

From docks to mills

Born of coal-mining origins, Bessemer & Lake Erie became an iron-ore conveyor

BY ERIC HIRSIMAKI

Designed as a conveyor belt made of steel rails, the Bessemer & Lake Erie was put together in the late 19th century to bridge the 157 miles between its Lake Erie docks at Conneaut, Ohio, and Pittsburgh-area steel mills. For decades “the Bessemer” did its thing superbly. The large majority of tonnage was south-bound iron ore unloaded from lake boats at Conneaut and northbound coal loaded there into the boats. B&LE also served Erie, Pa., but little traffic originated there.

B&LE dates from March 20, 1865, when the Bear Creek Railroad was chartered to build a 28-mile line from the Atlantic & Great Western (Erie) in Shenango (Greenville), Pa., to coal mines to the southeast. Renamed Shenango & Allegheny in 1867, the line was completed in 1869, although extensions took it south to Butler, Pa., and Osgood, north of Greenville, in the 1880s. The growth of S&A, which connected with Lake Shore & Michigan Southern (New York Central System) at Osgood, was illusory, and it was sold at a bankruptcy auction in 1887.

The new owners changed the name to Pittsburg, Shenango & Lake Erie to reflect planned extensions north and south that would gain a share of the growing iron-ore traffic. (Lack of a final “h” on the Steel City’s name was in vogue at the time.) Accordingly, in 1892 track was laid on the old Erie Extension Canal’s tow-path north from Osgood to Wallace Junction, where trackage rights on the Nickel Plate were gained to reach Erie. More important in the long run was the 12.8-mile branch from Albion, Pa., to Conneaut [CON-ee-awt], where port facilities were built. Both the railroad and the docks were ready to handle the first iron-ore cargo on November 6, 1892. Affiliate Pittsburgh & Conneaut Dock Co. operated the docks.

Butler was PS&LE’s southern terminus for several years, as the road chose to interchange the ore there to Pittsburg & Western (Baltimore & Ohio) for delivery to the big city’s mills. “The Shenango” was in business, but it had been cheaply built and was not up to standards neces-



Symbolic of the heavy-haul Bessemer, one of its 47 powerful 2-10-4 Texas types crosses the huge Allegheny River bridge with Minnesota iron ore in October 1934. CLASSIC TRAINS collection

sary to move iron ore. Earnings failed to meet expectations, partly owing to the financial Panic of 1893 and partly to the slow development of iron-ore mining in Minnesota’s Mesabi Range.

Enter Andrew Carnegie

At this point Andrew Carnegie stepped in. Fighting the Pennsylvania Railroad’s high freight rates, in the early 1890s he was looking at alternatives, and he and other Pittsburgh industrialists considered building a canal from Conneaut to the Ohio River. Instead, Carnegie decided to build his own railroad.

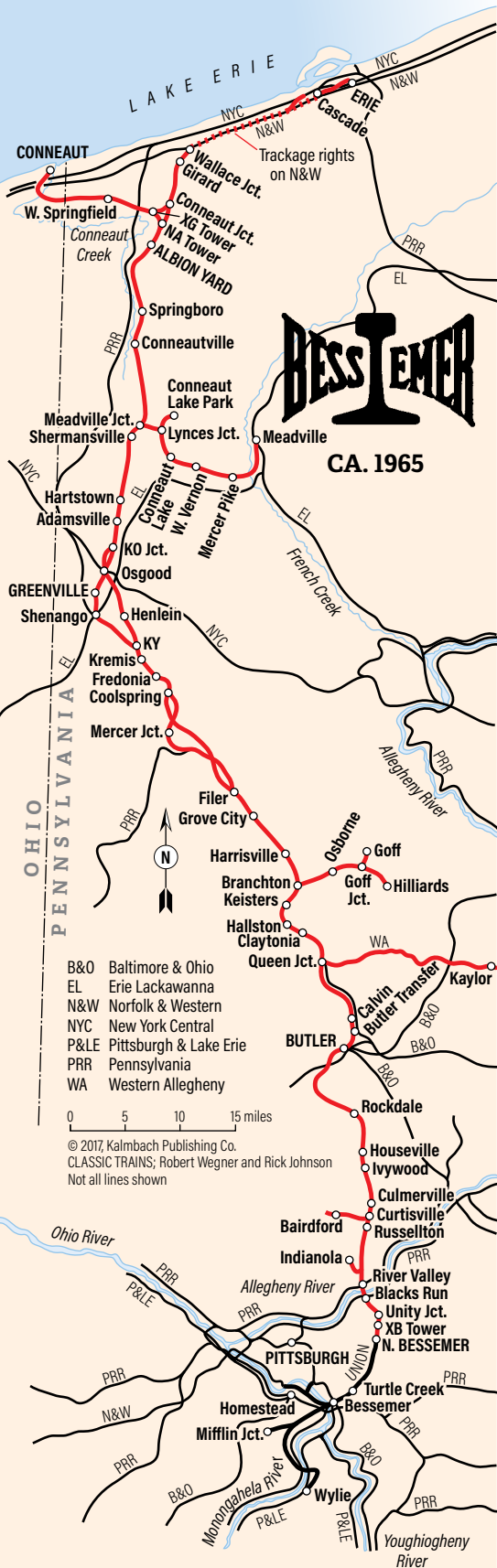
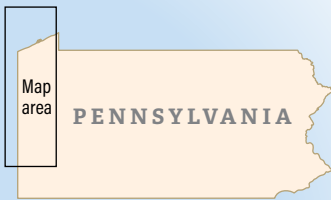
In January 1896 Carnegie Steel, the PS&LE, and his Union Railroad signed an agreement whereby the steel firm would build a link connecting Butler and the Union at North Bessemer; that all traffic would be routed on the new line into Pittsburgh; and that PS&LE and the

new extension would merge, with Carnegie Steel having controlling interest.

The 30-mile extension included two tunnels and a massive bridge over the Allegheny River 4 miles north of North Bessemer Yard. The double-track bridge (later to be paralleled by the Pennsylvania Turnpike’s) was 3,427 feet long and 160



Two F7s leave N&W trackage rights for home rails at Wallace Junction in March 1965. F7s would last on B&LE into the 1990s. James Scott



feet above river level. The Conneaut–North Bessemer line was finished by October 1897 and was renamed Pittsburg, Bessemer & Lake Erie Railroad.

Meanwhile the mighty PRR tried to get Carnegie to stop construction by offering to lower its rates, but he refused, although he agreed not to extend PB&LE south of Pittsburgh to coalfields and coke ovens in the Connellsville area. Considering the terrain, the new PB&LE was a remarkably straight railroad; if you drew a straight line between Conneaut and North Bessemer, the railroad was rarely more than 8 miles on either side of it.

The new owners began improving the physical plant immediately. Construction of the 8-mile “K-O Cutoff” (Kremis–Osgood) in 1902 bypassed Greenville, where the tracks ran through town; reduced a long southbound grade; and shortened the main line by 3 miles. At Osgood, the K-O Cutoff’s 1,724-foot-long, 64-foot-high Osgood Viaduct passed over NYC’s coal-and-oil Andover (Ashtabula), Ohio–Oil City, Pa., line; Erie Railroad’s main line; the Little Shenango River; and the original PB&LE [“Bird’s-Eye View,” Winter 2007 CT].

Other locations were upgraded, including an improved line across Hartstown Swamp north of Osgood. One obstacle that defied improvement was “Hog’s Back” in Conneaut, where a 1 percent grade had to be overcome climbing up from lake level; the remainder of the branch had a ruling grade of 0.8 percent. Over the years B&LE used three 2-10-4s, one in front and two pushing; four F7s each on a train’s front and rear; and later a pair of Alco RSD15s on each end to

take 13,500-ton ore trains to Albion yard.

PB&LE became Bessemer & Lake Erie in 1901 when it was leased to Carnegie Steel, though later that year it became part of the new United States Steel Corp. (USS), for whose operations it quickly became a vital link. It was said that ore mined in Minnesota could be made into steel in Pittsburgh five days later owing to USS’s efficient rail-water-rail system.

For heavy loads, big steam

The Bessemer always employed large locomotives, from 2-8-0s and 2-10-2s to the 47 brawny 2-10-4s Baldwin built during 1929–1944. Patterned after some Burlington Route 2-10-4s, they were some of the largest two-cylinder locomotives ever built. Although B&LE dieselized early, 18 of its 2-10-4s were among the last active steam locomotives in America, being sold in 1951 to sister USS road Duluth, Missabe & Iron Range, for which some worked into ’59. B&LE ran 0-4-0s, 0-6-0s, and 2-8-0s in yard service before buying 12 huge Alco 0-8-0s during 1936–43.

Texas type 643 survives in private ownership, inoperable, and 2-8-0 154 is at the Henry Ford Museum in Dearborn, Mich. All other Bessemer steam power was scrapped.

The Bessemer ran a modest regular passenger service, plus excursions to Exposition (Conneaut Lake) Park near Meadville, Pa., for many years behind 4-4-0s and small 4-6-2s. Steam-generator-equipped SD7s took over in 1952, but the passenger locals between Erie and Greenville ended in 1955.

B&LE’s traffic base was iron ore, coal, limestone, and coke, plus large quantities



Bessemer would begin shifting from B-B F7s to C-C non-turbocharged SD models in 1962. On September 22, 1990, four SD38s roll south at Mercer, Pa. After 36 “first-generation” SD7s, 9s, and 18s, 32 SD38s of four varieties joined the Bessemer’s roster beginning in 1967. James Scott



Six-motor, 1,500 h.p. 403, at Conneaut in 1971 (left), was one of 7 such Baldwins; 886, one of six big Alcos from Missabe, posed at Albion in 1965.

of finished steel products and scrap. For many years southbound ore predominated, but things changed in 1964 when a new coal dock with modern equipment was built at Conneaut to serve increasing traffic to Canadian power plants. Coal business grew over the years to the point that in the 1980s, it and ore traffic levels were equal. Ore began declining in the 1980s and coal shipments likewise after 2000 when Canadian plants began converting to natural gas. To handle ore and coal, B&LE always fielded a large fleet of hopper cars. It bought the first steel railroad car ever (a hopper) and later fielded thousands of distinctive brown triple hoppers with double brake beams.

Variety in diesels

Road trains were dieselized by the end of 1952, but steam lasted until May 14, 1953, when 2-8-0 156 tied up at Butler. B&LE's first diesel was a 1936 Westinghouse 530 h.p. steeple-cab, but dieselizing didn't begin in earnest until 1949 when Baldwin delivered a 1,000 h.p. switcher and two 1,500 h.p. C-C road-switchers. Bessemer tested a pair of Baldwin Centipedes, but settled for EMD's 1,500 h.p. F7 model, buying 28 cab units and 26 boosters during 1950–53. It added 7 more Baldwin road-switchers, 2 Alco S4s, and 8 EMD SD7s. The 104 steam locomotives on hand January 1, 1950, were replaced by 75 diesels. Some early units were black, but B&LE then standardized on the familiar orange-and-black livery.

Bessemer began converting to six-motor road units in 1962 when it sold 11 F7As and 11 F7Bs to Baltimore & Ohio. Ex-B&LE F7s also would find new homes on industrial operations and short lines across the land, and several still exist, some still numbered in the 700 series.

The money from the B&O sale was used to buy 7 new EMD SD18s, which were supplemented by 27 SD9s, 2 SD9Ms (Missabe Road rebuilds), and 6 Alco RSD15s from the DM&IR during 1964–72. The Alcos migrated in 1973 to another mining road, Cartier Railway in Quebec, which finally left B&LE an all-EMD road. Second-generation EMDs began arriving in 1967 with 3 SD38s, followed by 6 SD38ACs, 23 SD38-2s, 11 "SD40T-3s" (rebuilt former Southern Pacific "Tunnel Motors"), and a handful of secondhand switchers. For several years the Bessemer; the Missabe Road; and the Elgin, Joliet & Eastern conducted U.S. Steel-family "trades," as SD9s and then SD38s would swap around for testing. Some would go back "home," and some would be sold to the other USS road.

On December 31, 1967, the Bessemer re-acquired the 20-mile remnant of the Western Allegheny Railroad, which it had operated for its first six years, until 1908. WA subsequently was a Pennsy property until 1967 when, with a big on-line limestone quarry closing and coal traffic on the wane, PRR sold it back to B&LE. Bessemer assigned some of its few remaining F7s to the Western Allegheny, which attained some fame as the last Class I-related railroad to use F units in daily freight service, which ended in 1992.

Ultimately, big change

The drastic restructuring of the American steel industry after 1982 caused U.S. Steel to transfer its railroads, Pittsburgh & Conneaut Dock Co., and lake-boat fleet into a subsidiary, Transtar, Inc., in 1988. Blackstone Capital Partners acquired a 51 percent interest in Transtar in 1998 and then, in 2001, bought the share of USS, Inc. (the "new" name for United States Steel). Transtar then formed Great Lakes Transportation, LLC in 2001 to operate the Bessemer, P&C Dock, Missabe Road, and the lake boats.

Major changes occurred in this period. Iron-ore tonnage declined from 8 million tons in 1982 to 1.8 million in '89 before rebounding to 4.2 in 2011. Coal shipments at Conneaut also fell, from 10.2 million tons in 1979 to 6.4 million in '89 to not a single coal shipment during 2009–13. Coal continues to be interchanged at North Bessemer, but ore and coal tonnages at Conneaut will never return to what they were. Bessemer & Lake Erie's need for motive power plummeted, and the roster dwindled from 74 units in 1982 to 18 in 2004.

For many years B&LE was double track, but most of the second main was removed as traffic fell and CTC signaling rendered it redundant. Trackage rights into Erie were dropped in 1995, making



Five Union Pacific U30Cs fresh out of General Electric's Erie, Pa., factory, spice up Extra 870 South, led by an SD38-2 and an SD9, at Platea, Pa. in May 1973. Three photos this page, James Scott

Wallace Junction B&LE's northeast end.

In 2004, Canadian National purchased the Missabe Road ["King of the Iron-Ore Haulers," Winter 2013 CT], B&LE, P&C Dock, and the lake boats from Great Lakes Transportation. B&LE is operated as CN's Bessemer Subdivision, although it is hundreds of miles from a physical connection with CN's other U.S. lines.

Today, the only traffic to Wallace Junction is light engines picking up cars for delivery to an industry in nearby Girard. Interchange with CSX (former New York Central) now occurs in Conneaut near the upper coal facility, and no longer do B&LE "drag" crews shuttle between Conneaut and Albion, from where other crews took the trains to North Bessemer. Trains operate as turns in either direction out of Greenville, historically home to B&LE's shops but today the new operational hub. Of the 18 diesels on CN's Bessemer Sub, 4 are from the traditional B&LE SD38 series, augmented by a few SD40T-3s and Illinois Central SD70s. But like Missabe maroon and IC black, Bessemer orange has all but vanished, leaving behind a proud legacy that helped build the American steel industry. And the old Bessemer & Lake Erie is a mere shadow of itself as an afterthought in Canadian National's vast system. ■

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B&LE FACT FILE



(comparative figures are for 1929 and as noted)

Route-miles: 209; 205 (1983)

Locomotives: 140; 74 (1982); 51 (1992); 18 (2004)

Passenger cars: 46; 0 (1982)

Freight cars: 12,707; 5,127 (1992)

Headquarters city: Monroeville, Pa.

Recommended reading: *The Bessemer & Lake Erie Railroad 1869-1969*, by Roy C. Beaver (Golden West Books, 1969); *Bessemer and Lake Erie Railroad in Color*, by Robert F. Lorenzo and Nathan S. Clark Jr. (Morning Sun Books, 1994)

Source: *Historical Guide to North American Railroads*, Third Edition (Kalmbach, 2014)