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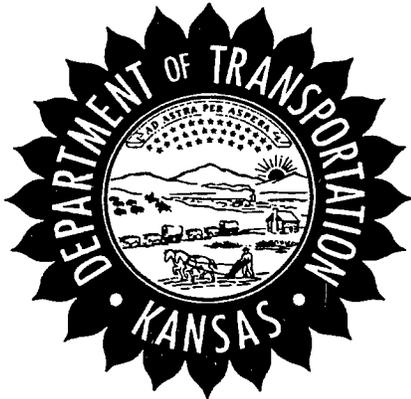


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# **BASELINE TRANSIT NEEDS ASSESSMENT - WICHITA, KANSAS**

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September 1997

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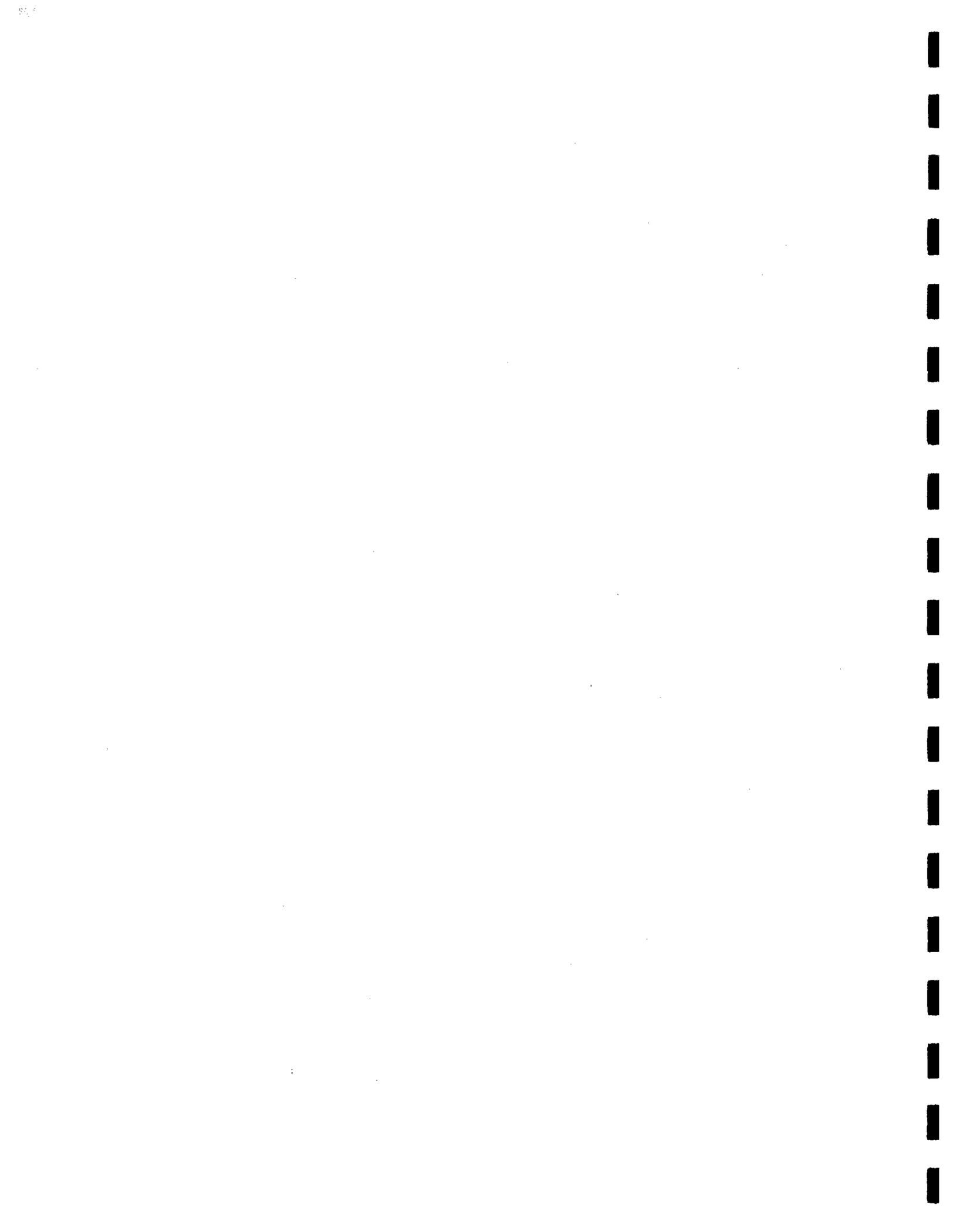
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## ABSTRACT

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The contents of this report reflect the views of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views or the policies of the State of Kansas. This report does not constitute a standard, specification or regulation.

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# CHAPTER I: EXECUTIVE SUMMARY

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## INTRODUCTION AND PURPOSE

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires state departments of transportation (DOTs) and local metropolitan planning organizations (MPOs) to: 1) develop, establish and implement public transportation facilities and equipment management systems; 2) develop a statewide, long-range transportation plan; 3) develop long range transportation plans for each of the state's metropolitan areas; and 4) develop a unified planning work program to meet the state's total transportation system needs. The provisions of ISTEA require states to consider not only the expansion of current systems to accommodate increased demand, but also an assessment of capital investment and other measures necessary to preserve the existing transportation system, including rehabilitation of existing and future transit facilities.

To address the ISTEA mandates enumerated above, the Kansas Department of Transportation (KDOT) has sponsored several studies directed at assessing the state's public transportation needs for the next ten years. In addition to satisfying the requirements of ISTEA, these needs assessment studies will be valuable to local and state elected officials in developing and evaluating programs to meet the transportation needs of the citizens of the state of Kansas in an efficient and economical manner.

An assessment of the state's rural public transportation needs has been completed [1]. The transit needs of the Kansas City (KS) Tri-County Area have been assessed by that area's planning agencies [2]. The basic objective of the present two-year research project is to estimate the capital and operating costs associated with providing general public transportation and paratransit services in Topeka, Wichita, Lawrence and Manhattan, KS over the next ten years (1997-2006). The needs assessment for Topeka [3] was completed in the first year (1995-96) of the two-year project. The needs assessment studies for Wichita, Lawrence and Manhattan are scheduled to be completed during year two (1996-97) of the research project. The present report presents the results of the transit needs

assessment for Wichita. The results of the transit needs assessment studies for the remaining cities (Lawrence and Manhattan) will be documented in two subsequent reports.

## **SCOPE AND LIMITATIONS**

This report presents the results of the transit needs assessment for Wichita for the period 1997-2006. The results reported in the present study are based on a synthesis and extrapolation of existing data. The needs assessment is presented in aggregate financial terms. The present study does not explicitly address ridership, demand, routes, service configuration, or system design.

The needs assessment is presented in terms of several scenarios which attempt to quantify the financial resources needed to 1) maintain existing levels of general public transportation and paratransit services in Wichita for the period 1997-2006 for various levels of local, state and federal funding assistance, and 2) restore general public transportation services to their pre-FY 1996 levels for various levels of local, state and federal funding assistance. In addition, data concerning local socio-demographic trends and transit service characteristics are provided in sufficient detail to allow local service providers to perform a rudimentary assessment of the potential economic and service impacts of a range of alternative transit service configurations.

## **FINDINGS**

This report provides data on existing transit services in Wichita, summarizes key socio-demographic data that can affect the demand for transit services, and presents estimates of the financial resources needed to provide general public transportation and paratransit services in Wichita for the period 1997-2006. The findings within each of these three basic subject areas are summarized in the following sections of this chapter.

## Existing Transit Services

The City of Wichita assumed operation of an existing, privately owned and operated transit system in October of 1966 and thus created the Wichita Metropolitan Transit Authority (WMTA). WMTA provides public transportation within the Wichita city limits and within the Oaklawn Improvement District by offering both fixed-route and paratransit services.

Operating expenses for WMTA during fiscal year 1995 exceeded \$5.6 million dollars, but, due to service reductions, that figure was reduced to \$5.1 million during fiscal 1996. Still, WMTA faces funding challenges. It has experienced a 69 percent decrease in federal funding since fiscal 1995, and the future of federal funding is uncertain. In addition, the mandates of the Americans with Disabilities Act (ADA) of 1990 has resulted in dramatic increases in the demand for WMTA's Special Services program. Consequently, WMTA has become more reliant upon revenue from the city's general fund. In 1995, WMTA received approximately 40 percent of its operating revenue from this fund. It is likely that approximately 59 percent of WMTA's operating revenues will come from that source during fiscal 1997.

In addition to operating expenses, WMTA also expects to spend more than \$10.5 million for capital projects by the end of fiscal 2006. These projects include the replacement of 27 coaches and 54 vans, as well as the purchase of new fare boxes for WMTA's entire fleet.

In order to provide its services, WMTA operates 33 buses on 17 fixed routes between the hours of 6 a.m. and 7 p.m. on weekdays. On Saturdays, WMTA uses 17 buses to serve these routes from 7 a.m. to 5 p.m. The regular per-trip fare for adult users of fixed-route services is \$1.00. During the period 1991 to 1995, fixed-route ridership increased 4 percent.

Complementary paratransit services are provided through WMTA's Special Services program. Since 1992, when many ADA mandates took effect, the program has experienced a 75 percent increase in ridership (from 75,985 riders in 1992 to 133,283 riders in 1996). WMTA estimates that it spent more

than \$900,000 to provide paratransit services during fiscal 1996, and anticipates spending more than \$1.1 million in fiscal 1997.

Several other entities in Wichita and Sedgwick County provide transportation services and receive funding from state and federal sources. These entities primarily provide paratransit services that target senior citizens and persons with disabilities. In most cases, these providers operate independently of the paratransit service provided by the Wichita Metropolitan Transit Authority. As of June 1996, nine agencies were operating 70 vehicles purchased with assistance from either federal programs or from state paratransit funds. Of these vehicles, 28 are equipped with wheelchair lifts and all are due to be replaced at least once before the end of fiscal 2006.

The performance of the transit services provided by the WMTA, as measured by service efficiency (operating expense/vehicle revenue mile and operating expense/vehicle revenue hour), cost effectiveness (operating expense/passenger mile and operating expense/passenger trips), and service effectiveness (passenger trips/vehicle revenue mile and passenger trips/vehicle revenue hour) were compared with that of other similar cities in the U.S. The cities were selected on the basis of their geographical locations, service areas and service area population. The data indicate that the performance of both fixed-route bus and demand responsive transit services provided by the WMTA is at least as effective as the other similar cities. Operating expenses per vehicle revenue mile and per vehicle revenue hour for WMTA's fixed-route bus transit are much lower than the national average. However, the ridership per vehicle revenue mile and per vehicle revenue hour of the WMTA are lower than the national average. Comparisons also indicate that the WMTA's operating expenses per vehicle revenue hour (17.10) and per passenger trip (4.32) for demand responsive transit are much lower than the national average (34.41 and 13.63, respectively).

### **Factors Affecting Transit Demand**

The growth of population in the Wichita-Sedgwick County area has been modest. Until recently, both the City of Wichita and the balance of Sedgwick County have experienced stable growth. The

resident population in the City is becoming more dispersed resulting in a decreasing population density. The population density (persons per square mile) of Wichita has decreased from 3,197 in 1970 to 2,641 in 1990.

The density of dwelling units in the City of Wichita remained nearly constant during the period from 1970 to 1990. Approximately eighty percent (80%) of the dwelling units of Sedgwick county are located within the city. However, the percentage of total dwelling units located within the city is decreasing. Therefore, it is expected that the average distance from residences to places of employment, shopping destinations, and other trip destinations will tend to increase.

Labor force participation in the Wichita-Sedgwick County area has increased substantially from 42.9% of the total population in 1970 to 52.9% in 1990. This increase has been attributed to two factors: an increasing proportion of the population which is sixteen years of age and older, and an increasing proportion of persons sixteen and older who are working or seeking work. The increased percentage of the total population which is in the work force serves to increase work trips. This increases not only the total travel but also increases the weekday morning and evening peak trips. This is the travel category which places the highest demands on the street and road system, and on the capacity of the transit system.

The 1990 Census data showed that approximately 98% of the total workers (age 16 years and over) in Sedgwick County and the City of Wichita worked outside of their home. Also, most of the workers worked in their county or area of residence. Only 2.7% of the workers in Sedgwick County worked outside the county. However, 16.7% of workers in the City of Wichita worked outside the city.

Approximately 96% of the working population in Wichita-Sedgwick County area uses automobiles as a means of transportation to and from work. Eleven percent (11%) of the population of this category use carpooling. Use of public transportation is extremely low (below 2%). The ratio of the workers who worked outside of their home to the number of automobiles was approximately 1 to 1. The mean travel time to work is relatively short with values of 17.8 and 17.0 minutes for Sedgwick

County and the City of Wichita, respectively. Persons who have a travel time of 45 minutes or more constitute approximately 3% of the total working population. The mean work travel time of this category for the Sedgwick County is 63.1 minutes. The corresponding figure for the City of Wichita is 65.8 minutes.

## **BASELINE FINANCIAL NEEDS ASSESSMENT**

A summary of the estimates of the capital and operating costs needed to provide general public transportation and paratransit services at various service levels with a range of possible levels of local, state and federal funding assistance for the period 1997-2006 is presented in the following sections of this chapter. The reader is referred to Chapter IV of this report for a detailed explanation of the data sources and methodology used to develop the estimates of future financial needs.

### **WMTA Services**

Due to recent service and budget reductions at WMTA, the determination of trends capable of accurately projecting revenue and expenditures during the next 10 years proved difficult. Therefore, the projections of possible future expenditures use WMTA's approved budget for 1997 as a baseline and the following basic assumptions: personal services (salaries and benefits) are assumed to increase 2.0 percent annually, while all other expenditure categories (except Special Services) are assumed to increase 3.0 percent annually. Special Services expenditures have increased at a greater rate than expenditures for other WMTA services. Ridership figures for Special Services since 1992 indicate an average annual increase of 15.8 percent. Using 1996 figures as a baseline, Special Services expenditures are projected based on this 15.8 percent growth rate. Using this method, the total cost of Special Services from 1997 to 2006 is projected to be in excess of \$23 million.

The Special Services projections are added to the projections made for the remaining services. In an effort to prevent the "double counting" of expenses, Special Services costs for personal services,

materials and supplies, and contractual services have been subtracted from the general operating budget. In other words, Special Services has been given its own line item. Overall, WMTA's total operating expenditures are expected to surpass \$67 million during the next 10 years.

Future capital expenses are determined on a project-by-project approach, based on cost estimates provided by WMTA officials. WMTA expects to replace 27 coaches and 54 vans during the next 10 years, as well as purchase new fare boxes for its entire fleet. From 1997 to 2006, it is projected that WMTA will require more than \$10.5 million to complete the desired capital projects. Overall, it is estimated that total expenditures (operating plus capital) for WMTA will be approximately \$77.7 million through fiscal 2006.

Because federal operating and planning funding has declined in recent years, WMTA has become more reliant upon revenue from the city's general fund. If the federal funding trend continues, WMTA will require additional increases in revenue from other local and/or state sources if it is to continue to provide current levels of service. Therefore, two future scenarios were developed to reflect this uncertainty. The assumption of the first scenario is that the federal operating allocation will remain constant at approximately \$627,000. The assumption of the second scenario is that the federal operating allocation will be reduced 25 percent each year until being phased out in fiscal 2001.

The projections indicate that through fiscal 2006, WMTA will incur operating expenses of approximately \$67 million during the 10-year period. If federal operating allocations remain constant, operating revenue during the same period of time is expected to total approximately \$56.5 million, leaving \$10.5 million to be funded by other local and/or state revenue sources during the 10-year period. If, however, federal operating allocations are gradually reduced and phased out in 2001, the funding needed from other local and/or state sources rises to \$15.8 million.

Projections also are made based on the long-term service plan approved in December of 1996 by the WMTA Board. This plan calls for enhancements to both fixed-route and paratransit services at some point in the future. For the scenario in which federal operating allocations remain constant, an

unfunded operating deficit of \$23.6 million is expected during the period from 1997 to 2006. The projected 10-year unfunded operating deficit increases to approximately \$28.9 million under the scenario in which federal operating allocations and grants decrease and eventually are phased out.

In an effort to address the projected operating deficits identified in this study, the City of Wichita has chosen to maximize local mil levy support for WMTA starting in 1998. This increased support will generate approximately \$425,000 per year and should be sufficient to cover anticipated operating deficits for current services through 1999. Unless additional state and/or federal operating assistance becomes available, significant reductions in service will be required after 1999.

### **Other Paratransit Services**

Data concerning the revenue and expenditures for the nine other paratransit service providers in the Wichita-Sedgwick County area that are funded through KDOT were obtained from the individual providers (via questionnaire or telephone conversation) and from the Kansas Department of Transportation (KDOT). Operating costs through the year 2006 were estimated by assuming that the combined 1996 transportation budgets of the nine providers would increase at the rate of 4.5 percent annually through fiscal 2006.

Based on this methodology, it is projected that the nine paratransit providers will collectively incur approximately \$20 million in operating expenses for transportation services through fiscal 2006. An additional \$4 million will be required for vehicle replacement during this time period.

### **REFERENCES**

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2. JBM Engineers and Planners in association with ETC Institute and Dobies and Associates. *Tri-County Public Transportation Needs Assessment Study*. Prepared for Mid-America

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## **CHAPTER II: EXISTING TRANSIT SERVICES**

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### **INTRODUCTION**

The City of Wichita assumed operation of an existing, privately owned and operated transit system in October of 1966 and thus created the Wichita Metropolitan Transit Authority (WMTA). The WMTA provides public transportation within the Wichita city limits and within the Oaklawn Improvement District. Service also is provided to McConnell Air Force Base, the Sedgwick County Zoo, and to the Beechcraft/Raytheon and Cessna/Pawnee aircraft manufacturing plants [1].

WMTA provides regular fixed-route bus service and paratransit service for the mobility impaired. In addition, other entities in Wichita and Sedgwick County provide demand-responsive paratransit services that primarily target senior citizens and persons with disabilities. In most cases, these providers operate independently of the paratransit service provided by the Wichita Metropolitan Transit Authority.

Following is a summary of fixed-route and paratransit services provided by WMTA, as well as paratransit services provided by other agencies.

### **WMTA FIXED-ROUTE SERVICES**

The basic operating characteristics and ridership trends for WMTA's current fixed-route transit services are summarized in the following subsections of this chapter.

#### **Fleet Characteristics**

The WMTA utilizes 33 buses to operate its 17 fixed routes during peak periods, while 17 buses are used during midday, or off-peak, service periods. Seventeen buses are used to provide service on Saturdays [2]. Due to recent reductions in the number and frequency of routes, WMTA plans to

reduce the number and size of vehicles in its fleet during the next three years.

Twenty-six of WMTA's buses are 1980 GMC models, and 16 are 1983 Flexible 870 models. In addition, seven 1988 Chance Ameribus models and four 1991 Flexible buses are utilized. The WMTA fixed-route fleet, organized by age, is shown in Table II-1.

**Table II-1. WMTA Fixed-Route Fleet.**

Model Year	Make/Model	Wheel Base (feet)	Quantity	Passenger Capacity	Lift Equipped	Year to Replace
1980	GMC RTS II	40	26	43	Yes	3 in 2002 9 in 2003
1983	Flexible 870	35	16	40	No	8 in 1996 8 in 1997
1988	Chance Ameribus	28	7	30	No	1998
1991	Flexible	35	4	37	Yes	2003

Source: Ref. 1

### Routes

WMTA operates 17 regular fixed routes, with 14 of those routes connecting the Central Business District (CBD) with points located throughout the city. Each of the routes operates Mondays through Fridays with 60-minute headways during off-peak hours and 30-minute headways during morning (6 a.m. to 8:45 a.m.) and afternoon (3:45 p.m. to 7 p.m.) peak hours [1]. On Saturdays, 60-minute headways are utilized on all routes and during all operating hours.

### Hours of Operation

Fixed-route services are offered Mondays through Fridays from 6 a.m. to 7 p.m. and on Saturdays

from 7 a.m. to 5 p.m. No service is provided on Sundays, during evenings, or on the following holidays: New Years Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. The downtown transit center is staffed Mondays through Fridays from 6 a.m. to 4:30 p.m. [2].

### **Transit Center**

Approximately 4,000 persons per day pass through the transit center, which was opened in 1993. In addition to serving as a transfer site, the facility provides passengers a centralized location for receiving transit information, purchasing passes, and accessing restrooms [2].

### **Storage/Administration/Maintenance (SAM) Facility**

The WMTA will break ground for a 66,000 square foot Storage/Administration/Maintenance (SAM) Facility during the Fall of 1997. The site is delineated by the 700 and 800 blocks of East Waterman between the Santa Fe railroad tracks and South Mosley Avenue, as well as by the 500 and 600 blocks of South Mosley Avenue between Lewis and Kellogg [4].

The SAM will house fixed-route and paratransit operations, vehicle repair and painting facilities, as well as office space for administrative staff. In addition, storage space will be provided for buses, eliminating the need to keep bus motors running throughout the night during cold weather. The existing facility is expected to be utilized in another capacity by the City of Wichita [4].

### **Fares**

The regular per-trip fare for the fixed-route system is \$1.00, and regular transfers cost \$0.25. Reduced fares are available to youths and the elderly, as well as for persons with disabilities. In addition to coin fares, WMTA offers 10 prepaid multi-ride options, such as punch passes, monthly passes, and semester passes. These passes may be purchased at the transit center and at more than

20 locations throughout the community [2]. Fixed-route fares are shown in Table II-2.

**Table II-2. WMTA Fixed-Route Fares.**

Category	Cash Fare	Fare for 20-Ride Pass
Adult	\$1.00	\$18.00
Special Citizen (disabled and/or 65 and older)	\$0.50	\$10.00
Youth (under 18)	\$0.75	\$13.00
Adult and Youth Transfer	\$0.25	\$5.00
Special Citizen Transfer	\$0.10	\$2.00

Source: Ref. 2

### Ridership

During 1995, the WMTA fixed-route service provided 2,364,288 overall passenger trips. This service averaged 8,400 passenger-rides per day during the week and an additional 4,433 passenger-rides per Saturday [2]. Annual fixed-route ridership and revenues are summarized in Table II-3.

**Table II-3. WMTA Annual Fixed-Route Ridership and Revenues.**

Year	Ridership	Revenue
1991	2,270,762	\$1,117,326
1992	2,271,760	\$1,111,974
1993	2,217,824	\$1,098,500
1994	2,138,515	\$1,035,296
1995	2,364,288	\$1,135,896

Source: Ref. 5

In an effort to identify characteristics of WMTA's clientele, an unscientific passenger survey was

conducted by the Office of the City Manager in July of 1996. The on-board survey reveals that 50 percent of the riders range in age from 25 to 44 years and that seven percent are senior citizens [6]. Sixty percent of riders have a household income of \$20,000 or less, and nearly 80 percent of the riders reported that they did not have a vehicle available to make their trips [6]. Fifty-six percent of the respondents reported that they made five or six bus trips per week, and nearly 54 percent of the trips are for work purposes [6].

The survey results indicate that respondents are most satisfied with the transit center (92 percent), safety (90 percent), driver courtesy (87 percent), overall service quality (86 percent) and transfer connections (78 percent) [6], where "satisfaction" is measured by combining the "good" and "excellent" responses.

Respondents expressed the least satisfaction (measured by combining "fair" and "poor" responses) with Saturday service (33 percent), comfort (32 percent), air conditioning (27 percent), convenience (26 percent) and service frequency (26 percent) [6]. The most requested system improvements were related to evening service (24 percent), Sunday service (15 percent), service frequency (14 percent) and the number of shelters provided (seven percent) [6].

## **WMTA RIDESHARE PROGRAM**

WMTA operates a free rideshare program designed to match commuters who are interested in forming a carpool or vanpool. The program, which has been in existence since 1984, is financed entirely by Kansas Corporation Commission (KCC) grant funds that are used to match funds provided by the Federal Transit Administration (FTA).

This program has approximately 3,500 commuters in its database, and it utilizes a computer to match commuters with similar origins and destinations. The program serves the City of Wichita and the area within a 50-mile radius of the city. Approximately half of all rideshare participants live outside the limits of the city.

## **WMTA PARATRANSIT SERVICES**

WMTA provides paratransit services through its Special Services program to those riders who are determined to be eligible according to the guidelines set forth by the Americans with Disabilities Act (ADA) of 1990. In general, persons who, because of a physical or mental disability, cannot access or use regular WMTA bus services are eligible to utilize Special Services [7]. WMTA provides this curb-to-curb service with "in-house" vans, vans leased to other providers, and through contracted private agencies.

Persons wishing to use Special Services must first complete and return an eligibility application. Once the application is approved, passengers may request rides by calling the WMTA paratransit coordinator between the hours of 8 a.m. and 3 p.m. Persons wishing to use the paratransit services must make a reservation by 3 p.m. on the day prior to the actual trip. As of January 1997, approximately 40 percent of the rides are scheduled one day in advance, and approximately 60 percent are subscription rides for passengers who make regular trips, such as to and from their places of employment. This feature eliminates the need for passengers to call and schedule each ride [7].

The Special Services program did not receive additional funding to comply with the requirements of ADA. The program currently has two sources of funding: direct operating costs are paid with money from the city's general fund, and the costs of administrative functions are paid with funds from the KCC/FTA grant. In 1996, this grant amounted to \$175,000.

The basic operating characteristics and ridership trends for WMTA's Special Services are summarized in the following subsections of this chapter.

### **Fleet Characteristics**

In order to provide Special Services, WMTA utilizes 24 vans equipped with hydraulic lifts and wheelchair tie-downs. Sixteen of the vans are classified as "in-house" vehicles, meaning that they are

used by WMTA to provide paratransit services. The remaining eight vans are leased to other providers. The characteristics of WMTA's Special Services fleet are summarized in Table II-4.

**Table II-4. WMTA Special Services Fleet.**

Model Year	Make	Quantity	Classification	Passenger Capacity	Wheelchairs/ Vehicle	Year to Replace <sup>a</sup>
1994	Ford--Metal Body	5	Leased	11	2	1999
1995	Ford--Diamond Fiberglass Body	14	11 In-House 3 Leased	9 9	2 2	1998 2000
1996	Ford--El Dorado Fiberglass Body	5	In-House	14	2	1999

<sup>a</sup> Per WMTA's replacement schedule

Source: Ref. 8

### Services and Fares

The Special Services program provides curb-to-curb transportation for persons with disabilities who are unable to use WMTA's fixed-route system. Once passengers are determined to be eligible for service, they may call the paratransit coordinator to arrange a ride. Ride information such as date and time, origin, and destination is obtained at this time. The fare for these services, whether provided by WMTA or a contracted agency, is \$2.00 per one-way trip [7].

### Hours of Operation and Service Area

The WMTA Special Services are offered on the same days and during the same hours as the fixed-route system (i.e., 6 a.m. to 7 p.m. on weekdays and 7 a.m. to 5 p.m. on Saturdays). No service is provided on Sundays or on the following holidays: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day [7]. Services are provided within the same operating area as the fixed-route system.

## Ridership

Special Services was created in 1978 and experienced a 317 percent growth in ridership over the period from 1978 to 1995. More recently, ridership has increased from a level of 49,605 in 1991 to 110,410 in 1995. With the implementation of ADA regulations in 1992, ridership increased 53 percent, from 49,605 riders in 1991 to 75,985 in 1992. Annual Special Services ridership and revenues are shown in Table II-5.

**Table II-5. WMTA Special Services Ridership and Revenue.**

Year	Ridership <sup>a</sup>	Revenue
1992	75,985	\$151,970
1993	88,214	\$176,428
1994	83,828	\$167,656
1995	110,410	\$220,820
1996	133,283	\$266,566

<sup>a</sup> Ridership consists of services provided by WMTA and contracted agencies.

Source: Ref. 9

## Sedgwick County Support Services for Elderly and Disabled Citizens

In 1995, the Sedgwick County Department of Aging initiated the Senior Citizen Ride at a Moment (SCRAM) program. This service provides subsidized taxi-cab rides to eligible elderly citizens within the Wichita city limits. The purpose of the program is to meet same-day essential transportation needs related to medical, social service, and food-shopping trips. However, this service will provide emergency trips when no other means of transportation is available.

While the program is funded entirely by Sedgwick County, it operates out of WMTA's Special Services division. The fare for each trip is \$2.00, and passengers must meet established program and financial eligibility criteria.

A similar program, Disability Rides at a Moment (DRAM), was established in 1996 by the Sedgwick County Department of Physical Disabilities. DRAM provides same-day emergency rides for citizens who meet established program and financial eligibility criteria. As with its senior citizen counterpart, DRAM is funded entirely by Sedgwick County.

In regard to services for elderly and disabled citizens, long-range plans call for the extension of services to other Sedgwick County communities. While no formal implementation plan has been developed, additional capital and operating resources may be required to allow this expansion to occur.

### **OTHER PARATRANSIT SERVICES**

Several other entities in Wichita and in Sedgwick County provide demand-responsive and point-deviation paratransit services for the elderly and for persons with disabilities. In most cases, these services operate independently of the paratransit services provided by the Wichita Metropolitan Transit Authority's Special Services system.

As of June 1996, nine agencies operate 70 privately owned or quasi-public paratransit vehicles purchased with assistance from either Federal Transit Administration 49 U.S.C. 5310 grant funds (formerly Section 16) or State of Kansas Elderly and Disabled Coordinated Public Transportation Assistance Funds [10]. Of these vehicles, 28 are equipped with wheelchair lifts or ramps [10].

All of these paratransit providers are members of the Paratransit Council, which acts as an umbrella agency for members receiving public funds for transportation [11]. In addition, all members of the Paratransit Council are represented on the Central Plains Coordinated Transit District No. 12, which serves Butler, Harvey, and Sedgwick counties. The Central Plains Area Agency on Aging is responsible for administration of the district, the purpose of which is to enhance coordination and management of state and federal passenger transportation funds [11].

Table II-6 summarizes the services of Wichita-Sedgwick County paratransit providers who utilize vehicles purchased with federal or state assistance. Table II-7 provides an inventory of the vehicles operated by these providers as of June 1996.

**Table II-6. Paratransit Services Provided by Other Wichita-Sedgwick County Providers.**

Provider	Type of Service	Target Clientele	Transportation Budget <sup>a</sup>
American Red Cross	PD/DR <sup>b</sup>	Elderly/Disabled	\$174,500
Arrowhead West, Inc.	PD/DR	Disabled	90,252
Cerebral Palsy Research	PD/DR	Disabled	173,900
Heartspring	DR	Disabled	24,471
Kansas Elks Training Center	PD/DR	Disabled	144,287
Rainbows United	PD	Disabled Youth	500,000
Sedgwick County	PD/DR	General Public	50,200
Starkey, Inc.	DR	Elderly/Disabled	249,592
STEPS, Inc.	PD/DR	Elderly/Disabled/Low Income	152,184

<sup>a</sup> Transportation budget (operating) figures supplied by providers via mailed questionnaire or telephone conversation.

<sup>b</sup> PD refers to point-deviation service and DR refers to demand-responsive service.

Source: Ref. 12

**Table II-7. Inventory of Other Paratransit Vehicles in Wichita-Sedgwick County.**

Provider	Vehicle Description <sup>a</sup>	Lift	Purchase Price (\$)	Projected Year to be Replaced <sup>b</sup>
American Red Cross	1976 school bus	No	14,343	1997
	1976 station wagon	No	4,894	1997
	1984 conversion van	No	17,585	1997
	1984 conversion van	No	17,585	1997
	1984 conversion van	No	17,585	1997
	1986 transit bus	No	23,510	1997
	1986 transit bus	Yes	55,610	1997

Table II-7 (contd..)

Provider	Vehicle Description <sup>a</sup>	Lift	Purchase Price (\$)	Projected Year to be Replaced <sup>b</sup>
	1988 conversion van	Yes	24,360	1998
	1989 window van	No	25,506	1999
	1989 window van	No	25,506	1999
	1990 window van	No	24,409	2000
Arrowhead West, Inc.	1994 station wagon	No	17,913	2003
	1996 window van	No	19,125	2006
Cerebral Palsy Research	1994 transit bus	Yes	37,360	1999, 2004
	1994 transit bus	Yes	39,505	2000, 2006
Heartspring	1989 station wagon	No	13,965	1997, 2005
	1989 conversion van	No	19,616	1999
	1994 window van	No	18,844	2004
Kansas Elks Training Center	1984 window van	Ramp	15,702	1997
	1985 school bus	Yes	29,586	1997
	1987 conversion van	Ramp	18,349	1997
	1987 conversion van	Yes	18,349	1997, 2003
	1988 conversion van	Yes	24,305	1997, 2002
	1993 transit bus	Yes	37,360	2000
	1994 conversion van	Yes	31,731	2000, 2006
	1994 conversion van	Yes	31,731	2002
	1995 window van	No	17,851	2005
	1995 window van	No	17,851	2005
	1996 transit bus	Yes	33,675	2006
	1996 transit bus	Yes	33,675	2006
Rainbows United	1985 window van	No	19,007	1997
	1993 conversion van	Yes	32,189	2003
	1994 conversion van	Yes	32,325	2004
	1994 conversion van	Yes	32,325	2003

Table II-7 (contd..)

Provider	Vehicle Description <sup>a</sup>	Lift	Purchase Price (\$)	Projected Year to be Replaced <sup>b</sup>
	1995 conversion van	Yes	33,041	2005
	1995 conversion van	Yes	33,041	2005
	1995 conversion van	Yes	33,041	2005
	1996 transit bus	No	37,155	2006
	1996 transit bus	No	37,155	2006
	1996 transit bus	No	37,155	2006
Sedgwick County	1989 conversion van	No	23,336	1997, 2003
	1990 conversion van	Yes	27,126	1997, 2002
Starkey, Inc.	1985 conversion van	No	18,167	1997
	1985 conversion van	No	18,167	1997
	1987 window van	No	15,934	1997
	1987 window van	No	15,934	1997
	1988 window van	No	17,805	1998
	1988 window van	No	17,805	1998
	1991 transit bus	No	30,019	1998, 2005
	1991 transit bus	No	30,019	1997, 2003
	1991 transit bus	No	42,729	1998, 2005
	1993 transit bus	Yes	36,880	1998, 2003
	1993 transit bus	Yes	36,880	2001
	1993 transit bus	Yes	36,880	1999, 2005
	1994 conversion van	No	28,540	2004
	1994 conversion van	No	28,540	2004
	1996 transit bus	No	33,600	2006
	1996 transit bus	No	33,600	2006
1996 transit bus	No	37,150	2006	
STEPS, Inc.	1988 window van	No	18,565	1997, 2005
	1989 window van	No	18,495	1997, 2004

**Table II-7 (contd..)**

Provider	Vehicle Description <sup>a</sup>	Lift	Purchase Price (\$)	Projected Year to be Replaced <sup>b</sup>
	1989 window van	No	18,495	1998
	1990 window van	No	20,765	1998, 2006
	1990 window van	No	20,765	1997, 2003
	1990 transit bus	No	30,351	1997, 2003
	1991 conversion van	Yes	28,076	1997, 2002
	1991 transit bus	Yes	33,299	1998, 2005
	1992 window van	No	23,825	2002
	1995 conversion van	Yes	33,041	2005
	1995 conversion van	Yes	33,041	2005

<sup>a</sup> Includes only those vehicles purchased with federal or state assistance.

<sup>b</sup> Based on vehicle age and average annual mileage; vehicle replaced at 10 years of age or 100,000 miles.

Source: Ref. 10

## WMTA SYSTEM PERFORMANCE

The performance of the transit services provided by the WMTA (measured in terms of service efficiency, cost effectiveness, and service effectiveness) was compared with that of other similar cities in the U.S. The cities were selected on the basis of their location, service area, and service area population. Table II-8 summarizes the service areas and the service populations of ten peer group cities in the U.S., including Wichita. Wichita has a transit service area of 120 square miles and a service area population of 304,011. Of the 10 cities, 7 cities (El Paso, Omaha, Albuquerque, Colorado Springs, Tulsa, Corpus Christi, and Des Moines) have populations greater than Wichita while the other 2 cities (Shreveport and Little Rock) have populations less than Wichita. These data are for 1995 (January 1 to December 31) [13]. The range of service areas of the cities is 53 to 838 square miles and the range of service area populations is approximately 186,000 to 540,000. All these cities are operating both fixed-route bus and demand responsive transit systems. Figures II-1 and II-2 compare the service area populations and service areas of these 10 peer group cities.

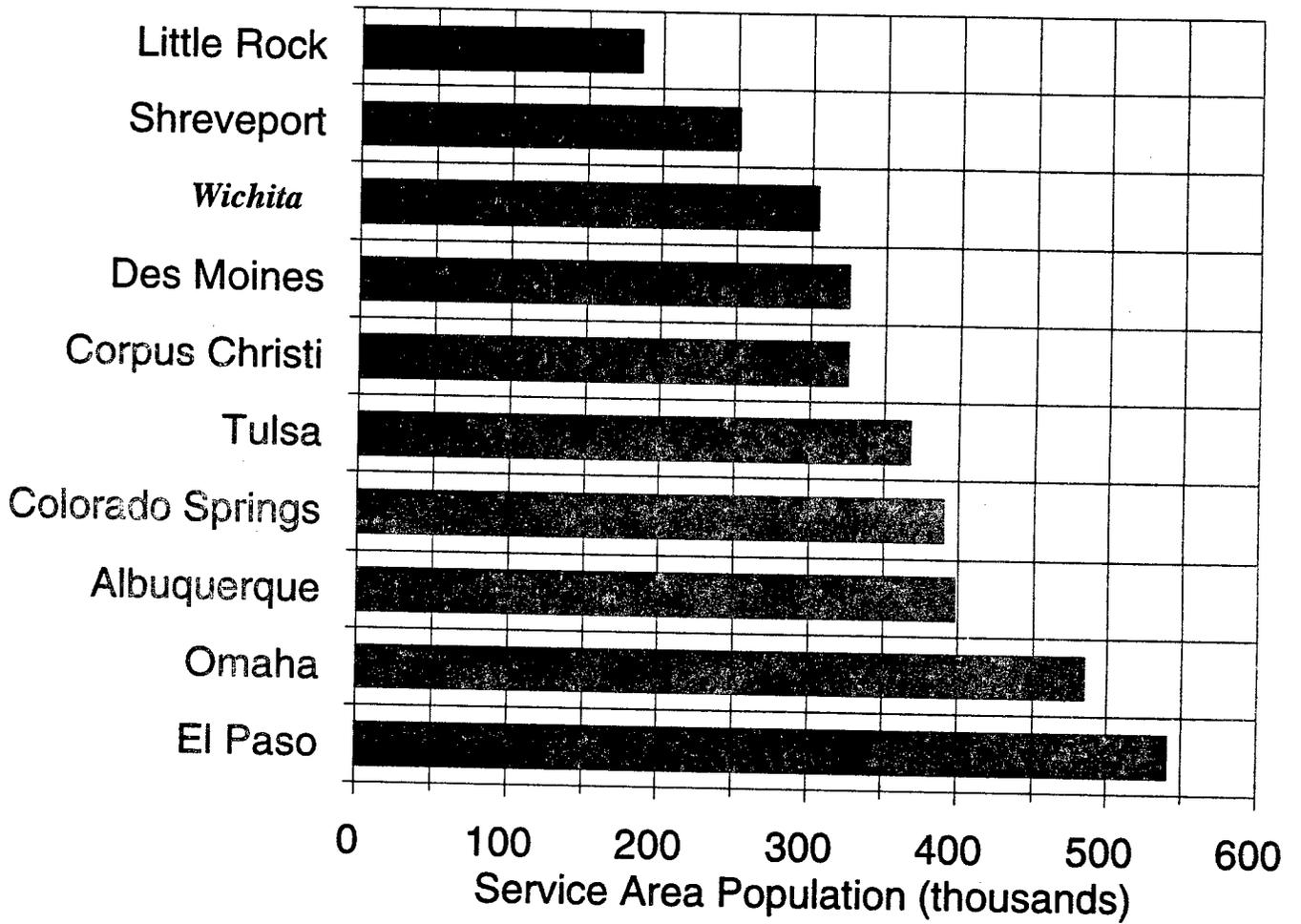
**Table II-8. Service Area and Population in 1995 of Peer Group U.S. Cities.**

City	Service Area (Sq. Miles)	Service Area Population
El Paso, TX	248	540,203
Omaha, NE	175	484,875
Albuquerque, NM	124	398,000
Colorado Springs, CO	644	390,000
Tulsa, OK	184	367,302
Corpus Christi, TX	838	325,000
Des Moines, IA	168	325,179
<b>Wichita, KS</b>	<b>120</b>	<b>304,011</b>
Shreveport, LA	53	251,398
Little Rock, AR	118	185,728

Source: Ref. 13

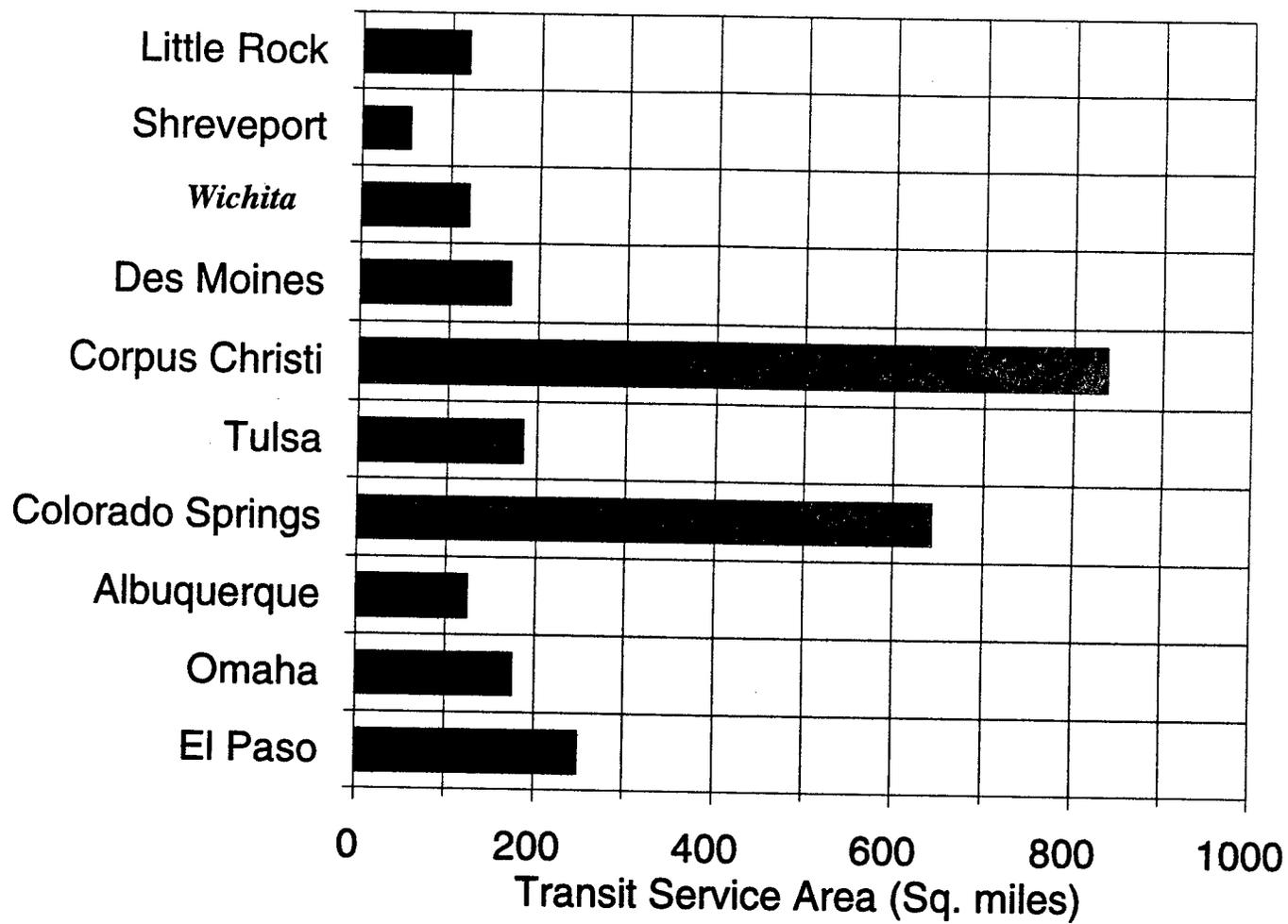
Tables II-9 and II-10 show the 1995 annual ridership and system wide operating expenses for the 10 U.S. cities. The data in Table II-9 reveal no readily apparent relationship between population and transit ridership. Though Shreveport and Little Rock have populations less than Wichita, total ridership for these two cities was higher than Wichita. Total operating expenses for 1995 follow the same pattern as that of total ridership; i.e., the higher the ridership the higher the total operating expenses (Figures II-3 and II-4).

Performance of the transit service provided by the WMTA was also compared with that of other similar U.S. cities. Performance was measured in terms of service efficiency (operating expense/ vehicle revenue mile and operating expense/ vehicle revenue hour), cost effectiveness (operating expense/ passenger mile and operating expense/ passenger trips), and service effectiveness (passenger trips/ vehicle revenue mile and passenger trips/ vehicle revenue hour). Tables II-11 and II-12 summarize the performance measures for fixed-route bus and demand responsive transit systems, respectively. The values indicate that the performance of both fixed-route bus and demand responsive



Source: Ref. 13

Figure II-1. Transit Service Area Population of Peer Group U.S. Cities.



Source: Ref. 13

Figure II-2. Transit Service Area of Peer Group U.S. Cities.

**Table II-9. Total Transit Ridership in 1995 of Peer Group U.S. Cities.**

City	Total Unlinked Passenger Trips*
El Paso, TX	15,793,962
Omaha, NE	5,022,654
Albuquerque, NM	6,536,416
Colorado Springs, CO	4,091,933
Tulsa, OK	3,139,541
Corpus Christi, TX	5,286,034
Des Moines, IA	3,824,938
<b>Wichita, KS</b>	<b>2,386,326</b>
Shreveport, LA	4,151,280
Little Rock, AR	2,600,250

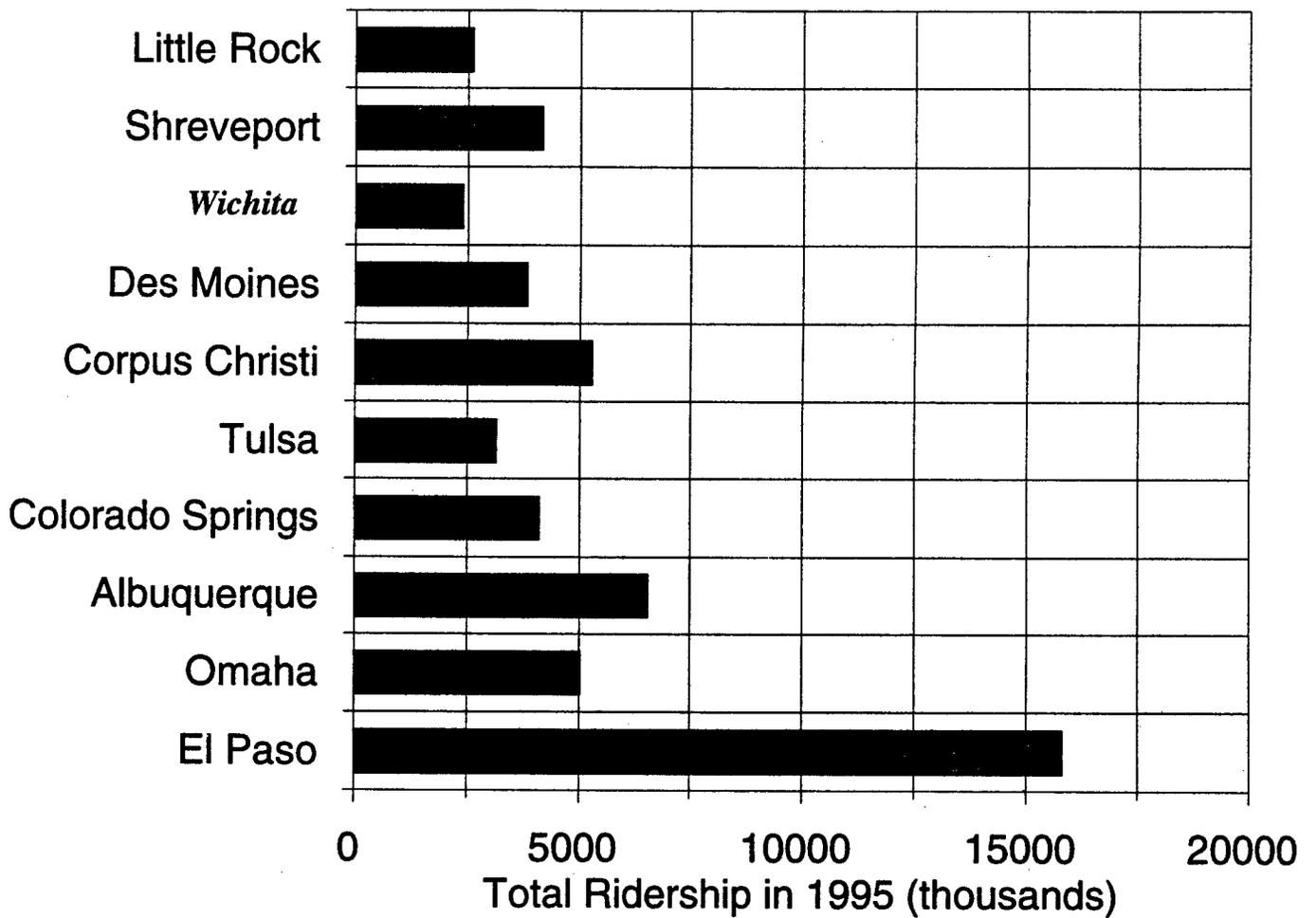
\* trips taken by both initial-board (originating) and transfer (continuing) transit patrons. Each passenger is counted each time that person boards a transit vehicle regardless of the type of fare paid or transfer presented [14].

Source: Ref. 13

**Table II-10. System Wide Operating Expenses in 1995 of Peer Group U.S. Cities.**

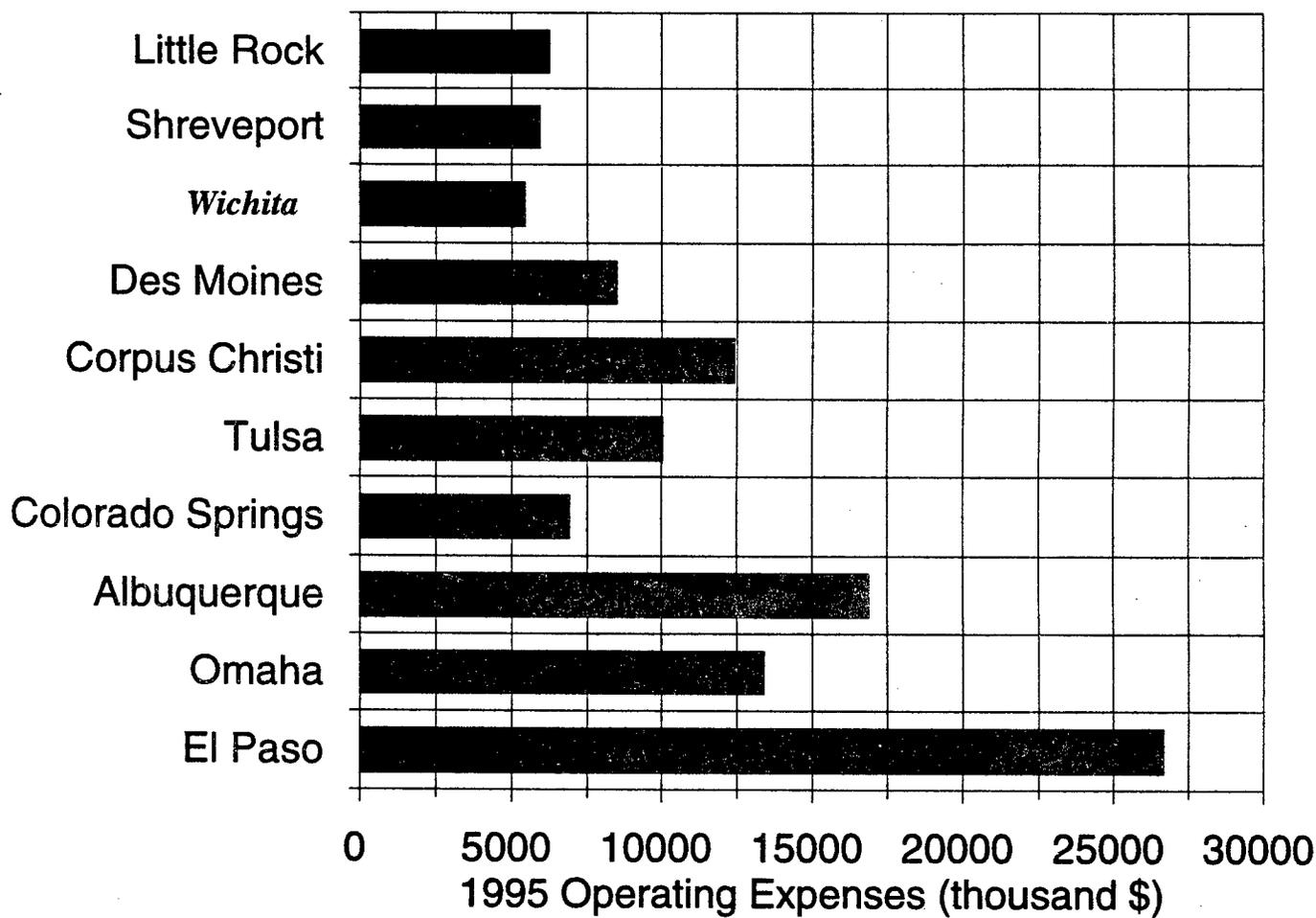
City	System Wide Operating Expenses (\$)
El Paso, TX	26,629,018
Omaha, NE	13,386,195
Albuquerque, NM	16,872,657
Colorado Springs, CO	6,902,238
Tulsa, OK	10,016,472
Corpus Christi, TX	12,401,596
Des Moines, IA	8,479,145
<b>Wichita, KS</b>	<b>5,418,577</b>
Shreveport, LA	5,927,713
Little Rock, AR	6,261,803

Source: Ref. 13



Source: Ref. 13

Figure II-3. Total Transit Ridership of Peer Group U.S. Cities in 1995.



Source: Ref. 13

Figure II-4. System Wide Operating Expenses in 1995 of Peer Group U.S. Cities.

**Table II-11. Performance of Fixed-Route Bus Transit Systems of Peer Group U.S. Cities.**

City	Service Efficiency		Cost Effectiveness		Service Effectiveness	
	Operating expenses/ vehicle revenue mile (\$)	Operating expenses/ vehicle revenue hour (\$)	Operating expenses/ passenger mile (\$)	Operating expenses/ passenger trip (\$)	Passenger trips/ vehicle revenue mile	Passenger trips/ vehicle revenue hour
El Paso, TX	3.79	48.95	0.28	1.45	2.62	33.74
Omaha, NE	3.22	43.22	0.66	2.51	1.28	17.25
Albuquerque, NM	4.06	65.30	0.70	2.26	1.80	28.94
Colorado Springs, CO	2.69	43.02	0.41	1.54	1.75	27.99
Tulsa, OK	2.93	44.95	0.50	2.75	1.07	16.37
Corpus Christi, TX	3.73	54.12	0.39	1.96	1.90	27.55
Des Moines, IA	4.70	61.73	0.40	1.97	2.39	31.39
Wichita, KS	2.47	39.56	0.48	2.17	1.14	18.22
Shreveport, LA	2.82	42.31	0.31	1.33	2.11	31.74
Little Rock, AR	2.60	37.15	0.61	2.34	1.11	15.90
<i>National Average</i>	5.84	74.74	0.53	1.96	2.98	38.18

Source: Ref. 13

**Table II-12. Performance of Demand Responsive Transit Systems of Peer Group U.S. Cities.**

City	Service Efficiency		Cost Effectiveness		Service Effectiveness	
	Operating expenses/ vehicle revenue mile (\$)	Operating expenses/ vehicle revenue hour (\$)	Operating expenses/ passenger mile (\$)	Operating expenses/ passenger trip (\$)	Passenger trips/ vehicle revenue mile	Passenger trips/ vehicle revenue hour
El Paso, TX	2.53	44.46	1.81	16.54	0.15	2.69
Omaha, NE	2.10	29.13	3.05	15.84	0.13	1.84
Albuquerque, NM	2.12	34.32	2.81	20.42	0.10	1.68
Colorado Springs, CO	0.90	11.70	0.83	3.22	0.28	3.63
Tulsa, OK	1.48	23.90	0.86	8.49	0.17	2.82
Corpus Christi, TX	1.99	37.79	1.09	12.81	0.16	3.08
Des Moines, IA	4.22	60.74	1.90	6.48	0.65	9.38
Wichita, KS	1.50	17.10	0.98	4.32	0.35	3.96
Shreveport, LA	1.30	17.97	1.71	12.35	0.11	1.46
Little Rock, AR	1.94	28.70	2.29	4.70	0.41	6.11
<i>National Average</i>	2.37	34.41	1.86	13.63	0.17	2.52

Source: Ref. 13

transit services provided by the WMATA is at least as efficient as the other similar cities. Operating expenses per vehicle revenue mile and per vehicle revenue hour for WMATA's fixed-route bus transit are much lower than the national average (Table II-11). However, the ridership per vehicle revenue mile and per vehicle revenue hour of the WMATA are lower than the national average. Table II-12 shows that WMATA operating expenses per vehicle revenue hour (17.10) and per passenger trip (4.32) for demand responsive transit are much lower than the national average (34.41 and 13.63, respectively).

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## **CHAPTER III: FACTORS AFFECTING TRANSIT DEMAND**

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### **INTRODUCTION**

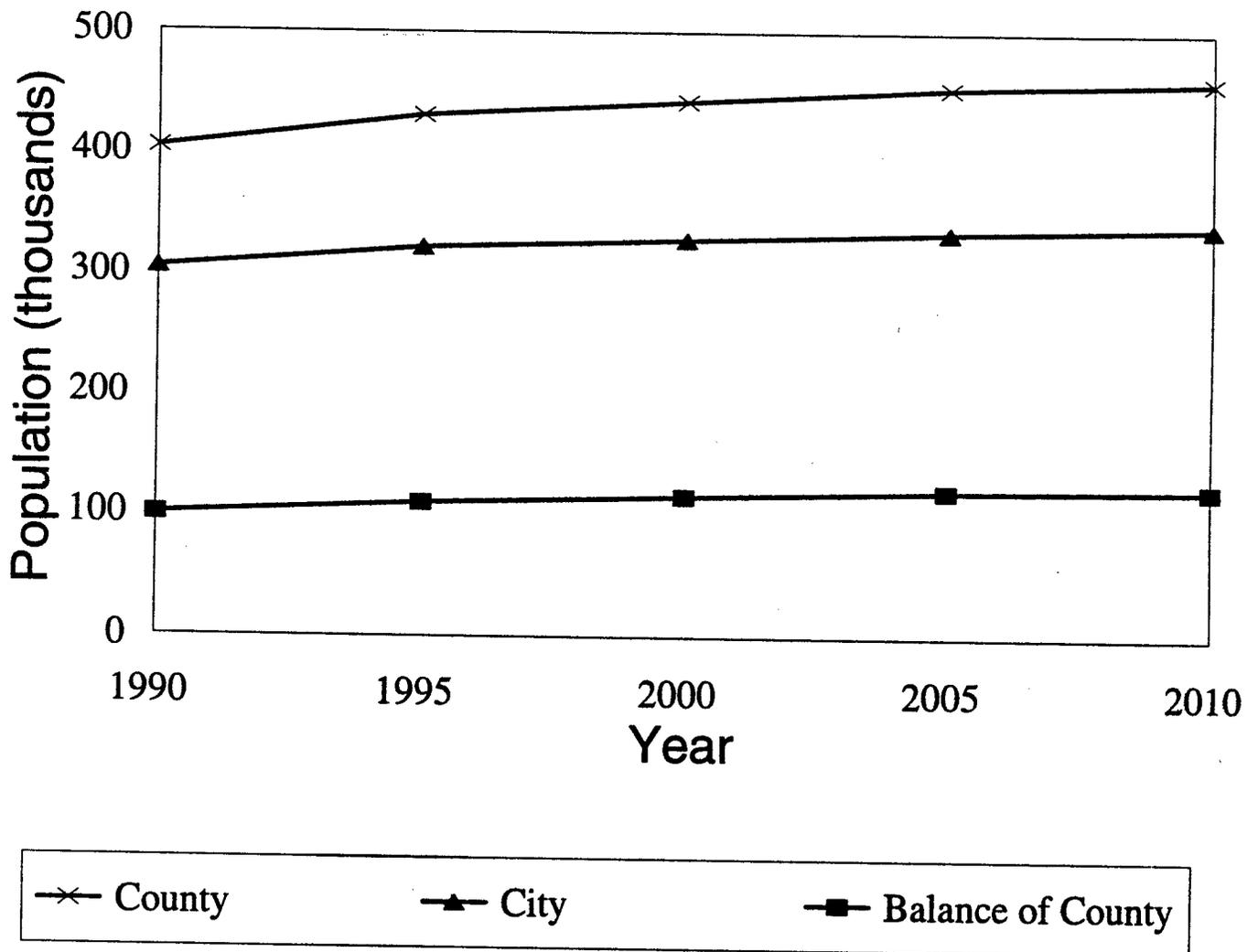
It has been understood for many years that there is a close relationship between land development, population and economic patterns and the demand for transportation services. Among the various factors affecting travel demand, the most significant are the natural growth of population and the spatial distribution of residences, work, shopping, and entertainment activities. These factors change over time affecting the road and street system and other transportation services and facilities.

This chapter provides a summary of key socio-demographic trends that could have a significant impact on the demand for transit services in Wichita and the surrounding area in coming years. These data should be useful to local transit service providers in assessing potential new transit markets and in evaluating alternative transit system configurations and service delivery schemes.

### **POPULATION GROWTH TRENDS**

The growth of population in Sedgwick County and in the City of Wichita has been modest. Until recently, both the City of Wichita and the balance of Sedgwick County have experienced stable growth. The County and City populations as reported by the U.S. Bureau of the Census in 1970, 1980 and 1990, are shown in Table III-1 [1]. The population growth rate during the ten year period from 1980 to 1990 is much higher than the growth rate during the period from 1970 to 1980. Data in Table III-1 also shows that the balance of county has a higher growth rate than the growth rate of the total population in both the City of Wichita and Sedgwick County. Figure III-1 shows the growth of population in the City of Wichita and in Sedgwick County during the period 1970-1990.

Table III-2 shows population projections for the City of Wichita and Sedgwick County up to 2010 [2]. The data for 1980 and 1990 in Table III-2 are the actual census counts. It is to be noted that the



Source: Ref. 1, 2

Figure III-1. Population growth trends in the City of Wichita and Sedgwick county.

population of the City of Wichita has been projected (1995-2010) using a growth rate which is consistent with the growth trend of the City population (Table III-1) and also with the growth of the County population (Table III-2). The census data indicated that the growth rate of the City population was relatively lower than that of the County [2].

**Table III-1. Population of the City of Wichita and Sedgwick County, Kansas.**

Year	City of Wichita	Balance of County	County Total	Percent of Total Population Living in the City
1970	276,554	74,140	350,694	78.9
1980	280,808	86,280	367,088	76.5
1990	304,011	99,651	403,662	75.3

Source: Ref. 1, 2

**Table III-2. Population Projections for the City of Wichita and Sedgwick County: 1980-2010.**

	1980	1990	1995	2000	2005	2010
County	367,088	403,662	430,078	442,377	453,828	459,161
City <sup>a</sup>	280,808	304,011	321,036	327,457	334,006	338,014
Balance of County	86,280	99,651	109,042	114,920	119,822	121,147

<sup>a</sup> 1995-2010: estimated using a growth rate which is consistent with the growth of the City and the County population.

Source: Ref. 2

## POPULATION DENSITY

The resident population in the City of Wichita is becoming more dispersed (Table III-1). In 1970, 79% of the Sedgwick County population resided in Wichita. By 1990, the portion of the county population residing in Wichita had declined to 75%. At the same time the limits of the City grew. Resident population density has thus decreased in the past two decades, as shown in Table III-3.

As population density decreases, the average distance from residences to places of employment,

shopping, and other trip destinations tends to increase. Accordingly, as the average trip lengths increase, the total miles of travel increase.

**Table III-3. Population Density in the City of Wichita, Kansas.**

Year	Population	Area (Sq. Miles)	Population per Sq. Mile
1970	276,554	86.5	3,197
1980	280,808	101.4	2,769
1990	304,011	115.1	2,641

Source: Ref: 3, 4, 5

### **AGE DISTRIBUTION**

Age distribution dynamics have varied substantially since 1970. The working age cohort (20-64) has increased substantially between 1970 and 1990 with an increased rate of growth occurring from 1970 to 1980. That same time period saw the decline of school age children (5-19) and non-school age children (under 5). However, the non-school age (under 5) group saw an increase during 1980 to 1990. The retiree age cohort (65 and over) has increased moderately since 1970 (8.0% in 1970 to 11.4% in 1990). Table III-4 summarizes the age distribution of the population in Sedgwick County for the period 1970 to 1990. Table III-5 also shows the composition of some specific population subgroups for the City of Wichita and Sedgwick County in 1990. These "target population" subgroups are frequently used to estimate the demand for transit services.

### **ETHNIC CHARACTERISTICS**

The ethnic characteristics of the population in 1990 for Sedgwick County and the City of Wichita show that the population is predominantly white, accounting for 85.5% and 82.3% of the total population of the county and the city, respectively (Table III-6). Census data also show that 4.3% of the total population in Sedgwick county is of Hispanic origin irrespective of race (Table III-6). The corresponding figure for the City of Wichita is 5%.

**Table III-4. Population Age Distribution of Sedgwick County: 1970-1990.**

Year	Age Group				County Total
	Under 5	5-19	20-64	65 & over	
<b>1970</b>					
Number	30,869	106,319	185,375	28,131	350,694
Percent (%)	8.8	30.3	52.9	8.0	100.0
<b>1980</b>					
Number	29,990	85,774	216,235	35,119	367,088
Percent (%)	8.2	23.4	58.9	9.5	100.0
<b>1990</b>					
Number	34,442	87,992	235,312	45,986	403,662
Percent (%)	8.5	21.8	58.3	11.4	100.0

Source: Ref. 1, 6, 7, 8, 9

**Table III-5. Target Population Subgroups (1990 Census Data).**

Population Subgroups	Sedgwick County	Wichita City
Total Population	403,662	304,011
Elderly (65 years and over)	45,986	37,655
Elderly (65 years and over) Non-disabled	37,723	30,856
Disabled <sup>a</sup>	17,964	14,622
Youth 15-19 years	26,051	18,757
Youth 0-14 years	96,293	69,688
General <sup>b</sup>	225,631	170,088

<sup>a</sup> Persons 16 years and over. Disabled population includes persons with mobility and/or self-care limitations.

<sup>b</sup> General population is the population other than Elderly non-disabled, Disabled, Youth 0-14 years, and Youth 15-19 years.

Source: Ref. 1, 10

**Table III-6. Ethnic Characteristics of the Population in 1990.**

Ethnic Characteristics	Sedgwick County		Wichita City	
	Population	Percent of Total Population	Population	Percent of Total Population
White	345,173	85.5	250,176	82.3
Black	36,061	8.9	34,301	11.3
American Indian / Eskimo / Aleut	4,556	1.1	3,527	1.2
Asian / Pacific Islanders	8,728	2.2	7,773	2.5
Other Races	9,144	2.3	8,234	2.7
Hispanic Origin <sup>a</sup>	17,435	4.3	15,250	5.0

<sup>a</sup> Hispanic origin total (irrespective of race). Persons of Hispanic origin are those who classified themselves in one of the following specific categories- "Mexican", "Puerto Rican", "Cuban", or "Other Spanish/Hispanic."

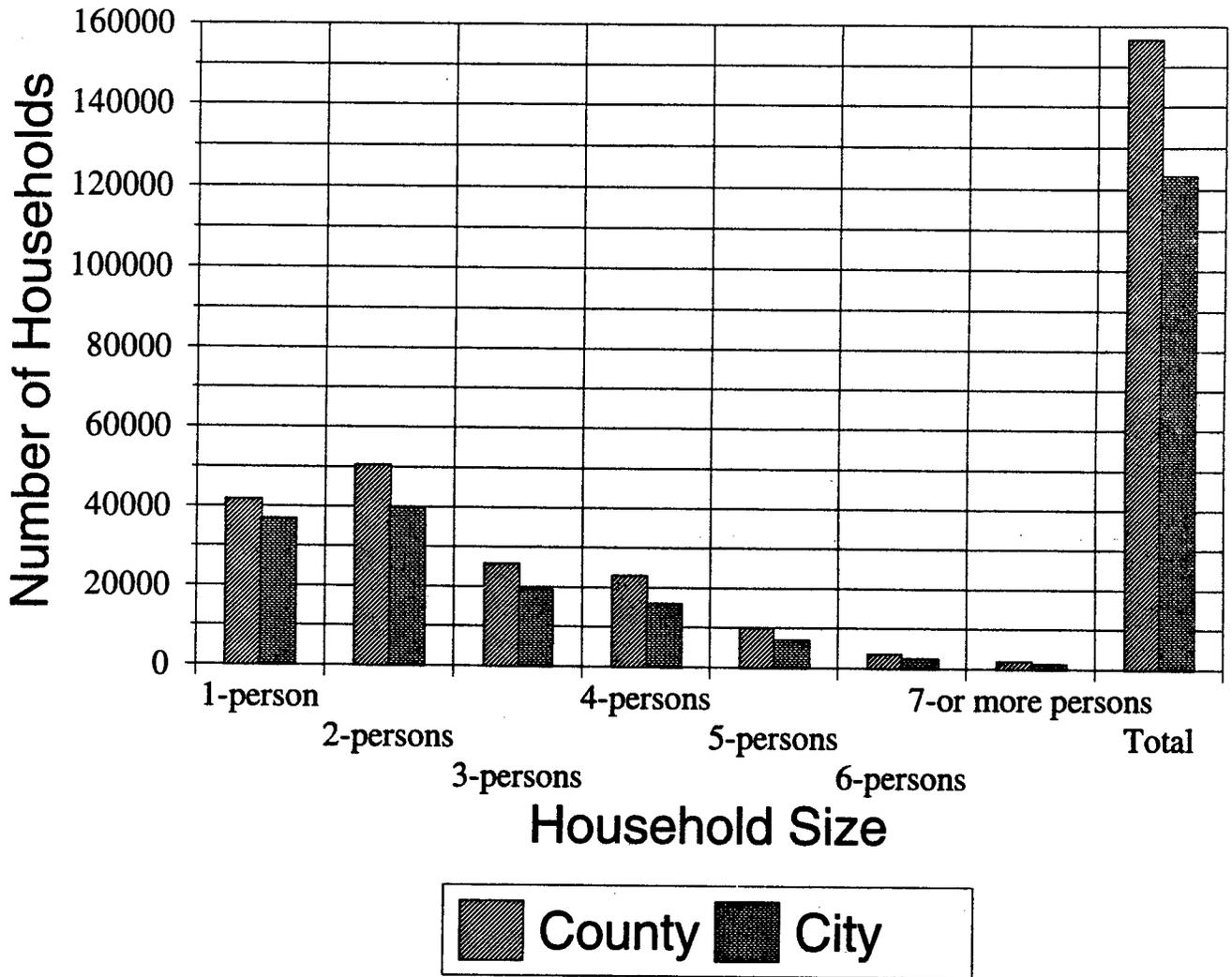
Source: Ref. 10

## HOUSEHOLD CHARACTERISTICS

1990 Census data show that the total numbers of households in Sedgwick County and in the City of Wichita were 156,571 and 123,249, respectively. Sixty five percent (65%) of the total households in the City of Wichita were family-households. The percentage distribution of the size of households was approximately 32% 2-person households, 30% 1-person households, 16% 3-person households, and 14% 4-person households. Tables III-7 and III-8 summarize the household characteristics in Sedgwick County and in the City of Wichita. Figure III-2 shows the number of households by household size in Sedgwick County and in the City of Wichita.

## DWELLING UNIT DENSITY

The 1990 Census data show that the density of dwelling units in the City of Wichita remained nearly constant during the period from 1970 to 1990. Table III-9 summarizes the density of dwelling units in the City of Wichita. Approximately eighty percent (80%) of the dwelling units of Sedgwick County are located within the city (Table III-10). Table III-10 also shows that the percentage of total dwelling units located within the city is decreasing.



Source: Ref. 1, 10

Figure III-2. Number of Households by Household Size.

**Table III-7. Household and Family Characteristics (1990).**

	Sedgwick County	Wichita City
Total Population	403,662	304,011
Persons in Households	397,701	299,476
Householder	<b>156,571</b>	<b>123,249</b>
Family Households	107,361	79,687
Non-family Households	49,210	43,562
Persons per Household	2.54	2.43
Persons per Family	3.11	3.05

Source: Ref. 1, 10

**Table III-8. Household Size (1990).**

Household Size	Sedgwick County	Wichita City
Total Households	156,571	123,249
1-person Household	41,876	36,991
2-persons Household	50,527	39,989
3-persons Households	25,744	19,465
4-person Households	22,996	16,015
5-person Households	10,099	7,004
6-person Households	3,464	2,423
7 or more person Households	1,865	1,362

Source: Ref. 1, 10

**Table III-9. Dwelling Unit Density in the City of Wichita (1970-1990).**

Year	Dwelling Units	Land Area (sq. miles)	Dwelling Unit Density (units/Sq. miles)
1970	99,920	86.5	1,155
1980	116,953	101.4	1,153
1990	135,069	115.1	1,174

Source: Ref. 11

**Table III-10. Dwelling Units (1970-1990).**

Year	Number of Dwelling Units in Sedgwick county	Number of Dwelling Units in Wichita City	Percentage of Total (county) Dwelling Units Located in Wichita
1970	120,666	99,920	82.8%
1980	145,863	116,953	80.2%
1990	170,159	135,069	79.4%

Source: Ref. 11

### **HOUSING OCCUPANCY STATUS**

Of the 170,159 dwelling units in Sedgwick County in 1990, 156,571 units (92%) were occupied. Sixty-four percent (64%) of the occupied units were owner occupied. Table III-11 summarizes the occupancy status of the dwelling units in 1990 in Sedgwick County.

### **LABOR FORCE PARTICIPATION**

Labor force participation has increased significantly in Sedgwick County since 1970. The labor force, defined as persons who are employed or seeking employment, rose from 42.9% of the population in 1970 to 52.0% of the population in 1980, and to 52.9% of the population in 1990. This increase has

been attributed to two factors: an increasing proportion of the population which is sixteen years of age and older, and an increasing proportion of persons sixteen and older who are working or seeking work.

**Table III-11. Housing Occupancy Characteristics in Sedgwick County in 1990.**

Occupancy Status	Number of Units	Percent of Total (%)
Owner Occupied	99,753	58.6
Renter Occupied	56,818	33.4
Vacant	13,588	8.0
Total	170,159	100.0

*Source: Ref. 12*

The increased percentage of the total population which is in the work force serves to increase work trips. This increases not only the total travel but also increases the week-day morning and evening peak trips. This is the travel category which places the highest demands on the street and road system, and on the capacity of the transit system.

Labor force participation in Sedgwick County for the period 1970-1990 is shown in Table III-12. Table III-13 also shows the specific composition of the labor force for Sedgwick County and the City of Wichita in 1990.

## **PLACE OF WORK**

The 1990 Census data show that approximately 98% of the total workers (age 16 years and over) in Sedgwick County and the City of Wichita work outside of their home. Also, most of the workers work in their county or area of residence (Table III-14). Only 2.7% of the workers in Sedgwick County work outside the county. However, 16.7% of workers in the City of Wichita worked outside the city.

**Table III-12. Labor Force Participation in Sedgwick County, Kansas.**

	1970	1980	1990
Population	350,694	367,088	403,662
Population Age 16 and Over	239,006	276,484	301,772
Percent of Population Age 16 and Over (%)	68.2	75.3	74.8
Labor Force	150,609	190,824	212,705
Percent of Persons Age 16 and Over in Labor Force (%)	63.0	69.0	70.5
Percent of Population in Labor Force (%)	42.9	52.0	52.7

Source: Ref. 7, 9, 10

**Table III-13. Labor Force Participation in 1990.**

	Sedgwick County	Wichita City
Persons 16 years and over	<b>301,772</b>	<b>230,302</b>
In labor force	212,705	160,657
Not in labor force	89,017	69,645
Percent of persons 16 years and over in labor force (%)	70.5	69.8
Persons 65 years and over in labor force	7,112	5,654
Percent of persons 65 years and over in labor force (%)	2.4	2.5
Percent of labor force consists of persons 65 years and over (%)	3.3	3.5
Percent unemployment (%)	5.4	5.9

Source: Ref. 10

**Table III-14. Place of Work in 1990.**

	Sedgwick County		Wichita City	
	Number	Percent (%)	Number	Percent (%)
Workers 16 Years and Over	198,261	100.0	148,854	100.0
Worked at Home	5,037	2.5	3,346	2.3
Worked not at Home	193,224	97.5	145,508	97.7
Worked in County/Area of Residence	192,865	97.3	123,954	83.3
Worked outside County/Area of Residence	5,396	2.7	24,900	16.7

*Source: Ref. 10*

Employment data by industries for the ten year period from 1985 to 1994 in the Wichita Metropolitan Statistical Area (MSA) are shown in Table III-15. All the industries in the Wichita MSA in this time period have experienced a stable growth in employment. Most of the working people are employed in service producing industries which include transportation and public utilities, trade, finance, insurance and real estate, services, and government. Data show that approximately 70% of total employment is in the service producing industries. The remaining 30% is in the goods producing industries, which include construction and mining and manufacturing.

## **INCOME**

The median household income in Sedgwick County in 1989 was \$30,216, while the median income for the City of Wichita in 1989 was \$28,024 (Table III-16). Data on income and poverty status show that the 1989 per capita income for Sedgwick County was \$14,555. The corresponding value for the City of Wichita was \$14,516. In Sedgwick County, 8.3% families were below the poverty level. The corresponding figure for the City of Wichita was 9.5%. The percent of persons below the poverty level in Sedgwick County and in the City of Wichita was 10.9% and 12.5%, respectively.

**Table III-15. Employment by Industries in Wichita MSA.**

Industry	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
<b>Goods Producing</b>	67,400	67,900	69,000	71,300	74,300	75,600	75,500	73,900	70,700	70,600
Construction and Mining	12,600	11,800	11,000	9,900	10,800	11,600	12,600	13,400	13,600	13,700
Manufacturing	54,800	56,100	58,000	61,400	63,400	64,100	62,900	60,500	57,000	56,900
<b>Service Producing</b>	136,900	139,500	141,000	161,400	164,500	166,300	169,200	173,600	173,100	181,400
Transport. & Public Utilities	9,900	9,700	10,000	10,900	11,300	11,700	11,500	11,700	11,600	11,400
Trade	50,100	51,500	50,000	54,500	55,800	56,400	56,500	56,700	55,800	58,500
Finance, Insur., & Real Estate	10,800	11,400	11,000	11,000	11,000	11,200	10,900	11,000	11,400	11,300
Services	41,200	42,100	45,000	56,800	58,500	58,300	61,100	64,000	64,200	67,600
Government	24,900	24,800	25,000	28,200	27,900	28,700	29,400	30,200	30,200	32,700
<b>Farm</b>	2,700	2,700	3,000	3,100	3,100	3,000	2,900	2,900	2,700	2,400
<b>Total (All Industries)</b>	204,300	207,500	213,000	234,600	238,700	214,900	247,600	250,400	243,800	252,000

Source: Ref. 2, 13, 14, 15, 16, 17, 18, 19, 20

**Table III-16. Income and Poverty Status in 1989.**

	Sedgwick County	Wichita City
Median income per household (\$)	30,216	28,024
Mean income per household (\$)	37,120	35,453
Median income per family (\$)	36,194	34,610
Mean income per family (\$)	43,529	42,326
Per capita income (\$)	14,555	14,516
Families below poverty level	8,995	7,674
Percent of families below poverty level (%)	8.3	9.5
Persons below poverty level	43,458	37,321
Percent of persons below poverty level (%)	10.9	12.5
Percent of persons 65 years and over below poverty level (%)	9.3	9.6

Source: Ref. 10

## MEANS OF TRANSPORTATION

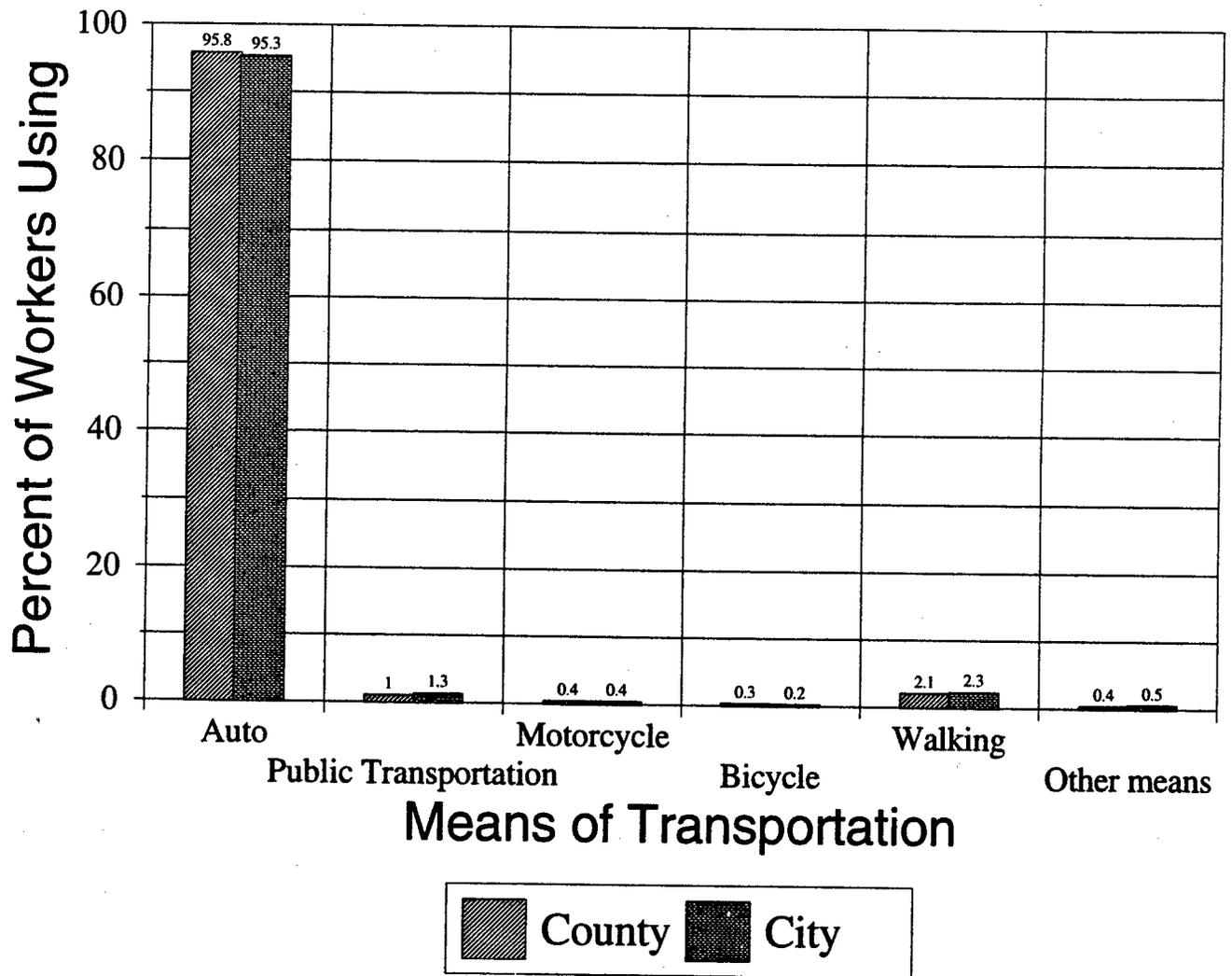
The automobile (includes car, truck, or van) is the predominant transportation mode in the City of Wichita and in Sedgwick County. 1990 Census data (Table III-17) show that the percent of workers who use the automobile as their primary means of transportation was approximately 96% in both Sedgwick County and the City of Wichita. Eleven percent (11%) of the workers who used automobiles used carpooling as their means of transportation. Only 1.0% of the workers in Sedgwick County used public transportation (includes bus and taxicab). The corresponding figure for public transportation for the City of Wichita was 1.3%. The ratio of the workers who worked outside of their home to the number of automobiles (car, truck, or van) was approximately 1 to 1. Figure III-3 shows the means of transportation used by workers in Sedgwick County and in the City of Wichita.

**Table III-17. Means of Transportation (1990).**

Means of Transportation	Sedgwick County	Wichita City
Car, Truck, or Van	185,143	138,633
Drove alone	164,138	122,905
Car pooled	21,005	15,728
Public Transportation	1,922	1,847
Bus	1,729	1,664
Taxicab	193	183
Motorcycle	746	593
Bicycle	470	389
Walked	4,108	3,385
Other means	835	661
Total <sup>a</sup>	193,224	145,508
Persons per car, truck, or van	1.06	1.06

<sup>a</sup> workers who did not work at home.

Source: Ref. 10



Source: Ref. 10

Figure III-3. Means of Transportation Used by Workers.

## MOTOR VEHICLE REGISTRATIONS

The number of motor vehicles registered in Sedgwick County decreased significantly between 1971 and 1991. During the period 1971-1991 the total number of motor vehicles registered in the county decreased by 70,434 vehicles. Motor vehicle registrations in Sedgwick County for 1971, 1981 and 1991 are shown in Table III-18.

**Table III-18. Motor Vehicle Registration in Sedgwick County, Kansas.**

Year	Autos	Trucks	Other Vehicles	Total
1971	330,662	41,614	24,017	396,293
1981	227,680	102,811	36,891	367,382
1991	223,193	72,800	29,866	325,859

Source: Ref. 19, 21, 22

It is interesting to note that between 1971 and 1991, the number of registered vehicles in the county decreased by 17.8%, while the population increased by 24%. However, the reason for this decline in vehicle registration cannot be explained with the available census data (Table III-17). The number of registered vehicles and the county population for 1971, 1981 and 1991 are shown in Table III-19. During the period 1971-1991 the number of vehicles per 1,000 persons decreased from 1197 to 794.

**Table III-19. Registered Vehicles Per 1,000 Persons in Sedgwick County, Kansas.**

Year	Total Population	Registered vehicles	Vehicles per 1,000 Persons
1971	331,069	396,293	1197
1981	364,973	367,382	1007
1991	410,462	325,859	794

Source: Ref. 19, 21, 22

## TRAVEL TIME

The 1990 Census data show that the work trips made by the workers in Sedgwick County and in the City of Wichita were of relatively short length. The mean travel times to work were 17.8 and 17.0 minutes in Sedgwick County and in the City of Wichita, respectively. Data also show that approximately 3% of the workers in both Sedgwick County and the City of Wichita had a work travel time of 45 minutes or higher. The mean travel times of this category in Sedgwick County and the City of Wichita were 63.1 and 65.8 minutes, respectively. The peak departures of the workers in Sedgwick County and in the City of Wichita occurred between 7:00 a.m. to 8:00 a.m. Table III-20 summarizes the travel to work and departure times of the workers in Sedgwick County and in the City of Wichita.

**Table III-20. Travel Time to Work and Departure Time (1990).**

	Sedgwick County	Wichita City
Worked not at home	193,224	145,508
Minutes to work:		
Less than 10 minutes	29,227	22,249
10 to 14 minutes	37,008	31,019
15 to 19 minutes	45,109	37,155
20 to 29 minutes	52,367	36,728
30 to 44 minutes	23,249	14,252
45 or more minutes	6,264	4,105
Mean travel time to work (minutes)	17.8	17.0
Mean travel time for workers traveling 45 or more minutes (minutes)	63.1	65.8
Departure Time:		
6:00 to 6:59 a.m.	39,821	28,599
7:00 to 7:59 a.m.	70,875	52,693
8:00 to 8:59 a.m.	26,358	20,835
All other times	56,170	43,381

Source: Ref. 10

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## **CHAPTER IV: BASELINE FINANCIAL NEEDS ASSESSMENT**

### **INTRODUCTION**

This chapter presents an overview of recent trends in system revenue and operating expenses for WMTA and other paratransit service providers in Wichita. Estimates of the capital and operating costs associated with providing general public transportation and paratransit services in Wichita for the period 1997-2006 are also presented. The estimates represent the financial resources needed to provide various levels of transit services with a range of levels of local, state and federal funding assistance. Estimates of potential revenue are also presented to provide a preliminary indication of the levels of funding that may be required from the various sources available to WMTA and other transit service providers.

### **WMTA SYSTEM REVENUE AND OPERATING EXPENSES**

Operating revenue for WMTA is derived from three primary sources: (1) an operating transfer from the City of Wichita's general fund, (2) a federal operating and planning allocation, and (3) charges for services. In fiscal year 1995, WMTA received nearly 40 percent of its funding from the general fund and just over 36 percent from federal operating allocations. However, federal operating funds have declined since 1995 and are expected to continue this decline before stabilizing at approximately \$626,000 per year. As a result, a larger percentage of WMTA's funding has come from the city's general fund. It is important to point out that it is possible that federal funding may be reduced and may be phased out entirely by 2001.

Table IV-1 summarizes the percentage breakdown of WMTA's primary revenue sources from fiscal year 1995 to 1997. Due to a budget deficit in 1995 and a projected deficit in 1996, WMTA reduced services in October of 1996. The figures shown in Table IV-1 reflect these reductions. Also included in Table IV-1 is projected revenue for a long-term service plan budget, which was adopted by the WMTA Board in December of 1996. The long-term plan calls for enhancements to both fixed-route

and paratransit services at some point in the future. Table IV-2 summarizes the funding obtained from each revenue source from FY 1995 to 1997, as well as in the long-term service plan budget.

**Table IV-1. Percentage Breakdown of WMTA's Operating Revenue Sources.**

Revenue Source	FY 1995	FY 1996	FY 1997 <sup>b</sup>	Long-Term Plan <sup>b</sup>
General Fund	40%	54%	59%	56%
Federal Operating/Planning	36%	17%	13%	13%
Charges for Services	23%	26%	25%	29%
Other <sup>a</sup>	1%	3%	3%	2%
Total	100%	100%	100%	100%

<sup>a</sup> "Other" includes interest, reimbursements, and rentals (advertising).

<sup>b</sup> Estimates

Source: WMTA

**Table IV-2. Breakdown of WMTA's Operating Revenue by Source.**

Revenue Source	FY 1995	FY 1996	FY 1997 <sup>a</sup>	Long-Term Plan <sup>a</sup>
General Fund	\$2,235,580	\$2,787,430	\$2,758,310	\$2,799,685
Federal Operating/Planning	2,027,943	871,590	626,600	626,600
Charges for Services	1,279,493	1,358,000	1,187,870	1,438,775
Interest	25,593	34,000	34,000	35,000
Reimbursements	25,912	51,160	42,500	42,500
Rentals--Advertising	22,893	26,000	27,000	28,000
Total	\$5,617,414	\$5,128,180	\$4,676,280	\$4,970,560

<sup>a</sup> Estimates

Source: WMTA

In regard to operating expenditures for WMTA, the major expense is the category of personal services, which exceeded \$3 million in both fiscal 1995 and 1996. Other substantial expenses are materials and supplies, contractual services, and debt service. Table IV-3 provides a detailed breakdown of WMTA's operating expenditures for fiscal years 1995 and 1996, as well as projected expenditures for FY 1997 and the long-term plan budget.

**Table IV-3. Breakdown of WMTA's Operating Expenditures.**

Category	FY 1995	FY 1996	FY 1997*	Long-Term Plan*
Personal Services	\$3,640,680	\$3,292,150	\$2,974,030	\$4,181,145
Contractual Services	765,089	693,570	665,320	754,019
Materials and Supplies	915,604	875,850	682,330	905,077
Debt Service--Principal	122,660	137,920	177,970	183,843
Debt Service--Interest	66,484	48,750	68,070	70,316
Administrative Charges	14,910	14,910	14,910	15,402
Capital Outlay	0	7,550	1,000	5,000
Maintenance Capital Match	0	57,480	42,650	44,057
Totals	\$5,525,427	\$5,128,180	\$4,676,280	\$6,158,859

\* Estimates

Source: WMTA

The WMTA also expects to spend more than \$10.5 million for capital projects before the end of fiscal year 2006. Included in these projects are the replacement of 27 coaches and 54 vans, as well as the purchase of new fare boxes for WMTA's entire fleet. Table IV-4 contains an itemized list of projected capital expenditures.

**Table IV-4. WMTA Projected Capital Expenditures Through Fiscal Year 2006.**

Fiscal Year	Project	Required Funding
1997	Replace eight coaches	\$2,000,000
1998	Replace seven coaches	\$1,960,000
	Replace five vans	\$200,000
	Purchase new fare boxes for entire fleet	\$550,000
1999	Replace five vans	\$200,000
2000	Replace six vans	\$240,000
2001	Replace six vans	\$240,000
2002	Replace three coaches	\$975,000
	Replace six vans	\$240,000
2003	Replace nine coaches	\$2,925,000
	Replace six vans	\$240,000
2004	Replace six vans	\$240,000
2005	Replace seven vans	\$280,000
2006	Replace seven vans	\$280,000
Projected Total Capital Expenditures Through FY 2006		\$10,570,000

Source: WMTA

**OTHER PARATRANSIT REVENUE AND OPERATING EXPENSES**

According to KDOT's 1995 monthly ridership and mileage reports of Federal Transit Administration 49 U.S.C. 5310 (formerly Section 16) and 49 U.S.C. 5311 (formerly Section 18) funded vehicles [1], the nine paratransit service providers in Wichita-Sedgwick County (see Chapter II) collectively incurred annual vehicle operating expenses of approximately \$550,100 and received a cumulative annual vehicle income of approximately \$34,200. These expenses and revenues are detailed in Table IV-5.

**Table IV-5. Collective Monthly Vehicle Operating Costs and Income for Nine Wichita-Sedgwick County Paratransit Service Providers During Calendar Year 1995.**

Month	49 U.S.C. 5310 (formerly Section 16)		49 U.S.C. 5311 (formerly Section 18)	
	Cost (\$)	Income (\$)	Cost (\$)	Income (\$)
January	37,615.76	2,425.50	4,444.57	477.05
February	36,615.96	2,607.64	4,451.37	457.75
March	40,289.00	2,450.23	4,929.15	418.00
April	39,636.15	2,729.74	4,654.09	343.00
May	43,242.16	2,049.28	4,694.55	374.00
June	49,735.60	2,134.48	5,004.97	450.00
July	40,336.25	2,109.30	2,594.83	438.00
August	41,523.26	2,616.20	4,930.85	376.00
September	38,725.27	2,133.18	4,640.83	422.00
October	39,156.21	2,841.56	4,946.49	528.00
November	42,370.09	2,447.48	4,863.53	474.00
December	46,055.48	2,411.48	4,693.19	453.00
<b>Total</b>	<b>495,301.19</b>	<b>28,954.07</b>	<b>54,848.42</b>	<b>5,211.30</b>

Source: Ref. 1

### **NEEDS ASSESSMENT (1997-2006)**

Estimates of the capital and operating costs needed to continue to provide general public transportation and paratransit services at their current levels of service for the period 1997-2006 are presented in the following sections of this chapter. Estimates of potential revenue are also presented to provide a preliminary indication of the levels of funding that may be required from the various sources available to WMTA and other transit service providers.

## WMTA Services

Due to recent service reductions and corresponding budget reductions at WMTA, the determination of trends capable of accurately projecting revenue and expenditures during the next 10 years proved difficult. Therefore, projections of future expenditures were made by using WMTA's approved budget for 1997 as a baseline and the following assumptions: personal services (salaries and benefits) were increased 2.0 percent annually, while all other expenditure categories (except Special Services) were assumed to increase 3.0 percent annually. Due to the impacts of ADA, expenditures for Special Services have increased at a greater rate than expenditures for other WMTA services. Ridership figures for Special Services since 1992 (see Table II-5) indicate an average annual increase of 15.8 percent. Using 1996 figures as a baseline, Special Services expenditures were projected using this 15.8 percent growth rate (see Table IV-6). In an effort to depict the true costs of Special Services, WMTA established the "in-kind expenses" category. This category reflects an operational cost enhancement that is provided to paratransit providers participating in WMTA's van-lease program. Essentially, this enhancement is provided by WMTA through subsidies to the paratransit provider, as well as by WMTA's provision of the local capital match for the purchase of the vehicle. Using this method, the total cost of Special Services from 1997 to 2006 is projected to be in excess of \$23 million, approximately \$12 million of which is likely to be used to pay for personal services (see Table IV-6).

The Special Services projections were added to the projections made for the remaining services. In an effort to prevent a "double counting" of expenses, Special Services costs for personal services, materials and supplies, and contractual services have been subtracted from the general operating budget. In other words, Special Services has been given its own line item. As shown on Tables IV-7 and IV-8, WMTA's total operating expenditures are expected to be over \$67 million during the next 10 years.

**Table IV-6. Projection of Expenditures for WMTA's Special Services Program, FY 1997-2006.**

Category	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 1997-2006
Personal Services	422,000	566,000	656,000	759,000	879,000	1,018,000	1,179,000	1,365,000	1,581,000	1,831,000	2,120,000	11,954,000
Materials and Supplies	100,000	98,000	114,000	132,000	153,000	177,000	205,000	238,000	275,000	319,000	369,000	2,080,000
Contracted Services	172,000	232,000	268,000	311,000	360,000	417,000	483,000	559,000	647,000	749,000	868,000	4,894,000
In-Kind Expenses	211,000	235,000	272,000	315,000	365,000	422,000	489,000	566,000	656,000	759,000	879,000	4,958,000
<b>Total Cost of Special Services</b>	<b>905,000</b>	<b>1,131,000</b>	<b>1,310,000</b>	<b>1,517,000</b>	<b>1,737,000</b>	<b>2,034,000</b>	<b>2,356,000</b>	<b>2,728,000</b>	<b>3,159,000</b>	<b>3,658,000</b>	<b>4,236,000</b>	<b>23,886,000</b>

Future capital expenses (Tables IV-7 and IV-8) were determined on a project-by-project approach, based on cost estimates provided by WMTA officials. WMTA expects to replace 27 coaches and 54 vans during the next 10 years, as well as purchase new fare boxes for its entire fleet. From 1997 to 2006, it is projected that WMTA will require more than \$10.5 million to complete the desired capital projects. Overall, it is estimated that total expenditures (operating plus capital) for WMTA will be approximately \$77.7 million through fiscal 2006.

In regard to operating revenue (see Tables IV-7 and IV-8), eight categories were considered: general operating fund, federal operating/planning, charges for services, rentals/advertising, reimbursements, interest, Kansas Corporation Commission/Federal Transit Administration (KCC/FTA) grant, and in-kind contributions (which parallel in-kind expenses). The WMTA has experienced a decline in federal operating/planning funding in recent years, and the future of federal operating/planning allocations is uncertain. Therefore, two future scenarios were formulated to reflect this uncertainty. The assumption of the first scenario (Table IV-7) is that the federal operating allocation (as well as the KCC/FTA grant) will remain constant at approximately \$627,000 per year. The assumption of the second scenario (Table IV-8) is that the federal operating allocation and the KCC/FTA grant both will be reduced 25 percent each year until being phased out in fiscal 2001. All other revenue categories are increased 3.0 percent annually.

The resulting projections indicate that through fiscal 2006 WMTA will incur operating expenses of approximately \$67 million during the 10-year period. If federal operating allocations remain constant (see Table IV-7), operating revenue during the same period of time is expected to total approximately \$56.5 million, leaving \$10.5 million to be funded by other local and/or state revenue sources during the 10-year period. If, however, federal operating allocations are gradually reduced and phased out in 2001, the funding needed from other local and/or state sources increases to \$15.8 million (see Table IV-8).

**Table IV-7. Projection of WMTA's Expenses and Revenues, FY 1997-2006, Reduced Services/Base Case Scenario.**

Category	FY 1997 Approved	FY 1998 Projected	FY 1999 Projected	FY 2000 Projected	FY 2001 Projected	FY 2002 Projected	FY 2003 Projected	FY 2004 Projected	FY 2005 Projected	FY 2006 Projected	FY 1997-2006 Projected Total
<b>Operating Costs</b>											
Personal Services	2,510,000	2,560,000	2,611,000	2,663,000	2,716,000	2,771,000	2,826,000	2,883,000	2,940,000	2,999,000	27,479,000
Contractual Services	434,000	447,000	460,000	474,000	488,000	503,000	518,000	533,000	549,000	566,000	4,972,000
Materials and Supplies	584,000	601,000	619,000	638,000	657,000	677,000	697,000	718,000	739,000	762,000	6,692,000
Debt Service--Principal	178,000	183,000	189,000	194,000	200,000	206,000	213,000	219,000	225,000	232,000	2,039,000
Debt Service--Interest	68,000	70,000	72,000	74,000	77,000	79,000	81,000	84,000	86,000	89,000	780,000
Administrative Charge	15,000	15,000	16,000	16,000	17,000	17,000	18,000	18,000	19,000	19,000	170,000
Contingency	50,000	52,000	53,000	55,000	56,000	58,000	60,000	61,000	63,000	65,000	573,000
Maintenance Capital Match	43,000	44,000	45,000	47,000	48,000	49,000	51,000	52,000	54,000	56,000	489,000
Capital Outlay	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000
Special Services	1,131,000	1,310,000	1,517,000	1,757,000	2,034,000	2,356,000	2,728,000	3,159,000	3,658,000	4,236,000	23,886,000
Total Operating Costs	5,014,000	5,283,000	5,583,000	5,919,000	6,294,000	6,717,000	7,193,000	7,728,000	8,334,000	9,025,000	67,090,000
<b>Capital Costs</b>											
Replace Revenue Vehicles	2,000,000	2,160,000	200,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,020,000
Replace Fare Boxes		550,000									550,000
Total Capital Costs	2,000,000	2,710,000	200,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,570,000
<b>Total Expenditures</b>	7,014,000	7,993,000	5,783,000	6,159,000	6,534,000	7,932,000	10,358,000	7,968,000	8,614,000	9,305,000	77,660,000
<b>Operating Revenue</b>											
General Fund--Operating	2,738,000	2,800,000	2,842,000	2,884,000	2,928,000	2,971,000	3,016,000	3,061,000	3,107,000	3,154,000	29,521,000
Federal Operating/Planning	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	6,270,000
Charges for Services	1,188,000	1,224,000	1,260,000	1,298,000	1,337,000	1,377,000	1,418,000	1,461,000	1,505,000	1,550,000	13,618,000
Rentals--Advertising	27,000	28,000	29,000	30,000	30,000	31,000	32,000	33,000	34,000	35,000	309,000
Reimbursements	43,000	44,000	45,000	46,000	48,000	49,000	51,000	52,000	54,000	55,000	487,000
Interest	34,000	35,000	36,000	37,000	38,000	39,000	41,000	42,000	43,000	44,000	389,000
KCO/FTA Grant	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	1,020,000
In-Kind Contributions	235,000	272,000	315,000	365,000	422,000	489,000	566,000	656,000	759,000	879,000	4,958,000
Total Operating Revenues	5,014,000	5,132,000	5,256,000	5,389,000	5,532,000	5,685,000	5,853,000	6,034,000	6,231,000	6,446,000	56,572,000
Unfunded Operating Deficit	0	151,000	327,000	530,000	762,000	1,032,000	1,340,000	1,694,000	2,103,000	2,579,000	10,518,000
<b>Capital Revenue</b>											
Federal	1,600,000	2,168,000	160,000	192,000	192,000	972,000	2,532,000	192,000	224,000	224,000	8,456,000
State	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Local	350,000	492,000				193,000	583,000	6,000	6,000	6,000	1,630,000
Total Capital Revenue	2,000,000	2,710,000	210,000	242,000	242,000	1,215,000	3,165,000	242,000	280,000	280,000	10,586,000
Unfunded Capital Deficit	0	0	0	0	0	0	0	0	0	0	0
<b>Total Revenue</b>	7,014,000	7,842,000	5,466,000	5,631,000	5,774,000	6,900,000	9,018,000	6,276,000	6,511,000	6,726,000	67,158,000
<b>Total Unfunded Deficit</b>	0	151,000	327,000	530,000	762,000	1,032,000	1,340,000	1,694,000	2,103,000	2,579,000	10,518,000

Assumptions: Federal Operating/planning allocation remains constant at approximately 627,000; FCC/FTA grant remains constant at approximately 102,000.

**Table IV-8. Projection of WMTA's Expenses and Revenues, FY 1997-2006, Reduced Services/Reduced Federal Funding Scenario.**

Category	FY 1997 Approved	FY 1998 Projected	FY 1999 Projected	FY 2000 Projected	FY 2001 Projected	FY 2002 Projected	FY 2003 Projected	FY 2004 Projected	FY 2005 Projected	FY 2006 Projected	FY 1997-2006 Projected Total
<b>Operating Costs</b>											
Personal Services	2,510,000	2,560,000	2,611,000	2,663,000	2,716,000	2,771,000	2,826,000	2,883,000	2,940,000	2,999,000	27,479,000
Contractual Services	434,000	447,000	460,000	474,000	488,000	503,000	518,000	533,000	549,000	566,000	4,972,000
Materials and Supplies	584,000	601,000	619,000	638,000	657,000	677,000	697,000	718,000	739,000	762,000	6,692,000
Debt Service--Principal	178,000	183,000	189,000	194,000	200,000	206,000	213,000	219,000	225,000	232,000	2,039,000
Debt Service--Interest	68,000	70,000	72,000	74,000	77,000	79,000	81,000	84,000	86,000	89,000	780,000
Administrative Charge	15,000	15,000	16,000	16,000	17,000	17,000	18,000	18,000	19,000	19,000	170,000
Contingency	50,000	52,000	53,000	55,000	56,000	58,000	60,000	61,000	63,000	65,000	573,000
Maintenance Capital Match	43,000	44,000	45,000	47,000	48,000	49,000	51,000	52,000	54,000	56,000	489,000
Capital Outlay	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000
Special Services	1,131,000	1,310,000	1,517,000	1,757,000	2,034,000	2,356,000	2,728,000	3,159,000	3,658,000	4,236,000	23,886,000
Total Operating Costs	5,014,000	5,283,000	5,583,000	5,919,000	6,294,000	6,717,000	7,193,000	7,728,000	8,334,000	9,025,000	67,090,000
<b>Capital Costs</b>											
Replace Revenue Vehicles	2,000,000	2,160,000	2,000,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,020,000
Replace Fare Boxes		550,000									550,000
Total Capital Costs	2,000,000	2,710,000	2,000,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,570,000
Total Expenditures	7,014,000	7,993,000	5,783,000	6,159,000	6,534,000	7,932,000	10,358,000	7,968,000	8,614,000	9,305,000	77,660,000
<b>Operating Revenue</b>											
General Fund--Operating	2,738,000	2,800,000	2,842,000	2,884,000	2,928,000	2,971,000	3,016,000	3,061,000	3,107,000	3,154,000	29,521,000
Federal Operating/Planning	627,000	470,000	352,000	264,000	0	0	0	0	0	0	1,713,000
Charges for Services	1,188,000	1,224,000	1,260,000	1,298,000	1,337,000	1,377,000	1,418,000	1,461,000	1,505,000	1,550,000	13,618,000
Rentals--Advertising	27,000	28,000	29,000	30,000	30,000	31,000	32,000	33,000	34,000	35,000	309,000
Reimbursements	43,000	44,000	45,000	46,000	48,000	49,000	51,000	52,000	54,000	55,000	487,000
Interest	34,000	35,000	36,000	37,000	38,000	39,000	41,000	42,000	43,000	44,000	389,000
KCC/FTA Grant	102,000	76,000	57,000	43,000	0	0	0	0	0	0	278,000
In-Kind Contributions	235,000	272,000	315,000	365,000	422,000	489,000	566,000	656,000	759,000	879,000	4,958,000
Total Operating Revenues	5,014,000	4,949,000	4,936,000	4,967,000	4,803,000	4,956,000	5,124,000	5,305,000	5,502,000	5,717,000	51,273,000
Unfunded Operating Deficit	0	334,000	647,000	952,000	1,491,000	1,761,000	2,069,000	2,423,000	2,832,000	3,308,000	15,817,000
<b>Capital Revenue</b>											
Federal	1,600,000	2,168,000	160,000	192,000	192,000	972,000	2,532,000	192,000	224,000	224,000	8,456,000
State	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Local	350,000	492,000				193,000	583,000		6,000	6,000	1,630,000
Total Capital Revenue	2,000,000	2,710,000	210,000	242,000	242,000	1,215,000	3,165,000	242,000	280,000	280,000	10,586,000
Unfunded Capital Deficit	0	0	0	0	0	0	0	0	0	0	0
Total Revenue	7,014,000	7,659,000	5,146,000	5,209,000	5,045,000	6,171,000	8,289,000	5,547,000	5,782,000	5,997,000	61,859,000
Total Unfunded Deficit	0	334,000	647,000	952,000	1,491,000	1,761,000	2,069,000	2,423,000	2,832,000	3,308,000	15,817,000

Assumptions: Federal Operating/planning allocation and KCC/FTA grant both decrease by 25 percent each year until being phased out in 2001.

Projections also were made based on the long-term service plan approved in December of 1996 by the WMTA Board. The long-term service plan budget was used as the base budget in fiscal 1997 and projected according to the methodology discussed previously. Using the scenario which assumes that federal operating allocations remain constant (see Table IV-9), an unfunded operating deficit of \$23.6 million is expected during the period from 1997 to 2006. The projected 10-year unfunded operating deficit increases to approximately \$28.9 million under the scenario in which federal operating allocations and grants decrease and eventually are phased out in 2001 (see Table IV-10).

In an effort to address the projected operating deficits identified in this study, the City of Wichita has chosen to maximize local mil levy support for WMTA starting in 1998. This increased support will generate approximately \$425,000 per year and should be sufficient to cover anticipated operating deficits for current services through 1999. Unless additional state and/or federal operating assistance becomes available, significant reductions in service will be required after 1999.

### **Other Paratransit Services**

Data concerning the revenue and expenditures for the nine other paratransit service providers (see Chapter II) in the Wichita-Sedgwick County area that are funded by KDOT were obtained from the individual providers (via questionnaire or telephone conversation) and from the Kansas Department of Transportation (KDOT). Operating costs through the year 2006 were estimated by assuming that the combined 1996 transportation budgets of the nine providers (see Table II-6) would increase at the rate of 4.5 percent annually through fiscal 2006. The resulting estimates are summarized in Table IV-11.

The capital costs shown in Table IV-11 are based solely on vehicle replacement needs. Using KDOT's funded-vehicle inventory, a replacement schedule has been established (see Table II-7) that assumes that vehicles will be replaced at 100,000 miles or at 10 years of age. It also is assumed that each provider would seek to replace its vehicle(s) according to this schedule, and that each provider will request the same type of vehicle. Vehicle replacement costs assume a 5 percent annual increase

**Table IV-9. Projection of WMTA's Expenses and Revenues, FY 1997-2006, Long Term Budget Plan/Base Case Scenario.**

Category	FY 1997 Planned	FY 1998 Projected	FY 1999 Projected	FY 2000 Projected	FY 2001 Projected	FY 2002 Projected	FY 2003 Projected	FY 2004 Projected	FY 2005 Projected	FY 2006 Projected	FY 1997-2006 Projected Total
<b>Operating Costs</b>											
Personal Services	3,717,000	3,791,000	3,867,000	3,944,000	4,023,000	4,103,000	4,186,000	4,269,000	4,355,000	4,442,000	40,697,000
Contractual Services	522,000	538,000	554,000	571,000	588,000	606,000	624,000	642,000	662,000	681,000	5,988,000
Materials and Supplies	806,000	831,000	856,000	881,000	908,000	935,000	963,000	992,000	1,022,000	1,052,000	9,246,000
Debt Service--Principal	184,000	189,000	195,000	201,000	207,000	213,000	220,000	226,000	233,000	240,000	2,108,000
Debt Service--Interest	70,000	72,000	75,000	77,000	79,000	82,000	84,000	86,000	89,000	92,000	806,000
Administrative Charge	15,000	16,000	16,000	17,000	17,000	18,000	18,000	19,000	20,000	20,000	176,000
Contingency	0	0	0	0	0	0	0	0	0	0	0
Maintenance Capital Match	44,000	45,000	47,000	48,000	50,000	51,000	53,000	54,000	56,000	57,000	505,000
Capital Outlay	5,000	5,000	5,000	5,000	6,000	6,000	6,000	6,000	6,000	7,000	57,000
Special Services	1,131,000	1,310,000	1,517,000	1,757,000	2,034,000	2,356,000	2,728,000	3,159,000	3,658,000	4,236,000	23,886,000
Total Operating Costs	6,494,000	6,797,000	7,132,000	7,501,000	7,912,000	8,370,000	8,882,000	9,453,000	10,101,000	10,827,000	83,469,000
<b>Capital Costs</b>											
Replace Revenue Vehicles	2,000,000	2,160,000	200,000	240,000		1,215,000	3,165,000	240,000	280,000	280,000	10,020,000
Replace Fare Boxes		550,000									550,000
Total Capital Costs	2,000,000	2,710,000	200,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,570,000
Total Expenditures	8,494,000	9,507,000	7,332,000	7,741,000	8,152,000	9,585,000	12,047,000	9,693,000	10,381,000	11,107,000	94,039,000
<b>Operating Revenue</b>											
General Fund--Operating	2,800,000	2,842,000	2,884,000	2,928,000	2,971,000	3,016,000	3,061,000	3,107,000	3,154,000	3,201,000	29,964,000
Federal Operating/Planning	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	627,000	6,270,000
Charges for Services	1,439,000	1,482,000	1,526,000	1,572,000	1,619,000	1,668,000	1,718,000	1,770,000	1,823,000	1,877,000	16,494,000
Rentals--Advertising	28,000	29,000	29,000	31,000	32,000	32,000	33,000	34,000	35,000	37,000	320,000
Reimbursements	43,000	44,000	45,000	46,000	48,000	49,000	51,000	52,000	54,000	55,000	487,000
Interest	35,000	36,000	37,000	38,000	39,000	41,000	42,000	43,000	44,000	46,000	401,000
KCC/FTA Grant	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	102,000	1,020,000
In-Kind Contributions	235,000	272,000	315,000	365,000	422,000	489,000	566,000	656,000	759,000	879,000	4,958,000
Total Operating Revenues	5,309,000	5,434,000	5,565,000	5,709,000	5,860,000	6,024,000	6,200,000	6,391,000	6,598,000	6,824,000	59,914,000
Unfunded Operating Deficit	1,185,000	1,363,000	1,567,000	1,792,000	2,052,000	2,346,000	2,682,000	3,062,000	3,503,000	4,003,000	23,555,000
<b>Capital Revenue</b>											
Federal	1,600,000	2,168,000	160,000	192,000	192,000	972,000	2,532,000	192,000	224,000	224,000	8,456,000
State	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Local	350,000	492,000				193,000	583,000	6,000	6,000	6,000	1,630,000
Total Capital Revenue	2,000,000	2,710,000	210,000	242,000	242,000	1,215,000	3,165,000	242,000	280,000	280,000	10,586,000
Unfunded Capital Deficit	0	0	0	0	0	0	0	0	0	0	0
Total Revenue	7,309,000	8,144,000	5,775,000	5,951,000	6,102,000	7,239,000	9,365,000	6,633,000	6,878,000	7,104,000	70,500,000
Total Unfunded Deficit	1,185,000	1,363,000	1,567,000	1,792,000	2,052,000	2,346,000	2,682,000	3,062,000	3,503,000	4,003,000	23,555,000

Assumptions: Federal Operating/planning allocation remains constant at approximately 627,000; FCC/FTA grant remains constant at approximately 102,000.

**Table IV-10. Projection of WMTA's Expenses and Revenues, FY 1997-2006, Long Term Budget Plan/Reduced Federal Funding Scenario.**

Category	FY 1997 Planned	FY 1998 Projected	FY 1999 Projected	FY 2000 Projected	FY 2001 Projected	FY 2002 Projected	FY 2003 Projected	FY 2004 Projected	FY 2005 Projected	FY 2006 Projected	FY 1997-2006 Projected Total
<b>Operating Costs</b>											
Personal Services	3,717,000	3,791,000	3,867,000	3,944,000	4,023,000	4,103,000	4,186,000	4,269,000	4,355,000	4,442,000	40,697,000
Contractual Services	522,000	538,000	554,000	571,000	588,000	606,000	624,000	642,000	662,000	681,000	5,988,000
Materials and Supplies	806,000	831,000	856,000	881,000	908,000	935,000	963,000	992,000	1,022,000	1,052,000	9,246,000
Debt Service--Principal	184,000	189,000	195,000	201,000	207,000	213,000	220,000	226,000	233,000	240,000	2,108,000
Debt Service--Interest	70,000	72,000	75,000	77,000	79,000	82,000	84,000	86,000	89,000	92,000	806,000
Administrative Charge	15,000	16,000	16,000	17,000	17,000	18,000	18,000	19,000	20,000	20,000	176,000
Contingency	0	0	0	0	0	0	0	0	0	0	0
Maintenance Capital Match	44,000	45,000	47,000	48,000	50,000	51,000	53,000	54,000	56,000	57,000	505,000
Capital Outlay	5,000	5,000	5,000	5,000	6,000	6,000	6,000	6,000	6,000	7,000	57,000
Special Services	1,131,000	1,310,000	1,517,000	1,757,000	2,034,000	2,356,000	2,728,000	3,159,000	3,658,000	4,236,000	23,886,000
Total Operating Costs	6,494,000	6,797,000	7,132,000	7,501,000	7,912,000	8,370,000	8,882,000	9,453,000	10,101,000	10,827,000	83,469,000
<b>Capital Costs</b>											
Replace Revenue Vehicles	2,000,000	2,160,000	200,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,020,000
Replace Fare Boxes	500,000	500,000									550,000
Total Capital Costs	2,000,000	2,710,000	200,000	240,000	240,000	1,215,000	3,165,000	240,000	280,000	280,000	10,570,000
Total Expenditures	8,494,000	9,507,000	7,332,000	7,741,000	8,152,000	9,585,000	12,047,000	9,693,000	10,381,000	11,107,000	94,039,000
<b>Operating Revenue</b>											
General Fund--Operating	2,800,000	2,842,000	2,884,000	2,928,000	2,971,000	3,016,000	3,061,000	3,107,000	3,154,000	3,201,000	29,964,000
Federal Operating/Planning	627,000	470,000	352,000	264,000	0	0	0	0	0	0	1,713,000
Charges for Services	1,439,000	1,482,000	1,526,000	1,572,000	1,619,000	1,668,000	1,718,000	1,770,000	1,823,000	1,877,000	16,494,000
Rentals--Advertising	28,000	29,000	29,000	31,000	32,000	32,000	33,000	34,000	35,000	37,000	320,000
Reimbursements	43,000	44,000	45,000	46,000	48,000	49,000	51,000	52,000	54,000	55,000	487,000
Interest	35,000	36,000	37,000	38,000	39,000	41,000	42,000	43,000	44,000	46,000	401,000
KCC/FTA Grant	102,000	76,000	57,000	43,000	0	0	0	0	0	0	278,000
In-Kind Contributions	235,000	272,000	315,000	365,000	422,000	489,000	566,000	656,000	759,000	879,000	4,958,000
Total Operating Revenues	5,309,000	5,251,000	5,245,000	5,287,000	5,131,000	5,295,000	5,471,000	5,662,000	5,869,000	6,095,000	54,615,000
Unfunded Operating Deficit	1,185,000	1,546,000	1,887,000	2,214,000	2,781,000	3,075,000	3,411,000	3,791,000	4,232,000	4,732,000	28,854,000
<b>Capital Revenue</b>											
Federal	1,600,000	2,168,000	160,000	192,000	192,000	972,000	2,532,000	192,000	224,000	224,000	8,456,000
State	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000
Local	350,000	492,000				193,000	583,000		6,000	6,000	1,630,000
Total Capital Revenue	2,000,000	2,710,000	210,000	242,000	242,000	1,215,000	3,165,000	242,000	280,000	280,000	10,586,000
Unfunded Capital Deficit	0	0	0	0	0	0	0	0	0	0	0
Total Revenue	7,309,000	7,961,000	5,455,000	5,229,000	5,373,000	6,510,000	8,636,000	5,904,000	6,149,000	6,375,000	65,201,000
Total Unfunded Deficit	1,185,000	1,546,000	1,887,000	2,214,000	2,781,000	3,075,000	3,411,000	3,791,000	4,232,000	4,732,000	28,854,000

Assumptions: Federal Operating/planning allocation and KCC/FTA Grant both decrease by 25 percent each year until being phased out in 2001.

in vehicle purchase prices.

Based on this methodology, it is projected that the nine paratransit providers will collectively incur approximately \$20 million in operating expenses for transportation services through fiscal 2006. An additional \$4 million will be required for vehicle replacement during this time period.

In regard to transportation-related revenue for the nine providers, their collective vehicle income for calendar year 1995 (see Table IV-5) is increased 4.5 percent annually, resulting in estimates of operating revenue through 2006. Federal capital revenue needed to allow vehicle replacement according to the schedule discussed above was included, and the total annual revenue is the sum of operating and federal capital revenue (Table IV-11).

**Table IV-11. Projection of Cumulative Expenses and Revenues for Other Wichita-Sedgwick County Paratransit Providers, 1997-2006.**

Category	1997 Projected	1998 Projected	1999 Projected	2000 Projected	2001 Projected	2002 Projected	2003 Projected	2004 Projected	2005 Projected	2006 Projected	1997-2006 Projected Total
Operating Costs	1,635,000	1,708,000	1,785,000	1,865,000	1,949,000	2,037,000	2,129,000	2,224,000	2,324,000	2,429,000	20,085,000
Capital Costs- Replace Vehicles	919,000	353,000	212,000	188,000	54,000	231,000	427,000	276,000	677,000	666,000	4,003,000
Total Expenditures	2,554,000	2,061,000	1,997,000	2,053,000	2,003,000	2,268,000	2,556,000	2,500,000	3,001,000	3,095,000	24,088,000
Operating Revenue											
Vehicle Income	37,000	39,000	41,000	43,000	44,000	46,000	49,000	51,000	53,000	55,000	458,000
State Operating	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	100,000
Other*	1,587,000	1,659,000	1,734,000	1,813,000	1,895,000	1,980,000	2,070,000	2,164,000	2,261,000	2,364,000	19,527,000
Total Operating Revenue	1,634,000	1,708,000	1,785,000	1,866,000	1,949,000	2,036,000	2,129,000	2,225,000	2,324,000	2,429,000	20,085,000
Capital Revenue											
Federal	735,000	283,000	170,000	150,000	44,000	184,000	342,000	221,000	541,000	533,000	3,203,000
Local	184,000	71,000	42,000	38,000	11,000	46,000	85,000	55,000	135,000	133,000	800,000
Total Capital Revenue	919,000	354,000	212,000	188,000	55,000	230,000	427,000	276,000	676,000	666,000	4,003,000
Total Revenue	2,553,000	2,062,000	1,997,000	2,054,000	2,004,000	2,266,000	2,556,000	2,501,000	3,000,000	3,095,000	24,088,000

\* Costs of transportation services are balanced with revenue from agencies' general funding sources, such as city and county governments, block grants, the United Way, etc.

**REFERENCES**

1. *FTA Section 16 and Section 18 Funded Vehicles Ridership and Mileage Reports 1995.*  
Kansas Department of Transportation (KDOT), Topeka, KS, 1995.

