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# Peninsula Ferry Feasibility and Market Study

Newport News City Council Work Session  
August 13, 2024

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# Introduction

- HRT staff was asked to explore the feasibility of ferry service between the Peninsula and the Southside
- This study examined:
  - Potential Ridership
  - Infrastructure Needs
  - Estimated Capital Costs
  - Operational Requirements
  - Operating and Maintenance Costs



# History

- Several studies and plans for ferry service:
  - Downtown Vision Plan (Newport News, 2016)
  - DRPT Hampton Roads Fast Ferry Feasibility Report (2013)
  - HRT Waterborne Transit Concepts Study (2010)
  - HRT Newport News Feasibility Study (2004)
- Harbor Link ferry service operated between Hampton and Norfolk (1999-2002)
  - The Zephyr was a 149-passenger ferry that operated on a two-hour frequency, with a \$5 one-way fare. Service was operated from 7:15 a.m. to 8:15 p.m., except for Fridays and Saturdays during the summer months.

# Market Analysis: Determining Ferry Service Feasibility

## Job & Population Density



Density is the #1 indicator of transit use and can help HRT to understand the feasibility of bi-directional ferry service.

## Commuter Propensity



The relative prevalence of employed persons and existing transit commuters can illuminate areas that might generate ferry trips.

## Travel Flow Data



Where people currently travel (as commuters or in general) can inform feasibility and placement of ferry terminals as well as ferry vehicle requirements.

## Stakeholder Interviews



Stakeholders provide insight into pre-existing site challenges and opportunities.

## Site Visits



Site visits provided context to ferry sites, infrastructure challenges and development opportunities.

# Predicted Peak Period Passenger Trips

Proposed Ferry Location	AM Peak Trips (Southside to NN)	PM Peak Trips (NN to Southside)
28 <sup>TH</sup> Street	235	220
23 <sup>rd</sup> Street	155	150

There was very low ridership potential between Newport News and Hampton identified, while Hampton only met the ridership threshold during the PM peak period.

# Stakeholder Interviews



- Interviews offered insight into local obstacles and future development plans
  - Newport News Downtown Vision Plan
  - Downtown Hampton Master Plan
- Stakeholders included members of local government, maritime experts, US Coast Guard, US Army Corps of Engineers, and more
- Interviews confirmed the infeasibility of specific sites including military installations with force protection concerns

# Site Visits

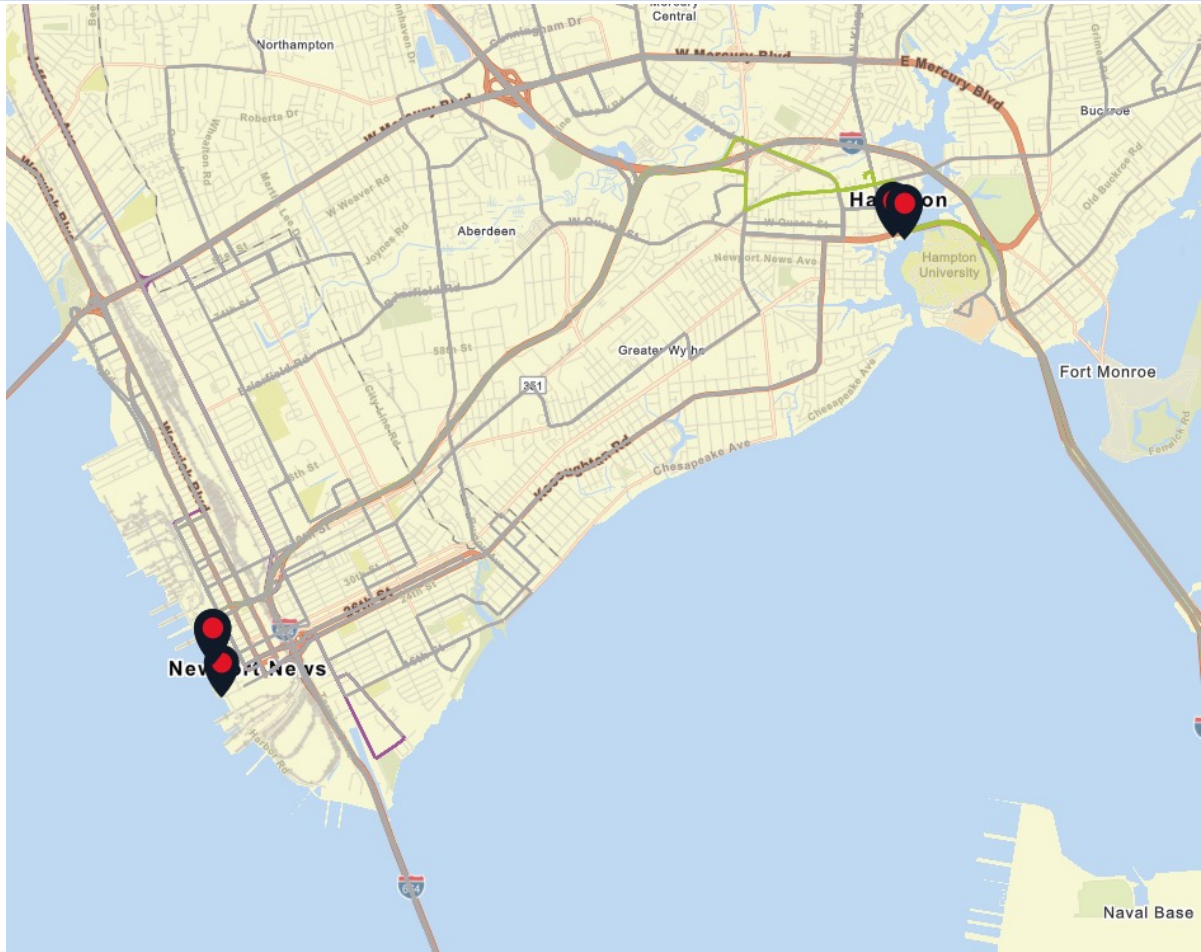


- Purpose: gather firsthand, ground-level information about ferry landing sites under consideration
- Site visits largely reaffirmed insights gleaned from stakeholder input and previous studies
- One site was removed from the short-list of potential ferry sites:
  - Small Boat Harbor (1067 Jefferson Ave.)
    - Navigational difficulties
    - Low level of development and long pier

# Potential Ferry Landing Sites

4 potential landing sites

- **Peninsula:**
  1. 28<sup>th</sup> Street
  2. 23<sup>rd</sup> Street
  3. Virginia Air and Space Science Center
  4. Hampton Maritime Center





## Potential Ferry Landing Sites

# 1. 23<sup>rd</sup> Street – Newport News

### Pros:

- + Site visit and stakeholders support this location for a near-term location
- + Bulkhead supportive of ferry infrastructure for use in the near-term
- + Close to public transit connections and proposed development

### Cons:

- Weather exposure
- Location not as close to shipyard
- Parking conflicts with nearby residential and commercial uses



# Potential Ferry Landing Sites

## 2. 28<sup>th</sup> Street – Newport News

### Pros:

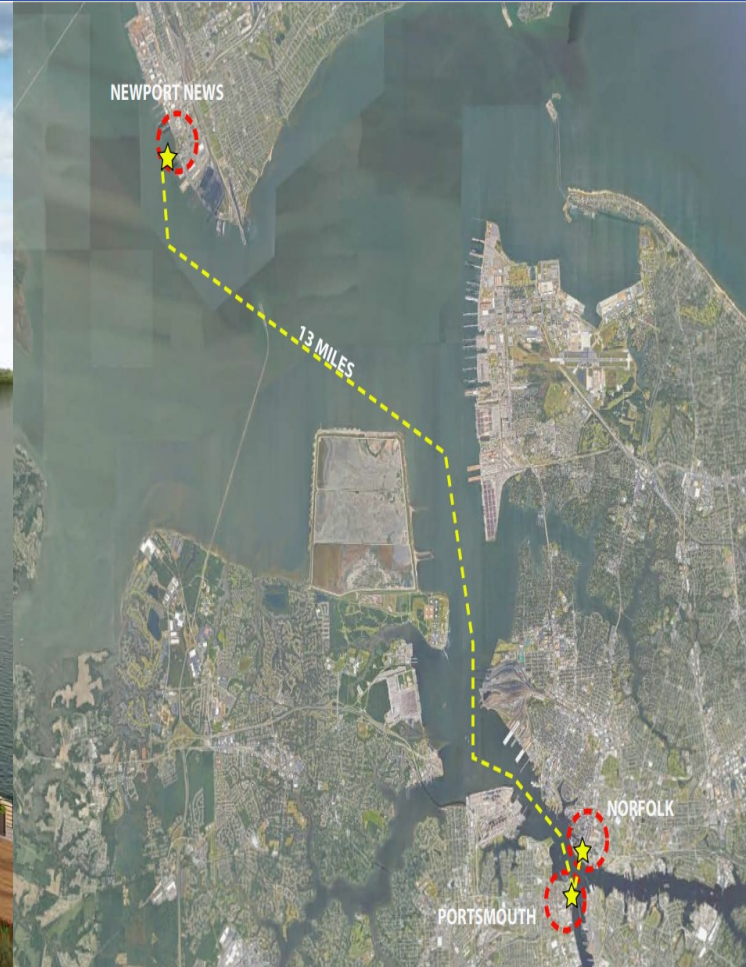
- + Near Newport News Shipbuilding and associated facilities
- + Newport News Downtown Vision Plan proposes a pier/ferry service and entertainment in this location
- + Close to public transit connections and proposed development

### Cons:

- This would be a longer-term option as there is currently no supporting infrastructure.
- Dredging and permitting would be required
- Parking would need to be made available



# 28<sup>th</sup> Street Vision



# Navigation Restrictions Newport News to Norfolk



- 60 minute run time
- Includes 10 minutes embarkation time at terminal
- 30 knot vessel speed required

30 knots	Distance (Miles)	Max Speed (Knots)	Travel Time (Mins)
Hampton River	0.46	5	5
Hampton Roads	11.0	30	19
Elizabeth River	2.30	5	24
One-way Trip			50

# Elizabeth River Ferries



## PRINCIPAL CHARACTERISTICS

Monohull Paddlewheeler

Length Overall            65 ft

Beam                        22 ft

Draft Max                 6 ft

Max Capacity             150

- Can only be operated in protected waters
- Poor seakeeping design
- Too slow

# Ridership and Fleet Requirement



- Assumed maximum 150 passenger capacity: based on industry best practice and peer ferry service
- 150 – 235 passengers expected during the morning peak period (6:00 a.m. – 9:00 a.m.)
- 2 – 3 catamaran-style fast ferries with 150-passenger capacity

# Fleet Operating Scenarios

Parameter	Scenario 1	Scenario 2
Operating Days	260	355
Operating Hours	8hrs Monday -Friday	8hrs on weekdays and Saturdays/ 9 hrs. Sundays
Crew Size Per Ferry	3	3
Ferries in Operation	2	2
Annual Hours	12,480	17,344
Annual Operating Cost	\$ 2,060,000 *	\$ 2,862,000 *

\* 2025 dollars that would be escalated 4% annually beginning in 2031

# Total Capital Costs

- Assumes revenue service begins 2031
- Capital costs are inflated to year 2030

Location	Newport News Landing		Norfolk Landing
Vessels	\$16,004,000 (3 vessels)		
Ferry Landing Sites	23 <sup>rd</sup> Street \$450,000	28 <sup>th</sup> Street \$8,078,000	Waterside \$956,000
Homeport Site	\$316,000		
Subtotal Landings Capital Cost	\$450,000 - \$8,078,000		\$956,000
Grand Total (Includes Vessels)	\$17,726,000- \$25,354,000		



# Cost Allocation Agreement

- Cost Allocation Agreement determines how cities share O&M costs.
  - Annual Revenue Hours of service in each city determines their share.
- Capital costs (vessels, ferry landings, and other infrastructure) can be programmed in 10-year CIP.
  - HRT staff will seek discretionary federal and state grants in support of new ferry service.



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# Next Steps



Final report due end of August 2024.



Depending on interest, moving forward identifying funding and more detailed engineering and costing analyses





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Questions?

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