QUAD CITIES TRANSIT DEVELOPMENT STUDY 1983

Bi-State
Metropolitan
Planning Commission

1504 Third Avenue / Rock Island, Illinois 61201
phone 309/793-6300

serving local government in Muscatine and Scott Counties, Iowa; Henry, Mercer and Rock Island Counties, Illinois

1983 QUAD CITIES
TRANSIT DEVELOPMENT STUDY

Prepared for the

Bettendorf Transit System
Davenport Public Transit System
and
Rock Island County Metropolitan
Mass Transit District

by the

Bi-State Metropolitan Planning Commission

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[3] Chairman, Bi-State Metropolitan Planning Commission

[4] The mayors of the Cities of LeClaire, Eldridge, Buffalo and Panorama Park in the Iowa portion and Milan, Silvis, Coal Valley, Carbon Cliff, Hampton, and Oak Grove in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.

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[2]The mayors of the Cities of LeClaire, Eldridge, Buffalo and Panorama Park in the Iowa portion and Milan, Silvis, Coal Valley, Carbon Cliff, Hampton, and Oak Grove in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.

[3]Transportation Technical Committee Chairman

RESOLUTION

WHEREAS, the Bi-State Metropolitan Planning Commission, through its Transportation Policy Committee, is responsible for the adoption of transportation plans and programs for the Davenport-Rock Island-Moline Urbanized Area as part of its role as the Metropolitan Planning Organization designated by the Governors of Iowa and Illinois; and

WHEREAS, the staff of the Bi-State Metropolitan Planning Commisison, working with the staffs of the City of Davenport, City of Bettendorf, and Rock Island County Metropolitan Mass Transit District, has prepared a transit development study for the three public transit systems in the Davenport-Rock Island-Moline Urbanized Area; and

WHEREAS, this 1983 Quad Cities Transit Development Study contains analyses of the local transit systems plus documentation of the transit improvement programs proposed by each system; and

WHEREAS, the City Councils of Bettendorf and Davenport and the Board of Trustees of the Rock Island County Metropolitan Mass Transit District have endorsed those portions of the Transit Development Study relating to their systems; and

WHEREAS, the Transportation Technical Committee has recommended the adoption of the Transit Development Study.

NOW, THEREFORE, BE IT RESOLVED by the Transportation Policy Committee of the Bi-State Metropolitan Planning Commission that the 1983 Quad Cities Transit Development Study is adopted as the official transit plan for the Davenport-Rock Island-Moline Urbanized Area; and

BE IT FURTHER RESOLVED THAT the transit program contained in the 1983 Quad Cities Transit Development Study is hereby amended into the current Transportation Improvement Program/Annual Element for the Davenport-Rock Island-Moline Urbanized Area.

ADOPTED THIS 5th DAY OF MAY, 1983

Paul E. Mulcahey

Paul E. Mulcahey, Chairman
Transportation Policy Committee
Bi-State Metropolitan Planning Commission

PHH/dmh
5/5/83
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RESOLUTION # 101-83

WHEREAS, the Bi-State Metropolitan Planning Commission, through its Transportation Policy Committee, is responsible for the adoption of transportation plans and programs for the Davenport-Rock Island-Moline Urbanized Area as part of its role as the Metropolitan Planning Organization designated by the Governors of Iowa and Illinois; and

WHEREAS, the staff of the Bi-State Metropolitan Planning Commisison, working with the staffs of the City of Davenport, City of Bettendorf, and Rock Island County Metropolitan Mass Transit District, has prepared a transit development study for the three public transit systems in the Davenport-Rock Island-Moline Urbanized Area; and

WHEREAS, this 1983 Quad Cities Transit Development Study contains analyses of the transit system operated by the City of Bettendorf as well as documentation of the transit improvement program proposed by the City; and

WHEREAS, the study, once adopted, can be used in justification of state and federal grants to support the implementation of the City's transit program;

NOW, THEREFORE, BE IT RESOLVED by the City Council of Bettendorf, Iowa that the City endorses those portions of the 1983 Quad Cities Transit Development Study which apply to the City's transit system and urges the adoption of the study by the Transportation Policy Committee of Bi-State.

ADOPTED THIS 3rd DAY OF May, 1983

Archie Weinbach

Mayor Pro Tem

206

RESOLUTION # 206

WHEREAS, the Bi-State Metropolitan Planning Commission, through its Transportation Policy Committee, is responsible for the adoption of transportation plans and programs for the Davenport-Rock Island-Moline Urbanized Area as part of its role as the Metropolitan Planning Organization designated by the Governors of Iowa and Illinois; and

WHEREAS, the staff of the Bi-State Metropolitan Planning Commission, working with the staffs of the City of Davenport, City of Bettendorf, and Rock Island County Metropolitan Mass Transit District, has prepared a transit development study for the three public transit systems in the Davenport-Rock Island-Moline Urbanized Area; and

WHEREAS, this 1983 Quad Cities Transit Development Study contains analyses of the transit system operated by the City of Davenport as well as documentation of the transit improvement program proposed by the City; and

WHEREAS, the study, once adopted, can be used in justification of state and federal grants to support the implementation of the City's transit program;

NOW, THEREFORE, BE IT RESOLVED by the City of Davenport Public Works Committee, that the City endorses those portions of the 1983 Quad Cities Transit Development Study which apply to Davenport transit system subject to required public hearing for specific project applications and urges the adoption of the study by the Transportation Policy Committee of Bi-State.

ADOPTED THIS 20 DAY OF APRIL, 1983

Charles K. Peart, Mayor
City of Davenport

RESOLUTION # 83-35

WHEREAS, the Bi-State Metropolitan Planning Commission, through its Transportation Policy Committee, is responsible for the adoption of transportation plans and programs for the Davenport-Rock Island-Moline Urbanized Area as part of its role as the Metropolitan Planning Organization designated by the Governors of Iowa and Illinois; and

WHEREAS, the staff of the Bi-State Metropolitan Planning Commisison, working with the staffs of the City of Davenport, City of Bettendorf, and Rock Island County Metropolitan Mass Transit District, has prepared a transit development study for the three public transit systems in the Davenport-Rock Island-Moline Urbanized Area; and

WHEREAS, this 1983 Quad Cities Transit Development Study contains analyses of the transit system operated by the Rock Island County Metropolitan Mass Transit District as well as documentation of the transit improvement program proposed by the District; and

WHEREAS, the study, once adopted, can be used in justification of state and federal grants to support the implementation of the District's transit program;

NOW, THEREFORE, BE IT RESOLVED by the Board of Trustees of the Rock Island County Metropolitan Mass Tran District, that the District endorses those portions of the 1983 Quad Cities Transit Development Study which apply to the District's transit system and urges the adoption of the study by the Transportation Policy Committee of Bi-State.

ADOPTED THIS 13 DAY OF APRIL, 1983

Chairman

Table of Contents

I. INTRODUCTION

The 1950's and the 1960's saw a steady decline in the use of public transportation in the Quad Cities urban area. Long years of deferred maintenance, service reductions and fare increases by the privately owned transit operations, combined with the continually increasing public investments in automobile-related facilities, gradually resulted in a public transit ridership composed of only those individuals who had no viable transportation alternative other than transit. Finally, in the late 1960's the public transportation providers appealed to local governments for financial assistance to avoid the loss of even this last remnant of public transit service.

In response to this request, local governments in both the Iowa and Illinois Quad Cities began providing operating subsidies to the financially ailing private transit systems. These funds were not sufficient to allow a resurgence of the private transit industry, but did allow the private systems to remain in operation for the period of time necessary to have public transportation evaluated. Finally, in 1974, the local Quad Cities governmental units to purchased the assets of the private Quad Cities transit providers and begin a period of public operation of the Quad Cities transit systems.

With this change from private to public ownership came a renewed interest in mass transportation services. New rolling stock was obtained to replace most of the aged vehicles acquired from the previous private ownership. It also allowed a reduction in transit fares and the initiation of new services to meet the needs of the changing Quad Cities land use patterns. As a result of these improvements, the downward trend in transit ridership was reversed. By 1980 transit ridership in the Quad Cities was nearly double that of 1973, which was the last year of private operation.

Many factors contributed to this growth in transit ridership. The new transit vehicles and improved services did much to improve the public attitudes toward transit usage. Increased public awareness of mass transportation's

potential valuable role in reducing urban air pollution and promoting national security and independence, through reduction of oil imports, also greatly enhanced the image of mass transit. Simultaneously, the rising fuel prices and general increase in the cost of living forced ever-growing segments of the general population to consider alternatives to the high cost of private transportation.

Now, despite continued ridership increases and increasing public interest in and demand for transit services, the Quad Cities transit operations are faced with an uncertain future. The energy-related inflationary problems of the current decade have hit heavily on all aspects of the transportation industry. While transit maintains several advantages over private auto use, it has not been spared the impacts of inflation. Transit remains very much fuel and labor intensive and, therefore, suffers disproportionately to the impact of rising fuel prices and increases in labor wage rates. To date transit fare increases have not kept pace with these costs, since transit officials have felt that, as transit became a more attractive alternative to private transportation, increased ridership would result in continued increases in the social benefits of public transit usage.

In the last couple of years, however, state and federal agencies have failed to provide the needed funds to maintain their proportionate support of the increasingly costly services. Now with the emphasis on reducing government spending, it is possible that all of the federal financial support being provided to the three Quad Cities urban transit systems may be withdrawn at a time when state and local governments may find it impossible to replace these needed funds.

The emphasis of this study is to determine the extent to which the Quad Cities public transit systems will be able to continue supplying this needed service to the community.

Study Area Description

The "Quad Cities," designated by the Bureau of the Census as the Davenport-Rock Island-Moline Urbanized Area, is a community of 287,000 persons living within 16 contiguous or nearly continguous municipalities spanning the Mississippi River between Iowa and Illinois. The large number of independent local jurisdictions involved (Table TDS-I-1) and, in particular, the relative balance among major central city communities, has resulted in a non-centralized or multiple-nuclei development pattern. This pheonmena partially offsets the impacts of the large urban population which ranks second only to Omaha-Council Bluffs among Iowa communities and the Greater Chicago and the Greater St. Louis areas within Illinois.

Table TDS-I-1: Population of Quad Cities Municipalities

Davenport, IA	103,264
Rock Island, IL	47,036
Moline, IL	45,709
Bettendorf, IA	27,381
East Moline, IA	20,907
Silvis, IL	7,130
Milan, IL	6,264
Coal Valley, IL	3,800
Green Rock, IL	3,324
LeClaire, IA	2,899
Colona, IL	2,172
Hampton, IL	1,873
Carbon Cliff, IL	1,578
Buffalo, IA	1,441
Riverdale, IA	462
Panorama Park, IA	145

Employment within the Quad Cities Urban Area is largely concentrated in heavy industry and is spread throughout the communities. Retail activity is likewise considerably dispersed, although particular centers can be found in the three major CBDs and the three regional shopping centers.

According to 1970 Census figures, approximately seven percent of the urbanized area population was composed of racial minorities with several areas showing above average concentration of various subgroups. Persons over 60 years of age represent approximately ten percent of the urban area population and are

distributed disproportionately in the older sections of the urban area and in specialized housing projects. No detailed data on handicapped population is currently available, however, other studies have indicated that persons with various types of handicaps compose approximately ten percent of the urban population.

Existing Transit Organizations

The Quad Cities is served by three separate publicly-funded transit operations. The City of Davenport was the first local entity to become involved with mass transit. In 1969, the City, through its semi-autonomous City Transit Authority, began subsidization of the private Davenport City Lines. After purchase of that operation, and subsequent abolition of the City Transit Authority, public transportation is now a function of the City's Department of Municipal Transportation through its Public Transit Division under the jurisdiction of the Public Works Committee and the City Council. The City now operates a total of 20 buses over eleven routes. During FY 1982 with 19 buses operating over seven routes ridership totaled 1,567,958 passengers. The City also provides specialized transportation for elderly and handicapped persons through a contract with a private, not-for-profit transit service. This service carried passengers in FY 1982.

The second local governmental entity to become involved with public transit was specially organized to provide this service. The Rock Island County Metropolitan Mass Transit District was organized by referendum in 1970 to subsidize and, beginning in 1974, to operate the public transportation system within the Illinois communities of Rock Island, Moline, East Moline and Silvis. This service area was later expanded based upon a referendum among the voters within the community of Milan. The District has its own limited taxing powers and is governed by a board of trustees made up of one representative appointed by each mayor within the five communities. The District, or "RICMMTD", operates

26 buses over eight fixed-routes and three subscription routes throughout the five-community service area and carried 1,702,445 passengers during FY 1982.

The City of Bettendorf is the newest entrant into the field of public transportation services within the Quad Cities. During 1974, Bettendorf began contracting with the Davenport City Transit Authority for provision of one bus route into the City of Bettendorf. Then in 1975, this service was discontinued and the City of Bettendorf initiated its own transit operation. The Bettendorf Transit System is a function of the City Administrator's office and is under the policy direction of the Transit Committee and the Bettendorf City Council. The Bettendorf Transit System expanded from one route bus and two dial-a-bus vehicles to three route buses and one dial-a-bus during 1980. During FY 1982 the Bettendorf Transit System carried 108,046 passengers.

Previous Transit Planning Efforts

Planning for the Quad Cities transit operations is conducted primarily by the Bi-State Metropolitan Planning Commission in conjunction with the management personnel of the three transit operations. A number of transit plans addressing various aspects of the Quad Cities transit picture have been prepared since the original transit study in 1971-1972. A brief description of these documents and their findings follows.

Quad City Public Transportation Study (1972) - Results of a comprehensive study of Quad Cities transit conducted for the Bi-State Metropolitan Planning Commission by Peat, Marwick, Mitchell and Co., this report presents the initial recommendation for public acquisition of the privately-owned local National City Lines subsidiaries.

Quad City Public Transportation Study: Transit Development Program 1975-1980 (1974) - This study, prepared by the Bi-State Metropolitan Planning Commission staff, updates findings of the original transportation study and analyzes alternative transit services to be provided by the publicly-operated transit systems.

1995 Transportation Plan (1976) - This plan, prepared by the Bi-State Metropolitan Planning Commission staff, examines the long-range future of transit in the Quad Cities. This was done through the analysis of alternate transit service networks covering a greatly expanded service area.

1977 Transportation Systems Management Element (1977) - This document, prepared by the Bi-State Metropolitan Planning Commission staff, examines various alternatives for transit service expansion for fixed-route, Dial-A-Bus and specialized elderly handicapped transportation services.

Quad City Transit Marketing Study (1977) - This effort prepared for the Bi-State Metropolitan Planning Commission by Ilium Associates, Inc., examines the potential market for transit within the Quad Cities and identifies areas of unmet transit demand, as well as strategies for independent and joint transit marketing efforts.

Quad City Transit Garage Study (1978) - This document, prepared for the Bi-State Metropolitan Planning Commission by the firm of Henningson, Durham and Richardson, examines the available alternates for replacing the transit vehicle storage and maintenance facility, which currently services RICMMTD and Davenport buses. After examining 51 options, including pairs of independent garages, pairs involving combinations of a heavy maintenance and a storage garage, and a single joint garage facility for both systems at various sites, the study recommends construction of a new joint maintenance and storage facility in Rock Island, Illinois to serve the two major transit operations.

Bi-State Energy Contingency Plan (1979) - Prepared by the Bi-State Metropolitan Planning Commission staff, this report identified various strategies for dealing with a possible serious short-fall in transportation fuels within the Bi-State Region. It recommends the establishment of task forces to prepare detailed plans for implementing such strategies as park-and-ride lots, maintenance of energy contingency-reserve bus fleets, and possible coordination with school bus transit operations.

Davenport Municipal Transit System: Existing Problems and Recommendations (1979) - Prepared by Davenport staff, this report details problems with the existing route structure of the City's bus system and with the location of bus stops, shelters, and the downtown terminal. It also analyses the operation of the bus garage, which services both Davenport and RICMMTD vehicles, and recommends that the maintenance staff be upgraded and expanded.

Quad Cities Transit Handicapped Accessibility Plan (1980) - This plan, prepared by the Bi-State Metropolitan Planning Commission staff, documents the programs of local transit operators to reach compliance with U.S. D.O.T. regulations implementing Section 504 of the Rehabilitation Act of 1973, as amended.

Bettendorf Transit Study (1980) - This study, prepared by the staff of the Bi-State Metropolitan Planning Commission, examined the expansion alternatives available to the City of Bettendorf. Based on surveys of community transit desires, locations of trip generators and attractors, and technical capabilities of the transit system, this study recommended three new transit routes which were implemented by the City in October, 1980.

RICMMTD Route and Schedule Analysis (1980-81) - Prepared for the RICMMTD and the Illinois Department of Transportation's Division of Public Transportation by Henningson, Durhan, and Richardson, this report analyzed passenger loadings, citizen transit desires, activity center locations, and physical constraints of area roadways to recommend minor routing changes as well as improvements to system marketing activities. Short-term service change proposals were implemented during 1981, as were several of the marketing suggestions.

Transportation Control Measure Evaluation (1981) - This effort was prepared by the staff of the Bi-State Metropolitan Planning Commission and examines the air quality benefits possible from various employer-based transit marketing programs. It recommends a comprehensive ridesharing program to be conducted among major employers. Such a program was implemented by the Bi-State

Commission in 1981 under the name BI-RIDE, using comprehensive TSM Grant funding and working closely with the three local transit operators.

Davenport Public Transit - Transit Development Program (1982) - Prepared by Davenport staff, this report documented the major service analysis which was conducted through an extensive series of public meetings and resulted in recommendations for major reramping of the City's transit service structure. As a result the City implemented eleven new routes during 1982 in place of the seven which had been in place previously.

Bettendorf Transit Study Update (1982) - This report, prepared by Bi-State staff, examines the performance of the Bettendorf Transit System since implementation of the original Bettendorf Transit Study recommendations. The updated report recommends continuation of the new system with a stronger emphasis on community information and targeted marketing of the transit services, including major involvement by local businessmen.

The Purpose and Scope of This Quad Cities Transit Development Study

As was noted earlier, many changes have taken place within public transit operations since the last comprehensive transit planning effort in 1974. The systems have now been under public operation for six years and have evolved in both their services and their clientele since that time. They are also facing a changing environment of public attitudes with regard to both the desirability for mass transportation services and a reduction in all governmental spending. It is important, therefore, to once more examine the Quad Cities public transit operations in the light of these new realities. It is equally important to compile the findings and the recommendations of the various individual studies which have been conducted over the past few years, so that they can be analyzed as to their combined impacts on the local transit systems.

This study will pull together data on the many varying aspects of transit operations in the Quad Cities, discussing and, if appropriate, evaluating recent

developments in each area, along with possibilities for future action. This information can then be compared to an adopted set of transit goals and standards as well as forecasted resources, and allow local decision-makers to generate a transit program for the coming years.

Report Contents

The remainder of this report consists of seven chapters which are summarized briefly here.

II. Goals, Objectives, Criteria, and Standards. This chapter describes the basic tools used in design and evaluation of transit services. A large selection of evaluative measurements used for transit are presented and those specific measures selected as policy guides by local transit operators in recent operations planning efforts are documented.

III. Service Analysis. Since 1980 numerous changes have been made in the services and schedules of each local transit system. This chapter describes the transit service currently provided by each of the Quad Cities transit operators, explaining how recent developments have affected the overall service structure. The level of usage of various services is presented in a very brief statistical analysis, and community requests or comments are also discussed. Finally, some general options for future actions are presented.

IV. Fare Analysis. Transit fares in the Quad Cities have recently been brought back to uniformity with regard to the basic categories after a few years of uncoordinated changes. This chapter presents a description of the current fare structures of the three systems and the series of developments which brought fares to their present levels. The differing forms of prepaid fares and treatments of minor fare categories are discussed, as well as possibilities for further fare developments.

V. Support Services Analysis. The last few years have seen considerable increases in cooperative efforts between Quad Cities transit operations. This

chapter discusses current management and maintenance activities among the systems, noting these recent developments. It also discusses some of the options for future action available, along with perceived advantages and problems.

VI. Equipment and Facility Analysis. The Quad Cities is now served by three very new handicapped-accessible transit fleets and is involved in the construction of a new joint transit maintenance/administrative facility. In addition, a wide variety of community information and passenger comfort features have recently been added to increase the effectiveness of transit services. This chapter looks at the overall picture of capital improvements, discussing recent efforts and the options for future action.

VII. Financial Resource Analysis. As noted earlier, financial support from state and federal governments has failed to keep up with the rising costs of providing transit service over the past several years. This makes it much more important to determine exactly what level of financial resources will be available, so that hard decisions about the level of service which should be provided can be made. This chapter looks at recent trends in local, state, and federal resource commitment to transit and the outlook for future funds based on existing and proposed legislation.

VIII. Transit Program. Based on the resources expected to be available, each Quad Cities transit system will have to evaluate the options available in terms of services, fares, management, and capital improvements to decide what can be done during the coming year and the next few years thereafter. This chapter documents the results of those decisions and outlines the changes which may be expected on the Quad Cities transit scene as a result.

II. GOALS, OBJECTIVES, CRITERIA, AND STANDARDS

In order to examine and evaluate existing conditions in the Quad Cities transit industry or to consider possible changes, it is important to have a clear picture of the purpose and intent of the organizations involved. It is also important to establish a basis for evaluation and comparison of the various aspects of the transit operations. These are the functions of goals, objectives, criteria, and standards.

A GOAL is a generalized statement of the intent of a program, or, in the public sector, it is often the charge given to a particular public entity. In the case of transit, the goal is what society expects of its public transit system(s). Goals may not always be fully attainable as they represent an ideal future condition.

An OBJECTIVE is a more targeted statement of intent, usually focusing on a single aspect of the overall transit operation. Objectives must be consistent with the overall goal, but they typically call for achievement of an attainable condition and should usually be measurable. Whereas goals are basically permanent policy statements, objectives may vary over time as different aspects of the operation are emphasized.

CRITERIA are quantifiable measures of performance. They can provide the means of evaluating the obtainment of objectives. They also facilitate the comparison of performance within or between transit systems.

STANDARDS are pre-selected levels of performance which have been established by policy-makers as a threshold for acceptability. Actual performance levels, measured in terms of the transit criteria, are compared to these values as a simple means of evaluating performance. Standards need not be constant and can be adjusted to address varying conditions. They may either be stated as absolute values or as relative to system averages.

Previously Stated Goals and Objectives for Quad Cities Transit

While the definition of transit goals and objectives is a critical part of the analysis and planning process, the results are not always clearly documented but are often inherent in the evaluation process. Most previous transit planning studies within the Quad Cities have included sections dealing with the purpose for which transit is provided and what it is hoped to accomplish. Although there is some variance in terminology, the basic policy concepts have been remarkably similar.

The original public transportation study prepared by Peat, Marwick, Mitchell, and Co. cited a general transportation goal to:

> Develop a transportation system in the metropolitan area to provide for safe, efficient, and economical movement of people and goods.

That study goes on to list eleven specific objectives for public transit in the Quad Cities. They address a wide range of issues as follows:

- Provide service to senior citizens who cannot use or afford an automobile, so that they are not dependent on car owners and drivers;
- Provide service to less affluent citizens who cannot use or afford an automobile;
- Develop a transit system which encourages the development of the central business districts in the Quad Cities;
- Provide service which increases employment opportunities for Quad Cities residents;
- Provide service which increases educational opportunities for Quad Cities residents;
- Provide service which increases health opportunities for Quad Cities residents;
- Develop a system which does not discharge an unacceptable level of air pollution;
- Develop a system that maintains the quality of the accoustical environment in areas traversed by the system;
- Provide a fast and convenient transit service;
- Develop a transit system with a high degree of reliability and predictability under the range of conditions which might exist in the Quad Cities; and
- Provide service at a price acceptable to transit users.

The 1974 version of the public transportation study presents a slightly expanded transportation goal which applies to all modes:

> Develop a transportation system for the metropolitan area to provide for the safe, efficient, and economical movement of people and goods in a manner that encourages harmonious community interaction and enhances the aesthetic and ecological features of our physical environment.

It then jumps to a discussion of a series of criteria and standards which will be presented later.

The 1977 Transportation System Management Element evaluated all transit alternatives based upon the goals and objectives for the Quad Cities transportation system management (TSM) planning program. The TSM goal is stated as follows:

> Maximize the operational efficiency of the existing transportation system through the implementation of short- and intermediate-range, low capital-intensive improvements which are consistent with the long-range transportation plan.
>
> The TSM objectives are set forth as below:
>
> o Maximize the cost effectiveness of transportation system investments;
>
> o Promote the development and integration of non-motorized transportation modes;
>
> o Improve the mobility of persons of all social, economic, and physical characteristics;
>
> o Improve overall safety of the transportation system;
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> o Increase auto and transit vehicle occupancy rates;
>
> o Minimize vehicle miles of travel;
>
> o Minimize fuel consumption;
>
> o Minimize air, noise, and water pollution;
>
> o Minimize congestion;
>
> o Minimize environmental disruption.

Among more recent transit planning efforts the Bettendorf Transit Study presents a discussion of the evolving role of transit in that community. It lists five public transit "roles" which may be taken together as a transit goal. These roles are:

- o Allowing senior citizens and handicapped persons to maintain independent lifestyles;
- o Reducing fuel consumption so that limited supplies will be more available for important trips which cannot be made by transit;
- o Allowing persons who normally drive to save money on their transportation, especially on commuter trips;
- o Improving community air quality by reducing overall automobile usage; and
- o Reducing traffic congestion and parking problems in the vicinity of major shopping or employment centers.

That study goes on to establish several "objectives" largely related to the planned expansion of the system. These are paraphrased below:

- o Expand passenger carrying capacity of system;
- o Expand coverage of service;
- o Improve system efficiency;
- o Minimize disruption of established transit usage patterns; and
- o Provide marketable (easily understood) service and fare structure.

The Route and Schedule Analysis prepared for the RICMMTD listed a series of very detailed "goals" each of which was restated as an objective. Because each goal focused on a single aspect of transit performance, they would themselves be considered only slightly more generalized objectives under the definitions used for this report. A listing of the RICMMTD study objectives follows:

- o Provide transit service to maximum number of residents within walking distance of transit line;
- o Maximize transit service by minimizing redundant coverage;
- o Make transit service available to potential users to a degree consistent with their likely use;
- o Minimize travel time by promoting directness of routing;
- o Provide the maximum number of customers with one-bus (no transfer) service;
- o Minimize the waiting time for transfers;
- o Provide service to points with significant concentrations of origins and/or destinations (major generators);
- o Minimize waiting time by keeping buses on schedule;

- o Provide adequate corridor capacity;
- o Provide bus shelters as warranted;
- o Maximize scheduled running speed;
- o Use facilities, equipment, and labor in the most effective manner;
- o Maximize farebox coverage of operating costs;
- o Maximize scheduled running speed on extensions;
- o Maximize ridership on extensions; and
- o Provide high quality service to elderly and handicapped.

The Davenport Transit Development Program re-established the pattern of a single general goal statement with related objectives. The stated goal is:

> Provide safe, dependable, and convenient public transportation throughout the City of Davenport to meet the travel demands of the community at a reasonable price with public funding not to exceed 75% of the cost of the service.

The program's three "objectives" actually combine some of the functions of standards with those of objectives. The listed FY 1983 objectives are based on use of Iowa Department of Transportation definitions.

- o Compensate for reductions in federal Section 5 funding by improving revenue/expense ratio by 4% by July 1, 1983.
- o Provide transit service to those areas of the City with a potential ridership of a minimum of 28,000 annual trips per square mile.
- o Improve convenience of the transit system.

The Bettendorf Transit Study Update establishes a single goal for that system as follows:

> To provide all Bettendorf residents access to quality, affordable transit service, allowing travel throughout the City and to other parts of the Quad Cities community.

As with the Davenport study, objectives in the Bettendorf update are oriented primarily to the anticipated activities of the coming year based on guidelines and definitions used by the Iowa Department of Transportation. Those listed for FY 1983 in the Bettendorf update include:

- o Improve the revenue/expense ratio for transit operations in order to better prepare for future loss of federal funding support;

- o Increase public knowledge and use of Bettendorf Transit System services;
- o Increase private sector support of public transportation in Bettendorf;
- o Increase the efficiency and effectiveness of the Bettendorf transit fleet communications system;
- o Reduce the average age of the Bettendorf transit fleet, including both active and reserve vehicles; and
- o Improve coordination of handicapped travel between the Cities of Bettendorf and Davenport.

Statement of Areawide Goal and Objectives

Reading through the various policy statements found in the individual transit operations' programming documents, it is possible to derive a general statement of goal for the Quad Cities transit industry. This is stated below:

- o Provide Quad Citians access to quality, affordable transit services throughout the urbanized area at a level consistent with available financial resources.

There are also a number of general transit objectives which are common to the three systems, though they are often not articulated as a cause of the moment, but are rather considered inherent in the overall commitment to transit. In a few cases funding agencies have also imposed requirements which serve as inherent objectives of the industry. Some of these shared transit objectives are listed below:

1. Maximize coverage and accessibility of transit services;
2. Maximize the match between transit service and citizen travel desires;
3. Maximize service to the transportation disadvantaged;
4. Maximize public awareness and understanding of services and fares;
5. Maximize efficiency and effectiveness of the transit operation;
6. Maximize passenger comfort and convenience;
7. Maximize public and private support for transit; and
8. Minimize disruption of residential neighborhoods by transit vehicles.

The establishment of goals and objectives gives us an idea of what transit should be accomplishing in the Quad Cities. The actual situation may or may not live up to those expectations. In order to determine this an evaluation of current transit activities must be made. This is done by establishing criteria or statistical measures of performance related to the transit objectives.

There is a vast amount of data either currently or potentially available for the evaluation of transit operations at both local and national levels. Some items, such as total ridership, total deficit, etc., have intrinsic value for comparison purposes, but most statistics are valuable only when their relationship to the transit objectives is clearly defined and when they are compared to adopted policy guidelines or standards setting forth acceptable levels.

Previous studies have listed varying criteria and/or standards. Where possible and appropriate they have been incorporated into the list of analytical tools to be used for this report.

Table TDS-II-1 shows the criteria and standards which will be used for the areawide evaluation of transit operations. They are displayed in groups relating to the objectives presented earlier. In most cases no specific standard has been adopted and those shown are general industry guidelines. Where a specific standard has been adopted by a local transit system this is identified.

In some cases the information identified for use in evaluating attainment of transit objectives has not previously been collected or compiled and is thus not available for use in the current analysis. Such data may be useful in future updates of this study if collection can begin now.

The structure of transit services has changed greatly over the past few years as a result of the various analyses performed as part of the transit planning process. The Bettendorf system has converted from a largely demand-responsive system with one fixed-route bus and two dial-a-buses to a system of three fixed routes and one dial-a-bus. The Davenport system has also completely altered its route structure going from seven fixed-routes to eleven. The Rock Island County system has added one new route, made a major change in another, and adjusted local routing or schedules for all others.

The future holds the possibilty of many more changes. On the one hand, the community continues to change and to demand new services. On the other, politicians promise to reduce government spending, and threaten even those resources which go to support existing services.

This chapter will examine the nature of today's transit services. It will discuss how they have evolved from the previous forms and also identify what may lie ahead. Because circumstances vary considerably between systems, each will be addressed separately for this analysis.

Bettendorf Transit System

Description of Service

The Bettendorf Transit System currently operates three fixed-routes with one bus each and a dial-a-bus service utilizing a fourth vehicle. In addition, a bicycle shuttle service is provided as an ancillary function.

The three routes each operate with 30-minute headways and radiate out from Bettendorf's regional shopping center, Duck Creek Plaza. Two of the routes provide local transit services within the City of Bettendorf and to major facilities in neighboring Riverdale. The third route provides both local service and a cross-river connection to Moline, Illinois. (See Figures TDS-III-1 to

TDS-III-3 for individual route maps.) The routes serve the densely settled areas of the City providing 1/4 mile service to 75% of the City residents. They also provide curb-side service to most actiity centers within the community. Included are: City Hall, the public library, one junior and two senior high schools, the community college in neighboring Riverdale, several major employers (including the ALCOA plant in Riverdale), the senior citizen congregate meal site, plus all shopping areas of neighborhood center class or above.

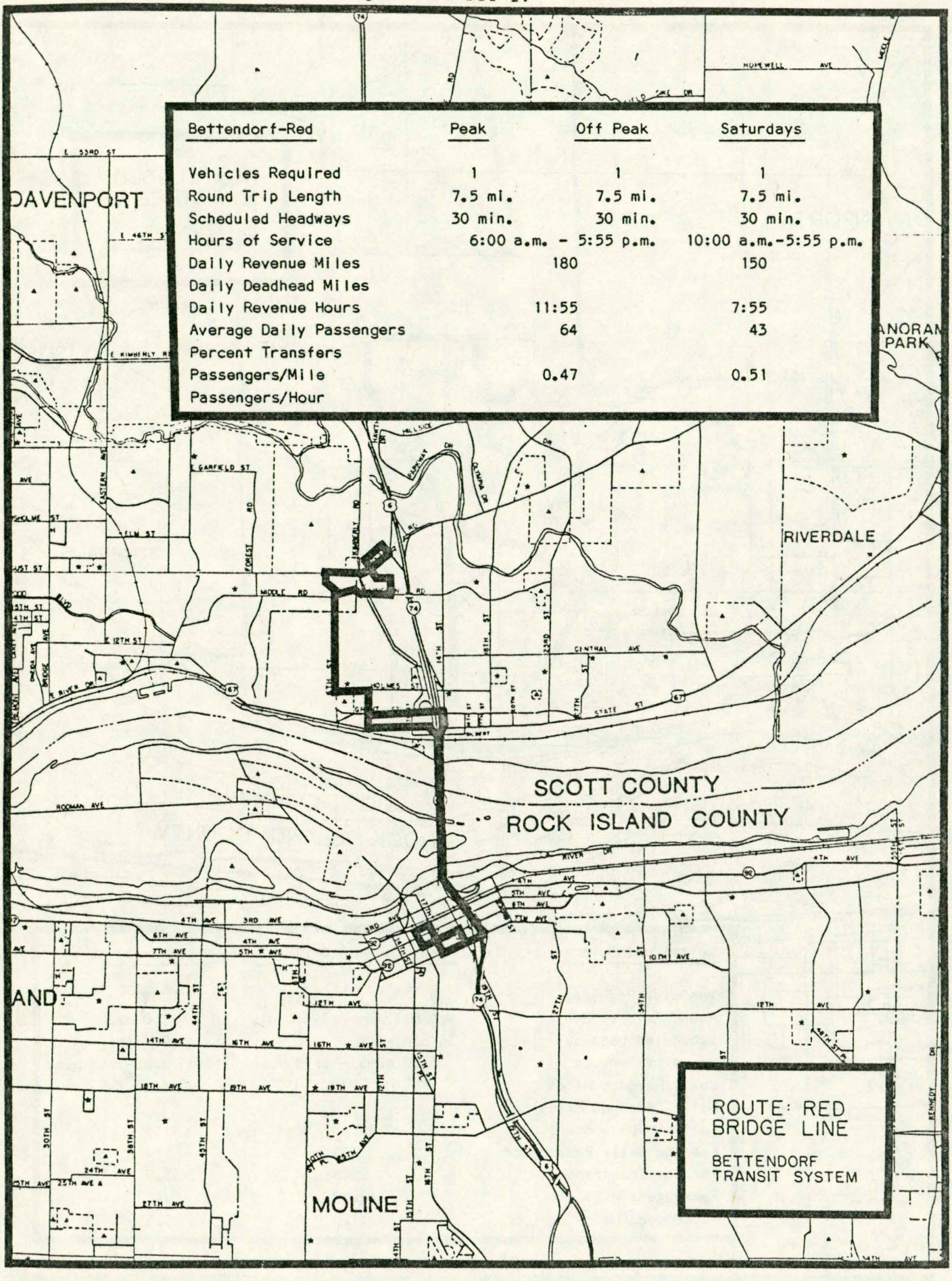
Bettendorf Transit provides connections to both other Quad Cities transit systems. Three Davenport bus routes are available for connections at Duck Creek Plaza, and connections are possible in downtown Moline with four Rock Island County routes and one Davenport route. Timed transfers are scheduled between the two local routes and the Davenport buses at Duck Creek and between the Bridgeline route and the Rock Island County and Davenport buses in Moline. Because of the timing of the other systems' schedules, however, there is a 15-minute layover required between the local Bettendorf routes and the Bridgeline.

Service hours for the three routes are 6 a.m. to 6 p.m. weekdays and 10 a.m. to 6 p.m. Saturday with no service provided on Sundays or major holidays.

The dial-a-bus element of Bettendorf's transit service covers those areas of the community unserved by the fixed-routes. The dial-a-bus also provides supplemental transportation for elderly and/or handicapped persons not able to effectively use the wheelchair-accessible route service. The service is provided by one vehicle operating from 6 a.m. to 7:00 p.m. weekdays and 6 a.m. to 2:00 p.m. on Saturdays. Riders must call in for same-day reservations and are scheduled in as possible. The dial-a-bus may also serve to relieve overcrowding on peak route runs by providing express service between major loading points.

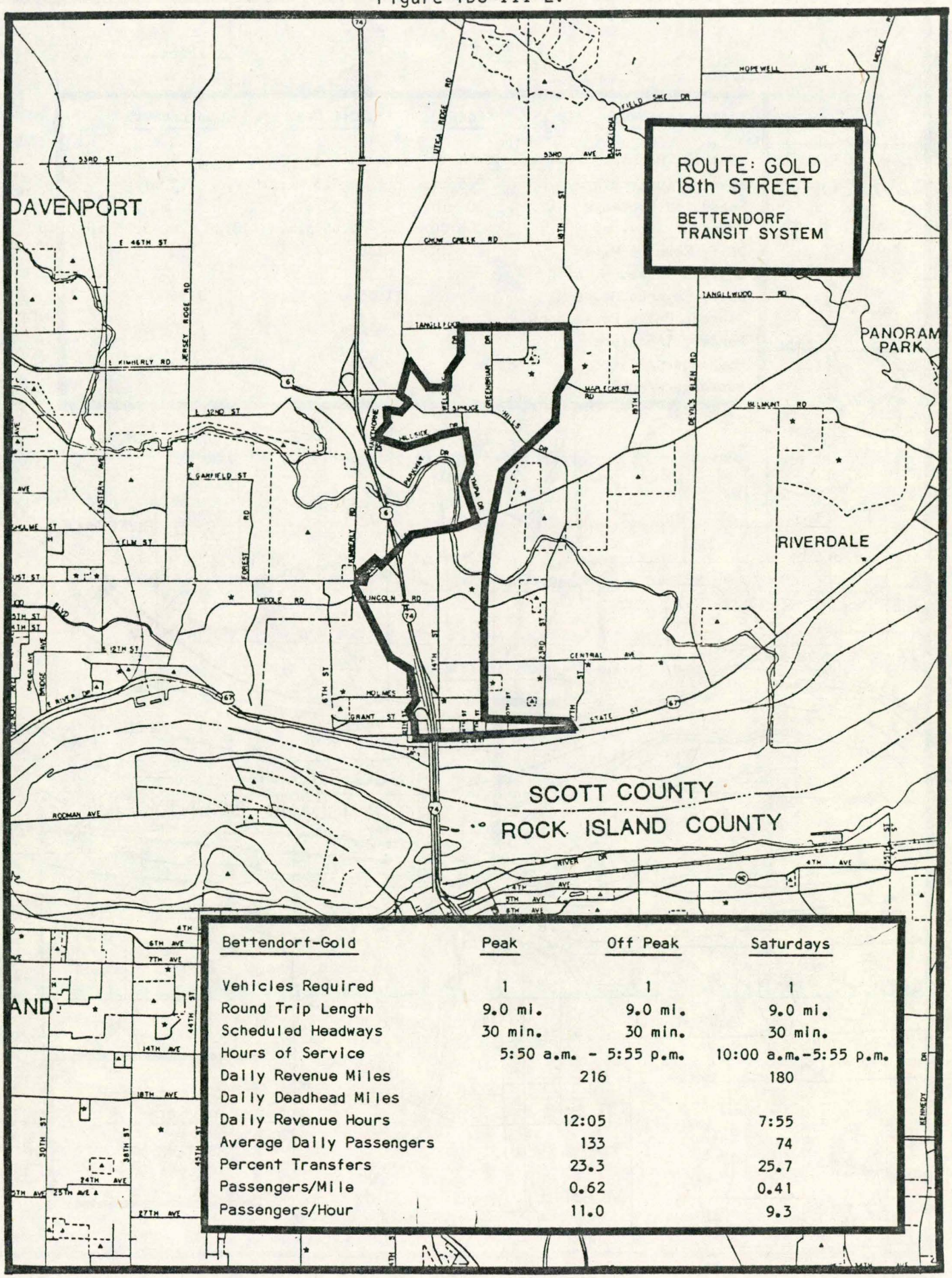
A third service element of the Bettendorf Transit System is a bicycle shuttle service provided as a secondary function of the Bettendorf/Moline

Figure TDS-III-1:



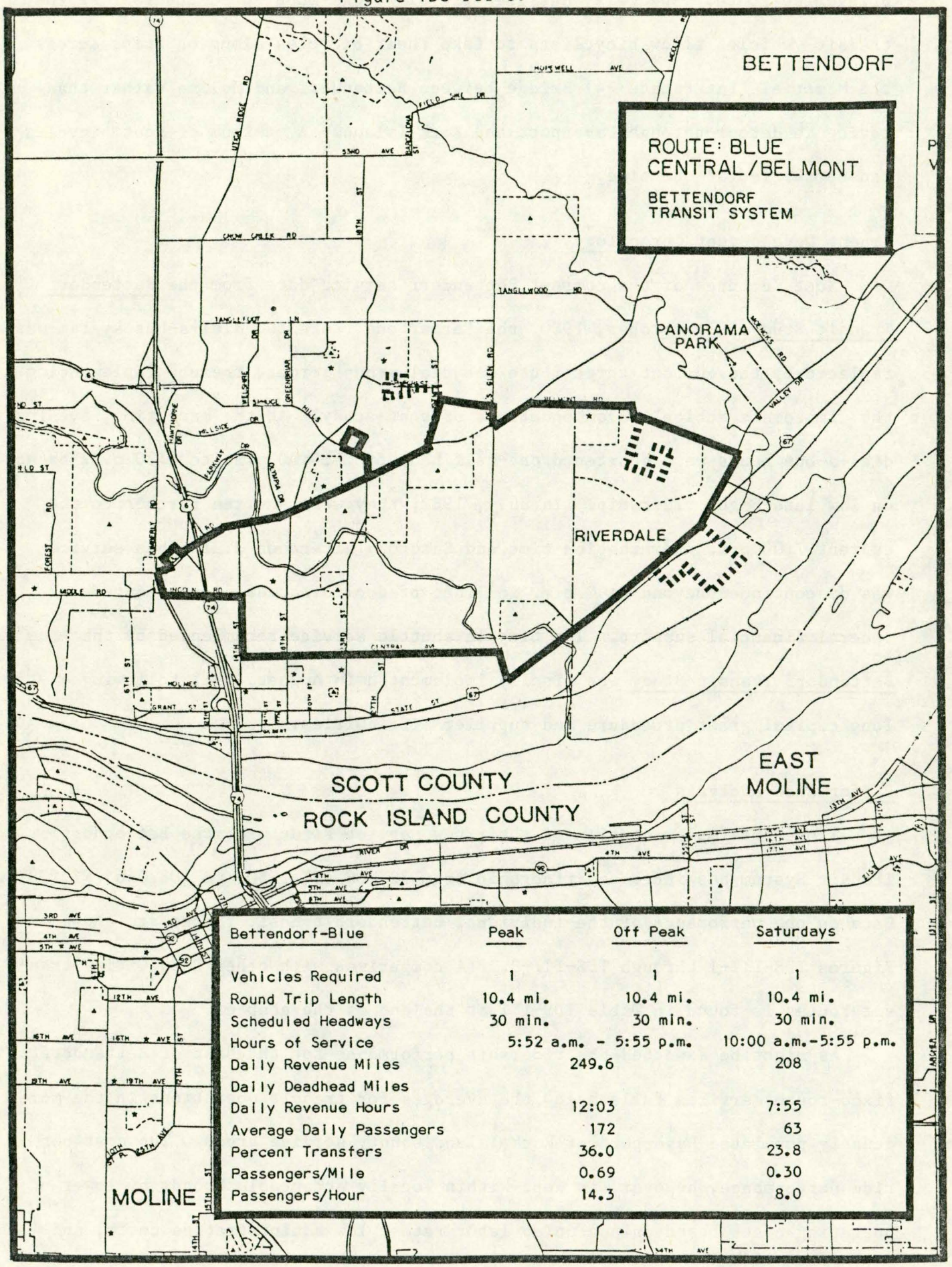
Bettendorf-Red	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	7.5 mi.	7.5 mi.	7.5 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	6:00 a.m. - 5:55 p.m.		10:00 a.m.-5:55 p.m.
Daily Revenue Miles	180		150
Daily Deadhead Miles			
Daily Revenue Hours	11:55		7:55
Average Daily Passengers	64		43
Percent Transfers			
Passengers/Mile	0.47		0.51
Passengers/Hour			

Figure TDS-III-2:



Bettendorf-Gold	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	9.0 mi.	9.0 mi.	9.0 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:50 a.m. - 5:55 p.m.		10:00 a.m.-5:55 p.m.
Daily Revenue Miles	216		180
Daily Deadhead Miles			
Daily Revenue Hours	12:05		7:55
Average Daily Passengers	133		74
Percent Transfers	23.3		25.7
Passengers/Mile	0.62		0.41
Passengers/Hour	11.0		9.3

Figure TDS-III-3:



Bettendorf-Blue	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	10.4 mi.	10.4 mi.	10.4 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:52 a.m. - 5:55 p.m.		10:00 a.m.-5:55 p.m.
Daily Revenue Miles	249.6		208
Daily Deadhead Miles			
Daily Revenue Hours	12:03		7:55
Average Daily Passengers	172		63
Percent Transfers	36.0		23.8
Passengers/Mile	0.69		0.30
Passengers/Hour	14.3		8.0

Bridgeline route. Specially designed bicycle racks mounted on the rear of the transit vehicles allow bicyclists to take their bicycles along on trips across the Memorial (Interstate 74) Bridge between Bettendorf and Moline rather than having to detour through Davenport and Rock Island. A maximum of four bicycles can be carried at one time.

Recent Development Chronology

Most features of the current Bettendorf service date from the Bettendorf Transit Study. In October, 1980, the former one route/two dial-a-bus system was replaced by the current three route/one dial-a-bus format, thereby implementing the "immediate action" recommendations of that study. At the same time, evening dial-a-bus hours were shortened one-half hour from 10:00 p.m. to 9:30 p.m. based on low late-night ridership. In July, 1982, they were shorten further to the current 7:00 p.m. termination time and Saturday afternoon dial-a-bus service was discontinued beyond 2:00 p.m. in light of declining usage and reduced federal financial support. The bicycle shuttle service recommended by the Bettendorf Transit Study was finally implemented in August, 1982 following a long capital grant procedure and supplier difficulties.

Performance Analysis

Since the implementation of their new service structure, the Bettendorf Transit System has increased ridership from 72,269 (FY 1980) to 108,046 (FY 1982). Data on the perfomance of the individual Bettendorf transit routes are shown on Figures TDS-III-1 through TDS-III-3. (A comparison with other Quad Cities transit routes is found in Table TDS-III at the end of the chapter.

As might be expected the ridership performance for the best of Bettendorf's fixed-route services falls below the averages for transit operations in the more densely populated Davenport or Rock Island County service areas. The cost per ride performance, however, is kept within locally acceptable bounds by lower operating costs based on non-union labor rates, low administrative costs, and small vehicles which can efficiently handle the small loads.

Among the Bettendorf routes, the Bridgeline route falls far short of the performance levels of the Central/Belmont or 18th Street routes. The Dial-A-Bus service also lags behind in performance statistics.

That problem is compounded by a poor awareness of the availability of the Bridgeline service on the part of Illinois bus riders. The 15-minute layover was scheduled at the Duck Creek end of the route because this was felt to be a more secure waiting area. Also, it was felt that more Illinois residents would be attracted to Duck Creek Plaza than Bettendorf residents to points in downtown Moline*, so less people would be inconvenienced by lack of on-time connections. The lack of knowledge, however, has kept the usage of the Bridgeline service by Illinois riders well below anticipated levels, while the layover has had its expected effect of discouraging travel to Illinois from other locations in either Bettendorf or Davenport.

Other current service-related problems revolved primarily around the Dial-A-Bus operation. This mode of transit operation suffers inherently from low ridership and high cost per ride when compared to route services. It is not surprising, therefore, that the dial-a-bus statistics lag behind the system averages. Nor is it surprising that there are scheduling problems in trying to serve the large, low density areas of the City and the elderly and handicapped community with a single vehicle.

Other "problems" relate to citizen demands for increased levels of transit services. This involves both requests for scheduled route transit in the outlying subdivisions, which currently have only dial-a-bus service, and requests for Sunday service for either religious or shopping purposes. While these requests relate to the transit service analysis, the actual problems involved are in the field of financing and not service.

*Most Bettendorf residents wanted to reach other points in Rock Island County according to surveys conducted as part of the Bettendorf Transit Study

Possibilities for Change

No immediate changes are anticipated in route services, however, consideration may be given to the implementation of the "intermediate action" route system from the Bettendorf Transit Study. This would require an additional vehicle for route service, and would result in improved service in the peripheral areas of the City which are not yet developed. The implementation of this system would involve a complete reorganization of the system, since all routes differ from those currently in existence. (See Figure TDS-III-4.)

Dial-a-bus operations could be changed to reduce the costs of this service. Two possibilities are a reduction in the hours service is available or a change to a 24-hour advanced-reservation format service which could be purchased from Great River Bend Services, Inc.

Davenport Public Transit

Description of Service

The Davenport Public Transit system operate a total of eleven fixed-routes utilizing nineteen vehicles. Eighteen of these are equipped with wheelchair lifts. In addition, the City contracts with a not-for-profit service provider--Great River Bend Services, Inc.--to provide specialized transportation for elderly and handicapped persons unable to make full use of the route service.

The fixed-routes radiate from three terminals. Downtown Davenport is served by eight routes; Davenport's Northpark regional shopping center is served by five; and Bettendorf's Duck Creek Plaza regional center is the common transfer point for three Davenport routes along with the three Bettendorf buses. Davenport buses also make connections with other buses at two Illinois locations. In downtown Rock Island, they connect with four RICMMTD routes and, in downtown Moline, they connect with four Rock Island County and one Bettendorf route. Approximately half the buses serving downtown Davenport are scheduled to meet with no-wait transfers on the hours and half hours, while others meet on the quarter hours. At Duck Creek all Davenport buses meet. At Northpark, most buses meet, though three buses per hour are scheduled to arrive when no other buses are present.

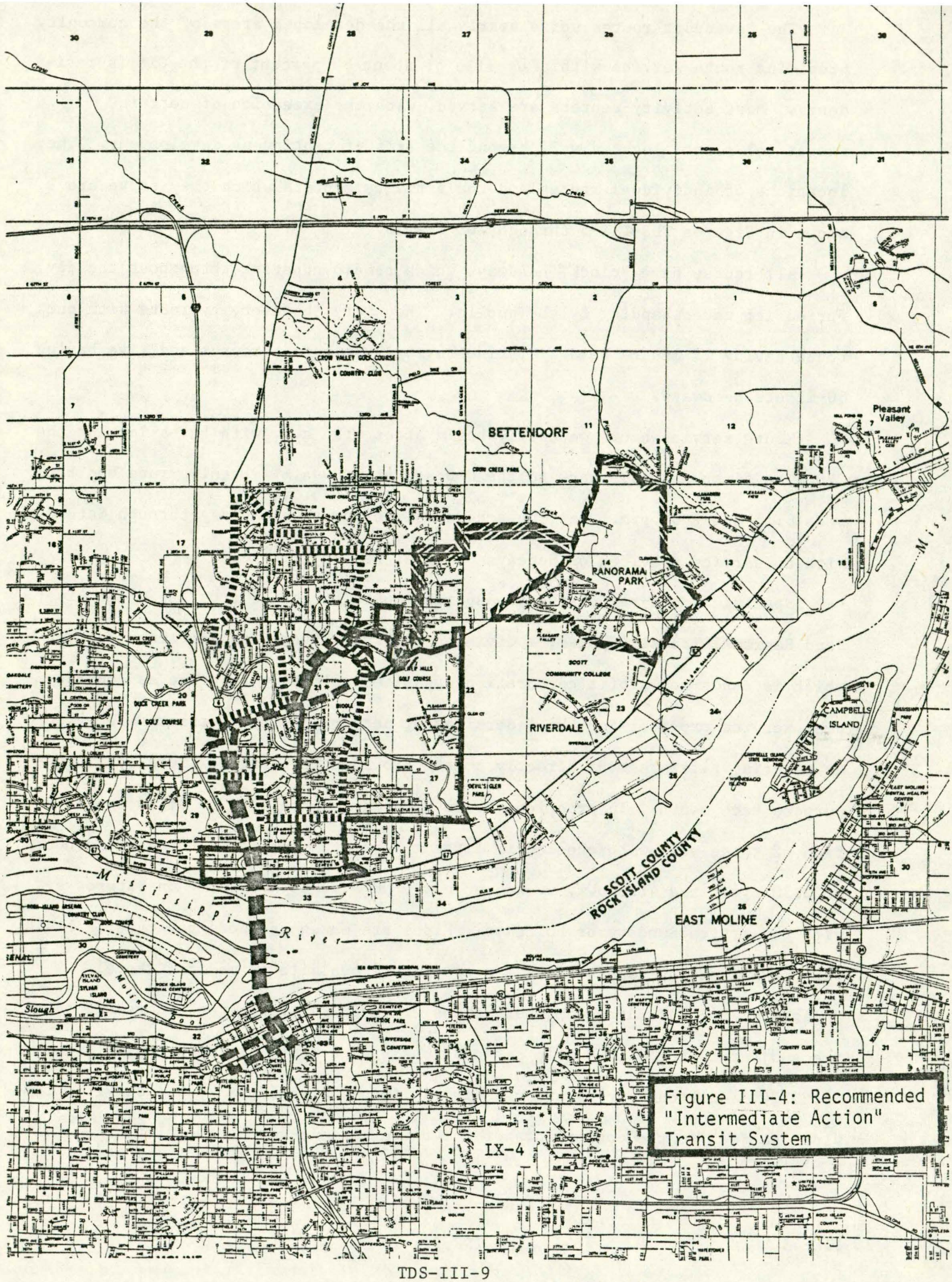


Figure III-4: Recommended "Intermediate Action" Transit System

The Davenport routes serve nearly all the developed areas of the community providing route service within 1/4 mile of about 88 percent of the City's residents. Most activity centers are served, with the exception of certain industrial plants located well beyond the area of continuous development. The locations of individual routes and the activity centers which they serve are shown in Figures TDS-III-5 through TDS-III-15.

All routes have "clock" headways which remain constant throughout the day for easier understanding by the public. They vary, however, by route with one route having 15 minute headways, five having 30-minute headways and five having 60-minute headways.

Route service hours generally begin about 6:00 a.m. with buses leaving the CBD. The first arrivals back to the CBD are at 7:00 a.m. Evening runs end between 6:15 and 7:00 p.m. Service schedules are identical Monday through Saturday with no service provided on Sundays or major holidays.

Special demand-responsive transportation is purchased from the Great River Bend Regional Transit System, a division of Great River Bend Services, Inc., which is a not-for-profit corporation organized primarily to serve as contractual service provider for the federal aging network. City contracts are based on per-ride reimbursement directly to the provider with set maximums by ride purpose each month. In practice, costs have been calculated to allow the operation of three vans with wheelchair lifts to operate year-round between the hours of 8:30 a.m. and 4:30 p.m. weekdays and 10:00 a.m. to 4:00 p.m. on Saturdays with no service Sundays or holidays. Rides are on an advanced-reservation basis with many standing reservations for congregate mealsite or medical travel. Generally, 24-hour advanced-reservations are required for other riders and they are subject to the City's trip purpose quotas on a month by month basis. Actually, additional trips are usually fit into the schedule by the service provider subject to the constraints of the three-vehicle service level.

Recent Development Chronology

The current service structure dates from July, 1982, when changes to the entire system were implemented based on the recommendations of the Transit Development Program prepared by City staff. The last previous major changes had occurred in 1977, based on the 1977 Transportation Systems Management Element analysis.

The July, 1982 reorganization increased the number of routes from eight to eleven. This was done both by adding additional vehicles (peak vehicle utilization is up to 19 from 18, and off-peak is now 19 rather than 16), and by increasing headways (Bridgeline is now 30 minutes at peak rather than 15, and most new routes are 60 minutes compared to the 30 minutes norm of the old system).

The expansion increased the areal coverage of the system and placed approximately 4,600 additional City residents within 1/4 mile of a transit stop. It porvided new direct connections from many parts of the City to major points such as Northpark, Duck Creek Plaza, and downtown Moline. It also greatly increased the number of points at which passengers can make transfers between routes without going downtown. One-way service loops have been largely eliminated to allow people to rely on transit for their complete trip without having to count on a much longer travel time coming or going.

At the same time as the routes were reorganized, the schedules were shifted. Previously buses had started as early as 5:10 a.m. at various points along routes so that poeple could get downtown as early as 5:45 a.m. and catch the 5:50 a.m. Bridgeline to Rock Island. At the other end of the day, service ended by 6:30 p.m. on most routes. Due to numerous requests from participants in the public input process for later evening service, the starting times and ending times were shifted to later hours. The starting points were also shifted to decrease deadhead mileage. The result is that the earliest buses returning to downtown come in at 7:00 a.m.

The supplemental elderly and handicapped special transportation was recently cut back somewhat after several years of expansion. Special services were first purchased in FY 1977 when the City provided the federal share to cover the deficit of two vehicles. The City later began full support of the supplemental service and in FY 1981 had a contract for unlimited rides which ended up providing 141,000 rides based on four vans in service. That same year the City completed its program of making at least half of all fixed-route service accessible as set forth in the Quad Cities Transit Handicapped Accessibility Plan. (At present 18 vehicles are lift-equipped compared to a daily total vehicle requirement of 19.) In order to encourage usage of the newly accessible fixed-route services, the supplemental service was scaled back and priorities established to try to assure the availability of supplemental services to those unable to use the routes. As noted, the current year's contract provides approximately three vehicles for supplemental elderly and handicapped transportation services.

Performance Analysis

Very little analysis is possible on the performance of the new service due to the recent implementation. Data has been collected for the two-week September sample period used for the other Quad Cities systems (See Figures TDS-III-5 through TDS-III-15), yet comparisons are not appropriate due to the short time that the new routes have been in place. The time required for changes in personal habits and travel patterns generally means that new service is not evaluated seriously before six months of service and is not expected to show "mature" performances for one-year to eighteen months. (The statistics provided are based on performance after 7-8 weeks of service.)

Increasing the complexity of the analysis will be the recent implementation of fare increases which may be expected to have a varying impact on the ridership levels among persons subject to the different fare categories. Since the ridership composition of each route and each area of the City differs, this tends to cloud the reactions to the service changes.

Figure TDS-III-5:

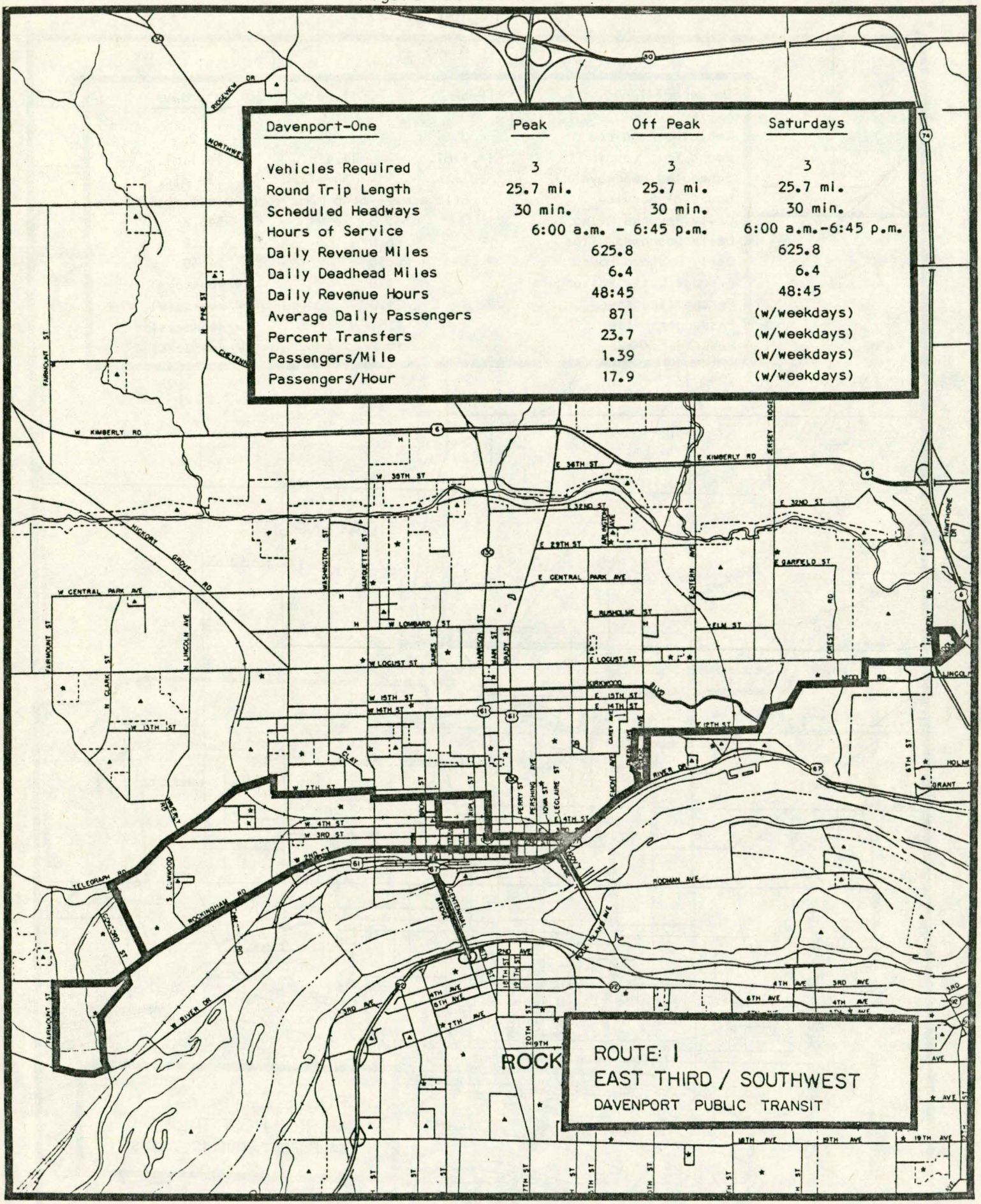
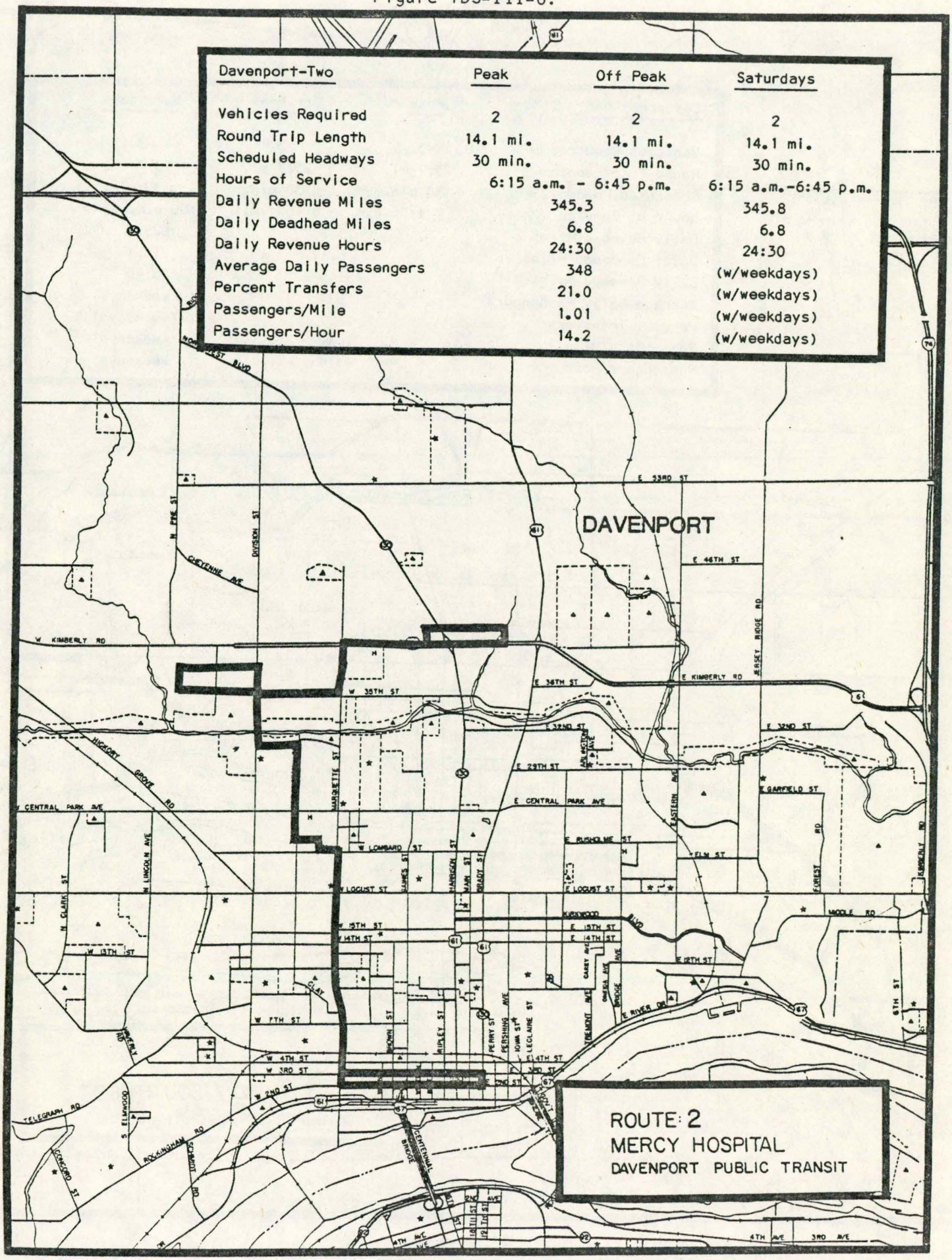
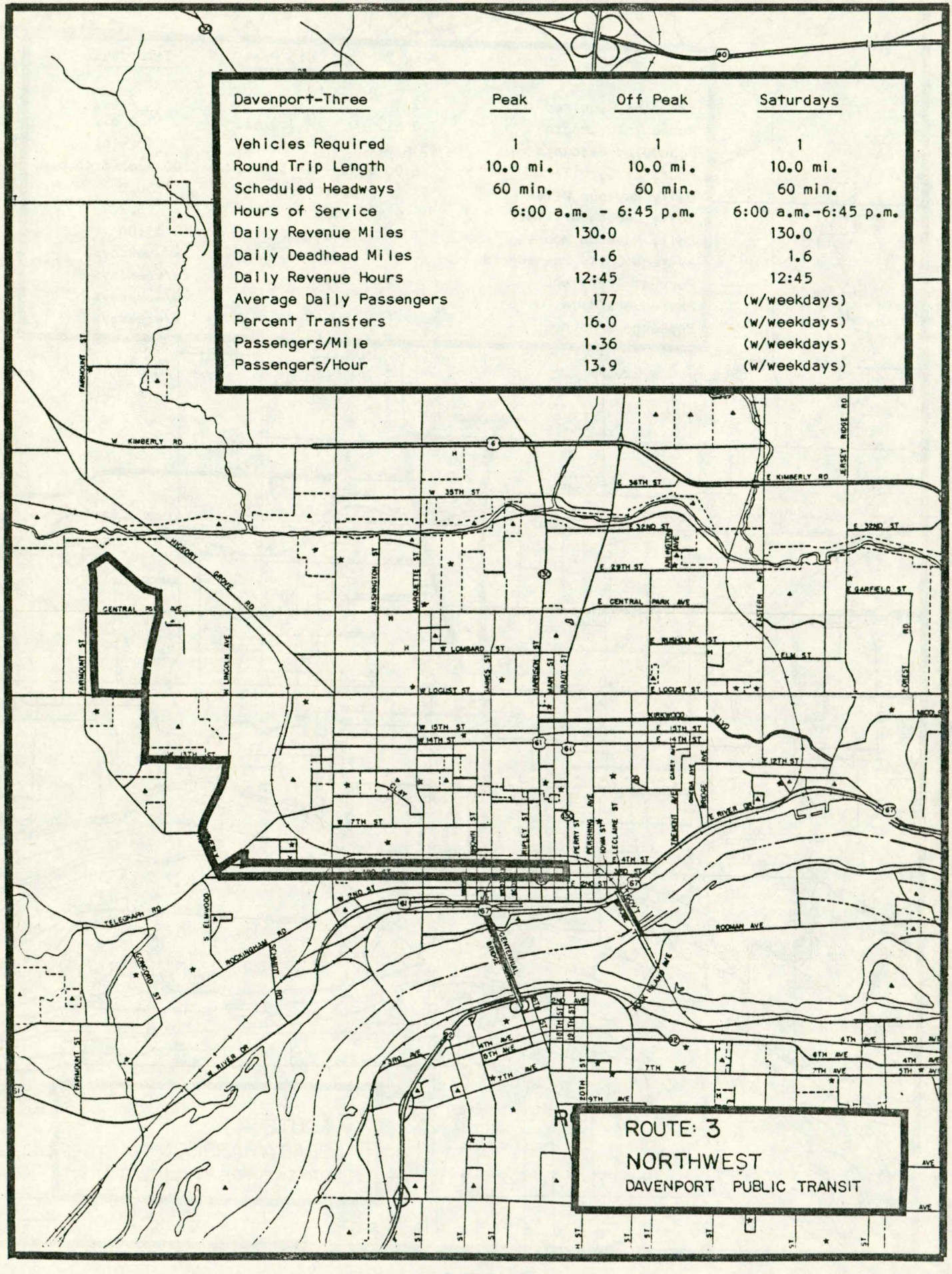


Figure TDS-III-6:



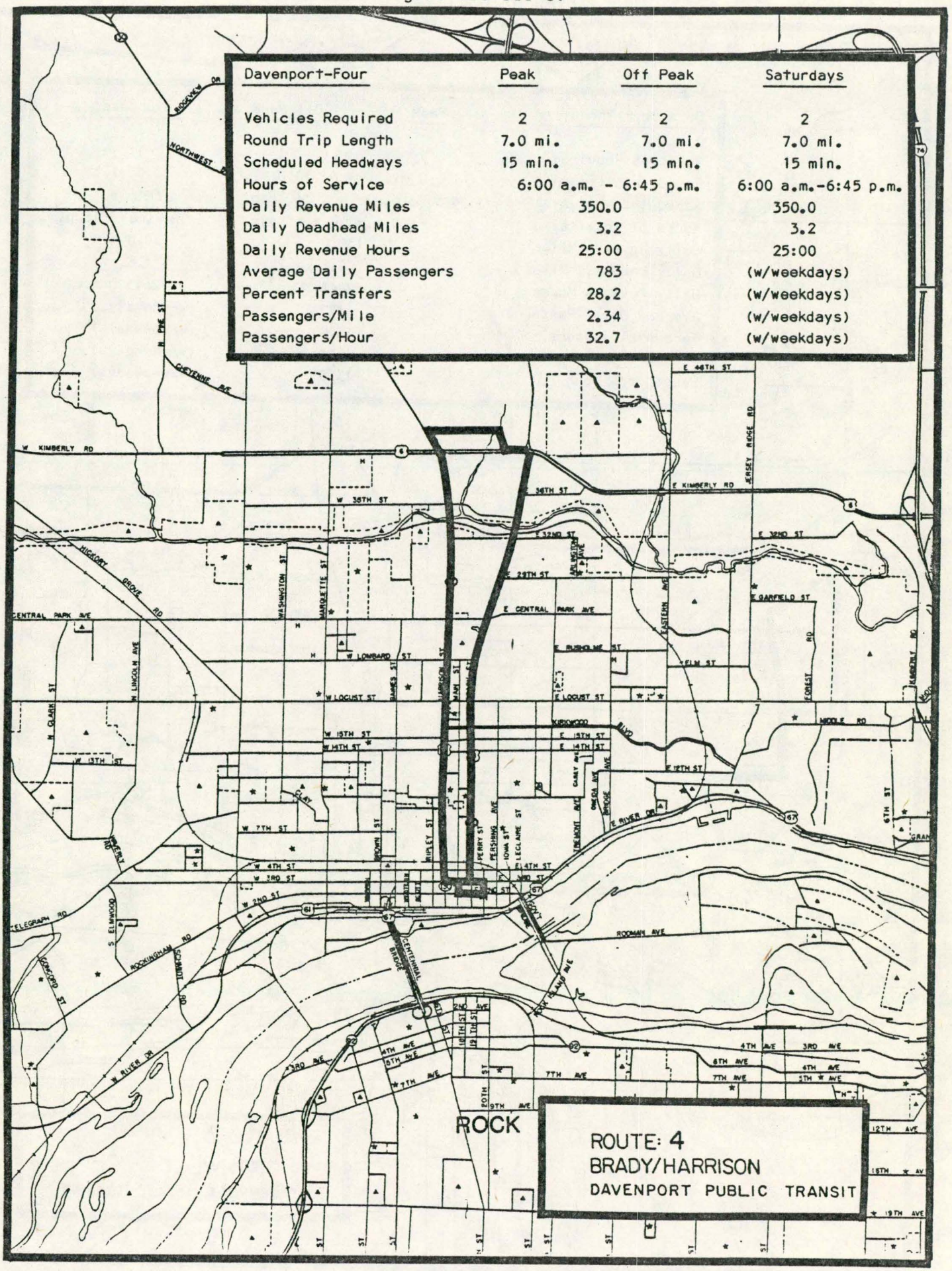
Davenport-Two	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	14.1 mi.	14.1 mi.	14.1 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	6:15 a.m. - 6:45 p.m.		6:15 a.m.-6:45 p.m.
Daily Revenue Miles	345.3		345.8
Daily Deadhead Miles	6.8		6.8
Daily Revenue Hours	24:30		24:30
Average Daily Passengers	348		(w/weekdays)
Percent Transfers	21.0		(w/weekdays)
Passengers/Mile	1.01		(w/weekdays)
Passengers/Hour	14.2		(w/weekdays)

Figure TDS-III-7:



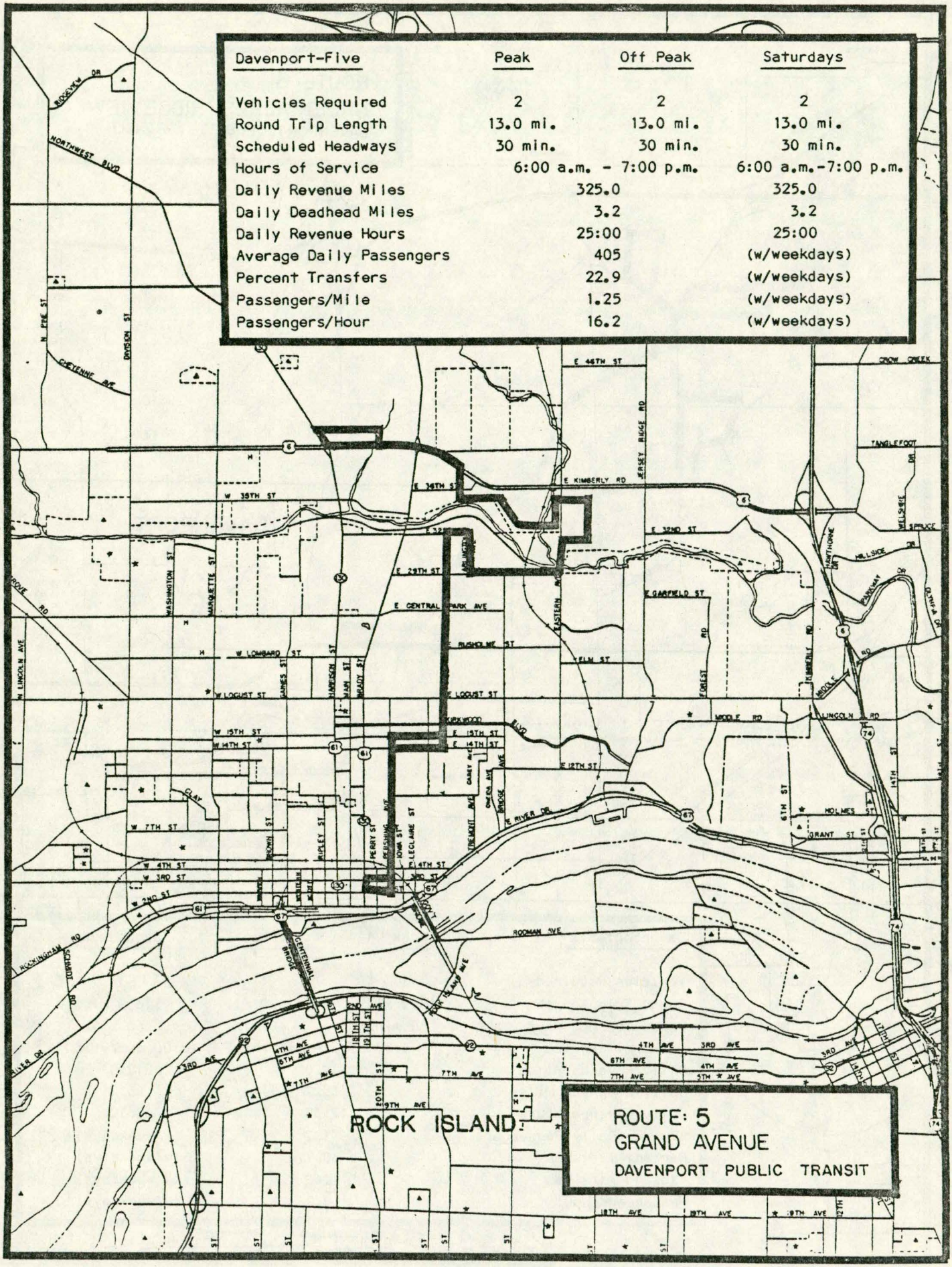
Davenport-Three	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	10.0 mi.	10.0 mi.	10.0 mi.
Scheduled Headways	60 min.	60 min.	60 min.
Hours of Service	6:00 a.m. - 6:45 p.m.		6:00 a.m.-6:45 p.m.
Daily Revenue Miles	130.0		130.0
Daily Deadhead Miles	1.6		1.6
Daily Revenue Hours	12:45		12:45
Average Daily Passengers	177		(w/weekdays)
Percent Transfers	16.0		(w/weekdays)
Passengers/Mile	1.36		(w/weekdays)
Passengers/Hour	13.9		(w/weekdays)

Figure TDS-III-8:



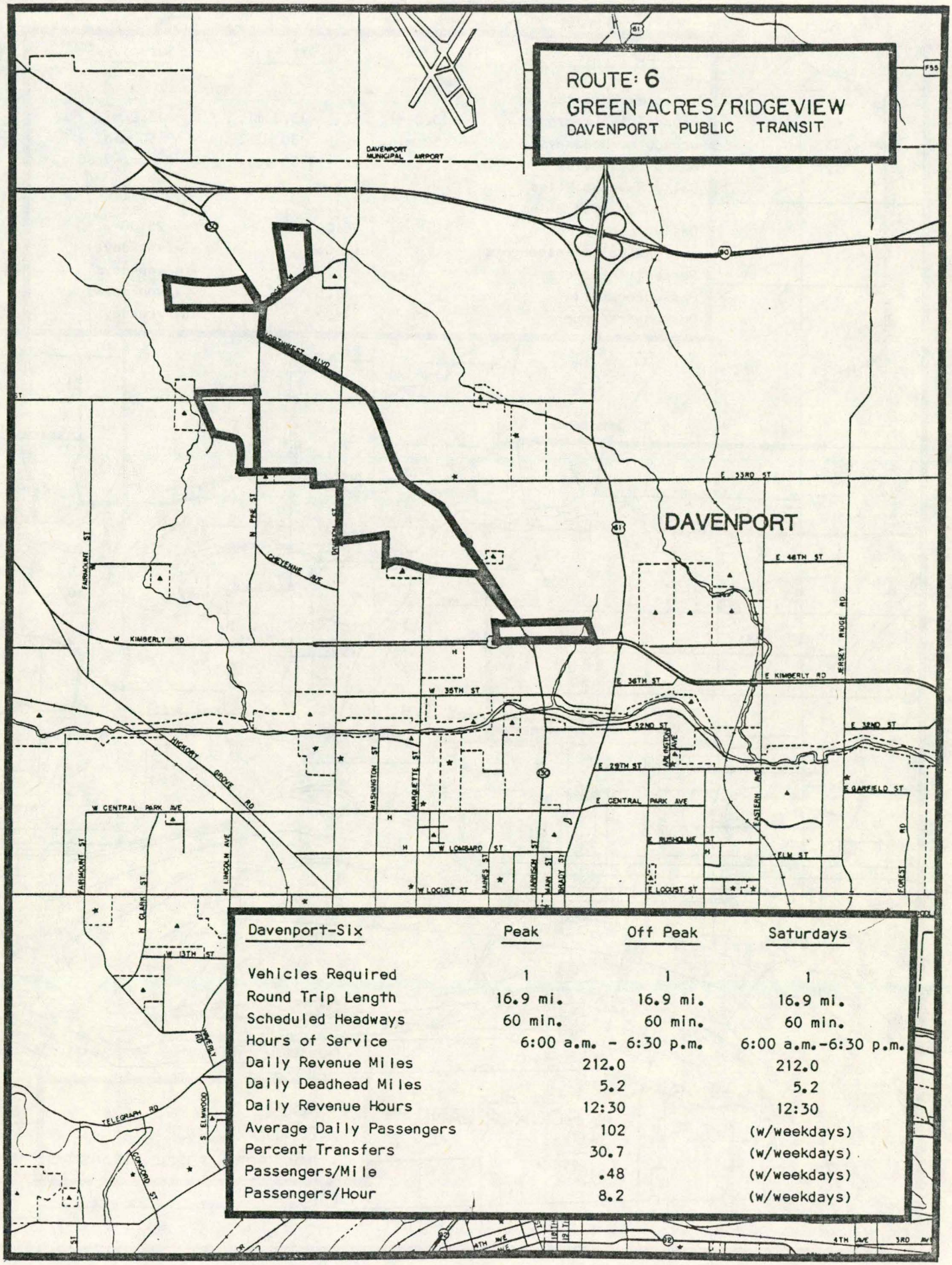
Davenport-Four	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	7.0 mi.	7.0 mi.	7.0 mi.
Scheduled Headways	15 min.	15 min.	15 min.
Hours of Service	6:00 a.m. - 6:45 p.m.		6:00 a.m.-6:45 p.m.
Daily Revenue Miles	350.0		350.0
Daily Deadhead Miles	3.2		3.2
Daily Revenue Hours	25:00		25:00
Average Daily Passengers	783		(w/weekdays)
Percent Transfers	28.2		(w/weekdays)
Passengers/Mile	2.34		(w/weekdays)
Passengers/Hour	32.7		(w/weekdays)

Figure TDS-III-9:



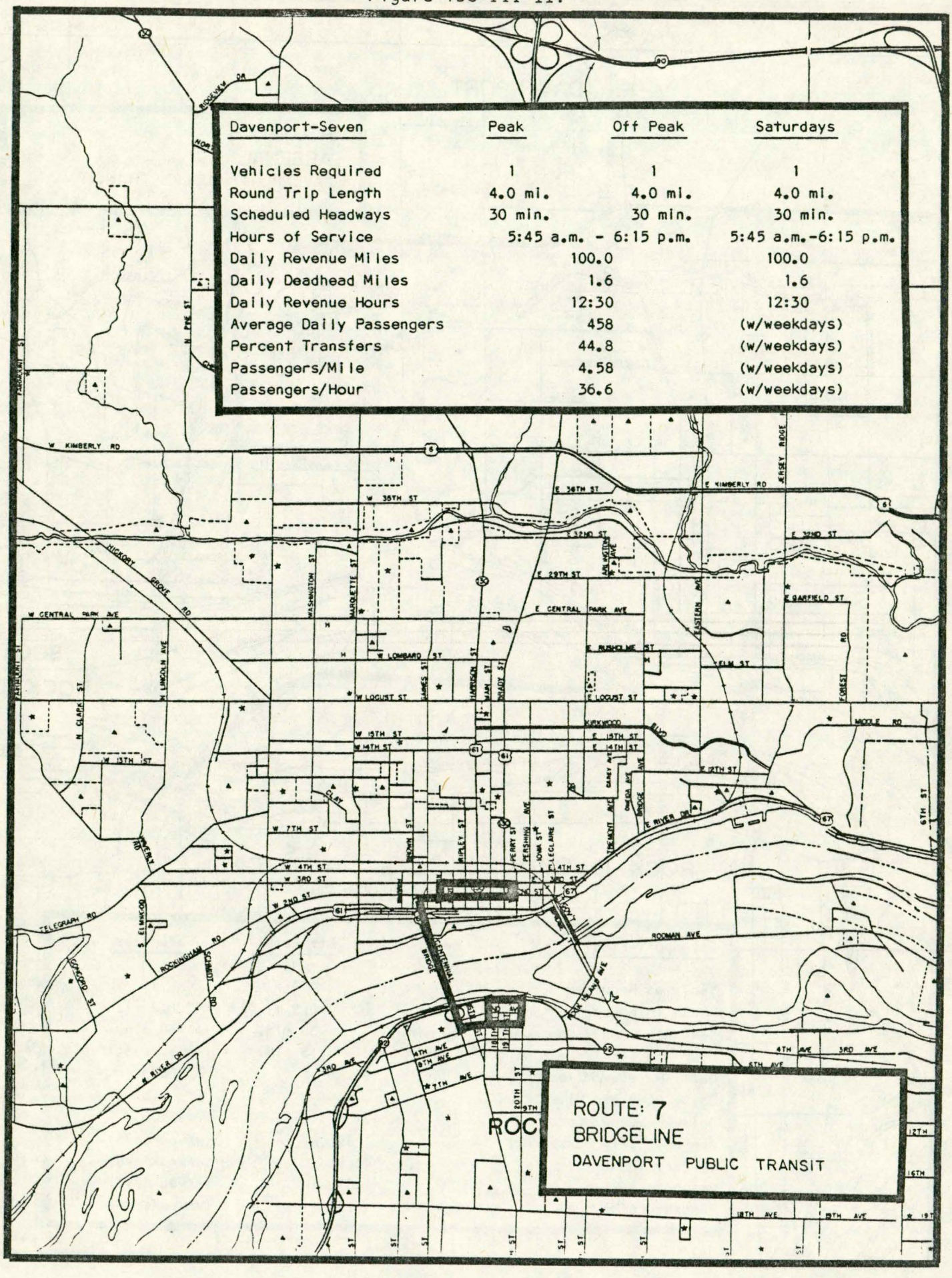
Davenport-Five	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	13.0 mi.	13.0 mi.	13.0 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	6:00 a.m. - 7:00 p.m.		6:00 a.m.-7:00 p.m.
Daily Revenue Miles	325.0		325.0
Daily Deadhead Miles	3.2		3.2
Daily Revenue Hours	25:00		25:00
Average Daily Passengers	405		(w/weekdays)
Percent Transfers	22.9		(w/weekdays)
Passengers/Mile	1.25		(w/weekdays)
Passengers/Hour	16.2		(w/weekdays)

Figure TDS-III-10:



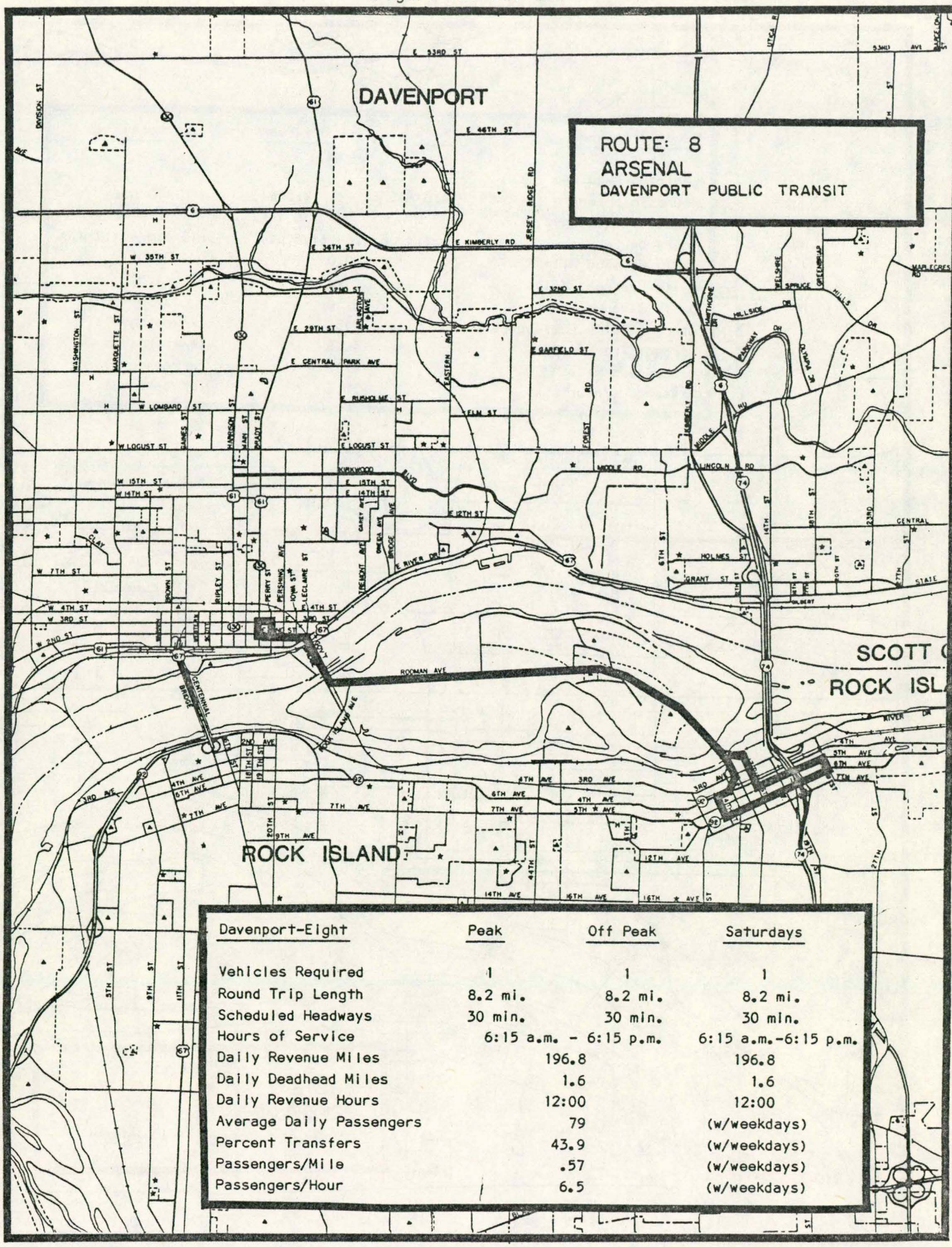
Davenport-Six	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	16.9 mi.	16.9 mi.	16.9 mi.
Scheduled Headways	60 min.	60 min.	60 min.
Hours of Service	6:00 a.m. - 6:30 p.m.		6:00 a.m.-6:30 p.m.
Daily Revenue Miles	212.0		212.0
Daily Deadhead Miles	5.2		5.2
Daily Revenue Hours	12:30		12:30
Average Daily Passengers	102		(w/weekdays)
Percent Transfers	30.7		(w/weekdays)
Passengers/Mile	.48		(w/weekdays)
Passengers/Hour	8.2		(w/weekdays)

Figure TDS-III-11:



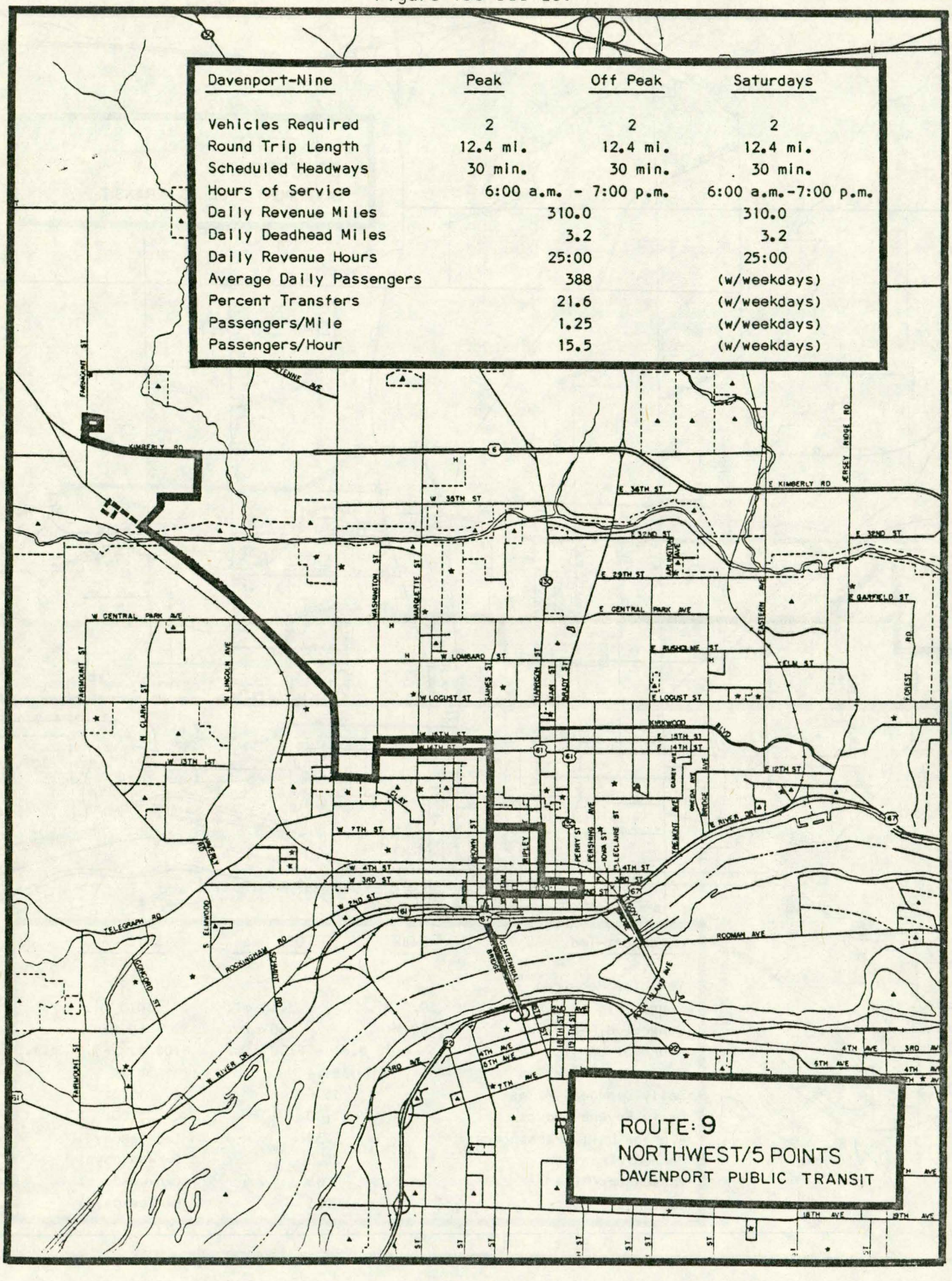
Davenport-Seven	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	4.0 mi.	4.0 mi.	4.0 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:45 a.m. - 6:15 p.m.		5:45 a.m.-6:15 p.m.
Daily Revenue Miles	100.0		100.0
Daily Deadhead Miles	1.6		1.6
Daily Revenue Hours	12:30		12:30
Average Daily Passengers	458		(w/weekdays)
Percent Transfers	44.8		(w/weekdays)
Passengers/Mile	4.58		(w/weekdays)
Passengers/Hour	36.6		(w/weekdays)

Figure TDS-III-12:



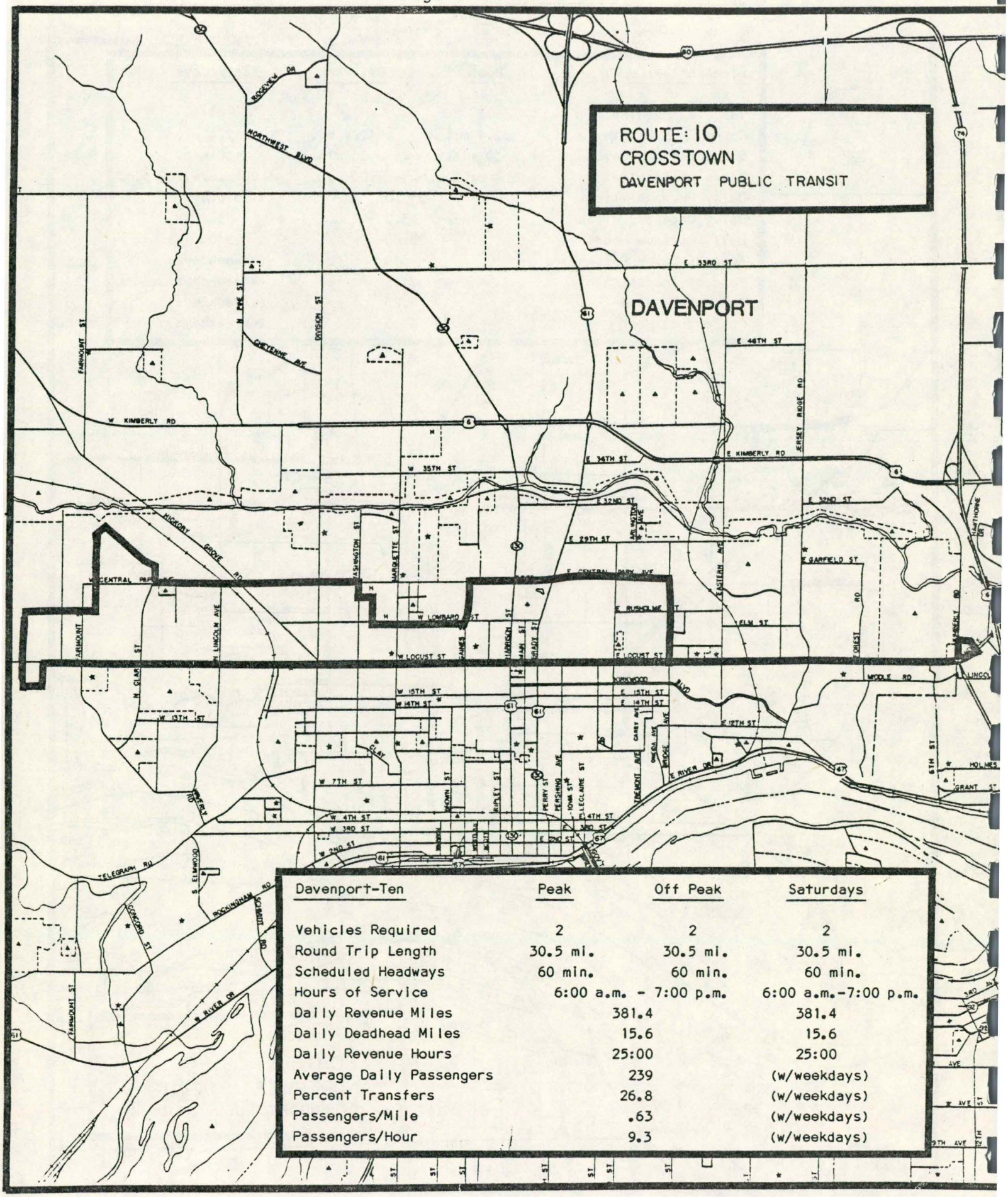
Davenport-Eight	Peak	Off Peak	Saturdays
Vehicles Required	1	1	1
Round Trip Length	8.2 mi.	8.2 mi.	8.2 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	6:15 a.m. - 6:15 p.m.		6:15 a.m.-6:15 p.m.
Daily Revenue Miles	196.8		196.8
Daily Deadhead Miles	1.6		1.6
Daily Revenue Hours	12:00		12:00
Average Daily Passengers	79		(w/weekdays)
Percent Transfers	43.9		(w/weekdays)
Passengers/Mile	.57		(w/weekdays)
Passengers/Hour	6.5		(w/weekdays)

Figure TDS-III-13:



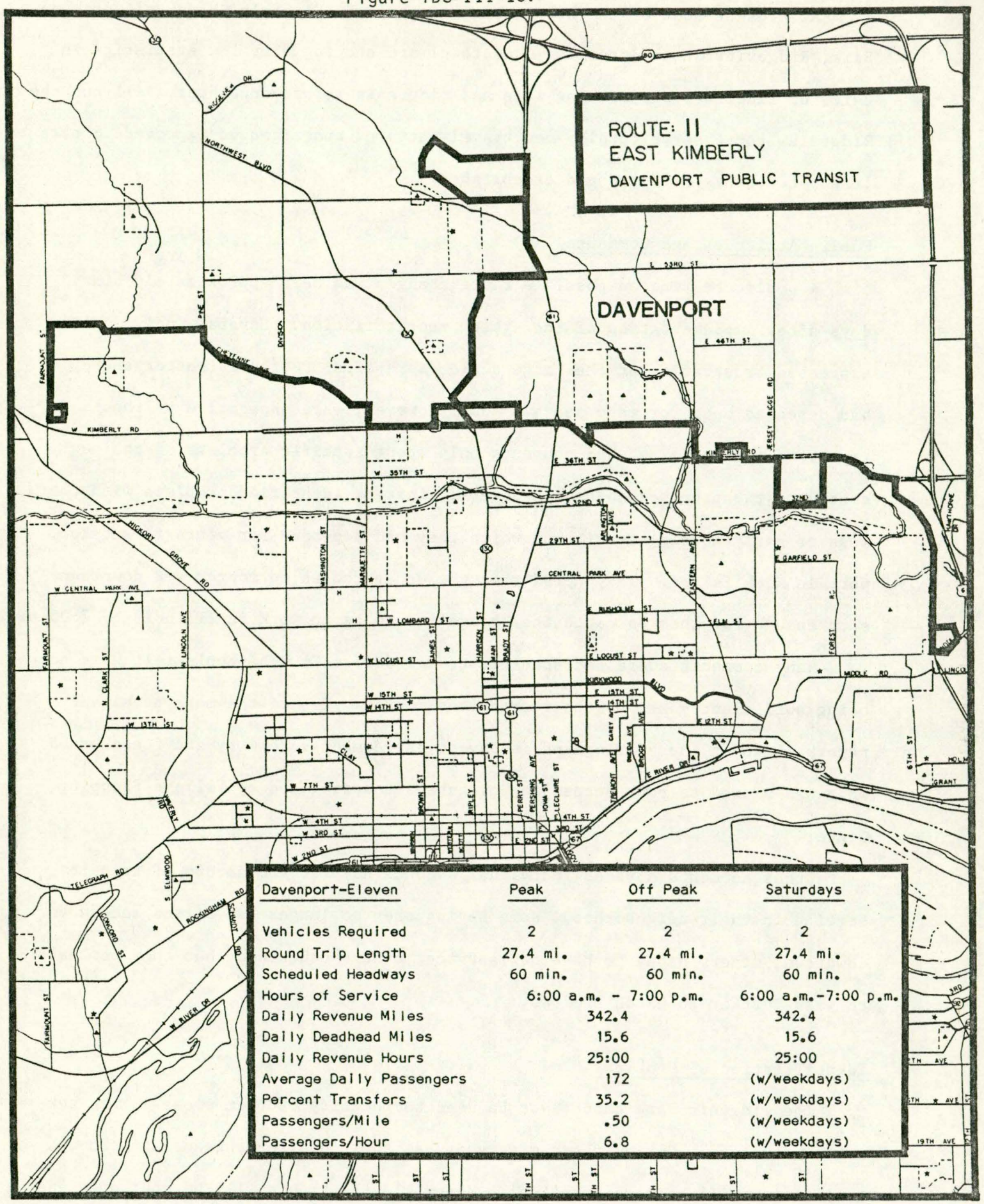
Davenport-Nine	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	12.4 mi.	12.4 mi.	12.4 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	6:00 a.m. - 7:00 p.m.		6:00 a.m.-7:00 p.m.
Daily Revenue Miles	310.0		310.0
Daily Deadhead Miles	3.2		3.2
Daily Revenue Hours	25:00		25:00
Average Daily Passengers	388		(w/weekdays)
Percent Transfers	21.6		(w/weekdays)
Passengers/Mile	1.25		(w/weekdays)
Passengers/Hour	15.5		(w/weekdays)

Figure TDS-III-14:



Davenport-Ten	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	30.5 mi.	30.5 mi.	30.5 mi.
Scheduled Headways	60 min.	60 min.	60 min.
Hours of Service	6:00 a.m. - 7:00 p.m.		6:00 a.m.-7:00 p.m.
Daily Revenue Miles	381.4		381.4
Daily Deadhead Miles	15.6		15.6
Daily Revenue Hours	25:00		25:00
Average Daily Passengers	239		(w/weekdays)
Percent Transfers	26.8		(w/weekdays)
Passengers/Mile	.63		(w/weekdays)
Passengers/Hour	9.3		(w/weekdays)

Figure TDS-III-15:



Davenport-Eleven	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	27.4 mi.	27.4 mi.	27.4 mi.
Scheduled Headways	60 min.	60 min.	60 min.
Hours of Service	6:00 a.m. - 7:00 p.m.		6:00 a.m.-7:00 p.m.
Daily Revenue Miles	342.4		342.4
Daily Deadhead Miles	15.6		15.6
Daily Revenue Hours	25:00		25:00
Average Daily Passengers	172		(w/weekdays)
Percent Transfers	35.2		(w/weekdays)
Passengers/Mile	.50		(w/weekdays)
Passengers/Hour	6.8		(w/weekdays)

At present four of the new routes (Arsenal, E. Kimberly/Cheyenne/Americana Park, Ridgeview/Green Acre, and Crosstown) are showing very low statistics in terms of ridership per revenue mile and ridership per revenue hour. All but the Ridgeview route serve totally new travel patterns and might be expected to take longer to become accepted and established.

Public Attitudes and Comments

A public hearing on possible route changes was held approximately sixty days after implementation of the system reorganization. Several individuals expressed frustration at the large scale disruption of transit patterns they had depended upon for many years. Most, however, were supportive of the improvement efforts and had comments only about specific problems of the new routes or the proposed changes. Several citizens identified problems with the loss of early morning service on which they had depended for years to get to work in Rock Island. They noted that the other routes no longer get downtown soon enough for them to catch the Bridgeline to be to work in Illinois by 7:00 a.m.

Many comments addressed specific travel desires which people felt were not being sufficiently met by the reorganized routes. Two of the more prominent remarks both at the hearing and in day-to-day comments to City staff concerned what was viewed as poor access to St. Luke's Hospital and to Village Shopping Center.

Other comments covered individual's concerns over the nature of transit service in their neighborhood, some saying they no longer had direct access to downtown, others happy to have new service, others concerned that they now have to walk further to catch the bus.

Identification of Problems

The rideship data cannot yet be used to identify problem areas in the new route structure. During the coming year, as additional experience is gained, evaluations will be more practical. Meanwhile the trends will be monitored and compared with community inputs.

Certain operational difficulties have been identified already and can be addressed before the ridership performance evaluation is ready. These involve schedule difficulties on the Brady-Harrison route where heavy loadings, conflicts with traffic signal sequences, and heavy traffic volumes have resulted in run times in excess of the original estimates. Another operations problem area is the segment of the West Third Street route which uses Sixth Street approaching Harrison Street, where a steep grade, rather narrow pavement and parking patterns promise poor conditions for winter driving.

Possibility for Change

The coming year may see considerable "fine tuning" of the new route structure. The initial adjustments will probably be limited to correcting operational problems and answering citizen complaints. As the year goes on larger adjustments may be forthcoming based on analysis of performance characteristics.

A first group of possible changes were presented to the public in October, 1982, addressing operational adjustments to routes one and four, improved service to St. Lukes Hospital and increased coverage of residential neighborhoods in east central Davenport. (See Figures TDS-III-16 to TDS-III-21.)

Rock Island County Metropolitan Mass Transit District

Description of Service

The Metropolitan Mass Transit District operates eight fixed-routes throughout their five-community service area as well as various subscription services for industrial commuters. Peak vehicle utilization is 27 vehicles. Base service on all routes is wheelchair accessible.

The District's routes provide numerous interconnections in order to serve the complex travel patterns of the multi-centered service area. Four routes converge on downtown Rock Island where they provide no-wait transfers with each other as well as with the Davenport Bridgeline bus. Downtown Moline is also

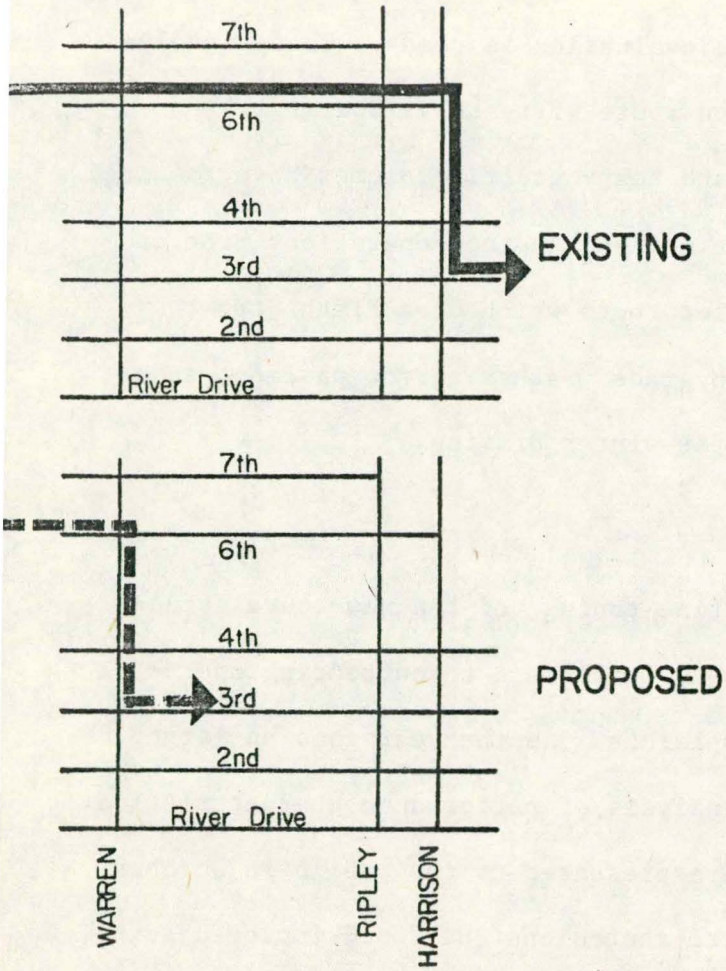


FIGURE III-16:
POSSIBLE CHANGES TO
ROUTE 1-DAVENPORT

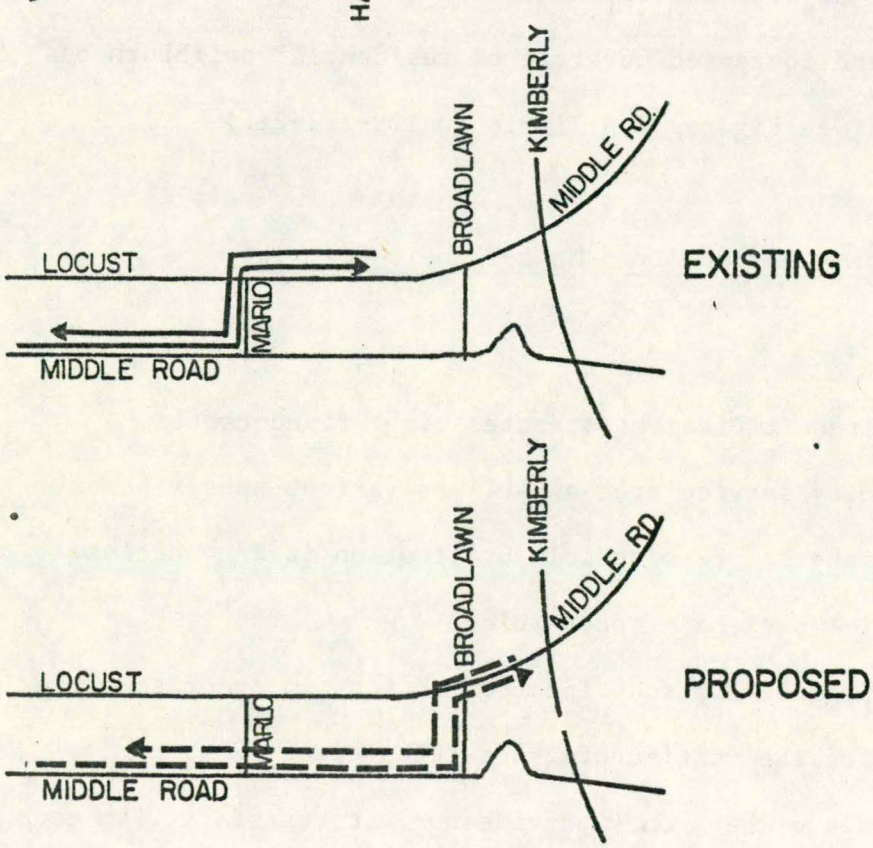
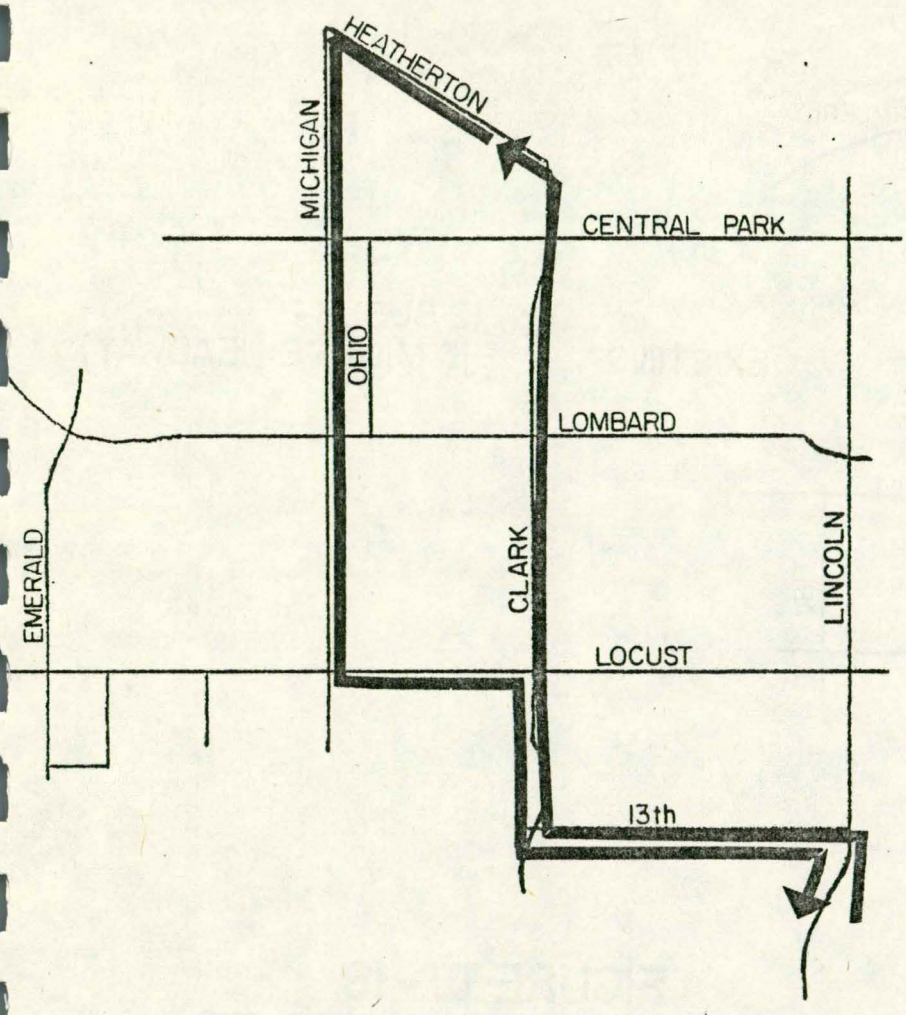
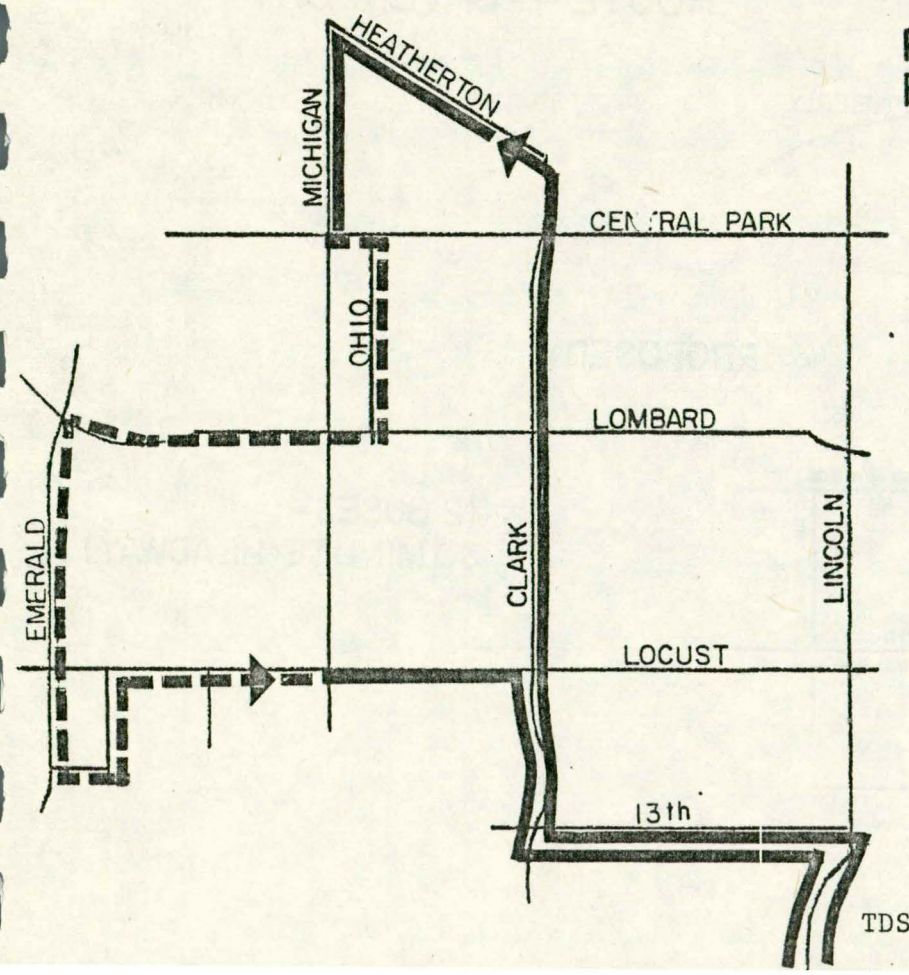


FIGURE III-17:
POSSIBLE CHANGES TO
ROUTE 1-DAVENPORT

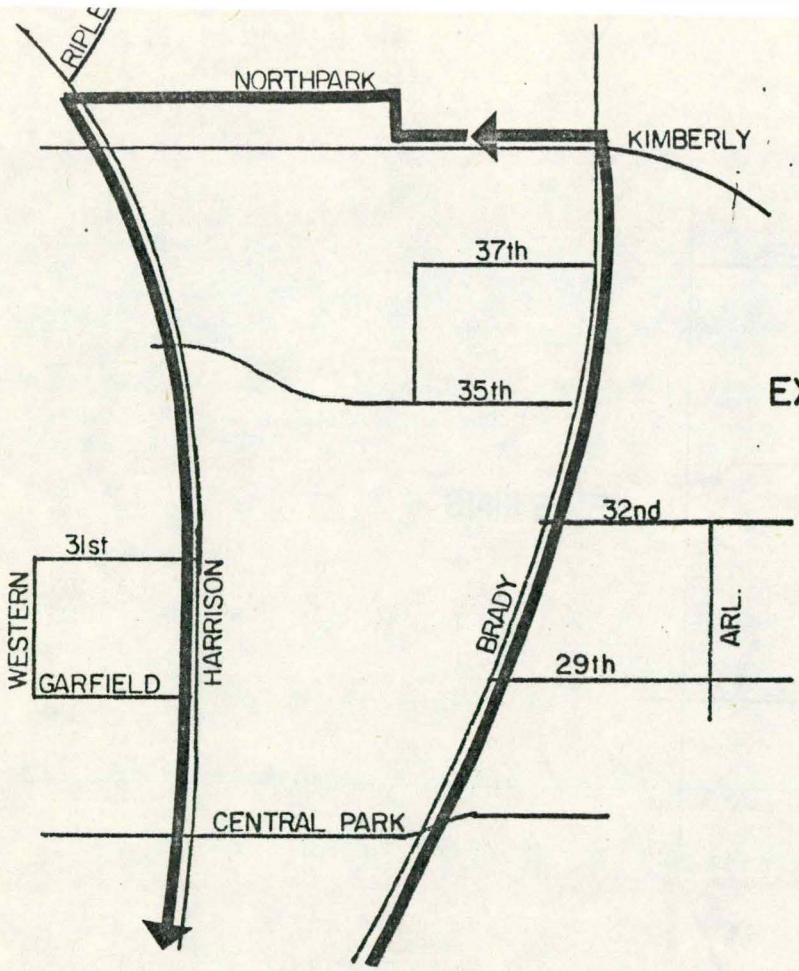


EXISTING

FIGURE III-18:
POSSIBLE CHANGES TO
ROUTE 3- DAVENPORT



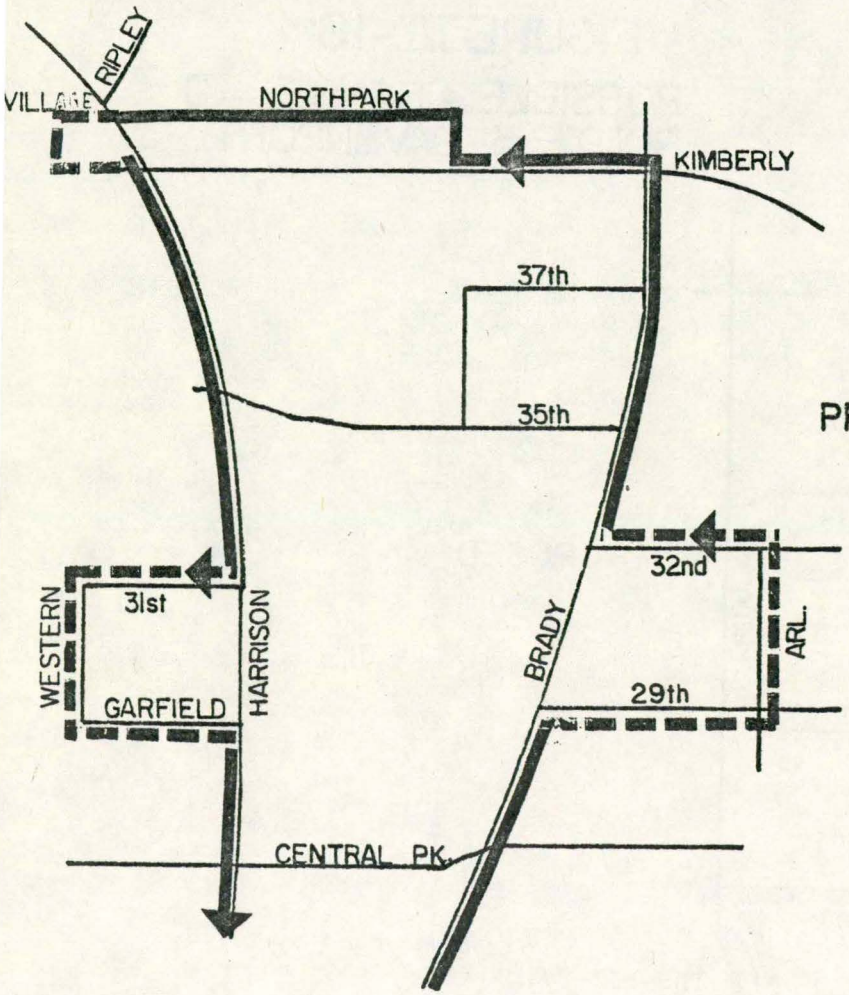
PROPOSED



EXISTING

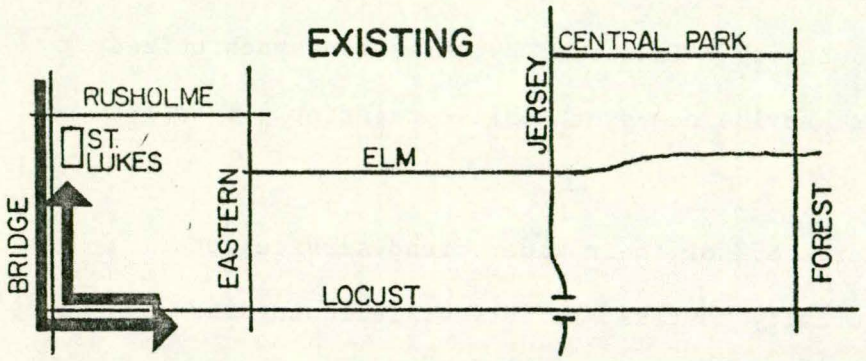
(2 BUSES-
15 MINUTE HEADWAY)

FIGURE III-19
POSSIBLE CHANGES TO
ROUTE 4-DAVENPORT



PROPOSED

(2 BUSES-
30 MINUTE HEADWAY)



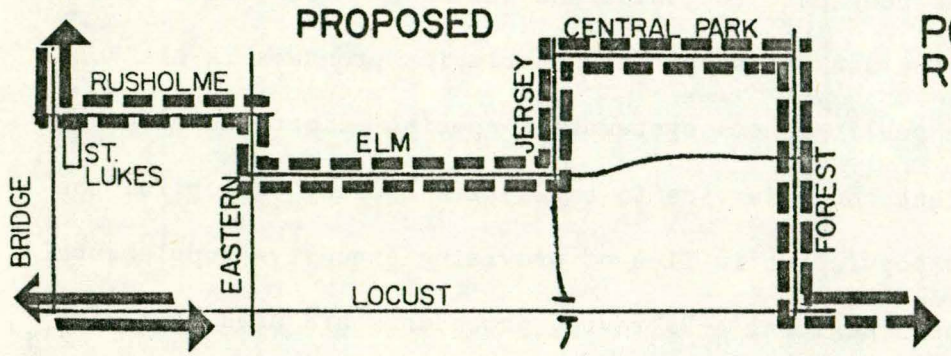
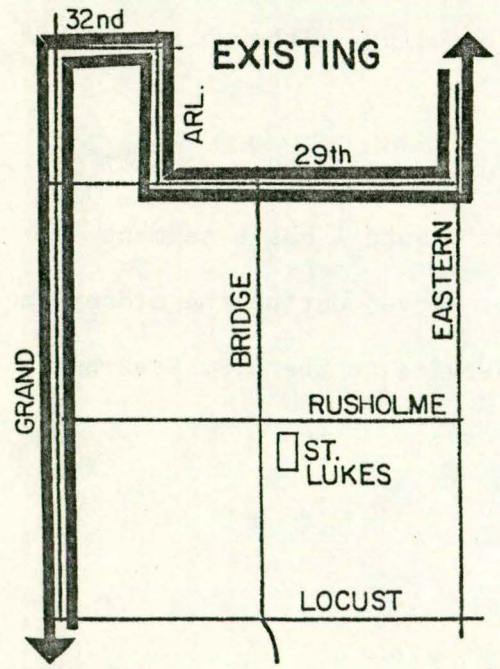
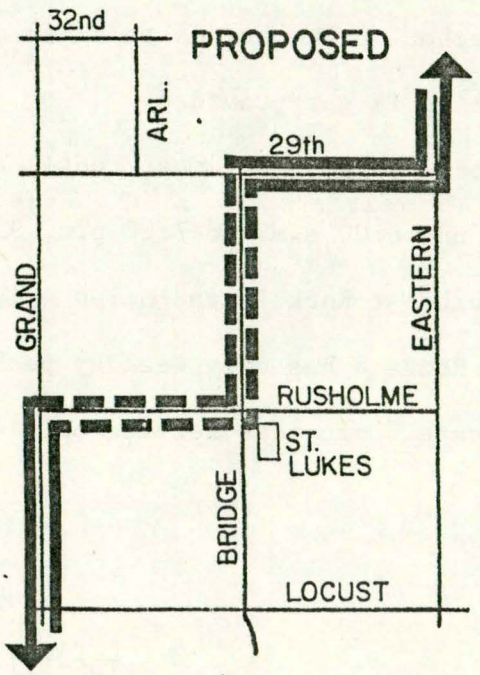


FIGURE III-21:
POSSIBLE CHANGES TO ROUTE 10-DAVENPORT

FIGURE III-20:
POSSIBLE CHANGES TO ROUTE 5-DAVENPORT





served by four RICMMTD routes which make no-wait transfers with the Bettendorf Bridgeline and the Davenport Arsenal bus. Two locations in East Moline, Moline and Rock Island serve as transfer points for two synchronized routes. Moline's regional shopping center - Southpark - is served by three non-synchronized routes. Several other points provide non-synchronized transfer points for two routes.

The District's routes serve 89% of their wide-spread service area population. Virtually all activity centers are served, including the John Deere Administration Center which is located just outside the District boundaries. Particular attention has been paid to junior and senior high schools in the routing process due to the lack of school transportation programs in the Rock Island-Milan and Moline public school systems. A special effort has also been made to provide convenient route service to facilities housing or serving the elderly and handicapped population in lieu of providing expensive supplemental service for these groups. Regional A-95 review procedures are used to try to direct new facilities for the elderly and handicapped to areas already served by transit. Figures TDS-III-22 through TDS-III-30 show the areas and facilities served by each RICMMTD route.

All routes have a basic 30-minute headyway except Route 5 which provides only 60-minute midday headways on school days. Route 4 provides supplemental buses during school peak periods to alleviate overcrowding, although a specific headway reduction is not provided.

The hours of service for most routes are approximately 5:00 a.m. to 7:00 p.m. weekdays and 8:00 a.m. to 7:00 p.m. Saturdays. Route 4 has a segment located in Southwest Rock Island-Milan which is not served during the midday on school days. Route 8 has only weekday peak-hour service to the U.S. Government Arsenal and Route 7 provides service only on Saturdays.

Recent Development Chronology

The RICMMTD service has shown considerable evolution over recent years. In 1978, the District added a new route to serve southeast sections of Moline including Black Hawk College and the Heritage Addition. That same year, several minor route adjustments were made to provide service to the J. I. Case plant in Rock Island, and to the relocated Illinois Department of Public Aid offices. The East Moline route was modified by extending the loop in the Watertown area and by ending the reversing service on the southern loop.

Special services to help reduce overcrowding of vehicles during school peaks was also instituted that year as the Transit District absorbed the major transportation increases caused by school desegregation plans. The same vehicles were also used to provide industrial tripper service for plants along Moline's Third Avenue.

Other minor route changes occurred in succeeding years, brining services closer to senior citizen housing projects, and, in one case, providing bus access to a large mobile home park.

In 1980-81, the District, with the help of Henningson, Durham, and Richardson, undertook a system-wide analysis of services. The conclusion was that the complicated pattern of routes provided a fairly good match to travel desires and only modest changes were proposed. A series of routing changes based on this analysis were implemented in August, 1981. The largest single change was an extension of Route 3 to serve Black Hawk College, while service on Route 5 was shifted to reach Southpark Mall. At the same time the peak-hour indusrial trippers were shifted from Route 3 to the Route 5. Other changes involved only slight adjustments regarding the streets utilized for service, particularly on Route 2 in the vicinity of Moline's City Line Plaza and on the Route 4 in the area south of Elderland Heights senior citizen housing complex. (This last change was later partially retracted and is now provided as an hourly alternate routing only.)

In October, 1981 the District added a new Saturday-only route connecting southern and western parts of Rock Island directly to the Southpark Mall shopping area. The new service reduced required travel times for people in Milan and most of Rock Island going to or from the regional shopping center by 45 minutes. The route serves a travel pattern identified for "intermediate action" in the route analysis, but serves it in a different way than proposed in that study.

In April, 1982 the District responded to declining federal operating assistance by reviewing their service schedule in light of a recommended service performance standard minimum of 15 boardings per hour. As a result, mid-day weekday service was eliminated in the southwest Rock Island area with Route 4 cut back serving only part of Milan. Route 5 service in the Heritage Addition was cut to hourly headways on weekdays during the midday. Saturday morning route service prior to 8:00 a.m. (9:30 for Route 5) was eliminated with a limited demand-responsive service substituted. Late evening runs were eliminated on several selected routes either weekdays or Saturdays.

Performance Analysis

Data on the performance of RICMMTD routes is shown in Figures TDS-III-22 through TDS-III-30.

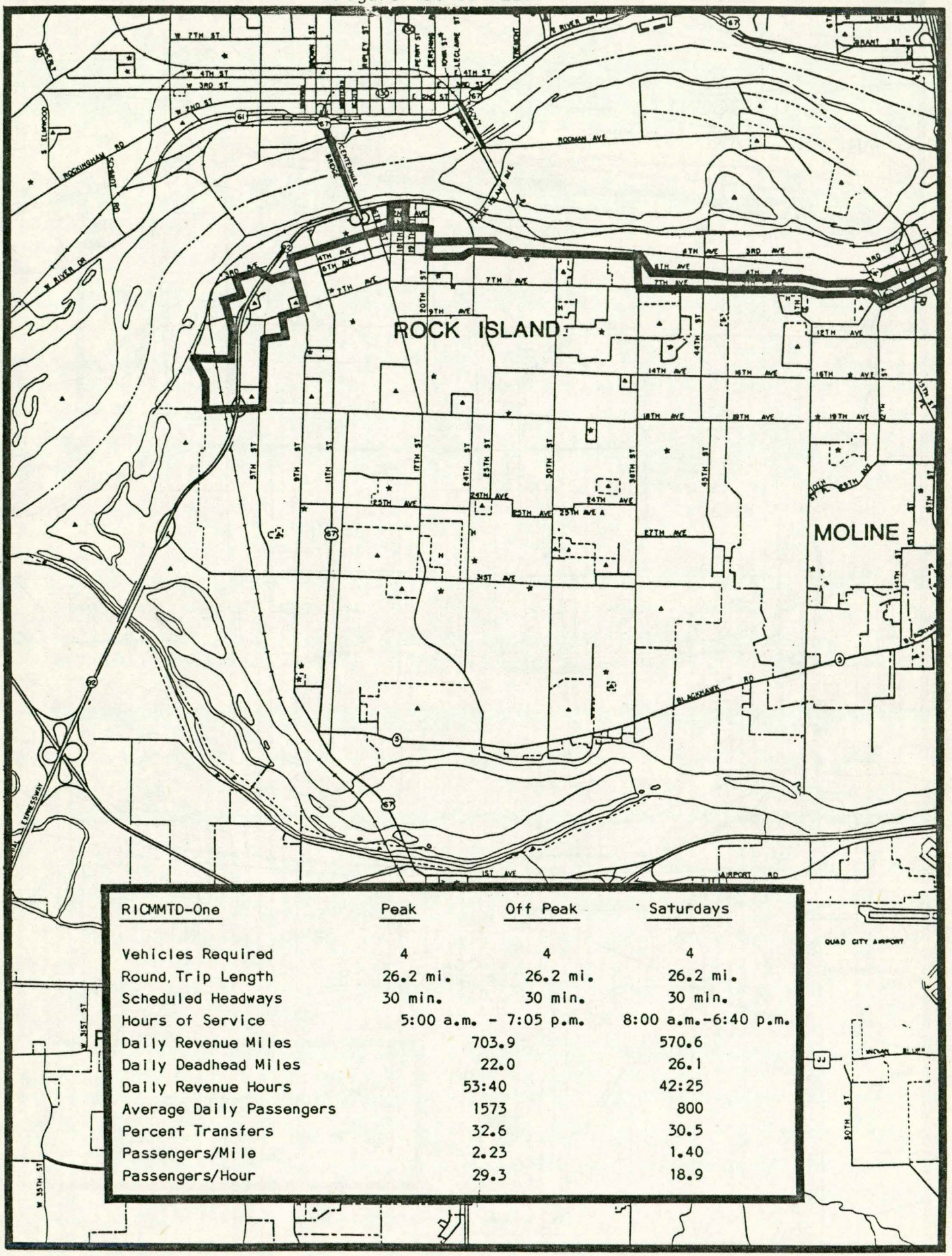
Route performance in terms of passengers/hour varies from a low of 8.7 for Route 7 on Saturdays to a high of 31.4 for Route 4 on weekdays. (A comparison with other Quad Cities transit routes is found in Table TDS-III-1.)

Community Attitudes and Comments

Most community comments relating to RICMMTD service have expressed satisfaction with the present services and particularly with the simultaneous transfers provided at most connecting points between routes.

Certain long-standing service requests continue to be heard from various elements of the public. Night service (until 9:30 or 10:00 p.m.) and Sunday

Figure TDS-III-22a:



RICMMTD-One	Peak	Off Peak	Saturdays
Vehicles Required	4	4	4
Round, Trip Length	26.2 mi.	26.2 mi.	26.2 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:00 a.m. - 7:05 p.m.		8:00 a.m.-6:40 p.m.
Daily Revenue Miles	703.9		570.6
Daily Deadhead Miles	22.0		26.1
Daily Revenue Hours	53:40		42:25
Average Daily Passengers	1573		800
Percent Transfers	32.6		30.5
Passengers/Mile	2.23		1.40
Passengers/Hour	29.3		18.9

Figure TDS-III-22b:

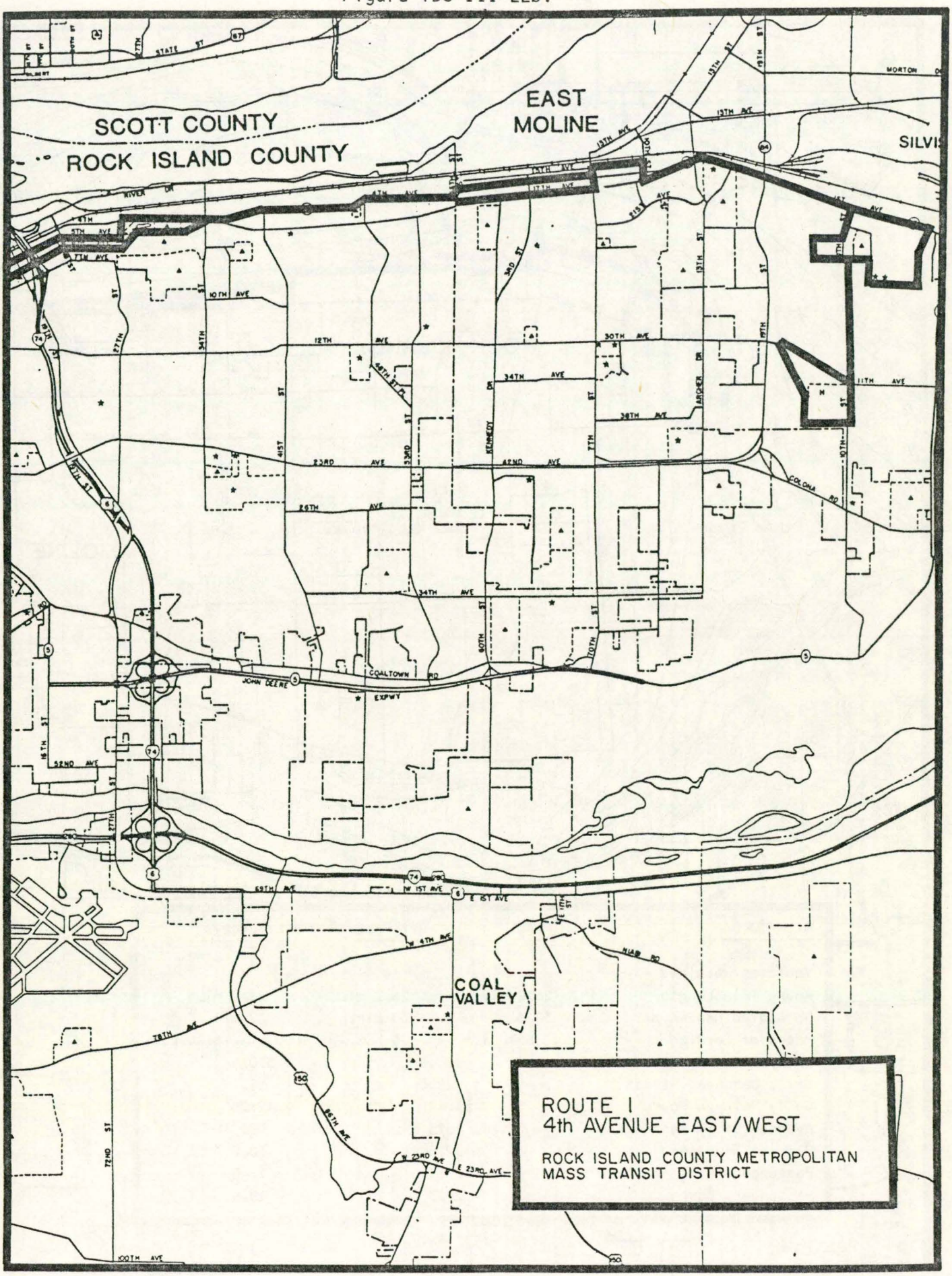
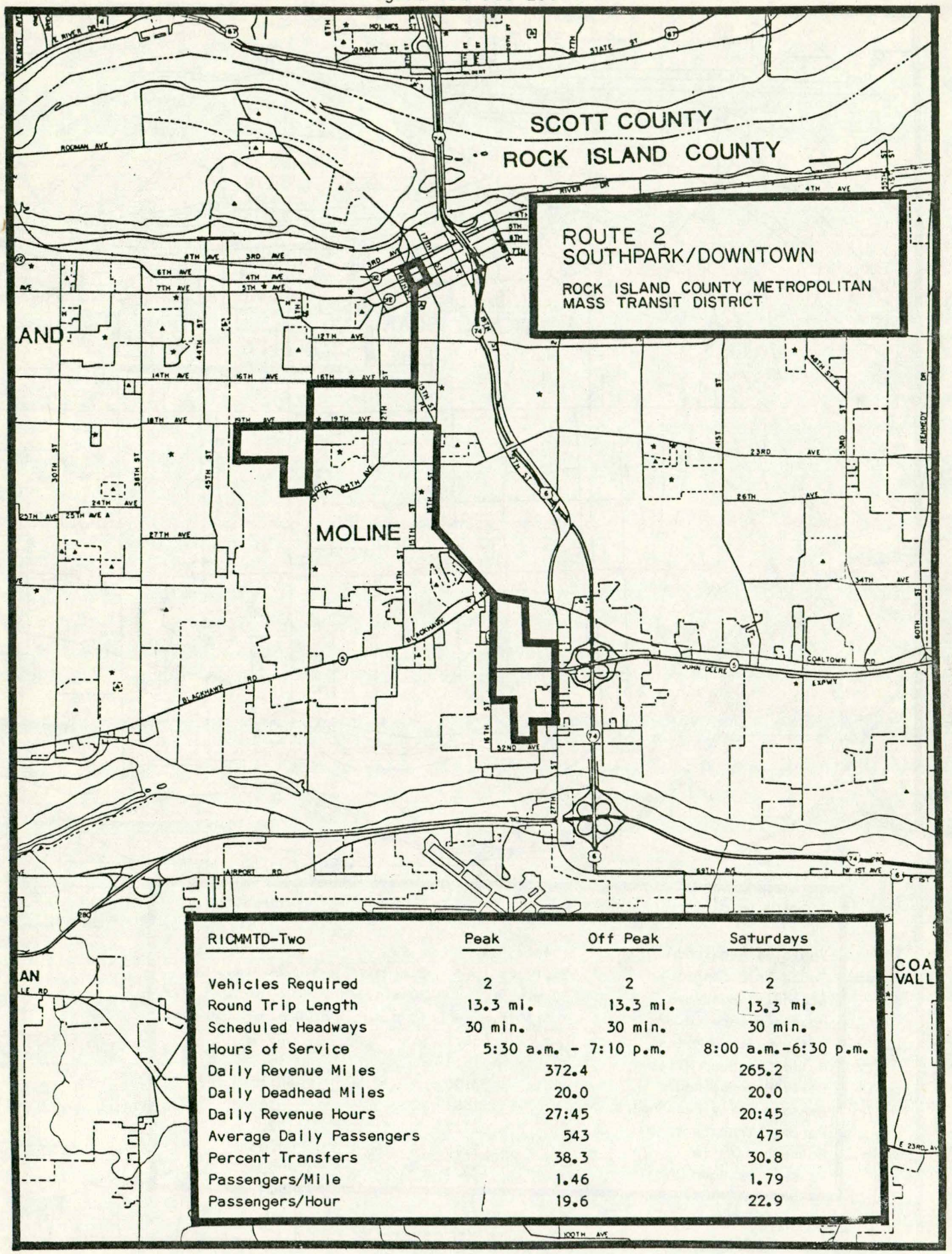
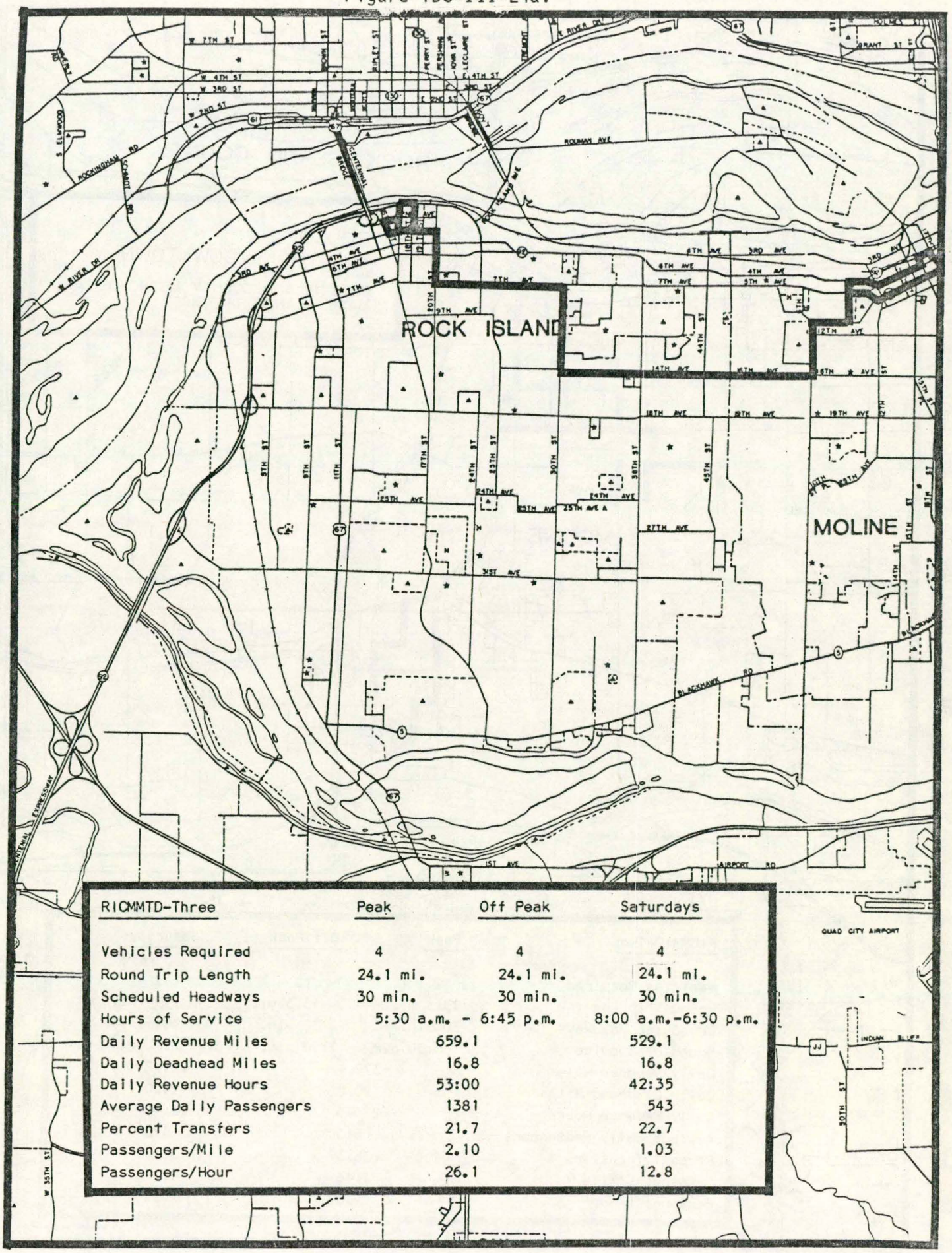


Figure TDS-III-23:



RICMMTD-Two	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	13.3 mi.	13.3 mi.	13.3 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:30 a.m. - 7:10 p.m.		8:00 a.m.-6:30 p.m.
Daily Revenue Miles	372.4		265.2
Daily Deadhead Miles	20.0		20.0
Daily Revenue Hours	27:45		20:45
Average Daily Passengers	543		475
Percent Transfers	38.3		30.8
Passengers/Mile	1.46		1.79
Passengers/Hour	19.6		22.9

Figure TDS-III-24a:



RICMMTD-Three	Peak	Off Peak	Saturdays
Vehicles Required	4	4	4
Round Trip Length	24.1 mi.	24.1 mi.	24.1 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:30 a.m. - 6:45 p.m.		8:00 a.m.-6:30 p.m.
Daily Revenue Miles	659.1		529.1
Daily Deadhead Miles	16.8		16.8
Daily Revenue Hours	53:00		42:35
Average Daily Passengers	1381		543
Percent Transfers	21.7		22.7
Passengers/Mile	2.10		1.03
Passengers/Hour	26.1		12.8

Figure TDS-III-24b:

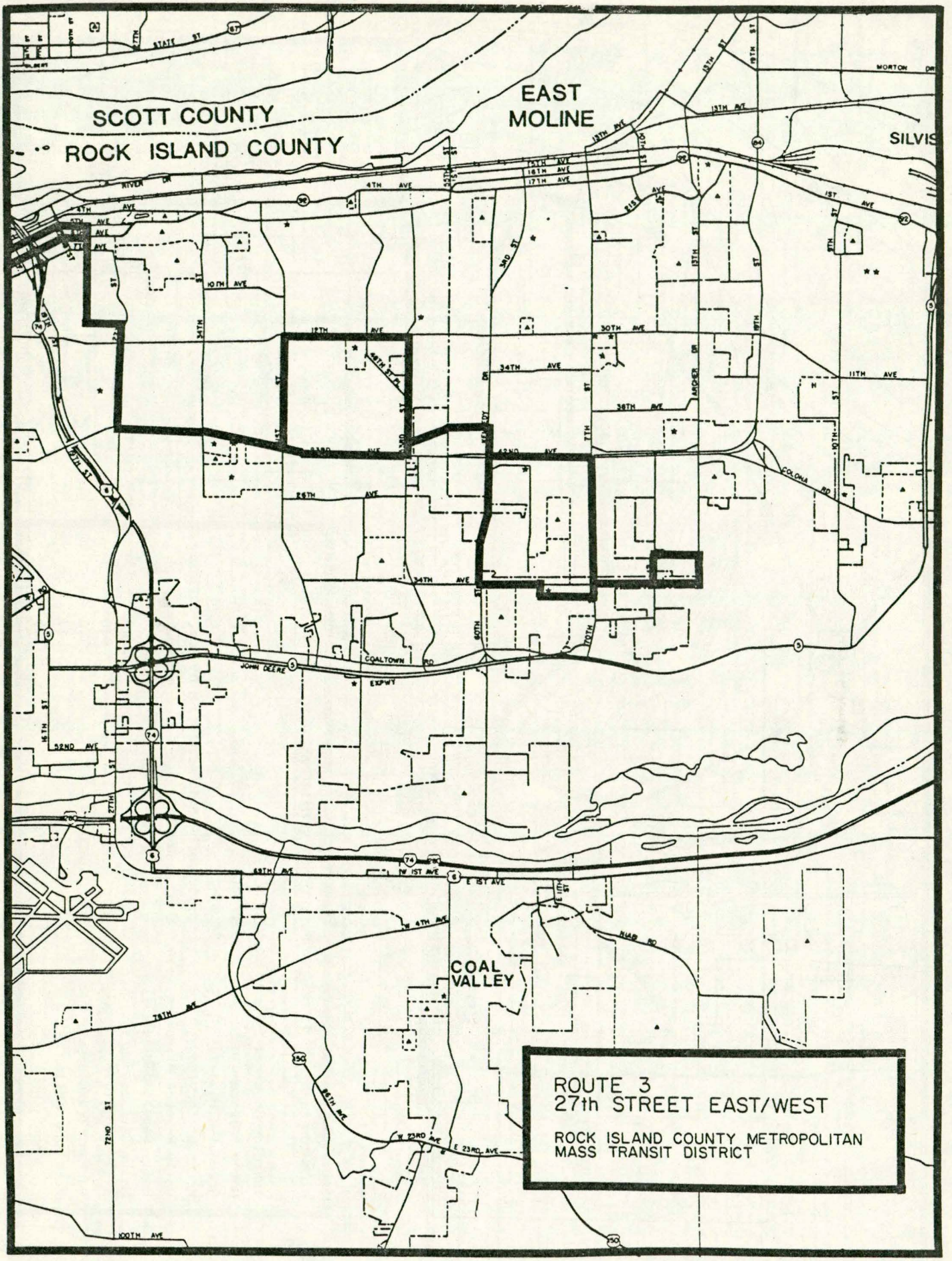
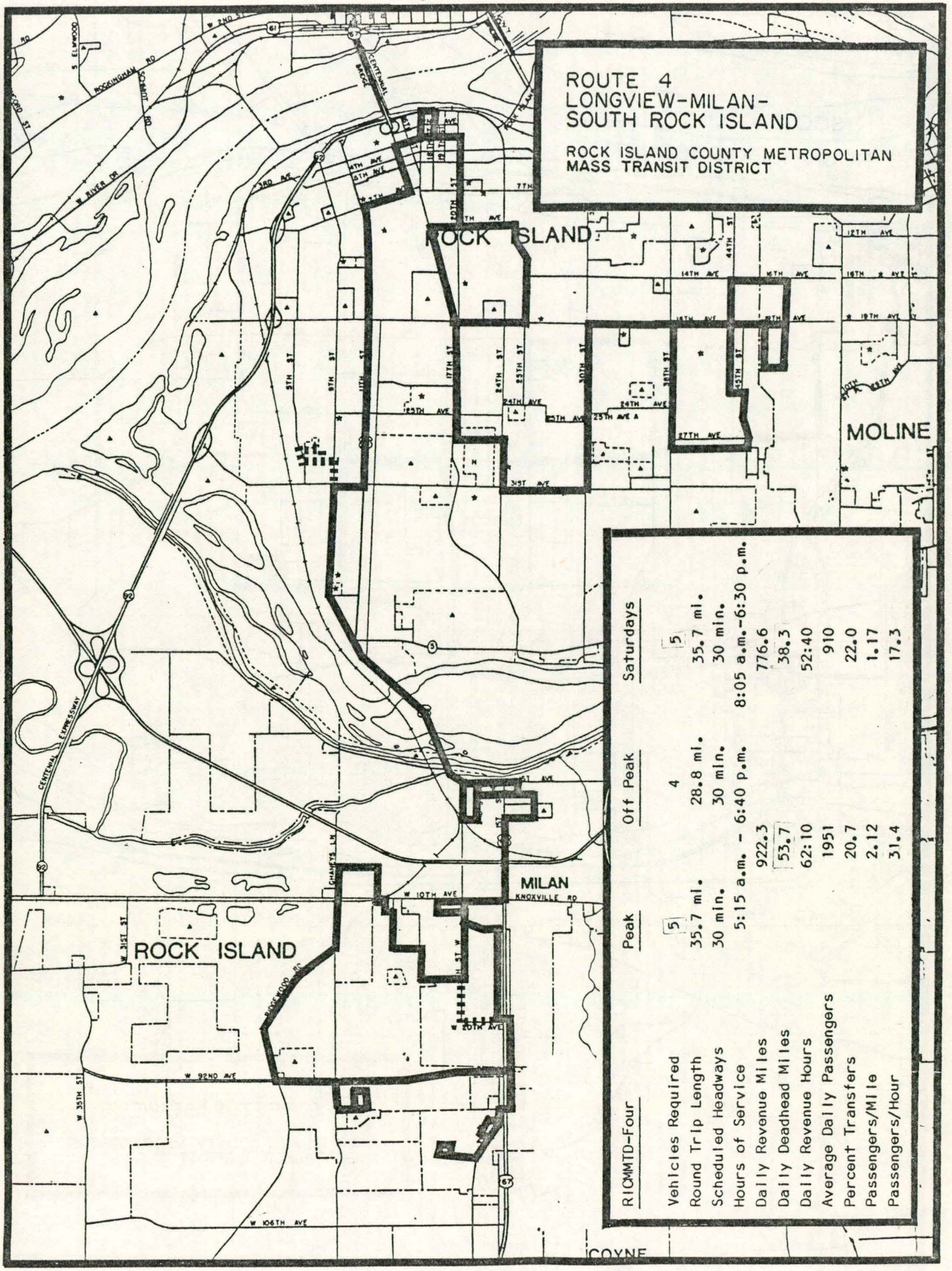
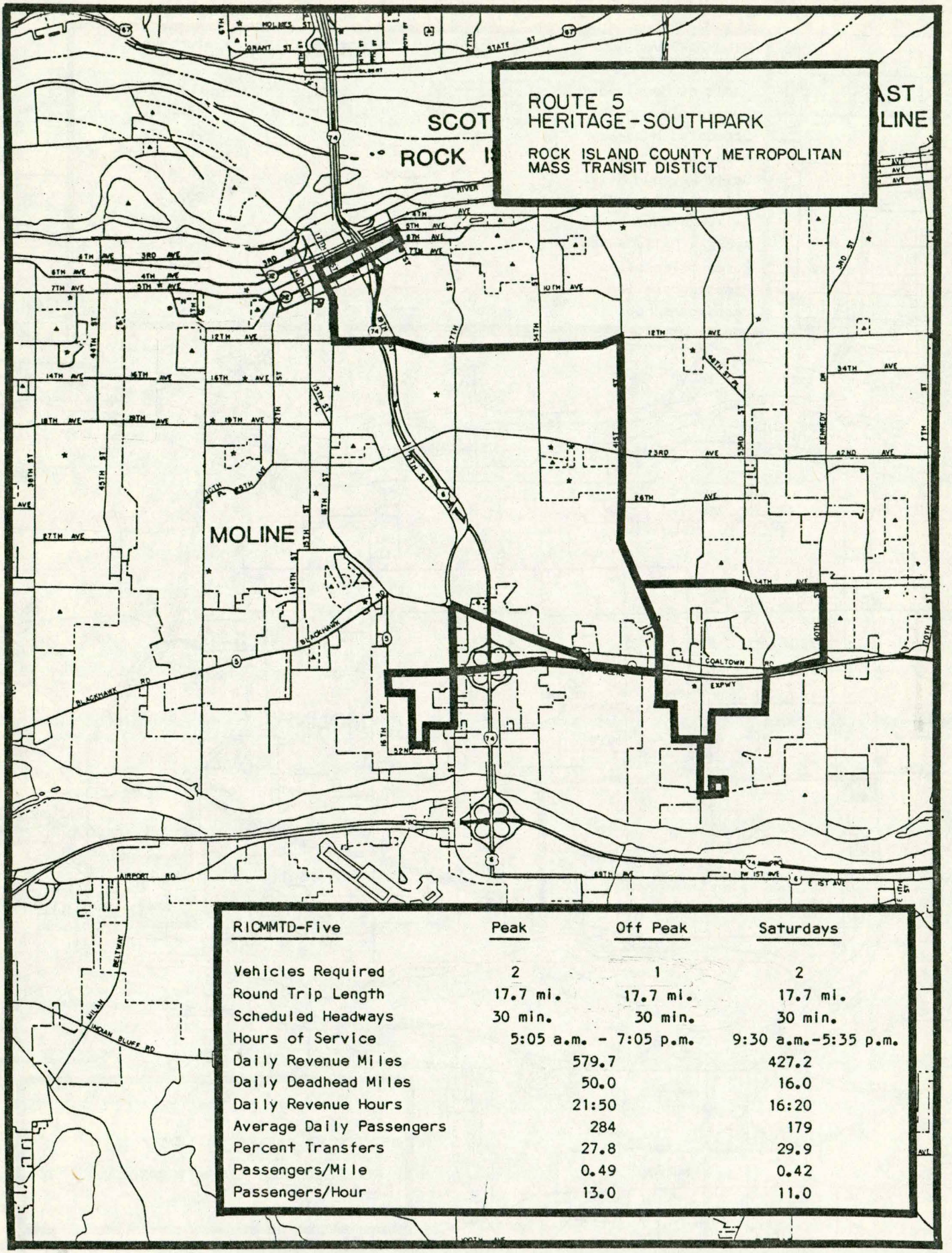


Figure TDS-III-25:



RICMTD-Four	Peak	Off Peak	Saturdays
Vehicles Required	5	4	5
Round Trip Length	35.7 mi.	28.8 mi.	35.7 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:15 a.m. - 6:40 p.m.		8:05 a.m.-6:30 p.m.
Daily Revenue Miles	922.3	53.7	776.6 / 38.3
Daily Deadhead Miles			
Daily Revenue Hours	62:10		52:40
Average Daily Passengers	1951		910
Percent Transfers	20.7		22.0
Passengers/Mile	2.12		1.17
Passengers/Hour	31.4		17.3

Figure TDS-III-26:



RICMMTD-Five	Peak	Off Peak	Saturdays
Vehicles Required	2	1	2
Round Trip Length	17.7 mi.	17.7 mi.	17.7 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:05 a.m. - 7:05 p.m.		9:30 a.m.-5:35 p.m.
Daily Revenue Miles	579.7		427.2
Daily Deadhead Miles	50.0		16.0
Daily Revenue Hours	21:50		16:20
Average Daily Passengers	284		179
Percent Transfers	27.8		29.9
Passengers/Mile	0.49		0.42
Passengers/Hour	13.0		11.0

Figure TDS-III-28:

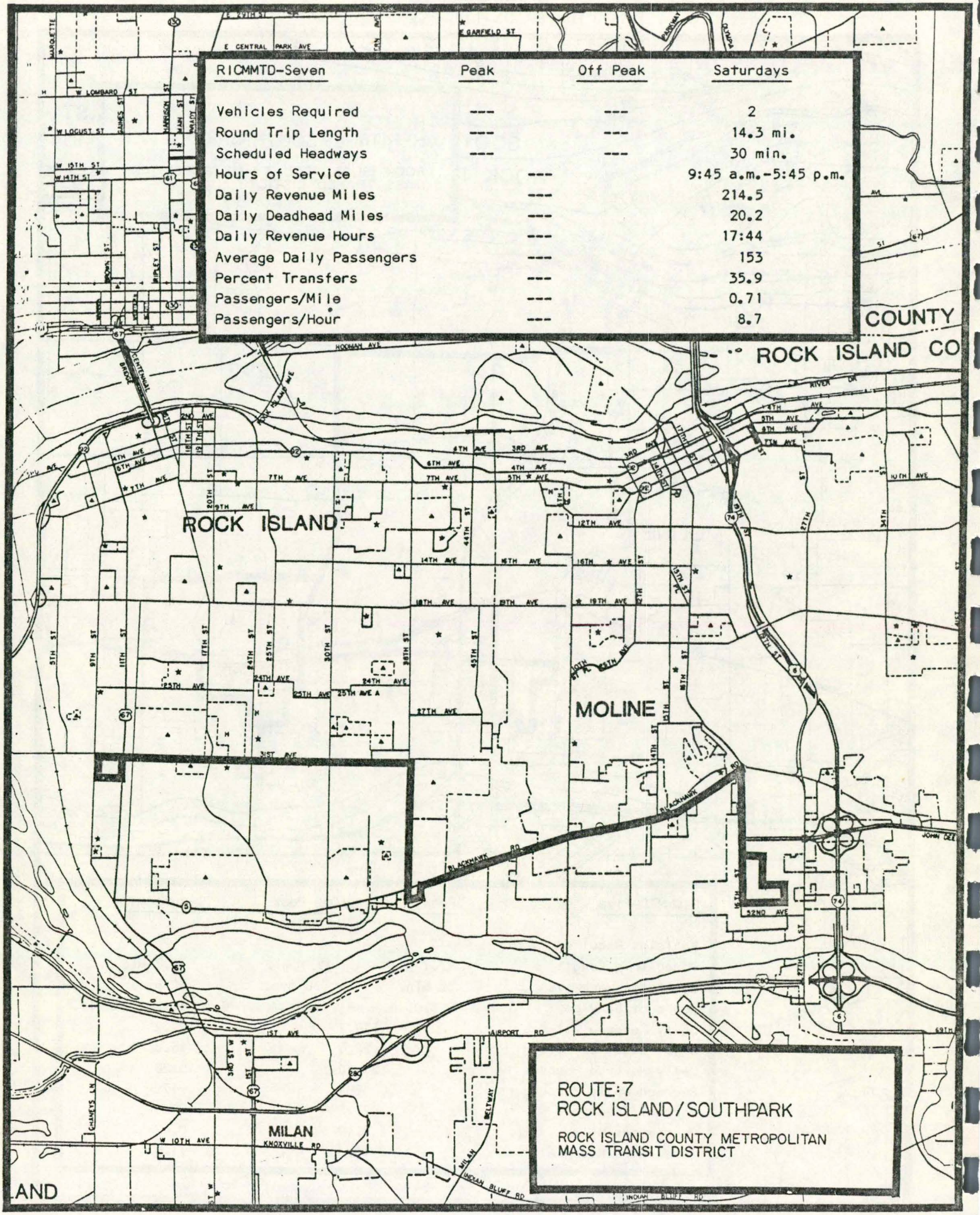
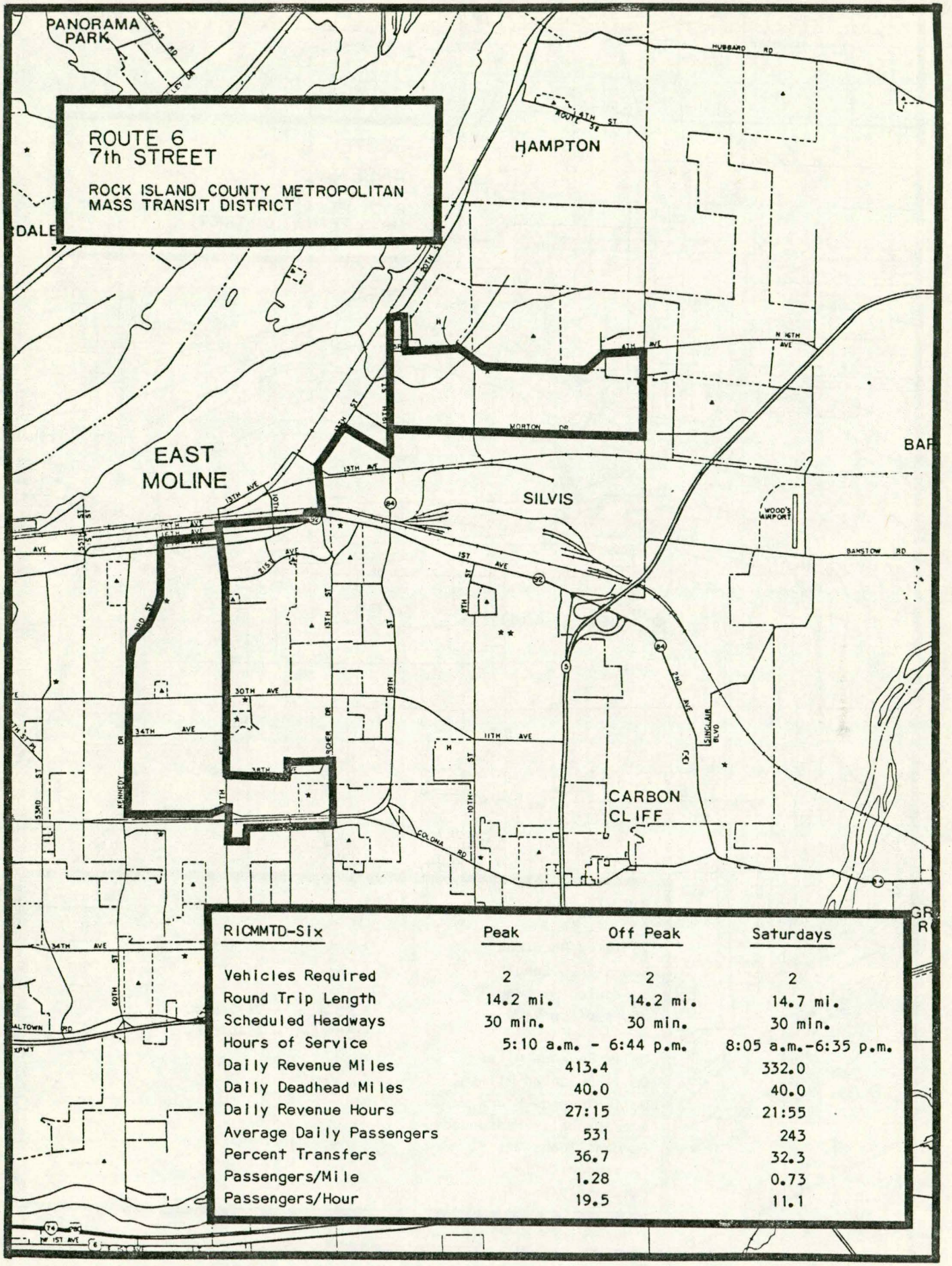
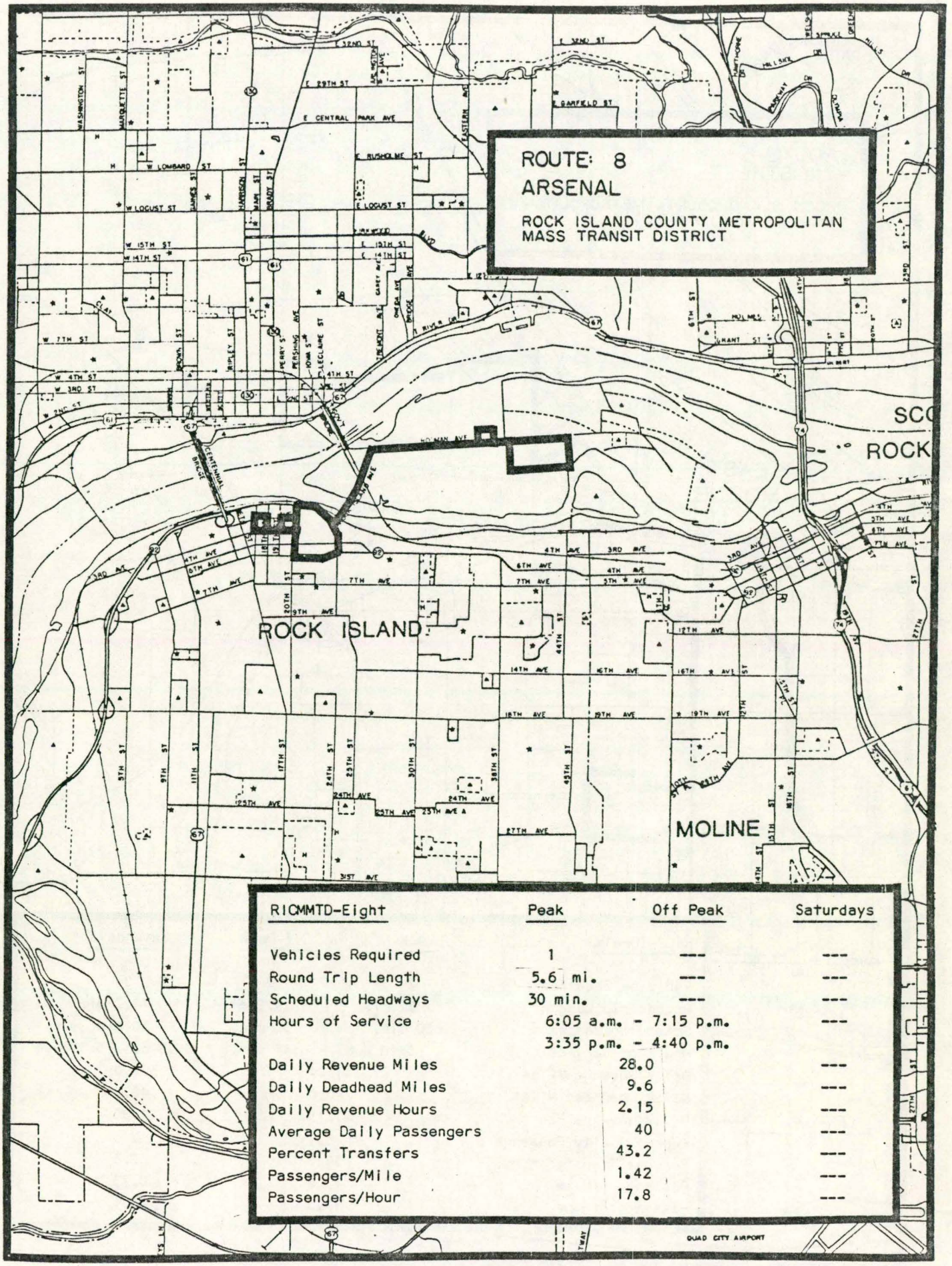


Figure TDS-III-27:



RICMMTD-Six	Peak	Off Peak	Saturdays
Vehicles Required	2	2	2
Round Trip Length	14.2 mi.	14.2 mi.	14.7 mi.
Scheduled Headways	30 min.	30 min.	30 min.
Hours of Service	5:10 a.m. - 6:44 p.m.		8:05 a.m.-6:35 p.m.
Daily Revenue Miles	413.4		332.0
Daily Deadhead Miles	40.0		40.0
Daily Revenue Hours	27:15		21:55
Average Daily Passengers	531		243
Percent Transfers	36.7		32.3
Passengers/Mile	1.28		0.73
Passengers/Hour	19.5		11.1

Figure TDS-III-29:



RICMMTD-Eight	Peak	Off Peak	Saturdays
Vehicles Required	1	---	---
Round Trip Length	5.6 mi.	---	---
Scheduled Headways	30 min.	---	---
Hours of Service	6:05 a.m. - 7:15 p.m.		---
	3:35 p.m. - 4:40 p.m.		
Daily Revenue Miles	28.0		---
Daily Deadhead Miles	9.6		---
Daily Revenue Hours	2.15		---
Average Daily Passengers	40		---
Percent Transfers	43.2		---
Passengers/Mile	1.42		---
Passengers/Hour	17.8		---

service are among the most notable. Another comment coming primarily from the elderly and handicapped community is a desire to see the Transit District provide demand-responsive door-to-door handicapped transportation rather than the current accessible route service and in place of the demand-responsive transportation now available for some from local social service agencies.

Most other service comments have involved providing quicker and more direct service to major shopping facilities such as Southpark. These have been at least partly addressed by the new Southpark extension of Route 5 and the new Saturday Rock Island to Southpark route. One other service which is often requested is to the Rock Valley Medical Center, a new office complex to which many doctors have moved from their previous locations along transit routes. Unfortunately the isolated location of this new facility and the traffic patterns in the area create little hope of service to the site being available in the near future.

A third major category of comments being heard by the District primarily from non-riders, is a dissatisfaction with bus traffic along area streets. Complaints have involved noise and vibration as transit vehicles encounter flaws in the street surfaces, and safety issues relating to the size and speed of buses. A recent meeting with Moline officials indicated complaints from nearly all segments of bus routes within that community despite the District's policy of keeping buses on collector and arterial streets as much as possible, and despite a concentrated speed enforcement program on the part of city police which detected no actual instances of speeding. Similar complaints have come up at other times in various residential neighborhoods concerning local streets where one group complains about the "destruction of the neighborhood" by "empty buses", while another group made up of actual riders fights to preserve access to the transportation services on which they depend.

Possibilities for Change

At present there are no immediate prospects for additions to the RICMMTD services. Continued monitoring of the performance of various District services may result, however, in fine tuning adjustments based on minor changes in land use or ridership intensity. One such minor service adjustment may be made to the Silvis end of the District's Route 1. A new elderly housing project has been constructed along 1st Street, Silvis in an area approximately six-tenths of a mile from existing transit service. At the time the project was initially proposed, four years ago, the District had been planning to provide 15-minute headway along Route 1 through Rock Island and Moline which was expected to allow additional coverage in Silvis. The District, therefore, gave approval to the A-95 reivew of the project and indicated an intent to provide such service to the developers. With the slashing of federal assistance in recent years, however, the District has had to drop the idea of reduced headways and must provide the promised service with existing buses. Figures TDS-III-31 through TDS-III-33 show three possible methods of serving the Warren Tower facility which were presented at a public hearing January 28, 1983.

Budgetary pressures caused by uncontrolled labor cost escalation granted by federal arbitrators may result in future reductions in Rock Island County transit services. These pressures are focused on the cost-of-living adjustments based on U. S. Department of Labor quarterly announcements.

Complaints of vehicle noise, speed, and vibration are currently being addressed through stepped up indoctrination and monitoring of drivers, as well as possible technical solutions such as radial tires. Should these not prove sufficient and local communities continue to demand changes to routes to avoid complaints, portions of several routes may have to be eliminated to avoid badly maintained roadways or to significantly reduce operating speeds.

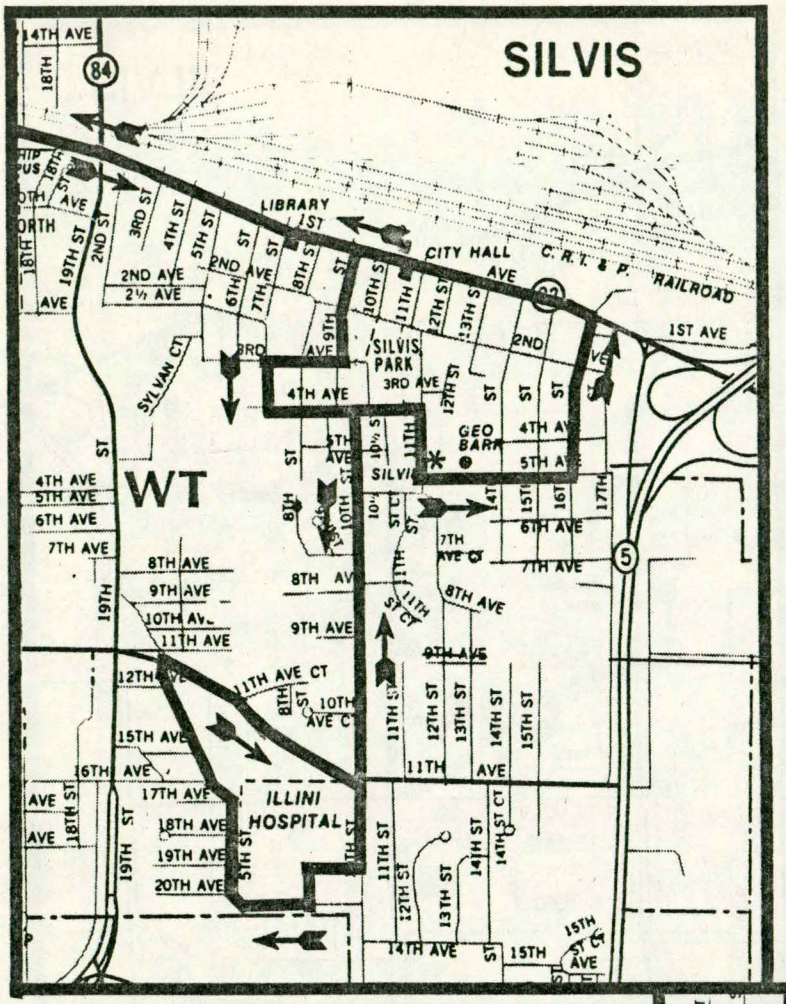


Figure TDS-III-29:
Existing routing of RICMMTD buses in Silvis with no service to Warren Tower

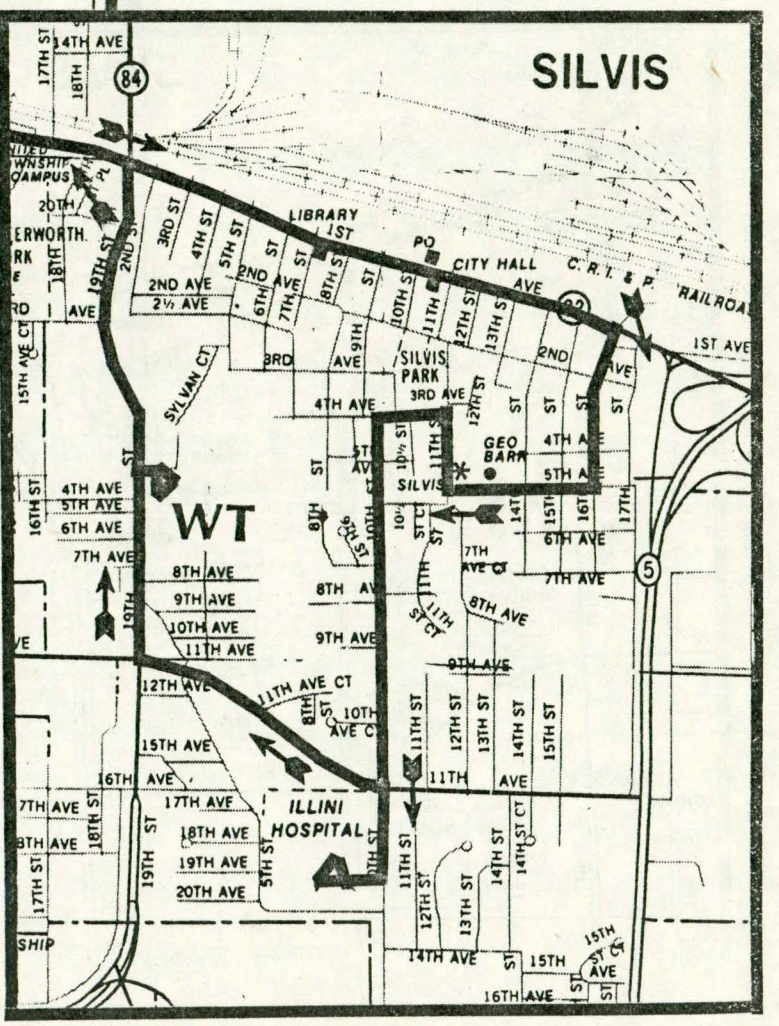


Figure TDS-III-30:
Possible alternative routing of buses through Silvis with counter-clockwise flow in large loop

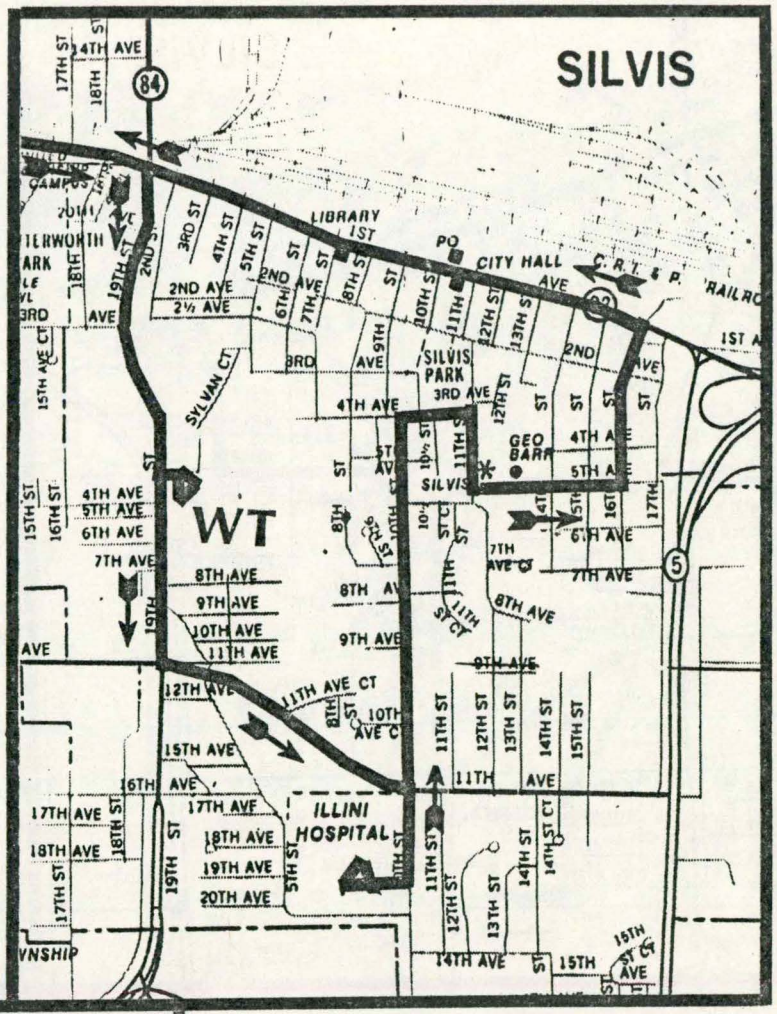


Figure TDS-III-31:
Possible alternative routing of buses through Silvis with clockwise flow in large loop

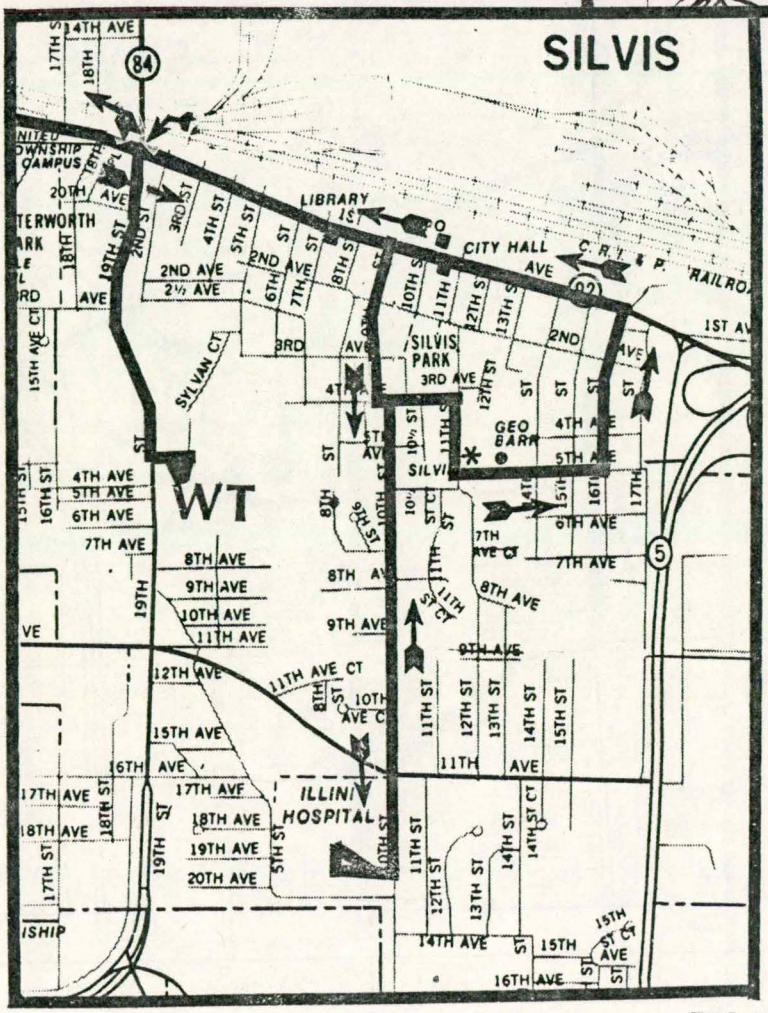


Figure TDS-III-32:
Possible alternative routing of buses through Silvis with spur service to Warren Towers on end of loop

Table TDS-III-1: Summary of Quad Cities Transit Route Performances

	Av. Daily* Unlinked Trips	% transfers	Trips per mile	Trips per hour
DAVENPORT				
1. SW Dav./3rd St.	871	23.7	1.39	17.9
2. Mercy Hospital	348	21.0	1.01	14.2
3. Northwest	177	15.0	1.36	13.9
4. Brady-Harrison	783	28.2	2.34	32.7
5. Grand Avenue	405	22.9	1.25	16.2
6. Ridgeview	102	30.7	0.48	8.2
7. Centennial Bridgeline	458	44.8	4.58	36.6
8. Arsenal	79	43.9	0.57	6.5
9. 5 Points	388	21.6	1.25	15.5
10. Crosstown	239	26.8	0.63	9.3
11. East Kimberly	172	35.2	0.50	6.8
Route Totals/Averages	4,022	27.3	1.23	16.3
BETTENDORF				
Red. Bettendorf Bridgeline	61	47.0	0.35	5.4
Gold. 18th Street	123	23.6	0.58	10.8
Blue. Central/Belmont	153	35.2	0.63	13.5
Route Totals/Averages	337	33.0	0.54	9.9
R.I.C.M.M.T.D.				
1. 4th Avenue	1444	32.9	2.12	27.9
2. Southpark	531	37.2	1.50	20.0
3. 27th Street	1241	22.1	1.95	24.2
4. Longview/Milan	1778	21.3	1.98	29.3
5. Heritage	267	28.5	0.48	9.4
6. 7th Street	483	36.4	1.21	16.5
7. Blackhawk (Sat. only)	153	35.9	0.71	8.7
8. Arsenal Weekdays only)	92	17.4	0.82	16.0
Route Totals/Averages	5,846	27.4	1.57	22.9

*Averages based on weekday and/or Saturday statistics from sample period September 10-25, 1982.

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IV. FARE ANALYSIS

Beyond the question of where and when the buses will run, one of the most important decisions in the development of the transit system is what riders will be charged for use of the system. This represents an important policy decision and there are several philosophies regarding the pricing of transit services. Whatever the reasons behind selection of a specific transit fare structure, however, there will be definite impacts upon usage of the service, the image of the system and public support for the system.

Fare Policies

Transit fares are basically a revenue generation device. They do have other effects, however, and because of this there are a number of policies or philosophies which must be considered as part of the decision-making process in choosing an appropriate transit fare structure.

Probably the foremost of these philosophies which bear upon fare structure decisions is the "user charge" concept. Basically, it can be stated that the users of any governmental service should pay for the cost of providing that service rather than having the general taxpayers bear the cost. This philosophy has been especially popular in recent political circles. It can, however, be looked at as a relative value in that it is possible to decide to collect a certain percentage of the cost of the service to be recovered through user charges or fares rather than the total cost. For instance, some systems use a standard that one-half of the cost of service be covered by farebox revenues. Others require that one-quarter of the cost be recovered from the farebox. As noted in Chapter II, both the City of Davenport and the RICMMTD have established a 25% cost recovery ratio as their intended system-wide standard.

Another philosophy affecting the determination of transit fares is that of transit as a social service. Under this concept, transit is provided primarily to meet the transportation needs of those who are considered to have no alter-

native mode of travel such as those who have low incomes or are elderly or handicapped. Services to other individuals who are able bodied or who have alternative means of travel such as their own automobiles are, under this philosophy, considered to be a luxury. Fares then are set based upon an "ability to pay". The federal government mandates some adherence to this philosophy with their requirement that all systems using federal operating assistance provide a reduced fare for elderly and handicapped during off-peak hours.

A third philosophy to be considered in setting transit fares involves the idea of transit as a remedy for urban ills. This concept relates to the benefits to the public in terms of improved air quality, reduced fuel consumption, and reduced congestion whenever automobile drivers are induced to use mass transit as an alternative travel mode. From this perspective, it is more important in terms of increased public benefit to encourage those with alternate means of travel to abandon their automobiles for city trips than it is to provide transportation for those who otherwise would not be making as many trips because of the cost. Based upon this philosophy, transit fares must be kept low across the board in order to have a competitive advantage over both the real and perceived costs of automobile travel.

A fourth philosophy concerning transit fares involves the fare itself as a market allocation device. This is based upon the marginal cost of each transit trip which depends upon the relationship between the supply of base transit service and the demand for transit service. In other words, the marginal cost of each additional rider added during periods of low ridership is very minimal, if it has been decided that the service will be provided regardless. As soon as vehicle capacities are reached, however, the marginal cost of additional transit trips increases drastically if more transit vehicles must be added. This marginal cost would then drop again as the added vehicles begin to approach capacity. If, however, fares are not set based upon a recovery of the total cost of transit trips, these extra buses, even when full, represent an additional

drain upon transit system resources or subsidies. Under this philosophy, then, fares are set based upon the demand for services, with low demand times having lower fares and high demand times having higher fares, in order to redistribute that demand and maximize utilization of a given transit service supply.

Fare Economics

Whatever the basic philosophies being utilized in formation of a transit fare structure, there are a number of basic economic principles which must be considered in examining transit fares. These deal primarily with the reaction of ridership to fares and fare levels. They apply to fares set based upon any of the above philosophies and in some cases may modify the intended results of a certain policy if not completely understood.

The first of these economic principles is that of price elasticity of demand. This deals with the decrease in demand for any particular good as price rises. With transit, this means that as transit fares are increased, in most cases, ridership will decrease, if no other factors are changed. The exact relationship between ridership changes and fare changes is known as elasticity and varies from area to area and possibly over time because of the impacts of other factors in the environment. A traditional guide used within the transit industry has been that total ridership will go down 0.3 percent for every one percent increase in transit fares. The result of this is that transit fare increases result in increased revenue despite loss of ridership.

A second economic principle which is closely related to the first is the distinction of "choice riders" versus "transit dependents". Choice riders are those who have easy access to alternate modes of travel and thus can respond to changes in transit fares by either changing the number of trips they make or merely changing the method of travel. Transit dependents, on the other hand, are those with little or no access to other modes of travel and whose only real choice in responding to changes in transit fare, therefore, is the number of

trips which will be made. It is the choice riders with their broader range of options which will respond most significantly to any change in transit fares. The mix of these two categories of riders will vary from region to region as well as from route to route within any particular transit system. This is part of the reason for the wide range of transit fare elasticities in various studies.

Another economic factor which affects ridership response to transit fares is the lack of perfect knowledge. Under most conditions, large segments of the population will be uncertain of the actual fare for transit services. This results both from a lack of adequate communication of this information and from a confusion which can be brought about by what seems to be to the conflicting data resulting from non-uniformity of the fare structures within a single market area. Until a person is confident that they understand the actual cost of transit, it is very unlikely that they will consider this as a viable alternative mode of travel.

A second example of how imperfect knowledge may affect the response of ridership to transit fares comes in the competition between transit and private automobiles for urban trips. In this case, it is a matter of perceived cost being different from the actual cost, particularly with regard to the private automobile. If an individual is not made aware of the actual cost of automobile operations as compared with the perceived daily out-of-pocket costs, then transit may seem at a competitive disadvantage, whereas, it has the advantage when compared with real auto costs. This would result in a need for even lower transit fares to attract a given number of choice riders.

Description of Existing Fares

At present the three Quad Cities urban transit systems are operating under nearly identical fare structures with regard to the primary fare categories for route service. Adult riders are charged 50¢, senior citizens and handicapped

persons are charged 25¢ per ride and transfers are free (except for those involving Davenport's Centennial Bridgeline route).

This uniformity in basic fares is extremely important for the cooperative marketing of transit services in the Quad Cities, both by reducing confusion and by allowing transit fare information to be included in joint media messages. Table TDS-IV-1 shows the complete current fare structures for each system. As can be seen the systems do differ considerably on treatment of other fare categories, such as students and children, and on their provisions for prepayment of fares.

Table TDS-IV-1: Quad Cities Transit Fares

	Bettendorf		Davenport		RICMMTD
Cash Fares	Route	Dial	Route	Dial	Route Only
Adults	50¢	$1.00	50¢	NA	50¢
Senior Citizens	25¢	50¢	25¢	50¢	25¢
Handicapped	25¢	50¢	25¢	50¢	25¢
Students	Included w/adults		Monthly pass only	NA	25¢
Child (under 5)	Free if accompanied, 25¢ if not	Free if accompanied, 50¢ if not	One free per adult, each add'l 35¢	NA	Free if accompanied
Child (5-11)	Included w/adults	Included w/adults	35¢	NA	25¢
Pre-Paid Fares					
Adult Monthly Pass	NA		$20.00		NA
Student Monthly Pass	NA		$15.00		NA
Adult Ticket/Token	7/$3.00		NA		11/$5.00
Student Ticket/Token	NA		NA		11/$2.50
Senior Citizens/Handicapped Ticket/Token	NA		NA		11/$2.50

Recent Development Chronology

In the last years of private operation of the Quad Cities public transit systems, fares were 35¢ for the Rock Island-Moline City Lines and 30¢ for the

Davenport City Lines transit. In addition, these systems charged for transfers and had additional zone fares as riders went through the service area. When public operation began, the base fare was reduced to 25¢ on both systems and the zone charges and transfers were eliminated, except for riders transferring between the two systems. Since both systems were required by the federal government to charge elderly and handicapped persons no more than half of the base fare during off-peak periods, a full-time reduced fare of 10 cents for the elderly and handicapped was established. When the City of Bettendorf started their transit system in 1975, they adopted the established 25¢ base fare but provided free fares for elderly and handicapped persons throughout the day.

In 1978, at the urging of the Iowa Department of Transportation, Bettendorf increased their fares to a 35¢ base fare for route service and 50¢ base fare on the dial-a-bus, with elderly and handicapped persons still riding free at all times. In 1980, after six years of stable transit fares among the two larger transit systems, government support began to rapidly fall behind the rate of inflation in transit costs forcing the Rock Island County Metropolitan Mass Transit District (RICMMTD) to increase their base fare to 40¢ and their reduced fares to 20¢ as of July, 1980. A suggestion to limit reduced fares to off-peak hours was not implemented.

In 1981, all three systems raised their fares, though not in unison. In April, the City of Davenport brought their adult fares up to 40¢ and their student and child fares to 20¢, while leaving their elderly and handicapped fare at 10¢ based on loud public outcry against an initial staff proposal that these groups would pay 20¢ during off-peak hours and full-fare during peak hours. In May, the RICMMTD instituted their second fare increase within a year's time, raising the base fare to 50¢ and the elderly and handicapped fares to 25¢, while eliminating reduced fares for students and children. In June, the City of Bettendorf followed the Transit District's lead with regard to the base fare, bringing this to 50¢ for route service. They also, for the first time, began

charging elderly and handicapped riders, though this fare was limited to 10¢ because of the Davenport action. Dial-A-Bus fares rose to $1.00 for adults and 25¢ for the elderly and handicapped. In November, the RICMMTD responded to a drastic loss of student ridership by reinstituting student and child fares at the 25¢ level.

In 1982, a basic uniformity was restored. As part of their overall review of the City transit operation, the City of Davenport implemented a fare increase in May. Adult fares were raised to 50¢, with elderly and handicapped fares set at 25¢ (all day) and child fares at 35¢. Reduced cash fares for students were eliminated, but a new reduced monthly pass was created for them. In June, the City of Bettendorf raised their elderly and handicapped fare to 25¢ as well, thus bringing all three systems into line on the three basic fares for adults, senior citizens, and handicapped persons.

While the cash fares were being adjusted, the three systems were also experimenting with fare prepayment schemes. In July of 1977 the RICMMTD began selling prepaid tickets. Much of the impetus was provided by Hampton Township officials who wished to use a portion of their revenue sharing funds to underwrite the bus fares of senior citizens within their jurisidiction. Prepaid fare tickets good for one ride each were seen as the solution. Two classes of tickets were created by the District, one good for all reduced fare categories and one for adult fares. Both were made available to the public with 11 tickets provided for the price of 10 fares (an approximate 9% discount). Tickets were available originally only at the District offices in Rock Island, but have since been offered for sale at all City Halls within the District. Also, all townships within the District now provide free reduced fare tickets to their elderly residents at their township offices and most also include handicapped residents.

The City of Bettendorf, when they went to a 35¢ base fare for route service in 1978, responded to citizen complaints about the awkward change requirement by

starting a program of prepaid fare tokens available at a price of 3/$1.00 (a 5% discount). Although, like the other systems, Bettendorf drivers did not make change, they could sell tokens to a rider who did not have exact change. Tokens were also available at City Hall. With the increase in base fare to 50¢ in 1981, Bettendorf Transit token prices went to 7/$3.00, which represents a 14% discount. Tokens can also be used on the dial-a-bus, with two tokens required for base fare and one for reduced fare. No prepayment provisions are currently available for the reduced fare route riders.

The City of Davenport went with a pre-paid monthly pass good for unlimited rides rather than individual prepaid trip fares. The initial program was implemented as a special project with Iowa DOT funding in FY 1980. The initial pass was priced at $7.75 with an estimated average value of $11.00 (based on 22 round-trips per month). This was a 30% discount, most of which was covered by Iowa DOT funding. The price of the pass was raised to $9.75 with the end of Iowa DOT special funding leaving about an 11% discount. As fares have increased the "Flash Pass" prices have followed suit so that the monthly adult pass is now $20.00 (a 9% discount based on 22 round-trips). In May of 1982, the City implemented a new student monthly pass to replace the reduced cash fare which had previously existed. The student pass is priced at $15.00 a month.

Performance Analysis

As noted earlier, changes in transit fares can have effects in several areas. Two of the most important of these are the total amount of passenger revenues collected and the number of rides consumed. In the face of declining federal financial support for transit, the recovery of a portion of costs from the farebox has taken on greater importance than in recent years. The number of persons served, however, is also quite important, for, as a public entity, the transit system is heavily impacted by public opinion. Fares which discourage ridership can result in resentment by those who previously rode (as well as

their families and friends). If fare increases result in fewer people on each bus, they can worsen the public's image of transit efficiency, regardless of increased revenues. If fares discourage use by "disadvantaged" persons, this may lessen support among those who promote transit as a form of "in-kind" public assistance.

It is often difficult to separate the effects of a fare increase from revenue and ridership trends caused by the national economy, energy supplies, or by changes in transit service.

The 1980 RICMMTD fare increase was one of the best examples of an isolated response. The RICMMTD did not change its services during the year prior to the fare action or during the next several months. In July 1980, fares for all riders were increased by an average of 73% (based on the ridership composition at the time of the increase). The result, after six months, was a 41% increase in monthly farebox revenues. At the same time, there was a net loss of ridership amounting to 14%. Based on the average fare increase, this represents an overall price elasticity of -0.19.

A more detailed examination of that analysis (shown in Table TDS-IV-2) shows great differences in the responses to the fare increase by different categories of riders. Children and adults showed elasticities of -0.38 and -0.34, respectively, after six months. Students showed a six-month elasticity of -0.10, while elderly and handicapped showed very little long-term response, with six-month elasticities of -0.05 and 0.00, respectively. Another important distinction was the response over time. Elderly and handicapped ridership, after an initial drop (shown in three-month figures), was recovering by the end of six months. The loss of adults, students, and children, however, showed signs of accelerating between the three-month and six-month figures. This tends to bear out the view that the elderly and handicapped are "transit dependent", having very limited alternatives to the use of transit. Students and children have also often been considered transit dependent, but this analysis would indicate

Table TDS-IV-2:
ANALYSIS OF RICMMTD FARE INCREASE
(Effective July 1, 1980)

Significance of Fare Changes

Fare Category	Prior to 7/1/80	After 7/1/80	79-80
Base (Adult)	25¢	40¢	+66.67%
Senior Citizens	10¢	20¢	+100.00%
Handicapped	10¢	20¢	+100.00%
Students	10¢	20¢	+100.00%
Children	10¢	20¢	+100.00%

Significance of Ridership Changes

Time Period	1979	1980	79-80	Net Effect of Fare Increase
		TOTAL REVENUE PASSENGERS		
April-June	410,897	435,846	+6.07%	---
July-September	390,341	355,759	-8.86%	-14.93%
July-December	871,107	802,144	-7.92%	-13.99%
		ADULT PASSENGERS		
April-June	187,155	196,053	+4.75%	---
July-September	197,819	164,639	-16.77%	-21.52%
July-December	391,230	321,568	-17.81%	-22.56%
		SENIOR CITIZENS		
April-June	68,863	69,922	+1.54%	---
July-September	74,922	70,016	-6.55%	-8.09%
July-December	148,109	142,194	-3.99%	-5.53%
		HANDICAPPED		
April-June	24,760	26,093	+5.38%	---
July-September	25,471	26,413	+3.70%	-1.68%
July-December	51,518	54,136	+5.08%	-0.30%
		STUDENTS		
April-June	104,762	115,975	+10.70%	---
July-September	61,156	65,032	+6.34%	-4.36%
July-December	224,160	225,047	+0.40%	-10.30%
		CHILDREN		
April-June	11,639	13,077	+12.36%	---
July-September	16,032	12,259	-23.53%	-35.89%
July-December	26,920	20,050	-25.52%	-37.88%

Fare Impact Analysis Methodology

Ridership for the three months prior to the fare change is compared with ridership during the same months in the preceding year. The percentage increase or decrease shown in this comparison is considered to be the prevailing ridership trend which could be expected to continue through the subsequent months if no fare change was enacted. The actual ridership in the three month and six month periods following the fare change is then compared to the equivalent periods the year before. In order to evaluate the actual impact on ridership assumably caused by the fare change, the ridership trend present before the fare change is subtracted from those found in the subsequent months, resulting in a "net impact of fare change."

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that children can respond significantly and quickly--possibly by just not making their previous trips--while students, who cannot choose to eliminate their trips, cannot respond quickly to the price increase, but over time are able to find alternatives to transit use.

These conclusions seemed to be borne out by the response to the next RICMMTD rate increase ten months later. The average fare based on ridership composition before the increase rose 61.1%. Six months afterwards, total farebox revenues were up 7.8% a month, but drastic changes were seen in ridership patterns. Ridership dropped by 28.2% for an elasticity of -0.46. Unfortunately, because the student and child fare categories were eliminated, statistical analysis of ridership response by category is not possible. The combined adult/student/child ridership 5-6 months after the increase showed a net decline of 41.3% compared to the individual numbers before. Staff observations indicated that, although there had been some loss of adult riders, the greatest part of this decline was attributable to the students. It was estimated that about 70% of the student ridership had found alternate means of getting to school. It appears that in response to the series of student fare increases (400% within one year) many parents had formed carpools to transport their children or allowed their children to purchase automobiles which they used to carpool fellow students to school. Surprisingly, although the new 50¢ per trip adult fares requested of the students added up to slightly above the monthly cost for private subscription school bus service, very few students chose this alternative.

The massive exodus of students defeated the revenue purpose of the fare increase for this rider category, as well as leaving District services greatly under-utilized. As a result, the student and child reduced fares were reinstituted in November, 1981. The adjustments made by students' families in the interim, however, were not immediately ended so that the District for the first time felt the need to promote student usage of the public transit services.

It is hard to tell how generally applicable the results of the analysis of RICMMTD rider reaction are. They took place under fairly constant conditions in terms of transit services. Other local fare increases are not so isolated. After the first Davenport increase in 1981 revenue was up 48% per month, but because the fare change followed a year of unreliable service caused by over-age equipment and was quickly followed by the acquisition of new buses, the rider response to the fares is lost in the overall resurgence of the system. Their second increase, in 1982, was followed by a complete reorganization of route services and again the response to the new fares cannot be separated from the response to service changes. The latest round of Bettendorf increases (1982) may provide a good basis for analysis once sufficient time has past to determine the trend.

The public's response to prepaid fares is also important from a financial point of view, since the transit system receives the funds and has use of them in advance of providing the services. These advance payments, if obtained in sufficient number, can provide a beneficial cash flow and help to avoid the need for short-term borrowing to meet operating expenses.

Currently the RICMMTD has the highest rate of participation in prepaid fare programs. During the two-week sample period in September for which route statistics were collected, 29.2% of the Transit District's revenue passengers used prepaid tickets. This included 26.6% of adult fare passengers and 33.6% of reduced fare passengers. The higher level of participation among reduced fare customers is probably largely due to the free distribution of tickets to elderly and handicapped residents by the local township governments. This arrangement is particularly beneficial to the District because most of the townships make one or two large purchases of tickets per year, thus supplying large cash advances for services which will be consumed over the following months.

fare, and Davenport's Bridgeline drivers would honor valid RICMMTD transfers with a 5¢ fare. The charges were maintained in lieu of any type of agreement for sharing of the riders' original fare payment between the independent governmental entities.

When the City of Bettendorf began their independent transit operation, a similar policy was instituted. The Davenport and Bettendorf systems honored each other's transfers but required a 5¢ transfer fee in addition to the valid transfer slip. In 1977, however, this practice as discontinued and Davenport and Bettendorf began to allow free transfers between their systems.

Meanwhile, during 1978 and 1979, the Centennial Bridge Commission which is responsible for maintenance of that facility, raised the tolls for vehicles using the bridge from 10¢ to 15¢ and then to 25¢ per crossing. In conjunction with these increases, in 1979 the City of Davenport redefined their additional Bridgeline charge as a fee to cover the cost of bridge tolls and began to charge the 5¢ additional fare from persons boarding with valid transfers from other Davenport bus routes as well as from those persons coming from RICMMTD buses. The RICMMTD continued its Bridgeline transfer fee based on the original philosophy, so that the result of the Davenport policy change was that persons using transit to cross from Iowa locations outside downtown Davenport to Illinois locations outside downtown Rock Island are charged 10¢ more than the normal fare, while persons traveling the opposite direction are charged only 5¢ extra.

In 1980 the City of Bettendorf initiated a transit route across the Memorial Bridge between Bettendorf and Moline. Free transfer privileges between the Bettendorf and RICMMTD systems were established at the beginning of this service.

In 1982 the City of Davenport initiated a second route crossing the Mississippi River. This route used Arsenal Island and made connections with the

Table TDS-IV-3: Analysis of Davenport Flash Pass Usage

	Adult Pass	Student Pass
Cost of pass	$20.00	$15.00
Number of passes sold	82	9
Number of unlinked trips made by passholders	5,159	263
Average number of unlinked trips per pass	62.9	29.2
Adjustment for use of pass in lieu of transfer (based on ratio of cash fares to unlinked trips by non-passholders)	0.71	---
Estimated number of linked trips made per pass	44.7	29.2
Estimated effective fare per linked trip by passholders	44.7¢	51.3¢
Estimated discount from 50¢ adult cash fare	10.6%	NA

Approximately 22.8% of Bettendorf Transit System route riders during the sample period paid for their trip with a token. Since Bettendorf's tokens are valued based on adult fares only this represents a very high rate of usage (41%) by persons in this category. One reason may be that the tokens can be purchased from drivers aboard the buses rather than having to go to a central outlet such as the transit system office. In addition, the 14.3% discount offered on Bettendorf token sales is the highest among the Quad Cities transit systems.

Aboard City of Davenport buses during the sample period, 5.5% of the trips were made with prepaid monthly passes. At the current rate of usage, the adult Flash Pass represents a 12.5% discount, while the user of student passes during the month of September actually received no discount based on their rate of usage. (See analysis in Table TDS-IV-3.) In coming months the percent of riders using prepaid passes should increase with the beginning of student pass sales at local schools. (Only nine students bought passes for the month of September when sampling was done.)

Public Attitudes and Comments

Most members of the general public and the riding public have been quite understanding and supportive of the fare increases which have taken place during 1981-82, except for the elimination of student fares in Rock Island County. They have indicated an understanding of the pressures caused by increasing costs and declining federal support, and most still indicate that they feel transit services are reasonably priced.

Many have expressed satisfaction with the convenience of 50¢ and 25¢ fares in conjunction with the three systems' exact fare policy. The change requirement had been a major complaint at the time of the 40¢ and 20¢ fares.

Some non-transit users continue to call for recovery of 100% of operating costs from the farebox. Other persons have complained about the percentage

the six months through December 31, 1982, the operating ratios of the two systems were 20.3% and 19.1% for the RICMMTD and Davenport Public Transit, respectively. The City of Bettendorf, which had a quarterly cost recovery ratio of 7%, agreed to have a portion of their Iowa DOT transit funding for FY 1983 contingent on a 5% increase in passenger revenues, compared to FY 1982. For the quarter ended in September, their passenger revenues were down 2.8% compared to the same quarter a year ago. At present these problems are seen to be more related to encouraging greater ridership through transit service adjustments and improved marketing than to any further fare adjustments.

One very real problem relating to transit fares is the lack of awareness of fares among the general public. Past surveys have shown that only one person in five is aware of transit fares. Joint transit marketing efforts in recent years have not been able to include fare information because of the three systems' variation on even basic adult, senior citizen, and handicapped fares. This obstacle has now been removed and it is hoped that inclusion of fare information in transit promotions will spur new interest among persons previously unaware of the cost advantages of public transportation.

While fares for students and children continue to vary among systems, these are considered to be much more of a local issue not affecting the areawide transit marketing. One item which does still provide some confusion is the Bridgeline transfer fee or zone fare charged by the RICMMTD and Davenport Public Transit systems in relation to the Centennial Bridgeline route between downtown Davenport and downtown Rock Island.

Before the acquisition of the Quad Cities transit operations by local government all transfers between routes had required a transfer ticket plus a 5¢ fare. When the RICMMTD and City of Davenport took over ownership all transfer charges were eliminated, except those for persons transferring between RICMMTD and Davenport buses. The only connection between the systems was the Centennial Bridgeline. RICMMTD drivers would honor valid Davenport transfers with a 5¢

increases in fares for low-income persons, particularly among the elderly who are dependent on transit for all travel and whose fares have increased by 150% or more in two years.

These conflicting comments may be expected to continue since they represent varying fare philosophies. At one extreme transit is seen as strictly another market commodity which should be provided only at the service level and price where it pays for itself, or even makes a profit equivalent to other investment opportunities. At the other extreme is the view of transit service as an "in-kind" form of public assistance to the disadvantaged. A more moderate philosophy holds that, while private individuals do benefit through use of transit and should pay a reasonable fee, there is also a myriad of public benefits produced as various groups use transit, so fares should be kept at a level that will encourage greater usage.

The discrepancy in fares between systems was previously identified by the elderly and handicapped community as a major barrier to use of public transit by many individuals who, after hearing conflicting reports of transit fare, were not confident enough of their understanding to attempt a bus ride. The variation was seen as a particular obstacle to travel across transit jurisdiction boundaries since persons, even if familiar with their own system, may hesitate to enter into areas where they are not sure of the return fares, etc. For the most part these comments have been addressed with the uniformity in basic fares obtained in 1982.

Identification of Problems

Perhaps the biggest current concern over fares is that the overall revenue results of these fares have not yet produced the cost recovery established as an objective by the systems. The City of Davenport and the Metropolitan Mass Transit District have both established as standards a revenue-to-expense ratio of 25 percent. Davenport established a specific objective for FY 1983 to improve their ratio to 24.5 percent from an FY 1982 level of 20.5 percent. For

RICMMTD buses in Moline. Both systems have decided to honor free inter-system transfers for persons using this route.

The resultant problem is that, despite general uniformity in fares among the three systems, an adult traveling through the urbanized area may end up paying 50¢, 55¢, or 60¢ for a one-way trip. The difference is not based on where he is traveling from or to, but how he selects his route. This not only prevents the use of promotions emphasizing a single fare for travel anywhere in the Quad Cities, but also makes it difficult to include any kind of general explanation of how fares do vary.

Possibilities for Change

At present no changes in the basic Quad Cities transit fares are anticipated. The general feeling is that the 50¢ adult fare is reasonable and, at least for now, represents a threshold of acceptance. With major cities' fares hovering in the 80¢-$1.00 range, many people would consider higher Quad Cities fares unjustified based on what one gets for the price.

All three systems will continue to strive for improved passenger revenues to improve on cost recovery ratios. The primary emphasis, however, will be on service and marketing improvements to bring in more passengers at the current fares.

One fare change which might be considered in support of the areawide marketing program is the elimination of transfer or zone charges in relation to the Centennial Bridgeline bus route from Davenport to Rock Island. As was noted in the earlier discussion, the original reasoning that a special additional charge is justified based on the passenger crossing from one system to another has not been retained by any system in the case of the recent inter-system connections. At the same time, an analysis of the Bridgeline performance (Table TDS-IV-8) shows that with elimination of the current zone charge, even if ridership did not increase, the level of subsidy per passenger on the Centennial

Bridgeline route would be only 37% of that required on other Davenport routes as a whole. Moreover, if elimination of the zone fare resulted in an increase in transfer ridership equal to a 3% increase in total Bridgeline ridership, the required subsidy per rider for that route would remain at today's level. Meanwhile, these new transfer riders would be creating additional fares at the point where they begin their transit trips. Elimination of the special Bridgeline charges would cost the City of Davenport about $3,200 and the RICMMTD about $2,700 annually. These losses would, however, be offset by increased revenues on other routes, if Bridgeline usage was increased just seven to ten percent.

Table TDS-IV-4: Bridgeline Analysis

	Riders/ Hour	Cost/ Hour	Cost/ Rider	Revenues/ Rider	Deficit/ Rider	Revenue/ Expense
Centennial Bridgeline w/zone fare	36.6	$28.81	$ .787	$.247	$ .540	.314
Centennial Bridgeline w/o zone fare	36.6	$28.81	$ .787	$.224	$ .563	.285
Averages for remainder of Davenport routes	15.2	$27.81	$1.830	$.319	$1.511	.174

An additional issue may arise in the near future if Reagan Administration transit funding proposals are adopted by Congress. The Administration has proposed to end the requirement that local transit systems using federal funds provide reduced fares for elderly and handicapped persons. This is offered by the Administration as one way to offset their proposed elimination of federal support of transit operations. Such a fare increase might, indeed, be expected to provide sizable revenue increases because of the low elasticity for elderly and handicapped ridership due to lack of choice. At the same time, the increased expenses and/or decreased travel opportunities would work additional hardships on these groups. The determination of whether this is a viable option for keeping transit service going in the face of reduced public funding will become a necessary local decision should this federal legislation be passed.

V. SUPPORT SERVICE ANALYSIS

A successful transit operation requires considerable behind-the-scenes support. The administrative functions such as planning, purchasing, personnel, recordkeeping, and grantsmanship bear heavily on the ultimate capability to provide acceptable service. Marketing is necessary to keep the public informed of the available services and often to boost the public's motivation toward trying public transit. Maintenance is a critical function since, obviously, bus service cannot be provided without operable rolling stock.

This chapter will discuss how these support services have been handled among the Quad Cities transit operations, highlighting any problems and areas for possible improvements.

Description of Existing Situation

The various support functions are often handled differently by the individual operators, however, enough of them are handled on a cooperative basis that the discussion will be organized on a functional basis rather than on a system-by-system basis.

Administration - The three Quad Cities transit operations all have extremely small administrative staffs. Davenport has a manager, two operations supervisors, two dispatchers and two clerical individuals available to perform some administrative functions within their Public Transit Division and shares the attentions of a director and secretary within the Department of Municipal Transportation. The RICMMTD has a part-time director, an administrative assistant, two operations supervisors, and two clerical individuals to cover the various administrative duties. The Bettendorf system has a director and an operations supervisor, plus two dispatchers.

To supplement these persons' capabilities other assistance is available in various forms. Davenport is able to call upon the finance, purchasing, legal and personnel department specialists to assist in transit issues. The

Transit District retains outside legal assistance on a contract basis and has used outside services in labor negotiations as well. Bettendorf has access to legal assistance and clerical and payroll assistance through the City and has taken advantage of a state program for assistance in preparing annual Section 15 reports to UMTA. All three systems contract for transit planning services from the Bi-State Metropolitan Planning Commission.

Ridership data is collected daily by each system using driver counts of reduced fare riders, transfers, and pass users by category, then calculating full fare ridership from farebox revenues. On-board surveillance to determine UMTA-required data on average passenger trip length and average passenger trip time is conducted on a seasonal basis for the City of Davenport and the RICMMTD by the personnel of Bi-State, under provisions of a procedural waiver received from UMTA. The City of Bettendorf has chosen to conduct their own surveillance effort using their drivers and dispatchers in order to be compatible with the Iowa DOT state-wide Uniform Data Management System (UDMS). Surveillance data for the specialized transit services provided by Great River Bend Services for the City of Davenport is performed independently by that agency as part of their total operation for use in the UDMS package. The raw data for the Davenport portion of the service is separately processed by Bi-State for incorporation in the City's annual Section 15 reports.

Tables TDS-V-1, TDS-V-2, and TDS-V-3 show the staff rosters of the City of Davenport, the RICMMTD, and the City of Bettendorf, respectively.

Marketing - Transit marketing has been an area of widely varied involvement by the three Quad Cities transit systems. Technical support has been provided by the staff of the Bi-State Metropolitan Planning Commission, mostly on a project-by-project basis. At various times, the operators have cooperated on joint marketing efforts, but most marketing work is done on an independent basis.

Currently, Bi-State is assisting the three systems in an extensive joint marketing campaign which is being funded under a special "Comprehensive TSM"

Table TDS-V-1

PERSONNEL LISTING
(See Reverse Side For Classifications, Code And Type)

AGENCY Bettendorf Transit System _____ Fy 19 82

Round All Figures To Nearest Dollar.

a Account For All Personnel By Personnel Job Title Or Classification (do not list names). List each sub-contractor separately.	b Employee Classification*	c Yearly Salary	d No. of Persons	e Union (U) Non-Union (N)	f Union Code	g Employment Status ***	h Total Yearly Salaries (c x d)	i Employers Share of the Yearly FICA/IPERS	j Yearly Fringe Benefit	k Yearly Personnel Costs (h + i + j)
Transit Manager	11	22,987	1	N	–	F	22,987			
Operations Supervisor	11	15,434	1	N	–	F	15,434			
Operators	13	12,647	2	N	–	F	25,294			
Operators	13	6,525	13	N	–	P	84,820			
Dispatcher	12	13,063	2	N	–	F	26,125			
Total Overtime	–	–					–			
Totals		1	2 19	4 U- N- 19		5	6 174,660	7 21,745	8 18,275	

3 Full-Time Equivalent Total Employees

9 Total Fringe Package (7 & 8)

10 214,680 Total Personnel Costs (6 & 7 & 8)

Table TDS-V-2

PERSONNEL LISTING

(See Reverse Side For Classifications, Code And Type)

AGENCY Davenport Public Transit — February — Fy 19 82

Round All Figures To Nearest Dollar.

a Account For All Personnel By Personnel Job Title Or Classification (do not list names). List each sub-contractor separately.	b Employee Classification*	c Yearly Salary	d No. of Persons	e Union (U) Non-Union (N)	f Union Code	g Employment Status ***	h Total Yearly Salaries (c x d)	i Employers Share of the Yearly FICA/IPERS	j Yearly Fringe Benefit	k Yearly Personnel Costs (h + i + j)
Transit Manager	11	32,750	1	N	–	F	32,750			
Operations Supervisor	11	22,037 23,732	2	N	–	F	45,769			
Operators	13	19,188	41	U	A	F	786,738			
Dispatcher	12	14,129	1	U	B	F	14,129			
Dispatcher	12	6,191	1	N	–	P	6,191			
Senior Clerk	12	13,121	1	N	–	F	13,121			
Totals	XXX	1	2 47	4 U- 42 N- 5	XXX	5	6 899,698	7	8	XXX

3 Full-Time Equivalent Total Employees

9 Total Fringe Package (7 & 8)

10 Total Personnel Costs (6 & 7 & 8)

Table TDS-V-3

PERSONNEL LISTING

(See Reverse Side For Classifications, Code And Type)

AGENCY Rock Island County Metropolitan Mass Transit District

February Fy 19 83

Round All Figures To Nearest Dollar.

a Account For All Personnel By Personnel Job Title Or Classification (do not list names). List each sub-contractor separately.	b Employee Classification*	c Yearly Salary	d No. of Persons	e Union (U) Non-Union (N)	f Union Code	g Employment Status ***	h Total Yearly Salaries (c x d)	i Employers Share of the Yearly FICA/IPERS	j Yearly Fringe Benefit	k Yearly Personnel Costs (h + i + j)
Managing Director			1	N		P	13,927			
Executive Assistant			1	N		F	19,490			
Operations Supervisor			2	N		F	52,379			
Clerk/Typists			2	N		F	28,717			
Trustees			5	U		F	6,000			
Operators			41	U	A	F	1,270,000			
			9	U	A	P	130,000			
Totals	X	1	2 61	4 U-55 N- 6	X	5	6 1,520,513	7	8	X
			3					9		10
			Full-Time Equivalent Total Employees					Total Fringe Package (7 & 8)		Total Personnel Costs (6 & 7 & 8)

grant which covers the costs of development as well as implementation of marketing strategies. Included in this special campaign are projects such as: developing and printing of an areawide pictorial transit map showing each system's bus routes along with many of the activity centers to which people may wish to travel by bus; producing and airing of television and radio spots emphasizing the usefulness of transit for all segments of the community; developing and printing a "bus user's manual" describing how one goes about scheduling a trip by bus, flagging down a coach, paying one's proper fare, making a transfer, and notifying the driver of one's desired stop, etc.; and organizing and implementing an orientation program to familiarize each system's telephone information specialists with the routes and schedules of the other two systems so that they can give out accurate information covering a complete trip within the metropolitan area.

Two other joint efforts by the transit systems have not involved direct assistance from Bi-State. One is a cooperative advertising campaign with local businesses. Originally developed by the Bettendorf Transit System, the program is now shared by all three systems. It emphasizes transit use for shopping purposes. Counter display cards are provided to the various shops and offices along the transit routes for display near cash registers or on reception desks. The transit systems also provide small symbols denoting transit access for the merchants to use in their establishments' newspaper ads. In return, the transit system periodically publishes ads directing citizens to watch for the symbols which tell them what businesses they can reach by bus. The program both increases non-riders awareness of the availability of transit service, and helps current riders to recognize the additional destinations available to them by bus. As such, the program provides an excellent supplement to the pictorial transit map which could not include all businesses along the bus routes.

An additional program involving all three transit systems has involved providing transit information tables at local malls on occasion. Originally begun

by Davenport and Bettendorf transit employees on an independent non-paid basis, recent displays have received official support and, through informal notifications between systems, have become Quad Cities-wide.

Bettendorf and the RICMMTD have also cooperated in another marketing campaign centered around the Bettendorf Bridgeline connecting Bettendorf and Moline. When the service first began, the RICMMTD utilized a portion of their radio advertising time to promote the new service which provided additional travel opportunities for Illinois bus riders as well as for Iowa residents. Within the last year Bettendorf has run a series of radio ads using the same theme and has also purchased inside advertising space aboard RICMMTD buses to promote use of the Bridgeline connection by Illinois bus riders.

Beyond these efforts, most transit marketing is system-specific. Each of the systems print their own system maps and schedules. Davenport and the RICMMTD supplement their system-wide publications with individual route maps and schedules for those not desiring the bulkier system brochures. The RICMMTD also promotes subscription commuter routes with individual route brochures and posters.

The Transit District has developed a program of "bus rider training" for residents of the many senior citizen housing projects in the Illinois Quad Cities. This includes personal appearances by transit staff with presentations covering riding techniques and pertinent information, plus a charter ride showing the facilities which can be reached along the route serving the particular housing complex and transfer points to other routes. The intent is to boost the senior citizens' confidence in their ability to find their way through the community by bus.

The RICMMTD also provides an introductory package through the area "welcome wagon" service for persons moving into the Illinois Quad Cities. Included is a route and schedule brochure and two complimentary bus tickets. They also distributed bus information packets door-to-door in many neighborhoods

after reinstituting reduced student fares, in an effort to recapture the large student ridership which was lost when such fares were eliminated.

Both Davenport and the RICMMTD have maintained an on-going program of radio promotions for transit, largely based on "free" air time received in trade for advertising sign space for local radio stations on the exteriors of buses. Such spots have been used to tie in with other advertising themes or to convey special messages of the moment. Within the last year Bettendorf has also begun a program of providing exterior advertising aboard their buses with the intent that revenues or trade-out time thus received will provide support for an on-going transit marketing program.

Maintenance - The maintenance of transit vehicles is a critical function within the transit operation. At present the local systems have quite new fleets of vehicles, but to maintain them they are forced to do their best within limits imposed by inadequate facilities. The Davenport and RICMMTD fleets are maintained at a 79-year-old facility in Davenport. The maintenance function is carried out under the jurisdiction of the Quad City Garage Policy Group (QCGPG) - a body composed of two representatives each from the Davenport City Council Public Works Committee and the RICMMTD Board of Trustees. The QCGPG currently is led by a part-time facility manager who is charged with directing the maintenance function including overseeing the operation of the existing garage and the construction of a new facility. The QCGPG operates as an independent contractor providing maintenance services to the two fleets and maintaining the garage facility. The QCGPG is not a recipient of UMTA monies. They do all maintenance work, servicing, and purchasing of fuel, lubricants, spare parts, etc., then bill the appropriate system for that portion attributable to that system's operation. Servicing costs and building maintenance are prorated based on the number of vehicles in each system's fleet. Parts, maintenance services, and fuel are directly accounted for by coach and billed that way. All accounts are maintained on a Section 15 basis for compatibility with the annual reports required of the transit systems.

Current staffing levels provide for a ratio of 0.34 mechanics per bus. This compares to an industry average of 0.40 per bus. Table TDS-V-4 shows the current staff roster for the maintenance facility.

Maintenance of Bettendorf buses is currently shared between the City garage and an Illinois auto dealership. The City's fleet has grown with the City population over the last few decades leaving the City garage inadequate to do the task of maintaining all City vehicles. Recent reorganization of garage staff has allowed the City to resume some servicing and preventive maintenance, but all major maintenance and some routine work is sent to the East Moline dealership which provides the City with a very cooperative contract maintenance relationship. Bus washing is also handled outside the City operation through a cooperative arrangement with the Bettendorf school system.

Recent Development Chronology

Each of the transit operations has seen considerable changes behind the scenes over recent years in all three areas of support services.

Administration - The organization of transit management has evolved considerably for the Cities of Davenport and Bettendorf. Staffing levels have changed for all three systems.

As recently as 1976, the Davenport transit operation was under a City Transit Authority and was kept separate from other City functions. Later that year the CTA was abolished and transit was moved into the regular City structure as the Department of Municipal Transportation. In 1978, that structure was broadened to include both the transit operation and the municipal airport operation. In 1980, the DDMT acquired two more areas of responsibility - traffic engineering and parking. Each was made a separate division within the department so that the transit system became the Public Transit Division. During this process many of the administrative functions which once were handled independently by the transit system were given to other City departments.

Table TDS-V-4

PERSONNEL LISTING

(See Reverse Side For Classifications, Code And Type)

AGENCY Quad City Garage Policy Group

Fy 19 83

Round All Figures To Nearest Dollar.

a Account For All Personnel By Personnel Job Title Or Classification (do not list names). List each sub-contractor separately.	b Employee Classification*	c Yearly Salary	d No. of Persons	e Union (U) Non-Union (N)	f Union Code	g Employment Status ***	h Total Yearly Salaries (c x d)	i Employers Share of the Yearly FICA/IPERS	j Yearly Fringe Benefit	k Yearly Personnel Costs (h + i + j)
Maintenance Administrator			1	N	–	P	20,851			
Maintenance Supervisor			3	N	–	F	48,184			
Senior Mechanics			5	U	A	F	117,603			
Mechanics			8	U	A	F	141,509			
Mechanic Trainees			3	U	A	F	61,158			
Parts Clerk			2	U	A	F	41,001			
Equip. Service Worker			6	U	A	F	108,039			
Accounting Specialist			1	U	A	F	16,500			
Secretary			1	U	A	F	14,500			
Overtime							25,000			
Shift Premiums							35,000			
Totals		1	2 30	4 U- 26 N- 4		5	6 629,385	7	8	
			3					9		10
			Full-Time Equivalent Total Employees					Total Fringe Package (7 & 8)		Total Personnel Costs (6 & 7 & 8)

This includes accounting and payroll functions which now are conducted through the finance department, and personnel administration which is handled by the personnel department.

Bettendorf transit, which began under the direct supervision of the City Clerk, is now organized as a separate City department under the direction of a Mass Transit Director, though the operation is still closely tied to the City Administrator's office with which they share clerical and accounting services.

Within the last two years both Davenport and the RICMMTD have lost administrative positions due to budgetary constraints. In Davenport, the position of assistant to the director of transportation was eliminated. This position had been responsible for grant writing and adminstration as well as for in-house transit planning and for liaison with the regional planning agency. The RICMMTD recently eliminated the position of assistant manager. The position had involved considerable grantsmanship, planning, and public relation responsibilities. With the loss of these positions, other staff have had to pick up some of the responsibilities while other capabilities have been lost.

Marketing - Much of the current activity in the area of transit marketing is fairly recent. The RICMMTD has been somewhat more active in the past, but this has been largely determined by the varying conditions of the transit fleets. The City of Davenport and the City of Bettendorf went through periods of unreliable service due to fleet problems during which it would have been counter-productive to encourage people to try the bus as a travel alternative. With the recent upgrading of all transit fleets there is much more support for marketing transit as a viable mode of travel.

The RICMMTD began publication of a system-wide route map in 1975, periodically providing updates as services changed. Davenport first published a system-wide map in 1978 and Bettendorf published one after expanding to three routes in late 1980. Both the RICMMTD and Davenport included insets showing Quad Cities bus routes and all three included telephone numbers to call for information on the other systems' services.

The RICMMTD has also conducted newspaper ad campaigns at various times, sometimes emphasizing where one can go by bus, sometimes just highlighting special features such as their timed transfers. All three systems have had system route maps published in local papers when system-wide changes occurred.

As noted earlier the RICMMTD and City of Davenport have from the initiation of public service made use of trade-out radio advertising time.

Maintenance - The primary development in the field of transit maintenance has been the creation of the Quad City Garage Policy Group to oversee operation of the new garage now under construction. Soon after the Policy Group was created, it was given control of the existing garage as well. The expansion of the garage workforce and the upgrading of garage equipment, along with acquisition of some new rolling stock, has combined to greatly increase service reliability for both the RICMMTD and Davenport bus systems.

The Garage Policy Group has undergone administrative staff cuts along with the City and Transit District. The GPG originally employed a full-time facility manager but has been cut-back to a part-time position, shared with either of the participating transit systems for the time being.

In Bettendorf, the maintenance function has long been a problem. For several years, the over-worked City garage has not been able to keep up with routine servicing and maintenance, let alone major problems. During this period both servicing (oil changes, lubes, tune-ups, etc.) and maintenance operations were contracted out. Recently, a reorganization of garage staff has somewhat increased the capacity of the facility, allowing the City to resume servicing and much of the routine preventive maintenance work, but leaving some routine maintenance and all major maintenance to outside contractors.

Possibilities for Change

Generally the area of transit support services has somewhat more room for flexibility than many of the other areas analyzed, since changes can be made in

smaller increments than say in adding new buses for more service or increasing or decreasing system fares.

Administration - One real possibility under the new legislative language contained in the federal Surface Transportation Act of 1982 is for an expansion of in-house planning capabilities using block grant funds. As staff levels dropped due to budgetary constraints, much local planning responsibility was forced on individuals already heavily burdened with operations responsibilities or was lost altogether. Despite increased reliance on Bi-State's transportation planning assistance some activities have been reduced. Also, there is considerable planning-related work which has always been treated as simply part of operations, which, with a clearly defined in-house transit planning program, could be eligible for 80-20 planning funds under the new Section 9 block grant program.

Expanded use of computers for processing of route performance data should serve to free up more staff time for operations responsibilities as well as expanding the planning capabilities of any planning staff. The computer programs now being developed by the City of Davenport and the Garage Policy Group under a Section 8 grant passed through by Bi-State will provide a major start on this. Present plans to install computer hardware at the new maintenance facility will allow further development of this capability as well as giving word-processing capability for the transit administrations of Davenport and the RICMMTD.

A special project has been proposed to convert the day-to-day accounting system used by the Bettendorf Transit System to the Section 15 format for greater internal consistency and to simplify the process of required annual UDMS and Section 15 reporting and audits.

Recent studies have investigated the feasibility of consolidating Quad Cities transit operations into a single agency. At present it was found that wage differentials make this undesirable due to the cost to equalize wages. As

time goes on, however, it is anticipated that wage rates will converge and the feasibility of such a merger will increase.

Marketing - With the completion of the areawide pictorial transit map, it is anticipated that the artwork may be utilized by the individual transit systems in their next system schedule brochures. The radio and television spots being produced for use under the comprehensive TSM grant will also remain available for use by the individual transit operators with their own "tags" on either a paid or a public service announcement basis.

Additional Bi-State assistance on joint marketing projects is expected during the coming year, possibly through a special technical studies grant.

Additional cooperative advertising projects involving transit and the business community should be pursued. This may include private sponsorship of transit information publications; "ride home free" promotions; or subsidized subscription commuter services for employees, as well as continuation of the "Shop by Bus" campaign.

Maintenance - Major improvements in the maintenance functions for both the Davenport/RICMMTD fleets and the Bettendorf fleet are primarily dependent upon facility improvements discussed in more detail in the next chapter.

The Garage Policy Group may go back to a full-time facility manager when the new transit maintenance facility in Rock Island is brought on-line later this year. Many management improvements are anticipated to take advantage of the improved facilities for training and inventory, etc.

For Bettendorf the greatest chance of improvement in the maintenance function lies with the plans for a new City garage. Other possibilities for change might include cooperation with the Quad City Transit Maintenance Facility for outside maintenance, although increased contact of this sort might lead to labor tensions between the non-union Bettendorf Transit System and the union drivers and mechanics at the maintenance facility.

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VI - EQUIPMENT AND FACILITY ANALYSIS

The success of a transit operation can be vitally affected by the quality of its capital stock. The best designed routes and schedules can be nearly worthless if vehicles cannot be kept in reliable service due to the age of the transit fleet or the capabilities of the maintenance facilities. Marketing campaigns to increase public awareness of transit and the public image of the service must be supported by adequate signing of bus routes and by having presentable buses. A bus system can also show that they care about the passengers' needs, and possibly show the integration of public transit with other community activities, through the provision of passenger waiting conveniences at various points along their bus routes.

This chapter will examine the current status of transit capital stock in the Quad Cities. It will discuss how this point was reached and what problems and opportunities are seen for the future.

Description of the Existing Situation

Revenue Vehicles - The Quad Cities transit fleet is quite diverse, reflecting the varying needs of the three different transit systems. Generally, however, the fleets are quite new and are, for the most part, accessible to handicapped persons.

The Rock Island County Metropolitan Mass Transit District maintains the largest active fleet with 32 vehicles. Because the system faces extremely heavy peak loading, the bulk of their fleet is 40' General Motors RTS-IV's, equipped with wheelchair lifts and kneeling entries, purchased in 1981. Other vehicles include 35' General Motors RTS-II's with lifts and kneeling features, purchased in 1978, and 35' General Motors "New Look" coaches purchased in 1976. The average seated capacity is 42.8 passengers. The average vehicle age is 2.9 years. The spare ratio at peak hour is 18%.

The RICMMTD also maintains an "energy reserve" fleet of 18 vehicles. These are all 30' Twin Coaches with an individual seated capacity of 31 passengers. They have been retired from active service, but are held for possible future use in case of an energy shortage.

The City of Davenport operates 28 vehicles in its active fleet. The majority of these ar 30' TMC "Citicruisers," most with wheelchair lifts, purchased in 1980 and 1981. The remainder are 35' Amercian Motors Generals purchased in 1977. The average seated capacity is 33.9 passengers per vehicle. The average vehicle age is 2.8 years. The spare ratio at peak hour is 47%.

The City of Bettendorf operates with an active fleet of seven vehicles. The primary vehicles are 17' and 22' Wayne Transettes and "XT's", with wheelchair lifts, purchased in 1979. The remaining vehicles are a 1978 Ford van and a 1976 Dodge van. The average capacity is 13.7 seated passengers. The average vehicle age is 4.1 years. The peak hour spare ratio is 75%.

A detailed listing of the revenue vehicles in the Quad Cities transit fleet and their equipment is shown in Table TDS-VI-1.

Revenue Vehicles Equipment - All Quad Cities transit buses are air-conditioned and equipped with fareboxes and radios. As noted earlier, most are wheelchair lift-equipped and some also have air-suspension systems designed to allow the entry to "kneel" so that those persons with difficulty climbing stairs can enter more easily.

The three systems differ somewhat in how they handle radio communications. The City of Davenport has a "closed" communications system so that all messages between buses must go through a dispatcher. The RICMMTD, with its emphasis on no-wait transfers at various points throughout the service area, has implemented an "open" radio system which allows the individual drivers to contact each other and verify locations and estimated arrival times as well as whether there are passengers wishing to transfer. The District thereby avoids the cost of dispatchers since office staff can monitor the ongoing calls and make any

Table TDS-VI-1: Revenue Vehicle Inventory

No. of Units	Make and Model	Yr. of Mfr.	Seated Cap.	Standing Cap.	Total Cap.	Handi. Access.	Equipment
			City of Bettendorf				
1	Dodge	1976	15	0	15	No	Upholstered seats 2-way radio
1	Ford	1978	12	0	12	No	Upholstered seats 2-way radio
3	Wayne Transette	1979	13	6	19	Yes	Upholstered seats air-conditioning farebox 2-way radio wheelchair lift and restraints
2	Wayne X-T	1979	15	8	23	Yes	Upholstered seats air-conditioning farebox 2-way radio wheelchair lift and restraints
			City of Davenport				
8	American Motors General	1977	43	21	64	No	Non-Upholstered seats air conditioning mech. fareboxes mech. destination sign 2-way radio
2	TMC Citicruiser	1980	31	15	46	No	Upholstered seats air conditioning mech. fareboxes mech. dest. sign 2-way radio
3	TMC Citicruiser	1980	31	15	46	Yes	Upholstered seats air conditioning mech. fareboxes mech. dest. sign 2-way radio wheelchair lifts and restraints
15	TMC Citicruiser	1981	30	15	45	Yes	Non-upholstered seats air conditioning electronic farebox electronic dest. sign 2-way radio wheelchair lift and restraints
			RICMMTD				
5	General Motors "New Look"	1976	44	22	66	No	Non-upholstered seats air conditioning electric farebox mech. dest. sign 2-way radio
7	General Motors RTS-II	1978	33	15	48	Yes	Non-upholstered seats air conditioning electronic farebox mech. dest. sign 2-way radio wheelchair lift and restraints
20	General Motors RTS-VI	1981	46	23	69	Yes	Non-upholstered seats air conditioning electronic farebox mech. dest. sign 2-way radio wheelchair lift and restraints

emergency contacts to points outside the system. The Bettendorf system utilizes an "open" system as well with drivers verifying their own transfers, but also maintains a dispatching function for its Dial-A-Bus operation. The dispatchers are also called upon to record Section 15 surveillance data.

Auxillary Vehicles - The City of Davenport and the RICMMTD maintain administrative/supervisory vehicles for their transit operations. The Quad Cities Garage Policy Group (QCGPG) operates both maintenance/service vehicles and administrative/supervisory vehicles in their role as transit maintenance provider for the two larger systems. The City of Bettendorf does not operate either supervisory or maintenance vehicles exclusively for its transit operation. (Bettendorf uses back-up buses for supervisory activities and city "pool" cars for administrative travel.)

The RICMMTD non-revenue vehicles include a manager's automobile (1978 Ford LTD, 82,000+ miles), an operations supervior's automobile (1976 Chevrolet, 85,000+ miles), and an operation supervisor's van (1980 Ford, 27,000 miles). The van has proven quite valuable for customer relations. In the case of serious road calls, the operations supervisor can reach the scene quickly and deliver passengers to their destinations without major delays.

The City of Davenport's non-revenue fleet includes a manager's automobile (1978 Chevrolet, 33,000+ miles), and an operations supervisor's automobile (1980 Dodge, 96,000+ miles). A second supervisor's vehicle was retired with 86,000+ miles recently, but has not yet been replaced.

The Garage Policy Group's non-revenue vehicles include the following:

1974 Dodge Pick-up (Bad Condition)
1974 Dodge 4 x 4 Pick-up (Bad Condition)
1983 Service Vehicle (New)

Passenger Facilities - Each of the Quad Cities transit systems has been active in providing bus route signs to delineate their routes for the convenience of members of the public, and in providing passenger waiting shelters at major loading points. A primary emphasis for shelter placement has been to

stops which serve housing facilities for the elderly. Industrial sites are also given high consideration to provide increased visibility of the transit ride-sharing option for the work trip. Generally, sites are provided with shelters based on the number of actual or potential loadings at a bus stop (with emphasis again on elderly or handicapped usage) or the need for riders to wait between buses at a transfer point, and the lack of natural shelter at the location. None of the systems provide bus stop benchs, though a private advertising firm does provide such a service in the Illinois Quad Cities. Benchs are placed primarily based on the volume of automobile traffic past a location, though the RICMMTD does at times suggest placements.

The RICMMTD has the largest number of signs and shelters. The large number of signs involved is due to the wide spread nature of the district. An exact count of signs currently in the field is not available but 480 signs have been placed throughout the five-city service area and it is estimated that approximately 60% remain in place. This would come to two signs per route mile. Although bus drivers can stop at any corner to pick up passengers who flag them down along the route, the signs help to make the public aware of the route location and are used to specifically designate non-standard (non-intersection) bus stop locations. The large number of shelters placed by the Transit District is based on their aggressive stance with regard to passenger facilities which in turn relates to their commitment to non-segregated fixed-route transportation for elderly and handicapped individuals, rather than the more expensive demand-responsive substitute service. The numbers also reflect the aggressive posture of the State of Illinois and the local Illinois communities in securing modern housing faclities for their elderly residents. With the cooperation of the Bi-State Metropolitan Planning Commission, through their regional A-95 review process for federally assisted projects, major housing projects for senior citizens and handicapped persons have been directed to the vicinity of the existing bus routes. The Transit District has followed up by providing waiting shelters

at the nearest bus stop for the convenience of the project residents. At present the District has 53 shelters placed throughout its service area plus two architectural-type shelters at its downtown Rock Island terminal/transfer facility. A listing of the shelter locations, the nature of the activity centers served, and an evaluation of the wheelchair accessibility of each shelter is provided in Table TDS-VI-2.

The City of Davenport, in conjunction with their recent redesign of route transit services, placed 300 new bus stop signs along their eleven new routes (two per route mile). Like the Transit District, the City buses will stop at intersections without bus stop signs, but the signs are used to mark the routes and special stop locations. The City maintains 13 passenger shelters for the convenience of the riding public including one at each of the two senior citizen housing projects in the City. The low number of elderly-oriented shelter placements is due to a very different state policy toward the elderly. Until recently the State of Iowa opposed the concentration of elderly individuals in specialized housing, supporting instead a policy of keeping these individuals dispersed in their homes. The result was that elderly persons could not be as easily served by fixed-route transit and Iowa communities were forced to implement more expensive demand-responsive services. Since this state policy has changed to a support of elderly housing projects in the last couple years, every effort is being made to see senior citizen housing built where it can be conveniently served by the more cost effective fixed-route transit services. Table TDS-VI-2 provides the details of shelter locations for the City.

The Bettendorf Transit System has the most concentrated bus stop sign placement policy. The BTS has 73 signs or three per route mile. Most intersections and special stops along each route within the City are marked and numbered. (The numbering is used for Section 15 ridership surveillance purposes.) Drivers are allowed to pick up persons at safe non-marked locations, however, these instances are relatively few. The BTS also, within the last year,

Table TDS-VI-2: Transit Passenger Shelter Inventory and Wheelchair Access Analysis

Location	Structural Accessibility	Access to Buses	Access to Sidewalk	Sidewalk/ Crosswalk Ramping	Access to Activity Center Served
Bettendorf Shelters					
State St. - 17th St Bettendorf Southwest Corner	Yes	Yes	Yes	Yes	Yes (City Hall)
Maplecrest Road Bettendorf Across from Luthor Manor	Yes	Yes	NA	Yes	Yes (Elderly Housing Project)
18th St. - Tech Drive Bettendorf Northeast Corner	Yes	Yes	Yes	Yes	Yes (Elderly Housing Project) Yes (Public Library)
29th St. between Camden & Cambridge Bettendorf	Yes	Yes	Yes	Yes	Yes (Apartment Complex)
Duck Creek Plaza Bettendorf Peterson/Younkers Court	Yes	Yes	NA	NA	Yes (shopping center)
Davenport Shelters					
2nd St. - Main Davenport Northwest Corner	Yes	Yes	Yes	Yes	Yes (Davenport CBD)
3400 Block Spring St. Davenport Southwest Corner	Yes	Yes	Yes	Yes	Yes (Elderly Housing Project Medical Clinic)
2nd St. - Gaines Davenport Northeast Corner	Yes	Yes	Yes	No	Yes (YMCA)
3rd St. - Perry (4 shelters) Davenport Northwest Corner	Yes	Yes	Yes	Some	Yes (Davenport CBD)
Rusholme - Bridge Davenport Northeast Corner	Yes	Yes	Yes	Yes	Yes (Hospital)
Oneida - 10th St. Davenport Southwest Corner	Yes	Yes	Yes	No	Yes (Nursing Home)
Brady - 10th St. Davenport Northeast Corner	Yes	Yes	Yes	No	No (College)
3rd St. - Scott Davenport Southwest Corner	Yes	Yes	Yes	No	No (Elderly Housing Project)
38th St. Pl. - Marquette Davenport Northwest Corner	Yes	Yes	NA	NA	Yes (Hospital, Residential)
Brady - 2nd St. Davenport Northeast Corner	Yes	Yes	Yes	Yes	Yes (Handicapped Residential Facility
RICMMTD Shelters					
16th to 17t St. - 3rd Ave. Rock Island	Yes	Yes	Yes	Most	Yes (Rock Island CBD, Government Offices)
16th St. - 3rd Ave. Rock Island Northeast Corner	Yes	Yes	Yes	Most	Yes (Rock Island CBD, Government Offices)

Table TDS-VI-2
(continued)

Location	Structural Accessibility	Access to Buses	Access to Sidewalk	Sidewalk/ Crosswalk Ramping	Access to Activity Center Served
5th Ave. - 15th St. Moline Southwest Corner	Yes	Yes	Yes	Yes	Yes (Moline CBD)
5th Ave. - 16th St. Moline Mid-block North side	Yes	Yes	Yes	Yes	Yes (Moline CBD)
5th Ave. - 17th St. Moline Northeast Corner	Yes	Yes	Yes	Yes	Yes (Moline CBD)
5th Ave. - 17th St. Moline Southwest Corner	Yes	Yes	Yes	Yes	Yes (Moline CBD)
5th Ave. - 17th to 18th St. Moline Mid-block North Side	Yes	Yes	Yes	Yes	Yes (Moline CBD)
17th St. - 3rd Ave. Rock Island Northeast Corner	Yes	Yes	Yes	Yes	Yes (Rock Island CBD)
3rd Ave. - 19th to 20th St. Rock Island Mid-block South side	Yes	Yes	Yes	No	Yes (Intercity Bus Terminal)
25th Ave. - 17th St. Rock Island Southeast Corner	Yes	Yes	Yes	No	No (High School)
23rd Ave. - 36th St. Moline Southwest Corner	Yes	Yes	Yes	Some	Yes (Shopping center, medical office building)
3rd Ave./Approx. 13th St. Moline South side	Yes	Yes	Yes	No	No (John Deere Plow/Planter)
20th St. - 3rd Ave. Rock Island Northwest Corner	Yes	Yes	Yes	No	Yes (Post Office) No (Intercity Bus Terminal)
19th Ave. - 2nd St. Moline Southwest Corner	Yes	No	No	No	No (City Line Plaza)
19th St. - Morton Drive East Moline Southeast Corner	Yes	Yes	Yes	No	Yes (UAW Hall)
8th St. - 15th Ave. East Moline Northeast Corner	Yes	Yes	Yes	No	Some (East Moline CBD)
Kennedy Drive - 30th Ave. East Moline Northwest Corner	Yes	Yes	Yes	No	Some (Residential)
Kennedy Drive - 41st St. East Moline Southwest Corner	Yes	No	Yes	No	No (Kennedy Square Shopping Center)
1st Ave. - 9th St. Silvis Northeast Corner	Yes	Yes	Yes	No	Little (Silvis CBD)
Blackhawk Rd. - Frontage Rd. at Venture Store Moline	Yes	No	Yes	No	No (Venture)
5th St. at 3rd Ave. Milan Southeast Corner	Yes	No	Yes	No	Yes (Elderly Housing Project)

Table TDS-VI-2
(continued)

Location	Structural Accessibility	Access to Buses	Access to Sidewalk	Sidewalk/ Crosswalk Ramping	Access to Activity Center Served
41st St. - 12th Ave. Moline Northeast Corner	Yes	Yes	Yes	No	Yes (Housing Project)
16th Ave. - 7th St. Moline Northeast Corner	Yes	Yes	Yes	Some	Yes (Medical Offices)
W. 11th St. - 8th Ave. Milan Southeast Corner	Yes	No	NA	NA	None (Residential)
W. 4th St. - Andalusia Rd. Milan Southwest Corner	Yes	No	NA	NA	No (Shopping Center)
U.S. 67 - Andalusia Rd. Milan Southwest Corner	Yes	No	NA	NA	No (Bank, Cinemas)
U.S. 67 - 2nd Ave. W Milan Northwest Corner	Yes	Yes	No	No	No (Mixed Residential, Shopping)
9th St. - Approx. 32nd Ave. Rock Island West Side of Street	Yes	Yes	Yes	Some	Yes (Elderly Housing Project)
11th St. - 16th Ave. Rock Island Southeast Corner	Yes	No	No	No	No (Shopping Center, Residential)
5th St. - 16th Ave. Rock Island Southeast Corner	Yes	No	No	No	No (Housing Project)
5th St. - 12th Ave. Rock Island Southeast Corner	Yes	No	No	No	No (Housing Project)
9th St. - 7th Ave. Rock Island Northeast Corner	Yes	Yes	Yes	Yes	No (Community Center, Library, Senior Meal Site)
9th Ave. - 20th St. Rock Island Northeast Corner	Yes	Yes	Yes	Yes	Yes (Residential)
30th St. - 9th Ave. Rock Island Northwest Corner	Yes	Yes	Yes	No	No (Nursing Home)
11th Ave. - 7th St. Moline Southeast Corner	Yes	Yes	Yes	No	No (Hospitals) Yes (Residential)
11th Ave. - 7th St. Moline Northeast Corner	Yes	Yes	Yes	No	No (Hospitals)
Blackhawk College Drive Moline At Administration Building	Yes	No	No	No	No (College)
70th St. - 34th Ave. Moline Southeast Corner	Yes	No	Yes	?	Yes (Apartments)
41st St. - 31st Ave. Moline Northeast Corner	Yes	No	No	Some	No (Library)
53rd St. - 20th Ave. Moline East Side	Yes	No	No	Some	No (YMCA)

Table TDS-VI-2
(continued)

Location	Structural Accessibility	Access to Buses	Access to Sidewalk	Sidewalk/ Crosswalk Ramping	Access to Activity Center Served
23rd Ave. - Approx. 52nd St. Moline South Side	Yes	No	No	No	No (Shopping Center)
5th Ave. - Approx. 32nd St. Moline South Side	Yes	Yes	Yes	No	Yes (Swimming Pool, Park)
4th Ave. - Approx. 32nd St. Moline South Side	Yes	No	Yes	No	No (Swimming Pool, Park)
13th St. - 41st Ave. East Moline Northeast Corner	Yes	No	NA	NA	No (High School, Swimming Pool, Shopping Center)
10th St. - 11th Ave. Silvis Southwest Corner	Yes	Yes	Yes	No	No (Elderly Housing Project)
16th St. - 1st Ave. Silvis Southeast Corner	Yes	No	NA	NA	No (Park, Residential)
8th St. - 15th Ave. East Moline Southwest Corner	Yes	Yes	Yes	No	Some (East Moline CBD)
23rd Ave. - 36th St. Moline Northwest Corner	Yes	No	No	No	No (Medical Office Building)
Colona House East Moline Southeast Entrance	Yes	Yes	Yes	NA	Yes (Elderly Housing Project)
30th St. - 18th Ave. Rock Island Southwest Corner	Yes	Yes	Yes	Yes	Yes (Bank, Grocery)

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placed five passenger shelters throughout their City, including sites serving the two elderly housing projects in their community. (See Table TDS-VI-2.)

Office Facilities - The three transit systems and the Garage Policy Group maintain offices at five sites.

The Bettendorf Transit System is based at City Hall where the manager shares clerical support with the City's general administration. Their dispatching and operations supervision functions are housed next door in the street department annex.

The City of Davenport handles transit affairs through its Department of Municipal Transportation offices at City Hall, while Public Transit Division operations are housed at the old bus barn on Davenport's River Drive.

The RICMMTD rents its own office space in downtown Rock Island and the Garage Policy Group shares the City of Davneport's office facilities at the bus garage.

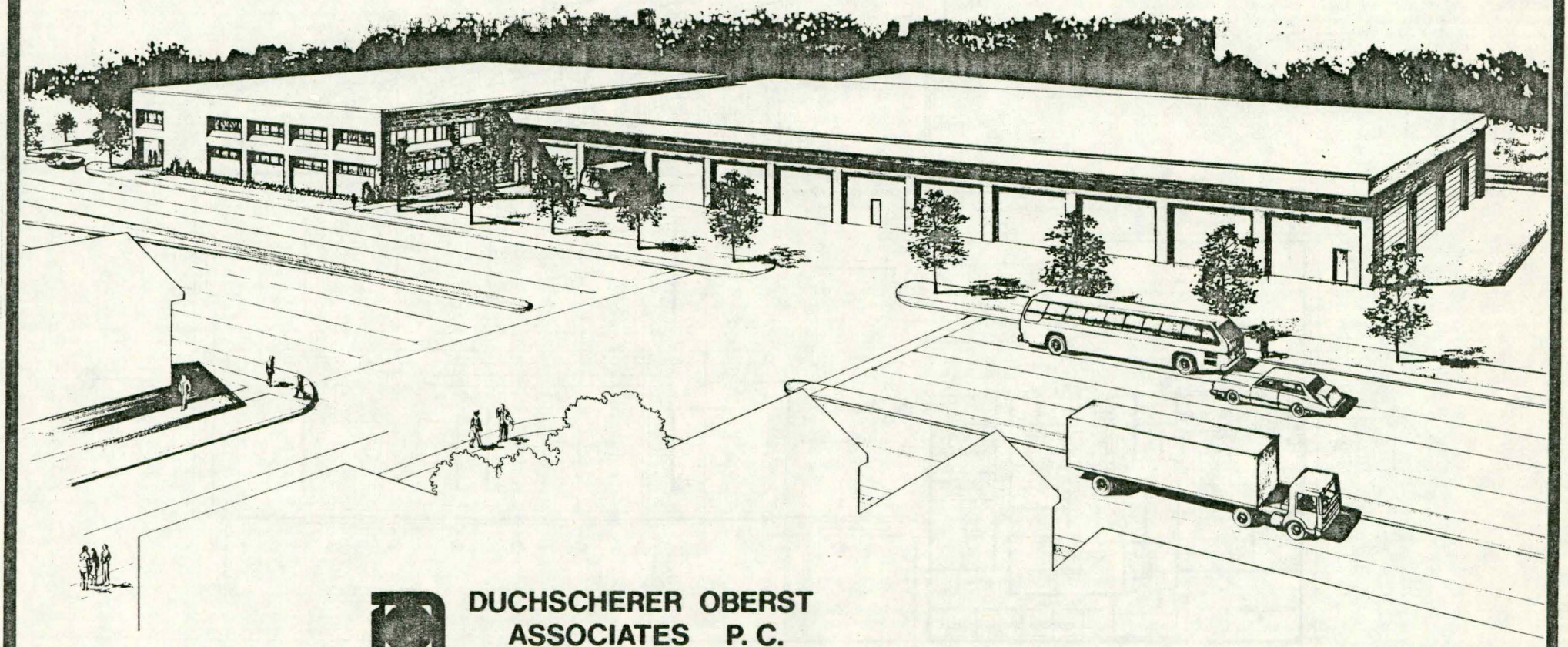
Storage/Maintenance Facilities - Existing transit storage and maintenance facilities in the Quad Cities are not impressive. The City of Bettendorf has no "facility". Their maintenance and servicing is contracted out due to the cramped conditions of the public works garage and the vehicles are stored in the parking lot around City Hall. The City of Davenport and the RICMMTD currently share the bus garage purchased by the City in 1974 from Davenport City Lines. The garage occupies about 34,500 square feet on a site along the banks of the Mississippi River at 1019 East River Drive, Davenport. The structure was constructed in four sections - the center section was constructed as a trolley barn in 1904, the east section was added in 1936 and the west portions in 1944 and 1950. The facility is physically deteriorated and the layout and equipment are not optimal for a bus maintenance operation. The building is also cramped for the storage of the 60 vehicles now in the two systems' active fleets.

Facilities Currently Under Construction - Two major new transit facilities are presently in progress in the Quad Cities. One is a new transit office/

maintenance/storage facility to serve the combined Davenport/RICMMTD fleets on a 3.7 acre site at 30th Street and 5th Avenue in Rock Island. Office space will be included for both the City of Davenport and the Transit District as well as for the Quad City Garage Policy Group which will run the facility. (This will replace the current bus barn office used by the City's Public Transit Division and the Garage Policy Group and the rented offices now used by the RICMMTD.) The new garage will provide a modern well-equipped maintenance shop, efficient servicing arrangement, and adequate storage for 75 buses. (See Figures TDS-VI-1 through TDS-VI-2 for design and sketchs of the proposed facility.)

The second facility now in progress is a downtown transit terminal/transfer facility for the Davenport central business district. This project is one aspect of a much larger "Ground Transportation Center" which will also include an intercity bus terminal, a hotel, a downtown campus for Scott Community College, and various offices. The total facility will occupy a site about four and one-half blocks from the current downtown transfer location and cover a square block area between 2nd Street and River Drive, Harrison Street and Ripley Street with the transit terminal area facing River Drive. Buses and passengers will wait in a covered area off-street so as to not disrupt downtown traffic flow. (See Figures TDS-VI-3 to TDS-VI-4 for design and sketchs of the proposed facility.)

Figure TDS-VI-1:



DUCHSCHERER OBERST
ASSOCIATES P. C.
ENGINEERS·ARCHITECTS·PLANNERS

QUAD CITY TRANSIT MAINTENANCE FACILITY

Artist's Conception - Preliminary Design

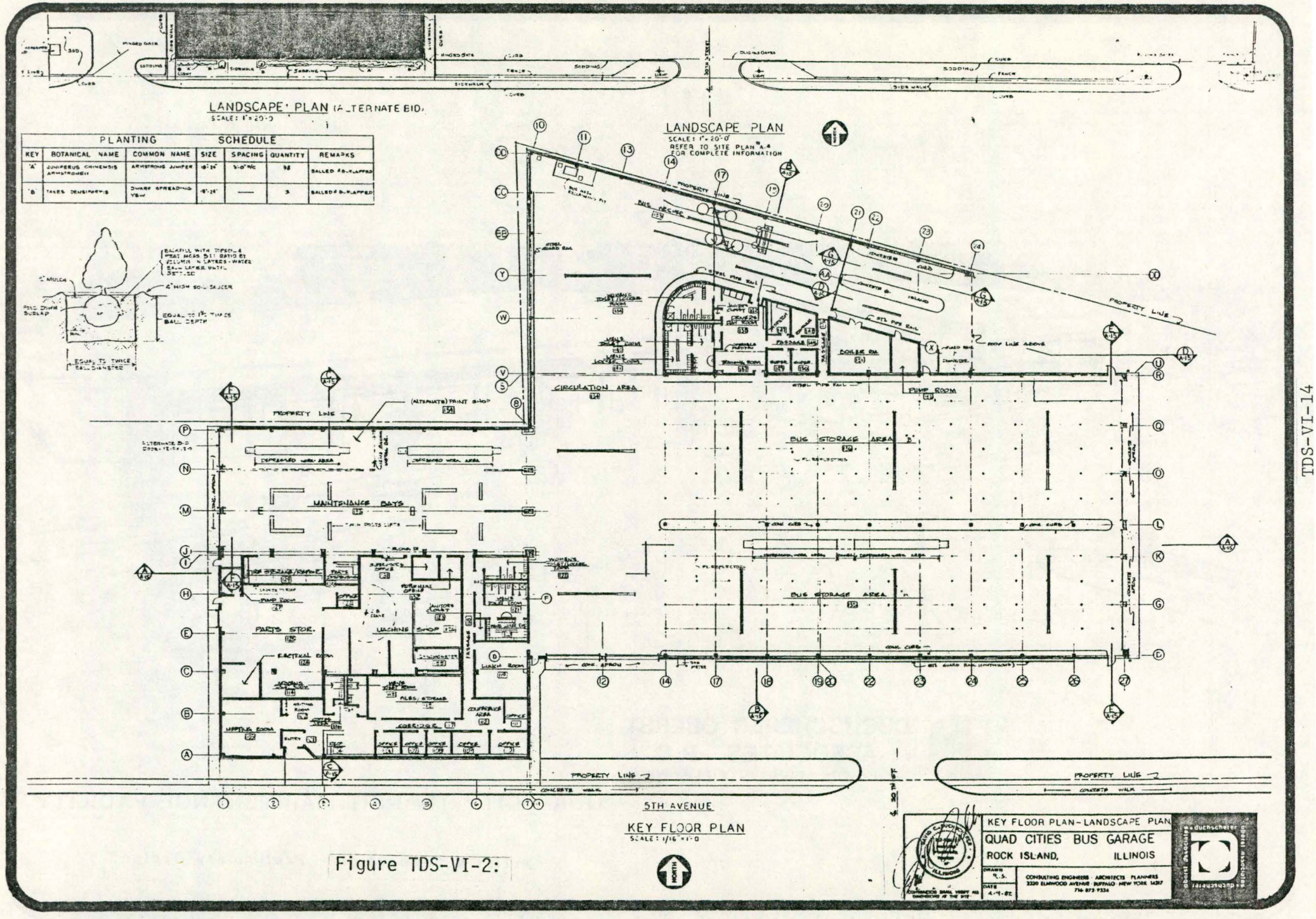


Figure TDS-VI-2:

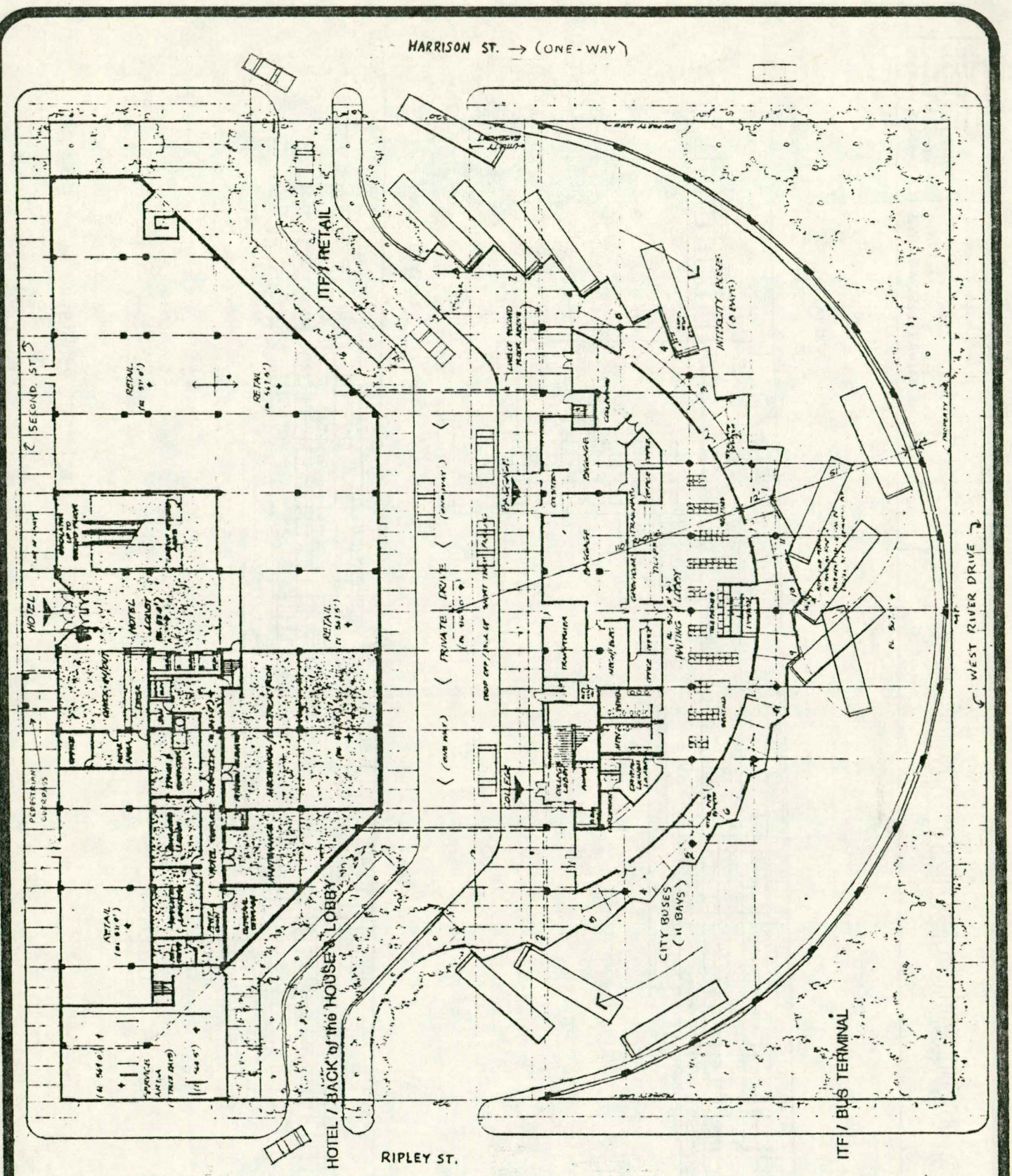


Figure TDS-VI-3:

Solomon, Cordwell, Buenz & Associates inc.
Architects and Planners
444 WEST GRANT PLACE
CHICAGO, ILLINOIS 60614
312 348-0300

GROUND FLOOR & MEZZANINE PLANS
SCALE 1 16" = 1'-0"

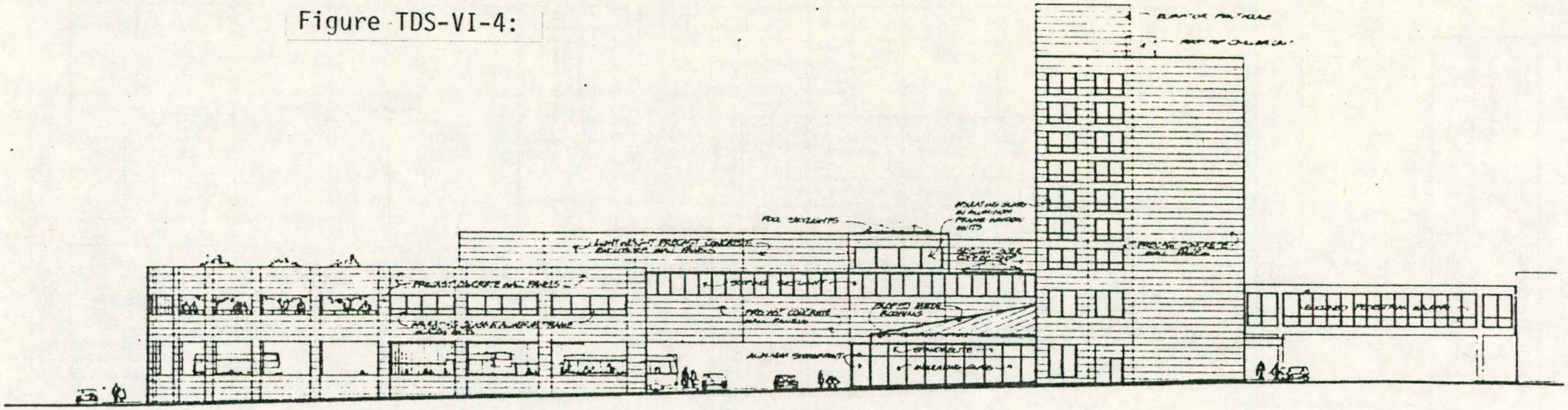
SCHEMATIC DESIGN PHASE

NORTH

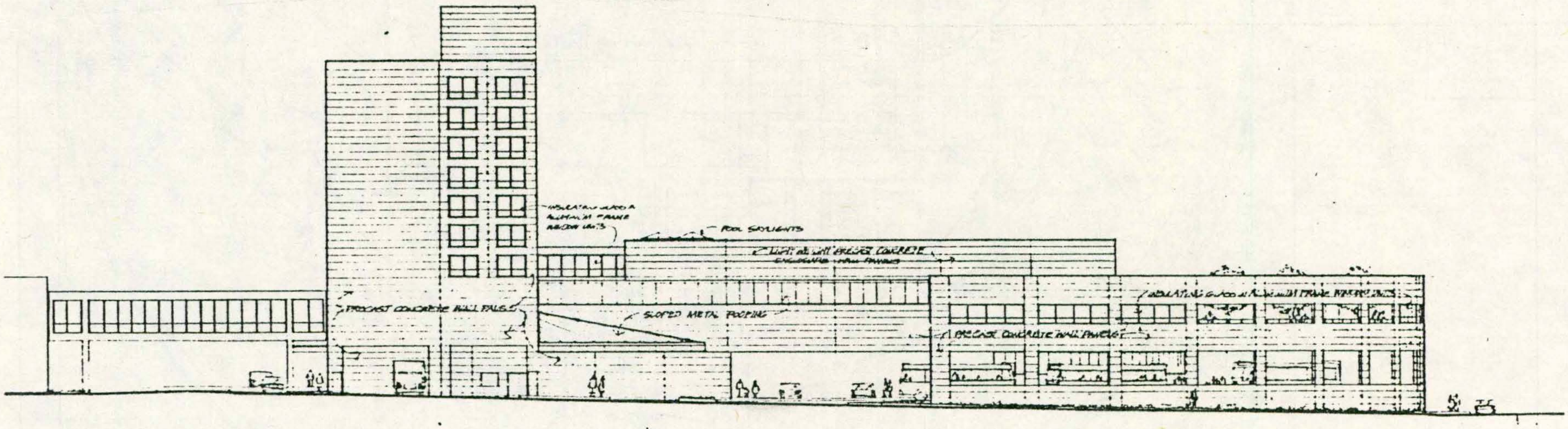
Ground Transportation Center

DAVENPORT, IOWA

Figure TDS-VI-4:



EAST ELEVATION



WEST ELEVATION

Solomon, Cordwell, Buenz & Associates INC. Architects and Planners	EAST & WEST ELEVATIONS SCALE 1/16" = 1'-0" SCHEMATIC DESIGN PHASE	Ground Transportation Center DAVENPORT, IOWA

Problems and Comments

Despite the tremendous advances of recent years, each of the Quad Cities transit systems exhibit need for further capital improvements.

The City of Bettendorf has two very ancient vans currently serving as back-ups. As transit patronage has increased along the routes implemented in 1980, the transit system is experiencing more frequent capacity problems with their very small transit vehicles. They are also aware that the gasoline power trains with which their fleet is equipped results in a short life-span for vehicles. The Bettendorf system also experiences problems with the lack of a sheltered local storage site for their vehicles. The plan a couple of years ago for a new City maintenance facility which could house and maintain the transit fleet along with other City vehicles has not yet been implemented. Contract maintenance has addressed part of this problem but no alternative for storage has been found.

The City of Davenport has had complaints about the inability of the wheel-chair restraints aboard Davenport buses to accomodate large-wheeled electric wheelchairs. This appears to be similar to the problem recently corrected aboard RICMMTD buses. The City has also heard passenger complaints that the new route structure requires persons to wait for un-timed transfers between routes at various remote locations where there is no natural shelter. Other passengers have noted that people are confused by the inconsistant messages caused by a number of old destination signs with messages geared to the old routes being used for new services which do not quite match up.

Several other problems are more noticeable from an internal viewpoint. These include mechanical problems with the TDT wheelchair lifts aboard the TMC's, and with the TMC air intake systems which are currently mounted low on the coaches so that they to their low mounts suck considerable road dust into the engines. The transit system is also operating with overage supervisory vehicles some of which have already been taken out of service. For the future,

there is concern that the Davenport radio base-station may not be sufficient to cover the service area from the Rock Island location of the new bus garage.

The Metropolitan Mass Transit District faces a slightly different problem in its five-city service area. Buses and other heavy vehicles running along many streets cause vibrations as they cross expansion joints and fissures. As roadway conditions decline the problem becomes more acute and recently many complaints have been directed both to the District and to local municipalities about noise and vibrations which are said to be causing deteriation of homes along major roadways which also serve as bus routes. Recent publicity in one community has brought out many additional complaints and many have tried to tie the problem to the new 40-foot buses. The problem is not new, however, as the RICMMTD has received such complaints at various rates throughout their history. The issue tends to flare up and complaints increase as various individuals stir up public opinion temporarily. Currently complaints are coming from throughout the City of Moline following heavy publicity of the Moline City Council's discussions on the issue. Earlier the complaints centered on eastern neighborhoods of Rock Island, where some neighborhood residents petitioned to have the buses removed from their street because of noise, vibration, and "safety" concerns. At that time the District held a public hearing on the possibility for changing the route to avoid the affected streets, only to find that the actual neighborhood sentiments ran about 40 to 6 against removing the buses.

Other problems facing the District include a need to replace the radio system repeater unit which has twice been struck by lightning. The MTD has completed modification of their wheelchair restraints aboard all lift-equipped buses but still has problems with the lifts themselves, particulary those in the seven older RTS's. These older units also have severe interior dust problems due to the poor seals at the rear door where curb-side dust is sucked in around the lift mechanism.

The District also faces some problems with their terminals and shelters. The downtown Moline transfer point has been moved several times during the past couple years since the City of Moline redesigned 5th Avenue as a serpentine transit mall, but then began to allow automobile parking in the designated bus pull-outs. The terminal has since been located in five different areas in and out of the central area. The preferred location was in the 400 block of 16th Street, a side street in the heart of the downtown. This block was closed, however, to convert two existing metered City parking lots to validation parking. Other locations have been unsatisfactory due to insufficient pavement strength to support the buses, lack of any shelter for the passengers, or merchant opposition to the presence of buses and waiting transit passengers. The merchant opposition to the location of a transfer point in the central area based on not wanting crowds of transit passengers in stores has been self-defeating. Moving the terminal away from the places people want to go downtown does discourage many from patronizng the downtown businesses, but those who come downtown anyway can no longer walk to the terminal to catch their bus during the short lay-over. Instead they must wait along 5th Avenue to catch the buses as they pass through the area. The "bus shelters" in this area provide no protection from the weather forcing the passengers to stand in the store fronts and, since the buses don't stop and wait anywhere in the central area, the passengers must stand right by the doors of the stores to watch for the buses coming down the street, thereby causing congestion in the entrances.

Another passenger-related problem facing the RICMMTD is the lack of snow clearance at their shelters and at major stops without shelters. The City plows leave a ridge of snow and ice along the curbs at bus stops which makes boarding the bus extremely hazardous for the old and infirm. At present the District has no equipment to deal with such situations and has not been satisfied with the results of private snow-removal contracts relied upon in the past.

Based on a vehicle replacement schedule the District also faces a need to replace two supervisory vehicles in the near future and several older revenue vehicles in the next few years. They also face a situation where local industries are responding favorably to the concept of subscription commuter bus services, provided with regular RICMMTD buses. The District is, however, currently operating very near the threshold for reserve vehicles needed for a fleet of their size, so that placement of any additional peak-hour subscription buses, while financially attractive to the District, could jeopardize the reliabilty of all services. At present the vehicles in the "energy reserve" fleet do not appear to provide a viable option for providing such services due to their conditions.

The Garage Policy Group currently faces severe facility and equipment problems at the old bus barn. The facility was built on unstable fill along the edge of the Mississippi River. This has caused considerable settling which in turn has resulted in numerous other problems. In five areas the garage floor has subsided more than 24 inches, the floor of the boiler room has sunk more than 30 inches requiring extremely dangerous jury-fitting of steam and gas pipes. Office walls have developed massive cracks and have been held up only by recently added poured concrete buttresses. Both garage and office doors must be constantly refitted as frames contort. The new roof added in 1976 has developed at least 100 major leaks due to structural settling, which in turn has produced numerous electrical shorts.

Many other problems are non-structural but related to the fleets out-growing the facility. The building has only five pits and no hoists, whereas, the fleet size would require a minimum of eight such work areas. The facility also has the capacity to store only 45-50 vehicles while the combined fleet now numbers 60 excluding the RICMMTD reserve fleet.

Other problem items include: the unpaved exterior areas at the site which cause major dust and mud problems which work against goals for presentable

buses, the ventilation system designed for electric trolleys rather than for diesel buses, and a parts room which is not secure or conducive to proper orgranization.

Opportunities for Capital Improvements

The City of Bettendorf is currently in the process of purchasing two replacement revenue vehicles. The bid specifications allow for either gasoline or diesel power-trains and will provide for greater seating capacities than on present BTS vehicles. These vehicles will replace the two non-handicapped accessible vans currently used for back-up. The new vehicles will be equipped with a special door to allow installation of a wheelchair lift, but will not immediately be lift-equipped.

Future vehicle replacements will also be intended to expand the passenger-carrying capabilities of the system, while maintaining the current level of accessibility for handicapped persons.

Bettendorf also has considered two alternatives to the current lack of maintenance and storage facilities. One option is to continue to contract out the maintenance and servicing of buses, either by private enterprises or by the Quad City Transit Maintenance Facility, and to construct a small storage facility to provide weather protection and security for the vehicles at a location convenient for the City personnel. A second option which has been considered preferrable, if feasible, is to incorporate the transit system in a new City maintenance facility with expanded capabilities to store and maintain the buses as well as providing a centralized transit operations office. Discussions have varied on how the transit system would participate - whether as a part owner paying for a part of the construction cost through a capital grant, or as a tenant paying on-going rent for space in the facility.

The City of Davenport will be moving into new transit operations offices with the completion of the Quad City Transit Maintenance Facility. It appears

that most new office equipment needed at that time will be covered by the garage grant.

They are considering a number of improvements to the revenue vehicle fleet which will increase the uniformity of the operation and improve the performance of the affected vehicles. These improvements include: modification of wheelchair restraints to accomodate larger wheeled electric wheelchairs; retrofitting all TMC coaches with high-level air intake to improve engine performance and life by reducing the amount of dust drawn in with air compared to current low-mounted intakes; installing energy absorbing bumpers on 1977 American Motors coaches similar to the equipment on existing TMC coaches to reduce body damage from minor traffic accidents.

Other possible improvements include: a new van for use by supervisory personnel in place of standard automobiles, to allow supervisors to deliver passengers from a broken down bus to the desinations without waiting for the next bus to come along in 30 or 60 minutes or for a new bus to be dispatched from the garage; a new radio base station capable of reaching throughout the City from the new garage location in Illinois; a system of automated passenger counting devices to allow for the collection of accurate on-off statistics for the fixed route services without the need for considerable additional labor costs as would now be the case.

Also under consideration by the City are passenger shelters to be located at the transfer sites created by the new route patterns. Since many of these locations are served by the different route buses at different times, the shelters would provide protection from the weather, as well as serving to formally identify the transfer site for other passengers, thus encouraging greater use of the more direct travel options created by the transfer system.

The RICMMTD will be moving their administrative and operations functions to the new Quad City Transit Maintenance Facility once it is completed in the fall

of 1983. As with Davenport it is expected that necessary new furnishings will be provided through the garage capital grant.

The Transit District will be purchasing two new non-revenue vehicles during FY 1983. The manager's automobile will be replaced with a new automobile and the existing supervisor's automobile will be replaced with a 15-passenger van. This will allow both supervisros to follow through on the District's policy of avoiding major travel delays for passengers whose bus is involved in a road call. The new vehicle will be equipped with four-wheel drive and a snow blade to allow the District personnel to clear snow away from shelters and major bus stops as well as to provide supplemental snow clearance for roadways at the scene of a stuck bus. Both vehicles will have diesel power-trains to provide extended service lives. Both the use of supervisory vans and the use of diesel-power trains are expected to continue as other existing vehicles come up for replacement.

The District will also be carrying out their promises of shelter placements, through purchase of new passenger waiting shelters to be located at three new senior citizen housing projects which have been constructed along bus routes. Two additional shelters are planned for placement at a major industry which has taken the lead in supporting use of subscription bus service for commuting purposes among its employers. It is anticipated that additional shelters will be placed in future years based on the continued construction of specialized housing facilities for elderly and handicapped persons and the expansion of the shelter placements to cover more elderly and handicapped activity centers (including congregate mealsites) as well as other employment centers.

A major capital project now pending for the RICMMTD would bring the District into partnership with the City of Moline to establish a permanent transit transfer terminal in the vicinity of downtown Moline. The City is proceeding with purchase and clearance of a site at the western end of the central business district which will serve as the site of an off-street terminal for District

buses and, possibly in the future, for taxi-cabs and intercity buses. The site will be offered to the Transit District under a long-term lease for the purpose of constructing such a terminal. (See Figures TDS-VI-5 and VI-6 for drawings of the proposed terminal.)

A minor capital change currently being pursued by the District is the conversion to radial tires for all coaches. This change may improve the handling ability of the vehicles, improve fuel performance, and possibly reduce somewhat the road impact vibrations caused by rough roadway surfaces.

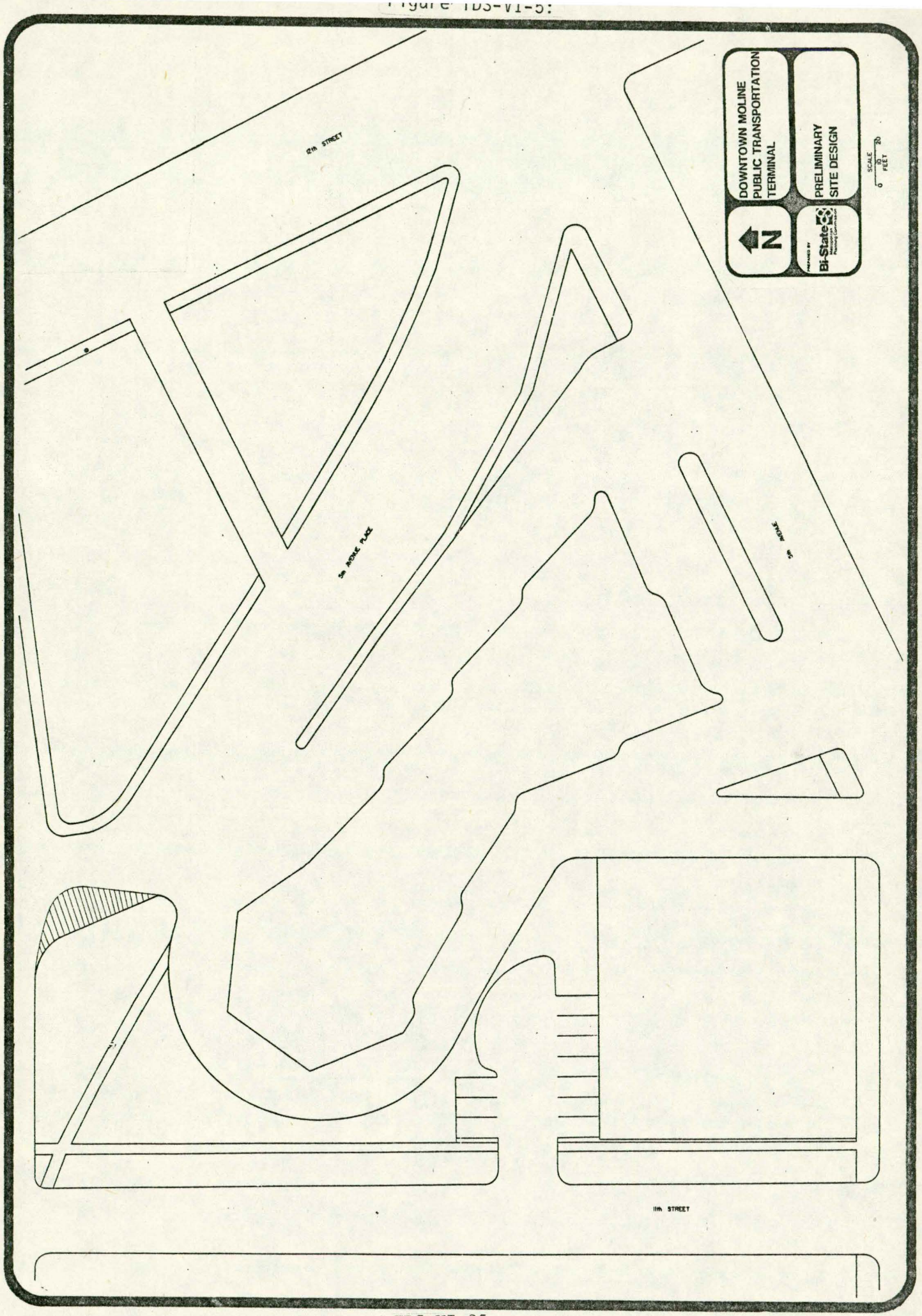
Also under consideration is the purchase of additional transit coaches for use in expansion of the subscription commuter bus program to area employers. Additional buses will also improve the active to spare ratio during off-peak hours, increasing the flexibility of the service and maintenance operations.

The Quad City Garage Policy Group will move into offices at the new maintenance facility which they will operate as soon as it is completed. New office furnishings will be provided under the garage grant. A new computer system to be shared by the Policy Group, the City of Davenport Transit and the Transit District is currently under consideration for a joint purchase by the City and District.

The garage grant will allow the purchase of a number of pieces of major maintenance equipment as shown in Table TDS-VI-3. Other capital items not covered by the garage grant but under consideration for the maintenance facility include:

- Floor scrubber/sweeper
- Telephone system
- Forklift
- Vises
- Tire dolly
- Chassis and transmission dynameters

Figure TDS-VI-5:



VII. FINANCIAL RESOURCES ANALYSIS

The availability of funding resources, whether they be from passenger revenues, other system revenues, local government subsidies, state subsidies, or federal subsidies, and whether they are available to use for operating costs or only capital costs is a major factor in determining what each transit system will or even can do in coming years. At present, the picture of funding is quite unclear since, despite new legislation authorizing continued transit funding at the federal level, the President is proposing to cut back on appropriations. In Iowa, there is neither authorization nor appropriation yet available for FY 1984 and beyond.

This chapter provides some perspective on the current situation in terms of past resource use, plus summarizes what is currently known about the funding picture for this year and future years.

Recent Development Chronology

User charges or passenger fares have always been a primary source of revenue for public transit systems. Their significance as a funding source has, however, diminished over time. A detailed discussion of the recent changes in fare structures by the individual Quad Cities transit systems was presented in Chapter IV. Whereas, that chapter dealt with the many effects of fare policies, this chapter is concerned only with the revenues which are produced. Table TDS-VII-1 shows the history of passenger revenue collection in by the Quad Cities systems over the last five years.

Table TDS-VII-1: Transit System Revenues FY 1978-82 ($'s)

Year	Davenport		RICMMTD		Bettendorf	
	Passenger	Other	Passenger	Other	Passenger	Other
FY1978	251,931	35,771	224,237	41,662	17,252	NA
FY1979	245,295	42,524	261,292	46,544	13,676	NA
FY1980	238,869	41,777	297,254	65,184	16,635	NA
FY1981	251,674	25,433	434,379	45,070	23,298	NA
FY1982	372,604	7,193	449,609	92,476	30,247	NA

The transit operations receive additional revenues from several minor sources. These include advertising aboard the transit vehicles, chartering of transit vehicles, property damage collections, support of elderly special transportation in Davenport and Bettendorf by the Commission on Aging for Senior Iowans, and, in the case of the RICMMTD, interest from short-term investment of cash flow reserve funds. The recent trend for these "other" revenues is shown in Table TDS-VII-1.

Despite the recent fare increases, transit system revenues are not sufficient to fully cover operating costs, and may never have been so. When originally transit operations were privately operated, they were supported strictly from the resources of the parent companies. This included not only the transit system revenues, but also other resources which were shifted to the transit operation from other company divisions to take advantage of tax write-offs. In the early 1970's the private operators turned to local governments for additional assistance in the form of direct financial subsidies. The City of Davenport and RICMMTD used local property tax monies to help support the cost of transit operations. The public acquisition of the Quad Cities transit systems coincided with the entrance of the federal government into the field of transit financial assistance.

Federal funds were available from two sections of the Urban Mass Transportation Act. Section 5 funds were allocated to each urbanized area annually and could be used either to fund operation of transit services or to purchase capital facilities or equipment. Section 3 funds were available on a competitive basis to fund major capital improvement projects. For the most part the local transit systems saved Section 5 monies to cover operations, while utilizing Section 3 funds for their capital projects.

When used for operations, federal funds could be used to support up to one-half the expenses not covered by system revenues. At the beginning, the Section 5 funds made available to the Quad Cities were in excess of the amounts which

local transit operators needed for deficit financing. Also, the amount of Section 5 monies being made available was increasing from year to year, though it was not matching the increases in national inflation. As a result, the area was building up a balance of availble funds which carried over from year to year. In FY 1978, however, the local use of operating funds began to exceed annual allocations which had leveled out and the area began to deplete its carryover account.

Under the UMTA legislation, the programming of the federal transit assistance is the responsibility of Metropolitan Planning Organization designated for each urbanized area by the Governor. In the Quad Cities, this role is fulfilled by the Bi-State Metropolitan Planning Commission based on designations by both Iowa and Illinois Governors. The Commission in turn has delegated the authority for transportation programming to their Transportation Policy Committee.

Until the area's Section 5 usage began to exceed the annual allocations, there was no concern about who used the area's Section 5 funds. Each transit system had been allowed to put in a request for the amount of funds they anticipated they would need each year, and after a review for reasonableness, they would be programmed. Once the carry-over funds began to be drawn down for current operating expenses (and some capital projects), however, it was decided that some type of formal method of distributing the single Quad Cities allocation from UMTA among the three transit systems should be established.

There was considerable debate over the relative benefits of straight allocations to each system which could be used as needed by that system, versus a competitive selection of projects to be funded on an areawide basis by the Transportation Policy Committee. The Policy Committee chose to make straight allocations and let the transit properties do the programming subject to review by the Transportation Technical Committee and final approval by the Policy Committee. It was further decided that the Policy Committee would utilize the UMTA-provided figures to split the funds between the Illinois and Iowa portions

of the urban area, and would then use the same formula that UMTA uses nationally to split the Iowa portion of the funds between the Cities of Davenport and Bettendorf.

This allocation method was applied to all previous funds, as well as to the current funds, in order to determine how much of the carryover belonged to each system. A similar process has been followed each year with the Bi-State staff maintaining records of how much of the area's funding belongs to each property and how much has been drawn down. The system of accounting also allows for one of the systems to "borrow" available federal assistance from another, if the first does not have sufficient funding available to fully support a chosen project while the second does have the funds, and both parties agree to the "loan" in advance.

Table TDS-VII-2 shows a summary of the transactions to date in each transit system's Section 5 account. Table TDS-VII-3 shows a year-by-year chronology of federal transit funds (both Section 5 and Section 3) received by each of the three systems since FY 1978. Recent years have seen a very high rate of success in competing for the Section 3 discretionary funds, with the area receiving a $3,234,000 grant for 29 buses in FY 1980, a $3,958,414 grant for a transit maintenance facility in FY 1981, and a $4,400,000 grant for a ground transportation center in FY 1982.

The story of state transit funding differs greatly between Illinois and Iowa. Illinois, through its Downstate Transit Assistance Act of 1974, has provided that 1/32 of the 4% state sales tax collected in each urban area would be earmarked for transit operating assistance. Originally these funds were allowed to cover 2/3 of the non-federal share of system operating losses, but beginning in FY 1980, this formula was changed to 1/3 of total operating costs, though at the same time the growth of state funding was limited to 10% per year. Earmarked transit assistance funds not used by an urbanized area in a particular year, because of the growth limit or other reasons, revert to the State's general

Table TDS-VII-2: Current Status of Section 5 Funds ($'s)

Transaction	Operating and/ or Capital	Capital Only
City of Bettendorf		
Allocations thru FY 1982	777,187	166,659
Obligations thru FY, 1982	-637,617	-66,782
Loan to RICMMTD	-121,925	--
Repayment from RICMMTD	+121,925	--
Loan to Davenport	--	-38,659
Repayment from Davenport	--	+38,659
Balance after FY 1982	155,861	110,877
City of Davenport		
Allocations thru FY 1982	3,758,891	800,145
Obligations thru FY, 1982	-3,878,056	-602,739
Loan to RICMMTD	-172,774	-168,838
Repayment from RICMMTD	+172,774	--
Loans from RICMMTD	--	+375,333
Repayments to RICMMTD	--	-375,333
Loans from Bettendorf	--	+38,659
Repayment to Bettendorf	--	-38,659
Credit for Deobligated Funds	+199,220	+197,406
Balance as of May, 1982	55	28,568
Rock Island County Metropolitan Mass Transit District (RICMMTD)		
Allocations thru FY 1982	5,675,439	1,205,981
Obligations thru FY, 1982	-5,674,439	-1,374,819
Loan(s) from Davenport	+172,774	+ 168,838
Repayment(s) to Davenport	-172,774	--
Loan(s) to Davenport	--	-375,333
Repayment(s) from Davenport	--	+375,333
Loan(s) from Bettendorf	+121,925	--
Repayment(s) to Bettendorf	-121,925	--
Credit for Deobligated Funds		
Balance as of May, 1982	116,110	- 168,838

Table TDS-VII-3: Receipt of Federal Transit Assistance
(Sections 3 and 5) FY 1978-82

Past Use of Funds ($'s)[1]

Year	Davenport		RICMMTD		Bettendorf	
	Operating	Capital	Operating	Capital	Operating	Capital
FY1978	352,313		484,941	548,864	50,415	
FY1979	505,740	338,640	682,952	250,900	54,434	
FY1980	512,158	2,206,192	997,693	1,979,312	92,785	
FY1981	730,860	1,196,800	1,070,934	2,535,280	109,716	44,782
FY1982	575,200	3,590,205	950,000	800,000	138,645	11,000

Balance of Funds Available ($'s)
Prior to FY 1983 Allocations/Obligations[2]

(Prior to FY'83)	Operating or Capital	Capital Only	Operating or Capital	Capital Only	Operating or Capital	Capital Only
	55	28,568	116,110	-168,838	155,861	11,877

Notes for Federal Transit Assistance

1 Years for past experiences are based on local fiscal years. Projects are shown based on year in which funds were obligated. Operating projects show amount of federal funds actually drawn down as taken from local audits except where audits are not yet completed. Capital pojrects are mostly still active, so figures show amounts obligated in grants. Funds shown include both Sections 3 and 5 grants from UMTA.

2 While Section 3 funds are granted at UMTA's discretion, the Section 5 funds are allocated to each urban area and area available for use as determined by local policy officials. Section 5 funds come in two categories, one available for either operating or capital projects and the other available only for capital. Within the Quad Cities these funds have been sub-allocated, by action of the Transportation Policy Committee, among the three transit operations using the same formula as UMTA uses nationwide. The "Balance of Funds" shows how much of these sub-allocations each operator has left after all of its Section 5 grants have been deducted. (The Section 5 funds remain available for 3 years and are accounted for on a first-in/first-out basis.) Operators may voluntarily loan funds to each other, which is the reason for the negative balance in the RICMMTD's "capital only" account. (The District is presently in the process of repaying a loan from the City of Davenport.)

fund. Illinois capital assistance derives from a separate source and is entirely discretionary on a project by project basis. Originally the State paid 2/3 of the non-federal share on capital projects (the federal government provides 80% of capital costs). Since FY 1980, the State pays the entire non-federal share of those capital projects which they approve for funding.

In Iowa, there is no established source of funding for transit assistance and the State transit assistance program is therefore dependent upon annual or biennial authorizations and annual appropriations from the state's general fund. Since FY 1977 when Iowa's state transit assistance program began, annual appropriations have varied between the original $2 million and an FY 1982 level of $1.91 million statewide. The funds are applied to either operating or capital projects. Approximately 70% of the year's total funds are nominally apportioned to the state's 33 transit systems based on past performance. The remaining 30% is held to fund "special" projects such as major capital improvements. In practice, however, all funding has been based upon the State's acceptance of individual projects.

Table TDS-VII-4 shows the history of state transit funding, over the past five years, for the Cities of Bettendorf and Davenport and for the RICMMTD. For FY 1982 state assistance amounted to approximately 44% of transit operating costs for Bettendorf, 31% for Davenport, and 33% for the Transit District. There is no carry-over of unobligated funds available to the individual transit system under either state's program.

Table TDS-VII-4: Receipt of State Transit Assistance
FY 1978-82 ($'s)

	Davenport		RICMMTD		Bettendorf	
Year	Operating	Capital	Operating	Capital	Operating	Capital
FY1978	84,461		347,843	91,477	8,560	
FY1979	65,832		477,315	41,817	12,808	
FY1980	27,952	23,100	700,000	329,885	20,029	
FY1981	54,654	283,667	770,220	633,820	14,029	
FY1982	44,474		847,242	50,000	27,464	1,834

Local funding capabilities also differ among the operators. The Transit District as a special-purpose taxing district has a limited taxing capability of its own, which amounts to 50¢ per $1,000 assessed valuation. (In Illinois, assessed value is supposed to represent 33 1/3% of market value for residential property and 25% of market value for commercial/industrial property.) Beginning in 1980, the revenue producing ability of the property tax was cut by the constitutional exclusion of corporate personal property from the levy. A special Corporate Personal Property Replacement Tax was instituted, however, to make up for this loss. Beginning in 1982, the District will also collect an additional levy to meet the mandatory employer costs of social security and the state retirement program. The Illinois legislature recently passed legislation which would allow voters within the Transit District to increase the District's normal levy as high as $2.50 per $1,000 assessed value through referendum, but at present there seems little likelihood such a proposal would receive voter approval.

For Bettendorf and Davenport there is somewhat more flexibility in local funding sources since they may utilize the city's general fund taxing powers, a special transit support levy of 54¢ per $1,000 assessed value (based by law on 100% of market value for all property) allowed by Section 384.12 Paragraph 10 of the Iowa Code, revenue sharing funds, or community development block grant funds. Until FY 1982 both Bettendorf and Davenport had limited themselves to use of general fund tax revenues for support of their transit operations. Despite limits on general fund tax increases, use of this source allows considerable flexibility due to the large size of this fund, and the City Council's latitude in determining how the funds will be apportioned among various City functions. In FY 1982, however, the City of Davenport, faced with a state-imposed one-year freeze on assessed valuations in their community, began to collect the full transit special levy as well as providing a reduced level of support from their general fund.

Table TDS-VII-5 shows the amount of local funds applied to transit operations or capital improvements by the Quad Cities transit systems over the last three years. The RICMMTD currently has a $428,600 cash flow reserve (equivalent to seven weeks of expenses) which allows the Transit District to meet current obligations prior to receipt of state and federal reimbursements without needing to go to short-term borrowing with the associated interest costs. The Cities do not have a cash balance attributable to their transit operations, but utilize their general fund balances to provide cash flow for transit.

Table TDS-VII-5: Application of Local Funds to Transit
FY 1978-1982 ($'2)

	Davenport		RICMMTD		Bettendorf	
Year	Operating	Capital	Operating	Capital	Operating	Capital
FY1978	237,486		284,064	45,394	36,451	
FY1979	408,867	84,660	338,447	20,908	39,337	
FY1980	512,158	320,448	335,393	164,943	78,540	
FY1981	630,860	299,200	363,105	200,000	129,770	11,195
FY1982	813,315		361,515		138,645	916

Outlook for Transit Financing

At present no further increases in transit fares are anticipated. The passenger revenues therefore will depend upon how well the transit systems do at attracting riders, through service improvements and marketing. The projections shown in Table TDS-VII-6 are based on a steady pattern of ridership growth which should be achievable over the next several years. "Other" revenue projections are for the most part stable, though these can be greatly affected by items such as interest rates in the case of the RICMMTD. These revenues are also forecasted in Table TDS-VII-6.

Table TDS-VII-6: Projection of Transit System Revenues ($'s)

	Davenport		RICMMTD		Bettendorf	
	Passenger	Other	Passenger	Other*	Passenger	Other
FY1983	392,000	10,000	448,000	40,000	35,700	1,500
FY1984	423,400	11,000	483,800	30,000	39,600	1,600
FY1985	457,200	12,000	522,500	25,000	42,700	1,900
FY1986	493,800	13,000	564,400	20,000	46,400	1,900
FY1987	533,300	14,000	609,600	20,000	49,600	2,000

Except for Illinois, the outlook for state and federal transit assistance is quite unclear. In Illinois, it appears that the RICMMTD each year will have state funds available to them in an amount equal to 110% of the previous year's usage. The actual use will, however, be limited each year to 1/3 of the total transit cost, which in turn makes the amount they can use dependent on the availability of other resources to support the remaining 2/3 of the transit budget. A "hold harmless" amendment to the program has been proposed which would allow a transit system to continue to receive full funding based on the previous years usage plus 10% despite any cuts in total operations cost necessitated by the loss of federal funds. To date this has not been accepted, however.

In Iowa, the amount of transit assistance which may be expected by the local city systems for FY 1983 is already under contract. Beyond that, however, future transit assistance is totally dependent upon actions by the next legislature. At present there is no authorization nor appropriation for FY 1984, nor any real commitment to continue the transit assistance program. Recent years have seen both proposals to increase the program and pressures to discontinue it. If a projection is to be based upon the results of those past debates, one can expect that the size of the total program will remain fairly constant and, therefore, the "mark" which the Iowa operators are told to expect will remain in the $28,000 range for Bettendorf, depending upon their statistical performance relative to other Iowa transit operations and increase slightly for Davenport based on their recent service improvements. Table TDS-VII-7 shows the amount of state assistance projected as available to each local system.

Table TDS-VII-7: Projected State Transit Funding ($'s)

	Davenport*	RICMMTD**	Bettendorf*
FY1983	84,139	931,966	35,999
FY1984	85,000	1,025,163	28,000
FY1985	85,000	1,127,600	28,000
FY1986	85,000	1,240,447	28,000
FY1987	85,000	1,364,492	28,000

* Davenport and Bettendorf figures show actual FY 1983 grant totals and anticipated "marks" for future years. Additional funds would be possible based on "special projects."

**The RICMMTD figures reflect the State of Illinois' limitation that state funding for transit operations can increase no more than 10% per year. Actual use of funds is limited to 1/3 of total eligible operating costs.

At the federal level, new legislation covering transit funding authorizations for FY 1983, FY 1984, FY 1985, FY 1986 and appropriations for FY 1983 were finally passed in late December, almost three months after the start of FY 1983.

For FY 1983, the legislation provides a continuation of the Section 5 program, though with reduced funding levels. A special provision, however, allows local transit operators to sacrifice capital funding to reach the level of operating assistance received in FY 1982. Table TDS-VII-9 shows how the amount of Section 5 monies which will be available to each Quad Cities transit operation initially and after adjustments to maximize availability of operating funds.

The authorization legislation also establishes a Section 9 block grant program for future years which will fund operations, capital, planning, and major spare parts and will totally replace Section 5. In FY 1983, a modified form of block grant is available to supplement the Section 5 program. This Section 9a program is eligible for all purposes that Section 9 was created for except operations. Table TDS-VII-10 show the availability of these funds to local transit operators based on UMTA initial allocations of the first 65% of the 9a funding.

Based on the authorizing legislation FY 1984, 1985, and 1986 block grant funds may be used for operations up to a level calculated based on 90% of the urban area's FY 1982 operations allocation. In FY 1984, the 100% level can again be reached by sacrificing capital block grant funds. For FY 1985 and 1986 the 90% level limit on operating use of block grant funds is to be firm. Thus, despite the uncertainty about exact allocations for Section 9 total funding caused by annual recalculations of allocation factors, the amount of operating assistance available to the Quad Cities is known for each year and individual operator allocations should be fairly stable as shown in Table TDS-VII-11.

Once caveat which must be noted is that future years funding is totally dependent on future appropriations legislation despite the passage of a multi-year authorizing act. Already it appears that the President will attempt to reinstate the termination of operating assistance through appropriations legislation which Congress rejected at the authorization stage.

The result is that except for FY 1983 all future federal resources for transit are once again in question and local systems are left to make transit planning and programming decisions without any knowledge of the resources available for the second year in a row.

CURRENT STATUS OF SECTION 5

		FY 1982 Fund Carry-over[1]	FY 1983 Fund Allocation[2]	Loan Repayment Adjustments[3]	Total FY 1983 Funds Available	Base Limit on Op. use of FY'83 Funds[4]	Capital Funds Required to Reach Base[5]	Maximum Limit on or use of FY'83 Funds[6]	Add'l Capital Funds needed to reach Maximum[7]	Total Intended Conversion of FY'83 Capital[8]	Final Adjusted Availability of FY'83 Funds[9]
RICMMTD	Op.	0	674,823	- 103	674,720	719,004		798,893		+ 99,711	774,431
	Cap.	0	296,263	-168,838	127,425		-44,284		-119,833.5	-127,425	0
Davenport	Op.	55	448,801		448,801	478,528		531,698		+107,359	556,160
	Cap.	28,568	197,175	+168,838	366,013		-29,727		- 79,755	-146,175	219,838
Bettendorf	Op.	13,831	101,263	+ 103	101,366	107,968		119,964		+ 18,598	119,964
	Cap.	110,877	44,488		44,488		- 6,602		- 17,994	- 24,596	19,892

[1] Balance in individual accounts after UMTA obligation of RICMMTD supplimental capital grant for garage, RICMMTD partial FY 1983 operating grant, and Bettendorf FY 1983 operating grant (subject to verification of urban area totals by UMTA)

[2] Based on application of national allocation formula using population and population density derived 25% from 1970 Census and 75% from 1980 Census data (using state splits published in the Federal Register, January 24, 1983)

[3] Repayment of previous loans using FY 1983 funds of like kind.

[4] Based on 90% of urban area FY 1982 operating allocation, divided among operators based on this year's allocation formula.

[5] Since FY 1983 operations allocations fall short of the 90% (of FY 1982) base limit on use of funds for operations, the Act allows that FY 1983 capital funds can be converted to operating funds on a dollar-for-dollar basis to reach the base.

[6] Based on 100% of urban area FY 1982 operating allocation, divided among operators based on this year's allocation formula

[7] The Act allows additional FY 1983 capital funds to be converted to operating uses based on the sacrifice of three dollars in capital funds for every two dollar used for operations until total operating funds reach 100% of the FY 1982 allocation.

[8] Since the RICMMTD will not have sufficient FY 1983 capital funds to reach the maximum levels of operations use allowed by the Act, Davenport will use the remainder of the 3-for-2 buy-down privilege based on an agreement reached 1-19-83.

[9] Funds intended for operations use may be carried-over to future years, since limits on use of funds for operations apply to FY 1983 allocations not FY 1983 projects.

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Table TDS-VIII-10:
Section 9A FY 1983 Apportionments

RICMMTD	$421,718
Davenport	308,176
Bettendorf	80,106
Q.C. Total	$810,000

(Local Apportionment Basis)

System	50% FY'81 Rev. Miles*	50% 1980 Pop./Pop. Dens.**	Combined Factor
RICMMTD	.4923182	.5489603	.5206395
Davenport	.3950955	.3658341	.3804648
Bettendorf	.1125861	.0852054	.0988957

* Based on UMTA Section 5 report for FY 1981 which UMTA used nationally.

** Based on 1980 Census using 1980 state split identified by UMTA in FY 1982.

General Notes:

- The figures above are based on UMTA's preliminary nationwide apportionment of the first 90% of Section 9A funds. A final apportionment of the full fund will be forthcoming later, after adjustment of the Section 15 data base for missing data. That should result in more money coming to this area and higher local apportionments.

- The Section 9A funds may be used for any eligible projects listed for Section 9 except operating assistance. These include transit planning; and acquisition, construction, or improvement of facilities, equipment or associated capital maintenance items (spare parts costing more than 1% of current cost of vehicle.)

- The Section 9A funds will remain distinct from the Section 9 funds and can be kept on account through FY 1985.

- A single application covering a "program of projects" is required of each designated recipient for 9A funds. (Same recipients as for Section 5 unless changed at local level.)

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VIII. TRANSIT PROGRAM

Based on the evaluation of existing services and facilities, the perceived needs, and the anticipated availability of financial support, the Quad Cities transit operators have established tentative programs for the years FY 1984 through FY 1988. This chapter presents these programs of capital and operating projects for future years in addition to the FY 1983 projects previously adopted by the area's Transportation Policy Committee. (Grants for most of the FY 1983 projects are still pending with UMTA at this point due to the lack of new federal legislation at this time.)

Description of Annual Element

During FY 1983 the Bettendorf Transit System will be continuing service along the routes established in the Fall of 1980 based upon the recommendations of the original Bettendorf Transit Study. Special emphasis will be on improving ridership on the Bettendorf-Moline Bridgeline Route by advertising the service on both sides of the river, including ads for the new bicycle transportation service which started last summer. Also included will be a major effort to involve local businesses in the promotion of transit through a cooperative advertising campaign. Fares for senior citizens and handicapped persons have been increased following the Davenport examples, as have the fares for Dial-A-Bus service. Bettendorf has no "new" capital projects for FY 1983, but will be purchasing two replacement vehicles with radios and fareboxes under a previously approved UMTA grant.

For FY 1984 the Bettendorf Transit System will continue to provide the same services, but will evaluate the results of the expanded marketing program on system ridership, particularly for the Bettendorf/Moline Bridgeline. If necessary, alternative routings for this service will be considered, but only after sufficient time has been given to assess the effect of FY 1983 projects. Alternatives to the current Dial-A-Bus operation may also be considered during

the course of the year. A capital grant to support the purchase of two replacememt buses will be requested as current vehicles will have accumulated approximately 180,000 miles.

The City of Davenport in FY 1983 has implemented a completely reorganized route strucutre, with eleven full-time routes. Fares were raised in (April, 1982) to correspond with those on the other Quad Cities transit systems. Since implementation of the new route structure in July, several "fine-tuning" adjustments have been made. These include changes to the Brady-Harrison, Mercy Hospital, Grand Avenue, and Crosstown Routes. (See Figures VIII-1 through VIII-4.) The City's FY 1983 Section 5 capital program includes the acquisition of a new supervisory van to serve as a replacement for a supervisory automobile already taken out of service.

For FY 1984, Davenport continue refining the new routes, adjusting to the citizen needs as identified from public comments and from ridership performance along the new lines. A major emphasis will be on marketing the new service to the public, making sure that they both are aware of the new routes and understand how to take advantage of the routes' new interconnections. A Section 9a project planned for FY 1984 will involve the cost of in-house planning activities, and purchase replacement door assemblies, powertrains, differentials, and air-conditioning compressors for their TMC coaches; a new radio base station to provide coverage of the transit services area from the Illinois garage, and the City's share of a transit computer to be located in the new facility and shared by the City, the RICMMTD, and the Garage Policy Group. A slide projector and a movie projector will allow expanded employee training as well as supporting the marketing effort.

The Rock Island County Metropolitan Mass Transit District during FY 1983 is providing service at a level which is slightly reduced from previous years due to anticipated cuts in federal assistance and restrictions on local funding capabilities. The service changes, which took effect April 1, 1982, reduced

Figure TDS-VIII-1:

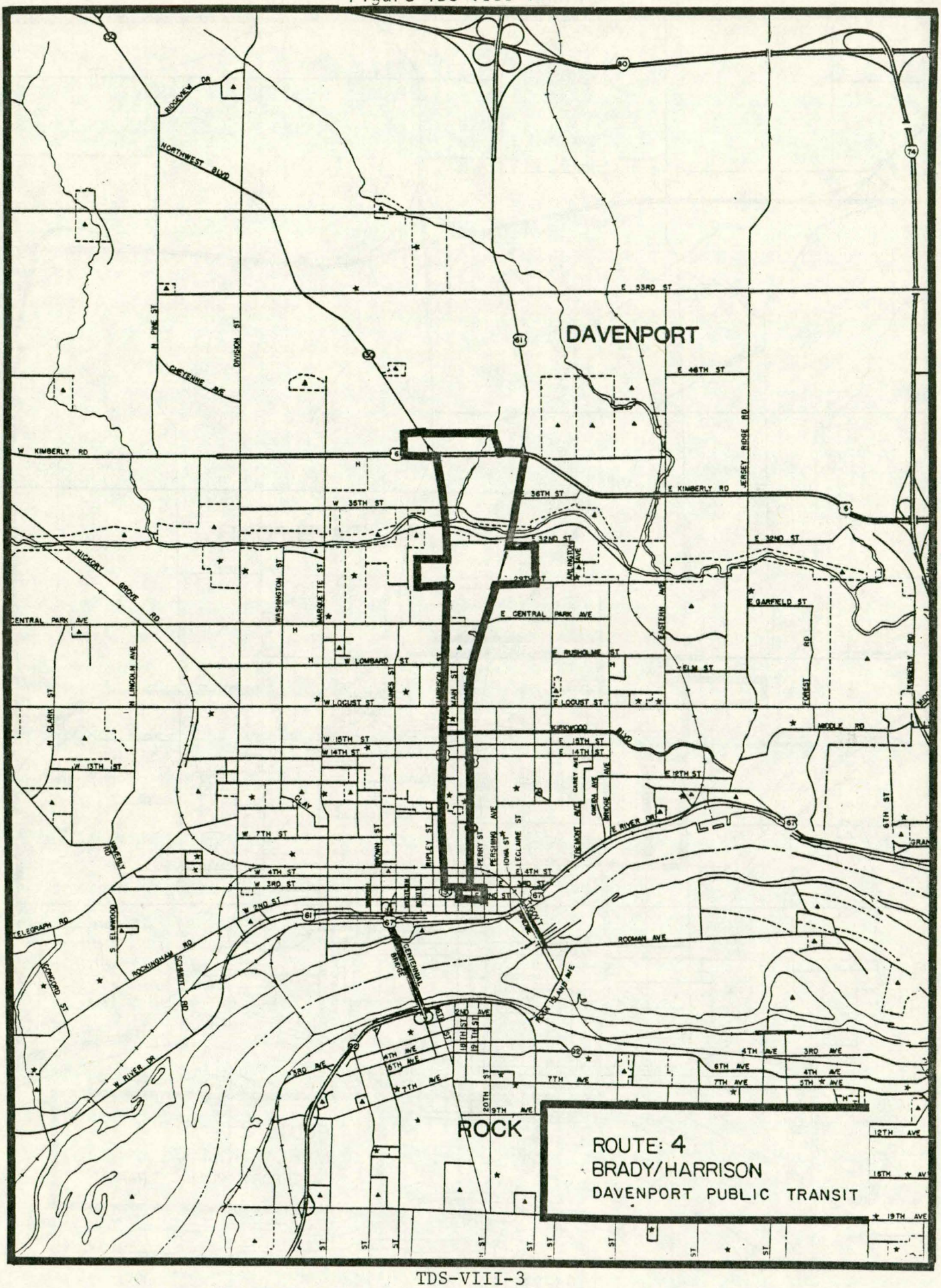


Figure TDS-VIII-2:

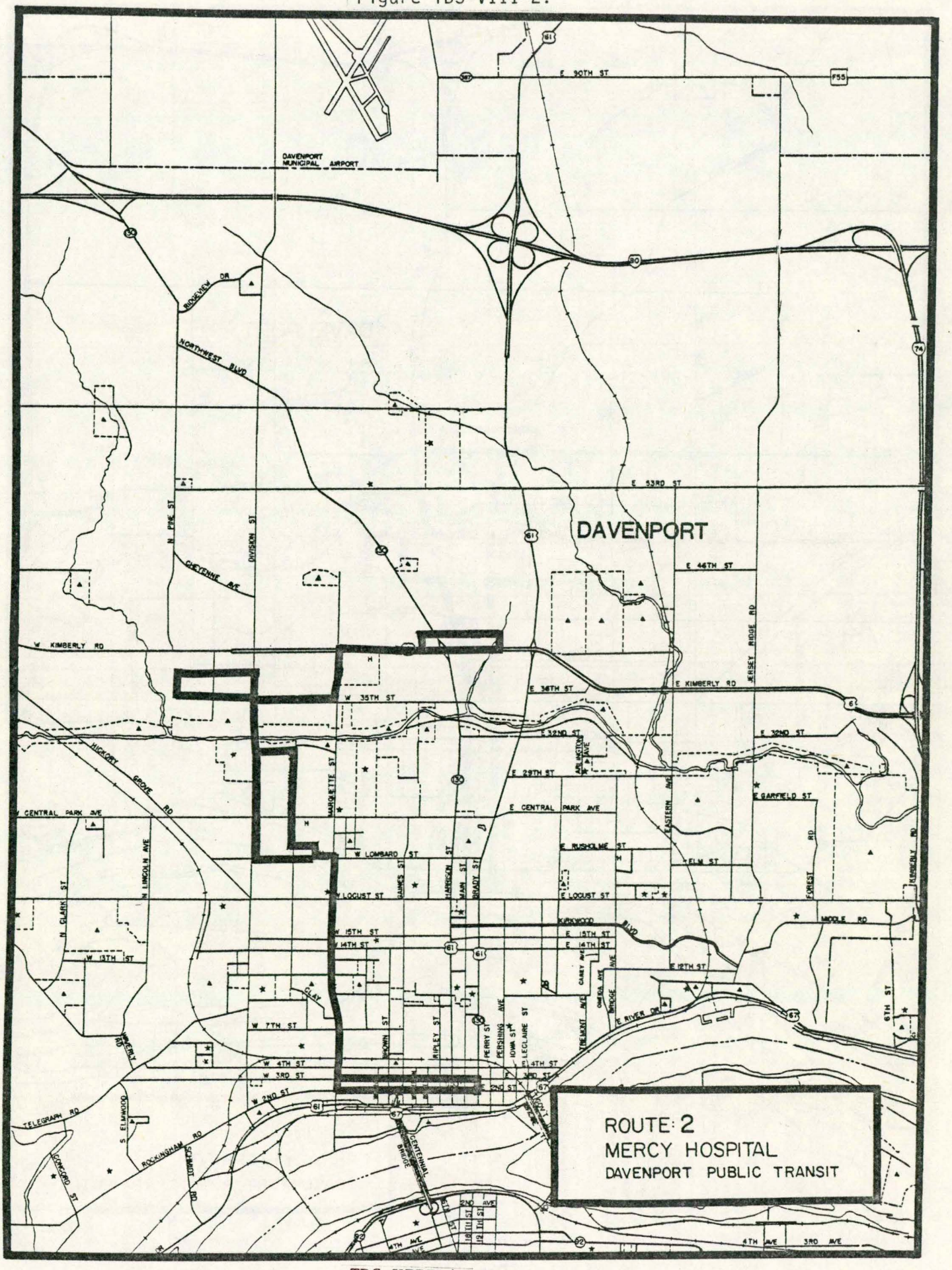


Figure TDS-VIII-3:

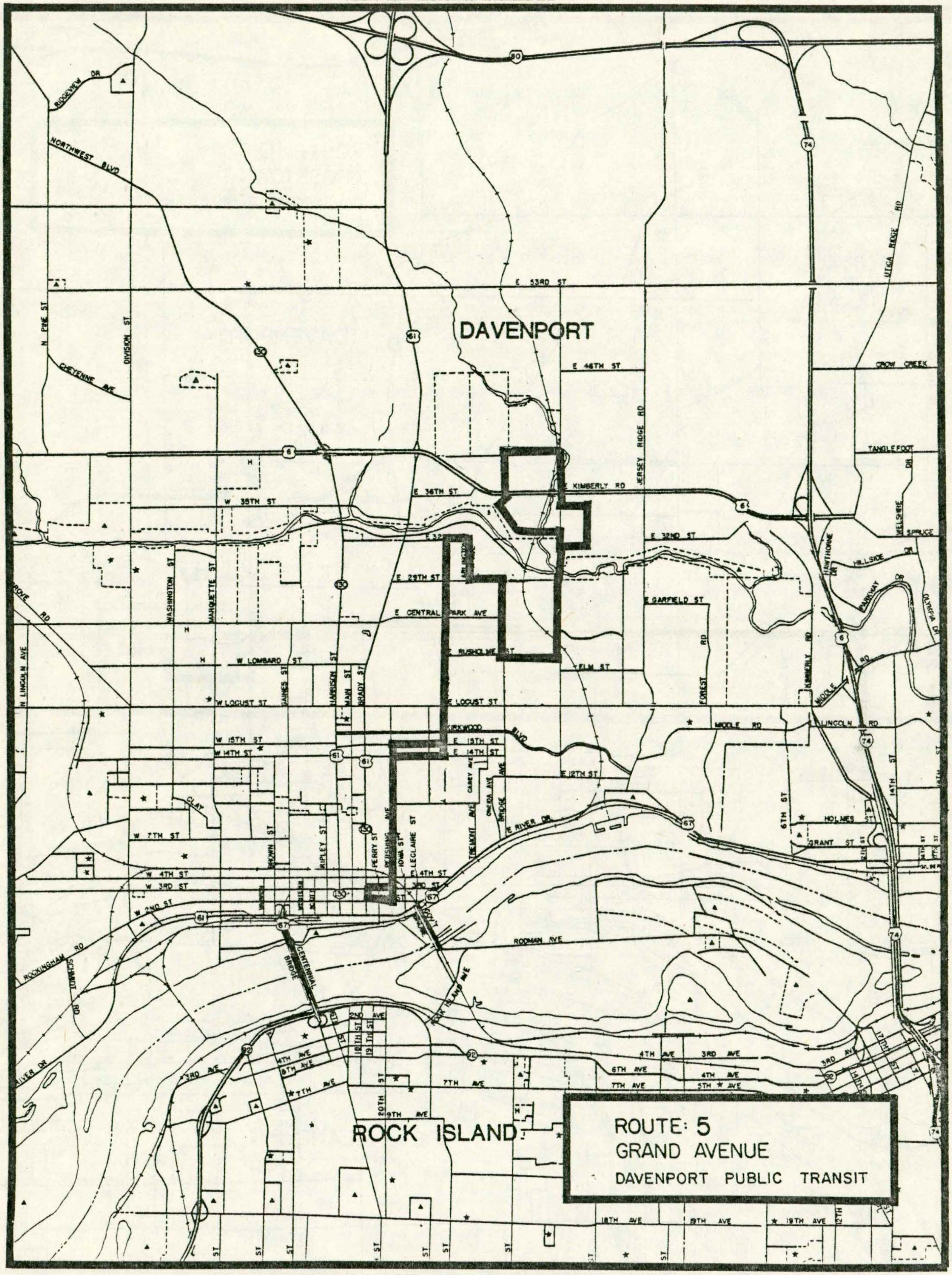
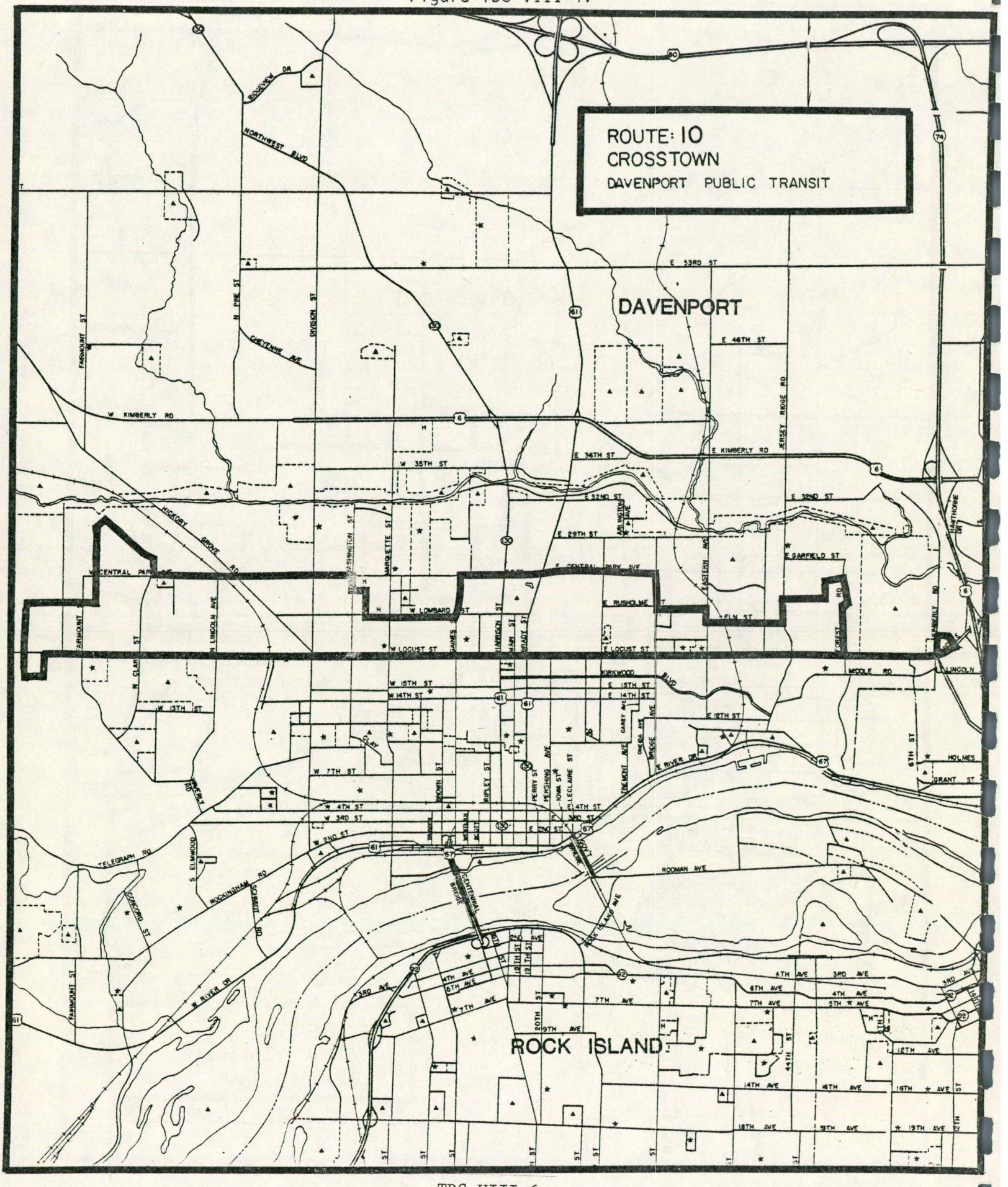


Figure-TDS-VIII-4:



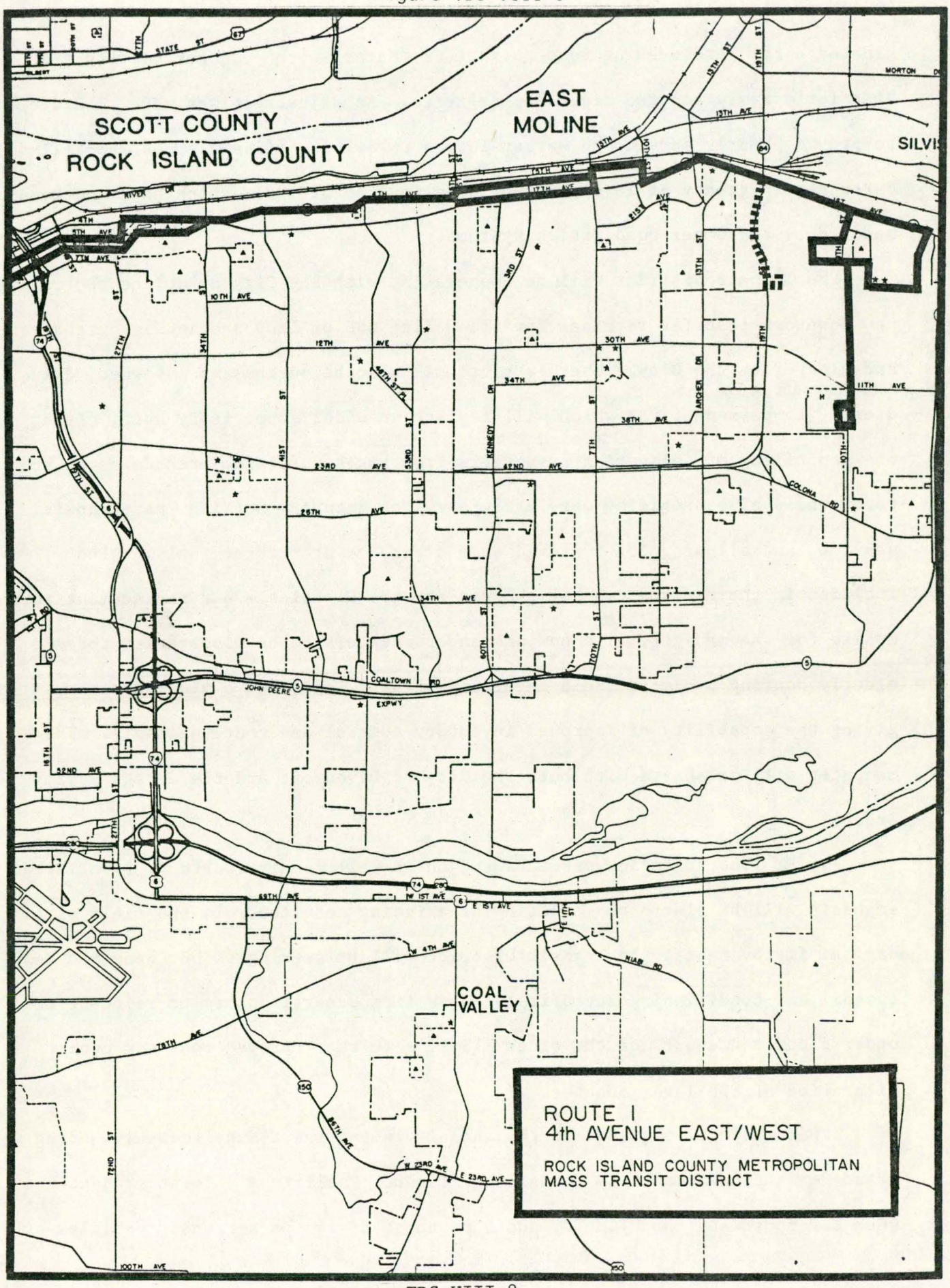
midday weekday service on two routes, eliminated Saturday morning route service (while providing limited advance-reservation, demand-response service), and eliminated a few late evening runs on various routes which were not meeting the District's newly adopted ridership criteria. An adjustment was made to Route 1 to provide hourly service to Warren Towers in Silvis. (See figrues TDS-VIII-5.) Fares remain steady at levels established in June of 1981, which have now been matched by the other Quad Cities systems.

The Transit District will be cooperating with the City of Moline to build a new downtown transfer terminal for the Moline CBD on land previously purchased and cleared by the City. The District will also be purchasing a 4-wheel drive, diesel, 15-passenger van which will replace an older supervisory auto, giving the capability of delivering passengers from buses suffering breakdowns on the road, while also providing more efficiency for Saturday morning paratransit service, and allowing for improved snow clearance at bus terminals. Also included in the FY 1983 capital program for the District are a replacement automobile for the manager, five new passenger shelters to be located at three elderly housing projects and a major industrial plant, and a mini-computer giving the capability of improved inventory control and route analysis. The computer will be shared with both the City of Davenport and the Garage Policy Group.

For FY 1984, District services and fares will remain constant. Continued emphasis will be placed on marketing of existing services. In the field of capital improvements, the Transit District will be seeking to purchase and install air-conditioning retrofit packages from General Motors to relocate the under-floor condensors of the older RTS-II's to the improved roof-top configuration of the later coaches.

Other projects included in the annual element are a supplemental funding grant for the new Quad City Transit Maintenance Facility - a joint project between Davenport and the RICMMTD, and a purchase of two para-transit vehicles by

Figure TDS-VIII-5



Project NOW - a not-for-profit social service transit provider in Rock Island County.

Description of Remaining Years Program

Transit operations during the years FY 1985 through FY 1988 were programmed without major changes in service levels, since any decisions along these lines will be highly dependent on better information about future funding from the state and federal governments than is now available. Despite the "no growth" assumption, transit costs will be subject to national inflationary pressures. Therefore, the figures shown in the program tables were adjusted upward each year to reflect the effects of a national inflation rate on the local economy.

Capital programming for these years is also somewhat tentative, but the items selected address the anticipated needs of the three systems.

The City of Bettendorf has only one capital project programmed in the "remaining years." This covers transit system participation in a new municipal maintenance facility during FY 1986. The new facility will provide expanded maintenance capabilities, allowing the City to resume maintenance and servicing of transit vehicles. It will also allow for sheltered storage of the vehicles, which are now parked in an open lot overnight. The new facility will also provide new centralized offices for transit operations and administration. The total facility will cost $4,180,000 with the transit system responsibile for $350,000.

The City of Davenport expects to have the following needs:

FY 1985 - Purchase of destination signs with messages consistant with the new route structure; new energy-absorbing bumpers for the City's AM General coaches similar to the equipment on the TMC's to reduce body damage in minor traffic accidents; new air intake systems for the TMC cocaches to reduce engine wear caused by road dirt now being sucked in;

FY 1986 - Purchase of a replacement vehicle for transit supervisory personnel.

The Metropolitan Mass Transit District has the following projects programmed:

FY 1985 - Replacement of fleet two-way radios purchased in FY 1974 which have been having considerable maintenance problems; and purchase of two new 40 foot transit coaches to allow expansion of cost-effective subscription bus operations to serve local industry.

FY 1986 - Purchase of two new 40-foot transit coaches to allow further expansion of customized services such as subscription buses for local employment centers.

FY 1987 - Purchase of a replacement supervisory vehicle with 4-wheel drive, deisel powered, and 15-passenger capacity to continue a program of minimizing service time lost in the case of bus breakdowns on-route; and purchase of two new 40-foot transit coaches for expansion of industrial subscription service.

FY 1988 - Rehabilitation of five 1976 model GMC "New Look" transit coaches. These coaches, which serve primarily to handle peak student loads, have proven quite reliable but will be quite advanced in age (12 years) by this time. Based upon current performance it appears that rehabilitation is preferable to outright replacement.

Another tentative capital project in the FY 1985-88 program is an FY 1985 Garage Policy Group purchase of miscellaneous maintenance equipment and/or vehicles. The exact nature of this project will be determined as the current garage project reaches completion.

TABLE VIII-1
FY 1983-84
TRANSIT ANNUAL ELEMENT

CITY OF BETTENDORF

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	TOTAL COST	REVENUE	FEDERAL SHARE	FEDERAL PROGRAM	LOCAL SHARE SOURCE
	FY 1983 Transit Operations Provision of wheelchair-accessible fixed-route and demand responsive transit service July 1, 1982 to June 30, 1983	City of Bettendorf, plus downtown Moline, and a portion of Riverdale	317,454	33,600	141,927	UMTA Sec. 5	City 105,928 State 35,999
	FY 1983 Transit Capital Project Aquisition of the following for support of transit operations:	NA					
	16-22-Passenger Transit Vehicles (2)		79,865		63,892	UMTA Sec. 5 Tier IV*	City 15,973
	FY 1984 Transit Operations Provision of wheelchair-accessible fixed-route and demand-responsive transit service July 1, 1983 to June 30, 1984	City of Bettendorf, plus downtown Moline and a portion of Riverdale	305,906	40,480	132,713	UMTA Sec. 5	City 99,929 State 32,784
	FY 1984 Transit Capital Project 20-25 Passenger Transit Vehicles (2) w/radios and fareboxes		93,940		80,104	UMTA Sec. 9a	City 10,038 State 9,988
	In-house planning activities		6,190				
			100,130				
		TOTAL ANNUAL ELEMENT	803,355	74,080	418,636		310,639

*Funding secured under FY 1980 Capital Grant

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TABLE VII-1
FY 1985 - FY 1988
TRANSIT PROGRAM

CITY OF BETTENDORF

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	ESTIMATED COST	PLAN STAGE
	FY 1985 Transit Operations Provision of wheelchair-accessible fixed-route and demand-responsive transit service from July 1, 1984 to June 30, 1985	Bettendorf, plus downtown Moline, and a portion of Riverdale	339,550	
	FY 1986 Transit Operations Provision of wheelchair-accessible fixed-route and demand-responsive transit service from July 1, 1985 to June 30, 1986	Bettendorf, plus downtown Moline, and a portion of Riverdale	366,700	
	FY 1986 Transit Capital Project Participate in construction of municipal maintenance garage to include maintenance and storage capacity for eight buses plus operations offices	Bettendorf	*350,000	
	FY 1987 Transit Operations Provision of wheelchair-accessible fixed-route and demand-responsive transit service from July 1, 1986 to June 30, 1987	Bettendorf, plus downtown Moline, and a portion of Riverdale	396,000	
	FY 1988 Transit Operations Provision of wheelchair-accessible fixed-route and demand-responsive transit service from July 1, 1987 to June 30, 1988		427,700	
	TOTAL REMAINING PROGRAM		1,879,950	
	TOTAL ANNUAL ELEMENT		803,355	
	TOTAL BETTENDORF PROGRAM		2,683,305	

*Transit portion of 4,180,000 of total project cost

TABLE VIII-2
FY 1983-84
TRANSIT ANNUAL ELEMENT
CITY OF DAVENPORT

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	TOTAL COST	REVENUE	FEDERAL SHARE	FEDERAL PROGRAM	LOCAL SHARE SOURCE
	FY 1983 Transit Operations Provision of wheelchair-accessible fixed-route transit service and demand-responsive special transportation service from April 1, 1982 to June 30, 1983	City of Davenport, plus downtown Rock Island and Duck Creek Plaza, Bettendorf	2,088,500	500,000	540,000	UMTA Sec. 5	City 1,524,661 State 84,139 Other 16,700
	FY 1983 Transit Capital Project Acquisition of the following for support of transit operations:	NA					
	Supervisory Van (1) (Plus 10% contingency)		12,000 13,200		10,560	UMTA Sec. 5 Tier IV	City 2,640
	FY 1983 Transit Capital Project Construction of a Ground Transportation Center to support transit operations (Funding secured under FY 1981 Capital Grant)	Downtown Davenport in block bounded by 2nd St., Harrison St., River Dr., and Ripley St.	27,203,000		4,400,000	UMTA Sec. 3	City 2,661,000 State 142,000 Other 20,000,000
	FY 1984 Transit Operations Provision of wheelchair-accessible fixed-route transit service and demand-responsive special transportation services from July 1, 1983 to June 30, 1984		2,212,260	407,187	16,215 523,785	UMTA Sec. 5 UMTA Sec. 9	City 1,212,596 State 52,477

TABLE VIII-2
FY 1983-84
TRANSIT ANNUAL ELEMENT
CITY OF DAVENPORT
(Continued)

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	TOTAL COST	REVENUE	FEDERAL SHARE	FEDERAL PROGRAM	LOCAL SHARE SOURCE
	FY 1984 Capital/Planning Project						
	In-house planning services		41,000				
	Door-assemblies for TMC's (4)		8,000				
	Powertrains for TMC's (4)		160,000				
	Differentials for TMC's (2)		8,000				
	Air-conditioning compressors for TMC's (4)		8,000				
			225,000	---	180,000	UMTA Sec. 9a	City 20,467 State 24,533
		TOTAL ANNUAL ELEMENT	31,741,960	907,187	5,670,560		25,741,213

TABLE VIII-2
FY 1985 - FY 1988
TRANSIT PROGRAM

CITY OF DAVENPORT (Cont.)

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	ESTIMATED COST	PLAN STAGE
	FY 1985 Transit Operations Provision of wheelchair-accessible fixed-route transit service and demand-responsive special transportation service from July 1, 1984 to July 30, 1985	Davenport, plus downtown Rock Island and Duck Creek Plaza,	2,302,571	
	FY 1985 Transit Capital Acquisition of the following equipment for support of transit services:			
	15 pass. 4-wheel-drive diesel van (1)		24,000	
	Mechanical Destination Signs(13)		19,500	
	Shock-Absorbing Transit Bumpers (16)		19,200	
	Air Intake Retrofit for TMC's (20)		10,000	
	(Plus 10% contingency)		79,970	
	FY 1986 Transit Operations Provision of wheelchair-accessible fixed-route transit service and demand-responsive special transportation service from July 1, 1985 to June 30, 1986	Davenport, plus downtown Rock Island and Duck Creek Plaza, Bettendorf	2,417,200	
	FY 1986 Transit Capital Acquisition of the following for support of transit operation:			
	Supervisory Auto (1)		$12,000	
	(Plus 10% contingency)		$13,200	

TABLE VIII-2
FY 1985 - FY 1988
TRANSIT PROGRAM

CITY OF DAVENPORT (cont.)

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	ESTIMATED COST	PLAN STAGE
	FY 1987 Transit Operations Provision of wheelchair-accessible fixed-route transit service and demand-responsive special transportation service from July 1, 1986 to June 30, 1987	Davenport, plus downtown Rock Island and Duck Creek Plaza, Bettendorf	2,538,060	
	FY 1987 Transit Capital Project Acquisition of the following for support of transit operation			
	Automatic Passenger Counters (5)		17,500	
	Shelters (5)		25,000	
	(Plus 10% contingency)		46,750	
	FY 1988 Transit Operations Provisions of wheelchair-accessible fixed-route transit service and demand-responsive special transportation service from July 1, 1987 to June 30, 1988		2,665,500	
	TOTAL REMAINING PROGRAM		10,063,251	
	TOTAL ANNUAL ELEMENT		31,741,960	
	TOTAL DAVENPORT PROGRAM		41,805,211	

ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	TOTAL COST	REVENUE	FEDERAL SHARE	FEDERAL PROGRAM	LOCAL SHARE SOURCE
	FY 1983 Transit Operations						
	Provision of wheelchair-accessible fixed-route transit service from July 1, 1982 to June 30, 1983	East Moline, Milan, Moline, Rock Island, Silvis	2,795,900	488,000	600,000	UMTA Sec. 5	District 775,947 State 931,957
	FY 1983 Transit Capital Project						
	Acquisition of the following for support of transit operations:	NA					
	15-Pass. Diesel Van w/Snowblade, and 4-Wheel Drive (1)		25,300				
	Passenger Shelters (5)		27,500				
	Manager's Auto (1)		14,300				
	In-house planning services		33,000				
	RTS Wheelchair lift Parts Kit		7,000				
	RTS powertrains (5)		200,000				
	RTS air-conditioning compressors (5)		10,000				
	RTS-II air-conditioning retrofit kits (7)		35,000				
	Differentials for GMC 7600, RTS-II, RTS-IV (1@)		15,000				
	6v 71 engine for GMC 7600 (1)		20,000				
	VH9 transmission (1)		10,000				
	Preliminary engineering for Moline CBD passenger term.		18,649				
			415,749	---	332,599	UMTA Sec. 9a	State 83,150
	FY 1984 Transit Capital Project						
	Construct downtown transit transfer terminal for Moline	Moline CBD	250,000	---	200,000	UMTA Sec. 9a	State 50,000
	FY 1984 Transit Operations						
	Provisions of wheelchair-accessible fixed-route transit service from July 1, 1983 to June 30, 1984	East Moline, Milan, Moline, Rock Island, Silvis	3,000,000	513,000	290,644 509 356	UMTA Sec. 5 UMTA Sec. 9	District 687,000 State 1,000,000
		TOTAL ANNUAL ELEMENT	6,461,649	1,001,000	1,932,599		3,528,054

TABLE VIII-3
FY 1985 - FY 1988
TRANSIT PROGRAM

ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	ESTIMATED COST	PLAN STAGE
	FY 1985 Transit Operations			
	Provision of wheelchair-accessible fixed-route transit service from July 1, 1984 to June 30, 1984	East Moline, Milan, Moline, Rock Island Silvis	3,200,000	
	FY 1985 Transit Capital			
	Acquisition of the following equipment for the support of transit operations:	NA		
	40-ft. Transit Coaches w/Radios & Fareboxes (2)		400,000	
	Two-Way Radios (18)		36,000	
	(Plus 10% contingency)		579,600	
	FY 1986 Transit Operations			
	Provision of wheelchair-accessible fixed-route transit service from July 1, 1985 to June 30, 1986	East Moline, Milan Moline, Rock Island Silvis	3,400,000	
	FY 1986 Transit Capital			
	Acquisition of the following equipment for the support of transit operations:	NA		
	40-ft. Transit Coaches w/Radios & Fareboxes (2)		440,000	
	(Plus 10% contingency)		484,000	
	FY 1987 Transit Operations			
	Provision of wheelchair-accessible fixed-route transit service from July 1, 1986 to June 30, 1987	East Moline, Milan Moline, Rock Island, Silvis	3,600,000	

TABLE VIII-3
FY 1985 - FY 1988
TRANSIT PROGRAM

ROCK ISLAND COUNTY METROPOLITAN MASS TRANSIT DISTRICT (Cont.)

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	ESTIMATED COST	PLAN STAGE
	FY 1987 Transit Capital			
	Acquisition of the following equipment for the support of transit operations:	NA		
	40-ft. Transit Coaches w/Radios and Fareboxes (2)		484,000	
	15-Passenger Van w/4-Wheel Drive and Diesel Power Train (1)		26,000	
	(Plus 10% contingency)		561,000	
	FY 1988 Transit Operations			
	Provisions of wheelchair-accesible fixed-route transit service from July 1, 1987 to June 30, 1988	East Moline, Milan Moline, Rock Island Silvis	3,800,000	
	FY 1988 Transit Capital Project			
	Rehabilitate 5 1976 model GMC "New Look" coaches	NA	275,000	
	(Plus 10% contingency)		302,500	
	TOTAL REMAINING PROGRAM		15,827,100	
	TOTAL ANNUAL ELEMENT		6,461,649	
	TOTAL RICMMTD PROGRAM		22,288,749	

TABLE VIII-4
FY 1983
TRANSIT ANNUAL ELEMENT

MISCELLANEOUS

PROJ. NUMBER	PROJECT DESCRIPTION	PROJECT LOCATION	TOTAL COST	REVENUE	FEDERAL SHARE	FEDERAL PROGRAM	LOCAL SHARE SOURCE
	FY 1983 Transit Capital Project	Rock Island, IL					
	Supplemental funding for joint RICMMTD/Davenport transit maintenance and storage facility		1,000,000	---	800,000	UMTA Sec. 5 Tier IV	RICMMTD 200,000
	(Total for facility including two previously approved grants)		6,448,279	---	1,200,000 3,958,414	UMTA Sec. 5 Tier IV Sec. 3	Ia DOT 247,414 Davenport 297,414 Il DOT 363,218 RICMMTD 381,610
	FY 1983 Transit Capital Project	Rock Island County, IL					
	Purchase of two small buses and one station wagon for private, not-for-profit transit operation serving elderly and handicapped persons in Rock Island County (Project NOW)		54,528	---	43,662	Section 16(b)(2)	Project NOW 10,906

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