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Transportation

Transportation data were gathered from a variety of public agencies. The Transportation Division of the Minneapolis Public Works Department provided information on travel trends, traffic accidents, street lighting, managing the city's parking infrastructure and use supply, and bicycle facilities. Public Works' Engineering Design Division furnished information on roadway jurisdictions and mileage, residential paving and storm drain separation programs. No information on the status of bridge conditions or engineering works was provided for 1998-99. Public Works' Engineering Operations Division provided information on residential pavement condition and the city's preventative maintenance programs. Minneapolis Parks and Recreation Department staff provided information on the condition of the city's parkways. The Downtown Minneapolis Transportation Management Organization provided information on travel demand management efforts in downtown Minneapolis. Metropolitan Council's Transit Operations Division provided information related to public bus transit service and ridership in Minneapolis.

This chapter can also be found on the city's web site at:
www.ci.minneapolis.mn.us/planning

**The Changing Transportation Picture
Roadway Infrastructure
Parking Infrastructure
Alternatives to the Auto**



The Changing Transportation Picture

As the region's population and physical area has grown, so have the nature of trips made, whether to get to and from work, school, shopping or other entertainment destinations. Concentrated job growth has continued in certain centers, dominated by Downtown Minneapolis, and the majority of new residential development is built at the distant edges of the metropolitan area. Land use patterns at the outer edges of the metropolitan area are overwhelmingly single activity in character. Coinciding with an increase in the number of working people per household as well as an increase in income levels, the region has seen an increase in the number of automobiles on the road. Along with these changes have come increased congestion and longer, more unpredictable travel times as the distances between homes, shopping and workplaces grows while the region expands its own boundaries. Yet at the same time, at a more local scale, use of bicycling trails and lockers has increased, and transit improvements to the existing bus system tell us that ridership has increased in 1999 at a rate not seen since the 1970s.

Job and Population Growth

The region's population grew by 400,000 people between 1970 and 1990, from 1.9 to 2.3 million. In the same time period, the number of people working increased from 850,000 to 1.3 million, an increase of 450,000 jobs. The number of jobs increased faster than area population. More importantly, almost half a million more people made twice-daily job related trips in 1990 than in 1970.

Travel Patterns in the Region

The Metropolitan Council collects data on travel behavior at 10 year intervals, with the last study conducted in 1990. The Metropolitan Travel Behavior Inventory portrays interesting patterns of travel in the region. Between 1950 and 1990 the number of daily trips per person doubled from 1.8 to 3.9 trips. Between 1970 and 1990 the rate rose from 2.7 to 3.9 trips per person. These calculations include adults and children, those who drive and those who do not. In that same time period between 1970 and 1990, the number of these trips made by people driving alone increased more than 100 percent, from approximately 3.0 million to 6.4 million of the total trips made. This increase is even more significant given that the metropolitan population increased only 22 percent in the same time period, from approximately 1.9 million to 2.3 million people. The average trip length increased 33 percent, from 5.1 miles in 1970 to 6.6 miles in 1990. Over the last 20 years and longer, metropolitan residents have traveled more frequently, over longer distances and they have increasingly made these trips alone.

Cars on the Road

Auto ownership doubled between 1950 and 1990. In 1950 the average household owned only one vehicle. By 1990 the average household owned two cars. The number of vehicles operating on the region's roadways increased from 640,000 to 2.27 million between 1950 and 1990, an increase of 1.6 million vehicles. For every person added to the region's population between 1970 and 1990, the region added nearly three vehicles. As a result, the miles of congested freeway have grown from 24 in 1972 to 110 today and are expected to increase to 175 by 2010.

Fewer people are riding in each car today than twenty years ago. The average auto occupancy for all types of trips decreased from 1.5 in 1970 to 1.3 in 1990. For the work trip (the trip that puts the greatest number of cars on the road at a single time, the so-called "rush hours"), the average auto occupancy dropped from just 1.2 to less than 1.1. This means that the average person going to work in a car is driving alone.

Specific Changes in Minneapolis

The city has also experienced changes in the way people travel around over the course of a typical day. Many of those changes parallel changes at the regional level. In ten years between 1980 and 1990, the city lost 2,500 people but added about 14,000 autos according to recent Planning Department estimates. Most people who are employed at a location in the city (a labor force of about 280,000 people) drive to work (about 60 percent); about 10 percent carpool, and close to 16 percent use existing public transit. For the majority of people employed in the city, the average commute time is 15-30 minutes. Data tell us that less than half of city residents work in the city, leaving close to 60 percent of city residents to commute out of the city to work.

1998 Cordon Count –

Downtown Minneapolis Travel Patterns

In 1998, the City of Minneapolis Public Works' Transportation Division and SRF Consulting Group staged a cordon count survey of all the traffic coming into and leaving the Minneapolis CBD over a 12 hour period. These data, which adds to the library of information about travel to and from downtown that has been collected on a regular basis since 1958, tell us a great deal about trip-making and travel downtown. The general patterns indicate that there are significantly more vehicles and people traveling to and from downtown. With a 13 percent increase in total vehicles (43,000 units); a 9 percent increase in total people (47,000) in 1998, it is interesting to note that such a large proportion of travelers continue to arrive by car.

**1998 TRANSPORTATION MODES
TO AND FROM DOWNTOWN MINNEAPOLIS**

	Total # of people	% share
Automobile	347,548	64.2
Taxi	10,976	2.0
Light Truck	24,339	4.5
Heavy Truck	6,191	1.1
Bus	107,201	19.8
Pedestrian/Bicycle	44,941	8.3

Source: 1998 Minneapolis CBD Cordon Count

Buses as a share of the total traffic have increased, with about 1,450 more buses a day entering or exiting the downtown area than were recorded in 1990. However, these buses are carrying fewer people than they did in 1990, where person arrivals by bus numbered 113,696 in that year and in 1998, person arrivals by bus numbered 107,201. Pedestrian and cyclist arrivals and exits from downtown have increased, up approximately 1,700 people from the 1990 count.

Vehicle occupancy to and from downtown for autos, buses and taxis has decreased over time, as demonstrated in the following table:

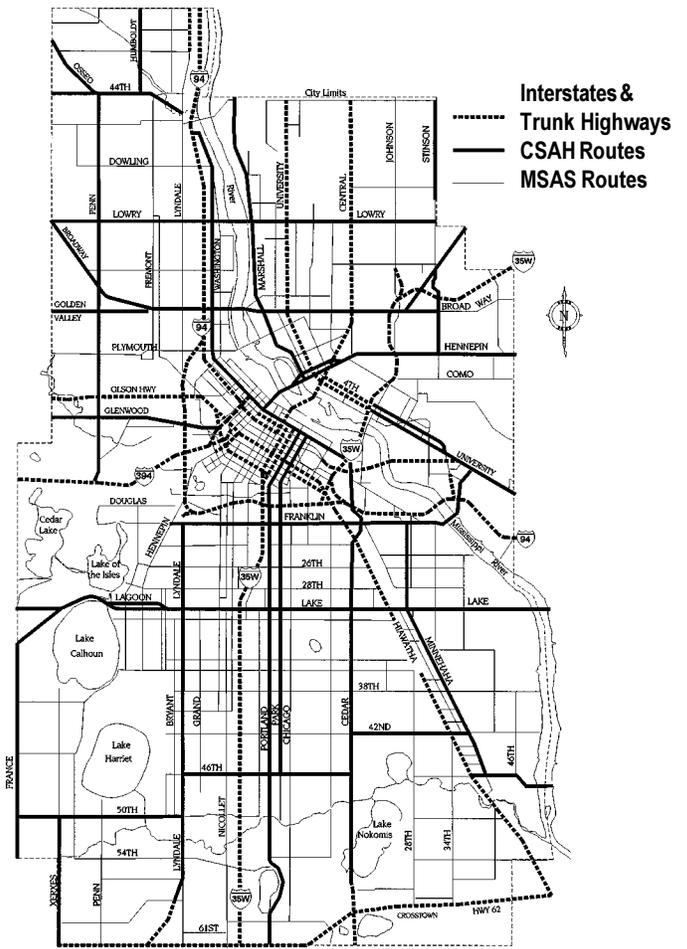
**OCCUPANCY RATIO OF VEHICLES
ENTERING AND EXITING DOWNTOWN, 1998**

	Autos	Taxis	Buses
1987	1.24	1.82	19.70
1990	1.23	1.79	18.59
1998	1.23	1.64	14.16

Source: 1998 Minneapolis CBD Cordon Count

For further information about the 1998 Minneapolis CBD Cordon County survey, contact the Transportation Division of Public Works.

**CITY OF MINNEAPOLIS:
STATE-AID ROUTE DESIGNATIONS**





Roadway Infrastructure

Roadways in the city are not all owned and maintained by the city; the federal, state and county governments are partners with the City of Minneapolis in providing a properly functioning, well-maintained network of roadways to address the travel demands of the public. Our city streets move people and goods by a variety of different vehicles and transportation modes, serving demands for mobility and providing access to property. However, some roadway designs of the 1950s are inadequate for the travel demands of the 1990s, both in their capacity and configuration.

Freeway Use and Its Impact on City Streets: Current Conditions

Much of the freeway network in the city has physically deteriorated to the point where major renovation or pavement and bridge deck replacement are necessary. Some freeway sections are handling higher-than-planned-for traffic volumes and have become unsafe.

Some parts of the freeway network are aging and require replacement to avoid becoming threats to the traveling public. Much of the freeway network in the city was planned in the late 1950s and built in the 1960s and 1970s; I-94 North was completed in the 1980s. Most of the older stretches of freeway have reached (and exceeded) their original design capacities. Population growth, increases in trips per person per day and total vehicle miles traveled have resulted in highway crowding throughout the region. Under these conditions, the margin for driver error has diminished dangerously, especially during high volume traffic periods like rush hour. The frequency of multi-vehicle accidents is increasing. Freeway congestion also causes traffic "spill-overs" onto the city's arterial and collector streets, a circumstance that these streets were never intended to handle. Thus, difficulties on the freeway network are indirectly posing threats to life and limb on the city's street system.

Traffic Calming

In 1998, the City of Minneapolis, through its Department of Public Works' Transportation Division, continued to expand its efforts to reduce the impact of traffic in residential neighborhoods. These "traffic calming" measures take many forms, but the most common changes to city streets are the construction of diverters,

edge lines, alley bumps, traffic circles, speed bumps, and intersection chokers (which make the intersection narrower). These measures are relatively new in Minneapolis and can be quite controversial because of driver unfamiliarity and a reluctance to trade off accessibility and local convenience in exchange for reduced travel speeds and in some cases, volumes. Therefore, whenever possible, traffic calming measures are installed on a temporary test basis to determine neighborhood acceptance prior to implementing a permanent measure. Results so far are mixed and will probably be effective on a location-by-location basis. Therefore, locations for implementation of these measures should be carefully chosen. Additional "traffic calming" types and variations, including raised crosswalks, intersection chokers and speed wagon use are under review.

Traffic Accidents

Reducing accidents and injuries on city streets is an important part of maintaining the high quality of life in the city, as well as the integrity of the roadway structure. The total number of accidents and injuries in 1998 decreased for vehicles, pedestrians and cyclists compared to figures for 1996-1997. However, the number of fatalities resulting from accidents remained the same in 1998, challenging a decreasing trend noticed in the mid-1990s. Fatalities were particularly prevalent for accidents involving pedestrians, increasing for the first time since 1994.

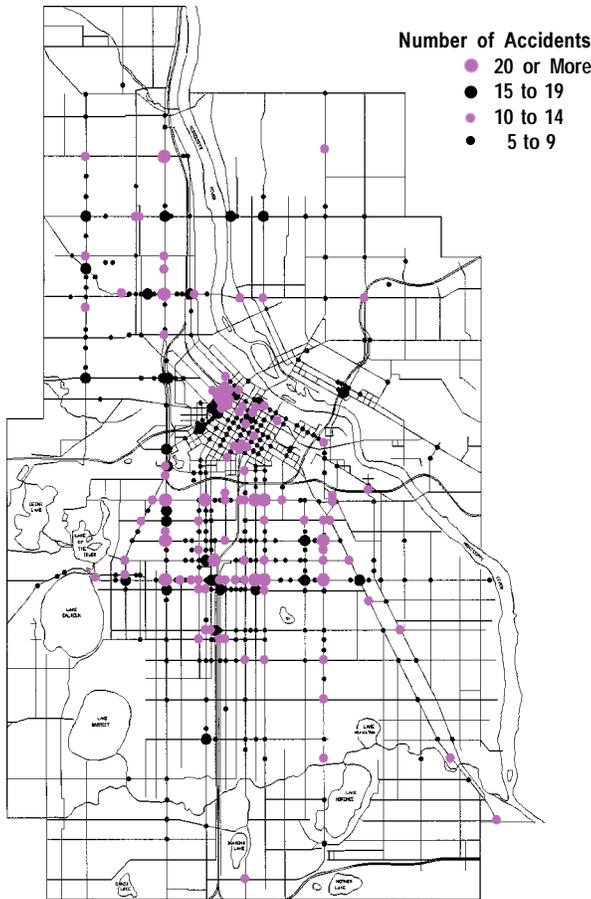
Over the past five years, reported bicycle accidents have been slowly increasing. The decrease in accidents in 1998 is a positive development, given that the city is experiencing a substantial increase in bicycle volumes due to improved bicycle parking and lane/trail facilities. It is interesting that the numbers of accidents on weekdays (Monday through Friday) are essentially equal, but drop off significantly on weekends. Although high accident corridors are more difficult to determine because of the relatively small numbers involved, five-year totals indicate that the high accident locations fall on the major city streets. This pattern would lend itself to a Top Accident Control Targets (TACT)-type accident reduction program now used for motorized vehicles. An enforcement effort is continuing in the Uptown area and along the Nicollet Mall.

TRAFFIC ACCIDENTS, BY TYPE
1993-1998

	1993	1994	1995	1996	1997	1998
Total Accidents	6,764	6,829	7,656	8,088	8031	7,590
Injuries	4,004	4,131	4,587	4,623	4314	4,291
Fatalities	19	20	12	10	17	17
Pedestrian Accidents	414	395	459	394	407	383
Pedestrian Fatalities	8	7	3	2	6	10
Bicycle Accidents	298	337	323	358	375	348

Source: Minneapolis Public Works Department, Transportation Division

1998 TRAFFIC ACCIDENTS



For the last 15 years, the City of Minneapolis has had the lowest fatal accident rate of any city of comparable size in the United States. This significant achievement has been aided by the city's award-winning TACT (Top Accident Control Targets) program. This program strives to concentrate existing resources of city agencies on those roadway segments where accident rates are higher than normal. Traffic studies indicate that 25 percent of all accidents occur on only two percent of the city's roadway system. These high-accident streets are the principal targets of the TACT program. The accompanying map shows where more than five traffic accidents occurred and the relationship of these accidents to the TACT areas.

As a result of the continued and coordinated focus of the city's Police Department and Public Works Department on the city's high accident TACT, the number of traffic accidents and injuries in the TACT areas has dropped while total traffic accidents on a city-wide basis has remained basically the same. Through the TACT program, the city has been able to obtain the maximum positive accident reduction impact from limited equipment and personnel resources. The TACT program is an example of the ongoing success of the city's efforts to reduce accidents and contain city costs at the same time.

The accident reduction program is now a routine part of the Transportation Division's daily activities. The use of computers and computer graphics allow the division to expand its efforts to additional areas without adding further personnel. Continued interagency cooperation and constant technical improvements maintain the positive results of this program, and efforts are being pursued to expand the program to include bicycle and pedestrian accident spots.

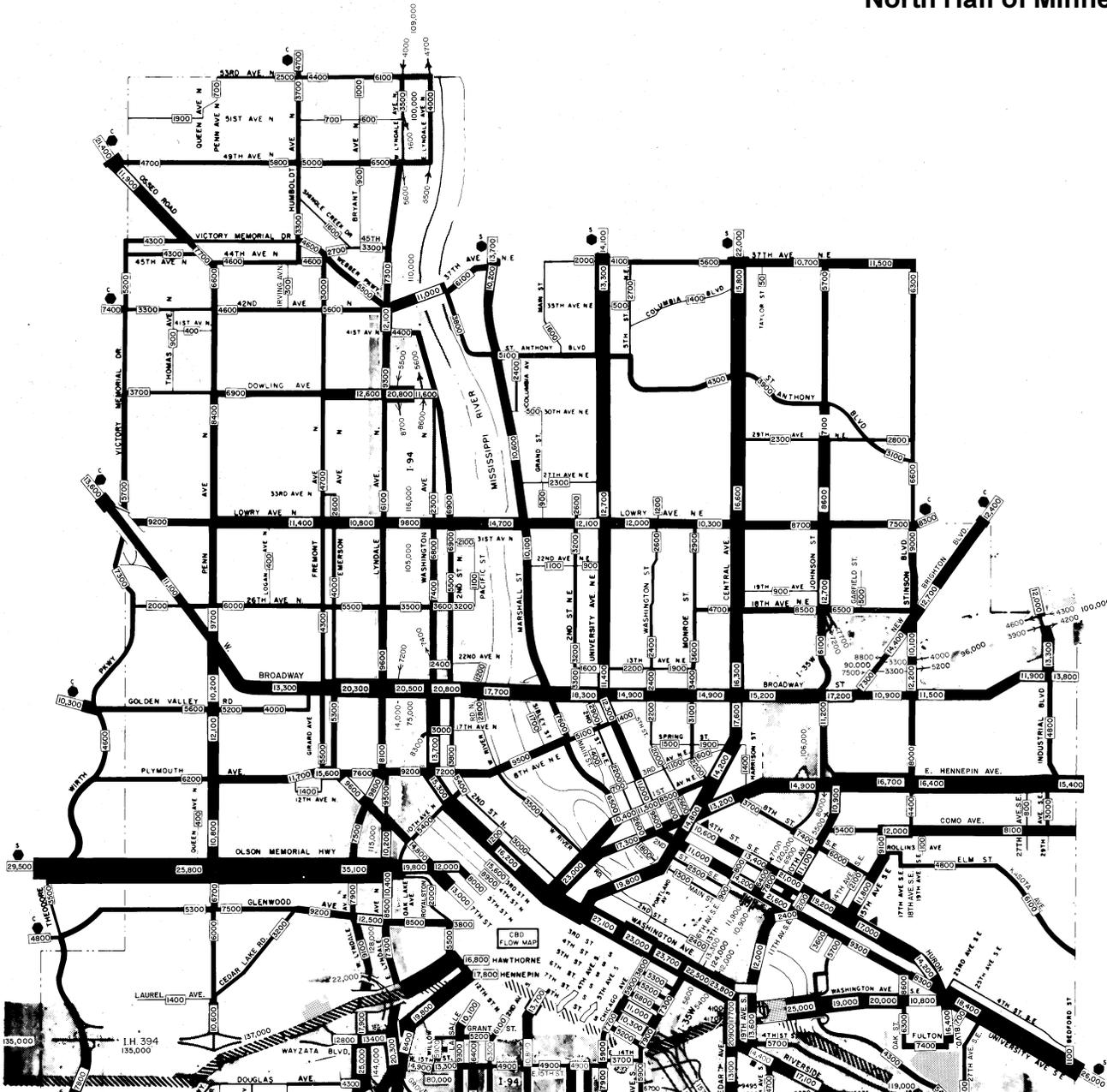
TACT AREAS COMPARED WITH REST OF THE CITY, ACCIDENTS BY YEAR

	1996		1997		1998	
	Total Accidents	Injury Accidents	Total Accidents	Injury Accidents	Total Accidents	Injury Accidents
TACT Areas	2,054	917	1,961	846	2,018	882
Rest of City	6,034	2,271	6,070	2,249	5,572	2,104

Source: Minneapolis Public Works Department, Transportation Division

TRAFFIC VOLUMES, 1997 AVERAGE DAILY TRAFFIC FLOW

North Half of Minneapolis



Notes:

Counts on city streets in South Mpls. were made in 1996 and counts in North, Northeast, Southeast and CBD were made in 1995.

Dividing line is shown by



Counts for I-35W, I-94, I-394 and 62 X-Town are from the 1996 St. Paul-Mpls. seven county area map prepared by MNDOT.

Counts marked with a **◆** on streets outside of city limits are supplied by Hennepin Co. (C) or MNDOT (S).

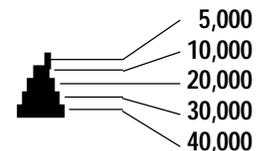
For counts within the Central Business District, use CBD Flow Map.

Counts marked with a **■** were made in 1992.

Counts marked with a **●** were made in 1994.

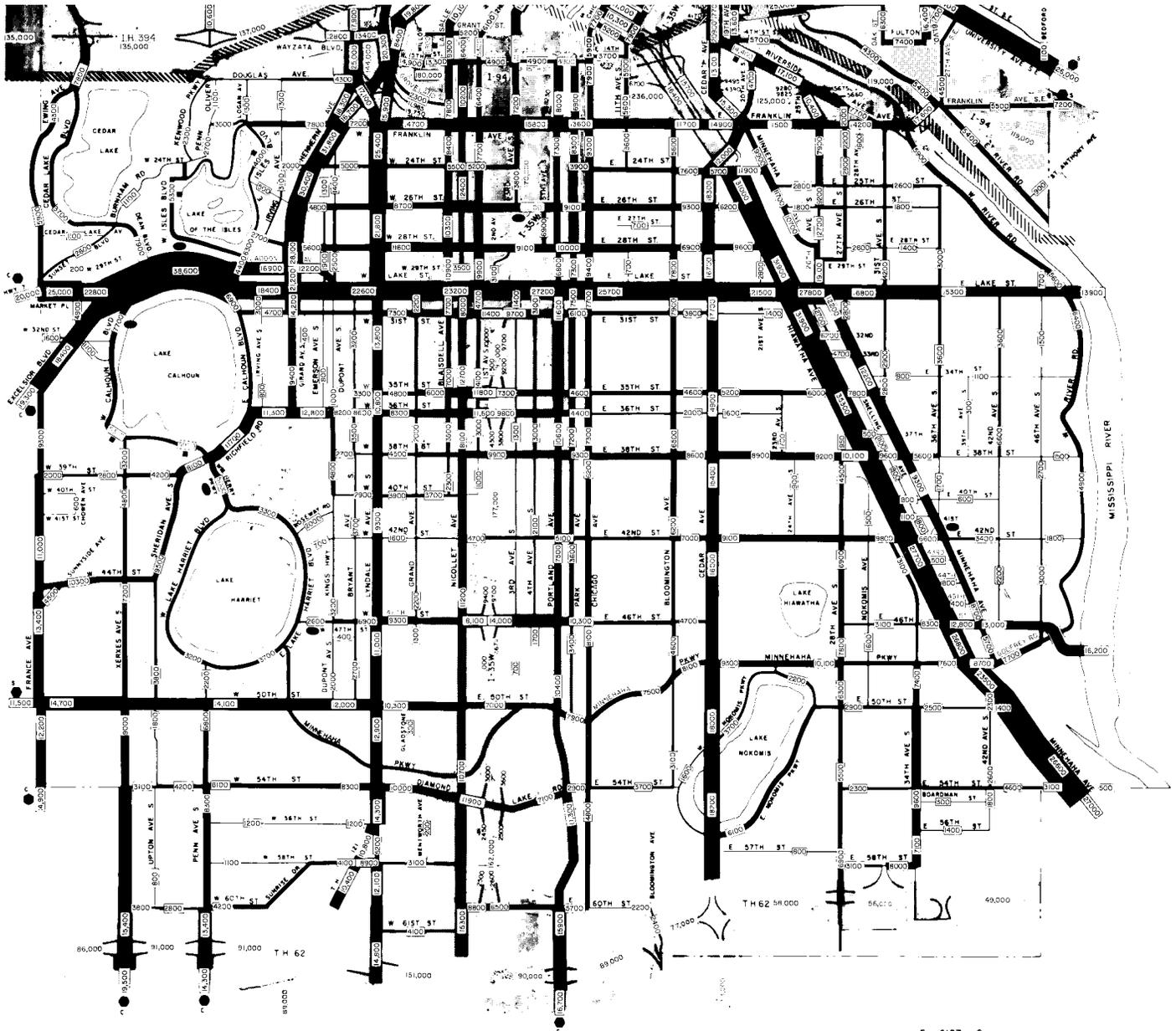
Counts marked with a **▲** were made in 1995.

Scale of Vehicular Volume



TRAFFIC VOLUMES, 1997 AVERAGE DAILY TRAFFIC FLOW

South Half of Minneapolis



E - 6187 - C

Notes:

Counts on city streets in South Mpls. were made in 1996 and counts in North, Northeast, Southeast and CBD were made in 1995.

Dividing line is shown by



Counts for I-35W, I-94, I-394 and 62 X-Town are from the 1996 St. Paul-Mpls. seven county area map prepared by MNDOT.

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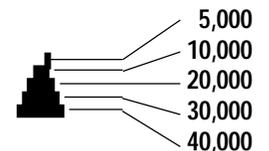
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Counts marked with a **■** were made in 1992.

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Scale of Vehicular Volume



Roadway Jurisdictions

The city works with partners at the federal, state and county level to maintain its streets and roadways. These partners provide major funding for rebuilding and redesigning the streets, and for this reason set standards for new construction or renovation. On the accompanying map, wide solid lines represent interstate highways. Other state trunk highways are shown in narrower solid lines; county state-aid highways (CSAH) are shown in dot and dash lines and municipal state aid (MSA) are shown as dashed lines on the map. All other streets are local city streets and under the city's control. Altogether, the city contains about 1,080 miles of roadways, 55 miles of parkway and 455 miles of alleys. The accompanying table shows the number of miles in each category of roadway.

TOTAL CENTERLINE MILES OF ROADWAY IN MINNEAPOLIS BY JURISDICTION, 1998

Type of Roadway	Number of Miles
State Trunk Highways	54.0
Interstate Highways	22.9
I-35W	(10.2)
I-94	(8.4)
I-394	(4.3)
Other State Trunk Highways	31.1
County-State-Aid Highways	87.1
Municipal-State Aid Streets	187.6
Parkways and Special Park Roadways	55.0
Local Streets	721
Total (Center Line Miles)	1,104.7
Alleys (Center Line Miles)	455.0

City Street Maintenance Activities and Responsibilities

The nature of county and city participation in street design and construction is markedly different. Generally speaking, the county, with the assistance of state funds, has assumed responsibility over the maintenance and reconstruction of the principal part of the roadway, the (automobile) travel lanes. The city's share has generally been to maintain and reconstruct as necessary the parking lanes, bicycle lanes, sidewalks, curbs and gutters along these streets. Over the past nine years, the state has turned back a number of trunk highways in the city so that the city assumes costs associated with repairing these roads. The city has had to pick up the capital and maintenance responsibility for such former trunk highways as Lake Street, Cedar Avenue, West Broadway and Broadway Street Northeast, Lyndale Avenue North, and most of Washington Avenue North without significant compensation from the state trunk highway fund.

The current round of route exchanges took effect in January of 1994. The state has exchanged ownership and maintenance responsibilities for certain roadways with Hennepin County, but no exchanges with the City of Minneapolis have occurred in this round. Hennepin County has agreed to transfer ownership of 25.5 miles

(87.3 lane-miles) of county-owned roads to the city and to accept ownership and maintenance responsibility for 21.4 miles (87.9 lane-miles) of city-owned roads from Minneapolis. The most recent changes to these arrangements, effective at the end of 1997, have shifted maintenance responsibilities for all city roads outside of downtown back to Hennepin County. The City of Minneapolis is only responsible for maintaining the condition of roads within downtown.

Residential and Municipal State Aid Paving Program

There are approximately 1,016 miles of residential and arterial streets within the City of Minneapolis and another 23 miles of interstate freeways and parkways in addition to 1,900 miles of sidewalks. The Department of Public Works, Paving Construction Division is responsible for major rehabilitation or reconstruction of those surface streets and sidewalks. Having recently completed a paving program devoted to the removal, grading and new construction of more than 600 miles of residential streets, the city has developed a renovation program that focuses on reconstruction and maintenance activities so that the surface streets maintain a useful life for a total life expectancy of 60 years.

PAVING PROGRAM 2000-2001

2000	Miles	Estimated Cost
Stevens Square	7.20	\$ 4,470,000
Johnson Street N.E.	0.37	827,000
11th Avenue South	0.06	250,000
5 th Avenue South	0.06	389,000
4 th Street South	0.06	200,000
Franklin Avenue	0.50	2,552,000
Como Avenue SE	0.21	252,000
31 st and California	0.12	637,000
Main Street SE	0.21	2,922,000
Hennepin Ave.	1.29	3,120,000
Nicollet Avenue	0.40	1,442,000
Harrison Renovation	4.30	1,324,000
Harrison Street NE	0.30	447,000
Fulton Street SE	0.30	108,000
Parkway Paving		1,500,000
Sidewalk		1,200,000
Total	15.28	\$21,640,000

2001	Miles	Estimated Cost
Ewing Avenue South	0.40	\$ 722,000
Dowling Avenue South	1.70	1,050,000
Como North Renovation	4.00	1,277,000
North Phillips Renovation	5.30	1,698,000
University Renovation	4.50	1,428,000
29 th Street West	0.13	252,000
2 nd Street Commercial	0.48	573,000
3 rd Avenue South	1.00	2,126,000
Convention Center	0.20	1,000,000
Chicago Avenue	0.38	3,914,000
Parkway Paving		1,500,000
Sidewalk		1,200,000
Total	18.09	\$16,740,000

City Street Renovation Program

Public Works has developed a framework to set the priorities of a street renovation program, relative to the age and condition of the streets and the kinds of rehabilitation work the streets have experienced in the past. Analysis of the data shows that a large percentage of the residential network is approaching that point in the pavement life cycle where more frequent seal coating and more extensive maintenance or rehabilitation efforts, such as mill-and-overlay treatment and miscellaneous curb and gutter replacement, will be required to maintain asphalt paved streets in good, serviceable condition. This higher level of maintenance is more costly than routine seal coating and is an inevitable condition of older more established urban areas. The object of the program is to extend the residential pavement system through another life cycle.

While the residential street system is in relatively good condition for its age, due in part to the current seal coat program, the Municipal State Aid Streets are not in as good condition. Public Works determined that a number of these mainline city-owned streets should be milled and overlaid to reduce the backlog of streets in need. The concrete streets in the residential system have maintenance problems that also need increasing attention as they grow older. Correcting these problems includes extensive joint repair and some wholesale panel replacement, which may also require subgrade soil correction.

Alley Resurfacing Program

The alley system in the City of Minneapolis is even older than the roadway system. The prevalence of alleys throughout city neighborhoods, and the access they provide to housing, makes them an important part of the street network in city neighborhoods. The funding source to resurface the city's 455 miles of alleys was dropped in 1992 for budgetary reasons.

Sidewalk Maintenance Program

The Sidewalk Division of the Public Works Department maintains the city's 1,900 miles of sidewalks and oversees the inspection and construction of sidewalks associated with all street paving projects. Generally speaking, sidewalks are inspected and repaired on a seven to ten year cycle. The cost for repairs to sidewalks is paid by the adjacent property owner, either by direct single payment or by special assessment to property taxes. During the 1999 construction season, over 2.5 million dollars was spent on sidewalk infrastructure in Willard Hay, Columbia, Sheridan, Standish, Diamond Lake, Wenonah and Lowry Hill neighborhoods. For the year 2000, plans are being made to inspect and repair sidewalks in the Camden, Armatage, Corcoran, Harrison, Lyndale, King Field, Waite Park, Victory, Diamond Lake, Stevens Square and Como neighborhoods.

After the severe storms in May and June of 1998, repairs in excess of \$250,000 were required at over 500 locations throughout the city. Maintaining the sidewalks as a clear and safe pathway for pedestrians in the winter is a challenge in Minneapolis, given the demands that the climate places on property owners. Yet, maintaining the walkability of the sidewalks is a key aspect of preserving a sense of livability in the winter months for all citizens. The Public Works Department has worked to meet this goal by creating a program that responds to snow and ice complaints from pedestrians. The city's Snow and Ice Ordinance requires property owners to maintain their sidewalks in all winter conditions and to make sure the sidewalk is clear after winter storms. Under the Winter Program, sidewalks are inspected and adjacent property owners are notified if their sidewalk is found to be in violation of the ordinance.

Roadways in the Regional Park System

The Minneapolis Park and Recreation Board is responsible for the maintenance and upkeep of the roads that make up the parkway system. These roadways are important elements of the city's transportation network, but the function differs slightly from other city streets. As the principal means of moving around a large part of the city's park system, there are special demands on the parkways. Issues of speeding automobiles, pedestrian and bicyclist use, landscaping and aesthetic features are critical for parkway users and neighboring property owners. A comprehensive examination of issues relating to traffic on the parkway system was completed in 1998 involving extensive work with traffic consultants, technical and citizens advisory committees. The study concluded with recommendations for a series of measures to reduce traffic speed and improve the parkway environment for all users.

The Minneapolis Park and Recreation Board has installed several test applications of the traffic-calming measures recommended in the 1998 *Parkway Traffic Study* on selected locations within the parkway system. These tests are intended to determine the efficacy of potential approaches to the problem of excessive traffic speed and volume throughout the 52-mile parkway system. Installations were made on King's Highway and Dean Parkway, and testing continues on a portion of West River Parkway where measures were installed in 1997. Traffic-calming will also likely be an important component of the redesign of East River Parkway adjacent to the University of Minnesota. Master planning for that redesign, as well as the for potential redevelopment of East River Flats Park, began in October and will be completed in late winter. Reconstruction of this parkway segment has been stimulated by the University of Minnesota's plans for a new south Mall and accompanying Riverbed Commons student housing and parking facilities.

1999 PARKWAY STREET IMPROVEMENTS, MINNEAPOLIS PARK BOARD

Mill and Pavement Reconstruction:

- Theodore Wirth Parkway, Glenwood Avenue north to Hwy 55
- West Calhoun Parkway, Richfield Road north to Lake Street

Pavement Seal Coat:

- West River Parkway, Godfrey Road to 25th Street E.

Bridges in the City

Minneapolis has a total of 592 bridges (excluding freeway bridges) within the city limits. Of the 592 bridge structures, 265 structures carry railroad, pedestrian, and skyway traffic over roadways. The remainder of the 327 bridge structures carry roadways over other roadways, creeks and rivers, or railroads. These bridges are a critical part of the city's transportation network.

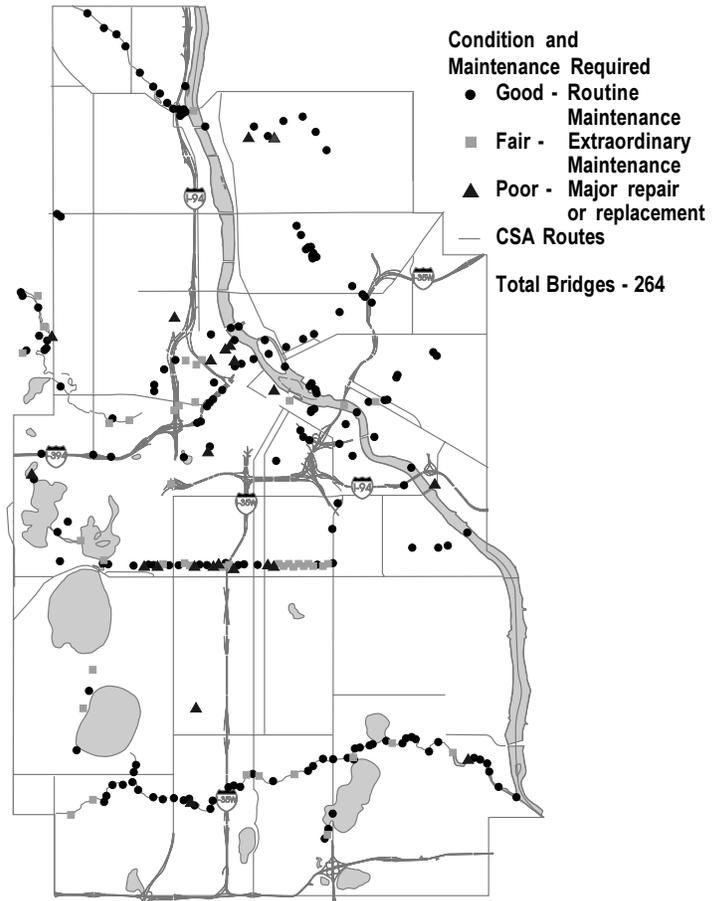
The city owns and maintains 181 of the 592 bridges in Minneapolis, with an additional 17 bridges maintained by agreement with the bridge owner for a total of 264 bridges.

At the end of 1998, 25 bridges were structurally deficient, and 30 were functionally obsolete, for a total of 55 deficient bridges, defined as such by federal rating criteria. The cost of replacing these bridges is estimated at about \$50 million in 1996 dollars. By the year 2001, about 85 more bridges built prior to 1940 will be added to the deficient list and will require an additional \$70 million in 1996 dollars. At the replacement rate of four bridges per year, it will take about 20-25 years to replace the deficient structures without counting additional bridges that may become deficient due to exceeding their useful life of 60 years.

Since the late 1970s, the city has had an aggressive bridge replacement program, successfully acquiring federal and state participation to provide the majority of funding for bridge replacement. A five-year replacement program is refined each year by the Public Works Department and will be continued in order to keep the Minneapolis bridge network viable. The accompanying map shows the locations of the bridges owned and maintained by the city, their condition and the types of maintenance activities appropriate for the bridges' condition. The condition ratings shown on the map indicate the urgency of needed maintenance work.

Currently, the Public Works Department performs annual structural inspections of all bridges according to strict criteria set up by the federal government. This information is used to recommend a year-by-year schedule of short-term maintenance, major repair and bridge replacement activities.

CONDITION STATUS OF BRIDGES OWNED AND MAINTAINED BY THE CITY, 1996



Low Level Street Lighting (formerly Pedestrian Level Lighting)

Several areas of Minneapolis have pursued the installation of low level street lighting systems, as security and aesthetics have become increasingly important to residents and businesses. As the city does not allocate funds to install these systems, property owners are paying assessments, occasionally using Neighborhood Revitalization Program (NRP) funds to write down the assessment costs in order to get these systems installed. The low level lighting program is based on resident requests and a petition process that assures wide-spread interest in having the system installed. When the lighting system is found to comply with city design standards and is installed in neighborhoods, the city assumes responsibility for ongoing operations and maintenance charges associated with these systems.



Parking Infrastructure

The parking system in Minneapolis consists of a variety of parking modes, from surface lots to parking structures to metered and on-street parking. The challenge facing the city is to provide sufficient parking to automobile drivers so that the city's competitiveness and marketability is not negatively impacted, but also to encourage people to use transit as a method of delivering people to their destinations quickly, conveniently and comfortably without concern for parking availability or cost.

Parking In Downtown

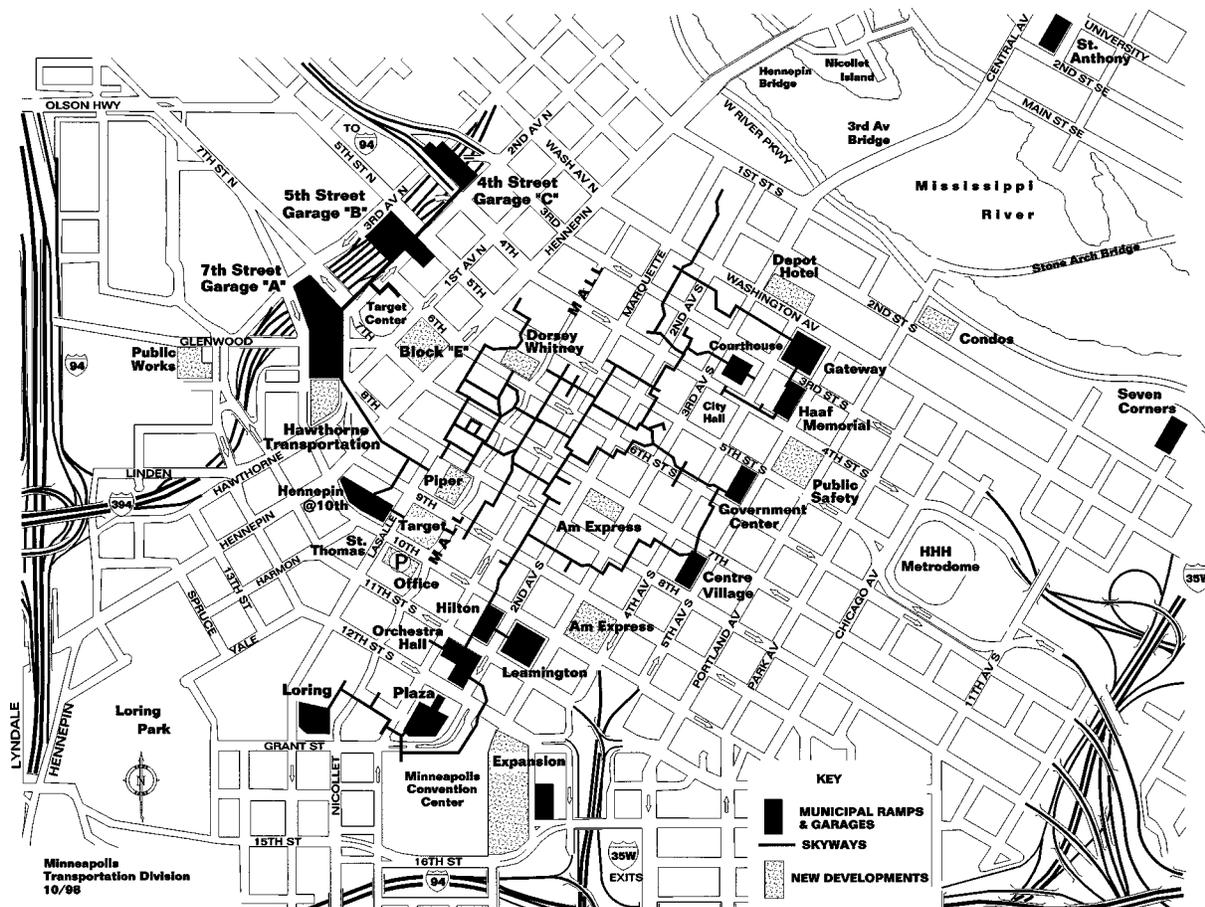
Downtown Minneapolis is the commercial and financial hub of the metropolitan region. New transit initiatives and increased passenger ridership play an increasingly important role in downtown's capacity to absorb more vehicles on a daily basis. The time and economic costs of traveling by single occupant vehicle into and out of downtown in peak hours are becoming increasingly clear as the region continues to grow and downtown's job base expands.

The City of Minneapolis, through its downtown Municipal Parking System, plays a crucial role in maintaining a balance between parking demand and supply, and, at a larger scale, between automobile and transit use into and out of downtown. As of the end of 1998, municipally controlled downtown ramps, ten parking lots, and 4,899 of the city's 6,300 on-street parking represented about 41 percent of all available parking in downtown Minneapolis.

Financing for the system has come from the city, MN/DOT and FHA. The aggregate public investment in the downtown parking system is about \$339,000,000 (1998 dollars).

In 1999, the city began construction of the Hawthorne Transportation Center. This public/private partnership with Greyhound Lines Inc. will create a multi-modal transit facility that includes a 975 space parking garage, an intercity bus terminal and skyway connections to the adjacent intracity terminal in the TAD ramp and the downtown skyway system through the Orpheum Theatre. The Hawthorne Transportation Center is scheduled for completion in November of 2000.

MUNICIPAL PARKING SYSTEM



Downtown Parking Rates and Revenues

The city sets its downtown parking fees at market rate for two reasons: a) the city must cover all construction, maintenance and operating expenses from user fees; and b) the city's pricing policy must avoid adversely affecting the private parking market. The parking meter system is a major revenue-producer for the city's parking fund. Parking meter fees are essential to the parking fund because they offset the high cost of structured parking facilities and, in some areas of the downtown, they offset revenue gaps caused by "soft" parking markets.

The following table and chart identify the typical users of the city's downtown municipal parking system.

AVERAGE DAILY USE OF DOWNTOWN MUNICIPALLY-OWNED PARKING SPACES¹

User Type	Percent of Total	Avg. Number of Vehicles Parked
Hourly/Daily	38.7	10,475
Monthly	33.4	9,041
Carpool, Vanpool	13.8	3,735
Commercial Validation	2.6	704
Event Parking	11.5	3,113
Total	100.0	27,068
Total Cars Parked in 1998		6,900,000

¹The total number of off-street parking spaces in the downtown municipal system is 20,606.

Source: Public Works' Transportation Division, Planning Department calculations.

Parking in Commercial Areas and Neighborhoods

According to leaders in the city's community and neighborhood business areas, close-by on-street parking is critical for their businesses' continued viability. The city provides parking meters in some areas, off-street lots in others, and time-controlled on-street parking in yet other areas to help provide this needed parking. In 1999, the city, in partnership with the Lyn-Lake Business Association, developed two new municipal parking lots in the Lyn-Lake area to encourage redevelopment and economic growth.

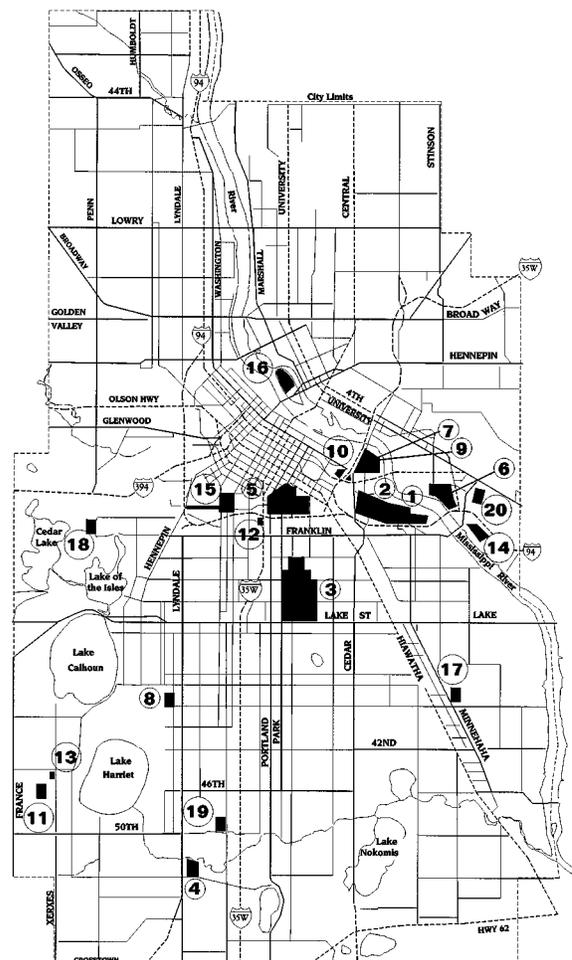
In a few areas of the city, the need to safely move traffic has required that some commercially oriented on-street parking be restricted, at least during peak traffic periods. In these areas, additional off-street parking should be developed to accommodate the demand.

Critical Parking Areas

Some activity centers in the city attract so many people that parking spills over onto surrounding residential streets. Residential areas close to these activity centers receive special consideration from the city when officially designated as Critical Parking Areas (CPAs). Residents of CPAs who must use on-street parking are able to purchase at a minimal fee, a parking permit which affords them long-term parking privileges, but eliminates or keeps at a minimum on-street parking spaces available to outside users. Special signs are used to designate CPAs. These special signs also warn those who do not hold parking permits that the city will rigorously enforce parking limits in CPAs. The number of CPAs continues to increase as a result of an ordinance change that broadens the criteria for CPA designation.

The accompanying map shows the locations of Critical Parking Areas throughout the city. Three new Critical Parking Areas were established in 1999.

CRITICAL PARKING AREAS





Alternatives to the Automobile

Minneapolis' economic competitiveness in the metropolitan region, as well as the livability of its neighborhoods, depends on a successful, high quality and balanced transportation system. As a region that has grown up with the automobile over the last four decades, the challenge that the city faces is to improve the quality and attractiveness of alternative transportation modes, whether by bus, pedestrian or bicyclist movement. Although the city has worked to accommodate these alternatives, the transportation system in the city and the metropolitan area is still unbalanced. Improvements to bus, pedestrian and cyclist movement will continue to be pursued at both the city and regional level.

The Public Transit System

Transit is integral to the city's future. Building a more balanced, high quality transit system will allow the city to pursue smart growth patterns and provide more options for travel to specific destinations such as work, education or entertainment. A good public transit system promotes the accessibility of downtown and enhances the mobility of those who ride the bus as well as those who remain in their cars.

In 1996, the City of Minneapolis convened an interdepartmental effort at drafting the city's Transit Planning and Funding Strategy. This project was a joint initiative by the Public Works Department, the City Coordinator's Office, the Planning Department and the Minneapolis Community Development Agency (MCDA). The strategy recommends that the City of Minneapolis commit to three principal tasks: first, to focus economic growth and transit service on designated Transit Corridors and Transit Centers; second, to designate and improve a high transit service area by modifying existing routes to focus on Transit Corridors and Transit Centers as described above; and third, to implement measures and improvements that give public transit priority in the planning, construction and operation of its streets.

One of the city's most important partners in working toward these objectives is of course the transit agency. Metro Transit is a division of the Metropolitan Council, responsible for planning and operating the transit system in Minneapolis and throughout the metropolitan area. As the first of the region's light rail lines in the Hiawatha Corridor advances in planning and construction, the operations of both the bus and the transit system will continue to be the responsibility of Metro Transit.

Bus Stops and Shelters

A federally funded project to place new bus stop signs at all Minneapolis bus stops was completed in 1999. Many stops had no signs, and many of the old signs were deteriorated. The new signs are reflectorized for better night visibility, and say "BUS" on the back side so pedestrians can more easily find the stops. Along with the signs, schedule information holders are also

being installed in downtown, wherever two or more routes serve the same stop, and at transfer points, unless there is already a bus shelter at these locations.

The first of a series of large, customized bus shelters was built on northbound 3rd Avenue South at 5th Street, on the plaza of the Hennepin County Government Center. Partially funded by Hennepin County, it is 50 feet long and designed to accommodate large groups of transit riders who wait at downtown stops. Design is underway for additional shelters of this type at specific downtown locations. In addition, late 1999 and 2000 will see the installation of additional standard bus shelters in Minneapolis and at bus stops along routes that lead to Minneapolis.

Exclusive Bus Lanes

Thirteen miles of exclusive bus shoulder lanes were implemented in 1999 on express bus routes serving downtown Minneapolis. These locations include:

- Northbound I-35W from I-694 to County Road I in Mounds View
- Southbound I-35W from Highway 10 to I-694 in Mounds View
- Westbound I-94 from McKnight Road to East 6th Street in St. Paul
- Eastbound I-94 from Highway 61 to McKnight Road in St. Paul
- Southbound Highway 65 from 89th and 85th Avenues in Blaine

For 2000, additional bus shoulder lanes will be constructed on I-94 between downtown Minneapolis and downtown St. Paul in both directions. Also, construction is underway on extension of the HOV lanes on I-35W between 76th Street in Richfield and 46th Street in South Minneapolis.

Ramp Meter Bypasses

Ramp meter bypasses for Minneapolis express buses were opened in 1999 at:

- Highway 169 and Highway 62 in Eden Prairie
- I-694 and Central Ave NE in Fridley
- Highway 77 and Highway 13 in Eagan
- Highway 77 and Diffley Road in Eagan
- Highway 77 and 127th Street in Apple Valley
- I-94 and Pascal in St. Paul

Other Improvements

The Foley Park-Ride lot in Coon Rapids was enlarged to 1,243 spaces, making it the largest park-ride lot in the metro area. Another large lot has been completed at Highway 610 and Noble Avenue in Brooklyn Park. It will be entirely open to the public in 2000 when Highway 610 is complete.

In 1999, Metro Transit added 131 new buses to its fleet, including two over-the-road type coaches that feature reclining seats, luggage racks, reading lights and a smoother, quieter ride. They are being assigned to long express routes on a demonstration basis. Other

new additions include electric hybrid vehicles and low floor vehicles.

Transit Service and Ridership

Ridership continued to increase in 1999. As of October 1999 ridership was ten percent ahead of 1998. Daily ridership averaged 210,000 in 1997 and is at 240,000 today, a level not experienced since 1986.

Major reasons for this increase are:

- A change in transfer rules that permits unlimited travel for 2.5 hours regardless of direction;
- Employer-based discount fare programs, most notable MetroPass (20 businesses are enrolled with nearly 34,000 employees included);
- Service increases, most notably all night "owl" service, certain new suburban expresses and more "reverse commute" services for city residents to reach suburban jobs;
- Improved bus service reliability and vehicle cleanliness, including a major successful campaign to eliminate graffiti on buses;
- Faster suburban express service due to increased transit advantages such as bus lanes and ramp meter bypasses.

The Hiawatha Corridor

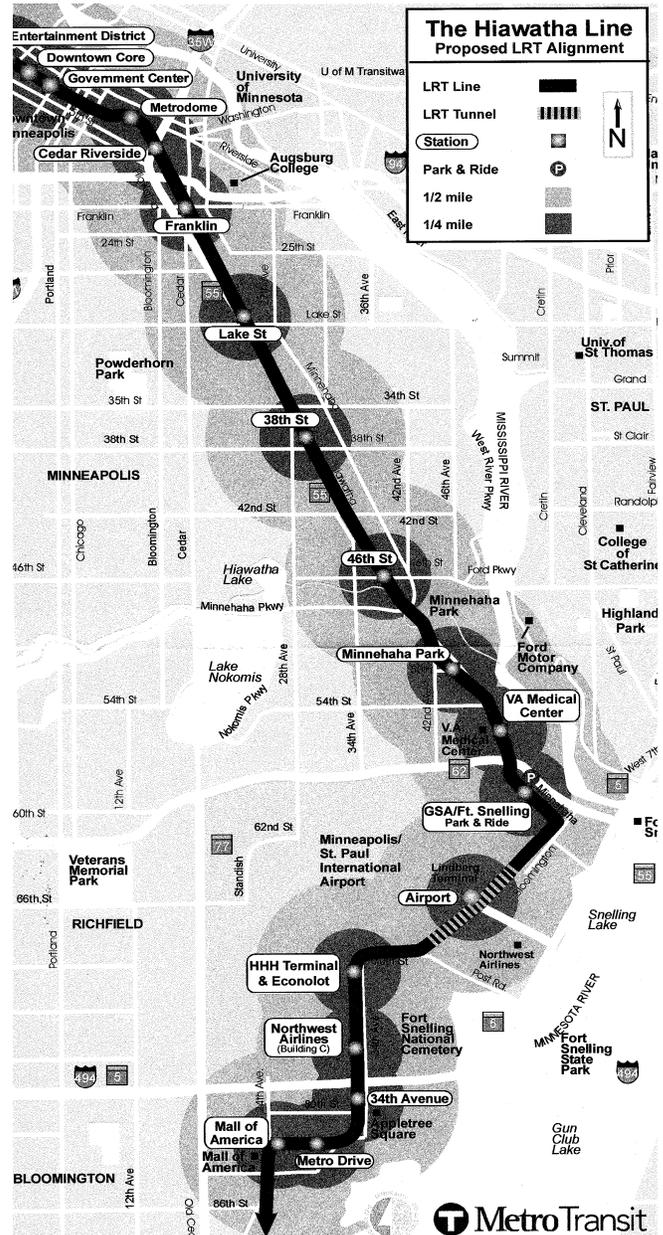
Regional transportation planning has identified a network of transitways connecting job and population centers throughout the seven county metropolitan region, including the Hiawatha Corridor. These transitways are designed to accommodate a variety of transit modes, from exclusive dedicated busways for rubber-tired vehicles to new track and ballast for light rail service, and also, the multiple use of existing heavy rail infrastructure for commuter rail service to more distant locations. At the present time, the Hiawatha Light Rail Transit Corridor and the Northstar Commuter Rail Corridor are two transit projects currently in planning and design stages in Minneapolis.

The Hiawatha Corridor line will run from Downtown Minneapolis along 5th Street, with a stop between Nicollet Ave and Marquette Ave; another in front of City Hall and the Government Center; and a final downtown stop immediately to the west of the Metrodome. After leaving downtown and following the existing rail right-of-way, the trains will stop at 16th Ave in Cedar Riverside. Next will be a station stop at Franklin Ave, then Lake Street, 38th Street, 46th Street and the last city stop will be 50th Street, near Minnehaha Park. Other stops planned include the Veterans Administration campus, a park and ride lot, three stops at the airport and three in Bloomington, including the Mall of America.

Ridership has been forecast at just over 24,000, with an estimated travel time between downtown and the Mall of America at 22 minutes, and a timely 19 minute trip to the airport. The trains are expected to run every 7-1/2 to 10 minutes in the peak period, every 15 minutes in the off peak during the day, and every 30 minutes in the

evening, weekends and holidays. The schedule for construction of the line and testing of trains and control systems foresees full revenue service in late 2003. The cost will be the same as the bus system with transfers made the same way they are today.

As a regional transportation project, LRT in the Hiawatha Corridor has the potential to bring benefit to the city, by improving access and mobility for residents along the route. It will also support the continued economic competitiveness of downtown, the region's largest employment and residentially dense center, by providing an alternative to automobile travel. Consequently, one of the most important supporting functions related to the light rail service is the potential redesign of bus routes to better serve neighborhoods, both as feeders into the LRT line and as methods of connecting neighborhoods. Metro Transit planners continue to work on the possible alternatives for each community along the light rail route.



Station area planning is another critical city activity related to the Hiawatha LRT project. As of November 1999, these activities (led by city staff) are underway at Lake Street, just beginning at Franklin/Cedar-Riverside, and are expected to begin early in the new year for downtown stations, as well as south of Lake station areas (38th, 46th, 50th Street stations).

In 1999, City Council approved MnDoT's submission of preliminary design plans for the Hiawatha Corridor. While the project is still waiting for approval and subsequent funding from the Federal Transit Administration (FTA), expected in early spring 2000, planning for supporting bus service, station design and station area planning (land use and development) will continue through 2000 and up to 2002. Current information about LRT activities and opportunities for public involvement in the LRT project are available on the city's website at www.ci.minneapolis.mn.us.

The Downtown Transportation Management Organization

The mission of the Downtown Transportation Management Organization (TMO) is to promote congestion mitigation strategies and advocate for environmentally sound transportation policies to assure the continuous and orderly growth and prosperity of downtown Minneapolis and the region.

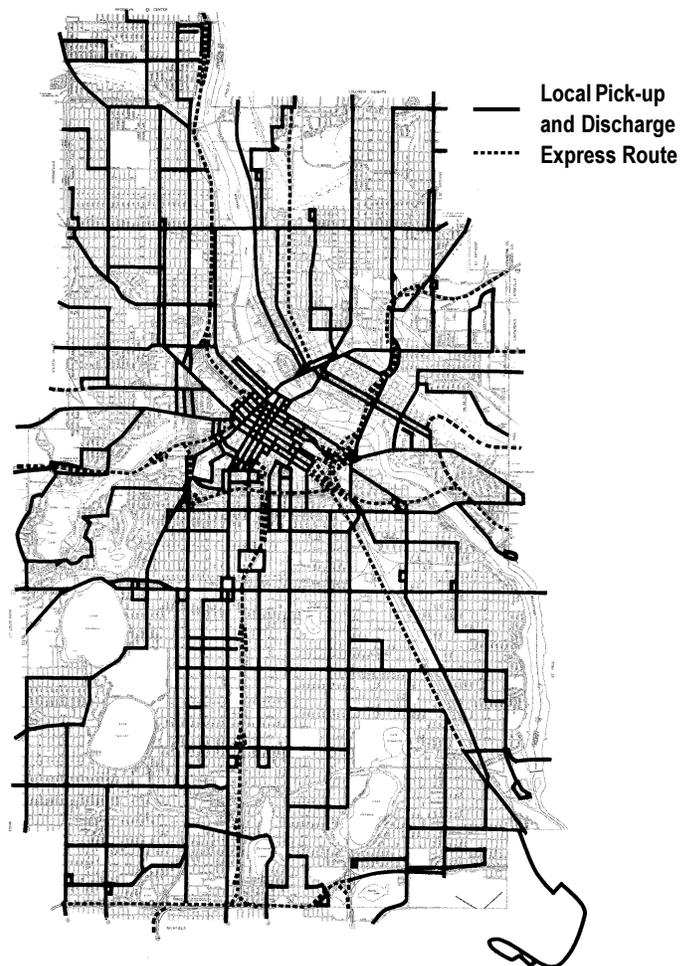
In order to fulfill the organization's mission, TMO activities include:

- Providing an information and sales outlet for commuters and the general public at a resource center, Commuter Connection (located in the Pillsbury Center). Commuter Connection is a state-of-the-art transportation service center offering the most current information;
- Teaching the public about alternatives to driving alone including the transit system, car-vanpooling, bicycling, telecommuting and flexible work arrangements;
- Involving employers and building managers in making good business decisions that support community options for employees, tenants, and employers; in 1998 the TMO, through an employer outreach program, worked with 80 businesses representing over 40,000 downtown employees;
- Advising government agencies and the private sector on transportation issues; the TMO serves as an advisory body to the Minneapolis City Council and the Minneapolis Downtown Council;
- Promoting effective improvements to current alternative forms of transportation; the TMO supported legislation to provide a dedicated transit-funding source and establish transitways and light rail transit (LRT) service;

- Educating business leaders, key policy makers and employers through a multimedia presentation on congestion's impact on our workplaces, urban center and region; and,
- Serving as transportation coordinator on behalf of the Hennepin County Welfare-to-Work initiative by maintaining an up-to-date transportation resource guide, providing trip planning assistance, conducting training sessions on transportation choices, and serving as a conduit between employers and MFIP providers and transportation agencies to improve transportation choices.

The TMO is a transportation information resource for downtown commuters and employers and is continually developing measures to reach a broader commuter audience. The TMO's efforts are bringing more people downtown in more economical and environmentally sound modes of transportation.

METRO TRANSIT SERVICE IN MINNEAPOLIS, 1997



Bicycle Commuting

Bicycle use as a form of transportation is on the rise. From the early 1980s to the early 1990s, bicycle commuting to downtown almost doubled. Recent data has shown that this upward trend continued through 1998. The growth rates have grown steadily over time: in 1977, slightly more than 200 downtown employees commuted to work by bicycle. Ten years later, in 1987, it was shown that the number had grown to almost 400. In 1990, the counts showed that close to 750 people were commuting to work downtown on a bicycle; by 1998, cordon count data recorded approximately 2,800 bicyclists commuting to work on an average day in the April to November months.

Contributing to the increase in bicycle use is the increase in bikeways and bicycle parking. Over 60 miles of on- and off-street bikeways exist in the city. The Kenilworth Trail, 11th Avenue South, and 11th and 12th Streets South were added to the system in 1999.

A summer 1994 inventory of bicycle parking facilities in downtown by the Public Works Department found 476 rack and hitch spaces and 190 high security bicycle parking lockers, for a total of 666 bicycle parking spaces. This number is increasing on an annual basis as the City of Minneapolis and the private sector continue to recognize the ever-expanding number of bicycle commuter needs. The city has a program to encourage businesses to promote bicycle commuting by offering a cost sharing program to encourage businesses to provide bicycle racks and lockers for their employees' use. So far the matching program for bicycle racks has been implemented at these locations:

- University of St. Thomas
- Bennett Lumber
- Government Center Municipal Ramp
- Walker/Guthrie Area
- Uptown Business – 3 locations
- Various Downtown Businesses

In 1998, the City of Minneapolis added 95 bicycle parking spaces along the Nicollet Mall. These new green 'hitching post' bike racks are located on the cross streets intersecting with the Nicollet Mall and add another level of amenity to downtown's transportation network.

MINNEAPOLIS BIKE ROUTES, FIVE YEAR PLAN

