

The Port Terminal Railroad
Association's centennial
GP38-2s work dockside at
the Houston Ship Canal on
Aug. 13, 2024. Jim Allen

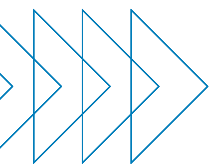


THE HEART OF HOUSTON

The Port Terminal Railroad Association keeps carload traffic moving

by Bill Stephens





Jeremy Thomas, the first-trick yardmaster at the Port Terminal Railroad Association's North Yard, spends a few minutes going over switch lists with a crew that's building an outbound train. With that task checked off his to-do list, you get a moment to ask him about his typical day. "It's nonstop, all day, every day," says the yardmaster, who everyone calls J.T. "Nonstop phone calls, nonstop radio."

And then, right on cue, he proceeds to prove it.

One phone is glued to his right ear. A second conversation carries on via speakerphone. On the radio, a train crew interrupts to ask for permission to make a shove move, which he approves in his role as dispatcher for the railroad's North Shore Subdivision.

A Union Pacific train crew walks into the office, prompting J.T. to pull up a video feed of the yard's north end. He zooms in and spies their empty grain shuttle train on track 60. He lets the crew know where they can find the train, GSHOSRO8. J.T. hands the crew paperwork, asks them to make sure the end-of-train device is on, and tells them to have a safe trip.

Then it's back to the conversation in his right ear. "We'll squeeze 141 in here, I believe," J.T. says, referring to the in-



bound job from Manchester Yard. "We'll get that high-and-wide out, too."

Finally, a nagging question from the speakerphone: Where are a handful of freight cars? J.T.'s fingers move to the keyboard to search the railroad's new car management system.

It's only the third day since the software went live in early April, so the answer doesn't come as quickly as he would like. "We're playing catch up," he explains.

You get the sense that if J.T. had an extra pair of hands he'd juggle even more tasks and somehow manage to keep all the balls in the air — and North Yard and the North Shore Sub running smoothly.

The yardmaster's office is a lot like PTR A itself. There's always something in motion. And there better be, given the 2,500 cars that PTR A switch jobs must spot and pull every day at the 226 customers that line both sides of the Houston Ship Channel. On this April day, the first shift alone will see 15 engine starts, with each job covering its assigned territory on PTR A's 185 miles of track. Second shift will have 17 engine starts, while the third trick will have a dozen. Plus, one crew per shift also handles inbound loaded and outbound empty Union Pacific, BNSF Railway, and Canadian Pacific

One of the railroad's 28 leased GP38-2s experiences typical port-area scenery while working the Equity Lead. Two photos, Bill Stephens





At Manchester Yard, PTRA job 240, left, pulls a cut of cars onto the lead while job 241 shoves a cut of cars on April 10, 2024.

Kansas City unit trains of grain, coke, coal, ethanol, crude oil, and steel pipe.

This is, in other words, one busy railroad. It's a key cog in the machine that is the Houston Terminal and its complex web of main lines, yards, junctions, and industrial trackage. "You basically control the heart valves of the terminal here," PTRA General Manager Ricky L. Wells says. "If we start holding trains out, it just creates a black hole and it'll suck everything in."

These days there's no need for heart bypass surgery at PTRA. Last year the railroad fluidly handled 321,647 cars and intermodal containers. The roughly 59%-39%-2% split of this volume reflects the pecking order of the Class I railroads that operate in Houston. UP's No. 1, BNSF plays second fiddle, and CPKC is a distant third.

Commercially, there's no understating PTRA's importance. It's a major source of traffic for UP and BNSF in Houston. And it's absolutely

critical for BNSF because of the access it provides to lucrative chemical business that UP otherwise has locked up in former Southern Pacific and Missouri Pacific territory on the Texas Gulf Coast.

At a time when merchandise traffic is in decline in most areas of North America, PTRA remains a carload stronghold. Yes, the railroad handles BNSF international double-stack moves in and out of the Barbours Cut intermodal terminal. And, yes,

those grain trains come in hot and heavy from September through February. But this is a railroad dominated by tank cars and covered hoppers for the petrochemical industry, with steel coil cars, bulkhead flats of pipe and steel, and the occasional boxcar sprinkled in for good measure.

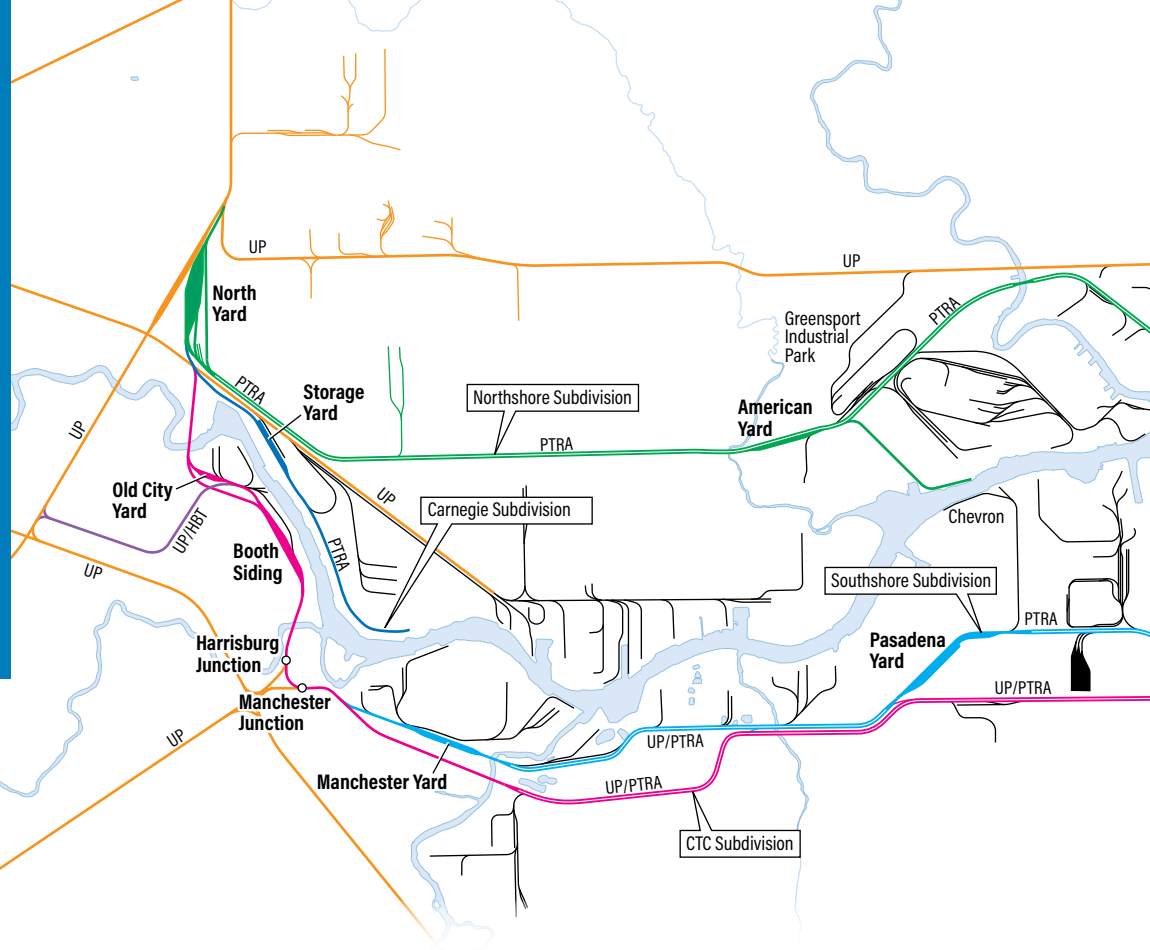
The PTRA marks its centennial this year, and its role today remains the same as it was in 1924: To provide Houston's railroads with access to



Chemicals may be king on the PTRA, but the railroad also handles intermodal traffic and a seasonal burst of grain.

Mark Lipczynski

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— PTRA GENERAL MANAGER RICKY L. WELLS



PTRA MK1500Ds Nos. 9610 and 9608 flank BNSF ES44AC at Pasadena Yard on the PTRA's South Shore Sub on April 8, 2017. The Morrison-Knudson units were the first to carry PTRA markings. Tom Kline



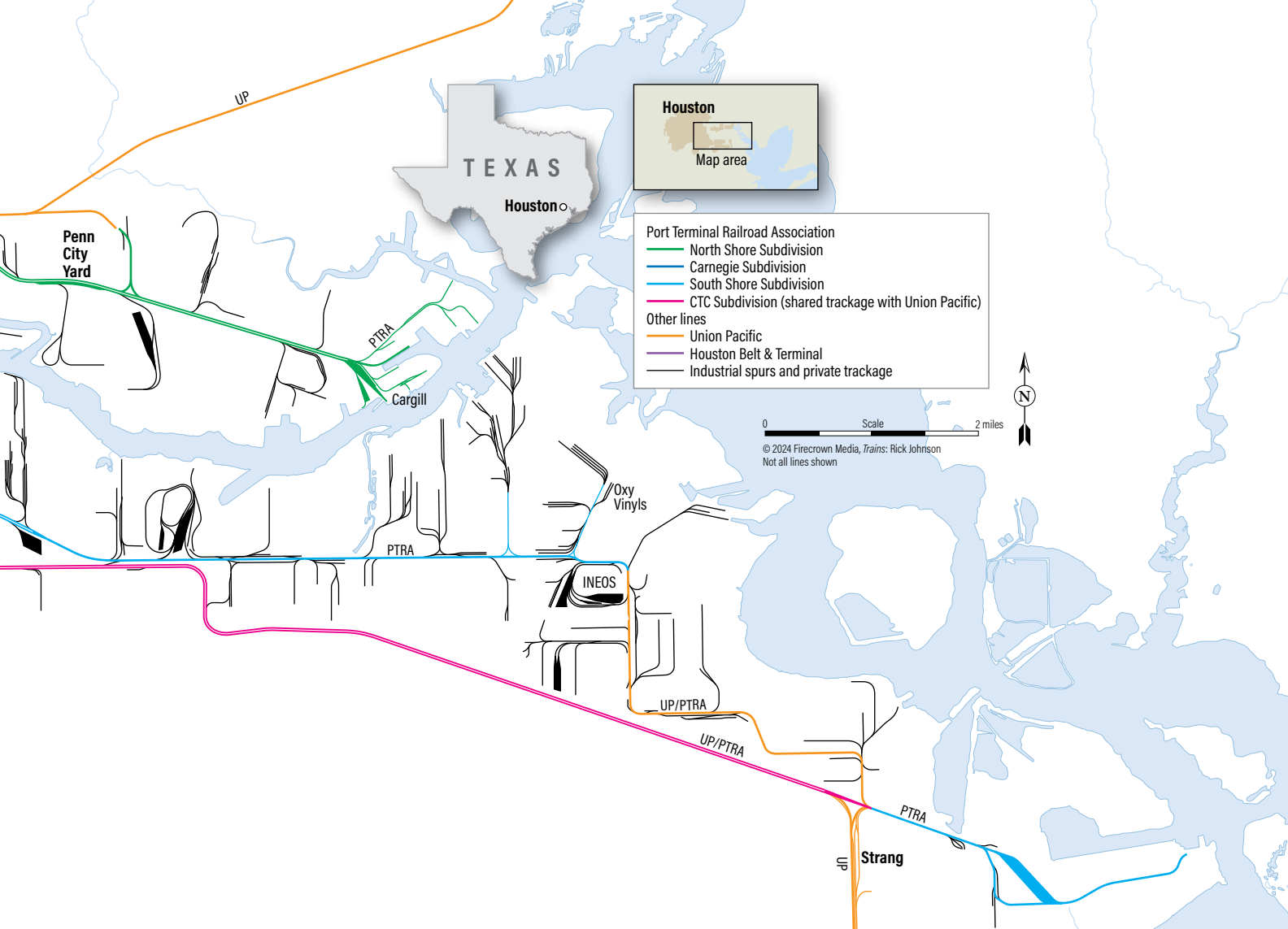
the dense cluster of industries and marine terminals lining the Ship Channel. In the beginning, PTRA member lines were the 18 railroads that served Houston. Today, thanks to merger upon merger over the decades, the PTRA's participating railroads are Class I systems UP, BNSF, and CPKC, plus the Houston Belt & Terminal. Port Houston remains the railroad's landlord, and the Class I railroads are called

member lines. Each has a seat — and equal say — on the PTRA board. The PTRA is a non-profit operation, with UP, BNSF, and CPKC paying the railroad's costs in proportion to their share of carloads.

SHIP CHANNEL TIES

Thousands of people lined the Ship Channel on Nov. 10, 1914, and heard a 21-gun salute echo across the water. From the White House,

President Woodrow Wilson officially opened the deepwater channel when he pushed an ivory button that fired a cannon by remote control. With that, a band played the national anthem from a barge anchored in the center of the Turning Basin, the head of navigation on the 52-mile waterway that links Houston with the Gulf of Mexico via Buffalo Bayou, the San Jacinto River, and Galveston Bay. Said



Presaging a move to come a decade later, a leased GATX Geep works with PTR A MK1500D adjacent to the ship canal on Jan. 22, 2012. Michael T. Burkhart

Sue Campbell, daughter of Houston Mayor Ben Campbell: "I christen thee Port of Houston. Hither the boats of all nations may come and receive hearty welcome."

The ceremony marked the completion of a two-year

dredging project that made Buffalo Bayou navigable to oceangoing ships; it previously could accommodate only shallow-draft vessels that would transload their cargo at Galveston. The project, the first of many to widen and deepen the

channel, launched Houston on its way to becoming the biggest port on the Gulf Coast and tops in the U.S. based on tonnage.

Within a decade it became apparent that rail access to the burgeoning port was woefully inadequate. Three railroads —



During a hi-rail trip on the North Shore Sub, Scott Sanders, PTRA director of regulatory compliance and security, inspects train No. 181. Two photos, Bill Stephens

Southern Pacific, Houston Belt & Terminal, and the International-Great Northern Railroad — each served parts of the Ship Channel. Naturally, the other 15 railroads in Houston all wanted in, and port officials were eager for an improved rail system.

The solution was the Port Terminal Railroad Association, a neutral railroad that provided all of Houston's railroads with unfettered access to the Ship Channel. PTRA, which sits mostly on land owned by what's now called Port Houston, began operations on July 1,

1924. Two years later the railroad handled 84,967 carloads, and by 1929 it operated 57 miles of track.

ONE GIGANTIC YARD

Today the PTRA is a heavy-duty, impeccably maintained railroad with 136-pound rail, seven yards, and numerous spurs that bend off the main line to reach sprawling customer facilities and public terminals. "It's the best infrastructure I've ever seen for really a gigantic classification yard, if you will, and 22 bridges being the key," Wells says, not-

ing the railroad has replaced or rebuilt all of its spans over the past few years.

For a terminal railroad, the PTRA's track looks gold-plated — and that's by design. PTRA's customer list reads like a who's who of chemical producers, petroleum refiners, and export terminals that handle huge volumes of tank cars laden with liquids or gases that are toxic, flammable, or both. A hazardous materials wreck inside the Houston city limits — which, with 2.3 million residents, ranks fourth largest in the U.S. — would be unthinkable

Specially painted PTRA locomotives celebrate the railroad's centennial with a Texas-flag inspired scheme (below); No. 1914 is one of two units commemorating the Port of Houston centennial. PTRA





catastrophic. “The level of track maintenance on PTRA is actually at a higher standard than terminal trackage of Class I railroads,” says Rollin Bredenberg, a retired BNSF and Southern Pacific operating



official who sat on the PTRA board for three decades, often as its chairman.

A 28-unit locomotive fleet composed entirely of leased GP38-2s keeps the PTRA’s traffic moving up to the maximum authorized track speed of 20 mph. They are clad in GATX’s blue livery with the exception of four glossy locomotives that debuted in special paint schemes this spring.

PTRA Nos. 1924 and 2024 celebrate the railroad’s centennial. They’re draped in a red, white, and blue scheme that’s a riff on the Lone Star State’s flag.

PTRA Nos. 1914 and 2014 sport Port Houston logos and are painted in a charcoal gray and white livery in a salute to the port’s centennial.

In 2022 the GP38-2s replaced the first locomotives to carry PTRA marks, the leased MK1500Ds that arrived on the railroad in 1998. Prior to that, PTRA relied on the member lines to supply motive power. It wasn’t uncommon to see motley lashups of Katy, Southern Pacific, and Missouri Pacific four-axle units wheezing on the point of PTRA trains. The practice was a headache for the

PTRA job 384 shoves tank cars into the Energy Transfer Houston Terminal on the North Shore Subdivision. Many customers have significant storage capacity; the terminal can handle 72 cars.



MK1500Ds Nos. 9617 and 9619 are parked on the main at the Penn City Yard on the North Shore Subdivision, waiting for a crew, on June 12, 2004. Across the tracks is a tied-down BNSF pipe train.
Tom Kline



PTRA job 134, working between Pasadena Yard and Barbours Cut, heads for the yard on PTRAs main line. Three photos, Bill Stephens

PTRA because the Class I roads often sent their shop queens. An ancient, unreliable SP switcher that spent most of its time in the Hardy Street shop, for example, would instead keep the mechanics busy at PTRAs shop at North Yard. PTRAs Class I member lines became short of four-axle power in the mid-1990s, and the PTR board decided the railroad would be better off with its own locomotives.

PTRA has four subdivisions, two on each side of the Ship Channel. Thanks to

the high density of customer facilities, each sub is further divided into districts. Although the subs generally run geographically east-west, they're oriented north-south from a timetable perspective.

The 13.2-mile North Shore Sub is double track, with the exception of the single-track Green Bayou Drawbridge at milepost 7.4. Also north of the channel: the 4.8-mile Carnegie Sub, which serves the City Docks.

To the south of the Ship Channel, the CTC Sub — which

is shared with UP and sits on UP property — stretches 25 miles from Galena Junction at the south end of North Yard to all the way to Barbours Cut. UP controls the CTC Sub from its Spring, Texas, dispatching office. The South Shore Sub, which sits just north of the CTC Sub, extends 9.5 miles from Manchester Yard to Dow Service Road. It slices its way through chemical row, where massive chemical plants and refineries line both sides of the tracks. Among them: Facilities for Chevron Phillips, BASF, Pemex, Dow, Lubrizol, Total, INEOS, and OxyChem. The CTC and South Shore subs are connected through five junctions.

Combined, PTRAs seven yards have a capacity for 5,000 cars. Customer facilities — which include intraplant yards, storage yards, spurs, loading and unloading spots, and loop tracks — typically hold a whopping 10,000 cars at any given time. The term spaghetti bowl does not even begin to describe the dense array of terminal trackage.

Rodney Bruton, the helper on Manchester Yard job 240, hustles to pull the pin as cars are kicked at the yard on April 10, 2024.





PTRA's largest classification facility is North Yard, site of the railroad's locomotive and car shops. It has six receiving and departure tracks, as well as 46 classification tracks with a capacity of 1,200 cars. UP, BNSF, and CPKC interchange with PTRA at the yard, which receives an average of 52 trains per week and departs 34.

Three other yards sit on the North Shore. Storage Yard has 19 classification tracks. It serves the City Docks and, as its name implies, is a place where flat cars, high-and-wides, and covered hoppers of plastic resin are stored. American Yard, a classification and serving yard for North Shore industries, features 10 tracks that can hold 400 cars. The three-track Penn City Yard handles traffic for customers on the North Shore's geographical east end.

The key facilities on the South Shore are Manchester Yard, which receives inbound interchange traffic from UP and BNSF, and Pasadena Yard, which handles outbound interchange moves with UP and

BNSF. Manchester's 26 classification tracks can hold 800 cars. Pasadena, surrounded by chemical and plastics plants, has 15 tracks with a capacity of 700 cars. The Pasadena yardmaster also does double duty as dispatcher for the South Shore Sub. Old City Yard's five tracks

serve a handful of customers near the Turning Basin.

THE PTR A HUSTLE

Manchester Yard, steps away from the PTRA headquarters, is bathed in the evening sun as yard jobs 240 and 241 switch parallel leads simultaneously. The pace is anything but leisurely. Rodney Bruton, the helper on the 240, moves at a speed somewhere between a brisk walk and a jog as he zips alongside the train and pulls the pin on cuts of tank cars being kicked onto their assigned tracks. Once they're all safely in the yard, PTRA No. 2202 grabs another cut. Bruton swings aboard the GP38-2's steps as it pulls back on the lead. From there the process repeats itself.

There's hustle in the jobs that spot and pull cars, too. Out on the South Shore Sub at Deer Park, job 133 shoves past you on the Equity Lead with a long string of tank cars at 9:50 a.m. Forty-five minutes later — after spotting and pulling cars at ITC Houston, then at Vopak Terminal, and finally at Clean Harbors — the 133 rolls by on its way back to Pasadena Yard with a string of empty tank cars.

"They get after it," Wells says of PTRA crews.

Turning over yard inventory quickly is essential if the PTRA — and by extension the entire Houston Terminal — is to



COMBINED, PTR A'S SEVEN YARDS HAVE A CAPACITY OF 5,000 CARS. CUSTOMER FACILITIES — YARDS, SPURS, AND LOOP TRACKS — HOLD A WHOPPING 10,000 CARS AT ANY GIVEN TIME.

Job 133 shoves a long string of tank cars on the Equity Lead on April 11, 2024.





After completing work at ITC Houston, Vopak, and Clean Harbors, job 133 heads out of the Equity Lead in Deer Park en route to Pasadena Yard.

Two photos, Bill Stephens

remain fluid. UP yard jobs pull traffic from North Yard to Settegast Yard twice a day, while BNSF and CPKC pull once each. At Pasadena Yard, UP pulls traffic twice per day, while BNSF pulls once daily. “Pasadena’s 15 tracks need to be turned every 24 hours or it’s a cluster,” says Scott Sanders, a 26-year PTRA veteran who started out as a conductor and now is director of regulatory compliance and security. The same holds true for unit trains, like the grain trains that typically arrive, unload, and depart within 24 hours.

You ask about average dwell in PTRA’s yards. Excluding cars being stored, the number of cars sitting for 24, 48, or 72 hours on this April day stands at precisely zero. It wasn’t always this way at the PTRA, which could be its parent railroads’ problem child from time to time. The last time it acted up was in 2006, when PTRA was

drowning in switching volume.

“PTRA was just jammed up. Neither the UP nor the BNSF could get into the PTRA, and PTRA congestion was actually congesting both railroads in the Houston area,” Bredenberg recalls. “It was very obvious that if we didn’t solve the PTRA, we were not going to solve the Houston area congestion.”

Ultimately BNSF and UP decided to lighten the PTRA’s switching load by delivering trains that were pre-blocked for the largest customers on each side of the Ship Channel. BNSF did its classification work at Teague Yard, 150 miles north of Houston. UP sorted PTRA’s cars at the nearby Englewood and Settegast yards and as far away as Pine Bluff, Ark. UP built five blocks for PTRA.

BNSF, for example, delivered a train to Pasadena Yard that included blocks that could be taken directly to Chevron, Goodyear, and Lyondell chemi-

cal plants. Tacked onto the end of the North Yard train was a solid block for American Yard. When the train would arrive at North Yard, PTRA crews would peel off the block and immediately take it to American Yard, and from there parcel out the traffic bound for individual customers further down the North Shore.

UP built North Yard blocks at Pine Bluff and Settegast, an American Yard block at Pine Bluff, Pasadena blocks at both Pine Bluff and Englewood, and Manchester Yard and Oxy blocks at Englewood.

If PTRA gets bogged down for 48 hours or more, that spells trouble in Houston and beyond. “If you don’t have this thing squared away, it’s going to create problems for hundreds of miles in just about every direction,” Wells says. The UP veteran speaks from experience: He began his career as a trainmaster in Houston, and



worked multiple operational positions around the terminal for nearly a dozen of his 23 years at UP.

The key, Wells says, is staying on top of operations and relying on relationships with colleagues across the Houston terminal. “You stay out in front of things that start to simmer and don’t ever let ‘em get too hot,” he says.

The pre-blocking — which continues to this day, with PTRAs also blocking outbound traffic for UP and BNSF — dramatically reduced the switching workload and gave the PTRAs much-needed breathing room by creating yard capacity. That’s not to say capacity expansion projects aren’t necessary as chemical and plastics production is expected to continue to grow.

In 2019, the \$23 million Broadway double-track project eliminated a PTRAs bottleneck that caused up to 2 to 4 hours



of delay per day for UP, BNSF, and PTRAs trains. The project replaced a single-track road overpass with a double-track bridge and added 3,478 feet of second track eastward from Manchester Junction. Now the PTRAs board is considering double-track projects to ease congestion between Pasadena Yard and Deer Park on the South Shore Sub. It’s a tricky place to add a second track, however, because the line is hemmed in by industries and a power transmission line.

Wells, who became PTRAs’s GM in June 2022, says he inherited a well-running operation. But he has aimed to modernize the railroad’s technology, including its back-office systems. Up

next: Introducing remote-control switching. PTRAs typically operates with three-person crews, and Wells figures that some jobs could be reduced to two people with, in some instances, assistance from a “super utility conductor.” At least some of the potential reduction in train crew employment from RC operations could be offset by scheduling changes that Wells says could improve the work-life balance for PTRAs railroaders.

Wells can’t say enough about the pride the PTRAs’s 309 employees take in their work, and credits them for the railroad’s 95% satisfaction rate that consistently comes back from customer surveys. **I**

Job 140 shoves into Pasadena Yard on the South Shore Subdivision. The 15-track yard can handle 700 cars.

An ATV delivers water to a UP train about to leave Settegast Yard, one of the facilities that pre-blocks trains for the PTRAs.

Matthew Holman

