CCTA Feasibility Study for Ferry Service Expansion

Hercules City Council Meeting
March 26, 2024

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Feasibility Study Partners

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San Francisco Bay Ferry

THE SEAL OF CONTRA COSTA COUNTY CALIFORNIA

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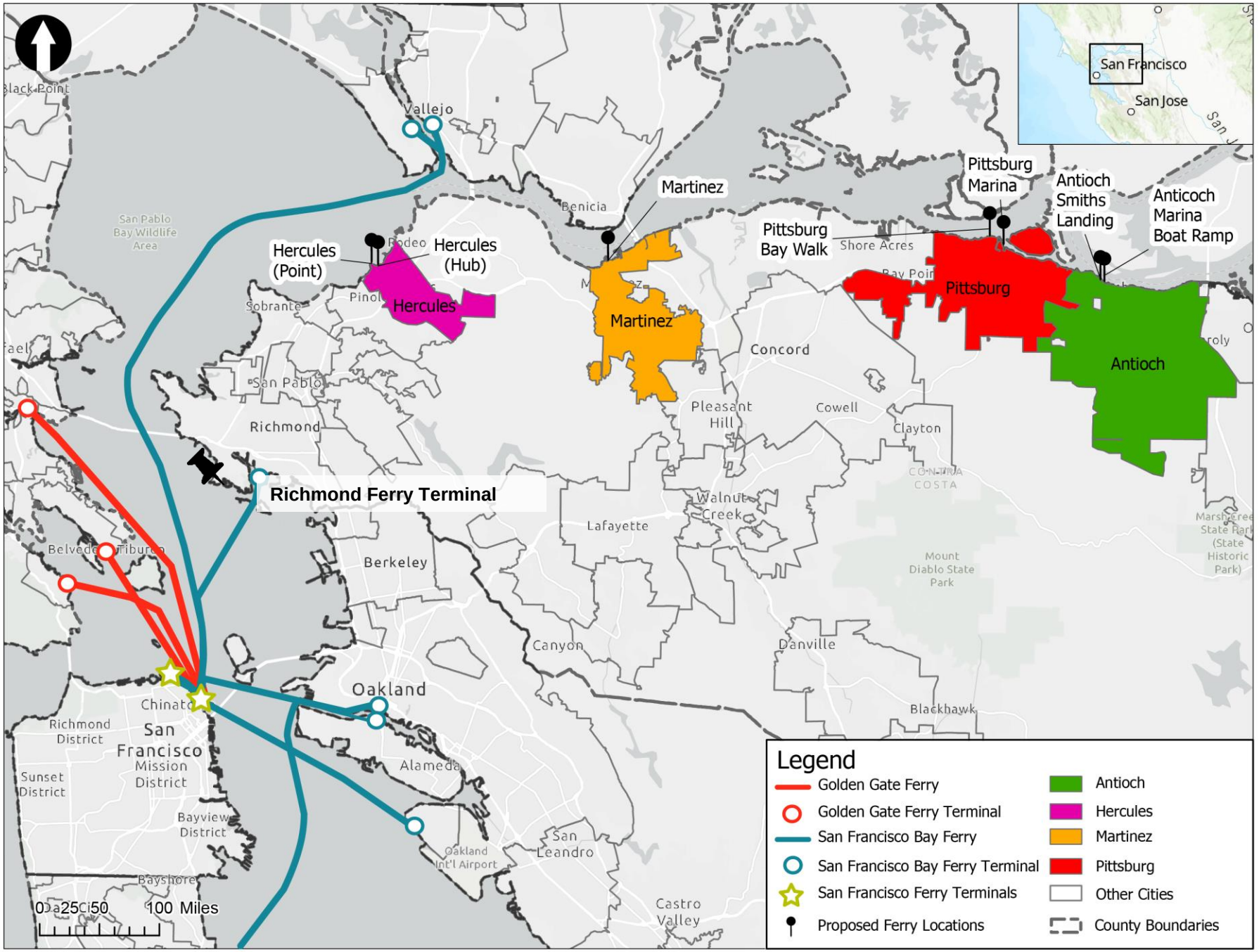
TRI DELTA TRANSIT

Overview of Contra Costa County Ferry Terminal Locations



Initial Ferry Service Assessment Approach

A simple Benefit/Cost Analysis

Benefits

- Demand Potential
- Additional transit connections for Equity Priority Communities
- Indirect benefits from nearby development
- Waterfront access
- Reducing car trips to SF
  - Greenhouse Gas reduction
  - Road congestion reduction

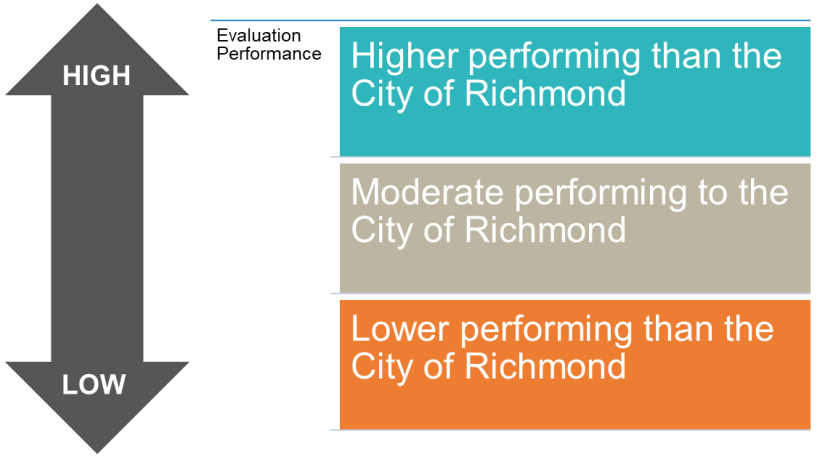
Costs

- Operating costs
- Capital costs
  - Landside Costs
  - Waterside costs
  - Operations and Maintenance Facility
  - Vessel Procurement
- Initial and Annual Maintenance Dredging

Demand Potential

Initial Ferry Feasibility Assessment

- Existing and planned conditions at the proposed ferry terminal are evaluated against the current existing Richmond ferry terminal



Demand Potential	City of Richmond	Ferry Location 1
• Travel Demand to SF Ferry Terminal [1]		
• Transit travel times		
• Driving travel times		
• Residents within ¾-mile walkshed		
• Jobs within ¾-mile walkshed		
• Residential density		
• Job density		
• Existing transit connections		
• Existing active transportation connections		
• Planned transit connections		
• Planned active transportation connections		

Notes: Travel Demand to SF Ferry Terminal is for 2022

Vessels Evaluated and Operating Authority

WETA Vessel: Dorado Vessel

- **Passenger Capacity**: 320
- **Bike Capacity**: 25
- **Max Speed**: 32 knots
- **Vessel Purchase Cost**: $21 million
- **Ownership:** WETA and operated by contractor

Prop SF Vessel: Billie J

- **Passenger Capacity**: 70
- **Bike Capacity**: 8
- **Max Speed**: 38 knots
- **Vessel Purchase Cost**: $3 million
- **Ownership**: Prop SF and operated by Prop SF under contract with WETA

Notes:

1. Vessel Types were recommended by WETA. They represent the currently available and approved vessels. The vessel choices for the actual service can be different as new products becoming available.
2. Bike capacity is based on the existing vessels and can be customized.

Benefits of Demand Potential: Hercules

	Ferry Feasibility Criteria	Hercules: Hub	Hercules: Point
Demand Potential	Travel Demand to SF Ferry Terminal	●	●
	Transit travel times	●	●
	Driving Travel Times	●	●
	Residents in 15 min walk shed	●	○
	Jobs in 15 min walk shed	●	●
	Residential density	●	●
	Job density	●	●
	Transit connections	●	●
	Active transportation connections	○	●
	Planned transit connections	●	●
	Planned active transportation connections	○	○

- Overall has optimal development and transportation plans to support ferry service yet capital cost is a challenge.
- The Hub location has expensive dredging costs, yet the development costs of the Point location make it far more expensive relative to the Hub location.
- Detailed assessment of capital costs for the Hub and the Point locations to understand the challenges and benefits associated with each site as it relates to capital costs.
- Evaluation of the optimal ferry service provider for initial and long-term service.
- Conduct further research on the feasibility of emerging vessel, low and zero emission technologies for ferry service, as well as policy implications and costs associated with implementing these technologies when planning ferry service.

Legend	
Higher performing than the City of Richmond	●
Moderate performing to the City of Richmond	○
Lower performing than the City of Richmond	●

Annual Operating Costs by Service Type – Hercules

Type of Service	Service Level 1 *Peak service only*	Service Level 2 *All day weekday*	Service Level 3 *All day weekday & weekend*	Richmond Service *All day weekday & weekend*
WETA Cost [1]	$16.8M	$21.0M	$24.2M	FY2023- 24 $10.2M
Prop SF Cost [2]	$10.6M	$12.3M	$13.7M	
Proposed One-Way Trips	20 (WETA) 24 (Prop SF)	25	25 (Weekday) 10 (Weekend)	28 (Weekday) 10 (Weekend)

Source Notes: WETA & Prop SF | *Additional services in Service Level 1 for Prop SF to accommodate for vessel size capacity. | Number of Round trips have been rounded up | 2023 USD $

1 WETA operating costs include vessel crew labor, vessel fuel, vessel O&M, Facility O&M and System Expenses

2 Prop SF assumed operating expenses include maintenance and repairs. However, the assumed costs do not include vessel purchase/lease costs and the cost of a maintenance facility.

Capital Costs: Hercules (The Point & The Hub)

- **Hercules Total Capital Costs**
  - WETA Dorado Vessel*:
    - The Point: **$61.6M**
    - The Hub: **$59M**
  - Prop SF Billie J Vessel
    - The Point: **$47.4M**
    - The Hub: **$44.2M**

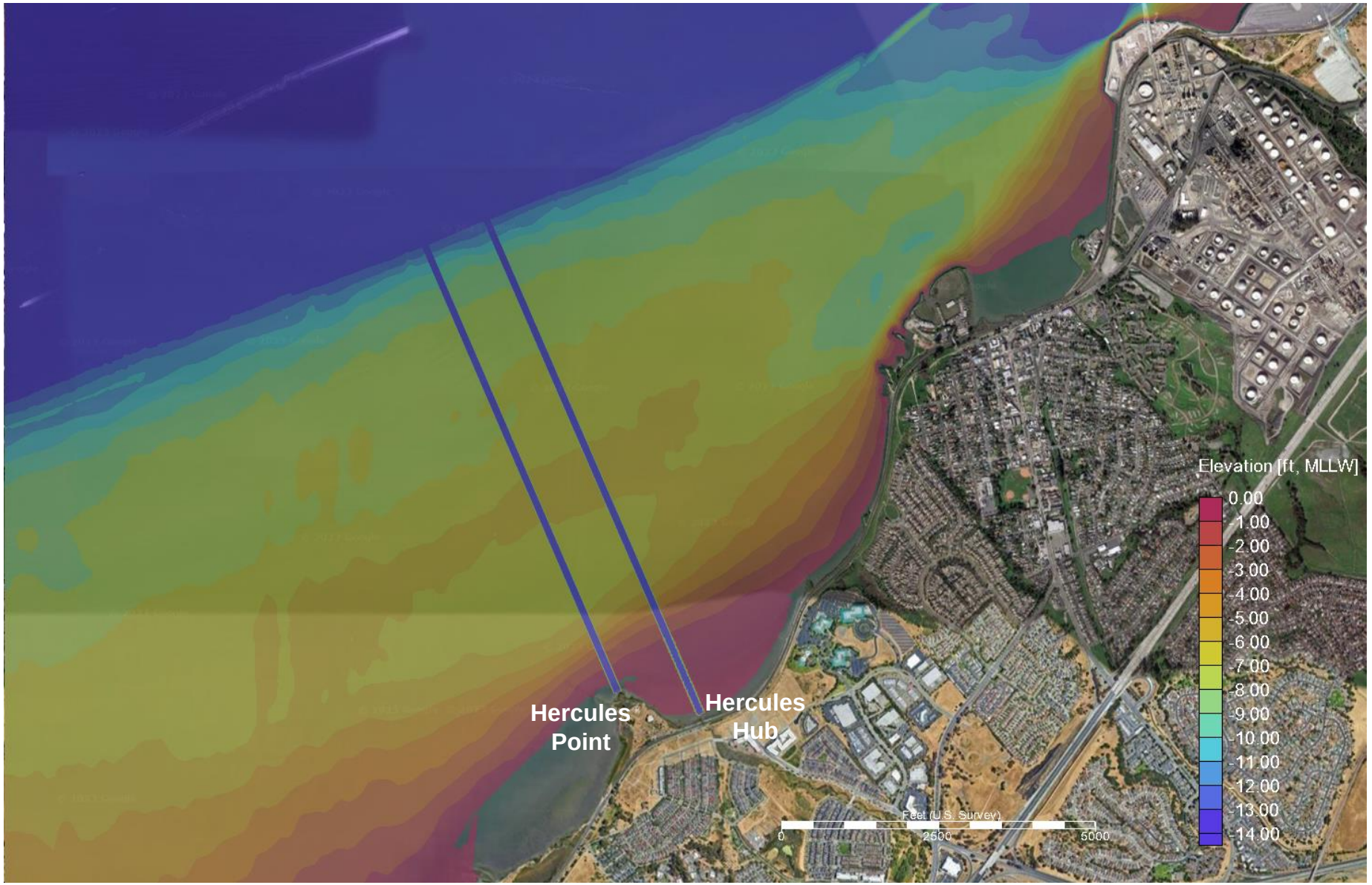
- **Vessel Purchase Cost:**
  - WETA Dorado Vessel: **$76M**
  - Prop SF Vessel: **$11M**

- **The Point had a higher cost due to its location farther away from development.**

- **Capital Costs include:**
  - Landside costs: utilities, pavement, landscaping, site civil
  - Waterside costs: piles, float and shelter items, construction, cost of pier, gangway
  - *Proportional Share of Operations and Maintenance Facility: Only applicable to the WETA Dorado Vessel with an estimated cost of $10.2M

Source Notes: Site evaluation based on the Illustrative Master Plan of the Hercules Bayfront | 50% contingency added for the Point location to help distinguish cost variance due to Point location being a brownfield. Vessel Purchase Cost: is based on a 20% Spare ratio

Dredging Costs: Hercules (The Point & The Hub)



Emerging Ferry Technology

Thank you!

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