Writers such as Archie Robertson, Lucius Beebe, and William S. Young prepared us for short lines of an unhurried nature. Far from the hustle and bustle of big-city commerce, these railroads went about their business in a leisurely way. Robertson captured such lines in 1945’s *Slow Train to Yesterday*; Beebe immortalized them in his 1947 classic *Mixed Train Daily*; and Young kept Trains readers informed about the little roads well into the 1950s with his monthly column, “Short Lines.”

The 1980 Staggers Act [page 10], the subsequent deregulation of railroad rates, and Wall Street have combined to end all that. Competition from unit trains, intermodal double-stacks, and the China trade, plus cell phones and the Internet make everything move faster, and the slow train that Robertson once wrote about is gone. It’s a smarter, faster world out there, and short lines have benefited. Yet, the challenges have never been greater. That’s why shortline operators and fans are keenly interested to know what it takes to keep their railroads running in the black. The short answer is to pay attention to the “Rule of 100,” a rule of thumb we’ll explore, and for the railroads to become “valued-added” short lines. We’ll also explain that concept in depth, but first, let’s survey the shortline world to understand where it is and what’s ahead.

The United States has about 600 short lines. They range in size from Arkansas’ 2-mile Delta Valley & Southern to the 500-mile Kyle Railroad in Kansas. Taken as a whole, short lines operate more than 52,000 route-miles of railroad, or about 30 percent of the U.S. rail system. They handle more than 12 million revenue units a year.*

Of the short lines operating today, 16 are owned by Class I railroads, and they fall into two categories: switching and terminal railroads, and actual short lines like the Winston-Salem Southbound (a joint property of Norfolk Southern and CSX, and a holdover from joint control of Norfolk & Western and Atlantic Coast Line) or the Texas Mexican (Kansas City Southern). The three best known are probably the Belt Railway of Chicago (owned by six Class Is), probably the biggest switching and terminal railroad; the Indiana Harbor Belt (Canadian Pacific, NS, CSX); and Houston’s Port Terminal Railroad Association (BNSF; Union Pacific). Together they operate on some 1,900 route-miles of track and handle roughly 4.5 million revenue units annually.

More than two dozen industry-owned railroads exist to serve their corporate owners’ core businesses. U.S. Steel’s Transtar Inc. (Union; Elgin, Joliet & Eastern; Birmingham Southern; and others) and Weyerhaeuser (Columbia & Cowlitz; Texas, Oklahoma & Eastern; and others) are two of the biggest. These roads account for nearly 1 million annual revenue units and operate more than 1,000 route-miles of railroad.

The switching and terminal railroads, Class I-owned short lines, and the industry-owned roads together add up to 48 companies that own “We count revenue units rather than cars because intermodal containers are revenue units that can load two to four per platform or car. Also, a five-platform articulated intermodal set is technically a “car” because it carries one unit.”

David Hoge

Caddo Valley Railroad Co.
Headquarters: Glenwood, Ark.
Route: 52.9 miles from Gurdon to Bird Mill, Ark.
Interchange: Gurdon, with UP
PREX GP16 1610 cuts through the piney woods near Gurdon, Ark.

It’s a great time to be in the railroad business, but if you’re a short line that’s going to make it, you’ve got to learn how to add big-time value.
companies, followed by RailAmerica, RailTex was one of the first holding lines: independents and lines that are 6 million revenue units on just un toward more of the latter and fewer of them out, and non-Class I or industry-short lines may be a bit thin.

36-42], Watco, and OmniTRAX. G&W [see “First Coast’s First Days,” pages 36-42], Watco, and OmniTRAX. Between Class I line transfers to the known players and industry consolidation, it’s gotten to the point where the top 20 shortline operating companies ranked by annual revenue units own and operate 170 separate railroad names with more than 26,000 route-miles of track moving 4 million loads a year. Pure short lines — that is, the total number of lines less the switching and terminal railroads, steel roads, and holding-company railroads — number just under 400 carriers with about 30,000 route-miles handling 3 million loads a year. That’s an average of 100 revenue units per mile per year, a handym number to keep in mind because we’re about to explore that Rule of 100. The shortline world has many rules about 100 cars per mile per year, $5,000 per mile per year in track maintenance to keep FRA Class 2 track (25- mph) up to specs, 12 gallons of diesel fuel per car handled yearly, and other restrictions of the lower grades. The Rule of 100 is perhaps the most important of all. It’s a useful tool to have when you’re trying to figure out whether the “Fallen Flag & Eastern” will make money. The Rule of 100 works like this: The typical short line gets an “allowance” that averages 20 percent or less of the Class I revenue per car — call it $2,000 based on calendar year 2004 Class I revenue per revenue unit other than coal or intermodal. Call it $250-$300 per revenue unit for the Class I railroad. A short line with 4,000 loads a year is looking at annual revenues of $1.2 million, tops. A well-run short line ought to be able to meet its expenses for 80 percent of revenues, implying an operating budget of roughly $1 million. Payroll and benefits will take about 30 percent of revenue. Locomotive ownership, upkeep, and fuel will consume another 20 percent of revenues, and car-hire, the amount one railroad pays another to use the latter’s cars, will take another 20 percent. That’s 70 percent of revenue, or $840,000, and there’s been no money allocated yet to track. Track will consume about $5,000 per mile per year in ties and surfacing to meet FRA Class 2 specs, the minimum required for maximum freight-train speeds of 25 mph. Why, you may ask, does a short line need 25-mph track? The answer is because it’s twice as fast as Class I (or worse, “excepted” track) and doesn’t carry hazmat and other restrictions of the lower grades. Do the math and you’ll see that a 15-mile railroad needs $75,000 a year just to keep the track up to Class 2 specs. A 30-mile railroad needs $150,000, and a 60-mile railroad needs $300,000. Applying the Rule of 100, a 4,000-car railroad will support 40 route-miles, which, at $5,000 per mile per year, comes to $200,000, leaving our sample railroad $60,000 to keep the lights on and pay the insurance. That’s why the 100 cars per mile per year average for the independent short lines may be a bit thin.

Sixty percent of short lines handle fewer than 4,000 cars a year, which is a kind of cut-off for profitability. You still need two train-service people, two track workers, a clerk, and a manager. It still takes upwards of $600,000 a year just to open the doors before the first car arrives at interchange or the first spike is hammered. Lines this small — the proverbial 10 miles of rust and a cloud of dust — won’t make it. But the short lines that focus on new importance as the major folk Southern unit coal trains, taking mileage out of an all-NS route and providing better use of assets. In fact, asset management has taken on new importance as the major railroads look to improve returns on invested capital. The trend is toward minimizing what Watco calls consumables per revenue unit: car-hire expense, fuel burn, and man hours. Tom Hund, chief financial officer at BNSF, will tell you that 75 percent of the money you don’t spend if you don’t run

and operate more than 3,000 route-miles of railroad, and handle nearly 6 million revenue units every year. Back them out, and non-Class I or industry-affiliated short lines handle the remaining 6 million revenue units on just under 50,000 route-miles of track among 550 different operating companies. Here is where it gets interesting. There are two types of non-affiliated (no Class I or industry ownership) short lines: independents and lines that are part of holding companies. The trend is toward more of the latter and fewer of the former. [see “Big players ...” page 35]. RailTex was one of the first holding companies, followed by RailAmerica, Genesee & Wyoming, and Railcar Management. Then came consolidation as RailAmerica acquired RailTex, and Genesee bought Railcar Management. Further, North American RailNet over the past year and a half sold its five lines to OmniTRAX (three), Savage Industries (one), and Watco (one).

There is also consolidation among shipper-owned short lines. Just last year, Arizona and Georgia Pacific sold their industry railroads to RailAmerica and Genesee & Wyoming, respectively.
The parallel thread is maximizing merchandise tonnage per scheduled train. That means, as NS has demonstrated with its Thoroughbred Operating Plan, scheduling the core network first and then building the feeder network around it. So, with all this unitizing and scheduling going on, what’s the poor short line to do? The only option is to take part. Take stone and gravel, for example. Say there are three stone users on your short line that bring in 75 cars a week among them. Your interchanging Class I railroad wants to run 75-car trains on a 24-hour turnaround at destination. If you’re going to split this train among three customers, your best bet is to lease 75 cars yourself so that when the Class I shows up for its train, you have one to give it.

Single-car customers are best served with a page out of the AIM playbook. The first step is to help customers accelerate the load-unload process to get cars back into the pipeline more promptly. With understanding will come a list of short-term action items for both railroad and customer. Finally, measurement — are we going where we said we’d go? Results, so far, are encouraging because taking assets out of the move lowers cost, lowers rates, and improves profitability for all. What better incentive could one ask for?

So it is that short lines do have a niche in this world of unit trains and scheduled operations. If ever there was a time to be in the shortline business, this is it, and what I call the “value-added” short line is in the best position of all. Value is added to the customer’s process where the short line can enhance the logistics chain, operations, and inventory management, enhancing the customer’s advantage against his competitors. No less an authority than management and leadership consultant Tom Peters reminds us that “sustainable market share comes through relative perceived product or service quality — relative with respect to the competition, perceived by the customer” (see Peters’ book Thriving on Chaos, page 67). To be sure, railroads are not known for providing a world-class service to customers in supply-chain management. But they ought to be.

The short line that can spot loads so as to fill inventory voids as they are created, eliminate demurrage, keep rates down by helping customers turn cars faster, and shorten the time lag between load release and the Class I core train, will be perceived as a quality supplier. Short lines such as Watco’s Eastern Idaho even have gone so far as to have their customers’ releases trigger Union Pacific trip plans through to the destination. And if being able to tell a customer when his shipment will arrive isn’t adding value to the rail transportation product, I don’t know what is. As Yogi Berra is reported to have said, “You can observe a lot just by watching.” How a short line is managed is reflected in the way it looks. Bill Strawn, president of the Ohio Central

What is a short line?

If you go looking for the definition of a short line, good luck. There is no hard and fast rule on them. The Association of American Railroads classifies railroads according to annual operating revenues:

- A Class I railroad earns more than $267 million.
- A Class II railroad earns less than $267 million but more than $21 million.
- A Class III railroad earns $21 million or less.

And so it is generally agreed that a short line is a Class II or III railroad that serves a limited market and is locally managed or owned. Short lines are typically paid a percentage of the Class I revenue for every car moved and rarely participate in rate negotiations with other railroads or shippers. — Roy Blanchard

The BNSF initiative centers on its AIM Strategy (Assess the carload product, Improve the carload model, Maximize the carload network). The effort starts by examining the resources required by commodity lane (one commodity moving between specific points) for such things as volume, equipment needs, and track speed. With this information, planners then can see where to improve productivity and move on to service design, customer involvement, and, most importantly, measurement and feedback.

This, mind you, comes from the railroad that generates 19 percent more revenue from intermodal and coal than it does from all other commodities combined, by far the highest percentage differential in the industry. On the other hand, CN’s merchandise franchise (everything but (intermodal) and coal) represents 73 Canadian cents out of every dollar in revenue. What could two railroads with franchises at opposite ends of the single-carload spectrum have in common?

The shift to unit grain trains helped doom both intermodal and coal well. The fuel, and dollar of car-hire. Yield per train-crew hour, gallon of produce, yet again, greater revenue

As Yogi Berra is reported to have said, “You can observe a lot just by watching.” How a short line is managed is reflected in the way it looks. Bill Strawn, president of the Ohio Central
shortline network, correctly maintains its customers' supply chain dynamics and knows "train time is any time" no longer works. To do better for them, the value-added short line switches its customers from the gate back and release them as needed to rectify it. That's what being a value-added short line is all about.

There are, as we noted at the opening of this article, many shapes, sizes, and approaches to the shortline basis. However, the economics and commercial aspects are common to all. Being perceived as a quality supplier in the eyes of the customer will get you through times of no money better than more and forget you through times of no customers.

After so many years of managing a shrinking asset base, the industry leaders have to think in terms of growth. And isn't it interesting that the 2005 stock price performance of the best-run North American railroads eclipsed that of so many e-business flippers from e-Bay to Yahoo?

Yes, consolidation within the shortline industry will continue, and the big will get bigger. Let the remaining market room for the value-added short line regard less of length. The small road no just as wide as the big one and has just as good a shot at being another value-added short line.

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