Estimating Ambler Road Construction, Maintenance, and Financing Costs

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January 2026

Executive Summary

The Ambler road project would construct a proposed 211 mile access road connecting a potential Ambler Mining District to the Dalton Highway approximately 200 miles north of Fairbanks. The 2024 *Ambler Road Final Supplemental Environmental Impact Statement*[2] (SEIS) updates the proposed road's cost estimates for the Alaska Industrial Development and Export Authority's (AIDEA) preferred route, Alternative A, from the 2020 *Ambler Road Final Environmental Impact Statement* (FEIS).[3]

This report updates the SEIS's cost estimates to first quarter (Q1) 2025 values using the U.S. Department of Transportation's and the Bureau of Labor Statistics' widely accepted inflation indexes for road construction. These updates show that construction costs would be $765.2 million, closure/reclamation costs would be $88.4 million, and maintenance costs would be $12.6 million per year for 50 years or at least $630 million. These updated construction, closure/reclamation, and maintenance cost estimates result in a combined cost of $1.484 billion for the road (not including financing costs).[4] Because AIDEA expects to issue revenue bonds to finance road construction,[5] however, the proposed road's construction costs ($765.2 million) would increase by $549.9 million in financing costs, resulting in a total cost of $2.034 billion.

Figure ES-1 shows the Ambler road construction cost when including its different components.

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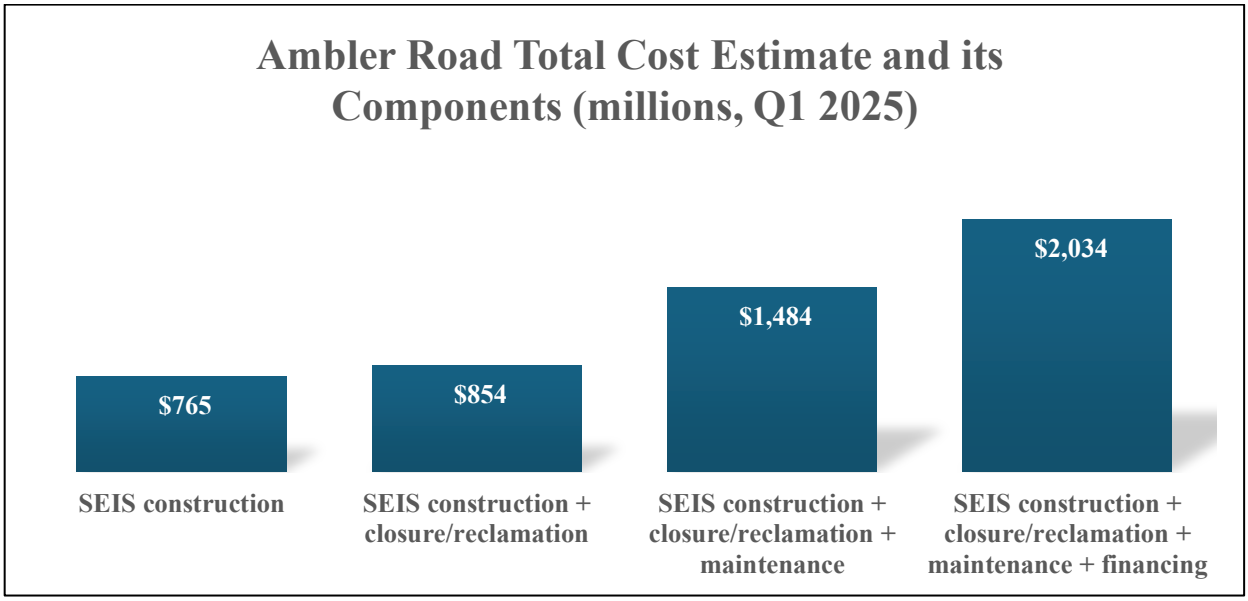
[2] Bureau of Land Management. (2024, April). *Ambler Road Final Supplemental Environmental Impact Statement: Vol. 1*. https://eplanning.blm.gov/public_projects/57323/200091317/20108427/251008427/Ambler-FinalSEIS_Volume1_508.pdf

[3] Bureau of Land Management. (2020, March). *Ambler Road Final Environmental Impact Statement: Vol. 1*. https://eplanning.blm.gov/public_projects/nepa/57323/20015364/250020506/Ambler_FEIS_Volume_1-_Chp_1-3_&__Appendices_A-F_.pdf

[4] While AIDEA expects some of this amount to be paid for through commercial user tolls, the mine developers have not committed to fully reimburse AIDEA and are likely to negotiate tolls that are as low as possible.

[5] SEIS, p. 2-11.

Figure ES-1



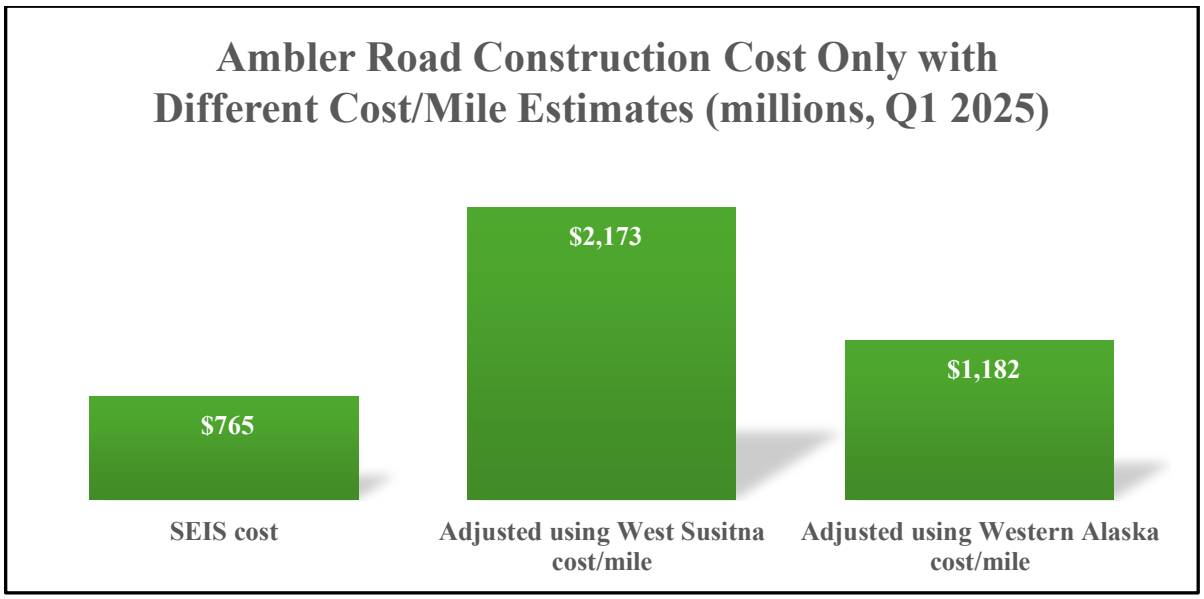
While this report's construction and maintenance cost estimates represent updated, inflation-adjusted values, they do not address potential deficiencies in the FEIS's original cost estimates. Thus, this report compares updated cost per mile estimates for the proposed Ambler road to cost per mile estimates for two other proposed roads with many similar characteristics, i.e., the West Susitna Access road and the Western Alaska Access road (the "road to Nome"). This comparative analysis results in an Ambler road construction cost estimate range of $765.2 million to $2.173 billion, not including maintenance and financing costs.

The high end of this range is nearly three times greater than the low end, i.e., the updated SEIS construction cost estimate of $765.2 million, indicating potential deficiencies in the SEIS estimate. One probable deficiency is that the proposed Ambler road requires three construction phases before it's complete compared to only one phase for the two other proposed projects; three construction phases would significantly increase the costs of equipment mobilization and personnel. With such a large construction cost range, and with the updated SEIS cost estimate representing the low end of the range, this report recommends a careful and comprehensive analysis of the accuracy of the proposed road's cost estimate.[6]

Figure ES-2 shows the large variance in Ambler road construction cost resulting from different cost per mile estimates for the two similar, proposed roads. Using the West Susitna Access cost per mile results in a Ambler road construction cost that is 184% higher; using the Western Alaska Access cost per mile results in a construction cost that is 55% higher.

[6] Details of the SEIS construction cost estimate are available in: Alaska Department of Transportation and Public Facilities. (2012, May). *Ambler Mining District Access: Summary Report*. Prepared by DOWL HKM. https://eplanning.blm.gov/public_projects/nepa/57323/98570/119366/02_App_2C_-_DOT_Summary_Report.pdf and Alaska Industrial Development and Export Authority. (2019, April). *Ambler Mining District Industrial Access Project: Summary Report Addendum*. Appendix A. Prepared by DOWL.

Figure ES-2


Ambler Road Construction Cost Only with Different Cost/Mile Estimates (millions, Q1 2025)
$765
$2,173
$1,182
SEIS cost
Adjusted using West Susitna cost/mile
Adjusted using Western Alaska cost/mile

I. Key Findings

Table 1 provides previous estimates of the proposed road's construction and maintenance costs.

Table 1
Previous Ambler Road Cost Estimates

Source	Construction Cost (millions)	Maintenance Cost (millions)
2020 *EIS* - construction[7]	$519.3	$9.2/yr
2024 *SEIS* - construction[8]	$672.4	$11.9/yr or at least $595 over 50 years[9]
2024 *SEIS* - closure/reclamation	$77.7[10]	Unknown
2024 *SEIS* - construction & closure/reclamation	$750.1[11]	>$595

Table 2 lists this report's updated cost estimates.

Table 2
Ambler Road Cost Estimates Updated to Q1 2025 Values

Source	Updated Construction Cost (millions)	Updated Maintenance Cost (millions)
2024 *SEIS* construction cost updated to Q1 2025 values	$765.2	$12.6/yr or at least $630 over 50 years
2024 *SEIS* closure/reclamation cost updated to Q1 2025 values	$88.4	Unknown
CONSTRUCTION COST WITH CLOSURE/RECLAMATION WITHOUT FINANCING	**$853.6**	**>$630**

According to the SEIS, "AIDEA indicates that no state General Fund dollars and no federal funds would be used for construction. AIDEA plans to issue revenue bonds as a principal tool to finance the construction of the project. These taxable bonds would be sold through private placements to various potential buyers (e.g., banks, investment funds, high-net-worth individuals, and others)."[12] If the entire $765.2 million construction cost is covered by a 30 year revenue bond at four percent interest, total interest paid for financing would be $549.9 million.

Total Cost of the Ambler road = Updated Construction Cost + Updated Maintenance Cost + Financing Cost

TOTAL COST OF THE AMBLER ROAD = $2.034 BILLION

[7] FEIS, p. C-4.
[8] SEIS, p. C-3.
[9] SEIS, p. 1-1.
[10] SEIS, p. C-3.
[11] SEIS, p. C-3.
[12] SEIS, p. 2-11.

Table 3 compares updated Ambler road construction cost estimates to updated estimates developed for the West Susitna Access and Western Alaska Access roads.

Table 3
Adjusted Ambler Road Construction Cost
Using Similar Roads' Cost Per Mile

Source	Construction Cost Per Mile Q1 2025 Values (millions)	Adjusted 211 mile Ambler Road Construction Cost (millions)
2024 *SEIS* ($765.2 million, 211 miles)	$3.6	$765.2
2014 *West Susitna Access Reconnaissance Study*[13] ($257.8 mill. - $452.3 mill., 33.5-108.0 miles depending on route)	$8.0-$12.6 (average = $10.3)	$2,173 (average)
2011 *Western Alaska Access Planning Study*[14] ($1.5 billion, 548 miles)	$5.6	$1,182

II. SEIS Estimate Limitations

The SEIS Ambler road cost estimates in Tables 1 and 2 contain the following limitations that result in underestimates of the proposed road's cost.

1. *AIDEA must pay for access to Alaska Native Corporation lands.* As stated in the SEIS, "All alternatives would cross many hundreds of acres of Native corporation lands."[15] Two Alaska Native Corporations, Doyon and NANA, would charge for the road right of way across their lands. As of the date for this report, AIDEA does not have an active access agreement with either corporation.

2. *The National Highway Construction Cost Index (NHCCI), which was used to update the construction cost estimates, does not account for state-specific* wages. Using the NHCCI underestimates road construction costs in Alaska because the index uses average U.S. wages. U.S. Bureau of Labor Statistics (BLS) data show that Alaska has 56% higher average weekly wages for private "[h]ighway, street, and bridge construction" during the most recent quarter of data available (Q1 2025) compared to the U.S. average.[16] This is the highest wage of any state.

[13] Alaska Department of Transportation and Public Facilities. (2014, Jan.). *West Susitna Access Reconnaissance Study: West Susitna Access to Resource Development.* Appendix D: Preliminary Cost Estimate. https://dot.alaska.gov/roadstoresources/assets/WSSARS/WestSusitna_TAR_w_Appendix.pdf Cost estimates in this appendix used the National Highway Construction Cost Index from 2013, adjusted if "a distinct trend emerged [that] made it possible to estimate the unit price as a function of the item quantity." (p. 5-23)

[14] Alaska Department of Transportation and Public Facilities. (2011, Dec.). *Western Alaska Access Planning Study: Corridor Staging and Alternatives Report.* Attachment A9. https://dot.alaska.gov/nreg/westernaccess/documents/corridor_staging_alternatives_report.pdf

[15] SEIS, p. C-13.

[16] U.S. Bureau of Labor Statistics. (2025, First Quarter). *Quarterly Census of Employment Wages: Employment and Wages Data Viewer*. Sort "Average Weekly Wage" from highest to lowest. Retrieved December 10, 2025 from

3. *Fisheries data not yet collected for the proposed Ambler road may show the need for additional, costly, bridges and/or culverts*. The fisheries data needed to design the road's culverts and bridges have not yet been fully collected. The SEIS states that "Additional field study would be necessary to identify all streams and other aquatic habitats in the study area and to determine potential fish use."[17]

4. *Costs will increase with inflation*. Construction and maintenance materials and wages will increase with inflation. Any cost estimate utilized by decision-makers ideally would reflect likely cost increases for Alaska (see Limitation 2, above).

5. *Unknown maintenance costs following closure/reclamation.* As stated in the SEIS, "no detailed reclamation plan has been developed and [AIDEA] does not intend to do so until close to road closure (in 50 years)."[18]

III. Methodology

Table 2 Results: This section describes the methodology utilized to obtain the updated cost estimates listed in Table 2. The construction cost used in this analysis is the "Construction plus reclamation – Total" of $750.1 million from the SEIS[19] listed in Table 1. To update the SEIS *construction cost*, this report uses the Federal Highway Administration's National Highway Construction Cost Index (NHCCI).[20] The NHCCI is the most appropriate and widely accepted index for updating U.S. highway construction cost estimates.

As of December 2025, NHCCI's Interactive Dashboard[21] shows:
3.167 is the value for Q1 2025 (the most recent estimate; these values are updated quarterly)
2.783 is the value for Q4 2022 (chosen because that was used in Table 1, Appendix C of the SEIS)

$750.1 mill. * 3.167/2.783 = $853.6 mill.

To update the SEIS *maintenance cost*, this report uses two Bureau of Labor Statistics (BLS) indexes, one for construction materials and one for construction wages. These two indexes are preferred over NHCCI for the maintenance cost update analysis because they separate out key components of the estimated costs, with wage increases likely to be significant for this project. After research examining the typical ratio of the two inputs in road building and maintenance, the analysis weighted the construction materials index at 60% and the wage index at 40%.

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https://data.bls.gov/cew/apps/table_maker/v4/table_maker.htm#type=0&year=2025&qtr=1&own=5&ind=2373&supp=0

[17] SEIS, p. 3-87.

[18] SEIS, p. 1-3.

[19] SEIS, Table 1, Appendix C. Note that in addition to updating for inflation, this table includes one additional maintenance station and changes in the number of bridges and culverts compared to Table 1, Appendix C from the FEIS.

[20] Federal Highway Administration. (n.d.). *National Highway Construction Cost Index (NHCCI)*. Latest NHCCI value shown is Q1 2025 (preliminary). Retrieved December 9, 2025 from https://explore.dot.gov/views/NHIInflationDashboard/NHCCI_1?%3Aiid=1&%3Aembed=y&%3AisGuestRedirectFromVizportal=y&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link

[21] *Ibid.*

Index 1. Construction materials for highways and streets index: Producer Price Index (PPI) Commodity data for inputs to highways and streets, excluding capital investment, labor, and imports, not seasonally adjusted.

BLS's Interactive Dashboard[22] shows:
151.333 for September 2025 (the most recent; these data are updated monthly)
146.177 for June 2023 (the date used for the cost estimate indexes except for NHCCI in Table 1, Appendix C, of the SEIS)

Index 2. Wages for construction index (not specific to highways and streets): U.S. Bureau of Labor Statistics, Employment Cost Index: Wages and Salaries: Private Industry Workers: Construction.

BLS's Interactive Dashboard[23] shows:
170.429 for Q2 2025 (most recent; this is updated quarterly)
157.200 for Q2 2023 (the date used for cost estimate indexes except for NHCCI in Table 1, Appendix C, of the SEIS)

(0.6 * $11.9 mill. * 151.333/146.177) + (0.4 * $11.9 mill. * 170.429/157.200) = $12.6 mill.

The updated maintenance cost of $12.6 million annually would apply for 50 years, resulting in a cost of at least $630 million since inflation is not included in this calculation. Because maintenance costs following closure/reclamation are unknown and inflation is not included, Table 2 lists the cost of maintenance as >$630 million.

As stated in the SEIS, "AIDEA plans to issue revenue bonds as a principal tool to finance the construction [not maintenance] of the project."[24] Revenue bond interest rates are based on market conditions, bond issuer credit rating, project risk, years to maturity, and other factors.[25] This analysis assumes a long-term bond of 30 years, a conservative but realistic municipal revenue bond interest rate of four percent,[26] and the full construction cost of the road covered by the bond. With these assumptions, interest payments would be $549.9 million.

The total cost of the proposed Ambler Road thus would be:

Total Cost of the Ambler road = Updated Construction Cost + Updated Maintenance Cost + Financing Cost

[22] U.S. Bureau of Labor Statistics. (n.d.). *BLS Data Viewer*. Retrieved December 9, 2025 from https://data.bls.gov/dataViewer/view/timeseries/WPUIP231231
[23] Federal Reserve Bank of St. Louis. (n.d.). *Employment Cost Index: Wages and Salaries: Private Industry Workers: Construction*. Source: U.S. Bureau of Labor Statistics via FRED. Retrieved December 10, 2025 from https://fred.stlouisfed.org/series/ECICONWAG
[24] SEIS, p. 2-11.
[25] For more information on state issued bonds to support private activity, see https://www.msrb.org/Education/Municipal-Bond-Basics-0
[26] As of December 9, 2025, FMSbonds, Inc. shows current interest yields of 4.15-4.65 percent. See https://www.fmsbonds.com/market-yields/

Total Cost of the Ambler road = $853.6 mill. + $630 mill. + $549.9

TOTAL COST OF THE AMBLER ROAD = $2.034 BILLION

Table 3 Results: This section describes the methodology utilized to develop an Ambler Road construction cost estimate range by comparing the proposed road's SEIS estimate to the Alaska Department of Transportation and Public Facilities' construction cost estimates for the proposed West Susitna Access and Western Alaska Access roads. These three gravel roads each are at least 100 miles in length, would pass through mountainous topography, would cross numerous fish-bearing waterways requiring costly bridges and culverts, would link to existing roads, and would have sections with underlying permafrost.

While these three proposed roads share key characteristics, no two roads are exactly comparable so the cost per mile will differ. For example, the cost estimates for the proposed West Susitna Access road are for a 24' wide road,[27] for the proposed Western Alaska Access road are for a 30' wide road,[28] and for the proposed Ambler road are for a 16'-32' road depending on the road phase.[29] Note that the proposed West Susitna Access road is far less remote than the other two roads yet it has the highest estimated cost per mile, indicating that there is wide variability in cost per mile estimations.

Table 3 shows the updated construction cost for Alternative A: $765.2 million, 211 miles. Dividing these two values results in a cost per mile of $3.6 million/mile. Table 3 displays the results of similar calculations for the proposed West Susitna Access (Q4 2013 value) and Western Alaska Access (Q3 2011 value) roads, with those values updated using NHCCI indexes to Q1 2025 values. The last column in Table 3 shows the cost per mile for these two roads multiplied by the 211 miles of the proposed Ambler road. This calculation results in a construction cost range for the proposed Ambler road of $765.2 million to $2.173 billion.

IV. Recommendations

Because the high end of the likely cost range for the proposed Ambler Road in Table 3 is nearly three times greater than the construction cost estimate in the SEIS and because two comparable proposed roads each have significantly higher costs per mile, there likely are meaningful deficiencies in the SEIS Ambler road construction cost estimate. The three construction phases of the Ambler road project likely warrant *higher* cost per mile than those estimated for the other two road projects, not a value at the low end of the cost range.

Recommendations: This report recommends:

1) A detailed, comprehensive analysis of the accuracy of the proposed road's total cost estimate before proceeding with construction. This analysis should be consistent to the maximum extent with cost analyses that have been performed on the proposed West Susitna

[27] Alaska DOT & PF. (2014). Appendix D.
[28] Alaska DOT & PF. (2011). Attachment A1.
[29] SEIS, pp. 2-8 – 9.

Access and the Western Alaska Access roads, including similar specificity for cost estimate line items.

2) When contractors develop more detailed cost estimates that would reevaluate the cost estimates for the proposed Ambler road, decision makers should review those new estimates and reassess whether the state should pursue the project.