Sargent Creek
and Russian River
Bridges Planning Study

Memorandum

Date: 10/31/2025
Project Name: Kodiak Sargent Creek and Russian River Bridges PEL Study
To: Alaska Department of Transportation and Public Facilities
From: HDR
Subject: **Alternative Selection Criteria Memorandum**

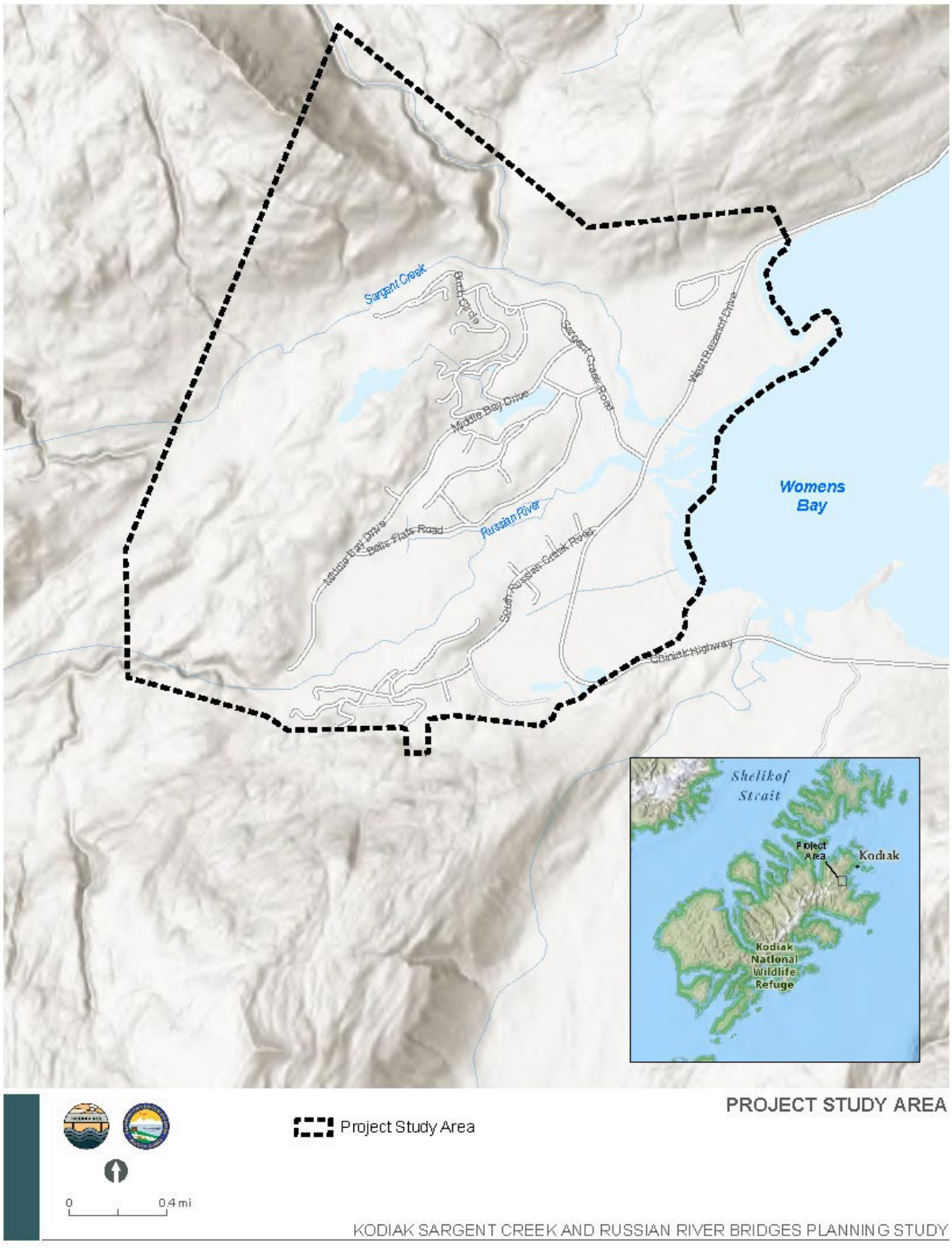
Background

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Kodiak Island Borough, is conducting a Planning and Environmental Linkages (PEL) Study to identify options for replacing bridge structures and investigating flooding associated with Sargent Creek and Russian River, near Womens Bay on Kodiak Island.

This *Alternative Selection Criteria Memorandum,* developed as part of the PEL study process, identifies the process and screening criteria to be used for completing alternatives screening that will lead to the selection of recommended alternative(s) for further consideration. The screening criteria were developed from the Kodiak Sargent Creek and Russian River Bridges PEL Study Purpose and Need Statement as well as in consideration for other goals and objectives for the project. The alternatives screening process will be conducted during a later phase of this PEL Study using the process described below. The results of this process may be adopted or incorporated by reference by the appropriate agency during a subsequent environmental review process. This memorandum is consistent with 23 United States Code 168 and 23 Code of Federal Regulations 450.212 and 450.318.

The study area is shown in Figure 1.

Figure 1. Study area



Alternatives Development and Screening Process

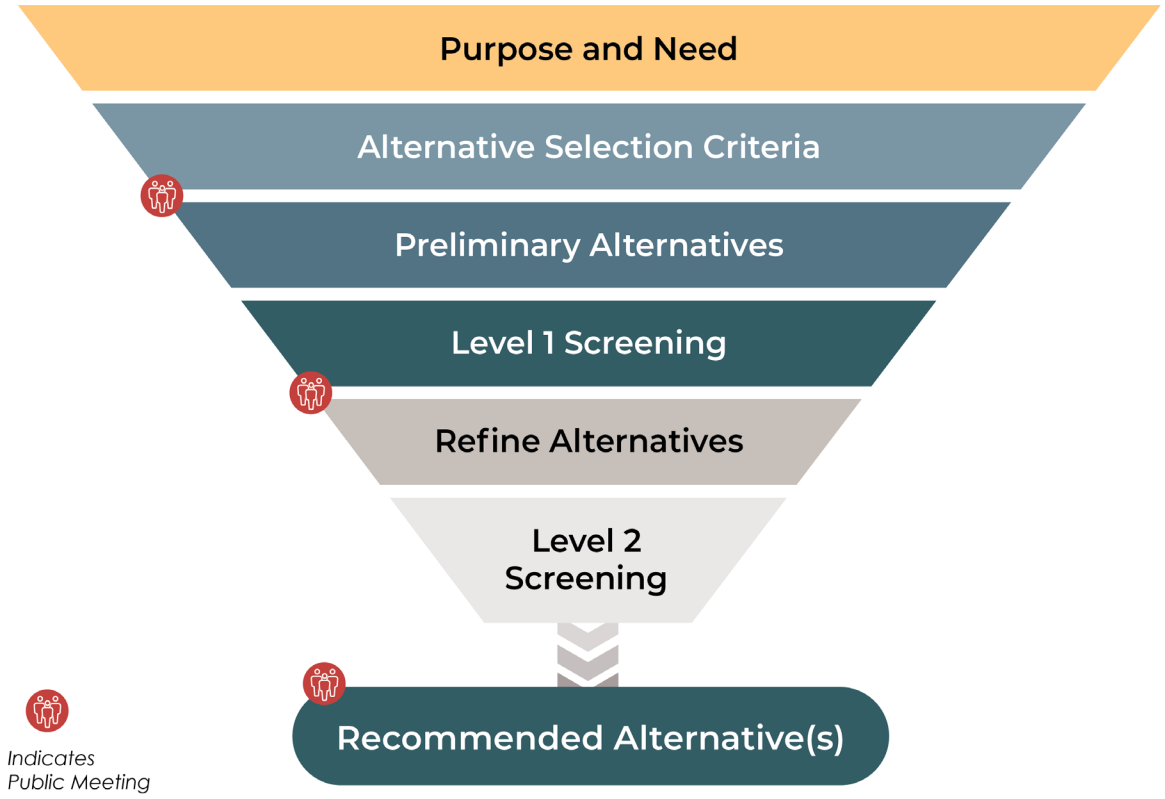
This PEL Study approach for developing and screening alternatives is consistent with federal Planning and Environmental Linkages guidance, and follows a systematic, transparent process to identify transportation solutions, that best address the project's Purpose and Need while considering technical, environmental, social and economic factors. The screening process evaluates the performance of alternatives using established criteria to determine whether it reasonably meets the Purpose and Need and is acceptable from technical, environmental, social, and economic perspectives.

The alternatives development and screening process includes the following steps:

- Develop the Purpose and Need Statement
- Develop alternative selection criteria
- Develop a range of alternatives
- Apply Level 1 screening
- Refine alternatives, as necessary
- Apply Level 2 screening
- Identify and document recommended alternative(s)

Figure 2 presents an overview of the alternative development and screening process.

Figure 2. Overview of the alternative development and screening process



Alternative Screening Criteria

The screening criteria are used to ensure that all alternatives under consideration are evaluated equally. The Level 1 screening evaluates how well each alternative under consideration meets the project's Purpose and Need Statement. The Level 2 screening evaluates how well those alternatives that pass Level 1 meet the project's goals and objectives. A No Action alternative is carried forward throughout the process to provide a baseline for comparison. The following sections discuss the two screening levels and the screening criteria in more detail.

Level 1 Screening

The purpose of the Level 1 screening is to determine if the alternative meets the project's Purpose and Need Statement.

PURPOSE

The purpose of this Planning and Environmental Linkages (PEL) Study is to identify a long-term and sustainable solution for replacing the Sargent Creek and Russian River bridges and to evaluate flood mitigation options for Sargent Creek Road.

NEEDS

The Project would address the following needs:

Replace two bridges that are in poor condition and have superstructure deficiencies

Alaska Department of Transportation and Public Facilities (DOT&PF) bridge inspections have found that both the Sargent Creek Bridge #0989 and Russian River Bridge #0990 have cracks in the concrete girders resulting in a "poor" superstructure rating. Both bridges are narrower than the adjoining Rezanof Drive roadway, in poor condition, and structurally deficient. The DOT&PF evaluated both bridges and determined that rehabilitation is not preferred because:

- The narrow width of the existing bridges would remain unchanged;
- Hydraulic capacity under the bridge would not be improved;
- Superstructure replacement of this type is not common practice in Alaska; and
- A detour bridge for construction would likely be required during construction, adding significant cost and logistical complexity.

Replacement of these two bridges would reduce the number of bridges in Alaska categorized as being in *poor* condition, reduce the total person miles traveled over bridges in poor condition, and improve compliance with current geometric design standards.

Reduce flooding in the Bells Flats and Russian Creek Subdivisions and on Sargent Creek Road

The community has expressed ongoing concern about repetitive flooding in the Bells Flat and Russian Creek Subdivisions as well as Sargent Creek Road, the only access route to and from these subdivisions. These subdivisions are located partly in the Sargent Creek and Russian River floodplains, upstream of the two bridges, and have experienced increased flooding and erosion of property and roads in recent years. Sediment (gravel) accumulation behind the bridges may be contributing to the flooding and channel instability upstream. Replacing these bridges to better align with flows, provide increased capacity to move water and sediment, and implement a sediment management plan, if needed, would help reduce the likelihood of these structures contributing to neighborhood and Sargent Creek Road flooding.

Improve safety, efficiency, and reliability for moving people and goods between Kodiak and the area beyond Womens Bay

The existing bridges on Rezanof Drive provide the only access between Kodiak proper and the communies (or subdivisions?) to the south. These bridges form an essential link for local businesses and serve a residential area of approximately 800 residents. They also provid access to recreational and subsistence areas that are important to the community. Loss of either bridge would pose a significant life and safety concern by limiting emergency response access and restricting the provision of critical services. In addition, these bridges do not have pedestrian or multimodal facilities, limiting safe access for non-motorized users.

LEVEL 1 SCREENING CRITERIA

The Level 1 screening evaluates if an alternative meets the project's Purpose and Need Statement. The general screening criteria will be applied to the initial set of alternatives

developed for the project. The flood management criteria will be based on a *Hydrology and Hydraulics Report* that is being developed by the PEL Study team to document existing river and floodplain conditions. The screening results will be quantified in terms of the performance measures shown in Table 1.

The results of the Level 1 screening, including identification of the alternatives recommended to advance to the Level 2 screening, will be documented in a *Level 1 Screening Report*. The draft report will be reviewed with the DOT&PF Statewide Environmental Office (SEO) and Stakeholder Working Group for concurrence prior to finalization.

Table 1. Level 1 screening criteria

Category	Criteria	Description	Measures
Technical Feasibility	Technical feasibility	Evaluates whether the alternative can be reasonably designed and constructed with available methods and within existing site constraints.	Yes/No
Flood Management	Flooding reduction	Estimates the frequency of flooding along Sargent Creek Road under each alternative.	High/Medium/Low
Flood Management	Hydraulic capacity of bridge opening	Evaluates the likelihood of floodwaters backing up upstream of the bridge during high-flow events.	High/Medium/Low
Operational	Multimodal accommodation	Determines whether the alternative can accommodate a 6-foot sidewalk or shared-use pathway to improve multimodal access.	Yes/No
Operational	Safety	Uses professional judgment to assess whether the alternative improves roadway and bridge safety for all users	Yes/No
Operational	Emergency vehicle access	Uses professional judgment to evaluate the degree of improvement in emergency response access (including neighborhood connectivity and bridge crossing reliability)	High/Medium/Low

Level 2 Screening

Alternatives that advance from the Level 1 screening will be refined to incorporate stakeholder and agency feedback, minimize environmental impacts, and improve constructability and feasibility. These refined alternatives will then be assessed against the Level 2 screening process to determine which alternative(s) should be recommended for advancement at the conclusion of the PEL Study. The Level 2 screening will consider other goals and objectives for

the project as well as the preliminary environmental impacts; The specific evaluation criteria and performance measures to be used are summarized in Table 2.

The No Action alternative will also be included in the Level 2 screening for baseline comparison.

Table 2. Level 2 screening criteria

Cost	Preliminary construction cost estimate	Evaluates the anticipated construction cost, and if it is reasonably attainable and appropriate in comparison to the other alternatives	High/Medium/Low
Cost	Preliminary annual maintenance cost estimate	Evaluates the anticipated annual maintenance cost, and if it is reasonably attainable and appropriate in comparison to the other alternatives	High/Medium/Low
Goals and Objectives	Improves active transportation and recreational opportunities	Assesses whether the alternative enhances active transportation (e.g. pedestrian and bicycle access) and recreational opportunities	Yes/No
Goals and Objectives	Accommodates parking lot/viewing area	Determines whether the alternative can reasonably accommodate a parking lot or viewing area	Yes/No
Goals and Objectives	Agency support	Evaluates whether the alternative is supported by participating agencies based on coordinated feedback	Yes/No

Goals and Objectives	Provides a 75-year service life	Uses professional judgment to determine whether the alternative is expected to meet a75-year design service life	Yes/No
Goals and Objectives	Improves flood resiliency	Assesses whether the alternative is expected to improve flood resiliency and reduce the risk of repetitive flooding	Yes/No
Goals and Objectives	Reduces project delivery cost and time	Determines whether the alternative can bedesigned and constructed within a timeframe of fewer than 4 years	Yes/No
Goals and Objectives	Minimizes construction impact on the community	Estimates duration of lane reductions or closures on Rezanof Drive and associated community impacts during construction	Months
Environmental	Land Use/Property impacts	Estimates number of parcels that would be affected by the alternative	Number
Environmental	Wetland impacts (acres)	Estimates acres of mapped wetlands impacted	Acres
Environmental	Stream impacts (linear feet)	Estimates the total linear feet of stream channel impacted by the alternative	Feet
Environmental	Section 4(f) impacts	Identifies whether the alternative would affect Section 4(f) properties (e.g.,	Yes/No

		publicly owned parks, recreation areas, wildlife and waterfowl refuges, or historic sites)	
Public Support	Level of public support	Uses professional judgment to assess the general level of public support based on community engagement and public comments	High/Medium/Low

The results of the Level 2 screening will be documented in the *Level 2 Screening Report*. The draft report will be reviewed by the DOT&PF SEO and the Stakeholder Working Group for concurrence prior to finalization.

Alternatives that advance from the Level 2 screening will be further refined (if necessary) and included in the PEL Study Report for consideration in future project development phases.

Identification of Recommended Alternative(s)

The process of identifying one or more recommended alternatives in a PEL Study is similar to the process used during the National Environmental Policy Act (NEPA) phase of a project. Factors to consider include ability to satisfy Purpose and Need (which includes safety and mobility improvements), direct and indirect environmental impacts, avoidance and minimization of effects on sensitive resources, and cost and overall feasibility of project goals.

An alternative identified as “recommended” in a PEL Study is considered reasonable and feasible, and is recommended for consideration as a preferred alternative(s) during subsequent NEPA and project development phases. An alternative that is “not recommended” will not be advanced further within the PEL Study because it provides comparatively lower benefits and/or higher impacts than other alternatives. However, such alternatives may be revisited or further evaluated during later NEPA or project development if new information or circumstances arise. An alternative identified as “eliminated” is one that does not meet the project’s Purpose and Need or is deemed unreasonable due to environmental impacts, engineering constraints, or overall infeasibility. The identification and rationale for the recommended alternative(s) will be documented in a future *Recommendations Report*.