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Highway Users Federation
FOR SAFETY AND MOBILITY
1776 Massachusetts Avenue, N.W.
Washington, D.C. 20036

December 1987

OFFICE OF THE PRESIDENT

The Honorable Bette Cato, Chairperson
House Transportation Committee
State of Alaska
Juneau, Alaska

Dear Representative Cato:

The Highway Users Federation is pleased to submit this report of a ten-month review of the Alaska Highway Program. The pages that follow list our major findings and recommendations. The balance of the report is our perspective on the status of the Program, its financing and management.

While we have made a number of recommendations for change to improve program efficiency and effectiveness, we did find much to praise. First and foremost, we found a cadre of dedicated people that have sustained the program over a long period of time throughout leadership and organizational transitions, criticisms by those outside the program that may not have understood the magnitude or complexity of the job to be done and sometimes difficult working conditions.

Also we found much has been accomplished for which Alaskans can be proud. Alaska is in the national forefront in traffic safety and bridge conditions. Notwithstanding the elements that must be dealt with, Alaska's state highway network is "on a par" with other states. Anchorage's arterial street and highway system has come a long way in the 1980's toward being as modern as any in the nation. And the Marine Highway System and most of Alaska's major airports provide reasonable service to its users and the Alaskan economy.

We also pay tribute to the current and previous ADOT&PF management teams that have had to deal with a wider range of responsibilities than any of their counterparts in other state highway or transportation departments of the nation. While most such state officials have highway responsibilities and little more, ADOT&PF officials must administer the state highway program, as well as the operations of the two International Airports, 215 other airports, a nine-ship ferry system, most state-owned buildings and the state equipment fleet.

While Alaska is unique in this most important aspect, the Federation recommends that the current scope of responsibility remain unchanged. However because of this extraordinary scope,

it is recommended that the headquarters staff be augmented to provide more effective policy direction.

Some of the recommendations are far reaching and politically sensitive -- ie. transferring some state highway responsibilities to Alaska's boroughs and cities, and raising highway user taxes and dedicating these to the State Highway Program. However these actions should free up other currently earmarked transportation funds thereby allowing the Department to undertake the other recommendations that require added resources.

Transportation is vitally important to the social and economic well being of Alaskans. The public side of the Alaska transportation System -- that is highways, airports, ferries and harbors -- is a fragile network and the public responsibility to keep the system up and operating safely and efficiently is great. Much progress has been made in building the network. It is important that resources be found to keep what you have and to make those advances that are prudent expenditures within Alaska's overall resources.

The opening page of the report lists the members of the Alaska Highway Program Review Advisory Council. The Council met five times during the course of the review and assisted Highway Users Federation staff in outlining the key issues to pursue and in reviewing factual information and findings.

The pages that follow contain our major findings and recommendations. The rest of the report contains charts and graphs to give interested persons a better understanding of the current status of the Alaska Highway Program. The first chapter outlines how the state and municipalities share road responsibilities, where the money comes from and what agencies spend it. The second chapter discusses road conditions and traffic service. Chapter three indicates the accomplishments of the State Highway Program and how the Program relates to needs. The fourth chapter deals with managing the State Highway Program. Changes over time are shown as well as comparisons with national averages.

The Highway Users Federation is a 55 year old business league made up of the key industries and their associations that have an interest in safe and efficient highway transportation at reasonable costs. On behalf of our members and our affiliate, the Highway Users Federation of Alaska, we appreciate the opportunity to offer our perspectives on the Alaska Highway Program. We are grateful for the cooperation of Commissioner Hickey and the entire staff of the Alaska Department of Transportation and Public Facilities. We stand ready to further assist you in the months and years ahead.

Sincerely,

Lester P. Lamm

MAJOR FINDINGS AND RECOMMENDATIONS

I. Distinguishing Characteristics of Alaska's Highway Program

Alaska's Highway Program has many characteristics that set the Program apart from other states highway programs. The major distinguishing characteristics are as follows:

1. High Road Cost. The annual cost of administering, maintaining and improving Alaska's highway (all roads) and supplementary ferry system -- $48,000 per mile and $1,100 per capita --is above comparable national averages -- $16,000 per mile and $260 per capita. This is due to Alaska's severe weather conditions, unusual foundation characteristics (permafrost), difficult terrain, restricted building and repair seasons, remoteness of many parts of the system and the high cost of materials, supplies, equipment and services.

2. Highway User Taxes Are A Small Portion Of Funds. Unlike most states where highway user taxes and fees are the only state funds used to support the state highway program, Alaska's highway user taxes and fees meet only a small fraction (ten percent) of the Alaska State Highway Program costs.

3. Highway User Taxes Are Low. Alaska truck taxes and fees are the lowest in the nation while Alaska automobile user taxes and fees rank 37th from the top state in the nation.

4. First In Federal $ Received/Federal Taxes Paid. Alaska is first in the nation in the ratio of Federal Aid Highway Program payments received to federal highway user taxes paid. Over the fiscal year 1956 to 1985 period, Alaska has received $2.2 billion in Highway Trust Funds as compared to $256 million in federal highway user taxes paid by Alaskans -- a 9 to 1 ratio.

5. Unique State Highway System. Unlike any other state, Alaska's state highway system serves less than half of Alaska's communities of over 250 persons. Unserved communities are however connected to the rest of the state through a system of state-owned airports and by a state-owned ferry system.

6. Traffic Density Low. Alaska has the second lowest population and the fewest registered motor vehicles of any state in the nation. Only three states have fewer vehicle miles of motor vehicle travel. The average daily traffic on Alaska's roads is one half the national average.

7. Lowest Road Density. Alaska has the largest land area of any state in the nation (2-1/4 times the land area of Texas) and the lowest road density in the nation, only 1 mile of public road per 57 square miles of land area. By way of comparison, Nevada has the next lowest road density with 1 mile of road for every 2.5 square miles of land.

8. Road Miles Are Low. Despite Alaska's vast land area, only Delaware, Hawaii and Rhode Island have fewer miles of public roads.

9. Bridge Leader. Based on a national survey, Alaska is first in the nation in bridge conditions. Alaska has the smallest proportion of deficient bridges among the 50 states.

11. Fewest Traffic Fatalities. Among the 50 states, Alaska and North Dakota had the fewest 1986 traffic fatalities. For 1986, Alaska's mileage death-rate stood at 2.13 deaths per 100 million vehicle-miles of travel or 14 percent below the national average. And when all facts are in, it appears that Alaska's 1987 traffic safety record will improve upon the 1986 record.

12. Most Comprehensive State Department of Transportation. Unlike other state highway and transportation departments, which are mainly responsible for state highway system administration, maintenance, operation and improvement, the Alaska Department Of

Transportation & Public Facilities has major responsibilities for airports, ferries, harbors, public buildings, as well as highways.

13. Most Decentralized Department. The ADOT&PF is more decentralized than any other state transportation agency with major control vested in regional offices as well as the International Airport System and Marine Highway System offices.

II. Major Recommendations

1. Keeping A Good Program Going. First and foremost, Alaska needs to find the money necessary to maintain its record of progress in transportation service. Major strides have been made in developing and improving the state highways, bridges, airports, marine highways and harbors. In all aspects, it is a system in which Alaskans can be proud. Finding the resources to sustain the progress, or at least to sustain the existing system and service levels, in the face of Alaska's social needs, is the most serious challenge.

2a. Setting A State And Municipal Road Responsibility Policy. Currently, the ADOT&PF and Alaska's municipalities share the management of roads within municipalities without a state-municipal, agreed-upon policy that is based on the traffic service (functional) characteristics of the roads. Unlike the state highway networks in other cities of the nation, which serve principally as distributors of statewide traffic to major centers of traffic attraction within urban areas, many of Alaska's urban state highways function as minor arterials or collectors of traffic through or around residential neighborhoods. As a result, the ADOT&PF is looked to for funding the maintenance and improvement of streets and roads that are primarily of concern to citizens in urban neighborhoods. Alaska's rural and urban state highways of statewide traffic significance must compete for scarce funds with streets and roads of only local importance.

2b. Establishing An Urban Arterial Fund. Urban street and highway development has been predicated largely by legislative earmarking of funds for specific improvement projects and by such initiatives as the Anchorage Accelerated Road Program. A statewide approach to meeting urban arterial needs has been lacking. However, once road responsibility policy has been agreed upon and streets and highways transferred to the

appropriate agency (ADOT&PF, cities and boroughs), it is recommended that an Urban Arterial Fund be established to fund the improvement of those arterial streets in Alaska's major municipalities that are not included in the state highway system.

3a. Increasing ADOT&PF Maintenance And Operations Resources. Funds for highway maintenance must be increased to ensure that state highways are preserved and that safe and efficient levels of service are made available to the public.
Responsibility for 292 airports and 5,542 miles of state highway is now spread among a maintenance force of 570 people (as of 6/30/87) as compared to 661 people at the same point in time in 1985. Based on a national survey, Alaska is among the states with the fewest highway maintenance personnel per lane-mile of highway in the nation. Furthermore, the highway and aviation portion of the maintenance and operations expenditures dropped 24 percent from $71.2 million in FY 1986 level to $53.9 million in FY 1987. While the FY 1988 authorization level increased to $61.6 million, this is not adequate to restore effective maintenance operations. Snow and ice removal operations have been reduced to the point where motorists are being inconvenienced, and if a severe winter is experienced, more problems will occur. Signs of physical neglect, while already noticeable, will become more pronounced as water and ice continue to widen unsealed cracks and as shoulder erosion and unrepaired pavement edges continue to break up.

3b. Develop And Publish Maintenance And Operations Options. To arrive at the appropriate highway maintenance funding level, it is suggested that the ADOT&PF develop and publish highway maintenance and operations options. It is suggested that this study define three or more levels of highway maintenance that might be provided With such information specified, along with clear indications of costs and benefits, the Department, the Legislature and the public will have the best possible basis for funding decisions. Service level A would be the optimum with little or no inconvenience to motorists during snow and ice conditions. Potholes and edge raveling would be eliminated. All pavement cracks would be sealed each year. All ditches and culverts would be kept cleaned. Ten percent of the state highway system would be seal-coated each year. Brush would be cut

back annually on all state highways. Shoulders would be leveled each year. Signs, pavement markings, culverts and guardrail would be kept in good repair at all times. The object of the Service Level A evaluation is to determine the cost to 1) gain the maximum service life from each highway and bridge and 2) gain the best possible service for the motorist.

Service level B would be a lower increment of service on all state highways, especially the 1,000 miles of Major Collector Highways. As is the case today, some routes would be closed during winter months. Service level B is most nearly consistent with the 1987 maintenance programs.

Service level C would be a still lower level of maintenance and operations than has heretofore existed.

In each case a full explanation of the options should be developed and published. The short and long range benefits of the optimum service level should be specified, as should the consequences of providing the optional lesser service levels.

4a. Initiating A Comprehensive Needs Analysis. To determine the optimum level of funding for the state highway improvement program, it is recommended that the ADOT&PF make an engineering appraisal of the cost to meet state highway system deficiencies as they are likely to occur over the next ten years. Such an analysis should be carried on concurrently with the maintenance and operations analysis and the revision of state highway responsibilities, because these associated analyses directly affect the needs appraisal. For example, a heavy emphasis on highway preservation reduces the need for surface rehabilitation and visa versa. Also, a smaller urban state highway system will reduce the overall magnitude of state highway system needs.

4b. Building On The Recently Completed Interstate Highway System Needs Estimate. The ADOT&PF has recently completed a mile-by-mile analysis of Interstate Highway System needs. This carefully prepared analysis compared the existing 1,089 miles of Alaska's designated Interstate Highways with "tolerable" highway standards. Deficiencies were noted, estimates of costs to correct deficiencies were calculated and a priority of need assigned to each deficiency. The Interstate Highway Needs Estimate provides an excellent

basis for similar estimates of needs (with different standards of tolerability) for the other four functional systems of state highways, that is Other Principal Arterials, Minor Arterials, Collectors and Local Access Roads.

A summary of the needs estimates, along with the priority established for each need, will provide a sound basis for determining total state highway program needs (capital plus maintenance) with options to fit Alaska's financial capability.

5a. Determining Highway User And Other Tax Resources. Together with an agreed-upon, restructured state highway system and an accurate appraisal of the cost to meet the most needed state highway deficiencies and a determination of highway maintenance and operations costs, it is also recommended that a fiscal analysis be made of highway user taxes and other funds that might be used to meet long range goals for state highway system development, improvement and maintenance. A financial plan should then be set to provide long term stability for a goal-oriented program.

5b. Relating Highway User Taxes To The State Highway Program. Unlike most states, where highway user taxes and fees -- motor fuel taxes, motor vehicle registration fees and other special taxes on motor vehicles, their operation and use -- are the principal resource for funding the state highway program, Alaska's Constitution precludes strict dedication of any tax. However a few other states and the Canadian Provinces have a situation similar to Alaska, and in these cases such taxes are informally dedicated to the state highway program. Officials and the public have recognized that the highway program has such far reaching economic and social implications that a secure funding source is important. It is also recognized that state and provincial highway programs benefit, in terms of effective and efficient use of resources, when transportation officials have reasonable assurance of funds over at least a five year period.

The success of the nation's highway program over the past 70 years is primarily attributable to the fact that it has been supported by user-based funds. Alaska's highway and airport progress has been based on a readily predictable and reasonably stable supply of funds stemming from the Federal Aid Highway and Federal Aviation Programs which are both funded by federal user taxes.

5c. Raising Motor Fuel Taxes and Other Highway User Fees or Dedication of Other Taxes. In order to completely fund the state highway program from state highway user taxes, it will be necessary to raise the existing taxes and fees. New highway user taxes and fees, such as use or sales taxes on motor vehicle transfers, not presently in existence in Alaska is another possibility. Dedication of a portion of mineral severance taxes to the State Highway Program might also be considered. Determining how much of an increase or what new taxes should be employed is beyond the scope of this review, but should be included in the fiscal analysis recommended.

In comparison with their counterparts in the rest of the nation, Alaska's truckers and other motorists currently pay low taxes and fees for truck and automobile use.

For heavy trucks, Alaska ranks lowest in the nation with a tax load of $1,598 per year or 2.0 cents per vehicle-mile of heavy truck travel. This compares to Washington which collects over three times as much ($4,990 per truck, and 6.2 cents per vehicle-mile of heavy truck travel). The highest taxer of heavy trucks is Arizona which collects $11,012 per truck or 13.8 cents per vehicle-mile of heavy truck travel.

For automobiles, Alaska ranks 37th among the states with a $122 tax per average automobile or 1.0 cents per vehicle-mile of travel. The highest in the nation is Rhode Island with an annual tax load of $731 per automobile or 5.9 cents per vehicle-mile of automobile travel (six times the Alaska load). The lowest is New York at $73 per year and 0.6 cents per vehicle-mile of travel. Washington's annual tax on automobiles is $310 per vehicle or 2.5 cents per vehicle-mile of auto travel.

5d. Keeping Trucking And Railroad Industries Competitive. An increase in highway user taxes will increase trucking industry costs, while railroad costs remain unchanged. The existing economic balance between the trucking and railroad industries will have changed. To retain current levels of profitability and service, truck rates may have to increase which may result in loss of business. And there are other consequences that have to be considered in any such tax change. Therefore it is recommended that the change in highway user taxes be preceded by economic analyses of highway/railroad competition and

proposed initiatives that would retain the economic viability of the two competing modes after the tax change.

6. Planning To Upgrade The Existing State Highway System. The recently adopted and implemented process of annually updating the Six Year Capital Improvement Program in close alignment with estimates of federal funds should be maintained as a fundamental tool in managing ADOT&PF capital improvements.
It is also suggested that a state highway surface restoration program be specified with a goal of resurfacing a prescribed number of state highway miles each year - a number that is consistent with the need to upgrade, or at least retain, the current level of rideability, skid resistance and pavement structural integrity. Similar goals as well as schedules of accomplishment should be set to complete the modernization of each of the functional classes of state highways.

7. Planning State Highway System Expansion. Most of Alaska's Interstate Highways, Other Principal Highways, Minor Arterials and Major Collector Highways that link together Alaska's economic centers were built over the past 50 years. It is realistic to forecast that additions will be made to this System over the next 50 years as Alaska expands its economic base. Now is the time to set an overall plan for expansion of the State Highway System and to establish priorities of need for each planned route. With such a plan (or future updated versions of the plan) and link-by-link estimates of cost, Alaska citizens can then decide the time schedule for building each and the means for its financing.
Not only should the plan address Alaska's mineral, forest and recreational resources but also Alaska's strategic military and defense situation. Because of the uncertainty about the amount of traffic that would be generated by many such routes, the use of special low cost design standards should be explored for the initial primitive routes.

8. Setting Statewide Highway Improvement Priorities. At present state highway improvement priorities are based on regional priorities after geographic apportionment of funds. As a result, some funded improvements are of low statewide significance and some

projects of high statewide importance are not being funded. A statewide priority system, developed in concert with the proposed engineering appraisal of highway deficiencies, will aid in setting equitable geographic apportionment of funds and funding the most urgently needed improvements.

9. Recapitalizing the State Equipment Fleet. The ADOT&PF Program includes maintaining a $118 million, 6,500-vehicle equipment fleet for ADOT&PF and 18 other state agencies. A Highway Equipment Working Capital Fund was established by law in 1960 as the accounting mechanism for deposit of lease funds and the appropriation of money for servicing the equipment and replacing worn or obsolete pieces. However, as the result of transfers out of the Fund to meet other State of Alaska needs and a FY 1987 reduction in lease fees to help agencies with budget constraints, the HEWCF was reduced to the point where the 1986 and 1987 schedules of equipment replacement could not be met. As a result state agencies are having to cope with the problem of maintaining equipment that should have been replaced or making do without those pieces that cannot be kept operable.
To meet the problem, the ADOT&PF raised lease rates in FY 1988 and appointed a task group to review the needs of the State Equipment Fleet and to recommend other necessary actions.

10. Establishing A Motor Carrier Advisory Council. There are a number of important issues that face government officials and the trucking industry. Sizes and weights, industrial use highways, safety, taxation and railroad competition are a few of the current issues that need to be discussed in open forums. To gain greater cooperation and better understanding of the issues and positions of the various interests, it is recommended that the ADOT&PF establish a Motor Carrier Advisory Council representing truckers, shippers, and the state agencies involved with truck regulation, and that recommendations be made to the ADOT&PF Commissioner. It is suggested that a trucking industry leader act as chairman of the Council but with ADOT&PF staff support in setting agendas.

11. Retaining A Strong Research Effort Program. By the nature of Alaska's climate and topography, the ADOT&PF has had to maintain a strong research program aimed at finding the most economical and effective methods of building and maintaining highways, as well as airports, harbors, ferries and public buildings. Finding the funds to keep a strong research program is vital to the ADOT&PF Program. Likewise, it is essential that important research results be brought to the attention of design, maintenance and construction staff.

III. Other Recommendations

The following are a list of other suggestions to enhance the efficiency and effectiveness of administering the ADOT&PF program:

1. Strengthening the Headquarters Function. The technical capability of the ADOT&PF headquarters staff should be augmented to strengthen its role of providing policy direction, improve the monitoring of Program expenditures, provide better support for the diverse elements of the ADOT&PF Program, better monitor the condition and performance of the state transportation systems, better plan for transportation systems that will promote safe and efficient travel as well as economic development, establish both maintenance management and pavement management systems and better inform the public of Alaska's transportation progress and problems.
This recommendation is not to be construed as a criticism of decentralized management of Alaska's Transportation Program but as a necessary augmentation that will provide resources to better coordinate the decentralized management team.

2. Improving Accountability. The ADOT&PF public information program should be expanded to better inform the public on:
a) how tax resources are being spent overall as well as according to mode,
b) on progress or lack of progress on meeting goals and,
c) on special problems that need to be addressed.

At the minimum, comprehensive ADOT&PF annual, or biennial, reports should be prepared and published.

In 1987 the Department placed heavy emphasis on accounting for previous and current expenditures on capital projects. A training program aimed at improving staff understanding and use of the Alaska State Accounting System was also implemented. Nevertheless, continued effort is needed to resolve the capital project accounting problem.

3. Enhancing Productivity. With one out of every three ADOT&PF Program dollars devoted to personnel services, the ADOT&PF should continue to give high priority to reviewing and analyzing staff productivity, and a comprehensive plan of manpower needs should be developed. Furthermore, guidelines need to be established on the use of consultants based on comparative analyses of public/private costs.

4. Improving Staff Morale. The ADOT&PF should continue to seek to bring more middle management and other employees into the decision making process. The formation of task committees to make a full evaluation of internal needs and to study specific problems is a good method of gaining greater employee appreciation of the Program, a greater sense of involvement and more pride of accomplishment.

5. Upgrading the ADOT&PF Personnel Function. The ADOT&PF needs to establish a career guidance program aimed at retaining key leaders and preparing others to step up to leadership assignments. The personnel section should become the key resource in meeting the needs of employees while at the same time assisting management to place the best qualified person in each management position.

6. Coordinating Maintenance Management. There is a need for a review of the current methods of managing the maintenance and operations program. Revisions should be made where it is found necessary to improve on the reporting of information needed to set program goals and to monitor progress toward meeting such goals. An Alaska highway and airport maintenance manual should be developed to enhance maintenance efficiency and effectiveness.

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INTRODUCTION, BACKGROUND AND ACKNOWLEDGEMENTS

The Review of the Alaska Highway Program was performed under contract with the Alaska Legislature. Most of the investigative work was accomplished from January through September 1987.

This is the seventh in a series of highway program reviews that the Highway Users Federation has accomplished over the 1984 through 1987 period. Prior to the Alaska Review, the highway programs of Tennessee (1984), Idaho (1984-1985), Indiana (1985), Mississippi (1985-1986), Nebraska (1986-1987), and Missouri (1987) were reviewed and reports submitted. Mr. Marshall Reed, PE, the Federation's Manager of State Transportation Studies has directed each of the efforts. Mr. Antony Petty managed the Alaska report production, and Ms. Nancy Calvin assisted with report graphics.

Advisory Council. A Highway Program Review Advisory Council was established to assist in the Review. Its members, all Alaskans, are listed on the second page of this report. All have close ties to the Alaska Highway Program.

The Council met five times during the course of the Review to help establish the most important issues to be pursued and to counsel the Federation on the findings.

The Highway Users Federation is indebted to the Council members for their assistance. It was observed that while each member has an economic stake in the Alaska Highway Program, each displayed an overriding interest in pursueing the best course for Alaskans and the Alaska economy.

ADOT&PF Cooperation. In each of the reviews, the work was carried out cooperatively with the state highway or transportation department. The ADOT&PF found office space for the Project Director within the headquarters' building, and Ms. Ginger Johnson (the ADOT&PF Public Information Officer) was appointed Project Liaison Officer. All of the Alaska data used in the Review came from the ADOT&PF and other Alaska agencies.

Highway Users Federation. The Highway Users Federation is a national business league made up of those corporations and associations that have an interest in safe and efficient highway transportation. The organization was first established in 1932, and it has been instrumental over the years championing the many aspects of our nation's highway programs that increase highway efficiency and safety at reasonable costs.

Highway Users Federation of Alaska. The Highway Users Federation of Alaska is an affiliate of the national organization, and it focuses on Alaska highway and traffic safety issues. All members are Alaska citizens. They represent such groups as the Alaska Trucking Association, the Alaska Chapter of the Associated General Contractors and Alaska's oil industry. It was the HUFA that brought the highway program review process to the attention of the Alaska House Transportation Committee, and that Committee sponsored the legislation required to establish the agreement for the $60,000 Alaska Highway Program Review.

Review Process. The object of the highway program review process is to evaluate the effectiveness of each state's total highway program in meeting its citizens needs for safety, service and cost effective transportation now and in the future.

Strengths of the current program and areas which can be improved are identified. Current assignments of responsibilities and resources between the state and local governments are analyzed as are the processes by which decisions are made in the planning, construction, maintenance and operation of the state highway system.

While much of the Review entailed interviews of key ADOT&PF officials in Juneau, trips were made -- via the State Highway System, the Alaska Marine Highway System and both commercial and chartered aircraft -- to most of Alaska's major cities and many of the smaller communities. Officials in each ADOT&PF Region were contacted as well as the Directors of the Alaska Marine Highway System and the International Airports.

Anchorage officials were interviewed to gain their perspective on municipal street and highway progress and problems. Also many remote communities were visited for first hand impressions on transportation operations and System needs.

The ADOT&PF maintenance foremen in many of the maintenance stations were contacted to determine their impressions of needs versus available resources. Over half of the State Highway System was driven.

Based on data summaries, comparisons with national statistics, visual impressions, interview comments, knowledge of other state highway programs and Advisory Council discussions, the major findings and recommendations were formulated and refined. The ADOT&PF headquarters' staff, as well as the Region and Division staffs, reviewed and commented on both the major findings and recommendations and the facts and figures presented in preliminary drafts of this final report.

In general, ADOT&PF officials and employees displayed an extraordinary amount of interest in the interviews and findings. The Highway Users Federation considered all comments in formulating this final report.

We hope that our perspectives on the Alaska Highway Program wil be useful as you plan for the future.

CHAPTER I

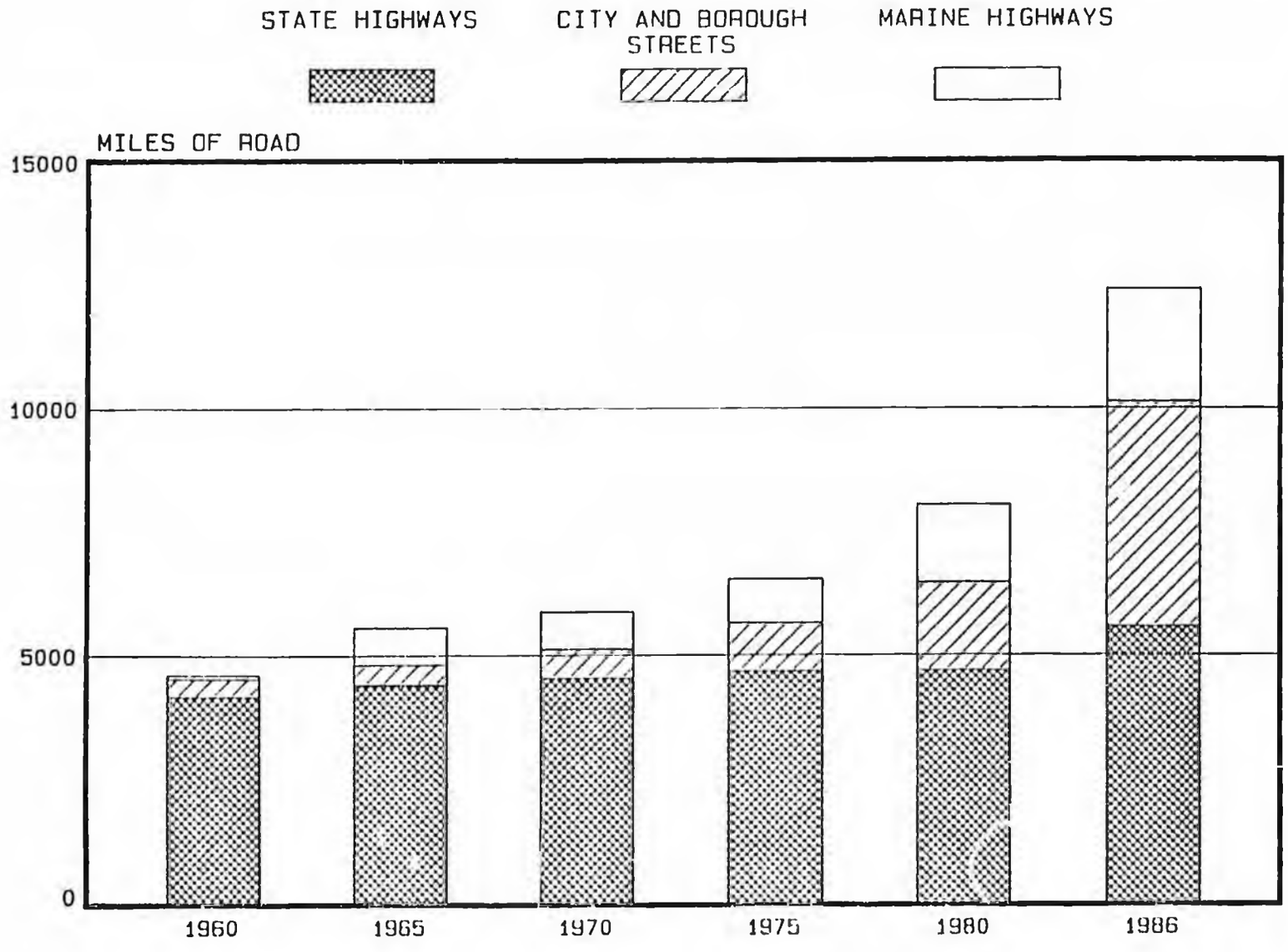
TRANSPORTATION FINANCE & RESPONSIBILITIES

CHAPTER I

TRANSPORTATION FINANCE AND RESPONSIBILITIES

This Chapter includes a Review of the Role of the State, Cities and Boroughs in Sharing Responsibilities for Administering, Maintaining, Operating and Improving Alaska's Transportation System as well as a Review of the Funds Available to Meet These Responsibilities.

MILES OF ROAD



NOTE: EXCLUDING FEDERALLY OWNED ROADS.

Over 10,000 Miles Of Road. Discounting the 224,000 miles of road that are under the direct control of federal agencies, there are 3.6 million miles of land service roads in the United States. Alaska's 12,370 miles is less than three one hundreths of a percent. Yet Alaska's land area is 16 percent of the nations total. Only Delaware, Hawaii and Rhode Island have fewer miles of road.

Marine Highway Routes Are State Highways. Including the ferry routes of the Marine Highway System, there are 7,824 miles of highway that are considered state highways. These routes are administered, operated, maintained and improved by the Alaska Department of Transportation and Public Facilities.

Since 1960 the state highway system (including Marine Highway System routes) has doubled in extent. The most significant change is the expansion of the Marine Highway System, due largely to the shift in the status of service to the Aleutian Chain in 1981 from testing and demonstration to permanently, scheduled service.

However during this 27 year period, the 416 mile Dalton Highway was built by private interests and added to the State Highway System. Also during this time, the 325 mile Parks Highway was completed to provide better highway service between Alaska's two largest centers, Anchorage and Fairbanks. Other shorter links of state highways have also been added.

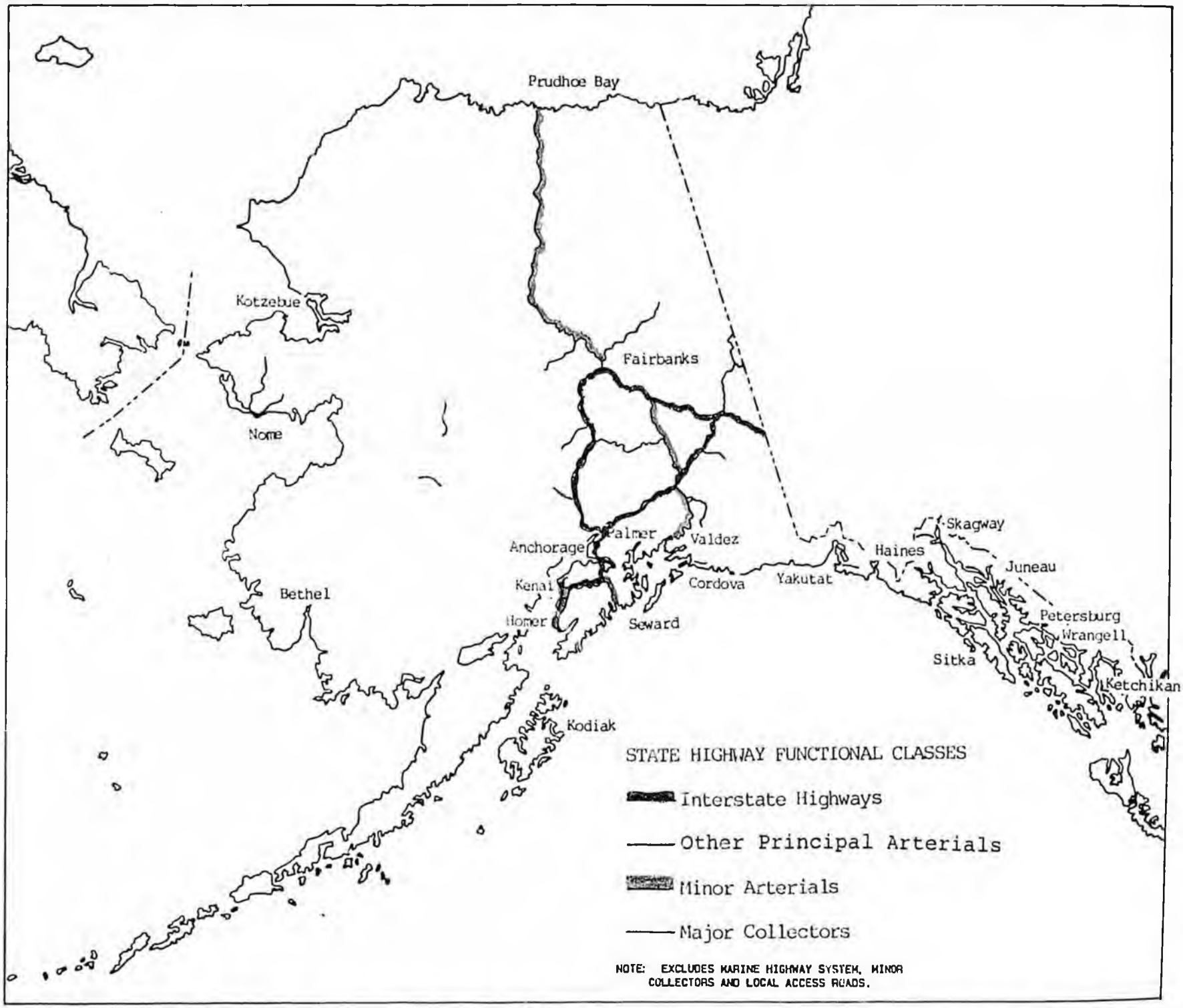
Alaska Unique. The truly striking transportation distinction between Alaska and the rest of the nation is that the majority of Alaska's communities of over 250 people are not connected by land via the State Highway System. The remoteness of some places, the water barriers and the difficulty of traversing the terrain have made such connections either impossible or inordinately expensive. Alaska has therefore relied on a system of ferry routes with nine ships capable of conveying both passengers and vehicles to some communities and to an extensive system of airports that allows air service to all other communities of over 30 people.

The Alaska Railroad. Alaska also has a 480 mile railroad system that is vitally important to the shipment of general commodities as well as mineral and forest products over the Seward to Fairbanks mainline. A spur to Whittier connects the main line with the Marine Highway System on Prince William Sound and to barges that service the "lower 48 states"..

In 1982, the State of Alaska purchased the railroad line, equipment and property. The Alaska Railroad Corporation operates the freight and passenger service. While the railroad is independent of the ADOT&PF, the ADOT&PF Commissioner is a member of the Alaska Railroad Company's Board of Directors.

Cities And Boroughs Also Have Road Responsibilities. In those parts of Alaska that have a population base and a system of local government (city or borough), the governmental entity can accept responsibility for some roads. While the ADOT&PF is not required to take into the State Highway System those roads that cities and boroughs will not accept, typically the ADOT&PF does take on this responsibility.

Leap In City And Borough Roads. Note that the chart indicates a significant growth in city and borough road and street mileage over the 1960 to 1986 period. Some of the increase is related to subdivision street construction by developers and some is related to state appropriations for specified roads. However some of the increase is due to better accounting by the cities and boroughs for road miles, since 1980 state legislation greatly increased the state revenue sharing funds that are based on miles of road.


Prudhoe Bay
Kotzebue
Fairbanks
Nome
Palmer
Anchorage
Valdez
Skagway
Haines
Juneau
Kenai
Cordova
Yakutat
Bethel
Homer
Seward
Petersburg
Wrangell
Sitka
Ketchikan
Kodiak
STATE HIGHWAY FUNCTIONAL CLASSES
Interstate Highways
Other Principal Arterials
Minor Arterials
Major Collectors
NOTE: EXCLUDES MARINE HIGHWAY SYSTEM, MINOR COLLECTORS AND LOCAL ACCESS ROADS.

FUNCTIONAL CLASSES OF RURAL ROADS

Functional Highway Classification - A Basis For Management Decisions. Most state highway agencies classify their state highways based on their traffic service functions. The resulting hierarchy gives managers a tool for decision-making regarding the distribution of scarce resources. Design standards, improvement priorities and maintenance standards are all related to the functional classification of roads. The map shows the functional designation of Alaska's major rural roads and their extensions through urban areas.

Interstate Highways, The Most Important Arteries. Alaska's most important rural roads are those designated to be Interstate Highways (1,089 miles). These connect Alaska's largest centers – Anchorage and Fairbanks – with each other and to the main route of land travel into Alaska. An Interstate Highway Spur also connects Anchorage with the Kenai Peninsula.

As the chart at right shows, the average mile of Interstate Highway is traversed by 1,750 vehicles per day. Alaska's Interstate Highway System's average traffic density is only one seventh the 12,900 vehicles per day average traffic density on all rural Interstate Highways in the nation. Due to this lower traffic density, Alaska's rural Interstate Highways are built to two-lane design standards rather than the four-lane, divided highway standards found in other states.

Other Principal Arterials Next In Importance. In terms of traffic service, Alaska's Other Principal Arterials are next in importance. The Egan Expressway in Juneau and the Klondike and Haines Cut-Off Highways are examples of Other Principal Arterials. They are important because they connect Haines, Skagway and Juneau to the Alcan Highway and to the Alaska Marine Highway System.

Minor Arterials Expand The System. As seen, the Minor Arterials link other important Alaska centers with the Interstate Highway System.

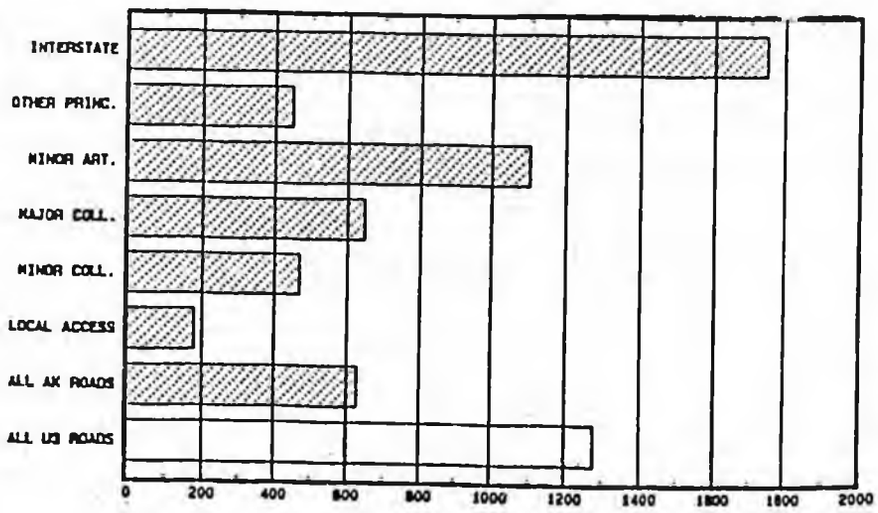
Major and Minor Collectors. the Major and Minor Collector Highways further expand the system. All remaining rural roads that serve long-distance travel are designated as Collector Highways. However not all Collectors are state highways, as some are under the jurisdiction of Alaska's cities and boroughs. The Major Collector classification is given to the more heavily travelled Collectors.

Local Access Roads. The remaining rural roads (not shown on the map) that serve individual or small groups of houses, camps or farms are termed local access. These roads function predominantly as a means of access to land, rather than as a means to convey people, products and raw materials through an area. Most such roads are in the Matinuska-Susitna and Kenai Boroughs.

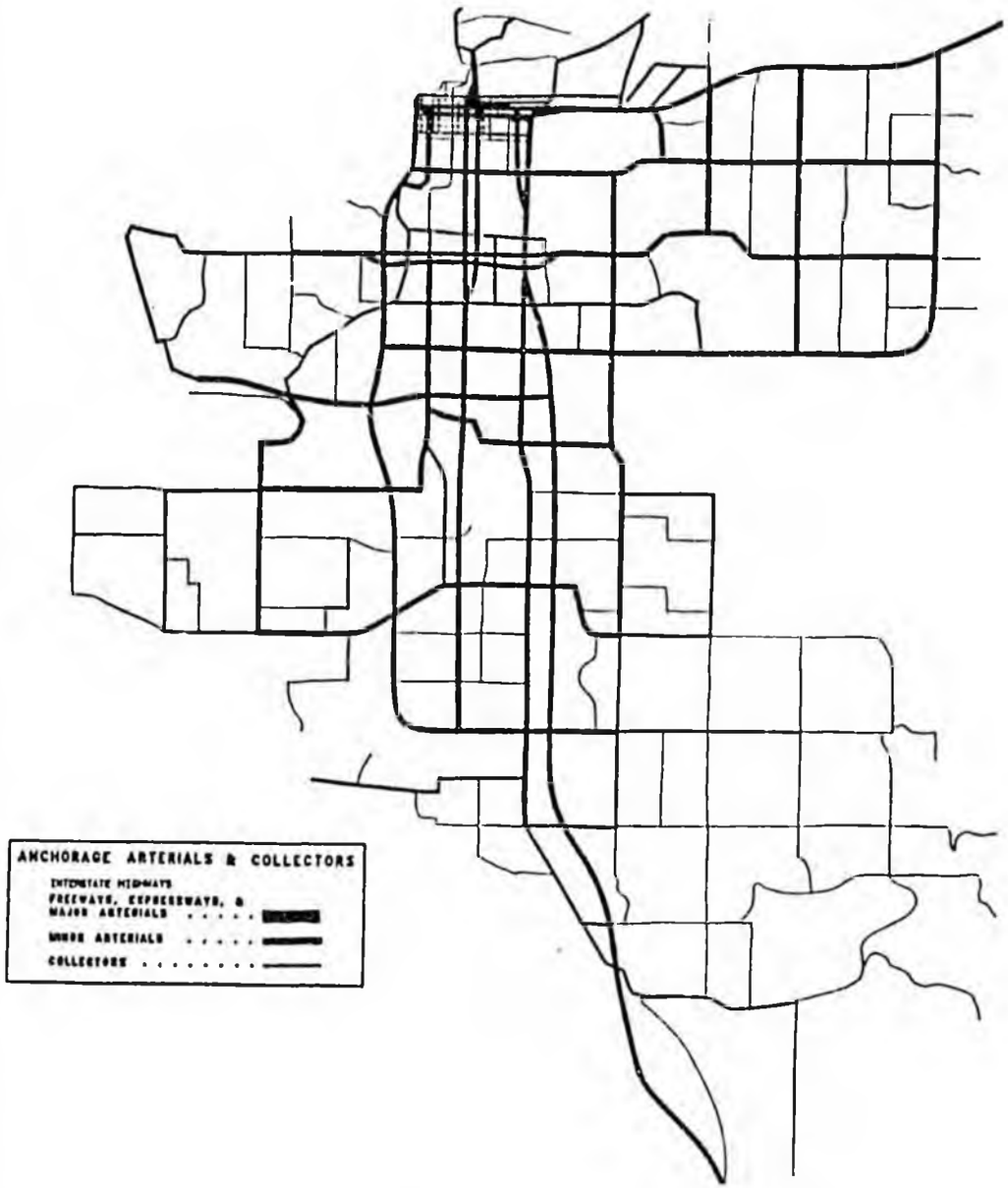
MILES

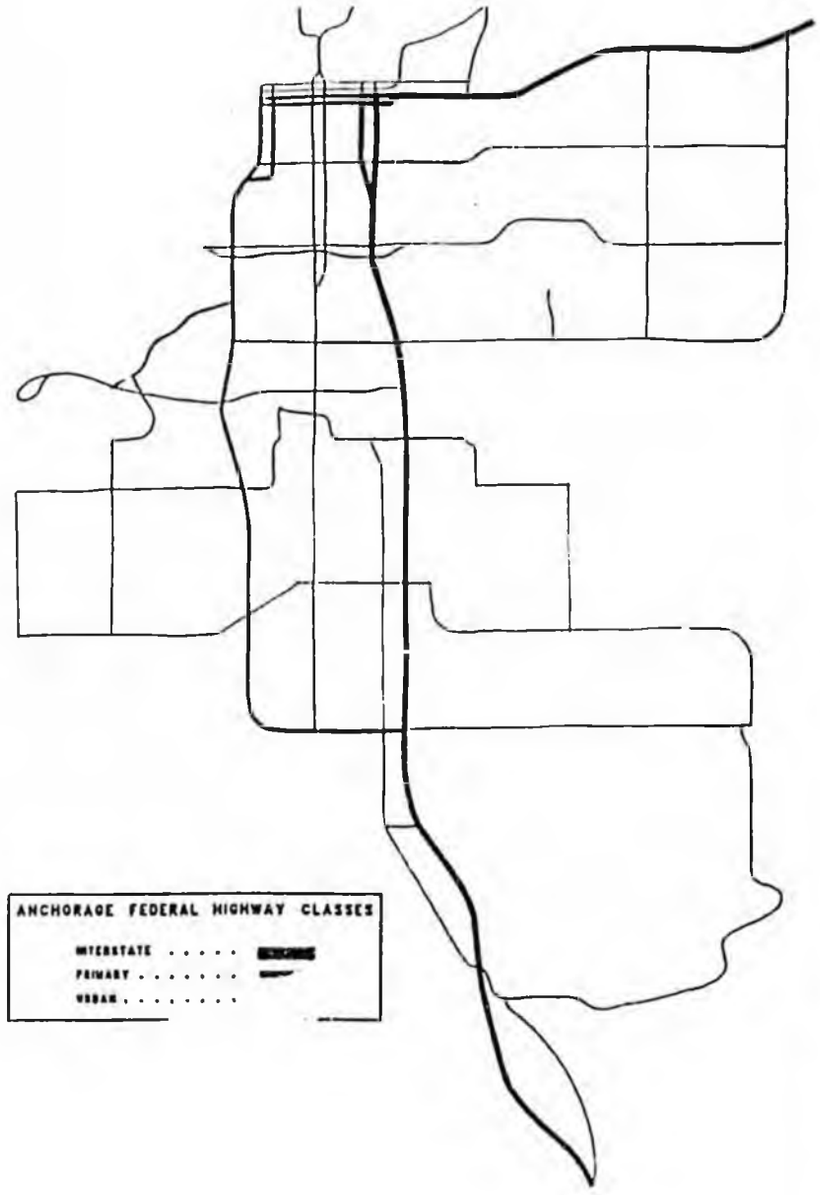
TOTAL: 9,980 MILES

TRAFFIC DENSITY



ANCHORAGE ROAD CLASSIFICATIONS





Functional Highway Classification Also An Urban Management Tool. The maps show three types of Anchorage road classifications. In the upper left are the functional classes agreed upon cooperatively by ADOT&PF and Anchorage officials. The designated Federal Aid Highway Systems are shown in the upper right. And the map on the bottom right shows the designated state highways.

Not shown is the street and highway maintenance scheme agreed upon by ADOT&PF and Anchorage officials in which some state highways are maintained by the Municipality of Anchorage and some municipal streets are maintained by the ADOT&PF. Also not shown are the 780 miles of Local Access Streets in the Anchorage urbanized area.

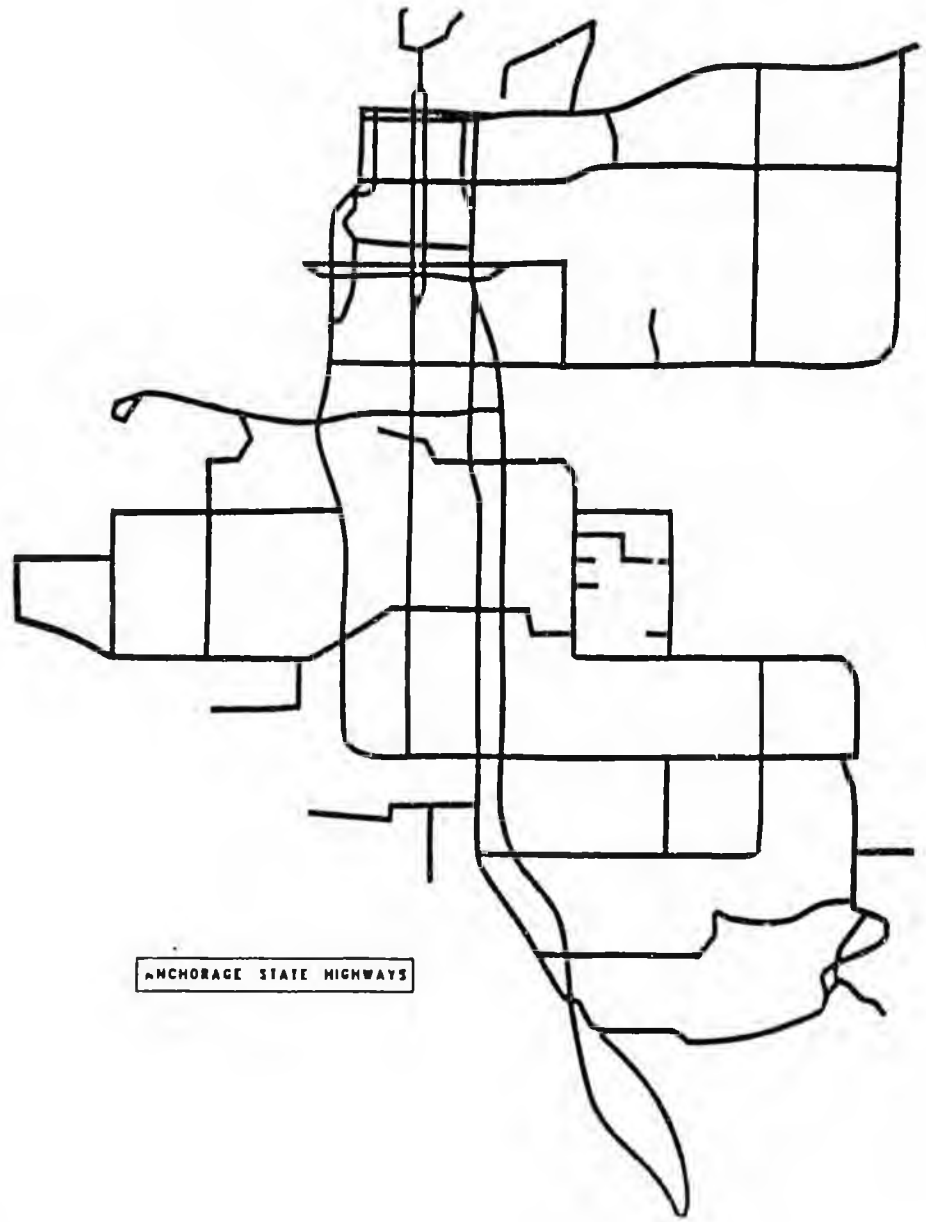
The below table indicates the importance of each functional class of Anchorage streets and highways. Of particular significance is the 88 miles of Interstate Highways, Freeways, Expressways and Major Arterials (9 percent of the miles) which serve almost two thirds (65.4 percent) of Anchorage's daily motor vehicle travel.

Functional Classes	Miles	% Mi.	% Travel	Traffic Density*
Interstate, Freeways, Expressways and Major Arterials	88	9.0	65.4	25,400
Minor Arterials	29	3.0	11.4	13,400
Collectors	80	8.2	10.1	4,300
Local Access	780	79.8	13.1	600
	977	100	100	

* Average daily vehicles per road mile.

The designated Federal Aid Highway System routes – Interstate, Primary and Urban – were adopted based on the traffic service function. These are the routes eligible for improvement with Federal Aid Highway Program funds. I-3

High Proportion of State Highways. There are 176 miles of state highway in the Municipality of Anchorage and 801 miles of either municipal street or streets that are "service area maintained". By agreement with the Municipality, the service areas levy road taxes and maintain all non-state highways within their area.



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At 16 percent of the road miles, the state highway system serving Anchorage is more extensive than the average urban state highway network (13 percent) in the nation. (And the national statistics are biased on the high side by high proportions of state highways in the cities of several Eastern states.) Furthermore in Alaska's urban areas, many streets and roads that serve a collector or minor arterial function are state highways.

As a result state resources must be used for the operation, maintenance and improvement of routes with only a minor traffic service function. Routes of greater statewide traffic service significance–in terms of their function in either connecting communities or distributing statewide traffic to important economic centers within urban areas–must compete for scarce state resources with the urban collector and minor arterial routes of low statewide significance. Compounding the problem is the fact that ADOT&PF officials must unnecessarily deal with urban issues such as land use and traffic control that are more properly a local responsibility.

Joint Action Needed. While the ADOT&PF has authority to transfer responsibility for state highways to local government, this is a very difficult problem due to the local government cost implications. Therefore, to resolve the issue of urban highways, it is recommended that the ADOT&PF and the Legislature first establish a state highway jurisdiction policy in concert with municipal officials and then make the changes that satisfy the policy.

Use The Functional Classification Plan. The most widely accepted basis for redefinition of state highways is the functional classification hierarchy of streets and highways. This is used to test alternative state/local jurisdictional plans.

Suggested Alternatives. One obvious alternative is to place only urban extensions of state highways on the urban state highway network. A second is to add to the first by including all Freeways and Expressways. The third alternative would be the addition of Major Arterials.

Financial Resources Are An Important Consideration. To ease the burden of a shift in urban road responsibility, there are financial and management arrangements that can be established.

One such arrangement is the Urban Arterial Board in the State of Washington. Only 6.7 percent of the urban road mileage in Washington is designated as state highway. Therefore the Washington Legislature established an Urban Arterial Fund and an Urban Arterial Board in 1968 to assist municipalities on a fund matching basis to make improvements to those designated urban arterials that are not state highways. It is recommended that Washington's success in limiting urban state highway responsibilities to major arterials and the success of the Urban Arterial Board and the Urban Arterial Fund in meeting Washington's urban arterial needs be studied for possible application in Alaska.

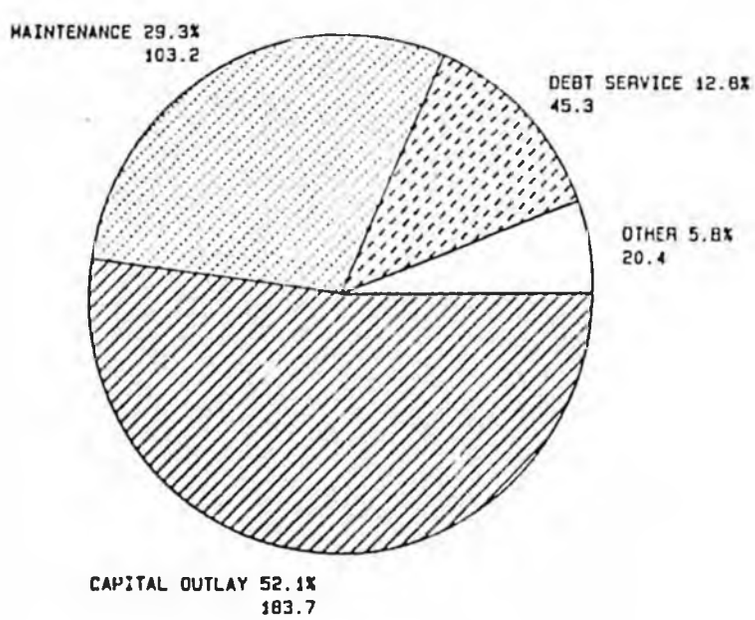
First Steps Taken. The need for a clear policy on road control is recognized by Alaska officials. In 1987 the Alaska Legislature set forth the following directive to begin dealing with the issue:

> "IT IS THE INTENT OF THE LEGISLATURE THAT DOT/PF: 1) ESTABLISH A ROAD RESPONSIBILITY TASK FORCE COMPRISED OF REPRESENTATIVES OF DOT/PF, LOCAL GOVERNMENTS, UNORGANIZED AREAS, AND USER GROUPS. THE TASK FORCE IS TO REVIEW THE FEASIBILITY OF TRANSFERRING THE RESPONSIBILITY OF DIRECT MAINTENANCE ON CERTAIN ROUTES FROM THE STATE TO LOCAL GOVERNMENTS, AND TO EXAMINE REASONABLE AND EQUITABLE FUNDING SOURCES FOR MAINTENANCE ACTIVITIES, INCLUDING A REVIEW OF THE MOTOR FUEL TAX AND OF THE EXISTING ROAD SERVICE ACCOUNT IN THE STATE' REVENUE SHARING PROGRAM. THE TASK FORCE SHALL ALSO STUDY THE ISSUES OF ROAD OWNERSHIP, LIABILITY, AND THE TRANSFER OF EQUIPMENT AND EMPLOYEES..."

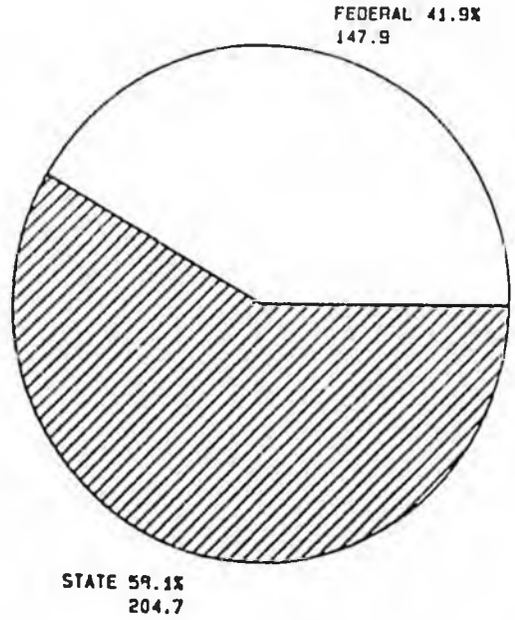
In September 1987, the ADOT&PF selected a facilitator to assist the Commissioner in responding to the mandate. In November, the Task Force was named and a first meeting planned.

1986 STATE HIGHWAY PROGRAM

EXPENDITURES



RECEIPTS



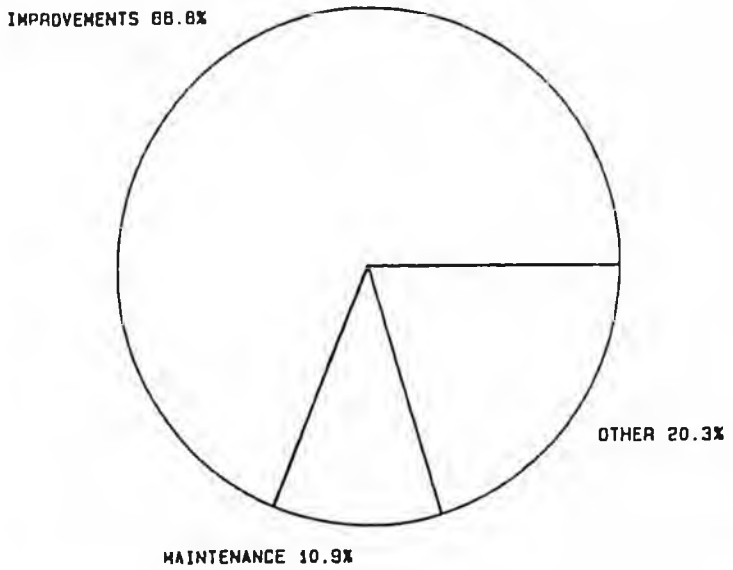
TOTAL: $352.6 MILLION

Highway Expenses Five Times The National Average. For 1986 (calendar year) the ADOT&PF reported to the Federal Highway Administration that it spent $353 million on state highway administration, maintenance, operations and improvement. This is about $700 per capita and compares with a $140 per capita national average of expenditure on state highways.

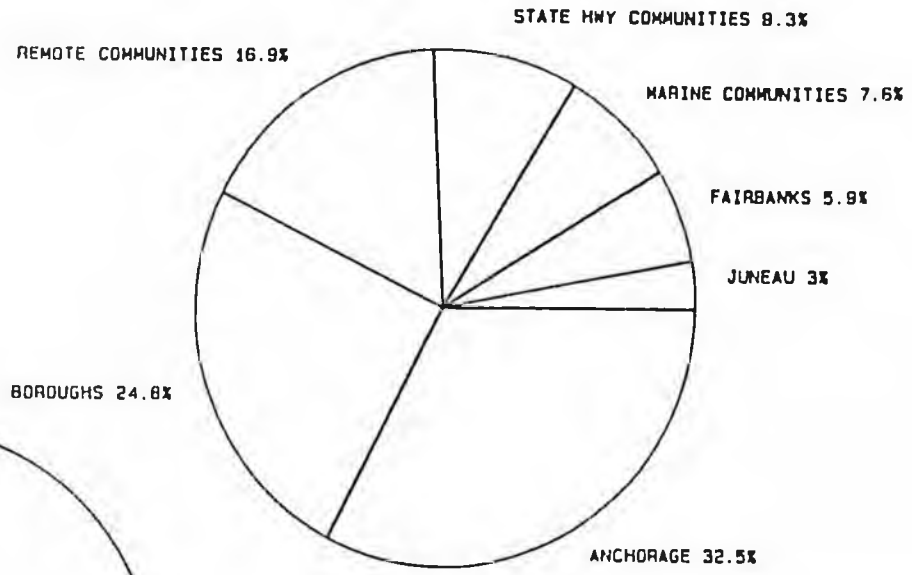
Marine Highway System Costs Included. Included are all 1986 capital as well as maintenance and operations expenditures for both land service state highways and the Marine Highway System. Also included are $45.3 million to service the state debt on borrowing for previous state highway system improvements. Law enforcement and safety expenditures amounting to $11.4 million are included in the "other" category of expenditure as well as $4.7 million for highway program administration and $4.2 million for highway planning and research. Finally in the other category is the 1986 expenditure of $4.3 million for Local Service Roads and Trails, which is a portion of the State Highway Program (administered by the ADOT&PF) but directed toward local road betterments.

1985 LOCAL ROAD & STREET PROGRAMS

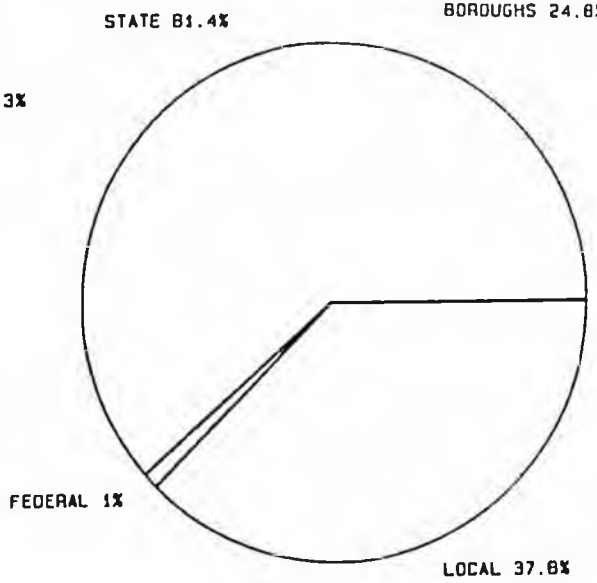
SPENDING CATEGORIES



UNITS OF GOVERNMENT



SOURCE OF FUNDS



TOTAL: $237.8 MILLION

Total Road Spending High. Alaskans raised and spent $237.8 million in 1985 (calendar year) for upkeep and improvement of the 3,992 miles of local streets and roads. For a population base of only 536,000 persons, this is a very significant level of expenditure. When combined with the 1986 state highway program of expenditure, it is estimated that total 1986 highway, street and road spending was about $590 million or $1,090 per capita, about four times the national average ($260 per capita).

Important ADOT&PF Factfinding Function. To assist the Office of the Governor and the Legislature and to comply with federal mandates, the ADOT&PF annually surveys, compiles and reports on local road and street spending. The ADOT&PF also verifies annually the current mileage of local roads and streets and this provides the base for state apportioning of road revenue sharing funds. 1985 information is the latest available on local road finance.

Road Revenue Sharing Funds. When the Legislature fully funds this program, each community receives a base of $2,500 per mile of conventional road and $1,500 for each mile of ice roads. However these amounts are adjusted upwards to accomodate higher costs in many areas of the state.

While communities are required to use only 20 percent of the funds for road purposes, ADOT&PF studies show that a majority of the road revenue sharing funds are actually used for road purposes.. Only that portion of the road revenue sharing funds that were actually devoted to municipal road programs are reported in the annual ADOT&PF surveys of municipal road expenditures.

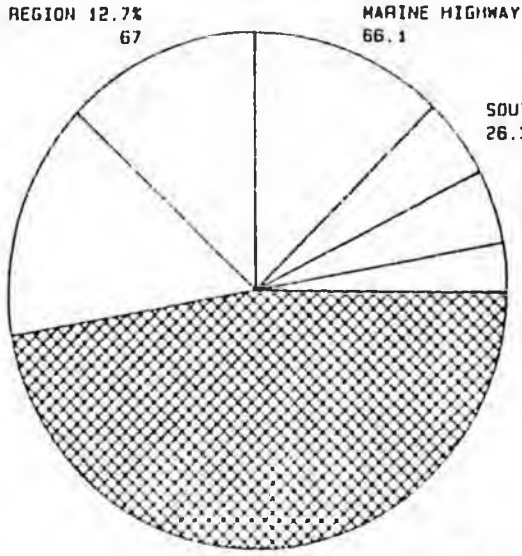
Special Terminology Used. Note the special terminology used in the "Units of Government" chart. "State Highway Communities" refers to all cities (15) directly served by the land service State Highway System, excluding Anchorage and Fairbanks. "Marine Communities" are the 20 cities, excluding Juneau, that are served by the Marine Highway System but not connected to the land service State Highway System. The "Remote Communities" are the remaining incorporated or unincorporated places not served by state highways or ferries.

State Funds Rising. In 1985, state grants for local roads amounted to $145 million, up from $88.4 million in 1984. This includes the portion of road revenue sharing funds that were used in road upkeep and other state funds appropriated for specific local road improvements. On the average the 1985 state contribution toward local road and street upkeep amounted to $270 per capita, but ranged from $120 per capita in the seven boroughs to $740 per capita in the Remote Communities.

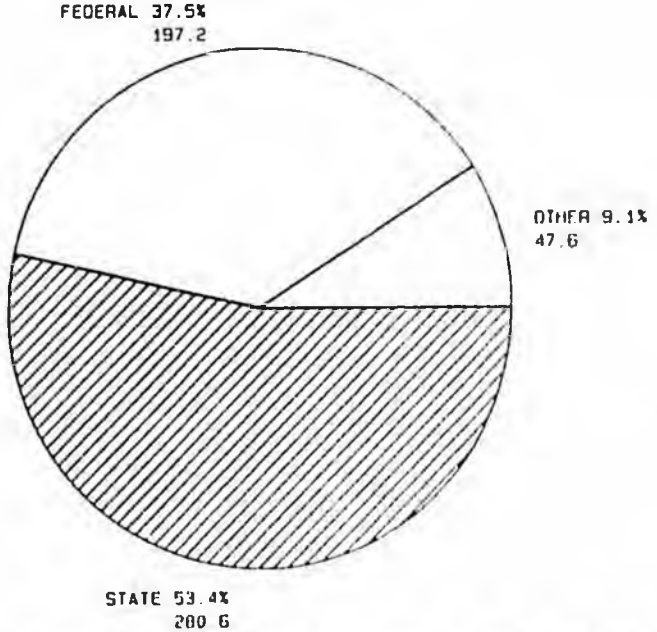
Fairbanks High in 1985 State Road Receipts. Based on miles of local road in each community, Fairbanks led with $132,000 per mile in state road receipts, while at the other extreme, the seven boroughs received an average of $13,000 per mile. Anchorage received $50,500 per mile. However in reviewing municipal road receipts and expenditures, it should be recognized that the year-to-year fluctuations are large and closely related to specific road improvements authorized by the Legislature.

1986 ADOT&PF EXPENDITURES

AREA

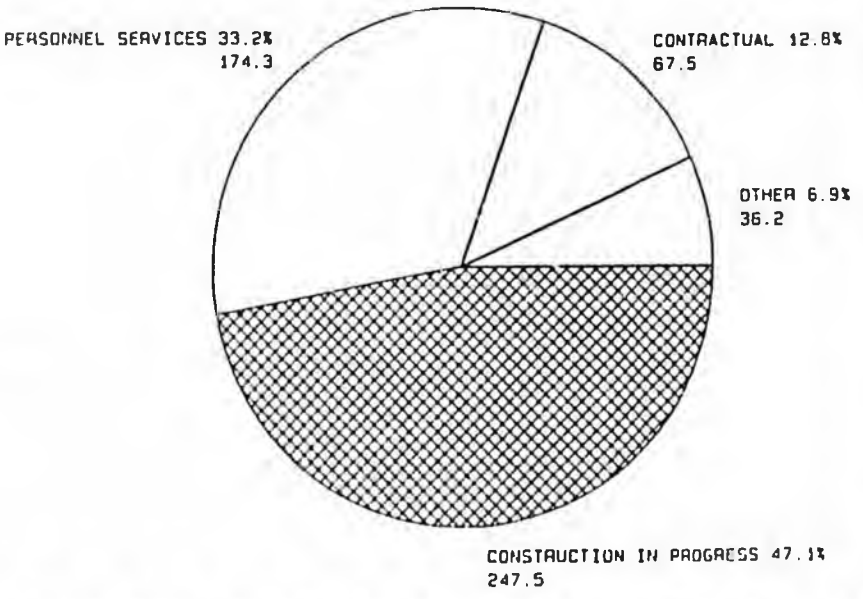


FUND SOURCES



TOTAL: $525.4 MILLION

EXPENDITURE OBJECTS



ADOT&PF Spent $525.4 Million In 1986. The charts above and at right are five perspectives on Alaska Department of Transportation and Public Facilities expenditures in fiscal year 1986. The ADOT&PF is not only responsible for State Highway System administration, operations, maintenance and improvement, but also owns, operates and maintains the nine-ship Marine Highway System, two International Airports, 215 other airports, 45 seaplane floats, harbor facilities, the state equipment fleet and almost 400 state owned buildings.

Highlights:

- o Payments for construction in progress, mostly highway and airport improvements, represented almost half of all expenses, $247.5 million.
- o Spending in the Northern Region, which has the most miles of state highway, led the three ADOT&PF regions.
- o Not included as ADOT&PF income is the $33.8 million in passenger and vehicle fees for Marine Highway System passage, which accrue directly to the Alaska Treasury.
- o About three fourths of the federal funds are reimbursements from the Federal Highway Trust Fund for state highway improvements. The other one fourth is from the Federal Airport Trust Fund for airport improvements.
- o Some of the "other" income is from concessions and fees from Anchorage and Fairbanks International Airport usage. These funds are deposited in the International Airport Enterprise Fund.
- o Two thirds (66.8 percent) of all expenditures were directed to private enterprise for construction in progress, supplies and other costs of business operation. One third (33.2 percent) was for ADOT&PF salaries and benefits.
- o 57.2 percent of all expenditures were for design (consulting or in house), right of way purchase and construction progress payments for improvements to highways, airports, ferries, harbors and other public facilities.

More Information Needed On Finance Trends. The information shown is the result of a special analysis made for this Review by the ADOT&PF. However it has been Highway Users Federation experience in other state highway program reviews that such information is readily available in the annual reports of the state highway and transportation departments. The information is important for the following reasons:

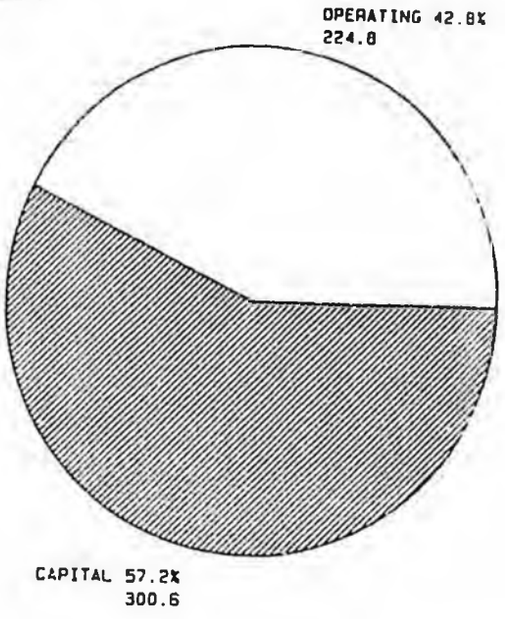
1) to place the Program in perspective with the programs of other state highway and transportation departments in order to detect possible inconsistencies,

2) to place modal components in perspective,

3) to analyze trends, and

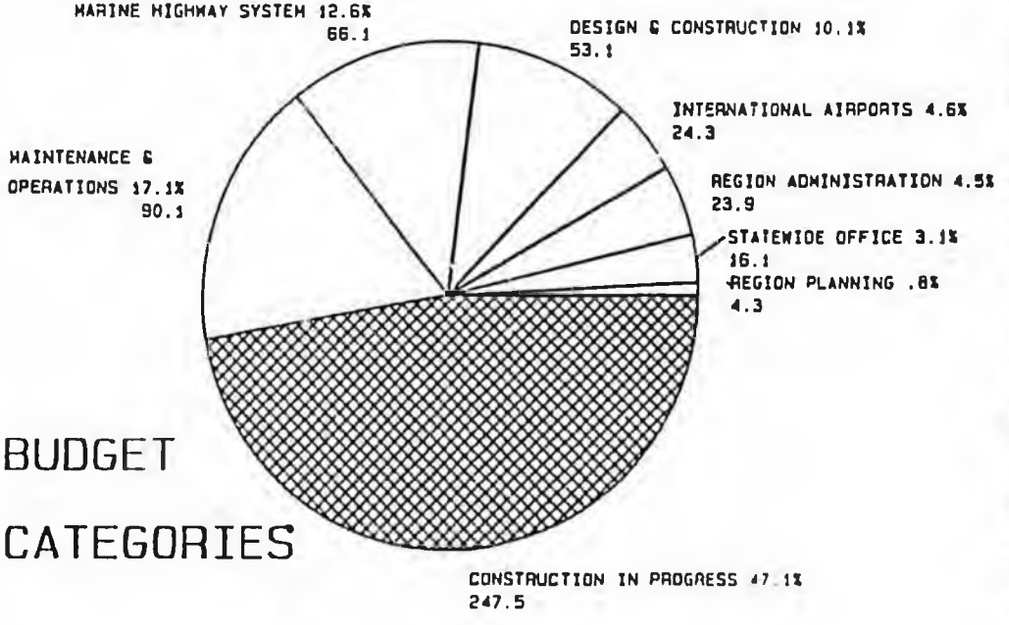
4) to provide legislators, administrators, other officials and constituent organizations with information necessary to make informed decisions regarding Program direction and support.

MAJOR BUDGET ELEMENTS



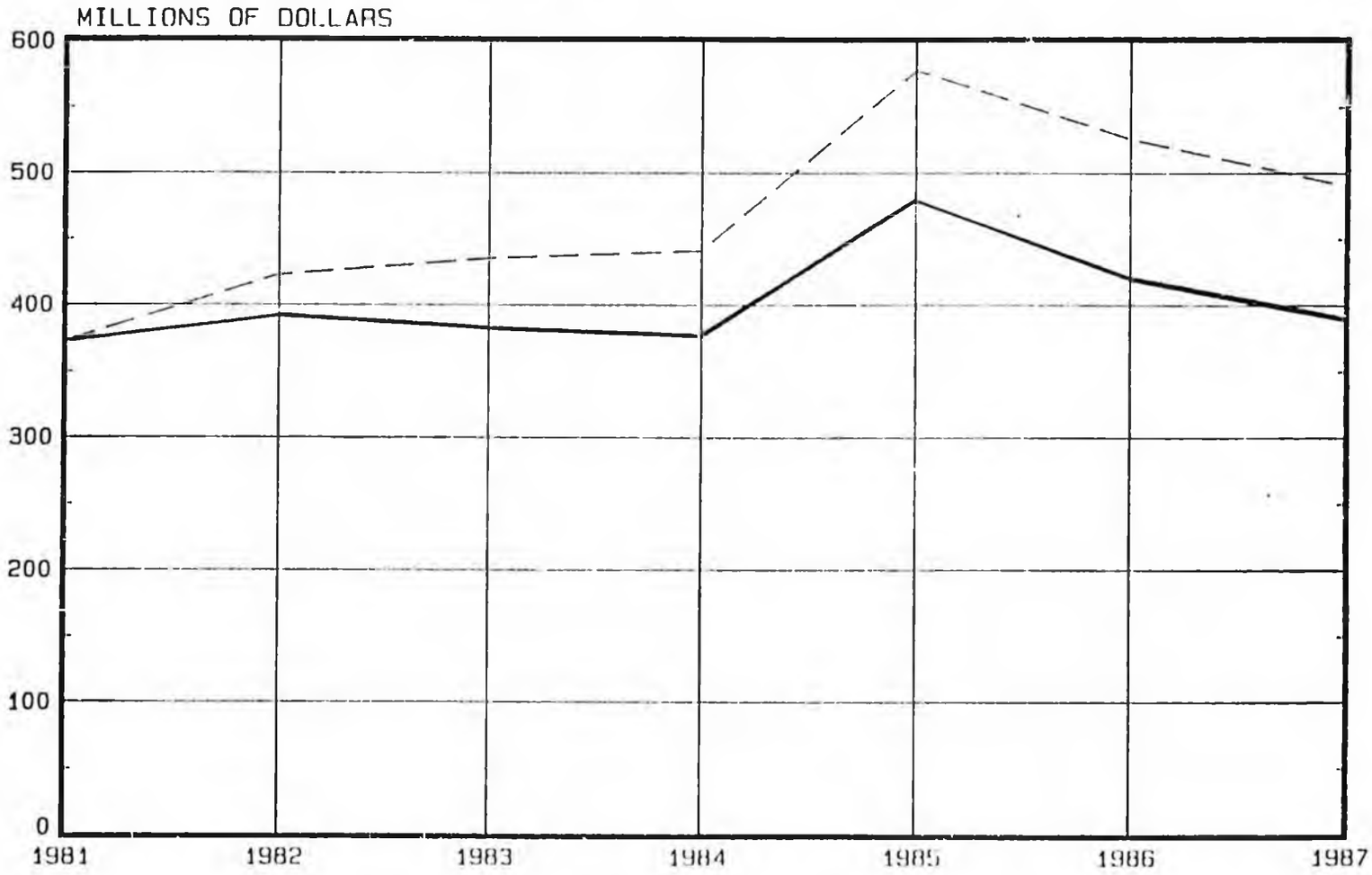
TOTAL: $525.4 MILLION

BUDGET CATEGORIES



ADOT&PF EXPENDITURE TRENDS

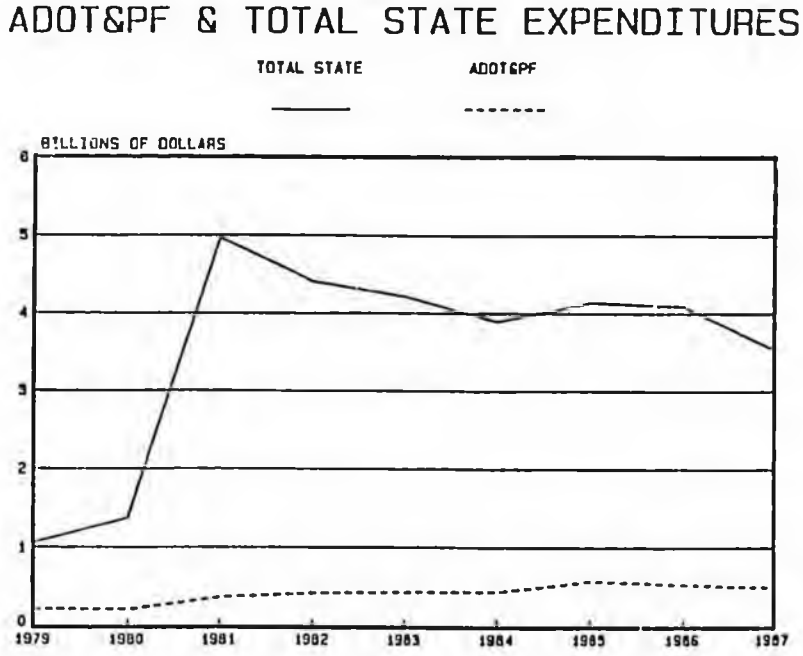
CURRENT $ CONSTANT 1981 $



ADOT&PF Spending Up Modestly Over Last Seven Years. Two views of ADOT&PF spending over the 1981 to 1987 period are shown in the above chart. The dashed line shows the actual spending while the solid line depicts the value of the spending when inflation is considered. (The Anchorage Area Consumer Price Index was used to show the 1981 value of each current year's spending.) As a result of the eroding value of money, ADOT&PF spending of $493 million in FY 1987 was worth only $385 million in terms of what could be purchased with 1981 money. Despite the apparent $120 million increase in ADOT&PF funds, the 1987 spending level was up by only $20 million or five percent over the 1981 level.

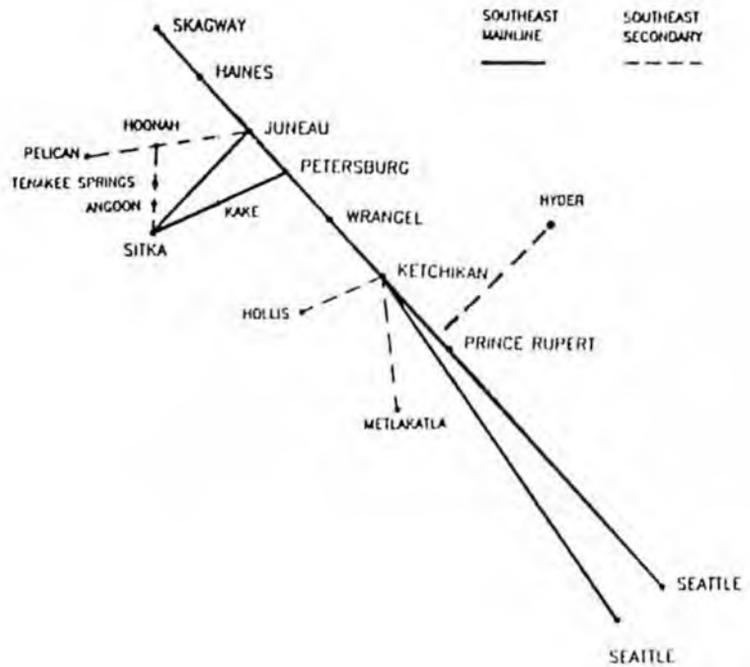
ADOT&PF Expenditure Increases Are Low When Related To Travel Increases. Travel change is one indicator of transportation finance need. During the 1981 to 1987 period motor vehicle travel in Alaska increased 62 percent, airport enplanements increased by 25 percent and Marine Highway System passengers were up by 9 percent. Furthermore, the lane-miles of state highway increased 12 percent, thereby increasing the demand for such maintenance activities as snow and ice control.

ADOT&PF Proportion of Total State Spending Has Diminished. While ADOT&PF spending has risen from $212 million in 1979 to $493 million in 1987, other state spending has risen even faster. This is noted by the fact that 1987 ADOT&PF expenditures represented 13 percent of total State of Alaska expenditures in 1987, down from 20 percent in 1979.

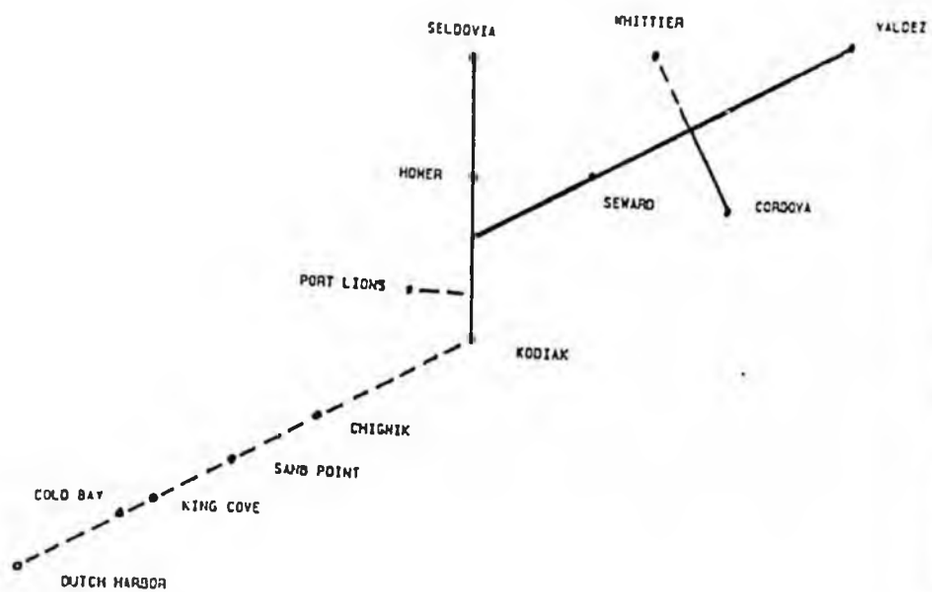


MARINE HIGHWAY SYSTEM

SOUTHEAST



SOUTHWEST



Waterborne Highway System. Alaska has more coastline than the rest of the United States combined. And more than half of its cities are unreachable by conventional highways. These are the reasons that Alaskans in 1960 voted the necessary bonds to establish the state's waterborne highway system. Operating as a division of the Department of Transportation and Public Facilities, the Marine Highway System started with one vessel – the Motor Vessel Chilkat. During its first fully operational year in 1963, four ships served the fleet.

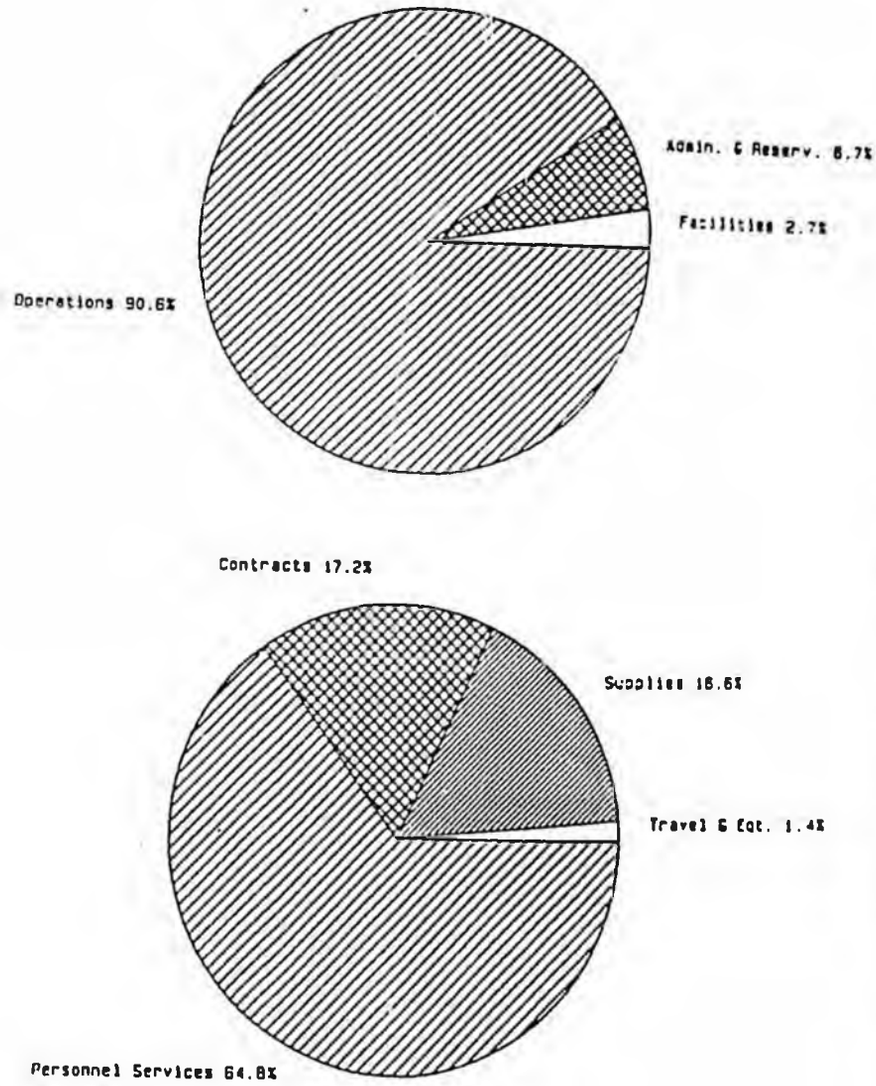
Nine Vessel Fleet. The original system operated from northern terminals at Skagway and Haines, to Prince Rupert in the south. Since then service has been extended to Seattle. And the nine ships, which now comprise the fleet, also provide feeder service in Southeastern Alaska, as well as from the Kenai Peninsula to the island city of Kodiak, to the communities of the Aleutian Chain, and to the communities on Prince William Sound.

The Motor Vessel Columbia is the largest ferry. Built in 1973 the Columbia is 418 feet long, with a capacity for 1,000 passengers and 180 automobiles. She has a service speed of 19 knots. There are 20 2-berth cabins and 71 4-berth cabins.

The other ferries range in size from 100 feet to 408 feet and have passenger carrying capacities ranging from 75 to 750 persons as well as auto and truck carrying capability. Food service, state rooms, cocktail lounges and solariums are available.

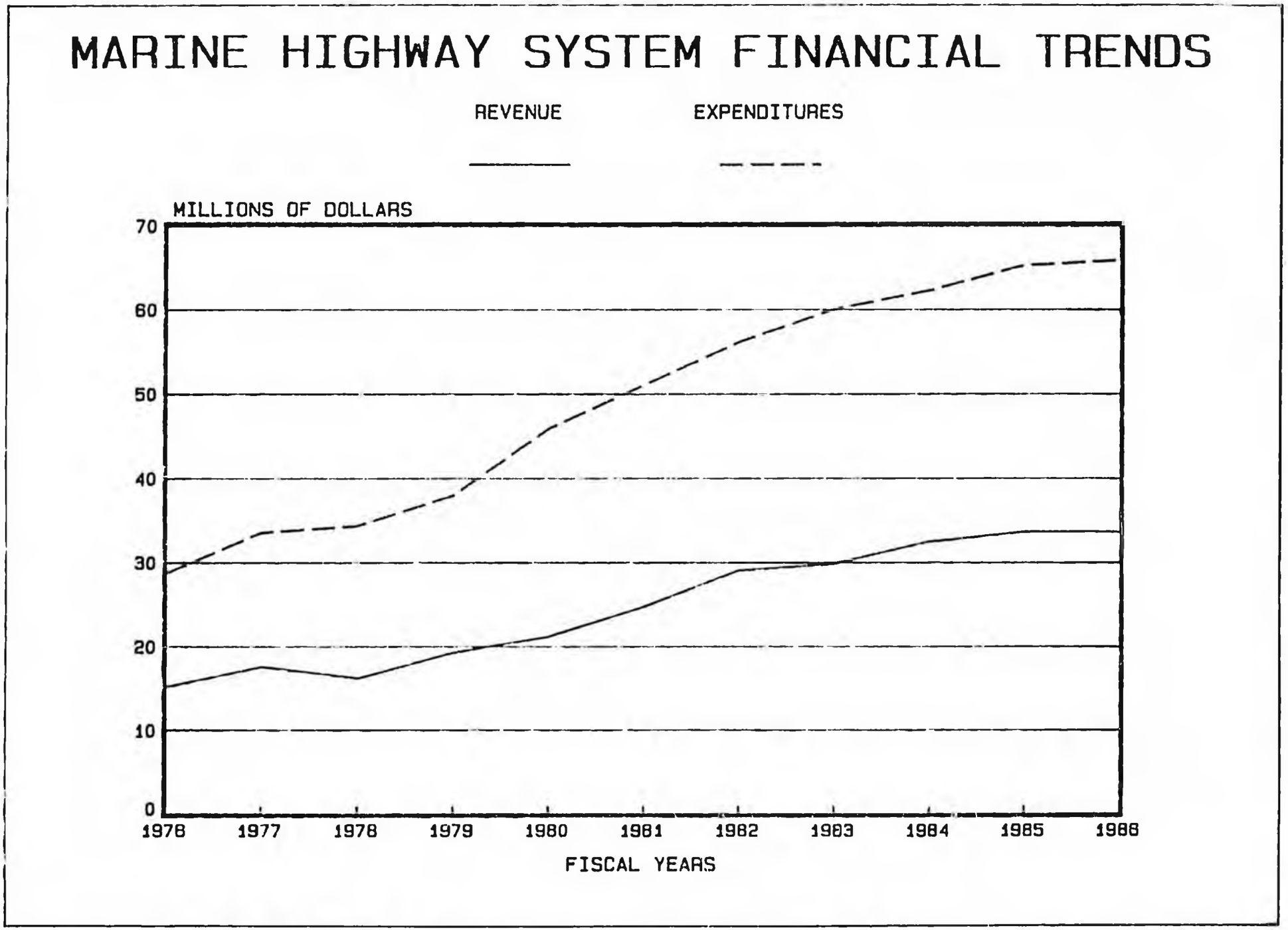
Unique System. No other state department of transportation in the nation operates a ferry fleet that offers such extensive service.

1987 BUDGET



Total: $63.4 Million

MARINE HIGHWAY SYSTEM FINANCIAL TRENDS



Fares Cover Over Half AMHS Costs. As shown above, passenger and vehicle fares and other en route receipts met about 55 percent of all costs in fiscal year 1986. (FY 1987 expenditures were $65 million while revenues were $33.8 million.) And this relationship between revenues and expenditures has remained approximately steady for the past 12 fiscal years.

Operations Are The Major Costs. As shown in the 1987 budget charts on the right, the costs of ship operations including necessary overhauls and improvements are 90.6 percent ($56.4 million) of all costs. The manning of shore facilitiesand overall administration costs, including the operation of the reservation system, is 9.4 percent ($7.0 million) of budgeted costs.

Personnel Costs Are Almost Two Thirds of All Costs. The 1987 budgeted complement included 879 persons, (705 permanent, 174 seasonal or part-time). To operate the ships safely and efficiently, to maintain the equipment and to serve the personal needs of passengers, AMHS personnel costs are almost two thirds (64.8 percent) of total costs.

Morale Good. Despite the extensive travel, crew morale seems to be good. Management in recent years has made progress in attending to member concerns and in giving crew members a greater voice in management decisions. Periodic Director and crew meetings have proved to be successful.

Need To Budget For Ship Replacements. The ferries range in age from 10 to 24 years with the average being 18 years old. With ship replacement costs ranging from $10 million for the smaller ships to $100 million for the larger ships, it would be prudent for Alaskans to begin setting aside funds annually to meet replacement needs. As is the case for Alaska's International Airport capital assets, it is suggested that future needs be accounted for in the annual budget process. Passenger and vehicle revenue is the suggested source of depreciation funds.

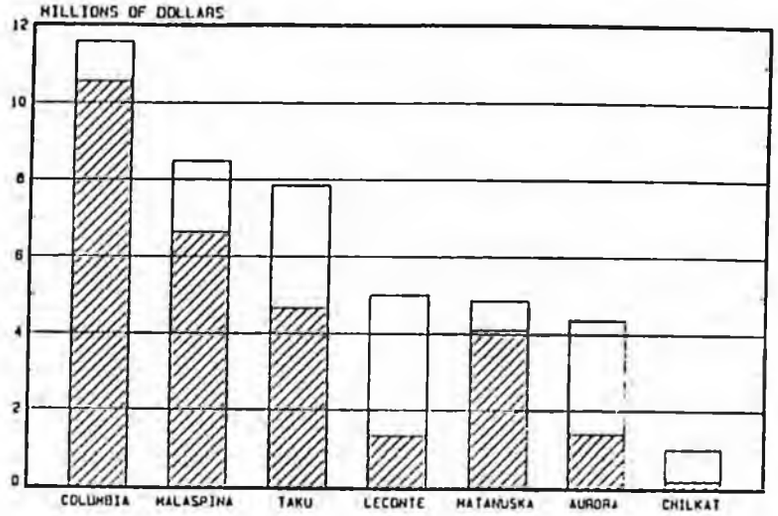
Need For Secure Funding Sources. As is the case for highway planning, ADOT&PF officials need the assurance of secure funds over a three to five year period in order to plan the most effective and efficient program of AMHS operations, maintenance and improvements. Passenger and vehicle revenue should form the base of such funds with set annual supplements from the Legislature and the communities served.

SHIP-BY-SHIP ANALYSIS

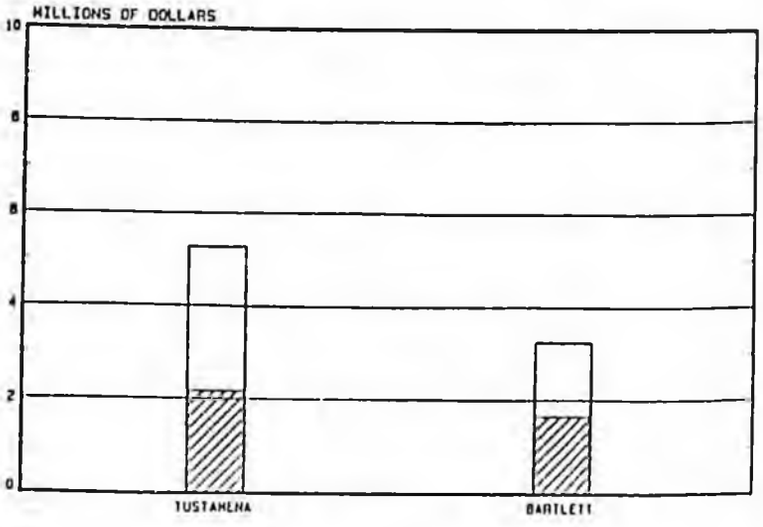
1988 REVENUE

1988 EXPENDITURES

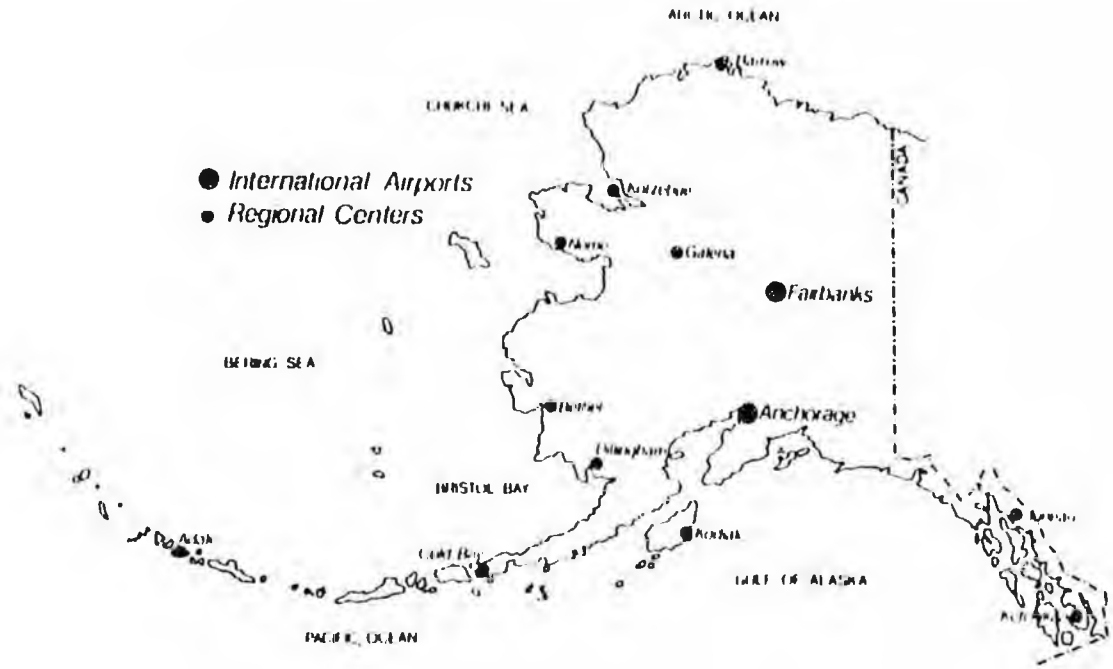
SOUTH EAST SYSTEM



SOUTH WEST SYSTEM



AIRPORTS



International

Central Region
- Anchorage International

Northern Region
- Fairbanks International

Regional Center

Central Region
- Bethel
- Cold Bay
- Dillingham
- Kodiak

Northern Region
- Barrow
- Galena
- Kotzebue
- Nome

Southeastern Region
- Juneau
- Ketchikan

District

Central Region
- Aniak
- Cordova Mile 13
- Homer
- Kenai Municipal
- King Salmon
- McGrath
- St. Marys
- Unalaska/Dutch Harbor

Northern Region
- Deadhorse
- Fort Yukon
- Gulkana
- Unalakleet

Southeastern Region
- Petersburg
- Sitka
- Wrangell

Transport

Central Region
- Flat
- Iliamna
- Merrill Field
- Platinum
- Sand Point

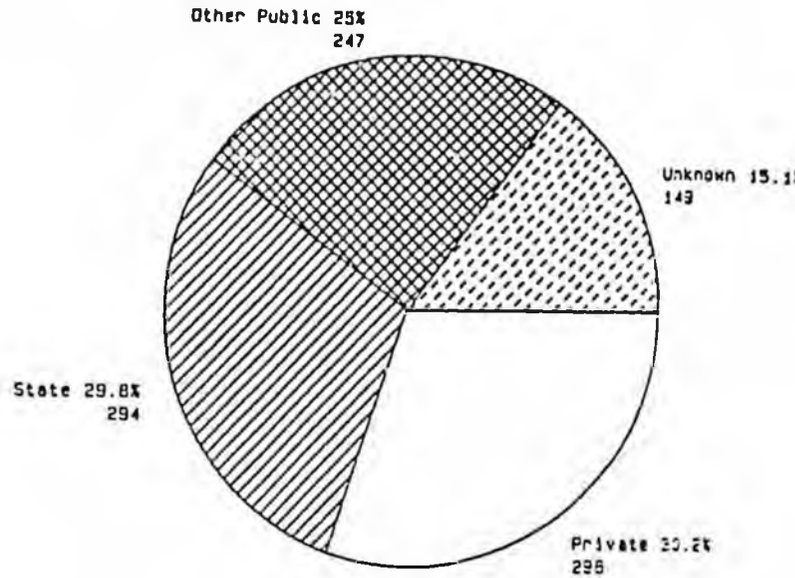
Northern Region
- Bettles
- Dahl Creek
- Prudhoe Bay
- Tok Junction
- Valdez

Southeastern Region
- Klawock
- Yakutat

There are 998 airports and bush landing strips in Alaska with 215 out of 294 state-owned facilities actually maintained by the ADOT&PF. The Anchorage and Fairbanks airports are included in the Alaska International Airport System in that they serve commercial aircraft of many nationalities. Due to their complexity, the International Airports are managed by a special division of the ADOT&PF.

AIRPORT OWNERSHIP

Total: 998

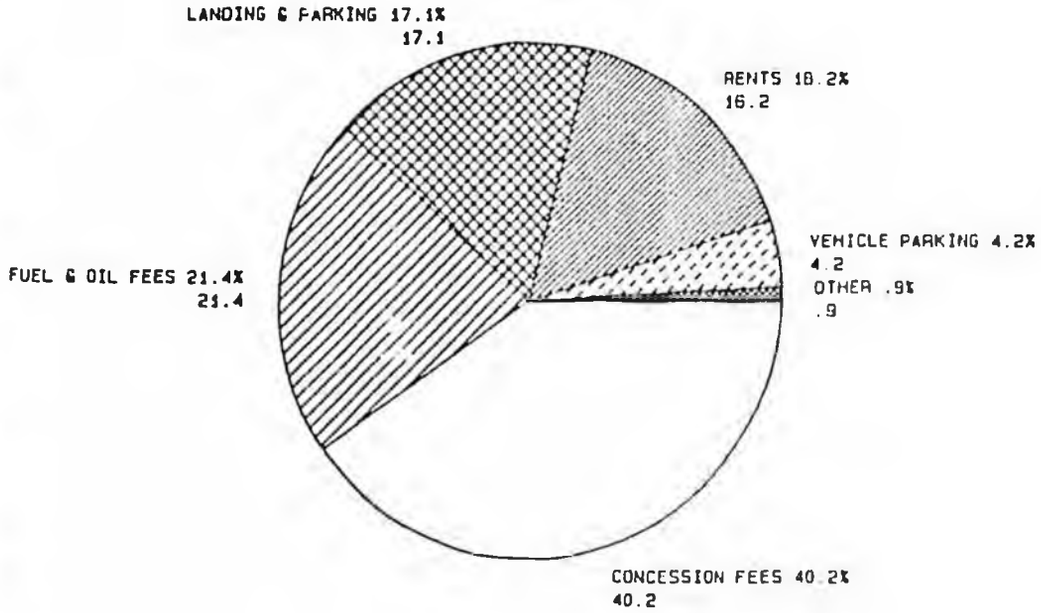


STATE AIRPORTS

FUNCTIONAL CLASSIFICATION	CENTRAL REGION	NORTHERN REGION	SOUTHEAST REGION	TOTAL
INTERNATIONAL	1	1	0	2
REGIONAL CENTER	4	4	1	9
DISTRICT	7	4	3	14
TRANSPORT	4	5	2	11
COMMUNITY	83	46	17	146
LOCAL	39	50	23	112
TOTAL:	138	110	46	294

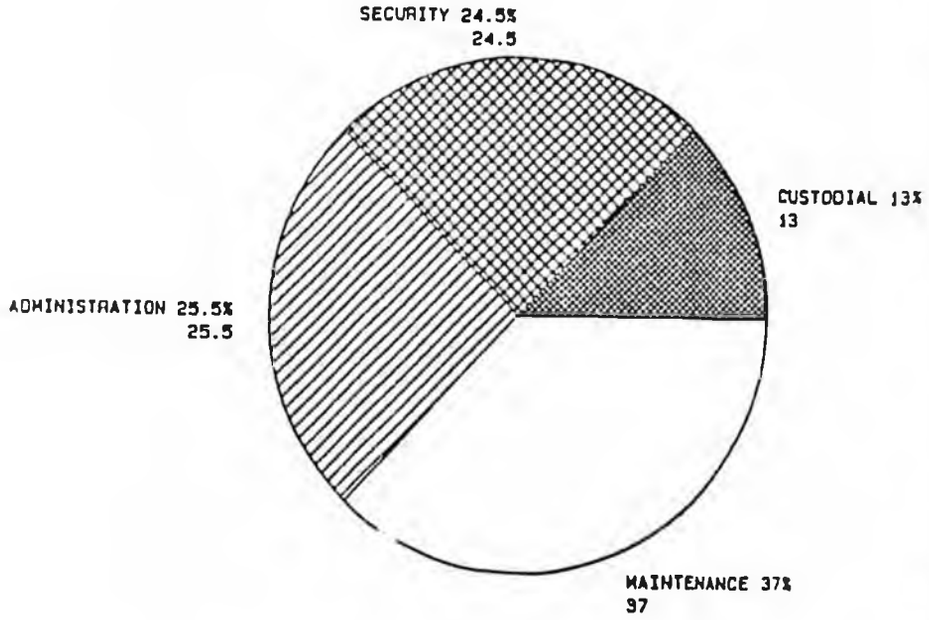
INTERNATIONAL AIRPORTS

1986 REVENUE



TOTAL: $47.9 Million

1986 OPERATING EXPENSES



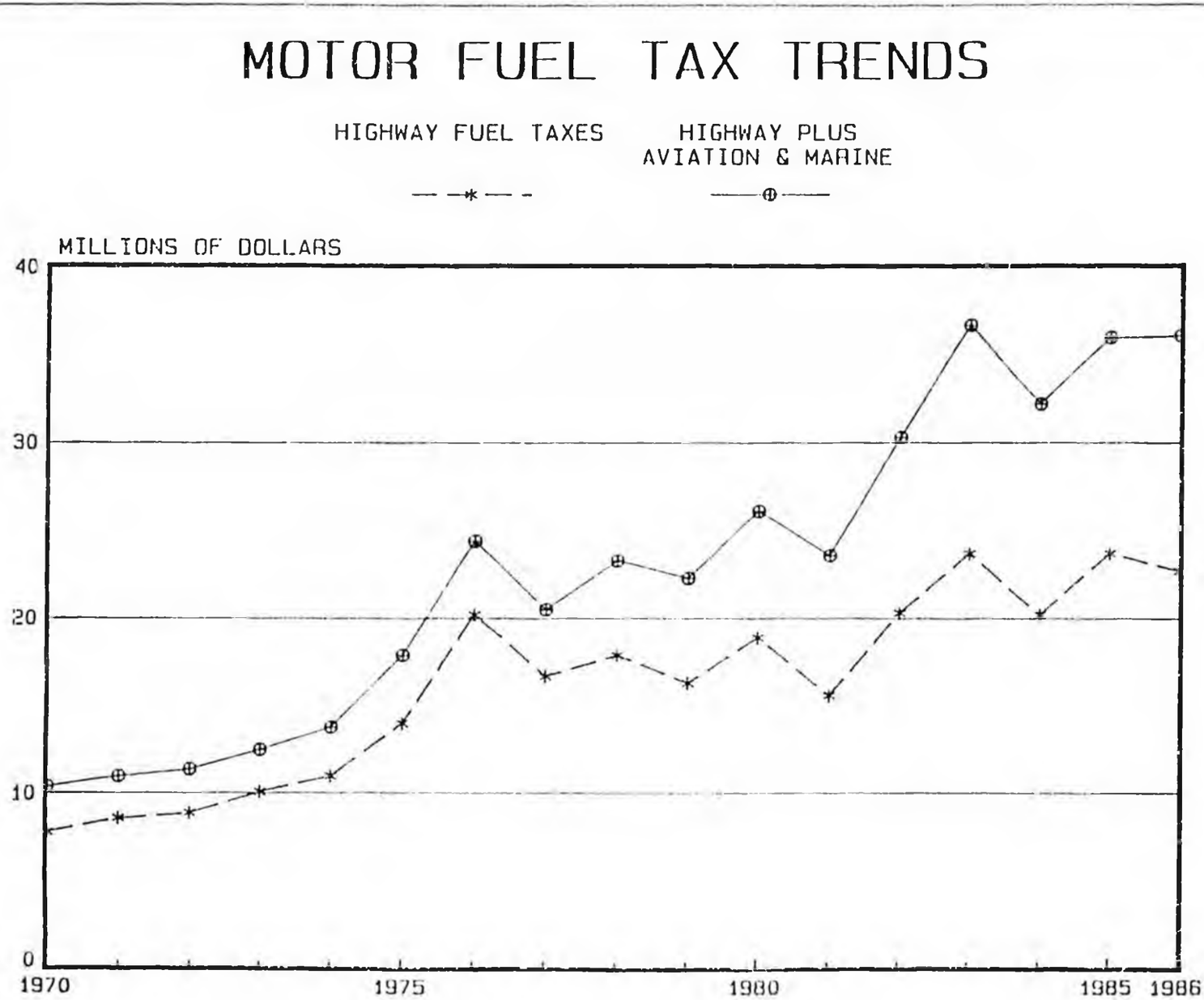
TOTAL: $25.5 Million

Because of its fast growth, extensive capital needs, self-sufficient nature and the need to guarantee the amortization of Alaska International Airport System bonds, all operating revenue generated and all expenditures are accounted for in a special Enterprise Fund. As indicated, revenues in fiscal year 1986 amounted to $47.9 million up from $42.5 million in 1985. And despite Alaska's economic downturn, revenues continued upward in 1987 to $48.9 million. As of June 30, 1986 the combined value of the two airports stood at $293 million up from $251 million a year earlier.

Bond Debt Up. At the close of fiscal year 1986 bonded indebtedness stood at $41.9 million. An additional $38.0 million of revenue bonds were issued in November 1986 for construction of the parking garage at the Anchorage International Airport.

Improvements. In fiscal year 1986 the $22.4 million in operating income together with $2.0 million in federal grants and net interest income of $0.9 million were used to make bond principal payments ($2.0 million), to increase restricted assets ($0.1 million), to increase working capital ($3.8 million) and to upgrade airport property, plant and equipment ($19.3 million).

MOTOR FUEL TAX TRENDS



Secure Funding Source Needed. One of the problems of providing a secure, predictable source of funds for Alaska's State Highway Program is that the highway user tax base does not provide enough revenue to support highway system maintenance and improvement needs. However for most other states of the nation the motor fuel taxes, the auto and truck registration fees and assorted other taxes and fees levied on motor vehicles and their use do provide the necessary funds to support the State Highway Program. The success of the nation's highway programs is largely attributable to the fact that secure and predictable highway user taxes have met the capital, operating and maintenance needs.

Low Highway User Taxes And Fees. The reason that Alaska's highway user taxes and fees do not meet highway program needs is that they are low in comparison with other states.

For heavy trucks, Alaska ranks lowest in the nation with a tax load of $1,598 per year or 2.0 cents per vehicle-mile of heavy truck travel. This compares to Washington which collects over three times as much ($4,990 per truck, and 6.2 cents per vehicle-mile of heavy truck travel). The highest taxer of heavy trucks is Arizona which collects $11,012 per truck or 13.8 cents per vehicle-mile of heavy truck travel.

For automobiles, Alaska ranks 37th among the states with a $122 tax per average automobile or 1.0 cents per vehicle-mile of travel. The highest in the nation is Rhode Island with an annual tax load of $731 per automobile or 5.9 cents per vehicle-mile of automobile travel (six times the Alaska load). The lowest is New York at $73 per year and 0.6 cents per vehicle-mile of travel. Washington's annual tax on automobiles is $310 per vehicle or 2.5 cents per vehicle-mile of auto travel.

The above facts are based on a 1987 U. S. Department of Transportation report, "Road User and Property Taxes". The taxes and fees were those in effect on January 1, 1987. Included are all highway user taxes and, where applicable, state personal property taxes. The study compared annual taxes on a 80,000 lb. gross vehicle weight truck/trailer combination driven 80,000 miles per year and a 4,200 lb. gross vehicle weight automobile driven 12,500 per year.

Raising Motor Fuel Taxes. Alaska's motor fuel tax, which has not changed since 1961, is eight cents per gallon and the revenue trend from the tax is as shown in the chart.

A comparison of the 1988 revenues with 1988 State Highway Program receipts (page I-5) shows a wide disparity. A ninefold increase in the tax on fuel used in highway travel would have been required to raise the $200.5 million per year of state funds, including debt service, motor vehicle law enforcement and highway safety programs.. Over a fivefold increase in total motor fuel tax receipts (highway plus aviation and marine fuel taxes) would have been required to raise the $200.5 million of state funds used to support the 1988 State Highway Program

However as shown on page III- 11, a doubling of the total motor fuel tax would meet the FY 1988 budget for highway and airport maintenance. As has been the experience of state highway program managers in other states, the earmarking of highway user taxes and fees (or other taxes, such as mineral severance taxes) for the state highway program or distinct parts of the program, such as highway maintenance, enables program managers to better plan for efficient and effective use of the funds.

Maintaining Balance Between Competitors. The Alaska Railroad Corporation and private truckers compete for freight movement in some important corridors. And it is important to maintain the existing balance in trucking and railroad costs when enacting highway finance initiatives. Higher highway user taxes would immediately change costs in the trucking industry to the railroads advantage -- unless the railroads costs were raised concurrently.

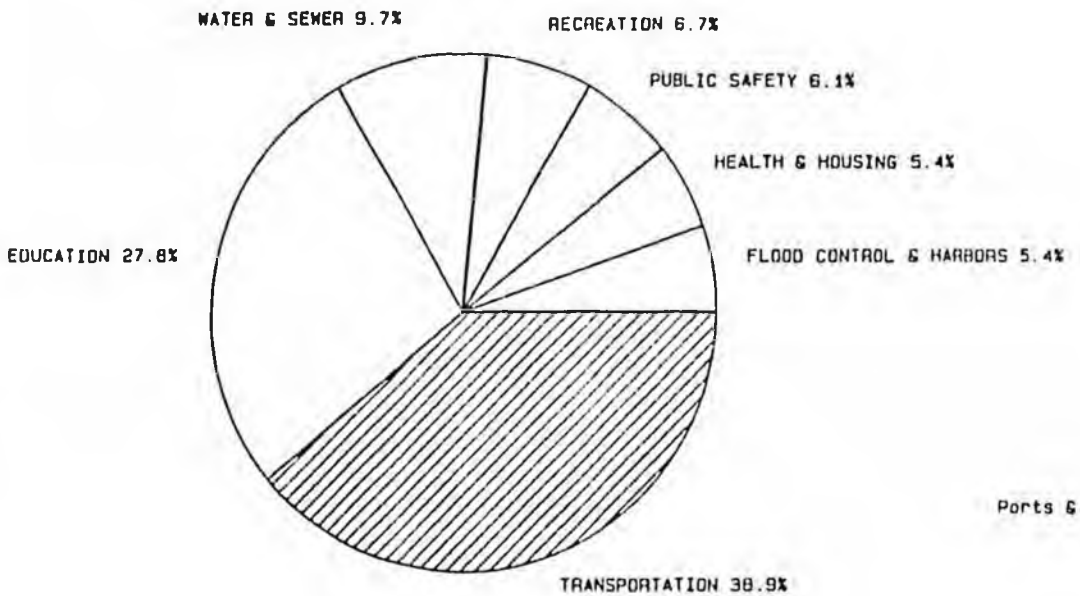
Two Possibilities That Need Further Study. One solution is enactment of legislation requiring the Alaska Railroad Corporation to pay motor fuel taxes. The Railroad is currently exempt from such taxes.

A second solution is to establish a regulation requiring the Alaska Railroad Corporation to pay monthly, quarterly or annual fees to the Alaska Treasurer in lieu of the taxes.

In either case it is suggested that at least half of the added railroad payments be used for railroad/highway grade separations. This would expand the program of constructing grade separations thereby enhancing safety and the efficiency of both rail and truck freight operations.

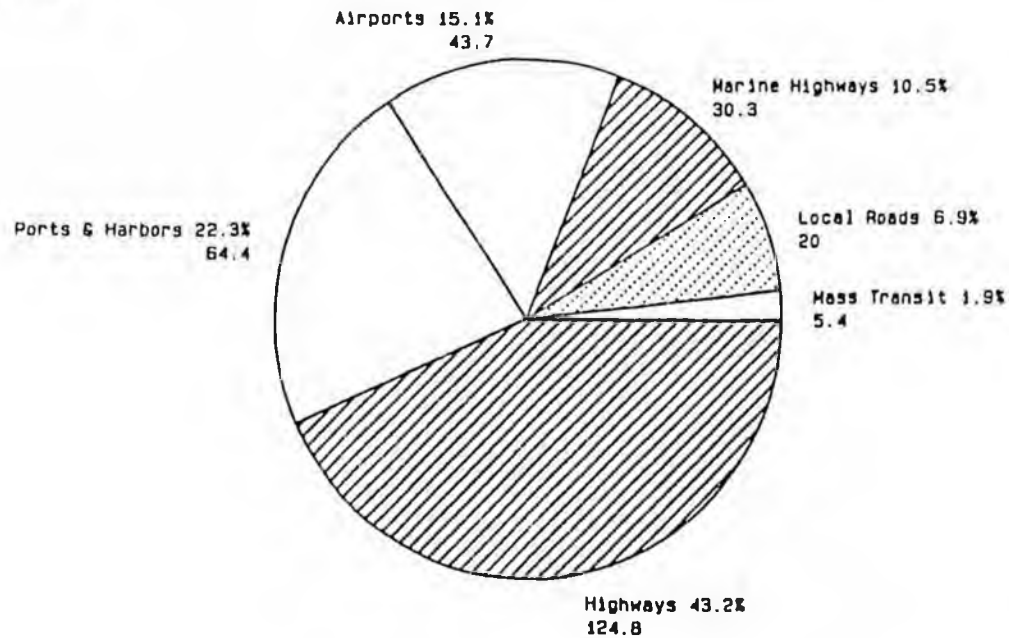
STATE BONDS

TOTAL SINCE STATEHOOD



TOTAL: $1.4 BILLION AS OF 6/30/84

TRANSPORTATION DEBT



TOTAL: $288.6 MILLION AS OF 12/31/86

Transportation Debt Being Rapidly Amortized. As shown in the right hand pie chart, the state transportation debt stood at $288.6 million as of December 31, 1986. This is down by $47.6 million from the close of the previous calendar year and $95.5 million down from two years previous. At that rate of amortization, state transportation bonds will be eliminated in six years.

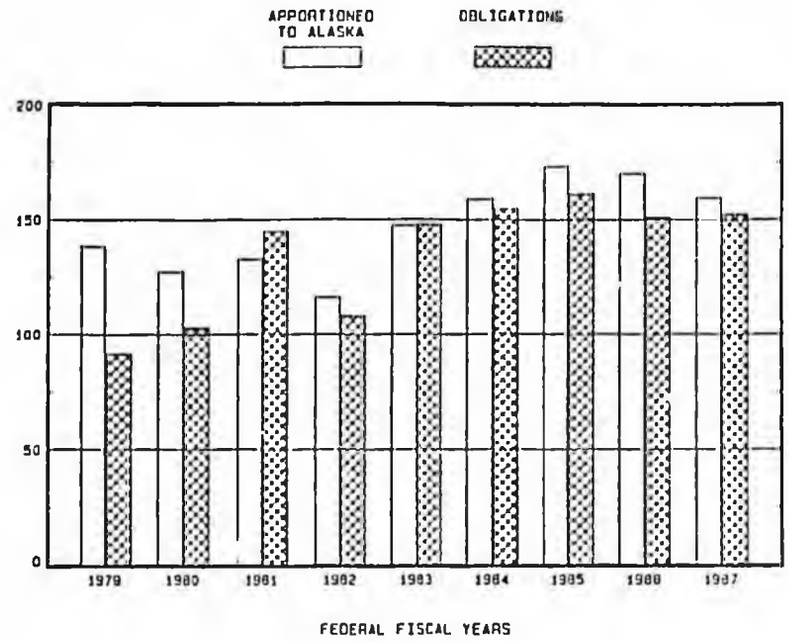
At $155.1 million, the debt for land highways and the Marine Highway System represented 53.7 percent of the December 31, 1985, transportation debt (The revenue bonds sold by the Alaska International airport System are not included in the charts.)

Some states rely extensively on the bond market for their state highway capital improvement programs. As a nation, total state highway debt was $20 billion as of December 31, 1985,the latest year in which debt summary information is available.

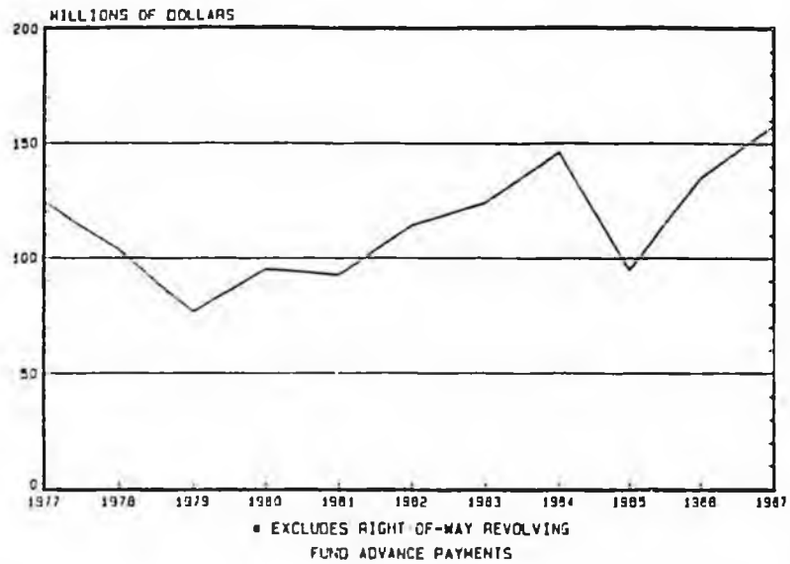
Alaska leads The Way In Public/Private Cooperation. Alaska has three outstanding examples of private funding for highway construction – 1) the 416 mile Dalton Highway built by oil interests; 2) the 50 miles of Red Dog Mine Access Road being financed by the Alaska Industrial Development Authority which will be reimbursed by private mining interests; and 3) the $1.3 million contribution by a trucking firm for the upgrading of the Klondike Highway to allow heavy-laden ore trucks to gain access from Canadian mines to the port at Skagway.

Military Involvement Also Important. The construction of the Alaska Highway in both Canada and Alaska by the U.S. Army during the early part of World War II was also a tremendous contribution to Alaska highway development.

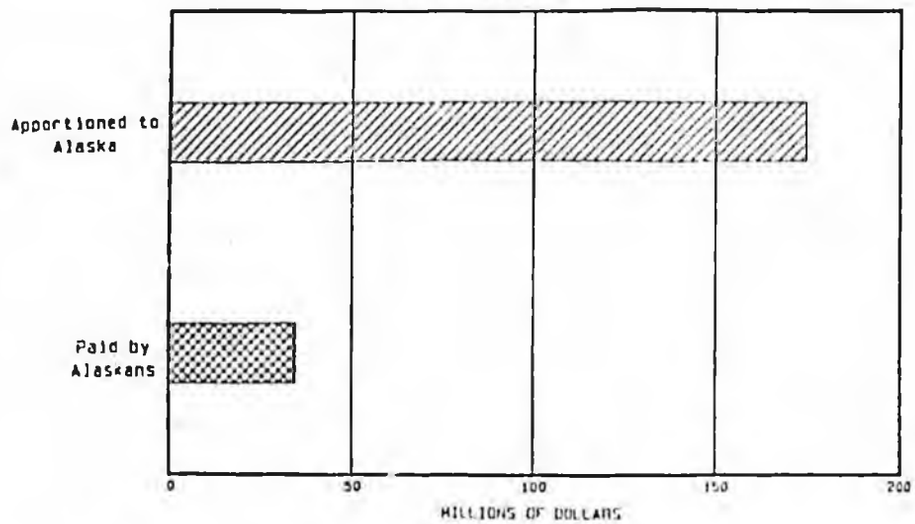
FEDERAL AID HIGHWAY PROGRAM



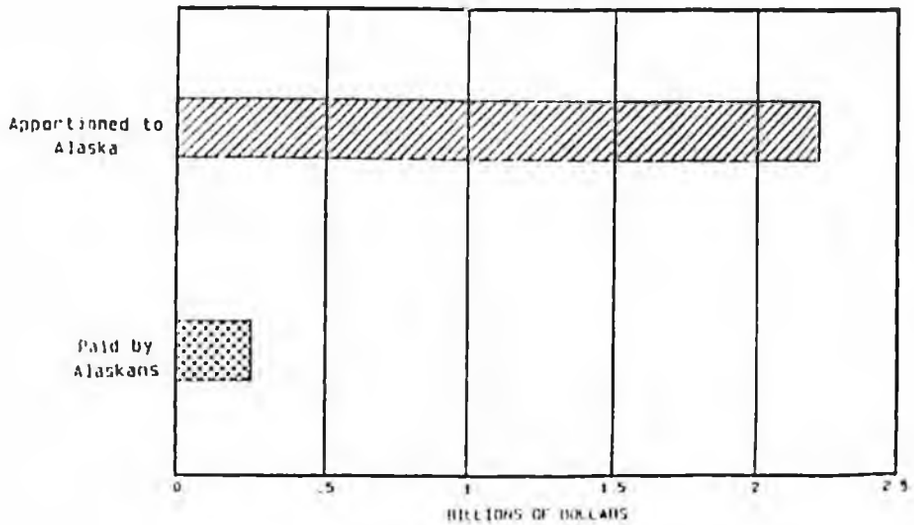
REIMBURSEMENTS



FY 1985



SINCE 1956



Federal Aid Highway Program Critically Important To Alaska. The chart on the upper left indicates the trends in the amounts of federal funds:
1) apportioned to Alaska, and 2) made available after budget limitations were applied by lawmakers and actually used (obligated for subsequent spending on Alaska road and bridge improvements). Federal aid highway funds are restricted by federal mandate for highway, ferry and ferry terminal improvements as well as planning, research and safety activities. Federal funds cannot be directed to highway maintenance activities.

1987 A Record. The upper right chart tracks actual payments to Alaska from 1977 to 1987 (federal fiscal years). Note that 1987 was Alaska's record-high year for Federal Aid Highway Program receipts. The federal funds stem largely from a nine cents per gallon tax on gasoline, a three cents per gallon tax on gasohol, a 16 cents per gallon tax on diesel and other special motor fuels, as well as a 12 percent sales tax on heavy truck and truck trailer purchases, a tax on truck tire sales and an annual use tax on heavy trucks. The federal highway user taxes are accounted for in the U.S. Treasury in a Highway Trust Fund and apportioned to each state for the modernization of major highway systems and bridges.

Federal Budget Controls Limit Spending. For the October 1, 1985 to September 30, 1986 federal fiscal year, Alaska was apportioned $165 million of authorized funds, but due to federal obligational control limitations only $151 million of the apportioned funds were actually available to Alaska. In other words $14 ($9 federal and $1 state) million worth of highway improvement projects could not be started because the obligation ceiling restricted the use of authorized and available Highway Trust Fund money.

Slowdown In Highway Improvements. The situation is far worse for fiscal year 1988 because it is controlled by the authorization levels mandated by the Surface Transportation and Uniform Relocation Assistance Act of 1987. This act reduced annual authorization levels over the 1988 to 1991 period. Furthermore, obligational control further limits fiscal year 1988 funds to about $130 million. Unless obligational controls are lifted, Alaska's highway improvement program will be sharply lower than the 1983 to 1987 experience.

Federal Incentives For Road And Bridge Modernization. The portion of the cost borne by federal highway user taxes, depends on the Federal Aid Highway System – Interstate, Primary, Secondary, Urban classification of the road to be improved. Federal funds will participate in 94.7 percent of the cost of Interstate Highway System original construction or rehabilitation, 91.4 percent of the cost of improving the other Systems and 80 percent of bridge replacement or rehabilitation costs. Overall, every dollar of Alaska funds that are made available for highway and bridge improvements is matched by nine dollars of Federal Highway Program funds – up to the limit of federal obligation authority. This is a great incentive for Alaska highway and bridge modernization.

Alaska Benefits The Most From The Federal Aid Highway Program. The bottom left chart indicates the amount of Federal Aid Highway Program funds apportioned to Alaska in 1985, as well as the amount of federal highway user taxes paid by Alaskans in that year. The bottom right chart summarizes both Alaska's apportionment of Federal Aid Highway Program funds and Alaskans payment of federal highway user taxes over the 1956 to 1985 period. At five and one half to one for FY 1985 and nine to one overall, Alaska leads all other states in the ratio of apportionments to taxes paid. This is due primarily to the fact that state apportionments of federal funds are related to the extent of land area in each state. Alaska, having the largest proportion of land of any state in the nation, receives disproportionally large shares of Federal Aid Highway Program funds.

Non-monetary Benefits. Besides financial assistance, there are other benefits that come with a strong Federal Aid Highway Program. First, it is required that national design standards be used and this promotes national uniformity as well as the safest possible highway environment. Second, federal officials on the scene in Alaska (the Juneau office of the Federal Highway Administration has a 12-person professional staff) provide both an oversight function as well as technical assistance to ADOT&PF officials. Lastly, the long standing spirit of cooperation that has prevailed between federal and ADOT&PF officials has been a stabilizing influence in Alaska's program of highway improvement.

CORRECTION

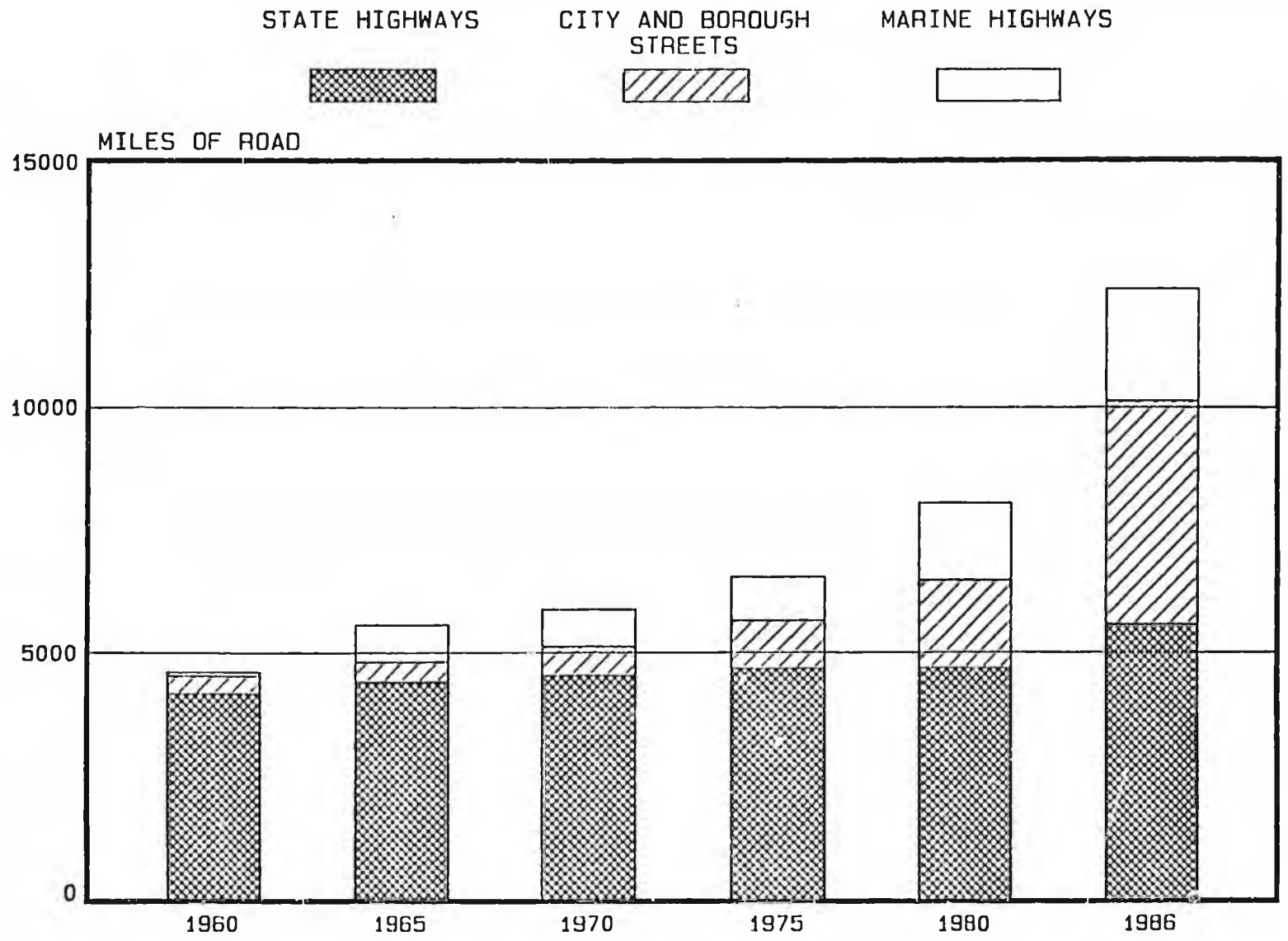
THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

CHAPTER I

TRANSPORTATION FINANCE AND RESPONSIBILITIES

This Chapter includes a Review of the Role of the State, Cities and Boroughs in Sharing Responsibilities for Administering, Maintaining, Operating and Improving Alaska's Transportation System as well as a Review of the Funds Available to Meet These Responsibilities.

MILES OF ROAD



NOTE: EXCLUDING FEDERALLY OWNED ROADS.

Over 10,000 Miles Of Road. Discounting the 224,000 miles of road that are under the direct control of federal agencies, there are 3.6 million miles of land service roads in the United States. Alaska's 12,370 miles is less than three one hundreths of a percent. Yet Alaska's land area is 16 percent of the nations total. Only Delaware, Hawaii and Rhode Island have fewer miles of road.

Marine Highway Routes Are State Highways. Including the ferry routes of the Marine Highway System, there are 7,824 miles of highway that are considered state highways. These routes are administered, operated, maintained and improved by the Alaska Department of Transportation and Public Facilities.

Since 1960 the state highway system (including Marine Highway System routes) has doubled in extent. The most significant change is the expansion of the Marine Highway System, due largely to the shift in the status of service to the Aleutian Chain in 1981 from testing and demonstration to permanently, scheduled service.

However during this 27 year period, the 416 mile Dalton Highway was built by private interests and added to the State Highway System. Also during this time, the 325 mile Parks Highway was completed to provide better highway service between Alaska's two largest centers, Anchorage and Fairbanks. Other shorter links of state highways have also been added.

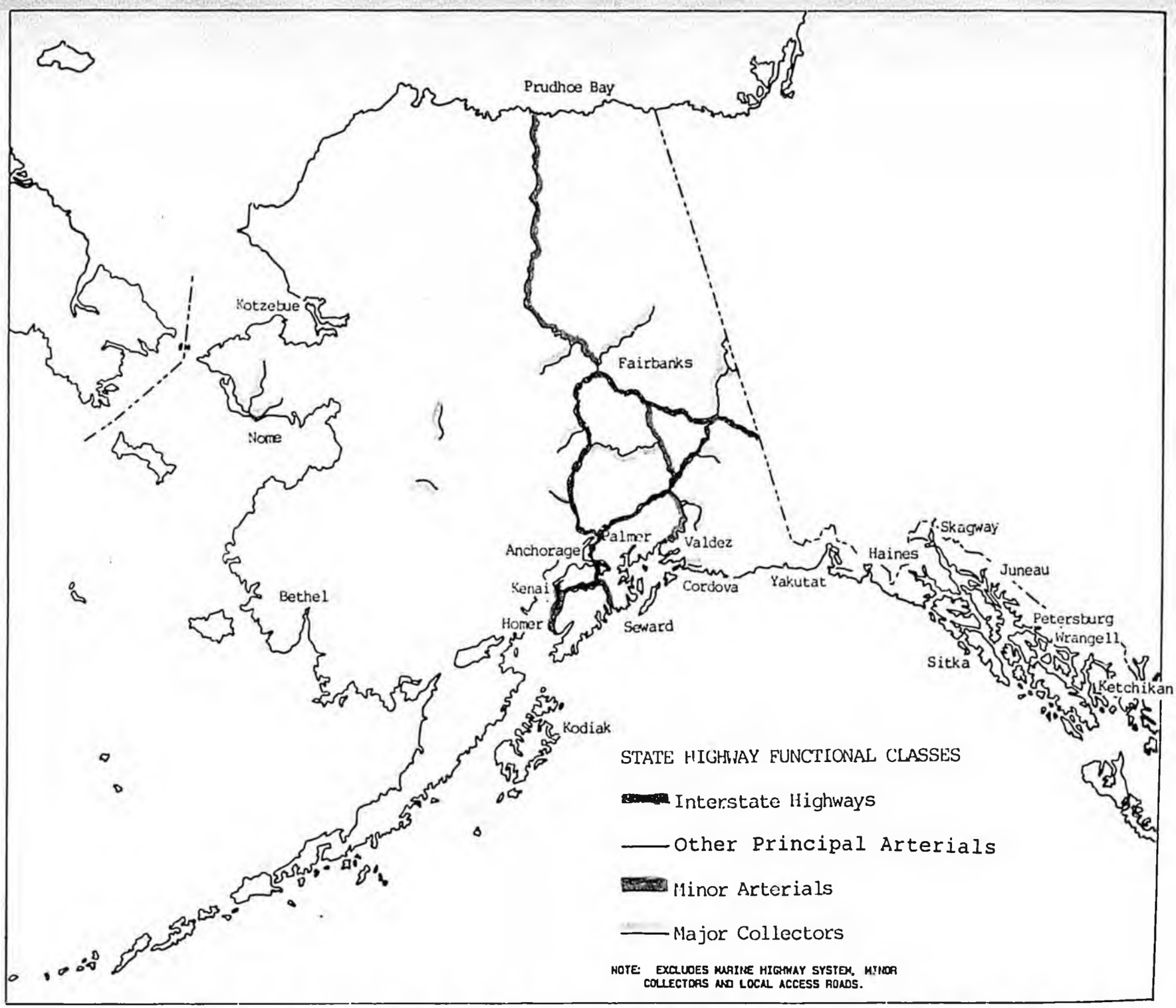
Alaska Unique. The truly striking transportation distinction between Alaska and the rest of the nation is that the majority of Alaska's communities of over 250 people are not connected by land via the State Highway System. The remoteness of some places, the water barriers and the difficulty of traversing the terrain have made such connections either impossible or inordinately expensive. Alaska has therefore relied on a system of ferry routes with nine ships capable of conveying both passengers and vehicles to some communities and to an extensive system of airports that allows air service to all other communities of over 30 people.

The Alaska Railroad. Alaska also has a 480 mile railroad system that is vitally important to the shipment of general commodities as well as mineral and forest products over the Seward to Fairbanks mainline. A spur to Whittier connects the main line with the Marine Highway System on Prince William Sound and to barges that service the "lower 48 states"..

In 1982, the State of Alaska purchased the railroad line, equipment and property. The Alaska Railroad Corporation operates the freight and passenger service. While the railroad is independent of the ADOT&PF, the ADOT&PF Commissioner is a member of the Alaska Railroad Company's Board of Directors.

Cities And Boroughs Also Have Road Responsibilities. In those parts of Alaska that have a population base and a system of local government (city or borough), the governmental entity can accept responsibility for some roads. While the ADOT&PF is not required to take into the State Highway System those roads that cities and boroughs will not accept, typically the ADOT&PF does take on this responsibility.

Leap In City And Borough Roads. Note that the chart indicates a significant growth in city and borough road and street mileage over the 1960 to 1986 period. Some of the increase is related to subdivision street construction by developers and some is related to state appropriations for specified roads. However some of the increase is due to better accounting by the cities and boroughs for road miles, since 1980 state legislation greatly increased the state revenue sharing funds that are based on miles of road.


Prudhoe Bay
Kotzebue
Fairbanks
Nome
Skagway
Palmer
Valdez
Anchorage
Haines
Juneau
Kenai
Cordova
Yakutat
Bethel
Petersburg
Homer
Seward
Wrangell
Sitka
Ketchikan
Kodiak
STATE HIGHWAY FUNCTIONAL CLASSES
Interstate Highways
Other Principal Arterials
Minor Arterials
Major Collectors
NOTE: EXCLUDES MARINE HIGHWAY SYSTEM, MINOR COLLECTORS AND LOCAL ACCESS ROADS.

FUNCTIONAL CLASSES OF RURAL ROADS

Functional Highway Classification - A Basis For Management Decisions. Most state highway agencies classify their state highways based on their traffic service functions. The resulting hierarchy gives managers a tool for decision-making regarding the distribution of scarce resources. Design standards, improvement priorities and maintenance standards are all related to the functional classification of roads. The map shows the functional designation of Alaska's major rural roads and their extensions through urban areas.

Interstate Highways, The Most Important Arteries. Alaska's most important rural roads are those designated to be Interstate Highways (1,089 miles). These connect Alaska's largest centers -- Anchorage and Fairbanks -- with each other and to the main route of land travel into Alaska. An Interstate Highway Spur also connects Anchorage with the Kenai Peninsula.

As the chart at right shows, the average mile of Interstate Highway is traversed by 1,750 vehicles per day. Alaska's Interstate Highway System's average traffic density is only one seventh the 12,900 vehicles per day average traffic density on all rural Interstate Highways in the nation. Due to this lower traffic density, Alaska's rural Interstate Highways are built to two-lane design standards rather than the four-lane, divided highway standards found in other states.

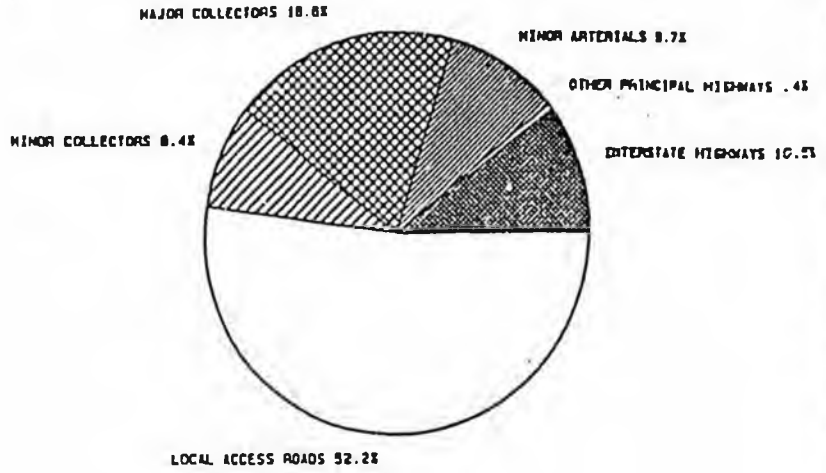
Other Principal Arterials Next In Importance. In terms of traffic service, Alaska's Other Principal Arterials are next in importance. The Egan Expressway in Juneau and the Klondike and Haines Cut-Off Highways are examples of Other Principal Arterials. They are important because they connect Haines, Skagway and Juneau to the Alcan Highway and to the Alaska Marine Highway System.

Minor Arterials Expand The System. As seen, the Minor Arterials link other important Alaska centers with the Interstate Highway System.

Major and Minor Collectors. the Major and Minor Collector Highways further expand the system. All remaining rural roads that serve long-distance travel are designated as Collector Highways. However not all Collectors are state highways, as some are under the jurisdiction of Alaska's cities and boroughs. The Major Collector classification is given to the more heavily travelled Collectors.

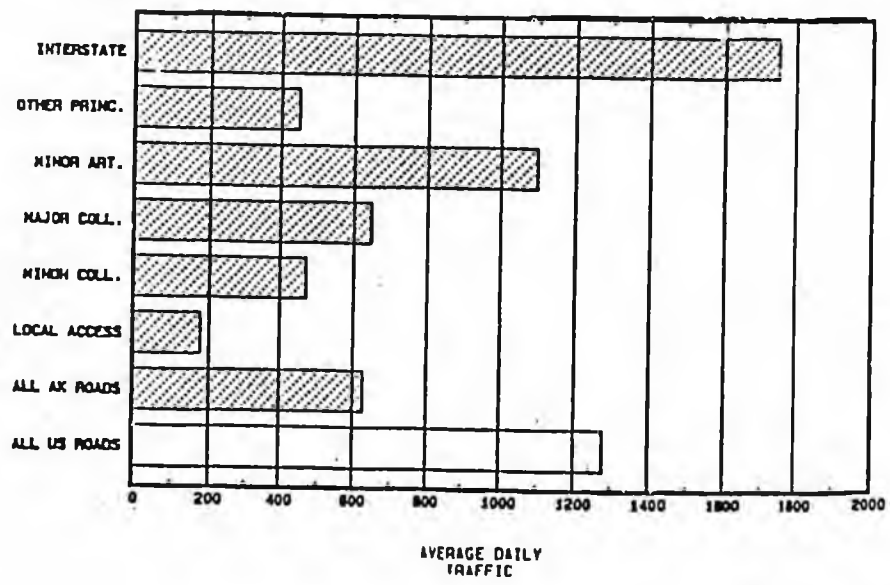
Local Access Roads. The remaining rural roads (not shown on the map) that serve individual or small groups of houses, camps or farms are termed local access. These roads function predominantly as a means of access to land, rather than as a means to convey people, products and raw materials through an area. Most such roads are in the Matinuska-Susitna and Kenai Boroughs.

MILES

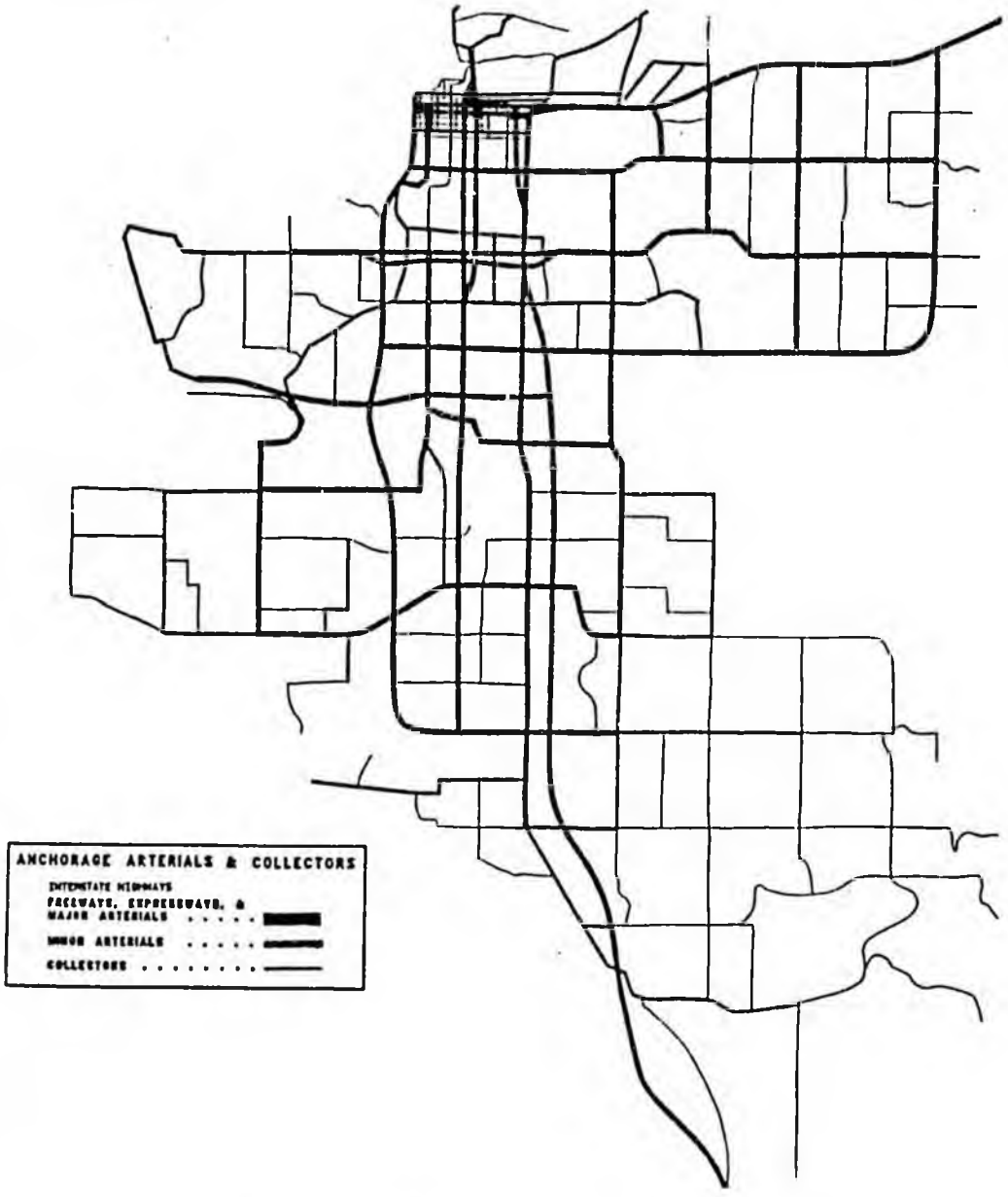


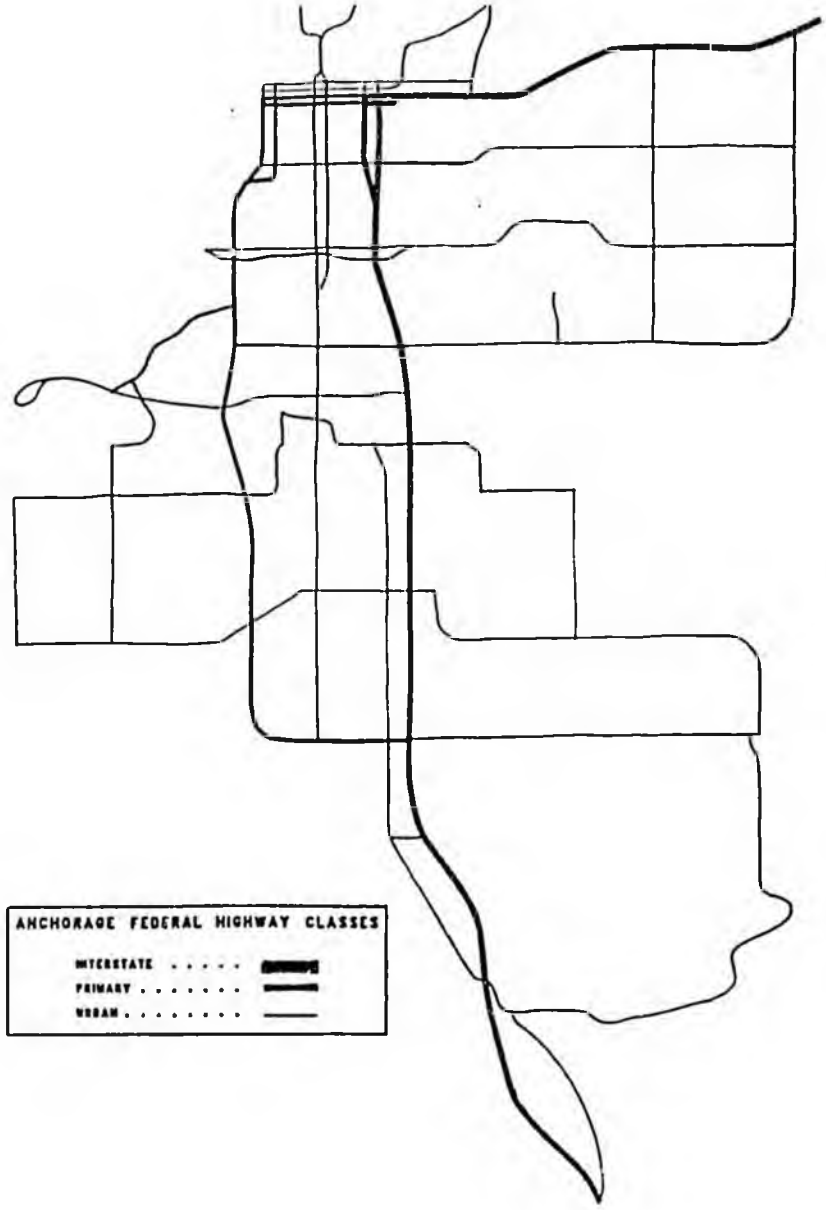
TOTAL: 9,980 MILES

TRAFFIC DENSITY



ANCHORAGE ROAD CLASSIFICATIONS





Functional Highway Classification Also An Urban Management Tool. The maps show three types of Anchorage road classifications. In the upper left are the functional classes agreed upon cooperatively by ADOT&PF and Anchorage officials. The designated Federal Aid Highway Systems are shown in the upper right. And the map on the bottom right shows the designated state highways.

Not shown is the street and highway maintenance scheme agreed upon by ADOT&PF and Anchorage officials in which some state highways are maintained by the Municipality of Anchorage and some municipal streets are maintained by the ADOT&PF. Also not shown are the 780 miles of Local Access Streets in the Anchorage urbanized area.

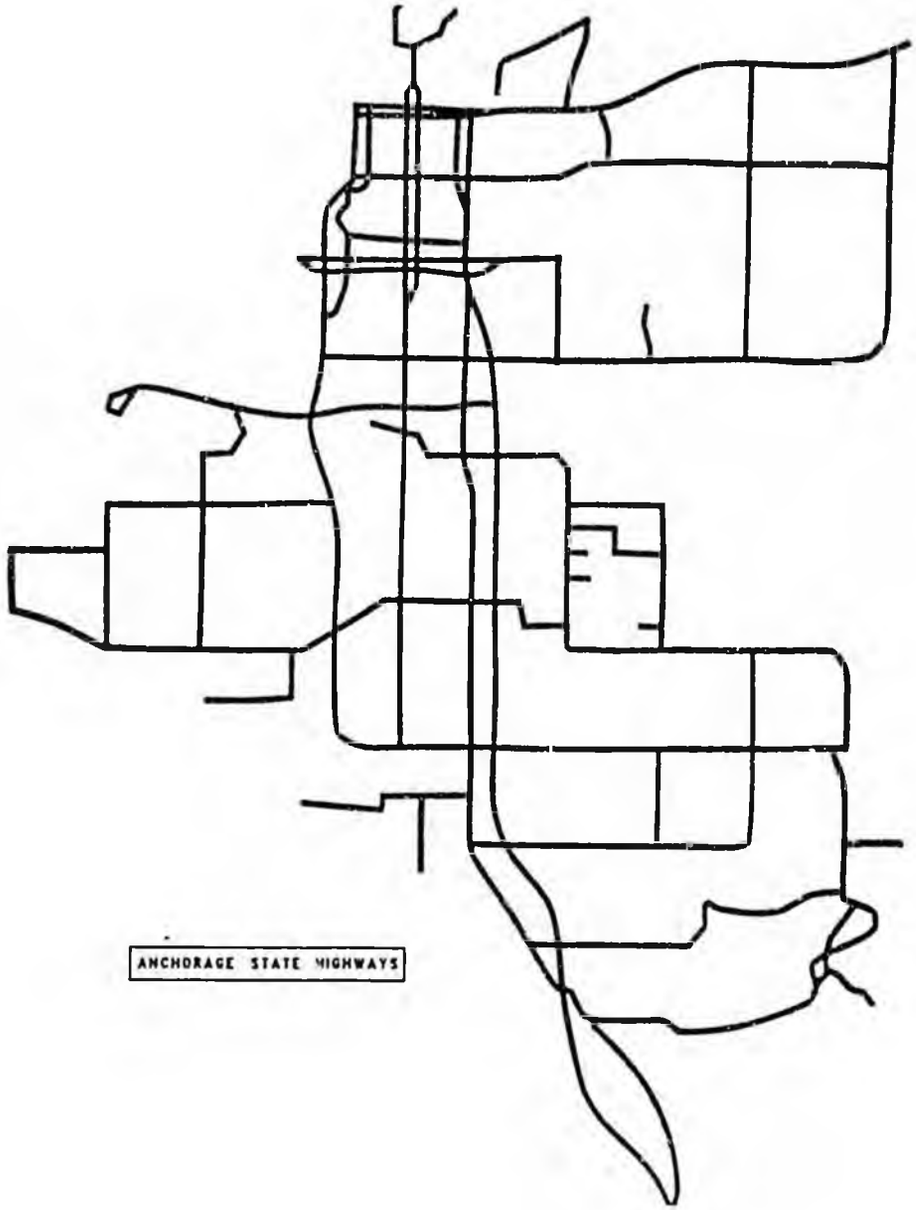
The below table indicates the importance of each functional class of Anchorage streets and highways. Of particular significance is the 88 miles of Interstate Highways, Freeways, Expressways and Major Arterials (9 percent of the miles) which serve almost two thirds (65.4 percent) of Anchorage's daily motor vehicle travel.

Functional Classes	Miles	% Mi.	% Travel	Traffic Density*
Interstate, Freeways, Expressways and Major Arterials	88	9.0	65.4	25,400
Minor Arterials	29	3.0	11.4	13,400
Collectors	80	8.2	10.1	4,300
Local Access	780	79.8	13.1	600
	977	100	100	

* Average daily vehicles per road mile.

The designated Federal Aid Highway System routes -- Interstate, Primary and Urban -- were adopted based on the traffic service function. These are the routes eligible for improvement with Federal Aid Highway Program funds. I-3

High Proportion of State Highways. There are 176 miles of state highway in the Municipality of Anchorage and 801 miles of either municipal street or streets that are "service area maintained". By agreement with the Municipality, the service areas levy road taxes and maintain all non-state highways within their area.



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At 18 percent of the road miles, the state highway system serving Anchorage is more extensive than the average urban state highway network (13 percent) in the nation. (And the national statistics are biased on the high side by high proportions of state highways in the cities of several Eastern states.) Furthermore in Alaska's urban areas, many streets and roads that serve a collector or minor arterial function are state highways.

As a result state resources must be used for the operation, maintenance and improvement of routes with only a minor traffic service function. Routes of greater statewide traffic service significance–in terms of their function in either connecting communities or distributing statewide traffic to important economic centers within urban areas–must compete for scarce state resources with the urban collector and minor arterial routes of low statewide significance. Compounding the problem is the fact that ADOT&PF officials must unnecessarily deal with urban issues such as land use and traffic control that are more properly a local responsibility.

Joint Action Needed. While the ADOT&PF has authority to transfer responsibility for state highways to local government, this is a very difficult problem due to the local government cost implications. Therefore, to resolve the issue of urban highways, it is recommended that the ADOT&PF and the Legislature first establish a state highway jurisdiction policy in concert with municipal officials and then make the changes that satisfy the policy.

Use The Functional Classification Plan. The most widely accepted basis for redefinition of state highways is the functional classification hierarchy of streets and highways. This is used to test alternative state/local jurisdictional plans.

Suggested Alternatives. One obvious alternative is to place only urban extensions of state highways on the urban state highway network. A second is to add to the first by including all Freeways and Expressways. The third alternative would be the addition of Major Arterials.

Financial Resources Are An Important Consideration. To ease the burden of a shift in urban road responsibility, there are financial and management arrangements that can be established.

One such arrangement is the Urban Arterial Board in the State of Washington. Only 6.7 percent of the urban road mileage in Washington is designated as state highway. Therefore the Washington Legislature established an Urban Arterial Fund and an Urban Arterial Board in 1968 to assist municipalities on a fund matching basis to make improvements to those designated urban arterials that are not state highways. It is recommended that Washington's success in limiting urban state highway responsibilities to major arterials and the success of the Urban Arterial Board and the Urban Arterial Fund in meeting Washington's urban arterial needs be studied for possible application in Alaska.

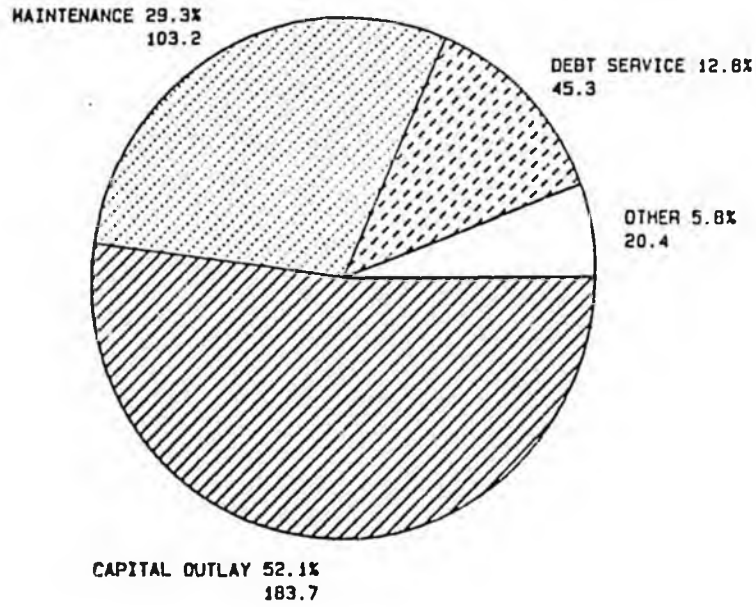
First Steps Taken. The need for a clear policy on road control is recognized by Alaska officials. In 1987 the Alaska Legislature set forth the following directive to begin dealing with the issue:

> "IT IS THE INTENT OF THE LEGISLATURE THAT DOT/PF: 1) ESTABLISH A ROAD RESPONSIBILITY TASK FORCE COMPRISED OF REPRESENTATIVES OF DOT/PF, LOCAL GOVERNMENTS, UNORGANIZED AREAS, AND USER GROUPS. THE TASK FORCE IS TO REVIEW THE FEASIBILITY OF TRANSFERRING THE RESPONSIBILITY OF DIRECT MAINTENANCE ON CERTAIN ROUTES FROM THE STATE TO LOCAL GOVERNMENTS, AND TO EXAMINE REASONABLE AND EQUITABLE FUNDING SOURCES FOR MAINTENANCE ACTIVITIES, INCLUDING A REVIEW OF THE MOTOR FUEL TAX AND OF THE EXISTING ROAD SERVICE ACCOUNT IN THE STATE' REVENUE SHARING PROGRAM.
>
> THE TASK FORCE SHALL ALSO STUDY THE ISSUES OF ROAD OWNERSHIP, LIABILITY, AND THE TRANSFER OF EQUIPMENT AND EMPLOYEES..."

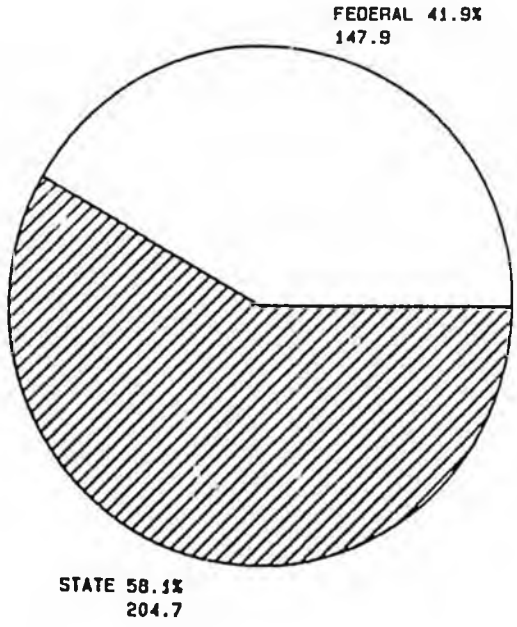
In September 1987, the ADOT&PF selected a facilitator to assist the Commissioner in responding to the mandate. In November, the Task Force was named and a first meeting planned.

1986 STATE HIGHWAY PROGRAM

EXPENDITURES



RECEIPTS



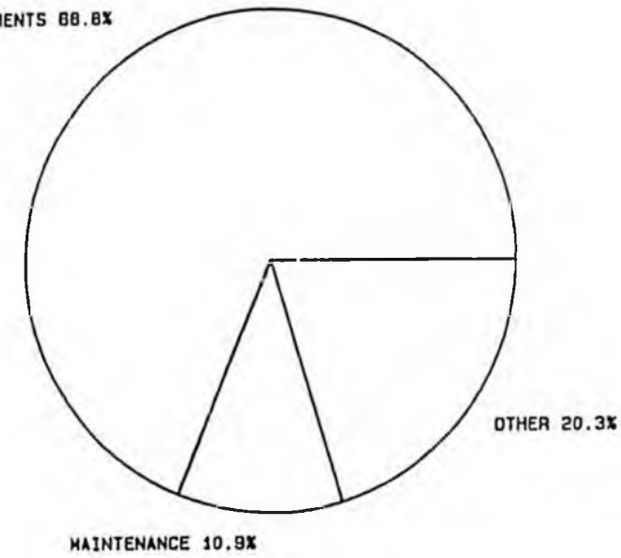
TOTAL: $352.6 MILLION

Highway Expenses Five Times The National Average. For 1986 (calendar year) the ADOT&PF reported to the Federal Highway Administration that it spent $353 million on state highway administration, maintenance, operations and improvement. This is about $700 per capita and compares with a $140 per capita national average of expenditure on state highways.

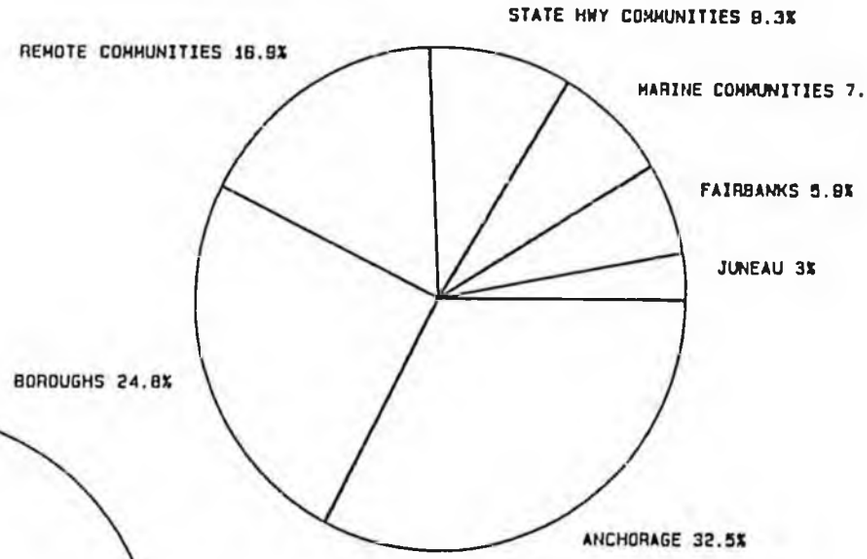
Marine Highway System Costs Included. Included are all 1986 capital as well as maintenance and operations expenditures for both land service state highways and the Marine Highway System. Also included are $45.3 million to service the state debt on borrowing for previous state highway system improvements. Law enforcement and safety expenditures amounting to $11.4 million are included in the "other" category of expenditure as well as $4.7 million for highway program administration and $4.2 million for highway planning and research. Finally in the other category is the 1986 expenditure of $4.3 million for Local Service Roads and Trails, which is a portion of the State Highway Program (administered by the ADOT&PF) but directed toward local road betterments.

1985 LOCAL ROAD & STREET PROGRAMS

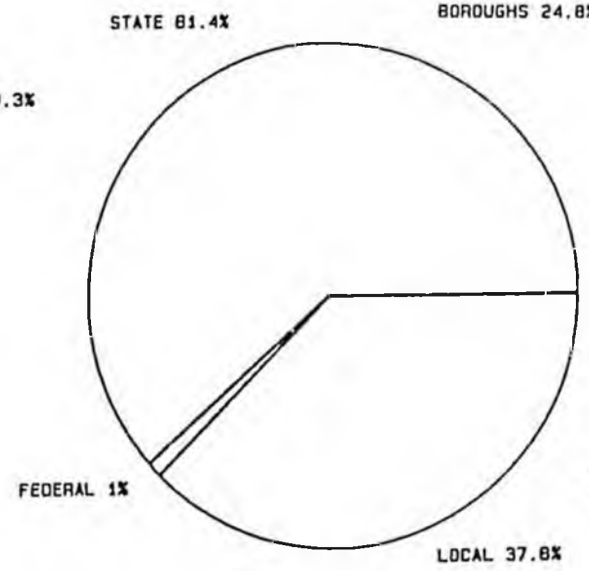
SPENDING CATEGORIES



UNITS OF GOVERNMENT



SOURCE OF FUNDS



TOTAL: $237.8 MILLION

Total Road Spending High. Alaskans raised and spent $237.8 million in 1985 (calendar year) for upkeep and improvement of the 3,992 miles of local streets and roads. For a population base of only 536,000 persons, this is a very significant level of expenditure. When combined with the 1986 state highway program of expenditure, it is estimated that total 1986 highway, street and road spending was about $590 million or $1,090 per capita, about four times the national average ($260 per capita).

Important ADOT&PF Factfinding Function. To assist the Office of the Governor and the Legislature and to comply with federal mandates, the ADOT&PF annually surveys, compiles and reports on local road and street spending. The ADOT&PF also verifies annually the current mileage of local roads and streets and this provides the base for state apportioning of road revenue sharing funds. 1985 information is the latest available on local road finance.

Road Revenue Sharing Funds. When the Legislature fully funds this program, each community receives a base of $2,500 per mile of conventional road and $1,500 for each mile of ice roads. However these amounts are adjusted upwards to accomodate higher costs in many areas of the state.

While communities are required to use only 20 percent of the funds for road purposes, ADOT&PF studies show that a majority of the road revenue sharing funds are actually used for road purposes.. Only that portion of the road revenue sharing funds that were actually devoted to municipal road programs are reported in the annual ADOT&PF surveys of municipal road expenditures.

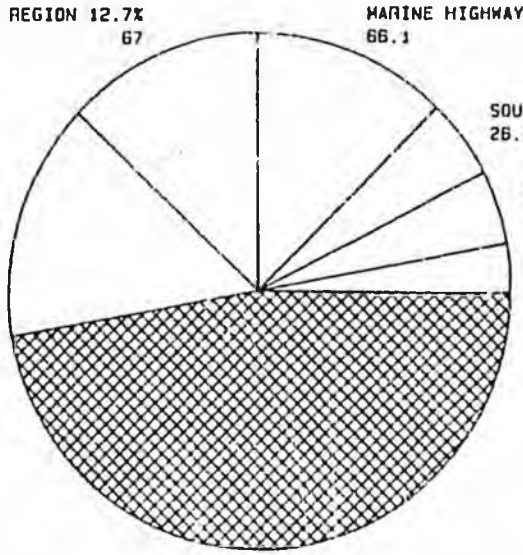
Special Terminology Used. Note the special terminology used in the "Units of Government" chart. "State Highway Communities" refers to all cities (15) directly served by the land service State Highway System, excluding Anchorage and Fairbanks. "Marine Communities" are the 20 cities, excluding Juneau, that are served by the Marine Highway System but not connected to the land service State Highway System. The "Remote Communities" are the remaining incorporated or unincorporated places not served by state highways or ferries.

State Funds Rising. In 1985, state grants for local roads amounted to $145 million, up from $88.4 million in 1984. This includes the portion of road revenue sharing funds that were used in road upkeep and other state funds appropriated for specific local road improvements. On the average the 1985 state contribution toward local road and street upkeep amounted to $270 per capita, but ranged from $120 per capita in the seven boroughs to $740 per capita in the Remote Communities.

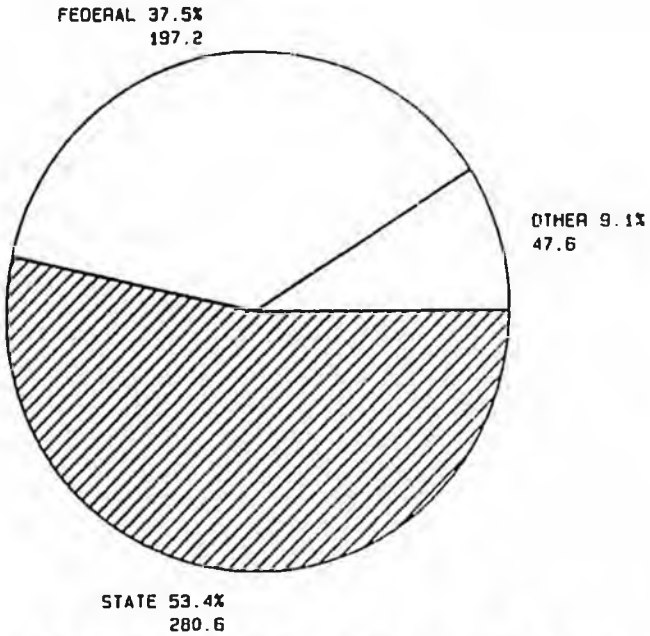
Fairbanks High In 1985 State Road Receipts. Based on miles of local road in each community, Fairbanks led with $132,000 per mile in state road receipts, while at the other extreme, the seven boroughs received an average of $13,000 per mile. Anchorage received $50,500 per mile. However in reviewing municipal road receipts and expenditures, it should be recognized that the year-to-year fluctuations are large and closely related to specific road improvements authorized by the Legislature.

1986 ADOT&PF EXPENDITURES

AREA

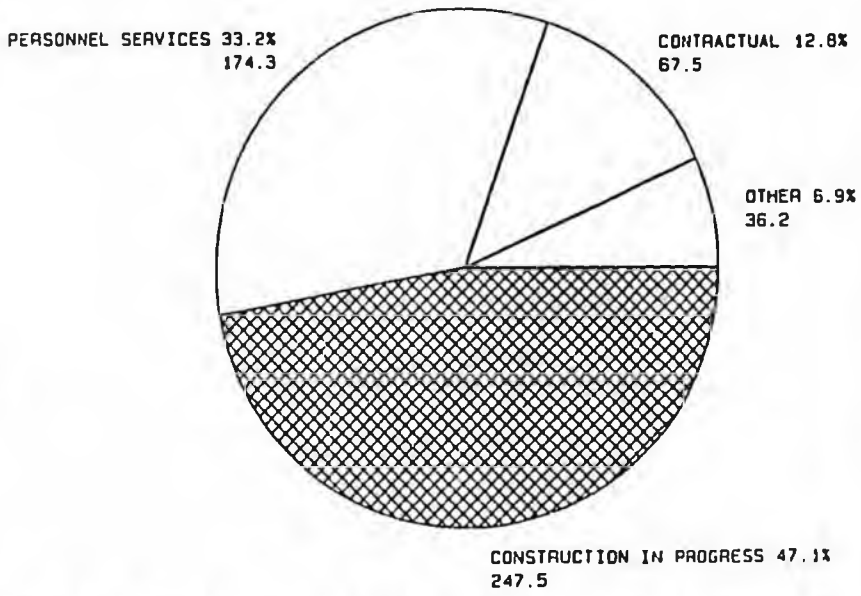


FUND SOURCES



TOTAL: $525.4 MILLION

EXPENDITURE OBJECTS



ADOT&PF Spent $525.4 Million in 1986. The charts above and at right are five perspectives on Alaska Department of Transportation and Public Facilities expenditures in fiscal year 1986. The ADOT&PF is not only responsible for State Highway System administration, operations, maintenance and improvement, but also owns, operates and maintains the nine-ship Marine Highway System, two International Airports, 215 other airports, 45 seaplane floats, harbor facilities, the state equipment fleet and almost 400 state owned buildings.

Highlights:

- o Payments for construction in progress, mostly highway and airport improvements, represented almost half of all expenses, $247.5 million.
- o Spending in the Northern Region, which has the most miles of state highway, led the three ADOT&PF regions.
- o Not included as ADOT&PF income is the $33.8 million in passenger and vehicle fees for Marine Highway System passage, which accrue directly to the Alaska Treasury.
- o About three fourths of the federal funds are reimbursements from the Federal Highway Trust Fund for state highway improvements. The other one fourth is from the Federal Airport Trust Fund for airport improvements.
- o Some of the "other" income is from concessions and fees from Anchorage and Fairbanks International Airport usage. These funds are deposited in the International Airport Enterprise Fund.
- o Two thirds (66.8 percent) of all expenditures were directed to private enterprise for construction in progress, supplies and other costs of business operation. One third (33.2 percent) was for ADOT&PF salaries and benefits.
- o 57.2 percent of all expenditures were for design (consulting or in house), right of way purchase and construction progress payments for improvements to highways, airports, ferries, harbors and other public facilities.

More Information Needed On Finance Trends. The information shown is the result of a special analysis made for this Review by the ADOT&PF. However it has been Highway Users Federation experience in other state highway program reviews that such information is readily available in the annual reports of the state highway and transportation departments. The information is important for the following reasons:

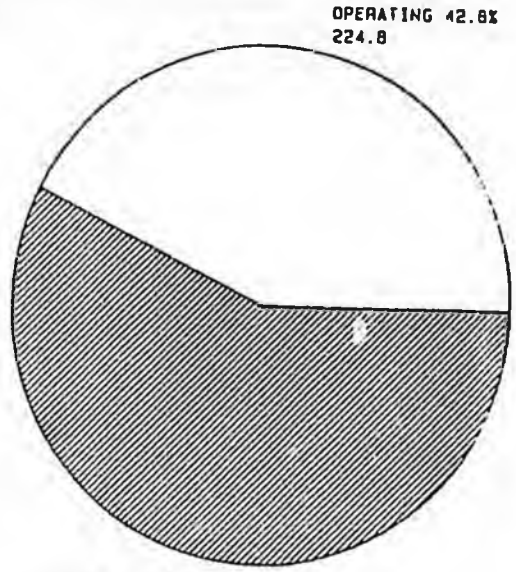
1) to place the Program in perspective with the programs of other state highway and transportation departments in order to detect possible inconsistencies,

2) to place modal components in perspective,

3) to analyze trends, and

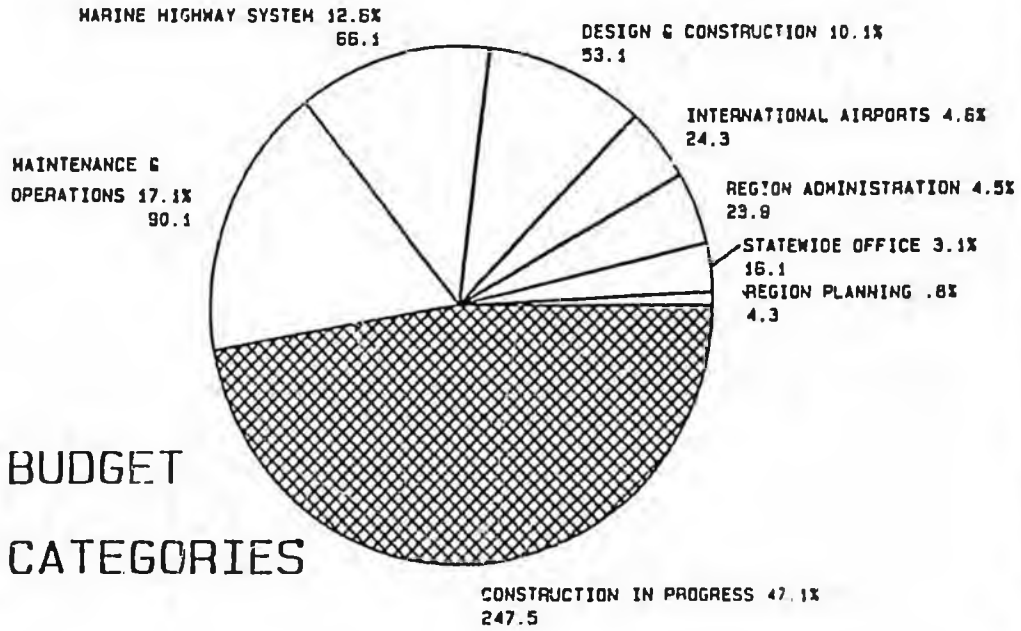
4) to provide legislators, administrators, other officials and constituent organizations with information necessary to make informed decisions regarding Program direction and support.

MAJOR BUDGET ELEMENTS



TOTAL: $525.4 MILLION

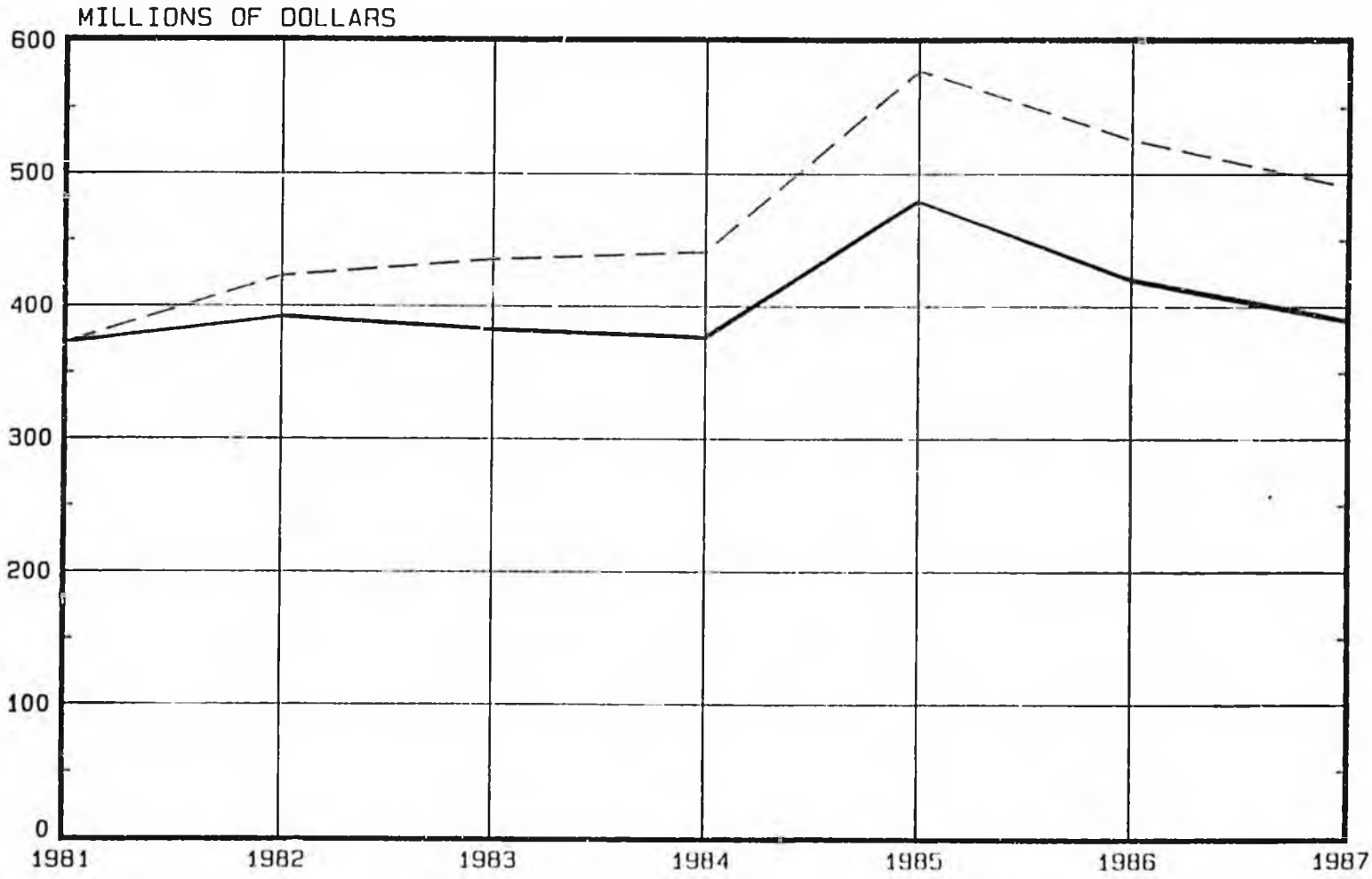
BUDGET CATEGORIES



ADOT&PF EXPENDITURE TRENDS

CURRENT $ — — — —

CONSTANT 1981 $ ——————

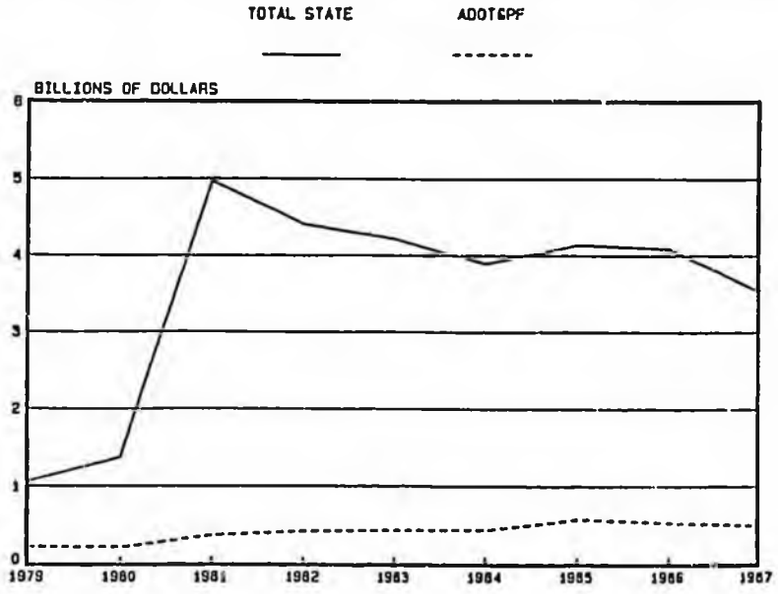


ADOT&PF Spending Up Modestly Over Last Seven Years. Two views of ADOT&PF spending over the 1981 to 1987 period are shown in the above chart. The dashed line shows the actual spending while the solid line depicts the value of the spending when inflation is considered. (The Anchorage Area Consumer Price Index was used to show the 1981 value of each current year's spending.) As a result of the eroding value of money, ADOT&PF spending of $493 million in FY 1987 was worth only $385 million in terms of what could be purchased with 1981 money. Despite the apparent $120 million increase in ADOT&PF funds, the 1987 spending level was up by only $20 million or five percent over the 1981 level.

ADOT&PF Expenditure Increases Are Low When Related To Travel Increases. Travel change is one indicator of transportation finance need. During the 1981 to 1987 period motor vehicle travel in Alaska increased 62 percent, airport enplanements increased by 25 percent and Marine Highway System passengers were up by 9 percent. Furthermore, the lane-miles of state highway increased 12 percent, thereby increasing the demand for such maintenance activities as snow and ice control.

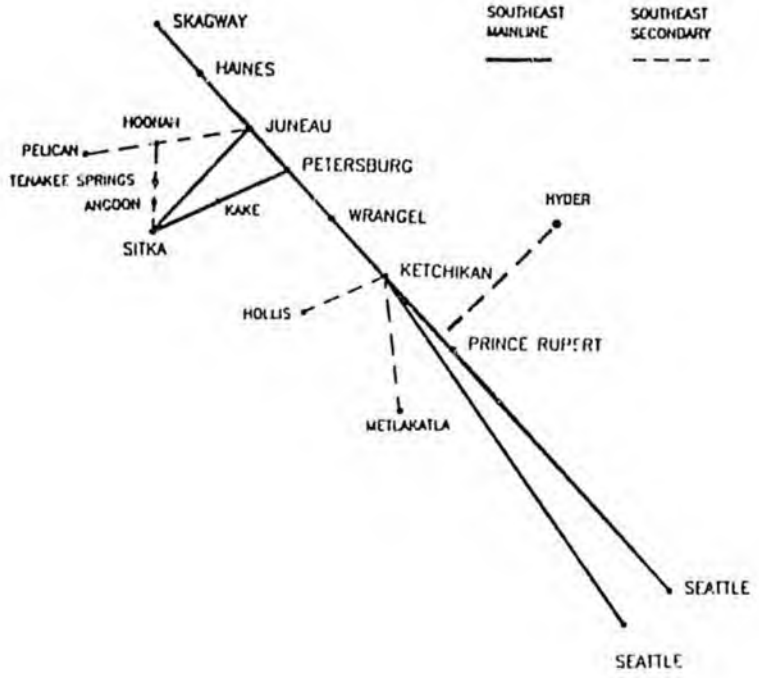
ADOT&PF Proportion of Total State Spending Has Diminished. While ADOT&PF spending has risen from $212 million in 1979 to $493 million in 1987, other state spending has risen even faster. This is noted by the fact that 1987 ADOT&PF expenditures represented 13 percent of total State of Alaska expenditures in 1987, down from 20 percent in 1979.

ADOT&PF & TOTAL STATE EXPENDITURES

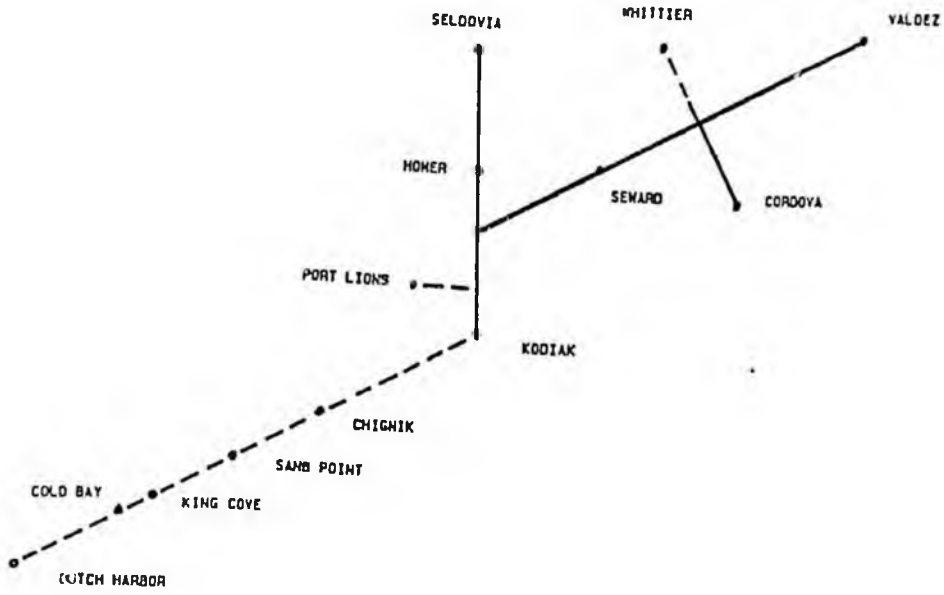


MARINE HIGHWAY SYSTEM

SOUTHEAST



SOUTHWEST



Waterborne Highway System. Alaska has more coastline than the rest of the United States combined. And more than half of its cities are unreachable by conventional highways. These are the reasons that Alaskans in 1960 voted the necessary bonds to establish the state's waterborne highway system. Operating as a division of the Department of Transportation and Public Facilities, the Marine Highway System started with one vessel -- the Motor Vessel Chilkat. During its first fully operational year in 1963, four ships served the fleet.

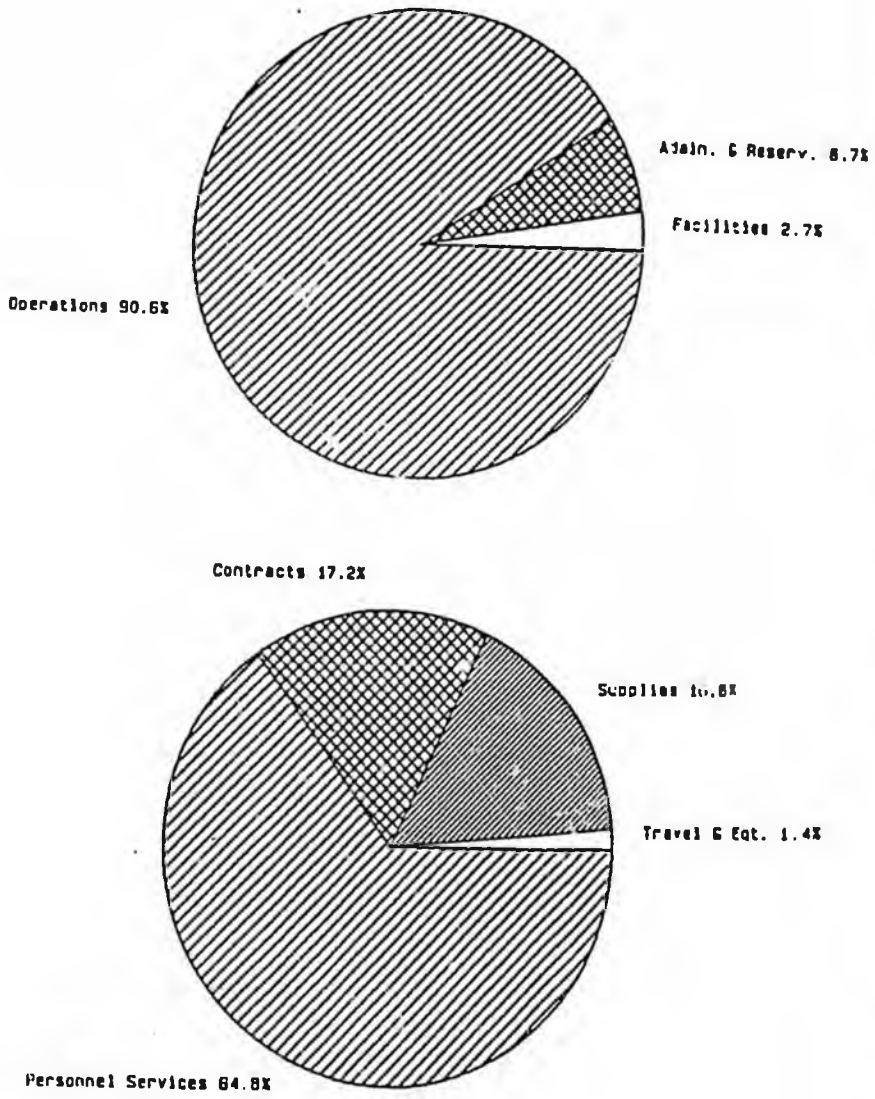
Nine Vessel Fleet. The original system operated from northern terminals at Skagway and Haines, to Prince Rupert in the south. Since then service has been extended to Seattle. And the nine ships, which now comprise the fleet, also provide feeder service in Southeastern Alaska, as well as from the Kenai Peninsula to the island city of Kodiak, to the communities of the Aleutian Chain, and to the communities on Prince William Sound.

The Motor Vessel Columbia is the largest ferry. Built in 1973 the Columbia is 418 feet long, with a capacity for 1,000 passengers and 180 automobiles. She has a service speed of 19 knots. There are 20 2-berth cabins and 71 4-berth cabins.

The other ferries range in size from 100 feet to 408 feet and have passenger carrying capacities ranging from 75 to 750 persons as well as auto and truck carrying capability. Food service, state rooms, cocktail lounges and solariums are available.

Unique System. No other state department of transportation in the nation operates a ferry fleet that offers such extensive service.

1987 BUDGET



Total: $63.4 Million