

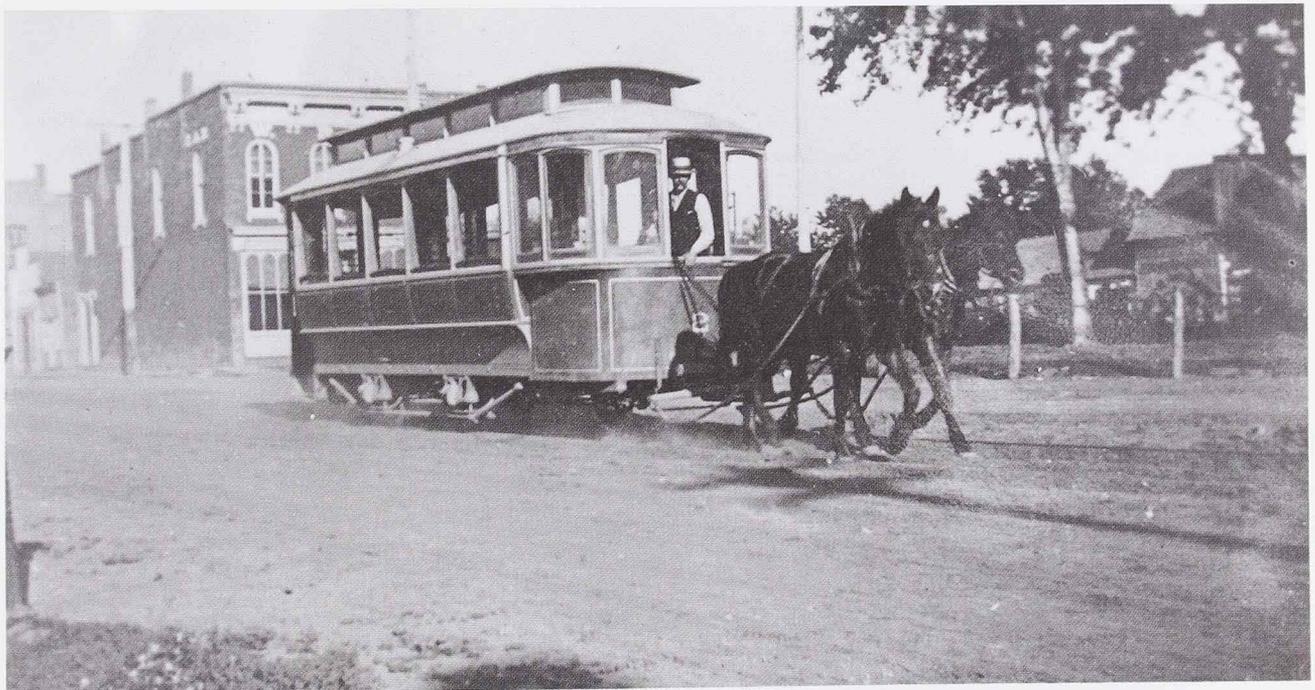
## Chapter Six Street Railways and Electric Interurbans to 1920

### Street Railways

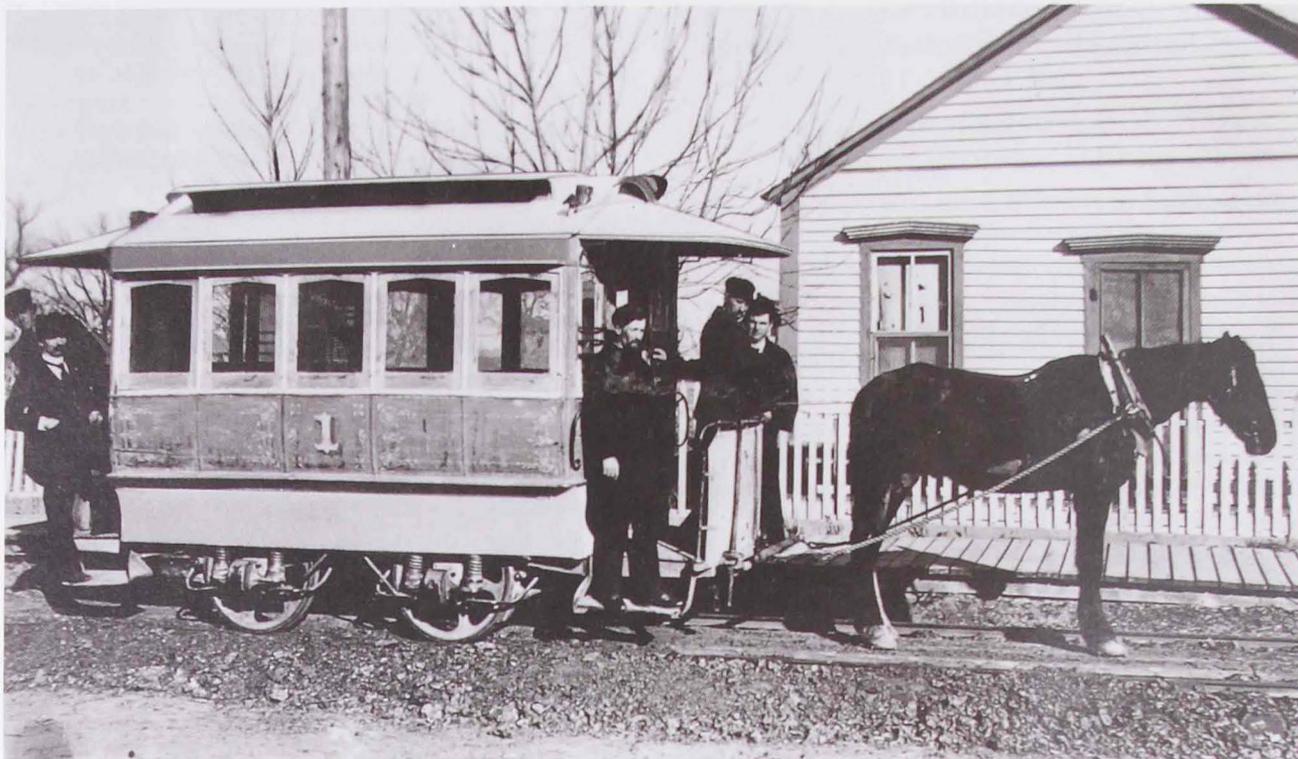
#### Introduction

Horse-drawn passenger vehicles appeared in the larger cities in the early 19th century. However, the poor condition of the streets meant a slow, bumpy ride or the prospect of becoming mired in the mud. Iron tracks were introduced to partially alleviate this problem, reducing the number of horses needed and permitting a somewhat smoother and faster ride. Speeds of four to six miles per hour were possible, hardly more than the pace of walking. A substantial part of the total costs was that of the horse, often priced at \$100 or more, and because they were usually limited to four to six hours of work, several teams were necessary. Often, the cost of the horses was greater than the average cost of \$750 for the car. It was estimated that 40 percent of the total investment was in the horses and stables.

Operating a horsecar cost about 20 cents per mile, including the wages of a two-man crew. As recently as 1908, public transportation was dependent upon animal power even though the average working life of a horse was only four years. Pollution was a problem as each horse generated ten pounds of waste on the streets each day. The invention of the steam engine brought experimentation with steam power, and electrification soon followed and spread rapidly. Fares through the first two decades of the 20th century were universally five cents and produced sufficient revenue until World War I. In 1920, fares were revised to distance schedules. Land values rose along the routes as transit companies developed commercial and residential housing, creating their own demand. By the end of the war, almost one-third of the companies nationwide were bankrupt as a result of over-capitalization, poor management and their inability to meet riders' needs. At the beginning of the 1920s, with automobile competition becoming important, the industry was in poor financial condition, unable to maintain its share of the growing urban transportation market.



Two-horse streetcar in Boonesboro, 1897.  
(Courtesy: Edward S. Meyers Collection)



Horsecar in Sioux City, 1884.  
(Courtesy: Scott Sorenson, Sioux City Public Museum)

### The Iowa Experience

Streetcar service started in five of the largest cities in Iowa during the early post-Civil War years. Operations by horse- or mule-drawn cars began in 1868 in Des Moines and Dubuque, and in 1869 in Davenport, Clinton and Council Bluffs. A brief review of the evolution of streetcar service in these cities will show the patterns that were rather typical in the development in other communities.

#### Des Moines

The capital of Iowa had a population of about 10,000 people at the close of the Civil War. Dr. M. P. Turner, who had operated toll bridges over the Des Moines River until tolls were abolished by the city council, received the first franchise for a narrow-gauge horsecar line to run from the Polk County Courthouse to the foot of Capitol Hill. In 1878, rails were laid on Walnut Street and ten years later, a line was opened on Fourth Street. Electric power was introduced by the Broad Gauge Railway Company, organized by Messrs. Van Ginkel, Teachout and Weber in 1886, to operate on Locust Street and

Grand Avenue. In 1889, Jefferson Polk, an associate of Turner, acquired control of the independent lines and consolidated them into the Des Moines Street Railway. A separate company, the Inter-Urban Railway, was incorporated in 1898 by the Des Moines Railway management to build an interurban three miles from Greenwood Park to Valley Junction (West Des Moines). Interurbans and street railways were often operated under common management with joint use of tracks, stations, repair shops and power facilities.

By 1890 the Polk interests operated 103 electric powered cars over nearly 50 miles of track in the city, and by 1911 they added 23 cars and 29 miles of trackage. In the early 1900s, the system came under control of the Harris Trust Company of Chicago and was petitioned into bankruptcy in 1911. Emil Schmidt, appointed receiver, became president of the newly organized company, later succeeded by Frank Chambers. Between 1911 and 1920, there was continuous labor-management strife over wages, conditions of work and the "two-man streetcar," climaxed by a four-month strike in 1921.

### Dubuque

In 1867, when Dubuque citizens voted to allow streets to be used for public transportation, the city was the largest in Iowa. In 1868, J. K. Graves organized the Dubuque Street Railway and operated the first horsecar from the levee at the foot of Jones Street to Coulter Avenue and 24th Street. Extensions were later built to the Fairgrounds and Eagle Point. Rather interesting and novel was the use of horse-drawn sleighs during the winter months. Joseph A. Rhomberg acquired the system in 1876. Electric storage battery cars used in the 1880s were

unsuccessful, as was the Graves Hill Street and West Dubuque Steam Railway, in negotiating the steep hills. In 1889, the Key City Electric Street Railway operated the first electric car on the Eighth Street hill and Rhomberg, faced with this competition, electrified the Dubuque Street Railway in 1890. The Union Electric Company, incorporated in 1900, acquired all of the street railways which passed into control of the Dubuque Electric Company in 1916. Expansion of the electric power industry resulted in acquisition of the street railways by the Interstate Power Company in 1924.



Electrified streetcar in Des Moines, 1890s.  
(Courtesy: Iowa State Highway Commission)

### Davenport

Five companies were involved in construction of street railways in and around Davenport. The first horsecar service by the Davenport City Railway began in 1869 on Third Street. In 1870, the Davenport Central Railway started operations on Brady Street and ran the first electric car in 1888. The Bridge, Second Street and Northwest Davenport Railway initiated service also in 1888 from the Mississippi River bridge on Second and Marquette to Eighth Street. In the same year, C. B. Holmes of Chicago acquired control of the various companies and incorporated the Davenport and Rock Island Railway to build a line on the bridge to Illinois. By 1890 electrification was completed, and in 1895 the company was reorganized into the Tri-City Railway and Light Company, controlled by the United Light and Railway Company of Grand Rapids, Michigan. The fifth line was organized in 1902 as the Davenport and Suburban Railway. The system was built on Fourth Street and started operations in 1904. This line was also acquired by the Tri-City Railway in 1907. Additional service was provided between Davenport and Rock Island by the "Bridge Line," a part of the system serving the area and the only Tri-City route that was double-tracked. During World War I, traffic was especially heavy to the Rock Island Arsenal, with ten cars permanently coupled in pairs and used during rush hours. Davenport cars were converted to one-man operations in 1921.

### Clinton

The first narrow-gauge horsecar line in the Clinton area was operated between Lyons and the CNW depot in Clinton in 1869, franchised as the Lyons Horse Railway Company and later extended south into Clinton. In 1878 a Clinton lumber firm received permission to open a narrow-gauge horsecar line in the city. Both lines were consolidated into the Clinton and Lyons Horse Railway in 1889, and by 1891 it had 24 cars pulled by 60 horses and mules over 10 miles of track. In 1890, franchises were granted to the Baldwin Electric Company and its successor, the State Electric Company, to build and operate electric or cable cars. This was done to compete with the horsecar lines, later controlled by the utility and widened to standard gauge and electrified. By 1904, the street railways were reorganized into the Clinton Street Railway and the system, expanded somewhat within the city, remained intact until the mid-1920s.

### Council Bluffs

Service began in 1869 by the Broad Street Railway, reorganized in 1872 into the Council Bluffs and Omaha Railway. Its initial project was a horsecar line from Tenth Avenue and Broadway to the Missouri River, a distance of three miles. In 1883 the UP gained control, but financial losses resulted in another reorganization through which the Council Bluffs Railway emerged. To purchase the UP interests, the Omaha and Council Bluffs Railway and Bridge Company was organized in 1887. Electrification followed, and a streetcar bridge over the Missouri was constructed and opened in the same year.

To Lake Manawa, formed during the spring flood of 1881 and subsequently developed into a resort area, service was subject to a bitter legal dispute between two rival railways. The Omaha, Council Bluffs and Suburban and the Manhattan Beach Railway, the latter chartered by the Omaha and Council Bluffs Railway and Bridge Company, sought to furnish transportation to the lake region. The former had purchased a steam locomotive to haul cars running from the UP station and had purchased the resort property in 1899, starting operations in 1900. But before the legal arguments reached a climax, the Omaha and Council Bluffs absorbed the Omaha, Council Bluffs and Suburban. Further solidification of the properties was arranged through lease of the Omaha and Council Bluffs Railway and Bridge Company and its wholly owned subsidiaries. The corporate management operated the street car service until it terminated in the 1940s.

### Other City Street Railways

Coverage of the street railway development in other cities in Iowa is confined only to the dates on which service began since the patterns were essentially similar; horsecars to steam to electrification with control by utility companies and reorganizations interspersed throughout the expansion. Burlington, Marshalltown and Cedar Rapids-Marion began in the 1870s, followed in the next decade by service in Oskaloosa, Boone, Keokuk, Muscatine, Waterloo, Fort Madison, and the first of five independent lines in Sioux City. Red Oak, the smallest of Iowa towns with municipal transportation, began operations in 1881, but faced with paving assessments, discontinued service in 1901. Ames started with a steam dummy line between the city and the Iowa State College campus in 1890, joined in the same year by electrified



Electrified streetcar in Sioux City, 1890.  
(Courtesy: Scott Sorenson, Sioux City Public Museum)

systems in Independence and Fort Dodge. Iowa City, whose central business district lay adjacent to the University of Iowa campus, saw no need for urban transportation until 1910.

### Novel and Unique Projects

**The Dubuque “Inclines”:** The Dubuque cable car system was built by J. K. Graves, banker, former mayor, state senator and a promotor and builder of street railways. His home was on a high bluff overlooking the central business district only three blocks away in a direct line but without adequate road or highway access. In 1882, Graves built a steam-operated cable car on an incline from Fourth and Bluff streets to the top of the hill, known after settlement as Fenelon Place. There was no charge for its use by residents for ten years until it was destroyed by fire. When Graves decided not to rebuild, his

neighbors incorporated the Fenelon Place Elevator Company and purchased the cable car property. In the 1900s, C. B. Trevis, a resident of the bluff since 1893, became sole owner, and after his death in 1940, the family continued operations. Family members and the city realized the importance of the “Incline” not only as a facility to transport commuters but also as a tourist attraction, and it has remained as such to the present time. Another cable car “incline” was built in 1887 at Eleventh Street, electrified in 1900 but abandoned in 1927.

**The Sioux City Elevated:** This experiment in urban transportation attracted national interest. It was observed that: “Urban Mass Transit, the past pride and now future hope of many of the world’s largest cities may very well owe a debt of gratitude to the founding fathers of Sioux City in northwestern Iowa. Indeed, the city of Chicago itself, might have been

deprived of one of its more romantic transportation landmarks had it not been for this Missouri River town—home of Iowa's first and last elevated railway."<sup>1</sup>

In 1887, Sioux City was in the midst of the most frenzied economic boom in its history. New businesses were being established and packing houses flourished; served by the Missouri River and four railroads, farms and real estate were selling at fabulous prices. Geographically, the location of the city did not allow for easy real estate development. Steep hills rose to the north and west from the river, and the Floyd River Valley lay to the east with its profusion of packing plants, cattle pens, railroad lines and yards. Beyond was a grassy plain known as Morningside, potentially an attractive suburb but in need of a transportation link to downtown Sioux City.

Prior to 1887, Sioux City was served by only a few scattered surface lines with cars drawn by horses, cable, or powered by steam. None could overcome the problem of crossing the Floyd River bottoms which included 84 railroad crossings. To remedy these conditions, the Sioux City Rapid Transit Company was organized in 1885 to build a double-tracked elevated railway from Third and Jones streets in the business district to Leech Street, connecting with a single-tracked surface line to the east side of Morningside Avenue.<sup>2</sup> It was rumored that initial financing was obtained during a poker game when nine local investors, including James Booge, A.S. Garretson, E. C. Peters, and A. M. Jackson put \$1,000 or more in the "pot" for seed money. Additional financing came from local, western Iowa and out-of-state interests. Peters was elected president and William Gordon, secretary of the company. At the time, only New York and Kansas City had elevated systems, and building the third in the nation would be Iowa's most famous and distinctive engineering feat. Upon completion, Chicago transit officials visited Sioux City to inspect the facility. Impressed with its engineering and apparent economy of operation, they used the model for construction of the Chicago elevated system. Visitors to the "Loop" would see the same type of construction that was once part of the Sioux City landscape.

The surface division was built first and opened for service in 1889. Original equipment consisted of a secondhand steam locomotive and two coaches scheduled for five trips per day. The elevated tracks were built some 25 feet above the central business

district and on bridges which spanned the main railroad lines. The tracks dropped on a concrete and iron ramp to ground level at Fowler Street where the operation continued into Morningside. Four stations were built on the elevated at Third and Jones, Iowa, Steuban and Divison Streets, with wrought iron stairways for access to the platforms. Six other ground stations were built on the Morningside route.

In 1891, the Rapid Transit officially opened for business, using one anthracite-burning locomotive and two rather ornately painted and decorated cars. Later, another locomotive was added with enough cars to make two three-car trains. The total cost of the elevated was \$500,000, exclusive of \$84,000 spent on the connecting surface line. For five years, the railway was prosperous. Fares were five cents for the elevated ride and an additional five cents for the surface line, making a total of 10 cents for the five-mile trip.

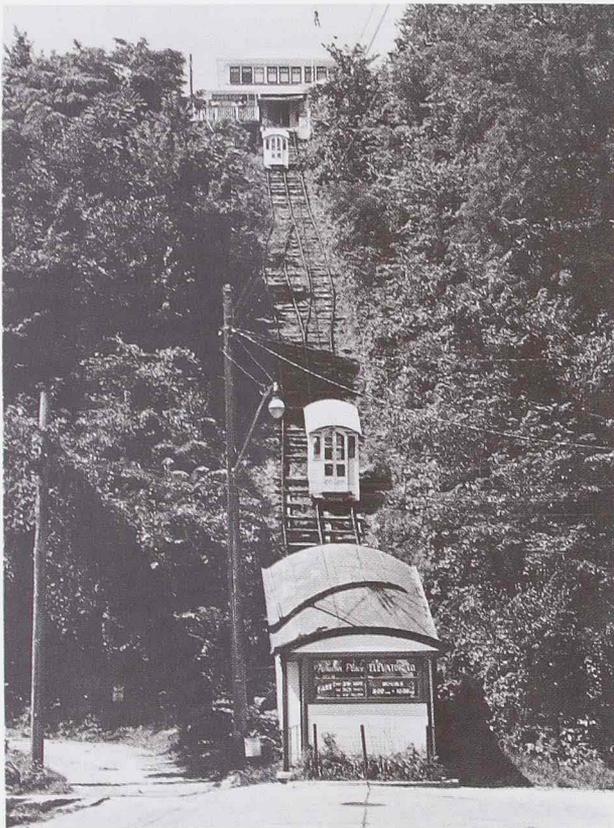
Several incidents indicated that work on the elevated was anything but dull. On one occasion, a mule wandered onto the right-of-way, although no one seemed to know how or why. The animal was struck by a train, walked away unhurt, but put the train in the repair shops for three days. A 16-year-old substitute engineer experimented with higher than normal speeds and almost toppled the train over the railing. The same individual ran through the wall of the Morningside engine house a few weeks later, thus ending his glorious railroading career. Another incident occurred when an important political party caucus was scheduled and the train somehow neglected to stop to board members of the opposition party.

In 1892, increasing competition from expanding surface lines forced the elevated to become partially

<sup>1</sup> B. Paul Chicoine, "Rails Across the Sky," *Iowan* 28 No. 3 (Spring 1980): pp. 28, 41-45, 53-54.

<sup>2</sup> Norman Carlson, ed., *Iowa Trolleys*, Bulletin 114, Chicago: Central Electric Railfans Association, 1974, p. 147; C. Addison Hickman, "The Sioux City Elevated," *Palimpsest* 22 (April 1941): p. 122. There appears to be a difference of opinion as to the length of the elevated railway. *Iowa Trolleys*, the most authoritative and illustrated research source found on Iowa street railways and interurbans, suggests that its distance was one and one-eighth miles, whereas Hickman states that it was two miles long.

electrified. In May, it received widespread publicity when its platforms were the refuge of residents during the Floyd River flood, saving many lives. Later that year, the first signs of impending disaster were noticed. The Panic of 1893 was a devastating blow to the economy of Sioux City. Among the business organizations forced into bankruptcy was the Rapid Transit Company, eventually sold for \$50,000, one-tenth of its original investment. Electric trolleys used the facility for the next seven years, but the new owners closed the stations and sold the equipment. Finally, in 1899, both elevated and surface companies were consolidated into the Sioux City Traction Company. The elevated was abandoned soon after, unable to compete with the electrified street railways. For a few years, control of the Traction Company was assumed by the Swift and Armour Packing Companies which continued to make surface improvements. In 1905, the Sioux City Electric Company, also controlled by Swift and Armour, succeeded the Traction Company and ran the cars through World War I.



Fenelon Place Elevator at Dubuque.  
(Courtesy: Dubuque Chamber of Commerce)

**The Sioux City Cable Railway:** The Company was incorporated in 1897 to operate on Jackson Street, which had an 11 percent grade from the river valley. Operations were delayed until 1899 expecting the city would reduce the grade, which did not occur. Two extensions were added in 1890 and 1892. By 1893, the Sioux City Street Railway was providing electrified service as close as two blocks from the cable railway on more efficient schedules. The cable company lost much of its traffic and converted to electric operation in 1894. It was sold to the Central Traction Company in 1895 which was merged with the Sioux City Traction Company in 1899.

## Electric Interurbans

### Introduction

Electric interurbans evolved from street railways or trolleys which had provided the public transit in the cities of Iowa. The trolleys had influenced the growth of the central city and linked it with the suburban areas. The next step was to connect regional cities and towns to nearby rural communities with a fast, frequent service not otherwise available. This was the convincing argument for interurban existence, and between 1900 and 1920 a dozen or more of these companies were operating in the state. Some started as steam roads and were electrified later; some operated as independents; others were associated with or were a unit within electric light and power utilities. Although developed originally for passengers, they expanded into freight service, interchanging with major railroads which crossed their routes, and they became important carriers for local traffic. The route maps later in the chapter show that with few exceptions, most were built in a north-south direction, filling the void for relatively short distance movements which existed by construction of the east-west roads. Their mileage and earnings reported from 1903 to 1920 are shown in Table 6-1 in five-year intervals.

The decline in net earnings and earnings per mile between 1915 and 1920 was the result of wartime inflation. Although gross earnings nearly doubled, operating expenses nearly tripled and the result was a drastic deterioration in net earnings and earnings per mile. The table does show, however, that from 1903 to 1915, the interurbans were in a rather favorable financial condition.

**Table 6-1**  
**Mileage and Earnings of Electric Interurbans in Iowa**

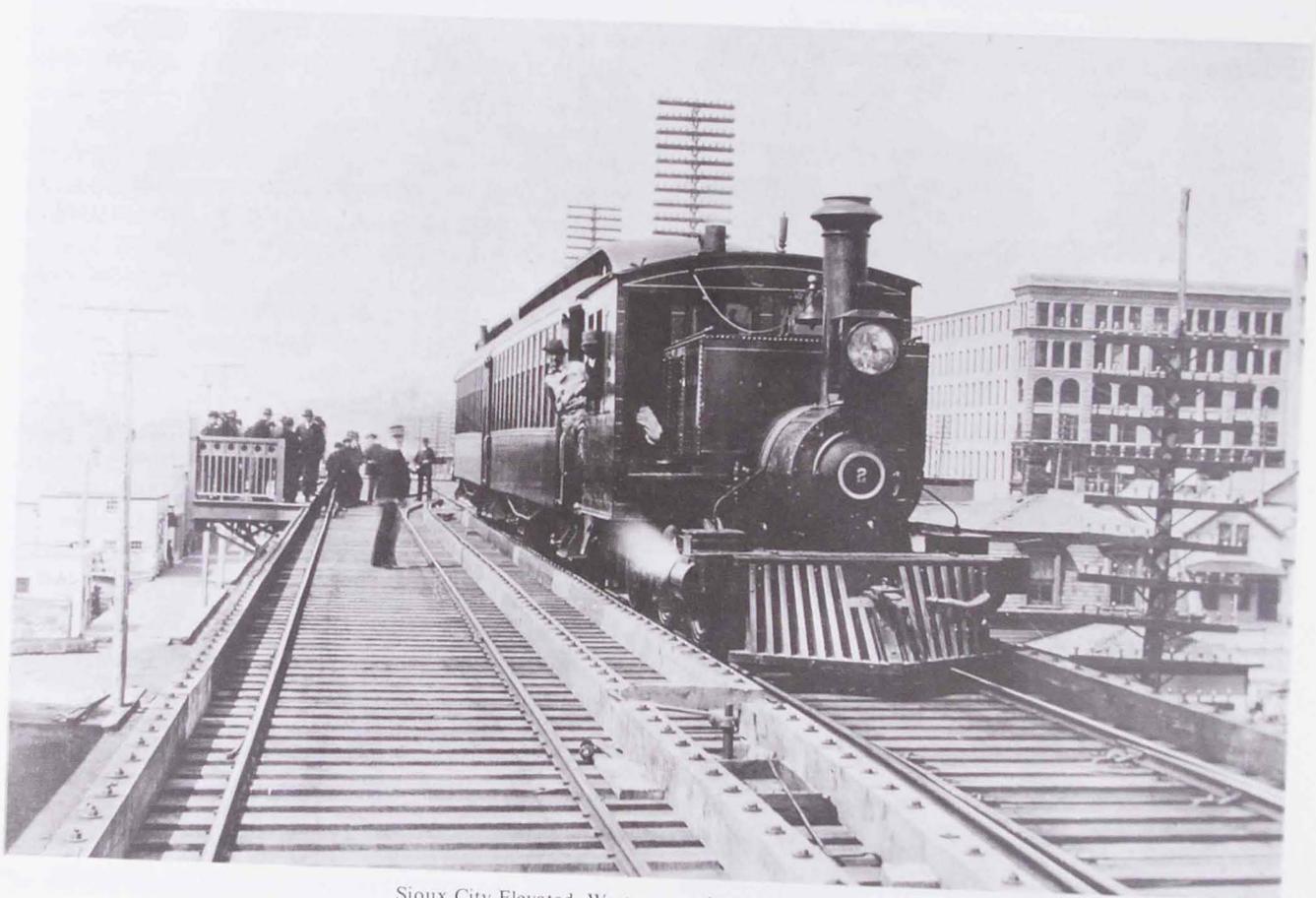
| Year | Mileage <sup>1</sup> | Gross Earnings <sup>2</sup><br>(thousands) | Operating<br>Expenses <sup>2</sup><br>(thousands) | Net<br>Earnings <sup>2</sup><br>(thousands) | Earnings<br>Per Mile |
|------|----------------------|--|---|---|----------------------|
| 1903 | 98                   | \$ 228                                     | \$ 132  | \$ 96                                       | \$ 975               |
| 1905 | 151                  | 497  | 316   | 181   | 1,194                |
| 1910 | 373                  | 1,450                                      | 951   | 409   | 1,322                |
| 1915 | 472                  | 2,923                                      | 1,805   | 1,118                                       | 2,173                |
| 1920 | 510                  | 5,628                                      | 4,923   | 685   | 1,341                |

(Source: Railroad Commission, *Annual Report, 1921*: p. viii.)

1903 was the first year for interurban reporting.

<sup>1</sup>Single track only.

<sup>2</sup>Figures rounded to the nearest unit.



Sioux City Elevated. Western terminus and main depot.  
 (Courtesy: Scott Sorenson, Sioux City Public Museum)



Sioux City Elevated. Third over Division Street.  
(Courtesy: Scott Sorenson, Sioux City Public Museum)

### Major Electric Interurbans

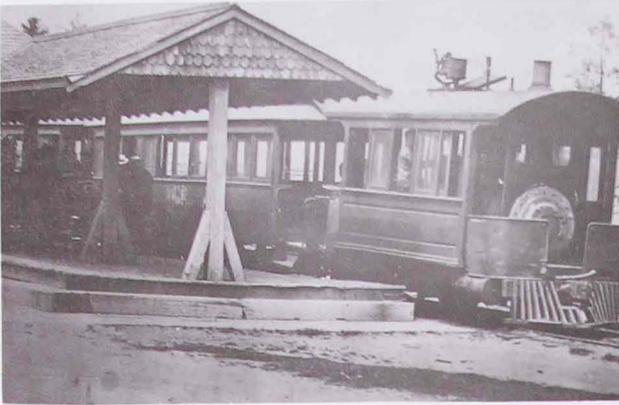
#### The Fort Dodge, Des Moines & Southern Railway.

Operating over approximately 150 miles, Iowa's longest interurban was organized to serve the cities in its name—the word “Southern” added in the expectation that the road would be built south of Des Moines. It started in 1893 as a small carrier, known as the Boone Valley Coal and Railway Company, to move coal three miles from Frazer to Frazer Junction on the M&StL. The road was headed by Hamilton Browne, mine manager of the Clyde Coal Company. Among its directors was Norman D. Frazer, after whom the town was named. In 1895, a new company, the Marshalltown and Dakota Railroad, was organized by Browne and his associates and purchased the property. In 1901, the name was changed to the Boone, Rockwell City and Northwestern Railroad with Browne again serving as president. The Newton and Northwestern (N&N) emerged in 1896 as a Browne road and extended the line from Frazer to Newton on the east, and from Gowrie to Rockwell City on the west. The entire line from Newton to Rockwell City was completed in 1904.

Expansion to common carrier status came about when eastern capitalists gained control of the N&N and in 1905, Henry Loring of Boston replaced Browne as president. The 100-mile railroad connected two small communities and owned large coal deposits which provided the major source of revenue. But some of the mines soon became unprofitable and the road needed new capital, a new industrial base, and larger terminals for further expansion. With capital furnished by New England financiers, the Fort Dodge, Des Moines & Southern (FTD, DM&S) was incorporated in 1906, with Loring as president and Henry W. Poor, publisher of *Poor's Manual of Railroads*, as a director.

The new company stopped the east-west expansion of the N&N and focused attention on the gypsum areas of Fort Dodge and the expanding industries in Des Moines as sources of new business. Three segments were built, each connecting with the N&N. One ran 28 miles from Hope to Fort Dodge, another 20 miles south from Midvale to Des Moines, and a third from Ames to Kelley. A branch into Ames was built in 1907. In 1909 the N&N went into receivership and was purchased by Loring. He conveyed it to the FTD,

DM&S which also acquired control of the Fort Dodge Street Railway and the two-mile line between Ames and the Iowa State College campus.



The Dinkey at Ames College Station  
(Courtesy: Ruth Jackson Collection)

Following the purchase of the N&N, the newly built lines were electrified with a 1,200 volt system furnished by a 6,000-kilowatt turbo generator at Frazer, fueled by company coal. Steam power was used for passenger service over the remainder of the road and freight service over the entire system until electrified in 1912. Electrification and the expenditure of \$2.5 million for 58-foot passenger cars put the railway into bankruptcy in 1910. Loring and Parley Sheldon of Ames were appointed as receivers. They terminated the Goddard-Midvale service in 1911 and abandoned a branch line from Niles to Ogden. Receivership, however, did not end improvements, the most notable being the replacement of the high wooden trestle with a steel structure over a tributary of the Des Moines river near Frazer, opened to traffic in 1912. In 1913, the railway was reorganized and sold to the Old Colony Trust Company of Boston for \$3.9 million. The new company was chartered in Maine, retained the old name and continued with Loring as president.

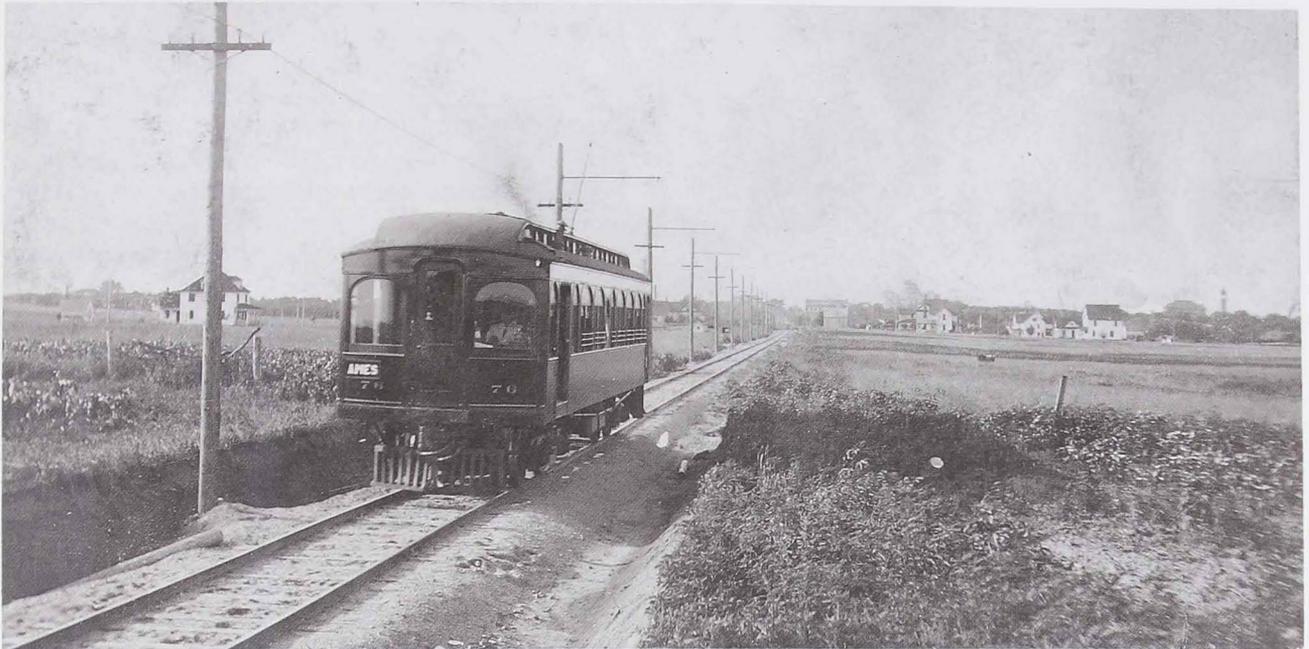
The Frazer generating plant had more capacity than needed to operate the electrified railroad and sold excess power to industrial users, especially in the Fort Dodge region. In 1915, the road acquired the Central Power and Light Company and became a commercial supplier of power on an area-wide basis. Freight trains were operated during nighttime hours when commercial demand was at its lowest level in order to balance the 24-hour power generation and distribution.

The railroad competed aggressively for freight traffic, operating 2,462 freight cars in 1918 as compared to 274 cars hauling freight on all other interurbans. For its size, it was said to have more freight cars than any other railroad in the nation. When the federal government took control of the railroads during World War I, the FTD, DM&S was included, together with the Waterloo, Cedar Falls and Northern (WCF&N). Passenger travel peaked in 1918. Over one million passengers were carried on hourly trains between Des Moines and Boone with connecting service to Ames. Between Boone and Fort Dodge, trains ran every two hours. Luxury service was provided in two parlor-observation cars at an additional fare of 25 cents between Des Moines and Fort Dodge. The road followed the operating rules of steam railroads, interchanging passengers and freight with the major east-west lines.

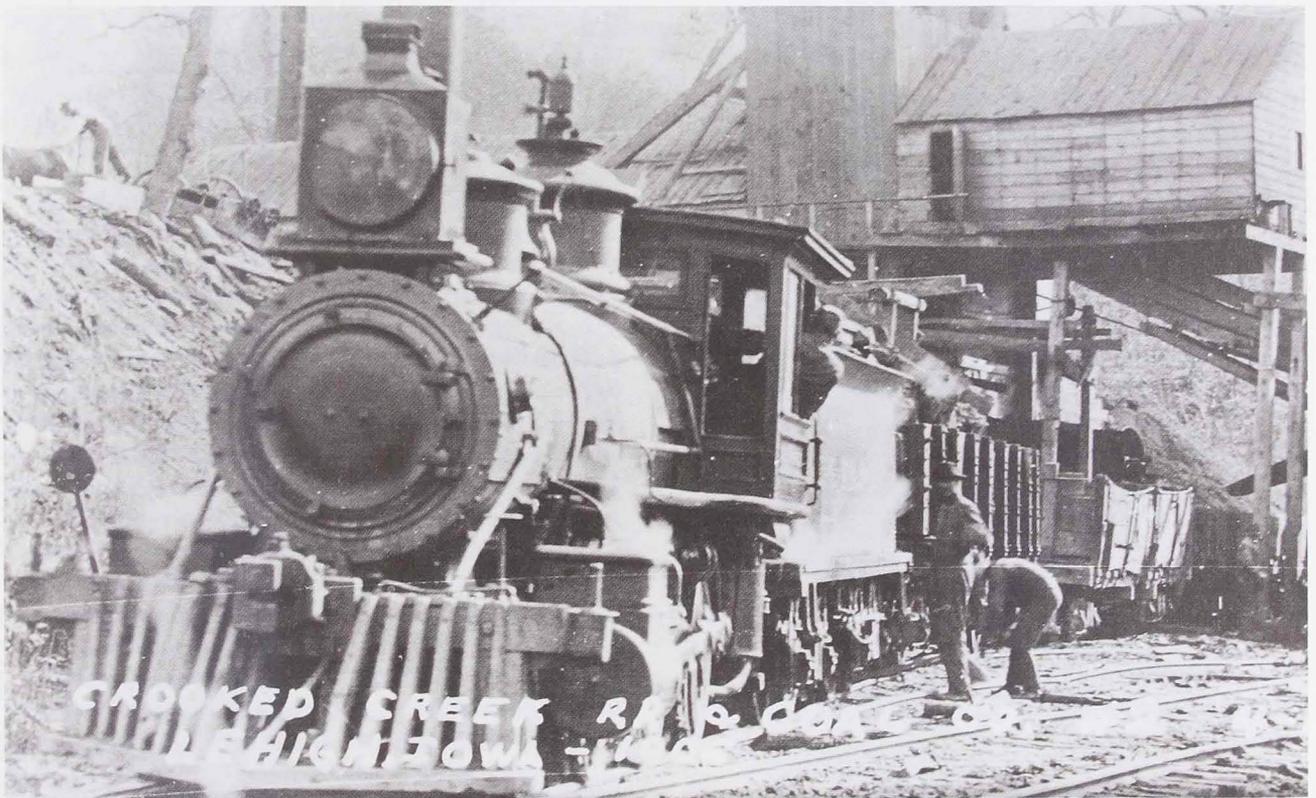
Expansion to serve additional industries resulted in the purchase of the Crooked Creek Railway in 1916 for access to coal traffic. The eight-mile narrow-gauge road began operating in 1876 from Judd on the IC to the mines at Lehigh. It was widened to standard gauge in the 1880s and operated in conjunction with the Webster City and Southwestern Railway, a 14-mile line between Border Plain and Webster City. In 1892, the Crooked Creek purchased the Webster City road and abandoned the Border Plain-Judd segment. In 1917, the FTD, DM&S built its own line from Fort Dodge to Border Plain and through track realignment had a direct connection between Fort Dodge and Webster City. At this time, the railroad was operating a system which would be in place for the next 45 years (Fig. 6-1).



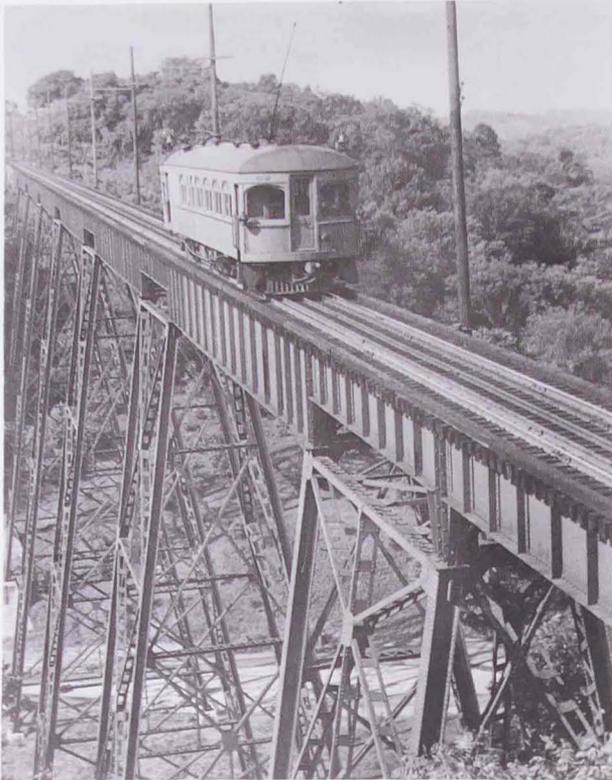
Crandie-Cedar Rapids & Iowa City Railway.  
(Courtesy: Iowa Electric Light & Power Company)



Fort Dodge, Des Moines & Southern Interurban, Ames to Ames College, 1906.  
(Courtesy: Ruth Jackson Collection)



Crooked Creek Railway & Coal Company, Lehigh, Iowa.  
(Courtesy: Oscar Bjork, Agent at Lehigh)



Fort Dodge, Des Moines & Southern car on the High Bridge.  
(Courtesy: Iowa State Highway Commission)

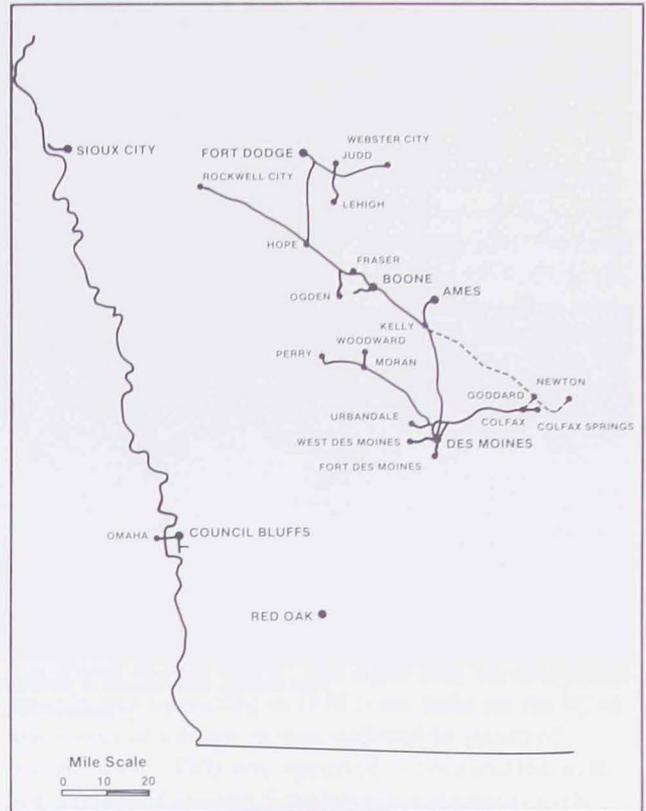


Figure 6-1  
Route of the Fort Dodge, Des Moines & Southern Railway.  
(Courtesy: Central Electric Railfans Association, *Iowa Trolleys*)

**The Cedar Valley Road and Crandic**

The second longest interurban route between major cities was a combination of the Waterloo, Cedar Falls and Northern (WCR&N), commonly known as the “Cedar Valley Road,” and the Cedar Rapids and Iowa City Railway, referred to as “Crandic” from the initials in its name. The two roads operated independently, interchanging passengers at a station built jointly on Fourth Street in Cedar Rapids, two blocks from the Union Station. The Valley Road started as a Waterloo horsecar line in 1885 and was considered one of the best built and managed interurbans in Iowa, receiving acclaim from the Westinghouse Electric Company. From Waterloo, it ran eight miles to Cedar Falls, 21 miles north to Waverly and 64 miles south to Cedar Rapids, soon earning the reputation of “a steam line with a trolley over it.”

Three Cass brothers—Louis S., Claude D., and Joseph F.—promoted and built the railroad. Louis and Joseph organized the Waterloo and Cedar Falls

Rapid Transit Company in 1895 to connect the two cities. Street railways in both were purchased in 1896 and 1897, giving access to downtown districts. In 1901, the road was extended 13 miles north to Denver and one year later to Denver Junction, where a connection was made with the CGW and trackage rights obtained to Sumner via Waverly for through service from Waterloo. In 1904, the name was changed to the Waterloo, Cedar Falls and Northern Railway. The arrangement allowed the Stickney road to use the interurban as a short cut for traffic from Waterloo to destinations on its Omaha line instead of using the longer route through Oelwein. There was also a personal relationship involved since both Louis and Joseph had served as vice presidents of the CGW. The coordinated system was terminated in 1909 when the CGW went into bankruptcy and the interurban built its own line into Waverly.

Construction on the Cedar Rapids line was started in 1912, reaching Urbana in 1913, and Center Point and Cedar Rapids in 1914. Connections were made with

the Cedar Rapids and Marion Railway and the "Crandic" line to downtown. Reciprocal schedules with the CNW at Cedar Rapids allowed through transit on interline tickets for passengers from Waterloo to Chicago. In 1918, the road operated 69 passenger cars, three of which were parlor-observation types with buffet service offered to those of the 7.3 million passengers who desired it. Freight operations were handled by 146 cars. The railroad suffered from poor maintenance during the War and when returned to the owners in 1920, it was in precarious financial condition.

The southern section of the route was incorporated in 1903 by the Dows family who provided, with one exception, it presidents throughout its history. It was organized as the Cedar Rapids and Iowa City Railway and Light Company, planned originally to operate through Iowa City and Muscatine to Peoria. Service began in 1904 with 13 trains daily, making the trip in 75 minutes. In 1913 the line was extended to Mt. Vernon, 15 miles east of Cedar Rapids, and later to Lisbon, two miles farther east. An important source of revenue came from college students attending the University of Iowa at Iowa City, Coe College at Cedar Rapids and Cornell College at Mt. Vernon. Traffic was especially heavy at home football games when WCF&N cars were leased, and on special occasions such as homecoming, special trains ran from Waterloo. This practice continued until 1938 when the WCR&N discontinued operations.

From its inception, the road was designed as a high-speed electric line for passenger service. As described by John M. Murray, the ride was "one of true adventure . . . always good for laughs and a myriad of jokes." Swinging and swaying from the great speed, the line was labeled by riders as the "Vomit Comet" or "as a ship rolling with an occasional leak."<sup>3</sup> However, by 1907 freight traffic, including coal for the Cedar Rapids power plant, was carried through interchange with the CRI&P at Iowa City. Originally the road was a unit of the Iowa Railway and Light Company, but as operations expanded, the title was changed to eliminate the words "and Light Company." It continued to be operated as a subsidiary of the parent company which became known as the Iowa Electric Light and Power Company in 1932. In addition to the interurban, the power company operated streetcar service in Cedar Rapids, generally along the interurban routes, in Boone and Marshalltown, and also along the three and one-half mile Tama and Toledo Railroad built around the edge of Tama to the State Juvenile Home.

The Lisbon branch never generated the expected volume of traffic and was scrapped in the late 1920s, but company equipment continued to run over Cedar Rapids streets until the 1930s (Fig. 6-2).

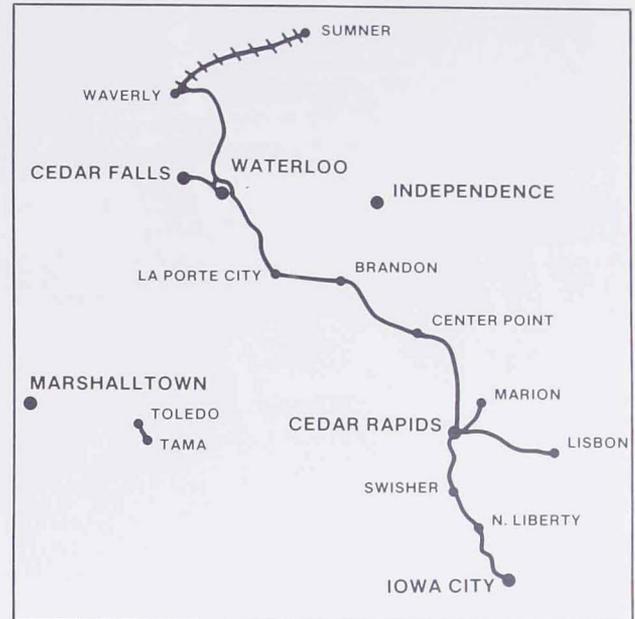
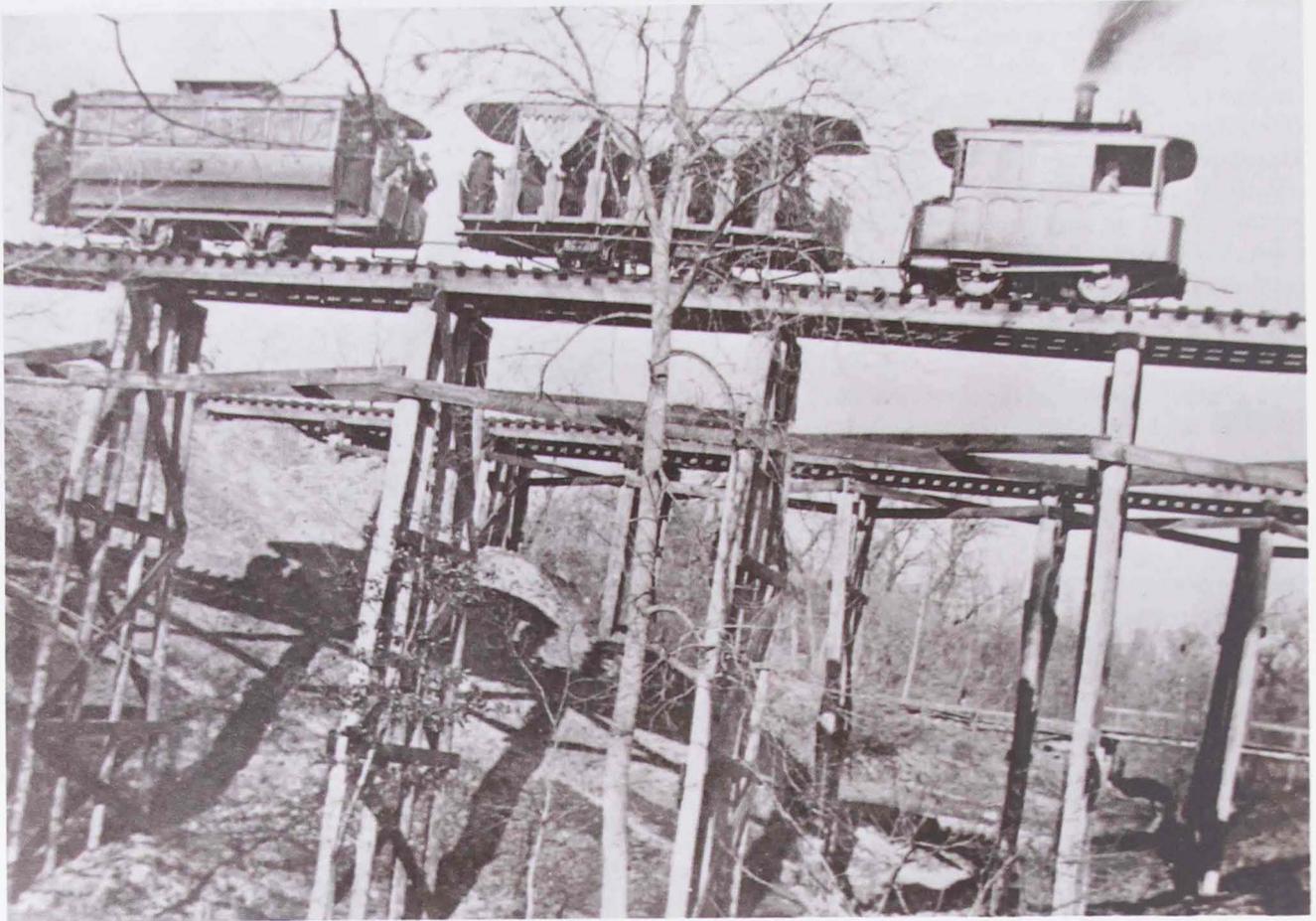


Figure 6-2  
Routes of the Cedar Valley Road and Crandic Interurbans.  
(Courtesy: Central Electric Railfans Association, *Iowa Trolleys*)



Crandic-Cedar Rapids & Iowa City Railway.  
(Courtesy: Iowa Electric Light & Power Company)

<sup>3</sup> John M. Murray, *It Took All of Us: 100 Years of Iowa Electric Light and Power Company*, Cedar Rapids: Iowa Electric Light and Power, 1982, p. 28.



Train west of Boone, around 1900.  
(Courtesy: Iowa Electric Light & Power Company)

### **The Des Moines and Central Iowa Railway**

The interurban fanned out of Des Moines to the east and northwest. It was incorporated in 1899 as the Interurban Railway by H. H. Polk, G. B. Hippee and W. I. Haskit of Des Moines and A. W. Harris of Chicago, with operations tied into the Des Moines street railway system. The first construction was an electric passenger road to Colfax through Altoona in 1903, connecting with the Douglas street car line at a point called Klondike Junction. Freight, consisting primarily of coal, ran on a line built on the north side of Des Moines, later used also for passenger service. The interurban planned to build north to Eldora, south to Indianola, southwest to Winterset and northwest to Audubon, but the only road that materialized was the 34-mile "Beaver Valley Division" to Granger, Woodward and Perry, built in 1906. Riders labeled the line as the "Galloping Goose."

The area served was rather sparsely settled and the frequent passenger service originally scheduled was never supported, although Colfax, then a popular health resort, accounted for relatively heavy business. Freight on both east and west lines was interchanged with the CGW at Des Moines, giving the railroad an entry into what was considered CRI&P territory. World War I brought a significant change in the passenger traffic. Camp Dodge on the Beaver Valley route was a training site for 40,000 to 50,000 military personnel, and dozens of trains running as frequently as the cars could be turned around made the trip from the interchange points on the major railroads to the Camp. In 1918, the interurban carried over two million passengers, second only to the total of the WCF&N, but by 1920 the volume had dropped to slightly over 500,000. The Perry to Colfax interurban was named the Des Moines and Central Iowa Railway in 1922.

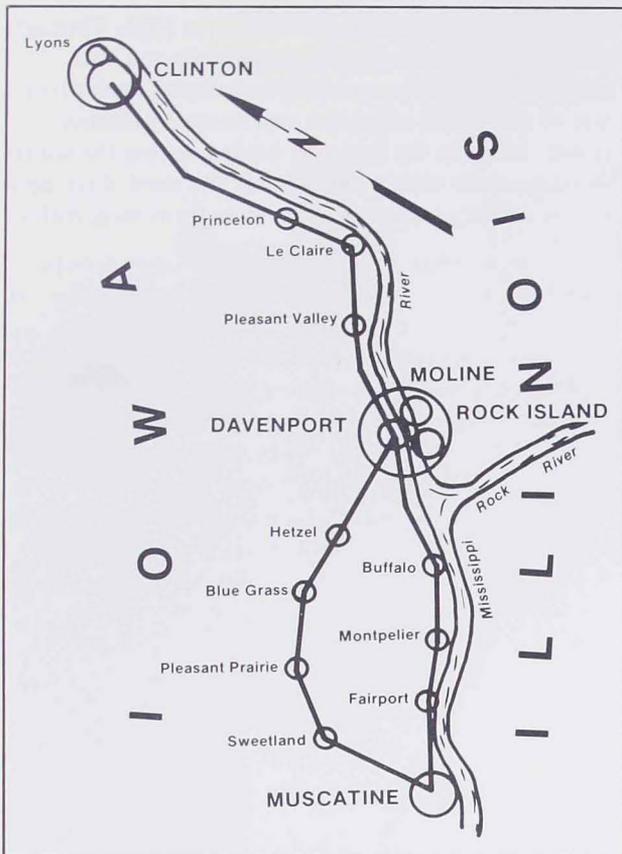


Figure 6-3

Route of the Clinton, Davenport, and Muscatine Railway.  
(Courtesy: Wayne DeJohn, "The Interurban Years")

### The Clinton, Davenport and Muscatine Railway

In terms of mileage operated, the fourth largest interurban was a combination of the Iowa and Illinois Railway, incorporated in 1901, and the Davenport and Muscatine Railway, incorporated in 1910. The Iowa and Illinois started operations in 1904 on a 33-mile route from Clinton to Davenport through Princeton, Le Claire and Pleasant Valley with seven daily schedules. The Davenport and Muscatine began in 1912 on a 25-mile right-of-way veering west from the river through Hetzel, Blue Grass, Pleasant Prairie and Sweetland and ran over five miles of streets in the terminal cities. An express route from Davenport went through Buffalo, Montpelier and Fairport. In 1916, the two roads were consolidated under the name of the Clinton, Davenport and Muscatine Railway, but through service was not possible because of the differences in the voltage systems used to power the equipment. As a result, the two roads were maintained as separate divisions with transfer at Davenport (Fig. 6-3).

During the peak of passenger travel in the war years, 15 daily trains were scheduled from Clinton to Davenport and 12 between Davenport and Muscatine. Passengers boarded the cars on city streets as they would on local trolleys. Rural travelers signaled the cars to stop by extending their arms horizontally above the tracks and at night would show and wave a light until acknowledged. By 1920, freight interchanged with the CNW at Clinton and the CRI&P at Davenport became more profitable than passenger traffic. Local freight carried included a variety of commodities ranging from perishable goods to sand, stone, gravel, coal, livestock, vegetables and agricultural supplies. Their passenger business was approximately the equivalent of the Crandic line—about 600,000 in 1918.

### Short Line Interurbans

**The Southern Iowa Railway** traces its ancestry from the Albia Centerville interurban, believed to be the oldest in Iowa. It was incorporated as the Centerville, Moravia and Albia Railroad by Francis M. Drake, a former Iowa governor and founder of Drake University, and Russell Sage of New York. The road was built as a branch of the Missouri, Iowa and Northern of the Wabash system in 1880. The Wabash operated trains between St. Louis and Des Moines over the two roads to Centerville and Albia until 1885 when it went into receivership. In 1880, the railroad was reorganized as the Albia Centerville Railway, leased to the Iowa Central which was later controlled by the M&StL and operated from Oskaloosa via Albia to Centerville until 1910. That year, W. A. Boland of New York and J. L. Sawyers of Centerville, dissatisfied with the M&StL service, reorganized the road, changing the name to the Southern Traction Company.

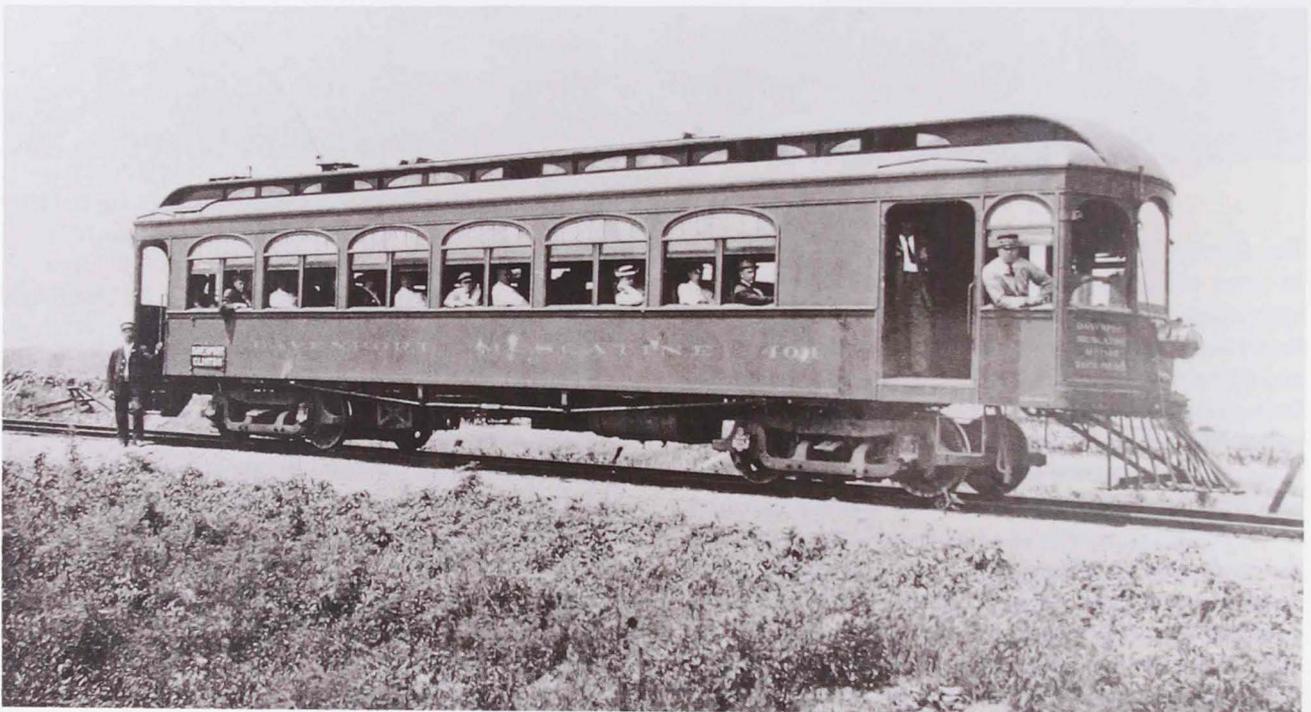
Although the name implied electric-powered equipment, it ran by steam. In 1914, Frank S. Payne and D. D. Bradley of the Centerville Light and Traction Company purchased the road and changed the name to the Centerville, Albia and Southern Railway, electrifying it shortly thereafter. By utilizing the street car tracks in both towns, the 30-mile interurban reached the depots of the CB&Q at Albia and the CRI&P at Centerville. Freight revenues came from coal and package traffic, interchanged with the M&StL at Albia, the Wabash at Moravia and the CMStP at Trask. The inventory of 10 passenger cars included two with wooden box motors and two center entrance steel cars with separate compartments for women, especially appreciated since miners

constituted the major passenger business and tended to become quite boisterous on pay days. In 1916, the Centerville Light and Traction Company changed its name to the Iowa Southern Utilities Company and the railroad was conveyed to the utility firm. In 1918, passenger volume totaled almost 400,000 riders.

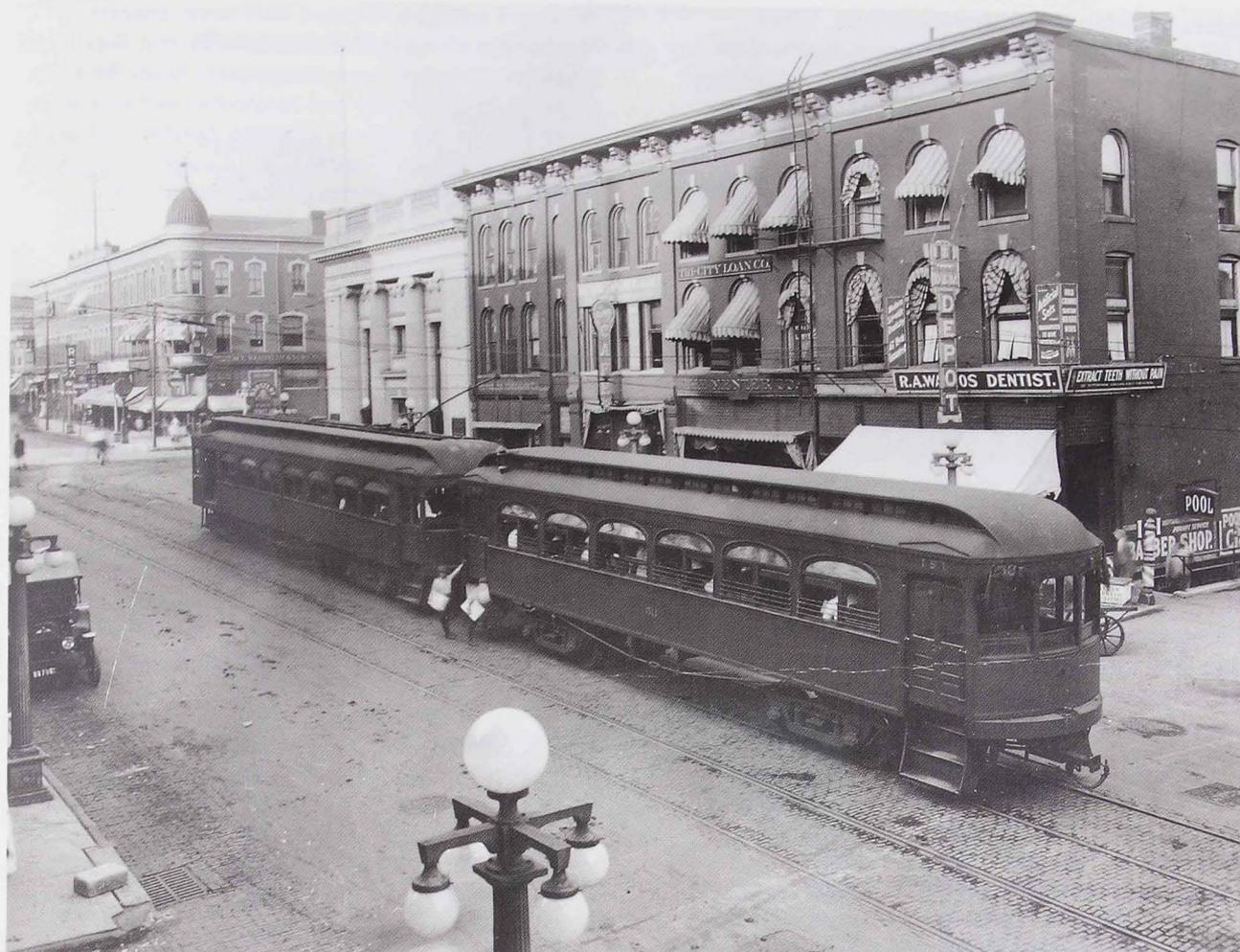
**The Mason City and Clear Lake Traction Company** was organized by W. E. Brice of Mason City and L. H. Ong of Tama in 1896 as an integral part of their real estate development in the southwest section of Mason City. Brice, who had been associated with steam railroads and later became a vice president of the CNW, was president and Ong, with experience with several power companies and the Tama-Toledo Railway, was vice president, secretary and superintendent. The 10-mile route was laid out over what is now Highway 106. Opened for traffic in 1897, it eventually had the longest tenure of continuous electric interurban operation in the nation. Equipment was purchased to handle the summer traffic to the popular Clear Lake area, reaching a

peak of over one million passengers in 1918. Through cars from connecting roads ran directly to Clear Lake, and railroad executives transferred their private cars to the line to enjoy the movement by electric power. Ice from the lake was hauled during the winter to destinations within and outside the state. Coal and milk were major sources of revenue from local traffic.

Shortly after 1900, the word "traction" was dropped from the company name and "railway" substituted. It was assumed that the change was made to secure tariff agreements with additional steam lines. In 1910, the company was controlled by the Peoples Gas and Electric Company of Mason City and reorganized as the Mason City and Clear Lake Railway. In 1913, the United Light and Railway Company acquired the stock as well as the utility, and Brice stepped down as president to become a director. He was succeeded by F. J. Hanlon, a member of the original administration. The new company also received franchises for street railways from both Mason City and Clear Lake.



Niles two-man car of the Davenport and Muscatine Railway.  
(Courtesy: Iowa Illinois Gas & Electric Company)



Two-car train in downtown Davenport.  
(Courtesy: Iowa Illinois Gas & Electric Company)

**The Charles City Western Railway** was chartered in 1910 by local interests and started operations on a 13-mile line between Charles City and Marble Rock. Originally, it ran as a gasoline and steam road. Passengers rode in a 55-foot “wind splitter” car with porthole windows and a center door entrance. The road was electrified in 1915 and an extension built to Colwell, eight miles northeast of Charles City. The cars ran within the city and interchanged with the CMSTP and IC at Charles City and the CRI&P at Marble Rock. The railway received considerable publicity during World War I when Marjorie Dodd, a college student and daughter of the mayor, became

the first woman “motorman” on an electric interurban in Iowa. City service was discontinued during the early 1920s.

The four remaining railways in the interurban category were essentially passenger roads, no more than three miles long, connecting with larger interurbans or steam railroads. Except for the fact that they ran between closely situated cities or towns, they probably would have been classified as street railways. **The Tama and Toledo Electric Railway and Light Company** started service in 1894 to link Toledo, the county seat of Tama County, with Tama on the CNW and the St. Paul Railroads. The line used the

streets of both cities as its right-of-way. When Leander College in Toledo merged with Coe College, the state took over the vacated buildings for a State Juvenile Home and insisted that railway service be provided for coal movements. The result was a relocation of the road in 1919 around the edge of Tama to the home in Toledo. Street trackage was abandoned when paving assessments were placed against the railway, which then routed its passenger cars over the belt line originally built for freight service.

**The Cedar Rapids and Marion Railway** was organized in 1891, and it immediately purchased the franchise for electric railways in Cedar Rapids. A 25-year franchise was granted for service from the terminal at Marion to the southwesterly city limits. By 1909, 12 miles of main line trackage was constructed within Cedar Rapids and 2.28 miles from the city limits at Kenwood to Marion. In 1912, the railway was acquired by the United Light and Power Company, a holding company with other roads in Iowa. The railway carried almost half a million passengers in 1918, probably the heaviest volume transported within the Cedar Rapids city limits.

**The Oskaloosa to Buxton Railway** began operations in 1906. It was owned and operated by the Oskaloosa Traction and Light Company, which planned ultimately to reach Albia but never built beyond Beacon, three miles distant. Expectations for

passenger service to Buxton were never realized because the mines closed soon after World War I and the unincorporated town disappeared from the Iowa maps. In 1913, the city and interurban railways were taken over by the Illinois Traction System, and later by the Des Moines Electric Light Company (Iowa Power and Light Company). Rail operations were abandoned in the 1920s.

**The Colfax Springs Railway** started in 1908, some years after the discovery of a mineral spring near Colfax. A hotel was built on the bluff overlooking the town, and an inclined plane connected it with the CRI&P station at the foot of the bluff. The health spa, reported to be one of the finest west of the Mississippi River, attracted thousands of visitors during the 1890s, but business declined drastically in the early 1900s. Colonel James P. Donahue, whose wife had ostensibly been cured by the mineral waters, bought the hotel and built a one-mile electric railway from the hotel into Colfax. Service began in 1909 but patronage was somewhat less than anticipated. Scheduled rail service ended with the closing of the hotel in 1920.

Electric interurbans made a strong contribution to the growing transportation structure of the state in the early years. Especially notable was their expansion during the second decade. This is indicated by selected operational data in Tables 6-2 and 6-3, presented in two-year intervals.

**Table 6-2**  
**Operating Revenues and Expenses of Electric Interurbans 1910-1920**

| Year | Mileage <sup>1</sup> | Revenues <sup>2</sup><br>(Thousands) | Expenses <sup>2</sup><br>(Thousands) | Op. Ratio<br>(Percentage) |
|------|----------------------|--------------------------------------|--------------------------------------|---------------------------|
| 1910 | 482                  | \$1,450                              | \$ 951                               | 65.58                     |
| 1912 | 427                  | 1,783                                | 1,272                                | 71.34                     |
| 1914 | 538                  | 2,682                                | 1,722                                | 64.20                     |
| 1916 | 619                  | 3,120                                | 1,967                                | 63.04                     |
| 1918 | 666                  | 4,460                                | 4,123                                | 92.44                     |
| 1920 | 658                  | 5,628                                | 4,923                                | 87.82                     |

(Source: Iowa Railroad Commission, *Annual Reports for the Selected Years*.)

<sup>1</sup> All trackage, including branches and sidings.

<sup>2</sup> Figures rounded to the nearest unit.

**Table 6-3**  
**Passengers, Revenues and Equipment of Electric Interurbans 1910-1920**

| Year | Passengers<br>Carried <sup>1</sup> | Passenger<br>Revenues <sup>2</sup><br>(Thousands) | Freight<br>Revenues <sup>2</sup><br>(Thousands) | Passenger<br>Cars | Freight<br>Cars |
|------|------------------------------------|---|---|-------------------|-----------------|
| 1910 | 7,419                              | \$ 968  | \$ 368  | 156               | 404             |
| 1912 | 10,076                             | 1,180   | 508   | 151               | 604             |
| 1914 | 13,350                             | 1,611   | 762   | 216               | 2,248           |
| 1916 | 12,905                             | 1,762   | 1,029   | 204               | 2,785           |
| 1918 | 15,077                             | 1,948   | 1,270   | 205               | 2,746           |
| 1920 | 13,523                             | 2,570   | 1,934   | 225               | 2,795           |

(Source: Railroad Commission, *Annual Reports for the Selected Years.*)

<sup>1</sup> In Millions.

<sup>2</sup> Figures rounded to the nearest unit. Freight revenues do not include those from milk, mail and express traffic.

In every category listed in the tables, the interurbans showed a remarkable expansion in operations. The exception was in passengers carried, a movement which peaked in 1918. The operating ratio (relationship of operating expenses to revenues) has always been a key indicator of financial progress with 70 percent generally considered as an ideal level. In that regard, the interurbans were fairly successful until the war years when inflation dramatically increased operating expenses. For example, the 102.2 percent of the FTD, DM&S and 93.7 percent of the WCF&N greatly influenced the overall ratio for all railways. Not much change was noted for the year 1920, when inflationary forces were still evident. The large increase in freight cars between 1912 and 1914 resulted from capital investments by the above roads and additions to the fleet of the Iowa Railway and Light Company.

### Summary

Street railways began operations in the largest Iowa cities during the early post-Civil War period and spread rapidly to other communities in the latter years of the 19th century. With few exceptions, the service started with horse- or mule-drawn cars and progressed through steam power to electrification as electric utilities were organized and their influence expanded in urban areas. These companies were instrumental in consolidating competing lines within the cities into more efficient systems. Novel experiments in public transit were introduced by cable

car innovations and elevated railways in Dubuque and Sioux City. The Dubuque Incline remained as a permanent structure, whereas the Sioux City elevated system operated for only ten years before abandonment. During the 1920s, many of the urban systems faced economic distress through paving assessments against their properties and the competition of automobiles.

Electric interurbans played an important role in the transportation structure of the state. They provided fast and frequent service on short or medium distance routes not serviced by main or branch line railroads and influenced the development of cities and towns within their territorial boundaries. Their value was enhanced by interchange agreements with major steam railroads and coordination with street railways in the joint use of trackage, stations, repair shops and power facilities. Although often steam powered initially, interurbans were converted to electrification through ownership by electric utilities. Built primarily for passengers, they soon found freight, especially coal traffic, to be a profitable source of revenue. Freight traffic was a principal reason why two of the largest interurbans were brought under federal control during World War I. As measured by their operating ratios, their financial condition was quite satisfactory until 1918 but was seriously undermined by inflationary forces during and following the war years. Passenger traffic peaked in 1918, thereafter succumbing to the same trends which forced abandonment of street railways.

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