



# **Alaska Department of Transportation & Public Facilities**

## **Design Concept Report Day Boat Alaska Class Ferry**

February 28, 2013



# Mission Requirements

- Design & Construct the Next Generation of Ferry
- Bow/Stern Roll On-Roll Off Passenger Ferry
- Capable of Operating as a 12-hour Day Boat
- Primary Service in Lynn Canal (Juneau, Haines, Skagway)
- Fast Mooring and Loading Operations
- Seakeeping Similar to the *Taku*
- 99% Sailing Frequency



# Vessel Requirements

- Approximate Length
  - 280ft Overall
  - 260ft at Waterline (40ft > *LeConte*)
- Schedule Speed: 15.5 Knots
- Loading/Unloading
  - Bow & Stern Doors
  - Bow Designed to Minimize Spray
  - Aft Port/Starboard Side Car Loading Openings
- Capacity
  - 300 Passengers
  - Minimum of 53 Alaska Standard Vehicles





# Lynn Canal Day Boat Schedule

## Juneau - Haines

Ferry Speed: 15.5 kn

	Terminal	Time	Underway Time	Load / Unload	Startup / Shutdown	Cumulative Time
Crew Start		6:45				0:00
Load	Juneau	7:00			0:15	0:15
Depart		7:30		0:30		0:45
Arrive	Haines	12:07	4:37			5:22
Depart		13:07		1:00		6:22
Arrive	Juneau	17:44	4:37			10:59
Unload		18:14		0:30		11:29
Crew End		18:29			0:15	11:44

- Vessel arrival times are coordinated for faster transfer times
- HNS-SGY vessel schedule allows for 4 hours of maintenance by day crew

## Haines - Skagway

Ferry Speed: 15.5 kn

	Terminal	Time	Underway Time	Load / Unload	Startup / Shutdown	Cumulative Time
Crew Start		8:40				0:00
Load	Haines	8:55			0:15	0:15
Depart		9:25		0:30		0:45
Arrive		Skagway	10:16	0:51		
Depart	11:16			1:00		2:36
Arrive	Haines	12:07	0:51			3:27
Depart		13:07		1:00		4:27
Arrive	Skagway	13:58	0:51			5:18
Depart		14:58		1:00		6:18
Arrive	Haines	15:49	0:51			7:09
Unload		16:19		0:30		7:39
Crew End		16:34			0:15	7:54



# Roadmap Design

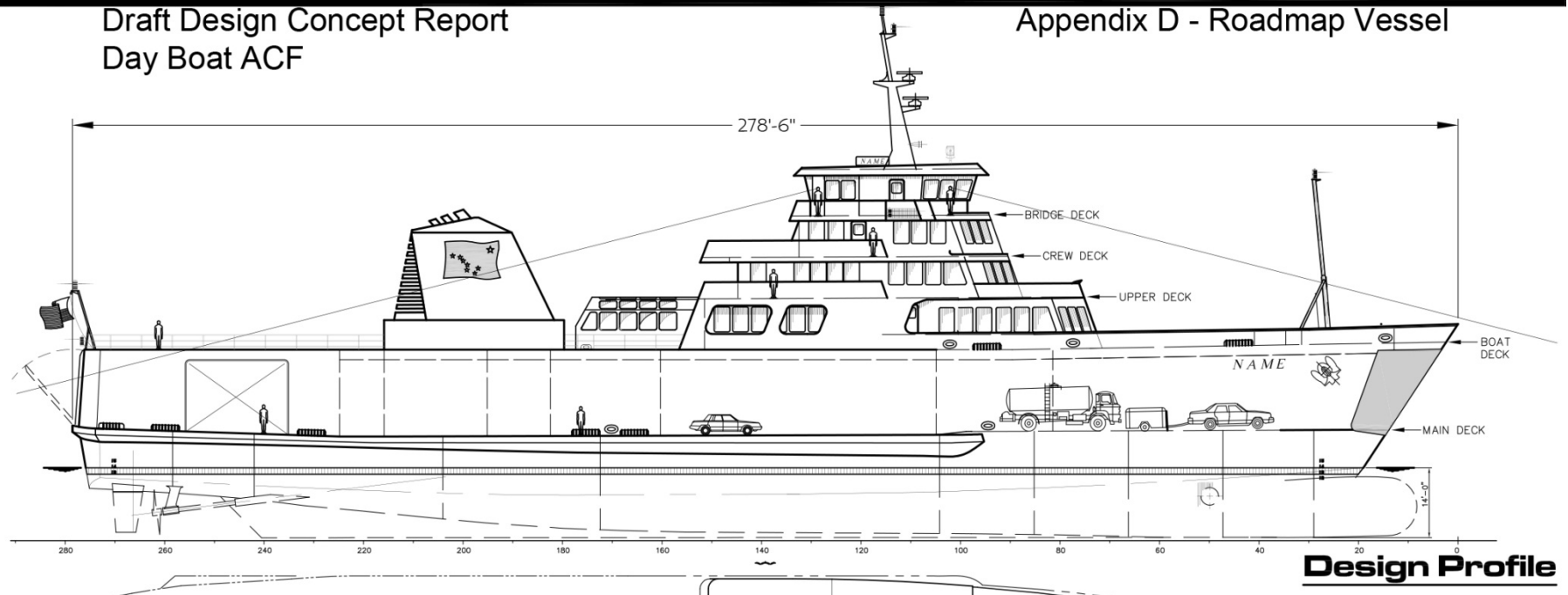
- Length: 278'-6"
- Beam: 62'-6"
- Depth: 19'-7"
- Draft: 14'-4"
- Service Speed: 16 Knots
- Vehicle Capacity: 53 Alaska Standard Vehicles
- Passenger Capacity: 300 persons (280 Interior Seats)
- Main Engines: 2 x 3000 hp
- "Clam Shell" Style Bow & Stern Center Doors
- Partially Open Aft Roof w/ Full (18') Height Bulwarks



# Day Boat ACF "Roadmap" Vessel

Draft Design Concept Report  
Day Boat ACF

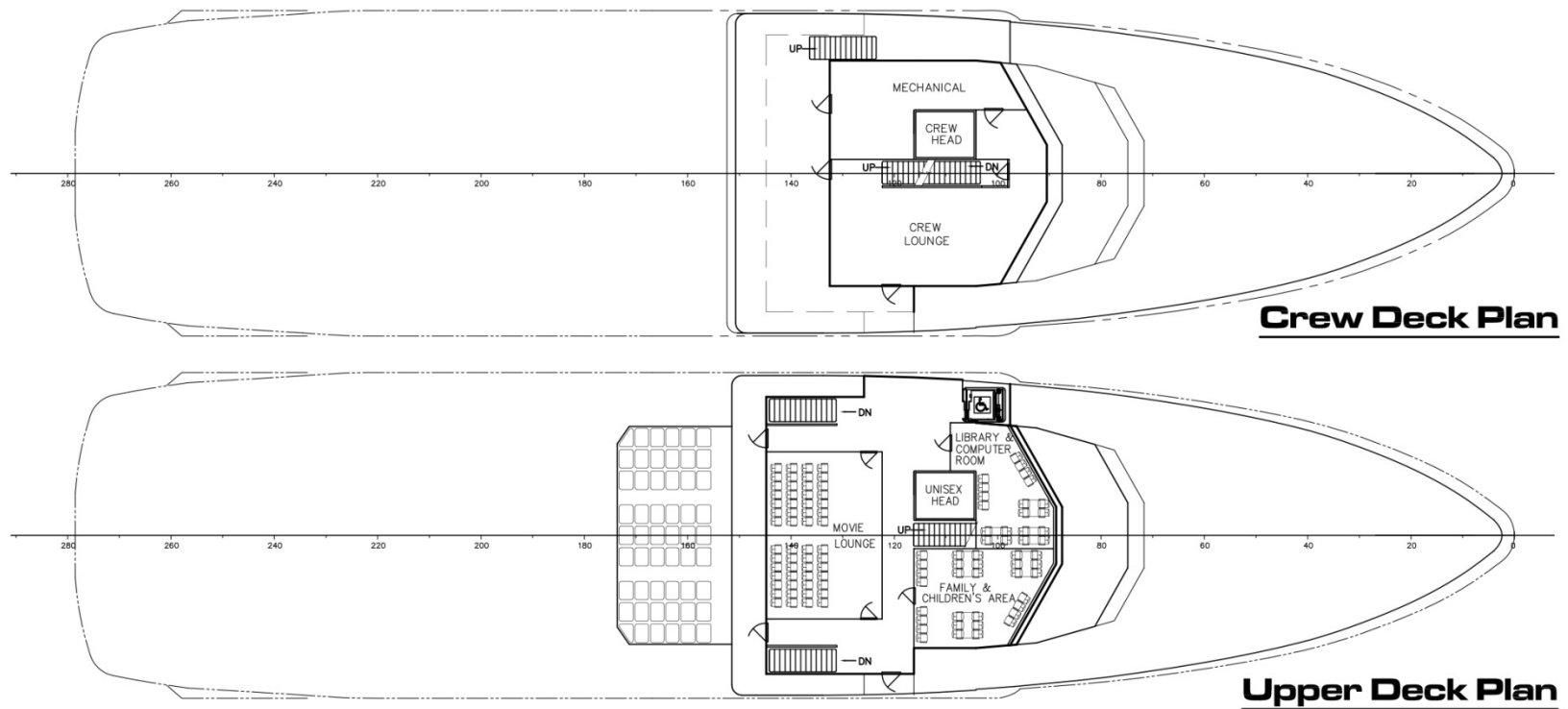
Appendix D - Roadmap Vessel





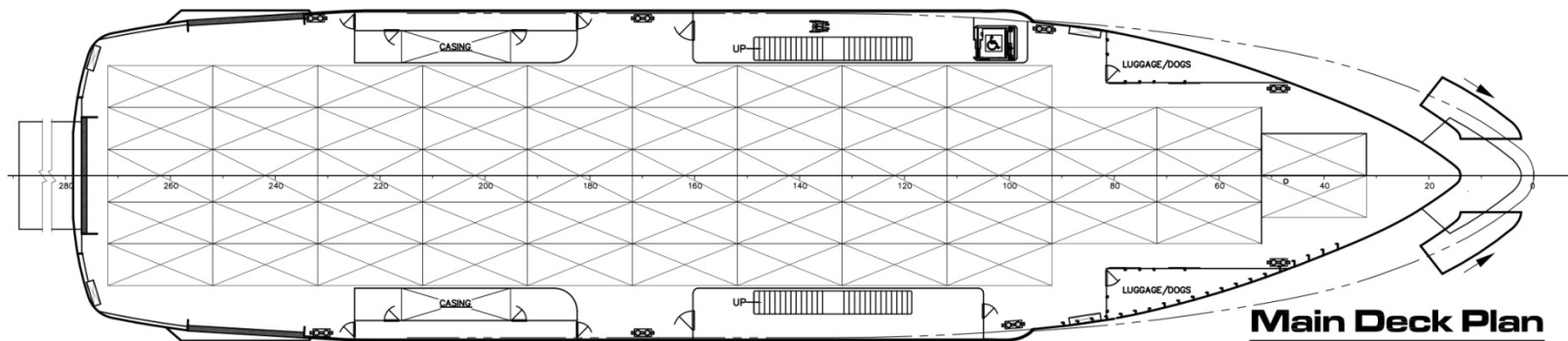
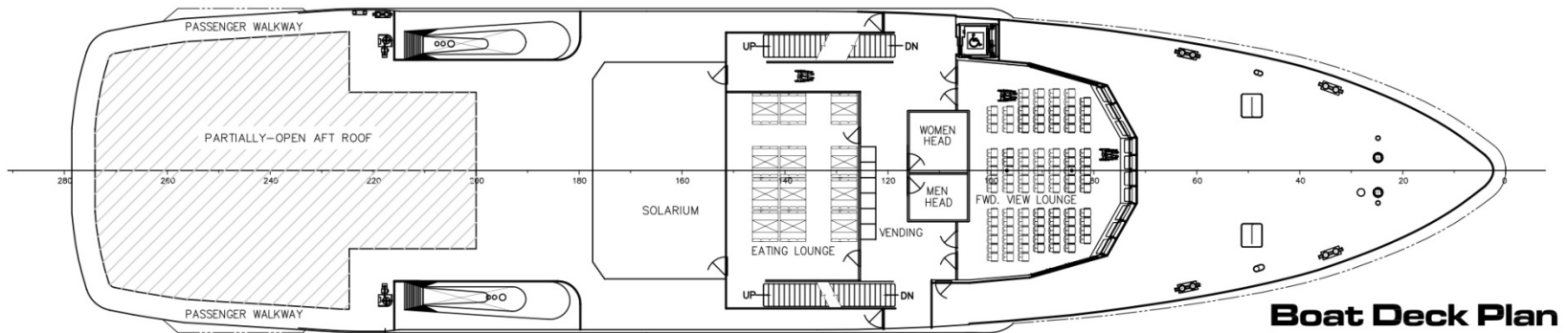


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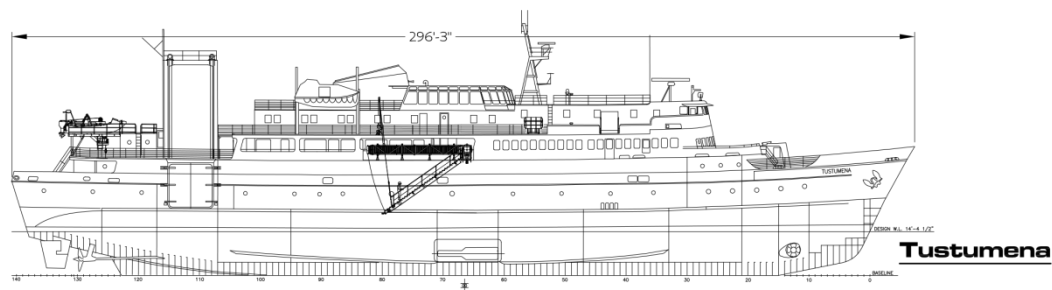
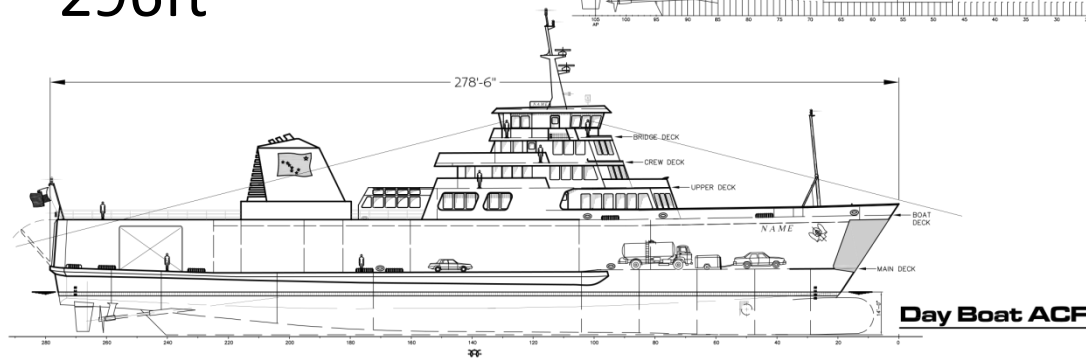
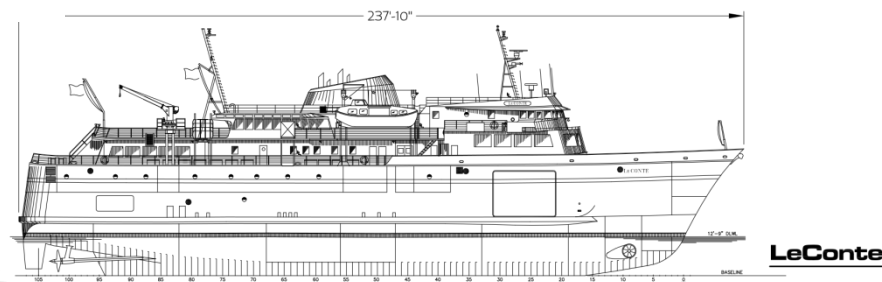






# Vessel Comparison

- LeConte – 237ft
- Day Boat ACF – 278ft
- Tustumena – 296ft





# Preliminary Cost Estimates

- \$3.2M - Preliminary Engineering (PE)
- \$49.2M - First Vessel Contract
- \$44.3M - Second Vessel Contract (10% Less)
- \$5.6M - Construction Engineering (CE)
- \$4.9M - ICAP (Both Vessels)
- \$107.2M -Total
  - Leaves \$9.8M for contingency from the \$117M remaining in the ACF budget.



# Next Steps: Tentative Timeline

- February 25 – March 8, 2013
  - Design Concept Report & Public Review
- April 1, 2013 – Design Study Report & Concept Design
- May 1, 2013 – Preliminary Design
- November 1, 2013 – Detailed Design
- January 1, 2014 – Keel Laying First Vessel