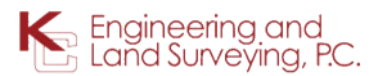


# Putnam County Southeast to Danbury Rail Link Feasibility Study

*NYMTC / PFAC Briefing  
February 10, 2022*



## Southeast to Danbury Rail Link

- Assessment of the regional market and interest for services connecting Southeast to Danbury
- Evaluate the feasibility for passenger rail service connecting Southeast to Danbury
  - *Potential extension of Metro-North's Harlem Line to the Danbury Line or further northeast*
  - *Stand-alone service alternatives with coordinated transfers*
- Improve quality of life / local economies
  - *Improved travel experience to/from NYC*
  - *Alternative to auto commute times and traffic congestion on I-684/I-84, local roads*
  - *Stations accessible to jobs, shopping, activity centers, parks, tourist attractions and housing*



Over the Croton River



At Southeast



At the Former NHRR Station now Museum

# Existing Corridor Conditions



— Single Track      — Double Track

While there are current connections further away, trains would need to make directional changes to transfer between lines, slowing operations significantly



# Corridor Station Opportunities and Locations



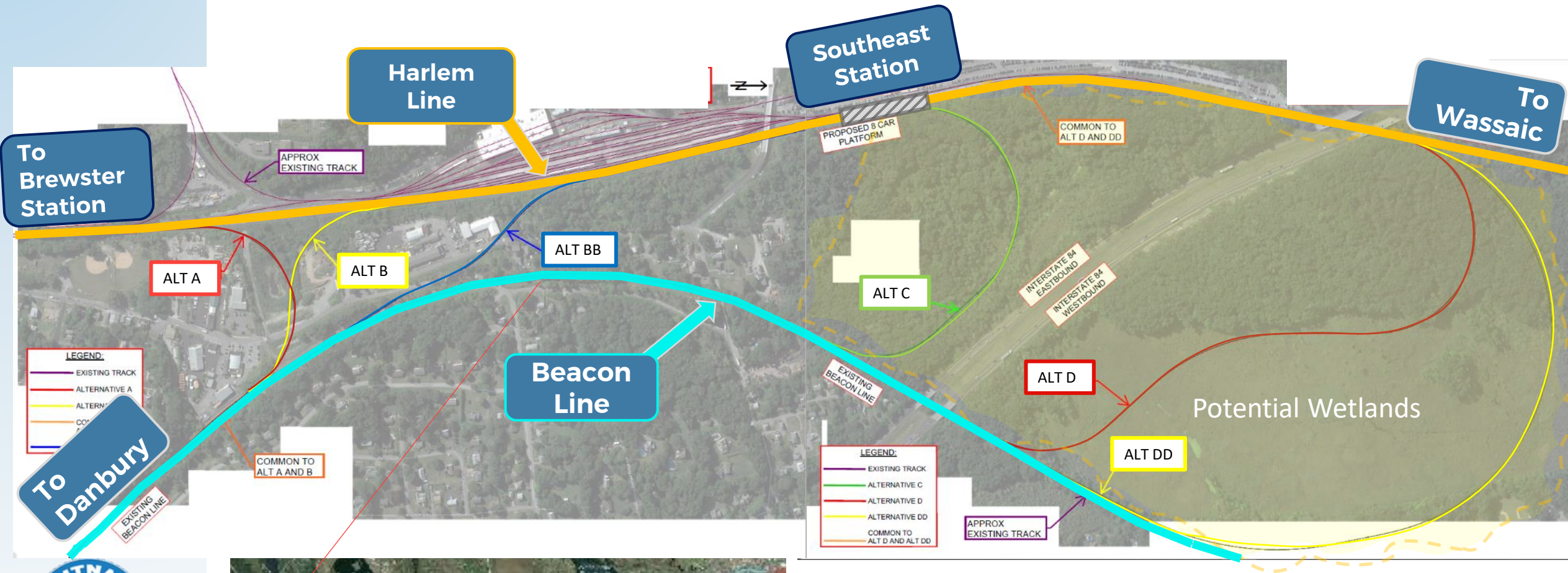
## Infrastructure Alternatives Development

- Series of 10 different main track and station connections were developed for linking the Metro-North lines
- All connections have varying environmental, community and property impacts associated with them
- All alternatives influenced by substantial track curvature on the Beacon Line and connections at each end.



What We've  
Developed

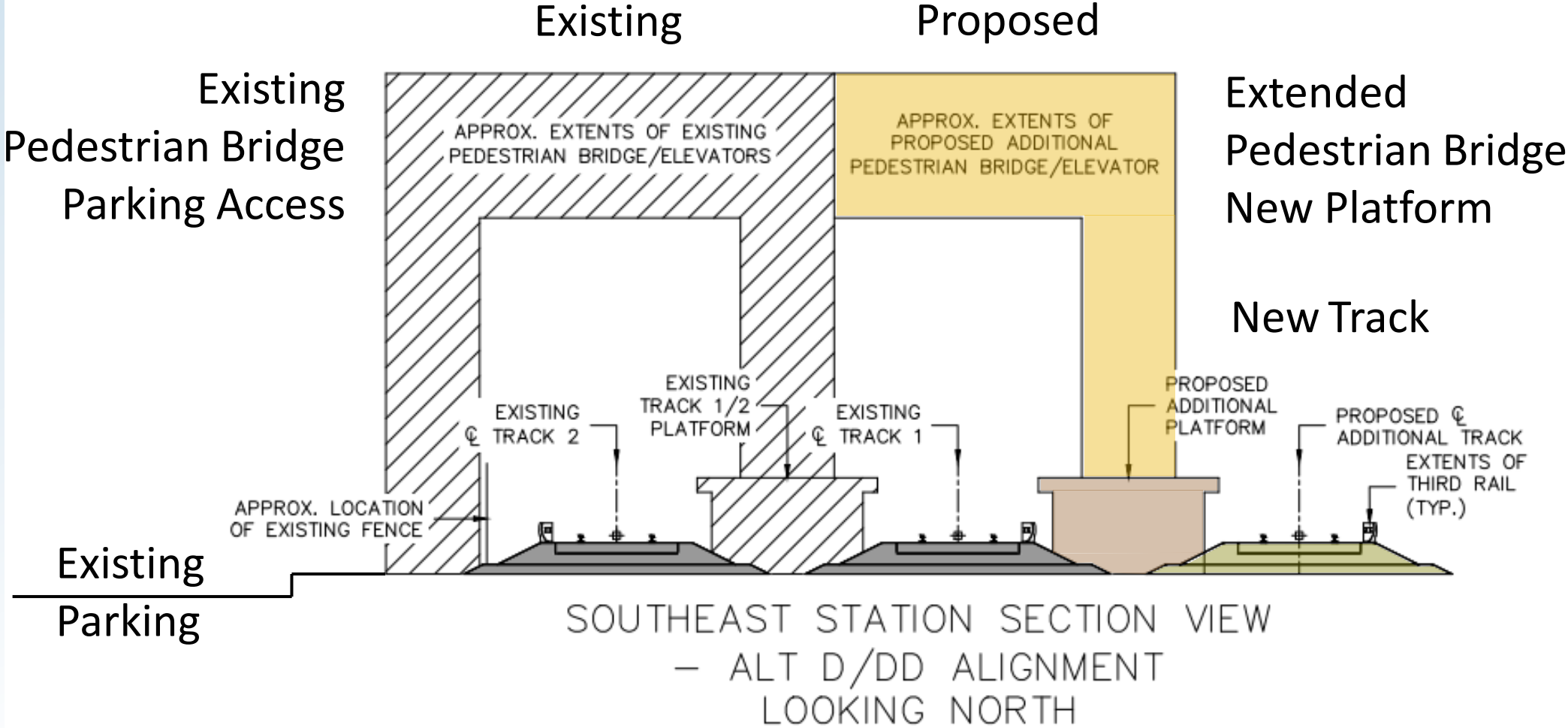
## Summary of Harlem Line / Southeast Connection Alternatives



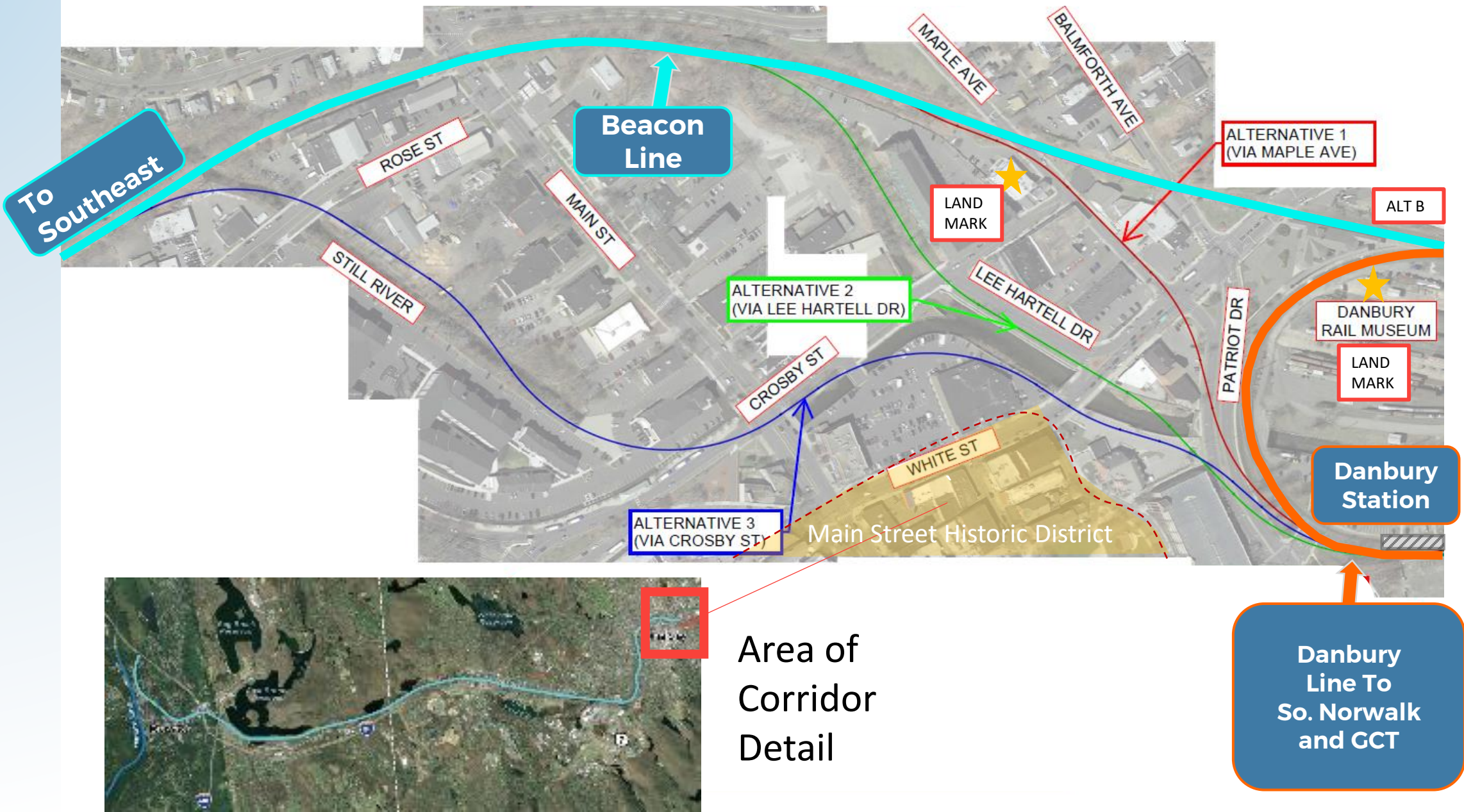
Location

6 Connection Alternatives Developed  
3 South of Southeast Station  
3 North of Southeast Station

# Southeast Station Concept

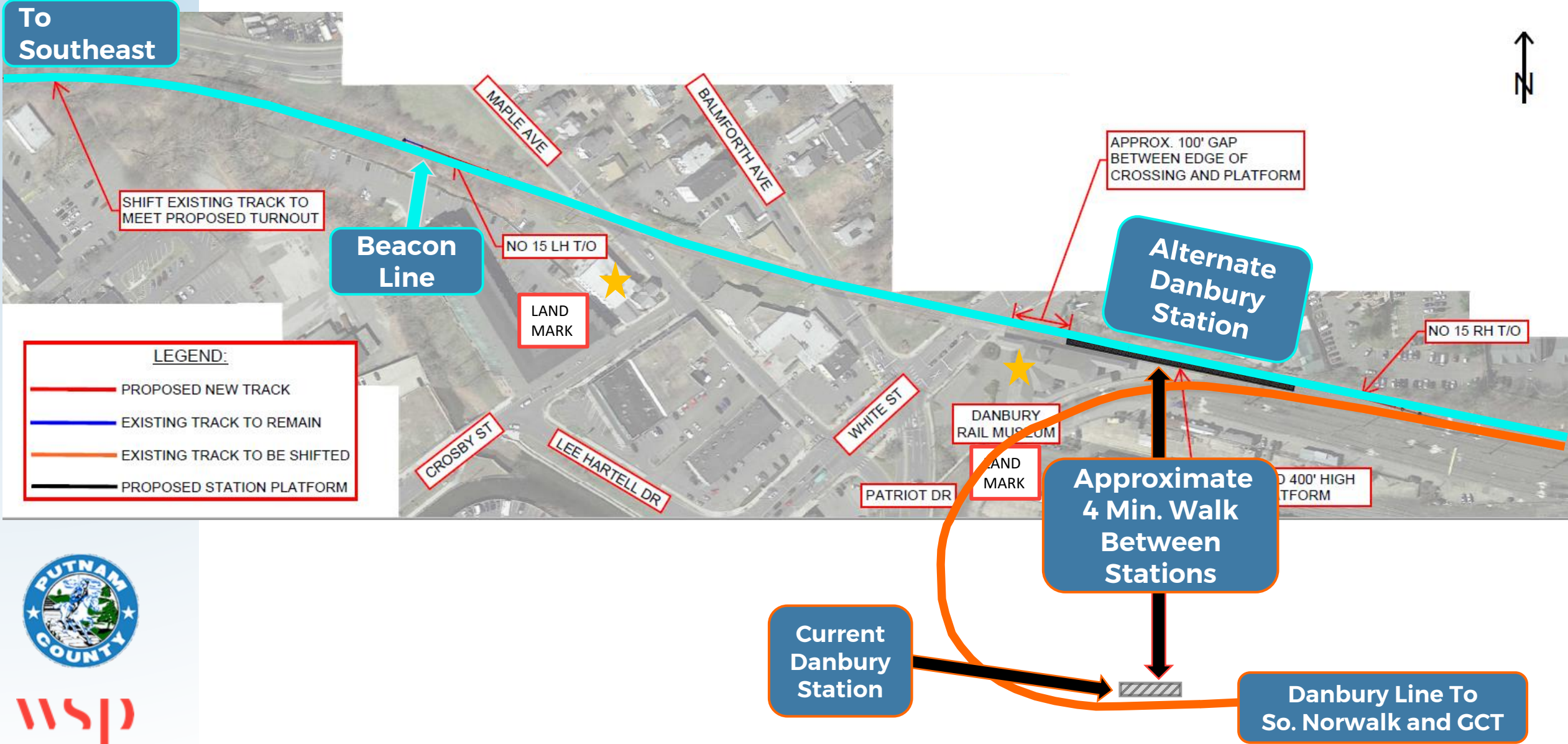


# Summary of Initial Danbury Connection Alternatives



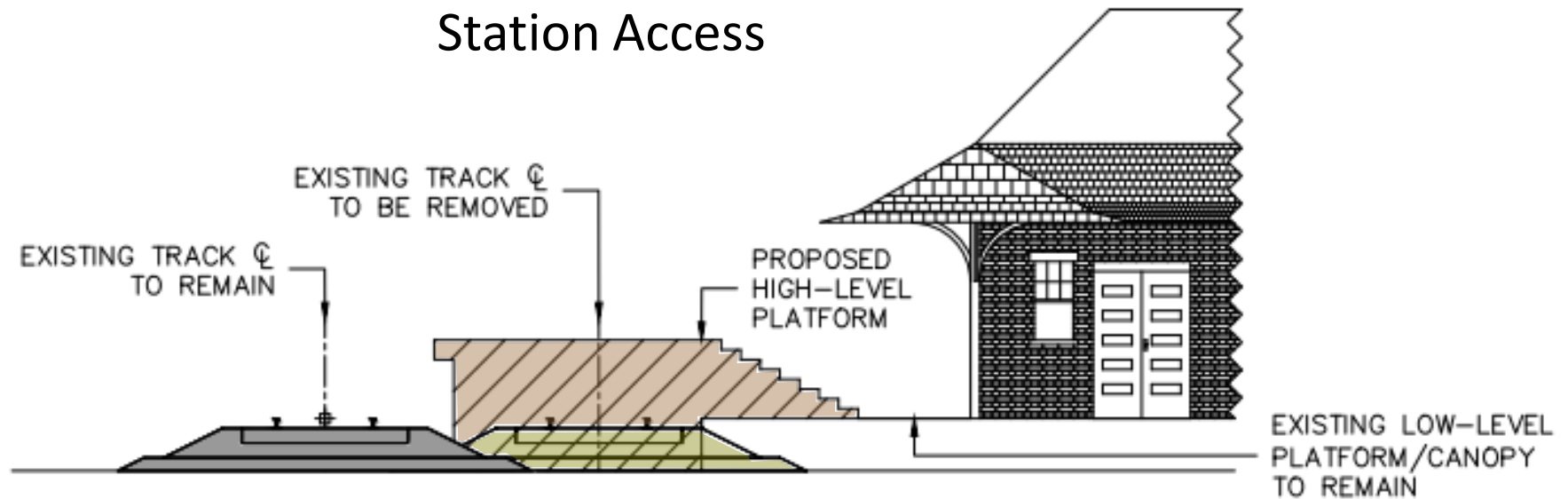
What We've  
Developed

# Danbury Station Alternative on Beacon Line



## Danbury Station Concept

### Proposed High Level Platform Station Access



DANBURY MUSEUM/STATION SECTION VIEW  
— ALT B ALIGNMENT  
LOOKING EAST



## Infrastructure Connection Alternatives Summary by Station Area

### ➤ BREWSTER

- Operationally infeasible
- Alternative not recommended

### ➤ SOUTHEAST

- Existing station platform at critical location which affects all concepts
- New platform recommended
- All connections likely to have Wetlands impacts

### ➤ MAIN TRACK

- New passing siding(s)
- Double track extensions

### ➤ DANBURY

- Physical connections with more difficult track geometry
- Neighborhood impacts
- Existing platform difficult to access – not able to share
- Separate platform with pedestrian connections is most viable



## Service Planning Assumptions

- Service frequency targets:
  - 30 minutes peak period - *(6-10AM Arrival GCT, 4-8PM Departure GCT)*
  - 60 minutes off-peak period
  - 15 minutes for light rail service - *(Alternative 4 only)*
- Existing Southeast and Danbury Station service levels remain unchanged due to mainline capacity constraints
  - *Additional platform edge at Southeast and Danbury recommended to accommodate new services*
- Assumes proposed services originate/terminate at Southeast
  - *Brewster Station as a terminus is not feasible*
  - *No reduction in service to Southeast Station*
- All commuter rail alternatives are assumed to use Brewster Yard as their maintenance base



# Service Planning cont.

| Vehicle Type                                               |                                                                                      | Proposed Service Frequency              | Additional Line Infrastructure required?  | New Facilities Required?                                      | Other Issues                                      |
|------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------|---------------------------------------------------------------|---------------------------------------------------|
| <b>FRA Compliant Diesel Multiple Unit</b>                  |    | 30 min pk,<br>120 min off pk for Alt 1; | Only if service pattern requires          | Shop/Yard                                                     | Only 1 provider                                   |
| <b>FRA Compliant Zero Emission Multiple Unit</b>           |                                                                                      | 15 min for Alt 4.                       | Only if service pattern requires          | Shop/Yard<br>Recharging for Battery or Refueling for Hydrogen | Not widely used (battery)<br>Hydrogen is unproven |
| <b>Push-pull Diesel/Electric/Battery Locomotive Hauled</b> |    | 30 min pk<br><br>120 min off pk         | Only if service pattern requires          | Could require updates for battery based                       |                                                   |
| <b>Electric Multiple Unit</b>                              |   | 30 min pk<br><br>60 min off pk          | Full 3 <sup>rd</sup> Rail Electrification | No                                                            |                                                   |
| <b>Light Rail Vehicle</b>                                  |  | 15 min                                  | Overhead Electrification                  | Shop/Yard                                                     | Requires separation from others                   |

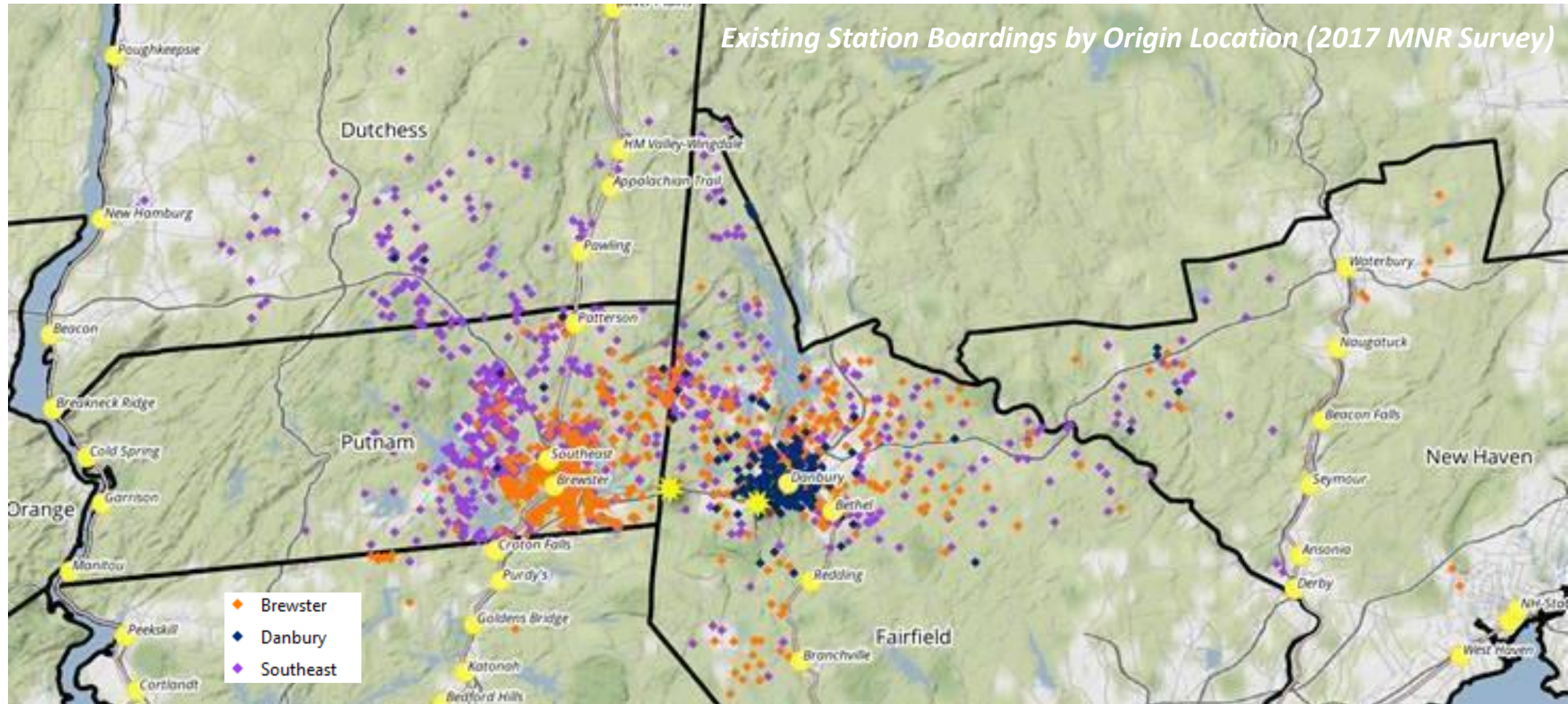


## Preliminary Market Forecasts

- STOPS Model of NYMTC area
- Calibrated to 2019 service plan and 2017 Metro-North On-Board Survey
- 3 Market subsets included
  - Full Service to NYC
  - White Plains
  - Local area
- 2 new intermediate stations included (State Line Park and Ride, Danbury Fair)
- Sensitivity tests: headway reductions, transfer impacts, visibility factors (relatively small impacts).



## Preliminary Market Forecasts



- Focusing on the 2017 Survey, there are a significant number of Southeast (purple dots) and Brewster (orange dots) passengers travelling from within the proposed service corridor as far east as Waterbury



## Preliminary Market Forecasts

| ALTERNATIVE    | Boardings at Danbury, Danbury Fair and State Line Stations (typical weekday to Points South) |            |                                        |                  |
|----------------|----------------------------------------------------------------------------------------------|------------|----------------------------------------|------------------|
|                | Total Riders                                                                                 | New Riders | Changing from Drive to the Harlem Line | Decrease in PMT* |
| 1 Shuttle      | 630                                                                                          | 270        | 360                                    | -15,340          |
| 2 Peak Through | 840                                                                                          | 400        | 440                                    | -24,310          |
| 3 Full Service | 970                                                                                          | 550        | 420                                    | -31,700          |
| 4 Light Rail   | 650                                                                                          | 270        | 380                                    | -15,550          |

PMT = Person Miles Traveled

Existing Daily Ridership

1,150 – Southeast

180 - Danbury

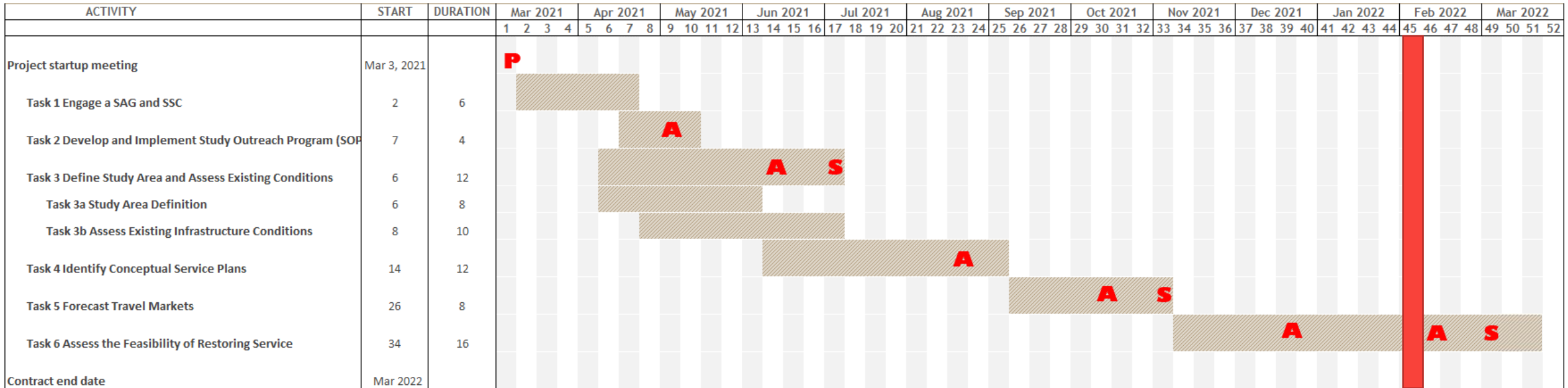


## Preliminary Findings / Conclusions

- With positive environmental determinations, a *Southeast to Danbury Rail Link Service* is operationally feasible without impeding existing Metro-North services
- Potential services could provide travel time savings by as much as 25 minutes between Danbury and NYC compared to a Danbury Line train running between the same points
- *Rail Link* would provide competitive travel times to new intermediate markets such as White Plains and for local travel
- Forecasted ridership of 500-1,000 daily trips is comparable or greater than daily trips made between Wassaic and Southeast
- Projected Daily Person Miles Traveled (PMT) reductions on the area highway system of 15,000 – 32,000 PMT each day is substantive



# Next Steps



**P** Project startup meeting

**A** Study Advisory Group

**S** Study Steering Committee

 We are here

- **Completion of Operating Cost estimates**
- **Completion of Capital Cost estimates**
- **Economic / Benefits Analyses**
- **Final Report**



Comments Appreciated  
and should be sent to:  
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Thank You!

