HUDSON TUNNEL

HUDSON TUNNEL PROJECT

PUBLIC OPEN HOUSES

Secaucus Junction, NJ
November 10, 2016

Hotel Pennsylvania, NY
November 17, 2016

Federal Railroad Administration

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Hudson Tunnel Meeting

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PURPOSE AND NEED FOR THE HUDSON TUNNEL PROJECT

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Need for the Project

- Both tubes of existing North River Tunnel were inundated during Superstorm Sandy and the tunnel was closed for 5 days
- The tunnel is safe for use, but storm damage continues to degrade tunnel systems

photos courtesy of Amtrak

Inundation of tunnel during Superstorm Sandy

Need for the Project

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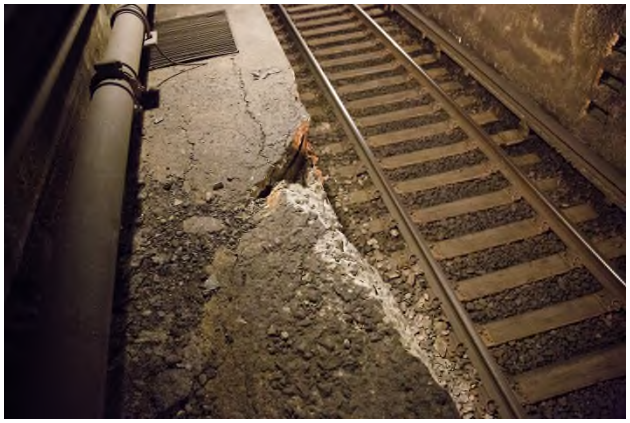
- The existing rail tunnel is safe for use but requires ongoing and emergency maintenance which disrupts rail service
- Long-term, the storm damage can only be addressed through a comprehensive reconstruction of the tunnel
- Existing train service (approximately 450 trains per day) must be maintained while reconstruction is under way



Monitoring and repairs are continuously necessary

photos courtesy of Amtrak

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Project Purpose

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- To preserve the current functionality of Amtrak's Northeast Corridor service and NJ TRANSIT's commuter rail service between New Jersey and Penn Station New York by repairing the deteriorating North River Tunnel.
- To strengthen the Northeast Corridor's resiliency to support reliable service by providing redundant capability under the Hudson River for Amtrak and NJ TRANSIT trains between New Jersey and the existing Penn Station New York.
- These improvements must be achieved while maintaining uninterrupted commuter and intercity rail service and by optimizing the use of existing infrastructure.

Project Goals and Objectives

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1: Improve service reliability and upgrade existing tunnel infrastructure in a cost-effective manner.

- Reduce infrastructure-related delays due to poor condition of the North River Tunnel following Superstorm Sandy.
- Rehabilitate the North River Tunnel to modern system standards.

2: Maintain existing NEC service, capacity, and functionality by ensuring North River Tunnel rehabilitation occurs as soon as possible.

- Optimize use of existing infrastructure.
- Use conclusions from prior planning studies as appropriate and to the maximum extent possible.
- Avoid regional and national economic impacts associated with loss of rail service.

3: Strengthen the NEC's resiliency to provide reliable service across the Hudson River, facilitating long-term infrastructure maintenance and enhancing operational flexibility.

- Construct additional tracks to allow for continued Northeast Corridor rail operations during maintenance periods and unanticipated human-caused and natural events.

4: Do not preclude future trans-Hudson rail capacity expansion projects.

- Allow for connections to future capacity expansion projects, including connections to Secaucus Junction Station in Secaucus through to the Portal Bridge over the Hackensack River, and connections to station expansion projects in the area of Penn Station NY.

5: Minimize impacts on the natural and built environment.

- Avoid/minimize adverse impacts on communities and neighborhoods.
- Strive for consistency with local plans and policies.
- Preserve the natural and built environment.

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ENVIRONMENTAL ANALYSIS

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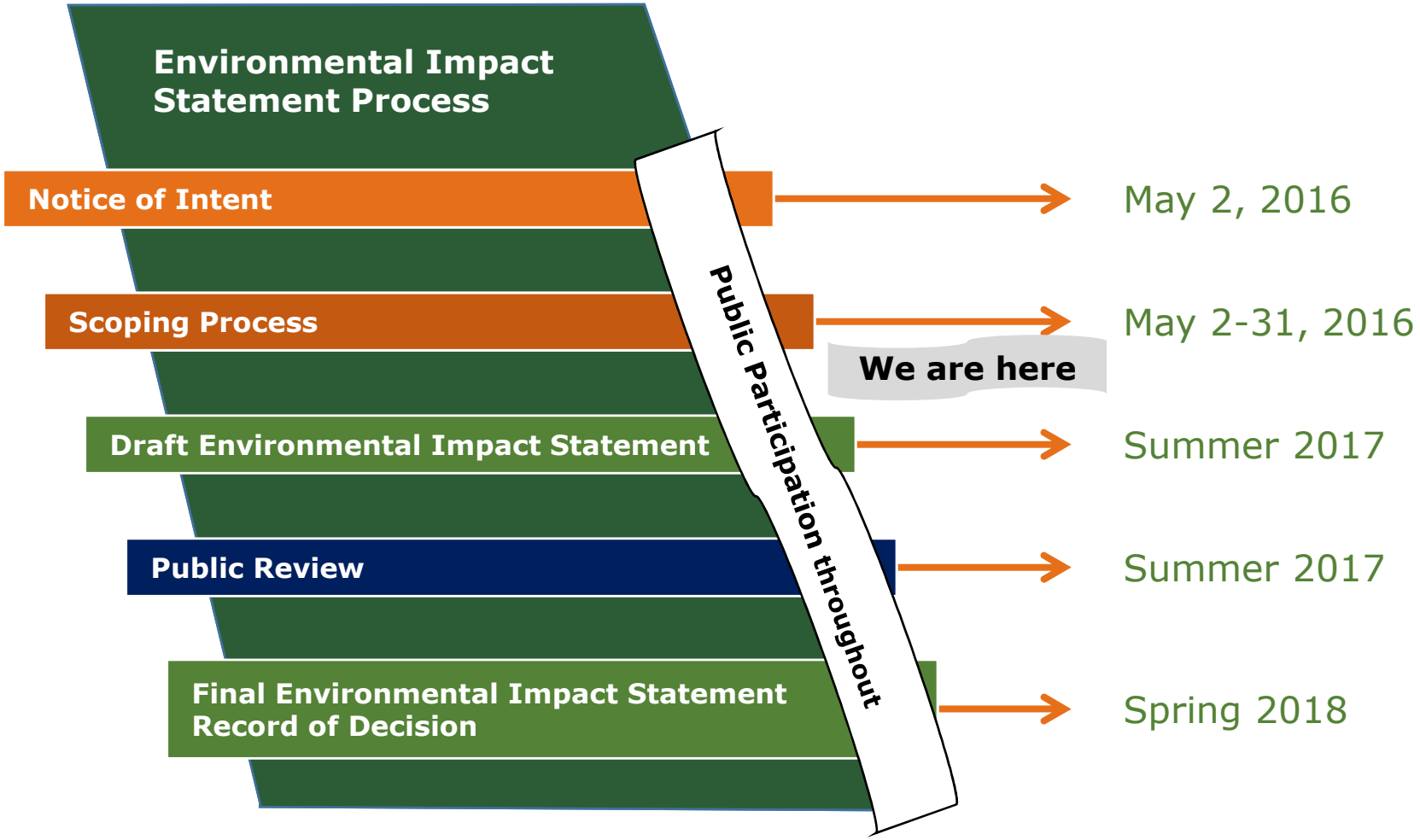

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Scoping Process

- Scoping Period: May 2, 2016 – May 31, 2016
- Scoping Meetings:
  - May 17, 2016 at Hotel Pennsylvania, NY
  - May 19, 2016 at Union City High School, NJ
  - Open House Format and Formal Presentation
  - 186 people attended
- Public Comments:
  - Comments accepted through May 31, 2016
  - Comments received on broad range of issues:
    - Environmental Review Procedures and Public Outreach
    - Project Definition and Purpose and Need
    - Project Cost and Funding
    - Alternatives
    - Environmental Analyses
    - Project Schedule
    - Support for Project

- Scoping Summary Report:
  - Report summarizing comments and responses completed October 2016
  - Available on Project website (hudsontunnelproject.com)

What is an Environmental Impact Statement?

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- Document that evaluates a project's impacts on the natural and built environment
- Includes impacts of the completed project and its construction impacts
- Identifies measures to avoid and mitigate impacts
- Considers alternatives to avoid or reduce impacts
- Reflects input received through public review opportunities

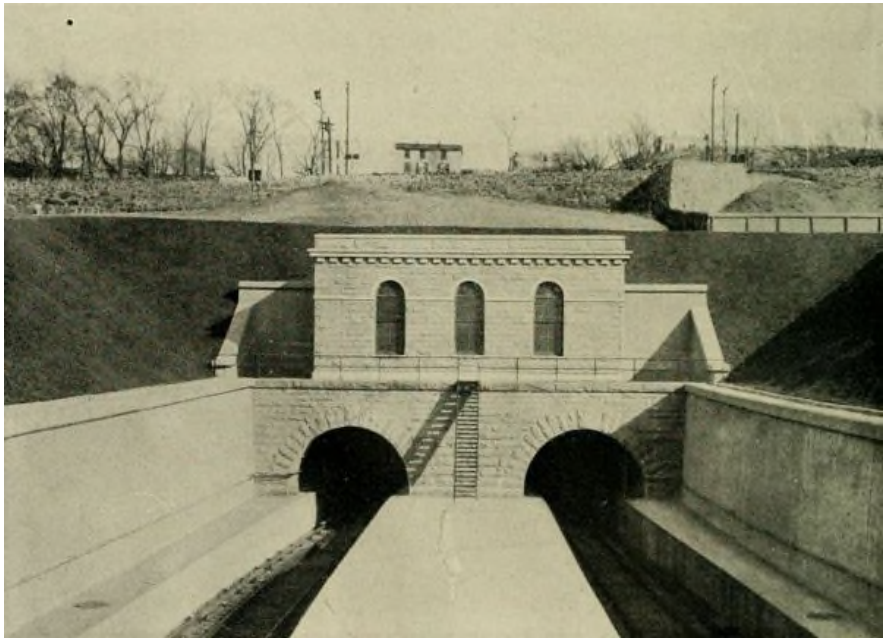
EIS ANALYSIS AREAS

- **Transportation**
- **Social & Economic Conditions**
- **Property Acquisition**
- **Parks and Recreational Resources**
- **Visual & Aesthetic Resources**
- **Historic & Archaeological Resources**
- **Air Quality**
- **Greenhouse Gas Emissions & Resilience**
- **Noise & Vibration**
- **Ecology**
- **Contaminated Materials**
- **Environmental Justice**
- **Secondary & Cumulative Effects**
- **Section 4(f) Evaluation** (parklands, protected wildlife areas, & historic structures/sites)

Section 106 of the National Historic Preservation Act

FRA and NJ TRANSIT are also evaluating the Project in accordance with Section 106 of the National Historic Preservation Act.

- Section 106 requires consultation with interested parties and the public on the Project's effects on historic properties.
- Any information on potential historic properties and cultural resources in the study area or issues to be considered is welcome.
- Parties with a specific interest in historic issues can request status as a Project Consulting Party under Section 106 by contacting FRA or NJ TRANSIT.



Historic image of North River Tunnel portal, North Bergen, NJ

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ALTERNATIVES EVALUATION

Alternatives Evaluation

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To meet the Project's purpose and need, any Build Alternative must at a minimum:

- Connect into the existing tracks at Penn Station NY.
- Have a grade not exceeding 2.1 percent to safely and efficiently operate passenger trains.
- Address the urgent need to rehabilitate the North River Tunnel.

Step 1: Review of alternatives identified in previous studies and suggested during Scoping:

- A bridge alternative
- Other tunnel alignments
- Modification to Project to include other Project elements

The only Build Alternative concept found to meet the Project purpose and need is a new two-track tunnel with rehabilitation of the existing tunnel.

Other alternatives were found not to meet the Project's purpose and need due to:

- Constraints of connecting from the NEC into the existing tracks at Penn Station NY;
- Constraints related to the need to complete the Project quickly; or
- Constraints related to maintaining existing train capacity through the Hudson River crossing.

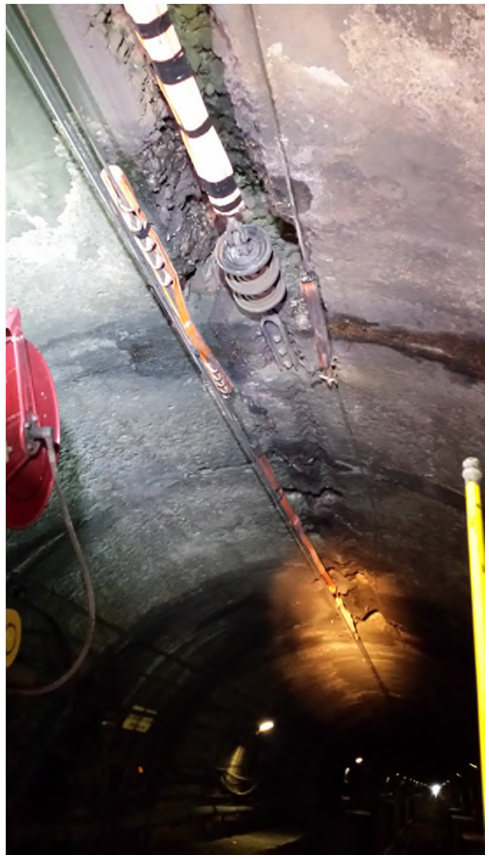

photo courtesy of Amtrak

Deterioration and damage in the North River Tunnel

Alternatives Evaluation

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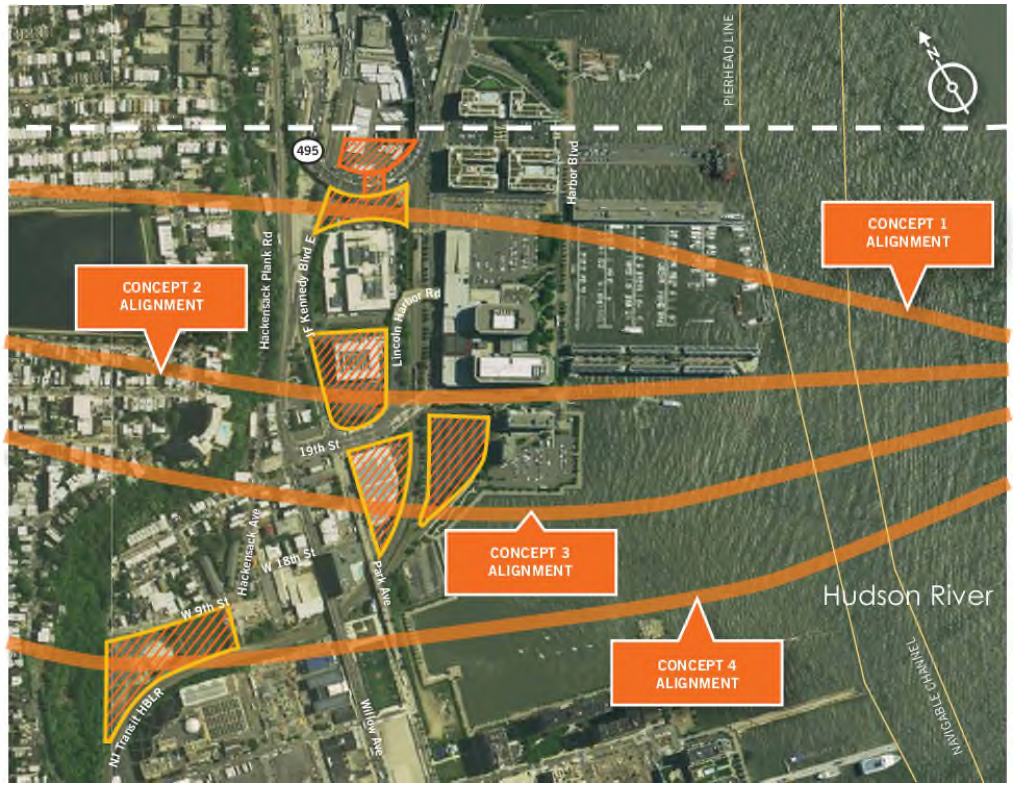
Four different alignment options were evaluated for the Build Alternative's new tunnel.

- Alignments were identified based on potential locations where the New Jersey vent shaft/fan plant could be sited. The vent shaft must be located directly above the tunnel and east of the Palisades.
- The four alignment options were evaluated in terms of how well they meet the Project's purpose and need.



Existing Tunnel

Tunnel Alignment Option

Shaft Site and Construction Staging

Construction Staging

Alignment Options Considered

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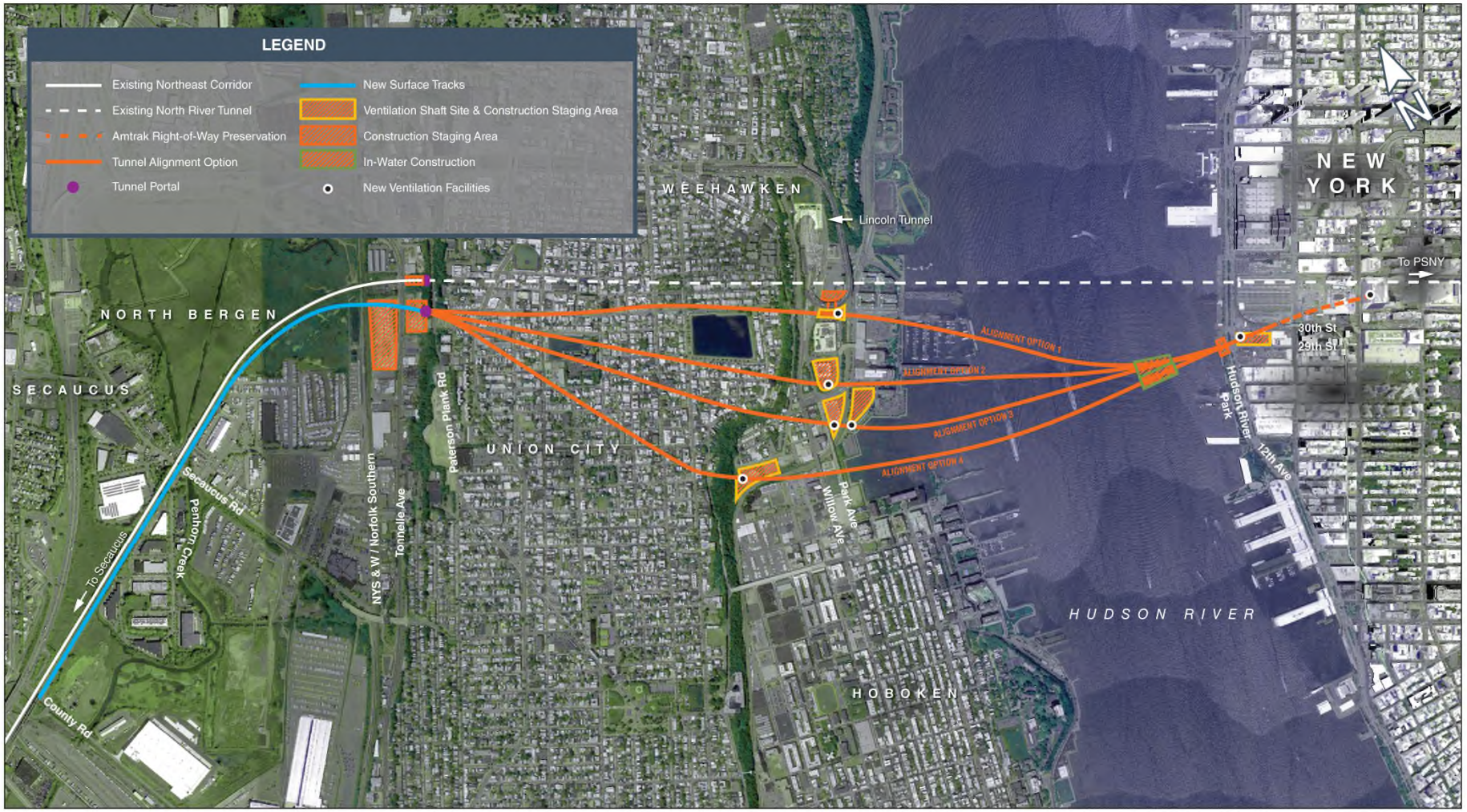

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PREFERRED ALTERNATIVE

Benefits of Preferred Alternative

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- A tunnel is the only alternative that meets the Project's purpose and need.
- The Preferred Alternative's tunnel alignment is the one that best meets the Project needs.
- The Preferred Alternative provides the least potential for delays to the Project schedule because:
  - It connects into the underground right-of-way being preserved by Amtrak at the Western and Eastern Rail Yards in Manhattan.
  - It maximizes the use of earlier work performed as part of the Access to the Region's Core (ARC) Project, such as property acquisition, investigation and remediation.
- The Preferred Alternative causes minimal impacts to existing transit and other transportation services.

Preferred Alternative

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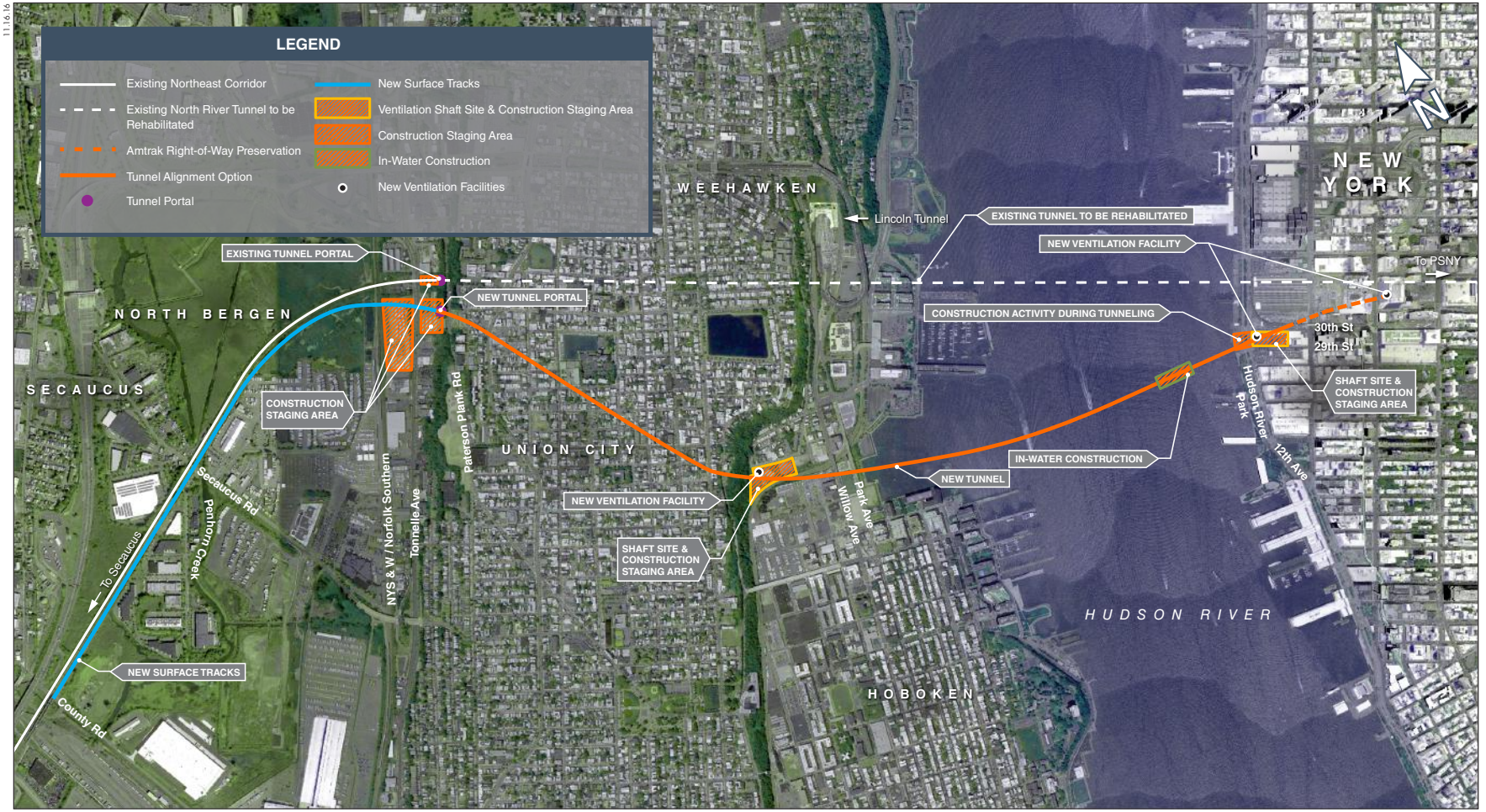

Preferred Alternative

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- **Two new tracks** from the Northeast Corridor in Secaucus, NJ, beneath the Palisades, Hoboken, and the Hudson River to connect to the existing approach tracks that lead into Penn Station New York.
- **Three new ventilation shafts/fan plants** directly above the new tunnel.
- **Rehabilitation of the existing tunnel** once the new tunnel is complete. When the rehabilitation is complete, both the existing and new tunnels would be in service, providing increased operational flexibility for Amtrak and NJ TRANSIT.

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RELATED/ PREVIOUS PROJECTS

Gateway Program

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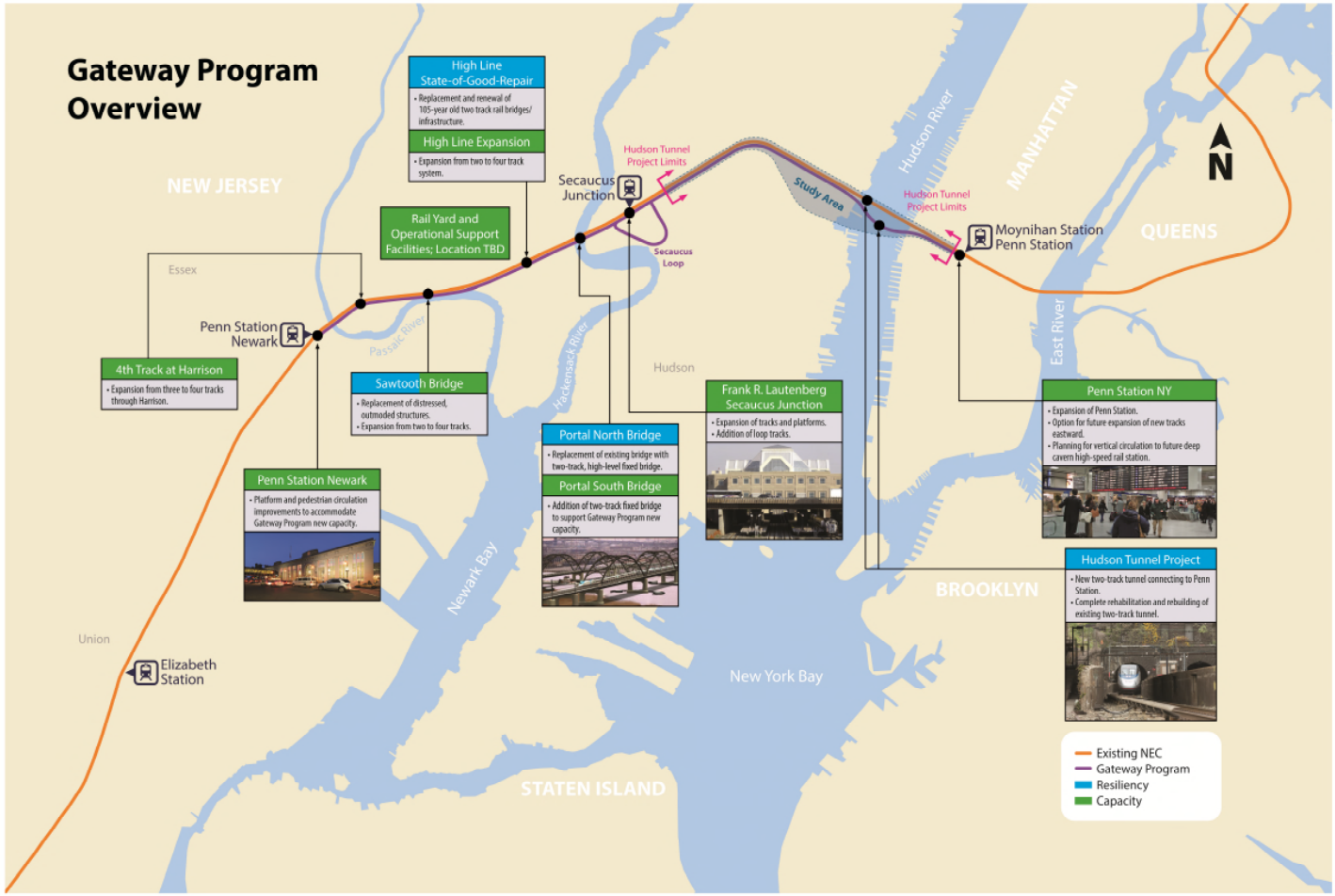

Gateway Program: A Long-Term Plan to Increase Capacity on the Northeast Corridor