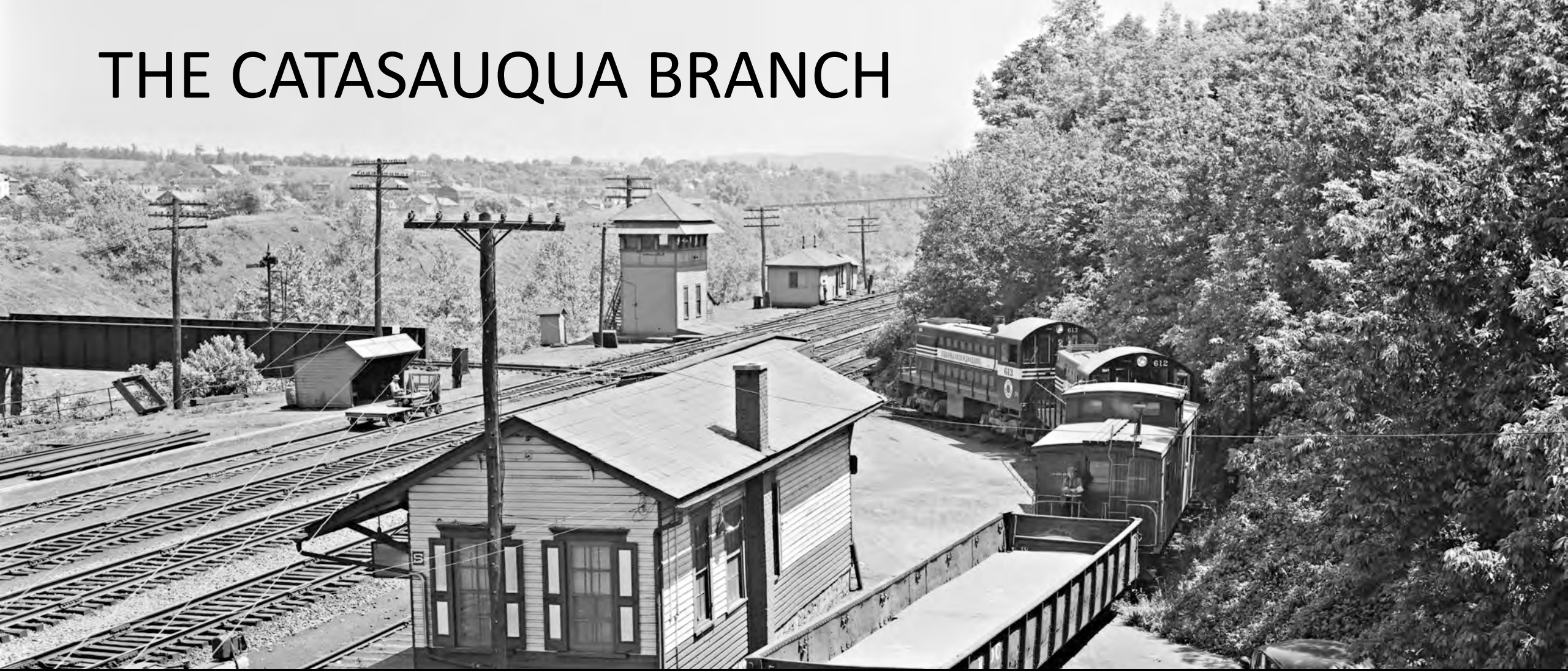


THE CATASAUQUA BRANCH





MODELING THE LEHIGH & NEW ENGLAND'S GATEWAY TO PENNSYLVANIA'S
CEMENT BELT

Todd Hermann - Mid-Atlantic Prototype Modelers Meet 2019

Overview

- Prototype History and Background
- Design & Planning
- Building the Railroad
- Lessons/ What's Next?

FORM C. T. 19 REV.
400 PADS 3-45 BB

 LEHIGH AND NEW ENGLAND RAILROAD COMPANY 
CLEARANCE FORM A

To Conductor and Engineman 2302 8479 M. 1-15 1946 at Aug.

I have 1 orders for your train.

Order No. 23 Order No. Order No. Order No.
Order No. Order No. Order No. Order No.

have been delivered and there are no further orders for your train.

Stop-signal is displayed

This form is authority to pass stop-signal for Stam track. Block

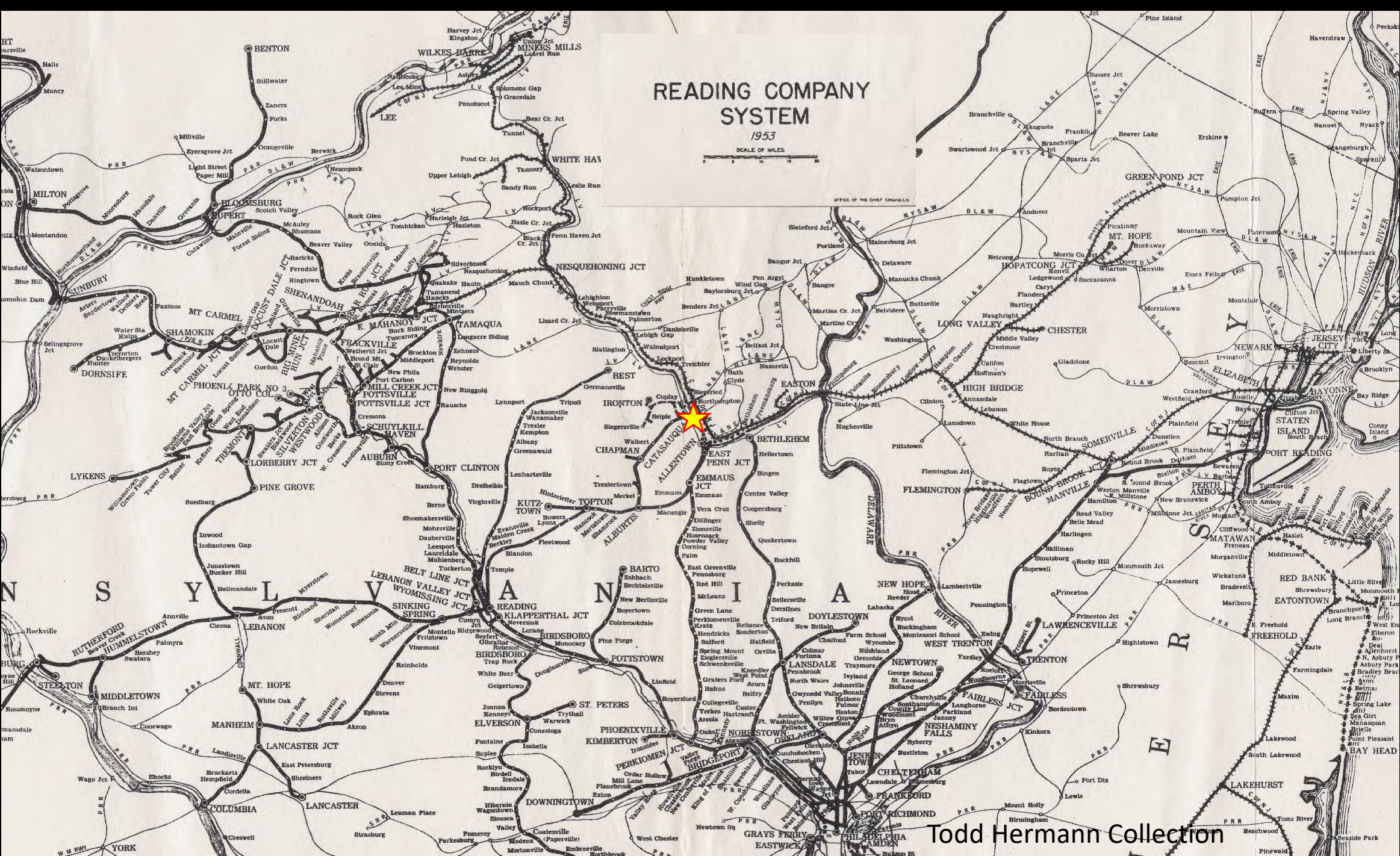
Stam
Signalman

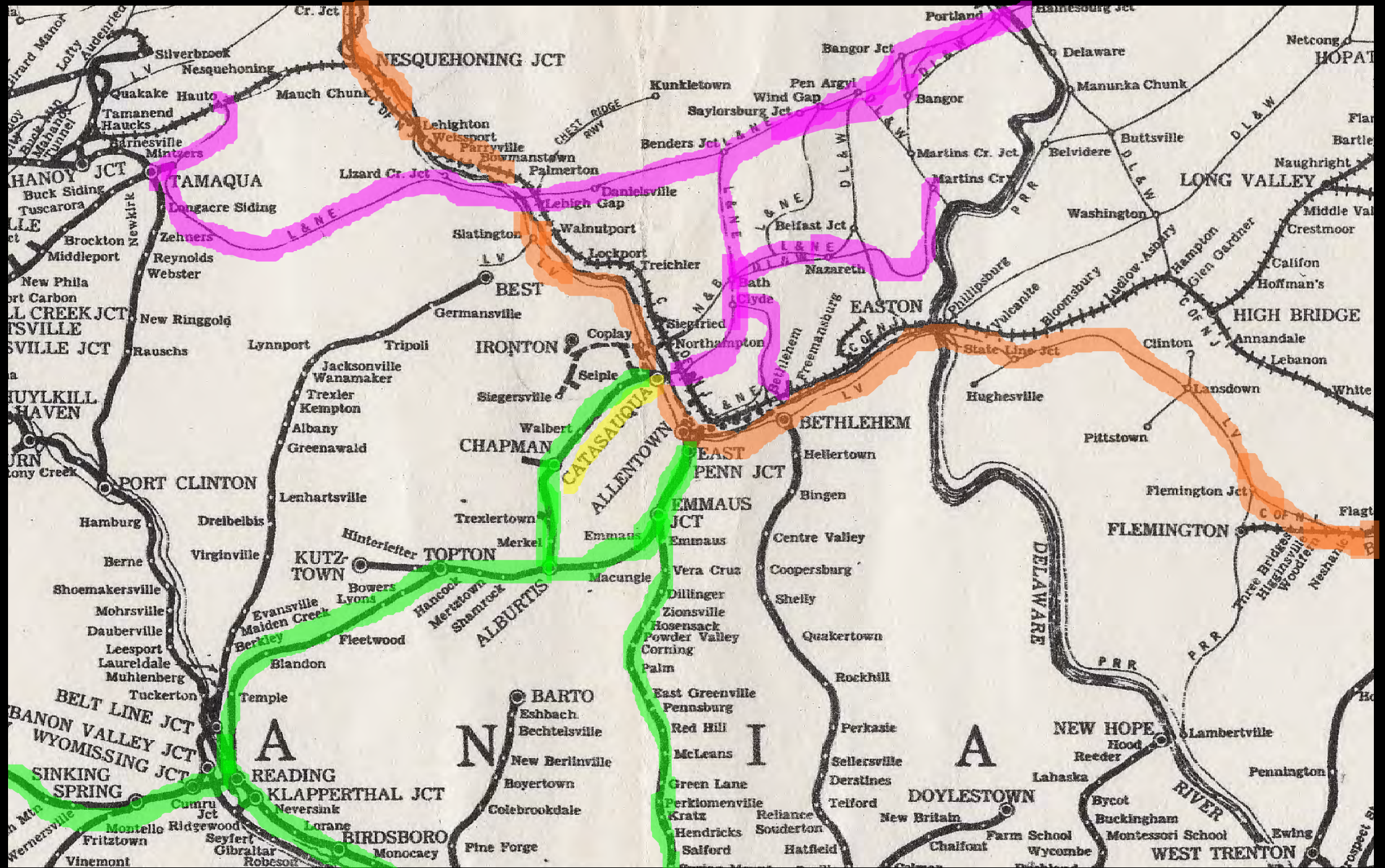
This form does not affect any orders you may have received.
Manifold copies will be made for each Conductor, Engineman and Signalman, the latter retaining a copy.
Conductors and Enginemen will see that their train number is correctly designated and the order numbers in the above form correspond with the order numbers delivered.
Where Clearance Form A is used when the block is not clear, the line giving block indication will be left blank, and Clearance Form B used in addition to Clearance Form A.

Cata-what??

- Catasauqua, PA
- 3 miles north of Allentown
- NYC = 75 miles east
- Philly = 50 miles south
- “Catty” to locals







Why this prototype?

Lehigh & New England: A Color Retrospect,
Garrigues House/ARHS, 1988.

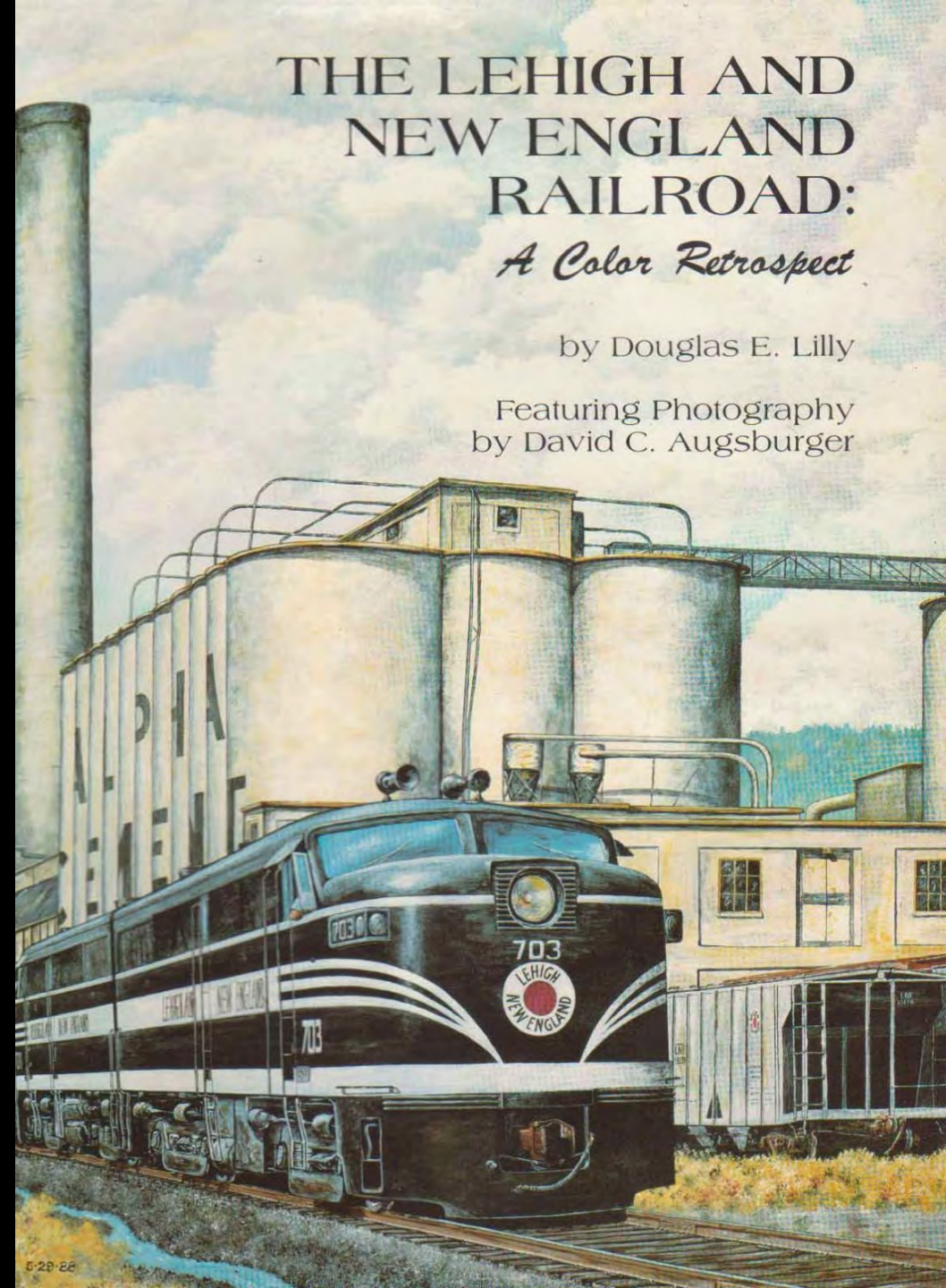
- Chapter devoted to Catasauqua Branch

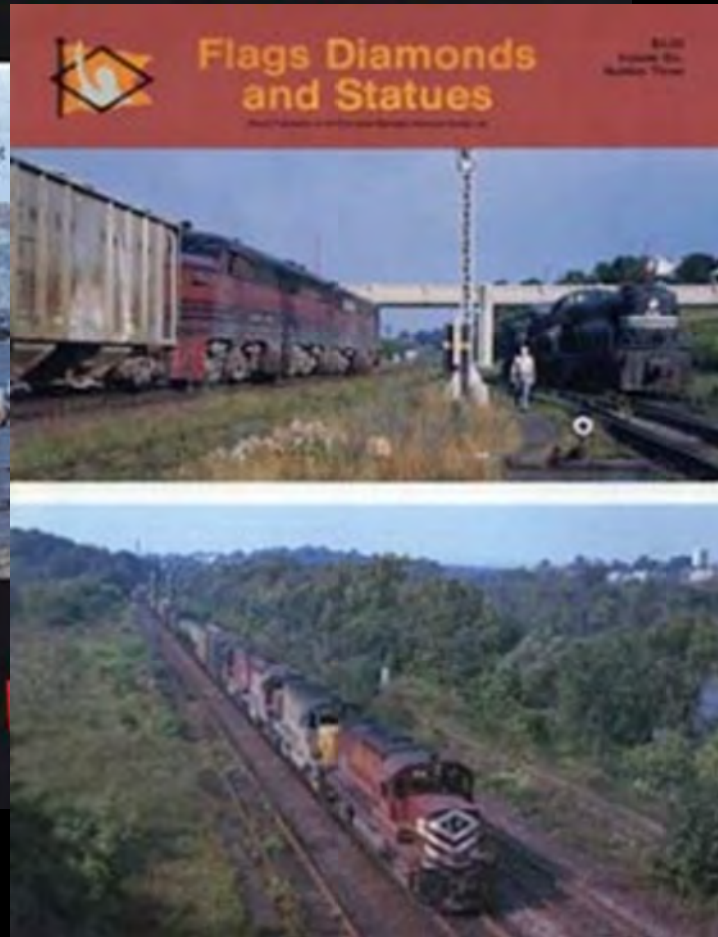
Compact size

Interesting equipment & scenery

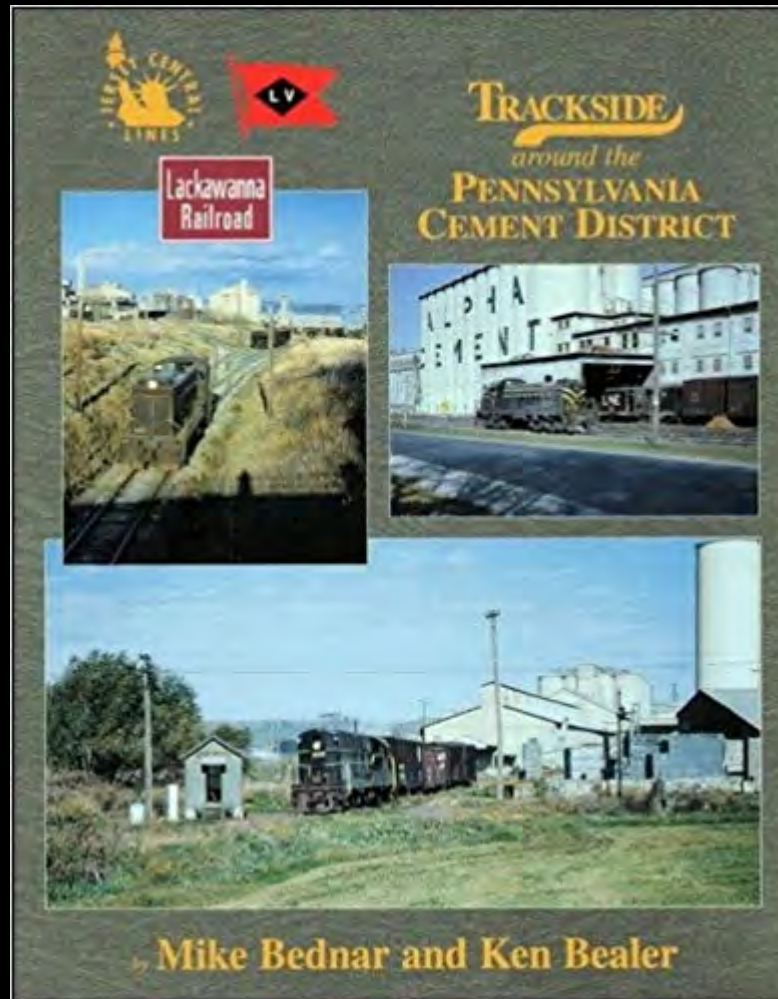
Hooked from the first read

...but it took 20 years before I got serious
about modeling it.

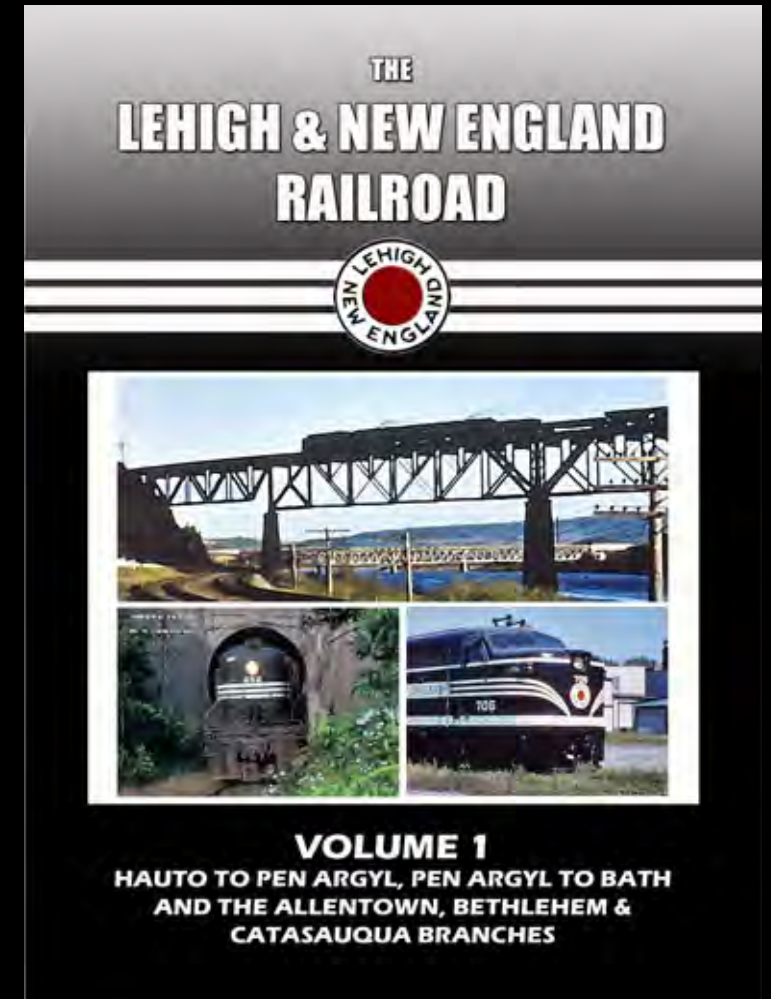




“Catasauqua: Crossroads of the Anthracite Roads” FD&S Vol. 6, No. 3 & 4, by Joe Yurko

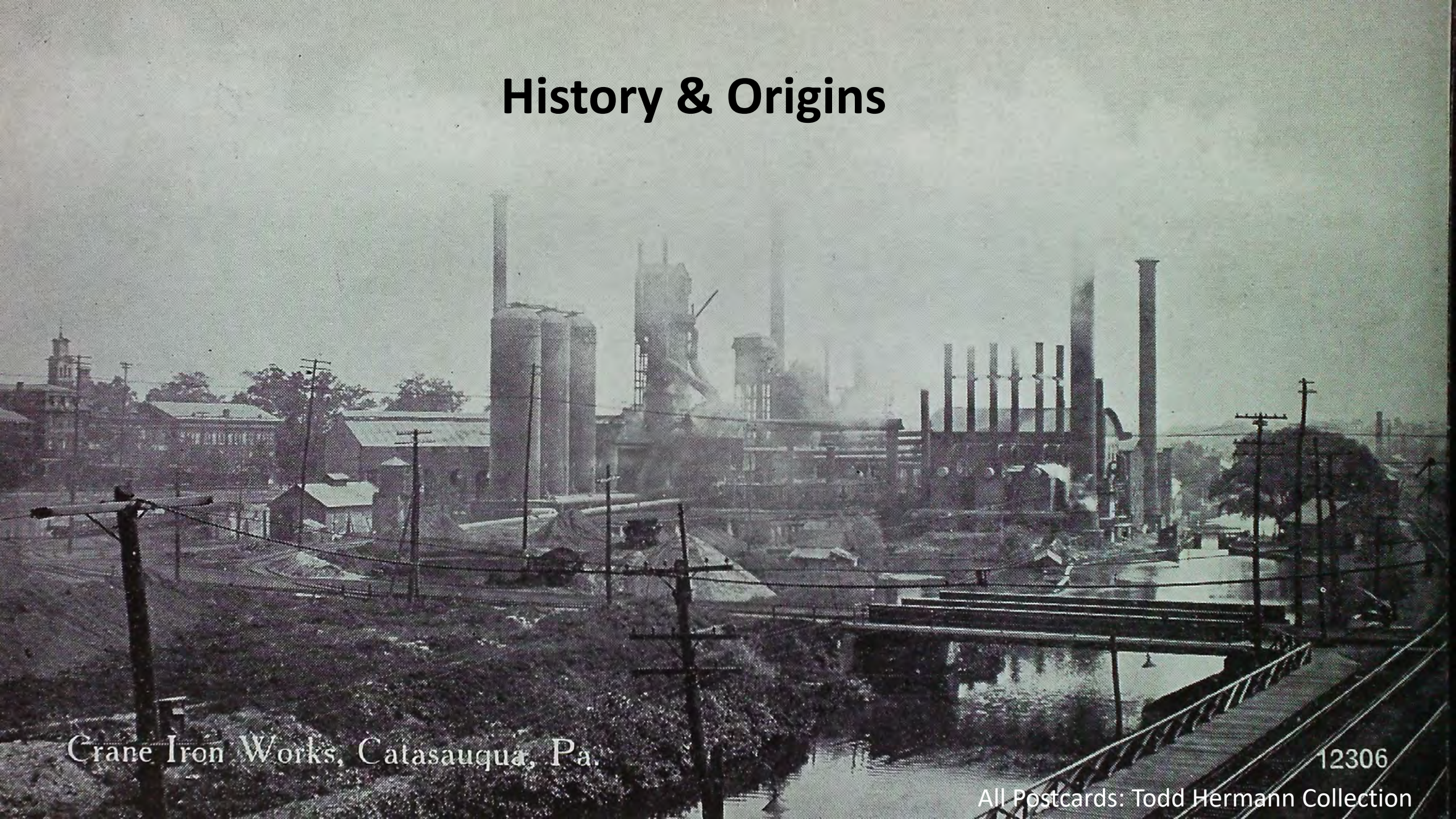


Morning Sun Books, 2010



John Pechulis Media, 2012
<https://www.johnpmedia.com>

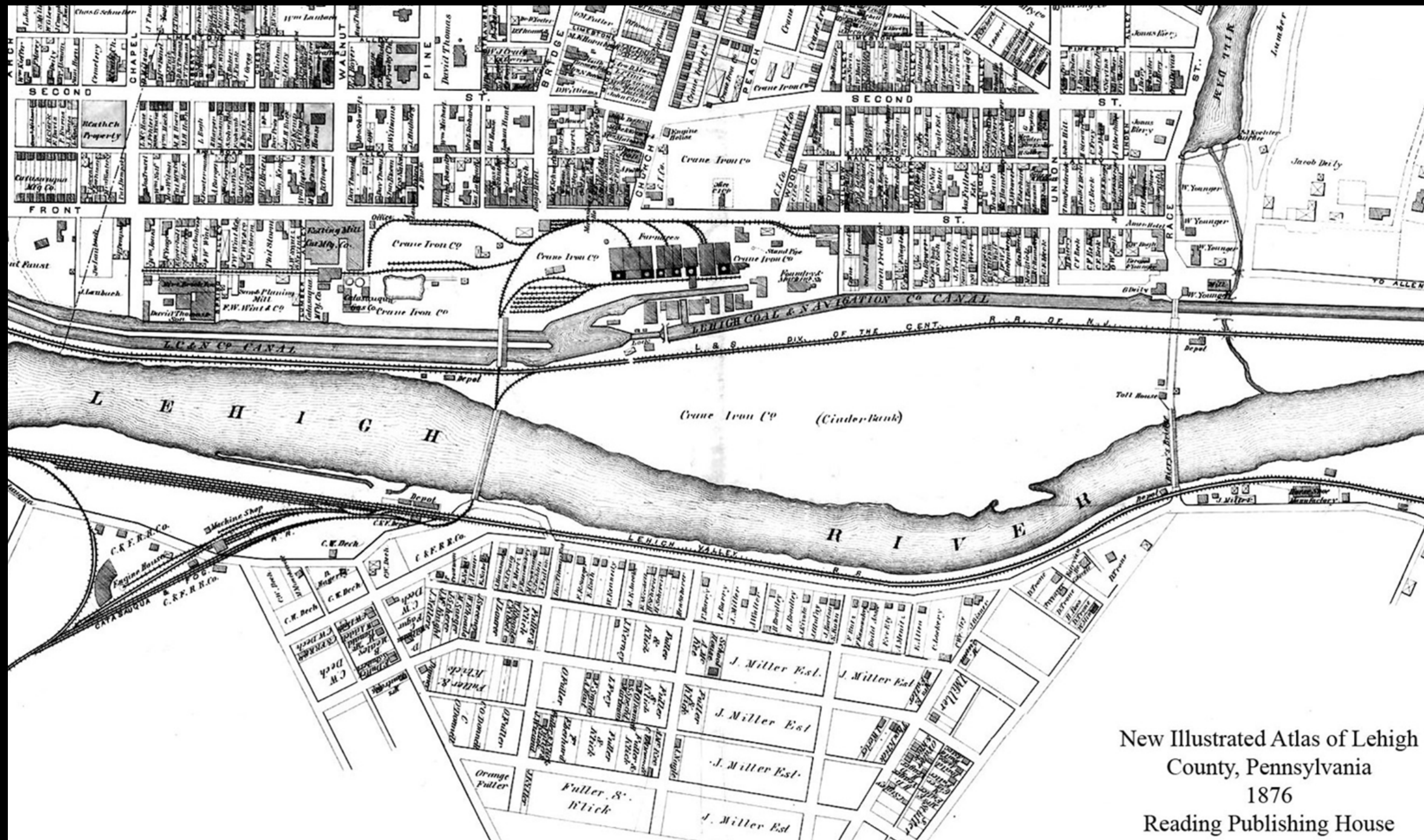
History & Origins



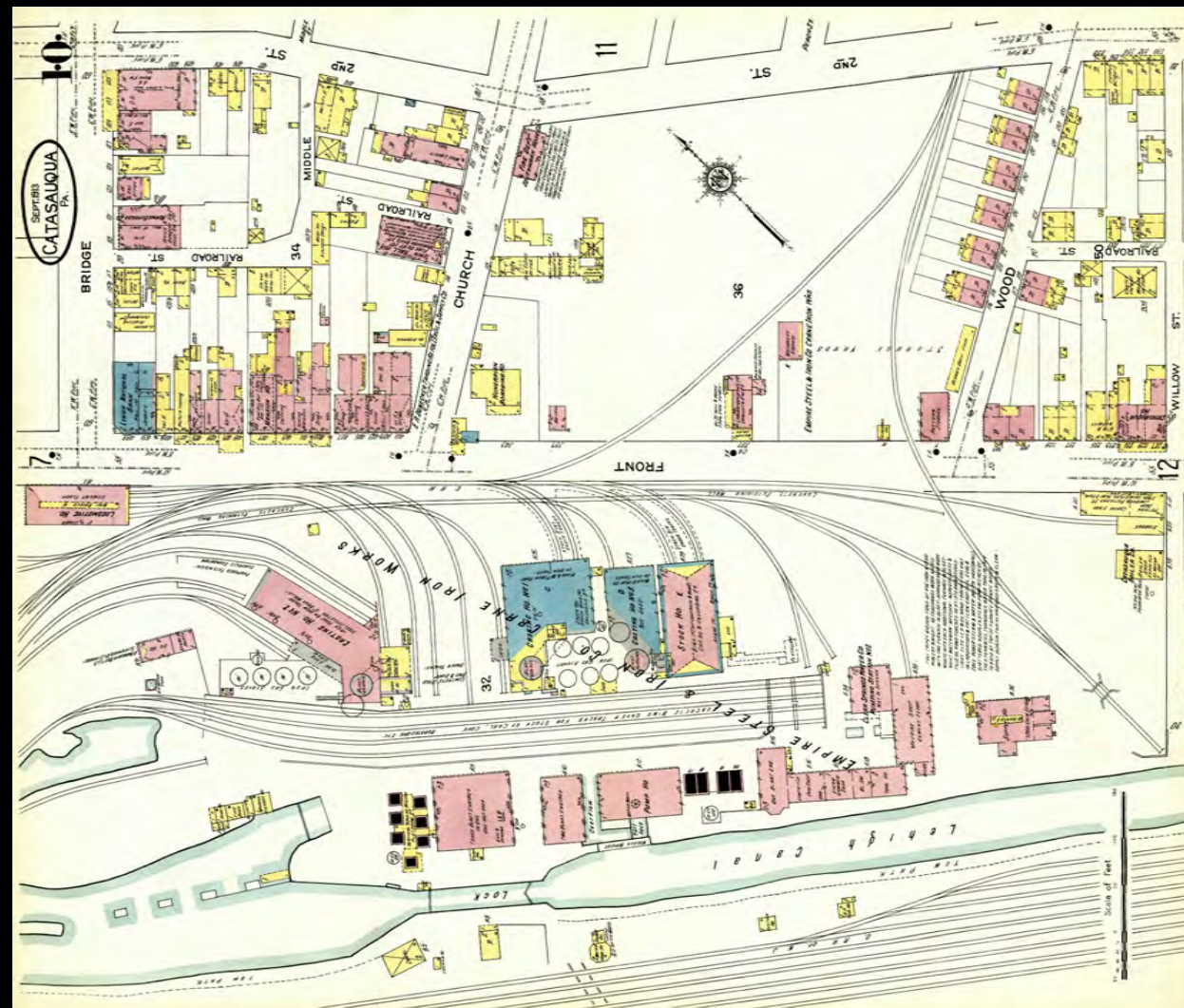
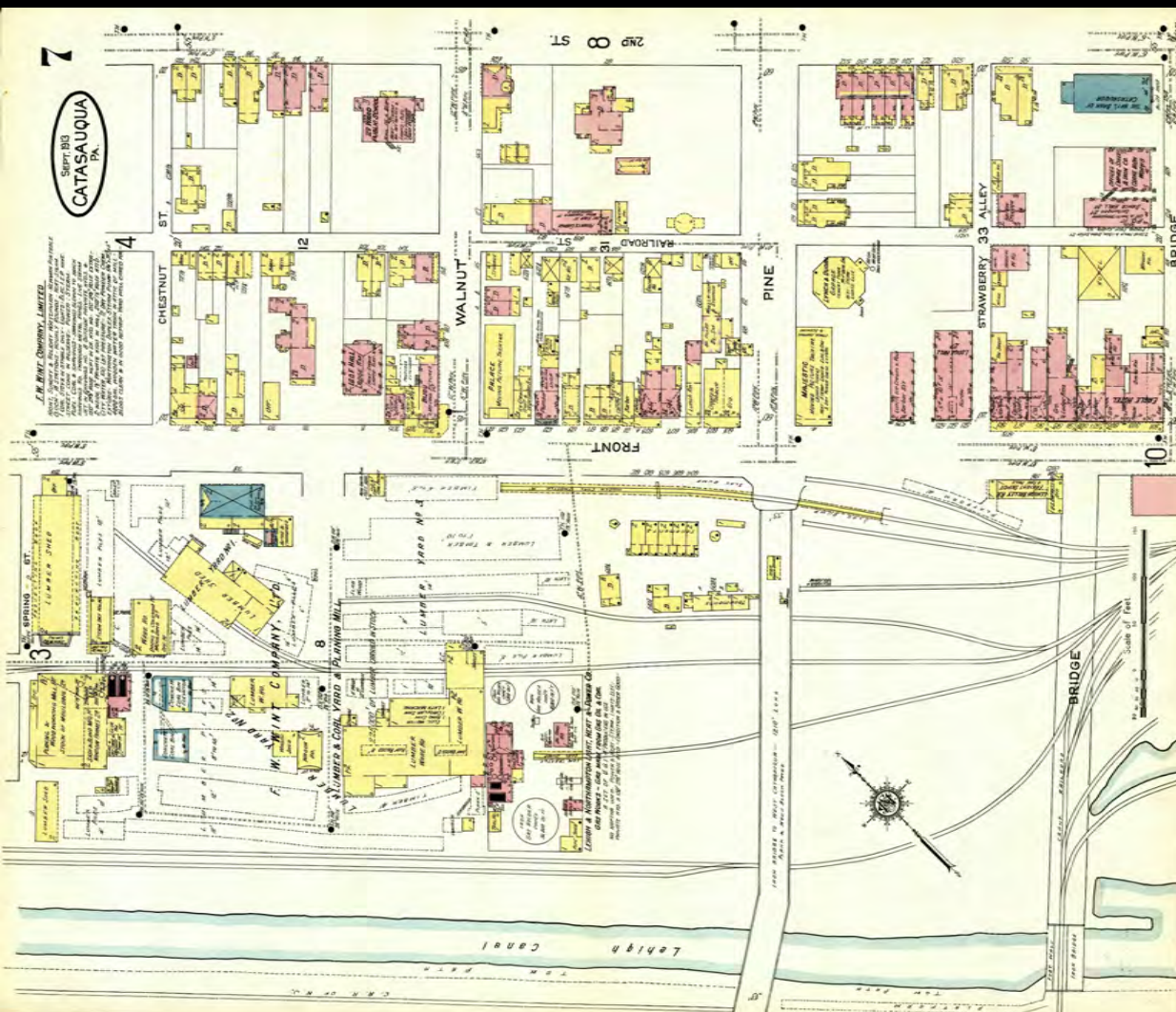
Crane Iron Works, Catasauqua, Pa.

12306

All Postcards: Todd Hermann Collection



New Illustrated Atlas of Lehigh
County, Pennsylvania
1876
Reading Publishing House



Sanborn Fire Insurance Maps, 1913 Penn State University Collection.



Photo: Hagley Museum & Library Collection

3 Foot Lengths		
HO gauge, 99 ft., .100 high		\$2.60
S gauge, 99 ft., .125 high		4.00
O gauge, 99 ft., .172 high		7.00

MODEL RAILROAD PRODUCTS
1378 Mineral Spring Ave., N. Providence, R. I.
Dealers' Inquiries Invited



NICHOLAS SMITH
60 N. 11th Street Philadelphia 7, P.

Newest 1958 Edition!
COMPLETE LISTINGS!
SPECIAL DEALS!

50¢ (Refundable on \$5 order)

Special offer: 3 yr. new NMRA couplers plus 1 yr. needle-point all-metal trucks, for only \$2
Couplers only, 10. 95¢; trucks . . . 91

ON LONG ISLAND
Open 9 A.M. to 11 P.M.

Open 7 days, 10 to 11 P.M.

COME IN

or
MAIL IN

LEE'S
HOBBY DISTRIBUTORS
2072 Front St., East Meadow, N. Y.



Here she is!

→ **Kit No. 3** ←

in AMBROID'S fabulous
"One of 5000"

HO Collectors' Line!

ONLY ONE RUN OF THIS

KIT WILL EVER BE MADE!

Photo of the prototype above just hints at the beauty of this famous old Z-braced pusher canoe from the Nashville, Chattanooga & St. Louis. And the supply of this "One of 5000" kit is strictly limited and rationed to the stores, so be sure to get yours NOW!

Super-detailed kits complete with Silver Streak brass caboose trucks, Kemtron universal coupler pockets, sample tube of Ambroid Liquid Cement **ONLY \$5.10**

BY THE MAKERS OF **AMBROID** LIQUID CEMENT

AMBROID CO.
E. Weymouth, Mass.

42



Close-up—prototype ideas for your railroad

Catasauqua crossing



Bethlehem Steel Co.

The Lehigh Valley-Reading junction at Catasauqua, Pa., appears here as it looked in the late 30's after installation of new crossings. Off to the right of the four-track LV main is the Lehigh River.

AT Catasauqua, Pa., a branch of the Reading contorts itself abruptly to get into position for a crossing of the Lehigh Valley's four-track main line and the Lehigh River. The general track arrangement offers the modeler good reason for what might at first appear to be an unrealistic track pattern. Beyond the highway overpass, the Reading's track curves in toward the Lehigh Valley trackage, and there's a series of turnouts leading to interchange tracks parallel to the LV. Other turnouts—some of them curved—lead to a small yard that curves around behind the hill.

To further complicate matters, each and every one of the crossings is slightly curved!

Detail surrounding the crossing also deserves attention. Note the positioning of the picturesque freight house, and the

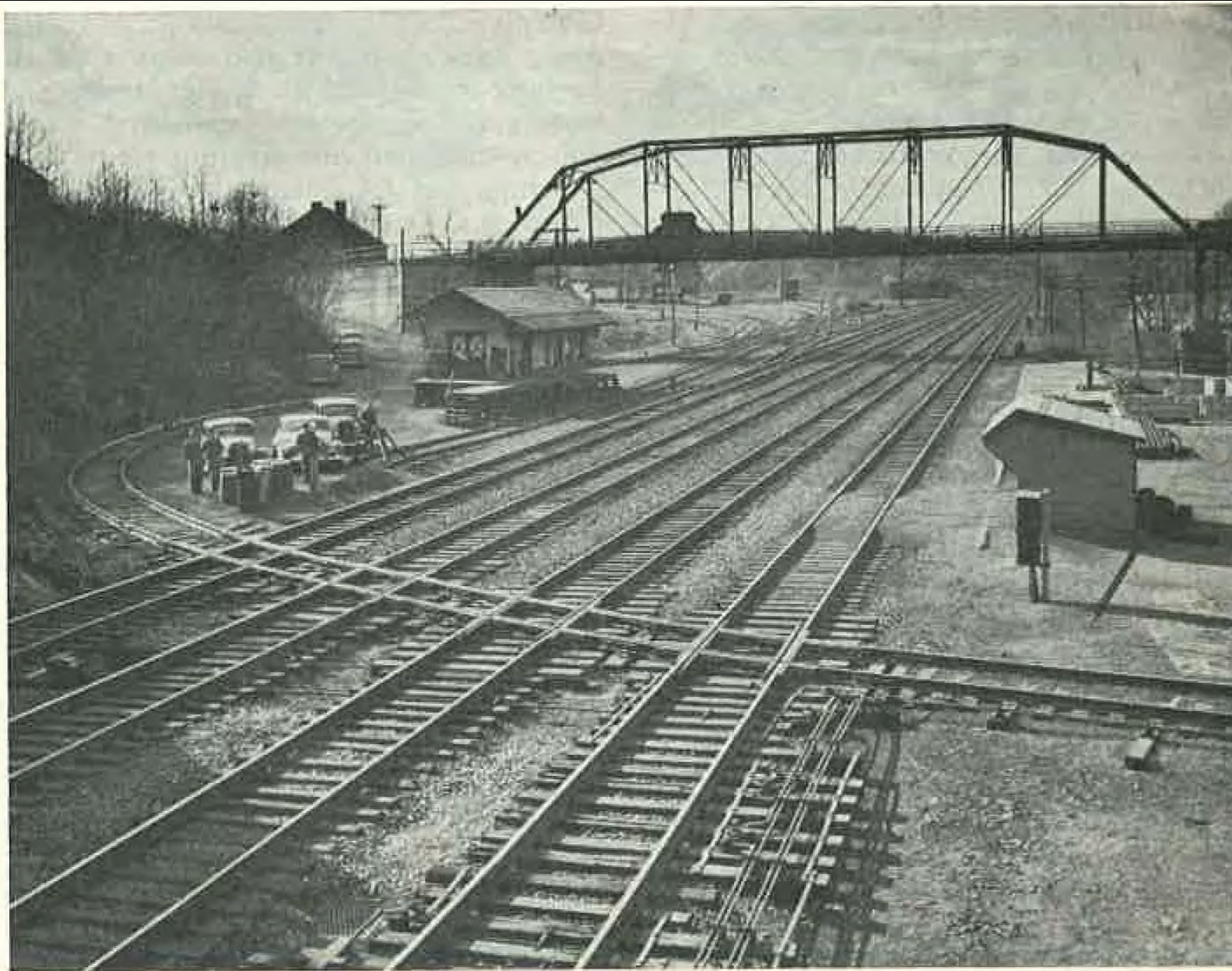
single track that bends its way up to the platform. The platform itself is interesting because it's two-level. A gravel road leads down to the freight house from the highway.

Between the Lehigh Valley tracks and the river are the remains of a station foundation. Apparently, the only facilities for passengers left is the small shelter with the overhanging roof. Note, too, the relay box hung on the post, the drain grating between the tracks and the manner in which signal and turnout rodding is mounted on extra long ties. Ties beneath the crossing or "diamonds" parallel

those of the Lehigh Valley tracks, with but a single tie needed to support the Reading rails between the diamonds.

Construction of all types of track crossings was described on page 46 of the Sept. '56 issue of MODEL RAILROADER.

Model Railroader

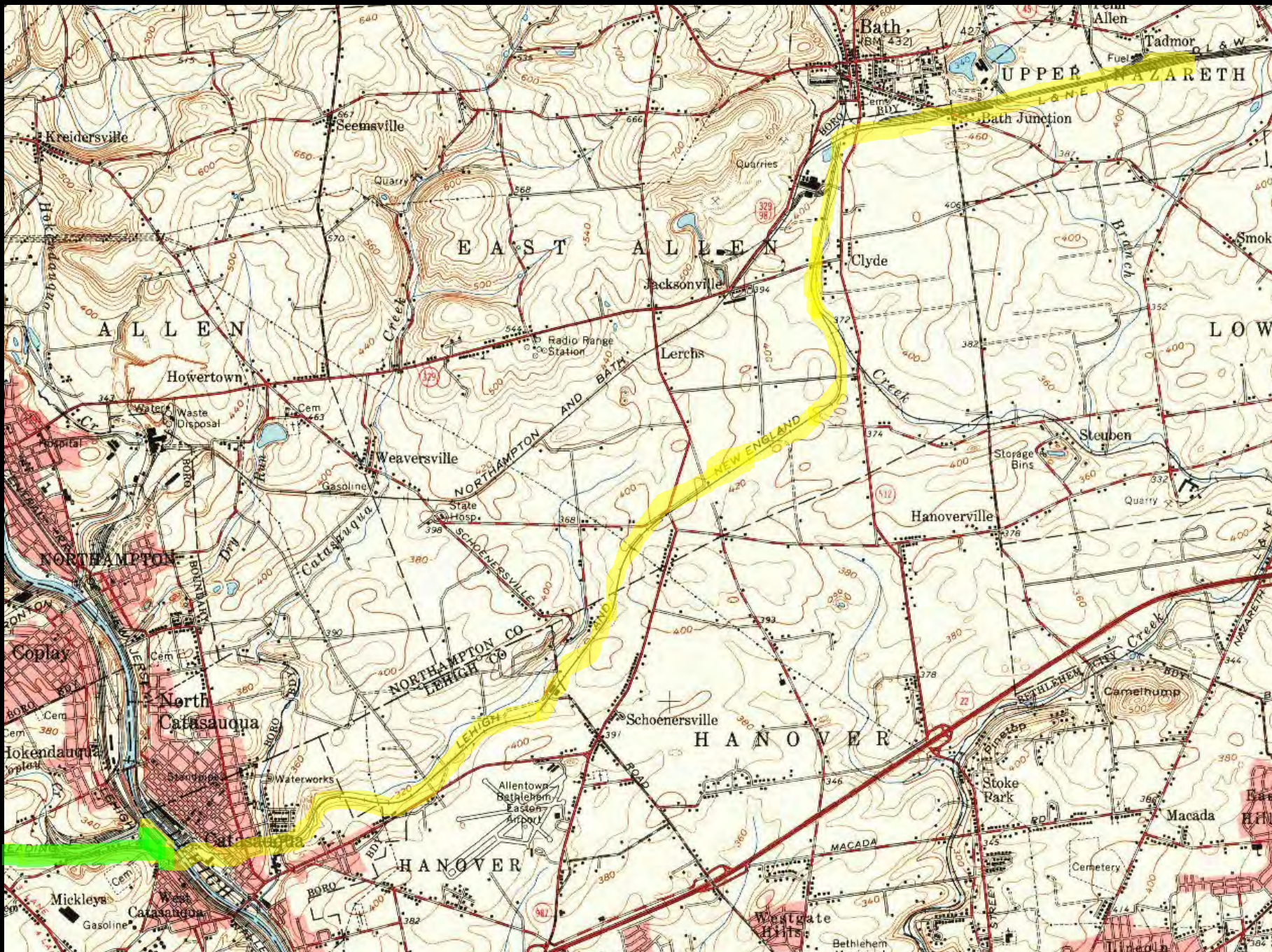


Bethlehem Steel Co.

The Lehigh Valley-Reading junction at Catasauqua, Pa., appears here as it looked in the late 30's after installation of new crossings. Off to the right of the four-track LV main is the Lehigh River.



West Portal Catasauqua Tunnel, 1956. Photo: Neil Shankweiler



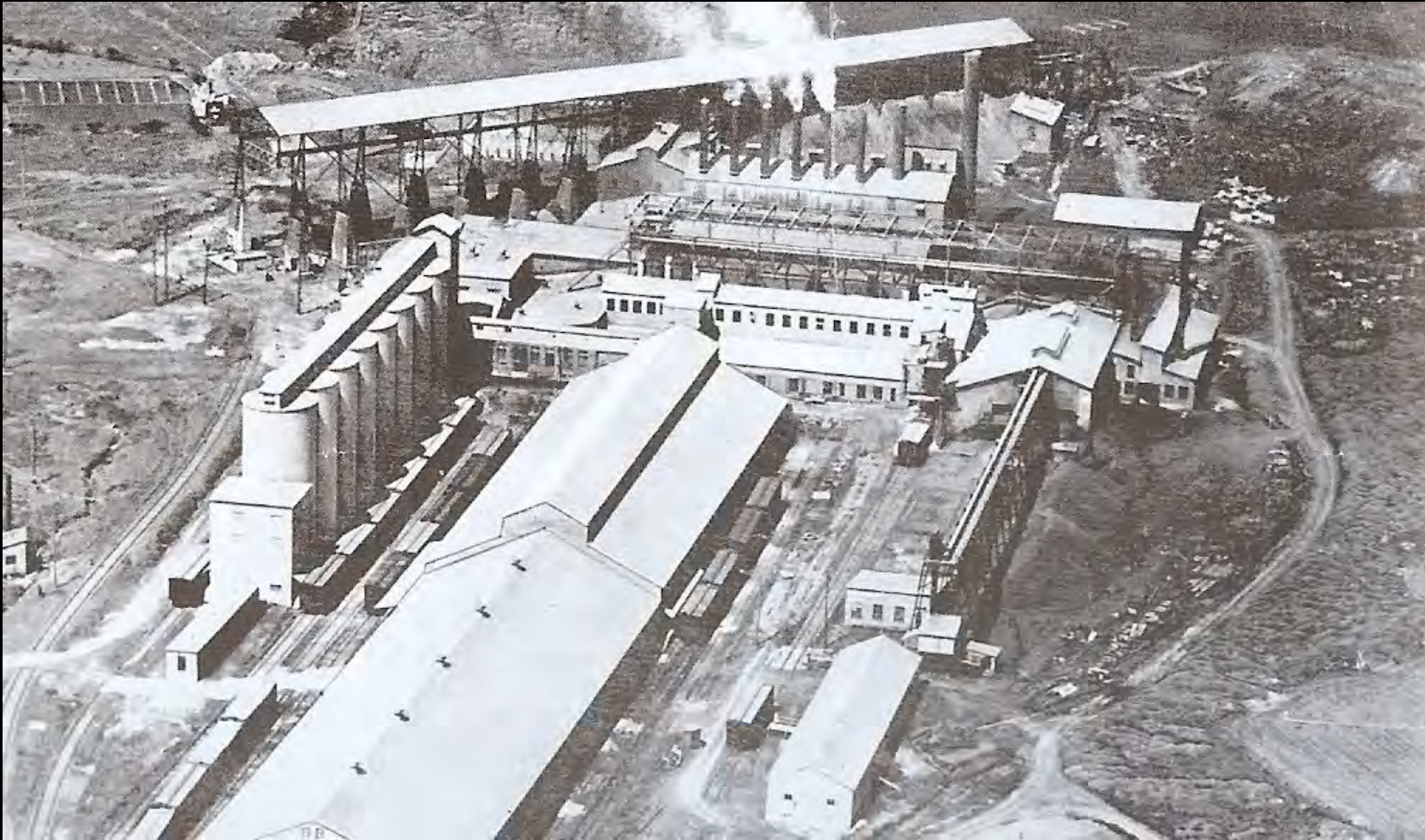
Bath – Crane
Jct.:
1.3 miles

Crane Jct. -
Catasauqua:
6.1 miles

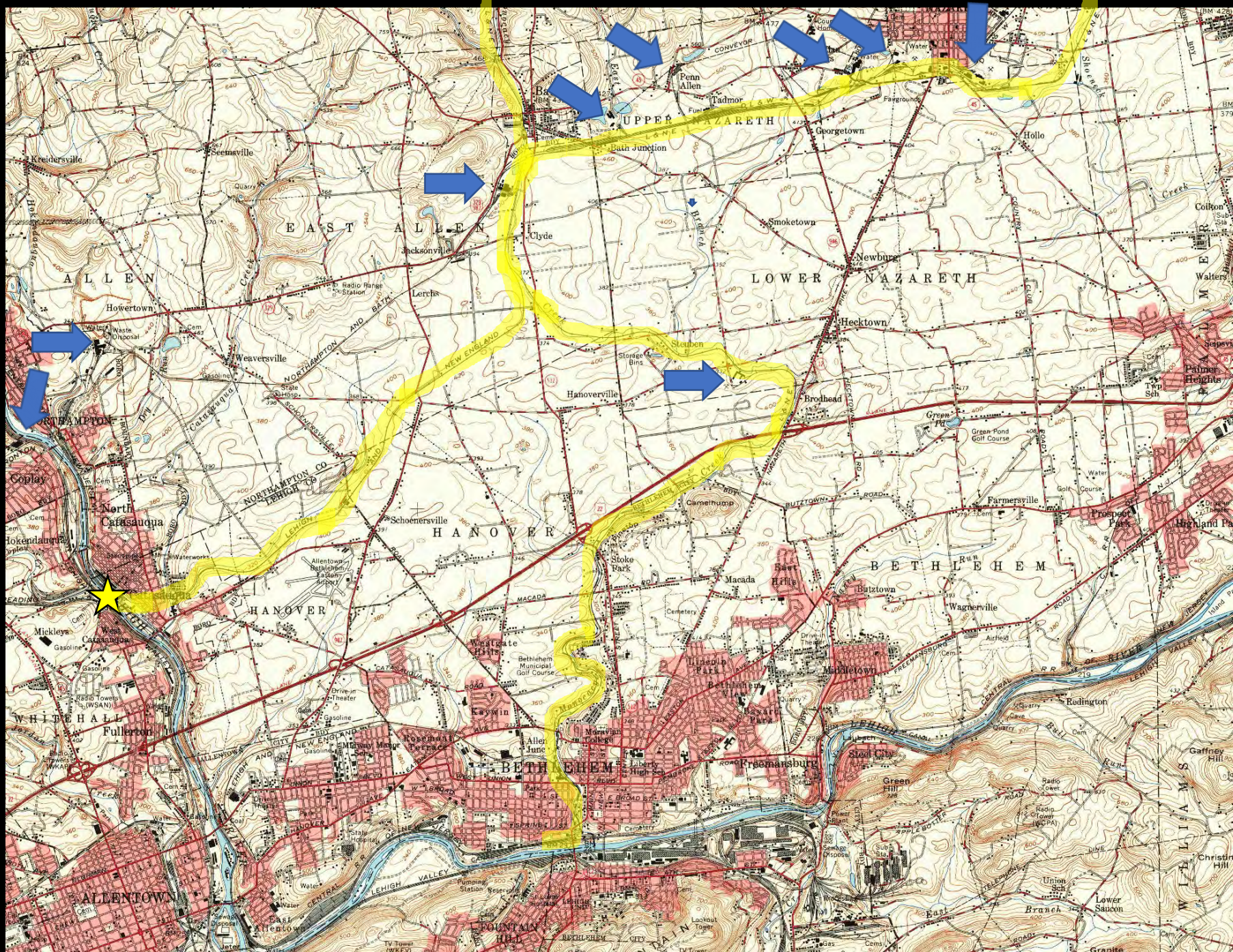
Tadmor – Bath:
2.4 miles

9.8 miles

Rise of the “The Cement Belt”



Penn-Dixie Cement #5 – formerly Penn Allen Cement, Bath, PA circa 1930s.



L&NE Interchange at Catty - 1953:

Carloads delivered/rec'd:

Reading	19,633
Lehigh Valley	3,392
CNJ	59
TOTAL:	23,084



Other L&NE gateways in 1953:

Bethlehem (CNJ):	19,025
Martins Creek (PRR+DL&W):	21,453
Campbell Hall/Maybrook (NH+NYC+NYO&W):	30,901

LEHIGH AND NEW ENGLAND RAILROAD LOADED CAR INTERCHANGE WITH CONNECTING LINES 12 Months Ended June 30, 1959

	Loaded Cars Interchanged (Received & Delivered Combined)	Per Cent of Total
<u>Central Railroad of New Jersey</u>		
Bethlehem	29,737	19.16
Hauto	2,118	1.36
Catasauqua	14	0.01
Total	31,869	20.53
<u>Reading</u>		
Catasauqua	15,227	9.81
Tamaqua	5,650	3.64
Total	20,877	13.45
<u>New York, New Haven and Hartford</u>		
Campbell Hall	26,618	17.15
<u>Lehigh Valley</u>		
Lizard Creek	9,841	6.34
Stockertown	7,862	5.07
Catasauqua	4,182	2.69
Total	21,885	14.10
<u>Pennsylvania Railroad</u>		
Martin's Creek	12,209	7.86
<u>Delaware, Lackawanna and Western</u>		
Portland	8,187	5.27
Bath Jct.	3,365	2.17
Augusta	61	0.04
Total	11,613	7.48
<u>New York, Susquehanna and Western</u>		
Hainesburg Jct.	8,894	5.73
<u>New York Central</u>		
Campbell Hall	6,146	3.96
<u>Chestnut Ridge</u>		
Palmerton	5,894	3.80
<u>Erie</u>		
Goshen	5,644	3.64
Pine Island	18	0.01
Total	5,662	3.65
<u>Northampton and Bath</u>		
Bath Jct.	3,562	2.29
Grand Total	155,229	100.00

1958-1959: 19,423 cars interchanged at Catty





LNE Yard, Tadmor, PA - Base of Ops for Catty Job

CT-20-648 200 pads - 8-57

LEHIGH AND NEW ENGLAND RAILROAD COMPANY

FORM 19

To C & E Eng 658

X

Train Order No. 8

At Tadmor

Opr.:

FORM 19

Sept 25 19 61

Eng 658 Run Extra Crane Jct
to Catasaugus and Return to
Crane Jct.

H.C.T.

Made Complete

time 1:11 P

M. Vogel

Opr.

Each employee addressed must have a copy of this order.



West End, Tadmor Yard.

Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media, 2011
 Trainorder: Todd Hermann Collection



Crane Junction. Photo: ARHS Archives



Photo: Dave Augsburg



Westbound, crossing Catasauqua Creek and American Street, July 1960. Photo: Neil Shankweiler.



Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media



East Portal, Catasauqua Tunnel.

Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media.



West Portal, Catsauqua Tunnel. Photo: Dave Augsburger, 1961



LVT / LNE diamond – Front Street, July 5, 1948. Photo: The Houser Collection



Lehigh Valley Transit – Front St. Catasauqua. Photo: The Houser Collection



Photo: Neil Shankweiler, Sept. 30, 1961



Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media



Fuller Company, February 2008. Photo: T. Hermann

FULLER COMPANY

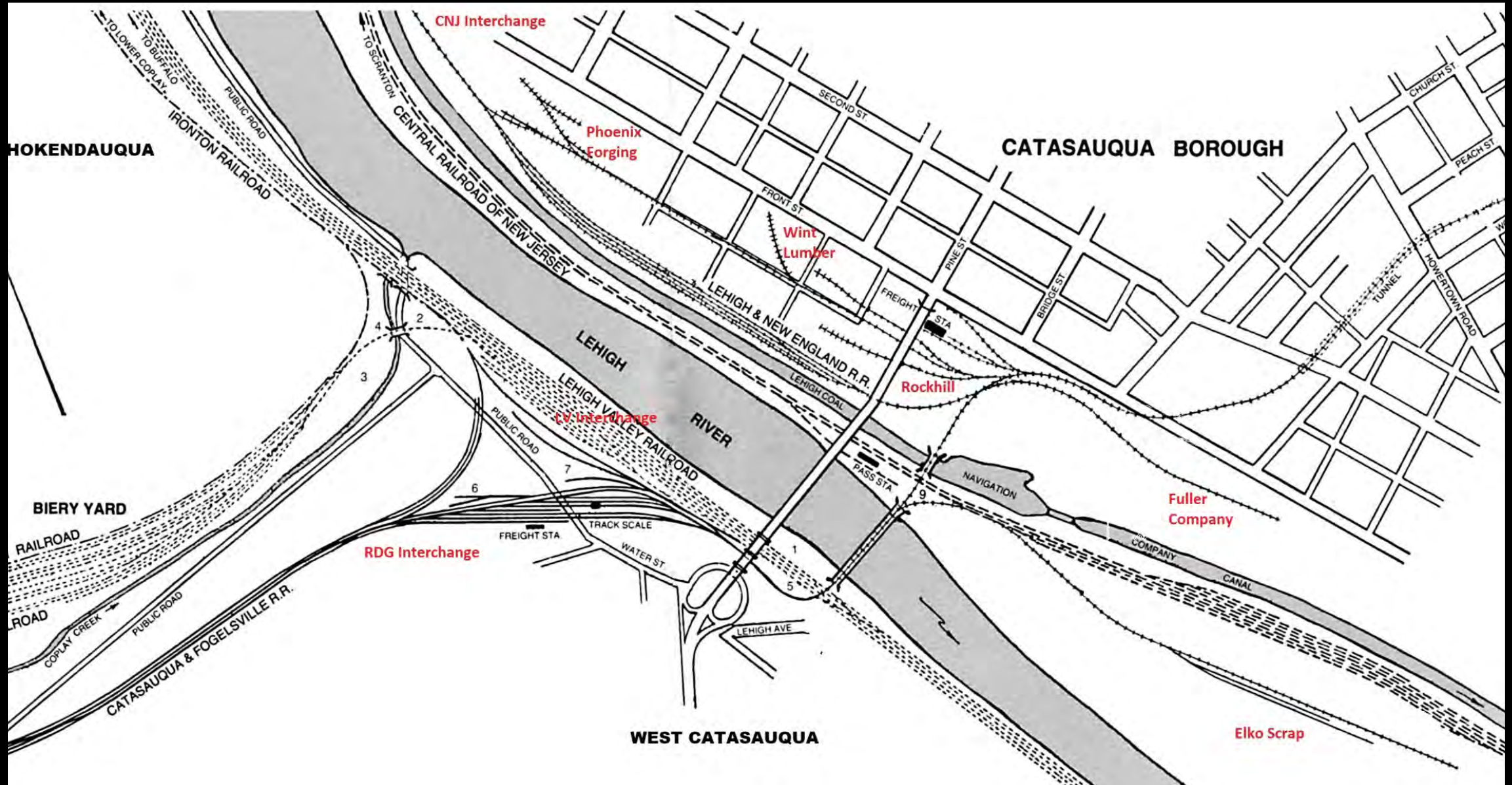


CATASAUQUA, PA. PLANT: Research laboratory, experimental plant, sheet metal shop, machine shop, and compressor engineering department located here.

Centennial History of Catasauqua 1853-1953, p.72.



L&NE Customers in Catasauqua, circa 1956





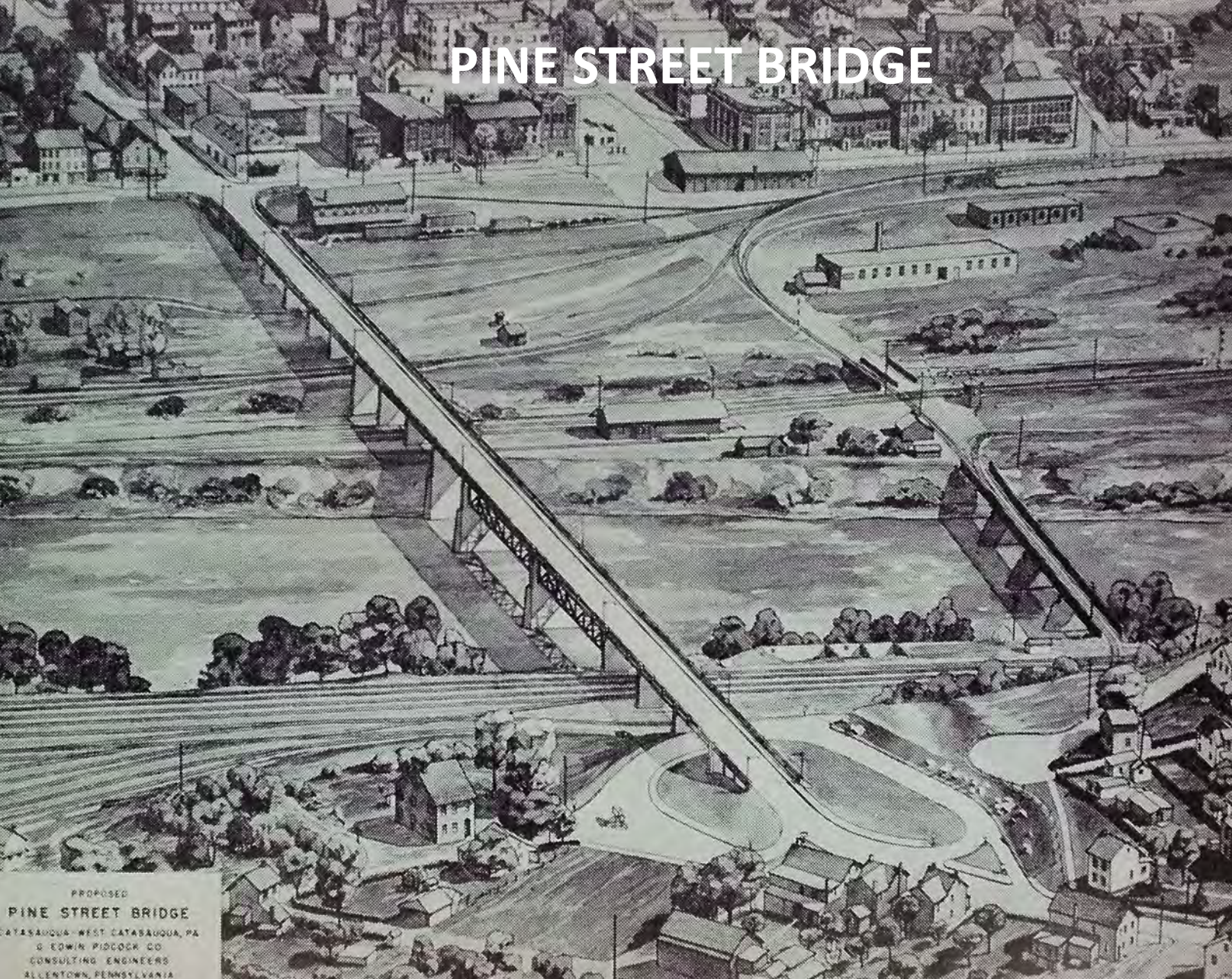
Rockhill Materials Unloader. Photo: T. Hermann Collection



Switching Rockhill Materials, 1961. Photo: T. Hermann Collection



Working the L&NE Yard, July 8, 1960. Photo: Neil Shankweiler



Above: Centennial History of Catasauqua 1853-1953, p.55.
Right: Tribune Photos/Morning Call Archive, T. Hermann Collection.





Switching along Front St. circa 1952. Photo: Bob's Photos.



Photo: Randolph Kulp, 1960 Lehigh Valley NRHS Collection



Tribune Photos/Morning Call Archive, T. Hermann Collection

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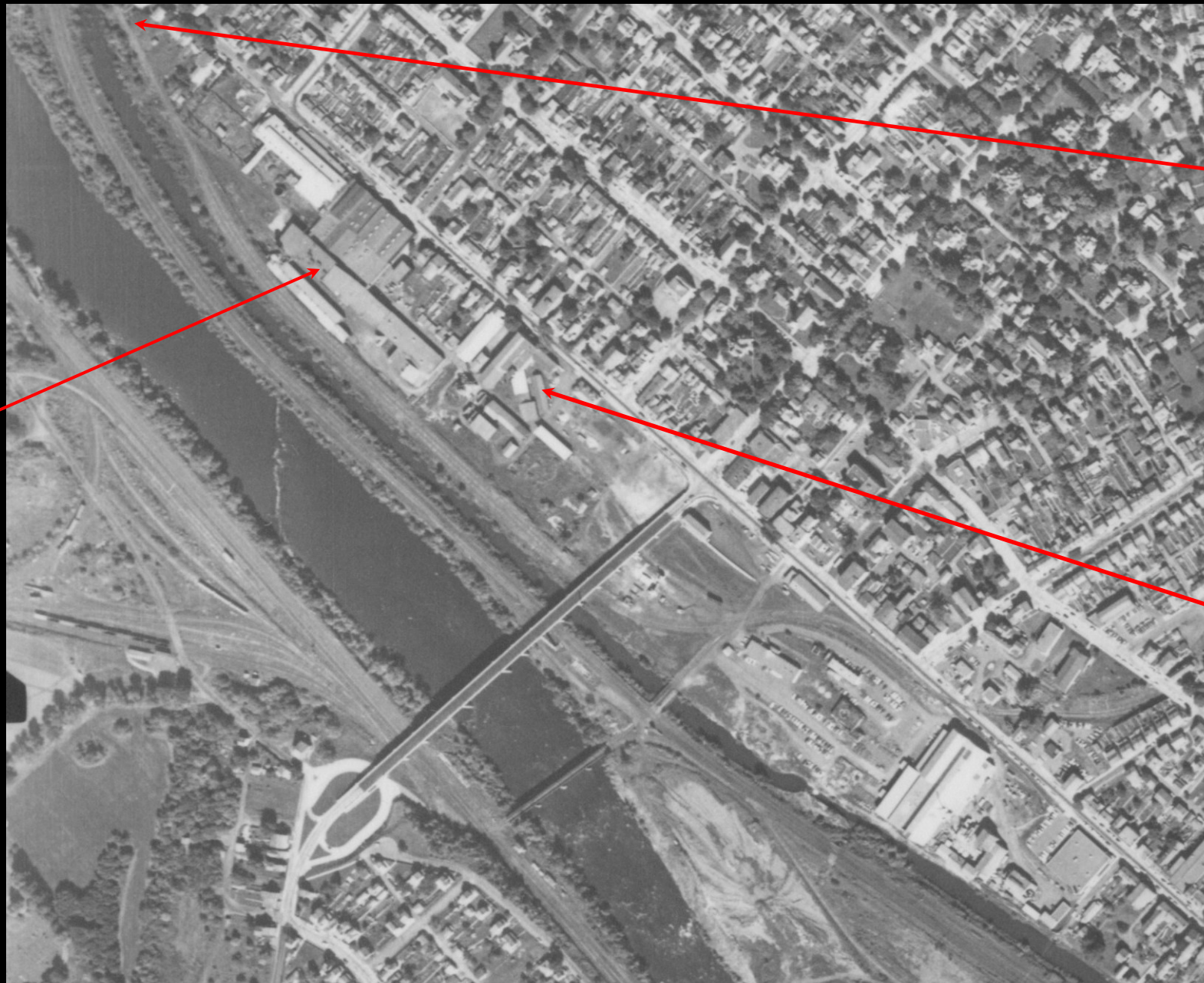
TOUGH TO BEAT

For all around fun, a game everybody can enjoy, you will find horseshoe pitching hard to beat. And for first quality equipment, you can't beat Phoenix. These drop forged steel shoes and stakes are made to take the roughest use. They're perfectly balanced, official weight and available now in pairs, sets or in quantity for school use. Through your regular supplier or direct.

PHOENIX
MANUFACTURING COMPANY
Joliet, Illinois Catasauqua, Pa.

PHOENIX
PITCHING
SHOES
DROP FORGED

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CLOSE COVER BEFORE STRIKING MATCH



Wint for Millwork

**DOORS
WINDOWS
MILLWORK**

Catasauqua, Pennsylvania

THE DIAMOND MATCH CO., BUFFALO, N.Y.

Customers North of Pine Street. Photo: PennPilot Photo Centers, October 1958



Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media



Photo: Dave Augsburger, ARHS Archives



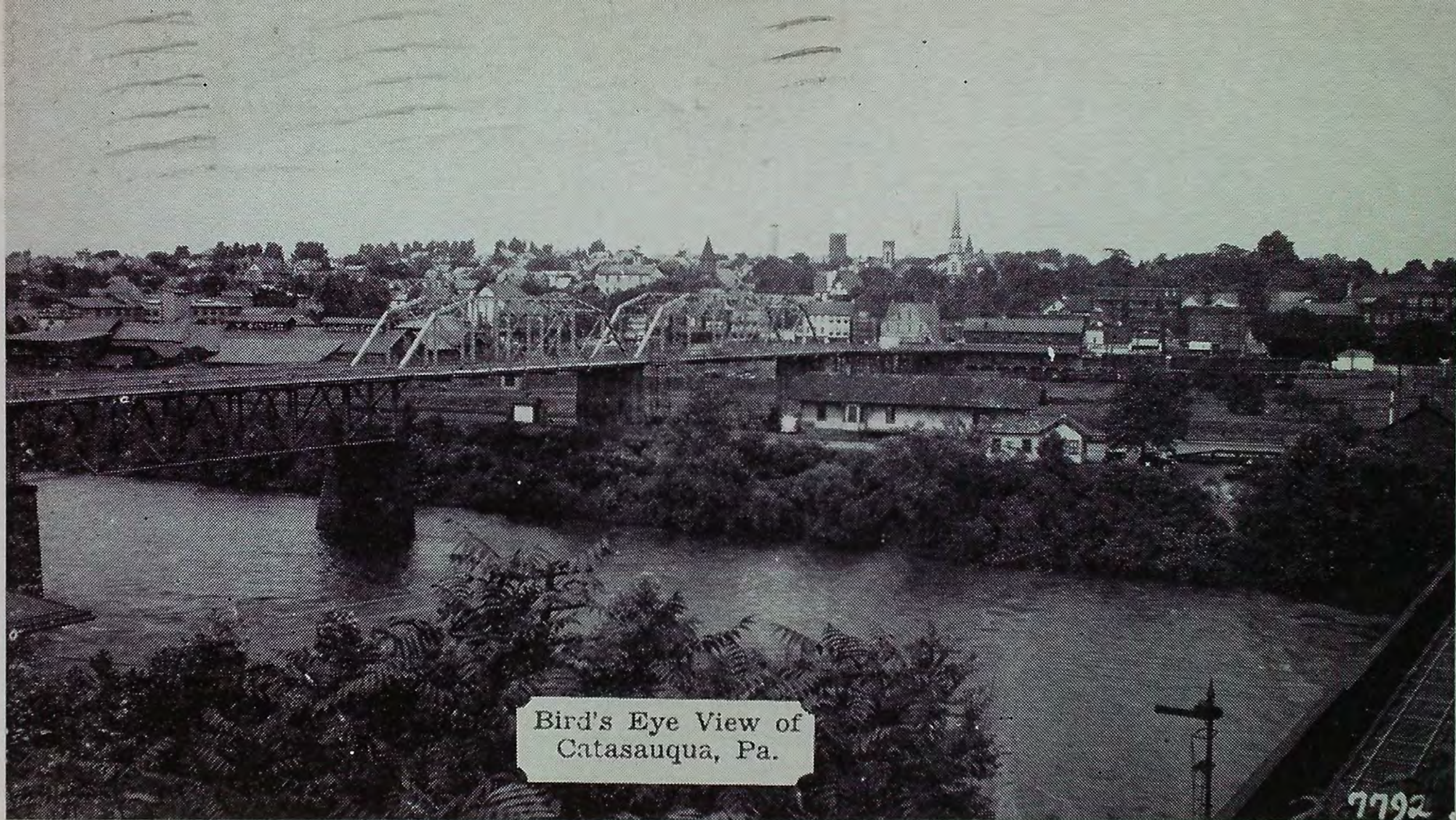
Eastbound across the CNJ and Lehigh Canal. Photo: Dave Augsburger



Catasauqua Tower, CNJ L&S Div. Photo: Charles Houser, Sr., The Houser Collection



Elko Scrapyard Switch. Looking west on the Lehigh River bridge. Photo: Dave Augsburg



Bird's Eye View of
Catasauqua, Pa.



Photo: T. Hermann, 2008



Photo: Donald Furler, 1948 – Center for Railroad Photography & Art



L&NE 207, West Catasauqua, 1945. Photo: Kermit Geary, Sr. Courtesy of Kermit Geary, Jr.



L&NE 207 at Illinois Railway Museum, 2001. Photo: Rick Parker, dotphoto.com



Photo: Donald Furler, Center for Railroad Photography & Art.



AMERICAN LOCOMOTIVE COMPANY

NEW YORK

Class, 404-DL-249

1500 B. H. P. Diesel Locomotive

Road Number, 652

BUILT FOR THE LEHIGH & NEW ENGLAND.

WEIGHT IN POUNDS WORKING ORDER		1-1500 H. P. DIESEL ENG. Turbo-supercharged			MOTORS				GAUGE OF TRACK
Total	Driving Wheels	Cylinders	Diam.	Stroke	Type	Number	Gear Ratio	Suspension	
249200	249200	12	9"	10½"	GE. 752	4	7¼/8	Spring Nose		4'-8½"
CAPACITY					WHEEL BASE				
ROAD & SWITCHING SERVICE									
Tractive Effort—Pounds	Speed—M. P. H.	@ 25 % Adhesion			Truck		Total		
62300	Starting				9'-4"		39'-4"		
42500	11				WHEEL DIAM.		AXLES		
	65	Continuous			Driving		Driving		
		Max. Speed			40"		Timken Bearing	Center	
							6½"	9"	

ORDER No. S-3118

October, 1949



Photo: Ken von Steuben, Dave Augsburg Collection



Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media, 2011



Still Frames: *Lehigh & New England*, Vol. 1, John Pechulis Media, 2011



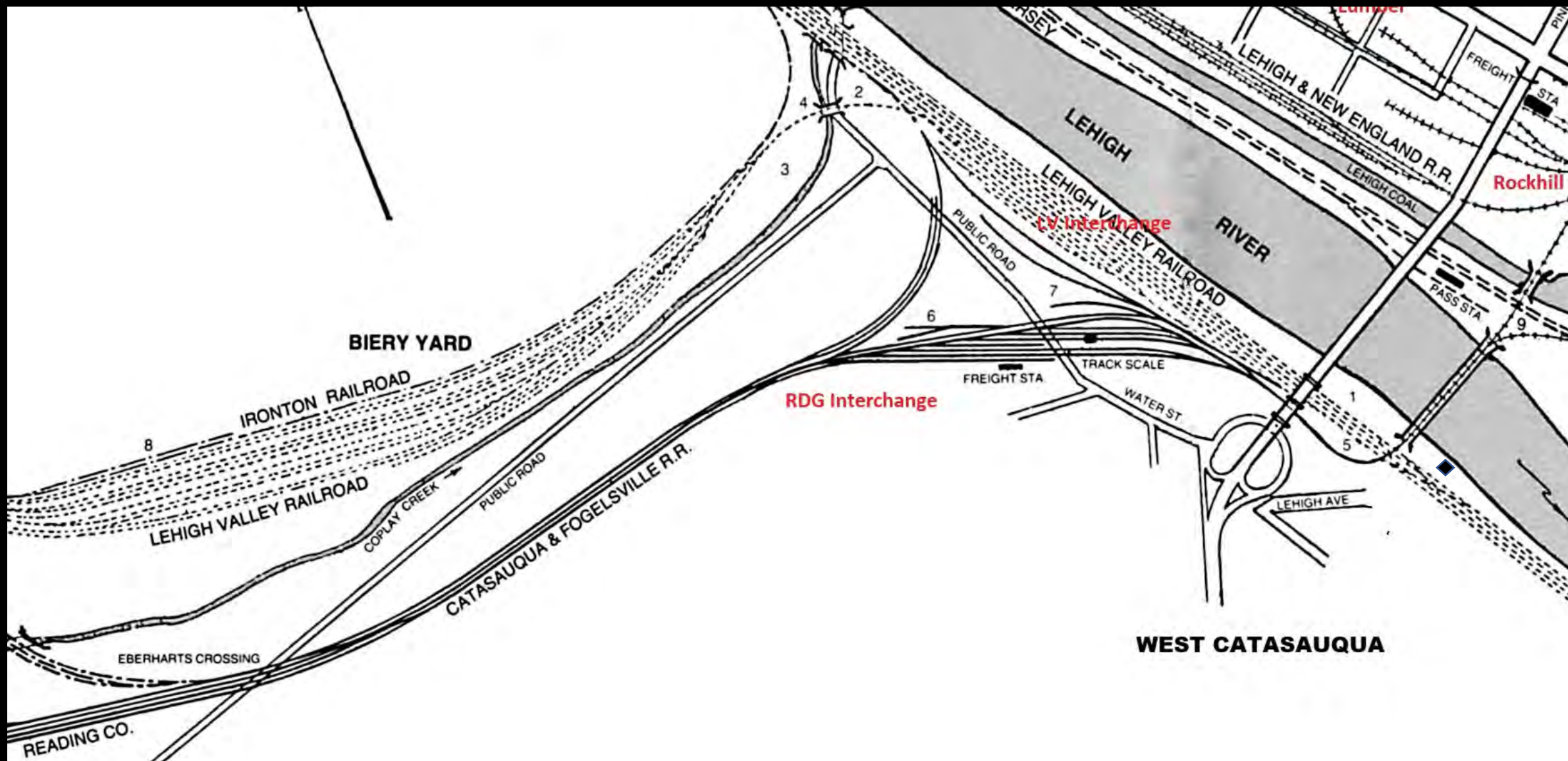
Photo: Neil Shankweiler, 1959



Still Frame: *Along the Bridge Lines to Maybrook*, John Pechulis Media, 2015



Still Frame: *Lehigh & New England*, Vol. 1, John Pechulis Media, 2011



LEHIGH VALLEY AND READING INTERCHANGES



Photo: Donald Furler. Courtesy of Alan Furler and the Center for Railroad Photography & Art



Photo: Kermit Geary Sr. Courtesy of Kermit Geary, Jr.



Photo: Dave Augsburger



Still Frame: John Pechulis Media



Photo: Todd Hermann Collection



Catasauqua Yard – Reading Company

- Built on a 1.28% westbound grade
- Long and narrow
- Ironton RR and L&NE interchanges
- Multiple wyes and two public grade crossings
- Symbol Freights: HCA-2/CAH-5

CATASAUQUA AND FOGELSVILLE BRANCH						
WEST	Distance from Catasauqua	Method of Operation	STATIONS	No. Main Tracks	Telegraph Signals	EAST
Grade						Grade
+ 1.28	0.0	Yard Rules	CATASAUQUA T.O.	SINGLE TRACK	S	- 1.28
+ 1.28	1.4		MICKLEY'S .....Y.L.		.....	- 1.28
+ 1.20	2.5		SEIPLE .....		.....	- 1.20
+ 1.22	6.3	Time Table & Train Orders	WALBERT	SINGLE TRACK	.....	- 1.22
- .62	8.5		CHAPMAN..... T.O.		CN	+ .62
- .85	11.1		TREXLERTOWN .....		.....	+ .85
- .81	12.5		MERKLE .....		.....	+ .81
+ 1.25	14.1		ALBURTIS T.O.Y.L.		AF	- 1.25

Aerial Photo: Penn Pilot. Timetable: T. Hermann Collection



Reading #533

Still Frame: John
Pechulis Media



Photo: Dave Augsburger



Reading C&F Yard Looking East, 1963 Photo: Tom Biery



West Catasauqua Penna 1963

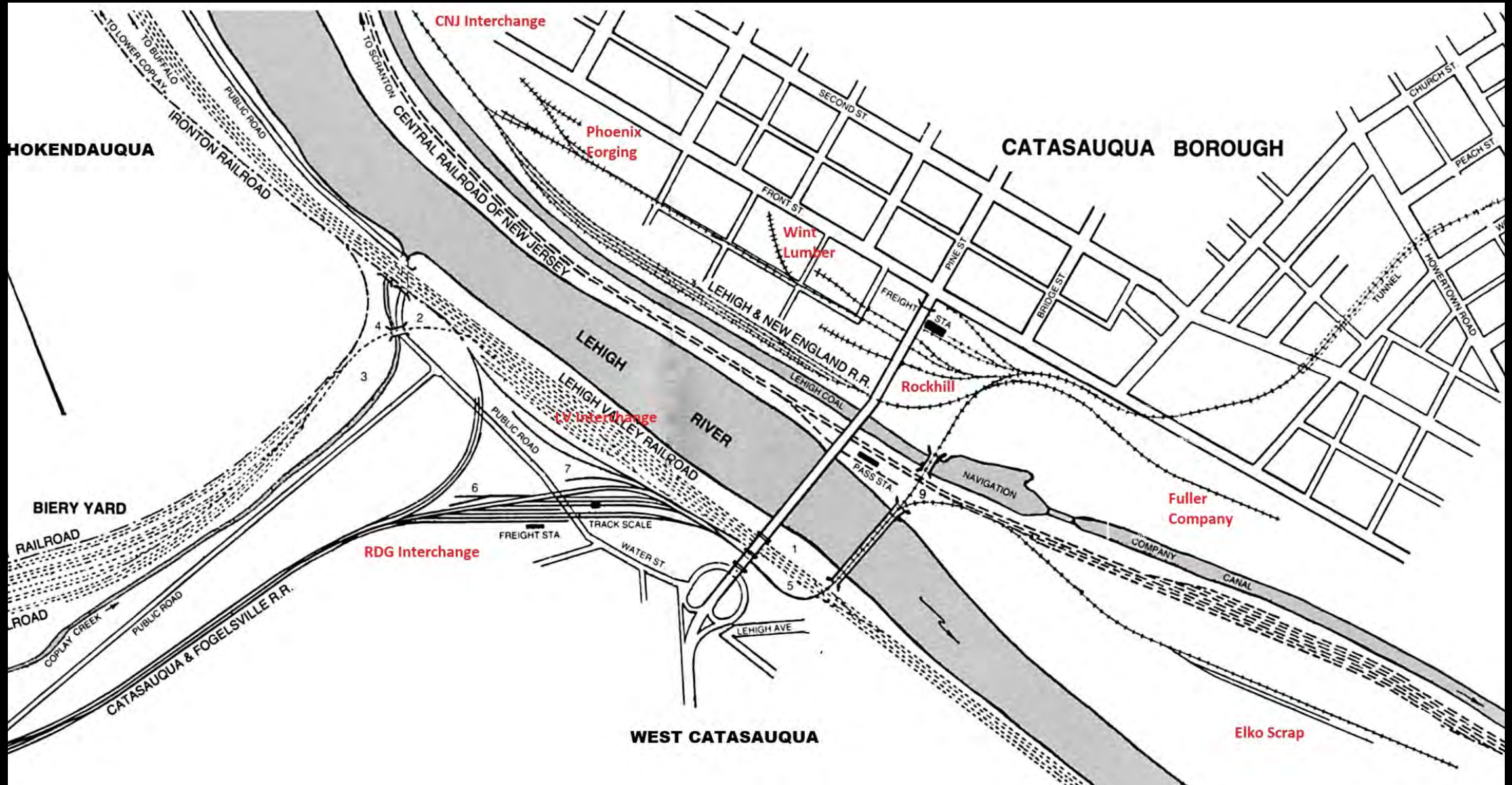
(C) Tom Biery



Reading Co, West Catasauqua Penna Yard view west 1963

(C) Tom Biery

Catasauqua, circa 1956



Design & Planning Goals:

- L&NE focus, but include CNJ, LV, RDG, Ironton
- Recreate key scenes/ favorite images
- Feature the West Catty Interchanges + local switching
- Untangle the spaghetti bowl
- Minimize compression
- Limit area of focus – relatively small section of RR
- Single deck, sincere
- Generous aisles
- Bulk of railroad in one half of the basement ~ 300 s.f.
- Design for operations

L&NE Catasauqua Branch

Scale: HO

Size: 16x23 + staging

Height: 49"-54"

Minimum Radius: 18"

Rail: Mainline - Cd. 83, Branches - Cd. 70,
Sidings - Cd. 50, Hidden Staging – Cd. 100.

Track: Mostly Micro-engineering

Benchwork: L-girder

Roadbed: $\frac{3}{4}$ " plywood + Homasote

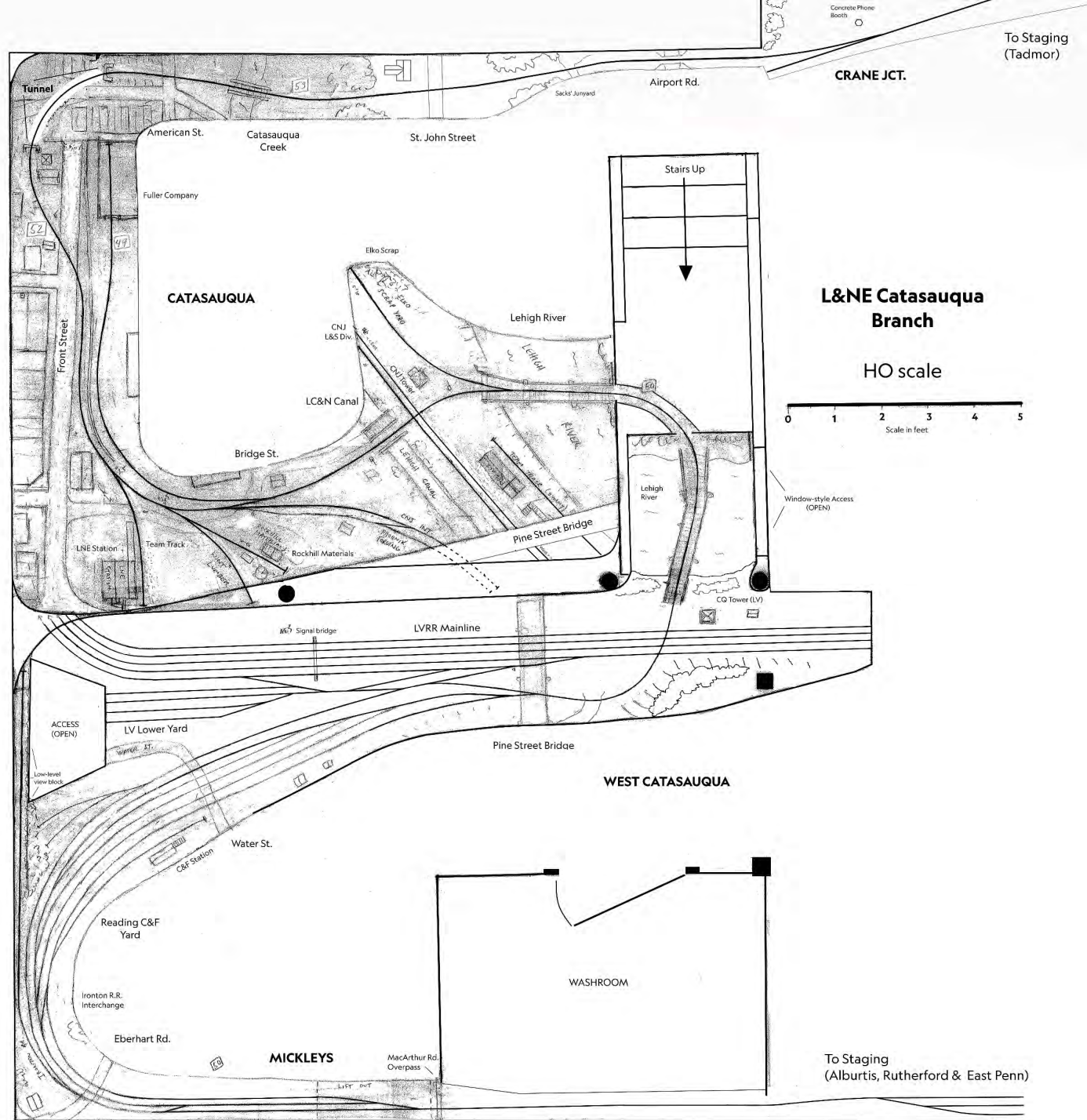
Control: NCE DCC

Turnouts: Manual

Backdrops: .060 Sheet Styrene

Beer: Yuengling Chesterfield

Time frame: Summer 1956





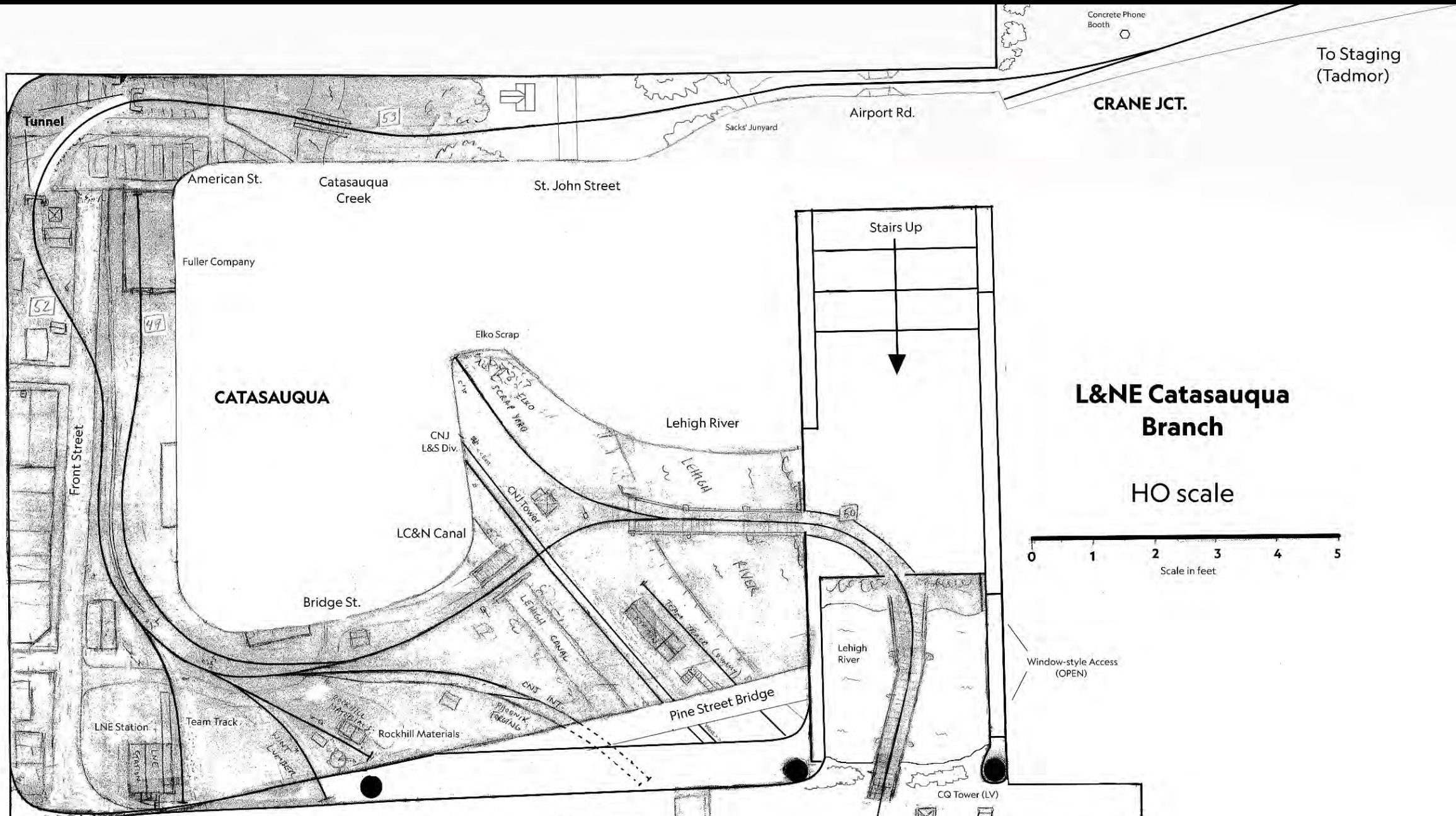














Crane Junction







CATASAUQUA CREEK



TUNNEL – EAST PORTAL



FRONT STREET



Video Still: *Lehigh & New England*, Vol. 1, John Pechulis Media





CROSSING THE CANAL, CNJ, AND LEHIGH RIVER



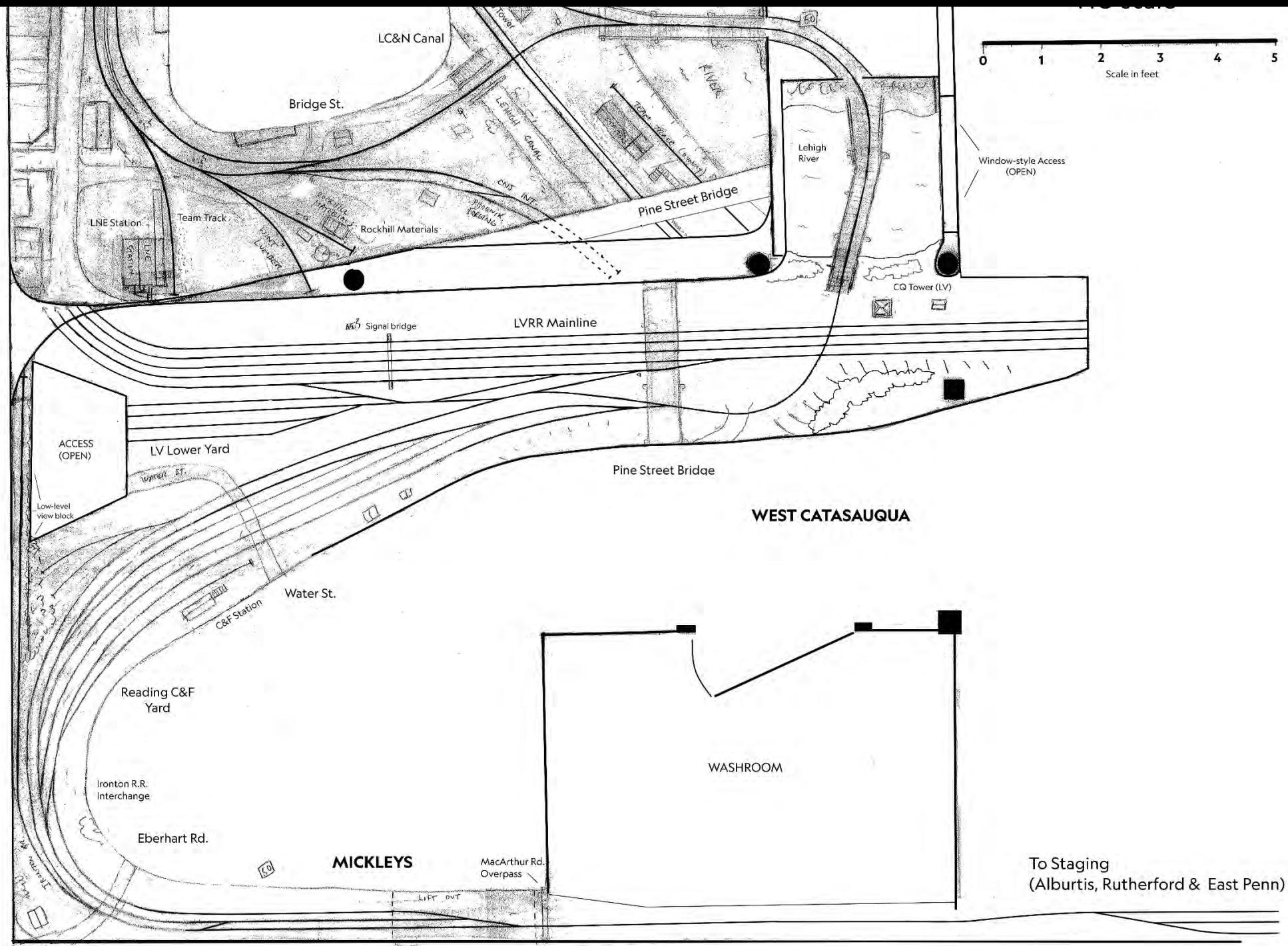




Photo: Scott Ruth

LEHIGH RIVER - REDUX





Lehigh Valley RR mainline







Photo: Kermit Geary Sr.





Ironton R.R.

C&F Yard – Reading Company





MICKLEY'S

LESSONS LEARNED:

Finish all room prep first!

Start building stuff earlier

Solid foundation for RR pays off

Dehumidifier = happiness

Plan/build for expansion

Just enjoy “the Layout Process”

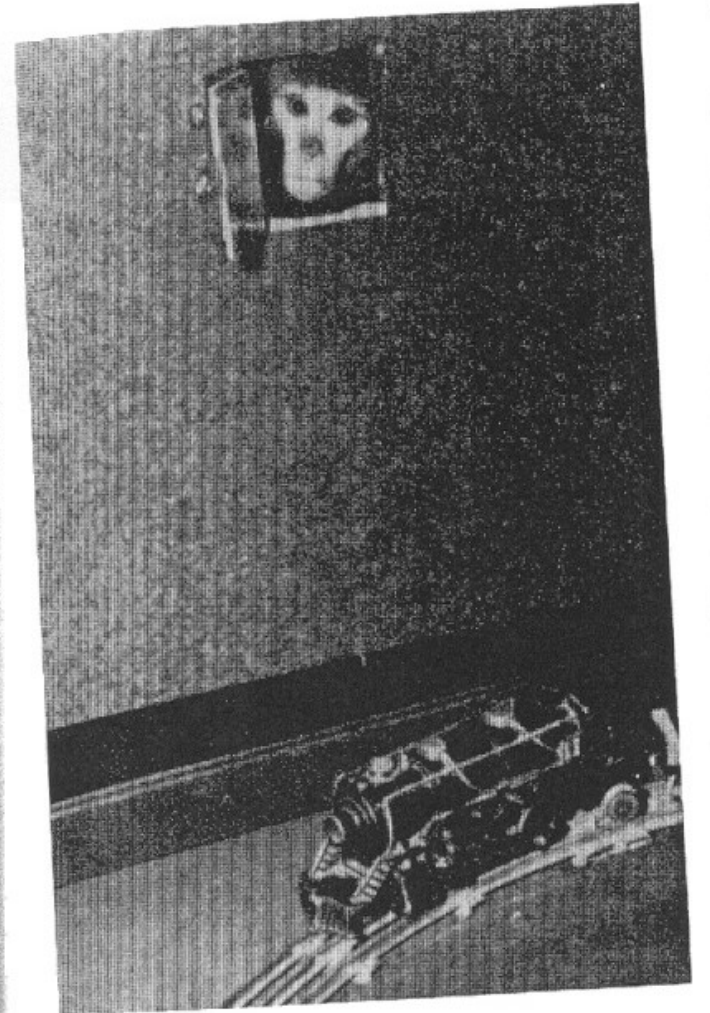


Figure 11.3

Curiosity

This monkey learned to perform a complicated task simply for the opportunity to look at a moving electric train.

SPECIAL THANKS

Anthracite Railroads Historical Society

Dave Augsburger

Mike Bednar

Tom Biery

Alan Furler

Kermit Geary, Jr.

Jim Hertzog

Andrew Koniers

Scott Lefever

Doug Lilly

Scott Lothes, CFRP&A

John Pechulis

Rob Quay

Jim Rowland, LV Chapter NHRS

Scott Ruth

David Schwartz

Neil Shankweiler

Joe Yurko





Email me at: RTH_628@yahoo.com