



# The Gateway Program: Expanding Capacity on the Northeast Corridor

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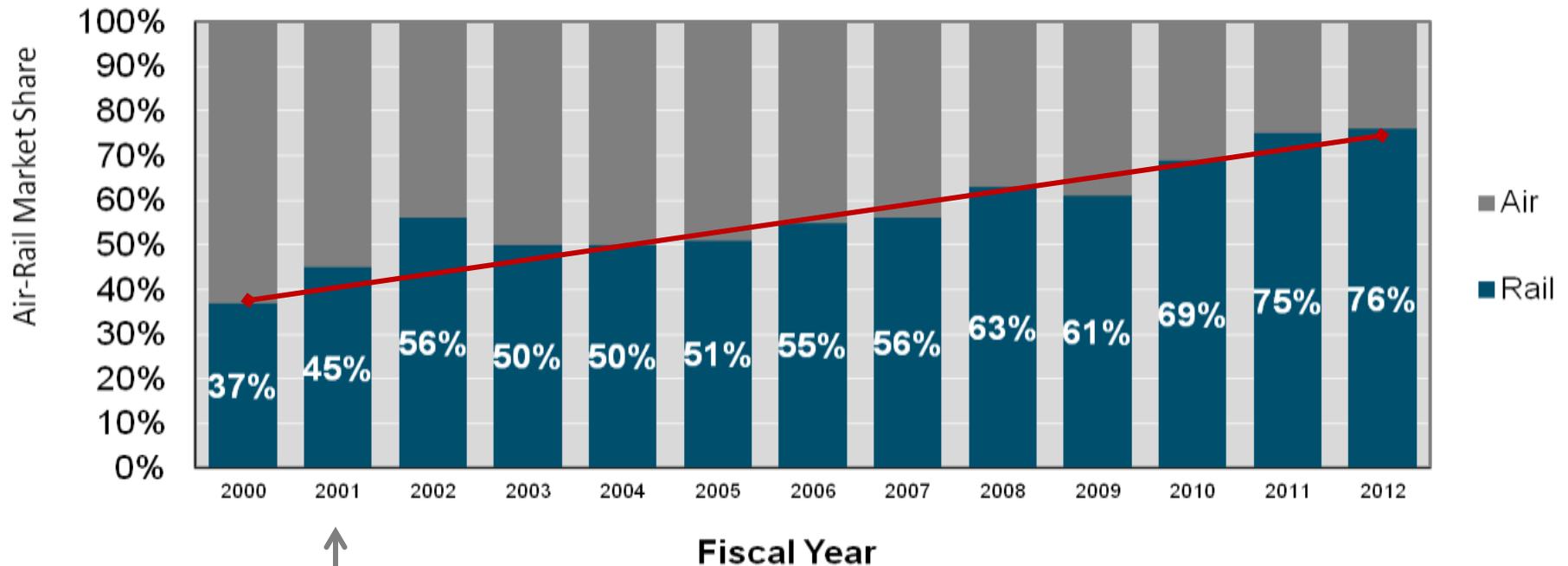
# The Northeast Corridor Mainline and Branches



- 899 Route-miles
- 546 Miles Amtrak-owned
- 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

**Washington to New York Air-Rail Market**  
*Amtrak market share doubles over the last 12 years*



Acela Service introduced

***Amtrak carries three times 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

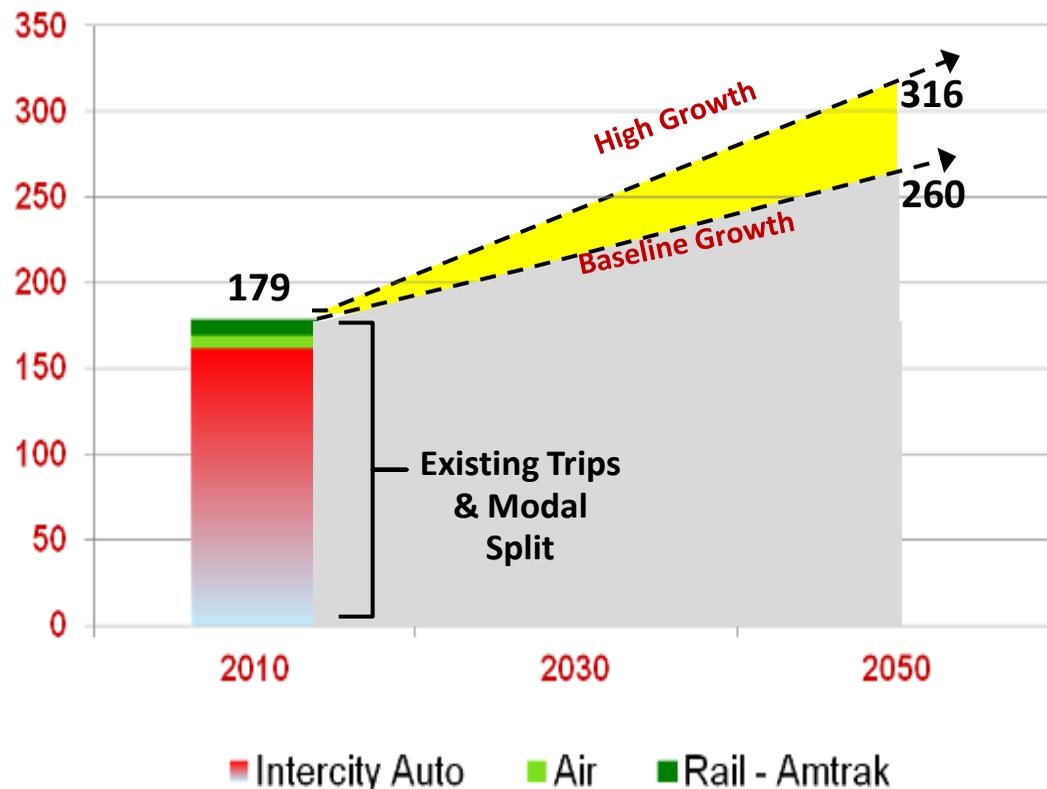
Substantial projected growth in intercity travel in the NEC

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

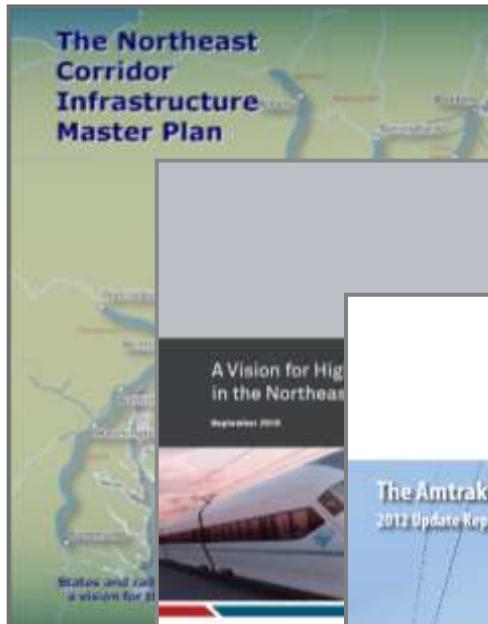
Other NEC modes have limited ability to add significant capacity

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

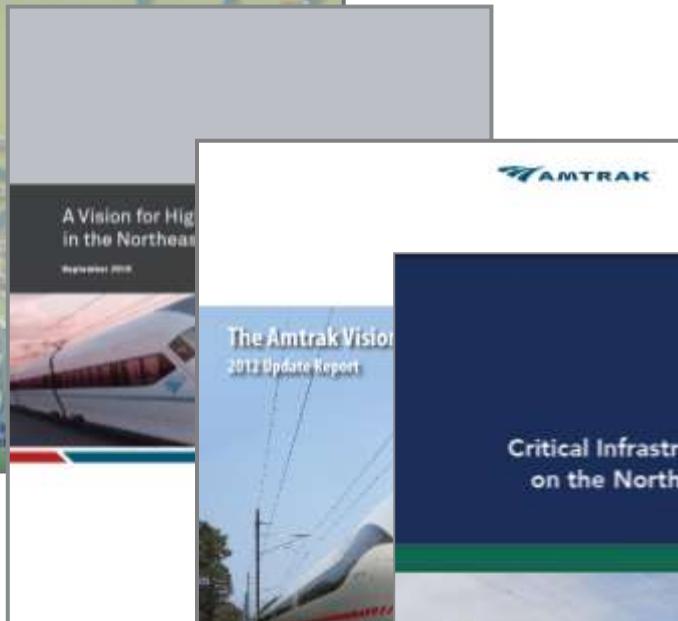
Northeast Corridor Travel Demand  
(Millions of Annual Intercity Trips)



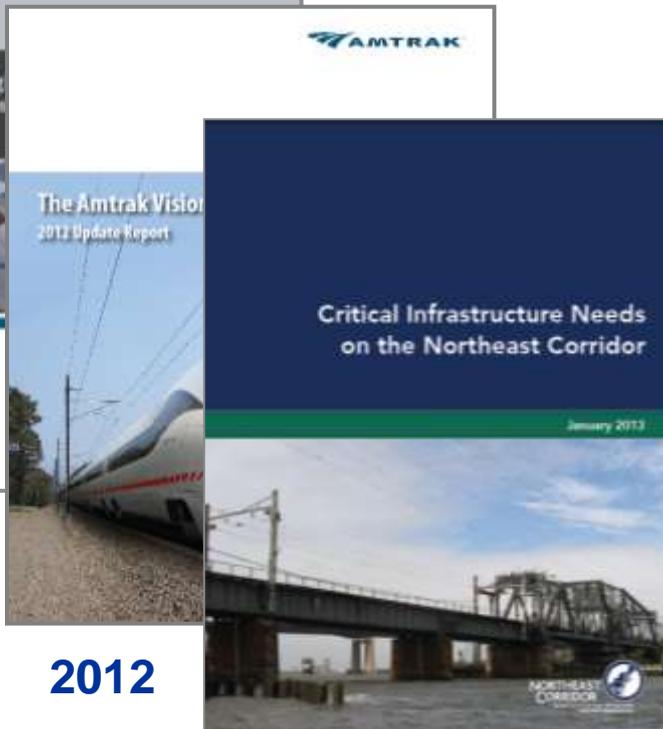
# Status of NEC Planning Efforts for Growth



2010



2010

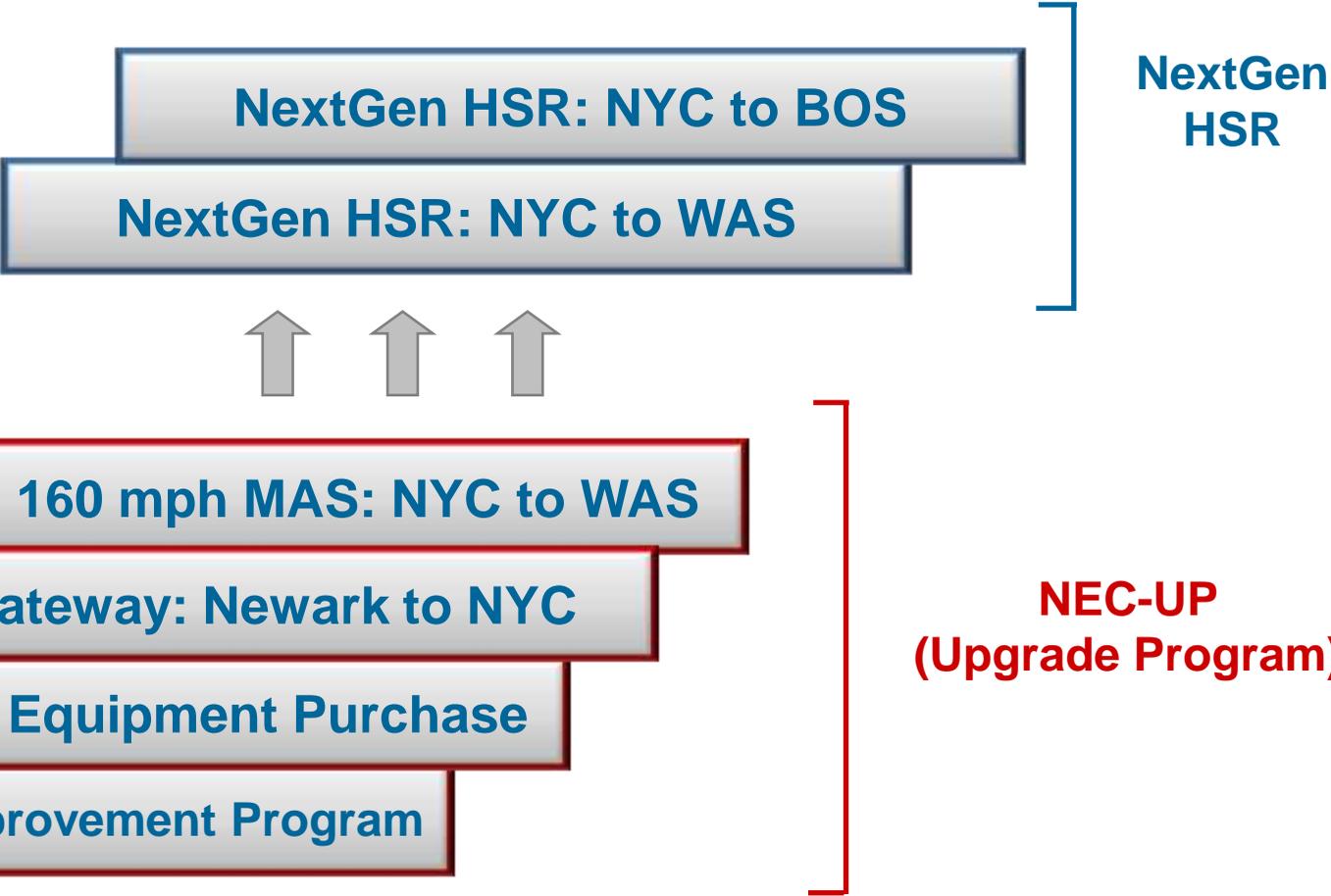
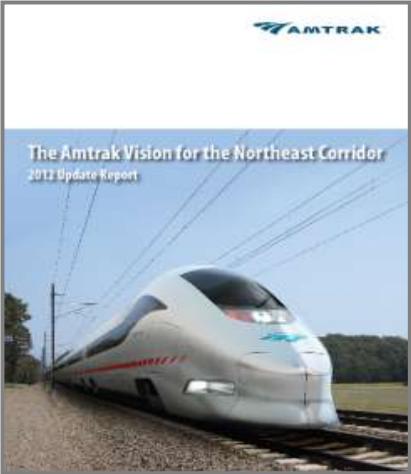


2012

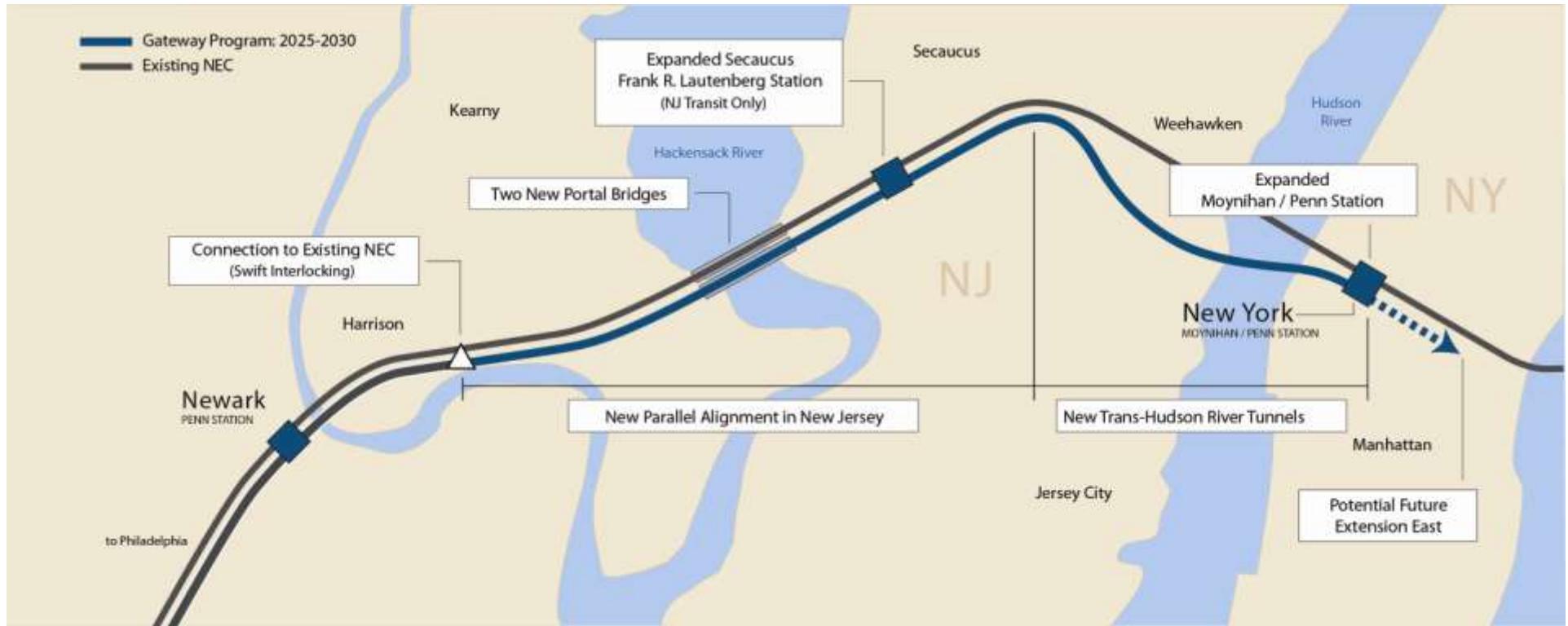
2013



# Amtrak NEC Improvements Implementation Phasing Strategy



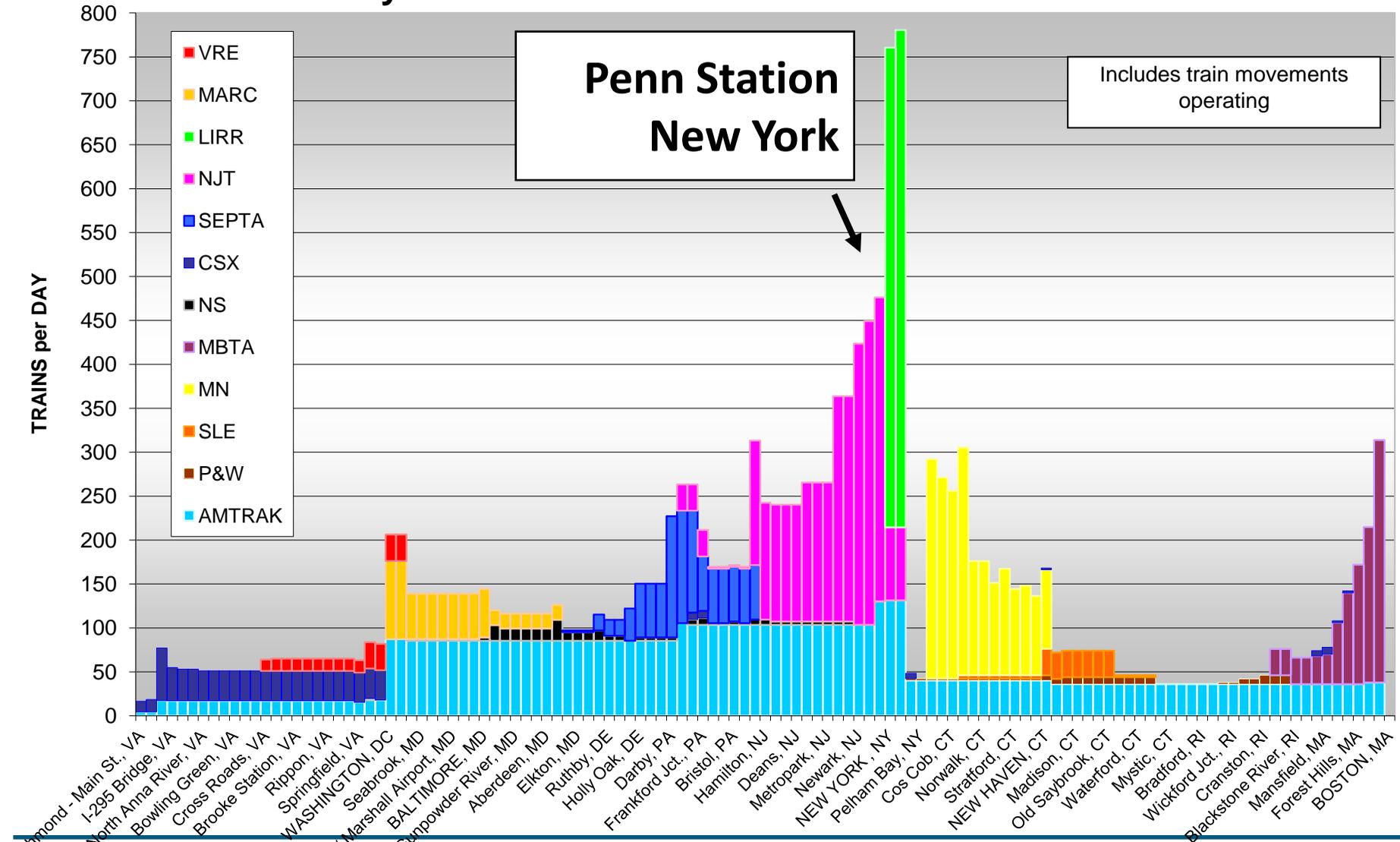
# The Gateway Program: Newark, NJ to Penn Station, New York



- 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

## NEC - Weekday Train Movements - 2012



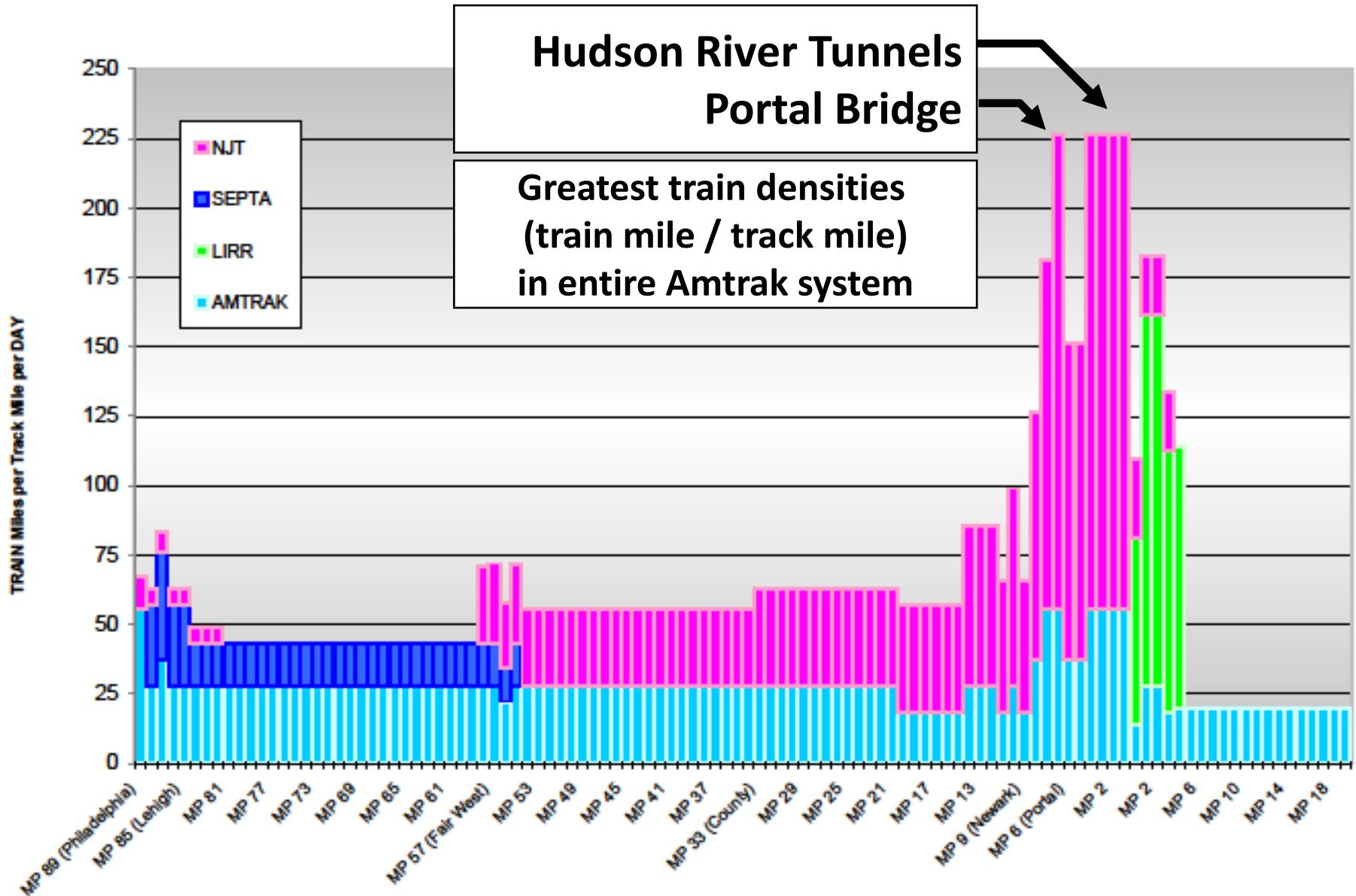
# Challenge: NEC Growth Relies on Added Trans-Hudson Capacity



- 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.

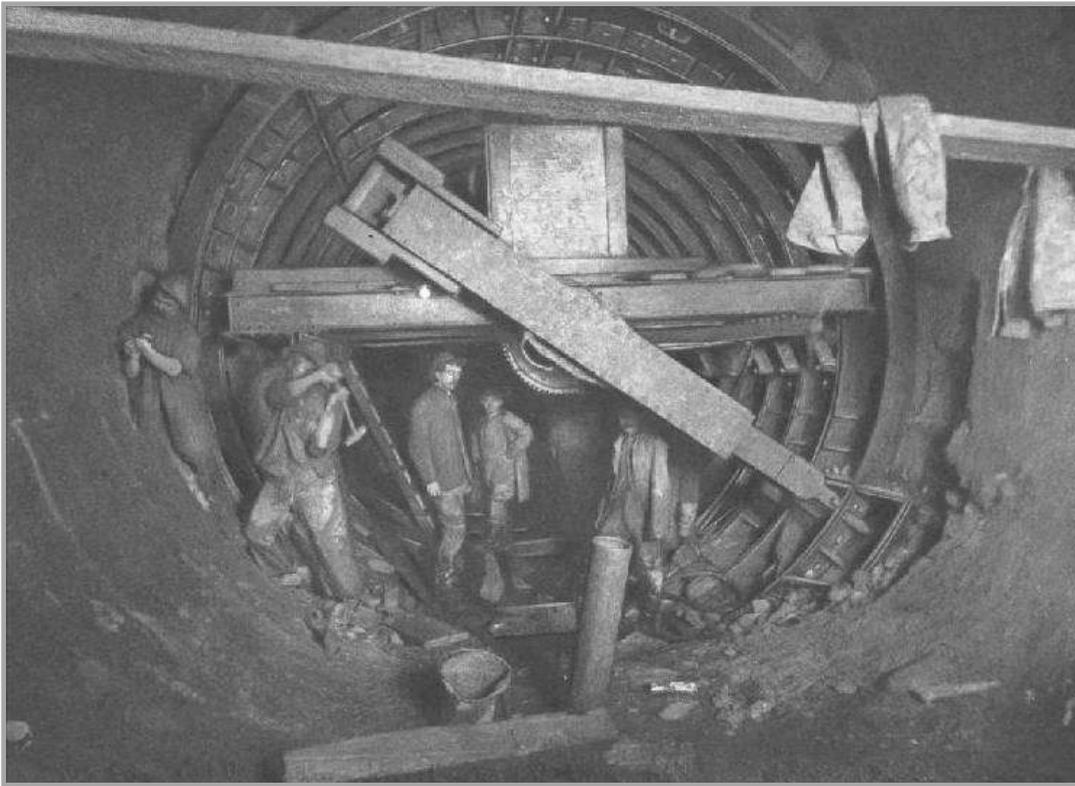


# Philadelphia to New Rochelle - Track Mile Density - 2012



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

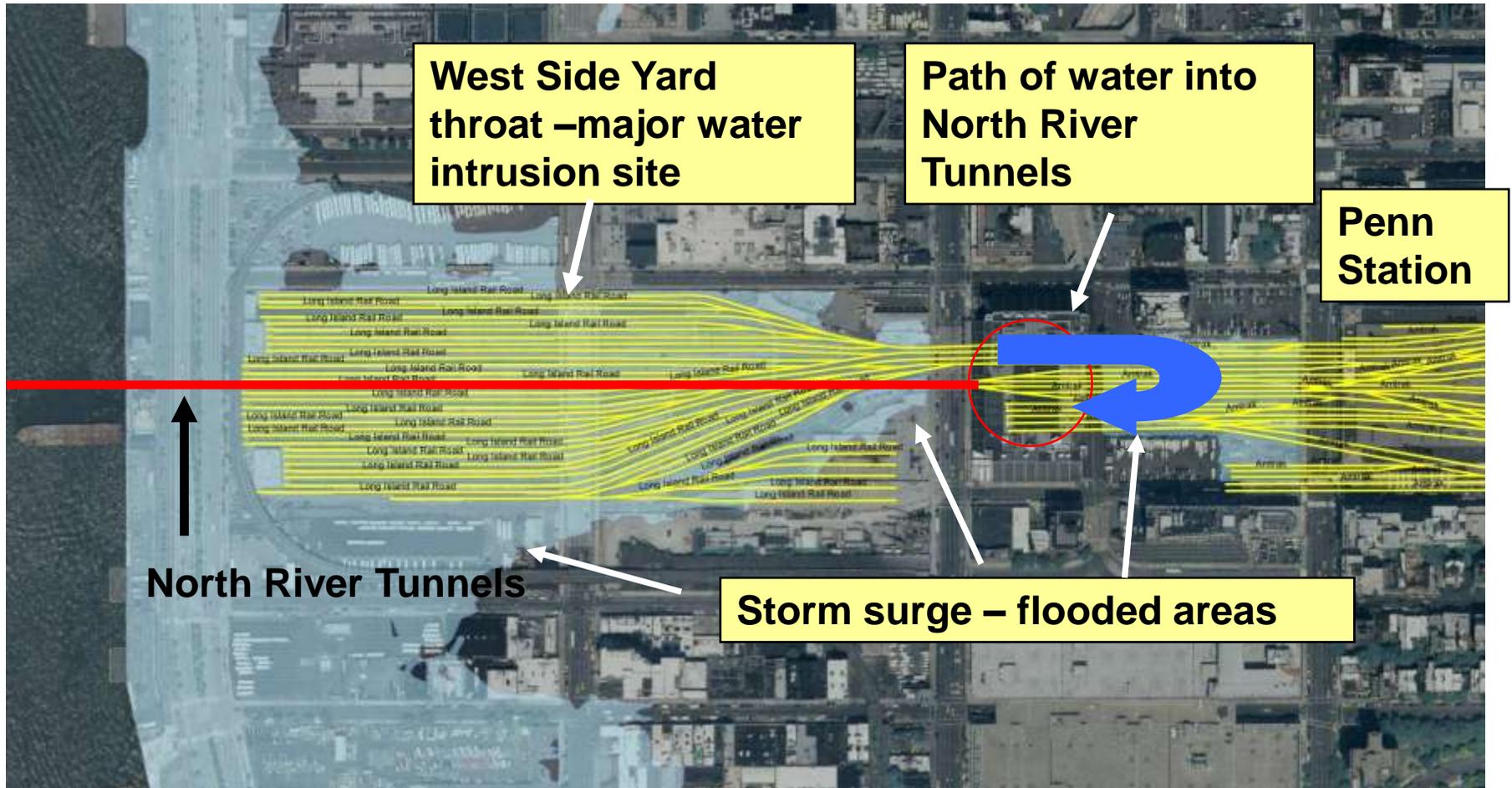
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*The existing Hudson River tunnels were completed in 1910.*

- 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 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

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- 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.*

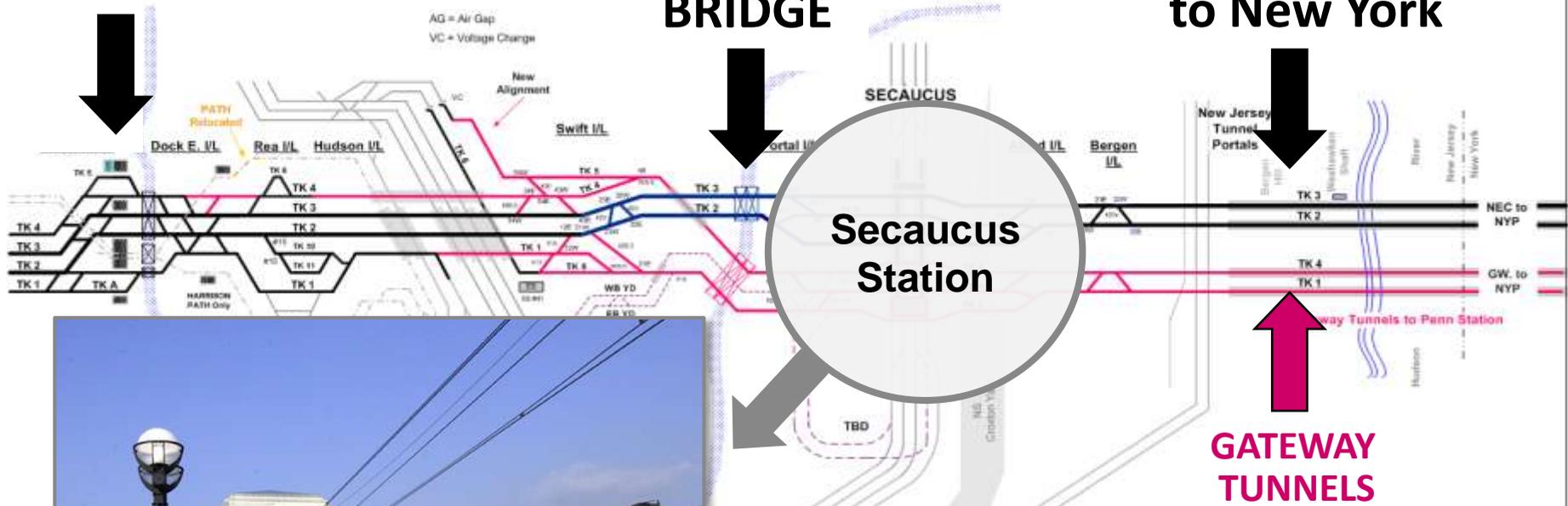
# Gateway – New Jersey Track Configuration (Illustrative)

← 2 Miles →   ← 3 Miles →   ← 3 Miles →

**NEWARK**

**PORTAL  
BRIDGE**

**EXISTING TUNNELS  
to New York**



**Secaucus  
Station**

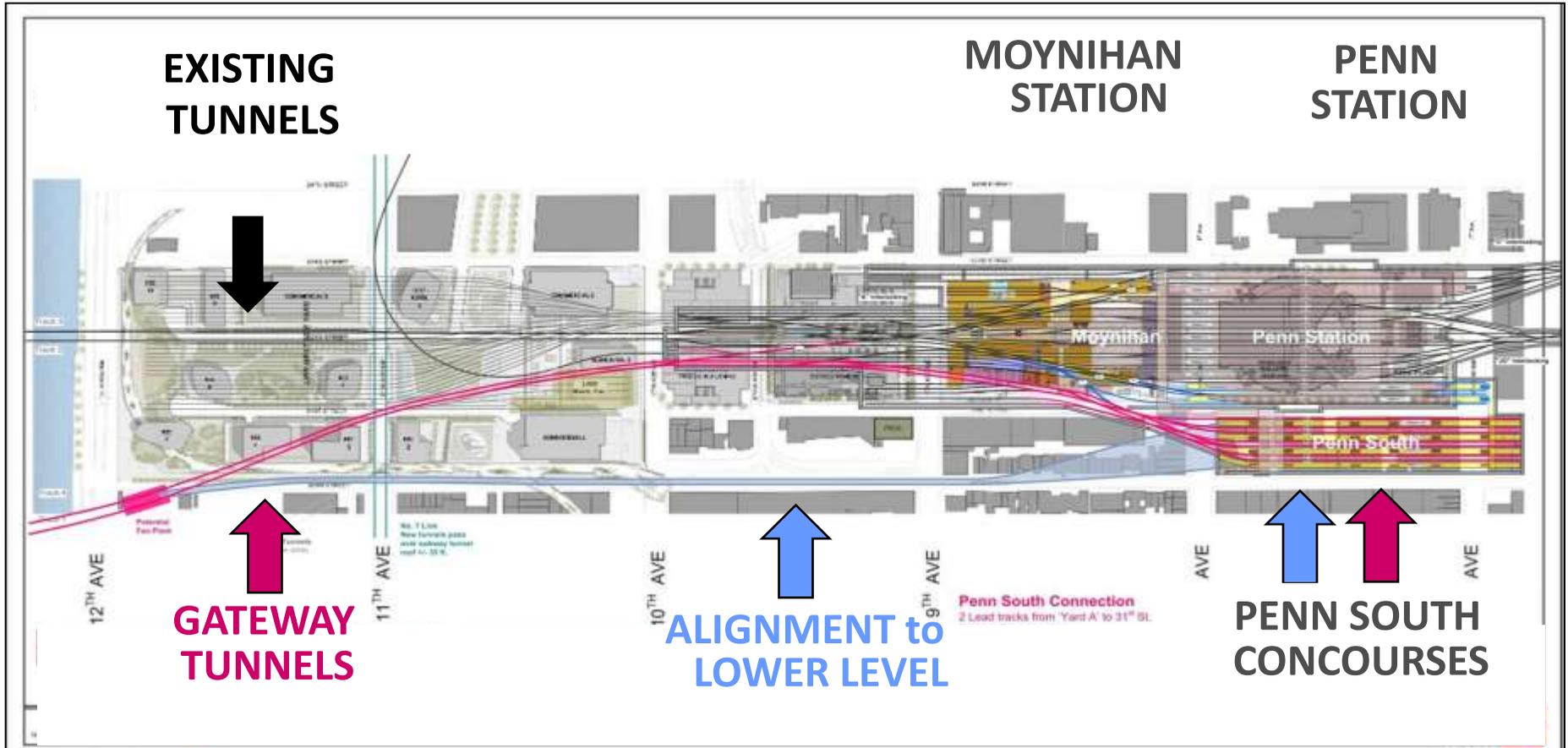
**GATEWAY  
TUNNELS**

**Program Elements in NJ**  
**Newark to Portal Bridge**  
**Portal Br. to NJ Tunnel Portal**  
**New Hudson River Tunnels**

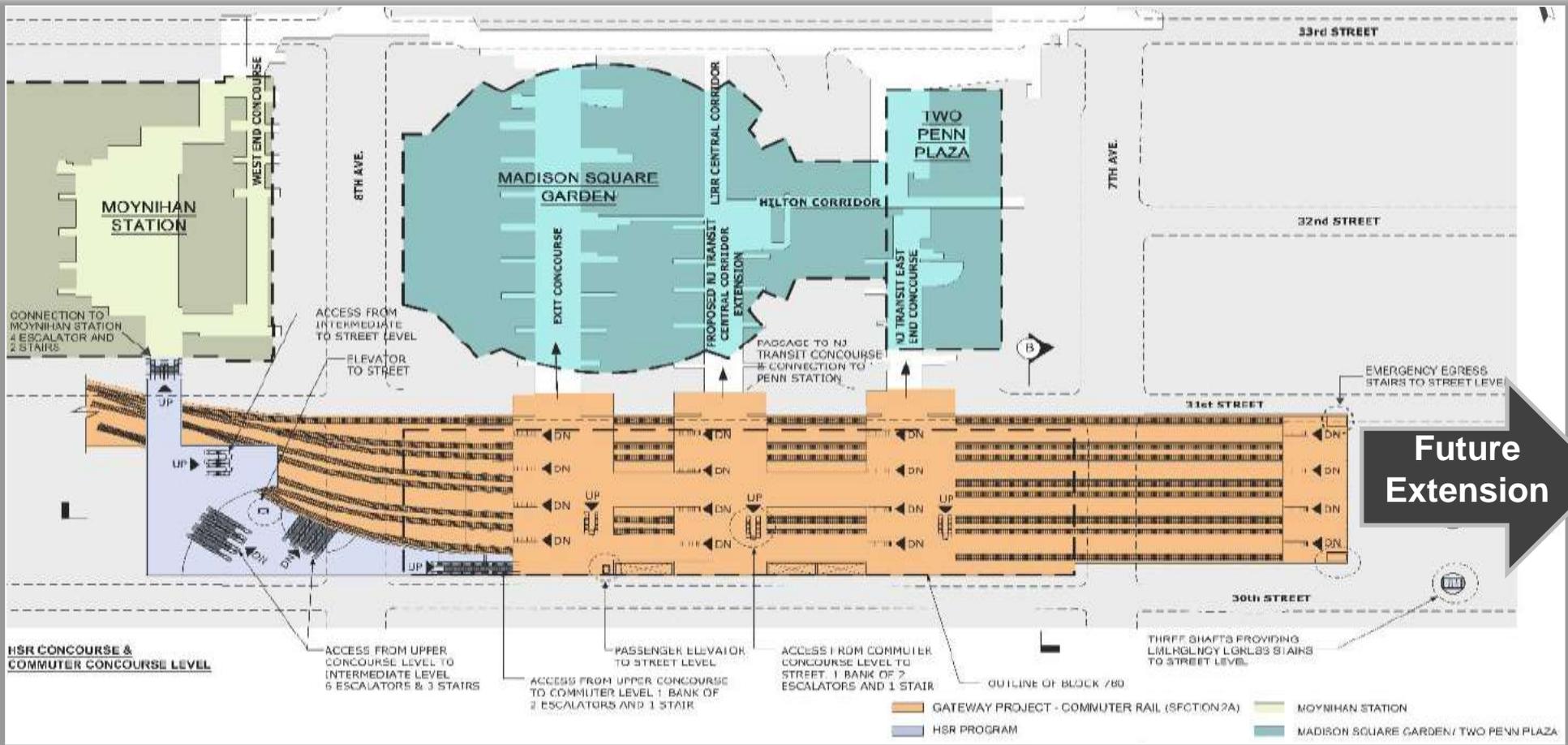


# Gateway Program – Manhattan Plan View

## 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

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



# Gateway Program Benefits (Intercity and Commuter)

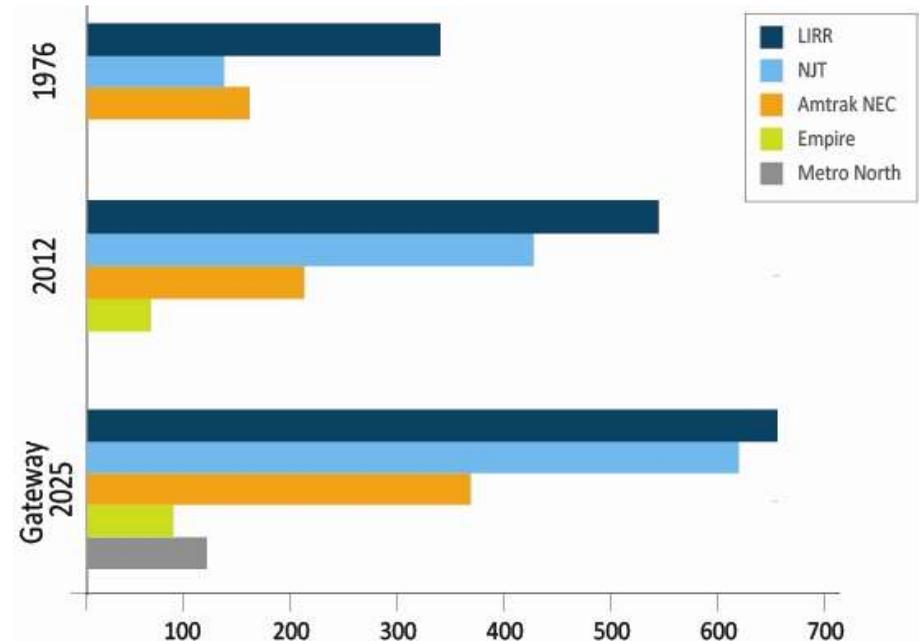
## New Jersey

- 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)**



1976	600
2012	1,200
GATEWAY	1,800 – 2,000



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

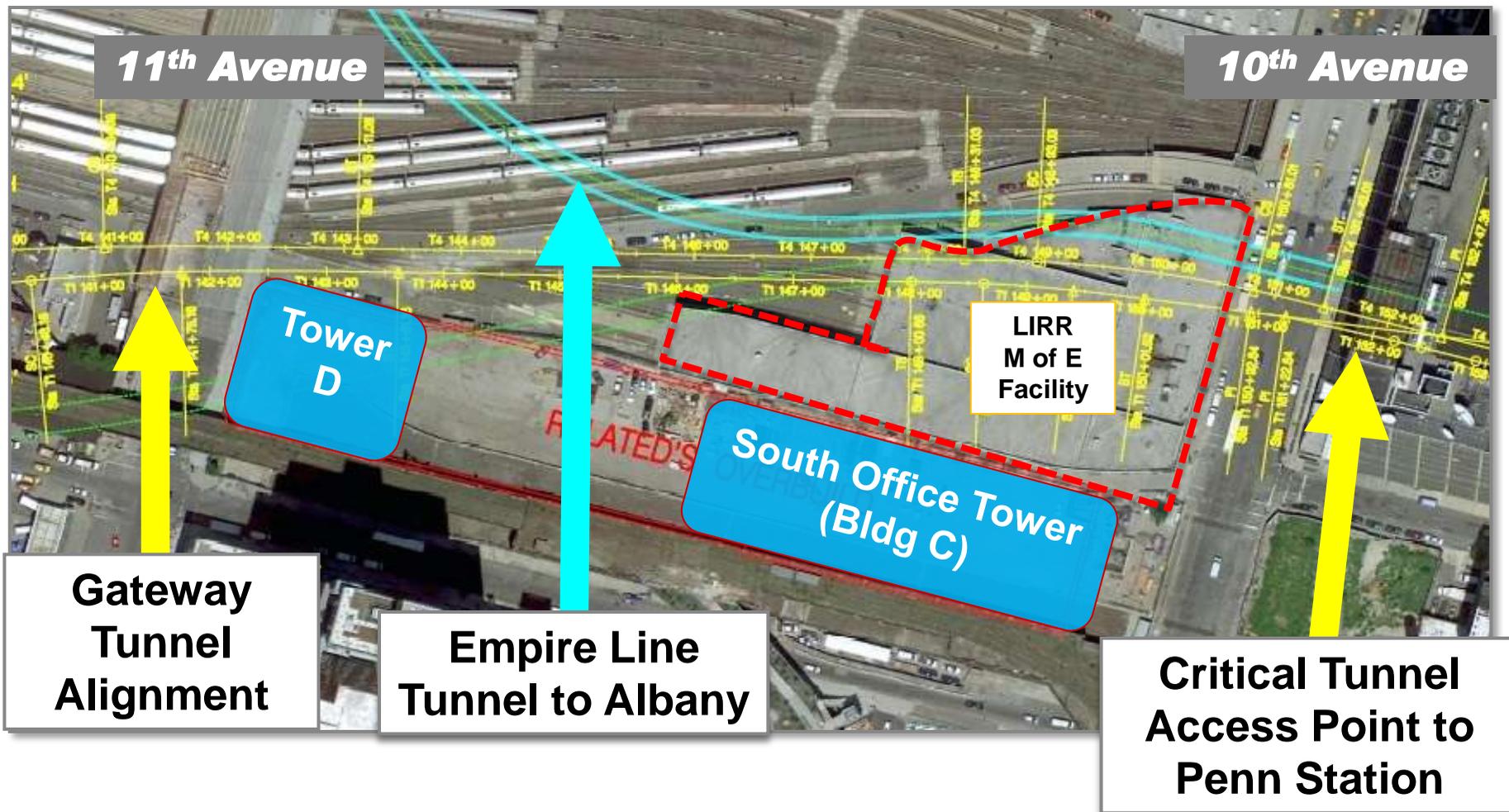
LIRR West Side Yards Today



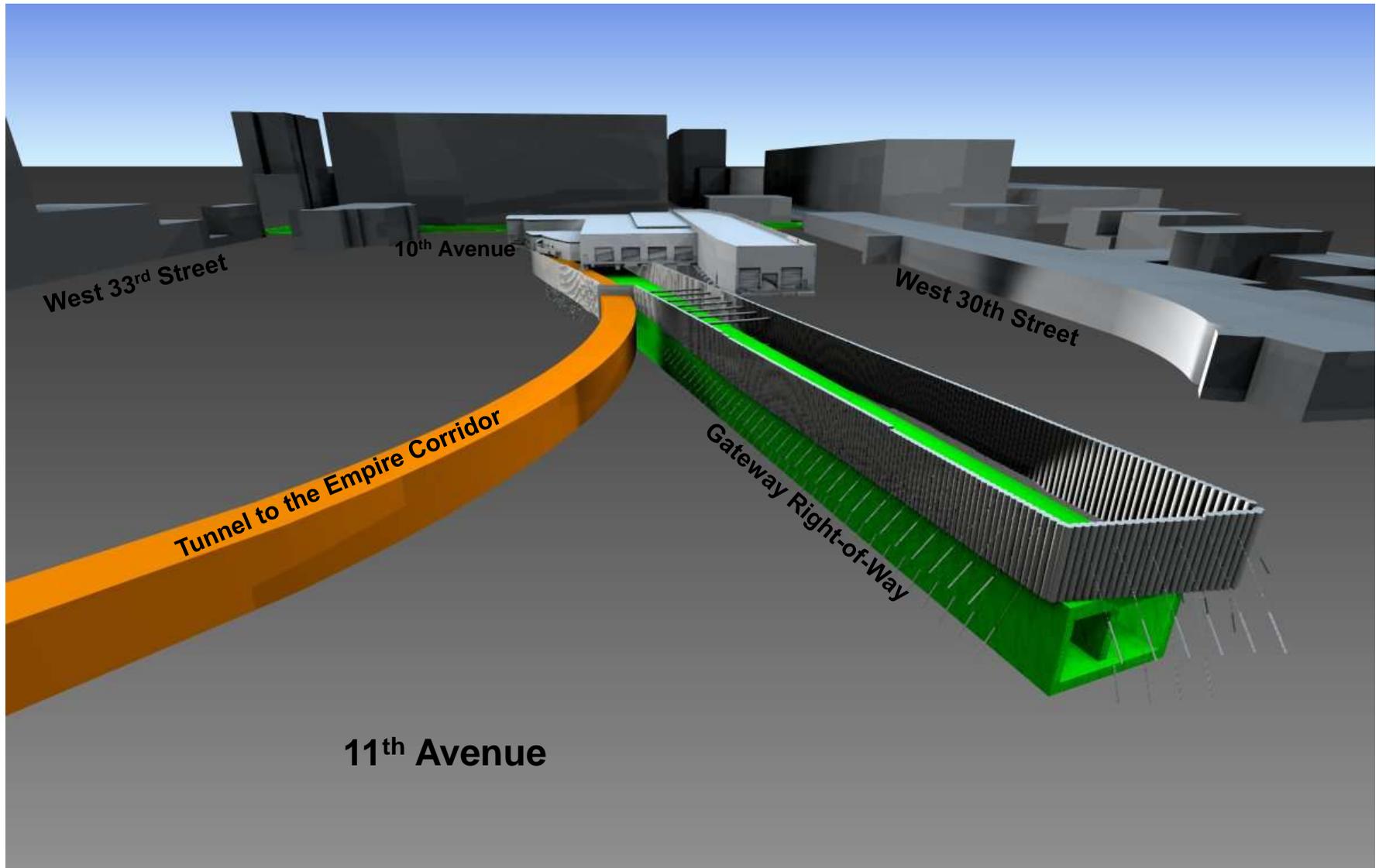
Hudson Yards Tomorrow



# 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.**