# A Through-Running Future for Penn Station: Takeaways from FRA's Phase 1 Report

Karim Ahmed
Dr. Robert Paaswell
Eugene Sinigalliano
Sam Turvey

**Presentation to High Speed Rail Alliance**
**October 9th, 2026**



ReThinkNYC

# Who are We?



**Karim Ahmed**
*Senior Transportation Advisor*, ReThinkNYC;
*Principal*, Reform Architecture, PLLC ;
*B. Arch. Cooper Union*



**Scott Bernstein**
*Founder and Emeritus*, President of Center of Neighborhood Technology;
*Co-founder and Chair,* Surface Transportation Project;
*B.A. Northwestern, Engineering and Political Science*



**Dr. Robert Paaswell**
*Distinguished Professor of Civil Engineering Emeritus*, City College;
*Former Head*, Chicago Transit Authority;
*Director Emeritus*, University Transportation Research Center, City College (DOT Region II);
*BA. and BS. Columbia University, Phd. Rutgers University*



**Samuel Turvey**
*Chairperson*, ReThinkNYC;
*Coordinator*, Empire Station Coalition;
*Lead*, Penn Community Defense Fund;
2025 City and State magazine Transportation Trailblazer;
*BA. Urban Affairs, Fordham College, JD. Fordham University School of Law*.

# What are We Advocating For?

## The Same Connectivity Our Subways Brought to Our Outer Boroughs, to Our Outlying Counties Across State Lines



# What are We Advocating For?

## An Answer to the Question "Can it work?"

**Complete RTC simulations are still missing in action to resolve the terminal track/hybrid/full through-running debate at Penn Station**

- Competing demands for track space require an accepted baseline of knowable facts.
- We need to model terminal south of the station, full symmetrical through-running and even a hybrid option

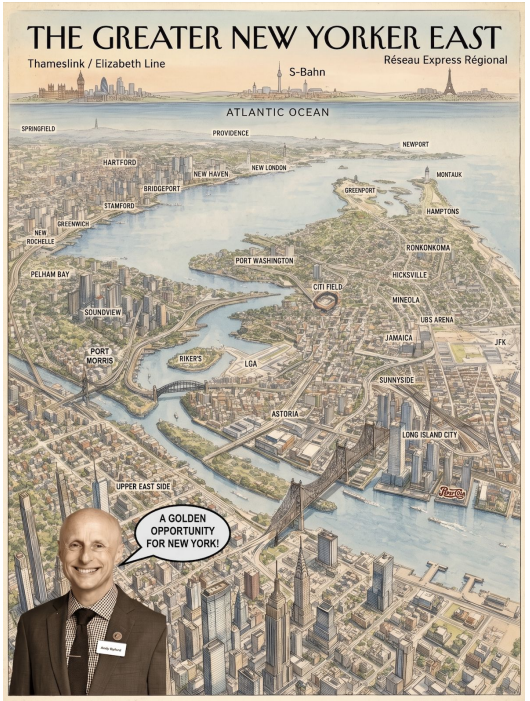
***The Railroads used RTC software in these major recent infrastructure projects:***

- Penn Station Access, enabling New Haven Line trains to serve Penn Station
- The LIRR's Third Main Track expansion between Floral Park and Hicksville
- The LIRR's proposed infrastructure changes at Jamaica
- East Side Access, bringing the LIRR into Grand Central Terminal
- Expanded Empire Corridor Service (8 simulations pending)
- Scranton to Penn Station Service (pending)
- Gateway/Penn Station/Penn Southern Expansion and/or through-running (limited)

# What are We Advocating For?




**A Unified Regional Transit Network That Recognizes and Leverages the Polycentric Region that We Are**



# Back to Some Basics-Dr. Robert Paaswell

- Through-running is the **global standard**:
  - Rail networks across the EU and Asia have demonstrated this. Philadelphia and Toronto have through-running. London is on its third generation.
- Penn Station is the **hub of Northeast Rail connectivity**, centered in the world's financial capital
- Modern rail is essential for this region to to stay **globally connected**
- Benefits: improved **housing creation**, **fluid labor markets**, and **broader growth**

"Improved regional access via through-running leads to improved regional economies and competitiveness"

- Dr. Robert Paaswell

# Other investments are similar:

The Greater NYC region has been making significant investments in growing regional connectivity and accessibility.

- Port Authority Bus Terminal: Full redesign and replacement
- LGA and JFK Airports: Terminal rebuilds
- The Port: Dredging and loading equipment for modern super freighters
- AMTRAK: Rolling stock modernization for faster, more efficient fleet

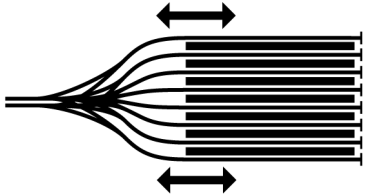
Penn Station cannot be left behind. As the heart of our regional transit system, it needs modern 21st century approaches to improved capacity and accessibility. Through-running is an essential component of modernization and building rail connectivity

# Through-Running Completes the Northeast Corridor

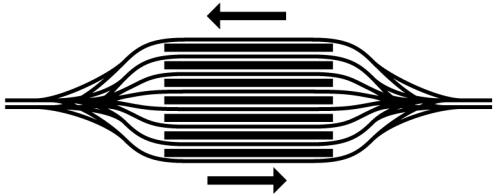
**One integrated system** (intercity rail, commuter rail, urban transit) centered on the nation's financial capital.

**Builds on Amtrak's system improvements**, including total modernization of their rolling stock.

Already the major choice intercity mode (over air), an upgraded rail system will **sustain and continue to grow regional activities** and economics.



TERMINAL STATION



THROUGH-RUNNING STATION

# Through-running?

## *The opportunity of the century created by ReThinking how we deploy commuter trains at New York Penn Station*

### Connectivity/Non-Demolition Plan:

Connecting hubs to drive regional growth without the public opposition and litigation delays of demolition. See **Appendix A**

### Cost-Effective Alternative:

At **$10 billion** it looks to cost potentially $8 to $10 billion less than the Railroads' current $17 billion "deep cavern" proposals. See **Appendix B**

### A Transformative Solution Compared to Railroads' plans:

For a complete comparison of ReThinkNYC's benefits–transit, economic, environmental and to quality of life– to Railroads' proposals to date, see **Appendix C**

### Modern Platforms/Vertical Circulation/Constructability:

The phased widening of antiquated, narrow platforms can be implemented while keeping the station fully operational. See **Appendix D**

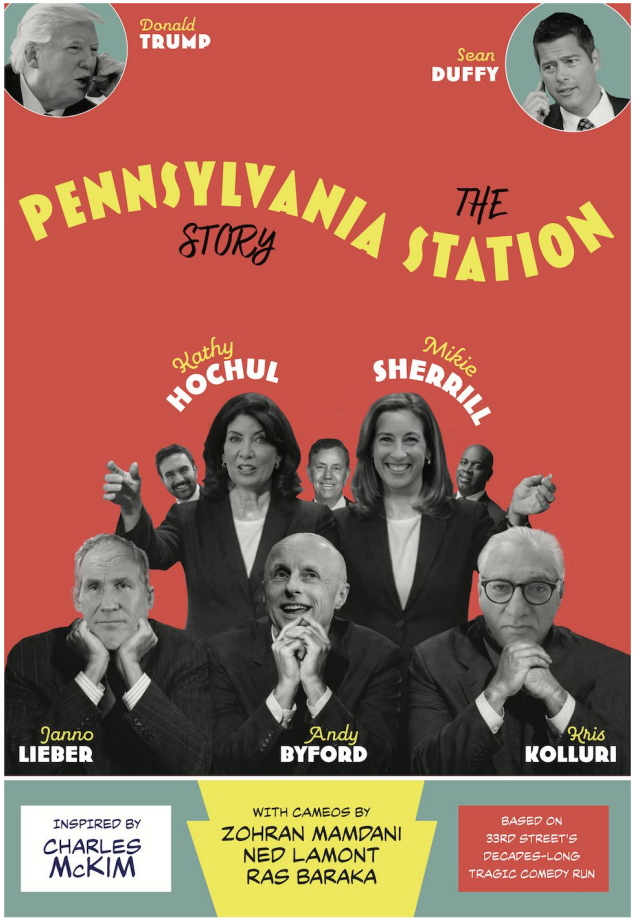
# The FRA Penn Station Service Optimization Study- Phase 1 Report (June 2026):

***Piercing the Decades Long Cone of Silence and Disinformation on Through-Running***



# A Few Key FRA Phase 1 Findings We Were Very Pleased to See

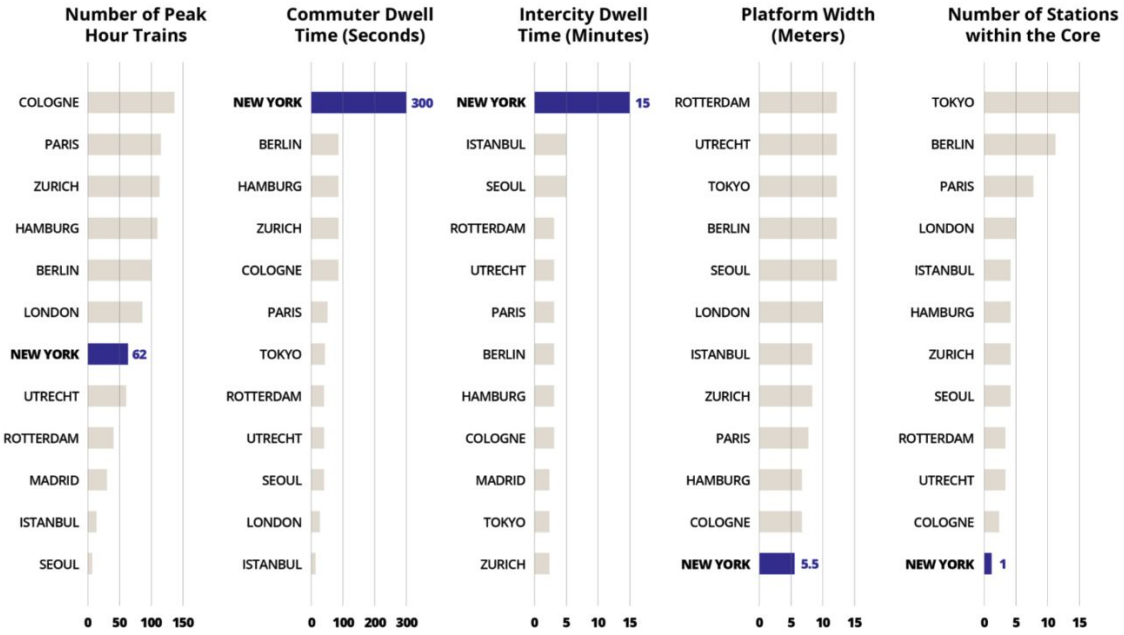
***(In Addition to The FRA's Longstanding Official Guidelines Favoring Through-Running)***




**Karim Ahmed**

# 1. Comparative Platform & Dwells

Figure 8: Comparing New York Penn Station to International Peer Rail Stations in Selected Cities




Source: Respective Station Plans and Timetables

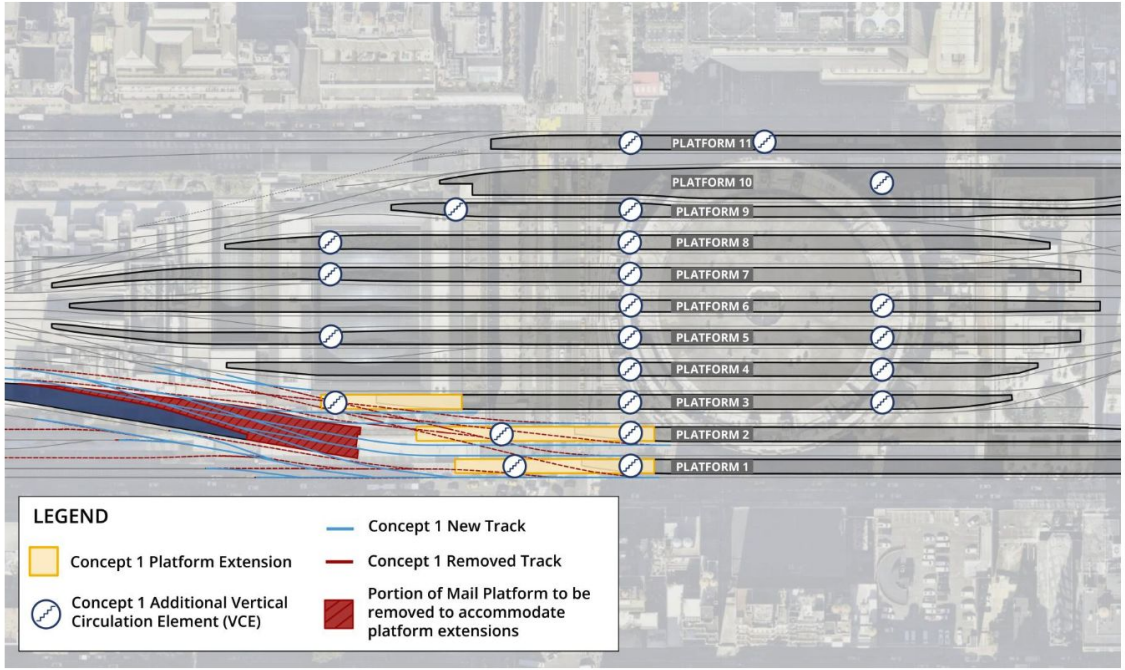
# 2. Service Optimization

**Table 2: Summary of Passenger Service Time Improvements Across Platforms (Baseline vs. Circulation Optimization Scenario)**

| Operator and Service Type | Service Time Across Platforms | | Improvement | |
|---|---|---|---|---|
| | Baseline Scenario (Maximum passenger service time in minutes) | Circulation Optimization Scenario (Maximum passenger service time in minutes) | Maximum Service Time Reduction | Average Across Platforms (in minutes) |
| **Amtrak NEC and Empire Service** | 19.3 | 10.2 | 45% | 7.0 |
| **NJ Transit (Drop and Go)**[16] | 7.9 | 5.7 | 31% | 1.5 |
| **NJ Transit (Load and Go)**[17] | 11.2 | 6.0 | 43% | 3.6 |
| **NJ Transit (Turn)** | 11.4 | 9.0 | 15% | 1.3 |
| **Commuter Revenue Through Service** [18] | 13.1 | 10.0 | 20% | 2.0 |
| **LIRR (Drop and Go)**[16] | 7.3 | 5.3 | 25% | 0.8 |
| **LIRR (Load and Go)**[17] | 7.6 | 6.3 | 10% | 0.7 |
| **Commuter Revenue Super-Wide Platform**[19] | 9.0 | 2.4[20] | 71% | 6.0 |

# 3. Platform Reclamation & Alignment

**Figure 11: Penn Transformation Improvements – Proposed VCE Additions**




Source: FRA Study Team

# 4. Putting Penn Expansion Block 780 Into Context

> “These targeted improvements within the existing Penn Station complex, combined with operations changes, could increase total cross-Hudson rail capacity from 24 TPHPD to up to 32 TPHPD in the AM peak (up to 30 TPHPD in the PM peak). These improvements could provide up to a third of the additional capacity envisioned under the previous Penn Station Expansion project at a fraction of its estimated $16.7 billion cost.”

# The "Big Four Takeaways" From Our Perspective Post FRA Phase 1 Study

1. The need for **48 trains per hour** (as opposed to the 32 train per hour construct in the FRA Study) will likely be front and center in the continuing dialogue based on the **capacity increases made possible by the Gateway Tunnels and latent demand** (there are some 400,000 cross regional commuters in the region today). The states need to do more than identify the need. They need to champion and invest in modern solutions including through-running not expensive retrograde band aids (deep cavern terminal track solutions). 32 Trains per hour leaves 2/3rds of the new Gateway Tunnel capacity on the cutting room floor.
2. ReThinkNYC's "constructible" full through-running plan is an **adaptive reuse strategy that gets to 48 TPH** and **only looks to remove 150 to 200 columns** even though it **widens platforms–all without service interruptions.**
3. The FRA Phase 2 look at **benefits and a demand study** should be looking to an **expanded core** where Newark, Sunnyside (think Canary Wharf), and other centers of activity are seen as part of a **polycentric transit strategy**. Any demand studies should expressly take polycentricity fully into account.
4. We think the Surface Transportation Reauthorization Act should direct the Northeast Corridor Commission to conduct a **study analyzing the potential impacts of through-running service implementation** at New York Penn Station. The NECC can point to successful precedents at 30th Street/Philadelphia, Trenton and elsewhere.This should facilitate better multi-state cooperation to through-running solutions.

# A FRA Phase 1 Finding* We Challenge: Where Have All the Columns Gone?

**4.3.1:** The "One Fully Integrated Station" concept investigated how a fully integrated through-running station with platforms and tracks redesigned beyond the constraints of the existing column structure could maximize capacity. These operating concepts assumed a fully integrated, regionally coordinated through-running service plan, which could enable much shorter dwell times. This has potential capacity much higher than any other approach reviewed in this study.

Achieving the uniform platform widths required to support this level of operation would necessitate removal of structural columns and major reconstruction affecting MSG, Moynihan, 2 Penn Plaza, the Farley Office Building and the 7th and 8th Avenue subway lines, making the concepts too disruptive and costly compared to possible benefits. As a result, the Study Team eliminated all operating concepts for the "One Fully Integrated Station" concept.

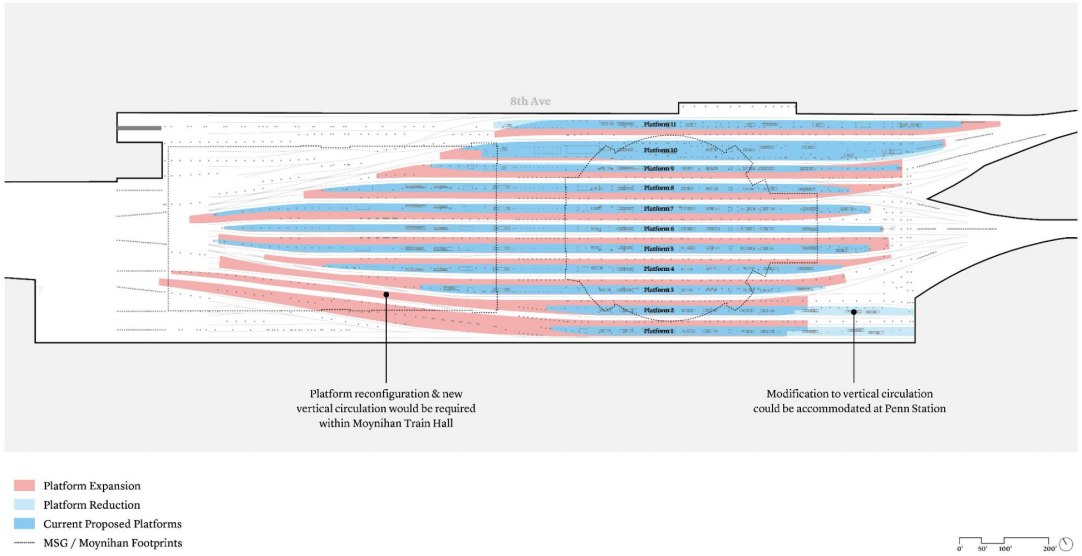
***For more, see our Incredibly Shrinking Objection Number 10, "Where Have All the Columns Gone" as well as a complete set of Incredibly Shrinking Objections available in Appendix F at the end of this presentation***

# HOK 2024 Slide on ReThinkNYC's Through-Running Proposal

## Through-Running Considerations

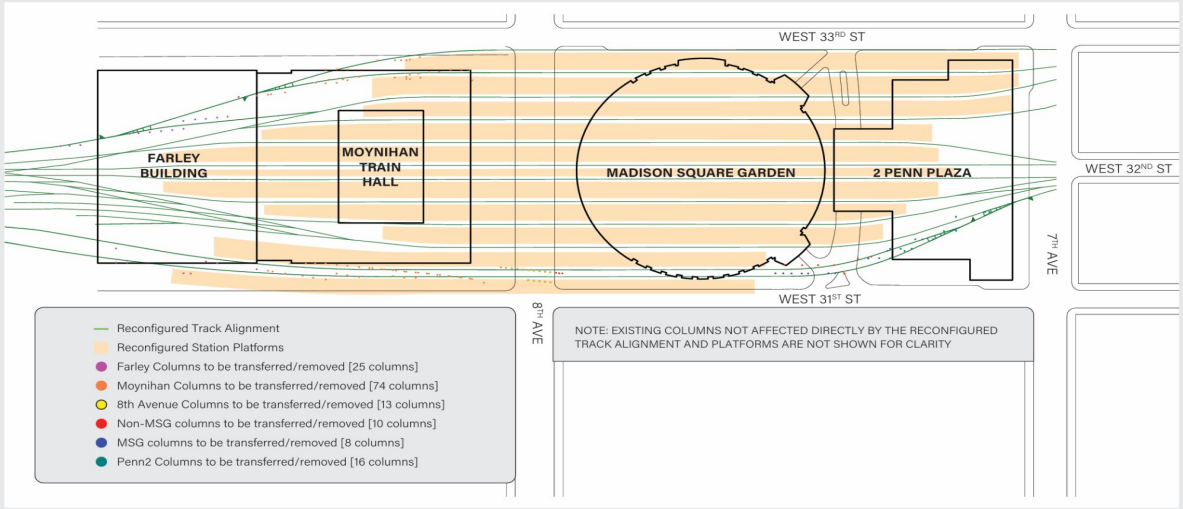
- Significant political, jurisdictional, procedural, and operational impediments would need to be addressed.
- Reconfigured platforms would require some new platform vertical circulation within the Moynihan Train Hall and the West End Concourse (Platforms 1, 2, 3, 10, 11, & 12).
- Modifications to the Penn Station platform vertical circulation could be accommodated as part of the ASTM proposal, as required.
- Standardized rolling stock, electrification, and platform/track/signal design would be required.

## Platform Modifications Capability for Through-Running



# WSP 10/2024: ReThinkNYC's 12-track/ "Limited Reconfiguration" solution is "constructible" and can service at least 40 Peak Hudson River Trains Per Hour using Conservative Assumptions

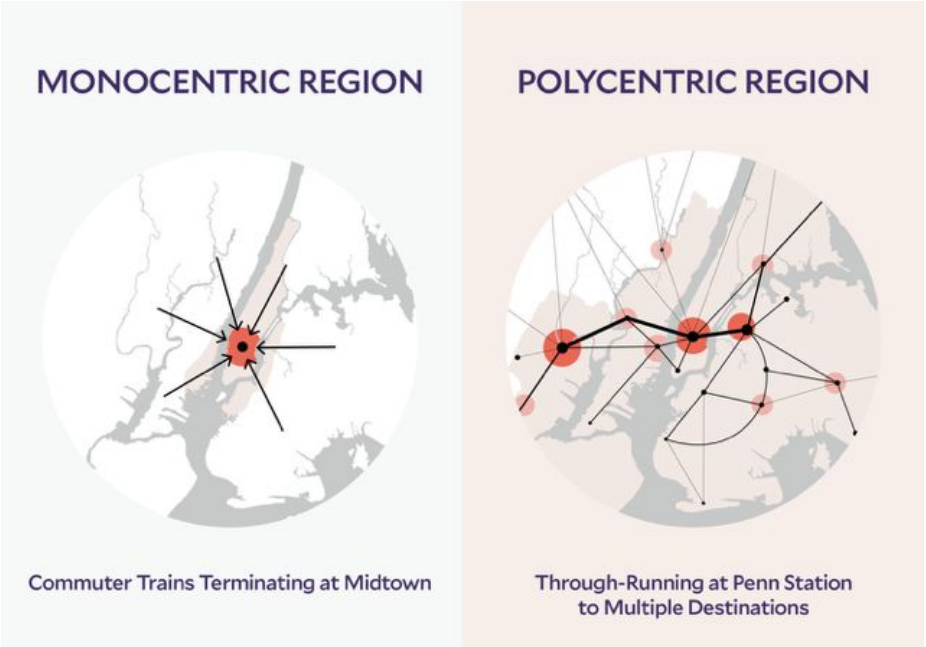
Figure 5-31
**Structural Columns Within Penn Station Requiring Removal, Relocation, or Transfer**
**Alternative 2, Design Concept 2**



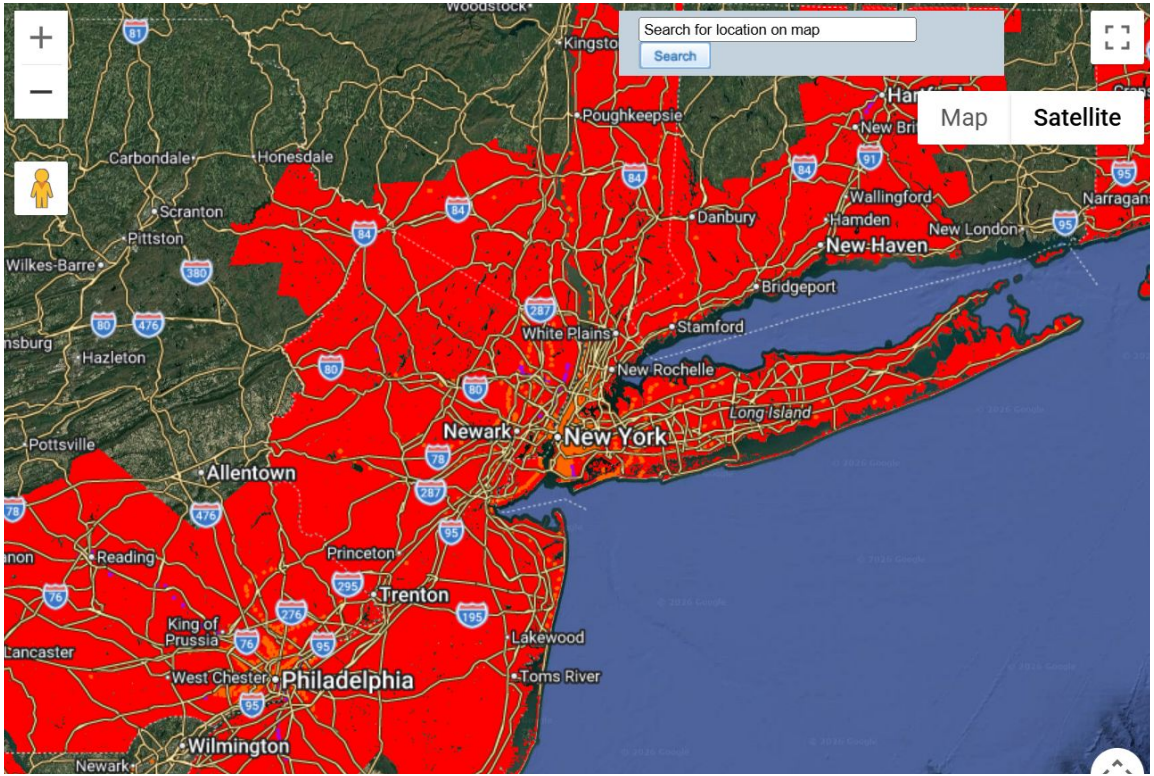

***Only 146 columns are removed above as per FX Collaborative/WSP***

# The Upcoming Demand Studies: Need to Model Polycentricity

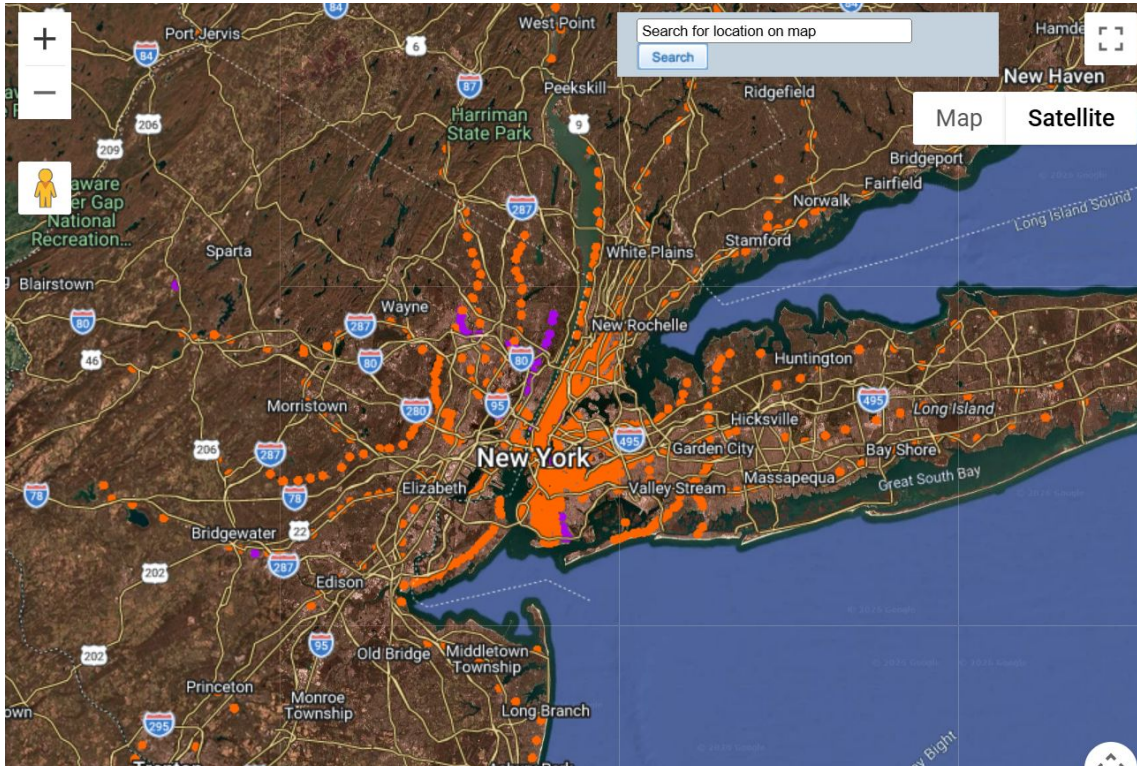
**Scott Bernstein**



# Existing Transit Served Area of the Polycentric Multi-State Region



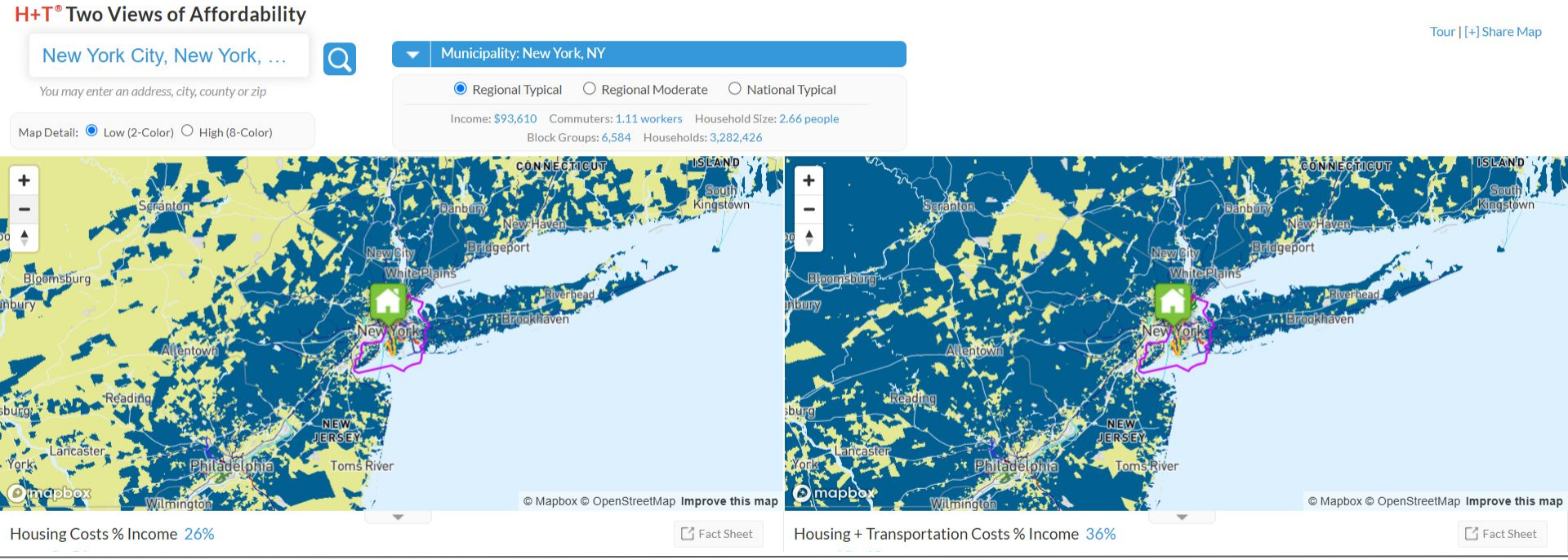
# Locations of Fixed Guideway (Rail Stations)



# Two Views of Housing + Transportation Affordability in the Region

*Yellow signifies affordability. Improved transit leads to increased affordability for millions of households, not only for commuters*

***Three car families might only need one car or none with Through-Running***



# 206,692

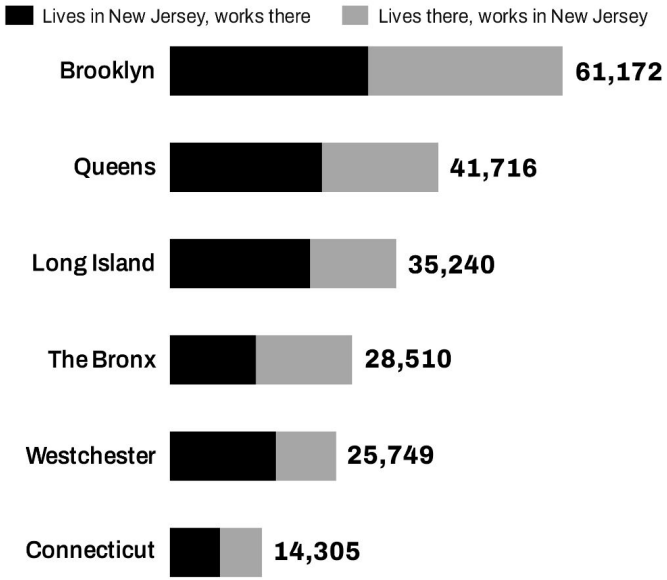
## home–work links connect New Jersey with six markets beyond Manhattan.

**114,180** New Jersey residents hold private-sector jobs in Brooklyn, Queens, Long Island, the Bronx, Westchester and Connecticut. **92,512** residents of those places work in New Jersey. These ties persist despite disjointed and disconnected commuter rail; easier (and saner) trips can be expected to drive growth in these patterns.

**Today, NJ TRANSIT and LIRR passenger services terminate at Penn, and Metro-North's planned Penn service would too. Through-running would allow selected trains to continue beyond Penn.**

**Two-way home–work links with New Jersey**

Private-sector primary jobs, 2023




**Analysis by Liam Blank (liamblank.com) and Francesca Hales (ReThinkNYC).** Source: U.S. Census Bureau, LEHD Origin-Destination Employment Statistics (LODES 8), 2023, private-sector primary jobs (JT03). Counts link where people live to where they work; they do not measure daily trips, travel mode, Penn Station use or ridership.

**Methodology: tinyurl.com/through-running**

# Impacts and Affordability

- Aggregate “leakage” to pay for an extra car per household
- Traffic, congestion, emissions
- Land use and parking
- Making more of the existing system could potentially recover tens of billions of dollars annually

- Produces a more effective polycentric region (the non-NYC regions become larger destinations too)
- Provides a brake on continued sprawl
- System-level changes can help do this, such as through-running, increased service frequency, & planning with optimal land-use in mind
- **Can generate an increase in desperately needed housing starts**

# Newsday Editorial Board, September 15, 2026

***Through-running, championed by a nonprofit called ReThinkNYC, could have larger implications too, providing a one-seat ride from Nassau and Suffolk counties to New Jersey, benefiting sports fans heading to football or hockey games, or Long Islanders with jobs, family or friends in the Garden State. (emphasis supplied)***

***It is a big idea worth consideration and study by the Metropolitan Transportation Authority and Amtrak, the national passenger rail system that owns Penn Station.***

# Closing Thoughts

## Using the Best Tools and Thinking Available Matters



# Closing Thoughts



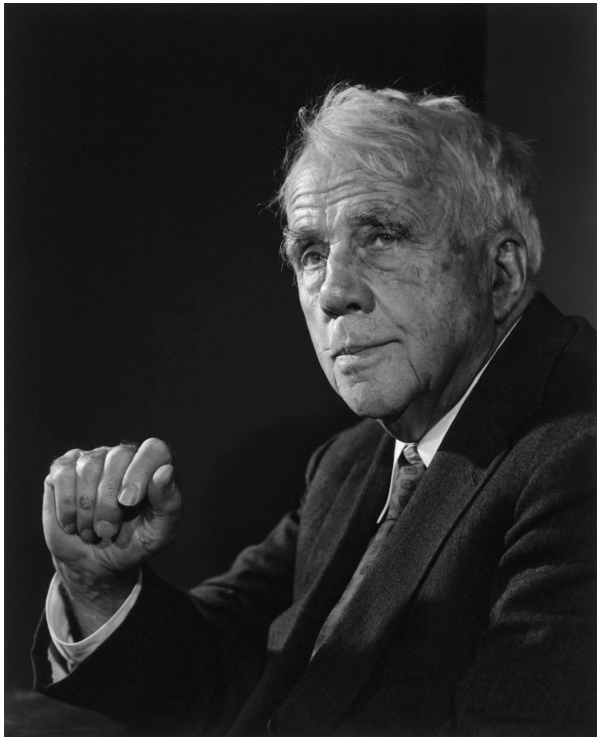
**Dwight D. Eisenhower told John F. Kennedy that the Allies won at D-Day because "we had better meteorologists than the Germans."**

## Closing Thoughts

The Hudson River is not the English Channel but our Poet Laureate Robert Frost was right:

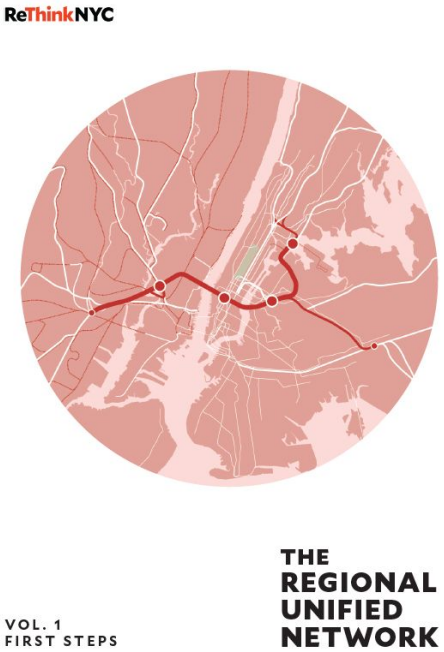
# “The best way out is always *through*”

Art sometimes imitates life, even on scientific matters



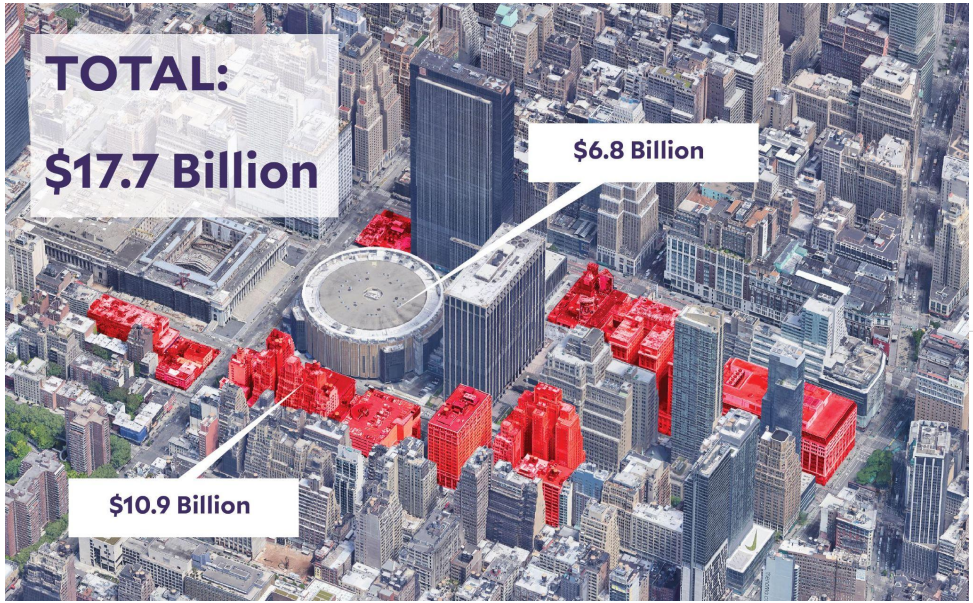
# Appendix A

[ReThinkNYC Regional Unified Network 34]



# Appendix B
# ReThinkNYC's Cost Comparison with Penn Terminal Track Expansion

# Empire Station Complex: Cost Analysis




| | | |
|---|---|---|
| Gateway: Penn Station Expansion | NY | $9.15 |
| Gateway: Penn Station Expansion Property Acquisition | NY | $1.75 |
| Penn Station New York: Reconstruction Master Plan | NY | $6.53 |
| Penn Station New York Reconstruction Master Plan Property Acquisition | NY | $0.25 |

Source: ConNECt 2035, Northeast Corridor Commission, July 2021

Page 182

# Gateway Program Budget[1]

## Penn South

- **Acquisition ($1.75 Billion)**
- **Construction ($9.15 Billion) [May be $17 Billion with new talk of larger Penn South]**

## Empire Station Complex

- **Acquisition ($.25 Billion)**
- **Construction ($6.53 Billion)**

**TOTAL: $17.7 Billion**

1. CONNECT NEC 2035. http://nec-commission.com/app/uploads/2021/07/CONNECT-NEC-2035-Plan.pdf

## Hudson River Tunnels

- **Hudson River Tunnels ($11.6 Billion)**

## Other Systemic Improvements Included in the Gateway Program

- **Highline Renewal and State of Good Repair ($.24 Billion)**
- **Secaucus Station and Loop Tracks ($1.62 Billion)**
- **Portal North and Portal South ($5.57 Billion)**
- **Sawtooth Bridge ($1.44 Billion)**
- **NJT Storage Yard ($1.88 Billion)**
- **Dock Bridge Rehabilitation ($.05 Billion)**
- **Harrison Fourth Track Phase 1 ($.08 Billion)**

**TOTAL: $10.88 Billion**

# Value for Budget

## Penn South[1]

- Acquisition ($1.75 Billion)
- Construction ($9.15 Billion)

## Empire Station Complex

- Acquisition ($.25 Billion)
- Construction ($6.53 Billion)

**TOTAL: $17.7 Billion**

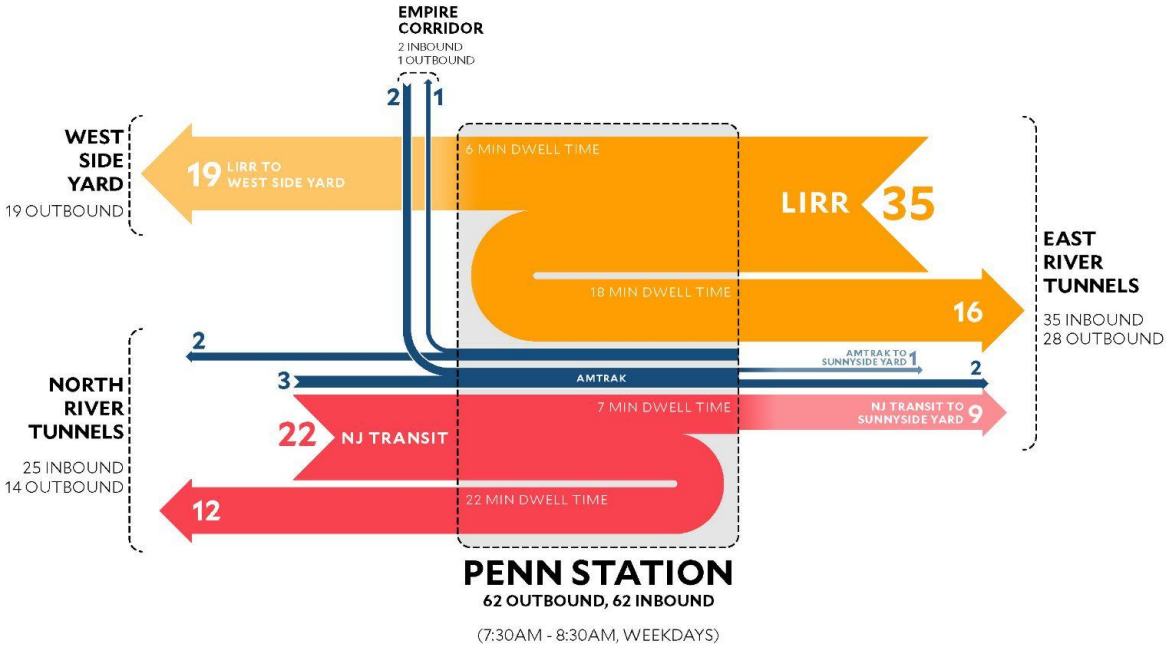
## Through-Running Penn & Outside Work
**(ReThink Proposal, full T.R. @ NY Penn Station)**

- Improvements to Track Alignments and Platforms at NY Penn Station ($4.5 Billion)
- New Sunnyside Station ($0.075 Billion)
- New Station at Port Morris & Cross-Bronx Tunnel ($1.5 Billion)
- East of NY Penn Yard ($1.5 Billion)
- Other System Improvements beyond Gateway Program (20% allowance for adjustments to existing proposals[2] - $2.175 Billion)

**TOTAL: $9.75 Billion**

Such as improvements to Rolling Stock Secaucus Junction & Loop, Yard that are proposed as part of the Gateway Program, but would need further scope beyond what is planned in order to accommodate through-running service.

# EXISTING


EMPIRE CORRIDOR
2 INBOUND
1 OUTBOUND
2
1
WEST SIDE YARD
19 OUTBOUND
19 LIRR TO WEST SIDE YARD
6 MIN DWELL TIME
LIRR 35
EAST RIVER TUNNELS
35 INBOUND
28 OUTBOUND
18 MIN DWELL TIME
16
2
AMTRAK TO SUNNYSIDE YARD 1
3
AMTRAK
2
NORTH RIVER TUNNELS
25 INBOUND
14 OUTBOUND
7 MIN DWELL TIME
NJ TRANSIT TO SUNNYSIDE YARD 9
22 NJ TRANSIT
22 MIN DWELL TIME
12
PENN STATION
62 OUTBOUND, 62 INBOUND
(7:30AM - 8:30AM, WEEKDAYS)

# Appendix C

## The Benefits Comparison
## ReThinkNYC Plan vs. Railroad Proposals

# The Benefits Comparison

**Through-Running (ReThinkNYC):**

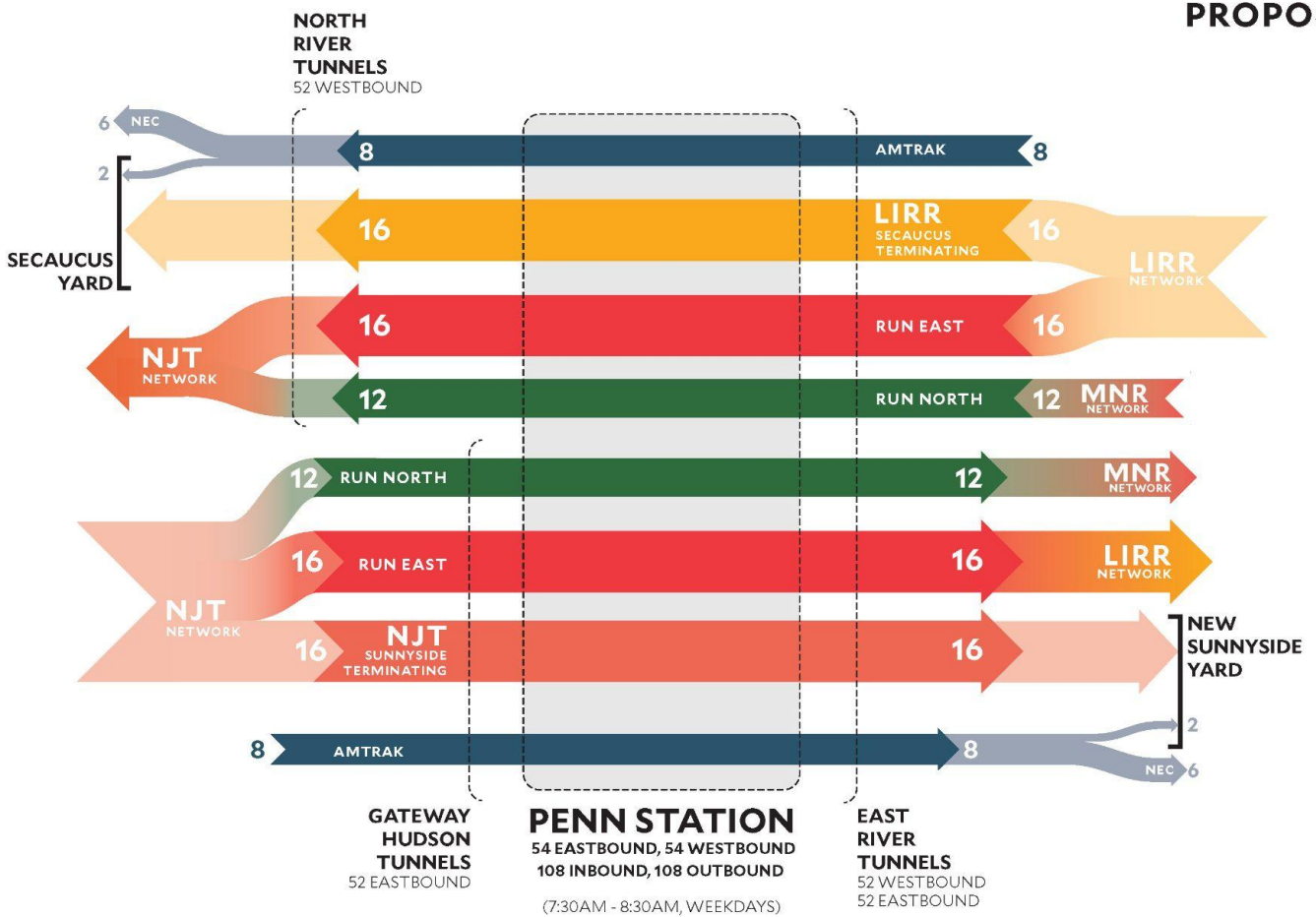
- Greatly increased connectivity for 20 million plus regional residents
- Increased capacity for NJT (42-52 peak TPH) and LIRR (6 peak TPH)
- Better safety as a result of improved vertical circulation (retire 1910 station platforms)
- More equitable and sustainable growth pattern for the region, expanding the region's core
- Relieving pressure to cannibalize midtown Manhattan for supertalls
- Implementation contemporaneously with opening of Gateway (2040). Systems integration work can proceed while tunnels are being built
- No need to demolish the neighborhood adjacent to Penn Station/More favorable impacts on embodied carbon release
- Increase economic relevance of Newark, Paterson, Passaic, Sunnyside, Mineola, Yonkers, White Plains, Stamford, etc.

**Southern Penn Expansion (Amtrak MTA and NJ Transit):**

- Increased capacity for NJT (48 TPH). No increased capacity for LIRR

# Appendix D
# ReThinkNYC's Implementation Plan for Through-Running at Penn Station

# PROPOSED






ReThinkNYC

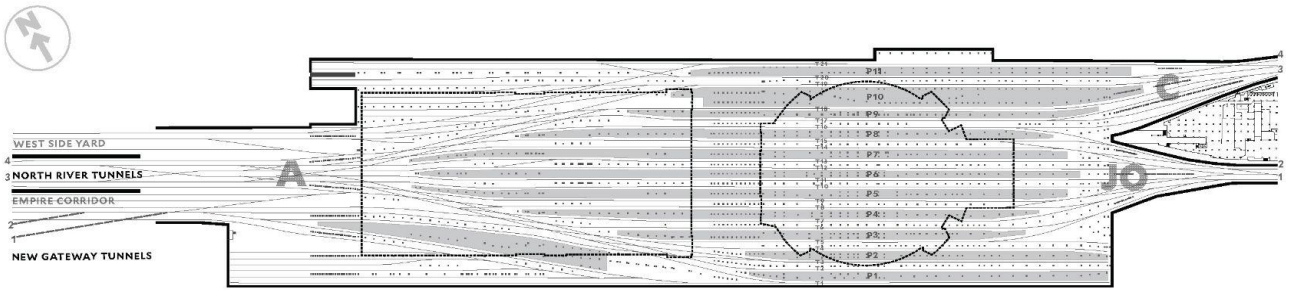
# EXISTING CONDITIONS

**SCALE 1:2500**

Existing based on:

Penn Station Track System. *Amtrak*. Retrieved: 6/29/2017.

MTA Board - Metro-North/LIRR Committee Meeting - 04/24/2017. *Metropolitan Transportation Authority*. Retrived: 6/29/2017



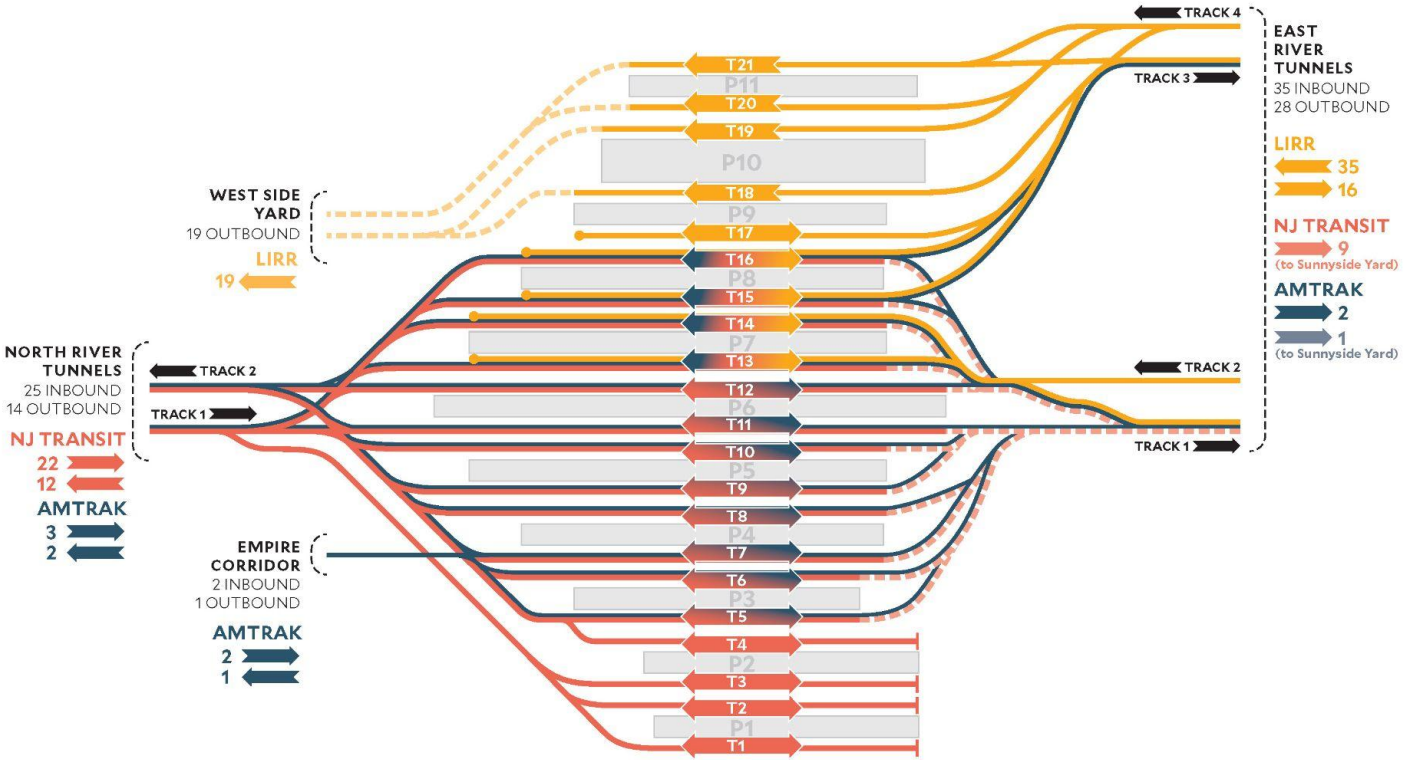

KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing Stairs & Escalators (Post Moynihan) |
|---|---|---|---|---|
| 1 | 16,235 | 16,235 | 0% | 8 |
| 2 | 15,005 | 10,804 | 0% | 8 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 14,829 | 0% | 9 |
| 10 | 42,863 | 42,863 | 0% | 9 |
| 11 | 17,348 | 17,348 | 0% | 8 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE




(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

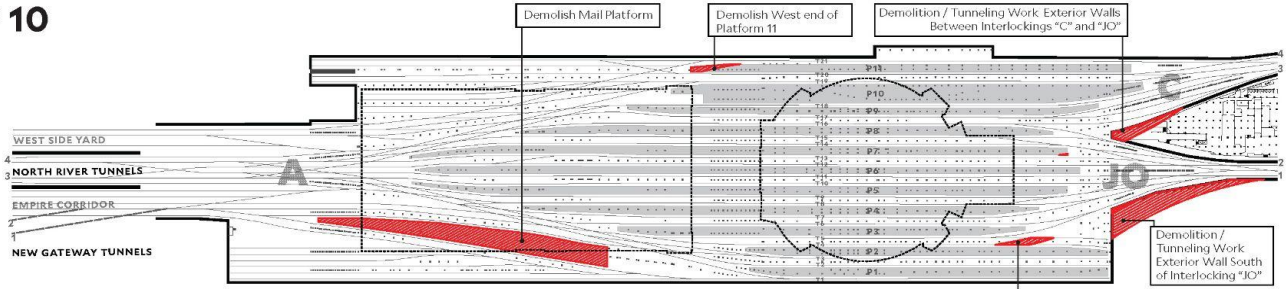
# PHASE 1 OF 10

## PLAN

SCALE 1:2500

## A

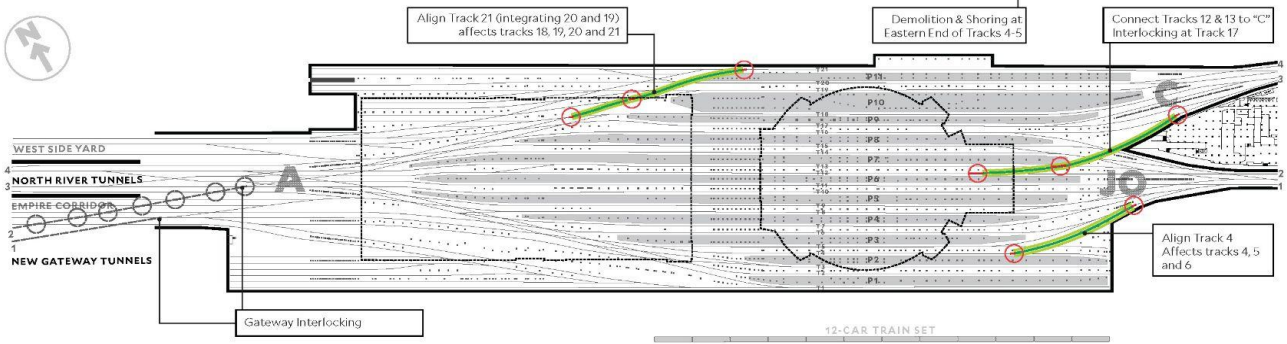
DEMO / OUT OF SERVICE




## B

CONSTRUCTION

Note: Completion of Phase 1 A & B to precede or coincide with operational status of all 4 Hudson River tunnels.



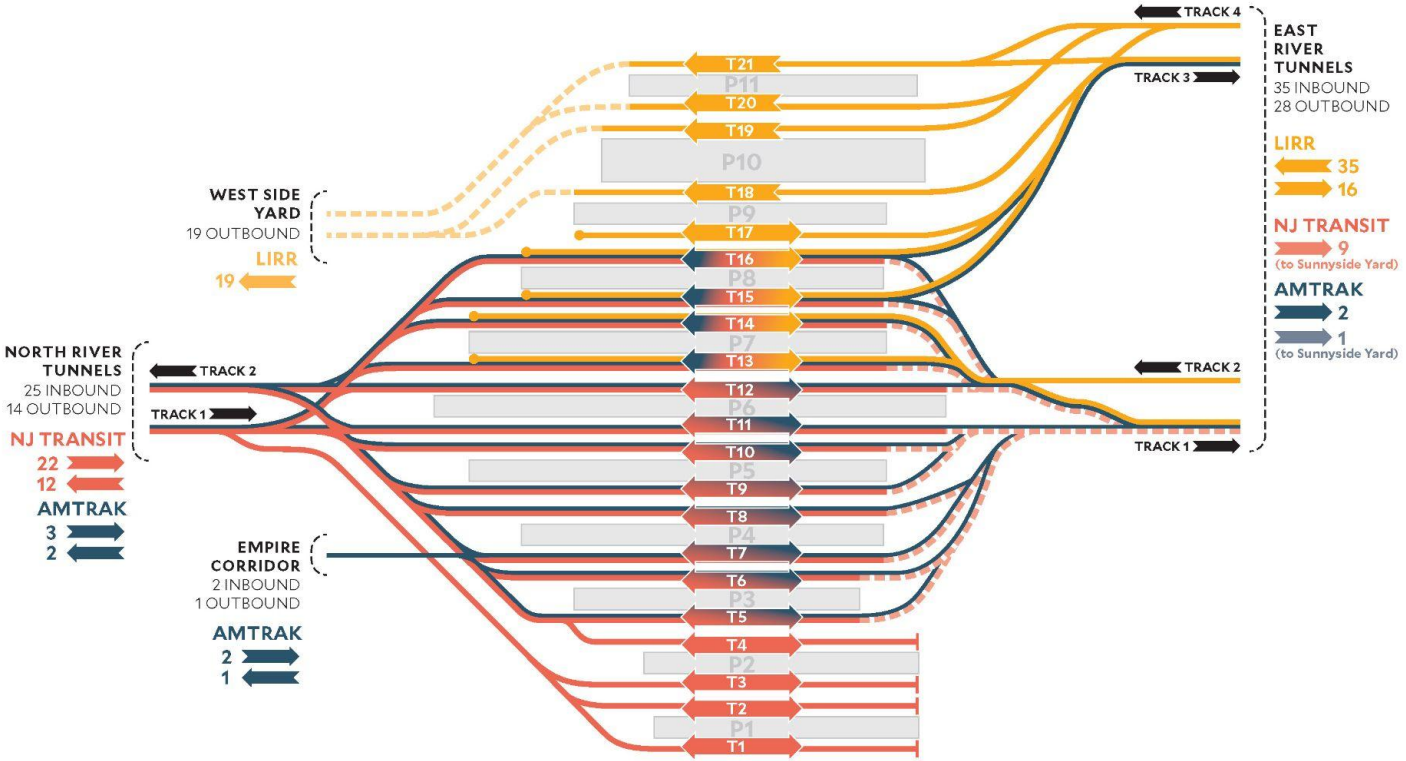

KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 16,235 | 0% | 8 |
| 2 | 15,005 | 10,804 | 0% | 8 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,997 | 20,997 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 14,829 | 0% | 9 |
| 10 | 42,863 | 44,794 | 5% | 9 |
| 11 | 17,348 | 16,371 | -6% | 8 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE




(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

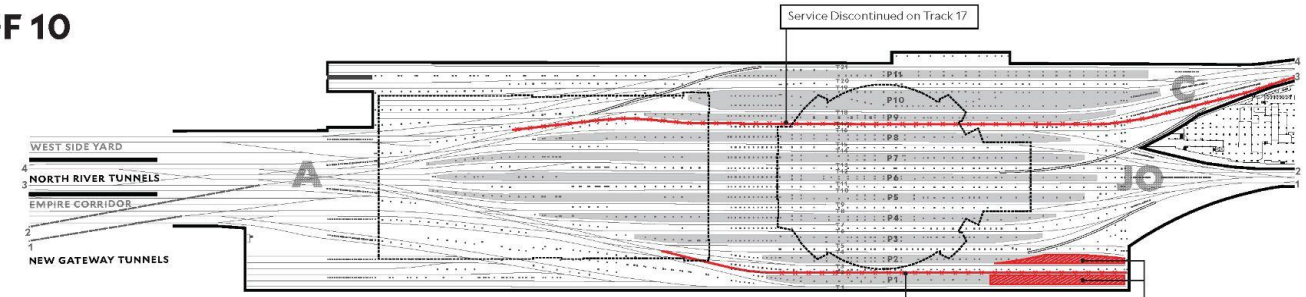
# PHASE 2 OF 10

## PLAN

SCALE 1:2500

## A

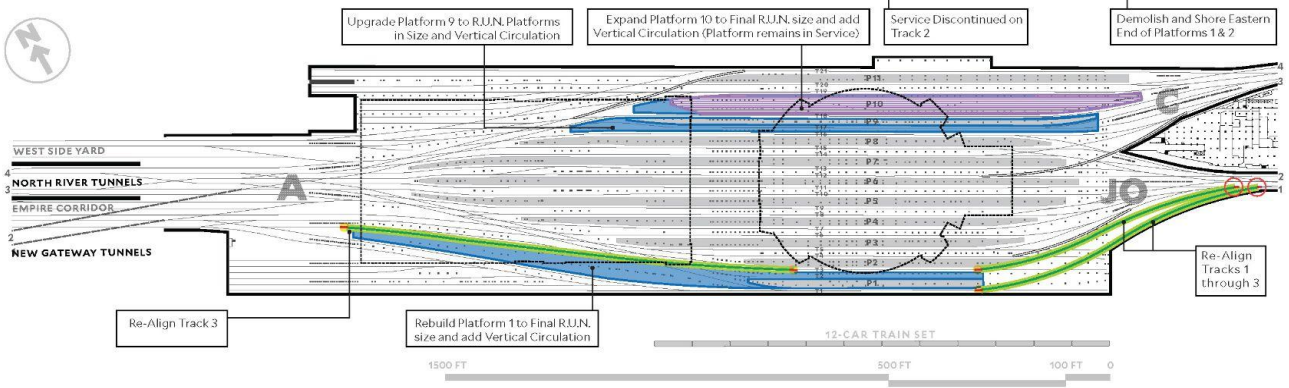
DEMO /
OUT OF SERVICE




## B

CONSTRUCTION

Begin Thru-Running Per
*"Analyzing The Potential for Commuter Train Run-Through Service At New York Penn Station"*




KEY

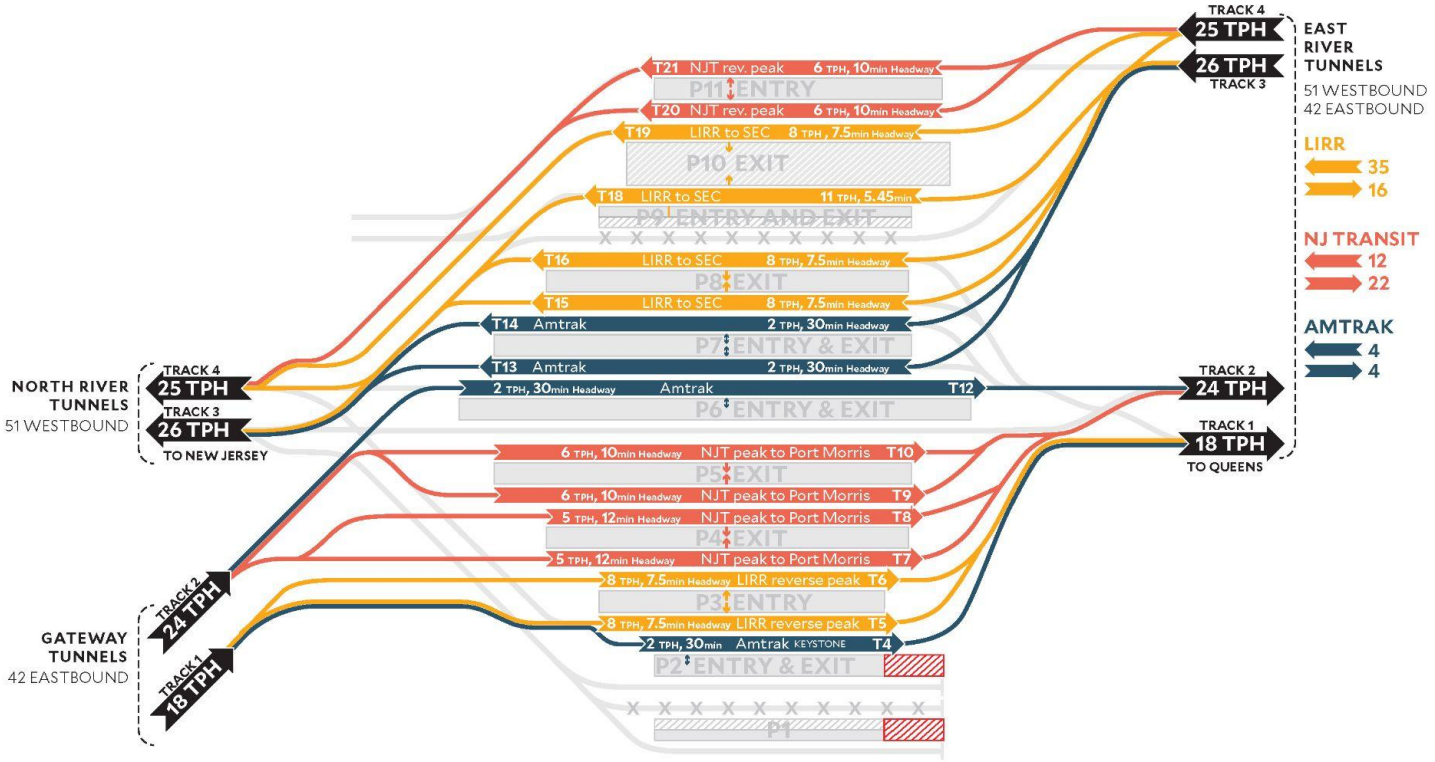
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49595 | 205% | 20 |
| 2 | 15,005 | 10,804 | -28% | 8 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 16,371 | 0% | 8 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

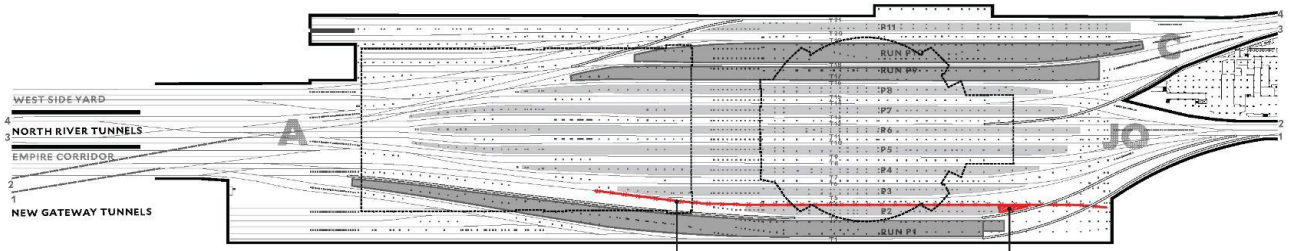
# PHASE 3 OF 10

## PLAN

SCALE 1:2500

### A

DEMO / OUT OF SERVICE



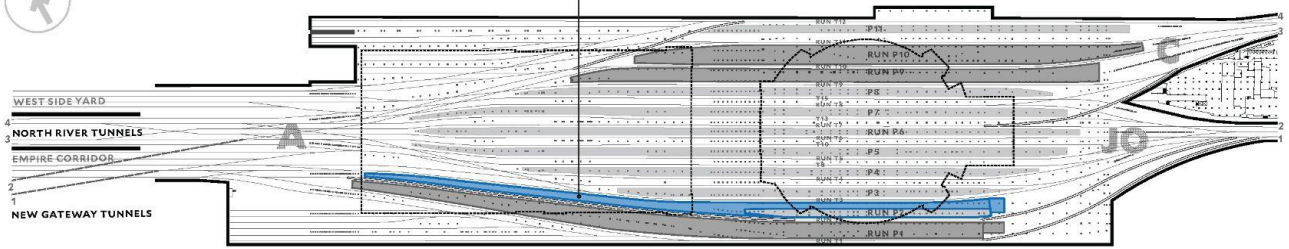

Upgrade Platform 2 to R.U.N. Platforms in Size and Vertical Circulation

Service Discontinued on Tracks 4

Demolish Eastern End of Platform 2

### B

CONSTRUCTION




12-CAR TRAIN SET

1500 FT 500 FT 100 FT 0

KEY

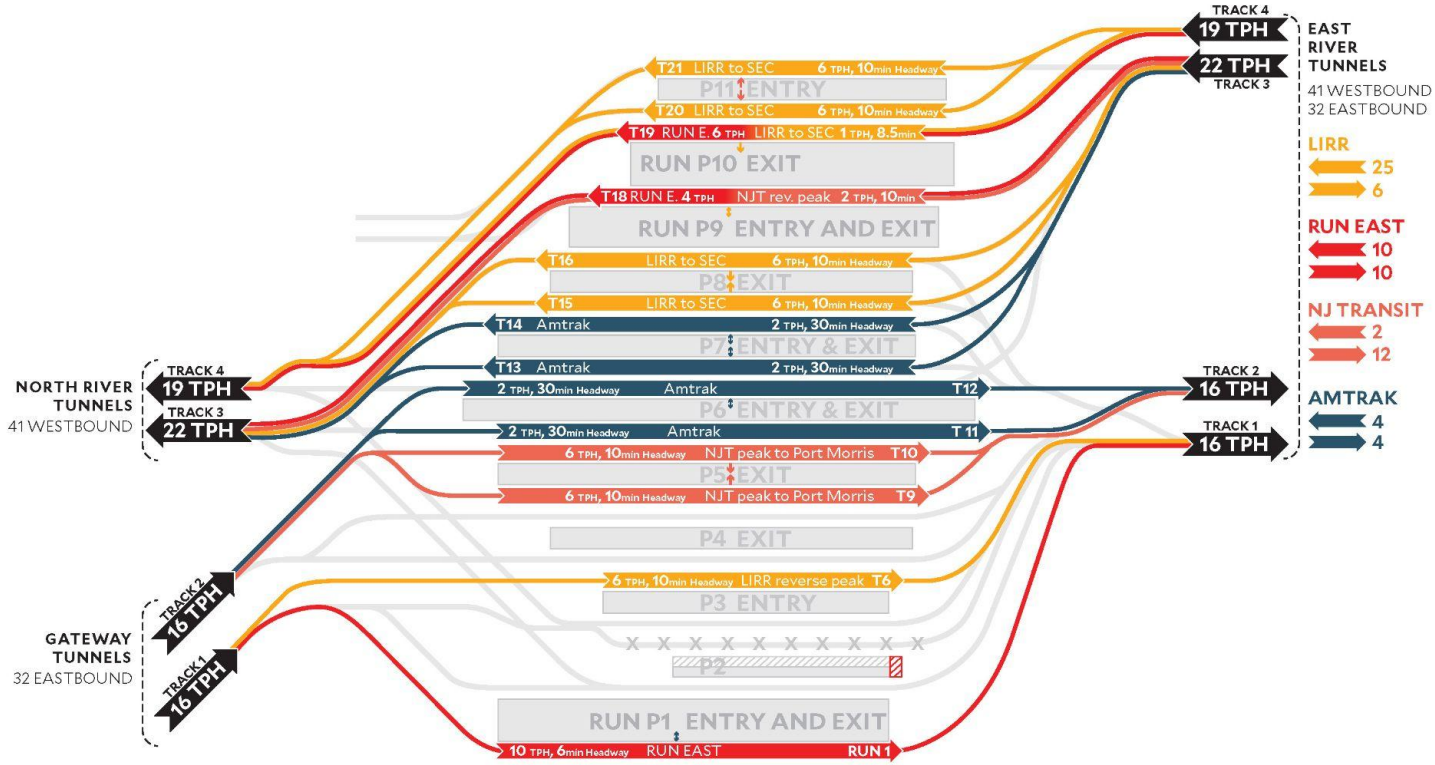
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 35,739 | +141 | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 16,371 | -6% | 8 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

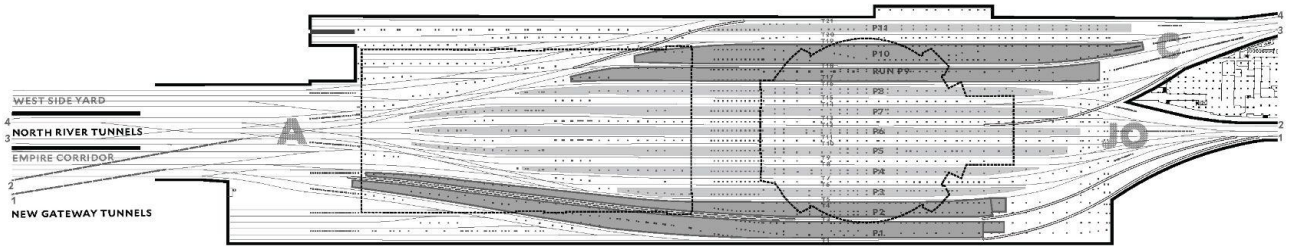
# PHASE 4 OF 10

## PLAN

SCALE 1:2500

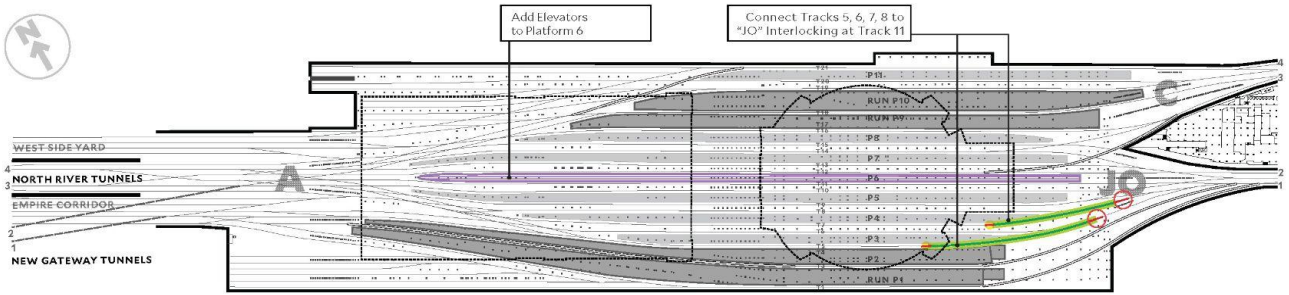
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







KEY

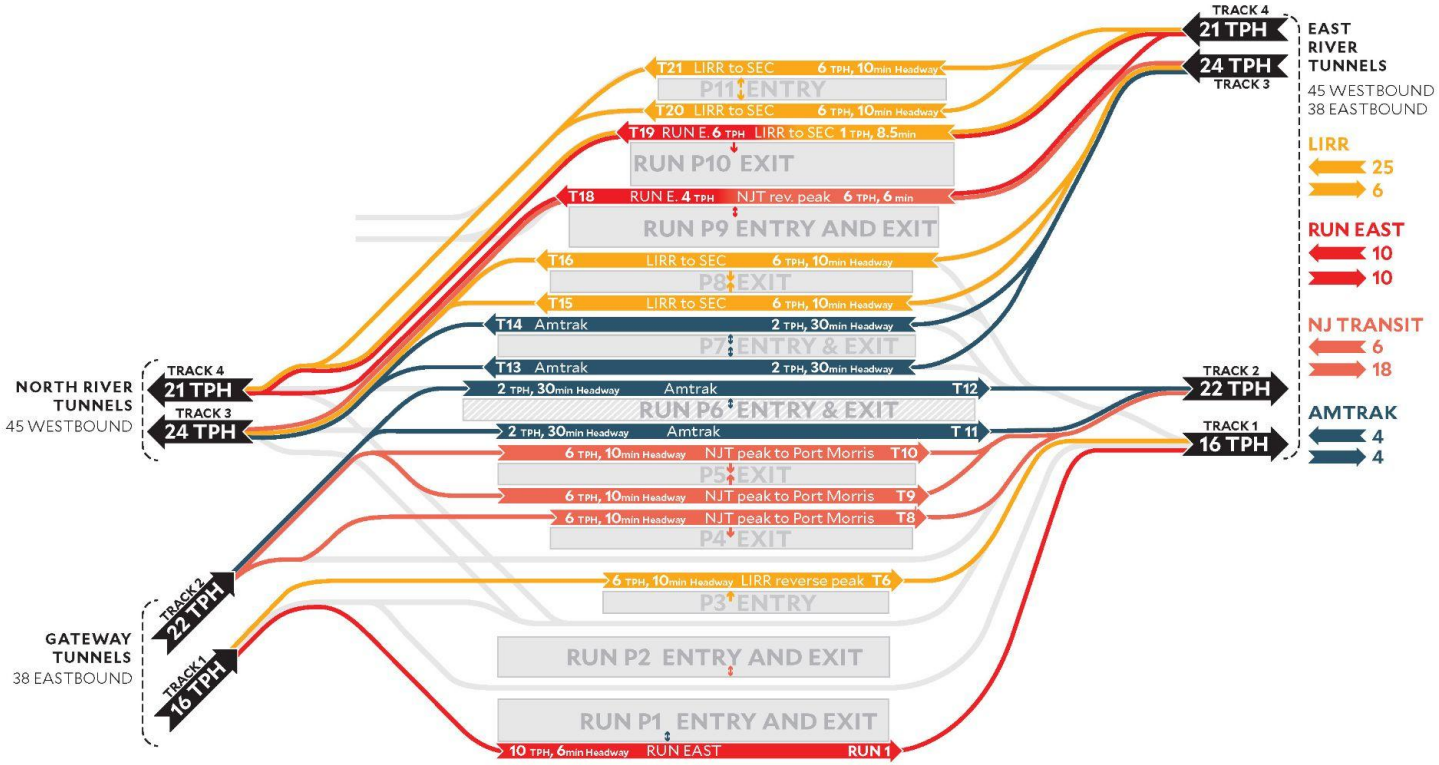
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,372 | 26,372 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 16,371 | -6% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

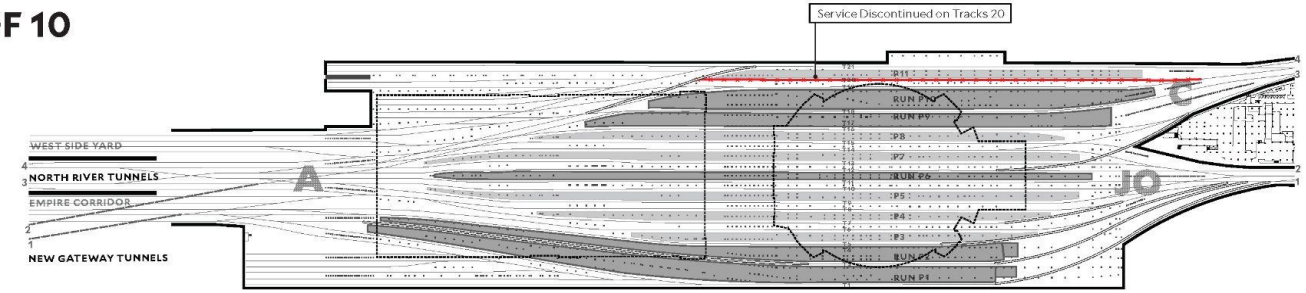
# PHASE 5 OF 10

## PLAN

SCALE 1:2500

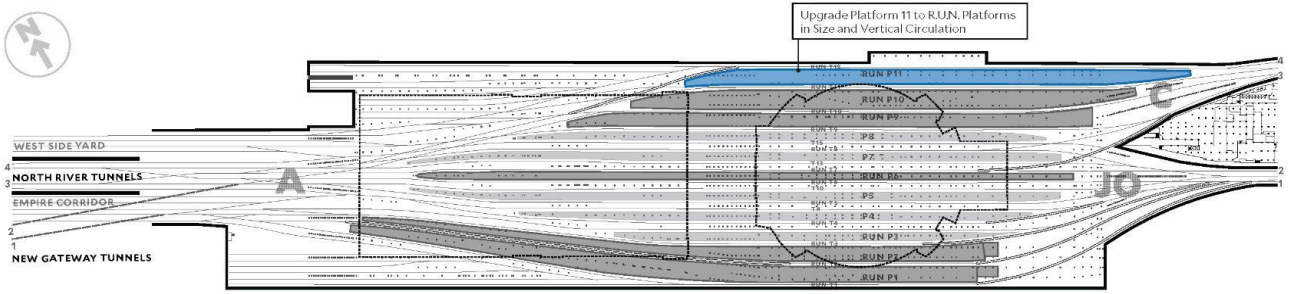
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







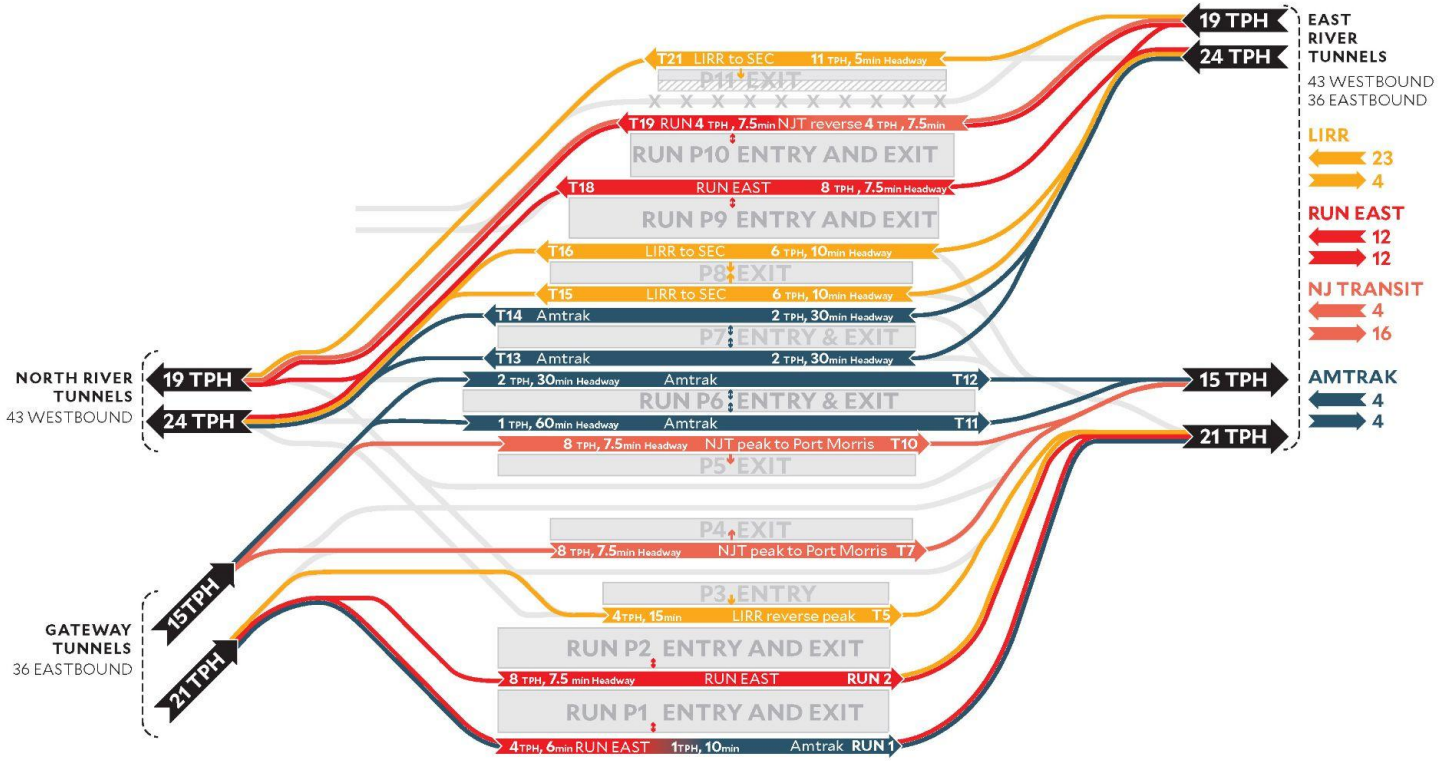
KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,433 | +129% | 20 |
| 3 | 17,051 | 17,051 | 0% | 9 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 41,322 | +141% | 20 |
| 10 | 42,863 | 47,642 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE




(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

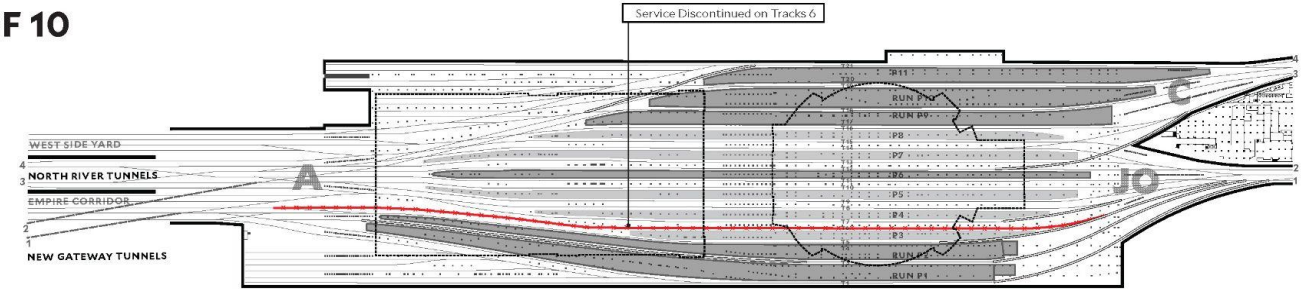
# PHASE 6 OF 10

## PLAN

SCALE 1:2500

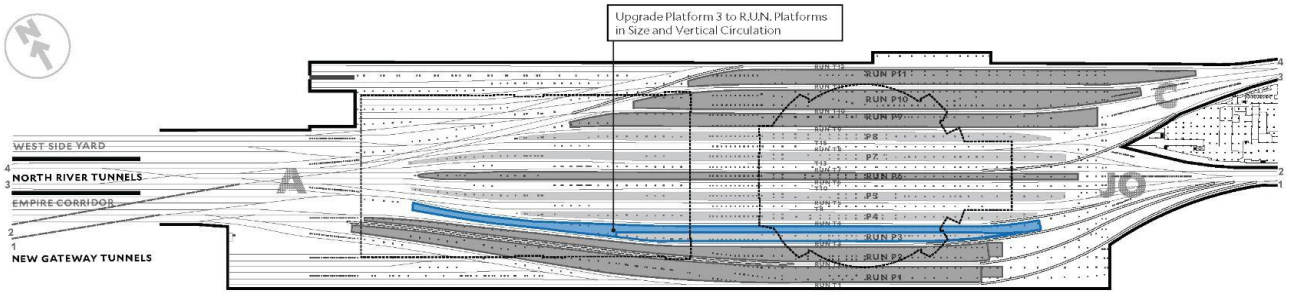
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







KEY

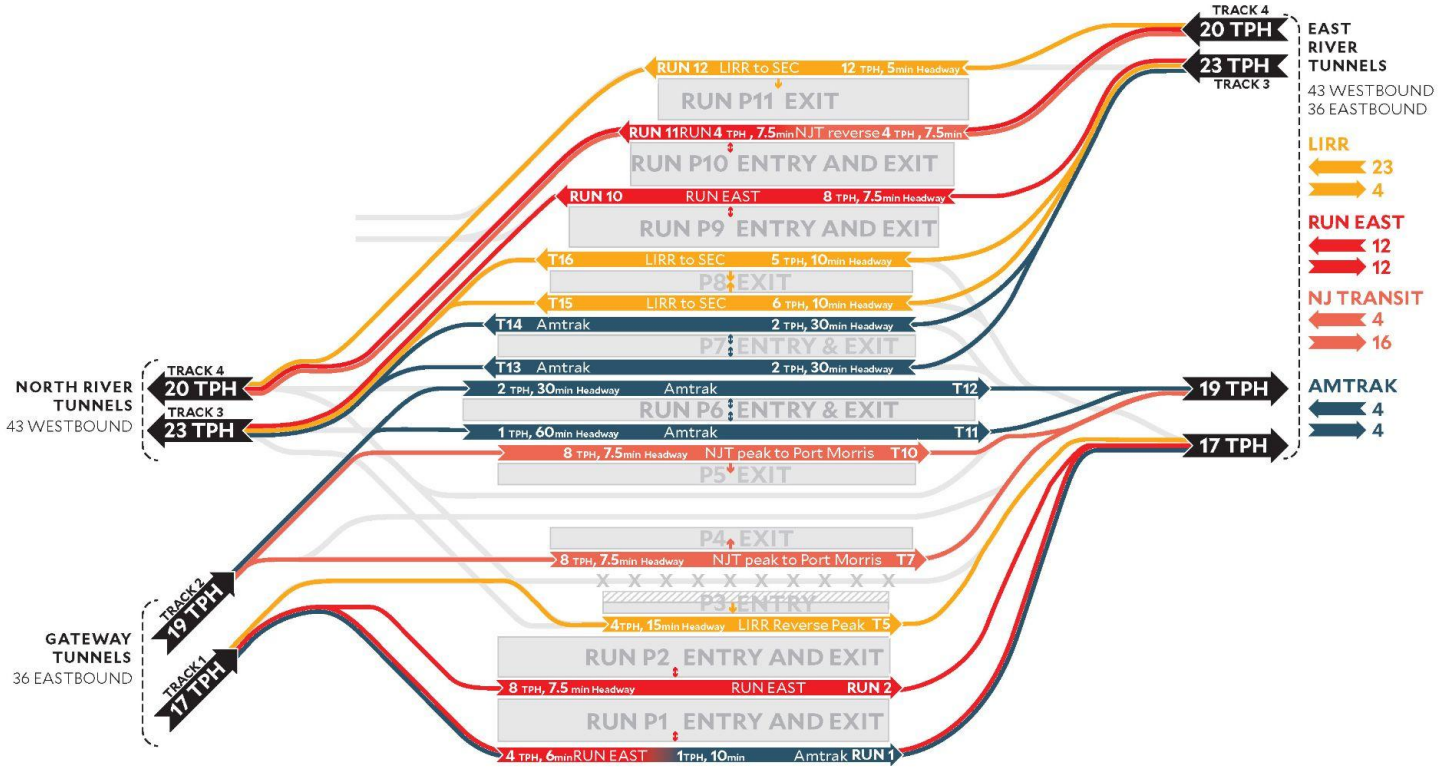
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 39,173 | +130% | 20 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,372 | 26,372 | 0% | 11 |
| 8 | 21,927 | 21,927 | 0% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

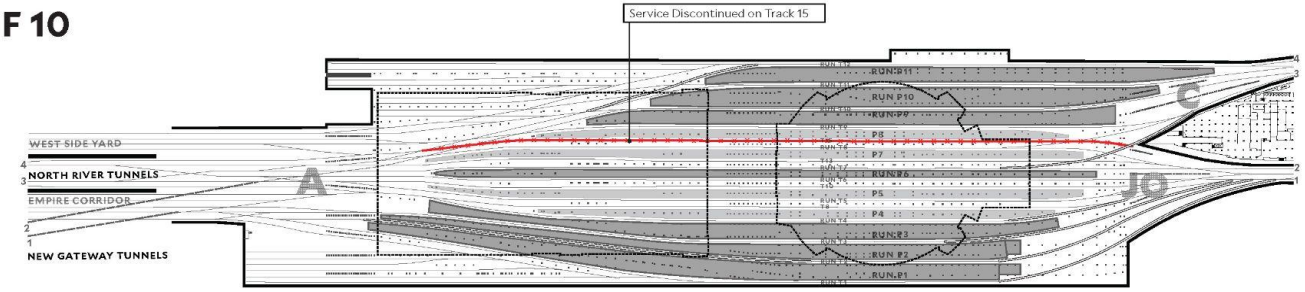
# PHASE 7 OF 10

## PLAN

SCALE 1:2500

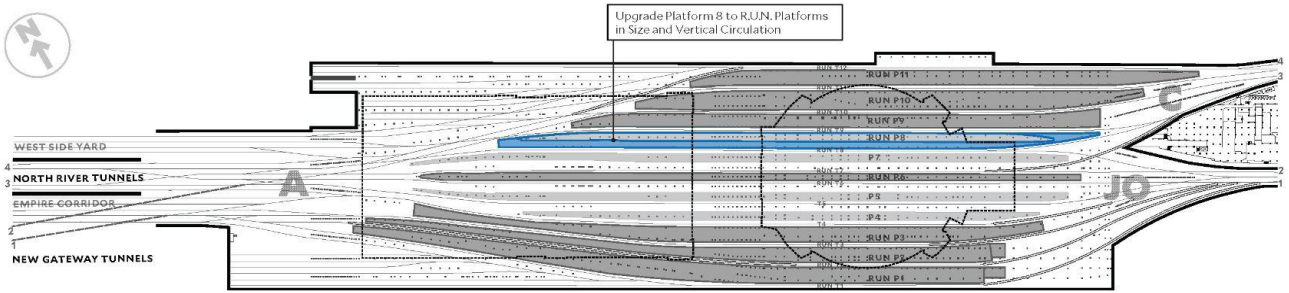
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







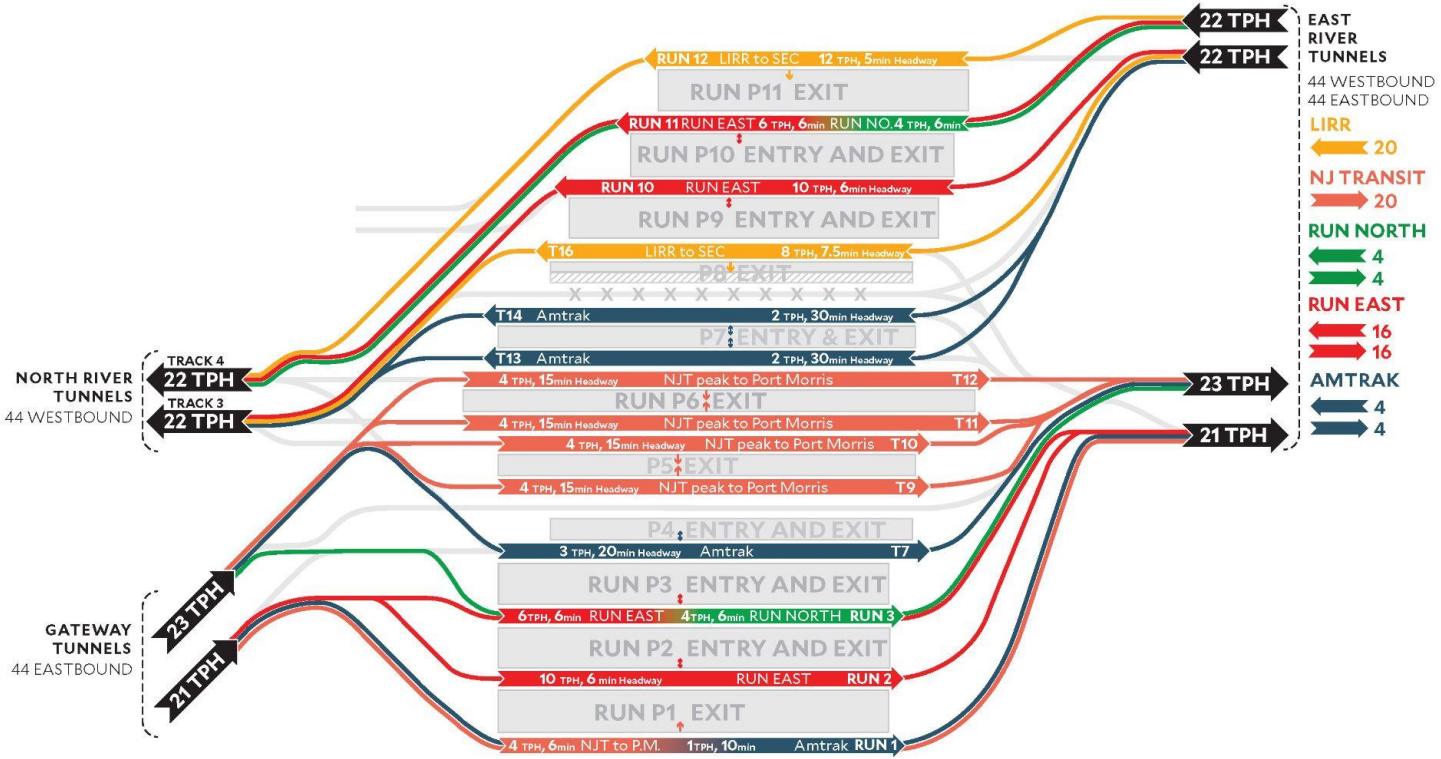
KEY

- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 39,173 | +130% | 20 |
| 4 | 20,197 | 20,197 | 0% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 26,322 | 0% | 11 |
| 8 | 21,927 | 43,859 | +100% | 11 |
| 9 | 14,629 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE




(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

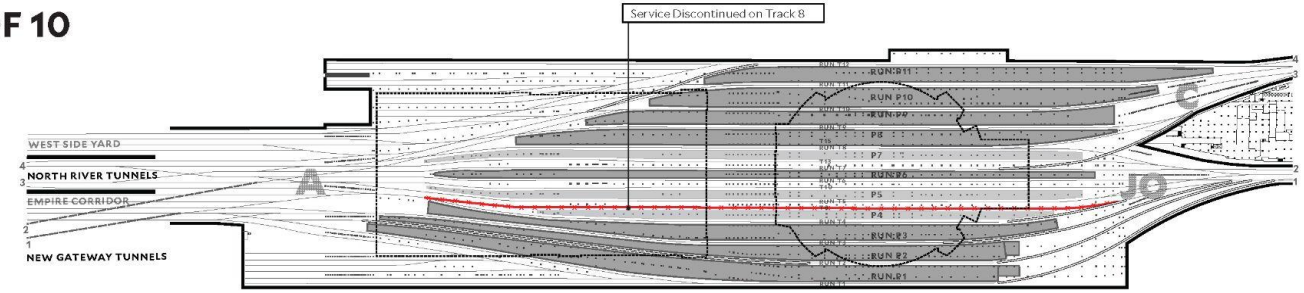
# PHASE 8 OF 10

## PLAN

SCALE 1:2500

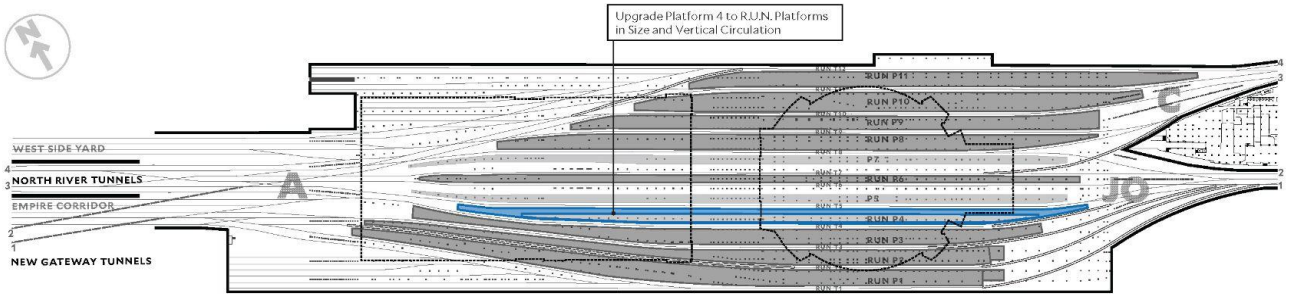
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







KEY

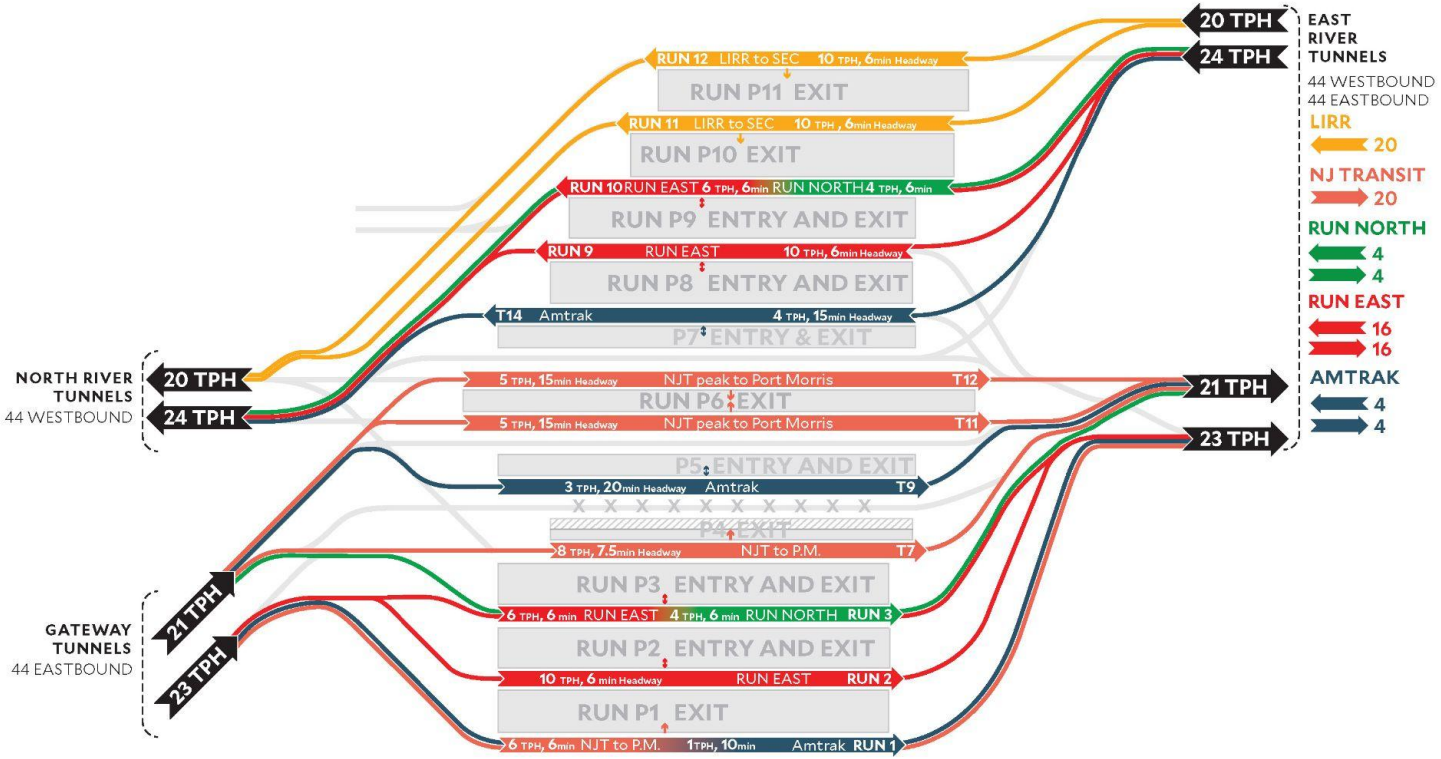
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 39,573 | +130% | 20 |
| 4 | 20,197 | 39,487 | +96% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,372 | 26,372 | 0% | 11 |
| 8 | 21,927 | 43,859 | +100% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

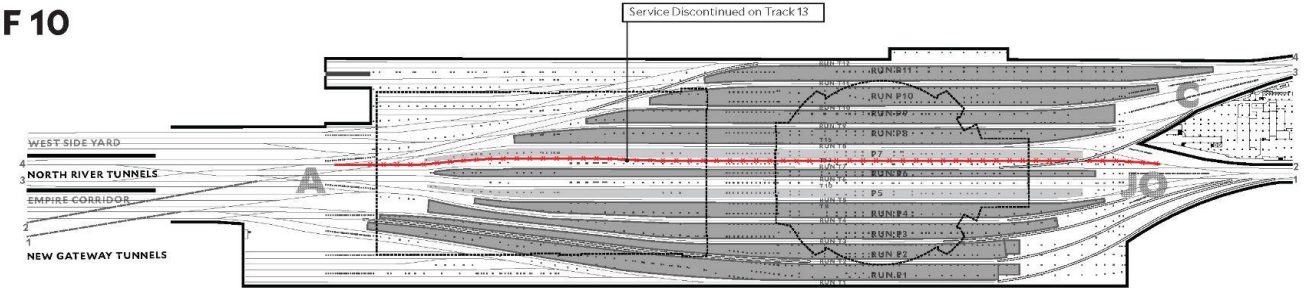
# PHASE 9 OF 10

## PLAN

SCALE 1:2500

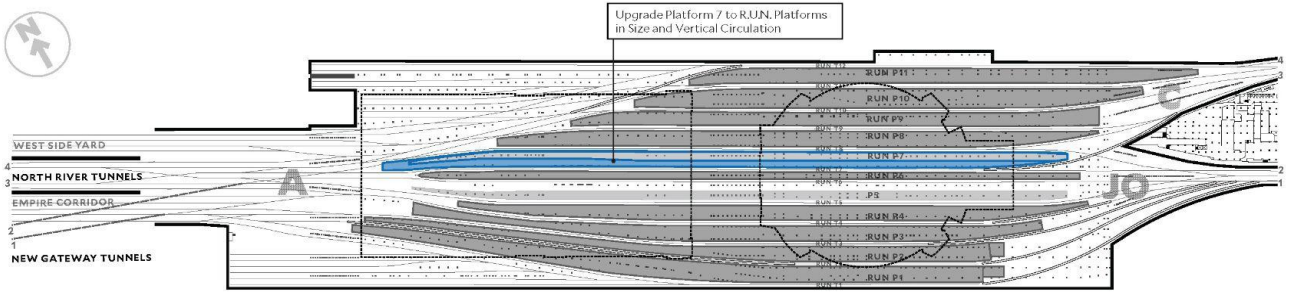
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







KEY

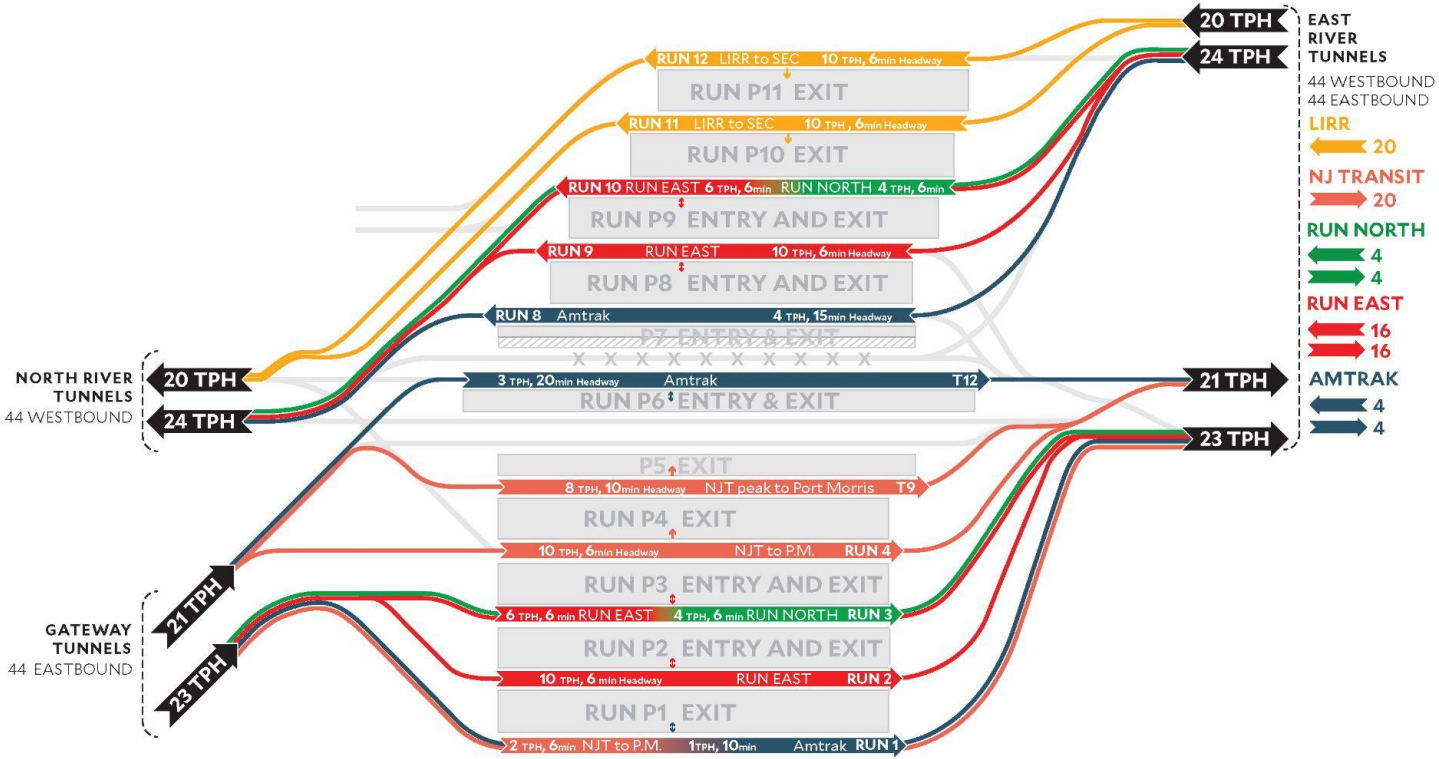
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 39,173 | +130% | 20 |
| 4 | 20,197 | 39,487 | +96% | 9 |
| 5 | 26,932 | 26,932 | 0% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 49,162 | +87% | 11 |
| 8 | 21,927 | 43,859 | +100% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE






(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

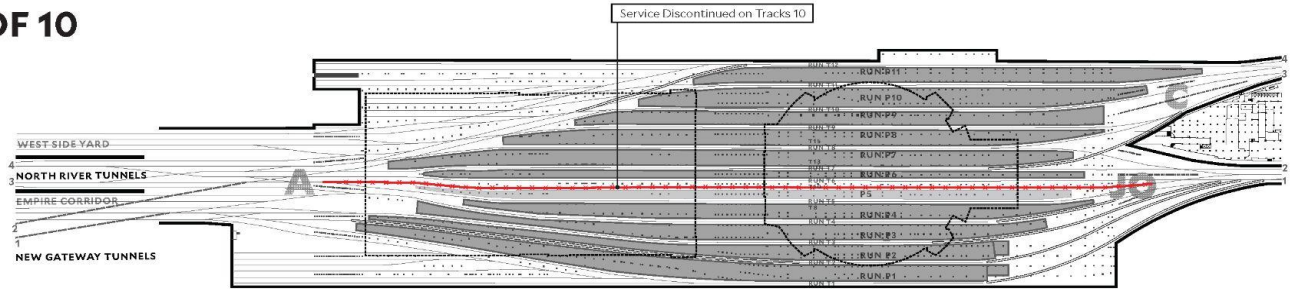
# PHASE 10 OF 10

## PLAN

SCALE 1:2500

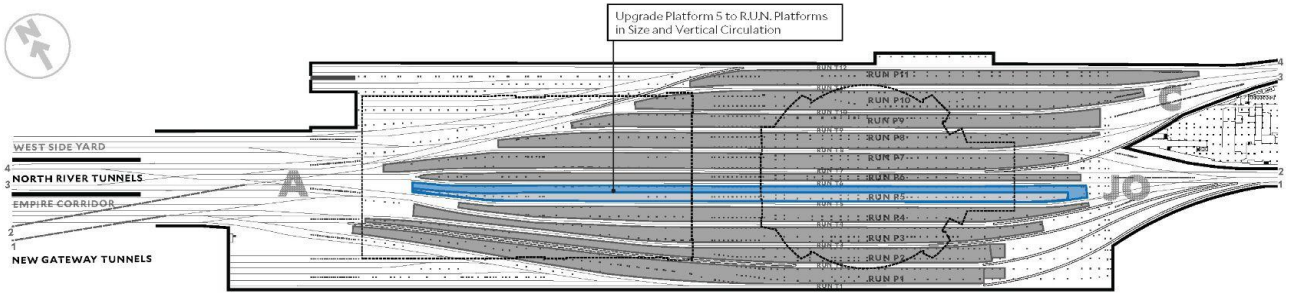
### A

DEMO / OUT OF SERVICE




### B

CONSTRUCTION







KEY

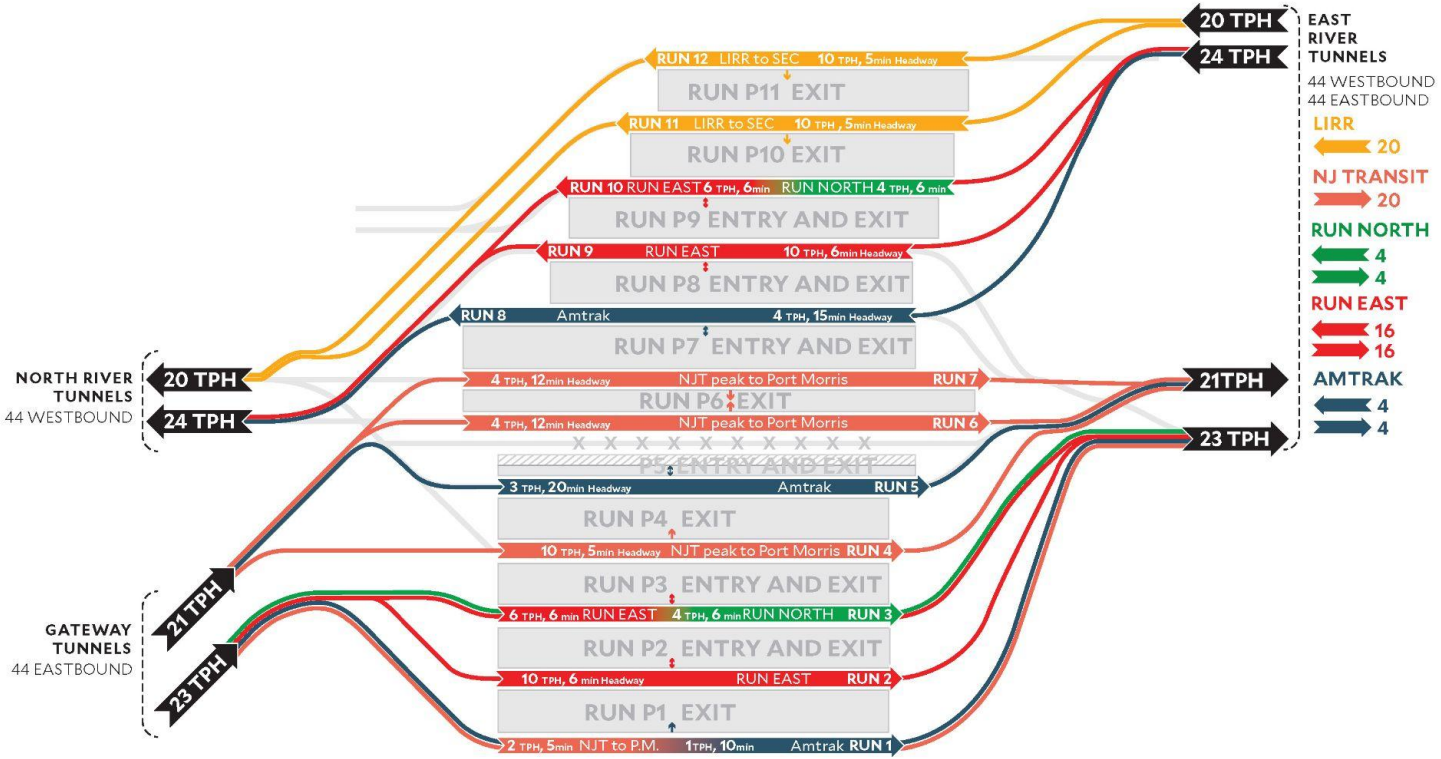
- Existing Platform
- Platform Work in Current Phase
- Platform Work (Vertical Circulation Only) (Maintains Service)
- Completed Platform
- Existing Track Center Line
- New Track Work
- Track Work from Previous Phase(s)
- Proposed Switch
- Proposed Switch on Non-Revenue Track
- Outline of Building Above
- Demolition
- Service Discontinued on Existing Track
- Amtrak Gateway

| Platform | Original Area sq.ft | New Area sq.ft | % Change | # Existing + New Stairs & Escalators |
|---|---|---|---|---|
| 1 | 16,235 | 49,595 | +205% | 20 |
| 2 | 15,005 | 34,419 | +129% | 20 |
| 3 | 17,051 | 39,173 | +130% | 20 |
| 4 | 20,197 | 39,487 | +96% | 9 |
| 5 | 26,932 | 51,933 | +93% | 10 |
| 6 | 23,308 | 23,308 | 0% | 10 |
| 7 | 26,322 | 49,162 | +87% | 11 |
| 8 | 21,927 | 43,859 | +100% | 11 |
| 9 | 14,829 | 35,739 | +141% | 20 |
| 10 | 42,863 | 44,794 | +5% | 20 |
| 11 | 17,348 | 35,301 | +103% | 20 |

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE



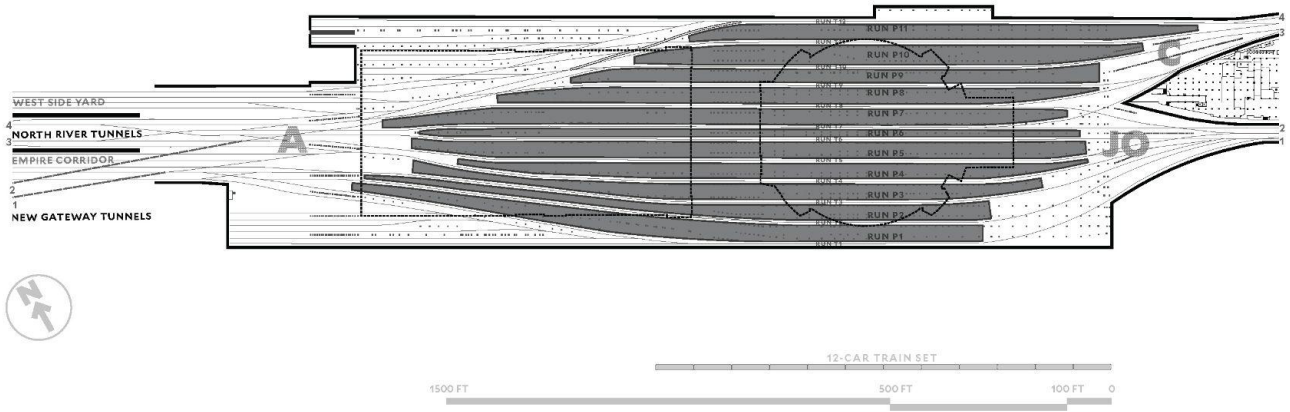



(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

# SCENARIO 1:

**SCALE 1:2500**



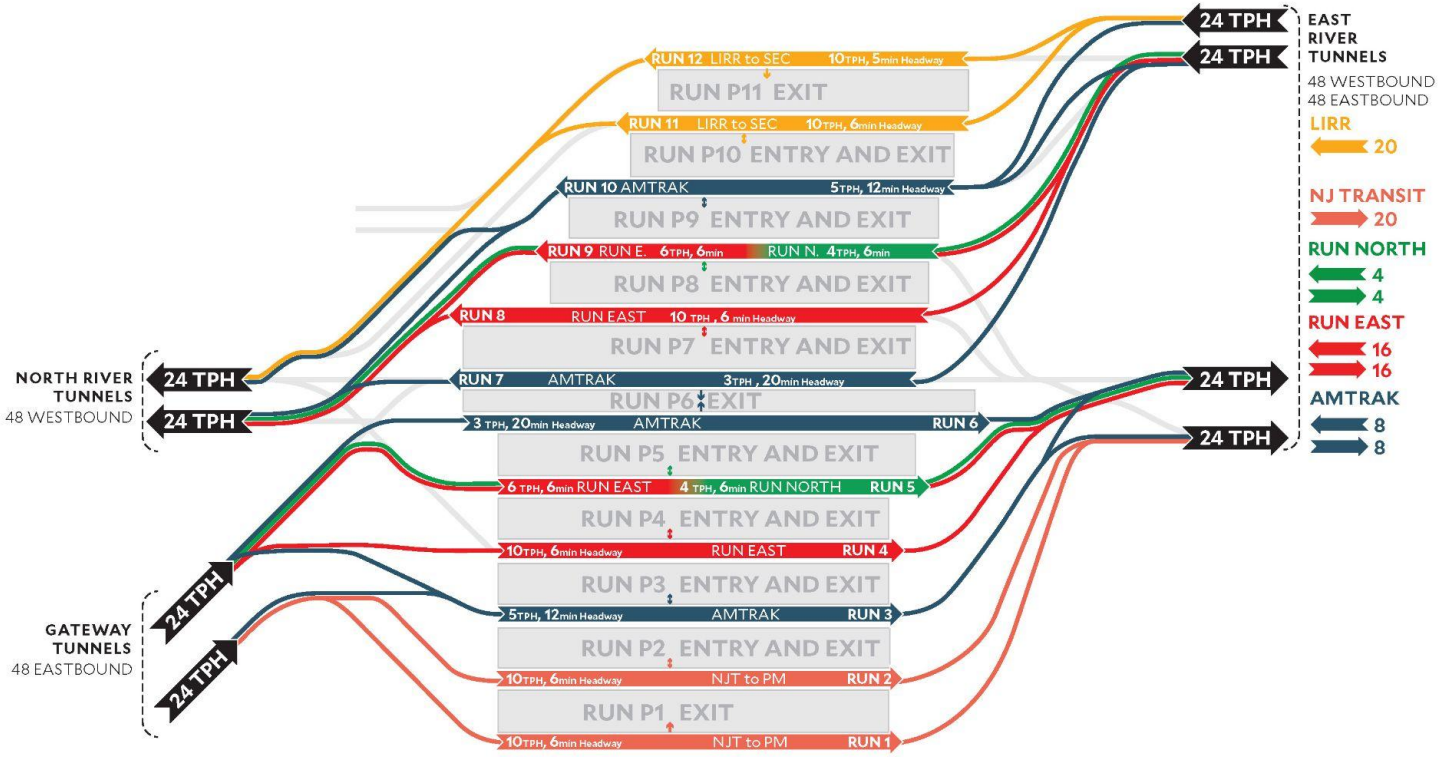

## NOTES

- 24 TPH per Tunnel
- Minimum reverse peak service
- Minimal Metro-North Penn Station service
- Fewer universal rolling stock required

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

## COMPLETE STATION

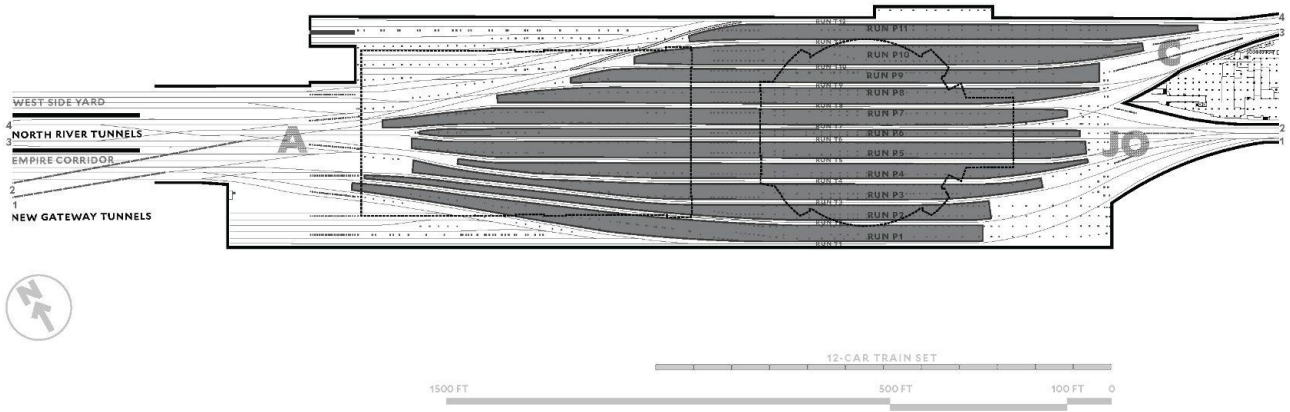



(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

# SCENARIO 2:

**SCALE 1:2500**



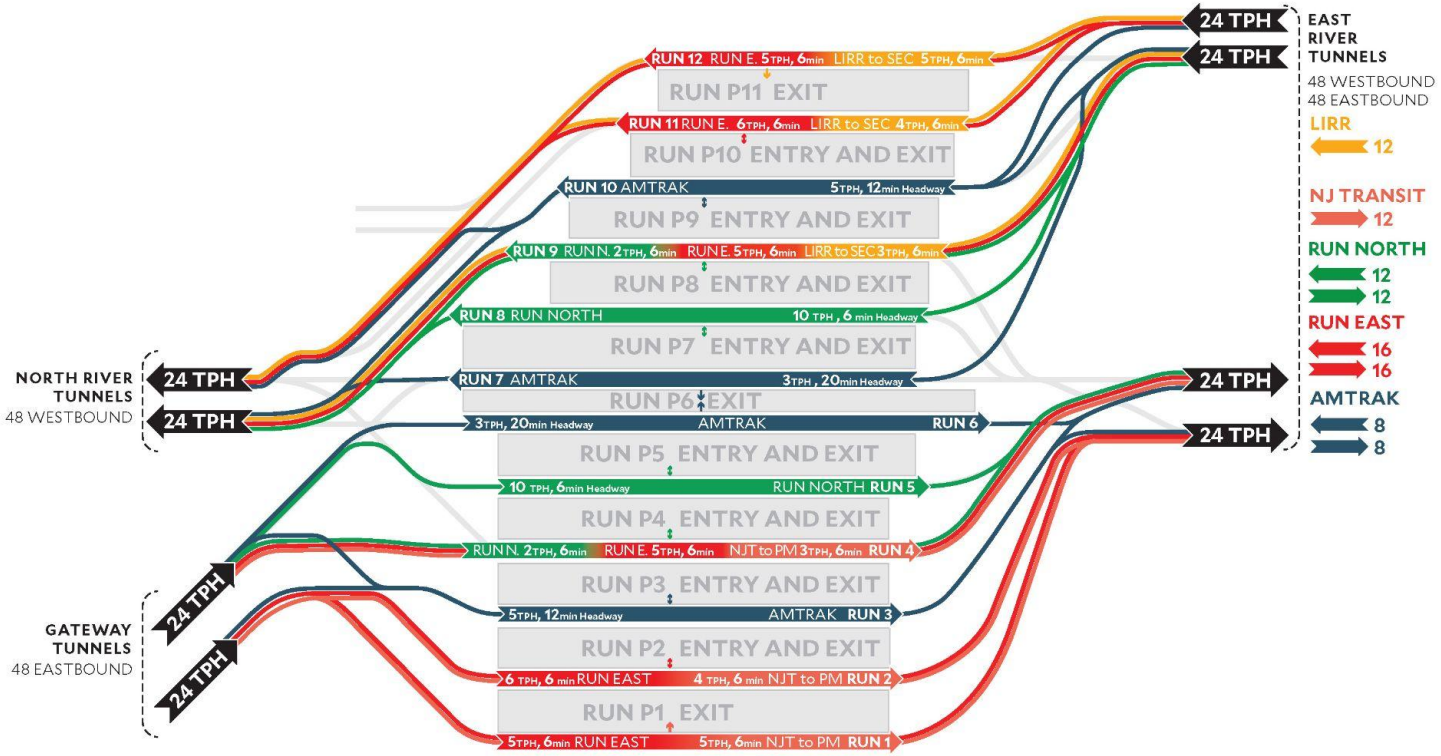

## NOTES

- 24 TPH per Tunnel
- Reduced peak LIRR Penn service
- Increased Metro-North Penn service
- More universal rolling stock required

# OPERATIONS DIAGRAM

CAPACITY | STAGING | SERVICE

## COMPLETE STATION




(7:30AM - 8:30AM, WEEKDAYS)

ReThinkNYC

# Appendix E
# ReThinkNYC Video/Vimeos

"The Conceptual Basics of Through-Running as a Means to Create Unified Regional Rail in New York"

"How Through-Running Would Operate at Today's Penn Station and Streamline Train Movements"

"A Flyover of the New York Metropolitan Region Showing How Through-Running Would Connect New Jersey to Long Island and the Bronx"

# Appendix F:

## ReThinkNYC's Response to Oft-Repeated Objections Interposed by Railroads and their Allies

## 10 Incredibly Shrinking Objections

(Click above for access)



# Appendix F:
# Demand Study Needs FRA Phase II

Demand Research:

# FRA Phase II: Anticipated Demand Study Data Needs (Preliminary)

| **Baseline:** *Gateway, Penn Access, Other Penn Station Improvements* | **Intervention:** *3 Alternative Scenarios* | **Validation:** *Test Baseline and Intervention* |
|---|---|---|
| Timetables, fare rules, and operating assumptions for committed projects<br><br>Existing demographic and OD data (eg. LEHD, ACS) | SOS Phase I Operating Concept 1 & 2: line pairings, service frequency, dwell time, capacity estimates<br><br>Full Through-Running Model (ReThinkNYC 12 Track)<br><br>Fare and transfer rules for new service<br><br>Existing NYMTC, NJTPA models | AFC ridership<br><br>O-D Survey data |

Demand Research:

# FRA Phase II: Anticipated Demand Study Data Needs (Cont.)

**Service and Infrastructure Data:**
GTFS feeds, track and platform diagrams, transfer penalties

**Employment-Center Geography & Worker and Job Accessibility:**
LODES, ACS, census-based worker residential distribution by tract, H+T Cost Index

**Travel Cost:**
Walk times, wait-time assumptions

**Service Optimization Study:**
Phase I Primary Source Materials

**Existing Regional Models:**
NYMTC model, model calibration datasets

**Penn Station Master Plan & Gateway:**
Underlying capacity and operations modeling

**Rider Data for Validation:**
AFC ridership, O-D Survey data, anonymized smart phone data (if available)