Item # 10

NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD

September 18, 2013





District Department of Transportation
Federal Railroad Administration

LONG BRIDGE STUDY

AGENDA

LONG BRIDGE STUDY

- Vision
- History & Background
- Study Area
- Purpose & Need
- Data Collection
- Bridge Conditions
- Engagement: Stakeholder & Public
- Alternatives
- Bridge Type Renderings
- Concept Animation
- Schedule
- Next Steps

VISION

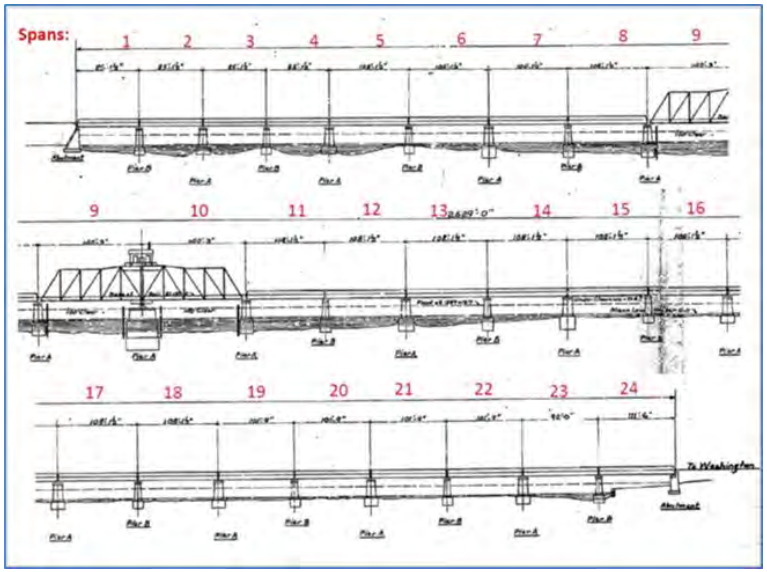
LONG BRIDGE STUDY

The Long Bridge over the Potomac River is a vital link for freight and passenger travel on the eastern seaboard. Future growth of passenger and freight rail require improvements for continued economic growth and movement of people and goods. The study also creates an opportunity to identify improved multi-modal connectivity.

HISTORY & BACKGROUND

LONG BRIDGE STUDY

- Only railroad bridge connecting VA and DC across the Potomac River
- Original Structure – 1904
- Upgrades – 1942
- Last Swing Span Opening – 1962
- Bridge length 2,529 ft
- 22 through girder spans and a double span swing truss for a total of 24 spans
- Two tracks approximately 36'-6" wide (narrows to ~28'-8" at the swing trusses)
- The vertical clearance is limited to 21' at the swing trusses
- There is an additional two span bridge that crosses the tidal basin between East Potomac Park and the Southwest Waterfront/Maine Ave SW
- NPS owns the landings and riverbed
- Navigational channel (Coast Guard)



STUDY AREA


LONG BRIDGE STUDY
WASHINGTON, D.C.
Jefferson Memorial
Potomac River
14th St. Bridge
I-395
ARLINGTON, VA
CSX LONG BRIDGE
Baker

LONG BRIDGE STUDY

- DDOT received an ARRA grant from the Federal Railroad Administration (FRA) to complete a comprehensive study of the bridge to include short-term structural remediation requirements and long-term capacity improvements.

- 2 track railroad bridge crossing the Potomac River
  - Owned by CSX

- CSX, Amtrak, and Virginia Railway Express (VRE) operate on the bridge

PURPOSE & NEED

LONG BRIDGE STUDY

- Purpose: complete a comprehensive study of the Long Bridge to include identification of short-term needs and long-term capacity improvements, identify and analyze alternatives that meet the short-term and long-term multi-modal needs, and identify, collect, and evaluate data in support of the recommended improvements.

- Needs:
  - Multi-modal Access
  - Long-term Capacity
  - Inter-modal Connectivity
  - Transportation Demand
  - Operational Improvements
  - Assess Structural Conditions

DATA COLLECTION

LONG BRIDGE STUDY

- Freight and Passenger Rail data
- Traffic & Roadway
- Bridge Inspection
- Load Capacity
- Survey
- Environmental Resources
- Historic Resources

Source: Mike Schaller, VRE

Source: Mike Schaller, VRE

BRIDGE CONDITIONS

LONG BRIDGE STUDY

- An inspection was performed and rated the structure:
  - Overall Superstructure: Fair
  - Overall Substructure: Satisfactory to Good

- A detailed inspection may find the substructure rated Poor.

- The rating for the substructure may also be different, depending on the piers and piles condition under water.

ENGAGEMENT: STAKEHOLDER

LONG BRIDGE STUDY

- Stakeholder list: FRA, CSX, VRE, Amtrak, MARC, Norfolk Southern, Arlington County, Commission of Fine Arts, DC Office of Planning, DC State Historic Preservation Office, DC Water, Federal Aviation Administration, FHWA, FTA, MWCOG, Metropolitan Washington Area Airports, National Capital Planning Commission, National Park Service, Navy, VDOT, Virginia DRPT, WMATA
- Kick-off Meeting (September 12, 2012)
  - Discussed scope, purpose and need, schedule
- Site Visit (October 10, 2012)
  - Boat tour to view Long Bridge and along Potomac River

ENGAGEMENT: STAKEHOLDER

LONG BRIDGE STUDY

Bridge Workshop (January 24, 2013)

- Overview of project
- Participants included bridge owner and users, stakeholder group, industry experts, as well as Office of Planning and DDOT staff
- Presentations were given on the importance of the bridge for moving commerce and people, framing the bridge in context of other initiatives in the region and the District, importance of high speed rail in the corridor, and background on the project
- Workshops sessions on:
  - Bridge Design & Architecture
  - Bridge Alignment & Landside Considerations
- Recommendations:
  - Long Bridge is an important railroad crossing in the District and in the national railroad network;
  - The current two track system provides operational challenged due to the growing freight, commuter, and passenger service demands;
  - The bridge structure, in the future, may need to be replaced;
  - The bridge should accommodate the future freight, passenger, and commuter rail needs;
  - Provisions should be made to accommodate future high speed rail;
  - The bridge should be able to accommodate both double stacked trains and electrified trains;
  - Other transportation modes should also be accommodated;
  - The bridge design should support the adjacent land use and should be able to provide connectivity to those land uses;
  - Bridge design and architecture should complement the historic and monumental context of the District

d.

ENGAGEMENT: STAKEHOLDER

LONG BRIDGE STUDY

- Coordination with Northeast Corridor Future
- Presented Alternatives (June 5, 2013)
- Coordination with VRE

ENGAGEMENT: PUBLIC

LONG BRIDGE STUDY

- Each public meeting has been held in SW Washington, DC (Westminster Presbyterian Church, 400 I Street, SW) & were advertised in the Washington Post, flyers distributed at nearby metros and in the neighborhood as well as with the ANC and email blasts to listserves.

- Public Meeting #1 (November 13, 2012)
  - Introduced project to public, asked for feedback on scope/needs
  - Top need: multi-modal access, inter-modal connectivity, long term capacity, transportation demand
  - There was a lot of interest in the pedestrian/bicycle connection

ENGAGEMENT: PUBLIC

LONG BRIDGE STUDY

- Public Meeting #2 (June 6, 2013)
  - Presented 10 alternatives
  - Major feedback: general support of rail expansion and communicated need for expanded passenger rail; support of pedestrian/bicycle connection; mixed review of vehicular connection; streetcar seen as a viable alternative

ALTERNATIVES DEVELOPMENT

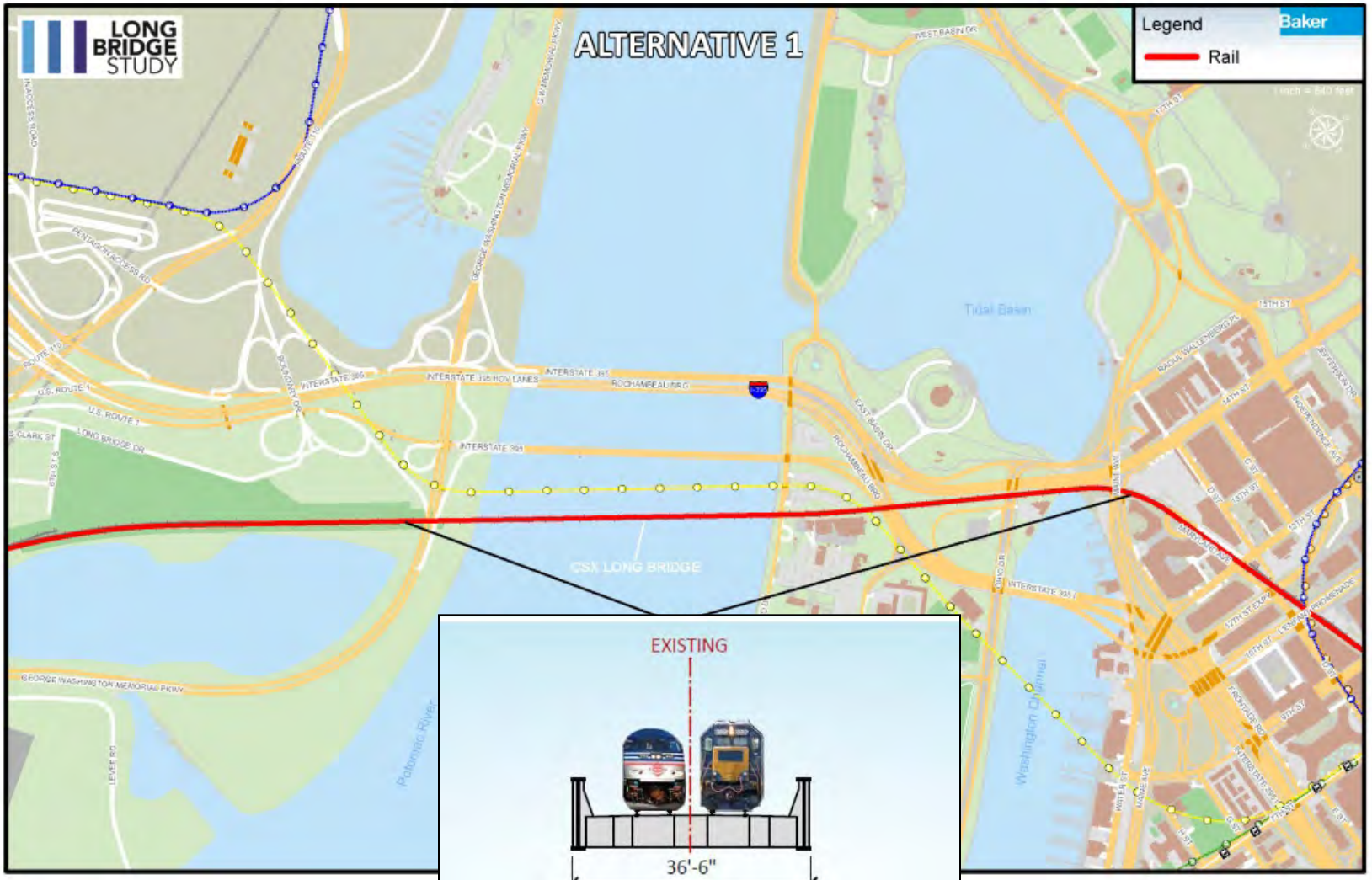
LONG BRIDGE STUDY

- Began with over 100 alternatives depending on alignment and configuration

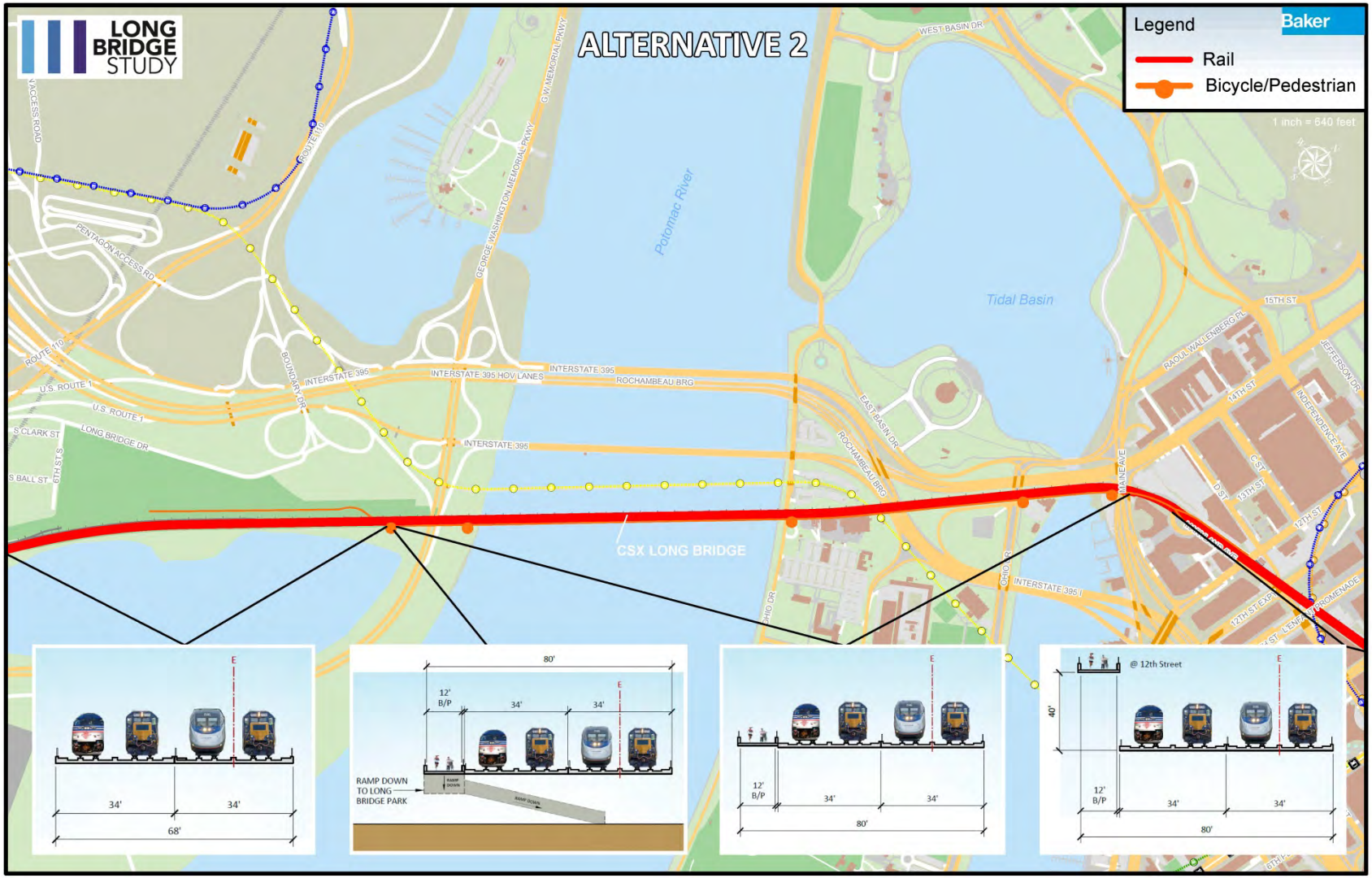
- Narrowed down to 10 alternatives that were presented to the stakeholders and public (eliminated three track railroad alternatives)

- Alternatives under consideration for further analysis:
  - Alternative 1: No Build
  - Alternative 2: expansion to 4 railroad tracks + pedestrian/bicycle
  - Alternative 3: expansion to 4 railroad tracks + streetcar + pedestrian/bicycle
  - Alternative 4: expansion to 4 railroad tracks + shared streetcar/vehicular + pedestrian/bicycle
  - Alternative 5: expansion to 4 railroad tracks + shared streetcar/vehicular + exclusive vehicular + pedestrian/bicycle
  - Alternative 6: 4 railroad track tunnel

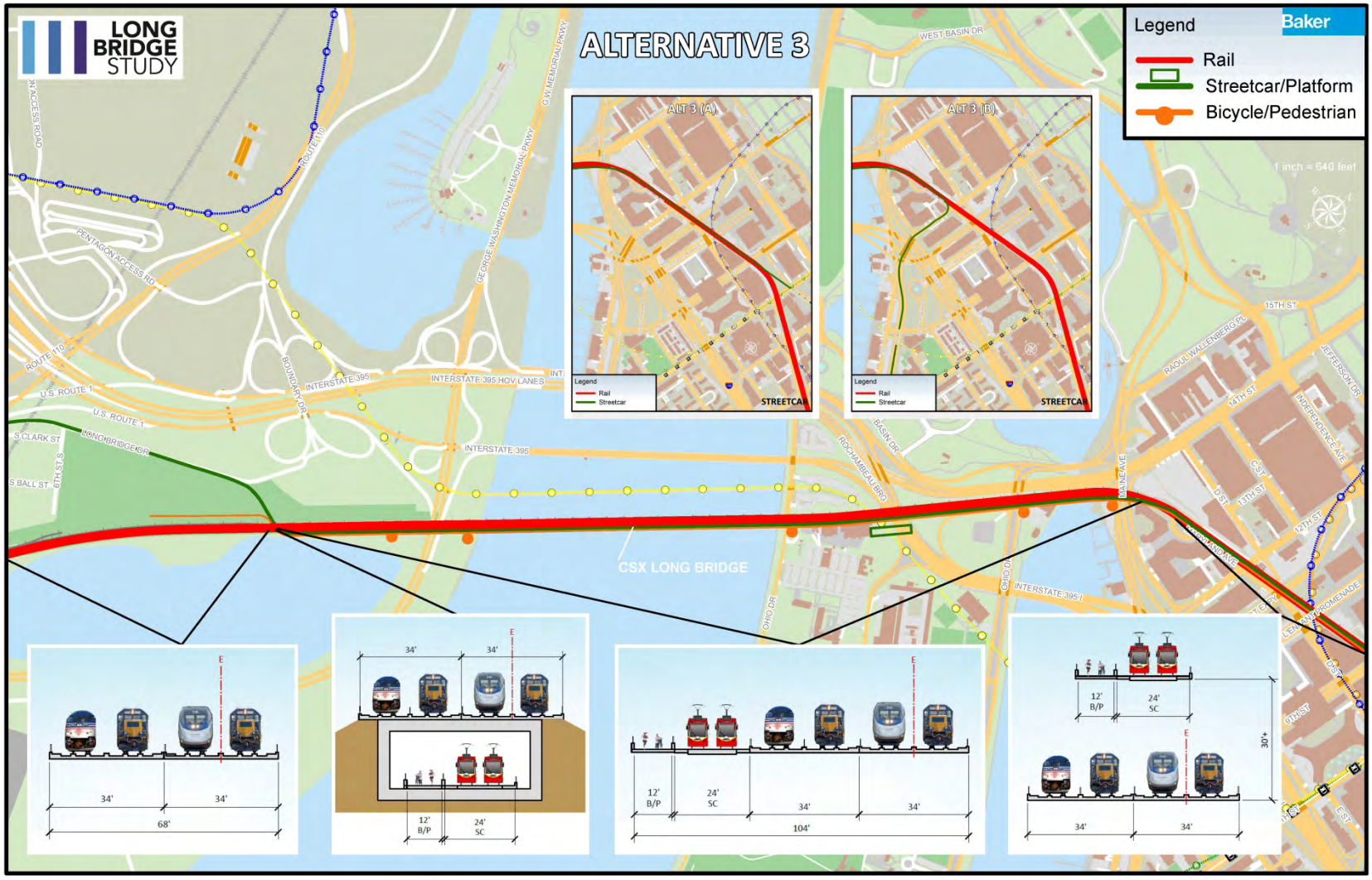
ALTERNATIVE 1: NO BUILD



ALTERNATIVE 2: EXPANSION TO 4 RAILROAD TRACKS + PEDESTRIAN/BICYCLE

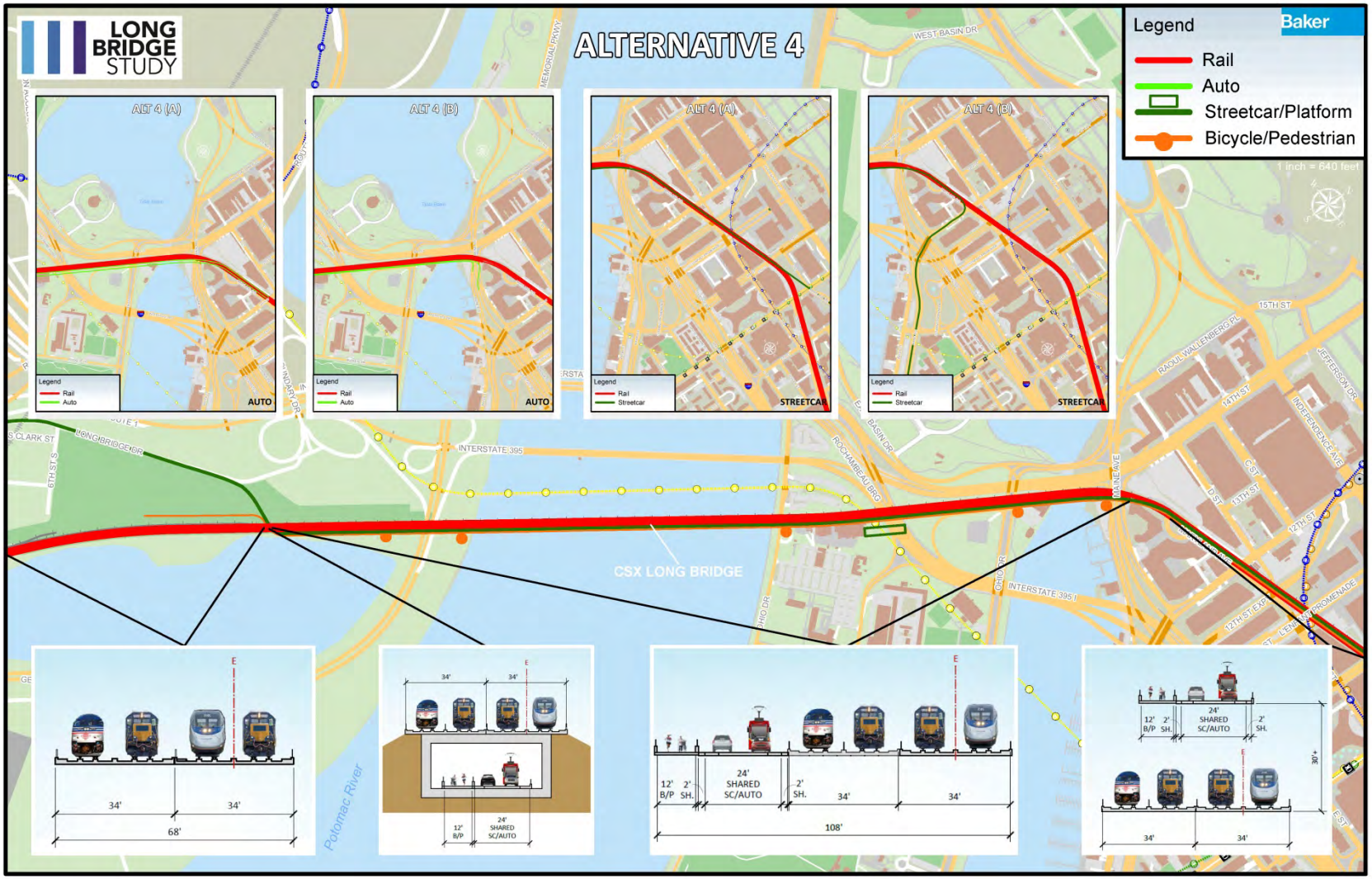


ALTERNATIVE 3: EXPANSION TO 4 RAILROAD TRACKS + STREETCAR + PEDESTRIAN/BICYCLE

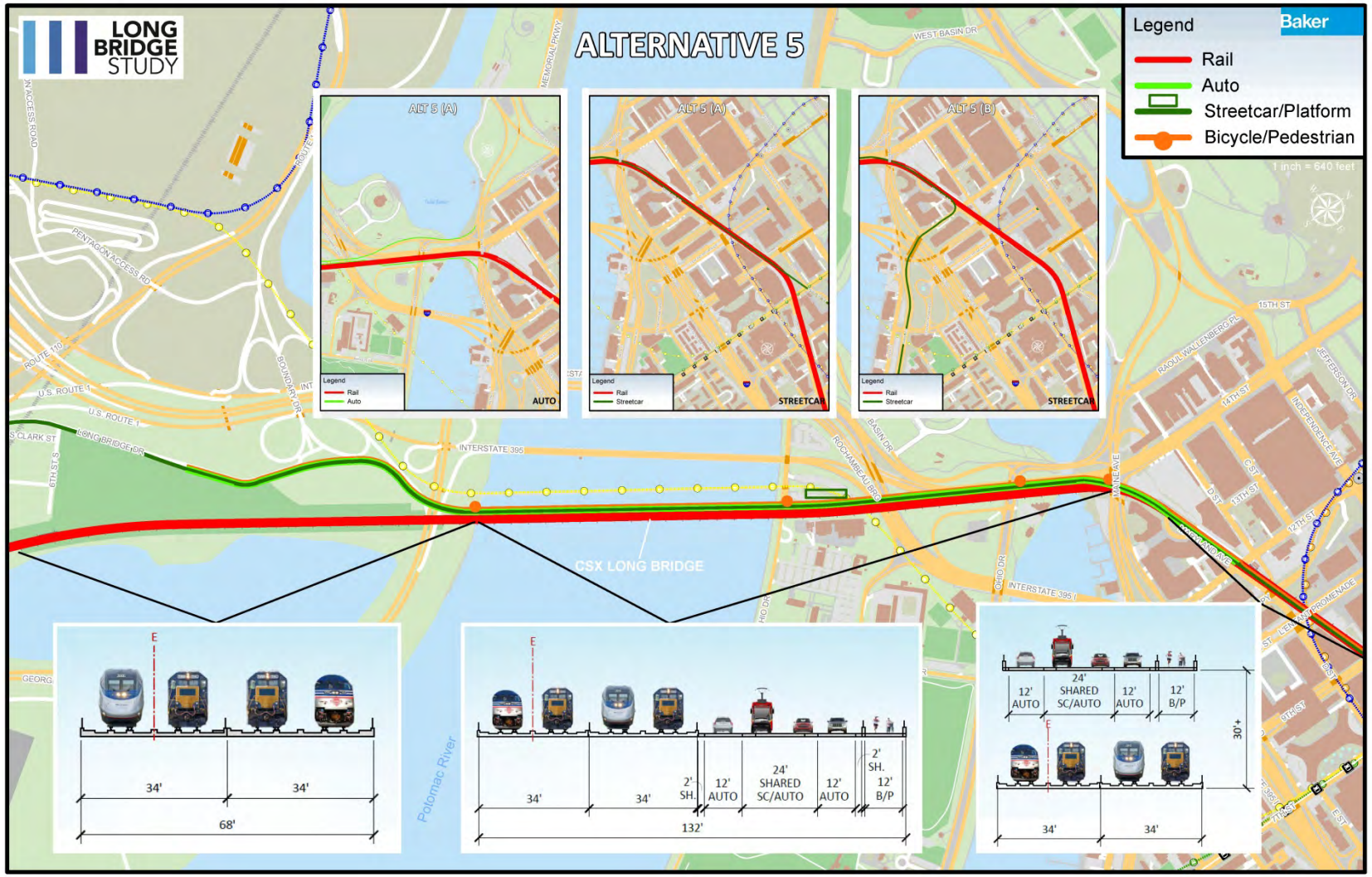


ALTERNATIVE 4: EXPANSION TO 4 RAILROAD TRACKS + SHARED STREETCAR/VEHICULAR + PEDESTRIAN/BICYCLE

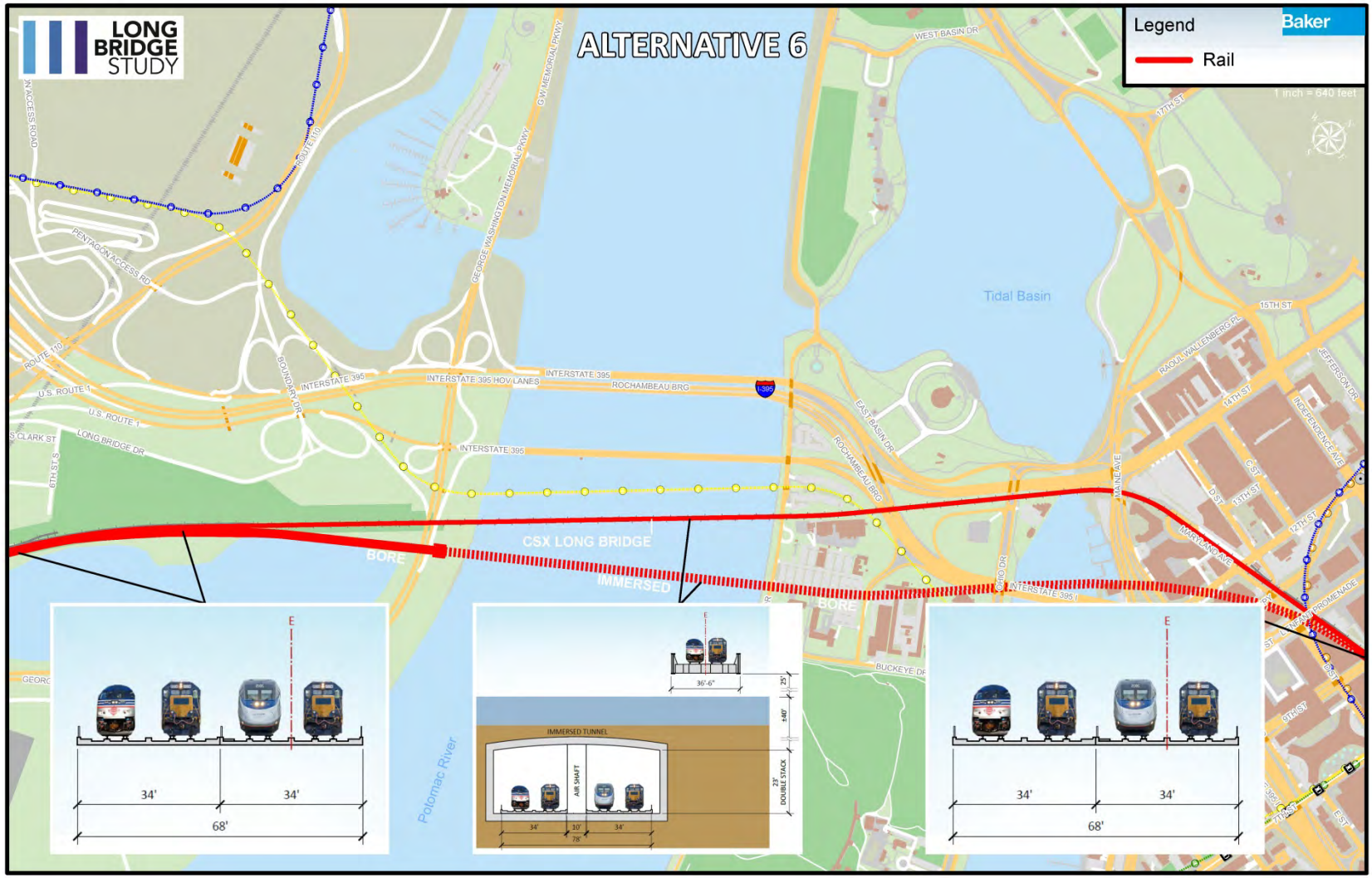
LONG BRIDGE STUDY



Alternative 5: EXPANSION TO 4 RAILROAD TRACKS + SHARED STREETCAR/VEHICULAR + EXCLUSIVE VEHICULAR + PEDESTRIAN/BICYCLE



ALTERNATIVE 6: 4 RAILROAD TRACK TUNNEL



BRIDGE TYPE – DECK ARCH

LONG BRIDGE STUDY

BRIDGE TYPE – TIED ARCH

LONG BRIDGE STUDY

BRIDGE TYPE – THROUGH ARCH

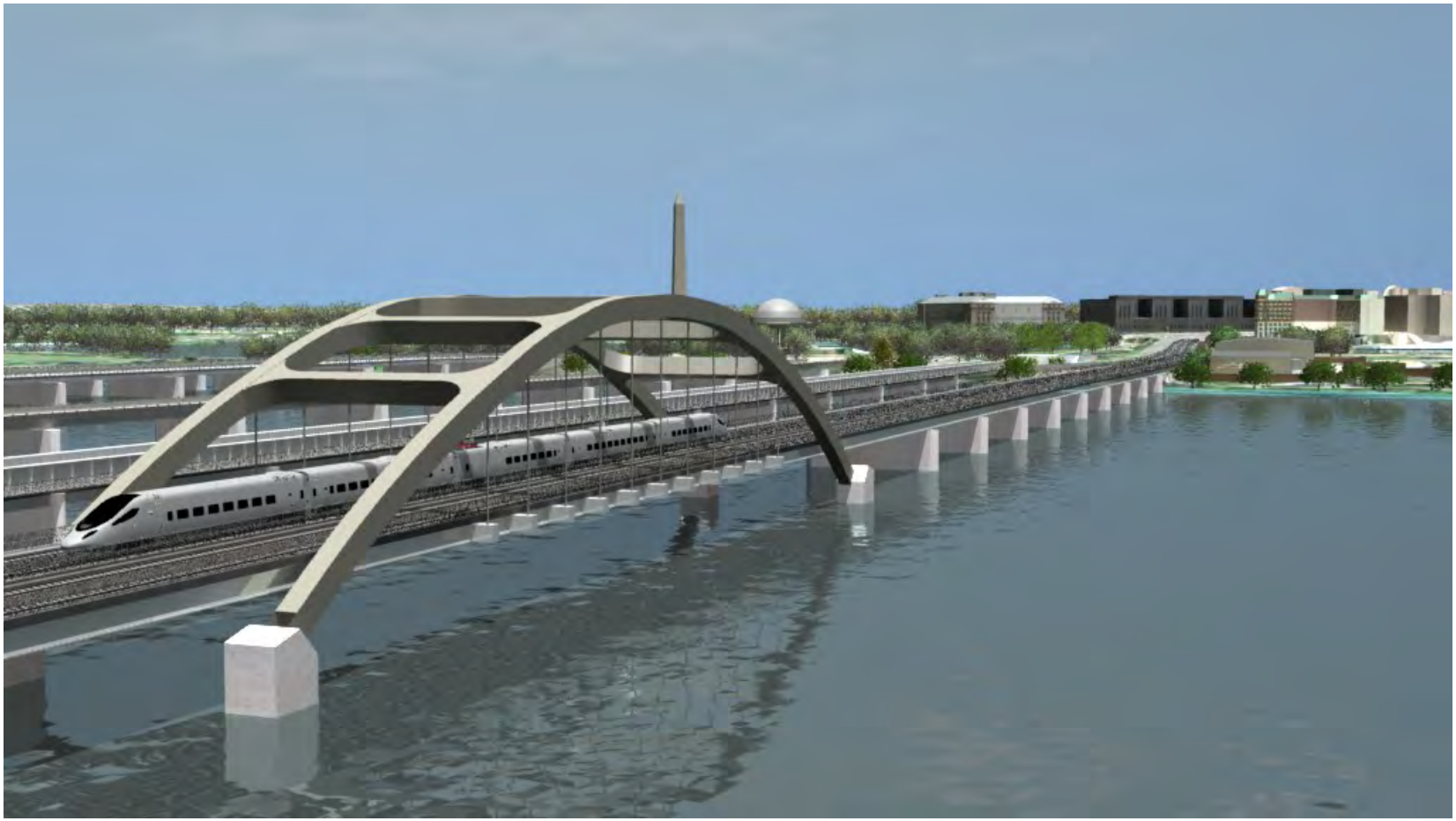
LONG BRIDGE STUDY

BRIDGE TYPE – EXTRADOSED

LONG BRIDGE STUDY

4-TRACK RAIL BRIDGE CONCEPT ANIMATION

LONG BRIDGE STUDY



SCHEDULE

LONG BRIDGE STUDY

- Detailed listing of meetings to date in your reference materials
- Demand and Operations Analysis – Summer/Fall 2013
- Concept Engineering – Fall 2013
- Finalize Report – Fall/Winter 2013

Next meetings:

- Fall 2013:
  - Interagency Meeting
  - Public Meeting #3

NEXT STEPS

LONG BRIDGE STUDY

- The Long Bridge Study will make a recommendation for the National Environmental Policy Act (NEPA) Class of Action
- Work with stakeholders to determine how best to move into the next phase
- Continue to coordinate on issues of ownership, aesthetics, process while we think through, with our stakeholders, the future funding strategies for a possible enhanced Long Bridge

LONG BRIDGE STUDY

QUESTIONS





d.