

## **Chicago's Finest Transportation The Illinois Central Electric**

John G. Allen and Roy G. Benedict

The South Side's great electric railroad celebrates its eightieth anniversary in 2006. Metra Electric—or as many long-time residents still think of it, the Illinois Central—is a solid, imposing presence in Hyde Park and the other South Side neighborhoods it traverses. With its raised embankment and its latticed steel towers, it has a solid, almost timeless feel to it. Like the Gothic buildings of the University of Chicago or Hyde Park's tree-lined streets with their mansions, coachhouses, townhouses, and six-flats, the railroad is an integral and evocative part of neighborhood life.

This great piece of transportation infrastructure has no parallel elsewhere in Chicagoland. It has few peers in North America, or indeed in the world. Even as Metra Electric celebrates its 80<sup>th</sup> anniversary in 2006, it remains, in its design and physical plant, at the pinnacle of achievement in the nation's railroad capital.

Public transportation on Chicago's South Side and south suburbs took a great stride forward in 1926 when the Illinois Central Railroad (IC) completed electrification of its commuter service. To this day, the physical plant of what is now Metra Electric reflects the vision of an age when the railroads were confident of themselves and the future. Much of that optimism is still palpable in the confidence with which the railroad strides authoritatively across Chicago's South Side. But the Illinois Central Electric story starts seven decades before the start of electric service, when Chicago was eagerly embracing the emerging technology of railroading as it outgrew its earlier role as a frontier outpost.

### **Paul Cornell and the Route of the Illinois Central**

How did this great electric railroad come to be, and what makes it special even to this day? The IC's electrification came about largely because the railroad ran along the south lakefront between the Loop and Hyde Park. When the IC's route was being planned in the early 1850s, the railroad sought to reach the Chicago River on a more westerly alignment near Halsted St., which would have bypassed Hyde Park altogether. But the City of Chicago insisted on a lakefront alignment. In an age long before Grant Park, Burnham Park, and Lake Shore Drive turned the south lakefront into a well-manicured landscape, the city's logic was that a lakefront route would force the railroad to protect the Loop and the south lakefront from storms and erosion to safeguard its own investment.<sup>1</sup>

This forced the railroad to deal with developer Paul Cornell, owner of today's Hyde Park. Cornell insisted that the railroad run what was then called suburban service to Hyde Park “in due course” (although the agreement did not specify a date), and buy lots in the community in order to have a stake in its success.<sup>2</sup> The IC reached Chicago in 1854, and inaugurated a four-round-trip suburban schedule on July 21, 1856, making it the first commuter service west of Philadelphia. In the wake of the Panic of 1857, the railroad showed that it, too, could drive a hard bargain, and insisted that Cornell reimburse the railroad for part of its losses from the service.

The IC was considering getting out of the commuter business altogether, but as Cornell was helping to pay the commuter deficit, the railroad felt optimistic enough about the service's prospects to extend service from Hyde Park to Woodlawn (i.e., from 51<sup>st</sup> St. – today's East Hyde Park Boulevard – to 63<sup>rd</sup> St.) in 1858. At some point between 1862 and 1869, the IC extended service half a mile further to Oak Woods Cemetery at 67<sup>th</sup> St.<sup>3</sup>

In subsequent decades, the IC would lead Chicago's railroads in the use of specialized cars and locomotives for its suburban service. Initially, however, the railroad used cars and engines from its regular fleet. Although the IC would eventually become a major consumer of coal from southern Illinois, its first locomotives burned wood, and refueled at a "wood pile" near where 57<sup>th</sup> St. is today.

### **The Fire and the Fair**

It took the 1871 Chicago Fire to turn the IC into an important part of the Chicago transportation picture. Many of those displaced by the fire relocated to the South Side, which was largely untouched by the fire. In 1871, shortly before the fire, the IC extended service a short distance to Parkside (at 70<sup>th</sup> St. and Kimbark Ave.). In 1872, after the fire, the IC took the bold step of running commuter trains all the way to Riverdale, just beyond the large area of Hyde Park township—which became part of the city in 1889.

In 1873 the IC inaugurated Sunday service, both for South Siders who still attended church services downtown, and for excursionists traveling to Oak Woods Cemetery (Americans in the 19<sup>th</sup> century had a closer relationship with death and the deceased than we do today). The South Chicago and Blue Island branches opened for service in 1883 and 1892, respectively. On the main line, further extensions brought IC commuter service to Harvey in 1890, Flossmoor in 1900, and Matteson in 1912. There were further south suburban extensions to Richton (now Richton Park) in 1946 and Park Forest South (now University Park) in 1979.

The IC provided impressive brick and stone stations and ornate ones with Carpenter Gothic architecture for its commuters. Adler and Sullivan designed a depot at Oakland (39<sup>th</sup> St.) with arches comparable to those found at Kenilworth on the Chicago & North Western or Stone Ave. on the Chicago, Burlington & Quincy. There was a large brick depot with a mansard roof at South Park station (57<sup>th</sup> St.), an engraving of which appeared on the cover of the first issue of *Hyde Park History* in 1980. Wooden depots, many with Carpenter Gothic trim, served commuters at other locations, particularly along the South Chicago branch. With the exceptions of Homewood and Flossmoor, the railroad demolished all of these station buildings in preparation for electrification.

Had it not been for the World's Columbian Exposition of 1893, the IC might well have remained a commuter railroad much like the Burlington, the Rock Island, the Chicago & North Western, or the Milwaukee Road. But the World's Fair propelled the Illinois Central to the forefront of Chicago's commuter railroads. The selection of the Jackson Park site was influenced in part by its proximity to the railroad for fast, easy access by fairgoers, and the IC fully rose to the challenge of handling unprecedented levels of ridership.

In 1892, in preparation for the World's Fair, the IC raised its tracks through Hyde Park and Woodlawn onto their present embankment so as to prevent delays and accidents at the many grade crossings with local streets.<sup>4</sup> The decorative concrete balustrades where the railroad crosses local streets came later; they are part of the "new" Hyde Park

bridges, which replaced lower steel structures in the decade before electrification. Grade separation work affected the main line only; the South Chicago and Blue Island branches remain on their original street-level alignments to this day.

In addition to its already-frequent service, the IC ran special trains to and from the fair – and there were so many of these trains that the railroad built a new set of express tracks for the benefit of fairgoers. “Peak travel day to the Fair was October 9, 1893... Counting passengers carried to and from the Fair and its regular suburban customers carried that day, the IC handled 541,312 people. The IC may still hold the record for passengers moved in one day on a U.S. suburban railroad”.<sup>5</sup> After the Fair, commuters benefited from the express tracks.

Even before the World’s Fair, IC service to Hyde Park was already distinct from most other commuter railroads. The IC was Chicago’s busiest commuter railroad, the trains had their own separate tracks since 1880, and they used specially-designed steam locomotives that could operate in either direction with equal ease. This saved on the land, time, and effort needed to turn the engines around on a turntable or a wye track at the end of the run, and made it more economical to run frequent trains back and forth over relatively short distances. The World’s Fair specials stopped exclusively at high-level platforms, so that passengers could board and alight without climbing or descending steps in the trains’ vestibules. The IC subsequently extended high-level platforms to all of its South Side and south suburban commuter stations. Although routine on rapid transit systems like Chicago’s “L”, high platforms were unusual on commuter railroads and remain so to this day outside the New York area.

### **The Decision to Electrify**

By 1920, there were about 400 commuter, intercity passenger, and freight trains passing through Hyde Park on the IC every weekday, all powered by coal-burning steam locomotives. Most, although by no means all of these were commuter trains. The smoke from these trains led civic groups and the city to press the IC to electrify its operations. In 1919 the IC entered into a set of agreements, collectively known as the Lake Front Ordinance, with the City and the South Park Commission (subsequently merged into the Chicago Park District). These agreements clarified certain property ownership matters for the railroad, and committed the parties to a series of civic improvements—the most important of which was electrification of the IC’s commuter service. The Lake Front Ordinance committed the IC to

*a strict 21-year timetable: suburban service had to be electrified by 1927, freight service north of Roosevelt Road by 1930, freight service south of Roosevelt Road by 1935, and through passenger service within the City of Chicago by 1940.*

*As it turned out, only the suburban electrification and the electrification of the freight service ... [to] a new yard at 31st Street were ... completed. [...] The Depression and the development of the diesel-electric ... locomotive doomed the freight electrification program, and the passenger electrification was contingent on ...[a] proposed new lakefront terminal, which was never built.<sup>6</sup>*

### **A Risk-Averse Choice of Voltage**

Every railroad electrifying its service faced a major decision from the outset: direct current (DC) or alternating current (AC). In a DC system, electricity flows in one direction from the source through the train's motors to a "ground" through the running rails. In an AC system, the directional flow of the electricity pulses back and forth at many cycles per second. At the end of World War I, DC was seen as a conservative choice rather than an innovative one. DC systems involved a lower voltage (pressure of transmission) than AC systems, which meant that more electricity had to be produced to do the same work. Furthermore, DC was not as well suited as AC to hauling heavy freight trains. On the other hand, with the electric technology of the day, cars and locomotives drawing AC power had to carry heavy transformers on board to reduce the voltage from the overhead wires to a level low enough for use in the traction motors. The weight of these transformers made AC less clearly advantageous on an electrification intended primarily for commuter service, as opposed to heavy-haul freight service where AC was more often seen as the superior choice.

When the IC made the decision to electrify in 1919, AC was being used successfully on the New Haven Line and on the Pennsylvania Railroad. Certain operating issues with AC technology, however, were still several years away from resolution.<sup>7</sup> The alternating-current systems that the New Haven Line and the Pennsylvania Railroad chose were selected largely for their ability to power heavy freight trains. Commuter rail service (although important) was not the determining factor as it was with the IC, so it is not surprising that the IC and certain other railroads chose direct current in order to avoid some of the technological complications then associated with AC.

Another factor probably influencing the choice of current was the extent of the electrifications that the various railroads planned. The Illinois Central and Canadian Northern never planned to extend electrification beyond their commuter territories, and the Delaware, Lackawanna & Western's plan for electrification beyond its commuter district into the Pocono Mountains was tentative at best. For most electrifications intended mainly for commuter rail, the advantages of AC were more than offset by other factors.

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<sup>1</sup> Paul Stanford, "Electric Commuting and a Cleaner Hyde Park." *Hyde Park Historical Society No. 1*. Chicago: Hyde Park Historical Society, 1980, pp. 14-16.

<sup>2</sup> Carlton J. Corliss, *Main Line of Mid-America: The Story of the Illinois Central*. New York: Creative Age Press, 1950.

<sup>3</sup> "Chicago Time-Table of 1869." *Illinois Central Magazine*, June 1930.

<sup>4</sup> Roy Benedict, "Shop Track," *First & Fastest*, Autumn 2002, p. 18.

<sup>5</sup> Alan R. Lind, *Limiteds Along the Lakefront: The Illinois Central in Chicago*. Park Forest, IL: Transport History Press, 1986, p. 55.

<sup>6</sup> Alan R. Lind, *Limiteds Along the Lakefront: The Illinois Central in Chicago*. Park Forest, IL: Transport History Press, 1986, p. 57.

<sup>7</sup> Michael Bezilla, *Electric Traction on the Pennsylvania Railroad, 1895-1968*, University Park, PA: Pennsylvania State University Press, 1980, pp. 68-72.

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### **Corrections**

In the article, "Chicago's Finest Transportation: The Illinois Central Electric," by John G. Allen and Roy G. Benedict, the following references were inadvertently omitted:

1. On Page 3, Col. 1, Par. 3. The passage, "Peak travel day ... on a U. S. suburban railroad," is from: Alan R. Lind, *From the Lakes to the Gulf: The Illinois Central Story*. Park Forest, Illinois: Transport History Press, 1993, p. 55.
2. On P. 3, Col. 2, Pars. 1 and 2, the section, "a strict 21-year timetable ... which was never built," is from: Alan R. Lind, *Limiteds Along the Lakefront: The Illinois Central in Chicago*. Park Forest, Illinois: Transport History Press, 1986, P. 57.