

# PATERSON NEWARK

## Transit Market Study



## Technical Advisory Committee

Meeting 1 – September 10, 2019



# AGENDA

1. Welcome and introductions
2. Study overview
3. Preliminary findings
4. Market opportunities
5. Discussion and next steps

## PROJECT TEAM

North Jersey Transportation Planning Authority  
Passaic County  
Essex County  
NJ TRANSIT

Fitzgerald & Halliday, Inc.  
Dewberry  
Sobers Consulting  
James Redeker

## STUDY OVERVIEW

### PURPOSE

To explore opportunities to run transit service between Paterson in Passaic County and Newark in Essex County along a combination of dedicated (off-street) corridors, as well as possible shared and mixed-traffic operations.

### GOAL

To identify regional solutions to reduce traffic congestion, improve mass transit service, and support economic development through increased access to jobs, education, healthcare, and commercial development

### OUTCOMES

- Assess market potential for new transit corridors
- Determine feasibility and options for transit development
- Study will not identify a locally preferred alternative

## STUDY OVERVIEW

### SCOPE OF WORK

- Task 1 Project Management
- Task 2 Public and Stakeholder Outreach
- Task 3 Data Collection
  - Community Characteristics
  - Infrastructure Assessment
- Task 4 Market Assessment and Metrics
  - Develop Service Options
  - Market Assessment
- Task 5 Findings and Recommendations
- Task 6 Final Report and Deliverables

### ENGAGEMENT

- Technical Advisory Committee (TAC)
- Focus Groups
- Public Meetings and Pop-ups

## STUDY OVERVIEW



## ENGAGEMENT

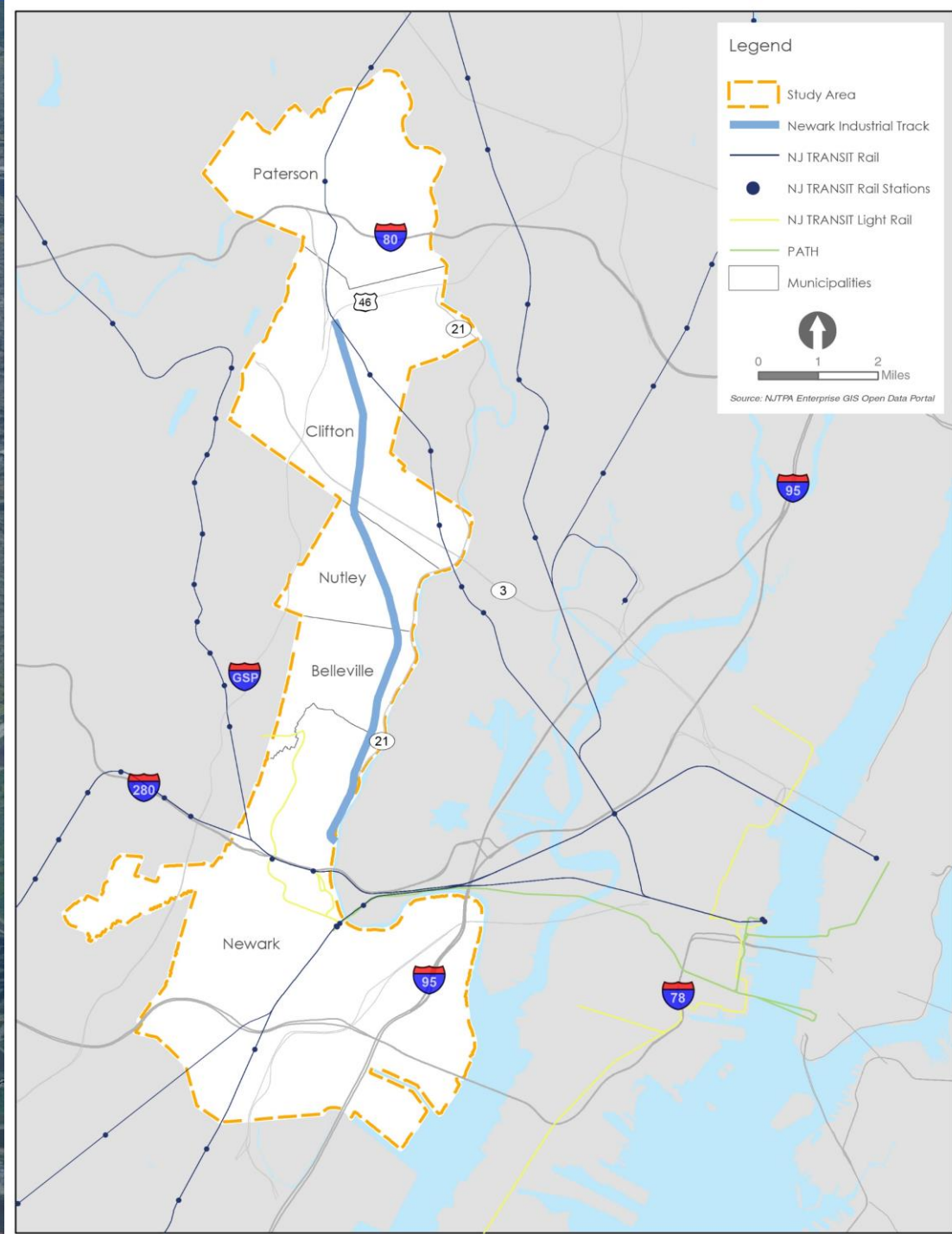
Technical Advisory Committee (TAC)  
Focus Groups  
Public Meetings and Pop-ups

## STUDY OVERVIEW



## ENGAGEMENT

Technical Advisory Committee (TAC)  
Focus Groups  
Public Meetings and Pop-ups






An aerial photograph of a city, likely Columbus, Ohio, showing a complex highway interchange with multiple overpasses and ramps. A river flows through the city, and various urban buildings, parking lots, and green spaces are visible. The text 'POPULATION AND DEMOGRAPHICS' is overlaid on the left side of the image.

# POPULATION AND DEMOGRAPHICS

Google Earth

An aerial photograph of a city, likely St. Louis, Missouri, showing a dense urban landscape with a river (the Mississippi River) flowing through it. The city is characterized by a mix of low-rise residential buildings and taller commercial structures. A major highway and several bridges are visible crossing the river. The overall scene is a detailed view of urban infrastructure and land use.

# POPULATION AND DEMOGRAPHICS

Google Earth

# TRANSIT

OUTFRONT 1915



**BSM** ACCOUNTING  
TAXATION  
CONSULTING

Income Tax | Bookkeeping | Payroll  
973.478.4846  
204 Lakeview Ave., Clifton

OUTFRONT 1915

2 absences = less likely  
per month = to graduate

AbsencesAddUp.org

0833 1916



# INFRASTRUCTURE



# REDEVELOPMENT



# ENVIRONMENT



## SCHEDULE

### 2019 - SUMMER

- Kick-off
- Public Outreach Plan
- Data Analysis

**Data Analysis**

### 2019 - FALL

- TAC Meetings 1 & 2
- Task 3 & 4 Reports
- Focus Groups
- Pop-up Events

**Market Assessment &  
Concept Development**

### 2020 – WINTER/SPRING

- TAC Meeting 3
- Task 5 & Final Reports
- Focus Groups
- Public Meetings

**Recommendations**

## TECHNICAL ADVISORY COMMITTEE

## ROLES AND RESPONSIBILITIES

### OFFER PROJECT GUIDANCE

- Local perspectives
- Technical expertise

### PROVIDE TECHNICAL SUPPORT

- Data collection
- Work review

### SUPPORT ENGAGEMENT

- Stakeholder recommendations
- Venues and communications for public events



# PRELIMINARY FINDINGS

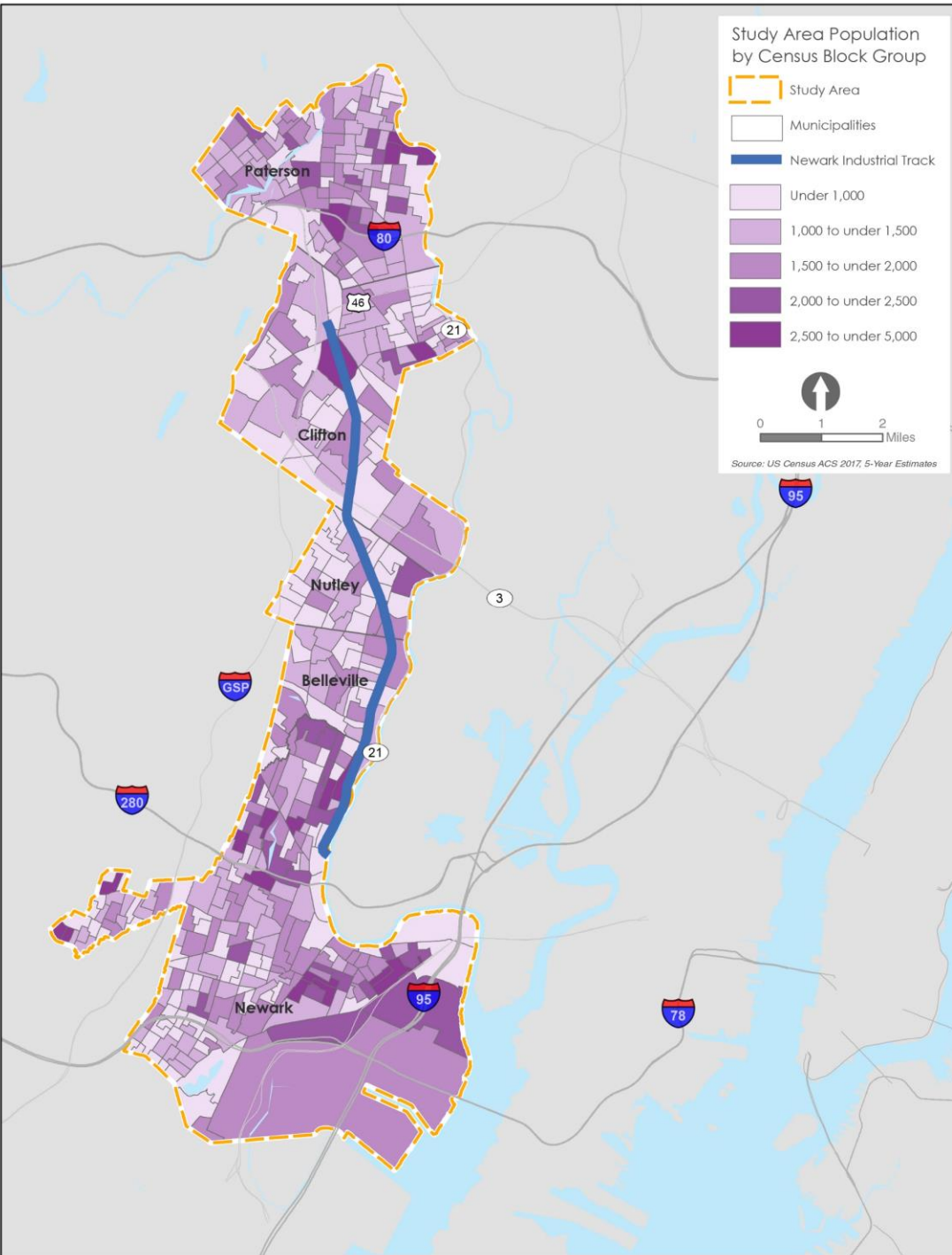
COMMUNITY CHARACTERISTICS

TRANSIT SERVICES

INFRASTRUCTURE

ENVIRONMENT

# Population



**Paterson**  
147,890

**Clifton**  
86,207

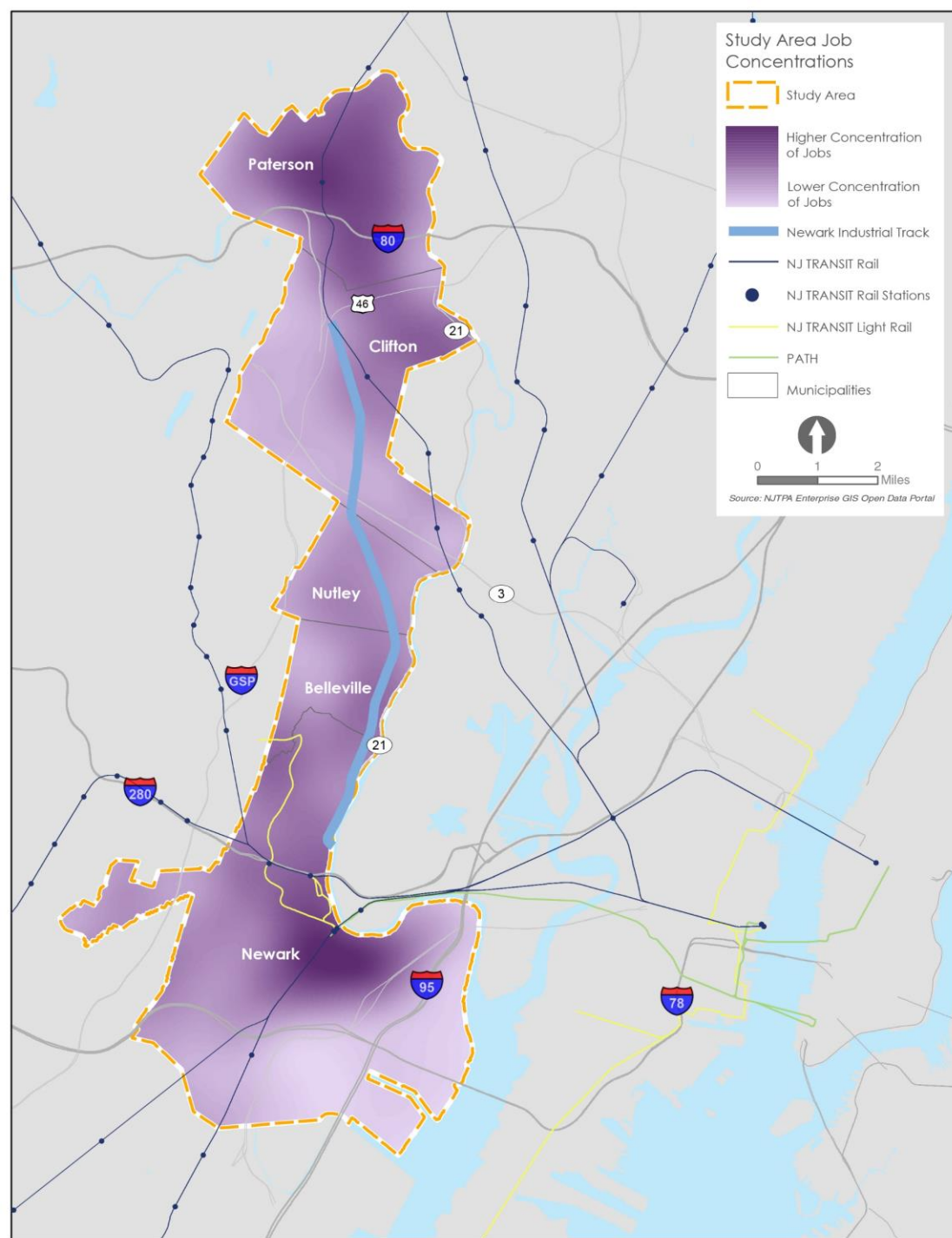
**Nutley**  
28,829

**Belleville**  
36,383

**Newark**  
282,803

**Total Study Area Population**  
**582,112**

Sources: U.S. Census Bureau  
Longitudinal-Employer Households Dynamics Program  
ACS 5-year estimates, 2013-2017

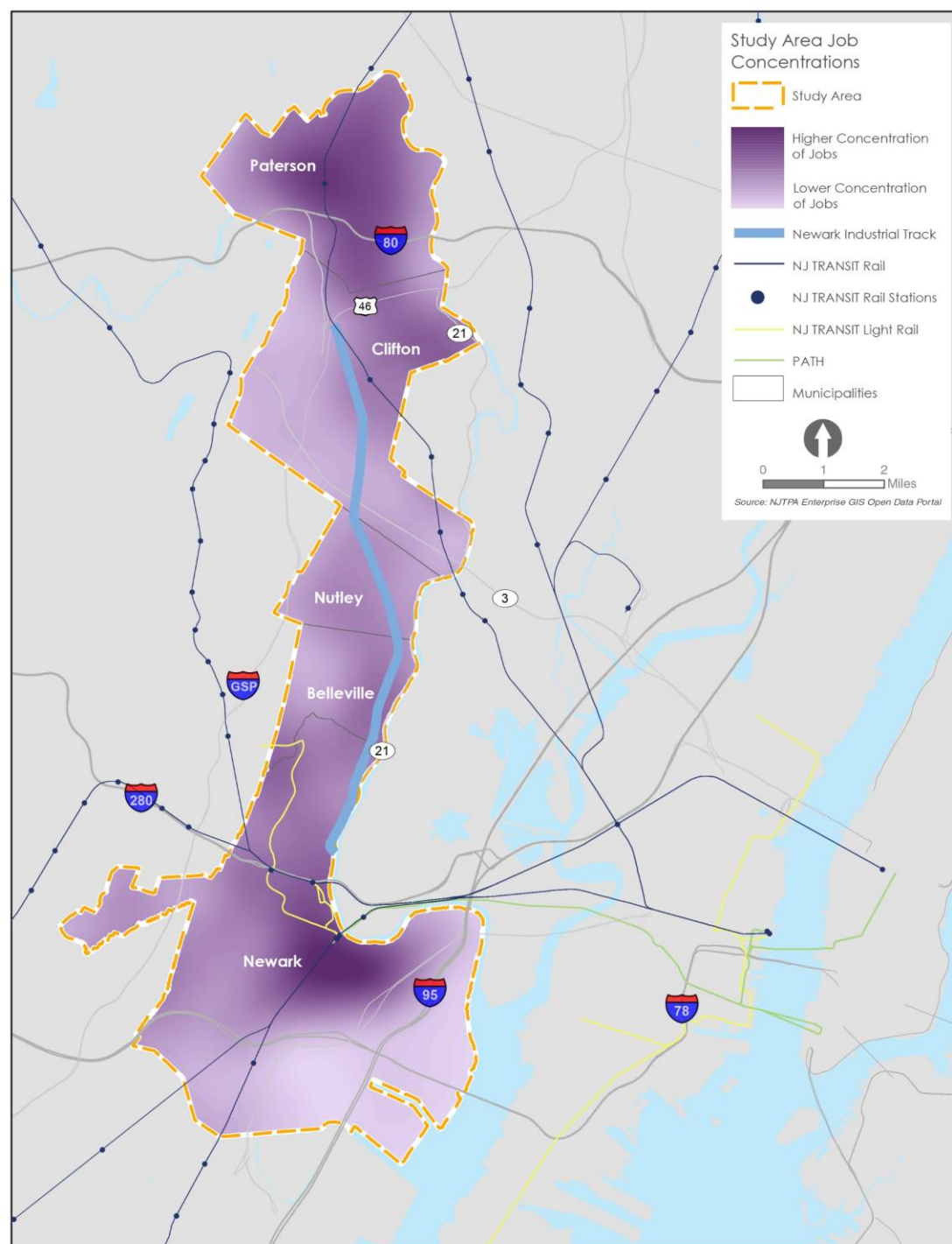


# Employment



- Employed in the study area and live outside
- Employed and live in the study area
- Live in study area and employed outside

# Employment



## Top locations where workers in the study area LIVE:

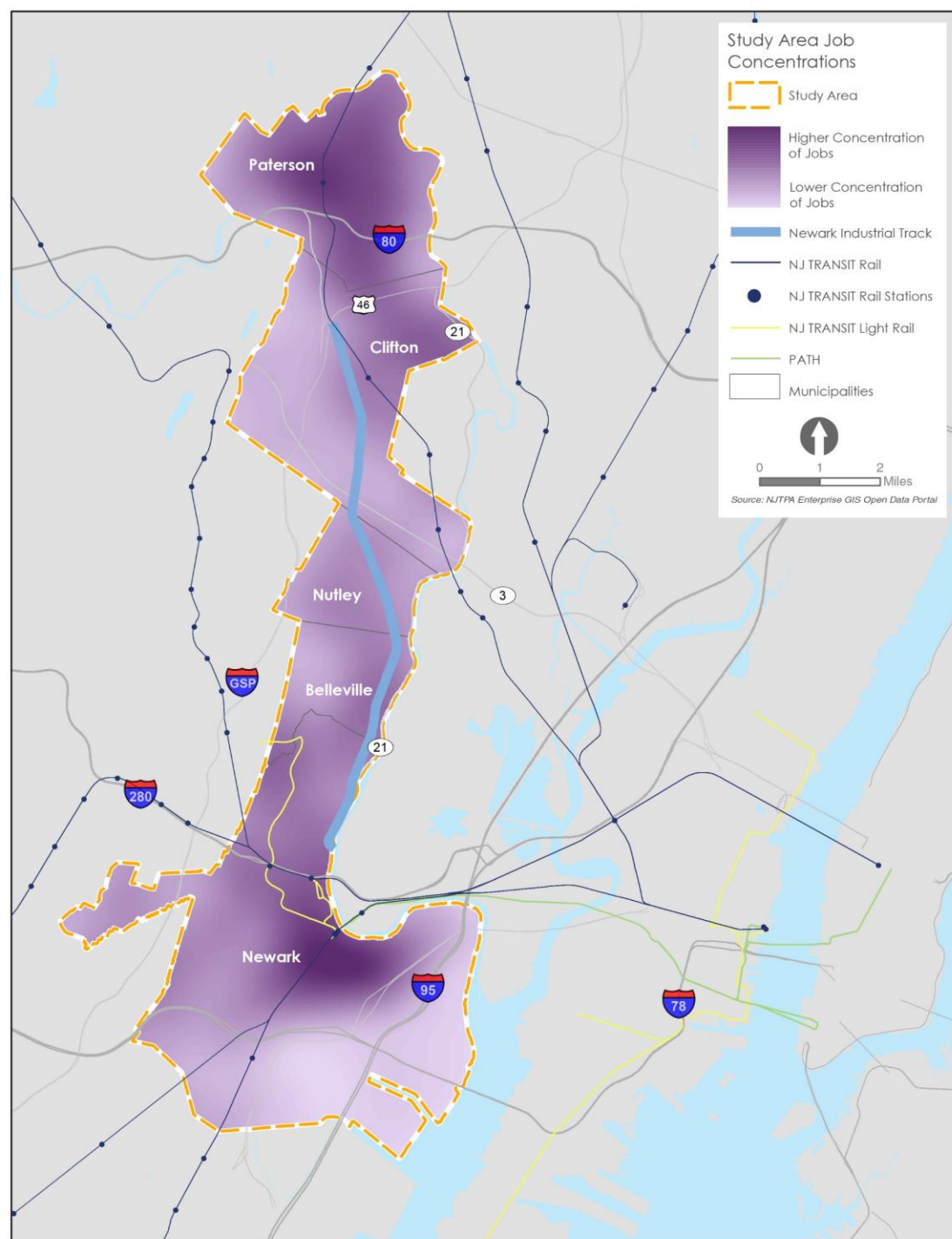
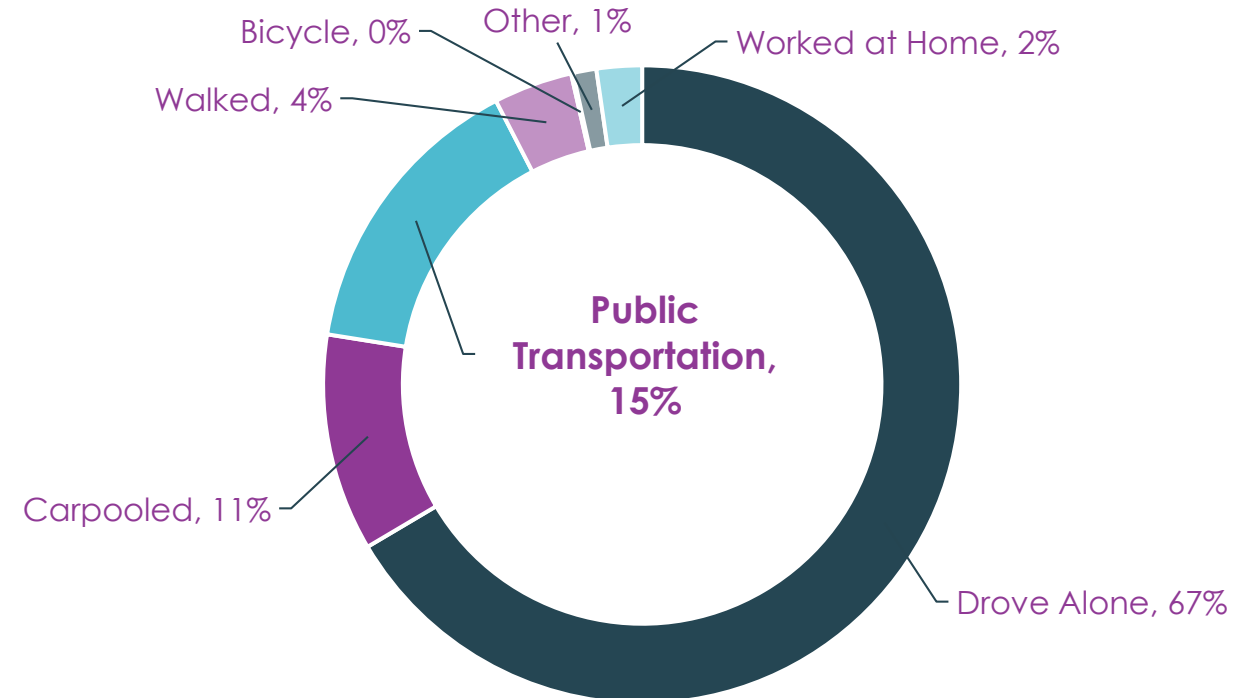
1. Newark (12%)
2. Paterson (6%)
3. New York City (4%)
4. Clifton (4%)
5. Jersey City (3%)

## Top locations where residents of the study area WORK:

1. Newark (13%)
2. New York City (9%)
3. Paterson (7%)
4. Clifton (3%)
5. Jersey City (3%)

# Employment

## Means of Transportation to Work (2013- 2017)



# Employment

## Travel Time to Work (ACS 5-year estimates, 2013-2017)

Less than 10 minutes

9%

10 to under 30 minutes

47%

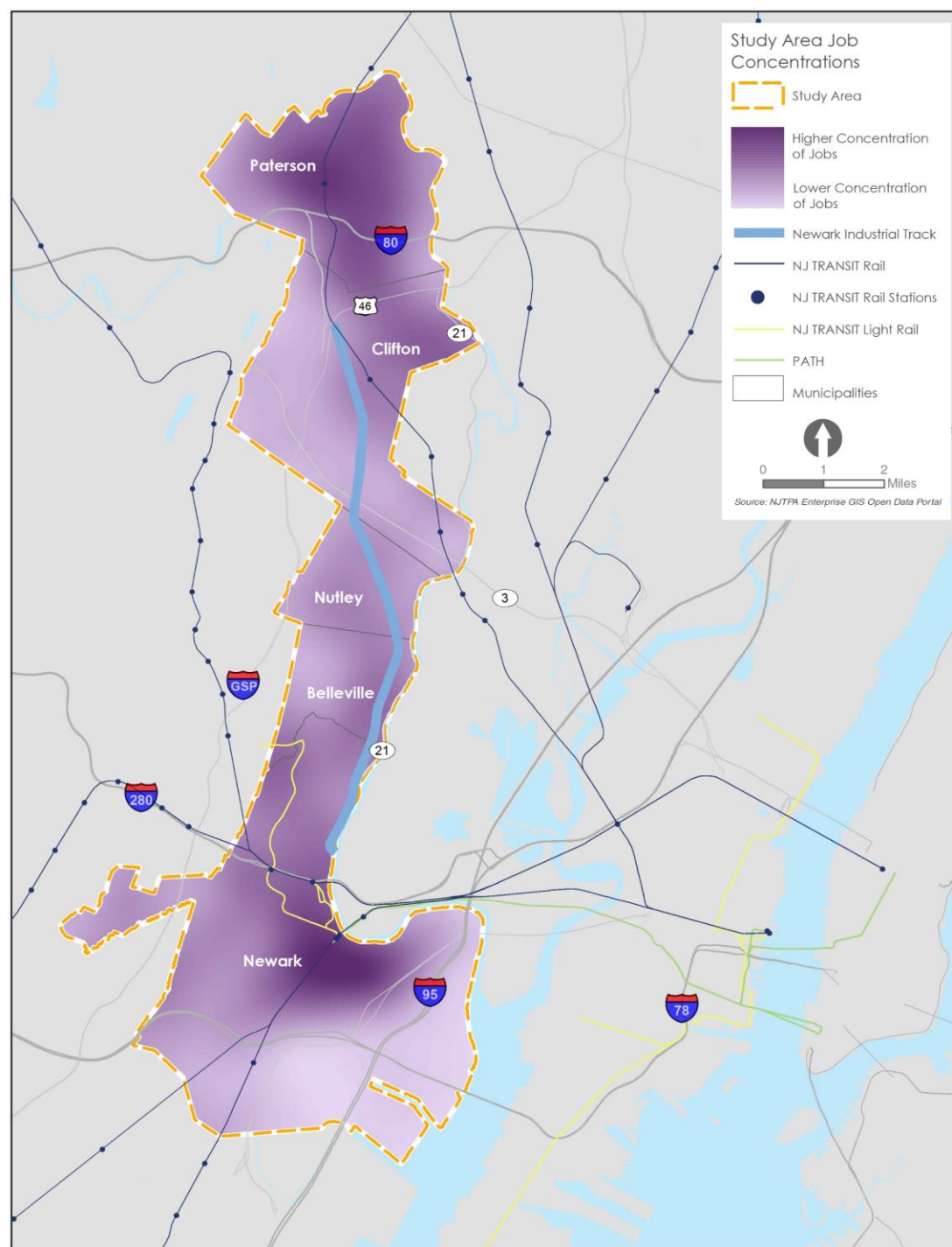
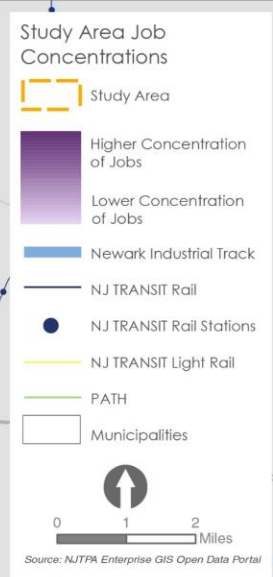
30 to under 60 minutes

31%

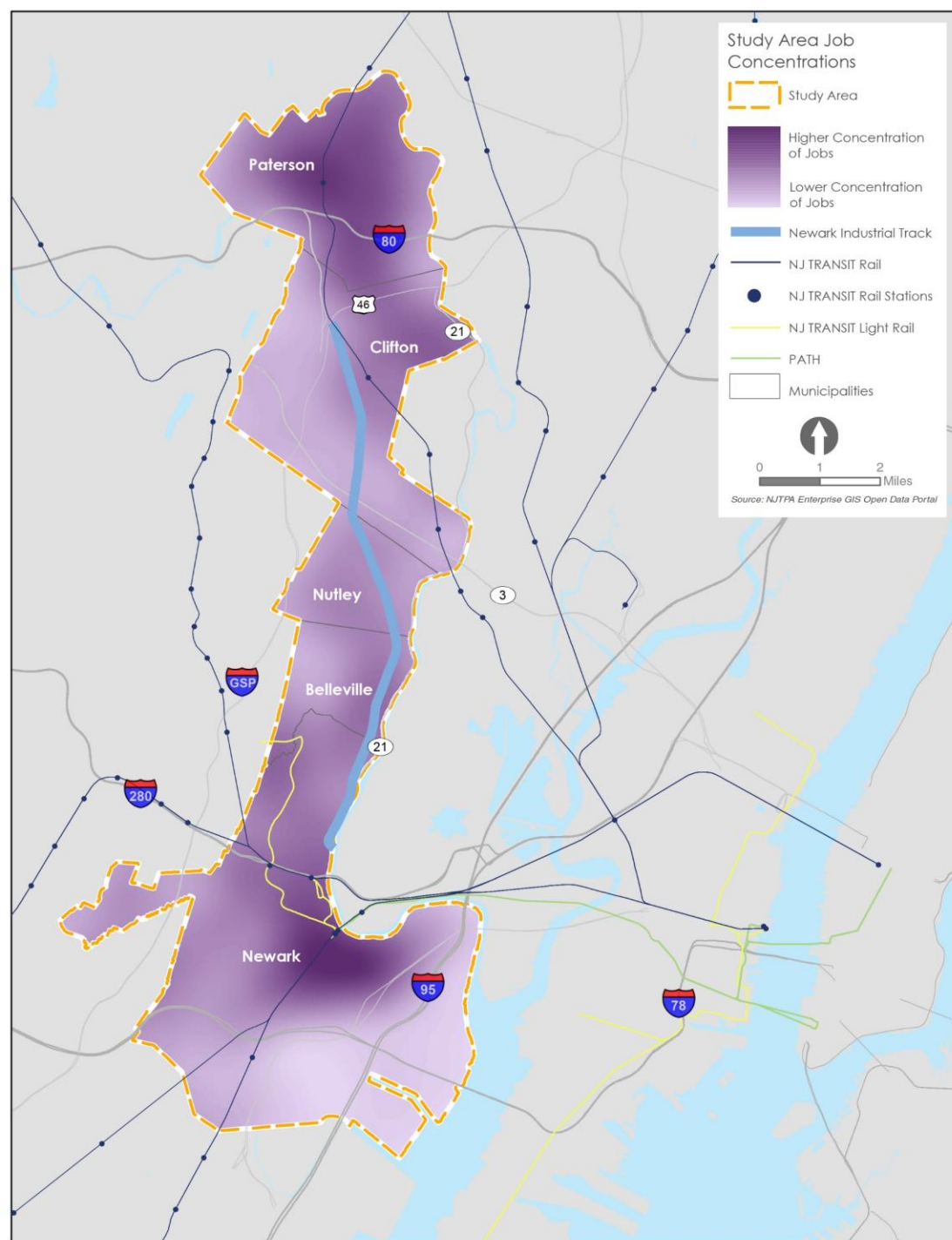
60+ minutes

13%

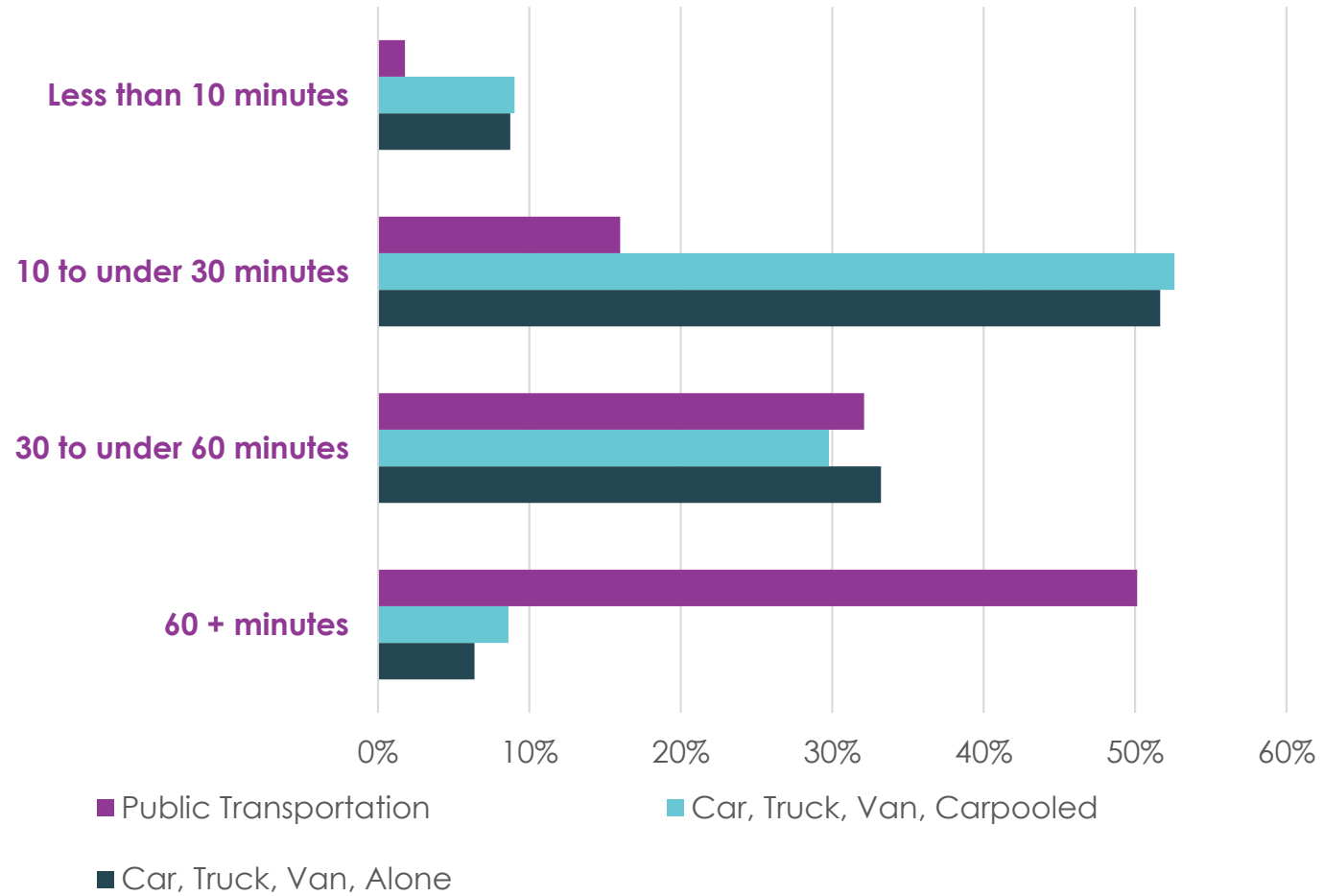
0% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50%



# Employment



## Travel Time to Work by Mode (ACS 5-year estimates, 2013-2017)

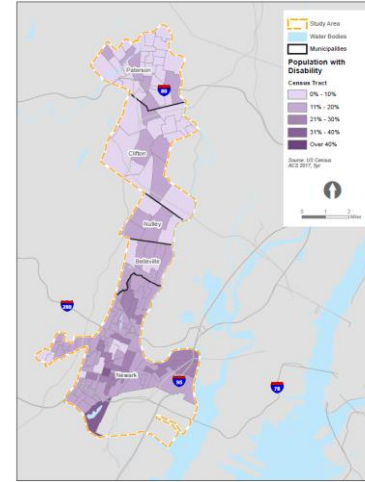


# Environmental Justice

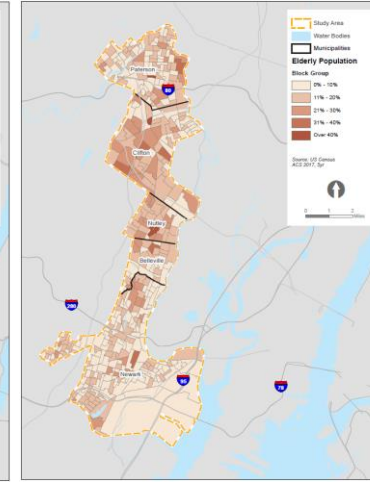
## Environmental Justice Composite Map



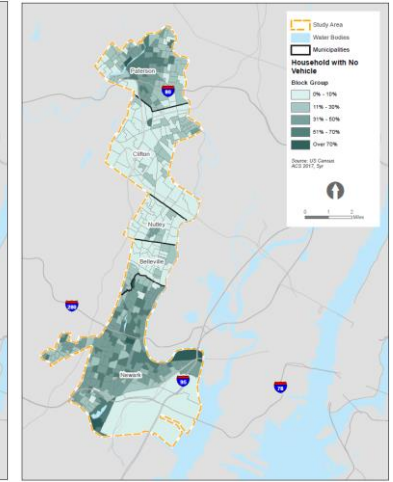
## Disability



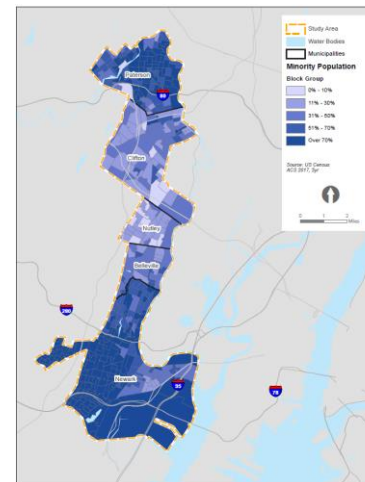
## Age 65+



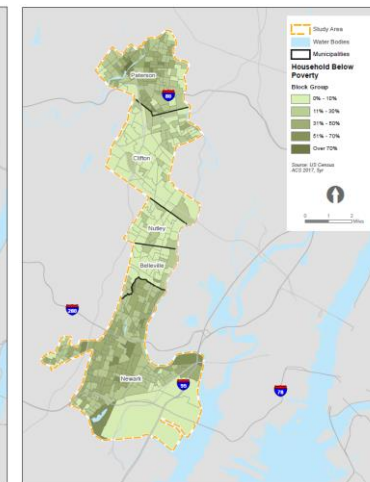
## No Vehicle



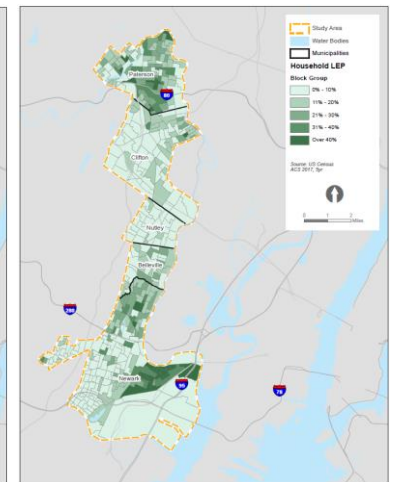
## Minority



## Poverty

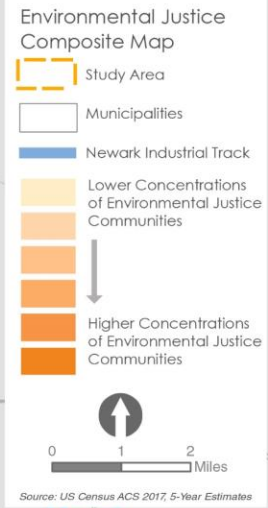


## Low English Proficiency





# Environmental Justice

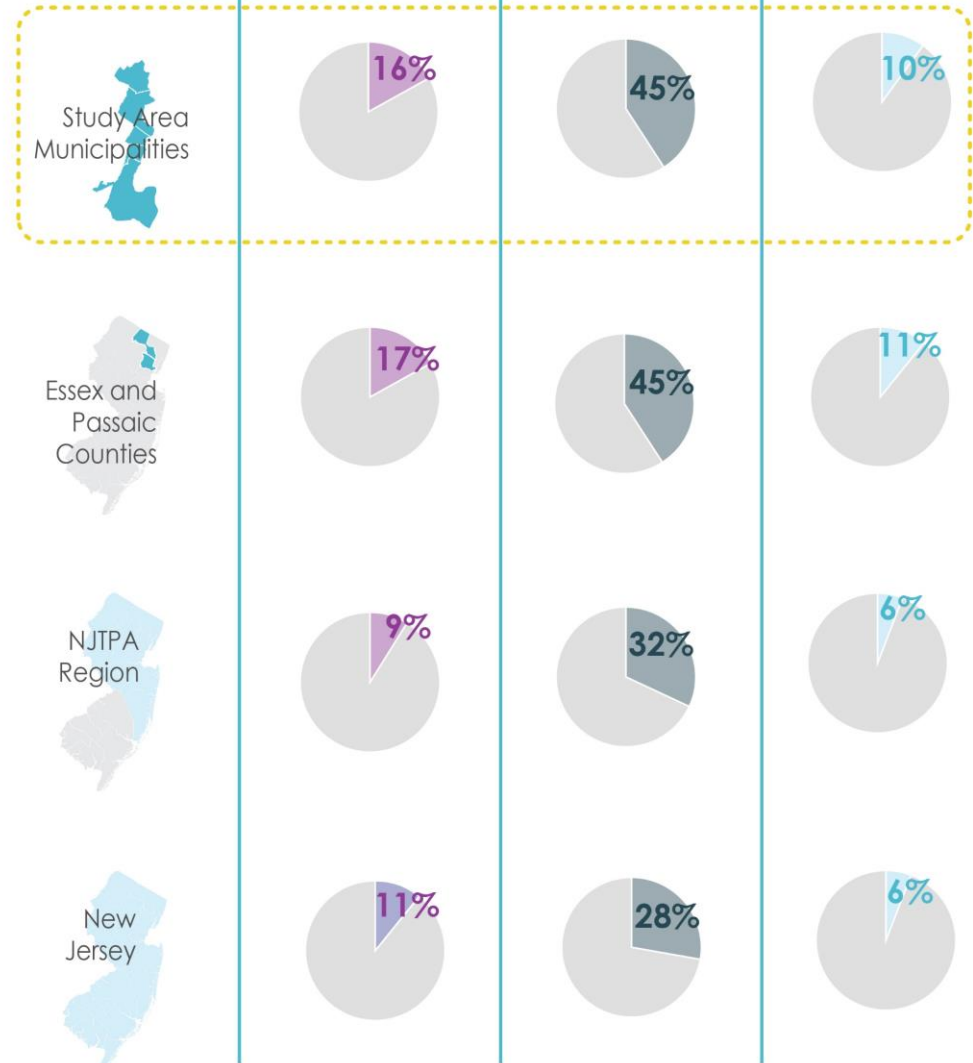


## Geography

### Population Below Poverty Line \$\$\$

### Minority Population

### Zero Car Households



# PRELIMINARY FINDINGS

COMMUNITY CHARACTERISTICS

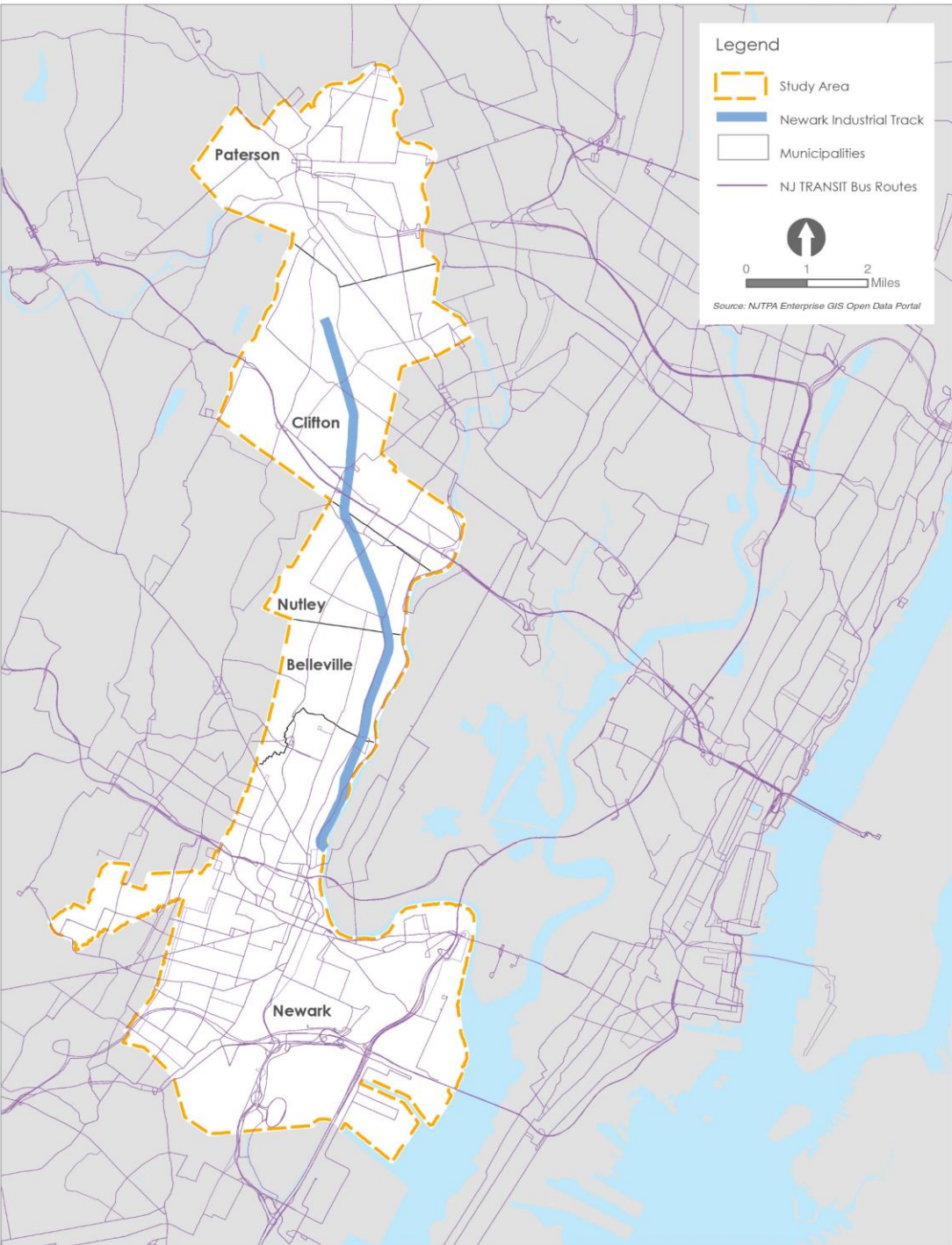
TRANSIT SERVICES

INFRASTRUCTURE

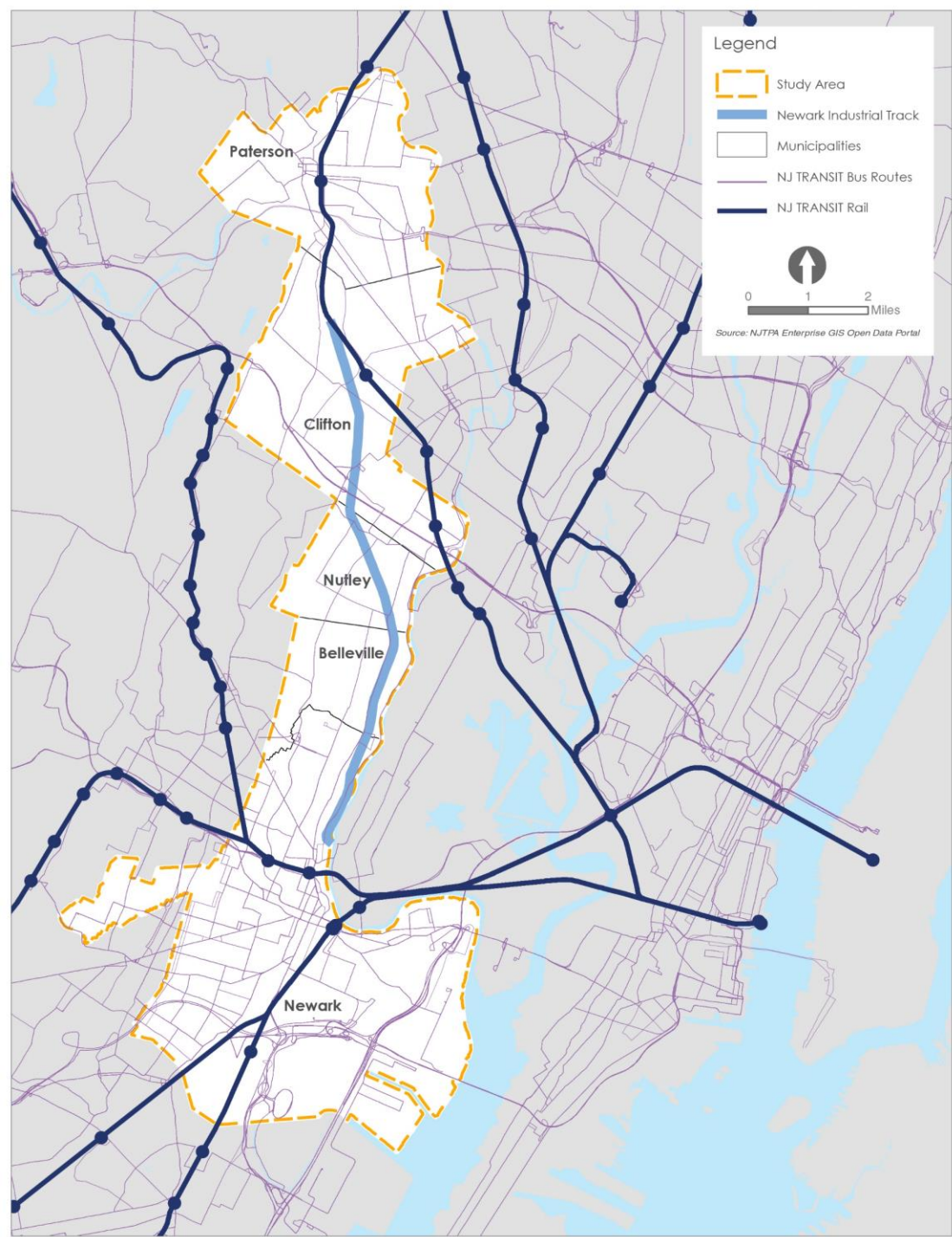
ENVIRONMENT

# Transit Services

# BUS

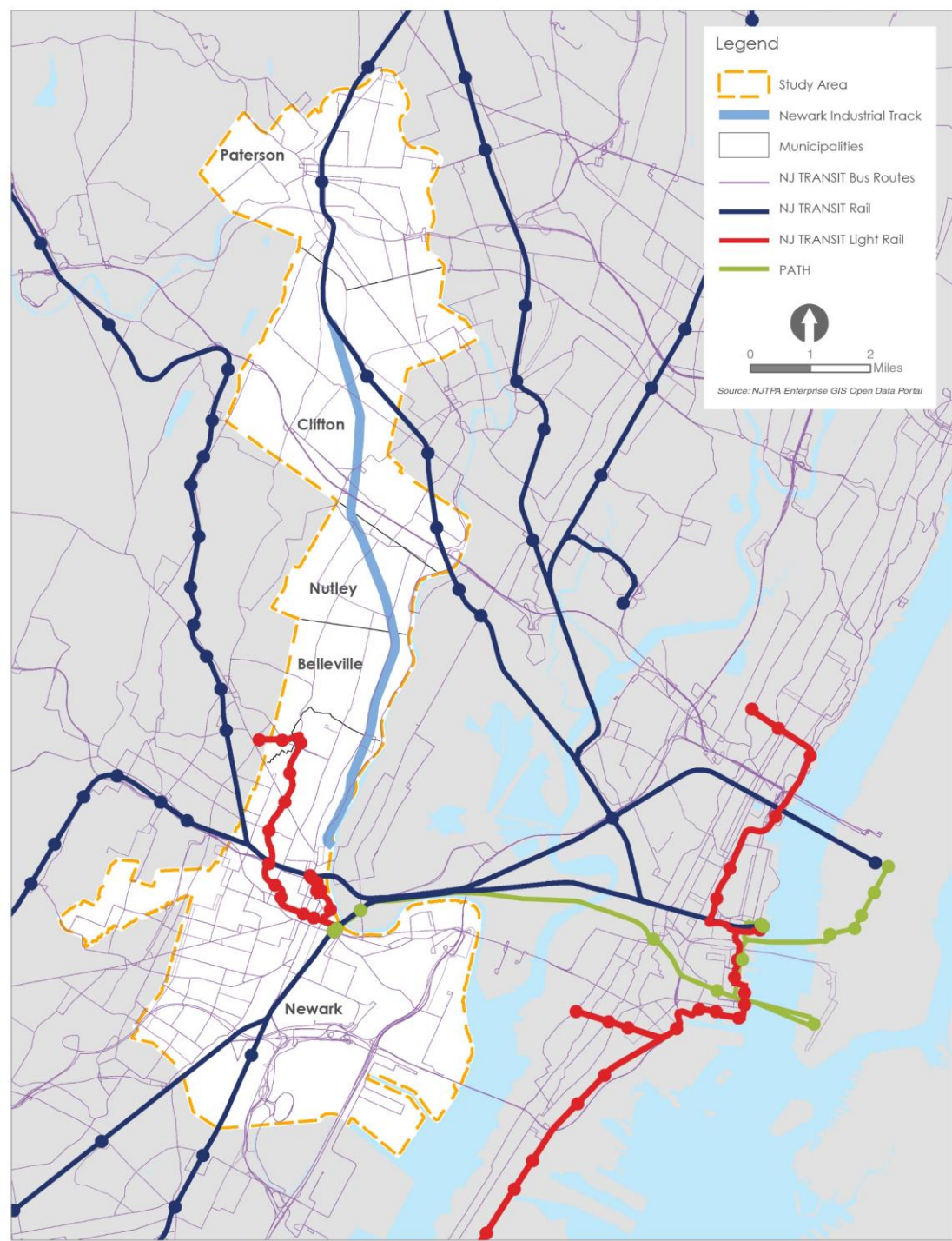


# Transit Services



Bus  
Commuter Rail

# Transit Services

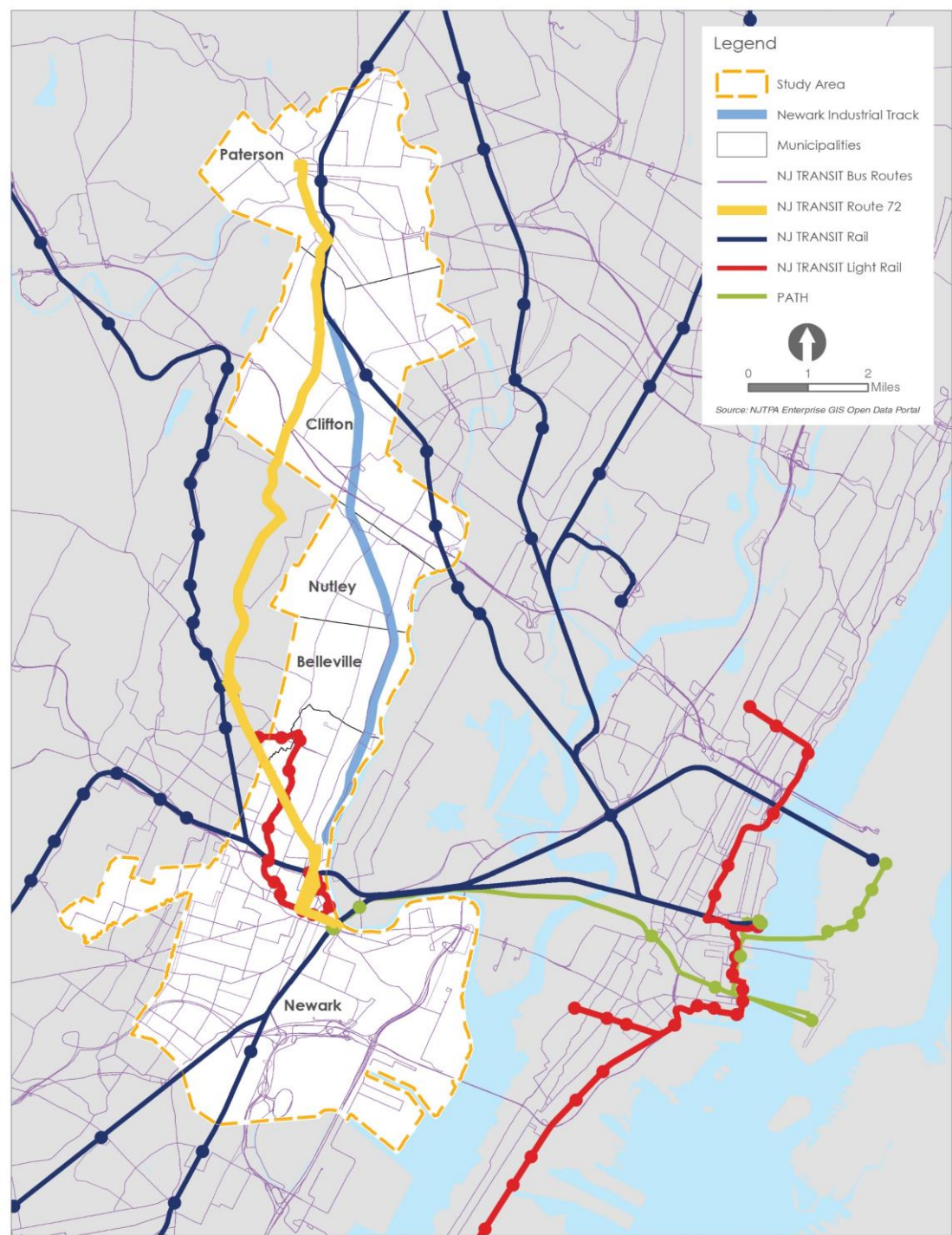


Bus  
Commuter Rail  
Light Rail  
PATH

# Transit Services

## Existing Transit Options

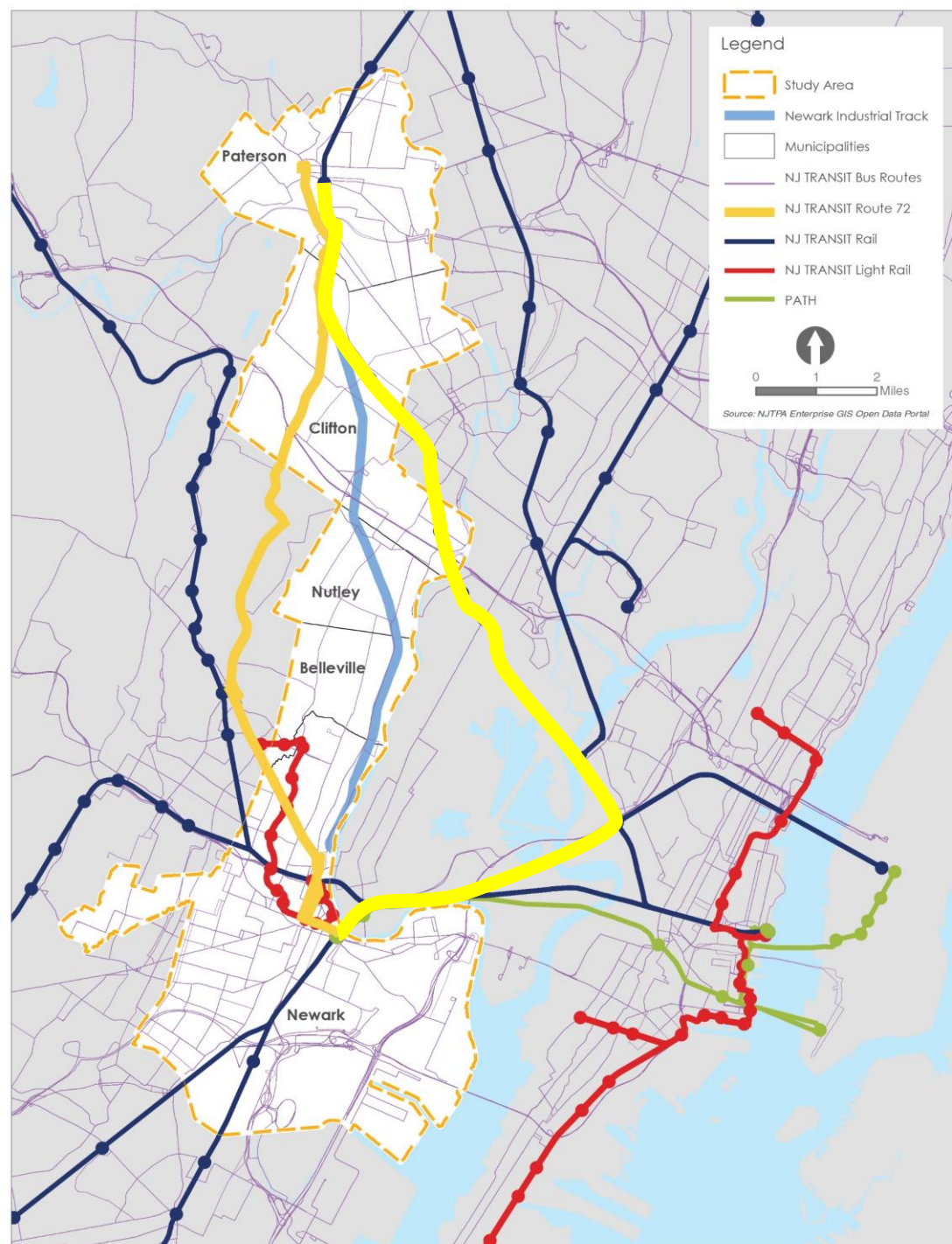
NJ TRANSIT Bus Route 72  
~1 hour 10 minutes



## Existing Transit Options

NJ TRANSIT Bus Route 72  
~1 hour 10 minutes

NJ TRANSIT Rail  
~50 minutes with transfer



# Paterson Transit Corridors

Rank by Daily Boarding Activity \*

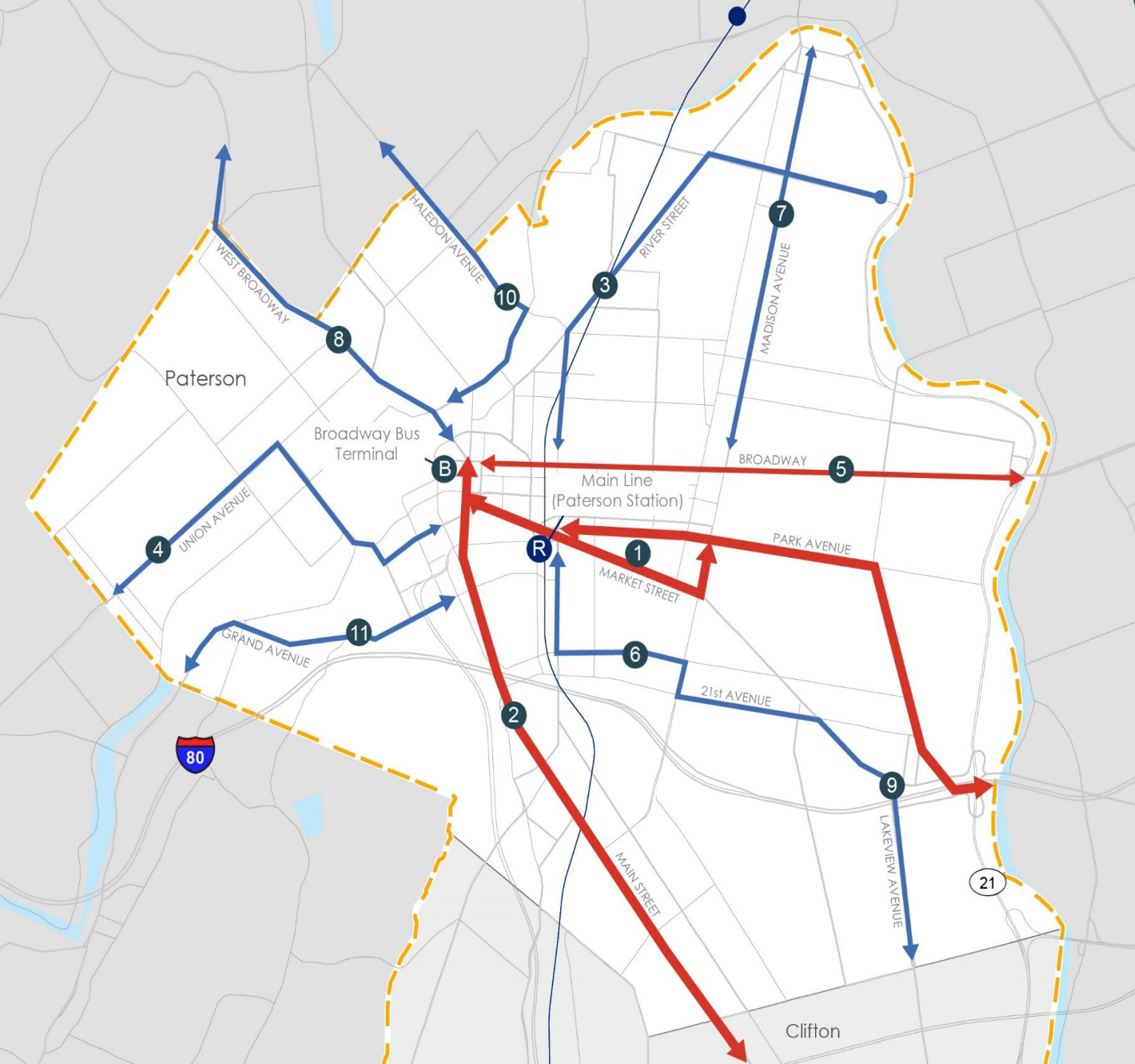
- 1. **Market Street / Park Avenue**
- 2. **Main Street**
- 3. Rosa Parks Boulevard / River Street
- 4. Union Boulevard / Wayne Avenue
- 5. Broadway
- 6. 20<sup>th</sup> / 21<sup>st</sup> / Trenton Avenues
- 7. Madison Avenue
- 8. West Broadway
- 9. Vreeland / Lakeview Avenues
- 10. Haledon Avenue / Presidential Blvd
- 11. Grand Avenue

- B. **Broadway Bus Terminal**
- R. Paterson Station

 Interstate Service

 Local Service

\* **Bold = 1,000+ daily boardings**





# Clifton Transit Corridors

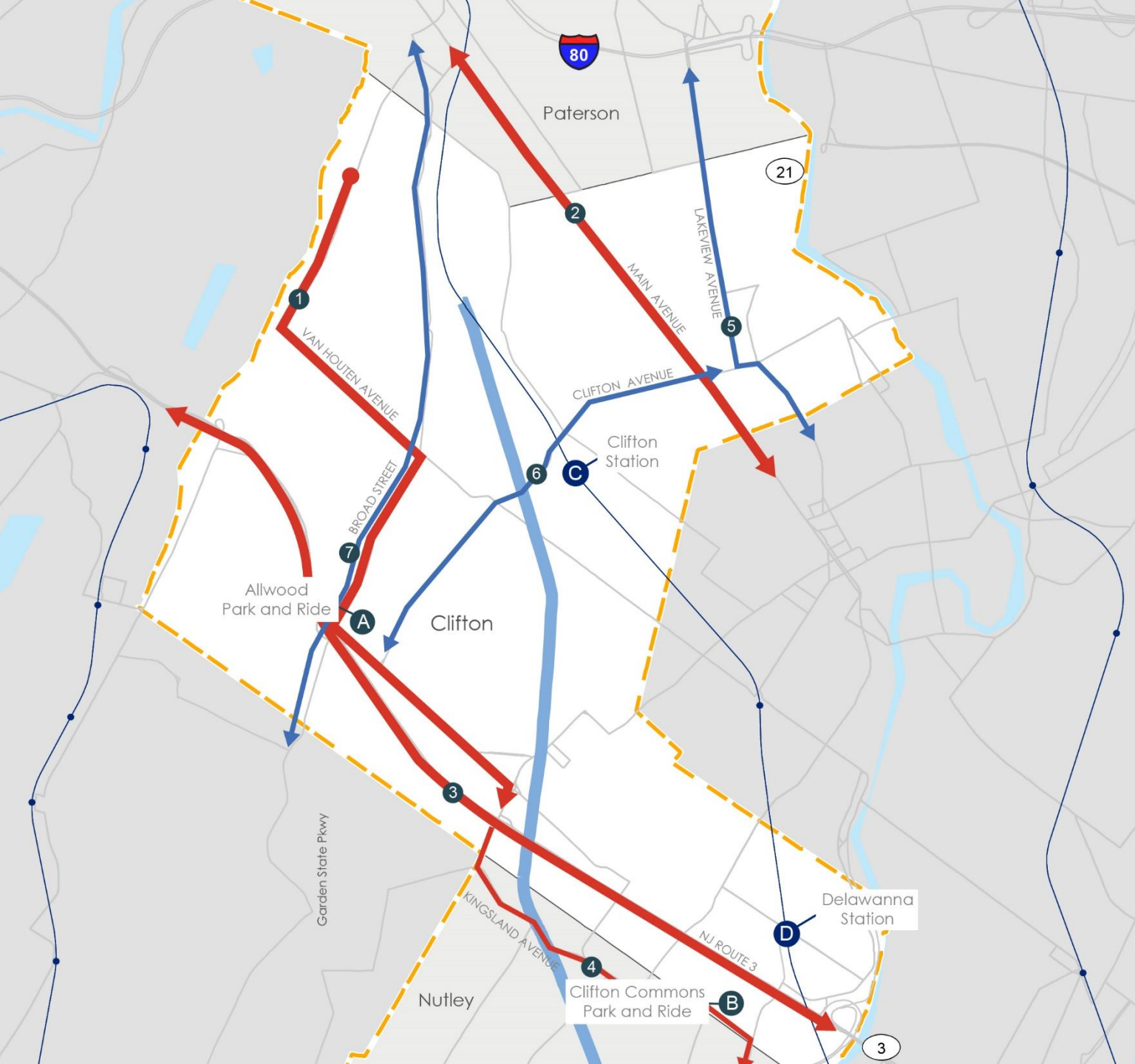
Rank by Daily Boarding Activity \*

- 1. **Valley Rd / Allwood Rd / Bloomfield Ave**
- 2. **Main Avenue**
- 3. **NJ Route 3**
- 4. Kingsland Road
- 5. Lakeview / Lexington Avenues
- 6. Clifton Avenue
- 7. Broad Street
  
- A. Allwood Park & Ride
- B. Clifton Commons Park & Ride
- C. Clifton Station (Main Line)
- D. Delawanna Station (Main Line)

 Interstate Service

 Local Service

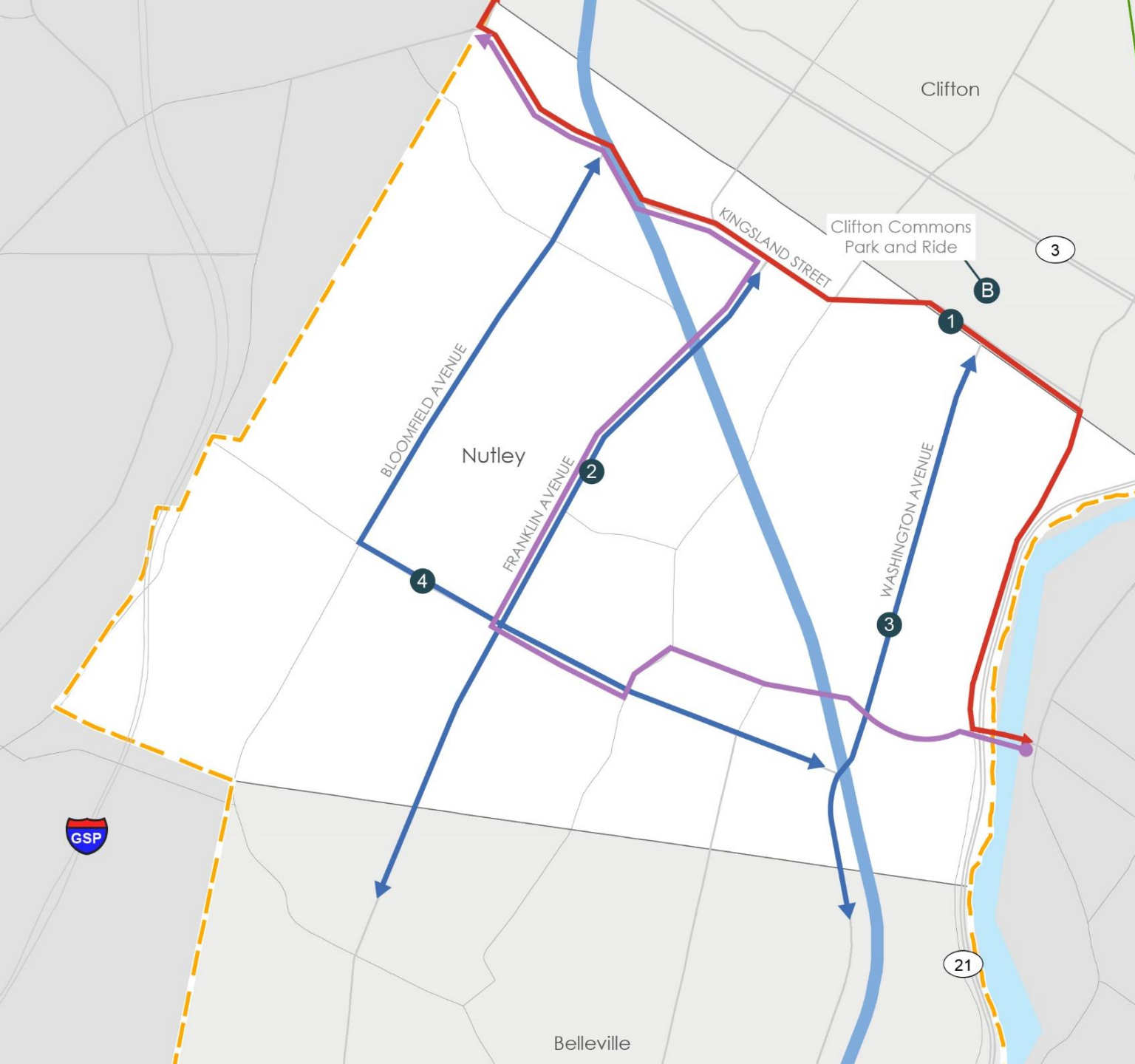
\* **Bold = 1,000+ daily boardings**



# Nutley Transit Corridors

## Rank by Daily Boarding Activity \*

- 1. Kingsland Street / River Road
- 2. Franklin Avenue
- 3. Washington / Union Avenues
- 4. Centre Street/ Park Avenue
- 5. Bloomfield Avenue



**— Interstate Service**  
**— Local Service**

**\* Bold = 1,000+ daily boardings**

# Belleville Transit Corridors

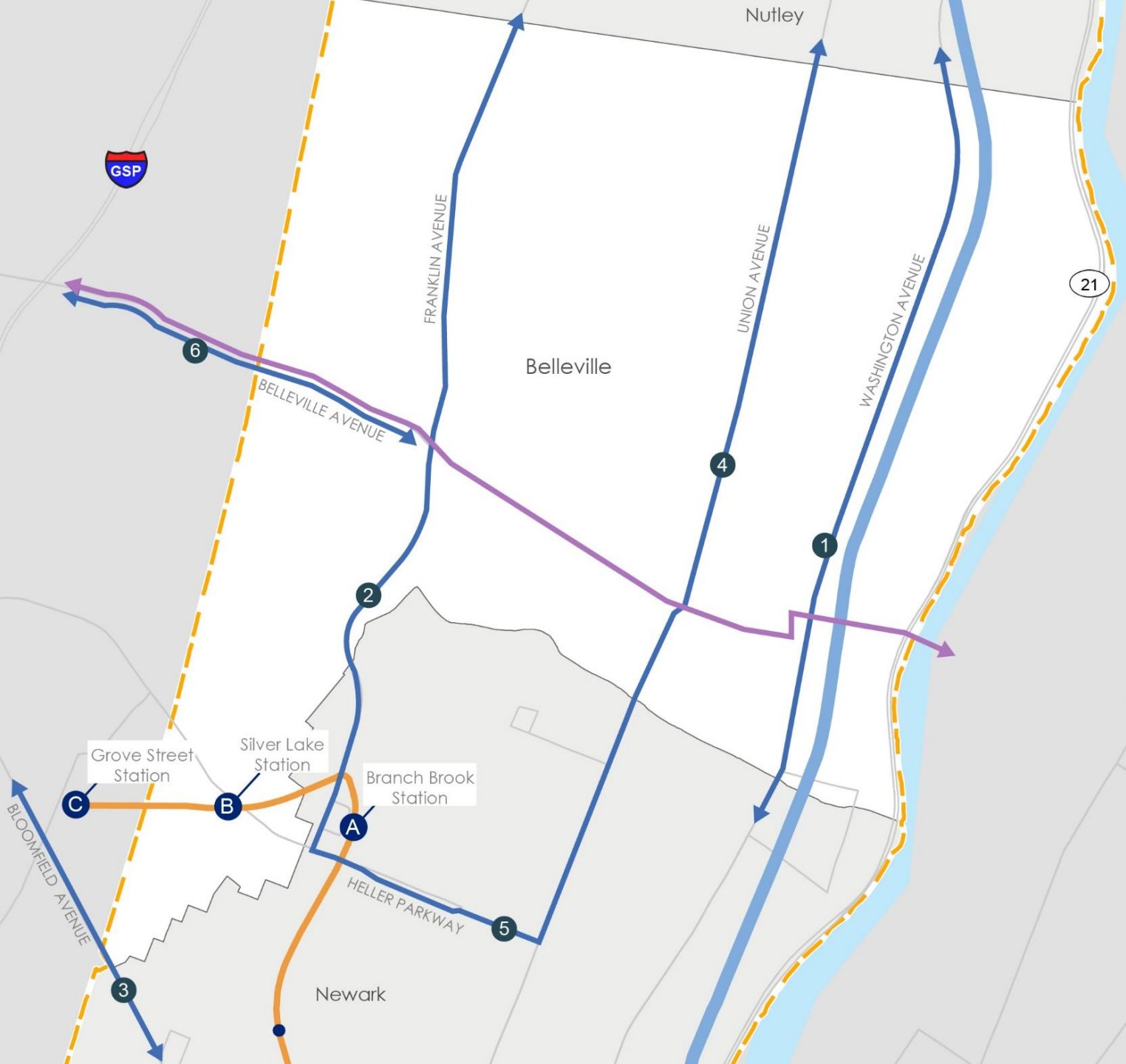
## Rank by Daily Boarding Activity \*

1. Washington Avenue
2. Franklin Avenue
3. Bloomfield Avenue
4. Union Avenue
5. Franklin Street / Heller Parkway
6. Belleville Avenue

- A. Branch Brook (Newark Light Rail)**
- C. Grove Street (Newark Light Rail)
- B. Silver Lake (Newark Light Rail)

**Interstate Service**  
**Local Service**

\* **Bold = 1,000+ daily boardings**



# Newark Transit Corridors

Rank by Daily Boarding Activity \*

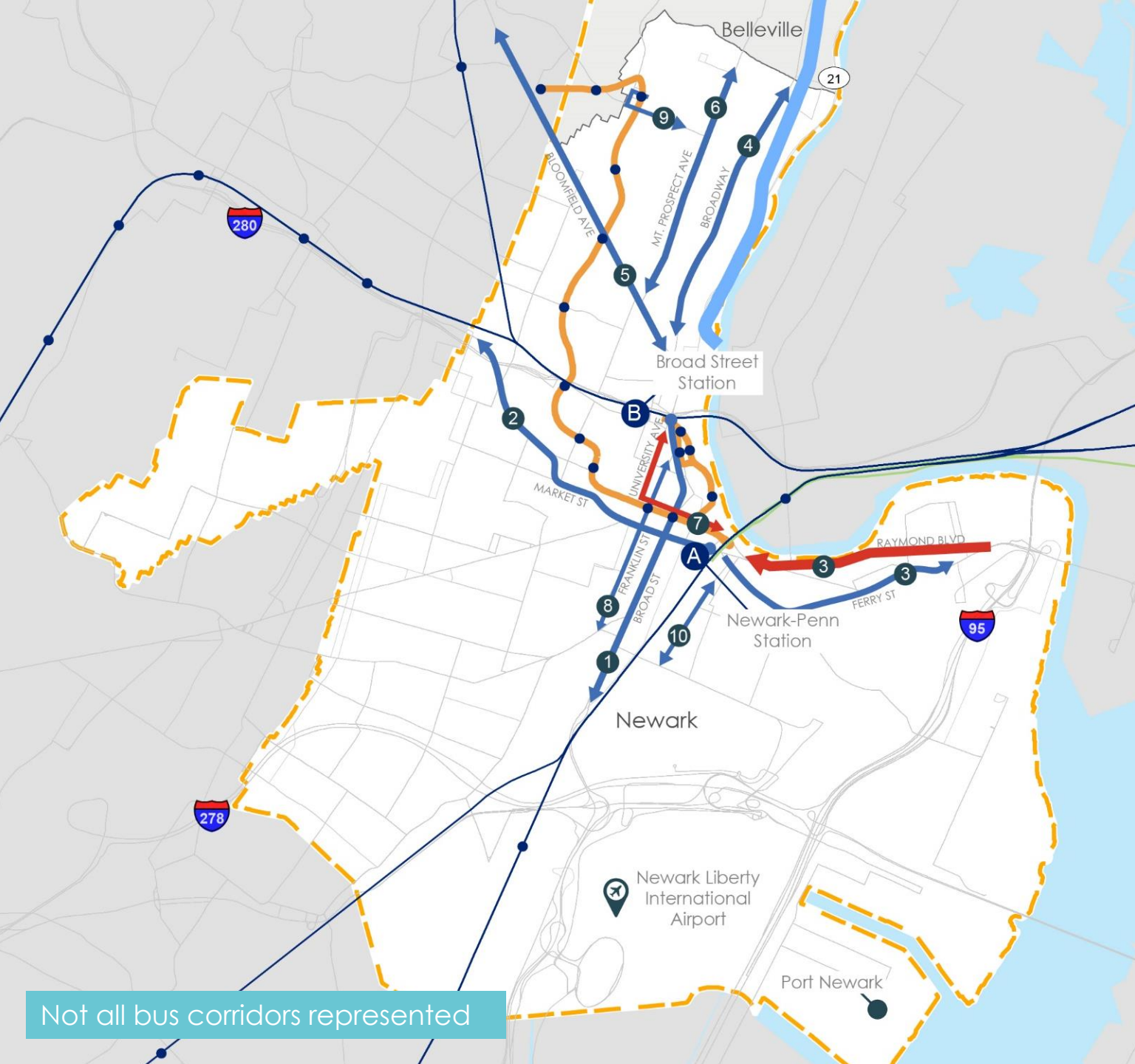
- 1. **Broad Street**
- 2. **Market Street**
- 3. **Ferry Street / Raymond Boulevard East**
- 4. **Broadway**
- 5. **Bloomfield Avenue**
- 6. **Mt. Prospect Avenue**
- 7. University Avenue / Raymond Boulevard
- 8. Washington Street
- 9. Heller Parkway / Franklin Street
- 10. Ironbound / South Street / Port Newark

- A. **Newark Penn Station**
- B. **Newark Broad Street**

 Interstate Service

 Local Service

\* **Bold = 1,000+ daily boardings**



Not all bus corridors represented

# PRELIMINARY FINDINGS

COMMUNITY CHARACTERISTICS

TRANSIT SERVICES

INFRASTRUCTURE

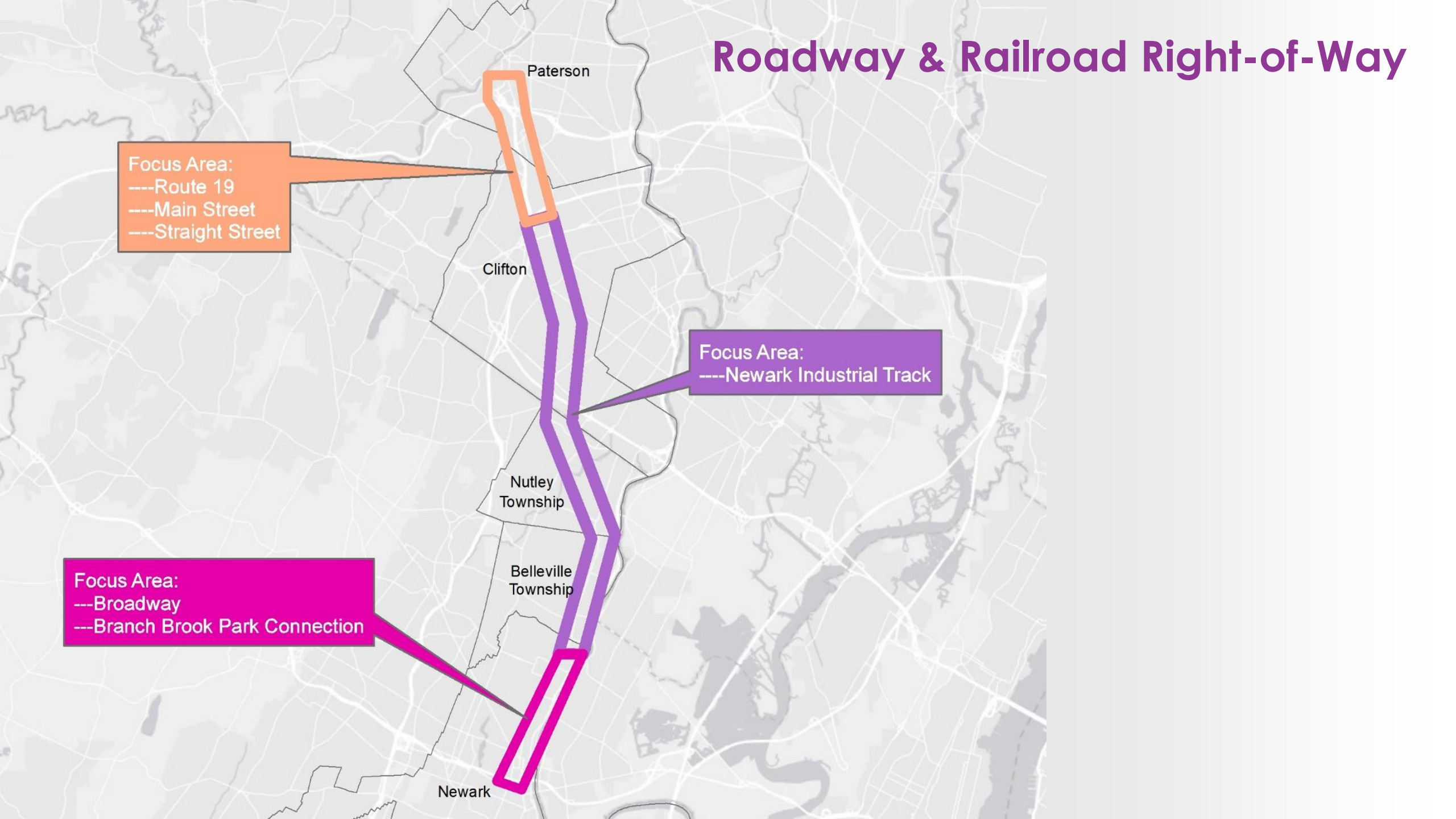
ENVIRONMENT

# Roadway & Railroad Right-of-Way

Focus Area:  
---Route 19  
---Main Street  
---Straight Street

Focus Area:  
---Newark Industrial Track

Focus Area:  
---Broadway  
---Branch Brook Park Connection



Paterson

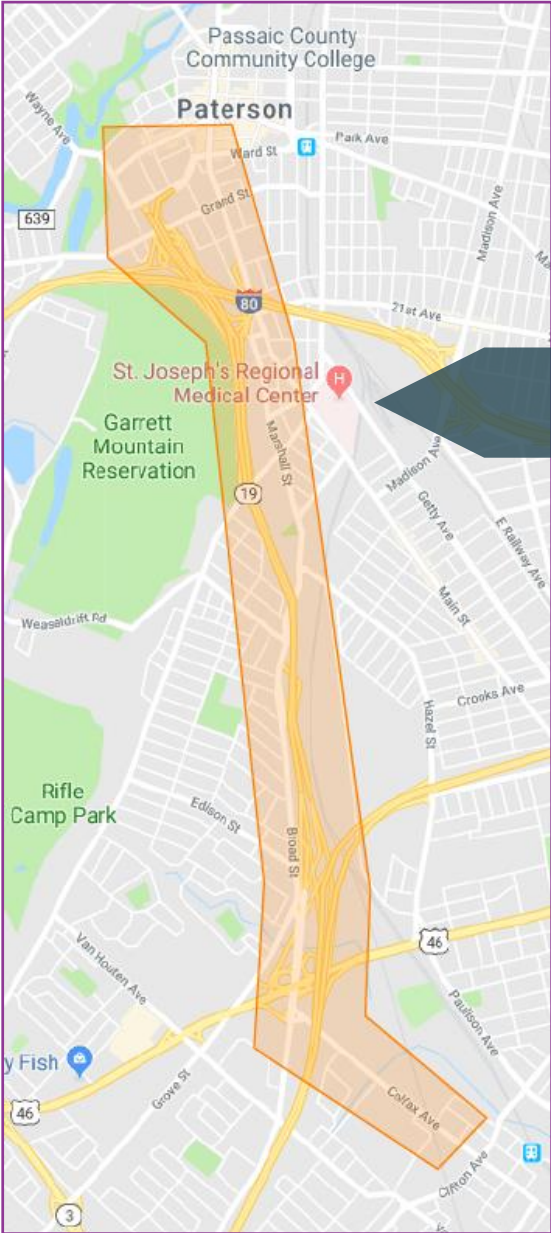
Clifton

Nutley  
Township

Belleville  
Township

Newark

# Roadway & Railroad Right-of-Way

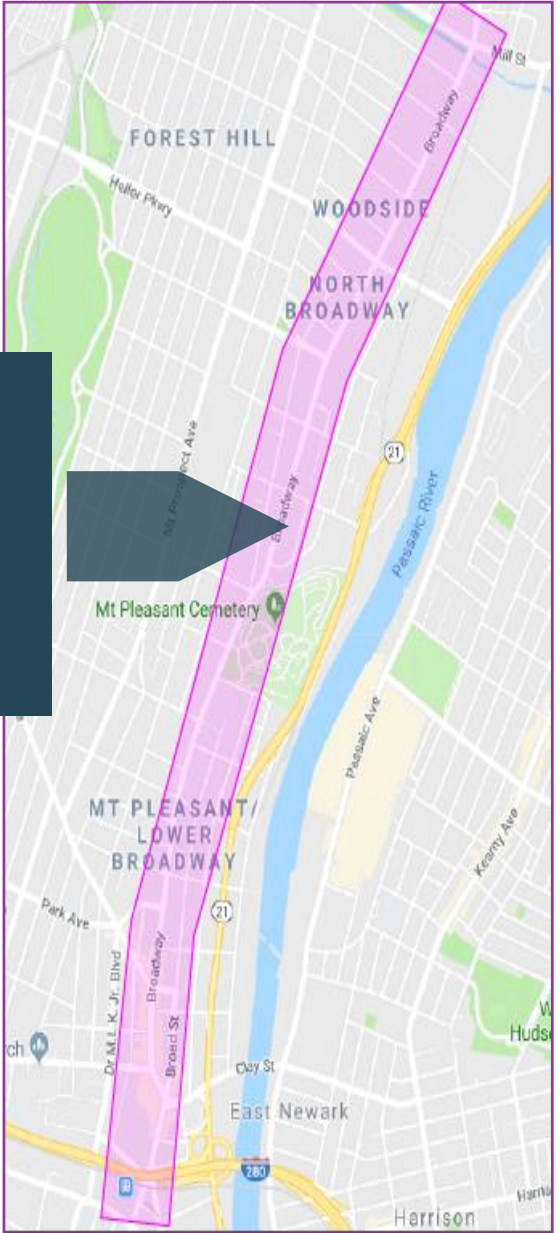
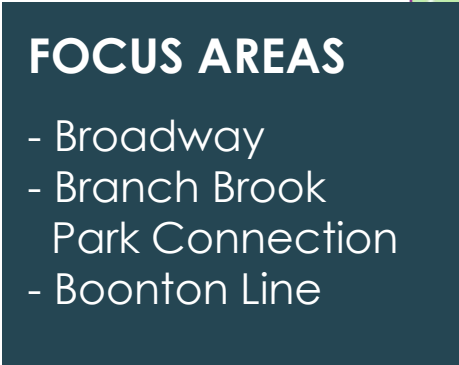
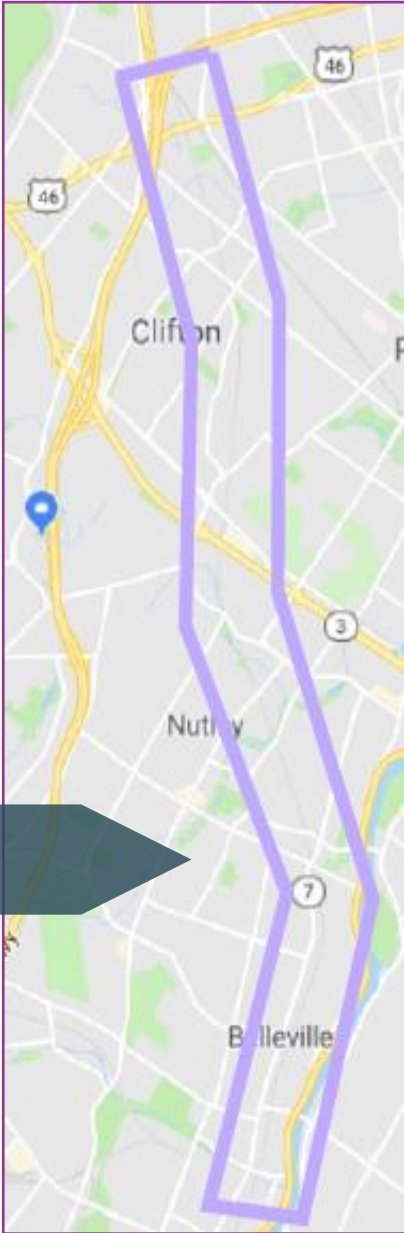


## FOCUS AREAS

- Route 19
- Main Street
- Straight Street

## FOCUS AREA

- Newark Industrial Track



## Drainage Conditions

### FEMA Flood Insurance Rate Map

- The rail alignment along the northern and southern limits is within or in close proximity to Passaic River 100-year (1% annual chance) flood plain.
- Potential alignments either cross or are within close proximity to the FEMA 100-year (1% annual chance) flood plain at the following locations:
  - Second River in Newark/Belleville
  - Third River in Belleville/Nutley
  - Weasel Brook in Clifton – subject to greater flooding and drainage issues

### NJTPA BRT 2014 Report

- Bus bypass shoulder operations
  - Concerns with shoulder slopes and inlet design



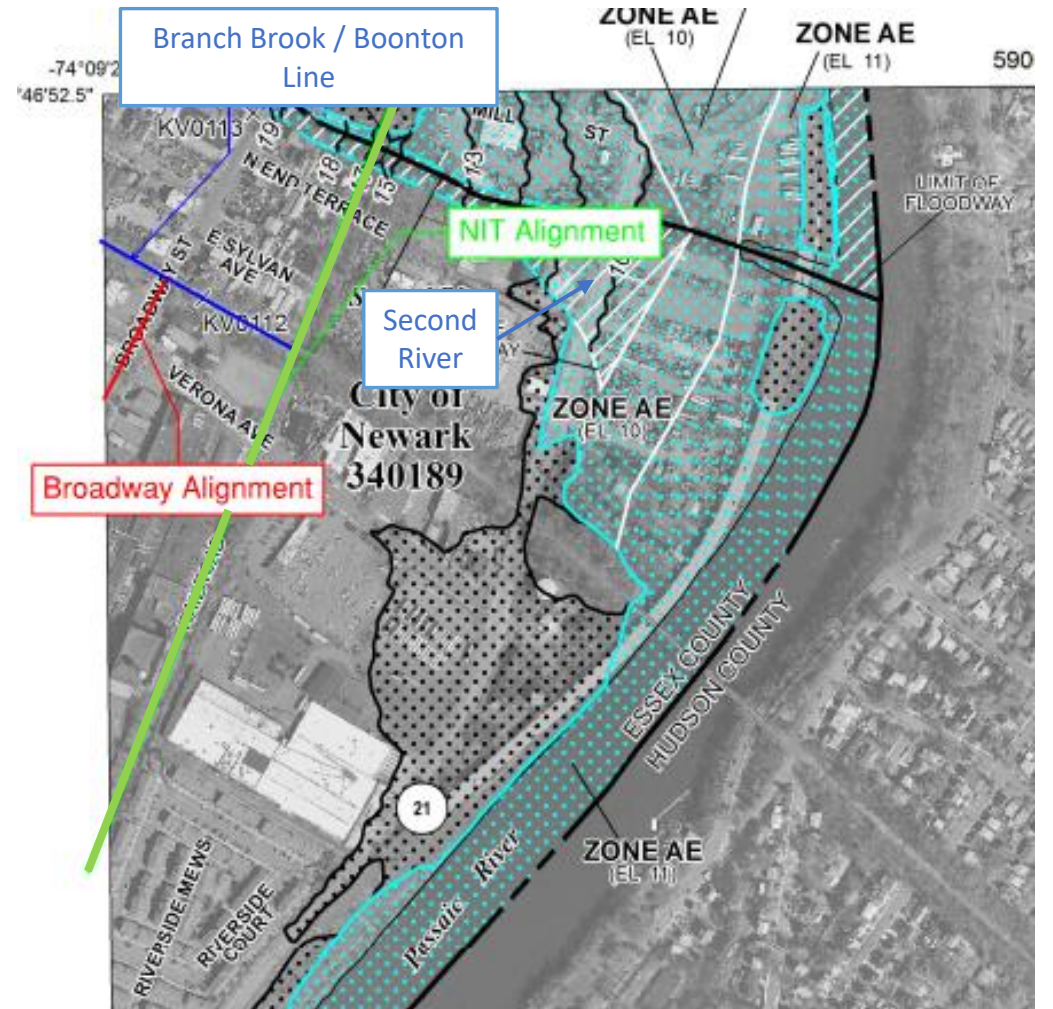
## Drainage Conditions

Alignments near regulated streams are subject to greater drainage issues

Northern & southern limits of alignments near FEMA's Passaic River 100-year floodplain

Portions of other alignments near FEMA's 100-year flood plains of:

- Second River in Newark/Belleville
- Third River in Belleville/Nutley
- Weasel Brook in Clifton



## Drainage Conditions

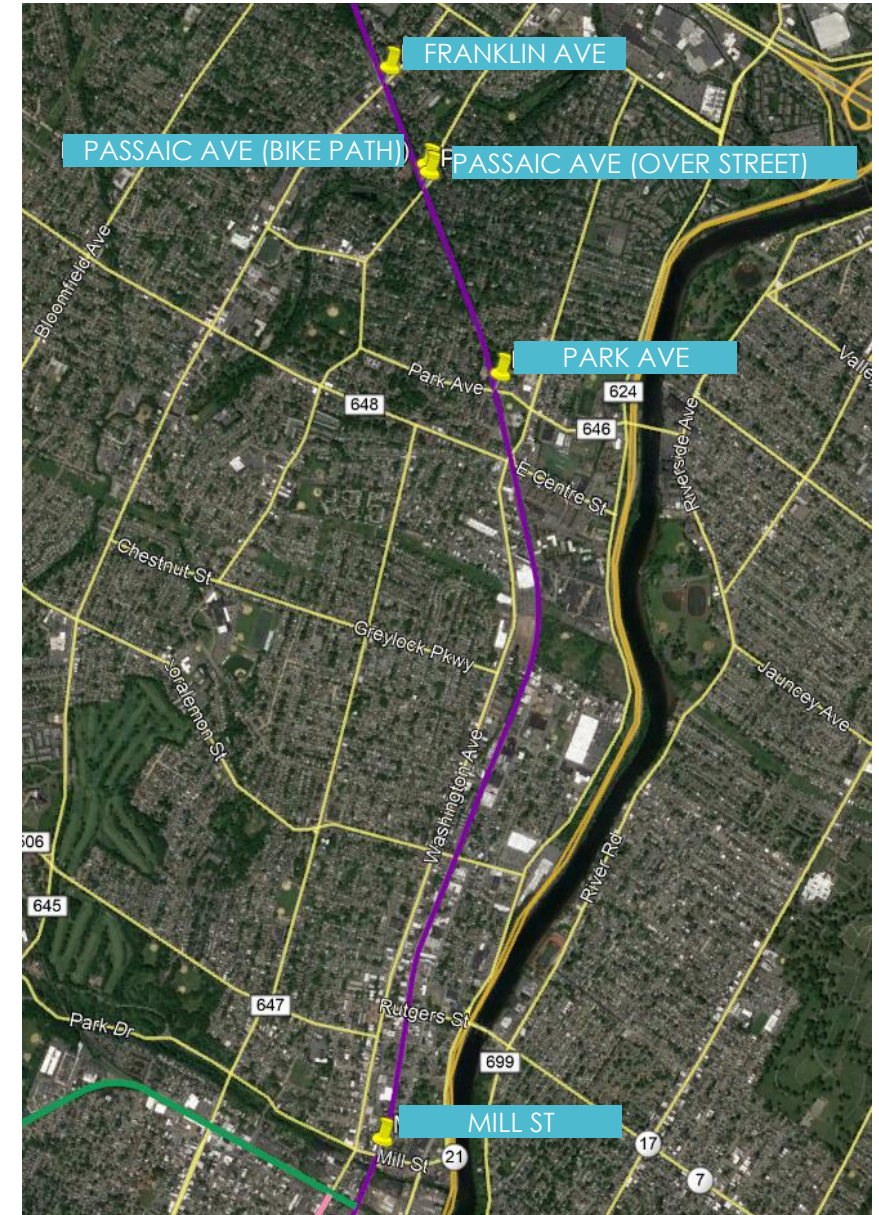
- Geometric design changes provide opportunities to improve
- local drainage issues
- Need for improvements to storm sewer
- Bus bypass shoulder operations
  - Concerns with shoulder slopes and inlet design



## Structural Conditions

- Superstructures designed for heavy rail (single and dual track operations)
- No significant deterioration observed
- Bridge structures not exposed to de-icing salts
- Maintenance typically limited to repair/replacement of deteriorated components, cleaning, painting of superstructure

## Railroad Right-of-Way



# Railroad Right-of-Way

## Structural Conditions



12'4" Substandard Vertical Clearances  
(Franklin Avenue, Nutley)

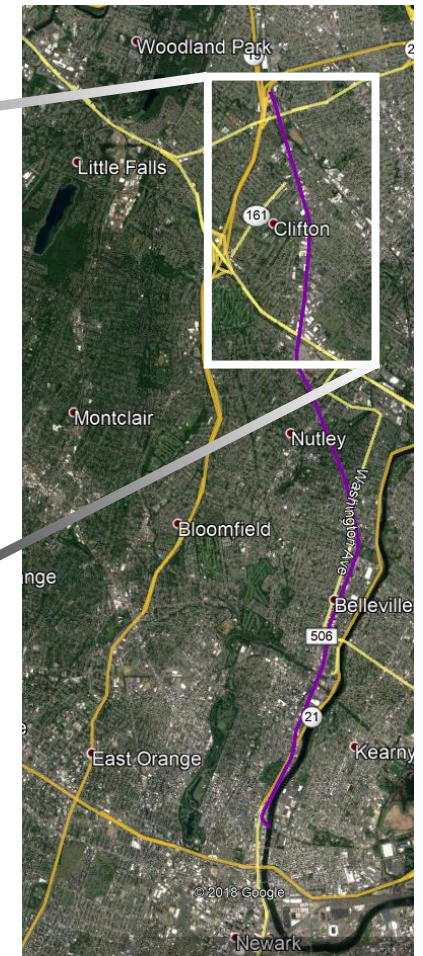
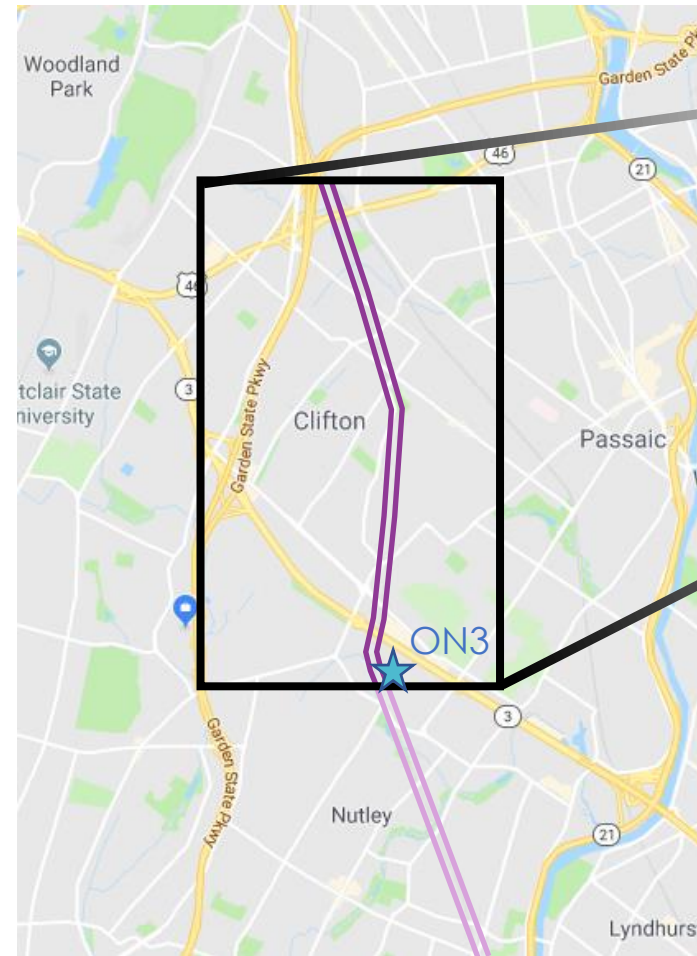


Single Track Rail Structure  
(Passaic Avenue, Nutley)

## Newark Industrial Track Setting

### Clifton

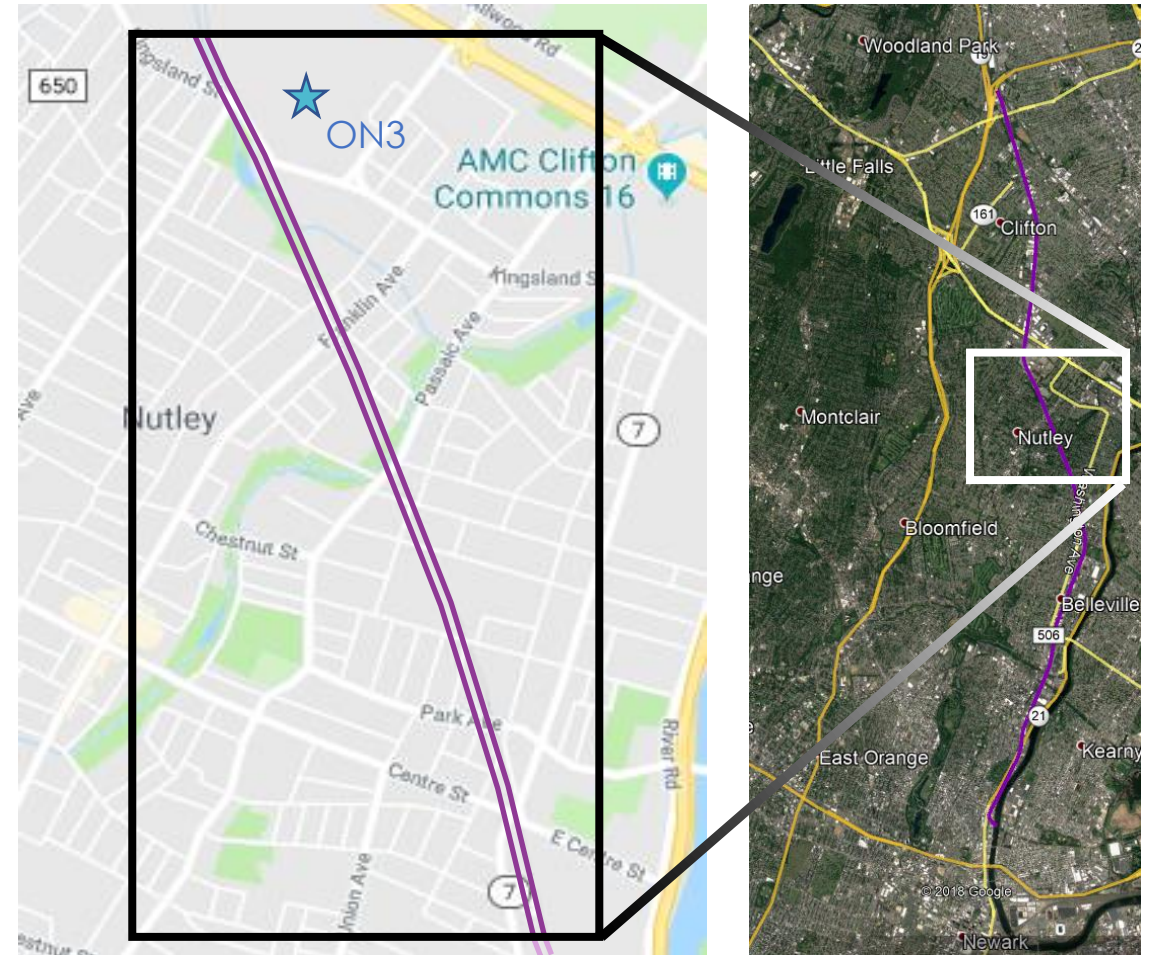
- Predominantly industrial and residential uses along track at northerly end
- Transitions to an area occupied by a combination of commercial, industrial and residential uses close to the track
- Clifton-Nutley municipal boundary, NIT travels through ON3 property being developed with:
  - Medical, office, R&D space
  - Education
  - Hotel
  - Retail
  - Residential



## Newark Industrial Track Setting

### Nutley

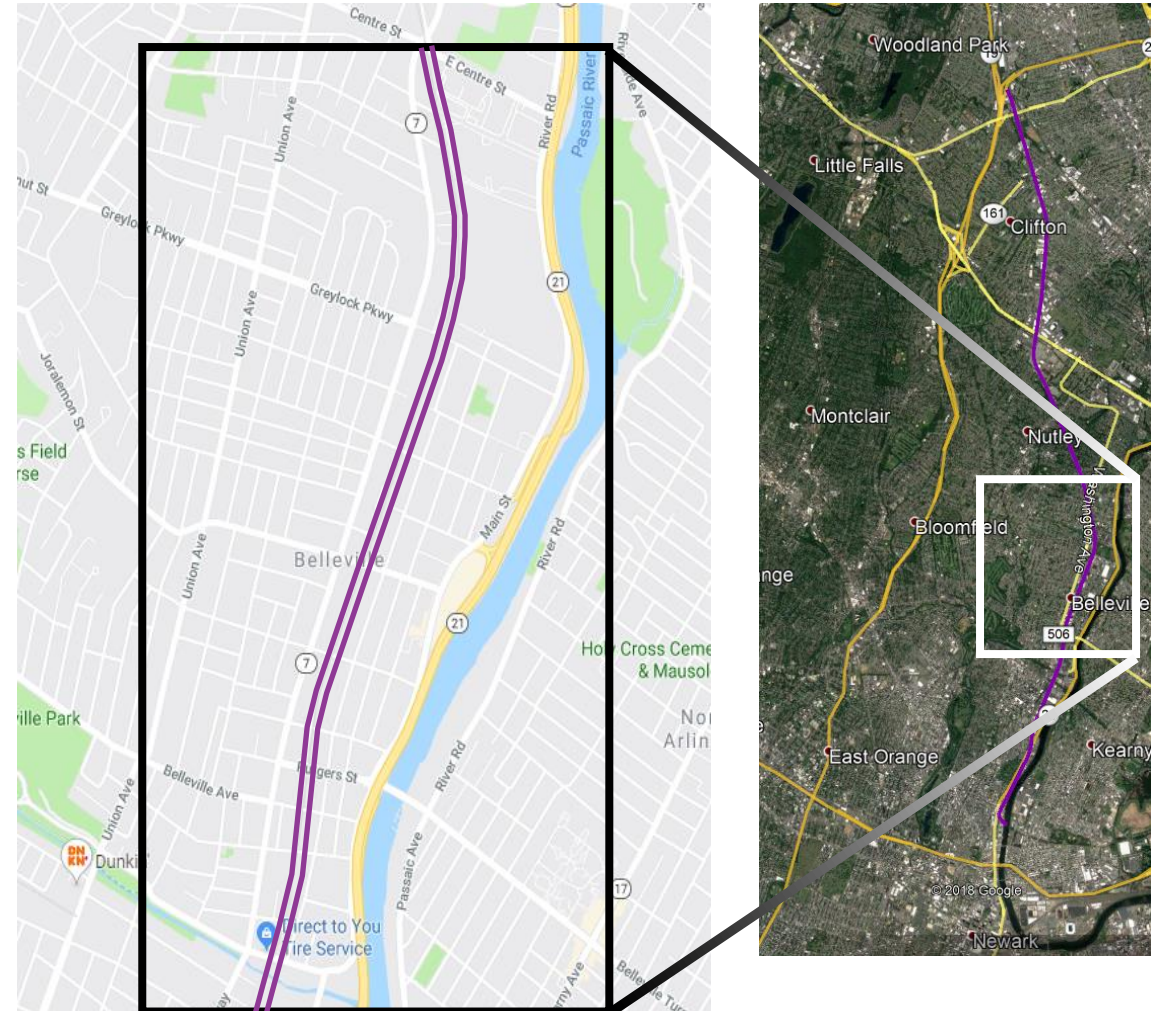
- Predominantly industrial in the vicinity of the ON3 development
- Transitions to a residential area with a light scattering of commercial uses
- Proximate to the Nutley-Belleville municipal boundary, the area surrounding the NIT is developed by commercial uses



## Newark Industrial Track Setting

### Belleville

- Located parallel to NJ-7 and Route 21, west of the Passaic River.
- Predominantly light industrial and commercial uses along its length
- Residential uses are intermittently scattered along the NIT corridor

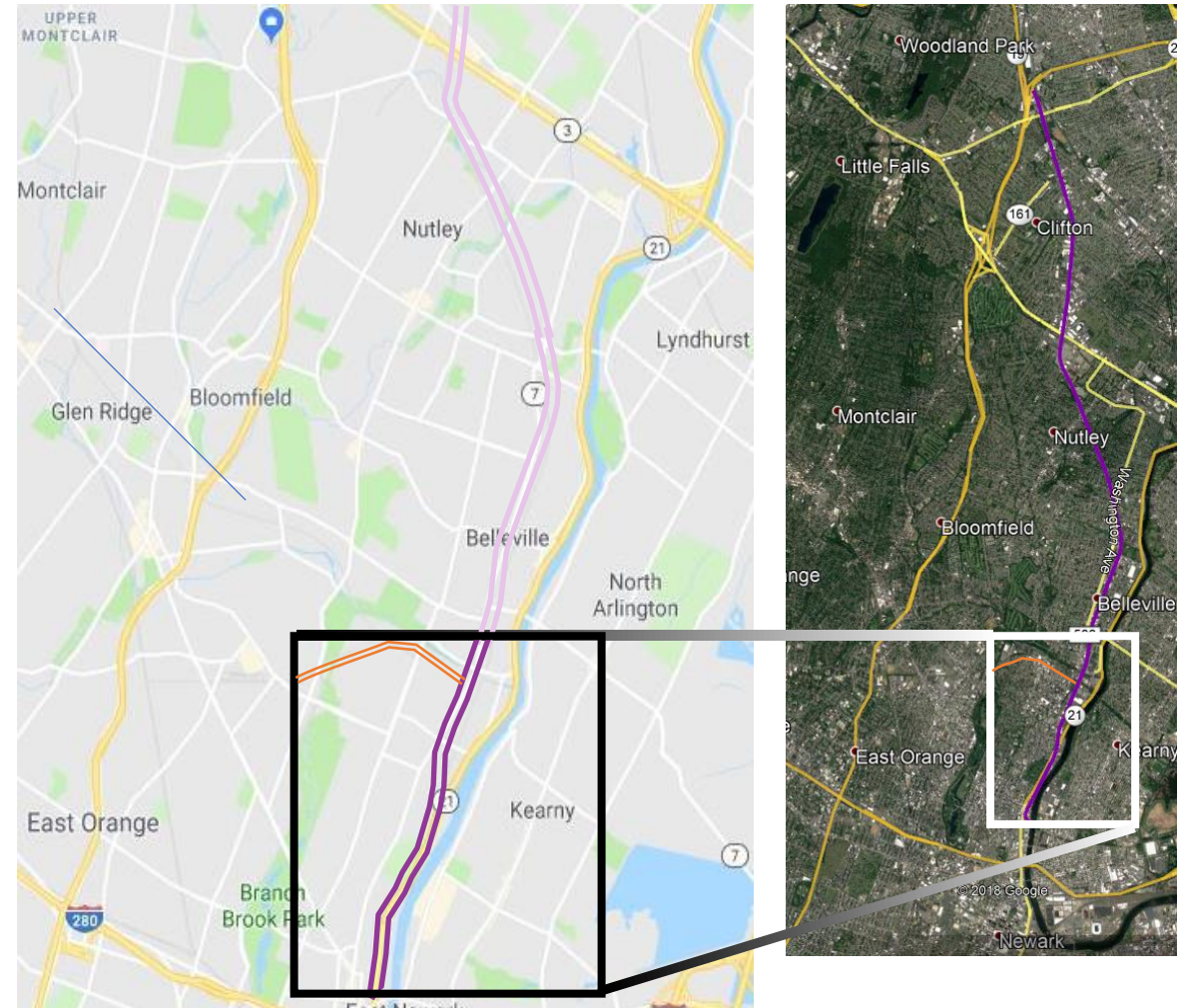


# Railroad Right-of-Way

## Newark Industrial Track Setting

### Newark

- Located parallel to the Passaic River
- Predominantly industrial along the corridor
- Portions of track are paved over
- Adjacent and crosses under NJ Route 21
- Boonton / Branchbrook Line





# Roadway Right-of-Way

## Pavement Conditions

- Existing bituminous pavement inspected along On Road Loop, Great Falls – Route 21, and Broadway in Newark
- Conditions vary widely from recently paved to poor
- Many areas of patching, cracking/distress, spalling, and deterioration



VERONA AVENUE



RIVERSIDE AVENUE



GRAFTON AVENUE

# Roadway Assessment

## On-Loop Road: Key Roadways

### Main Street Right-of-Way



- Accommodates two-way traffic
- Permits parking along its length
- Currently accommodates bus routes
- Promotes pedestrian circulation - sidewalks, crosswalks, ADA ramps, etc.

### Similar Rights-of-Way

- Straight Street
- Marshall Street

## On-Loop Road: Key Roadways

### Hazel Street Right-of-Way



- Accommodates two-way traffic
- Parking prohibited along segment
- School drop-off/pick-up activity cause traffic congestion
- Accommodates bus routes along its length
- Above-grade crossing over NJ TRANSIT tracks, east of the Marshall Street intersection

## On-Loop Road: Key Roadways

### Kuller Road Right-of-Way



- Accommodates two-way traffic
- Parking is not permitted along the study segment
- Study length is in an industrial area
- Adjacent to NIT at south end

# Roadway Assessment

## Great Falls / Route 19 – Key Roadways

### NJ Route 19 Right-of-Way



- Provides connectivity between Paterson and Clifton
- Predominantly 2 to 3 travel lanes Freeway-like conditions
- Accessed via Mill Street
- Typically free-flow operations

## Great Falls / Route 19 – Key Roadways

### Mill Street Street Right-of-Way



- Provides access to Paterson Street network from NJ Route 19
- Varies between one-way and two-way operation
- One-way in southbound direction south of Ward Street. Parking lanes available on both sides
- No existing NJ TRANSIT bus service

# Roadway Assessment

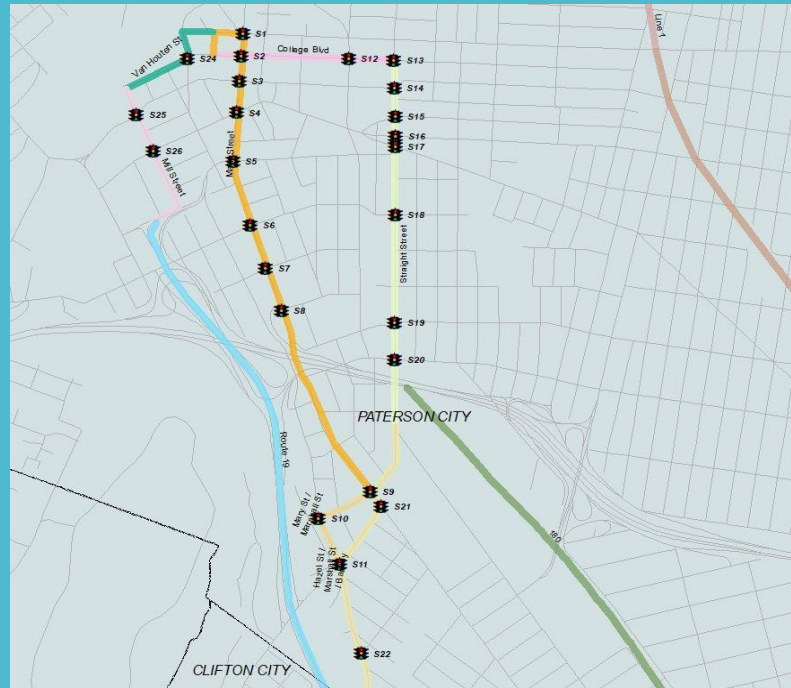
## Broadway – Key Roadways

### Broadway Right-of-Way

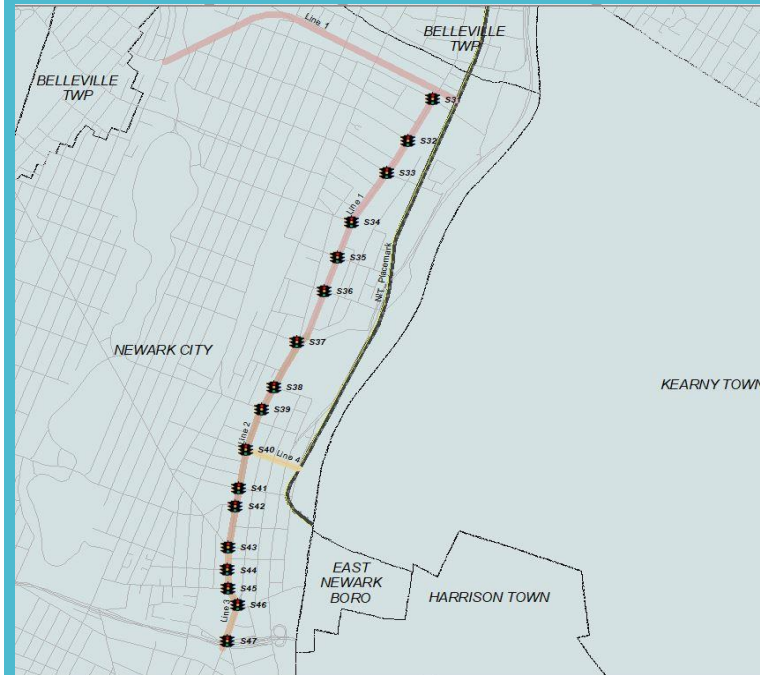


## Traffic Signalization and Operations

### Paterson Traffic Signals Locations



### Newark Traffic Signal Locations



### NEMA TS1/TS2 Signal Equipment

- Mix of different signal technology along corridor
- Some signals may have pre-emption capabilities
- May require replacement/upgrades if transit signal priority is proposed



# PRELIMINARY FINDINGS

COMMUNITY CHARACTERISTICS

TRANSIT SERVICES

INFRASTRUCTURE

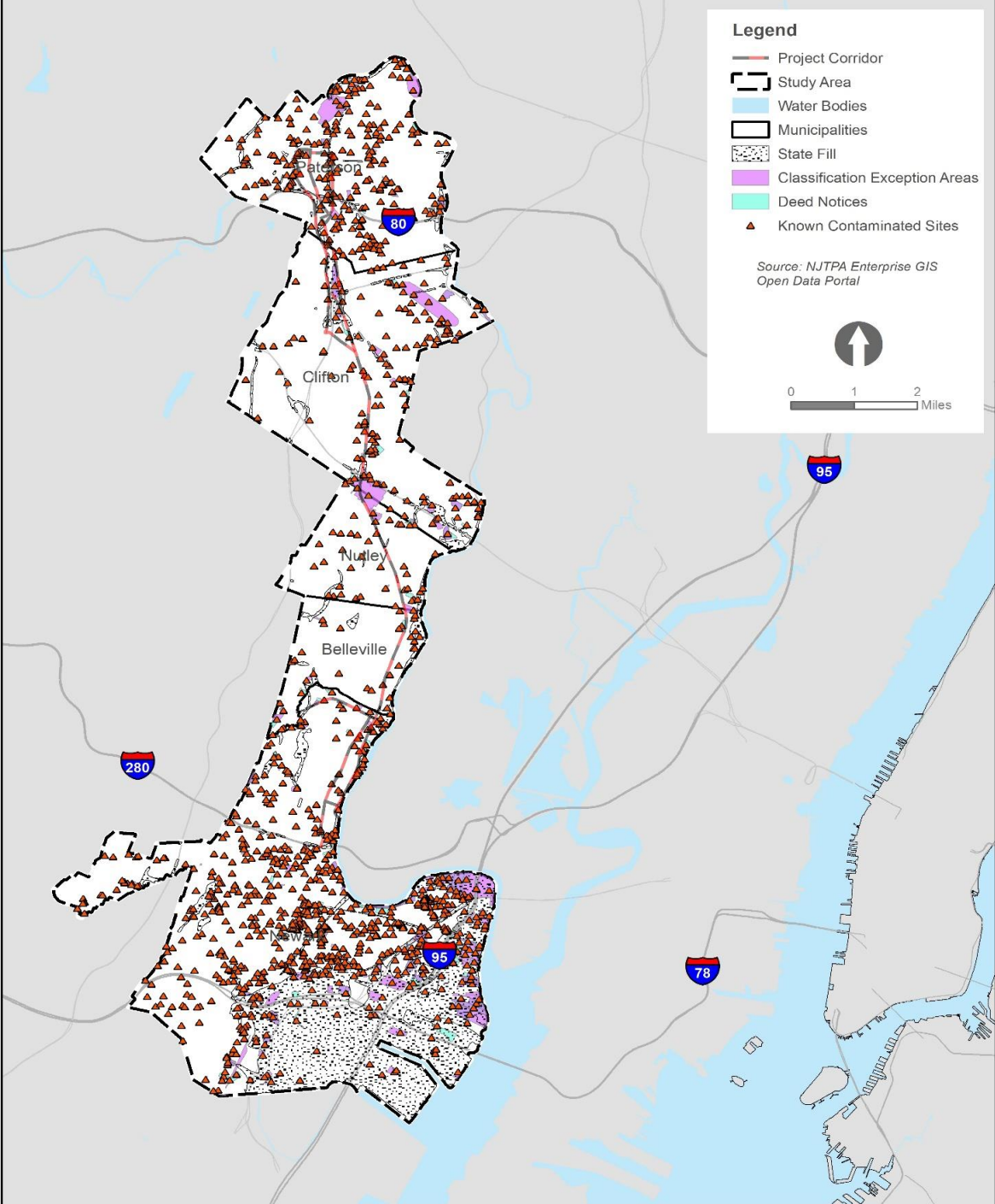

ENVIRONMENT

# Hazardous Waste

**Legend**

- Project Corridor
- Study Area
- Water Bodies
- Municipalities
- State Fill
- Classification Exception Areas
- Deed Notices
- Known Contaminated Sites

Source: NJTPA Enterprise GIS Open Data Portal



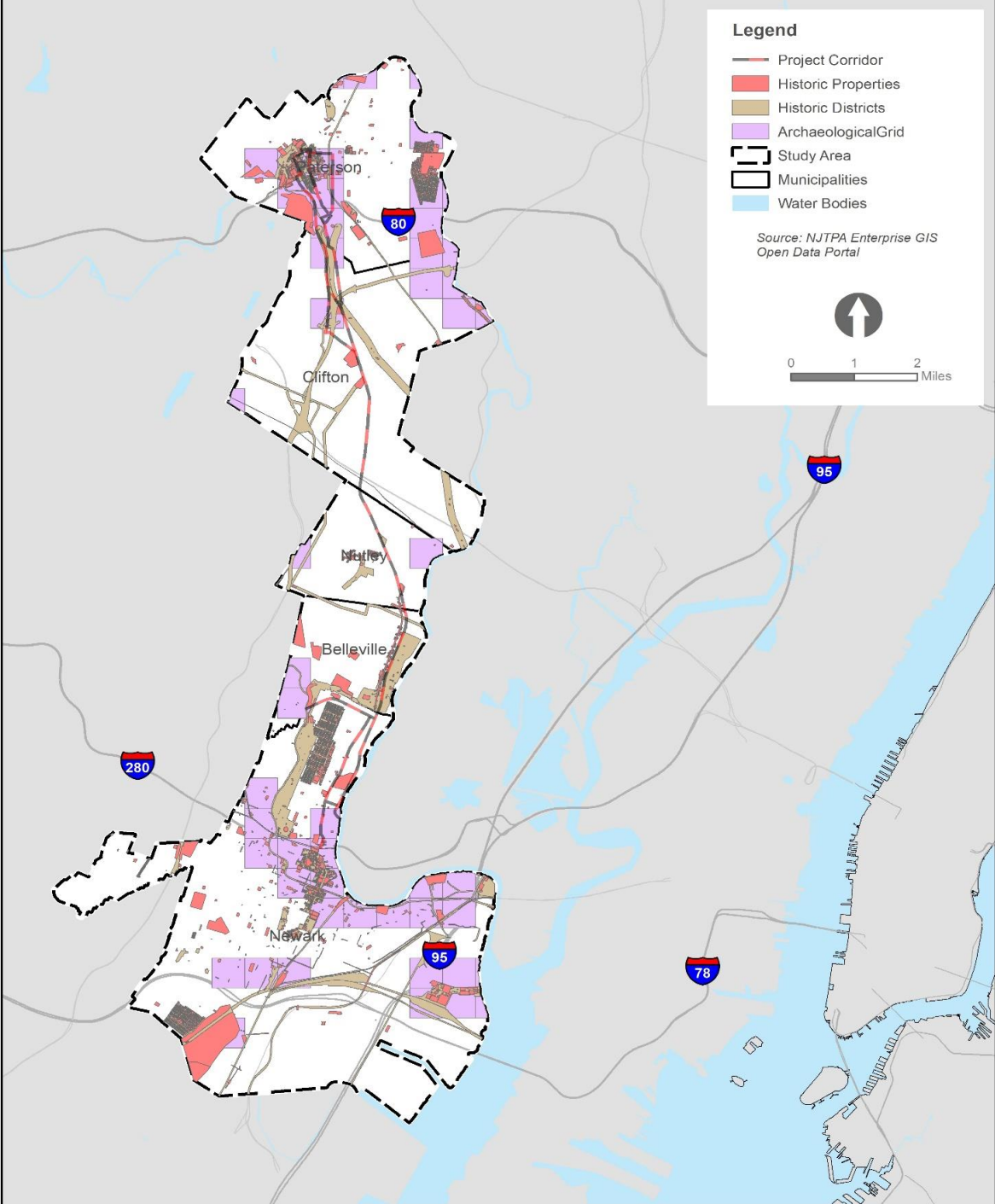

Known contaminated sites  
Classification exception areas  
Historic fill  
Deed notices

# Cultural Resources

**Legend**

- Project Corridor
- Historic Properties
- Historic Districts
- Archaeological Grid
- Study Area
- Municipalities
- Water Bodies

Source: NJTPA Enterprise GIS Open Data Portal

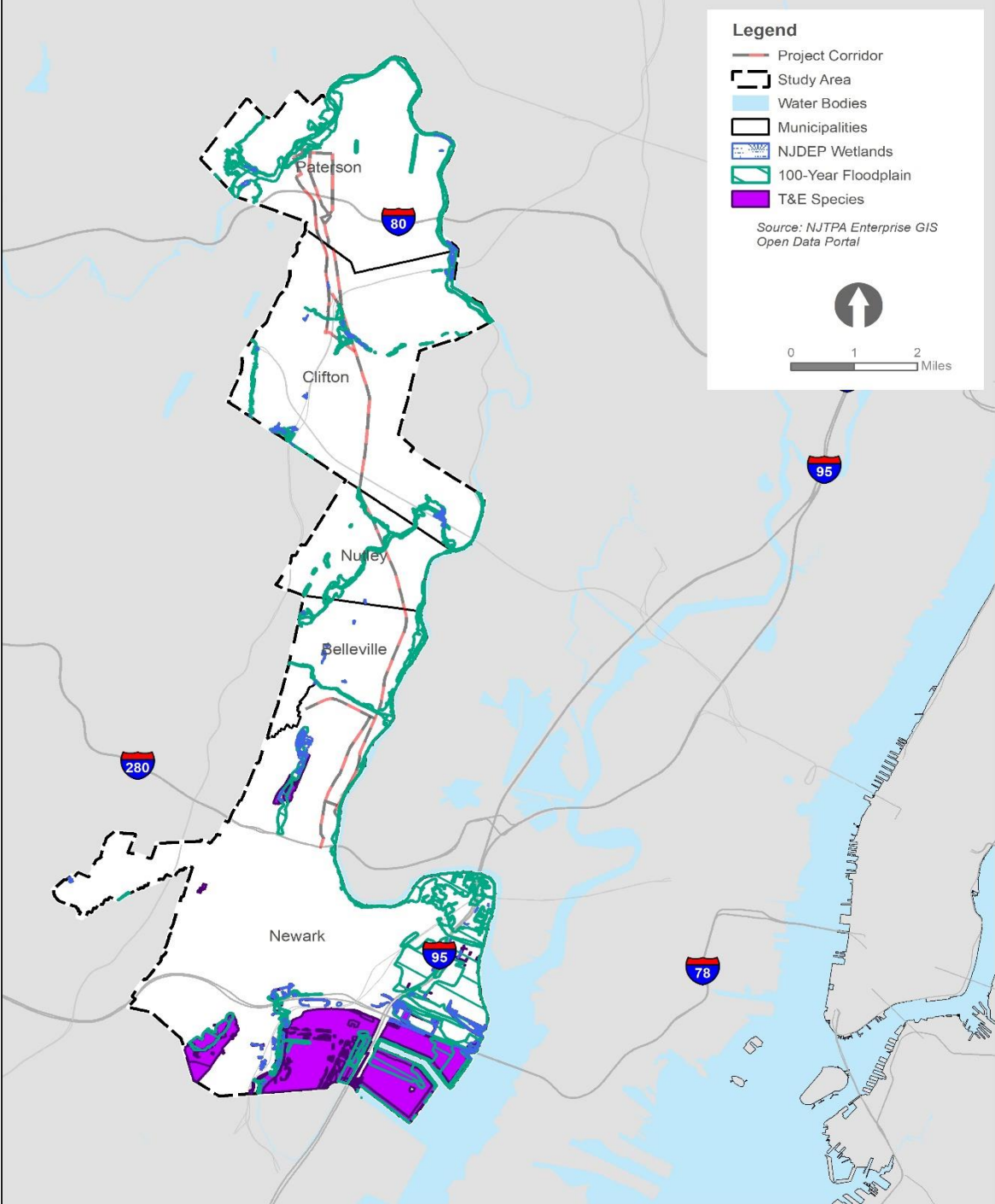
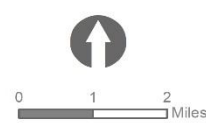


Historic properties  
Historic districts  
Archeological grid

**Legend**

- Project Corridor
- Study Area
- Water Bodies
- Municipalities
- NJDEP Wetlands
- 100-Year Floodplain
- T&E Species

Source: NJTPA Enterprise GIS Open Data Portal



Wetlands  
Floodplain  
Threatened & endangered species

# MARKET OPPORTUNITIES

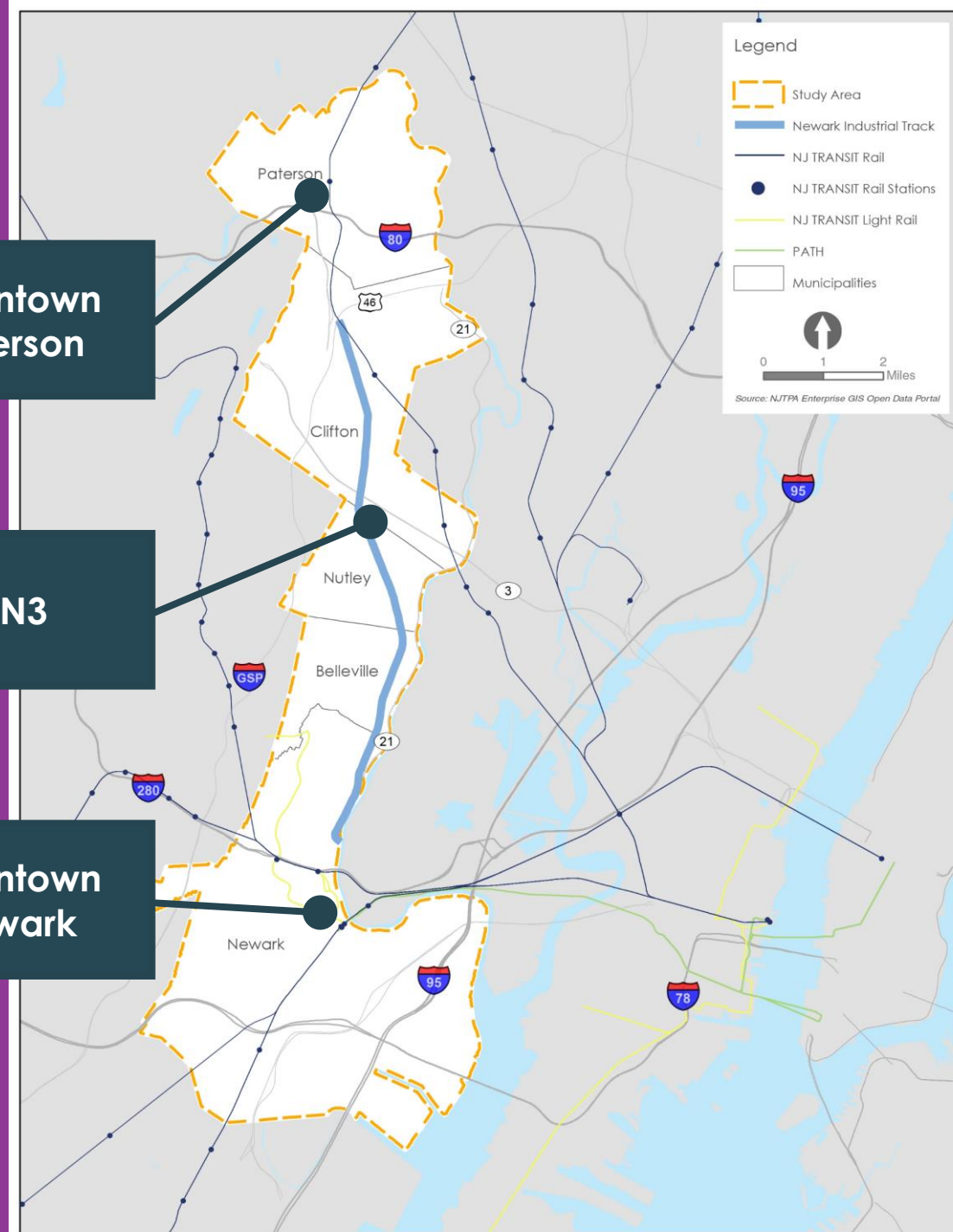
## Corridor Anchors

Transit Network Opportunities  
Mode/Alignment Options

Downtown Paterson

ON3

Downtown Newark

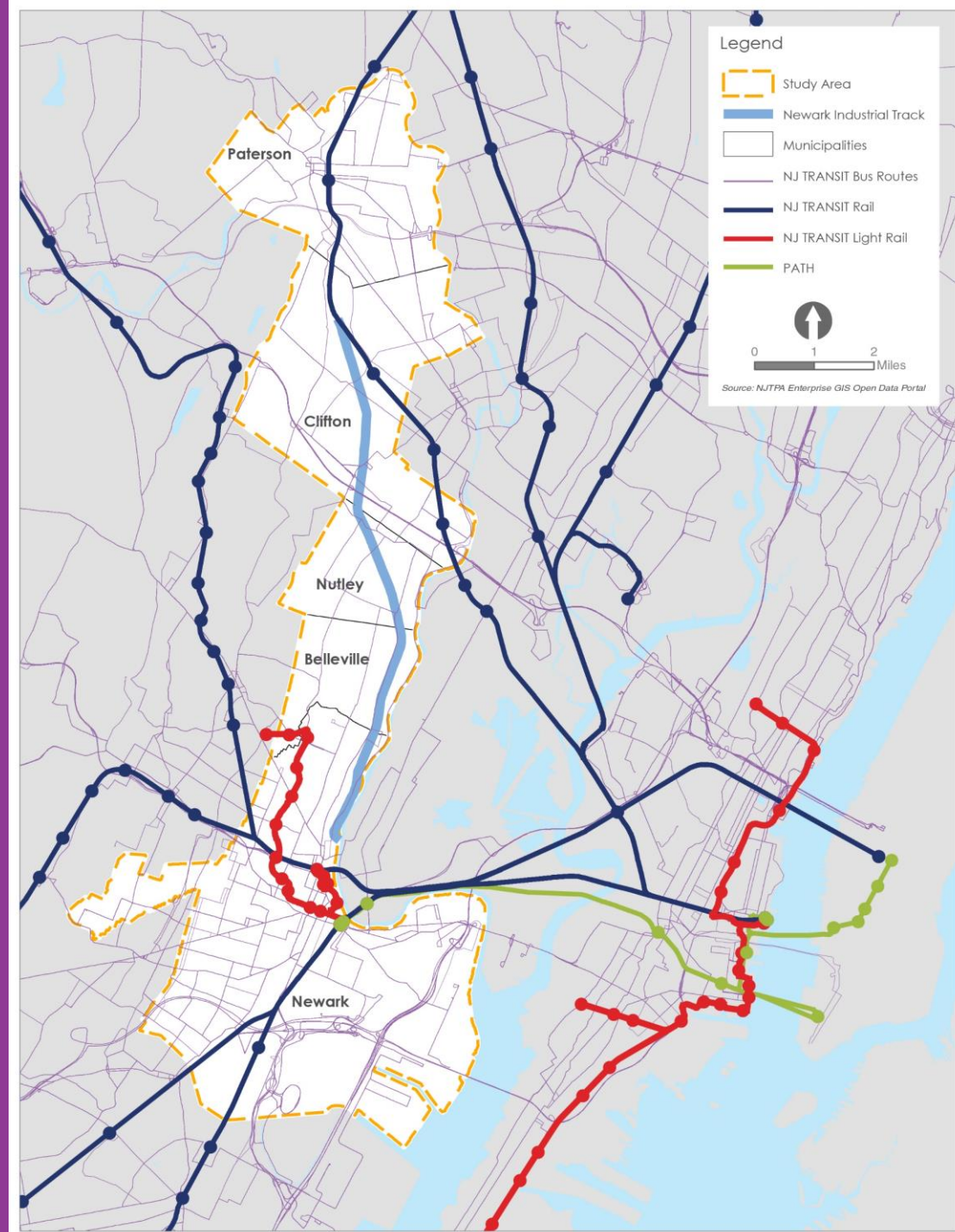


# MARKET OPPORTUNITIES

Corridor Anchors

Transit Network Opportunities

Mode/Alignment Options



# MARKET OPPORTUNITIES

Corridor Anchors  
Transit Network Opportunities  
**Mode/Alignment Options**

Bus Rapid Transit/Enhanced Bus



Light Rail (Electric)



Light Rail (DMU)



# DISCUSSION

1. Constraints
2. Opportunities
3. Next Steps



# PATERSON NEWARK

## Transit Market Study



## Technical Advisory Committee

Meeting 1 – September 10, 2019

