



>> Voodoo and palmettos

A modern industrial switching layout on a shelf

By Lance Mindheim • Photos by the author



1 CSX GP38-2 no. 2764 brings a cut of cars past the Seaboard Warehouse on Lance Mindheim's HO scale East Rail switching layout.

Even by the lofty standards of railroad lore, the stories don't get much better than what was being laid out for me by a retired railroader at a recent prototype modelers' meet. Having learned that I was in the process of planning a switching layout based on an industrial park in Miami, the gentleman was explaining how Voodoo traditions



intersected with modern day railroading in South Florida. According to the explanation, it's a belief within the Voodoo culture that evil could be warded off through the sacrifice of a chicken. For the spell to work, the sacrifice had to be particularly violent in nature and carried out in accordance with very specific procedures. A live chicken is placed in a pillowcase with a paper bag of money. The package is knotted off at the top and draped across the rails moments ahead of an approaching train. A few seconds later, the deed is done.

He had my full attention.

But more to the point, he went on to describe the Miami rail scene in such vivid detail that a project that had been on life support and unable to get out of the planning stages for some time was immediately injected with a new vitality and momentum that saw it through to completion less than eight months later. Such was the genesis of my CSX East Rail layout.

Florida's charm

Why model South Florida? A post on the Web site www.trainorders.com said it best. "Miami is a strange place. . . . It's a bit of a tropical paradise, a third-world country, an amazing mix of cultures and history. It isn't for everybody. It's also unlike pretty much any other place in the country."

Modern Miami is paradise for those who love industrial railroading. Industrial parks with faded pastel warehouses

2 Lance used a handful of intermodal containers to suggest the Antillean Marine storage yard. Low-relief structures and partial industries work well on shelf layouts.

abound. In many ways, one has the feeling of stepping back in time to the 1950s, when spotting a single car at a small industry was the norm. It's an area that cries out to be modeled.

The lure of the modern era

For many years I was in the majority of modelers whose primary interest was the steam-to-diesel transition period. I had no interest in modeling the modern era. In fact, I'd completely discounted it.

At some point, and I don't know why, I did a 180 on modern-day modeling. As I looked around, I discovered that today's railroads operate freight cars that are as varied and interesting as those of previous eras. I also discovered that smaller rail-served industries, while on the decline, do still exist. If they aren't being served by Class 1 carriers (BNSF Ry., Canadian Pacific, and CSX, among others), short lines are doing the switching at these industries.

However, the biggest advantage of modeling the modern era is the availability of research material. No longer do I have to look for a critical (and often elusive) photo. If I need prototype information, all I do is visit the prototype and take pictures.



Switching on a shelf

At slightly more than 9 feet long by 9 feet wide (see the track plan at right), the East Rail layout is small. Though I had space for a larger model railroad in the loft above my workshop, I kept the layout a more manageable size. The advantages of building a larger layout are readily apparent, but building a small model railroad has advantages of its own.

Among them are the opportunity to complete the layout in a reasonable amount of time, to model highly detailed scenes, and to arrange impromptu operating sessions with ease. Of course, maintenance is less time-consuming, too.

3 Palm trees and signs are just two ways Lance conveys to visitors that this layout is set in Miami, Fla. The buildings are based on prototypes in the East Rail industrial park.

4 After modeling the steam-to-diesel transition, Lance gave the modern era a try. Four-axle road locomotives and patched-out boxcars are typical of today's railroads.



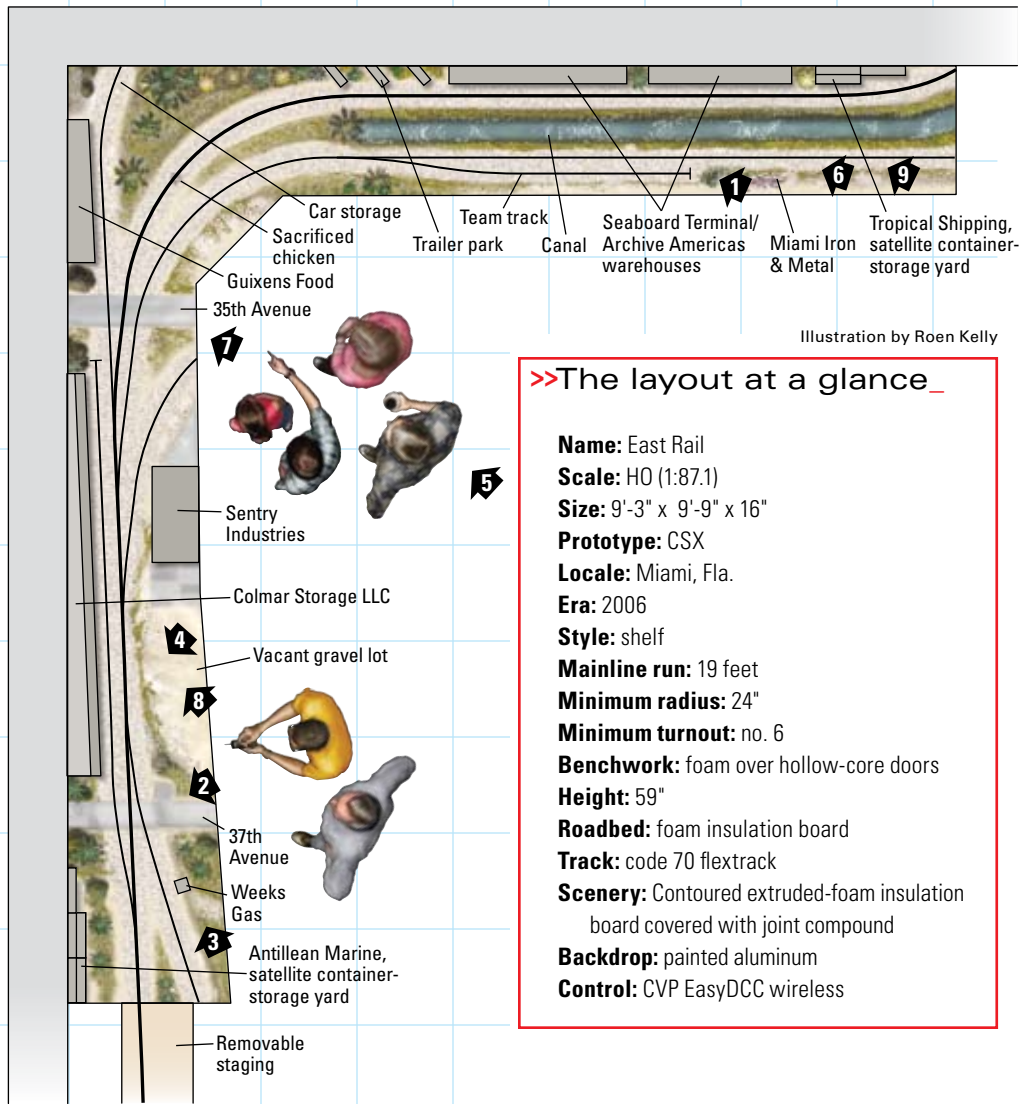


Illustration by Roen Kelly

>>The layout at a glance_

- Name:** East Rail
- Scale:** HO (1:87.1)
- Size:** 9'-3" x 9'-9" x 16"
- Prototype:** CSX
- Locale:** Miami, Fla.
- Era:** 2006
- Style:** shelf
- Mainline run:** 19 feet
- Minimum radius:** 24"
- Minimum turnout:** no. 6
- Benchwork:** foam over hollow-core doors
- Height:** 59"
- Roadbed:** foam insulation board
- Track:** code 70 flextrack
- Scenery:** Contoured extruded-foam insulation board covered with joint compound
- Backdrop:** painted aluminum
- Control:** CVP EasyDCC wireless

CSX East Rail layout

HO (1:87.1)
 Layout size: 9'-3" x 9'-9"
 Scale: 1/2" = 1'-0", 24" grid
 Numbered arrows indicate photo locations

5 This overall view shows how the layout fits in the corner of the room. That's Lance's 12-year-old son, Zachary, standing on the step stool switching cars at the Seaboard Terminal warehouse.





In the end, the East Rail project was driven by three of my interests: South Florida geography, the modern era of railroading, and a favorite layout (John Wright's Federal Street shelf layout, *Model Railroader*, May 2003).

Friendly advice

I initially had some difficulty combining these three interests in a workable model railroad. Fortunately, the input of the retired railroaders at the prototype modelers' meet broke my designer's block.

The railroaders were kind enough to sketch out the general track arrangements of the Class 1 railroads in Miami

and the locations of various industrial parks. They also suggested a few that would be especially good to model.

When I returned home from the meet, I did a virtual aerial survey of Miami's industrial parks using Google Earth. It occurred to me that flying to the area for a one-day trip wouldn't cost much more than a decent Digital Command Control and sound-equipped locomotive.

I selected four or five industrial parks that held the most promise from a modeling standpoint. Then I took a 6 a.m. flight to Miami, rented a car, and spent the day shooting almost 300 digital photos of the various industrial parks.

6 While two empty gondolas await loading at Miami Iron & Metal, CSX GP38-2 no. 2764 spots boxcars at the Seaboard Terminal and Archive Americas warehouses.

Fortunately, I was able to photograph the parks safely and unobtrusively from public sidewalks. I was home in time to watch the 11 p.m. news!

After reviewing the photos, East Rail industrial park seemed to have the most modeling potential. Geographically, the East Rail spur is just south of Hialeah Yard and approximately a half mile east of the airport. While on my trip I was able



>> Timesaving steps to a detailed layout

There are ways to leverage your time in such a way as to have both a fairly detailed model as well as one that goes together relatively quickly. One way is to develop an eye for which details make a visual impact and which don't. This keeps you from spending hours building things that aren't noticeable.

Another is to use higher-quality products. For example, both the Atlas MP15DC and Proto 2000 GP38-2 are of such high quality that very few additional details were needed. A little weathering, an extra part here and there, and they were ready to take their place on the layout.

Finally, there must be an understanding of why what you're looking at appears to be realistic – or not. In the hierarchy of elements that enhance realism, color, texture, and scene composition play a much more important role than detail. If the color of a layout element is off or the scene composition is too cramped, we have a sense that something isn't quite right, even if we aren't exactly sure what it is. On the other hand, if a detail is omitted, a streetlamp for example, the eye doesn't pick up on that as quickly. – *L.M.*



to sketch out the park's track arrangement on a notepad, copy it for my layout's track plan, and select industries that already existed.

I'd previously attempted a freelance version of this design and found the approach to be extremely difficult. But now there was no guesswork and no concerns as to whether the layout theme would be believable.

While the layout is close to prototypical, I did take some liberties. The spur I selected to model is named the Big Hole Lead. In real life, this spur serves the Seaboard Warehouse/Archive Americas, Colmar Storage, and Guixens Food Group.

I selected several other interesting industries from adjacent spurs to include on the layout. Specifically, I added Weeks Gas, Sentry Industries, Gator Industries, and Miami Iron & Metal.

In all respects, the layout is very simple. Benchwork consists of 1" foam attached to hollow-core doors with Liquid Nails. The doors are supported on heavy-duty shelf brackets. In keeping with the worn-down appearance of industrial parks, I didn't lay the track on roadbed. Instead, I placed it directly on the foam. In the one section where I wanted the track to appear a little higher, I placed it on a strip of .060" styrene. I

7 Lance found that today's freight cars are as varied as those of previous eras. Boxcars, such as this Penn Eastern Rail Lines 50-footer, are common on modern railroads.

used Micro Engineering turnouts, and they are manually lined by simply moving the points with a fingertip. I used an EasyDCC wireless system, keeping wiring to a minimum.

Measure once, build twice

To rewrite a phrase from carpentry, once I had the layout base in place, I "built" the layout twice. The first go-around



>>Featured industries

The industries featured on my layout (and listed below) are based on actual businesses in the East Rail industrial park. Here's what each industry moves by rail.

Colmar Storage: warehouse specializing primarily in bags of green coffee beans

Gator Industries: injection-molded footwear

Guixens Food Group: food distributor

Miami Iron & Metal: scrap metal

Seaboard Warehouse/Archive Americas: records warehouse

Sentry Industries: pool chemicals (primarily chlorine)

Weeks Gas: liquefied-petroleum gas for forklifts

involved assembling photo mockups to test the plan. I began by laying down the foam scenery base and shaping the contours. Modeling flat Florida terrain goes quickly. Then, in one afternoon, I laid all of the temporary track using Atlas code 83 products, connected an old Model Rectifier Corp. power pack, and began running trains.

Over the next several weeks I made scale-size structure mockups. I started by assembling pieces of foam core into boxes that matched the structures. Then I used a photo-editing program to clean up my digital photographs of the prototype structures. Finally, I used 3M's Super77 cement to attach the photos to the foam core.

At this point I had an operating layout with all of my industries represented in

3D. This approach gave me a good idea of what I had before I invested a lot of time, money, and material in scratchbuilt structures and detailed track. This first pass at the layout was worth the effort, resulting in the relocation of a spur.

Satisfied that I was headed in the right direction, I moved on to the layout's second phase, starting with re-laying the track. Working from right to left, I gradually replaced the Atlas rail with more-detailed Micro Engineering code 70 flextrack. Had I been faced with this trackwork decision several years ago, I probably would have opted for handlaid track. I'm now of the opinion that high-quality flextrack is the better option. Micro Engineering flextrack comes with cast-on tie plates and spikes that you simply don't get with handlaid track. In

8 Colmar Storage LLC is a sprawling low-relief structure between 35th and 37th Avenues. The industry primarily stores bags of green coffee beans.

that sense flextrack is more realistic than handlaid. And laying flextrack is, of course, much faster.

When I had completed a structure model, I replaced the mockup with the real structure. Since all of the buildings had to be built from scratch, this was the most time-consuming part of building the layout.

Gradually, over an eight-month period, the layout morphed from operational mockup to a completed model railroad.

Operation

For many, operating a model railroad prototypically has become a hobby within a hobby. Among those who

Lance uses modified CSX work order forms, like the one shown at right, when he switches cars.

INDUSTRY WORK AT: COLMAR, LLC						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	
1						
2						
3						
4						
5						
6						

INDUSTRY WORK AT: GUIXENS FOOD GROUP						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

INDUSTRY WORK AT: SEABOARD TERMINALS/ARCHIVE AMERICAS						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

INDUSTRY WORK AT: TEAM TR						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

INDUSTRY WORK AT: MIAMI IRON AND METAL						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

INDUSTRY WORK AT: SENTRY INDUSTRIES						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

INDUSTRY WORK AT: WEEKS GAS						
Seq	CAR					
Num	INIT	NUMBER	WI	Spot	Remarks	

Key:
 WI Work Instruction
 PU Pull From Industry
 PL Place for loading

enjoy operating, there's a wide spectrum of interests. My preference is for shorter, more-relaxed sessions that focus on industrial switching. I love the rhythmic cadence of a switcher methodically going about its task of spotting cars, free from the pressures of the clock and clearing opposing trains. Modeling a specific spur as it actually exists in the real world and doing so in the current era puts you in the nice position of just copying what the big boys do.

On my trip to the Miami industrial park, the switcher had just shown up while I was there, and I was able to watch its entire operation. CSX operates off of what is called a work order. Essentially, this is a glorified switch list on a computer tablet the engineer keeps with him.

The actual form, which I found online, is easy for the layman to follow, so I simplified it a little bit and used it to run the model railroad. (This is another advantage of modeling the modern era. Both CSX and the manufacturer of their computer work order system make many switching related operational details available to the public on their Web sites).

On my East Rail layout, a typical session takes between 45 minutes to an hour to complete, depending on how much car-spotting there is at the warehouses. I'll often run a shorter 15- or 20-minute impromptu session in the evening.

A session starts with the train spotted on the staging spur. The operator receives his work order printed, out on an *Excel* spread sheet, and simply goes about the tasks laid out for him. There are no switching puzzles *per se*.

You will notice, however, that the layout has no passing siding. As with the prototype, all of the turnouts are oriented in the same direction. This negates the need to run around a car to shove it into the siding. The one spur oriented in the opposite direction is handled by staging that industry's cars behind the locomotive at the start of the session.

Lessons learned

The completion of every model railroad leaves one with lessons learned and things that could have (or should have) been done differently. It also validates some of the core concepts you had going in.

If I were to start over, the one element I would handle differently would be the backdrop. While it looks fine when



9 The backdrop on the layout is painted aluminum, so Lance used Adobe *Photoshop* to add real sky backdrops to the images shown in this article.

viewed in person, the backdrop has characteristics that make photographing the layout difficult. First, it's not tall enough. When I take photographs down the length of the layout, I find that the overhead layout lights constantly encroach on the shot. I wish I had made the backdrop at least a foot taller.

Second, the shade of blue I used is much too light. My digital camera consistently registers its displeasure as it tries to separate the pale blue sky from the light-color tones on the surrounding warehouses. I should have selected a darker shade of blue.

On the positive side, I've learned the advantages of bringing other people into the process as teachers. Without the input of two retired railroaders (who prefer to remain anonymous) and the coaching by skilled digital photographers and skilled rolling stock modelers, I never would have gotten the results I did. I've gained as much or more satisfaction from the new friendships developed while building the project as I did from actually constructing it.

Finally, I did take some risks with this layout. I'd never modeled south Florida,

>>Meet Lance Mindheim

Lance, a frequent contributor, is owner of the Shelf Layouts Co., a custom layout construction and design firm. He got his start in model railroading when, at age 8, his parents built him a 4 x 8-foot HO layout. Lance is married to wife Cathy and they have a 12-year-old son Zachary. When he's not building model railroads Lance enjoys fishing, following the Washington Redskins, and feeding his addiction to TV crime dramas.

and there were few people I could consult with who had. I'd never modeled the modern era, and it had been some time since I'd modeled in HO.

I also acknowledge that my modeling interests going into this layout are of lesser interest to the modeling population as a whole. Would anybody even care to look at the finished layout? How would I feel if they didn't?

In the end it all worked out. The biggest lesson I learned is that you can get satisfaction from venturing into modeling areas that are outside your comfort zone. You may also find satisfaction in ending up with a model railroad that's a true joy to own, operate, and experience on a daily basis. GMR

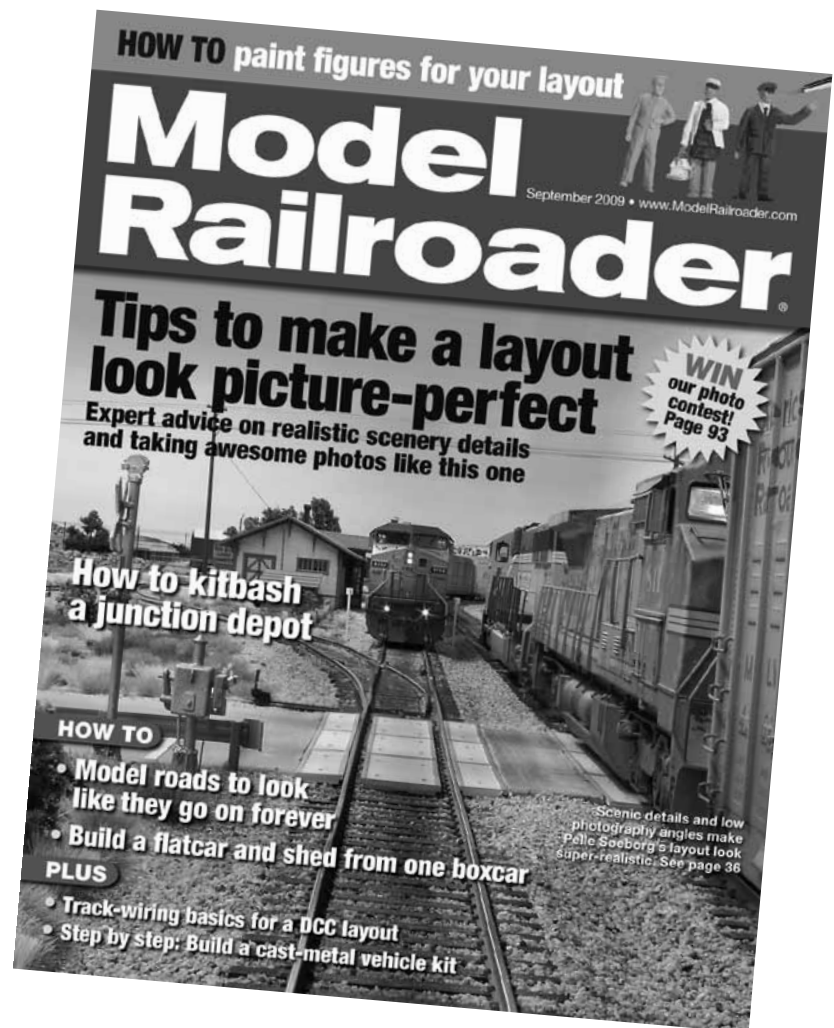
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