

# JIM BARKER

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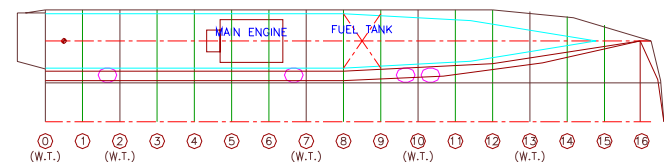
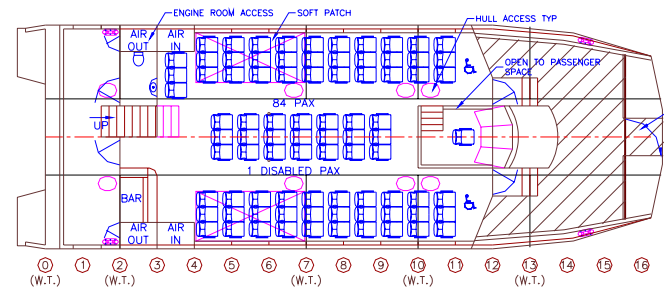
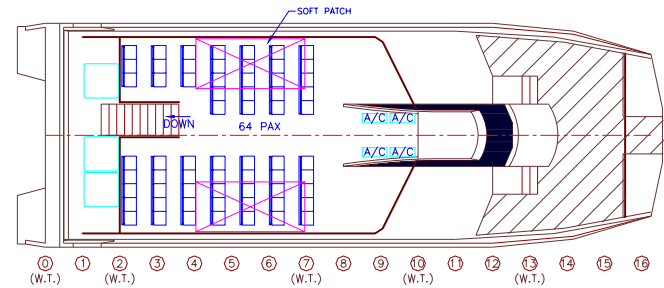
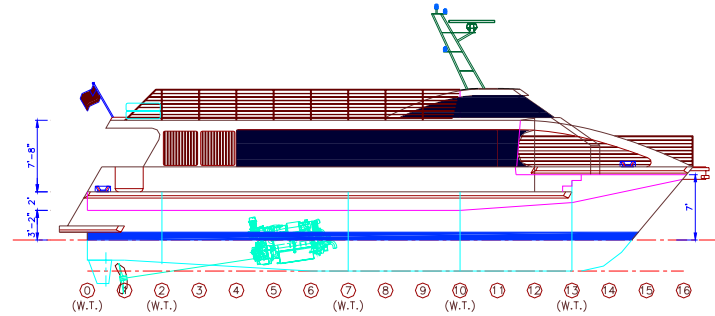
# MV OCEAN STATE

- Newport – Providence
- Rhode Island Regional Transportation Authority (RIPTA)
- 2003- 50,000 passengers
- Subsidized by State & Federal
- Low Profile Vessel for Providence Hurricane Barrier
- Side and Bow-Loading Configurations
- Low Wake-Wash Design



# OCEAN STATE

- Length 65'
- Beam 24'
- Max Draft 5'6"
- Passengers 149 / 3
- USCG Sub Chapter T
- 2 x Detroit 12V
- 28 Knots PAX



# VINEYARD 95

- New Bedford – Martha's Vineyard
- License from Steamship Authority
- Active Ride Control
- Year-round Service
- 2 Vessels



# Project Overview

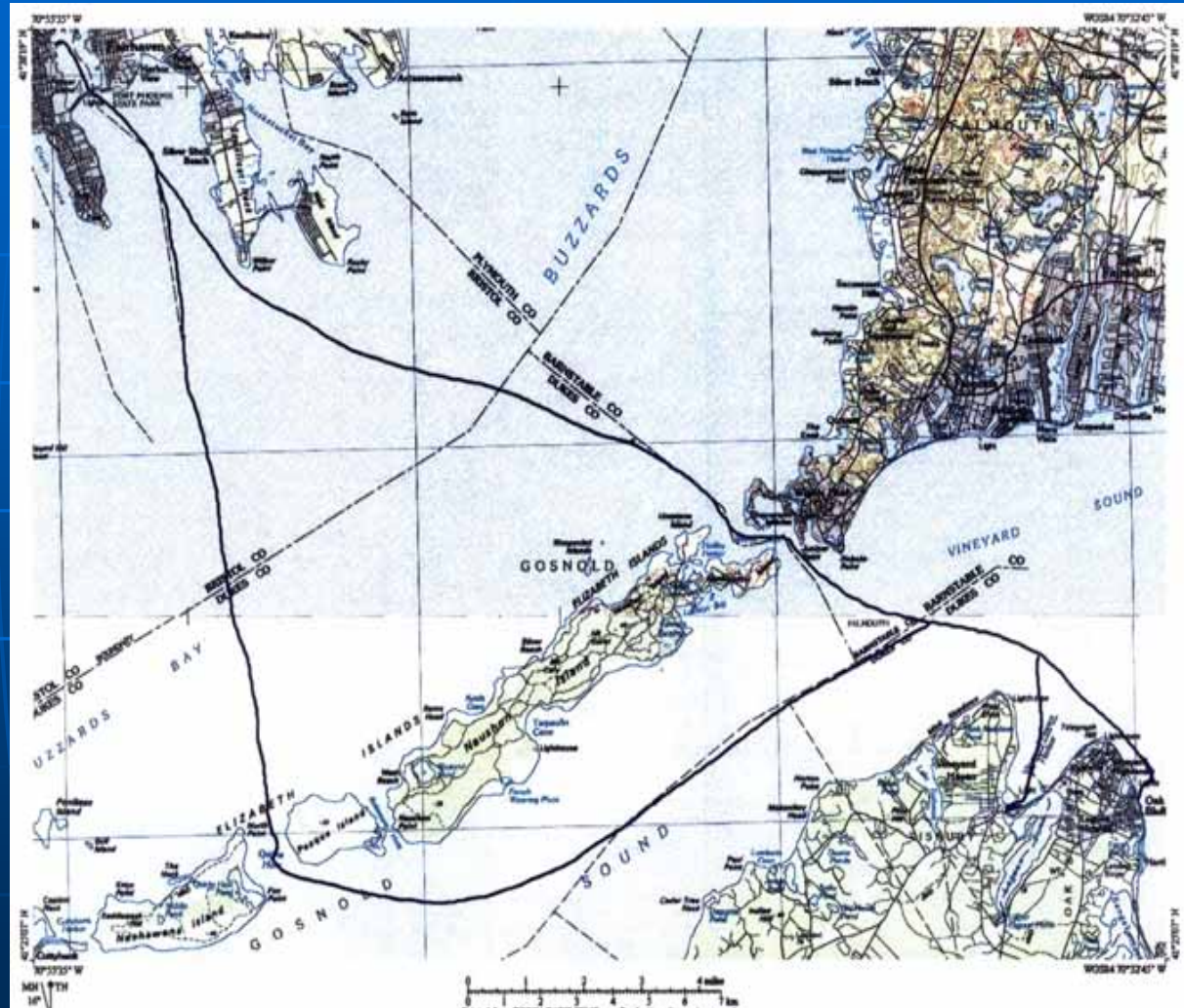
- Year-round passenger and small freight service to the Island from the mainland
- Two vessels to ensure frequency & dependability of service
- Environmentally compatible design and operation
- Low operational expenses
- Passenger comfort inside and out
- Vessel utilization/ versatility:  
(flexible passenger & cargo space)

# Year Round Service Goals

- Six to ten round trips daily during the summer season: June 15<sup>th</sup> through September 15<sup>th</sup>
- Three to six round trips daily during shoulder seasons: April 15<sup>th</sup> through June 14<sup>th</sup> & September 16<sup>th</sup> through October 14<sup>th</sup>
- Two to four round trips daily during winter season: October 15<sup>th</sup> to April 15<sup>th</sup> (with supplemental service on holidays- traffic/ demand dependent)

# Operational Routes

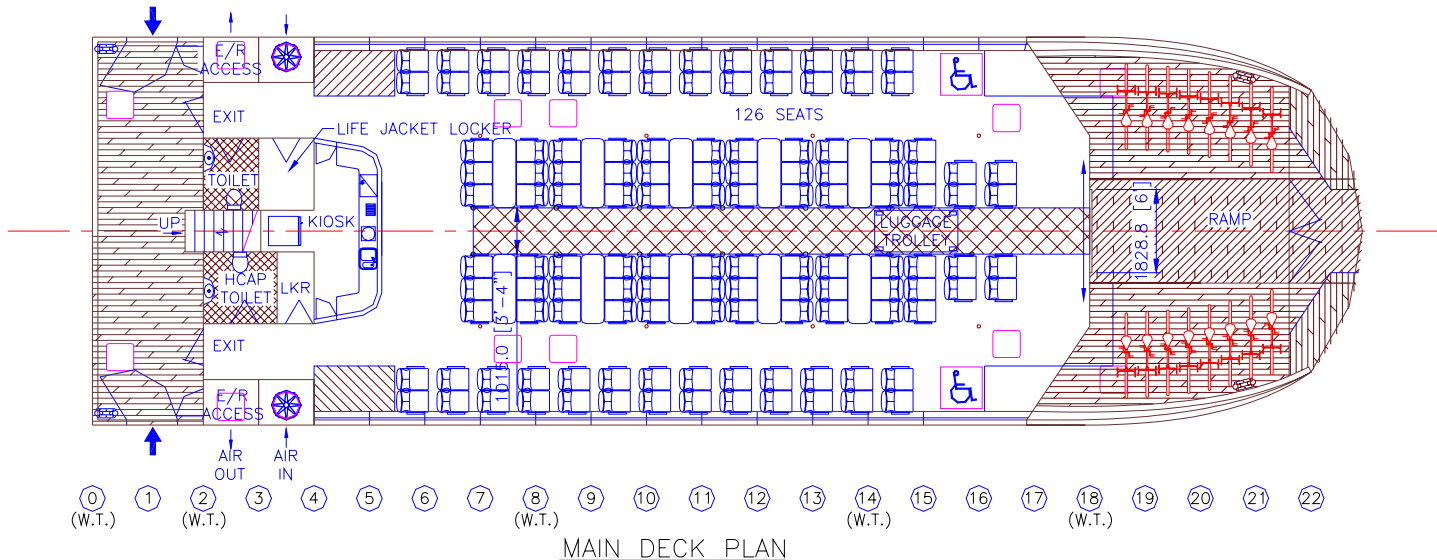
- One Hour Passage-
- State Pier, New Bedford
- Oak Bluffs
- Vineyard Haven
- Via- Woods Hole or Quick's Hole







# MAIN DECK PLAN



MAIN DECK PLAN



# Interior Vineyard 95'

- The vessel's interior materials and colors have been selected by an experienced interior designer to compliment the local environment.
- The passenger accommodation area are configured to maximize passenger comfort.
- Flexible seating layout allows for seasonal scheduling and "dolly freight" configurations.



# Vineyard 95'

## Environmentally sensitive design

- Narrow hull forms
- Light displacement
- One engine/ hull
- Small vessel profile



# Vineyard 95'

## Environmentally Sensitive Design

- Propeller driven
- Rounded bilge chines
- Small propeller with high pitch



# Low Wake/Wash Vineyard 95'

- Advance round bilge hull form
- Optimized hull length to beam ratio
- A proven hull form currently operating in world Heritage listed region (Gordon River, Tasmania)
- Crowther is a world leader in the design of low wash catamaran ferries
- The Crowther proven hull form was developed from tank testing experiments and full scale trials



# Vessel – Environmental Impact

## *Emissions*

	New England Fast Ferry		Hy-Line Cruises		SSA	
	16V2000s		16V92s		EMD 645s	1500HP
	per engine	per vessel	per engine	per vessel	per engine	per vessel
CO g/hr	770	<b>1,540</b>	1,035	4,140	1,785	3,570
NOx g/hr	5,975	<b>11,950</b>	10,060	40,240	21,600	43,200
SO2 g/hr	1,030	<b>2,060</b>	1835	7,340	1,020	2,040

Summary: NEFFCO vessel emits 62% less Carbon Monoxide, 70% less NOx, and 72% less SO2 than typical fast ferry.

# Vessel – Environmental Impact

## *Wake/Wash*

- Wake Wash Energy

*Washington State Ferry Standard is 2500 J/m*

Speed	Wave Energy J/m
15 knots	235
20 knots	161
25 knots	339
30 knots	858

# Vessel – Environmental Impact

## *Wake/Wash*

- Wake Wave Height

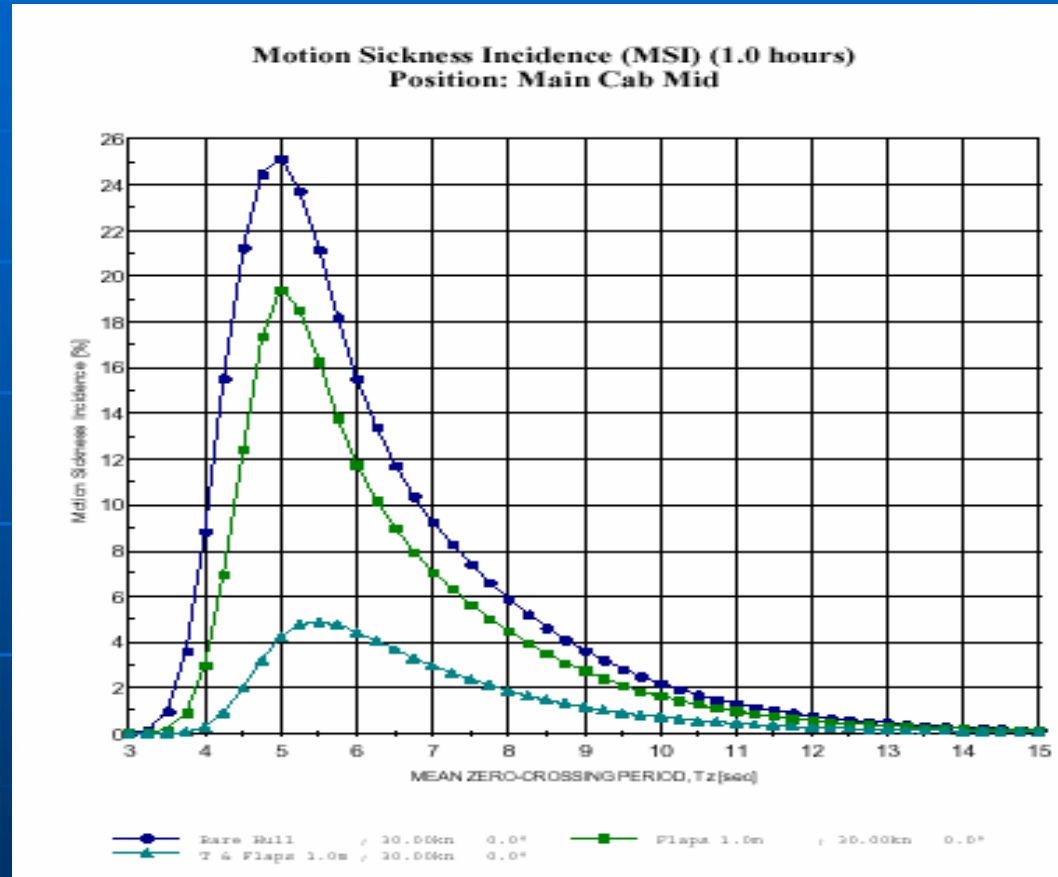
*RFP Spec of 250mm (most highly advantageous) at 300M from travel line*

Speed	Wave Height (mm)
15 knots	132
20 knots	110
25 knots	177
30 knots	245



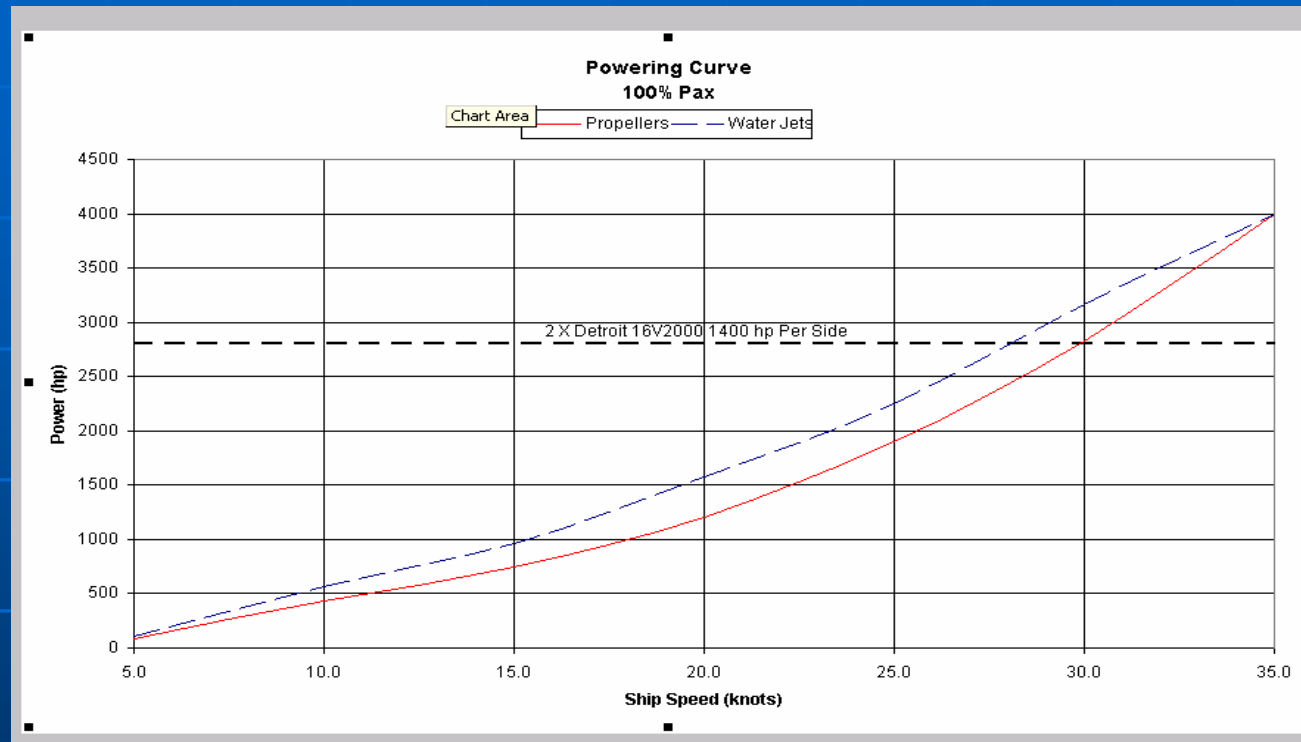
# Sea-Keeping Analysis

- Full Seakeeping analysis undertaken
- Motion Sickness Incidence
- Direct Head seas @ 30 knots
- Significant wave height 5'
- No Motion control
- Interceptor Ride Control
- T-foils



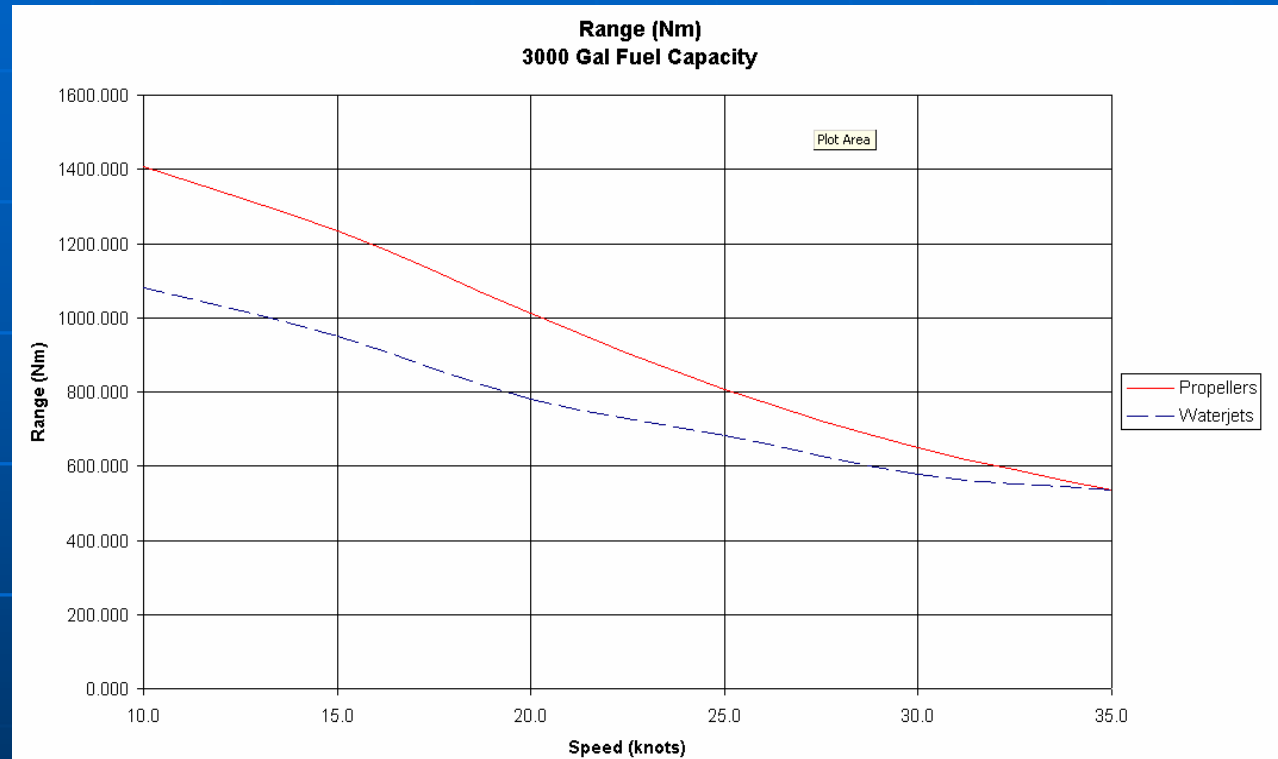
# Speed

- Water Jets
- Propellers



# RANGE

- Water Jets
- Propellers

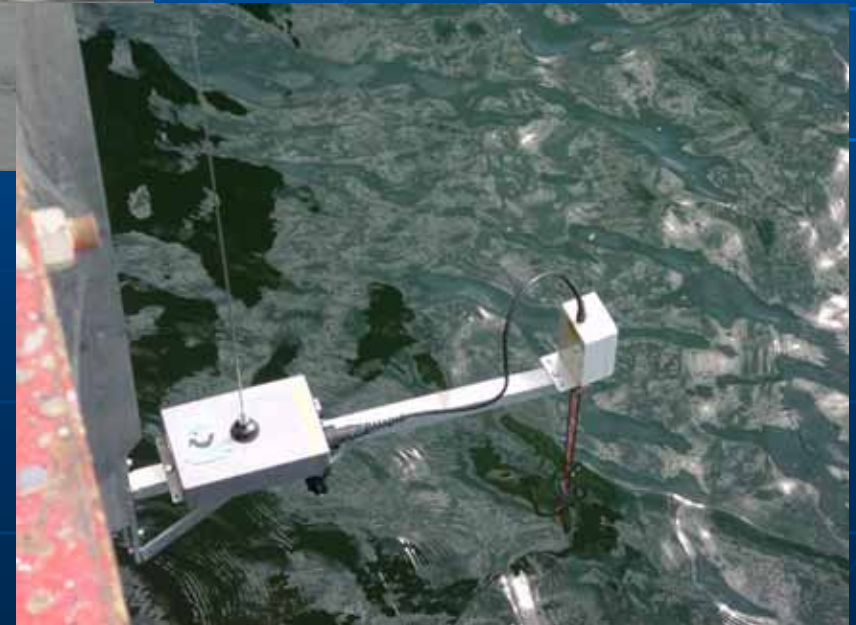


# Wash Tank Testing

- Undertaken on a sister-ship by the designer
- Experiments carried out at the Australian Ship Hydrodynamics Center (Tasmania)
- Crowther Design are leaders in the design of low wash catamaran ferries.



# Wash Full Scale trials Sistership Lady Jane Franklin



NEW ENGLAND  
FAST FERRY CO.