

Magnolia Bridge Project Goals

Community and Design Advisory Group input helped SDOT create the following project goals.

- Provide a reliable route(s) between Magnolia and the rest of Seattle
- Maintain Magnolia's aesthetic qualities and community feel
- Maintain or improve traffic mobility
- Provide a route that will support local neighborhoods and businesses
- Maintain or improve traffic flow on the 15th Avenue W. corridor
- Improve access to the waterfront to and from Magnolia
- Minimize impact to existing traffic patterns during construction
- Maintain or improve the level of bicycle and pedestrian connections within and beyond the project area
- Preserve family-wage jobs and the marine industrial economic cluster
- Ensure the highest level of design excellence
- Support multi-modal connections



Preferred Alignment — Alternative A



The new Magnolia Bridge route shown in orange, with the existing bridge in the background photograph.

Lane Configuration for New Magnolia Bridge



History of Magnolia Bridge

1929



1946



1967



- 1887 Seattle, Lake Shore & Eastern built railroad in Interbay to serve the coal fields of Issaquah and New Castle.
- 1891 The community of Boulevard received a post office. Three years later the name was changed to Interbay.
- 1892 Great Northern Railway constructed railroad to Seattle through Interbay. Great Northern built a depot at Smith Cove and piers into the cove to handle cargo from Asia.
- 1929 West Garfield Street Bridge constructed between 15th Avenue West and Dartmouth Avenue West. The new concrete bridge replaced a timber trestle that ran from 15th Avenue West to 23rd Avenue West. Bridge included north and south connections to 23rd Avenue West. See 1929 photo.
- 1931 Dravus Street Bridge was opened to traffic.
- 1940 Seattle obtains Piers 90 and 91.
- 1942 Navy condemned Piers 90 and 91 for military use. Presumably, the Navy removed the trestle connections to 23rd Avenue West. See 1946 photo.
- 1957 A new structure over 15th Avenue West on the east end of the bridge was constructed.
- 1960 Bridge renamed as Magnolia Bridge.
- 1961 West half of the bridge was strengthened by installing steel cross bracing on piers and steel trusses under deck.
- 1974 East half of bridge was strengthened similar to west half.
- 1975 Navy returns Piers 90 and 91 to Seattle.
- 1981 Concrete barriers added to both sides of roadway.
- 1991 New ramps added to serve Elliot Bay Marina.
- 1997 Landslide damaged piers on west end of bridge requiring closure until repaired.
- 2001 Nisqually earthquake damages piers requiring closure until repaired.
- 2001 West Galer Street Flyover is constructed.
- 2002 Planning begins for replacing Magnolia Bridge.



Seattle Department of Transportation

Magnolia
BRIDGE
PROJECT

Common Themes & Important Factors

General

- Think broadly and creatively!
- It's more than a "bridge-replacing-bridge" project
- Consider fourth access point

Community Values

- Consider Magnolia's "island feel"
- Keep a working waterfront
- Avoid neighborhood impacts - noise, traffic, air quality
- Improve shoreline access

Environmental

- Improve seismic/landslide safety
- Maintain parks and open space
- Consider displacement/relocation
- Minimize air, noise, odor impacts
- Consider contaminated property

Economy and Business

- Bridge as lifeline to Magnolia Village businesses
- Create/retain family-wage jobs
- Maintain and enhance freight mobility

Land Use

- Plan for future land use changes
- Coordinate with Port plans
- Enhance connectivity and access to parks and marina
- Support appropriate mix of land uses (industrial, commercial, etc.)
- Achieve consistency with county-wide planning policies

Design

- Plan for future development
- Design for free-flowing traffic
- Enhance views to and from bridge
- Provide adequate turning room for trucks
- Minimize conflicts between diverse uses

Construction Impacts

- Keep the bridge open during construction
- Protect emergency access routes

Create a Multi-modal Transportation System

- Enhance transit options (e.g., monorail, street car, etc.)
- Provide bicycle and pedestrian trails
- Consider interplay with 15th/Elliott corridor
- Provide seamless freight connections



Bridge Structure Segments



The Magnolia Bridge has four structure segments used for bridge design work. These four color-coded segments group portions of the bridge with similar design characteristics in order to help the design team identify the best structure type for each segment.

Mainline Structure

Looking north from Alaskan Way W



Existing Bridge Structure



A photo simulation of how the new Magnolia Bridge will look
(Precast Concrete Box Girder)

15th Avenue W Overcrossing Structure

Looking north from 15th Avenue W



Existing Bridge Structure



A photo simulation of how the new Magnolia Bridge will look
(Haunched Cast-in-Place Concrete Box Girder)

Magnolia Bluff Structure

Looking north from Smith Cove Park



Existing Bridge Structure



A photo simulation of how the new Magnolia Bridge will look
(Haunched Cast-in-Place Concrete Box Girder)

23rd Avenue Ramps Structure

Looking northeast from Smith Cove Park



Existing Bridge Structure



A photo simulation of how the new Magnolia Bridge will look
[Haunched Cast-in-Place Concrete Box Girder (Main Structure);
Precast Concrete Box Girder (Ramp Structure)]

Selecting Design Features for the New Magnolia Bridge

After selecting the bridge column and structure types for the new Magnolia Bridge, SDOT turned its attention to more detailed design elements. The project team identified several options for each of the following:

- Street and pedestrian lighting
- Railings
- Pedestrian viewpoints facing south
- Column treatments
- Pedestrian pathways and sidewalks
- Bicycle connections

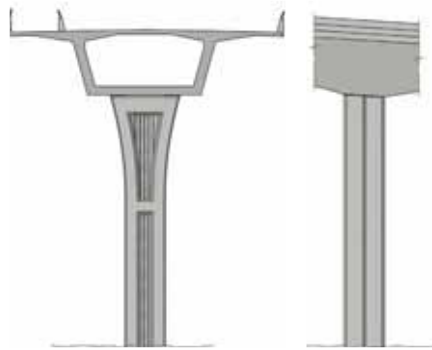
The Design Advisory Group recommended that design elements reflect a maritime, modern theme to best fit with the bridge's location.



Lighting, Railing, Sidewalks & Wall Treatments



Street and pedestrian lighting



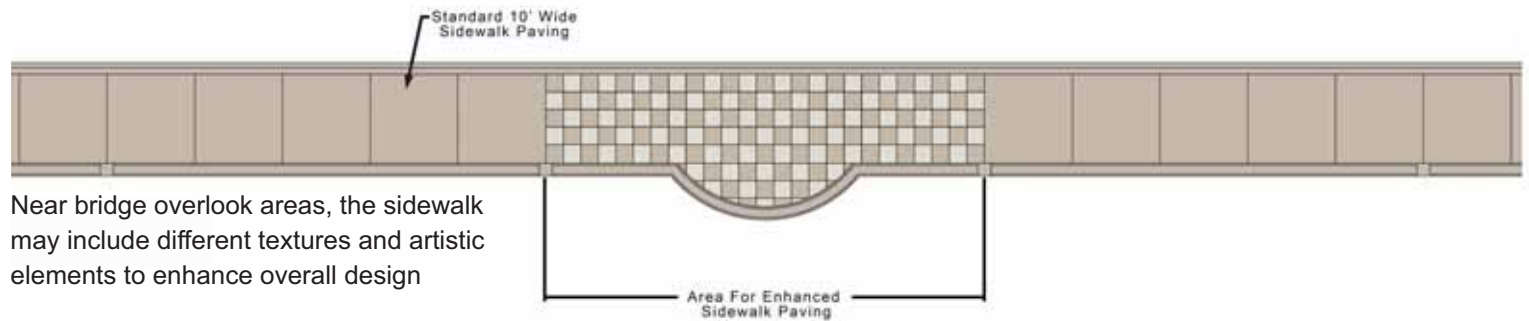
Column treatments



Wall treatments will look like vertical ropes, suggesting maritime activities

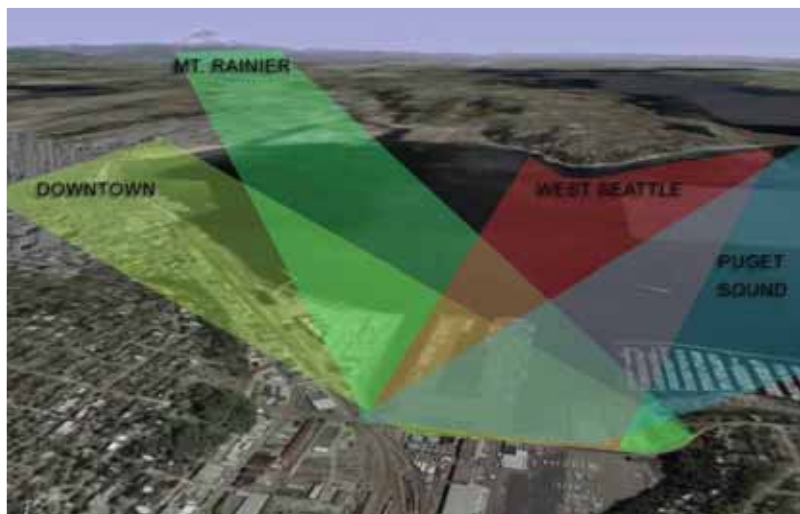


Steel tube railing and a concrete half-wall will border the bridge's sidewalk



Near bridge overlook areas, the sidewalk may include different textures and artistic elements to enhance overall design

Proposed Overlook Features Facing South



View analysis



Proposed overlook design



Potential overlook locations

Pedestrian Path & Bicycle Connections



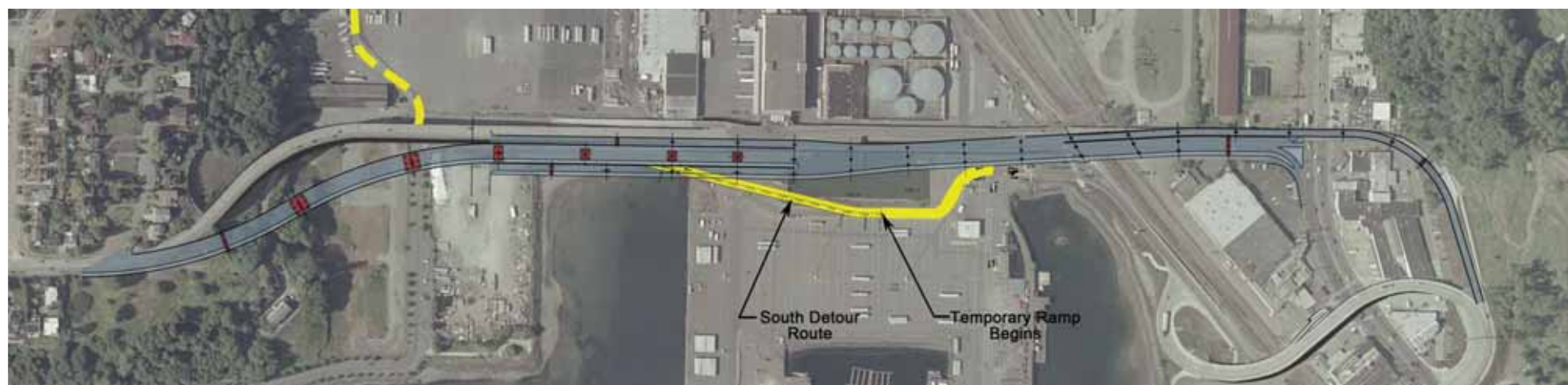
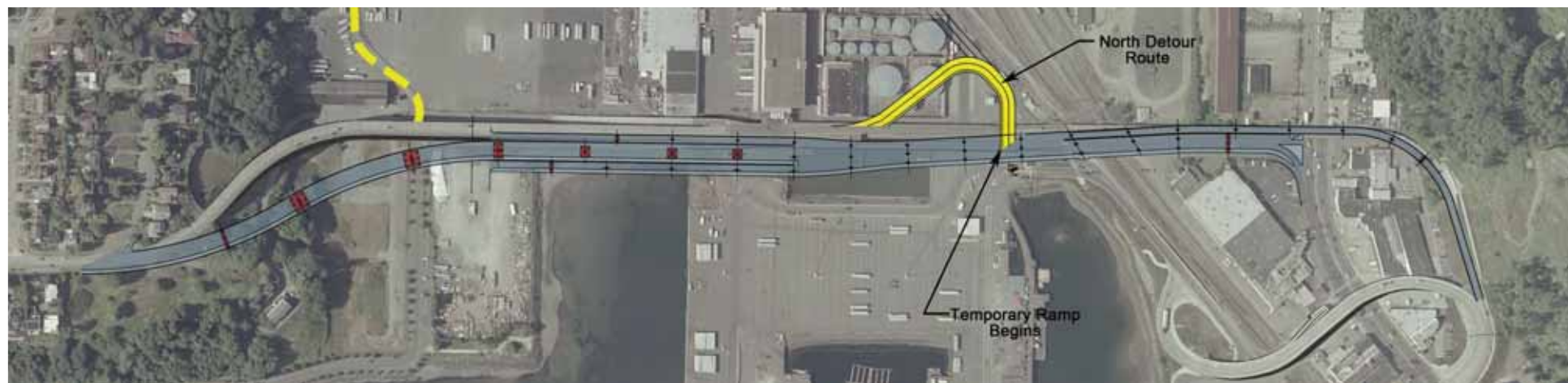
Photo simulation of pedestrian path connection to bridge



Proposed pedestrian path on east end of bridge



Potential Temporary Routes During Construction



The above are possible construction detour designs. The contractor and SDOT will determine the best detour route when construction begins.

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www.seattle.gov/transportation/magbridgereplace.htm | 10-07

Next Steps: Project Planning & Funding

Revised 2007 Project Cost Estimate: \$262 million

- Includes design, right-of-way, and construction costs
- Assumes construction starts in 2009
- Cost will likely increase if construction is delayed

SDOT has not yet secured construction funding

- SDOT continues to pursue a blend of sources:
Federal funding, grants, and other local and regional opportunities
- SDOT anticipates a funding delay of 5 years (or more)

Next Steps

- SDOT will hold design work at the 50 percent level until the City secures funding (to avoid having to redo work if future conditions change)
- SDOT will continue to coordinate with the Port of Seattle about:
 - Northbay development
 - Emergency detour routes
 - Cruise ship terminal planning
 - Other topics related to the bridge

