



Commuter Rail Schedules Initiative

North Side

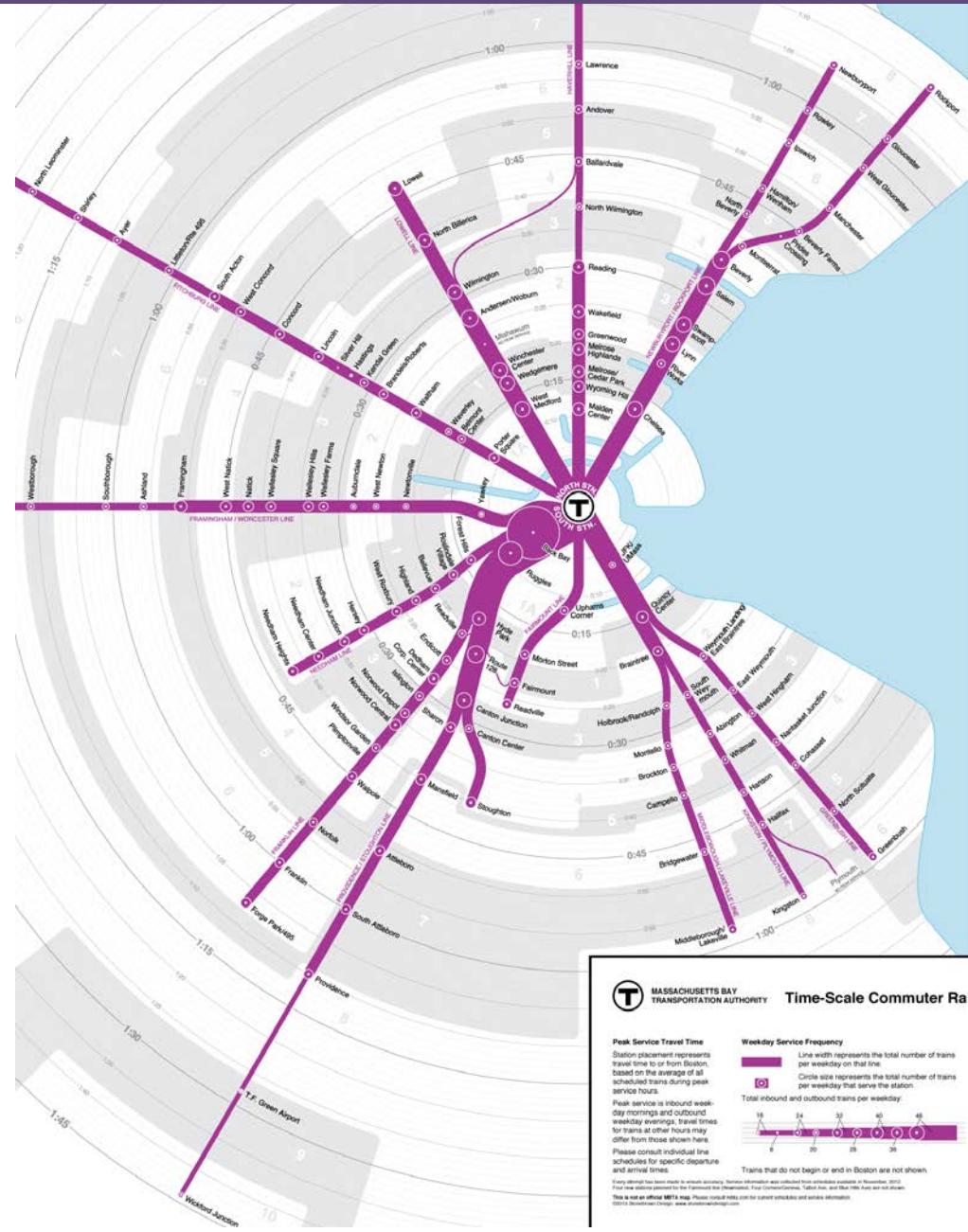
SCOPE: MISSION & CONSTRAINTS

Project Mission:

- Create Reliable and Resilient Commuter Rail Schedules
- Create Efficient and Logical Equipment Movements

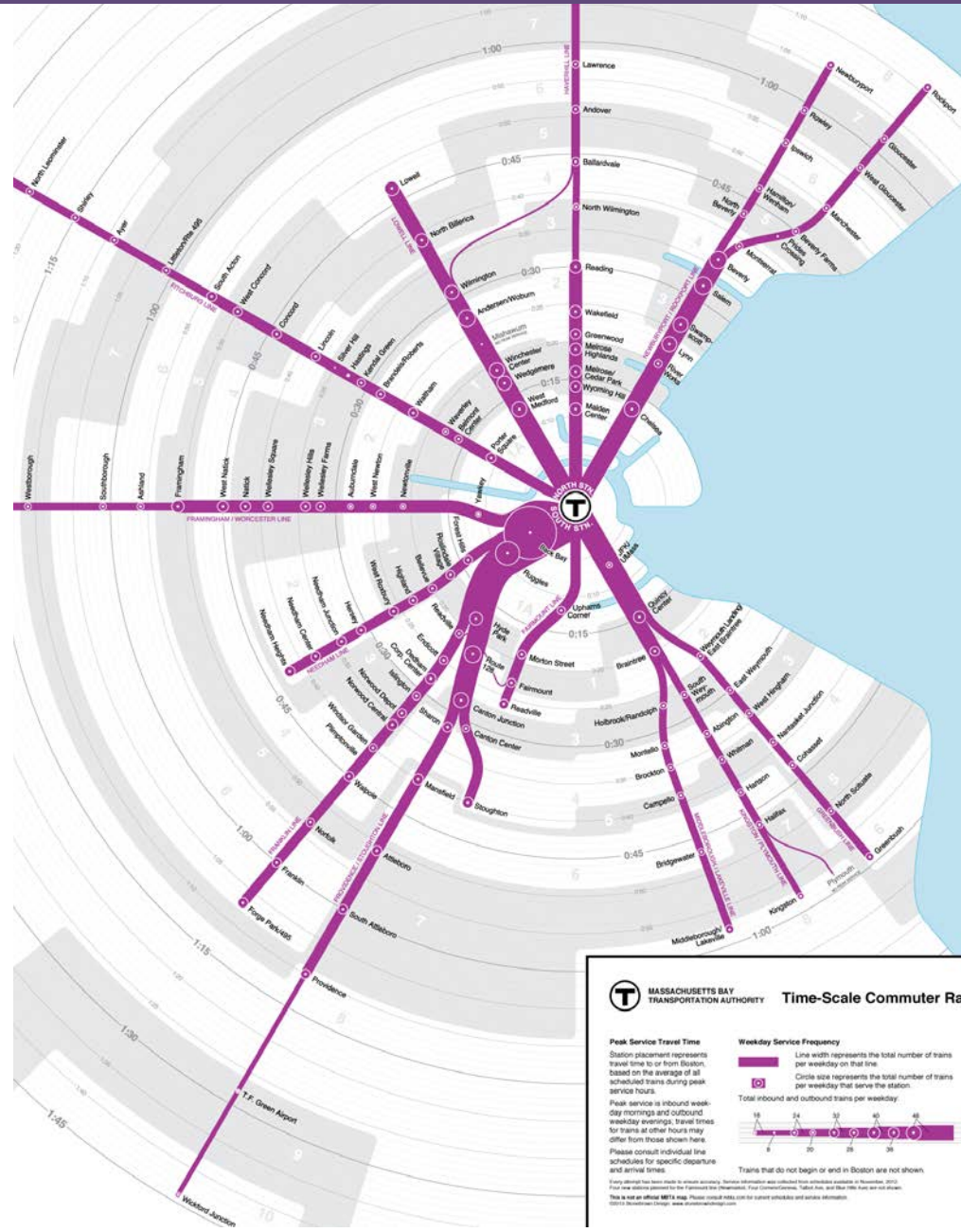
Constraints:

- Amount of Equipment
- Existing Track and Station Infrastructure Capacity
- Convenient Arrival/Departure Times at North Station for Commuters
- Amtrak Services



SCOPE: PROCESS

- Information and Data Collection
- Schedule Development
- Rail Traffic Controller (RTC) Modeling
- Output Analyzed and Schedules Refined
- Final Schedules Developed
- Long-Term Plan for Operations



SCHEDULE DEVELOPMENT: SYSTEM-WIDE

Assumptions:

- No new major infrastructure projects will be developed in 2015, except for the Fitchburg Line.
 - Fitchburg improvements include a new station and layover facility at Wachusett, and track and signal upgrades. Express trains will run from Fitchburg to Porter Square in 1 hour.
- 25 North Side Trainsets Available
- Boston Engine Terminal Operations
- Existing Amtrak Schedules Considered



SCHEDULE DEVELOPMENT: DESTINATIONS

North Station Walk and Transit Times

- Assumes majority of commuters will access jobs in major centers that are a 15-20 minute walk or transit trip from North Station, such as Post Office Square, Back Bay, or Cambridge
- Reverse commuters to key locations such as Route 128 region, I-495 Region, and Lowell
- Standardizes Rush Periods



BENEFITS: EQUIPMENT

- Preventing Cascading Delays by Eliminating Interlined Trains
- Creating Standardized Minimum 15-Minute Turn Times (Haverhill has 20-Minute Turns) and Reduction of Scheduled Long-Dwells at North Station
- Optimization of Corridor Capacity through RTC Analysis
- Maintenance and Processing Time at BET Considered and Reflected in Schedules and Modeled in RTC
- Incorporation of Fitchburg Line Infrastructure



BENEFITS: PASSENGER EXPERIENCE

- Increased Peak Train Service
- Additional Peak Express Service from Outer Points
- Evenly Spaced Peak Service from Inner Core Stations
- Optimized Peak Arrival and Departures from North Station for Key Job Start and End Times
- Efficient Train Movements at North Station to Mitigate Crowding
- Standardized Peak "Box"
 - AM Peak North Station Arrival: 6:00 -9:00
 - PM Peak North Station Departure: 3:30 - 6:30
- Regular Off-Peak Departure Times



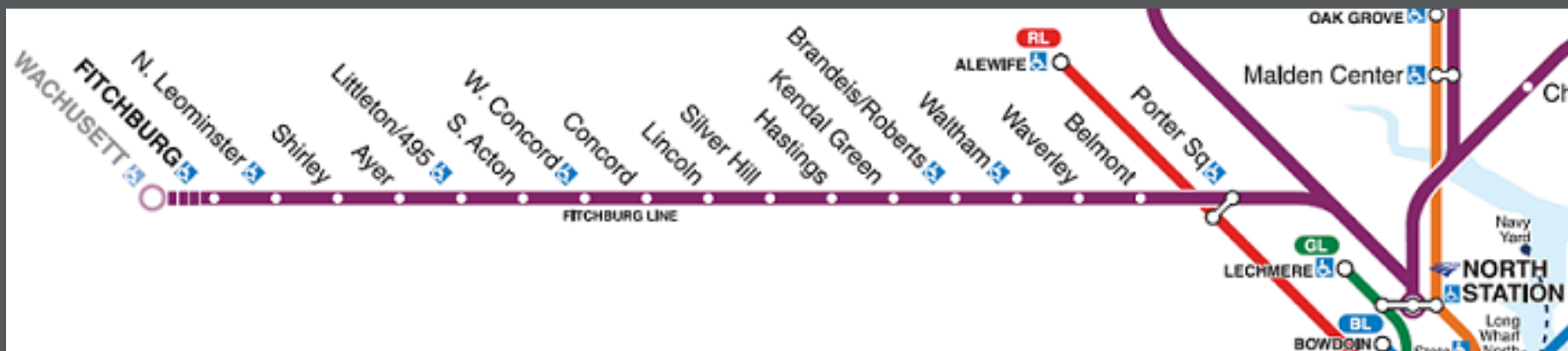
RESOURCES REQUIRED

- New Runbook to Reflect Finalized Schedules
- Coordination and Training of Crew and Maintenance Staff for New Schedule Procedures and Policies
- BET Maintenance Planning and Organization
- Potentially Hire Crew and Staff Based on Requirements Identified



FITCHBURG LINE: SUMMARY

- Travel Time Improvements due to New Infrastructure and Improved Express Service
- One Additional AM and PM Peak Roundtrip Express Train
- One Additional AM and PM Peak Roundtrip Local Train
- Two AM Reverse Commute Trains to Job Centers in Waltham and Littleton/495
- Two PM Inbound Trains Scheduled for Reverse Commuters and Garden/Fenway Event Start Times



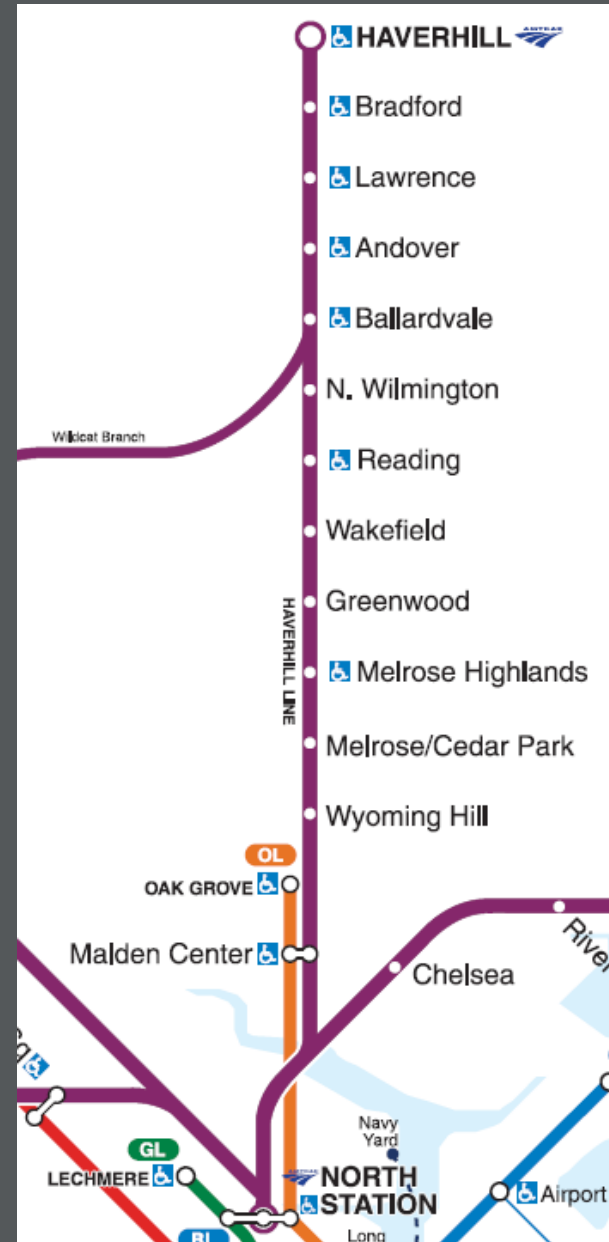
LOWELL LINE: SUMMARY

- Peak 30-Minute Headways with one Additional Local Roundtrip
- One Peak Express Roundtrip
- Consistent Hourly Local Off-Peak Service
- Four PM Inbound Trains Scheduled for Reverse Commuters and Garden/Fenway Event Start Times



HAVERHILL LINE: SUMMARY

- Schedule will be revisited when double track to Vale and Merrimack River Bridge Projects are Complete
- Similar Peak Schedules as Existing due to Infrastructure Constraints
- Flattened Off-Peak Service Providing Consistent Departure Times
- PM Inbound Trains Scheduled for Reverse Commuters and Garden/Fenway Event Start Times



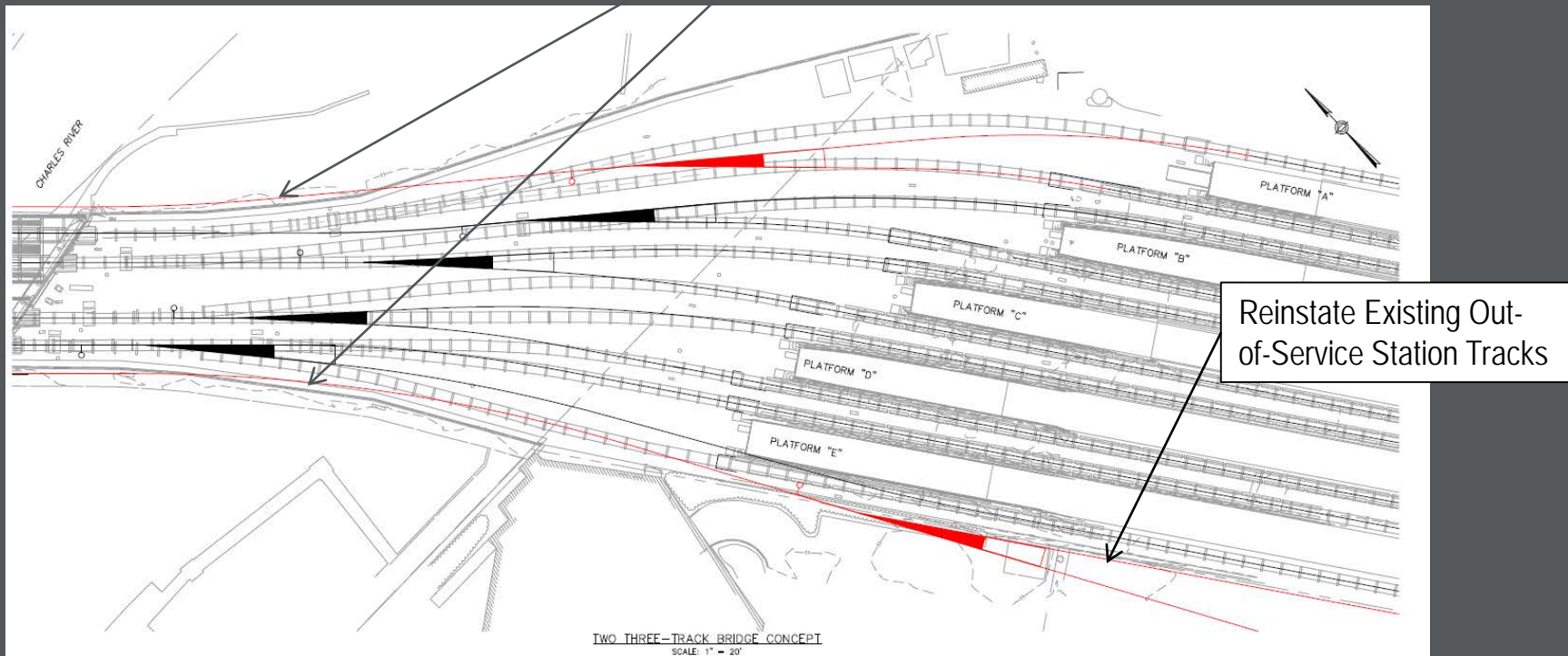
NEWBURYPORT/ROCKPORT LINES: SUMMARY

- Improved Rockport Peak Express Service with One Additional Roundtrip Train
- Improved Newburyport Peak Service with Express Service and One Additional Roundtrip Train
- New Peak Inner Core Service from Beverley to North Station
- Flattened Off-Peak Local Service to Newburyport and Rockport
- Evening Event Train
- Better Separation of Oncoming Traffic at Salem Tunnel



POTENTIAL INFRASTRUCTURE IMPROVEMENTS

- Identification of areas to modernize infrastructure, streamline transit times and increase layover capacity. Examples in North Station Terminal Area include:
 - 6 Track Charles River Drawbridges including Reconnection of Station Tracks 11 & 12
 - Relocation of Fitchburg Main Lines
 - BET Expansion
 - Reconfiguration of FX Interlocking



POTENTIAL INFRASTRUCTURE IMPROVEMENTS

Reconfigured Tower A Interlocking

- Higher Speeds Through Terminal Limits
- Allows for Higher Volumes of Commuter Traffic
- Efficient Train Movements for Station Routing

Replacement
Drawbridges

Improved
Interlocking

