

2/17/12
DEPARTMENT OF
TRANSPORTATION
OVERVIEW:
ROADS TO
RESOURCES

<TARGET><BILL></BILL><SUBJECT>2-17-12 DEPARTMENT OF
TRANSPORTATION OVERVIEW ROADS TO
RESOURCES</SUBJECT><COMM>SFIN27</COMM></TARGET>

ALASKA STATE LEGISLATURE

SENATE FINANCE COMMITTEE

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AGENDA

Friday, February 17, 2012

Senate Finance Room 532 – 9:00 AM

Department of Transportation Overview: Roads to Resources
Bills Previously Heard/Scheduled

Sen Giessel



Alaska Department of Transportation & Public Facilities

Roads to Resources

Senate Finance Committee Presentation

February 17, 2012

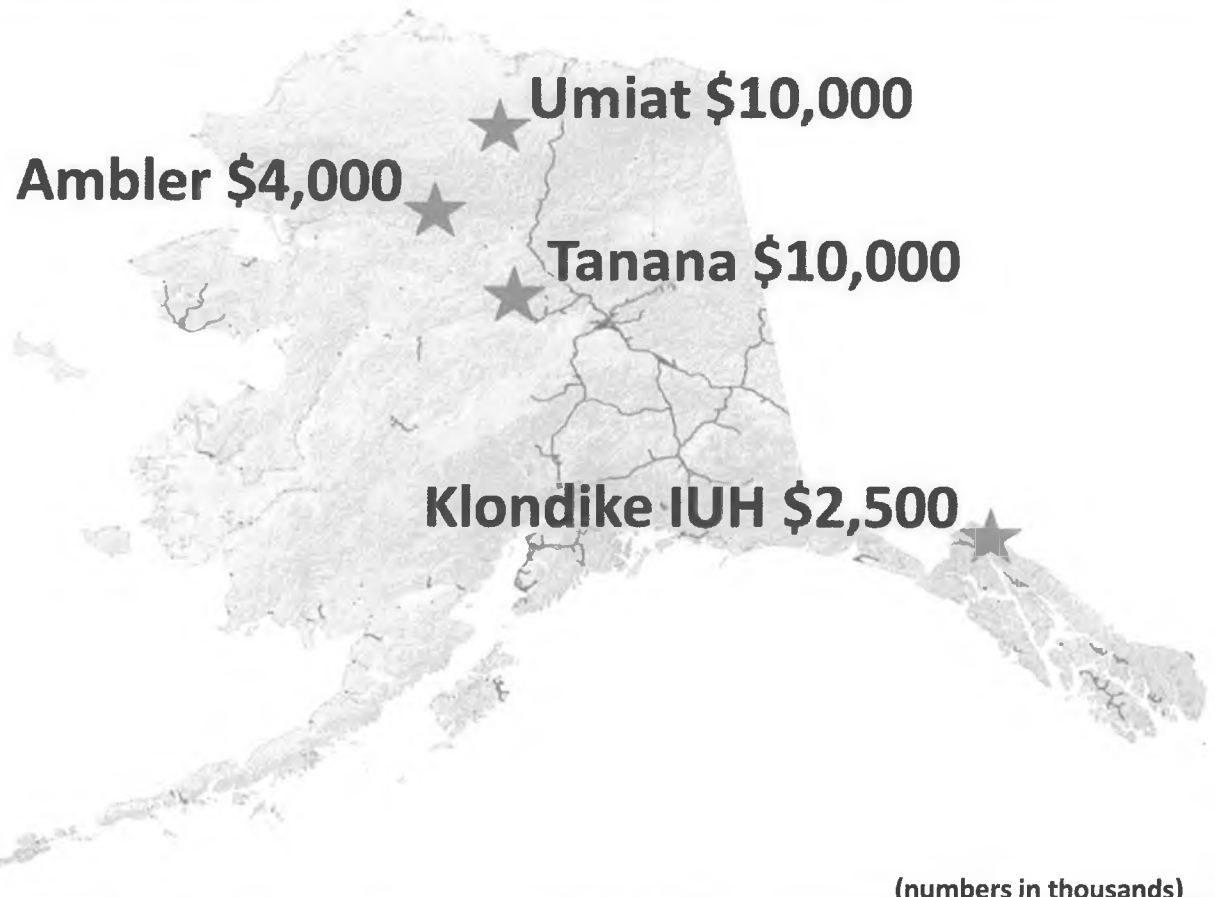
Patrick Kemp, P.E.
Deputy Commissioner

Joe Buck, P.E.
Roads to Resource Manager



Roads to Resources 2013 Capital Budget Request

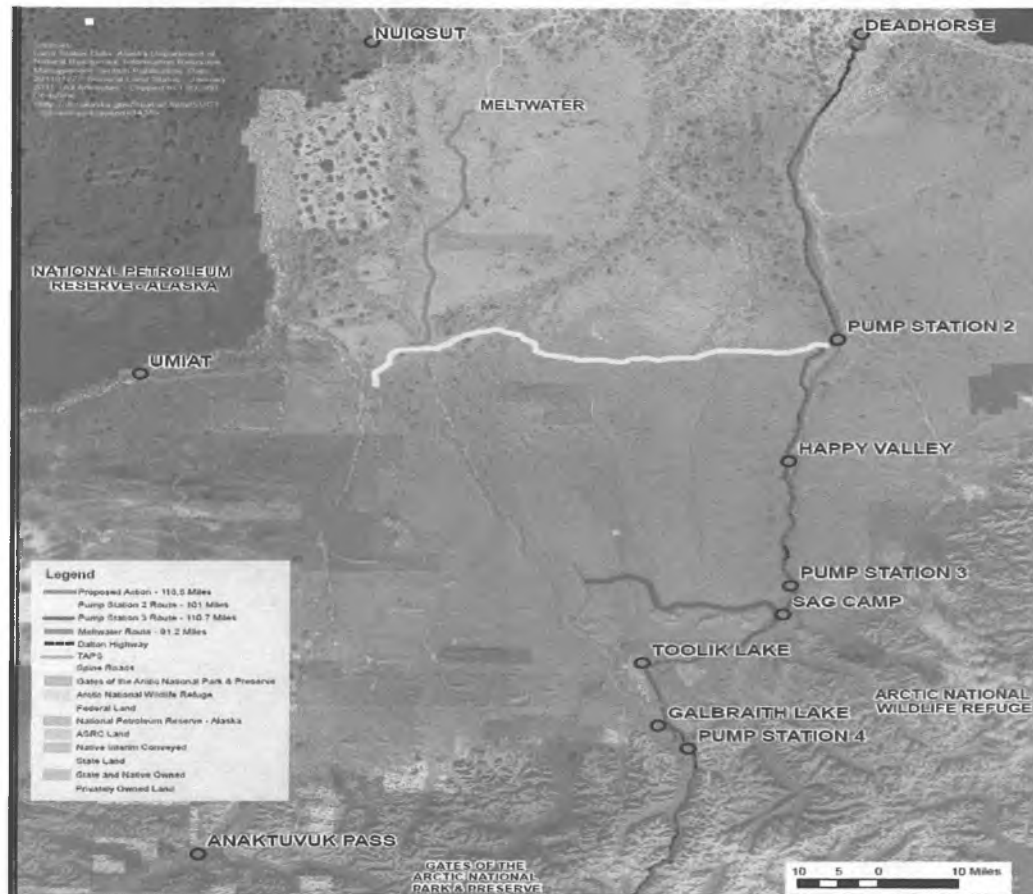
★ Statewide Roads to Resource Program Development and Small Projects Evaluation \$2,000



(numbers in thousands)



Road to Umiat - Foothills West





Road to Umiat – Foothills West

- Umiat is a petroleum rich area, 200 to 300 million barrels of oil, and over 31 trillion cubic feet of gas
- 18' wide road with inner-visible turnouts
- \$200 million to \$300 million construction estimate for road and bridges
- Draft EIS scheduled for December 2012, with R.O.D. in mid-2013



Roads to Resources Ambler Mining District Access

- Ambler Mining District is a mineral rich area (Cu, Zn, Pb, Ag, and Au)
- 300 direct jobs for development of NovaCopper's Arctic deposit
- NovaCopper and NANA Corp. have entered into a partnership to develop mineral resources
- Road and rail alternatives being considered



Road to Tanana

- Mineral rich area with mines in production
- Added benefit of providing road access to the community of Tanana
- 18' wide road with inner-visible turnouts
- Begin construction in 2013



Klondike Industrial Use Highway (IUH)

- Yukon ore haul volumes to Skagway are projected to significantly increase due to Canadian mine industry growth
- The Klondike IUH is the only Industrial Use Highway in Alaska
- Tolls collected since 1985
- Replace bridge and strengthen pavement to support heavy haul ore trucks



Other Potential Projects

- Road to Beluga (gas and coal)
- Niblack Mine Access- Prince of Wales (Au, Ag, Cu, Zn, Pb)
- Bokan Mtn. Mine Access- Prince of Wales (REE)
- Totchaket Road- Nenana (agriculture/ timber/ potential gas & minerals)
- Granduc Mine- Hyder Salmon Road (Cu)
- Katlian Quarry – Baranof Island
- Marshall Quarry – Yukon River

Title: Road to Umiat – Foothills West Access

Location: The Foothills West Access study area ranges from a northern limit at Franklin Bluffs along the Dalton Highway at Milepost 376, south to Galbraith Lake near Dalton Highway Milepost 278, and from those points west to converge on the state owned airport at Umiat. Umiat is located approximately 90 miles west of the Dalton Highway and TAPS Pump Station 2. The access study area is approximately 3,940 square miles. See attached Resource Areas map – Foothills West Transportation Access EIS, June 2011.

Purpose: The State of Alaska proposes to improve access to known Gubik gas and Umiat oil accumulations, and optimize exploration and development of hydrocarbon resources, within the Foothills Areawide Lease Sale area. To facilitate this proposal, the State of Alaska, through the DOT&PF, proposes to construct an all-season gravel road from the Dalton Highway to Umiat, Alaska. Road access would optimize and expand oil and gas exploration and development of known hydrocarbon resources in the Foothills Areawide Lease Sale area, as well as facilitate a more economically feasible development of the NPR-A. The Foothills West Transportation Project is considered an important investment by the State of Alaska to further oil and gas resource development opportunities to benefit Alaska’s economy.

Project Description: The proposed road would be designed to safely accommodate industrial traffic in arctic conditions. Construction components of the road corridor would include an all-season gravel road, associated bridges, pull-outs, maintenance facilities, temporary construction camps, and material sites.

The road will be initially constructed to Industrial Access Road standards as defined by AASHTO classification, “Special Resource Recover Roads”, to include:

- Single lane industrial access road
- 18’ wide roadway with 2’ shoulders to accommodate thermal degradation
- Gravel embankment: minimum 6’ depth at centerline
- 9” crushed rock surfacing with palliatives for dust control
- 200’ long x 25’ wide inter-visible vehicle turnouts

Estimated Cost of Construction = \$200 to \$400 million for road and bridges, depending on selected alternative.

Schedule Status: EIS schedule from ACOE project webpage (2/15/12)

Notice of intent Published:	May 20, 2011
Public Scoping Period:	May 20 – July 26, 2011
Public Scoping Meetings:	June 8 – 16, 2011
Scoping Report published:	Winter 2012 (February)
Draft EIS published:	Fall 2013
Public Comment on Draft EIS & ANILCA §810 Hearings:	Fall 2013
Final EIS published:	Fall 2014
Record of Decision:	Winter 2014

Funding Sources: FY2013 Governor’s Budget Proposal = \$10 million

Issues:

- The project is currently in the NEPA phase with the Army Corp of Engineers as the lead federal agency. The ACOE has hired AECOM as their EIS consultant. The Alaska Department of Natural Resources and the Bureau of Land Management are cooperating agencies in the NEPA process. ADOT&PF is the permit applicant for the State of Alaska.
- Human Impact Assessment (HIA) work currently underway is coordinated through ADNR-OPMP, is being managed by the ADH&SS HIA group, and has contracted with the consultant NewFields of Denver CO. The work is to be completed by summer 2012 for inclusion with the Preliminary Draft EIS as an appendix.
- Caribou Survey Studies and a Subsistence Impact Assessment are being conducted by the Alaska Department of Fish & Game. This work is to be completed by summer 2012 for inclusion in the Preliminary Draft EIs as an appendix.
- The Umiat and Foothills Areawide Lease Sales area is a petroleum rich region with an estimated 200 to 300 million barrels of oil, and over 31 trillion cubic feet of gas.

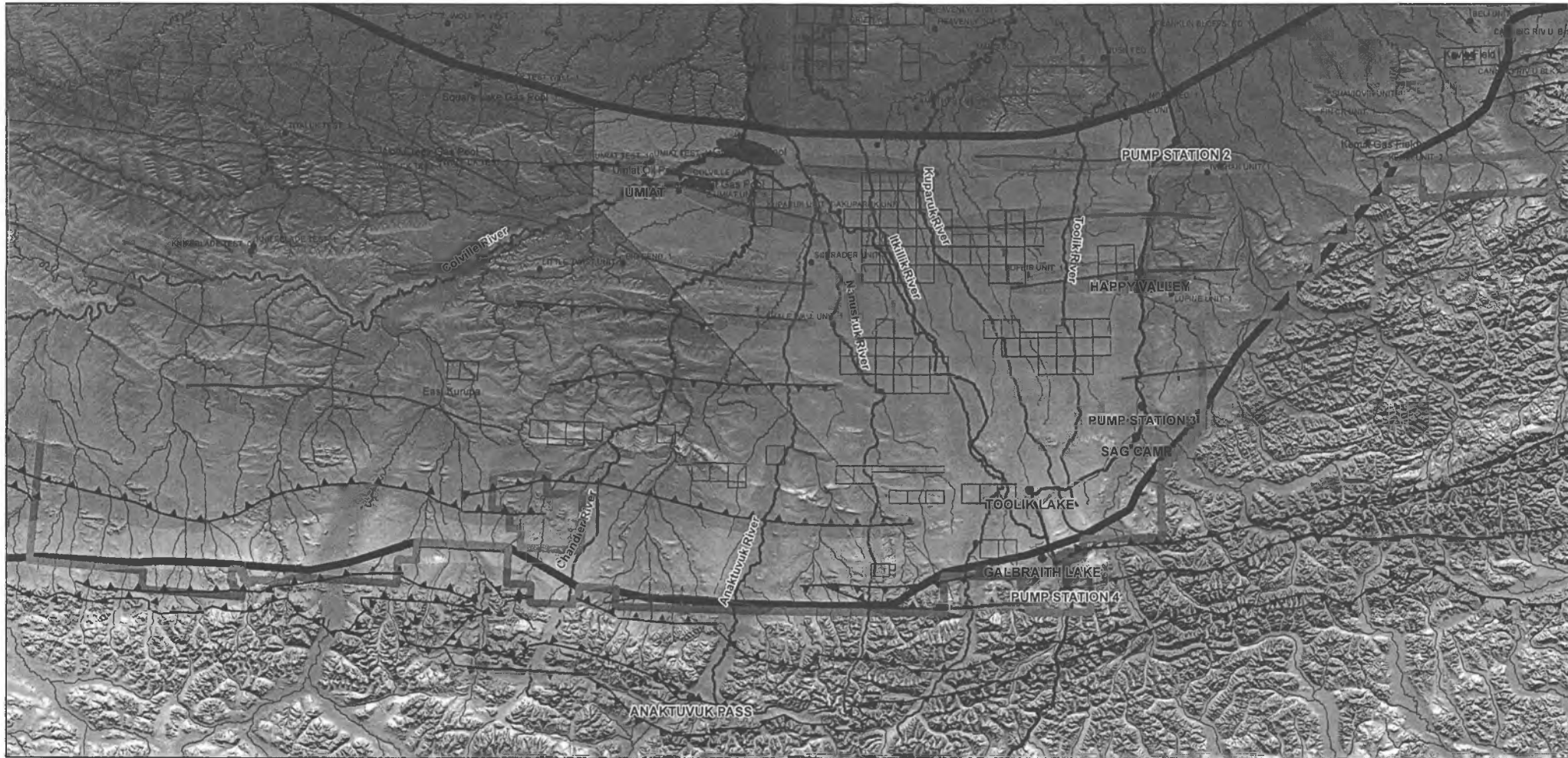
References:

www.foothillsroad.alaska.gov/ (ADOT&FP Northern Region project webpage)

www.foothillswesteis.com (ACOE NEPA project webpage)

Resource Areas map, Foothills West Transportation Access EIS, June 2011

Foothills West Transportation Access EIS June 2011



Data Sources:
 Geologic Structure Data: "Regional Geology of the North Slope of Alaska" Map, published April 2008. State of Alaska, Department of Natural Resources, Division of Oil and Gas. http://www.dnr.state.ak.us/oilproducts/maps/north-slope/nrs/ns_RegionalGeology_80x96_040909.pdf
 Oil and Gas Accumulation Data: State of Alaska Department of Natural Resources, Division of Oil and Gas. Oil and Gas Accumulations (as of January 12, 2009). <http://www.dnr.state.ak.us/oilproducts/data/downloads/downloads.htm>

Oil and Gas Leases Data: Statewide Oil & Gas PA Boundaries Shepelle, Alaska Department of Natural Resources, Division of Oil and Gas. Statewide Oil & Gas PA Boundaries; <http://www.dnr.state.ak.us/oilproducts/data/downloads/downloads.htm>

Source of Map: Alaska Department of Transportation & Public Facilities

Note:
 Potential resource target areas reflect areas of mapped geologic anticlinal structures. Potential resource target areas may be inferred between these structures but are not shown on this map.

Legend

- Gas Accumulations
- Oil Accumulations
- Potential Resource Target Areas
- Anticlines
- Thrust Faults
- Foothills Lease Sale Area
- Physiographic Province
- Umiat Baseline
- Foothills Study Area
- Dalton Highway
- TAPS
- Proposed Road Corridor
- Historic Exploration Wells
- Oil & Gas Leases (as of March 4, 2011)



Resource Areas

Title: Ambler Mining District Access

Location: The project study area extends from the Ambler mineral belt south to Nenana and from the Dalton Highway to the west coast of Alaska. Eight potential corridors were initially identified within the project study area.

Purpose: Provide all-season transportation access to promote exploration, development, and production of known mineral resources in the Ambler mineral belt. The project will assess, identify, permit, design, and develop a transportation corridor from the Ambler mineral belt to either a port location on the west coast of Alaska or the surface transportation system in Alaska's Interior. Both road and rail options are being evaluated. The selected corridor is intended to provide surface transportation access to state, private, and native corporate lands to facilitate exploration and development of mineral resources in the region.

Project Description: Conduct a transportation corridor feasibility and preliminary engineering assessment to determine an optimal transportation mode and corridor, proceed with permitting and environmental documentation, and establish a right-of-way. Thereafter, some form of public-private partnership (3P) would be structured to proceed with private financing, final design, construction, operations and maintenance; relying on user commitments to repay capital investments.

Eight transportation corridors have been evaluated and the Brooks East Corridor option refined for further evaluation due to ranking scores. The corridor matrix criteria were evaluated and scored based on 1) corridor length, 2) Federal Conservation System Unit impact, 3) wild & scenic river impact, 4) salmon/shee fish river impact, 5) caribou habitat impact, 6) threatened & endangered species/critical habitat area impact, 7) availability of material sites, 8) large bridges requirements, 9) construction costs, 10) maintenance costs, and 11) special considerations.

The Brooks East Corridor is the shortest option, measuring 220 miles from the Ambler mineral belt to the Dalton Highway. The corridor leaves the Ambler mineral belt and travels east to the Dalton Highway, staying primarily in the foothills of the Brooks Range and crossing the lower portion of the Gates of the Arctic National Park and Preserve and the Kobuk Wild & Scenic River. The corridor connects to the Dalton Highway at Prospect Creek.

Corridor Length =	220 miles
Material site availability =	100% of length
Total bridges =	13 totaling 5000 lf
Estimated construction cost =	\$430 million

The roadway construction costs assume construction of a narrow industrial access road with clearing, embankment, gravel surfacing, and inner-visible turnouts.

Schedule Status:

Public outreach w/ 9 communities:	December 2011 to January 2012
Develop Proposed Action:	January 2012 to December 2012
EIS Initiation:	February 2013
Engineering Baseline Studies:	March 2012 to November 2012

Environmental Baseline Studies:
EIS
ROD

February 2012 to December 2013
April 2013 to August 2016
December 2016

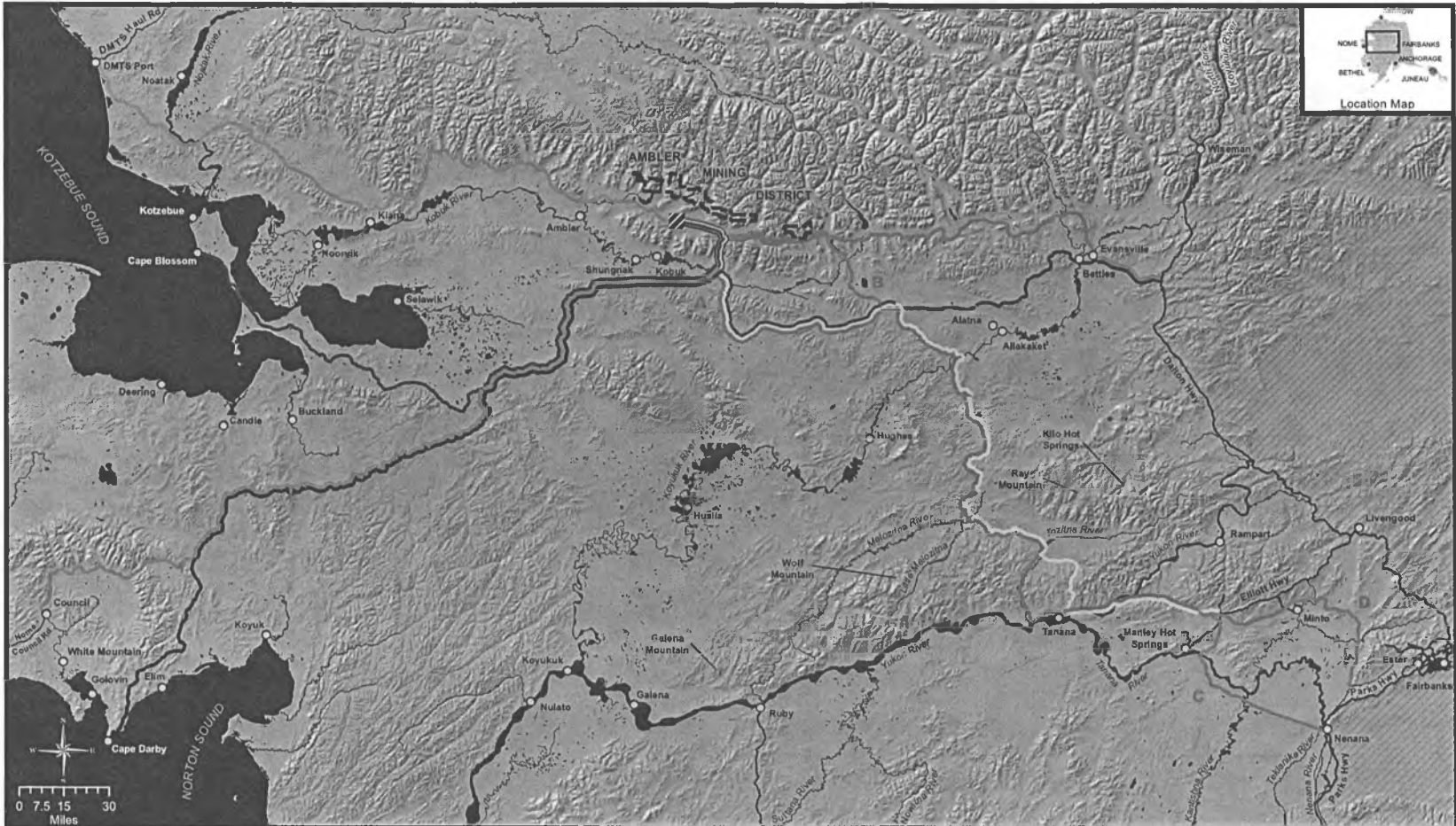
Funding Sources: FY2013 Governor’s Budget Proposal = \$4 million

Issues:

- Meetings with the Upper Kobuk Valley communities were held in January, April, May, December 2011, and January, February 2012 to provide information on this study, and to gather information and feedback from the communities on potential access to the Ambler mineral belt. Information from these meetings was incorporated into the evaluations and will inform the engineering and environmental processes as the project moves forward. Meetings were also held with the National Park Service to discuss considerations related to corridors that cross through the Gates of the Arctic National Park and Preserve.
- Comprehensive subsistence mapping by contractor is scheduled to begin in spring of 2012 for the Upper Kobuk region. This work may be extended to Lower Kobuk depending on initial findings.
- Hydrological studies are being planned for selected rivers for spring 2012.
- Continuing overall engineering and environmental evaluations related to developing a proposed action.

References:

[www.dowlhkm.com/projects/Amber Mining District Access/new_website/index.html](http://www.dowlhkm.com/projects/Amber_Mining_District_Access/new_website/index.html)
Ambler Mining District Access - Summary Report, September 2011 (DOWL HKM)
Ambler Mining District Access - Corridor Development Memorandum, September 2011 (DOWL HKM)
Attached Ambler Mining District Access -Preliminary Corridors Map (5/19/2011)



<ul style="list-style-type: none"> Communities and Place Names Railroad Existing Roads Water 	<ul style="list-style-type: none"> Outside of Project Study Area Ambler Mineral Belt Proposed Staging Area 	<ul style="list-style-type: none"> 1-Brooks East Corridor 216 Miles (Road Only) 2-Kanuli Flats Corridor 241 Miles (Road Only) 5-DMTS Port Corridor 257 Miles (Road & Rail) 	<ul style="list-style-type: none"> 3-Elliott Hwy Corridor 365 Miles (Road Only) 4-Parks Hwy RR Corridor 420-450 Miles (Rail Only) 6-Cape Blossom Corridor 245 Miles (Road & Rail) 	<ul style="list-style-type: none"> 7-Selawik Flats Corridor 331 Miles (Road & Rail) 8-Cape Darby Corridor 340 Miles (Road & Rail) 	<p>Sources: Communities and Place Names: DNR, DOT&PF Existing Roads: DOT&PF DMTS Hwy Road: NANA Railroad: DNR</p> <p>Coordinate System: NAD 1983 Alaska Albers</p>	<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES NORTHERN REGION AMBLER MINING DISTRICT ACCESS CORRIDOR DEVELOPMENT MEMORANDUM PRELIMINARY CORRIDORS</p>
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Title: Road to Tanana

Location: Extension of Tofty Road, between Manley Hot Springs and Tanana.

Purpose: Provide improved road access to known mineral developments in the Serpentine Ridge/Rough Top Mountain mineral belt to support mining opportunity expansion and resource exploration. The road will improve access between remote communities and connect to existing Elliot Highway near Fairbanks. The project would support regional and community sustainability by reducing the cost of living and providing greater opportunities for employment and commerce.

Project Description: The proposed road would be 54 miles in length, including the existing 15 miles of Tofty Road. The road will take advantage of existing pioneer roads alignments to minimize additional impacts to the environment. The road would be designed to safely accommodate public, commercial and industrial traffic.

The road will be constructed to Industrial Access Road Standards as defined by AASHTO classification, “Special Resource Recovery Roads”, to include:

- Single lane industrial access road
- 18’ wide roadway with 2’ shoulders
- Gravel embankment – 6’ min. depth at centerline
- 9” crushed rock surfacing with palliatives for dust control
- 200’ x 25’ inter-visible vehicle pullouts

The FY2013 project funding will be used for environmental permitting, design, and construction of a pioneer road to the east bank of the Yukon River

Schedule Status:

Preliminary Engineering & Field Work:	March 2012 to November 2012
Environmental Documentation & Permitting:	June 2012 to March 2013
R/W Acquisitions and Clearing Plans:	November 2012 to March 2013
Design & Pioneer Road Construction:	April 2013 to January 2015

Funding Sources: FY2013 Governor’s Budget Proposal = \$10 million

Issues:

- Mineral data is well documented – numerous mining claims along route (Au, Ag, base metals Cu, Pb, Zn, REE, U, Th).
- Road would lower costs for mineral exploration, development and production.
- Anticipate potential to enhance intermodal transportation system (Yukon River barges basing operations out of Tanana).
- Project will greatly reduce the cost of getting goods into Tanana
- Improved access to public services (education, health care, emergency and safety services)

References:

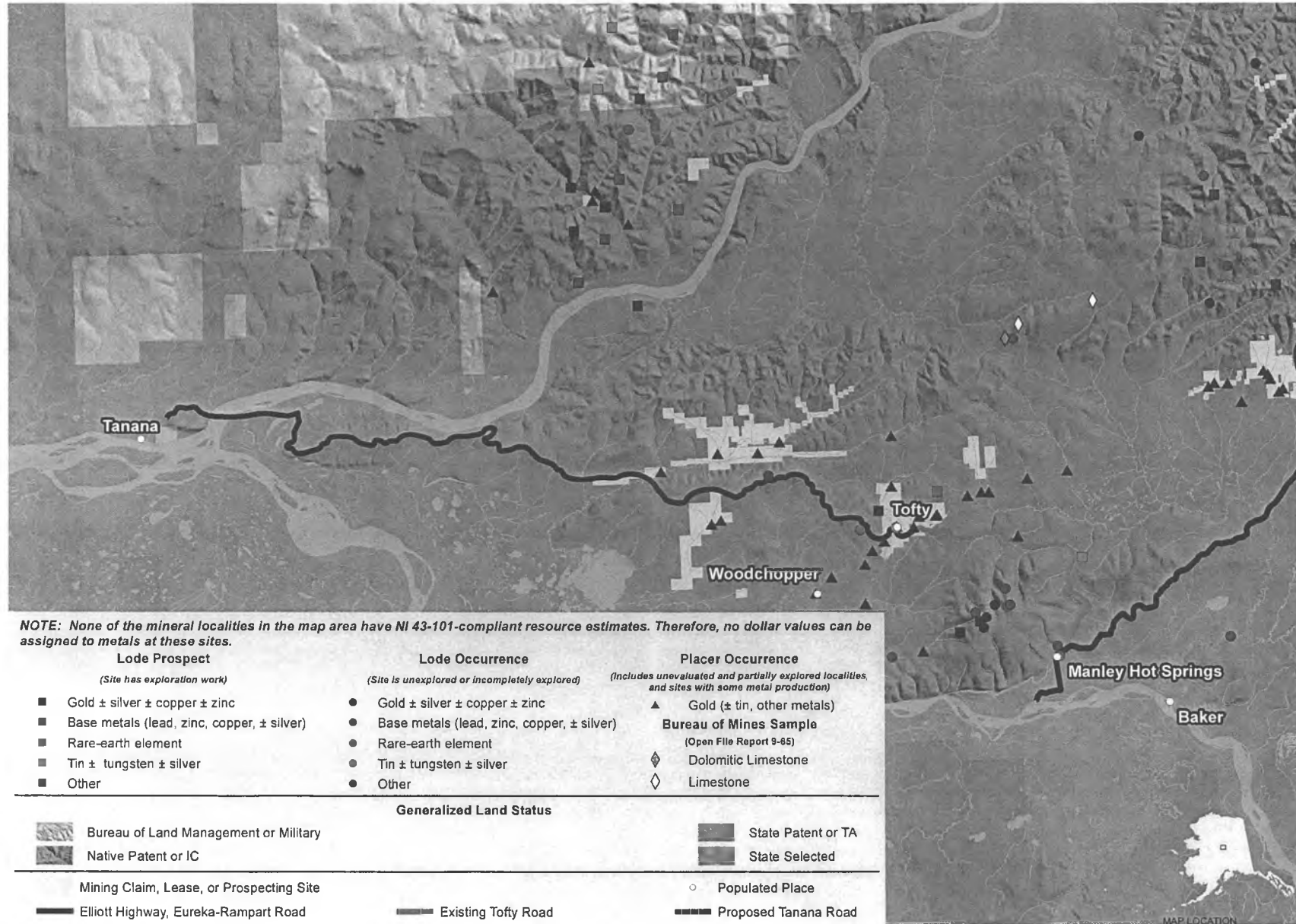
www.dot.alaska.gov/nreg/westernaccess/

Western Alaska Access Planning Study, Corridor Staging and Alternatives Report,
Dec. 2011, prepared by DOWL HKM

ADNR Map - Known Mineral Localities Along Proposed Tanana Road, dated Feb. 2012



KNOWN METALLIC-MINERAL AND LIMESTONE LOCALITIES ALONG PROPOSED TANANA ROAD



Title: Klondike - Industrial Highway Ore Haul Refurbishment

Location: South Klondike Highway from Skagway to Alaska-Canada border.

Purpose: Refurbish and strengthen the Klondike Highway pavement to accommodate increased ore and freight demands from Yukon mining industry. Replace the Capt. William Moore Bridge with a structure capable of supporting 80 to 100 ton heavy haul truck loads.

Project Description: The South Klondike Highway is 98 miles from Skagway to Alaska Highway MP874.4 outside Whitehorse YT. The portion within Alaska is approximately 14 miles in length from Skagway to the Alaska-Canada border at White Pass.

Estimated construction cost for road and bridge improvements are \$39 million.

The FY2013 project funding will be used for design, environmental permitting, and a portion of the construction cost.

Schedule Status:

Design & Permitting: July 2012 to December 2013

Funding Sources: FY2013 Governor's Budget Proposal = \$2.5 million

Issues:

- Adjust toll fee for industrial haul truck to recoup capital investments.
- Assess border crossing and weigh station infrastructure and develop improvement plan to accommodate increased industrial truck traffic on Klondike IUH.
- Canadian mines haul ore to the Port of Skagway for shipment to ore smelters around the world. AIDEA is in the process of replacing their ship loader and expand their ore storage facility at the Port of Skagway to accommodate increasing ore shipping demands - including ore shipments from the Selwyn Mine (Pb/Zn).
- The Klondike IUH currently levies fees on industrial truck loads in excess of legal highway loads. Existing haul fees are set to recover the cost of capital investment and road maintenance for ore haul over the service life of the improvement.

Yukon Exploration Projects 2010

MAP FEATURES

- | | |
|---------------------------------|--|
| ○ communities | ▲ generating station diesel |
| ⊙ capital city | ■ hydroelectric |
| ⊡ deep water port | Transmission line |
| — primary highway | — <138 kv |
| — secondary highway | - - - Pelly-Stewart transmission project |
| — mineral claims staked in 2010 | — 138 kv |
| ■ mineral claims | Proposed infrastructures |
| □ parks - withdrawn areas | - - - 1942 surveyed railway route |
| | - - - pipeline route |

COMMODITY

- silver
- gold
- copper
- nickel +/- PGE
- lead/zinc
- tungsten
- molybdenum
- uranium
- REE
- iron

DEPOSIT TYPE

- ⊕ iron oxide breccias/vein
- ▲ mafic/ultramafic associated
- mississippi valley type
- porphyry/sheeted vein
- ◇ sediment associated
- ◇ skarn/replacement
- ◇ vein/breccia
- ▽ volcanic associated
- industrial minerals

* indicates project which was drilled in 2010
 advanced projects (>\$100k in expenditures) are large labelled symbols
 early stage projects (<\$100k in expenditures) are small unlabelled symbols

December 2, 2010

