

Infrastructure projects

in the New York City metro area.

ニューヨーク市の大都市圏におけるインフラストラクチャプロジェクト。

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New York State and City have a variety of entities through which they can build infrastructure projects.



- **City of New York**

- Spends about \$10.4 billion annually on infrastructure, the biggest share of which goes to education (school buildings)
- Has responsibility for local roads and free bridges (such as the Brooklyn Bridge), water and sewer pipes and plants, criminal justice buildings (jails), waste-transfer stations
- Has the power to raise debt through tax-exempt municipal bonds, the biggest single source of revenue for local infrastructure
- Has the power to levy property taxes to repay the bonds
- Bonds are not guaranteed by the federal government, but rather are backed by tax and fee revenues

- **Metropolitan Transportation Authority**

- A non-profit corporation created by the New York State legislature in 1968
- Spends about \$6.5 billion annually on infrastructure, with a plan to spend \$11 billion annually
- Has responsibility for subways, buses, toll bridges and tunnels within New York City, and commuter-rail lines
- Has the power to raise debt through tax-exempt municipal bonds, and also receives federal and state grants for major projects
- Has no independent taxing power
- Bonds are not guaranteed by any government, but rather are backed by fare and toll revenues and tax subsidies approved by the New York State legislature

New York State and City have a variety of entities through which they can build infrastructure projects.



- **Port Authority of New York and New Jersey**
 - A bi-state non-profit corporation created by U.S. Congressional treaty in 1921
 - Spends about \$3 billion annually on infrastructure
 - Responsible for airports, toll bridges and tunnels from NYC to New Jersey, ports, bus terminal, PATH subway system, World Trade Center
 - Has the power to raise debt through tax-exempt municipal bonds, does not generally receive state or federal grants
 - Has no taxing power, does not receive tax subsidies
 - Bonds are not guaranteed by any government, but rather by fare, toll, and fee revenues
- **New York State Thruway Authority**
 - A non-profit corporation created by the New York State legislature in 1951
 - Spends about \$600 million annually on infrastructure
 - Responsible for the New York State Thruway, including the Tappan Zee / Mario M. Cuomo Bridge as well as parts of I-87 and I-95
 - Has the power to raise debt through tax-exempt municipal bonds, only receives state and federal funding for large projects
 - Has no taxing power, does not receive tax subsidies
 - Bonds are not guaranteed by any level of government, but rather are backed by toll revenues

Through these entities, New York has a credible recent history of building large projects.



- **City of New York**
 - Third Water Tunnel (\$6 billion, substantially completed in 2020)
 - Croton Water Filtration Plant (\$3.5 billion, completed in 2015)
- **Metropolitan Transportation Authority**
 - Second Avenue Subway, first three stops (\$4.5 billion, completed in 2016)
 - Long Island Rail Road East Side Access (\$11.2 billion, to be completed in 2022)
 - Long Island Rail Road (Third Track) Expansion (\$2.6 billion, to be completed in 2022)
 - Moynihan Train Hall (\$1.6 billion, completed in 2021)
 - Subway-signal modernization (L and #7 trains completed in 2012 and 2018 respectively, A/C/E/F lines ongoing)
- **Port Authority of New York and New Jersey**
 - LaGuardia Airport reconstruction (\$8 billion, substantially completed between 2020 and 2025)
 - Goethals Bridge (\$1.5 billion, completed in 2018)
 - Oculus Train Hub (\$4 billion, completed in 2016)
- **New York State Thruway Authority**
 - Tappan Zee Bridge replacement / Mario Cuomo bridge (\$4 billion, substantially completed in 2018)

Entities have moved toward a design-build or design-build-operate-maintain framework, and away from multiple separate contracts for each project.

- Design-build
 - Mario Cuomo Bridge
 - Long Island Rail Road (Third Track) Expansion
- Design-build-operate-maintain
 - LaGuardia Airport reconstruction
 - Goethals Bridge
- Traditional contracting (separate contracts for design and construction, and then return to sponsor for operation and maintenance)
 - Second Avenue Subway, first three stops
 - East Side Access
 - Oculus
 - Third Water Tunnel
 - Croton Water Filtration plant

Projects have attracted a variety of bidders, constrained by the need to guarantee large projects with capital.



- JFK reconstruction (forthcoming construction, \$13 billion)
 - The Carlyle Group, JLC Infrastructure and the Union Labor Life Insurance Company; JFKIAT (Royal Schiphol); Aecom, Holt Construction; American Triple I Partners, RXR Realty, Vantage Airport Group
- Mario Cuomo Bridge
 - Fluor, American Bridge, Granite; Traylor Bros., HDR, Buckland & Taylor, URS, GZA
- Long Island Rail Road (Third Track) Expansion
 - Dragados USA, John P. Picone, CCA Civil, Halmar
- LaGuardia Airport reconstruction
 - Skanska, Walsh, HOK, WSP, Vantage
- Goethals Bridge
 - Macquarie, Kiewit
- Second Avenue Subway, first three stops
 - Aecom, WSP, Skanska, J.F. Shea Construction, Schiavone Construction

Future project success will depend on several factors.



- Political risk

- Governor Andrew M. Cuomo has been an infrastructure champion

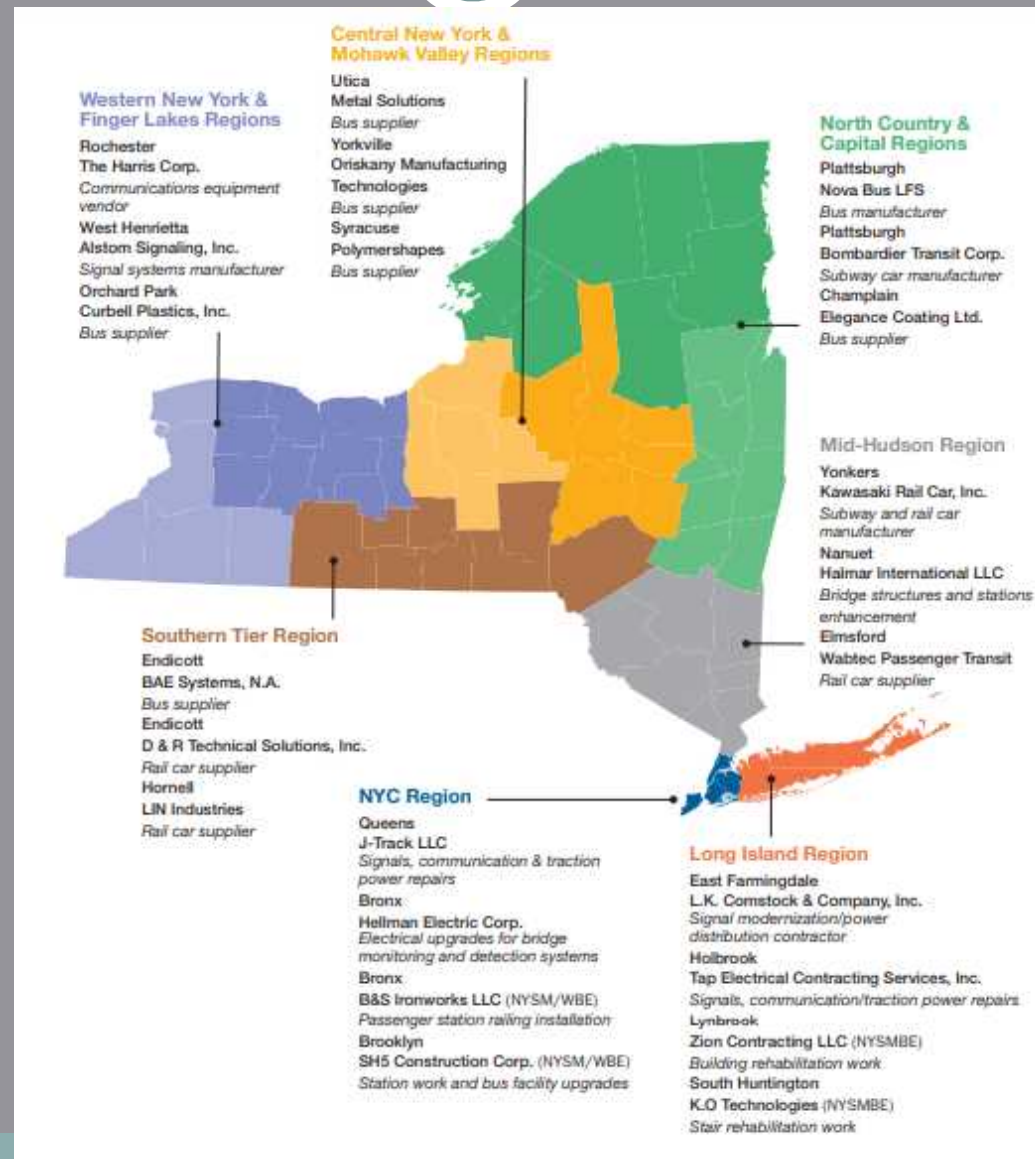
- Fiscal risks

- Three separate federal COVID relief packages mean that New York City and the MTA do not face significant budget deficits over the next two years, allowing them to maintain their current construction schedule
- However, future funding for new mega-projects (Port Authority, MTA) will depend on a federal infrastructure law

Execution risk

- Shallow bidding pool for large projects
- Dearth of qualified subcontractors and workers relative to potential large federal infrastructure funds

Domestic sourcing is important to federal and New York State leaders. *(Source: MTA.)*



City of New York: Four-borough Jails



City of New York: Four-borough Jails



- **Scope**

- \$8.9 billion project to build four high-rise jails in lower Manhattan; Forest Hills, Queens; Mott Haven, the Bronx, and downtown Brooklyn, thereby closing jails on Rikers Island

- **Structure**

- Design-build

- **Potential Bidders**

- Three bidders prequalified last year: Gilbane Building, Leon DeMatteis Construction, and Plaza Construction were pre-qualified for the Manhattan jail
- Yet the city cancelled this RFQ and started over again this year, indicating unhappiness with the bids
- New bids for Manhattan demolition were due last week; a reissued bid for Manhattan construction will occur later this year

- **Timeline**

- Requests for qualifications to build the Bronx and Queens jails are due May 3, 2021
- Full project – all four jails – is supposed to be complete 2029

- **Risks**

- Does not depend directly on federal stimulus, but the next mayor may not champion the project
- Shallow pool of bidders, deterred by operational, legal and political uncertainty

- **More information**

- <https://www1.nyc.gov/site/ddc/about/press-releases/2021/press-releases.page>

City of New York: Brooklyn-Queens Expressway



City of New York: Brooklyn-Queens Expressway



- **Scope**

- \$3.6 - \$11 billion project to rebuild 1.5-mile stretch of six-lane, 70-year-old highway through downtown Brooklyn
- A technically complex project involving demolition and reconstruction of a “cantilever (triple-deck bridge over land) while rerouting traffic
- Project may involve a smaller road (four lanes)

- **Structure**

- Likely design-build

- **Timeline**

- Likely after the mayoral election, post-2022
- Still must undergo lengthy environmental reviews

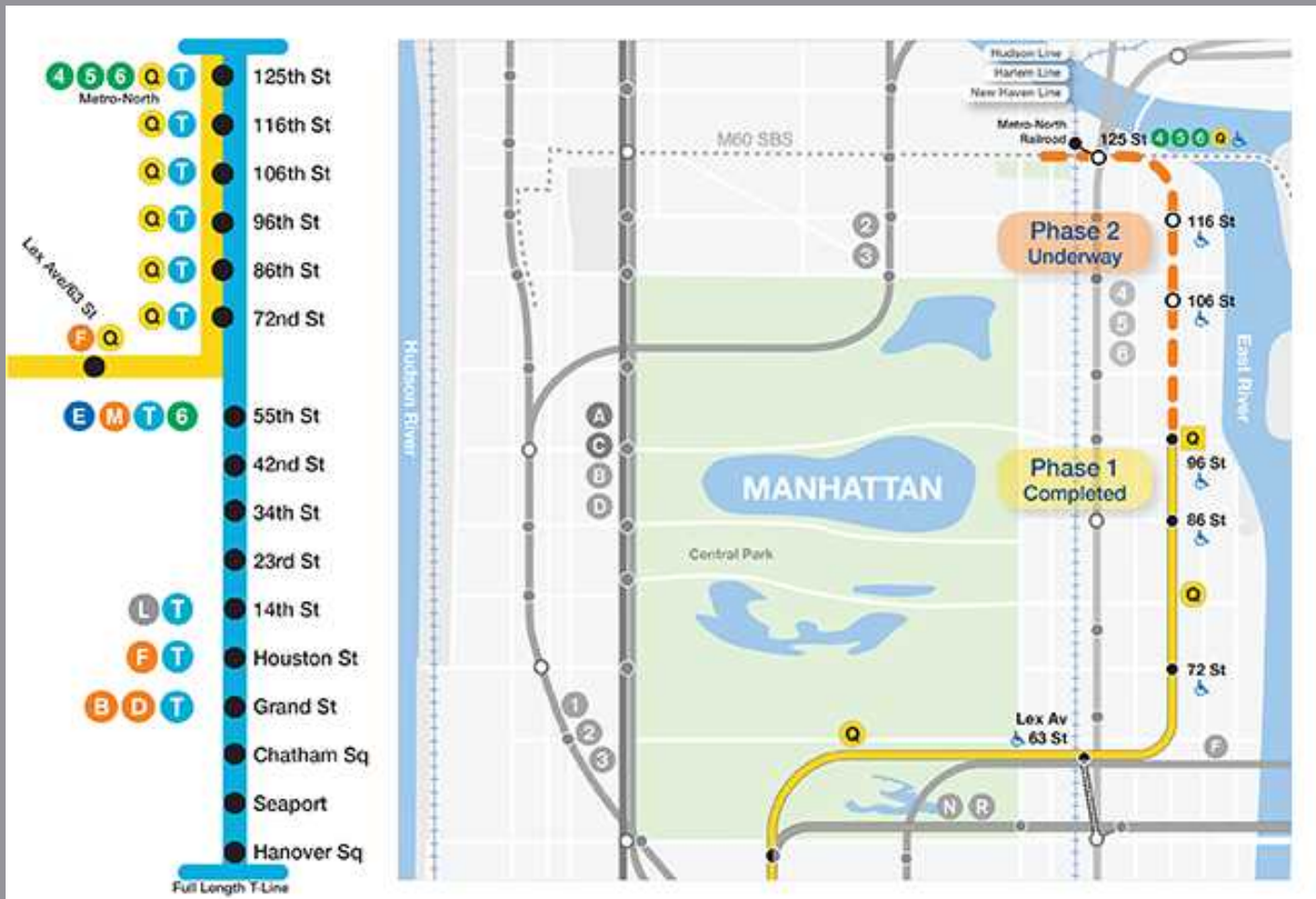
- **Risks**

- Delay due to community lack of agreement on what to build
- Likely dependent on federal stimulus for a portion (20-30 percent) of funding

- **More information**

<https://www.bqe-i278.com/en>

MTA: Second Avenue Subway, phase 2



MTA: Second Avenue Subway, phase 2



- **Scope**
 - \$6.9 billion to build three new stops (from 106th to 125th Street) of new East Side subway
- **Structure**
 - Likely design-build
- **Timeline**
 - Environmental review underway
- **Risks**
 - Depends on new federal infrastructure funds for 30-40 percent of the cost
 - Failure to rebuild ridership from COVID
 - Change in gubernatorial administration
- **More information**
 - http://web.mta.info/capital/phase2_about_sas.html

MTA: Subway-signal modernization packages



- **Scope**

- \$7.1 billion to continue modernization of subway signals, including the Lexington Avenue Line (4, 5, 6)

- **Structure**

- Design-build (limited)

- **Potential Bidders**

- Siemens, Alstom, Thales, LK Comstock

- **Timeline**

- Ongoing

- **Risks**

- Failure to pass federal infrastructure stimulus

- **More information**

- <https://new.mta.info/doing-business-with-us/procurement/construction-and-development>



MTA: Subway-station elevator packages



- **Scope**

- \$9.2 billion for new elevators at 70 stations, replace 65 escalators, station renewal to make stations accessible to the handicapped

- **Structure**

- Design-build

- **Timeline**

- Ongoing, bids for 14th Street due April 8, 2021

- **Risks**

- Failure to pass federal infrastructure stimulus

- **More information**

- <https://new.mta.info/doing-business-with-us/procurement/construction-and-development>



MTA: Metro-North Penn Station Access



- **Scope**
 - \$1.6 billion project to build four new Metro-North stations through the Bronx
- **Structure**
 - Design-build, similar to LIRR Third Track
 - Pre-qualified firm teams are Halmar, Arup; Skanska, Aecom; Tutor Perini, Parsons
- **Timeline**
 - Budgeted for contract awarding before 2024
- **Risks**
 - Failure to pass federal infrastructure stimulus
- **More information**
 - <https://pennstationaccess.info/newsroom>

MTA: East Side Access station management



- **Scope**
 - \$100 million-plus contract to operate and maintain the new East Side Access station
- **Structure**
 - Operate / maintain (construction will be complete by November 2022)
- **Timeline**
 - Bids due March 25, 2021
- **Risks**
 - Labor risk
 - Risk that this is an untested contracting method for the MTA
- **More information**
 - <https://new.mta.info/doing-business-with-us/procurement/construction-and-development>

Port Authority: LaGuardia AirTrain



- **Scope**
 - \$2.1 billion project to build a train connection from the Long Island Rail Road / subway to LaGuardia Airport
- **Structure**
 - Design-build or design-build-operate-maintain (similar to JFK AirTrain)
- **Timeline**
 - Undergoing environmental-review process
- **Risks**
 - A project championed by Governor Cuomo
 - Failure to achieve a federal stimulus
 - Failure to rebuild airline passenger traffic post-COVID
- **More information**
 - <https://www.panynj.gov/port-authority/en/about/capital-plan.html>

Port Authority: Newark AirTrain



- **Scope**

- \$2.1 billion project to replace the existing AirTrain at Newark Airport, which connects to New Jersey Transit

- **Structure**

- Likely design-build or design-build-operate-maintain

- **Timeline**

- In the planning stage

- **Risks**

- Failure to achieve federal stimulus
- Failure to rebuild airline traffic post-COVID

- **More information**

- <https://www.ewrredevelopment.com/about-airtrain-ewr/>



Port Authority: Bus Terminal



Port Authority: Bus Terminal



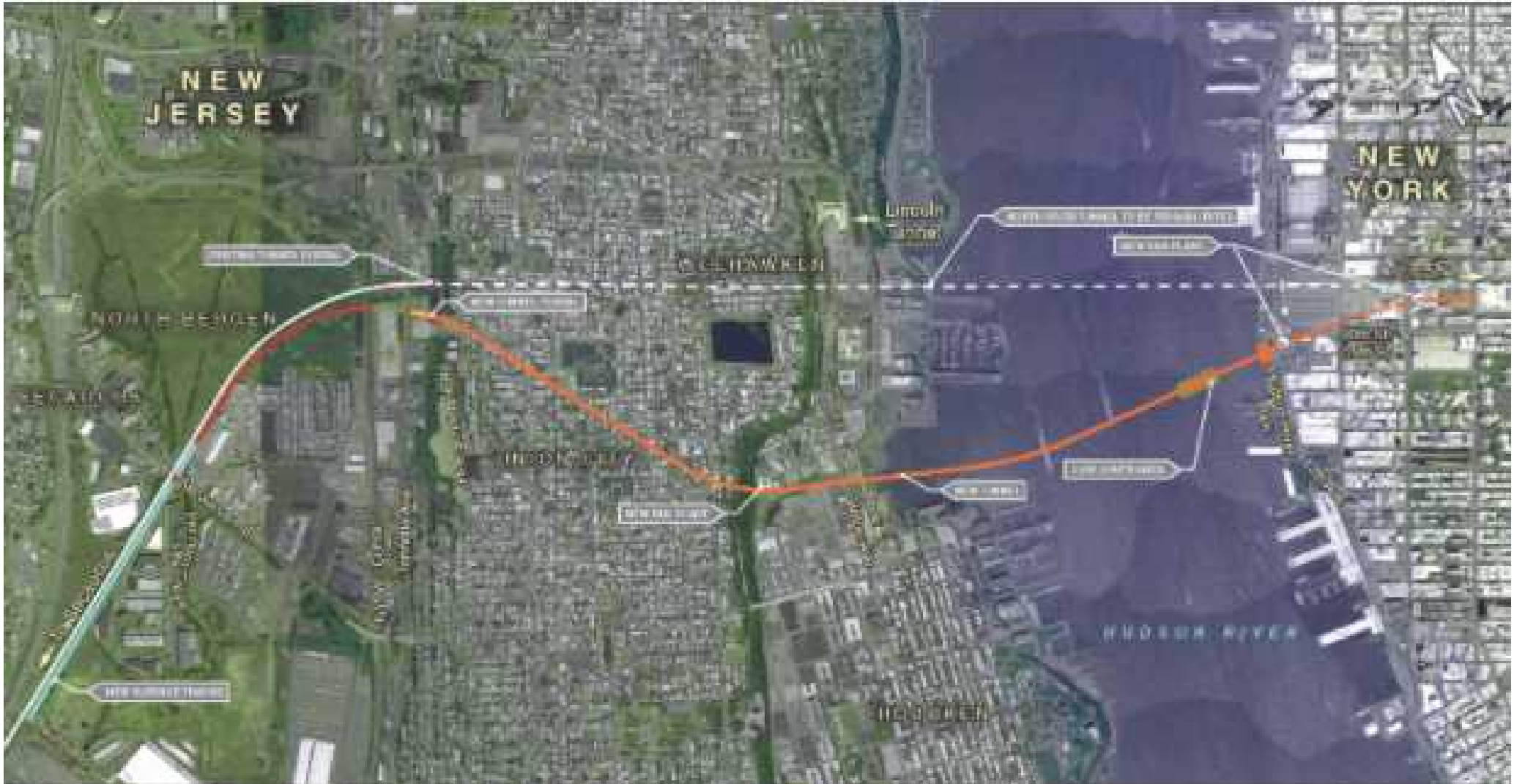
- **Scope**
 - Likely \$10 billion-plus project to build a new, larger bus terminal in Midtown Manhattan (with 40 percent more capacity) and demolish the existing terminal
- **Structure**
 - Likely design-build or design-build-operate maintain
- **Timeline**
 - Port Authority goal is completion by 2031
- **Risks**
 - Significant risks, including New York City approval of tax diversion from four planned high-rise towers to fund part of the project; prospects of federal stimulus; risk that commuting bus traffic does not return post-COVID
- **More information**
 - <https://www.panynj.gov/port-authority/en/press-room/press-release-archives/2021-press-releases/port-authority-unveils-new-plan-for-bus-terminal-replacement.html>

Port Authority (and sister agencies): Gateway Tunnel



- **Scope**
 - \$11.3 billion project to build a new tunnel under the Hudson River for use by Amtrak and New Jersey Transit trains
- **Structure**
 - Likely design-build
- **Timeline**
 - Environmental study is complete, project awaiting federal funding
 - With federal funding, bids could go out as early as this year
- **Risks**
 - Failure to attain federal stimulus funding
- **More information**
 - <http://www.gatewayprogram.org>

Port Authority (and sister agencies): Gateway Tunnel



All photos are sourced from the City of New York, MTA, Port Authority, and Gateway.