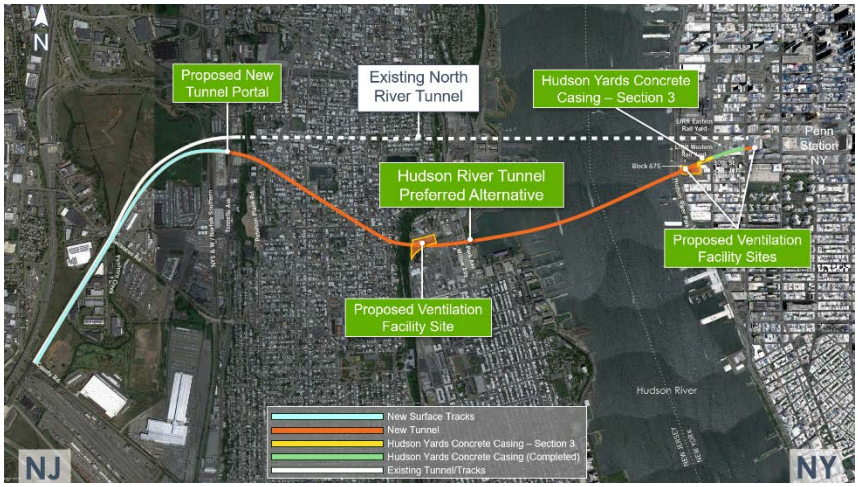
THE HUDSON TUNNEL PROJECT

OVERVIEW

The Hudson Tunnel Project includes three major elements to create **resiliency**, **redundancy**, and **reliability** for Amtrak's Northeast Corridor (NEC) service and NJ TRANSIT's commuter rail service between New Jersey and Penn Station New York (PSNY):



- *New, Two-Track Hudson River Tunnel*: The construction of a new two-track Hudson River rail tunnel from the Bergen Palisades in New Jersey to Manhattan.
- *Hudson Yards Concrete Casing – Section 3*: The construction of the third and final rail right-of-way preservation section beneath Hudson Yards in NY.
- *North River Tunnel Rehabilitation*:
  The rehabilitation of the existing North River Tunnel that was severely damaged during Superstorm Sandy.

BACKGROUND

The existing North River Tunnel (NRT) opened in 1910 by the Pennsylvania Railroad, was designed to early 20th century standards, and consists of two tracks, resulting in a one-track-in, one-track-out rail system between New York and New Jersey that results in significant delays up and down the NEC when service incidents occur. Service reliability through the NRT, already suboptimal because of the tunnel's age and antiquated design, has been further compromised because of the damage to tunnel components caused by Superstorm Sandy in 2012.

North River Tunnel (Existing)
Opened: *1910*
Tracks: *2 (1 track in separate tubes)*
Weekday Revenue Trains
450+ NJT & Amtrak Trains
Weekday Passenger Trips
200,000+ NJT & Amtrak Trips
Major Failure Days (2014-2018)
65 days, each causing more than **5 hours** of total train delays, resulting in **2,500 delayed trains & 65,000 train delay minutes**

Superstorm Sandy inundated both tubes of the NRT with millions of gallons of seawater, causing ongoing damage to the NRT's structural, mechanical, and electrical infrastructure. This results in disabled trains, signal malfunctions, and significant delays. When an incident takes one tube out of service, traffic in and out of PSNY must use the one remaining NRT tube, resulting in significant delays and reducing capacity by up to 75%. The 24 trains per hour that use the NRT in the peak period could drop to as few as 6 during the closure of one tube.

The Hudson Tunnel Project would build two additional tracks and rehabilitate the existing two tracks, resulting in four modern tracks between New York and New Jersey that create operational flexibility, rail network redundancy, and resiliency against future impacts to the Hudson River rail crossing. The North River Tunnel/Hudson River rail connection is a vital part of the 457-mile NEC between Boston, MA to Washington, DC, America's busiest passenger railroad.

BENEFITS

The Project will provide long-term resiliency, reliability, and redundancy to the regional and national rail network the NJ TRANSIT and Amtrak customers that rely on these rail services, and in doing so, substantial social, economic, and environmental benefits:

- Eliminate a single point-of-failure for the region whose economy drives a sizable portion of America's gross domestic product (GDP) - the New York regional economy and the Northeast corridor megaregion contribute 10% and 20%, respectively, of the nation's GDP.
- Create over 72,000 direct, indirect, and induced jobs over the Project's construction period
- Stimulate the economy by directly spending over an average of $85 million/month on materials & labor over the Project's construction period
- Utilize U.S. suppliers and manufacturers through the Buy America requirement that applies to federally funded purchases, as well as the provisions regarding participation by minority, women, small, and disadvantaged businesses.

CURRENT ACTIVITIES & NEXT STEPS

Environmental Review

The Project Partners are awaiting USDOT's approval of the environmental review for the new Hudson River Tunnel and rehabilitation of the North River Tunnel. USDOT has not provided a new completion date for the environmental impact statement ("EIS") and Record of Decision ("ROD"). A ROD is critical for starting early work activities, including real estate acquisition.

Pre-Procurement Activities

Preliminary Engineering on the new Hudson River Tunnel reached the 30% threshold typical for Design-Build contracts. The GDC has successfully completed multiple Requests for Information with the private sector and launched a Virtual Geotechnical Data Room.

Funding & Financing

The current financial plan assumes local funding commitments will support the repayment of Railroad Rehabilitation and Improvement Financing (RRIF) loans obtained by GDC. A "Medium" rating is required for advancement in the FTA Capital Investment Grant (CIG) Program and ultimately a Full Funding Grant Agreement. The Project is currently seeking a New Starts grant for $5.510 billion ($4.498B for construction + $1.011B for FTA-eligible financing costs), which is 44.3% of CIG-eligible public transportation costs.

Next Steps

- USDOT approval of Final EIS and ROD
- Improved Financial Plan Rating & Advancement in FTA Grant Process
- USDOT release of Amtrak NEC appropriations for potential Gateway projects use

Hudson River Tunnel & HYCC Concrete Casing – Section 3

Tracks: *2 (1 track in separate tubes)*

Est. Construction Cost (2020)

$9.8 billion

Environmental Review (New HRT)

Pending from FRA & FTA

Environmental Review (HYCC-3)

Complete from FRA & FTA

Est. Construction Duration

8 years

Project Lengths

New Track: ~9 mi. (4.5 mi each direction)

New Tunneling: ~4.5mi. (2.4 mi each direction)

Tunnel Diameters

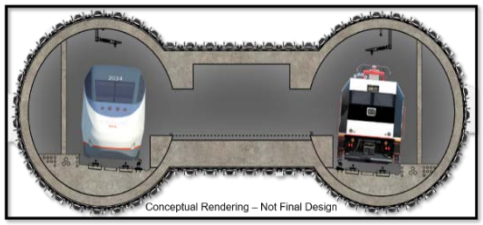
Internal: ~25 feet, 2 inches

Outside: ~28 feet

Tunnel Depths Below Surface

Min: ~20 feet (Manhattan, NY)

Max: ~275 feet (Palisades, NJ)



North River Tunnel Rehabilitation

Est. Construction Cost (2020)

$1.8 billion

Environmental Review

Pending from FRA & FTA

Est. Construction Duration

3 years (1.5 years per tube)

Elements to be Improved

- Signals & Emergency Cables
- Track and Trackbed
- Benchwalls/Egress
- Internal Concrete
- Leaks & Water Resiliency

Note: Estimated Construction Costs

Estimated construction costs shown were those submitted in the 2020 FTA Financial Plan and are subject to change based on delays in starting construction.