Hudson Tunnel Project Frequently Asked Questions (FAQs): Manhattan

PROJECT OVERVIEW

Q: What is the Hudson Tunnel Project (HTP) and why is it necessary?

A: The HTP is an urgent investment in the nation's passenger rail infrastructure that will improve train transportation up and down the Northeast Corridor. The HTP is building nine miles of new passenger rail track between New York and New Jersey, including a new, two-tube tunnel under the Hudson River. The HTP will also rehabilitate the 116-year-old North River Tunnel, which is a leading cause of delays that impact hundreds of thousands of riders.

When the HTP is finished, there will be two tunnels containing four modern tracks where there are currently only two tracks. This will make traveling by train more reliable and reduce congestion on already overcrowded roads. Just as importantly, the HTP will prevent a tunnel shutdown that could cost the national economy $16 billion. Construction of the HTP is already creating tens of thousands of good jobs and generating billions of dollars in economic activity. Reliable, modern rail transit will support long-term growth that benefits the region and the country for decades after the project is finished.

Q: What is the Gateway Development Commission (GDC)?

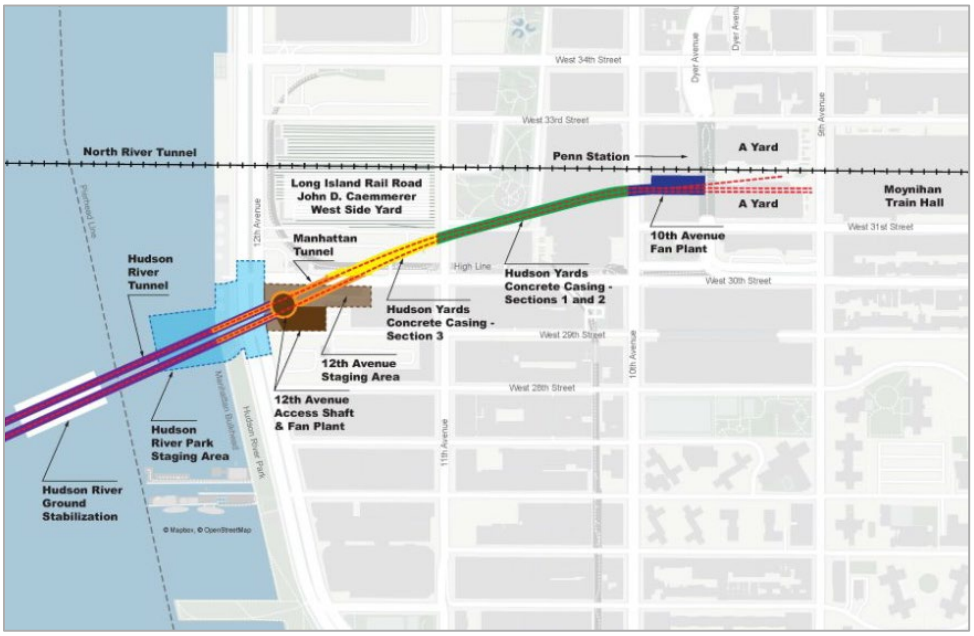
A: GDC was formed in 2019 as a bi-state commission established by the state of New Jersey and the state of New York for the purpose of delivering the Hudson Tunnel Project.

Q: When did HTP construction start and when will it be complete?

A: HTP construction began in November 2023. The new tunnel is expected to be completed by 2035, and rehabilitation of the North River Tunnel is expected to be completed by 2038.

Q: Where is the HTP being constructed in Manhattan?

A: The HTP will route into Manhattan near Pier 66 and run below Hudson Yards before connecting to New York Penn Station. Active construction is taking place west of 11th Avenue between W. 29th and W. 33rd Streets. There are currently three active HTP construction projects in Manhattan.



- The **Hudson River Ground Stabilization (HRGS) Project** is mixing lightweight cement into the Hudson River riverbed near Pier 66 to create a stable environment to tunnel through. The team

is mixing within a temporary cofferdam to shield the area where the ground is being stabilized from the strong currents in the river. The HRGS Project is anticipated to be completed in 2027.

- The **Manhattan Tunnel Project** is excavating and backfilling a section of the new tunnel under 12th Avenue to serve as a pathway for future tunneling. This team is also building the section of tunnel under W. 30th Street. The Manhattan Tunnel Project is anticipated to be completed in 2029.
- The **Hudson Yards Concrete Casing – Section 3 (HYCC-3) Project** is building the final section of rail right-of-way under Hudson Yards that will connect the new tunnel to New York Penn Station. The HYCC-3 Project is anticipated to be completed in late 2026.

Starting in 2027, the **Tunnel Systems & Fit Out Project** will build tracks, systems, and other infrastructure inside the new tunnel and along the new aboveground tracks. This project also includes constructing two fan plants that will ventilate the new tunnel in Manhattan and one in New Jersey.

TUNNELING METHODS

Q: What types of ground will the new tunnel pass through?

A: The new tunnel will pass through varying geology, including hard, dry rock, silty riverbed close to the consistency of chocolate pudding, and reclaimed land. In Manhattan, the teams have to navigate existing underground utility and sewer lines, the foundations of the old West Side Elevated Highway, the remains of old piers, and other obstructions.

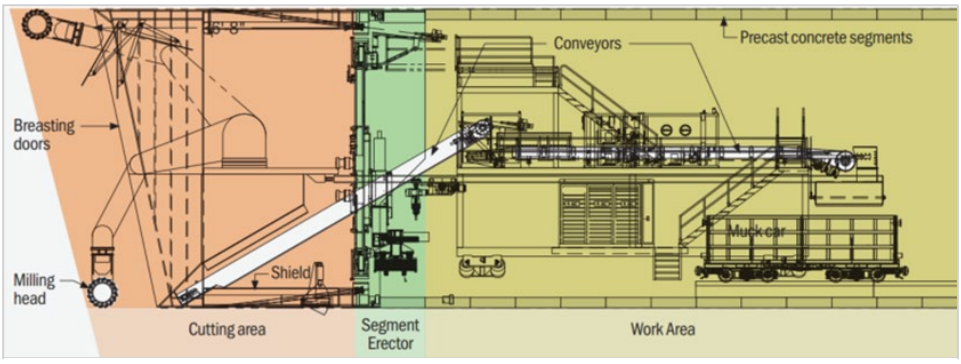
Q: How will the tunnel be built under the Hudson River?

A: The ground under the Hudson River is made up of soft mud and clay. In advance of tunneling, the team is mixing lightweight cement into the riverbed off Pier 66 to create a stable environment for digging. Once the ground is stabilized, two tunnel boring machines (TBMs) will dig the tunnel starting in New Jersey and ending at the edge of Manhattan. TBMs are extremely large drills that are longer than a football field with cutterheads nearly 30 feet wide. TBMs are designed to handle tough underground conditions and minimize impacts above ground.

The shield for one of the TBMs that will build the new tunnel.

Q: How will the tunnel be built near Hudson River Park, 12th Avenue, and W. 30th Street?

A: Near Hudson River Park, 12th Avenue, and W. 30th Street, the tunnel will pass through reclaimed land: areas where the river was filled with soil, rubble, and other materials. In this area, tunneling requires navigating the fill used to expand Manhattan into the Hudson River during the 1800s. To provide the



A diagram of a digger shield, which will be used to navigate obstructions in Manhattan fill.

flexibility needed to remove or dig through these obstacles, this section of tunnel is being prepared using a digger shield. A digger shield is like a TBM but excavates using a hydraulically powered arm instead of a flat cutterhead.

Using a digger shield for this section of tunnel makes it easier to navigate around obstacles while enabling most construction to take place below ground, improving public safety and significantly reducing the impacts of construction on roads and sidewalks.

Q: What tunneling method is being used near the High Line, Hudson Yards, and New York Penn Station?

A: The sections closest to New York Penn Station, including under Hudson Yards near the High Line, are being built using the cut and cover method. Cut and cover involves digging a trench, building the tunnel inside the trench, and then covering up the completed tunnel portion. This is the oldest way of building tunnels and was the primary method used to construct New York City's subway system in the early 20th century. Cut and cover is an appropriate method for building the shallow section of tunnel that will connect into New York Penn Station.

The cut and cover method involves digging a trench before covering the completed tunnel portion.

Q: How can I be sure my building is structurally safe while tunneling is occurring near or underneath it?

A: Extensive time, effort, and expertise have gone into the design and engineering of the HTP. In accordance with the National Environmental Policy Act (NEPA), the project team spent years analyzing potential impacts of construction to the environment and surrounding community in order to prepare GDC's Final Environmental Impact Statement (FEIS)/Record of Decision (ROD). This document was reviewed and approved by the Federal Railroad Administration (FRA) and Federal Transit Administration (FTA) in 2021.

As part of the FEIS/ROD and design process, the HTP team calculated a specific radius based on excavation dimensions, geologic conditions, and engineering solutions to determine which neighboring structures could be impacted by tunneling operations. All residential buildings near HTP construction sites are outside the calculated "influence zone," which means excavation and other construction-related activities will not impact the structural stability of nearby residential building foundations.

Q: How is the project ensuring that water from the Hudson River does not get into the tunnel?

A: The future tunnel will run underneath the Hudson River, not through it. GDC is stabilizing the ground under the river and in Manhattan before tunneling begins, which ensures that river water cannot enter the tunnel. Additionally, the future tunnel will include waterproofing membranes that will prevent groundwater from seeping into the structure.

Q: How does weather impact tunnel construction?

A: Construction of the tunnel is continuing throughout all seasons. While some aboveground construction activities are paused during inclement weather, underground work, including tunnel boring, can take place regardless of the weather above ground. Ground temperatures at depth are generally constant; thus, weather has minimal impact on underground construction.

QUALITY OF LIFE AND ENVIRONMENTAL

Q: What are the limits on construction noise? How are these limits monitored and adhered to?

A: As per GDC's Final Environmental Impact Statement (FEIS)/Record of Decision (ROD), construction noise levels are limited to protect the surrounding community. Continuous noise monitoring equipment is installed on site; if noise levels exceed allowable limits, it prompts the construction team to take corrective action. Nighttime noise limits are more stringent to minimize community disruption. Contractors may also use noise mitigation measures at the construction sites, such as noise-sensitive equipment, noise blankets, and equipment shrouds, and restrict the loudest construction activities to daytime hours whenever feasible.

Q: How are air, noise, or vibration levels monitored?

A: Contractors are required to monitor air quality, noise, and vibration at permanent stations near construction sites. Air monitors are placed upwind and downwind, while noise and vibration monitors are placed in sensitive areas. Regular spot checks to measure noise levels at locations in the vicinity of the construction site and noise monitoring of specific construction equipment are also performed.

Additionally, GDC has a dedicated Environmental team, including on-site inspectors, that holds regular biweekly meetings with project partners and contractors, enforces contract requirements, helps investigate complaints, oversees corrective actions, and coordinates with stakeholders to maintain full compliance with environmental standards. GDC's Environmental Compliance Field Inspectors are on-site 4-5 days per week to ensure all commitments and requirements are met.

Q: What happens if air, noise, or vibration levels exceed allowable limits?

A: If air, noise, or vibration levels exceed allowable limits, the construction team is immediately notified through monitoring systems, and the contractor is required to take corrective action to prevent recurrence.

Q: What steps are taken to manage and treat water on-site?

A: Contractors are required to collect, treat, and dispose of stormwater, groundwater, and decontaminated water generated within the work area in full compliance with federal, state, and local regulations.

Q: How is light pollution minimized?

A: Contractors are required to face construction lighting downward and put shields in place to control the direction and spread of light. Additionally, lighting is reduced during hours when construction is not occurring.

Q: How are environmental incidents (such as spills) handled?

A: Contractors must implement comprehensive spill response and emergency management plans, including deployment of trained personnel and site-specific procedures. Incidents are addressed promptly using containment, cleanup, and reporting protocols to minimize environmental impact and ensure regulatory compliance.

Q: What happens if a historic artifact is found?

A: Archaeologists are stationed on-site during excavation in the instance that an artifact of possible historic significance is discovered to valuate found objects and support preservation if deemed necessary.

Q: How are residents kept safe during changes to road and sidewalk configurations?

A: Changes to road and sidewalk configurations required for construction have been developed in coordination with the New York City and New York State Departments of Transportation (DOTs). Changes are publicized in advance via GDC's Construction Notices. Additionally, physical barriers and signage have been installed to denote clear paths of travel. When required by the DOTs, flaggers have been put in place to facilitate flow of traffic and safe travel for pedestrians and cyclists.

Q: How are traffic and trucking being managed to reduce community impact?

A: Trucks are required to use designated routes and staging areas and deliveries are consolidated to minimize traffic during busy hours. Additionally, vehicles are equipped with community-sensitive backup alarms and idling time is generally restricted to three minutes. Flaggers are also in place to keep traffic moving and to safely direct pedestrians and cyclists around construction vehicles and altered roadway configurations.

To minimize dust and debris, contractors are required to securely cover trucks hauling loose materials before leaving construction sites. Additionally, vehicles are rinsed to prevent dirt from being tracked onto public roads.

Q: How is construction impacting Hudson River Park?

A: The new tunnel will pass beneath Hudson River Park on its way to connect into New York Penn Station. Beginning as early as 2026 and continuing through 2027, the Manhattan Tunnel Project team will temporarily modify the configuration of the Hudson River Park bikeway and walkway between W. 29th and W. 30th Streets to accommodate ground stabilization activities.

Q: Will construction result in permanent changes to any section of Hudson River Park?

A: Following the completion of construction, GDC will restore the impacted area of Hudson River Park in close coordination with Hudson River Park Trust.

For more information on environmental mitigations and the obligations of the Hudson Tunnel Project, please see the Final Environmental Impact Statement (FEIS)/Record of Decision (ROD).

GETTING IN TOUCH

Q: How does GDC keep residents informed about upcoming work?

A: GDC distributes regular Construction Notices and Boater Safety Alerts in advance of new or impactful work. Join GDC's Manhattan Construction Notice Mailing List and Boater Safety Alert Mailing List to stay up to date.

Q: Who can I reach out to with questions, suggestions, or concerns?

A: If you have feedback to share, a question to ask, a concern to voice, or an incident to report, the best way to do so is to fill out GDC's Contact Us form at https://www.gatewayprogram.org/contact-us.html. Following the submission of this form, a member of our Public Affairs team will follow up with you on the next business day that the GDC office is open. Members of the public can also reach GDC via phone at 1-800-239-9497.

You can learn about the project, ask questions, and share feedback in person at GDC's New York Community Engagement Center at 249 9th Avenue. The Community Engagement Center is open from 10:00 AM – 6:00 PM on Mondays and 8:00 AM – 4:00 PM on Wednesdays and Thursdays.