BENEFIT-COST ANALYSIS NARRATIVE

The Benefit-Cost Analysis estimates that there will be more than $106.9 million in total benefits over the 20-year analysis period (undiscounted), resulting from the $30,700,000 investment. When evaluated on a discounted NPV basis (7.0 percent for all costs and benefits), the Project yields a benefit-cost ratio of 1.91 and a NPV of $15,667,421 (2024$). Benefits arise from various sources, including safety, ongoing maintenance cost savings, travel time savings, residual value and the value associated with health and amenity improvements. The proposed improvements will enhance safety for users of all transportation modes through Presque Isle, promote the use of non-vehicular travel, reduce road maintenance costs, and significantly improve the aesthetics and quality of life for both regional residents and visitors relying on the commercial district, including tourists. These enhancements will lead to an appreciable increase in residential and commercial property values in Presque Isle and the surrounding Aroostook County.

All savings are presented in 2024 dollars, and the Project is expected to start accruing full benefits in 2032, with the end of the 20-year analysis period set for 2051.

7.0% NPV Summary			
	Costs	**Benefits**	**Discounted**
Capital Cost	($25,716,383)		($17,172,681)
Operations and Maintenance		$3,210,118	$1,048,560
Safety		$14,310,000	$4,720,454
Travel Time Savings		$8,370,256	$2,761,105
Vehicle Operating Cost Savings		$0	$0
Emission Reductions		$0	$0
Amenity Benefits		$61,546,724	$20,302,478
Health Benefits		$5,178,732	$1,708,313
Residual Value		$14,286,880	$2,299,193
Total	**($25,716,383)**	**$106,902,710**	**$15,667,421**
Net Present Value	**$15,667,421**		
Benefit-Cost Ratio	**1.91**		

User Volumes

Vehicle Volumes

Since the project does not include any components to change the vehicular travel demand or mobility of the corridor, the annual vehicle trips for the Build and No Build Scenarios remain the same. The Annual Average Daily Trips for Route 1 in Presque Isle is 14,679. This is based on historical traffic count of 16,310 with 10 percent reduction to account for diversion to the Presque Isle Bypass currently under construction. Maine's Statewide Travel Demand Model Forecast for the area shows a small decrease in travel demand in Aroostook County, and travel counts in the region have seen small but steady declines in recent decades. For this analysis, we have assumed a zero percent growth rate in vehicle trips, because of the city's role as a service center for the region.

Pedestrian and Cyclist Volumes

Because of the city's rural nature, pedestrian and bicyclist volumes are not regularly tracked. As a part of the Feasibility Study that guided this Project design, traffic engineers collected pedestrian and bicyclist volumes at the critical intersection of Main Street and State Street. These volumes are used as the basis for the No Build scenario assumptions. The No Build, warm day, daily pedestrian volume is 1,735, and the warm day, daily cyclist volume is 174. We assume that the warm day trips apply to 182.5 days per year, and that the cold day trips, also 182.5 days per year, see a 50 percent drop in pedestrian and cycling volumes.

For purposes of the Benefit-Cost Analysis, Project engineers prepared a conservative estimate of one-time, 10 percent pedestrian and bicyclist volume growth due to the Project at time of Project completion. This includes induced non-motorized transportation from residents as well as expected growth at the nearby University of Maine at Presque Isle (UMPI) campus at the south end of the Project area. Of the currently enrolled students at the UMPI campus, 75 percent (524 students) commute via vehicle, walking, and cycling. Of the students who live on-campus, 40 percent (70 students) do not have a registered vehicle on campus. These figures are factored into the 10 percent growth assumption for pedestrian and bicyclist volumes but demonstrate how this assumption is very conservative.

BENEFITS

Net Operations and Maintenance Costs

A modest overall benefit to the Project is the reduction in maintenance required post-construction, achieved through reducing travel lanes, resurfacing roadways, and repairing sidewalks to address deficiencies. Cyclical paving treatments are assumed to occur every 12 years, and the BCA includes provisions for increased maintenance costs after each five-year period. The NPV of the net savings in the build vs. no-build scenario amounts to **$1,048,560**.

Safety

The safety benefits stemming from this project are calculated based on the assumption of the full elimination of crashes involving pedestrians and cyclists because of the new, grade separated shared-use paths, updated sidewalks, and the addition of crosswalks with three new Rectangular Rapid Flashing Beacons (RRFB). The calculated nominal annualized safety benefit is over $700,000 per year, resulting in an overall NPV of **$4,720,454.**

Travel Time Savings

The construction of the pedestrian bridge is conservatively estimated to reduce trip distances by 0.7 miles for 10 percent of existing pedestrian and cycling traffic. The travel time savings and then estimated based on standard BCA assumptions about pedestrian and cycling trip lengths and travel speed, as well as the hourly value of walking and cycling of $40.20 per hour. The calculated annual travel time savings benefit is over $418,000 per year, resulting in an overall NPV of **$2,761,105**.

Amenity Benefits

The new sidewalks and shared-use pathways will connect to existing infrastructure and are expected to significantly enhance the connectivity and quality of walking and cycling amenities throughout the project area. Benefits were calculated for both existing and new users, with benefits for induced trips reduced by half. The NPV of these amenity benefits for pedestrians and cyclists is **$20,302,478.**

Health Benefits

The new pathways are expected to increase pedestrian and cyclist activity throughout the project area. The NPV of the incremental induced pedestrian and bicyclist use in this benefit is **$1,708,313.**

Residual Value

Most project components are estimated to have a useful life of 45 years and the operational life for the BCA is assumed at 20 years. Residual value is calculated by linearly depreciating the total project cost (in constant 2024 dollars) by 45 percent (20 out of 45 years), with 55 percent of the value remaining. The NPV of the residual value is **$2,299,193**.

COSTS

Construction Costs

The capital costs of the Project are broken out by preliminary & final design, construction engineering, and construction costs over a period of 3 years (2029-2031). The analysis assumes an annual inflation rate of 3 percent per year to convert between year of expenditure dollars and constant dollars (2024 $). The total capital cost in constant dollars is $25,716,383 (2024 $) and the NPV of the overall project costs is **$17,172,681**.

SUMMARY

The improvements to the Route 1 corridor in Presque Isle, Maine is expected to have substantial benefits. The benefits and costs of these improvements were calculated using the BCA guidelines published in the December 2025 Benefit-Cost Analysis Guidance for Discretionary Grant Programs. Benefits to the corridor include safety improvements, travel time savings, reduced operation and maintenance costs, improved pedestrian and cyclist amenity quality, health benefits and residual value of infrastructure. The Project would produce a **benefit cost ratio of 1.91 and a NPV of $15,667,421 (2024$)**.