



Valdez City Council & A2A Rail Meeting

August 13, 2020



Agenda

1. Project Overview
2. Feasibility Studies
3. Canada Update
4. Proposed Alignment
5. Valdez Terminal & Port
6. Economics
7. Next Steps - Process Moving Forward
8. Support for A2A
9. Asks of Valdez
10. Discussion & Questions

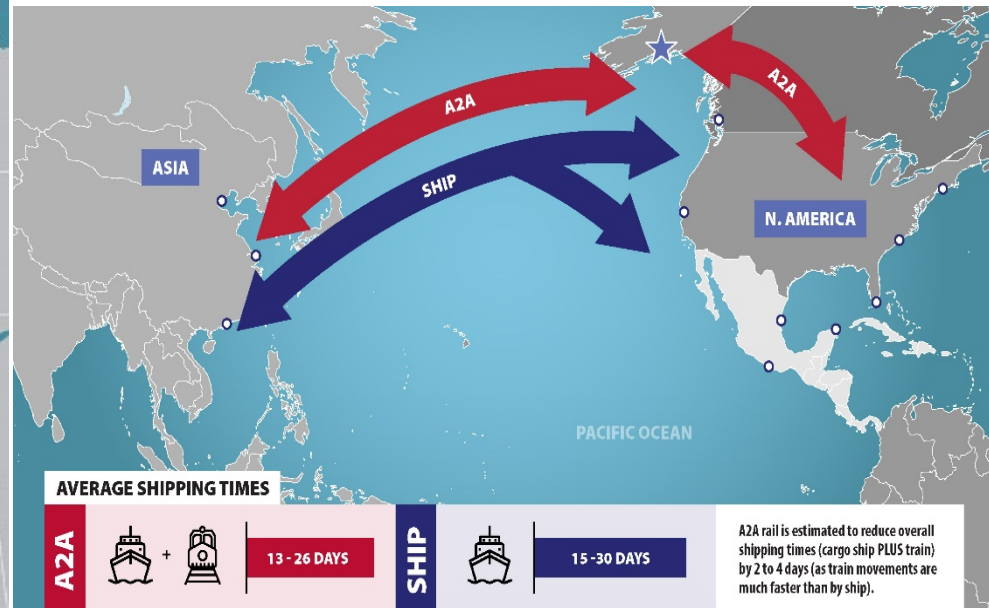
Project Overview



A2A Rail Team:

- Sean McCoshen, Chairman & Founder
- Robert Dove, Financing & Strategy
- JP Gladu, President & CA Indigenous Lead
- Mead Treadwell, Vice-Chair, Alaska
- Bill Hjelholt, HDR Engineering Project Principal
- Doug Ford, Communic Public Affairs (CA Indigenous Support)
- Jon Katchen, Alaska Lead, Holland & Hart
- Joy Huntington, AK Indigenous Lead, Uqaqti Consulting
- Sean Solie, Alaska Coordinator, New Frontier Consulting





Project Overview

A2A Railroad – in Alaska

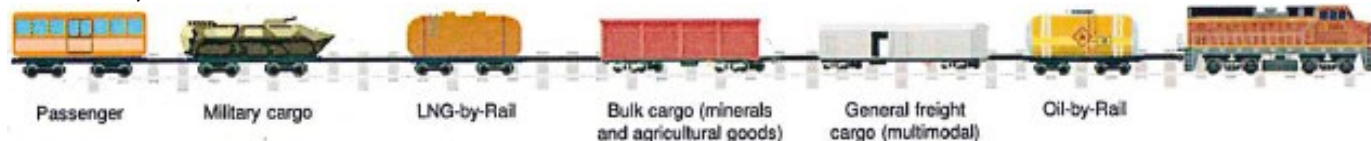
- 1600 miles (2576 kilometres)
 - Alaska 190 miles (306 kilometres)
 - Potential Valdez Route 270 miles (434 kilometres)
- ARRC
 - Northern Rail Extension, NRE, 83 miles (134 kilometres)
 - Bridge across Tanana in Salcha constructed (Phase 1 of 4)
 - Existing track North Pole to tidewater
- 286,000-pound cars
- Trains
 - 2 loco–96 cars–3 loco–96 cars–2 loco
 - 11,700 feet (3566 metres)
 - Unit trains with bulk commodities
 - Mixed freight & Intermodal (double stack)



Project Overview

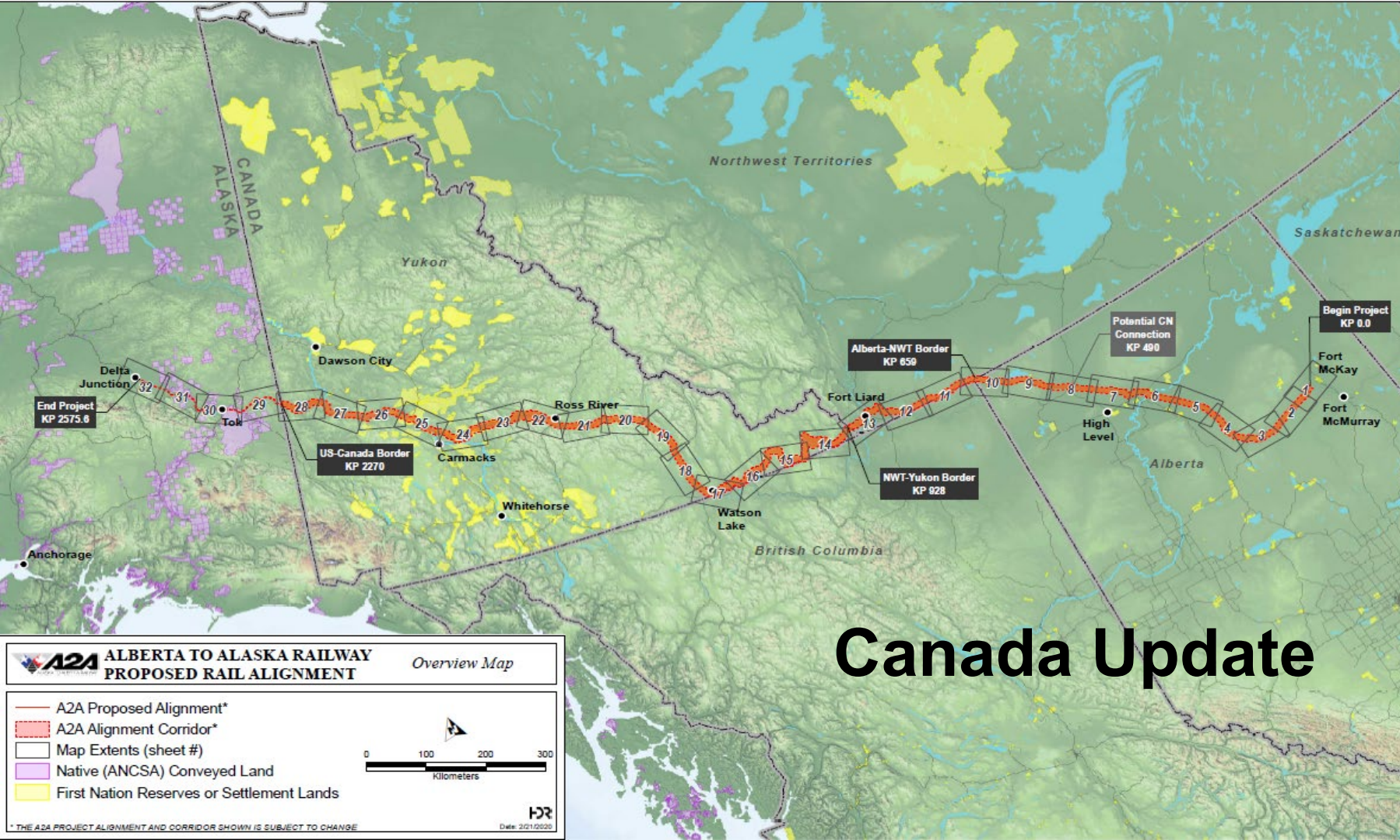
Movement of Goods and Commodities

- A2A Rail will operate as a heavy haul standard gauge railway, capable of moving a wide range of cargo, such as:
 - bitumen and other bulk dry & liquid cargo (grain, potash, sulfur, bitumen, gravel, propane, minerals, wine, vegetable oils, etc.)
 - general cargo (boxes, crates, drums, etc.)
 - bulk cargo (machinery, bundled steel, lumber, etc.)
 - refrigerated cargo (fruit, fish, meat, vegetables, dairy products, etc.)
 - roll-on/roll-off cargo (cars, trucks, semi-trailer trucks, trailers, etc.)
 - container and passenger cargo.
- Additionally, A2A Rail intends to offer the Military a new viable option for moving cargo through Alaska or to installations such as, Eielson Air Force Base, Fort Wainwright, Fort Greely, Clear Air Force Station, Joint Base Elmendorf, etc.

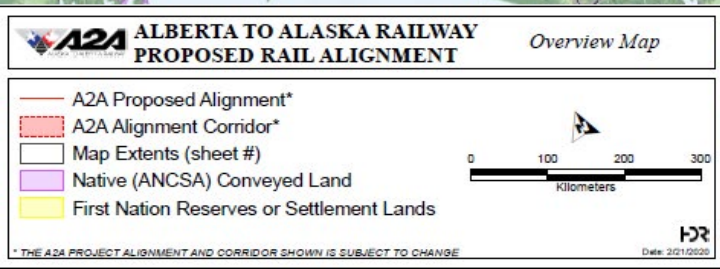


Feasibility Studies

- Van Horne Institute – Alberta to Alaska Railway: Pre-Feasibility Report (2015)
- McKinsey & Company – Alaska to Alberta Railway: Economic Analysis (2020)
- University of Alaska Fairbanks –
 - Alaska-Canada Rail Link: Phase 1 Feasibility Study (2007)
 - Alaska-Canada Rail Link: Incremental Expansion Project Breakout (2012)
 - Alaska-Canada Rail Link: Economic Benefits Study (2019)
- HDR Engineering –
 - Analysis of VHI Pre-Feasibility Report Cost Findings (2017)
 - Analysis of VHI Preliminary Route & Alignment (2017)
 - Alaska Railroad Existing Infrastructure: Feasibility Study (2019)
 - Valdez Route: Feasibility Study (2020)



Canada Update



Proposed Alignment

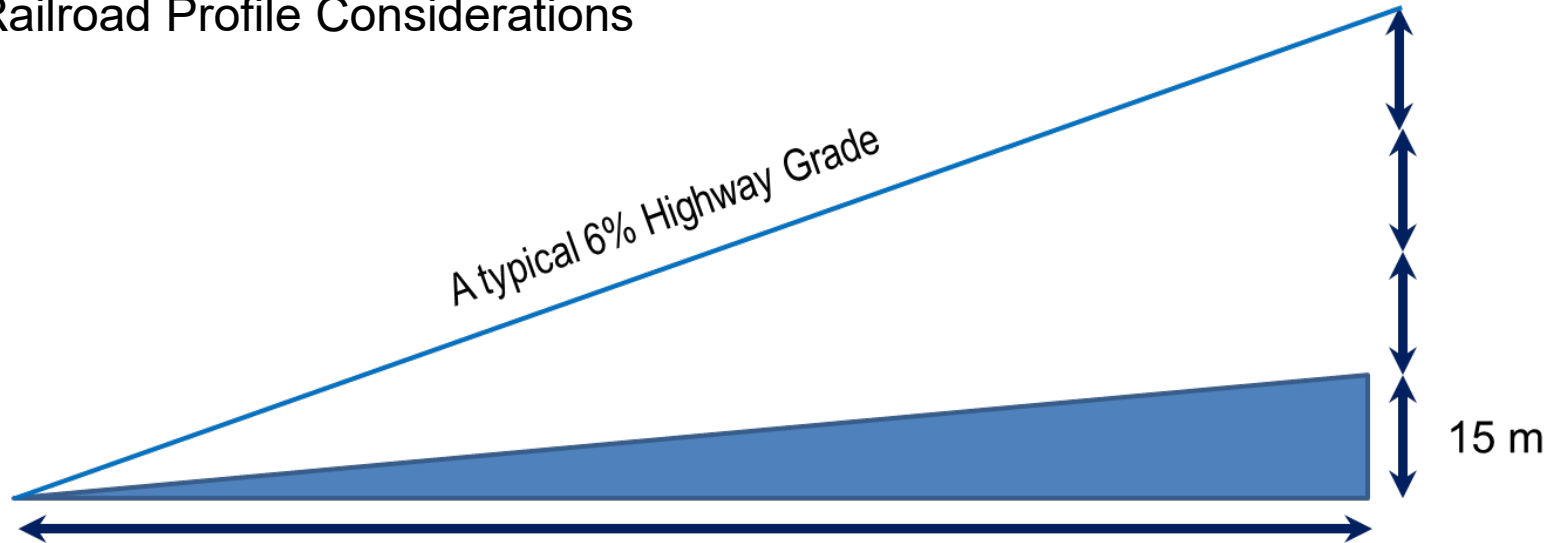
Engineering Considerations:

- Attempt to follow previously used corridor (Road, Pipeline, Power Line) where design standards allow
- Used sidehill construction to minimize earthwork impacts, reduce tunnel lengths and reduce bridge heights
- As feasible, provide right angle crossings of streams and rivers, avoid wetlands and parallel alignments in flood plains
- Care taken, where feasible to stay on side opposite of an existing road or other disturbance when passing near National Parks, noted fisheries
- Trains need to stay above 10 MPH speeds and provide safe breaking for stopping ability
 - Curves and grades drain energy used to move train
 - Too much force pulling or pushing train can cause pull aparts or derailments

City of Valdez considerations needed on proposed Valdez Terminal & Port

Proposed Alignment

Railroad Profile Considerations



Maximum Grade 1.5%: 15m vertical/km
Or 79-feet rise/mile traveled

Rail Terminal – Grade is Flat

Proposed Alignment

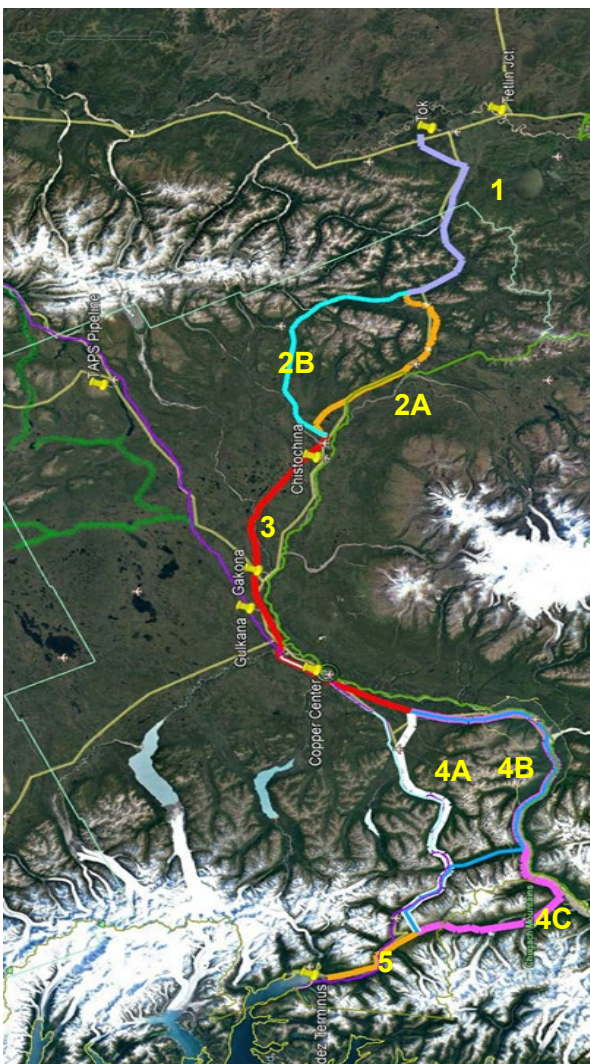
Terrain and Alignment



Proposed Alignment

Valdez Route Study:

- First phase – multiple potential corridors
- Three segments did not have variations (1, 3 & 5)
- Segment 2 had two variations (2A & 2B)
- Segment 4 had three variations (4A, 4B & 4C)



Proposed Alignment

Valdez Route Process Features – Step 1:

- Selected preferred route from multiple segments

Segment	Length (M)	Expected Construction Difficulty	Long Tunnels 1.0 Mi Or Greater	Short Tunnels Shorter Than 1.0 Mi	Spiral Tunnels, Switchbacks, Or Loops For Elevation Gain	Spectacular Bridges Taller Than 150'	Adjust Ruling Westward Grade Above 1%?	Adjust Ruling Eastward (to Tidewater) Grade Above 1.5%?	Adjust Curvature Tighter Than 3.5 Degrees?	National Park Impacts	National Preserves Or Other Federal Lands	NO. Bridge Crossings	Average Bridge Length		Total Bridge Length		Preferred Geomorphology	No. of TAPS Pipeline Crossings	Wetland Length	Anadromous stream crossings	NHD Stream Crossings	Native Allotments	Land Type Impacts
													(m)	(ft)	(m)	(ft)			(mi)				
1	47.3	Easy	No	No	No	No	No	No	No	No	No	8	137	450	1098	3600	X		20.36	1	36	8	Native 9.79 Mi 20.7% Private or Municipal 7.02 Mi 14.8% State 25.43 Mi 53.7% State & Native 5.1 Mi 10.8%
2a	46.7	Moderate	No	No	No	No	No	No	No	Yes	Yes	8	113	369	900	2950	X		28.21	4	41	8	BLM 9.54 20.5% National Park Service 1.06 2.3% Native 27.36 Mi 58.7% Private or Municipal 8.49 Mi 18.2% State 0.19 Mi 0.4%
2b	51.2	Easy	No	No	No	No	No	No	No	No	No	9	217	711	1952	6400			32.09	22	46	3	BLM 0.03 Mi 0.1% Native 17.73 Mi 34.6% Private or Municipal 2.02 Mi 4.0% State 31.40 Mi 61.4%
3	81.4	Easy	No	No	No	Yes	No	No	No	No	Possibly	9	219	717	1967	6450	X	2	34.67	7	34	9	BLM 11.24 Mi 13.8% Native 35.96 Mi 44.1% Private or Municipal 39.97 Mi 34.5% State 7.76 Mi 9.5% State & Native 6.53 Mi 8.0%
4a	60.5	Moderate	Yes	Likely	No	Possibly - 1	Possibly To Shorten Tunnel	No	Yes, Near Tunnel	No	Yes	17	80	262	1358	4450	X	8	10.02	30	83	4	BLM 24.39 Mi 40.3% Native 4.20 Mi 6.9% Private or Municipal 17.59 Mi 29.1% State 14.26 Mi 23.6% State & Native 0.08 Mi 0.1%
4b	89	Difficult	Yes	Possibly	Possibly	Possibly - Multiple	Possibly To Shorten Tunnel	No	Yes, 6 Degrees	No	Yes	21	83	271	1739	5700		4	15.5	4	60	11	BLM 11.22 Mi 12.6% Native 5.09 Mi 5.7% Private or Municipal 15.56 Mi 17.5% State 33.21 Mi 37.3% State & Native 23.94 Mi 26.9%
4c	99.9	Difficult	Possibly	Yes	Likely - Multiple	Likely - Multiple	Yes, 1.5%-2.0% Preferred	No	Yes, 6 Degrees	No	Yes	20	125	410	2501	8200			22.71	12	78	11	BLM 2.95 Mi 3.0% Nat'l Forest Service 0.67 Mi 0.7% Native 32.41 Mi 32.5% Private or Municipal 14.79 Mi 14.8% State 17.60 Mi 17.6% State & Native 31.42 Mi 31.5%
5	21	Difficult	Likely	Yes	Yes	Likely - Multiple	No	Yes, 2.0%-2.2% Preferred	Yes, 6 Degrees Or Tighter	No	No	6	114	375	685	2250	X	1	4.24	9	24	0	BLM 1.49 Mi 7.1% Private or Municipal 8.91 Mi 42.5% State 10.54 Mi 50.3%
	Shortest Route Preferred	Easy Terrain preferred over moderate over difficult	no tunnels, or shorter tunnels with total length less than other alts.	prefer no tunnels, or shorter tunnels with total length less than other alts.	prefer no spiral tunnels, switchbacks, or loops	Prefer bridges less than 100-feet, 100- to 150 double, prefer shorter bridges (see bridge length columns)	Information to adjust standards, impact on project taken into account in other categories.			No impacts preferred	No impacts preferred	Prefer low number of bridge crossings	Prefer overall shorter average length of bridges		Prefer shorter total length of bridges		noted reduced seismic or geotechnical issues	lowest number of crossings preferred	Prefer lowest total length in wetlands	Prefer lowest number of anadromous stream crossings, Copper River Valley location is a fatal flaw	Prefer lowest number of stream crossings	Lowest number of impacts to Native Allotments is preferred	A lesser anticipated effort to obtain R/W is preferred over lengthy timeframe and difficult permit process.

Proposed Alignment

Segment
Length
Expected
Construction
Difficulty
No. of
TAPS
Pipeline
Crossings
Wetland Length
(mi)
Anadromous
stream crossings
NHD Stream
Crossings
Native
Allotments
Land Type Impacts

Segment	Length (Mi)	Expected Construction Difficulty	No. of TAPS Pipeline Crossings	Wetland Length (mi)	Anadromous stream crossings	NHD Stream Crossings	Native Allotments	Land Type Impacts
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5	21	Difficult	1	4.24	9	24	0	BLM 1.49 MI 7.1% Private or Municipal 8.91 MI 42.5% State 10.54 MI 50.3%
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Proposed Alignment

Valdez Route Features:

- Length 434.3 kilometres (269.9 miles)
- Crosses TAPS 7 times – all proposed grade separated structures
- 11 grade separated road crossings
- 62 bridges
- 5 tunnels with various lengths, longest is 4696 m (2.9 miles), shortest is 705 m (2,300 ft), total length 9571 metres (31,400 ft)
- Terminal – Valdez, AK



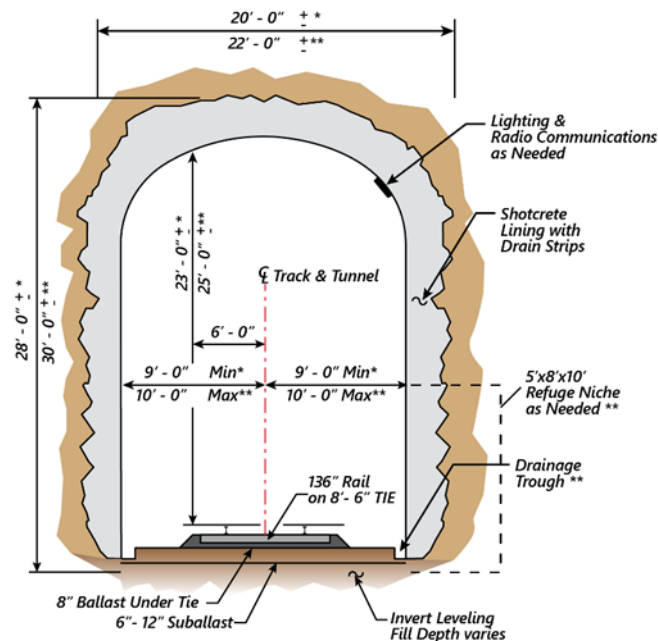
Proposed Alignment

Thompson Pass Area Considerations



Proposed Alignment

Tunnels & Impacts



Typical Tunnel Section

* Short Tunnels Less Than 5,000 Feet Long

** Long Tunnels, Greater Than 5,000 Feet Long



Valdez Terminal and Port

- Handle up to 8-10 trains a day to offload at full capacity
- Storage/Surge Tanks
- Rolling Stock Facilities & link to Port Facilities
- Offload into ships – Can existing facilities be used or will new be required

Alaska Railroad – Terminal Reserve



Initial terminal areas have been identified, need to work with City and others on land use planning and feasibility in future studies

Future Studies

- Engineering – Route Survey & Alignment Refinement
- Operations – Refinement of Train Performance and fit with overall operations plan and business case
- Valdez Port Study – Terminal and Port Facilities concept/feasibility study

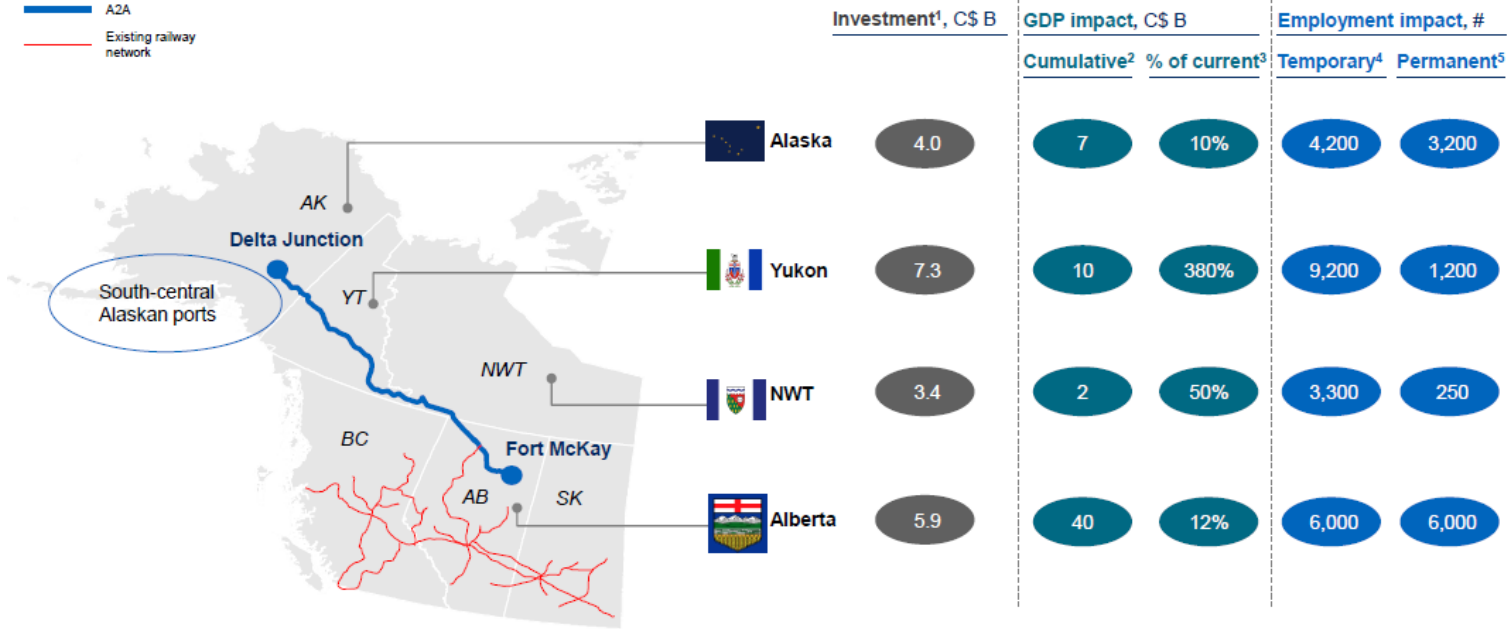
Alaska Railroad – Terminal Reserve



Economics

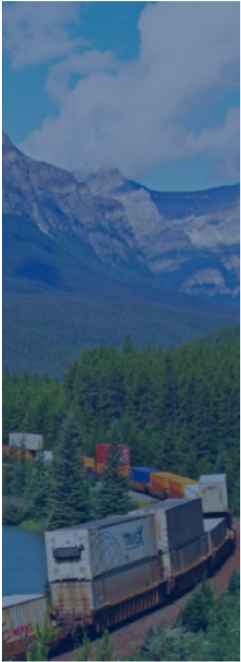
ESTIMATES

A2A can provide significant additional benefits to economies of Northwest Canada and Alaska, USA



1 Total upfront capital investment; 2 Cumulative total GDP impact 2022 – 2040; 3 Cumulative total GDP impact 2022 – 2040 as a % of current GDP; 4 Number of temporary construction employees; 5 Direct jobs from operations and indirect and induced jobs in the greater economy
SOURCE: Provincial and state government budget reports; StatsCanada Dashboard economic and employment multiplier; HDR analysis

Economics



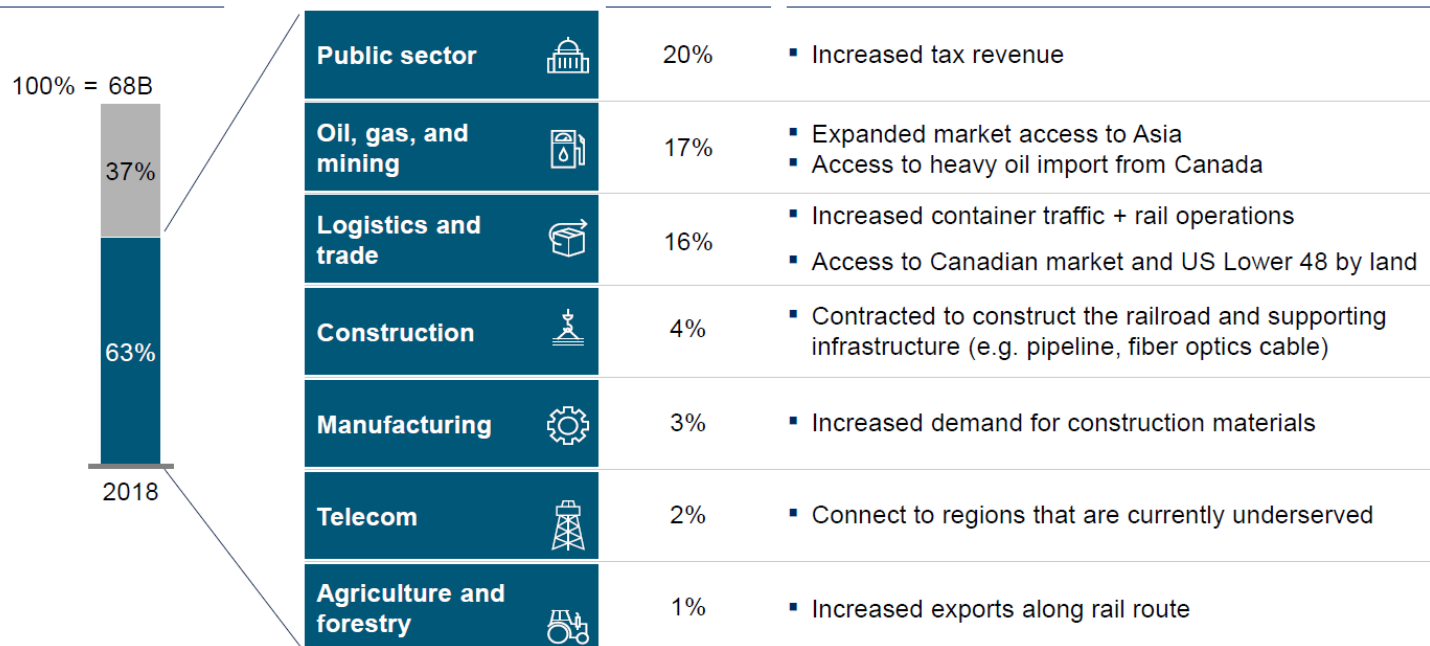
Investment in A2A can directly support		
Economic growth	A2A spurred real GDP growth ¹ Cumulative 2022 – 2040, C\$	A2A spurred real GDP growth ¹ % of current GDP
	~C\$ 7B	~10%
Employment	Construction jobs during peak activity	Direct jobs from operations and indirect and induced jobs in the greater economy
	~4,200	~3,200+

¹ The real GDP growth rate is a permanent increase over and above the currently anticipated GDP growth of the region
SOURCE: Alaska government budget reports; U.S. economic and employment multipliers; HDR analysis

Economics

A2A can benefit sectors representing >60% of Alaska's economy

Alaska 2018 GDP
C\$ B



SOURCE: Alaska government budget reports; U.S. economic and employment multipliers; HDR analysis

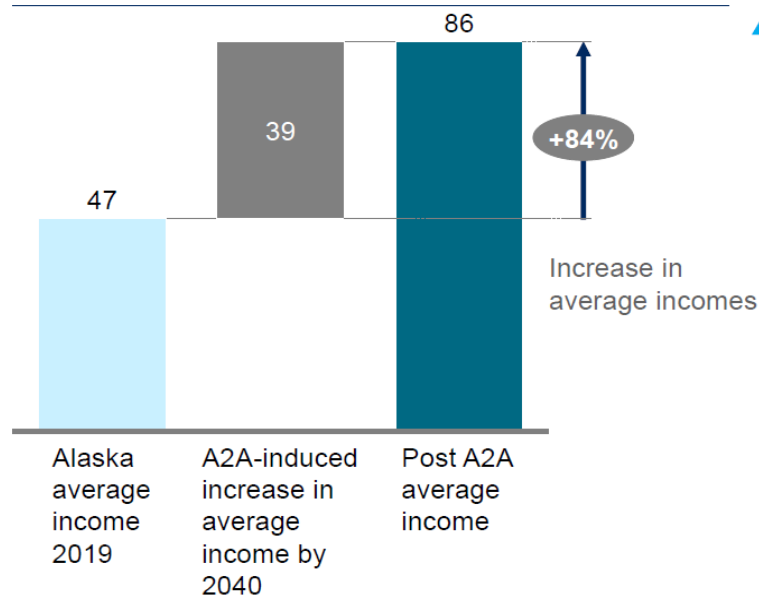
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Economics

Benefits from A2A could flow through to the Alaskan citizens

A2A can increase average incomes...

C\$ '000



...and help alleviate the state's social assistance burden

Alaska spends a considerable sum on social assistance for its citizens

of Alaskans on social assistance

~240K
(1/3 of the population)

Average benefit

\$640 per month for a single parent with 2 children
(2x that of Mississippi)

Spend on social assistance

~\$1B by the state and local governments in Alaska
(>20% of the state budget)

¹ For working age population

SOURCE: U.S. Census, Alaska government budget reports; U.S. economic and employment multipliers; HDR analysis

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Economics

The opportunity for shipping Alberta heavy oil by rail is a function of demand, supply and transportation alternatives

Key insights

Demand

1



- Global oil demand is expected to see modest growth and peak by 2035
- Asia drives the majority of total global liquids demand growth from 2018 to 2035
- Significant Asia demand for heavy crude exists with capacity to process additional 2 mmbbl/d

Supply

2



- Major projects FID-ed before the oil price crash have driven sustained growth in oil sands production in recent years
- Canada oil sands production projected to grow by ~2% p.a. through 2035 and remain flat thereafter
- Majority of future production likely to come from Canada-focused and financially stable players

Transport infrastructure

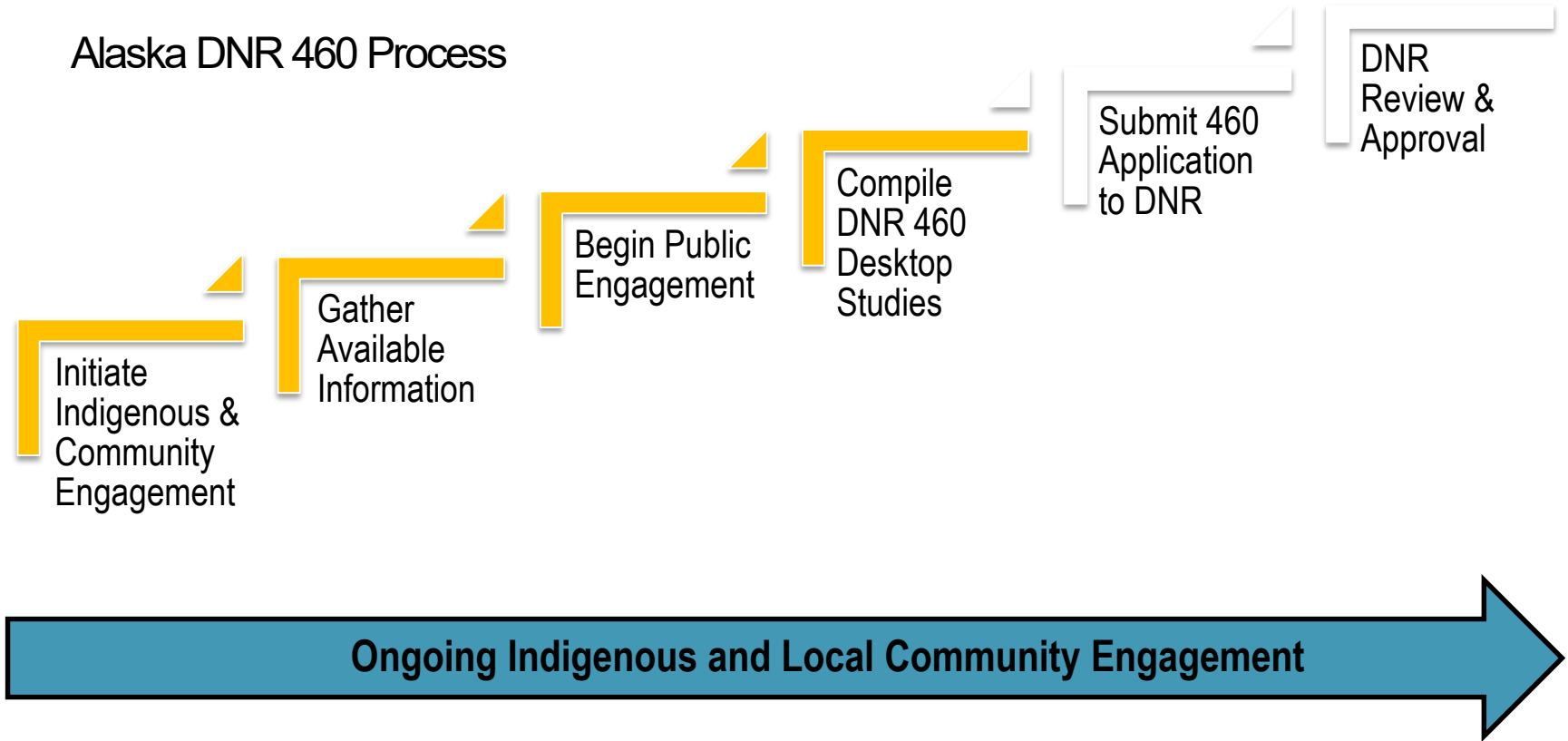
3



- Existing pipeline capacity and crude by rail are insufficient for current production capacity
- Growth in oil production will likely continue to exceed current pipeline capacity, however, 3 main pipelines are under construction to address a potential capacity gap: Enbridge Line 3 (Canadian part completed, smaller US part remains pending permitting), Trans Mountain (owned by Canadian Federal government), and Keystone XL (currently facing a number of challenges)
- If all 3 pipelines come online, no additional takeaway capacity would be needed until 2031

Next Steps

Alaska DNR 460 Process

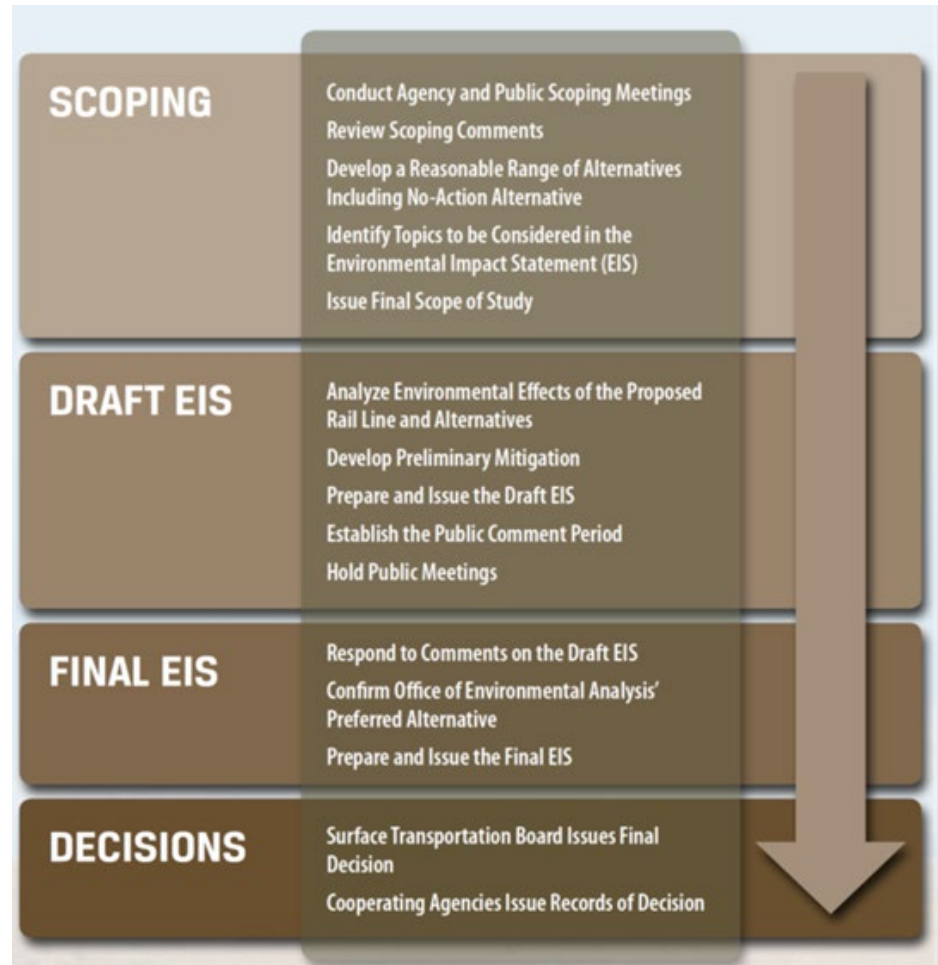


Next Steps

STB NEPA Process – potential 1st

Qtr. 2021 Start

- 4 major steps
- STB utilizes a 3rd Party Consultant to prepare the EIS document
 - Paid for by Project Proponent
- STB may allow Proponent's Engineering and Environmental Consultant to perform some of the Baseline Studies
- STB & 3rd Party Consultant arrange for Scoping and Public meetings



Support for A2A

Governor Dunleavy:

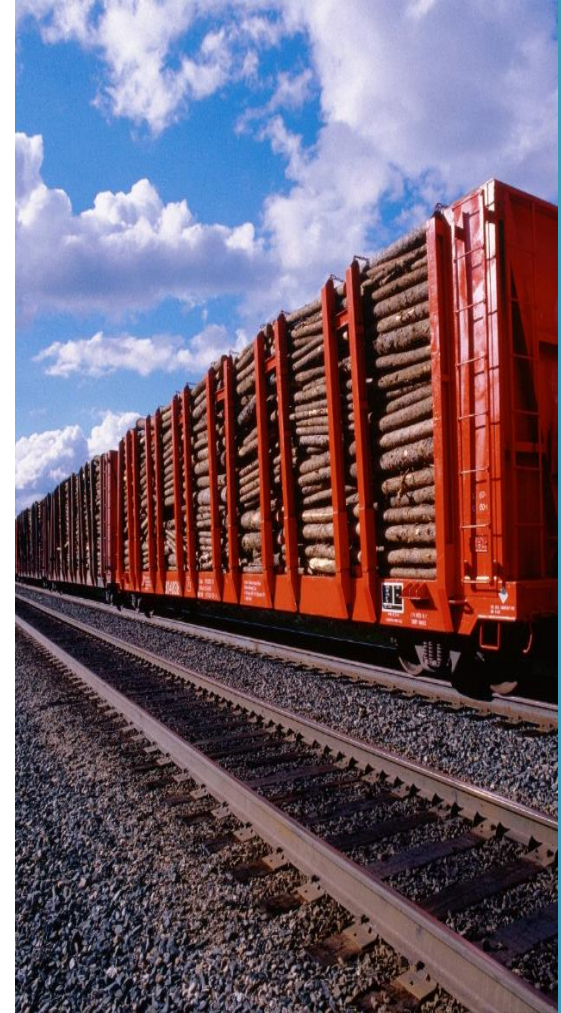
- Letter sent to White House urging the issuance of the Presidential Permit
- Continues to demonstrate his support and commitment to the project by assisting on various fronts here in Alaska and Washington, D.C.

Alaska State Legislature:

- Passed S.J.R. 11, signaling support for the issuance of the Presidential Permit.

Alaska Congressional Delegation:

- Letter sent to White House urging an expeditious issuance of the Presidential Permit.
- Continued engagement with the Trump Administration



Support for A2A

Tetlin Native Corporation:

- Sent letter to White House urging the issuance of the Presidential Permit.

Tanacross Inc.:

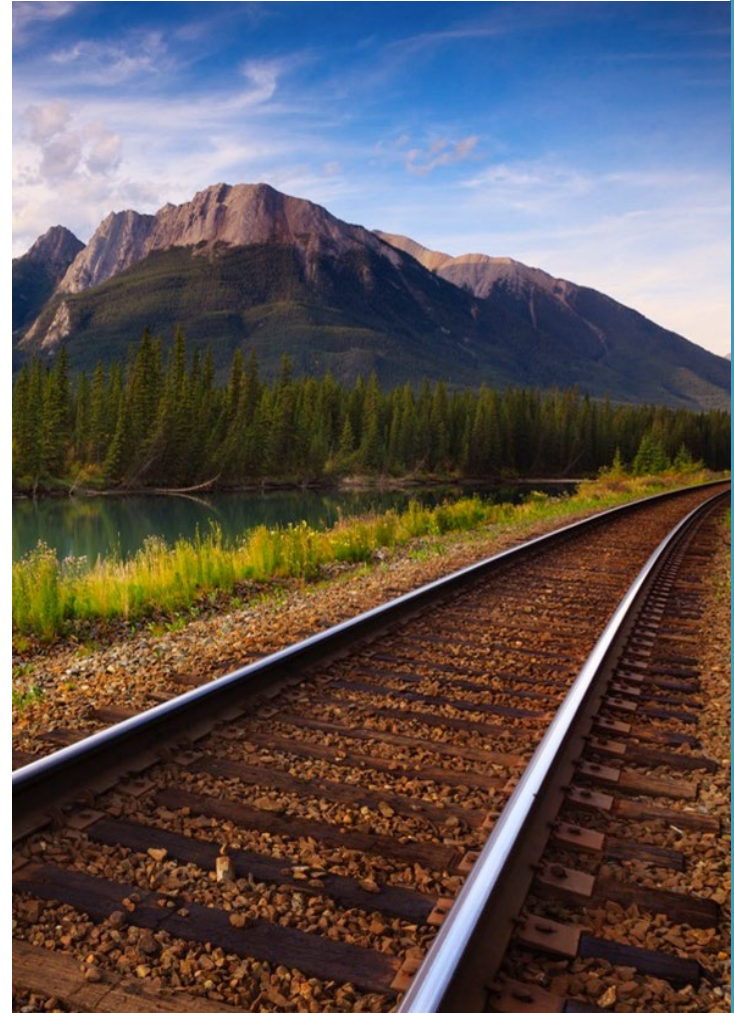
- Sent letter to White House urging the issuance of the Presidential Permit.

Fairbanks Economic Development Council:

- Letter sent to White House expressing support for the project and the issuance of the Presidential Permit.

Pacific Northwest Economic Region (PNWER):

- Letter sent to White House expressing support for the project and the issuance of the Presidential Permit.



Asks of Valdez

- Execute Memorandum of Understanding
- Work alongside A2A and HDR to complete Port of Valdez Feasibility Study
- Develop next steps for A2A and City of Valdez



Discussion & Questions

