

The Alaskan Way Viaduct & Seawall Replacement Program



Central Waterfront

North Portal Working Group

May 21, 2009

North Portal Goals

- Keep people and goods moving safely on SR 99.
- Provide freight access for Ballard/Interbay and port facilities.
- Provide access to/from SR 99 in all directions.
- Maintain access to downtown from Aurora Avenue North.
- Maintain and/or enhance transit service and reliability.
- Maintain efficient operations on the arterial street network.
- Improve the urban character and reconnect adjacent neighborhoods.
- Open bored tunnel to traffic by the end of 2015.
- Complete improvements within the established budget.
- Minimize construction impacts.
- Keep traffic moving during construction.

North Portal Considerations

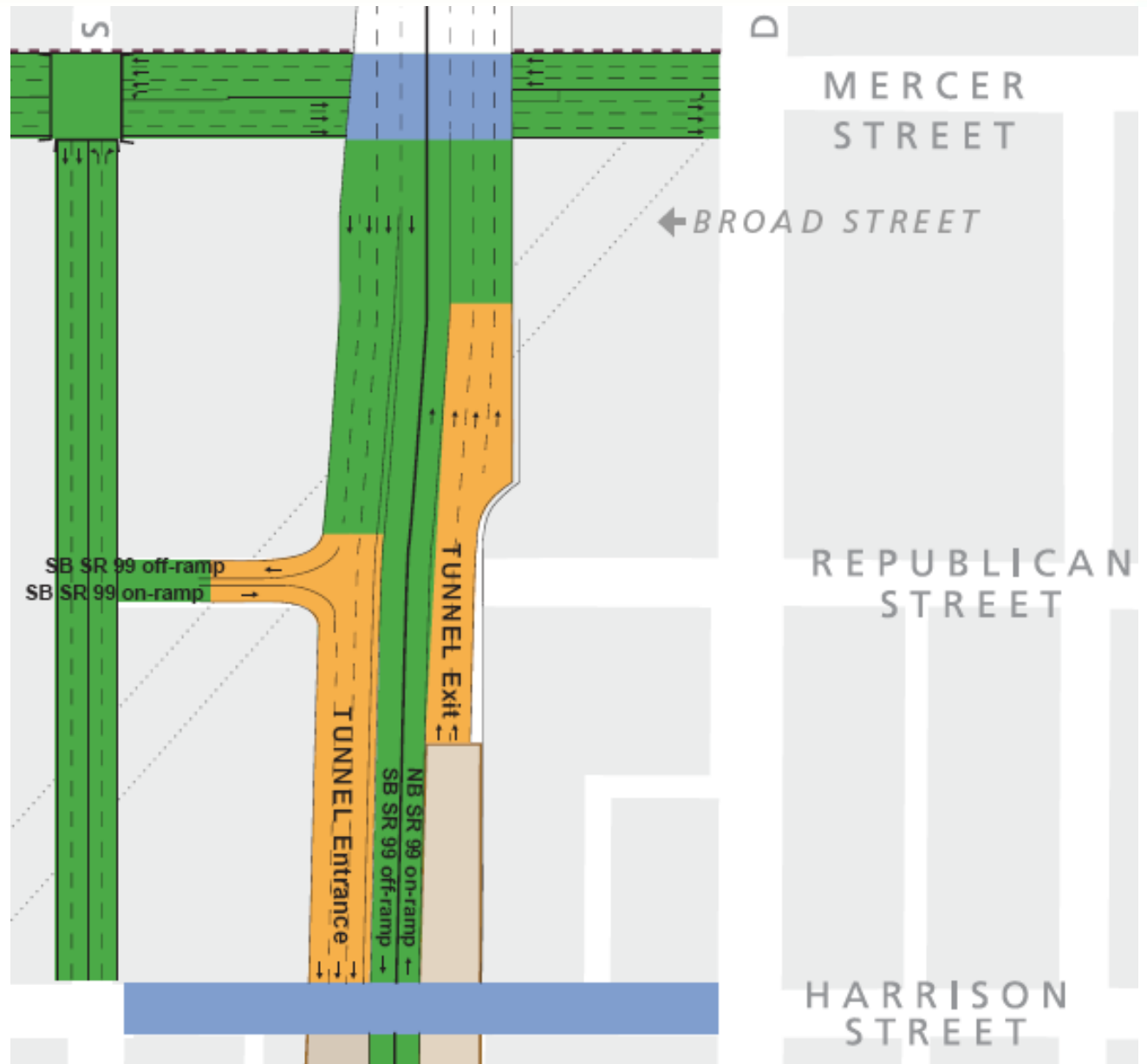
- In evaluating north portal concepts, we found that impacts in the following areas were generally equal across the board:
 - Utility relocation - regardless of which concept is chosen for the north portal, utilities will need to be relocated. The manner in which that work is done remains fairly consistent across the concepts.
 - Construction - construction time, mitigation and staging would all be handled in similar ways and is not a differentiating factor across concepts.
 - Land use – land left after construction is a consideration of all of the concepts and as such is not a differentiating factor.

North Portal Process

- Since the bored tunnel was selected as the recommended solution, the project team has:
 - Engaged engineers and program management from the state, city, county and port.
 - Developed many draft designs for potential north portal configurations.
 - Continued environmental process.

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North Portal Concept A



North Portal Concept A – Access and Mobility

Advantages:

- Eliminates the weave between traffic entering from downtown and the northbound tunnel traffic exiting in the portal area.
- Eliminates the weave between southbound traffic exiting into downtown and traffic entering the tunnel from the portal area.
- Distributes the southbound entrance and exit traffic to two locations north and south of Mercer Street.
- Improves east-west connections, including two-way Mercer Street.
- Provides an opportunity for transit priorities at Denny Way.
- Accommodates freight traffic into the bored tunnel at Republican Street.

North Portal Concept A – Access and Mobility

Disadvantages:

- Only one northbound exit at Roy/Valley streets.
- Only one northbound entrance other than Denny Way at Roy/Valley streets.
- The Thomas Street overpass grades would exceed 10%.
- Ramps to Denny Way would be approximately 7%.
- No transit stops on Aurora Avenue north of Denny Way; difficult to serve South Lake Union and Seattle Center area.
- Northbound freight trips must use the Roy Street exit.
- Left-side entrance and exit lanes between Aurora Avenue North and downtown.

North Portal Concept A – Urban Character

Advantages:

- Creates an urban street grid east and west of Aurora Avenue, including connections across Aurora.
- Enables potential development of surplus properties (needed for construction only).
- Creates enhanced bike and pedestrian connections via the widened Mercer Street underpass.

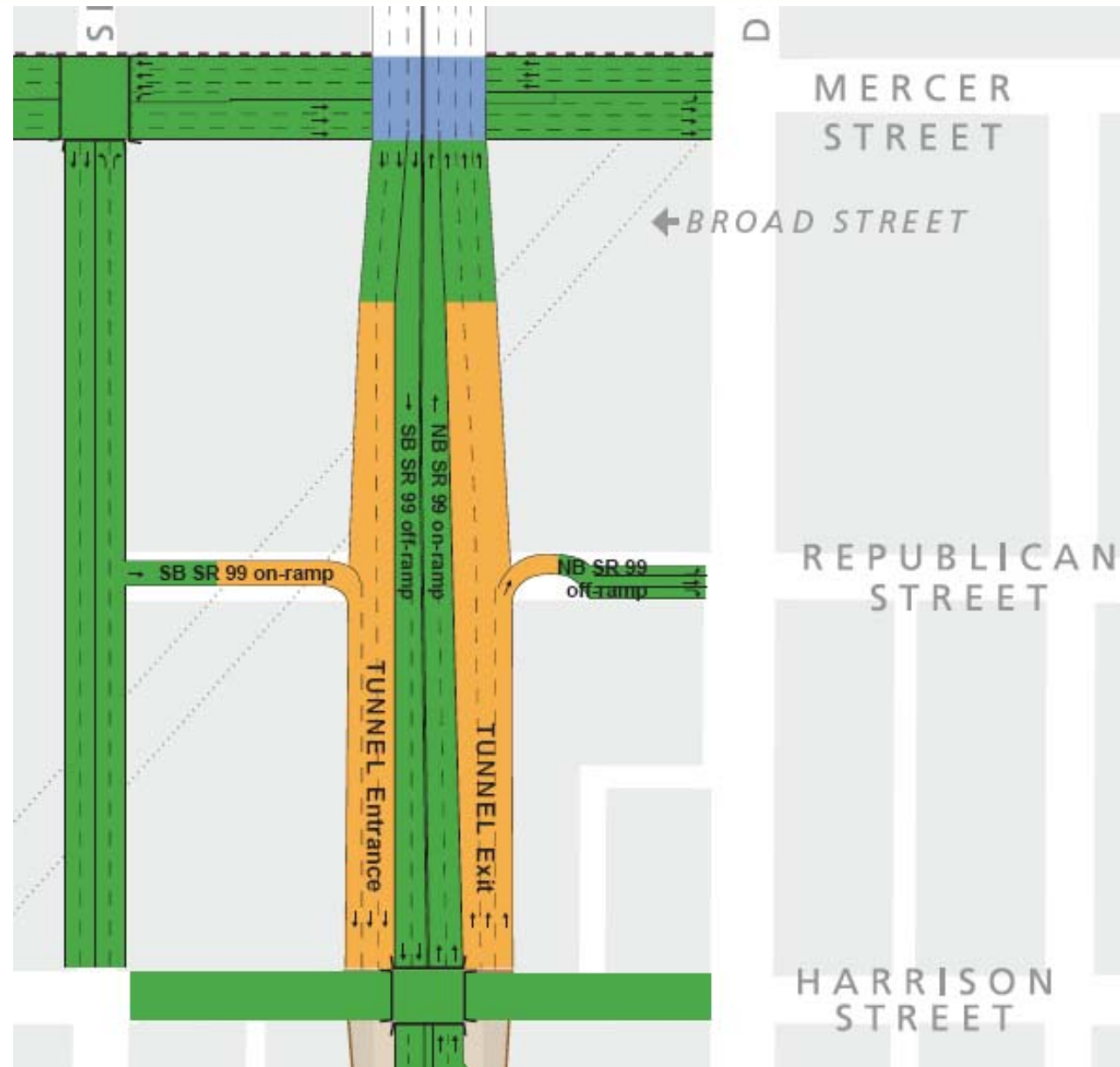
North Portal Concept A – Urban Character

Disadvantages:

- Access to properties along Thomas Street – Sixth Avenue to Dexter Street – may be affected.
- Would create a narrow sidewalk on the east side of Aurora Avenue north of Harrison Street.
- No vehicular access along Aurora Avenue from Harrison Street to Mercer Street.

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North Portal Concept B



North Portal Concept B – Access and Mobility

Advantages:

- Eliminates the weave between traffic entering from downtown and the northbound tunnel traffic exiting in the portal area.
- Eliminates the weave between southbound traffic exiting into downtown and traffic entering the tunnel from the portal area.
- Distributes southbound entrance and northbound exit traffic to two locations north and south of Mercer Street.
- Improves east-west connections, including two-way Mercer Street.
- Creates access to the street grid for traffic traveling from the north on Aurora Avenue to all streets south of Harrison Street.
- Provides freight access to and from the bored tunnel at Republican Street.

North Portal Concept B – Access and Mobility

Advantages:

- Creates three new crossings at John, Thomas and Harrison streets.
- Creates an opportunity for transit priority at Denny Way.
- Creates transit access to South Lake Union and Seattle Center.
- Accommodates truck movements and wide turns at the off-ramp onto Republican Street.

Disadvantages:

- Left-side entrance and exit lanes between Aurora Avenue North and downtown.

North Portal Concept B – Urban Character

Advantages:

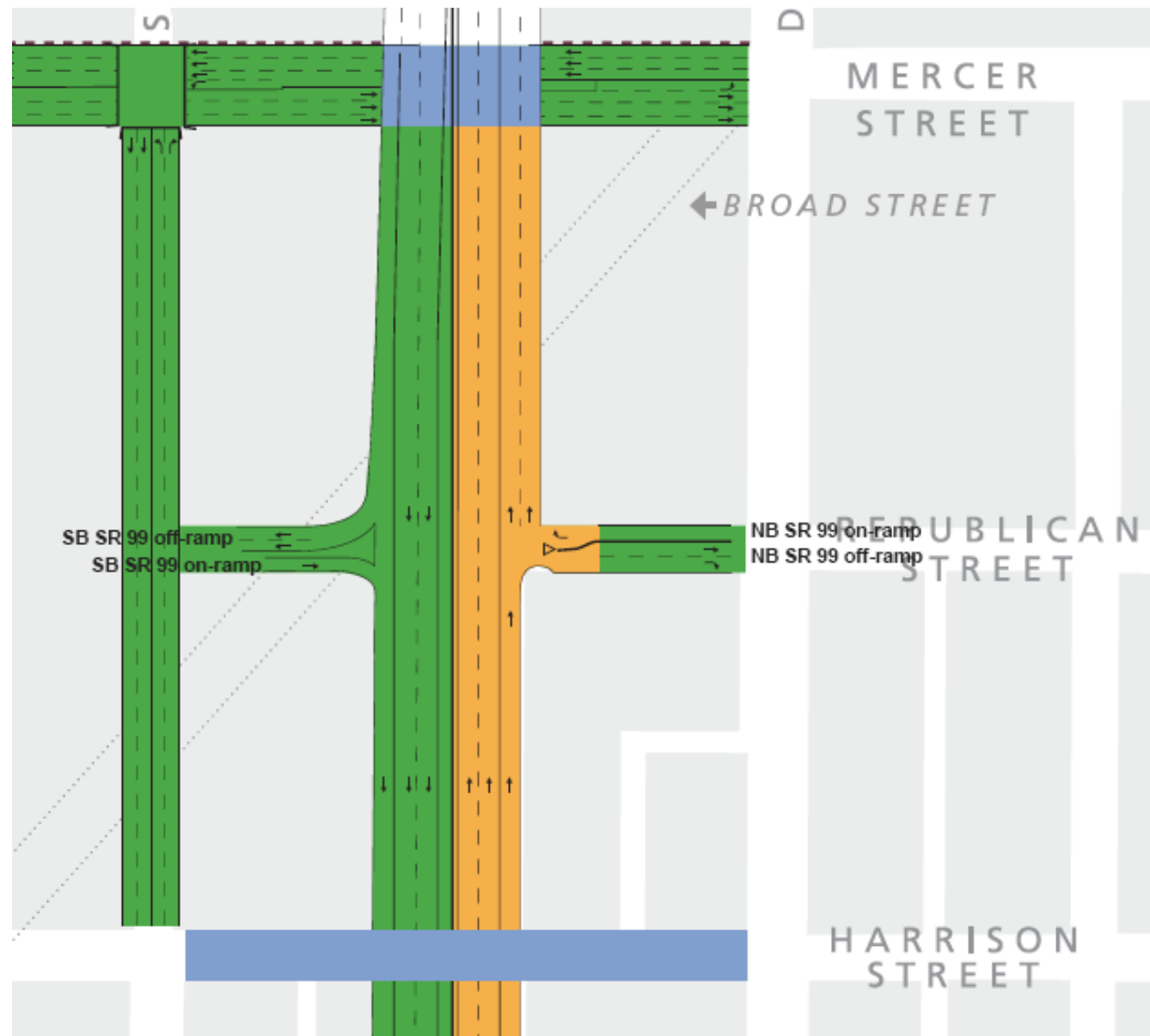
- Creates an urban street grid across, and including, Aurora Avenue.
- Creates three new crossings at existing street grade.
- Develops a new surface Aurora Avenue boulevard from Harrison to Denny streets.
- Enables potential development of surplus properties (needed for construction only).
- Creates enhanced bike and pedestrian connections via the widened Mercer Street underpass.

Disadvantages:

- Would create a narrow sidewalk on the east side of Aurora Avenue north of Harrison Street.
- Aurora Avenue sidewalk would be disrupted at Republican Street.

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North Portal Concept C



North Portal Concept C – Access and Mobility

Advantages:

- Separates through traffic on SR 99 from entering and/or exiting traffic.
- Distributes northbound exit and southbound entrance traffic to two locations - north and south of Mercer Street.
- Improves the east-west connection, including two-way Mercer Street.

North Portal Concept C – Access and Mobility

Disadvantages:

- Entering and exiting traffic merges into one collector-distributor lane (could cause back-ups onto mainline).
- Grades on John and Thomas street crossings would range from 5 to 10%.
 - Grades on Harrison Street would be between 10 and 15%.
- Ramps to Denny would be approximately 7%.
- Provides limited opportunities for transit priority at Denny Way.
- There are no transit stops on Aurora Avenue north of Denny Way.
- No room for sidewalks on east side of Aurora Avenue.

North Portal Concept C – Urban Character

Advantages:

- Creates an urban street grid east and west of Aurora Avenue.
- Enables potential development of surplus properties (needed for construction only).
- Creates enhanced bike and pedestrian connections via the widened Mercer Street underpass.

Disadvantages:

- Access to properties along John, Thomas, and Harrison streets – Sixth Avenue to Dexter Street – may be affected.
- Would create a narrow sidewalk on the east side of Aurora Avenue north of Harrison Street.
- No vehicular access to properties along Aurora Avenue from John to Mercer streets.

Feedback from working group members

Conclusion

- Concepts A through C meet our defined goals and objectives.
- There are opportunities for access, mobility and urban character enhancements under each of the concepts, although Concept B seems to have the most advantages while having the least disadvantages.