

Chapter Eleven

Change, Confusion and Crisis— The 1970s and 1980s

Introduction

The period of 1970-1984 witnessed revolutionary changes in transportation philosophies and attitudes, structural organization, carrier operating strategies and coordinated federal-state policies. State Departments of Transportation were created to promote more orderly and effective planning and funding programs for balanced systems unique to a state's needs. In the early and mid-1970s, federal legislation was directed toward relief of the perennial financial problems of the railroads. Major roads in the East as well as two roads serving Iowa filed for bankruptcy, resulting in state involvement to replace parts of the route structures. The near completion of the interstate highway system and reconstruction and improvement in other highway programs brought demands for longer and heavier trucks, often requiring solutions through legal action.

Environmental issues, the energy crisis, and the expected character of service were instrumental in establishing new standards for railroads and highways. Public transit became a prominent issue as rural areas faced losses of air service and railroad branch lines and as urban communities sought solutions to rising private and commercial traffic congestion. Mississippi River problems centered on the controversy over Lock and Dam No. 26 at Alton, Illinois, and user taxes were assessed against commercial water carriers. State airport and aviation system plans were developed in air transportation.

The State Department of Transportation

Until the 1960s, transportation planning and project implementation were the responsibilities of individual modal agencies with little coordination among them. The demand for more efficiency in developing balanced transportation systems led to the creation of the U.S. Department of Transportation, a consolidation of the modal agencies. The same trends occurred on the state level. Action plans on environmental issues, integrated transportation planning, and studies of the impact of highway improvements on other modes were called for in federal legislation. At the same time, independent of federal incentives, states were reorganizing government structures, and the creation of

Departments of Transportation was one end result. By 1977, 38 states had organized such agencies, 21 of which preceded Iowa, and a number of these were dominated by one or two modal agencies, usually the highway division. In fact, of those created by 1979, five still had the word "highway" in their titles.

At the request of Governor Ray in 1970, the Office of Planning and Programming prepared a report which analyzed the requirements for an Iowa Department of Transportation, developing an understanding of the organization and its operations, and identifying issues to be addressed in its organization and implementation. The report was advisory in nature and recommended "a first generation" departmental structure (Fig. 11-1). The 65th General Assembly created the department, effective July 1, 1974, "to be responsible for the planning, development, regulation and improvement of transportation in the state as provided by law."¹ A state Transportation Commission consisting of seven members, no more than four from the same political party, was appointed to four-year terms by the Governor, subject to Senate confirmation. Their responsibility was to periodically review programs of the department and make all major policy decisions. Victor Preisser was selected as the first director and brought a wide and diversified experience in modal and general transportation to the task of organizing the department. He viewed Iowa as a "Transportation Laboratory"—a display state where transportation problems could be anticipated, studied and analyzed before national and state laws were passed.

From the Highway Commission, which ended its 62 year existence in 1975, to the new Transportation Commission, came Robert Rigler, New Hampton; Stephen Garst, Coon Rapids; and Donald K. Gardner, Cedar Rapids. Ann Pellegrino, Story City, was appointed from the Aeronautics Commission, which was terminated after 30 years of existence. Others appointed were William F. McGrath, Melrose; Allen Thoms, Dubuque; and L. Stanley Schoelerman of Spencer. In 1984, of the original membership, only

¹ 1974 Laws of Iowa, Chapter 307. See also James Bennett Jr. and William J. Dewitt, "The Development of State Departments of Transportation—A Recent Organizational Phenomenon," *Transportation Journal* (Fall 1982): p. 515.

Robert Rigler remained until his retirement in 1986. The organizational structure of the Department of Transportation in 1984 is shown in Fig. 11-2.

The Transportation Commission in 1986 consisted of Austin B. Turner, Corning, chairperson; C. Roger Fair, Davenport, vice chairperson; David Clemens, Dubuque; Del Van Horn, Jefferson; Robert Meir, Ottumwa; Molly Scott, Spencer; and Douglas Shull, Indianola. Barbara Dunn, Des Moines; Dennis Voy, Maquoketa; Darrel Rensink, Sioux Center; and Jules Busker, Sioux City, had also served terms on the Transportation Commission. Preisser was appointed state Social Services Director in 1977 and was succeeded by Raymond L. Kassel. Kassel retired in 1982, and Warren B. Dunham came from the Illinois Department of Transportation to replace him. When

Dunham took a position in industry early in 1988, he was succeeded by Deputy Director Darrel Rensink.

Senate File 1141 (1974) mandated the commission to develop and coordinate a comprehensive transportation policy for the state. Following input by public, private and citizen groups, combined with staff expertise and contact with other state departments, a draft proposal was prepared for public hearing on November 24, 1974. The final policy statement was approved by the commission in December and adopted by the General Assembly in June, 1975. The initial policy and plan was published in *Trans Plan '76* and updated in *Trans Plan '79*; publications of the Department. The current policy statement is found in Chapter 12.

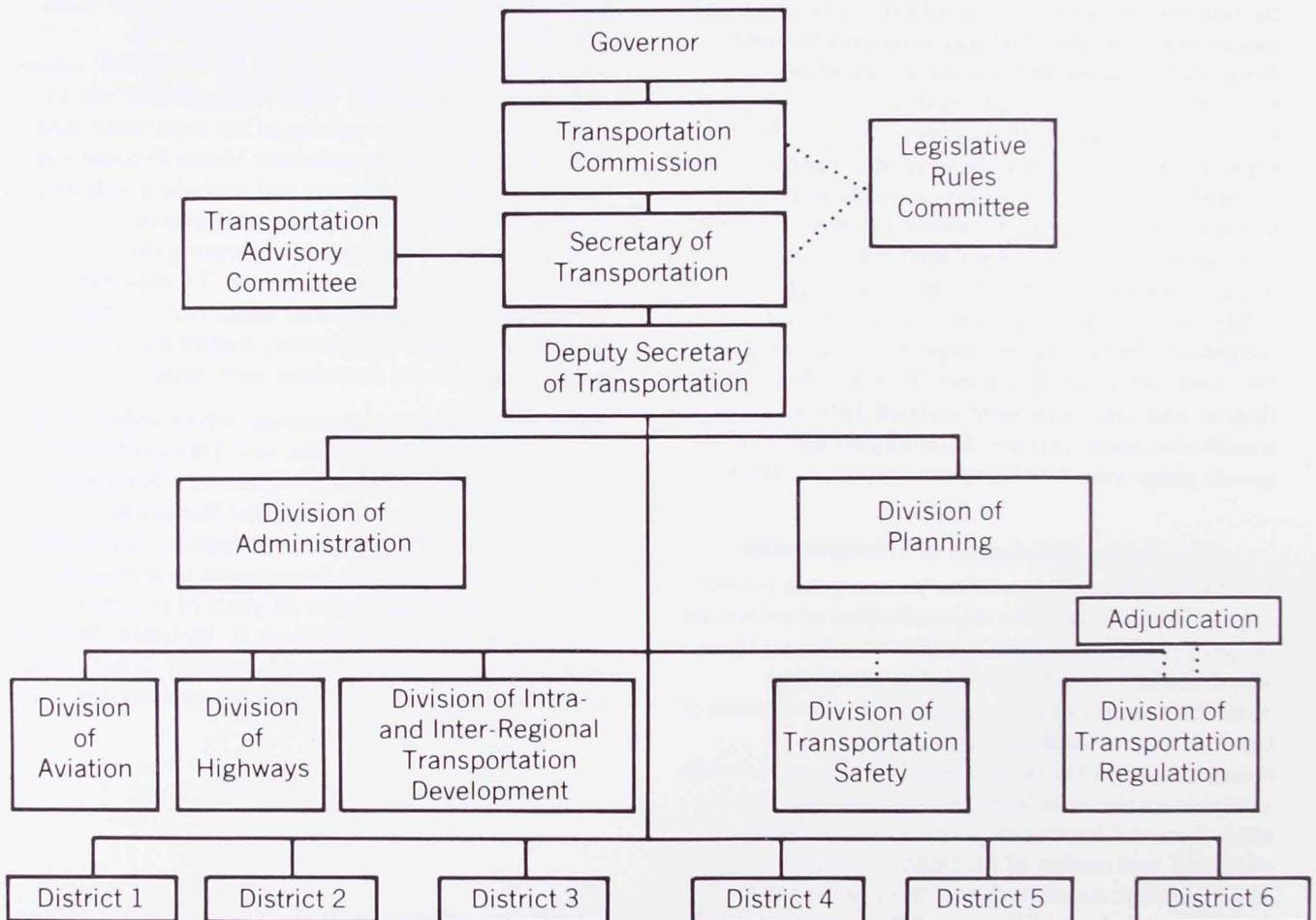


Figure 11-1

Proposed organizational chart for Iowa Department of Transportation.
 (Courtesy: Iowa Office of Planning and Programming Report of November 1, 1971)

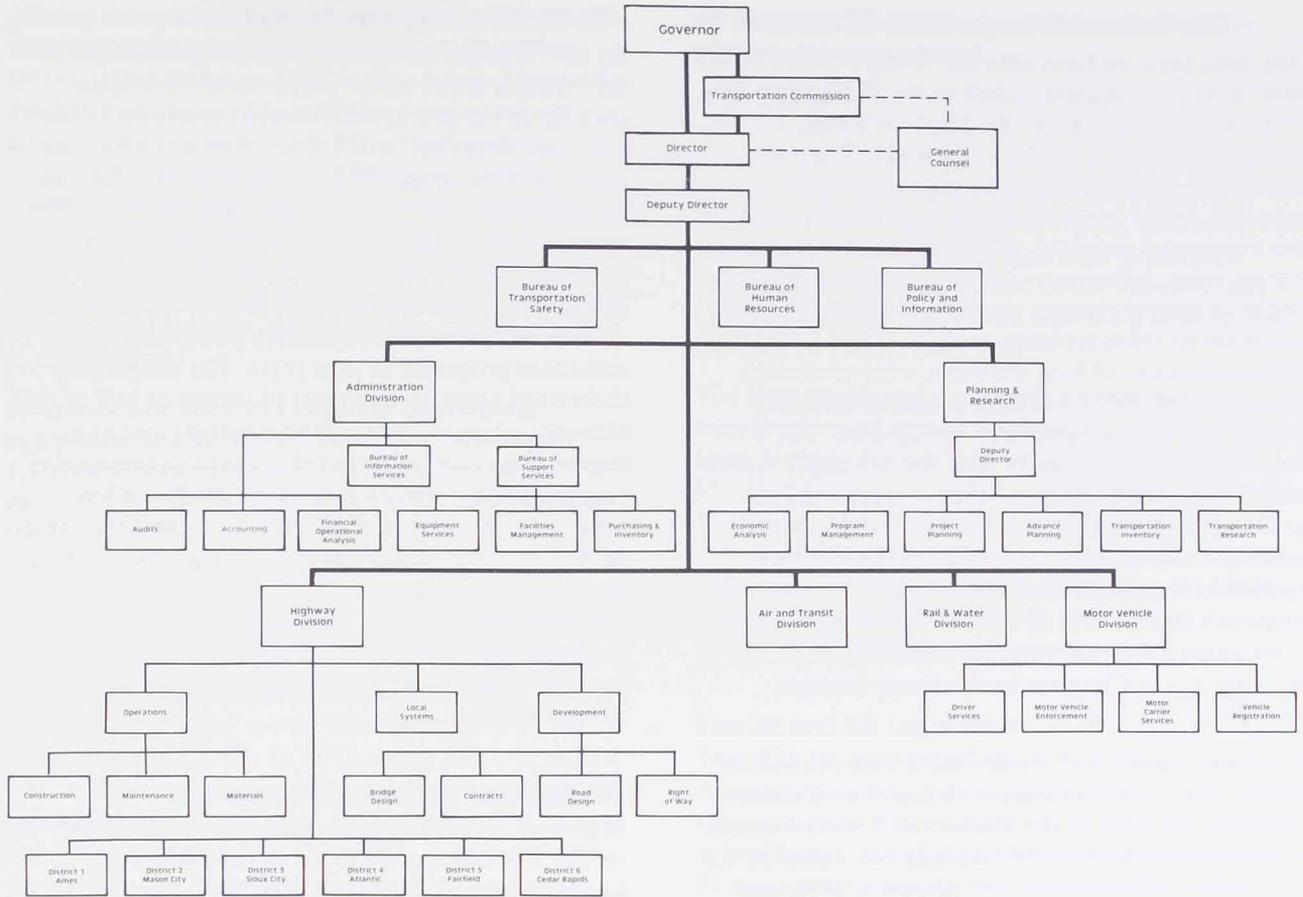
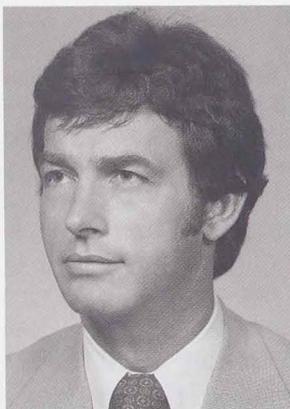


Figure 11-2
Department of Transportation organizational structure in 1984.
(Courtesy: Iowa Department of Transportation)



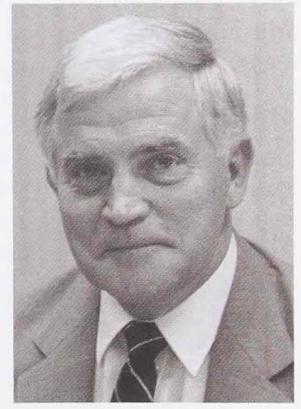
Victor Preisser
Director, 1974-1977



Raymond L. Kassel
Director, 1978-1982



Warren B. Dunham
Director, 1982-1988



Darrel Rensink
Director, 1988-

The National Transportation Dilemma

The need for a uniform national transportation policy was never more apparent than in the 1970s when the "transportation problem" hit the nation and dominated most of the domestic issues. Uneven regulation, unbalanced public expenditures for separate modal promotion and development, postwar environmental concerns, the OPEC oil embargo and energy crisis, inflationary trends, and economic and social structural changes combined to focus national attention on transportation matters. These interacting influences, some of long duration, were predicting trouble in the 1960s, but their potential collective impact was not recognized or was ignored. For a decade, hundreds of books, articles, newspaper reports and special studies diagnosed the "transportation problem" and prescribed for it. Forums of learned academic scholars and industrial and government specialists regularly assembled to argue the merits of proposals to deal with it. Periodically, congressional committees published volumes discussing and defining it, and Congress itself solemnly debated measures to solve it.

If volumes moved and money spent were criteria for success, the American transportation system should have been the envy of the world. The Transportation Association of America (TAA) reported a total of 5.3 billion tons of intercity freight carried in 1976, and the Census of Transportation in 1977 covered \$1.34 trillion worth of manufactured goods, weighing in excess of 3.3 billion tons and representing 759 billion ton-miles. The nation's estimated transportation bill for private and for-hire passenger and freight vehicles between 1964 and 1976 totaled \$3.0 billion; for 1976 alone it was \$358.7 million.

Private automobile and air expenditures accounted for 87.1 percent of the nation's passenger dollar, and private and for-hire highway carriers, 78.1 percent of the freight dollar. Between 1952 and 1976, almost one-half trillion dollars were spent on transportation facilities by federal, state and local governments. Eighty-seven percent was allocated to improved highways and streets, eight percent to airways and airports and four percent to waterways. The remaining one percent was for cash subsidies to domestic airlines. Up to 1975, loans and grants for railroad rehabilitation amounted to approximately \$2.5 billion. Yet in 1970, Fortune's fifty largest transportation companies lost money.

Rescuing the Railroads

By 1977 a major effort of the federal government in the transportation sector was concentrated upon shoring up the precarious financial condition of the railroads. Although well known during the previous years, nothing of significance was done to relieve the problems until the Penn-Central bankruptcy in 1970, two years after the merger of the two giants. This petition, together with others in the Northeast, brought to public attention the lack of coordination and the weaknesses of regulatory policy and public assistance programs of past years. The bankruptcy threatened users with the loss of service in half of the railroad mileage in the Eastern District, and to a degree, the situation reflected the serious financial condition of the nation's railroads. Within a few years, the CRI&P and CMStP&P followed the same path. To restore vitality to railroad operations, three major pieces of legislation were passed by Congress: The National Railroad Passenger Act of 1970; The Regional Rail Reorganization Act of 1973 (3R Act); and The Railroad Revitalization and Reform Act of 1974 (4R Act).

The National Railroad Passenger Act

Measured by billions of passenger-miles, railroad service had declined from 2.8 percent of all private and public transportation in 1960 to 1.1 percent in 1970, during the same period when total passenger-miles of all modes had substantially increased. Alarmed by the trends, Congress, fearing that the service would soon cease to exist, passed the legislation to assure viable service between major population centers. The act was to be administered through the National Passenger Corporation, incorporated as a non-profit corporation, originally known as "Railpax," but later changed to "AMTRAK," a contraction of "American Travel by Track."

AMTRAK was created to operate rail passenger service over a basic intercity network selected by the Secretary of Transportation with operations to commence in 1971. Equipment was owned by AMTRAK, but operating personnel and facilities initially were utilized under contract with the railroads. However, since the early days, dining, parlor car and reservations employees became AMTRAK personnel. The familiar logo adopted was a headless arrow painted in red, white and blue colors.

Joining the system was voluntary. If the railroads did, they were relieved of their obligation to provide service either within or outside the system. Those who did not were required to maintain existing service until at least January, 1975. Most roads joined, becoming stockholders in the National Passenger Corporation through payments of cash, equipment or future services for which they received common stock in return. The cost was related to deficits in their passenger service as of 1969, the amount computed by one of three formulas, whichever was most favorable to the railroad.²

Railroads paid their subscriptions by releasing equipment to AMTRAK. Nine roads transferred 1,200 cars, some relatively new, especially those received from the AT&SF and the UP. They became the nucleus of a fairly modern fleet for mainline service. Under the terms of the Act of 1970 (as amended through 1981), states could request new routes to supplement the basic national system. As specified in Section 403 (b) of the Act, as amended, both capital costs and annual operating deficits on new state-sponsored routes would be shared by the states and AMTRAK. In 1981, a new phase-in period was set for sharing route-related deficits. States would pay 45 percent of operating deficits in the first year and 65 percent each year thereafter. A state was still required to pay 50 percent of capital improvements necessary to establish and maintain all Section 403 (b) routes sponsored.

From 1972, the annual deficit of \$147.5 million rose to highs of \$800 million in 1981-1982, making the service the most heavily subsidized of American transportation as measured by public funding relative to user expenditures. Proposed reductions in federal budgets included cuts in or elimination of AMTRAK subsidies which could affect low patronage lines.

Iowa's Segment of the AMTRAK System

The final AMTRAK system plan was announced in 1971. Twenty-nine city pairs or end points were designated as "essential service" routes. Among these was the Chicago-San Francisco route for which a number of possibilities were suggested through Iowa. Between Chicago and Omaha, the choices were the CRI&P, CMStP&P and the BN, the latter selected to operate the *San Francisco Zephyr*. The choice was not universally popular since the carrier operated across the thinly populated southern counties where approximately 10 percent of the state's population resided. The condition of the roadbed and track were

the major criteria, not railroad passenger markets, when routes were selected.

A second carrier, the *Southwest Chief*, provided service between Chicago and the West Coast. It followed the AT&SF line through Fort Madison, Kansas City, and Albuquerque to Los Angeles. A third route, the *Black Hawk* of the IC, offered service between Chicago and Dubuque until September, 1981. It was discontinued due to low ridership and termination of an AMTRAK operating subsidy from the state of Illinois (Fig. 11-3).

The total number of passengers embarking and disembarking all regularly scheduled Amtrak trains in Iowa declined from 87,669 in fiscal year 1979 to 57,529 in fiscal year 1982, but increased to 62,596 in fiscal year 1984. Preliminary 1985 estimates of passenger counts indicated a reduction of 13 percent from the 1984 level. Probable reasons for the lower demand are strong competition from discount airline fares and the state's poor economy.

The 3R and 4R Legislation

The 1973 3R Act created the United States Railway Association (USRA), a non-profit government agency, to plan the restructuring of the Northeastern network covering 17 states and to guarantee up to \$1.5 billion in loans. Grants totaling \$550 million were given to the roads for operations while restructuring occurred. Another organization, the Consolidated Railroad Corporation (Conrail), was formed as a semi-public, for-profit operating road. USRA was to determine the viable routes for the restructured lines, abandoning unprofitable segments, and Conrail was to purchase the assets of the bankrupt carriers for cash and securities. The 4R Act provided the funding for Conrail (\$2.1 billion) authorized in 1973, \$1.6 billion in loans and loan guarantees for all railroads, and \$1.75 billion for AMTRAK improvements and operations over five

² D. Phillip Locklin, *Economics of Transportation*, 7th edition, Homewood, Ill.:Richard D. Irwin, Inc., 1972, p. 276. The formulas for determining the price to be paid for joining were: (1) 50 percent of the "fully distributed" passenger deficit for 1969; (2) 100 percent of the "avoidable loss" on such operations; or (3) 200 percent of the "avoidable loss" on the intercity passenger services the railroad operated over routes within the basic system.

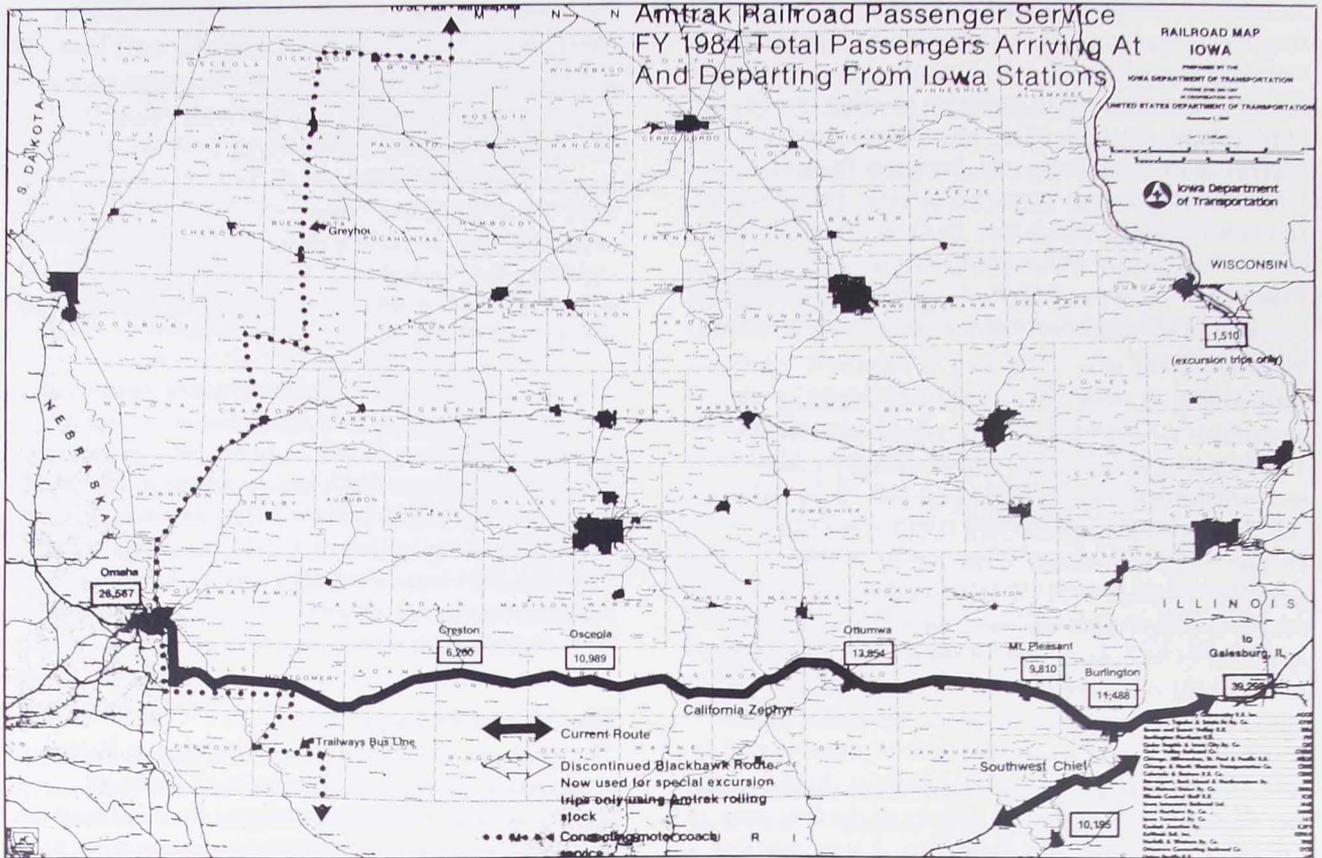
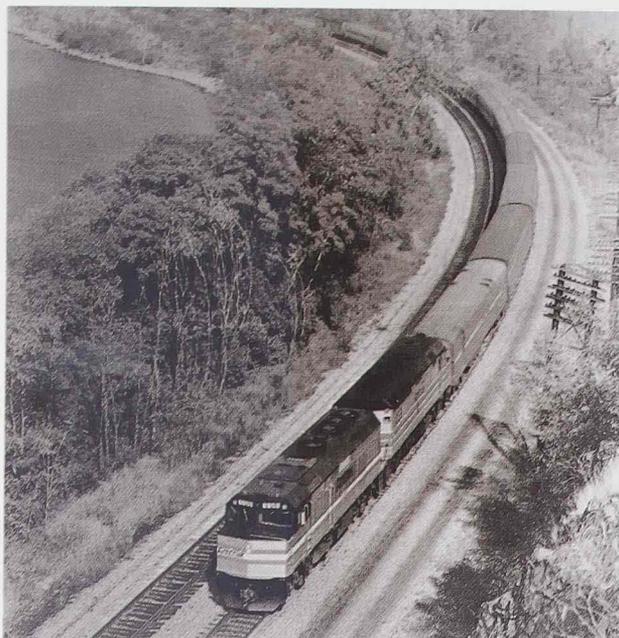


Figure 11-3
AMTRAK railroad passenger service in Iowa—FY 1984.
(Courtesy: Iowa Department of Transportation)

years in the Boston-Washington corridor. Section 15a was amended to provide new guidelines for the ICC to determine rate reasonableness, and new terms such as “Market Dominance” and “Yo-Yo” clauses

sparked controversy as to intent and interpretation. All ICC rail merger evidentiary proceedings had to be concluded within two years and the decision made within 180 days thereafter.³

³ “Market Dominance” was defined as the absence of effective competition by other rail or modal carriers. The “yo-yo” provisions stated that the ICC could not suspend a railroad rate which was less than a seven percent change from the existing rate proposal for two years after February 5, 1976, except for certain specified conditions. Donald V. Harper, *Transportation in America: Users, Carriers, Government*, Englewood Cliffs, N.J.: Prentice-Hall, 1982, pp. 563-564; Donald F. Wood and James C. Johnson, *Contemporary Transportation*, Tulsa, Okla.: PennWell Publishing Co., 1983, pp. 108-109; William C. Johnson, “Railroad Revitalization and Regulatory Reform Act,” *ICC Practitioner’s Journal* (November-December 1977): pp. 27-49; Stanley J. Hille, “Transportation Legislation—A Year of Action,” *Adelphi* (May 1976): pp. 8-11; G.J. Rooney, “The RRRR Act—Some Implications for Rate Bureaus,” *Transportation Journal* (Winter 1977): pp. 17-31.



AMTRAK passenger train.
(Courtesy: Ward B. McCaerney III, photographer;
1982 edition of Rail Ventures.)

The Railroad Situation in Iowa

Eight Class I railroads operated 8,249 roadway miles in 1971, but were reduced to 4,144 miles by 1985 (Table 11-1). The 1970s were not prosperous years for a number of major Iowa roads. In approving the BN-Frisco merger in April 1980, the ICC commented on the financial condition of railroads affected. The CNW reported a net income in only one year since 1970, and lost more than \$17.2 million in 1979. The Illinois Central-Gulf (ICG) lost \$27 million in the same year, and both roads were heavily in debt to the federal government for loans to repair track and rehabilitate and purchase equipment. The CRI&P and CMStP&P sought bankruptcy protection.

The Chicago and North Western

On June 1, 1972, the CNW was sold by Northwestern Industries, a holding company, to a new organization formed by the employees and headed by Larry S. Provo. By 1974, the road had abandoned 1,500 system miles and had another 1,020 miles before the ICC for approval. The total system of 10,200 route miles in 1980 was slimmed down to 7,400 miles by 1984. The reorganization process had a significant

impact upon Iowa. Nearly 325 miles of road were abandoned from 1975 through 1980 and an additional 694 miles through July 1985. Iowa mileage owned and operated by the CNW fell 18 percent since 1975, including 594 miles acquired from the CRI&P and the CMStP&P during the latter time period. Total tonnage originated or terminated in the state increased over 60 percent despite this loss of mileage. In terms of mileage operated, tonnage hauled and revenues earned in Iowa, the CNW was the dominant carrier. Almost half of the roadway miles of the state are under its jurisdiction. Reorganization also resulted in substantial financial gains, and in 1981 the railroad earned a record profit of \$54.3 million.

The Final Days of the Rock Island

The demise of the CRI&P, the second largest railroad in the state, was a tragic story in the history of Iowa. In 1974 the railroad was technically solvent and hoped for a favorable decision on the 11-year UP merger proposal. In the intervening period, little or no investment had been made in track or equipment, and when grain exports boomed, the road was in no physical condition to handle increased traffic. A loan of \$100 million had been requested from the USRA. In February 1975, the agency agreed to provide \$9.1 million for working capital which never materialized. Ironically, in the same month a \$19 million loan was approved for the Missouri-Kansas-Texas (KATY) lines. On March 17, 1975, the day that the daily cash forecast sheet predicted a negative balance, the CRI&P declared bankruptcy and petitioned for reorganization.

A drastic reduction in operating costs was initiated in 1974-1975. Forty percent of management personnel and about one-third of operating employees lost their jobs. Private funds were obtained for acquisition and rehabilitation of equipment but could not be used for upgrading track. Iowa alone financed approximately half as many track improvements as the Federal Railroad Administration did over the 13-state system. The CRI&P lost \$45 million between January and June, 1979, and \$145 million during the 1975-1979 period. Net railway operating income was negative from 1968 to 1978.

Experiments with fewer employees, jurisdictional labor disputes and new operating techniques brought threats of strikes when labor contracts expired in 1977. Labor-management negotiations over several months were unsuccessful and President Carter, in the sixth week of the strike in 1979, requested a directed

service order from the ICC which was served without public hearings. The Kansas City Terminal Company was selected to operate the road for eight months under a guaranteed profit which cost the federal government about one-half million dollars per day. Serious questions were raised as to why this expenditure offered a more effective performance prospect than equivalent financial assistance to CRI&P management, certainly more familiar with operations than outside interests.

On May 17, 1980, the ICC recommended that the CRI&P "be allowed to die," abandon 6,960 miles of track and discontinue service over 763 miles of trackage rights. The road was to keep in place all track proposed for sale, decreed by Judge Frank McGarr of the U.S. District Court in Chicago on June 2. The ruling also stated that the railroad would not be responsible for protecting employees affected. The final chapters in the CRI&P saga were written in 1982 and 1983, when the CNW won a bidding war against the Soo Line Railroad for certain properties in Iowa. The 730-mile "spine" from Minneapolis to Kansas City, 235 miles of branch lines in northern and central counties, and 10 miles of east-west track in Des Moines were purchased for \$93 million. The largest remaining segment, between Council Bluffs and Davenport, was operated by the Iowa Railroad in 1982 under lease, pending approval of a permanent operating organization. On June 1, 1984, the CRI&P ceased to exist after years of reorganization efforts. Within Iowa, about 1,102 miles (64 percent) of the 1,733 miles operated in 1975 have been acquired and are operated by other carriers. Over 520 miles have been acquired by seven Class III or short lines operating in the state.

The Bankruptcy of the Chicago and Milwaukee

The CMStP&P filed for bankruptcy on December 19, 1977, and in 1979 a reorganization plan calling for a reduction of 4,500 miles from its 10,000 mile system was submitted to the court. Nearly half of the 1,341 miles of roadway in Iowa was excluded. The plan was rejected by the ICC on March 19, 1980. Another plan filed in September 1981 suggested a core of 2,900 miles—a streamlined railroad in Iowa to provide service along the northern route from Sheldon to Marquette, south along the Mississippi River to Davenport and southwest from Muscatine to Washington, Ottumwa and other points on the Kansas City route.

Three railroads were bidding for the railroad in 1983:

the Soo Line, Grand Trunk Corporation and the CNW. The Grand Trunk dropped its proposal and the other two took turns in raising the bids throughout 1984 to a level of \$786 million by the CNW and \$571 million offered by the Soo Line. In February 1985, the final decision was handed down by U. S. District Judge Thomas R. McMillen who favored the Soo Line, stating that "the higher bid is not a controlling factor in which railroad should prevail in this particular contest. The major factor was determination of what was best for the public interest."⁴

Burlington Northern

In terms of miles of road and freight tonnage, the BN is Iowa's second largest railroad. Nearly 23 percent of Class I tonnage originated or terminated in the state is handled by the railroad. Included are nearly 53 percent of the coal delivered to Iowa and 12 percent of the grain handled by Class I roads in 1984.

Illinois Central Gulf

On August 10, 1972, the Illinois Central and Gulf, Mobile and Ohio railroads merged to form the Illinois Central Gulf Railroad Company. The railroad is a wholly owned subsidiary of the IC Industries, a consumer and manufacturing goods conglomerate headquartered in Chicago. In April 1985, the railroad agreed to sell 674 miles of track between Chicago and Omaha for \$75 million to John Haley, who renamed the segment the Chicago, Central and Pacific Railroad. Within Iowa, major commodities moved are grains, grain milled products, fertilizer and Illinois coal into the eastern counties. The railroad accounted for 12 percent of originating and seven percent of terminating Class I tonnage in the state in 1984.

⁴ U.S. District Court, Northern District of Illinois, Eastern Division, *In the Matter of Chicago, Milwaukee, St. Paul and Pacific Railroad Company, Debtor*, February 8, 1985, p. 14.

Table 11-1
Iowa Rail Mileage Operated as of July 1, 1985

Operating Carriers	Iowa Roadway Miles			Total
	Main	Branch	Trackage Rights*	
Class I Railroads				
Chicago & North Western Transportation Co.	789	1,204	85	2,078
Burlington Northern Railroad Co.	436	260	65	761
The Milwaukee Road Inc.	192	430	36	658
Illinois Central Gulf Railroad Co.	459	55	0	514
Norfolk & Western Ry. Co.	0	66	42	108
Atchison, Topeka & Santa Fe Ry. Co.	20	0	1	21
Union Pacific Railroad Co.	2	0	0	2
Missouri-Kansas-Texas Railroad Co.	0	0	2	2
Class I Subtotal	1,898	2,015	231	4,144
Class III Railroads				
Iowa Interstate Railroad Ltd.		359	14	373
Iowa Northern Railway Co.		142	0	142
Cedar Valley Railroad Co.		84	0	84
American Short Lines Inc.		66	0	66
Cedar Rapids & Iowa City Railway Co.		56	0	56
Davenport, Rock Island & North Western Railway Co.		35	1	36
Iowa Terminal Railroad Co.		25	0	25
Des Moines Union Railway Co.		19	0	19
KeWash Railroad Inc.		15	0	15
Appanoose County Community Railroad Co.		10	0	10
Ottumwa Connecting Railroad Co.		3	0	3
D&I Railroad Co.		0	41	41
Burlington Junction Railway Co.	Switching company only—no roadway miles reported.			
Waterloo Railroad Co.	**	**	**	**
Keokuk Junction Railway	Switching company only—no roadway miles reported.			
Class III Subtotal		814	56	872
Iowa Total	1,898	2,829	287	5,014

* Right obtained by one carrier to operate its trains over the tracks of another carrier, therefore, this mileage is counted twice in the statewide total.
**Six miles of road reported by ICG Railroad.

(Source: R-1 Report of State Statistics to the Interstate Commerce Commission and Annual Report of Class III Railroads to the Iowa DOT.)

Other Class I Railroads

The NW, AT&SF, UP and KATY railroads operated a combined total of 233 roadway miles in Iowa in 1984. In October 1964, the NW began operating in the state under lease arrangements with the Wabash. It was consolidated with the Southern Railway in July 1980, under a holding company known as the Norfolk Southern (NS). In June 1984, the road offered to purchase the federal government's 85 percent interest in Conrail to expand its system service and increase its competitive position with respect to its principal competitor—the CSX

Corporation. Despite the selection of the NS by the Secretary of Transportation, Congress rejected the offer. Farm and food products were the principal tonnage hauled over its 107 roadway miles in 1984. The AT&SF operates only 21 miles of road in Iowa, serving the cities of Fort Madison and Keokuk. The UP and KATY lines operate two miles each in and around Council Bluffs.

In 1984 Iowa's Class I railroads transported over 24.4 million tons of freight that had originated within the state. The CNW alone carried more than 50 percent

of this total. Together, the CNW, CMStP&P, BN, and ICG originated over 90 percent and terminated over 95 percent of the total Class I tonnage in Iowa. Coal accounted for about 63 percent of 1982 traffic entering the state, and farm products comprised about 48 percent of rail freight from Iowa. Predictions for the 1990 traffic flow call for substantial increases in Class I railroad traffic. From and to Iowa, grain, coal, nonmetallic minerals, grain mill products, pulp and paper products, chemicals and transportation equipment are expected to be the major commodities carried. The 1985 railroad map of

Iowa is found in Fig. 11-4, whereas the trends in roadway railroad mileage between 1850 and 1985 are presented in Fig. 11-5. Class I railroad system financial indicators for 1984 reveal the positions of each of the carriers relative to the industry averages in the eight categories listed in Table 11-2. The operating ratio was lowest for the BN and highest for the CMStP&P. Rate of return on net transportation investment showed similar positions. However, the percentage of revenues earned in Iowa indicated the importance of the CNW to the state, by far the leader in this category.

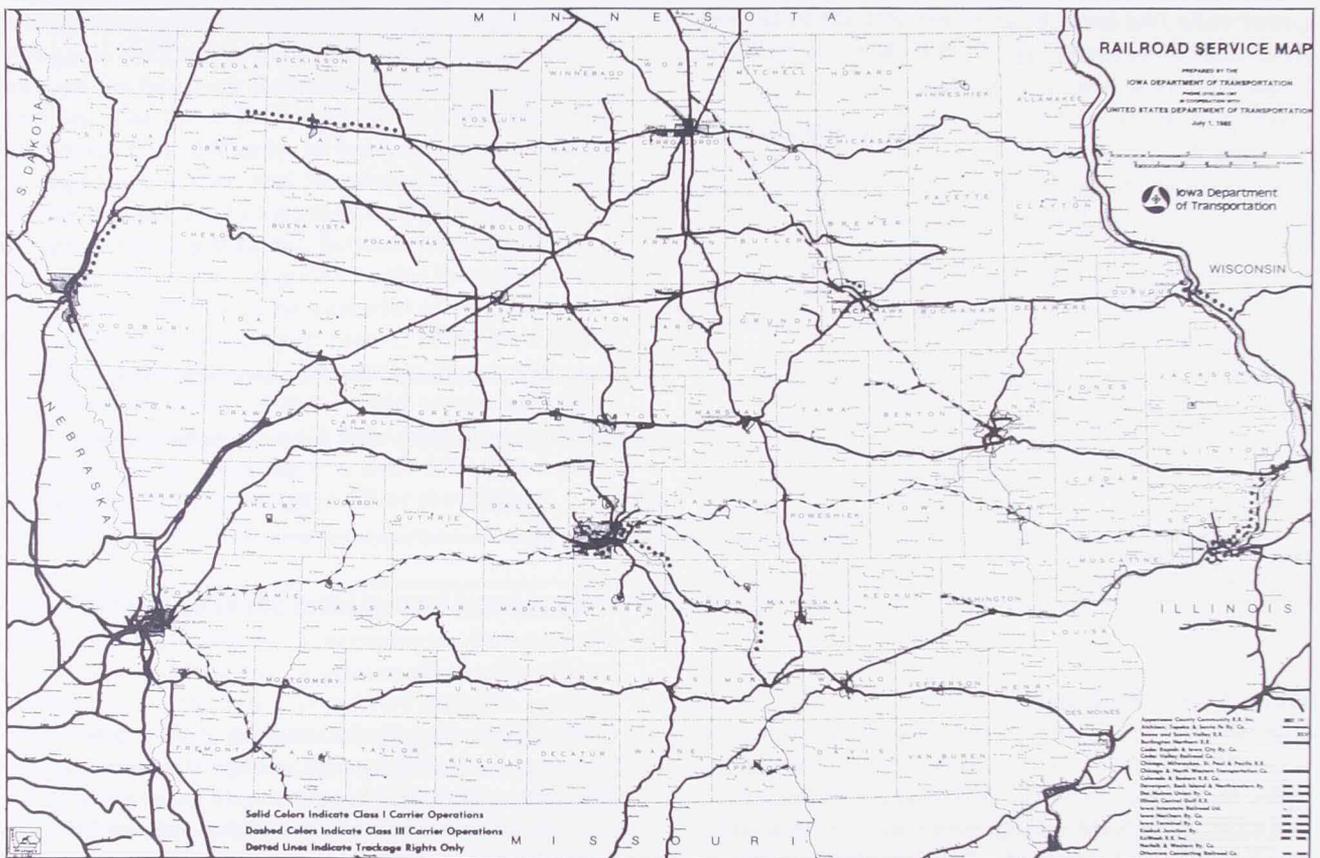


Figure 11-4
1985 railroad map of Iowa.
(Courtesy: Iowa Department of Transportation.)

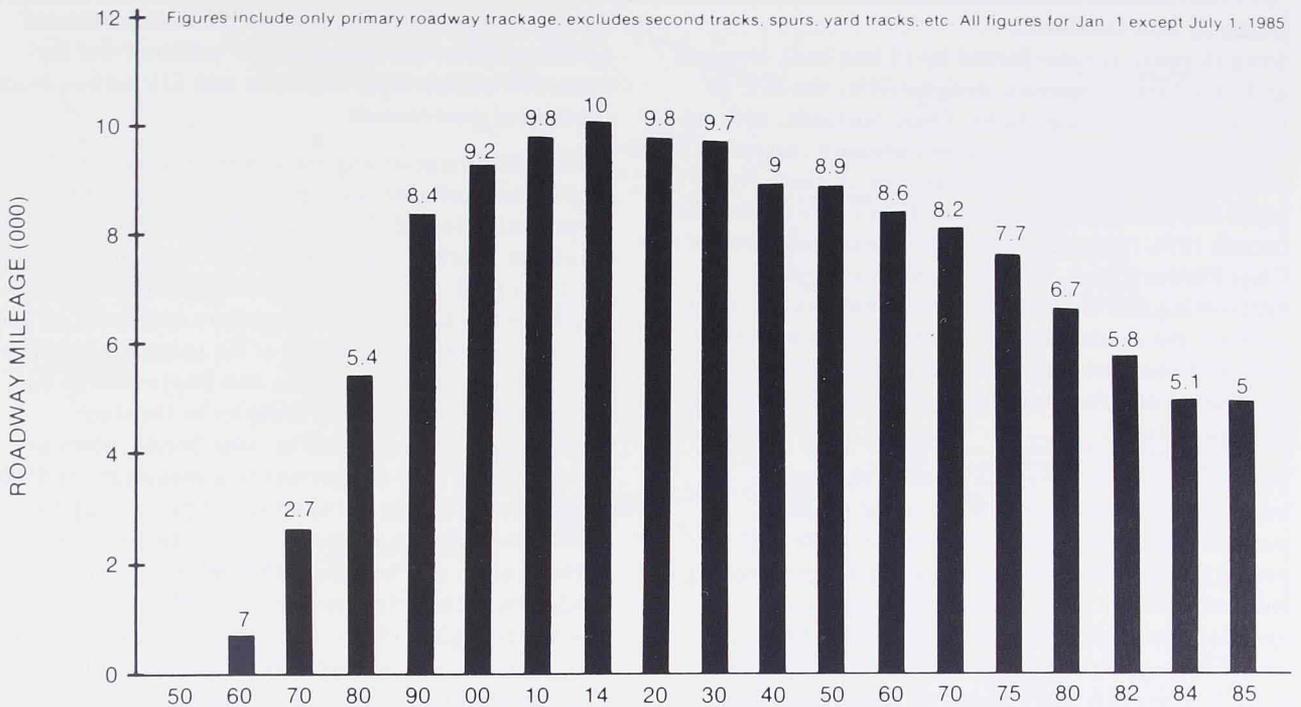


Figure 11-5

Historic Iowa railroad mileage.

(Courtesy: *Poor's Manual of Railroads, 1890 for 1800-1880*; Interstate Commerce Commission and Iowa DOT for 1890 to present.)

Table 11-2

System Financial Indicators, 1984

	Burlington Northern	Chicago & North Western	Milwaukee Road	Illinois Central Gulf	Norfolk & Western	Santa Fe	Union Pacific	Industry Average
Operating Revenues (\$ Millions)	4,440	876	417	955	1,715	2,305	1,921	1,178
Percentage of Revenues Earned Within Iowa	2.7	33.4	NA	4.4	0.3	0.4	0.1	NA
Operating Expenses (\$ Millions)	3,493	816	414	892	1,386	2,083	1,726	1,032
Operating Ratio	0.79	0.93	0.99	0.93	0.81	0.90	0.90	0.88
Net Railway Operating Income (\$ Millions)	547.1	46.7	2.8	53.8	167.8	148.8	134.1	101.5
Rate of Return on Net Transportation Investment (percent)	9.9	5.7	0.4	3.1	6.3	4.5	4.2	5.7
Current Ratio	1.31	1.00	0.78	1.05	2.34	1.22	1.25	1.23
Debt-to-Total Capitalization Ratio	0.53	0.65	0.74	0.40	0.41	0.48	0.52	NA

NA = Not Available

Better Than Industry Average
Worse Than Industry Average

(Source: Interstate Commerce Commission)

Class III Rail Carriers

Iowa shippers are also served by 15 line haul, terminal and switching companies, designated by the ICC as Class III carriers (Fig. 11-6). These railroads, with an income of less than \$17.5 million annually, are often referred to as short-line or feeder-line carriers. A rapid increase in the number of these roads during the decade 1974-1984, was the result of abandonments of Class I branch lines, wage rate and work rule differentials and the need for continuous local service. In Iowa, the motivation for short lines has been the extensive abandonments created by the CRI&P liquidation and reorganization of the CMSt&P and Conrail systems.

The importance of these railroads in the state's transportation system is evident in the dramatic increase in their operations during the 1980-1985 period. In 1980, five short-line railroads operated 101 miles of road. In 1985, 15 carriers owned and operated approximately 814 miles. About 89 percent of this mileage was operated by six Class I railroads in 1975. The short-line operations range from two-mile systems to one that exceeds 370 miles; the average is about 60 miles.

Twelve of the 15 carriers started and continue to operate with no financial assistance from either federal or state sources. Three railroads have received such assistance: Iowa Northern, Iowa Interstate, and Appanoose County Railroad. The two largest financial assistance projects for short-lines have involved the Iowa Railway Finance Authority. The first was a \$2 million low-interest loan combined with a federal loan of \$3.4 million to acquire 142 miles of former CRI&P track in northeast Iowa. The second loan was for \$15 million to Heartland Rail Corporation for the purchase of the former CRI&P east-west line across Iowa plus three Iowa branch lines, one Illinois branch line and track into Chicago. The loan was combined with a \$16 million package of commercial loans and stockholders equity to attain the \$31 million purchase price. The track is operated by the Iowa Interstate Railroad. On September 30, 1985, Heartland obtained a \$6.2 million federal track rehabilitation loan to upgrade east-west track to 40 mph standards.

The Iowa Railroad Finance Authority

For several years, Iowa financed branch line rehabilitation before the national program of local rail service assistance was enacted in the 4R Act. Between 1974 and 1982, over 1,100 miles of branch

lines were improved at a cost of \$78 million, funded by \$26 million from shippers, \$17 million from the state, \$19 million from railroads and \$16 million from the federal government.

Continued financial distress and the realization that AMTRAK and Conrail types of financing were not forthcoming forced the state to examine internal solutions. In 1980, the 68th General Assembly created the Iowa Railroad Finance Authority (IRFA) as an autonomous board of five members appointed by the Governor to staggered terms of six years. Its purpose was to finance the acquisition and improvement but not operations of railroad facilities in the state. Authorization was granted to issue bonds, notes or other revenue type obligations to a maximum of \$100 million to overcome the shortage of private capital needed to maintain adequate service. In 1981 the authorization was increased to \$200 million to be funded by a diesel fuel tax on railroads, a loaded mileage tax (after 1983), delinquent railroad property taxes, lease or sale of property owned by the IRFA, repayment of loans, and loans, guarantees, grants and contributions from any source. "The IRFA is to play the role of catalyst, banker and partner to the private enterprise sector in the transition of the lines from a non-operating status to operating status under private ownership."⁵

The most controversial source of funding was the railroad fuel tax of three cents per gallon between October 1, 1981 and June 30, 1982, after which it would increase to eight cents. Class I railroads filed suit in November 1981 in the Polk District Court, attacking the proposal on constitutional and other grounds, but lost on a decision by Judge Anthony Critelli. On September 21, 1983, a 5-4 decision of the Iowa Supreme Court reversed the lower court, stating that the tax violated the 4R Act which prohibited state tax policies from discriminating against railroads. The decision was appealed to the U.S. Supreme Court, which declined to hear the case on February 27, 1984. The General Assembly also

⁵ Allen Vellinga and Bruce Ferrin, "A Review and Analysis of the Iowa Railway Finance Legislation: An Example of Defederalization of Transport Policy," *Transportation Research Forum Proceedings* 23 (1982): p. 325.

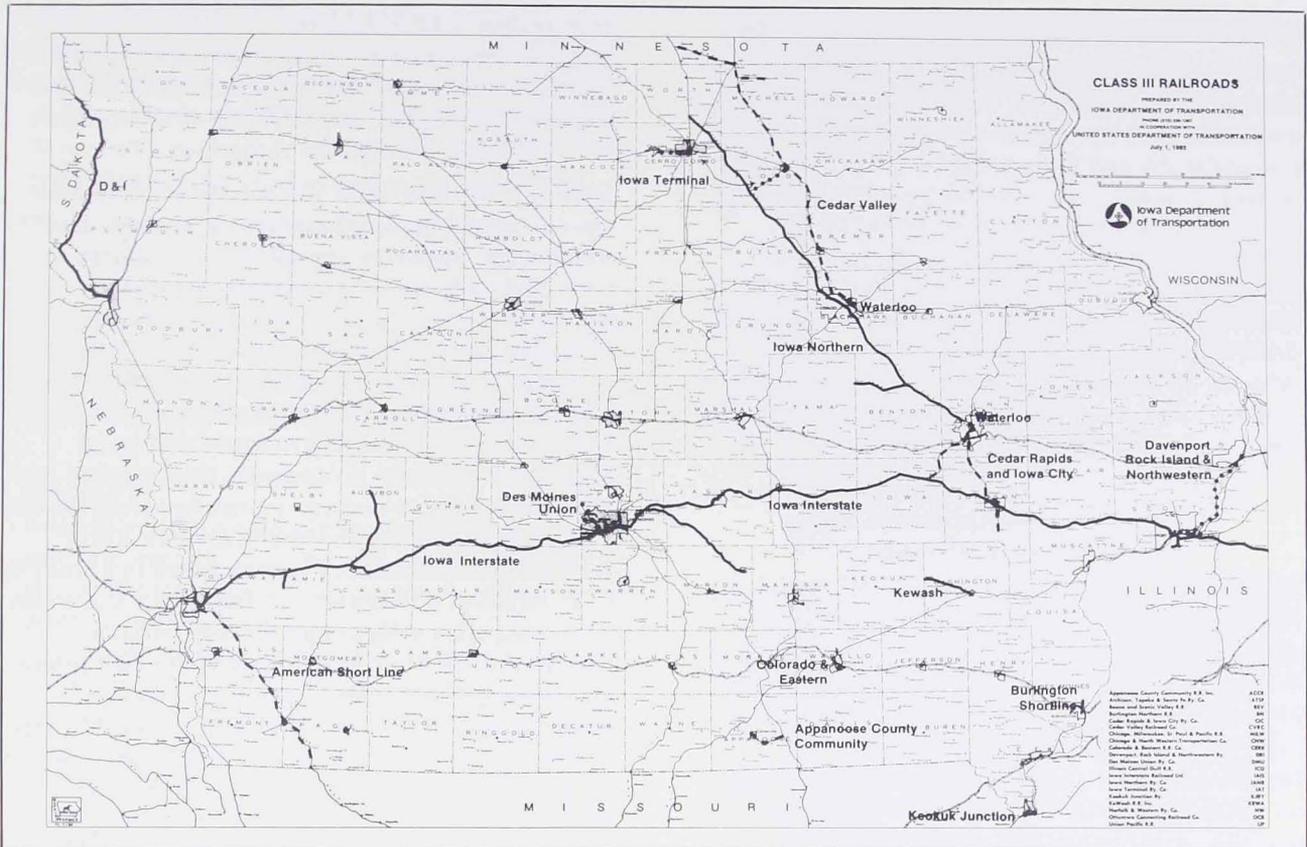


Figure 11-6
Class III railroads.
(Courtesy: Iowa Department of Transportation.)

authorized a diversion of \$7.5 million per year for two years from the state road fund as a loan to assist them in the purchase of the east-west CRI&P lines.

Membership on the IRFA in 1986 was as follows: George Davison, Des Moines, chairperson; Fred McKim, West Bend, vice chairperson; O.R. Woods, Palo; J. H. Harper, Blue Grass; and Richard P. Flagg, Cedar Rapids.

The Heartland and Iowa Interstate Railroad Venture

Iowa shippers on the main line between Davenport and Council Bluffs had been served by the Iowa Railroad and CMStP&P since the CRI&P failed. The Iowa Railroad lacked the funds to buy the properties, and the CMStP&P wanted only to purchase the Iowa City to Davenport segment. Concerned that the line

would be sold for scrap, Iowa business leaders, including the Maytag Company of Newton and Rolscreen Company of Pella, formed the Heartland Railroad Corporation to buy the road. The final roadblocks against the operation were removed when the Polk County Court and the ICC agreed that the two railroads no longer had authority to handle freight on the line.

For one year from June 1983, Heartland sought funding and negotiated for the purchase. In July 1984, a down payment of \$500,000 was made to complete the sale. In October, the IRFA approved the \$15 million loan as part of the package for the purchase. The CNW and CMStP&P opposed the loan, claiming that Iowa taxpayers would not be properly protected if the railroad defaulted. However, the state loan was secured by a lien on Heartland tracks between Iowa City and Council Bluffs,

estimated to have a salvage value of \$17.4 million.

The corporate offices of the Iowa Interstate Railroad were in Evanston, Illinois, but it operated out of Iowa City and served communities on the line between Council Bluffs and Bureau, Illinois, with trackage rights over other roads into Chicago. The railroad started with 80 employees, many of whom were former CRI&P workers, given preference under federal law. Equipment consisted of 14 diesel locomotives and 400 cars with possibilities of adding to the fleet through short-term leases. About 150 shippers were expected to provide traffic, of which the leading commodities were considered to be steel and scrap, grains and products, and lumber.

Confusion in Transportation Policy versus Export Trends

The attitude of the federal administration in the early 1980s suggested that midwestern grain-oriented railroads should be allowed to restructure themselves to lower operating levels. This came during a period when the federal government depended upon grain exports to balance international trade deficits. Important segments of the railroad system were on the verge of collapse, highways were crumbling faster than they could be repaired, and bridges were disintegrating, threatening the movement of exports—particularly grains and products—into export markets at reasonable costs.

In the 1960s, farm exports accounted for 15 percent of farm income, compared to 28 percent in 1980. The annual sale of 125 million tons of grain for \$38 billion was one of the bright spots in the nation's international trade, and Iowa was contributing an average of two to three billion dollars or more each year to the total.

The importance of exports to the Iowa economy cannot be overemphasized. Between 1970 and 1980, the value of agricultural exports expanded from \$551 million to \$3.0 billion; that of manufacturers (a large percentage in agriculture-related industries) from \$590 million in 1972 to \$2.7 billion in 1982. In 1982 Iowa was the second leading state in agricultural exports, and in addition, more than 800 manufacturers were also in the export markets, contributing an approximate value of \$2,211 per person, the third highest per capita value in the nation. Exports contributed substantially to the gross state product which rose from \$12.3 billion to \$34.0 billion during the 1970-1982 period. In constant 1972 dollars, the

increase was from \$13.4 billion to \$16.4 billion. The fact that exports have declined in the recent past in no way detracts from the importance of transportation in the international logistical structure of grain and grain products movements.

Export trends give a clue to the reliance of the state upon transportation and concerns over developments which might interrupt the movement to markets. Corn and soybeans were becoming important commodities in world trade, and export demand stimulated growth of motor and water carriage which challenged the traditional railroad share of the traffic. The competition was difficult for the railroads to overcome as they struggled to retain or expand agricultural business. To compete, they required new operating techniques and equipment, including the use of jumbo hopper cars and multi-car rates. These problems and possibilities were explored in a study by C. P. Baumel and associates at Iowa State University. They analyzed alternative grain transportation systems to Gulf ports from a six and one-half county area around Fort Dodge. The research was an in-depth analysis of one intensive grain production area with the objective of determining which system would yield the highest net revenue to the region under stated assumptions. Another study analyzed grain transportation throughout the United States by comparing 10 different sets of transport costs, rail systems and export demands.

Highways, Bridges, and the 65-Foot Double Bottom Controversy

Motor Vehicle Traffic and Highways

In 1980, 6,900 motor carriers provided intrastate service, and 13,500 moved on interstate routes connecting virtually every community in Iowa. Operating over a 112,300-mile highway system, their freight ton-miles since 1973 had increased over 50 percent. Freight carried by trucks in Iowa on the interstate system accounted for 45 percent of the primary system ton-miles and 36 percent of the total highway system ton-miles. Over two billion dollars had been spent on highway construction between 1970 and 1982, half of which was allocated to the primary system.

The Iowa DOT became one of the nation's leaders in completion of the four-lane interstate highways with the opening of the 50-mile segment on I-35 between U.S. 20 near Williams and Iowa 106 near Clear Lake on November 7, 1976, some six months ahead of schedule. The opening marked completion of the

original 710 miles of the system which included I-35, I-80, I-29 and I-74. From Iowa City to Waterloo, I-380 was completed in two stages; the first stage in August, 1976, when the section from I-80 to Third Street in Cedar Rapids was opened, and the remaining mileage opened during the fall of 1985.

The new interstate highways, construction, reconstruction or resurfacing of primary highways and improved secondary highways resulted in substantial increases in vehicular traffic. Automobile registrations climbed from 1.48 to 1.68 million in the 1970-1980 period, and motor truck registrations almost doubled, from 378,000 to 608,000.

Bridges

Integral units in a highway system are bridges, spanning everything from small gullies to swamps and rivers. The large number in the state and their critical position as links between otherwise isolated areas commands attention in highway analysis. In recent years, bridges have become an important target in highway planning because of their deteriorating and dangerous conditions. A U.S. DOT study in 1981 reported that half of the substandard bridges in the nation were located in 10 states. Iowa ranked third in the number of deficient bridges, after Texas and Missouri (Table 11-3).

A structurally deficient bridge is one which has been restricted to light vehicles only, is closed to traffic, or must be rehabilitated to remain open. A functionally obsolete bridge is one whose narrow lanes, load-carrying capacity, clearance, or approach roadway alignment can no longer safely serve its current traffic load. The cost to replace or rehabilitate all of the bridges in the nation was estimated at \$41.1 billion, of which \$20.6 billion would be required for bridges on the federal-aid system. Federal allocation of funds in the Surface Transportation Act of 1978 ranged from \$900 million in 1979 to \$1.3 billion in 1980 and 1981, then dropped back to \$900 million for 1982.

Matching fund requirements from participating states were set at 20 percent, a reduction of five percent from the original bridge replacement program.

The bridge problem in Iowa was particularly vexatious. Half of the bridges were fragile, antiquated or crumbling, unable to support the heavy pounding of large trucks. On the heaviest traveled roads, 250 embargoes or load restrictions were placed on bridges in 1980-1981. More than 1,100 structures 40 years of age or older were built to carry 15 tons or less and had a life expectancy of 50 years. Currently, they carry loads of 40 or more tons. A similar situation existed on half of the county bridges, resulting in roundabout routing of vehicles on secondary roads.

Table 11-3
Top 10 States in Total Number of Deficient Bridges
(as of December 31, 1980, inventory)
Highway System

State	Total No. Inventory	Off Federal-aid	Deficient Federal-aid	Total	Percent Deficient
Texas	41,454	3,683	11,514	15,197	36.7
Missouri	20,911	3,400	10,413	13,813	66.1
Iowa	25,423	2,231	10,452	12,683	49.9
N. Carolina	14,960	2,630	8,689	11,319	75.7
Nebraska	16,767	1,726	9,439	11,165	66.6
Indiana	17,474	2,549	8,476	11,025	63.1
Mississippi	16,358	4,103	6,802	10,905	66.7
New York	17,189	3,411	6,620	10,031	58.4
Illinois	24,736	2,207	6,937	9,144	37.0
Kansas	22,424	2,442	6,579	9,021	40.2
Total	217,696	28,382	85,921	114,303	52.5

(Source: Wilbur Smith & Associates, *Bridge Deficiencies in the United States: An Overview of the Problem*. Prepared for the United States Steel Corporation. The ATA Foundation, Washington, D.C., May, 1982. Tables 1, 2: 5-8.)

The 65-Foot Twin-Trailer Issue

Before the national interstate system was half completed, the use of twin-trailer trucks with an overall length of 65 feet became a controversial issue. In 1964 the Bureau of Public Roads, now the Federal Highway Administration (FHWA), recommended that these combinations be allowed on the interstate system. At hearings on the 1971 Highway Act, FHWA Administrator Norbert Tieman and James Lauth of the U. S. Department of Agriculture made similar recommendations as a means of increasing productivity and saving energy. Energy considerations, reduction of environmental pollution, greater cubic capacity, loading characteristics, maneuverability relative to the 55-foot tractor semi-trailers, and flexibility were the major pro arguments. Countering these alleged advantages was the question of highway safety. By 1978, 31 states permitted the 65-foot twins on designated highways. Iowa allowed 60-foot twins; four states, 55-foot doubles; and in 14 states, twin trailers were not permitted.

The Iowa Department of Transportation published a report on the 65-foot twins in 1975. It estimated a net annual nationwide saving of seven million gallons of fuel through legalization of the twins in Iowa; that one-half of one percent of additional wear on highways would result from increased numbers of the combinations on interstates, but that traffic would be reduced somewhat on primary roads. Over a 20-year period, net benefits in the amount of \$145 million could accrue to the state, and net benefits to out-of-state firms would total \$214 million. There was also the speculation that permitting the 65-foot twins would promote industrial growth in the state.

For some years, Wisconsin had issued annual permits for the operation of the 65-foot twins used in transporting Wisconsin manufactured products to markets. Raymond Motor Transport applied for permits to move interstate commerce over interstate highways in Wisconsin but was refused on grounds of safety. Raymond filed suit, claiming that the denial resulted in a burden on and was discriminatory against interstate commerce. The case was eventually decided by the U. S. Supreme Court in favor of the motor carrier.

Unlike other states in the West and Midwest, Iowa generally prohibited the 65-foot doubles within its borders. Most combinations were restricted to 55 feet in length except for some twins, mobile homes, trucks carrying vehicles such as tractors and farm equipment, and singles handling livestock which were

permitted to be as long as 70 feet. By local ordinance, cities abutting the state line could adopt length limitations of adjoining states. Other exemptions allowed Iowa truck manufacturers to obtain a permit to transport trucks as long as 70 feet and to move oversized mobile homes, provided that the units were moved from a point within Iowa or delivered for an Iowa resident.

In 1974 the General Assembly passed House File 671 which allowed 65-foot twins within Iowa borders, but the bill was vetoed by Governor Ray. The Transportation Commission, pursuant to its authority conferred in Section 307.10(5), Code of Iowa, subsequently adopted regulations which would have legalized the twins provided that the legislature enacted a ban on studded snow tires. The Iowa Supreme Court declared the regulations void because they were impermanently tied to legislative action. The issue was decided when Consolidated Freightways, a participant in the Wisconsin case, brought suit against the state in district court for permission to use doubles on the interstate system and on feeder roads within five miles of these highways. The court followed the Wisconsin ruling and concluded that the law impermissibly burdened interstate commerce. The Court of Appeals of the Eighth Circuit Court affirmed and was upheld by the U. S. Supreme Court on March 24, 1981, by a vote of 6-3.

Energy considerations were of major interest to the nation even though they may have played a minor role in the 65-foot twin trailer controversy. The Arab oil embargo in 1973 resulted in a 55 mph national maximum speed limit law as a temporary conservation measure. It was made permanent in 1975 since it had ostensibly reduced highway accidents, injuries and deaths. For many years prior to 1973, highway speeds had been rising by about one-half mph per year to an average of 65 mph on the interstate highways. Highway fatalities reached an all-time high in 1972 and 1973, but the new speed limits were estimated to have saved the lives of 9,100 people in 1974. While gradually rising over the interim period, the average speed in 1983 was 59.1 mph, reflecting an 80 percent retention of the 1974 slowdown. From time to time, increases in the speed limits on interstate highways have been advocated by state legislators and other groups, but a 19-member National Research Council committee concluded that "the 55 mph limit is one of the most effective safety policies ever adopted" and recommended to Congress

that it should be retained as national policy. The committee, however, did not make a judgment on whether or not individual states should be permitted some flexibility to raise the 55 mph limit on rural interstate highways.

Having lost the long truck battle, Iowa faced changes in truck sizes and weights as enacted in the Surface Transportation Act of 1982. The act mandated the previously permissive maximum weight limits of 80,000 pounds, gross; 20,000 pounds, single axle; and 34,000 pounds, tandem axle, on any segment of the interstate system and designated federal-aid primary roads, including reasonable access to terminals. Widths were increased from 96 to 102 inches, and all states were to allow the twin-trailer combinations. The same act increased federal fuel taxes from four to nine cents per gallon, with one cent allocated to public transit for capital projects and four cents to highway repair, rehabilitation or improvement. Iowa increased gasoline taxes from 10 to 13 cents per gallon, diesel fuel from 11.5 cents to 13.5 cents, and gasohol from five to six cents.



65-Foot Twin-Trailer (Double Bottom) Truck



102-inch wide truck permitted under Surface Transportation Act of 1982. (Courtesy: Dean Rappleye Trucking and the Spring Research Institute.)

Functional Classifications— Railroads and Highways

Railroads

In accordance with Section 503(b) of the 4R Act, the U.S. DOT in 1976 set preliminary standards, classifications and designations for Class I railroads in the United States. Four major standards were used: (1) density as measured by gross tons moved on a line; (2) service to major markets; (3) appropriate levels of capacity; and (4) defense essentiality. Two additional standards were the economic viability of the owning carrier and the probable economic vitality of connecting carriers. The following categories were established: (1) A Mainlines; (2) Potential A Mainlines; (3) B Mainlines; (4) A Branch Lines; (5) B Branch Lines; and (6) Defense Essential Branch Lines.

Railroads operating in Iowa were classified in every category except "A Mainlines," which required 20 million or more gross tons moved per year in the state. However, by 1980, the CNW had reached this level. To meet the Iowa DOT's interim requirement for identification of railroad needs, a preliminary assessment was prepared in 1980, at a time when the railroad system consisted of 7,008 roadway miles, from which 4,779 miles were determined as the minimum needed to adequately serve the state. Following public hearings for comments, suggestions and criticisms, railroad mileages were placed into five classifications: (1) lines of national interest, 840 miles; (2) lines of multi-state interest, 990 miles; (3) lines of regional interest with substantial traffic needs, 1,200 miles; (4) light-density branch lines with significant local traffic needs, 1,050 miles; and (5) low traffic needs, 1,120 miles.

Highways

Functional classification of highways began with the establishment of County Classification Boards in 1969 and was a requirement of the 65th General Assembly. Functional classification was defined as the grouping of roads and streets into systems according to the character of service expected and assignment of jurisdiction over each class to the government unit having primary interest in each type of service. As defined by the legislation, the classifications were summarized as follows:

A. Primary Road System

1. The Freeway-Expressway System (3,000 miles)
 - a. The National System of Interstate

and Defense Highways in Iowa

- b. All roads connecting and serving major urban and regional areas of the state with high-volume, long-distance traffic movements and generally connecting with like roads of adjacent states
2. The Arterial System (3,500 miles)
 3. The Arterial Connector System
- B. Secondary Road System
1. The Trunk System (15,000 miles)
 2. The Trunk Collector System (20,000 miles)
Both would constitute the Farm-to-Market System
 3. Area Service System—all other rural roads not otherwise classified
- C. Municipal Street System
1. Arterial System
 2. Collector System (limited to 20 percent of entire street mileage under jurisdiction of the municipality except in those municipalities under 2,000 population, in which cases the mileage may be exceeded)
 3. Service System
- D. Other Road and Street Systems
1. State Park, State Institutions, and other state land road systems wholly within the boundaries of state lands
 2. County Conservation Parkway Systems, wholly within the boundaries of county lands operated as parks, forests or other public access areas.



Interstate 80 in Iowa.

(Courtesy: Iowa Department of Transportation.)

Rural Transportation

Concerns over the future status of commercial transportation to rural communities were consistently expressed during the 1970s and early 1980s. One stemmed from the continued abandonment of railroad branch lines which accelerated between 1976 and 1982 (Table 11-4).

Another concern related to the potential impact of motor carrier regulatory reform on service to rural areas, discussed in Chapter Twelve. As railroad branch line abandonments increased, the Iowa DOT was faced with selection of branch line upgrading projects to be funded by the Assistance Program—branch lines which had the greatest potential net benefit to the communities and state relative to the costs incurred. An Iowa State University study published in 1976 provided some insight into the problem through analysis of 71 low-volume rural branch lines on a benefit/cost basis. On only eight lines were the benefit/cost ratios favorable—ratios greater than 1.00—for upgrading track. Thirteen lines had ratios of 0.75 or greater under one of six alternatives used and 56 percent had ratios of less than 0.25. Two reasons were given for the low number of lines with favorable ratios; (1) the large number of branch lines in the state, and (2) their poor physical condition. It was estimated that almost \$19 million annually would be required to upgrade and maintain the 71 branch lines studied.

The research focused upon agricultural movements and explored various alternatives available to grain shippers. These included the use of different grain elevators by farmers, shipment by truck and rail with or without multi-car rail rates and supplemental elevators, shipment by truck and barge, or in the case of elevators which would continue to receive rail service by rail and barge and direct shipments by trucks to nearby grain terminals. In terms of net benefits to shippers, all of these alternatives could be used with the actual one chosen dependent upon distance from a river, time of year, railroad rate structure and grain prices in different markets.

A program of selective upgrading of light density lines combined with abandonment of other lines was estimated to result in a net saving of \$20 million annually in operations, maintenance and capital costs for Iowa railroads. By encouraging volume shipments the program could increase net revenue to grain producers and shippers by more than \$14 million annually, assuming no change in the current rate structure; and by as much as \$24 million annually if

Table 11-4
Iowa Rail Abandonment

Time Period	Rail Still in Place		Rail Removed		Total Length
	Miles	% of Total Miles Abandoned During Designated Time Period	Miles	% of Total Miles Abandoned During Designated Time Period	
Pre-1950	0	0%	1,278.66	100%	1,278.66
1950-1959	5.97	1%	451.46	99%	457.43
1960-1975	20.40	2%	883.90	98%	904.30
1976-1982	523.58	29%	1,264.26	71%	1,787.64
Total	549.95	12%	3,878.28	88%	4,428.23

(Source: Iowa Department of Transportation.)

rates permitting the use of 85-car unit trains were adopted. The study also analyzed the consequences of abandonment and found relatively little effect upon local communities. Comparisons of similar-sized towns with railroad service to those without showed only slight differences in such indicators as population, retail sales, bank deposits and bank earnings. These findings supported conclusions of an earlier study made at the Massachusetts Institute of Technology.

Public Transit

For those interested in the development of public transportation in cities, historical trends are discussed in detail by George W. Smerk, covering the variety of passenger services and vehicle types available to people. He described the evolution of the horse-drawn omnibus of 1662 in Paris to the modern double-decker bus in London, and the relatively slow development of transit systems in the United States.

The history of public transit (street cars) in Iowa was discussed in Chapter Six. Following World War II, availability of automobiles, gasoline and tires and continued improvement in highways provided an attractive alternative to public transit. Ridership declined and financial conditions of private transit companies became critical, leading to service discontinuance. However, local government units and citizen groups in the cities and regions decided that public transportation should be continued, and in the late 1960s public takeover of private systems began with assistance from the federal government.

Federal Transit Policy

George Smerk suggested that "the catalytic event that set in motion the activities leading to the urban transportation policy of the federal government was actually the Transportation Act of 1958, a piece of legislation that on the surface, had nothing to do with urban transportation."⁶ The removal of passenger trains was a key factor in this legislation, and some of the first considered for elimination were those used in commuter operations in the large cities. Prodded by mayors of these cities who had no desire to lose this service, Congress moved toward mass transit aid. The Housing Act of 1961, the Highway Act of 1962, and the Urban Mass Transportation Act of 1964, discussed in Chapter Ten, marked the beginning of federal transit policy. Capital grants were provided for acquisition of new equipment and facilities. Funds were also provided for planning, management training, research and development.

In 1970 Congress made \$3.1 billion available for capital improvements, portions of which could be obligated in advance to the year 1975. In the Highway Act of 1973, highway funds could be used for rural transit demonstrations. Formula grants to urban areas and possible funding for operations were included in the Urban Mass Transit Assistance Act of

⁶ George W. Smerk, "Ten Years of Federal Policy in Urban Transit," *Transportation Journal* (Winter 1971): p. 46.

1974. In 1978, Title III of the Surface Transportation Act expanded funding and extended formula assistance to non-urbanized areas. Four-year funding was authorized at \$13.58 billion, with yearly totals rising from \$2.36 billion in fiscal year 1978 to \$3.67 billion in fiscal year 1982. As the 1970s ended, efforts for additional funds by the transit community ran into an atmosphere of uncertainty as to the future of the federal programs. The Reagan administration proposed that transit operating aid be phased out in stages by 1985. Capital and other funding would be stabilized at the 1981 level with no escalator for inflation. Further proposals for reductions in federal funding came in 1985 when preliminary budget conferences discussed the gradual elimination of almost \$900 million in operating subsidies to states by 1990 and reduction of capital grants by about \$2 billion by 1988.

Public Transit in Iowa

Under the Highway Commission, prior to 1975, the Urban Department had been active in planning and implementing urban improvements in the larger cities. A research study recommending a public transit division and a statewide transit policy was conducted by the Engineering Research Institute of Iowa State University and submitted to the Department in 1975. Included were inventories of transit operations in the state and examination of policies of other states regarding transit structures, responsibilities of a transit division, revenue sources and financial assistance. Four transit plans were presented, calling for state appropriations ranging from \$3.1 to \$6.25 million, dependent upon the program level selected. A second project analyzed Iowa intercity passenger carriers, with recommendations for specific changes in service and proposals for the state role in their implementation. These reports laid the background for the formation of the Public Transit Division in the DOT and furnished research data useful for the *Iowa Transit Plan '78* and the *1981 Transit Plan*. Earlier research studied intercity transportation and its relationship to socio-economic characteristics in rural regions, with the objective of relating intercity systems of small urban communities to their ability to attract and absorb growth.

In 1975, 14 transit operations in metropolitan and small urban areas served a population of over one million people and carried 13.5 million revenue passengers (Table 11-5). Twelve Class I passenger carriers provided scheduled intercity bus service in the state, but no service was available for 18 cities which

were either county seats or had populations over 2,500 in 1970. Sixteen operations served rural regions in 37 counties, and 77 taxicab companies operated in 60 cities. By 1980, there were 17 urban systems, 16 multi-county operations, 25 intercity charter companies, 12 commuter companies, and 77 taxicab operations. Bus and taxi travel accounted for 1.2 percent of 18.7 billion passenger-miles in rural areas, and one percent of 12.1 billion passenger-miles in urban areas. Automobiles, trucks and motorcycles were utilized for 88 percent of total rural travel and 99 percent of urban transportation. The remaining 11 percent of rural travel was divided into rail, regular bus and aviation. Sources of transit financial assistance for operations between 1975 and 1980 are shown in Table 11-6; estimates of Iowa passenger transportation expenditures in Table 11-7; and operating statistics for transit properties in Iowa in 1984, in Table 11-8.

From \$350,000 appropriated by the state for rural elderly demonstration projects in 1976, funding increased to \$2 million annually in 1977 and remained at that level in later years. Most of the 1977 funds were used for operations that reached a level of 92 percent of the appropriation in 1981. The Transportation Commission recommended \$5.56 million for 1982 and 1983 but the total remained at \$1.9 million, ranking Iowa 24th of the 36 states that funded public transit systems. The 1981 Iowa Transit Plan listed 33 public systems including 16 regional systems based on the state's planning regions, seven large urban systems in cities with populations of 50,000 or more, and 10 small urban systems in cities with populations between 20,000 and 50,000. The number was increased to 34 public transit systems in 1985 (Fig. 11-7).

Between 1981 and 1984, a 28 percent increase occurred in transit expenditures in Iowa, rising from \$30.3 to \$38.2 million. Federal funding increased only slightly, from \$12.2 to \$12.6 million, and state aid declined from \$2 to \$1.8 million. The lack of funds necessitated reliance of transit systems more on local taxes, fare box revenues and contracts. In these categories, spending rose from \$16.1 to \$28.3 million between 1981 and 1984. The state's depressed economy throughout these years hurt transit operations, with some systems in better financial condition than others depending upon the location and the levels of economic activity. Ridership declined in the larger cities, and revenues and funding were unable to meet the rising costs of operation. The alternative was to reduce services both on city routes

and on the regional systems, a trend which could continue unless new sources of funding are found.

Intercity Bus Service

Bus service in Iowa grew rapidly between 1940 and the mid-1950s but afterward reversed the trend in ridership to 1980. The decline in demand reached a point where many of the carriers could not afford to recapitalize fleets and physical facilities or upgrade operating capabilities, thus reducing the network and the communities served. In 1942, service was provided to 492 points throughout the state, dropping to 301 locations in 1981. Sixteen intercity bus carriers

operated regular routes in 1942, compared with six carriers in 1983. Three of these, Greyhound, Trailways and Jefferson Lines, controlled nearly 75 percent of the total route service on a daily basis. Most of the service points were lost in communities of 2,500 population or less, and the areas that suffered severely were the southern two tiers of counties, eastern Iowa along the Mississippi River north of Davenport, and western Iowa, particularly from Des Moines to Sioux City. Intercity buses in the early 1980s carried more passengers annually in Iowa than competing rail or air carriers but were surpassed by publicly-funded regional transit systems.

Table 11-5
Summary of Urban Transit Operations in Iowa
April 1, 1975

City	Transit operator	Type ownership	Date of public ownership	Number of buses (active)	Number of routes	Base fare \$
Metropolitan Areas						
Cedar Rapids	Regional Transit Corporation, Inc.	Municipal	1966	12	11	0.30
Council Bluffs	Metro Area Transit (Omaha)	Municipal	1972	16	7	0.40
Davenport	City Transit Authority	Municipal	1974	18	7	0.30
Des Moines	Des Moines Metropolitan Transit Authority	Regional	1973	72	15	0.50
Dubuque	Key Line	Municipal	1973	27	11	0.40
Sioux City	Sioux City Transit	Municipal	1963	21	11	0.25
Waterloo	Metropolitan Transit Authority of Black Hawk County, Inc.	Regional	1972	12	9	0.25
Small Urban Areas						
Ames	Midwest Transportation, Inc.	Private	--	3	3	0.30
Burlington	Burlington Urban Service	Municipal	1975	7	7	0.25
Clinton	Clinton Municipal Transit Authority	Municipal	1973	7	5	0.25
Iowa City	Iowa City Transit	Municipal	1971	15	10	0.15
Marshalltown	Marshall Motor Coach, Inc.	Private	--	2	3	0.25
Mason City	Public Transit Company	Private	--	3	3	0.40
Ottumwa	Ottumwa Transit Lines, Inc.	Private*	--	7	7	0.30

*Private contractor with Ottumwa Transit Authority.

(Source: Iowa State University Transit Assistance Program Report for Iowa.)

Table 11-6
Sources of Transit Financial
Assistance for Operations, 1975-1980.
(Excludes Farebox Revenue)

Calendar Year	Federal Government (Percent)	State Government (Percent)	Local Governments (Percent)
1975	21.4	28.9	49.7
1976	25.7	22.3	52.0
1977	30.7	25.1	44.2
1978	30.9	25.3	42.8
1979	30.4	21.4	48.1
1980	30.2	22.7	47.1

(Source: Public Transit Workshop No.2, Transportation Commission Meeting, March 2, 1982.)

Note: In terms of total operating revenue in 1980, federal operating assistance accounted for 17.8 percent, state operating assistance for 13.0 percent and local operating assistance, 27.0 percent. Almost all transit capital revenue was received from government agencies. In 1980, the federal government contributed \$2.8 billion toward the purchase of transit capital equipment. Based on a ratio of 80 percent federal contributions and 20 percent local contributions, state and local governments contributed an additional \$0.7 billion toward capital purchases by transit systems.

Table 11-7
Estimated Iowa Passenger Transportation Expenditures
(Millions of 1980 Dollars)

	User Costs	Non-User Costs	Total Costs	% Paid By User
Automobiles, Light Trucks and Motorcycles	\$3,373.5	\$166.4 (a)	\$3,539.9	95.3
Certified Air Carriers and General Aviation	476.5	30.7 (b)	507.2	91.9
Local Public Transit	8.8	25.1 (c)	33.9	26.0
Intercity Bus	14.5	1.0 (d)	15.5	93.9
Taxicabs	29.5	1.6 (d)	31.1	94.9
AMTRAK	1.3	2.9 (c)	3.3	39.4
Water Modes	---	---	---	---

(Source: Public Transit Workshop No. 1, Transportation Commission Meeting, February 16, 1982.)

Grand Total: Passenger Transportation	\$4,130.9 M (11% of State GNP)
Total Iowa Passenger Bill:	\$8,700.0 M (23% of State GNP)
Passenger Transportation Percentage:	47%

(a) Non-User charge: highway construction and maintenance.

(b) FAA and CAB programs net of user charges. General aviation portion of this subsidy would be large relative to its 3.2 percentage share of user-borne costs.

(c) Operating and capital subsidies: all non-farebox and contract-covered expenses plus non-user borne highway costs.

(d) Non-user borne highway costs.

Note: Accounts do not include some transportation costs: i.e., costs of congestion and noise, air pollution, visual intrusion, traffic congestion and litter opportunity costs on right-of-way (except for AMTRAK), or subsidized costs on capital facilities.

Table 11-8
Operating statistics for transit properties in Iowa, 1984

System Name	Passengers	Revenue Miles	Operating Revenue, \$	Operating Expenses, \$	Operating Deficit, \$
Regional Systems					
Region 1	154,452	578,797	228,165	389,000	181,260
Region 2	157,170	334,331	133,027	210,684	114,944
Region 3	188,808	554,713	313,661	411,565	87,947
Region 4	97,650	367,089	144,860	245,741	128,706
Region 5	190,486	295,140	83,768	199,596	150,286
Region 6	48,447	233,236	8,321	127,329	128,071
Region 7	159,956	1,044,610	348,570	469,535	181,899
Region 8	34,581	139,997	37,923	103,223	61,290
Region 9	55,313	225,065	192,980	233,733	51,767
Region 10	337,922	823,273	410,581	716,230	251,389
Region 11	285,785	711,615	348,317	642,178	286,853
Region 12	184,867	382,854	137,640	212,264	74,166
Region 13	84,017	300,955	83,029	237,744	141,269
Region 14	88,815	211,454	128,258	231,057	84,880
Region 15	178,865	584,160	406,525	457,588	111,894
Region 16	119,034	252,072	151,696	226,402	53,692
Total	2,366,168	7,039,361	3,157,320	5,113,869	2,090,312
Small Urban Systems					
Ames	2,000,129	689,355	831,314	1,386,961	414,692
Burlington	353,699	289,110	108,866	577,343	331,079
Clinton	396,079	255,623	113,001	452,296	347,103
Marshalltown	62,311	87,168	25,372	173,354	147,780
Mason City	165,987	237,743	45,485	201,734	189,599
Muscatine	121,904	182,803	51,196	286,613	234,799
Ottumwa	240,575	149,546	89,469	311,286	227,691
Subtotal	3,340,684	1,891,348	1,264,704	3,389,588	1,892,744
Metropolitan Systems					
Bettendorf	141,367	239,985	40,018	297,546	275,001
Cedar Rapids	1,845,067	1,013,637	583,408	2,097,614	1,915,201
Coralville	550,351	237,380	218,954	476,262	252,872
Council Bluffs	560,793	395,721	253,249	889,712	635,948
Davenport	1,307,110	939,750	403,748	2,166,133	1,750,637
Des Moines	5,164,084	3,096,517	3,326,935	7,098,475	3,533,643
Dubuque	1,035,359	535,102	293,228	1,315,683	1,056,695
Iowa City	2,453,786	808,819	800,664	1,879,226	1,085,527
Sioux City	1,634,502	484,480	419,215	1,376,823	922,359
Waterloo	851,256	763,186	276,439	1,620,648	1,240,816
Subtotal	15,543,675	8,514,577	6,615,857	19,218,122	12,668,699
Total	21,250,527	17,445,286	11,037,881	27,721,578	16,651,755

(Source: Iowa Department of Transportation.)

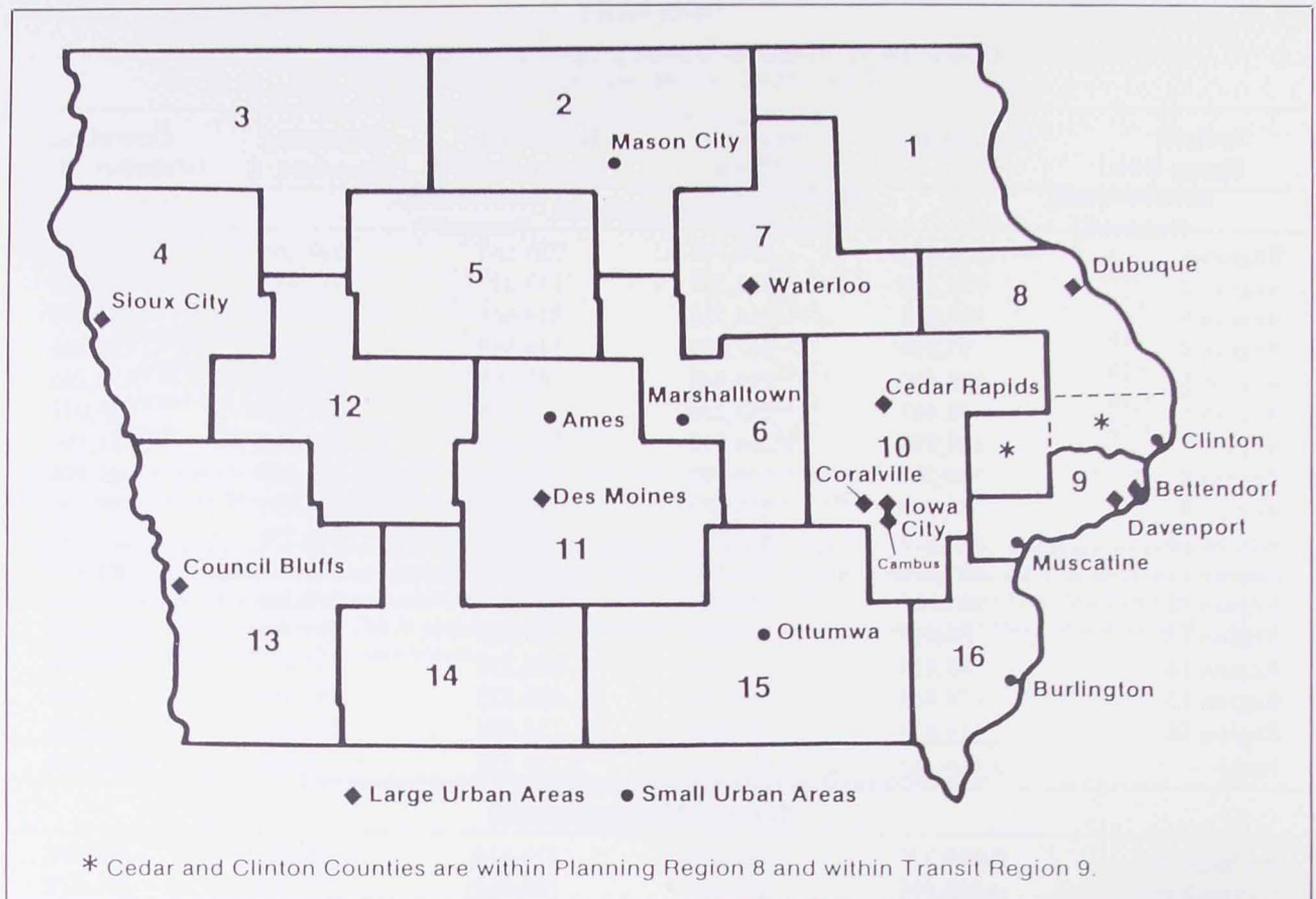


Figure 11-7
34 Public transit systems in Iowa.
(Courtesy: Iowa Department of Transportation.)

River Conditions

User Charges

Seven Presidents of the United States, beginning with Franklin D. Roosevelt, plus leaders of both political parties with liberal or conservative views, pledged to provide revenues to recover a portion of the public expenditures on inland waterways. Despite broad support, waterway charge proponents failed to gain congressional approval, and meanwhile, federal, state and local government expenditures continued to mount, reaching an estimated \$21.2 billion by 1976. This amount covered funds for inland and intercoastal waterways; the Great Lakes and coastal harbors; construction, maintenance and operation of channels and harbors, locks and dams; alteration of bridges over navigable rivers; engineering and design and other costs associated with navigation. Not

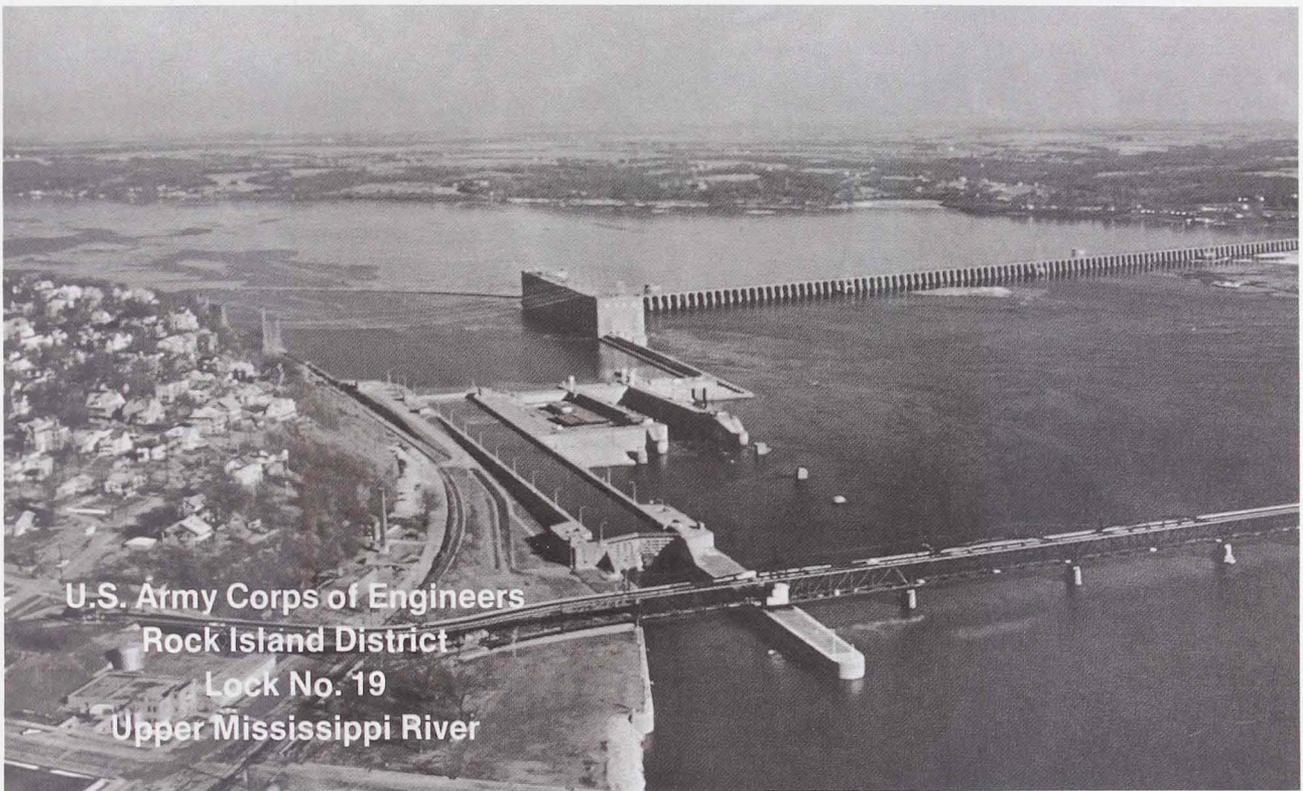
included were costs ascribed to non-navigation elements of the projects or the expenditures of the Tennessee Valley Authority and the U.S. portion of the construction of the St. Lawrence Seaway. Public Law 91-469, approved October 21, 1970, amended the Act creating the Seaway Corporation by terminating the payment of interest on the obligations of the corporation. Toll revenues on the Seaway failed by a large margin to cover total annual costs.

The overriding problem in assessing waterway user charges concerned the multi-purpose features of waterway projects. The concept of user charges is based upon benefits received on publicly-financed transportation routes. The difficult question to resolve lay in the method of isolating benefits to commercial users as against benefits accruing to the general public—the so-called “public interest

principle.” Flood control, water supply to communities and industries, wildlife and recreation enhancement and energy generation are waterway projects whose cost should be borne by the general public. On the other hand, commercial interests also benefited and had been freed from user taxes since waterway development began, successfully arguing that navigation was a by-product of these projects.

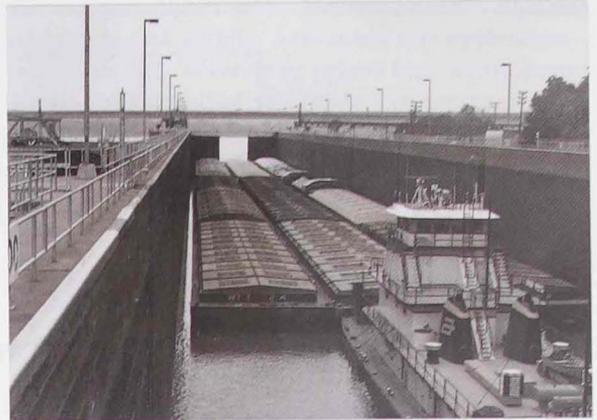
In 1976, the Iowa DOT staff reviewed accounting records of the Corps of Engineers to determine operating and maintenance costs on the 300-mile section of the Mississippi River from Guttenburg, Iowa, to Hannibal, Missouri. The area was considered typical of federal maintenance standards

on the entire river. Following an examination of channel and local maintenance cost components, the staff used 43 percent as a basis for proposed user charges against barge companies—a figure comparable to the basis for taxes on trucks using public highways. Use of the base percentage translated into a proposal for a fuel tax of three cents per gallon and a \$32 locking fee. It was estimated that grain rates from Davenport to New Orleans would increase by one-half cent per bushel and that the tax would generate \$75-\$100 million annually if applied nationwide. Costs, other than navigation, were not included. In May 1977, the Transportation Commission voted to make the staff proposal a DOT recommendation.



**U.S. Army Corps of Engineers
Rock Island District
Lock No. 19
Upper Mississippi River**

Mississippi River Lock and Dam No. 19 at Keokuk, Iowa.
(Courtesy: U.S. Corps of Engineers, Rock Island District.)



Locking a tow through Lock No. 19 at Keokuk, Iowa.
(Courtesy: Rail and Water Division, Iowa Department of Transportation.)

The Lock and Dam 26 Problem

Sixty-four terminals along the Mississippi and ten along the Missouri River provided facilities for handling nearly 13 million tons of commodities annually. Included were seven million tons of grain, two million tons of coal, one million tons of petroleum and three million tons of other commodities. Where speed of movement was not a major factor, productivity and the economic advantage of barges was tied to their ability to handle far larger volumes of traffic in single units or tows than was possible by railroads and trucks on competing routes. But economic operations require continuous movement, and interruptions for any reason tend to negate the comparative advantages of water carriers.

In April 1976, Lock and Dam No. 26 at Alton, Illinois, was partially closed, dramatically pointing to the importance of water transportation to users on the upper Mississippi River, including those in Iowa. The facility was in poor condition after approximately 40 years of service and had a history of excessive maintenance problems and costs. It was a vital link in the waterway system, accounting for 54 million tons of traffic valued at four billion dollars locked through in 1975—a volume eight million tons over its practical design capacity and four million tons over the total movement through the Panama Canal during that year.

The Iowa DOT supported replacement rather than rehabilitation of the existing locks and dam, favoring relocation some two miles downstream with one lock 1,200 x 110 feet at time of construction and the option of adding another lock in the future. Congress authorized construction in 1978 of one lock, but lawsuits in opposition by the railroads and environmental protection groups delayed the project until October 1979, when a Federal District Court ruling provided for the construction of the new lock and dam, to cost \$861 million at the two-mile downstream location. The same legislation directed the Upper Mississippi River Basin Commission to conduct a master plan study of the entire upper Mississippi River system. An important part of this study, completed in 1982, was the recommendation concerning the economic need for a second lock. The legislation also provided for a waterway user tax of four cents per gallon of fuel effective October 1, 1980, to rise to 10 cents in 1985. The U.S. Transportation and Commerce Departments considered that the tax would have a short-term impact on barge operations and would probably be more lasting on grain interests, but overall would not be a major factor during the next decade. The Reagan Administration supported the user fees.

It was questionable whether the new lock would be adequate for current traffic plus projected increases and it was further suggested that a second lock would

be necessary for emergency use. In 1985, the Corps of Engineers decided to utilize funds available for planning purposes to proceed with engineering and design of the second lock, action taken as an interim measure until congressional authorization for the new lock could be obtained. The second lock was included in the omnibus waterway legislation debated during the 1984 session of Congress (Fig. 11-8).

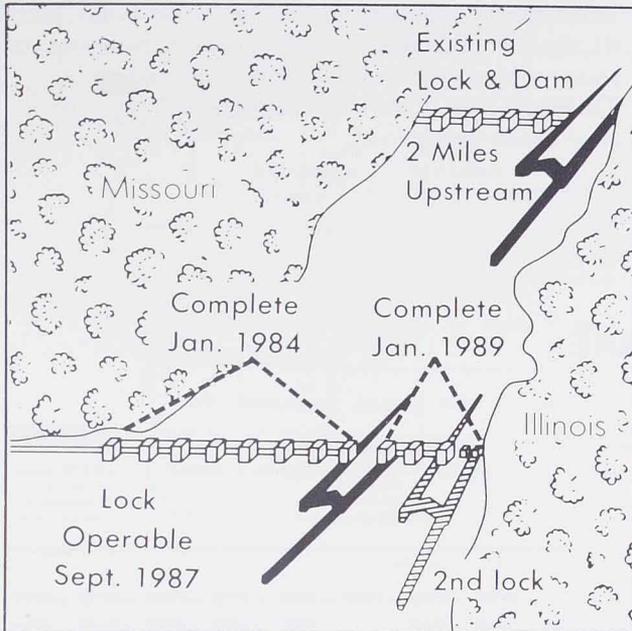


Figure 11-8
Lock and Dam 26.

(Courtesy: Iowa Department of Transportation.)

The Iowa Rail-Barge Tariff

Intermodalism in the form of rail/truck combinations (piggyback) had been commonplace in Iowa for many years and was a popular and effective system for moving selected classes of commodities. In 1976, the Iowa DOT brought together the CMStP&P and the Alter Barge Line for the purpose of discussing rail/barge combinations on grain movements to the Mississippi River under one tariff. Previously, shippers used one rate from inland origins to river terminals, another charge for transfer and a separate barge rate to destinations, under two bills of lading. The single tariff meant that shippers dealt only with one mode—the railroad—to arrange for shipments under one bill of lading. Uncertainty over barge rates, which fluctuated almost daily, was eliminated through

stabilization by the barge line over three time periods: March-June, July-September and October-December. Barge availability was guaranteed by payment of rail car demurrage if the rail cars arrived at a terminal when barges were not ready for loading.

The tariff called for six consecutive 15-car movements to the river. To enable small elevators to participate, the railroad established 11 zones (Fig. 11-10). It was possible for up to three elevators within a zone to divide the 15 cars among themselves, or each of the six movements could originate from one to three elevators in that zone. Rates under the single tariff were lower than the sum of the individual charges and were competitive with 25, 50 and 75 railroad multi-car rates to the Gulf (Fig. 11-9). The advantages to the Iowa shipper were convenience, alternative routes, less documentation, increased competition and lower costs. By the close of 1978, three and one-half million bushels of grain had moved on the tariff, with a net saving of three to five cents per bushel to the Iowa farmer. Unfortunately, the plan collapsed when the CMStP&P filed for bankruptcy and restructured the system, and increasing barge rates were unattractive to the Alter Barge Line.

State Aviation System Evaluation

Before the Iowa DOT was organized, the Aeronautics Commission was the only state agency concerned with aviation goals. Its objective was to establish a public airport providing round-the-clock operation with an all-weather surface in each of the 99 counties. In 1973, through the efforts of the commission, local sponsors and the FAA, a network had been developed which consisted of 123 municipal and 111 private airports. Ten of these were in communities served by commercial air carriers: one medium hub (Des Moines); three small hubs (Cedar Rapids, Waterloo and Sioux City); and six non-hubs (Burlington, Clinton, Dubuque, Fort Dodge, Mason City and Ottumwa). Five sites (Des Moines, Ottumwa, Davenport, Fort Madison and Spencer) were also utilized by third level air carriers. Iowa was 25th in population, but eighth in the nation in the number of airports having paved and lighted runways, 21st in the number of active pilots (8,824), 18th in the number of aircraft (2,652) and 14th in the number of public use airports (234).

Airport development programs historically have been constrained by the lack of adequate funding, and since little construction occurred without state or federal aid, it was imperative that allocation of funds

be made in the most judicious manner. In June 1971, at the request of Governor Ray, a detailed and comprehensive planning project was initiated by the Engineering Research Institute, Iowa State University, and submitted to the Aeronautics Commission in November, 1972. It made recommendations for improving and/or developing 117 airports with suggestions for implementation. The plan called for an expenditure of \$126 million to be shared by the three levels of government and was approved by the FAA for inclusion in the National Airport System Plan, which became part of the National Transportation Plan.

The 1972 State Airport Plan was updated by the Iowa

DOT in 1978, 1982, and 1985. The 1982 plan recognized the need for a total aviation system plan, one which emphasized the importance of aviation services as well as aviation facilities and covered a 20-year period in three phases: (1) a short-range period from 1982 to 1986, (2) an intermediate period, from 1987 to 1991, and (3) a long-range period from 1991 to 2001. It evaluated 114 existing publicly-owned airports and identified 80 airports eligible for state development, planning and safety project funds, and 41 local service airports eligible for state planning and safety projects but not developmental funding. Developmental costs were estimated at \$291 million over the 20-year period.

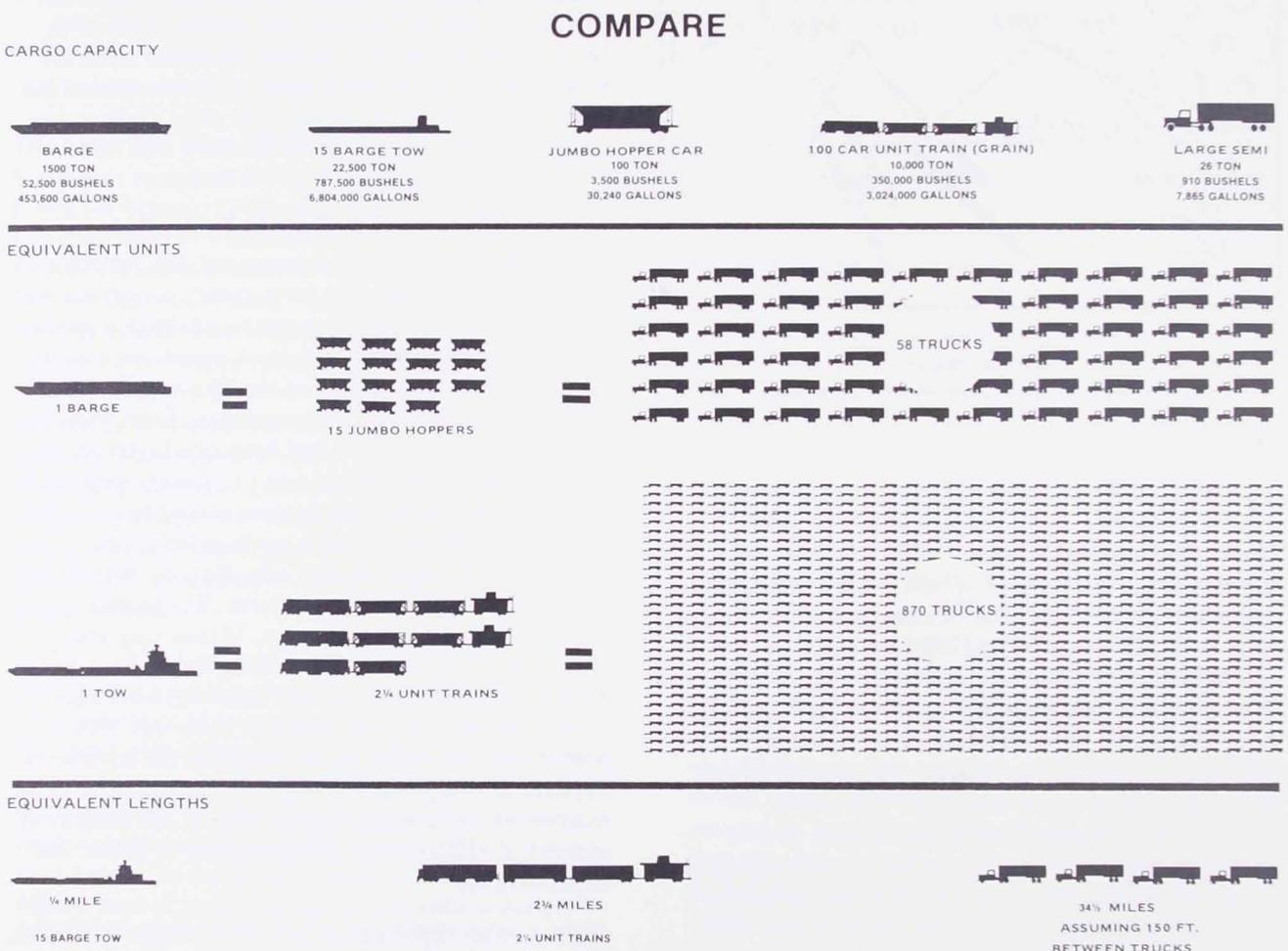


Figure 11-9
Comparison of tonnages carried by barge, rail and truck.
(Courtesy: Iowa Department of Transportation.)

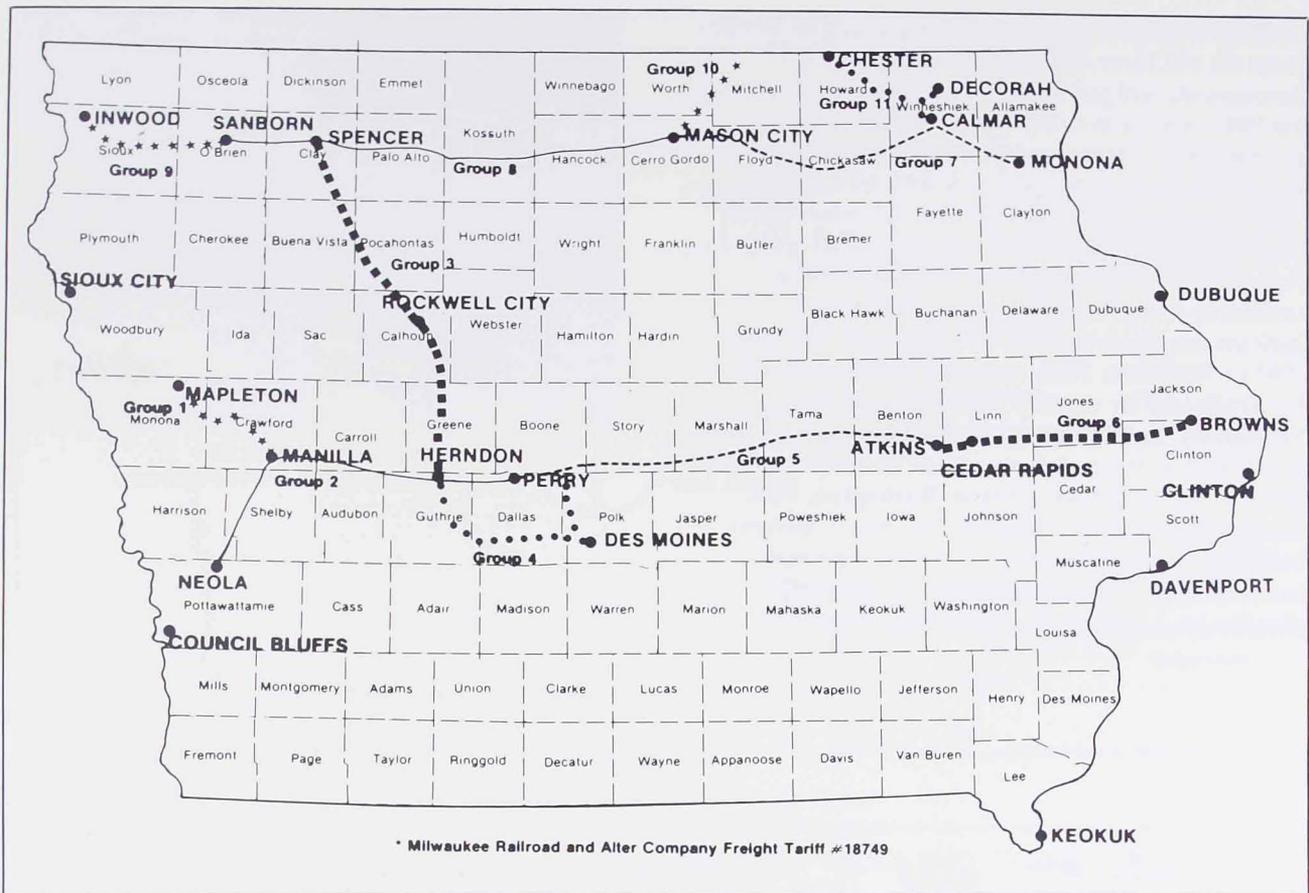


Figure 11-10
Rail/barge tariff shipping zones.
(Courtesy: Iowa Department of Transportation.)

In 1985 the state had 112 publicly-owned airports which provided access to the national system through direct commercial flights and air taxi services. They also provided access to communities by business interests and other users. There were 101 general aviation airports which provided service by aircraft ranging from single-engine airplanes to large corporate jets. Eleven commercial airports handled flights by major national airlines and/or commuter airlines as well as general aviation aircraft. All publicly-owned airports were included in the aviation system which provided service to all areas of the state (Fig. 11-11).

The number of registered aircraft increased in each year from 1970 to the peak year of 1979, when 3,530 were registered. In 1984, 3,079 aircraft were

registered, a decline of 13 percent. Estimates for 1985 showed a further decrease of about 100 aircraft. In 1984, 2,935 aircraft or 95.9 percent of all aircraft registered were based at publicly-owned airports. These are aircraft that are regularly hangared or stored at a facility.

In 1980, Iowa had 12,101 registered pilots. The number fell to just over 10,000 in 1982 and to about 9,000 in 1984, representing a decline of 3,000 in four years. Projections of the number of future registered pilots show a growth rate of approximately 2 percent each year from 1985 to 2005, or a total of 13,400 pilots in the latter year.

Air passenger enplanements were expected to increase throughout the 20-year planning period. Enplanements on certificated air carriers declined

between 1980 and 1982 but were beginning to increase from the 1982 low. Estimates based upon FAA forecasts showed just under one million enplanements for 1985, with an 8 to 9 percent increase each year through 2005. Enplanements on commuter airlines increased sharply—by 1985 they were estimated at four times the number in 1980. The increases can be traced to two developments: the Airline Deregulation Act of 1978 and an expansion in the number of commuter lines. Projections from 1985 to 2005 indicate that enplanements will rise from 106,000 in 1985 to 300,000 in 2005. Iowa has four airports served by certificated air carriers: Cedar Rapids, Des Moines, Sioux City and Waterloo. Commuter service is provided at these airports as well as at Spencer, Mason City, Dubuque, Clinton, Burlington, Fort Dodge and Ottumwa. However, the recent mergers involving Republic and Ozark Airlines and the bankruptcy of Frontier Airlines may significantly alter the air passenger service in Iowa (Fig. 11-12).



Des Moines Airport, 1970.
(Courtesy: Des Moines Municipal Airport)

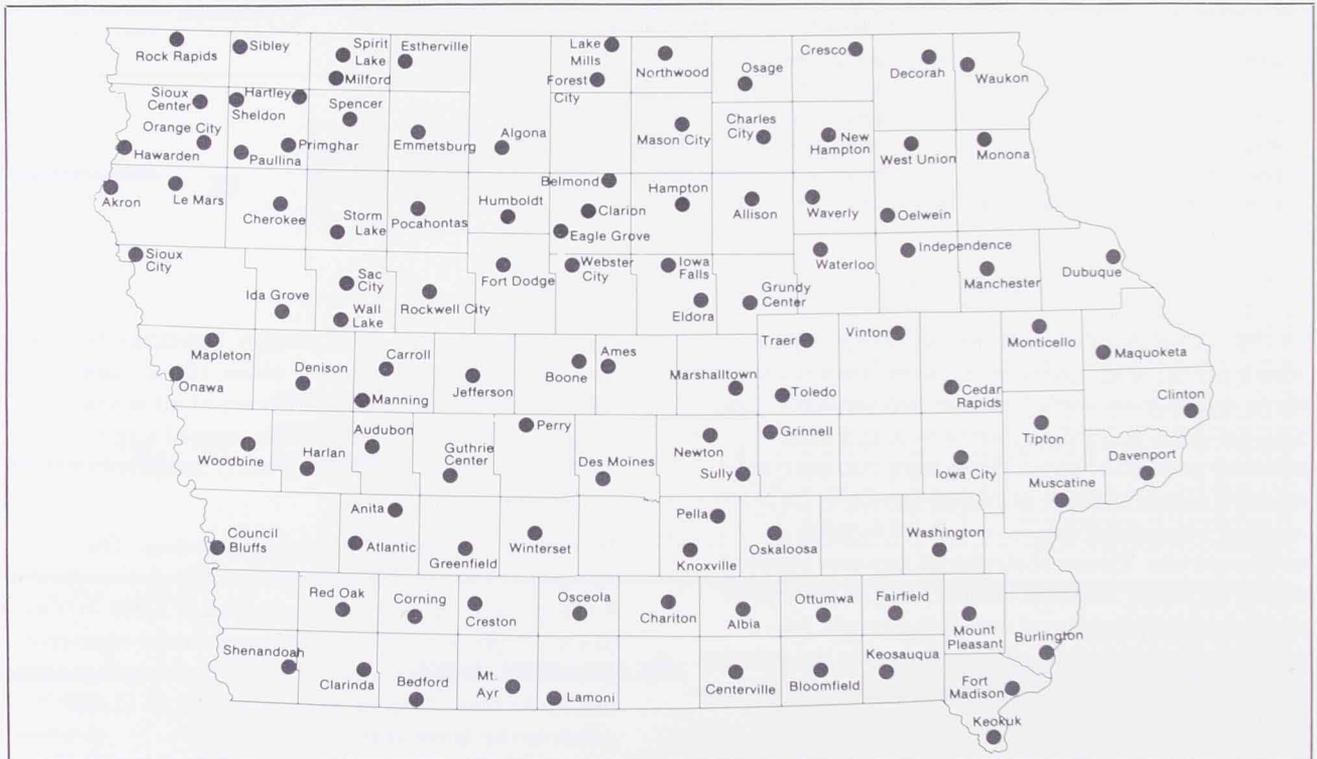


Figure 11-11
1985 Iowa aviation system plan.
(Courtesy: Iowa Department of Transportation.)

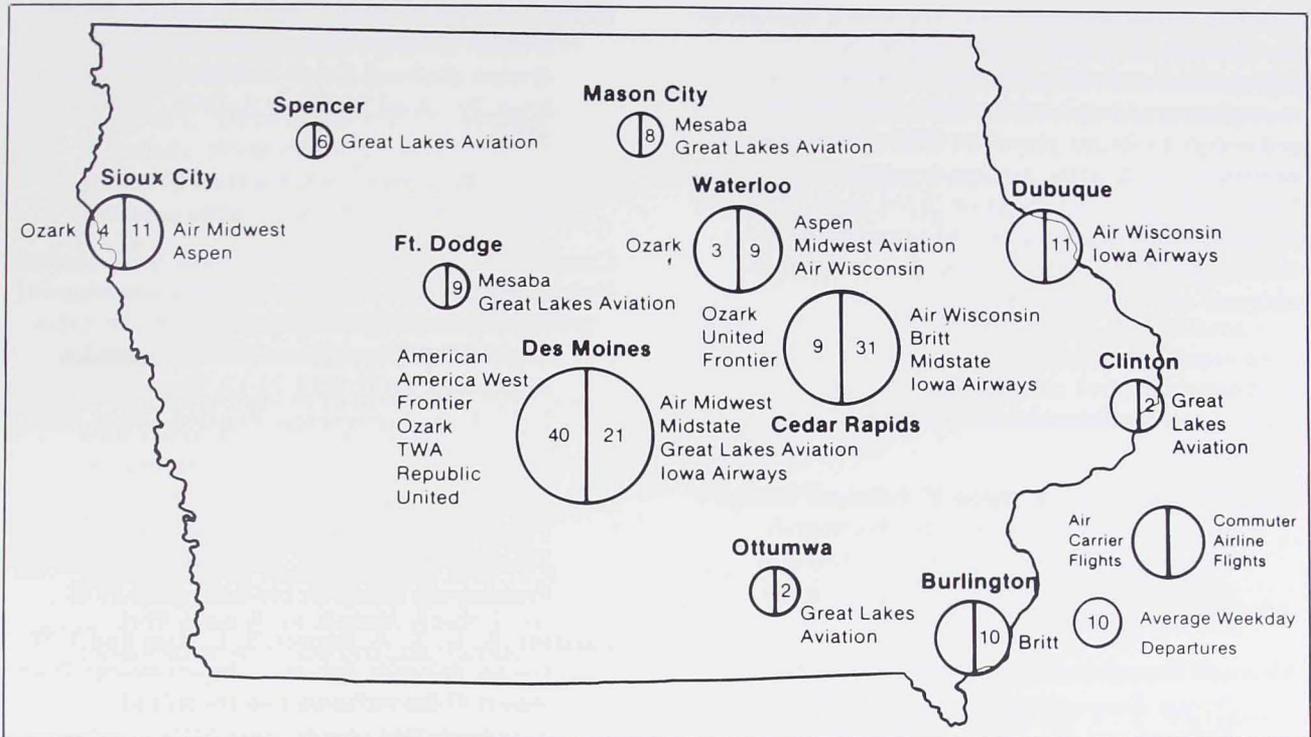


Figure 11-12
Air passenger service in Iowa, October 1985.
(Courtesy: Iowa Department of Transportation.)

Summary

The newly created Iowa Department of Transportation faced the problems of a distressed railroad industry which was hard-pressed to handle the rapid increase in agricultural and manufactured traffic, and to implement federal legislation passed in an effort to relieve railroad distress in passenger and freight movements. Bankruptcies and branch line abandonments reduced railroad mileage throughout the state during the 1970-1985 period. To counter the threat of reduced or completely eliminated service, the newly created Iowa Railroad Finance Authority was authorized to finance acquisition and improvement of railroad facilities.

Motor carrier traffic increased substantially during these years, partially because of the completion of interstate highways and the improvement of primary and secondary roads. However, the condition of bridges on all highways was a critical problem. The expansion in trucking brought controversy over the

use of 65-foot twin trailers, fought by the state, only to lose the legal battle in the courts. Not only were the 65-foot twins mandated, but Iowa faced changes in truck sizes through federal legislation. Highway user taxes were raised at both state and federal levels.

Public transit became a salient issue in the nation and state as the demand for service increased faster than resources to meet that demand. Federal and state funding allowed the organization of regional and urban systems which had to weather the difficulties of an economic recession in the early 1980s. User charges were assessed against commercial waterway operators on the rivers bordering the state and the deterioration of Lock and Dam No. 26 at Alton, Illinois, pointed to the importance of water transportation to Iowa shippers. Aviation development was programed through state airport and system plans in 1972, 1978, 1982 and 1985.

The decade of 1970-1980 was one in which federal legislative reform measures freed carriers from long-

standing rules and regulations. There were changes in the character of modal services and in the organization and reorganization of carrier management and operations. Environmental concerns and energy problems played an important role in the adjustment of the state to these developments. Nationwide economic recession in the early 1980s and its impact upon Iowa placed additional burdens on the transportation sector to meet the challenge of adequate service at reasonable costs.

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