

PLAISTOW COMMUTER RAIL EXTENSION STUDY

Public Informational Meeting

February 24, 2015

Plaistow Town Hall, Plaistow, NH

STUDY TEAM

HDR Engineering

- John Weston – 20+ years of experience in planning and evaluating transit and railroad projects
- Ron O’Blenis – 40+ years in designing and implementing transit and railroad improvements
- Stefanie McQueen – 12 years of experience in facilitating planning studies

NH DOT

- Patrick Herlihy - Director of Aeronautics, Rail and Transit
- Shelley Winters - Administrator, Rail and Transit

PAC Members

- Town of Plaistow – Sean Fitzgerald; (Alternate: Tim Moore)
- Town of Atkinson – David Harrigan; (Alternate: Robert Clark)
- Rockingham Planning Comm. - Cliff Sinnott
- Merrimack Valley Planning Comm. – Todd Fontanella
- Northern New England Passenger Rail Authority – Jim Russell
- Massachusetts Bay Transportation Authority – Ron Morgan
- Pan Am Railways – Invited
- City of Haverhill - Invited

OVERVIEW OF STUDY

Goal: Evaluate the extension of the MBTA Haverhill Line commuter rail service from Haverhill, MA to Plaistow, NH including locating a site for a new station and layover facility.



STUDY PURPOSE

Purpose

- NHDOT study to provide information to local officials on the cost and impact to extending MBTA service to the area.

Study Outcome

1. **Alternative Analysis:**
 - Assess possible sites for station and layover facility
 - Identify best possible site or configuration (Recommended Alternative)
2. **Environmental Assessment (EA):**
 - Document impacts of the Recommended Alternative compared to not implementing the project (No-Build Alternative)

TOWN OF PLAISTOW PROCESS

- Town to receive completed Alternatives Analysis (AA) Report (anticipated early March)
- The completed AA Report will be reviewed by numerous boards and commissions
 - Board of Selectmen, Planning Board, Conservation Board, Highway Safety Commission, Rockingham Planning Commission
- A determination by the Plaistow Board of Selectmen (BOS) will be made as to whether any of the alternatives should be considered further.
- If, in the BOS's opinion, the project has potential benefits for the community, it will be brought to citizens for a vote after completion of the Environmental Assessment (EA) (EA is anticipated to be completed in May 2015)

PROJECT PURPOSE

Transit improvements for the Town of Plaistow and surrounding communities are needed to support **economic opportunities** and **improve mobility** for residents and businesses in the Plaistow area.

Specific needs that can be addressed through transit improvements include:

- Supporting economic development and job creation;
- Increasing access to employment opportunities;
- Reducing impacts of high roadway congestion on average commuting travel time;
- Reducing commuting costs, particularly for commuters to employment centers in the Plaistow to Boston corridor; and
- Improving access to transit and resulting mobility improvements.

PROJECT BENEFITS

Jobs

- Potential for station area development could increase yielding an estimated 40 to 1,070 jobs in Plaistow.
- 325 full-time-equivalent jobs per year as a result from construction of the station and layover facility.

Property Values

- Studies indicate that for properties within ½-mile of a commuter rail station, property values have an added 10% premium.
- Other studies have found that properties near commuter rail stations maintain their value as compared to those without similar rail service.

PROJECT BENEFITS

Economic Development

- Better transportation access to labor may support expansion of existing businesses and impact locational decisions of new businesses.
- Plaistow's relatively lower housing costs combined with improved transportation access may support residential growth in Plaistow.
- Increased activity around the station may attract additional business development

Improved Opportunities

- Improved transit provides greater access to jobs for Plaistow residents. – Improved access to the 440,000 jobs in Boston/Cambridge.

Improved Mobility

- Increase mobility for those in the community that do not have access to vehicles.
- Adds transportation alternative for Boston metro commuters

PROJECT CAPITAL IMPROVEMENTS

Station Design Criteria

- Station platform (815-ft), canopy, parking & pickup/drop-off area
- Terminal station with train holding capacity
- Separate track from the main line

Layover Facility Design Criteria

- Six tracks for overnight storage for 6 train sets (815-ft)
- “Hotel” power for plugging in trains at night to minimize idling
- Located directly off the main line as close as possible to the station on the same side of the tracks as station
- Employee parking area and access road

STUDY PROCESS

Alternatives Analysis

Environmental Assessment (EA)

7 Stations
9 Layovers

Alternative I

Alternative II

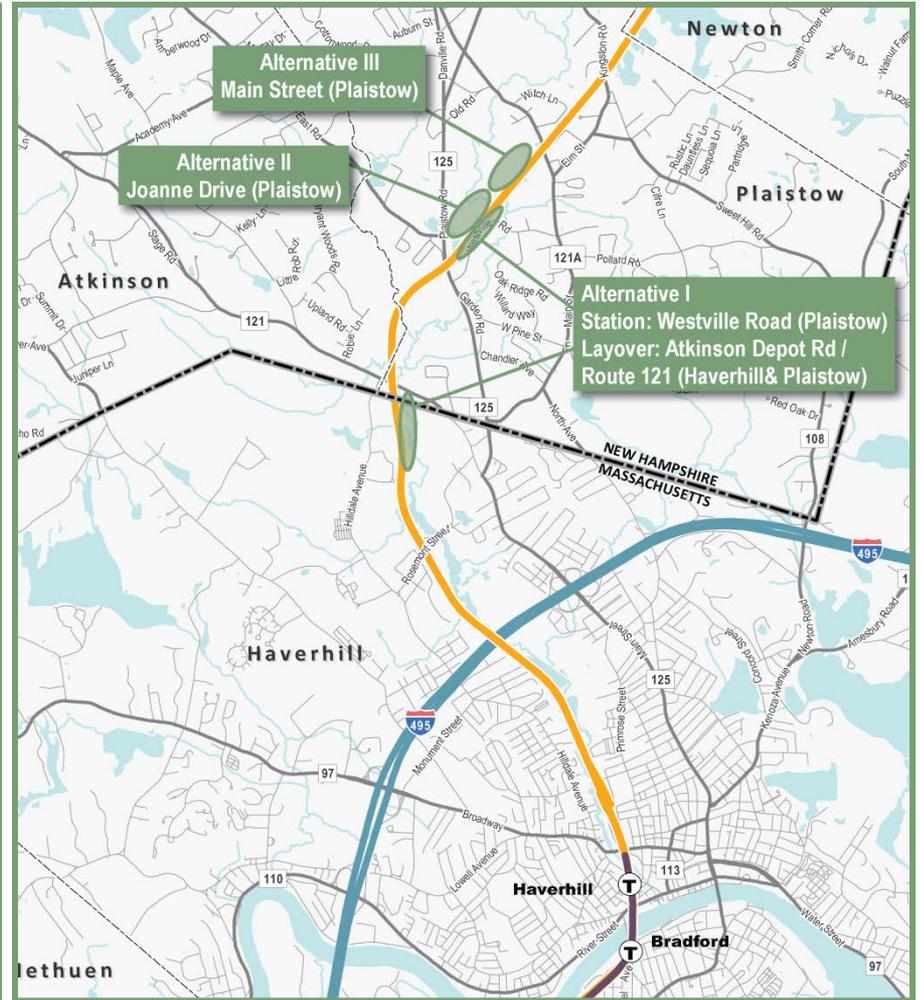
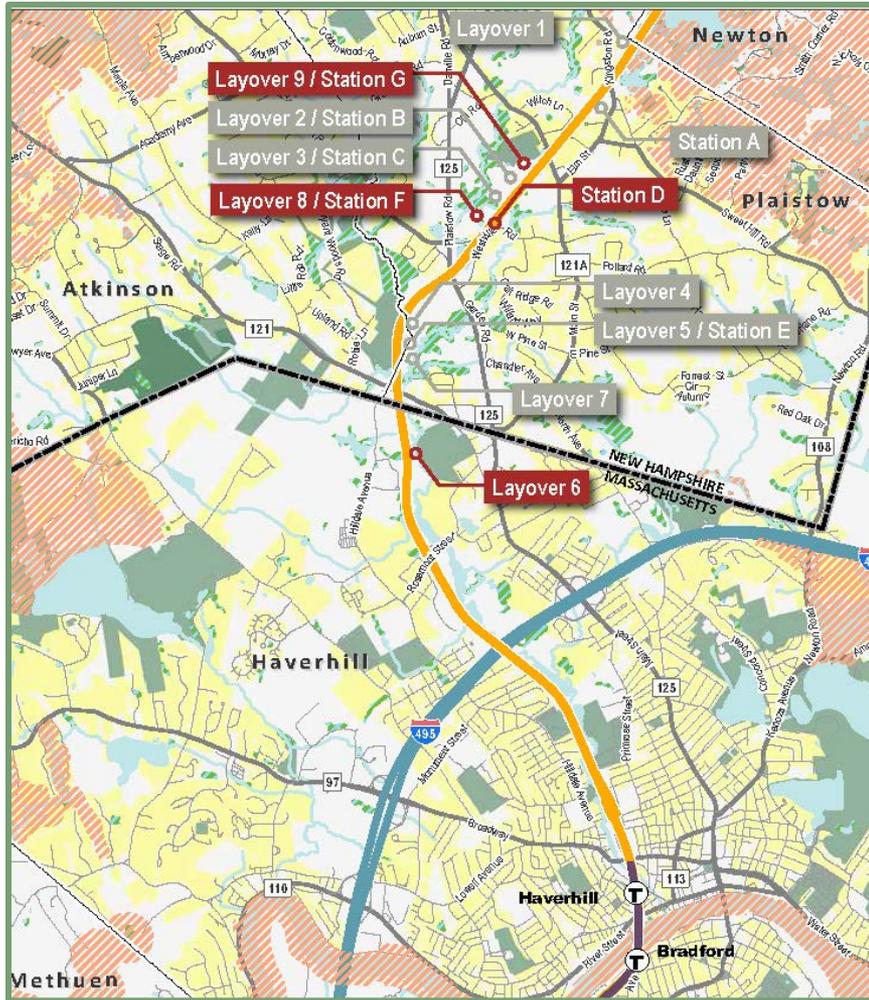
Alternative III

Recommended
Alternative

No Build

No
Recommendation

ALTERNATIVE DEVELOPMENT



ALTERNATIVES ANALYSIS

Analysis for Review Today:

- Traffic
- Noise Impacts
- Wetlands/Natural Resources
- Costs
- Ridership
- Air Quality

TRAFFIC IMPACTS

AM Peak Hour Traffic (6:30am – 7:30am)

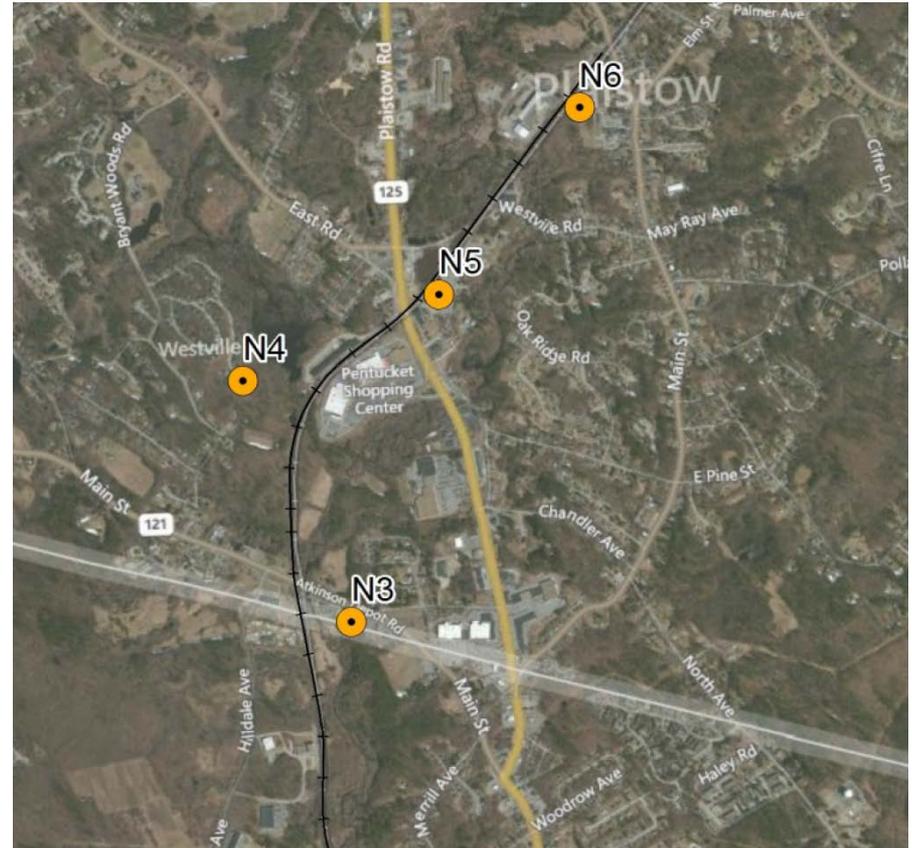
- Increased traffic at this time based on 90 anticipated riders
- Results in 100 additional vehicular trips

Alternative	Type of Highway	Vehicles Per Day	Existing Peak Hour	Proposed Condition	% Increase to Peak Hour Volume	Impact to Roadway Capacity
ALT I (Westville Rd)	Two-Lane	4,100 vpd	450 vph	550 vph	25%	<ul style="list-style-type: none"> • Some impact to Westville Road
ALT II (Route 125)	Four-Lane	19,000 vpd	1,900 vph	2,000 vph	5%	<ul style="list-style-type: none"> • Minimum impact to Route 125 • Joanne Drive/Route 125 intersection improvements
ALT III (Main St)	Two-Lane	6,600 vpd	725 vph	825 vph	15%	<ul style="list-style-type: none"> • Some impact to Main St • Signal not warranted, more evaluation needed

EXISTING NOISE MEASUREMENTS

Noise Measurement Locations

- N-3: Holy Angels Kindergarten & Preschool
- N-4: Cul-de-sac at Bayberry Drive
- N-5: Westville Road park-and-ride lot
 - 57 dBA at 50' from tracks
- N-6: Pollard Elementary School
 - 62 dBA at 100' from tracks



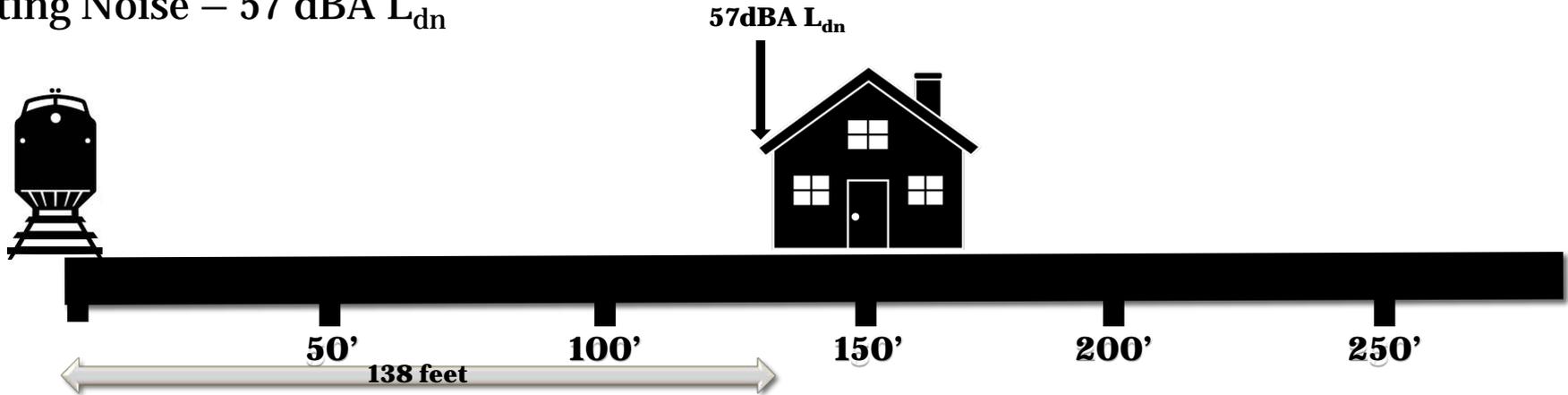
NOISE COMPARISONS

Noise Source	dBA
Wind in Trees	43
Birds @ 10'	57
Passenger Cars 55 MPH @50'	71
Large Barking Dog @ 50'	72
Surf (moderate seas) @ 10'	78
Commercial Airline @ 1 mile	79
Military Helicopter @ 500'	80
Snowmobile @ 50'	85
Lawn Mower @ 5'	86
Large Truck 55 MPH @ 50'	86
Motorcycle full throttle @ 50'	95
Car Horn @ 15'	97
Pistol Shoot @ 250'	106

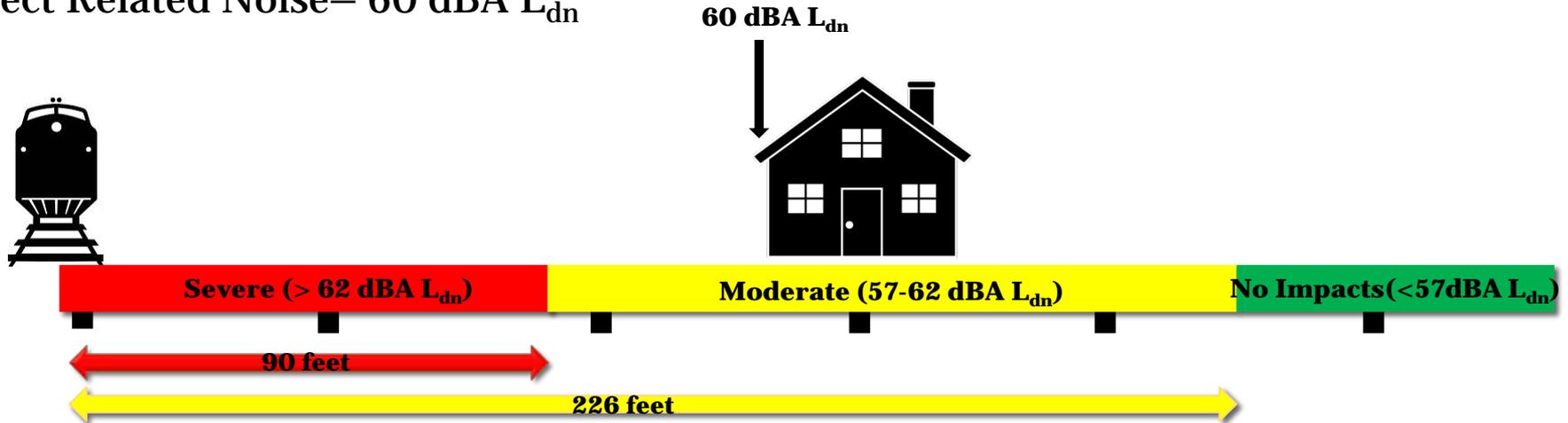
- a 3dBA increase in sound level is barely noticeable to the human ear.
- a 5dBA increase is when most listeners report a noticeable change.
- a 10dBA increase before the average listener *hears* “double the sound.”

NOISE IMPACT – EXAMPLE SITE

Existing Noise – 57 dBA L_{dn}



Project Related Noise – 60 dBA L_{dn}



NOISE IMPACTS - ALTERNATIVES

New Hampshire Noise Impacts

	Moderate Impacts	Severe Impacts
Alternative I	5	2
Alternative II	3	4*
Alternative III	5	2

* Includes 3 buildings with severe impacts that will be acquired as part of alternative



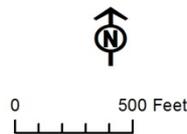
AMBIENT NOISE ANALYSIS

Alternative I Layover Site

- 2 buildings located within area where idling trains would be heard over ambient noise



— Idling Locomotive
— Hourly Leq from Project at 4 AM = 51 dBA

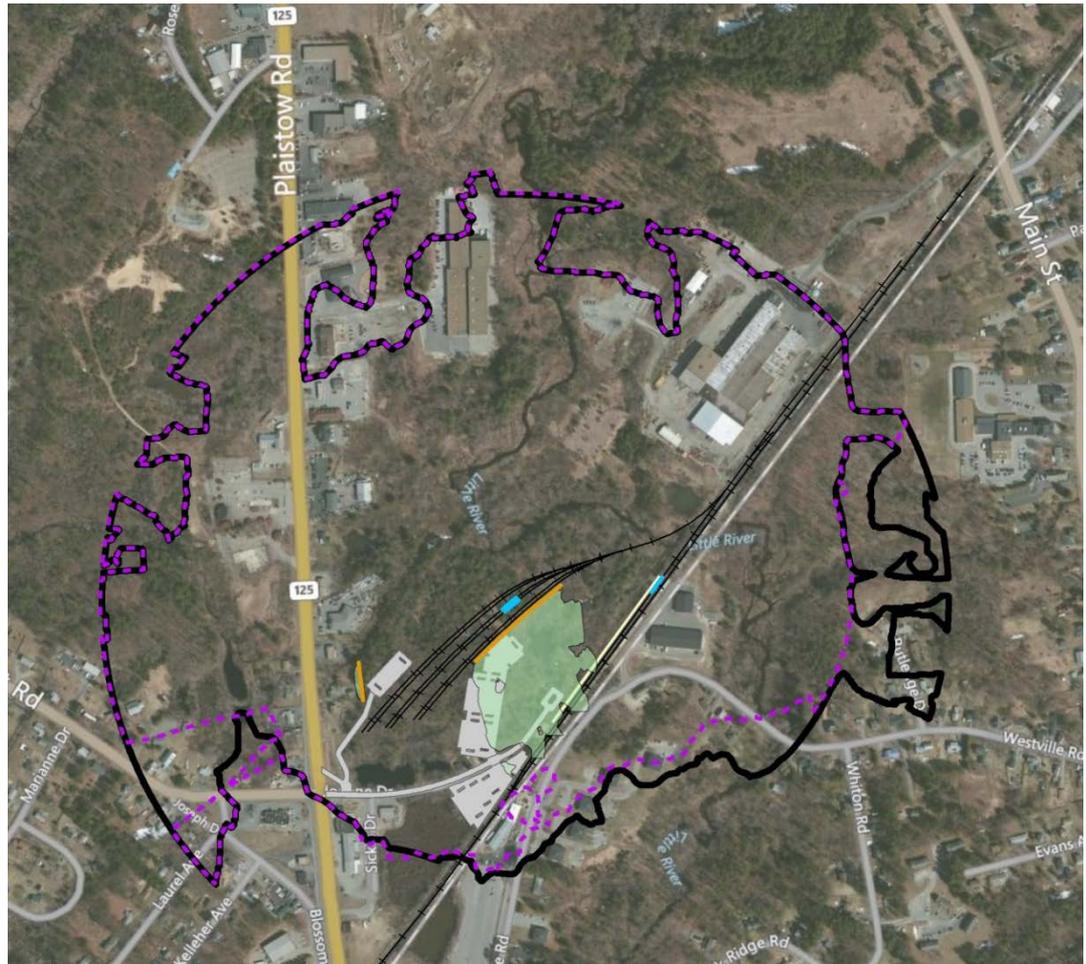


AMBIENT NOISE ANALYSIS

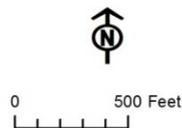
Alternative II Site

50 buildings located within area where idling trains would be heard over ambient noise

With sound walls number would reduce to 39



- Idling Locomotive
- Station
- Parking / Access
- Hourly Leq from Project at 4 AM = 48 dBA
- Mitigation - Noise Wall
- Mitigated Hourly Leq from Project at 4 AM = 48 dBA
- Mitigation Reduces Hourly Leq by 5 dBA



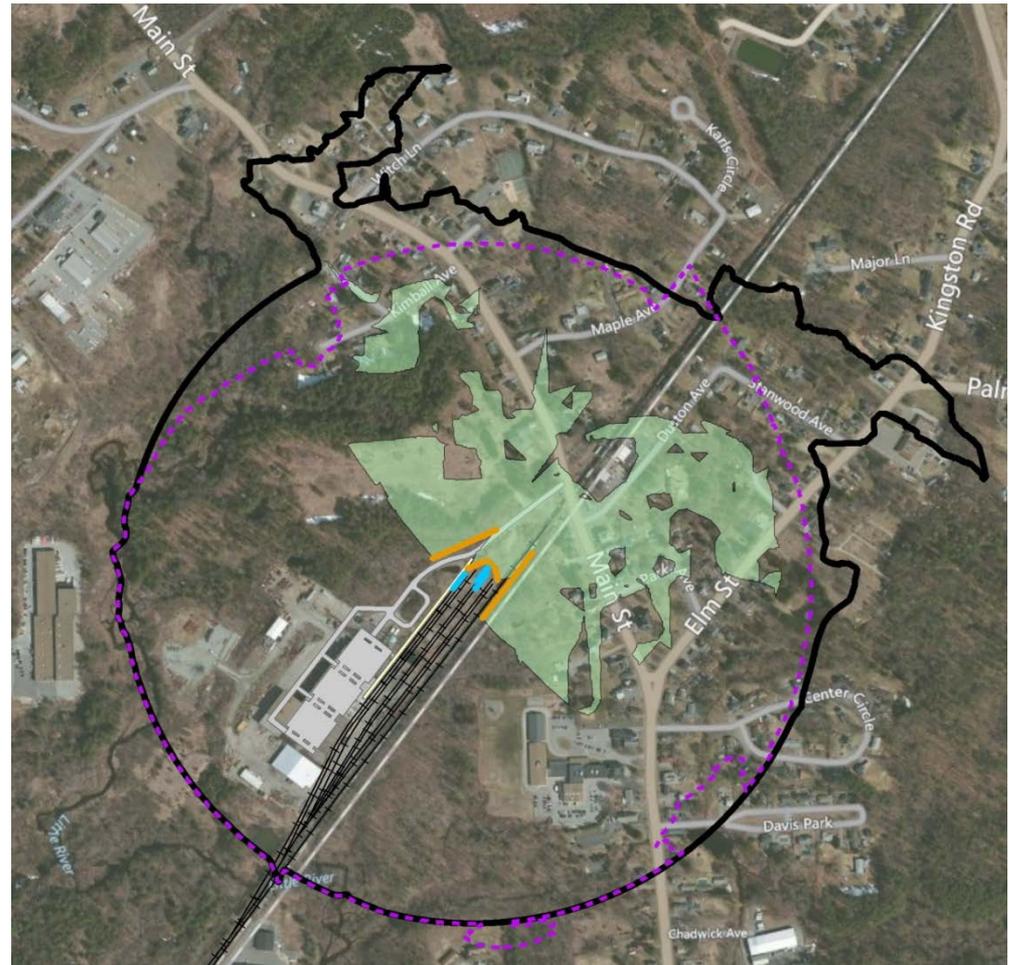
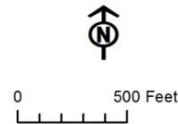
AMBIENT NOISE ANALYSIS

Alternative III Site

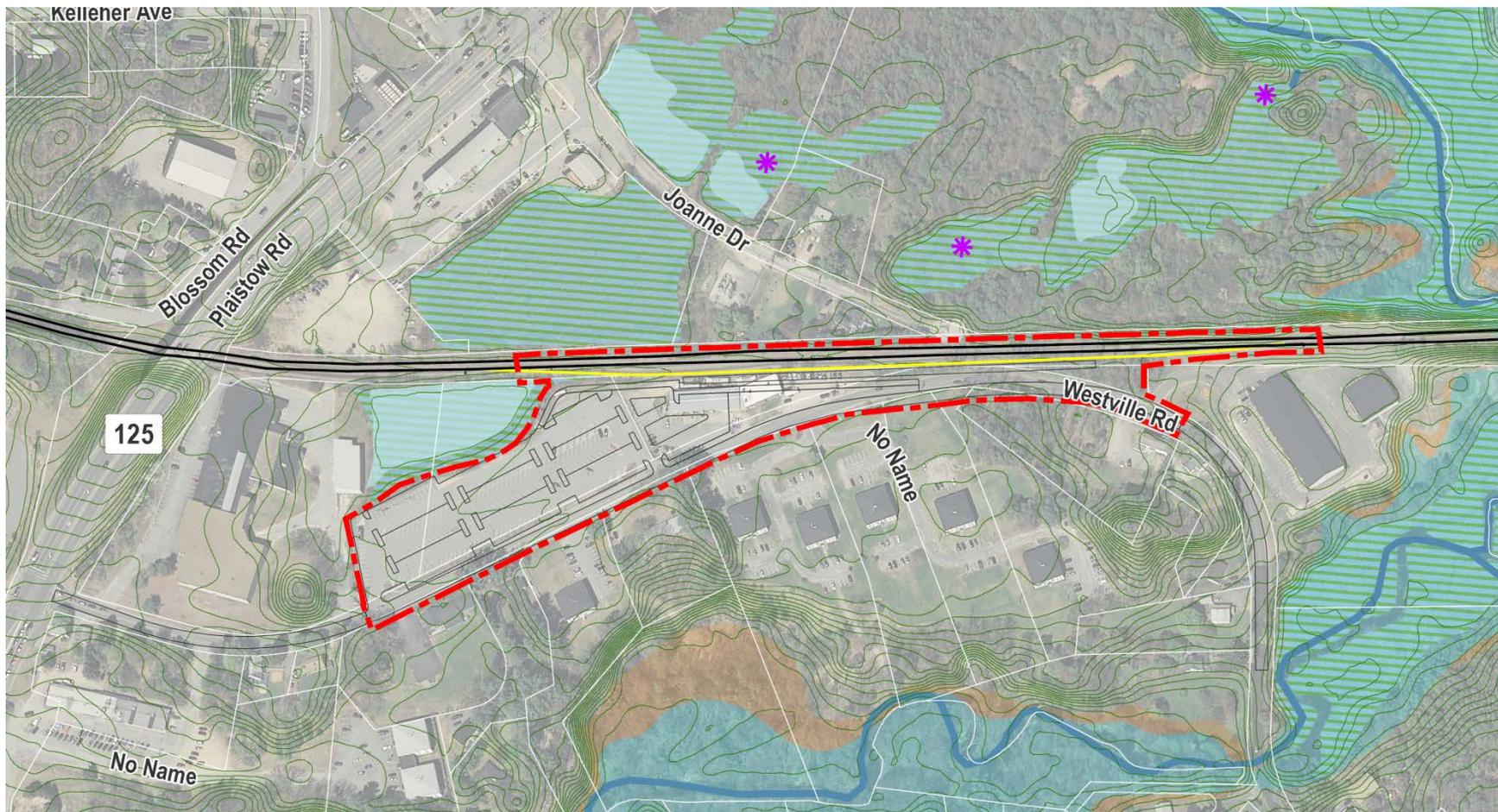
143 buildings located within area where idling trains would be heard over ambient noise

With sound walls number would reduce to 73

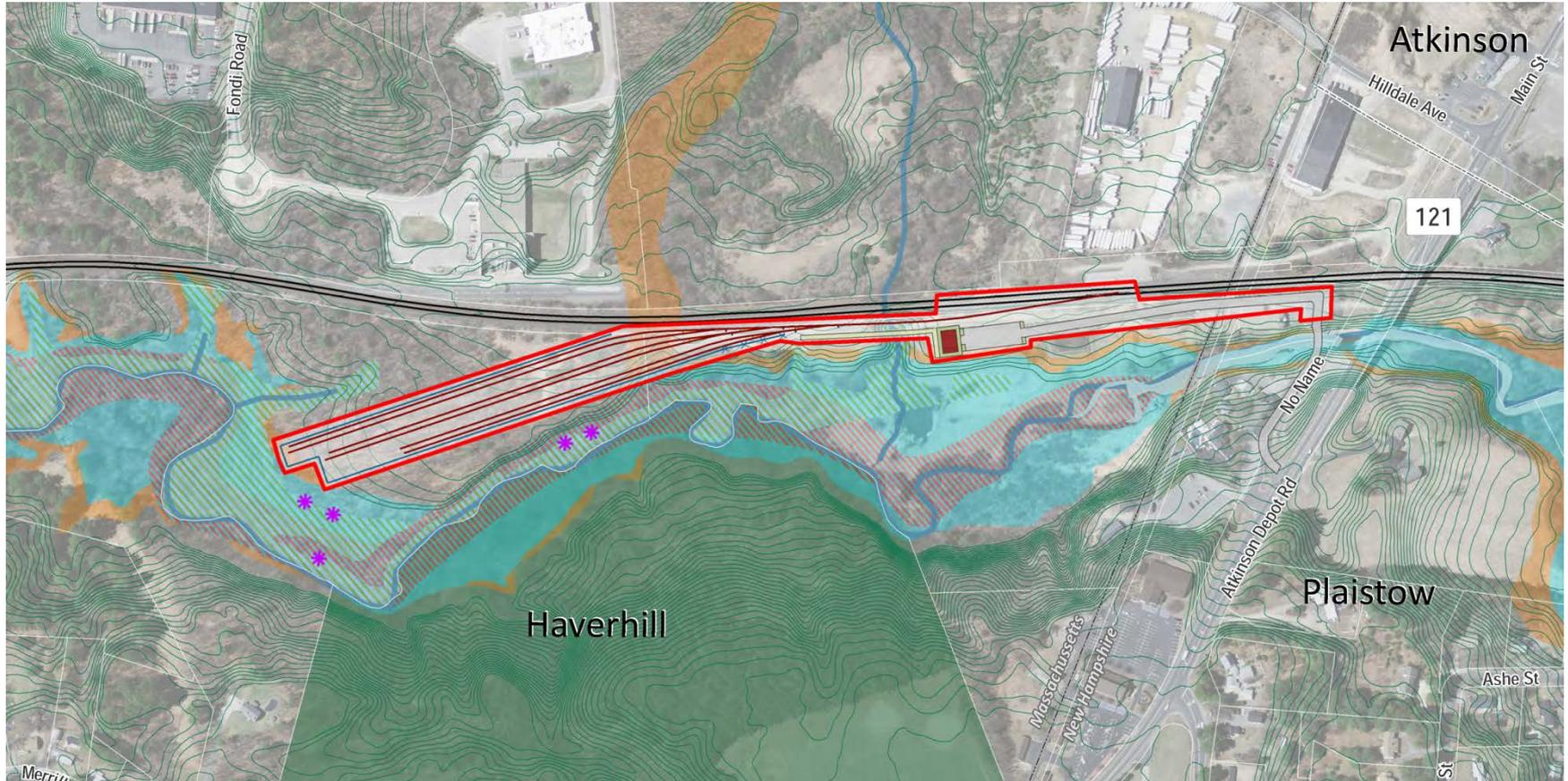
- Idling Locomotive
- Station
- Parking / Access
- Hourly Leq from Project at 5 AM = 46 dBA
- Mitigation - Noise Wall
- Mitigated Hourly Leq from Project at 5 AM = 46 dBA
- Mitigation Reduces Hourly Leq by 5 dBA



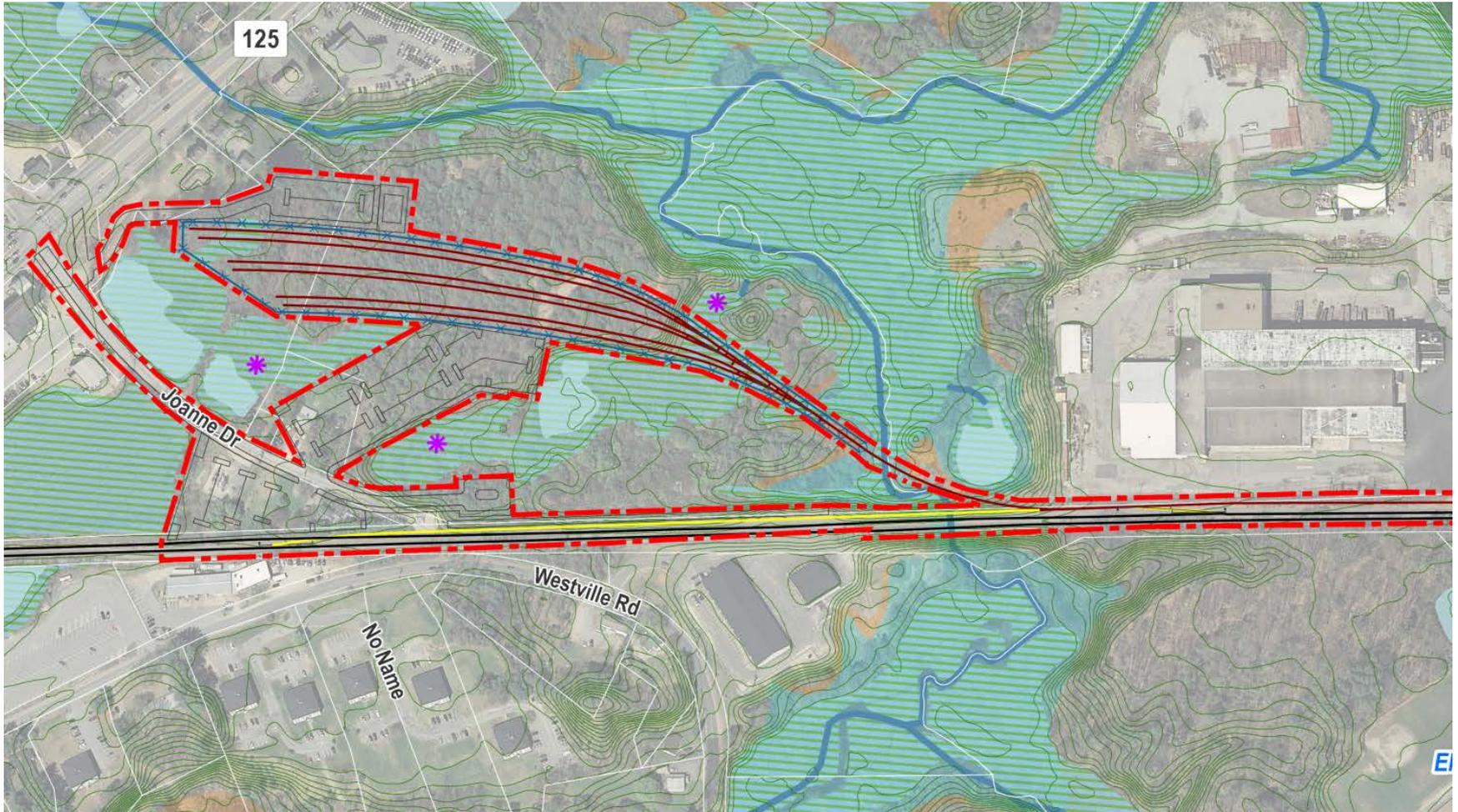
NATURAL RESOURCES ALTERNATIVE I - STATION



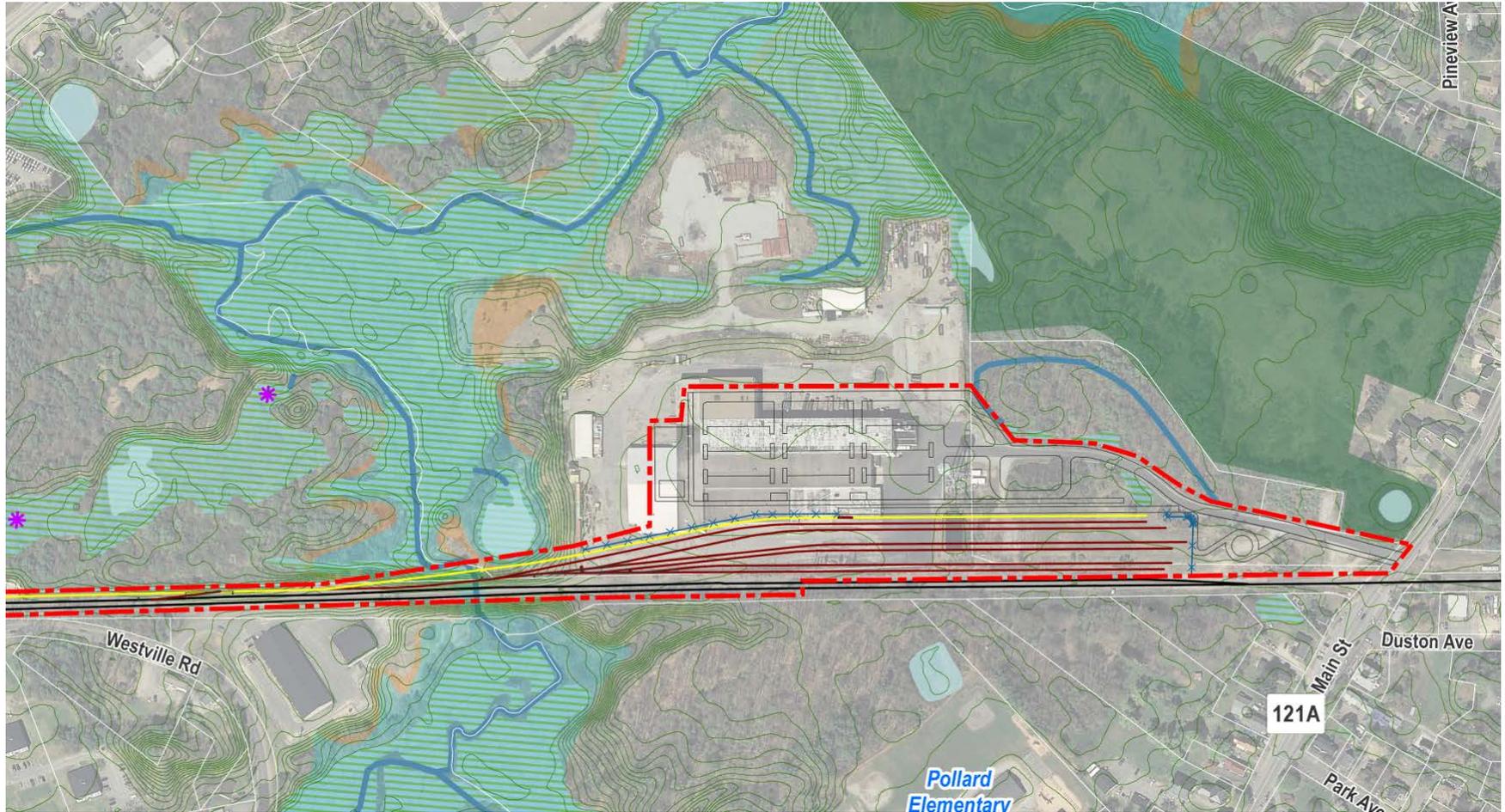
NATURAL RESOURCES ALTERNATIVE I - LAYOVER



NATURAL RESOURCES ALTERNATIVE II



NATURAL RESOURCES ALTERNATIVE III



NATURAL RESOURCE IMPACTS

	Wetland (acres)	Length of Stream (linear feet)	Flood Zone (acres)	100-ft Potential Vernal Pool Buffer (acres)
Alternative I (Station)	0.02	0	0	0
Alternative I (Layover)	0.08	68	0.49	0.12
Alternative II	0.94	0-139*	0.53	0.29
Alternative III	0.21	183	0.33	0

**Impact depends on extent of bridging used over Little River*

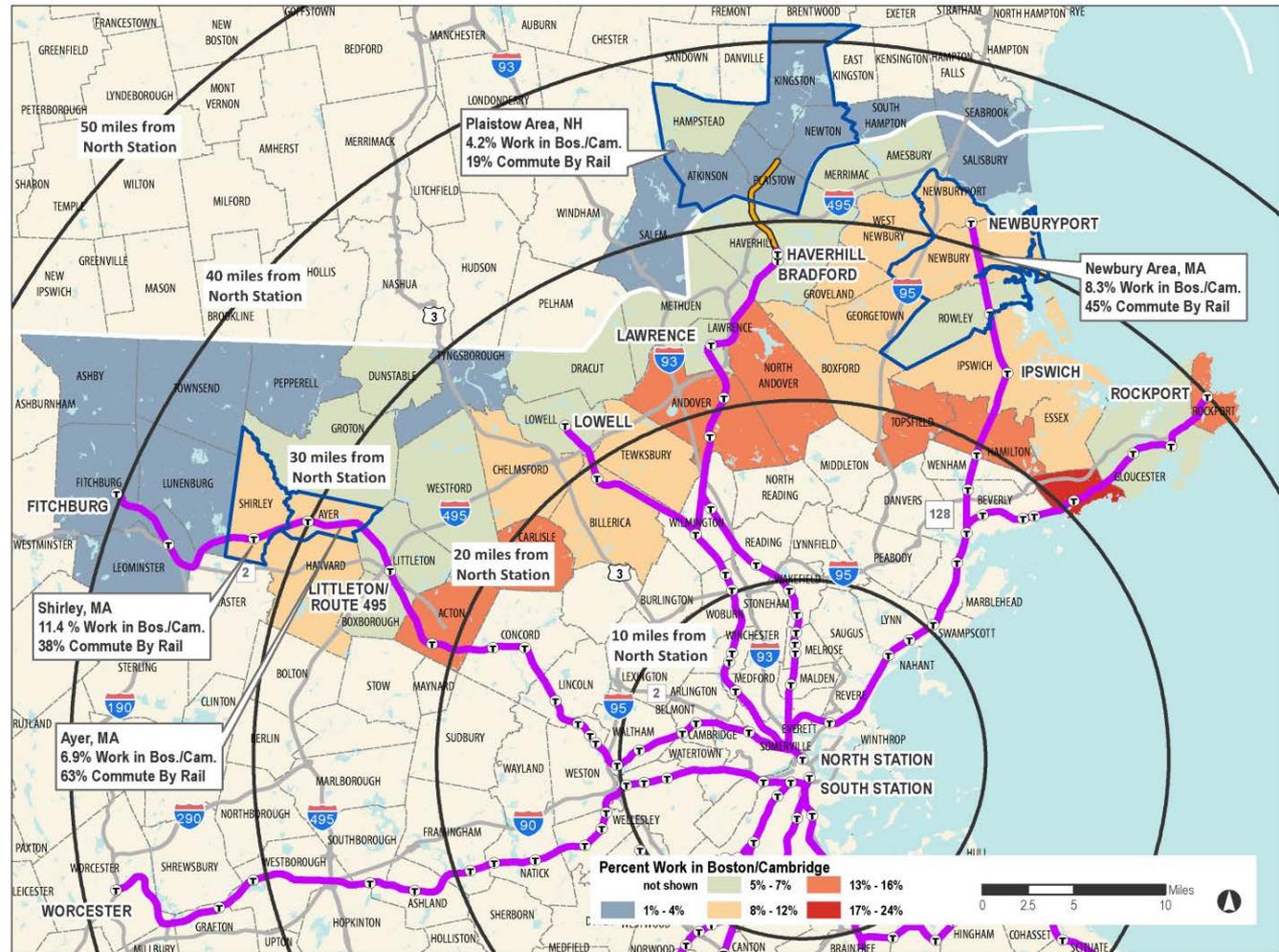
CAPITAL COST

Capital Cost	Alternative I	Alternative II	Alternative III
Layover	\$ 5.7	\$ 10.0	\$ 6.4
Parking/Roadway Improvements	\$ 1.7	\$ 3.2	\$ 2.7
Station	\$ 3.7	\$ 3.9	\$ 3.8
Main Line Improvements	\$ 11.3	\$ 11.3	\$11.1
Noise Mitigation	\$ 3.7	\$ 3.5	\$ 3.6
Wetland Mitigation	\$ -	\$ 0.4	\$ -
Real Estate/Demolition	\$ 0.9	\$ 1.3	\$ 5.3
SUBTOTAL	\$ 27.0 million	\$ 33.6 million	\$ 32.9 million
Engineering/Design (10%)	\$ 2.7	\$ 3.4	\$ 3.3
Project Administration & Construction (10%)	\$ 2.7	\$ 3.4	\$ 3.3
Contingency (30%)	\$ 8.1	\$ 10.1	\$ 9.9
TOTAL	\$ 40.5 million	\$ 50.5 million	\$ 49.4 million

**Capital Costs are anticipated to be paid from a Federal grant & Massachusetts matching funds;
No capital or operating costs anticipated to be paid by either New Hampshire or the Town of Plaistow*

RIDERSHIP

Station	2013 Avg. Daily Boardings
Newburyport	812
Haverhill	576
Ayer	435
Rockport	323
Shirley	315
Bradford	278
Rowley	140



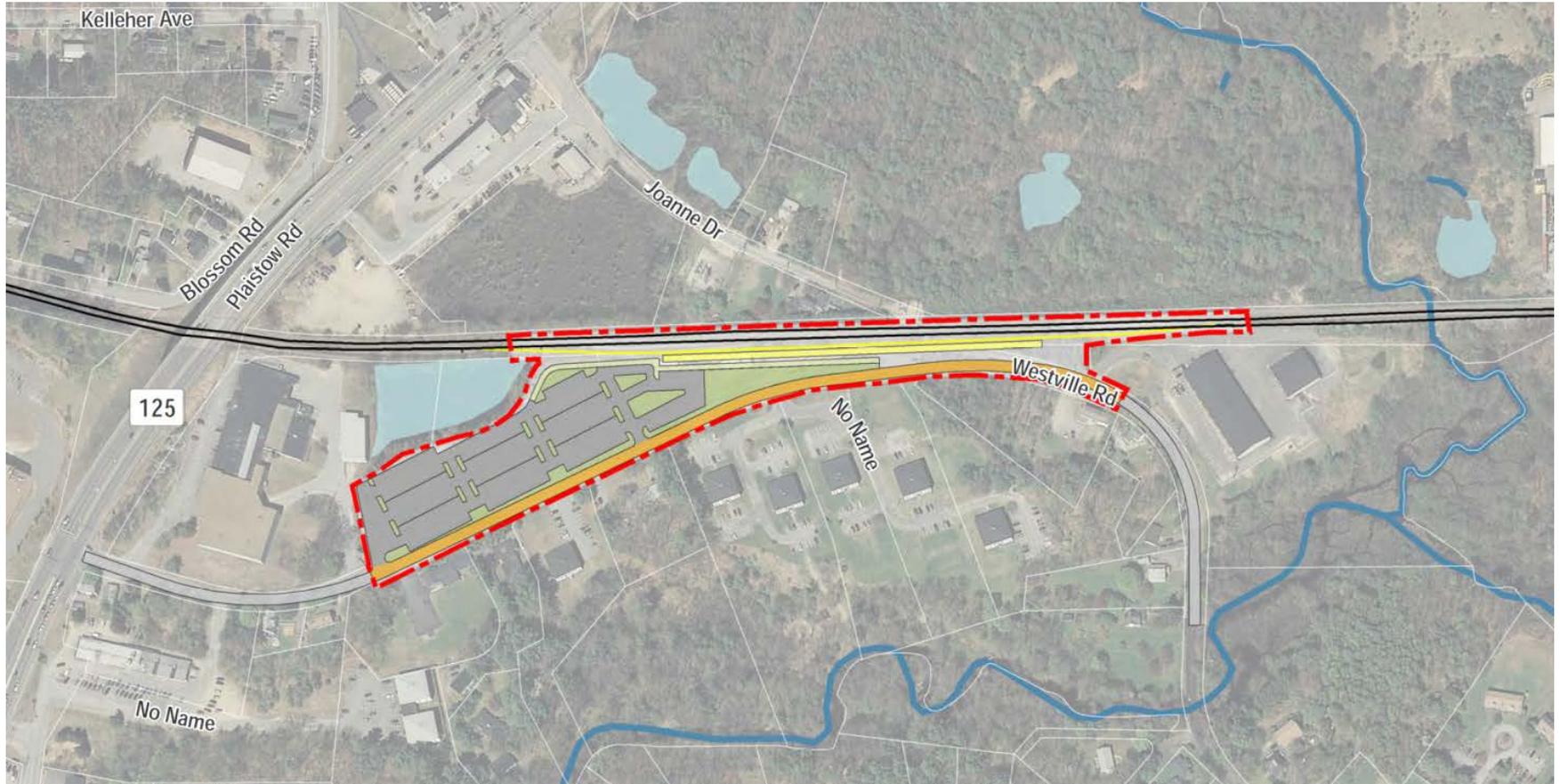
RIDERSHIP

Plaistow Area	Existing Conditions (2015)		Future Conditions (2030)	
	Diversion/ Transfer of Existing Riders (Day 1)	Improved Train Service- Related Growth (Year 1)	Growth of Boston/ Cambridge Workers	Projected Growth of Population
Total Workers	17,469	17,469	17,469	18,351
% Work in Boston/Cambridge	4.2%	4.2%	5.2%	5.2%
Boston/Cambridge Workers	742	742	917	963
Estimated % Commute By Rail	19%	30%	35%	35%
Estimated Workers Commute by Rail	139	223	321	337
Projected Boardings at New Plaistow Station	118	170	246	258

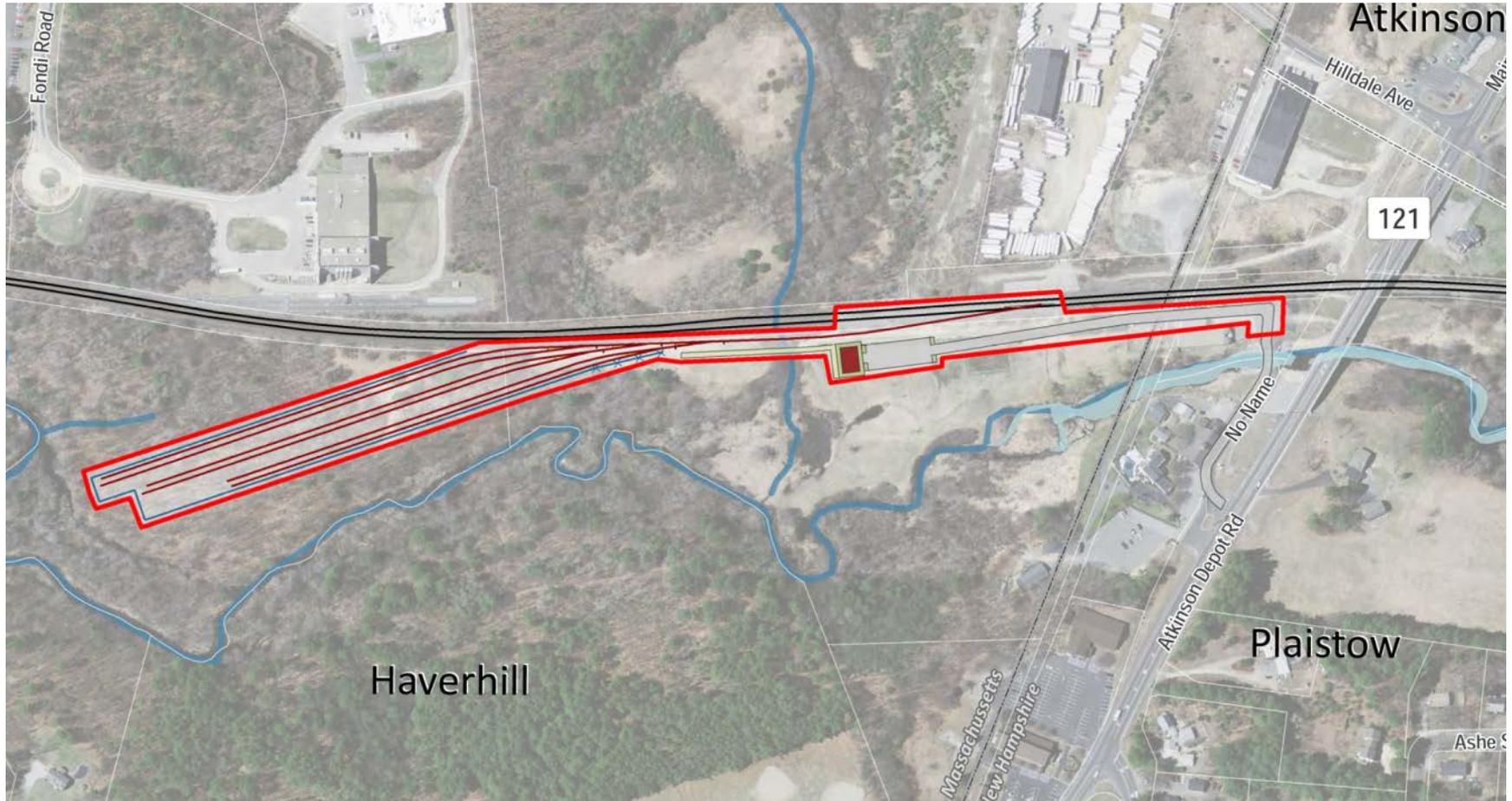
AIR QUALITY

- Air quality assessment of layover facility and station are underway
- Impacts at regional level are projected to be minimal
- Local impacts will identified in the next month
 - Impacts for Alternative II and III impacts are expected to be similar
- Future improvements to train-related emissions (new locomotive standards)

ALTERNATIVE I - STATION



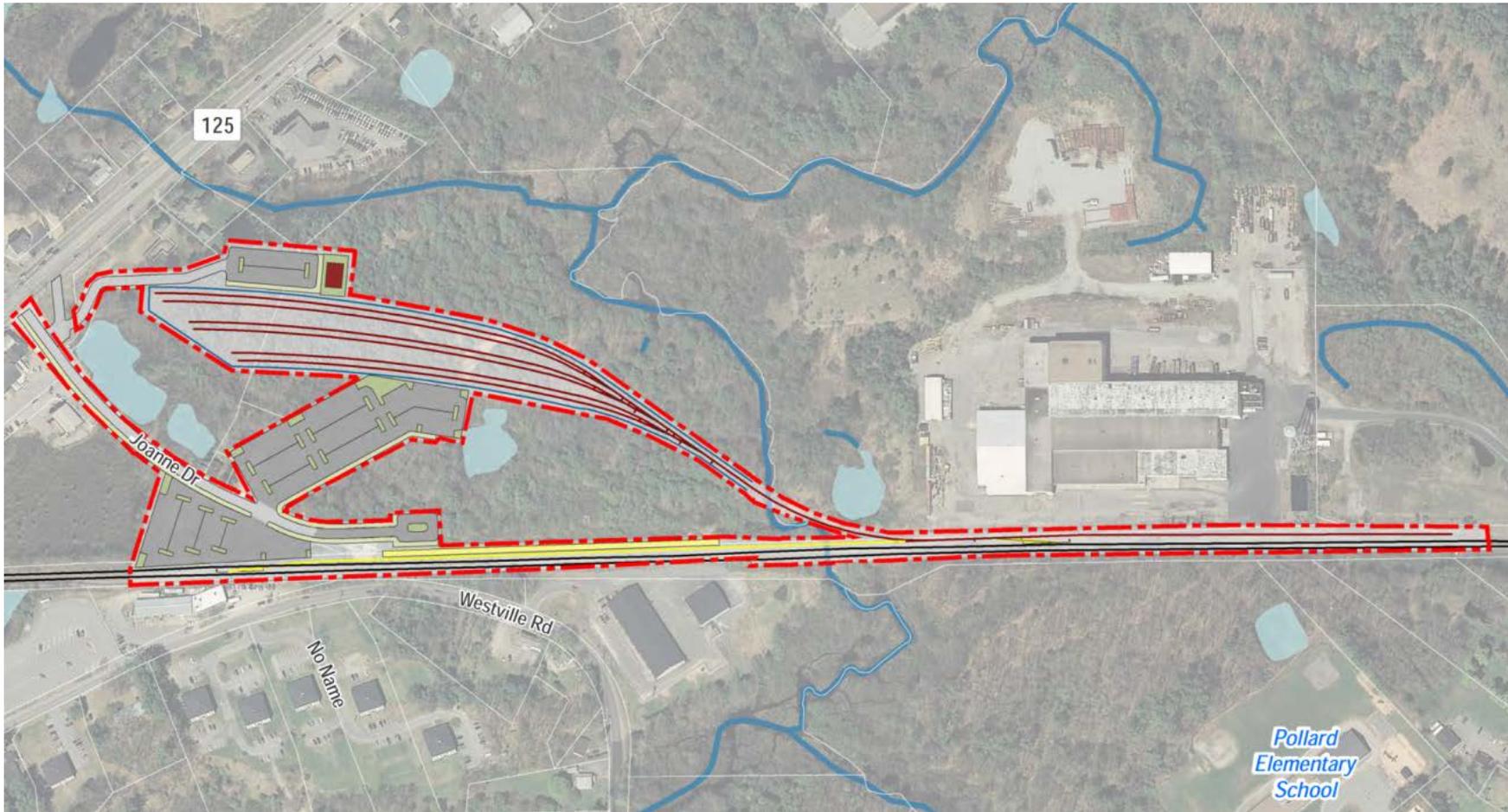
ALTERNATIVE I – LAYOVER



ALTERNATIVE I SUMMARY

Benefits/Advantages	Constraints/Issues
<ul style="list-style-type: none">▪ Lowest capital investment cost (\$40.5 million).▪ Station site creates no significant environmental impacts, including wetlands or other water resources.▪ Station uses existing NHDOT park-and-ride lot.▪ Station and layover facility uses are compatible with adjacent land uses.▪ Layover facility is furthest from schools/Plaistow Center.	<ul style="list-style-type: none">▪ Operational issues tied to 1.1-mile separation of layover and station (existing freight & passenger service).▪ Largest number of residences within 1/2 mile of station and layover sites▪ Operational subsidies may be required because facilities are separated; Town of Plaistow cannot support costs.▪ Layover site has moderate to high sensitivity for archaeological resources and moderate environmental impacts (stream and floodplain).▪ Westville Road must be slightly realigned to the east.

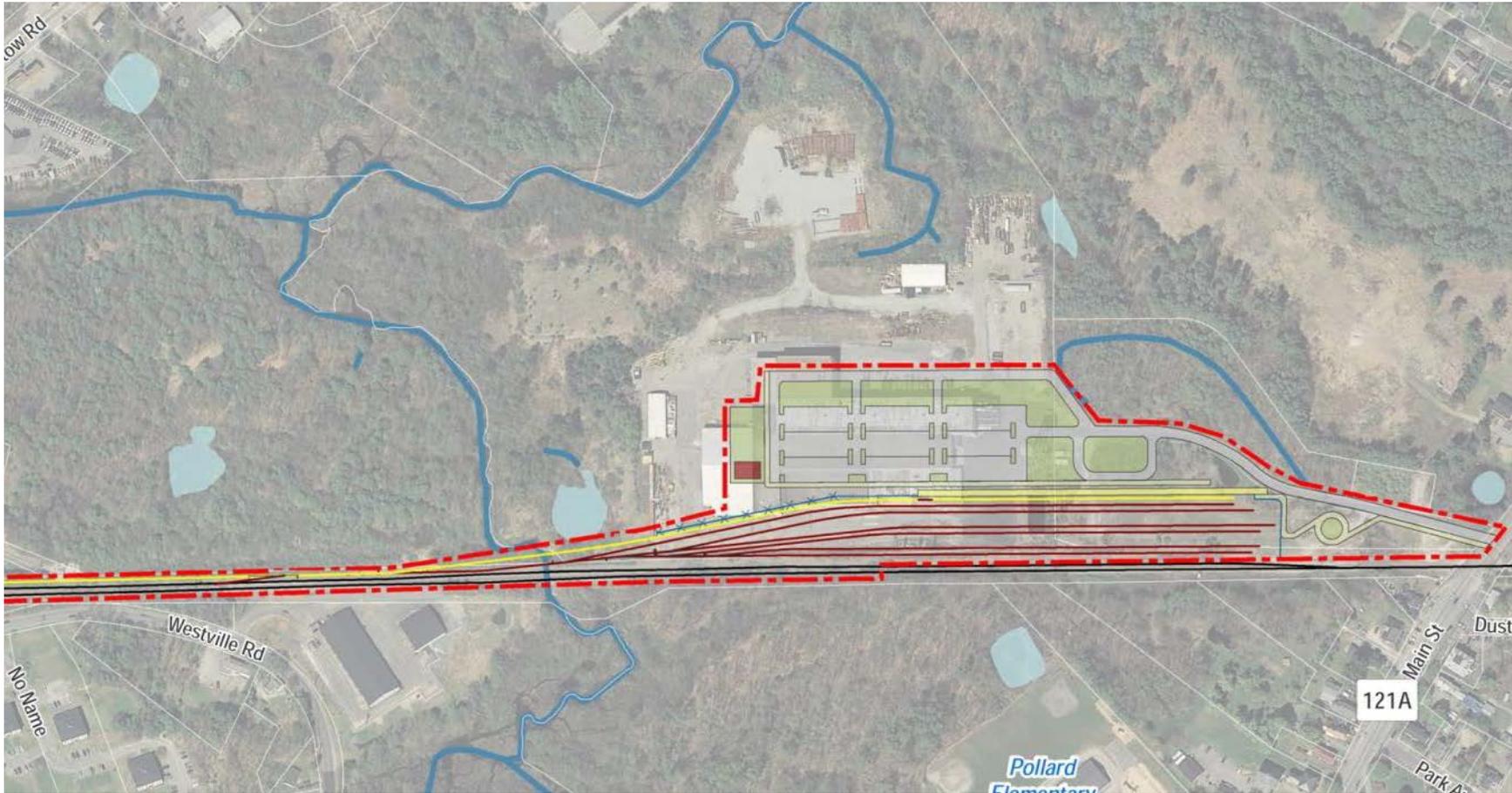
ALTERNATIVE II



ALTERNATIVE II SUMMARY

Benefits/Advantages	Constraints/Issues
<ul style="list-style-type: none">▪ Best regional access to Route 125; Joanne Drive has an existing signalized intersection.▪ Fewest number of noise impacts.▪ Fewest number of residential properties within ½ mile.▪ Operationally ideal; co-location allows movement between station and layover without access to main line track; reduces impact to Amtrak and freight services.▪ Low potential for hazardous materials, historical, cultural, and archaeological resources impact.▪ Allows for potential to connection with future development in Plaistow Center.	<ul style="list-style-type: none">▪ Highest capital investment cost (\$50.5 million)▪ Site has the highest potential impact on natural resources, including wetlands.▪ Requires acquisition of three residential buildings.▪ To avoid wetlands areas and minimize need for ramping due to site grading, parking for the station is not very close to the platform.

ALTERNATIVE III



ALTERNATIVE III SUMMARY

Benefits/Advantages	Constraints/Issues
<ul style="list-style-type: none">▪ Operationally ideal; co-location allows movement between station and layover without access to main line track; reduces impact to Amtrak and freight services.▪ Station is located closest to Plaistow Village, which would allow the best access for local passengers and bicycle and pedestrian access.▪ Results in minor environmental impacts and no impacts to potential vernal pools.	<ul style="list-style-type: none">▪ Concern with traffic impacts on Main Street.▪ Reduces opportunities for other (TOD) development.▪ Highest potential impact on schools/surrounding area.▪ Site has the most difficult regional access.▪ Requires acquisition of largest amount of land, including Town of Plaistow parcel.▪ High capital investment cost (\$49.4 million).▪ The existing industrial site has the highest potential for hazardous materials issues and impacts.

RECOMMENDED ALTERNATIVE

- Based on input received in the past several meetings, **Alternative II is the Recommended Alternative**
- **Primary reasons for recommendation:**
 - Site offers best regional access (Route 125)
 - Not expected to create traffic impacts (signalized intersection)
 - Fewest number of noise impacts
 - Fewest number of residential properties within ½ mile
 - Testa Realty and town-owned parcel remain available for future development
 - Wetland mitigation possible through site design/bridging of Little River

RECOMMENDATION/NEXT STEPS

- Move forward into NEPA **Environmental Assessment (EA)** with Alternative II as the Recommended Alternative
 - Federal process to identify any significant impacts that result from the project and cannot be mitigated
- **Town Review/Approval Process**
- **Develop Financial Plan**
 - Identify funding sources for capital improvements
 - MBTA assumed to provide 20% local match for federal grants
- Develop **agreement with MA/MBTA** to provide funding for capital improvements in exchange for service to NH
 - Model agreement on RI/MA Pilgrim Partnership

WHAT IS AN EA?

- An Environmental Assessment (EA) is a **comparison of Recommended Alternative vs. No-Build**
- Requires **coordination with federal, state, and local regulatory agencies**
- **Identifies impacts and required mitigation**
- Developed in **coordination with Federal Transit Administration (FTA)**

EA PROCESS

- **EA Report issued for public review**
 - Anticipated to be posted to project website in late April 2015
- **30-day public comment period**
 - Public hearing will be held during comment period
- **FTA to determine if project would result in significant impacts**
 - If none – issue a Finding of No Significant Impact (FONSI)
 - If significant impacts identified – additional study through an Environmental Impact Study (EIS)

REGIONAL PERSPECTIVE

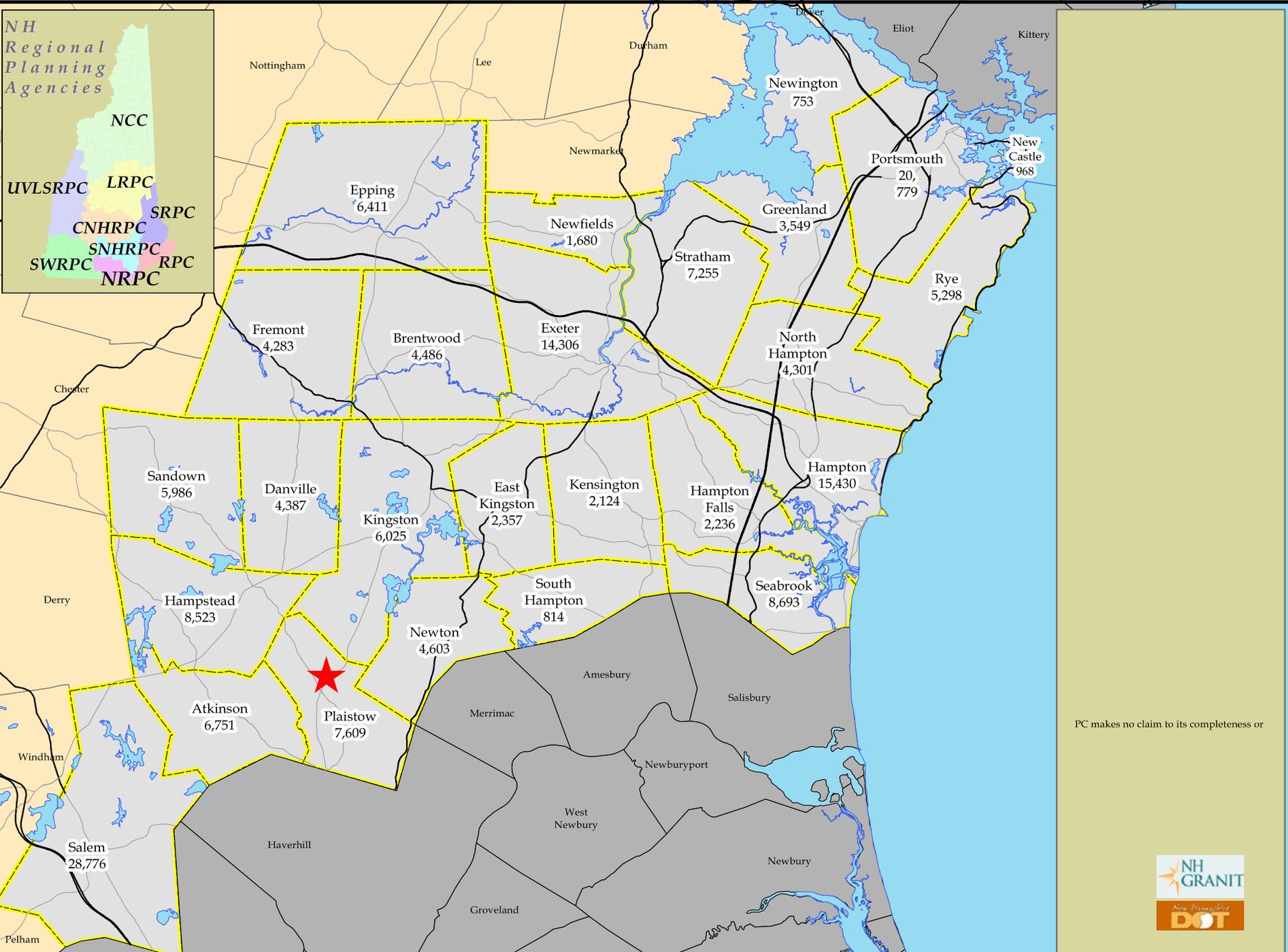
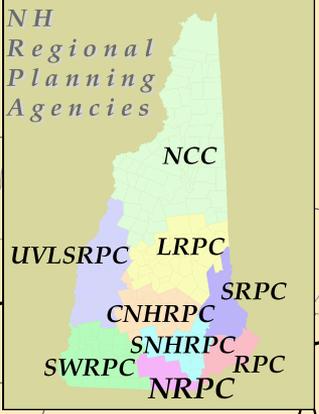
ROCKINGHAM



PLANNING
COMMISSION

Regional Transportation Considerations – MPO Role

- **MPO** = metropolitan planning organization
- **Rockingham Planning Commission** designated as the MPO for SE New Hampshire
- **Purpose:** to ensure local and regional needs are represented in state and federal transportation planning
- RPC on the Plaistow Rail Project Adv. Comm. to represent **regional transportation planning needs.**

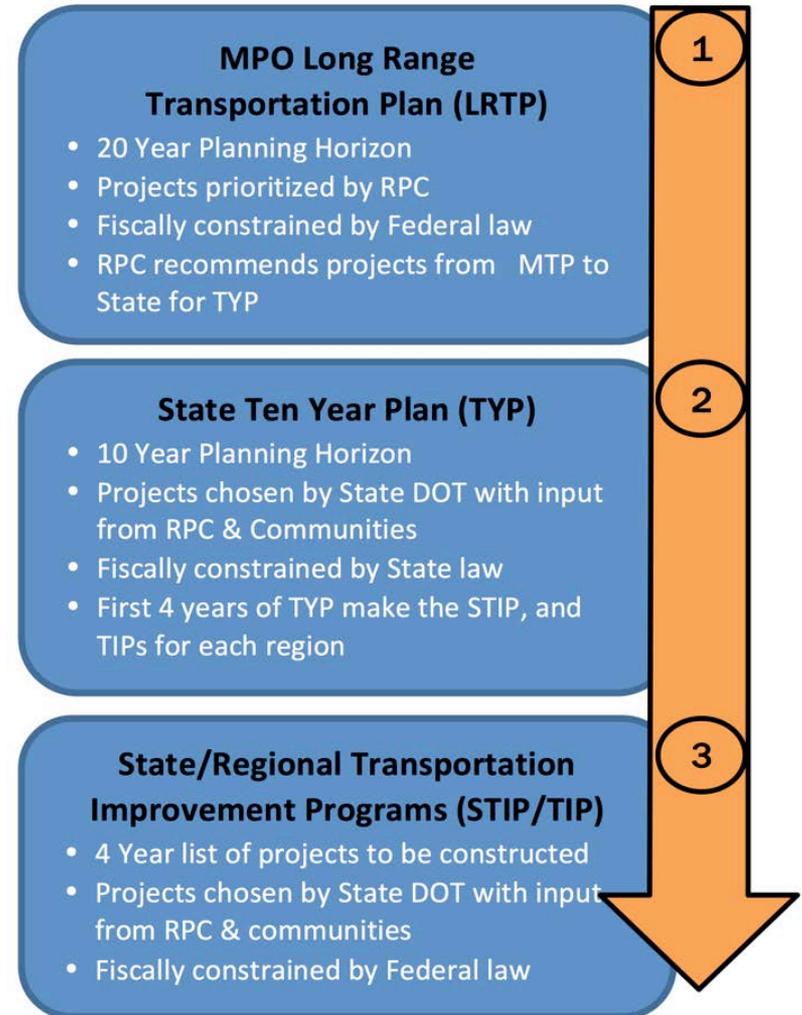


PC makes no claim to its completeness or



Project Development & Selection

- **Long Range Transportation Project List (MPO)**
- **State 10-year Plan – 2 Year Update Cycle (NHDOT)**
- **Project Evaluation:** What do we look for?
 - Project Need
 - Network Significance
 - Feasibility
 - Project Support
 - Environmental Impact
 - Cost Effectiveness
 - Supports transportation goals
- **Limited resources**



Regional Transportation Goals

- Improve safety
- Reduce congestion
- Improve mobility
- Increase access to alternatives
- Create an efficient & sustainable system
- Others
 - Compatible with land use
 - Improve air quality
 - Support economic development

Plaistow Commuter Rail Extension from a Regional Perspective

- **Plaistow rail service seen as regionally significant**
 - lowers peak hour volume of cars on Rt. 125
 - provides alternative transportation to Boston
 - improves mobility & regional access
 - spurs economic development
 - addresses future needs
- **Multipart decision**
 - Feasibility, preferred alternative & EA (This study)
 - Plaistow decision
 - Funding availability
 - Cost effectiveness; competition with other needs

COMMENTS/QUESTIONS

Based on analysis and comments heard to date,
Alternative II is the best alternative to
proceed through the
Environmental Assessment (EA) process
to complete the study.

FOR MORE INFORMATION:

Project Website

www.plaistowstudy.org

Project Facebook Page

www.facebook.com/plaistowstudy