DAVID Y. IGE
GOVERNOR

JADE T. BUTAY
INTERIM DIRECTOR

Deputy Directors
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

December 28, 2017

The Honorable Ronald D. Kouchi
President and Members of the Senate
Twenty-Ninth State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki
Speaker and Members of the House of Representatives
Twenty-Ninth State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

For your information and consideration, I am transmitting the Feasibility Study on Inter-island and Intra-island Ferry Systems as required by Act 196 (2016). This study also addresses the feasibility study requested by House Concurrent Resolution 47 (2017).

In accordance with HRS 93-16, I am also informing you that the report may be viewed electronically at: http://hidot.hawaii.gov/library/reports/reports-to-the-legislature/.

Sincerely,

JADE T. BUTAY
Interim Director of Transportation

c: Legislative Reference Bureau

Report to the Hawaii State Legislature

FEASIBILITY STUDY ON INTER-ISLAND AND INTRA-ISLAND FERRY SYSTEMS

December 2017

Authored by the Department of Transportation
Statewide Transportation Planning Office &
Harbors Division

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Executive Summary

The Department of Transportation presents this ferry feasibility study in response to two legislative actions in 2016 and 2017 that queried whether the State of Hawaii ought to establish an inter-island and/or intra-island ferry system. This study is the result of a year of research into the operations of past ferry operations here in Hawaii and existing ferry systems in other parts of the United States, a market study built on the voices of 1,500 Hawaii residents, and a sequence of analyses that broadly considered the critical components of a ferry system. Apart from the contract to SMS Hawaii to conduct the market study, this report is the product of Department of Transportation staff.

This study is organized into three areas: technical feasibility, commercial feasibility, and financial feasibility.

- The technical feasibility analysis describes the service to be offered and considers route feasibility based on use of hypothetical vessels and a survey of existing port infrastructure. Regulatory requirements, including compliance with State and federal environmental laws, are also part of this section.

- The commercial feasibility analysis focuses on the probability of commercial success and this section of the study features an analysis of the market study findings, how the market is expected to respond to a ferry system, and whether there is sufficient interest or need for the service to justify further action.

- The financial feasibility analysis considers all projected costs, revenues, and funding and financing options, and concludes whether resources are or will be reliably available to support a ferry service.

A prospective ferry system must be technically, commercially, and financially sound to be considered “feasible” and to urge the State of Hawaii to proceed with next steps in the establishment of a ferry system.

The study team tested the feasibility of an inter-island system between Honolulu and five neighbor island destination; an intra-county system between Maui and Molokai to restore the service absent since Sea Link ceased its operations in 2016; an intra-island commuter system on Oahu between Kalaeloa and Honolulu, similar to two previously operated demonstration projects; and an intra-island commuter system on Maui between Lahaina and Central Maui, either Maalaea or Kahului.

In each area of analysis, the inter-island, intra-county, and intra-island ferry systems are infeasible. From a technical standpoint, the lack of available pier space and the

significant costs required of constructing new pier facilities to accommodate a ferry system are the primary barrier to feasibility. From a commercial perspective, the expectations of Hawaii's residents and the reality of a ferry system are incompatible. While the interest or support for a ferry system, inter-island or other, is significant, the pool of likely users is relatively insignificant. Financially, none of the proposed ferry systems is self-sustaining, and a State subsidy is largely the missing factor in making the numbers pencil.

Hawaii State law declares that the establishment of a ferry system to provide the people of Hawaii with an economic means of transportation is a public purpose. Alongside this declaration is the core message received through the market study: Hawaii residents strongly support an inter-island travel alternative. However, at this very point in time inter-island travel by ferry, and even commuting by ferry, cannot be provided at cost that would be considered economical. The public purpose cannot be met.

Until a ferry vessel technology exists that facilitates the transport of passengers between two points for a substantially lower cost, or at a speed drastically quicker than the available alternatives, even despite the voiced support for a ferry, the market demand for and likelihood of residents to use a ferry will probably not change.

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Study Background & Premise

Act 196 (Session Laws of Hawaii, 2016) requires the undertaking of a study by the Department of Transportation on the feasibility of establishing an inter-island and intra-island ferry system. The act also appropriated $50,000 for the expenses associated with conducting this study. In conducting this study, the Department of Transportation must accomplish the following:

1. Include a comparison of various jurisdictions with successful ferry systems including Washington and Alaska;
2. Emphasize compliance of the ferry system with the State's environmental protection laws, including Chapter 343, Hawaii Revised Statutes;
3. Identify appropriate routes and harbors for the ferry system;
4. Consider the potential costs and revenues of the ferry system;
5. Include financing options for the ferry system, including the establishment of rates or fees to address operating costs;
6. Consider the particulars of the ferry system, including vessel design and speed, passenger capacity, cargo capacity, automobile capacity, and compatibility with harbor infrastructure;
7. Consider and determine the impacts the ferry system would have on traffic congestion on all islands served by the ferry; and
8. Consider the impacts the ferry system could have on the transmission of invasive species between islands and determine inspection requirements to limit the transmission of invasive species between islands.

In 2017, the Hawaii State Legislature adopted House Concurrent Resolution 47, Requesting that the Department of Transportation Conduct a Study on the Need and Feasibility of Establishing a Government-subsidized Ferry Service between the Islands of Maui and Molokai. The resolution specifies a request for this study to consider the potential costs, financing options, and parameters of a ferry system, as well as whether the use of a ferry system would be advantageous for visitors, school athletic teams, and those who require disability accommodations.

Both pieces of legislation are appended (Appendix 1) and both require the Department of Transportation's report of findings and recommendations no later than 20 days prior to the convening of the Regular Session of 2018.

The Department of Transportation Statewide Transportation Planning Office and the Harbors Division staff spearheaded and authored this feasibility study and commissioned a component market study with the appropriation of $50,000 to assess the feasibility of an inter-island and intra-island ferry system. The department

contracted SMS Hawaii to conduct this study and the market study results form the basis for much of this overall feasibility study. The market study in its entirety is also appended to this report (Appendix 2) and its findings will inform policymakers of the current public interest in, and demand and support for a ferry service, as well as the preferred routes, vessel types, acceptable fares, and desired frequency of ferry service.

Note: The sections of this study that address a specific deliverable identified in either Act 196 or HCR 47 are noted with this anchor icon: 

Past Ferry Feasibility Studies & Demonstration Projects

Hawaii's archipelagic geography underscores the natural draw to the ocean for inter-island transport. The people of Hawaii and the history of these islands are tied to the ocean as a source of not only transport, but sustenance and commerce. Today, the internal waterways and harbor facilities that carry goods and people into, out of, and through the islands are, in effect, a marine highway; Hawaii's residents depend on its commercial harbor system as a marine highway in the same way that the contiguous states depend on interstate highways, railways, and intermodal transport. No other state depends on ocean or water transport to the degree Hawaii does.

The interest in establishing an inter-island ferry system is long-standing. The Department of Transportation identified the documents among its files and archives that address the matter of prospective ferry operations in Hawaii over the past six decades. A total of 73 documents, all enumerated in **TABLE 1: PAST STUDIES, REPORTS & PUBLICATIONS ON A FERRY SERVICE IN HAWAII** (see insert), were used as points of reference when conducting this study. Among the list are no fewer than 35 feasibility or market studies that address the very subject matter of this study.

The oldest document is dated 1956, prior to statehood, is entitled "Inter-Island Ferry System Study" and was authored by Joseph B. Ward & Associates. The more recent documents were produced within the last decade and focus on the operations of the now defunct commuter services including the Express Commuter Ferry Demonstration Project a.k.a. WikiWiki Ferry (1999-2000), and TheBoat (2007-2009), and the Hawaii Superferry which served Oahu, Maui, and Kauai from 2007 to 2009. The library of studies also includes references to other short-lived services such as the Hualalai steamship (1966) and SeaFlite (1975-1978).

Many studies completed at various points in time reached the same conclusion that a ferry system, inter-island or intra-island, would operate at a deficit requiring government subsidies to sustain the operation. These studies and demonstrations in part explain the absence of a successful and sustainable inter-island or intra-island ferry system in Hawaii (excepting the Expeditions Maui-Lanai Passenger Ferry). This current study uses this collective documentation as points of reference only, rather than

TABLE 1: PAST STUDIES, REPORTS & PUBLICATIONS ON A FERRY SERVICE IN HAWAII

	Document	Year	Author
1	Inter-Island Ferry System Study	1956	Joseph B. Ward & Associates
2	Market for Inter-Island Surface Transportation Facilities and Services	1957	John Child and Company
3	Interim Report to the Legislature	1959	Territory of Hawaii Department of Public Works
4	Report on Trip to U.S. Mainland October 15 - November 20, 1961 in Connection with "Providing for the Preparation of the Establishment and Maintenance of a State Ferry System"	1961	Sam O. Hirota and Leo C. Pritchard
5	The Market for a New Inter-Island Ferry System	1961	Roberts S. Craig Associates
6	Hawaiian Inter-Island Ferry Study Final Report	1962	Parsons, Brinckerhoff, Quade & Douglas
7	State of Hawaii Inter-Island Ferry Service Report to Director Department of Transportation State of Hawaii	1962	George G. Sharp, Inc. Marine Designs
8	Proposed Operation of S.E. Alaska Ferry in Inter-Island Hawaiian Service	1963	Philip F. Spaulding and Associates, Inc.
9	Proposed Privately Financed and Privately Operated Inter-Island Ferry System Hawaiian Island	1965	Philip F. Spaulding and Associates, Inc.
10	The Proposed Hawaii Inter-Island Sea Ferry System Feasibility and its Probable Impact on the Hawaiian Economy	1965	William A. Dymsza, Ph.D.; Fred C. Hung, Ph.D.; Chris A. Theodore, Ph.D.
11	State of Hawaii Inter-Island Ferry Service Interim Report to Director Department of Transportation State of Hawaii	1966	George G Sharp, Inc.
12	State of Alaska Department of Public Works Division of Marine Transportation Seattle Ferry Route Revenue, Passengers and Vehicles Transported 1968-1972	1973	State of Alaska Department of Public Works Division of Marine Transportation
13	Proposed Inter-Island Ferry Systems (Technical Papers)	1973	University of Hawaii Pacific Urban Studies and Planning Program
14	Proposed Inter-Island Ferry Systems (Impact Summary)	1973	University of Hawaii Pacific Urban Studies and Planning Program
15	General Information on Proposed Hawaiian Inter-Island Ferry Design	1975	Nickum & Spaulding Associates, Inc.
16	Hull Technical Information on Proposed Hawaiian Inter-Island Ferry Design	1975	Nickum & Spaulding Associates, Inc.
17	Proposal Specifications Proposal "B" Combination 1000 Passenger & Vehicle Ferry	1975	Nickum & Spaulding Associates, Inc.
18	Proposal Specifications Proposal "A" Combination 600 Passenger & Vehicle Ferry	1975	Nickum & Spaulding Associates, Inc.
19	Extracts from Report "Hawaiian Inter-Island Ferry Study" April 1962	1975	Parsons, Brinckerhoff et. Al.
20	Proposal for Inter-Island Passenger/Vehicle Ferry for The State of Hawaii	1975	Morris Durlnick Associates, Inc.
21	Hawaiian Inter-Island Ferry System	1976	N/A
22	The Interisland Ferry Issue	1976	Ad Hoc Committee on Interisland Transportation Chamber Of Commerce Of Hawaii Honolulu, Hawaii
23	Proposal To State of Hawaii Department of Transportation For Jet Ferry Program (Phase II) Report No. D7582-953002	1976	Bell Aerospace TEXTRON
24	Report to The Ninth Legislature of The State of Hawaii Regular Session of 1977 on House Concurrent Resolution Regular Session of 1976 Subject: Relating to The Proposed State Ferry System	1976	State of Hawaii Department of Transportation

	Document	Year	Author
25	Preliminary Basic Design Study of a Semi-Submerged Catamaran for The Hawaiian Inter-Island Passenger Car Ferry System	1976	Mitsui Shipbuilding & Engineering Co,. Ltd.
26	Sea keeping Characteristics of an Inter-Island Passenger-Car Ferry Volume I	1976	University of Hawaii College of Engineering
27	Sea keeping Characteristic of an Inter-Island Passenger-Car Ferry Volume 2	1976	Ludwig Seidl
28	University of Hawaii College of Engineering Safekeeping Characteristics of an Inter-Island Passenger-Car Ferry Volume I	1976	University of Hawaii College of Engineering
29	1978-79 Marketing and Service Improvement Plan for The Washington State Ferry System	1978	Washington State Ferry System - Marketing and Service Planning Division
30	The Physical and Operating Characteristics of Ferry Vessels Presented at the 60th Annual Meeting of the Transportation Research Board Washington, D.C.	1981	Arnold J. Bloch
31	Some Critical Aspects of Ferry Planning Final Report Phase II	1982	Roger Roess, Phillip Grealy, Carl Berkowitz
32	SuperOutrigger: Artist's Rendering of a SuperOutrigger Passenger Ferry	1987	Nathan I. Daniel and Howard E. Daniel
33	Oahu Intraisland Ferry System Draft Environmental Impact Statement	1988	Wilson Okamoto & Associates, Inc.
34	EA for Maunalua Bay Ferry Terminal	1988	Wilson Okamoto & Associates, Inc.
35	Oahu Interisland Ferry System	1989	Wilson Okamoto & Associates, Inc.
36	Oahu Intraisland Ferry System Interim Ferry Terminal at Barbers Point Harbor Supplemental Environmental Assessment	1989	Wilson Okamoto & Associates, Inc.
37	Oahu Intraisland Ferry System, Interim Waikiki Ferry terminal at Kewalo Basin Supplemental EA	1989	Wilson Okamoto & Associates, Inc.
38	Waikiki, Airport, Ewa and Waipahu Ferry Terminals	1992	R. M. Towill Corporation
39	After Transit for Oahu Development Plan Waikiki, Airport, Ewa and Waipahu Ferry Terminals Oahu, Hawaii	1992	R.M. Towill Corporation
40	Water Transit System for Oahu Development Plan Waikiki, Airport, Ewa, and Waipahu Ferry Terminals	1992	R.M. Towill Corporation
41	Water Transit System for Oahu Development Plan Downtown and Barbers Point Ferry Terminals	1992	R. M. Towill Corporation
42	Preliminary Investigation of Ferry Systems	1997	State of Hawaii Department of Transportation
43	Facility Layout Study for Hawaii Superferry and Procedures	2004	Winzler & Kelly
44	Review of Hawaii Superferry Business Plan and Financing	2004	Leigh Fisher Associates
45	Environmental Review Exemption Determination, Honolulu Harbor	2005	State of Hawaii Office of Environmental Quality Control
46	Hawaii Superferry Whale Avoidance Policy	2005	Hawaii Superferry
47	Operations Plan for Honolulu Ferry Terminal, Pier 19 Honolulu Harbor, Oahu	2006	CH2MHill
48	Operations Plan for Kahului Ferry Terminal, Pier 1 Kahului Harbor, Maui	2006	CH2MHill
49	Operations Plan for Kawaihae Ferry Terminal, Pier 1 Kawaihae Harbor, Hawaii	2006	CH2MHill
50	Operations Plan for Nawiliwili Ferry Terminal, Pier 1 Nawiliwili Harbor, Kauai	2006	CH2MHill
51	Hawaii Superferry Public Meeting Presentation	2006	State of Hawaii Department of Transportation
52	Alien Species Biological Assessment For The Statewide Large-Capacity Inter-Island Ferry EIS	2008	Hawaii Biological Survey
53	Potential Impact of a Large Capacity Ferry on Marine Mammals of Hawaii	2008	Belt Collins

	Document	Year	Author
54	Socio -Economic Impact Assessment Large Capacity Inter-Island Ferry Service	2008	Belt Collins
55	Performance Audit: Phases 1 and 2	2008	State of Hawaii Office of the Auditor
56	Statewide Large-Capacity Inter-Island Ferry DRAFT: Volume 1	2008	Belt Collins
57	Statewide Large-Capacity Inter-Island Ferry DRAFT: Volume 2	2008	Belt Collins
58	Long-Term Ferry Finance Study	2008	Cambridge Systematics, Inc.
59	DOT Rapid Risk Assessment for Wastewater Disposal and Security Planning on the Hawaii Superferry	2008	Belt Collins
60	Rapid risk Assessment for Wastewater Disposal and Security	2008	John Clark, Planning Consultant
61	Hawaii Superferry Public Meeting Presentation	2008	SMS Research
62	Hawaii Superferry Passenger Survey	2008	SMS Research
63	Rapid Risk Assessment of Operational Compliance and Environmental Risks of the Hawaii Superferry	2008	Belt Collins
64	HSF Rapid Risk Assessment Volume 1	2008	Belt Collins
65	HSF Rapid Risk Assessment Volume 2	2008	Belt Collins
66	Air Quality Study	2009	Science Applications International Corp.
67	Draft Report on Rapid Risk Assessment of Hawaii Superferry Efforts to Interdict Invasive Species	2009	Fred Kraus, Bishop Museum
68	Final Environmental Assessment for Kaunakakai Harbor Ferry System Improvements	2011	Wilson Okamoto & Associates, Inc.
69	Final Environmental Impact Statement for Lahaina Small Boat Harbor Ferry Pier improvements	2014	Munekiyo Hiraga
70	Oahu Intraisland Ferry System	N/A	Wilson Okamoto & Associates, Inc.
71	Public Expenditures and the Conventional Ferry Interisland Ferry Impact Planning Study Technical Paper No.4	N/A	Robert Fletcher
72	Principal West Coast Ferry Operations I. British Columbia Ferry System II. Washington State Ferry System III. Alaska Marine Highway System	N/A	Nickum & Spaulding Associates, Inc.
73	Supplemental Memorandum to the Report on Routing, Terminals, Vessels, Schedules, Rate, Traffic, Revenues, Capital and Operating Costs and Financial Feasibility for a Proposed Passenger and Vehicle Ferry for Southeast Alaska	N/A	W.C. Gilman & Company

address shortcomings of any given study or project. Further, this feasibility study is an opportunity to record the current market conditions as they relate to a ferry service and compare them with the findings and recommendations of past studies to identify whether certain factors that may have changed could support a ferry system today.

New York University operates its own ferry to shuttle students and faculty from its campus in Midtown Manhattan to Sunset Park in Brooklyn, with several stops along the way. Photo credit: D. Kalili, DOT.

About Ferry Systems

In other jurisdictions, ferries are used to cross bodies of water where there is no bridge or other roadway; to commute to work in coastal cities; to transport freight and goods when alternatives are limited; to reach and service islands; and for recreation or tourism, especially in National Parks, among other reasons. In Hawaii, an inter-island ferry system can serve as a link between islands for residents to visit family, business travelers connecting with neighbor island offices, or visitors wanting to experience many parts of Hawaii while on vacation. An intra-island ferry system, or an intra-*county* system between Maui and Molokai, will link two points on a single island or within a county that would primarily accommodate commuters which may also alleviate traffic congestion. This study considers the extent to which a ferry system in Hawaii can effectively deliver on these expectations.

Understanding ferry system operations, financing options, and ridership trends in other jurisdictions is helpful in determining the feasibility of establishing a ferry system in

Hawaii. **TABLE 2: COMPARISON OF FERRY SYSTEMS OPERATING IN THE U.S.** (see insert), provides a snapshot of 160 domestic ferry systems, including data on whether a ferry transports passengers, vehicles, and/or freight, whether the operation is private or public, number of vessels in the fleet, vessel capacity, and sources of operating revenue (see insert). The data largely is from the 2016 National Census of Ferry Operators conducted by the U.S. Department of Transportation Bureau of Transportation Statistics, along with data provided by individual ferry systems.

Here is a summary of figures that describe these domestic ferry systems:

- Passenger-only ferry systems: **64**
- Passenger and freight ferry systems: **12**
- Passenger and vehicle ferry systems: **59**
- Passenger, vehicle, and freight ferry systems: **25**
- Ferry systems 100% subsidized by the U.S. federal government: **4**
- Ferry systems 100% subsidized by a state government: **13**
- Ferry systems 100% subsidized by a local government: **6**
- Ferry systems that do not charge a fare: **33**
- Government-run ferry systems that operate 100% on ticket sales revenue: **11**

There is no ferry system in the U.S. that would be reasonably comparable to a ferry system that may be established in Hawaii based on comparison factors such as similar population base, high tourist traffic within the system, similar distance between ports of service, and vessel size and passenger capacity. Although there is not a true peer system, the successes and shortcomings of operations can always provide insights into strategies Hawaii may consider or avoid in establishing or sustaining a ferry service. For example, systems that report diverse private or non-government revenue sources can be innovative models to guarantee a system is not supported long term by government subsidy.

Act 196 specifically names the Washington State Ferries and the ferry system in Alaska as comparison points. The analysis of these two systems and models for Hawaii is below:

The **Washington State Ferries** (Table 2, #152) is a public government-run system operating in the Seattle area since 1951 and today runs a fleet of 24 vessels on 21 routes. Many of these routes connect islands to the mainland where there are no bridges, or offer more direct connections across bays and inlets that are much quicker than the alternate drive times around the waterways. In 2015, the passenger boarding counts equaled 23.8 million, accounting for 92% of all ferry passengers in Washington. Regular one-way fares for passengers range from $3.35 for the short crossing across the Admiralty Inlet, to $19.85 for a transit from the San Juan Islands into British Columbia,

TABLE 2: COMPARISON OF FERRY SYSTEMS OPERATING IN THE U.S. | Arranged by state

	Ferry System/Operator & Location	Ferry Type Passenger (P), Vehicle (V), Freight (F)	Public or Private Operation	Fleet Size	Passenger Capacity Of Largest Vessel in Fleet	Vehicle Capacity Of Largest Vessel in Fleet	Private Revenue Sources (% of total) Ticket sales (T), Private contracts (P), Advertising (A)		Public Revenue Sources (% of total) Federal (F), State (S), Local (L), Public contracts (PC)	
1	**Haines-Skagway Fast Ferry LLC** Haines, AK	PF	Private	2	172	0	T: 20 P: 80	A: 0	F: 0 S: 0	L: 0 PC: 0
2	**Inter-Island Ferry Authority** Klawock, AK	PVF	Public	1	190	30	T: 80 P: 1	A: 1	F: 14 S: 4	L: 0 PC: 0
3	**Alaska Marine Highway System** Ketchikan, AK	PVF	Public	11	499	133	T: 30.9 P: 0	A: 0	F: 0.5 S: 68.6	L: 0 PC: 0
4	**Seldovia Village Tribe** Seldovia, AK	P	Public	1	150	0	T: 99 P: 0	A: 0	F: 1 S: 0	L: 0 PC: 0
5	**Red Mountain Marine Inc.** Homer, AK	P	Public	1	15	0	T: 50 P: 48	A: 0	F: 0 S: 0	L: 0 PC: 2
6	**Ketchikan Gateway Borough** Ketchikan, AK	PVF	Public	2	146	24	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
7	**Hornblower Marine Services Global Maritime** Dauphin Island, AL	PV	Public	3	149	28	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
8	**Arkansas State Highway and Transportation Department** Little Rock, AR	PV	Public	5	100	12	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
9	**CALTRANS** Walnut Creek, CA	PV	Public	2	98	10	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
10	**Humboldt County Public Works** Eureka, CA	P	Public	2	0	0	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
11	**The Catalina Flyer** Newport Beach, CA	P	Public	1	600	0	T: 99.5 P: 0.5	A: 0	F: 0 S: 0	L: 0 PC: 0
12	**Catalina Express** Long Beach, CA	P	Private	8	458	0	T: 96.2 P: 2.5	A: 0	F: 0 S: 0	L: 0 PC: 1.3
13	**Golden Gate Bridge Highway and Transportation District** San Francisco, CA	P	Public	7	750	0	T: 80.01 P: 5.3	A: 0.48	F: 0.03 S: 14.18	L: 0 PC: 0
14	**San Francisco Bay Area Water Emergency Transportation Authority (WETA)** San Francisco, CA	P	Public	12	399	0	T: 59 P: 0	A: 0	F: 0 S: 0	L: 41 PC: 0
15	**Jersey Island Ferry** Martinez, CA	PV	Private	1	49	9	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
16	**Island Packers Corp.** Ventura, CA	P	Private	4	149	0	T: 99.98 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0.02
17	**Long Beach Transit** Long Beach, CA	P	Public	4	75	0	T: 29 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 70
18	**Balboa Island Ferry** Balboa Island, CA	PV	Private	3	75	3	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
19	**Chemehuevi Indian Tribe** Havasu Lake, CA	P	Private	2	150	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
20	**Blue and Gold Fleet** San Francisco, CA	P	Private	8	787	0	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
21	**The Town of Greenwich CT** Greenwich, CT	P	Public	3	350	0	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
22	**Connecticut DOT Bureau of Public Transportation** Rocky Hill, CT	PV	Public	3	49	9	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
23	**Block Island Ferry Service LLC** New London, CT	PV	Private	1	530	0	T: 99 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 0

	Ferry System/Operator & Location	Ferry Type Passenger (P), Vehicle (V), Freight (F)	Public or Private Operation	Fleet Size	Passenger Capacity Of Largest Vessel in Fleet	Vehicle Capacity Of Largest Vessel in Fleet	Private Revenue Sources (% of total) Ticket sales (T), Private contracts (P), Advertising (A)		Public Revenue Sources (% of total) Federal (F), State (S), Local (L), Public contracts (PC)	
24	**Cross Sound Ferry Services Inc.** New London, CT	PVF	Private	8	885	100	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
25	**Delaware DOT** Georgetown, DE	PV	Public	1	50	6	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
26	**Hontoon Island State Park** DeLand, FL	P	Public	1	0	0	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
27	**Hornblower Marine Services - Florida Inc.** Atlantic Beach, FL	PV	Private	1	199	32	T: 62 P: 0	A: 0	F: 0 S: 38	L: 0 PC: 0
28	**National Park Service (Fort Matanzas)** St. Augustine, FL	P	Public	2	36	0	T: 0 P: 0	A: 0	F: 100 S: 0	L: 0 PC: 0
29	**Putnam County Public Works** East Palatka, FL	PV	Public	2	8	2	T: 25 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 75
30	**Water Taxi of Fort Lauderdale** Fort Lauderdale, FL	P	Private	11	200	0	T: 95 P: 5	A: 0	F: 0 S: 0	L: 0 PC: 0
31	**Caladesi Island Adventure** Palm Harbor, FL	P	Private	2	49	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
32	**Lang Seafood (for Cumberland National Seashore)** St. Mary's, GA	P	Public	3	153	0	T: 89 P: 11	A: 0	F: 0 S: 0	L: 0 PC: 0
33	**State of Georgia, Department of Natural Resources** Sapelo Island, GA	PF	Public	2	149	0	T: 99.5 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0.5
34	**Savannah Belles Ferry** Savannah, GA	P	Public	4	149	0	T: 0 P: 0	A: 0	F: 0 S: 0	L: 60 PC: 40
35	**Expeditions** Lahaina, HI	PF	Private	4	149	0	T: 80 P: 12	A: 0	F: 0 S: 0	L: 0 PC: 8
36	**Wendella Sightseeing Boats** Chicago, IL	P	Private	4	150	0	T: 90 P: 0	A: 0	F: 0 S: 0	L: 10 PC: 0
37	**Rock Island County Metropolitan Mass Transit District** Moline, IL	P	Private	3	49	0	T: 31 P: 0	A: 0	F: 0 S: 51	L: 18 PC: 0
38	**Cave in Rock Ferry** Cave in Rock, IL	PV	Public	5	15	5	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
39	**Illinois Department of Transportation** Springfield, IL	PVF	Public	9	149	21	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
40	**Calhoun Ferry Company** Batchtown, IL	PV	Private	4	81	15	T: 90 P: 10	A: 0	F: 0 S: 0	L: 0 PC: 0
41	**City of Grafton** Grafton, IL	PV	Private	4	81	15	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
42	**Agusta Ferry Authority** Augusta, KY	PV	Private	2	49	8	T: 37.5 P: 0	A: 0	F: 14 S: 0	L: 0 PC: 48.5
43	**U.S. DOI - Mammoth Cave National Park** Mammoth Cave, KY	PV	Public	1	18	3	T: 0 P: 0	A: 0	F: 100 S: 0	L: 0 PC: 0
44	**Valley View Ferry Authority** Nicholasville, KY	PV	Public	3	24	3	T: 0 P: 0	A: 0	F: 0 S: 90	L: 10 PC: 0
45	**Butler County Fiscal Court** Morgantown, KY	PV	Public	2	0	0	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
46	**Kentucky Transportation Cabinet - Kentucky Ferryboat Operations** Frankfort, KY	PV	Public	3	50	3	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
47	**LA Department of Transportation & Development**	PV	Public	11	2600	60	T: 2	A: 0	F: 12	L: 0

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	Baton Rouge, LA						P: 0		S: 86	PC: 0
48	**St. Mary Parish Council** Franklin, LA	PVF	Public	1	7	6	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
49	**Plaquemines Parish Ferry Department** Belle Chasse, LA	PV	Public	3	199	63	T: 16 P: 0	A: 0	F: 84 S: 0	L: 0 PC: 0
50	**Hy-Line (Hyannis Harbor Tours Inc.)** Hyannis, MA	P	Private	4	800	0	T: 95 P: 4.5	A: 0.5	F: 0 S: 0	L: 0 PC: 0
51	**Woods Hole Martha's Vineyard and Nantucket Steamship Authority** Woods Hole, MA	PV	Public	9	1263	60	T: 99 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 0
52	**Bay State Cruise Company** Boston, MA	P	Private	3	1137	0	T: 50 P: 50	A: 0	F: 0 S: 0	L: 0 PC: 0
53	**Boston Harbor Cruises LLC** Boston, MA	P	Private	25	571	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
54	**Patriot Party Boats Inc.** Falmouth, MA	P	Private	1	40	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
55	**Freedom Cruise Line** Harwich Port, MA	P	Private	1	80	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
56	**Essex National Heritage Commission, Inc.** Salem, MA	P	Private	1	18	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
57	**Island Commuter Corp.** Falmouth, MA	P	Public	1	517	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
58	**Waterfront Enterprises, Inc.** Plymouth, MA	P	Private	1	0	0	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
59	**Smith Island Cruises** Smith Island, MD	P	Private	2	132	0	T: 35 P: 15	A: 0	F: 0 S: 0	L: 0 PC: 50
60	**Wicomico County - Road Division** Salisbury, MD	PV	Public	2	6	3	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
61	**Oxford - Bellevue Ferry** Oxford, MD	PV	Private	1	99	9	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
62	**Baltimore Water Taxi** Baltimore, MD	P	Private	17	100	0	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
63	**Downeast Windjammer Cruises and Ferries** Cherryfield, ME	P	Private	2	75	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
64	**Chebeague Transportation Co.** Chebeague Island, ME	PV	Private	3	102	4	T: 91 P: 6	A: 0	F: 0 S: 0	L: 0 PC: 3
65	**State of Maine** Rockland, ME	PVF	Public	7	250	30	T: 51 P: 0	A: 0	F: 49 S: 0	L: 0 PC: 0
66	**Casco Bay Island Transit District** Portland, ME	PVF	Public	5	399	12	T: 73.5 P: 8.5	A: 0	F: 14 S: 4	L: 0 PC: 0
67	**Balmy Days Cruises** Boothbay Harbor, ME	P	Private	2	130	0	T: 90 P: 10	A: 0	F: 0 S: 0	L: 0 PC: 0
68	**Town of Frye Island Ferry Service** Frye Island, ME	PVF	Private	2	6	9	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
69	**Isle Au Haut Boat Services** Stonington, ME	PF	Public	2	62	0	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
70	**Champions Auto Ferry Inc.** Harsens Island, MI	P	Private	4	80	12	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
71	**Blue Water Ferry LTD** Marine City, MI	PV	Private	2	75	12	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0

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72	**Eastern U. P. Transportation Authority** Sault Ste. Marie, MI	PVF	Public	4	130	28	T: 50 P: 0	A: 0	F: 0 S: 50	L: 0 PC: 0
73	**Charlevoix County Transportation Authority** Charlevoix, MI	PV	Public	1	26	4	T: 94 P: 0	A: 0	F: 6 S: 0	L: 0 PC: 0
74	**Sheplers Mackinac Island Ferry Service** Mackinaw City, MI	PF	Private	5	280	0	T: 99 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 0
75	**Beaver Island Transportation Authority** Charlevoix, MI	PVF	Private	2	293	20	T: 96 P: 4	A: 0	F: 0 S: 0	L: 0 PC: 0
76	**Lake Michigan Car Ferry** Ludington, MI	PV	Private	1	600	180	T: 89 P: 11	A: 0	F: 0 S: 0	L: 0 PC: 0
77	**The Isle Royale Line** Copper Harbor, MI	P	Public	1	97	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
78	**Isle Royale National Park** Houghton, MI	PF	Public	1	128	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
79	**Plaunt Transportation Company Inc.** Cheboygan, MI	PVF	Public	1	79	17	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
80	**Grand Portage-Isle Royale Transportation Line, Inc.** Grand Portage, MN	PF	Public	2	68	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
81	**Ste. Genevieve - Modoc Ferry Inc.** Perryville, MO	PV	Public	2	100	12	T: 58 P: 0	A: 0	F: 0 S: 42	L: 0 PC: 0
82	**Mississippi County Port Authority** East Prairie, MO	PV	Private	2	148	18	T: 28 P: 5	A: 0	F: 5 S: 62	L: 0 PC: 0
83	**National Park Service** Salem, MO	V	Private	1	0	1	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
84	**Warren County Board of Supervisors** Vicksburg, MS	PV	Public	2	12	6	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
85	**Ship Island Excursions** Gulfport, MS	P	Private	3	352	0	T: 80 P: 20	A: 0	F: 0 S: 0	L: 0 PC: 0
86	**Blaine County Road Department** Chinook, MT	PVF	Public	1	5	2	T: 0 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
87	**Chouteau County** Fort Benton, MT	PV	Public	2	0	2	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
88	**Bald Head Island Transportation Inc.** Southport, NC	P	Private	4	150	0	T: 90 P: 7	A: 0	F: 3 S: 0	L: 0 PC: 0
89	**N.C. Department of Transportation Ferry Division** Manns Harbor, NC	PV	Public	24	300	49	T: 5.3 P: 0.39	A: 0	F: 0 S: 94.31	L: 0 PC: 0
90	**Calibogue Cruises** Hilton Head, NC	P	Private	2	146	0	T: 85 P: 5	A: 0	F: 0 S: 0	L: 10 PC: 0
91	**Morris Marina Kabin Kamps and Ferry Service Inc.** Atlantic, NC	PVF	Private	2	42	8	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
92	**Cape Lookout Cabins and Camps Ferry Service** Davis, NC	PV	Public	1	49	4	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
93	**Island Ferry Adventures** Beaufort, NC	P	Public	4	0	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
94	**Island Cruises Inc.** Rye, NH	P	Private	1	21	0	T: 95 P: 5	A: 0	F: 0 S: 0	L: 0 PC: 0
95	**Statue Cruises** Jersey City, NJ	P	Private	8	870	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
96	**Liberty Landing Ferry, LLC**	P	Private	2	128	0	T: 100	A: 0	F: 0	L: 0

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	Jersey City, NJ						P: 0		S: 0	PC: 0
97	**New York Waterway** Weehawken, NJ	P	Private	18	492	0	T: 84.34 P: 8.58	A: 1.76	F: 0 S: 0	L: 0 PC: 5.32
98	**Billy Bey Ferry** Wehawken, NJ	P	Private	17	399	0	T: 85 P: 4	A: 1	F: 0 S: 0	L: 0 PC: 10
99	**Cape May - Lewes Ferry** North Cape May, NJ	PV	Private	3	863	100	T: 99.9 P: 0.1	A: 0	F: 0 S: 0	L: 0 PC: 0
100	**Fire Island Ferries Inc.** Bay Shore, NY	PF	Private	14	395	0	T: 97 P: 1	A: 1	F: 0 S: 0	L: 0 PC: 1
101	**Empire State Development, Erie Canal Harbor Devel. Corp. (ECHPC)** Buffalo, NY	P	Public	1	49	0	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
102	**New York City DOT Ferry Division** Staten Island, NY	PVF	Public	9	5200	39	T: 0 P: 0	A: 0	F: 17 S: 26	L: 57 PC: 0
103	**Sea Lion Project Ltd.** Bemus Point, NY	PV	Private	1	0	0	T: 0 P: 0	A: 0	F: 0 S: 0	L: 100 PC: 0
104	**Fishers Island Ferry District** Fishers Isalnd, NY	PVF	Public	2	245	45	T: 99 P: 1	A: 0	F: 0.1 S: 0.1	L: 0 PC: 0
105	**Governor's Island Preservation & Education Corp.** New York, NY	PV	Private	2	1242	35	T: 0 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 100
106	**Davis Park Ferry Co.** Patchogue, NY	P	Private	4	277	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
107	**Bay Point Navigation Corp.** Point O' Woods, NY	PF	Private	1	150	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
108	**Bridgeport and Port Jefferson Steamboat Company** Port Jefferson, NY	PV	Private	3	1000	120	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
109	**North Ferry Company Inc** Shelter Island Heights, NY	PV	Private	5	150	23	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
110	**Sayville Ferry Service Inc.** Sayville, NY	PF	Private	7	413	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
111	**South Ferry Inc.** Shelter Island, NY	PVF	Private	4	150	15	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
112	**Miller Boat Line Inc.** Put-In-Bay, OH	PVF	Private	4	500	24	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
13	**Put-in-Bay Boatline Co.** Put-in-Bay, OH	P	Private	4	390	0	T: 98 P: 2	A: 0	F: 0 S: 0	L: 0 PC: 0
114	**Central Oklahoma Transportation and Parking Authority** Oklahoma City, OK	P	Public	3	49	0	T: 3 P: 9	A: 0	F: 2 S: 0	L: 86 PC: 0
115	**Marion County Department of Public Works** Salem, OR	PV	Public	2	49	9	T: 78 P: 0	A: 0	F: 0 S: 20	L: 2 PC: 0
116	**Clackamas County Department of Transportation and Development** Oregon City, OR	PV	Public	1	43	6	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A
117	**Millersburg Ferryboat Association** Millersburg, PA	PV	Private	2	50	4	T: 97 P: 2	A: 0	F: 0 S: 1	L: 0 PC: 0
118	**Puerto Rico Maritime Transport Authority** San Juan, PR	PVF	Public	9	603	18	T: 13 P: 1	A: 0	F: 7 S: 0	L: 0 PC: 79
119	**Rhode Island Fast Ferry**	P	Private	1	150	0	T: 58	A: 0	F: 0	L: 0

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	North Kingstown, RI						P: 42		S: 0	PC: 0
120	**The Rhode Island Department of Transportation** Providence, RI	P	Public	1	149	0	T: 0 P: 0	A: 0	F: 80 S: 20	L: 0 PC: 0
121	**Conanicut Marine Services, Inc.** Jamestown, RI	P	Private	2	48	0	T: 90 P: 10	A: 0	F: 0 S: 0	L: 0 PC: 0
122	**A & R Marine Corportation, DBA Prudence & Bay Islands Transport** Bristol, RI	PVF	Private	1	150	20	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
123	**The Block Island Ferry** Wakefield, RI	PVF	Private	5	1260	40	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
124	**Fort Sumter Tours/Spiritline Cruises** Charleston, SC	P	Private	2	527	0	T: 92 P: 8	A: 0	F: 0 S: 0	L: 0 PC: 0
125	**Tennessee Department of Transportation (TDOT)** Nashville, TN	PV	Public	6	32	8	T: 3.22 P: 0	A: 0	F: 0 S: 96.78	L: 0 PC: 0
126	**Texas Department of Transportation - Port Aransas Ferry Operation - Corpus Christi District** Port Aransas, TX	PV	Public	8	149	28	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
127	**Texas Department of Transportation** Austin, TX	PV	Public	6	500	70	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
128	**Harris County** Baytown, TX	PV	Public	2	53	10	T: 0 P: 0	A: 0	F: 100 S: 0	L: 0 PC: 0
129	**Jetty Boat. Inc** Denton, TX	P	Private	1	42	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
130	**UDOT Charles Hall Ferry** Richfield, UT	PVF	Public	1	150	23	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
131	**Virginia Department of Transportation** Richmond, VA	PV	Public	6	444	70	T: 0 P: 0	A: 0	F: 0 S: 100	L: 0 PC: 0
132	**Hatton Ferry** Scottsville, VA	PV	Private	1	6	2	T: 0 P: 90	A: 0	F: 0 S: 0	L: 10 PC: 0
133	**Transportation District Commission of Hampton Roads** Hampton, VA	P	Private	3	150	0	T: 18.86 P: 2.76	A: 1.15	F: 23.6 S: 18.05	L: 37.58 PC: 0
134	**Tangier and Chesapeake Cruises** Reedville, VA	P	Private	1	150	0	T: 95 P: 5	A: 0	F: 0 S: 0	L: 0 PC: 0
135	**Tangier-Onancock Ferry** Tangier, VA	P	Public	1	25	0	T: 100 P: 0	A: 0	F: 0 S: 0	L: 0 PC: 0
136	**Transportation Services of St. John Inc.** Cruz Bay, Saint John, VI	P	Public	3	250	0	T: 99 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 0
137	**Smith's Ferry Services Ltd.** St. Thomas, VI	P	Private	2	149	0	T: 85 P: 15	A: 0	F: 0 S: 0	L: 0 PC: 0
138	**Native Son Inc.** St. Thomas, VI	P	Private	4	307	0	T: 75 P: 25	A: 0	F: 0 S: 0	L: 0 PC: 0
139	**Inter Island Boat Services Inc.** Cruz Bay, Saint John, VI	P	Private	4	132	0	T: 48.4 P: 51.6	A: 0	F: 0 S: 0	L: 0 PC: 0
140	**Love City Car Ferries, Inc.** St. Thomas, VI	PV	Private	2	0	0	T: 96 P: 1	A: 0	F: 0 S: 0	L: 0 PC: 3
141	**Lake Champlain Transportation Co.** Burlington, VT	PV	Private	12	375	50	T: 98.4 P: 1.2	A: 0	F: 0.4 S: 0	L: 0 PC: 0
142	**1759 LTD (Fort Ticonderoga Ferry)** Whiting, VT	PV	Private	1	68	18	T: N/A P: N/A	A: N/A	F: N/A S: N/A	L: N/A PC: N/A

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143	**Hat Island Community Inc** Everett, WA	P	Private	1	88	0	T: 99.5 A: 0 P: 0.5	F: 0 L: 0 S: 0 PC: 0
144	**Lake Chelan Boat Company** Chelan, WA	PF	Private	3	285	0	T: 85 A: 0 P: 15	F: 0 L: 0 S: 0 PC: 0
145	**Colville Confederated Tribes (Inchelium-Gifford Ferry)** Inchelium, WA	PV	Public	1	50	18	T: 0 A: 0 P: 0	F: 100 L: 0 S: 0 PC: 0
146	**King County Department of Transportation, Marine Division** Seattle, WA	P	Public	4	278	0	T: 26 A: 0 P: 0	F: 57.7 L: 16.1 S: 0.2 PC: 0
147	**Wahkiakum County** Cathlamet, WA	PV	Public	2	100	23	T: 20 A: 0 P: 0	F: 52 L: 28 S: 0 PC: 0
148	**Pierce County Public Works** Tacoma, WA	PV	Public	2	288	54	T: 37 A: 0 P: 1.4	F: 13.9 L: 36.3 S: 8.3 PC: 3.1
149	**Whatcom County Public Works Department** Bellingham, WA	PV	Public	1	100	0	T: 52 A: 0 P: 0	F: 0 L: 42 S: 6 PC: 0
150	**Skagit County Department of Public Works** Anacortes, WA	PV	Public	1	99	21	T: 38 A: 0 P: 0	F: 0 L: 49 S: 13 PC: 0
151	**Kitsap Transit** Bremerton, WA	P	Private	2	140	0	T: 35 A: 0 P: 0	F: 0 L: 65 S: 0 PC: 0
152	**Washington State Ferries** Seattle, WA	PVF	Public	24	2500	202	T: 72.7 A: 0.3 P: 1.3	F: 0 L: 0 S: 25.6 PC: 0.1
153	**Puget Sound Express Inc.** Port Townsend, WA	P	Private	2	70	0	T: 95 A: 0 P: 5	F: 0 L: 0 S: 0 PC: 0
154	**Black Ball Transport Inc.** Port Angeles, WA	PV	Private	1	1000	110	T: 100 A: 0 P: 0	F: 0 L: 0 S: 0 PC: 0
155	**Madeline Island Ferry Line Inc.** La Pointe, WI	PVF	Private	4	149	25	T: 100 A: 0 P: 0	F: 0 L: 0 S: 0 PC: 0
156	**Wisconsin Department of Transportation, SW Region** Madison, WI	PV	Public	1	0	15	T: 0 A: 0 P: 0	F: 0 L: 0 S: 100 PC: 0
157	**Cassville Car Ferry/ Cassville Tourism** Cassville, WI	PV	Public	2	149	12	T: 95 A: 3 P: 2	F: 0 L: 0 S: 0 PC: 0
158	**Voight's Marine Service, LLC** Ellison Bay, WI	P	Private	2	149	0	T: 95 A: 0 P: 5	F: 0 L: 0 S: 0 PC: 0
159	**Washington Island Ferry Line Inc.** Washington Island, WI	PVF	Private	4	100	24	T: 100 A: 0 P: 0	F: 0 L: 0 S: 0 PC: 0
160	**Lake Express LLC** Milwaukee, WI	PV	Private	1	350	46	T: 100 A: 0 P: 0	F: 0 L: 0 S: 0 PC: 0

Data source: Individual ferry system websites/publications and the 2016 National Census of Ferry Operators (https://www.bts.dot.gov/surveys/national-census-ferry-operators-ncfo/national-census-ferry-operators-ncfo)

Canada. Approximately three-fourths of Washington State Ferries revenue is derived from ticket sales, private contracts, and advertising, and the balance is derived from a subsidy provided by the State of Washington. While Washington State Ferries is probably the best-run ferry operation in the U.S. and it serves several routes that are similar in length to prospective *intra*-island or *intra-county* routes in Hawaii, there are few other analogous features that make this a good model for Hawaii to follow. The population of the Seattle urban and suburban region plus its visitor counts can sustain a ferry operation this large at such low fares. Also, most routes served by this system are shorter than ten nautical miles, compared to the distance between Honolulu and Kahului at just over 100 nautical miles.

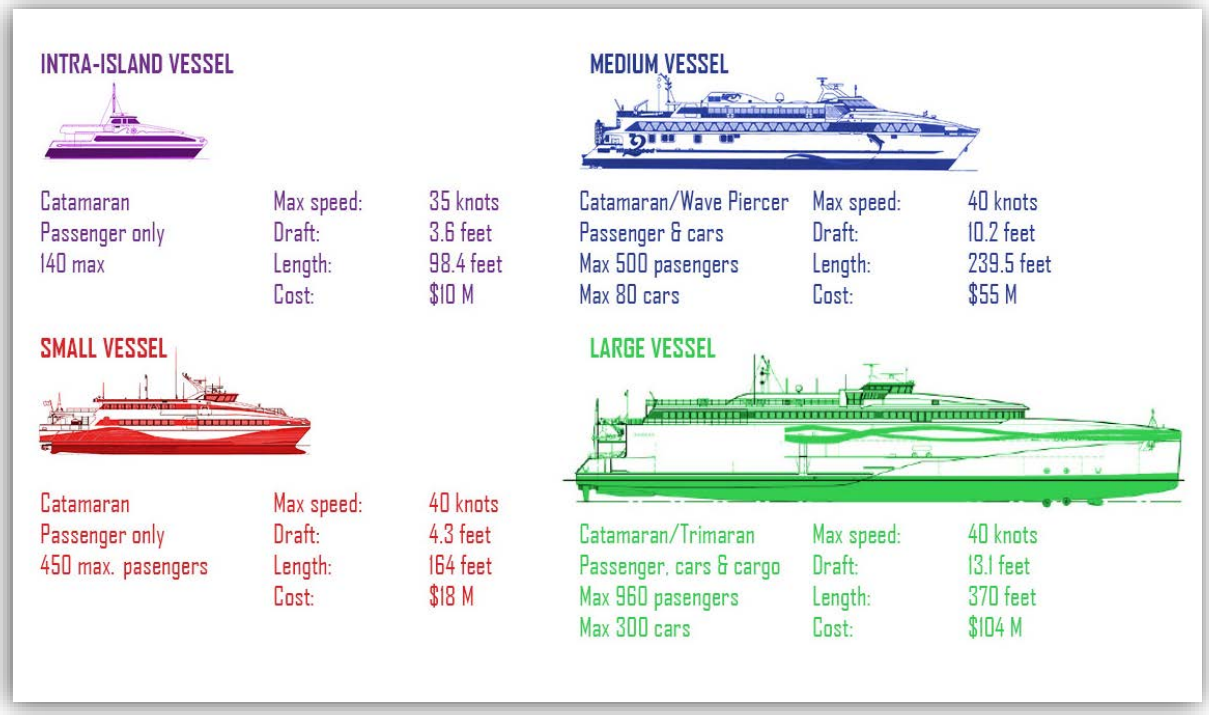
The **Alaska Marine Highway System** (Table 2, #3) is another public ferry system in operation since 1948 and runs along 3,500 miles of Alaska's southern coastline. Many communities in the state are not accessible by a land-based road or rail system, making air or sea the primary means of travel and access. There are 56 route segments served with the shortest segment of eight nautical miles served by a 45-minute crossing service at a one-way passenger fare of $30.00. The Alaska Marine Highway System should actually be considered an inter-state system as it serves a segment between Bellingham, Washington and Ketchikan, Alaska. The run time for this route is 38 hours and a one-way fare of $310.00 is charged per passenger. The vessels serving this route are outfitted with sleeping cabins; the fares for cabins will add another $500.00-plus per passenger to the base fare. The total fare for these multi-day transits may exceed $1,000.00 depending on the accommodation. By contrast, the airfare for a five-hour flight on Alaska Airlines between Bellingham and Ketchikan may be as low as $225.00. Unlike the Washington State Ferries, the Alaska Marine Highway System derives only 30.9% of its revenue from ticket sales and relies on a 68.6% subsidy from the State of Alaska and 0.5% subsidy from the federal government. According to its Fiscal Year 2016 Annual Report, the system realized $47.2 million in operating revenues and a total operating expenditure of $145.2 million.

The Alaska Marine Highway System may be an analogous model for the prospective *inter*-island system as several segments it serves are closer in length to the inter-island route distances, between 100 and 270 nautical miles. However, the six-hour, ten-hour and overnight run times on these Alaska routes may not meet the expectations of Hawaii's residents accustomed to flying between islands in less than one hour. Alaska's population is also one-half of Hawaii's population base (excluding visitor counts), so the much smaller market and the higher capital costs to sustain the operation (e.g., dozens of terminal facilities, larger fleet) may suggest that the subsidy ratio for Hawaii's ferry system may be lower than that of the Alaska Marine Highway System.

Hypothetical Vessels

The ongoing debate on which vessel is best suited, if suitable at all, to Hawaii's sea conditions for either an inter-island or intra-island ferry is as long-standing as the question of whether to establish a ferry to serve these islands. Nonetheless, this study uses four multi-hulled hypothetical vessels of various sizes that are likely to fare well in Hawaii's waters. These hypothetical vessels are used to gauge whether existing infrastructure is compatible and what infrastructure may need to be improved to accommodate a ferry service, and to determine certain operating costs and projected revenues. Figure 1 below shows the specifications for each hypothetical vessel:

FIGURE 1: HYPOTHETICAL VESSELS USED IN THIS STUDY



Note: The intra-island vessel is also used as the intra-county vessel.

The medium and large vessels also include a quarter-stern ramp as none of the harbors have ramp facilities to load cars or trucks carrying cargo.

Determining Feasibility

The objective of this study is to complete the deliverables enumerated in Act 196 and evaluate them to determine whether the State of Hawaii ought to establish an inter-island and/or intra-island ferry system. If such a system is determined to be feasible, the study should address whether to proceed and then how to proceed.

This study is organized into three areas: technical feasibility, commercial feasibility, and financial feasibility.

- The technical feasibility analysis describes the service to be offered and considers route feasibility based on use of hypothetical vessels and a survey of existing port infrastructure. Regulatory requirements, including compliance with State and federal environmental laws, are also part of this section.

- The commercial feasibility analysis focuses on the probability of commercial success and this section of the study features an analysis of the market study findings, how the market is expected to respond to a ferry system, and whether there is sufficient interest or need for the service to justify further action.

- The financial feasibility analysis considers all projected costs, revenues, and funding and financing options, and concludes whether resources are or will be reliably available to support a ferry service.

A prospective ferry system must be technically, commercially, and financially sound to be considered "feasible" and to urge the State of Hawaii to proceed with next steps in the establishment of a ferry system.

Technical Feasibility Analysis

Based on the directives outlined in Act 196 and HCR 47, and based on the subjects past studies and demonstration projects, this study sets the following parameters for prospective ferry systems for the subsequent analysis:

1. An inter-island ferry system is one that operates between any two islands within the State of Hawaii that are under separate county jurisdictions, carries passengers or cars or cargo/freight for a fee, embarks and disembarks at a State of Hawaii harbor facility, and is wholly owned by the State of Hawaii;

2. An intra-county ferry system is one that operates between two islands under the same county jurisdiction, carries only passengers for a fee, embarks and disembarks at a State of Hawaii harbor facility, and is wholly owned by the State of Hawaii; and

3. An intra-island ferry system is one that operates between two points on the same island, carries only passengers for a fee, embarks and disembarks at a State of Hawaii harbor facility, and is wholly owned by the State of Hawaii.

This study considers an inter-island ferry system that may serve various routes, an intra-county ferry system between Maui and Molokai, an intra-island ferry system between West Oahu and Honolulu, and an intra-island ferry system between West Maui and Central Maui.

This study assumes that one of the aforementioned hypothetical vessels will be used to provide the service of transporting passengers and/or cars and cargo/freight on the routes, as applicable.

Assessment of Harbor Infrastructure

To first determine whether any of these ferry systems is physically possible given the existing harbor infrastructure, the Department of Transportation assessed each hypothetical vessel against nine of its commercial harbors and three small boat harbors managed and controlled by the Department of Land and Natural Resources Division of Boating and Ocean Recreation (DOBOR). This assessment identifies the best or preferred pier or location for a ferry operation at each harbor, compares the length and draft of each vessel with the length and draft at that pier, and highlights the availability of the preferred pier based on current uses and berth schedules. Availability is based on the harbors scheduling policy of "first come, first served" and assumes no existing harbor user is displaced or operation disrupted to accommodate a ferry operation. The

assessment yielded recommendations for capital improvement projects where the infrastructure is insufficient to accommodate a ferry operation, and identified constraints if a ferry system operation would be infeasible at that harbor.

FIGURE T1: MAP OF HAWAII'S HARBORS

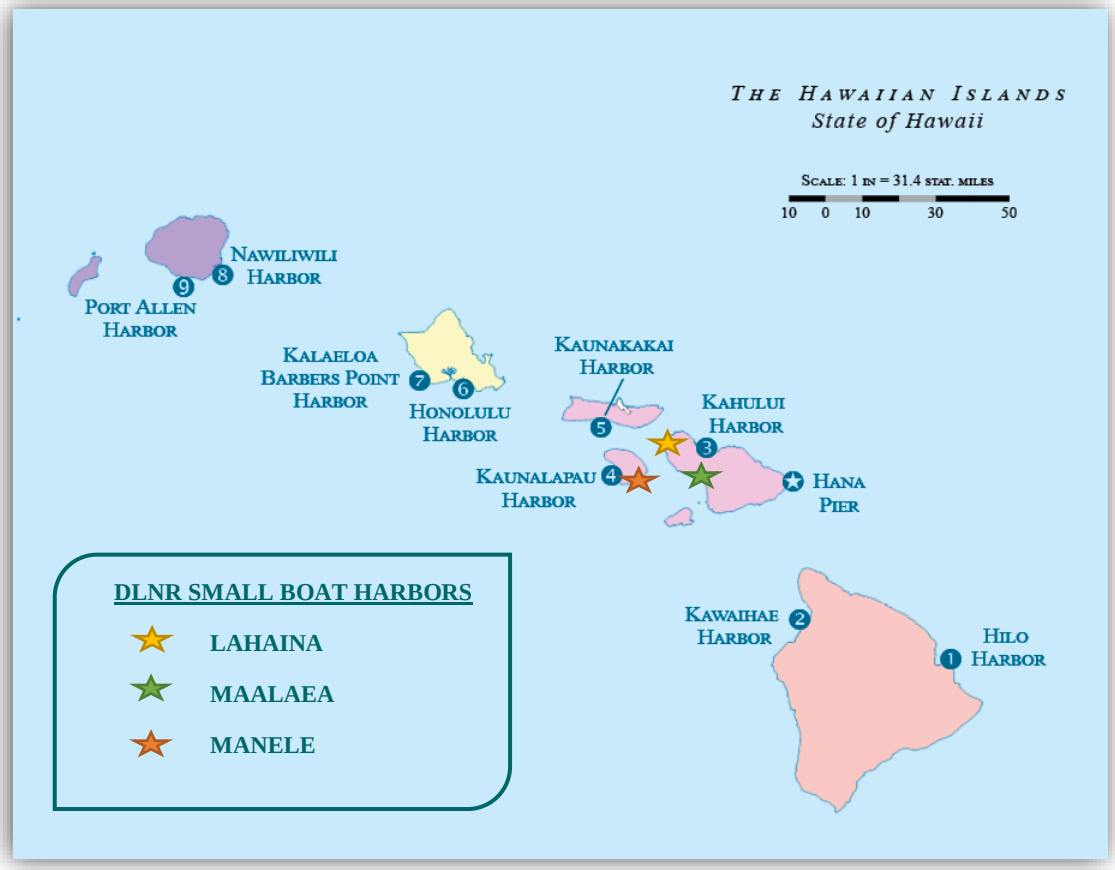


Table T1: INFRASTRUCTURE GAP ANALYSIS OF STATE COMMERCIAL AND SMALL BOAT HARBORS organizes the findings of the assessment. (See insert)

Kaunakakai Harbor and Honolulu Harbor could feasibly accommodate an intra-island vessel or a small inter-island vessel in the immediate future without need for any significant improvements. Kaunakakai could not support a medium or large vessel, but Honolulu's Pier 19 could if ramps to load cars and cargo were available, either as part of the vessel or a separate improvement fixed to the pier.

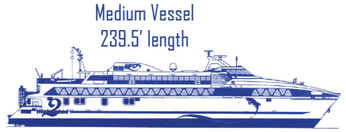
Nawiliwili Harbor and Port Allen Harbor, both on Kauai, could accommodate a ferry system served by any of the hypothetical vessels provided a passenger facility, even a temporary one, was built to provide passengers protection from inclement weather while waiting for the ferry. The Port Allen South Pier and adjacent shed location are not ideal for a ferry operation, but it is certainly possible with the reconfiguration of the parking area at the harbor.

This assessment matches existing commercial and small boat harbors facilities with hypothetical vessels to determine whether a ferry can operate at that harbor, and, if so, the best or preferred location for a ferry operation. This table also shows currently availability of the location in average days available per week, capital improvements to required to support a ferry service, and any recommendations or constraints.

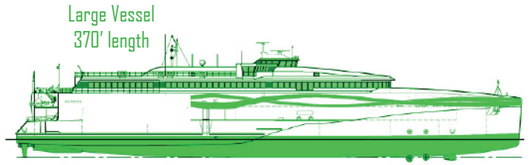
TABLE T1: INFRASTRUCTURE GAP ANALYSIS OF STATE COMMERCIAL AND SMALL BOAT HARBORS

INTRA-ISLAND VESSEL OPTION: Passengers Only
Draft: 3.6 feet Passengers: 140
Length: 98.4 feet

SMALL VESSEL OPTION: Passengers Only
Draft: 4.3 feet Passengers: 450
Length: 164 feet



MEDIUM VESSEL OPTION: Passengers & Cars
Draft: 10.2 feet Passengers: 500
Length: 239.5 feet Cars: 80



LARGE VESSEL OPTION: Passengers, Cars & Cargo
Draft: 13.1 feet Passengers: 960
Length: 370 feet Cars: 300

HILO HARBOR Hawaii DOT	RADIO BAY No existing infrastructure NEEDS: New floating dock, passenger facility, parking	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 2-3 days, various NEEDS: Parking	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 2-3 days, various NEEDS: Parking, staging area, ramps CONSTRAINTS: No area available for expansion for staging area	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 2-3 days, various NEEDS: Parking, staging area, ramps CONSTRAINTS: No area available for expansion for staging area
KAWAIHAE HARBOR Hawaii DOT	PIER 1 Sufficient length and draft; 5-6 days NEEDS: New passenger facility, parking	PIER 1 Sufficient length and draft; 5-6 days NEEDS: New passenger facility, parking RECOMMENDATION: Develop coral flats area	PIER 1 Sufficient length and draft; 5-6 days NEEDS: New passenger facility, parking, staging area, ramps RECOMMENDATION: Develop coral flats area	PIER 1 Sufficient length and draft; 5-6 days NEEDS: New passenger facility, parking, staging area, ramps RECOMMENDATION: Develop coral flats area
KAHULUI HARBOR Maui DOT	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 0 days NEEDS: Additional/new pier space, parking RECOMMENDATION: Develop new Pier "2C"; Westside too rough	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 0 days NEEDS: Additional/new pier space, parking RECOMMENDATION: Develop new Pier "2C"; Westside is too rough for ferry	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 0 days NEEDS: Additional/new pier space, parking, staging area, ramps RECOMMENDATION: Develop new Pier "2C"; Westside too rough for ferry	PIER 1 (PASSENGER TERMINAL) Sufficient length and draft; 0 days NEEDS: Additional/new pier space, parking, staging area, ramps RECOMMENDATION: Develop new Pier "2C"; Westside too rough for ferry
MAALAEA SMALL BOAT HARBOR Maui DLNR	NORTH & SOUTH PIER Insufficient length and draft; 0 days NEEDS: Additional pier space, parking	N/A	N/A	N/A
LAHAINA SMALL BOAT HARBOR Maui DLNR	FERRY PIER Insufficient length and draft; Varies NEEDS: New 115-ft ferry pier (CIP design underway)	N/A	N/A	N/A
KAUNAKAKAI HARBOR Molokai DOT	**FERRY TERMINAL** **Sufficient length and draft; 7 days** **NEEDS: None**	**FERRY TERMINAL** **Sufficient length and draft; 7 days** **NEEDS: None**	FERRY TERMINAL Sufficient length and draft; 7 days NEEDS: Staging area, ramps CONSTRAINTS: No area available for expansion for staging area	FERRY TERMINAL Sufficient length and draft; 7 days NEEDS: Staging area, ramps CONSTRAINTS: No area available for expansion for staging area
KAUMALAPAU HARBOR Lanai DOT	PIER Sufficient length and draft; 6 days NEEDS: New passenger facility, parking	PIER Sufficient length and draft; 6 days NEEDS: New passenger facility, parking	PIER Sufficient length and draft; 6 days NEEDS: New passenger facility, parking, staging area, ramps CONSTRAINTS: No area available for expansion for staging area	PIER Sufficient length and draft; 6 days NEEDS: New passenger facility, parking, staging area, ramps CONSTRAINTS: No area available for expansion for staging
MANELE SMALL BOAT HARBOR Lanai DLNR	PIER Insufficient length and draft; Varies NEEDS: New floating dock, passenger facility, parking	N/A	N/A	N/A
HONOLULU HARBOR Oahu DOT	**PIER 19 FERRY TERMINAL** **Sufficient length and draft; 7 days** **NEEDS: None**	**PIER 19 FERRY TERMINAL** **Sufficient length and draft; 7 days** **NEEDS: None**	PIER 19 FERRY TERMINAL Sufficient length and draft; 7 days NEEDS: Ramps	PIER 19 FERRY TERMINAL Sufficient length and draft; 7 days NEEDS: Ramps
KALAELOA BARBERS POINT HARBOR Oahu DOT	PIER 3 Sufficient length and draft; 0 days NEEDS: New floating dock, passenger facility, parking CONSTRAINTS: Pier 3 to be developed as a dedicated fuel pier	PIER 3 Sufficient length and draft; 0 days NEEDS: New floating dock, passenger facility, parking CONSTRAINTS: Pier 3 to be developed as a dedicated fuel pier	PIER 3 Sufficient length and draft; 0 days NEEDS: New floating dock, passenger facility, parking, ramps CONSTRAINTS: Pier 3 to be developed as a dedicated fuel pier	PIER 3 Sufficient length and draft; 0 days NEEDS: New floating dock, passenger facility, parking, ramps CONSTRAINTS: Pier 3 to be developed as a dedicated fuel pier
NAWILIWILI HARBOR Kauai DOT	JETTY PIER Sufficient length and draft; 7 days NEEDS: New passenger facility	JETTY PIER Sufficient length and draft; 7 days NEEDS: New passenger facility	JETTY PIER Sufficient length and draft; 7 days NEEDS: New passenger facility, ramps	JETTY PIER Sufficient length and draft; 7 days NEEDS: New passenger facility, ramps
PORT ALLEN HARBOR Kauai DOT	SOUTH PIER Sufficient length and draft; 7 days NEEDS: New passenger facility	SOUTH PIER Sufficient length and draft; 7 days NEEDS: New passenger facility	SOUTH PIER Sufficient length and draft; 7 days NEEDS: New passenger facility, staging area, ramps	SOUTH PIER Sufficient length and draft; 7 days NEEDS: New passenger facility, staging area, ramps

Hilo Harbor could become part of an inter-island ferry system operating a small vessel if a nominal number of parking stalls were available. Radio Bay currently has no infrastructure, but with moderate investment can host an intra-island ferry, or a vessel of under 100 feet in length. Any larger operation is highly unlikely as a land acquisition is necessary to create a new yard to stage cars and cargo trucks as they await embarkation. At Kawaihae Harbor, Pier 1 could support an intra-island ferry or vessel of similar size if parking and a passenger facility were made available. With the current cargo volume moving at Kawaihae, Pier 1 is not ideal for a larger ferry operation, but the large coral flats area between the commercial harbor and small boat harbor has potential for development for a ferry. Based on the cost of a recently completed new pier project at Hilo Harbor, the development of the coral flats may cost upward of $70 million.

The three small boat harbors, Maalaea, Lahaina, and Manele, have accommodated intra-county vessels, but none can accommodate the 98.4-foot length hypothetical intra-island/intra-county vessel. Expeditions runs between Lahaina and Manele and is 55 feet in length. The Department of Land and Natural Resources is preparing designs for a new ferry pier at Lahaina Harbor and the new pier, designed to be 115 feet long, may accommodate the intra-island/intra-county vessel. Kaumalapau Harbor on Lanai, like Kaunakakai, could operably accommodate an intra-island vessel or a small inter-island vessel with minor improvements, but does not have space for a staging area for cars or cargo prior to ferry embarkation.

Kahului Harbor, the most popular inter-island ferry destination from Honolulu, has such high harbor traffic that it, unfortunately, could not accommodate a ferry service. The pier lengths and drafts are more than sufficient, but the piers are never available. Previous administrations have contemplated the development of a ferry and cruise facility on the west side of Kahului Harbor, but the strong current and surge are not ideal for other operation there. The development of a new pier on the opposite side of the existing Pier 2 may be an option, but not without significant cost.

Environmental Regulatory Requirements

Hawaii's environmental compliance law, Hawaii Environmental Policy Act (HEPA), is codified in Chapter 343, Hawaii Revised Statutes, and its implementing rules are found in Title 11-200, Hawaii Administrative Rules. HEPA ensures that environmental concerns are duly considered with economic and technical considerations in decision-making for certain State and County projects, operations, or actions. There are nine actions that trigger the requirement to conduct an environmental review; the most relevant to the establishment of a State-run ferry system is the use of State or County lands or funds.

The National Environmental Policy Act (NEPA) is the federal counterpart law that mandates environmental factors be given appropriate consideration in decision-making by federal agencies. If a project has a federal nexus, like the use of federal funds or a federal permit or approval, a NEPA review of the project is necessary. A project can clear the NEPA process through a Categorical Exemption, an Environmental Assessment (EA) with a Finding of No Significant Impact (FONSI), or an Environmental Impact Statement (EIS) and accompanying Record of Decision.

In addition to the NEPA requirements, a ferry operation and the needed infrastructure improvements for the operation will require a series of federal permits. **TABLE T2: FEDERAL AND STATE APPLICABLE PERMITS, CONSULTATIONS & APPROVALS FOR HARBOR PROJECTS** lists federal and State permits, approvals, and consultations that may be required in the process of establishing a ferry system in Hawaii.

The establishment of a State-run ferry system certainly has a federal nexus. There are two possible scenarios to address these regulations and each is explained below.

Option #1: HEPA with a NEPA Overlay. Projects at State commercial harbors that do not involve federal funds or lands, but require a federal permit (most often a Department of the Army (DA) permit issued by the U.S. Army Corps of Engineers (USACE)), the Department of Transportation prepares a HEPA EA or EIS with a NEPA overlay. The NEPA overlay facilitates the future DA permit process generally undertaken during the design phase of a project. The USACE, as the federal agency responsible for administering the DA permit, will conduct its own internal NEPA review of the project, but overlay assists in this review as it includes rigorous alternatives analysis, significance thresholds, and analyses of the project compliance with various federal laws.

Projects that typically involve a HEPA environmental review document with a NEPA overlay are those that involve work in or over water such as demolition, reconstruction, or new construction of piers, which may entail driving in-water piles or sheet piles and/or dredging or filling areas beneath or adjacent to theses piers.

Option #2: Joint HEPA/NEPA Document. In the case of the new ferry system, the use of State funds triggers an environmental review and federal participation most likely be in the form of funding assistance require a joint HEPA/NEPA document. The federal funding agency is responsible for project compliance with NEPA. In situations where multiple federal entities are involved, a lead federal agency is designated to fulfill the NEPA requirement. While there are differences between HEPA and NEPA in terms of document content, terminology and procedural requirements, they are similar in many respects. Both require consultations with agencies, organizations and individuals with expertise or that may be directly affected by the proposed project, both have public involvement requirements, and the purpose and intent of both processes is to facilitate informed decision-making by government agencies.

TABLE T2: FEDERAL AND STATE APPLICABLE PERMITS, CONSULTATIONS & APPROVALS FOR HARBOR PROJECTS

PERMIT/CONSULTATION/ APPROVAL	RESPONSIBLE AGENCY	DESCRIPTION	AUTHORIZATION
Federal, 408 Permission	U.S. Army Corps of Engineers (USACE)	Grants permission for the alteration of a USACE public work (e.g., revetment), so long as that alteration is not injurious to the public interest and will not impair the usefulness of the work. Alterations refer to any action (except those undertaken by USACE) that builds upon, alters, improves, moves, occupies, or otherwise affects the usefulness, or the structural or ecological integrity, of a USACE project. A Section 408 decision must be made before a DA Permit is issued. Requires NEPA review.	Section 14 Rivers and Harbors Appropriation Act (RHA) (33 USC 408)
Federal, Department of the Army Permit	U.S. Army Corps of Engineers (USACE), Regulatory Branch	Work (including construction and dredging) in, over, or under Navigable Waters of the US; Placement or discharge of dredged or fill material in Waters of the US; Transportation of dredged material for the purposes of dumping it into ocean waters. Requires EPA concurrence.	Section 10 RHA (33 USC 403) Section 103 Marine Protection, Research and Sanctuaries Act (MPRSA) (33 USC 1413)
Federal, Historic Preservation Review	State Historic Preservation Officer (BLNR Chair)	Requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment prior to implementing the undertaking. Section 106 encourages, but does not mandate preservation. The consultation process emphasizes consultation with Native Hawaiian organizations.	Section 106, National Historic Preservation Act (NHPA)
Federal, Endangered Species Consultation	U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS)	Requires Federal agencies to consult with the USFWS (and NMFS if affecting marine species) when their undertakings may affect a listed endangered or threatened species. Consultations help ensure that Federal actions do not jeopardize the continued existence of a species or destroy or adversely modify critical habitat.	Section 7 Endangered Species Act (ESA)
Federal, Incidental Take Permit and Habitat Conservation Plan	USFWS	Issued to non-federal entities whose undertakings may result in an incidental 'take' of an endangered or threatened species; the permit authorizes the 'take,' not the activity. A permit application is accompanied by a Habitat Conservation Plan, which ensures the effects of the take are minimized and mitigated. Take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap capture, or collect, or attempt to engage in any such conduct."	Section 10 ESA
Federal, Essential Fish Habitat Consultation	NMFS	Federal agencies that fund, permit or undertake activities that may adversely affect EFH are required to consult with National Marine Fisheries Service regarding the potential effects on the EFH that may result from the agency's actions. EFH are waters and substrate necessary for federally-managed species to spawn, breed, feed, and/or grow to maturity.	Magnusson-Stevens Fishery Conservation and Management Act
Federal, CZM Federal Consistency	State DBEDT, Office of Planning, Coastal Zone Management Program	Requires federal actions that affect coastal use or resources be conducted in a manner consistent with the State CZM program. These federal actions are reviewed by the Hawaii's CZM program.	Section 307 Coastal Zone Management Act
Federal, Incidental Take Authorization	NMFS	The MMPA allows, upon request, the incidental take of small numbers of marine mammals by US citizens and US-based companies who engage in a specified activity—other than	Marine Mammal Protection Act (MMPA)_

PERMIT/CONSULTATION/ APPROVAL	RESPONSIBLE AGENCY	DESCRIPTION	AUTHORIZATION
		commercial fishing—within a specified geographic region. There are two types of incidental authorizations: (1) Incidental Harassment Authorization (1 year) and (2) Letter of Authorization (for anticipated harassment over multiple years and for serious injury or mortality).	
Federal, Environmental Justice	Responsible Federal Agency (USACE if DA permit is limit of federal involvement)	Directs federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations, to the greatest extent practicable and permitted by law, and to promote non-discrimination in federal programs.	Executive Order 12898
Federal, Floodplain Management	Responsible Federal Agency (USACE if DA permit is limit of federal involvement)	Requires federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.	Executive Order 11988
Federal, Invasive Species	Responsible Federal Agency (USACE if DA permit is limit of federal involvement)	Directs federal agencies to take steps to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause.	Executive Order 13112
Federal, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians	Responsible Federal Agency (USACE if DA permit is limit of federal involvement)	Directs federal agencies to conduct regular and meaningful consultation with tribal officials in the development of federal policies that have tribal implications.	Executive Order 13175
Federal, Water Quality Certification	State DOH, Clean Water Branch	The State DOH is authorized under 40 CFR 121.16, 33CFR 325.2(b)(1), and HRS 342D-53 to administer the 401 Water Quality Certification program in Hawaii. A WQC is required by any applicant for a Federal license or permit to conduct any activity, which may result in any "discharge" into navigable waters. A DA Permit authorized under Section 404 CWA automatically triggers the need for a 401 WQC. A DA permit authorized under Section 10 RHA may, but does not necessarily require a 401 WQC. That determination is made by DOH-CWB and is dependent on the nature of the project and its potential to result in a 'discharge.'	Section 401 Clean Water Act (CWA)
Federal, National Pollutant Discharge Elimination System	State DOH, Clean Water Branch	The State DOH is delegated by the US EPA to administer the NPDES Permit program in Hawaii. NPDES permits are required for all point source pollutant discharges to State waters and discharges of storm water associated with construction activities that disturb one acre or more, storm water associated with industrial activities, and storm water and certain non-storm water discharges from the Municipal Separate Storm Sewer Systems (MS4s).	Section 402 CWA
State, Historic Preservation Review	State DLNR, Historic Preservation Division	Provides for the review of any State or county project that may affect a historic property, aviation artifact, or burial site, especially those listed on the Hawaii Register of Historic Places.	HRS 6E-8, HAR 13-275

PERMIT/CONSULTATION/ APPROVAL	RESPONSIBLE AGENCY	DESCRIPTION	AUTHORIZATION
		The project shall not commence until the DLNR provides its written concurrence.	
State, Incidental Take License	State BLNR	A temporary license issued as part of a habitat conservation plan to allow a 'take' of an endangered or threatened species that is incidental to an otherwise lawful activity. These include any aquatic life, wildlife, or land plant determined endangered by the ESA, any indigenous species determined as threatened by the ESA, and those indigenous species determined by DLNR as endangered or threatened pursuant to factors listed in HRS 195D-4(b).	HRS 195D
State, Community Noise Permit and Community Noise Variance	State DOH	Provides for review and permitting of activities that may generate excessive noise (in excess of the maximum permissible sound levels), subject to reasonable conditions. A variance may be applied for if activities are expected to exceed the maximum permissible sound levels for construction activities outside of normal permitted hours.	HRS 342F-4, HAR 11-46
State, Conservation District Use Permit	State DLNR	Provides for review and permitting of proposed activities in the State Land Use Conservation District. Per HRS 266-2.2, DOT Harbors projects are exempt from the CDUP process for activities involving submerged lands. Use of non-submerged Conservation District lands by DOT-H would still require a CDUP. Any applicant action proposed within the Conservation District, whether on submerged or non-submerged lands, must obtain a CDUP. HRS 266-2.2: "Notwithstanding any law to the contrary, all work involving submerged lands used for state commercial harbor purposes shall be exempt from any permitting and site plan approval requirements established for lands in a conservation district."	HRS 183C, HAR 13-5
State, Special Management Area Permit	County Planning Departments	Provides for review and permitting of proposed developments in the Special Management Area to ensure that they comply with CZM objectives, policies, and SMA guidelines. Per HRS 266-2(7)(b), DOT-H developments are exempt from the SMA requirements. Any applicant development proposed within the SMA must comply with the SMA rules. HRS 266-2(7)(b): "Notwithstanding any law or provisions to the contrary, the department of transportation is authorized to plan, construct, operate, and maintain any commercial harbor facility in the State, including, but not limited to, the acquisition and use of lands necessary to stockpile dredged spoils, without the approval of county agencies."	HRS 205A

Draft Environmental Impact Statement, December 2008

In October 2007, the Hawaii State Legislature passed a bill in Special Session allowing large-capacity ferry vessels to operate between ports in Hawaii while an EIS is prepared. The Department of Transportation contracted Belt Collins Hawaii Ltd. to produce a draft EIS at a cost of $1.39 million. The draft EIS evaluates the action of developing harbor improvements needed to support a large-capacity ferry vessel company within the commercial harbors system controlled by the Department of Transportation, and the indirect impacts of the ferry operation. The environmental review is quite extensive and the document exceeds 1,200 pages. As such, only the summary sheet of the draft EIS is appended to this report, instead of the complete document (Appendix 3).

Although this draft EIS was prepared pursuant to Act 2 (2007, Special Session) instead of Chapter 343, most of the content is still relevant to the establishment of a new ferry system and may be used as a resource or starting point for any future environmental review.

Invasive Species

One subject that will surface in any environmental review related to an inter-island ferry service is invasive species. Invasive species threaten Hawaii's natural environment and local economy by damaging native forests, competing with native flora and fauna for resources that may lead to the extinction of these species, and carrying disease that may affect native species, agricultural crops, and humans. Fire ants, coqui frogs, and gorse are examples of such invasive species that have established on Hawaii Island to the point where eradication is nearly impossible and controlling the spread of such species to other islands a major concern and statewide priority. Inter-island ferry operations that include the transport of passengers, vehicles, and cargo have the potential to increase the spread of invasive species, even if unintentionally, between islands.

Primary pathways for inter-island transport of alien terrestrial species include soil and litter (containing seeds, microorganisms, and invertebrates) adhering to vehicles and construction equipment; stowaways boarding the vessel either actively or with contaminated cargo and recreational equipment (e.g., contaminated clothing, hiking boots, or hunting dogs); intentional transport of plants and animals (including smuggling); contaminated produce; and symbiotic species traveling with their associated species.

In discussions surrounding the Hawaii Superferry over a decade ago, invasive species were a point of concern and contention. In response, the Hawaii Superferry contemplated and/or implemented the following mitigation measures to control the

spread of invasive species through its operations:

- Agricultural screenings of its passengers and visual inspection and agricultural screening of all vehicles, including visual inspection of engines, interiors, undercarriages, wheel wells, trunks, beds of pickup trucks, and trailered equipment and vehicles;
- Denying boarding or embarkation to vehicles that were not inspected and screened, or vehicles containing prohibited items;
- Notifications to passengers in advance that all vehicles, camping, hiking, hunting, snorkeling, diving, fishing, and boating equipment (including boats and trailers) should be thoroughly washed with fresh water and be free of any debris prior to boarding or embarkation;
- Notifications to passengers in advance that all vehicles, including "off road" or four-wheel drive vehicles, including trucks, dirt bikes, and all-terrain vehicles, will be subject to screening and inspection, including for dirt or mud, and denying boarding or embarkation to vehicles that are excessively dirty, or muddy;
- Prohibiting living plants and propagative plant parts (e.g., roots and root stock) on the vessel unless accompanied by a valid Department of Agriculture certificate of inspection;
- Permitting Department of Agriculture inspections of cut or harvested flowers, foliage, fruits, vegetables, and/or other non-propagative plant parts;
- Permitting domestic livestock and poultry, limited to domestic cattle, horses, donkeys, goats, sheep, chickens, and roosters, on the vessel only if accompanied by a valid Department of Agriculture certificate;
- Prohibiting swine of any kind on the vessel, including but not limited to pigs, potbellied pigs, hogs, boars, and sows;
- Prohibiting transport of fishing nets of any kind;
- Prohibiting transport or rocks, soil, sand, dirt, or dead coral, except for soil or dirt in potted plants inspected and cleared for transport by the Department of Agriculture;
- Providing boot scrubbers at each ferry terminal;
- Requiring passengers to declare, orally or in writing, all plants, fruits, seeds, and any other biological medium; and
- Full cooperation with any monitoring or inspections by any state officials, employees, or contractors.

This list is not comprehensive, but these and other mitigation measures like undercarriage wash facilities for vehicles and a full contingent of Department of Agriculture inspectors at each ferry terminal must be implemented and strictly adhered to by any future ferry operation. Ultimately, even with mitigation measures in place, there is still some risk of transporting invasive species via ferry. The risk cannot be eliminated by the mitigation measures.

Additionally, each mitigation measure represents additional cost that will need to be incurred by the State if it decides to launch a ferry service, and facilities for the mitigation systems and inspectors need to be constructed and maintained. Staff must also be trained and equipped. This represents an enormous cost in time, facilities, equipment, and personnel, but are imperative for a responsible ferry operation.

Other Regulatory Requirements

Federal Laws

Two key federal laws dictate that ferry vessels operating in Hawaii must be U.S.-built. The **Passenger Vessel Services Act of 1886** effectively requires vessels to be U.S.-built by prohibiting foreign vessels from transporting passengers between ports and places in the United States subject to a per passenger penalty. Certain provisions of the **Merchant Marine Act of 1920**, a.k.a. Jones Act, are also applicable, especially to a ferry that may transport cargo and the crew of the vessel. The cost of vessel construction and crew in the United States can be significantly larger that internationally-built vessels.

Other federal regulations govern operations at commercial harbors and agencies like the U.S. Coast Guard and the U.S. Department of Homeland Security enforce these rules. One such regulation is the requirement of a facility security plan, or FSP, for each type of operation at each harbor. The FSP for a cruise ship or cargo ship may not be consistent with the security needs of a ferry. This study assumes that an FSP will need to be developed and the State will bear all costs for the preparation and implementation of the FSP.

The U.S. Coast Guard also regulates daylight and nighttime operations at a pier, and safety and security standards for each type of operation. The assessment of harbor infrastructure assumes daylight operations only at all facilities.

State Laws

Chapter 268, Hawaii Revised Statutes, authorizes the establishment of a ferry system to provide the residents of Hawaii with an economic means of inter-island and intra-island transportation. The chapter also names the system “Hawaii State Ferries.” There are two noteworthy terms in the chapter that must be considered at this point. The first is the authority for the Department of Transportation and the Department of Land and Natural Resources to waive fees or assess just a nominal fee for the use of facilities by an intra-state ferry. The second is found in Section 268-10, that states the Department of Transportation shall have all the obligations, duties, and rights of a common carrier of persons and property. Together with Chapter 271, Hawaii Revised Statutes, this section confirms that this government-run ferry system is subject to the jurisdiction and

oversight of the State of Hawaii Public Utility Commission. Both will factor into the financial feasibility analysis later.

Conclusion

In reviewing harbor infrastructure necessary to support any kind of ferry service and the environmental regulatory considerations in launching said service, the operation of an inter-island, intra-county, and intra-island ferry system in Hawaii is entirely possible, but is not feasible.

Honolulu Harbor, the hub of Hawaii's commercial harbor hub-and-spoke system, has a ferry terminal facility designed for this very purpose. However, the same is not true for almost every "spoke" harbor. The lack of available pier space or yard space at most inter-island destinations demand significant capital improvements, and none are identified as part of the Harbors Modernization Plan or on any current project priority lists for the Department of Transportation. Funding these improvements is a separate matter that also underscores the low viability of an inter-island ferry system. The commercial harbors system is a self-funded enterprise and its users pay fees to fund the operational costs and capital improvement costs throughout the system statewide. It is unfair and unreasonable to expect the ferry system improvements to be borne by these harbor users or the Department of Transportation Harbors Division.

The intra-island service from West Oahu to Downtown Honolulu is also technically infeasible because there is no pier facility available at Kalaeloa Barbers Point Harbor. There are barriers to the West Maui-Central Maui intra-island service, too, as the small boat harbors at Lahaina and Maalaea cannot accommodate a vessel as large as the hypothetical model. The establishment of the service can wait until the expected completion of the new Lahaina ferry pier in 2019, or in the meantime, the operation may consider a vessel similar to the Expeditions ferry that fits in the smaller harbors.

In contrast to the other harbors, Kaunakakai Harbor already has a ferry facility that can sufficiently support a ferry operation. Notwithstanding specific regulations that may be applicable to a new ferry system that may not have applied to the Sea Link Molokai Ferry and the availability of resources to comply with such regulations, the intra-county ferry system between Maui and Molokai is technically feasible.

On top of the infrastructure requirements, the environmental regulatory requirements pose challenges to technical feasibility. Neither the environmental compliance by the ferry operations itself nor the infrastructure improvements alone make the project infeasible; however, the time and resources required to complete the environmental review will delay the implementation of this ferry system.

Commercial Feasibility Analysis

The commercial feasibility analysis focuses on the probability of commercial success and this section of the study features an analysis of the market study findings, how the market is expected to respond to a ferry system, and whether there is sufficient interest or need for the service to justify further action.

The Ferry Feasibility Market Study completed by SMS Hawaii for the Department of Transportation provides key insights into whether the current market would support an inter-island or intra-island ferry system. The complete report for the market study, including the survey instruments and the list of participants is appended to this study (Appendix 2).

The Ferry Feasibility Market Study

The Department of Transportation and SMS Hawaii constructed this study to engage a wide-range of local stakeholders who may use or may be impacted by a future ferry system. The survey instruments were designed to collect data and anecdotal statements that reflect sentiment and market demand as both forces are important in the success of a public works project like this. Data collection was completed during August and September 2017. The participants in this study are categorized into the three groups as follows:

1. The **Personal Interviews** group consisted of government leaders who would be direct decision-makers or appropriators for a State-run ferry service, elected officials who represent districts that may be impacted by a ferry service, maritime industry executives, and leaders from environmental and community organizations representing interests that would be directly impacted by a ferry service. The group included nine State legislators, three county mayors, three State agencies, the Hawaii Harbors Users Group, the Airline Committee of Hawaii, Hawaii Farm Bureau, Sierra Club, Blue Planet Foundation, and Earthjustice. The Department of Transportation identified the 22 members of this group and SMS Hawaii personally interviewed each face-to-face or by phone.

2. The second group, **Prospective Ferry Stakeholders**, is similar to the Personal Interviews, but included a much broader range of elected officials and lawmakers at the State and County levels, businesses who may be potential ferry users or ferry service competitors, and community organizations including environmental protection groups. Of 264 government, business, and community entities that were invited to participate in this survey, 61 responded and their responses are reflected in this report. Among this group

were an additional 15 State legislators, 11 county council members from each of the four counties, the Hawaii Government Employee's Association, Hawaii Small Business Development Centers, Expeditions (the existing Maui-Lanai passenger ferry), Young Brothers, Hawaii Ranchers Association, Polynesian Voyaging Society, and several other yacht and canoe racing organizations. Figures and tables below highlighted in blue correspond to this group.

3. The **General Public** group consisted of 1,458 randomly selected State of Hawaii residents who live on Hawaii, Maui, Molokai, Lanai, Oahu, Kauai, and Niihau and provided responses through a phone or online survey. The responses offered by this group on support, need, and demand for a ferry service in Hawaii, as well as preferences for fare pricing and likelihood to travel by ferry formed the baseline for the representative statements of the consensus of Hawaii residents. Figures and tables below highlighted in orange correspond to this group.

   All participants in each group were asked to share opinions and feedback on ferry systems in general and on an inter-island ferry system. Members of the General Public group who reside in West Oahu answered additional questions about their interest in and likelihood of riding an intra-island commuter ferry between Honolulu Harbor and Kalaeloa Barbers Point Harbor. Similarly, residents of Maui and Molokai answered additional questions about an intra-island commuter ferry between Lahaina and either Maalaea Harbor or Kahului Harbor, and the restoration of an intra-county ferry between Maui and Molokai.

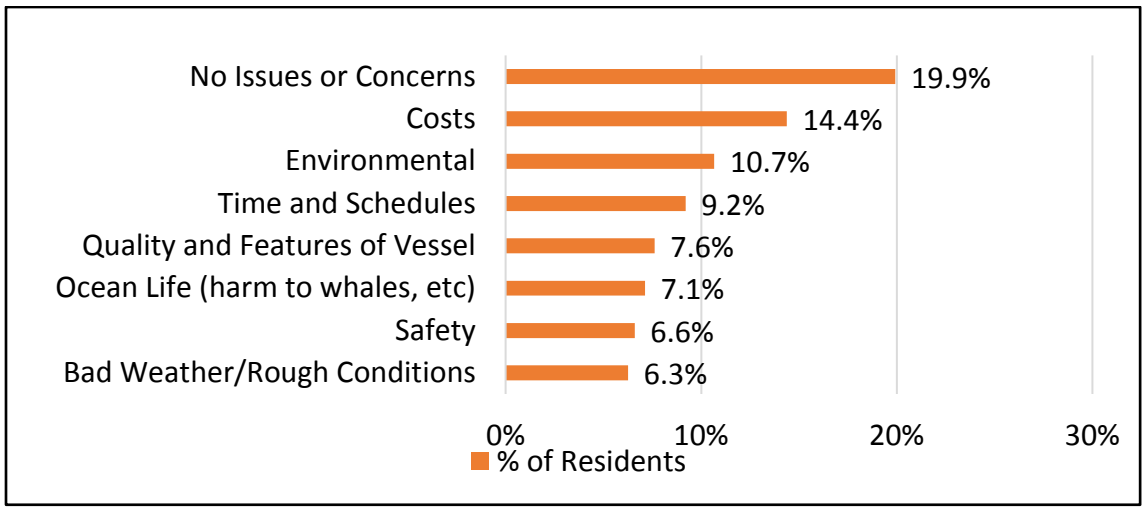
Market Study Findings: Overall Sentiment on a Ferry System

Across the board, the market study reveals that Hawaii is very open to the concept of a ferry system to serve the State. Reasons for support include having more options for travel and transport, a perception of lower costs of travel compared to existing alternatives, and the environment-friendly nature of a ferry operation in terms of pollution and emissions as compared to air travel. A small portion of study participants expresses opposition to a ferry and cited potential negative environmental impacts (e.g., transport and proliferation of invasive species, harm to marine life), the high cost of establishing and operating a ferry system, the rough sea conditions in the inter-island channels, and the potential negative impacts to neighbor island communities. These themes emerged across the three participant groups.

The General Public group was asked to identify specific concerns or issues they may have regarding a future inter-island ferry service, but responses as shown in the figure below are applicable to any type of ferry system that may operate locally. The concerns and issues of the General Public varied widely with nearly 20 % stating that they had no important concerns. The area of concern identified most frequently was the cost of a ferry system, and the anecdotal responses to the follow-on question, "Why would you

say that?", referred to funds still owed by investments made by the State of Hawaii on previous ferry operations. Other comments referred to a waste of taxpayer dollars.

FIGURE C1: CONCERNS OR ISSUES WITH A FUTURE INTER-ISLAND FERRY SERVICE, GENERAL PUBLIC



Note: percentages could total to more than 100%. Respondents could choose multiple responses.
Question: What would be some of the concerns or issues you would have with a future inter-island ferry service?

There were two recurring themes among the Personal Interviews that generally did not surface in the other groups. Participants advised that a successful ferry feasibility report should underscore how the ferry system could provide benefits and meet the needs of residents and local business, and not just focus on the costs of the technology and infrastructure required to support a ferry system. The other theme was a recommendation was to ensure that there was a clear and complete process for community input identified in the report or in future plans should an initiative to establish a ferry system advance. The undertone of this discussion stemmed from lessons learned from previous ferry projects that operated in Hawaii.

With regard to the operation of a ferry system, very few respondents think a ferry system in Hawaii should be government-run; most support a privately-run enterprise or a public-private partnership (P3) arrangement. However, even with little support for a government entity to operate the ferry, there is broader support for government subsidy. On average, Prospective Ferry Stakeholders suggested a State subsidy level for the operation of a ferry system at 38%; business sector participants tended to suggest lower subsidy levels while public sector participants tended to suggest higher subsidy levels. Of the General Public, 77.2% felt that a ferry system should be supported with State funding.

The following figures and tables depict the high points among the many findings of the market study on an *inter*-island ferry system.

FIGURE C2: SUPPORT OF INTER-ISLAND FERRY, PROSPECTIVE FERRY STAKEHOLDERS

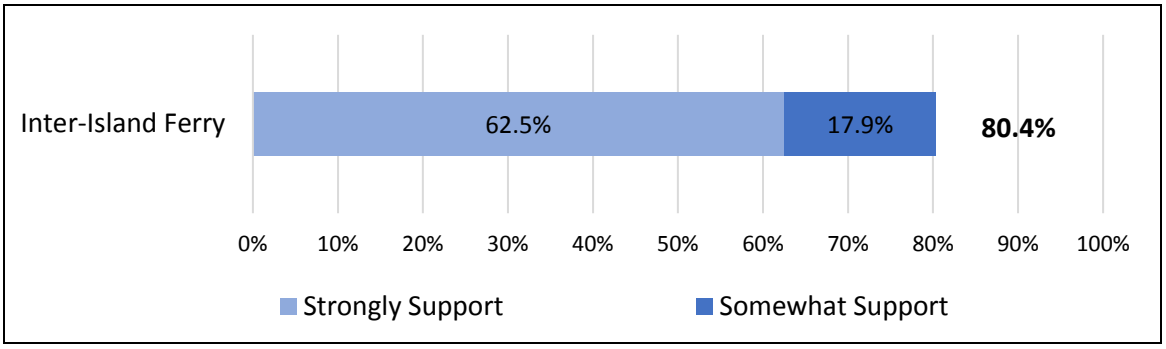
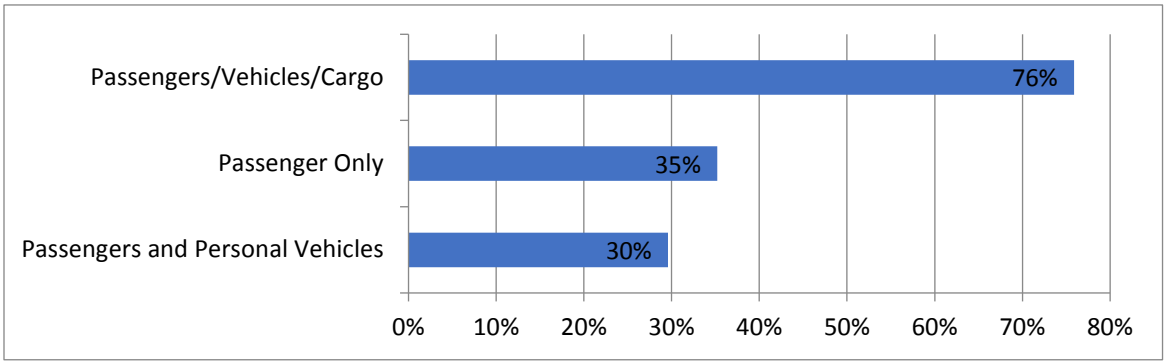


FIGURE C3: SUPPORT LEVEL FOR EACH TYPE OF FERRY SERVICE, PROSPECTIVE FERRY STAKEHOLDERS



Note: percentages could total to more than 100%. Stakeholders allowed to choose multiple responses.
Question: If a ferry service was introduced in Hawaii, which types of ferry would you support?

TABLE C1: PROPOSED FERRY ROUTES BY PRIORITY ORDER, PROSPECTIVE FERRY STAKEHOLDERS

Route	Priority Order	% Ranked 1st or 2nd
Honolulu (Oahu) and Kahului (Maui)	1	63.3%
Lahaina (Maui) and Kaunakakai (Molokai)	2	34.0%
Honolulu (Oahu) and Hilo (Hawaii Island)	3	31.9%
Honolulu (Oahu) and Kawaihae (Hawaii Island)	4	24.5%
Honolulu (Oahu) and Nawiliwili (Kauai)	5	23.4%
Honolulu (Oahu) and Maalaea (Maui)	6	18.8%
Lahaina (Maui) and Manele (Lanai)	7	14.9%

The Prospective Ferry Stakeholder Group collectively showed a high level of support for an inter-ferry system and a strong preference for a service that carried passengers, vehicles, and cargo. Figure C3 shows the level of support for this service was more than double the support for either a passenger-only service or a service for passengers and vehicles.

FIGURE C4: SUPPORT OF INTER-ISLAND FERRY, GENERAL PUBLIC

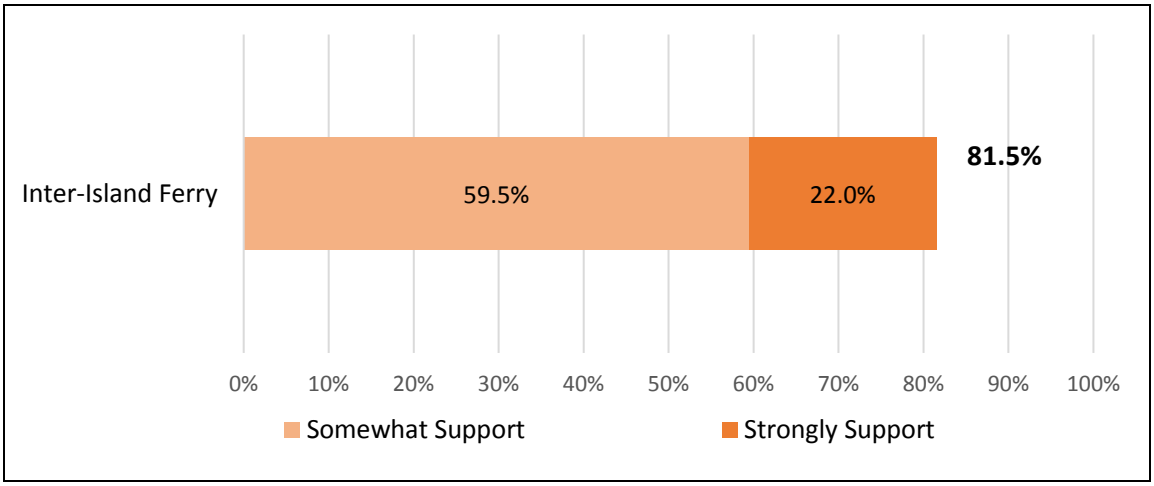
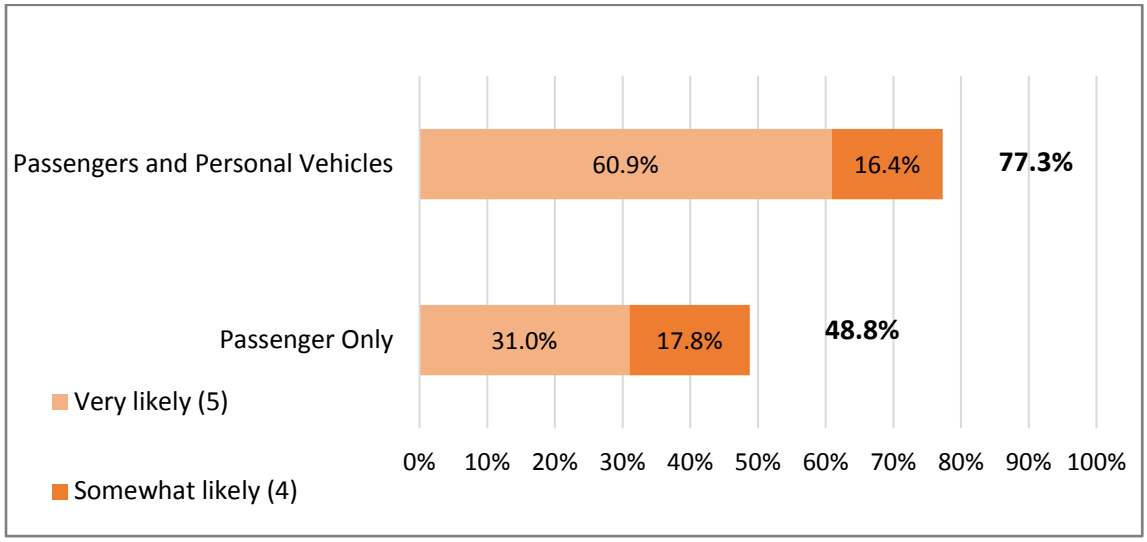


TABLE C2: SUPPORT OF INTER-ISLAND FERRY BY COUNTY, GENERAL PUBLIC

	County				
	Honolulu	**Maui**	**Hawaii**	**Kauai**	**Total**
Strongly Support	60.5%	55.2%	64.5%	41.3%	59.5%
Somewhat Support	23.5%	21.4%	17.8%	12.6%	22.0%
Slightly Support	9.0%	9.2%	6.9%	17.2%	9.1%
Very Little Support	3.6%	6.2%	5.1%	4.9%	4.2%
Not Support at All	3.3%	8.0%	5.7%	23.9%	5.2%

The General Public level of support nearly mirrors the level expressed by the Prospective Ferry Stakeholder group. Table C2 shows the breakdown of support by county of residence; Honolulu, Maui, and Hawaii residents responses have similar distribution while Kauai residents reported the fewest number of "strongly support" responses and the highest number of responses indicating "not support at all."

FIGURE C5: LIKELIHOOD TO USE EACH TYPE OF FERRY SERVICE, GENERAL PUBLIC



Question: On a 5-point scale where 5 is very likely and 1 not at all likely, if an inter-island ferry service were introduced in Hawaii, how likely are you to use that ferry in the future, If…?

Figure C5 above also shows this group has a much stronger preference for a passenger and vehicle service with 77.3% of respondents indicating they are very likely or somewhat likely to use this type of ferry service. This compares to a 48.8% likelihood to use a service that was passenger-only.

FIGURE C6: DEMAND FOR FERRY ROUTES, GENERAL PUBLIC

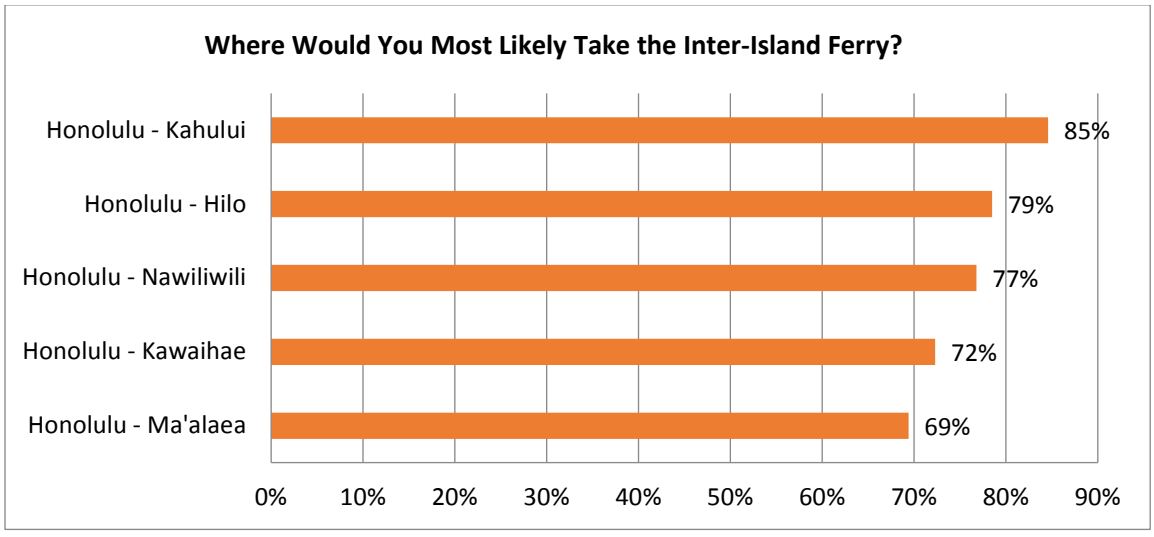


TABLE C3: ACCEPTABLE FERRY CROSSING TIMES, GENERAL PUBLIC

Proposed Route	Approx. 3 hours	3 to 5 hours	6 hours or overnight
Honolulu (Oahu) and Kahului (Maui)	69.9%	25.7%	4.4%
Honolulu (Oahu) and Hilo (Hawaii Island)	41.7%	42.9%	15.4%
Honolulu (Oahu) and Nawiliwili (Kauai)	68.4%	26.8%	4.8%
Honolulu (Oahu) and Kawaihae (Hawaii Island)	38.1%	47.5%	14.5%
Honolulu (Oahu) and Maalaea (Maui)	66.7%	27.9%	5.4%

Question: And, how long of a ferry crossing time is acceptable to you if the inter-island ferry goes between…

FIGURE C7: ACCEPTABLE FREQUENCY FOR THE FERRY SCHEDULE, GENERAL PUBLIC

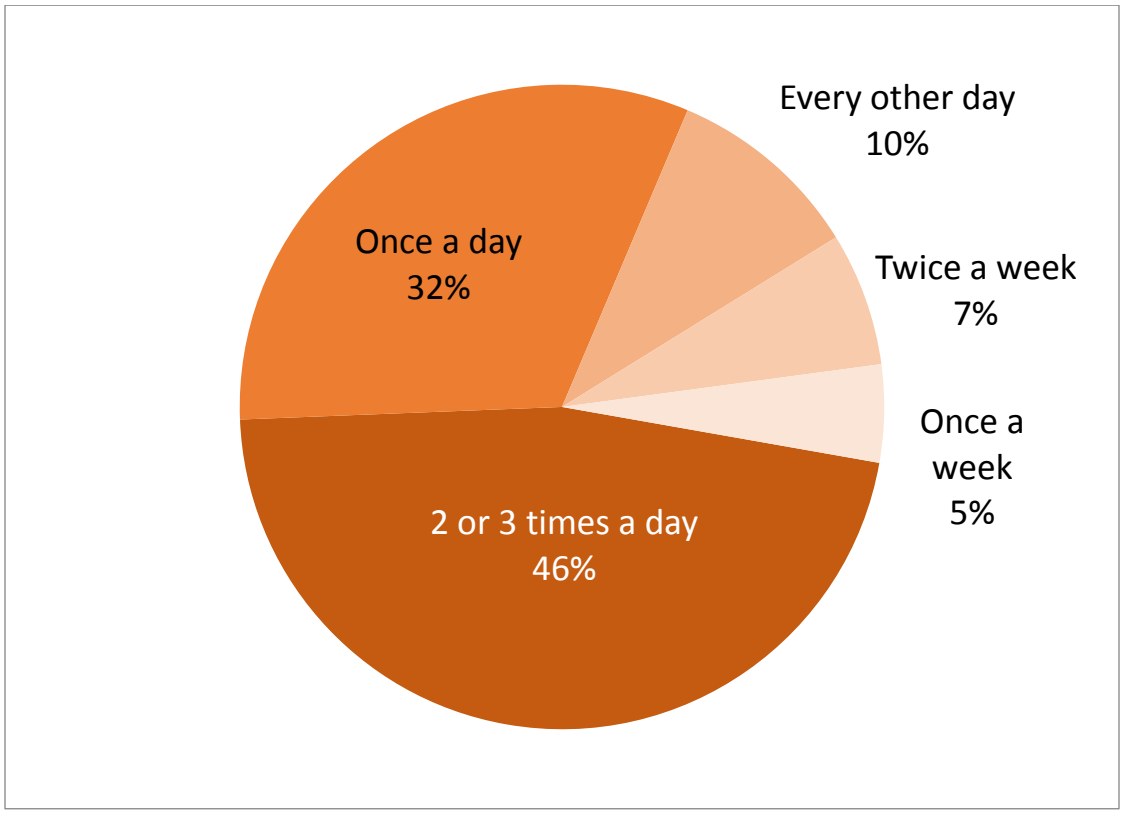
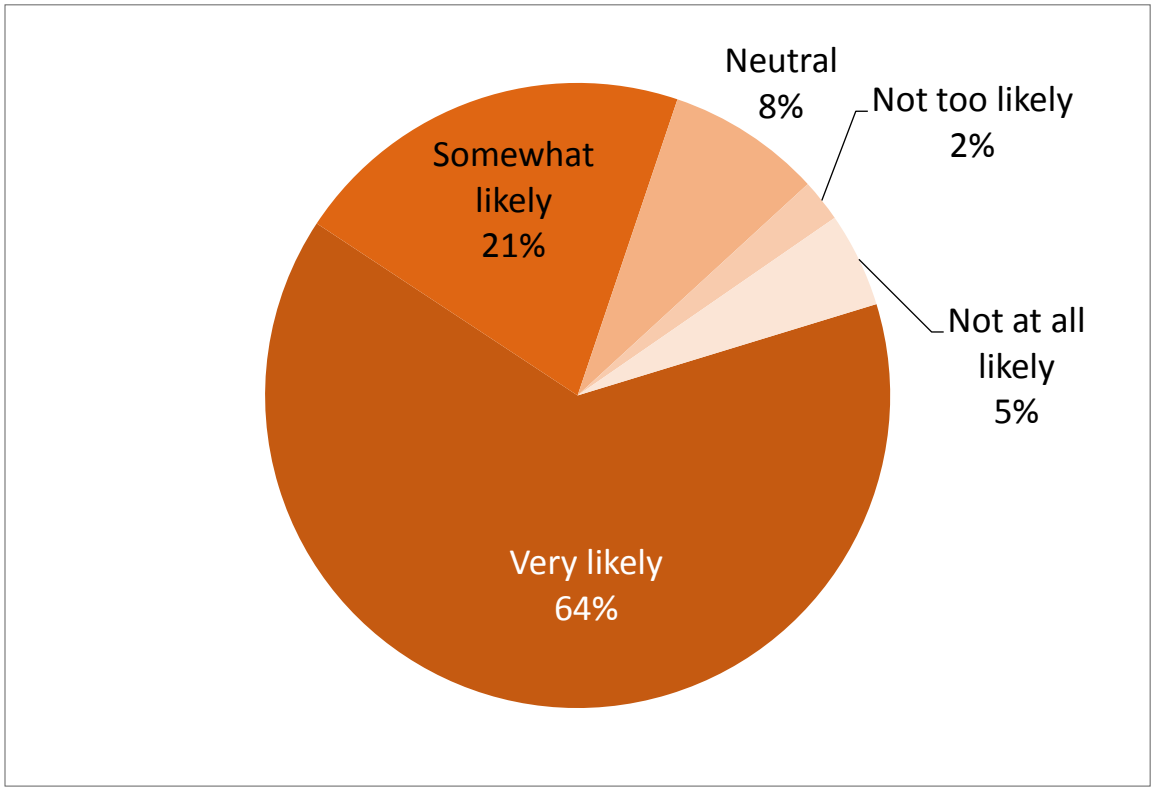


FIGURE C8: LIKELIHOOD TO USE FUTURE FERRY SERVICE, GENERAL PUBLIC



Question: Assuming that the inter-island ferry met your price and convenience needs, now how likely would you be to use the ferry service in the future? On a 5-point scale where 5 is very likely and 1 not at all likely.

Figures C6 and C7 coupled with Table C3 reflect the demand for specific ferry routes, as well as the expectations of the General Public for crossing times and frequency of service. Figure C8 above indicates that if all expectations are met, 64% of the General Public is very likely and 21% is somewhat likely to use an inter-island ferry. These expectations are significant factors in the analysis of projected ridership and revenue in the next section and the evaluation of Technical Feasibility later in this study.

The critical component of the market study is the range of pricing for a roundtrip on an inter-island ferry service, along with the optimal price point at which revenue is maximized. The General Public was asked for three price points for a roundtrip: a reasonable price, a price considered expensive but still acceptable, and a price that was too expensive and unacceptable. Table C4 on the following page shows the summary of responses to this prompt.

TABLE C4: AVERAGE PRICE WILLING TO PAY FOR AN INTER-ISLAND FERRY (ROUND TRIP), GENERAL PUBLIC

Round Trip for One Adult including Baggage	Mean	First Quartile	Median	Third Quartile
Reasonable Price	$92	$50	$80	$100
Expensive Price	$136	$80	$110	$160
Too Expensive	$187	$100	$150	$200
Additional Personal Vehicle	$87	$25	$50	$100

Based on the pricing model, the optimal price for a round trip adult fare was $140.00. At that price point 61.9% of all interested riders would be willing to pay for that ticket price.

The General Public was also asked for input on how much each would be willing to pay to travel on a ferry with a personal vehicle. Based on the responses, the optimal price for this service would be $90.00, and 37.1% of interested riders would be willing to pay for the car.

SMS Hawaii compiled this pricing data with the reported preferences, expectations, and likelihood to use the service to develop the following projected ridership and revenue models. There are projections for conservative, realistic, and optimistic scenarios. The methodology for the development of these models is found in the market study report, and the models do not project fluctuations over time (e.g., short-term interest in the novelty of a new ferry system) and do not reflect known patterns in inter-island travel (e.g., seasonal travel, special events on the neighbor islands).

Below are the projections for ridership and revenue on an annual basis for the top four inter-island routes for a **passenger-only inter-island ferry service** at a price of $140.00 per adult roundtrip:

TABLE C5: TOTAL PASSENGER TRIP FOR **PASSENGER-ONLY** FERRY, BY INTER-ISLAND ROUTES, GENERAL PUBLIC

Total Passenger Trips (RT) Per Year - Passenger-Only Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	68,886	137,771	203,003
Honolulu - Hilo	60,232	120,465	177,333
Honolulu - Nawiliwili	56,666	113,332	167,283
Honolulu - Kawaihae	56,098	112,196	165,617

TABLE C6: TOTAL EXPECTED REVENUE FROM **PASSENGER-ONLY** FERRY BY INTER-ISLAND ROUTES, GENERAL PUBLIC

Total Revenue Passenger-Only Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	$9,643,982	$19,287,964	$28,420,459
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617
Honolulu - Nawiliwili	$7,933,259	$15,866,518	$23,419,588
Honolulu - Kawaihae	$7,853,725	$15,707,450	$23,186,357

Below are the projections for ridership and revenue on an annual basis for the top four inter-island routes for a **passenger and car** inter-island ferry service at a price of $140.00 per adult and $90.00 per car roundtrip:

TABLE C7: TOTAL PASSENGER TRIP FOR **PASSENGER AND CAR** FERRY, BY INTER-ISLAND ROUTES, GENERAL PUBLIC

Total Passenger Trips (RT) Per Year Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	70,456	140,912	208,435
Honolulu - Hilo	63,658	127,316	187,926
Honolulu - Nawiliwili	32,479	64,958	95,779
Honolulu - Kawaihae	59,389	118,777	175,648

TABLE C8: TOTAL EXPECTED REVENUE FROM **PASSENGER AND CAR** FERRY BY INTER-ISLAND ROUTES, GENERAL PUBLIC

Total Revenue Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	$10,595,251	$21,190,502	$31,344,747
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617
Honolulu - Nawiliwili	$4,884,212	$9,768,425	$14,403,366
Honolulu - Kawaihae	$8,930,960	$17,861,920	$26,414,169

To develop each scenario, SMS Hawaii converted the stated ferry use intentions (see Figure C8) into an actual use probability. These intentions are based on the ferry system meeting a customer's pricing needs and convenience needs, like frequency of service and crossing time.

There are certain known facts and status quo factors that prevent any inter-island ferry service from meeting these stated expectations. For example, there is an expectation that an inter-island ferry should offer multiple crossings per day, yet the current availability of pier space cannot accommodate this schedule. Another example of a projected unmet expectation is the crossing time. There is an expectation that a crossing from Honolulu Harbor to Hilo Harbor should take three hours or fewer. A ferry travelling at maximum operating speed of 40 knots per hour, although this speed is not recommended for Hawaii's ocean conditions, would take nearly seven hours to complete this transit. These factors associated with ferry vessels and landside capital required to sustain an operation are explained in detail in the Technical Feasibility Analysis. **For these reasons, it is both reasonable and prudent to use the conservative scenario as the baseline for this analysis.**

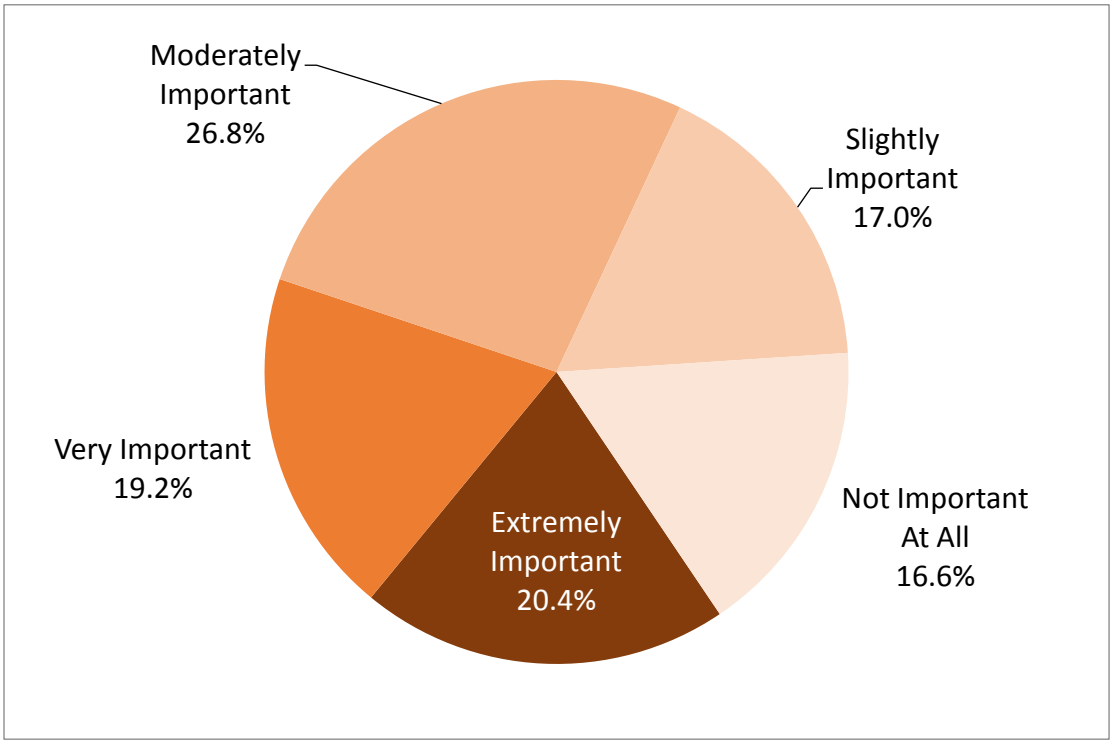
As a point of reference, air carriers serving the inter-island route between Honolulu and Kahului collectively offer about 4,890 seats each way per day. In the optimistic scenario for a passenger-only ferry, the total number of round trips likely to be made on the ferry is equivalent to 11.4% of the air carriers available seats per year.

Market Study Findings: Intra-County Ferry between Maui & Molokai

Pursuant to HCR 47, residents of the County of Maui were afforded the opportunity to comment on various scenarios of passenger-only ferry system that could serve commuters, or other travelers. Only half of those polled were likely to use a future commuter ferry between Maui and Molokai (55.5%), or between Maui and Lanai (44.6%).

To understand the significance and utility of the discontinued Sea Link ferry between Lahaina and Kaunakakai, this segment of participants was asked for a rating of the importance of that ferry service and how many times on average he or she has used that ferry. Figure C9 shows the distribution of the responses on the importance of the Molokai Ferry.

FIGURE C9: IMPORTANCE OF THE MOLOKAI FERRY



Of those who had ridden the ferry in the past, there was a fairly even spread across those who consider the ferry *extremely important* (20.4%) to their own livelihood to those who thought the ferry was *not important at all* (16.6%). When specifically questioning Molokai residents, 80% stated that they had used the Molokai Ferry in the past. However, the interest in a Maui-Molokai service was not strong: only 37.2% said they would be very likely to use the ferry service again in the future. In fact, 31.4% were not at all likely to use the system.

The Maui-Molokai passenger-only ferry pricing was calculated in the same way as the inter-island ferry routes and the optimal price for a single adult roundtrip ticket would be $90.00. At this price, a conservative estimate of 18,413 round trips or an optimistic estimate of 52,000 round trips per year would be traveled on this intra-county ferry system.

TABLE C9: PASSENGER TRIPS AND REVENUE FOR A LAHAINA - KAUNAKAKAI FERRY, GENERAL PUBLIC

Maui-Molokai Passenger-Only Ferry	Conservative	Realistic	Optimistic
Rides	18,413	36,825	52,000
Revenue	$1,657,139	$3,314,278	$4,680,013

Market Study Findings: Intra-Island Ferry between Honolulu & Kalaeloa/West Oahu

The market study of a passenger-only ferry service between Honolulu Harbor and Kalaeloa Barbers Point Harbor considered only the opinions and attitudes of the study participants at this point in time. Respondents were not asked to compare the prospective ferry service with the light rail service that is currently under construction, but it is apparent from the responses and comments that participants consider the Honolulu Authority for Rapid Transit (HART) rail a competitor of an intra-island ferry system.

The anecdotal responses from the Personal Interviews were lukewarm and cited the lack of infrastructure for connecting transportation to and from the harbors, previous unsuccessful ferry projects on the same route, unwanted competition with the rail system currently under construction, and the minimal impact the ferry would have on traffic congestion.

A slight majority (60.0%) of the Prospective Ferry Stakeholders stated that they either strongly supported or somewhat supported a daily commuter ferry service on Oahu between Honolulu Harbor and Kalaeloa Barbers Point Harbor.

The General Public included Oahu residents living in communities west of Waipahu and their responses are most telling when it comes to commercial feasibility of this ferry system. Nearly half, or 46.7%, of all West Oahu commute to Downton Honolulu at least five days per week. Of those who commute, 86.8% drive their own car while 6.8% rely on public transportation. When asked to rate likelihood to ride a ferry to commute from Kalaeloa to Honolulu on a scale of one to five, just 23% rated five or *very likely*.

Below are verbatim responses that may explain the low level of support for this ferry system:

- *I [drive] a work vehicle and I need my equipment.*
- *My destination in Honolulu varies, and it is convenient to have my car available if my plans change. The bus is too slow and inconvenient.*
- *Drive from Central Oahu to Kalaeloa is just as bad as to Honolulu.*
- *There's no parking at the [harbor] locations. I won't take a bus to the ferry. Give me a parking lot, preferably with a security guard.*

The optimal price for a roundtrip between Kalaeloa and Honolulu is $19.00. This fare is high for a commuter option, especially when compared to the current public transportation option in Honolulu with a day pass fare of $5.00. Nonetheless, the following table shows the projected ridership and revenue based on the demand and the fare:

TABLE C10: PASSENGERS TRIPS AND REVENUE FOR OAHU INTRA-ISLAND COMMUTER FERRY, GENERAL PUBLIC

Intra-Island, Oahu Honolulu - Kalaeloa	Conservative	Realistic	Optimistic
Passenger Trips	667,282	1,334,565	1,815,178
Revenue	$12,678,367	$25,356,734	$34,488,374

Based on this ridership, and assuming a daily average ridership of 2,566 passengers removing 2,566 cars from the H-1 Freeway corridor from West Oahu to Downtown Honolulu, the impact would possibly go unnoticed. This ferry system would not alleviate traffic congestion in the way that recent improvements to the H-1 Freeway, like the expansion of the Zipper Lane or the opening of the westbound shoulder lane near Pearl City during rush hour, or the extension of shoulder lane access hours have had.

Market Study Findings: Intra-Island Ferry between Lahaina & Kahului or Maalaea

An intra-island ferry system on Maui connecting Lahaina Harbor and either Maalaea Harbor or Kahului Harbor was suggested as a means address traffic issues on Honoapiilani Highway in West Maui. The Personal Interviews and the Potential Ferry Stakeholders were not queried regarding this possible use for this ferry system.

When Maui residents were asked how likely they would be to use a daily passenger-only commuter ferry service regularly between West Maui and Central Maui, the survey found that 58.5% of residents are very likely to use a ferry between Lahaina and Kahului, and 57.4% are very likely to use a ferry between Lahaina and Maalaea.

Similar to the other routes, SMS Hawaii developed an optimal pricing model for the Maui intra-island service and $19.00 is the optimal fare. Again, this is relatively high for a daily commuting cost. The projections for each route mirror each other. When compared to the demand for the Maui-Molokai route, it appears there is a greater demand and greater likelihood of use.

TABLE C11: PASSENGER TRIPS AND REVENUE FOR MAUI INTRA-ISLAND COMMUTER FERRY LAHAINA – KAHULUI, GENERAL PUBLIC

Intra-island, Maui Kahului - Lahaina	Conservative	Realistic	Optimistic
Passenger Trips	66,515	133,029	194,313
Revenue	$1,263,780	$2,527,560	$3,691,942

TABLE C12: PASSENGER TRIPS AND REVENUE FOR MAUI INTRA-ISLAND COMMUTER FERRY LAHAINA – MAALAEA, GENERAL PUBLIC

Intra-island, Maui Kahului - Lahaina	Conservative	Realistic	Optimistic
Passenger Trips	67,582	135,165	197,622
Revenue	$1,284,066	$2,568,131	$3,754,827

Conclusion

The probability of commercial success for a prospective ferry system in Hawaii is heavily dependent on a small portion of residents who are interested inter-island and intra-island travel by ocean.

Simply as a point of reference, the Hawaii Superferry relied on a 2001 statistic that Hawaii's residents generate 4 million inter-island flights annually for both business and leisure. Assuming the statistic has not changed over the past 16 years and this number translates to 2 million roundtrips, the sum of the projected number of roundtrips on all routes in the optimistic scenario represents 35.6% of the resident-generated inter-island flights. On the other hand, the sum of the projected number of roundtrips on all routes in the realistic scenario represents just 12.1% of the resident-generated inter-island flights. For reasons previously stated, the conservative scenario is the better option for analysis and decision-making.

Through a different lens, the concept of inter-island travel by ferry appears to meet needs unmet by air travel, but the numbers do not support this. There is no critical mass. The market study explains several public perceptions of how a ferry benefits Hawaii's inter-island travelers – the expectation that travel by ferry will be cheaper than a flight, the ability for large groups to travel together, the options for athletes to travel with their gear and equipment at a reduced cost – but the perception does not translate to demand. This is generally also true for the intra-county and intra-island routes, too.

The proposed intra-island commuter ferry systems do not yield a high demand level and are also not commercially feasible. Commuting on a $19.00 per day cost is also not sustainable or realistic. In the conservative scenario for the Kalaeloa ferry, there are 667,282 passenger trips per year. Assuming 260 work days per year, there would be 2,566 individuals commuting to Downtown Honolulu by ferry. While an argument can

be made to support a ferry targeting this market, there would need to be 17 trips per commute on an inter-island vessel or at least six vessels. These West Oahu commuters could not sustain the operations and maintenance costs of this size fleet, even on a $19.00 fare per roundtrip. The same is true if fewer larger vessels were used to deliver this service. The market study reveals the interests of Hawaii's residents today, but these expectations are unworkable and the intra-island routes are also unworkable.

The anomaly among these four ferry systems is the Maui-Molokai intra-county system. The market study results align with the other prospective routes, but the anecdotal comments from all participants accentuate a very real need for this service to be restored. This service may not be commercially feasible, but it is needed. Extra research can be done to better understand who needs this service and why this need is unmet by air travel. Other facts, such as the budget of the Department of Education for students to travel to other islands for academic and athletic contests, can also shed light on the overall feasibility of this route.

Financial Feasibility Analysis

This section considers all projected costs, revenues, and funding and financing options, and concludes whether resources are or will be reliably available to support a ferry service.

As discussed in the introduction of this report, there is no peer ferry system that serves as a fair model for operations or financing. This leaves the projected costs to be estimated based on either the best comparable costs from an existing ferry system, or the costs from a system that previously operated in Hawaii with costs adjusted for inflation. Certain projections were developed using the U.S. Department of Transportation Ferry Lifecycle Cost Model for Federal Land Management Agencies (referred to herein as "USDOT Ferry Lifecycle Cost Model") with the understanding that the model is six years old and was based on ferry vessels slightly smaller than the small hypothetical vessel. The market study provides projected fare box revenues and ridership so the available resources are a known variable. The information available is inadequate to develop a dependable financial pro forma, but the figures in this section are reasoned and methodical to provide data points for this analysis.

Projected Costs & Revenues

As in any burgeoning enterprise, the costs of business can be categorized as initial costs or ongoing operations costs. In this case, the operations costs are further divided into direct costs and overhead costs.

Initial Costs

The initial costs are expected to be high. Reflecting on the findings in the Technical Feasibility Analysis, the initial outlays for capital investments are high because of the need to acquire the vessels and to improve the harbor infrastructure so the harbors can efficiently accommodate a ferry service. The real costs for the hypothetical vessels are $10 million, $18 million, $55 million, and $104 million, respectively (refer to Figure 1). These costs are based on a buy-maintain-operate model as opposed to a lease-maintain operate, a contract for service, or a concession. The projections do not contemplate financing for the vessel or related debt service.

The costs for permanent infrastructure improvements identified in the gap analysis (refer to Table T1) can be in excess of $100 million, but less expensive temporary options, like a floating dock, may be sufficient to launch a ferry operation. Any

infrastructure improvement on State property will require an environmental assessment or an environmental impact statement. Costs for these environmental reviews are not factored in to this cost model.

The costs to establish an office, conduct renovations, purchase furniture, install signage, and other activities at each ferry origin or destination are acknowledged as an initial cost but are not calculated.

The costs related to measures intended to mitigate the spread and proliferation of invasive species will be both initial costs and direct costs. These costs are unknown and cannot be estimated.

Direct Costs

Direct costs like crew salaries, fuel, maintenance, and harbor use fees (e.g., port entry, dockage, and passenger fees) are best estimated using the USDOT Ferry Lifecycle Cost Model as benchmarks only because operating costs of a ferry service vary dramatically depending on an array of factors such as desired speed, fuel price, passenger amenities, marine conditions, and available docking facilities. Cost of service and maintenance also vary regionally.

The 2016 State Industry-Specific Occupational Employment and Wage Estimates for Hawaii and the 2018 Bureau of Labor Statistics Standard Occupational Classification for Class 53 – Transportation and Material Moving Occupations suggest the following annual salaries for certain on-board personnel:

- Sailors and Marine Oilers - $33,860
- Captains and Mates - $53,410

In a State-run ferry operation, all crew and landside personnel will be employees of the State of Hawaii. As such, a factor of 60% is added for fringe benefits.

Each hypothetical vessel has a recommended minimum crew count and crew salaries are based on this recommendation plus other crew members whose roles are oriented to customer relations and experience.

The intra-island and small hypothetical vessels run on diesel fuel and consumes fuel at a rate of 600 gallons per hour and 950 gallons per hour, respectively. A national current diesel price of $2.97 per gallon is used in these calculations.

According to the USDOT Ferry Lifecycle Cost Model, maintenance costs for a new ferry are estimated at 3.5% of the purchase price of the vessel assuming 1,000 hours of operation per year.

Harbor use fees charged by the Department of Transportation are calculated based on 2018 port entry, dockage, and passenger fees pursuant to the Title 19-44, Hawaii Administrative Rules. The Department of Land and Natural Resources also charge fees for use of its small boat harbors; these are identified in the projections but are not calculated.

Overhead Costs

This category of costs covers required expenses that do not directly derive revenue. The rent for the offices previously mentioned as initial costs are acknowledged but not calculated. As a State operation, office space may be available in an existing State office facility for very low or no rent.

Administrative staff costs are certain, but the size of the staff depends on the size of the ferry operation. Positions like accountants, sales and reservation agents, communications specialists, engineers, compliance officers, and legal counsel are needed to support this operation. There is not enough information available to deduce a cost. As a point of reference, the Hawaii Superferry, at its peak operations, had 308 employees. And again, in a State-run ferry operation, administrative staff will be employees of the State of Hawaii, presumably within or administratively attached to the Department of Transportation.

The cost model includes a set budget for marketing and sales to promote the launch of the ferry service in its first year of operations. This budget is not expected to remain at this level in subsequent years.

The insurance costs estimates follow the guidance of the USDOT Ferry Lifecycle Cost Model. Hull insurance primarily represents property insurance coverage for the vessel and equipment, and often includes collision liability coverage for damage to other vessels and their cargo as well. Estimates from shipyards, existing ferry operators, and other ferry service feasibility studies suggest that annual insurance expense is typically between 1% to 3% of the value of the vessel being insured. This model uses a 3% factor.

Protection and Indemnity insurance includes insurance against passenger liability, crew liability, and other liabilities (which often include liquor liability, pollution liability, premises liability and medical payments), injuries to crew members and other persons occurring on board the insured vessel, damage to property struck by the insured vessel, and accidental pollution from the discharge of fuel oil or other similar substances. Based on previous ferry feasibility studies and information from ferry operators, this expense category is assumed to vary as a function of the number of passengers carried, and to be equal to $0.35 per passenger boarding, plus a factor of 2%.

To reiterate, there are surely other costs other than those identified here, but the financial feasibility analysis is completed with this understanding.

The following tables present the best estimates for initial, direct, and overhead costs compared to the projected revenues based on the market study findings. The model assumes that pricing for the ferry service is based on the optimal price identified in the market study and that pricing is static. Each table is followed by a footnote explaining all assumptions made in its development that are not previously explained.

To evaluate the financial feasibility of an inter-island ferry service, this study uses the Honolulu-Kahului route as it is, by far, the route in highest demand. This model is structured on a passenger-only service and assumes that no other ferry vessels are simultaneously serving another inter-island route. The market study indicates that total projected ridership in one year ranges from a conservative estimate 68,886, to an optimistic projection of 203,003 roundtrips. Assuming the average daily passenger count in a given year is the number of roundtrips divided by 365, a range of 189 to 556 individuals will want to ride on this ferry route each day. This service will require at least one small vessel with a maximum passenger capacity of 450 to accommodate these passengers, with another back up vessel to maintain a dependable service. If the actual ridership is closer to the conservative scenario, just one daily roundtrip is sufficient. If demand is elevated, two roundtrips per day are required to transport the 556 passengers.

TABLE F1: PROJECTED REVENUE & COSTS, YEAR 1 OF OPERATION, HONOLULU-KAHULUI PASSENGER-ONLY INTER-ISLAND FERRY

	Conservative	Realistic	Optimistic
Revenue			
Total Passenger Roundtrips/Year	68,886	137,771	203,003
Daily Average (rounded)	189	377	556
Projected Revenue	$ 9,643,982	$ 19,287,964	$ 28,420,459
Initial Costs			
Vessel Acquisition (Small)	$ 36,000,000	$ 36,000,000	$ 36,000,000
Infrastructure Improvements	TBD	TBD	TBD
Office Space, Honolulu	TBD	TBD	TBD
Office Space, Kahului	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Direct Costs			
Crew salary	1,100,000	1,100,000	1,100,000
Fuel	7,208,933	7,208,933	14,417,865
Maintenance	1,620,000	1,620,000	1,800,000
DOT Harbor Use Fees	2,666,602	5,247,162	7,756,892
Other Costs	TBD	TBD	TBD
Overhead Costs			
Office Rent, Honolulu	TBD	TBD	TBD
Office Rent, Kahului	TBD	TBD	TBD
Administrative Staff	TBD	TBD	TBD
Marketing and Sales	500,000	500,000	500,000
Insurance, Hull	1,080,000	1,080,000	1,080,000
Insurance, Protection	588,220	636,440	682,102
Other Costs	TBD	TBD	TBD

Assumptions: Once daily roundtrip in conservative and realistic scenarios, and twice daily roundtrips in the optimistic scenario; Crew salary is based on 17 crew, rounded to the nearest hundred; Maintenance is calculated at 4.5% instead of 3% per the USDOT Ferry Lifecycle Cost Model since annual operation hours per year exceeds 1000.

This model is approximate and incomplete, but it shows how direct and overhead costs in the conservative scenario exceed projected revenue compared to the realistic and optimistic scenarios that have some potential to be profitable. The estimated direct and overhead costs for the conservative scenario is $14.76 million, over 50% more than the projected revenue.

Still, referencing an earlier section of this report, the realistic and optimistic scenarios are unlikely because of the unrealistic expectations the public holds for a ferry system. Parallel models for the intra-county and intra-island ferry systems based on the same premises are below in Tables F2, F3, F4, and F5.

TABLE F2: PROJECTED COSTS & REVENUE, YEAR 1 OF OPERATION, MAUI-MOLOKAI PASSENGER-ONLY INTRA-COUNTY FERRY

	Conservative	Realistic	Optimistic
Revenue			
Total Passenger Roundtrips/Year	18,413	36,825	52,000
Daily Average (rounded)	50	101	142
Projected Revenue	$ 1,657,139	$ 3,314,278	$ 4,680,013
Initial Costs			
Vessel Acquisition (Intra-island)	$ 10,000,000	$ 10,000,000	$ 10,000,000
Infrastructure Improvements	TBD	TBD	TBD
Office Space, Lahaina	TBD	TBD	TBD
Office Space, Kaunakakai	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Direct Costs			
Crew salary	600,000	600,000	600,000
Fuel	945,645	945,645	945,645
Maintenance	700,000	700,000	700,000
DOT Harbor Use Fees	146,045	294,965	414,685
DLNR Harbor Use Fees	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Overhead			
Office Rent, Lahaina	TBD	TBD	TBD
Office Rent, Kaunakakai	TBD	TBD	TBD
Administrative Staff	TBD	TBD	TBD
Marketing and Sales	100,000	TBD	TBD
Insurance, Hull	600,000	600,000	600,000
Insurance, Protection	312,889	325,778	336,400
Other Costs	TBD	TBD	TBD

Assumptions: Once daily roundtrip in all scenarios; One intra-island vessel acquired; Crew salary is based on eight crew members, rounded to the nearest hundred.

The minimum operating costs are expected to be $3,434,579, resulting in a $186.53 cost per passenger in the conservative scenario. If ridership increases to the optimistic scenario, cost per passenger is cut by more than half to $71.67.

TABLE F3: PROJECTED COSTS & REVENUE, YEAR 1 OF OPERATION, OAHU PASSENGER-ONLY INTRA-ISLAND COMMUTER FERRY

	Conservative	Realistic	Optimistic
Revenue			
Total Passenger Roundtrips/Year	667,282	1,334,565	1,815,178
Daily Average (rounded)	2,566	5,133	6,981
Projected Revenue	$ 12,657,139	$ 25,356,734	$ 34,488,374
Initial Costs			
Vessel Acquisition (Small)	$ 72,000,000	$144,000,000	$216,000,000
Infrastructure Improvements	TBD	TBD	TBD
Office Space, Honolulu	TBD	TBD	TBD
Office Space, Kalaeloa	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Direct Costs			
Crew salary	2,200,000	2,600,000	3,000,000
Fuel	20,236,320	40,472,640	53,963,520
Maintenance	2,520,000	5,040,000	7,560,000
DOT Harbor Use Fees	17,951,825	35,903,650	47,871,533
Other Costs	TBD	TBD	TBD
Overhead			
Office Rent, Honolulu	TBD	TBD	TBD
Office Rent, Kalaeloa	TBD	TBD	TBD
Administrative Staff	TBD	TBD	TBD
Marketing and Sales	500,000	TBD	TBD
Insurance, Hull	2,160,000	4,320,000	6,480,000
Insurance, Protection	1,547,097	3,094,196	4,510,625
Other Costs	TBD	TBD	TBD

Assumptions: Once daily roundtrip for work days only (260 days per year) in all scenarios; Four small vessels acquired in conservative scenario, eight vessels in the realistic, and 12 vessels in the optimistic; Crew salary is based on 34 crew members for the conservative scenario, 44 for the realistic scenario, and 54 for the optimistic scenario, rounded to the nearest hundred; Purchase of a larger vessel does not reduce costs.

Since a high number of vessels must be acquired to serve this route, the initial costs for this route are higher than any other. However, the cost per passenger across the three scenarios are very similar: $70.61 for the conservative, $68.88 for the realistic, and $68.25 for the optimistic. Despite the consistency, this cost is more than three-fold the optimal price of $19.00.

TABLE F4: PROJECTED COSTS & REVENUE, YEAR 1 OF OPERATION, LAHAINA-MAALAEA PASSENGER-ONLY INTRA-ISLAND FERRY

	Conservative	Realistic	Optimistic
Revenue			
Total Passenger Roundtrips/Year	18,413	36,825	52,000
Daily Average (rounded)	50	101	142
Projected Revenue	$ 1,657,139	$ 3,314,278	$ 4,680,013
Initial Costs			
Vessel Acquisition (Intra-island)	$ 10,000,000	$ 10,000,000	$ 10,000,000
Infrastructure Improvements	TBD	TBD	TBD
Office Space, Lahaina	TBD	TBD	TBD
Office Space, Kaunakakai	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Direct Costs			
Crew salary	600,000	600,000	600,000
Fuel	347,490	694,980	1,042,470
Maintenance	700,000	700,000	700,000
DLNR Harbor Use Fees	TBD	TBD	TBD
Other Costs	TBD	TBD	TBD
Overhead			
Office Rent, Lahaina	TBD	TBD	TBD
Office Rent, Maalaea	TBD	TBD	TBD
Administrative Staff	TBD	TBD	TBD
Marketing and Sales	250,000	250,000	250,000
Insurance, Hull	300,000	300,000	300,000
Insurance, Protection	197,307	244,616	288,335
Other Costs	TBD	TBD	TBD

Assumptions: Twice daily roundtrip for work days only (260 days per year) in conservative scenario, four roundtrips in realistic, and six roundtrips in optimistic; One intra-island vessel acquired; Crew salary is based on 8 crew members, rounded to the nearest hundred.

This route shows the narrowest margin between cost and revenue projections in the conservative scenario among all routes. The realist and optimistic scenarios show revenues surpassing the identified and estimated costs.

No cost projections were done for the Lahaina-Kahului route because it is not financially feasible compared to the Lahaina-Maalaea route. Ridership projections were lower for a Lahaina-Kahului service and the longer distance would require a second vessel that would further increase operating costs.

State and Federal Subsidy & Funding

The cost and revenue projections indicate that a State-run ferry service would require a subsidy for costs beyond the revenue earned. Any subsidy for the first year of operations of any of the proposed ferry services should be calculated based on the conservative scenario for the reasons outlined in the commercial feasibility analysis.

Decisions on a State subsidy would be ultimately decided by the Hawaii State Legislature as the appropriators for all State activity. The top-of-mind example of a subsidy for public transportation is the State general excise tax surcharge that is used to fund a portion of the Honolulu Authority for Rapid Transportation (HART) rail project on Oahu. Another option is the gas tax. As these sources of State revenue are already allocated to existing programs, another source would likely be required for a ferry system.

Several federal programs run by the U.S. Department of Transportation have competitive funds available for ferry systems. One such program is the **Transportation Investment Generating Economic Recovery (TIGER)** which awards funds annually for infrastructure and gives special consideration to projects which emphasize improved access to reliable, safe, and affordable transportation for communities in rural areas, such as projects that improve infrastructure condition, address public health and safety, promote regional connectivity, or facilitate economic growth or competitiveness. In 2017, the U.S. Department of Transportation announced that $500 million was available through this program through 2020.

The **Infrastructure for Rebuilding America (INFRA)** grant program provides dedicated, discretionary funding for projects that address critical issues primarily affecting highways and bridges. However, INFRA grants may be available to develop ferry landings, roadways around a ferry landing, or a shuttle service connecting a ferry terminal to another public transportation corridor.

The U.S. Maritime Administration (MARAD) runs the **Federal Ship Financing Program** that provides low interest loans with long-term debt repayment guarantees for the acquisition of new vessels.

The **Federal Highway Administration** and the **Federal Transit Administration** can also fund pier and dock improvements, other infrastructure, and ferry system operations. It is unclear, however, whether an award of funds to a Hawaii ferry system would reduce funds already made available to other State programs.

Any project that is eligible for federal assistance through any of these programs is also eligible for the **Transportation Infrastructure Finance and Innovation Act (TIFIA)**, a financial assistance program that provides secured loans, loan guarantees, or standby lines of credit.

The Department of Transportation is eligible for all of these programs, and a ferry system run by the department would also be eligible.

In addition, the U.S. Department of Commerce offers assistance for Economically Distressed Areas and a ferry system serving the island of Molokai would likely meet the criteria for funding. Funds awarded through this program may be used for planning and infrastructure (excluding dredging).

Public-Private Partnerships

A public-private partnership is a contractual arrangement through the design, construction, finance, and operations of a specific public-sector project through which risk between the two partners is shared. This type of partnership, or P3, is not always the solution for a project, but can be an invaluable tool when a project has long-term value to the public, needs on-time and on-budget delivery, involves long-term or life-cycle maintenance, and requires the public partner to maintain ownership and control over the project or asset. These are true of a ferry system.

In 2017, Puerto Rico's Maritime Transportation Authority is actively exploring the feasibility of a public-private partnership for its ferry system. The authority hopes the partnership is realized to address a series of risks and challenges in its system, including high operating costs, deferred maintenance on facilities and vessels, an outdated marketing system, and poor customer relations.

In Hawaii, public-private partnership can be practical option for a ferry system for both the harbor improvements, and the acquisition, operation, and maintenance of the vessel. If the ferry is deemed to be feasible, a risk analysis and value-for-money analysis should be done to determine whether a P3 is the best solution.

Conclusion

Strictly based on the examination of the projected costs and revenues in the conservative scenario for each proposed route, it is very apparent that a ferry system serving this market will not be financially self-sustaining. On the face of it, no ferry system is financially feasible in this market.

While there are several well-funded federal assistance programs that may provide support for initial costs and operation costs to fill the gap that the system revenues cannot, a State subsidy will be necessary. Referring back to the market study results, 77.2% of the General Public felt that a ferry system should be supported with State funding and a subsidy level of about 38% was found to be acceptable by Prospective

Ferry Stakeholders. Based on the rough cost estimates and assuming no federal assistance, the Kahului-Honolulu route would need $5 million or a 34% subsidy for operating costs in the first year. Based on the same assumptions, the Lahaina-Kaunakakai route would require $1.8 million in subsidy to cover 52% of its operation costs. A commuter ferry service from Kalaeloa to Honolulu would require the highest subsidy: $34.4 million or 73% of the operating costs.

One additional consideration for pricing is that it is static and cannot necessarily be changed to match the cycles of a dynamic market in the same way an inter-island airline can. Since a State-run ferry service would be subject to the oversight of the State of Hawaii Public Utility Commission, the rate case decisions will drive pricing for ferry users.

Given all of these factors, it may very well be that a public-private partnership will be the solution to establishing financially feasible State-run ferry system as it would still maintain eligibility for federal assistance, the contract would include all ongoing maintenance and operating costs, and may eliminate the requirement that ferry system personnel must be employees of the State of Hawaii.

Conclusion

The objective of this study is to complete the deliverables enumerated in Act 196 and evaluate them to determine whether the State of Hawaii ought to establish an inter-island and/or intra-island ferry system. If such a system is determined to be feasible, the study should address whether to proceed and then how to proceed.

In each area of analysis, the inter-island, intra-county, and intra-island ferry systems are infeasible. From a technical standpoint, the lack of available pier space and the significant costs required for constructing new pier facilities to accommodate a ferry system are the primary barrier to feasibility. From a commercial perspective, the expectations of Hawaii's residents and the reality of a ferry system are incompatible. While the interest or support for a ferry system, inter-island or other, is significant, the pool of likely users if relatively insignificant. Financially, none of the proposed ferry systems is self-sustaining, and a State subsidy is largely the missing factor in making the numbers pencil.

The analysis may attract criticism that it is too conservative, or that the market of tourists has not been considered. However, in light of the past experiences with ferry services in Hawaii and the fiduciary responsibility to manage State resources sensibly, a conservative analysis is appropriate. It is important to note here that the Hawaii Superferry reportedly carried 250,000 passengers during its eleven months of operation, but its average ridership was well below its break-even passenger count.

Notwithstanding the foregoing conclusion, there are two recommendations for further exploration. The first is an in-depth investigation into a public-private partnership through a risk analysis and value-for-money analysis based on the findings of this study. There may yet be an opportunity to find a feasible ferry solution. The second is a more detailed review of the Maui-Molokai intra-county system. As previously presented, the anecdotal comments from all participants accentuate a very real need for this service to be restored and this affirms the concerns underlying HCR 47. This service may not be commercially feasible, but it is needed. Extra research can be done to better understand who needs this service and why this need is unmet by air travel. Considering that the ferry facility at Kaunakakai Harbor does not require infrastructure improvements, and that the new ferry pier development at Lahaina Harbor is underway, the technical feasibility for this specific route is supported. Even if the result of continued study yields a recommendation for a subsidized voucher program for a ferry charter instead of a State-owned and State-run system, at the very least, the consideration for this needed service will be fully exhausted.

Hawaii State law declares that the establishment of a ferry system to provide the people of Hawaii with an economic means of transportation is a public purpose. Alongside this declaration is the core message received through the market study: Hawaii residents strongly support an inter-island travel alternative. However, at this very point in time inter-island travel by ferry, and even commuting by ferry, cannot be provided at a cost that would be considered economical. The public purpose cannot be met.

Until a ferry vessel technology exists that facilitates the transport of passengers between two points for a substantially lower cost, or at a speed drastically quicker than the available alternatives, even despite the voiced support for a ferry, the market demand for and likelihood of residents to use a ferry will probably not change.

Appendices

APPENDIX 1

GOV. MSG. NO. 1298

EXECUTIVE CHAMBERS
HONOLULU

DAVID Y. IGE
GOVERNOR

July 1, 2016

The Honorable Ronald D. Kouchi,
President
and Members of the Senate
Twenty-Eighth State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

The Honorable Joseph M. Souki,
Speaker and Members of the
House of Representatives
Twenty-Eighth State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Dear President Kouchi, Speaker Souki, and Members of the Legislature:

This is to inform you that on July 1, 2016, the following bill was signed into law:

SB2618 SD1 HD2 CD1 RELATING TO TRANSPORTATION
ACT 196 (16)

Sincerely,

DAVID Y. IGE
Governor, State of Hawai'i

Approved by the Governor
on JUL 1 2016
THE SENATE
TWENTY-EIGHTH LEGISLATURE, 2016
STATE OF HAWAII

ACT 196
S.B. NO. 2618 S.D. 1 H.D. 2 C.D. 1

A BILL FOR AN ACT

RELATING TO TRANSPORTATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. Unlike other states, Hawaii is not linked to other states by the federal interstate highway system or a network of interconnected state and local highways. Furthermore, for Hawaii, air transportation is often the only efficient means of travel to another state, as well as between Hawaii's major islands and between different harbors of an island. An interisland and intra-island ferry system can serve as an efficient alternative for transporting passengers, cargo, farm produce, and motor vehicles.

Washington State Ferries, which is part of the Washington State Department of Transportation, operates the largest ferry system in the United States. Washington State Ferries employs approximately eighteen hundred people and is Washington's most popular tourist attraction. Alaska also has a successful ferry system.

S.R. No. 116, S.D. 1, Regular Session of 2015, adopted on April 9, 2015, requests the department of transportation to study the feasibility of establishing an interisland ferry

system, among other things, and report its findings and recommendations to the legislature prior to the 2016 regular session. However, the department may need additional funding and time to undertake and complete the study.

The purpose of this Act is to require the department of transportation to conduct a study on the feasibility of establishing an interisland and intra-island ferry system and to make an appropriation for expenses accordingly.

SECTION 2. The department of transportation shall conduct a study on the feasibility of establishing an interisland and intra-island ferry system similar to the ferry systems operated by Washington State and other jurisdictions, including proposed legislation. In conducting the study, the department shall:

(1) Include a comparison of various jurisdictions with successful ferry systems including Washington and Alaska;

(2) Emphasize compliance of the ferry system with the State's environmental protection laws, including chapter 343, Hawaii Revised Statutes;

(3) Identify appropriate routes and harbors for the ferry system;

(4) Consider the potential costs and revenues of the ferry system;

(5) Include financing options for the ferry system, including the establishment of rates or fees to address operating costs;

(6) Consider the particulars of the ferry system, including vessel design and speed, passenger capacity, cargo capacity, automobile capacity, and compatibility with harbor infrastructure;

(7) Consider and determine the impacts the ferry system would have on traffic congestion on all islands served by the ferry; and

(8) Consider the impacts the ferry system could have on the transmission of invasive species between islands and determine inspection requirements to limit the transmission of invasive species between islands.

SECTION 3. The department of transportation shall report its findings and recommendations, including proposed legislation, to the legislature no later than twenty days prior to the convening of the regular session of 2018.

SECTION 4. There is appropriated out of the general revenues of the State of Hawaii the sum of $50,000 or so much thereof as may be necessary for fiscal year 2016-2017 for the department of transportation to conduct a study on the feasibility of establishing an interisland and intra-island ferry system as described in this Act.

The sum appropriated shall be expended by the department of transportation for the purposes of this Act.

SECTION 5. This Act shall take effect on July 1, 2016.

APPROVED this 1 day of JUL , 2016

GOVERNOR OF THE STATE OF HAWAII

HOUSE OF REPRESENTATIVES
STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

May 10, 2017

Mr. Ford Fuchigami
Director, Department of Transportation
Aliiaimoku Building
869 Punchbowl Street
Honolulu, HI 96813

Dear Mr. Fuchigami:

I transmit herewith a copy of House Concurrent Resolution No. 47, which was adopted by both the Senate and the House of Representatives of the Twenty-Ninth Legislature of the State of Hawaii, Regular Session of 2017.

Sincerely,

Brian L. Takeshita
Chief Clerk
House of Representatives

HOUSE OF REPRESENTATIVES
TWENTY-NINTH LEGISLATURE, 2017
STATE OF HAWAII

H.C.R. NO. 47

HOUSE CONCURRENT RESOLUTION

REQUESTING THAT THE DEPARTMENT OF TRANSPORTATION CONDUCT A STUDY ON THE NEED AND FEASIBILITY OF ESTABLISHING A GOVERNMENT-SUBSIDIZED FERRY SERVICE BETWEEN THE ISLANDS OF MAUI AND MOLOKAI.

WHEREAS, unlike other states, Hawaii is an island state that is not linked to other states, cities, or towns via the federal interstate highway system or a network of interconnected state and local highways; and

WHEREAS, Sea Link began providing regular ferry service between Kaunakakai, Molokai and Lahaina, Maui in 1987, serving as a critical and essential lifeline for Molokai residents; and

WHEREAS, when initiated, the state-subsidized ferry service served as a convenient way for Molokai residents to travel to and from employment on West Maui and served as an affordable alternative to air travel; and

WHEREAS, the State ended subsidies to the ferry service in 1996, and ridership declined in the face of competition from federally subsidized commuter air travel; and

WHEREAS, traveling by air may not be possible or practical for persons with certain disabilities; and

WHEREAS, it is less feasible for high school athletic teams to travel between Molokai and Maui by air because of the high costs of transporting dozens of students, along with heavy and bulky athletic equipment; and

WHEREAS, high school athletic teams on both Molokai and Maui relied heavily on the ferry service as the only cost-effective way to travel between the two islands; and

WHEREAS, when the Molokai ferry service ended, Sea Link stated that it would be very difficult for a heavily regulated, nonsubsidized ferry service to operate in the face of competition with air travel options that are heavily subsidized by the federal government; and

WHEREAS, since the closure of the Molokai ferry service in October 2016, air transportation has been the only option for travel between Molokai and the other major islands; and

WHEREAS, a renewed ferry service between the islands of Molokai and Maui would provide a practical, cost-effective way for residents, visitors, and workers to travel between the two islands, and provide a safe way for those with disabilities to travel interisland; now, therefore,

BE IT RESOLVED by the House of Representatives of the Twenty-ninth Legislature of the State of Hawaii, Regular Session of 2017, the Senate concurring, that the Department of Transportation is requested to study the need for and feasibility of establishing a government-subsidized interisland ferry system between the islands of Molokai and Maui; and

BE IT FURTHER RESOLVED that the Department of Transportation is requested to consider the potential costs, financing options, and parameters of a ferry system; and

BE IT FURTHER RESOLVED that the Department of Transportation is requested to also consider whether use of a ferry system would be advantageous for visitors, school athletic teams, and those who require disability accommodations; and

BE IT FURTHER RESOLVED that the Department of Transportation is requested to report its findings and recommendations, including any proposed legislation, to the Legislature no later than twenty days prior to the convening of the Regular Session of 2018; and

H.C.R. NO. 47

BE IT FURTHER RESOLVED that a certified copy of this Concurrent Resolution be transmitted to the Director of Transportation.

OFFERED BY: Lynn DeCorte

FEB 14 2017

APPENDIX 2

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Beyond Information. Intelligence.

Database Marketing

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Evaluations

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Modeling/Forecasting

FERRY FEASIBILITY MARKET STUDY

Prepared for the Department of Transportation

SMS
1042 Fort Street Mall
Suite 200
Honolulu, HI 96813
Ph: (808) 537-3356
Toll Free (877) 535-5767
E-mail: info@smshawaii.com
Website: www.smshawaii.com

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Overview

In 2016, the Hawai‘i State Legislature passed Act 196 which required the Department of Transportation (“HDOT”) to conduct a study that examines the feasibility of establishing an inter-island and intra-island ferry system. The legislation mandates that the study include a comparison of various jurisdictions with successful ferry systems; emphasize compliance of the ferry system with the State’s environmental protection laws; identify appropriate routes and harbors for the ferry system; consider the potential costs and revenues of the ferry system; include financing options for the ferry system, including the establishment of rates or fees to address operating costs; consider the particulars of the ferry system, including vessel design and speed, passenger capacity, cargo capacity, automobile capacity, and compatibility with harbor infrastructure; consider and determine the impacts the ferry system would have on traffic congestion on all islands served by the ferry; and consider the impacts the ferry system could have on the transmission of invasive species between islands. In 2017, the Legislature adopted House Concurrent Resolution 47 requesting HDOT to study the need and feasibility of establishing a government-subsidized ferry service between Maui and Moloka‘i.

To assess the feasibility of a ferry system and to produce these deliverables, HDOT sought a market analysis and opinion poll to determine current public interest in, and demand and support for a ferry service, as well as the preferred routes, vessel types, acceptable fares, and desired frequency of ferry service.

HDOT and SMS Hawai‘i constructed this study to engage a wide-range of local stakeholders who may use or be impacted by a future ferry system. The survey instruments were designed to collect data and anecdotal statements that reflect sentiment and market demand as both forces are important in the success of a public works project. The participants in this study are categorized into three groups: Personal Interviews, Prospective Stakeholders, and General Public.

The **Personal Interviews** group consisted of government leaders who would be direct decision-makers or appropriators for a state-run ferry service, elected officials who represent districts that may be impacted by a ferry service, maritime industry executives, and leaders from environmental and community organizations representing interests that would be directly impacted by a ferry service. HDOT identified the 22 members of this group and each member was personally interviewed face-to-face or by phone.

The second group, **Prospective Ferry Stakeholders**, is similar to the Personal Interviews, but included a much broader range of elected officials and lawmakers at the State and County levels, businesses who may be potential ferry users or ferry service competitors, and community organizations including environmental protection groups. Of 264 government, business, and community entities that were invited to participate in this survey, 61 responded and their responses are reflected in this report.

The **General Public** group consisted of 1,458 randomly selected State of Hawai‘i residents who live on Hawai‘i, Maui, Moloka‘i, Lāna‘i, O‘ahu, Kaua‘i, and Ni‘ihau and provided responses through a phone or online survey. The responses offered by this group on support, need, and demand for a ferry service in Hawai‘i, as well as preferences for fare pricing and likelihood to travel by ferry formed the baseline for the representative statements of the consensus of Hawai‘i residents.

See the appendices for the list of participants, the survey instruments, and a detailed description of the study methodology.

Summary

Overall there was positive sentiment and support for a future ferry system in Hawai‘i from all of the groups that were surveyed or interviewed. Though each respective group tended to focus on specific concerns, key themes emerged for across the groups.

Hawai‘i supports the introduction of a ferry system because:

- Hawai‘i needs to diversify its transportation system to offer more choice and improve resiliency
- Expectation that a ferry system will increase competition with airlines and shipping companies which will lower transportation and shipping costs.
- Hawaii’s economy will increase because a ferry system should provide opportunities for improved inter-island commerce.
- A ferry system opens up other opportunities to business and residents that are not currently available such as taking cars to neighbor island same day, shipping sports gear with the teams or tools with workers; or handling large group travel.

Hawai‘i opposes the introduction of a ferry system because:

- A ferry system would create too many environmental concern such as the spread of invasive species between islands and impact to marine life with a ferry traveling in the near shore waters.
- Smaller rural communities would be negatively impacted by increased traffic moving out of Honolulu.
- Hawai‘i is not conducive to supporting a ferry system because it does not have adequate harbor facilities and infrastructure and water conditions can be too rough and unpredictable for consistent scheduled service,

Inter-Island Ferry System

- Overall there was positive sentiment and support for a future ferry system in Hawai‘i from all of the groups that were surveyed or interviewed.
- Nearly all of those from the Personal Interviews stated that they could support and encourage an inter-island ferry system. Prospective Ferry Stakeholders and the General Public (81.5%) stated a high level of support for the introduction of inter-island ferry service in Hawai‘i
- 28.8% of Kauai residents have little to no support of a ferry system.

Ferry Type and Features

- 77.3% of the General Public Group favored a ferry capable of carrying passengers and passenger vehicles; 76% of the Potential Stakeholders Group wanted a ferry to carry passengers, vehicles and cargo; but the Personal Interviews Group was more likely to support a passenger-only ferry.
- The Personal Interviews Group was opposed to carrying personal vehicles because on the concern for transporting invasive species between islands and the impact to the Neighbor Islands due to increased traffic.
- 21.5% of the General Public Group said they would support a ferry system to have the ability to transport and use a personal vehicle on another island

Routes

- The most favored route was between Honolulu and Kahului. 63.3% of Prospective Ferry Stakeholders considered it one of the most important routes and 85% of General Public were most likely to take a ferry on this route. This was also the top route for the Personal Interviews Group
- A route between O'ahu and Hawai'i Island was also important to many. 79% of General Public would ride between Honolulu and Hilo and 31.9% of Prospective Ferry Stakeholders state it as an important route. The Personal Interviews actually placed a route between Honolulu and Kawaihae as the second priority.
- The Honolulu - Kaunakakai route was the second most important route among Prospective Ferry Stakeholders (34.0%) and was also important to the Personal Interviews Groups

Operations

- The groups in the study did not recommend that the State own or operate the ferry system on its own. A Public Private Partnership was recommended by both the Personal Interviews Group and the Potential Ferry Stakeholders Group. 77.2% of the General Public felt that is should be supported by state funding. The partnership would provide the subject matter expertise and the fiscal management savvy of the private sector but also would advocate for the needs of the residents and the accountability to taxpayer monies.
- Stakeholders thought a 30%-40% state government subsidy of the fare would be reasonable.
- For a passenger-only ferry around 138,000 passenger trips (round-trips) would be taken by residents of Honolulu and Maui on the Honolulu – Kahului ferry route. At optimal price of $140 per ticket the route would generate gross revenue of around $19.3 million annually.
- For a passenger and car ferry the results varied by the routes. For the Honolulu – Kahului route expected ridership increased about 3,000 more passenger trips per year. But the Honolulu – Līhu'e route the ridership fell by almost 50,000 passenger trips per year. The result reflective of the lower interest by Kaua'i residents to support a vehicle ferry.

Daily Passenger-only Intra-Island Ferry on Oahu

- 46.7% of West Oahu residents spend at least five days a week traveling to Honolulu and back.
- Only 42.4% of West Oahu residents would be likely to use the service regularly
- Anticipated demand for the Kalaeloa ferry is 1.33 million passenger trips per year and potential total revenue generated of $25.4 million.

Maui Molokai Ferry

- Support for the Maui Molokai Ferry was positive for Personal Interviews and the Prospective Ferry Stakeholder. They felt Molokai residents needed an affordable mode of transportation to the other islands.
- The General Public Group was evenly distributed across those who considered the ferry *extremely important* (20.4%) to their own livelihood to those who thought the ferry was *not important at all* (16.6%). These results indicated that commitment to the past ferry system was not strong and future likelihood to use a re-established ferry system should be considered cautiously.
- 55.5% of Maui County resident were likely to use a future commuter ferry to Molokaʻi
- 80% of Molokai residents stated that they had used the Molokaʻi Ferry in the past. Only 50% said they would be likely to use the ferry service again in the future. 31.4% were not at all likely to use the system.
- The pricing model determined the Lahaina - Kaunakakai route would generate 36,825 passenger trips per year and at the optimal price of $90 round-trip, would generate $3.3 million in revenue.

Daily Passenger-only Intra-Island Ferry on Maui

- Maui residents expressed substantial likelihood to use the ferry between Lahaina and Kahului (67.2%).
- Even with the short distance apart, 68.1% of Maui residents were likely to use a Lahaina and Māʻalaea route.
- The Lahaina and Kahului route would realistically result in 133,029 passenger trips per year and would generate $2.5 million in revenue.
- The Lahaina and Māʻalaea route would realistically result in 135,165 passenger trips per year and $2.6 million in revenue.

Overall and General Sentiment about a Ferry System in Hawai‘i

Overall and General Sentiment About a Ferry System in Hawai‘i

Each study participant group answered a series of general questions on the prospective introduction of a ferry system. This section of the report organizes the responses to these general questions by participant group and presents common themes and issues that must be addresses prior to in the establishment of a ferry system here in Hawai‘i. The research was particularly focused on the Personal Interviews and Prospective Ferry Stakeholders as their specific insights would very likely influence the development and introduction of a ferry system..

Personal Interviews

This participant group of key influencers had mixed sentiment on a ferry system citing reasons for strong support, but equally important concerns regarding factors or impacts of a ferry system that may be harmful to Hawai‘i and certain communities in the state. The Personal Interviews also urged HDOT to address in its overall feasibility study specifically how a ferry will meet local needs, how community can offer input into the development of a ferry system, and how the system will comply with environmental protection laws.

Ferry Factors and Features

What are some the important factors or features that the potential ferry service should have to be successful?

Transit time and schedule. This will be important factor in the success of a ferry system because if the crossing takes too long or does not hold a consistent, timely schedule, then there will be a lack of demand to use it.

Actual responses:

- *Transit time and cost most important.*
- *If too long no one will use it.*
- *Boat cannot be too big - Take too long to load/unload. And too slow.*
- *Should have easy embark and disembarkation. Schedules that allow for day trips*
- *Slower is ok if it lowers costs*
- *Timing is important, so it is convenient for neighbor island to come to O‘ahu in the morning. Trip should originate from neighbor island.*

Comfort. Services like free Wi-Fi, concessions for food and drinks, and even a bar on board the ferry are recommended.

Actual responses:

- *Make it an enjoyable ride with wifi, forms of entertainment, bar and concessions.*
- *Comfortable ride with enough restrooms.*
- *Comforts: free Wi-Fi, coffee shop, restaurant, restrooms, comfortable seating and enclosed [passenger areas].*

Environment and ecosystem protection. The concern with invasive species continues to be a factor, the stakeholders recommended special washing and inspection of vehicles.

Actual responses:

- *Monitoring and prevention of invasive species.*
- *[Vessels] must be eco-green and local sourced to support local economy*
- *[Screening and inspections of cars and cargo] must be fair between existing cargo [shipping] companies. Cargo might invite more scrutiny.*

Support of the Introduction of a Ferry System

To better understand the issues, can you please tell us the top reasons why an inter-island or commuter ferry should be introduced into Hawai'i?

Support: Lower transportation costs through competition with existing transport options
Increased competition with airlines for passengers and shipping companies should bring down the current prices. Provides another mode of transportation for residents who cannot afford air travel.

Actual responses:

- *[Transportation] needs to be more competitive which would result in lower costs.*
- *[A ferry] reduces the shipping costs for the transportation of goods.*
- *To provide other modes of transportation for residents who cannot afford air.*
- *Competition to air travel. Alternative to air.*
- *Lower price/cost [than current options].*
- *[Ferry] price should be half of air ticket or at least same as lowest air route*

Support: More choices and options.
Provide various forms of transportation and alternatives that benefit all types of people and their needs. A ferry system also opens other transportation options for business and residents that are not currently available such as taking cars to neighbor island same day, shipping team gear with the teams, and handling large group travel at reduced costs.

Actual responses:

- *Solving traffic congestion and providing relief to areas that have a lack of service and infrastructure.*
- *Getting people from one place to another to drive economic engine.*
- *Hawai'i needs various forms of transportation and also needs to connect areas that are not adequately served.*
- *Provides alternatives which benefit everyone. Cost of transportation should come down. Give more options results in more resources*
- *Support for local sports teams to ship team gear with teams*
- *Easy to bring own car*

Opposition to the Introduction of a Ferry System

Looking now at the other side, please tell us the main reasons why an inter-island or commuter ferry should <u>not be introduced</u> into Hawai'i

Oppose: Potential negative impact to neighbor island communities
Personal Interviewees are concerned that O'ahu residents would overwhelm the smaller neighborhoods, would increase traffic, and cause over fishing on the Neighbor Islands.

Actual responses:

- *Neighbor Island residents will hate O'ahu people coming with vehicles and taking home fish and other things. Impact on neighbor island communities with additional cars.*
- *Public perception, NIMBY [not in my backyard]. Also denying outsiders from coming to their island.*
- *Neighbor island residents fear O'ahu people will come and deplete their natural resources*
- *O'ahu people stealing neighbor island resources*
- *Traffic impacts to the other islands – can these islands absorb the number of vehicles? Is the transportation infrastructure ready? Can each island take on more?*

Oppose: Potential negative environmental impacts
Concern for the introduction of Invasive species between islands and impact to marine life with a ferry traveling in the near shore waters.

Actual responses:

- *Invasive species: animals and plants travelling between islands*
- *Risk of hitting humpback whales. Must travel slowly in the channel.*
- *Marine mammals – observe speed limits of 13 knots or less.*

Oppose: Hawai'i's conditions are not conducive for a ferry system
Hawai'i has too many issues and concerns that will make it difficult to implement a ferry system: rough waters, lack of harbor space, lack of harbor facilities and infrastructure.

Actual responses:

- *Potential obstacles are water, the channel waters are rough.*
- *Distance between islands is so great it makes ferry service difficult.*
- *The increase in interchange between islands leads to an increased probability of unforeseen consequences.*

Issues to Consider in the Overall Feasibility Study

Are there any areas that should be investigated in this feasibility study that would encourage a higher level of support for the ferry's introduction?

During the Personal Interviews the stakeholders were asked if there were any areas that should be investigated in this feasibility study that would encourage a higher level of support for the prospective introduction of a ferry system.

Meeting local needs. In general, the Personal Interviews advised that a successful ferry feasibility report should underscore how the ferry system could provide benefits and meet the needs of residents and local business, and not just focus on the costs of the technology and infrastructure required to support a ferry system. This theme was clear through most of the comments provided in the previous sections.

Actual response:

- *The SuperFerry failed because it was too commercialized and did not met the needs or solve the problems of Hawai'i's residents.*

Community input. Another recommendation was to ensure that there was a clear and complete process for community input identified in the report or in future plans.

Actual responses:

- *The community must be kept informed all the time.*
- *Ensure community input*
- *Make sure that all sides are considered and provide both pros and cons in the analysis*

Addressing environmental concerns. Similarly, the plan must address the environmental issues that were raised by those who offered conditional support for the ferry system. As mentioned earlier, in order to retain or increase their level of support, the plan must address all cultural and environmental concerns.

Actual response:

- *If all environmental concerns are addressed, then there will be support by stakeholders. The study must show <u>how</u> environmental concerns will be addressed.*

Prospective Ferry Stakeholders

The Prospective Ferry Stakeholders were realistic in their approach to the ferry system and they understood that a ferry system would change the current transportation system in Hawai'i. However, few in this group supported the belief that introduction of a ferry system would lower current shipping and transport rates. Since many of the respondents represented the business sector or government, they were cautious about encouraging additional competitors in the current transportation system. More were concerned with the costs to the state to build and operate this system as it may result in costs being passed on to the taxpayers.

Support of the Introduction of a Ferry System

To better understand the issues, can you please tell us the top three reasons why and inter-island or commuter ferry should be introduced into Hawai'i?

Support: More choices and options

The majority of Prospective Ferry Stakeholders stated that a ferry system should be introduced into Hawai'i to provide alternatives to the current transportation system. These statements were not specific regarding increasing competition or lower prices, but just that a ferry system seemed an appropriate diversification of the transportation system in Hawai'i.

Actual responses:

- *Provides additional options for residents to transport goods and services inter-island.*
- *We are surrounded by water and having a ferry system in place as an option for public transportation between islands or from Kalaeloa to Honolulu makes sense especially for the working families.*
- *More transportation options for residents.*
- *Another way of TRAVELING!*
- *Alternative to air travel is needed.*
- *Provides alternative modes of transportation for inter-island travelers and commuters.*
- *Breaks the dependence on air travel [which brings about] … economic and social benefits.*
- *Another way of shipping things between island.*
- *Faster movement from island to island by ferry than by air.*
- *Affordable for locals to use daily*
- *Residents on neighbor islands can more easily access medical care on Oʻahu*
- *There are many times when users would love to go to another island for a few days and take their car, or maybe a piece of equipment to help a friend, or similar times that do not warrant shipping on a barge but would increase the unity [among] the islands.*
- *This would allow for more economical excursions for larger groups travelling inter-island.*
- *Those who live and work on different islands would have more access and options.*
- *Ferry service may be more cost-effective than additional highways or other forms of transportation.*

Support: Lower transportation costs through competition with existing transport options
The Potential Ferry Stakeholders identified the ferry system as competition for existing options and stated that the competition, especially with air travel would spur lower prices.

Actual responses:

- *[Transportation by ferry is] less expensive.*
- *A ferry provides an additional low-cost method of transportation between islands for locals*
- *Competition to air travel, keep costs down.*
- *A more cost-effective means of visiting friends and relatives on neighboring islands.*
- *Provide increased capacity for residents, businesses, and visitors to travel within the state.*

Support: Increased opportunities for economic development
A ferry system would expand the opportunities for commerce between the islands which would spur economic development.

Actual responses:

- *Inter-island ferry would help unify the island economies and help create a larger overall economy to flourish*
- *Encourage inter-island commerce.A ferry system would encourage more farming, as the main Honolulu market could be reached easily and less expensively.*
- *Relations between islands will grow in the economy and as such tourism will as well. The ferry would be an alternative option where tourists would sprout forth to use.*

- *Subject to the feasibility of a commercial ferry service, a good ferry service would provide an alternative to interisland airfreight and Young Bros barge service that is not as frequent or fast as air, but more frequent and faster than barge. Hitting this sweet spot could stimulate a significant movement of goods between main ports that would facilitate the State's economy. Our primary interest is between Honolulu and Kawaihae Harbors.*
- *Ability to move more than just passengers, delivery and other services could help grow business and create greater competition.*
- *A ferry can offer a more cost-effective means of shopping on neighboring islands.*

Support: Environmental Benefits
Some of the Prospective Ferry Stakeholders touted the environmental benefits of a ferry system compared to the current inter-island transportation options.

Actual responses:
- *A ferry system produces fewer carbon emissions than inter-island travel by air.*
- *Potentially better on carbon emissions*
- *Can accommodate vehicles and cut down on number of rental cars needed throughout state; helpful to local farmers for moving ag produce.*
- *A ferry can run on renewable fuel easier than airplanes.*

Opposition to the Introduction of a Ferry System

Looking now at the other side, please tell us the three main reasons why an inter-island or commuter ferry should not be introduced into Hawai'i?

Oppose: Potential negative environmental impacts
The main opposition to the introduction of a ferry service to Hawai'i is based on the concern for potential environmental damage, particularly the spread of invasive species between islands and harm to marine life.

Actual responses:
- *Unwanted transport of invasive species throughout the islands.*
- *An inter-island ferry should not be introduced because it increases the environmental impact of inter-island travel including, but not limited to: transport of invasive species, over exploitation of natural resources, and direct harm to marine resources including endangered and protected species.*
- *A ferry will make it easier for pests to spread from island to island.*
- *It is essential that proper environmental reviews are first conducted to prevent negative environmental impacts.*
- *A ferry can support moving illegal goods, animals, etc.*
- *High-speed ocean-going ferry services could cause harm to whales, porpoises, and green sea turtles.*
- *A ferry can possibly impact marine life.*

Oppose: A ferry is too costly

The Prospective Ferry Stakeholders were also concerned that the ferry system would be too costly to implement without negatively impacting the state government. They were also concerned that there would not be enough demand from passengers and businesses to sustain the ferry system at an appropriate and affordable price.

Actual responses:

- *Potential costs would be in competition with other priorities of the State.*
- *DOT may not be able to fund it for a sustained period of time.*
- *Higher costs of infrastructure, or environmentally-disruptive operations associated with water-borne transportation make the ferry costly.*
- *Each terminal would require expensive land facilities for parking, staging, and security.*
- *The State would have to provide the port infrastructure for any successful ferry operator. The cost of the infrastructure would be substantial, and there is little likelihood that the State would ever recover the cost of the infrastructure through user fees paid by the ferry operator. Presumably the cost of the infrastructure would have to be covered by appropriations from the State general fund (as opposed to from current Harbors Division revenue sources). If the State is unwilling to fund the infrastructure, then the project should be dropped.*
- *We are skeptical that a ferry service to Kahului Harbor would be workable due to weather considerations in the Pailolo Channel and on the Maui North Shore. We do not believe servicing Nāwiliwili would be feasible.*
- *First, the cost of our last ferry was quite high when including the fuel surcharge. I believe it was as or more costly than flying. If this is the case, then I think it becomes much more difficult to attract passengers. There is the added benefit of having your own vehicle on a ferry, but if fuel costs too much this may not be enough to attract customers.*
- *If there's no real demand for a service, then we probably should not have a ferry service.*
- *Airlines don't want the competition.*
- *If a ferry transports vehicles , it would negatively impact our car rental agencies.*
- *There will likely be a lack of ridership on the ferry.*
- *The commute time is too long, and the channels are too rough to provide a comfortable ride.*

Oppose: Potential negative impact to neighbor island communities

A smaller number of the Prospective Ferry Stakeholders were concerned about the impact on the smaller rural communities that might be overwhelmed by the sheer volume of arrivals by ferry from Oʻahu. This expectation by the rural communities may pit communities against each other in conflicts between supporters and opponents of the ferry system.

Actual responses:

- *[A ferry may cause] depletion of outer (neighbor) island fishing areas by Oʻahu residents with vehicles.*
- *Raiding and poaching of our island resources [may result from a ferry.]*
- *Traffic on neighbor islands [will increase].*
- *Past experience with [ferry] leadership trying to get around environmental and cultural protections [suggest the same might happen].*
- *There needs to be sufficient public support for the ferry project in terms of service parameters and government cost. Also, changes would have to be made to the Hawaiʻi Water Carriers Act of 1974 and the application of environmental impact law on the project. If there isn't sufficient public support these requirements, then the project should be dropped.*

- *If this moves forward, we will have all sorts of protestors claiming the ferry disrespects Native Hawaiian land and culture and that the vessels are going to impact marine life. There obviously needs to be extensive community outreach to mitigate these risks.*

Operations, Funding Structure, and Subsidies for a Ferry System

The three participant groups provided input on how a ferry would be run and financially sustained. The Personal Interviews and Prospective Ferry Stakeholders offered detailed insights on several areas, whereas the General Public responded to a single broad question on whether the ferry should be State-subsidized.

Personal Interviews

Ferry System Operations

How should the ferry system in Hawai'i be operated: a government run system; a privately-owned ferry; or something else? And why do you say that?

The Personal Interviews group reported that due to current fiscal issues within the State (e.g., unfunded liabilities, rail, public union negotiations, etc.), the Hawai'i State Legislature and the State government would more than likely only support a public private partnership instead of a government-run system. These interviewees advised that private sector subject matter experts could help to develop and operate a ferry system combined with government regulations and oversight in place to ensure the ferry system would benefit residents and local businesses first.

Actual responses:

- *Government should be involved in the ferry system, but it must be managed and run like a business. Need subject matter experts [to assist].*
- *Not sure if DOT could take it on. Harbors Division is already complicated.*
- *More specifically, one stakeholder suggested, "selling the development rights to parcels in the harbor as an incentive for the partnership. However, it is important that this be done soon before the best parts are carved out for other projects."*

Subsidies for Ferry Operations

Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?

The Personal Interviews were mixed on supporting the ferry system through State-funded subsidizes. Even among those who supported a subsidy, the support was for a limited time only. One stakeholder said it would be reasonable for the government to fund the harbor improvements and invasive species protection initiatives, but not the operations and ticket price. Only four of the Personal Interviews felt that the ferry system should not be subsidized at all. In particular, one interviewee suggested that if a subsidy was required to operate the ferry system, it would be wiser to fund airlines and air transportation to reduce the costs of inter-island air travel.

Actual responses:

- *A [ferry system must be a] public service and it is not realistic to be 100% private. Federal funding [is needed to support the ferry].*
- *State should fund harbor improvements and car washing (for invasive species control) but not subsidize fares.*
- *Support government subsidies through GET [general excise tax]. Or charge air passengers [a tax] to offset ferry passengers.*
- *Subsidized only at start, but long term should be without subsidies*
- *Wouldn't be opposed but encourage private funding first as opposed to raising of taxes.*

Several Personal Interviews suggested a specific source of funding or subsidy, including the following

- *A surcharge on air passengers or tolls in state parks and marine parks.*
- *Federal funding sources only; do not increase taxes on Hawai'i residents.*
- *A charge on tourists to benefit residents, like a toll at state parks or marine parks.*
- *TAT [Transient Accommodations Tax]*
- *Realize at least 50% [subsidy], but not from General Fund since it is already limited. Tap into one of the current special funds*

Prospective Ferry Stakeholders

Ferry System Operations

How should the ferry system be operated, a government run system; a privately owned ferry; or something else?

Only a small portion of this participant group supported a government-run system (10.9%). The Prospective Ferry Stakeholders were more likely to prefer a privately-owned ferry system (47.3%), and a large segment of this group would advocate for something else (41.8%). For those who would support alternative system, most mentioned a form of a public-private partnership.

Government-run Ferry

The small portion of the group who supported a government-run ferry system, was mostly concerned with protecting the consumers' rights and opportunities for transportation at a reasonable price for all.

Actual responses:

- *Would not want profit to be the primary driver and at the same time, would like to maximize efficiency (which I hope the "private sector" would facilitate).*
- *Government can be made accountable to taxpayers.*
- *If it was government-owned it would be more feasible for everyone to use. The ferry could be subsidized. If it was privately owned, cost would be significant, and people may not use it. If it was going to be privately owned there should be more than one company operating the ferry so that it keeps the cost down.*
- *Ensure cost effectiveness given that State controls harbors - and nearly every municipal mass transit system has some level of government support to be sustainable.*

Privately-Owned Ferry
The stakeholders supported a privately-owned ferry system for two major reasons. First, private ownership would not burden the tax payers and the State government since the State would not immediately have a funding mechanism. The second driving force was the distrust and skepticism of a government-run operation that would or could be more efficient as a private sector business.

Actual responses:

- *[Private is preferred] so that the burden would not end up on the tax payers.*
- *We cannot afford another giant tax-funded transportation enterprise (like rail).*
- *A private ferry will be more efficient and have lower prices than a public ferry. The private sector is almost always better at providing these types of services. If a ferry should be publicly run, then why shouldn't an airline be publicly run?*
- *[A private ferry is more] efficient but would need some subsidization. Please note there already is a very profitable and excellent ferry service between Lahaina and Lānaʻi.*
- *Are you kidding? Look at how government-operated things are going. For instance, the Department of Water Supply and the Hele On bus service on the Big Island, as well as the DLNR.*
- *Hopefully a private ferry would reduce costs to residents. I don't really want to pay for a ferry service with my tax dollars.*
- *[Implementation of a government-run ferry] would be too slow*
- *Because the government will probably screw it up.*
- *They [should] do it as a business. Government workers will screw it up.*
- *Private interest will focus on the task at hand. Government gets distracted with union issues that will bog down and burden required steady transportation schedules.*

Alternate model: Public Private Partnership
Many stakeholders shared the option of a Public Private Partnership model for the ferry system. Under this model, the government side would provide safeguards and consumer protection and could provide access to State and federal funds and share financial risks, while the private entity would allow better opportunities for innovation and access to commercial opportunities.

Actual responses:

- *There should be basic safeguards and regulations provided by the State but the entity should have the flexibility to not be bogged down by State procurement or private sector ability to respond quickly to market demands.*
- *The routes, like other utilities would represent monopolies hence should not be totally under private control. Government-only is problematic in that the government does not have a customer-service/competitive mindset and probably would not be well run. So, either a joint venture or as most utilities (again) highly regulated private.*
- *Private companies will run more efficiently, but the risks are too high for them to do it totally on their own.*
- *Believe this would be of shared risk to both government and private sector, as long as terms are agreed upon by both sides.*
- *The system will be able to access more of the Federal funds available to public/private entities.*
- *Private industry has more commercial opportunities open to it and can financially supplement a public venture and funding.*
- *to lower the cost to the state and to allow for private sector innovation*
- *Allow for private enterprise in coordination with use of public facilities.*

- *Seems some kind of public/private partnership might be most effective. Hawai'i government does not seem to have the best track record when it comes to implementing huge transportation projects*

Subsidies for Ferry Operations

Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?

Prospective Ferry Stakeholders were also asked what percentage of state funding would be acceptable. The average level was approximately 38 percent of the total ticket price would be State-funded. Furthermore, those public and government stakeholders were more likely to state a higher percentage (above 30 percent) while the private sector and businesses were more inclined to favor a lower or very little government funding.

Minimal Subsidies (20% or below)

Actual responses:

- *Many ferry systems around the world are bid out on a tender basis by the controlling government authority providing a small subsidy to the successful bidder / operator. The City of New York has recently done this (with the city providing all the port infrastructure). The level of subsidy would have to be determined by the proposed study, but should not be too large (i.e., 10% or under).*
- *Any more and our taxes of all kinds would be increased. Any less and the service might be too expensive.*
- *It would be nice if the service was self-supporting through fares, but in the event that causes the rates of travel to be too high, it would be nice to have some government support.*
- *Majority should be paid by the users/riders.*
- *Enough to have some skin in the game, but not so much that it becomes another bureaucracy.*
- *There is value to government in terms of disaster preparedness, commuter options, general transport. Subsidy should not be too big.*

The government should be a partner in this investment (30% - 50%)

Actual responses:

- *Enough to make it go but note that makes it totally reliant on government funding.*
- *I think that the system should strive for self-sufficiency, however for the public interest, I do believe that the state should be able to provide necessary funding to make system initially affordable and well used.*
- *The State should still have some responsibility while allowing for outside assistance.*
- *The government should provide some contribution but since the private entity stands to profit (within regulated guidelines) then the private portion should shoulder the bulk of the costs.*

- *In a partnership scenario, government would have to foot some amount of the operations of the service. In return, the private partner could be guaranteed their profits or pay back of investment for a period of time that would be longer compared to either government or the private sector funding the service on their own.*

The government should play a leading role in ensuring success through funding (Over 50%)

Actual responses:

- *The subsidy should be higher because the high risk of a company coming into start a new business/ferry. The last ferry failed. This would be temporary (up to 10 years of funding) until the public and politicians were ok with ferry transportation.*
- *Because the system must be at least 50% self-supporting. The subsidy can gradually be reduced if it is a successful system.*

General Public

Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?

Over three-quarters of the General Public felt that the ferry system operations should be supported by state funding (77.2%).

The General Public was not asked additional questions regarding what the source of the public funding should be.

Opinions and Sentiment About an Inter-Island Ferry System

Overall, there was positive sentiment and support for a future ferry system in Hawai‘i from all of the groups that were surveyed or interviewed.

Nearly all of those from the Personal Interviews stated that they could support and encourage an inter-island ferry system. However, each interviewee stated that certain requirements had to be met or issues that needed to be addressed for full support. Further, they acknowledged that economic pressures and infrastructural limits would make it difficult to address all their concerns.

Moreover, the Prospective Ferry Stakeholders and the General Public stated a high level of support for the introduction of inter-island ferry service in Hawai‘i with collectively over eight out of ten respondents stating that they either strongly support or somewhat support it.

Personal Interviews

Type of Ferry

If an inter-island ferry service was introduced in Hawai‘i, which types of ferry services would you support? (e.g., passenger-only; passengers and drive on vehicles; passengers, drive on vehicles and cargo).

Understanding what would be type of ferry service is supported or demanded is a critical component of this study as the ferry type determines what size of a ship would be necessary (i.e., passenger-only services could be smaller ships). Also, if the market demanded a ferry service to include personal vehicles and cargo, then the additional improvements to the pier would be necessary to accommodate these larger vessels and the staging areas for the vehicles and cargo. The Personal Interviews stated clearly that all configurations of the state Inter-island ferry service system must have a passenger component; therefore passenger-only ferry was the most recommended form of service.

Actual responses:

- *A passenger ferry is the most recommended form of service.*
- *All modes but must have a passenger component*
- *Unaccompanied cargo is also acceptable.*
- *Regular service is important. If there are too many cancellations, then demand will be affected.*
- *Passenger ferry: easier to inspect.*
- *Passenger only to start.*
- *Suggest transitional starting with passenger only until successful then adding cargo.*

Interviewees also recommended to add cargo-carrying capabilities to the passenger ferry than to add personal vehicles as a service. Allowing cars and trucks was only acceptable to a few. The main opposition is that invasive species monitoring, and preventative measures would be difficult for cars and trucks.

Actual responses:

- *Cargo with truck drive-on and drive-off, and area for refrigerated cargo.*
- *Passenger and cargo are okay, but not cars. Concerned with invasive species and transportation infrastructure on neighbor islands.*
- *Passenger and cargo are acceptable, but no vehicles; do not want to deal with the same issues as the Hawai'i SuperFerry*
- *Invasive species monitoring, and preventative measures would be difficult for cars and trucks.*
- *Concerned with invasive species and transportation infrastructure on neighbor island.*

However, allowing cars and trucks was still promoted by a limited number of the Personal Interviews.

- *Passenger with personal vehicles – flights too expensive.*
- *Should be with vehicles so that neighbor island can get enough construction workers there, especially Maui.*
- *Passenger only limits opportunities. Must provide most flexibility.*

Prioritization of Major Inter-Island Routes

On these cards we have included some of the proposed inter-island ferry routes, can you look at these cards and rank them in order of importance to you and your organization? Most important on top. (see Appendix C for the Personal Interviews discussion guide and cards used to illustrate the ferry features, design and routes)

Overall, the Personal Interview group did not have a strong opinion of which routes should be pursued first or would have the highest demand. Many of the members of this group had statewide oversight, so they did not want to isolate any one island or route.

Of the suggested inter-island routes, Personal Interviews stated that a route between O'ahu and Maui would be of the highest important importance. Some of the Interviewees selected Kahului Harbor as their top choice destination while other selected Mā'alaea Harbor. However, one respondent mentioned that Kahului Harbor's rough surf would make it difficult to moor the Ferry.

Another top choice for many of the Interviewees was the route between Lahaina – Kaunakakai. this will be discussed in the Intra-County section of this report.

The next route in priority to the Personal Interviews was service between Honolulu and Kawaihae on Hawai'i Island. The route between Honolulu and Kaua'i had the lowest priority of all the proposed routes with only one person selecting it as a first choice. One participant specifically said to not start with Kaua'i and to lead with Maui as the first test route for an inter-island ferry service.

Stakeholders have a few suggestions for additional transit routes, including a multi-island circuit:

- *Honolulu and Kaunakakai: This route would provide ready access to families and businesses to the bustling metropolitan. Moloka'i residents can now have equitable opportunities.*
- *A slower moving course that would connect three islands was also suggested: Nāwiliwili – Honolulu – Kahului or Honolulu – Kahului – Kawaihae.*

Sentiment About an Inter-Island Ferry System

The sentiment of the Personal Interview participants are grouped into one of three categories regarding the introduction of an inter-island ferry system: 1) support of a ferry system for the need to have a diversified transportation system, 2) support with some apprehension of a ferry system due to concerns with environmental issues and lack of community input, or 3) strong opposition for the ferry system because it would not be appropriate for Hawai‘i due to business and infrastructure issues. These sentiments about an inter-island ferry system mirrored their overall sentiments on a ferry system in general.

They expected that the ferry could handle larger travel parties with larger amounts of baggage. There were also expectations that the ferry service would have a cheaper fare than the current inter-island airfares. Among the public officials in the Personal Interviews, many were concerned equally for residents' interests and businesses' interests, and all stated that they have heard overall public demand for the ferry.

Support of the Introduction of an Inter-Island Ferry System

Support: More choices and options
Many of the interviewees were direct in saying that Hawai‘i must reduce the risk of a dependence on only one large inter-island air passenger service or a limited number of sea cargo operations. One of the interviewees was adamant that "*no jurisdiction in U.S. should depend on a single mode of transport within its boundaries."*

A large majority of the Personal Interviews explained that their support for a ferry system was based on their interest in increasing resiliency in Hawai‘i by diversifying the inter-island transportation options. They felt that the ferry system would be a complement to the current inter-island air travel system.

Support: Lower transportation costs through competition with existing transport options
The public officials (key legislators, mayors, and department heads) were particularly concerned that Hawai‘i needed multiple forms of transportation for both resident travel and businesses. The general sentiment was that the ferry would provide choices which would generate price consciousness among the existing transportation providers.

Many in the Personal Interviews group stated that the current ticket prices for inter-island flights and the shipping costs for air or sea cargo were high for the average Hawai‘i resident. Therefore, they were hoping that the ferry system would either be cheaper than the current inter-island costs or would stimulate competitions in the market to drive down the prices.

Support: Provide transportation services not currently available
The public officials also were keen on addressing social justice, particularly economic justice. The stakeholders hoped that the ferry would provide equal footing for economic opportunities and equal access to jobs which would result in fair distribution of wealth. Those particularly interested in social justice justified their support of the ferry as a means to address inequality of services for neighbor island residents. One interviewee stated that ocean transportation could assist those underserved communities such as Moloka‘i, and Hāna, Maui.

Actual responses:

- *The economic impact study must include all factors such as job equalization across counties, islands.*
- *The ferry may support small cottage industries, small businesses, and improve distribution of wealth throughout the State.*
- *Social justice is promoted by supporting business opportunities beyond O'ahu.*
- *Diversity of modes of transportation that then influences lifestyle, choice, price and efficiency.*

The public officials also stated that small businesses and farmers faced similar inequities in the current shipping and transportation options. Some felt that neighbor island business needed options besides the current Young Brothers overnight delivery by ocean barge. The interviewees felt that neighbor island businesses already pay higher prices to have their supplies shipped from Honolulu and that lower transportation fees to ship their finished product back to the main market of Honolulu would allow them to remain competitive against products produced and sold in Honolulu.

Responses from the Personal Interviews pointed out that group travel such as sports teams would benefit from a ferry service, particularly neighbor island teams who had to travel often between schools on other islands to play. The interviewees were concerned with school teams not being able to travel together due to limited air seat capacity. Another benefit of the ferry would be the ability for sports teams, hula hālau, and construction workers to travel with their tools and equipment. Currently, sports teams have to ship ahead their gear and equipment, and construction workers are limited to the amount and types of equipment they can carry-on or check-in on inter-island flights.

Conditional Support of an Inter-Island Ferry System

Support Conditioned on Environmental and Community Concerns Satisfactorily Addressed

Those in the Personal Interviews who represented environmental organizations and community groups were all of a similar opinion that they would support a ferry system if the environmental issues were addressed. All recognized that the ferry system would provide some benefit to the State, particularly through increased competition which would lead to lower prices. Many also pointed out that a ferry would have less carbon emissions than an airplane traveling the same route.

None of the respondents in this group strongly supported a ferry system that would transport vehicles between islands. They felt that the environmental impacts caused by the transport of invasive species on personal cars would be detrimental. They were also concerned that the additional cars would negatively impact infrastructure and smaller communities.

When the Personal Interviews looked at the broader transportation and shipping infrastructure in Hawai'i, most imagined that ferries could play a critical inter-island role in the movement of cargo. Even those stakeholders, who were vocal against the Hawai'i SuperFerry, explained that if a ferry system addressed their environmental concerns and provided better opportunities for communities. they would also support the system.

Actual responses:

- *In favor of inter-island ferries with some reservations – primary concern is invasive species.*
- *Some of the conditions that need to be met in order to retain their support:*
  - *Assurance of protection against the transport of invasive species [between islands by ferry]*
  - *Prices lower than current air passenger fares and cargo rates*

Opposition to an Inter-Island Ferry System

Oppose: Potential negative environmental impacts
For those who had little support for the ferry system because of environmental issues they were specific about how these could be addressed.

Actual responses:

- *It's not that I do not support the idea of an inter-island ferry. I do not support any further form of inter-island travel until the State is fully equipped to adequately address and prevent the spread of invasive species and provide the appropriate facilities and personnel to address this critical and devastating issue, whether transport is by air, sea, or otherwise. Hawai'i Island is too vulnerable environmentally and culturally.*
- *While an inter-island ferry service could fill a transportation need, it is important that such a service be developed in a way that minimizes negative impacts to communities and natural resources while serving needs of resident communities (not just visitors)*

Oppose: Hawai'i's conditions are not conducive for a ferry system
Those who represented business and industry among the Personal Interviews stated mixed support. All acknowledged that the ferry system would be economically very difficult. One group of participants that were interviewed was very adamant about its opposition to the ferry. The opposition was due to the lack of existing harbor infrastructure and the group felt that the current infrastructure was limited, old, and could not even handle the current cargo load and vessels that rely on the commercial harbors.

Similar to the public officials, these interviewees also noted that the ferry technology and vessel designs could not adequately handle Hawai'i's rough seas. The boats would have to operate too slowly to navigate during rough weather which would make the transit time too long and undesirable. Others cited Kahului Harbor as having high surf, so vessels of all sizes have difficultly docking in port during the winter swells. Interviewees also proposed that it would be better to support competition through another inter-island airline than to spend that money for a ferry system.

Prospective Ferry Stakeholders

To preface the responses in this section, several participants in this group represent local businesses and were asked about current inter-island travel habits. Most stakeholders indicated that their associates and employees predominately "visit [an]other island and came back on the same day."

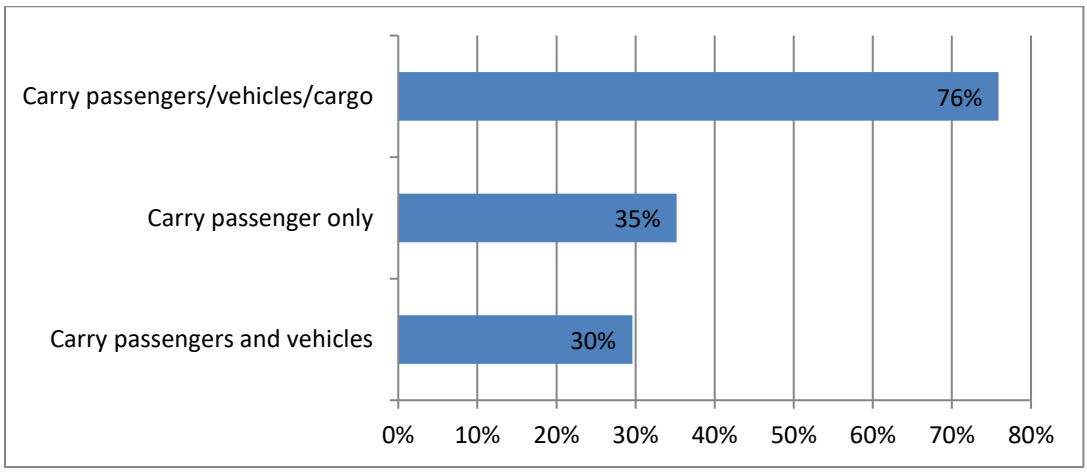
Even though none of the stakeholders who responded to the business survey stated that they were dissatisfied with their current travel options, a few remarked on the limited options and the restrictions posed by airline rules that prevent business travelers from carrying certain tools and equipment with them.

Type of Ferry

If a ferry service was introduced in Hawai'i which types of ferry would you support?

The responses from Prospective Ferry Stakeholders were slightly different from the Personal Interviews. As indicated in the chart, many more would advocate for a full-service ferry service (76%) that included the ability to carry passengers, personal vehicles, and cargo. Fewer Stakeholders would favor a Ferry that carried passengers only (35%) or just passengers and vehicles (30%)

Figure 1: Type of Ferry Service, Stakeholders



Note: percentages could total to more than 100%. Stakeholders allowed to choose multiple responses.
Question: If a ferry service was introduced in Hawai'i which types of ferry would you support?

Prioritization of Major Inter-Island Routes

The Prospective Ferry Stakeholders were asked to rank seven proposed inter-island routes by importance to associates and employees. Most recommended that the top priority should be establishing a Honolulu (Oʻahu) to Kahului (Maui) route, and almost twice as many respondents ranked this route as their first or second choice (63.3%) than the next preferred route of Lahaina (Maui) to Kaunakakai (Molokaʻi) (34.0%).

However, re-establishing the Lahaina (Maui) – Kaunakakai (Molokaʻi) service was still considered of high importance compared to the other routes listed. A similar number of stakeholders also wanted to see a route from Honolulu (Oʻahu) to Hawaiʻi Island, with stronger preference for Hilo (31.9%) on the east side of the island than for Kawaihae on the west side (24.5%).

The Honolulu (Oʻahu) to Māʻalaea (Maui) and Lahaina (Maui) to Mānele (Lānaʻi) routes were the least important to this group of respondents. In particular, none of business respondents included these two routes as a top-priority routes.

Table 1: Proposed Ferry Routes by Priority Order (Prospective Ferry Stakeholders)

Route	Order	% Ranked 1st or 2nd
Honolulu (Oʻahu) and Kahului (Maui)	1	63.3%
Lahaina (Maui) and Kaunakakai (Molokaʻi)	2	34.0%
Honolulu (Oʻahu) and Hilo (Hawaiʻi Island)	3	31.9%
Honolulu (Oʻahu) and Kawaihae (Hawaiʻi Island)	4	24.5%
Honolulu (Oʻahu) and Nāwiliwili (Kauaʻi)	5	23.4%
Honolulu (Oʻahu) and Māʻalaea (Maui)	6	18.8%
Lahaina (Maui) and Mānele (Lānaʻi)	7	14.9%

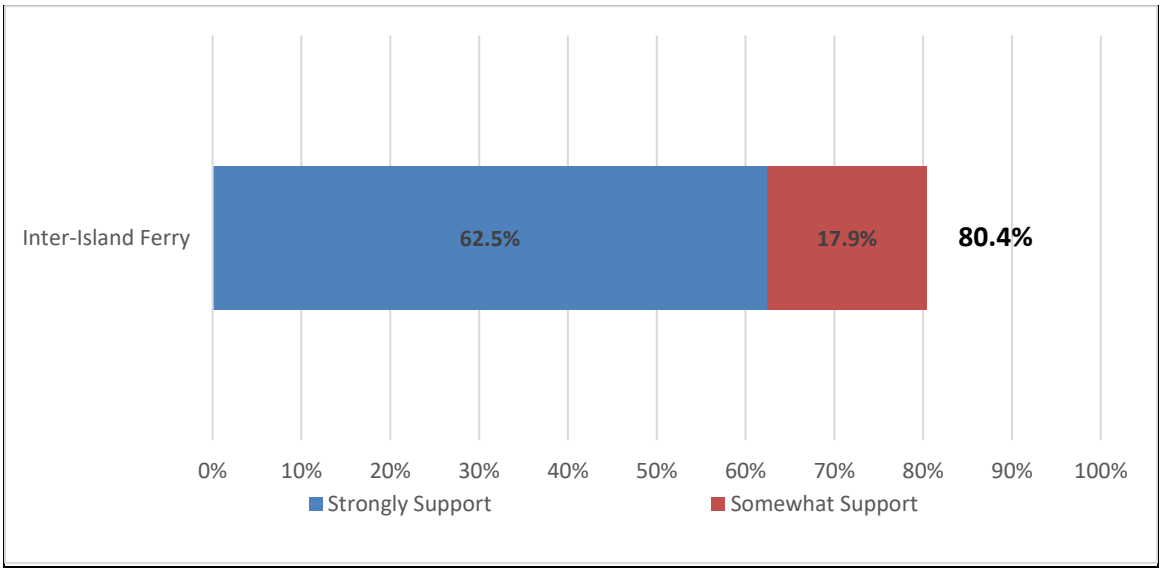
Question: Listed below are some of the proposed inter-island ferry routes. Which of the following are most important to your associates and employees? Please rank them in order from 1 to 7 with 1 being most important, 2 less so, and 7 least important.

Support for an Inter-Island Ferry System

On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i?

The Prospective Ferry Stakeholders stated a high level of support for the introduction of inter-island ferry service in Hawai'i with 62.5 percent who stated strongly support and collectively over 8 out of 10 stakeholders (80.4%) who stated somewhat or strongly support.

Figure 2: Support of Inter-Island Ferry (Prospective Ferry Stakeholder)



Question: On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i?

Figure 3: Support of Inter-Island Ferry by Organization Type (Prospective Ferry Stakeholder)

Support of Inter-Island Ferry	Enviro - mental	Gov't - County	Gov't - State	Maritime Industry	Ocean Rec Users	Private Sector Business	Other	Total
Strongly Support	33.3%	41.7%	66.7%	80.0%	57.1%	85.7%	100.0%	62.5%
Somewhat Support	33.3%	25.0%	19.0%	0.0%	28.6%	0.0%	0.0%	17.9%
Slightly Support	33.3%	8.3%	14.3%	0.0%	0.0%	14.3%	0.0%	10.7%
Very Little Support	0.0%	8.3%	0.0%	0.0%	14.3%	0.0%	0.0%	3.6%
Not Support At All	0.0%	16.7%	0.0%	20.0%	0.0%	0.0%	0.0%	5.4%

Support: More choices and options
Those who strongly supported the introduction of an inter-island ferry system cited the "additional methods of transportation between islands will greatly help our state in many ways."

Actual responses:

- *Alternative to air transportation is sorely needed.*
- *Having an alternative to the air carriers would be a good thing. From the perspective of inter-island commerce, it would be another vehicle for freight-forwarding.*
- *It will increase options for traveling between islands.*
- *This ferry supports my business and the economy in sharing our resources with each other. The inter-island ferry gives a better and wider opening for opportunities in future generations.*
- *To provide another option for inter-island travel. To offer a competitor to air travel.*
- *I think that adding a mode of transportation between islands will give residents, businesses, and visitors an option for travel. And, it would provide a strategic second option for intra-state commerce.*
- *I believe that an interisland ferry system will provide additional opportunities and flexibility to residents and businesses seeking to move people, goods and services throughout the islands. The ferry system will hopefully be more accommodating than current interisland shipping options.*

Support: Lower transportation costs through competition with existing transport options
Many of those who advocated providing alternatives to the current inter-island passenger and cargo transportation options did so hoping that increased competition would lower costs and prices of inter-island transport.

Actual responses:

- *An interisland ferry system offers the prospect of better service at significantly lower cost than the current options of hyper-expensive airfares and/or poor services for ocean transportation.*
- *Competition for more modes of inter-island public transportation is much better than the sole method that is currently available. Air travel is expensive and not practical when transporting bulky items such as bulky or heavy business deliveries.*
- *To provide another option for inter-island travel. To offer a competitor to air travel.*
- *If run properly it should prove to be a more cost-effective and time-effective method of travel between islands. In other parts of the world this has worked very efficiently.*
- *As well as provide a more economical passenger transport that will alleviate the high cost of airline travel.*

Support: Provide transportation services not currently available
Several stakeholders identified the ferry system as offering a new service to address unmet needs, such as traveling with a personal vehicle, and quick transport of goods not safe for air travel.

Actual responses:

- *Additionally, people who work or spend more time on the neighbor island would have an available option to take their own cars to the neighbor islands.*
- *With a ferry service depending on size, cars can be brought between islands, this would be a huge help for sports team. It's also another form of activity that our visitors can enjoy our islands.*
- *Another means of transportation that will help schools and sports teams and everyday families bring their vehicle to another island for the day.*
- *Interisland transport of goods that are not safe for air transport. Good for tourism as well.*
- *From the perspective of inter-island commerce, it would be another vehicle for freight-forwarding.*
- *Good for farmers, student athletic groups and other locals. But don't include Kaua'i.*
- *We need alternative means to travel interisland beyond just airlines. A ferry service would allow transport of more goods and services interisland. As it is now, you cannot easily travel with pet dogs interisland, which should be accommodated with a ferry service. Also, the ability to take one's vehicle interisland is a big plus for local residents wanting to visit other islands.*
- *Numerous examples of users who would benefit from an inter-island ferry include: - Hunters traveling between islands who want to transport their gear and personal vehicles - Small businesses such as contractors who want to supplement the local workforce - Emergency support such as in a hurricane - Families traveling for extended holidays who may want to take their own camping gear to different islands - Companies who want to transport large equipment / goods but can't wait for the weekly Young Brothers barge.*

Support: Increased opportunities for economic development

Those who stated support for the ferry system also felt that the Hawai'i's economy would improve by having additional inter-island connections, especially benefitting the neighbor islands. The stakeholders felt that the inter-island service would help to spur new industries and companies on the neighbor islands, and more frequent shipping would support businesses in Hawai'i.

Actual responses:

- *Inter-island ferry service would allow the neighbor islands to increase economic development, thus raising the standard of living.*
- *An inter-island ferry system offers the prospect of better service at significantly lower cost than the current options of hyper-expensive airfares and/or poorly serviced ocean transportation.*
- *An inter-island ferry would provide an alternate form of transportation for commuters between islands, create jobs and increase commercial activity and opportunities,*
- *It would link the islands economies for tourism, business, and medical support for neighbor island residents.*
- *The inter-island movement of product would probably not have idle time on the piers.*
- *We support a privately-operated inter-island ferry operating daily service with displacement hulls between main ports with sufficient cargo volumes to support a service. Our interest would be to transport cargo in large road trailers to increase the availability and speed of commercial inter-island transport.*

Opposition to an Inter-Island Ferry System

Among the Prospective Ferry Stakeholder Group about nine percent were not supportive of an inter-island ferry service in Hawai'i (Very Little Support, 3.6%; Not Support At All, 5.4%).

Oppose: Potential negative environmental impacts
A dominant concern for these respondents was the "pollution and environmental concern." Similar to those were interviewed, the stakeholders were very much concerned for the transmission of invasive species between islands.

Actual responses:

- *A ferry, if it brings roll-on/roll-off vehicles, will be like a road between the islands, which means huge detrimental impacts to the neighbor islands in terms of invasive species; overloading of recreational sites; pilfering of natural resources like maile, river rocks, opihi; and more traffic congestion; plus danger to whales and other marine life. It could work if roll-on/roll-off vehicles were not allowed, stricter than New Zealand inspections and interdiction were imposed to protect against invasive species, and the ferry was powered only by renewable energy.*
- *It's not that I do not support the idea of an inter-island ferry. I do not support any further form of inter-island travel until the state is fully equipped to adequately address and prevent the spread of invasive species and provide the appropriate facilities and personnel to address this critical and devastating issue, whether transport is by air, sea, or otherwise. Hawai'i Island is too vulnerable environmentally and culturally.*
- *I would be more supportive if it was just a passenger ferry, so no vehicles, or it's only used to move vehicles intra-island. Otherwise, the same issues that came up last time will arise again (e.g., invasive species transport, resources being taken or overused, etc.).*

Oppose: Hawai'i's economic/political conditions are not conducive for a ferry system
These stakeholders also felt that Hawai'i was not ready fiscally nor had the leaders and skills to manage a new transportation option.

Actual responses:

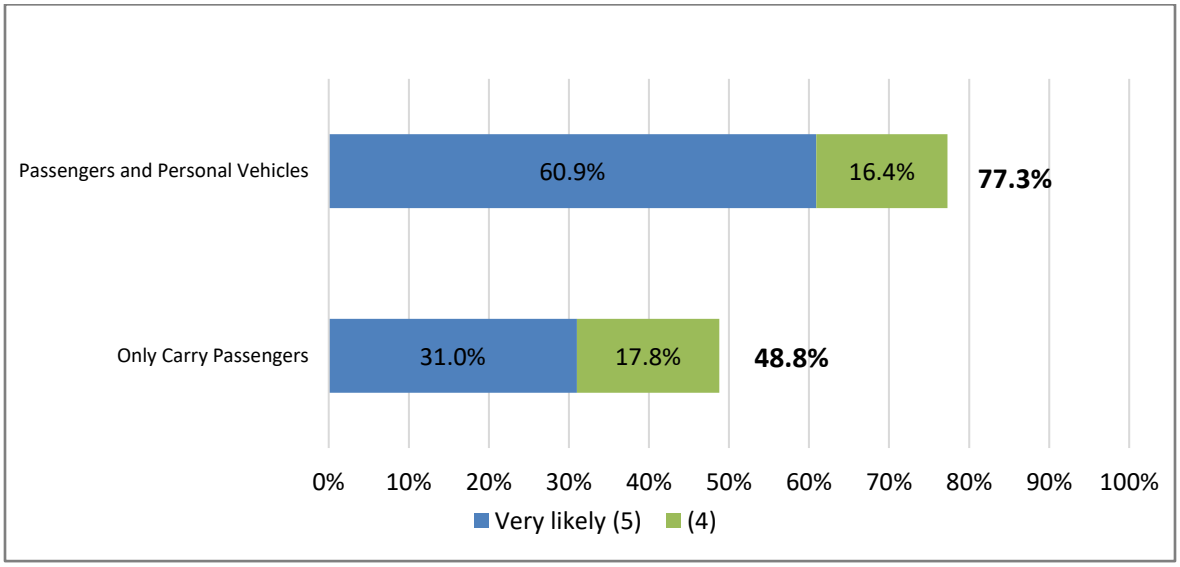
- *The last one cost the state $71MM and that's not all. The federal govt. paid off a loan guarantee of around $150-170MM. Taxpayers cannot support this because ferry system cannot be self-sufficient and need heavy annual subsidies. We do not need another Honolulu rail fiasco. Fast ferries brought down the British Columbia provincial government in 1999 and cost the government over C$450MM. A fast ferry brought down the Rochester city government in 2007. Harbor facilities are already overburdened and do not have space. Mixing passengers with cargo operations does not work.*
- *I have no confidence that the political decision-making process in Hawai'i has the integrity or the capacity to do such forward-looking and detailed planning and execution.*

General Public

Type of Ferry

The General Public indicated that they were very likely to use an inter-island ferry that could carry passengers only and/or both passengers and personal vehicles. The top two box scores on likelihood to use totaled 77.3 percent of all participants. In contrast, only 48.8 percent of residents were likely to use a passenger-only inter-island ferry.

Figure 4: Likelihood to Use Passenger and/or Passenger and Vehicle Ferry in the Future



Question: On a 5 point scale where 5 is very likely and 1 not at all likely, if an inter-island ferry service were introduced in Hawai'i, how likely are you to use that ferry in the future, If…?

Table 2: Likelihood to Use Passenger and Vehicle Ferry by County

Passenger and Drive-on Personal Vehicles	County				Total
	Honolulu	Maui	Hawai'i	Kaua'i	
Very Likely	62.2%	57.1%	64.1%	43.2%	60.9%
4	17.3%	17.1%	12.2%	12.5%	16.4%
3	10.4%	7.0%	9.0%	11.2%	9.9%
2	5.6%	5.7%	4.3%	4.0%	5.4%
Not At All Likely	4.4%	13.2%	10.3%	29.1%	7.4%

Residents of the County of Kauaʻi showed a difference of intention compared to the other counties (Table 2). Kauaʻi residents were strongly against a passenger/vehicle type of ferry to Kauaʻi; 29.1 percent responded that they were *not at all likely* to use the ferry compared to the statewide response of 7.4 percent. Similarly, only 43.2 percent of Kauaʻi residents were *very likely* to use a ferry that transported Drive-on Personal Vehicles, while 60.9 percent of all residents statewide favored that type of ferry.

Table 3: Likelihood to Use Passenger-only Ferry by County

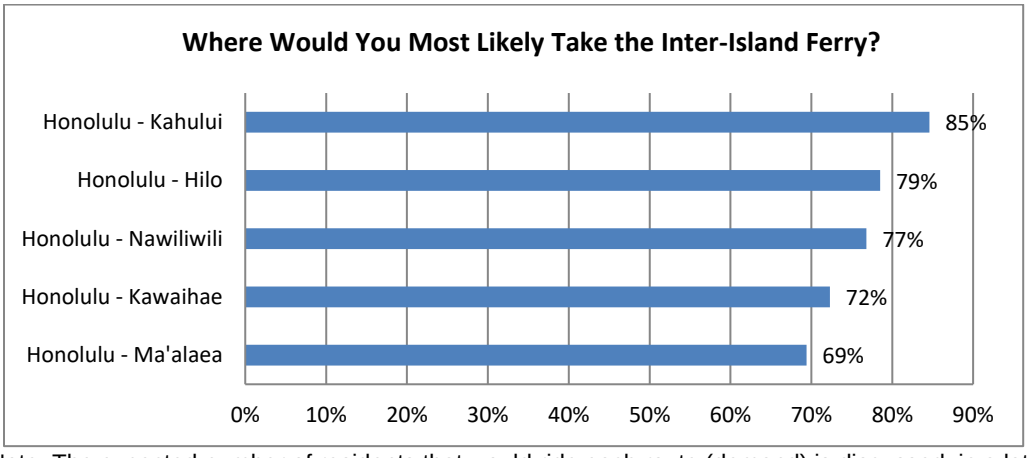
Only Carry Passengers	County				Total
	Honolulu	Maui	Hawaiʻi	Kauaʻi	
Very Likely	28.8%	33.6%	40.4%	31.0%	31.0%
4	18.5%	18.4%	15.0%	14.5%	17.8%
3	27.3%	18.6%	21.6%	24.1%	25.3%
2	11.7%	11.4%	10.4%	6.6%	11.2%
Not At All Likely	13.8%	17.8%	12.6%	23.9%	14.6%

In a follow-up question, the General Public was asked: *If this feasibility study showed demand only for passenger service; would that be an acceptable level of service to you?* Given that situation, 65 percent of residents accepted a passenger-only ferry service.

Prioritization of Major Inter-Island Routes

The priority of routes based on the expected demand from the General Public mirrored closely the responses of the Prospective Ferry Stakeholders. The most popular route would be Honolulu (Oʻahu) - Kahului (Maui) and then Honolulu (Oʻahu) – Hilo (Hawaiʻi island). Similarly, the lowest demand was for the Honolulu (Oʻahu) – Māʻalaea (Maui) route.

Figure 5: Demand for Ferry Routes (Resident)

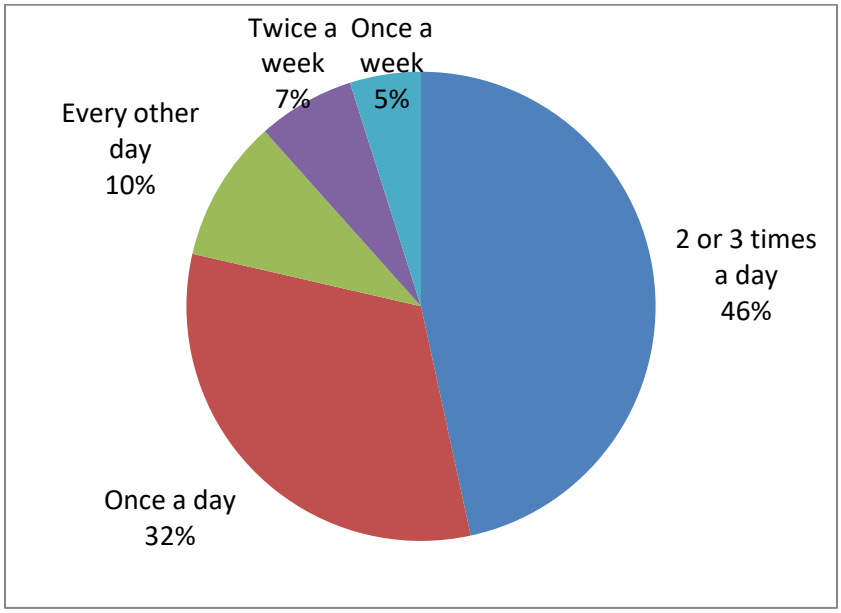


Note: The expected number of residents that would ride each route (demand) is discussed in a later section. Table 9 (page 45) shows the number of person trips on a passenger-only ferry expected by each route and Table 10 (page 45) shows the distribution for a passenger and vehicle ferry.

Frequency

Over three-quarters of the respondents in the General Public felt that the ferry service should be providing at least daily service (32%) if not two or three times a day (46%). There was a smaller proportion that would still find the service acceptable even if it ran every other day (10%).

Figure 6: Acceptable Frequency for the Ferry Schedule (General Public)



Question: What is the minimum frequency the inter-island ferry schedule should run to make it acceptable for you? The ferry should run at least…

Crossing Time

In general, two-thirds of residents were willing to spend approximately three hours or fewer to transit between O'ahu and Maui (66.7% for Mā'alaea, or 69.9% for Kahului), or between O'ahu and Kaua'i (68.4%). Residents were also willing to spend a little more time on a ride to Hawai'i Island with more than half willing to spend more than three hours (62.0% to Kawaihae Harbor, or 58.3% to Hilo Harbor). Table 4 shows that very few residents are willing to spend six hours or longer, or even overnight to get to another island.

Table 4: Acceptable Ferry Crossing Times

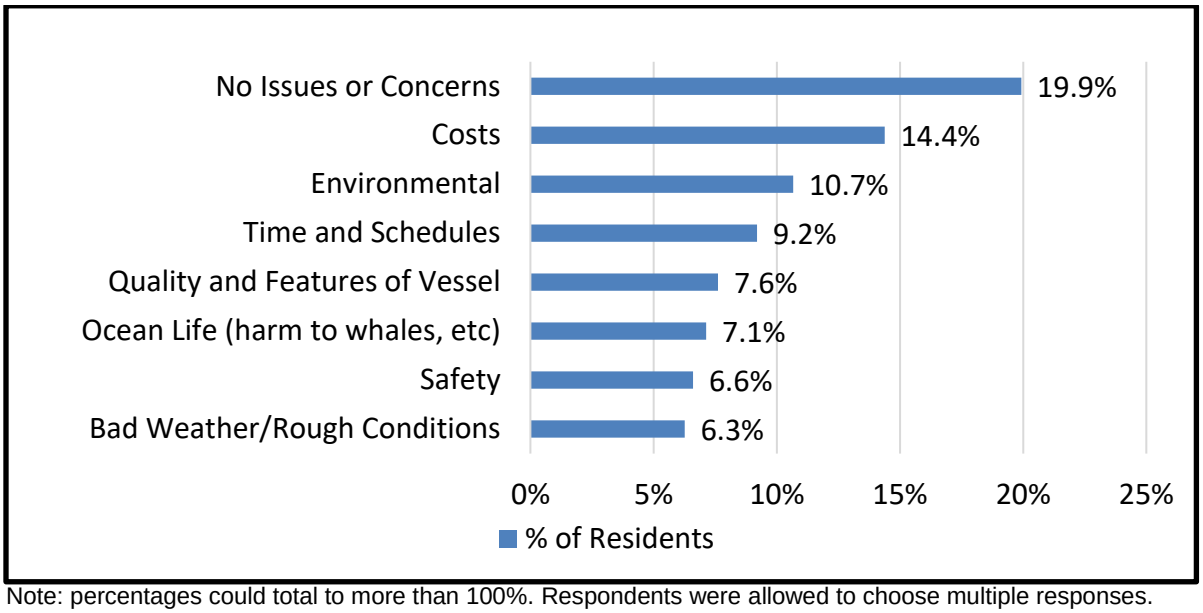
Proposed Route	Approximately 3 hours	3 to 5 hours	6 hours or overnight
Honolulu (O'ahu) and Mā'alaea (Maui)	66.7%	27.9%	5.4%
Honolulu (O'ahu) and Kahului (Maui)	69.9%	25.7%	4.4%
Honolulu (O'ahu) and Nāwiliwili (Kauai)	68.4%	26.8%	4.8%
Honolulu (O'ahu) and Kawaihae (Hawai'i Island)	38.1%	47.5%	14.5%
Honolulu (O'ahu) and Hilo (Hawai'i Island)	41.7%	42.9%	15.4%

Question: And, how long of a ferry crossing time is acceptable to you if the inter-island ferry goes between…

Concerns with a Future Inter-Island Ferry

What would be some of the concerns or issues you would have with a future inter-island ferry service?

Figure 7: Concerns or Issues with a Future Inter-Island Ferry Service (General Public)



Note: percentages could total to more than 100%. Respondents were allowed to choose multiple responses.
Question: What would be some of the concerns or issues you would have with a future inter-island ferry service?

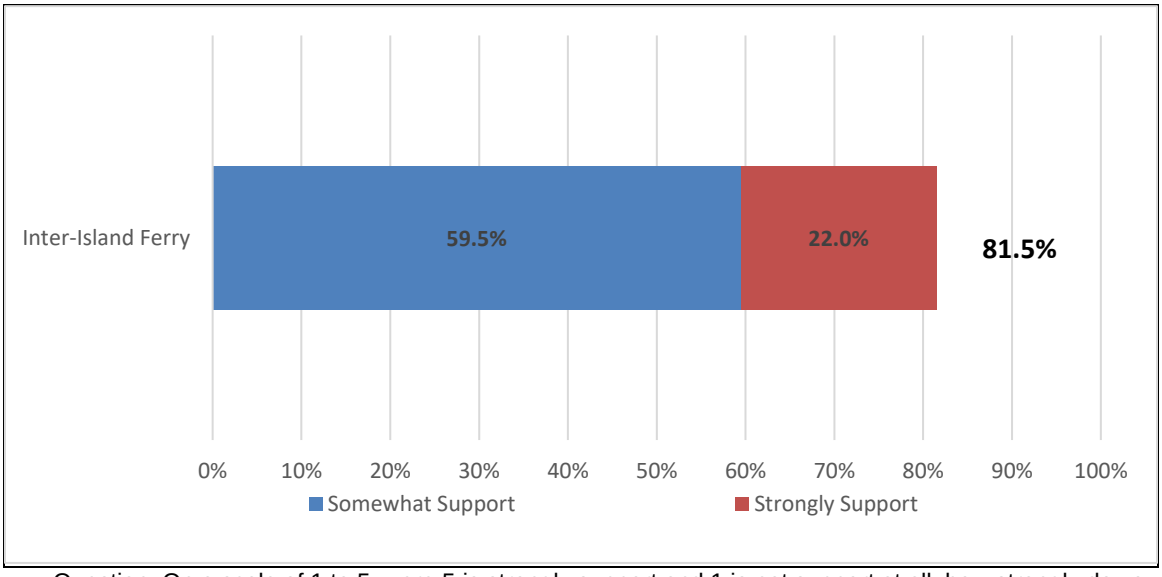
The concerns and issues of the General Public varied widely with nearly 20 percent stating that they had no important concerns. Many participants reported concerns with the costs of the ferry system, from the waste of taxpayers' money to the concern that ferry rates would increase too high.

Actual responses:

- The State still owes money on the last SuperFerry that failed.
- A concern would be that they raise the rates after the first year or constant breaking down of the ferry causing delays or cancelled.
- If the State can't make it affordable then no point in having a ferry service.

Support of an Inter-Island Ferry System

Figure 8: Support of an Inter-Island Ferry System (General Public)



Question: On a scale of 1 to 5, were 5 is strongly support and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i?

The General Public is clearly in favor of introducing an inter-island ferry service in Hawai'i; 81.5 percent of residents stated they *strongly support* (59.5%) or *somewhat support* (22.0%). Support for the ferry was similar across all of the counties except for the County of Kaua'i. On Kaua'i, almost a quarter of residents (23.9%) stated that they *would not support at all* the introduction of an inter-island ferry.

Table 5: Resident Support of Inter-Island Ferry by County

	County				Total
	Honolulu	Maui	Hawai'i	Kaua'i	
Strongly Support	60.5%	55.2%	64.5%	41.3%	59.5%
Somewhat Support	23.5%	21.4%	17.8%	12.6%	22.0%
Slightly Support	9.0%	9.2%	6.9%	17.2%	9.1%
Very Little Support	3.6%	6.2%	5.1%	4.9%	4.2%
Not Support at All	3.3%	8.0%	5.7%	23.9%	5.2%

Support: More choices and options

The General Public stated that they were supportive of the ferry because they see it as providing alternatives to the current inter-island flights and inter-island shipping.

Actual responses:

- *We need other means of inter-island travel transport of food*
- *We are an island, for God sake; use the ocean to our advantage. More ferries around the island the more alternatives.*
- *I think it would offer an alternative to flying.*
- *Right now, we're held hostage to the airlines*

Support: Lower transportation costs through competition with existing transport options
The supporters of the ferry system voiced their concern that Hawai'i was dominated by only a few transportation companies. The residents felt that alternatives increased competition which would bring prices down.

Actual responses:

- *Hawai'i could use some inter-island transportation competition.*
- *We need more competition for the Airline and Young Brothers. Hopefully they will lower the prices for our local population.*
- *Another option to travel. Gives Hawaiian Air who monopolize the market competition*
- *It will give folks an alternative to flying & healthy competition to the airline industry.*

Support: Provide transportation services not currently available
The General Public also expressed that they supported a ferry system because of the appeal that they could bring a car or ship more goods between islands.

Actual responses:

- *We need more options other than air to travel inter-island; the convenience of using own car; I would travel inter-island way more.*
- *Provides an alternative to flying and able to ship car*
- *I would like to take my car with me to other islands instead of using a rental.*

Support: More cost-effective option
The expectation that the ferry would provide a cheaper, more economical alternative to travel inter-island was the fourth most popular response for supporting the ferry.

Actual responses:

- *I support the ferry because it would cost less for my family of six to travel inter-island and for the majority of the middle and low-income families in Hawai'i, this statement is true. The ferry would also eliminate the need to rent a van or SUV. Overall it would save us and the people of Hawai'i a lot of money and give us another option to travel.*
- *I support the proposed come back of the ferry system so it's easier, hopefully cheaper and more convenient to go to other islands. In that way, we can bring more stuff with us and we don't need to rent a car or take a plane.*
- *If ferry service turns out to be cheaper than airfare, I would go to the neighbor islands more often.*

Support: Convenient and easier to use.
A reoccurring declaration by the General Public was the convenience of an inter-island ferry. Convenience and ease was typically associated with previous reasons such as bringing a car or shipping other goods. However, residence also felt that the ferry ride would be a better experience than the current air transportation.

Actual responses:

- *It's a nice ride. It's fast/easy. It's convenient. Better than the bus/rail*
- *Visited another state that had like ferry and it was pleasant way to go*
- *Convenient way of travel. No need rental cars. More people would travel*
- *Convenience, easier commute, less expensive & a "Travel Experience*
- *It's easy and convenient and its affordable. You get a good boat ride out of it.*
- *Easier to get on and off the island, and because you can use your own car, save money*
- *would be easier and a direct path. see the other islands without getting on an airplane.*

Opposition to an Inter-Island Ferry System

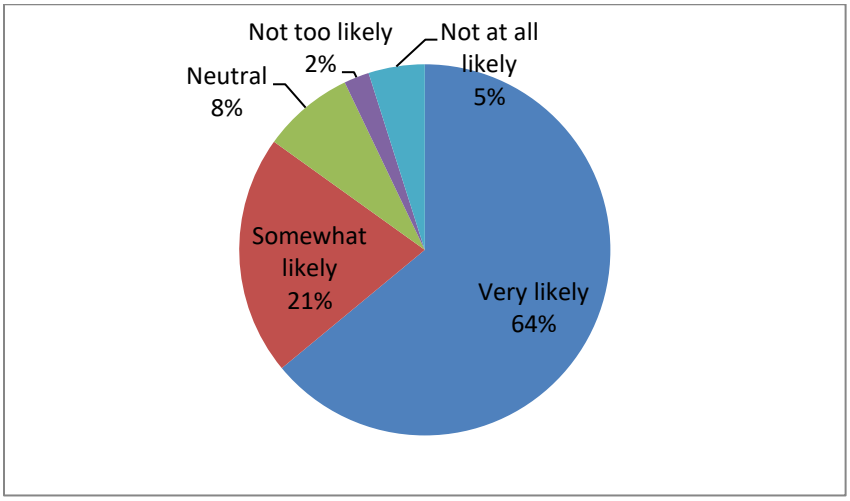
Oppose: Potential negative environmental impacts
Among the General Public who opposed an inter-island ferry system, the prevailing reason for little to no support of the introduction of an inter-island ferry was the possible negative impact to the environment (9.5% of all responses). These non-supporters spoke about the impact that a new ferry system would be on Hawai'i's ocean waters, and were also concerned about the impact that the passengers and their vehicles would have to the ecology and infrastructure of the arrival island. The passion and adamant opposition to the ferry appeared to be much stronger in the residents' responses than from those of the two other participant groups.

- *I just think the ocean should be protected more; having the water disrupted is not healthy for the environment. Our reefs are already dying around the world and we need to work hard at preserving what is left.*
- *I think it would damage the ecosystem on the island; too much traffic and I think it would destroy the island and nature can't take it.*
- *The risk of spreading unwanted insects, invasive species, diseases, would put non-affected areas at high risk. They cannot guarantee they will not spread pests and disease.*
- *Because of exploitation. I live in a very beautiful place and I just feel that with exploitation from other island visitors there will be less fishing resources.*
- *Too many opportunities for invasive animals, plants, etc. to be brought in.*
- *I don't believe a ferry system would be good for our little island due to introduction of invasive species, more traffic, and our fish would be depleted.*

Likelihood to Use Future Inter-Island Ferry Service

If the inter-island ferry addressed the General Public's concerns and met their price and convenience needs, the likelihood to use the ferry improved slightly over the original measure of support. 84.9 percent of the General Public were *very likely* or *somewhat likely* to use an inter-island ferry compared to 81.5 percent who said they would support the ferry. And only 7.1 percent of residents stated that *not too likely* or *not at all likely* to use the ferry service compared to 9.4 percent in the earlier question. Of those who earlier stated that they had little support for the ferry service, one-third were statements regarding environmental issues and concern for marine life safety. It appears that these residents were likely to use the ferry if they were assured that their concerns were addressed in the future ferry system.

Figure 9: Likelihood to Use Future Ferry Service (General Public)



Q18: Assuming that the inter-island ferry met your price and convenience needs, now how likely would you be to use the ferry service in the future? On a 5-point scale where 5 is very likely and 1 not at all likely.

Pricing and Revenue

How much are residents willing to pay to use an inter-island ferry?

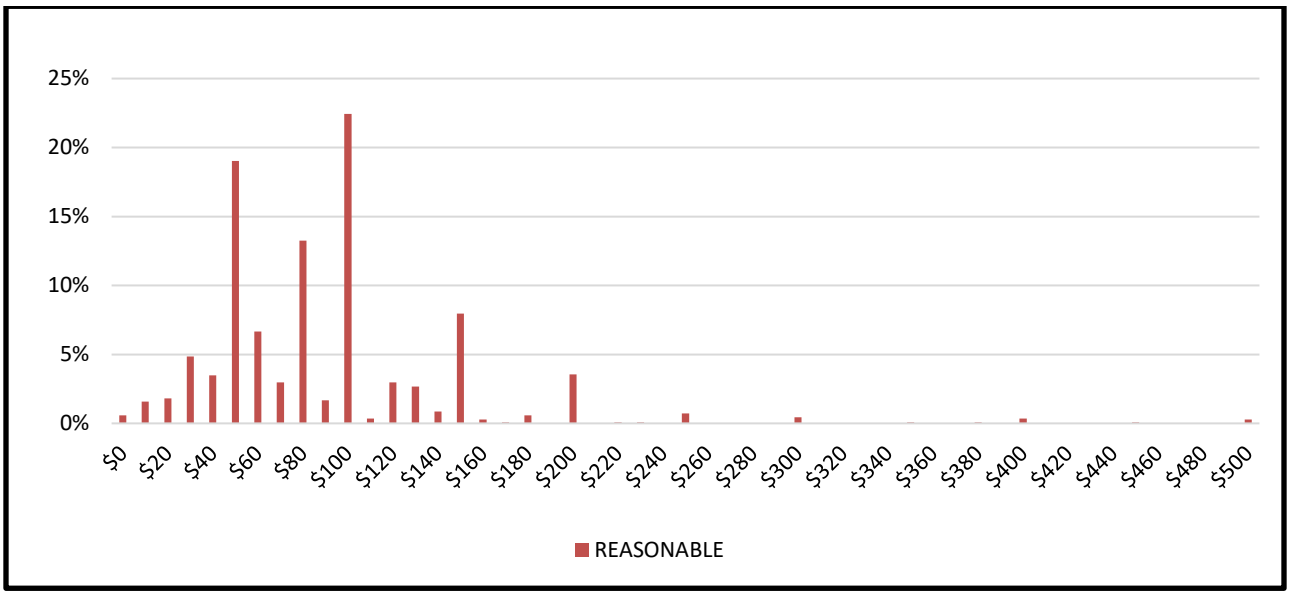
Optimal Pricing Structure

Determining the optimal pricing of the ticket was a crucial component of the ferry system market analysis. Optimal pricing is the price at which the maximum amount of revenue would be collected. Therefore, both price and the number of passengers willing to pay for service at that price were considered.

The pricing model uses survey methodology to evaluate different price points for different entities. The entities could be new or existing products, new or existing services, or any other concept. For each entity measured, the pricing model takes consumer information from three pricing-related questions, and then projects market penetration and revenue for that entity at each price point within a range.

The respondents were asked three questions to identify the best price. First, each was asked what he/she considered a reasonable price for a round trip on the ferry for one adult including all baggage. The Figure 10, illustrates the variability of the responses with some residents saying they would pay upwards of $300. The responses varied greatly but the average of reasonable prices was $92. Second, each resident was asked to declare a price that would be considered expensive but acceptable. The average of the responses was $136. Third, an upper limit was established by asking each resident the following: *what price per adult would you consider so expensive that you would not travel on the ferry?* Respondents declared, on average, they would not pay for any tickets priced at $187 or higher. See the Appendix D for the detailed explanation of the pricing model and how these three prices were used by the model to determine the optimal price point.

Figure 10: Distribution of Inter-Island Ferry Prices



Question: if an inter-island ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult including all baggage?

Table 6: Average Price Willing to Pay for an Inter-Island Ferry (Round Trip)

Round Trip for One Adult including Baggage	Mean	First Quartile	Median	Third Quartile
Reasonable Price	$92	$50	$80	$100
Expensive Price	$136	$80	$110	$160
Too Expensive	$187	$100	$150	$200
Additional Personal Vehicle	$87	$25	$50	$100

Based on the pricing model, the optimal price for a round trip adult fare was $140. At that price point 61.9 percent of all interested riders would be willing to pay for that ticket price.

As for the additional cost to travel on the ferry with a personal vehicle, the optimal price would be $90. At that price 37.1 percent of interested riders would be willing to pay for the car.

Determination of Expected Demand and Maximum Revenue

The second part of the pricing analysis was to determine the maximum annual revenue that each route would produce. These figures could then be used by HDOT to determine if the revenue stream would be sufficient to fund the total costs of establishing and sustaining a ferry system.

For the estimation of revenue, the first step was to determine the number of adult residents that would actually ride the ferry at any given time. The model started with the respondent's intention to use the ferry service in the future (Figure 9). Next the model included a predefined functional relationship to convert the stated intentions into estimates of actual purchase probabilities. This is called, Intent scale translation, and is a mathematical technique used by marketers to convert stated purchase intentions into purchase probabilities, that is, into an estimate of actual buying behavior. It takes survey data on consumers purchase intentions and converts it into actual purchase probabilities.

The model assigns values to each of these intention categories (likelihood to use the ferry) that indicate the probability that the respondent would actually ride the ferry. This is an Intent Scale Translation - to take the survey data of stated purchase intentions and convert it into purchase probabilities, an estimate of actual buying behavior.

Very likely ➔ **50%**
Somewhat likely ➔ **25%**
Neutral ➔ 0%
Not too likely ➔ 0%
Not at all likely ➔ 0%

With this simplified example, we expect that 37.2 percent [64%*50% + 20.9%*25% = 37.2%] of the respondents would actually use the inter-island ferry system.

For this analysis, we created three revenue scenarios: Conservative, Realistic, and Optimistic. The scenarios were based on varying the probabilities of the Intent Scale Translation. The Realistic Scenario is the illustrated above, and assumes that the purchase probability is 50% for *very likely* and 25% for *somewhat likely*. The Optimistic Scenario assumed that ridership is 25 percent more than the Realistic Scenario, and the Conservative Scenario assumed ridership was 25 percent lower.

The Realistic Scenario was also set to mirror similar levels of ridership as the Hawai'i SuperFerry when it was in full operation in 2008 and traveled the Honolulu (O'ahu) – Kahului (Maui) route.

A detailed explanation of how each demand and pricing was calculated for each route appears in Appendix D: Pricing Model and Intent Scale Translation.

Based on the optimal revenue model, 137,771 passenger trips (roundtrip) would be taken by residents of O‘ahu and Maui on the Honolulu (O‘ahu) – Kahului (Maui) ferry route.

Table 7: Total Passenger Trip for Passenger-Only Ferry, by Inter-Island Routes

Total Passenger Trips (RT) Per Year - Passenger-Only Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	68,886	137,771	203,003
Honolulu - Mā‘alaea	60,758	121,516	179,260
Honolulu - Nāwiliwili	56,666	113,332	167,283
Honolulu - Kawaihae	56,098	112,196	165,617
Honolulu - Hilo	60,232	120,465	177,333

At $140 per ticket, that route would generate gross revenue between $9.6 million in a Conservative Scenario and $28.4 million in an Optimistic Scenario, with a realistic revenue level of around $19.3 million annually. Table 8lists the expected revenue for each proposed inter-island routes.

Table 8: Total Expected Revenue from Passenger-Only Ferry by Inter-Island Routes

Total Revenue Passenger-Only Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	$9,643,982	$19,287,964	$28,420,459
Honolulu - Mā‘alaea	$8,506,087	$17,012,173	$25,096,454
Honolulu - Nāwiliwili	$7,933,259	$15,866,518	$23,419,588
Honolulu - Kawaihae	$7,853,725	$15,707,450	$23,186,357
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617

When the demand and revenue were calculated for a passenger and car ferry, the incremental changes varied by the routes. For the Honolulu (Oʻahu) – Kahului (Maui) route, the expected ridership actually increased by about 3,000 more in the Realistic Scenario (Table 9). However, the Honolulu (Oʻahu) – Nāwiliwili (Kauaʻi) route the ridership fell by almost 50,000. The result was reflective of the lower interest by Kauaʻi residents to take a passenger and car ferry. The expected revenue transformed accordingly (Table 10).

Table 9: Total Passengers Trips for Passenger and Car Ferry by Inter-Island Routes

Total Passenger Trips (RT) Per Year - Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	70,456	140,912	208,435
Honolulu - Māʻalaea	57,234	114,467	168,610
Honolulu - Nāwiliwili	32,479	64,958	95,779
Honolulu - Kawaihae	59,389	118,777	175,648
Honolulu - Hilo	63,658	127,316	187,926

Table 10: Total Expected Revenue for Passenger and Car Ferry by Inter-Island Routes

Total Revenue Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	$10,595,251	$21,190,502	$31,344,747
Honolulu - Māʻalaea	$8,606,857	$17,213,713	$25,355,814
Honolulu - Nāwiliwili	$4,884,212	$9,768,425	$14,403,366
Honolulu - Kawaihae	$8,930,960	$17,861,920	$26,414,169
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617

Opinions and Sentiment About an Intra-Island Ferry on O‘ahu

A commuter ferry between Honolulu and Kalaeloa/West O‘ahu

The market study of a passenger-only ferry service between Honolulu Harbor and Kalaeloa Barbers Point Harbor considered only the opinions and attitudes of the study participants at this point in time. It is apparent that the respondents may have factored in the under-construction Honolulu Authority for Rapid Transit (HART) rail system from Kapolei to Ala Moana as they formulated their answers. However, the analysis did not integrate data on rail fares, frequency, or services since these are not currently known.

Figure 11: O‘ahu Intra-Island Ferry Route

Personal Interviews

Sentiment About an Intra-Island Ferry on O‘ahu

In your own words, can you tell me whether you support or oppose introduction of daily passenger-only ferry service on O‘ahu between Honolulu Harbor and Kalaeloa Why do you say that?

The Personal Interviews Group showed little support for a commuter ferry system between West O‘ahu and Honolulu. Many of the detractors felt that the commuter ferry would be a competitor to the upcoming rail system. Some would support the commuter ferry if it could provide a comfortable alternative to driving. However, interviewees also pointed out that previous demonstration projects highlighted the critical need for the infrastructure for parking and coordinating bus services to complement the commuter ferry.

Support for an Intra-Island Ferry System on O‘ahu

Those who support the commuter ferry do so because they imagine it to be a relief to the current congested traffic conditions.

Conditional Support for an Intra-Island Ferry System on O‘ahu

Those in the Personal Interviews group were cautious about supporting the commuter ferry unless there were specific conditions met. Some conditions are listed below:

- *Makes sense, but ride swells will make ride not comfortable.*
- *Would support if park and ride facility is built.*
- *Supportive, but would take lots of supplemental ground transport and ride is long, especially around Kalaeloa Pt.*
- *Parking infrastructure needs to be solved. And must match start times for downtown [jobs/businesses].*
- *If there was a possibility for the commuter ferry, the [vessel] must have amenities that would entice riders away from the bus or actual driving.*
- *A successful route must show that the benefits of sitting down at a table to relax or even the ability to walk around the ship during the sail.*

Opposition to an Intra-Island Ferry System on O‘ahu

The responses from those who opposed this kind of ferry system varied and specific reasons for the low support levels include the little to no impact in the alleviation of traffic congestion, the lack of infrastructure for connecting transportation to and from the harbors, and the competition with the rail system currently under construction. Another theme that emerged from the detractors was the experience with a previous unsuccessful ferry.

Oppose: Past experience with a ferry system was not good
The Personal Interviews were adamant that the past trial tests were not positive, and that diminished support for a prospective ferry system.

Actual responses:

- *No. Why try to do it again when it failed twice already and now there is the rail system going in.*
- *Not supportive: TheBoat failed and with rail coming up, this won’t work. Service from Pearl Harbor to downtown might be good.*

Oppose: Hawai‘i’s conditions are not conducive for a ferry system

- *Not in support commuter ferry. Will not take enough people off to reduce traffic.* Need too much work for parking and buses.
- *Not support intra island ferry on O‘ahu. Do not build a competitor to rail.*

Prospective Ferry Stakeholders

A slight majority (60.0%) of the Prospective Ferry Stakeholders stated that they supported a daily commuter ferry service on O'ahu between Honolulu Harbor and Kalaeloa Barbers Point Harbor. However, almost a third of the stakeholders indicated *very little* or *not support at all* (30.9%). Interestingly, 28.6 percent of the State government officials in this participant group showed some apprehension to an O'ahu commuter ferry by indicating *very little support*.

Figure 12: Support of an O'ahu Intra-Island Ferry by Perspective Ferry Stakeholders

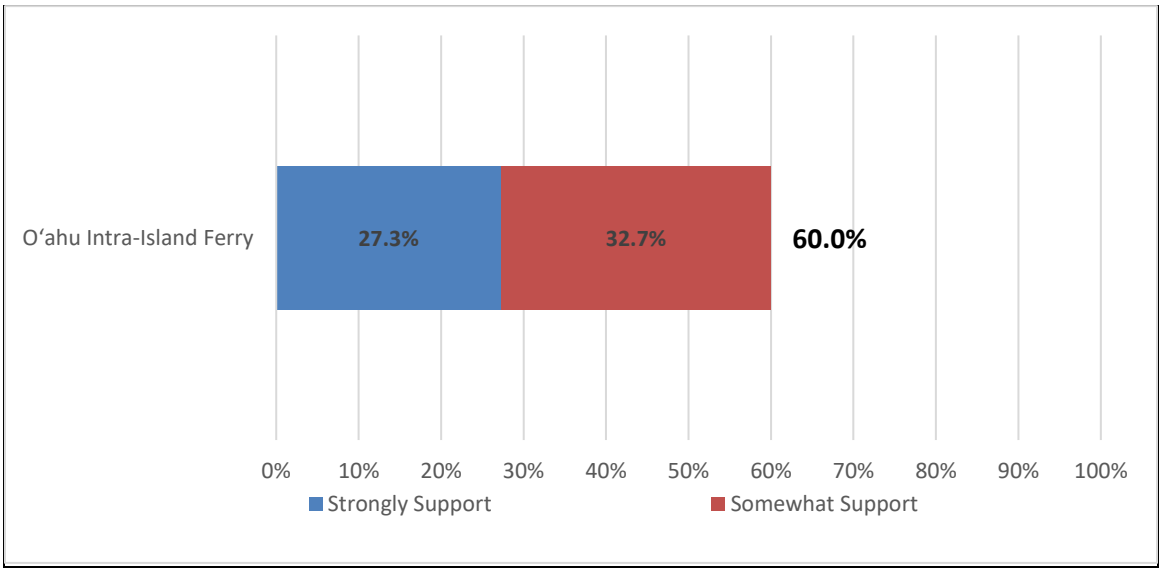


Figure 13: Support of an O'ahu Intra-Island Ferry by Organization

Support of Inter-Island Ferry	Enviro - mental	Gov't - County	Gov't - State	Maritime Industry	Ocean Rec Users	Private Sector Business	Other	Total
Strongly Support	33.3%	33.3%	33.3%	0.0%	14.3%	33.3%	0.0%	27.3%
Somewhat Support	66.7%	33.3%	23.8%	20.0%	28.6%	66.7%	0.0%	32.7%
Slightly Support	0.0%	0.0%	14.3%	0.0%	28.6%	0.0%	0.0%	9.1%
Very Little Support	0.0%	16.7%	28.6%	60.0%	14.3%	0.0%	100.0%	23.6%
Not Support At All	0.0%	16.7%	0.0%	20.0%	14.3%	0.0%	0.0%	7.3%

Support for an Intra-Island System

Support: Alternative to driving
Among the Prospective Ferry Stakeholders, those who strongly supported the West O'ahu commuter ferry service stated that they did so because they wanted an alternative to driving into work.

Actual responses:

- *Ferry transportation between two major points on O'ahu will significantly relieve H-1, H-2 and H-3 traffic congestion and will not interfere with surrounding quality of life.*
- *A commuter ferry would provide an alternative means of transportation for commuters between West O'ahu and Honolulu, especially for those in Kapolei and the 'Ewa Plain which is the fastest growing residential area on O'ahu.*

Opposition to an Intra-Island Ferry System

Oppose: Past experience with a ferry system was not good

Actual responses:

- *Was not successful in trial twice previously when federal subsidies were used up. Check the economics.*
- *It seems like a great idea, especially if it connects to TheBus or rail, and if passengers are allowed to bring bicycles on board. However, it was not used extensively in the past*
- *They have tried it before and had problems with ridership; I believe the same would be true now.*

Oppose: Ridership is expected to be low

Actual responses:

- *I don't believe there would be enough interest in a ferry ride for that short a distance. The time required to switch modes of transportation would be too significant for the time saved, if any.*
- *Kalaeloa Boulevard getting onto Farrington is such a mess that no one would want to take a ferry from Honolulu to Kalaeloa and then subsequently spend forever in traffic.*

Oppose: Conflicts with rail system
Critics also felt that the commuter ferry was a detractor from the rail project that is currently under construction. They felt that the state and city have already invested in the rail and that another transit program was not needed.

- *Spending nearly $10 billion on rail and this commuter ferry would take ridership from it.*
- *This would provide some reduction of traffic from West O'ahu to the city, but it will not be a viable long-term solution and will compete with the success of the proposed transit program*

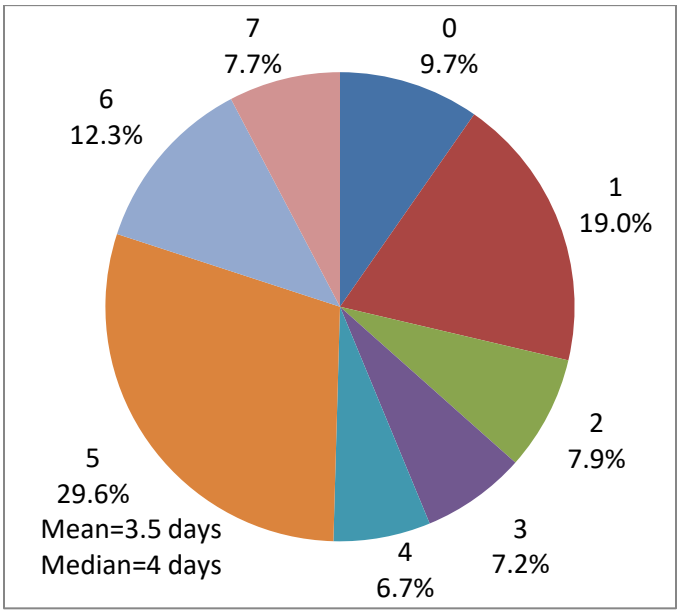
General Public

The survey designed for the General Public investigated the interest in a commuter passenger-only ferry system that would run daily on between Kalaeloa Barbers Point Harbor and Honolulu Harbor. Only West O'ahu residents within a reasonable transit distance of the Kalaeloa Barbers Point Harbor were included in this analysis. More specifically, only the communities of Ewa Beach, Kapolei, Kunia, Wai'anae, and Waipahu (as defined by zip code) were asked questions about the commuter ferry on O'ahu.

Current Transportation Situation for West O'ahu Residents

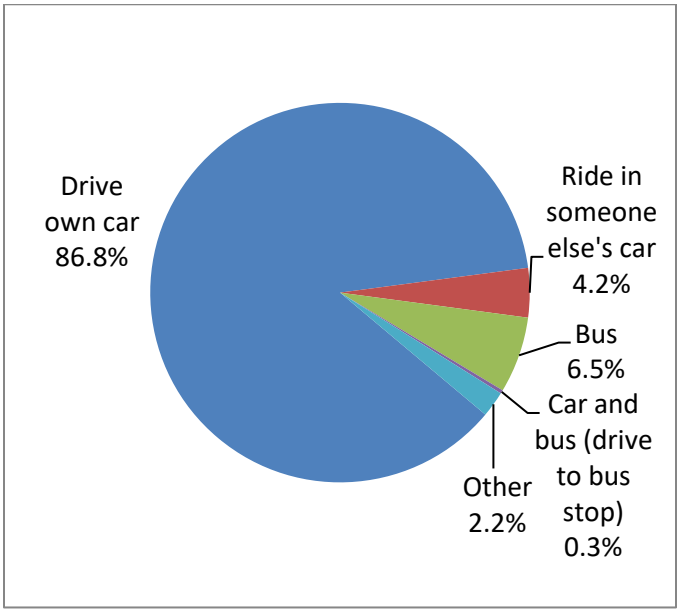
Almost half (46.7%) of all West O'ahu residents are spending at least five days a week commuting to Honolulu and back. The great majority (86.8%) of those who are commuting drive their own cars. Very few use the current public bus system (6.5%).

Figure 14: Number of Days Traveling between West O'ahu and Honolulu



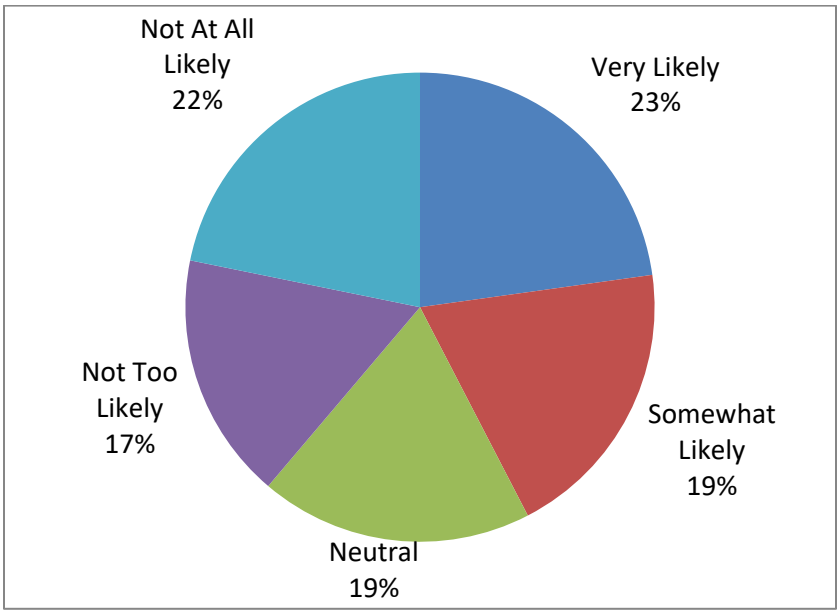
Question: In general, how many days per week do you travel between West O'ahu and Honolulu?

Figure 15: Type of Transportation



Question: And how do you typically get between West O'ahu and Honolulu?

Figure 16: Likelihood to Use Kalaeloa to Honolulu Harbor Ferry



Question: On a 5-point scale where 5 is very likely and 1-not at all likely, if a daily passenger-only ferry service was introduced on O'ahu for travel between Kalaeloa and Honolulu Harbor, how likely would you be to use the service regularly?

Demand for the Intra-Island Ferry

Based on the General Public survey results, there was some demand for a daily passenger-only ferry service for travel between Kalaeloa Barbers Point Harbor and Honolulu Harbor. The survey indicated that four out of ten residents (42.4%) were either *very likely* or *somewhat likely* to use the service regularly, the main justifications being traffic congestion and trouble and expense of parking in town.

Actual responses:

- *Be easier than driving and if the cost was right it would offset the cost of wear and tear on my car.*
- *Traffic is the number one factor that stops me from going to town more often.*
- *I live in Waipahu, so I could drive to Kalaeloa to use the ferry if traffic is very bad that day.*
- *I don't go downtown too much but if there were a ferry I might go more because parking is hard to find.*

However, there were many residents who were not interested in the ferry with 38.8 percent *not too likely* or *not at all likely* to use the ferry service regularly. Some of the issues that prevented residents from supporting the commuter ferry are below.

Actual responses:

- *I [drive] a work vehicle and I need my equipment.*
- *My destination in Honolulu varies, and it is convenient to have my car available if my plans change. The bus is too slow and inconvenient.*
- *Drive from Central O'ahu to Kalaeloa is just as bad as to Honolulu.*
- *There's no parking at the [harbor] locations. I won't take a bus to the ferry. Give me a parking lot, preferably with a security guard.*

Intra-Island Ferry on O‘ahu - Pricing and Revenue

Ridership and optimal pricing for the O‘ahu commuter ferry scenario was calculated similarly to the pricing for the inter-island routes.

Optimal Pricing Structure

First, only those West O‘ahu residents who traveled at least five days per week were considered to be potential commuter ferry users. Similar to the inter-island routes, three scenarios using different Intent Scale Translations to convert Question 27 (*How likely would you be to use the service regularly*?) from “likelihood” to “expected intention to use the commuter ferry service,” were created. Given these assumptions a realistic value of 19,020 unique ferry users was calculated.

The optimal pricing model was based on Questions 29 – 30 *"If the Kalaeloa passenger-only ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult"* The optimal price was determined to be $19 and 72.9 percent of potential riders would pay that amount.

Table 11: Average Price Willing to Pay for an Oʻahu Intra-Island Commuter Ferry (Round Trip)

Round Trip for One Adult including Baggage	Mean	First Quartile	Median	Third Quartile
Reasonable Price	$41	$8	$15	$40
Expensive Price	$60	$11	$21	$60
Too Expensive	$77	$15	$31	$100

Determination of Expected Demand and Maximum Revenue

Therefore, anticipated demand for the Kalaeloa ferry would result in 1.33 million passenger trips per year for the Realistic Scenario and potential total revenue generated of $25.4 million.

Table 12: Passengers Trips and Revenue for Oʻahu Intra-Island Commuter Ferry

Honolulu - Kalaeloa Passenger-Only Ferry	**Conservative**	**Realistic**	**Optimistic**
Passenger Trips	667,282	1,334,565	1,815,178
Revenue	$12,678,367	$25,356,734	$34,488,374

Opinions and Sentiment About an Intra-County Ferry System Between Maui and Molokaʻi

Personal Interviews

Most of the Personal Interviews voiced a level of understanding of the need for a Lahaina (Maui) – Kaunakakai (Molokaʻi) passenger-only ferry service. The most common reason shared was to provide economic relief to the Molokaʻi residents. Stakeholders felt that many Molokaʻi families could not afford market price travel by air if they had to make frequent trips.

Support of this ferry route came with many qualifying statements. Even though the addition of consistent service with larger capacity planes has brought some relief, the interviewees were concerned that large families and team sports would still need some subsidized rate to make the air travel affordable. Surprisingly, the Personal Interviews focused more on supporting the needs of the school trips or for residents to do weekend trips to Maui for shopping. There was not much discussion on workforce support or daily commuting.

Actual responses:

- *Route is very important to residents. But Molokai doesn't have the visitor infrastructure to have the tourist passengers to subsidize the local [ferry route] traffic.*
- *Molokaʻi residents need to go off island to get necessary goods.*
- *It was needed but couldn't develop the ridership. Will only support if government subsidies are available.*

Prospective Ferry Stakeholders

Among Prospective Ferry Stakeholders, support for the Maui-Molokaʻi ferry was also positive. The survey showed that 70.9 percent of the stakeholders support a commuter service on this route. In addition, very few stated that they were not supportive of the ferry (10.9% stated *very little* or *not support*). County and State government officials were supportive of this ferry, while most of the negative comments came from the private sector businesses and the maritime related organizations.

Figure 17: Support for a Lahaina (Maui) – Kaunakakai (Moloka'i) Ferry by Potential Ferry Stakeholders

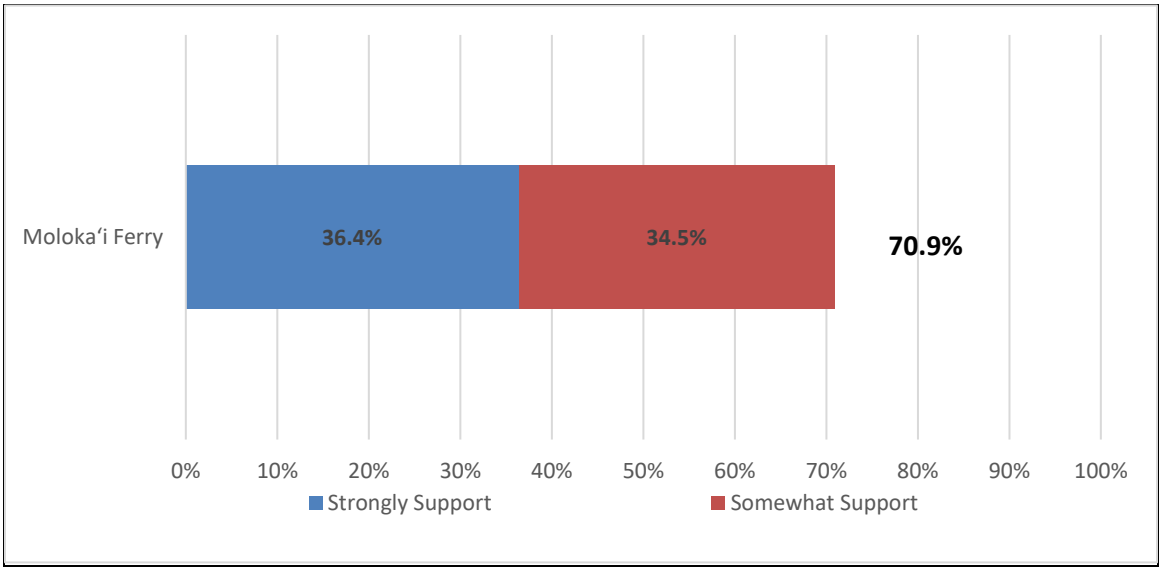


Figure 18: Support for a Lahaina (Maui) – Kaunakakai (Moloka'i) Ferry by Organization

Support of Inter-Island Ferry	Enviro - mental	Gov't - County	Gov't - State	Maritime Industry	Ocean Rec Users	Private Sector Business	Other	Total
Strongly Support	33.3%	58.3%	33.3%	40.0%	16.7%	28.6%	0.0%	36.4%
Somewhat Support	33.3%	16.7%	47.6%	0.0%	50.0%	28.6%	100.0%	34.5%
Slightly Support	33.3%	16.7%	9.5%	20.0%	33.3%	28.6%	0.0%	18.2%
Very Little Support	0.0%	8.3%	9.5%	20.0%	0.0%	0.0%	0.0%	7.3%
Not Support At All	0.0%	0.0%	0.0%	20.0%	0.0%	14.3%	0.0%	3.6%

Support for an Intra-County Ferry System Between Maui and Moloka'i

Support: More choices and options

Again, those who had the strongest support for the ferry, felt that it provided an alternative mode of transportation.

Actual responses:

- *I believe working families from Moloka'i need to have a sustainable and an affordable mode of transportation to get to work.*
- *The short distance allows for a modestly subsidized service to support the critical employment (jobs in Lahaina) and commuter needs of the isolated community on Moloka'i.*
- *Air is the only other option which is very expensive, very limited in the number of available seats and not suitable for business transport of bulky or heavy goods.*

Opposition to an Intra-County Ferry System Between Maui and Moloka‘i

Some respondents who indicated *very little support* or *not support at all* were concerned with the economic issues and the sustainability of such a service citing that the route could not support a regular commercial service and the subsidizing the service would not be a good use of public resources.

General Public

Sea Link of Hawai‘i operated a regular Maui to Moloka‘i ferry service for over three decades but ended service on October 28, 2016 due to sustained losses. The past experience with a Maui-Moloka‘i ferry service referenced this specific ferry.

Past Experience with the Maui – Moloka‘i Ferry

According to respondents of the General Public survey, fewer than one-third (27.7%) of County of Maui residents had actually used the ferry service in the past. Many had used it only one or two times in a given year (64.2% of past ferry users; median=2 times in a typical 12 month period). There was a small portion of the riders who used the ferry for regular commutes 100 times or more per year (2.1%).

Figure 19: Number of Times Used Moloka‘i Ferry in 12-Month Period

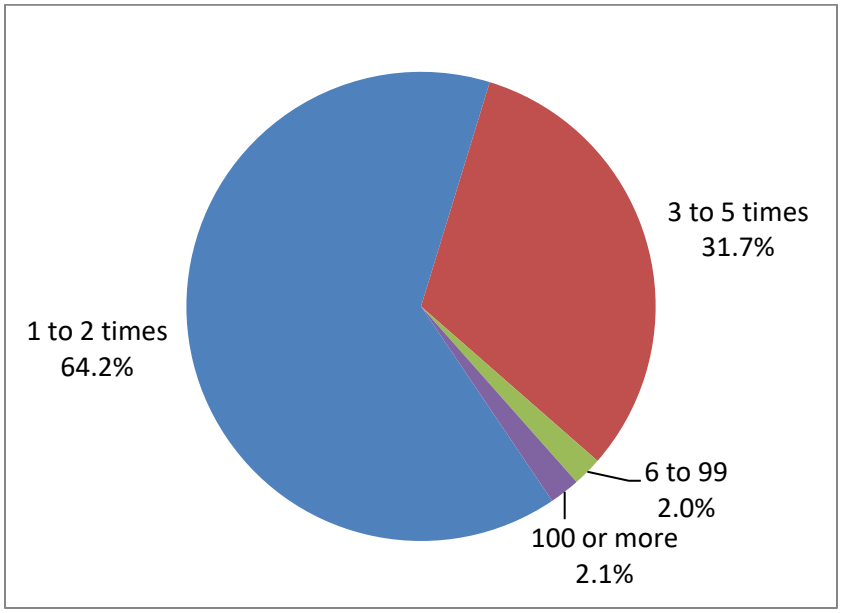
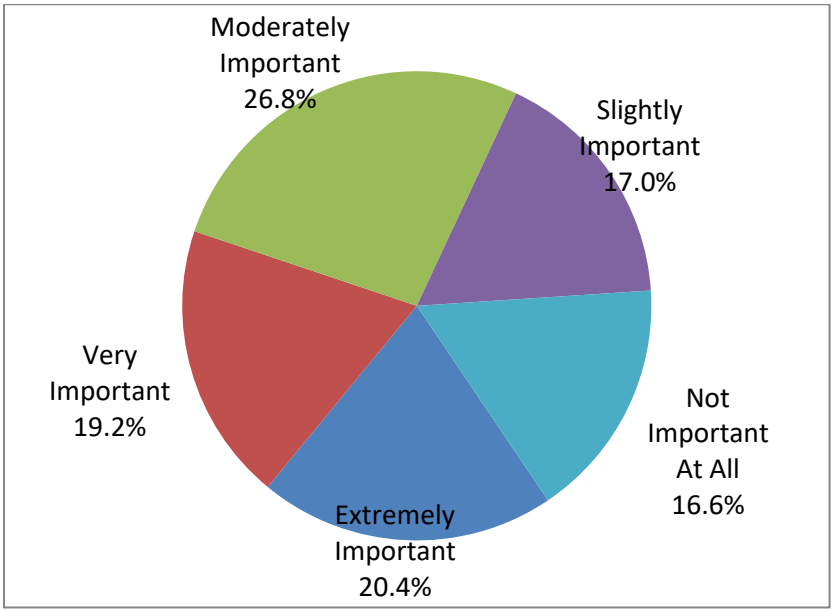


Figure 20: Importance of the Molokaʻi Ferry



Of those who had ridden the ferry in the past, there was a fairly even spread across those who consider the ferry *extremely important* (20.4%) to their own livelihood to those who thought the ferry was *not important at all* (16.6%). These results indicated that commitment to the past ferry system was not strong and future likelihood to use a re-established ferry system should be considered cautiously.

Table 13: Likelihood of Using Maui Intra-County Ferry Service

Routes	Not at all likely				Very Likely
	1	2	3	4	5
Lahaina (Maui) and Kaunakakai (Molokai)	17.4%	6.7%	20.5%	16.6%	38.9%
Lahaina (Maui) and Mānele (Lānaʻi)	21.3%	13.6%	20.5%	13.7%	30.9%

Demand for the Intra-County Ferry System

Residents of the County of Maui were given an opportunity to comment on various scenarios of passenger-only ferry system. Only half of County of Maui residents were likely to use a future commuter ferry to Molokaʻi (55.5%) or Lānaʻi (44.6%). This was understandable given the limited need and interest of most County of Maui residents to travel to Molokaʻi (17.4% not at all likely) and Lānaʻi (21.3% not at all likely). Since this service would be a daily passenger-only ferry, 62.5 percent of residents felt that the ride to Molokaʻi should not take longer than one hour, and 74.0 percent felt that the transit to Lānaʻi should also not take longer than one hour.

Table 14: Acceptable Ferry Crossing Time for Maui Intra-County Ferry

Intra-County Routes	Approximately 1 hour or less	More than 1 hour
Lahaina (Maui) and Kaunakakai (Molokaʻi)	62.5%	37.5%
Lahaina (Maui) and Mānele (Lānaʻi)	74.0%	26.0%

When specifically questioning Molokaʻi residents, 80 percent stated that they had used the Molokaʻi Ferry in the past. However, the interest in a Lahaina (Maui) – Kaunakakai (Molokaʻi) service was not strong: only 50 percent said they would actually be likely to use the ferry service again in the future. In fact, 31.4 percent were not at all likely to use the system.

Table 15: Likelihood of Using Lahaina (Maui) – Kaunakakai (Molokaʻi) Ferry by Island of Residence

Lahaina (Maui) and Kaunakakai (Molokai)	Not at all likely				Very Likely
	1	2	3	4	5
Maui Island residents	16.1%	6.3%	20.8%	16.7%	40.1%
Molokaʻi residents	31.4%	5.7%	12.8%	12.8%	37.2%

Maui – Molokaʻi Passenger-Only Ferry Pricing and Revenue

Optimal Pricing Structure

The Maui-Molokaʻi Passenger-only ferry pricing was calculated in the same way as the inter-island ferry routes. The likelihood to use the ferry was measured by Question 37 (Table 13). The optimal price for the round-trip ticket would be $90; at which 84.8 percent of those residents who said they were likely to ride the very would pay that price.

Table 16: Average Price Willing to Pay for an Maui Intra-County Ferry (Round Trip)

Round Trip for One Adult including Baggage	Mean	First Quartile	Median	Third Quartile
Reasonable Price	$64	$25	$50	$75
Expensive Price	$96	$50	$75	$100
Too Expensive	$164	$60	$100	$150

Determination of Expected Demand and Maximum Revenue

According to the optimal pricing model the Lahaina (Maui) and Kaunakakai (Molokaʻi) route would realistically generate 36,825 passenger trips per year which would generate $3.3 million in revenue.

Table 17: Passenger Trips and Revenue for a Lahaina - Kaunakakai Ferry

Maui-Molokaʻi Passenger-Only Ferry	Conservative	Realistic	Optimistic
Rides	18,413	36,825	52,000
Revenue	$1,657,139	$3,314,278	$4,680,013

Opinions and Sentiments About an Intra-Island Ferry on Maui

A commuter ferry between Lahaina and Mā‘alaea or Kahului

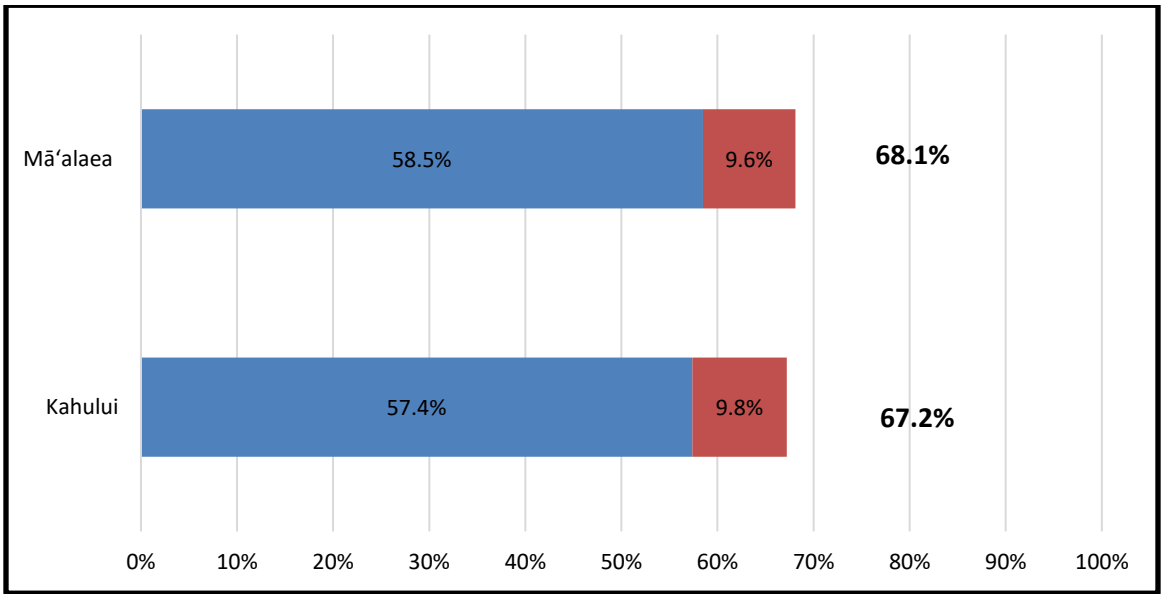
An intra-island ferry system on Maui connecting Lahaina Harbor and either Mā‘alaea Harbor or Kahului Harbor was suggested as a means address traffic issues on Honoapiilani Highway in West Maui. The Personal Interviews and the Potential Ferry Stakeholders were not queried regarding this possible use for this ferry system.

Figure 21: Possible Ferry Ports in Maui County

General Public

When Maui residents were asked how likely they would be to use a daily passenger-only ferry service regularly between Lahaina and various nearby ports; the survey found that there actually was substantial likelihood to use the ferry between Lahaina and Kahului (67.2%). Even with the short distance apart, Maui residents also showed interest in a Lahaina and Mā‘alaea route (68.1%).

Figure 22: Likelihood of Using a Daily Passenger-only Ferry between Lahaina and …



Question: On a 5 point scale where 5 is very likely and 1 not at all likely, if a daily passenger-only ferry service was introduced on Maui for travel to and from Lahaina, how likely would you be to use the service regularly between Lahaina and either Mā‘alaea or Kahului?

For those Maui residents who said they would be likely to use the service regularly, they were also asked their expectations on how long should the ride be. Overall a large majority of the residents wanted the ride to take one hour or less. For the Kahului route, just over a quarter of the respondents were willing to spending more than one hour.

Figure 23: Preferred Ferry Crossing Time for an Intra-Island Maui Ferry

	Approximately 1 hour or less	More than 1 hour
Lahaina (Maui) and Kahului (Maui)	73.5%	26.5%
Lahaina (Maui) and Mā‘alaea (Maui)	84.5%	15.5%

Question: And, how long of a ferry crossing time is acceptable to you if a daily passenger-only ferry goes between… [only those who responded likely to use the service regularly]

Determination of Expected Demand and Maximum Revenue

According to the optimal pricing model the Lahaina and Kahului route would realistically result in 133,029 passenger trips per year and would generate $2.5 million in revenue. While the Lahaina and Mā‘alaea route would realistically result in 135,165 passenger trips per year and $2.6 million in revenue. Since questions regarding prices and frequency were not specifically asked about the Maui Intra-Island Ferry, the model assumed that the optimal price and frequency would be the same as the O‘ahu Intra-Island Ferry.

Figure 24: Passenger Trips and Revenue for Lahaina - Kahului Ferry Route

Intra-Island Maui Lahaina - Kahului	Conservative	Realistic	Optimistic
Rides	66,515	133,029	194,313
Revenue	$1,263,780	$2,527,560	$3,691,942

Figure 25: Passenger Trips and Revenue for Lahaina – Mā‘alaea Ferry Route

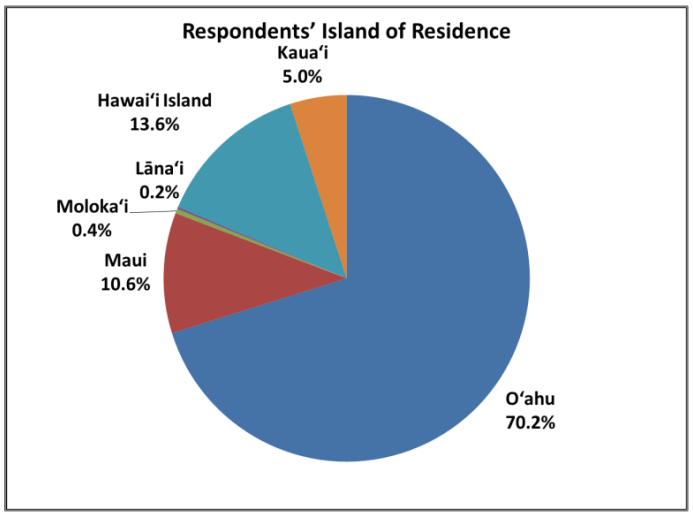
Intra-Island Maui Lahaina – Mā‘alaea	Conservative	Realistic	Optimistic
Rides	67,582	135,165	197,622
Revenue	$1,284,066	$2,568,131	$3,754,827

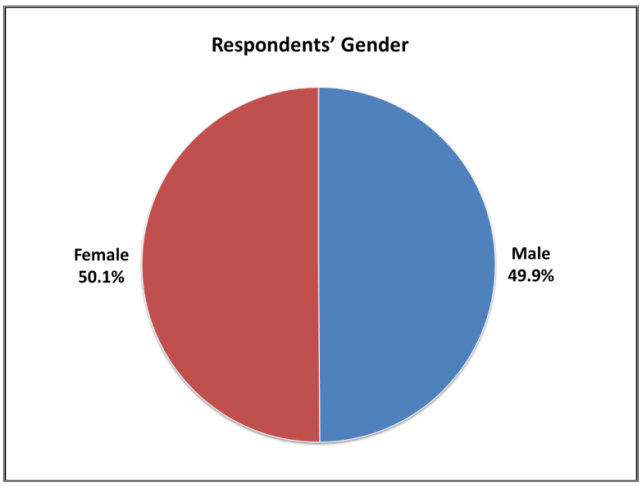
Appendices

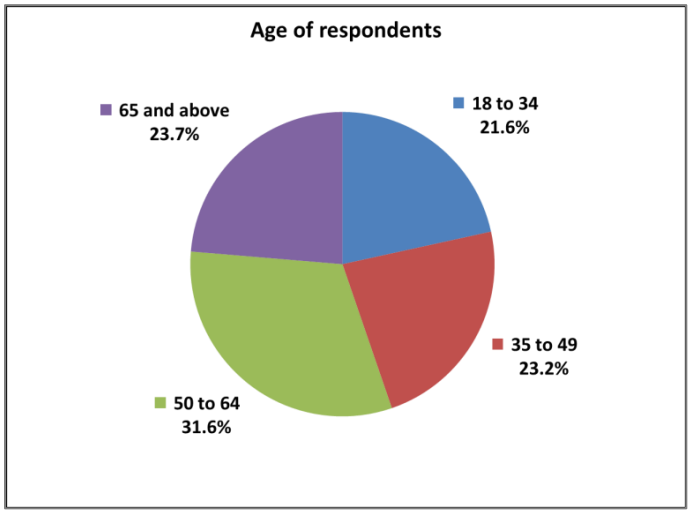
Appendix A: Demographics

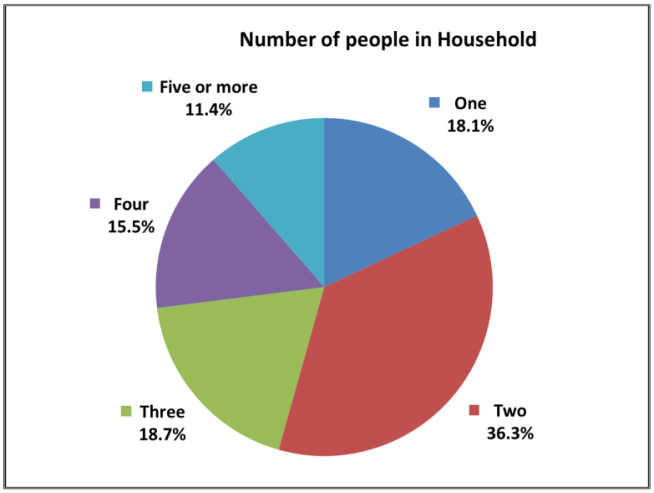
Resident Respondents' Demographic Characteristics

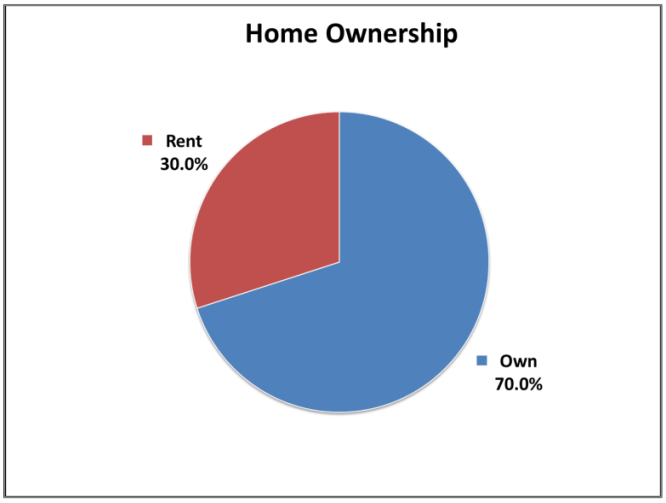
As stated previously, respondent demographics were balanced by age, gender and island distribution to reflect the latest Hawai'i Adult resident 18 years or older population according to the US Census, American Fact 2015. The following demographic characteristics are respondents' demographics:

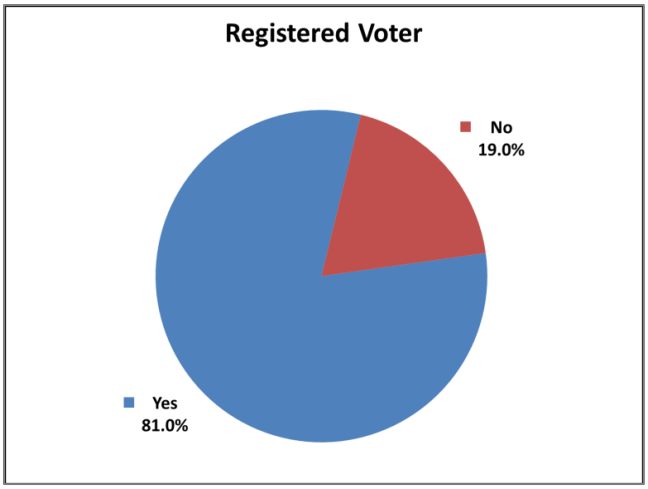


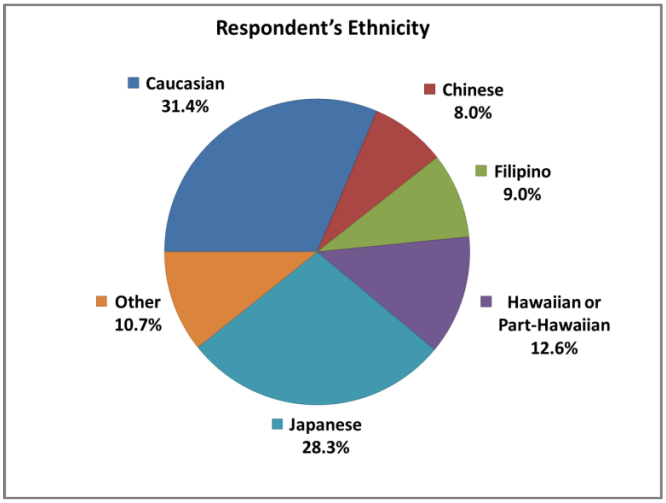


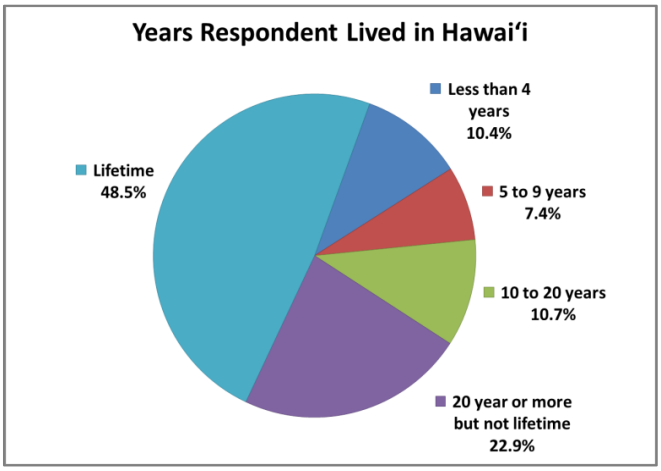


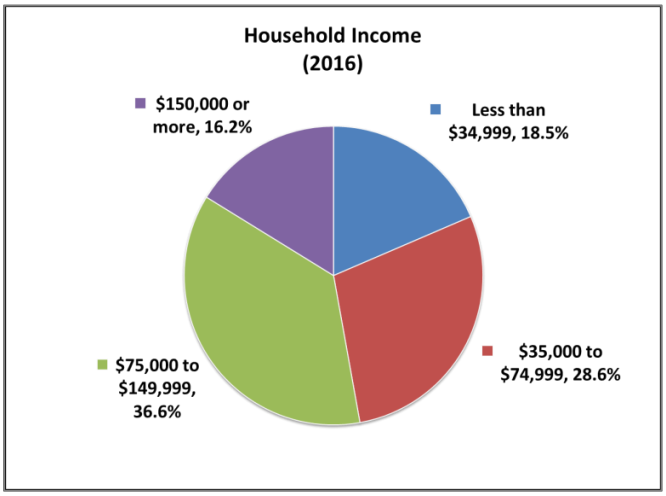



Home Ownership
Rent
30.0%
Own
70.0%


Registered Voter
No
19.0%
Yes
81.0%


Respondent's Ethnicity
Caucasian
31.4%
Chinese
8.0%
Filipino
9.0%
Other
10.7%
Hawaiian or
Part-Hawaiian
12.6%
Japanese
28.3%


Years Respondent Lived in Hawai'i
Less than 4
years
10.4%
Lifetime
48.5%
5 to 9 years
7.4%
10 to 20 years
10.7%
20 year or more
but not lifetime
22.9%


Household Income
(2016)
$150,000 or
more, 16.2%
Less than
$34,999, 18.5%
$75,000 to
$149,999,
36.6%
$35,000 to
$74,999, 28.6%

Appendix B: Survey Methodology

Survey Methodology Stakeholders Surveys and Interviews

To assure adequate insights of the level of support or opposition to the possible introduction of a Ferry Service among community leaders, the following activities were undertaken by the SMS and HDOT.

A list of key community leaders consisting of names was developed SMS and DOT which covered the following categories of leadership. All major islands were represented in the list selection.

- Legislature both as State and County levels
- Business executives
- Industry representatives such as tourism, transportation, farmers and others
- Environmental Organizations
- Union representatives
- Harbor Users
- Cultural organizations

The participants in this study are categorized into the Personal Interviews Group and the Prospective Stakeholders Group.

The **Personal Interviews** group consisted of government leaders who would be direct decision-makers or appropriators for a state-run ferry service, elected officials who represent districts that may be impacted by a ferry service, maritime industry executives, and leaders from environmental and community organizations representing interests that would be directly impacted by a ferry service. HDOT identified the 22 members of this group and each member was personally interviewed face-to-face or by phone.

The second group, **Prospective Ferry Stakeholders**, is similar to the Personal Interviews, but included a much broader range of elected officials and lawmakers at the State and County levels, businesses who may be potential ferry users or ferry service competitors, and community organizations including environmental protection groups. Of 264 government, business, and community entities that were invited to participate in this survey, 61 responded and their responses are reflected in this report.

SMS developed three survey instruments to reach out to these groups. A personal interview discussion guide, a non-business web-based survey instrument targeted at the non-business segment as defined above, and a separate survey was developed for the business leaders. All surveys were attached in Appendix C. All participants were guaranteed confidentiality. Names of participants are not disclosed nor are individual responses.

The potential participants in the personal interviews were sent an advance letter from the Director of the Hawai‘i Department of Transportation advising the project and requesting their participation in the survey process. SMS followed up with a telephone call to set up a convenient appointment to undertake the survey. SMS completed 22 interviews in person between August 1 and September 18, 2017.

A web survey was undertaken among the balance of community and business leaders. All potential participants were sent an email from the Director of Transportation informing them of the nature and purpose of the study along with a request for their participation and instructions on how to proceed with the survey process. A secondary reminder letter was also sent to potential participants that had not responded within two weeks of initial attempt. The data collection took place between August 25 and September 5, 2017.

Survey Methodology Resident Survey (General Public Group)

The **General Public** group consisted of 1,458 randomly selected State of Hawai'i residents who live on Hawai'i, Maui, Moloka'i, Lāna'i, O'ahu, Kaua'i, and Ni'ihau and provided responses through a phone or online survey. The responses offered by this group on support, need, and demand for a ferry service in Hawai'i, as well as preferences for fare pricing and likelihood to travel by ferry formed the baseline for the representative statements of the consensus of Hawai'i residents.

Sampling methodology for the resident survey was complex. SMS utilized multi-mode data collection mode and a stratified sample. We undertook such a complex sampling methodology in order to assure achievement of the following criteria:

- An adequate sample by island including small communities such as Moloka'i and Lāna'i
- A representative sample of all resident age groups, recognizing that older residents tend to be more responsive to landline telephone surveys whereas younger residents are more responsive to cell phone and web-based surveys
- Due to the high incidence of cell-phone only households in Hawai'i (estimated at 48%), an adequate sample of cell-phone surveys was completed

The end sample and data collection methods are summarized in the following table:

Table 1: Resident Survey Methodology and Sample

	Methodology			Margin of error
Island	**Web Panel**	**Telephone**	**Sample**	
O'ahu	676	13	689	3.7%
West O'ahu	143	13	156	7.8%
Maui County	90	176	266	6.0%
Maui	86	119	205	6.8%
Moloka'i	3	51	54	13.3%
Lāna'i	1	6	7	37.0%
Kaua'i	56	187	243	6.3%
Island of Hawai'i	146	114	260	6.1%
Statewide			**1,458**	**2.6%**

The island of O'ahu sample was further stratified to ensure a statistically valid sample of West O'ahu residents to quantify their attitudes of the commuter Ferry between West O'ahu and

Downtown Honolulu. The West O‘ahu region was therefore oversampled, with a completed sample base in the area of 156 interviews.

Landline and cell-phone numbers were randomly generated to ensure a random sample. In this manner, each household in Hawai‘i had an equal probability of participating in the survey. The web panel consists of 18,000 statewide households with demographic characteristics representative of Hawai‘i residents.

The end sample of all resident survey data collected were cleaned and balanced to the latest Hawai‘i Census data (American Fact 2015). SMS professionals balanced each of the islands and then the State of Hawai‘i overall to assure that the end results are representative of the Hawai‘i adult resident population.

The resident survey instrument was developed by SMS professionals and reviewed by the DOT Team. After review and adjustments it was programmed into the SMS CATI software program (Caller Assisted Telephone Interview) and the Sawtooth Web Survey program for pre-testing. Final adjustments were made to the surveys and data collection was undertaken. The survey instrument with response frequencies can be reviewed in Appendix C. Telephone data collection was undertaken under full supervision from the SMS calling center located in downtown Honolulu. Calls were made between July 25 and August 29, 2017 from the hours 1:00 pm to 9:00 pm Monday through Saturday. The Web survey data collection took place between August 11 and August 28, 2017.

Appendix C: Surveys

DOT Stakeholder Online

Aloha,

As a follow up to our letter dated _____, we would appreciate your participation in this confidential important survey. In 2016, the Hawai'i State Legislature passed Act 196 which requires the Department of Transportation to conduct a study that examines the feasibility of establishing an inter-island, intra-county, and intra-island ferry system. Results of the study will be presented to the Hawai'i State Legislature for its consideration during the 2018 Legislative Session. SMS Research has been retained to undertake the research phase of the feasibility study.

We would like to learn about your perceptions and opinions regarding the potential ferry service in the Hawaiian Islands.

SMS guarantees your privacy and the confidentiality of your responses. We will protect you by:

- **Password protecting each survey.** Only individuals with valid passwords will be allowed to access any of the surveys.
- **Storing your data on a secure server.** Only SMS can access the secure server on which your survey responses are stored.
- **Never asking you for personally identifying information.** While we do need to know some demographic details about you, we will never ask you for a phone number, address, or any other information we can use to identify you as an individual.
- **Reporting only aggregated data.** Any reports that are produced using your data will ONLY contain aggregated/summarized information from all respondents in the panel. No one will know how you answered any individual question.

Your link to the survey is _____
Your unique password is _____

Your participation in this survey is very important, so if you have any questions or challenges please contact:
Daniel Nahoopii (808) 440-0711 or via e-mail at dnahoopii@smshawaii.com

1. **On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i? *(CHECK ONLY ONE RESPONSE)***

   Strongly support 62.5%
   Somewhat support 17.9%
   Slightly support 10.7%
   Very little support 3.6%
   Not support at all.....5.4%

2. **In your own words, please tell us why you say that?**

3. **On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support or not support the introduction of a daily commuter ferry service on O'ahu between Honolulu Harbor and Kalaeloa? *(CHECK ONLY 1 RESPONSE)***

   Strongly support 27.3%
   Somewhat support 32.7%
   Slightly support 9.1%
   Very little support 23.6%
   Not support at all.....7.3%

4. **In your own words, please tell us why you say that?**

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© SMS September 7, 2017

5. **On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support or not support the introduction of a commuter service between Lahaina on Maui and Kaunakakai on Moloka'i? *(CHECK ONLY 1 RESPONSE)***

Strongly support 36.4%
Somewhat support 34.5%
Slightly support 18.2%
Very little support 7.3%
Not support at all.....3.6%

6. **In your own words, please tell us why you say that?**

_____

_____

7. **To better understand the issues, can you please tell us the top three reasons why an inter-island or commuter ferry should be introduced into Hawai'i?**

1. _____
2. _____
3. _____

8. **Looking now at the other side, please tell us the three main reasons why an inter-island or commuter ferry should not be introduced into Hawai'i?**

1. _____
2. _____
3. _____

9. **If a ferry service was introduced in Hawai'i, which types of ferry would you support… *(CHECK AS MANY AS APPLY)***

Carry passengers only.....35.2%
Carry passengers and vehicles 29.6%
Carry passengers and vehicles as well as cargo 75.9%
Other (please specify).....9.3%

_____

10. **If the feasibility study showed demand only for passenger service, would that be an acceptable level of service?**

Yes.....80%
No 20%

11. **Which of the following routes in your opinion are most important? Please rank them in order from 1 to 7 with 1 being most important, 2 less so, and 7 least important.**

Route	RANK
Honolulu Harbor (O'ahu) and Mā'alaea (Maui)	6
Honolulu Harbor (O'ahu) and Kahului (Maui)	1
Honolulu Harbor (O'ahu) and Nāwiliwili (Kaua'i)	4
Honolulu Harbor (O'ahu) and Kawaihae (Big Island)	5
Honolulu Harbor (O'ahu) and Hilo (Big Island)	3
Lahaina (Maui) and Kaunakakai (Moloka'i)	2
Lahaina (Maui) and Mānele (Lāna'i)	7

12. **How should the ferry be operated, a government run system; a privately owned ferry; or something else?**
    Government run system 10.9%
    Privately owned ferry 47.3%
    Something else .....41.8% Public Private Partnerships

13. **And why do you say that?**

14. **Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?**
    Yes.....72.7%
    No 27.3%

15. **And what percentage of state funding do you think is acceptable?** 38%

16. **And why do you say that?**

17. **For classification purposes, would you please tell us your current position and the name of the organization or government agency you work for?**

Current Position	
Name of Organization or Government Agency	

18. **Is there anything else that you wish to add or that we may not have asked?**

Mahalo!

Ferry Resident Summary

RESIDENT SURVEY

Hello, I'm _____ with SMS Research, a Honolulu research company. Today, we are doing a CONFIDENTIAL survey on behalf of the State of Hawai'i Department of Transportation. Please be advised that my supervisor may be monitoring this conversation for internal quality control purposes.

SCREENING QUESTIONS

1. **Which Island do you live on?**

Oahu 70.1%
Maui 10.8%
Moloka'i 0.4%
Lāna'i 0.2%
Hawai'i Island 13.6%
Kaua'i 5.0%
No ***(TERMINATE)*** 0%

2. **What is the zip code where you live? _____ [to be used to determine neighborhood for intra-island ferry questions]**

3. **In the past year (12 months), how many times have you traveled inter-island? Mean=3.2, Median=2**
If 0 ***(SKIP TO 9)*** ..... O

4. **Including yourself, how many people regularly travel inter-island with you? Mean=2.2, Median=2**

5. **Has your travel been mainly for business or pleasure?**

Business 23.7%
Pleasure (visit friends, family, vacation, sightseeing) 76.3%
No answer / refused.....0%

6. **You said you traveled inter-island [INSERT RESPONSE TO Q3] times in the past year; of those trips, how many of those trips did you…**

	# of trips	Honolulu C&C	Maui County	Hawai'i County	Kaua'i County	Total
Visit the other island and came back on the same day		32.3%	17.7%	41.5%	29.8%	29.6%
You stayed on the other island overnight or a few days then returned		49.3%	34.1%	43.4%	51.5%	44.0%
You stayed on the other island for about a week		14.4%	12.4%	10.0%	7.7%	12.4%
You stayed on the other island more than a week		4.1%	35.8%	5.1%	11.0%	14.1%
Total	**INSERT Q3**					

7. **On a 5 point scale where 5 is very satisfied and 1 is very dissatisfied; when thinking about traveling inter-island, how satisfied are you with the current travel options?**

Very satisfied 6.2%
Somewhat satisfied.....11.7%
Neither satisfied nor dissatisfied.....12.7%
Somewhat dissatisfied 41.8%
Very dissatisfied.....27.7%

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	Total
Very Satisfied	31.1%	26.3%	19.6%	21.7%	27.7%
Somewhat Satisfied	47.5%	39.1%	30.8%	24.3%	41.8%
Neither	10.8%	10.5%	17.1%	23.0%	12.7%
Somewhat Dissatified	7.7%	14.3%	20.7%	18.0%	11.7%
Very Dissatisfied	2.9%	9.8%	11.8%	13.0%	6.2%

8. **Why do you say that?**

The Department of Transportation of the State of Hawai'i has been asked by the State legislature to understand the feasibility and demand for a potential inter-island ferry service.

Before we discuss the details about the ferry…

9. **On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i? (CHECK ONLY 1 RESPONSE)**

Strongly support 59.5%
Somewhat support 22.0%
Slightly support 9.1%
Very little support 4.2%
Not support at all.....5.2%

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	Total
Strongly Support	60.5%	55.2%	64.5%	41.3%	59.5%
Somewhat Support	23.5%	21.4%	17.8%	12.6%	22.0%
Slightly Support	9.0%	9.2%	6.9%	17.2%	9.1%
Very Little Support	3.6%	6.2%	5.1%	4.9%	4.2%
Not Support at All	3.3%	8.0%	5.7%	23.9%	5.2%

10. **In your own words, please tell us why do you say that?**

11. **On a 5 point scale where 5 is very likely and 1 not at all likely, if an inter-island ferry service were introduced in Hawai'i, how likely are you to use that ferry in the future, If...?**

	Not at all likely				Very Likely
	1	2	3	4	5
The ferry would only carry passengers	14.6%	11.2%	25.3%	17.8%	31.0%
The ferry could also carry drive-on personal vehicles (i.e., cars, vans, pick-up trucks)	7.4%	5.4%	9.9%	16.4%	60.9%

12. **If the feasibility study showed demand only for passenger service, would that be an acceptable level of service for you?**

Yes.....64.8%
No 24.1%
Don't know / refused.....11.1%

13. **[IF Q11 IS 3 OR HIGHER] You said that you would be likely to use the ferry in the future, how many times would you use the ferry service in a 12 month period? Mean=5.1,Median=3**

14. **What is the minimum frequency the inter-island ferry schedule should run to make it acceptable for you? The ferry should run at least…**

2 or 3 times a day 46.6%
Once a day 32.0%
Every other day 9.8%
Twice a week 6.7%
Once a week.....4.9%

15. **Where would you most likely take the inter-island ferry? Between… [O'AHU RESIDENTS WILL ONLY SEE O'AHU, ETC…]**

	YES	NO	DK/Refuse
Honolulu Harbor (O'ahu) and Mā'alaea (Maui)	69.4%	30.6%	0%
Honolulu Harbor (O'ahu) and Kahului (Maui)	84.6%	15.4%	0%
Honolulu Harbor (O'ahu) and Nāwiliwili (Kaua'i)	76.8%	23.2%	0%
Honolulu Harbor (O'ahu) and Kawaihae (Big Island)	72.3%	27.7%	0%
Honolulu Harbor (O'ahu) and Hilo (Big Island)	78.5%	21.5%	0%
Lahaina (Maui) and Kaunakakai (Moloka'i)	64.7%	35.3%	0%
Lahaina (Maui) and Mānele (Lāna'i)	65.7%	34.3%	0%

16. And, how long of a ferry crossing time is acceptable to you if the inter-island ferry goes between…[SHOW ONLY RESPONSES FROM Q15=YES]

	Approximately 3 hours	3 to 5 hours	6 hours or overnight
Honolulu Harbor (O'ahu) and Maalaea (Maui)	66.7%	27.9%	5.4%
Honolulu Harbor (O'ahu) and Kahului (Maui)	69.9%	25.7%	4.4%
Honolulu Harbor (O'ahu) and Nāwiliwili (Kauai)	68.4%	26.8%	4.8%
Honolulu Harbor (O'ahu) and Kawaihae (Big Island)	38.1%	47.5%	14.5%
Honolulu Harbor (O'ahu) and Hilo (Big Island)	41.7%	42.9%	15.4%

17. And, how long of a ferry crossing time is acceptable to you if the inter-island ferry goes between…[SHOW ONLY RESPONSES FROM Q15=YES]

	Approximately 1 hour or less	More than 1 hour
Lahaina (Maui) and Kaunakakai (Molokai)	74.0%	26.0%
Lahaina (Maui) and Mānele (Lāna'i)	81.2%	18.8%

Talking about a potential inter-island passenger ferry…

18. Assuming that the inter-island ferry met your price and convenience needs, now how likely would you be to use the ferry service in the future? On a 5 point scale where 5 is very likely and 1 not at all likely;

Very likely 64.0%
Somewhat likely 20.9%
Neutral 8.0%
Not too likely 2.2%
Not at all likely.....4.9%

	County				
	Honolulu	Maui	Hawai'i	Kaua'i	Total
Very likely	65.8%	54.5%	68.7%	48.3%	64.0%
Somewhat likely	22.6%	21.8%	13.7%	14.0%	20.9%
Neutral	6.9%	11.9%	7.8%	15.0%	8.0%
Not too likely	1.6%	4.2%	3.8%	2.0%	2.2%
Not at all likely	3.1%	7.7%	5.9%	20.7%	4.9%

19. **Why do you say that?**

_____

_____

20. **If an inter-island ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult including all baggage? Mean=91.8, Median=80**

21. **What is the round trip adult price you would consider expensive, but would still be acceptable to you? Mean=136.3, Median=110**

22. **What price per adult would you consider so expensive that you would not travel on the ferry? Mean=187.2, Median=150**

23. **How much more would you be willing to pay to take a vehicle with you to your destination? Mean=87.4, Median=50**

24. **What would be some of the concerns or issues you would have with a future inter-island ferry service? [INTERVIEWER: DO NOT READ LIST. MARK ALL THAT APPLY. PROBE]**

I'm satisfied with the current interisland travel options	O
Concerned with sea sickness	O
Worried about the bad weather/rough conditions	O
Don't travel inter-island much	O
Think it is unsafe	O
Don't think it would be convenient	O
Concerns with spread of invasive species	O
Concern for the safety of ocean life (whales, etc)	O
Concerns with other environmental issues	O
Concerns with changing traditional ways of life, cultural issues, exploitation of resources	O
Concerns with increased traffic, crowds	O
No access to public transportation or parking at origin or destination	O
The ports are not convenient for me	O
Ferry schedules are unreliable	O
You'll get stuck with no other options if the Ferry cannot sail	O
Other [SPECIFY] _____	

[NOTE: Q25-Q38 LIMITED TO WEST O'AHU, MAUI, LĀNA'I AND MOLOKA'I RESIDENTS]

25. **(FOR West O'ahu ONLY) In general, how many days per week do you travel between West O'ahu and Honolulu? Mean=3.5, Median=4**

If 0 ***(SKIP TO 42)*** ..... O

26. **(FOR West O'ahu ONLY) And how do you typically get between West O'ahu to Honolulu?**

Drive own car	86.8%
Ride in someone else's car	4.2%
Bus	6.5%
Car and bus (drive to bus stop)	0.3%
Other	2.2%
Don't know / refused	0%

27. **On a 5 point scale where 5 is very likely and 1 not at all likely, if a daily passenger-only ferry service was introduced on O'ahu for to travel between Kalaeloa and Honolulu Harbor, how likely would you be to use the service regularly?**

Very likely	22.8%
Somewhat likely	19.6%
Neutral	18.8%
Not too likely	17.0%
Not at all likely	21.8%

28. **Why do you say that?**

_____

_____

29. **If the Kalaeloa passenger-only ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult including all baggage? Mean=41.5, Median=15**

30. **What is the round trip adult price you would consider expensive, but would still be acceptable to you? Mean=59.5, Median=21**

31. **What price per adult would you consider so expensive that you would not travel on the Kalaeloa passenger-only ferry? Mean=77.5,Median=31**

32. **(FOR MAUI AND MOLOKAI ONLY) Did you use the ferry service when it was running between Lahaina and Kaunakakai?**

Yes	27.7%
No [SKIP TO Q33]	72.3%
Don't know / refused [SKIP TO Q33]	0%

33. **And how many times would you use the ferry service in a typical 12 month period? Mean=8.6, Median=2**

34. On a 5 point scale where 5 is extremely important and 1 not important at all, How important was this ferry service to you?

Extremely important.....20.4%
Very important 19.2%
Moderately important 26.8%
Slightly important 17.0%
Not important at all 16.6%

35. Why do you say that?

_____

_____

36. You said that you didn't use the Ferry to Kaunakakai to Lahaina; Why did you say that?

_____

_____

37. On a 5 point scale where 5 is very likely and 1 not at all likely, if a daily passenger-only ferry service was introduced on Maui for travel to and from Lahaina, how likely would you be to use the service regularly between Lahaina and ... ?

	Not at all likely				Very Likely
	1	2	3	4	5
Lahaina (Maui) and Kaunakakai (Molokai)	17.4%	6.7%	20.5%	16.6%	38.9%
Lahaina (Maui) and Mānele (Lāna'i)	21.3%	13.6%	20.5%	13.7%	30.9%
Lahaina (Maui) and Kahului (Maui)	12.1%	6.6%	14.1%	9.8%	57.4%
Lahaina (Maui) and Mā'alaea (Maui)	11.6%	6.7%	13.5%	9.6%	58.5%

38. And, how long of a ferry crossing time is acceptable to you if a daily passenger-only ferry goes between...[SHOW ONLY SELECTED RESPONSES FROM Q34]

	Approximately 1 hour or less	More than 1 hour
Lahaina (Maui) and Kaunakakai (Molokai)	62.5%	37.5%
Lahaina (Maui) and Mānele (Lāna'i)	74.0%	26.0%
Lahaina (Maui) and Kahului (Maui)	70.3%	29.7%
Lahaina (Maui) and Mā'alaea (Maui)	78.9%	21.1%

39. If the Lahaina passenger-only ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult including all baggage? Mean=64.1, Median=50

40. What is the round trip adult price you would consider expensive, but would still be acceptable to you? Mean=95.9, Median=75

41. What price per adult would you consider so expensive that you would not travel on the Lahaina passenger-only ferry? Mean=164.3, Median=100

FUNDING [ALL RESPONDENTS]

42. Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?

Yes.....77.2%
No 22.8%
No answer / refused.....0%

DEMOGRAPHICS [ALL RESPONDENTS]

43. What is your age? Are you...

18 to 24	5.8%
25 to 34	15.7%
35 to 39	6.8%
40 to 44	7.7%
45 to 49	8.6%
50 to 54	10.0%
55 to 64	21.5%
65 to 69	10.8%
70 or above	12.8%
Don't know / refused	0.3%

44. Gender

Male	49.6%
Female	49.8%
Other	0%
No answer / refused	0.6%

45. First, how many people, including yourself, live in your household?

One	18.0%
Two	36.2%
Three	18.6%
Four	15.5%
Five	7.0%
Six or more	4.4%
Don't know / refused	0.3%

46. Do you own or rent your home?

Own	68.2%
Rent	29.2%
Don't know / refused	2.6%

47. What is your primary ethnic background (SELECT ONE)?

Caucasian	29.9%
Chinese	7.6%
Filipino	8.6%
Hawaiian or Part-Hawaiian	12.0%
Japanese	26.9%
Korean	1.0%
Samoan	1.0%
Black or African American	1.1%
Hispanic or Latino	2.0%
Mixed, Not Hawaiian	5.1%
Other [DO NOT SPECIFY]	3.6%
No answer / refused	1.2%

48. What was the total 2016 income, before taxes, for all members of your household? Was it...

Less than $10,000	3.4%
$10,000 to $14,999	2.1%
$15,000 to $24,999	5.1%
$25,000 to $34,999	6.1%
$35,000 to $49,999	8.9%
$50,000 to $74,999	16.9%
$75,000 to $99,999	14.2%
$100,000 to $149,999	18.8%
$150,000 to $199,999	8.0%
$200,000 or more	6.6%
No answer / refused	9.9%

49. Are you currently registered to vote in Hawai'i?

Yes	79.5%
No	18.6%
Don't know / refused	1.9%

50. How long have you lived in Hawai'i?

Less than a year	2.2%
1 to 4 years	8.2%
5 to 9 years	7.4%
10 to 20 years	10.7%
20 year or more but not lifetime	22.8%
Lifetime	48.4%
Don't Know/Refused	0.3%

Thank you for participating in this survey.

Personal Interviews Discussion Guide

SMS® RESEARCH

Interviewer: _____	FERRY FEASIBILITY: STAKEHOLDER INTERVIEWER DISCUSSION GUIDE	Date: _____
Interviewee: _____		Address and/or telephone number for the meeting: _____
Address: _____		

INTRODUCTION

Thank you for agreeing to meet with me today to discuss the feasibility of a ferry service throughout the Hawaiian Islands. SMS has been retained by the State of Hawai'i Department of Transportation to undertake a feasibility study for such a service. We are interviewing community leaders to better understand the issues and opportunities for such a ferry service. Your comments are 100% confidential. No one outside of SMS professionals will review your comments. SMS will only report aggregated comments from everyone being interviewed.

WHO YOU ARE:

1. **Can you first tell me about your organization and your position within the company?**

2. **I am certain that you have heard that the State of Hawai'i Department of Transportation has been requested to undertake a Ferry Feasibility Study. In your own words, can you tell me whether you support or oppose the introduction of an inter-island ferry and why? *(IF SECURITY OF HAVING ALTERNATIVE TRANSPORTATION OPTIONS BESIDES AIR IS NOT MENTIONED—ASK IT)***

3. **If an inter-island ferry service was introduced in Hawai'i, which types of ferry services would you support? (e.g., passenger-only; passengers and drive on vehicles; passengers, drive on vehicles and cargo).**

4. **On these cards we have included some of the proposed inter-island ferry routes, can you look at these cards and rank them in order of importance to you and your organization? Most important on top:**

Route	RANK
Honolulu Harbor (O'ahu) and Mā'alaea (Maui)	
Honolulu Harbor (O'ahu) and Kahului (Maui)	
Honolulu Harbor (O'ahu) and Nāwiliwili (Kaua'i)	
Honolulu Harbor (O'ahu) and Kawaihae (Big Island)	
Honolulu Harbor (O'ahu) and Hilo (Big Island)	
Lahaina (Maui) and Kaunakakai (Moloka'i)	
Lahaina (Maui) and Mānele (Lāna'i)	

5. In your own words, can you tell me whether you support or oppose introduction of daily passenger-only ferry service on O'ahu between Honolulu Harbor and Kalaeloa (PROVIDE HANDOUT DESCRIPTION – PICTURE WITH PROPOSED ROUTE)? Why do you say that?

6. In your own words, can you tell me whether you support or oppose daily passenger-only ferry service between Lahaina on Maui and Kaunakakai on Moloka'i (PROVIDE HANDOUT DESCRIPTION)? Why do you say that?

7. Besides the inter-island and intra-island (same island) ferry routes we mentioned so far, are there any other ferry routes that should be considered?

8. To better understand the issues, can you please tell us the top reasons why an inter-island or commuter ferry should be introduced into Hawai'i?

9. Looking now at the other side, please tell us the main reasons why an inter-island or commuter ferry should not be introduced into Hawai'i

FERRY FACTORS & FEATURES

10. What are some the important factors or features that the potential ferry service should have to be successful? *(PROBE)*

11. **On these cards we have included some factors that the potential ferry service should have to be successful. Can you look at these cards and rank them in order of importance to you and your organization? Most important on top:**

Speed, crossing time ._____
Cargo ....._____
Vehicle ....._____
Frequency....._____
Cost....._____
Environmental Issues _____

OTHER FACTORS

12. **Are there any areas that should be investigated in this feasibility study that would encourage a higher level of support for the ferry's introduction?**

_____

_____

13. **In your opinion, what are the potential pitfalls that will discourage elected officials or other community leaders from supporting the ferry service?**

_____

_____

14. **In your opinion what issues need to be addressed to ensure the introduction of a ferry service in Hawai'i? What are some of the mitigating factors that need to be considered?**

_____

_____

FUNDING

15. **How should the ferry system in Hawai'i be operated: a government run system; a privately owned ferry; or something else? And why do you say that?**

_____

_____

16. **Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds? (PROBE. IF FUNDING SOURCES OR "WHAT PERCENTAGE OF STATE FUNDING" *IS NOT MENTIONED—ASK IT*)**

_____

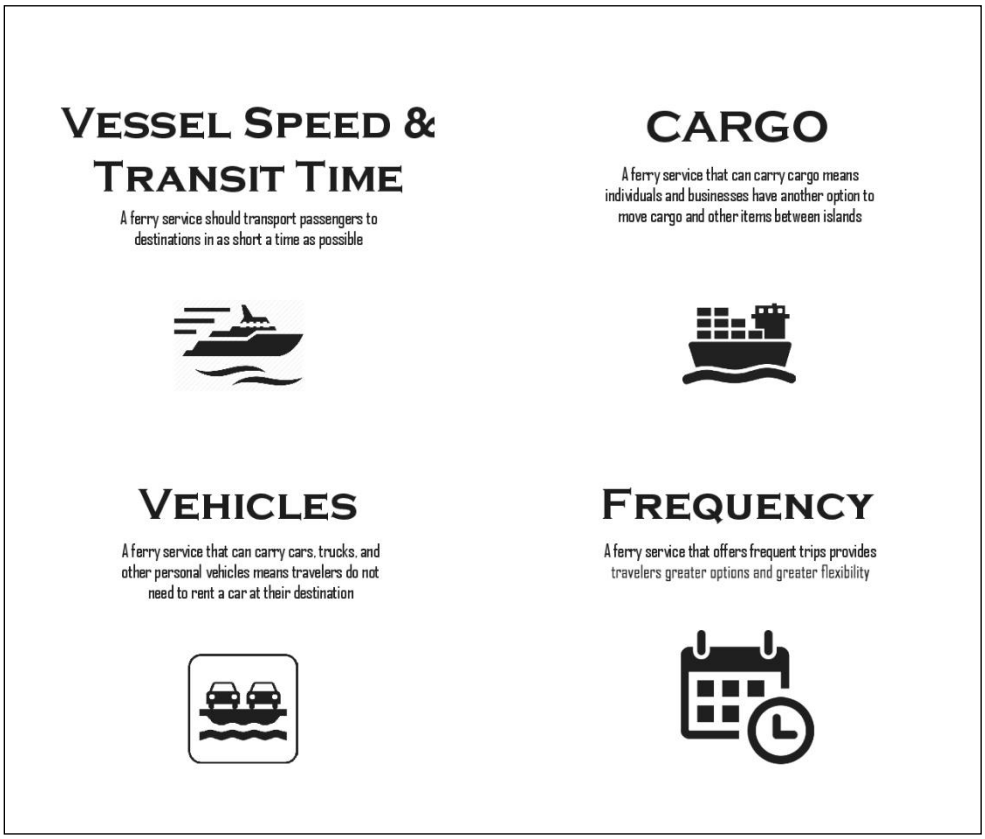
_____

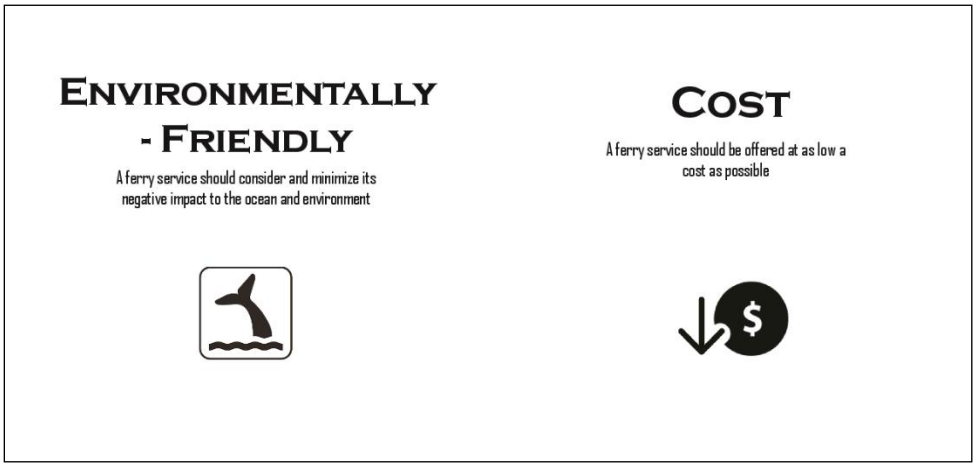
CLOSING

17. Is there anything else that you can tell me?

Thank you.

Personal Interviews – Cards Used to Illustrate Ferry Features, Ferry Design and Routes





SMALL VESSEL OPTION
PASSENGERS ONLY

Vessel Type: Catamaran

HULLS:	2
MAX. SPEED:	40 KNOTS
DRAFT:	4.3 FEET
LENGTH:	164 FEET
PASSENGERS:	450
CARS:	0
CARGO?	NO

MEDIUM VESSEL OPTION
PASSENGERS & CARS

Vessel Type: Catamaran or Wave Piercer

HULLS:	2
MAX. SPEED:	40 KNOTS
DRAFT:	10.2 FEET
LENGTH:	239.5 FEET
PASSENGERS:	500
CARS:	80
CARGO?	NO

Features: Roll-on/Roll-off (RO/RO), quarter stern ramp

LARGE VESSEL OPTION
PASSENGERS, CARS & CARGO

Vessel Type: Catamaran, Wave Piercer or Trimaran

HULLS:	2 OR 3
MAX. SPEED:	40 KNOTS
DRAFT:	13.1 FEET
LENGTH:	370 FEET
PASSENGERS:	960
CARS:	300
CARGO?	YES

Features: Roll-on/Roll-off (RO/RO), quarter stern ramp; can accommodate commercial trucks (including containers on chassis)

COMMUTER VESSEL OPTION
PASSENGERS ONLY

Vessel Type: Catamaran

HULLS:	2
MAX. SPEED:	35 KNOTS
DRAFT:	3.6 FEET
LENGTH:	98.4 FEET
PASSENGERS:	140
CARS:	0
CARGO?	NO

Business Online Questionnaire

BUSINESS ONLINE QUESTIONNAIRE

Aloha:

As a follow up to our letter dated _____, we would appreciate your participation in this confidential important survey. In 2016, the Hawai'i State Legislature passed Act 196 which requires the Department of Transportation to conduct a study that examines the feasibility of establishing an inter-island, intra-county, and intra-island ferry system. Results of the study will be presented to the Hawai'i State Legislature for its consideration during the 2018 Legislative Session. SMS Research has been retained to undertake the research phase of the feasibility study.

We would like to learn about your perceptions and opinions regarding the potential ferry service in the Hawaiian Islands.

SMS guarantees your privacy and the confidentiality of your responses. We will protect you by:

- **Password protecting each survey.** Only individuals with valid passwords will be allowed to access any of the surveys.
- **Storing your data on a secure server.** Only SMS can access the secure server on which your survey responses are stored.
- **Never asking you for personally identifying information.** While we do need to know some demographic details about you, we will never ask you for a phone number, address, or any other information we can use to identify you as an individual.
- **Reporting only aggregated data.** Any reports that are produced using your data will ONLY contain aggregated/summarized information from all respondents in the panel. No one will know how you answered any individual question.

Your link to the survey is _____
Your unique password is _____

Your participation in this survey is very important, so if you have any questions or challenges please contact:
Daniel Nahoopii (808) 440-0711 or via e-mail at dnahoopii@smshawaii.com

ORGANIZATION DEMOGRAPHICS

1. Just to get to know a little about you and your organization, which of the following best describes the nature of your business? [PULL DOWN MENU]

Government ..... O
Agriculture/forestry/fishing ..... O
Utilities ..... O
Construction ..... O
Manufacturing ..... O
Wholesale trade ..... O
Retail trade ..... O
Transportation/warehousing ..... O
Information ..... O
Finance/insurance ..... O
Real estate/rental/leasing ..... O
Professional/technical services ..... O
Management of companies ..... O
Administrative/waste services ..... O
Educational services ..... O
Health care/social assistance ..... O
Arts/entertainment/recreation ..... O
Accommodation/food services ..... O
Other services ..... O

2. And what is your title at your company?

Manager ..... O
Senior Manager ..... O
Director ..... O
Vice President ..... O
Senior Vice President ..... O
C level executive (CIO, CTO, COO, CMO, Etc) ..... O
President or CEO ..... O
Owner ..... O

3. **How many years have you been in this position?**
   Less than one year ..... O
   1 to 3 years ..... O
   4 to 9 years ..... O
   10 or more years ..... O

4. **What is the total number of associates or employees in your company here in Hawai'i?**
   1 to 19 ..... O
   20 to 49 ..... O
   50 to 99 ..... O
   100 to 249 ..... O
   250 to 499 ..... O
   500 to 999 ..... O
   1,000 or more ..... O
   Don't Know/Refused ..... O

5. **How long has your company been in Hawai'i?**
   Less than a year ..... O
   1 to 4 years ..... O
   5 to 9 years ..... O
   10 to 20 years ..... O
   20 year or more ..... O
   Don't Know/Refused ..... O

6. **During an average year, approximately how many of your associates or employees travel inter-island?____**

7. **Can you confirm that all interisland travel is by air?**
   Yes ..... O
   No ..... O
   Don't Know/Refused ..... O

8. **And during an average year, what is the total number of inter-island round trips that your associates or employees travel? ____**

9. **You said your associates or employees travel inter-island [INSERT RESPONSE TO Q8] times in an average year; of those trips, how many of those trips are to…**

	# of trips
Visit the other island and came back on the same day	_____
Stay on the other island overnight or a few days then returned	_____
Stay on the other island for about a week	_____
Stay on the other island more than a week	_____
Total	**INSERT Q8**

10. **What are the most traveled inter-island routes for your associates or employees? Please select your top three routes and rank them from 1 to 3; with 1 being most traveled, 2 less so, etc ...**

Route	RANK
O'ahu -- Maui	
O'ahu -- Kaua'i	
O'ahu -- Molokai	
O'ahu – Lāna'i	
O'ahu -- Big Island East Hawai'i (Hilo)	
O'ahu -- Big Island West Hawai'i (Kona)	
Maui -- Big Island West Hawai'i (Kona)	
Maui – Kaua'i	
Maui – Moloka'i	
Maui – Lāna'i	
Kaua'i – Big Island West Hawai'i (Kona)	

11. **Are there other routes that are heavily travelled by your associates and employees?**

12. **On a 5 point scale where 5 is very satisfied and 1 is very dissatisfied; when thinking about traveling inter-island, how satisfied are you with the current travel options for your associates and employees?**
    Very satisfied 5
    Somewhat satisfied 4
    Neither satisfied nor dissatisfied 3
    Somewhat dissatisfied 2
    Very dissatisfied 1

13. **Why do you say that?**

14. **Does your company send freight, bulk items, or cargo inter-island on a regular basis?**
    Yes ..... O
    No **[SKIP TO Q18]** ..... O
    Don't know / refused **[SKIP TO Q18]** ..... O

15. **What kind of items are you sending inter-island?**
    Automobiles ..... O
    Commercial equipment ..... O
    Lumber and construction materials ..... O
    Paper, paper products, printed materials ..... O
    Farm products, flowers, vegetables, fresh foods .... O
    Grocery, packaged foods and related products ..... O
    Other non-durable goods ..... O
    Household goods, furniture, consumer electronics . O
    Apparel, piece goods, and notions ..... O
    Other ..... O

16. **And what type of shipping service are you using inter-island?**
    Air cargo service ..... O
    Sea freight service: Break Bulk Cargo/Pallets ..... O
    Sea freight service: Containerized Cargo ..... O
    Delivery service (FedEx UPS, USPS, etc) ..... O
    Other ..... O

17. **And during an average year, approximately how many times do you ship cargo inter-island?____**

18. **And considering delivery times, approximately what percentage of the cargo needs to be on the other island…**

	% of all trips
On the same day	____%
Overnight	____%
Within a few days	____%
Within one week	____%
Total	**100%**

SUPPORT

Again, Department of Transportation is conducting a study that examines the feasibility of establishing an inter-island, intra-county, and intra-island ferry system.
Before we discuss the details about an inter-island ferry;

19. **On a scale of 1 to 5, where 5 is strongly support, and 1 is not support at all, how strongly do you support the introduction of an inter-island ferry service in Hawai'i? (CHECK ONLY 1 RESPONSE)**

Strongly support 5
Somewhat support 4
Slightly support 3
Very little support 2
Not support at all 1

20. **Why do you say that?**

_____

21. **As the feasibility of a potential inter-island ferry service is being undertaken, is it your opinion that the service should… (CHECK AS MANY AS APPLY)**

Carry passengers only ..... O
Carry passengers and vehicles ..... O
Carry passengers and vehicles as well as cargo ..... O
Other (please specify) ..... O

_____

22. **If the feasibility study shows demand only for passenger service; would that level of service be acceptable to you?**

Yes ..... O
No ..... O
Don't know / refused ..... O

Now let's talk about a potential inter-island ferry system…

23. **Assuming that the inter-island ferry met price and convenience needs, now how likely would your associates and employees be to use a passenger-only ferry service in the future? On a 5 point scale where 5 is very likely and 1 not at all likely**

Very likely 5
Somewhat likely 4
Neutral 3
Not too likely 2
Not at all likely 1

24. **[IF Q23 IS 3 OR HIGHER] You said that your associates and employees would be likely to use passenger-only ferry service in the future, how many times would they use the ferry service in a 12-month period?** _____

25. **And what is the minimum frequency the inter-island ferry schedule should run to make it acceptable for your associates and employees? The passenger-only ferry should run at least…**

2 or 3 times a day ..... O
Once a day ..... O
Every other day ..... O
Twice a week ..... O
Once a week ..... O

26. **Next, if the inter-island ferry could carry both passengers and vehicles, how likely would your associates and employees be to use the ferry service in the future on a 5 point scale where 5 is very likely and 1 not at all likely?**

Very likely 5
Somewhat likely 4
Neutral 3
Not too likely 2
Not at all likely 1

27. **And how much more likely would your associates and employees be to use a ferry that could carry passengers and drive-on vehicles with freight and bulk items on those vehicles?**

Very likely 5
Somewhat likely 4
Neutral 3
Not too likely 2
Not at all likely.....1

28. **If an inter-island ferry service were available in the future, what would you consider a reasonable price for a round trip fare for one adult including all baggage? $_____**

29. **What is the round trip adult price you would consider expensive, but would still be acceptable to you? $_____**

30. **What price per adult would you consider so expensive that you would not travel on the ferry? $_____**

31. **How much more would you be willing to pay to take a vehicle with you to your destination? $_____**

CARGO

32. **How likely would your associates and employees be to use an inter-island ferry that could carry unaccompanied cargo?**

Very likely 5
Somewhat likely 4
Neutral 3
Not too likely **[SKIP TO Q37]** 2
Not at all likely **[SKIP TO Q37]**.....1

33. **If an inter-island ferry service were available in the future, what would you consider a reasonable price for a price for shipping cargo? [Please also indicate the unit of measure] $ _____ $/lb $/container $/cubic foot**

34. **What is the cargo price you would consider expensive, but would still be acceptable to you? [Please also indicate the unit of measure] $ _____ $/lb $/container $/cubic foot**

35. **What price for cargo would you consider so expensive that you would not travel on the ferry? [Please also indicate the unit of measure] $ _____ $/lb $/container $/cubic foot**

36. **And during an average year, approximately how many times would your company use the ferry cargo service? ____**

[CARGO – END]

37. **Listed below are some of the proposed inter-island ferry routes. Which of the following are most important to your associates and employees? Please rank them in order from 1 to 7 with 1 being most important, 2 less so, and 7 least important.**

Route	RANK
Honolulu Harbor (O'ahu) and Mā'alaea (Maui)	
Honolulu Harbor (O'ahu) and Kahului (Maui)	
Honolulu Harbor (O'ahu) and Nāwiliwili (Kaua'i)	
Honolulu Harbor (O'ahu) and Kawaihae (Big Island)	
Honolulu Harbor (O'ahu) and Hilo (Big Island)	
Lahaina (Maui) and Kaunakakai (Moloka'i)	
Lahaina (Maui) and Mānele (Lāna'i)	

38. **To better understand the issues, can you please tell us the top three reasons why an inter-island ferry should be introduced into Hawai'i?**

1. _____

2. _____

3. _____

39. **Looking now at the other side, please tell us the three main reasons why an inter-island should not be introduced into Hawai'i?**

1. _____

2. _____

3. _____

40. **How should the ferry be operated, a government run system; a privately owned ferry; or something else?**
Government run system ..... O
Privately owned ferry ..... O
Something else ..... O

41. **And why do you say that?**

_____

_____

42. **Transportation systems such as bus services and ferries in other states receive government funding to support operations. Do you think ferry system operations in Hawai'i should be supported by State of Hawai'i funds?**
Yes ..... O
No ..... O
Don't know / refused ..... O

43. **And what percentage of state funding do you think is acceptable? ____%**

44. **And why do you say that?**

_____

_____

Thank you for participating in this survey.

Appendix D: Pricing Model and Intent Scale Translation

Pricing Model

The pricing model uses survey methodology to evaluate different price points for different entities. The entities could be new or existing products, new or existing services, or any other concept. For each entity measured, the pricing model takes consumer information from three pricing-related questions, and then projects market penetration and revenue for that entity at each price point within a range.

In general, pricing models are based on the following assumption: for every product that might be purchased, every potential buyer has some concept of an appropriate price. Therefore, for each price point, a potential buyer will either consider that price reasonable for the entity in question, expensive but still acceptable, or too expensive.

A possible approach, then, could be to ask each survey respondent: "What do you think about $20.00 for this entity? Is it reasonable, acceptable but still expensive, or too expensive?" This question could then be repeated for every price point that the researcher wanted to test.

Clearly, the above approach would not work well, particularly if the researcher was unsure of the general range of price acceptance for a particular entity. Practical considerations would limit the number of price points that could be measured in one survey. As a result, the researcher would be forced to choose between a wide range of prices with large intervals between price points (resulting in virtually useless data), or a narrow range with short intervals between price points (in which case, the researcher might miss the appropriate price range entirely). Another potential drawback to the above approach is that it might produce biased results, since quoting price points might influence survey respondents to adjust their own concept of price, whether consciously or subconsciously.

The pricing model provides the answer by allowing each survey respondent to volunteer three price points: the highest price in the "reasonable" range, the highest in the "expensive but acceptable" range, and the point beyond which the entity would even be considered for purchase. Once these three points are entered for each respondent, the analyst can look at an infinite number of price points by using a customized analysis software package. The software looks at each price point (as selected by the researcher) and asks: "What percentage of the survey respondents would find this price to be reasonable? What percent would find this price to be expensive but still acceptable? What percent would consider this price to be too expensive to consider?"

The Output

The pricing model generates a data table, based on the answers to the above questions. A graph can be generated from the data table.

The data table consists of six columns: *Price Point*, *Low*, *Medium*, *High*, *Total*, and *Per 100 Revenue*.

1) *Price Point* contains the different price points, as selected by the researcher.

2) For each price point, *Low* is the percentage of respondents who would consider that price to be too low for the entity in question -- that is, when asked to name a "reasonable" price (Pricing Question 1), these respondents quoted a price higher than that price point.

3) For each price point, *Medium* is the percentage of respondents who would consider the price point to be a reasonable price -- that is, the price point is greater than or equal to the respondents' quote for a "reasonable" price (Pricing Question 1), but lower than their quote for an "expensive but still acceptable" price (Pricing Question 2).

4) For each price point, *High* is the percentage of respondents who would consider the price point to be expensive, but still acceptable -- that is, the price point is greater than or equal to the respondents' quote for an "expensive but still acceptable" price (Pricing Question 2), but lower than their quote for a "too expensive to consider" price (Pricing Question 3).

5) For each price point, *Total* is the sum of *Low*, *Medium*, and *High*. It represents the total percentage of respondents who would buy at that price.

6) For each price point, *Per 100 Revenue* is the total projected amount of dollars that would be generated at that price, for every 100 potential buyers. For the pricing model, "potential buyers" are defined as those individuals who are aware of and interested in obtaining the particular entity. The size of this group depends on the reach and effectiveness of marketing efforts for the entity, and cannot be determined through the pricing model questions. The primary benefit of the *Per 100 Revenue* column is that it enables the researcher to identify the ideal price point for the entity in question.

Extrapolating to Adult Market Size

"Per 100 Revenue" is a fairly difficult concept to grasp. Therefore, we apply the pricing model's market penetration percentages to real-world numbers in order to make the data easier to understand and use. Specifically, the percentages are applied to the number of persons in each market segment.

Using the target market size, two additional columns were added to the pricing model data table:

7) *Adult in each segment: # adults* – The estimated number of adults (annually) who would buy the product at that price point; and

8) *Adults likely to use Ferry Revenue* – The revenue generated by multiplying that number of adults by the price point.

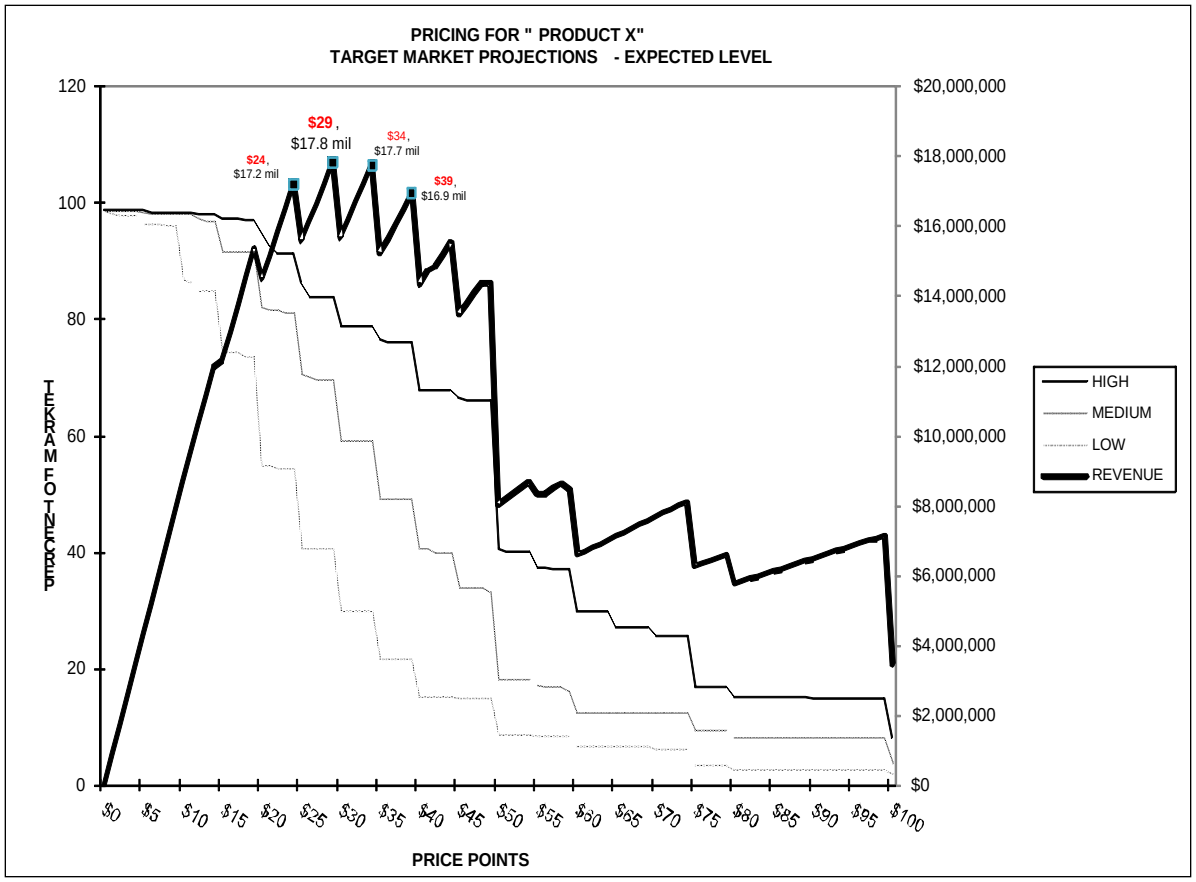
Maximum vs. Expected Level Pricing Models

The standard pricing model uses all three percentage columns (*Low*, *Medium*, and *High*) to determine *Total* market penetration. We refer to this as the "maximum level" pricing model, because it shows the highest possible percentages (and revenues) that might be achievable.

In practice, though, we tend to prefer the "expected level" version of the pricing model, since it gives more realistic projections.

The difference between the "maximum level" pricing and the "expected level" pricing is that the "maximum level" includes respondents in the "High" category of the pricing model, whereas the "expected level" excludes them. Put another way, the "maximum level" model not only counts those who view the particular price point as being reasonable or tolerably acceptable, but also even includes those for whom the price point was higher than their "expensive but still acceptable" price, as long as it was under their "too expensive" price. In contrast, the "expected level" model excludes this "High" group as being potentially too risky to count as buyers. Thus, the "expected level" is a more conservative estimate of optimal pricing.

Sample of one output of Pricing Model:



Intent scale translation

Intent scale translation is a mathematical technique used by marketers to convert stated purchase intentions into purchase probabilities, that is, into an estimate of actual buying behavior. It takes survey data on consumers purchase intentions and converts it into actual purchase probabilities.

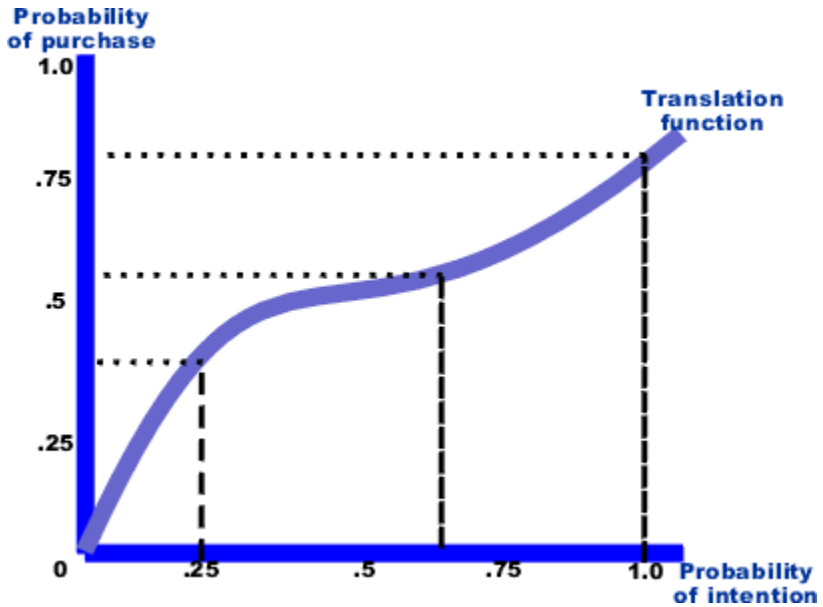
A survey might ask a question using a five-point scale such as:

> Which is most true about product X?
>
> ___ I definitely would use product X
> ___ I probably would use product X
> ___ I might use product X
> ___ I probably would not use product X
> ___ I definitely would not use product X

A marketing researcher will first assign numerical values to these intention categories. If the numbers range from zero to one, they can be thought of as intent probabilities. This is a typical example:

> definitely -> .99
> probably -> .75
> maybe -> .5
> probably not -> .25
> definitely not -> .01

Next, the researcher uses a predefined functional relationship to convert the stated intentions into estimates of actual purchase probabilities. The diagram that follows illustrates one such translation function. If a survey respondent were to choose a response of "definitely" and an intent probability of .99 was assigned to that category, then the actual probability of purchase could be read off the vertical axis. The translation function gives a value of about .8, indicating the specifiers of the function feel that not all people that claim they definitely intend to purchase will actually purchase.



Intent Translation

If a survey respondent were to choose a response of "probably not" and an intent probability of .25 was assigned to that category, then the actual probability of purchase could be read off the vertical axis as .35, indicating the specifiers of the function feel that some people that claim they probably will not purchase will actually purchase.

Optimal Revenue

The table below shows an example of how maximum revenue was calculated for the Honolulu – Kahului Route. Each of the steps in the calculations were indicated by a letter and was individually addressed below.

	Honolulu - Kahului Route				
STEP		**Response from Survey**	**Conservative**	**Realistic**	**Optimistic**
A	How likely to use Ferry Service (Q18):				
	Very Likely / Somewhat Likely	64%/20.9%	25%/12.5%	50%/25%	75%/25%
B	Passenger Ferry Service OK (Q12=Yes)	64.8%	55%	55%	55%
C	No. of times would use ferry service (Q13)	5.1	55%	55%	55%
D	Traveled Interisland Last Year (Q3>=1)	54.6%	YES	YES	YES
E	Expected Total Passenger Trips (rt) per Year		111,213	222,427	327,742
F	**Total Passenger Trips (rt) per Year at Optimal Price**	**61.9%**	**68,886**	**137,771**	**203,003**
G	**Total Revenue Passenger-Only Ferry**	**@$140**	**$ 9,643,982**	**$ 19,287,964**	**$ 28,420,459**
H	Passenger & Cars Ferry: (Q11=Very Likely)	60.9%	55%	55%	55%
I	**Total Passenger Trips (rt) per Year at Optimal Price**	**61.9%**	**70,456**	**140,912**	**208,435**
J	Total Revenue Passenger Only	@$140 and 61.9%	$ 9,863,821	$ 19,727,642	$ 29,180,902
K	Total Cars at Optimal Price	37.1%	7,388	14,776	21,857
L	Total Revenue for Car	@$99 and 37.1%	$ 731,430	$ 1,462,860	$ 2,163,846
M	**Total Revenue Passenger and Car Ferry**		**$ 10,595,251**	**$ 21,190,502**	**$ 31,344,747**

STEP A: For the estimation of revenue, we needed to determine the number of adult residents that would actually ride the ferry at any given time. We started with the respondent's intention to use the ferry service in the future (Question 18):

> **Assuming that the inter-island ferry met your price and convenience needs, now how likely would you be to use the ferry service in the future? On a 5-point scale where 5 is very likely and 1 not at all likely;**

Very likely 64.0%
Somewhat likely 20.9%
Neutral 8.0%
Not too likely 2.2%
Not at all likely.....4.9%

Then we assigned values to each of these intention categories (likelihood to use the ferry) that indicate the probability that the respondent would actually ride the ferry. This is an Intent Scale Translation - to take the survey data of stated purchase intentions and convert it into purchase probabilities, an estimate of actual buying behavior.

Very likely ➔ 75%
Somewhat likely ➔ ***25%***
Neutral ➔ 0%
Not too likely ➔ 0%
Not at all likely ➔ 0%

With this simplified example, we expected that 53.2 percent [64%*75% + 20.9%*25% = 53.2%] of the respondents would actually use the inter-island ferry system.

For this analysis, we actually created three different intent scale translations to form three revenue scenarios: Conservative, Realistic, and Optimistic.

Intent Scale	Conservative	Realistic	Optimistic
Very Likely	25%	50%	75%
Somewhat Likely	13%	25%	25%
Neutral	0%	0%	0%
Not Tool Likely	0%	0%	0%
Not At All Likely	0%	0%	0%

STEP B: For the next step, we determined the number of potential passenger-only ferry users. For this estimate we used Question 12 and applied a 55 percent Intent Scale Translation:

If the feasibility study showed demand only for passenger service, would that be an acceptable level of service for you?

Yes.....64.8%
No 24.1%
Don't know / refused.....11.1%

STEP C: To determine the annual number of trips we used the average response for Question 13 and also applied a 55 percent Intent Scale Translation:

[IF Q11 IS 3 OR HIGHER] You said that you would be likely to use the ferry in the future, how many times would you use the ferry service in a 12 month period?

Mean=5.1

STEP D: We further refined the estimate by only considering those who actually travelled inter-island in the past year (Question 3):

In the past year (12 months), how many times have you traveled inter-island?

Mean=3.2, Median=2

STEP E: Each of the steps above were programmed into SPSS and applied to each weighted record. The survey data base was weighted to produce the actual adult population in each county, therefore the result was the number of expected residents who would use the passenger-only ferry between Honolulu and Kahului.).

STEP F: However, we have not considered the price of a ferry ticket yet. As previously mentioned in the section on pricing, the optimal price was $140 for a round trip ticket and that 61.9 percent of all interested riders would be willing to pay that price. By discounting the expected number of riders by 61.9 percent, we determined the number of expected round trips per a year at the optimal price of $140.

STEP G: The final step in the revenue calculation was to multiply the $140 for each ticket to the number of expected round trips per year. Therefore, the total expected revenue for the Passenger-only Ferry between Honolulu and Kahului would be:

Table 2: Maximum Annual Revenue Expected from a Passenger-Only Ferry Honolulu-Kahului

	Conservative	Realistic	Optimistic
Honolulu - Kahului	$9,643,982	$19,287,964	$28,420,459

Listed in Table 19 is the expected annual revenue for a passenger-only ferry by inter-island route. Under the Realistic scenario, the Honolulu – Kahului route would generate $19 million in annual revenue

Table 3: Maximum Annual Revenue Expected from Each Inter-Island Route for a Passenger-Only Ferry

Total Revenue Passenger-Only Ferry	**Conservative**	**Realistic**	**Optimistic**
Honolulu - Kahului	$9,643,982	$19,287,964	$28,420,459
Honolulu - Māʻalaea	$8,506,087	$17,012,173	$25,096,454
Honolulu - Līhuʻe	$7,933,259	$15,866,518	$23,419,588
Honolulu - Kawaihae	$7,853,725	$15,707,450	$23,186,357
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617

Optimal pricing for a Passenger and Vehicle Ferry System

STEP H, I, J: We used the same model as we did in STEPS A-G however for STEP B, we assigned a probability of 55 percent to Question 11 (STEP H), "How likely are you to use that ferry in the future if the ferry could also carry drive-on personal vehicles?" instead of using the results from Question 12. Overall 60.9 percent of respondents were *very likely* to use the ferry. The expected passenger trips in a Passenger and Vehicle Ferry was shown in STEP I and the resulting total expected revenue was shown in STEP J.

Total Passenger Trips (rt) Per Year - Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	70,456	140,912	208,435
Honolulu - Mā'alaea	57,234	114,467	168,610
Honolulu - Līhu'e	32,479	64,958	95,779
Honolulu - Kawaihae	59,389	118,777	175,648
Honolulu - Hilo	63,658	127,316	187,926

STEP K: To calculate how many cars were expected to be taken on board we used divided the number of Passenger Trips (STEP I) by the average number of people that regularly travel together inter-island (Question 4: "Including yourself, how many people regularly travel inter-island with you?"). The average was 2.2 persons per trip.

STEP L: Similar to the optimal pricing for the individual ferry tickets we determined that $99 was the optimal price to take a vehicle with you to your destination. At that price point, 37.1 percent of the riders would take a vehicle.

STEP M: Adding together the revenue from STEP J and STEP L to get the total expected revenue from operating a Passenger and Vehicle Ferry between Honolulu and Kahului.

Total Revenue Passenger and Car Ferry	Conservative	Realistic	Optimistic
Honolulu - Kahului	$10,595,251	$21,190,502	$31,344,747
Honolulu - Mā'alaea	$8,606,857	$17,213,713	$25,355,814
Honolulu - Līhu'e	$4,884,212	$9,768,425	$14,403,366
Honolulu - Kawaihae	$8,930,960	$17,861,920	$26,414,169
Honolulu - Hilo	$8,432,524	$16,865,135	$24,826,617

Intra-Island Ferry on O‘ahu - Pricing and Revenue

Honolulu - West O‘ahu Route				
	Response from Survey	**Conservative**	**Realistic**	**Optimistic**
Number of Adults		286,895	286,895	286,895
At least 5x/wk between West O‘ahu and Honolulu (Q25)	49.6%	142,300	142,300	142,300
How likely to use Ferry Service (Q27):				
Very Likely / Somewhat Likely	22.8%/19.6%	25%/12.5%	50%/25%	75%/25%
Number of Ferry Users (calculated)		9,510	19,020	25,870
No. of times commute per week (Q25)	3.5	55%	55%	55%
Number of trips per year (Q13)	50 weeks	915,339	1,830,679	2,489,956
Total Passenger Trips (rt) per Year at Optimal Price	**72.9%**	**667,282**	**1,334,565**	**1,815,178**
Optimal Price Elasticity for Passenger Ticket (rt)	@$19	YES	YES	YES
Total Revenue Passenger Only		**$12,678,367**	**$25,356,734**	**$34,488,374**

Ridership and optimal pricing for the O‘ahu commuter ferry scenario was calculated very similar to the pricing for the inter-island routes.

First, only those West O‘ahu residents who traveled at least 5-days per week were considered to be potential commuter ferry users. Similar to the inter-island routes, we then created three scenarios using different Intent Scale Translations to convert Question 27 (How likely would you be to use the service regularly) from likelihood to expected intention to use the commuter ferry service.

The optimal pricing model was based on Questions 29 – 30 *“If the Kalaeloa passenger-only ferry service were available in the future, what would you consider a reasonable price for a round trip for one adult”* The optimal price was determined to be $19 and 72.9 percent of potential riders would pay that amount.

Therefore, anticipated demand for the Kalaeloa ferry would result in 1.33 million passenger trips per year for the Realistic Scenario and potential total revenue generated of $25.4 million.

Intra-County Ferry System Between Maui and Molokaʻi - Pricing and Revenue

Maui - Molokai Route				
	Response from Survey	**Conservative**	**Realistic**	**Optimistic**
Number of Ferry Users				
Number of Adults	Maui-Molokaʻi	140,471	140,471	140,471
How likely to use Ferry Service (Q37):				
Very Likely / Somewhat Likely	38.9%/16.6%	25%/12.5%	50%/25%	75%/25%
		16,576	33,151	46,812
No. of times would use ferry service (Q13: FERRY USE)	8.6	55%	55%	55%
Traveled Interisland Last Year (TravelledII)	27.7%	YES	YES	YES
Total Passenger Trips (rt) per Year at Optimal Price	**84.8%**	**18,413**	**36,825**	**52,000**
Optimal Price Elasticity for Passenger Ticket (rt)	@$90 and 84.8%	YES	YES	YES
Total Revenue Passenger Only		**$1,657,139**	**$3,314,278**	**$4,680,013**

The Maui-Molokaʻi Passenger-only ferry pricing was calculated in the same way as the inter-island ferry routes. The likelihood to use the ferry was measured by Question 37.

According to the optimal pricing model the Lahaina (Maui) and Kaunakakai (Molokaʻi) route would realistically generate 36,825 passenger trips per year which would generate $3.3 million in revenue. The optimal price for the round-trip ticket would be $90; at which 84.8 percent of those residents who said they were likely to ride the very would pay that price.

Intra-Island Ferry on Maui - Ferry Pricing and Revenue

Intra-Island Maui ferry pricing was calculated using data from the model for the Intra – Island O'ahu Commuter Ferry. First, we made the assumption ferry would be mainly used by those who worked in the Lahaina area but lived outside (Kahului, Kīhei,Pukalani, etc). Therefore, the number of users was derived from the number of jobs in the Lahaina and Kā'anapali area. Secondly we had to use data from the O'ahu commuter questions because the Resident Survey did not ask specific questions about the commuting habits or preference for Maui residents.

Lahaina - Kahului Route				
	Response from Survey	**Conservative**	**Realistic**	**Optimistic**
Number of Ferry Users				
Number of Jobs*	Lahaina/ Kā'anapali	12,271	12,271	12,271
At least 5x/wk between West O'ahu and Honolulu (Q25)**	49.6%**	6,086***	6,086	6,086
How likely to use Ferry Service (Q37)				
Very Likely / Somewhat Likely	57.4%/9.8%	25%/12.5%	50%/25%	75%/25%
Number of Ferry Users		948	1,896	2,769
No. of times commute per week (Q25) O''ahu**	3.5	55%	55%	55%
Number of trips per year	50 weeks	91,241	182,482	266,547
Total Passenger Trips (rt) per Year at Optimal Price	**72.9%**	**66,515**	**133,029**	**194,313**
Optimal Price Elasticity for Passenger Ticket (rt)	@$19	YES	YES	YES
Total Revenue Passenger Only		**$ 1,263,780**	**$ 2,527,560**	**$ 3,691,942**

*2012 U.S. Economic Census
**Assumed to be similar to O'ahu Ferry responses
*** U.S. Census (ACS) shows 7,471 workers live in Lahaina/Kā'anapali

Appendix E: Participants List

We would like to acknowledge the following people for their contributions to the Ferry Feasibility Study.

Personal Interviews Group:

- Business - Transportation — Airline Committee of Hawaii
- Business - Maritime — Hawaii Harbors Users Group
- Business - User — Hawaii Farm Bureau
- Environmental Organization — Blue Planet Foundation
- Environmental Organization — Earthjustice
- Environmental Organization — Maui Tomorrow
- Environmental Organization — Save Our Seas Hawai'i
- Environmental Organization — Sierra Club of Hawai‘i
- Government - County — Mayor of Hawaii
- Government - County — Mayor of Honolulu Designee
- Government - County — Mayor of Maui
- Government - State — House Committee on Finance
- Government - State — House Committee on Transportation
- Government - State — House Speaker
- Government - State — House Representative for Maui, Molokai, Lanai
- Government - State — Senate Committee on Transportation and Energy
- Government - State — Senate Committee on Ways and Means
- Government - State — Senate President
- Government - State — Senator for Maui, Molokai, Lanai
- Government - State — Senator for Nanakuli and Waianae
- Government - State — Hawaii Tourism Authority
- Government - State — Department of Agriculture
- Government - State — Department of Land and Natural Resources

Stakeholders

General Category	Specific Organization	No. of Surveys
Business - General	Hawaii Gas	1
Business - General	Kapolei Properties	1
Business - General	McCabe, Hamilton & Renny	1
Business - Trade Organization	Hawaii Shippers' Council	1
Business - Trade Organization	Island of Hawai'I Visitors Bureau	1
Business - Trade Organization	Maui/Lanai/Molokai Visitors Bureau	1
Business - Trade Organization	Small Biz - Hawaii Small Business Development Cent	1
Business - Trade Organization	Small Biz - HI SBDC - Maui	1
Business - Trade Organization	Small Biz - HI SBDC - Oahu (Manoa Innovation Cente	1
Business - Transportation	Expeditions (Maui - Lanai passanger ferry)	1
Business - Transportation	Island Air	1
Business - Transportation	Young Brothers	1
Business - User	Hawaii Ranchers Association	1
Community - General	Hawaii Pacific University	1
Community - General	Polynesian Voyaging Society	1
Community - General	University of Hawaii	1
Community - General	Keauhou Kona Yacht Club	1
Community - General	Nawiliwili Yacht Club	1
Community - User	Hawaii Adaptive Paddling Association	1
Community - User	Hawaii Hunting Farming and Fishing Association	1
Community - User	Kauai Outrigger Association	1
Community - User	Moku O Hawaii Outrigger Canoe Racing Association	1
Community - User	Na Opio Canoe Racing Association	1
Environmental Organization	Hawai'i Conservation Alliance	1
Environmental Organization	The Nature Conservancy - Hawaii Field Office	1
Government - County	County - Honolulu County Council Member	1
Government - County	County - Kaua'i County Council Member	3
Government - County	County - Maui County Council Member	3
Government - County	County - MISC - Maui Invasive Species Committee	1
Government - County	County - Hawaii County Council Member	4
Government - State	State - Department of Business, Eonomic Development and Tourism	1
Government - State	Department of Health	1
Government - State	Department of Land and Natural Resources	1
Government - State	Hawaii State Legislature	15
Union	HGEA	1

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APPENDIX 3

SUMMARY SHEET

Agency:	State of Hawai'i Department of Transportation, Harbors Division (DOT-Harbors)
Property locations:	Honolulu Harbor, City and County of Honolulu Kahului Harbor, County of Maui Nawiliwili Harbor, County of Kaua'i Kawaihae Harbor, County of Hawai'i
Brief description of the action:	The action evaluated in this Environmental Impact Statement (EIS) is harbor improvements needed to support a large-capacity ferry vessel company within the commercial harbors system managed, controlled, and regulated by DOT-Harbors. Indirect impacts, those occurring as a result of a large-capacity ferry vessel company's operations, are also evaluated.
Significant beneficial and adverse impacts, including indirect and cumulative impacts:	**Direct Impacts.** With the future use of the West Harbor in Kahului Harbor by a large-capacity ferry vessel and others, those practicing cultural activities in the vicinity of the new harbor improvements would be displaced and significantly and adversely impacted. New pier construction at Kawaihae Harbor may result in potentially significant and adverse impacts on nearby Pu'ukohola Heiau National Historic Park. Specific concerns include visual impacts, given the Heiau's vantage point providing views toward the sea and from the sea; construction vibrations that could affect the rock walls of the heiau; and construction noise that may affect cultural or ceremonial activities occurring there. **Indirect Impacts.** Indirect significant and adverse impacts resulting from the operation of a large-capacity ferry vessel include those on traffic and traditional cultural practices. Significant traffic impacts would occur at one intersection near each of the following three commercial harbors: Kahului, Nawiliwili, and Kawaihae. Significant concerns regarding potential impacts on traditional cultural practices at Nawiliwili and Kawaihae harbors, specifically the potential loss of natural resources and activities (fishing, surfing, diving) that are important for cultural reasons, have been recognized in the cultural impact analyses (CIAs) prepared for this project. A large-capacity ferry vessel would provide a significant beneficial impact on public health and safety in Hawai'i, as it would provide a superior marine mode of transportation for disaster planning and emergency response. This particular type of ferry vessel would increase the capabilities and response times of first responders and relief efforts. **Cumulative Impacts.** Significant and adverse cumulative impacts as a result of the action and other past, present, and reasonably foreseeable actions could occur on traffic in the vicinity of all four commercial harbors, takes of humpback whales in Hawaiian waters, inter-island dispersal of invasive species, and traditional cultural practices within Kahului Harbor.

Proposed mitigation measures:	With the mitigation measures proposed in this EIS, significant adverse impacts can be substantially or fully mitigated, with the exception of certain cultural uses at Kahului Harbor. In this case, the development of and subsequent use of the future West Harbor by a large-capacity ferry vessel (and other commercial harbor activities) would displace users conducting cultural activities in the immediate area. Construction related impacts (direct impacts) on nearby Pu'ukohola Heiau National Historic Park associated with improvements at Kawaihae Harbor could be mitigated by using paint and landscaping to soften the visual effects of sheds and storage facilities, retaining the current buffer zone between the harbor and the Historic Park, and evaluating the risks of vibration impacts during the design phase and identifying alternative methods as needed. Indirect and cumulative traffic impacts can be fully mitigated with the road improvements identified in Sections 4.2.1 and 4.3.1 of this EIS. The exception is cumulative impacts of regional growth in 2030 at one intersection in the vicinity of Kawaihae Harbor. Future planned regional roadway improvements such as the Kawaihae Road Bypass may help improve traffic conditions at this one intersection. Participants in the CIA offered the following measures to address concerns and to help mitigate indirect and cumulative impacts to cultural traditional practices on Kaua'i: provide the community an opportunity to review and comment on the draft CIA in this EIS; have the State of Hawai'i Department of Land and Natural Resources (DLNR) develop a mitigation plan to enforce conservation laws and rules that have important cultural and spiritual value and significance to Native Hawaiians and other kama'aina; address concerns about fishing spots, surf breaks, and dive places by holding meetings throughout the island; and offer educational programs for ferry vessel passengers. CIA participants offered that indirect and cumulative impacts to cultural traditional practices on Hawai'i Island could be mitigated by: having government conduct inspections and enforce conservation laws and rules; offering educational programs for ferry vessel passengers; organizing a consultative body; and implementing community relations/outreach. Cumulative impacts on whales as a result of increasing vessel traffic in Hawaiian waters could be mitigated with the use of whale avoidance protocols to limit the cumulative takes of humpback whales. Cumulative impacts from invasive species would occur as a result of, first, an increase in the transport of cargo into the state and, secondly, an increase in the transport of cargo inter-island. These impacts could be mitigated with the State of Hawai'i Department of Agriculture's (DOA's) biosecurity program, as discussed in Section 4.2.2.5.1 of this EIS.
Alternatives considered:	The range of alternatives with DOT-Harbors' action are limited to areas that the DOT-Harbors manages or controls. For this reason, alternative pier locations within each of the three harbors and an alternative pier configuration in Kawaihae Harbor were evaluated in this EIS. Table 2-1 of this EIS summarizes the alternatives evaluated. Alternative vessel designs or other modes of transportation providing a similar benefit were not evaluated, as these issues are not within DOT-Harbor's management or control.

Unresolved issues:	Two issues are unresolved: control of invasive species and recreational users within commercial harbors. The DOA's Biosecurity Program is the State's key program in controlling invasive species from entering the state of Hawai'i and from spreading between islands. However, funding and approvals are needed before it can be effectively implemented. Commercial harbors are working harbors with activities that are generally not compatible with recreational users for safety reasons. In many cases; however, DOT-Harbors continues to accommodate recreational users within certain areas of the commercial harbors. As is evident at Kahului Harbor, the commercial harbor provides a safe haven for commercial vessels and recreational users because it is the only protected ocean area in the region. With highly valued activities competing for space, difficult decisions based on continuously changing economic and harbor demands must be made in the best interest of the State and its people at any one time, as not everyone can be fully served within the confines of the commercial harbors.
Compatibility with land use plans and policies, and a listing of permits or approvals:	DOT-Harbors' action is generally compatible with land use plans and policies as discussed in Chapter 5 of this EIS. As DOT-Harbors is exempt from the requirements of HRS Chapter 205A (Hawai'i's Special Management Area law) and Act 2 exempts large capacity ferry vessel projects from county permits, the following permits and approvals expected for the action are National Pollutant Discharge Elimination System permits for construction stormwater from the State of Hawai'i Department of Health. Additional permits and approvals, which would be obtained using separate environmental documents when designs for improvements are available, could include: Department of the Army permits, Clean Water Act Section 401 Water Quality Certifications, Coastal Zone Management Consistency Determinations, and State Conservation District Use permits.