MAGNOLIA BRIDGE PLANNING STUDY

PRESENTED TO THE MAGNOLIA COMMUNITY COUNCIL
MARCH 20, 2018
Mission:  
*Develop an alternative that provides safe and efficient access to the Magnolia area that has stakeholder support and is financially feasible.*

Project Goals:  
- Provide a safe route(s) to Magnolia.  
- Provide reliable and redundant access to and from Magnolia.  
- Any new route must be grade separated from the BNSF Mainline railroad tracks.  
- Provide a route that will support Magnolia Village.  
- Maintain or improve traffic flow on, and connections to, the 15th Avenue W corridor.  
- Maintain access to the Smith Cove waterfront and improve connection between Magnolia and the Smith Cove waterfront.  
- Maintain or improve access to Terminal 91.  
- Improve the level of bicycle and pedestrian connections within and beyond the project area.  
- Consider future ST3 light rail project when evaluating alternatives.  
- Design an alternative that is financially feasible.  
- Minimize or mitigate environmental impacts.  
- Minimize disruption during construction.
Magnolia Bridge Planning Study

EVALUATION PROCESS

QUALITATIVE ANALYSIS

Fatal Flaw Criteria:
- Maintain access to the Smith Cove waterfront and improve connection between Magnolia and the Smith Cove waterfront
- Must be grade separated from the BNSF Mainline railroad tracks
- Maintain or improve access to Terminal 91 (T91)
- Must be financially feasible

Component to replace the existing Magnolia Bridge was considered and found to be fatally flawed

STEP 1: Fatal Flaw Screening

Component Eliminated

STEP 2: Technical Screening

Component Eliminated

STEP 3: Alternatives Analysis

Alternative Eliminated

Identify Preferred Alternative

QUANTITATIVE ANALYSIS

Technological Screening includes:
- Traffic operational need
- Geometric feasibility

Technical Analysis include:
- Traffic operations metrics (travel time, intersection delay, etc.)
- Cost Estimates
- Right-of-Way Impacts
- Construction Disruption and Duration

WE ARE HERE
Component 1: West Uplands Perimeter Road
- New roadway parallel to existing Elliott Bay Trail
- Required to provide access to/from Elliott Bay Marina and Smith Cove
- Required to provide access between Magnolia and Elliott Bay Marina and Smith Cove
- Only works in conjunction with other components
Component 2: Magnolia Connector
- Improvements to existing roadway
- Required to provide access between Magnolia and Elliott Bay Marina and Smith Cove
- Option to provide access on 20th Ave W or 21st Ave W
- Only works in conjunction with other components
Component 3: Dravus St Improvements
- Improves existing access to/from Magnolia
- May include upgrades to intersections at 15th Ave W and 20th Ave W and/or the Dravus St Bridge
- Conceptually component works independently
Component 4: Wheeler Street Bridge
- Provides new access to/from Magnolia
- Options for 15th Ave W access include intersection treatment (4A) or Gilman Dr W loop (4B)
- Conceptually component works independently
Component 5: Armory Way Bridge
- Provides new access to/from Magnolia
- Options for 15th Ave W access include intersection treatment (5A) or braided fly-over ramp (5B)
- Conceptually component works independently
Component 6: New Bridge Port Connector
- Provides access between new bridge and Port property, Elliott Bay Marina, and Smith Cove
- Needs to accommodate freight traffic
- Options include EL-ramp to 20th Ave W (6A), loop-ramp to 21st Ave W (6B), Thorndyke Ave W/21st Ave W (6C), or Thorndyke Ave W/ 20th Ave W (6D)
- Only works in conjunction with other components
Component 7: Magnolia Bridge Segment

- Improvements to existing Magnolia Bridge segment
- Provides direct access to/from Port properties
- Provides partial access to/from Magnolia in combination with other components
- Relieves pressure on Galer Street Flyover
- Particularly important to freight traffic
- Conceptually component works independently however, if intended for public use, only works in conjunction with other components
Component 8: Alaskan Way Connector
- Extend portion of Alaskan Way
- Provides access between Port property/Magnolia Bridge segment and Galer St Flyover
- Provides partial access to/from Magnolia in combination with other components and/or the Galer Street Flyover
- Relieves pressure on the Galer St Flyover
- Only works in conjunction with other components
Component 9: East Uplands Perimeter Road

Improve and open existing private Port road
- Provides partial access between Port property and Magnolia and 15th Ave W
- Provides partial access to/from Magnolia
- Particularly important for freight traffic
- Particularly important for transit access to the Port and T91 cruise terminal
- Only works in conjunction with other components
ALTERNATIVE ANALYSIS METRICS:

Mobility and Connectivity
- Vehicular Access to and from:
  - Magnolia
  - Marina/Waterfront
  - Terminal 91
- Traffic Flow on 15th Avenue
- Bicycle and Pedestrian Connections
- Transit Access

Environmental Impact
- Adjacent Land Use (Acquisition, Noise, and Visual)
- Sensitive Areas (Cultural, Historic, and Natural Resources)
- Natural Hazards (Steep Slopes and Seismic Susceptibility)

Implementation Characteristics
- Project Cost
- Construction Duration and Impact
- Stakeholder Support

Other Considerations:
- Neighborhood Advisory Committee (NAC) Agreement
- Sound Transit’s Link alignment
- Freight access and Port security protocol

NEXT STEPS

Package viable components into alternatives
Perform alternatives analysis
Identify the Preferred Alternative

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NEXT STEPS

Package viable components into alternatives

Perform alternatives analysis

Identify the Preferred Alternative

Online Survey to describe Magnolia Bridge history (including past alternatives evaluation process), present alternatives, and collect community input

Public Outreach Event(s) to describe the evaluation process, share findings, summarize community feedback, and present the preferred alternative
QUESTIONS?

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