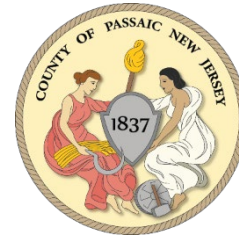


# PATERSON NEWARK

## Transit Market Study



## Technical Advisory Committee

Meeting 3 – April 28, 2020

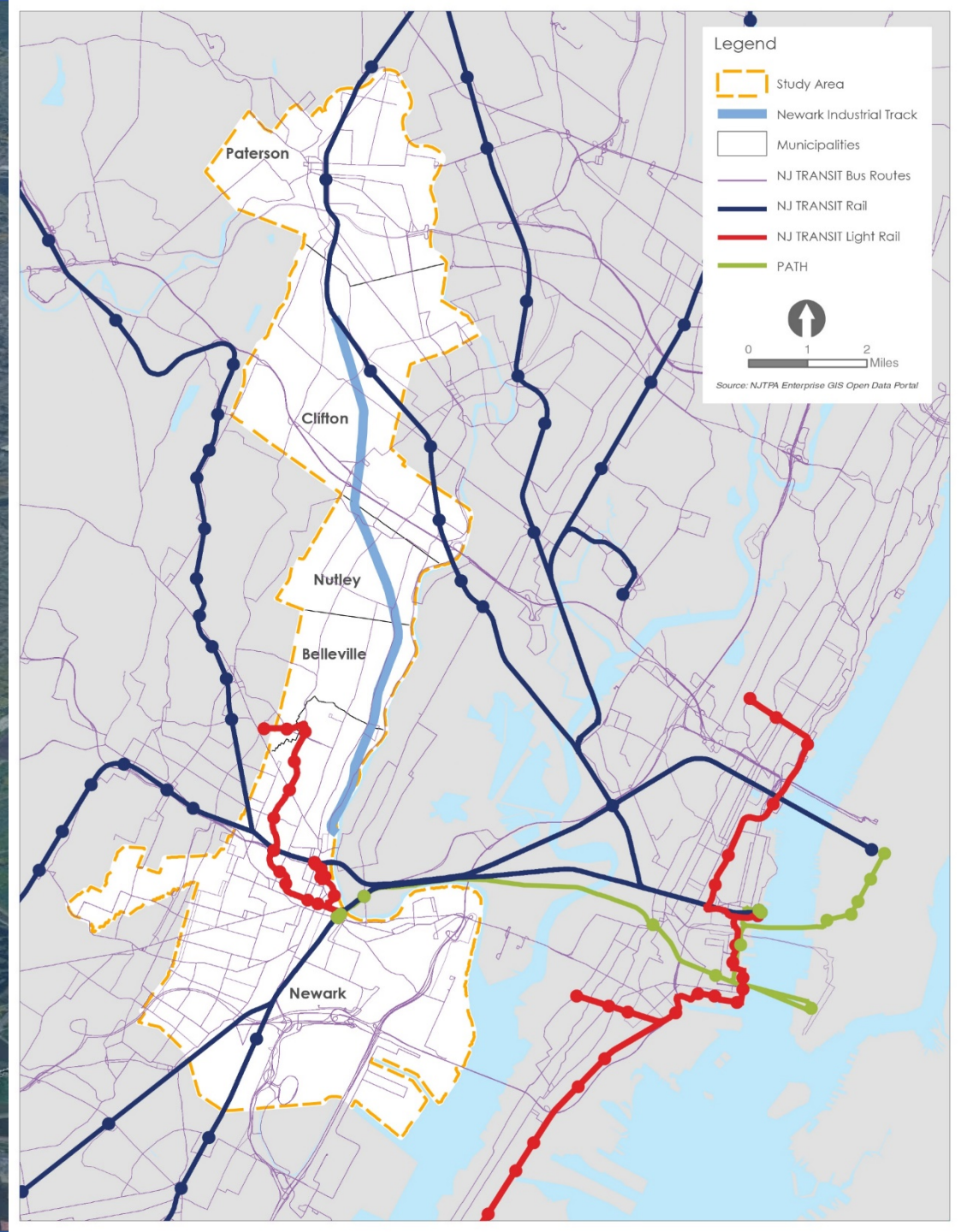
2:00 - 3:30pm



# AGENDA

1. Study update
2. Recap of mode/alignment options
3. Demand forecast model results
4. Conclusions and recommendations
5. Discussion – path to implementation
6. Next steps







# STUDY UPDATE

FALL 2019

WINTER 2019-2020

SPRING 2020

**DATA COLLECTION**

Community

Infrastructure

**MARKET ASSESSMENT**

Mode/Alignment

Demand Model

(We Are Here)

**RECOMMENDATIONS**

**ENGAGEMENT**

TAC

Pop-ups

TAC

TAC

Public

Focus Groups

## **MODE/ALIGNMENT OPTIONS**

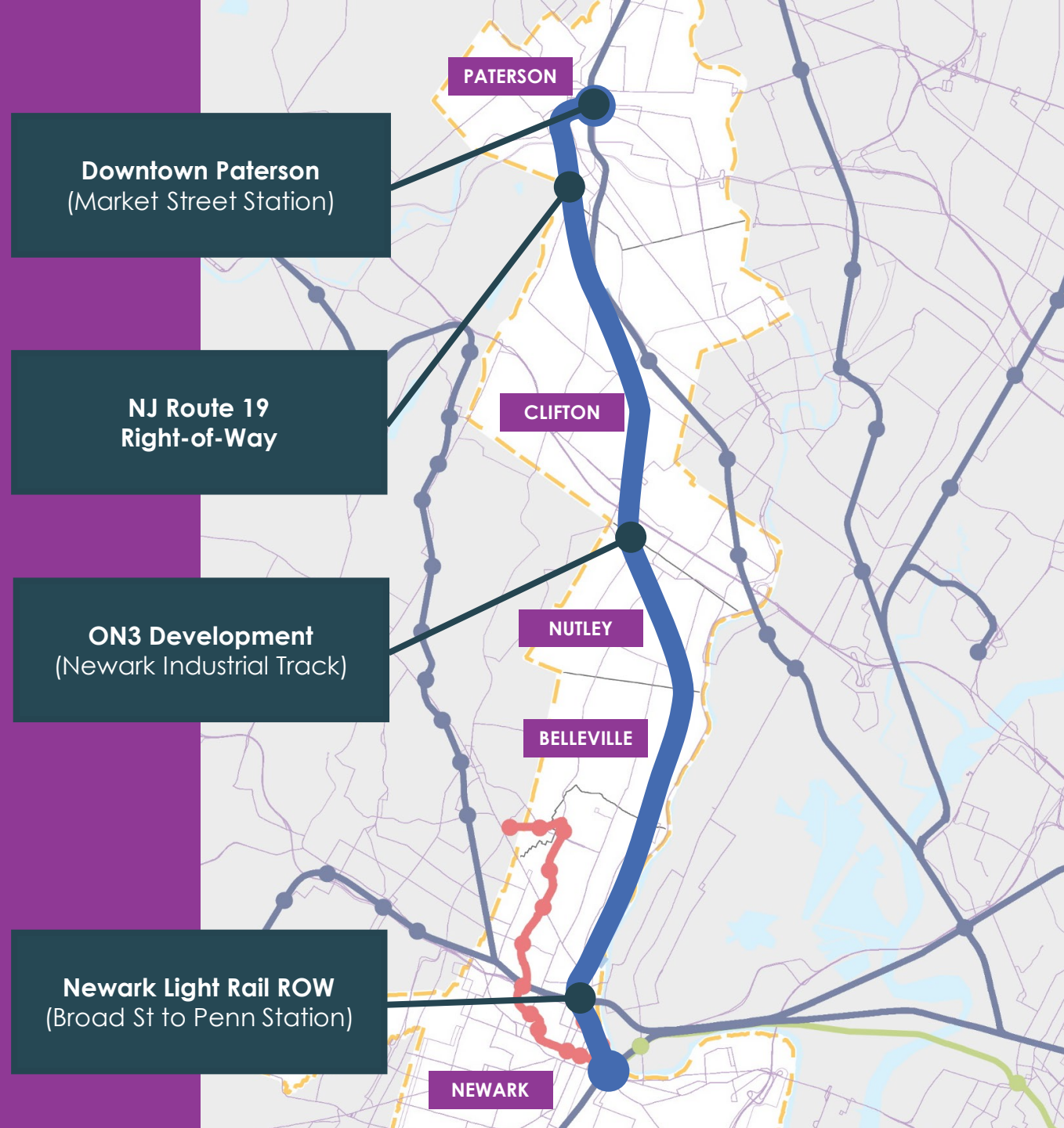
Light Rail Option A	(LRT A)
Light Rail Option B	(LRT B)
Bus Rapid Transit	(BRT)

# DEMAND FORECAST MODEL

Mode/Alignment Option:

**Light Rail (A)**

Estimated run-time: 48 minutes

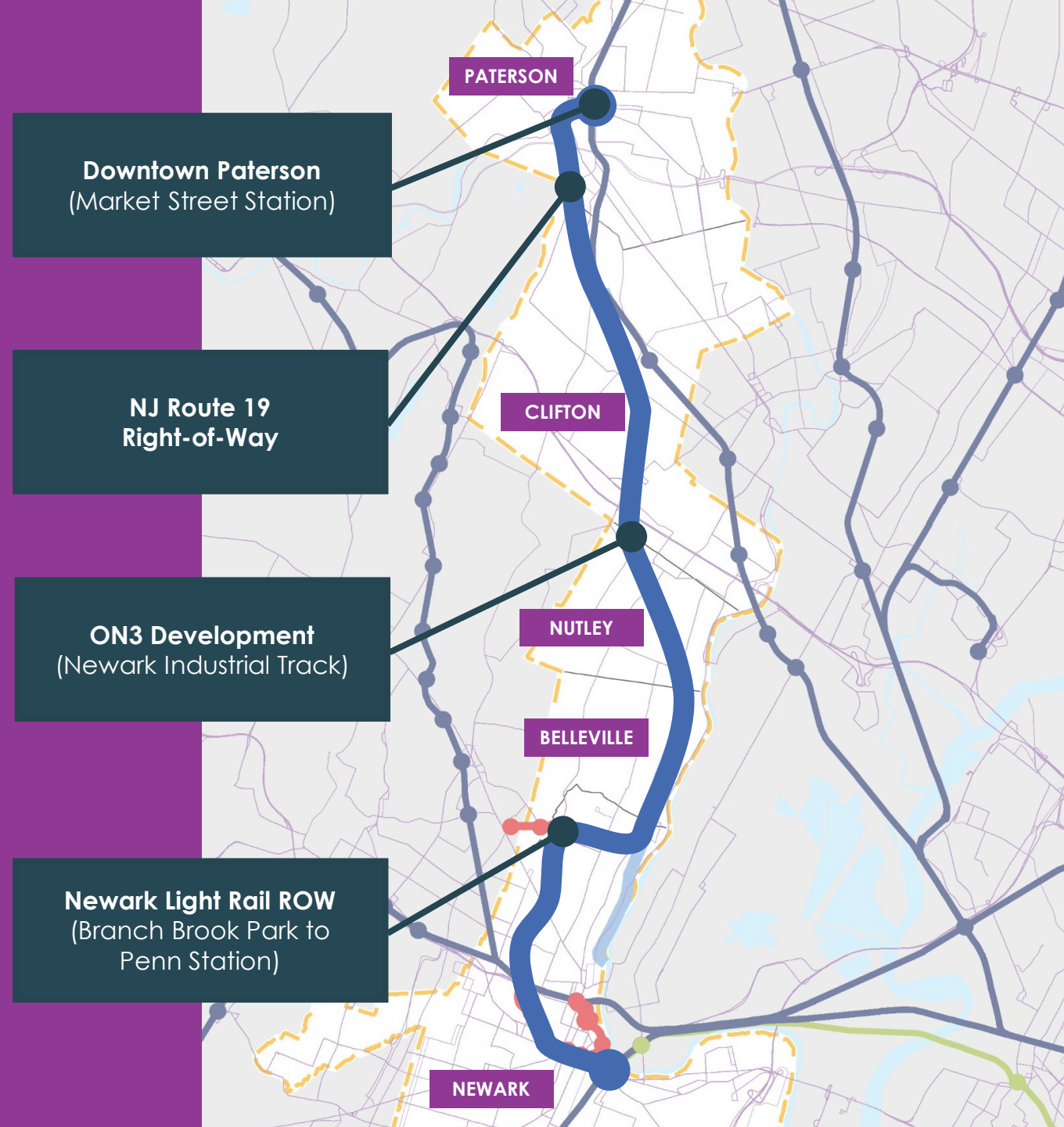


# DEMAND FORECAST MODEL

Mode/Alignment Option:

**Light Rail (B)**

Estimated run-time: 51 minutes



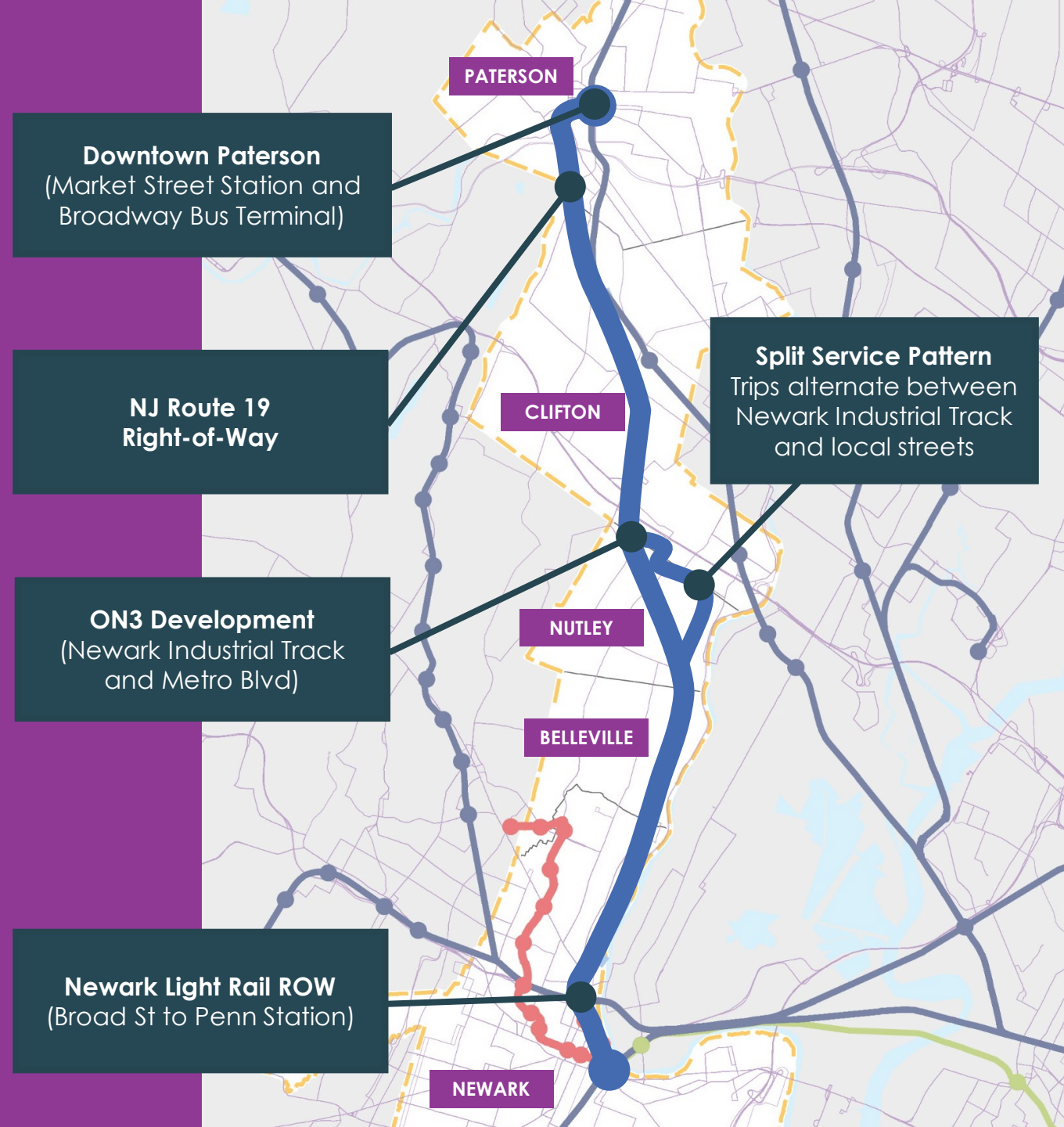


# DEMAND FORECAST MODEL

## Mode/Alignment Option

### Bus Rapid Transit

Estimated run-time: 41-48 minutes





# TRANSIT DEMAND FORECAST MODEL

Purpose & Functionality

# INPUT

## CURRENT YEAR TRIPS

Mode and Origin/Destination

## FUTURE REGIONAL GROWTH

Population and  
Employment Forecasts

## FUTURE YEAR TRIPS

Origin/Destination

## NEW MODE ATTRIBUTES

Stations/Stops, Fare, Frequency,  
Travel Time, Mode Choice  
Parameters

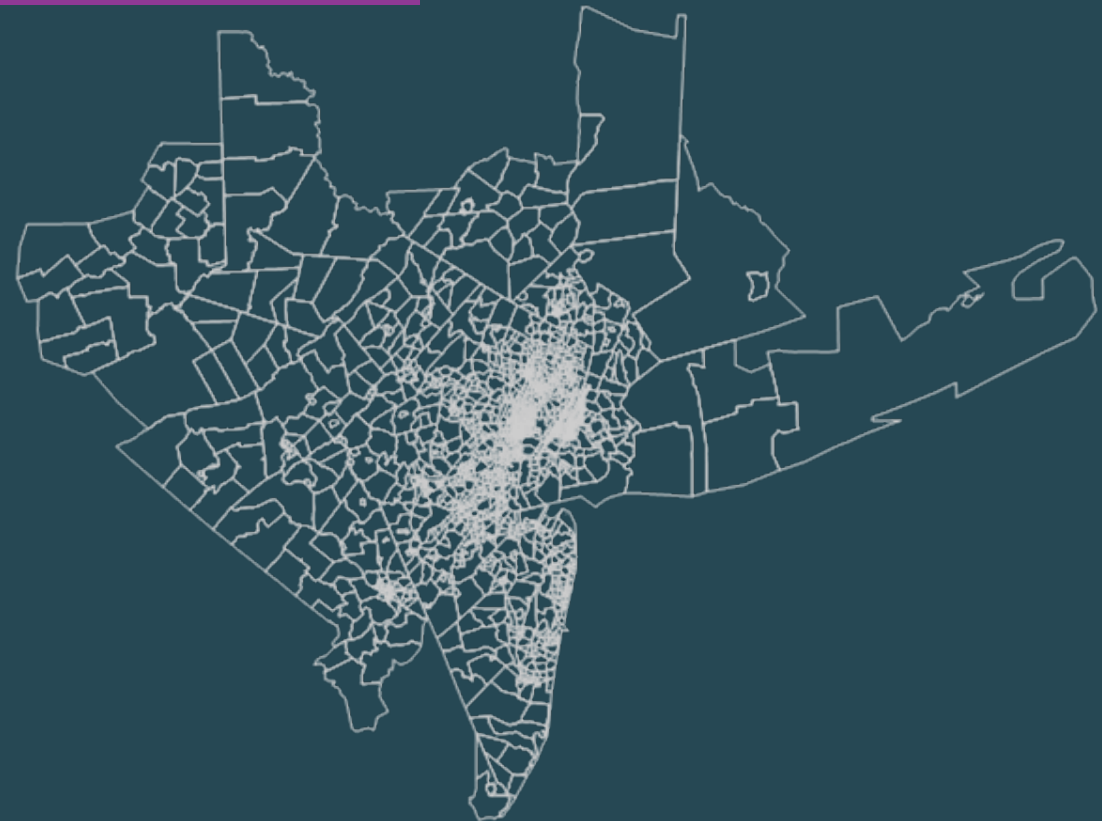
# OUTPUT

## FUTURE YEAR, NEW MODE TRIPS

Boardings by Station/Stop

# EVALUATION CRITERIA

Trips by Station/Stop  
New Mode Ridership  
Total Transit Ridership  
Changes in Auto Trips



# TRANSIT DEMAND FORECAST MODEL

Results and Interpretation



# MODEL OUTPUTS AND KEY DATA POINTS

## 2040 Build and No-Build Daily Ridership

### Daily Ridership by Alternative

- New segments
- Existing segments (Newark Light Rail)
- Total

### Daily Ridership by Municipality

### Daily Ridership Changes from No-Build

- New segments
- Existing segments
- Total

### Daily Trip Diversions

### Access Modes



# 2040 DAILY RIDERSHIP BY ALTERNATIVE

## Totals by Alternative

	No Build	Light Rail A	Light Rail B	Bus Rapid Transit
Existing Segments	20,340	27,100	23,740	--
New Segments	--	10,600	8,760	11,460*
<b>Total Daily Boardings</b>	20,340	36,700	32,500	11,460*

Emphasis on new segment comparison

## Changes from No Build

	No Build	Light Rail A	Light Rail B	Bus Rapid Transit
Existing Segments	--	6,760	3,400	--
New Segments	--	10,600	8,760	11,460*
<b>Total Change in Daily Boardings</b>	--	17,360	12,160	11,460*

Ridership gains on existing Newark LRT

Total ridership growth from no-build

\* Bus Rapid Transit shares the Newark Light Rail alignment and stations from Newark Penn Station to Broad Street Station. Only new BRT-specific ridership is shown here.

# 2040 DAILY RIDERSHIP BY MUNICIPALITY – NEW SEGMENTS ( — )

## LRT A



Paterson: 1,770

Clifton: 2,900

Nutley: 2,740

Belleville: 1,780

Newark: 1,410

## LRT B



Paterson: 2,110

Clifton: 2,170

Nutley: 2,040

Belleville: 1,440

Newark: 1,000

## BRT



Paterson: 1,910

Clifton: 1,190

Nutley: 2,220

Belleville: 1,240

Newark: 4,900



# 2040 DAILY MODE SHIFTS / TRIP DIVERSIONS

	Light Rail A	Light Rail B	Bus Rapid Transit
Auto	5,700	3,960	3,830
Bus	8,340	5,560	5,780
NJ TRANSIT Rail	1,950	1,910	720
Other (PATH, Ferry, Light Rail)	1,370	730	1,130
<b>Total Trip Diversions*</b>	<b>17,360</b>	<b>12,160</b>	<b>11,460</b>

\* Matches total new trips relative to No Build

- Auto trip diversions reflect potential to mitigate regional congestion and improve the viability of transit for trips in the corridor
- Transit trip diversions, mostly from existing bus and related (but indirect) commuter rail trips, show potential for new service to increase travel options

# 2040 ACCESS MODES TO STATIONS

Mode of Access to Stations	No Build	Light Rail A	Light Rail B	Bus Rapid Transit*
Transfer (Transit)	51%	41%	43%	27%
Walk	44%	46%	50%	63%
Drive	5%	13%	7%	10%

\* Bus Rapid Transit shares the Newark Light Rail alignment and stations from Newark Penn Station to Broad Street Station. Only new BRT-specific ridership is shown here.

- Many stations envisioned as primarily walk-on stations (little or no parking)
- Higher walk access percentage for BRT, reflecting nature of bus mode and diversions from less competitive bus routes
- Park & ride stations (e.g., Route 46) draw from outside the corridor

# CONCLUSIONS AND RECOMMENDATIONS

Market Potential  
Regional Benefits  
Concept Development



# CONCLUSIONS

All three alternatives demonstrate market potential

- Reduced transit travel times and direct travel
- Links to city centers, ON3 development enhance existing transit
- Ridership potential compares well to other NJ TRANSIT services
- Demand forecast highlights local and regional benefits

Unique attributes of each warrant further consideration

Corridor connects substantial environmental justice communities to more employment, education, healthcare, and regional attractions

Auto diversions demonstrate transit's value in busy north/south corridor

# RECOMMENDATIONS

Form agency/municipal coalition to preserve key right-of-way components

- Newark Industrial Track
- NJ Route 19
- Local streets in Paterson and Newark

Advance to more detailed Alternatives Analysis study

- Detailed technical study
  - Alignments
  - Station location and design
  - Service and capital plans
- Refined demand forecast modeling
- Robust public and stakeholder engagement

# COMMITTEE DISCUSSION

Mode/Alignment Opportunities  
Local and Regional Priorities  
Path to Implementation

## **STUDY NEXT STEPS**

Public Presentation (Online)  
Draft and Final Report

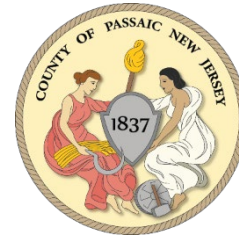
**THANK YOU.**

Your participation in this study and future efforts is greatly appreciated.



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