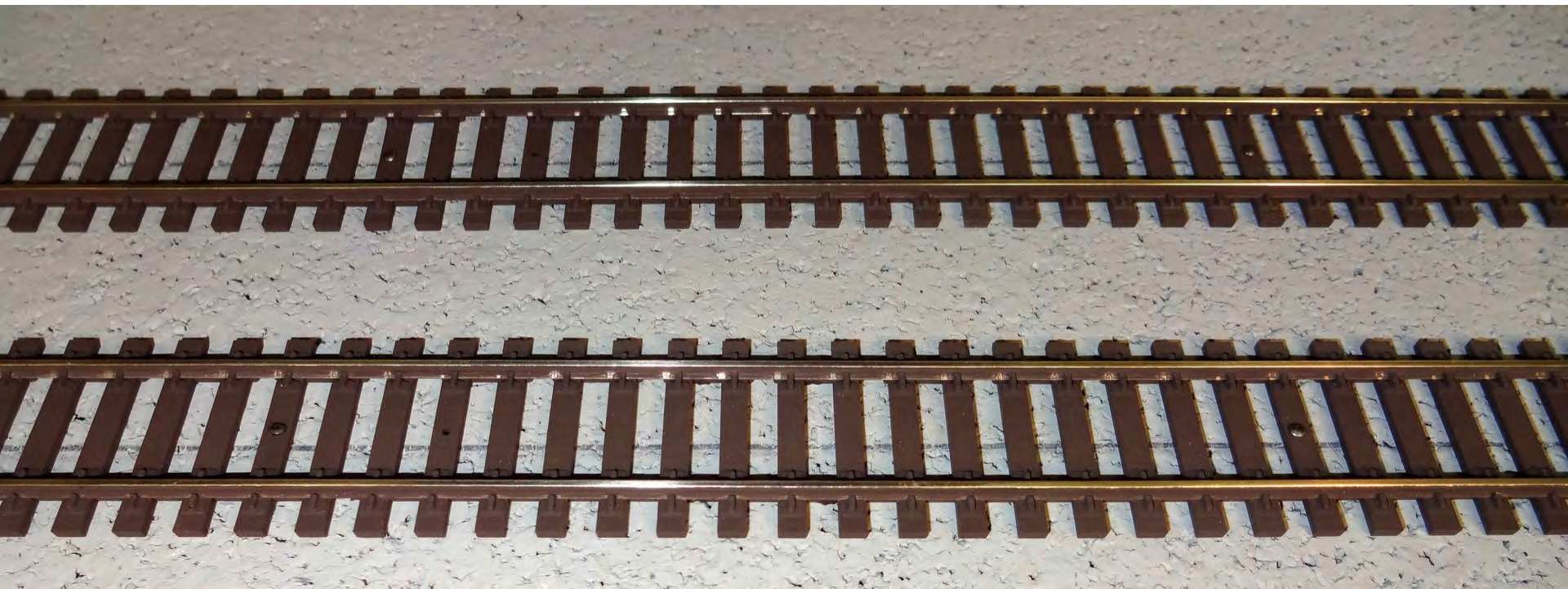
# Painting the Track Ties

Spray the track ties using Rust-Oleum Earth Brown camouflage spray paint.



# Painting the Track Ties

I prefer to spray paint my track outside on newspaper, then tack it down to the cork roadbed after it has dried.





# Painting the Rail

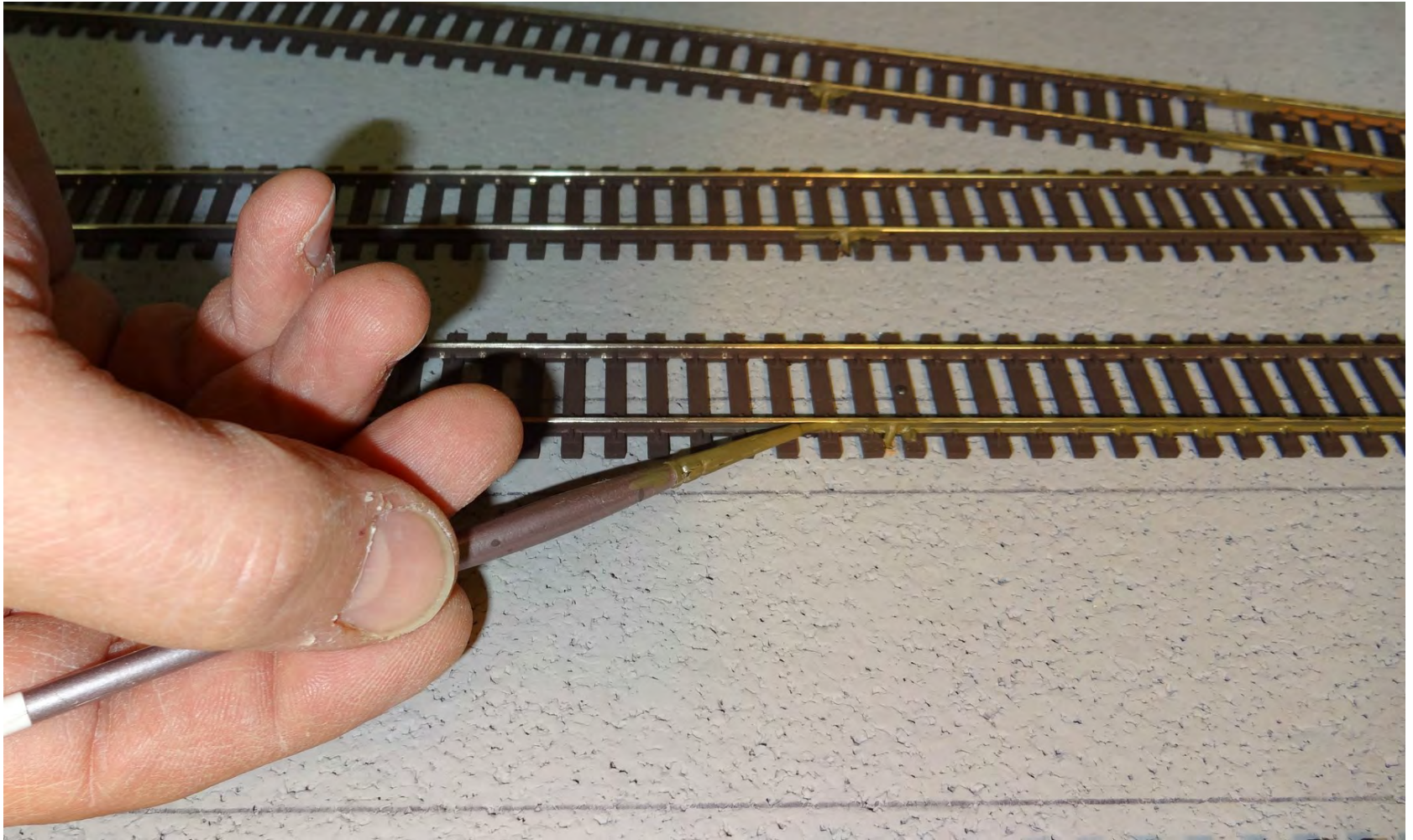
## Tools & Materials:

- MicroLux Hobby Acrylic
  - #29001 Rail Brown  
(from Micro-Mark)



# Painting the Rail

Paint the side of the rails Rail Brown.

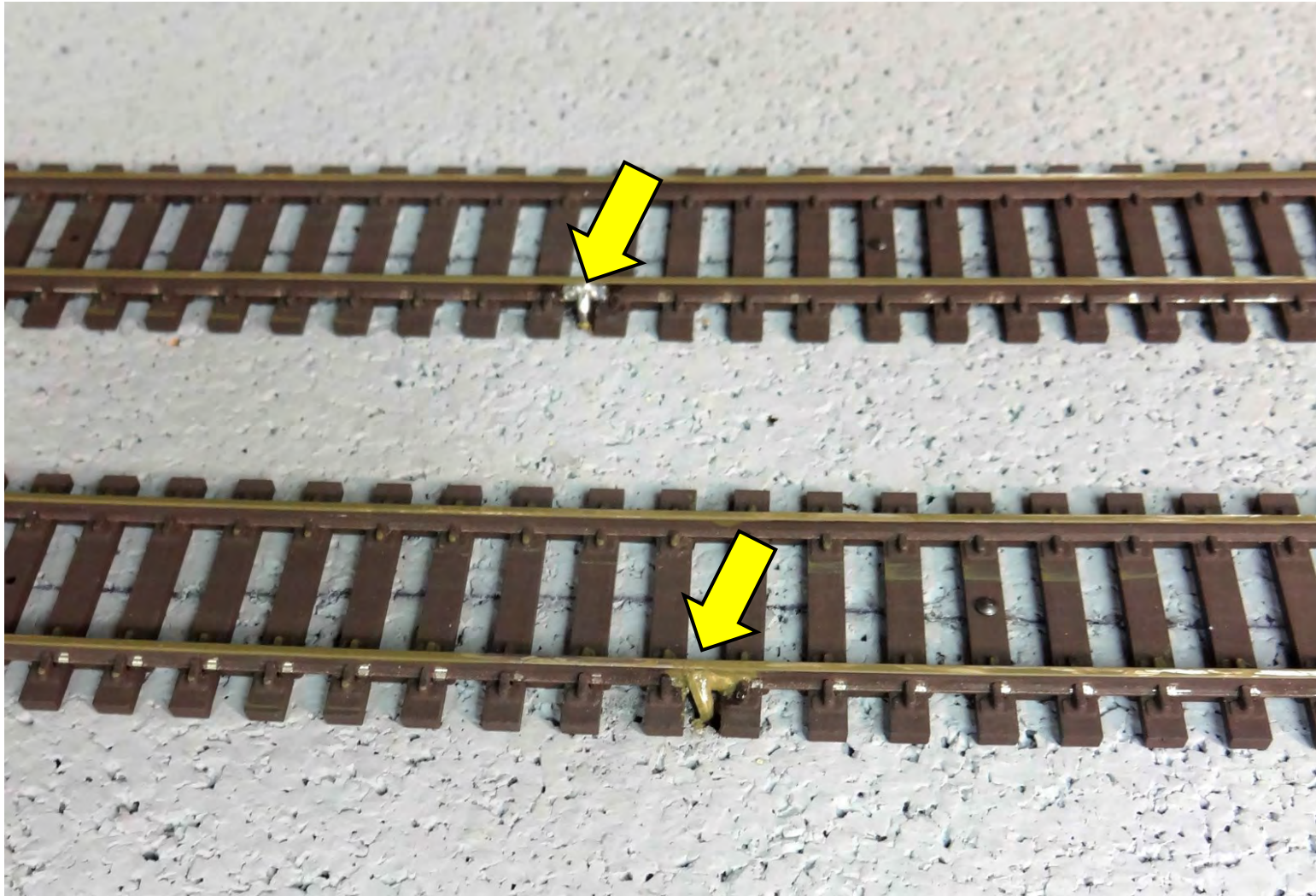


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# Painting the Rail

Paint any soldered feeder wires Rail Brown also.



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# Painting the Rail

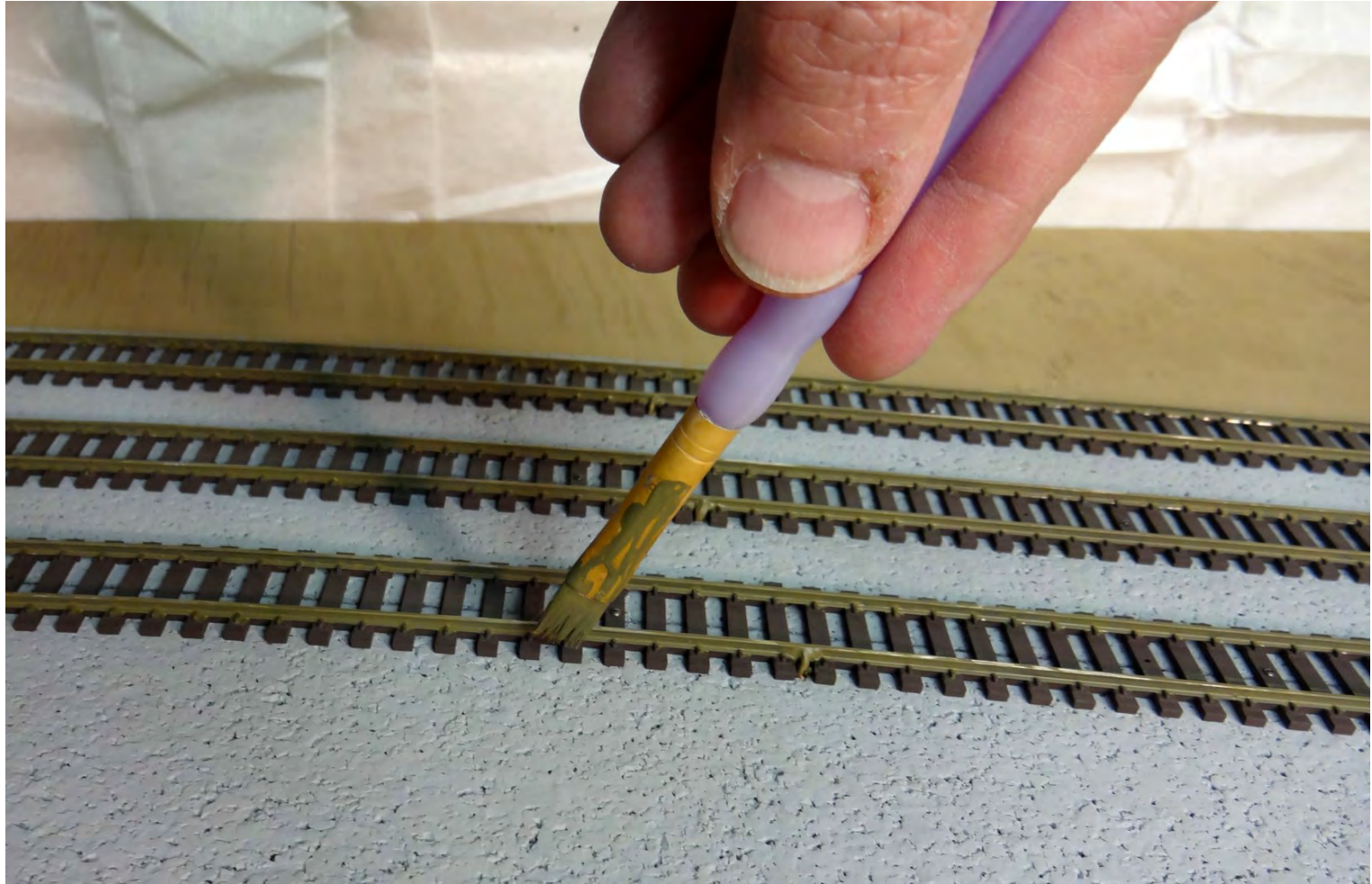
Make sure you cover any shinny bare rail missed by the spray paint.





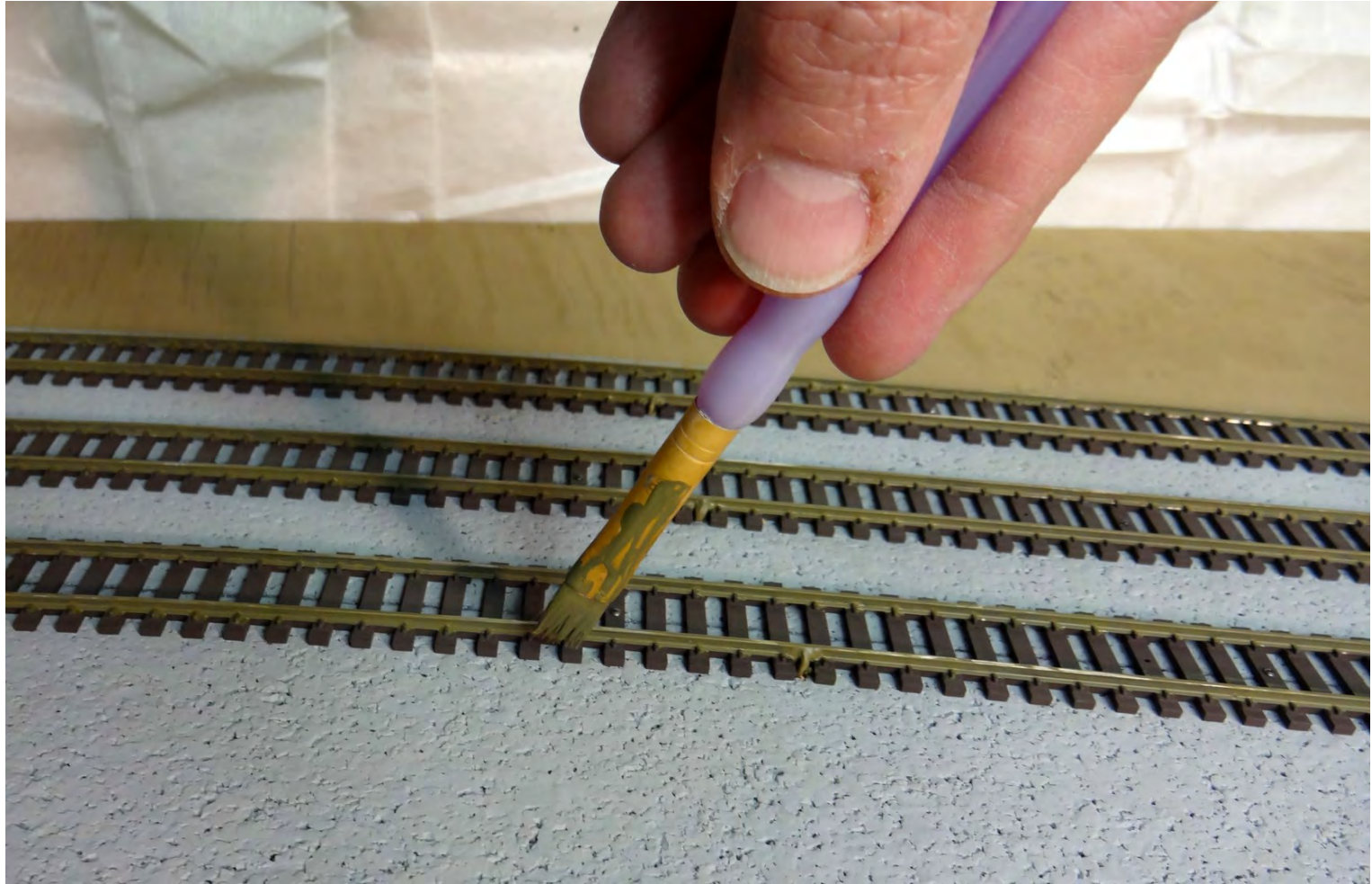
# Painting the Rail

Use a flat brush to paint the rail. A flat brush will hold more paint allowing you to paint the rail quicker.



# Painting the Rail

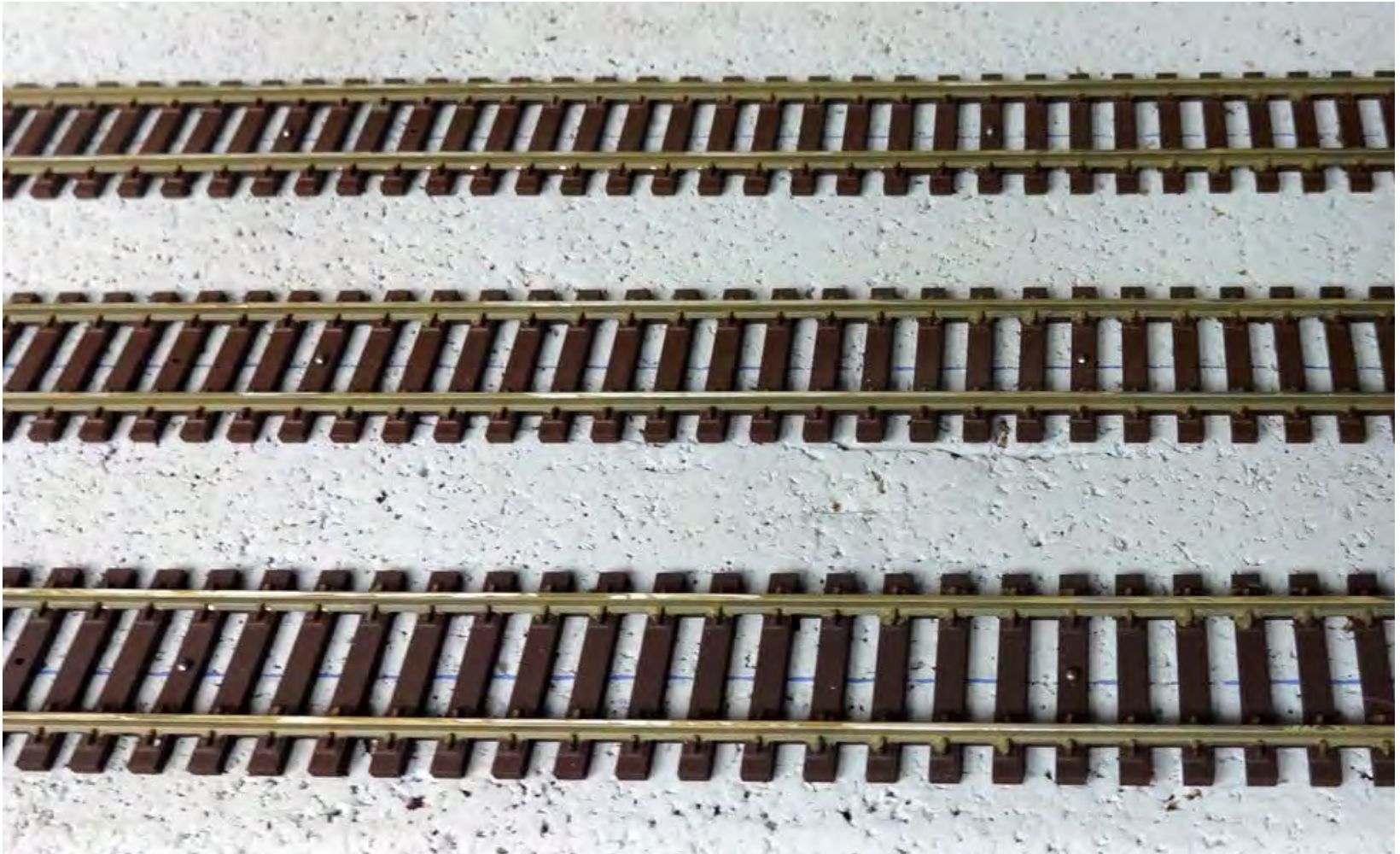
Don't worry to much about getting paint on the ties. You can touch them up later.





# Painting the Rail

The rails should look something like this when finished with the rail brown paint.

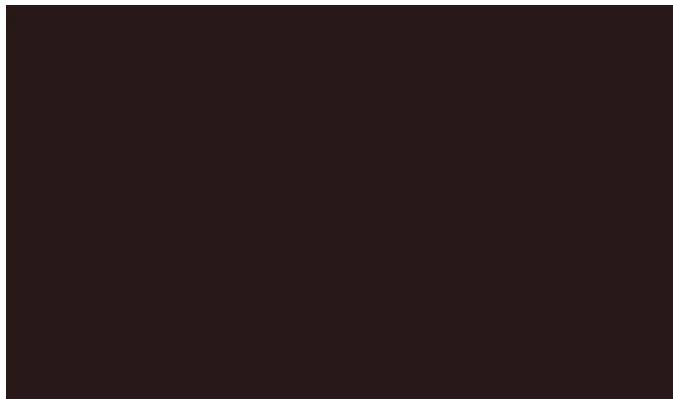


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# Touching Up the Rail Ties

## Tools & Materials:

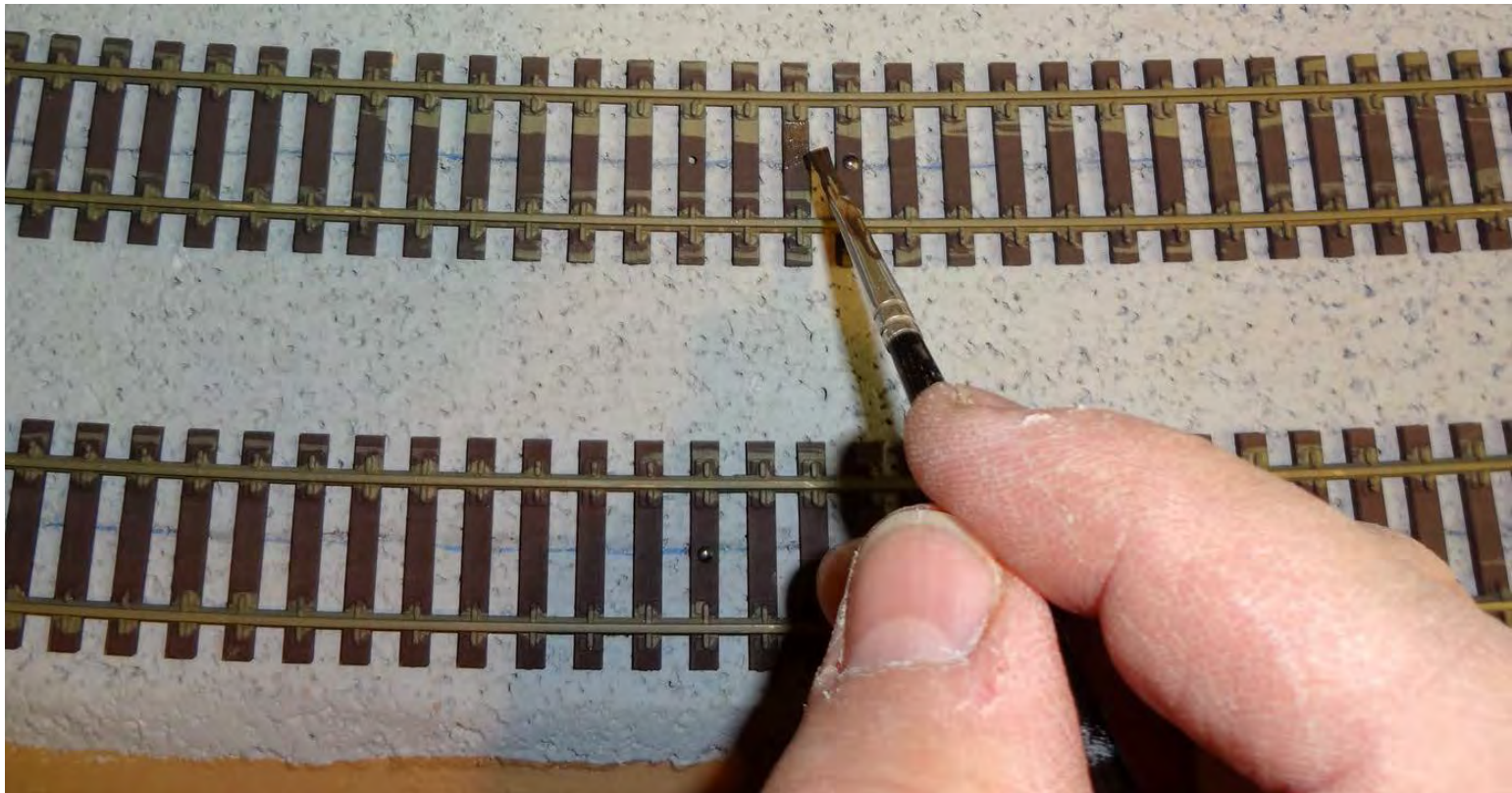
- Americana Acrylic Paint
  - Bittersweet Chocolate #DA195  
(dark brown colored)  
(buy at Michael's Arts & Crafts)





# Touching Up the Rail Ties

Use a brush and touch up the rail ties using the Bittersweet Chocolate colored acrylic paint .



# Painting the Tie Plates & Rail

## Tools & Materials:

- Americana Acrylic Paint
    - Terra Cotta #DA062  
(rust colored)
- (buy at Michael's Arts & Crafts)





# Painting the Tie Plates & Rail

The next step is to use a rust colored wash to make the tie plates and rail sides look rusty.



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# Painting the Tie Plates & Rail

Make the rust colored wash by diluting the Terra Cotta acrylic paint with water.



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# Painting the Tie Plates & Rail

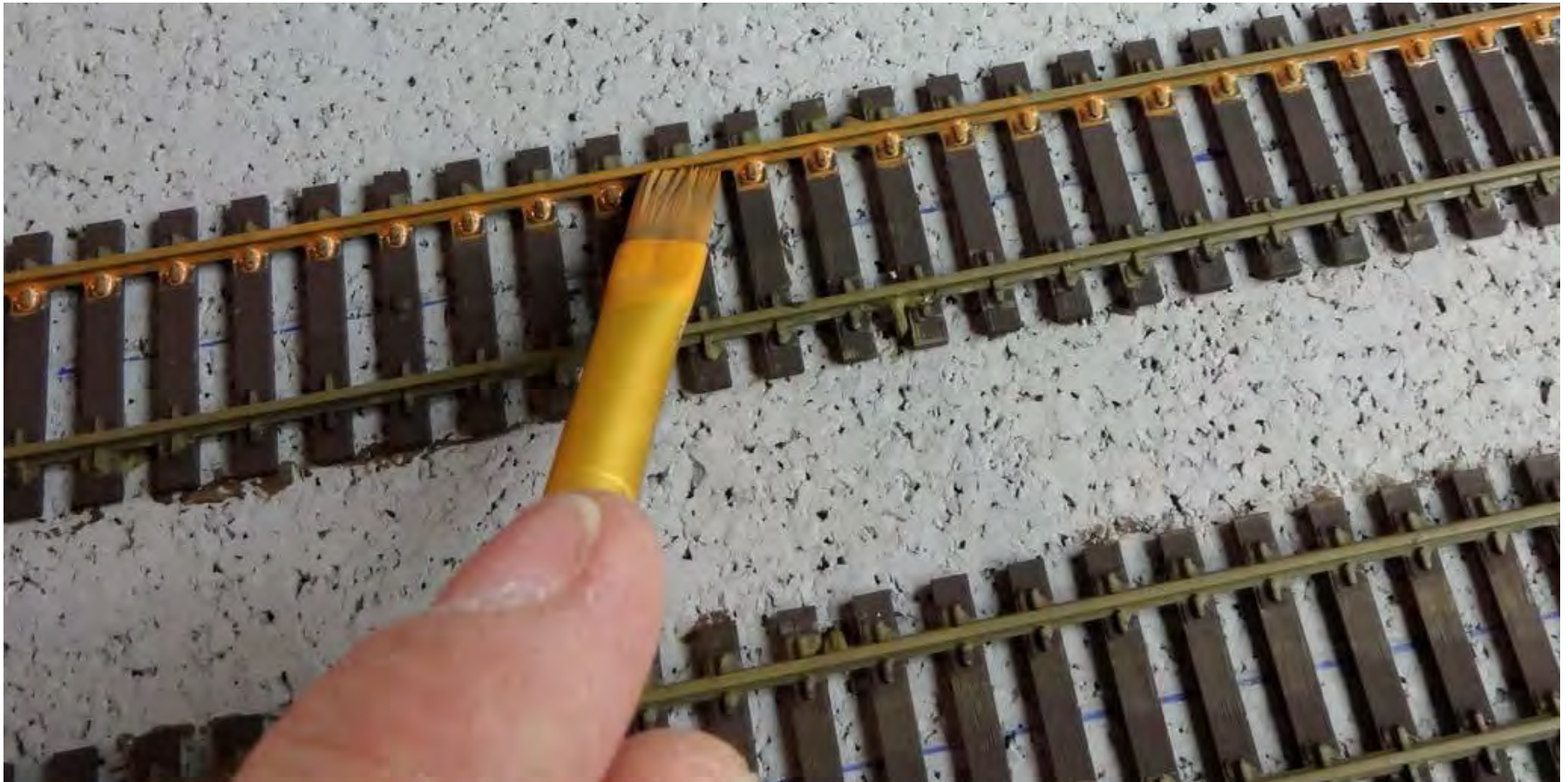
I used about 4 parts water to 1 part paint.



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# Painting the Tie Plates & Rail

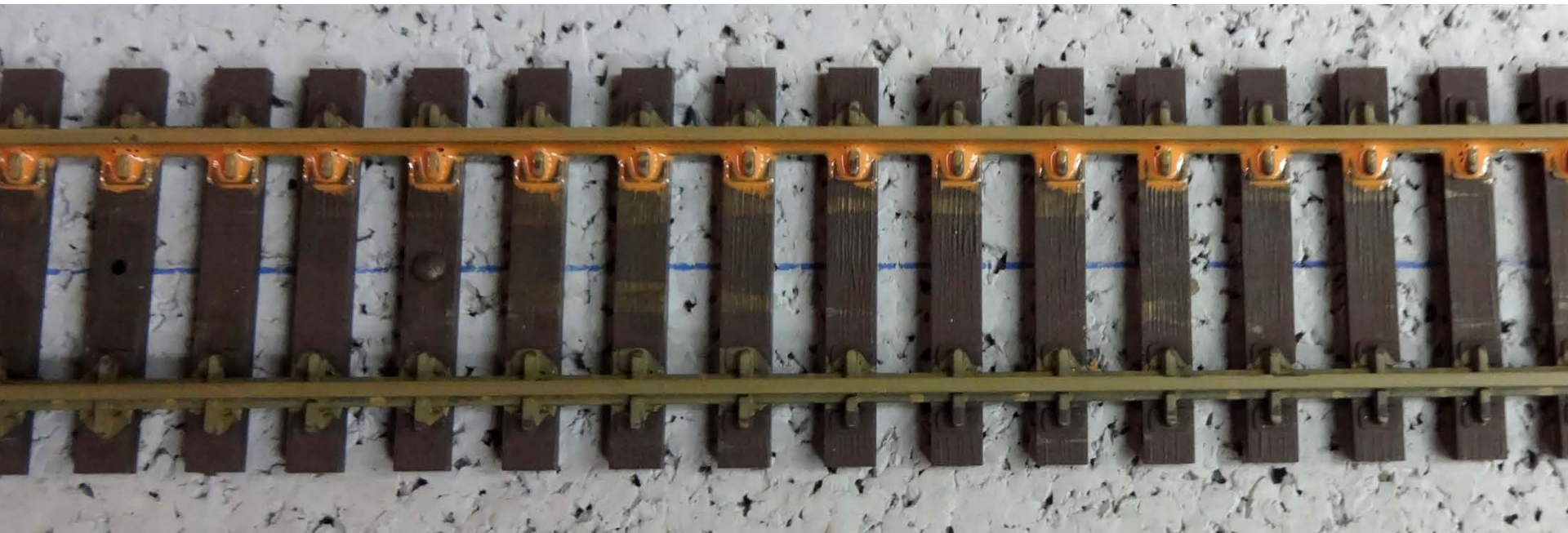
Use a flat brush to apply the wash. Apply the wash to the sides of the rail as well as the tops of the tie plates.



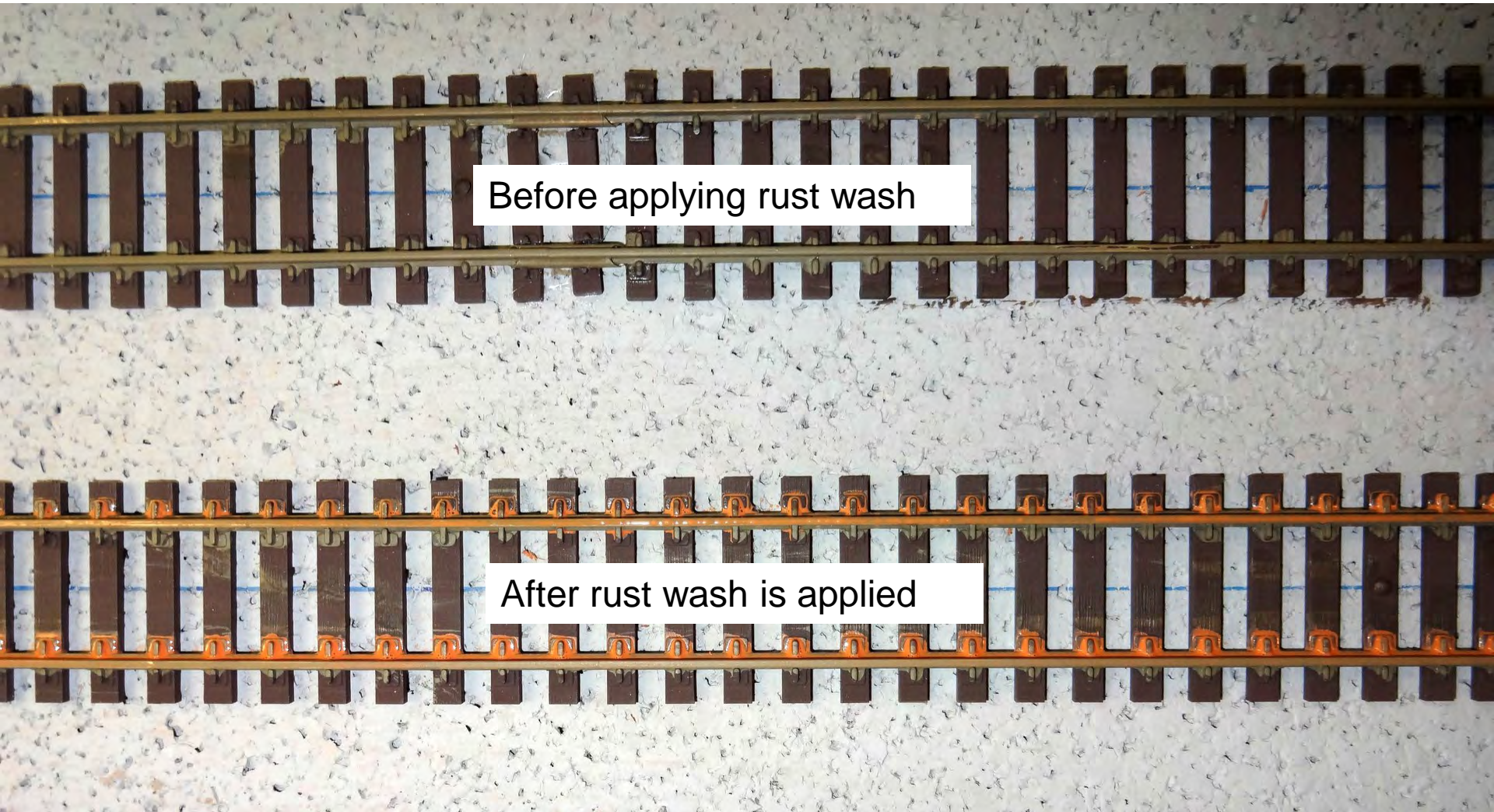


# Painting the Tie Plates & Rail

The wash should settle in the base of the rail and corners of the tie plates and still allow some of the base color to show through.



# Painting the Tie Plates & Rail



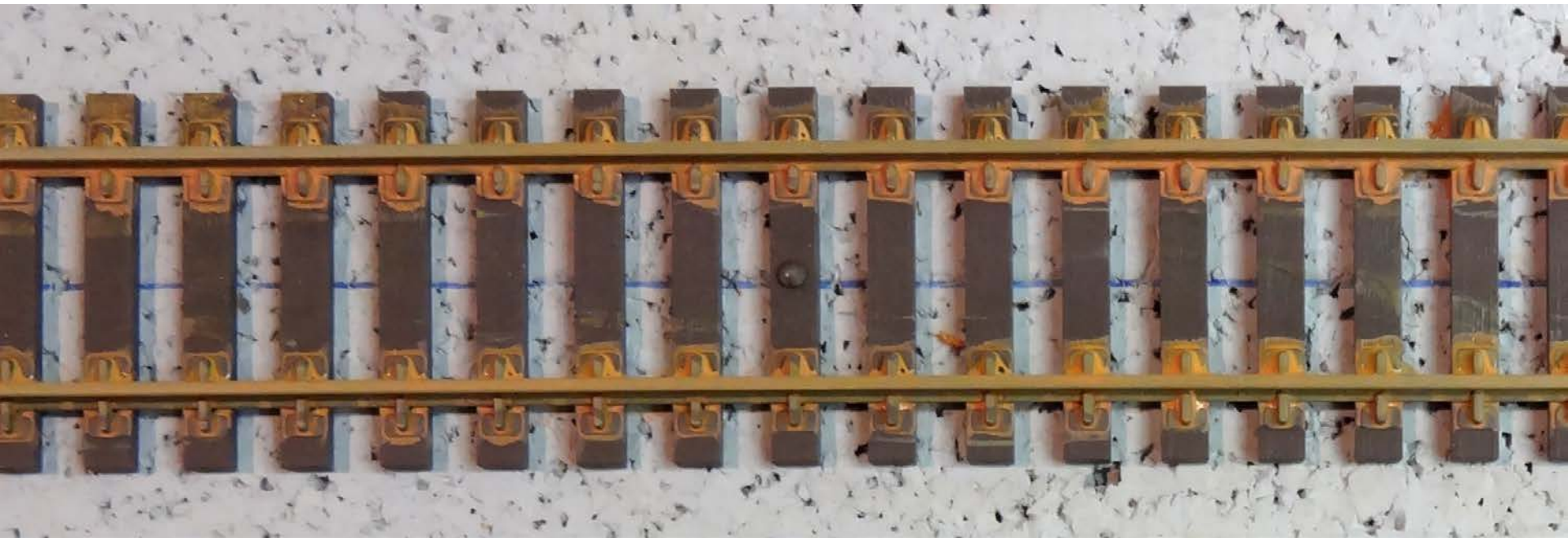
Before applying rust wash

After rust wash is applied



# Painting the Tie Plates & Rail

When dry the wash should appear see through but darker in the corners.



# Painting the Tie Plates & Rail

This is what the rails and tie plates should like when the rust wash has dried.

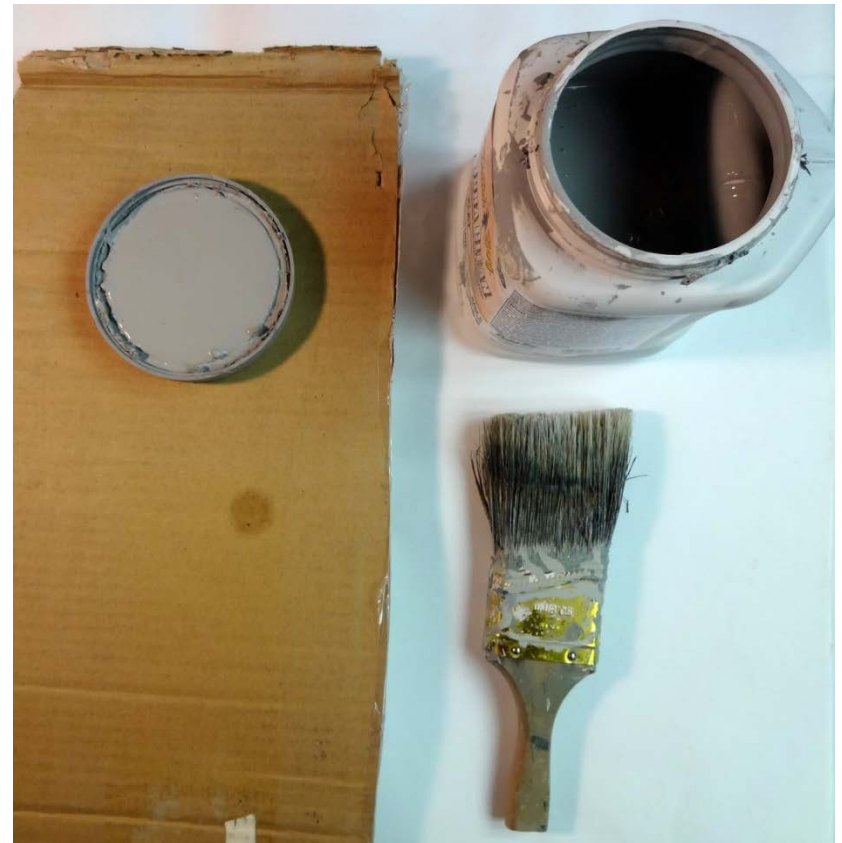




# Weathering the Track

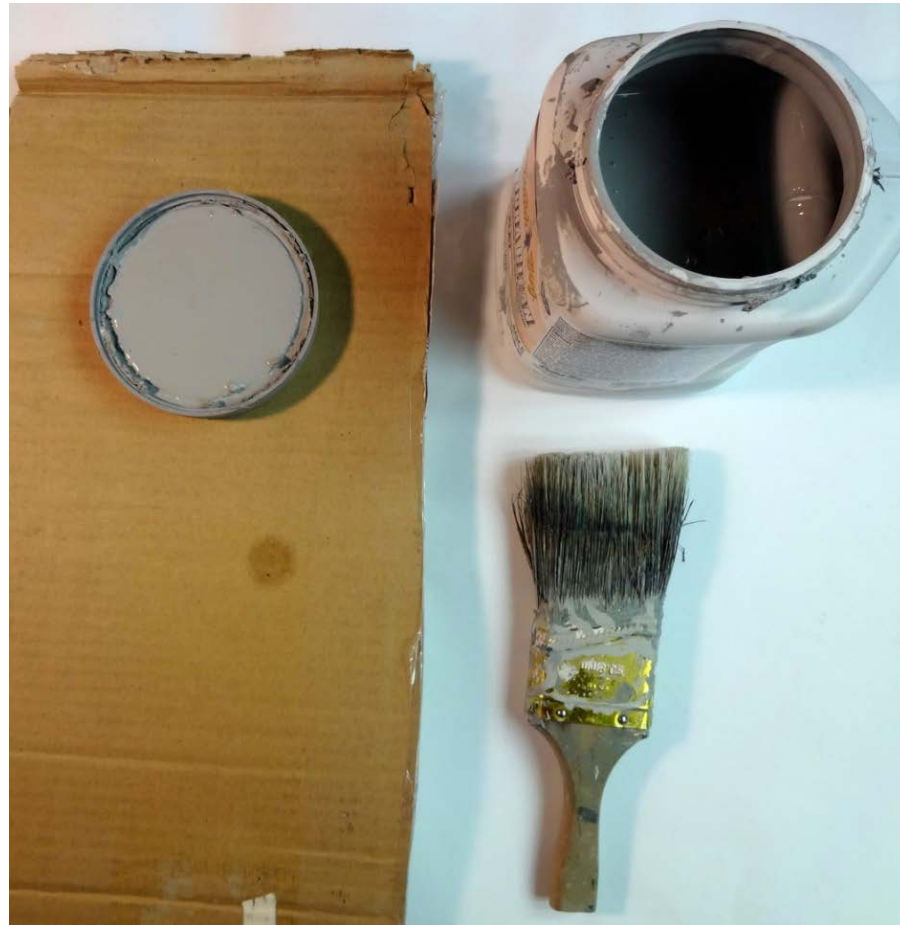
## Tools & Materials:

- Flat Interior Latex Paint
  - Light Gray
  - (buy at Menards)
- Old 2" wide paint brush
- Cardboard



# Weathering the Track

We are going to weather the track by applying the gray paint using a technique called dry brushing.



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# Weathering the Track

Dip the paint brush about 1/8" deep into the gray paint as shown below.



# Weathering the Track

Begin to wipe most of the paint off on a piece of cardboard until the brush is almost complete dry.





# Weathering the Track

Quickly rub the dry brush back and forth down the length of the track.



# Weathering the Track

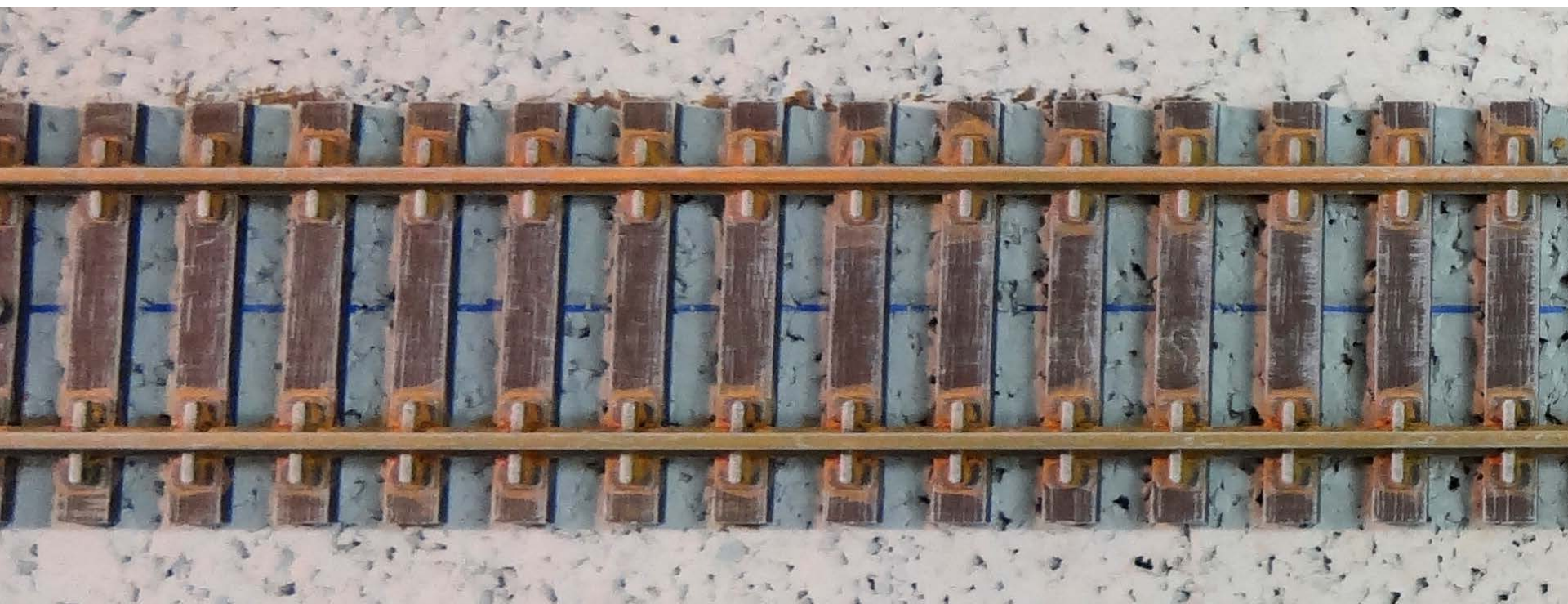
Make sure the brush is dry enough. You do not want too much paint to come off the brush.





# Weathering the Track

You want the paint to only highlight the edges of the rail spikes and the wood grain ridges of the ties.



# Weathering the Track

Your weathered track should now look something like this.



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# Cleaning the Rail Head

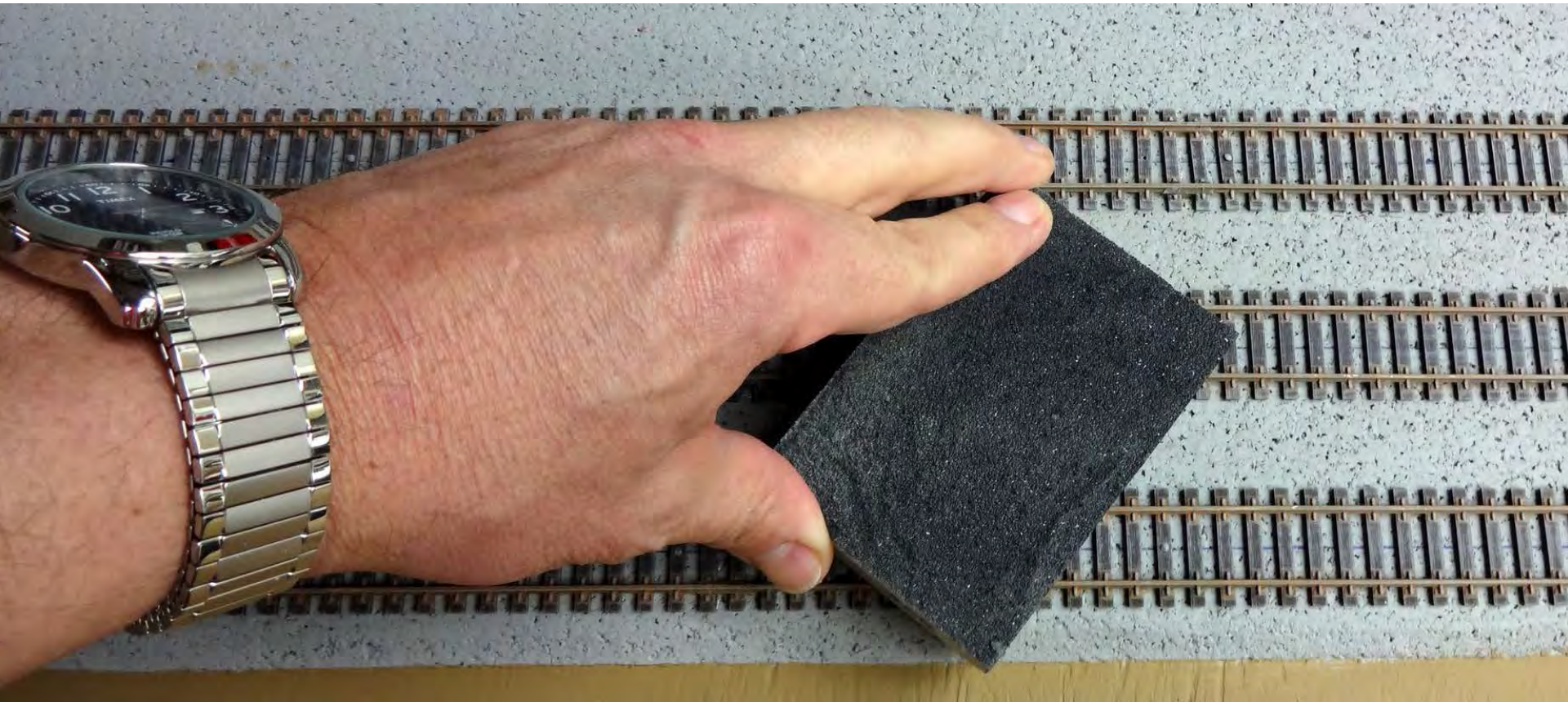
## Tools & Materials:

- 3M All Purpose Sanding Sponge  
(buy at Menards)



# Cleaning the Rail Head

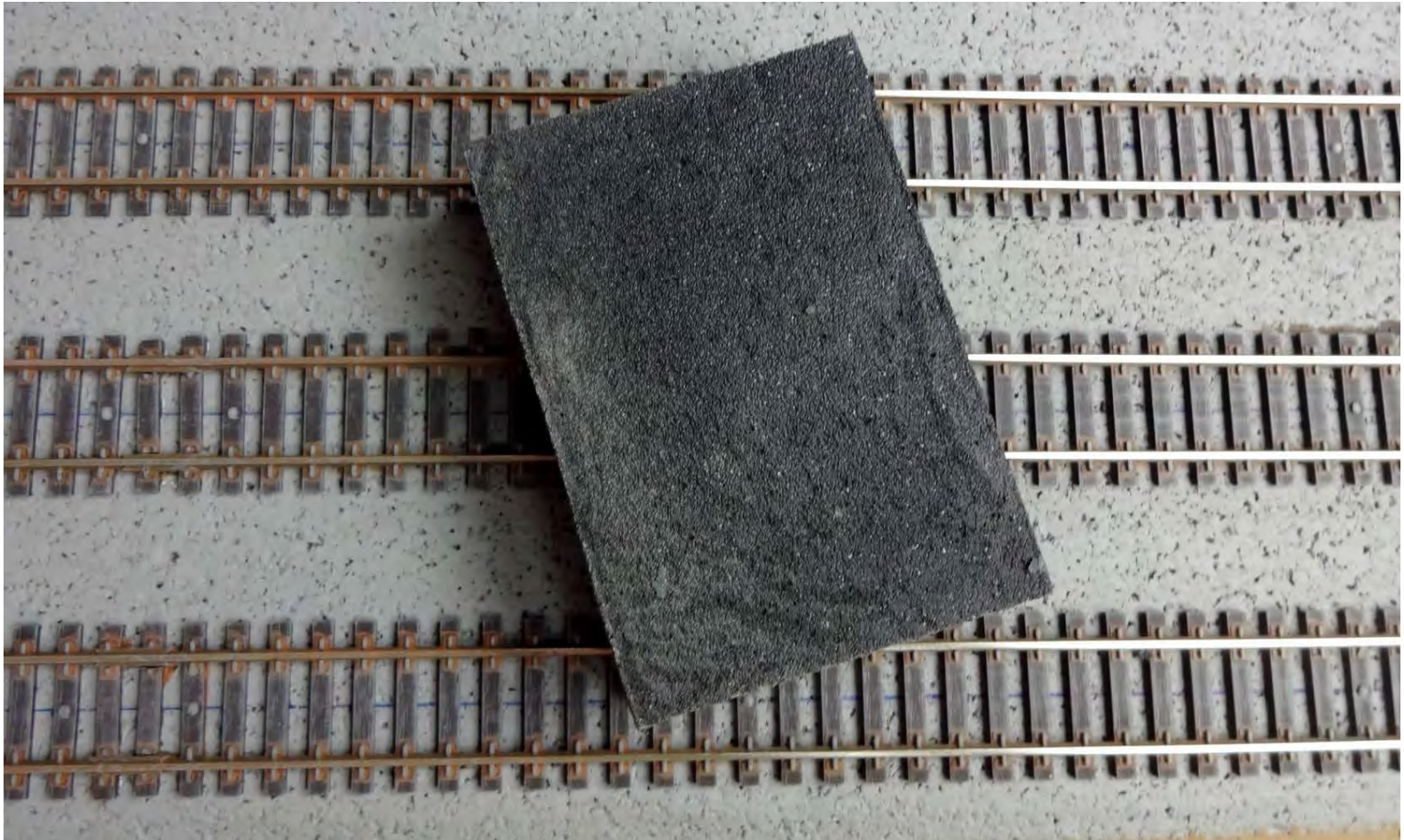
Use a sanding sponge to remove the dried paint from the rail head.





# Cleaning the Rail Head

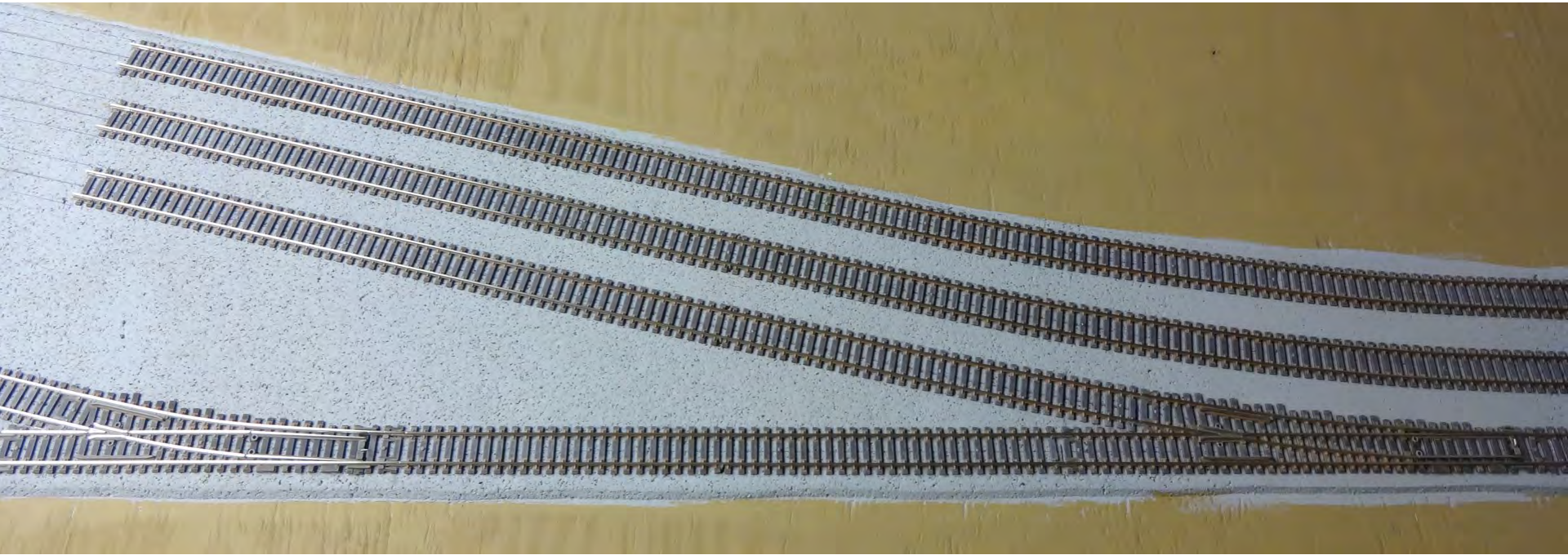
You want the rail head to look shinny. This will also give you proper electrical conductivity.



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# Ballasting Track

Now that the track is weathered we are ready to begin ballasting.





# Ballasting Track

## Tools & Materials:

- Woodland Scenics Fine Ballast
  - Gray Blend B1393



# Ballasting Track

## Tools & Materials:

- Scenic Express  
Concentrated Matte Medium  
Transparent Scenery Cement





# Ballasting Track

## Tools & Materials:

- 2 oz. Bellows Type Glue Applicator  
(from Micro-Mark)



# Ballasting Track

## Tools & Materials:

- 4 oz. Spray Splatter Applicators  
(buy at Michael's Arts & Crafts)





# Ballasting Track

## Tools & Materials:

- 4 oz. Spray Splatter Applicators  
(buy at Michael's Arts & Crafts)

Buy several applicators

Use 1 with diluted Matte Medium

4 parts water, 1 part Matte Medium

Use 1 with “wet water” (water with a little isopropyl alcohol added to it).



# Ballasting Track

## Tools & Materials:

- An old empty bottle of Elmer's Glue

Pour some concentrated Matte Medium into the empty Elmer's Glue bottle.

It makes a handy applicator when I need to apply concentrated Matte Medium directly to the cork roadbed.





# Ballasting Track

## Tools & Materials:

- A ½" paint brush to spread the Matte Medium
- A plastic cup for diluted Matte Medium
- A small can of water for cleaning your brush
- Small paper cups for sprinkling ballast



# Ballasting Track

Why use only Matte Medium?

Why not use thinned white glue?

- Matte Medium is a synthetic acrylic-based adhesive.
- Acrylics are very flexible and transparent.
- Matte Medium will never dry out or deteriorate, will never yellow and always remain flexible.
- It has a matte or flat finish when dry.
- It is nearly invisible.
- It has greater holding strength.





# Ballasting Track

Mix some Matte Medium with water in a jug or bottle ahead of time. Use a 4:1 ratio (4 parts water, one part Matte Medium). Pour some into a plastic cup and fill your bellows type glue applicator.



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# Ballasting Track

Begin by applying concentrated Matte Medium to the beveled edge of the cork roadbed.





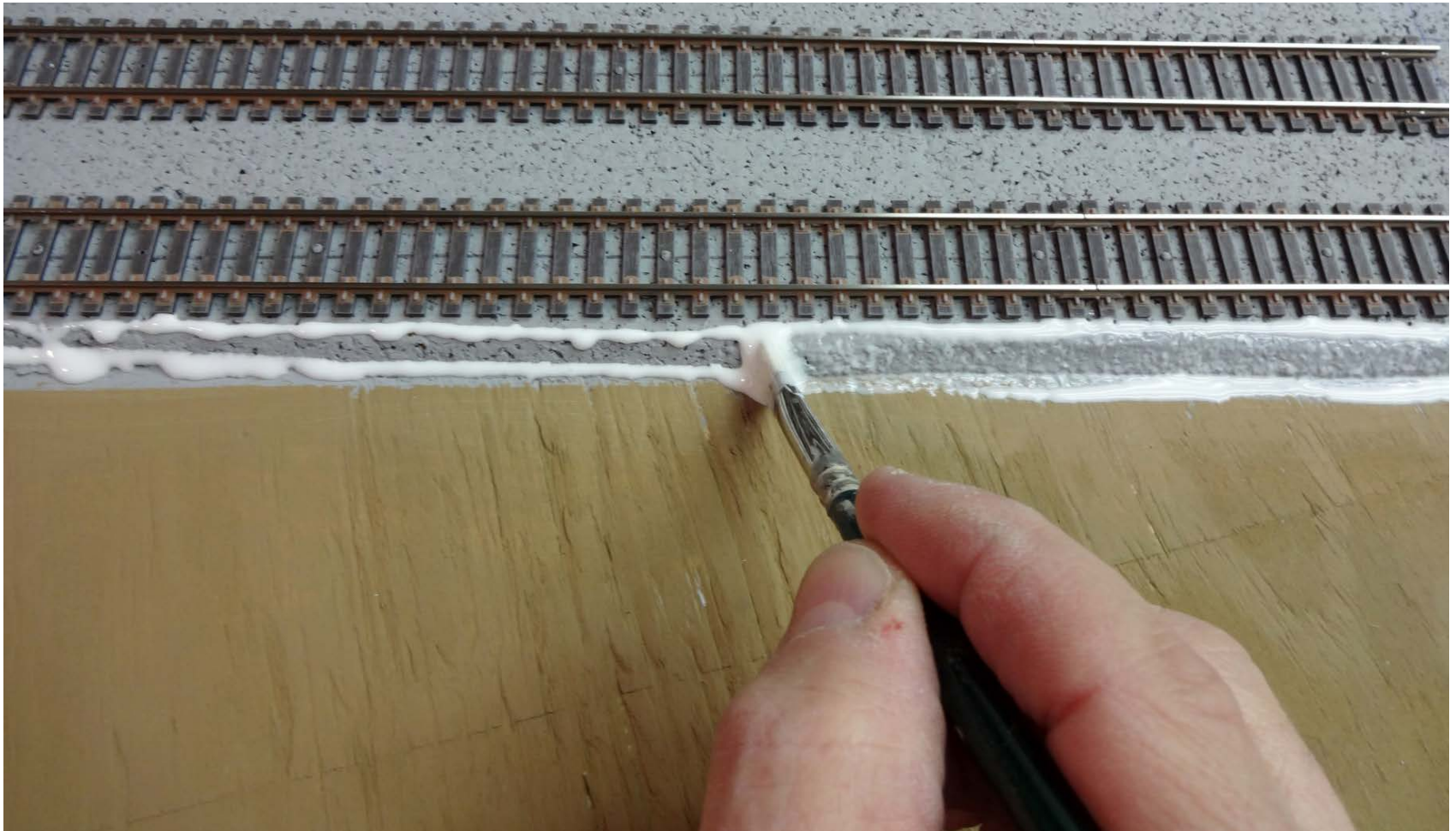
# Ballasting Track

Since the concentrated Matte Medium goes on thicker it will help hold the ballast to the beveled edge of the cork roadbed.



# Ballasting Track

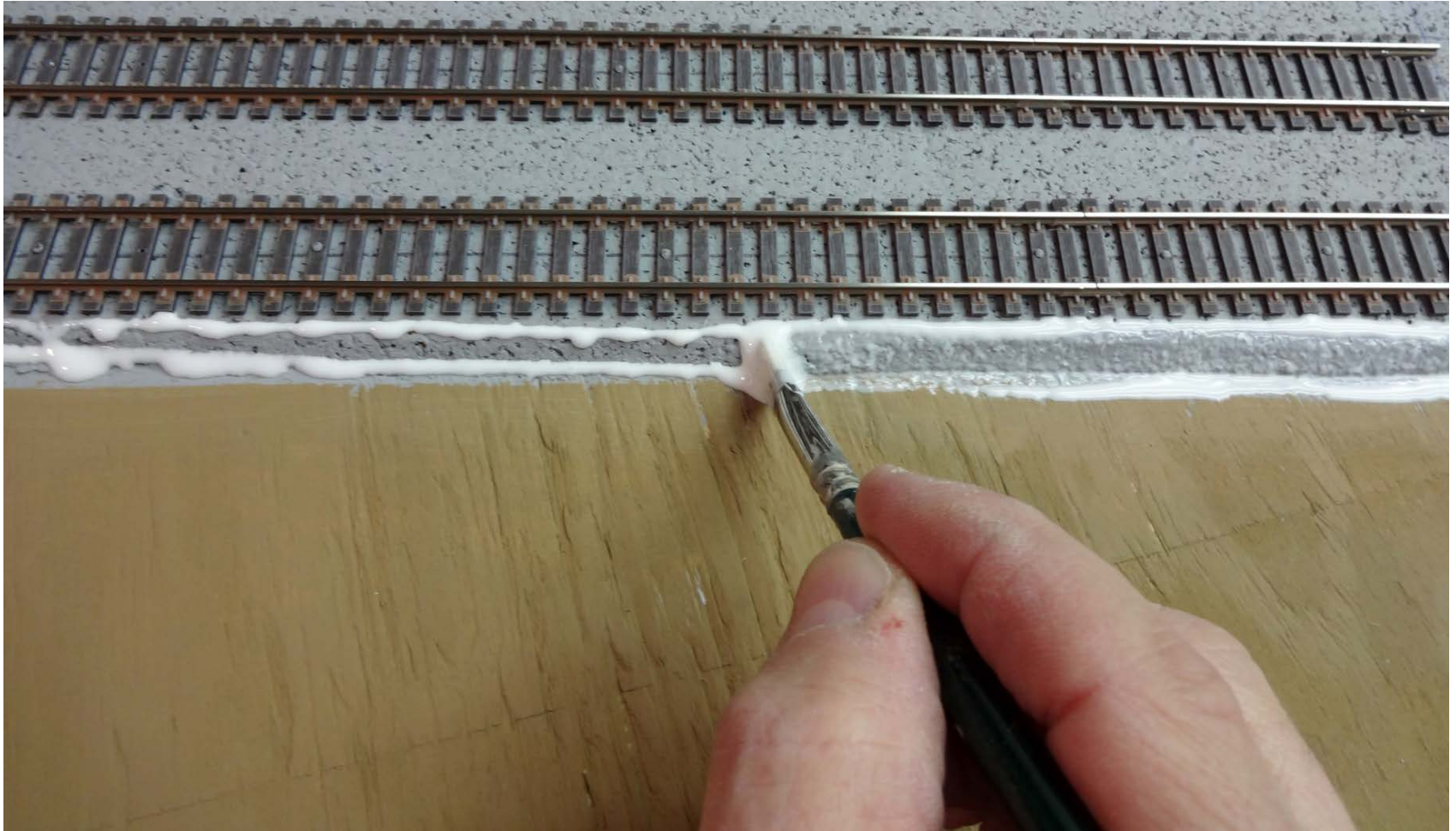
Use a ½" paint brush to spread the Matte Medium along the beveled edge of the cork roadbed.





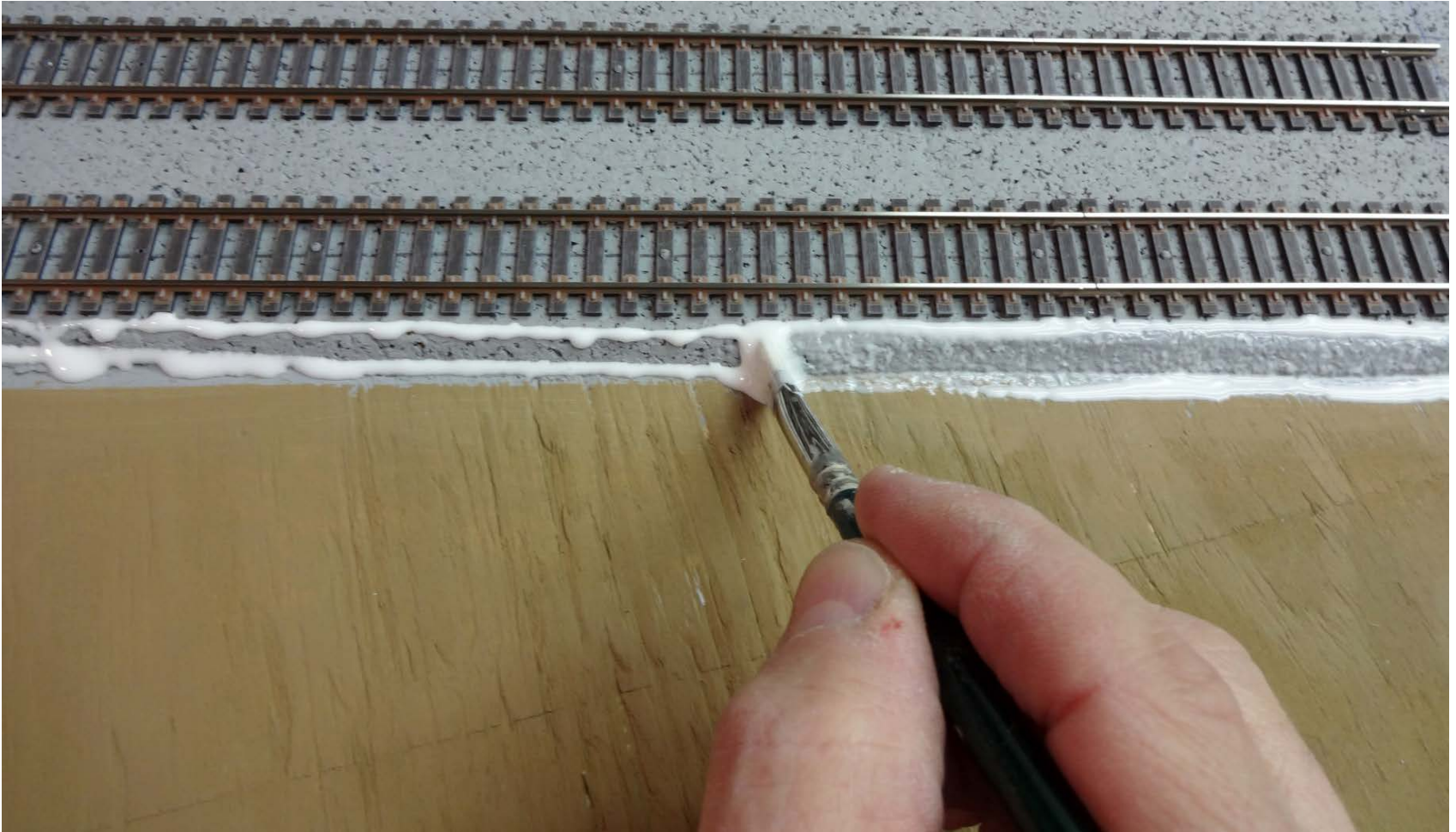
# Ballasting Track

Do not try to do too large an area all at once. The glue will begin to dry out before you can apply all the ballast.



# Ballasting Track

I usually do an area between 12 and 24 inches at a time.

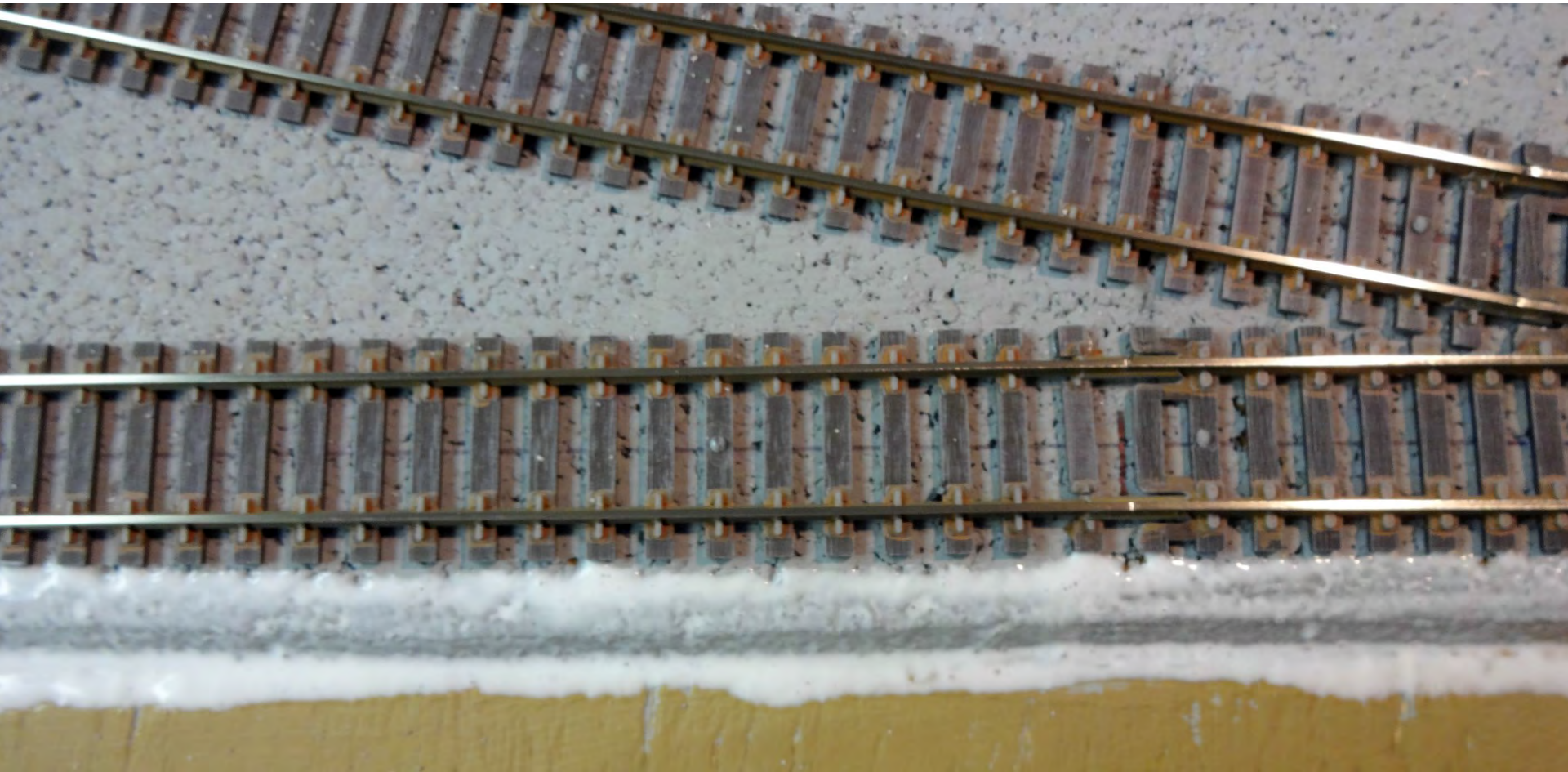


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# Ballasting Track

Make sure you have a nice thick coating of Matte Medium applied before adding the ballast.



# Ballasting Track

Remember to put your glue brush in a can of water to keep the Matte Medium from drying on your brush.





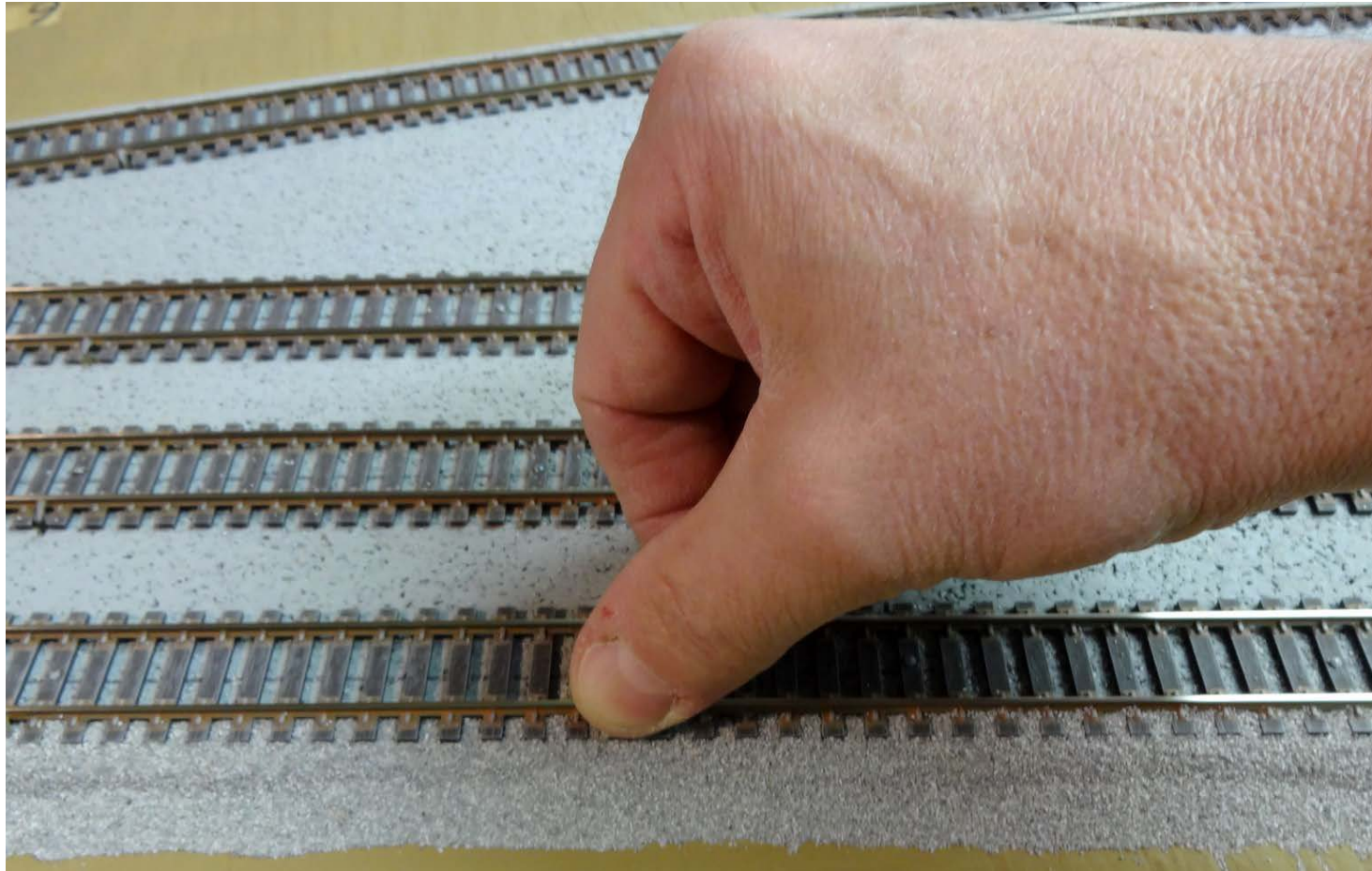
# Ballasting Track

Fill a small paper cup with your ballast and carefully begin sprinkling the ballast along the edge of the cork roadbed where you just applied the Matte Medium.



# Ballasting Track

Run your thumb along the top of the ties to spread the ballast into the spaces between the ties.





# Ballasting Track

You want the ballast to be just below the top of the ties.





# Ballasting Track

Apply more concentrated Matte Medium to the cork roadbed in the area between multiple tracks.

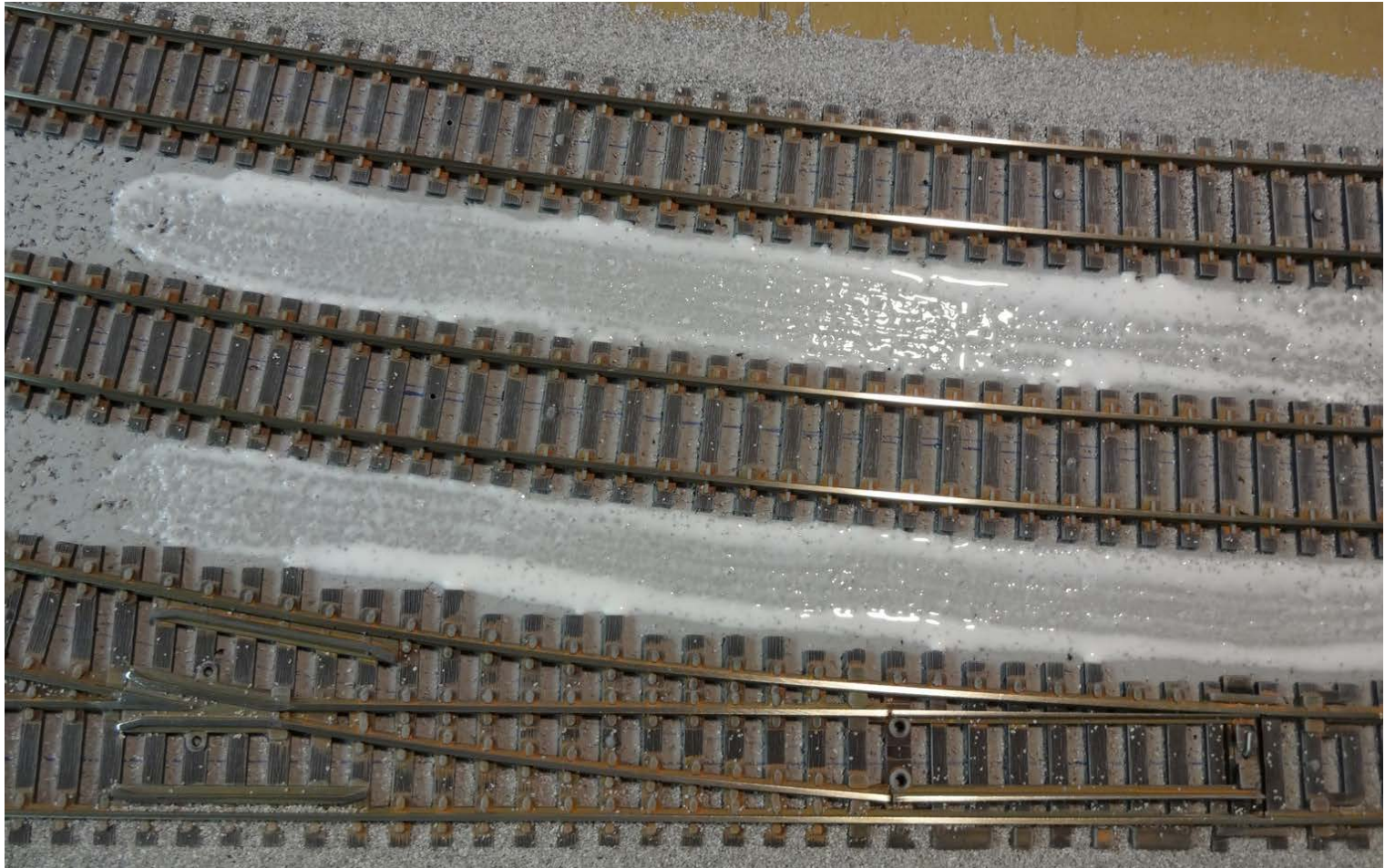


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# Ballasting Track

Spread the Matte Medium over the cork roadbed evenly using the ½" paint brush.



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# Ballasting Track

Using a small paper cup carefully sprinkle the ballast in between the tracks where you just applied the Matte Medium.



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# Ballasting Track

Run your thumb along the top of the ties to spread the ballast into the spaces between the ties.



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# Ballasting Track

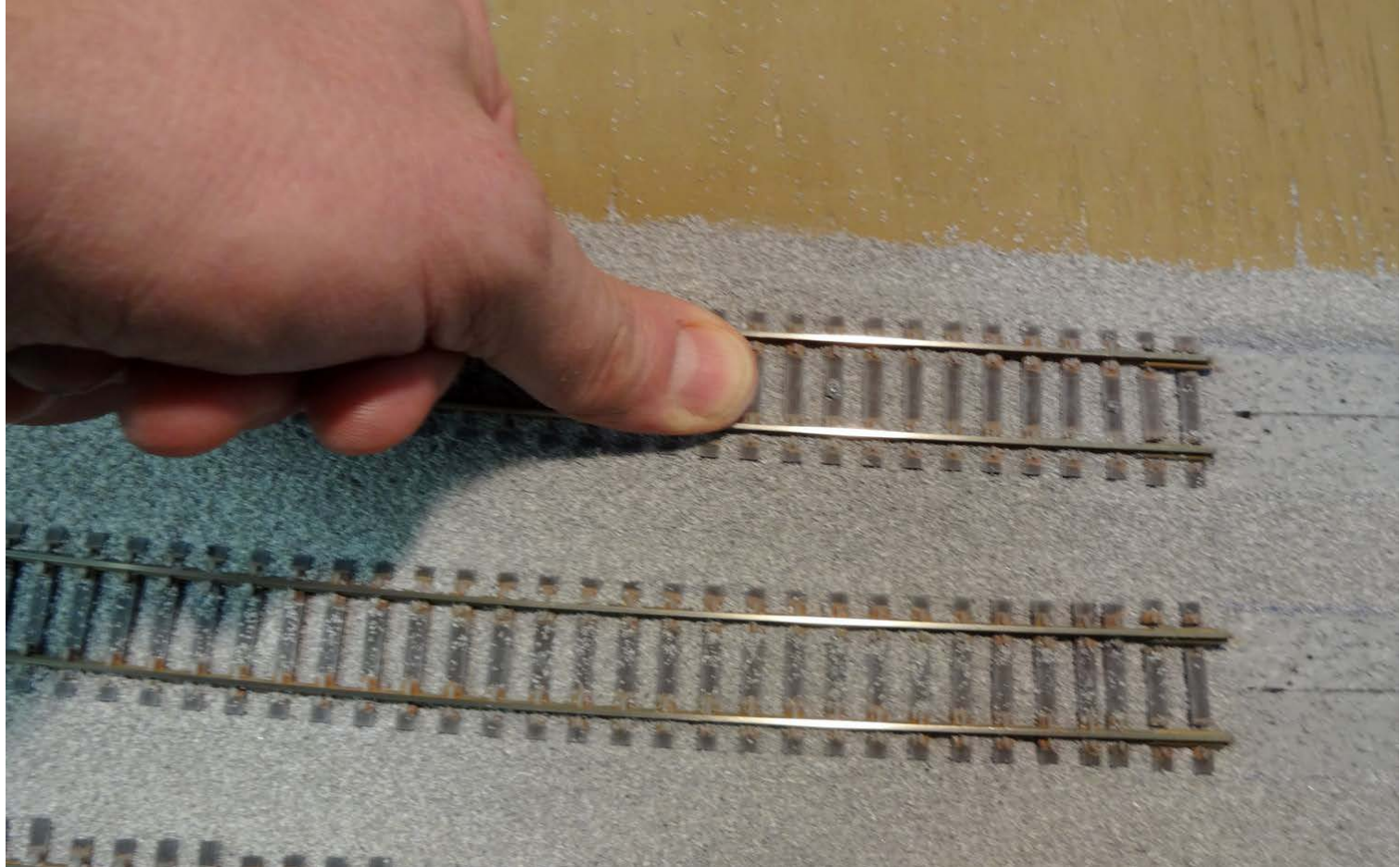
Now sprinkle some ballast down the center of each track between the ties.





# Ballasting Track

Now run your thumb down the center of each track to spread the ballast into the spaces between the ties.



# Ballasting Track

Try to remove any excess ballast from the top of the ties.

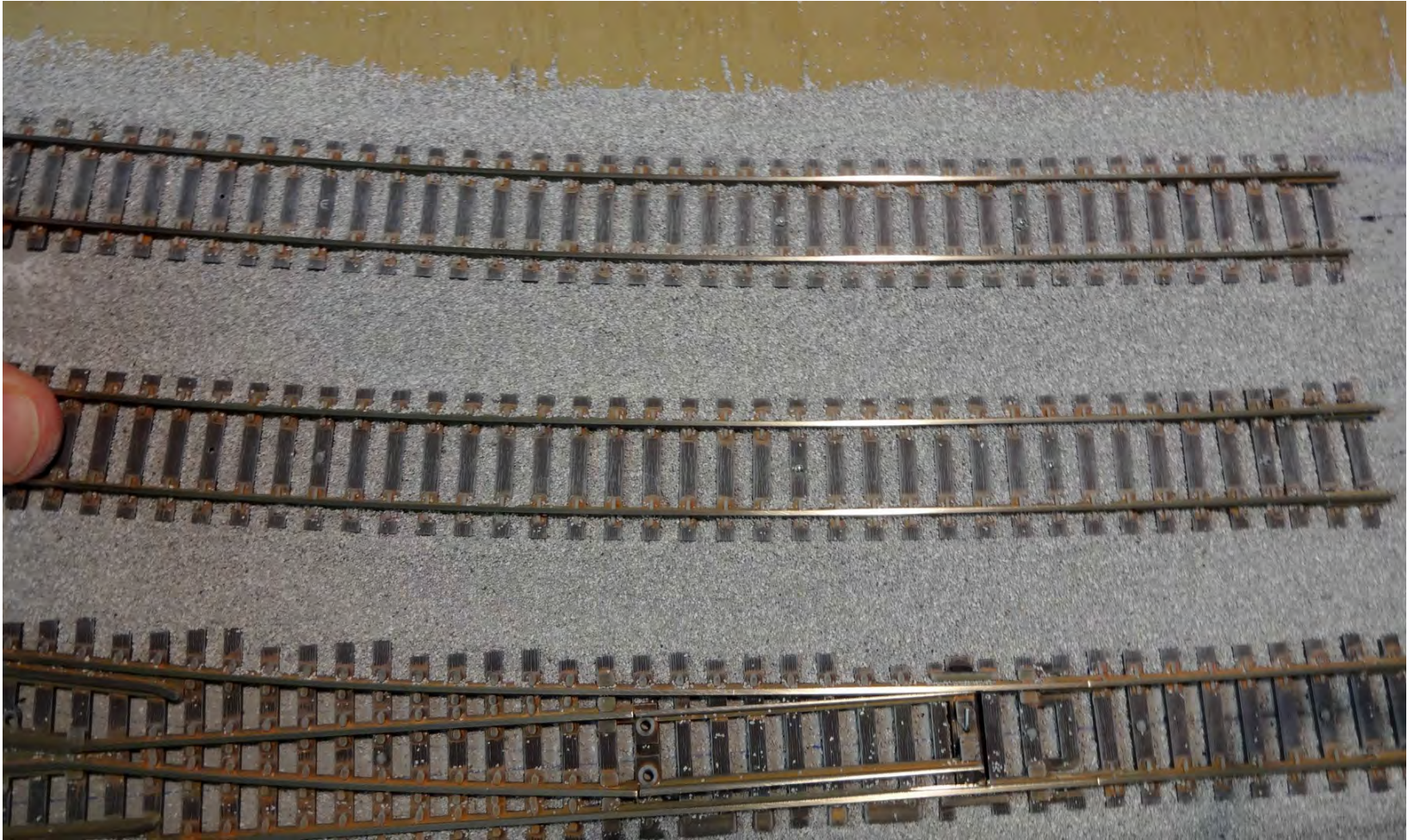


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# Ballasting Track

You want the ballast to be just below the top of the ties.





# Ballasting Track

Take extra care when adding ballast to turnouts.





# Ballasting Track

Use a fine brush to help remove excess ballast from the frogs, points and guard rails.





# Ballasting Track

The frogs and guard rails should be clear of any excess ballast before applying any diluted Matte Medium.



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# Ballasting Track

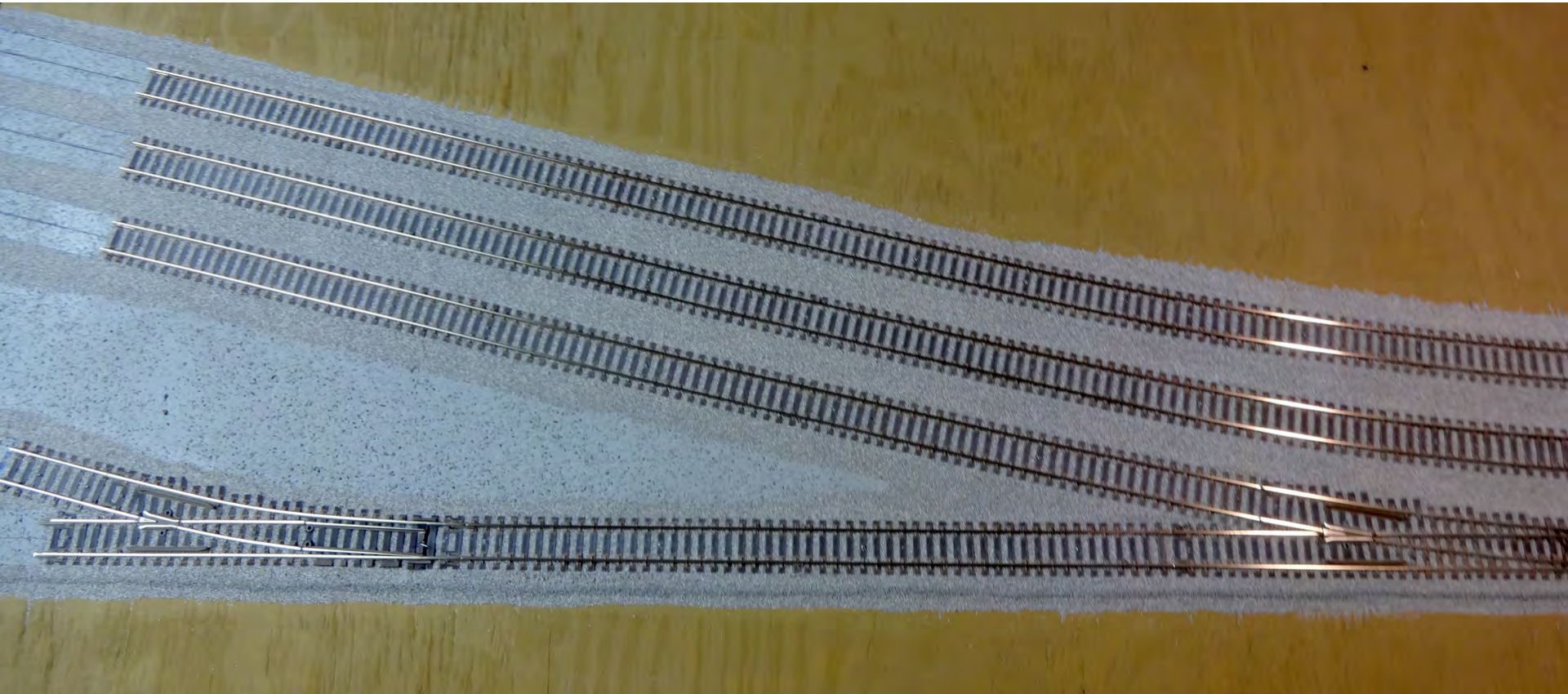
Ensure the points are clear of excess ballast also before applying any diluted Matte Medium.





# Ballasting Track

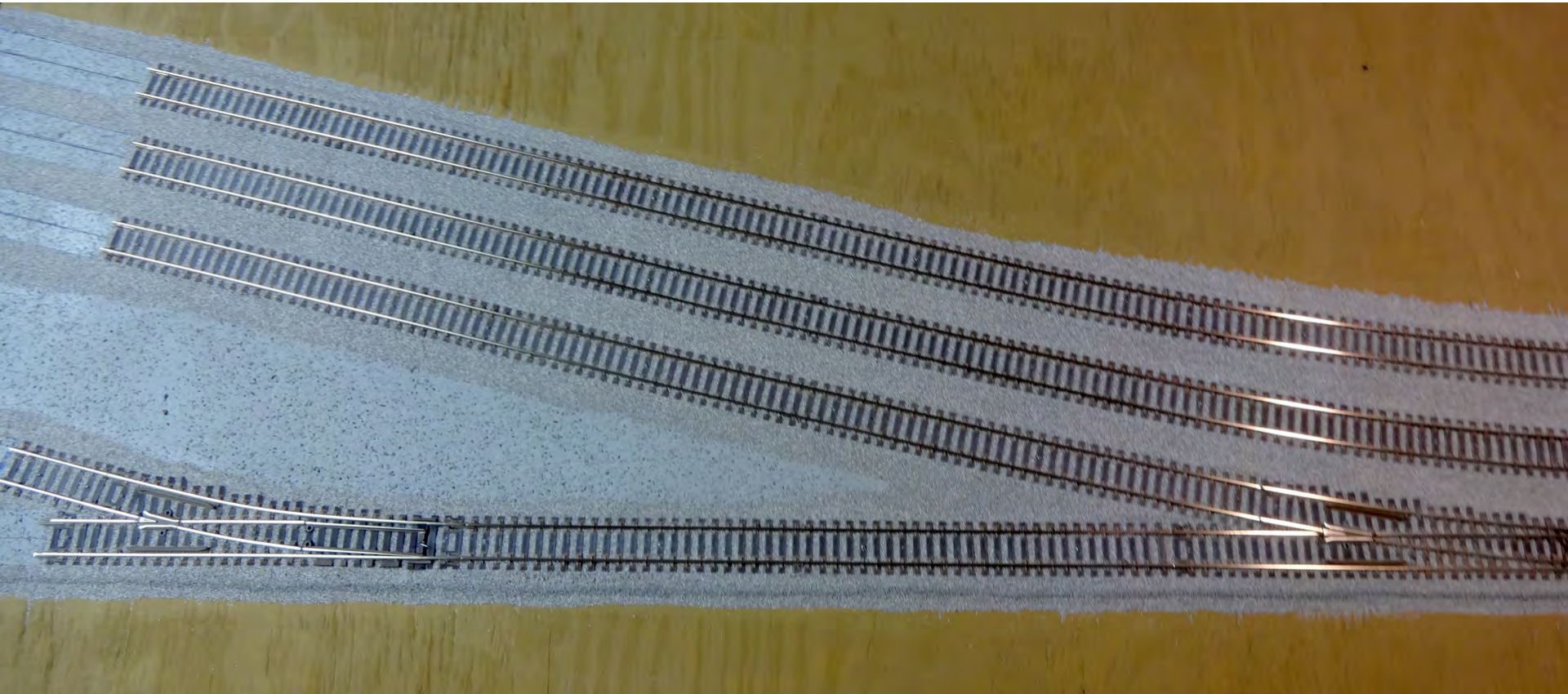
Now that the base coat of concentrated Matte Medium has been applied, the ballast has been spread, and the turnouts have been cleaned of excess ballast.....





# Ballasting Track

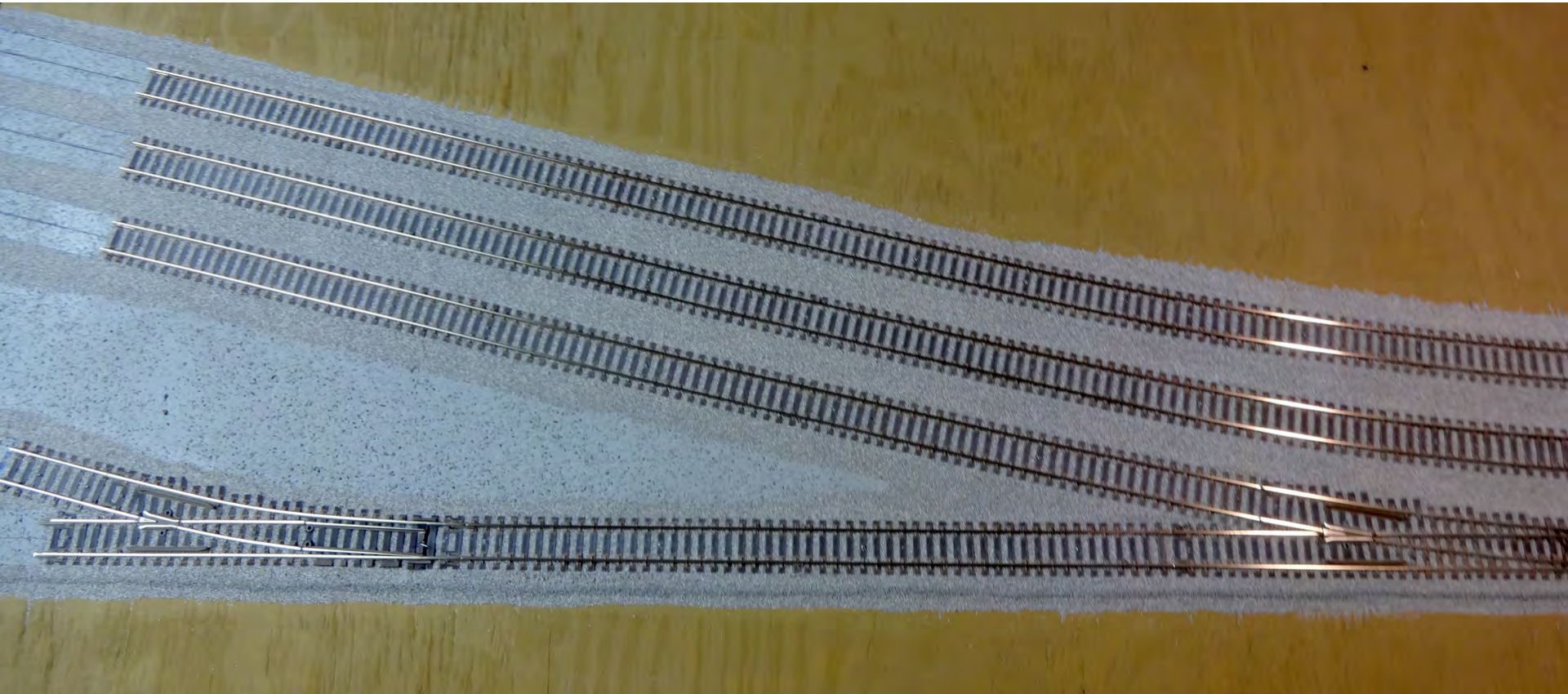
We are now ready to apply the diluted Matte Medium to secure all the loose ballast.





# Ballasting Track

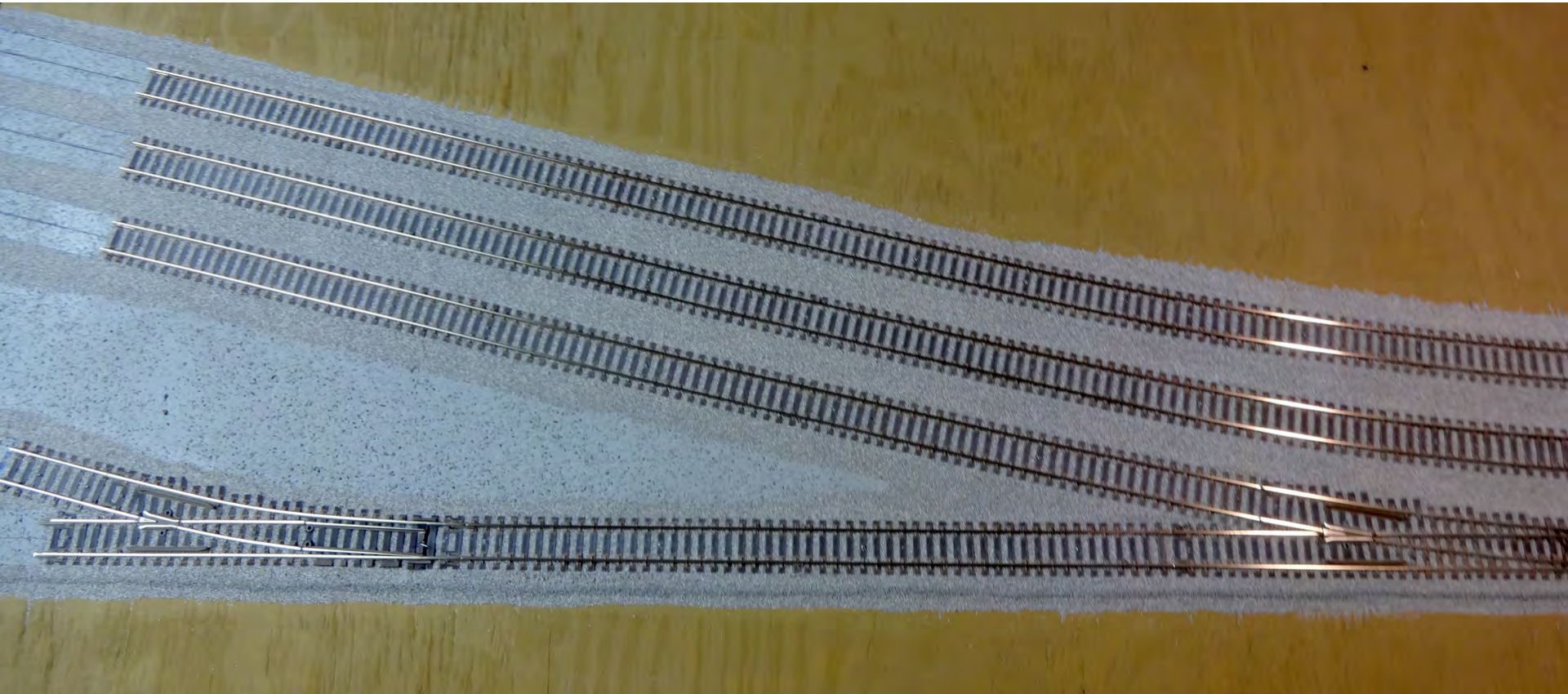
Since the loose ballast is dry and can be disturbed very easily, we need to prepare the ballast to accept the diluted Matte Medium.





# Ballasting Track

We want the diluted Matte Medium to soak in without disturbing and displacing the loose ballast.



# Ballasting Track

Prepare the loose ballast using the 4 oz. splatter spray applicators. They produce a fine mist when pumped which will not displace the loose ballast.





# Ballasting Track

Start by misting the ballast using the “Wet” water. Make sure to get all the ballast wet. This will allow the diluted Matte Medium to soak in without disturbing the ballast.



# Ballasting Track

Next apply a light mist of diluted Matte Medium to help hold the loose ballast in place.





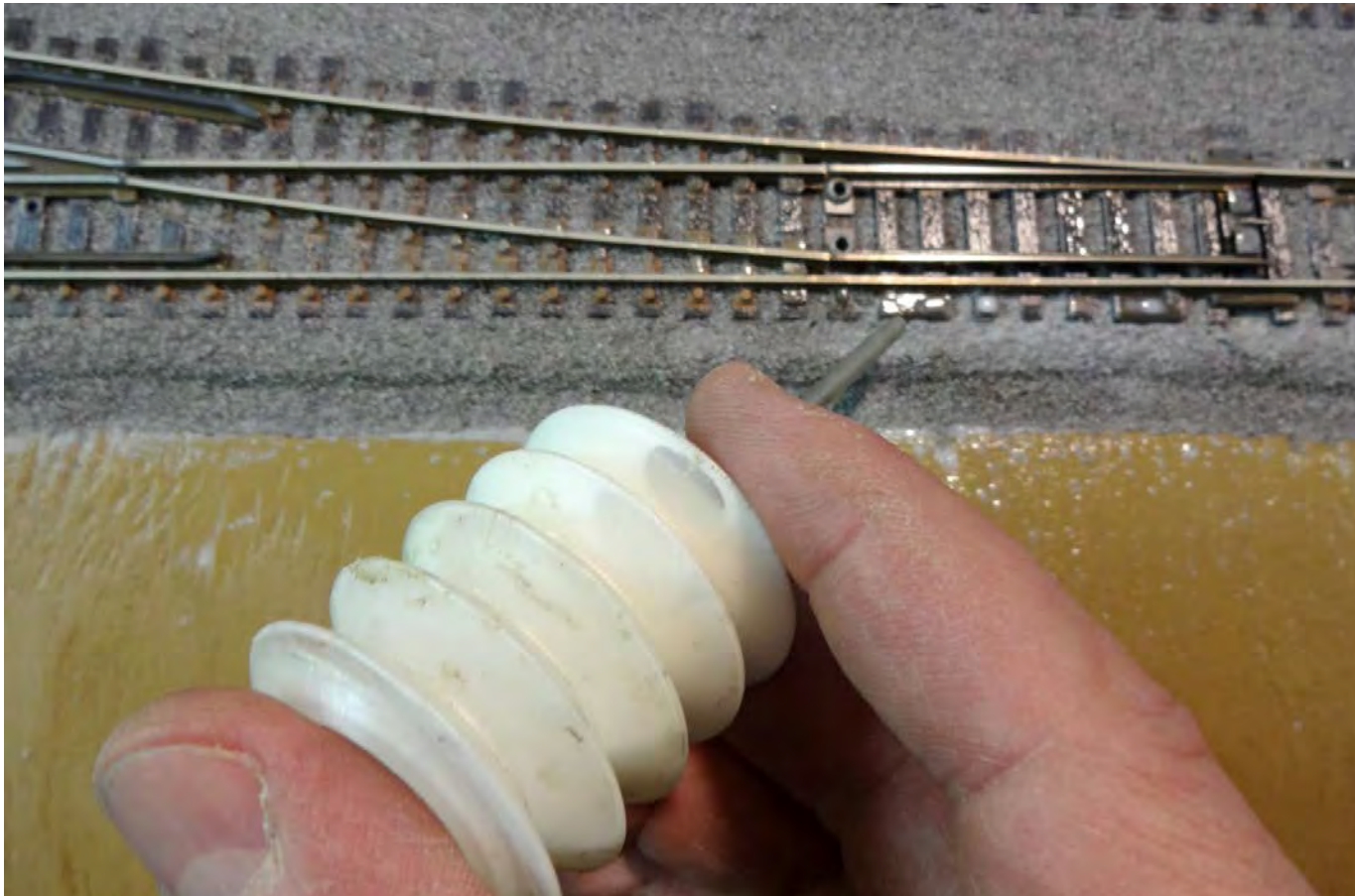
# Ballasting Track

Now we can use the bellows type glue applicator to flood the ballast with diluted Matte Medium which will permanently secure all the ballast when dry.



# Ballasting Track

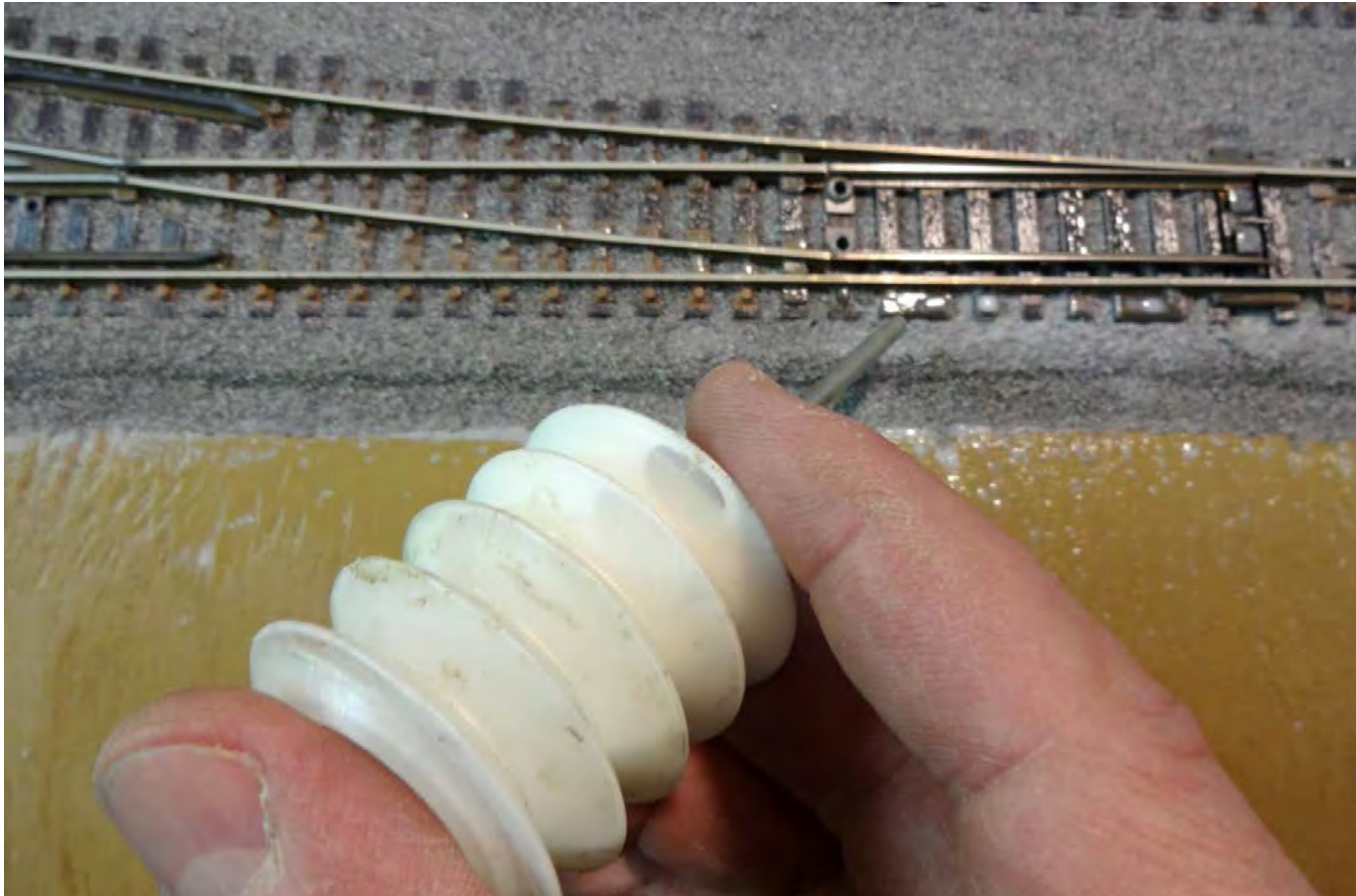
Start applying Matte Medium to the sloped edges of the cork roadbed.





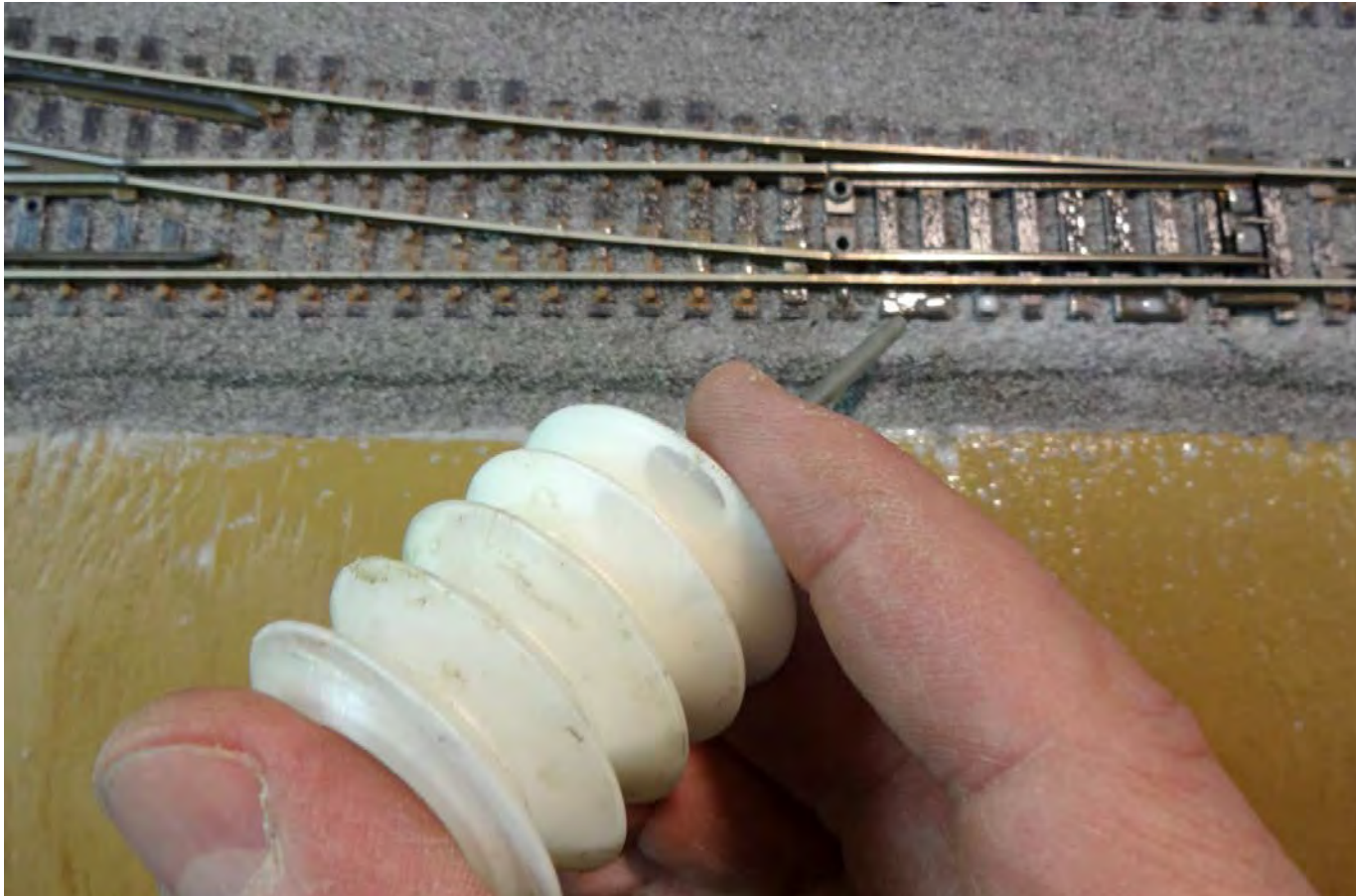
# Ballasting Track

Carefully squeeze the bellows type applicator to allow the Matte Medium to drip out drop by drop.



# Ballasting Track

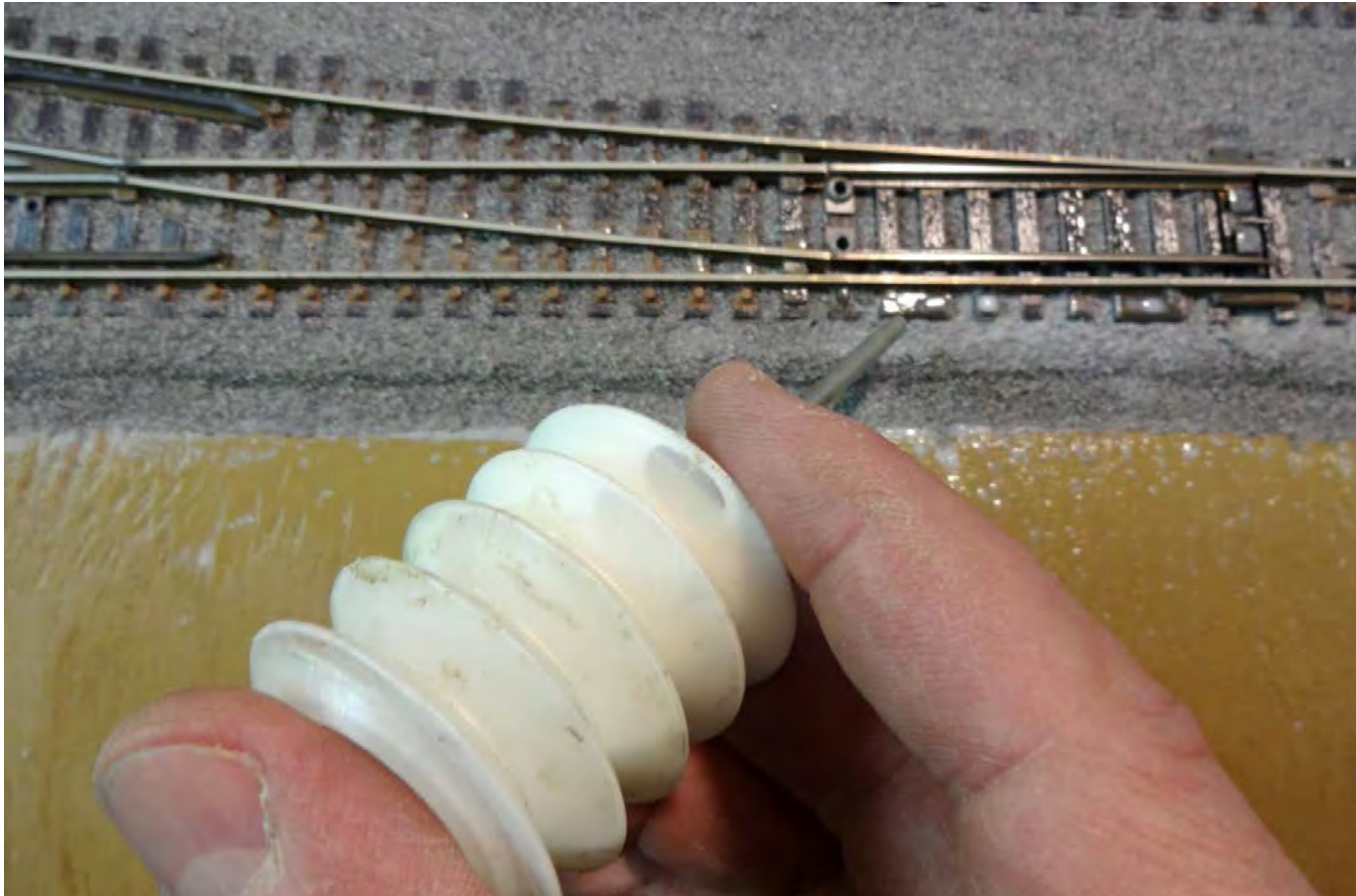
Do not squirt the Matte Medium out of the applicator or it will displace the ballast and leave a large bare spot.





# Ballasting Track

Try to drip the Matte Medium onto the ties and let it soak down the sloped edge of the cork roadbed.



# Ballasting Track

Continue to flood the ballast with Matte Medium until you see the white mixture reach the top of the ballast.



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# Ballasting Track

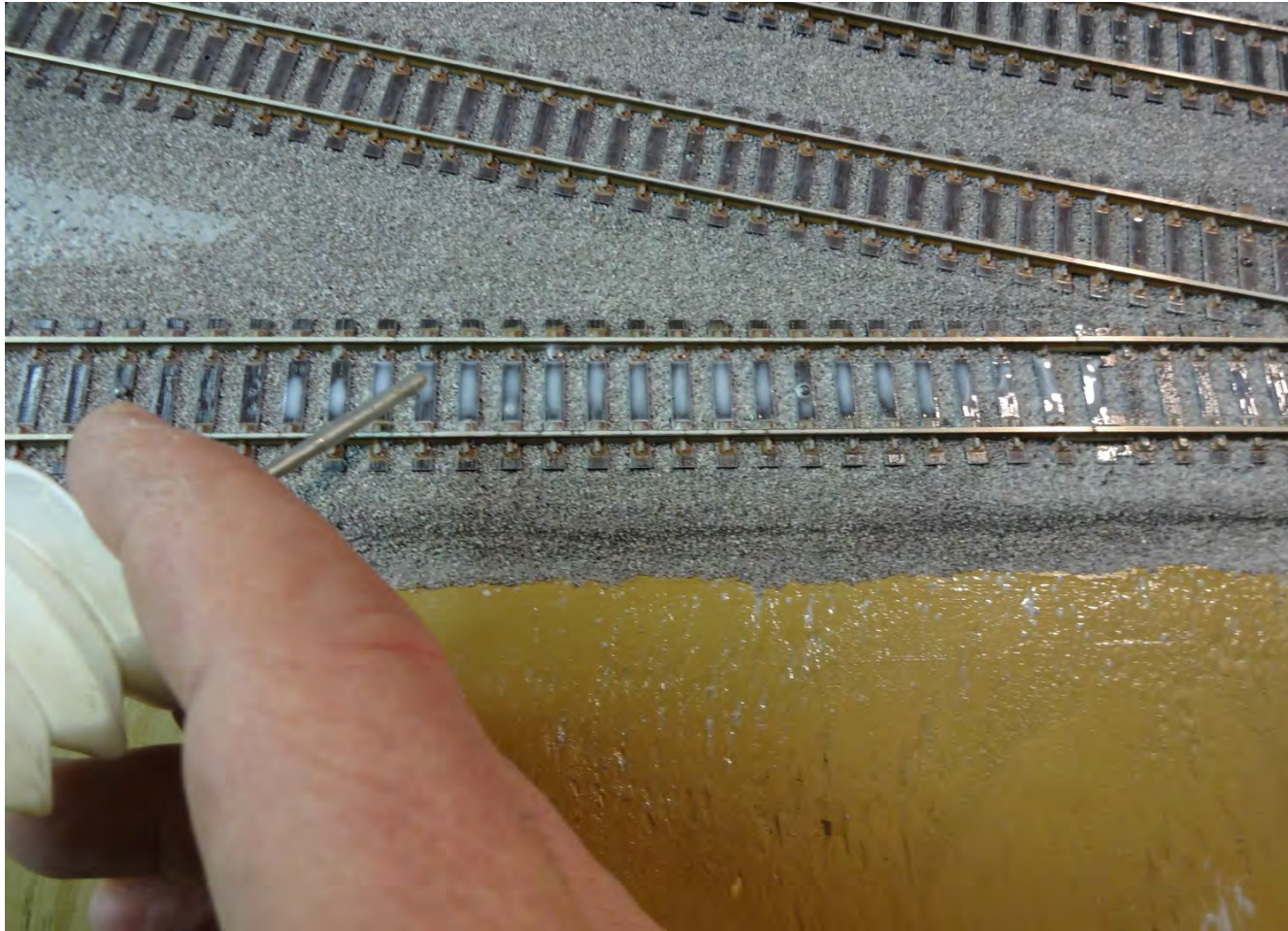
Apply the diluted Matte Medium drop by drop in the flat areas between the multiple tracks.



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# Ballasting Track

Lastly apply the diluted Matte Medium over the ties in between the rails.



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# Ballasting Track

If at any time the ballast appears to be getting too dry while applying the Matte Medium with the bellows type applicator, mist the ballast again with the splatter spray applicators to rewet the ballast.



# Ballasting Track

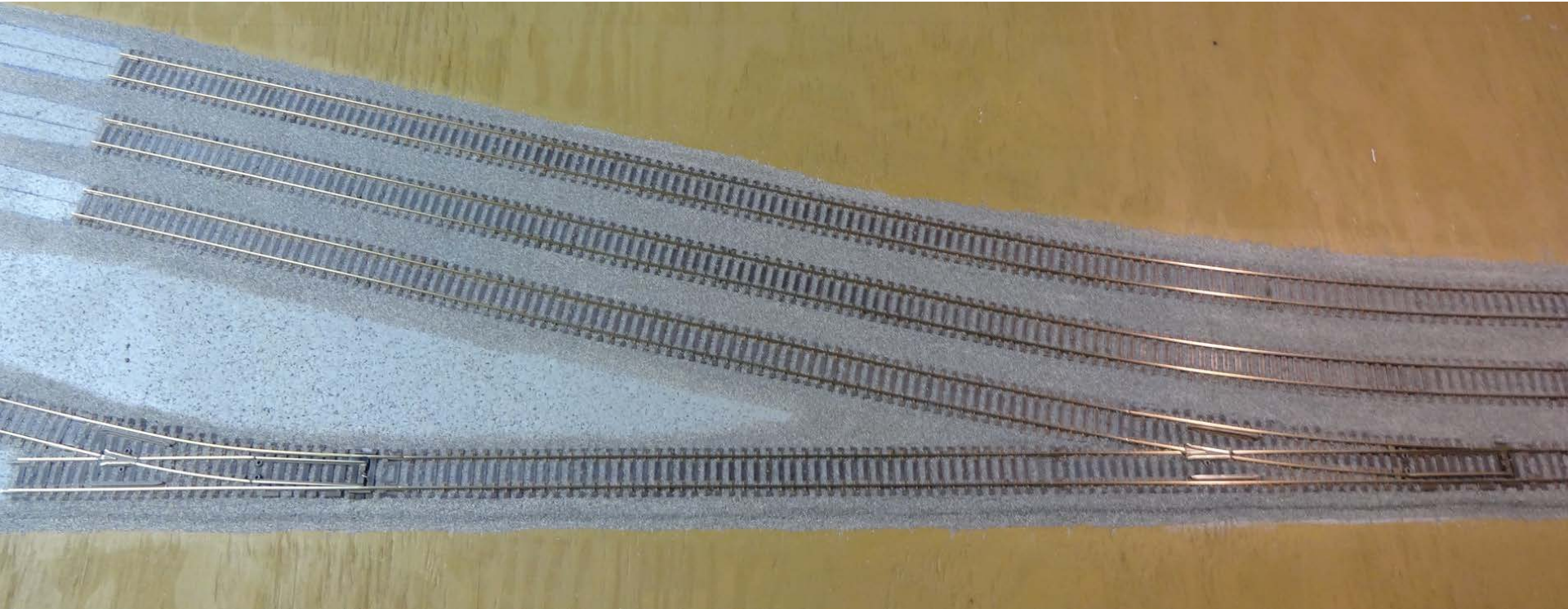
The ballast should look completely soaked with Matte Medium when you are done.





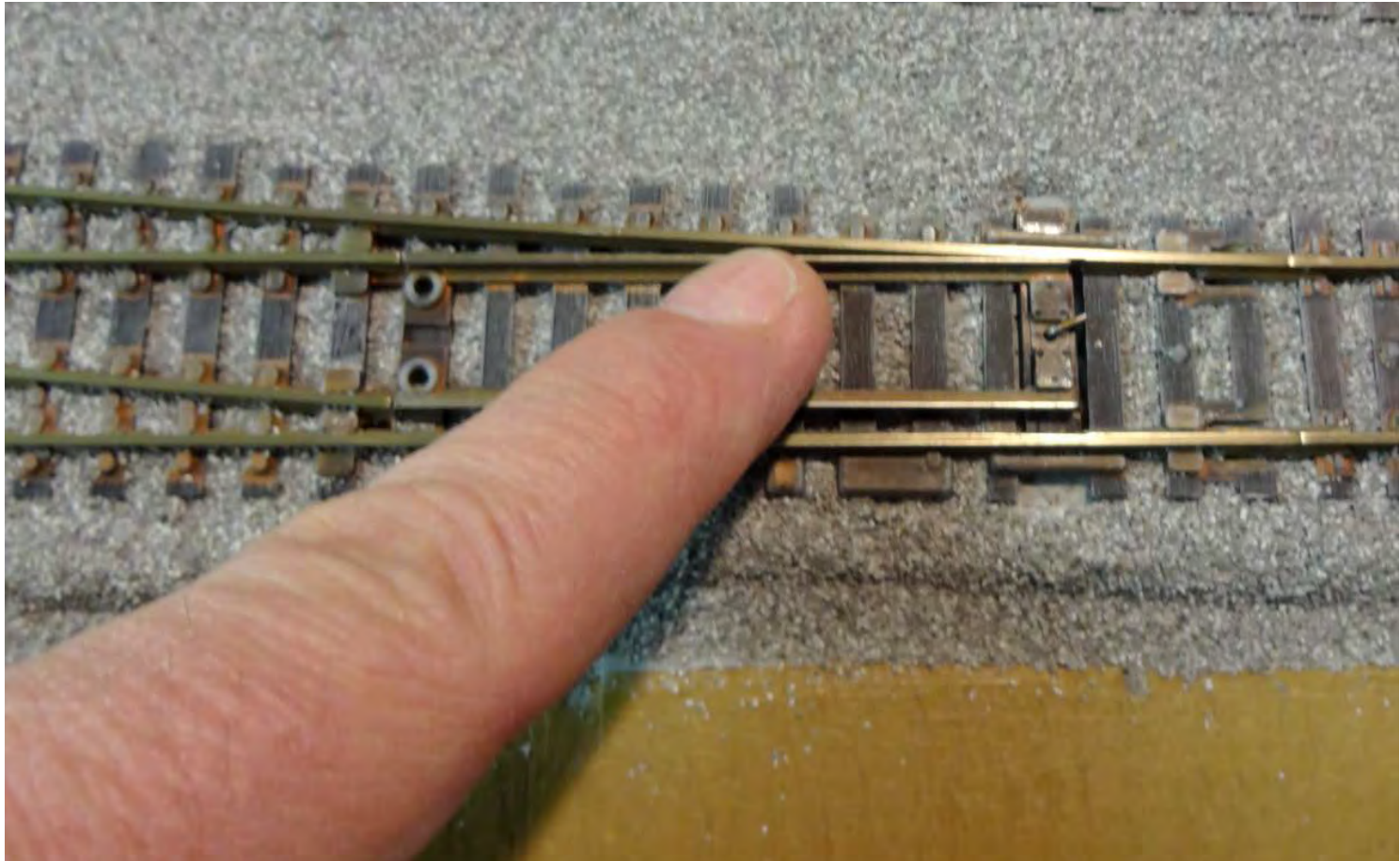
# Ballasting Track

Allow the Matte Medium to dry at least 24 hours.



# Ballasting Track

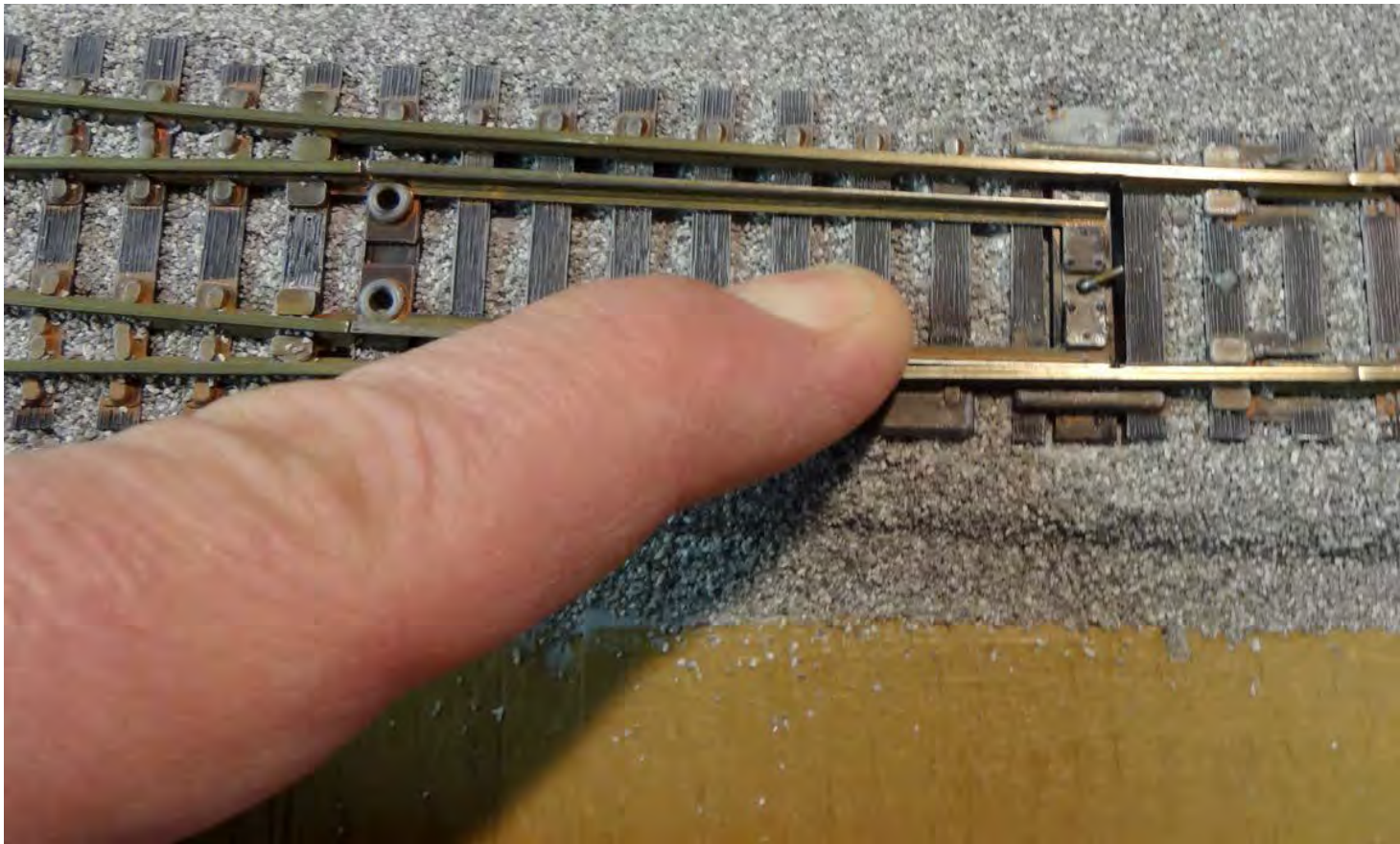
After the Matte Medium has completely dried, use your finger to bust the turnout points loose.





# Ballasting Track

Ensure the turnout moves freely in both directions. Use a pick or knife if necessary to remove any ballast that may be obstructing the points.



# Cleaning the Rail Head

## Tools & Materials:

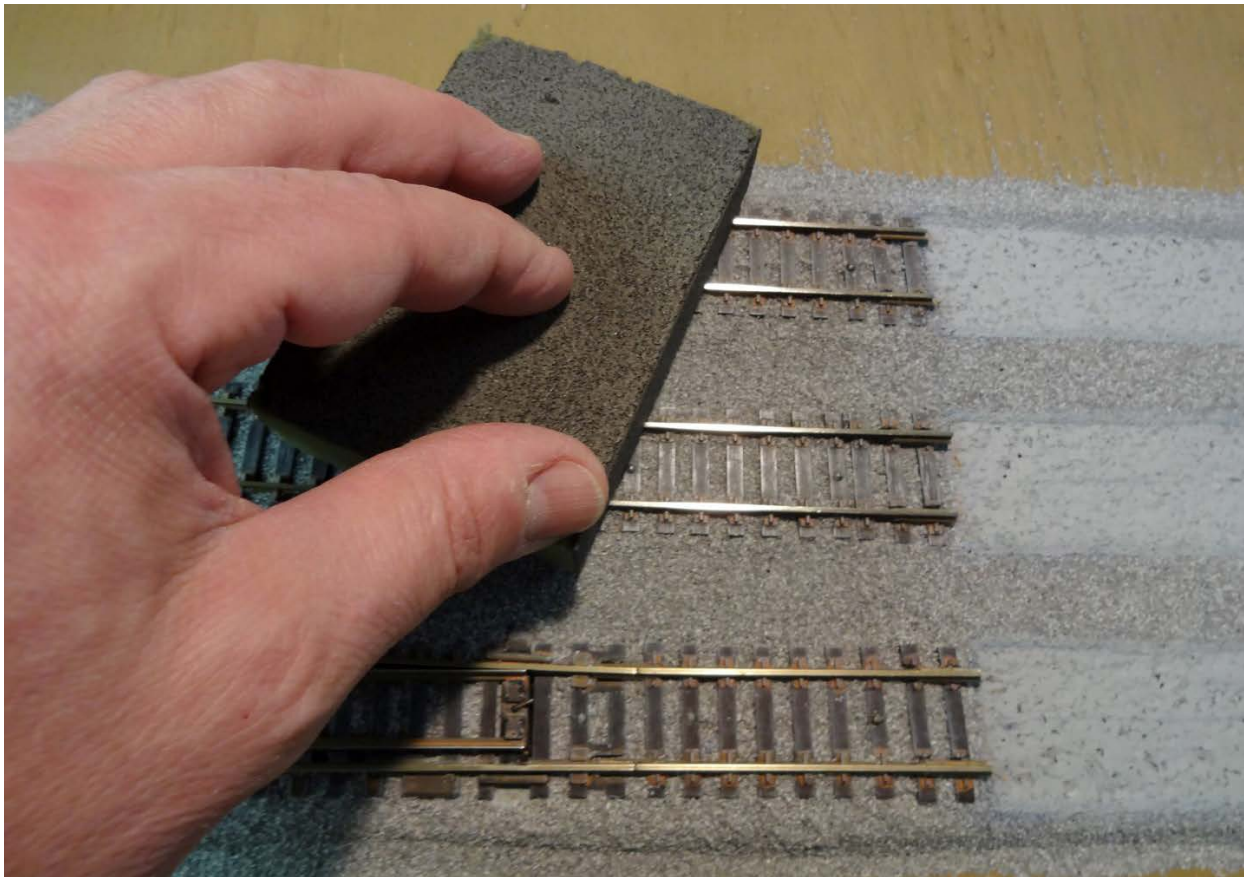
- 3M All Purpose Sanding Sponge





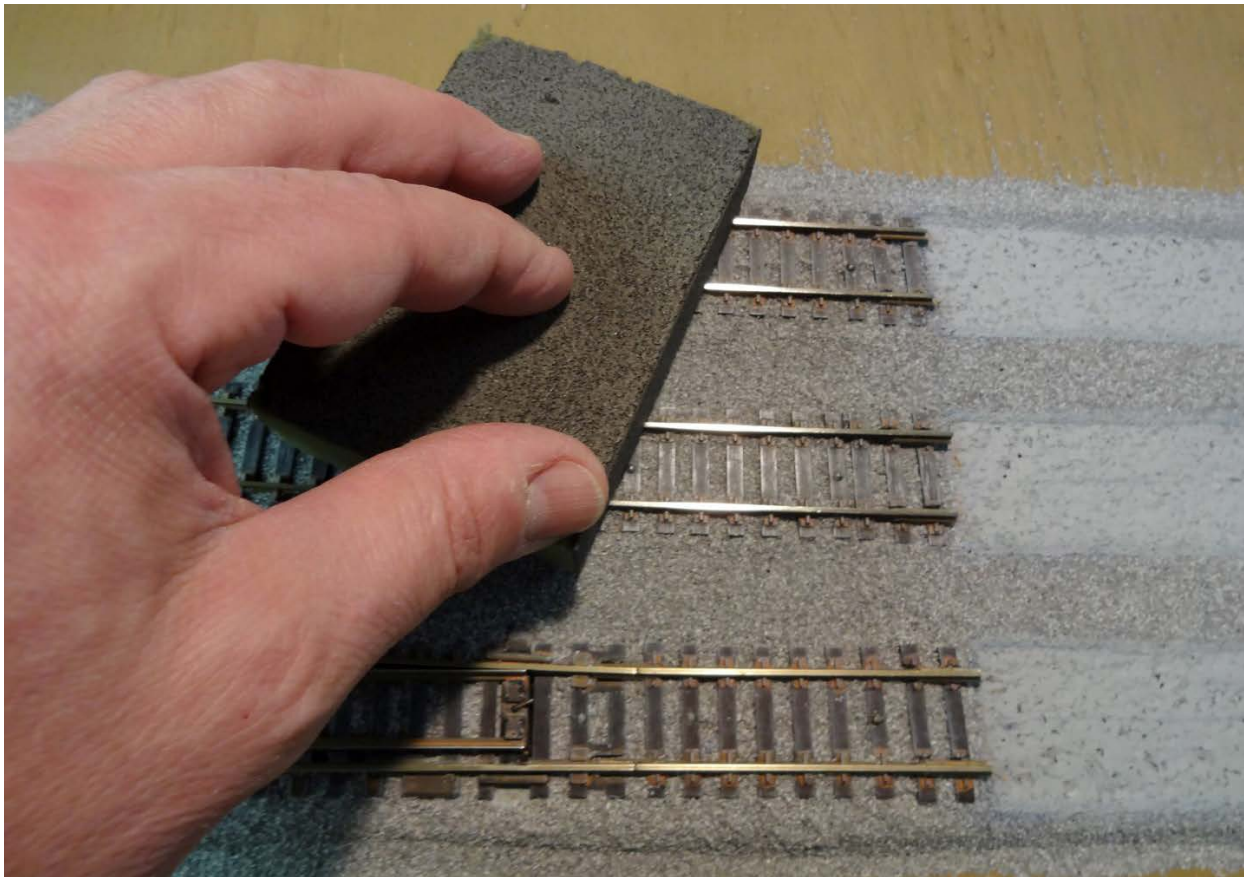
# Cleaning the Rail Head

You will notice that the rail head has a yellow tint to it from the dry Matte Medium.



# Cleaning the Rail Head

The last thing you need to do is remove the Matte Medium from the top of the rail head using a fine grit sanding sponge.





# Finished results

The finished result is nicely weathered and ballasted track that will blend into your surrounding scenery in a very believable appearance.



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# Finished results

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