Alaska DOT&PF Statewide Long Range Plan Update

Southeast Conference
September 2007
Food for Thought

Cost to drive: Per AAA 50¢ to 75¢ per mile

Contribution to highways in AK: 0.4¢ mile at 20 mpg

US % of GDP spent on transportation: 10% of China

Alaska’s % of state GDP (non-federal) spent on transportation: 44 out of 50 states
Why Another Plan?

...and there are more!
Long Range Plan
Plan Purpose

Provide statewide focus
Serve as top-level policy plan to other plans to set state-wide priorities
Address all responsibilities of ownership
Provide system level analysis of all needs
  _ System development
  _ Life cycle management
  _ Maintenance and operations
**Long Range Plan**

**Plan Purpose**

<table>
<thead>
<tr>
<th>The plan will</th>
<th>Will not be</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Set policy direction</td>
<td>- Comprehensive list of projects</td>
</tr>
<tr>
<td>- Be system level</td>
<td>- Unrealistic</td>
</tr>
<tr>
<td>- Address all modes</td>
<td>- Too general</td>
</tr>
<tr>
<td>- Address DOT&amp;PF responsibilities as the owner</td>
<td></td>
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</tbody>
</table>
Long Range Plan
Addresses State Responsibilities

- Highways and Bridges
- Alaska System
- Alaska Marine Highway System
- Transit
- Airports
Plan Update Process

Overall Analysis Approach:

Summary

Baseline
- Current plans
- Life cycle management
- Routine maintenance

Trends
- Population
- Vehicle miles travelled
- Revenues
- Construction cost

Plan for Future
- Consider
  - Needs
  - Priorities
  - Standards

Plan Strategies
- Prioritize
- Manage
- Constrain needs
- Increase revenues

Updated Plan
Plan Update Process

Timeline

Conduct Baseline Analysis
Identify Problems & Needs
Identify Potential Solutions & Prepare Draft Plan

Late 2006

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUNE  JULY  AUG  SEPT  OCT  NOV

Plan Schedule

2030 Let's Get Moving!
Alaska Statewide Long-Range Transportation Policy Plan Update

meeting and presentation dates and times. Go to www.dot.ak.gov/2030
Trends

Population, Vehicles, and VMT

![Trends Graph]

- **Index, 1959=100**
  - Population
  - Registered Vehicles
  - VMT
Trends Population Forecast

State of Alaska: Population

Historical Population

Forecast Population
Trends
Alaska-Specific Cost Escalation

Index, 2000 = 100

- Alaska: Hot Mix Asphalt
- Alaska: Excavation
- Nationwide: Highway and Street Construction
- National CPI
- Nationwide: Asphalt
- Nationwide: Concrete

2000 2001 2002 2003 2004 2005 2006
Trends

Historical Revenues

Dependent on Federal funds

$ (Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>AMHS Revenues</th>
<th>Total General Funds</th>
<th>Federal Receipts, per FHWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1997</td>
<td></td>
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<td>1999</td>
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<td>2001</td>
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<td>2003</td>
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<tr>
<td>2005</td>
<td></td>
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</table>
### Strategic Priorities

#### Surface Transportation

<table>
<thead>
<tr>
<th>Priority</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Demand driven urban capacity</td>
<td>$2 b</td>
</tr>
<tr>
<td>NHS to current standards</td>
<td>$1 b</td>
</tr>
<tr>
<td>Ferry, rail, and transit</td>
<td>$1 b</td>
</tr>
<tr>
<td>New roads, links</td>
<td>$.5 b</td>
</tr>
<tr>
<td>Special needs – gas line, truck weight restrictions</td>
<td>$.5 b+</td>
</tr>
<tr>
<td>Other – NHS rehab, strategic AHS links, earmarks</td>
<td>$.8 b</td>
</tr>
</tbody>
</table>

**Total:** $ 5.8 billion
## Needs and Funding Analysis
### Alaska Needs – Annualized (2007 $ Millions)

<table>
<thead>
<tr>
<th></th>
<th>Category Total</th>
<th>System Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Highways/Bridges</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Development</td>
<td>$ 552</td>
<td></td>
</tr>
<tr>
<td>Life Cycle Management-Highways</td>
<td>$ 367</td>
<td></td>
</tr>
<tr>
<td>Life Cycle Management-Bridges</td>
<td>$ 70</td>
<td></td>
</tr>
<tr>
<td>Routine Maintenance</td>
<td>$ 104</td>
<td>$ 1,093</td>
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<tr>
<td><strong>AMHS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fleet Additions</td>
<td>$ -</td>
<td></td>
</tr>
<tr>
<td>Fleet Replacement</td>
<td>$ 26</td>
<td></td>
</tr>
<tr>
<td>Fleet Refurbishment/Recertification</td>
<td>$ 23</td>
<td></td>
</tr>
<tr>
<td>Terminal Additions/Replacement*</td>
<td>$ 10</td>
<td></td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>$ 95</td>
<td></td>
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<tr>
<td><strong>Aviation</strong></td>
<td></td>
<td>$ 223</td>
</tr>
<tr>
<td>System Development</td>
<td>$ 122</td>
<td></td>
</tr>
<tr>
<td>Life Cycle Management</td>
<td>$ 62</td>
<td></td>
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<tr>
<td>Routine Maintenance</td>
<td>$ 39</td>
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</table>
Alaska Financing - Realities

Relying on Federal program growth is risky

Prognosis for general fund revenue as highway funding source is not good

- State running out of oil revenues – without gap pipeline (earliest 2015), state revenue will decline

No dedicated highway user fees
Limited applicability of new financing strategies and mechanisms being pursued in rest of the country

- National trends for revenue bonds and tolls not viable
- State building new corridors for economic development: rest of the country adding capacity to address congestion

Other states have dedicated highway user fees (e.g. Gas tax, vehicle registration fees)

- In Alaska, low potential yield from gas tax due to high costs of highways, few users, and heavy industrial component
Towards Plan Strategies
Needs Vs. Revenues

- Aviation receives separate Federal Funds, but uses General Funds for the maintenance program.
Towards Plan Strategies

Guiding Principles

- Be realistic, base plan on current revenue sources
- Be realistic about each source of revenue and future viability
- Provide strategies to bridge needs versus funding gap
- Provide framework for decision making/resource allocation
- Specify plan priorities for resource allocation
- Establish statewide strategic project priorities
Towards Plan Strategies
How to Bridge the Needs Gap?

Prioritize:
• Between needs categories
• Within categories
• Between modes

Constrain Needs:
• Revisit & constrain system plans
• Lower Level of Service
• Target NHS/AHS

Increase Revenues:
• Pursue state/local funding mechanisms

Needs

Aviation
AMHS
Hwys/Bridges

Revenues

General Funds
AMHS Revenues
Federal Receipts

Federal Receipts
AMHS
Revenues
General Funds
Towards Plan Strategies

Prioritize
- Between needs categories
- Within categories
- Between modes

Manage
- Allocate funds & program based on priorities
- Life cycle management strategies
- Improve productivity by using new technology

Constrain Needs
- Revisit and constrain system plans
- Lower Level of Service (LOS)
- Target on NHS/AHS
- Privatization/New resource road classification

Increase Revenues
- Pursue state funding mechanisms
- Pursue local funding mechanisms
Towards Plan Strategies
Scenario 1: Maintain O&M and LCM Funding Levels

Implications:
- Continued deterioration of existing system
- Increase in life cycle backlog
- Will take longer than 2041 to complete the strategic projects!
Towards Plan Strategies
Scenario 2: Fund O&M at Optimal Level

Implications

- Slower deterioration of existing system
- Slower increase in life cycle backlog
- Will take longer than 2064 to complete the strategic projects!
Towards Plan Strategies
Scenario 3: Fund LCM at Optimal Level

Implications

- Need additional $93 m to fund routine maintenance and operate ferry system at current level
- No life cycle backlog
- No funds available for the strategic projects!!!
The Most Viable Scenario
Maintain O&M and LCM Funding Levels

Operations and maintenance at current level of funding
Life cycle management: Maintain current level of funding and use funds optimally
  _ No more “worst first”
  _ Better pavement management system
  _ Use funds on NHS first, followed by AHS, and then local roads

Remaining $ to be spent on capital projects
  _ Strategic projects in the state will be completed first

Ensure link to programming (strategic projects)
The Most Viable Scenario
Maintain O&M and LCM Funding Levels

<table>
<thead>
<tr>
<th>Risks</th>
<th>How is this different?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Federal re-authorization: funds reduction</td>
<td>• More efficient use of life cycle management $</td>
</tr>
<tr>
<td>• Continued dependence on state general funds</td>
<td>• Better state-wide prioritization: Realistic system development goals</td>
</tr>
<tr>
<td>• Revenue growth less than construction inflation</td>
<td>• Better ties planning and implementation</td>
</tr>
<tr>
<td>• Cannot adequately follow through on state priorities</td>
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Next Steps

Prepare draft plan that specifies
- Vision
- Policies
- Strategies
- Implementing actions
Questions