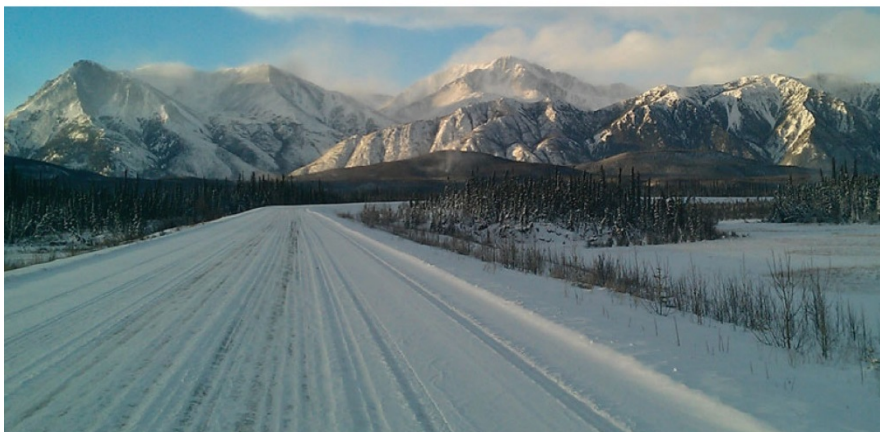


Alaska Statewide Long-Range Transportation Plan

# LET'S KEEP MOVING 2036: Freight Element Implementation Guidance

December 2017



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Appendix A: Alaska LRTP Freight Element Summary



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## ABOUT THE ALASKA STATEWIDE FREIGHT PLAN

This document – Alaska LRTP Freight Element Implementation Guidance – is a companion document to the 2016 Alaska Long Range Transportation Plan (LRTP) Freight Element. Taken together, the LRTP Freight Element and this Implementation Guidance constitute the Alaska Statewide Freight Plan.

Alaska has developed a Statewide Freight Plan consistent with federal guidance as specified in the Fixing America’s Surface Transportation (FAST) Act. Most of the elements required for a Statewide Freight Plan are contained in the Freight Element. However, some required elements – like the designation of specific projects and investments – are not consistent with the 2016 LRTP policies-not-projects framework. Other elements – like the designation of critical urban and rural freight connectors and the implementation of performance measures – may change periodically during the lifespan of the LRTP. For both reasons, it is desirable and necessary to provide some freight plan elements in an implementing document separate from the LRTP itself, so that its contents can be adopted and updated as needed to successfully achieve the freight plan goals, policies, and strategies adopted in the LRTP.

### The LRTP Freight Element

The statewide long-range transportation planning process is a policy planning process led by the Alaska Department of Transportation and Public Facilities (DOT&PF). The resulting LRTP is multimodal. The primary focus is planning for the transportation facilities and services that are owned and operated by the State of Alaska.

Multiple public and private stakeholders have a keen interest in the performance of Alaska’s freight transportation system. In general, freight transportation performance is important to all Alaskans because the efficiency of freight transportation affects both the costs of goods and services in Alaska and the ability of the economy to export its products to national and international markets.

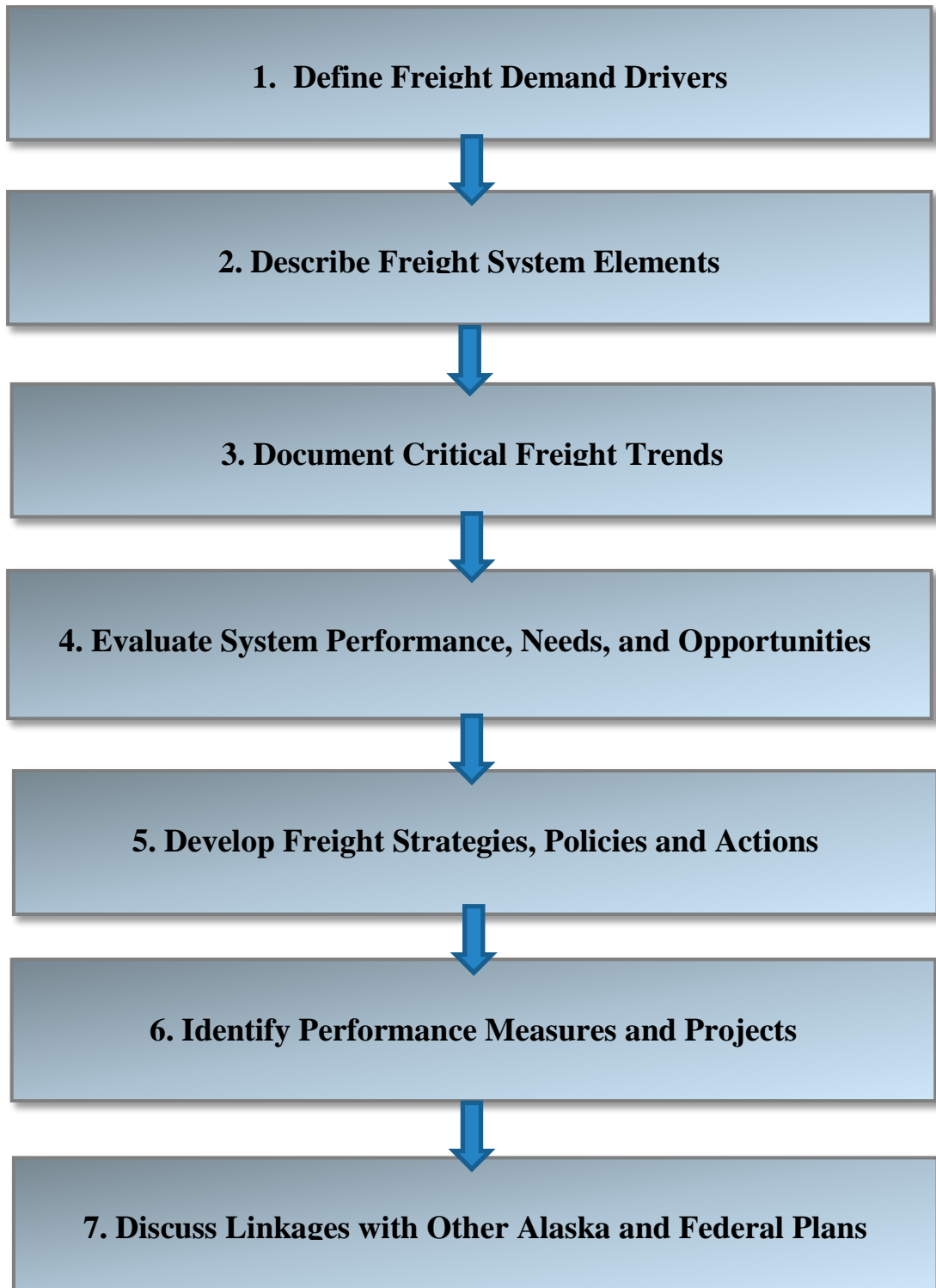
The Freight Element of the LRTP was developed by the DOT&PF working with a variety of public and private stakeholders. As a policy plan, the LRTP and this Freight Element provide direction to area plans and other transportation planning agencies in the state on policy and strategies with which to align their plans. They in-turn develop plans with regional, metropolitan, or modal focuses that work toward achieving the goals of the LRTP.

The Freight Element is based on a detailed review of domestic and international commodity flows, economic data, an assessment of Alaska’s freight facility performance, recent freight plans (area and modal), and other information. Stakeholders representing owners, operators, freight service providers, and users of freight facilities were engaged throughout the process, and the public was invited to provide feedback. The Freight Element is based on a systematic data-driven evaluation of the demand for freight transportation and how well it is met today.

The overall structure of the Freight Element is illustrated in Exhibit 1. The primary Freight Element conclusions, which are used as organizing themes for the Freight Element, are summarized in Exhibit 2.

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Exhibit 1: Freight Element Process Diagram



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## Exhibit 2: Primary Freight Element Conclusions

1. **Freight movement in Alaska results from specific demand drivers**, primarily requirements to export natural resources from the state to national and international markets; import consumer goods and industrial supplies from other states and countries; and distribute goods within Alaska over very long supply chains.
2. **Freight demand in Alaska is served by multiple transportation modes: road, air, water, rail, and pipeline**. Each has a critical role in the state’s multi-modal system and must be considered in the context of the entire system.
3. **Alaska’s freight demand drivers are impacted by critical trends**. This plan is based on the high likelihood that the primary trends experienced in recent years impacting freight will continue. These trends include a growing population that is increasingly concentrated in urban areas; rising overall industrial production but high uncertainty regarding future energy production; and increasing seasonal/annual variability in demand due to climate change and other factors. Critical trends, acting on and over Alaska’s freight transportation network, lead to changes in system performance and create both needs and opportunities.
4. **To provide acceptable freight system performance—defined as available, reliable, affordable, timely, safe, and secure—the Freight Element addresses the following needs and opportunities:** bringing more resources efficiently to markets; improving truck access to intermodal facilities (ports, airports, etc.); enhancing freight mobility in growing urbanized areas; maintaining and enhancing critical trade gateway and corridor facilities; maintaining and enhancing critical connections with Alaska’s rural communities; supporting military movements and needs; and doing so with constrained public funds.
5. **The LRTP includes goals, policies, and actions for the freight transportation system**. These align outcomes, plans, and projects based on performance-based resource allocation; manage the system to increase performance and reduce risk; and provide accountability for the expenditure of public funds.
6. **The Freight Element aligns with LRTP goals for performance-based resource allocation** by creating first-generation approaches for freight system performance measurement; freight project prioritization and evaluation; and multi-modal freight investment at a program level.
7. **The Freight Element is a valuable resource** for modal plan development and area/local freight planning, and complies with federal guidance for state freight plans.

## The Alaska LRTP Freight Element Implementation Guidance

This document – the Alaska LRTP Freight Element Implementation Guidance – addresses the following

- Freight Networks and Critical Urban and Rural Connectors
- Freight Projects and Funding Sources
- Ongoing Performance Measurement
- Ongoing Stakeholder Engagement and Plan Refinement
- Appendix A – LRTP Freight Element Executive Summary
- Appendix B – LRTP Freight Element Goals, Policies, and Objectives

As previously noted, the LRTP Freight Element and the Implementation Guidance each satisfy certain elements of Federal guidance for Statewide Freight Plans. The required and recommended components of state freight plans, and where they are addressed, are listed in Exhibit 3.

**Exhibit 3: Federal Guidance and the Alaska Freight Plan (LRTP Freight Element and Implementation Guidance)**

FAST Act Freight Requirements	Where Addressed
1. The Plan shall include an identification of significant freight system trends, needs, and issues with respect to the State.	<i>Freight Element -- Freight Demand Drivers</i> <i>Freight Element -- Freight System Elements</i> <i>Freight Element -- Critical Freight Trends</i> <i>Freight Element -- Performance, Needs and Opportunities</i>
2. The Plan shall include a description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State.	<i>Freight Element -- Goals, Policies, and Actions</i> <i>Freight Element -- Performance Measurement, Prioritization, and Project Evaluation</i>
3. The Plan shall include a listing, when applicable, of: (a) multimodal critical rural freight facilities and corridors designated within the State under section 70103 of this title (b) critical rural and urban freight corridors designated within the State under section 167 of title 23.	<i>Freight Element -- Performance Measurement, Prioritization, and Project Evaluation</i> identifies an Alaska Multimodal Freight Network (AMFN) that includes all major freight facilities that play a significant role in the state’s economy.  <i>Implementation Guidance --</i> Portions of the AMFN corresponding to federal designations defined under FAST are identified and may be periodically updated under separately adopted <i>Alaska Freight Element Implementation Guidance</i> .
4. The Plan shall include a description of how the plan will improve the ability of the State to meet the national multimodal freight policy goals described in section 70101(b) of this title and the national highway freight program goals described in section 167 of title 23.	<i>Freight Element -- Relationship with Other Plans and Federal Guidance</i>
5. The Plan shall include a description of how innovative technologies and operational strategies, including freight intelligent transportation systems, that improve the safety and efficiency of freight movement, were considered.	<i>Freight Element -- Goals, Policies, and Actions</i>



FAST Act Freight Requirements	Where Addressed
<p>6. In the case of roadways on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to substantially deteriorate the condition of the roadways, the Plan shall include a description of improvements that may be required to reduce or impede the deterioration.</p>	<p><i>Freight Element -- Performance, Needs, and Opportunities</i> addresses infrastructure needs and planned improvements associated with natural resource (mineral, oil and gas extraction, timber, etc.) development, including existing roadways as well as potential future roadways.</p> <p><i>Implementation Guidance</i> -- Freight priority projects consistent with this Freight Element, and investment plans to implement them, are identified and may be periodically updated under separately adopted <i>Alaska Freight Element Implementation Guidance</i>.</p>
<p>7. The Plan shall include an inventory of facilities with freight mobility issues, such as bottlenecks, within the State, and for those facilities that are State owned or operated, a description of the strategies the State is employing to address the freight mobility issues.</p>	<p><i>Freight Element -- Performance, Needs, and Opportunities</i></p>
<p>8. The Plan shall consider any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion or delay.</p>	<p><i>Freight Element -- Performance, Needs, and Opportunities</i></p> <p><i>Freight Element -- Freight Goals, Policies, and Actions</i></p>
<p>9. The Plan shall include a freight investment plan that, subject to subsection (c)(2), includes a list of priority projects and describes how funds made available to carry out section 167 of title 23 would be invested and matched.</p>	<p><i>Implementation Guidance</i> -- The LRTP does not include projects or investments. Freight priority projects consistent with the LRTP Freight Element, and investment plans to implement them, are identified and may be periodically updated under separately adopted <i>Alaska Freight Element Implementation Guidance</i>.</p>
<p>10. The State Freight Advisory Committee shall be consulted in development of the Plan, if applicable.</p>	<p><i>Implementation Guidance</i> -- The Freight Element was developed with the participation of a Freight Working Group, consisting of diverse public and private sector stakeholders, as part of the larger public involvement process guiding development of the full LRTP. The Freight Working Group will be a continuing resource for freight planning, as outlined in the <i>Alaska Freight Element Implementation Guidance</i>.</p>

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## FREIGHT NETWORKS AND CRITICAL URBAN AND RURAL CONNECTORS

**The LRTP Freight Element identified a recommended Alaska Multimodal Freight Network. Portions of this Freight Network (the interstate highways) have already been designated as part of the National Highway Freight Network (NHFN) by the Federal Highway Administration. Alaska has the opportunity to designate additional NHFN mileage, in the form of critical urban and rural connectors. The Alaska Multimodal Freight Network and Alaska’s NHFN connector designations are designated in this Implementation Guidance, and may be updated in future Guidance.**

As discussed in the LRTP Freight Element, the Alaska Multimodal Freight Network (the Freight Network) emphasizes transportation infrastructure that plays a critical role in supporting the economy of the state, allowing it to export valuable natural resources and import indispensable consumer products that improve quality of life. Links and nodes were selected as part of this network because they handle significant quantities of freight, in tonnages or value, without which large segments of the state’s economy could not operate.

Identifying a Freight Network does not imply that the remainder of the freight infrastructure in the state is unimportant. The Freight Network includes primarily major facilities, corridors, and connectors, but it also recognizes that last-mile deliveries to smaller communities, through small ports and small airport and landing strips, are essential. Issues and needs for smaller facilities will become obvious to their users without the need for ongoing performance monitoring at a system level. The initially defined Freight Network, shown in Exhibit 4 following, is composed of the following:

- Highways
  - Parks Highway; Seward Highway; Sterling Highway; Dalton Highway; Richardson Highway; Glenn Highway; Alaskan Highway; Klondike Highway; Haines Highway
  - Steese Expressway and Airport Way in Fairbanks
  - Minnesota Drive, International Airport Road, C Street, and Ocean Dock Road in Anchorage
- Seaports that handle more than 140,000 tons per year (which represent 98% of all seaports in the state),<sup>1</sup> plus other strategically important seaports
- Airports that handle more than 1,500 tons per year (which represent 88% of all air cargo tons handled in the state)<sup>2</sup>
- Alaska Pipeline
- Alaska Railroad

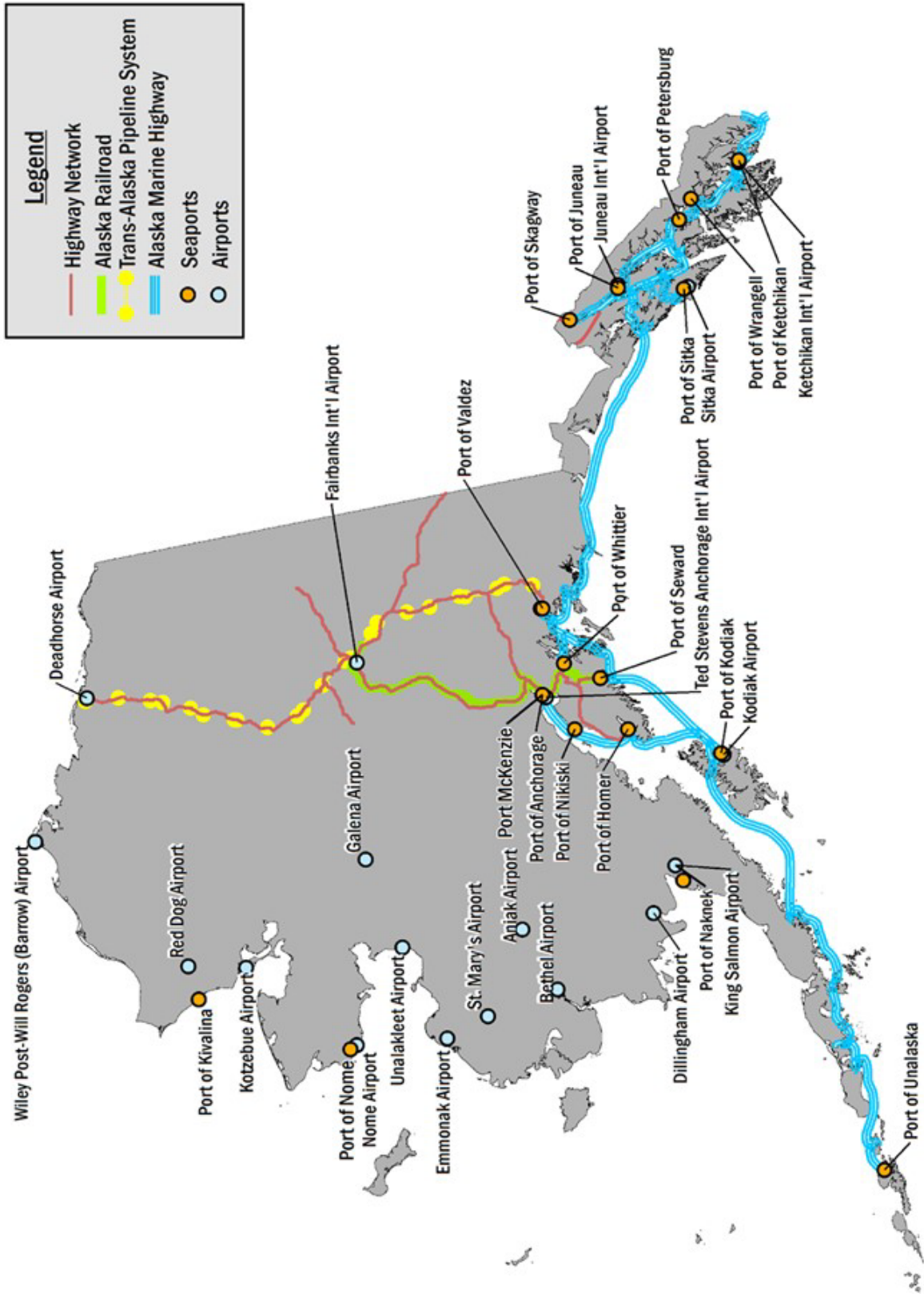
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<sup>1</sup> As reported in the U.S. Army Corps of Engineers Waterway Data

<sup>2</sup> As reported in the Bureau of Transportation Statistic’s T-100 Data

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- Alaska Marine Highway, navigable Coastal Corridors, and navigable Inland Waterways

Exhibit 4: Initial Alaska Multimodal Freight Network

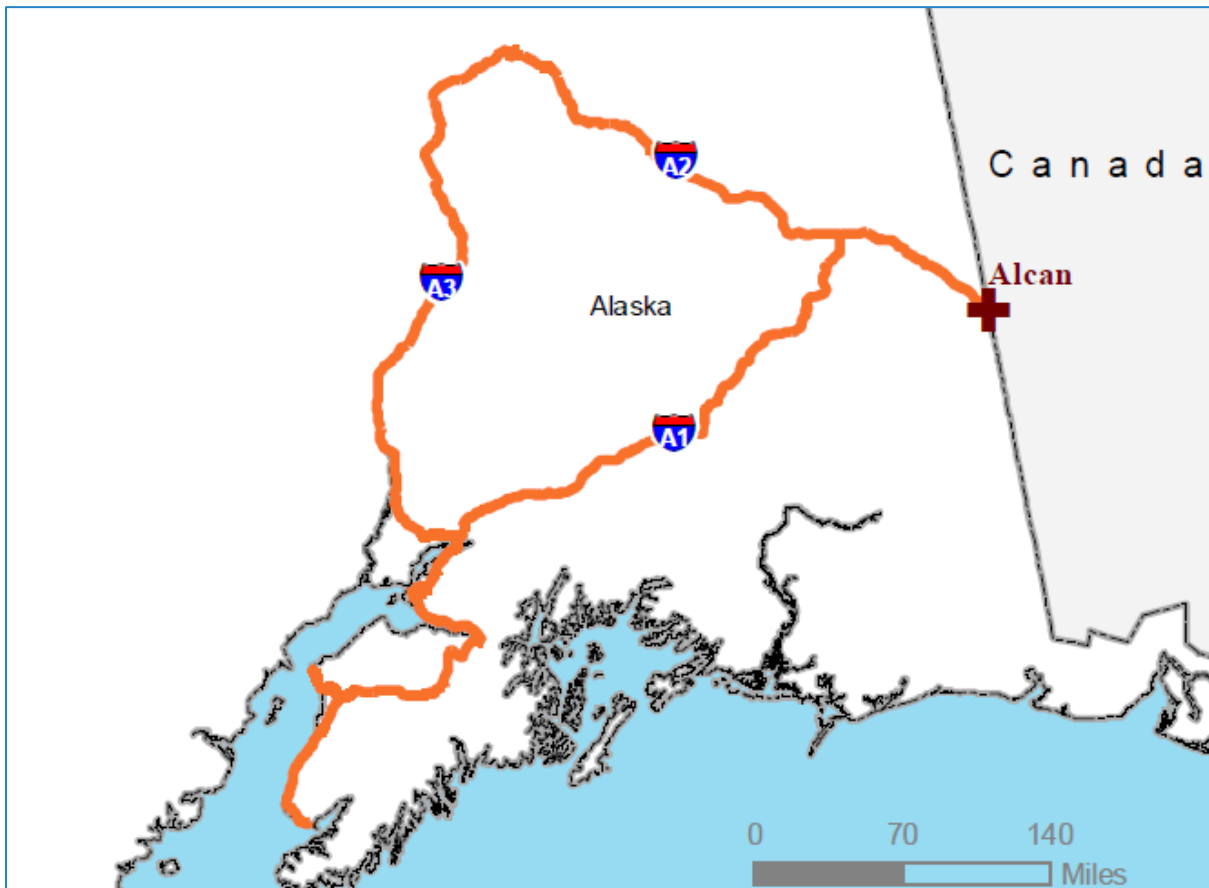


Source: WSP | Parsons Brinckerhoff

The Alaska Multimodal Freight Network is conceived as a “living” system that can be amended as needed, through updates to Freight Element Implementation Guidance or other appropriate mechanisms.

Separately, under the FAST Act, the US Department of Transportation designated a National Highway Freight Network (NHFN) and a National Multimodal Freight Network, shown in Exhibit 5. The NHFN was designed to assist in the targeting of the FAST Act’s National Highway Freight Program (NHFP) funds (\$6.2 billion over 5 years nationally); at least 90% of NHFP funds must be spent on NHFN facilities.

**Exhibit 5: Map of Federally-Designated Portions of Alaska’s National Highway Freight Network**



*Source: US Department of Transportation*

These two networks – the Alaska Multimodal Freight Network and the National Highway Freight Network – are complementary, but serve very different purposes. The Alaska Multimodal Freight Network documents a full “universe” of critical freight infrastructure, including all modes, without mileage restrictions; it depicts, as a whole, the key freight system elements that Alaska’s public and private sectors manage, plan, and (where appropriate) improve. The National Highway Freight Network, on the other hand, is limited to highways and is mileage-restricted; it is intended to depict only the highway system mileage eligible for NHFP funding under the FAST Act. Exhibit 6 provides a tabulation of the Federally-designated portions of the NHFN in Alaska.

**Exhibit 6: Table of Federally-Designated Portions of the National Highway Freight Network in Alaska**

PRIMARY HIGHWAY FREIGHT SYSTEM (PHFS) ROUTES				
State	Route No	Start Point	End Point	Length (Miles)
AK	5th Ave	Glenn Hwy	L St	1.17
AK	6th Ave	L St	Glenn Hwy	1.10
AK	Airport Wy	Parks Hwy	Richardson Hwy	3.92
AK	Geist Rd	Parks Hwy	Johansen Exwy	1.16
AK	I St	Minnesota Dr	5th Ave	1.15
AK	Sterling, Seward, Glenn, Richardson, Tok Cut-off, Alaska Hwys	Kenai Spur Rd	AK/YT Line	554.99
AK	Richardson Hwy	Mitchell Exwy	Tok Cut-off Rd	203.74
AK	Parks Hwy, Mitchell Exwy	Glenn Hwy	Richardson Hwy	322.53
AK	Johansen Exwy	Geist Rd	Steese Hwy	4.39
AK	L St	Minnesota Dr	5th Ave	0.86
AK	Minnesota Dr	Seward Hwy	L St	7.39
AK	Sterling Hwy	Kenai Spur Rd	Homer - Point Lions Ferry	75.62
AK	Gambell St	5 <sup>th</sup> Ave	Seward Hwy	1.63
AK	Steese Hwy	Richardson Hwy	Johansen Exwy	3.05
AK	Tudor Rd, Muldoon Rd	Minnesota Dr	Glenn Hwy	9.09
AK	University Ave	Mitchell Exwy	Airport Wy	0.79
<b>Subtotal</b>				<b>1192.59</b>
PHFS INTERMODAL CONNECTORS				
State	Facility ID	Facility Name	Facility Description	Length (Miles)
AK	AK15P	Port of Nenana	From Parks Hwy via 6th St, Nenana St, Front St, Dock Rd	0.91
AK	AK17A	Kenai Airport	Served indirectly (Proximate Connection) from the Kenai Spur Rd NHS Intermodal Port Connector Route	10.49
AK	AK18P	Port Nikiski – Kenai	From Sterling Hwy via Kenai Spur Rd, Nikisha Beach Rd	12.63
AK	AK1P	Port of Anchorage	From 6th Av via A St/C St couplet, C St, Ocean Dock Rd	1.12
AK	AK2A	Anchorage International Airport	From Minnesota Dr. via International Airport Rd, Airport arrival ramp, Airport departure ramp	2.00
AK	AK3A	Fairbanks International Airport	From Parks Hwy via Airport Way, Wien Rd, Wein NB-Airport Way EB ramp	2.50
<b>Subtotal</b>				<b>29.65</b>
<b>PHFS Total</b>				<b>1222.23</b>
INTERSTATE NOT ON THE PHFS				
State	Route No	Start Point	End Point	Length (Miles)
<b>INTERSTATE NON-PHFS Total</b>				<b>0</b>
CRITICAL RURAL FREIGHT CORRIDORS (CRFC)				
State	Facility ID	Start Point	End Point	Length (Miles)
TBD				TBD
<b>CRFC Total</b>				<b>TBD</b>
CRITICAL URBAN FREIGHT CORRIDORS (CUFC)				
State	Facility ID	Start Point	End Point	Length (Miles)
TBD				TBD
<b>CUFC Total</b>				<b>TBD</b>



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The NHFN consists of not only of the federally-designated components (primary highway freight connectors, intermodal connectors, and remainder of the interstate system), but also two additional components:

- Critical Rural Freight (highway) corridors, which are to be designated by states
- Critical Urban Freight (highway) corridors, which are to be designated by MPOs and states (lead agency based on urban area population)

Alaska has the opportunity to designate 244.45 miles of Critical Rural Freight Connector (CRFC) mileage and 122.22 miles of Critical Urban Freight Connector (CUFC) mileage to the NHFS, and FHWA offers the following guidance<sup>3</sup> for these designations.

#### Exhibit 7: Requirements for Designating a Critical Rural Freight Connector

**Question 1:** What are the requirements for designating a CRFC?

**Answer 1:** 23 U.S.C. 167(e) identifies the requirements for designating CRFCs. A State may designate a public road within the borders of the State as a CRFC if the public road is not in an urbanized area (see Question 3 for more details), and meets one or more of the following seven elements:

(A) is a [rural principal arterial](#) roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks ([Federal Highway Administration vehicle class 8 to 13](#));

(B) provides access to energy exploration, development, installation, or production areas;

(C) connects the PHFS or the Interstate System to facilities that handle more than:

1. 50,000 20-foot equivalent units per year; or
2. 500,000 tons per year of bulk commodities;

(D) provides access to:

1. a grain elevator;
2. an agricultural facility;
3. a mining facility;
4. a forestry facility; or
5. an intermodal facility;

(E) connects to an international port of entry;

(F) provides access to significant air, rail, water, or other freight facilities in the State; or

(G) is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

First and last mile connectivity is essential to an efficiently functioning freight system. These public roads provide immediate links between such freight generators as manufacturers, distribution points, rail intermodal and port facilities and a distribution pathway. FHWA encourages States, when making CRFC designations, to consider first or last mile connector routes from high-volume freight corridors to key rural freight facilities, including manufacturing centers, agricultural processing centers, farms, intermodal, and military facilities.

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<sup>3</sup> [https://ops.fhwa.dot.gov/fastact/crhc/sec\\_1116\\_gdnce.htm](https://ops.fhwa.dot.gov/fastact/crhc/sec_1116_gdnce.htm)



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## Exhibit 8: Requirements for Designating a Critical Rural Freight Connector

**Question 2:** What are the requirements for designating a CUFC?

**Answer 2:** 23 U.S.C. 167(f) identifies the requirements for designating CUFCs. In an urbanized area with a population of 500,000 or more individuals, the MPO, in consultation with the State, may designate a CUFC. In an urbanized area with a population of less than 500,000 individuals, the State, in consultation with the MPO, may designate a CUFC.

A public road designated as a CUFC must be in an urbanized area, regardless of whether the population is above or below 500,000 individuals (see Question 3 for more details), and meet one or more of the following four elements:

(A) connects an intermodal facility to:

1. the PHFS;
2. the Interstate System; or
3. an intermodal freight facility;

(B) is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;

(C) serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or

(D) is important to the movement of freight within the region, as determined by the MPO or the State.

FHWA encourages States, when making CUFC designations, to consider first or last mile connector routes from high-volume freight corridors to freight-intensive land and key urban freight facilities, including ports, rail terminals, and other industrial-zoned land.

## Exhibit 9: Applicability of Rural and Urban Designations

**Question 3:** How do the rural and urban designations influence how CRFC and CUFC routes are designated?

**Answer 3:** [Urbanized areas](#) with a population of 500,000 or more (For the list of 2010 urban areas visit the [2010 Census Urban and Rural Classification and Urban Area Criteria webpage](#)) define which partner will take the lead in designating the CUFC routes. In an urbanized area with a population of more than 500,000, the MPO, in consultation with the State, is responsible for designating the CUFC. In an urbanized area with a population of less than 500,000, the State, in consultation with the MPO, is responsible for designating the CUFC.

The minimum population for an urbanized area is 50,000, as defined by the Census Bureau. Being located inside or outside an [adjusted urbanized boundary](#) determines whether the public road can be designated as a CRFC or a CUFC. CUFC routes must be within the adjusted boundaries of an urbanized area. CRFC routes must be outside the adjusted boundaries of any urbanized area.

As designated in the 2010 Census, Alaska has two designated urban areas (population of 50,000 or more) – Anchorage and Fairbanks. Neither has a population greater than 500,000, so “the state in consultation with the MPO” (AMATS and FMATS) is responsible for designating the CUFC mileage. The state is responsible for designating the CRFC mileage.

Given the limitations on mileage, defining the CUFC and CRFC mileage on the basis of quantitative or performance based standards is impractical. Any such standards would have to be calibrated to produce the required number of system miles, leading inevitably to a patchwork of routes and segments without logical connections. The distance from Fairbanks to Prudhoe Bay via the Steese/Elliott/Dalton Highways, by itself, is 500 miles – more than twice the available CRFC mileage. Therefore, the selection of NHFN mileage must be targeted to: a) highway segments with near-term critical needs; and/or b) identified project opportunities where NHFP funding will likely be applied.

In 2017, Alaska intends to establish the connector designations and associated mileages shown in Exhibit 10 and Exhibit 11.

**Exhibit 10: Alaska-Designated Rural Connector Mileage for the National Highway Freight Network**

Mileage	Description
235	Dalton Highway MP 0-235 (proposed)
<b>235 Total Miles</b>	

**Exhibit 11: Alaska-Designated Urban Connector Mileage for the National Highway Freight Network**

Mileage	Description
<b>Fairbanks Urban Area</b>	
	None
<b>Anchorage Urban Area</b>	
<b>0 Total Miles</b>	

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## FREIGHT PROJECTS AND FUNDING SOURCES

**The Alaska LRTP is not designed to identify projects and investments, but as Federal guidance for state freight plans requires an investment element, this Implementation Guidance defines the planned uses of National Highway Freight Program funds, and additionally identifies other project investment opportunities.**

Alaska’s freight system owners and operators – both public and private – have made considerable investments in infrastructure development, expansion, and maintenance, through a combination of federal funds, other public funds, revenue streams, and private capital investment. The FAST Act has provided a new source of freight funding – the National Highway Freight Program.

- The NHFP is funded at \$6.2 billion over five fiscal years, and funds are available for obligation for up to four years (three years after the first day of the fiscal year for which funds are authorized).
- The federal share of NHFP funded projects is generally 80%, except for interstate non-single occupancy improvements, safety improvements, and certain other projects where a higher federal share may be authorized.
- As of December 4, 2017, projects using NHFS funds must be identified on an adopted and approved State Freight Plan. Projects must be identified in the STIP/TIP, and must be consistent with long range state and metropolitan transportation plans.
- Up to 10% of NHFP funds may be spent within the boundaries of ports and rail terminals to “facilitate direct intermodal interchange, transfer, and access.” A minimum of 90% must be spent on facilities that are designated as part of the NHFS; this includes not only highway improvements, but also highway/rail grade separations, information and management systems, etc. Eligible projects and other NHFP program features are described in FAST Act guidance<sup>4</sup> quoted in part below.

***Eligible Projects:*** *Eligible projects shall contribute to the efficient movement of freight on the NHFN, and be identified in a freight investment plan included in a SFP (required in FY 2018 and beyond). NHFP funds may be obligated for one or more of the following:*

1. *Development phase activities including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities.*
2. *Construction, reconstruction, rehabilitation, acquisition of real property (including land relating to the project and improvements to land), construction contingencies, acquisition of equipment, and operational improvements directly relating to improving system performance.*
3. *Intelligent transportation systems and other technology to improve the flow of freight, including intelligent freight transportation systems.*
4. *Efforts to reduce the environmental impacts of freight movement.*
5. *Environmental and community mitigation for freight movement.*
6. *Railway-highway grade separation.*
7. *Geometric improvements to interchanges and ramps.*
8. *Truck-only lanes.*

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<sup>4</sup> See [https://ops.fhwa.dot.gov/freight/pol\\_plng\\_finance/policy/fastact/s1116nhfpguidance/](https://ops.fhwa.dot.gov/freight/pol_plng_finance/policy/fastact/s1116nhfpguidance/)

9. Climbing and runaway truck lanes.
10. Adding or widening of shoulders.
11. Truck parking facilities eligible for funding under section 1401 of MAP-21
12. Real-time traffic, truck parking, roadway condition, and multimodal transportation information systems.
13. Electronic screening and credentialing systems for vehicles, including weigh-in-motion truck inspection technologies.
14. Traffic signal optimization, including synchronized and adaptive signals.
15. Work zone management and information systems.
16. Highway ramp metering.
17. Electronic cargo and border security technologies that improve truck freight movement.
18. Intelligent transportation systems that would increase truck freight efficiencies inside the boundaries of intermodal facilities.
19. Additional road capacity to address highway freight bottlenecks.
20. Physical separation of passenger vehicles from commercial motor freight.
21. Enhancement of the resiliency of critical highway infrastructure, including highway infrastructure that supports national energy security, to improve the flow of freight.
22. A highway or bridge project to improve the flow of freight on the NHFN.

*In addition, any surface transportation project to improve the flow of freight into and out of a freight intermodal or freight rail facility is an eligible project. 23 U.S.C. 167(i)(5)(C). In accordance with 23 U.S.C. 167 (i)(5)(B), there is a cap on the use of NHFP apportioned funding for these freight intermodal or freight rail projects: For each fiscal year, a State may obligate not more than 10 percent of the total State apportionment under NHFP for these types of projects. These projects include those within the boundaries of public or private freight rail or water facilities (including ports), and that provide surface transportation infrastructure necessary to facilitate direct intermodal interchange, transfer, and access into or out of the facility.*

*In addition to the eligible projects identified above, a State may use apportioned funds for carrying out diesel retrofit or alternative fuel projects under section 149 for class 8 vehicles; and for the necessary costs of conducting analyses and data collection related to the NHFP, developing and updating freight performance targets, and reporting to the FHWA Administrator to comply with the freight performance targets established pursuant to 23 U.S.C. 150.*

Each state’s allocation of these NHFP funds is proportional to its share of total FAST Act funding. Alaska’s estimated apportionment of FAST Act funds is approximately 1.28% of the national total in each funding year.<sup>5</sup> Applying the apportionment estimate to the program funds in each year yields the following estimate of available NHFP funds for Alaska.

**Exhibit 12: Estimated NHFP Funds for Alaska by Program Year**

	National Total	Alaska Total (1.28%)	Min. for NHFN (90% of )	Max. for Intermodal (10%)
FY 2016	\$1,140,250,003	\$14,599,431	\$13,139,488	\$1,459,943
FY 2017	\$1,090,673,914	\$13,964,673	\$12,568,206	\$1,396,467
FY 2018	\$1,189,826,092	\$15,234,189	\$13,710,770	\$1,523,419
FY 2019	\$1,338,554,353	\$17,138,463	\$15,424,616	\$1,713,846
FY 2020	\$1,487,282,615	\$19,042,736	\$17,138,463	\$1,904,274
<b>TOTAL</b>	<b>\$6,246,586,977</b>	<b>\$79,979,492</b>	<b>\$71,981,543</b>	<b>\$7,997,949</b>

<sup>5</sup> See <https://www.fhwa.dot.gov/fastact/funding.cfm> for apportionment details

Alaska’s freight infrastructure opportunities and needs, as identified in the LRTP Freight Element, will require far more than the \$80 million made available from the NHFP. Nevertheless, the NHFP funds will have a positive impact by advancing a number of high-priority projects. Exhibit 13 below contains a list of identified near-term freight project opportunities. The list was developed by Alaska DOT&PF, which requested input (through the Plan’s Freight Working Group) from a diverse range of stakeholder including AMATS, FMATS, the Alaska Railroad Corporation (ARRC), Fairbanks International Airport, Ted Stevens Anchorage International Airport, and the Port of Anchorage. While only a limited number of these projects can be funded through the NHFP, it is important to recognize the full list of opportunities, many of which may be advanced through other means. The long list of suggested possibilities, listed alphabetically by proposing agency, is shown below.

**Exhibit 13: “Long List” of Potential Projects for NHFS Funding**

Identified by	Project Description	Eligible as Primary HFN, Designated / Potential Connector, or Intermodal	Estimated Cost	Currently on STIP/TIP?
DOT&PF	Sterling Highway MP60-79 Passing Lanes	Primary HFN	\$76.8M	Yes
	Dalton Highway MP 0-9 Reconstruction	Rural Connector	\$40.7 M	Yes
	Dalton Highway MP 18-25 Reconstruction	Rural Connector	\$25.0 M	Yes
	Dalton Highway MP 18-37 Reconstruction	Rural Connector	\$26.0 M	Yes
	Dalton Highway MP 109-120 Reconstruction	Rural Connector	\$27.0 M	Yes
	Dalton Highway MP 109-144 Reconstruction	Rural Connector	\$27.0 M	Yes
	Dalton Highway MP 120-135 Reconstruction	Rural Connector	\$25.0 M	Yes
	Dalton Highway MP 209-222 Reconstruction	Rural Connector	\$23.0 M	Yes
	Dalton Highway MP 209-235 Reconstruction	Rural Connector	\$46.0 M	Yes
	Dalton Highway MP 222-235 Reconstruction	Rural Connector	\$26.0 M	Yes
	Dalton Highway MP 265 Bridge Replacement	Rural Connector	\$4.5 M	Yes
	Dalton Highway MP 289-305 Reconstruction	Rural Connector	\$34.5 M	Yes
	Dalton Highway MP 305-315 Reconstruction	Rural Connector	\$28.5 M	Yes
	Dalton Highway MP 305-335 Reconstruction	Rural Connector	\$29.5 M	Yes
	Dalton Highway MP 315-325 Reconstruction	Rural Connector	\$30.6 M	Yes
	Dalton Highway MP 362-370 Reconstruction	Rural Connector	\$37.5 M	Yes
	Dalton Highway MP 362-414 Reconstruction	Rural Connector	\$21.0 M	Yes
ARRC	Bird Point Siding/Seward Hwy Bridge Expansion	Primary HFN	\$17 M	No
	Whittier Marginal Wharf Reconstruction	NHFS Intermodal	\$25-40 M	No
	Anchorage Intermodal Yard Improvements	NHFS Intermodal	\$12-15 M	No
	Fairbanks Intermodal Yard Improvements	NHFS Intermodal	\$20 M	No
	Whittier Street Grade Crossing Elimination	Rural Connector	\$20-30 M	No

**Exhibit 13: “Long List” of Potential Projects for NHFS Funding (continued)**

Identified by	Project Description	Eligible as Primary HFN, Designated / Potential Connector, or Intermodal	Estimated Cost	Currently on STIP/TIP?
AMATS, Port of Anchorage	Seward Hwy/Glenn Hwy Connection Phase II	Primary HFN	\$994.7 M	Yes
	Seward Hwy/Glenn Hwy Connection Phase III-A	Primary HFN	\$3,380.8 M	No
	Seward Hwy/Glenn Hwy Connection Phase III-B	Primary HFN	\$1,117.6 M	No
	Seward Hwy/Glenn Hwy Connection Phase III-C	Primary HFN	\$1,816.1 M	No
	Glenn Hwy HOV and Ship Creek Bridge	Primary HFN	\$400.7 M	No
	Glenn Hwy/Farm Ave Slip Ramp, Eagle River	Urban Connector	\$279.5 M	No
	Business Blvd Extension, Eagle River	Urban Connector	\$174.2 M	No
Glenn Hwy/Old Glenn Hwy/Peters Creek, Eagle River	Urban Connector	\$307.3 M	Yes	
FMATS	Richardson Highway MP 353-357 Access/Safety	Primary HFN	\$33.7 M	Yes
	University Ave Rehab (Thomas St to Chena River)	Urban Connector	\$34.2 M	Yes
	University Ave Rehab (Chena River to Parks Hwy)	Primary HFN	\$15.0 M	Yes
	Steese Highway and 3rd Street Widening	Urban Connector	\$12.9 M	Yes
	Richardson Hwy MP 359 Rail Grade Separation	Primary HFN	\$36.0 M	Yes
	Steese Expwy/ Johansen Expwy Interchange	Primary HFN	\$36.0 M	Yes
	Richardson Highway MP 351 Interchange: HSIP	Primary HFN	\$21.9 M	Yes
	Johansen Expressway/ Danby Road Interchange	Primary HFN	\$25.9 M	No
	Richardson Hwy MP 350-353 Access Improvements	Primary HFN	\$36.4 M	No

This “long list” was reviewed with the proposing agencies. Based on their input, and on Alaska DOT&PF’s goal of balancing investments across geographies, modes, and freight activities to address the needs and opportunities identified in the LRTP Freight Element, a plan for utilizing Alaska’s NHFP funds was developed. Several submitted projects did not meet the eligibility criteria for NHFP funding and do not appear in the long list. Routes not shown as Primary HFN would need to be designated as CUFC or CRFC in order for them to be considered for NHFP fund utilization. Exhibit 14 summarizes this Utilization Plan and includes descriptions of projects, NHFN consistency, STIP/TIP/funding-constrained plan consistency, planned NHFN expenditures by year, amount of local matching funds, and source/status of matching funds.

This Utilization Plan is consistent with the designation of CUFC and CURC mileage designated by Alaska; all planned projects are on the NHFN, or at NHFN intermodal facilities. This Utilization Plan, and corresponding designations of CUFC and CURC mileage, may be periodically amended.

**Exhibit 14: Planned Utilization of Alaska's NHFP Funds**

<b>Funding Year</b>	<b>Project and Location</b>	<b>NHFS Funding Allocation</b>	<b>Source of Committed Matching Funds</b>	<b>Inclusion on Funding Constrained Plan</b>
FY16-17	Sterling Highway MP 60-79 (PFN)	\$28,015,342	\$1,979,671 State GF	Yes STIP NID 11921
FY18	Sterling Highway MP 60-79 (PFN)	\$15,234,189	\$1,066,393 State GF	Yes STIP NID 11921
FY19-20	Dalton Highway MP 222-235 (CRFC)	\$16,000,000	\$1,120,000 State GF	Yes STIP NID 30286
	Sterling Highway MP 60-79 (PFN)	\$16,372,652	\$1,146,086 State GF	Yes STIP NID 11921
FY21-22	Dalton Highway MP 222-235 (CRFC)	10,000,000	\$700,000 State GF	Yes STIP NID 30286
	Dalton Highway MP 0-9 (CRFC)	\$28,085,472	\$1,965,983 State GF	Yes STIP NID 22453

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## ONGOING FREIGHT PERFORMANCE MEASUREMENT

**The LRTP Freight Element identified first-generation and potential next-generation mechanisms for performance measurement. This Implementation Guidance establishes certain measures as a matter of policy, and anticipates the continuing evolution of these measures in the future.**

The need for, and value of, performance measurement is addressed at length in the LRTP Freight Element. At the highest level, Alaska’s freight transportation system must be evaluated against the overall goal “to maintain and improve Alaska’s multi-modal freight transportation system, providing an acceptable level of performance in light of anticipated population growth, desired economic expansion, and known or anticipated risks.” This Implementation Guidance establishes two methods of freight system performance measurement.

- The first is the mandated federal requirement. Recent Federal guidance has specified that beginning in 2018, states must report freight performance over their interstate facilities, along with their annual submittal of Highway Performance Monitoring System (HPMS). The federal measure consists of a Truck Travel Time Reliability Index, to be calculated for interstate facilities using the National Performance Management Research Data Set (NPMRDS) or comparable data. The federal TTR metric incorporates travel speed, segment length, and measurement period (AM peak, PM peak, etc.) considerations.
- The second represents an expanded use of the NPMRDS. As a demonstration analysis, the NPMRDS information was used to identify the travel times of trucks along key road segments in Alaska, every 15 minutes, from October 1, 2015 to September 30, 2016. Travel speeds were recorded by segment for every hour of the day, and ratios between uncongested and congested travel speeds by segment were calculated. This ratio represents a Planning Travel Time Index; the higher the index, the greater the difference between uncongested and congested speeds. The data therefore supports measurement of three basic performance indicators: overall speed; congested (low speed) locations; and low-reliability locations (where the Planning Travel Time Index is high). For this study we define this index as the ratio of the 95th Percentile Travel Time to 50th Percentile Travel Time. Results are displayed as point measurements for simplicity. These points are located at the start or end of the roadway segment being analyzed.

Each approach has value. The federal metric is required for compliance, while the expanded analysis provides useful data for each network segment in the entire NPMRDS (not just interstates) with a simple and straightforward calculation. Under this Implementation Guidance, Alaska will pursue both measurement strategies; the second has already been calculated for the period October 1, 2015 to September 30, 2016.

To advance LRTP actions related to performance-based planning, and to look beyond the constraints of NPMRDS-based performance measures that address only truck travel time speed, the Freight Element has formulated a set of potential next-generation performance measures. These are not formally



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adopted in this Implementation Guidance, but may be adopted in future guidance. Potential measures may address:

- **Availability** measures whether a modal service is available to a community. Measures could include number/share of communities served by a given mode; number/share of residents served by a given mode; and number/share of freight-intensive business establishment locations served by a given mode. All of these measures could be calculated from available information.
- **Utilization** measures the cargo volumes moving through freight facilities and networks. For Alaska this could include the following: truck tonnage and value; rail tonnage and value; air cargo tonnage and value; port and waterway tonnage and value; and pipeline tonnage and value.
- **Infrastructure condition** affects the costs and reliability of moving goods throughout the state, which in turn affects trade and economic activity. Key measures could include pavement and bridge condition, structural condition of port facilities and rail infrastructure, etc.
- **Infrastructure safety and security** measures could include fatal crashes, injury crashes, property damage crashes, and other incidents involving freight vehicles (trucks, trains, vessels, and aircraft).
- **Reliability and Resiliency** measures include door-to-door on-time performance, risk of temporary or sustained disruption, possibility that a service may not be available within a given planning horizon, risk of losing connectivity or service due to reliance on a single mode, etc. In repeated surveys, freight shippers rank reliability as the most important factor in freight transportation logistics decisions. Measures could include highway travel time reliability (similar to the example analyses presented earlier) and number/duration of highway closure events (should be available from existing data); port and airport delivery reliability (vessel arrivals and departures versus schedule) and number/duration of closure events, which should be available from ports and airports; and rail delivery reliability (train arrivals and departures versus schedule) and number/duration of closure events, which should be available from the Alaska Railroad. Essentially, this would provide a systematic mechanism for bottleneck identification across all Alaska freight modes and geographic regions.
- **Cost** measures include prices paid for transportation services, inventory, “buffering” against risks, and premiums paid because a preferred mode is not available (e.g., where air is used because trucking or water services are not provided). Useful transportation cost data is challenging to develop and would require new techniques (for example, perhaps confidential rate surveys of key freight facilities, shippers, and carriers) but represents a critically important benchmark. Response resistance and confidentiality issues would need to be successfully addressed.
- **Speed and Travel Time** is the total end-to-end delivery time. Some freight (for example, perishables) requires speed as a top priority, and shippers will pay premium prices for the fastest available services; other freight (for example, coal or stone) is less concerned with speed and more with price, and shippers will prefer slower modes at lower prices. Travel speed is most important for time-sensitive freight, which is typically moving by truck or air. The NPMRDS data on average travel

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speed, combined with improved truck counts (e.g., regular, systematic, and at more locations) would allow for the accurate estimation of average travel speeds in key trucking corridors. For air cargo, aircraft arrival and departure data would provide the needed information. It is more difficult to obtain the total end-to-end delivery time, including time outside of trucks or aircraft for pick-up, drop-off, waiting at terminals, etc. For this, the best approach might be a shipper or customer survey program that could address all modes and would not have to be limited to truck or air shipments. As with cost, response resistance and confidentiality issues would need to be successfully addressed.

- **Cargo Safety and Security** measures address the risk of loss, breakage, tampering, loss of visibility, or other loss of value during the shipment process. Crash and incident data should be available for highways, airports, ports, railroad, and pipeline modes. Carriers and insurance companies would have additional information, but may not be positioned to release it. The promise of confidentiality, and care in aggregation, might help address any concerns.
- **Environmental measures** could address criteria pollutant emissions for greenhouse gases, nitrogen oxide, volatile organic compounds, particulate matter, and ozone from the totality of freight operations across all modes and facilities.

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## ONGOING STAKEHOLDER ENGAGEMENT AND PLAN REFINEMENT

**The Alaska Freight Plan was developed with substantial input and guidance from a diverse Freight Working Group. This Implementation Guidance confirms the Freight Working Group as a continuing resource that DOT&PF can draw upon for future input on freight issues, including revisions to the LRTP Freight Element and this Implementation Guidance.**

The Alaska LRTP was developed with a robust program of stakeholder engagement. To specifically address freight issues, a Freight Working Group (FWG) was established. There were three in-person meetings of the full FWG during preparation of the draft LRTP Freight Element, and additionally many FWG members were interviewed at length. As the LRTP Freight Element was finalized and the Implementation Guidance developed, the FWG was convened several times via teleconference.

While the roster of FWG participants has evolved over the course of plan development, the core member organizations have included:

- Alaska Department of Transportation and Public Facilities (multiple geographic and modal divisions)
- US Army Corps of Engineers
- US Department of Defense
- USDOT Federal Highway Administration
- Alaska Industrial Development and Export Authority
- Alaska Railroad Corporation
- Alaska Trucking Association
- Alaska Air Carriers Association
- FedEx
- Port of Anchorage
- Crowley Maritime
- Association of Village Council Presidents
- Anchorage Metropolitan Area Transportation Solutions (MPO)
- Fairbanks Metropolitan Area Transportation Study (MPO)

Looking forward, Alaska DOT&PF intends to use the FWG members as a continuing resource for consultation on freight planning issues, including but not limited to future updates of this Implementation Guidance and the LRTP Freight Element. Member agencies will be continuously evaluated to ensure broad representation across the diverse spectrum of public and private freight stakeholders in Alaska.

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## **Appendix A: Alaska LRTP Freight Element Summary**

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The Freight Element of the Alaska Long-Range Transportation Plan (LRTP) addresses comprehensively Alaska’s major freight transportation modes: truck, air, water, rail, and pipeline. Special attention is paid to the critical role that Alaska’s freight transportation system plays in the State’s economy. The Freight Element:

- Identifies and supports strategies, policies and actions to achieve Alaska’s economic development and transportation goals
- Addresses federal guidance (established in the Fixing America’s Surface Transportation [FAST] Act) for preparation of Statewide Freight Plans. The FAST Act calls for State Freight Plans to identify the intended use of National Highway Freight Program funds; the LRTP does not contain projects, so this information is presented in separate Freight Investment Element Implementation Guidance. Together, the two documents – the Freight Element and the Implementation Guidance -- satisfy federal requirements.

While Alaska has addressed freight transportation in many prior studies and plans—such as modal system plans, facility development plans, metropolitan plans, and area plans—this is the first time that Alaska’s freight transportation has been examined systematically and multi-modally in the context of long-range statewide transportation planning.

Key findings from the Freight Element are summarized below.

## **The Critical Role of Freight Movement in Alaska**

Freight movement was critical to Alaska’s initial settlement and development, and it remains extremely important today. Over 90% of discretionary revenues collected by the State come from the production of petroleum, and large shares of the State’s workforce and wages are directly linked to freight-dependent industries. Alaska has large quantities of petroleum, zinc, coal, copper, gold, rare earth metals, and other valuable commodities that are in high demand around the world. Mining and fishing are key industries that provide employment for many Alaskans. Almost all of these products are exported to other states and countries. Alaska produces few of the consumer goods its workforce and population require, so these goods must be imported from other states and countries. As a result, Alaska’s overall economy and quality of life depend on freight transportation “supply chains” that span the State, the nation, and the world.

Alaska’s size and geography pose unique challenges for the freight transportation system of the state. Much of Alaska’s freight is generated by remote resource extraction industries that require long transportation and service corridors, such as the Dalton Highway and the Trans-Alaska Pipeline System, through sparsely developed regions. Most of the population lives along the triangle created by Anchorage, Fairbanks, and Juneau, and these cities attract the bulk of consumer goods that enter the state and are connected by major seaport, airport, and rail infrastructure, and also serve as hubs for truck transportation. Hundreds of smaller cities and communities are also located throughout Alaska’s vast geographic area. Many of these communities are not connected to the road network and require basic goods such as food and fuel to be brought long distances by air or barge. The Essential Air Service

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Program and Bypass Mail Program provide subsidies to resupply these communities with much needed goods. The costs associated with importing and distributing basic consumer goods results in consumer prices that are far above national averages, especially in Alaska’s remote low population areas.

To serve its industries, population, and military/government facilities, the state of Alaska has invested heavily in its freight transportation infrastructure. The state has large seaports that handle containerized inbound cargo at Anchorage and other places, and seaports with specialized facilities to handle bulk commodities at Valdez, Nikiski, Seward, and elsewhere. It has two main international airports that serve as hubs for goods to reach remote airports and airstrips throughout the state, and many smaller airports serving other communities. Highways connect the main cities, while smaller roads and seasonal ice roads allow vehicles and trucks to wind inward toward the interior as far as geography and climate permit. Freight rail and pipelines provide services in critical corridors. In the lower 48 states, “last mile” freight connections usually refer to trucks; in Alaska, those connections are also made by snowmobile and/or all-terrain vehicles (ATVs). Alaska’s freight transportation is truly multi-modal.

In Alaska, the relationship between commodity prices, resource development, and freight transportation infrastructure is especially close. Much of Alaska’s freight movement is driven by private-sector resource development, especially petroleum and natural gas. The ongoing decline of North Slope oil production has been recognized as a source of uncertainty (for transportation demand) and risk (for State revenues), but with the recent dramatic declines in global energy prices, uncertainty and risk issues are elevated. How extensive will future private-sector resource development be, and where, and when? What transportation improvements will be required to serve it? How fast will Alaska’s workforce and population grow and where, given that a large share of that workforce is supported directly and indirectly by resource industries? What are the likely impacts and opportunities associated with climate change and variability, and other global/external factors? How much funding will be available for the transportation system improvements that Alaska’s communities and stakeholders may need or want, from public sources and from private owners and partners?

Against this backdrop, the Alaska Department of Transportation and Public Facilities (DOT&PF) and its state, regional, and local partners face the challenge of managing the existing freight infrastructure and planning for future needs. This Freight Element provides perspective on what drives the market demand for freight transportation in Alaska, how the market is served today, trends impacting the future, and the role that government can play. This Freight Element is intended to support decisions about freight transportation policies, strategies, and actions within the context of the state’s broader LRTP.

## **Freight Element Conclusions**

The Freight Element is based on a detailed review of domestic and international commodity flows, economic data, an assessment of Alaska’s freight facility performance, recent freight plans (area and modal), and other information. Stakeholders representing owners, operators, freight service providers, and users of freight facilities were engaged throughout the process and the public was invited to provide feedback. The Freight Element is based on a systematic data-driven evaluation of the demand for freight

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transportation and how well it is met today. The primary conclusions regarding planning for freight in Alaska from this analysis are summarized below.

**1. Freight movement in Alaska results from specific demand drivers, primarily requirements to export natural resources from the state to national and international markets; import consumer goods and industrial supplies from other states and countries; satisfy military supply requirements; and distribute goods within Alaska over very long supply chains.**

- 1.1. The demand for freight transportation is driven by the amount and type of economic activity—in essence, commerce trade in goods. Demand for freight transportation arises from producing industries and consumers. Producing industries need access to inputs—raw materials, machinery and equipment, components, packaging, etc.—and access to markets where their products are sold. Consumers need access to basic necessities such as shelter, food, fuel, vehicles, clothing, appliances and electronics, construction and building materials, and other supplies and property. In Alaska, the major producing industries include petroleum extraction, mining, commercial fishing and processing, construction, and power generation. Alaska also has a large government (particularly military) presence that requires the shipment of equipment, machinery, fuels, and supplies.
- 1.2. Alaska is characterized by a dramatic imbalance between its produced and consumed commodities—most of what Alaska produces is exported to other states and other countries, while most of what Alaska consumes is provided by other states and other countries. This creates an especially strong dependence on effective trading connections and services.
- 1.3. Alaska is a very large state with very long supply chains. Freight exported from Alaska must usually be moved long distances, from extraction and production facilities to ports and airports; freight imported must be distributed from a few critical gateway ports and airports to users distributed throughout the entire state. This means that more freight has to move more miles to serve Alaska than any other state.
- 1.4. Alaska has a unique geographic position midway between the lower 48 states and Asia, and serves as a gateway for pass-through air cargo. Alaska’s freight infrastructure and its economic activity related to the handling of pass-through freight are therefore linked to larger global trades.

**2. Freight demand in Alaska is served by multiple transportation modes: road, air, water, rail, and pipeline. Each has a critical role in the state’s multi-modal system and must be considered in the context of the entire system.**

- 2.1. Freight transportation demand is generally met through truck, air, water, rail, and pipeline. These five transportation modes accommodate services that represent the supply of freight transportation capacity to meet demand.

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- 2.2. Each mode has a specific set of freight carriers (trucking companies, airlines, vessel operators, railroads, and pipeline operators), who utilize a variety of infrastructure assets. Some of these infrastructure assets are unique to each mode, such as highways, waterways, railroads, and pipelines. Some, known as “intermodal” facilities, are designed to bring together different modes; these include ports (linking water with trucks, rail, and/or pipelines), airports (linking air with trucks and sometimes pipelines), and rail terminals (linking rail, trucks, and ports). Different networks and facilities have different owners, which may be public or private, and the vehicles and vessels that operate over these networks and through these facilities are both publicly and privately owned.
  - 2.3. Alaska’s freight movement is highly seasonal due to production and employment cycles, as well as changes in the availability of key infrastructure, especially roads and waterways.
- 3. Alaska’s freight demand drivers are affected by critical trends. This plan is based on the high likelihood that the primary trends experienced in recent years affecting freight will continue. These trends include a growing population that is increasingly concentrated in urban areas; rising overall industrial production but high uncertainty regarding future energy production; and increasing seasonal/annual variability in demand due to climate change and other factors. Critical trends, acting on and over Alaska’s freight transportation network, lead to changes in system performance and create both needs and opportunities.**
- 3.1. Alaska’s consuming population is expected to grow and to be increasingly concentrated in larger urban areas, consistent with economic opportunity. This will increase demand for urban freight deliveries of consumer goods.
  - 3.2. Alaska’s overall economy and its freight-intensive industries will continue to expand, creating increased demand for inbound, outbound, and within-state goods movement.
  - 3.3. The future levels and economics of energy and other resource production will have large impacts on transportation planning and freight demand in particular. For example, if energy production slows significantly, it could not only reduce the flow of resource commodities within and outbound from Alaska but also reduce in-migration and population growth, with the additional effect of flattening demand for inbound consumer goods. If, alternatively, resource production looks to increase rapidly, it may require the rapid development of new transportation capacity—pipelines, ports, etc.—not only to handle increasing volumes of resource commodities, but also to meet the consumer needs of a rapidly expanding workforce.
  - 3.4. National forecasts anticipate that demand for non-energy related industrial goods and products – consumer goods, machinery, instruments, etc. -- will increase, creating greater demand on international gateways and supply chains. National forecasts also anticipate long-term declines in Alaska tonnages of crude petroleum and other energy



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products. However, there is a high degree of uncertainty regarding energy forecasts since production depends on global demand and pricing, availability of competing supplies, the cost of production/transportation/export from Alaska, and other variable factors.

- 3.5. Since Alaska freight movement is driven largely by traded commodities, economic and population growth will lead to growth pressures at key trade gateways and on corridors linking these gateways to resources and consumers. As many of these gateways are located in urbanized areas, increased trade gateway traffic will compound urban growth issues associated with population growth.
  - 3.6. Increasing average temperatures, rising sea levels, and related effects will exacerbate seasonal variations in freight demand and freight infrastructure availability, creating greater unpredictability and variability in freight commodity movements from season-to-season and year-to-year.
- 4. To provide acceptable freight system performance—defined as available, reliable, affordable, timely, safe and secure—the Freight Element addresses the following needs and opportunities: bringing more resources efficiently to markets; improving truck access to intermodal facilities (ports, airports, etc.); enhancing freight mobility in growing metropolitan areas and key corridors; maintaining and enhancing critical trade gateway and multimodal corridor facilities; maintaining and enhancing critical connections with Alaska’s rural communities and military facilities; and doing so with constrained public funds.**
- 4.1. The freight system involves different modes with different operational characteristics, and freight system users, owners, and operators measure performance differently. In addition, many freight trips involve multiple modes. The Freight Element adopts a “user’s perspective” on performance. In general, freight system users value reliability, price, speed, safety, and security, in that order. In Alaska, an additional measure is important: whether a mode or service is available at all.
  - 4.2. Freight element analysis identifies a high likelihood of the following needs and opportunities for freight transportation in Alaska:
    - Providing freight transportation capacity to directly support new resource development if and when it occurs. This includes a variety of initiatives: new construction of a statewide liquid natural gas (LNG) pipeline; development of resource access roads; improvement of the Dalton Highway, coastal ports, and possibly other infrastructure to accommodate proposed mining operations; and potential development of an Arctic Port.
    - Reducing truck congestion and improving travel time reliability and safety in urban areas and key corridors, especially for movement to/from ports, airports, and other

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major freight trip generators, while accommodating the needs of a changing population, which will be larger and increasingly concentrated in urban areas.

- Maintaining and improving trade gateways and corridors — seaports, airports, railroads, highways, and land border crossings—which are the lifelines for Alaska’s producers and consumers.
- Maintaining and improving multi-modal connectivity among and between Alaska’s urban and rural communities, including the provision of alternative facilities, services, or modes to improve reliability, cost, and overall performance. Alaska’s highway system reaches major cities, but its overall mileage is low; many communities are not connected or served by roads. Alaska’s freight rail and pipeline systems operate in limited corridors. Alaska’s ports serve coastal and river communities, but their ability to serve inland communities is constrained by the availability of other connections. Roads and ports may be usable only in certain seasons when ice stabilizes road surfaces or lack of ice makes marine traffic possible. As a result, Alaska is highly dependent on air cargo to reach and serve communities with commodities that in the lower 48 would normally be served by truck or rail. In some cases, the “last mile” move from an airport is by snowmobile or sled. In most of the U.S., freight shippers can choose from a full range of modal options, selecting the ones that best suit their needs for reliability, cost, speed, safety, and security; in Alaska, freight shippers may have little or no choice regarding transportation modes.
- Maintaining critical multimodal connections to Alaska’s military facilities and ensuring future needs are accommodated.

4.3. Freight planning must consider uncertainty and risk. The key areas where these considerations arise are as follows:

- How resource development and other freight drivers might evolve in the future. While the public sector may have some influence on future freight demand, the primary drivers are population growth and private industry activities. However, the public sector can play a very significant role in ensuring the multi-modal transportation system is positioned to meet future needs. Preserving and/or improving performance may involve repairing or expanding infrastructure, implementing new technologies or management practices, improving service availability and reliability, and/or adopting innovative policy, financing, and implementation approaches.
- Addressing impacts of climate change and increasing climate variability, which will impact both the transportation system and the underlying commodity movements and markets that generate demand and utilization over the system. These changes create risks such as increased seasonal fluctuations in demand and infrastructure availability, as well as potential long-term changes in Alaska’s economy and

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infrastructure, but they also create opportunities, such as the potential to develop an Arctic Port.

- Managing freight transportation costs. With a high dependence on goods imported from other states and countries, a high dependence on air cargo (one of the most expensive forms of freight transportation), and long supply chain distances within the state, the cost of goods in Alaska tends to be very high. Without “bypass mail” service, where rural air cargo is delivered at postal rates, the cost would be even higher.
- Addressing funding uncertainties. Much of Alaska’s infrastructure is aging, and the costs to keep the system in operation are increasing. At the same time, system expansion and modernization will be required. The good news is that some of Alaska’s freight infrastructure is privately owned, self-funded from revenue streams, or built through public-private partnerships administered through the Alaska Industrial Development and Export Authority (AIDEA) and other public partners. The bad news is that much of Alaska’s freight infrastructure is funded through traditional transportation state and federal funding sources that are both projected to decline.

**5. The LRTP includes goals, policies, and actions for the freight transportation system. These align outcomes, plans, and projects based on performance-based resource allocation; manage the system to increase performance and reduce risk; and provide accountability for the expenditure of public funds.**

- 5.1. Freight movement is a partnership between public and private freight shippers, carriers, infrastructure owners and operators, and all levels of regulatory and financing responsibility (federal, state, regional, and local). No single entity or agency “controls” freight movement in Alaska or can define its future on its own. Nonetheless, among all state agencies, DOT&PF is best positioned to provide statewide multi-modal leadership and “stewardship of the whole” given that it owns and operates much of the state’s freight transportation system (including roads, airports, and marine services).
- 5.2. The LRTP includes freight-related policies addressing New Facilities and Modernization; System Preservation; System Management and Operations; Economic Development; Safety and Security; Livability, Community and the Environment; and Accountability for Transportation System Performance.
- 5.3. The LRTP includes 40 specific freight actions designed to improve performance and advance these strategies and policies.

**6. The Freight Element aligns with LRTP goals for performance-based resource allocation by creating first-generation approaches for freight system performance measurement; freight project prioritization and evaluation; and multi-modal freight investment at a program level.**

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- 6.1. Alaska’s freight transportation infrastructure may accommodate, encourage, or constrain the demand for freight movement based on the level of performance offered; it can significantly affect industry location and expansion decisions, as well as larger population settlement patterns. Transportation system performance measurement—and management—is part of the Alaska Statewide Transportation Planning Process.
  - 6.2. Alaska’s freight transportation system is performing reasonably well today. Plan analysis identified the following performance risks that are expected to increase in coming years: congested truck routes and intermodal connectors; limited route and modal service choices, especially for rural communities; unreliability or unavailability of services due to seasonal effects, aging infrastructure, or other disruptions; overall cost of goods; and missing infrastructure links and facility improvements that are needed to serve new industries and population growth.
  - 6.3. This Freight Element provides initial “first generation” freight performance measures for Alaska’s highway system, using the National Performance Measurement Research Data Set (NPMRDS) made available by USDOT. Starting in 2018, USDOT will require the annual calculation of Truck Travel Time Reliability (TTTR) scores using NPMRDS.
  - 6.4. The Freight Element provides a framework for additional next-generation performance measures. These include measures that are relatively easy to quantify today (modal/service availability, modal volume and utilization, infrastructure condition, and infrastructure safety/security) as well as measures that will require higher levels of effort to develop (modal and system reliability and resiliency, cost, speed/travel time, cargo safety/security, and environmental measures
  - 6.5. As a means of linking performance analysis and prioritization, the Freight Element establishes an Alaska Freight Network that is the primary system used for freight transportation. The Freight Network identifies system elements and specific routes across all modes and regions that are especially important to freight. The Freight Network includes facilities and transportation services where freight performance monitoring and freight project development are to be emphasized in the statewide long-range plan.
  - 6.6. The Freight Element includes a starting point approach for estimation of freight project benefits and project prioritization across modes and geographies based on emerging best practices.
7. **The Freight Element is a valuable resource for modal plan development and area/local freight planning, and complies with federal guidance for state freight plans.**
    - 7.1. Data and analysis developed in the Freight Element is designed to be used in a broad range of planning and analysis applications, at the area and local levels, and in the context of modal system planning.

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- 7.2. Projects included within an approved statewide freight plan may be eligible for a new category of federal funding. The FAST Act establishes a new formula-based National Highway Freight Program (Title I, Section 1116) funded at \$6.2 billion over five years. Up to 10% of funds may be used for rail or port projects. To be eligible for this funding, projects must be identified within an approved State Freight Plan. This Freight Element provides the basis from which projects eligible for current and future dedicated federal freight funding could be identified. This Freight Element satisfies federal guidance for statewide freight planning.

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## **Appendix B: Alaska LRTP Freight Goals, Policies, and Actions**

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**The LRTP includes goals, policies, and actions for the freight transportation system. These align outcomes, plans, and projects based on performance-based resource allocation; manage the system to increase performance and reduce risk; and provide accountability for the expenditure of public funds.**

Freight movement is a partnership between public and private freight shippers, carriers, infrastructure owners and operators, and all levels of regulatory and financing responsibility—federal, state, regional, and local. No single entity or agency “controls” freight movement in Alaska, or can on its own define its future. Nonetheless, among all state agencies, DOT&PF is best positioned to provide statewide multi-modal leadership and “stewardship of the whole,” given that it owns and operates much of the state’s freight transportation system (including roads, airports, and marine services).

In this section, freight-related goals, policies, and actions developed as part of the larger LRTP process are presented. These goals, policies, and actions are designed to respond to Alaska’s freight drivers, system conditions, critical trends, and needs and opportunities, and were crafted with substantial input from a wide range of public and private-sector stakeholders.

## **LRTP Goals, Policies, and Actions**

The Policy Plan of the Long-range Transportation Plan provides the overall umbrella for statewide transportation planning, under which the Freight Element falls. The direction for the plan is applicable to this Freight Element:

1. Align outcomes, plans, and projects based on performance-based resource allocation
2. Manage the system to increase performance and reduce risk
3. Increase revenue and provide accountability

The goals, policies, and actions described below implement each of these strategies. It is also important to note that based on the Freight Element analysis, much of the Policy Plan goals, policies, and actions in themselves address freight performance.

## **Freight Policies**

The LRTP includes freight-related policies addressing New Facilities and Modernization; System Preservation; System Management and Operations; Economic Development; Safety and Security; Livability, Community, and the Environment; and Accountability for Transportation System Performance.

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## 1 New Facilities and Modernization

*Develop new capacity and connections that cost-effectively address transportation system performance. Make the existing transportation system better and safer by applying state-of-the-art technologies and techniques that support productivity, improve reliability, and reduce safety risks to improve performance of the system. The policies and actions that follow apply to both new facilities and modernization policy areas.*

**Policy 1.A:** Develop the multimodal transportation system to provide safe, cost-effective, and reliable accessibility for people and freight.

- We will identify multimodal solutions and regional priorities for the development of the transportation system through area, corridor and modal plans that appropriately and realistically address the values of communities and stakeholders.
- We will address efficient intermodal connections between roads, airports, rail, harbors, transit terminals, and bicycle and pedestrian facilities through area, corridor and modal plans to improve asset utilization, safety, reliability, and the cost-effective movement of people and freight.
- We will evaluate projects for funding by considering the overall benefits and costs to the State in meeting Long-Range Transportation Plan New Facilities and Modernization goals.
- We will ensure investments for rural and non-rural Alaska are evaluated through a decision-making methodology applicable to their circumstances.

**Policy 1.B:** Prioritize new construction projects by considering overall benefits and costs over time to the State as the key consideration.

- We will continue to add new strategic links to the system based on their benefits and costs in improving access, connectivity, and efficiency, as well as their resulting economic benefit.
- We will reduce the vulnerability of the Alaska Transportation System to safety and security risks from seismic events, climate change, and man-made disasters by incorporating those considerations in project development.

**Policy 1.C:** Upgrade and modernize passenger and freight transportation systems to increase productivity and reliability, and to reduce safety risks.

- We will invest in modernizing and upgrading facilities based on the expected impact of these projects on asset condition, reliability, and safety.
- We will continue to consider all approaches: use of new technologies, travel demand management, coordination with land use and development control, and nontraditional approaches to modernizing the Alaska Transportation System.
- We will continue to support the modernization and improvement of transit systems in Alaska.



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## 2 System Preservation

*Manage the Alaska Transportation System to meet preservation performance targets and acceptable levels of service for all modes of transportation.*

**Policy 2.A:** Apply asset management best practices to preserve the existing transportation system.

- We will strengthen our asset management systems and practices, including those for highway and airport pavements, and bridges. We will add culverts and other assets when it is cost effective.
- We will reduce the risks due to the limited redundancy in the Alaska Transportation System from natural disasters, climate change, and other events through corridor planning and our asset management plan.
- We will work toward optimal life-cycle management practices for all assets and capital equipment.
- We will coordinate with MPOs when establishing performance targets for asset management of the federally funded surface transportation system.
- We will improve and use our management systems to support our asset management plan.
- We will address failed and failing assets using a risk-based approach, recognizing that we cannot afford full reconstruction or replacement of the growing backlog of such assets.
- We will support local governments in Alaska in meeting federal transit asset management requirements.
- We will monitor and report annually via Federal Highway Administration (FHWA) Highway Performance Monitoring System (HPMS) reporting, the condition of our bridge and pavement assets.

**Policy 2.B:** Increase understanding of, and communicate DOT&PF's responsibilities for, system preservation as the owner of highways, airports, harbors, marine terminals, and vessels.

- We will monitor and report annually, to the extent practicable, the condition of our assets.
- We will adhere to the reporting timeframes established in the Final Rule for National Performance Management Measures.
- We will communicate the anticipated level of service and predict future system conditions based on the planned allocation of funds for preservation and maintenance treatments.
- We will address bicycle and pedestrian needs as a part of system preservation and modernization.
- We will establish and communicate our performance metrics and targets, planned funding levels, and prioritization framework for asset preservation to the general public.

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- We will consider the performance of passenger and freight movement in system preservation decisions.

### 3 System Management and Operations

*Manage and operate the system to improve operational efficiency and safety.*

**Policy 3.A:** Ensure the efficient management and operation of the passenger and freight transportation system.

- We will preserve transportation corridors and pursue corridor management.
- We will increase understanding of, and communicate DOT&PF's operational responsibilities for, highways, bridges, airports, and vessels.
- We will support cost-effective and sustainable efforts by the Alaska Railroad, local public transit providers, and regional entities that improve the department's ability to manage and operate its facilities.

**Policy 3.B:** Use technology and Intelligent Transportation Systems where cost-effective.

- We will deploy Intelligent Transportation Systems that increase asset utilization and transportation system capacity, and reduce safety and security risks.
- We will follow national developments in intelligent infrastructure and connected and autonomous vehicles, and seek opportunities to cost-effectively and sustainably apply changing technology in Alaska.
- We will follow commercial development in unmanned aerial technologies and evaluate their application for use in Alaska's rural and remote areas.
- We will apply research results and technology transfer to our design, construction, and maintenance practices to reduce costs and improve efficiency and safety.

### 4 Economic Development

*Promote and support economic development by ensuring safe, efficient, and reliable access to local, national, and international markets for Alaska's people, goods, and resources, and for freight-related activity critical to the State's economy.*

**Policy 4.A:** Identify new construction and modernization needs that address travel demand growth, economic development, travel and tourism needs and funding strategies through area and metropolitan plans.

- We will monitor and plan for acceptable levels of mobility and reliability to support the Alaska economy.

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- We will target system development investments based on their benefits, costs, and sustainability in supporting market-driven economic development.
  - We will continue to include a Freight Element in the Statewide Long-Range Transportation Plan to identify transportation infrastructure barriers to economic development.

**Policy 4.B:** Preserve and operate Alaska’s multimodal transportation system to provide efficient and reliable access to and from local, national, and international markets to support economic development goals.

- We will focus on preserving and modernizing the existing system while recognizing that system development is also necessary in Alaska.
- We will maintain and operate the system to provide acceptable reliability and performance.
- We will provide safe, secure, reliable, and cost-effective freight transportation infrastructure for Alaska’s freight shippers, receivers, and communities to support Alaska’s economic vitality and growth.
- We will monitor climate change to plan for its impacts on transportation-related economic development.
- We will preserve and identify cost-effective opportunities to increase freight modal choices available to rural communities.

## 5 Safety and Security

*Improve transportation system safety and security.*

**Policy 5.A:** Improve transportation system safety in Alaska.

- We will use new technology to improve safety for people and freight 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 across Alaska in DOT&PF’s aviation system plan.
- We will ensure safe transportation by means of timely compliance with national and federal safety standards.

**Policy 5.B:** Work with federal, local, and state agencies to provide a safe, secure, and resilient transportation system and emergency preparedness for all modes.

- We will improve system resiliency of freight and passenger transportation to reduce the safety and security risks of natural events such as earthquakes, climate change, and man-made disasters (e.g., accidents).

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- We will address the security of airports, vessels, rail, 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 and resiliency as part of our emergency preparedness and response planning.
  - We will address security and resiliency as we plan and develop infrastructure projects.
  - We will apply technology to improve security and resiliency in all transportation modes.

## 6 Livability, Community, and the Environment

*Incorporate livability, community, and environmental considerations in planning, delivering, operating, and maintaining the Alaska Transportation System.*

**Policy 6.A:** Address quality-of-life, livability, and community considerations in the Statewide Long-Range Transportation Plan, area and corridor plans, asset management, and other plans and project investment decisions.

- We will continue to emphasize effective public involvement, consultation, and cooperation with local units of government, stakeholders, and local communities in the development of transportation plans at all levels.
- The State shall consider the formation of Regional Transportation Planning Organizations as appropriate.
- We will recognize the critical role of transportation in all aspects of quality of life.
- We will address livability and community considerations in project development and work with local governments for roads that are managed to serve local and regional mobility needs.
- We will consider the accessibility needs of mobility-impaired individuals, including the senior population, in designing facilities.

**Policy 6.B:** Preserve the integrity of the ecosystems and the natural beauty of the State, limit the negative impacts, and enhance the positive attributes – environmental, social, economic, and human health – from the Alaska Transportation System.

- We will evaluate and consider environmental outcomes in area plans, modal plans, and project development.
- We will approach transportation planning and project development to minimize adverse environmental, economic, or social impacts on the State and its traveling public.

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- We will support Planning and Environmental Linkage where appropriate and consider Programmatic Mitigation Plans and efforts during the planning process.
  - We will use the area and modal planning processes to consult with resource agencies in the early identification of environmental sensitivities, avoidance areas, and potential mitigation measures.
  - 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 6.C:** Support energy conservation, specifically in our consumption of fossil fuels to address climate change.

- We will implement strategies for energy conservation of our transportation system that are identified in area plans, metropolitan plans, and community plans.
- We will support transit, ride sharing, trip reduction, non-motorized transportation, and the use of alternative fuels where economically feasible.
- We will continue the State’s role in establishing and supporting coordinated community transit systems.

**Policy 6.D:** Develop transportation plans in close coordination with local communities to ensure transportation investment decisions reflect Alaskans’ quality of life values.

- We will coordinate with local jurisdictions to provide transportation enhancements such as waysides, trailheads, and trails for residents and visitors as funding becomes available.
- 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.

## **7 Results-Based Alignment for Transportation System Performance**

*Ensure broad understanding of the level, source, and use of transportation funds available to DOT&PF; provide and communicate the linkages between this document, National Goals and Performance Measures, State Performance Targets, area transportation plans, asset management, other plans, program development, and transportation system performance.*

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**Policy 7.A:** The statewide plan will provide the framework from which DOT&PF sets investment priorities.

- We will monitor, forecast, and report transportation system performance with an emphasis on the federally funded surface transportation system.
- 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 best practice techniques and technology for involving public and private sector stakeholders in the transportation planning process.

## **Freight Actions**

The LRTP includes 40 specific freight actions designed to implement and advance these strategies and policies. Many of the full set of Goals and Actions included in the Policy Plan address all users of the transportation system and therefore address the freight travel demands and associated trends analyzed in this Freight Element. The actions that address freight and that were informed by technical analysis and stakeholder input are listed below.

**Exhibit 15: Freight Actions—New Facilities and Modernization**

L RTP Action #	Description
1.1	Focus State surface transportation finance responsibilities on the Interstate, Non-Interstate National Highway System, Alaska Highway System, and other high-functional class routes.
1.2	Establish an approach to better align needs analyses in area plans and other transportation plans with goals for surface transportation using a performance based approach to planning-level project evaluation.
1.3	Continue to participate in U.S. Army Corps of Engineers ports planning and federal efforts to monitor and plan for increased Arctic maritime traffic and the transportation infrastructure needs that it may generate for Alaska.
1.6	Incorporate demand management and multimodal solutions into transportation plans at all levels.
1.8	Monitor and regularly evaluate performance of the Alaska Transportation System in meeting freight demand as part of the statewide transportation planning process on an ongoing basis (this Statewide Long-Range Transportation Plan establishes a Statewide Freight Vision and identifies a framework for the Alaska Freight Transportation Network).
1.9	Establish a formal methodology to evaluate freight projects using cost-effectiveness as a key criterion and provide for consistent application in area and modal plans.
1.10	Implement and adapt to new technologies applicable to Alaska, such as Intelligent Transportation Systems, NextGen aviation technologies, and others, to improve asset utilization, system productivity, and reduce safety risks.
1.11	Maintain and report core freight-related multimodal performance measures to inform system expansion and upgrading decisions. Through the Freight Element, establish FAST-compliant highway metrics reflecting system performance, user experience, and other factors based on readily available information. Identify metrics for other freight modes that are available today or that could be developed in the future.

**Exhibit 16: Freight Actions—System Preservation**

LRTP Action #	Description
2.1	Establish Asset Management Plans for DOT&PF bridges and pavements. Support consistency in area plans to address overarching asset management plans.
2.2	Implement a formal and consistent process for linking the asset management plans for pavement, structures, vessels, airports, and where applicable, ancillary assets to capital project selection and scope.
2.3	Implement a formal and consistent process for linking asset management plans to DOT&PF’s capital improvement program and Statewide Transportation Improvement and Airport Improvement Program(s) development.
2.4	Strengthen analytical and reporting capabilities, including supporting data reliability and accessibility, to support asset management planning and federal reporting.
2.5	Work toward coordination of maintenance activities and the timing of work performed through DOT&PF’s Capital Improvement Program process through incorporation of maintenance considerations in asset management plans.
2.6	Work with the U.S. Army Corps of Engineers and other agencies to ensure that federal responsibilities for maintaining navigation channels are met in an adequate and timely manner.

**Exhibit 17: Freight Actions—System Management and Operations**

LRTP Action #	Description
3.1	Address corridor preservation and access management in area, corridor and local plans to preserve the transportation system.
3.4	Support broader use of Intelligent Transportation System technologies in the truck freight network to improve routing, coordination, reliability, and overall system efficiency.
3.5	We will collaborate with MPOs and coordinate with their Intelligent Transportation Systems plans to establish regional approaches.



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**Exhibit 18: Freight Actions—Economic Development**

<b>L RTP Action #</b>	<b>Description</b>
4.1	Support and facilitate Alaska’s continued economic development and growth by providing access to new resource development areas, new intermodal infrastructure, and other major freight generating projects through the private development of required transportation infrastructure, and where public investments are required, recover those costs from the proceeds of resource development.
4.2	Work with the Alaska Industrial Development and Export Authority and other partners to coordinate funding and development opportunities for freight transportation facilities and supporting economic development.
4.3	Monitor and take all available actions for the continuation of the U.S. Postal Service bypass mail program.
4.4	Implement the freight rail policy and plan priorities established by the State Rail Plan.

**Exhibit 19: Freight Actions—Safety and Security**

<b>L RTP Action #</b>	<b>Description</b>
5.1	Address the safety goals and implement the strategies established in the Alaska Strategic Highway Safety Plan and subordinate safety plans.
5.2	Identify the facilities that present the greatest risks from lack of redundancy in Alaska’s primary transportation corridors and appropriate risk response strategies.
5.3	Address lack of redundancy and climate change resiliency in asset management plans, project identification, and prioritization within area, corridor and metropolitan plans.
5.4	Incorporate emergency freight management in Alaska’s emergency response plan.
5.5	Work with federal partners to streamline and reduce the cost of security measures related to international trade.

**Exhibit 20: Freight Actions—Livability, Community, and the Environment**

<b>L RTP Action #</b>	<b>Description</b>
6.1	Align project design elements with the project purpose.
6.2	Implement the process and methods required for the early identification and evaluation of environmental outcomes in area and modal planning.
6.3	Review industrial and resource roads and alternative mechanisms to fund them.
6.4	Work cooperatively with federal agencies and industry partners to support practical strategies that reduce fuel consumption and emissions from freight movement through a combination of improved logistics, higher efficiency, lower emission vehicles, and/or alternative fuels.
6.5	Reestablish and maintain the Statewide Freight Advisory Committee comprised of public and private sector owners, operators, customers, and others.

**Exhibit 21: Freight Actions—Accountability for Transportation System Performance**

<b>L RTP Action #</b>	<b>Description</b>
7.1	Communicate the current and forecast levels of funding available for transportation and pursue increased transportation revenue.
7.2	Collaborate with local units of government and, where applicable, private entities, to transfer state-owned and/or state-maintained local facilities that have no regional or statewide function to local ownership and local financing mechanisms.
7.3	Advance regional funding approaches for major new construction and transit service needs identified in area and MPO plans.