

# Bob Fink's Dayton Union Railway

## The Modeler, his Layout and the Tribute Article

By John Burchnall and Rick Lach

### Bob Fink, MMR®

Born 1935 in Dayton, Ohio, OSU grad, married Marcie, US Army, Professional Engineer, taught engineering in college

Daughter Cindy learned to tolerate, then appreciate, her Dad's hobby

NMRA Life member, charter member and longtime leader of Dayton's Division 3, Mid-Central Region

Expertise in design, modeling, electrical, scenery, computers, operations, administration

Author, speaker, mentor – Master Model Railroader® #161, earning every NMRA Achievement Award

Passed away on May 28, 2021 at the age of 86



### Bob's Achievement Awards



### Bob's Publications

From 1960 to 2009, Bob wrote dozens of articles in NMRA, MR and RMC magazines

Mar 1988 to Sep 1996 – ran quarterly column in MR entitled “Computers in Model Railroading”

#### Sampling of Bob's articles

Aug 1967 NMRA  
New Author  
Contest

Jan 1971 RMC  
Concrete  
Coal Dock

Dec 1975 MR  
100 Ton Steel  
Coaling Station

Nov 1977 MR  
Daughter Cindy  
as operator



# Scratch-Built Coaling Stations



# Bob's Layouts

Bob was a trail blazer with purist, creative and frugal approaches to the hobby – preferring scratch building, kit-bashing or kit building vs. buying ready-to-run equipment

He also preferred operating his railroad realistically

Built several apartment layouts, then 3 large ones in the basements of his last 3 homes, including the previously published Dayton, Duluth & Western

His final layout shared here, the Dayton Union Ry, reflected his cumulative modeling and design skills – also featured at the 2005 NMRA Natl Conv. in Cinti



# The Tribute Article Story

After Bob passed, Rick asked John to photograph the layout for family and Div. 3

We also decided to develop a feature layout article for the hobby press

Rick and John collaborated on the article, with Cindy writing a companion article

Big issue was lack of a track plan, so we had to create one using only our photos

Insights gleaned from Bob's brochure, his control panels, his operators, the track plan and the photos

NMRA editor Cinthia Priest was very receptive

The twin articles are a tribute to Bob, plus an historical record for the whole hobby to enjoy



# The Tribute Article

## The Dayton Union Railway A Tribute to Bob Fink, MMR®

work by Rick Lach and John Bushnell; Photos by John Bushnell

**I**n 1984, when MMR's first issue was published, Bob Fink was the only person in the hobby who had a full-scale model railroad. He had built it from scratch, and it was a masterpiece of engineering and design. It was the Dayton Union Railway, a 1:25 scale model of a real railroad. Bob had spent years of his life building it, and it was a labor of love. It was a tribute to his hobby, and it was a tribute to his life.

Bob's railroad was a masterpiece of engineering and design. It was a tribute to his hobby, and it was a tribute to his life. It was a labor of love, and it was a masterpiece of engineering and design. It was a tribute to his hobby, and it was a tribute to his life.

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# The Tribute Article



**Historical Building**  
 The building, which was built in 1890, is a fine example of the architecture of the time. It was built by the railroad and served as a station house for many years. The building is now a museum and is open to the public.



© 2000 Magazine



**Diagram Description**  
 This diagram illustrates a complex track layout with multiple tracks, switches, and signaling systems. It shows how the tracks are interconnected and how the signaling system is designed to manage train movements safely and efficiently.

© 2000 Magazine

# The Tribute Article



**Model Train Set**  
 This model train set is a fine example of the art of model railroading. It features a detailed locomotive and passenger cars, all meticulously crafted to look like real life.



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© 2000 Magazine

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© 2000 Magazine

# Cindy Fink Companion Article

- Her life growing up with her model railroading Dad
- We suggested she write her thoughts for a sidebar or separate article
- She appeared in a photo in Bob's Nov. 1977 MR article

## Model Railroading: A Daughter's Appreciation

By Cindy Fink, with photos from author's collection

I was the kid who begged for a pool table in her basement. I wanted to play when my dad and I were alone. I was the kid who begged for a pool table in her basement. I wanted to play when my dad and I were alone. I was the kid who begged for a pool table in her basement. I wanted to play when my dad and I were alone.

My dad, I've learned of my dad and what he accomplished in his hobby. However, I've only recently come to an understanding of the significance of model railroading. "Dad," I said to my dad, and I wish I had realized that sooner. I would have called him a quiet man, a man who had a passion for his hobby.



Author: Cindy Fink, working on the HO scale Union Pacific, Bob's 1977 MR article in the basement of her father's home.



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# Dayton Union Ry Design Concept

Combined Bob's loves of history and model trains

Bob researched and modeled 4 major RRs (PRR, NYC, B&O, Erie) passing thru Dayton in 1939 – via double track, folded dog-bone

Main feature was the large Dayton Union Station complex, with 8 thru-tracks, 3 passenger platforms, elevated tracks and signature dual-level station



Also features scratch-built “selectively compressed” Dayton landmarks, roundhouses and rail facilities, plus an interurban trolley line running through downtown and countryside, with freight interchange

Started 2003, run for 2005 NMRA Conv. – sections, structures and rolling stock from prior layouts

# The Track Plan

Derived from photos

Double track folded dogbone

Multiple yards and staging

Signature Dayton Union Station complex

Dayton Union Railway Co.  
Dayton & Western  
Dayton & Troy



# Frugal Creatively Classic Methods

- wide central aisle, no duck-unders or gates, open staging, minimal hidden track
- hand-laid track with homemade turnouts
- plaster over screen wire scenery
- inexpensive rigid polystyrene backdrops
- customized DC block control system with push-button cab selectors, wireless infrared throttles, local control panels
- surplus or recycled electrical components
- automatic crossing flashers via optical sensors
- dispatcher-controlled signals & mainline turnouts
- customized or scratch-built cars and structures
- rebuilt vintage locomotives



# View from Dispatcher Room





## Main Entrance View



## Dayton Union Station Complex



## DUS Complex Elevated Tracks



## Dayton Union Station Terminal Building





**Aerial View  
of Dayton  
Union Station  
Complex**



**DUS Throat at Terminal End**



**Dayton & Troy Traction Loop**



**PRR Tracks in Xenia**





## PRR Tracks in Xenia



## Downtown Dayton Trolley Loop



## Heavy Steel Truss Bridge



## Rural Trolley Loop





## Interurban Trolley Car Barn



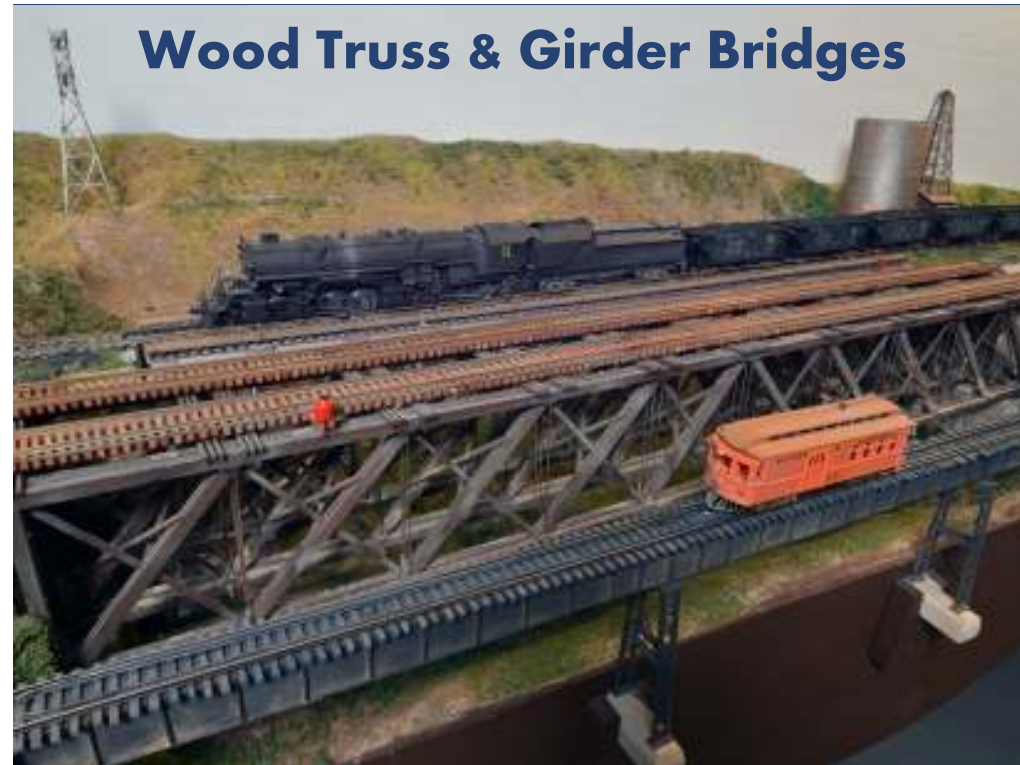
## Dayton & Western Freight Station



## Trolley End Loop



## Wood Truss & Girder Bridges





## Sucher Meat Packing



## Station + Dayton Tire & Rubber



## NYC Freight House



## NYC Roundhouse





## B&O Needmore Yard



## Shops Spur



## Shops Spur



## 1st Tall Wood Trestle





## 2<sup>nd</sup> Tall Wood Trestle



## Miamisburg



## Miamisburg



## Miamisburg Station





**Southern Hills Quarry**



**Bürger Brewery**



**Dayton Fabricated Steel Co.**



**Troy Sand & Gravel Co.**





# Quik-Grow Fertilizer Co.



# Cement Dealer



# Primary Staging Room



# Staging Loco & Car Servicing Area







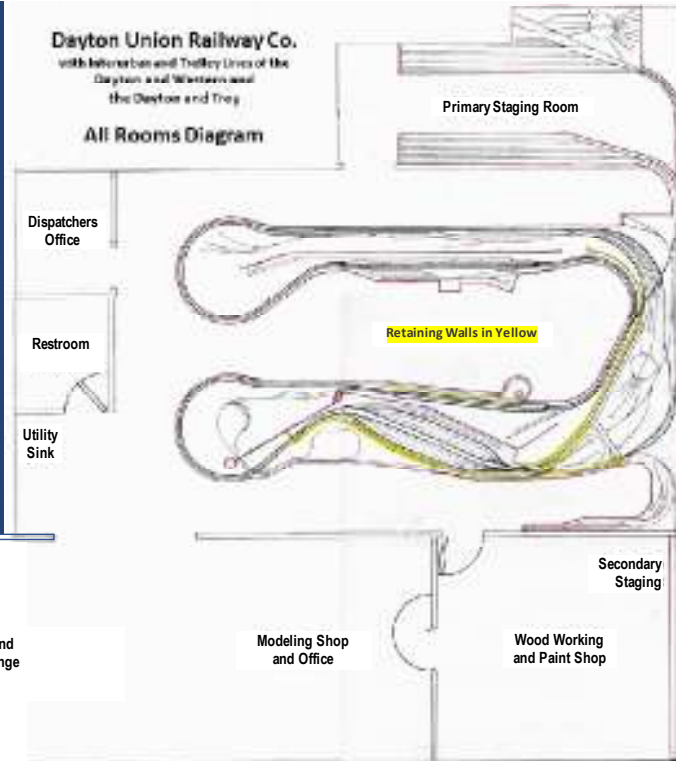






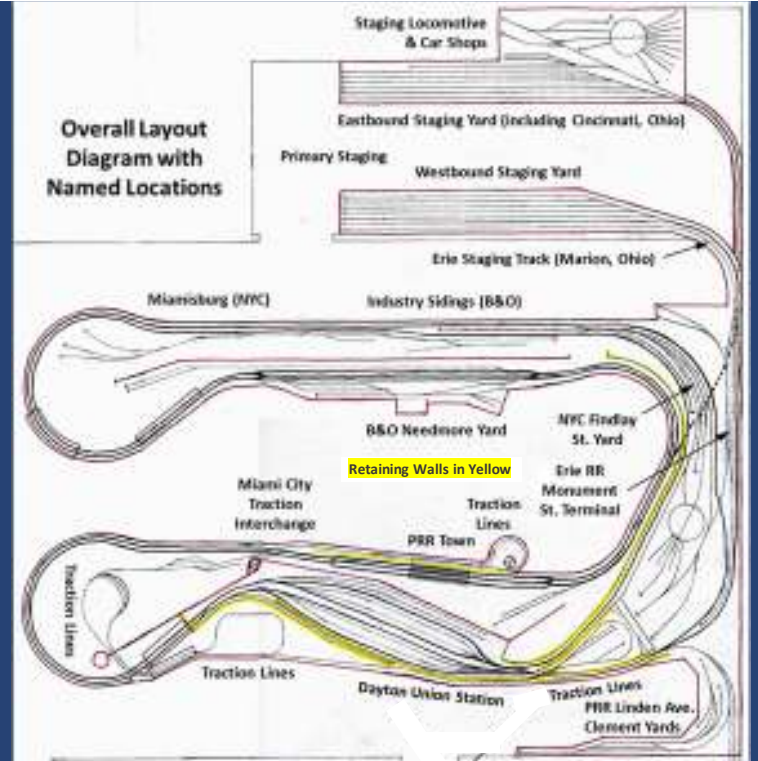
# Scale Floor Plan

100% derived from photos



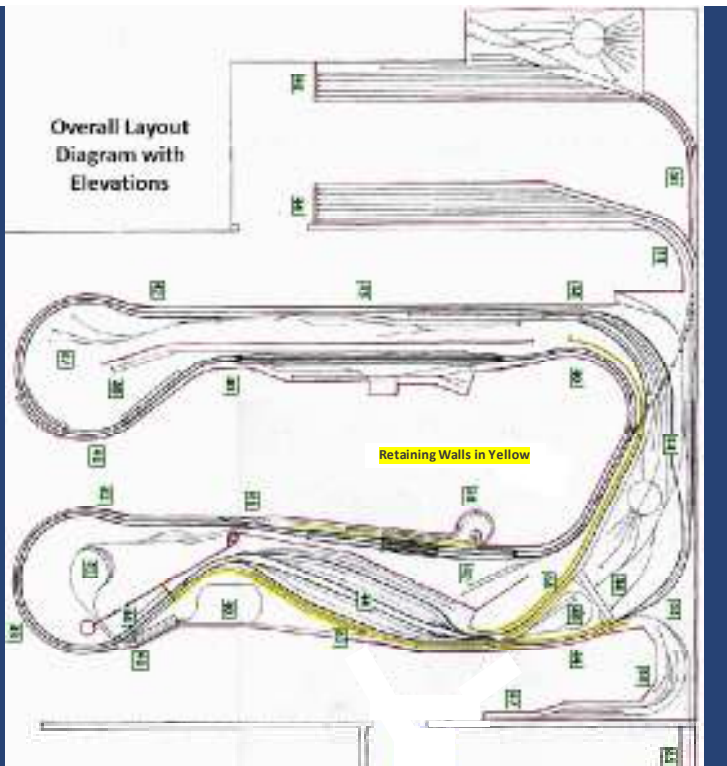
# Full Track Plan

100% derived from photos

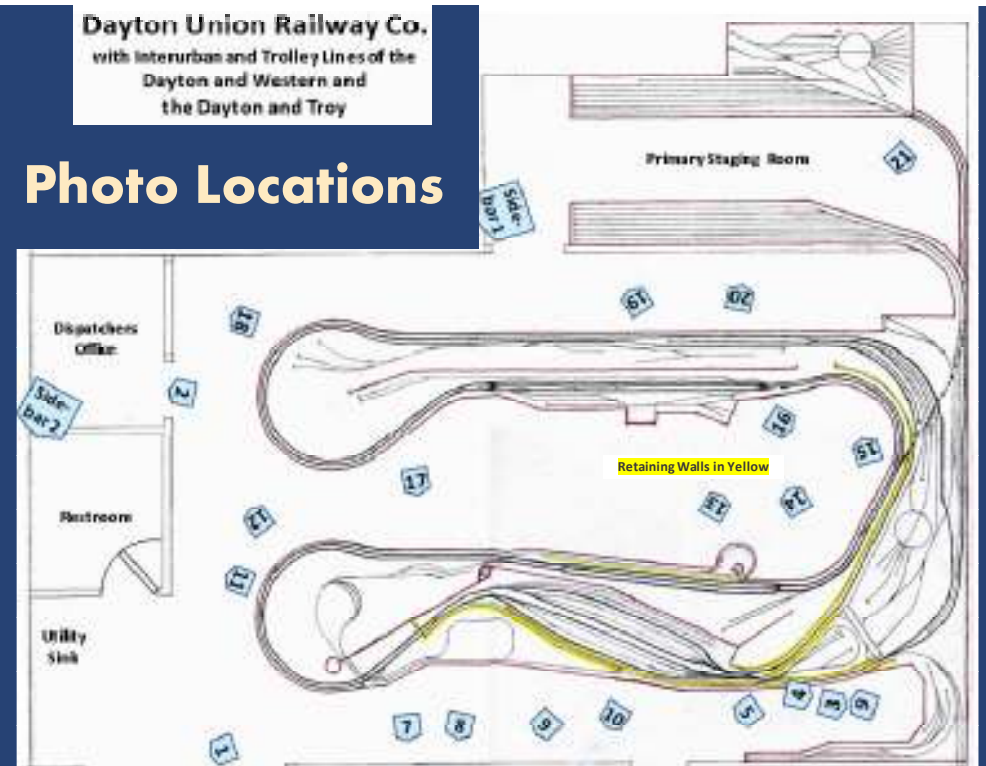


# Track Elevations

100% derived from photos



# Photo Locations









# Operations

## Train Dispatching

- All passenger and freight trains dispatched and run via a master “schedule” sheet sequence
- A timetable or clock was not needed

## Track Routings

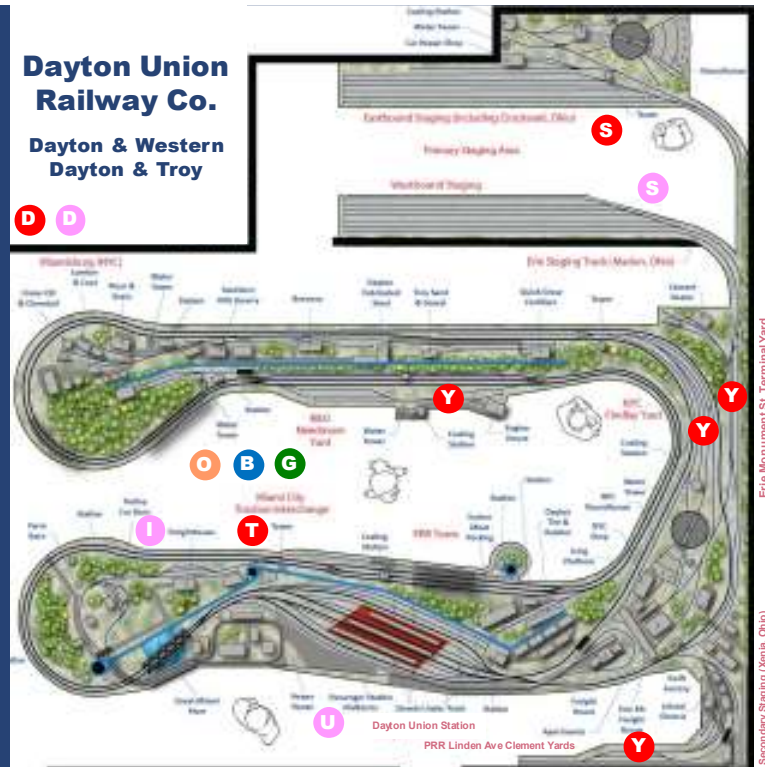
- Dispatcher ran all train routing, turnout control and signals control, for all station tracks and the 9 mainline blocks
- Yard operators ran yard tracks and turnouts
- Road crews controlled the industry turnouts

**Crew Size: 10-14**

## 10-14 Person Crew

- 1-2 dispatchers **D D**
- 1-2 staging operators **S S**
- tower operator **T**
- 4 yard operators **Y Y**
- 3 mainline crews **O B G**
- optional Union St. operator **U**
- optional interurban conductor **I**

**Dayton Union Railway Co.**  
Dayton & Western  
Dayton & Troy



Secondary Staging (Xenia, Ohio) Erie Monument St. Terminal Yard

# Train Types and Origins

## Mainline Trains

- All passed thru Dayton Union Station tracks
- PRR, NYC and B&O trains originated from multiple staging locations
- Erie freights originated in Marion, Ohio (via WB staging) & worked Erie yard + Dayton industries
- Other trains came from Xenia (via secondary staging) and Cincinnati (via WB staging)

## Locals, Interurbans and Trolleys

- Freight locals ran between yards and industries
- Interurban trolleys ran thru downtown and countryside w/ interchange/junction at Miami City

## The Yards

**3 Staging**

- Eastbound (with Cinti)
- Westbound (with Marion)
- Xenia, Ohio

**4 Modeled**

- B&O Needmore
- NYC Findlay
- Erie Monument
- PRR Linden Ave Clement

**Dayton Union Railway Co.**  
Dayton & Western  
Dayton & Troy



Secondary Staging (Xenia, Ohio) Erie Monument St. Terminal Yard



# Main Staging Yards



# Xenia Staging



# Train Operating Sequence Sheet

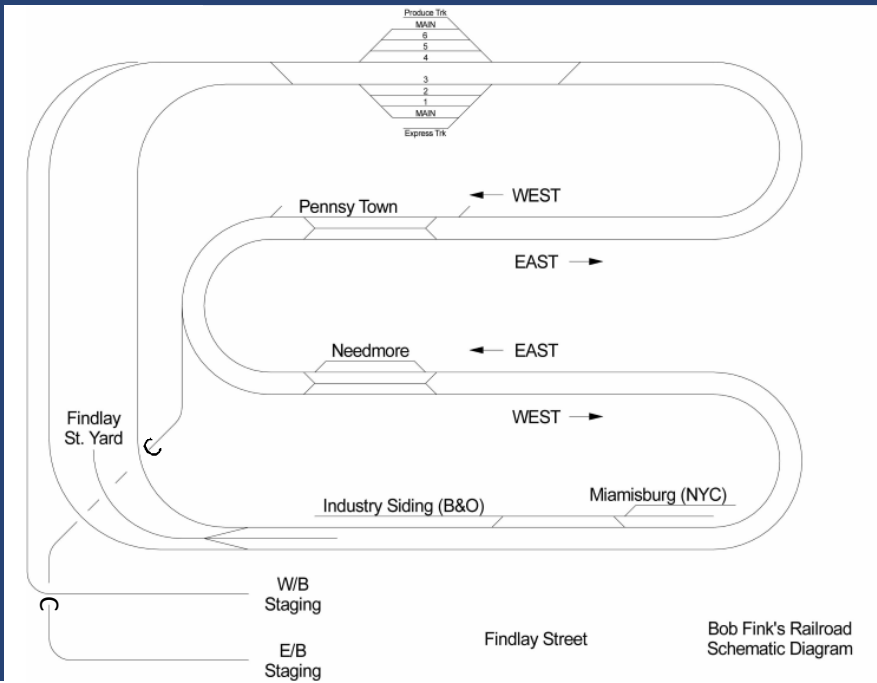
Seq	Next	Train	Cab	Crew	From	To
1		B&O Xtra West	Blu		WBS 5	EBS 1
2	30	B&O Way Freight (E)	Blu		Needmore Yard	Miamisburg (W main)
2	30	NYC Way Freight (W)	Blu		Findlay St. Yard	Miamisburg (W main)
3	4	PRR 30	Org		EBS 2	DUT 1
4		PRR 30	Org		DUT 1	WBS 4
5	15	PRR 32	Org		EBS 2	DUT 1
6	8	PRR Thru Freight W	blu		Xenia Storage	Clement Yards
7	14	B&O Thru Freight E	Grn		EBS 6	Findlay St. Yard
8	17	PRR Thru Freight W	Blu		Clement Yards	Needmore Yard
9	12	B&O 53	Org		WBS 1	DUT 4
10	TIP You can run step # 15 if PRR # 32 is ready in Dayton					
11	13	B&O 54	Org		EBS 3	DUT 6
12		B&O 53	Org		DUT 4	EBS 3
13		B&O 54	Org		DUT 6	WBS 1
14	18	B&O Thru Freight E	Grn		Findlay St. Yard	Needmore Ctr. Siding
15		PRR 32	Org		DUT 1	WBS 4
16	24	PRR 33	Org		DUT 2	West Dayton
17	25	PRR Thru Freight W	Blu		Needmore Yard	Findlay St.
18	27	B&O Thru Freight E	Grn		Needmore Ctr. Siding	Needmore yard
19	26	NYC Thru Freight E	Grn		EBS 5	Findlay St. Yard
20	32	B&O R255	Grn		WBS 6	Produce Track
21	22	NYC 16	Grn		EBS 4	DUT 3
22		NYC 16	Grn		DUT 3	WBS 3
23	31	NYC 16 (2nd)	Grn		EBS 4	DUT 1
24		PRR 33	Org		West Dayton	EBS 3
25		PRR Thru Freight W	Blu		Findlay St. Yard	EBS 6
26	28	NYC Thru Freight E	Blu		Findlay St. Yard	Needmore Ctr. Siding
27		B&O Thru Freight E	Grn		Needmore Yard	WBS 5
28	33	NYC Thru Freight E.	Blu		Needmore Ctr. Siding	Needmore Yard
30		B&O Way Freight E			Miamisburg (W main)	Needmore Yard
30		NYC Way Freight W			Miamisburg (W main)	Findlay St. Yard
31		NYC 16 (2nd)	Grn		DUT 1	WBS 3
32		B&O R255	Org		DUT East Main	EBS 5
33		NYC Thru Freight E	Blu		Needmore Yard	WBS 6
34	BREAK Run either seq. 35 and 36 OR just 37 to end session					
35	36	PRR Way Freight	Blu		Clement Yards	West Dayton
36		PRR Way Freight	Blu		West Dayton	EBS 4
37		NYC 3 & PRR 31			Siding	Siding

# Dispatching Room

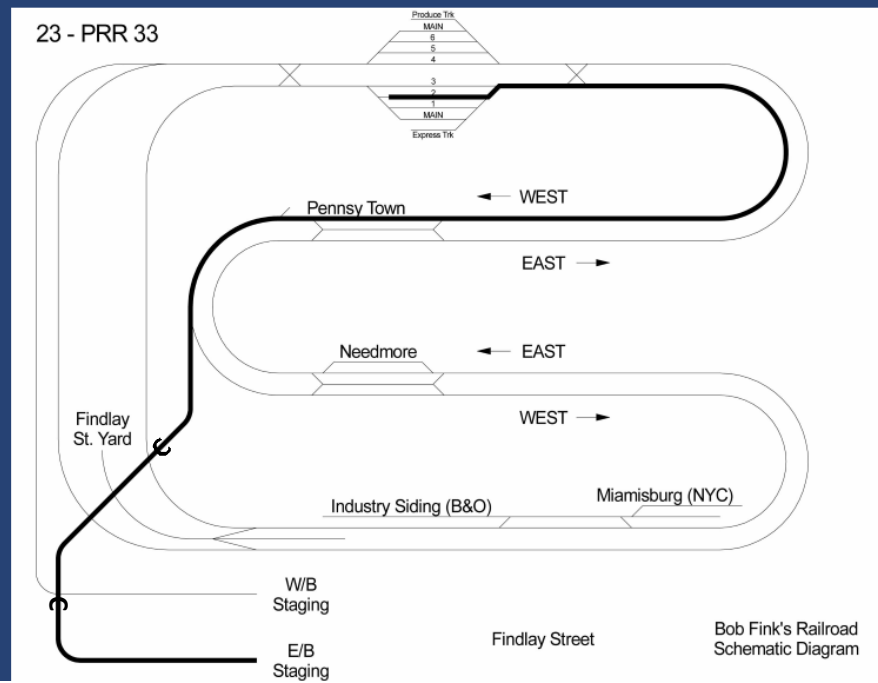




# The Operating Scheme



# The Operating Scheme



## Control Systems



## Auxiliary Rooms

### Modeling Shop & Office (Main Shop)

- Office, computer, files and stereo
- Loco, car and structures fabrication/repair
- Modeling tools and supplies
- Electrical testing equipment

### Wood Working & Paint Shop (Back Shop)

- General layout construction tools, wood working tools, paints and spray booth

### Library & Crew Lounge

- Research files, chairs, books and magazines

### Restroom & Utility Sink





## Main Shop



## Back Shop



## Library & Crew Lounge



## Magazine Considerations

- **Magazine Choices – Pick One at a Time!**
  - Model Railroader, Great Model Railroads, Model Railroad Planning (all Kalmbach)
  - Railroad Model Craftsman
  - NMRA Magazine
  - Model Railroad Hobbyist (all electronic)
  - N Scale, O Scale, Classic Toy Trains, ...
- **Circulation – number of viewers**
- **Paper & Print Quality – varies by magazine**
- **Publication Que – varies by magazine**
- **Amount of Editing – varies by magazine**
- **Proofs – NMRA involves the authors**
- **Pay Scale – similar across primary mags**



## Acknowledgements

**Phil Giebe**

**John Smith**

**Mike Mereness**

**Jim Montgomery**

**Ken Allen**

**Jim Rhinehart**



## Bob's Legacy

**Lifetime Model Railroader**

**Family Man**

**Longtime NMRA Leader**

**Consummate Modeler & MMR**

**Prolific Mentor, Author & Speaker**

**Walked the Talk**



## Lessons Learned

**Nice layouts need to be published**

**People friendly amenities are important**

- wide aisles, no duck-unders
- visible staging, minimal hidden track
- nice work shops and crew lounge

**Don't need a fortune to have a nice layout**

**Join a work/operations group and have fun!**

**What's the end game for your layout?**

**Comments  
and  
Questions?**