# The Gateway Program: Expanding Capacity on the Northeast Corridor

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### The Northeast Corridor Mainline and Branches

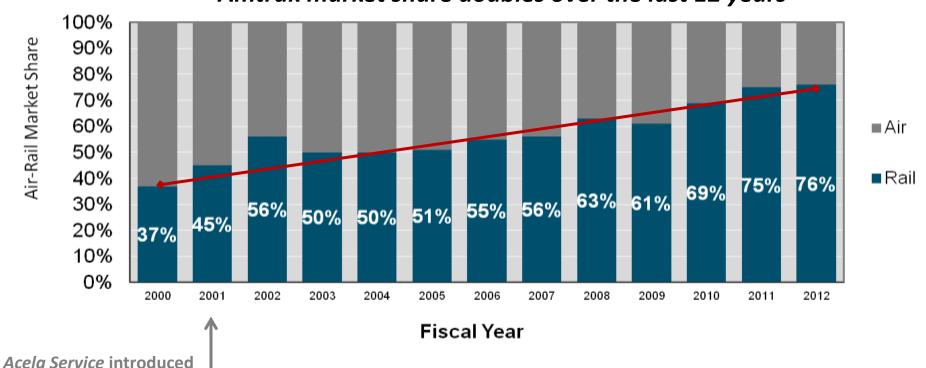


- 899 Route-miles
- 546 Miles Amtrakowned
- 66% electrified
- 8 commuter operators
- 6 freight operators on Amtrak NEC
- 2,200 daily trains
  - 2,000 Commuter
  - 140 Intercity
  - 60 Freight
- 260 million annual passenger trips



### The Northeast Corridor: Consumers Choose Rail over Air Travel





Amtrak carries <u>three times</u> as many passengers on the NEC than all of the airlines put together



### Challenge: NEC Travel Projected to Grow Substantially – On Rail and Other Modes

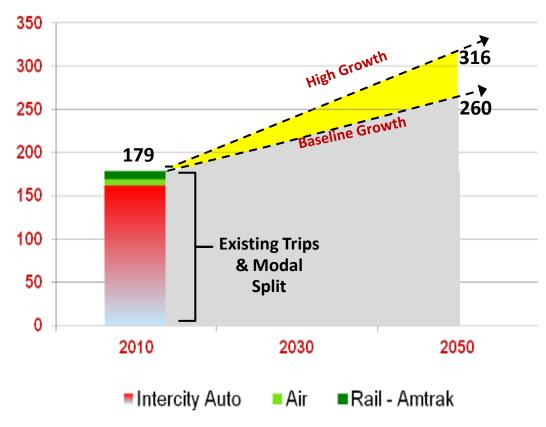
Substantial projected growth in intercity travel in the NEC

- Baseline: +45%
- High growth+76%

Other NEC modes have limited ability to add significant capacity

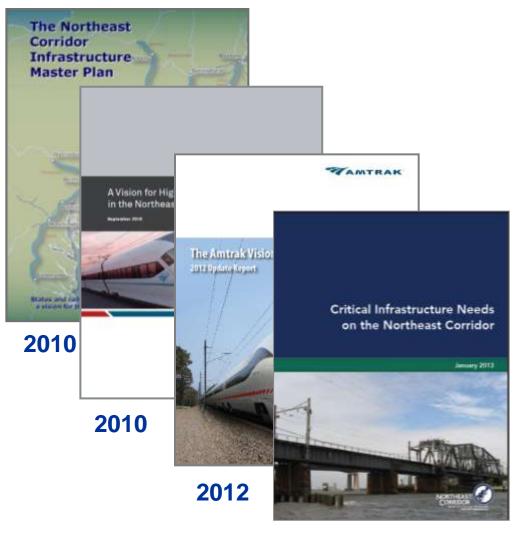
NEC can't add more trains because of limited tunnel and line-haul capacity into NYC

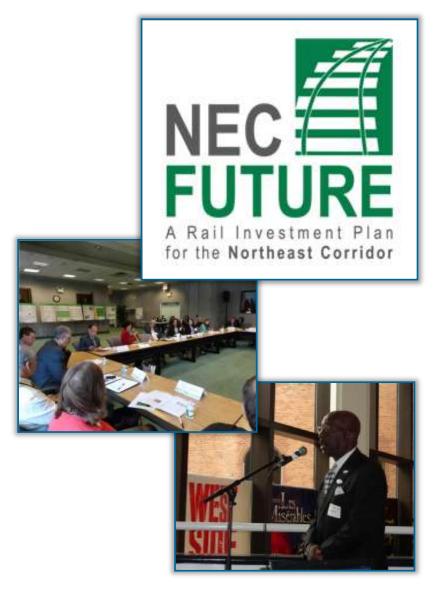
# Northeast Corridor Travel Demand (Millions of Annual Intercity Trips)





# **Status of NEC Planning Efforts for Growth**

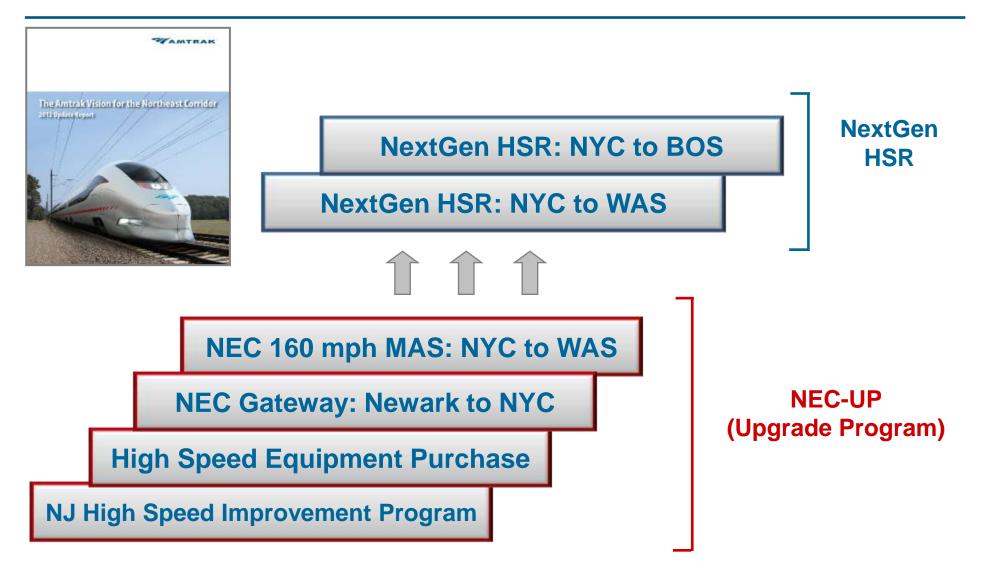




2013

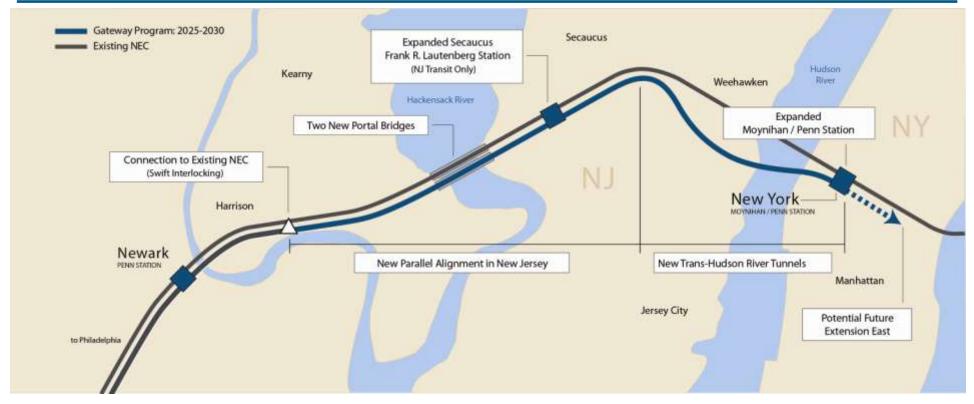


# **Amtrak NEC Improvements Implementation Phasing Strategy**





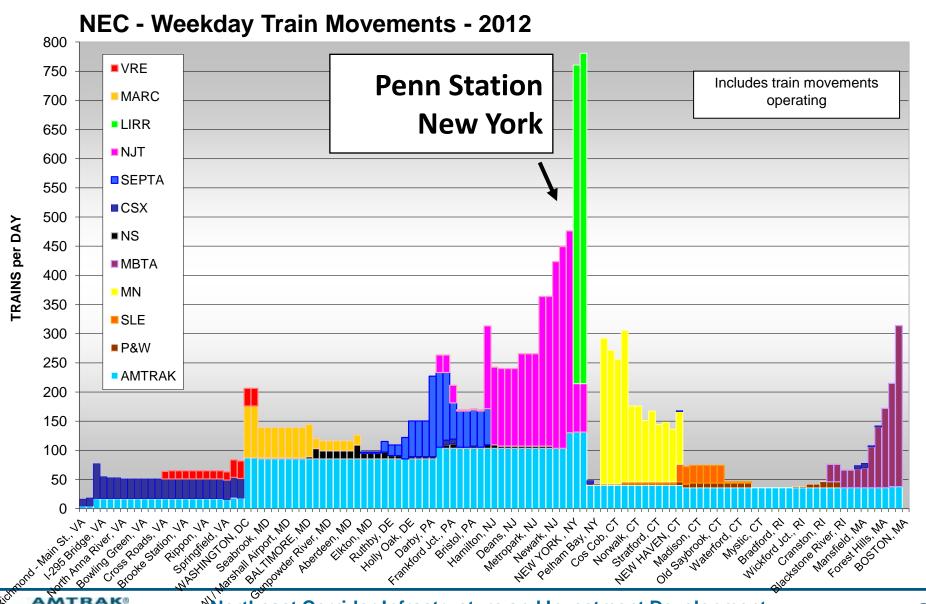
### The Gateway Program: Newark, NJ to Penn Station, New York



- New Hudson River Tunnels
- Expanded Moynihan/Penn Station, New York
- New Portal Bridges
- Newark-to-Secaucus Improvements
- Reconstruction of Existing Hudson River Tunnels



### Gateway Addresses Rail Bottleneck Between Newark, NJ and NYC



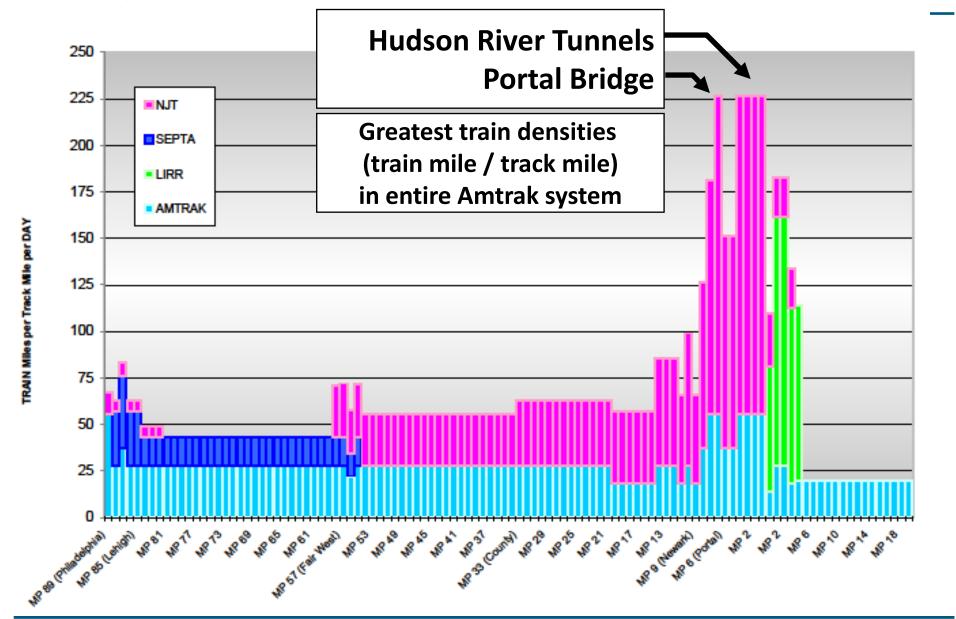
### Challenge: NEC Growth Relies on Added Trans-Hudson Capacity



- Penn Station NY is North America's busiest transportation facility.
- Two of every three Amtrak NEC trips have one leg in New York.
- NJT annual passenger trips at NYP has more than quadrupled from 1980 – 2012 to reach 44 million.

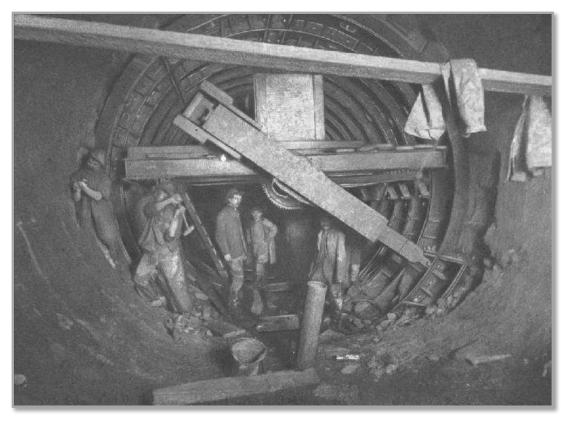


# Philadelphia to New Rochelle - Track Mile Density - 2012





### The Need: Existing Hudson River Tunnels are 103 Years Old.

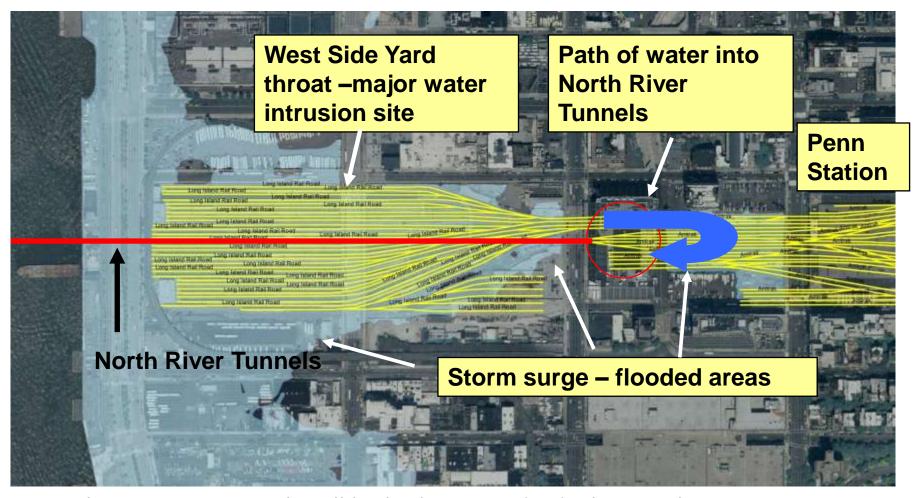


- Even a minor delay of one train has large impact on all services.
- Present, "holding-action" weekend work programs will go on indefinitely and permanently limit the NEC to a single-track railroad.

The existing Hudson River tunnels were completed in 1910.



### The Need: Infrastructure is Vulnerable to Extreme Weather Events.



• The Gateway tunnels will be built to standards that can better resist and recover from flooding.



# **Gateway Program Principles**

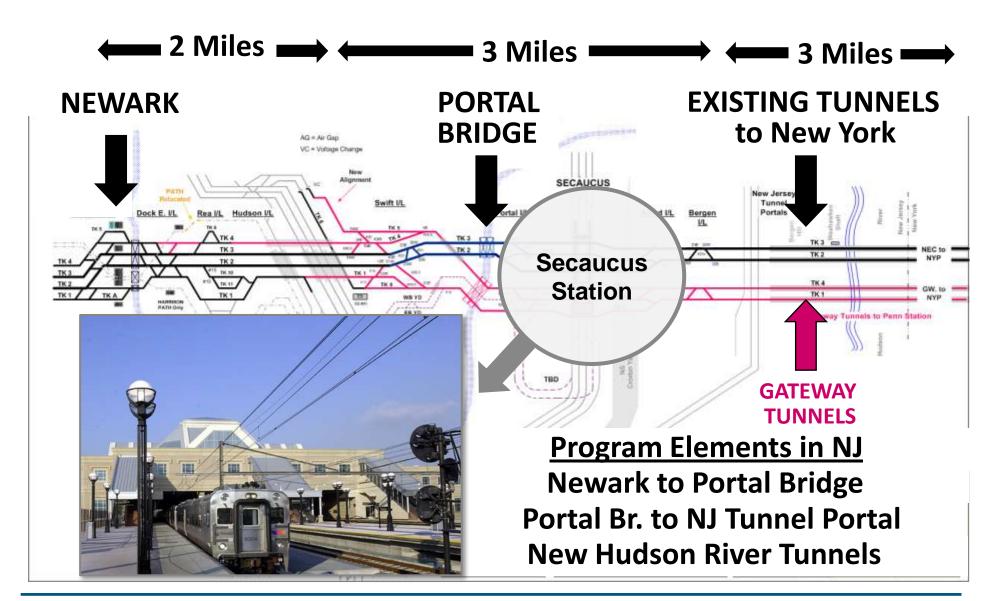
- Improve Existing Operations
  - Reliability/ Redundancy
  - Maintainability
- Expand Capacity
  - Intercity/ High Speed Rail
  - Commuter (all operators)
- Rebuild Infrastructure
  - Provide enhanced storm protection
  - Bring to a state of good repair
- Modular Project Design
  - Advance program elements with independent utility, as funding and permitting allows



Final design to replace Portal Bridge is complete and can be advanced as soon as funding is available.



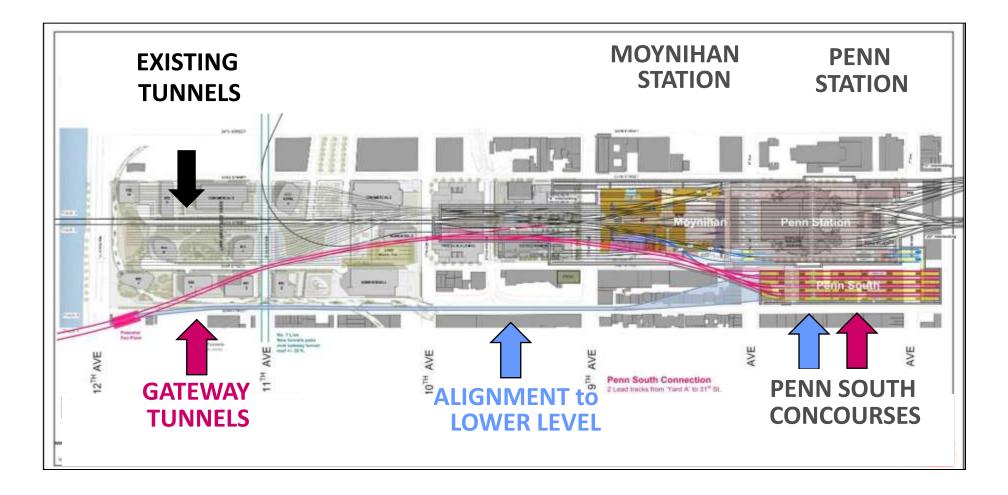
# **Gateway – New Jersey Track Configuration (Illustrative)**





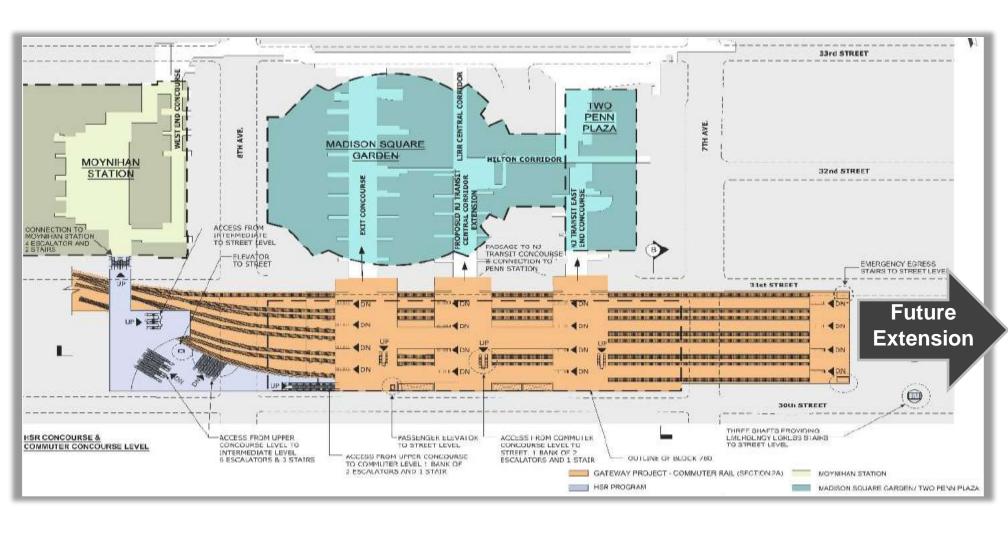
### **Gateway Program – Manhattan Plan View**

### **Sketch Plan of Alignments to Penn Station and Penn South Concourses**





### **Gateway Program – Penn South Upper-Level Concourse**





### Penn South – Upper-Level Concourse Section View



Looking North up 7<sup>th</sup> at 31st

Upper Level
Concourse
concept
provides for
4-6 tracks to
extend east.



# Portal Bridge North: Design Complete to Replace Existing Bridge



**Artist Rendering of New Portal Bridges – North and South** 



### **Gateway Program Benefits (Intercity and Commuter)**

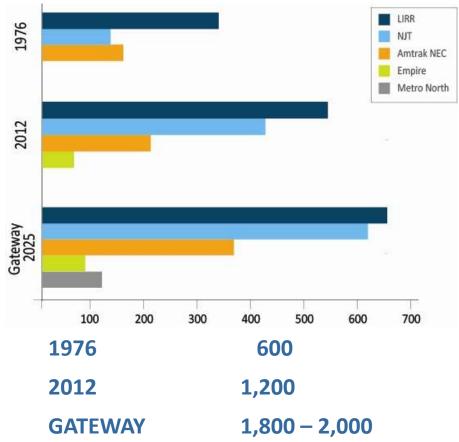
### **New Jersey**

- 100% increase in line capacity
- 4 main tracks / new river crossings /Bergen Loop option
- Upgraded support systems (electric traction, signals)
- Rebuilt infrastructure (bridges)

### **New York**

- 50% increase in Penn Station /Moynihan Station capacity
- New commuter/HSR concourses
- Operational redundancy
- Commercial development
- Expansion of all services

Historic and Projected Growth in Daily Penn Station, New York Train Movements: 1976, 2012, and with Gateway (Illustrative)





# Near Term: Hudson Yards Development in Gateway's Future Path

LIRR West Side Yards Today



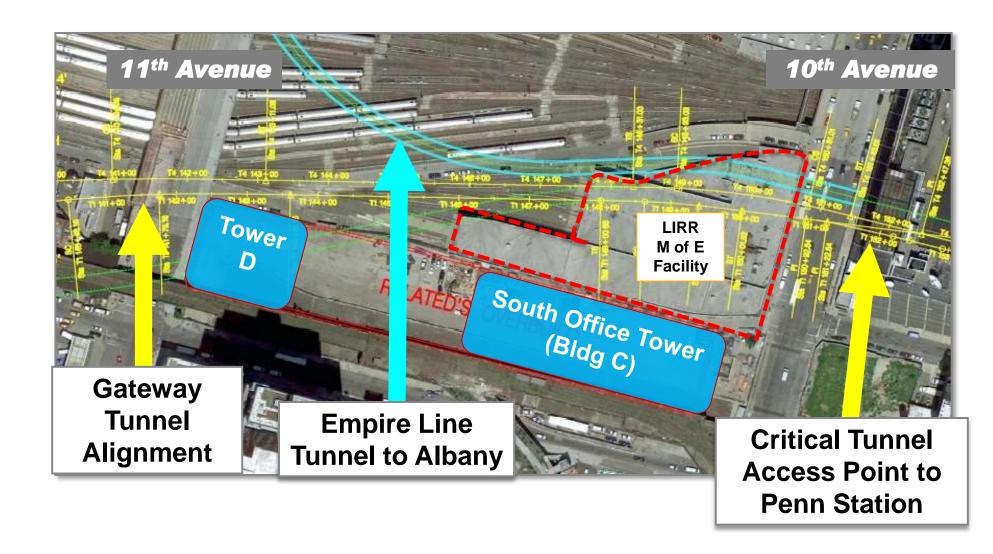


**Hudson Yards Tomorrow** 



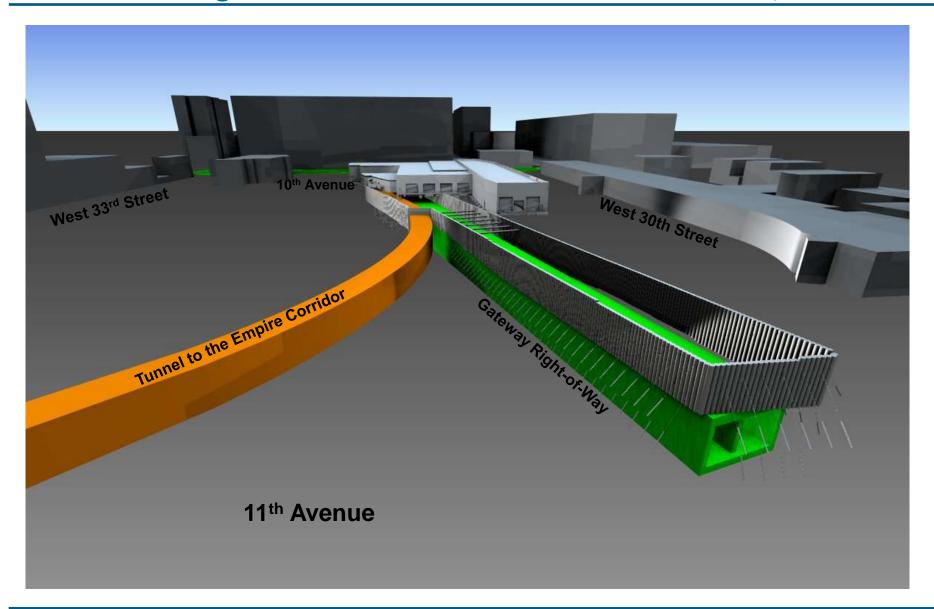


### Partial Eastern Hudson Yards Plan: Track Level – Including Gateway Tunnel Alignment





# Concrete Casing Under Construction at the Hudson Yards, Manhattan





### **Gateway Program: Next Steps**

- Concrete casement under construction.
- Collaborating with NJ Transit, LIRR and Metro North to assess and determine future service plans.
- Advancing design elements on projects with independent utility (i.e., "Saw Tooth" Bridges, Portal Bridge, Hudson Interlocking,)
- Supporting and informing NEC Future Process.



Groundbreaking of Hudson Yards Right-of-Way Preservation Project, New York City, September 23, 2013.





Thank you for your attention.