



2030 Let's Get Moving!

Alaska Statewide Long-Range Transportation Policy Plan Update

A Message From the Commissioner

November 2008



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To All Alaskans:

Over the past year the Alaska Department of Transportation and Public Facilities and the citizens of our state took a long, hard look at the condition and future needs for our transportation system. This plan – *Let's Get Moving 2030* – is based on this analysis and is a set of ideas and concepts. It is not intended as a formal statement or list of projects that have been prioritized or selected for funding. Funding and prioritization for projects is subject to federal and state legislative appropriations and laws. Amendments to state statutes require legislative approval. The strategic priorities and implementing actions developed as a result of this planning process are a blueprint for managing the state's responsibilities for highways, airports, and ferries through 2030.

As a vast, diverse state with unique travel demands and a relatively small population, Alaska's economic and social wellbeing depends on a modern, efficient, and reliable transportation system. This plan will be used as a framework to set priorities and guide our work to ensure that Alaskans continue to enjoy the benefits of mobility. Your continued input into this plan, coupled with our focus in putting it into action, will enable us to balance many competing needs and help us to ensure that we use our resources wisely to meet our mobility and economic needs in a financially and environmentally sustainable manner.

Sincerely,

Leo von Scheben, P.E., R.L.S., MBA

Commissioner

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Introduction to Let's Get Moving 2030

Let's Get Moving 2030 is Alaska's Statewide Long-Range Transportation Plan for 2008 through 2030. The plan was developed to guide transportation policies, programs, and investments through 2030. It can be used as a framework for developing future transportation planning documents, capital programs, and budget. The plan is an important undertaking based on an evaluation of the most pressing transportation issues facing Alaska and forecasts for the future.

This plan addresses federal and state mandates governing the transportation planning process in a meaningful way. It links system-level planning to our regional, modal, and metropolitan plans. It helps set priorities and guides resource allocation. We have a bold vision and many plans for the future development of Alaska's transportation system. To move forward we must set priorities and understand the fiscal constraints we face. The intent of *Let's Get Moving 2030* is to avoid planning by "needs list" by setting system-level priorities and defining strategies based on what we can afford.

Developing this plan involved careful technical analysis, policy deliberation, and the active involvement of transportation providers and users throughout Alaska. Together we evaluated needs, established strategic priorities, and defined strategies and implementing actions. The plan addresses the State's responsibilities as the owner and operator of highways, bridges, airports, and ferries, and its supporting role in directing funding to public transportation system operators and local units of government for their transportation infrastructure. These responsibilities are:

Maintenance and operations, preserving the government's investment in transportation facilities, and the further development of the system.

Implementation of the plan will ultimately require the input and assistance of the Alaska Legislature. Their role in providing for the financial resources necessary to maintain, improve and expand the transportation system is constitutionally required.

Let's Get Moving 2030 Planning Process

Federal Mandate

The long-range plan is one element of a federally required continuing, cooperative, and comprehensive statewide transportation planning process. The mandate is to provide a clear link between policy, planning evaluation, and the investments that are made. The intent is for careful planning and sound evaluation to guide decision making. To do this, Alaska is required to prepare a twenty-year, multimodal long range plan that takes into consideration eight transportation planning factors that are to be addressed in all elements of the planning process.

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The Eight Planning Factors

Federal law as implemented through the Code of Federal Regulations requires Alaska to develop plans and programs for all areas of the state and to carry out a transportation planning process that provides for consideration and implementation of projects, strategies, and services that will:

- (1) Support the economic vitality of the United States, the States, metropolitan areas, and non-metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency;
- (2) Increase the safety of the transportation system for motorized and non-motorized users;
- (3) Increase the security of the transportation system for motorized and non-motorized users;
- (4) Increase accessibility and mobility of people and freight;
- (5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- (6) Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;
- (7) Promote efficient system management and operation; and
- (8) Emphasize the preservation of the existing transportation system.

State Mandate

Alaska Statute (AS 44.42.050.) directs the Commissioner of the Alaska Department of Transportation and Public Facilities (ADOT&PF) to develop a comprehensive, intermodal, long-range transportation plan for the state. The plan may be developed in multiple documents that address logical components, including geographic areas, modes of transportation, transportation corridors, systems, and other distinct subjects relevant to transportation planning. The statute also describes the requirements for the use of federal funds and the process for developing and/or updating the plan. In developing the statewide transportation plan the Commissioner may:

- (1) Consult and cooperate with officials and representatives of the federal government, other governments, interstate commissions and authorities, local agencies and authorities, interested corporations and other organizations concerning problems affecting transportation in the state; and
- (2) Request from an agency or other unit of the state government or of a political subdivision of it, or from a public authority, the assistance and data that may be necessary to enable the commissioner to carry out responsibilities under this section; every such entity shall provide the assistance and data requested.

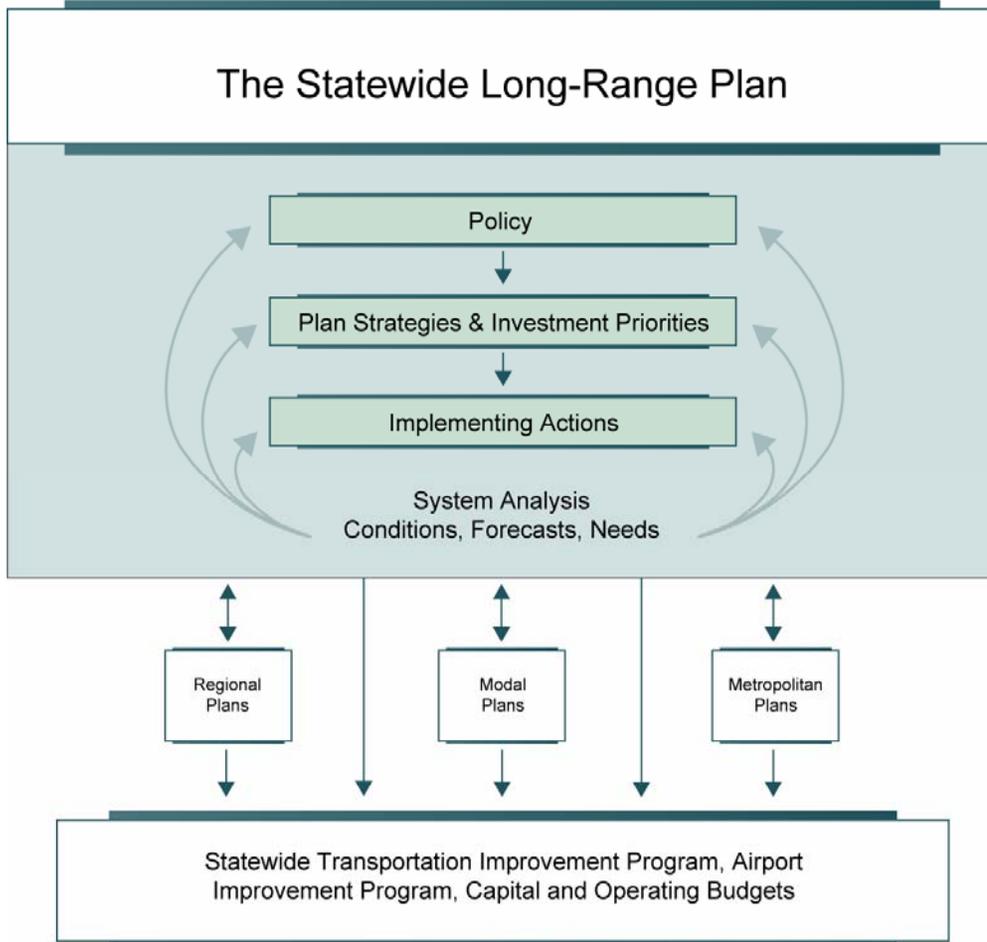
The tiered nature of the statewide transportation plan recognizes the application of many of the regulatory requirements at the intermediate or lower tier plans, while realizing their limited use for a policy- and program-level document such as *Let's Get Moving 2030*.

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Overall Statewide Planning Process

Alaska’s overall statewide planning process is depicted in Exhibit 1. This is the overall framework through which federal and state mandates are addressed.

Exhibit 1: Overall Statewide Planning Process



Public Involvement

Alaska’s statewide transportation planning process and within *Let’s Get Moving 2030* is shaped by early and ongoing opportunities for public participation. The Department complies with federal and state public outreach requirements. ADOT&PF provides many opportunities for all Alaskans, to participate proactively and continuously in the entire transportation planning, design, construction, and maintenance process to ensure that policies and projects reflect public knowledge and values. The public involvement mechanisms used to develop *Let’s Get Moving 2030* are listed in Exhibit 2. To develop the long-range transportation plan, ADOT&PF provided citizens, affected public agencies, Tribal governments, freight shippers, private providers of transportation, representatives of users of public transit, providers of freight transportation services, and other interested parties with opportunities to participate early and on an ongoing basis in plan development. All reasonable opportunities were provided for comment on the draft plan.

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Exhibit 2: Extent of Public Involvement

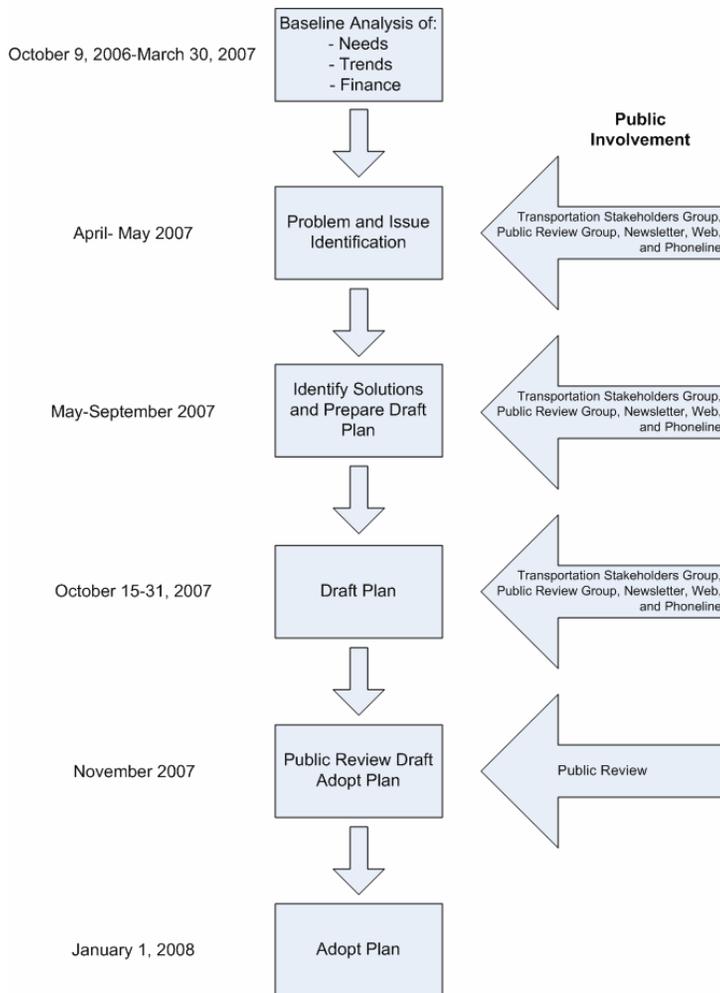
Involvement Mechanisms	Stakeholders	Purpose and Role
<p>Early and Ongoing Involvement</p> <ul style="list-style-type: none"> • Through a Public Review Group • Through a Transportation Stakeholder Group • Newsletter and comment forms • E-mail notification to extended stakeholder distribution list • Website and public meetings • Agency invitation to participate letter • Presentations to interested local and statewide professional and advocacy groups 	<p>Federal and State Agencies</p> <p>MPOs</p> <p>Local elected officials</p> <p>Stakeholder associations</p>	<p>Communicate opportunities for involvement</p> <p>Invite participation in the planning process as a member of the Public Review Group</p> <p>Identify issues and concerns to address in the planning process</p> <p>Set agenda for policy development and technical analysis</p> <p>Identify plan strategies for evaluation</p> <p>Recommend strategic priorities, strategies, and implementing actions to ADOT&PF</p> <p>Express policy priorities</p> <p>Public comment on draft plan</p>
<p>Tribal Consultation</p> <ul style="list-style-type: none"> • Tribal consultation letter • Newsletter and comment forms • Invitation to participate on Public Review Group • Email correspondence • Response Summary • Website and public meetings 	<p>Federally Recognized Tribes</p> <p>Secretary of the Interior</p>	<p>Communicate opportunities for involvement</p> <p>Invite the Tribe to participate in the planning process as a member of the Public Review Group</p> <p>Identify issues and concerns to address in the planning process</p> <p>Express policy priorities</p> <p>Public comments on draft plan</p>
<p>On-going Outreach to Maximize General Public Involvement</p> <ul style="list-style-type: none"> • Newspaper advertisements • Website and public meetings • Comment forms • Electronic comment • Response Summary • Media interviews and press releases 	<p>Public at Large</p>	<p>To announce the project to the public and invite their participation in the process</p> <p>To gain the public perspective on issues facing Alaska's transportation system</p> <p>To obtain input on the draft and draft final plan</p>

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Planning Process

Exhibit 3 provides an overview of the work steps involved in the development of *Let's Get Moving 2030*.

Exhibit 3: ADOT&PF Plan Update Process



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Technical Approach

Let's Get Moving 2030's technical work provides a comprehensive analysis of Alaska's transportation baseline and future needs that includes all modes. A key objective for the analysis was to evaluate the different types of needs that ADOT&PF must address for transportation facilities and services. The technical analysis provides a comprehensive fact-based assessment from which we can set priorities and plan for the future, and presents a sound foundation for ongoing policy development. The models and decision-support framework that were developed allow for monitoring the performance of the transportation system and determining how to allocate funds to best meet desired outcomes.

To do this, the technical work involved the following steps and assumptions:

Baseline Assessment of the State-owned Transportation System. The analysis addresses the surface, marine, and air transportation facilities that ADOT&PF is responsible for. The current use, condition, and performance of the different elements of this statewide system were assessed. These broad categories of need were addressed: System development, life cycle management, and routine maintenance and operations.

Analysis of the Trends Affecting the Future Performance of the Transportation System.

The analysis considered those factors that will impact the future performance of the transportation system. This includes economic and population growth, which determines future travel demands; the level of system preservation and maintenance investment, which impacts the physical condition of the transportation system; and factors affecting the delivery of transportation solutions, such as their cost, technology transfer and innovation, and changing citizen values and priorities.

Evaluation of Ability to Fund the Plan. Historical analysis of expenditures and future forecasts of revenue available for transportation were developed.

The technical analysis provided the information necessary to ensure that the consideration of policy and plan strategies is realistic and addresses Alaska's most pressing challenges. The information provided for a balanced and considered assessment of maintenance and system preservation needs, which are often overlooked in the desire to move forward with development.

Guiding Principles and Vision

Transportation Challenges

Alaska has many transportation plans that provide bold, ambitious goals for the development of the transportation system. Together these plans provide a well-defined blueprint for the future. Implementing these plans will cost many billions of dollars, and absent large amounts of new funding they cannot all move toward implementation in the next ten to twenty years. The technical analyses, stakeholder input, and stakeholder discussions conducted to develop *Let's Get Moving 2030* identified a pressing need for this plan to provide a framework for setting statewide priorities and balancing different needs. Such a framework provides a way to address the transportation challenges that confront Alaska today and that must be addressed in any plan for the future.

These challenges are:

- A large increase in the costs of doing business – construction costs have increased over 50 percent since 2000. Operations and fuel costs have also experienced large increases.
- Alaska is geographically the largest state in the country, and the current and future economic and social wellbeing of its citizens is critically dependent on a reliable transportation system.
- A transportation system that is still being developed – many communities have long-standing projects and plans to further develop the system, to meet travel demands arising from growth, and to support economic development.
- Alaska state government now owns and operates an extensive multimodal transportation system that includes airports, highways, ferries, and harbors. As the owner of this system, the state has many responsibilities – preeminent among them is preserving the value of this system which represents the largest capital investment by government in the state.
- New responsibilities for addressing the security of our infrastructure and the important role that transportation infrastructure plays in national security, emergency planning, and incident management.
- ADOT&PF does not currently have sufficient funding to exercise its full responsibility for preserving the transportation system while also developing the system. Absent additional revenue, the technical analyses of the future situation predict a continuation of these trends.
- Today's transportation system in Alaska is dependent on federal capital funding, which is predicted to have very small growth, if any, in coming years. In short, federal funds will not meet the state's needs. The state provides general funds, which are used to meet the federal matching requirements and to help fund facility maintenance and the operation of the AMHS.
- In many of our rural areas, air transportation service is dependent on continuities of the federal essential air service (about \$10 million per year) and bypass mail subsidies. The sustainability of these federal funds is also a concern.
- Uncertainty over the impacts of climate change on the transportation sector. Alaska is heavily dependent on aviation and marine transportation, which relatively have large carbon footprints per person mile traveled.
- Responsibilities to transportation-disadvantaged individuals and communities statewide.

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Guiding Principles

Let's Get Moving 2030 is based on a series of guiding principles that result from technical analyses, stakeholder input, and the transportation challenges that confront Alaska today and must be addressed in any plan for the future. These principles were developed through stakeholder discussions about transportation needs, funding, and experience with prior plans. The guiding principles are that:

- Alaskans must plan based on a realistic assessment of transportation revenue sources.
- To be of value, the plan must provide specificity to guide implementation.
- It is imperative that Alaskans get the most value possible from transportation funding.
- Statewide planning will provide a framework for resource allocation.
- The statewide planning process establishes statewide agreement on broad strategic priorities for the future development of the system.
- Managing Alaska's transportation systems efficiently, with careful use of available funding, is critical to maintaining existing facilities and services.
- Optimizing the use of new technologies and continued technology innovation are essential to successfully delivering transportation in Alaska.

Our Vision

Alaska is a large, diverse state and many of its citizens have big visions for the future development of the transportation system. In rural and remote regions, the vision is for a transportation system that improves accessibility to commercial, medical, and other service centers. In the state's urban centers, the vision is for a system that is multimodal, operates efficiently, and accommodates growth. For the state as a whole, the vision is for affordable and developed connectivity between Alaskan communities and to national and international destinations.

At the state level, our vision is that we continue to have a robust open planning process through which regional and community plans are developed for the future improvement of the system. We will be more disciplined and make investment decisions based on system-level analysis to use our limited resources more effectively, while protecting the natural environment. We will provide the public with ongoing opportunities for input to ADOT&PF decision-making.

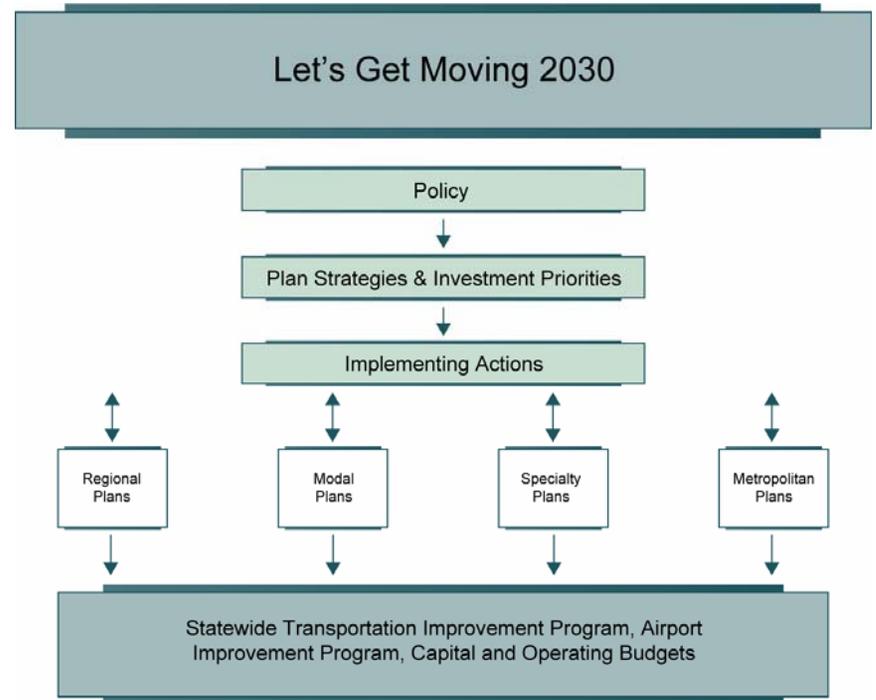
These visions are tempered by a recognition that Alaska's current transportation system extends over a vast and challenging geographic area. Alaska's network of highways, airports, and harbors together provide the lifelines that support the social and economic wellbeing of Alaskans. Due to Alaska's unique economy, geography, and climate, transportation infrastructure and transportation services cost more and are a larger part of household and business expenditures than in other states. As the owner of our transportation infrastructure, our vision is that we continually apply the best management practices, use new technology, and innovate to preserve and ensure the reliable operation of this system.

The vision for planning is that we have a collaborative process that, at the statewide level, provides a framework for making publicly transparent decisions. Our vision is that this framework is used to make difficult choices that balance the competing needs that we have between developing the system, preservation, operations, and maintenance; between different modes; and between urban and rural communities. Lastly, our vision calls for evaluating and minimizing the impacts of transportation on the environment. While some impacts are unavoidable, they can and should be minimized and at times mitigated. Tying planning to resource allocation cannot be accomplished instantly, but change is required: Alaska's economy, safety, and quality of life are at stake. This change will enable us to effectively use our limited resources to meet our economic, safety, and quality of life objectives.

Policies

The following policies guide the development of the statewide strategies and actions in *Let's Get Moving 2030* as well as regional plans, modal plans, local plans, and the state's transportation investment decisions. Exhibit 4 below illustrates the guiding role that Let's Get Moving 2030 plays in the statewide planning process.

Exhibit 4: Policies Guide Plan Strategies and Actions



System Development

Alaska's transportation system is a work in progress. System development addresses the expansion and upgrading of the existing multimodal system.

Policy 1: Develop the multimodal transportation system to provide safe, cost-effective, and energy-efficient accessibility and mobility for people and freight.

- We will identify multimodal solutions and regional priorities for the development of the transportation system through regional and modal transportation plans that address the values of communities and stakeholders.
- We will address efficient intermodal connections between roads, airports, rail, ferry terminals, harbors, transit terminals, and bicycle and pedestrian facilities through regional and modal plans to reduce travel time and ensure safety for people and freight.
- We will apply statewide cost-effectiveness criteria to projects recommended for funding while recognizing that rural transportation investments must go forward to serve basic community needs.

Policy 2: Establish statewide strategic priorities for transportation system development funding.

- We will continue the modernization of the National Highway System to current standards and address safety and connectivity.
- We will address demand-driven urban capacity on the most congested highways in Alaska.
- We will continue to add strategic new system links to improve connectivity and efficiency.

- We will replace or rehabilitate ferries and transit vehicles that are no longer cost-effective.
- We will address the statewide aviation system development goals set in the Continuous Aviation System Plan by establishing 24-hour Medivac capabilities at selected airports, mitigating seasonal closures at these airports, and partnering with the Federal Aviation Administration on their instrumentation and safety initiatives.

System Preservation

As the owner of highways, bridges, airports, non-motorized elements, terminals, and vessels, ADOT&PF is responsible for their preservation and maintenance. System preservation includes the preservation, rehabilitation, and at times replacement work needed for the current system to function at an acceptable level of service.

Policy 3: Apply the best management practices to preserve the existing transportation system.

- We will strengthen our highway and airport pavement management systems and practices.
- We will work toward optimal life cycle management practices for pavement and bridge treatments and capital equipment.
- However, we must address failed pavements as a practical necessity recognizing we cannot fund full reconstruction of the growing backlog of such pavement.

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Policy 4: Increase understanding of and communicate ADOT&PF's responsibilities for system preservation as the owner of highways, airports, and vessels.

- We will monitor and report annually, to the extent practicable, the condition and value of our assets.
- We will communicate the anticipated level of service and predict future system conditions based on the allocation of funds for preservation and maintenance treatments.

System Management and Operations

ADOT&PF is responsible for the efficient, effective, and safe management and operation of the transportation system. System management includes interagency communications, information sharing, and coordination of transportation planning with local community land use decisions that affect the operational efficiency of the transportation system. Operations refer to the day-to-day operation of airports, vessels, and highways to ensure their productivity, safety, and security.

Policy 5: Ensure the efficient management and operation of the transportation system.

- We will preserve transportation corridors and pursue corridor management.
- We will increase understanding of and communicate ADOT&PF's operational responsibilities for highways, airports, and vessels.

Policy 6: Use technology and Intelligent Transportation Systems where cost-effective to ensure the efficient operation of the transportation system, accessibility, and customer service.

- We will deploy Intelligent Transportation Systems with demonstrable benefits.
- We will apply research results and technology transfer to our design, construction, and maintenance practices to reduce costs and improve efficiency and safety.

Economic Development

The demand for transportation services is directly linked to the level of economic activity in Alaska. The cost of transportation is an important factor in economic development in the state. An efficient and reliable transportation system that provides access to local, national, and international markets and supports the visitor-based economy and federal government activity is critical to Alaska's economy.

Policy 7: Identify system development needs that address travel demand growth, economic development, and funding strategies through regional and metropolitan plans.

- We will identify, prioritize, and guide system development priorities to address economic development through regional and metropolitan plans.
- We will identify strategic system development priorities that address economic development through the statewide plan, including improvements to support the Alaska Gasline Inducement Act.

- We will assess project-level economic development benefits for proposed projects that are advanced solely for economic development purposes.

Policy 8: Preserve and operate Alaska's multimodal transportation system to provide efficient reliable access to local, national, and international markets.

- We will focus on preserving and modernizing the existing system while recognizing that system development is also necessary in a state with an incomplete transportation system.
- We will maintain and operate the system to provide acceptable reliability and performance.

Safety

ADOT&PF has responsibilities for the design, construction, and operation of safe highways, ferries, and airports. These responsibilities include system maintenance, hazard elimination, and emergency preparedness planning and response. To exercise these responsibilities, ADOT&PF works in conjunction with industry associations and other state, federal, and local agencies.

Policy 9: Increase the safety of the transportation system for users of all modes.

- We will address the safety goals and implement the strategies established in the Alaska Strategic Highway Safety Plan and subordinate safety plans.
- We will use new technology to improve safety through Alaska's Intelligent Transportation Systems Architecture and related use of new technology.

- We will address airport safety and the role of aviation in ensuring health and safety in ADOT&PF's aviation system plan.

Security

ADOT&PF has an important role to play in ensuring the safety of Alaska's transportation system. We have responsibility for addressing security related requirements at airports, on AMHS vessels, and in highway facilities. Our role in homeland security is developing, and we are working to improve security with federal and other state agencies.

Policy 10: Work with federal, local, and state agencies to provide a secure transportation system and emergency preparedness for all modes.

- We will address the security of airports, vessels, and highways in our operating plans, manuals, and guidelines.
- We will partner with other governmental agencies, private and public transportation providers, and their customers to address security.
- We will address security as part of our emergency preparedness and response planning.
- We will address security as we plan and develop infrastructure projects.
- We will apply technology to improve security in all transportation modes.

Environment and Quality of Life

The development and operation of the transportation system is a basic component of the quality of life for most Alaskans. It plays a crucial role in social and economic wellbeing. ADOT&PF collects the information and conducts the appropriate analysis to ensure that transportation projects are designed and built so that they preserve the state's natural beauty and avoid, minimize, and mitigate any adverse environmental impacts.

Policy 11: Preserve the natural beauty of the state, limit the negative impacts and enhance the positive attributes – environmental, social, economic, and human health – of an efficient transportation system.

- We will evaluate and consider environmental outcomes in our regional plans, modal plans, and project development.
- We will approach transportation planning and project development with a strong environmental ethic.
- We will avoid, minimize, and/or mitigate the impact of transportation infrastructure and operations on fish and wildlife.
- We will monitor the issues and assess the actions we can take to address climate change concerns.
- We will promote environmentally friendly, affordable transportation solutions.

Policy 12: Support energy conservation, specifically in our consumption of fossil fuels as a matter of national security and to address climate change.

- We will address strategies for energy conservation in regional plans, metropolitan plans, and community plans.
- We will advocate for transit, ride sharing, trip reduction, non-motorized transportation, and the use of alternative fuels.
- We will continue the State's role in establishing and supporting coordinated community transit systems.

Policy 13: Develop transportation plans in close coordination with local communities to ensure transportation investment decisions reflect Alaskans' quality of life values.

- We will provide transportation enhancements such as rest areas, restrooms, waysides, trailheads, and trails for residents and visitors.
- We will coordinate with and support local land use planning to ensure livable communities.
- We will encourage local jurisdictions to make land use decisions that protect the efficient functioning of the highway system.

Good Government: Openness and Accountability for Transportation System Performance

This statewide plan and ADOT&PF's continuing planning process are structured to provide openness and accountability for how funds are spent. We closely follow state and federal mandates for meaningful public input into the planning process. The planning process supports good governmental management by providing the information from which Alaskans can see the impact of funding decisions on the performance and condition of the transportation system. This involves ongoing technical work to analyze our transportation system, monitor how well it performs today, and predict future transportation system performance.

Policy 14: The statewide plan will provide the analytical framework from which ADOT&PF sets investment priorities.

- We will monitor, forecast, and report transportation system performance through data-driven management systems.
- We will provide information for performance-based planning and budgeting.
- We will promote and work to improve coordination between public transportation and human services transportation.
- We will use the best techniques and technology for involving the public in the transportation planning process.

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Strategic Goals and Priorities for System Development: Surface Transportation

Let's Get Moving 2030 provides statewide strategic priorities for the development of the surface transportation system. The plan targets resources over and above those allocated to preservation and maintenance to accomplish these goals:

- Complete the modernization of the National Highway System to current standards to address safety and connectivity.
- Address demand-driven urban capacity on the most congested highways in Alaska.
- Add strategic new system links to improve connectivity and efficiency.
- Replace ferries and transit vehicles that are no longer cost-effective.

Why we set strategic priorities

Like all state departments of transportation, ADOT&PF faces many project development demands. Surface transportation needs are both numerous and expensive. State highways, local roads, public transportation systems, ferries and ferry terminals all compete for limited dollars.

ADOT&PF's project selection process has for some time allocated funds to the major surface transportation programs:

NHS, the National Highway System. These are federally-designated highways, ferries, and ferry terminals that are the state's core surface transportation system.

AHS, the Alaska Highway System. Highways and ferry service that are secondary to the NHS, but link communities and are otherwise of regional significance.

CTP, the Community Transportation Program. These are local roads, streets, and transit systems. Many are locally owned, but most high-volume routes remain state-owned.

TRAAK, Trails and Recreational Access for Alaska. This includes trails, pedestrian access, waysides, and similar improvements that enhance roadways and community transportation in general.

These categories and the allocation of funds to each have evolved as a product of needs expressed by ADOT&PF, local governments, and the Alaska Legislature, as well as the priorities of successive state administrations.

An assessment of Alaska's strategic priorities must begin with a clean slate and ask: In terms of system development, which projects are the most important when the entire state's transportation system is considered? It is important to also ask: What are we trying to accomplish? Therefore, *Let's Get Moving 2030* identifies statewide strategic goals for the development of the system and the improvements needed to accomplish these goals.

From the state's perspective, Alaska's main highways and ferry routes are of strategic concern. Only the state has the responsibility for these systems and only the state will

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establish and improve them over time. Key routes must be built or expanded to keep pace with growth.

The statewide plan is to target resources and allocate funds to meet system development goals in advance of the multi-billions of dollars of needs identified across the state. Exhibit 5 following summarizes strategic statewide goals and the associated surface transportation needs that are generally considered the most important.

Exhibit 5: Strategic System Development Goals

Goals	Estimated Cost ¹ (\$ billions)
Complete the modernization of the National Highway System to current standards to address safety and connectivity.	1.5
Address demand-driven urban capacity on the most congested highways in Alaska.	1.6
Add strategic new system links to improve connectivity and efficiency.	0.7
Replace ferries and transit vehicles that are old and no longer cost-effective.	0.7
Improve selected Alaska Highway System links to enable economic development.	0.3
Other strategic capital needs and committed projects: Alaska Gasline Inducement Act improvement project, removal of spring weight restrictions, NHS rehabilitation and earmarks.	0.7+
Total	\$5.5 billion

¹ Planning-level estimates inflated to 2007 dollars from plan documents.

The total cost of all of the strategic projects is at least \$5.5 billion. With an annual capital program of \$400 million, it will take many years to build just this group of statewide strategic projects. It is also unrealistic to assume that state spending on local projects will stop, thus these strategic projects will compete for funding with other needs in the state.

A few of Alaska's communities fund roadway projects in their community through the sale of bonds, but many – including some of the state's largest – provide virtually no local funding. Many unincorporated areas have no local government to develop, design, and build local roadway projects, let alone a local funding mechanism to pay for such projects.

Complete the modernization of the National Highway System to current standards to address safety and connectivity

Alaska's National Highway System is the state's most important surface transportation network, linking the parts of the state that are road accessible and connecting Alaska with Canada and the Lower 48. It includes among the most important and high-volume traffic routes in Alaska's cities: Anchorage, Fairbanks, the urban parts of the Matanuska-Susitna Borough and the Kenai Peninsula Borough, and the larger communities of Southeast Alaska (Juneau, Ketchikan and Sitka). Much of the ferry system, including vessels and terminals, is part of the NHS. NHS routes carry a majority of truck-based freight, much of the state's tourist traffic, and allow Alaskans and freight to travel to other communities safely and quickly.

Progress has been made in updating the older parts of Alaska's NHS routes. There are some key sections remaining – about 250 miles total – that were originally built in the 1940s and 1950s and have not been significantly improved. These are among the most difficult and expensive road segments to improve. Among these key remaining sections are:

- The Sterling Highway in the Cooper Landing area
- The Glenn Highway from Long Lake to Cascade
- The Seward Highway from Snow River to Trail River
- Many segments of the Richardson Highway between Delta Junction and Gakona Junction

Included in the NHS is also the Steese-Elliot-Dalton Highway combination that connects Fairbanks with the Prudhoe Bay oil and gas producing area. Although there is some local traffic and summer tourism, the Dalton Highway or “haul road,” as it is widely known, is primarily an industrial-use highway. The Dalton sees consistent and relatively high-volume heavy truck traffic and the effects of thawing permafrost. This level of industrial use in a difficult environment, along with the growing likelihood that a gas pipeline will be constructed along this corridor, makes the reconstruction of many segments of these highways important. Much has been rebuilt in the past ten years, but a number of segments remain, totaling about twenty-five miles of the Elliot and one-hundred miles of the Dalton Highway, and several bridges including the Yukon River crossing. The total cost of these improvements to Alaska's “backbone routes” is roughly \$1.5 billion.

Address demand-driven urban capacity on the most congested highways in Alaska

In addition to the routes that link Alaska's cities, many of the most heavily-traveled routes in the cities are also a part of the National Highway System. Improvement of these routes will typically result in reduced delay, fewer crashes, and less air pollution from idling vehicles. The most critical of these projects include:

- The Glenn–Seward Highway-to-Highway connection in Anchorage
- Widening of the Seward Highway in Anchorage from four to six lanes
- Widening the Parks Highway between Lucus Road and Big Lake Road to four or six lanes depending on the location
- Widening and/or realignment of a group of Mat-Su Valley roads needed to keep pace with growth of the area. These include the Palmer-Wasilla Highway, Trunk Road, Wasilla-Fishhook Road, Knik-Goose Bay Road, and Seward Meridian Road
- Construction of a new through-route south of Wasilla parallel to the Parks Highway to provide sufficient capacity in the corridor

Modal alternatives to driving should be developed to accommodate growth in Anchorage. This will be accomplished through expansion of the transit system. These improvements taken together will cost approximately \$1.6 billion.

Replace ferries and transit vehicles that are old and no longer cost-effective

Alaska's Marine Highway System faces sizeable vessel renewal and replacement needs. The original ferries are now approaching fifty years of age and will need to be replaced in the near future. Ferries must maintain compliance with Coast Guard standards, and those that serve Canadian ports must maintain compliance with Safety of Life at Sea standards. On older vessels the cycles of upgrade and improvement are extensive and expensive and are reaching the point at which replacement is likely more cost-effective than ongoing repair and upgrade. The four oldest vessels in the fleet, if replaced, are anticipated to cost \$600 million.

The cost to upgrade and replace transit capital assets in Alaska is approximately \$75 million over the next ten to fifteen years. This amount would fund bus fleet replacement and expansion of systems in Anchorage, Juneau, Fairbanks, and other communities with transit systems.

Although a small amount in comparison to the anticipated capital needs of the other modes, transit can provide a highly effective mode of transportation readily adjusted to match demand. A growing segment of the population relies on transit for basic mobility. Where ridership levels warrant increased capital expenditure for bus rapid transit, development should be supported and existing equipment should be replaced.

Add strategic new system links to improve connectivity and reduce ferry links

ADOT&PF is also pursuing a group of roadway expansion projects that are in various stages of design and permitting. Each of these projects may or may not be completed, but are at present shown in the Department's Statewide Transportation Improvement Program (STIP). These projects and their costs are:

- Knik Arm Crossing connecting Anchorage with Point MacKenzie. The remaining public portion of the anticipated cost is \$70 million. The project will also need to attract toll-reimbursed private capital before construction proceeds.
- Juneau Access connecting Juneau with the state road system at Haines and Skagway. The project intends to extend the road north of Juneau to a ferry terminal at the Katzehin River. Short cost-effective dayboat ferry connections to Haines and Skagway will complete the link. The project is currently estimated to require \$350 million to complete.

A rail connection between Port MacKenzie and the Alaska Railroad will be needed to help the port function as a bulk commodity gateway. Port Mackenzie is being developed to specialize in the export of bulk commodities, complimenting the Port of Anchorage's focus on containers, trailers, and higher value commodities. The cost of design, permitting, and construction of the thirty- to forty-five-mile rail line connecting the port and the Alaska Railroad at Willow is estimated at about \$300 million and will rely on a long-term contract to repay revenue bonds.

Improve selected Alaska Highway System links to enable economic development

Although there are a number of proposed improvements to the Alaska Highway System – Alaska’s secondary highways – only a few rise to the level of strategic investments because of their economic development potential. These include:

- Taylor Highway MP 64 to border reconstruction
- Pasagshak Road realignment/upgrade on Kodiak Island, which provides access to the rocket launch facility
- A group of road projects in Southwest Alaska including improvement of the Williamsport-Pile Bay Road, completion of the Iliamna-Nondalton Road and road improvements in the Chignik

Together these projects are estimated to cost about \$300 million.

Other Strategic Capital Needs

Other National Highway System routes are in need of rehabilitation, which generally includes repaving and widening and addition of segments with passing lanes, but stops short of major reconstruction and realignment. These improvements are estimated to cost \$350 million and include:

- Many segments of the Parks Highway between Houston and Fairbanks
- Many segments of the Alaska Highway between Delta Junction and the Yukon border, including replacement of obsolete bridges

- Selected segments of the Glenn, Haines, and Seward Highways

Alaska Gasline Inducement Act Transportation (AGIA) Improvements

The prospect of construction of a large diameter natural gas pipeline raises questions about the capacity of the state transportation system to meet the considerable demands for the movement of people, equipment, materials, and supplies during a project that could last four or more years. ADOT&PF has analyzed the possible route options depending upon the destination chosen for the gasline, as well as studies that were undertaken for previous gas pipeline construction scenarios.

Two key differences are apparent in the AGIA project as compared the construction of Trans Alaska Pipeline System in the mid-1970’s. First, the gasline will use steel pipe that is substantially thicker and heavier because of the higher internal pressures necessary when transporting gas. Second, the practice of constructing buildings and processing facilities in large heavy modules is far more common today and will likely be used for construction camps and permanent facilities such as gas treatment and pumping stations. Both of these changes will place demands on the transportation system to ensure that bridges and pavements can sustain the larger and heavier loads.

Some of the most critical bridges have already been slated for replacement, such as the Washington Creek Bridge (replaced in 2007) on the Elliott (Dalton) Highway and the Shaw Creek Bridge on the Richardson Highway (scheduled for 2008). Other major bridges, such as the Tanana River

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Bridge on the Alaska Highway, are in the design stage. Passing lanes on the Richardson Highway have been recently completed and a new interchange at North Pole will proceed in 2008.

Until the process established in the AGIA legislation to select a team to design, build, finance, and operate the gasline is complete, the actual route and construction logistics will not be known. As this develops, the ADOT&PF will be a participant to further identify necessary physical improvements to the transportation system. No specific dollar amount can be estimated until greater detail about the final gas pipeline is known. Only after more information about the route and construction logistics is available will more detailed estimates be possible. For example, the following types of questions will play a major role in defining the improvements necessary:

- Where will the route run?
- What ports will be used to receive materials and equipment?
- What reliance will be made between railroad and highway shipments?
- What is the time frame for major activity including pre-construction efforts?
- Where will major centers of activity (such as pipe coating yards) be located?
- Where will modules be manufactured and to what weight and dimensions?

Once these issues are clarified, ADOT&PF will address a schedule of necessary projects that will ensure the pipeline project is not limited by highway conditions. It is anticipated that much of this work would be the financial responsibility of the pipeline builder, such as turn lanes into camps, logistics centers, and other major activity centers.

Removal of Spring Weight Restrictions on the Parks Highway

Each spring weight restrictions are placed on trucks carrying freight between Anchorage and Fairbanks using the Parks Highway. If heavy trucks use certain sections of the road while the subgrade is thawing, the pavement can be damaged. Since the spring thaw varies by both latitude and altitude, the period of time the highway is restricted can last several weeks, thus prolonging the period for which restrictions apply. Rebuilding of the subgrade and pavement in these sections would allow the highway to be used year-round without weight restrictions, which would lower the cost of shipping freight during this period. The cost of the reconstruction has been estimated at about \$100 million.

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Strategic Goals and Priorities for System Development - ADOT&PF Airports

ADOT&PF has the following goal driven strategic priorities for the development of state airports:

ADOT&PF has established the following system-level goals through its Aviation System Planning activities and identified a list of airports as priority airports:

- **Goal 1: 24-hour Medivac capability for targeted airports. This goal requires that:**

1. Runways are adequate to support 24-hour operations by fixed wing aircraft.
2. Runway lighting is provided to support 24-hour operations by fixed wing aircraft. Where runway lighting is not available or practical to develop, helicopter landing zones have been identified and helicopter landing zone lighting will be provided.

- **Goal 2: Address seasonal closures impacting targeted airports**

A number of airports routinely experience seasonal closures due to wet/soft runways at time of spring thaw/break up. This plan goal is to make improvements to prevent seasonal closures.

- **Goal 3: Participation and Partnership with FAA Initiatives.**

ADOT&PF partners with FAA to receive grants and deploy new technologies.

A total of thirty-six airports require capital improvements to meet both goals 1 and 2 (four of these airports need improvements to meet both goals 1 and 2).

It should be noted that a long term ADOT&PF goal is to upgrade not just the priority airports, but all airports to at least 3300 feet runways.

Exhibit 6 below shows the improvement needs to meet ADOT&PF goals. These needs refer to projects that have not been completed at the time of the plan publication.

Exhibit 6: ADOT&PF goals based needs

Goals	Airports	Needs (\$ Millions)
Goal 1: 24-hour Medivac capability	28	\$310
Goal 2: Address seasonal closures	13	\$123
Goal 3: Participation & partnership with FAA initiatives	-	Addressed through FAA grants
Total		\$433

Goal 1: 24-hour Medivac capability

The total needs are about \$310 million - \$289 million for meeting runway length criteria, and \$21 million to meet the lighting needs.

Runway length needs

Of the twenty-eight airports with planned 24-hour Medivac capability, twenty of those airports do not meet the 3300-foot runway length standard.

Lighting needs

Of the twenty-eight airports with planned 24-hour Medivac capability, all twenty-eight airports require lighting upgrades. The cost for lighting fixes is expected to be around \$21 million.

Goal 2: Address seasonal closures

Thirteen airports in Alaska experience seasonal closures due to heavy snow, heavy rain, damage from the coastal surf, or high winds. These effects cause damage to the runways such that landing safety is compromised and the runways must be shut down for various periods of time. Damage can include wet, soft runways as well as potholes caused by coastal winds during high tide season, and debris on the runway. Some runways are closed for five to fourteen days during the season leading to unpredictable service. Improvements to address seasonal closures are expected to cost about \$123 million.

Goal 3: Participation in and partnership with FAA initiatives

ADOT&PF participates as a partner and grant recipient in the Federal Aviation Administration's NextGen Program. This is a program to accelerate the implementation of modern technology to improve safety.

The primary component of NextGen is Automatic Dependent Surveillance-Broadcast (ADS-B) - a digital alternative to radar that displays air traffic with a high degree of precision.

The goals for NextGen focus on significantly increasing the safety, security, and capacity of air transportation operations, thereby improving the overall economic wellbeing of the country. These benefits are achieved through a combination of new procedures, technologies and airfield infrastructure deployed to manage passenger, air cargo, general aviation, and air traffic operations.

More information about the NextGen program is available at:

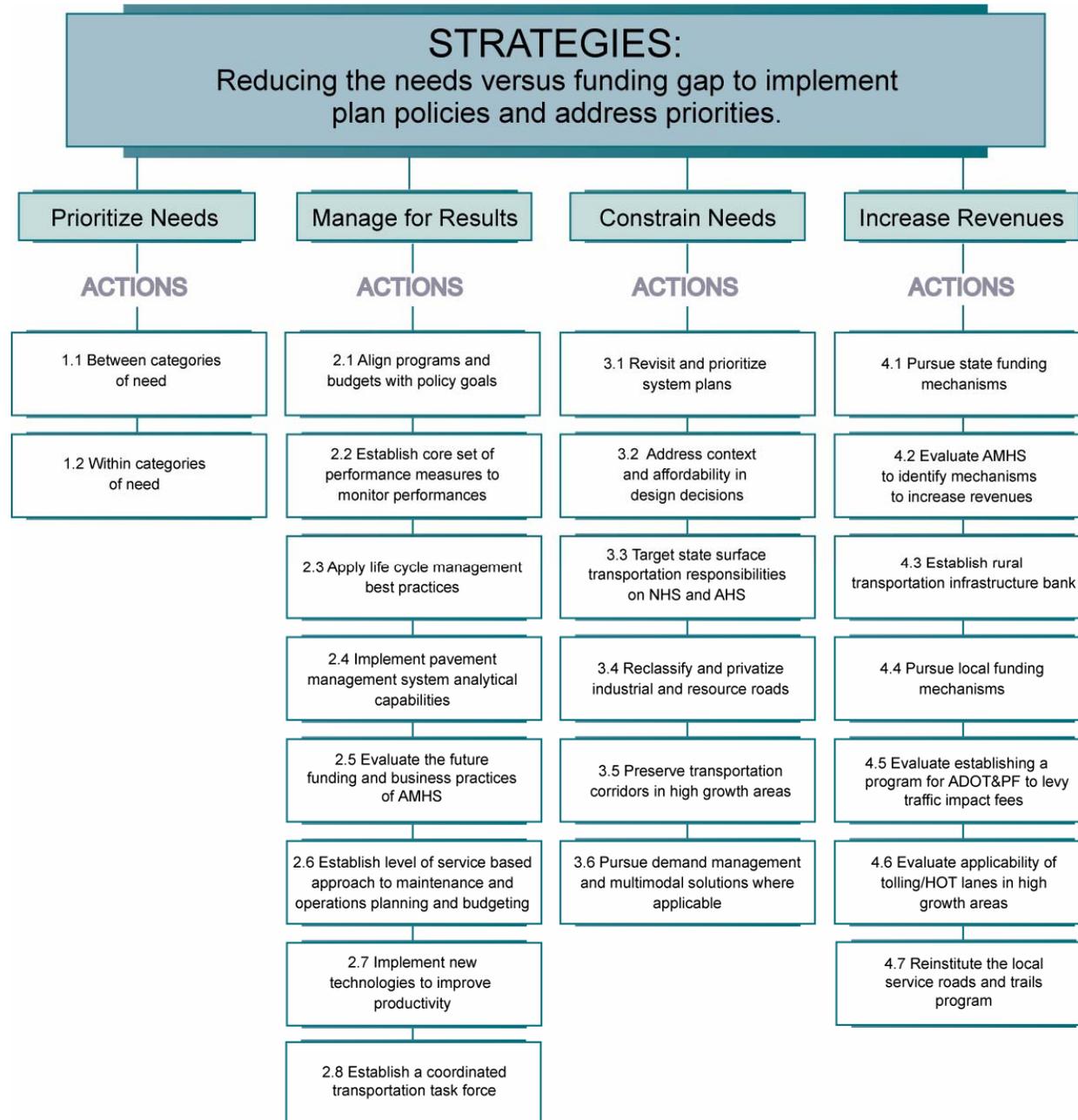
http://www.faa.gov/about/office_org/headquarters_offices/ato/publications/oep/nextgenvision/

Other Strategic Considerations

A number of communities want system development to provide longer and wider runways than the 3300-foot length goal for 24-hour Medivac capability. Wider runways would allow use by larger higher speed civilian medivac aircraft. Longer runways would greatly improve the efficiency of freight and fuel shipments by allowing larger aircraft to use the facility. This would reduce fuel costs in many remote communities. These important considerations will be addressed through ADOT&PF's aviation system planning.

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Let's Get Moving 2030 Strategies and Actions



Strategy 1: Prioritize needs through an integrated planning process that evaluates choices and guides investment decisions based on fiscal realities.

This strategy will enable more system-level planning and priority setting. Because our transportation system is a network of different modes of transportation, and within modes different facilities, we can make better use of funds by starting from a system-level perspective. This is especially important in a fiscally constrained environment because this level of analysis enables consideration of how best to provide the infrastructure to meet the state's diverse travel demands.

Why this strategy?

- Alaska needs a decision making process that specifies an agreed course of action – the plan for the future of the transportation system that makes explicit choices. This strategy provides ADOT&PF and its partners across Alaska information to aid decision making over the management, operation, and development of the transportation system. The strategy will provide a framework for difficult prioritization decisions considering the planned outcome for transportation in Alaska. It will enable an open dialogue about the performance of our transportation system and the level of service that we can plan for.
- Traditionally our planning process has focused on securing funding for system development projects that are advocated by communities to address specific needs. For many participants, the planning process is project-oriented, and most importantly, a mechanism for getting identified project priorities in the STIP. This is reinforced by federal funding

and the large increase in project earmarks in the current federal transportation budget (SAFETEA-LU). The cumulative effect of project-by-project decision making will not improve the performance of the transportation system as cost-effectively as starting from a system perspective.

Action Plan

Action 1.1. Allocate resources between categories of need.

The planning process provides the framework for allocating resources between broad categories of need. The plan distinguishes between routine maintenance, life cycle management, and system development. Going forward we will use planning analysis to support this decision making.

Alaska is confronted by such a large and growing gap between needs and funding that without additional revenue sources, limited progress can be made to address system development goals and there will be a growing backlog of system preservation needs. In this constrained environment, this plan protects expenditures for maintenance and life cycle management at current levels. These levels are not sufficient to ensure preservation of the system. In fact, we predict that the purchasing power of these funds will continue to be eroded by transportation sector inflation outpacing any budget growth.

With our current revenue sources the plan is to:

- **Fund routine maintenance activities at current levels.** This means that if our total budget decreases, we will continue to fund routine maintenance at its current dollar level. If the total budget increases, we will increase

routine maintenance funds at a level proportionate to the current allocation. This increase will continue up to an annual allocation of \$239 million, which will provide an acceptable level of service across all modes. Implementation will require legislative support in the budget process, as ADOT&PF does not have the authority to shift funds between capital and operating budgets.

- **Fund preservation and life cycle management at current levels.** This means that if our total budget decreases, we will continue to fund preservation and life cycle management at its current dollar level. If the total budget increases, we will increase preservation and life cycle management funds at a level proportionate to the current allocation.
- **Fund system development by applying the balance of available funds to this category of need.** At current revenue levels this maintains the current dollar level, although the impact of federal rescissions could reduce the amount.

Expressed another way, this action keeps maintenance and preservation funding at current dollar levels if funds decrease. If funds increase in future years, the same percentage distribution as currently will prevail until maintenance and preservation are funded at optimal levels.

Action 1.2. Prioritize resources within categories of need – target system development to meet *Let's Get Moving 2030* statewide strategic system development priorities.

Let's Get Moving 2030 recognizes that several billion dollars of needs have been identified in regional plans, MPO plans, and in ADOT&PF's Needs List and STIP. The amount of the needs

identified compared to revenues is so great that in effect – without setting priorities and specifying how investments will be funded – Alaska has merely a project list, not a plan.

The plan is to target system development projects to accomplish the following goals:

- **Continue the modernization of the National Highway System in Alaska to meet contemporary design standards for mobility and safety.** While important to our state, our project-focused planning has tended to address community needs and not the roads between the communities. This is the system that connects Alaska's smaller communities to urban centers and services and connects Alaska to Canada and the Lower 48. This system provides access to ports, airports, and international borders. In the larger cities it constitutes the high-volume roads that are most important for daily commuters. These are the roads that are used the most and provide for the most productive use of capital invested in infrastructure. There are sections of this system, built decades ago, that do not have shoulders, have narrow lanes, and need rebuilding.
- **Provide demand-driven capacity to accommodate growth.** The plan is to target investments where the travel demand is greatest to provide mobility for people to get to work and for our economy to function efficiently. This is mainly demand-driven urban capacity, which is costly to meet and concentrated in the high-growth Anchorage and Matanuska Valley areas and to a lesser extent in Fairbanks and smaller communities. The MPO planning process will be used to identify demand-driven capacity needs.

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- **Use the regional and Metropolitan Planning Organization (MPO) planning process to evaluate and propose the most beneficial projects.** ADOT&PF's regional plans and MPO plans have evaluated needs and priorities for each region. The projects developed by these plans generally address high-level system needs.

The plan intent is for the State to fund meeting these system development goals ahead of all other system development. We cannot meet these goals by 2030 with existing revenue sources, but we can make progress. The plan would target any additional revenue for system development to meet the strategic goals before funding more speculative or less important projects.

Strategy 2: Manage for results and apply resources effectively through the application of best practices.

This strategy is for ADOT&PF to institute a focus on the most strategic needs in the process through which funds are allocated. The strategy is to evaluate investment decisions and business practices based on their contribution to meeting needs. Through this strategy ADOT&PF decision making will ensure that funds are applied in the most cost-effective manner to meet needs. This could be through increased productivity, the application of new technologies, and the consideration of innovative transportation solutions. The strategy involves making a link between transportation system performance, investment decisions, and outcomes. This will provide both accountability and realistic expectations for Alaskans regarding the transportation system and services being planned for.

Why this strategy?

Alaska needs to ensure that it yields the greatest return on available funding. This means bringing more discipline into how project-level decisions are made. Best practice is to have a close link, enforced through management controls, between planning-level decisions and project selection and scoping. Establishing such a link can ensure that priorities for addressing needs are implemented. This will strengthen accountability between the ADOT&PF, policy makers, the public, and all organizations responsible for providing transportation infrastructure and services.

Let's Get Moving 2030 addresses ADOT&PF's responsibilities as the owner of infrastructure for maintenance and life cycle management. The strategy elevates the importance of ADOT&PF applying best management practices to ensure funds for these activities are used most effectively. It provides policy direction for the application of these practices.

Improving our productivity is a necessity. Our capital and operating costs have increased dramatically in recent years, much more rapidly than the rate of inflation. Therefore we must continue to look to new technologies, the application of engineering innovation, and other mechanisms that increase our productivity.

Action Plan

Action 2.1. Align ADOT&PF's programs and budgets with policy goals.

The action is to ensure that project programming and the ADOT&PF budget is explicitly aligned with the policy goals established through this plan. The intent is for ADOT&PF to manage for results.

Action 2.2. Establish a core set of performance measures to monitor performance against plan goals.

The action will result in a core set of performance measures that can be used to monitor and track transportation system conditions addressed by this plan. The measures will further provide accountability for ADOT&PF's implementation of plan strategies and actions, and address safety, such areas as condition of the state's system, among others. Examples of the types of measures include: annual fatalities on the highway system, lane-miles of pavement in the backlog requiring reconstruction, and airport runway pavement below standard among others.

Action 2.3. Apply life cycle management best practices to the selection of pavement treatments – avoid "worst first."

The plan is for ADOT&PF to apply funds assigned to life cycle management using the best available engineering science to determine the timing and location of treatments. The approach is to apply funds in a way that maximizes their impact on the preservation of the value of Alaska's highway infrastructure. With a large backlog of needs, ADOT&PF is always under tremendous pressure to resurface roadways that are in the

worst condition and need to be rebuilt. Often referred to as "worst first," this practice is not economical because it does not preserve the life of the roadway which often requires resurfacing a few months or years later. These funds spent on other roads that can still benefit from preservation measures will prevent them deteriorating to that level.

This action cannot be fully implemented without some initial funding to bring the worst roads back into serviceable condition. Funds must be focused on the worst roads for several reasons, including safety, user complaints, and the need for them to remain in service.

Action 2.4. Implement pavement management system analytical capabilities.

This action is to provide ADOT&PF region staff with the analytical tools to support effective life cycle management. This requires implementing pavement management system analytical capabilities that will provide the information from which ADOT&PF can optimize the use of life cycle management funds.

Action 2.5. Evaluate the future funding and business practices of AMHS.

The AMHS' current level of service is dependent on continuing and increased operating subsidy from the general fund. The capital needs that will arise from recertification and the cost of replacing vessels cannot be funded from current revenue streams. This calls for an analysis of how to bring fiscally-constrained considerations based on cost of service and capital availability into planning for and making investments in the AMHS. Among the considerations for evaluation identified by this plan are:

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- Funding the ferry system budget over multiple years so that schedules can be developed in advance, which gives customers more chance to make reservations in advance. This will provide a rationale for developing marketing initiatives and related improvements.
- Analyze the reasons for the substantial increase in state operating support provided the AMHS in the last few years. It will be important to reconsider the more costly and less productive service changes.
- Review the AMHS operation on the fundamental objectives identified in the Southeast Alaska Transportation Plan, Prince William Sound Transportation Plan and Southwest Alaska Transportation Plan. In addition to a basic mainline system, provide most service with shorter haul single-crew routes.

Other business changes will be explored by the current update to the AMHS System plan, which is presently underway.

Action 2.6. Establish a level of service based approach to maintenance and operations planning and budgeting.

Let's Get Moving 2030's analysis is based upon conservative assumptions about the maintenance funding required to provide required service levels and a likely understated representation of maintenance needs. The plan identifies the importance of establishing a sound analytical basis for maintenance planning and budgeting. The action involves using the new maintenance quality assurance program that ADOT&PF is developing to establish a measured relationship between the maintenance budget for specific maintenance activities and the level of service. This will enable ADOT&PF to improve maintenance management practices and identify opportunities for productivity improvements. It will also provide more accurate perspective on maintenance and operations needs.

Action 2.7. Implement new technologies such as Intelligent Transportation Systems to improve productivity.

Implementing Intelligent Transportation Systems consists of applying advanced communication, control, and information processing technologies including computer hardware and software at locations throughout the state to improve efficiency/productivity, safety, and reliability of Alaska's transportation system. ITS long-range vision will be available in the form of Alaska Iways architecture, the long range plan for ITS development in Alaska.

Action 2.8. Establish a coordinated transportation task force to ensure the efficient use of public transportation resources.

Implementing a state-level coordinated transportation task force for human service transportation will help maximize the service provided in Alaska communities with existing resources, while reducing duplication of transportation alternatives. The task force would recommend policies and procedures to coordinate human service transportation and recommend removal of agency regulations or procedures that impede coordination.

Strategy 3: Constrain Needs.

This strategy provides a way forward – a plan that integrates the regional, metropolitan, local area, and special transportation plans that have been conducted. Absent significant new revenue, these plans cannot all be implemented over the next twenty years or perhaps the next fifty years. Therefore, Alaska needs a way forward to arrive at a more constrained plan for the future. This strategy provides this approach through a series of actions that involve considering how to manage travel demand, set more modest twenty-year goals for system development, and look toward new solutions to meeting future travel demands.

Why this strategy?

The strategy is needed to bring fiscal discipline into the planning and programming processes. The gap between needs and revenues is so great that we need to rethink how we approach our longer-range planning that traditionally has resulted in very large lists of projects. In this situation many more projects than can be built over twenty years tend to be treated as equal until programmed into the STIP. We need an orderly process that considers longer-range funding constraints as part of the development of a fundable plan for the future. With some flexibility, this can provide our agreed roadmap. This enables us to use our funds most effectively.

The strategy recognizes that in the planning process we define needs as the cost of the improvement to address a specific engineering deficiency or to develop the new infrastructure. This approach to needs is based on the cost of supplying the infrastructure. There are other demand-side approaches that

we can take—such as access management, corridor management, and coordination with land use—which can make our highway system more productive and can reduce needs.

Action Plan

Action 3.1. Revisit and prioritize system plans.

This statewide plan identifies a constrained set of goals and improvements for the development of the statewide system. The region plans are an important element of the statewide planning process. This action involves amending the regional plans to provide a constrained tiered set of priorities for system development. Where applicable, regions should consider new or more affordable transportation solutions to include in their plans. The intent of the action is that each plan should identify near-term goals within the next ten years, medium-term goals of ten to twenty years, and beyond system-level priorities. Ideally the update would identify at the system level what resources the improvements would require. The constrained planning process would involve identifying the planned approach to funding.

Action 3.2. Address context and affordability in design decisions.

ADOT&PF, like other transportation agencies, is often criticized for over-designing or building to engineering standards that, it is argued, are not warranted. This plan finds ADOT&PF in a situation in which all assumptions regarding the level of service – for congestion, routine maintenance, or the design standards that guide reconstruction projects – need to be systematically considered based upon what Alaska can afford. Plan updates,

especially in metropolitan areas and communities that address traffic growth, should consider accepting lower levels of service in their plans if they are to be affordable and if funds are to be available for meeting routine maintenance and life cycle management needs.

Action 3.3. Target State surface transportation finance responsibilities on the National Highway System, Alaska Highway System, and other high-functional class routes.

Across the nation, the traditional approach to jurisdictional responsibility for meeting needs has been tied to the importance and function or use of the roadway which is referred to as its functional classification. In this way the federal government identifies a National Highway System that has a national function and in which the federal government has a financial interest. In Alaska this is mirrored by the Alaska Highway System. Together this is the system which connects communities to service centers, airports, ports, and international borders. Unlike any other state, ADOT&PF is required by state law to allocate federal funds to the Community Transportation Program. Since October 1, 2006, this has been 39 percent of nonrestricted federal-aid highway apportionments. This has the effect of increasing the needs that the state is responsible for and reducing the funds available to meet statewide and regional transportation system needs. It would be beneficial for these projects to be funded by other funding mechanisms, such as the Local Service Roads and Trails (LSR&T) program. (See Action 4.7, page 35). Implementing the action will require changes to how federally funded projects are selected to ensure that only the most strategic state and local roads receive funds.

Action 3.4. Reclassify and privatize industrial and resource roads.

This action recognizes that historically private roads have played a large role in the development of Alaska by providing infrastructure that meets the transportation demands of a single user. The action involves reclassifying and privatizing such roads so that the user of the facility is responsible for maintaining and developing the road.

Under certain circumstances ADOT&PF is able to establish industrial use roads and charge for its use when trucks are in an overweight and overlength condition. The primary example is the Klondike Highway from Skagway to the Canadian Border, currently designated as an industrial use highway. In the late 1980s the state allowed Lynden Inc. to operate their ore trucks in both an overweight and over length configuration, subject to both an initial investment in additional pavement and a trip-based toll. This road remains an industrial use road and Alaska Statute has provisions for charging tolls to its use by carriers that wish to operate in an overweight capacity.

Action 3.5. Preserve transportation corridors in high growth areas through corridor management planning, advance acquisition of right-of-way, and coordination with land use planning.

The cost of right-of-way acquisition in developed and developing corridors is a costly element of system development. Further, effective corridor management can also preserve the capacity of existing highways, reduce crashes, and reduce the need for future development. This action involves ADOT&PF pursuing active corridor management and corridor preservation in high growth areas. The types of planning

include coordinating with local jurisdictions so that they enact setback ordinance, managing direct access onto the highway, and designing local circulation using collector roads, frontage roads, or other methods. Another related strategy would be to purchase the right-of-way needed in these corridors, when property comes onto the market. ADOT&PF recently received authority to begin this last practice, and this needs to occur on a wider basis.

Action 3.6. Pursue demand management and multimodal solutions where applicable.

Over the twenty-year plan horizon there will be increasing opportunities for and economic benefits from demand management. Increased ridesharing, the use of transit, telecommuting, and other demand-side measures that reduce travel demand will reduce the costs to government and the costs to highway users. Such approaches can provide a cost-effective mechanism for addressing some of the future growth in travel demand. They will be most effectively addressed through metropolitan planning; however, there are growing numbers of trips from outside the metropolitan area that these actions should address.

Strategy 4: Increase Revenues.

Preserving and developing Alaska's transportation infrastructure is critical for the economic and social wellbeing of all Alaskans. The prior strategies provide a plan for using current funding mechanisms effectively. However, at these funding levels, this plan will result in a growing backlog of system preservation needs as it underfunds maintenance and preservation; only limited progress will be made toward this plan's system development goals.

This strategy recognizes that increasing revenue for transportation is a critical element of *Let's Get Moving 2030*. This will require action by the legislature; today, transportation funding in Alaska is dependent almost exclusively on federal funds, while state general funds are used to provide the federal match and the required operating subsidy for AMHS.

The strategy is to provide a new approach to supplement federal funds. While we will always be highly dependent on federal funding, this presents many risks as a state. We recognize that we must diversify our revenue sources and identify new approaches for increased investment in transportation. There is no magic bullet; transportation infrastructure is expensive, and our large and demanding geography means that per capita we have a greater demand for transportation capital than in any other state. The strategy is to pursue a portfolio of actions to increase revenue.

Why this strategy?

Plan analysis shows that without increased revenue for Alaska's transportation system there will be a marked deterioration in the condition of the system and the level of service provided. There is a growing gap between the cost of owning and operating Alaska's transportation system to provide minimally acceptable service and ADOT&PF's ability to finance these costs. In just the past five years, the cost of highway, aviation and ferry improvements has increased at a far faster rate than revenue, and travel demands have increased. This strategy is required to reduce the impacts of the continuation of these trends.

Action Plan

Action 4.1. Pursue state funding mechanisms.

This action, recommended by the Transportation Stakeholders Group, is for ADOT&PF to pursue as part of its legislative agenda the establishment of a state transportation fund. Such mechanisms should be based partly on the user fee principle so that those who use the system pay for it. Among the mechanisms to consider are vehicle registration fees, vehicle excise taxes, congestion fees levied on development, and motor fuel taxes.

Given the state's geographic size and limited population additional funds will also be critical. Alaska is a state of geography and resources; there is a vast geographic area and a very low population. Thus the state's vast resource base should also be considered as a key to adequate transportation investment. This approach is consistent with the state constitution, which clearly encourages the development of state resources for the maximum benefit of citizens.

Action 4.2. Evaluate AMHS to identify mechanisms for increasing revenue.

The intent of this action is for AMHS to have the authority and business practices that would increase passengers and revenues. The current organization and financing of AMHS provides constraints on such activities. The action is to evaluate the financial benefits of changing AMHS budgeting. The adoption of schedules over a longer time frame together with improvements to reservations, ticketing, and better marketing will increase use. The current business plan being prepared for the AMHS is expected to evaluate this issue in more detail. (See also Action 2.5, which addresses planning and management as well as revenue.)

Action 4.3. Establish rural transportation infrastructure bank.

Many smaller communities do not have the accumulated revenue to fund local infrastructure improvements that serve very local needs and are either unable to issue bonds or would pay higher rates for such bonds. This action is for the state to issue bonds to capitalize a rural infrastructure bank that would then make loans to fund local improvements. Local jurisdictions would then use their tax base to make repayments.

Action 4.4. Pursue local funding mechanisms.

This plan targets the state priorities for system development on a narrow and difficult to fund set of goals for the National Highway System and a limited set of other key system elements. Other system development needs identified in region plans, area plans, and metropolitan plans will require local funding if they are to be built, maintained, and operated. This funding can be pursued by local jurisdictions using the enabling authority that they have to impose a variety of user fees to fund improvements.

Action 4.5. Evaluate establishing a program for ADOT&PF to levy traffic impact fees.

This action would evaluate establishing a mechanism for addressing some of the transportation costs of growth that ADOT&PF is facing in the Alaska's fastest growing areas. Through this action the ADOT&PF may impose traffic impact mitigation fees or require mitigation from development activity that creates additional significant demand and need for transportation improvements to the state highway system. Through this action development can occur once impact fees are paid.

Impact fees differ from taxes in that they are voluntary rather than compulsory, because they are only imposed upon those voluntarily developing land, not upon all landowners or taxpayers uniformly. Impact fees also differ from traditional exactions because they can be used to mitigate for both on and off-site facility improvements. Impact fees are calculated under the assumption that the incremental need for infrastructure can be measured after development is complete, and that the current resident's needs for infrastructure can be identified separately from the new resident's needs.

Such fees are widely used for utility systems, as each new customer places a demand on the overall utility and its capacity. The logic is no different for the highway system; however, the application of such a fee for highways will be new and thus not without controversy.

Action 4.6 Evaluate Applicability of Tolling and HOT lanes to Meeting Travel Demand Needs in the Anchorage–Mat-Su area.

The Anchorage metropolitan plan, the Mat-Su Long–Range Transportation plan and other studies forecast travel demand growth on the Glenn Highway and vicinity. Planning level estimates of need for the major projects amount to about \$3 billion. This action is to evaluate the financial, technical, and political feasibility of tolling as a strategy to finance these improvements. There has been a large increase in use of tolling as an effective user fee for the development of high volume limited access facilities. For a corridor like the Glenn Highway between Anchorage and Wasilla and Palmer, tolling new HOT lanes could be tied to a higher level of service for maintenance and operations, which could include lighting and other safety measures. The development of High Occupancy Toll (HOT) lanes could also be part of a multimodal approach that would make transit more attractive and provide incentives for ride sharing and help fund transit service improvements on HOT lane routes.

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Action 4.7 Reinstitute the Local Service Roads and Trails Program.

An ongoing concern for the state is the need to provide local communities (particularly those with a limited tax base) with the means for building and maintaining community transportation infrastructure. Without this provision, it is difficult politically for the State to reserve sufficient federal funding for higher priority statewide needs. The Local Service Roads and Trails (LSR&T) Program (AS 19.30.111 – 19.30.251) once provided state funding support for local development of transportation infrastructure by allocation formula based on land area and population. This program was employed effectively during the early 1980s until state revenues dropped dramatically, and it has not received funding since. Administered by ADOT&PF, LSR&T distributes funds available under the program to cities and boroughs that have assumed road powers. Funds can then be used to design and construct local transportation projects.

The provision of federal-aid funding for local roads in Alaska led in the mid-1990s to development of the Community Transportation Program for the STIP, but these projects bring with them a host of federal regulatory requirements, vulnerability to rescissions, and time-trap concerns. More recently, frustration with the Community Transportation Program encouraged communities to seek earmarking of federal funds for local projects (also frustrating are the many federal rules that apply to earmarks and their general insufficiency to meet the total project cost). LSR&T, on the other hand, could provide much greater local freedom and flexibility along with an annual influx of funding for local transportation needs. To optimize LSR&T's long-term effectiveness, it should be linked to a reliable funding source that grows over time, and some of the current statutory

provisions may require changes. When it was an active program it delivered needed infrastructure with a local direction and a minimum of state and federal oversight.

Transportation System Today

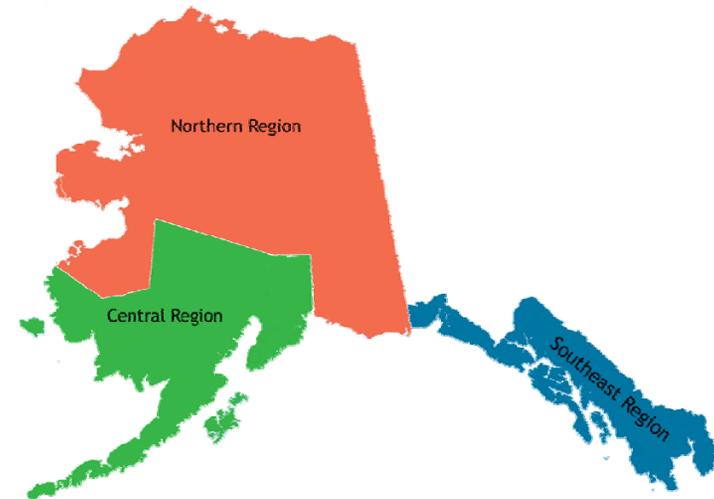
An Introduction

Passengers and freight travel in Alaska via infrastructure and services provided by government and private industry. ADOT&PF owns and operates highways and bridges, the AMHS, and airports. Transit service is provided by local entities with some support from the state. Marine ports and some airports are owned and operated by other units of government. Freight rail infrastructure is provided by the Alaska Railroad which is a public corporation. Aviation services, marine and highway freight services, and some roads are provided by private enterprise and are an integral part of the transportation system. Most of the freight coming into Alaska arrives via water at the port of Anchorage. Most of the freight delivered to communities not connected by rail is delivered by trucks.

Given the geography of the state, Alaskans have long relied on aviation and marine transportation to move people and goods. Many remote communities are connected to the rest of the world through either waterways or airports, and do not have any roads. This makes Alaskans uniquely dependent on an efficient intermodal transportation system.

Let's Get Moving 2030 addresses the state's responsibilities within Alaska's overall transportation system. The plan addresses the state's responsibilities as the owner of infrastructure and is therefore focused on state highways, AMHS, and state-operated airports. The responsibilities of ownership are to preserve the value of the nation's large capital investment, operate and maintain the system safely, and plan for its further development.

For practical planning and organizational purposes, ADOT&PF divides the state into three regions: Northern, Central, and Southeast.



The transportation system in Alaska is not complete and there are many plans for its further development into a more integrated network. This is very different from the rest of the country, where the system is complete and most new construction is to address congested bottlenecks and corridors.

Alaska's highways and bridges

ADOT&PF is responsible for most of the roads and bridges in the state, barring some local roads and Community Transportation Program roads. There are about 14,800 lane miles of state-owned road and about 1,000 state-owned bridges. Although Alaska is the largest state in terms of area, it has the fifth-lowest road mileage in the nation. The primary reasons for low road miles in Alaska are that most people live in the urbanized areas; and that extreme weather, rugged terrain, vast

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distances, low population density, and scattered islands make road construction difficult and very costly compared to the number of users.

Alaska's highways are categorized according to their functions. This is a useful way to determine the importance of a road based upon how much it is used and what it is used for. Roads are classified as being on the National Highway System, Alaska Highway System, or as Community Transportation Program roads. Federal funds are targeted on the National Highway System, which includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. These roads form the core network for the state. Other important roads in the state that link communities and are important for the regions of Alaska are on the Alaska Highway System, while most of the community and local roads fall under the Community Transportation Program.

Alaska Marine Highway System

The AMHS is a critical part of Alaska's transportation system and the service it provides is part of the National Highway System. For many communities in coastal Alaska, ferry service is their highway, providing connections to other communities and beyond.

The AMHS carries over 350,000 passengers and 100,000 vehicles every year. Service is provided using a fleet of eleven vessels. This includes nine mainline ferries and two fast ferries (M/V Fairweather and M/V Chenega). These vessels and their ages are listed in Exhibit 7.

Exhibit 7: Age of AMHS Vessels

Vessel	Year Commissioned	Age
Taku	1963	44
Malaspina	1963	44
Matanuska	1963	44
Tustumena	1964	43
LeConte	1974	33
Columbia	1974	33
Aurora	1977	30
Kennicott	1998	9
Lituya	2004	3
Fairweather	2004	3
Chenega	2005	2

Some of the vessels have been in service for over forty years and will need to be replaced in coming years. The main differences between how we address ferry and highway systems in transportation planning arise in:

- **Regulation**, which is substantially different for ferries than highway systems. State departments of transportation set their own safety and operating standards for highways, by and large, but the maritime safety and common carrier operations of ferries are regulated by federal authorities. For ferries the safety standards are absolute; unless the vessels meet Coast Guard certification requirements, they cannot sail. In contrast, highways often remain open to traffic when they are in poor condition.
- **Operating costs**, which are much higher for ferries than highways due to fuel and labor expenditures. Over a life cycle, ferries are generally a much more expensive technology for delivering a surface transportation service than either land-based roads or bridges.

AMHS experienced significant financial and operational impacts from the implementation of federal security regulations, enacted in the last seven years, to better protect the nation's infrastructure. New maritime security regulations require AMHS to develop and implement security plans for terminal facilities and vessels, requiring specialized security equipment and new personnel demands. System-wide exercises take place to test AMHS coordination with federal, state, and local government agencies.

Ports and Harbors

Ports and harbors are owned and operated by local agencies and other units of government. In the past, the state has supported critical port and harbor infrastructure and financed and constructed many facilities across Alaska. There is no annual state program for construction and upgrade of ports and harbors. ADOT&PF regional plans are multimodal and have identified priority port and harbor needs.

Railroads

Railroads play an important role in shipping freight to marine ports and are part of the tourist infrastructure providing access to Denali National Park and beyond.

There are 721 total railway miles in Alaska; 611 public miles owned by the Alaska Railroad Corporation and about fifteen miles privately owned by the White Pass and Yukon Route Railroad providing links into Canada.

The White Pass and Yukon Route Railroad is narrow-gauge railroad operated solely for tourism and runs on one track from Skagway, Alaska to Carcross, Yukon. It operates each year from May to September. A wholly-owned subsidiary of Tri-White Corporation based in Toronto, Ontario, the White Pass & Yukon Route generated \$18.2 million in 2006 with 431,249 passenger trips. Though this railroad was originally developed to serve Yukon gold mining, and has served as an ore-carrying railroad as recently as the 1970s, the owners have recently expressed limited interest in expanding the railroad's purpose to once again carrying ore.

The Alaska Railroad is an independent corporation serving ports and communities from the Gulf of Alaska to Fairbanks. Purchased by the State of Alaska from the federal government in 1985, the Alaska Railroad is governed by a seven-member Board of Directors appointed by the Governor of Alaska. It is mandated to be self-sustaining and responsible for all its financial and legal obligations.

The Alaska Canada Rail Link Project is an on-going initiative that provides an objective assessment of the business case for connecting the Alaska Railroad to the Canadian National Railway. The business case is based on such a rail link providing lower cost access for the export of bulk commodities from Canada and the United States to tidewater ports geographically positioned to serve northern Pacific Rim markets. In turn, the link would provide access to North America markets for container traffic for consumer goods and other finished products from the Pacific Rim.¹

The Alaska Railroad plays an important economic role. According to a report by the Institute for Social and Economic Research at the University of Alaska Anchorage, the Railroad provides 1,900 jobs and \$38 million in payroll dollars per year within the state. 75% of the Railroad's business is freight, with over 8 million tons shipped in 2005. Another 13 percent is passenger fares, primarily tourists, who took 471,348 trips in 2005. The most common freight shipped on the Alaska Railroad is petroleum products (46 percent), followed by interline freight (29.5 percent), gravel (11 percent), and coal (9 percent). In FY 2005, the Railroad

¹ See the Alaska Canada Rail Link Project feasibility study reports at <http://www.dot.state.ak.us/comm/pressbox/acr-link.shtml>

reported \$573.9 million in total assets, with a 2004 net income of \$12.7 million.

Private Resource Roads

Private roads have long been a part of Alaska's economy. Mining, natural resource-based, and other extractive industries have had to account for the costs of building and operating roads in their economic assessment of the viability of business operations.

The public is permitted to use some but not all private roads. The type and conditions of private roads vary based on their intended use. ADOT&PF does not have the authority to regulate, maintain or provide service on private roads.



Private roads have historically played a major role in the development of Alaska. For example, the Dalton Highway was originally known as the North Slope haul road. It was built by Alaska

Pipeline Service Company to allow construction of the Trans-Alaska Pipeline system. This 360-mile haul road was constructed in 1974 in just five months. Permits were required to drive on the road until 1995, but the road is currently owned and maintained by ADOT&PF.

Aviation

Air transportation is a critical part of Alaska's transportation system. The level of air transportation service is dependent on a unique mix of government and private enterprise. Most airports are owned and operated by state government, while the Federal Aviation Administration provides air traffic control, regulates for safety, and provides funding for airports. Commercially scheduled services and general aviation are provided by the private sector.

Alaska's size, geography, and population distribution make air transportation much more important for economic, mobility, and connectivity issues than in any other state. For many communities, aviation provides the only connection to the rest of the state beyond because they do not have any roads or ferries. For many Alaskans and Alaska businesses, aviation provides their only means of transportation to the rest of the country and overseas.

State government owns and operates some 254 airports including Anchorage International Airport. There are a further 1,112 private airports, aircraft landing areas, and seaplane bases.

Let's Get Moving 2030 addresses the state-owned airports that are the backbone of the state's aviation infrastructure. Airports are classified based on the runway surface as either paved, unpaved, concrete, or water. About 68 percent of all state-owned airports are unpaved. A small number of airports in the state (about fifty) are paved airports.

State-owned airports are critical for Alaska's economy and the health, safety, and welfare of all Alaskans. Airline

passengers, overnight mail, air cargo, air ambulance, remote search and rescue, the military, and the business community all depend on Alaska's airport network.

Airports are funded through a combination of user fees and federal funds. Unlike surface transportation, airports have a variety of mechanisms for charging users for the cost of services. Commercial service airports have the greatest operating costs but also have mechanisms for levying user fees. Many of the smaller airports served by general aviation have limited opportunities for generating revenue. In recent years, there have been new security requirements that many remote airports are finding difficult to finance, such as perimeter fencing and security staffing requirements. Similarly, ADOT&PF has limited funds to perform other operation and maintenance work at many general aviation airports.

Bicycle and Pedestrian Facilities

ADOT&PF has a bike and pedestrian plan that is a subordinate document and part of *Let's Get Moving 2030*. Alaska's population is concentrated in its urban areas and ADOT&PF is supportive of these communities' initiatives to develop bicycle and pedestrian facilities.

ADOT&PF works to provide safe places to walk and ride bikes. A large number of pedestrians and bicyclists are school children traveling between home and school. Over the past decade, state and local governments have made investments in pathways, bike lanes, wide shoulders, and other provisions that improve conditions for bicyclists and pedestrians.

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It is believed that four to five percent of all travel trips in Alaska are made by bicyclists and pedestrians. This number is lower than the national average of 7.9 percent, given the Alaskan climate and the sprawling nature of major cities. Alaska is unique in that depending on the local ordinances and season, snowmobiles and all-terrain vehicles are a regular form of transportation.

ADOT&PF has constructed over seventy miles of new pathways and anticipates constructing more. ADOT&PF's program to upgrade the National Highway System routes to current standards has resulted in the addition of wide paved shoulders to over one-hundred miles of highway in the state. Wide paved shoulders on highways benefit not only motorists, but offer long-distance bicyclists a safe place to ride without impeding other traffic. This refocused effort on bicycles and pedestrians should yield a safer and more balanced transportation system.

Public Transportation

Public transportation is supported by ADOT&PF, but is operated by each community's local government or a non-profit agency. The communities of Anchorage, Juneau, and Fairbanks operate conventional fixed-route bus systems, while several other communities and/or private non-profit ventures operate demand-responsive service. Exhibit 8 shows the system operator, the type of transit operated, and the number of vehicles operated by Alaska's primary transit systems during 2007.

Exhibit 8: Public Transportation Systems

Community	Operator	System Type	Number of Vehicles
Anchorage	Municipality of Anchorage	Fixed route & paratransit	60 buses 47 paratransit vans 51 vanpool vans
Juneau	City and Borough of Juneau	Fixed route & paratransit	16 buses 7 vans
Fairbanks	Fairbanks North Star Borough	Fixed route & paratransit	9 buses 11 vans
Palmer, Wasilla and the "Core Area"	Mat-Su Community Transit (MASCOT)	Deviated fixed route & paratransit	10 vans
Kenai and Soldotna	Central Area Transit Service (CARTS)	Dial-a-ride demand response & paratransit	9 vans
Kodiak	Senior Citizens of Kodiak	Deviated fixed route & paratransit	
Ketchikan	Ketchikan Gateway Borough	Fixed route and paratransit	6 buses
Sitka	Sitka Tribe of Alaska	Fixed route & paratransit	
Girdwood	Girdwood Transportation L.L.C.	Deviated fixed route & paratransit	
Bethel	City of Bethel	Deviated fixed route & paratransit	1 bus, 2 vans

Alaska’s transit systems have evolved from primarily fixed-route systems twenty years ago to a combination of fixed-route and demand-responsive systems today. While the larger Alaskan cities continue to operate conventional fixed-route systems with paratransit systems for the elderly and riders with disabilities, a number of smaller communities have successfully started demand-responsive systems. Lacking the residential density and funding needed to operate fixed-route transit successfully, the evolution of coordinated transit systems combining public and private non-profit agency resources has allowed smaller communities in the state to initiate and operate transit successfully. The public/private system model uses some public resources along with vehicles and drivers provided by social service agencies to cost-effectively provide service to agency clients and the general public.

Capital Needs

The most recent Alaska Public Transportation Management System data indicates that over the next eight years overall transit capital needs include eighty-five fixed route buses, 280 paratransit vehicles, and fifty-five cars, trucks and other support vehicles, and a number of passenger and vehicle shelters.

In addition, population growth, traffic congestion and the cost of capacity expansion has raised the question of transit system expansion in Anchorage. The system growth may take the form of regular fixed routes or possibly the start of a bus rapid transit system. More flexible, scalable, and an order of magnitude less expensive than light rail, bus rapid transit represents the next step for transit in Anchorage. The

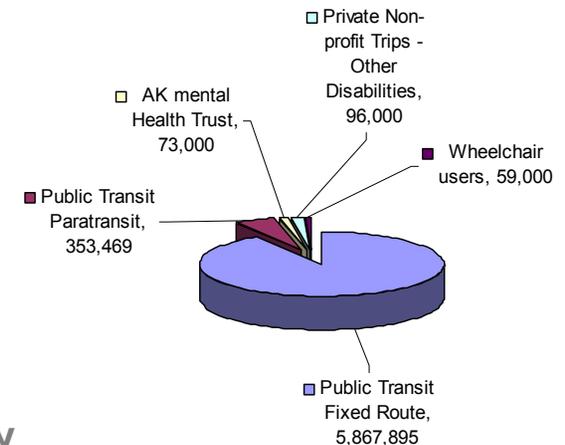
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approximate value of the capital needs of all systems over the next ten to fifteen years in Alaska is \$75 million.

A limitation to transit development in some of the state’s rapidly growing areas (Mat-Su, Kenai Peninsula) is that the systems are not government-owned. These areas are served by a non-profit service provider organized around serving human service transportation needs, offering service to the general public as well. Absent the investment of local government in the service, these systems remain limited in their ability to produce needed capital for system expansion and upgrades, even to match available federal funding. Thus in the fastest growing regions of the state, the existing public transportation systems lack the ability to grow in proportion to population increase and service demand. Additionally, they remain outside of local government strategies for transportation development and traffic management, including that on many state-owned roads. For these growth areas in particular, the state is served by encouraging local government ownership and investment in public transportation.

Transit ridership statewide has been trending up. In 2006, a total of 6.5 million one-way trips were taken on transit systems in Alaska. Exhibit 9 displays the distribution of the trips taken.

Exhibit 9: Public Transportation Ridership, 2006
2006 Alaska Transit and Paratransit Trips



Trends Affecting Transportation in Alaska

Let's Get Moving 2030 identified the most important trends affecting the future demand for transportation and ADOT&PF's capacity to develop and operate a transportation system to meet that demand in a safe, efficient, and effective manner.

Growth in Travel Demand

Travel demand grows where there are more people and increased economic activity. Forecasts indicate continued growth in traffic on the existing highway system. Alaska needs to plan for added congestion, safety, operations, and maintenance needs on the existing road network, along with planning for new roads to address growing mobility needs in high growth areas.

Transportation plans for Alaska have always had to balance the fact that the majority of Alaska's population is concentrated in its urban areas, yet there is rural population with mobility needs dispersed over a vast area.

Over the plan horizon, population will continue to concentrate in urban areas. The Anchorage bowl, Matanuska-Susitna borough, and the Fairbanks metropolitan area are expected to be the areas with maximum population increase through 2030. The Anchorage bowl area is expected to grow by 24 percent, while the Mat-Su borough is expected to grow by about 78 percent through 2025.

Future Trends Affecting Long-Range Planning

Travel demand – Will grow and remain concentrated in the largest urban areas.

Financial condition – ADOT&PF is dependent on federal funds and this places Alaska's ability to fund surface transportation at risk. Federal funds are not expected to grow in coming years. The federal highway trust fund is forecast to be in partial deficit by 2009.

Subsidies continuation – The Essential Air Service and By-Pass Mail programs bring a major source of federal funds that subsidize air service in Alaska. The AMHS operating subsidy is a major part of the ferry system operations. All of these subsidies must continue and grow with cost increases, if these systems are to continue at present service levels.

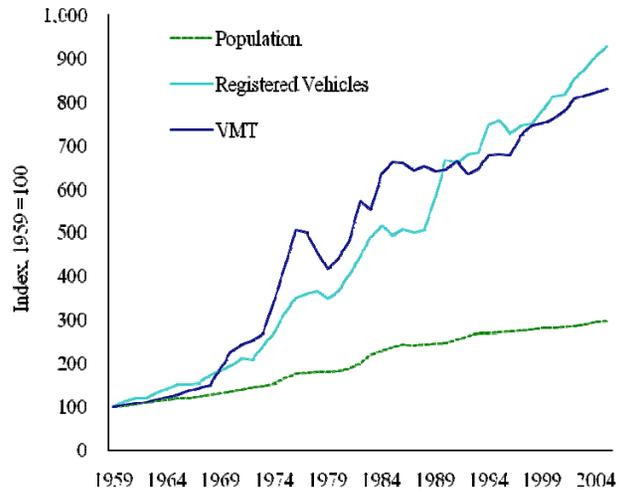
Construction cost – Alaska and the rest of the nation continues to experience construction cost inflation rates that are much more than the general inflation rate (Consumer Price Index).

Other considerations – The implications of climate changes and regulatory requirements for dust control in rural communities are uncertain at present. Continued underfunding of maintenance and anticipated shortfalls for preserving an aging infrastructure will result in a growing backlog of preservation and maintenance needs.

The Fairbanks metro area is predicted to grow by 39 percent in the same time frame. The Fairbanks North Star borough is expected to grow at about 25 percent - same as the expected overall state population growth rate.²

As shown in Exhibit 10, the number of vehicles and vehicle miles traveled in the state continues to increase at a rate greater than the population increase.

Exhibit 10: Travel Demand Trends



The increase in road miles in Alaska has not kept up with the population increase nor the increase in vehicle miles traveled. The number of state-owned road miles grew at less than 2 percent between 1997 and 2005. Many more vehicles driving more miles on the existing system results in

² Alaska Department of Labor and Workforce Development <http://www.labor.state.ak.us/research/trends/oct07pop.pdf>

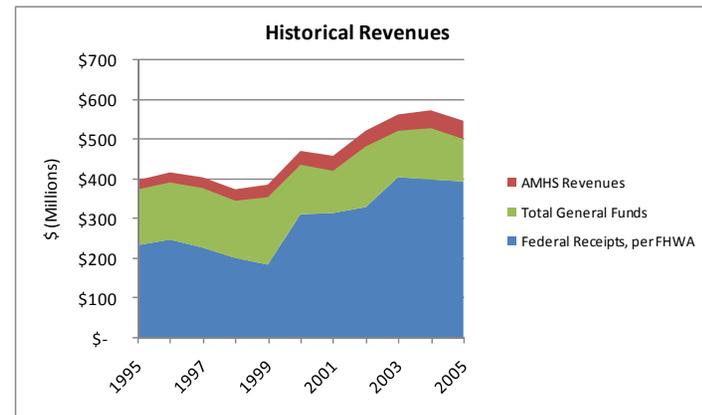
congestion now, witnessed in parts of Anchorage, Fairbanks, and the Mat-Su Valley areas.

Freight volume in state is also expected to increase rapidly. The FHWA estimates freight volume in Alaska to reach 21 million tons by 2020, more than double the 10 million tons in 1998.³ Traffic growth has increased operations and maintenance needs due to increased wear and tear across the state. Many safety improvements are needed when there are increased traffic volumes on existing highways – these include protected left turns, passing lanes, signalization, and other improvements that reduce crashes.

Financial Condition

Alaska is extremely dependent on federal funds for transportation finance, which have historically been the biggest source of revenues for the state as shown in Exhibit 11.

Exhibit 11: Historical Source of Transportation Funds



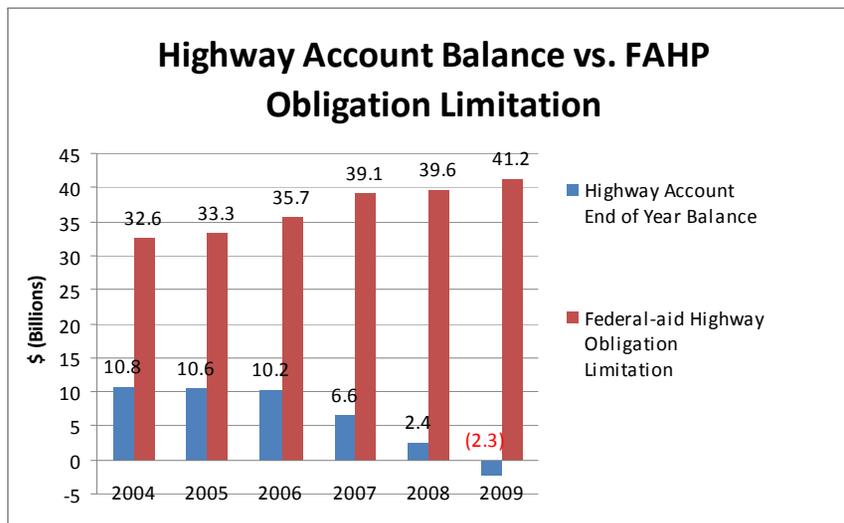
³http://www.ops.fhwa.dot.gov/freight/freight_analysis/state_info/alaska/profile_ak.htm#fig3

Future federal funding will not meet Alaska's transportation finance needs. Alaska faces the following risks:

- The federal highway trust fund account is expected to go into partial deficit in year 2009. Federal funds come in large part from a motor fuel tax, which has a decreasing yield with improved engine efficiency and use of alternative fuels.
- Alaska's share of federal funding is unlikely to increase and could fall. Currently, Alaska receives the highest federal transfers per capita of any state, and therefore bears the highest risk of federal deficit reduction of any state.
- Alaska has a number of special funding provisions which are at risk from future federal government deficit reduction efforts.

Unlike other states, Alaska has neither taxes nor highway user fees dedicated to transportation needs. Consequently, ADOT&PF funds the required state contribution to federal projects and the operating subsidies for AMHS through the state's general fund. The added risk is that, despite the current high prices, Alaska's oil revenues are expected to peak this year. The current general fund forecast⁴ is for a decrease in oil revenues, because future increases in price will no longer offset the steady decline of production on the North Slope. Although other general revenues are forecast to increase, they represent such a small proportion of unrestricted revenues that they cannot stem the overall decrease. This means that ADOT&PF will have to compete with other agencies for general fund appropriations from a decreasing revenue stream.

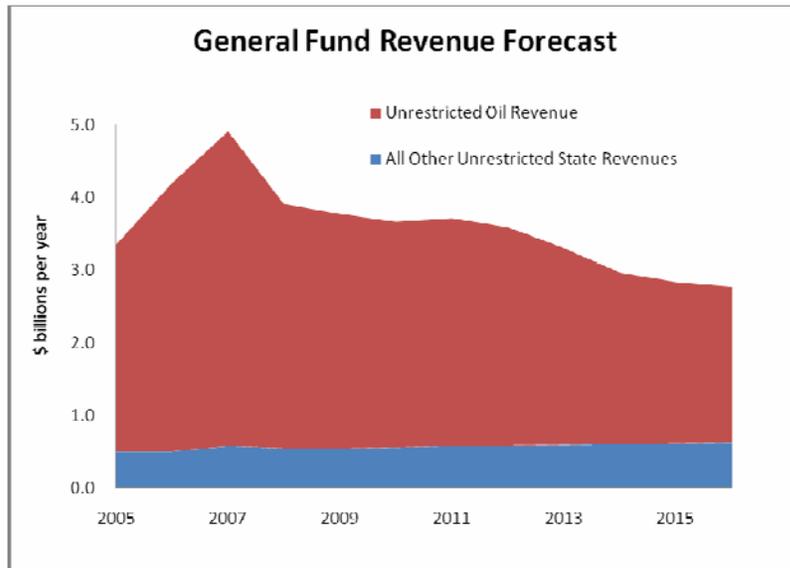
Exhibit 12: Federal Trust Fund Forecast Deficit



Source FHWA (2006)

⁴ Alaska Department of Revenue. Fall 2006 Revenue Sources Book.

Exhibit 13: General Fund Revenue Forecast



Many other states are taking steps to reduce their dependency on the federal program and generate revenue to meet their transportation needs. The challenge for Alaska is that today there are no registration fees, fuel taxes, or other mechanisms dedicated to transportation.

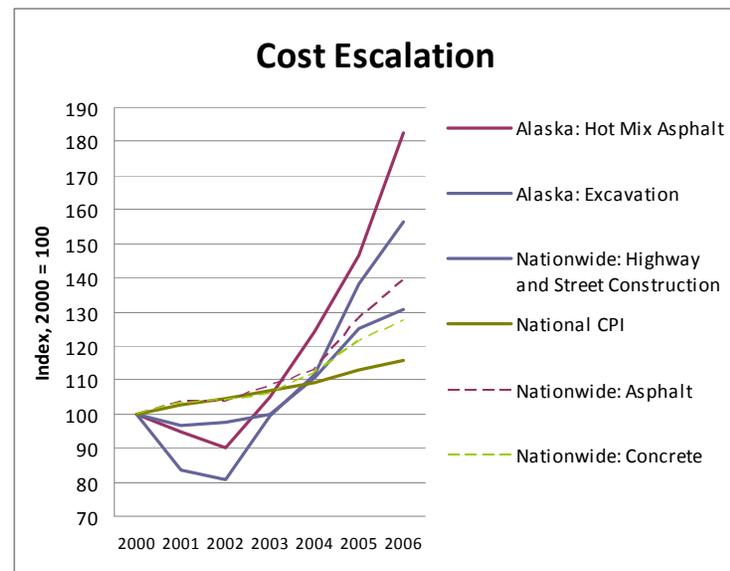
A further challenge is that, with a low population and a large industrial component to transportation demand, there is a small population base to pay for infrastructure. New financing strategies and mechanisms like public-private partnerships, tolling, and other approaches being pursued in the rest of the country have limited applicability in Alaska.

Construction Cost

ADOT&PF’s costs of doing business have increased dramatically and far faster than the rate of inflation. The increases are higher in Alaska than the national average. Cost escalation impacts new projects, operations, and maintenance. This reduces the buying power of existing funds considerably.

Exhibit 14 reports results from *Let’s Get Moving 2030* analysis that shows costs for hot mix asphalt in Alaska have increased over 80 percent in the last six years, compared to a 40 percent average increase in the country. Similarly, excavation costs have gone up over 55 percent. As a result, ADOT&PF has not been able to meet all previous commitments due to major budget changes required to finish projects already underway or ready to go to construction.

Exhibit 14: Construction Cost Escalation



Commodity cost escalation also affects operating costs for AMHS most notably for fuel which is a major item. Similarly, replacement costs for vessels are impacted by rising commodities prices, such as steel.

Other Planning Considerations

Growing Backlog of Preservation and Maintenance Needs

The *Let's Get Moving 2030* technical analysis identifies a large current and growing backlog of needs. At current funding levels this backlog will grow and there will be a continued deterioration in the conditions of the transportation system.

Climate Change and Green House Gas Emissions

Transportation plans address a backlog of improvement needs and are based on forecasting the future trends in population and economic growth. Scientific discussion indicates that the impacts of climate change will be experienced sooner and perhaps be more pronounced in Alaska than in other states. Over the life of *Let's Get Moving 2030*, we will experience changes that will affect both the demand for transportation services and how transportation is provided. The implications for how we deliver infrastructure and for the demands on our infrastructure are uncertain at present. So too are new government policies that will call for changes in how energy is used, taxed, and considered in planning for the future. They will be monitored and addressed in future plan updates.

Regulatory Requirements for Dust Control in Rural Communities

Dust produced from unpaved roads, airfields, and other sources in rural Alaska is impacting the quality of life in many villages. It can cause respiratory ailments, impact subsistence food storage and sources, and visibility on village streets. Several rural communities in Northwest Alaska have been monitored and found to have dust levels far in excess of federal air standards. The future implications of regulatory requirements to address this problem are uncertain. In some communities, paving roads, applying palliatives or even periodic watering will solve some of the problems; however, this is prohibitively expensive for other communities due to lack of suitable materials and cost prohibitive sources. It is also likely that the source of this dust is not confined to the surface of roadways and airfields, limiting the strategies that a transportation agency can address. Because the federal Clean Air Act tightly links the federal transportation program to meeting clean air goals, the issue is likely to impact the use and allocation of already scarce transportation funds.

New Non-Attainment Designation for Greater Fairbanks

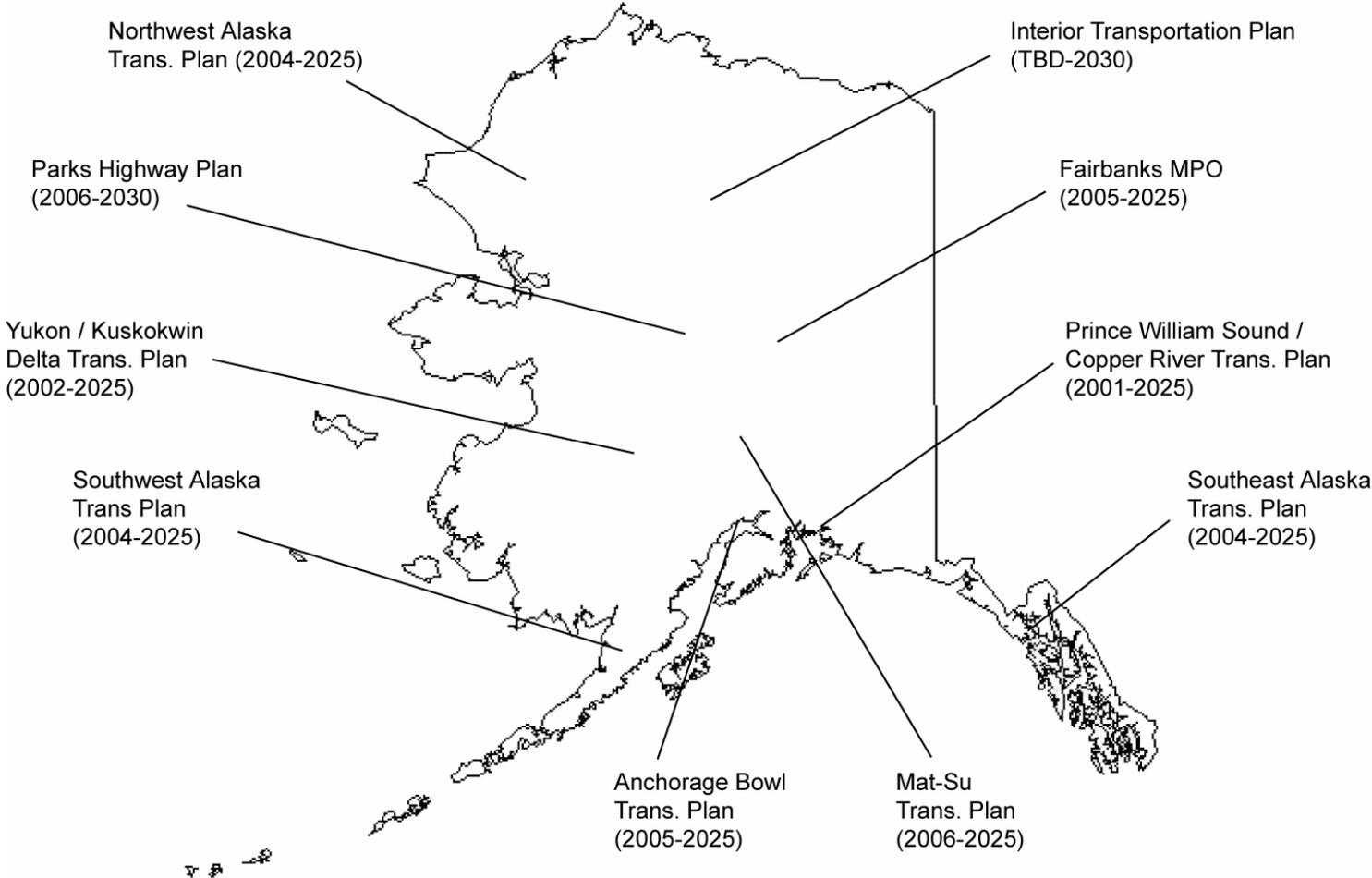
Fairbanks has been found to have air quality for a very fine particulate matter known as PM 2.5 that exceeds federal standards. A formal non-attainment designation is expected. Like rural Alaska, this will require the transportation planning process to consider how each project in the area would affect air quality. This may also lead to major investment of federal highway funds in actions that would lead to better air quality. Much like the rural dust issue, the role of transportation sources in the fine particulate matter found in Fairbanks may be overshadowed by other sources such as home heating with wood and fuel oil. However, the Clean Air Act will require the transportation planning process in the Fairbanks Metropolitan Area to address this issue.

Plans for System Development

Alaska's regions and communities have prepared a number of transportation plans that provide a vision, system plan, and identify project priorities for the development of the transportation system.

Exhibit 15 shows the primary ADOT&PF plans, along with the date the latest plans were created and the time frames of the plans. These plans are multimodal and were developed with considerable community participation. The plans are ambitious and cannot be funded through current revenue sources over their life.

Exhibit 15: Transportation System Plans



ADOT&PF's Responsibilities as Owner

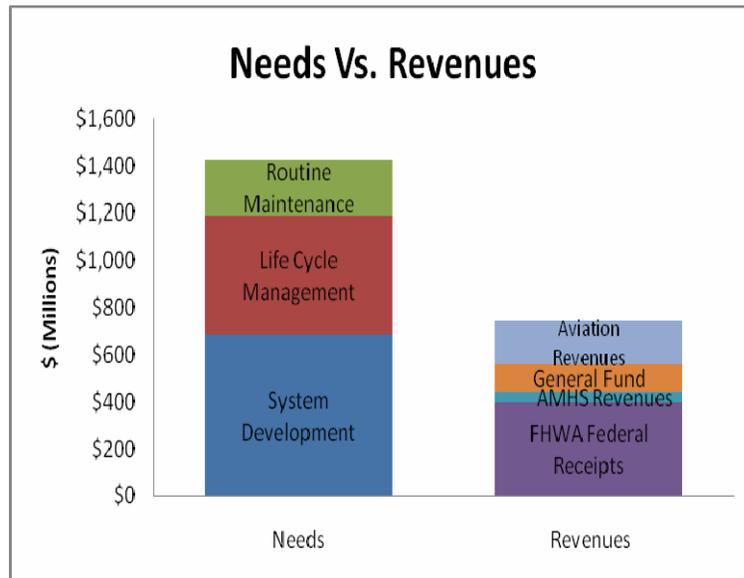
Let's Get Moving 2030 addresses ADOT&PF's responsibilities for the state-owned transportation systems. The technical analysis quantified the current backlog and future needs for these responsibilities through 2030.

System	Annual Total Needs (millions)	Responsibility	Annual Needs (millions)	Total Needs to 2030 (millions)
Highways and Bridges	\$1,049	System Development: Building and expanding roads and bridges	\$552	\$12,699
		Life Cycle Management (Highways): Preventive maintenance, rehabilitation, and reconstruction	\$367	\$8,435
		Life Cycle Management (Bridges): Preventive maintenance, rehabilitation, and reconstruction	\$26	\$598
		Routine Maintenance	\$104	\$2,402
AMHS	\$154	System Development: Fleet additions	—	—
		Life Cycle Management: Fleet replacement	\$26	\$600
		Life Cycle Management: Fleet refurbishment or recertification	\$23	\$529
		System Development: Terminal additions or replacements	\$10	\$231
		Operations and Maintenance	\$95	\$2,185
Aviation	\$224	System Development: Building and expanding airports	\$123	\$2,814
		Life Cycle Management: Preventive maintenance, rehabilitation, and reconstruction	\$62	\$1,427
		Routine Maintenance	\$39	\$905
Other Activities	N/A	Planning and Budgeting: Prioritizing projects and balancing budgets between regional plans and modes	—	—
		Access to Non-State Services: Provide links to private transportation such as commercial air, rail and freight	—	—

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Needs Exceed Revenues

Exhibit 16: Needs Exceed Revenues



As shown in the graphic above, ADOT&PF's needs are more than its current revenues.

Financial Realities

It is evident that Alaska has very large transportation funding shortfalls. Finance strategies and mechanisms being pursued in the rest of the country have limited applicability in Alaska.

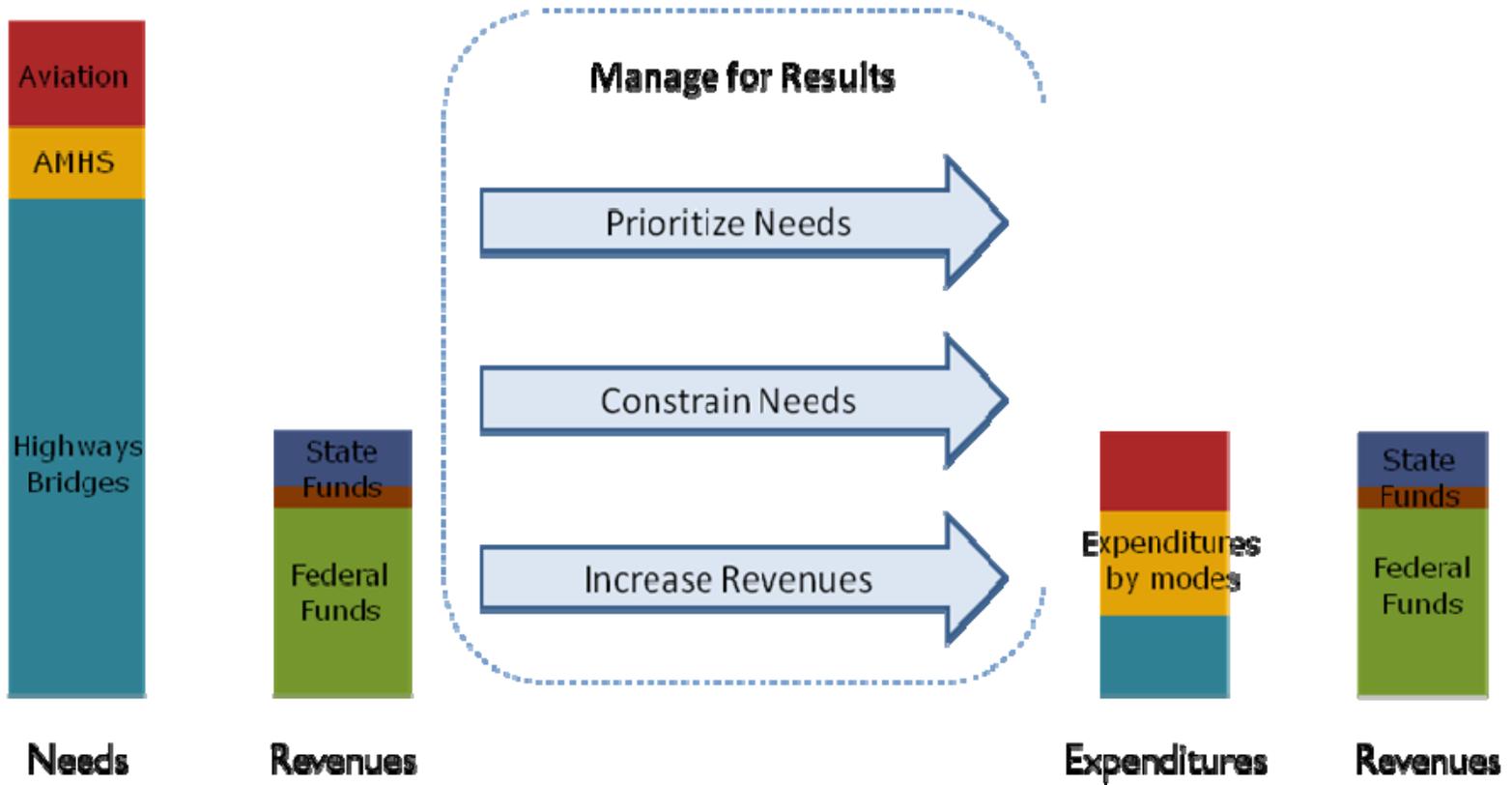
- User fees, such as the fuel tax, have limited yield due to the high costs of highways, the low number of users, and the heavy industrial component.
- National transportation finance trends for revenue bonds, tolls, and ultimately VMT-based charges are not viable.
- The rest of the country is incrementally adding capacity to address congestion. Alaska is building new corridors typically for economic development and/or cost-effective accessibility, and striving to bring very outdated roads to a modern standard.

Transportation Planning Implications

- The ability to build planned highways is at risk.
- There is a large and growing backlog of life cycle management needs.
- *Let's Get Moving 2030* establishes priorities for the system.

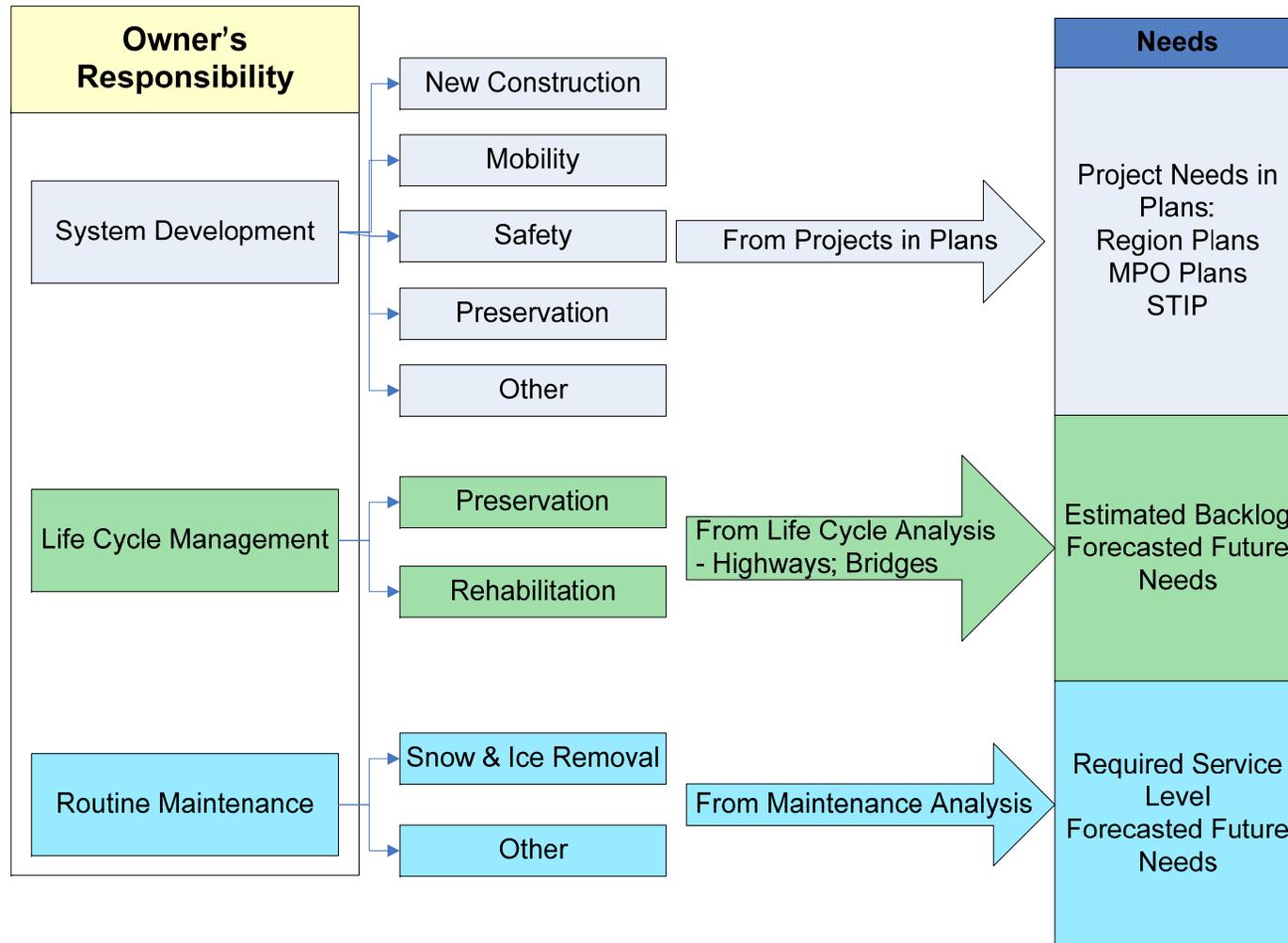
Bridging the Needs Gap

ADOT&PF programs and prioritizes projects and funding. *Let's Get Moving 2030* provides strategies that help bridge the gap.



Highways and Bridges: Needs Analysis

Let's Get Moving 2030 identifies needs for system development, life cycle management, and routine maintenance. System development needs are taken from existing plans. Life cycle management needs are from spreadsheet models. Maintenance needs approximate funds need to provide a minimum level of service.



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Highways and Bridges: System Development Needs

Alaska has plans for the continued development of the transportation system by building new roads and connecting more communities by surface transportation. This is costly construction and is very different from the rest of the country, where new construction is intended to reduce congestion and improve safety.

System development needs through 2030 are identified by consolidating project needs identified in all regional plans, metropolitan plans, and the Statewide Transportation Improvement Program. These needs, when restricted to projects identified in existing plans, total over \$12 billion and translate to at least \$550 million per year, as shown in Exhibit 17.

Exhibit 17: System Development Needs

Plans	Total (\$ Billions)
Regional Plans	\$ 2.24
Metropolitan Plans	\$ 5.27
Other Plans	\$ 1.97
Statewide Transportation Improvement Program	\$ 3.21
System Development Total	\$ 12.69 b

Implications

These needs greatly exceed revenues, and current plans do not provide a basis for setting statewide priorities or effectively guiding regional implementation priorities. The large gap between needs and revenues makes prioritizing these needs very important to ensure that funds are used effectively. All needs cannot be met over the current planning horizon, and therefore the planning process needs to identify priorities at the system level

Highway and Bridges System Development Needs

Total: \$550 million/year

Let's Get Moving 2030 addresses needs by:

- Setting strategic statewide priorities for the development of the system based on straightforward achievable goals.
- Directing future updates to regional plans to set near-term and long-term priorities for implementation.

Highways and Bridges: Life Cycle Management Needs

Life cycle management involves taking action to preserve the service life of facilities. For highway pavements, this includes overlays and rehabilitation at defined times based upon the condition and anticipated remaining life of the pavement.

As Exhibit 18 shows, performing preventive maintenance activities at the right time reduces the overall cost of owning/maintaining the asset over the life of the asset.

Exhibit 18: Life Cycle Management Optimal Practice

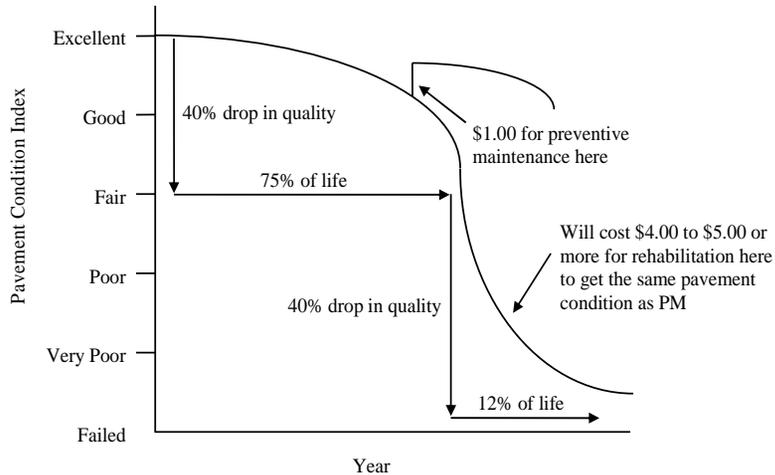


Exhibit 18 illustrates the optimal practice for life cycle management on highways in the Southeast region of the state. This shows over a thirty-year cycle when different treatments should be performed.

Optimal treatment cycles were defined for each region, due to differences in soils, climates, and construction materials. When followed, the treatment cycles dramatically reduce life cycle management costs and thereby prolong the life of the original investment.

Highways and Bridges Life Cycle Management Needs

Highways: \$367 million/year

Bridges: \$26 million/year

Let's Get Moving 2030 addresses needs by:

- Specifying actions that ensure all available funds are used as efficiently as possible.

Needs

ADOT&PF historically allocates about 50 percent of the budget to life cycle management. However, there is a backlog of needs, the system is aging, and life cycle management needs are increasing. Many highways and bridges assets are in need of improvements. The annual needs to maintain highways and bridges are approximately \$412 million, while the ADOT&PF spent an average of \$200.1 million a year between FY 2001 and FY 2005.

Implications

At the current budget allocation levels, the system will continue to deteriorate, while the assets in need of immediate repairs will keep increasing. This will reduce the level of service provided to the residents of and visitors to Alaska in terms of smooth roads and bridges. Ensuring that bridges are structurally sound and functionally valid will become difficult.

The plan proposes a more efficient use of life cycle management funds by directing them toward projects that would provide the maximum benefits for the expenditures. This will be achieved through a better pavement management system. Such measures will mean that the worst assets will not necessarily be treated first.⁵ Implementation will be constrained by the size of the

⁵ Any policy choice to not treat the worst roads first, must also consider public safety, and which option would achieve the highest overall safety profile. The plan is not recommending that by not treating the worst roads first, public safety would be disregarded.

current backlog. However, if roads are impassible or close to failure, “worst first” is unavoidable.

Highways and Bridges: Routine Maintenance

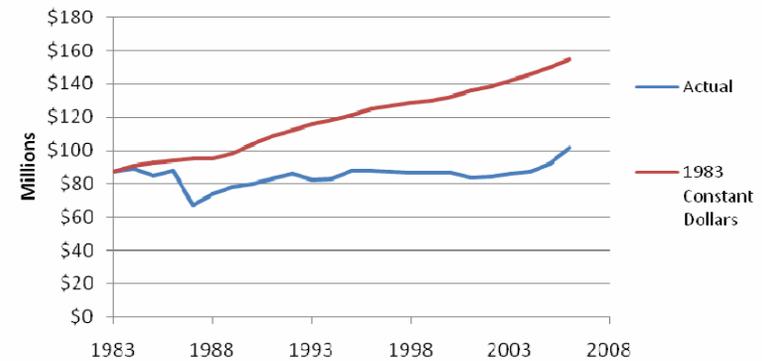
Routine maintenance is an important part of life cycle management and ensuring the serviceability of existing infrastructure. For example: Painting steel bridges, especially in a maritime environment; keeping culverts and ditches clear so that water does not infiltrate to the base of the road; and other maintenance activities are important elements of life cycle management.

Needs

Maintenance needs are most effectively measured in terms of what it costs to provide a particular maintenance level of service. ADOT&PF does not currently have the data to compute this.

Let's Get Moving 2030 uses ADOT&PF expert opinion to make the conservative assumption that in 1983 maintenance was funded at a level that results in an acceptable level of service. Annual maintenance needs are then defined as the 1983 funding level held constant (adjusted for inflation). The gap between funds allocated to maintenance and funds required to pursue desirable life cycle management is shown in Exhibit 19. The gap is a conservative estimate because the number of lane miles to maintain, material costs, and environmental compliance costs, among other factors, have increased over the years.

Exhibit 19: Growing Maintenance Funding Gap



Implications

Routine maintenance ensures that roads are clean, clear of ice, culverts are not blocked, and ensures the overall safety of road users. It also helps ensure that the future condition of the road or bridge is not adversely affected. If routine maintenance is not funded at the optimal level, the level of service provided to road users will continue to deteriorate.

Highways and Bridges Routine Maintenance Needs

Total: \$104 million/year

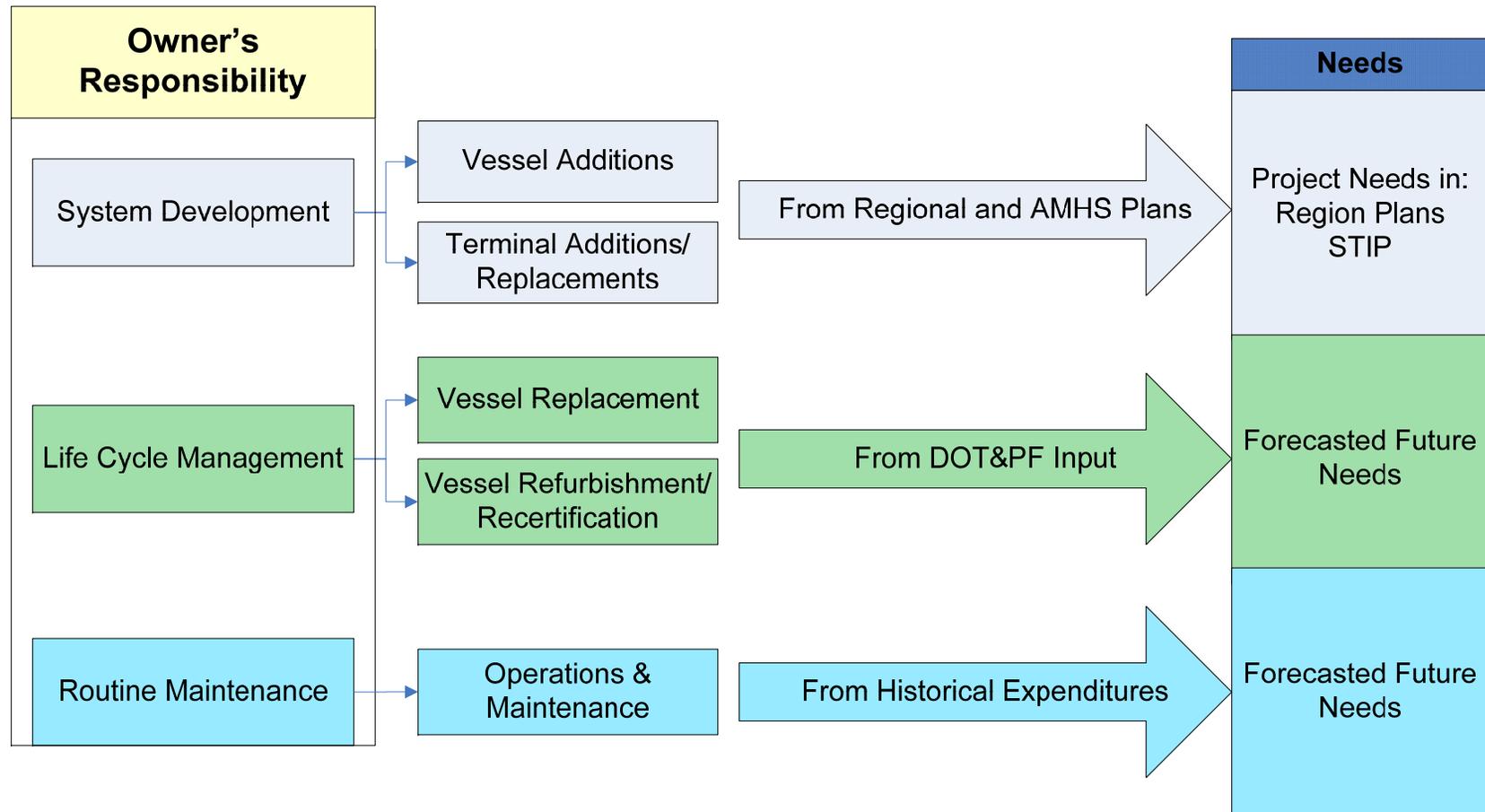
Let's Get Moving 2030 addresses needs by:

- Recognizing that the current maintenance budget is not sufficient to follow optimal maintenance practices.

Policy and strategies prioritize protecting and growing the maintenance budget ahead of other needs. ADOT&PF's ability to implement this is dependent upon the legislative budget process because maintenance funds are not fungible with capital program funds.

Alaska Marine Highway System: Needs Analysis

Let's Get Moving 2030 identifies system development needs in terms of net new additions to the fleet or new terminals. Life cycle management includes the replacement and refurbishment of vessels. Routine maintenance includes all the operations and maintenance costs to meeting a sailing schedule.



Alaska Marine Highway System: System Development Needs

System development for AMHS is composed of two components: Vessel additions and terminal additions or replacements. Vessel additions are new vessels not intended to replace or substitute for existing vessels. Terminal additions or replacements consist of any new terminals planned or any terminal replacements or improvements to the terminals.

Needs

No new vessels are planned to be added to AMHS through 2030. Terminal additions and replacement needs are expected to be about \$10 million per year based on the regional plans. It should be noted that this needs number is not constrained by funding, and the actual amount spent will depend on budgeting constraints.

Implications

There are no plans to increase system wide AMHS service.

<p>AMHS System Development Needs</p> <p>Total: \$10 million/year</p> <p><i>Let's Get Moving 2030</i> addresses needs by:</p> <ul style="list-style-type: none"> • Recommending that the current levels of service are continued through fleet rehabilitations and/or replacements.

Any system wide service increases will involve large capital costs, and the plan recommends planning for these in advance. Additional security requirements will also need to be addressed as part of terminal additions and replacements.

Alaska Marine Highway System: Life Cycle Management Needs

Life cycle management for AMHS consists of three primary parts: Vessel replacement, refurbishment, and recertification. AMHS life cycle management must address mandatory safety and operating standards for passenger vessels. The United States Coast Guard regulates ferry operations to ensure adequate safety on the vessels. Vessels need to be recertified at certain intervals to meet Coast Guard requirements.

Needs

There are four vessels in the AMHS fleet that are at least forty years old (M/V Malaspina, Matanuska, Taku, and Tustumena) and will need to be replaced before 2030. This is expected to cost about \$150 million per vessel – an average of \$26 million a year over the *Let's Get Moving 2030* planning horizon.

As the vessels age, ADOT&PF estimates that maintenance costs will increase significantly. Regular vessel refurbishment and recertification needs are expected to be around \$23 million a year.

Implications

A major difference between roads and ferries is that ferries must meet stringent regulatory requirements including crew training and certifications or the Coast Guard will not allow them to be put in service. Unlike roads, which can have obvious shortcomings like rough pavement, preventative maintenance and refurbishment are mandatory if a vessel is to continue to be used by the public.

AMHS Life Cycle Management Needs

Vessel Replacement: \$26 million/year

Vessel Refurbishment and Recertification: \$23 million/year

Let's Get Moving 2030 addresses needs by:

- Maintaining current levels of service through fleet replacements.
- Addressing additional security requirements.

Alaska Marine Highway System: Maintenance and Operations Needs

The routine maintenance of vessels is highly regulated in ferry services: the United States Coast Guard requires compliance with its standards and the vessels' insurers require compliance with a certification system defined by Lloyds of London. Both agencies oversee routine maintenance inspections and are very prescriptive about what maintenance must be done.

Operating costs include the fuel, labor, and other materials required to meet a particular sailing schedule. Labor costs are determined through collective bargaining with the applicable unions. The only cost variable that ADOT&PF controls is the schedule.

Needs

ADOT&PF has spent an average of approximately \$95 million a year for operations and maintenance between FY 2001 and FY 2006. This amount is budgeted to increase to about \$136 million in FY 2007. This is offset by average revenue of \$48.4 million per year over the past three years. The difference is the operating subsidy provided through the general fund.

Implications

Maintenance and operating costs have increased considerably in recent years due to increased costs of fuel, labor, and sailings.

AMHS Maintenance and Operations Needs

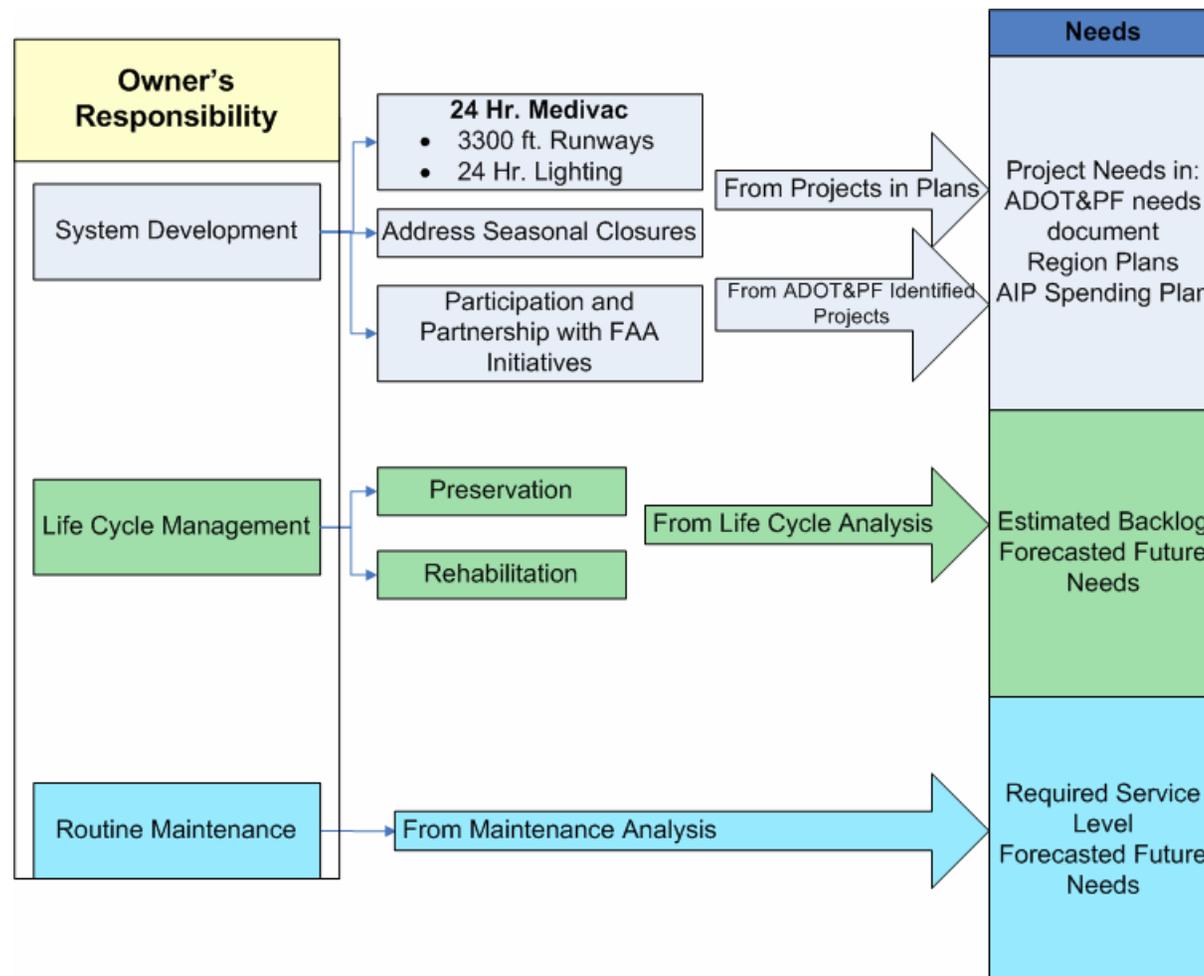
Total: \$95 million/year

Let's Get Moving 2030 addresses needs by:

- Recognizing that continued general subsidy will be required to maintain the current level of service.

Aviation Needs Analysis

Let's Get Moving 2030 identifies system development needs as the capital improvements required to meet the goals established for the state-owned airports in ADOT&PF's airport system plan and regional multimodal plans. These needs are therefore performance-based and constrained. Life cycle management needs are limited to runway and taxiway pavement preservation at paved and unpaved airports. Maintenance includes the various activities performed on airport by ADOT&PF crews and contractors. These needs do not include other terminal facilities needs.



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Aviation: System Development Needs

System development needs for aviation comprise of all the needs identified in existing transportation plans. ADOT&PF goals for airports are given below:

- 1) 24-hour Medivac capability for targeted airports
 - a) Adequate runway length: 3,300 ft.
 - b) 24-hour lighting
 - i) PAPI & REIL
 - ii) Runway edge lighting
- 2) Address seasonal closures impacting targeted airports
- 3) Participation in and partnership with FAA initiatives

Needs

The needs identified from regional plans and the airport improvement program shown in Exhibit 20 are \$2.38 billion through 2030, while the needs for the ADOT&PF goals are shown in Exhibit 21 and total \$433 million.

Exhibit 20: System Development Needs

Transportation Plan	System Development Needs (\$ millions)
Regional Plans	
Interior transportation plan + Corridor needs (From un-formalized plan)	\$717
Northwest Alaska transportation plan	None
Prince William Sound/Copper River transportation plan	\$.40
Southwest Alaska transportation plan	\$170.5
Southeast Alaska transportation plan	None
Yukon-Kuskokwim Delta transportation plan	\$390.8
Airport Improvement Program (AIP)	\$1,102.8
Total	\$2,381.5

Exhibit 21: ADOT&PF Goals & Needs

Goals	Airports	Needs (\$ Millions)
Goal 1: 24-hour Medivac capability	28	\$310
Goal 2: Address seasonal closures	13	\$123
Goal 3: Participation & partnership with FAA initiatives	-	Addressed through FAA grants
Total		\$433

Currently, ADOT&PF's goal to participate in and partner with FAA initiatives is addressed through FAA actions, grants, and related funding.

The total system development need is about \$2.81 billion till 2030, or about \$123 million a year. It is important to note here that funds for aviation system development come from a separate source than funds for highways/bridges and AMHS.

Implications

Funding the ADOT&PF goals will ensure that additional areas in Alaska will have 24-hour Medivac capabilities, ensuring safety of the residents and visitors of those regions.

Aviation System Development Needs

State Plans: \$104 million/year

ADOT&PF Goals: \$18.8 million/year

Let's Get Moving 2030 addresses needs by:

- Incorporating ADOT&PF's airport priorities as strategic priorities for airport system development.

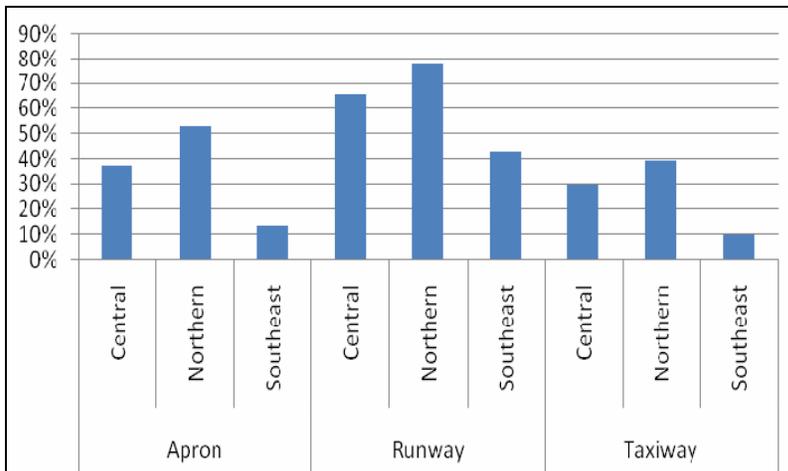
Aviation: Life Cycle Management Needs

Life cycle management for airports is very similar to that for highways and bridges. Life cycle management can be generally defined as the management of assets (runways, taxiways, aprons) and applying proper treatment cycles to reduce the total cost of ownership.

Needs

There is a considerable backlog of airport pavement needs. Exhibit 22 shows the pavement condition for paved airports across the state. About 62 percent of runways around the state fall below the pavement condition standard, while 35 percent of aprons and 27 percent of taxiways fall below the standards.

Exhibit 22: Percent of Pavement Below Standard



As a result, the funding required to bring the airports back to standards will be more than that required to optimally manage the life cycle in the long range.

The backlog and life cycle management needs average \$62 million a year to meet the life cycle management needs for both paved and unpaved airports.

Implications

If the life cycle management needs are not addressed, the backlog will keep increasing, and the airports will be in worse condition than at the present.

Aviation Life Cycle Management Needs

Total: \$62 million/year

Let's Get Moving 2030 addresses needs by:

- Ensuring that all available funds are used as efficiently as possible.
- Directing funds toward projects that would provide maximum benefits.

Aviation: Routine Maintenance Needs

Routine maintenance for airports, similar to that for highways and bridges, refers to discrete activities that are performed on a yearly basis, typically seasonal in nature. Common routine maintenance activities include: snow and ice removal, pothole patching, and minor crack sealing. Many of these activities are tightly related to future condition of the pavements.

Needs

The budget for routine maintenance has not kept up with the rate of inflation, just as for highways and bridges. The routine maintenance needs for airports are estimated to be around \$39 million per year.

Implications

Routine maintenance ensures that the runways, taxiways, and aprons are clean and without ice; that water is not clogged; and overall ensures the safety of the users. It also helps ensure that the future condition of the airports is not adversely affected. If routine maintenance is not funded at the optimal level, the level of service provided to airport users will continue to deteriorate.

Aviation Routine Maintenance Needs

Total: \$39 million/year

***Let's Get Moving 2030* addresses needs by:**

- Spending funds on areas of greatest importance.

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