The Knickerbocker SUPER CHIEF

A chance discovery led to the preservation of an iconic painting and research into the creation of the most famous locomotive color scheme

By Michael E. Iden
This is a story about time, talent, and technology. The time span is 75 years, beginning February 17, 1937, and ending now in mid-2012. Most of the activity is based in the late 1930s, but there is also a moment of chance discovery in 1975. The focus on talent involves an automotive stylist at General Motors Corp. in Detroit who was reassigned to help create some of the very first streamlined diesel locomotive designs, along with his fellow stylists and engineer-managers at GM’s Electro-Motive Corp. subsidiary in La Grange, Ill. The technology involved is the early Electro-Motive E-series passenger units. The story involves a painting by the principal stylist, showing what became the most recognized locomotive paint scheme ever.

In 1975 I was working as a mechanical...
engineer in Electro-Motive’s La Grange locomotive plant. One day as I walked through the plant maintenance shop, something caught my eye, literally stopping me in mid-stride. I had just walked past a storage rack holding an assortment of signs stacked upright like dominoes. Stop. Look Both Ways. No Parking. An ordinary collection of signs—but what was that shape in red, silver, and yellow? In a fraction of a second, I had seen something so recognizable, but which should not (could not!) be there. I walked back and separated two of the signs. There it was: the unmistakable image of an early E unit. Red on the nose, silver body, a yellow elliptical emblem trimmed in black across the front—Santa Fe. It was a large painting, 33 inches wide and 21 inches high, framed in wood and glass. This was not just any locomotive painting. It was the Knickerbocker Super Chief.

I had found the painting by Leland A. Knickerbocker showing the “Warbonnet” styling of Electro-Motive’s E1 diesels for the Santa Fe Railway’s streamlined Super Chief of 1937. In the lower right-hand corner, hand-painted below a Santa Fe emblem in capital letters:

GENERAL MOTORS ART AND COLOUR INDUSTRIAL DESIGN DEPT.
L. A. KNICKERBOCKER • 2-17-37

The shop foreman explained that the painting had been removed from a hallway on the executive floor of the office building when a renovation project was started. “It’s an old painting,” he told me. “They told us to take down the old stuff on the hallway walls. Nobody said anything about re-hanging it. We asked them about the paintings. Someone said, ‘No, take it away.’” The foreman said it was about to be “disposed of” (read “thrown away”) and that I could take it with permission. That evening, with a Plant Property Pass signed by the foreman and the plant engineer in my hand, “the Knickerbocker” left La Grange, 38 years after it arrived there from Detroit.

And now, another 37 years later, and 75 years after Leland’s paint dried, research has uncovered more details about the artist who designed what has been called the most recognizable locomotive paint scheme ever created. We now know the extent to which Knickerbocker participated in Electro-Motive locomotive styling and even design. He not only styled the locomotives, he was present in the paint shop at La Grange to lay out his design on the real locomotives. And Knickerbocker himself hand-painted various details on those locomotives.

When I told my supervisor at EMD, Carl Dankworth, about the painting, he recalled his early career at La Grange as a blacksmith helper around 1940. One of his first jobs was to take pieces of hot steel from a furnace and beat them with a sledge hammer into curved shapes for the framing inside E-unit noses. Steel sheets would then be formed into curved panels using rubber hammers and welded to the steel members. Carl’s labor, those steel shapes, the Knickerbocker painting, and bits of information gathered over decades can now be forged into one story.

LEARNING ABOUT LELAND

Leland Adelbert Knickerbocker was born in Holley, N.Y., on March 18, 1893. He was a ninth-generation Knickerbocker in America, his earliest recorded ancestor being Harmon Jansen Knickerbocker Van Wyhe, who left the Netherlands sometime before 1680 and settled near Albany. The 1910 federal census recorded teen-aged Leland living in the family home in Rochester, N.Y., and the 1920 census has Leland, his wife, and daughter in Brooklyn. During the 1920s and ‘30s, there is evidence that Leland worked as a painter in New York’s Finger Lakes region, as a book illustrator, and also as a sculptor.

At some point in the early 1930s, Knickerbocker moved to Detroit, where he went to work in GM’s Art & Colour Section, led by master automotive stylist Harley Earl. It was Earl more than any other man who introduced “industrial design” to the auto industry. During the 1920s, Earl did some automotive design work in California, and in 1927 was personally hired by GM President Alfred P. Sloan to form and lead the Art & Colour Section in Detroit. This was the first attempt to fuse artistic design and engineering clarity within an industrial man-
ufacturing enterprise. Art & Colour was responsible for all design work for GM’s five automotive product lines.

Leland’s skills as an artist and sculptor made him uniquely qualified to work with Harley Earl, who believed not only in two-dimensional drawing for automotive design but also in three-dimensional clay modeling. GM was the first auto manufacturer to make scale and full-size automobile models in clay.

The exact details of Knickerbocker’s early career at GM are not known, but we do have some key evidence. His oldest surviving locomotive artwork is a group of color paintings from 1934–35 showing styling proposals for Electro-Motive’s 1,800 h.p. box-cab passenger locomotives. His name appears on several other proposals in 1936 and ’37. Leland was named on four U.S. design patents for locomotive car bodies issued to GM in 1937 and ’39 for the B&O model EA, Santa Fe E1A, Rock Island TA, and Seaboard E4A.

The Art & Colour Section’s first several years were difficult because most GM executives reportedly did not believe in styling as a marketing tool. Published accounts such as David Gartman’s Harley Earl and the Art & Colour Section: The Birth of Styling at General Motors (MIT Press, 2011) say it was often referred to within GM as the “beauty parlor.” Earl himself was reported to feel the name was “sissy-ish” and he led the change in mid-1937 to renaming it the GM Styling Section. There is no record of Leland Knickerbocker within the department prior to his 1934 box-cab paintings, so his starting date with GM is speculative.

Because no Knickerbocker automobile documents have come to light, we also can only speculate on which group employed him. I believe he worked in the Cadillac group, perhaps within the group that did styling for the LaSalle sub-mark. LaSalle styling was headed by Paul A. Meyer, who reported directly to Earl. After Knickerbocker died, and before Electro-Motive hired John Markstein as its first in-house stylist, Meyer styled several locomotives including the Southern Railway and Santa Fe FT’s.

Thanks to his Super Chief painting, Knickerbocker is one of the few artists in Earl’s group who has escaped anonymity. The art historian C. Edson Arm once described Earl’s styling process as a form of “anonymous creativity,” with few designers (other than Earl himself) ever earning public recognition. Arm claimed that Earl “could not draw,” but was, nevertheless, the master stylist for what was then the world’s largest corporation.

Other than Knickerbocker, the only other Art & Colour Section stylist to gain any notoriety because of the Super Chief locomotive was Chris J. Klein, a GM sculptor whose specialty was designing automotive radiator caps and trim pieces. Klein’s name (along with Knickerbocker’s and those of Electro-Motive’s Harold Hamilton, Richard Dilworth, Martin Blomberg, and William Otter) appears on U.S. design patents 106,918, 106,919, and 106,920, all filed by GM on June 24, 1937, and issued by the Patent & Trademark Office on November 9, 1937, protecting the E1 carbody shape. There are no records defining Klein’s exact involve-
The “slant nose” was not the first idea coming from GM’s Art & Colour Section for the E unit. What preceded the rakish, 20-degree-sloped prow—and which almost survived into production—was far less aesthetic. We know this by examining a proposal painting from early 1936 and photographs taken at about the same time showing the brand-new assembly hall at La Grange.

The artwork, lettered for GM’s Art & Colour Section and dated April 25, 1936, shows a proposal for the Santa Fe Super Chief cab and booster locomotive. Like the E1 that was eventually built, the cab is set behind and above a nose. However, the proposed units were rendered in what was clearly intended to be stainless steel, with corrugated side panels matching the trailing passenger cars; the cab unit rides on a B-A1A truck arrangement while the booster unit appears to be of B-B configuration; and the nose design is different. (The cab unit bears the number “3,” possibly because Santa Fe’s two EMC box-cabs, soon to enter service on the original, heavyweight Super, were at the time believed to be numbered 1 and 2, instead of the Nos. 1 and 1A they in fact were given.)

Although the painting bears no artist’s name, it is unmistakably a Knickerbocker. Like his Super Chief painting of February 17, 1937, this one includes trackside figures admiring the shimmering locomotive. Second, the nose of the cab unit includes the Santa Fe cross emblem superimposed on the profile of an American Indian chief, a design carried by no Santa Fe equipment until Knickerbocker hand-painted it on the flanks of E1 No. 2. Thus it appears that in April 1936 Knickerbocker had already decided how he would paint the chief’s profile in front of the Santa Fe emblem more than a year later when he supervised the painting of Santa Fe 2 and 2A!

What is perhaps most striking about the April 1936 cab unit design, however, is the nose. Compared to what was assembled on the B&O EA’s and Santa Fe’s E1, the proposed nose is not as aggressively angled or curved. It bears more of a resemblance to the noses on the Fairbanks-Morse Erie-built locomotives assembled by GE in the late 1940s, and even the retrofitted noses applied to the Alaska Railroad’s ex-Army RS1 road-switchers in the 1950s.

The mid-1936 photos in the La Grange high bay, however, prove that the bulky design almost made it into production. The photos were taken for The Austin Co., the contractor that built the plant. They show two wooden cab mock-ups assembled on a flatcar in the high bay, with an SC switcher underframe suspended overhead from the new 200-ton crane. One mock-up is clearly patterned after the Budd shovel-nose power cars built for the Burlington Zephyrs (in fact Electro-Motive would soon complete at La Grange several Zephyr power cars using Budd-built stainless-steel bodies). The other mock-up is the “square nose” clearly patterned after Leland’s “initial Super Chief” proposal painting.

The mock-up in the photos is even less elegant than the cab in the painting. The nose is bulky. The front is almost vertical. The various radiiuses are either visually too small or too large. A small headlight can be seen protruding from the front and below the top of the nose, as are classification marker lights on the front upper corners. The pilot has an odd angle and juts out from the nose. What Detroit had rendered in painting, La Grange was mocking up in 2-by-4’s and plywood—and almost fabricated in steel, as surviving documents prove.

Electro-Motive Engineering Releases indicate that the April 1936 “square nose” and the odd B-A1A wheel arrangement had been released for design and procurement of parts.

On July 3, 1936, Authorization Order No. 7 (AO#7) was issued, subject: “ONE (1) 1200 H.P. LOCOMOTIVE – ‘A’ UNIT [and] ONE (1) 1800 H.P. LOCOMOTIVE – ‘B’ UNIT” and identified as being “FOR: SANTA FE RAILROAD.” This document also makes an important link to what ultimately became Santa Fe E1’s 2 and 2A: the assignment of Electro-Motive Corp. serial numbers 662 (cab unit) and 663 (booster). The same serial numbers were, as we’ll see, assigned to Santa Fe 2 and 2A in May 1937!

AO#7-A, also from July 3, 1936, and also referencing a 1,200 h.p. “A” unit, released drawing Z-100610, which showed the locomotive’s “hood curves.” And on July 27, 1936, AO#7-B transferred “from stock” one 16-cylinder 1,200 h.p. Winton 201A engine to “… apply to the ‘A’ unit of this job AO#7.” Likewise, AO#7-C released two 12-cylinder 900 h.p. 201A’s for the “B” unit. Thus, the “square nose” cab unit would have had one 1,200 h.p. engine, and the booster unit two 900 h.p. engines.

But one month later, on August 27, 1936, came AO#7-K, communicating an important change in plans:

“We have received information from the Sales Department that the ‘A’ unit, which was previously known as a 1200 H.P. locomotive, has been changed to an 1800 H.P. locomotive, so that this authorization order #7

Knickerbocker designed the paint scheme for E3 822 (top), which lost its “fish-eye” headlight before becoming KCS 1 (above).

Two photos, Louis A. Marre coll.

MEMOS AND LETTERS

Documents preserved on microfiche in La Grange illuminate the spectacular manner in which Santa Fe’s first E1 set was “dressed.” Engineering Releases AO7-27P and AO7-27Q (for E1A No. 2 and E1B 2A, respectively), dated May 12, 1937, describe how Leland’s painting, completed 84 days before, was translated onto stainless and carbon steel. “The [elliptical Santa Fe] insignia on front of car and body trim contour [the Warbonnet shape] to be blocked out by Mr. Knickerbocker, of the General Motors Art and Color [sic] Section. The Indian Head Emblem on right and left side of [cab unit] car … is to be blocked out and painted by Mr. Knickerbocker. According to [Leland’s] Color Scheme Z-1235, DuPont light red 246-9089, DuPont chrome yellow 242-0624, DuPont black and Alcoa.

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Aluminum are to be used … Grab iron and steps are chromium-plated … Main car body to be natural stainless steel, rubbed down with Bon Ami [a non-abrasive polishing powder still on the market]. Horn … Anti-Climber … Pilot … Tanks and Tank Supports … End Frame … Couplers … Diaphragm … Face Plate … Trucks to be painted aluminum. A sample of DuPont light red and DuPont chrome yellow to be used on this unit were handed Mr. Warren on date of May 11, 1937."

Surviving paper memos, dated 1937 and '38, between Knickerbocker in Detroit and William D. Otter, EMC’s assistant sales manager in La Grange, reveal that Knickerbocker was regarded as “La Grange’s locomotive stylist.” The memos also shed a significant amount of colorful and personalized light on the thinking of Knickerbocker and Electro-Motive people. Prior to his untimely death in 1939, Leland also had styling responsibility for Union Pacific’s Armour yellow and bulbous-nosed E2, Electro-Motive’s E3 demonstrator, and Seaboard Air Line’s E4 in the “citrus” color scheme.

Otter’s letters to Knickerbocker always began with “Dear Knick,” indicating a true friendship. When Knickerbocker wrote to Otter, he began with “Dear Bill.”

One of the most interesting letters was dated November 1, 1937, when Otter wrote Knickerbocker describing details of how Electro-Motive’s E3 sales demonstrator No. 822 was to be styled: “In your new color treatment, I suggest that you include some sort of treatment of the headlight along the lines of previous discussions which we have had, in this order to get away from the homely ‘fish eye’ appearance. I am going to leave this detail to your own good judgment, but mention it as a point for your consideration.”

Otter’s comment on the “homely fish eye” headlight used on the Santa Fe E1s, B&O EA’s, and Rock Island TAs leaves
open for speculation who designed that headlight arrangement. Was it a product of Knickerbocker and/or Klein or Meyer in Detroit, or someone in La Grange? In any case, Otter’s view prevailed, for although E3 822 was built with a “fish eye” headlight, this was changed to a raised housing before the unit was sold to Kansas City Southern.

On November 3, Knickerbocker wrote back to Otter suggesting that future locomotives have all-painted carbodies instead of mostly stainless steel as on the E1. Electro-Motive was easing away from customized carbodies as it moved toward mass-produced locomotives differentiated largely only by exterior paint. Possibly the building of this new unit could be simplified by not using stainless steel ply-metal on the sides. From the standpoint of appearance I believe an all-paint treatment has as many possibilities as a combination of stainless and carbon steel.” Ply-metal was a sandwich of steel sheet metal bonded to both sides of a plywood panel, which Electro-Motive used for all of its carbody designs. The “automotive stylists” in Detroit and the “locomotive builders” in La Grange were thinking alike on issues of product simplification, standardization, and manufacturing cost.

Meanwhile, Santa Fe ordered more E1’s. On November 5, Otter wrote asking Knickerbocker to suggest an exact color shade for copper-colored trim, as the Santa Fe had requested enameled Indian head logo pieces for the next batch of E1’s in lieu of Leland’s hand-painted emblems of the first E1. Otter also advised: “You will be interested to know that all of the U.P. officials are highly pleased with the new City of Los Angeles [model E2] which left our plant last Sunday morning.” This indicates Knickerbocker had his hand in some aspect of the E2 styling.

On December 23, 1937, Executive Engineer D. H. Queeney wrote to Martin Blomberg (himself a to-be-famous Electro-Motive engineer; see pages 38–45) about the E3 demonstrator: “… As is the case of the Santa Fe M-2 [for some reason Queeney referred to the Super Chief E1 as “M-2”], and the first Rock Island Rocket [model TA], it is our intention to have Mr. Knickerbocker on hand at La Grange to lay out the color scheme when this locomotive [the E3] is ready for painting.” This is another confirmation that Knickerbocker was often present at La Grange when paint was applied.

On February 2, 1938, Bill Otter wrote to Leland: “I discussed, yesterday, with Mr. Hamilton, the front end treatment proposed for the new [E3] demonstrator locomotive. It is our belief that there may be an objection on the part of some rail-
the selection of aluminum paint for the trucks “… is undoubtedly good” and on April 1 Otter responded: “I am glad you feel as you do about painting the running gear aluminum, because there is a decided advantage in so doing. It has been our experience that the aluminum painted trucks of the Santa Fe and Burlington locomotives are kept clean, and therefore the performance is materially improved.” Otter also added that Leland’s E3 demonstrator paint scheme was “… a beautiful job and has received Mr. Hamilton’s blessing …” and concluded “… we want you with us when the painting begins.” Leland was a regular visitor to La Grange.

A May 24 memo from Otter went to Robert Bingman in the newly renamed Styling Section in Detroit along with photos of the new E3. This was possibly one of the few inter-organization locomotive memos not sent to Leland but to another stylist. On September 1, William Otter advised D. A. Warren in the La Grange planning department that the front end painting arrangement on the E3 demonstrator “… will be laid out by Mr. Knickerbocker at the time of application.”

The last known letter from William Otter to Leland Knickerbocker was dated September 1, 1938, in which Otter acknowledged “… I know you are going to be busy every minute completing the Seaboard job, but under your supervision somebody else should be able to prepare this much needed drawing [showing the layout of the Electro-Motive name on the side of the E3 demonstrator].” The “Seaboard job” was the styling for Seaboard Air Line’s E4’s to power the Orange Blossom Special. That design turned out to be the subject of Leland’s final locomotive painting, signed and dated October 28, 1938. This painting was stacked behind the Santa Fe painting in that sign rack back in 1975, and was also saved from likely destruction.

We can only speculate on one last historic artifact about the artist. The design patent for the Seaboard E4 carbody, bearing the unmistakable “citrus” color scheme, was filed on December 16, 1938, and issued to GM on February 28, 1939. Of all locomotive design patents issued to GM, it is the only one not bearing the names of any Electro-Motive people. It names only one inventor: Leland A. Knickerbocker. Was this a tribute by GM and Electro-Motive to the artist?

A LASTING LEGACY

According to one of his granddaughters, Leland Knickerbocker died following a long illness. An obituary in the Detroit News lists June 25, 1939, as the date of his passing. After a memorial service, Knickerbocker’s remains were transported to Rochester, N.Y. (probably on a New York Central train drawn by a Hudson steam locomotive), and he was laid to rest in Webster, N.Y., around June 30, 1939.

As for Santa Fe E1 No. 2, the star of Leland’s 1937 painting, after 15 years of high-speed service it was returned to La Grange in February 1952. There, usable parts were removed and reconditioned, and an almost-new E8Am (Santa Fe No. 80) emerged from EMD. The locomotive was eventually scrapped, but at least one part from the original 2-Spot still exists. The control stand was shipped from La Grange to Topeka, Kans., where Santa Fe installed it in gas-electric car M-160, then being converted to diesel power. M-160 has been preserved at the Museum of the American Railroad in Frisco, Texas.

On August 26, 1999, the U.S. Postal Service released the “Super Chief” 33-cent stamp, using a Ted Rose watercolor image of E1 No. 6. Some 24 million of the stamps were issued, each with a description on the reverse side of the Super Chief color scheme along with the name of the designer, “Leland A. Knickerbocker.”

As evidenced by patents, drawings, photos, and long-hidden records, no one was responsible for the E-unit family of locomotives. But it was Leland Knickerbocker’s artistic talent that created the most enduring image of an E.
A day on C&NW’s Geneva switch run
Filling in on a hot summer’s day in 1952, at last with an R-1 class 4-6-0, on a local out of West Chicago, Ill.

By Robert A. Janz
Photos by A. W. Johnson from the Krambles-Peterson Archive
relic from the past. She had a lean, undernourished look. Her drivers were unevenly spaced, and there was a curious step in the bottom of the firebox over the rear driver. An R-1 had sloped cylinders, Stephenson inside-connected valve gear, and a pair of single-stage air compressors. A tall stack and a pair of rounded domes mounted on a tapered boiler perched high above the drivers completed the picture. An R-1’s cab was small and cramped and appeared hardly adequate for normal-sized men.

I would learn that the R-1 was the North Western’s workhorse, the “Geep” of its era, if you will, and C&NW stabled more than 300 of them. Subsidiary Omaha Road had 67 class I-1 counterparts. All were built during 1901–1910, most by Schenectady with some of the Omaha’s by Baldwin.

Typically R-1’s were used on freights that went out in the morning to switch customers and returned home in the afternoon. C&NW defined these as “switch runs,” but they were generally called “wayfreights” or “locals.” The remaining Chicago-area R-1’s frequently were used on work trains, or made trips to Chicago’s Union Stock Yards with livestock. They also pinch-hit in suburban service. They were well-suited for these kinds of work and could haul fairly heavy trains at respectable speeds. Their ability to negotiate lightly built trackage and sharp curves, where larger power could not go, helped ensure their longevity beyond that of newer locomotives.

Although I hadn’t caught an assignment that had an R-1, I finally got my chance that summer when a call came early one morning to fill in on the Geneva Switch Run, a branchline out of West Chicago.

In those days, West Chicago, 30 miles from C&NW’s Chicago Passenger Terminal, was a busy place. Right in town near the depot was a 12-stall roundhouse on the south side of the main line. A suburban coach yard, a freight yard, and two interlocking towers were strung out on the north side. There were interchange tracks with Chicago, Burlington & Quincy near the roundhouse and with Elgin, Joliet & Eastern north of town adjacent to C&NW’s original Galena & Chicago Union line to Elgin, Rockford, and Freeport, Ill. Passenger and freight trains continually passed through on the Chicago–Council Bluffs main line, as well as the suburban trains that operated between Chicago and Geneva.

I was looking forward to this assignment. Not only would a switch run be a new experience, but there was a good chance we’d have an R-1. A check of the Employee Time Table indicated that two branches began at Geneva. One went north to St. Charles, 2.6 miles, while the other ran south to Aurora, 9.4 miles.

Another company then built a 2-mile line south from St. Charles to Geneva—the very line the author would work 102 years later—thus connecting Geneva with the G&CU via St. Charles. Soon the Chicago, Fulton & Iowa built west through Geneva, so by late 1850, Junction had three railroads.

Junction’s name, Turner Junction, dates from an 1857 merger of two adjacent town plats (G&CU’s founder was John B. Turner). The community, with 850 people, incorporated as the Village of Turner in 1873. It became quite the commercial hotspot with the coming of the Elgin, Joliet & Eastern in the 1880s, so in hopes of attracting more industry, in 1896 changed its name to West Chicago. —J. David Ingles
To get to West Chicago, I rode out on a suburban train, which C&NW employees called "scoots." They consisted of ancient gas-lit, 60-foot coaches, plus some slightly newer 85-foot cars, pulled by Atlantics and Pacifics. C&NW's air-conditioned, bilevel gallery cars were in the future, but scoot crews would leave the old cars' end doors open to provide a breeze.

Detraining at a stop made for employees at the West Chicago roundhouse, I found the office. More important, beyond the roundhouse were three R-1's under steam! Two were pointed west, the third one east. (Regulars assigned in that era included 345, 423, and 1154.) Each carried a pair of white flags on the front of the smokebox to indicate they would be extras with no timetable authority.

The pleasant smell of coal smoke and steam, mixed with hot oil, permeated the air. Coal scoops scraping on steel decks, the metallic clanking of firedoors, and the unmistakable muffled clatter of coal scattering against firebox side sheets indicated these engines were being readied for service. A check of their numbers on an assignment board in the office confirmed these were switch-run engines, with the one for the Geneva job at the west end. The R-1 pointed east was marked up for the Third Rail job, which did the local work on the main between West Chicago and Elmhurst. Its name evolved from that being three-track territory. The other R-1 pointed west was assigned to the Aurora job. At last I had caught up to the elusive R-1!

A veteran's appearance

Boarding the Geneva engine, I was greeted by the fireman, his face glistening with perspiration. Like all steam engines, the cab was a mass of pipes, valves, levers, and gauges for air, water, and steam. Centered on the backhead about a foot and a half above the deck was the air-operated butterfly firedoor that occupied the fireman's attention . . . and was the cause of his perspiration.

A long, cushioned seatbox on the left-hand side accommodated both the fireman and a brakeman. Firemen generally chose to sit in front, while brakemen sat behind with one leg tucked under.

The engineer was on the ground, busy with his long-spouted oilcan and looking over the machinery. The fireman was working with his fire, so I decided to look at the engines. I climbed down the gangway steps and walked through wisps of steam and the ever-present puddles of water toward the front of our engine.
The sounds made by a steam locomotive at work are best described as awe-some, although at rest, steam-driven appliances create unique sounds. Drops of water pop and sizzle as air compressors race, clicking and thumping, building up pressure in the main reservoirs and air lines. The compressors exhaust steam into the smokebox, making a panting sound, while the generator whines and buzzes as it provides power for various lights and train-control equipment.

This R-1’s jacket was dented and had lost its luster. Her bell was grimy, her cab sagged, rusty patches showed on the smokebox, and there were accumulations of cinders everywhere. The other two engines were virtually identical in appearance. All three were fitted with footboards at each end for use by crews during switching. The wooden footboards were attached to the pilot castings with steel straps and bolted in place. Matching sets were attached to the beam across the rear of the tender.

Long grabirons extended across the pilot beams and the end of the tenders to provide hand-holds. The uncoupling levers extended from one side to the other, but on engines in switching service they were modified to act independently of each other. This was done to make it impossible to raise both ends while opening a coupler knuckle, which could cause injury to a crew member on the other side.

By this time, there were standard headlights on the tenders instead of the usual small lights as mounted on road engines. These switch-run engines often ran in reverse and required the same illumination in each direction at night. Each was also equipped with Automatic Train Control apparatus, which allowed them to operate on the main line.

Being young, I was eager to get underway, and it seemed as though preparations by the engine crew would go on forever. To them it was routine, and they just continued in their prep work. Shortly, the conductor showed up and introduced himself as Miles. After getting acquainted, he explained the routine of the job, saying I would be the head-end brakeman. That meant I would be with the engine most of the day. The two other brakemen on our job were already at the yard. The reason for three brakemen, Miles explained, was to have a man to provide flag protection when the job worked industries out on the main line.

Getting ready to move

At last the engineer was ready. Wiping his hands on a piece of cotton waste, he announced we could go. I intended to ride in the cab as we headed out to the yard and was disappointed when the conductor insisted I ride the rear footboards with him. The engine, woofing softly, headed out toward the main line in a cloud of steam from the cylinder cocks. After a brief pause at an interlocking signal, the engine rattled, clattered, and lurched through several crossovers and across the EJ&E diamond before reaching the West Chicago freight yard. The two other engines followed along, each in its own cloud of steam. The Aurora engine followed us to the west end, but the Third Rail engine stopped at the east end to couple to its train.

As we rolled through the yard, the tender pitched and rocked from side to side on the uneven track. Sometimes it was more like being at sea than on a railroad. When we reached the west end, Miles pointed out our train, saying, “Send the engine in. Your partners are waiting there to tie her on. Line the

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On July 14, 1933, R-1 1154 heads west on Stevens Street in Geneva, having worked the “east side” industries along the Fox River. The crew will uncouple from these cars at the west end of this spur, proceed north to St. Charles, and pick them up on the return to Geneva. Industries served by rail in Geneva included lumber and coal yards, feed mills, ice plants, a foundry, an auto-supplies manufacturer, and other factories.
The 9.4-mile Aurora branch, south from Geneva, was much the same as the 2.6-mile St. Charles branch to the north. On October 30, 1943, a decade before author Janz worked to St. Charles, R-1 1154 (left) moseyed north along the Fox River from Batavia with about a dozen cars. The year before, in July 1942, the Aurora branch train is moving waycar-first through the weeds north of Batavia as the crew keeps watch.

Photo at left, A. W. Johnson; above photo, Henry J. McCord

switch off the main to alert the crossing main. Our engineer rang the bell as we track in the small yard south of the embarked to line our train into a clear Fox River on a long, high bridge. I dis-the old R-1 working hard.
at first was uphill, and the engineer had
ceed onto the main line's south track,
aspect indicating our train could pro-
signal at WX interlocking displayed an
mind a bit. At the west end of the yard, a
R-1's cab! It was cramped, but I didn't
Now that we were moving, I was finally
in an R-1's cab! It was cramped, but I
didn't mind a bit.
full-length platform canopy completed
the structure. Across the tracks stood a
standard C&NW lower-quadrant sema-
phore train-order signal mounted on a
mast made of secondhand rail. As we
pulled through the yard, the station
agent came out to check our cars.
Shortly after we stopped in the yard, the
Aurora job, which followed us out of
West Chicago, pulled in alongside our
train. We both commenced to shuffle
our cars on the weedgrown tracks. Our
train had been made up at West Chicago
by the midnight switch crew in two
blocks, one for Geneva and the other for
St. Charles. The cars in the blocks, how-
ever, were in random order, so to simpli-
fy our work, we lined them up for place-
ment at the various industries on our
route. The Geneva yard also held cars to
be switched into our consist.
On the St. Charles branch, there were
industries in Geneva on the west side as
well as on a spur to the east, which went
down along the Fox River. In St. Charles,
the industries were clustered together.
Miles arranged our train into four
blocks: first for the north end of Geneva's
west side, second for its east side, third
for St. Charles, and fourth for the south
end of Geneva's west side.
After a while, the Aurora crew pulled
out of the yard's west end, wheel flanges
squealing on the curve leading south as
the train disappeared off into the weeds.

Up the branch we go
The St. Charles branch began just
west of the depot at a switch off the
north main track. To reach it, we would
have to cross the double-track main, a
move that had to be coordinated with
the dispatcher in Chicago. When suffi-
cient time was available to avoid delay-
ing mainline traffic, he would grant per-
mission to leave the yard and cross over
to the north track.
When he cleared us to leave, Miles in-
dicated we could make the move by hold-
ing his arms across his chest in the shape
of an "X," meaning to cross over. Remem-
ber, in those days there were no radios,
so we conveyed information to each oth-
er by an array of hand signals. A circular
motion while pointing at a switch meant
to throw that switch. When it was de-
sired to have the air hoses coupled, you'd
hold your hands apart and roll them
a nasty habit of greasing the weeds as she ran through them. It was in my best interest to avoid walking in those weeds.

As I worked with this crew, it became easy to see they’d been together for a long time. Wally was always just in the right place for each move. When I threw a switch, John would motion me to stay there rather than ride down to a coupling or a cut. When the engine was sent back to me, they would show me where to send it by pointing to the next track. All I had to do was watch for their signals and throw switches. Because of all the planning, each car was in just the right place so it could be spotted without more switching. When two or more cars were spotted on the same track, they were already in order. As we pulled cars from spurs, we’d line them up together on one of the long sidings for return to West Chicago. Watching how this crew worked was a great learning experience.

**Feeling the heat**

As we switched back and forth, the sun grew hotter. Each time the engine went by, I stepped back farther to avoid the firebox heat. The engine crew seemed to hang a little farther out of the cab in an effort to catch a little more breeze.

After finishing the west side work, we took the next block of cars and headed to the east side. For this move, I rode in the cab while Wally and John rode on a gondola of coal. Miles, however, remained behind—he had something else to do.

The track to the east side went five blocks along the north edge of Stevens Street. En route, we ran past houses on the south side, and all along, children stopped playing to wave at us. After a few blocks, the track went to the middle of the street and finally crossed it. At the intersection of Stevens Street and 1st Street (Route 31), the track cut across the lawn of a house on the corner. We stopped short of this crossing, and I went out to flag traffic. Our engine then crossed Route 31 and eased down a sharp curve to the lower level along the river.

Switching here was much the same as on the west side. Some spurs ran north, while others ran south. The crew’s prior planning was again evident as we worked. After finishing, cars for West Chicago were gathered together. Now with the engine running tender-first, we backed up the hill and across Route 31, and at the west end of the spur we left the cars which would go back south with us standing alongside Stevens Street.

By this time, I was really feeling the heat. Back on the branch, when I coupled the engine to the rest of our train for the run north to St. Charles, Wally motioned for me to catch the waycar. I swung aboard as it passed and found Miles, Wally, and John huddled around a frosty 10-gallon pot of lemonade, with chunks of ice bobbing up and down! Handing me a large full cup, Miles smiled and said, “This is what I had to take care of. I’m sure you’ll like this better than riding that old teakettle on the smoky end.”

Sinking down onto a cushioned bunk, I thanked him and drank gratefully. The summer heat soon became more bear-

**When I swung aboard, I found the crew huddled around a 10-gallon pot of lemonade!**
The waycar was cool and comfortable as we moseyed along. Both end doors and all the windows were open, allowing a pleasant breeze with occasional whiffs of coal smoke to waft through. The breeze was a welcome relief, but I’ll never forget that lemonade!

We crossed Route 31 again and ran parallel to it. There were places here like a green tunnel with trees arching over the track, allowing just enough clearance to get by. As it was, branches constantly struck the side of the waycar. In a few minutes, we came to a stop shaded by trees alongside a passing track. This was normally my cue to go up ahead, but Miles told me to relax. “The fireman will cut off the engine and get the switches. It’ll come back through the passing track and we’ll go to lunch.”

Soon the engine rumbled by, her loose rods clanking with each revolution of the drivers. The fireman switched her over to the track we were on and the engineer stopped her a car-length from the waycar. It was now the engine crew’s turn to enjoy the lemonade. We took a long lunch, then a short nap to fortify us against the rest of the day.

Switching St. Charles, then home

When our break was over, the engine was coupled on and we shoved the train into the “terminal” at St. Charles. The track arrangement was simple, essentially three long stub tracks with spurs branching off from the outer ones. We switched the local customers, spotted the inbound cars, and pulled the outbounds. When that work was finished, we set the waycar onto the center track and coupled the accumulated cars to it. There were no turning facilities here or at Geneva, so the engine would return all the way to West Chicago tender-first.

On our way back to Geneva, we stopped at Stevens Street to pick up the cars from the east side that we’d left behind, as well as those on the 7th Street siding. After coupling everything together, our train had about 18 cars.

When we arrived at Geneva, Miles went to the agent’s office to call the dispatcher for permission to enter the main. Returning, he said, “The dispatcher says the railroad is ours, we can go.” Then he said, “We’ll pull into the east yard at West Chicago. When we get in the clear, cut off the engine. Don’t wait for me, just head for the barn. The next eastbound scoot is due at 5:35, and the engineer will drop you off at the depot.” I lined the mainline switch and boarded the engine as it passed.

Once we cleared the branch and the switch was relined, our engineer widened out on the throttle and let her ramble. The home signal at WX at the west end of the yard displayed red over red over yellow, indicating we could proceed but at restricted speed. To our left was the west yard, with the east yard ahead. The local switch engine was standing in the clear, and one of the switchmen gave us a signal to keep coming. Our track was lined, and we pulled right in.

Following Miles’ instructions, I cut off the engine and returned to the cab. We stormed out of the yard’s east end, creating a cloud of black smoke to alert the leverman at JB Tower that we were coming. He slid the derail off the rail ahead of us, and the dwarf signal changed from red to yellow.

Approaching the West Chicago depot, the engineer told me he wanted to catch the next scoot, too. He slowed at the platform to let me off, and as soon as I hit the ground, he was on his way. In about 15 minutes, he bounded across the mainline tracks from the roundhouse just before the scoot showed up and commented, “I didn’t have time to wash up, and the wife won’t let me in the house until I wash up in the basement.”

On the train ride home, I reflected on the day’s work. It was my first experience with an R-1, but my ambition to work with steam locomotives was far from satisfied. It was a pleasure working with such a capable crew, even though it was on one of the hottest days of the year. I enjoyed being in unfamiliar territory and the casual, leisurely pace of a branchline operation.
BEDROOMS EN SUITE: The double bedrooms in Erie's seven 10&6 sleeping cars were of Pullman Company Type B, with each room having two collapsible chairs, but no sofas, for daytime use. One of the seven such sleepers, Charles Minot, is in the Lake Cities, led by PA 861 and E8 833, leaving the Hammond, Ind., station in fall 1960 on the last leg into Chicago.

Photo by J. David Ingles; illustration from CLASSIC TRAINS collection

Charades on the ERIE

Why the “A. King” family always missed their train

By Bill Doyle
At least three times a year throughout the 1950s, the “A. King” family would book passage on the Erie Railroad to ride from Jersey City, N.J. (and later Hoboken), to Chicago and return. (Erie vacated its Jersey City terminal for Lackawanna’s Hoboken Terminal in 1956, four years before they merged to form Erie Lackawanna.) The Kings planned a trip at least once each spring, summer, and fall, often more frequently. The reservation read, “A. King, Wife, and Young Son.” After the boy was older, they would add trips in winter. Moreover, every couple of years, they would book an additional trip to Chicago, continuing on to St. Louis to visit family, usually on Wabash’s Banner Blue, which like the Erie used Chicago’s Dearborn Station. They usually would return on Wabash’s streamlined Blue Bird.

After making arrangements with their son’s school, the typical itinerary would be to depart Jersey City between 9 and 9:30 a.m., depending on the season’s schedule, on a Friday morning on No. 1, the Erie Limited. That would put them into Chicago between 7 and 8:30 a.m. on Saturday morning. The family would spend the day along Michigan Avenue and in the Loop, including the large Marshall Field’s department store. They would visit the Adler Planetarium and Chicago’s nearby museums. That same evening, they would return east on No. 2, the Erie Limited, which left Dearborn between 5:30 and 6:15 (depending on current schedules). This would get them back to Jersey City on Sunday evening, in time for the father to return to work and the son to school on Monday.

Occasionally, in order to enjoy the scenery of western Pennsylvania, Ohio, and eastern Indiana, which the Erie Limited typically traversed during darkness, the family would book passage on No. 5, the Lake Cities, which left Jersey City about 7:30 p.m. This also provided an opportunity to see the sprawling Ravena Arsenal in Ohio and the steel-belt cit-
ies of Akron, Youngstown, and Marion, Ohio, plus the industries in northwestern Indiana. Since No. 5 arrived in Chicago only an hour or two before the departure of eastbound No. 2, the family typically would spend the night in the Windy City.

The King family liked to travel in comfort, 1950s-style, and the Erie accommodated. They always booked bedrooms E and F in one of the seven 10-roomette/6-double-bedroom lightweight sleepers Pullman-Standard had built for Erie in mid-1949. (The cars, all named for men prominent in Erie history, were Marvin Kent, James Gore King, Benjamin Loder, Eleazar Lord, Daniel Craig McCallum, Charles Minot, and William Reynolds.) Why Rooms E and F? Because those were in the center of the car, farthest from the noise and bounce of the wheels. The rooms were made up en suite, with the folding partition between them drawn back against the corridor wall. This allowed more room in a space 12 feet long and 7 feet wide, and also provided a bed for each person and two restrooms, which measured 2½ by 4 feet! When the son got to be age 10 or 11, they booked three roomettes, one for each member of the family.

**A RUN OF BAD LUCK**

Most unfortunately, A. King, his wife, and their young son were beset by extraordinarily bad luck. Despite meticulous preparations, they missed their train in Jersey City or Hoboken on every one of the 40-plus times they booked space during that decade. As good fortune would have it, though, on each of those occasions, out in Port Jervis, N.Y., the end of the commuter-train zone 88 miles west of Jersey City, W. Doyle, with his wife and young son, would just happen to be waiting on the platform where the Pullman usually stopped, all packed for a quick trip to Chicago and back. Dutifully asking the Pullman conductor whether there was space in the car that day, the Doyle family found the Kings’ taste in accommodations much to their liking and stepped aboard for the ride.

Coincidence? Hardly—the “Kings” and Doyles were in fact the same family. Why the charade? To get around an Erie and Pullman Company employee restriction. My father, W. H. “Bill” Doyle, was variously steward, inspector, and assistant superintendent in Erie’s dining car department, a career that carried over to the Erie Lackawanna. Because the diners traveled system-wide, plus occasionally on “foreign” railroads in special moves, he carried that most coveted of all railroad passes—the system pass. He could travel free on any Erie passenger train at any time, and because he had a system pass, his wife (my mother) and I also had our own system passes with the same privileges.

There was a catch, though. Although system pass holders were entitled to free transportation, they had to pay half fare for Pullman space (in 1958 dollars, about $81.50 round trip), and could not bump any passengers who were paying full fare. Of course, if space was empty because the party who reserved it was a no-show, crews on the train would gladly let a fellow employee and his family who boarded at a station down the line occupy that space. To assure their accommodations, pass riders would book space under an assumed name.

Thus, “King” became the family name the Doyles used for reservations when they wanted to ride. In fact, for conductors, ticket agents, Pullman porters, and others in the know, “A. King” was but one of apparently a dozen or more pseudonyms Erie employees used for this purpose across the railroad during this period.

There was another perk. Since Dad was an official in the dining car department, “dinner in the diner” was free, as were breakfast and lunch. So were off-
CHICAGO MEMORIES: E8 825 is already relettered for the merged company on June 25, 1961, as it and a sibling prepare to back onto the consist of train 6, the Lake Cities, at Chicago’s Dearborn Station. A Santa Fe train is loading on the next track. The author once toured a Super Chief consist at Dearborn with his dad, courtesy of the Santa Fe crew.

J. David Ingles

HOME AT LAST: The eastbound Erie Limited has arrived at Port Jervis, home of the author and his parents, in August 1957 as its two E8’s get serviced for the 87-mile final leg into Hoboken Terminal. In the distance, a PA waits to depart 17 minutes later with local train 60.

Karl Zimmermann
In August 1957, while on one of several trips to photograph what steam was still operating in southern Ontario, I met a Canadian Pacific locomotive engineer at Guelph Junction, 39 miles west of Toronto on the main line to Windsor. Frank Bunker had been called on a "pusher engine" to help a long train of passenger cars deadheading west to London, Ont., for a troop-train extra out of the large armory there.

Helper engines were added to heavy westbounds at Lambton yard in Toronto and, if tonnage was not reduced at Galt, 51 miles out, the "pushers" would stay on for 9 miles across the Grand River and up the nearly 1 percent grade to Orr's Lake. (CPR people called helpers "pushers" even though they were customarily placed ahead of the road engine; the Lambton-based helper assignment, filled with immigrants from England, was known as the "Cockney pool.") The 18-car empty passenger train was in the charge of Royal Hudson 2857; Frank would assist it with 4-6-2 No. 2236.

While waiting on the Guelph Junction platform for the action to start, I struck up a conversation with Frank. I asked him what was going on, where were they going, and when they were departing. After telling me what the plan of action would be, he asked if I would like to ride with him to Orr's Lake, where he would cut off the pusher and return to Guelph Junction. He was obviously a mind-reader as well as a locomotive engineer. I instantly answered, "Yes!"

I was traveling with the late Warren Hills ("Hillsey"), a friend from the Buffalo area whom I would often meet for steam safaris into southern Ontario. In fact, when we stopped at Guelph Junction, we were on our way to Palmerston for CN branchline action ["Stepping Back in Time," Summer 2014 Classic Trains]. Frank invited Hillsey to ride, too. After the paperwork from the dispatcher was finished and the two locomotives had been watered, we walked toward the engines. Hillsey would ride in one cab, and I in the other. A meet with an eastbound was scheduled at Puslinch, 6 miles west of Guelph Junction, which allowed us to swap cabs.

The Royal Hudson's cab was much more roomy than the Pacific's, but I spent more time in the 2236 with Frank. It was obvious watching him that he relished, and was an integral part of, the steam locomotive and everything associated with it. Frank was definitely "in charge" as he perched on that right-hand seat, hand on the throttle, peering ahead as he leaned out the window as if he were the driver of a hurrying Wells Fargo stagecoach, holding the reins of six thundering horses in front of him.

Upon reaching Orr's Lake, 2236 was cut away, and Frank ran the it ahead beyond the west siding switch, stopped, then backed onto the passing track to allow 2857 to resume its trip to London. He then ran the 2236 back to the Orr's Lake depot at the east siding switch. The operator, after copying orders from the dispatcher for us to run "light engine"
back to Guelph Junction, gave them to Frank, and we all re-boarded 2236 for an uneventful, though crowded, return trip.

**Keeping in touch**

After steam was replaced on the CP by diesels (Frank called them “dismals”), he worked freight, but he complained about driving 28 miles across metropolitan Toronto to the Agincourt yard to get the trains. “It was a damn disappointment to crawl out of bed and book on, only to find a damn gurgling dismal waiting for you with a personality rated NIL, not like a nice, warm steamer that was alive and raring to go,” he wrote me. “All you had to do is treat them right and they treated you right.”

Frank did remain active with steam locomotives, though, becoming one of Canadian Pacific engineer Frank Bunker epitomized the steam hogger, “in complete charge of his great machine,” as here (top, facing page) en route from Guelph Junction to Orr’s Lake, Ont., on August 3, 1957. At Guelph Junction (above), the crews of the road engine and the “pusher” (in front of the road engine) conversed, and soon Mr. Bunker invited my friend and me to ride with them.
the regular engineers on steam-powered excursions on CP sponsored by railroad enthusiast groups out of Toronto. He sat on his beloved right-hand seat on many of the trips, including the famous May 1960 tripleheader to Orangeville, Ont. [“Canadian Pacific’s Ontario Hat Trick,” Summer 2000 Classic Trains], featuring three of its oldest locomotives: 1883 Rogers 4-4-0 136 and Montreal D10-class 4-6-0s 815 (1908) and 1057 (1912).

When GO Transit commuter trains out of Toronto began running on the CP in 1981, Frank booked on to run them, as the GO shops were only about 10 blocks from his house. The service was to Milton, but the trains continued on from there to Guelph Junction for their overnight layover.

After four years of running the commuter trains, though, Frank thought it would be more exciting to sit at home and watch the grass grow. He told me he never dreamed he’d see the day when he’d quit railroading, but he said the “dismals,” plus radios, university-trained officials, computers, and so forth all took the fun out of railroading for him. Frank took his pension from the railway in June 1985 at age 60.

Before departing Guelph Junction, the two locomotives took water, and the engineers oiled around, Frank Bunker doing so on the 2236 with an onlooker behind him (top photo). Hillsey and I received our cab-ride invitation from Frank during this servicing interlude.
As we departed from Guelph Junction, our westbound deadhead passenger extra met this eastbound freight, led by 4-6-2 No. 2235, toward the end of the double track.
Frank's whole being was related to the steam locomotive, as illustrated in a letter he wrote to me in 1999. He'd been treated for coronary problems and reported, "Things were going OK till Oct. 1996 when my cross-compound pump wasn't doing the job, so I ended up in the backshop. They put a new main valve in my pump and took two pieces of tubing out of my legs and used them for bypasses to get the valve oil to my pump. When I came to in the backshop, I found they'd changed my cross-compound pump to a single pump and instead of the pump being 100 percent, it's only 29 percent, which is better than zero percent, and I can still keep company with my old gals 136 and 1057. They have me on pills but I'm not free-steaming like I used to be, and my headlight is a lot dimmer."

Although we corresponded before and after his retirement, I never saw Frank again after that enchanting ride on August 3, 1957. At age 80, in June 2004, the man who compared his body's functions to those of a steam locomotive, dropped his fire, and his boiler cooled down forever. R.I.P., dear Frank! (Born, December 24, 1924; retired, June 1985; died, June 12, 2004.)

At Galt station, with another local youth looking on (top), our doubleheader held for a meet with an eastbound freight led by RS18 8744. (The overhead wires are from the interchange with an electric CPR subsidiary.) Soon we were back on board, heading west across the Grand River.
As we cleared the Grand River bridge out of Galt and curved onto the Orr’s Lake Hill grade, there was an opportunity (top) to look back at the long string of empty maroon coaches trailing behind us. At Orr’s Lake, we stopped to detach No. 2236, then returned to the tiny depot at the east siding switch (above) for orders. In my final photo of the trip, Frank Bunker climbs back into the cab to begin our return ride eastward.
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