

# Northern Virginia NTRAK "How-To" Article

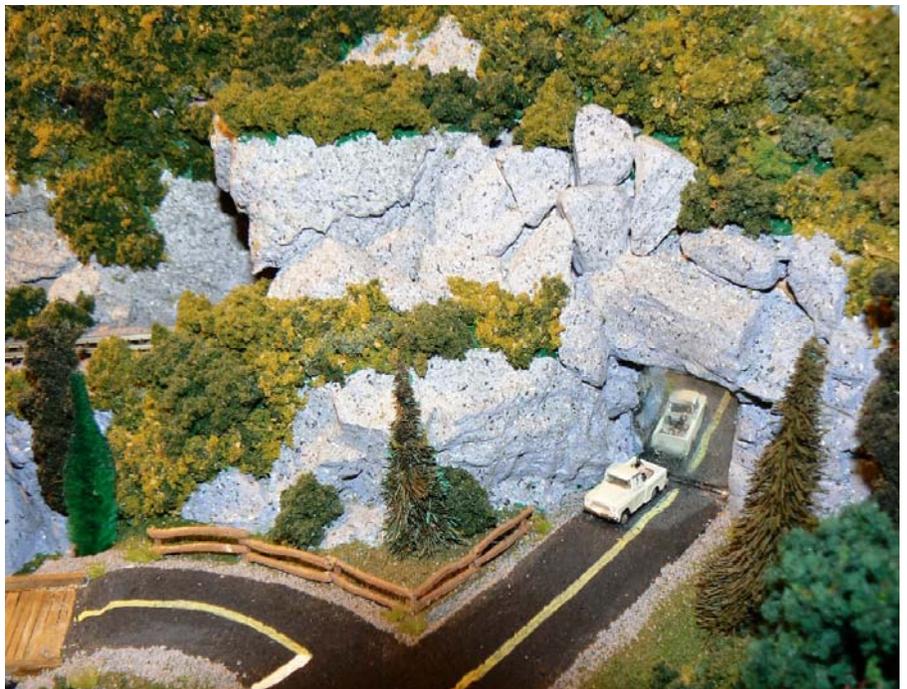
ROCKS AND OUTCROPS  
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Unless you are modeling an area along the East or Gulf coast or the Midwest plains, you are going to need to plan for some rocks or outcroppings on your module. Here are some things to think about.

What is the basic geography or topography of the area that you are modeling? Obviously, there is a big difference between the steep valleys of the Rockies, the rolling valleys of West Virginia or Upper New York State, the piedmont of Virginia or Maryland, and the flat coastal areas of New Jersey, Virginia, or the Carolinas.

- Sedimentary areas tend to have a greater variety of rock colors than other regions. Exposed rock faces may show distinct layering and rarely are these layers perfectly horizontal (think about folds exposed by road cuts). Individual rocks located in streams, at the base of cliffs, or in fields may tend to be more rounded due to weathering.
- Igneous or volcanic areas may tend to have darker colors (mainly greys and greens) with a more uniform appearance than sedimentary areas. Formations tend to be more linear as lava tends to flow or pool.
- Metamorphic regions will also have a more uniform color appearance and little evidence of the layering associated with sedimentary rocks. Colors may be more in the range of medium to dark greys but occasionally you may see veins of strikingly bright whites (quartzite usually). Exposed rock may tend to have sharper edges than sedimentary regions.
- Rock layers typically fracture as a result of pressure during mountain building. Sedimentary areas typically have fewer noticeable fractures than igneous or metamorphic. Igneous regions may have fractures somewhat in line with the flow lines of the lava. Metamorphic regions may have noticeable horizontal and vertical fractures.
- Exposure: Keep in mind that most cliff faces have large boulders and talus at the bottom. There are also slopes at the bottom of these cliffs and occasionally the larger boulders may "roll" some distance away from the cliff face. Many regions have outcroppings more than actual cliffs. Outcroppings are usually surrounded by large areas of ground cover and occupy significantly smaller areas than cliffs.

If you are modeling a prototypical location, you might want to go there and look at the geography and topography. Are there natural outcroppings or are they limited to road cuts? What is the slope at the base of any cliffs? What color are the rock faces? Also keep in mind that most ballast is often quarried close to the area in which it will be used. This means that your ballast and most of your rock should be similar colors.



## How to get rocks on your modules

You will quickly discover that different materials will give you different effects which can allow you to achieve a good amount of variety in a small space.

You can't beat real rock for a realistic look. I have built home layouts that incorporated reasonably large rocks (6-8") as cliff faces and outcroppings. Obviously these weigh a lot and I wouldn't necessarily want to have to lug those around to train shows. Picking up some of these from actual locations that you are modeling certainly will make things look more accurate. I tend to use smaller aggregates (1-2 inch rocks from edges along roads) or small gravel (less than a ½ inch rocks from pothole patching) for a variety of purposes on my layouts. They usually don't add much weight and certainly give more realistic touches. I have found that if you glue these together on a rock face and then cover the gaps with clump foliage you can get a pretty good looking outcropping or cliff.

There are a variety of rock-molding kits available. Usually these involve some type of rubber mold that you fill with a plaster-type material. I would recommend that you ask around to see if anyone has any of these that they would lend you before going out and buying any (after all, once you make the rocks, what are you going to use the molds for?). You can also make your own molds using several layers of thick aluminum foil. There are essentially two types of "plaster" available: *Plaster of Paris* (Home Depot, Michael's, etc) or *Hydrocal* (Woodland Scenics). Each is a little different in terms of mixing and use, but you end up with about the same thing: rocks that tend to have sharp looking features but that are a little brittle and prone to chipping. You can also use something like *Cellu-Clay* (a paper mache-type material). This will give you rocks that may not have as sharp an appearance but that also aren't prone to chipping. There are two methods for applying molded rock. The soft application method involves applying the molded rock (before it hardens completely) to an area with plaster that hasn't hardened either. This method allows for a little "bending" of the molded rock to better fit the area and eliminates the need for additional adhesives. The hard application method involves allowing the rock or rock face to harden completely and then gluing it into place.

A B&O freight train passes in front of a rock face made from a rubber mold with plaster and behind a lower face involving carved foam. In both cases the faces were painted grey and then sprayed with rock texture paint.

Ready-made or store bought rock faces are usually available through mail order catalogs and occasionally hobby shops. They are usually more expensive than any of the other types of materials. Some already come painted the color of rock in particular area. These are usually made out of plastic or resin and are pretty resistance to chipping. They are also quite lightweight.

You can also carve rock faces directly into the foam that you are using for your layout or plaster coverings. Make sure that your knife is sharp so that you can get smooth cuts.



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This rock face was made by carving the foam used to build up the module. Notice that clump foliage was glued into some of the cracks.

Attaching rock to your module is not much different than attaching any other objects. For larger rocks you may want to hollow out the foam under the rock so that it will appear more natural. Keep in mind that most rocks have been out there for a while so the ground and vegetation covers most of the base of the rock. You will also notice that most rocks in nature have taller grasses around the base.



Depending on the material that your rocks are made of you can use a variety of paints. I tend to use thick latex, water-based paints (Home Depot), but I spoken with people who have used craft paints, oil paints, thinned air-brush paints. The only real concern is if you carved your rock faces in the foam. Keep in mind that some paints (most spray paints, oil paints, etc) may dissolve the foam. After painting the base coats, you can add details by dry-brushing, over-spraying, or using rock texture spray paint. I usually sprayed all rock areas with the rock texture paint (available from Home Depot or Michael's) to give them a rock look. I've gotten numerous positive comments from visitors at train shows when they see the result. The two layers seem sufficient to prevent the spray from dissolving the foam.

On one of my modules I used five different types of rock: carved foam, real rock, plaster molded, cellu-clay molded, and plastic store bought rock. To blend them together, I painted all exposed rock with two thick layers of grey "oops" latex paint that I got at Home Depot and then used the rock texture paint to give all the faces a rock look.

I also tend to carry a small container of aggregate rock with me to train shows to use to fill gaps between modules or in case I need a quick repair.