

FY 2022 Passenger Ferry Grant Program, Electric and Low-Emitting Ferry Pilot, and Ferry Service for Rural Communities

Applicant and Proposal Profile

Is this a resubmission due to an invalid/error message from FTA? Yes No

Is this application for:

(If applying to two programs, please select both boxes)

- Passenger Ferry Grant Program (FTA-2022-006-TPM-FERRY)
- Electric or Low-Emitting Ferry Pilot Program (FTA-2022-007-TPM-FERRYPILOT)
- Ferry Service for Rural Communities Program (FTA-2022-008-TPM-FERRYRURAL)

If applying to more than one Ferry program, applicants should enter information for the applicable programs on this form but **Must** submit the application package including the Supplemental Form and attachments, to **Each** respective Opportunity ID on Grants.Gov. That is, complete one form, but submit it to each program in Grants.gov.

Section I. Applicant Information

Organization Legal Name:

FTA Recipient ID Number :

Organization Chief Executive Officer:
(Name and Direct Phone Number)

- Applicant Type: Designated or Eligible Direct Recipient of 5307 Urbanized Area Formula Funding
- State or Territory
- Local Governmental Authority
- A Federally-Recognized Indian Tribe

- Project Location: Large Urbanized Area (200,000+ people)
- Small Urbanized Area (50,000-199,999 people)
- Rural (less than 50,000 people)

Description of services provided and areas served:

The Alaska Marine Highway System (AMHS) serves 35 Alaska ports by transporting passengers and vehicles between coastal communities. This service helps meet the social, educational, health and economic needs of Alaskans. AMHS provides year-round scheduled ferry service throughout Southeast and Southwest Alaska, extending south to Prince Rupert, British Columbia and Bellingham, Washington. The system connects communities with each other, regional centers, and the continental road system. It is an integral part of Alaska's highway system, reaching many communities that would otherwise be cut off from the rest of the state and nation. AMHS also provides a coastal transportation alternative between Anchorage and the "Lower 48" states versus driving the Alaska Highway.

AMHS is designed to provide basic transportation services to communities; transportation that allows community access to health services, commodities, legal services, government services, and social services; transportation that meets the social needs of isolated communities; and transportation that provides a base for economic development. AMHS service is divided into two major systems: the Southeast System (from Bellingham north to Yakutat) and the Southwest System (from Cordova west to Unalaska). The Alaska Marine Highway fleet consists of 9 vessels; six operate in the Southeast System and three operate in the Southwest System. All 9 vessels are designed to carry passengers and vehicles ranging in size from motorcycles to large freight container vans. Trips on AMHS can last

several hours or several days, so passenger services are an important aspect of the state’s transportation service. Most vessels provide food service, shower facilities, observation lounges, and recliner lounges. The larger vessels provide additional amenities, including play areas for children. Four vessels have stateroom accommodations for overnight travel.

One regular use of AMHS is the year-round transportation of container vans. These vans transport time-sensitive cargo such as fresh vegetables, meat, and dairy products from Bellingham and regional Alaska centers to communities served by the system. Local restaurants, grocery stores, individuals, and food distribution businesses have established delivery schedules with AMHS to ensure regular and continuous delivery of perishable goods. Shipping perishable supplies on AMHS is more cost-effective than air freight, and in many cases ensures delivery to communities on a more frequent basis than commercial barge and freight lines. Vans are also used to move fresh Alaska fish and seafood to markets, and to transport U.S. mail and household goods.

The Southwest system serves Prince William Sound, the Kenai Peninsula, Kodiak Island, and the Aleutians. The MV Tustumena provides regular service between Kodiak, Port Lions, Seldovia and Homer. The Southwest routes connect to the continental road system at Valdez, Whittier, and Homer, Alaska. The MV Kennicott provides regular cross gulf sailings. These sailings connect Southeast Alaska with the Southcentral and Southwest regions of the state. The Southeast route is divided into two subsystems: the “mainline” routes which typically take more than one day for the ship to travel and shorter routes where vessels depart their home port in the morning, travel to destination ports and then return to their home port on the same day. The mainline routes carry a high percentage of tourists and vehicles in the summer, and provide service between Bellingham, WA or Prince Rupert, BC, and Skagway or Haines, Alaska. Along the way, the ships stop in Ketchikan, Wrangell, Petersburg, Sitka, Juneau, and Haines. Although Kake and Hoonah are smaller communities, they are also served by certain mainline sailings. The day boat routes connect the smaller communities to regional hub communities for commerce, government, health services, and connections to other transportation systems.

Section II. Project Information

About the Project

Project Title: Cultivating a Systems Approach to Sustainable Transportation by implementing Climate Responsive Ferry Vessel Options
(Descriptive title of this project)

Project Executive Summary:

The United States and the world face a profound climate crisis; Alaska is at the forefront of its impacts, experiencing change at twice the national rate. Federal infrastructure investment through the Infrastructure Investment and Jobs Act (IIJA) provides an opportunity to reflect and rebuild in ways that support our communities by mitigating the worst damages of climate change while advancing environmental justice. Funds from the FTA’s Low-No Ferry Program will be leveraged by the Alaska Department of Transportation & Public Facilities (DOT&PF) to modernize the Alaska Marine Highway System (AMHS) with the purchase and deployment of an electric ferry and associated charging infrastructure.

This project is needed to improve and sustain service to help meet the social, educational, health and economic needs of Alaska communities that are relatively short distances from each other (less than 4 hours) while demonstrating a decarbonized solution for this essential form of transportation in varied Alaska weather, sea states, and routes. The electric ferry is intended to shuttle passengers and vehicles between rural communities, rotating through low mileage (16 miles) routes and replacing/augmenting less efficient vessels that serve: 1) Ketchikan/Saxman to Annette Bay/Metlakatla, 2) Haines/Klukwan to Skagway, and 3) Homer to Seldovia. One of each pair of communities can be considered disadvantaged, the majority are Tribal, and all are rural.

DOT&PF has completed extensive research to arrive at vessel solutions that lower carbon emissions and are scalable to reducing emissions entirely. At the same time, five of six route locations utilize hydropower for the majority of their electric needs, and low/no emission shoreside power will complement the overall mitigation efforts of the State.

Project Statement of Work (one sentence summarizing request):

DOT&PF requests \$46,214,008 to construct an electric ferry to improve and sustain essential transportation services to rural port communities, demonstrate innovative approaches that increase efficiency, decrease emissions, promote transportation sustainability, and increase grid resilience while improving the overall sustainability of Alaska’s ferry system.

Will you need a Buy America waiver? Yes No

- Propulsion Type:
- Battery electric
 - CNG
 - Diesel
 - Diesel-electric hybrid
 - Electricity (including electricity from solar energy)
 - Fuels (except alcohol) derived from biological materials
 - Gasoline
 - Hydrogen
 - Liquefied petroleum gas
 - Methanol, denatured ethanol, and other alcohols
 - Natural Gas
 - A mixture containing at least 85% of methanol, denatured ethanol, and other alcohols by volume with gasoline or other fuels
 - Any other fuel that is not substantially petroleum and that would yield substantial energy security and environmental benefits

If other fuel, specify:

Other

If Other, specify:

- Project Type:
- Facility Rehabilitation
 - Facility Replacement
 - New Facility (expansion)
 - New Vessel (expansion)
 - Number of vessels for service expansion:
 - Vessel Rehabilitation
 - Number of vessels to be rehabilitated:
 - Vessel Replacement
 - Number of vessels to be replaced:
 - Related Equipment
 - Operating (Rural Program Only)
 - Planning (Rural Program Only)
 - Other

If Other, specify:

Climate Change

Please describe the significant community benefits relating to the environment (see NOFO section E.2):

This project mitigates climate change by reducing emissions, and includes environmental justice and DOT's Historically Disadvantaged Community Tool in its planning. Over 416,000 kg CO2 may be saved annually, and more from avoided diesel engine dock run time. Benefits extend to noise and fuel spill reduction. Local/regional climate action plans call for efficient transportation, and the State is developing a Sustainable Transportation Program and drafting a transportation equity plan.

Environmental Justice Populations

Is there an environmental justice population(s) located within the service area? Yes No

Describe the environmental justice population(s) and the anticipated benefits resulting from the project for those population(s) (see NOFO Section E.2):

Ketchikan/Saxman has high exposure rates to diesel particulate matter, ranking in the 79th percentile for Alaska, 98th for the EPA region, and 62nd for the county. Metlakatla's EJ indices show it is in the 76th percentile for exposure to diesel particulate matter and air toxics cancer risk. Metlakatla has socioeconomic indicators associated with high potential susceptibility to environmental factors that lead to negative health outcomes, including high percentages of people of color (87%), low income (38%), and unemployment (38%). Klukwan, served through Haines, and Saxman served through Ketchikan, are Tribal and considered disadvantaged under J40. Seldovia is considered disadvantaged by J40, and the City of Homer ranks relatively low in the Environmental Justice Indicators compared with other communities in the state, EPA region, and nation. All communities served by the project are considered rural, and difficult to develop by HUD.

Racial Equity/Barriers to Opportunity

Does the project address racial equity or barriers to opportunity (see NOFO Section E.2)? Yes No

If yes, please describe:

This project promotes racial equity and removes barriers to opportunity. The AMHS is at the heart of Alaska’s equitable approach to ensuring the benefits of affordable transportation. This publicly subsidized system ensures that coastal communities (the majority of which are considered disadvantaged) have high costs and limited service mitigated. Coastal communities’ land use policies and housing take into account distance from the ferry terminal and dock access. The State’s sustainable transportation program and future transportation equity plan take into account the AMHS. The projects proactively advances racial equity and addresses a barrier to opportunity by ensuring reliable service, which might be reduced otherwise. All project costs are considered investments in addressing racial equity or removing barriers to opportunity, especially to the extent they contribute to improving the socio-economic and health status of the disadvantaged communities served.

Creating Good-Paying Jobs

Applicants for facility projects, please describe how the project will support creating good paying jobs (see NOFO section E.2):

DOT&PF contracts implement equity-focused policies and labor standards related to all phases of contracting and construction and requires payment of Davis-Bacon wages when applicable. For communities with few opportunities, AMHS provides good career jobs. AMHS employees are represented by three unions. 95% of AMHS employees are residents of 44 communities. Contractors are required to seek out minority and local hires and fully utilize any training programs in the area.

Justice40

Does the project support the Justice40 Initiative? Yes No

Describe how the project supports the Justice40 Initiative and the benefits provided (see NOFO Section E.2):

The project will support the Justice40 Initiative by strengthening the resiliency of a vital transportation system in the face of extreme impacts from climate change and by connecting disadvantaged rural communities to commerce, health and social services, and providing an affordable, climate-conscious way to bring food and other goods and services in. Communities served by the lower emission ferry are without reliable and affordable transportation otherwise, given harsh climate and remoteness, which speaks to environmental justice. Transportation planning in Alaska accounts for both environmental justice and climate change, and this project includes design components that result in greater efficiency and contribute to climate change mitigation. Resilience to climate change in the transportation network is particularly important in Alaska, where climate change puts much of the state at increased risk. The AMHS has also been integrated into the state's emergency response system.

Describe the methodology used to determine the project meets the Justice40 Initiative (see NOFO Section E.2):

Many of the datasets in the Justice40 screening tool are not complete for Alaska, or use data that is not always applicable. The Climate and Economic Justice Screening Tool lists a number of communities in high percentiles. Every community is listed as a Medically Underserved area by the EJSCREEN tool. 15 of the 35 served communities on the AMHS route are considered Tribal or Disadvantaged, though other datasets (e.g., USDA or HUD) would consider all communities served as Tribal and additional communities as Difficult Development Areas or climate-impacted. Climate Action Plans at the local and regional level have

identified emission reduction as a goal. The EJSCREEN does not report information for the Haines and Skagway region, nor Seldovia, stating that the area exceeds the size or is too complex for reporting.

Justice40 Population Impacted

Justice40 Disadvantaged Community Served as Identified in the NOFO Section E.2

Actual or Estimated Annual Ridership Count

Ketchikan (Saxman)	13,295
Haines (Klukwan)	21,035
Seldovia	6,356

What is the percentage of Disadvantaged Communities within the project area? %

Was this estimate generated using the Justice40 online mapping tool? Yes No

Project Budget

Description	QTY	Federal Amount Requested	Federal Match Amount	Other Federal Funds	Other	Total Cost
Construction	1	37,440,000	9,360,000	0	0	46,800,000 <input checked="" type="checkbox"/>

Description	QTY	Federal Amount Requested	Federal Match Amount	Other Federal Funds	Other	Total Cost
Planning Cost	1	3,744,000	936,000	0	0	4,680,000 <input checked="" type="checkbox"/>

Description	QTY	Federal Amount Requested	Federal Match Amount	Other Federal Funds	Other	Total Cost
Contingency 5%	1	2,059,200	514,800	0	0	2,574,000 <input checked="" type="checkbox"/>

Description	QTY	Federal Amount Requested	Federal Match Amount	Other Federal Funds	Other	Total Cost
ICAP 6.87%	1	2,970,808	742,702	0	0	3,713,510
Total:		46,214,008	11,553,502	0	0	57,767,510

Operating Support (Rural Program Only)

Rural Ferry Program applicants requesting operating assistance should complete the following based on the applicant's fiscal year.

	A. Total Operating Cost**	B. Operating Support Provided by the State	C. Fares and Other System Generated Revenues	D. Other Funding Sources*	
2017					
2018					
2019					
<i>Anticipated*</i>					Amount Eligible to Apply
2023					
2024					

*do not include funds anticipated through this application

** Column B+C+D=A for 2017-2019

2017-2019 Average Operating Support Provided by the State or locality:

75 Percent (minimum that must be provided) of 2017-2019 Average Operating Support Provided by the State or locality:

Matching Funds Information

Matching Funds Amount:

Source of Matching Funds:

The State of Alaska DOT&PF is the source of non-federal matching funds. These funds are currently available and have been appropriated to the project. DOT&PF is committed to this match due to the disadvantaged status of AMHS-served communities, as described below.

Disadvantaged Community Status:

The communities of Sand Point, False Pass, Akutan, Chenega, Tatitlek, Seldovia, Saxman, Ouzinkie, Chignik, Kake, and Metlakatla are all federally recognized Alaska Native Villages and therefore have Disadvantaged Community Status.

Environmental Factors:

Environmental data is from the EJScreen Tool and the Climate and Economic Justice Screening Tool. Many communities on AMHS routes face environmental and climate change challenges. Expected population loss rate is high for the following communities: Sand Point, Cold Bay, False Pass, and Akutan are at the 83rd percentile. Klukwan is at the 99th percentile. Homer is at the 81st percentile. Seldovia is at the 98th percentile. Ouzinkie is at the 89th percentile. Chignik is at the 99th percentile. Yakutat is at the 92nd percentile.

Diesel particulate matter exposure is high in Ketchikan and Kodiak, where one census tract in each community is at the 99th percentile. Five communities have high proximity to Risk Management Plan (RMP) facilities: Unalaska at the 92nd percentile, Cordova at the 87th percentile, Ketchikan at the 91st percentile in one census tract and 98th in another, Kodiak in three census tracts (81st percentile, 98th percentile, 99th percentile), and Sitka at the 81st percentile in one census tract.

Health Factors:

Twenty-five communities are in Medically Underserved Areas according to the EJSscreen tool: Ketchikan, Saxman, Wrangell, Kake, Juneau, Haines, Klukwan, Skagway, Cordova, Valdez, Whittier, Chenega, Tatitlek, Yakutat, Kodiak, Homer, Seldovia, Ouzinkie, Chignik, Sand Point, King Cove, False Pass, Akutan, and Unalaska. EJSscreen lists four communities in food deserts: Wrangell, Kake, Klukwan, and Chignik. Other health data came from the Climate and Economic Justice Screening Tool. Four communities on AMHS routes have high rates of asthma among adults, with Klukwan at the 91st percentile, Ouzinkie at the 85th percentile, Chignik at the 93rd, and Metlakatla at the 93rd percentile. Two communities have high rates of both diagnosed diabetes and coronary heart disease among adults: Klukwan is in the 92nd percentile for diabetes and the 96th for heart disease and Metlakatla is in the 94th percentile for diabetes and the 83rd percentile for heart disease. One census tract in Juneau is in the 92nd percentile for low life expectancy.

Socioeconomic Factors:

Socioeconomic data is from the Climate and Economic Justice Screening Tool. Klukwan is in the 90th percentile for low median household income as a percent of area median income, Chignik is in the 88th percentile for the same metric and one census tract in Ketchikan is in the 80th percentile. Four census tracts along AMHS routes are at the 80th percentile or above for linguistic isolation: one census tract in Ketchikan is at the 80th percentile, two census tracts in Kodiak are in the 80th percentile and one census tract in Kodiak is in the 85th percentile. Four communities have very high unemployment rates: One census tract in Ketchikan is at the 85th percentile, Ouzinkie is at the 93rd percentile, Chignik is in the 95th percentile, and Metlakatla is in the 97th percentile.

Supporting Documentation of Local Match:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is the State Transportation Agency that plans, designs, constructs, maintains, and operates transportation infrastructure in the State of Alaska. DOT&PF has a proven track record of utilizing FHWA formula funds, through surface transportation grants, and constructing maritime infrastructure in support of the operations of AMHS, which is a division of DOT&PF.

DOT&PF is committed to the long-term sustainability of the AMHS. The addition of a low/no emission shuttle to the AMHS fleet is a critical component of future-proofing an essential service for Alaska communities, which serves as a lifeline for many. This addition will improve quality of service to rural and disadvantaged communities, lead to greater operational efficiency and cost savings, and the improve the health and safety of residents and mariners.

The total project cost is \$57,767,509. Through the Low/No Emission Ferry grant program, the State is requesting \$46,214,08 which is 80% of the total eligible project cost. The State of Alaska commits to contributing twenty percent (\$11,553,502) of the total eligible project cost towards this critical State need. This is equivalent to 20 percent of the Low No Emission Ferry Program grant request.

DOT&PF undertakes this project as a sponsor and experienced project manager building a sustainable Alaska Marine Highway System.

DOT&PF has included its match commitment and local letters of support in Appendix C. All project documents are located at <https://dot.alaska.gov/amhob/strategy.shtml> under Item 1.4 "IJA Funding and Discretionary Grants." Appendix A provides maps and routes for the AMHS, and Appendix B is a Technical Volume providing any condition reports or implementation plans.

Project Scalability

Is Project Scope scalable? Yes No

If Yes, specify minimum Federal Funds necessary:

Provide explanation of scalability with specific references to the budget line items above:

Scaling this application is not ideal, as it threatens the opportunity for the State of Alaska to contribute to climate change mitigation efforts through the reduction of greenhouse gases, and delays improved service to communities that are counting on it. Without this project's quick implementation to full construction, communities may be faced with no service in future years as the rest of the fleet

is positioned elsewhere and facing increased maintenance and replacement needs. Many of the potential sites this shuttle could serve are predominantly on Tribal lands or serve Tribal populations, and are considered disadvantaged.

Scaling this project back calls into question the viability of this efforts and means these communities have to come to grips with an uncertain future, even as the State works to move forward with what it can with limited resources.

With that in mind, USDOT could choose to scale back the project to focus on design only, for both the vessel and shoreside infrastructure, leaving construction to a future award. The total for that request would be approximately \$4 million, with the State committing \$1 million in match. DOT&PF would then apply in the future for federal funds to complete the project through construction, within a narrow window of time before planning, design, and engineering must be redone.

Project Timeline (Please be as specific as possible)

Timeline Item Description

Timeline Item Date

Funds Obligated	01/01/2023
Preliminary Vessel Design	04/01/2023
ATP to Final Design	10/01/2023
Final Design	01/01/2024
ATP to Construction	01/01/2024
Construction Award	10/01/2024
Construction Complete	10/01/2025

Congressional Districts (Project Location)

Congressional District

AK-001

Section III. Evaluation Criteria

***** Address each of the evaluation criteria as described in the Notice of Funding Opportunity. *****

Demonstration of Need

The Alaska Marine Highway System provides essential transportation to 35 of Alaska's coastal communities stretching from Metlakatla, north to Prince William Sound and the Kenai Peninsula, and west to the Aleutian chain. With only five of these communities connected to Alaska's road system, AMHS provides a critical transportation link for Alaska residents and businesses, as well as for nonresidents visiting our state. A strong ferry system is essential to regional economic development, quality of life, and community well-being. The AMHS provides access to health care, shuttles workers to their jobs, carries visitors, connects markets and customers, and allows fishermen to move seafood to markets. It moves freight, building materials, and machinery to support local development. It supports social and cultural connections and is relied upon for food security. Transportation connectivity for Alaska's marine highway connected communities has long been identified as the most vulnerable element of the regional economy. The age and condition of the AMHS fleet has required extensive overhaul and maintenance, even as lack of available resources has resulted in deferred and reduced maintenance, which has led to ships being removed from service.

AMHS has worked diligently to keep its fleet operational as its structure, machinery, and outfitting have aged, up to and including multimillion-dollar refurbishments of vessel. Nevertheless, especially for older vessels, structural and mechanical issues in this period of the vessel's life are widespread. These issues affect the vessel's capabilities as well as its reliability; due to structural issues, each vessel's service has been limited, and the vessel's planned maintenance periods frequently reveal structural and mechanical issues that require longer stays in the shipyard and higher costs than expected. The vessels that this new low emission ferry could potentially replace - but is planned to augment - include the Lituya (2004), Kennicott (1998), or Aurora (1977). The latter is currently out of service due to age and condition.

The International Maritime Organization is implementing new air emission and efficiency requirements for existing ships. These regulations, called the Energy Efficiency Existing Ship Index (EEXI), enter into force on January 1, 2023, and will apply retroactively to all SOLAS ships. These regulations involve calculating an "attained" EEXI number for the existing vessel that scores efficiency improvements instituted on a vessel against a baseline for that vessel. The regulations mandate a minimum factor of improvement over the baseline, varying by vessel type. These minimum factors increase over a series of phases, culminating in a final phase from January 1, 2025, onwards. The AMHS fleet is being rehabilitated with SOLAS in mind, with existing ships needing extensive work to comply.

The current number of vessels serving proposed routes are inadequate to meet the ridership demands of these communities, if maintenance needs are taken into account. It is worth noting that each time a vessel enters a maintenance or overhaul period, whether drydocked for intensive capital expenditures or tied up pier-side for smaller scopes of work, there is a high risk of delays, change orders, and increased work scope due to the discovery of additional structural or mechanical issues during planned maintenance. Delays due to discovery work can keep a vessel in the shipyard or tied up at the pier for longer than expected, especially if the discovered issues are severe enough to trigger a USCG no-sail order until they are remediated. This, in turn, reduces the level of service each can provide to the communities they serve. A new vessel added to the inventory will better support ridership by being positioned to augment current capacity and fill holes when current vessels are under repair.

Demonstration of Benefits

Note: If applying to more than one program, be sure to select "yes" and provide a response to the applicable questions below.

Is this an application to the Passenger Ferry or Rural Program? Yes No

Please describe the benefits of the proposed project per the statutory requirements of the Ferry or Rural Programs (see NOFO Section E(1)(b)(ii)):

Is this an application to the Low-Emitting Program? Yes No

Please describe the benefits of the proposed project per the statutory requirements of the Low-Emitting Program (see NOFO Section E(1)(b)(ii)):

The project fulfills the statutory requirements of the Low-Emitting Program: Safety - Existing ferries are decades old with numerous safety concerns. State of Good Repair - The latest fleet condition report refers to 35 recommendations for the Lituya, 9% were in the high category for urgency and cost. Provide Options - The new vessel will be interoperable between routes. Improve Quality - Underserved communities rely on AMHS to access essential goods and services, with few other affordable options. Support Passengers - Metlakatla to Ketchikan/Saxman, 17,392 passengers / 5,102 vehicles; Haines/Klukwan to Skagway 2,488 passengers / 1,280 vehicles; and Homer to Seldovia, 8,398 passengers / 478 vehicles. Reduce Particulates - The proposed vessel will be electric, without emission of particulates or other pollutants, and shoreside power mainly hydroelectric. Reduce Emissions - Over 416,000 kg CO2 may be saved annually, and more from avoided diesel engine dock run time.

Planning and Local / Regional Prioritization

This project is supported by regional Comprehensive Economic Development Strategies (CEDS) and local Comprehensive Plans. Numerous support letters have been provided by impacted communities. This project is consistent with State plans. It is not included in Alaska’s STIP, but the DOT&PF will add the project through amendment before grant award if successful.

Consistent with Regional and Community Plans:

Southeast Conference’s CEDS stresses that a strong ferry system is essential to regional economic development, quality of life and community wellbeing in Southeast Alaska. Their priority transportation objective is to minimize impact of budget cuts to AMHS and develop sustainable operational model. This objective includes: Design a new strategic operating plan for AMHS, Lower State’s general fund subsidy percentage, Fleet Renewal Plan, and AMHS Value Outreach. Skagway is the northern terminus of Southeast Alaska’s part of the AMHS, and has a long tradition of advocating for consistent ferry service. Their Comprehensive Plan notes that the ease and cost of resident travel are negatively affected when ferry service is down, especially in the winter. Haines Borough’s Comprehensive Plan calls for ongoing advocacy for daily summer and frequent winter AMHS ferry stops in important for tourism and residents.

Kenai Peninsula Economic Development District’s CEDS highlights disruptions to marine travel as being a key challenge for the region. The ferry service provides critical passenger connections and transporting goods between the Kenai Peninsula and southwest and southeast Alaska. Seldovia depends on the AMHS for scheduled trips to accommodate freight, vehicles, and passenger travel to and from Homer and the Sterling Highway. Seldovia’s Comprehensive Plan’s goal is to retain, safe, well-timed, water-based transportation options, namely by cooperating with the State of Alaska to improve AMHS service for all users. Consistent with DOT&PF Strategic Planning and AMHS Prioritization.

Sustainable Transportation Program:

DOT&PF’s draft Long Range Term Plan “Alaska Moves 2050” drives strategic goals for the DOT&PF family of plans. Focus areas impacting AMHS are identified to make progress toward the long-term strategies, including Sustainability. DOT&PF Strategic Themes (and the respective AMHS Focus areas) include: Safety (Vessel Repair); State of Good Repair (Preservation and Maintenance of Terminals and Vessels); Economic Vitality (New Service Vessels, New Terminals); Resiliency (Fleet Modernization, Vessel Replacement, Terminal Upgrades); Sustainability (Vessel Hybrid Conversion, terminal Electrification, Electric Shuttle Ferry Construction, Energy Efficient Operations Strategies); Mobility/Access (Increased Service, ADA accessibility). Developing sustainable transportation infrastructure involves a multi-modal lifecycle approach that considers environmental quality, economic development, and social equity.

Ferry-related Focus Areas.:

Sustainable Transportation Research: FHWA Low-No Emission Ferry Research, Renewable Diesel Research, and Automation through Digitization; AMHS Fleet Modernization: Tustumena Replacement Vessel Construction, Low-No Emission Shuttle Ferry Construction, Shoreside Charging, Ferry Retrofits; Statewide Equipment Fleet Modernization: Statewide Fleetwide Modernization and Rolling Stock Electrification.

Modernization Topics.:

Low-Cost Transportation: Alternative Energy Corridors EV Infrastructure, Port Parking Community EV Infrastructure; Energy Efficiency: DOT&PF Facilities Energy Efficiency Upgrades, LED Streetlight Conversions; Healthy Environment: Tracking Transportation Emissions, Cruise Line and Port Facilities Electrification; Equitable Transportation: Promoting equity within and between successive generations.

Sustainable Transportation Program Goal.:

Help communities thrive through transportation investments that promote independence, efficiency, low-cost transportation, and a healthy environment.

Local Financial Commitment

The Alaska Department of Transportation and Public Facilities (DOT&PF) is the State Transportation Agency that plans, designs, constructs, maintains, and operates transportation infrastructure in the State of Alaska. DOT&PF has a proven track record of utilizing FHWA formula funds, through surface transportation grants, and constructing maritime infrastructure in support of the operations of AMHS, which is a division of DOT&PF.

DOT&PF is committed to the long-term sustainability of the AMHS. Unique in the nation, Alaska’s ferry system is a critical link in Alaska’s transportation landscape. Alaska’s ferries knit together ports, towns, and cities from Southcentral to Southwestern Alaska, and their service affects the lives and livelihoods of many Alaskans. After decades of reliable service, DOT&PF acknowledges the need to plan for the future and ensure that future vessels are up to the job. Low and no emission vessels will be a critical infrastructure component for rural, disadvantaged communities in Alaska that are not connected to the road system and for whom sustainable transportation is a key feature of community sustainability.

Through the Low/No Emission Ferry grant program, the State is requesting \$46,214,008, which is 80 percent of the total eligible project cost. This request is specific to the Low No Emission Ferry Program. The State of Alaska commits to providing the non-federal match of \$11,553,502 or 20 percent of the total eligible project cost towards this critical State need. These funds are currently available.

DOT&PF undertakes this project as a sponsor and experienced project manager building a sustainable Alaska Marine Highway System.

DOT&PF has included its match commitment and local letters of support in Appendix C. All project documents are located at <https://dot.alaska.gov/amhob/strategy.shtml> under Item 1.4 “IIJA Funding and Discretionary Grants.” Appendix A provides maps and routes for the AMHS, and Appendix B is a Technical Volume providing any condition reports or implementation plans.

Project Implementation Strategy

Can this project be obligated within 12 months? Yes No

The planning, design, and construction process will be carried out and approved by licensed Professional Engineers that maintain an ISO 9001 quality certification.

Because this is a marine vessel construction project, no SEPA or NEPA approval process is required; the relevant approval bodies for the project instead consist of the US Coast Guard (USCG), the American Bureau of Shipping (ABS), and the International Maritime

Organization (IMO).

Project Milestones and Timeline:

- Funds Obligated - Q1 2023
- Preliminary Design Vessel - Q2 2023
- ATP to Final Design - Q4 2023
- Final Design - Q1 2024
- ATP to Construction - Q1 2024
- Construction Award - Q4 2024
- Construction Complete - Q4 2025

The following describes the development of that similar vessel, based on AMHS research. The electric propulsion system will utilize an integrated approach with propulsion and ship service loads fed from the same power source. This will increase overall system efficiency as well as reduce operating hours and maintenance costs. The system will be readily adaptable to emerging technologies for shipboard power generation.

The vessel will utilize an innovative steerable electric podded propulsion system. This combines the drive motor, propeller, and steering into a single unit, eliminating the need for a separate propeller, rudder, steering gear, propulsion shafting, and associated machinery. The steerability improves the vessel's maneuverability while docking in adverse weather conditions, improving vessel operability. In addition, with two steerable propulsion units, the ship will be able to return to port under its own power in the unlikely event of a complete failure of the other unit.

The project will utilize an innovative contracting methodology known as Construction Management / General Contractor (CM/GC). Under this system, the owner's naval architect and construction contractors (construction integration managers, shipyard, and key vendors) jointly develop the Concept and Basic Design. A construction contract is negotiated and awarded to the shipyard based on mutual understanding of the owner's intentions. Allowing the designer and integrator/shipyard/vendors to work together can help ensure that the design is readily constructible by the shipyard and avoids the lengthy design transfer process. Collectively, AMHS and its contractor base have extensive experience in designing, managing construction of, and safely operating marine vessels to USCG, ABS, and IMO standard and regulations.

Technical, Legal, and Financial Capacity

DOT&PF owns, operates and/or maintains ferry terminals in 35 Alaskan communities. AMHS has operated since 1968. DOT&PF has a dedicated marine design group and environmental staff who have delivered dozens of terminal improvement projects, including up to six per year. DOT&PF has maintained a marine engineering team since Statehood in 1959 – primarily dedicated to supporting the AMHS ferry system. They have directly designed or managed consultant designs and conducted numerous refurbishments, replacements, repairs, and maintenance on nearly every ferry terminal facility in the State and many other ports, harbors, and seaplane facilities. Most of these projects utilized federal aid through FHWA. They have successfully delivered many federal aid marine projects supporting AMHS over the years, including 86 projects totaling over \$308,000,000 since 2002 alone. DOT&PF has designed all of the existing ferry terminal facilities. We have standard mooring dolphin and other marine facility designs on file. The marine engineering team also inspects every ferry terminal and associated transfer bridge structure in the State. They are highly experienced and intimately familiar with this particular project's local conditions and needs. DOT&PF's project development staff comprises 75 persons, including materials and geotechnical engineers, environmental and right of way professionals who can navigate and achieve the required support products according to all Federal regulations and requirements. DOT&PF and its marine design group are knowledgeable about federal requirements, including Build America stipulations. The terminal design is based on a standard DOT&PF design modified to meet site geology and terminal configurations.

DOT&PF was granted primacy over its NEPA Assignment Program through an MOU with FHWA signed Nov. 3, 2017 to assume responsibilities under NEPA and all or part of FHWA's responsibilities for environmental review, consultation, or other actions required under any Federal environmental law with respect to one or more Federal Highway projects within Alaska. The assigned responsibilities are subject to the same procedural and substantive requirements as applied to FHWA.

DOT&PF's Equal Employment Opportunity Plan (2022) includes a review of personnel designations, employment practices information, employment practices assessment, monitoring and reporting systems, and additional resources. DOT&PF participates in

the federal Disadvantaged Business Enterprise (DBE) program and meets the federal requirements. DOT&PF has a vibrant Disadvantaged Business Enterprise Program and a DBE Utilization Goal of 8.63 percent for federally funded projects. According to a 2019 study, M/W/DBE firms were awarded contracts totaling \$418.8 million, 17.68 percent of construction dollars. MBEs were awarded \$298.8 million in contracts, 12.61 percent of construction dollars.

DOT&PF has authority under 23 U.S.C. 140 to implement and conduct a compliance program that addresses Equal Employment Opportunity (EEO) and Affirmative Action (AA) for employment on federally assisted construction contracts. DOT&PF maintains a Civil Rights Office committed to ensuring equal opportunity for all businesses and personnel on DOT&PF projects. The bidding and contract documents include specific provisions to implement equity-focused policies related to all phases of contracting and construction. The contract provisions address nondiscrimination, equal employment opportunity, reasonable accommodations for employees with disabilities, and non-segregation of facilities.

DOT&PF provides reasonable accommodations to applicants and employees who need them because of a disability or practice or observe their religion absent undue hardships. DOT&PF has created a Diversity, Equity, and Inclusion (DEI) Team whose members work with the different department training systems.