
**RAPID RISK ASSESSMENT
OF
OPERATIONAL COMPLIANCE
AND ENVIRONMENTAL RISKS
OF THE
HAWAII SUPERFERRY**

Prepared for:



State of Hawai'i
Department of Transportation
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1 PURPOSE

Pursuant to Act 002 Second Special Session of 2007 (Act 2), the Hawaii Superferry (HSF) is allowed to operate during the preparation of an environmental impact statement (EIS), subject to the employment of measures to mitigate significant environmental effects. As the final EIS may not be completed until June 2009, the purpose of this Rapid Risk Assessment (RRA) is to provide early and independent assessment of: 1) operational compliance with mitigation measures enumerated in section 4(a) of Act 2, Executive Order 07-10 and the Agreement between Hawaii Superferry, Inc. and the State of Hawai'i, and 2) observed environmental risks associated with the HSF operation.

2 METHODOLOGY

Belt Collins Hawaii (BCH) contracted the following subconsultants to conduct the RRA investigations in their respective fields of expertise:

- Marine Mammals Research Consultants (MMRC) – Ocean Life and Marine Animals and Plants
- Mr. John Clark, Planning Consultant – Water Resources and Quality / Public Safety and Security
- Fehr & Peers/Kaku Associates – Vehicular Traffic
- Bishop Museum, Department of Natural Sciences – Invasive Species / Cultural and Natural Resources
- Rev. Dr. Kaleo Patterson – Native Hawaiian Cultural Sensitivity and Awareness

Field investigations commenced on 9 January 2008, but were interrupted in February 2008 because the HSF cancelled voyages due to high seas and annual maintenance and repairs. Field investigations continued when the HSF resumed operations in April 2008. The final field investigation was completed on 26 May 2008.

The operational ports of the HSF during the RRA consisted only of Honolulu Harbor and Kahului Harbor. A description of the field work conducted by each subconsultant team is presented below.

2.1 Marine Mammals Research Consultants

Field investigations onboard the HSF vessel were conducted by one of two experienced MMRC consultants and included a total of 25 one-way trips (legs) traveled between Honolulu and Kahului. Observations were recorded on the bridge of the vessel with access to instrument displays and direct communication with the HSF Captain and the able-bodied seamen serving as whale lookouts. Distance estimations to whales were made using a hand-held clinometer, which measures sighting angles to whales.

2.2 Mr. John Clark, Planning Consultant

Field investigations conducted by John Clark consisted of a complete tour of the HSF vessel, including all of its wastewater systems, while in port in Honolulu. The vessel tour was guided by the HSF Director of Engineering and included a walk-through of the support facilities warehouse in Honolulu. Observations of vessel cleaning (i.e., freshwater wash down), fueling, and wastewater discharge operations, which are all conducted daily in Honolulu, were made. Field investigations also consisted of five one-way trips onboard the HSF vessel to observe wastewater disposal and security operations while underway.

2.3 Fehr & Peers/Kaku Associates

Field investigations conducted by Fehr & Peers/Kaku Associates were performed over holiday periods when passenger and vehicular loads were anticipated to be greatest: Martin Luther King Jr. holiday weekend in January (Friday, 20 January 2008 through Monday, 23 January 2008) and Memorial Day

weekend in May (Friday, 23 May 2008 through Monday, 26 May 2008). During the January observations, field investigations consisted of:

- four embarking observations in Honolulu,
- three disembarking observations in Honolulu, and
- four overlapping disembarking/embarking observations in Kahului.

During the May observations, field investigations consisted of:

- four embarking observations in Honolulu,
- three overlapping disembarking/embarking observations in Honolulu,
- four disembarking observations in Honolulu, and
- seven overlapping disembarking/embarking observations in Kahului.

2.4 Bishop Museum, Department of Natural Sciences

The field investigation team consisted of six Bishop Museum staff members tasked with observing the HSF screening operations for departing passengers and vehicles. Field work was conducted in pairs, except for the first observation which included all six staff members to standardize the field work procedures. Twenty-five (25) total observations of the screening operations were made, consisting of:

- 15 at Honolulu, and
- 10 at Kahului.

Each observation covered the two hours immediately preceding the HSF departure, and data was recorded for as many arriving passengers and vehicles as could reliably be tracked. RRA investigations also included inspection of: the HSF web site, ticket purchase process, and electronic documents provided by HSF upon ticket purchase.

2.5 Rev. Dr. Kaleo Patterson

Field investigations conducted by Rev. Dr. Kaleo Patterson and Dr. Lou Ann Ha'aheo Guanson consisted of five one-way trips on the HSF vessel to observe the operations with respect to cultural sensitivity and awareness of the Hawaii's host culture. Observations included an assessment of: online ticketing, port operations, passenger screening, boarding and disembarking, ocean travel and routing, video and audio programming, printed material, marketing, branding, workplace culture, and employee training.

3 FINDINGS AND RECOMMENDATIONS

Based on the field investigations and information provided by the HSF Director of Business Development, Mr. Terry O'Halloran, the HSF appears to be in general compliance with the conditions and protocols enumerated in Executive Order No. 07-10 (E.O. 07-10; provided in Appendix A). Table 1 itemizes the E.O. 07-10 protocols and conditions observed for compliance, identifies the corresponding RRA Scope of Work (SOW; provided in Appendix B) conditions, and indicates whether or not the conditions were met.

Field investigation findings and associated recommendations that address potential environmental risks follow. The full reports submitted by the subconsultants are provided as Appendices C through G.

3.1 Ocean Life and Marine Animals and Plants

General compliance with E.O. 07-10 conditions associated with ocean life and marine animals and plants (Section A) was observed during the field observations. Humpback whales were sighted on all legs during the designated whale season (i.e., between January 1 and April 30) and during each of the three daytime legs observed in May 2008. No whales were sighted during the three corresponding nighttime legs observed in May 2008; however, the sightings earlier on those days suggest that whales were likely to have been present but were undetected. No collisions with or near misses of whales occurred.

- Mr. O'Halloran confirmed that, in compliance with E.O. 07-10 condition A.1, the HSF requested that National Marine Fisheries Service (NMFS) certified fisheries observers be onboard the vessel to help monitor and document all marine life sighting and potential impacts to marine life by the vessel.
- In compliance with E.O. 07-10 condition A.2, the HSF Captain avoided vessel operations within the boundaries of the Hawaiian Humpback Whale National Marine Sanctuary waters unless compelling reasons of passenger safety and comfort existed to the contrary. Due to high winds and/or high seas along the alternate route, the Captain made the decision to travel inside Sanctuary waters on seven of the observed legs, with only four of these occurring during the designated whale season. When operating within Sanctuary waters, the HSF maintained speeds of less than 25 knots at all times and courses were taken that minimized the potential for contact with whales based on whale locations maps posted on the bridge. The Captain maintained a logbook of the course taken on each leg, and noted any evasive maneuvering required to avoid whales. The observer reported that at the end of each day, a digital copy of the Captain's logbook is forwarded to the Department of Transportation (DOT) and the DLNR by the HSF Director of Operations.

Based on the observer's conversation with the Captain during the early part of the field investigations during the designated whale season, there appeared to be some confusion as to whether a reduced speed was *required* when traveling in waters less than 100 fathoms while outside of Sanctuary boundaries. It should be clarified to the HSF that during the designated whale season, speeds of 25 knots or less be maintained in all waters less than 100 fathoms, regardless of whether the HSF is operating inside or outside of Sanctuary waters.

- In compliance with E.O. 07-10 condition A.3, two able-bodied seamen were posted as whale lookouts at all times on the bridge wings. Both lookouts demonstrated vigilance (i.e., actively scanning for whales) during at least 90 percent or more of the total time observed, and notified the Captain when whales were sighted. Although the level of vigilance is high, it is recommended that the HSF take measures that would help maintain a consistent level of vigilance beyond the current RRA process. A third party observation team should be implemented whereby observers are brought onboard the HSF at random intervals to ensure compliance with whale avoidance protocol during future whale seasons.
- The HSF vessel maintained a minimum of 500 meters distance from sighted whales whenever possible, as required by E.O. 07-10 condition A.4. On at least three recorded occasions, however, the vessel passed within 500 meters of whales. It should be noted that 500 meters is a substantial distance (approximately 1/3 mile) and given average densities of whales within nearshore Hawaiian waters, the stringent requirement of maintaining a 500-meter minimum distance from sighted whales should be reevaluated.
- E.O. 07-10 condition A.5 requires that the HSF agree to utilize radar, night vision equipment, and bow-mounted cameras to detect whales and try to avoid collisions. Radar equipment was kept operational during all transits, though it was not specifically used to detect whales. It should be noted that the use of radar as a means to detect whales is currently still in the research and

development phase. At present, the only means of reliably detecting a whale at the surface is by visual detection, so reliance on the two lookouts should be considered sufficient during daylight hours.

On the nighttime legs, hand-held, monocular night vision devices were employed by the two lookouts. Although vision at twilight is impaired due to low light, night vision equipment was not typically used immediately following sunset. In addition, the hand-held and monocular aspects of the night vision device appeared to produce fatigue after just several minutes of use. Significant variation in usage of the night vision equipment by the two lookouts occurred; one used the device approximately 75 percent of the time, while the other used the device as little as 15 percent of the time. It is recommended that a binocular night vision device with a head harness be used to free up hands and avoid fatigue, and that use of the night vision equipment be standardized so that it is used consistently and continuously following sunset. It is also recommended that a study demonstrating the effectiveness of the night vision system at detecting whales be performed using scientifically accepted methods.

Bow-mounted cameras are not currently employed on the HSF vessel, as no such cameras were available during the RRA observation period. The HSF, however, has contracted Current Corporation to develop a bow-mounted infrared sensor system to aid in detecting whales. As with radar equipment, the efficacy of these sensors in detecting whales is still in the research and development phase. Given that the utility of radar and bow-mounted sensors in detecting whales has yet to be demonstrated, the requirement to use both radar and bow-mounted cameras should be reevaluated. At present, during daylight hours, all whale avoidance measures should focus on visual detection.

- E.O. 07-10 condition A.6 requires documentation of any collision or whale approach less than 100 meters from the vessel, and in the event of a collision, requires noting observable damage or injury to the whale, remaining on the scene until rescue arrives (if safe and possible), and submitting a detailed written report to DOT and DLNR within 24 hours. Because no collisions or whale approaches less than 100 meters from the vessel occurred, operational compliance was confirmed by reviewing the HSF's "Whale Avoidance Policy," which states that in the event of any whale collision, the ship's Master shall call the National Marine Fisheries Service (NMFS), the U.S. Coast Guard (USCG), and the Hawaiian Islands Humpback Whale National Marine Sanctuary to report the incident, and that the vessel is to remain in the area for as long as practical and, if possible, take photos and/or video of the injured animal. In addition, the HSF's "Whale Avoidance Policy" states that a detailed written report is to be submitted to the Director of Marine Operations within 24 hours of any such incident (and presumably forwarded to DOT and DLNR).
- Mr. O'Halloran confirmed that, in compliance with E.O. 07-10 condition A.7, the HSF staff have been trained by DLNR personnel on proper procedures for retrieving downed seabirds and turning the birds over to DLNR biologists or rehabilitation specialists. Between September 15 and December 15, DLNR-trained crew members are present onboard the HSF vessel to retrieve and care for downed seabirds.

Recommendations

The following recommendations are offered:

- It should be clarified that during the designated whale season, speeds of 25 knots or less be maintained in all waters less than 100 fathoms, regardless of whether the HSF is operating inside or outside of Sanctuary waters.
- In order to maintain a consistent level of vigilance beyond the RRA process, a third party observation team should be implemented whereby observers are brought onboard the HSF at

random intervals to ensure compliance with whale avoidance protocol during future whale seasons.

- The requirement of maintaining a 500-meter minimum distance from sighted whales should be reevaluated.
- A binocular night vision device with a head harness should be used to free up hands and avoid fatigue, and use of the night vision equipment should be standardized so that it is used consistently and continuously following sunset.
- A study should be performed to demonstrate the effectiveness of the night vision system at detecting whales using scientifically accepted methods.
- The requirement to use radar and bow-mounted cameras should be reevaluated until the utility of this equipment in detecting whales has been clearly demonstrated. At present, during daylight hours, all whale avoidance measures should focus on visual detection.

3.2 Water Resources and Quality / Public Safety and Security

Full compliance with all E.O. 07-10 conditions associated with water resources and quality (Section B) and public safety and security (Section D) was observed during the field observations.

- Mr. O'Halloran confirmed that the HSF is in compliance with HRS chapter 342D, "Water Pollution," and such other laws, rules, or regulations adopted by the Department of Health, Clean Water Branch, as required by E.O. 07-10 condition B.1.
- In compliance with E.O. 07-10 condition B.2, the HSF does not discharge any wastewater into the ocean. Grey water (from the vessel's sinks and freshwater wash down) and black water (from the vessel's toilets and urinals) generated onboard the vessel are contained within their own disposal systems and gravity-flow into a combined 10,000-liter holding tank that is emptied daily in Honolulu by Aqua Pumping, a commercial vendor contracted by the HSF. The grey and black wastewater systems are completely enclosed and there is no valve in either system where wastewater can be discharged at sea.

Bilge water (any water that could be contaminated with petroleum products) generated onboard the vessel is contained within its own disposal system and gravity-flows into a 500-liter holding tank that is emptied periodically in Honolulu by Aqua Pumping when the tank is one-half to three-quarters full. If bilge water is suspected of any petroleum contamination, it is diverted into portable 400-gallon containers (cubitainers) and the oily water is disposed of by Penco or Unitek. The vessel is equipped with an oily water separator and discharge valve which enable the HSF to discharge bilge water that meets federal requirements into the ocean; however, per company policy, the oily water separator and discharge valve are never used and all bilge water is discharged in port in Honolulu.

In the event that any vehicle on the vessel's decks should leak fuel, oil, grease, or any other liquid, the HSF is equipped with spill kits. The absorbent material is spread on the spill, picked up and bagged, and then disposed of in Honolulu. Petroleum spills onboard the HSF are not washed down, but if rainwater should interact with a spill, the oily water would drain into the gutters on the decks which connect to the bilge water disposal system. There are no scuppers (drains) that drain off the decks into the ocean.

All the HSF fueling operations are performed in Honolulu. Diesel is pumped from a Chevron fuel truck into two fuel storage tanks in the vessel's hull. In the event of a leak in the fuel system piping, the fuel would be captured by the bilge water disposal system.

The HSF's Finance Section maintains the records that verify that wastewater generated onboard the HSF vessel, including bilge water, is discharged in port in Honolulu. The HSF vessel does not carry ballast water and is not equipped with ballast tanks. Based on the above findings, there are no recommendations for improvements to the HSF's wastewater disposal operations.

- The HSF's Safety Management System Main Manual, written for the HSF by Hornblower Marine Services, includes both a facility security plan and a vessel security plan. In compliance with E.O. 07-10 condition D.1, the USCG issued the HSF a Certificate of Inspection, which includes approval of the manual, on 24 May 2007. The certificate is valid for five years, requires the HSF to conduct periodic drills to test its procedures, and subjects the HSF to an annual audit of its procedures by the USCG. The HSF Operations Support Manager is responsible the implementation of the policies and procedures in the Safety Management System Main Manual.
- In compliance with E.O. 07-10 condition D.2, the HSF Port Managers have coordinated visits to the port facilities in their respective counties and onboard the vessel for the first responders, fire departments, and police departments. The HSF Port Managers maintain a cordial relationship with the fire and police departments, and additional visits may be requested at any time.

Recommendations

None.

3.3 Vehicular Traffic

Full compliance with all E.O. 07-10 conditions associated with vehicular traffic (Section C) was observed during the field observations.

- Mr. O'Halloran confirmed that the HSF contracted CH2M Hill to conduct traffic studies at each harbor in November 2006, as required by E.O. 07-10 condition C.1. These reports can be viewed on the HSF web site.
- The HSF has implemented vehicle movement and management plans for its port terminal facilities in Honolulu and Kahului, as required by E.O. 07-10 condition C.2. Vehicle movement and management operations were observed to be in accordance with the site plan diagrams published on the HSF web site.
- Mr. O'Halloran confirmed that, in compliance with E.O. 07-10 condition C.3, the CH2M Hill traffic studies were used to adjust the HSF's arrival and departure schedules to lessen the impact of vehicular traffic associated with the HSF on local traffic patterns in the immediate vicinity of each operating port.
- E.O. 07-10 condition C.4 requires the HSF to: (a) design its harbor facilities to, insofar as practicable, hold departing vehicles within the terminal area; (b) employ trained staff to manage traffic entering and exiting each port terminal facility; (c) permit vehicles to enter each port terminal facility a minimum of two hours prior to departure of the vessel to reduce local traffic impacts; and (d) as required by DOT, retain and post security guards or off-duty police officers to direct traffic, control signals, and respond to unforeseen traffic problems during vehicle loading or unloading in ports of operation.

The harbor facilities in both Honolulu and Kahului are designed such that departing vehicles can be accommodated within the terminal area. Trained HSF staff managed the traffic entering and exiting the terminal facilities. At both ports, HSF personnel were positioned at each entry/exit point to direct traffic. The HSF staff also directed traffic inside the terminal facilities and managed the passenger pick-up/drop-off areas. Terminal facilities in both Honolulu and Kahului are opened to passenger vehicles a minimum of two hours prior to the scheduled vessel departure.

In Honolulu, private traffic control contractors were posted at each access point along Nimitz Highway for the midday overlapping arrival/departure on 23 May 2008 and 26 May 2008 (Friday and Monday of the Memorial Day weekend, respectively). The contractors coned off the right lane of Diamond Head-bound Nimitz Highway creating freeflow right turns into and out of Kukahi Street and the passenger pick-up/drop-off area. On peak demand days when traffic control contractors were not present, the queue of exiting vehicles on Kukahi Street extended from Nimitz Highway to Gate 3. In order to avoid queuing of outbound vehicles on Kukahi Street, traffic control should be implemented at Nimitz Highway (e.g., flagger to direct traffic). It is also recommended that the coning operation be continued during future peak demand days to facilitate traffic flow of the concurrently embarking and disembarking vehicles.

In Kahului, traffic control officers (TCOs), presumed to be off-duty police officers, were posted along Pu'unene Avenue on all observation days. During several observation days in May, TCOs manually controlled the traffic signal at the Pu'unene Avenue and Ka'ahumanu Avenue intersection. The heavy presence of TCOs (as many as five) at the exit during off-loading operations seemed to make some drivers apprehensive about their actions, hindering the outbound flow of traffic. In order to maintain off-loading efficiency, the number of TCOs should be reduced. In addition, it is recommended that while manually controlling the traffic signal, TCOs should maintain a regular signal timing pattern to allow for more efficient operation of the intersection.

In Honolulu, vehicle traffic associated with the HSF did not impact traffic operations on Nimitz Highway during any of the observed time periods. Traffic in/out of the vehicle entrance and on/off of the HSF vessel operated efficiently given the volume of vehicles handled. Lack of clear signage, however, caused confusion for drivers entering the HSF port area, as vehicles were observed using the wrong entrance and needing to circle back around. It is recommended that the HSF post signage on both the Diamond Head and 'Ewa directions of Nimitz Highway which clearly marks upcoming turns for the vehicle entrance and the passenger pick-up/drop-off area. In addition, a sign should be suspended over Kukahi Street at Gate 3 (the commercial vehicle entrance) indicating that general passenger vehicles proceed to Gate 1.

Vehicles arriving on the 'Ewa-bound Nimitz Highway would often make a U-turn at Kukahi Street onto the Diamond Head-bound Nimitz Highway to access the HSF port area, forcing them to cut across all lanes of Nimitz Highway to turn into the passenger pick-up/drop-off area. In order to avoid this potential traffic safety hazard, signage on the 'Ewa-bound Nimitz Highway should indicate that vehicles turn at Pacific Street (rather than making a U-turn at Kukahi Street). If signage proves to be insufficient, it is recommended that a barrier be installed to limit access to the right lane of Nimitz Highway, such that vehicles making a U-turn at Kukahi Street will not be able to cut across the highway and turn into the passenger pick-up/drop-off area. It is also recommended that a sidewalk be constructed from Nimitz Highway into the HSF passenger terminal to safely accommodate passengers that arrive on foot.

In Kahului, the intersections of Ka'ahumanu Avenue with Pu'unene Avenue and Ka'ahumanu Avenue with Wharf Street currently operate at an acceptable level of service during all peak traffic periods, even with the addition of HSF-related traffic, and there were no traffic operational problems observed at these intersections. On one occasion, however, an operational issue was observed between entering commercial vehicles and exiting general vehicles at Gate 14, creating a brief back up on Pu'unene Avenue. It is recommended that commercial vehicles be required to arrive early, possibly even before the general public, to avoid the potential conflict with disembarking vehicles.

Recommendations

The following recommendations are offered:

- Traffic control should be implemented at Nimitz Highway (e.g., flagger to direct traffic) in order to avoid queuing of outbound vehicles on Kukahi Street.
- The coning operation along Nimitz Highway should be continued during future peak demand days to facilitate traffic flow of the concurrently embarking and disembarking vehicles.
- The number of TCOs at Kahului should be reduced in order to maintain off-loading efficiency.
- While manually controlling the traffic signal at the intersection of Pu'unene Avenue and Ka'ahumanu Avenue, TCOs should maintain a regular signal timing pattern to allow for more efficient operation of the intersection.
- Signage should be posted on both the Diamond Head and 'Ewa directions of Nimitz Highway which clearly marks upcoming turns for the vehicle entrance and the passenger pick-up/drop-off area. In addition, a sign should be suspended over Kukahi Street at Gate 3 (the commercial vehicle entrance) indicating that general passenger vehicles proceed to Gate 1.
- Signage on the 'Ewa-bound Nimitz Highway should indicate that vehicles turn at Pacific Street, rather than U-turn at Kukahi Street, in order to avoid the potential traffic safety hazard of vehicles cutting across all lanes of Nimitz Highway to turn into the passenger pick-up/drop-off area. If signage proves to be insufficient, a barrier should be installed to limit access to the right lane of Nimitz Highway.
- A sidewalk should be constructed from Nimitz Highway into the HSF passenger terminal to safely accommodate passengers that arrive on foot.
- Commercial vehicles should be required to arrive early, possibly even before the general public, in order to avoid the potential conflict with disembarking vehicles (particularly in Kahului).

3.4 Invasive Species / Cultural and Natural Resources

General compliance with E.O. 07-10 conditions associated with invasive species (Section E) and cultural and natural resources (Section F) was observed during the field observations. However, because the quality and consistency of inspections were not maintained, certain aspects of the inspections were deemed noncompliant. Although the operational conditions do not call for recurrent training, updated training should be required at regular intervals to reinforce standards for prohibited items and inspection diligence, as well as to ensure that newly hired staff receives consistent training.

- As dictated by E.O. 07-10 condition E.1, the HSF staff conducted agricultural screenings of its passengers and visual inspections and agricultural screening of all vehicles; however, inspections and screenings were carried out with varying levels of diligence. Observations suggest that the thoroughness of inspections and screenings declined when the HSF staff were pressed for time (due to a backlog of vehicles or passengers) or distracted by other processing glitches (e.g., problems with the boarding pass). Adoption of a system that staggers vehicle arrival times, within the two-hour period in which vehicles are allowed to enter the port terminal facility, is recommended to limit vehicle backlog and the associated decline in inspection diligence. Also, a checklist of the required inspection actions and screening questions should be integrated into the existing electronic pre-boarding checklist so that potential invasive species risks are not overlooked. Because of the inconsistent visual inspections of vehicular engines, interiors (23% of interiors were not inspected), undercarriages, wheel wells (30% of wheel wells were not

inspected), trunks, beds of pickup trucks, and trailered equipment, the HSF was deemed not in compliance with E.O. 07-10 condition E.1.

- In compliance with E.O. 07-10 condition E.2, all vehicles are required to pass through the inspection and screening process prior to boarding the HSF vessel. In addition to verbal screenings for prohibited items, the HSF staff consistently opened coolers for inspection, but other luggage and transported items were virtually uninspected. Depending on legal limitations, consideration should be given to increasing the number of random baggage inspections to prevent potential smuggling of plants, animals, and other biological materials.
- In compliance with E.O. 07-10 conditions E.3 and E.4, the notification provided to all passengers upon HSF ticket purchase states 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, and 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. It is recommended that the notification put greater emphasis on the necessity to remove mud from vehicles, as many arriving passengers do not seem to take this requirement seriously. Additional pre-arrival vehicle cleaning procedures, including vacuuming of the interior and removal of accumulated vegetative material from under the hood, around the trunk, or inside the truck bed, should also be added to the notification.
- E.O. 07-10 condition E.5 requires the HSF to deny boarding of vehicles that are excessively dirty or muddy, or that have caked-on mud. In several cases, however, the HSF staff allowed boarding of vehicles that contained significant quantities of mud that the Bishop Museum staff would have prohibited. The HSF staff had a tendency to overlook mud hidden on fenders of pickup trucks, as well as seeds, grass, and leaf litter under vehicle hoods, in trunks, and on interior floorboards. Because of the lenient allowances for muddy vehicles (several vehicles were allowed to board that contained significant quantities of mud), the HSF was deemed not compliant with E.O. 07-10 condition E.5. While RRA observers recommended that an undercarriage pressure-wash system and a vacuum cleaner be available to better ensure that vehicles will be clean and free of invasive species before boarding the HSF vessel, it is highly unlikely that an undercarriage pressure-wash system could be accommodated given constraints on space and water within certain harbors, along with concerns about permitting and water disposition at all harbors.
- In compliance with E.O. 07-10 condition E.6, living plants and propagative plant parts that were not accompanied by a DOA certificate of inspection were invariably forfeited to the HSF staff, and DOA personnel were present to inspect other non-propagative plant parts, including cut or harvested flowers, foliage, fruits, and vegetables, as required by E.O. 07-10 condition E.7.
- As dictated by E.O. 07-10 conditions E.8 – E.10, the only animals permitted on the vessel without a DOA certificate were domestic cats, dogs, pigeons, and rabbits, as there were no known attempts to transport uncertified domestic livestock, uncertified poultry, or swine of any kind.
- In compliance with E.O. 07-10 conditions E.11 – E.13, the notification provided to all passengers upon HSF ticket purchase states that valid hunting licenses are required by DLNR in the State of Hawai‘i, prior to hunting, and indicates that potential invasive species vectors banned from the vessel include fishing nets of any kind, as well as rocks, soil, sand, dirt, or dead coral, except for soil or dirt in potted plants inspected and cleared for transport by the DOA.
- Boot scrubbers are provided at both the Honolulu and Kahului passenger terminals, as required by E.O. 07-10 condition E.14; however, passenger use of the boot scrubbers was not observed. It is recommended that informative signage be put in place to encourage use of the boot scrubbers when necessary.

- As dictated by E.O. 07-10 condition E.15, the HSF requires passengers to declare all plants, fruits, seeds, and any other biological medium, as indicated in the notification provided to all passengers upon ticket purchase. Verbal querying of passengers traveling without vehicles to elicit such declarations, however, was observed to be inconsistent. The HSF staff frequently omitted questions regarding non-plant materials and occasionally did not query passengers about prohibited items at all. Animals or other banned non-plant materials should be explicitly mentioned when conducting verbal screenings for prohibited items. Because of the inconsistent questioning of passengers (17% of passengers traveling without vehicles were not verbally queried), the HSF was deemed not in compliance with E.O. 07-10 condition E.15.
- Pests for control or eradication purposes (e.g., insects hitch-hiking on vehicles) and invasive species were removed by the HSF staff, and DOA personnel confirmed that the HSF staff have been trained to screen for and identify the same, as required by E.O. 07-10 condition E.16.
- E.O. 07-10 condition E.17 requires the HSF to fully cooperate in any risk assessment performed by the DOA. Although the DOA has not yet performed any risk assessment directly involving HSF operations, the HSF staff has been working cooperatively with both DOA and DLNR personnel that are present at the inspection stations, as required by E.O. 07-10 condition E.18.
- In compliance with E.O. 07-10 conditions F.1 – F.5, the notification provided to all passengers upon HSF ticket purchase indicates that cultural and natural resources banned from the vessel include iwi or human bones; opihi, lobster, and other crustaceans; and cut logs, cut trees, and tree limbs. In addition, the notification states that marine life, including live or dead fish, may only be transported with a valid commercial marine license issued by DLNR, except that recreational fishers may transport fish subject to any limitations established by DLNR, and asks that passengers be sensitive to the use of cultural and natural resources, including but not limited to hunting and fishing rules and camping permit requirements.
- Mr. O'Halloran confirmed that the HSF is currently working toward adding information about Hawai'i's cultural and natural resources to its onboard programming, as required by E.O. 07-10 condition F.6.

In addition to the notification provided to all passengers upon HSF ticket purchase, information regarding inspection procedures and banned items is also displayed on signage that is posted at both the vehicle inspection stations and the passenger terminals. Unfortunately, the current signage is confusing in its identification of prohibited items versus permitted items. In addition, the signs are placed in inconspicuous locations which seem to elicit little notice from arriving passengers. It is recommended that the signage be rewritten for clarity and that signs be hung from the front of the vehicle inspection stations and in passenger waiting areas where they are more likely to be seen.

Another concern is lighting for vehicle inspections during the pre-dawn and nighttime hours. The HSF staff relied on hand-held flashlights of varied quality to inspect wheel wells, under hoods, and in trunks. Some flashlights provided insufficient lighting for inspection purposes. In order to ensure that thorough inspections occur during low-light conditions, the HSF should provide its staff with reliable flashlights of uniformly high quality.

During the pre-dawn and nighttime hours, the HSF staff also used flashlights to illuminate vehicle undercarriages by reflecting light off of the trollied mirrors. Although the trollied mirrors are a sensible means of inspecting undercarriages, the reflected lighting from a flashlight seems inadequate for inspection purposes in low-light conditions. It is recommended that the HSF use a trollied mirror that incorporates a bank of forward-directed lights to more effectively illuminate vehicle undercarriages.

An important qualification of the RRA observations is that HSF staff was aware of the field team's presence and may have altered their behavior accordingly. Thus, it is possible that typical inspection

performance of the HSF is lower than that observed by the field team. In order to ensure inspection vigilance beyond the duration of the RRA process, it is recommended that HSF consider hidden camera surveillance (to be screened by a third party) and/or random assessments by DOT personnel of the HSF inspection process for compliance.

Recommendations

The following recommendations are offered:

- Updated training should be required at regular intervals to reinforce standards for prohibited items and inspection diligence, as well as to ensure that newly hired staff receives consistent training. Training should be consistent so that inspections at each harbor are consistent; distribution of the same written/printed materials used to reinforce understanding to all trainees should help provide consistency.
- Standards for allowable dirt on vehicles (E.O. 07-10 condition E.5) and inspection of wheel wells (E.O. 07-10 condition E.1) seem especially in need of improvement. Training should define “excessively dirty”, “muddy”, “caked-on mud”, and “debris”, and more importantly, explain the reasons why these conditions can spread invasive species and the implications of the spread of such species. For vehicles having low clearance, HSF staff needs to be trained to make observations in low areas that are difficult to observe.
- A system that staggers vehicle arrival times (within the two-hour period in which vehicles are allowed to enter the port terminal facility) should be adopted to limit vehicle backlog and the associated decline in inspection diligence.
- A checklist of the required inspection actions and screening questions should be integrated into the existing electronic pre-boarding checklist so that potential invasive species risks are not overlooked.
- Depending on legal limitations, consideration should be given to increasing the number of random baggage inspections to prevent potential smuggling of plants, animals, and other biological materials. Inspections should not be limited to a type of container, e.g., coolers, as this may result in the transport of banned items in containers not subject to inspection.
- The notification provided upon ticket purchase should put greater emphasis on the necessity to remove mud from vehicles. Additional pre-arrival vehicle cleaning procedures, including vacuuming of the interior and removal of accumulated vegetative material from under the hood, around the trunk, or inside the truck bed, should also be added to the notification.
- A vacuum cleaner should be available to better ensure that vehicles will be clean and free of invasive species before boarding the HSF vessel. Cost for use could be charged to the passenger.
- Informative signage should be put in place to encourage use of the boot scrubbers when necessary.
- Querying of passengers for banned items is inconsistently applied. Animals or other banned non-plant materials should be explicitly mentioned when conducting verbal screenings for prohibited items. Alternatively, the objective of limiting the transport of undesirable species might be more easily met by asking all passengers whether they have any plants, fruits, seeds, animals, soils, or other living items.
- The inspection signage should be rewritten for clarity and signs should be hung from the front of the vehicle inspection stations and in passenger waiting areas where they are more likely to be seen.

- The HSF should provide its staff with reliable flashlights of uniformly high quality in order to ensure that thorough inspections occur during low-light conditions.
- A trolled mirror that incorporates a bank of forward-directed lights to more effectively illuminate vehicle undercarriages should be used.
- The HSF should consider hidden camera surveillance (to be screened by a third party) and/or random assessments by DOT personnel (or other third parties) of the HSF inspection process in order to ensure continued inspection vigilance.
- The HSF should consider posting a supervisor at the inspection area to address customers who do not agree with inspectors' determinations. The supervisor would have a thorough understanding of E.O. 07-10 and could explain determinations to customers. Designating a supervisor to handle the difficulties of customer relations would allow inspectors' decisions to be based solely on criteria and trained judgment, without concern for anticipated confrontations with customers.

The DOA and the DLNR provided comments during the review of the Draft RRA. Substantive comments that enhance the RRA observations and findings were incorporated in the above recommendations. Additional recommendations identified by DOA and DLNR follow.

- DLNR recommends that HSF develop standard written protocols for disposition of illegal contraband and prohibited items discovered during inspections. Different protocols should be made available for (1) illegal items and (2) items prohibited under E.O. 07-10, but not illegal.
- DLNR recommends that HSF establish and implement a centralized inspection reporting system that reports: number, types, dates, and locations of infractions of E.O. 07-10; whether prohibited items were voluntarily disclosed or discovered during inspections; and the ultimate disposition of the items.
- DLNR recommends that periodic third-party assessments of the HSF inspection process be submitted to DLNR and DOA on a monthly basis, and that reports of illegal contraband be submitted to appropriate county agencies.
- DLNR believes a pre-boarding email or phone recorded message reminding passengers of (1) items that may not be transported and (2) the fact that vehicles should not be "excessively dirty" or "muddy" and should not have "caked-on mud" and "debris" could be helpful.
- In addition to revising signage pertaining to restricted and prohibited items and displaying them from the front of the vehicle inspection stations and in passenger waiting areas, the DOA and DLNR recommend that these signs also be displayed prior to entering each port terminal facility.
- DLNR believes that the HSF web site is currently text-heavy and that pictures would help attract customers' attention as it pertains to prohibited items. Pictures could show unauthorized items and cars that are considered "excessively dirty".

3.5 Native Hawaiian Cultural Sensitivity and Awareness

Although not explicitly defined in the RRA scope of work, the DOT requested that input on cultural sensitivity and awareness be obtained and included in this assessment. The Rev. Dr. Kaleo Patterson accepted this challenge and opportunity to evaluate aspects of the HSF relative to cultural sensitivity and awareness of the host culture of Hawai'i. Rev. Dr. Patterson's findings and recommendations are provided in his report (Appendix G). Because the complexity and depth of the sentiment and concerns expressed cannot be easily described, let alone summarized, this RRA does not attempt to do so. Rather, only a few of the overarching concerns are presented herein.

- Current HSF operations could be viewed by some within the native Hawaiian community as lacking in understanding and integration of the host culture, language, and values. For this reason, the HSF should consider initiating dialogue with a group of respected Hawaiian leaders and collaborating with the community. The forum would demonstrate the HSF's commitment in obtaining input from the native Hawaiian community, which could serve as a step toward repairing relations.
- In addition to developing a working relationship with the native Hawaiian community, the HSF can demonstrate increased sensitivity and awareness toward native Hawaiian culture, language, and values through the following:
 - Integration of the Hawaiian language and culture into HSF operations, for example, by requiring cultural sensitivity and language training for all HSF employees;
 - Redevelopment of naming and branding of the HSF through collaboration with the native Hawaiian community; and
 - Development and implementation of educational materials on Hawaiian culture and the environment, for example, by incorporating information about travel routes (e.g., place names, names of channels, and points of interest such as Hulu Island Bird Sanctuary and Kalaupapa) and mo'olelo (stories) about Kanaloa of the ocean, the moku Kanaloa (i.e., Kaho'olawe), and related environmental issues.

Again, the background and sentiment supporting these briefly summarized findings and recommendations are provided in the Rev. Dr. Patterson's report (Appendix G). The Rev. Dr. Patterson's findings and recommendations help bring to light the depth and complexity of some of the sentiment and ongoing concerns of Native Hawaiians in our ever-changing community.

3.6 Other Considerations

The HSF was found to be in full compliance with the remaining E.O. 07-10 conditions (Section G).

- Mr. O'Halloran confirmed that, in compliance with E.O. 07-10 condition G.1, the HSF is currently in the process of developing a special transport rate for locally-grown agricultural products and products made from locally-grown agricultural products.
- The HSF fully cooperated with the RRA investigations, as required by E.O. 07-10 condition G.2.

Table 1. Summary of HSF’s Operational Compliance with Executive Order No. 07-10

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
<p>A.1. The large capacity ferry vessel company (“company”) shall agree to request that National Marine Fisheries Service (NMFS) certified fisheries observers, currently residing in Hawaii, such as graduates and members of Alu Like’s Marine Stewardship Program, be onboard its vessels to help monitor and document all marine life sightings and potential impacts to marine life by its vessels, to warn the bridge in a timely manner about potential impacts, to collect data on appropriate NMFS forms of general and unusual marine life observations, to appropriately document observations, and, in the event of an interaction with an endangered species by one of its vessels, to document and follow applicable federal requirements, if any.</p>	---	Yes	
<p>A.2.(a) The company shall agree that company vessels shall avoid operating within the boundaries of the Hawaiian Islands Humpback Whale National Marine Sanctuary or in waters less than 100 fathoms from January 1 to April 30 of each calendar year unless: (i) the Master of the vessel determines that this operation is in the interest of passenger safety and comfort or vessel safety; or (ii) the vessel is making an immediate approach to or departure from the ports of Honolulu, Kahului, Nawiliwili, or Kawaihae.</p> <p>(b) The company shall agree that if the Master of a vessel makes a determination that operation within the boundaries of the Hawaiian Islands Humpback Whale National Marine Sanctuary or in water less than 100 fathoms from January 1 to April 30 of each calendar year other than when the vessel is making an immediate approach to or departure from the ports of Honolulu, Kahului, Nawiliwili, or Kawaihae (“said operation”) is in the interest of passenger safety and comfort or vessel safety, the Master shall, when feasible, refer to and consider existing data on aerial and shore-based systematic surveys of whale densities to select areas of lesser densities.</p>	(f)	Yes	

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
<p>A.2. (continued)</p> <p>(c) The company shall agree that if the Master of a vessel makes a determination that “said operation” is in the interest of passenger safety and comfort or vessel safety, the vessel shall not exceed twenty-five knots at any time during “said operation.”</p> <p>(d) The company shall agree that if the Master of a vessel makes such a determination that “said operation” is in the interest of passenger safety and comfort or vessel safety; the Master shall, with respect to “said operation”: (i) document this determination in the vessel’s log book with a certification by the Master that the vessel did not exceed twenty-five knots during “said operation,” (ii) document the time, location, course and any evasive actions taken by the vessel, and (iii) provide a copy of the vessel log book entry(ies) to the Director of Transportation and the Chairperson of the Board of Land and Natural Resources.</p>	(f)	Yes	
<p>A.3. The company shall agree to post two persons to act as whale lookouts on any vessel and allow for direct communications between the lookouts and the Master of the vessel, and the observers identified in Section A.1 may serve as these whale lookouts.</p>	(g)	Yes	
<p>A.4. The company shall agree that each vessel shall maintain a minimum of 500 meters distance from whales whenever possible when whales are sighted.</p>	(h)	Yes	Recommend that 500-meter minimum distance requirement be reevaluated.
<p>A.5. The company shall agree to utilize radar, night vision equipment, and bow-mounted cameras to detect whales and try to avoid collisions.</p>	(i)	Yes	<p>Recommend that required use of radar and bow-mounted cameras be reevaluated.</p> <p>Recommend that hands-free, binocular night visions devices be used.</p>

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
<p>A.6. The company shall agree that any vessel’s Master shall document and report any collision or whale approach less than 100 meters from the vessel, that in the event of a collision, the company shall document observable damage or injury to the whale and, if safe and possible, remain on scene with the whale until rescue response arrives, and within twenty-four hours of any whale collision, provide a detailed written report of the collision to the Director of Transportation and the Chairperson of the Board of Land and Natural Resources.</p>	(j)	Yes	
<p>A.7. The company shall agree that it shall designate a crew member or crew members to be trained by the Department of Land and Natural Resources to monitor its vessel for downed seabirds. Between September 15 and December 15 of each calendar year, prior to evening departures from the ports of Nawiliwili, Kahului and Honolulu and prior to morning departures from any harbor after being docked overnight, the company shall agree to retrieve and care for any and all downed seabirds on a vessel in accordance with DLNR policies and procedures, if any.</p>	(k)	Yes	
<p>B.1. The company shall agree to comply, at all times, with HRS chapter 342D, “Water Pollution,” and such other laws, rules or regulations adopted by the State of Hawai‘i, Department of Health (DOH), Clean Water Branch, if any, as may apply to vessel operations in the State of Hawai‘i.</p>	---	Yes	
<p>B.2. The company shall agree that it will not, at any time, discharge wastewater into the ocean, including but not limited to the coastal waters of the State of Hawai‘i, and that in the event of any discharge, the company shall document and report said discharge to the Director, DOH, within twenty-four hours of discharge.</p>	(l)	Yes	

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
<p>C.1. The company shall agree to complete traffic studies, including traffic counts, with the first studies to be furnished to the State Department of Transportation (DOT) by January 1, 2008, but furnishing such studies shall not be a condition precedent to commencing operation before January 1, 2008.</p>	(m)	Yes	
<p>C.2. The company shall agree to implement a vehicle movement and management plan for each port of operation as may be directed by the DOT.</p>	(n)	Yes	
<p>C.3. The company shall agree that the traffic studies shall be used to adjust vessel arrival and departure schedules as necessary to lessen the impact of ferry vehicular traffic on local traffic patterns in the immediate vicinity of each operation port (with any adjustments to vessel arrival and departure schedules subject to advance DOT approval).</p>	---	Yes	
<p>C.4. The company shall agree to:</p> <p>(a) design its harbor facilities to, insofar as practicable, hold departing vehicles within the terminal area;</p> <p>(b) employ trained staff to manage traffic entering and exiting each port terminal facility;</p> <p>(c) permit vehicles to enter each port facility a minimum of two hours prior to the departure of the vessel to reduce local traffic impacts; and</p> <p>(d) as required by DOT, retain and post security guards or off-duty police officers to direct traffic, control signals, and respond to unforeseen traffic problems during vehicle loading and unloading in ports of operation.</p>	(o) (p) (q)	Yes	Recommend that presence of traffic control officers in Kahului be reduced.
<p>D.1. The company shall agree that, prior to the commencement of operations, a Facility Security Plan (FSP), by operational port, and a Vessel Security Plan (VSP) shall have been submitted for approval to the United States Coast Guard, and if necessary for operation, approved by the United States Coast Guard.</p>	(r)	Yes	

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
D.2. The company shall agree to coordinate its operational plans as necessary with county fire and police departments.	(s)	Yes	
E.1. The company shall agree to conduct agricultural screenings of its passengers and visual inspections 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.	(d) (t)	No	17% of passengers (without vehicles) were not verbally queried about possession of prohibited items; interiors had a 23% rate of non-inspection; and wheel wells had a 30% rate of non-inspection.
E.2. The company shall agree that vehicles that have not been inspected and screened will not be allowed to board, and that vehicles containing prohibited items will not be allowed to board.	(u)	Yes	
E.3. The company shall agree that passengers will be notified 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.	(v)1	Yes	Recommend that notification put greater emphasis on importance of mud removal and also include pre-arrival cleaning procedures of vacuuming vehicle interiors and removing any accumulated vegetative materials.
E.4. The company shall agree that passengers will be notified 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.	(v)2	Yes	
E.5. The company shall agree that it will not permit boarding of any vehicles that are excessively dirty, muddy, or have caked-on mud on a vehicle and/or its tires.	(w)	No	Several vehicles with a significant quantity of mud were allowed to board.

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
E.6. The company shall agree that it will allow living plants and propagative plant parts (e.g., roots and root stock) on the vessel only if accompanied by a valid DOA certificate of inspection, and that the company shall permit no other living plants on the vessel.	(x)	Yes	
E.7. The company shall agree to permit DOA inspections of cut or harvested flowers, foliage, fruits, vegetables and/or other non-propagative plant parts.	(y)	Yes	
E.8. The company shall agree to permit only the following animals on the vessel without a DOA certificate: Domestic cats, dogs, pigeons, and rabbits.	(z)	Yes	
E.9. The company shall agree to permit domestic livestock and poultry, limited to domestic cattle, horses, donkeys, goats, sheep, chickens and roosters, on the vessel only if accompanied by a valid DOA certificate.	(aa)	Yes	
E.10. The company shall agree not to permit swine of any kind on the vessel, including but not limited to, pigs, pot-bellied pigs, hogs, boars, and sows.	(bb)	Yes	
E.11. The company shall agree to notify passengers in advance that valid hunting licenses are required by DLNR in the State of Hawai'i, prior to hunting.	(v)3	Yes	
E.12. The company shall agree that transport of fishing nets of any kind is prohibited and to notify passengers that transport of fishing nets of any kind is prohibited.	(a)2	Yes	
E.13. The company shall agree that transport of rocks, soil, sand, dirt, or dead coral, except for soil or dirt in potted plants inspected and cleared for transport by the DOA, is prohibited, and to notify passengers that transport of such items is prohibited.	(a)3 (a)4	Yes	

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
E.14. The company shall agree to provide boot scrubber approved by DOA at each of its port terminal facilities	(cc)	Yes	Recommend that informative signage be placed at boot scrubbers.
E.15. The company shall agree to require passengers to declare, orally or in writing, all plants, fruits, seeds, and any other biological medium.	(b) (dd)	No	17% of passengers (without vehicles) were not verbally queried about possession of prohibited items.
E.16. The company shall agree to confiscate any “pests for control or eradication purposes” and invasive species, and to work with DOA on learning how to screen for and identify the same.	(c) (ee)	Yes	
E.17. The company shall agree to fully cooperate in any risk assessment that may be performed by DOA, including but not limited to any Maritime Risk Assessment with USDA’s Western Region and Center for Plant Health Science and Technology.	(ff)	Yes	
E.18. The company shall agree to fully cooperate with any monitoring or inspections by any state officials, employees, or contractors.	(ff)	Yes	
F.1. The company shall agree that transport of iwi or human bones is prohibited and to notify passengers that transport of iwi or human bones is prohibited.	(a)1	Yes	
F.2. The company shall agree that transport of opihi, lobster, or other crustaceans is prohibited and to notify passengers that transport of opihi, lobster, or other crustaceans is prohibited.	(a)5 (a)6	Yes	

Executive Order No. 07-10 Conditions and Protocols	Corresponds with RRA SOW Condition 2.b.(2)	Full Operational Compliance? (Yes / No)	Comments
<p>F.3. The company shall agree: (a) that live or dead fish or live coral may only be transported with a valid commercial marine license issued by DLNR except that recreational fishers may transport fish subject to any limitations established by DLNR and, (b) to notify passengers that marine life, including live or dead fish or live coral, may only be transported with a valid commercial marine license issued by DLNR except that recreational fishers may transport fish subject to any limitations established by DLNR.</p>	---	Yes	
<p>F.4. The company shall agree to provide to passengers information provided by the State of Hawai‘i and/or the counties concerning restrictions on the use of cultural and natural resources, including but not limited to hunting and fishing rules and camping permit requirements.</p>	(gg)	Yes	
<p>F.5. The company shall agree that transport of cut logs, cut trees, and tree limbs is prohibited, and to notify passengers that the transport of cut logs, cut trees, and tree limbs is prohibited.</p>	(a)8	Yes	
<p>F.6. The company shall agree to consider adding a cultural briefing on Hawai‘i’s cultural and natural resources to its on-board programming and education.</p>	(hh)	Yes	
<p>G.1. The company shall agree to consider whether to establish a special transport rate for agricultural products.</p>	(ii)	Yes	
<p>G.2. The company shall agree to fully cooperate with any risk assessment conducted by or authorized by the State of Hawai‘i Department of Transportation.</p>	---	Yes	
<p>* Prompt notification to the appropriate governmental agency regarding any violation or potential violation of invasive species, agricultural, conservation or other law.</p>	(e)	Yes	

* Note: Additional condition introduced in RRA SOW.

APPENDIX A

Executive Order No. 07-10

EXECUTIVE ORDER NO. 07-10

WHEREAS, it has been determined that it is in the public interest that a large capacity ferry vessel service should commence as soon as possible to provide inter-island ferry service between the islands of Oahu, Maui, Kauai, and Hawaii, using state harbor facilities on each island while harbor improvements continue to be constructed and used while any environmental studies, including any environmental assessments or environmental impact statements, are conducted and prepared; and

WHEREAS, section 4(a) of Act 2, Second Special Session Laws of Hawaii 2007 ("Act 2"), permits a large capacity ferry vessel company to operate if it complies with conditions enumerated in section 4(a) of Act 2 and any other conditions or protocols the Governor of Hawaii deems necessary and appropriate to protect the State's environment, and establishes by executive order pursuant to section 4(a)(3) of Act 2; and

WHEREAS, section 4(c) of Act 2 provides that the Governor of Hawaii may establish by executive order conditions and protocols to mitigate significant environmental effects that the Governor determines, in the Governor's judgment, are likely to be caused by a large capacity ferry vessel company's inter-island operations ("conditions and protocols"); and

WHEREAS, the Governor of Hawaii has considered the effects that operations of a large capacity ferry vessel may have on:

- (1) Ocean life and marine animals and plants, including a whale avoidance policy and procedures;
- (2) Water resources and quality;
- (3) Harbor infrastructure;
- (4) Vehicular traffic;
- (5) Public safety and security;
- (6) Controlling the spread of invasive species;
- (7) Cultural resources, including hunting, fishing, and native Hawaiian resources; and
- (8) Economic consequences and impact; and

WHEREAS, the Governor of Hawaii has considered other natural resource and community concerns that the Governor deemed it appropriate to consider; and

WHEREAS, the Governor of Hawaii has considered establishing conditions and protocols that would require State of Hawaii Department of Agriculture (DOA) inspectors and State of Hawaii Department of Land and Natural Resources (DLNR) conservation and resources enforcement personnel on each inter-island voyage conducted by a large capacity ferry vessel company, but has not found the same to be necessary and appropriate; and

WHEREAS, the Governor of Hawaii has considered such other facts and matters as required by Act 2;

NOW, THEREFORE, I, LINDA LINGLE, Governor of the State of Hawaii, pursuant to the provisions of section 4(c) of Act 2, do hereby establish the following conditions and protocols:

A. Ocean Life and Marine Animals and Plants

1. The large capacity ferry vessel company ("company") shall agree to request that National Marine Fisheries Service (NMFS) certified fisheries observers, currently residing in Hawaii, such as graduates and members of Alu Like's Marine Stewardship Program, be onboard its vessels to help monitor and document all marine life sightings and potential impacts to marine life by its vessels, to warn the bridge in a timely manner about potential impacts, to collect data on appropriate NMFS forms of general and unusual marine life observations, to appropriately document observations, and, in the event of an interaction with an endangered species by one of its vessels, to document and follow applicable federal requirements, if any.

2. (a) The company shall agree that company vessels shall avoid operating within the boundaries of the Hawaiian Islands Humpback Whale National Marine Sanctuary or in waters less than 100 fathoms from January 1 to April 30 of each calendar year unless: (i) the Master of the vessel

determines that this operation is in the interest of passenger safety and comfort or vessel safety; or (ii) the vessel is making an immediate approach to or departure from the ports of Honolulu, Kahului, Nawiliwili or Kawaihae.

(b) The company shall agree that if the Master of a vessel makes a determination that operation within the boundaries of the Hawaiian Islands Humpback Whale National Marine Sanctuary or in waters less than 100 fathoms from January 1 to April 30 of each calendar year other than when the vessel is making an immediate approach to or departure from the ports of Honolulu, Kahului, Nawiliwili, or Kawaihae ("said operation") is in the interest of passenger safety and comfort or vessel safety, the Master shall, when feasible, refer to and consider existing data on aerial and shore-based systematic surveys of whale densities to select areas of lesser densities.

(c) The company shall agree that if the Master of a vessel makes a determination that "said operation" is in the interest of passenger safety and comfort or vessel safety, the vessel shall not exceed twenty-five knots at any time during "said operation."

(d) The company shall agree that if the Master of a vessel makes such a determination that "said operation" is in the interest of passenger safety and comfort or vessel safety; the Master shall, with respect to "said operation": (i) document this determination in the vessel's log book with a certification by the Master that the vessel did not exceed twenty-five knots during "said operation," (ii) document the time, location, course and any evasive actions taken by the vessel, and (iii) provide a copy of the vessel log book entry(ies) to the Director of Transportation and the Chairperson of the Board of Land and Natural Resources.

3. The company shall agree to post two persons to act as whale lookouts on any vessel and allow for direct communications between the lookouts and the Master of the vessel, and the observers identified in Section A.1 may serve as these whale lookouts.

4. The company shall agree that each vessel shall maintain a minimum of 500 meters distance from whales whenever possible when whales are sighted.

5. The company shall agree to utilize radar, night vision equipment, and bow-mounted cameras to detect whales and to try to avoid collisions.

6. The company shall agree that any vessel's Master shall document and report any collision or whale approach less than 100 meters from the vessel, that in the event of a collision, the company shall document observable damage or injury to the whale and, if safe and possible, remain on scene with the whale until rescue response arrives, and within twenty-four hours of any whale collision, provide a detailed written report of the collision to the Director of Transportation and the Chairperson of the Board of Land and Natural Resources.

7. The company shall agree that it shall designate a crew member or crew members to be trained by the Department of Land and Natural Resources to monitor its vessel for downed seabirds. Between September 15 and December 15 of each calendar year, prior to evening departures from the ports of Nawiliwili, Kahului and Honolulu and prior to morning departures from any harbor after being docked overnight, the company shall agree to retrieve and care for any and all downed seabirds on a vessel in accordance with DLNR policies and procedures, if any.

B. Water Resources and Quality

1. The company shall agree to comply, at all times, with HRS chapter 342D, "Water Pollution," and such other laws, rules or regulations adopted by the State of Hawaii, Department of Health (DOH), Clean Water Branch, if any, as may apply to vessel operations in the State of Hawaii.

2. The company shall agree that it will not, at any time, discharge wastewater into the ocean, including but not limited to the coastal waters of the State of Hawaii, and that in the event of any discharge, the company shall

document and report said discharge to the Director, DOH, within twenty-four hours of discharge.

C. Vehicular Traffic

1. The company shall agree to complete traffic studies, including traffic counts, with the first studies to be furnished to the State Department of Transportation (DOT) by January 1, 2008, but furnishing such studies shall not be a condition precedent to commencing operations before January 1, 2008.

2. The company shall agree to implement a vehicle movement and management plan for each port of operation as may be directed by the DOT.

3. The company shall agree that the traffic studies shall be used to adjust vessel arrival and departure schedules as necessary to lessen the impact of ferry vehicular traffic on local traffic patterns in the immediate vicinity of each operating port (with any adjustments to vessel arrival and departure schedules subject to advance DOT approval).

4. The company shall agree to: (a) design its harbor facilities to, insofar as practicable, hold departing vehicles within the terminal area; (b) employ trained staff to manage traffic entering and exiting each port terminal facility; (c) permit vehicles to enter each port terminal facility a minimum of two hours prior to the departure of the vessel to reduce local traffic impacts; and (d) as required by DOT, retain and post security guards or off-duty police officers to direct traffic, control signals, and respond to unforeseen traffic problems during vehicle loading or unloading in ports of operation.

D. Public Safety and Security

1. The company shall agree that, prior to the commencement of operations, a Facility Security Plan (FSP), by operational port, and a Vessel Security Plan (VSP) shall have been submitted for approval to the United States Coast Guard, and if necessary for operation, approved by the United States Coast Guard.

2. The company shall agree to coordinate its operational plans as necessary with county fire and police departments.

E. Invasive Species

1. The company shall agree to conduct agricultural screenings of its passengers and visual inspections 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.

2. The company shall agree that vehicles that have not been inspected and screened will not be allowed to board, and that vehicles containing prohibited items will not be allowed to board.

3. The company shall agree that passengers will be notified 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.

4. The company shall agree that passengers will be notified 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.

5. The company shall agree that it will not permit boarding of any vehicles that are excessively dirty, muddy, or have caked-on mud on a vehicle and/or its tires.

6. The company shall agree that it will allow living plants and propagative plant parts (e.g., roots and root stock) on the vessel only if accompanied by a valid DOA certificate of inspection, and that the company shall permit no other living plants on the vessel.

7. The company shall agree to permit DOA inspections of cut or harvested flowers, foliage, fruits, vegetables and/or other non-propagative plant parts.

8. The company shall agree to permit only the following animals on the vessel without a DOA certificate: Domestic cats, dogs, pigeons, and rabbits.

9. The company shall agree to permit domestic livestock and poultry, limited to domestic cattle, horses, donkeys, goats, sheep, chickens and roosters, on the vessel only if accompanied by a valid DOA certificate.

10. The company shall agree not to permit swine of any kind on the vessel, including but not limited to, pigs, pot-bellied pigs, hogs, boars, and sows.

11. The company shall agree to notify passengers in advance that valid hunting licenses are required by DLNR in the State of Hawaii, prior to hunting.

12. The company shall agree that transport of fishing nets of any kind is prohibited and to notify passengers that transport of fishing nets of any kind is prohibited.

13. The company shall agree that transport of rocks, soil, sand, dirt, or dead coral, except for soil or dirt in potted plants inspected and cleared for transport by the DOA, is prohibited, and to notify passengers that transport of such items is prohibited.

14. The company shall agree to provide boot scrubbers approved by DOA at each of its port terminal facilities.

15. The company shall agree to require passengers to declare, orally or in writing, all plants, fruits, seeds, and any other biological medium.

16. The company shall agree to confiscate any "pests for control or eradication purposes" and invasive species, and to work with the DOA on learning how to screen for and identify the same.

17. The company shall agree to fully cooperate in any risk assessment that may be performed by DOA, including but not limited to any Maritime Risk Assessment with USDA's Western Region and Center for Plant Health Science and Technology.

18. The company shall agree to fully cooperate with any monitoring or inspections by any state officials, employees, or contractors.

F. Cultural and Natural Resources

1. The company shall agree that transport of iwi or human bones is prohibited and to notify passengers that transport of iwi or human bones is prohibited.

2. The company shall agree that transport of opihi, lobster, or other crustaceans is prohibited and to notify passengers that transport of opihi, lobster, or other crustaceans is prohibited.

3. The company shall agree: (a) that live or dead fish or live coral, may only be transported with a valid commercial marine license issued by DLNR except that recreational fishers may transport fish subject to any limitations established by DLNR and, (b) to notify passengers that marine life, including live or dead fish or live coral, may only be transported with a valid commercial marine license issued by DLNR except that recreational fishers may transport fish subject to any limitations established by DLNR.

4. The company shall agree to provide to passengers information provided by the State of Hawaii and/or the counties concerning restrictions on the use of cultural and natural resources, including but not limited to hunting and fishing rules and camping permit requirements.

5. The company shall agree that transport of cut logs, cut trees, and tree limbs is prohibited, and to notify passengers that the transport of cut logs, cut trees, and tree limbs is prohibited.


6. The company shall agree to consider adding a cultural briefing on Hawaii's cultural and natural resources to its on-board programming and education.

G. OTHER

1. The company shall agree to consider whether to establish a special transport rate for agricultural products.
2. The company shall agree to fully cooperate with any risk assessment conducted by or authorized by the State of Hawaii Department of Transportation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of Hawaii.

DONE at the State Capitol, Honolulu,
State of Hawaii, this 4th day
of November, 2007.



LINDA LINGLE
Governor of Hawaii

APPROVED AS TO FORM:



MARK J. BENNETT
Attorney General

APPENDIX B

Department of Transportation – Rapid Risk Assessment Scope of Work

DEPARTMENT OF TRANSPORTATION
RAPID RISK ASSESSMENT

The purpose of the Rapid Risk Assessment (“RRA”) is to provide early and independent assessment of: 1) observed environmental risks associated with the Hawaii Superferry operation, if any, and 2) operational compliance with mitigation measures enumerated in section 4(a) of Act 2, Executive Order 07-10 and the Agreement between Hawaii Superferry, Inc. and the State of Hawaii.

Act 2 requires the preparation of an environmental impact statement (“EIS”) “regarding commercial harbor improvements undertaken to accommodate a large capacity ferry vessel and its operations, including secondary impacts of such commercial harbor improvements, including impacts of a large capacity ferry vessel company and its operations.” The EIS process is expected to take between 12 and 15 months with a projected completion date of December 31, 2008.

The RRA shall commence on contract award. The RRA shall be completed within three (3) months of commencement of field investigations. At the end of the three (3) month period, a written report shall be delivered by the RRA contractor to the Governor, Director, Department of Transportation (“DOT”), Chairperson, Board of Land and Natural Resources (“DLNR”), and Chairperson, Board of Agriculture (“DOA”).

SCOPE OF WORK

The RRA shall include, but not be limited to, the following:

1. **Preparation**

- a. Review the Agreement between Hawaii Superferry, Inc. and the State of Hawaii for conditions, protocols and mitigation measures included in Act 2 and/or Executive Order 07-10 and accepted by the Superferry as conditions to operation (hereinafter “conditions”).
- b. Meet with DOT Harbors and Superferry personnel regarding: logistics for the conduct of the RRA; interface with DOT and Superferry designated personnel for receipt of data related to compliance with conditions, authorization to access property and monitoring of operations; and obtain required security clearances.
- c. Plan for, provide and manage RRA staff necessary to assess Superferry operations and observed environmental risks, if any.
- d. Plan for, provide and manage RRA staff necessary to assess, monitor and document Superferry compliance with conditions.

2. **Field Work**

- a. Commence field investigations on December 13, 2007;
- b. Conduct field investigations in all operational ports assessing, monitoring and documenting:

- (1) Observed environmental risks, if any, not contemplated or addressed by the conditions.
- (2) Compliance with the following conditions:
 - (a) Posting of signage and notification to passengers in advance of travel regarding all bans, inspections, check-in procedures and deadlines, including but not limited to the bans on the transport of:
 1. iwi or human bones;
 2. fishing nets of any kind;
 3. rocks, soil, sand, dirt (except for soil or dirt in potted plants inspected and cleared by for transport by HDOA);
 4. dead coral;
 5. opihi;
 6. lobster or other crustaceans;
 7. swine;
 8. cut logs, cut trees and/or tree limbs.
 - (b) Requiring passengers declare all plants, fruits, seeds and any other biological medium;
 - (c) Confiscation of any and all pests for control or eradication purposes or invasive species;
 - (d) Inspection of all vehicles prior to boarding, including:
 1. trunks of all cars;
 2. beds of all pickup trucks; and
 3. the undercarriage and interiors of all vehicles;
 - (e) Prompt notification to the appropriate governmental agency regarding any violation or potential violation of invasive species, agricultural, conservation or other law;
 - (f) Avoidance of vessel operations within the boundaries of the Hawaiian Humpback Whale National Marine Sanctuary (HHWNMS) or waters less than 100 fathoms from January 1 to April 30 of each calendar year. Note: The vessel may operate in the HHWHMS if:
 1. the Master of the vessel determines that said operation is in the interest of passenger safety and comfort or vessel safety; or
 2. the vessel is making an immediate approach to or departure from the ports of Honolulu, Kahului, Nawiliwili or Kawaihae.

If the Master makes a determination that operation in the HHWNMS or in waters less than 100 fathoms between January 1 and April 30 is necessary, the Master shall:

1. refer to and consider existing data on aerial and shore-based systematic surveys of whale densities to select areas of lesser densities;
2. not exceed twenty-five (25) knots;

3. document the operation (time, location, course and any evasive actions take) in the vessel log book with a certification by the Master that the vessel did not exceed 25 knots; and
 4. provide a copy of the log book entry(ies) to DOT and DLNR.
- (g) Posting of two (2) whale lookouts on the vessel with direct communication possible between the lookouts and the Master (observers may serve as lookouts);
 - (h) Maintaining a minimum of 500 meters from sighted whales;
 - (i) Utilization of radar, night vision equipment and bow-mounted cameras to detect whales and try to avoid collisions;
 - (j) Documentation of any whale collision, noting observable damage or injury to the whale, with the vessel remaining on the scene until rescue arrives (if possible) and detailed written report to DOT and DLNR within 24 hours;
 - (k) Designation of a DLNR trained crew member who, between Sep 15 and Dec 15 of each year, will retrieve and care for downed seabirds on the vessel prior to evening departures from Nawiliwili, Kahului and/or Honolulu and prior to morning departures after being docked overnight;
 - (l) No discharge of wastewater into the ocean;
 - (m) Completion of traffic studies, including traffic counts, to be furnished DOT by January 1, 2008;
 - (n) As directed by DOT, implement a vehicle movement and management plan for each port of operation;
 - (o) Terminal facility design shall permit vehicles to enter each port terminal facility a minimum of two (2) hours prior to the departure of the vessel;
 - (p) Employ trained staff to manage traffic entering and exiting each port terminal facility;
 - (q) As directed by DOT, retain and post off-duty police (or their equivalent) to direct traffic, control signals and/or respond to unforeseen traffic problems;
 - (r) Submission of a Facility Security Plan and Vessel Security Plan to the USCG for approval prior to commencement of operations;
 - (s) Coordination of Superferry operational plans with county fire and police departments;
 - (t) Agricultural screenings of passengers and visual inspections and agricultural screenings of all vehicles, including visual inspections of:
 1. engines;
 2. interiors;

3. undercarriages;
 4. wheel wells;
 5. trunks;
 6. beds of pickup trucks
 7. trailered equipment and vehicles;
- (u) Deny boarding of vehicles that have not been inspected and screened and/or vehicles containing prohibited items;
 - (v) Notify passengers in advance that:
 1. 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 debris;
 2. 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
 3. Valid hunting licenses are required by DLNR in the State of Hawaii prior to hunting;
 - (w) Deny boarding of vehicles that are excessively dirty, muddy, or that have caked-on mud on the vehicle and/or its tires;
 - (x) Permit living plants and propagative plant parts (e.g., roots and root stock) on the vessel only if accompanied by a valid DOA certificate of inspection;
 - (y) Permit DOA inspection of cut or harvested flowers, foliage, fruits, vegetables and/or other non-propagative plant parts;
 - (z) Permit only the following animals without a DOA certificate: Domestic cats, dogs, pigeons and rabbits.
 - (aa) Permit the following domestic livestock and poultry with a DOA certificate: Domestic cattle, horses, donkeys, goats, sheep, chickens and roosters;
 - (bb) Deny boarding to swine of any kind, including but not limited to pigs, pot-bellied pigs, hogs, boars and sows;
 - (cc) Provide DOA approved boot scrubbers at each port;
 - (dd) Require passengers declare, orally or in writing, all plants, fruit, seeds and any other biological medium;
 - (ee) Confiscate any "pests for control or eradication purposes" and invasive species and work with DOA to learn on how to screen and identify same;
 - (ff) Cooperate in any risk assessment performed by DOA and any monitoring or inspections by any state officials, employees or contractors;
 - (gg) Provide to passengers information provided by the State of Hawaii and/or Counties concerning restrictions on

the use of cultural and natural resources, including but not limited to hunting and fishing rules and camping permits;

- (hh) Consider adding a cultural briefing on Hawaii's cultural and natural resources to its on-board programming;
- (ii) Consider adding a special transport rate for agricultural products.

- c. Field investigations shall include random unannounced assessment, monitoring and documentation of inspections and evaluations performed at all operational ports, including arrivals and departures at all ports in both daylight and evening hours, weekdays and weekends.
- d. Field investigations shall include a minimum of one transit on the Superferry between each port in operation during the term of the RRA.
- e. Field investigators shall take such steps as are reasonably necessary to credibly confirm or deny compliance with conditions.
- f. Field investigators and/or Contractor shall contact DOT's identified point of contact should they require additional information or guidance regarding assessment, monitoring and documentation of condition compliance or noncompliance.
- g. Contractor shall identify and/or recommend any additional measure that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including the substantive basis for such recommendation(s).
- h. Contractor shall identify and/or recommend the discontinuation or removal of any condition established under Executive Order 07-10 determined to be unnecessary or of no further need, including the substantive basis for such recommendation.

3. Deliverables

- a. Contractor shall prepare a Draft RRA for internal distribution to DOT, DLNR and DOA and incorporate comments from the departments. The Draft RRA shall be delivered to the departments fifteen (15) days prior to the delivery of the Final RRA Report with the departments provided seven (7) days for the submissions of comments.
- b. Contractor shall prepare a Final RRA Report for distribution to the Governor, DOT, DLNR, DOA and the Oversight Task Force. The report shall include summary assessments of compliance in all areas covered by conditions and incorporate and include the data obtained during assessment and monitoring, including the results of field investigations identified by date, location and time. The Final RRA Report shall also document environmental concerns noted during the field investigations which are not addressed by Act 2 or Executive Order 07-10.
- c. Contractor shall deliver the Final RRA Report 90 days after commencement of field investigations.
- d. Contractor shall provide electronic files to DOT.

APPENDIX C

Marine Mammals Research Consultants

Final Report:

Hawaii Superferry Rapid Risk Assessment



Photo by J. Mobley, NOAA Permit No. 810

Submitted to:

Belt Collins

Submitted by:

Joseph R. Mobley, Jr., PhD

dba: Marine Mammal Research Consultants

Date: June 19, 2008

Summary

This report summarizes observations made onboard the Hawaii Superferry during 25 legs between Honolulu and Kahului, Maui, using pre-prepared datasheets for the period Jan. 9 to May 23, 2008. The mission was to note compliance with 11 aspects of the required rapid risk assessment (RRA) sections 2b(2)(f-j) with respect to operating the ferry inside waters of the Hawaiian Islands Humpback Whale National Marine Sanctuary (“Sanctuary”) and waters less than 100 fathoms. All observations were made on the ferry’s bridge with access to instrument displays (e.g., GPS and speed indicators), the Captain, and the able-bodied seamen (ABs) responsible for shipboard observations. General compliance was found on each of the 11 operational points (e.g., traveling < 25 knots inside Sanctuary waters or within the 100 fathom contour). No collisions or near misses occurred.

The decision was made to travel inside Sanctuary waters on seven of the 25 legs, with only four of these occurring during the designated peak period for humpback whales (Jan 1 through April 30). In each of these seven instances, the Captain’s decision to travel inside Sanctuary waters was made out of consideration for the safety and comfort of the ferry’s passengers owing to either high winds or high seas along the alternate route. Humpback whales were sighted on all legs during the peak period (Jan 1 through April 30), and during each of the three daytime legs after that period (May 12a, 19a, 23a). The ferry’s schedule expanded to two roundtrips daily during May, 2008. Night-time observations were made on three legs (May 12b, 19b, 23b). No whales were sighted during the night-time legs, though the fact that whales had been sighted in each case earlier that day suggests that whales were present but undetected. Hand-held, monocular night vision devices were deployed by the AB lookouts at varying intervals following sunset. Our observer noted that the hand-held aspect produced fatigue after just several minutes of use. Additionally, discrepancies were noted with respect to their use on the part of the two AB observers. Use varied between approximately 15 to 75% of total time depending on the observer. A supplementary bow-mounted sensor system (under contract to Current Corporation), designed to detect whales during night-time or periods of limited visibility, is currently in research/development stages. Though initial results on this system are promising, its effectiveness at detecting living whales remains to be demonstrated.

In light of observations, we offer several recommendations: a) maintain speeds less than 25 knots in all waters less than 100 fathoms, both in and outside Sanctuary waters during whale season; b) implement a third-party observation system whereby observers are brought onboard the HSF at random intervals to ensure compliance with whale avoidance protocol during future whale seasons; c) obtain and utilize binocular night vision devices that can be worn on the head, rather than held (to avoid fatigue); d) standardize the use of night vision devices so that they are used consistently and continuously following sunset; e) perform a scientifically valid study demonstrating the effectiveness of whatever night vision system is used in detecting whales, including the proposed bow-mounted sensor system, when available; f) re-evaluate the 500 m minimum distance requirement since it is unrealistic; and g) omit the required use of radar and bow-mounted cameras for day-time observations and focus entirely on visual detection of whales until such time that the utility of such equipment has been clearly demonstrated.

Observations

Observations were recorded on the bridge of the Hawaii Superferry (HSF) during 25 legs between Honolulu and Kahului Harbors for the period January 9 and May 23, 2008.

Observations were made by one of two experienced MMRC consultants, Amanda Cummins (24 legs) and Joe Mobley (1 leg) located on the ship's bridge. Visual displays of key equipment (i.e., GPS map showing depth contours, ship's location and speed) were available at all times. The observer was provided with a hand-held Suunto clinometer that measured sighting angles to whales which could be converted to distances. When questions arose, the Captain or ship's Master were available to respond.

General compliance was noted on each of 11 points required as part of the State of Hawaii's Dept. of Transportation rapid risk assessment (RRA) sections 2b(2)(f-j) using pre-constructed datasheets. Table 1 below summarizes additional comments made for each of the 25 legs.

Specifically, the Captain avoided operation inside waters of the Hawaiian Islands Humpback Whale National Marine Sanctuary ("Sanctuary") unless compelling reasons existed to the contrary (e.g., high winds and/or sea conditions). The ferry operated inside Sanctuary waters during seven legs, with only four of these occurring during the designated whale season (Jan. 1 through April 30). When operating inside Sanctuary waters, the ferry maintained speeds less than 25 knots at all times. The ferry generally maintained a minimum distance of 500 meters from whales based on distance estimation using a hand-held clinometer, though it passed within 500 meters of whales on at least three recorded occasions. It should be noted that 500 meters is a substantial distance (approx. 1/3 mile) and given the average densities of whales within nearshore Hawaiian waters, maintaining that minimum distance at all times is an unreasonable expectation. Courses were taken that minimized the potential for contact with whales based on whale location maps posted on the bridge (data from Mobley, Bauer and Herman, 1999; Mobley, 2004). No collisions or near misses occurred.

The ship's Captain maintained a logbook of the course taken on each leg, and noted any evasive maneuvering required to avoid whales. The process for transmitting the logbook was reported as follows: The Captain's logbook is digitally scanned at the end of each day and transmitted via email to the HSF Director of Operations. The latter then forwards the logbook on to Dept. of Transportation (DOT) and Dept. of Land and Natural Resources (DLNR). Since no collisions with whales occurred it was not possible to confirm compliance with protocol. According to the "whale avoidance policy," in the event of any whale collision, the ship's Master is to notify National Marine Fisheries Service (NMFS), the US Coast Guard, and the Hawaiian Islands Humpback Whale National Marine Sanctuary to report the incident. The ship is required to remain at the location of the incident for "as long as practical" and, if possible, take photos and/or videos of the animal involved.

Two able-bodied seamen (ABs) were posted as whale lookouts at all times on the bridge wings. Both demonstrated vigilance (i.e., actively scanning for whales) during at least 90% or more of the total time observed. When whales were noted, the ABs notified the Captain who performed any necessary evasive maneuvering.

Radar equipment was kept operational during all transits, though it was not specifically used to detect whales, so technically the HSF was non-compliant with regards to the use of radar. In defense of this practice, it should be noted that the use of radar as a means to detect whales is currently in research and development stages (e.g., DeProspero et al. 2005). At present, the only means of reliably detecting a whale at the surface is by visual detection. Thus the reliance on the two AB lookouts should be considered sufficient during daylight hours.

With regards to the use of “bow-mounted cameras” (item 10 on the field observation sheet), no such cameras were available during the RRA observation period. However, the author of this report (JM) has been in contact with Doug Houghton of Current Corporation who was contracted by HSF to develop a bow-mounted sensor system to aid detecting whales. These sensors utilize various aspects of the infra-red spectrum (IR) and are specifically designed for “detection of obstacles while navigating at night...including logs, buoys, small unlit boats and marine wildlife” (from Current Corporation “night navigator” brochure). Thus far, the efficacy of the sensors in detecting whales is in research-development phase. Mr. Houghton provided a digital video clip showing enhanced detection of “artificial whale spouts,” involving floating platforms releasing a mixture of water and compressed air, thereby approximating actual whale spouts. Though these initial results are promising, the sensors’ capability of detecting living whales remains to be demonstrated.

The Hawaii Superferry schedule expanded to include two daily roundtrips between Honolulu and Kahului Harbors beginning in May 2008. This afforded the opportunity to observe night-time operations on three occasions (second roundtrips on May 12, 19 and 23).

Concerns

Despite general compliance with each of the 11 operational points of the RRA (with the exception of the use of radar, explained above), several concerns emerged:

- a) Based on a conversation with the Captain during the early part of the observation period, there appeared to be some confusion as to whether a reduced speed was necessary when traveling outside of Sanctuary waters, but in waters less than 100 fathoms (during the designated whale season). This was inferred by the Captain’s statement that he would slow down in waters outside of Sanctuary boundaries when less than 100 fathoms even though it was “not required.” As stated in the RRA requirements 2.b.(2)(f), the ferry should avoid operating in “Sanctuary waters or waters less than 100 fathoms during the designated whale season.”
- b) Though the level of vigilance was high (observers actively scanning > 90% of time) during whale season, it is recommended that measures be taken that would help to maintain a consistent level of vigilance beyond the current RRA observations.
- c) The bulk of concerns surrounded night-time operations surrounding the use of night vision equipment. Even though whales were observed during the daytime legs, no whales were observed during the night-time legs on the same days. This suggests that whales were likely present during those times but were undetected.

- d) One observer (AC) noted that fatigue quickly set in when using the hand-held, monocular night vision device. This resulted from having to hold the device and from using only one eye when peering through it. This fact likely served as a counter-incentive to using the device.
- e) Night time equipment was not typically used during the twilight hours immediately following sunset, even though vision at this time is impaired due to low light.
- f) There was variation between the AB lookouts in their use of night vision equipment. One AB used it as little as approximately 15% of total time, whereas the other used it approximately 75% of the time.
- g) The effectiveness of the proposed bow-mounted sensor system at detecting whales is untested.

Recommendations

Based on the above concerns we offer the following recommendations:

- 1) Reduced speeds (< 25 knots) should be uniformly followed in all waters less than 100 fathoms during whale season, regardless of their inclusion in the Sanctuary.
- 2) A third-party observation team should be implemented whereby members are brought onboard the HSF at random intervals to ensure compliance with whale avoidance protocol during future whale seasons.
- 3) Binocular night vision equipment (or similar equipment not requiring hand-held deployment) should be obtained, ideally involving head harnesses to free up hands.
- 4) Use of the night vision equipment should be standardized so that it is used consistently and continuously following sunset.
- 5) A study demonstrating the effectiveness of the night vision system at detecting whales, including the use of bow-mounted sensors, should be performed using scientifically accepted methods.
- 6) The 500 meter minimum distance should be re-evaluated. As it stands, it presents an unrealistic requirement (i.e., too large) given the densities of humpback whales during their breeding season in nearshore Hawaiian waters. No vessel could reasonably meet this standard.
- 7) The requirement for use of radar or bow-mounted cameras should be re-evaluated given the fact that the utility of radar and/or special sensors in detecting whales has yet to be demonstrated. At present, the only reliable means to detect whales at the surface during daylight hours is visual detection. In light of this, at present, all whale avoidance measures should focus on visual detection during daylight hours.

References

DeProspero, D.F., Mobley, Jr., J.R., Hom, W., Carron, M., D'Amico, A., Pavan, G. Using ship-mounted radar to detect and track cetaceans—Results of CEDAR experiment. Presented at the 16th Biennial Conference on the Biology of Marine Mammals, San Diego, CA, December 2005.

Mobley, Jr., J. R., Bauer, G. A. and Herman, L. M. (1999). Changes over a ten-year period in the distribution and relative abundance of humpback whales (*Megaptera novaengliae*) wintering in Hawaiian waters. *Aquatic Mammals*, 25(2):63-72.

Mobley, Jr., J. R. (2004). Results of marine mammal surveys on U.S. Navy underwater ranges in Hawaii and Bahamas. Final Report to Office of Naval Research, 27 pp. Available as downloadable pdf file at: <http://socrates.uhwo.hawaii.edu/SocialSci/jmobley/ONRfinal.pdf>

Table 1--Summary of Observer Comments

Date	Inside Sanct?	Route	Dep/ Arrive	Comments
1/9/08	No	Maui to Oahu	11:08 14:12	Several whales were sighted throughout the voyage, though none were seen closer than 500 m
1/13/08a	Yes	Maui to Oahu	6:30 10:15	(Criteria for entering Sanctuary): Swell height > 16 ft with short period. Greater than 10 whales sighted on Penguin Bank. Closest approach was 7 degrees (using clinometer). Captain took shortest route across (at base nearest Molokai).
1/13/08b	Yes	Maui to Oahu	11:15 14:50	Logbook will be sent to Marine Operations director who will forward to DOT & DLNR; High sea state made visual observations difficult
1/15/08	Yes	Maui to Oahu	10:59 14:35	Beaufort 6 in channels; Beaufort 2-3 in Sanctuary waters. Captain Joe and Chief Mate Dale asked for consultation on operation in Sanctuary (gov order) vs 100 fathom. Though not in Sanctuary, we were within 100 fathom line, speed at 30 kts. Very uncomfortable to go at slower speed (suggested 25 knots)., would have made voyage a lot rougher at that location (just outside Kahului Hbr). Other notes: as soon as we entered Sanctuary vessel slowed to 23-25 kts and picked up speed once we cleared Sanctuary waters.
1/19/08	No	Maui to Oahu	11:21 14:15	Smooth ride through waters N. of Molokai. Very few whales sighted. Spotters were able to see any whale I sighted and called them out. Captain was able to maneuver the few times necessary to avoid whales (precautionary). No close approaches.
1/20/08	No	Oahu to Maui	06:43 10:00	Course was altered appropriately when whales were spotted close to vessel; 12 whale groups sighted.
1/23/08	No	Maui to Oahu	11:13 14:15	Voyage N. of Molokai. Passed through some waters < 100 fathoms. Stayed at ~ 25 knots. Captain's logbook goes to Bill (Director of Operations) who sends them to DOT & DLNR. Captain scans them and emails them to Bill at the end of day when Superferry goes through Sanctuary.
1/26/08	No	Maui to Oahu	11:14 14:15	Master maintained 25 knots in waters < 100 fathoms. No whales sighted. Radar in use, but not used for scanning for marine mammals.
2/4/08	No	Maui to Oahu	15:07 16:35	Many whales sighted just outside of Kahului Hbr. Captain altered course to avoid distant whales. New captain: Captain Craig.

2/5/08	No	Oahu to Maui	06:31 to 10:10	11 whale groups sighted. Rough water, some rain squalls. Spotters and captains very vigilant when visibility decreased.
2/7/08	No	Maui to Oahu	11:16 to 14:12	CPA 6 degrees, port side. Many whales just outside Kahului Hbr. Course altered a couple of times. CPA 3 degrees SW of Oahu.
2/8/08	No	Maui to Oahu	11:13 to 14:16	Vessel stayed at ~25 knots in waters < 100 fathoms. Several whales spotted in Channels. Lookouts spotted all whales.
2/9/08	No	Maui to Oahu	11:07 to 14:09	Radar in use, but not for scanning for marine mammals.
2/10/08	No	Maui to Oahu	11:11 to 14:15	Radar in use, but not for scanning for marine mammals
2/11/08a	No	Oahu to Maui	06:33 to 10:12	33 whales sighted. Many whales sighted, none close to vessel
2/11/08b	No	Maui to Oahu	11:13 to 14:02	CPA calf 4 degrees outside Kahului Hbr
4/11/08	No	Maui to Oahu	10:58 to 14:15	Beaufort 5. Several whales spotted outside of Kahului Hbr. Captain altered course to avoid nearby whales. No close approaches. Single whale spotted N. shore of Molokai (blow cue). Captain altered course. Pilot whales & dolphins (spp unknown) sighted on N. coast of Molokai. Some bow-riding observed.
4/13/08	No	Maui to Oahu	10:08 to 14:05	Beaufort 5; 6-ft swell.
4/14/08	Yes	Oahu to Maui	06:10 to 09:00	Beaufort 3 out of HNL; Beaufort 5 in channels. Captain cited swell with short period and wind as reason for entering Sanctuary.
5/12/08a	Yes	Oahu to Maui	14:34 to 17:45	Beaufort 4 outside Hon Hbr. Course was altered for all close sightings. At least 4 whales spotted (incl 1 calf). Course was altered each time as soon as they were spotted. 15:24--Single whale (21° 09.64'; 157° 25.714') spotter sighted whale, course was altered accordingly. 16:31—Single whale (21° 09.462'; 156° 48.811') course altered.

5/12/08b	No	Maui to Oahu	18:45 22:00	<p>16:51—Whale spotted dead ahead (21° 01.517'; 156° 31.026'), course altered immediately</p> <p>NOTE: 1st nighttime observation. Getting dark; Beaufort 4 outside of Kahului Hbr. No whales sighted. Night vision not used until completely dark, so there was a lot of time where it would be extremely hard to spot a whale. Night vision scopes are monocular (1 per AB) which could possibly cause eye strain. Discrepancies were noted in percent of time whale spotters used scopes. Suggest scopes that are worn on head outfitted for both eyes. Possibly rotate observers more often when using night vision to minimize eye strain.</p>
5/19/08a	Yes	Oahu to Maui	14:43 17:45	<p>Voggy, Beaufort 3 outside Honolulu Hbr. Strong winds were cited as reason for staying inside Sanctuary. ~ 4 whales sighted (Penguin Bank & Pailolo Channel). Course was altered appropriately.</p>
5/19/08b	No	Maui to Oahu	18:45 22:00	<p>NOTE: 2nd nighttime observation. Getting dark; No whales sighted. 19:10—near dark, but too much light for night vision. Would be hard to see whales at this time.</p>
5/23/08a	Yes	Oahu to Maui	14:50 18:16	<p>Beaufort 3 outside HNL Hbr; Beaufort 2 in Molokai Channel; Beaufort 1 on Penguin Bank. High winds cited as reason for going inside Sanctuary. 15:30—Dolphins (Tursiops) approached vessel in Channel. Spotter sighted this small pod as early as possible. Vessel maintained course and speed (26 knots). Dolphins did not attempt to bowride. Another small (3-4) pod sighted at 15:55. 17:20—Single whale spotted in Pailolo Channel. Captain altered course appropriately (maintained speed at 26 knots).</p>
5/23/08b	No	Maui to Oahu	18:55 22:20	<p>NOTE: 3rd nighttime observation. Getting dark just outside of Kahului Hbr; dark for 80% of voyage. No whales sighted. Large discrepancy noted between whale spotters regarding use of night time vision. Some look through night time vision ~ 75% of time on watch; some look through night vision ~ 15% of time. Recommend night vision that uses both eyes (best if worn on head) to reduce eye strain. Recommend a study to determine distance at which whale can be sighted using the night time vision. This distance should be used to determine how often observers should scan with night time vision at various speeds.</p>

APPENDIX D

Mr. John Clark, Planning Consultant

Department of Transportation
Rapid Risk Assessment Report
for
Wastewater Disposal
and
Security Planning
on the Hawaii Superferry

Prepared for:
Belt Collins Hawaii Ltd.
2133 North King Street, Suite 200
Honolulu, Hawaii 96819-4554

Prepared by:
John Clark, Planning Consultant
P.O. Box 25277
Honolulu, Hawaii 96825

April 2008

1.1 Purpose.

The purpose of the Rapid Risk Assessment (“RRA”) is to provide early and independent assessment of: 1) observed environmental risks associated with the Hawaii Superferry operation, if any, and 2) operational compliance with mitigation measures enumerated in section 4(a) of Act 2, Executive Order 07-10 and the Agreement between Hawaii Superferry, Inc. and the State of Hawaii.

1.2 Scope of Work.

The scope of work for this section of the RRA on wastewater disposal and security planning included the following:

a. Preparation

1. Reviewing the following sections of the agreement:

2.b.(2)(l) No discharge of wastewater into the ocean, 2.b.(2)(r) Submission of a Facility Security Plan and Vessel Security Plan to the USCG for approval prior to commencement of operations, and 2.b(2)(s) Coordination of HSF operational plans with county fire and police departments.

2. Meeting with DOT Harbors and HSF personnel regarding the requirements listed above.

b. Field Work

Field work consisted of a complete tour of the vessel, including all of its wastewater systems, while it was in port in Honolulu. The HSF Director of Engineering, Joe Almony, conducted the tour. When the tour of the vessel was completed, he included a walk-through of the HSF support facilities warehouse in Honolulu.

Field work included observing vessel cleaning operations, such as washing the forward bridge deck and all windows daily with fresh water and observing fueling and wastewater discharge operations, all of which are conducted daily in Honolulu.

Field work also consisted of five one-way trips on the HSF to observe the HSF wastewater and security operations. These trips included two from Honolulu to Kahului and three from Kahului to Honolulu. The field investigations commenced in January 2008 and were completed in April 2008.

1.3 No Discharge of Wastewater into the Ocean.

Definitions of Wastewater.

The HSF vessel generates three types of wastewater: grey water, black water, and bilge water.

Grey water comes primarily from the sinks in the vessel's galleys (kitchens) and heads (restrooms). It also comes secondarily from general maintenance on certain parts of the vessel after the last trip of the day, which includes washing down the forward bridge deck with fresh water and cleaning all the windows with fresh water. No detergents or other cleaning agents are used on the windows and all of the washdown water is contained onboard the vessel.

Black water is the sewage that comes from the toilets and the urinals in the vessel's heads (restrooms).

Bilge water is any water on the vessel that could be contaminated with petroleum products such as fuel, oil, or grease. Contamination may occur in a number of ways, such as when vehicles come on board on a rainy day, or it may occur in the voids, the main engineering spaces in the hulls, if a leak occurs in the piping, such as the cooling or the fuel piping. Whatever the circumstances, any mixture of water and a petroleum product is considered bilge water.

Other large vessels also carry ballast water, which they routinely take on and discharge as necessary to maintain a desired vessel weight. The HSF vessel does not carry ballast water and is not equipped with ballast tanks.

Disposal of Grey and Black Wastewater.

Grey water and black water generated on board the HSF vessel are contained within their own disposal systems and gravity-flow to a common holding tank in the void in one of the two hulls. The 10,000-liter black and grey water tank is located in Void #7 and is designed with check valves at the common meeting point of the grey and black water so the black water cannot back up into the grey water system.

The combined wastewater in the 10,000-liter holding tank is emptied daily in Honolulu by Aqua Pumping, a commercial vendor contracted by the HSF. Crew members of the HSF pump the wastewater through their bunker station in the stern of the vessel into a discharge line to Aqua Pumper's wastewater tank truck. The Aqua Pumper tank truck stands by on the pier near the stern of the vessel during the discharge operation, which normally takes from 20 to 30 minutes. The discharge line is solid with no couplings. If a leak should occur, it would take place either at the bunker station, which has a built-in containment berm on the deck below the pump panel, or at the tank truck's pump panel. In either case, discharge operations would be terminated immediately, spill mitigation operations would be implemented, and no wastewater would enter the harbor.

It should be noted that the grey and black water systems onboard the vessel are completely enclosed and that there is no valve in either system where wastewater can be discharged at sea.

Disposal of Bilge Water.

Bilge water generated on board the HSF vessel is contained within its own disposal system and gravity-flows to a bilge water holding tank in the void in one of the two hulls. The 500-liter bilge water holding tank is located in Void #7. Every void within the hulls is equipped with a bilge pump, which is capable of pumping accumulated bilge water to the bilge water holding tank.

Periodically, when the bilge water holding tank is one-half to three-quarters full, the bilge water is discharged through the bunker station at the stern of the vessel to an Aqua Pumping tank truck. The bilge water discharge operation is similar to the discharge operation of the grey and black water. However, in the event that the bilge water is suspected of any petroleum contamination, it is diverted into portable 400-gallon containers called cubitainers. The bilge water in the cubitainers is then disposed of by Penco or Unitek, two companies the HSF contracts to handle oily water.

It should be noted that in Void #7 the vessel is equipped with an oily water separator, a piece of equipment that is capable of processing bilge water and rendering it into a dischargeable-at-sea state. According to USCG regulations, bilge water that has a petroleum content of less than 15 parts per million can be discharged at sea 12 nautical miles away from land. As part of this sludge and oily water separating system, the HSF vessel is equipped with a discharge valve in one of its hulls approximately six feet above the waterline. The discharge valve would permit the HSF vessel to discharge bilge water that meets federal requirements into the ocean. However, per company policy the oily water separator and the discharge valve are never used, and all bilge water is discharged onshore in Honolulu.

Spill Mitigation.

Part of the HSF operation is to transport vehicles from one port to another. In the event that any vehicle on the vehicle decks should leak fuel, oil, grease or any other liquid, the HSF vessel is equipped with spill kits. The spill kits are located on the vehicle decks where they are easily accessible and consist of absorbent material which is spread on the spill and then picked up. The absorbent material is bagged and disposed of in Honolulu. Petroleum spills on board the vessel are never washed down.

In the event that rain water should interact with a spill, the oily water would drain into the gutters on the vehicle decks which connect to the bilge water piping system. There are no scuppers (drains) that drain off the vessel's decks into the ocean.

Fueling Operations.

All fueling operations are performed in Honolulu after the vessel has completed its final voyage for the day. The Chevron fuel truck stands by on the pier at the stern of the vessel and pumps the fuel onboard. The fuel, which is off-road diesel dyed pink, goes through the bunker station into two fuel storage tanks in the vessel's hull. The fuel storage tanks are normally not filled beyond 50 to 60 percent capacity because of the extra weight the additional fuel would add to the vessel. In the event of a leak in the fuel system piping, the fuel would be captured by the bilge water system.

Passenger Waste Disposal.

When the vessel is underway, passengers are restricted to the passenger cabin, which is completely enclosed. However, passengers are also permitted to stand or sit on the "Aft Lanai", which is a small open deck at the stern of the vessel on the same level as the passenger cabin. The "Aft Lanai" offers to only opportunity for passengers to throw solid or liquid waste overboard. However, the HSF has conspicuous signs posted on each side of the deck that read as follows:

Please help protect our environment. Do not throw any objects in the water. No smoking is permitted anywhere on the vessel.

In addition, two large blue trash receptacles are secured to the Aft Lanai railing, one opposite each door into the passenger cabin. Passengers are also reminded in the safety video about protecting the environment and not throwing anything overboard. Crew members circulate in the passenger cabin and on the Aft Lanai throughout the voyage to ensure passenger compliance with all regulations.

Wastewater Disposal Verification.

The Finance Section in the HSF's administrative offices is in charge of the contracting the services of Aqua Pumping, Penco, Unitek, and Chevron. The Finance Section maintains the records that verify that wastewater generated on the HSF vessel, including bilge water, is discharged daily in port in Honolulu. The contact person in the Finance Section is Lorelei Kawaoka.

1.4 Submission of a Facility Security Plan and Vessel Security Plan to the USCG.

The HSF has a Safety Management System Main Manual, which was written for the HSF by Hornblower Marine Services. The manual includes a facility security plan and a vessel security plan. The USCG issued the HSF a Certificate of Inspection, which includes approval of the manual, on May 24, 2007. The certificate is valid for five years. The HSF is required by the USCG to conduct periodic drills to test its procedures and is subject to an annual audit of its procedures by the USCG, the most recent being held in February 2008.

Eina Chin, the HSF Operations Support Manager, is responsible for the implementation of the policies and procedures in the SMS Main Manual, including facility and vessel security plans, coordinating drills with HSF personnel, and the annual audit with the USCG. She is located in the HSF administrative offices in Honolulu.

1.5 Coordination of HSF Operational Plans with County Fire and Police Departments.

The HSF Port Managers, Hal Burchard in Honolulu and Duane Kim in Kahului, have coordinated visits to the port facilities and on board the vessel for the first responders, fire and police, in the City and County of Honolulu and in the County of Maui respectively. Additional visits by county police or fire personnel may be requested at any time.

1.6 Summary and Recommendations.

The HSF vessel does not discharge any wastewater, including bilge water, in the ocean. All wastewater generated on board the vessel is removed from the vessel by private contractors while the vessel is in port in Honolulu.

The HSF has a safety manual which addresses facility and vessel security. The manual has been approved by the USCG, and the USCG conducts an annual audit of the manual's procedures. The HSF has an Operations Support Manager who is dedicated to the maintenance of the manual and to the implementation of its policies and procedures.

The HSF Port Managers maintain a cordial working relationship with the county fire and police departments in the City and County of Honolulu and in Maui County.

Recommendations: none.

Attachments:

1. Certificate of Inspection issued by the USCG. (copy)
2. Hawaii Superferry Safety Management System Main Manual, Table of Contents. (copy)
3. Safety Management Certificate issued by Germanischer Lloyd. (copy)
4. Schematic Drawing: General Arrangement
5. Schematic Drawing: Bilge System
6. Schematic Drawing: Black & Grey System
7. Schematic Drawing: Deck Sprinkler Drainage Layout
8. Schematic Drawing: Fuel System



United States of America
Department of Homeland Security
United States Coast Guard

Certification Date: 24 May 2007
Expiration Date: 24 May 2012
IMO Number: 9328912

Certificate of Inspection

Vessel Name ALAKAI	Official Number 1182234	Call Sign WDD4575	Service Passenger (Inspected)
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Hailing Port HONOLULU HI	Hull Material Aluminum	Horsepower 43980	Propulsion Jet Drive
--------------------------------	---------------------------	---------------------	-------------------------

Place Built MOBILE, AL UNITED STATES	Delivery Date	Date Keel Laid	Gross Tons	Net Tons	DWT	Length
	24May2007	08Jun2004	R-3617 I-8127	R-2459 I-2438	936	R-321.2 I-321.2

Owner HAWAII SUPERFERRY INC ONE WATERFRONT PLAZA STE 300 500 ALA MOANA BLVD HONOLULU, HI 96813 UNITED STATES	Operator HAWAII SUPERFERRY INC 1 WATERFRONT PLAZA, SUITE 300 500 ALA MOANA BLVD HONOLULU, HI 96813 UNITED STATES
---	---

This vessel must be manned with the following licensed and unlicensed personnel. Included in which there must be 11 certified lifeboatmen, 0 certified tankermen, 5 HSC type rating, and 3 GMDSS Operators.

1 Master	0 Master & 1st Class pilot	0 Radio Officer(s)	1 Chief Engineer	1 QMED/Rating
1 Chief Mate	0 Mate & 1st Class Pilot	3 Able Seamen/ROANW	0 1st Asst. Engr/2nd Engr.	0 Oilers
0 2nd Mate/OICNW	1 Lic. Mate/OICNW	2 Ordinary Seamen	0 2nd Asst. Engr/3rd Engr.	10 Other persons in crew
0 3rd Mate/OICNW	0 1st Class Pilot	0 Deckhands	0 3rd Asst. Engr.	
			1 Lic. Engr.	

In addition, this vessel may carry 866 passengers, 8 other persons in crew, 8 persons in addition to crew, and no others.
Total persons allowed: 903

Route Permitted and Conditions of Operation:

---Oceans---

NOT ON AN INTERNATIONAL VOYAGE.

LIMITED TO THOSE WATERS OF THE HAWAIIAN ISLANDS BETWEEN HONOLULU HARBOR, OAHU; KAHULUI HARBOR, MAUI; AND NAWILIWILI HARBOR, KAUAI, HAWAII AS OUTLINED IN THE VESSEL'S ROUTE OPERATIONS MANUAL, REV. DATED AUGUST 10, 2007.

THIS VESSEL HAS BEEN DESIGNED, CONSTRUCTED, AND OUTFITTED IN ACCORDANCE WITH THE INTERNATIONAL CODE OF SAFETY FOR HIGH-SPEED CRAFT (HSC CODE) 2000; THE REQUIREMENTS OF WHICH SHALL BE CONSIDERED EQUIVALENT TO THE INTERNATIONAL MARITIME ORGANIZATION'S SAFETY AND LOAD LINE CONVENTIONS. THE CONDITION OF THIS VESSEL AND ITS EQUIPMENT SHALL BE

SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION

With this Inspection for Certification having been completed at Mobile, AL, the Officer in Charge, Marine Inspection, Mobile, Alabama certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Quarterly Reinspections				This Amended certificate issued by:
Date	Zone	A/P/Q	Signature	
-	-	-	-	VINCENT B. ATKINS, CAPT, USCG <small>Officer in Charge, Marine Inspection</small> HONOLULU <small>Inspection Zone</small>
-	-	-	-	
-	-	-	-	
-	-	-	-	



Certificate of Inspection

ALAKAI

Page 2 of 4

Certification Date:
24May2007

MAINTAINED TO CONFORM WITH THE PROVISIONS OF THE HIGH SPEED CRAFT CODE AS A CATEGORY B PASSENGER CRAFT AND THIS CERTIFICATE OF INSPECTION AT ALL TIMES.

WHEN VESSEL IS CARRYING LESS THAN 501 PASSENGERS, THE OTHER PERSONS IN CREW MAY BE REDUCED BY TWO (2) FOR A TOTAL OF EIGHT (8) OTHER PERSONS IN CREW. LIFEBOATMEN MAY BE REDUCED TO EIGHT (8).

WHEN VESSEL IS CARRYING LESS THAN 251 PASSENGERS, THE OTHER PERSONS IN CREW MAY BE REDUCED BY FOUR (4) FOR A TOTAL OF SIX (6) OTHER PERSONS IN CREW. LIFEBOATMEN MAY BE REDUCED TO FIVE (5).

WHEN VESSEL IS CARRYING 0 PASSENGERS, THE OTHER PERSONS IN CREW MAY BE REDUCED BY TEN (10) FOR A TOTAL OF ZERO (0) OTHER PERSONS IN CREW. LIFEBOATMAN MAY BE REDUCED TO THREE (3).

BASE PORT IS HONOLULU HARBOR, OAHU, HAWAII.

THE VESSEL SHALL BE OPERATED IN ACCORDANCE WITH HIGH SPEED CRAFT OPERATING MANUAL, SERIAL NUMBER: DOC-615-015-105, REV. DATED MAY 1, 2007

APPROVAL OF THE VESSEL'S HULL STRUCTURE IS BASED ON THE VESSEL HAVING A DISPLACEMENT NOT GREATER THAN 2211 METRIC TONS AND COMPLIANCE WITH THE DESIGN RESTRICTIONS REGARDING WAVE HEIGHT AND VESSEL SPEED. THE VESSEL SHALL FOLLOW THE RESTRICTIONS AS IDENTIFIED BELOW IN THE SIGNIFICANT WAVE HEIGHT VS. SPEED TABLE AS APPROVED BY THE MARINE SAFETY CENTER LETTER H2-0701537 DATED MAY 15, 2007.

THE MASTER MUST OBTAIN CURRENT WEATHER DATA FROM A RECOGNIZED WEATHER SERVICE PRIOR TO COMMENCING ANY TRIP TO ENSURE THE FOLLOWING PARAMETERS ARE NOT EXCEEDED DURING THE VOYAGE:

SIGNIFICANT WAVE HEIGHT (m)	MAXIMUM ALLOWABLE SPEED (kts)
0-2.8	45.0
2.8-3.2	37.3
3.2-3.5	33.0
3.5-4.0	28.0
4.0-5.0	22.0
5.0-6.0	19.0
ABOVE 6.0	SEEK SHELTER AT SLOW SPEED

THE VESSEL IS LIMITED TO A 6.0 METER SIGNIFICANT WAVE HEIGHT WHEN CARRYING PASSENGERS BASED ON THE POST-FLOODING DOWNFLOODING POINT REQUIREMENT OF HSC CODE 2.6.11.1 AND THE LIMITED EXTRAPOLATION OF VOYAGE DATA VALIDATING MAXIMUM HORIZONTAL ACCELERATIONS ASSOCIATED WITH PASSENGER SAFETY IN ACCORDANCE WITH 2000 HSC CODE, TABLE 1, ANNEX 3. SEE MARINE SAFETY CENTER LETTER H2-0703356 DATED OCTOBER 31, 2007 AND H2-0703788 DATED DECEMBER 12, 2007.

FAILURE TO LOAD AND OPERATE THE VESSEL IN ACCORDANCE WITH THIS OPERATIONAL ENVELOPE MAY RESULT IN EXCESSIVE HULL STRESSES NOT CONTEMPLATED BY THIS APPROVAL.

ALL WATERTIGHT DOORS IN SUBDIVISION BULKHEADS SHALL BE KEPT CLOSED AT ALL TIMES EXCEPT WHEN USED FOR TRANSIT. THE WATERTIGHT HATCHES LOCATED IN THE PORT AND STARBOARD GENERATOR ROOMS AND JET ROOMS SHALL BE KEPT CLOSED AT ALL TIMES WHILE UNDERWAY.



Certificate of Inspection

ALAKAI

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Certification Date:
24May2007

IF THE VESSEL IS AWAY FROM THE DOCK OR PASSENGERS ARE ON BOARD OR HAVE ACCESS TO THE VESSEL FOR A PERIOD EXCEEDING 12 HOURS IN ANY 24 HOUR PERIOD, AN ALTERNATE MASTER AND CREW SHALL BE PROVIDED.

THE MASTER MUST REMAIN ON BOARD THE VESSEL AT ALL TIMES WHILE UNDERWAY OR AT ANCHOR WHEN CARRYING PASSENGERS FOR HIRE.

ONE CHILD SIZE LIFE PRESERVER SHALL BE PROVIDED FOR EACH PERSON WEIGHING LESS THAN 90 POUNDS.

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
Drydock	24May2008	24May2007	-
Internal structure	24May2008	24May2007	-

---Stability---

Letter Approval Date / 24May2007 Office/ MSC-1

---Liquid/Gas/Solid Cargo Authority/Conditions---

Authorization/
 46CFR Subchapter D Authority: Highest Grade/ Capacity/ Units/
 46CFR Subchapter O Authority: Part 151/No Part 153/No Part 154/No

---Inspection Status---

Fuel Tanks

Tank ID	Internal Examinations		
	Previous	Last	Next
Stbd Fuel Tank	-	24May2007	24May2008
Port Fuel Tank	-	24May2007	24May2008

Pressure Vessels

Type	Location	Previous	Last	Next
Air Receiver	Port Engine Room	-	24May2007	24May2012
Air Receiver	Stbd Engine Room	-	24May2007	24May2012
Air Receiver	Generator Room	-	24May2007	24May2012
Air Receiver	Generator Room	-	24May2007	24May2012

Lifesaving

Number of Davits/2					
Lifeboat/Raft ID	Full Wgt Test	Light Wgt Test	Falls Rnwd	Falls End/End	
XDC47578D606	24May2007	-	24May2007	-	
XDC47577C606	24May2007	-	24May2007	-	

---Lifesaving Equipment---

	Number Persons		Required
Total Equipment for Lifeboats (Total)	0	0	948
		Life Preservers (Adult)	948
		Life Preservers (Child)	87



Certificate of Inspection

ALAKAI

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Certification Date:
24May2007

Lifeboats (Port)*	0	0	Ring Buoys (Total)	8
Lifeboats (Starbd)*	0	0	With Lights*	2
Motor Lifeboats*	0	0	With Line Attached*	4
Lifeboats W/Radio*	0	0	Other*	2
Rescue Boats/Platforms	2	12	Immersion Suits	4
Inflatable Rafts	11	1100	Portable Lifeboat Radios	3
Life Floats/Buoyant App	0	0	Equipped with EPIRB?	Yes

(* included in totals)

---Fire Fighting Equipment---

Number of Fireman Outfits/ 6 Number of Fire Pumps/ 2

Hose information

Qty	Diameter	Length
2	1.5	Other
22	1.5	50

Fixed Extinguishing Systems

Capacity	Agent	Space Protected
	Water Mist	Port Engine Room
	Water Mist	Stbd Engine Room
	Water Mist	Port Generator Room
	Water Spray	Mezzanine Deck
	Water Spray	Car Deck
	Water Mist	Stbd Generator Room

Fire Extinguishers - Hand portable and semi-portable

Qty	Class Type
34	B-II

---Certificate Amendments---

Current Amendment

Port Amending/ Sector Honolulu Date Amended/ 12Dec2007

-Remarks-

Amended Route and Conditions to reflect new significant wave height table.

1. Port Amending/ SEC Hono Date Amended/ 20Aug2007

-Remarks-

Updated Routes and Conditions and Manning Scale.

END

SAFETY MANAGEMENT CERTIFICATE

Issued under the provisions of the
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA; 1974,
 as amended

under the authority of the Government of the

UNITED STATES OF AMERICA

by **GERMANISCHER LLOYD**

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage	IMO Number
<i>ALAKAI</i>	<i>WDD4575</i>	<i>Honolulu</i>	<i>8127</i>	<i>9328912</i>

Name and address of the Company (see paragraph 1.1.2 of the ISM Code)	Type of Ship *
<i>Hawaii Superferry, Inc. 1 Waterfront Plaza, Ste. 300, 500 Ala Moana Blvd, Honolulu, HI 96813 / USA</i>	<i>Passenger high-speed craft</i>

THIS IS TO CERTIFY THAT the Safety Management System of the ship has been audited and that it complies with the requirements of the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code)**, following verification that the Document of Compliance for the Company is applicable to this type of ship.

This Safety Management Certificate is valid until *09th October, 2012*, subject to periodical verification and the Document of Compliance remaining valid.

Completion date of the verification on which this certificate is based: *10th October, 2007*

Issued at *Hamburg* the *21st* day of *November, 2007*



Germanischer Lloyd

Olaf Quas

Ingo Haverkamp



SAFETY MANAGEMENT SYSTEM

MAIN MANUAL

HSV Alakai

Document Control # 6/6

Issued to DP

Revision # 2

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1 Waterfront Plaza 500 Ala Moana Blvd.
Box 34, Suite 1-302
Honolulu, HI 96813

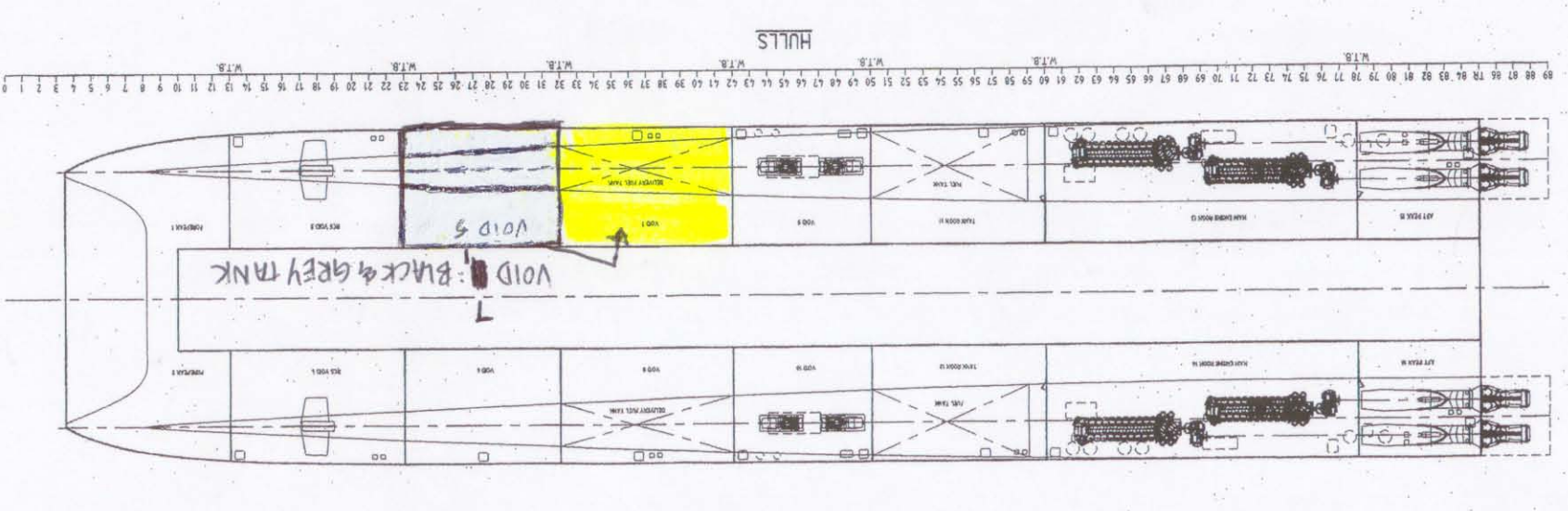
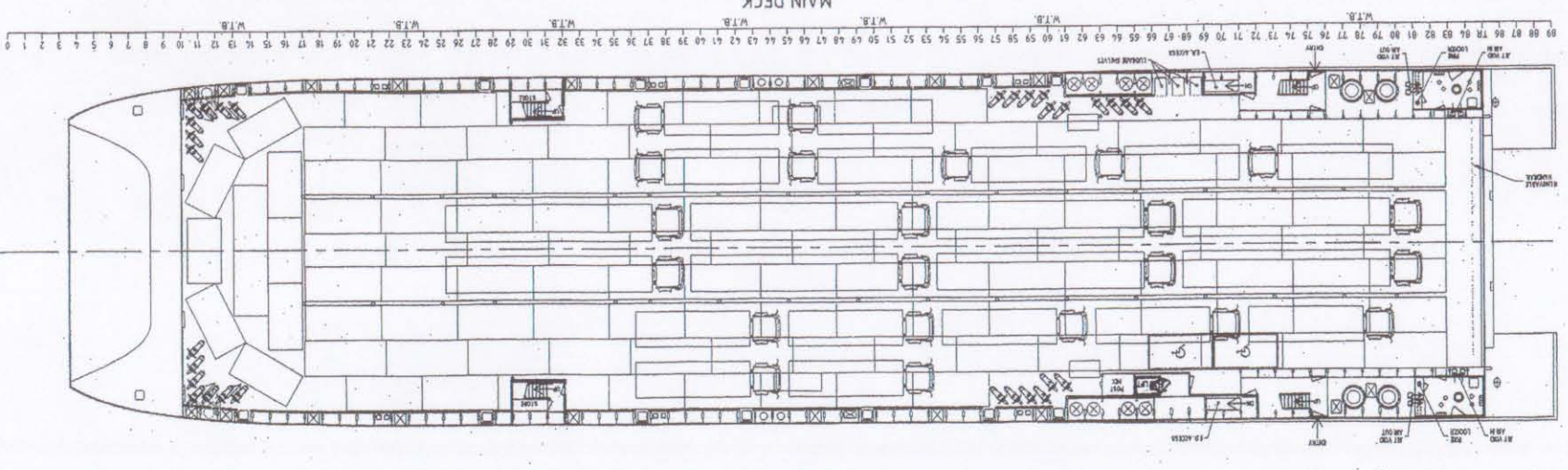
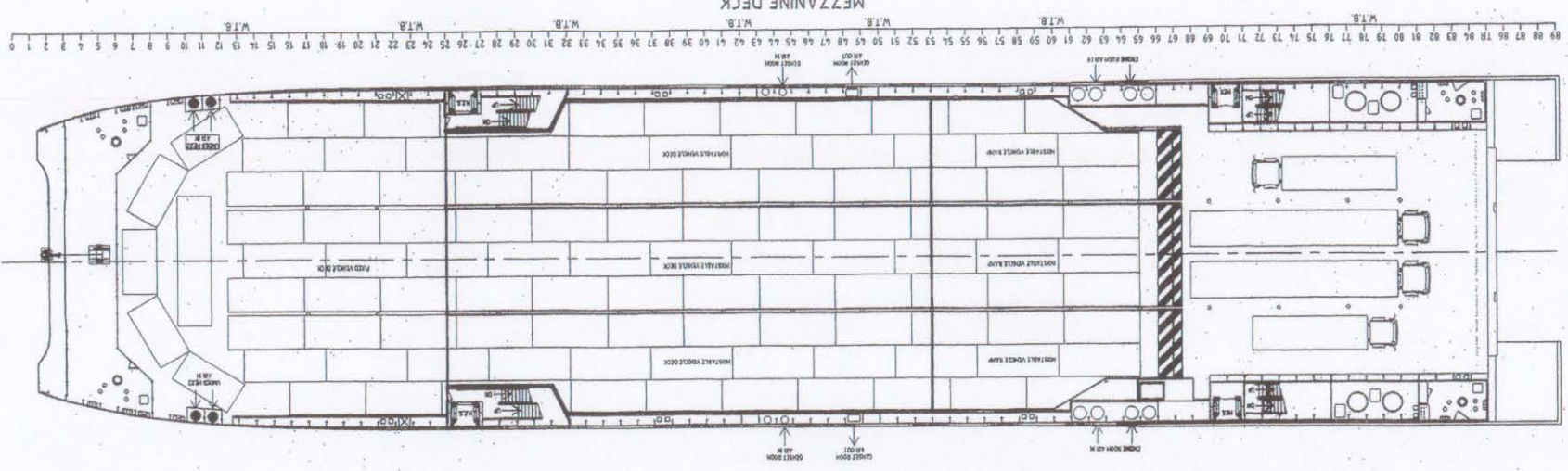
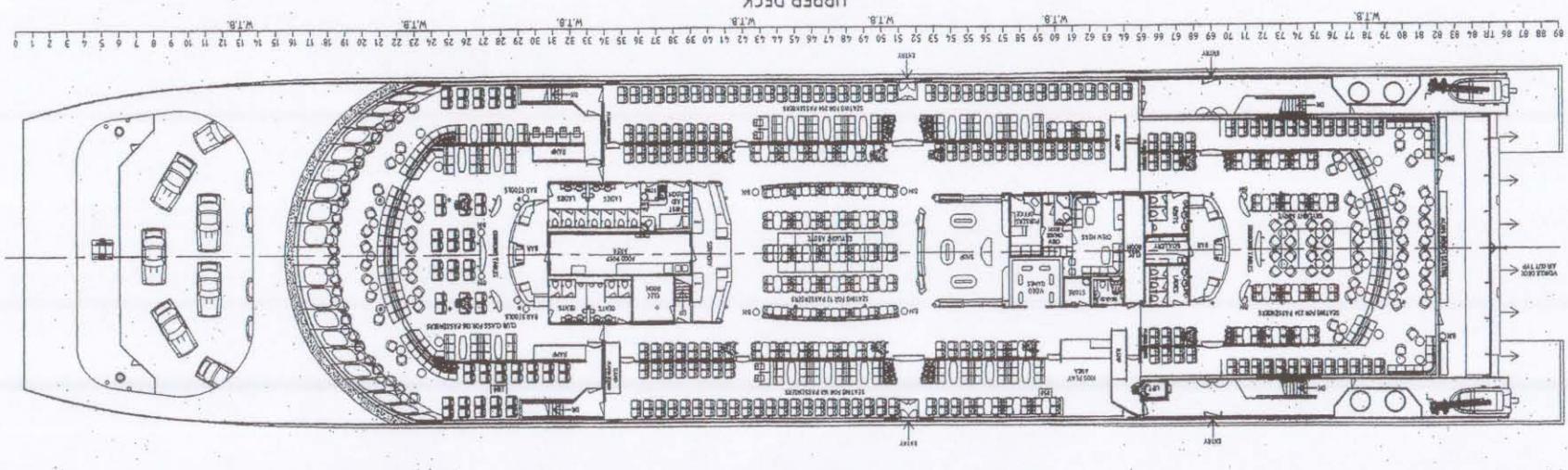
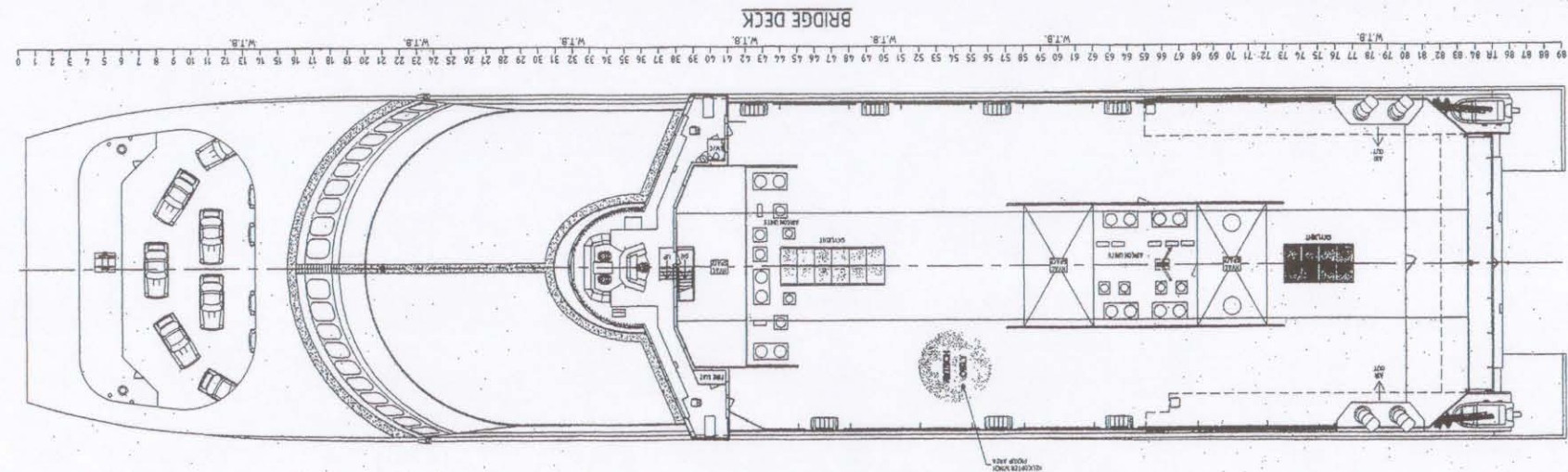
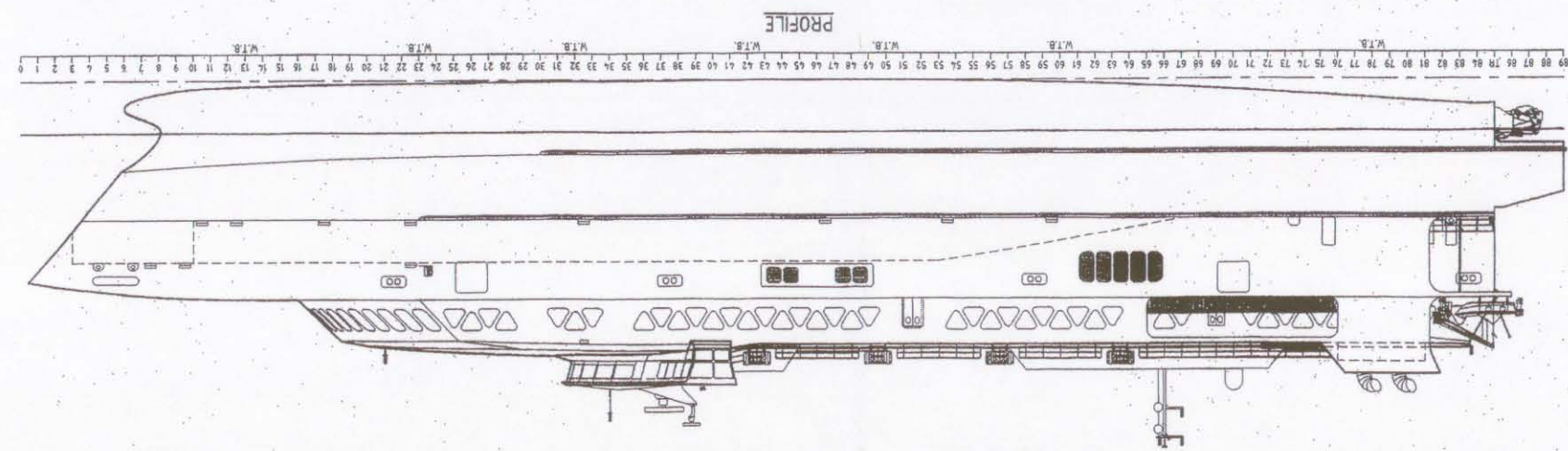
Telephone (808) 531-7400
Facsimile (808) 531-7410

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PRINCIPAL PARTICULARS	
L.O.A.	106.5m
Length between	92.4m
Beam	23.0m
Depth	9.4m
Depth (Bulwark)	3.5m
Depth (Deck)	8.6m
Passengers	282 (94m)
Crew	34 (12 in 8 Crews)



REVISIONS	
NO.	DATE
1	10/10/01
2	10/10/01
3	10/10/01
4	10/10/01
5	10/10/01
6	10/10/01
7	10/10/01
8	10/10/01
9	10/10/01
10	10/10/01

AUSTAL
SHIPS

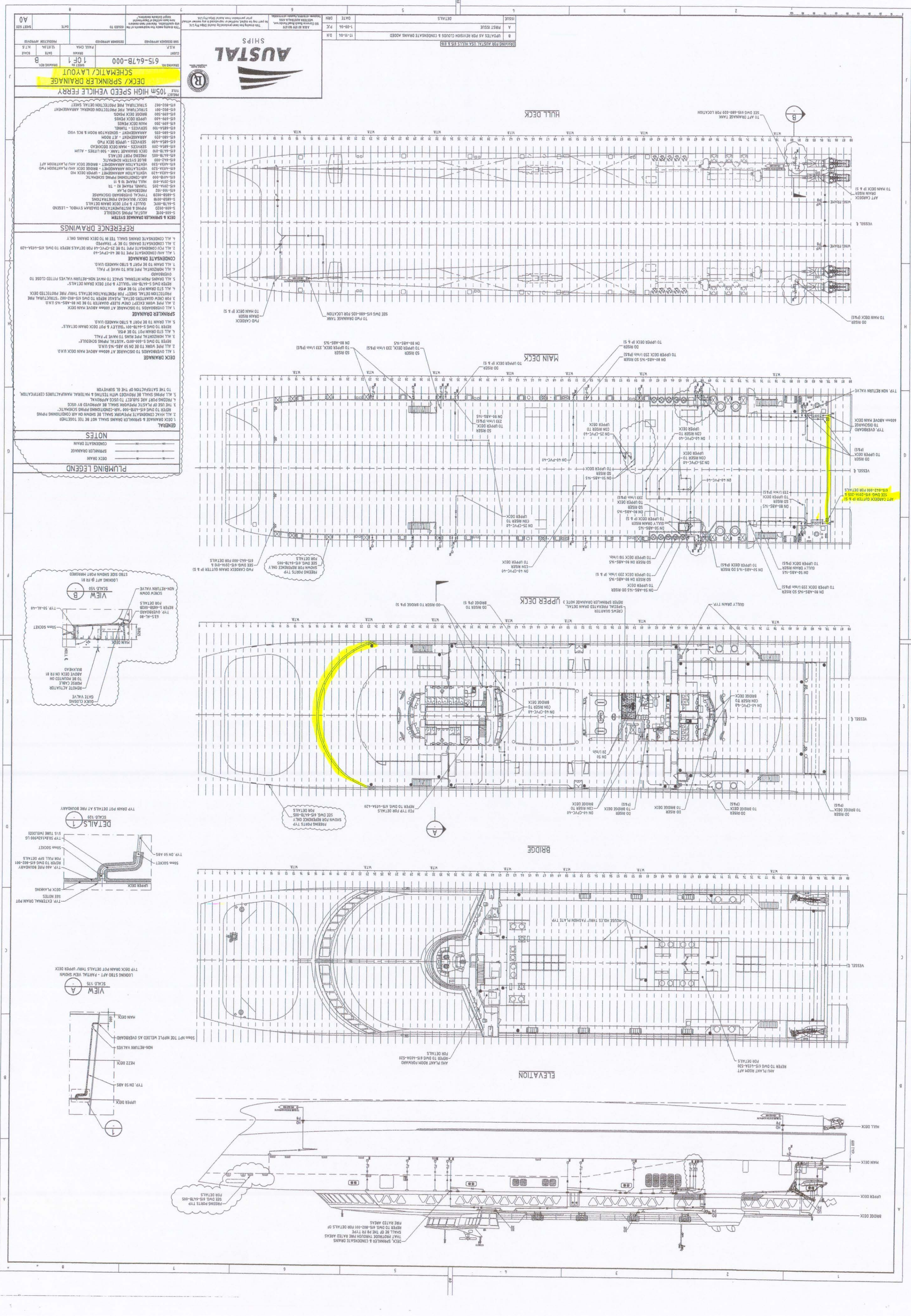
ISSUED FOR CONSTRUCTION

PROJECT: 106.5m HIGH SPEED VEHICLE FERRY
GENERAL ARRANGEMENT

SCALE: 1:100

DATE: 10/10/01

DESIGNER: [Signature]



DATE	ISSUE	DESCRIPTION
11-04-04	A	ISSUE FOR PER REGION CLOUDS & CONDENSATE DRAINS ADDED
11-04-04	B	UPDATES AS PER REGION CLOUDS & CONDENSATE DRAINS ADDED

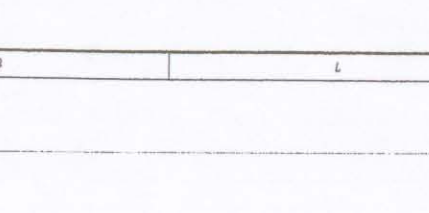
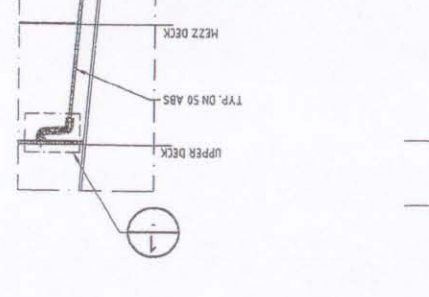
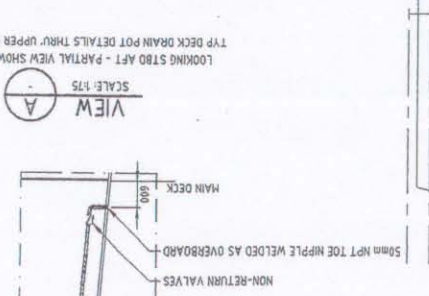
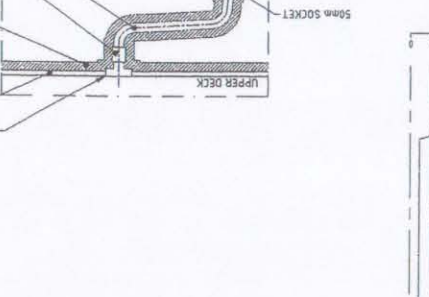
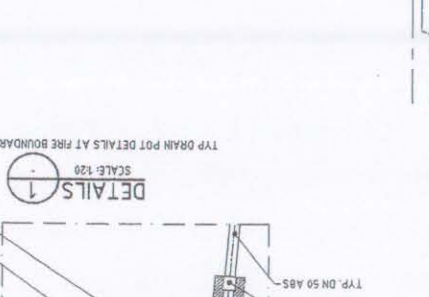
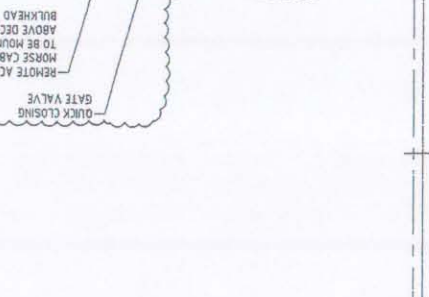
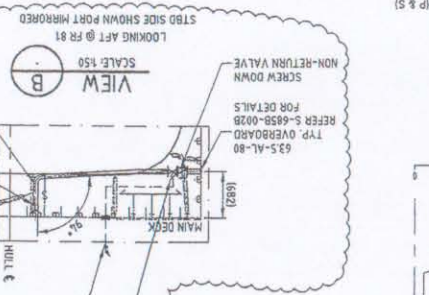
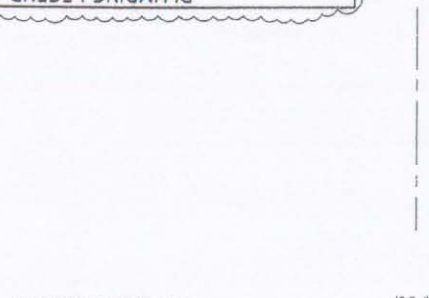
AUSTAL SHIPS

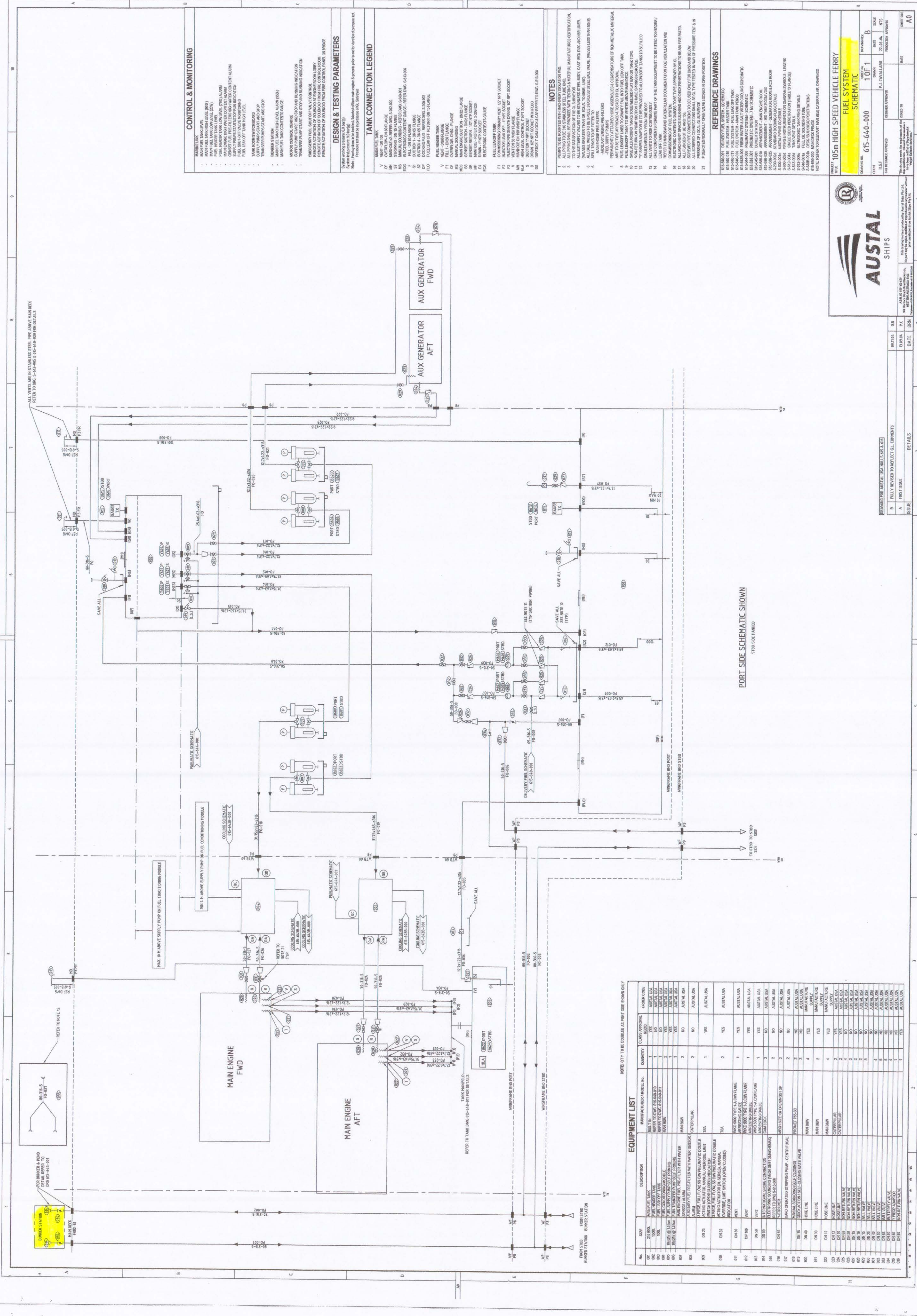
PROJECT: 105m HIGH SPEED VEHICLE FERRY
 DRAWING NO: 615-647B-000
 SHEET: 1 OF 1
 TITLE: DECK / SPRINKLER DRAINAGE SCHEMATIC LAYOUT

- REFERENCE DRAWINGS**
- 1. ALL CONDENSATE DRAINS SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 2. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 3. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 4. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 5. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 6. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 7. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 8. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 9. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 - 10. ALL CONDENSATE PIPES TO BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000

- NOTES**
1. DECK DRAINAGE & SPRINKLER DRAINS SHALL NOT BE TOGETHER
 2. ALL DRAINAGE & SPRINKLER DRAINS SHALL BE APPROVED BY US
 3. USE OF PLASTIC PIPE SHALL BE APPROVED BY US
 4. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 5. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 6. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 7. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 8. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 9. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000
 10. ALL CONDENSATE PIPES SHALL BE 1" DIA. 304 SS. REFER TO DWG. 615-647A-000

- PLUMBING LEGEND**
- DECK DRAIN
 - CONDENSATE DRAIN
 - SPRINKLER DRAINAGE
 - DECK DRAIN





CONTROL & MONITORING

- MAIN FUEL TANK LEVEL
- MAIN FUEL TANK HIGH LEVEL (HPL)
- FUEL HEADERS TANK LEVEL
- FUEL HEADERS TANK LOW LEVEL (LPL)
- GENERATOR FUEL FILLERS HIGH WATER CONTENT ALARM
- GENERATOR FUEL FILLERS LOW WATER CONTENT ALARM
- FUEL LEAK OFF TANK HIGH LEVEL
- TANK ROOM SWITCHBOARD
- SUPPLY PUMPS START AND STOP
- MANUAL PUMPS START AND STOP
- MAIN FUEL TANK HIGH LEVEL ALARM (HPL)
- MAIN FUEL TANK CONTENTS GAUGE
- ENGINE CONTROL CENTRE
- SUPPLY PUMP START AND STOP AND RUNNING INDICATION
- TRANSFER PUMP START AND STOP AND RUNNING INDICATION
- REMOTE ACTIVATION OF SOLENOID FROM FIRE CONTROL ROOM
- REMOTE ACTIVATION OF SOLENOID FROM ENGINE ROOM
- REMOTE ACTIVATION OF SOLENOID FROM FIRE CONTROL ROOM

DESIGN & TESTING PARAMETERS

System working pressure: 6.3 bar (90 psi)

System test pressure: 12.6 bar (180 psi)

Maximum pressure: 12.6 bar (180 psi)

Pressure: 12.6 bar (180 psi)

TANK CONNECTION LEGEND

- V VENT - DN 80
- OF OVERFLOW - DN 80 FLANGE
- BT BREATHER - DN 80 FLANGE
- EG ELECTROSTATIC CONDUCTIVITY GAUGE - REFS: DMS, S413.006
- F FILL - DN 80 FLANGE
- SF SECTION - DN 80 FLANGE
- EP EXHAUST PUMP - REF: DMS, S205.000
- FEL FUEL EFFICIENCY FACTOR - DN 80 FLANGE
- V VENT - DN 80 FLANGE
- FEL FUEL EFFICIENCY FACTOR - DN 80 FLANGE
- MES MAIN ENGINE SECTION - DN 80 FLANGE
- OR OR - DN 80 FLANGE
- DN DN - DN 80 FLANGE
- EG ELECTROSTATIC CONDUCTIVITY GAUGE
- F1 FUEL LEAK OFF TANK
- F2 FUEL LEAK OFF TANK
- F3 FUEL LEAK OFF TANK
- F4 FUEL LEAK OFF TANK
- F5 FUEL LEAK OFF TANK
- F6 FUEL LEAK OFF TANK
- F7 FUEL LEAK OFF TANK
- F8 FUEL LEAK OFF TANK
- F9 FUEL LEAK OFF TANK
- F10 FUEL LEAK OFF TANK
- F11 FUEL LEAK OFF TANK
- F12 FUEL LEAK OFF TANK
- F13 FUEL LEAK OFF TANK
- F14 FUEL LEAK OFF TANK
- F15 FUEL LEAK OFF TANK
- F16 FUEL LEAK OFF TANK
- F17 FUEL LEAK OFF TANK
- F18 FUEL LEAK OFF TANK
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- F21 FUEL LEAK OFF TANK
- F22 FUEL LEAK OFF TANK
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- F24 FUEL LEAK OFF TANK
- F25 FUEL LEAK OFF TANK
- F26 FUEL LEAK OFF TANK
- F27 FUEL LEAK OFF TANK
- F28 FUEL LEAK OFF TANK
- F29 FUEL LEAK OFF TANK
- F30 FUEL LEAK OFF TANK

NOTES

- PUMPS TO BE INSTALLED WITH INVERTED ISOLATION TAG.
- ALL PIPING SHALL BE PROVIDED WITH TESTING MATERIAL MANUFACTURE CERTIFICATION TO THE SATISFACTION OF THE CLIENT.
- VALVES GREATER THAN OR EQUAL TO DN 80 - RISKY CAST IRON (CIR) AND RISKY.
- ALL BALL VALVES TO BE OF THE PRESSURE TEMPERATURE RATED TYPE.
- MAIN ENGINE PRE-FLTERS
- FUEL SUPPLY PUMPS
- PERMANENTLY ATTACHED HOSE ASSEMBLY AS COMPENSATOR FOR NON METALLIC MATERIAL.
- FUEL LEAK OFF TANK TO BE INSTALLED ABOVE MAIN TANK.
- NON RETURN VALVE ON PUMP SECTION TO HAVE SPRING BIASED.
- NON RETURN VALVE TO BE PROVIDED TO ALLOW DRAIN TANKS TO BE FILLED.
- ALL VALVES TO BE CONTINUOUSLY OPERATED.
- REFER TO MANUFACTURE CATALOGUE FOR FITTED TO HOSE/PIPE.
- ELECTRIC CONTENTS GAUGE TO BE TYPE APPROVED BY COL.
- REFER TO MANUFACTURE CATALOGUE FOR FITTED TO HOSE/PIPE.
- ALL INSTRUMENTS SHALL BE PROVIDED WITH TYPE APPROVED BY COL.
- SCHEMATIC CONNECTIONS SHALL BE USED ONLY FOR TEST AND DEMO.
- IF INSTALLED NORMALLY OPEN VALVE LOCKED IN OPEN POSITION.

REFERENCE DRAWINGS

- 85-444-001 FUEL SYSTEM - GENERAL SCHEMATIC
- 85-444-002 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-003 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-004 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-005 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-006 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-007 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-008 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-009 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-010 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-011 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-012 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-013 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-014 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-015 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-016 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-017 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-018 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-019 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-020 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-021 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-022 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-023 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-024 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-025 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-026 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-027 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-028 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-029 FUEL SYSTEM - FUEL LEAK OFF TANK
- 85-444-030 FUEL SYSTEM - FUEL LEAK OFF TANK

PROJECT 105m HIGH SPEED VEHICLE FERRY

TITLE FUEL SYSTEM SCHEMATIC

DRAWING NO. 615-640-000

REV. 1 OF 1

DATE 22-04-14

SCALE B

DESIGNED BY P.J. CAVALLARO

CHECKED BY P.J. CAVALLARO

APPROVED BY P.J. CAVALLARO

REVISIONS

NO.	DESCRIPTION	DATE
1	ISSUED FOR APPROVAL	22-04-14
2	APPROVED FOR CONSTRUCTION	22-04-14



ALL VENTS ARE IN STAINLESS STEEL PIPE ABOVE MAIN DECK
REFER TO DMS 8-443-000 & 85-444-000 FOR DETAILS

FOR BUNKER & PUMP DETAIL REFER TO DMS 85-445-001

REFER TO NOTE 12

REFER TO TANK DMS 85-444-000 FOR DETAILS

PORT SIDE SCHEMATIC SHOWN

EQUIPMENT LIST

NOTE: QUANTITY TO BE DOUBLED AS PORT SIDE SHOWN ONLY

NO.	SIZE	DESCRIPTION	MANUFACTURE / MODEL NO.	CLASSIFICATION	QUANTITY
001	DN 100	MAIN FUEL TANK	AUSTAL USA	YES	1
002	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
003	DN 100	FUEL HEADERS TANK	AUSTAL USA	YES	2
004	DN 100	FUEL HEADERS TANK	AUSTAL USA	NO	2
005	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
006	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
007	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
008	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
009	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
010	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
011	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
012	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
013	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
014	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
015	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
016	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
017	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
018	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
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020	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
021	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
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023	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
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026	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
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081	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
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083	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
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097	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
098	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1
099	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	YES	1
100	DN 100	FUEL LEAK OFF TANK	AUSTAL USA	NO	1

APPENDIX E

Fehr & Peers/Kaku Associates

DRAFT

**HAWAI'I SUPERFERRY
RAPID RISK ASSESSMENT**

JUNE 2008

PREPARED FOR

STATE OF HAWAI'I DEPARTMENT OF TRANSPORTATION

PREPARED BY



DRAFT

**HAWAI'I SUPERFERRY
RAPID RISK ASSESSMENT**

June 2008

Prepared for:

STATE OF HAWAI'I DEPARTMENT OF TRANSPORTATION

Prepared by:

FEHR & PEERS/KAKU ASSOCIATES
201 Santa Monica Boulevard, Suite 500
Santa Monica, California 90401
(310) 458-9916

Ref: LA08-2231.01

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I. INTRODUCTION

As part of a broader analysis of the operation of the Hawai'i Superferry (HSF) conducted for the Rapid Risk Assessment (RRA) for the State of Hawai'i Department of Transportation (HDOT), Fehr & Peers/Kaku Associates performed field observations of traffic operations at the HSF terminal at Pier 19 of the Honolulu Harbor on O'ahu and at the Kahului Harbor on Maui, during the HSF's initial period of operation in mid-January 2008 and again in late May 2008. Both observation periods focused on the scope of work identified in the RRA and potential traffic operational issues caused by the loading and unloading of passengers' vehicles onto and off of the HSF at both harbors as well as the operation of the pick-up/drop-off area at the HSF terminals.

II. RAPID RISK ASSESSMENT OBJECTIVES

Per HDOT's 2007 *Rapid Risk Assessment Scope of Work*, "The purpose of the Rapid Risk Assessment is to provide early and independent assessment of: 1) observed environmental risks associated with the Hawai'i Superferry operation, if any, and 2) operational compliance with mitigation measures enumerated in section 4(a) of Act 2, Executive Order 07-10 and the Agreement between Hawai'i Superferry, Inc. and the State of Hawai'i."

The following summarizes the objectives of the RRA scope relative to traffic issues at each HSF port terminal facility:

- Section 2.b.(2)(n) – As directed by HDOT, is the vehicle movement and management plan implemented?
- Section 2.b.(2)(o) – Does the terminal facility design allow vehicles to enter each port terminal facility a minimum of two (2) hours prior to departure of the vessel?
- Section 2.b.(2)(p) – Are trained staff employed to manage traffic entering and exiting each port terminal facility?
- Section 2.b.(2)(q) – As directed by HDOT, are off-duty police (or their equivalent) retained and posted to direct traffic, control signals and/or unforeseen traffic problems?
- Section 2.g – Additional measures that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including substantive basis for such recommendation(s)?
- Section 2.h – Should any conditions (established under Executive Order 07-10) be discontinued or removed because they are unnecessary or of no further need? If so, provide the substantive basis for such recommendation.

A brief description of each objective by location is followed by a table providing a summary of each objective by location over the course of the observation periods.

HONOLULU HARBOR

Section 2.b.(2)(n) – As directed by HDOT, is the vehicle movement and management plan implemented?

Yes. The port terminal facility at Honolulu Harbor operates in accordance with the site plan diagram published on the HSF website.

The plan indicates that general vehicles enter at Gate 1 on Kukahi Street and exit from Gate 3 on Kukahi Street. Commercial vehicles are directed to enter and exit from Gate 3. Passenger pick-up/drop-offs enter and exit from Gate 4 just off Nimitz Highway, located about 130 feet Diamond Head of Kukahi Street. The facility provides ample vehicle storage space before and after vehicles progress through the inspection station, so vehicles arriving early can be accommodated without blocking vehicle traffic outside the port facility and disembarking HSF traffic.

Section 2.b.(2)(o) – Does the terminal facility design allow vehicles to enter each port terminal facility a minimum of two (2) hours prior to departure of the vessel?

Yes. The port terminal facility opens its gates for departing vehicles a minimum of two hours prior to the scheduled vessel departure.

Section 2.b.(2)(p) – Are trained staff employed to manage traffic entering and exiting each port terminal facility?

Yes. Trained HSF personnel, or their equivalent, manage the traffic both entering and exiting the facility.

Staff members are positioned at each entry/exit point to direct traffic. HSF personnel direct traffic inside the facility: embarking vehicles are directed through inspection, into vehicle staging areas, and onto the HSF and disembarking vehicles are guided out of the site and onto Kukahi Street. The pick-up/drop-off area is also managed by HSF personnel, who direct taxis, vans and private vehicles to queue in designated areas.

Section 2.b.(2)(q) – As directed by HDOT, are off-duty police (or their equivalent) retained and posted to direct traffic, control signals and/or unforeseen traffic problems?

Private traffic control contractors were present to control and direct traffic on Friday, May 23, 2008 and Monday, May 26, 2008. The traffic control contractors managed flows during the midday overlapping arrival and departure time period. The contractors coned off the right lane on Diamond Head-bound Nimitz Highway creating freeflow right turns onto and off of Kukahi Street and the turnoff for the pick-up/drop-off area. At each access point on Nimitz Highway, contractors directed traffic and managed traffic flow.

Traffic control contractors were not present during the entirety of the January observations or on the other May observation days.

Section 2.g – Additional measures that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including substantive basis for such recommendation(s)?

We recommend improvements to external wayfinding signage. Vehicles bound for the drop-off area were observed traveling down Kukahi Street in error, based on signage found on Nimitz Highway. With direction from HSF personnel stationed at Gate 3, vehicles turned around and entered the drop-off area.

We recommend improving signage on 'Ewa-bound Nimitz Highway. While the observer was positioned on Diamond Head-bound Nimitz Highway, 'Ewa-bound drivers turning onto Kukahi Street would inquire about the location of HSF facilities; this included private drivers as well as taxi drivers. From 'Ewa-bound Nimitz Highway, some vehicles would make a U-turn onto Deamond Head-bound Nimitz Highway and attempt to cut across traffic to enter the pick-up/drop-off area. This is a potential safety hazard because vehicles need to cut across four lanes of traffic in 130 linear feet. If problems persist, installation of a median or barrier, so a right turn into the pick-up/drop-off area cannot be made from this move, may be considered.

We recommend traffic control at Nimitz Highway during outbound operations, either a lane on Nimitz Highway or a flagger to direct outbound traffic. During the peak January demand, traffic exiting HSF from Gate 3 onto Kukahi Street would queue at Nimitz Highway because of the signal timing at Pacific Street. The queue would extend from Nimitz Highway to Gate 3 and would not clear out with each gap in Nimitz Highway traffic. Traffic control was implemented on select days during the May observations.

We recommend continuing the coning operation on Nimitz Highway during the peak demand days. The coning operation created a freeflow right-turn lane into and out of both entrances and facilitated traffic flow during the overlapping condition of embarking and disembarking traffic. Additionally, coning eliminated potential safety hazard of vehicles turning into the pick-up/drop-off area from a left turn onto Diamond Head-bound Nimitz Highway from the segment of Kukahi Street that allows vehicle travel from 'Ewa-bound Nimitz Highway to Diamond Head-bound Nimitz Highway.

We recommend designating a pedestrian entry path. Several pedestrians were observed entering the HSF terminal from Nimitz Highway. The driveway leading to the pedestrian entry does not have a designated walkway.

Section 2.h – Should any conditions (established under Executive Order 07-10) be discontinued or removed because they are unnecessary or of no further need? If so, provide the substantive basis for such recommendation.

No. No conditions (established under Executive Order 07-10) are recommended for discontinuation or removal.

Table 1A provides a summary of the Honolulu Harbor observation results.

TABLE 1A
SUMMARY OF THE RAPID RISK OBSERVATION RESULTS - HONOLULU

IRRA SOW	CONDITION	1/20/08 - Obs 1	1/20/08 - Obs 2	1/21/08 - Obs 1	1/21/08 - Obs 2	1/22/08 - Obs 1	1/22/08 - Obs 2	1/23/08 - Obs 1	5/23/08 - Obs 1	5/23/08 - Obs 2	5/23/08 - Obs 3	5/24/08 - Obs 1	5/24/08 - Obs 2	5/25/08 - Obs 1	5/25/08 - Obs 2	5/25/08 - Obs 3	5/26/08 - Obs 1	5/26/08 - Obs 2	5/26/08 - Obs 3	
2.b.(2).(n)	As directed by DOT, vehicle movement and management plan implemented?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(o)	Does the terminal facility design allow vehicles to enter each port terminal facility a minimum of two hours prior to the departure of the vessel?	Yes	[a]	Yes	[a]	Yes	[a]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(p)	Are trained staff employed to manage traffic entering and exiting each port terminal facility?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(q)	As directed by DOT, are off-duty police (or equivalent) retained and posted to direct traffic, control signals and/or respond to unforeseen traffic problems?	No	No	No	No	No	No	No	No	Yes	No	No	No	No	No	No	No	Yes	Yes	No
2.g	Additional measures that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including substantive basis for such recommendation(s)?	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]
2.h	Should any conditions (established under Executive Order 07-10) be discontinued or removed because they are unnecessary or of no further need? If so, provide substantive basis for such recommendation.	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None

Notes:

[a] - No scheduled departure during this observation, only arrival.

[b] - Refer to text for summarized discussion. Detailed discussion available in appendix.

KAHULUI HARBOR

Section 2.b.(2)(n) – As directed by HDOT, vehicle movement and management plan implemented?

Yes. The port terminal facility at Kahului Harbor operates in accordance with the site plan diagram published on the HSF website.

The plan indicates that all vehicles enter the port terminal facility from Pu'unene Avenue. General vehicle and pick-up/drop-off access is provided at Gate 15; commercial vehicle access is provided at Gate 14. The facility provides ample vehicle storage space before and after vehicles progress through the inspection station, so vehicles arriving early can be accommodated without blocking vehicle traffic outside the port facility and the disembarking HSF traffic.

Section 2.b.(2)(o) – Does the terminal facility design allow vehicles to enter each port terminal facility a minimum of two (2) hours prior to departure of the vessel?

Yes. The port terminal facility opens its gates for departing vehicles a minimum of two hours prior to the scheduled vessel departure.

Section 2.b.(2)(p) – Are trained staff employed to manage traffic entering and exiting each port terminal facility?

Yes. Trained HSF personnel manage the traffic both entering and exiting the facility.

Staff members are positioned at each entry/exit point and within the port terminal facility to direct traffic during embarking/disembarking operations. Embarking vehicles are directed through inspection, into vehicle staging areas, and onto the HSF and disembarking vehicles are guided out of the site and onto Pu'unene Avenue. The pick-up/drop-off area is also managed by HSF personnel, who direct taxis, vans and private vehicles to queue in designated areas.

Section 2.b.(2)(q) – As directed by HDOT, are off-duty police (or their equivalent) retained and posted to direct traffic, control signals and/or unforeseen traffic problems?

Yes. Traffic control officers (TCOs), presumed to be off-duty officers from the Maui Police Department, are posted on Pu'unene Avenue to control and direct traffic entering and exiting the port terminal facility and were present during each observation day. Additionally, TCOs were posted at the intersection of Pu'unene Avenue & Ka'ahumanu Avenue to direct other traffic unrelated to the HSF operations. During several days in May, the TCOs were also observed to manually control the traffic signal cycle length at Pu'unene Avenue & Ka'ahumanu Avenue. The total number of TCOs present ranged from four to five officers. They were present during all observations in January and May.

Section 2.g – Additional measures that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including substantive basis for such recommendation(s)?

We recommend reducing the size of the TCO presence during the off-loading operations. The presence of four to five TCOs appeared to negatively affect the operational efficiency and outbound flow of traffic. Some drivers appeared apprehensive about their actions, as if they were slowing down for additional directions from the TCOs, creating periodic slowdowns in the unloading operation.

We recommend using a regular traffic signal pattern at Ka'ahumanu Avenue & Pu'unene Avenue while under manual control. Observations in May indicated that TCOs were able to manually control the signal timing at the intersection. There was no regular pattern to the traffic signal cycle. In some instances, prioritization was given to the southbound cycle by allocating greater green time to vehicles disembarking from HSF, causing longer queues in the east and westbound directions on Ka'ahumanu Avenue.

We recommend requiring departing commercial vehicles to arrive at the HSF facility before general vehicles. This would remove any potential for conflict between entering commercial vehicles and vehicles disembarking from the vessel. A disruption between inbound commercial vehicles and offloading vehicles was observed in May. The vehicles exiting through Gate 14 prevented the commercial vehicles from entering through the normal commercial gate. As the commercial vehicles queued on Pu'unene Avenue to enter the facility, a backup was created along Pu'unene Avenue extending to Ka'ahumanu Avenue.

Section 2.h – Should any conditions (established under Executive Order 07-10) be discontinued or removed because they are unnecessary or of no further need? If so, provide the substantive basis for such recommendation.

None. No conditions (established under Executive Order 07-10) are recommended for discontinuation or removal.

Table 1B provides a summary of the Kahului Harbor observation results.

**TABLE 1B
SUMMARY OF THE RAPID RISK OBSERVATION RESULTS - KAHULUI**

RRA SOW	CONDITION	1/20/08 - Obs 1	1/21/08 - Obs 1	1/22/08 - Obs 1	1/23/08 - Obs 1	5/23/08 - Obs 1	5/23/08 - Obs 2	5/24/08 - Obs 1	5/25/08 - Obs 1	5/25/08 - Obs 2	5/26/08 - Obs 1	5/26/08 - Obs 2
2.b.(2).(n)	As directed by DOT, vehicle movement and management plan implemented?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(o)	Does the terminal facility design allow vehicles to enter each port terminal facility a minimum of two hours prior to the departure of the vessel?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(p)	Are trained staff employed to manage traffic entering and exiting each port terminal facility?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.b.(2).(q)	As directed by DOT, are off-duty police (or equivalent) retained and posted to direct traffic, control signals and/or respond to unforeseen traffic problems?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2.g	Additional measures that may be determined reasonably necessary to provide operational safeguards in accordance with the intent of Act 2 and the conditions established under Executive Order 07-10, including substantive basis for such recommendation(s)?	No	No	No	No	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]	Yes [b]
2.h	Should any conditions (established under Executive Order 07-10) be discontinued or removed because they are unnecessary or of no further need? If so, provide substantive basis for such recommendation.	None	None	None	None	None	None	None	None	None	None	None

Notes:

- [a] - No scheduled departure during this observation, only arrival.
- [b] - Refer to text for summarized discussion. Detailed discussion available in appendix.

III. FIELD OBSERVATIONS AND BACKGROUND INFORMATION

January field observations were performed January 20 through 23, 2008 over the Martin Luther King Jr. holiday weekend, and May observations were performed on May 23 through 26, 2008 over the Memorial Day weekend. Both HSF facilities at Honolulu Harbor and Kahului Harbor were observed. At the time of the observations, HSF was only operating the roundtrip route between Honolulu Harbor and Kahului Harbor.

JANUARY 2008 SCHEDULE – SAILINGS AND OBSERVATIONS

During the January observations, only one round trip sailing took place each day:

- 6:30 a.m. Honolulu departure (arriving 10:15 a.m. at Kahului)
- 11:15 a.m. Kahului departure (arriving 2:15 p.m. at Honolulu)

Information provided by HSF indicated that the facility gates are opened two hours before departure and closed approximately 30 minutes before departure. Based on the sailing schedule, the following field observation schedule was utilized in January:

- Honolulu from 4:30 a.m. to 6:30 a.m. (departure)
- Kahului from 9:15 a.m. to 10:45 a.m. (overlapping arrival and departure)
- Honolulu from 1:00 p.m. to 2:30 p.m. (return)

MAY 2008 SCHEDULE – SAILINGS AND OBSERVATIONS

During the May observations, two roundtrip sailings were scheduled for four days out of the week. The remaining days were scheduled for a single roundtrip. The following is the sailing schedule over the observation period:

- 6:30 a.m. Honolulu departure (arriving 9:30 a.m. at Kahului)
 - 11:00 a.m. Kahului departure (arriving 2:00 p.m. at Honolulu)
 - 3:00 p.m. Honolulu departure (arriving 6:00 p.m. at Kahului)
 - 7:00 p.m. Kahului departure (arriving 10:00 p.m. at Honolulu)
- Second sailing only on Sunday, Monday, Wednesday, Friday

Again, based on information provided by HSF and as in January, the facility gates are opened two hours before departure and closed approximately 30 minutes before departure. The following observation schedule was developed with the sailing schedule:

- Honolulu from 4:30 a.m. to 6:30 a.m. (departure of first sailing)
- Kahului from 8:30 a.m. to 11:30 a.m. (overlapping arrival and departure of first sailing)
- Honolulu from 1:30 p.m. to 3:30 p.m. (return of first sailing and departure of second sailing)
- Kahului from 4:30 p.m. to 7:30 p.m. (overlapping arrival and departure of second sailing)
- Honolulu from 9:30 p.m. to 10:30 p.m. (return of second sailing)

Table 2 summarizes the sailing schedules as observed during January and May.

OPERATIONS PLAN – HONOLULU HARBOR

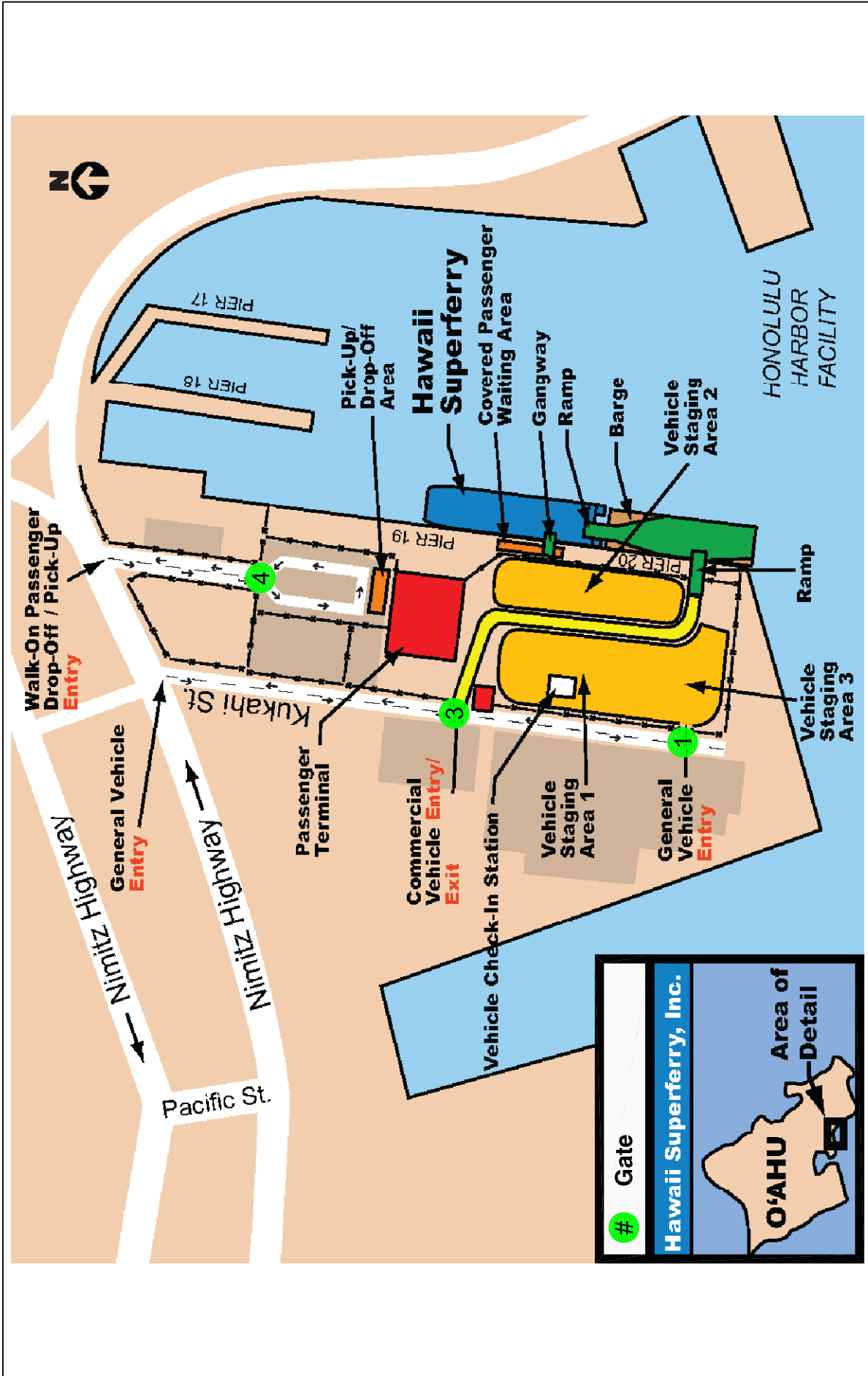
Access to the HSF terminal at Pier 19 in the Honolulu Harbor is provided along Nimitz Highway. There are two entrances to the HSF facility: commercial/general vehicle entry and pick-up/drop-off area entry. The commercial/general vehicle entry is along Kukahi Street, and access to the pick-up/drop-off area is provided by a driveway on Nimitz Highway, just Diamond Head of Kukahi Street. In this area of Honolulu Harbor, Nimitz Highway is a separated facility with one way in the ‘Ewa direction and one way in the Diamond Head direction. Figure 1 illustrates the location and layout of the Honolulu HSF facility. All Diamond Head-bound vehicles can turn right from Nimitz Highway onto Kukahi Street or into the HSF driveway. Vehicles boarding the HSF and traveling ‘Ewa must travel makai across Nimitz Highway to access the vehicle gates on Kukahi Street. ‘Ewa-bound vehicles intending to drop-off or pick-up passengers must turn

**TABLE 2
SAILING SCHEDULE**

	Honolulu to Kahului		Kahului to Honolulu	
	Departure	Arrival	Departure	Arrival
January	6:30 AM	10:15 AM	11:15 AM	2:15 PM
May	6:30 AM 3:00 PM*	9:30 AM 6:00 PM*	11:00 AM 7:00 PM*	2:00 PM 10:00 PM*

Sailing schedule current as of observation date.

* Sailing only on Sunday, Monday, Wednesday, Friday.



FEHR & PEERS

KAKU ASSOCIATES

Jun 19, 2008

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HONOLULU HARBOR TERMINAL MAP

FIGURE 1

left at the intersection of Kukahi Street & Nimitz Highway (Diamond Head) and cross four travel lanes in order to access the HSF driveway.

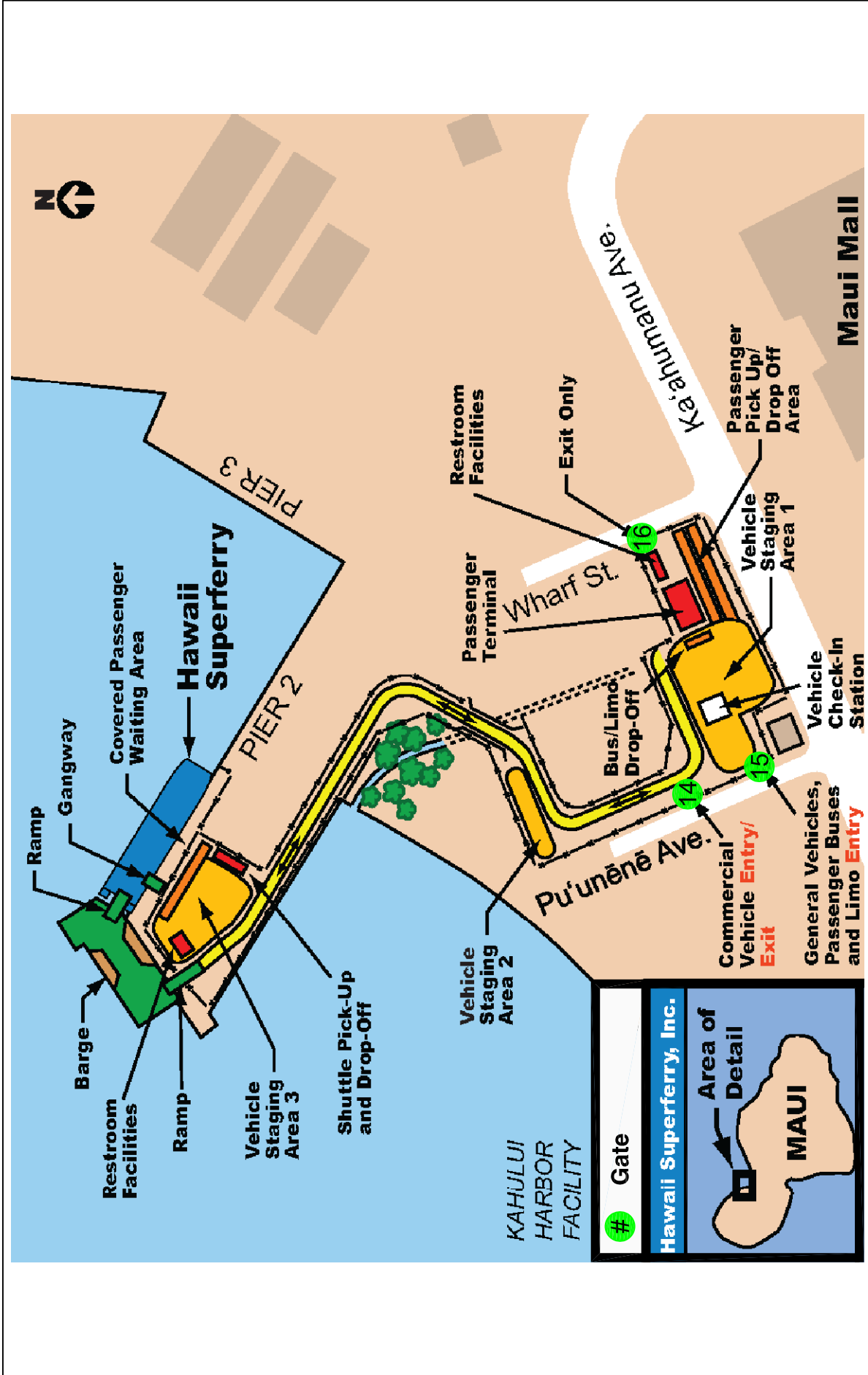
Vehicles boarding the HSF turn onto Kukahi Street and travel makai towards the entry gates; commercial vehicles enter at Gate 3 and general vehicles enter from Gate 1. Once in the HSF facility, drivers are guided into their respective areas for vehicle check-in and inspection. When the check-in and inspection processes are complete, drivers are then directed into the appropriate staging areas for loading onto the vessel. The commercial and general vehicle staging areas are typically separated because of the order of loading the vessel. Commercial vehicles are directed to Staging Area 3 and general vehicles are directed to Staging Area 2.

All vehicles disembarking the vessel follow a two-lane aisle through the HSF facility toward the passenger terminal building. The drive aisle is reduced to a single lane by the terminal building and vehicles exit single-file through Gate 3. All exiting vehicles must turn right at Nimitz Highway. Those vehicles traveling Diamond Head can turn right and continue along Nimitz Highway; 'Ewa-bound vehicles can either turn left at Sumner Street or loop around Nimitz Highway, 'Ewa of the Nuuanu Stream Bridge.

For passenger drop-offs and pick-ups, posted signage directs drivers to enter from Gate 4 at the end of the HSF driveway. Taxis, vans, private vehicles, and pedestrians are directed to this entrance. Inside the pick-up/drop-off shed, three storage lanes are available in the middle for taxis and vans to queue and one lane provides circulation around the perimeter of the shed. Additionally, taxis may queue on the Diamond Head side of the pick-up/drop-off area if the middle lanes are not used for vehicle storage.

OPERATIONS PLAN – KAHULUI HARBOR

Access to the HSF terminal at Pier 2 in the Kahului Harbor is provided just off the intersection of Pu'unene Avenue & Ka'ahumanu Avenue. Two entrances to the HSF facility are found along Pu'unene Avenue: commercial entry is through Gate 14, furthest from Ka'ahumanu Avenue, and general vehicle and pick-up/drop-off access is provided through Gate 15, closest to Ka'ahumanu Avenue. Figure 2 illustrates the location and layout of the Kahului HSF facility.



Vehicles traveling from the general direction of Wailuku can generally turn left from Ka'ahumanu Avenue into the HSF facility. Drivers from the Kihei direction can follow Pu'unene Avenue into the facility, and vehicles from the airport and upcountry can access the facility by turning right from Ka'ahumanu Avenue. Once in the HSF facility, drivers are guided into their respective areas for vehicle check-in and inspection. When the check-in and inspection processes are complete, drivers are then directed into the appropriate staging areas for loading onto the vessel. The commercial and general vehicle staging areas are typically separated because of the order of loading the vessel. Commercial vehicles are directed to Staging Area 2 and general vehicles are directed to Staging Area 3 at the end of the dock.

Disembarking vehicles are directed to exit through Gate 14. HSF staff direct all exiting traffic internal to the site. Once on Pu'unene Avenue, TCOs with the Maui Police Department direct traffic at the Ka'ahumanu Avenue intersection.

Passenger drop-off/pick-ups are guided to the drop-off/pick-up area through Gate 15 on Pu'unene Avenue and directed to exit through Gate 16 on Wharf Street. Taxi pick-ups are required to be dispatched from the taxi company (i.e., taxi drivers are not allowed to enter the facility without having a passenger's name). Pedestrians and walk-up passengers are directed toward Gate 16.

HSF PATRONAGE

Table 3 summarizes both the patronage and number of booked vehicles on each of the four observation days in January and the four observation days in May.

Actual daily passenger load data was provided by HSF staff for the two series of observations. In January, the highest daily passenger and vehicular demands were observed on Monday, January 21 (the Martin Luther King, Jr. holiday) with 493 passengers and 135 vehicles; of this, 144 passengers/41 vehicles were departing Honolulu and 349 passengers/94 vehicles were departing Kahului. According to conversations with HSF staff, this was the highest demand to date since HSF service resumed after its November 2007 stoppage. The remainder of the observations experienced total daily demand ranging from 182 to 269 passengers and 59 to 80 vehicles. The average directional split, based on vehicles, over this period was 40% arriving

**TABLE 3
PASSENGER AND VEHICLE COUNTS**

Date	Honolulu to Maui		Maui to Honolulu	
	Passengers	Vehicles	Passengers	Vehicles
Sunday 1.20.08				
One Daily Sailing	98	30	171	50
Monday 1.21.08				
One Daily Sailing	144	41	349	94
Tuesday 1.22.08				
One Daily Sailing	99	28	83	31
Wednesday 1.23.08				
One Daily Sailing	107	41	118	38
Friday 5.23.08				
First Sailing	610	188	338	75
Second Sailing	498	153	227	59
Saturday 5.24.08				
One Daily Sailing	698	181	263	67
Sunday 5.25.08				
First Sailing	413	95	298	72
Second Sailing	210	38	508	147
Monday 5.26.08				
First Sailing	111	26	658	173
Second Sailing	318	84	578	169

in Kahului and 60% departing from Kahului. Although the directional split favored Honolulu, a travel trend appears in the Monday patronage data likely because of the Martin Luther King, Jr. holiday weekend.

According to actual passenger load data, the demand during the May observations exceeded the demand in January. The highest daily passenger and vehicular demand was observed on Friday, May 23 (two roundtrips) with 1,673 passengers and 475 vehicles; of this 1,108 passengers/341 vehicles were departing from Honolulu and 565 passengers/134 vehicles were departing from Kahului. In terms of sailings with peak demands, the first sailing on Friday, May 23 experienced the highest vehicular demand with 263 vehicles. Another high vehicular demand was observed during the p.m. period on Monday, May 25 with 253 vehicles, of which 84 were traveling to Kahului and 169 were departing from Kahului. Over the course of the May observation period, the average directional split for passengers was 50% traveling to Kahului and 50% traveling to Honolulu. Although the data indicates an even directional travel split for the May observation period, the daily average varied up to a 20% to 80% split in the direction of travel (i.e., a larger percentage of passengers to Kahului). The average directional split, based on vehicular traffic, over this period was 40% arriving in Kahului and 60% departing from Kahului. The most noticeable trend coincided with holiday travel with most vehicles traveling to Maui at the beginning of Memorial Day weekend and traveling to Honolulu at the conclusion of the Memorial Day weekend.

SUMMARY OF OBSERVATIONS – HONOLULU HARBOR

The observations for January and May are provided separately to ensure that the distinction between the two sets of observations is clear.

January Observations

The following summarizes the key points relative to the traffic impact of the loading and unloading operation of passenger vehicles onto and off of the HSF at Honolulu:

- The facility gates were opened by 4:30 a.m. each day.
- On each day, most departing vehicles, i.e., vehicles planning to embark on the HSF, arrived at the harbor area within 60 minutes of scheduled departure, or by 5:30 a.m.
- No queuing was observed on Nimitz Highway into the HSF facility during the morning departure.
- During the afternoon arrival, vehicles disembarking the vessel typically offloaded within 15 minutes after the unloading of vehicles commenced. Therefore, disembarking vehicles had vacated the harbor area by 2:30 p.m.
- During three of the four afternoon observations, there was little queuing related to HSF traffic observed on Kukahi Street at Nimitz Highway. On these three days, the volume of vehicles disembarking the vessel was lower in comparison to the peak discussed below. There were no traffic problems related to these disembarking vehicles. Other commercial vehicles, related to adjacent harbor commercial activity, were not observed exiting Kukahi Street at the same time vehicles disembarked the vessel. This likely reduced the possibility of queuing at Nimitz Highway.
- On the afternoon of Monday, January 21, 2008, the highest observed demand, queuing was observed on Kukahi Street. The queue was created by departing vehicles waiting to approach Nimitz Highway. The queues were observed to be approximately 20 vehicles, which backed into the HSF facility. Gaps in Diamond Head-bound traffic, created by the traffic signal at Pacific Street & Nimitz Highway, allowed up to half of the queue to clear each time. Operations on Nimitz Highway were not adversely affected by the departing vehicles.

May Observations

The following summarizes the key points relative to the traffic impact of the loading and unloading operation of passenger vehicles onto and off of the HSF in May:

- Gates were already open at 4:30 a.m. when observations began.
- On peak days, several vehicles were in inspection, or had cleared inspection by the time observations had begun, indicating that some vehicles arrived more than 90 minutes before departure. Friday, May 23 had the highest number of vehicles already at the site at 4:30 a.m., with most of the storage capacity leading up to inspection filled with vehicles. In general, though, most vehicles arrived between 90 and 30 minutes before departure.
- Passenger drop-offs arrive fairly evenly in the hour leading up to departure. However, peak drop-off traffic occurred 45 to 30 minutes before departure. Peak pick-up traffic for HSF arrivals occurred 15 to 30 minutes following arrival.

- Traffic operations in and out of the HSF terminal did not negatively impact traffic operations on Nimitz Highway during the early a.m., midday, and evening HSF arrivals and departures. There is little southbound traffic on Nimitz Highway during the early a.m. and evening time periods, but traffic is moderate during the midday period.
- Vehicle boarding operations function well, as there is ample storage capacity before and after vehicle inspection and a sufficient number of traffic control personnel to guide vehicles into staging areas.
- Vehicle exiting operations also function smoothly with guidance from traffic control personnel. Traffic exiting the HSF terminal does queue on Kukahi Street during periods of peak demand. However, the queue clears quickly because ample gaps occur in southbound traffic on Nimitz Highway.
- Private vehicles tend to stage in the parking lot just outside the pick-up/drop-off area and then circle through the shed when passengers have arrived. However, this parking lot is expected to be used for long-term parking for HSF passengers and may not be available for such use in the future.
- Signage for both the vehicle entrance and the passenger entrance is poorly marked, so some vehicles intending to go to the passenger pick-up/drop-off area entered at the wrong entrance and needed to make a U-turn. While these vehicles were not observed blocking traffic, the lack of signage did increase the potential for needless conflicts and did increase the number of vehicles traveling through the intersection of Nimitz Highway & Kukahi Street. On Saturday, May 24 and Sunday, May 25, counts were conducted of vehicles entering the wrong entrance and circling back. During the observation periods, approximately 30% of vehicles entering the passenger pick-up/drop-off area were noted to come from the wrong entrance.
- During all time periods, but especially the morning and evening observations, some vehicles were seen making a left onto Diamond Head-bound Nimitz Highway from Kukahi Street and then cutting across four lanes of traffic in 130 linear feet to make a right turn into the passenger pick-up/drop-off entrance. Taxis were the predominant vehicle type making this move, presumably because they were heading 'Ewa-bound on Nimitz Highway from hotels in the Waikiki area. While traffic is quite light at 5:00 a.m. and 10:00 p.m. on Nimitz Highway, this movement still presents a safety hazard as approximately 30% of vehicles entering the passenger pick-up/drop-off entrance made this move.
- Friday midday and Monday midday periods had an overlap of high departure and arrival volumes of passengers and vehicles. HSF coned off a significant stretch of Nimitz Highway, effectively creating a freeflow right turn into and out of the vehicle entrance/exit at Kukahi Street. Cones reserving the right lane of Nimitz Highway (Diamond Head-bound) stretched from Pacific Street to River Street. Traffic control personnel were positioned to flag drivers into and out of the site, as well as to manage vehicles departing from the passenger pick-up/drop-off entrance. Traffic flowed consistently into and out of the site. This technique appeared to be an effective means to manage traffic during peak periods with an overlapping arrival and departure. This also eliminated the safety hazard related to the left turn detailed

previously, as vehicles were unable to enter the passenger pick-up/drop-off entrance from that move.

- Thirty to 54 daily pedestrians were observed entering or exiting the HSF terminal on Friday through Sunday, May 23 to 25. According to informal discussions with pedestrians and HSF staff, pedestrians appeared to come from or were walking to a bus stop, walked from hotels, parked in other locations, or got picked up in locations other than the terminal. There is currently no sidewalk, so pedestrians must walk in the street.
- The 10:00 p.m. arrival on Monday, May 26 had a high number of arriving walk-on passengers and, thus, a large number of private vehicles were waiting to pick up passengers. HSF personnel staged the cars in the parking lot in front of the passenger entrance until passengers actually disembarked from the HSF. At that point, they started the cars circulating through the pick-up/drop-off shed, as well as the parking lot out front, not allowing them to stop inside the shed area. Because the parking lot is expected to be used for long-term paid parking, this area will no longer be available for use as pick-up overflow. On peak days, this entrance may not have enough storage capacity within the shed to handle the number of private vehicles arriving to pick up passengers.

SUMMARY OF OBSERVATIONS – KAHULUI HARBOR

Following are the observations for January and May at Kahului Harbor.

January Observations

The following summarizes the key points relative to the traffic impact of the loading and unloading operation of passenger vehicles onto and off of the HSF in January:

- TCOs were positioned at Ka'ahumanu Avenue & Pu'unene Avenue to direct traffic.
- Gates were opened by 9:00 a.m. each day.
- On each day, most departing vehicles, i.e., vehicles planning to embark on the HSF, arrived at the harbor area within 75 minutes of scheduled departure, or after 10:00 a.m. Vehicles disembarking the vessel typically offloaded within 15 minutes after the unloading of vehicles commenced. Therefore, disembarking vehicles had vacated the harbor area by 10:30 a.m.
- No additional queuing was observed on Pu'unene Avenue as a result of incoming HSF vehicles at any time on any of the four days.

- Departing vehicles were carefully controlled by the TCOs assigned to the HSF in the harbor area. These officers ensured that the queuing of departing vehicles at Ka'ahumanu Avenue did not block vehicles attempting to access the bank parking lot, did not block vehicles accessing other areas in the harbor, and did not block vehicles arriving to board the HSF. The officers also ensured that vehicles were not allowed to leave the harbor area if no queuing space was available on the southbound leg of Pu'unene Avenue.
- Neither study intersection experienced any congestion on any observation day during either the arrival or departure of vehicles associated with the HSF.
- On all four days, both intersections operated freely without congestion during the HSF loading and unloading of vehicles, with little or no queuing of vehicles on any approach of the intersections, and without any delays associated with HSF operations.
- On Monday, January 21, 2008, the intersections did become congested from approximately 11:00 a.m. until 12:00 noon, when the observation of the intersections was concluded. This congestion, which was primarily caused by the higher than normal traffic volumes on Ka'ahumanu Avenue, occurred after all vehicles disembarking the HSF had departed the area, and after all vehicles embarking the HSF had arrived and were either on the HSF or at least within the harbor gates. Discussion with harbor staff and the TCOs indicated that these higher than normal traffic volumes and the subsequent traffic congestion were generated by the holiday activities at the adjacent shopping centers and was totally unrelated to the HSF.

May Observations

- TCOs were positioned at Ka'ahumanu Avenue & Pu'unene Avenue to direct traffic.
- Gates were opened by 9:00 a.m. each day.
- On each day, most departing vehicles, i.e., vehicles planning to embark on the HSF, arrived at the harbor area within 75 minutes of scheduled departure, or after 9:45 a.m. Vehicles disembarking the vessel typically offloaded within 25 to 35 minutes after the unloading of vehicles commenced. Therefore, disembarking vehicles had vacated the harbor area by 10:05 a.m.
- Departing vehicles were carefully controlled by the TCOs assigned to the HSF in the harbor area. These officers ensured that the queuing of departing vehicles at Ka'ahumanu Avenue did not block vehicles attempting to access the bank parking lot, did not block vehicles accessing other areas in the harbor, and did not block vehicles arriving to board the HSF. The TCOs also ensured that vehicles were not allowed to leave the harbor area if no queuing space was available on the southbound leg of Pu'unene Avenue.

- One of the TCOs manually controlled the allocation of green time of the signal cycles at Ka'ahumanu Avenue & Pu'unene Avenue during each unloading operation of the HSF at the harbor. Whether it was because different TCOs were controlling the signal during each of the different periods of this operation or because the control varied depending on the traffic demand coming off the HSF during each period, the signal cycle timing did not have a regular pattern during a single off-loading operation of the HSF or during different HSF off-loading operations. In some instances prioritization was given to the southbound cycle by allocating greater green time to vehicles disembarking from HSF, in turn causing longer queues in the east and westbound directions on Ka'ahumanu Avenue. However, adequate green time was given to clear the east and westbound approaches on Ka'ahumanu Avenue so that no undue delays were observed. The presence of a large number of TCOs at the exit gate (up to five at any given time) seemed to make some drivers apprehensive when leaving the Kahului Harbor area, causing the exiting operation to be less efficient than it could be.
- Neither study intersection experienced any congestion on any observation day during either the arrival or departure of vehicles associated with the HSF.
- Both intersections operated freely without congestion on all four days during the HSF loading and unloading of vehicles, with little or no queuing of vehicles on any intersection approach, and without any delays associated with HSF operations.
- The Kahului Harbor operations were slightly different in May as a result of the addition of a taxi and rental car station to accommodate the higher number of walk-on passengers boarding the HSF. A seating area was provided for walk-on passengers where they could request HSF staff call a taxi or rental car shuttle for pick-up at the Kahului Harbor. This new operation did not adversely impact the circulation in the terminal area or the adjacent intersections.
- Field observations and discussions with HSF employees revealed that there are instances where HSF patrons have requested to park at the Kahului Harbor for the duration of their voyage to Honolulu and back. Currently, HSF does not have parking available to accommodate such requests.
- On one of the four days of the May observations, additional queuing was observed on Pu'unene Avenue for a short period of time (about three minutes) as a result of HSF loading operations. On Friday, May 23, the northbound leg of Pu'unene Avenue experienced a queue at approximately 9:45 a.m. primarily caused by the arrival of two commercial vehicles during the discharge of vehicles from the HSF. Commercial vehicles are unable to negotiate the entrance where passenger vehicles enter, so they have a designated entrance at Gate 14, a location where outbound vehicles normally exit. Because the commercial vehicles arrived as vehicles were exiting, they could not access their staging area immediately. Under normal operations, the trucks must wait for HSF employees to hold exiting vehicles at Gate 14 far enough back from the entrance that the commercial vehicles can enter, or the commercial vehicles wait for disembarking vehicles to finish offloading entirely. Commercial vehicles regularly boarded on several days during the observations without causing a queue.

IV. CONCLUSIONS AND RECOMMENDATIONS

HONOLULU HARBOR

The following is a summary of the conclusions based on the January and May 2008 observations of the HSF loading and unloading operations at Honolulu Harbor:

- HSF traffic did not impact traffic operations on Nimitz Highway during any of the observed time periods.
- Traffic in and out of the vehicle entrance and on and off the HSF operates efficiently given the volume of vehicles handled.
- Lack of clear signage leads to significant confusion of drivers entering the site, causing them to use the wrong entrance, and tying up HSF personnel to direct them to the appropriate entrance.
- Vehicles cutting across Nimitz Highway from Kukahi Street to turn into the passenger pick-up/drop-off entrance could constitute a safety hazard.
- A small but significant number of passengers walk into and out of the HSF terminal.

The following represents the recommendations for the operation of the HSF loading and unloading operation at Honolulu Harbor based on the observations:

- Install large, illuminated, and permanent signage that directs drivers to the vehicle entrance and passenger pick-up/drop-off entrance of the HSF terminal. Signs should be installed on both the Diamond Head and 'Ewa directions of Nimitz Highway and indicate upcoming turns for HSF. The sign on Diamond Head-bound Nimitz Highway should specify the location of the right turn for the vehicle entrance as well as the passenger entrance. An example of possible text on the sign is "Hawai'i Superferry vehicle entrance first right; passenger pick-up/drop-off entrance and parking, second right." In addition to this sign, each entrance should have its own large sign indicating where to turn. Finally, a sign should be suspended over Kukahi Street at the commercial vehicle gate indicating that entering vehicles should proceed to the general vehicle entry, so drivers do not need to ask HSF personnel where they should go.

- Signage should also be placed on 'Ewa-bound Nimitz Highway. However, rather than indicating that vehicles should turn at Kukahi Street, we recommend that the sign indicate that vehicles should turn at Pacific Street. Though a sign will not limit where vehicles turn, it will encourage most vehicles to turn at Pacific Street, thereby ensuring that more vehicles make right turns in at both the vehicle entrance as well as the passenger pick-up/drop-off area, which would reduce the safety hazard at Kukahi Street & Nimitz Highway.
- If signage does not appear to be sufficient to minimize the safety hazard at Kukahi Street, consider installing a barrier in between the rightmost and third lane of Nimitz Highway that would force the pedestrian pick-up/drop-off entrance to be a right in and right out only.
- Because of the number of pedestrians entering the site, we recommend the construction of a sidewalk from Nimitz Highway into the HSF terminal.

KAHULUI HARBOR

The following is a summary of the conclusions based on the two periods of observation of the loading and unloading operations of the HSF at the Kahului Harbor:

- The intersections of Ka'ahumanu Avenue & Pu'unene Avenue and Ka'ahumanu Avenue & Wharf Street currently operate at an acceptable level of service during all peak periods, both with and without the addition of HSF-related traffic.
- The volume of vehicles disembarking on Friday, May 23 and embarking on Monday, May 26 actually exceeded the peak patronage forecasts for the HSF.
- These high patronage figures are not expected to occur weekly, but represent the peak volumes that can be expected on a holiday (Memorial Day) weekend.
- Even on days when these peak volumes were observed, no traffic operational problems were observed at the intersections of Ka'ahumanu Avenue with Pu'unene Avenue and Wharf Street.
- An operational issue was observed, on one day, between entering commercial vehicles and exiting general vehicles. Vehicles unloading from the vessel were directed to exit at Gate 14, also used as the commercial vehicle entry. Two large commercial vehicles arrived as the vessel was unloading, creating a brief backup on Pu'unene Avenue.
- It can be concluded that the HSF would not have an impact on the traffic operations of either intersection even under peak conditions.

The following represents the recommendations for the operation of the HSF loading and unloading operation at Kahului Harbor based on the observations:

- Such a heavy presence of TCOs at the exit during the off-loading operation of the HSF may not be necessary. The presence of up to four officers seemed to hinder the flow of traffic and negatively affected the efficiency of this operation.
- A regular pattern for the signal at the intersection of Ka'ahumanu Avenue & Pu'unene Avenue may be more efficient for the operation of the overall intersection without adversely affecting the unloading of vehicles from the HSF or the flow of traffic on Ka'ahumanu Avenue.
- It may be advisable to require commercial vehicles to arrive early, possibly even before the general public, to avoid the potential conflict between entering commercial vehicles and vehicles exiting from the HSF. This would also allow the HSF to place these commercial vehicles in the far end of the holding area and load them last.

APPENDIX F

Bishop Museum, Department of Natural Sciences

Draft Report on Rapid Risk Assessment of Hawaii Superferry Efforts to Interdict Invasive Species

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Introduction

Pursuant to Act 002, Second Special Session of 2007, Hawaii Superferry (HS) was allowed to continue service operations during the completion of an environmental impact statement (EIS) covering ferry activities. As part of this act, HS was required to adopt a number of measures to reduce the risk of inter-island spread of invasive alien species during its operations. Further, the Governor issued Executive Order No. 07-10 in November 2007 to address the same. Shortly thereafter, the Hawaii Department of Transportation (HDOT) defined the scope of a Rapid Risk Assessment (RRA) to provide early and independent assessment of 1) observed environmental risks associated with the HS operation, if any, and 2) operational compliance with mitigation measures enumerated in Section 4(a) of Act 2, E.O. 07-10, and the Agreement between HS and the HDOT. HDOT retained Belt Collins Hawaii Ltd. to prepare the RRA with its subconsultants. Bernice P. Bishop Museum (BPBM) is the subconsultant retained to conduct the assessment effort addressing invasive species. This report covers the findings of that assessment.

Normal HS operations require that all vehicles boarding the ferry be funneled through a processing area at which vehicles are inspected by HS staff to ensure they are not overly muddy or harboring prohibited items (including human bones, fishing nets, dirt, soil, rocks, coral, crustaceans, cut logs or limbs, unpermitted livestock, unpermitted domestic pets, unpermitted plants or propagative plant parts, other pests). Inspections cover most major components of each vehicle (e.g., engines, interiors, undercarriages, wheelwells, trunks, and pickup beds), and passengers are queried as to their possession of prohibited items. Passengers arriving at the terminal without vehicles are funneled through a separate waiting area and inspection area where they are asked whether they are carrying prohibited items. The RRA investigations were to determine how well HS staff fulfilled these obligations and to identify improvements that could be made to further reduce the risk of invasive-species spread via HS operations.

Plan

The rapid risk assessment was begun in early January 2008. Assessment personnel consisted of six staff from Bishop Museum (BPBM) led by Dr. Fred Kraus. Field assessments began 9 January and were interrupted on 12 February for annual ferry maintenance and repairs. During this initial period, BPBM conducted 16 assessments, comprising ten at Honolulu and six at Kahului. Inspections were resumed 8 April, once

ferry operations were reinstated, and were completed 16 April. Final totals involved 15 inspections at Honolulu and ten at Kahului. Each field assessment, except for the first, employed a pair of BPBM staff observing HS screening operations for departing passengers and vehicles. The first inspection employed all six personnel so as to identify questions regarding assessment operations and to standardize procedures to be followed by BPBM staff during subsequent inspections.

Each assessment by BPBM personnel covered the two hours immediately preceding ferry departure, during which time passengers and vehicles were processed by HS for boarding. Each assessor recorded data for as many arriving passengers and vehicles as could reliably be tracked during the two hours and entered all observations on standardized forms. These forms covered all topics relevant to invasive species that were included in HDOT's Scope of Work for the RRA. The HDOT Scope of Work for the RRA is included as Appendix I to this report.

Independent of this data-collection activity, Dr. Kraus obtained information from Hawaii Department of Agriculture (HDOA) and Hawaii Department of Land and Natural Resources (DLNR) necessary for evaluating compliance with HDOT requirements 2b(2)k, 2b(2)ee, and 2b(2)ff. Compliance with requirement 2b(2)v and 2b(2)gg was determined by inspection of the HS website, purchase of ferry tickets, and inspection of electronic documents sent by HS to each customer upon ticket purchase.

Results

Vehicle inspections

Vehicle inspections are intended to ensure that departing vehicles are free of invasive species (including seeds), whether deliberately carried by the passengers, hitch-hiking on the vehicle itself, or harbored in attached clods of mud. Ideally, vehicle inspections examine the engine, interior, undercarriage, wheelwells, and trunks of cars, pickup beds, or trailered vehicles, as well as any intentionally transported organisms or equipment carried by the passengers, such as fishing nets, that might inadvertently harbor organisms.

Inspection thoroughness for each of these items varied. We found that engines, undercarriages, trunks, pickup beds, and trailered equipment had a low rate of non-inspection, varying from 0-4% overall. However, inspections of vehicle interiors and wheelwells were less thorough, with 23% of interiors and 30% of wheelwells being overlooked during inspection. There was some evidence that interiors were more thoroughly examined at Kahului (17% overlooked) than at Honolulu (26% overlooked), but wheelwells were overlooked at the same frequency at both ports. Inspection of undercarriages, though rarely neglected, relied on using trolled mirrors to see under the vehicles. Lighting for these inspections at Honolulu relied on reflecting a flashlight off the mirror to illuminate the undercarriage, a procedure that did not strike us as providing sufficient light for reliable inspection. Inspections at Kahului were conducted during daytime, when ambient light provided a better view of vehicle undercarriages. Inspections of wheelwells, under hoods, and in trunks also relied on hand-held flashlights, the quality of which was variable, with some flashlights providing insufficient light for inspection purposes.

Violations were moderately common among departing vehicles (11%), with far more violations occurring at Kahului (19%) than at Honolulu (7%). Most violations were for inordinately muddy vehicles (65% of violations at Honolulu, 87% at Kahului). HS staff typically required the vehicle to be cleaned prior to approval for boarding, but occasionally refused entry to vehicles too dirty for rapid cleaning (2% of arriving vehicles at Honolulu and 3% at Kahului). Sometimes, large volumes of mud were removed from a single arriving vehicle (Fig. 1). Overlooked as areas emphasized by HDOT for inspection, we found fenders of pickup trucks to frequently harbor large volumes of mud. On several occasions we found HS staff to pass vehicles that contained quantities of mud that we would have prohibited. In one case a mud-covered tuber was passed through inspection with HDOA approval.

Only 2-3% of arriving vehicles carried non-HDOA-approved plants. These were invariably forfeited to HS staff prior to allowing a vehicle to board or were left at the dock for a friend or relative to retrieve. No passengers arrived with swine or other non-HDOA-approved livestock. “Pests for control” that were confiscated by HS staff ($n = 9$) were typically insects or other organisms found hitch-hiking on the vehicle, often on the radiator or engine block. In no instance observed by us were intentional violations of banned live animals involved. We did, however, once observe a passenger attempt to transport a cooler of crabs bought at market; these were confiscated by HS staff. We also observed one instance of a passenger attempting to transport several rocks; these too were confiscated. When questions arose regarding the appropriateness of an item, HS staff sought out advice from HDOA and DLNR staff present at the inspection stations. Hence, as well as we could determine, HS is in compliance with HDOT requirements 2b(2)x, 2b(2)y, and 2b(2)z.

Passengers arriving with vehicles were usually requested to declare whether they had banned articles, but sometimes HS staff neglected to ask this question (7% of arrivals at Honolulu, 2% at Kahului), especially when the volume of traffic awaiting inspection grew large.

Passenger inspections

Inspection requirements for passengers arriving without vehicles call for agricultural screening. In practice, this typically involves passengers being asked whether they were carrying plants, fruits, or seeds; sometimes, possession of animals, other types of biological materials, or human bones was also queried. However, of 285 arriving passengers that we sampled, 17% were not questioned about possession of any materials. Fewer passengers remained unquestioned at Kahului (14%) than at Honolulu (19%). Our experience was that non-plant materials were infrequently asked about. We found that questions relating to possession of biological materials tended to be omitted when: (1) there was pressure to quickly process a growing line of waiting passengers, or (2) processing of a passenger was delayed over another matter such as a problem with the boarding pass. Under both circumstances, HS staff often forgot to ask for a declaration about possession of biological articles.

If banned items were discovered, HS staff required the item to be forfeited. For example, we observed one passenger in Honolulu declare a banana and then consume it prior to entering the waiting area. We observed baggage being checked only once at Honolulu (out of 152 arriving passengers), when a passenger arrived with two coolers.

At Kahului, we observed 12 passengers (out of 133 arriving) having their baggage checked, sometimes randomly, sometimes because they arrived with coolers. At both ports, baggage checks for banned articles were rare.

HS staff did not seem to pay particular attention to whether footwear of passengers arriving without vehicles was muddy. However, our observations were that virtually all arrived with clean shoes or sandals, so passengers inadvertently carrying seeds on muddy boots or shoes are probably a rarity.

Prior passenger notification

In compliance with HDOT item 2b(2)v, HS provides to all ticket purchasers a one-page notification of items banned from the vessel. This form includes notification that vehicles must arrive clean, that all vehicles are subject to inspection, and that valid state hunting licenses are required prior to hunting. It also includes mention of the obvious need to obey hunting and fishing rules and camping-permit requirements, consistent with HDOT item 2b(2)gg, but the form does not otherwise include mention of State or County restrictions on the use of cultural or natural resources. It is unclear from item 2b(2)gg what other cultural or natural-resource restrictions are contemplated by the State.

Signage

Signage informing arriving passengers of items prohibited from the vessel (Fig. 2) is present at each vehicle-inspection station and in the transit areas for passengers arriving without vehicles. However, the signage is confusing because the sign heading (“Banned from Vessel”) is inconsistent with those constituent parts written in italics, which denote those items that are not prohibited. Signage would be clearer if separate columns indicated which items are banned and which are permitted instead of mixing the two. These signs are posted off to the side of the vehicle-inspection stations. Similar signs in the terminal for passengers arriving without vehicles are smaller and also inconspicuously placed. Our observations suggest that signs at both locations elicit little notice from arriving passengers. To make the signs more noticeable, signs could be hung from the front of the vehicle-inspection areas (the direction facing passengers as they await inspection) and in the waiting area for processed passengers arriving without vehicles.

Boot scrubbers

In Honolulu, boot scrubbers are available at the entrance of the terminal where passengers arrive without vehicles. However, there are no signs informing arriving passengers as to the purpose of the scrubbers, how they might be used, or when they should be used. At Kahului, boot scrubbers were located at the bus-boarding point for ferry passengers; these were later relocated to inside the terminal. Informative signage as to the purpose of the scrubbers was lacking at both locations. We never observed boot scrubbers being used.

Cooperation with Hawaii Department of Agriculture (HDOA)

In compliance with HDOT item 2b(2)ee, HS operations staff have been trained by HDOA to inspect for and identify alien species; confiscated and forfeited specimens

obtained during HS inspections are routinely turned over to HDOA (D. Cravalho, Inspection and Compliance Section Chief, Plant Quarantine Branch, HDOA, pers. comm.).

HDOA has not yet performed any risk assessment directly involving HS operations, provided for by HDOT item 2b(2)ff (D. Cravalho, Inspection and Compliance Section Chief, Plant Quarantine Branch, HDOA, pers. comm.). However, HDOA inspectors were frequently present during HS vehicle-screening operations, and they served to guide quarantine decisions when HS staff were unsure of the proper response to an item.

Cooperation with Hawaii Department of Land and Natural Resources (DLNR)

In compliance with HDOT item 2b(2)k, HS operations staff have been trained by DLNR on proper procedures for identifying and retrieving downed seabirds and passing those birds onto DLNR biologists or rehabilitation specialists on the islands of Oahu, Kauai, and Maui (S. Fretz, Wildlife Program Manager, Division of Forestry and Wildlife, DLNR, pers. comm.). Officers from DLNR's Division of Conservation Resources Enforcement were invariably present during our inspections, and they helped HS staff resolve questions as to whether particular items might be banned.

Discussion

During our observations, HS compliance with the mitigation requirements identified in HDOT's scope of work (Appendix I), Act 002, and Executive Order 07-10 was generally good and inspection staff seemed largely motivated to do a thorough job. HS has in place a fairly efficient processing procedure to ensure compliance of arriving passengers with the requirements of Act 002. There were, however, several areas in which improvement could easily be had, and suggestions for how such improvements might be made are provided in the next section. Some of these improvements would involve addressing previously underappreciated risks. Examples of this include that (1) large amounts of seeds and leaf litter were frequently present under the hoods and trunks of cars and concentrated especially along the rain-gutter gaskets fronting the windshield and surrounding the trunk; (2) the interior floorboards of vehicles often contained large amounts of grass, seeds, and other dried plant parts; and (3) fenders of pickup trucks often harbored large volumes of hidden mud. We also observed occasions where off-road bikes that were being transported on trailers were clean but the biking gear (boots, clothing) stored on the trailers next to the clean bikes were covered in mud or harbored seeds. For each of these concerns, HS staff seemed either insufficiently sensitive to the risk, or sensitive to the risk but spending a large amount of time cleaning dirty vehicles that should be the responsibility of the owners. Other improvements would involve devising ways for HS staff to better reduce already recognized risks more effectively. Examples of this include better inspection of wheelwells and undercarriages. Wheelwells were typically inspected only on vehicles having high clearance because they could be seen from a standing position; wheelwells were usually overlooked if vehicles had low clearance, requiring inspectors to bend down for effective inspection. Undercarriage inspection was of questionable effectiveness at Honolulu because of poor lighting conditions that relied on flashlights reflecting off of mirrors. Some flashlights were

ineffective for inspection purposes, and we remain unconvinced of the reliability of this reflected lighting arrangement. Some flashlights were also insufficient for direct (non-reflected) inspection of engines, wheelwells, and trunks.

Our observations lead us to be especially concerned with the variable response by HS staff to caked mud and plant detritus in or on departing vehicles. On several occasions we found HS staff to pass along vehicles with quantities of mud of quarantine concern to us. Often, however, vehicles were required to be cleaned by their owners or were cleaned by HS staff prior to boarding. There remains a need to standardize HS staff response to vehicle mud and to improve cleanliness of vehicles.

Our observations suggested that inspection thoroughness declined when HS staff were pressed for time or distracted by other processing glitches unrelated to quarantine inspection. Under those circumstances, staff forgot to check for certain compliances when processing passengers arriving either with and without vehicles. Too, multiple staff were typically working simultaneously to process any given vehicle, but individual staff were not all assigned a consistent set of tasks for each vehicle. Hence, staff actions were not necessarily coordinated, and this became problematic as the queue of arriving vehicles lengthened and staff had to clear each one in shorter time. This problem could be alleviated somewhat by attempting to stagger arrival times of vehicles. Even though HS opened the gates for vehicle processing two hours prior to departure, relatively few vehicles arrived within the first hour. Typically, most vehicles arrived in the last hour prior to departure, forcing inspection staff into a pressing situation in which they were less effective and overlooked inspection actions and banned items. An electronic checklist format that lists all inspection tasks might improve inspection consistency and completion rates. A similar system is currently used for processing passenger ticket and vehicle-registration information and it could presumably be expanded to cover invasive-species inspection tasks.

Processing efficiency could also be improved, and risk of invasive species transport reduced, if HS were to redesign its pre-boarding information and checklists. In particular, if HS were to inform its customers that the floorboards and the areas under vehicle hoods should be cleaned prior to arrival at the port, it seems likely that the number of contaminated cars arriving could be significantly reduced, thus saving HS passengers or staff the effort of cleaning them (or passing them through unchallenged) at the port.

BPBM risk-assessment staff remain concerned by the variable responses of HS staff to vehicles arriving with mud and (sometimes) with questionable items like cut flowers. We see a need for a stricter and more consistent enforcement of vehicle cleanliness standards. This is more of a problem on Maui, where a larger percentage of vehicles arrive muddy, but consistency among ports would be desirable. We frequently found vehicles to be passed through inspection that contained quantities of mud that were clearly a quarantine concern. This sometimes occurred even after vehicles had been forced to depart the port and be cleaned in a car wash. Some of these dubious clearances would probably be avoided if HS staff had available at the port a reliable way to have passengers clean the small areas of their vehicles that were typically muddy. Sometimes it seemed like HS staff were loathe to force a vehicle out of line and to a car wash for only a small amount of mud. This could be avoided if a readily accessible cleaning station were available at each port.

Variability in HS staff responses to mud and some other action items raises the question of how much training for inspections has been provided to new staff. We were told that HDOA was involved in training HS staff for invasive-species inspections, but it was not clear to us whether training was a one-time event or an ongoing process. Some BPBM personnel noted that the degree of active interest and involvement of HDOA and DLNR enforcement personnel during pre-boarding inspections appeared to play a key role in how thoroughly HS staff conducted their inspections. HS staff frequently looked to these State personnel for decision verification or to make command decisions in novel situations. Inasmuch as State personnel were not always available for consultation, and may be less available in future, it would be good to ensure that HS inspection staff are trained to a level of risk awareness and decision-making confidence beyond what some of them currently seem to exhibit.

One important qualification of this risk assessment that should be remembered is that the design of the RRA was not ideal inasmuch as it was impossible to keep HS staff unaware of our presence. Thus, our results suggesting widespread compliance of HS staff serve as a measure of the existing upper bound of compliance, that is they reflect the current best-case scenario. It thus remains possible that inspection performance might be lower than indicated by our RRA when staff are not under direct observation. This raises the issue as to how inspection vigilance might be ensured beyond the duration of this assessment. Two possibilities present themselves. First, one might videotape inspection procedures on a regular basis with hidden cameras and hire a third party to assess some elements of inspection compliance on a random schedule. Second, one might have HDOT personnel (or other persons with standing MARSEC clearance) perform random spot inspections for compliance. The first possibility will be limited by an inability to verify all aspects of inspection compliance with only visual data; the second suffers the same limitations as the present study inasmuch as HS inspection staff would be aware that they are under observation and could modify their behavior accordingly.

One final point is that it would be desirable for HDOA staff to conduct a comprehensive (“blitz”) inspection of the risk posed by HS operations for transport of invasive species between the islands. Such a program would provide useful quantitative and taxonomic information to assess to what extent HS operations pose a risk for inter-island pest transport relative to other known pathways. It is HDOA’s intent to perform such an inspection (D. Cravalho, Inspection and Compliance Section Chief, Plant Quarantine Branch, HDOA, pers. comm.), as they have for the state’s airports, but time has not yet allowed for such an inspection effort to occur.

Recommendations

- 1) Installation of an undercarriage pressure-wash system (or at least a hose) at each port to clean dirty vehicles would better ensure that ferried vehicles are clean. Cost for usage could be charged to the passenger with the dirty vehicle.
- 2) Installation of a car vacuum cleaner at each port to clean dirty interiors, trunks, and engines would better ensure that ferried vehicles are clean. Cost for usage could be charged to the passenger with the dirty vehicle.

- 3) Flashlights are required for inspecting engines, wheelwells, and some trunks and vehicle interiors. Lights provided to staff should be of uniformly high quality. We observed no standardization of lighting sources in our assessment, leading us to wonder whether inspection staff were required to provide their own flashlights. HS should provide reliable hand-held lights for inspection purposes, especially at Honolulu, where inspections are conducted in the pre-dawn hours (Fig. 3). Identical requirements would pertain to future pre-dawn or night-time inspections at additional ports as HS develops them.
- 4) The trollied mirrors are a sensible means of inspecting undercarriages, but use of reflected lighting for inspecting undercarriages in the pre-dawn hours seems inadequate. It would be worth investigating whether similar trollies are commercially available that incorporate a bank of forward-directed lights to more effectively illuminate vehicle undercarriages. Alternatively, it might be possible to rig a lighting system to each of the existing mirrors for the same purpose if commercial models meeting this need are lacking.
- 5) HS's form notifying ticket purchasers of banned items should include the additional notifications that arriving vehicles should be vacuumed and that accumulated vegetative material should be removed from under hoods, around trunks, and from pickup beds prior to arrival at port. This would save HS staff considerable time in trying to partially clean arriving vehicles carrying heavy seed loads and reduce the numbers of seeds that successfully pass through inspection. Additional emphasis in the existing form about the need to remove mud from arriving vehicles would also be warranted. Currently, many arriving passengers do not appear to take this requirement especially seriously.
- 6) Adoption of a system that staggers vehicle arrival times for processing at the port would remove a major cause of HS staff inspection error by limiting or eliminating backlogs of vehicles requiring inspection. Backlogs appear to lead staff to rush through their inspections, causing unintended omission of inspection actions. Staggered arrival might be achieved by assigning each passenger with vehicle a 15-minute window during which to appear at the port.
- 7) Some HS inspection staff have electronic checklists to verify all relevant registration and ticketing information for arriving vehicles. These pre-boarding checklists should also include a list of relevant invasive-species inspection actions for each vehicle. Currently such a checklist appears lacking, making relevant inspection actions more easily overlooked.
- 8) Querying of passengers for prohibited items should explicitly mention animals or other banned non-plant materials. Queries regarding banned articles are inconsistently applied at present. Part of this inconsistency may stem from the roundabout way that the Governor's Executive Order and HDOT Scope of Work address this issue. Both clearly have the intent to limit the inter-island transport of most plants, animals, and other biological materials, although their wording is not efficient. HS could best meet its mandate to limit the transport of undesirable species by asking all passengers the simple

question “Are you carrying any plants, fruits, seeds, animals, soil, or other living items?” This would more uniformly allow HS to comply with items 2b(2)a, 2b(2)b, 2b(2)c, 2b(2)u, 2b(2)x, 2b(2)y, 2b(2)z, 2b(2)aa, 2b(2)bb, 2b(2)dd, and 2b(2)ee.

9) Depending on legal limitations, consideration should be given to increasing the numbers of random inspections of luggage and other transported items. Currently, coolers are invariably opened for inspection, but luggage and other transported items are virtually unsampled, providing a possible pathway for smuggling of plants, animals, and other biological materials.

10) Updated staff training probably needs to be required at regular intervals so as to reinforce standards for prohibited items and inspection coverage, as well as to ensure that newly hired staff are consistently trained. Standards for amount of allowable dirt on vehicles and inspection of wheelwells seem especially in need of improvement. We found staff at Kahului to be more sensitive to both, often checking wheelwells by hand as well as visually. Consistent application of higher standards is warranted. HS staff need to be trained to bend down and inspect wheelwells on vehicles having low clearance.

11) Signage informing passengers of prohibited items on the vessel (Fig. 2) should be rewritten to be clearer in meaning, and signs should be hung from the front of the vehicle-inspection stations and passenger waiting rooms.

12) Signs need to be installed that explain and encourage the use of boots scrubbers for relevant passengers.

Figure 1. Example of heavy mud load removed from one arriving sedan at Kahului.



Figure 2. Existing signage warning passengers of banned items from Superferry. Note confusing mixing of prohibited and allowed items.

CHECK-IN PROCESS AND INSPECTIONS	BANNED FROM VESSEL	BANNED FROM PASSENGER DECK
<ul style="list-style-type: none"> • Arrive early. Gates close 30 minutes prior to departure time. • Please have the following documents ready: <ul style="list-style-type: none"> - Valid government-issued photo ID for each passenger 18 and older - Valid Vehicle Registration and Proof of Insurance - Boarding Passes - Notarized "Authorization to Move Vehicle," if required • Declare all plants, fruits, seeds or biological medium. • Declare and completely identify all firearms and any ammunition during the check in screening process. • Passengers and vehicles will be visually screened for security and agriculture: <ul style="list-style-type: none"> - Engines, interiors, undercarriages, trunks, beds of pickup trucks, and trailered equipment and vehicles - All vehicle compartments must be openable and available for screening - Vehicles may not be excessively dirty, muddy, or have caked-on mud on it and/or its tires - Vehicles containing prohibited items will not be allowed to board. • Passenger and vehicle may be subject to additional screening. 	<p>DOMESTIC ANIMALS [ONLY domestic cats, dogs, rabbits, and pigeons are allowed] Female dogs in heat and female animals with suckling young</p> <p>DOMESTIC LIVESTOCK [ONLY domestic cattle, horses, donkeys, goats, sheep, chickens, and roosters are allowed and only with a HDOA Certificate of Ownership & Movement] Swine: Including, but not limited to, pigs, pot-bellied pigs, hogs, boars and sows</p> <p>FIREARMS Bulk or commercial quantities of firearms or ammunition Unlicensed personal firearms; non-conventional ammunition</p> <p>HAZARDOUS MATERIALS Hazardous materials in baggage Flammable gas: acetylene or hydrogen (except propane up to 20 lbs) Flammable liquids in bulk or in excess of two six-gallon containers</p> <p>PESTS & INVASIVE SPECIES Pests for control or eradication purposes and invasive species</p> <p>MARINE LIFE Marine life, including live or dead fish, allowed ONLY with a valid commercial marine license issued by DLNR except that recreational fishers may transport fish subject to any DLNR limitations Opahi, lobster, other crustaceans Coral</p> <p>MISC Fishing nets of any kind Iwi or human bones</p> <p>PLANTS & SOIL [Living plants and propagative plant parts (e.g., roots and root stock) permitted ONLY with HDOA certificate] Cut logs, cut trees, and tree limbs Rocks, soil, sand or dirt EXCEPT in potted plants inspected and cleared by HDOA</p> <p>SMOKING Smoking is not permitted anywhere on the vessel or in the ports</p>	<p>DOMESTIC ANIMALS All animals except service animals and animals traveling with law enforcement agents</p> <p>DOMESTIC LIVESTOCK Any and all animals without exceptions</p> <p>FIREARMS Firearms are not permitted on his/her person or baggage except law enforcement agents actively engaged in investigation of potential criminal activities Fireworks, grenades, or toy replicas thereof are forbidden</p> <p>HAZARDOUS MATERIALS Hazardous materials of any kind</p> <p>SMOKING Smoking is not permitted anywhere on the vessel or in the ports</p> <p>WEAPONS Bladed weapons, equipment or sporting goods i.e. knives, bows arrows, box cutters Baseball, cricket or other types of bats, golf clubs, hockey or lacrosse sticks, pool cues, ski poles, or clubs of any kind Tools greater than seven (7) inches in length including axes, hatchets, hammers, etc.</p>

Figure 3. Inspection station at Honolulu, showing the low ambient light levels available for undercarriage inspection.



APPENDIX G

Rev. Dr. Kaleo Patterson

Hawaii Super Ferry — Rapid Risk Assessment

Cultural Sensitivity and Awareness Assessment and Recommendations

By Rev. Dr. Kaleo Patterson
Pacific Justice and Reconciliation Center

and

Dr. Lou Ann Haaheo Guanson
Pacific Justice and Reconciliation Center

Executive Summary

Introduction

- I. Major Assessments and Recommendations
- II. Specific Assessments and Recommendations
- III. Additional Assessments and Recommendations

Honolulu, Hawaii

June 19, 2008

**Hawaii Super Ferry — Rapid Risk Assessment
Cultural Sensitivity and Awareness
Assessment Report and Recommendations**

By Dr. Kaleo Patterson
Pacific Justice and Reconciliation Center

June 19, 2008

Executive Summary

In this RRA I will focus on the following areas of observed risks to indigenous Native Hawaiian cultural sensitivity and awareness in the behavior, operations, policies, and structures of the Hawaii Super Ferry. This executive summary also concludes the major assessments and recommendations of this report:

The Hawaii Super Ferry's routes will result in regular travel through areas of high cultural sensitivity and awareness, but appropriate protocols of acknowledgment and education are not currently in place. Areas where protocols should apply include the welcoming of passengers; the beginning of travel; cultural and historical education about points of interest and ocean travel and traditions; and the end of travel.

The language, culture, and values expressed in the Hawaii Super Ferry's online, inport, and onboard operations do not reflect an effective understanding of Hawai'i's Host Culture and language, but follow a multicultural model of cultural diversity that could apply anywhere in the United States.

Measures designed to prevent perceptions of cultural insensitivity, exploitation, and discrimination should be enacted through a community-engaged program of cultural sensitivity and awareness related to all people of Hawai'i, but with a particular focus on the language and values of Hawai'i's acknowledged Host Culture. This program should involve cultural sensitivity training for all employees, the creation of new media, and enhanced educational programming. Specific areas where appropriate educational materials are needed include travel route points of interest, mo'olelo or stories about Kanaloa of the ocean, and about environmental issues relating to the moku Kanaloa, also known as Kaho'olawe; and materials that promote cultural sensitivity toward and awareness of indigenous Native Hawaiian culture, history, and concerns, and that give recognition and place to the host people of Hawai'i.

The lack of initiation or participation by, and direct benefit to, the indigenous Native Hawaiian community in the programs of the Hawaii Super Ferry for promoting cultural sensitivity and awareness stigmatize and promote resistance to the Ferry's future developments. An education program should be set up that is structured dynamically, with set goals, outcomes, and measures that reflect collaboration and oversight and involve community and government members.

A process of acknowledgement of existing perceptions of insensitivity should begin with a group of respected Hawaiian leaders or facilitators to repair, redress, and reconcile disagreements, perceptions, and injuries, with the goal of community healing and restorative justice.

Introduction

Mahalo for the opportunity to comment on the “cultural sensitivity and awareness” concerns raised in regards to the Hawaii Super Ferry – Rapid Risk Assessment. This is no small undertaking, and these considerations are critical for the promotion of necessary understandings and collaborations between government, the private sector, and the communities impacted. It is noted here that livelihood and lifestyle issues are at stake today with every new economic development interest. The reality of Pacific Island life and living are that natural resources, and the necessity for adequate infrastructures for community well being and community-based economic development, are limited and decreasing. Above all, there is the hope that the spiritual ecology and historical cultural integrity of the land, and the traditions of the people, will not just be sustained but enriched, to the benefit of all, through open discussion, informed debate, and collaborative decision making.

It is recognized here that concerns about cultural sensitivity and awareness may arise out of a setting and process where their active promotion has been absent or disregarded. Such may be the case here.

Absent any formal definition and specificity regarding this requested risk assessment for cultural sensitivity and awareness, the following revised statement is recommended for use, and adopted here as a starting point for this report and recommendations:

The purpose of the Rapid Risk Assessment (“RRA”) is to provide early and independent assessment of:

- 1). Observed indigenous Native Hawaiian cultural sensitivity and awareness risks associated with the Hawaii Super Ferry operation, if any, and,*
- 2). Observed environmental risks associated with the Hawaii Super Ferry operations that are culturally sensitive to indigenous Native Hawaiians and require increased cultural sensitivity and awareness, if any, and*
- 3). Operational compliance with mitigation measures enumerated in sections 4(a) of act 2, Executive Order 07-10 and the Agreement between Hawaii Superferry, Inc. and the State of Hawaii i.*

(Revised from DOT RRA Scope of Work introduction)

Formal cultural sensitivity and awareness observations of HSF operations took place during five ocean travel events, beginning in March 2008 and ending in May 2008. Travel events included a HSF RRA orientation and sailing from Maui to Oahu, and other sailings at different times from Oahu to Maui and Maui to Oahu. Observation scenarios were conducted as walk-on passenger and as drive on - truck vehicle passenger, included various locations on board, including Hāhālua room. Diverse weather and ocean conditions were experienced, ranging from high swells to calm seas, north of Molokai, and south of Molokai routes.

Included in specific observations and assessments, were online ticketing, port operations, passenger screening, boarding, and disembarking, ocean travel and routing, video and audio programming, printed material, marketing, branding, workplace culture, employee training.

It is recognized herein, in narrative and restated format, that the HSF has not taken an active role in promoting indigenous native Hawaiian cultural sensitivity and awareness, and related environmental concerns in it's general operations, naming and branding. It has adopted the path of multiculturalism, which is the culture sometimes identified with the U.S. Military, a disputed approach, which tends to perpetuate marginalization and power dynamics of the disadvantaged along racial and ethnic lines. In Hawai i this approach tends to disregard the widespread government, industry, and community recognition and cultural sensitivity to the indigenous host Hawaiian culture and people.

I. Major Assessments and Recommendations

1. Pacific, Polynesian, and Hawaiian Protocols:

The Hawaii Super Ferry's routes and alternate routes—through channels (such as the triad Pailolo, Kalohi, and Kaiwi channels), and along moku (island) coastal areas—will result in regular travel through areas of high cultural sensitivity and awareness. Many traditions and protocols exist in Hawai'i and throughout the Pacific regarding ho'okipa (the crossing of boundaries), and appropriate and inappropriate interactions between people, groups, and communities. Appropriate protocols of acknowledgment and education are not currently in place in Hawaii Super Ferry operations, and should be required to promote a greater level of cultural sensitivity and awareness, and to foster community involvement and support. A review of online, inport, and onboard operations reveals several areas where protocols apply, including the welcoming of passengers; the beginning of travel; cultural and historical education about points of interest and ocean travel and traditions; and the end of travel.

2. Hawai'i's Host Culture and Language

The language, culture, and values expressed in the Hawaii Super Ferry's online, inport, and onboard operations do not reflect an effective understanding of Hawai'i's Host Culture and language. Changes should therefore be required to actively promote cultural sensitivity and awareness of Hawai'i's acknowledged "Host Culture," which is both historical and living, and expressed in diverse communities of indigenous Native Hawaiians and in non-Hawaiian settings in Hawai'i today. Many legislative bills, policies, and resolutions, from the State of Hawai'i Legislature, Hawai'i's County Councils, and the City and County of Honolulu, have all specifically recognized and acknowledged these facts. Since 1991, the Hawai'i Tourism Authority has held the "Keep It Hawai'i Recognition Awards," which honor the creative and courageous commitment of individuals and organizations to promote and raise awareness of the Host Hawaiian Culture in the visitor industry and community. In 1993, the President of the United States, Bill Clinton, and the United States Congress, and the United Churches of Christ—the descendent denomination of the early missionaries to Hawai'i—enacted Apologies to Native Hawaiians, in the form of resolutions and laws, which acknowledged the unique history, culture, and political status of Hawai'i's indigenous Native people.

To this end, there is a complex and demanding historical record of indigenous Native Hawaiians and the larger community advocating for the restoration of the Host Culture in Hawai'i through 'ōlelo Hawai'i, the Hawaiian language. The Hawaii Super Ferry can play a key role in acknowledging the Host Culture and language by comprehensively integrating them—and the values inherent in them—throughout its operations: in programs, in signage, and in employee sensitivity and language training. Such a commitment would strongly reflect the Hawaii Super Ferry's solidarity with the people of Hawai'i. Such sensitivity to and awareness of the Host Culture would be restorative and preventive, and lead to creating a positive setting for dialogue and resolution of other community and indigenous Native Hawaiian concerns.

3. CSA - Rapid Risks Assessment and Recommendations

The Hawaii Super Ferry's operational language, culture, and values currently follow a multicultural model of cultural diversity that can be applicable anywhere in the United States, as well as internationally, in such places as the Canary Islands or the Caribbean. This is not necessarily a bad model, except when, as is currently the case in Hawai'i, the cultural protocols and histories of a place and people are not adequately included or acknowledged, and especially when economic benefit is derived from that history and culture. The appearance or perception of cultural insensitivity or insult can easily arise in such situations, where there is little allowance for the active promotion of cultural sensitivity and awareness.

a. This Rapid Risk Assessment recognizes the potential for, and the reality of, perceptions of cultural insensitivity, exploitation, and discrimination, and recommends that preventive measures be enacted through the active and committed development of a community-engaged program of cultural sensitivity and awareness related to all people of Hawai'i, but with a particular focus on the language and values of Hawai'i's acknowledged Host Culture. This program should involve cultural sensitivity training for all employees, and should be reflected in new media and enhanced educational programming.

b. This Rapid Risk Assessment also recognizes the history of the Hawaii Super Ferry, and the reality of currently perceived cultural insensitivities. It is strongly recommended that a process of acknowledgement and dialogue begin with a group or team of respected Hawaiian leaders or facilitators to repair, redress, and reconcile existing disagreements, perceptions, and injuries, with the goal of community healing and restorative justice.

II. Specific Assessments and Recommendations:

1. Language, Culture, and Values

It is important to begin this assessment of the spoken and written language and culture of the Hawaii Super Ferry by first of all noting the obvious—that the predominant language used in all Hawaii Super Ferry operations is English, an Indo-European, West Germanic language originating in England, which is the first language for many, but not all, people, in the United States, and certainly not for all people in Hawai'i.

In Hawai'i today many native Hawaiians and others are very aware of and sensitive to the history and issues of language use. Using the Hawaiian language as a medium of education was outlawed in 1896, and legal constraints against its use were maintained by territorial and U.S. state governments until 1986 (Wilson 1998b: 128–129). A renaissance of Hawaiian culture and politics in the 1970s brought a new focus to the topic of the revitalization of the Hawaiian language, but not without much struggle and tensions, which continue to this day. As a consequence of the State Constitutional Convention of 1978, ka 'ōlelo Hawai'i was reestablished as an official state language, and recognized as one of the cultural and linguistic rights of the people of Hawai'i.

(Ref: http://www.wikipedia.org/wiki/Hawaiian_language).

The Hawaii Super Ferry is deficient in its support and integration of this basic recognition of Hawaiian language and culture throughout its operations and training programs, and should be encouraged to join with other community, government, and tourism industry initiatives in recognizing and collaborating with the host indigenous Native Hawaiians, by acknowledging and respecting their language, culture, and protocols. In particular, Pacific Island peoples, Polynesians, and indigenous Native Hawaiians have intact cultural traditions and protocols related to waterways and crossing boundaries that should be integrated into the operations of the Super Ferry organization.

An analysis of the Hawaii Super Ferry's visual and printed material is particularly disturbing in its minimal reference to the indigenous Native Hawaiians. The use of the word "Polynesians" is more prominent. These materials do not convey a natural or community-based understanding of the history and culture of Hawai'i, or an understanding of the cultural protocols, sensitivities, and awareness of the indigenous Native Hawaiian people. There is very little advocacy related to the promotion of cultural sensitivities and awareness, and even when present, it is seen as more perfunctory in use.

In the opinion of this assessment, the Hawaii Super Ferry's visual and printed material tries to avoid drawing too much attention to any one ethnic group. Employees have stated that the language, culture, and values of the Super Ferry are focused on affirming the cultural diversity, and meeting the needs, of the many different peoples who are its customers. The truth of this statement is strongly supported by observations of employee uses of greetings, customer interactions, and minimal use of Hawaiian language or words.

Language is a carrier of the culture of a people, and transmits the values of a people. It can transform a community positively or negatively. In the cultural setting of Hawai'i today, with the support and collaboration of government, industry, and community, the evolving language, culture, and values of the people of Hawai'i can be affirmed in ways that give important meaning and purpose to all. The classic example is seen in the widespread global use of the word and meaning of "aloha."

In fact, the State of Hawai'i was officially designated as the "Aloha State" during impending statehood in 1959 (HRS Section 5-7); later, Act 186, Session Laws of Hawai'i 1986, further recognized the "Aloha Spirit" as a life force, which is expressly stated in HRS Section 5-7.5, and reads in part:

" . . . It was the working philosophy of native Hawaiians and was presented as a gift to the people of Hawaii. "Aloha" is more than a word of greeting or farewell or a salutation. "Aloha" means mutual regard and affection and extends warmth in caring with no obligation in return. "Aloha" is the essence of relationships in which each person is important to every other person for collective existence"

Important Language, Culture, and Values Recommendations:

This Rapid Risk Assessment recognizes the language, culture, and values of the Hawaii Super Ferry have the potential to promote or heighten misunderstanding, and/or increase alienation

with indigenous Native Hawaiians and other segments of the community. The risks resulting from these cultural issues are related to the influence of emerging community trauma (kaumaha) and helplessness in the face of escalating economic development. Furthermore,

a. The perception and the reality of a dominant Judeo-Christian or American cultural – multicultural identification and precedence in Hawaiian waters may foster existing resentments and fears, miscommunication and misunderstandings, which may escalate polarization and community conflict beyond manageable proportions.

b. The lack of initiation or participation by, and direct benefit to, the indigenous Native Hawaiian community in the programs of the Hawaii Super Ferry for promoting culture sensitivity and awareness may continue to stigmatize and promote resistance to the Ferry's future developments.

c. In combination, these risks are too great to ignore, in terms of the community strengthening and reconciliation that are needed to process the key decisions that must be made regarding this project.

d. It is imperative now that the recognition and active promotion of existing county, state, and federal policies, resolutions, and laws related to the recognition of the indigenous host Hawaiian language, culture, and self-governance of indigenous native Hawaiians, and the integration of the host Hawaiian language and culture into all operations, and employee training be developed and implemented immediately. Recognition, promotion, and integration of language and culture shall be in collaboration with indigenous native Hawaiians, community, and government.

2. Naming and Branding

Hawaiian waters are steeped in culture, history, and traditions. The Hawaii Super Ferry operates in Hawaiian waters a unique vessel that was born in Alabama. This vessel is named the Alaka‘i, a Hawaiian word that can mean leader, guide, conductor, or director. Misplace the okina and you end up with “potbelly and bloated” (*Hawaiian Dictionary*, Pukui). On the ship today, no okina is used at all.

Hāhālua is the second Hawaiian word the Hawaii Super Ferry uses in branding, and here the word and image, which is painted on the sides of the Alaka‘i, refers to the Hawaiian manta ray. Hāhālua is the name of the principal magazine of the Super Ferry, and it is also the name of the upgrade lounge located in the bow section of the ship. The proposed meaning of the Alaka‘i intended by the Super Ferry is unclear; there is little reference to the cultural significance of this name.

The risk here is with the non-Hawaiian interpretation of the attributes, considerations, and use of the Hāhālua image and word. In the Hawaiian cultural understanding, for some who are considered distinguished Kūpuna (elders), manta rays, as in the hāhālua, were not common creatures in everyday life, as the Hāhālua of the Super Ferry have and will become. Instead the Hāhālua were considered to be a sacred bird-like fish, difficult to categorize some say, and

therefore a manifestation of the gods. Hāhālua were treated with great respect and reverence. They were not fished for food or eaten. They were not to be controlled by humans:

Mantas and rays confuse two opposing terms, both equally distant from man. These “monsters represent a commingling in the purely “other”; moreover, they constitute a real threat to man. They are not caught like fish, but if they wash up on the beach or are taken in nets they are reintegrated into the divine realm. The latter has a purely negative connotation in this context; in fact, mantas and rays are considered the “bodies” of Kanaloa, the most “sinister” of the major Hawaiian gods.

(Handy and Pukui 192, 177) Ref. Valeri, *Kingship and Sacrifice*, 119

The prominent placement of the Hāhālua term and image, with a painted logo on the side of the vessel being seen commonly every day, can be understood as culturally insensitive to the sacredness of the Hāhālua, as misrepresenting the actual cultural view of the Hāhālua, or as an intentional reinterpretation of the cultural perspective for economic benefit and profit in the near or developing future.

Finally it must be noted that the commonly used name for the vessel is the Super Ferry, not Alaka'i. Some reference is made to the vessel as Hāhālua due to the prominence of the logo branding and the painted image on the side, where the image of the Hāhālua logo and the Super Ferry graphic lettering can lead to great confusion and misunderstanding. The Hāhālua is being associated as a manta ray that carries passengers like a ferry from place to place. The association between the two may also lend itself to the idea that the sacred hāhālua is being controlled and domesticated to serve a non-Hawaiian entity for economic profit and gain. In Hawaiian culture and spirituality, those things that are sacred are such because they are of the gods, and not controlled or exploited by humans. The graphic lettering of the Super Ferry, and the painted Hāhālua logo, occur in major signboard proportions. An investigation should be conducted as to whether this signage is legally constituted in its current depictions and cultural insensitivity.

Furthermore, Super Ferry, the commonly used name of the vessel, is being seen by some as a reflection of cultural values that are not the values of the host culture. From a cultural perspective, those things that are supra (Latin), or po'okela (Hawaiian) are divine, or of the gods. To place this kind of naming, signage, and understanding in the midst of major channels of Hawaiian waters, also considered sacred, and in the heart of the indigenous Native Hawaiian community, could be potentially insulting and misconstrued as arrogant.

For the Hawaiian, the largest creature of the ocean to be respected and honored as po'okela is the kohala or the palaoa. Charlie Maxwell, a well-known Kūpuna of Maui, articulates the present-day spirituality and reverence for the god Kanaloa, and the manifestation of Kanaloa in the Kohala, in this way:

The Kohala is revered in modern day Hawaii not only by the thousands of whale watchers, but by the native Hawaiians who still consider it as one of Kanaloa's magnificent creations. In 1990, I was one of the fortunate ones that were touched by the Kohala. Several of us were involved in relocating the Ritz Carlton Hotel in Honokahua. Originally, the hotel was supposed to be built over ancient Hawaiian burial grounds. After strong objections from the Hawaiian community, it

was relocated to its present site.

I was one of seven people chosen to rewrap the thousands of remains that had been dug up. The remains dated between A.D. 850 and the early 1800's. There were numerous amounts of Niho Lei Palaoa (whale tooth necklaces) from one to six inches in length. This would indicate that royalty of all ages were interred with their symbols of nobility.

In 1991 a very spiritual incident occurred on the last night that we buried the last remains at Honokahua. At midnight we were ready to start our burial rituals when we heard a loud slapping coming from Honokahua Bay. As we looked over the hill into the bay we saw an outline of a whale lying on its side, rhythmically hitting the water with its pectoral fin. After about 15 minutes it stopped, and we went back to the burial pit. As we started our ceremonies, several owls flew overhead and screamed, then headed for the mountains. This was the Hō‘ailona, the sign that our Kūpuna were back reunited with their Iwi, bones.

(<http://www.moolelo.com/kohola.html>)

Sacred are the waters of the Pailolo, Au‘au, Kalohi, and Kaiwi channels, and the moku of Kanaloa, also known as Kaho‘olawe. Sacred are the waters north of Moloka‘i, long secluded and mysterious. These are the proposed new highways of the Super Ferry. What are the appropriate expressions of respect and protocol for these new traditions and change? What are the cultural sensitivities and awareness?

Important Naming and Branding Recommendation:

a. Immediate redevelopment of naming and branding, in collaboration with the indigenous native Hawaiian community, and other Hawai‘i community leaders, and government, in respect of indigenous native Hawaiian and other Hawai‘i communities, history, and culture.

b. The masking or elimination of the current signage and logo on the side of the ferry vessel Alakai shall be for the duration of the EIS, until such time when agreement is reached, following a process of dialogue between HSF, and indigenous native Hawaiian cultural representatives, other community representatives and government.

c. Included in this collaboration shall be representatives or groups or organizations concerned about public billboard signage, and excessive advertising and marketing, such as the Outdoor Circle,

3. Education

The efforts of the Hawaii Super Ferry in the area of education for cultural sensitivity and awareness, and environmental concern, are very minimal. This assessment is a result of direct observations of online ticketing, inport settings and activities, and onboard settings and materials and videos.

An important recommendation of this assessment is a formalized education program that is structured dynamically with set goals, outcomes and measures reflecting collaboration and oversight involving community and government.

This kind of a program would be the most effective way to promote responsibly cultural sensitivity and awareness pertaining to indigenous host culture concerns and history, and a relationship with environmental concerns. Education of this type is already present in Hawai‘i in the public schools and community centers, and is community-based and widespread.

As a commitment to promoting cultural sensitivity towards indigenous Native Hawaiian culture and history, more education and development of the Hāhālua logo and branding should be required. One concrete example of how to promote cultural sensitivity and awareness in collaboration with the community can be found at the Department of Land and Natural Resources’ website related to promoting an understanding of Hawai‘i’s sharks or manō (<http://www.hawaii.gov/dlnr/dar/sharks/index.html>). This is an excellent example of what is missing in the educational culture of the Super Ferry.

The DLNR site is also very indicative of what needs to be done with the Hāhālua logo. At present, no educational material related to the hāhālua promotes cultural sensitivity and awareness of the host culture on the level seen on the DNLN site. If developed, this material would be key in setting the tone for culturally sensitive and community-based operations of the Hawaii Super Ferry.

In evaluating the materials, videos, and overall educational efforts, it seems that the primary audience orientation is decidedly non-Hawaii residents: U.S. visitors, U.S. Military, and the international customer base. To this end it appears that greater educational emphasis and programming is directed at providing entertainment, promoting leisure and comfort, and marketing the Hawai‘i Super Ferry, in development of its customer base.

Important Education Recommendations:

Possible education initiatives that may alleviate risks of increased alienation and miscommunication in the already volatile communities of Hawai‘i during the EIS should include:

- a. The HSF operations and activity during the EIS should be required to conduct an immediate review and new development and implementation of educational materials and programming on indigenous native Hawaiian culture and environmental sensitivity and awareness, to be used in the active promotion of cultural and environmental sensitivity and awareness.*
- b. This education and promotion to be integrated in all phases and aspects of operations and employee training. Education and all promotion programs shall be developed in collaboration with indigenous native Hawaiians, Hawai i communities, and government.*
- c. Specifically, the immediate development and utilization of education related to travel route points of interests, including place names, the names of channels (Pailolo, Kalohi, Kaiwi), and of points of interests such as Hulu Island Bird Sanctuary or Kalaupapa; mo’olelo or stories about Kanaloa of the ocean, or about environmental issues relating to the moku Kanaloa, also known as Kaho’olawe; with the goal of promoting cultural sensitivity and awareness to the host culture and people of Hawai i, and environmental concerns.*

III. Additional Assessments and Recommendations:

1. HSF Online Ticketing and Website:

Assessment:

A. HSF Online ticketing and website contains no educational material or programming directed at promoting cultural sensitivity and awareness regarding indigenous native Hawaiian concerns and issues, including environment, whales, opihi, iwi kūpuna, pōhaku, and other.

Recommendations:

A. Re-development of existing HSF Online ticketing and website to contain substantial promotion of indigenous host cultural sensitivity and awareness by:

- 1). Providing important educational links to community and educational resources related to things like Hawaiian cultural / spiritual / ecological considerations related to ocean travel, names of channels, place names on routes, island histories, relevant chants or stories and other.
- 2). Collaborating with community, and developing new educational material specific to cultural significance of routes and alternate routes that can increase passenger cultural sensitivity and awareness of indigenous host culture, and appreciation and respect for ocean, coastal, and ocean environments.
- 3). Including specific cultural sensitivity and awareness education related to Kohala - Whales, Manta Ray - Hāhālua, Manu - Birds, opihi, iwi kūpuna, and other, that include traditional and contemporary understandings, and community resources, and relate to routes and alternative routes
- 4). Increasing and integrating use of Ōlelo Hawai i - Hawaiian Language, and cultural protocols and concepts, in the development and promotion of cultural sensitivity and awareness, to heighten significance of ocean travel, ocean ecology, and environmental concerns, foster appreciation and respect. Include community support, expertise, and involvement in development of education strategy and materials.

2. Port Operations, Ticketing, Screening, Waiting, Boarding and Disembarking:

Assessment:

A. General observations of employee duties and operations in ports reveal minimum customer service training related to indigenous host culture and language. Greetings are predominantly in English language when observing security, greeters, ticketing, screeners, and on board employees. More than one employee acknowledged that cultural diversity is valued, and that customer service relates to acknowledging all people and cultures. This may be the reasoning or rationale behind the observed minimal use and integration of Hawaiian history, language, and culture in HSF operations, and the absence of a direct promotion of indigenous host culture sensitivity and awareness.

C. Port facilities (signage, walls, waiting areas, PA system, video monitor) contained minimum educational material, and no promotion of cultural sensitivity of indigenous host culture and language. *Important to connect host culture concerns with concerns of environment, invasive*

species, whales, and opihi, iwi kūpuna, other. Increase development of educational strategies and opportunities in port facilities to address environmental, community, and cultural concerns.

Recommendations:

A. Increase the promotion of indigenous host cultural sensitivity and awareness by incorporating into all operations indigenous host culture and language customer service training that includes knowledge of whales, opihi, fishing and hunting concerns, routes, history, stories, community knowledge, practice and traditions and other. Training to include all employees and conducted semi-annually w/ required competencies established in collaboration with community.

B. Increase commitment to promote cultural sensitivity and awareness related to indigenous host culture, language, and environment, through the use of port operations and facilities, to include signage, wall graphics, exhibits, displays, with printed materials, PA system announcements and programming, video programming. Include community participation in educational development and resources in various ports.

3. Ocean Travel and Passenger Service:

Assessment:

A. No observable program, begin or end signal, activity, or meaningful recognition, related to the leaving or arriving on an island, or the idea of promoting respect for the ocean, or islands. The development of a mass passenger ocean travel industry, operating on a daily basis between islands, should require specific educational strategies to promote respect, sensitivities, and awareness to cultural, environmental, and safety concerns.

In all travel observed, the vessel begins moving or docking without event, activity, or established protocols related to cultural sensitivity and awareness. In considering cultural sensitivity and awareness, these questions may be addressed: What are the traditions related to ocean travel? What would be appropriate to provide a sense of respect or appreciation for ocean travel, safety, wellness, the vessel, the on board community that is traveling, and cultural sensitivity and awareness related to leaving or arriving on an island? What would be an appropriate cultural orientation to ocean travel, permission or crossing boundaries values, and other related traditions to develop, foster and promote respect and appreciation, cultural sensitivity and awareness?

B. No observable promotion of route sensitivity, awareness, and education related to Hawaiian names of channels, or historical/cultural significance, island history, place names and point of interest, whales, or birds, other.

Recommendations:

A. The use of pū kani (blowing conch shell) is a widespread tradition in the communities of Hawaii. This may be a symbolic and supportive element in the promotion of cultural sensitivity and awareness. It may also be a concrete way to mark the beginning and ending of travel between islands for passengers, as well as announcing the departure from an island or the approach and arrival to an island. The pū kani can also be used in the sighting of whales or other important sightings or acknowledgements.

B. Oli (chant) and Pule (prayer) are traditions of the indigenous host culture that continue to be observed and in common use today. These traditions are appropriate to integrate into the operations and programming of ocean travel relating to the departure from an island and the approach or arrival to an island. These traditions promote cultural sensitivity and awareness, as well as respect for life and all things.

4. Video Programming:

Assessment:

A. An assessment of ocean travel video programming reveals prominent focus on marketing, advertisement, and entertainment in contrast to minimal education and the promotion of cultural and environmental sensitivity and awareness. On more than one occasion, movies such as Cinderella and Transformers were shown while cruising slowly past the pristine north side of the island of Molokai. No references or education through audio or video were made during this time, although many passengers were questioning “what island is this”, as well as inquiring about land points, bays, and places. Audio interruption of the ending of the showcased movie on more than one occasion may be an indication the need to increase the development of a well programmed and coordinated audio and video ocean travel program.

B. In what appeared to have been an attempt to provide educational viewing related to Hawaii, a film documentary from National Geographic on endangered species of bird populations was explicit in identifying traditional Native Hawaiian bird catchers as responsible for the decimation and extinction of many species of birds in Hawaii. While this information may be factual it represents a poor use of education that may be taken as culturally insensitive to the Hawaiian community. Furthermore, this film documentary shown on the vessel can easily foster negative understandings towards Hawaiians and cultural practices and traditions. Available in Hawaii are numerous educational resources used in community and schools and produced by filmmakers and educators from Hawaii, including many who are Native Hawaiian.

C. Audience orientation related to advertising and marketing appears to be directed at non-Hawaiian or non-local residents, visitors to Hawaii, and U.S. Military. Absent are advertising of businesses that are locally owned, community based, historically established, and those related to ocean travel, ocean lifestyles, and cultural or environmental organizations. Predominant are the video images and nature scenes commonly associated with promoting tourism, the sales language directed at those who are on vacation, and very little information, direction, or communication, that is community oriented, and committed to strengthening and protecting Hawaii's fragile communities, environment, and lifestyle. Overall there is a minimal promotion of cultural sensitivity and awareness of indigenous host Hawaiian Culture and Language. Recognizable in audio and video programming is the limited use of words such as “Native Hawaiians” and the more frequent use of the term “Polynesians”, in particular when these were used to link the HSF development with the ancient Polynesians sailing and voyaging traditions. Consequently when Native Hawaiians are referred to it is almost exclusively in the past tense, and the reference is very brief.

Recommendations:

A. The development of a systematic approach to promoting cultural and environmental sensitivity and awareness would be an important first step to protecting and supporting the

fragile communities and environment of Hawai'i. Audio and video programming should be complementary, and provide major promotion and education on cultural and environmental sensitivity and awareness. The ability to regularly assess the effectiveness of the promotion and education should be required, and certain measures and competencies established with the goals of protecting and supporting Hawai'i's fragile communities and environments. Community and government involvement should be required in all education and promotion of cultural and environmental sensitivity and awareness programs.

5. Printed Material

Assessment:

A. The major printed material is the Hāhālua. This magazine is primarily used currently to promote the HSF. As such the promotion of cultural sensitivity and awareness related to indigenous native Hawaiians and the environment are minimal or absent. On the front cover of the magazine is photo of the HSF Alaka'i in a sea of blue ocean. Throughout the magazine are articles related to the history of the HSF, the development and construction of the first ferry, naming and branding, and other. The magazine exhibits no explicit orientation towards promoting cultural sensitivity and awareness, or providing education on specific issues from a cultural perspective for instance on ocean travel, the whales, opihi, or other.

Recommendation:

A. The HSF Hāhālua is a magazine that can be used primarily to promote, through education, cultural and environmental sensitivity and awareness, community, local businesses, and in particular ocean knowledge, lifestyles, travel. Through education the Hāhālua can be a major resource complementing HSF ocean travel audio and video programming. Collaboration with community and government can be the beginning of a comprehensive program of protecting Hawai'i's fragile communities and environment.

6. Names and Branding

Assessment:

A. The signage on the side of the ferry itself is excessive and may represent concerns that relate to the Hawai'i Billboard signage laws. The visual impact of the HSF vessel, it's size and signage, has yet to be determined, but one needs only consider the visual impact and intrusion to communities once highly regarded because of their unique isolation such as those on the north side of Moloka'i. The billboard like proportions of the signage and images, in the populated area of Honolulu, and Maui, may have a negative visual impact, to the economy.

B. The content of the signage, namely the large Super Ferry logo, and the large painted manta rays, in combination, may be culturally insensitive. The Hāhālua image, on the side of the vessel is creating a new understanding that is not cultural in the Hawaiian community.

Recommendation:

A. The signage, and Hāhālua imaging of the HSF vessel Alaka'i, should be masked for the duration of the EIS, and dialogue with Hawaiian community leaders and groups such as the Outdoor Circle be conducted, to assess the appropriateness of the naming, images, and branding.

