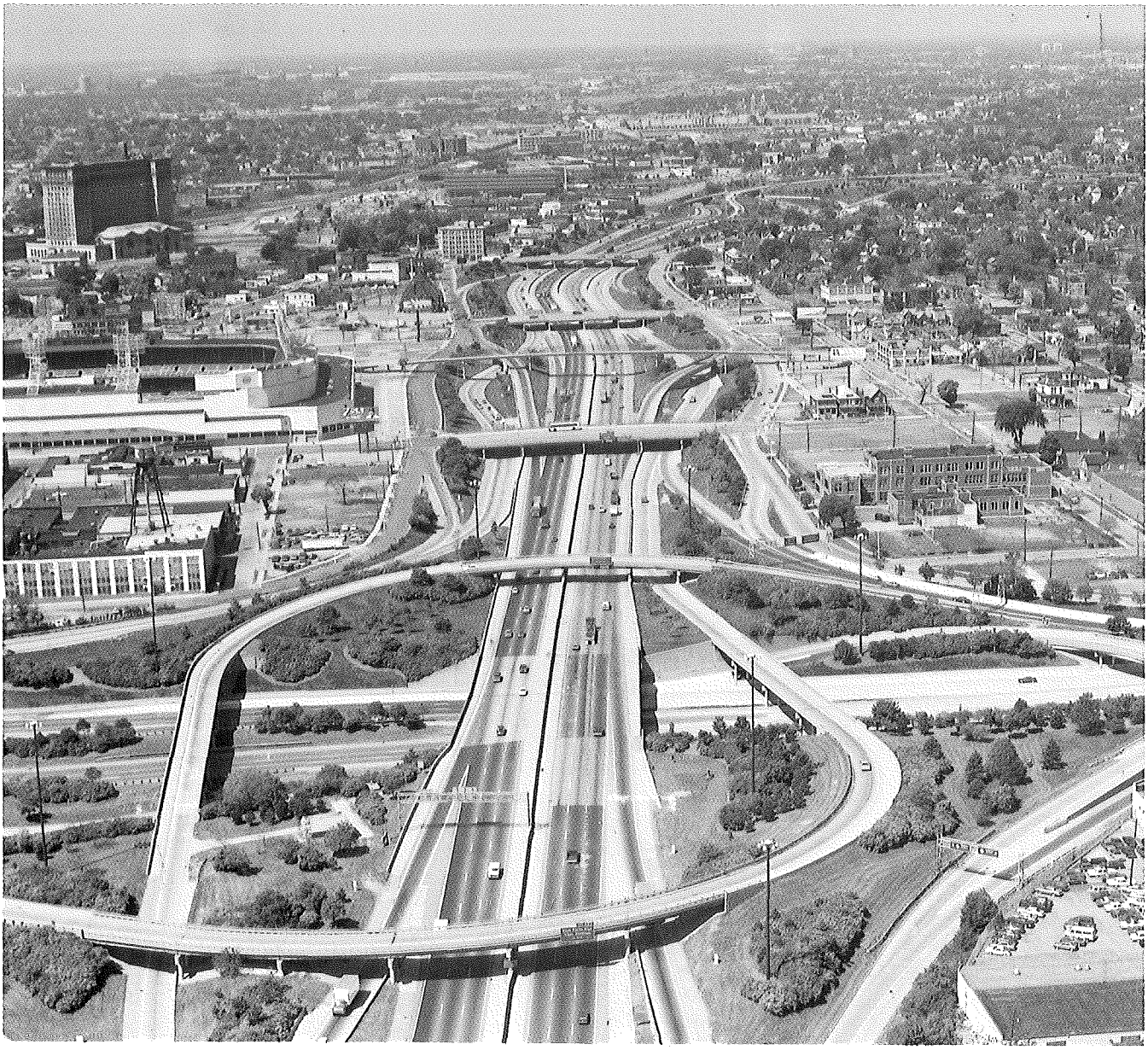
ULTI-MODAL PROGRAM

CHIGAN DEPARTMENT OF TRANSPORTATION

1989-90



Access, mobility, economic development

1989-90
MULTI-MODAL PROGRAM

MICHIGAN DEPARTMENT OF TRANSPORTATION

JAMES P. PITZ, DIRECTOR

MICHIGAN TRANSPORTATION COMMISSION

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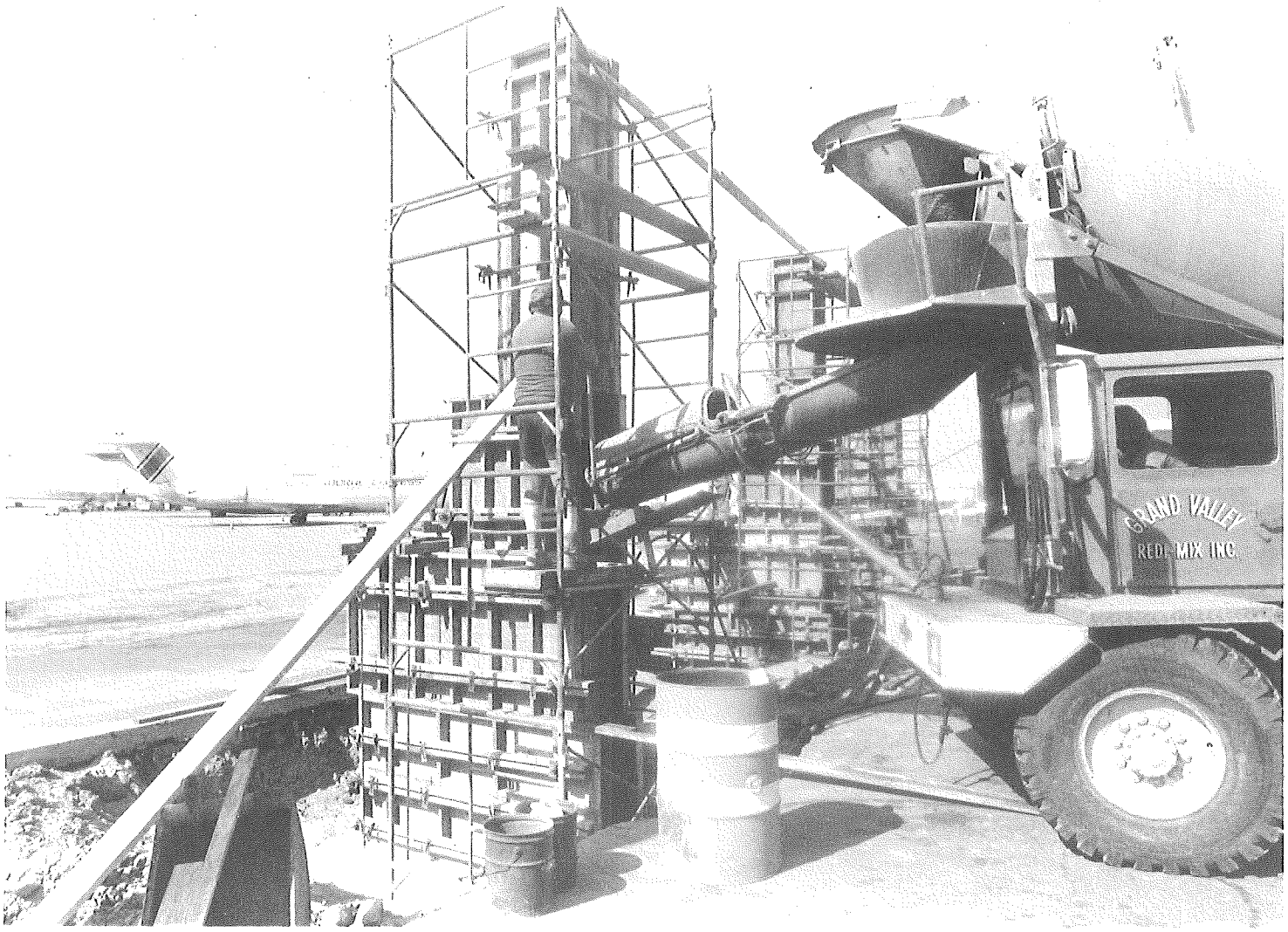
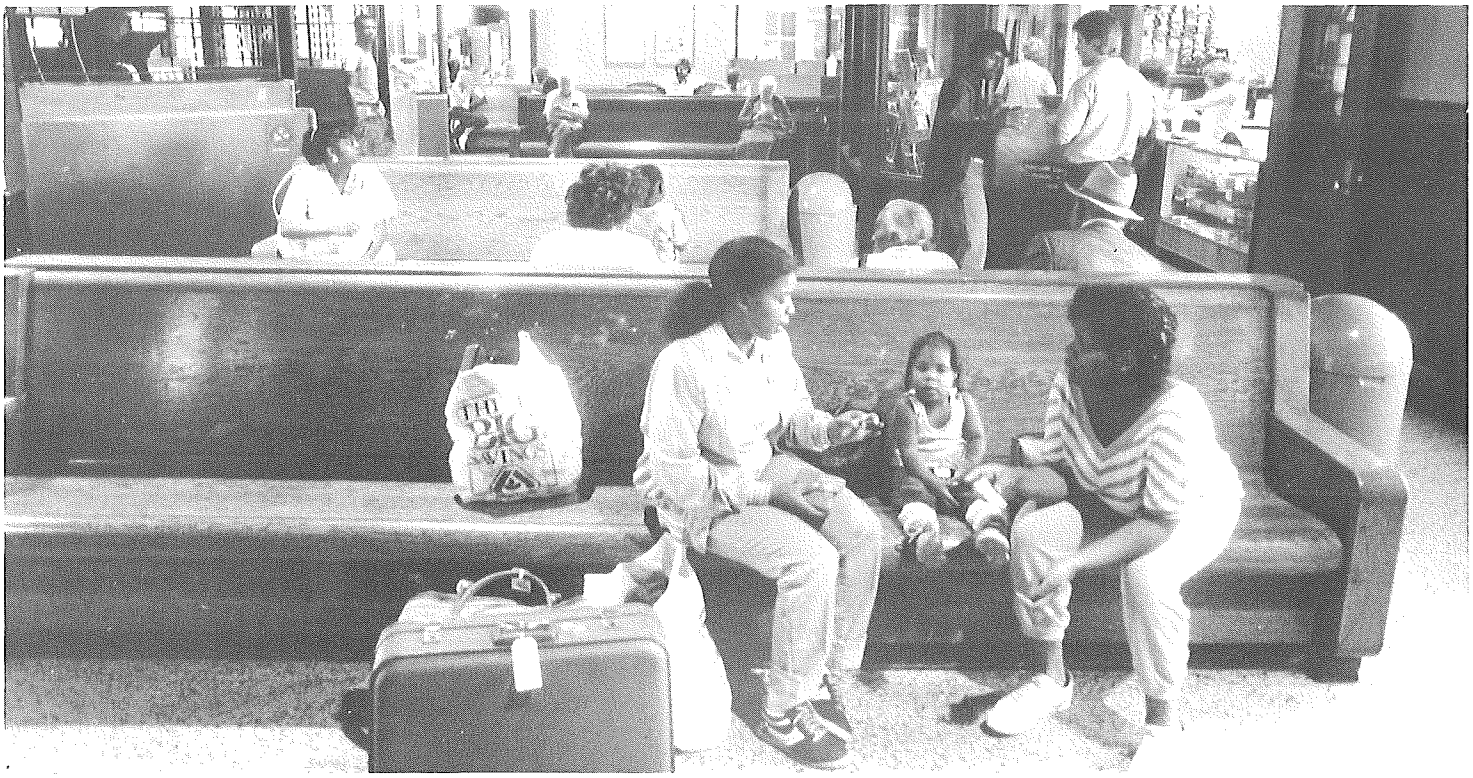
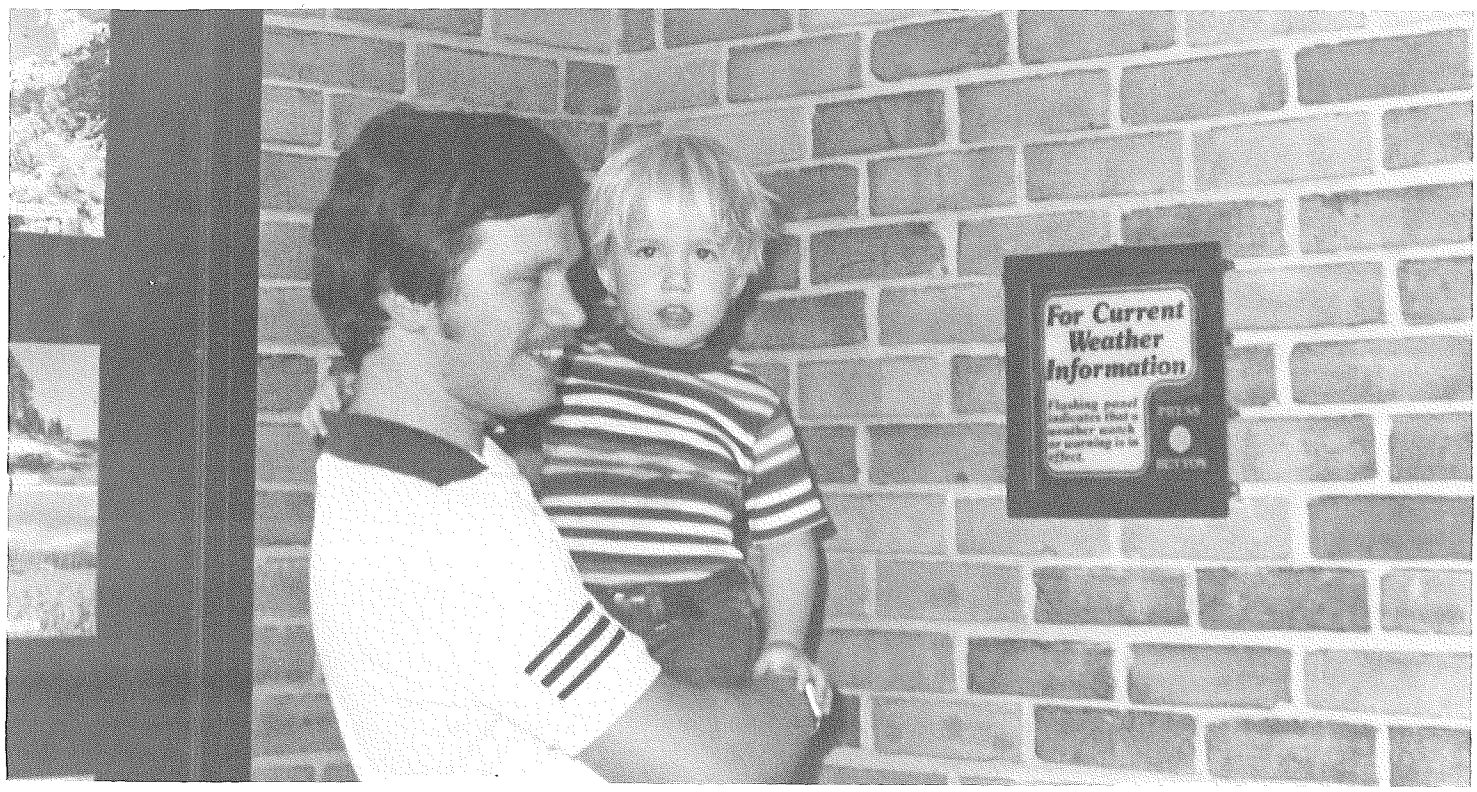
MAY 1, 1989



Public Safety is Number One at Michigan's Airports



Safe, clean terminals await the public transportation user.



Your travel made comfortable and safe by our rest areas.

TABLE OF CONTENTS

Page

PREFACE

This document describes the Michigan Department of Transportation's fiscal year 1990 modal programs. It includes highways, comprehensive transportation, and aviation. There are five sections: Section one is an introduction and summary of the total program for all modes. Sections two, three, and four provide detailed information about the highway, comprehensive public transportation, and aviation modes, respectively. Section five is the appendixes.

The appendixes list specific projects to be undertaken during the fiscal year for highways and aviation. Public transportation activities are described in the main body of the report.

The highways section of the document was written by the Program Planning Division, Bureau of Transportation Planning. Considerable assistance was provided by the Program Administration Division, Bureau of Highways. The Airport Development Division, Bureau of Aeronautics wrote the aviation section. The comprehensive transportation section was written by the Office of Planning and Programming, Bureau of Urban and Public Transportation (UPTRAN). Editing and publishing were provided by the manager of the Word Processing Center, UPTRAN. The Data Management Section, Bureau of Transportation Planning provided information for the highway condition section. Art work, design, and layout were provided by the Project Services Section, Bureau of Transportation Planning. Photos are courtesy of the department's Photo Lab and the Public Information Office.

Questions or comments about the program should be addressed to Mr. G. Robert Adams, Deputy Director, Bureau of Transportation Planning, 517/373-0343; or Ms. Susan Mortel, Division Administrator, Program Planning Division, 517/373-2605.

INTRODUCTION

INTRODUCTION

The Michigan Department of Transportation provides the transportation services that keep Michigan on the move. Its efficient and integrated systems of highways, public transit, rail, and airports keep the citizens of Michigan on the move.

"Michigan on the move . . ."

On average over 12,000 cars and trucks travel each mile of state highways every day. This represents a total of 42 billion miles traveled each year on the 9,500 miles of state highways. Some routes have more than 100,000 cars rolling over them every day. The Detroit metropolitan area, in particular, has a large number of routes with high, daily traffic volumes.

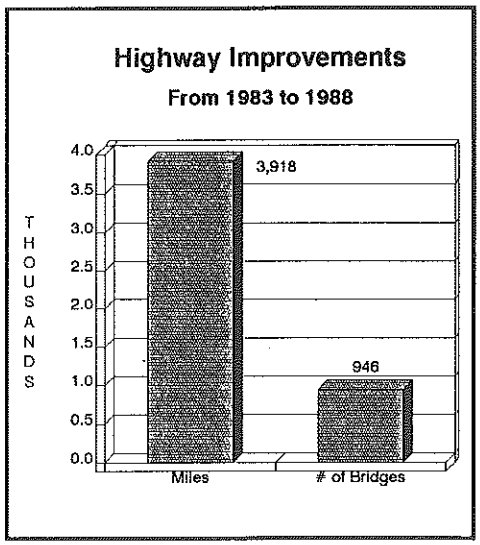
These highways keep Michigan on the move. They allow the citizens of Michigan to travel from home to work, to school, to the doctor's office and the hospital, to the grocery store and the clothing store, and to the stadium. They allow the citizens of Michigan to travel for family visits, or to visit the zoo. They allow travel to the beach, to the stream, and to the ski trail.

The department provides public transportation services that allow senior citizens, the handicapped, the poor, the vacationer, and the business traveler to keep moving. In 1988 over 90 million passengers traveled by bus. Almost 500,000 passengers traveled by train, and 25 million passengers traveled by airplane.

The department also provides a total transportation system for transporting goods that we make to sell and import to buy. We estimate that trucks carry at least 52 million tons of goods on our highways each year. Almost 1.5 million rail carloads roll over our system of railroads. Over 75 million tons sail into or from our ports, and over 400 million pounds of cargo fly through our skies.

Many depend on Amtrak for travel.

"Keeping Michigan on the move . . ."



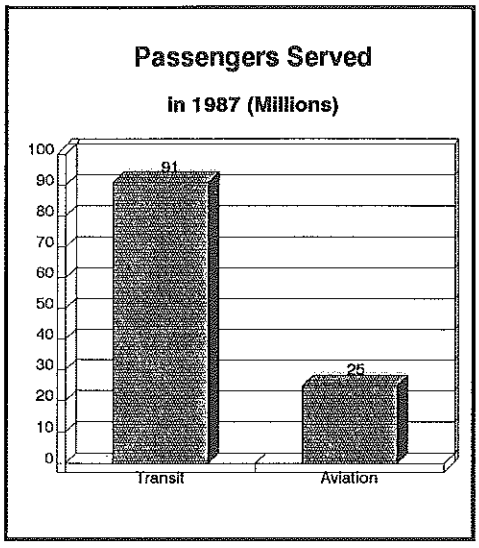
In order to keep Michigan on the move, we must keep all of our transportation systems in good repair, and expand these systems when the demand for service exceeds current capacity. We also need to be able to adapt to changing conditions and provide additional services where they are needed.

PROGRAM PROGRESS

Since 1983 we've repaired or upgraded 3,918 miles of roadways and repaired 946 bridges. This is an annual average of 560 miles of roadways and 135 bridges.

In 1987 we opened the segment of I-69 around East Lansing. This allows trucks to by-pass the city streets of Lansing and East Lansing, and makes driving faster and safer for everyone. In 1988 we opened the Zilwaukee Bridge. No longer will there be miles of cars and trucks backed up while boats keep the draw bridge up.

Construction of the I-696 freeway through the suburbs north of Detroit continues. When this route is open in 1989, travel through southern Oakland and Macomb counties will be greatly improved. Long distance traffic, including heavy trucks, will no longer have to use local streets. Travel will be easier, faster, and safer for individuals and businesses.



In 1989 we will have contracted for the construction of the last segment of I-69 in Shiawassee and Eaton counties. With the completion of I-69 from Lansing to Charlotte in 1991, we will have completed the interstate system in Michigan.

Other improvements are planned in 1989 for other parts of the state. In the Upper Peninsula, we plan to improve M-35 in the Palmer area, M-94 at Chatham Corners, and M-28 at Rathfoot Park. In the northern half of the Lower Peninsula, improvements are planned for M-27 in Cheboygan, US-31 in Petoskey, US-23 in Presque Isle County, and the M-55 bridge over the Pine River. Construction will begin on the temporary traffic detour which will allow us to improve M-32 in Montmorency County. We will also continue construction along the US-31 and US-10 routes in the Ludington area. These are

some of the transportation needs we have been able to meet. Unfortunately, there are many needs for transportation services that we can't meet.

UNFUNDED PROJECT NEEDS

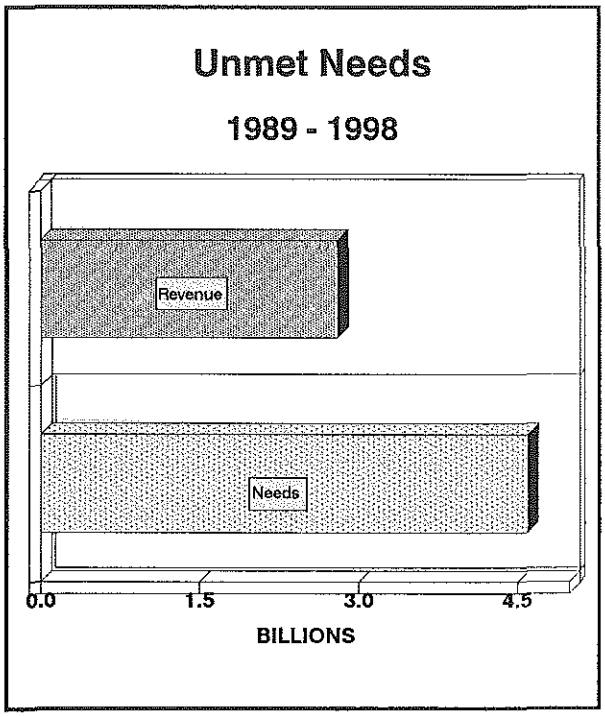
There is an immediate need to finish US-31 in Berrien County. Presently, cars and trucks that are traveling through the area use highways and streets better suited for local community traffic. This slows the progress of through traffic and adds congestion for all traffic.

US-31 in the Ludington and Scottville areas needs improving. The current highway cannot handle the traffic using the roadway. The same is true with US-23 along the eastern shore of the northern part of the Lower Peninsula.

Improvements are needed to US-2 in several areas of the Upper Peninsula. These areas include Iron River, Crystal Falls, Rapid River, and Escanaba. The large amount of vacation travel through these communities conflicts with the local traffic on the roadway. Improvements are also needed along US-2 from Escanaba to St. Ignace. It is not unusual for many automobiles to gather behind a slow moving vehicle, without an opportunity to pass for several miles.

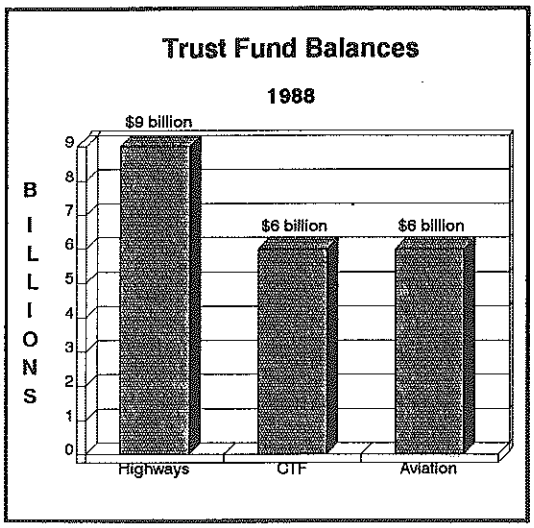
US-131 in the northwestern Lower Peninsula needs to be relocated and widened. Weekend travel floods the current highway. US-27 north of Lansing needs to be upgraded and widened. A by-pass of the St. Johns area is particularly needed to divert through traffic from local streets. Additional capacity is needed on M-59, M-53, and M-24 in the southeastern portion of the state. M-84, M-81, M-25, and M-20 in the Saginaw Bay portion of the state also need additional capacity. In addition to these highway needs, 1,850 bridges are in need of repair.

The total highway needs that we can't fund over the ten-year period of the Highway Investment Plan are at least $1.3 billion, as shown on the chart to the right.



There are unfunded needs in other modes as well. Public transportation vehicles and facilities are needed in many counties throughout the state. Several smaller communities need better and closer air service; the Sparta area in Kent County is an example. And there are needs in the rail freight transportation sector.

TRUST FUND BALANCES



There are funds available to meet many of these needs. The Highway Trust Fund has $9 billion and the Aviation Trust Fund and Mass Transit Fund have $6 billion each that our citizens paid into them. These funds are being withheld from us by Congress. Congress is using the funds in a type of shell game to reduce the federal budget deficit. If Congress would allow us to draw down these funds and use them as originally intended, we could fund much of our unfunded improvement needs. A phased draw down of the Highway Trust Fund would add $50 million to $60 million to the annual program.

1989-1998 HIGHWAY INVESTMENT PLAN

Since we can't finance all of our needs, an Investment Plan was developed to guide our spending. This plan, called the 1989-1998 Highway Investment Plan, sets forth a rational, orderly process that relied heavily on information from local agencies and citizens. It covers a ten-year period and was established by the Transportation Commission to set goals and priorities. The Investment Plan allows us to work toward our goals on a priority basis.

THE 1990 PROGRAM

"The 1990 Program is consistent with the Investment Plan goals. . . ."

The 1990 program is an annual element of the Investment Plan and is consistent with it. The 1990 program calls for the repair and maintenance of 339 miles of roads and streets, and the repair of 52 bridges. Capacity improvements are scheduled for 12 miles of highways. These are improvements that increase the number of vehicles a highway can carry. Twenty-two miles of major new highways will be constructed.

The program also provides for the continuation of public transportation service to 91 million bus riders annually on 66 transit systems statewide, to 500,000 train riders, and to 25 million airplane passengers.

MAJOR PROJECTS

The major projects to be undertaken include:

Upper Peninsula

- Resurfacing 7 miles of US-41 from Chippewa Street in Negaunee to County Road 492 in Marquette County.
- Resurfacing 13 miles of US-41 from South Ingalls northerly in Menominee County.
- Resurfacing 4 miles of M-28 from Ewen Airport Road easterly in Ontonagon County.
- Reconstructing 1 mile of M-183 from Temple Street to Vans Harbor in Delta County.
- Widening and reconstructing 1 mile of US-2 from US-41 easterly in Delta County.
- Continued support for ferry service between Neebish, Sugar, and Drummond islands and Chippewa County mainland.
- Continued support for local bus systems.
- Perimeter fencing and apron expansion at Delta County Airport in Escanaba.
- Apron expansion and taxiway extension at the Chippewa County International Airport in Sault Ste. Marie.
- A new taxiway at Ford Airport in Iron Mountain/Kingsford.
- Terminal building at the Marquette Airport.
- Snow removal equipment at the Houghton County Memorial Airport in Hancock.

Northern Lower Peninsula

- Resurfacing 4 miles of M-113 from M-186 to US-131 in Grand Traverse County.
- Resurfacing 7 miles of US-27 from Long Lake Road to Cone Camp Road in Roscommon and Clare counties.
- Rehabilitating 12 miles of US-10 westbound from Midland-Bay Road to I-75 in Bay County.
- Rehabilitating 4 miles of M-115 from M-55 to Stoney Ledge Lake Road in Wexford County.
- Widening 1 mile of M-22 from M-72 northerly in Leelanau County.
- Widening 4 miles of US-10/US-31 from Brye Road easterly in Mason County.
- Continued support for local bus systems.
- Runway improvements and lighting at Phelps Collins Airport in Alpena.
- Runway rehabilitation at Wexford County Airport in Cadillac.
- Apron, taxiway, and runway improvements at Evart Municipal Airport in Evart.

Southern Lower Peninsula

- Grading, drainage, and structures for US-31 from Matthew Road to US-33 in Berrien County.
- Resurfacing 8 miles of US-12 from M-60 easterly in Cass County.
- Resurfacing 4 miles of US-27BR from Creyts Road to Waverly Road in Eaton County.
- Resurfacing 8 miles of M-11 from Chicago Drive to M-37 in Kent County.
- Resurfacing 5 miles of M-24 from Harman Road northerly in Oakland County.
- Resurfacing 16 miles of I-75 from M-54 to the C&O railroad crossing in Saginaw County.
- Continued support of Amtrak passenger service.
- Intercity passenger terminals at Lansing and Holland.
- Resurfacing 6 miles of US-24 from Ecorse Road northerly in Wayne County.
- Rehabilitating 7 miles of I-75 from I-275 northerly in Monroe County.

- Rehabilitating 12 miles of M-52 from the Ohio state line northerly in Lenawee County.
- Reconstructing 1 mile of M-46 from Pine Street to Holt Street in Muskegon County.
- Widening 1 mile of M-54 from Leith Street to Stewart Street in Flint.
- Widening and reconstructing 4 miles of M-44 from I-96 to 4 Mile Road in Kent County.
- Continued support for 27 local bus systems.
- Apron rehabilitation, land acquisition, and snow removal equipment at Tri-City International in Saginaw.
- Runway construction and access road at Metropolitan Airport in Wayne County.

Program Funding ($ Millions)

	Hwy.	CTF	Avia.
Preserve	$185	$143	$18
Improve	68	17	17
Expand	56	3	0
Totals	**$309**	**$163**	**$35**

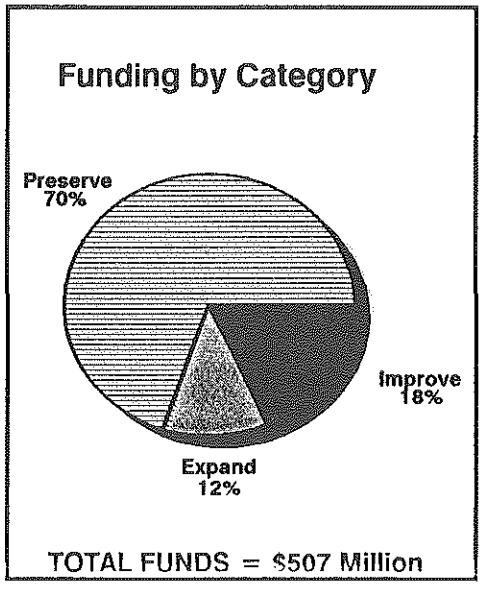
PROJECT COSTS

Providing these transportation services: road repairs, maintenance, and improvements; airports maintenance and improvements; and other public transportation services will cost $507 million.

A total of $309 million is devoted to highways: $185 million to preserve existing highways: $68 million to improve existing highways, and $56 million to expand the highway network. Three hundred thirty-nine miles of highway will be repaired or maintained, twelve miles widened, and twenty-two miles will be newly constructed.

A total of $163 million is to be used to help provide public mass transportation, intercity passenger, freight, and port services: $136 million to preserve existing public transportation services, $24 million to improve services, and $3 million to expand services.

A total of $35 million will be used to provide much needed improvements to the system of airports and air services. This breaks down to $18 million for preservation activities, $17 million for improvements. There are no expansion projects for aviation.



THIS DOCUMENT

The remainder of this document details the specific programs for the highway, comprehensive transportation, and aviation modes. A listing of the projects to be undertaken during 1990 for highways and aviation is included in the appendix at the end of this document.

"We expect Gramm-Rudman to further reduce our funds."

In developing this program, we made several assumptions concerning revenues as well as provisions for emergencies and other special situations that may occur throughout the year. One assumption is that our federal funding will be cut by Gramm-Rudman-Hollings legislation. This assumption is based on Congressional Budget Office estimates of the federal budget deficit.

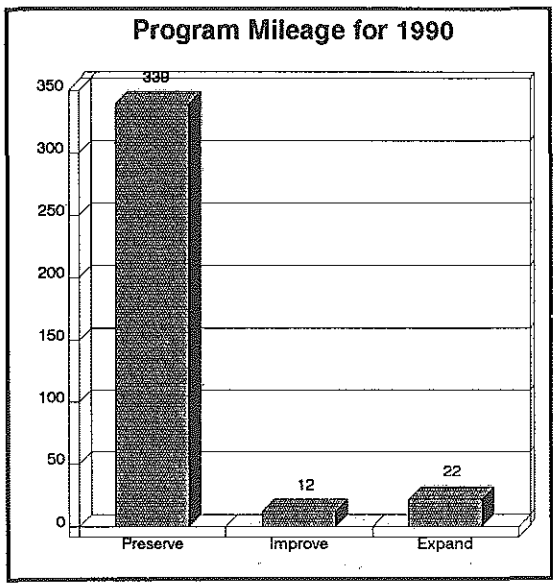
We've also had to plan the program at a time when federal funding is most uncertain. While federal trust fund balances continue to be high, Congress steadily reduces our authority to use these funds. As it stands now, our 1990 federal aid will be cut by $20 million. If Gramm-Rudman-Hollings reductions are ordered, our federal aid will be cut even deeper. In 1988 we suffered a $50 million cut from the original budget. Over the last five years, the total federal aid has been $250 million less than the original Congressional budget.

Other uncertainties are involved in developing the program. Individual projects are placed in the program on the basis of estimated revenue and cost, and on the ability to complete preconstruction and other preliminary activities. We believe these estimates are accurate; yet, as with any estimate, changes can occur. As a result additions, deletions, and other modifications may occur as we implement the program.

HIGHWAYS

HIGHWAYS

The overwhelming priority for the highway system is to repair and maintain the 9,500 miles over which the department has jurisdiction. Thus, the program is heavily weighted toward preserving existing highways.



SYSTEM PRESERVATION

Ninety-one percent of the miles and sixty-three percent of the dollars in the program are devoted to preserving the existing system. Eight miles of highways are being completely reconstructed, one hundred seventy-one miles resurfaced, one hundred fifty-seven miles rehabilitated. Three miles will require minor widening.

The above preservation projects cost a total of $121 million. The remaining $64 million of preservation expenditures is for projects that repair shoulders and joints, promote safety, and repair bridges. Fifty-two bridges will be painted, resurfaced, repaired, or replaced in 1990.

The major preserve projects include:

1. **Reconstruction Projects**

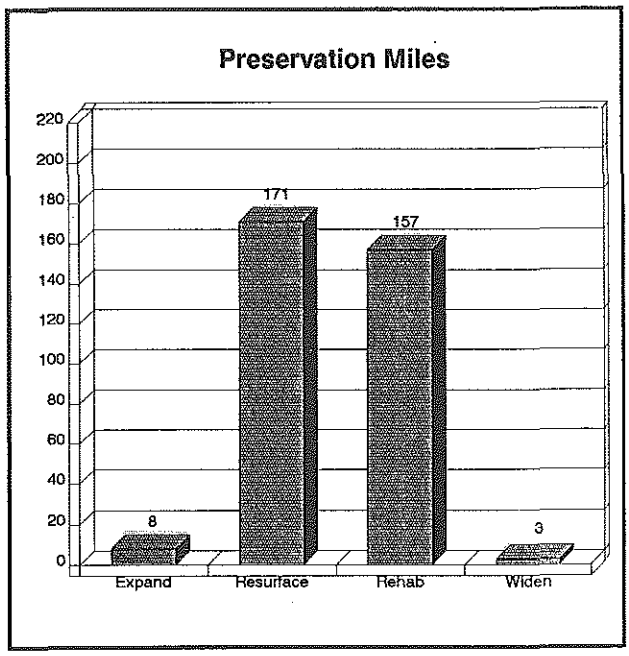
   a. 2 miles of I-75 business loop in St. Ignace, Mackinac County.

   b. 2 miles of US-41 from M-203 in Hancock to Coburntown Road in Houghton County.

   c. I-96 interchange at Okemos Road in Ingham County.

   d. I-96 interchange at Milford Road in Oakland County.

   These roads need extensive reconstruction. Typical problems calling for reconstruction include pavements that have cracked and shifted and are badly deteriorated, a base that is inadequate to support the traffic on the road, and inadequate



drainage. The deficiencies associated with these projects require a more extensive treatment than resurfacing or rehabilitating the existing pavement. The interchange reconstructions are required because their designs are not capable of handling the increasing traffic volumes using the interchanges.

2. Resurfacing Projects

a. 15 miles of I-94 intermittantly from the Indiana state line northerly in Berrien County.

b. 10 miles of I-75 from M-93 northerly in Crawford County.

"Preservation projects make the ride smoother and safer for the motoring public and reduces wear and tear on their cars."

c. 17 miles I-75 from the M-54/M-83 interchange northerly in Saginaw County.

d. 5 miles of M-24 from Harman Road northerly in Oakland County.

e. 2 miles of M-1 from 8 Mile Road to 6 Mile Road in Wayne County.

f. 8 miles of M-11 from Chicago Drive to M-37 in Kent County.

These projects repair the pavement and provide a smooth ride for the motoring public. Additional or recycled surface material is placed on the existing pavement to improve the ride or strengthen the pavement. There may be some other work done in conjunction with the resurfacing, such as shoulder improvements, pavement patching, minor drainage corrections, crack sealing, elevation adjustments, or safety improvements. Sometimes a roadway will be resurfaced while it is still in fairly good shape to extend its life. This treatment may extend the life of the roadway for another ten years before major improvements are required.

3. **Restoration & Rehabilitation Projects**

   a. 12 miles of US-10 from Midland-Bay Road to I-75 in Bay County.

   b. 5 miles of US-131 from M-11 northerly in Kent County.

   c. 7 miles of I-75 from I-275 northerly in Monroe County.

   d. 4 miles of M-115 from M-55 to Stone Ledge Lake in Wexford County.

   These projects rehabilitate pavement that is not good enough for simple resurfacing, or where there are only spot improvements needed.

SYSTEM IMPROVEMENTS

In addition to our preservation needs, there continues to be a need to improve services to businesses and to the motoring public. Some roadways are not wide enough to handle traffic that has been steadily increasing over the years. Other areas have developed to the point where new highways are needed. In these instances, the department must improve and expand services. The projects selected in the improve and expand categories are taken from a "core" list of projects, which is part of the department's 1989-98 Long-Range Program.

IMPROVE PROJECTS

"Improve projects reduce bottlenecks and traffic congestion. They also improve safety."

Eighteen percent of highway money ($58 million) is budgeted to improve 12 miles of existing highways. The major improve projects are:

a. 1 mile of M-54 from Leith Street to Stewart Street in Flint.

b. 4 miles of M-44 from I-96 to 3 Mile Road in Kent County.

c. 4 miles of US-10/US-31 from Brye Road to Scottsville in Mason County.

All these roads experience bottlenecks and traffic back-ups because they cannot handle the amount of traffic using them. The improvements will increase the efficiency of the roads and reduce delays experienced by motorists.

EXPAND PROJECTS

Fifty-six million dollars are budgeted to build 22 miles of new highways. The major expand project is:

"Expand projects provide much needed new service in rapidly growing areas."

One-half mile of I-696 Connector from I-275 to 12 Mile Road in Oakland County.

This project is designed to expand the system of highways in this area so that travel is efficient for the citizens and businesses of the northern Detroit area.

TRANSPORTATION ECONOMIC DEVELOPMENT FUND (TEDF)

TEDF, created in 1987, provides funding for transportation improvements associated with economic development projects. Vehicle registration and driver license fees provide the funding for these projects. The state must compete with the counties and cities for funding. The 1990 program includes $15 million for transportation improvement projects that help enhance or retain economic development.

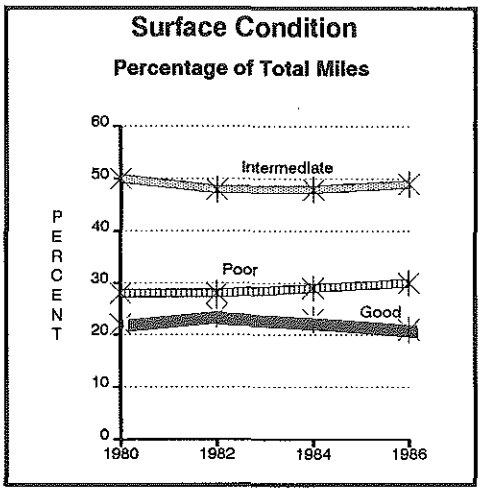
HIGHWAY CONDITION INFORMATION

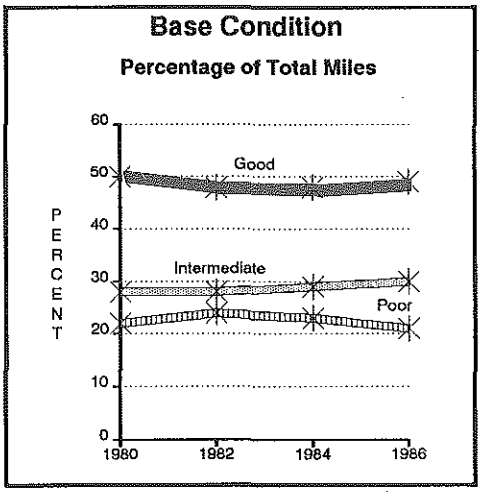
The charts at right indicate the trend of the general condition of our roadways. This shows that, at the same time we have continued to experience declining revenues, we have been able to maintain the overall generally good condition of our roads and highways. Our ability to maintain this condition level is threatened by continued declines in federal funding. This year the number of miles of preservation work is down, compared to past years.

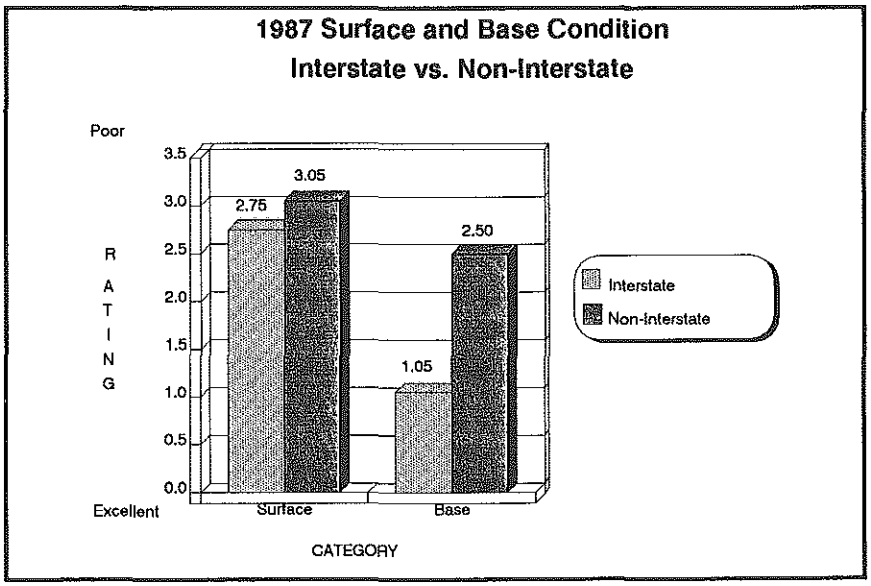
Annually, we review all state-owned roadways to determine their condition. Each roadway is assigned a score on the basis of its surface and base characteristics. Surface ratings measure the adequacy of the roadway surface itself; base ratings measure the soundness of the roadway foundation.

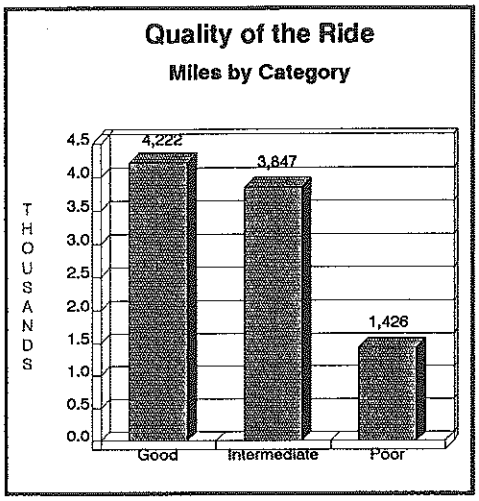
On the basis of the score received, a roadway is classified as in good, intermediate, or poor condition for both surface and base. The percentage of roadway miles in each of these classifications is shown in the previous charts.

The chart in the margin shows the difference between the condition rating for the interstate and the non-interstate highways. This data indicates the interstate is in better overall condition than the non-interstate. One would expect this situation since the interstate system is given priority for repair and other preservation activities.





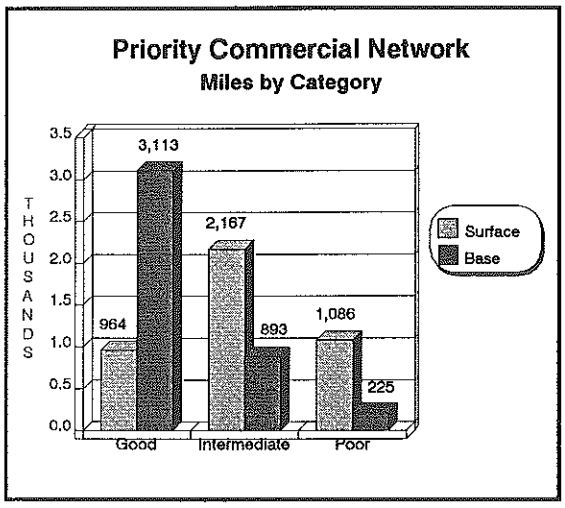




Quality of the Ride

A rating is given to state roadways that indicates the quality of the ride. This is an indication of the comfort felt by automotive occupants, and it is indicative of the motoring public's perception of our road conditions.

The miles of roadway with good, intermediate, and poor quality of ride are shown in the margin.



Priority Commercial Network

The Priority Commercial Network is the state highways that are most important for commerce in the state. Routes on the Priority Commercial Network are ones that are used extensively to haul goods to and from businesses in Michigan, and for tourism. A Priority Commercial Network route is given high priority when projects are considered for inclusion in the program. It is our intent to keep this subsystem of state highways in the best possible condition.

The surface and base condition of the Priority Commercial Network is shown in the margin.

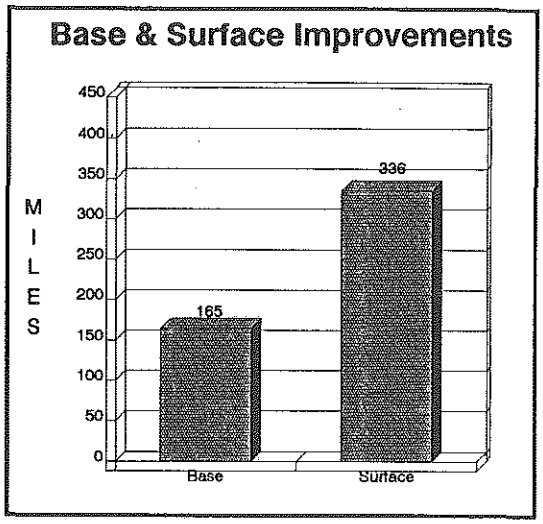
Eighty percent of the dollars and sixty-five percent of the miles in the program are on the Priority Commercial Network.

Bridge Condition

In addition to highways, bridges are rated and classified as either good or in need of repair. Of the 4,304 bridges on our system, 1,850 need repairing of which 875 need painting.

IMPROVEMENTS TO CONDITION

Our major purpose in collecting this condition data is to guide us in selecting projects. Projects are selected with the objective of improving the overall condition of the roads.



Each year we must repair at least 390 miles of roads just to keep pace with deterioration. Any mileage above the 390-mile mark reduces the backlog of resurfacing needs. This year we have 339 miles of improvements in the program.

The chart on the right presents a summary of the improvements we will be making to the roads in 1990.

Prior to 1990 we had a target of repairing an average of 500 roadway miles annually. This target allowed all roads to be repaired as soon as their condition was rated "poor." In developing the revised Investment Plan, we had to face the fact that our resources would not allow us to achieve this target over the next ten years. As a result, we've concluded that some low-use, low-speed roads cannot be repaired until their condition becomes very poor. Using this criteria, the average target is to repair 390 miles of roads, annually.

The reason we are below the 390 miles is that there are several large, costly projects in the program for 1990. Examples:

	Million
Military Street bridge, Port Huron	$12
I-196 bridge over Grand River, Grand Rapids	$ 5
I-75 resurfacing in Saginaw	$18
I-75 restoration in Monroe	$17
I-69 reconstruction in Livingston County	$ 8
I-94 Blue Water Bridge Plaza	$23

These and other high-cost, low-mileage projects reduce the funds available to repair other roads, and reduce the total mileage.

The 339 miles are not inconsistent with the Investment Plan's goal of averaging 390 miles annually. The goal is an average one; we expect to exceed the goal in some years

and to be under it in other years. Over the ten years, however, we expect to repair the 3,900 miles targeted by the Investment Plan.

REVENUES AND THEIR USES

Funds used to finance highway projects are provided by state and federal taxes on gasoline and automotive related items. Weight taxes also contribute about one quarter of the state funds. State taxes are returned to the department through the State Trunkline Fund. Federal taxes are returned to the department in the form of federal aid. About 67 percent of the highway construction is financed by federal aid. To maximize the return on state monies, state trunkline funds are first used to match federal aid. Any additional funds are then used to fund projects for which federal aid is not available.

FUNDING BY SOURCE

"Sixty-seven percent of the highway program is financed by federal aid."

Our current estimate for fiscal year 1990 funding for capital improvements is shown below:

Millions	
$198	Federal Aid
96	State Trunkline Funds
15	Transportation Economic Development Fund
$309	Total

Included in the appendixes of this program is a listing of the projects for 1990. These projects are grouped into the program structure of preserve, improve, and expand. These categories are further disaggregated into subcategories, called work-type categories. This structure is described on the next page, along with the funding for each work-type category.

1989-90 Highway Program

Summaries by Non-Interstate and Interstate Classifications ($1,000)

	NON-INTERSTATE		INTERSTATE		TOTAL	
	Amount	Miles	Amount	Miles	Amount	Miles
PRESERVE						
Reconstruction	$ 5,732	7.8	$ 6,566	0.0	$ 12,298	7.8
Restoration & Rehabilitation	16,204	66.8	34,439	90.5	50,642	157.3
Resurface	28,361	129.2	29,041	41.6	57,402	170.8
Minor Widening	1,130	3.4	0	0.0	1,130	3.4
Traffic Operation/TSM	12,200		2,000		14,200	
Safety	7,500		2,500		10,000	
Bridge Upgrade	16,887		16,732		33,619	
Roadside Facilities	116		1,015		1,131	
Miscellaneous	4,000		1,000		5,000	
SUBTOTAL	**$ 92,131**	**207.2**	**$ 93,292**	**132.1**	**$185,423**	**339.3**
IMPROVE						
Capacity	19,060	12.2	2,577	0.0	21,637	12.2
Bridge Replacement	0		3,638	0.0	3,638	
Bridge Widening	0		0		0	
Roadside Facilities	3,616		24,219		27,835	
SUBTOTAL	**$ 22,676**	**12.2**	**$ 30,434**	**0.0**	**$ 53,110**	**12.2**
EXPAND						
New Route	1,320	0.8	16,358	4.5	17,678	5.3
Relocation	35,370	16.8	0	0.0	35,370	16.8
Roadside Facilities	0		3,248		3,248	
SUBTOTAL	**$ 36,690**	**17.6**	**$ 19,606**	**4.5**	**$ 56,297**	**22.1**
TRANSPORTATION ECONOMIC DEVELOPMENT FUND					**$ 15,000**	
GRAND TOTAL	**$151,497**	**237.0**	**$143,333**	**136.6**	**$309,830**	**373.5**

Note: This listing includes $17 million of anticipated I4R Discretionary Funds. This listing is from the PPF Data Base dated April 10, 1989. Amounts for traffic operators, safety and miscellaneous are lump sum estimates. Adjustments from Program Administration concerning Blue Water Bridge projects were incorporated April 13, 1989.

PRESERVE COMPONENT

1. **Traffic Operations** **$14,200,000**

   This work includes items such as signing, pavement markings, and traffic signals. A lump sum budget amount is placed in this work-type for projects that will be developed throughout the year.

2. **Safety** **$10,000,000**

   Safety work includes intersection revisions, lighting, median barriers, guardrails, railroad crossing improvements, obstacle removal, and improvements that increase the ability of drivers to see approaching and crossroad traffic. This work-type also has a lump sum budget amount for future projects.

3. **Bridge Rehabilitation** **$33,619,000**

   This category includes all work related to extending the life of a bridge. Typical work includes replacing or resurfacing the deck, replacing the railings, making underwater repairs, painting, and minor widening (less than one lane in width). It does not include replacing a bridge.

4. **Resurfacing** **$57,402,000**

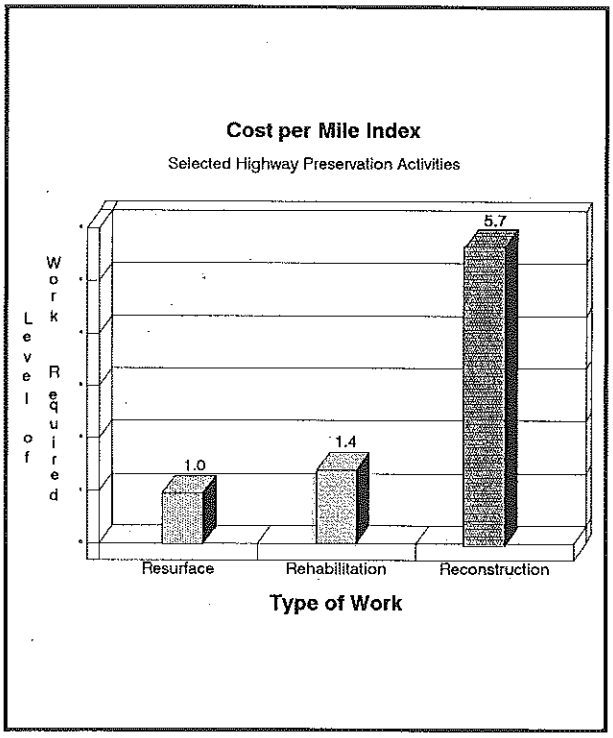
   This work involves putting a new surface on the highway. Often other work is done in addition to the new surface. This includes improvements to the road edges or shoulders, repair of cracks in the pavement, correction of drainage problems, and minor repairs to the roadway base. In general, a resurfacing project is less extensive and less costly than a full restoration (discussed below) of the roadway.

5. Restoration and Rehabilitation **$50,642,000**

The purpose of this type of work is to make extensive repairs to a roadway. Old pavement may be removed, the roadway base and drainage improved, and a new or reconditioned surface put down. Safety improvements and other incidental work may also be included. The following are examples of typical work:

- Recycling existing pavement
- Adding three feet of paved shoulders
- Minor drainage and base improvements
- Joint repairs and pavement patching

A restoration and rehabilitation project is less costly and less extensive than a reconstruction project.



6. Reconstruction **$12,298,000**

This category of work calls for the removal and replacement of the old pavement. No additional lanes are added. It may include major changes to the elevation, drainage, and the roadway base. In general, this is an extensive reconstruction of the road and is more expensive than either a resurfacing or a restoration and rehabilitation project.

7. Minor Widening **$1,130,000**

This category of work calls for widening an existing road without adding additional lanes. It includes adding turn lanes that are less than one-half mile in length.

8. Roadside Facilities **$1,131,000**

These projects include renovations of rest areas and roadside parks; installing fences; planting trees, flowers, and grass; and other similar activities.

9. Miscellaneous **$5,000,000**

This category includes projects that do not fall in the other categories. It also includes a lump-sum amount for special situations that arise during the year which cannot be foreseen at this time.

IMPROVE COMPONENT

10. Capacity Improvement **$21,637,000**

Projects in this category add at least one lane to an existing road. When necessary, the old roadbed is reconstructed or the pavement resurfaced. Passing lanes of more than one-half mile are included in this category.

11. Bridge Replacement **$3,638,000**

A completely new bridge is constructed in the place of an inadequate old one. Incidental work to the road on either side of the bridge for an adequate approach may also be included.

12. Bridge Widening **$-0-**

Projects in this category add lanes to an existing bridge. Other repairs to the bridge may also be included as well as work to the approach road on both sides of the bridge.

13. Roadside Facilities **$27,835,000**

These projects include constructing sound barriers, rest areas, installing fences, planting trees and flowers, and other similar activities.

EXPAND COMPONENT

14. New Routes **$17,678,000**

This is the construction of a new road. The prime example is the construction of a new freeway, though the route need not be a freeway.

15. Relocation **$35,370,000**

Under this category, a new road is constructed near, but not in the same place as, an existing road. The new road will take traffic off the old road, but the old road may remain to service neighborhood traffic. The old road may be retained under state jurisdiction, but it is more likely to be turned over to the jurisdiction of the local area governing body.

16. Roadside Facilities **$3,248,000**

These projects include constructing sound barriers, rest areas, installing fences, planting trees and flowers, and other similar activities.

We are taking the initiative in this program to include additional projects in our program so that we can capture interstate 4R discretionary funds. If we are unable to capture these discretionary funds, the projects may need to be delayed to a future year. Programming in this manner allows us to capture as much federal aid as possible while maintaining flexibility to change as conditions change. We have adopted this approach to protect our program from fluctuations caused by federal funding changes.

Besides the construction projects listed in this program, we will continue preliminary engineering and right-of-way acquisition on a number of projects that are planned for construction beyond 1990. These costs are estimated to be between $11 million and $13 million.

ACT 51 COMPLIANCE

This program is in compliance with the 90 percent maintenance provision of Act 51, of the Public Acts of 1951, as amended.

COMPREHENSIVE TRANSPORTATION PROGRAM

". . . Helping keep public transportation there."

Safe, comfortable, convenient bus services for the elderly and the young.

1989-90 COMPREHENSIVE TRANSPORTATION PROGRAM

The Comprehensive Transportation Fund (CTF) supports local transit services, local bus new services, specialized services for seniors and handicappers, intercity passenger services, and freight services--helping keep public transportation "there" for everyone who needs it.

Local buses are there for people who need access to jobs, medical care, education, shopping, and leisure activities. Buses make seniors more mobile and self-sufficient. Buses with lifts are there for handicappers, helping them lead more independent lives.

Intercity buses are there for business and leisure travel. Amtrak passenger trains are there, too, for business and recreational travelers from Michigan and all over the country.

And, if your business depends on freight deliveries, Michigan's rail freight network is there for you.

This proposed FY 1989-90 program describes these services in more detail. It is based on estimated CTF revenue of $176.8 million, special funds of $7.6 million, and federal funds of $9.4 million as shown on Table C-1 on the right.

After deducting funds for debt service and administrative costs, the CTF amount available for public transportation programs in FY 1990 is $146.2 million. This is allocated according to Section 10 of Act 51 of 1951, as amended in 1987, as shown on the right.

The FY 1990 program is consistent with the CTF Investment Plan, which was recently developed to provide a framework for sound financial decisions. Estimated needs exceed estimated revenue in FY 1990 by more than $30 million. Priority has been given to maintaining essential transportation service.

TABLE C-1
CTF Revenue Estimates

Gas & Registration	$ 108,199,100
Sales Tax	45,200,000
Miscellaneous	23,411,000
CTF Subtotal	**$176,810,000**
Intercity Bus Equip. Fund	$ 3,300,000
Rail Preservation Fund	4,300,000
Special Funds Subtotal	**$ 7,600,000**
UMTA	$ 8,950,000
FRA	500,000
Federal Funds Subtotal	**$ 9,450,000**
Total Approp. Funds	**$193,860,900**

TABLE C-2
CTF Program Allocations

Percent	Amount	Program
70%	$ 102,308,400	Local Bus Oper. Assist.
10%	14,615,500	Intercity Passenger & Freight Trans.
20%	29,231,000	Public Trans. Develop.
100%	**$146,154,900**	

TABLE C-3

FY 1989-90 COMPREHENSIVE TRANSPORTATION FUND PROGRAM

By Source of Funds
April 3, 1989

Description	CTF	Special Funds	Federal	Totals
Local Bus Operating Assist. - 70%	**$102,308,400**	**$ 0**	**$ 0**	**$102,308,400**
Section 18 Nonurban Assistance	0	0	3,500,000	3,500,000
	$102,308,400	**$ 0**	**$3,500,000**	**$105,808,400**
Intercity Pass. & Frt. - 10%				
Intercity Service Development	$ 900,000	$ 0	$ 0	$ 900,000
Intercity Terminals	3,000,000	0	0	3,000,000
Intercity Bus Equipment	0	3,300,000		3,300,000
Rail Passenger Service	3,500,000	0	0	3,500,000
Marine Passenger Service	700,000	0	0	700,000
Transportation Service Directories	50,000	0	0	50,000
Freight Preservation/Development	3,666,800	4,300,000	500,000	8,466,800
Freight Property Management	2,000,000	0	0	2,000,000
Port Development	301,900	0	0	301,900
Discretionary	496,800	0	0	496,800
	$ 14,615,500	**$7,600,000**	**$ 500,000**	**$ 22,715,500**
Public Trans. Development - 20%				
Specialized Services	$ 2,500,000	$ 0	$ 0	$ 2,500,000
Local Share Bonus	1,000,000	0	0	1,000,000
Effective Service Bonus	1,000,000	0	0	1,000,000
Municipal Credit Program	1,000,000	0	0	1,000,000
Bus Transit Capital	9,800,000	0	4,600,000	14,400,000
Bus Property Management	225,000	0	0	225,000
Technical Studies	35,000	0	600,000	635,000
Planning Grants	50,000	0		50,000
Ridersharing	250,000	0	0	250,000
Vanpooling	110,000	0	0	110,000
Service Development/New Technology	1,400,000	0	250,000	1,650,000
Discretionary	11,861,000	0	0	11,861,000
	$ 29,231,000	**$ 0**	**$5,450,000**	**$ 34,681,000**
PROGRAM TOTALS	**$146,154,900**	**$7,600,000**	**$9,450,000**	**$163,204,900**
DEBT SERVICE/ADMINISTRATION	**30,655,200**	**0**	**0**	**30,655,200**
TOTAL	**$176,810,100**	**$7,600,000**	**$9,450,000**	**$193,860,100**

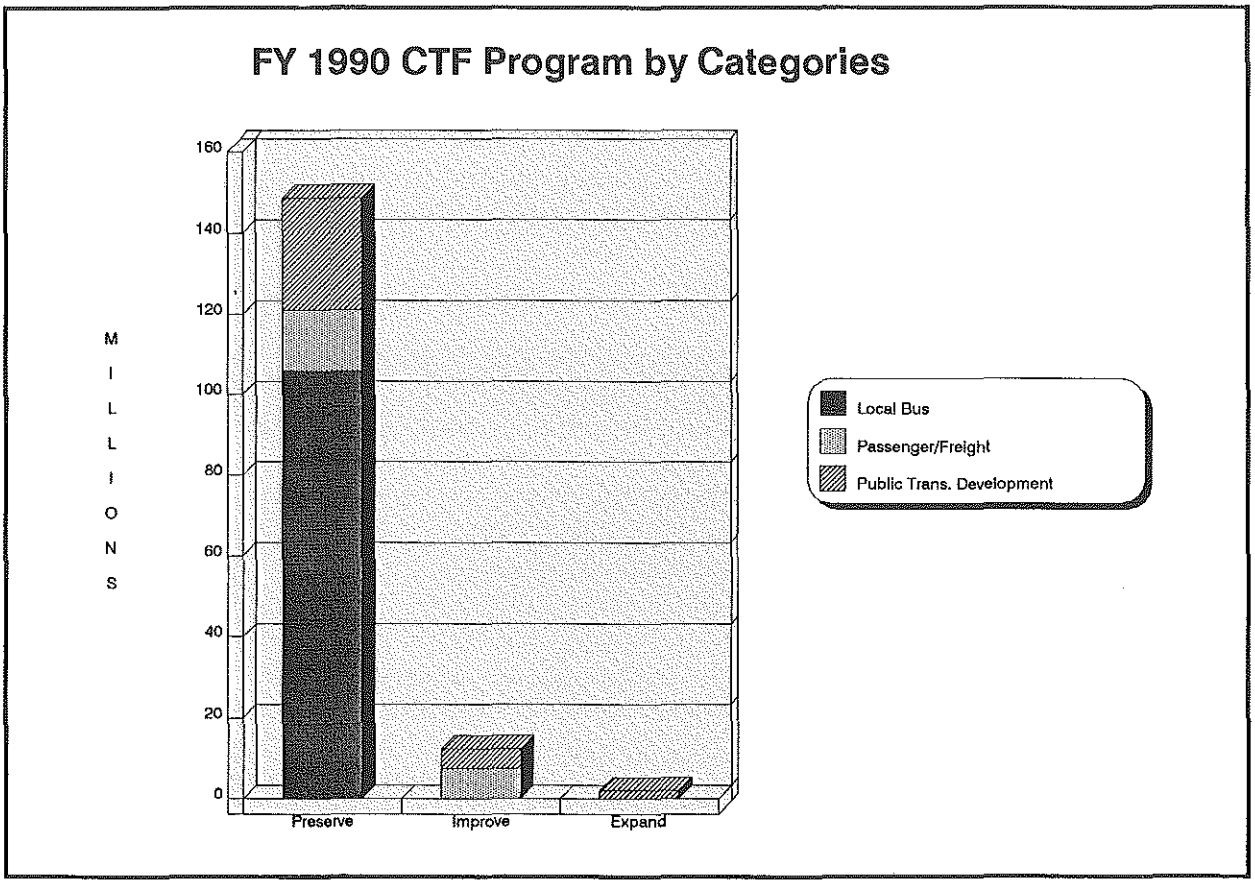
TABLE C-4

FY 1989-90 COMPREHENSIVE TRANSPORTATION FUND PROGRAM

By Categories of Preserve, Improve, or Expand
April 3, 1989

Description	Preserve	Improve	Expand	Totals
Local Bus Operating Assistance	$ 105,808,400	$ 0	$ 0	$ 105,808,400
Intercity Passenger & Freight	$ 15,215,500	$ 7,500,000	$ 0	$ 22,715,500
Public Transportation Development	$ 27,681,000	$ 5,000,000	$ 2,000,000	$ 34,681,000
PROGRAM TOTALS	**$148,704,900**	**$12,500,000**	**$2,000,000**	**$163,204,900**

Preserve	Improve	Expand
91%	8%	1%



LOCAL BUS OPERATING ASSISTANCE - 70%

$102,308,400 CTF

This program provides public bus transportation service to the general public, senior citizens, and handicappers of our state. Each year local transit systems serve a ridership of approximately 100 million passengers, providing access to jobs, medical care, education, shopping, recreation, and other needed service. Funds are distributed to eligible systems based on the percentage of eligible operating expenses.

It is anticipated that there will be 15 urbanized and 53 nonurbanized transit systems serving communities throughout Michigan in FY 1990. Six urbanized systems also provide service in nonurbanized areas, as shown by the asterisks in the listing to the left. Maps C-1 and C-2 on the following pages show the locations of these services across the state.

Performance data for FY 1987-88 (the most recently completed fiscal year) for urban transit systems are shown on Table C-5. Table C-6 shows performance data for nonurban systems, while Table C-7 portrays FY 1988 ridership by type of system.

Urban Transit Sytems - 15

Ann Arbor*	Kalamazoo
Battle Creek	Lansing*
Bay County*	Muskegon
Benton Harbor	Niles*
Detroit	Port Huron
Flint	Saginaw
Grand Rapids	SMART*
Jackson*	

*Combined urban and nonurbanized

Nonurban Systems - Countywide - 32

Alger County	Kalamazoo County
Antrim County	Kalkaska County
Barry County	Lenawee County
Bay Area	Manistee County
Berrien County	Marquette County
Branch County	Mecosta County
Charlevoix County	Ogemaw County
Clare County	Ontonagon County
Crawford County	Osceola County
Eaton County	Oscoda County
EUPTA	Otsego County
Gladwin County	Roscommon County
Gogebic County	Sanilac County
Huron County	Schoolcraft County
Iosco County	Van Buren County
Isabella County	Wexford County

NONURBAN OPERATING/CAPITAL

$3,500,000 UMTA (Estimated)

This program, complementary to the Local Bus Operating Assistance program, provides federal operating assistance for public transportation in the nonurbanized areas of the state (under 50,000 population). Nonurbanized area transit systems and the nonurbanized portion of combined transit systems are eligible to receive these Federal Section 18 funds. Effective 1987, this federal program also provides funding under the Rural Transit Assistance Program.

Nonurban Systems - Noncountywide - 21

Adrian	Houghton
Alma	Ionia
Alpena	Keweenaw Bay
Belding	Lapeer Area
Big Rapids	Ludington Area
Caro	Marshall
Dowagiac	Midland
Grand Haven	Saugatuck
Greenville	Sault Ste. Marie
Hillsdale	Yates Township
Holland	

TABLE C-5

URBAN TRANSIT SYSTEMS

FY 1988 Performance Data

Location	Vehicles Regular	Vehicles Lift-Equipped	Passengers	Percent Seniors	Percent Handicappers
Ann Arbor	2	52	3,598,358	11	4
Battle Creek	15	9	749,102	18	12
Bay County	3	39	670,388	22	23
Benton Harbor	10	5	131,771	35	2
Flint	85	15	3,178,670	5	4
Grand Rapids	68	11	3,869,721	10	4
Jackson	3	31	454,249	37	7
Kalamazoo	0	46	1,536,960	7	8
Lansing	30	35	3,601,585	7	4
Muskegon	0	18	514,840	18*	3*
Niles	4	3	97,527	35	12
Saginaw	6	43	1,422,973	4	2
SEMTA	486	511	64,862,136	17*	5*
TOTALS	**712**	**818**	**84,688,280**		

* = Estimated

MAP C-1
Urban Transit Systems

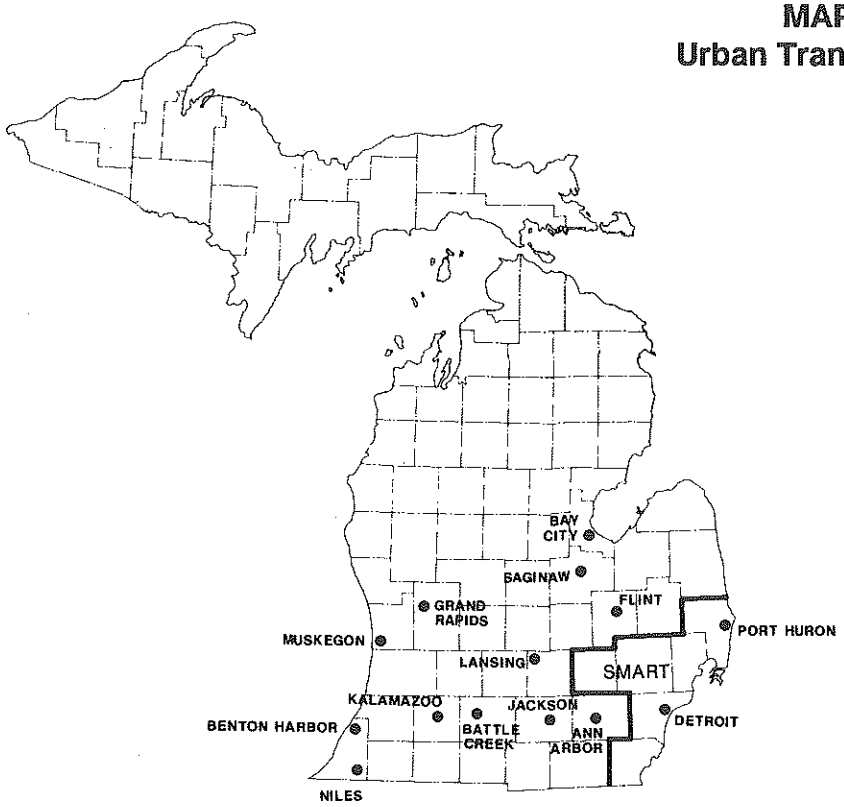


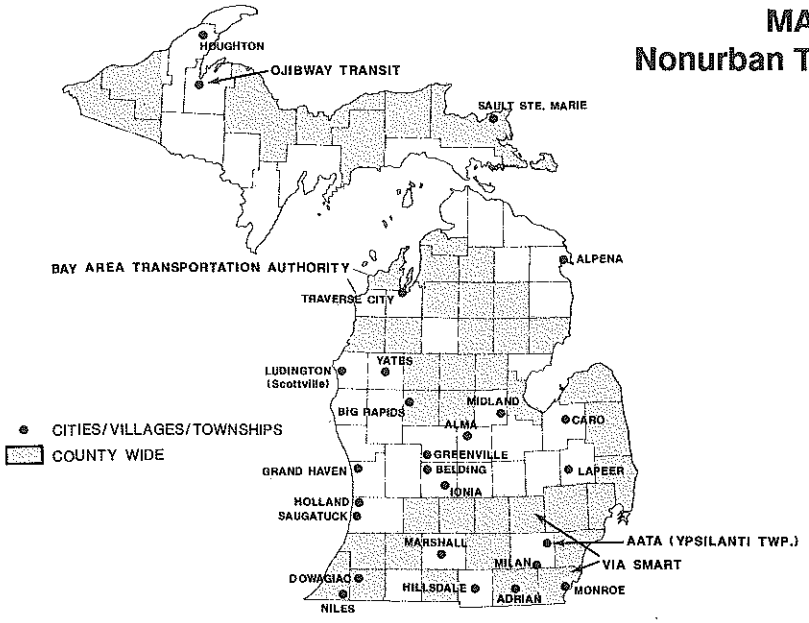
TABLE C-6

NONURBAN TRANSIT SERVICES

FY 1988 Performance Data

Non-County Systems	Vehicles Regular	Vehicles Lift-Equipped	Passengers	Percent Seniors	Percent Handicappers
Adrian	4	2	99,203	39	15
Alma	4	2	68,999	29	15
Alpena	3	3	92,848	32	36
Belding	1	2	57,066	20	2
Big Rapids	5	3	102,788	18	12
Caro (Village)	4	2	66,843	34	20
Dowagiac	0	2	27,147	39	8
Greenville	2	2	51,712	34	5
Grand Haven	10	6	201,017	16	22
Hillsdale	5	2	99,472	28	19
Holland	8	4	130,044	25	29
Houghton	3	5	56,240	32	40
Ionia	2	2	51,508	22	9
Keweenaw Bay	1	4	3,312	27	20
Lapeer	3	3	28,137	28	38
Ludington	7	5	121,013	31	21
Marshall	1	3	65,269	21	5
Midland	5	5	100,980	20	41
Niles (Buchanan)	1	2	10,619	45	17
Saline	2	2	592	6	91
Saugatuck Twp.	1	2	34,987	48	11
S.S. Marie	2	3	49,612	36	11
Yates Twp.	2	2	45,872	17	22
Subtotals	**76**	**68**	**1,565,280**		

MAP C-2
Nonurban Transit Systems



Prepared by: MDOT - Tech. Serv.
Mapping Section
Transit

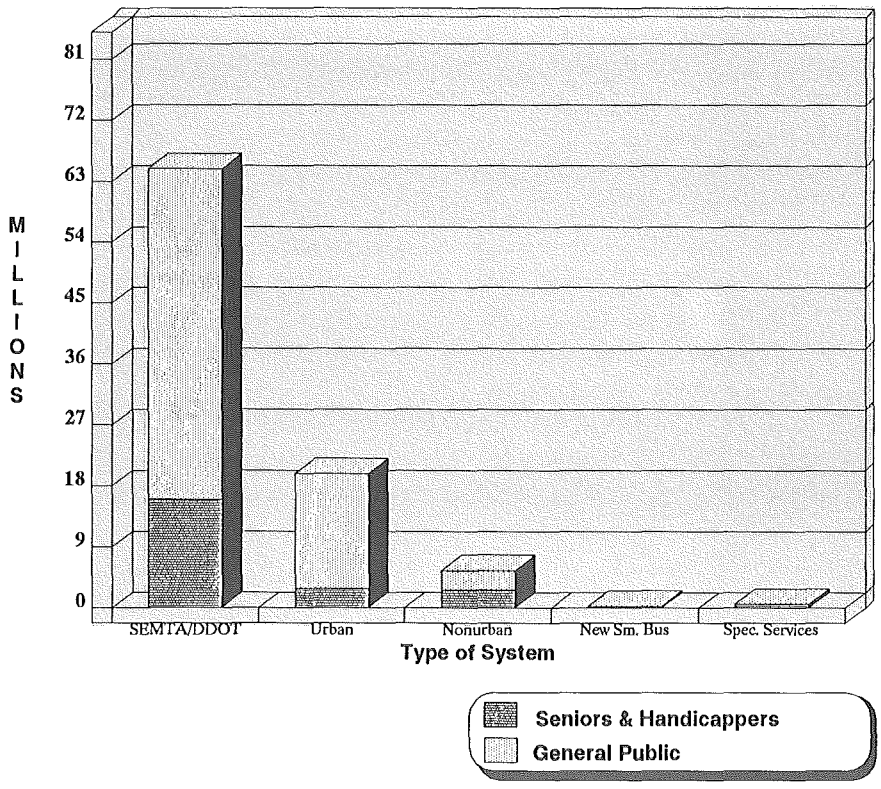
TABLE C-6
(Continued)

County Systems	Vehicles: Regular	Vehicles: Lift-Equipped	Passengers	Percent Seniors	Percent Handicappers*
Alger Co.	5	4	38,360	17	10
Antrim Co.	6	8	104,248	13	30
Barry Co.	0	6	62,054	13	8
Bay Area	9	6	285,690	19	30
Bay Co.	0	17	182,851	5	58
Berrien Co.	9	7	160,952	10	62
Branch	4	4	81,449	17	50
CATA (Ingham Co.)	2	6	26,075	28	20
Charlevoix Co.	3	7	73,753	17	49
Clare Co.	4	4	63,048	14	47
Crawford Co.	5	3	104,410	21	5
Eastern U.P.	4	7	77,141	1	63
Eaton Co.	1	14	152,824	15	26
Gladwin Co.	2	9	106,701	19	33
Gogebic Co.	3	2	30,660	47	21
Huron Co.	8	6	158,610	8	38
Iosco Co.	2	6	49,485	31	31
Isabella Co.	13	14	287,571	14	37
Jackson	0	14	58,148	11	87
Kalamazoo Co.	0	12	114,269	15	81
Kalkaska Co.	2	7	77,818	19	36
Lenawee Co.	9	5	90,967	18	63
Manistee Co.	11	11	229,026	24	19
Marquette Co.	12	12	275,655	24	19
Mecosta Co.	7	4	65,429	16	63
Ogemaw Co.	1	4	42,713	24	34
Ontonagon Co.	3	3	34,459	22	26
Osceola Co.	3	3	65,289	29	62
Oscoda Co.	1	3	24,388	64	3
Otsego Co.	4	5	101,574	25	22
Roscommon Co.	6	5	110,403	17	10
Sanilac Co.	1	9	76,502	2	97
Schoolcraft Co.	3	2	36,222	22	50
SEMTA	0	34	395,487	17**	5**
Van Buren Co.	3	5	53,734	20	71
Wexford Co.	6	6	124,564	25	25
Subtotals	**152**	**274**	**4,022,529**		
NONURBAN TOTALS	**228**	**342**	**5,587,809**		

* = Includes senior handicappers
** = Estimated

TABLE C-7

LOCAL TRANSIT RIDERSHIP
FY 1987-88



The Grand Haven Trolley.

INTERCITY PASSENGER AND FREIGHT TRANSPORTATION-10%

INTERCITY BUS SERVICE DEVELOPMENT

$900,000 CTF

This project includes three activities that focus on continuing the availability of intercity bus passenger services to smaller communities. Prior to deregulation in 1982, 11 major carriers provided intercity bus service to more than 550 Michigan communities. Today, there are only five carriers, and more than 100 communities have lost service. Service development efforts seek to prevent community isolation and support tourism and economic development.

"Essential intercity transportation for students, families, and seniors."

- The intercity marketing program is designed to inform the public of the availability and advantages of intercity bus service. The goal is to enhance the image of public intercity surface transportation and to stimulate ridership on selected corridors. Promotion of intercity transportation is carefully aligned with the tourism industry so as to complement and highlight the state's tourism programs.

- Intercity bus operations assistance is considered only if all other efforts, including marketing and the bus equipment program, have failed to maintain essential service. This program would provide financial assistance to continue or reinstate service where termination would cause isolation to an area not designated as part of the core network, shown on Map C-3. Funding may be provided for 90 to 180 days to avoid a break in service while an evaluation is performed. Route services must generate a minimum of 30 cents per mile in passenger revenue to be eligible for continuation beyond the evaluation period. Continuation service contracts will be let on a bid basis with state funds being reduced over subsequent years of operations.

"Service development efforts seek to prevent community isolation."

- The terminal security program offers two-year demonstration grants to enhance safety of local facilities. A 25 percent match is required for the first year; a 50 percent match is required for second-year funding. Security personnel, additional open hours, security hardware, and monitoring equipment are eligible costs.

TERMINAL DEVELOPMENT

$3,000,000 CTF

Kalamazoo Intermodal Terminal

The intercity terminal development program provides funding on an 80 percent state/20 percent local basis, or on an 80 percent federal/20 percent state basis where facilities are approved for federal funding. Locations for proposed facilities are reviewed on a case-by-case basis to achieve the best response to the area of market, transportation industry needs, coordination, and economic development. Scheduled to open in spring 1989 are facilities in Flint, Southfield, and St. Joseph. Detroit and Benton Harbor are programmed for intercity passenger terminals in FY 1989. Lansing and Holland are targeted to receive funding for intercity passenger facilities in FY 1990. This program has provided construction or development of convenient facilities for the traveling public in 13 communities, to date, as shown on Map C-4.

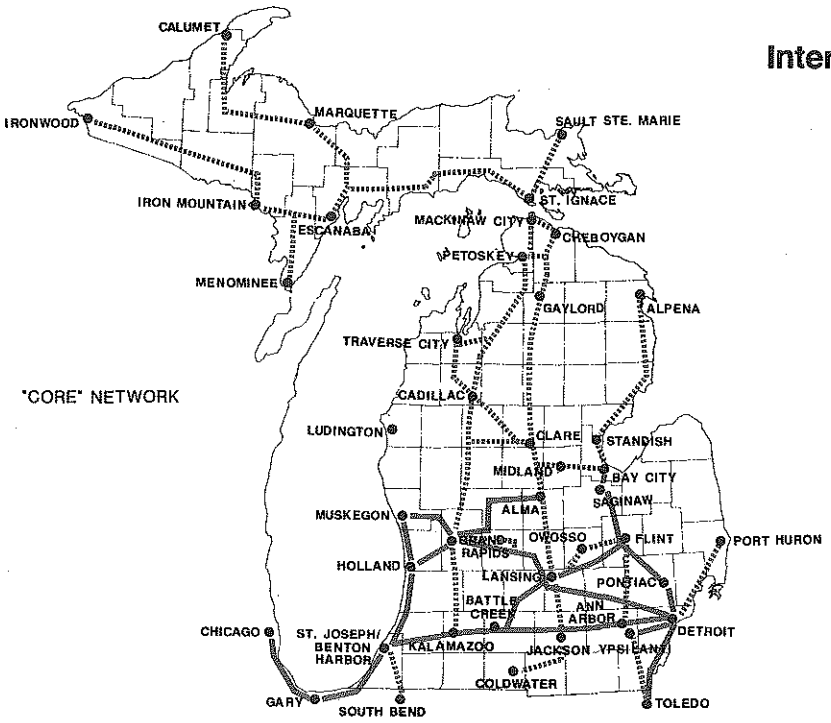
INTERCITY BUS EQUIPMENT PROGRAM

$3,300,000 Equipment Fund

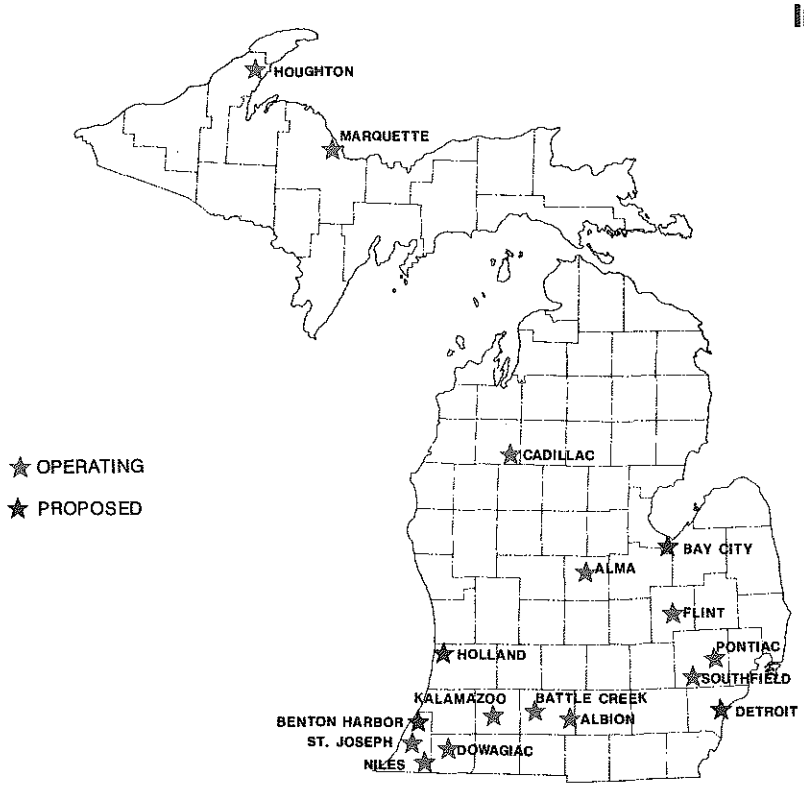
"Modern vehicles to serve intercity travelers throughout Michigan."

This program provides modern vehicles to serve intercity travelers throughout Michigan. Carriers that have operated under a certificate of authority for two years may lease a maximum of five units a year for up to six years each. The lease rate is $1 per year per bus. Carriers provide a security deposit of 2 percent of the vehicle purchase price and provide all necessary maintenance and operating costs. Use of the equipment is restricted to scheduled regular-route services that originate at, or are destined to, points in Michigan. This program enhances the operating safety and attractiveness of such service through provision of new equipment.

MAP C-3
Intercity Bus Network



MAP C-4
Intermodal Passenger Facilities



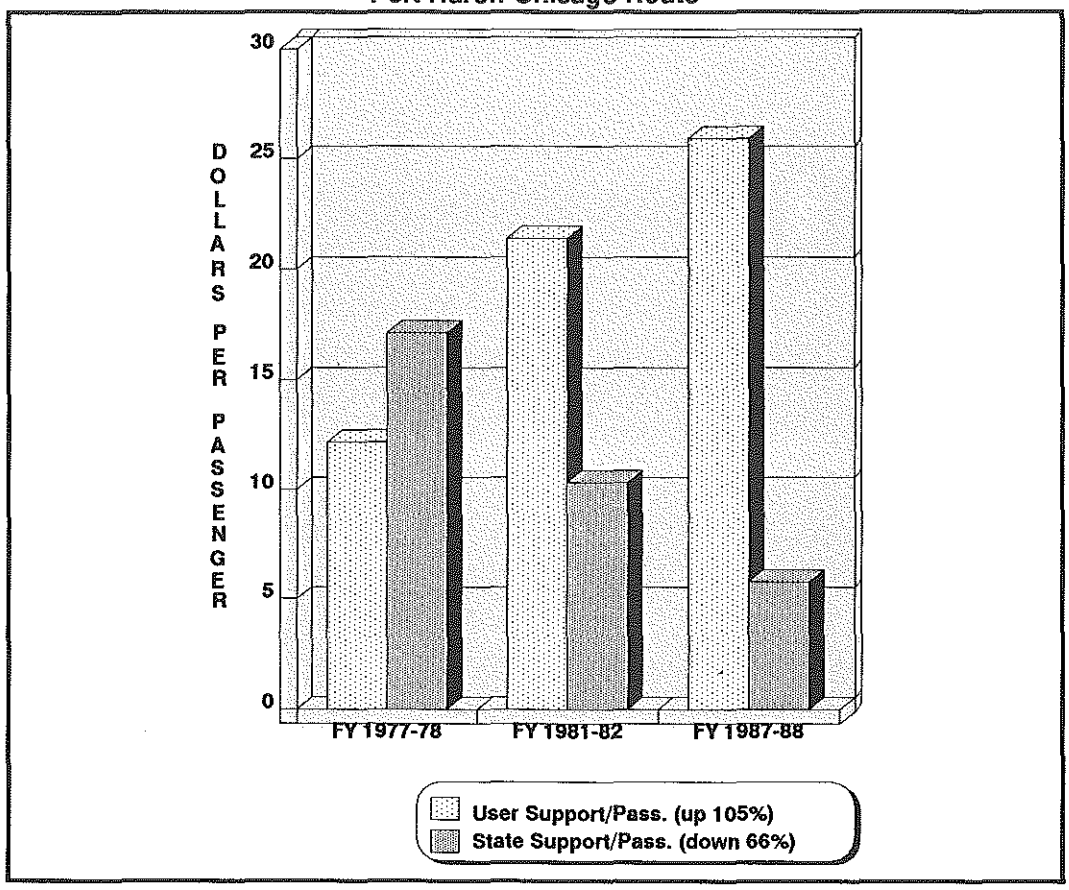
RAIL PASSENGER SERVICE

$3,500,000 CTF

Rail passenger service provides an increasingly attractive mode of travel serving 20 communities along three primary Michigan routes. The "International Limited" route links Port Huron, Flint, Lansing/East Lansing, and other central and eastern Michigan cities with Chicago and Toronto. The "Pere Marquette" service links Grand Rapids and other southwestern lower Michigan cities with Chicago. Amtrak's Detroit-Chicago route provides daily corridor service to Dearborn, Ann Arbor, Jackson, Albion, Battle Creek, Kalamazoo, Dowagiac, and Niles. These three routes served almost 460,000 rail passengers in FY 1988.

TABLE C-8

Economic Productivity of State-Supported Amtrak Services
Port Huron-Chicago Route

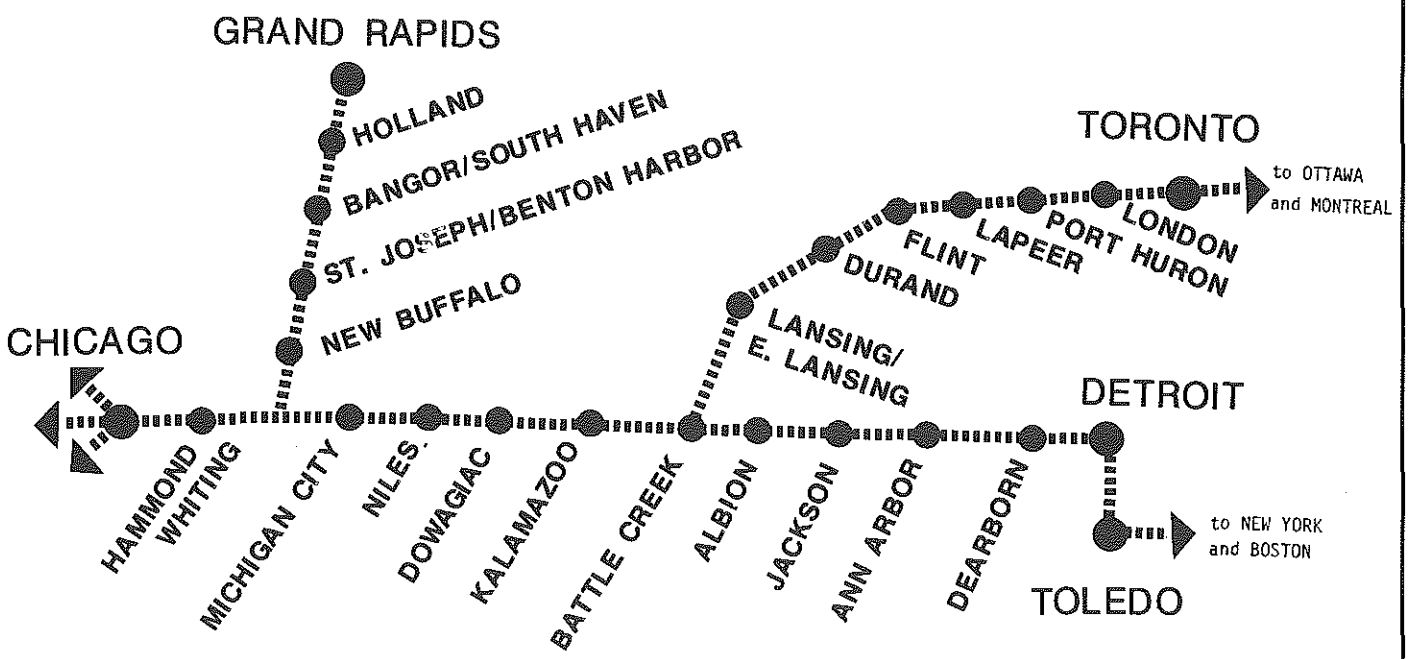


Rail passenger capital investments focus on passenger stations, track and signal improvements, equipment upgrading, and grade crossings to achieve improved service availability, attractiveness, safety, and performance. A $60 million track improvement program by Conrail and Amtrak over virtually the entire Detroit-Chicago corridor was completed in 1988.

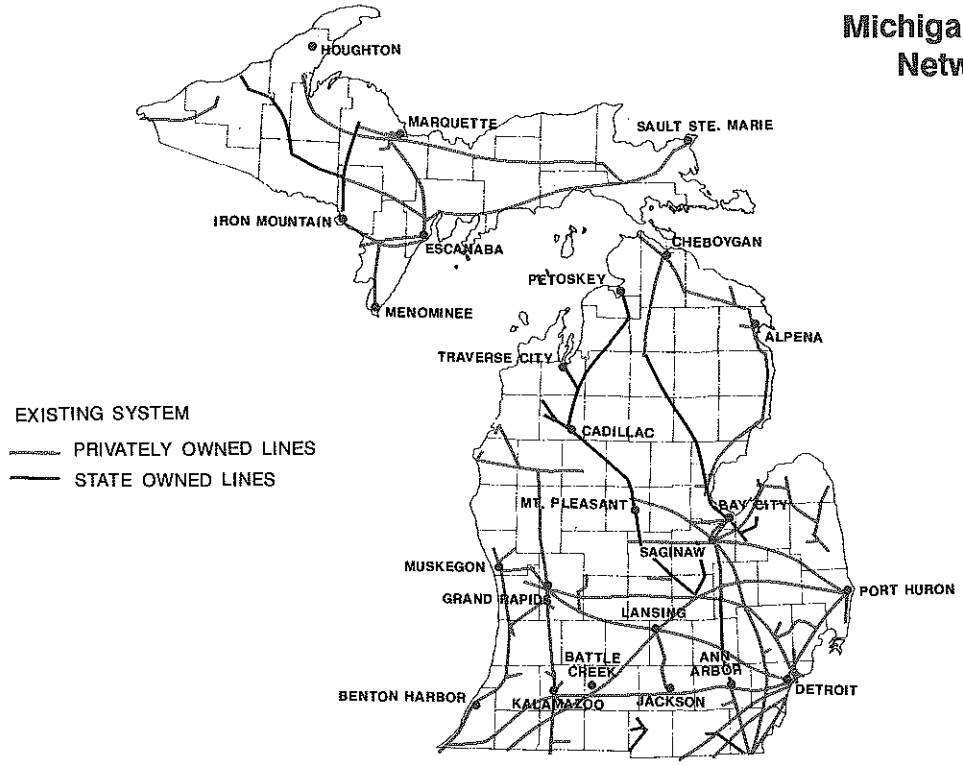
Map C-5 shows Michigan's rail passenger network which extends more than 1,000-route miles. Table C-8 shows economic performance trends impacting state assisted rail passenger services. From FY 1977-78 to 1987-88, user support increased from $12.61 to $25.90 per passenger, while state support required dropped from $17.14 to $5.77 per passenger.

All Aboard!!

MAP C-5
Rail Passenger Network



MAP C-6
Michigan's Rail Freight Network System

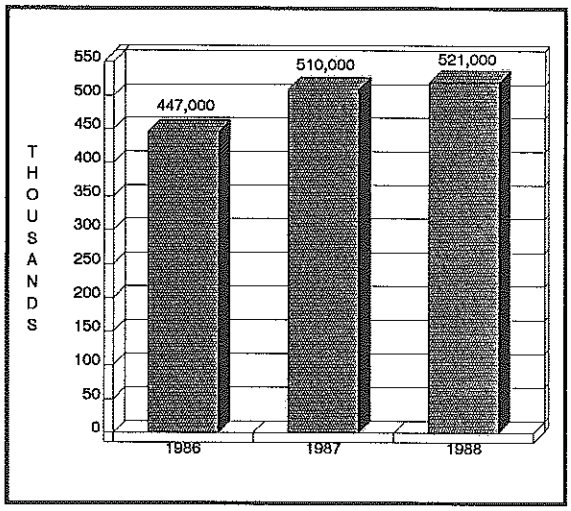


MARINE PASSENGER

$700,000 CTF

The state provides operating and capital support to designated water ferry service linking Drummond, Neebish, and Sugar Islands with the Chippewa County mainland. These services are administered by the Eastern Upper Peninsula Transportation Authority. Residents of the islands are dependent upon these services for access to fuel and other basic supplies and services, as well as school and work transportation. Ferry traffic between the islands increased 2.3 percent for passengers and 91 percent for vehicles from 1987 to 1988, as shown on Table C-9. Delivery of a new vessel, expected in early FY 1990, and dock repairs will offer improved service.

TABLE C-9
Ferry Pasengers



TRANSPORTATION SERVICES DIRECTORY

$50,000 CTF

The Michigan Public Transportation Map and Directory is a helpful passenger services guide. This composite brochure, divided into geographic sections, shows all intercity bus, rail, airline, and ferry routes, and identifies communities with local bus service. The directory lists, by community, the available transportation services by mode, with phone numbers and addresses. These directories are used by the tourism industry, the public transportation industry, and the general public.

"The public transportation directory is used by the tourism industry and the traveling public."

FREIGHT PRESERVATION AND DEVELOPMENT

$4,300,000	Rail Preservation Fund
500,000	Federal Railroad Administration
3,666,800	CTF
$8,466,800	

The freight transportation program helps assure that essential rail facilities are maintained for the movement of goods. Program policies include:

"The statewide rail freight network plays a significant role in supporting economic development."

- Improvements to state-owned rail facilities will be prioritized according to available funds and relative importance of the project. Facility rehabilitation projects will be engineered based on concern for safety, traffic volume/tonnage, time sensitivity of commodities, function of segment in a corridor, and cost of operations.

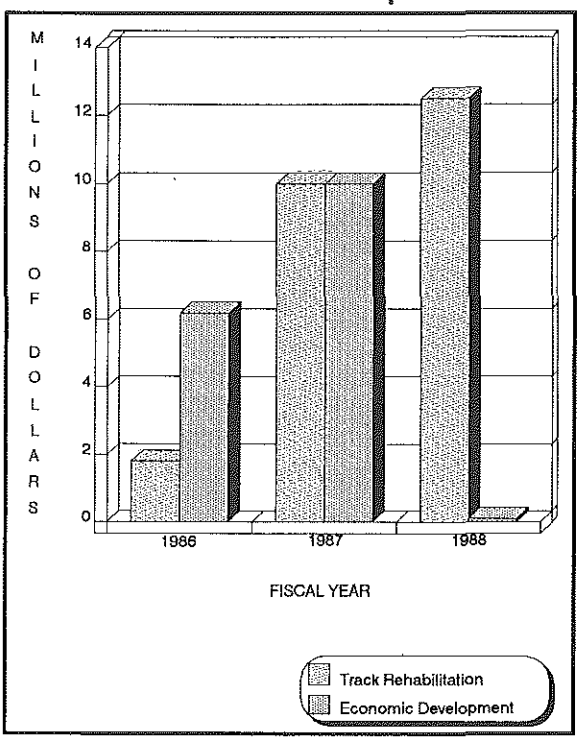
- The state will consider purchase of a new line only where the proposed line is directly connected to a currently operating state-owned line, and the proposed line generates an annual minimum of 20 carloadings per mile. Acquisition of other lines may occur as a last resort to preserve service when a documented need exists and when other sources provide 50 percent of acquisition costs.

"Technical and financial assistance for Michigan's commercial rail network."

- Privately owned railroad companies may receive capital loans up to 30 percent of the total project cost to improve or expand the privately owned infrastructure.

- Nontransportation companies or local units of government may receive assistance for economic development purposes in the form of loans and/or grants up to 50 percent of the total cost of the rail freight portion of the project.

TABLE C-10
Rail Freight Projects for Track Rehabilitation and Economic Development



Michigan's rail freight network of approximately 4,600-route miles is shown on Map C-6. This network is operated by five major railroad companies and numerous short line, regional, and terminal companies. In 1988, an estimated 1,375,000 carloads were generated from Michigan stations.

Freight construction projects carried out in FY 1988 include reconstruction of the Bacon Street bridge in Hillsdale, construction of rail cross-over at Pinconning, improvements to 84 miles of state-owned track, and upgrading track sidings at Shepherd and Rosebush.

The FY 1989 program includes evaluation of needed bridge repairs and improvements to state-owned track between Walton Junction and Traverse City and between Mancelona and Petoskey. The FY 1990 program will

continue the bridge repair evaluation and begin needed replacement work, and target improvements to state-owned track between Farwell and Mt. Pleasant and between Kalkaska and Mancelona.

FREIGHT PROPERTY MANAGEMENT

$2,000,000 CTF

Effective property management is essential to protect the state's sizable investment in 872 miles of railroad rights-of-way, track structure, adjacent real estate parcels, and several buildings. Examples of expenses funded under this category are those arising from leases, taxes, inventory control, maintenance and repair, insurance, security, appraisals, and railbanking activities.

PORT ASSISTANCE

$301,900 CTF

The purpose of this program is to partially fund the operating budgets of eligible port authorities. By statute, upon city, county, and state approvals of an eligible port authority budget, 50 percent is to be funded by the state and 25 percent each from the city and the county. The Detroit/Wayne County Port Authority is the only authority currently eligible for this state assistance.

A ballast regulator brooming track.

Public Transportation Development Project Summary

Specialized Services	$ 2,500,000
Local Share Bonus	1,000,000
Effective Service Bonus	1,000,000
Municipal Credit Program	1,000,000
Bus Transit Capital	14,400,000
Bus Property Management	225,000
Technical Studies	635,000
Planning Grants	50,000
Ridesharing	250,000
Vanpooling	110,000
Service Development/New Technology	1,650,000
Discretionary	11,861,000
	$34,681,000

Helping handicappers lead more independent lives.

PUBLIC TRANSPORTATION DEVELOPMENT - 20%

Sources

$29,231,000	CTF
5,450,00	UMTA (Estimated)
$34,681,000	

PROGRAM HIGHLIGHTS

Public Transportation Development supports subprograms and projects that contribute to a balanced statewide network of public transportation services. Projects are selected based on statewide goals related to preserving basic services, generating technical improvements, and encouraging economic development. The first four projects are mandated by Act 51 of 1951. Each subprogram is described below:

"Preserving essential services, generating technical improvements and encouraging economic development."

1. **Specialized Services**

   $2,500,000 CTF

   Many of Michigan's senior citizens and handicappers look to specialized services as a primary means of transportation. Act 51, as amended in 1987, provides that not less than $2,000,000 shall be distributed as grants for specialized services.

   Performance data for those agencies receiving specialized services operating assistance in FY 1988 are provided in Table C-11 on the following page.

TABLE C-11

FY 1988 PERFORMANCE DATA
Specialized Services for Seniors and Handicappers

Location	Operator	Vehicles: Regular	Vehicles: Lift-Equipped	Passengers
Allegan Co.	Resource Development Comm.	0	2	80,537
Alpena Co.	Thunder Bay Transit	0	14	44,274
	Northeast Michigan Rehabilitation	0	1	2,268
Baraga Co.	Baragaland SCC	0	1	404
Baraga/Houghton/K.	CAA	0	2	5,783
Benzie Co.	COA	0	2	8,628
Calhoun co.	CAA of South Central Michigan	0	1	9,881
Cass Co.	Westgate Center	0	3	6,505
	COA	0	3	1,611
Cheboygan Co.	Cheboygan COA	1	3	8,621
Clinton Co.	CRV	0	5	17,921
Delta/Menominee Co.	CAA	0	9	38,513
Dickinson/Iron Co.	CAA	0	10	39,594
Genesee Co.	Association for Retarded Citizens	2	8	73,667
	Service Center for Visually Impaired	0	2	2,659
	Centers for Gerentology	0	1	7,296
	Haskell Owls	0	1	972
Gratiot Co.	HIC	0	2	3,478
Hillsdale Co.	Key Opportunity	15	4	33,943
Kent Co.	Hope Rehabilitation Net	6	4	23,844
Lapeer Co.	Christian and Family Services	2	1	7,339
	Community Mental Health	10	0	17,357
Mackinac Co.	CAA	0	1	13,998
Midland Co.	COA	0	1	3,230
Montmorency Co.	COA	0	1	758
Muskegon Co.	W. Michigan Center for the Handicapped	0	2	38,761
Newaygo Co.	Five Cap. Inc.	0	1	1,351
Oceana Co.	COA	0	1	5,472
Ottawa Co.	Georgetown Seniors	0	1	598
Petoskey	Friendship Center	0	7	20,953
Presque Isle Co.	Presque Isle COA	0	3	4,480
Saginaw Co.	COA	0	2	12,920
	Child Development Center	0	6	6,140
	Frankenmuth Lutheran Home	0	1	466
Shiawassee Co.	COA	1	1	10,414
	ACKCO Service	1	1	11,782
St. Clair Co.	COA	3	3	24,273
St. Joseph Co.	COA & Arch Workshop	2	7	47,891
Washtenaw Co.	Chelsea Area Transportation	1	1	7,820
	Child & Family Service	0	2	5,118
	Manchester Senior Citizens	0	1	2,053
	Work Skill Corp.	0	1	3,378
	People's Express	0	1	3,733
Totals		**21**	**122**	**660,684**

2. Local Share Bonus

$1,000,000 CTF

Recent amendments to Act 51 provide that not less than $1,000,000 shall be distributed to local transit agencies as a local share bonus. These bonus funds will be distributed based on percentage of local revenue, weighted by population.

3. Effective Service Bonus

$1,000,000 CTF

Recent amendments to Act 51 provide that not less than $1,000,000 shall be distributed to local transit agencies as an effective service bonus. These bonus funds will be distributed based on farebox revenue as weighted by vehicle miles.

"Assisting communities in funding local transit services."

4. Municipal Credit Program

$1,000,000 CTF

Recent amendments to Act 51 provide that not more than $1,000,000 from the 20 percent allocation shall be distributed as part of the Municipal Credit Program. This program, administered by the Regional Transit Coordinating Council in southeast Michigan, assists local communities within the council's district in funding public transportation service.

Harbor Transit . . .there when you need it.

5. Bus Capital

$ 9,800,000 CTF
4,600,000 UMTA (Estimated)
$14,400,000

This subprogram is designed to meet capital needs of local transit systems, including replacement and rehabilitation of transit vehicles and equipment, and construction or improvement of transit facilities. State funds are used to the extent possible

to match funds from UMTA's Section 9, Section 3, and Section 16(b)(2) programs. For transit systems in nonurban areas, where federal funds are generally not available, 100 percent state funding meets these capital needs. In FY 1990, a shortfall of $20 million is anticipated in federal funding. Urban transit systems will have significant unmet capital needs because state funds will not stretch to meet this federal shortfall.

"There is a need for replacement vehicles and equipment."

6. Bus Property Management

$225,000 CTF

This subprogram funds operating costs for the central facility operated by Bus Transit Division. This facility, conveniently located near Potterville, is used for inspecting vehicles, conducting vehicle maintenance training, and vehicle storage. This also funds insurance and bus rehabilitation costs for the state loaner fleet which is used to meet emergency or special needs of local transit systems.

7. Technical Studies

$ 35,000 CTF
600,000 UMTA (Estimated)
$635,000

These Section 8 Technical Studies focus on operational and technical problems of local transit agencies. Activities can include operational manuals, technical assistance, and program management. Specific projects are selected by the department's Technical Studies Committee after funding guidance is received from UMTA. In-kind services are used to the extent possible to capture maximum federal funds.

"Providing technical assistance to local transit agencies."

8. Planning Grants

$50,000 CTF

With the concurrence of local transit agencies, several state metropolitan planning organizations utilize UMTA Section 9 funds for planning tasks directly related to the area's transit program. This subprogram provides matching funds on an 80 percent UMTA, 10 percent state, 10 percent local basis. The federal funds are granted directly to local transit agencies.

9. Ridesharing

$250,000 CTF

Ridesharing programs assist in finding alternative transportation services. Ridesharing for the work trip offers potential for reducing energy consumption, traffic congestion, and air pollution. This subprogram provides grants to local agencies for ridesharing marketing, organizational, promotional, and demonstration efforts. Most of the costs are associated with the continued support of local ridesharing offices. Continuation grants are based on evaluation of effectiveness. Map C-7 shows ridesharing and vanpooling activity throughout Michigan. Table C-12 provides performance data for FY 1988.

"Ridesharing can reduce traffic congestion, energy consumption, and air pollution."

10. Vanpooling

$110,000 CTF

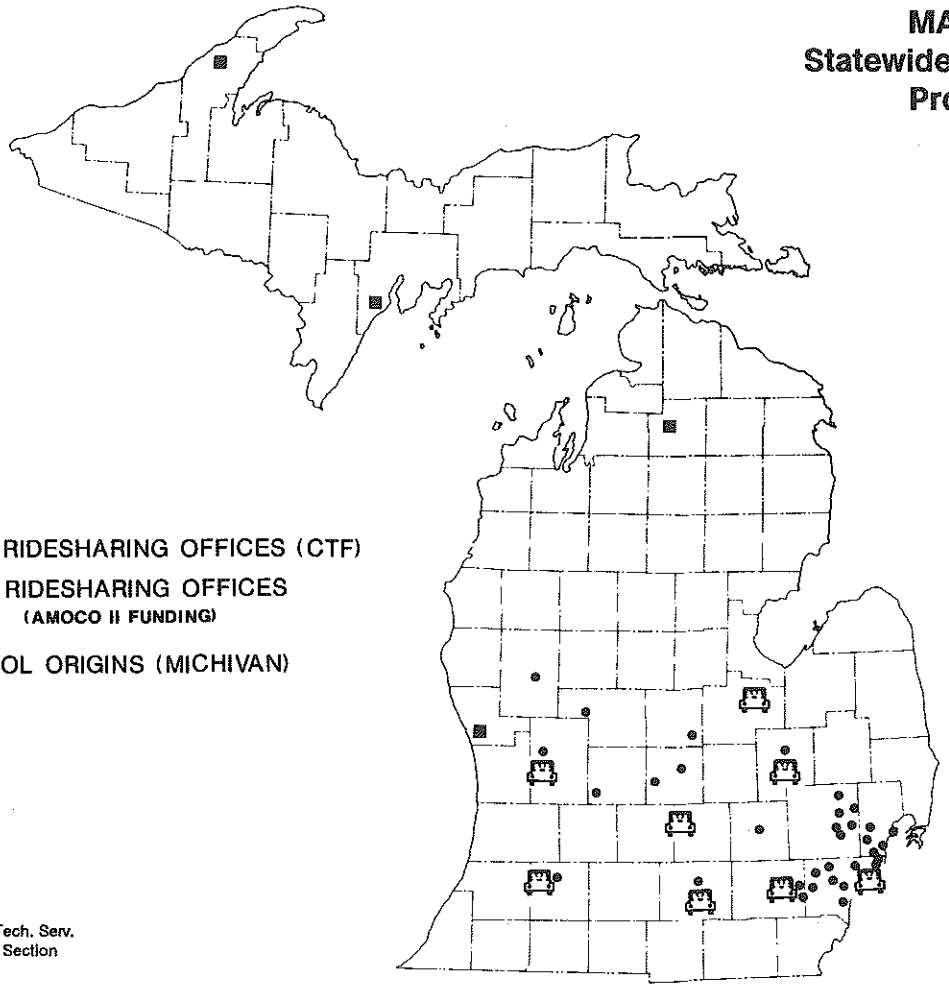
This subprogram funds the continuation of MichiVan vanpool services to qualified community groups of eight or more persons throughout the state. Self-supporting except for marketing and administrative costs, MichiVan is an energy-efficient form of transportation that contributes to the relief of traffic congestion and air pollution. This subprogram, which has accelerated the expansion of vanpooling in Michigan, continues to meet transportation demands where public transportation is unavailable or is unsuited to commuter travel needs.

TABLE C-12

FY 1988 PERFORMANCE DATA
Ridesharing and Vanpool Programs

	Ridesharing	Vanpooling
Number of Carpools/Vans	2,491	69
Number of Carpoolers/Vanpoolers	6,965	897
Reduction in No. of Vehicles on Road	2,866	672
Vehicle Trips Saved	1,432,662	344,050
Gallons of Gas Conserved	1,185,995	316,365

MAP C-7
Statewide Ridesharing Program



Prepared by: MDOT - Tech. Serv.
Mapping Section
Transit

11. Service Development and New Technology

$1,400,000 CTF
250,000 UMTA (Estimated)
$1,650,000

This subprogram is designed to assist public transportation providers in seeking more effective service delivery mechanisms. Examples of major activities include development of computer hardware and software systems, improvements to communications equipment, assistance with vehicle maintenance schedules and vehicle purchases, development of a marketing program to promote greater awareness of public transit and to increase ridership, driver training programs, and technical assistance in accounting and financial management.

12. Public Transportation Development Discretionary

$11,861,000 CTF

This discretionary account provides the department the ability to respond to emerging issues and to adjust resources for projects where funding requirements vary during the year. For example, this could fund essential transit services, critical needs for transit vehicles, investments on state-owned rail trackage, rail freight facilities to support newly announced economic development projects, or technical improvements. Programming to specific projects is provided in quarterly reports. Plans for funding from this account include:

- Local New Bus Services, providing capital and operating assistance for new service projects. This program has a 95 percent success rate with the vast majority of communities having opted to continue local funding after the initial three-year demonstration period.

Local Bus New Service Continuation Systems

Ann Arbor
BATA
Cass Co.
DDOT
Delta County
Flint
Ionia
Isabella County
Lansing Shuttle
Muskegon
Saginaw
SMART

Continuation systems for FY 1990 under the Local Bus New Service program, shown on Map C-8, are anticipated to require $2.5 million. Performance data for systems operating in FY 1988 are shown on Table C-13. Funding requirements for FY 1990 starts are not known at this time. Applications are accepted on an ongoing basis from interested communities.

Rural Connector Service

BATA
Benton Harbor - St. Joseph
Berrien Co.
Kalamazoo Co.
Isabella Co.
Muskegon Co.

- Statutory maximums of 40 percent of eligible operating expenses for urban transit systems and 50 percent for nonurban systems, limited by a growth cap. The 70 percent allocation of CTF program funds provides $102 million for this purpose. It is estimated that an additional $1.4 million will be required for Supplemental Operating Assistance.

- Continuation and expansion of the Rural Connector demonstration project that offers local bus connections for intercity travelers. The concept is to use existing local transit services to meet intercity bus arrival and departure schedules at central locations and transport passengers to communities not directly served by private intercity carriers.

Now we're connected . . .

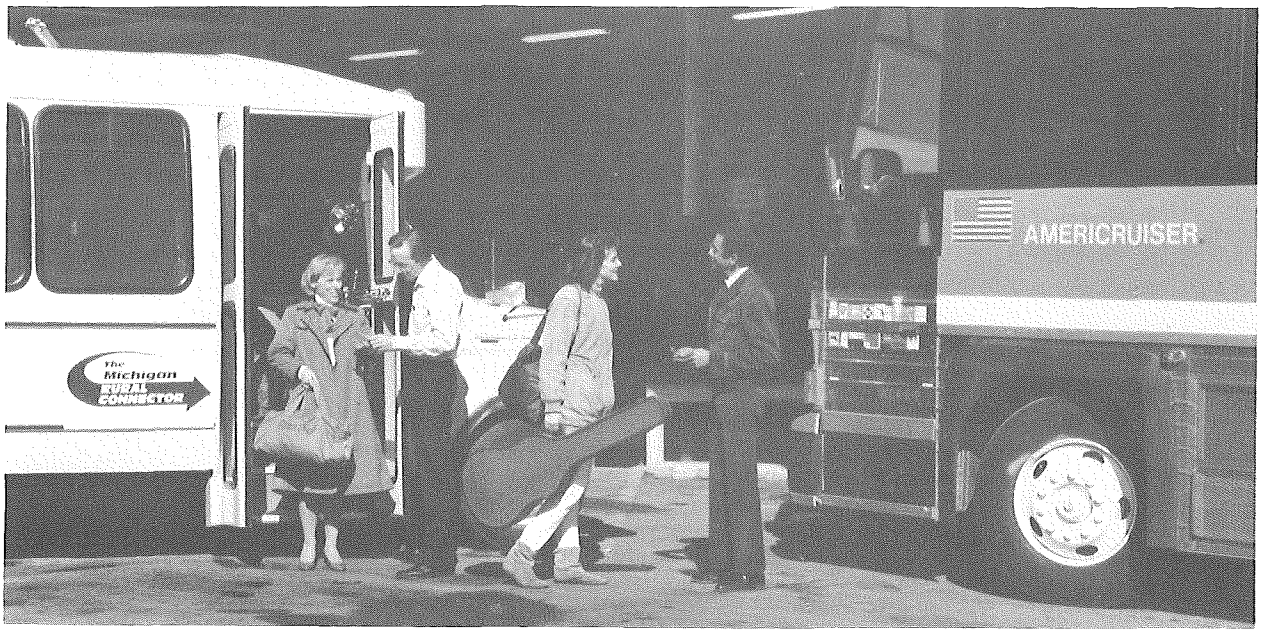
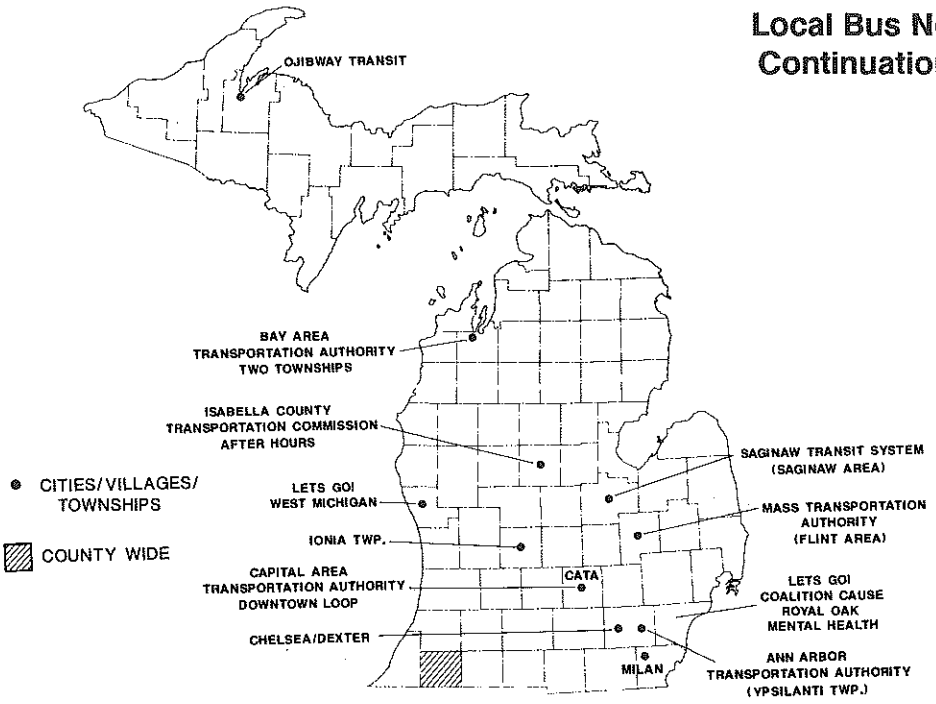


TABLE C-13

FY 1988 PERFORMANCE DATA
Local Bus New Services

Location	Vehicles: Regular	Vehicles: Lift-Equipped	Passenger	% Seniors and Handicappers
Cass Co.	5	3	10,997	49
Chelsea/Dexter	0	2	14,748	10
Flint	7	5	13,145	95
Greater Lapeer	3	3	31,190	72
Milan	0	3	45,444	39
Saginaw Co.	0	1	17,988	NA
SEMTA LETS GO	13	7	137,322	100
Ypsilanti Twp.	0	2	36,213	15
Totals	**28**	**26**	**307,047**	

MAP C-8
Local Bus New Service Continuation Systems



AVIATION

Michigan's corporations depend on air services to remain competitive in the world marketplace.

AVIATION

HIGHLIGHTS

Airports are among one of the most important and widely used transportation facilities in Michigan. The system is composed of 240 airports and flying fields throughout the state. While scheduled passenger service represents the bulk of users, many of our citizens make daily use of airports through mail and commodities that have been shipped through the state's airports.

Of the 240 airports, 126 are owned by governmental bodies. Michigan airports are typically owned by cities and counties, or by semi-independent authorities formed by these jurisdictions. It is through many years of cooperation between these jurisdictions and state/federal agencies that Michigan sustains a quality system of airports and air service.

The airport development program emphasizes capacity and preservation of publicly-owned facilities across the state. Forty-nine percent of the $35 million state aeronautics program is devoted to increasing the capacity improvements at existing airports, while fifty-one percent of the program is targeted at preserving existing facilities.

Thirty-two airports are scheduled for projects during the 1989-90 fiscal year. Of that total, 27 have either capacity or reconstruction or a combination of both types of projects. To maintain a quality system and a high level of service, the majority of the aviation budget must be devoted to these development items.

Airports at Alma, Bad Axe, Bay City, Benton Harbor, Charlevoix, Jackson, and Traverse City have major projects devoted to preserving the surface condition of existing runways and taxiways, and maintaining existing facilities. Saginaw, Tri-City, and Evart have over $1 million in project funds for this purpose. Detroit Metro, Howell, Lansing, and Marquette are also scheduled for major projects aimed at preserving or enhancing airport capacity.

AIRPORT SYSTEM

Michigan citizens are afforded access to the national air transportation system through airports located throughout the state. Two types of airports are commercial service and general aviation.

Commercial service airports are defined as those airports having 2,500 or more annual boarding passengers (enplanements). There are currently 20 commercial service airports in Michigan. Primary commercial service airports are defined as those airports having 10,000 or more yearly enplanements. There are currently 7 to 12 primary airports among the 20 commercial service airports in Michigan. These airports receive annual enplanement dollars based upon passenger counts.

General aviation airports accommodate all other activity from crop dusting to passenger and cargo charters. Medical transport, business and executive flying, air-taxi, flight training, personal transportation, and many other industrial and recreational uses are accommodated at general aviation facilities. There are currently 220 general aviation airports in Michigan. Of them, 106 are publicly-owned and operated. One hundred fourteen are privately-owned and open to the public. These airports do not receive public funds but are widely used for corporate and utility purposes. These airports are being squeezed out by competing land uses and increasing insurance and liability costs.

Reliever airports are general aviation airports which serve to reduce capacity problems at the larger commercial service airports. Michigan reliever systems center around the southeast metropolitan area. Currently, six primary relievers are Willow Run, Oakland-Pontiac, Grosse Ile, Port Huron, Monroe, and Howell. FAA's funding act provides that 10 percent of federal funds be reserved for these airports.

REVENUE SOURCES

Funding for aviation projects comes from federal grants, state tax on airplane fuel, and local taxes. Tax on airline passenger tickets provides the bulk of federal funds. The chief source of income for state funds is the aviation fuel tax.

Federal grants are appropriated through the Airport and Airways Trust Fund. These grants fund airport projects that are on the National Plan of Integrated Airport System (NPIAS). To be placed on the NPIAS listing, an airport must serve a minimum of aircraft, must not duplicate existing service of another facility in the same general service area, and must be included in the Michigan Aviation System Plan (MASP). Justification for improvements, such as runway extensions, must be substantiated before funds are made available.

Prior to any allocation of state or federal funds for a project, local revenue must be budgeted for the local match. State and local funds are used to match federal aid on a 50/50 ratio. If the state is unable to participate, projects are funded on a 90 percent federal and 10 percent local basis. Projects not receiving federal aid are usually funded on a 50/50 basis by state and local funds.

The estimated revenues by source that are available for construction projects for 1990 are shown below:

	A List	B List	Total
Federal Aid	$26,082,124	$3,828,622	$29,910,746
State Funds	1,310,117	204,001	1,514,118
Local Funds	3,262,898	245,402	3,508,300
TOTAL	**$30,655,139**	**$4,278,025**	**$34,933,164**

The **A List** contains sufficient projects to use the minimum expected funding. The **B List** adds sufficient projects to bring the cost up to the maximum funding that can be expected.

As with highways, there is a large balance in the Aviation Trust Fund. If the balance was made available for use, needed additional improvements to Michigan airports and the services they provide to Michigan's citizens could be made.

PRIORITIES AND PROGRAM CATEGORIES

State funds are allocated to projects on the basis of the following priorities:

1. **Safety - lighting, approach clearing, land, and runway surfaces.**

2. **Primary Airside - primary runways, taxiways, aprons, and associated land.**

3. **Secondary Airside - secondary runways, taxiways, aprons, and related development.**

4. **Primary Landside - terminal buildings, access roads, tie downs, and T-hangar taxiways.**

5. **Secondary Landside - fencing, storage buildings, and service roads.**

All projects in the first priority are funded before succeeding priorities. State funding is sufficient to allow the state to participate in projects into priority four. The remaining projects are funded without state participation on a 90 percent federal and 10 percent local basis.

Program categories are used to group and identify similar types of projects. A category may contain projects from all of the priorities previously discussed. The eight categories and their total funding are:

1. **Special Programs/Safety** **$2,055,500**

   This category includes projects which respond to federal safety and security requirements. It also includes economic development projects of special significance.

2. **Reconstruction** **$10,950,400**

Projects that are required to preserve, repair, or restore the functional integrity of the landing area are included in this category. Typical projects are rehabilitation of pavements and replacement or rehabilitation of lighting systems. Routine maintenance, such as crack sealing, is excluded.

3. **Standards** **$2,684,259**

This category includes projects which bring existing airports up to recommended standards established for the current classification of the airport.

4. **Upgrading the Airport Role** **$120,000**

Projects in this category are designed to enable an airport to handle larger aircraft and longer nonstop routes. For example, extending or strengthening a runway to accommodate larger aircraft is an upgrade.

5. **Capacity Development (Capacity)** **$16,991,005**

This category is oriented towards development of increased airport capacity beyond its present use. Typical development includes new runways, apron and terminal expansion.

6. **New Airports - Capacity** **$-0-**

These projects are constructed to increase metropolitan system capacity. The category includes all new reliever airports and new commercial service airports.

No projects are programmed for this category in 1990.

7. **New Airports - Community** **$-0-**

This category is used for any new airport which will be the sole airport serving a community and is usually a general aviation airport. A small number of commercial service (new or replacement) airports outside of large metropolitan areas may also be included.

8. **Equipment and Buildings** **$2,132,000**

This category includes maintenance equipment and buildings.

Each of the eight categories has been grouped into the broader preserve, improve, and expand designations. In relation to aviation, **preserve** is defined as maintaining existing air service, equipment, and facilities. **Improve** increases the capacity or service of existing airports. **Expand** provides a new service or facility. Increasing service to an existing airport would also be an expansion.

The funding for 1990 by the program categories and by preserve, improve, and expand are shown on the following page.

AVIATION PROJECTS SUMMARY

Priority A & B Lists

	Total	Federal	State	Local
PRESERVE				
Safety/Special Projects	$ 2,055,500	$ 1,849,950	$ 93,275	$ 112,275
Reconstruction	10,950,400	9,855,360	547,520	547,520
Standards	2,684,259	2,415,832	64,423	204,004
Building & Equipment	2,132,000	1,897,200	49,600	185,200
Subtotal	**$17,822,159**	**$16,018,342**	**$ 754,818**	**$1,048,999**
IMPROVE				
Upgrade Role	$ 120,000	$ 108,000	$ 6,000	$ 6,000
Capacity Development	16,991,005	13,784,404	753,300	2,453,301
Subtotal	**$17,111,005**	**$13,892,404**	**$ 759,300**	**$2,459,301**
EXPAND				
Special Projects	$ 0	$ 0	$ 0	$ 0
New Airports - Capacity	0	0	0	0
New Airports - Community	0	0	0	0
Subtotal	**$ 0**	**$ 0**	**$ 0**	**$ 0**
TOTALS	**$34,933,164**	**$29,910,746**	**$1,514,118**	**$3,508,300**

APPENDIXES

HIGHWAY PROJECTS

HIGHWAY PROJECTS by PROGRAM CATEGORY
FY 1990
data base as of 01/31/89

April 19, 1989

CATEGORY: 1. PRESERVE

WORK TYPE: 11. TRAFFIC OPERATIONS

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
169	I-94 TO CHARLOTTE	SIGN UPGRADE	415,800	23.1
M28	US2 TO US45	SIGN UPGRADE	198,000	40
US23	S CO L TO M55	SIGN UPGRADE	37,400	8.6
US23	M55 TO ALCONA N CO L	SIGN UPGRADE	214,500	48.8
M37	N/I96 TO 7 MILE ROAD	SIGN UPGRADE	13,200	3.8
M37	7 MILE ROAD TO ALPINE AVE	SIGN UPGRADE	4,400	1.4
M37	ALPINE AVE TO N JCT M46	SIGN UPGRADE	40,700	12.2
I75	N/MACK BRG TO INT	SIGN UPGRADE	660,000	52
US23	OHIO ST L TO I94	SIGN UPGRADE	660,000	33.4
M37	N JCT M46 TO N CO L	SIGN UPGRADE	147,400	43.5
I75	S CO L TO DIXIE HWY	SIGN UPGRADE	440,000	33.8
I96/27	M102 TO I275 S JCT	SIGN UPGRADE	54,050	54
M28	US45 TO HOUGHTON E CO L	SIGN UPGRADE	134,000	26.9
I75	M33 TO US27	SIGN UPGRADE	276,000	47
I69	W CO L TO CHURCH ROAD	FREEWAY SIGN	230,000	8.5
		WORK TYPE:TRAFFIC OPERATIONS	TOTAL 3,525,450	437

WORK TYPE: 12. SAFETY

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
M28	G03 AT WC RAILROAD	RAILROAD CROSSING	49,000	0
M28	AT G03 WC RAILROAD	RAILROAD APPR	41,400	0
M89	G02 AT CR RAILROAD	RAILROAD CROSSING	40,000	0
M89	AT G02 CR RAILROAD	RAILROAD APPR	21,850	0
US23	G01 AT D & M RAILROAD	RAILROAD CROSSING	54,000	0
US23	AT G01 D & M RAILROAD	RAIL ROAD APPR	33,350	0
US23	S/M61 TO SCL STANDISH	WIDEN 5 LANES	315,700	0.4
M65	G02 AT D & M RAILROAD	RAILROAD CROSSING	89,000	0
US141	G01 AT WC RAILROAD	RAILROAD CROSSING	72,000	0
M66	G02 AT CSX RAILROAD	RAILROAD CROSSING	34,000	0
M25	AT HENRY ROAD IN BAY CITY	IMPROVE LANE	115,000	0.1
US12BR	G01 AT CR RAILROAD	RAILROAD CROSSING	125,000	0
US12BR	AT G01 CR RAILROAD	RAILROAD APPR	59,800	0
US12	G01 AT GTW RAILROAD	RAILROAD CROSSING	95,000	0
M66	M-66 AND M-32	INTERSECTION RECONSTRUCTION	150,650	0.2
M72	G02 AT D & M RAILROAD	RAILROAD CROSSING	46,000	0
M72	G02 AT D & M RAILROAD	RAILROAD SIGNAL	40,000	0
M100	AT M43, GRAND LEDGE	RIGHT TURN	103,500	0.1
M100	M43 TO WILLOW HWY, GRAND LEDG	CENTER TURN LANE	330,000	0.5
M54	AT DAVISON ROAD, FLINT	INTERSECTION IMPROVEMENT	182,850	0
M54	AT MAPLE ROAD, BURTON	CENTER TURN LANE	201,250	0.1
M113	GO-1 AT T&SB RAILROAD	RAILROAD SIGNAL	7,000	0
M46	G02 AT MM RAILROAD	RAILROAD CROSSING	220,000	0
M203	G01 SL RAILROAD. HANCOCK	CROSSING REMOVAL	103,500	0
M142	G01 AT H&E RAILROAD	RAILROAD CROSSING	173,000	
M142	AT G01 H&E RAILROAD	RAILROAD APPROACH	60,950	0
M66	AT TUTTLE ROAD INTERSECTION	INTERSECTION IMPROVEMENT	212,750	0.3
M66	AT G02 CM RAILROAD	RAILROAD REMOVAL	37,950	0
I94BL	G01 AT CR RAILROAD & G02	RAILROAD SIGNAL	156,000	0
I196	AT M45	TOWER LIGHTING	56,350	0
M45	G01 AT CR RAILROAD	RAILROAD CROSSING	66,000	0
M45	G02 AT CSX RAILROAD	RAILROAD CROSSING	39,000	0

M45	AT GO1 CSX RAILROAD & GO2	RAILROAD APPROACHES		37,950	0
US131	RAMPS TO WESTON	REPLACE LIGHTS		63,250	0
M156	AT GO1 LC RAILROAD, MORENCI	RECONSTUCT & APPROACHES		74,750	0
M52	GO4 AT LC RAILROAD	RAILROAD CROSSING		70,150	0
M97	AT HAYES ROAD, ROSEVILLE	INTERSECTION IMPROVEMENTS		115,000	0.1
US31	GO2 AT CSX RAILROAD	RAILROAD CROSSING		88,000	0
US31	AT GO2 CSX RAILROAD	RAILROAD APPROACH		32,200	0
US41BR	SL RAILROAD TO FOURTH ST, MAR	UTILITY RELOCATION		330,000	1.2
US41BR	AT RUBLIEN ST, MARQUETTE	CENTER TURN LANE		385,000	0.2
US31	GO1 AT C&O RAILROAD	RECONSTRUCT CROSSING		73,000	0
US31	AT GO1 C&O RAILROAD	APPROACH		48,300	0
M125	AT LUNA PIER & LAKESIDE ROADS	INTERSECTION IMPROVEMENTS		189,750	0
M50	GO3 AT GTW RAILROAD	RAILROAD CROSSING		99,000	0
M50	AT GO3 GTW RAILROAD	RAILROAD APPROACH		40,250	0
M91	SOUTH OF GREENVILLE	GURAD RAIL UPGRADE		19,550	0
M91	NORTH OF GREENVILLE	GURAD RAIL UPGRADE		18,400	0
M120	GO1 AT CSX RAILROAD	RAILROAD CROSSING		69,000	0
I96BL	GO1 AT CSX RAILROAD	RAILROAD CROSSING		59,000	0
I96BL	AT GO1 CSX RAILROAD	RAILROAD APPROACH		72,450	0
M82	AT WARNER & 72ND STREETS	INTERSECTION REVISIONS		230,000	0.5
M59	EAST BLVD TO CLINTON ROAD	GURAD RAIL UPGRADE		177,100	11.7
US45	GO1 AT WC RAILROAD	RAILROAD CROSSING		87,000	0
US45	AT GO1 WC RAILROAD	RAILROAD APPROACH		27,600	0
US31BR	AT 8TH STREET, HOLLAND	INTERSECTION IMPROVEMENTS		248,400	0
M104	BUCHANAN ST TO DEWIT LANE	GUARD RAIL UPGRADE		51,750	0
M65	GO1 AT D&M RAILROAD	RECONSTRUCT CROSSING		19,000	0
M65	AT GO1 D&M RAILROAD	APPROACH PAVING		18,400	0
M13	GO2 AT CM RAILROAD	RAILROAD CROSSING		107,000	0
M13	AT GO2 CM RAILROAD	RAILROAD APPROACH		80,500	0
M77	GO1 AT WC RAILROAD	RAILROAD CROSSING		58,000	0
M77	AT GO1 WC RAILROAD	RAILROAD APPROACH		41,400	0
M136	AT KRAFFT	LEFT TURN LANE		161,000	0.2
M40	AT MICHIGAN AVENUE	INTERSECTION REVISION		57,500	0
M52	GO1 AT CR RAILROAD	RAILROAD CROSSING		130,000	0
M52	AT GO1 CR RAILROAD	RAILROAD APPROACH		55,200	0
US24	M153 TO CHERRY HILL	CONSTRUCT CROSSOVERS		440,000	0.9
M102	GO1 AT CR RAILROAD & GO2	RAILROAD CROSSING		88,000	0
M102	AT GO1 CR RAILROAD & GO2	RAILROAD APPROACHES		80,500	0
M85	GODDARD TO EUREKA	RECONSTRUCT CROSSOVERS		467,500	1.6
I275NM	GO1 AT CSX RAILROAD	RAILROAD CROSSING		13,000	0
		WORK TYPE:SAFETY	TOTAL	7,855,700	18.1

WORK TYPE: 13. BRIDGE REHABILITATION

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I196	S01 UNDER OLD US-31	DECK OVERLAY	638,000	0
M63	R01 OVER C&O RAILROAD	PAINTING	1,210,000	0
I75NB	R02 OVER D&M RAILROAD	OVERLAY & PAINTING	759,000	0
M95	B-1 OVER MINOMINEE RIVER	STRUCTURE REPLACEMENT	57,500	0
I75	AT S07 UNDER GRAND BLANC RD	DECK OVERLAY	616,000	0
US127	OVER BEECHER CREEK	STRUCTURE REPLACEMENT	200,100	
I96	OVER US-31	PAINT STEEL & REPLACE PINS & HA	1,067,000	0
I196	OVER GRAND RIVER	DECK OVERLAY	5,060,000	0
US131	S08 UNDER 32ND AVENUE & 4 OTH	DECK REPLACEMENT	902,000	0
US131N	S15 OVER US131SB AND I196WB	DECK OVERLAY	2,750,000	0
I96	UNDER NICHOLSON RD	PAINT & OVERLAY	276,000	0
I94	AT S06 UNDER 10 MILE ROAD	SUBSTRUCTURE REPAIR	276,000	0
I94	UNDER M-59	PAINT P & H REPLACEMENT	638,000	0
I75	UNDER I-75 AND M-125	PAINT P & H REPLACEMENT	221,950	0
US31	OVER N. CHANNEL MUSKEGON RIVE	UNDERWATER REPAIRS	207,000	0
M37	AT C&O RAILROAD	STRUCTURE REPLACEMENT	723,800	0
I94BL	OVER BLACK RIVER	STRUCTURE REPLACEMENT	9,487,501	0
I196	S04 I-96 UNDER M-140	DECK OVERLAY	814,000	0
I94	S03 UNDER RAWSONVILLE RD	PAINTING & PINS & HANGERS	342,100	0
I94	S12 UNDER US-12	PINS AND HANGERS	533,500	0
I94	S04 UNDER SALINE RD	PAINTING & PINS & HANGERS	230,000	0
I94	S23EB OVER OUTER DRIVE	PAINTING	115,000	0
I94	X03 UNDER CR RAILROAD	STRUCTURE REPAIR	161,000	0

M10	WISCONSIN TO IUT @ 16 STRUCTU	PAINTING	851,200	0
I96	S03 OVER I-96	PAINTING	1,115,400	0
I96	OVER C & O RAILROAD	PAINTING	1,270,500	0
I96	AT S02 UNDER BUCHANAN & MYRTL	OVERLAY & SUB REPAIR	1,681,900	0
I75	S09 UNDER WATERMAN	DECK OVERLAY	1,414,600	0
		WORK TYPE:BRIDGE REHABILITATION	TOTAL 33,619,051	0

WORK TYPE: 14. RESURFACE

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I196	S APPROACH TO BRIDGE OVER KZ	RESUFACE	80,500	0.1
M66	M-66 FROM CHURCH ST NORTH	BITUMINOUS SURFACE	132,250	0.6
I94BL	COLFAX TO 4TH STREET	MILL & RESURFACE	101,200	0.3
I94	ST JOSEPH TO EMPIRE	RESURFACE & JOINTS	2,420,000	3.7
US31	FROM RIVER ST TO M-140	BITUMINOUS SURFACE	188,600	1.3
M51	FROM POKAGON ST TO DULIN ST	BITUMINOUS SURFACE	126,500	0.6
I69	INTERSECTION AT COPELAND	RESURFACE	253,000	0
US12	M-60 TO EDWARDSBURG	BITUMINOUS SURFACE	778,800	8.1
M40	M-60 TO M-216	BITUMINOUS RESURFACE	877,800	8.8
M32	M66 TO B01, EAST JORDAN	MILL & RESURFACE	239,800	0.5
US23	SUTHERLAND TO M-27 CHEBOYGAN	MILL, PULVERIZE	451,000	0.9
I75SB	US27 TO I75SB	RUBLE & RESURFACE	1,210,000	3.9
I75	M-93 TO COUNTY LINE	MILL & RESURFACE	1,595,000	10.1
M18	COUNTY LINE NORTHERLY TO M72	SEAL COAT	407,000	8.7
US2	FH 13 TO M183	PULVERIZE & RESURFACE	1,115,400	8.1
M113	M186 TO US131	WIDEN & RESURFACE	486,200	4.2
M143	HOMER TO BRODY, EAST LANSING	MILL & RESURFACE	588,500	0.6
M55	CHAMBERS TO KOBS	RESURFACE & SHOULDERS	286,000	4.7
M50	STONE LAKE TO BROOKLYN	RESURFACE & MILL	478,500	3.4
I94BL	SOUTH TO MICHIGAN	MILL & RESURFACE	289,300	0.5
M11	CHICAGO DRIVE TO M-37	MILL & RESURFACE	1,100,000	8.4
M22	M109 TO WESTMAN ROAD	WIDEN & RESURFACE	379,500	2
M34	BEECHER RD TO LYONS RD	RESURFACE & BIT SHLDRS	522,500	3.7
M34	LYONS TO US223	RESURFACE & SHOULDERS	125,350	1.1
M95	COUNTY ROAD LLK TO US41	RESURFACE &SHOULDERS	577,500	6.4
US41	CHIPPEWA ST TO CTY RD 492	RESURFACE	1,303,500	6.8
M116	ROBERT TO TINKHAM	MILL & RESURFACE	297,000	0.9
US41	INGALS TO OAKWOOD, BAGLEY	RESURFACING & JOINT REPAIR	1,314,500	12.6
CO RD	LA BRANCHE TO E CO LINE	UPGRADE & RESURFACE	3,162,500	9.6
M46	PINE STREET TO GETTY STREET	WIDEN & RESUFACE	1,210,000	0.9
M24	HARMAN RD TO END OF DIVIDED H	BITUMINOUS OVERLAY	3,295,600	5.1
US23	COUNTY ROAD 638 TO M65	MILL & RESURFACE	770,000	5.8
US27	LONG LAKE RD TO CANOE CAMP RD	MILL & PULVERIZE	2,145,000	7
I75	BRIDGEPORT INTCH TO M13	OVERLAY, CONCRETE PATCHING	8,861,600	7.7
I75	M54/M83 TO BRIDGEPORT INTCH	OVERLAY, CONCRETE PATCHING	8,321,500	8.5
M66	US-12 TO NCL OF STURGIS	MILL BITUMINOUS RESURFACE	134,550	0.8
M40	FROM SVL OF LAWTON TO G01	MILL BITUMINOUS RESURFACE	194,350	0.7
M14	HURON RIVER TO US-23	RESURFACING	752,400	1.5
M17	SUMMIT HURON TO HAMILTON	MILL & RESURFACE	333,500	0.5
US12	VINEWOOOD TO US10	RESURFACE	792,000	2.3
I96	SCHAEFER TO I75	OVERLAY	6,299,700	7.6
M1	8 MILE TO 6 MILE, DETROIT	MILL & RESURFACE	3,404,500	2.2
		WORK TYPE:RESURFACE	TOTAL 57,402,400	171.2

WORK TYPE: 15. RESTORATION & REHABILITATION

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
M66M50	NASHVILLE-M50 & M66-IONIA CL	BITUMINOUS SHLDRS	533,500	14
M66	M-50 TO IONIA CL	CONCRETE JOINT PATCHES	93,150	1.2
I75BLW	I75 TO WEST CITY LIMITS, BAY	PAVEMENT REHABILITATION	539,000	1.2

US10WB	MIDLAND-BAY RD TO I75 W CTY L	SONIC RUBBLIZING CONCRETE PAVEM	896,500	2
US10WB	CARTER ROAD TO 3 MILE ROAD	PAVEMENT REHABILITATION	3,569,500	7.9
US10WB	3 MILE ROAD TO I75	PAVEMENT REHABILITATION	497,200	1.1
I94	STATE LINE TO LAPORTE ROAD	JOINTS & PATCHING	817,300	1.5
M60TB	AT BARREN LAKE ROAD	MISCELLANEOUS REHABILITATION	13,800	0.1
I75	CHIPPEWA CL TO INTL BRIDGE	BITUMINOUS SHOULDER REPLACEMENT	2,200,000	26.8
US27BR	I96 TO WAVERLY	JOINT REPAIR	1,067,000	3.7
M99	SPICERVILLE ROAD TO M50	MILL & RESURFACE	551,100	1.4
M25	AT SCHAAF DRAIN	DRAIN ASSESS	5,800	0
I96	M-52 TO E CO LINE	SAW & SEAL REFLECTIVE CRACKS	74,750	2.6
I94EB	WEST COUNTY LINE TO MICHIGAN	RECYCLE & 3 STRCUTURES	4,440,700	6.3
I96	GRAND RIVER TO THORNAPPLE RIV	SAW CUT & SEAL ALL REFLECTIVE C	319,000	15.3
I96	24TH STREET TO GRAND RIVER	RESURFACE & SHOULDERS	3,190,000	10
US131	M11 TO 6TH ST	SKID PROOFING	998,800	4.2
M52	OHIO STATE LN TO S. ST, ADRIA	CONC PAVT PATCHING	946,000	11
US23	SILVER LAKE RD TO I96	PAVEMENT PATCHING/BRDG DECK REP	2,090,000	4.7
I96	M59 TO CHILSON ROAD	CONCRETE RECYCLING	7,943,100	5.6
I75	POST RD AT I275 TO N CO LINE	CONCRETE RECYCLING	13,242,900	6.6
M28	EWEN AIRPORT ROAD EAST	PULVERIZE & RESURFACE	1,553,200	3.5
I94	FREER ROAD TO I94BL	JOINT REPAIR	286,000	11.1
US24SB	ECORSE ROAD TO JOY ROAD	PATCH & OVERLAY	1,740,200	7.1
M115	M55 TO STONE LEDGE LK	MILL & REHABILITATE PAVEMENT	1,108,800	3.8
		WORK TYPE:RESTORATION AND REHABILITATION TOTAL	48,717,300	152.7

WORK TYPE: 16. RECONSTRUCTION

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I94WB	WEIGH STATION, NEW BUFFALO	BUILDING	149,500	0
M66	8TH STREET, E JORDAN TO M32	PULVERIZE & RESHAPE BIT PAVEMEN	360,800	0.7
M75	BOYNE CITY TO STATE STREET	RESURFACE & SEWER	1,466,300	2.3
M183	VANS HARBOR RD TO TEMPLE ST	RECONST, PVD SHLDR GUT, STRM SE	497,200	0.8
US41	M203 TO COBURN TOWN RD	RECONSTRUCTION AND DRAINAGE	2,382,600	2.2
I75BL	I75 BUSINESS LOOP, MACKINAC C	REMOVING PAVE & BIT SURFACE	1,025,200	1.8
I96	MILFORD RD	INTCH UPGRADE & STRUCTURE WIDEN	4,158,000	0
I75	AT AMBASSADOR BRIDGE	SR &STR	2,258,300	0
		WORK TYPE:RECONSTRUCTION TOTAL	12,297,900	7.8

WORK TYPE: 17. MINOR WIDENING

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
M89	AT DIX ROAD, OTSEGO	CENTER TURN LANE	126,500	0
I94BL	AT GLENLORD ROAD	INTERSECTION IMPROVEMENTS	227,700	0.2
M54	AT M57	CENTER TURN LANE	281,750	0.3
M106	ROSEHILL TO PORTAGE	WIDEN & RESURFACE & SHOULDERS	494,500	2.9
		WORK TYPE:MINOR WIDENING TOTAL	1,130,450	3.4

WORK TYPE: 18. ROADSIDE FACILITIES

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
US131	102ND AVE TO M89	FENCE REPLACEMENT	59,800	0
I94BL	AT CRYSTAL AVE INTERCHANGE	FENCE REPLACEMENT	31,050	0
I69	COLDWATER WELCOME CENTER	LAGOON UPGRADE	440,000	0

I75	14 MILE ROAD TO 17 MILE ROAD	INTERMITANT FENCING		134,550	0
I75NB	AT REST AREA NEAR BRIDGEPORT	SANITARY SEWER		440,000	0
US131	KERR CREEK ROAD TO HOFFMAN RD	FENCE REPLACEMTNT		25,300	0
		WORK TYPE:ROADSIDE FACILITIES	TOTAL	1,130,700	0

CATEGORY: 2. IMPROVE

WORK TYPE: 21. CAPACITY IMPROVEMENT

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I75BL	GRAYLING TO AUSABLE RIVER	ADD TURN LANE	902,000	1
US2	US41 EASTERLY	WIDEN & RECONSTUCT & STRUCTURE	921,800	0.7
M54	LEITH ST TO STEWARD ST	WIDENING TO 5 LANES WITH CURB &	2,874,300	1.2
I96	AT OKEMOS INTERCHANGE	INTERCHANGE IMPROVEMENT	2,577,300	0
M44	I-96 TO 3 MILE ROAD	RECONSTRUCTION TO A 2@24' BOULE	4,400,000	2.9
M22	M72 TO NORTH CEDAR CREEK	WIDEN TO 3 LANES WITH CURB & GU	1,138,500	1.4
US1031	BRYE RD EAST TO SCTV	WIDEN TO 5 LANES WITH CURB & GU	7,788,001	4.3
M25	KRAFFT TO KEEWAHDIN	WIDEN TO 5 LANES WITH CURB & GU	1,034,999	0.7
		WORK TYPE:CAPACITY IMPROVEMENT	TOTAL 21,636,900	12.2

WORK TYPE: 22. BRIDGE REPLACEMENT

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I75	UNDER WALTON BLVD.	REPLACE STRUCTURE	1,437,500	0
I75	AT CROOKS RD	CONSTRUCT NEW SB STRUCTURE	2,200,000	0
		WORK TYPE:BRIDGE REPLACEMENT	TOTAL 3,637,500	0

WORK TYPE: 24. ROADSIDE FACILITIES

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I94	NEW BUFFALO WELCOME CENTER	REST AREA LANDSCAPING	345,000	0
US27	CLARE WELCOME CENTER	REST AREA BUILDING	3,080,000	0
US31	3 MILE ROAD TO BUNKER HILL RD	NON MOTORIZED PATH	178,250	0
I496	AT US127 INTERCHANGE	NON MOTORIZED PATH	173,651	0
I75BL	GTW RAILROAD TO WOODWARD AVE	BLVD LANDSCAPING	86,250	0
I94	AT M39 INTERCHANGE	LANDSCAPING	440,000	0
US24	JOY ROAD TO M5	LANDSCAPING	97,750	0
		WORK TYPE:ROADSIDE FACILITIES	TOTAL 4,400,901	0

CATEGORY: 3. EXPAND

WORK TYPE: 31. NEW ROUTES

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I696	WESTERN TO FAIRFIELD	LANSCAPING	264,500	2.8
I696	LONGFELLOW TO I75	LANSCAPING	143,750	1.2
I696	GREENFIELD TO 10 MILE	RECONSTRUCT & WIDEN	1,320,000	0.8
I696	I-696 TO 12 MILE ROAD	CONSTRUCT A 6 LANE DIVIDED ROAD	15,950,000	0.5
		WORK TYPE:NEW ROUTES	TOTAL 17,678,250	5.3

WORK TYPE: 32. NEW ROUTES

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
US31	WALTON ROAD TO MATTHEW ROAD	FREEWAY PAVING	3,637,700	2.3
US31	MATTHEW ROAD TO LAKE CHAPIN R	GRADING & DRAINAGE STRUCTURES	4,609,000	3.6
US31	LAKE CHAPIN ROAD TO SNOW ROAD	GRADING & DRAINAGE STRUCTURES	7,581,200	0.7
US31	SNOW ROAD TO EXISTING US-31	GRADING & DRAINAGE STRUCTURES	6,743,000	2.5
M53	27 MILE RD TO 37 MILE RD	CONSTRUCT A RELOCATED 2 LANE RO	12,615,500	7.7
M53	G01 NEAR 32 MILE ROAD	RAILROAD CROSSING	184,000	0
		WORK TYPE:RELOCATION	TOTAL 35,370,400	16.8

WORK TYPE: 33. ROADSIDE FACILITIES

ROUTE	LOCATION	WORK TYPE	TOTAL COST	DISTANCE
I94WB	AT WEIGH STATION NEAR NEW BUF	WELL & MISCELLANEOUS	149,500	0
I696	I75 TO SERVICE ROAD CROSSOVER	NOISE BARRIER	1,668,700	1
I75	NEAR CLARKSTON ROAD	CONSTRUCT NOISE BARRIERS	1,034,000	0.32
I75	EAST OF M-15	CONSTRUCT SOUND BARRIER	396,000	0.34
		WORK TYPE:ROADSIDE FACILITIES	TOTAL 3,248,200	1.66

AVIATION PROJECTS

BUREAU OF AERONAUTICS
1990 CAPITAL OUTLAY PROGRAM
PRIORITY A PROJECTS

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 1 SPECIAL PROGRAMS/SAFETY		
ALMA GRATIOT COMMUNITY	AIRPORT LIGHTING	$200,000
ALPENA PHELPS COLLINS	RUNWAY GROOVING	$100,000
BAY CITY JAMES CLEMENTS	MEDIUM INTENSITY RWY LTG	$85,000
CHARLOTTE FITCH H BEACH	RWY OBSTRUCTION REMOVAL	$30,000
DETROIT WILLOW RUN	SECURITY FENCING	$250,000
HOWELL LIVINGSTON COUNTY	AIRPORT LIGHTING SECURITY FENCING	$215,000 $168,000
MARQUETTE MARQUETTE COUNTY	UTILITY RELOCATION	$240,000
MUSKEGON MUSKEGON COUNTY	OBSTRUCTION REMOVAL	$360,000
SAGINAW TRI CITY INTERNATIONAL	RADIO CONTROL GENERATOR	$20,000 $120,000
	CATEGORY TOTAL	$1,788,000
CATEGORY 2 RECONSTRUCTION		
ALMA GRATIOT COMMUNITY	RUNWAY REHABILITATION RUNWAY REHABILITATION TAXIWAY REHABILITATION	$200,000 $250,000 $20,000
ALPENA PHELPS COLLINS	RUNWAY REHABILITATION MEDIUM INTENSITY RWY LTG	$750,000 $150,000

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 2 RECONSTRUCTION (CONT'D)		
BAY CITY JAMES CLEMENTS	RUNWAY REHABILITATION APRON REHABILITATION	$414,000 $451,200
BENTON HARBOR ROSS FIELD	DRAINAGE REHABILITATE RWY LIGHTING	$600,000 $100,000
CADILLAC WEXFORD COUNTY	RUNWAY REHABILITATION	$300,000
CHARLEVOIX CHARLEVOIX MUNI	RUNWAY OVERLAY APRON REHABILITATION	$560,000 $144,000
CHARLOTTE FITCH BEACH	RUNWAY REHABILITATION	$250,000
EVART EVART MUNI	NEW TAXIWAY CONSTRUCT NEW APRON PRIMARY RWY CONSTRUCTION	$88,000 $61,000 $1,020,000
GRAND HAVEN GRAND HAVEN MEML AIRPARK	RUNWAY REHABILITATION APRON REHABILITATION	$260,000 $144,000
JACKSON JACKSON COUNTY/ REYNOLDS FIELD	RUNWAY REHABILITATION	$692,000
SAGINAW TRI CITY INTERNATIONAL	APRON REHABILITATION APRON REHABILITATION	$1,461,000 $1,679,000
TRAVERSE CITY CHERRY CAPITAL	RUNWAY REHABILITATION APRON DRAINAGE	$325,000 $250,000
	CATEGORY TOTAL	$10,169,200

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 3 STANDARDS		
CHARLEVOIX CHARLEVOIX MUNI	LAND-EASEMENT	$175,000
CHARLOTTE FITCH BEACH	CLEARING LAND FOR EXISTING AIRPORT	$10,000 $50,000
DETROIT WILLOW RUN	CLEARING	$133,334
EVART EVART MUNI	**LAND FOR EXISTING AIRPORT**	**$100,000**
FLINT BISHOP INTERNATIONAL	LAND-ACQUISITION REMOVE TRANSMISSION LINES	$524,000 $142,125
GRAND HAVEN GRAND HAVEN MEML AIRPARK	LAND FOR EXISTING AIRPORT CLEARING	$100,000 $3,000
GRAND LEDGE ABRAMS MUNI	LAND FOR EXISTING AIRPORT	$120,800
GREENVILLE GREENVILLE MUNI	LENGTHEN EXISTING RUNWAY	$300,000
HANCOCK HOUGHTON COUNTY MEMORIAL	TURNAROUND	$700,000
SAGINAW TRI CITY INTERNATIONAL	LAND-ACQUISITION	$182,000
	CATEGORY TOTAL	$2,540,259

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 5 CAPACITY DEVELOPMENT (CAPACITY)		
DETROIT DETROIT METROPOLITAN	LENGTHEN EXISTING RUNWAY ENTRANCE ROAD	$6,000,000 $2,800,000
DOWAGIAC CASS COUNTY MEML	CROSSWIND RWY CONSTR	$375,000
FLINT BISHOP INTERNATIONAL	ACCESS ROAD	$470,000
HOWELL LIVINGSTON COUNTY	CONSTRUCT GA AREA	$1,016,000
IRON MOUNTAIN/KINGSFORD FORD	NEW TAXIWAY	$50,000
MARQUETTE MARQUETTE COUNTY	TERMINAL BUILDING	$1,250,000
PONTIAC OAKLAND-PONTIAC	LENGTHEN EXISTING RUNWAY	$1,500,000
PORT HURON ST.CLAIR COUNTY INTL	NEW TAXIWAY	$745,680
SAULT STE MARIE CHIPPEWA COUNTY INTERNAT.	APRON EXPANSION EXTEND TAXIWAY	$400,000 $75,000
	CATEGORY TOTAL	$14,681,680

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 8 EQUIPMENT AND BUILDINGS		
FLINT	SNOW REMOVAL EQUIPMENT	$420,000
BISHOP INTERNATIONAL	PASSENGER LOADING BRIDGE	$320,000
HANCOCK	SRE TRUCK PLOW/BLADE	$110,000
HOUGHTON COUNTY MEMORIAL		
IRON MOUNTAIN/KINGSFORD	SRE SWEEPER	$23,000
FORD		
SAGINAW	SNOW REMOVAL EQUIPMENT	$155,000
TRI CITY INTERNATIONAL	ARFF EQUIPMENT	$373,000
SAULT STE MARIE	SRE FRONT END LOADER	$75,000
CHIPPEWA COUNTY INTERNAT.		
	CATEGORY TOTAL	$1,476,000
	TOTAL COST FOR "A" LIST	$30,655,139

BUREAU OF AERONAUTICS
1990 CAPITAL OUTLAY PROGRAM
PRIORITY B PROJECTS

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 1 SPECIAL PROGRAMS/SAFETY		
BAD AXE HURON COUNTY MEMORIAL	TAXIWAY LIGHTING	$37,500
LUDINGTON MASON COUNTY	PERIMETER FENCING	$70,000
PELLSTON EMMETT COUNTY	SECURITY FENCING	$160,000
	CATEGORY TOTAL	$267,500
CATEGORY 2 RECONSTRUCTION		
BAD AXE HURON COUNTY MEMORIAL	PRIMARY RWY CONSTRUCTION	$340,000
CADILLAC WEXFORD COUNTY	TAXIWAY PAVING	$100,000
LUDINGTON MASON COUNTY	TAXIWAY REHABILITATION	$89,200
MENOMINEE TWIN COUNTY	SEAL RUNWAY (RST)	$102,000
PELLSTON EMMETT COUNTY	REHABILITATE RWY LIGHTING	$150,000
	CATEGORY TOTAL	$781,200
CATEGORY 3 STANDARDS		
BAD AXE HURON COUNTY MEMORIAL	LAND FOR EXISTING AIRPORT	$144,000
CATEGORY TOTAL		$144,000

LOCATION /AIRPORT	PROJECT ITEM DESCRIPTION	TOTAL COST
CATEGORY 4 UPGRADING AIRPORT ROLE (UPGRADE)		
CADILLAC WEXFORD COUNTY	LENGTHEN EXISTING RUNWAY	$120,000
	CATEGORY TOTAL	$120,000
CATEGORY 5 CAPACITY DEVELOPMENT (CAPACITY)		
BAD AXE	NEW TAXIWAY	$140,000
HURON COUNTY MEMORIAL	APRON EXPANSION	$100,000
CADILLAC WEXFORD COUNTY	APRON EXPANSION	$300,000
LANSING	NEW TAXIWAY	$166,650
CAPITAL CITY	CONSTRUCT NEW APRON	$874,000
LUDINGTON MASON COUNTY	APRON EXPANSION	$158,675
WEST BRANCH WEST BRANCH COMMUNITY	PARALLEL TAXIWAY PAVING	$570,000
	CATEGORY TOTAL	$2,309,325
CATEGORY 8 EQUIPMENT AND BUILDINGS		
ESCANABA DELTA COUNTY	CFR EQUIPMENT	$200,000
EVART EVART MUNI	AUTO PARKING	$24,000
LANSING CAPITAL CITY	ACCESS ROAD	$432,000
	CATEGORY TOTAL	$656,000
	TOTAL FOR "B" LIST	$4,278,025
	GRAND TOTAL	$34,933,164