



Track Improvement Program Update

Feb. 29, 2024

-Ryan Jordan, Deputy Chief,
Construction Field Services



Track Improvement Program 2023-2024 | Timeline

Alternative Service Limits	Speed Restrictions	Modeled Time Savings (mins)	Diversion Duration (days)	2023		2024													
				NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
A	Harvard to Central	<input checked="" type="checkbox"/>	1	1.7	Wknd														
B	JFK/UMass to Park St	<input checked="" type="checkbox"/>	6	2.7	EA/Wknd														
A	Oak Grove to North Station	<input checked="" type="checkbox"/>	2	1.9	EA/Wknd														
A	North Station to Kenmore, Heath, Babcock	<input checked="" type="checkbox"/>	10	4.3	9														
B	Riverside to Kenmore	<input checked="" type="checkbox"/>	20	9.2	10														
1	North Station to Lechmere		2	1.8	14														
2	North Station to Kenmore, Heath, Babcock	<input checked="" type="checkbox"/>	15	8.7	21														
3	Copley to St. Mary's, Babcock, Brookline Hills		9	4.2	18														
4	Boston College to Kenmore		7	1.7	10														
5	Cleveland Circle to St. Mary's		1	0.1	6														
1	Oak Grove to North Station		13	1.7	6														
2	Wellington to North Station		5	4.3	9														
3	Sullivan to Back Bay		6	2.3	10														
4	Haymarket to Jackson Sq		2	1.3	4														
5	Back Bay to Forest Hills		15	4.8	11														
1	Alewife to Harvard	<input checked="" type="checkbox"/>	9	6.5	9														
2	Alewife to Kendall		9	4.0	16														
3	Harvard to Park		3	0.8	6														
4	Kendall/MIT to Broadway		8	3.7	6														
5	Park to JFK/UMass		8	2.6	8														
6	Broadway to North Quincy		4	2.7	6														
7	JFK/UMass to Braintree		22	9.1	16														
1	Airport to Wonderland		12	5.3	12														
2	Bowdoin to Airport		2	0.7	Night Orders														

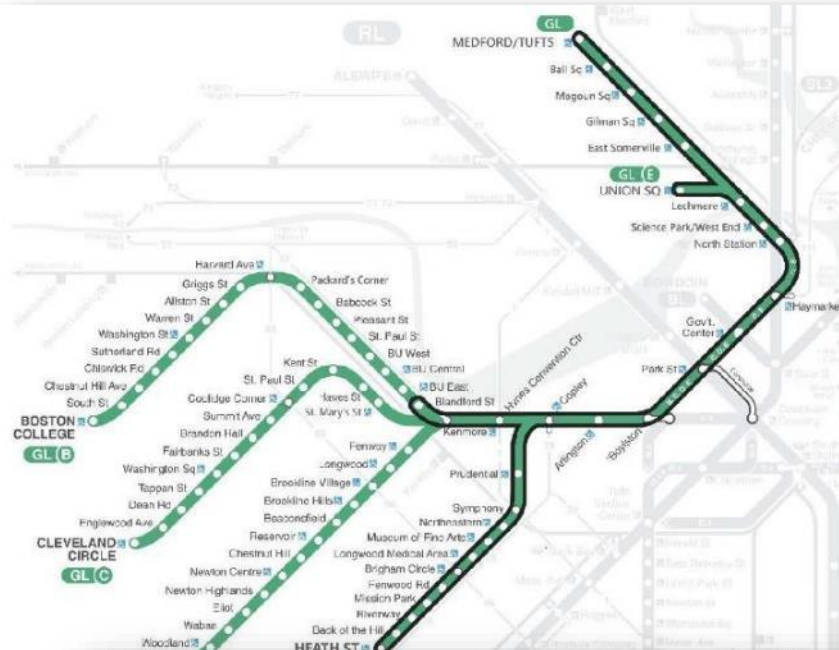
191 restrictions Lifted
86.1 minutes saved
207 days of work

Today Feb 29

Data as of February 21, 2024

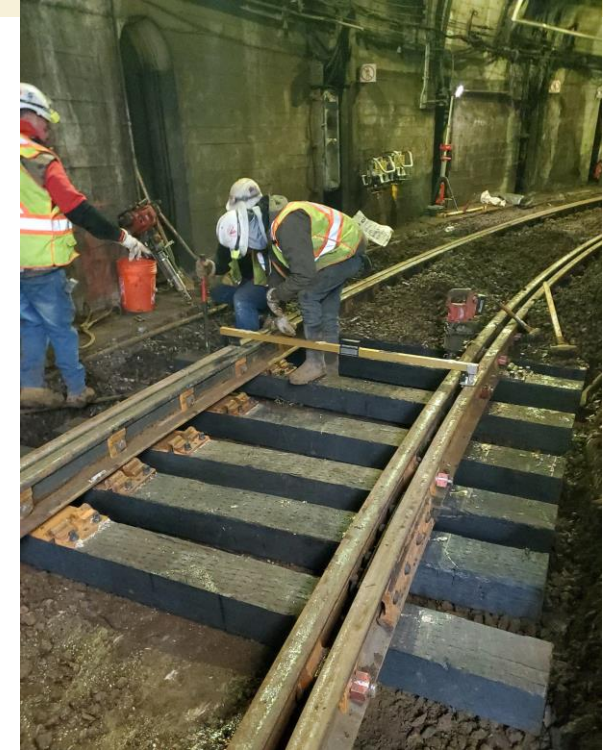
Track Improvement Program | 2-Phase January Surge, Completed

GL Central Tunnel, and B North Stn - Babcock St, E North Stn - Heath St, C & D North Stn - Kenmore Stn, Jan 3-12 & 16-28, 2024



Metrics

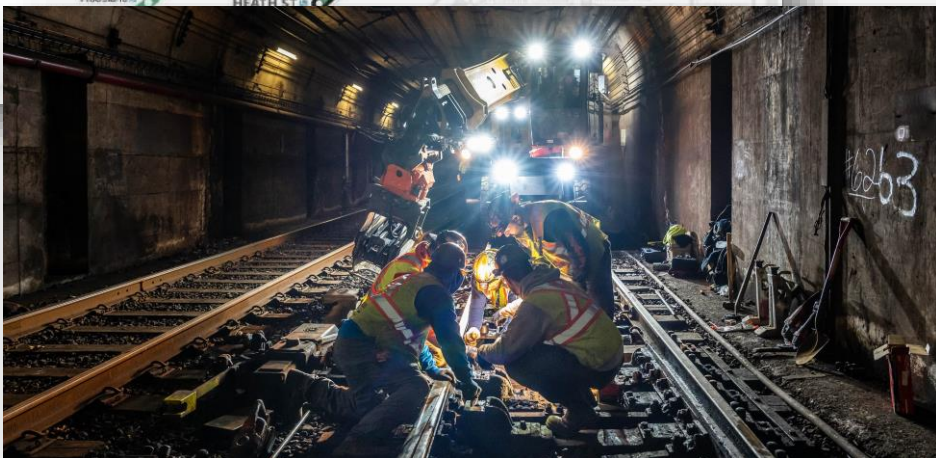
- ✓ 16 Speed Restrictions cleared.
- ✓ 1306 ties replaced.
- ✓ 10,845 ft rail replaced.
- ✓ 1280 ft full depth track repairs
- ✓ 8887 ft track resurfaced & tamped - smoother ride.
- ✓ 12 Switch Replacements/Rehabilitations.
- ✓ 66 thermite welds.



Park St to Gov't Center 01.20.2024

Piggyback Work

- ✓ ~7,300 ft overhead catenary wire replaced between Haymarket and Boylston stations.
- ✓ Water infiltration repairs completed in Green Line tunnel.
- ✓ Park Street communication room improvements.
- ✓ Copley station, repair work completed 3 in-station columns with additional infrastructure upgrades accomplished

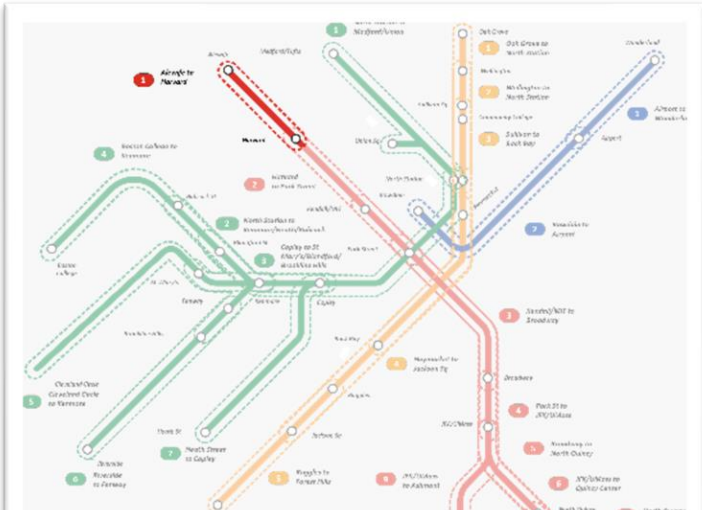


Copley Square
01.18.2024



Track Improvement Program | Completed

RL Alewife to Harvard, Feb. 5 – 14, 2024



Metrics:

- ✓ 8 speed restrictions lifted.
- ✓ 27 ties replaced.
- ✓ 2002 ft rail replaced.
- ✓ 1360 ft track resurfaced/tamped.
- ✓ 6 switches replaced/rehabbed
- ✓ 30 thermite welds
- ✓ 28 primary pads & 61 secondary pads replaced (0 ft full depth track repairs)



Repairing concrete slabs

Piggyback Work:

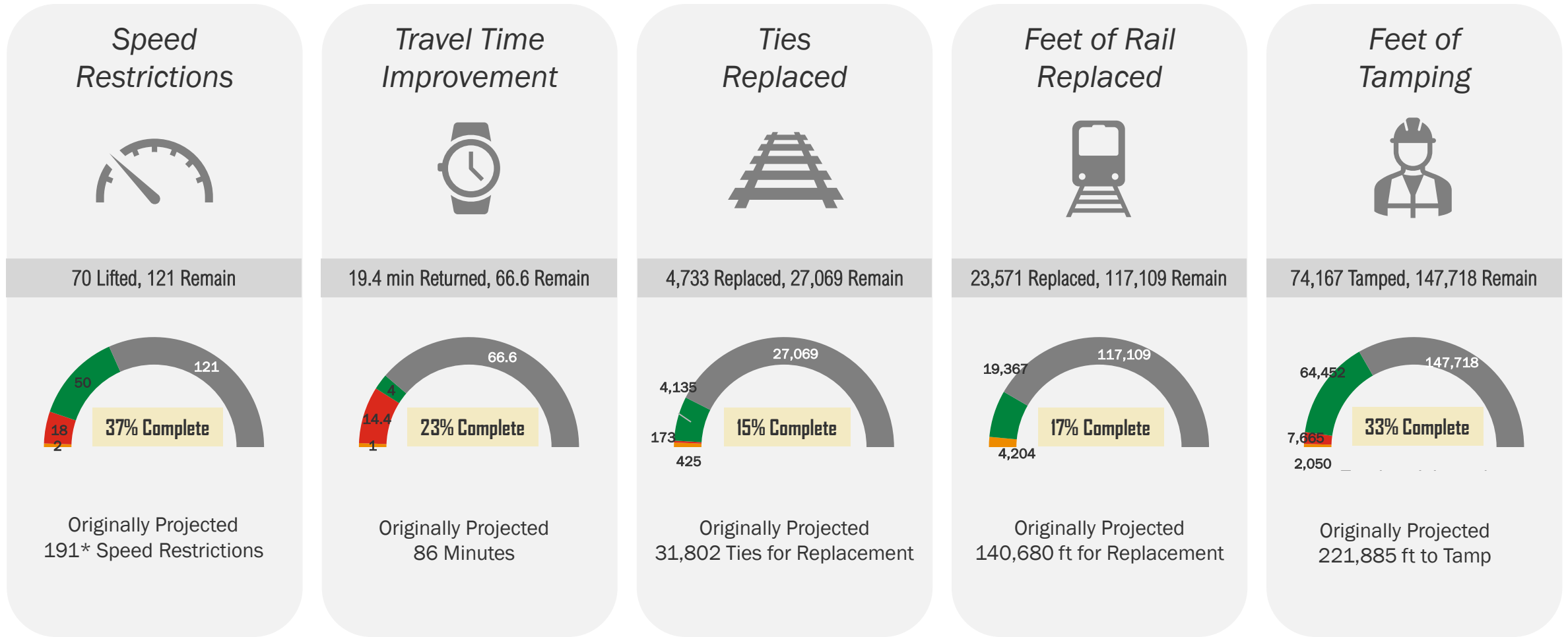
- ✓ Station enhancements - new flooring and lighting.
- ✓ Replaced dozens of signal bonds, reinstalled ~3,500 ft signal cable.
- ✓ Regauged 3rd rail and other rail work at Alewife crossover.
- ✓ Tunnel inspections/repairs along SB track between Harvard and Central stations.
- ✓ Davis station ceiling repairs.
- ✓ Signal modernization work at Alewife, Davis, Porter, Harvard stations.
- ✓ Installed a new standpipe at Kendall/MIT station.
- ✓ Improved security cameras at Alewife, Porter, Davis stations.



Track work on the Red Line



Progress Metrics



Projections as of Nov. 6, 2023, Track Improvement Plan

■ Orange Line
 ■ Red Line
 ■ Blue Line
 ■ Green Line
 ■ Remaining

Track Improvement Program | Current Work

GL Copley to Babcock, Cleveland Circle and Brookline Hills, Feb. 20 – Mar 8, 2024

Planned Work:

- Address 11 speed restrictions and approximate time savings of 4 minutes.
- Replace special trackwork, more than 1 mile of track, ~1200 ties, and tamping and aligning about 2 miles of track.

Piggyback Work Proposed:

- At the stations, maintenance and repairs will be performed such as paint, bench repairs, concrete, repairs, floor repairs, stair tread replacement, hand-rail replacement, ceiling panel removals, waste receptacle replacement, plumbing & HVAC maintenance and inspection activities.

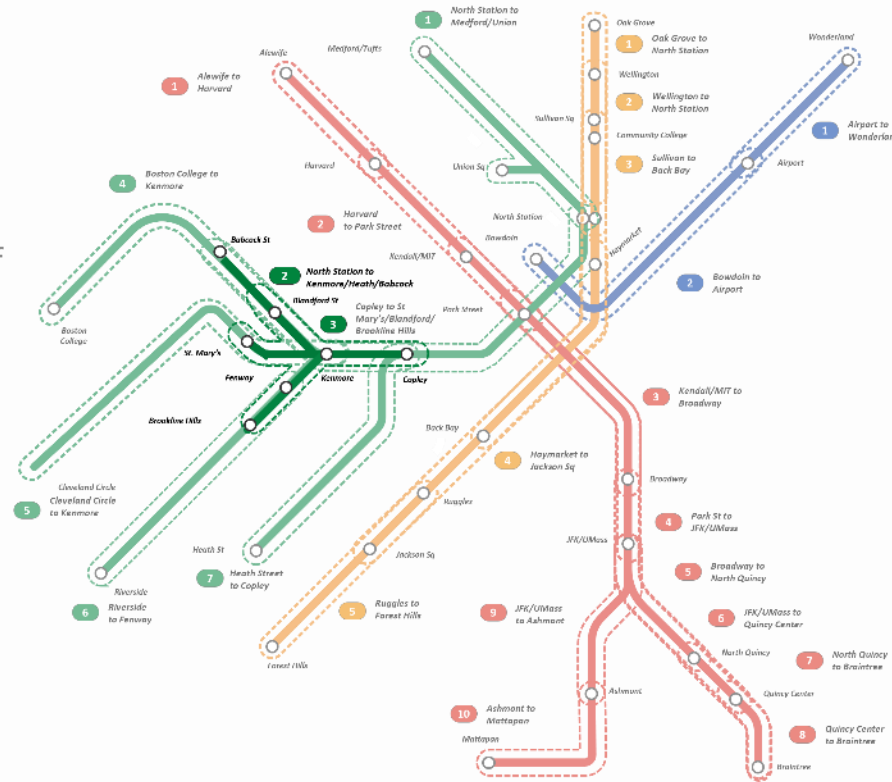
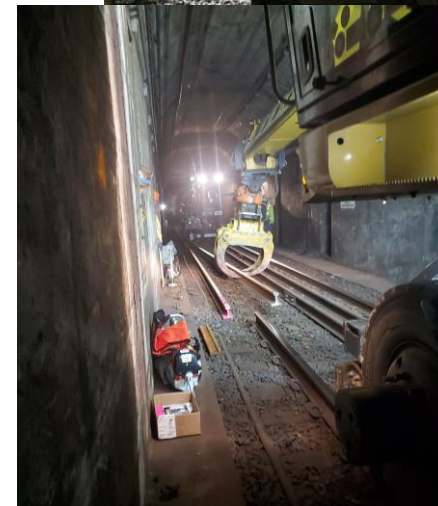
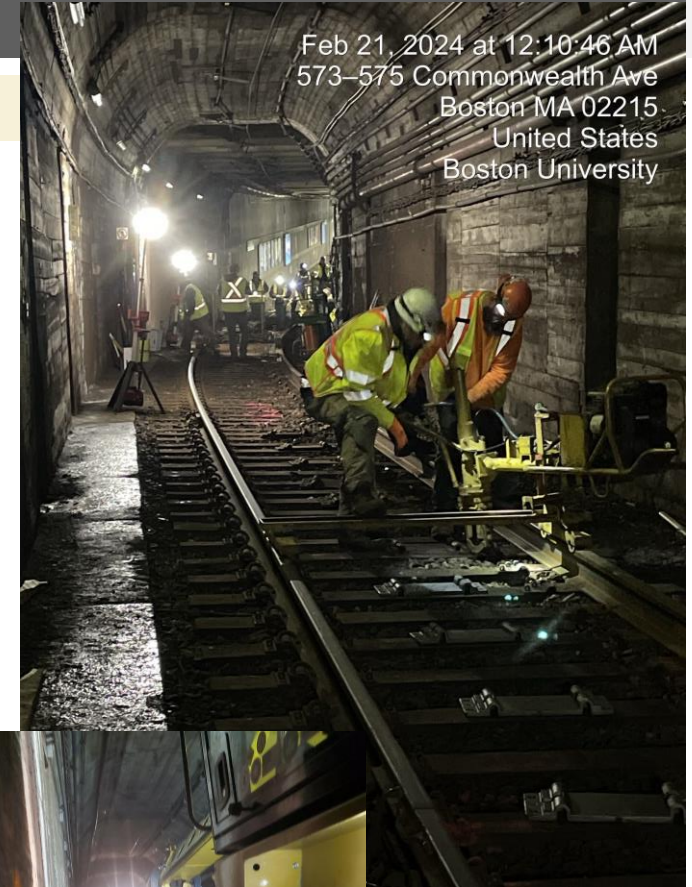


Photo courtesy of Jeremiah Cox/SubwayNut.com



Kenmore to Hynes, Feb. 20



Track Improvement Program | *Upcoming Work*

OL North Station to Jackson Square, Mar 18-21, 2024



Proposed Track Work

- Address 6 speed restrictions and state of good repair between Haymarket and Jackson Square Stations.
- Replace cologne eggs as needed.
- Replace frog guard, rail and plates in designated areas.
- Replace certain contact rail concrete support bases, add insulator shims.
- Replace shoulder posts, e-clips as identified.

Proposed Piggyback Work

- Replace first generation, end of life IP based security cameras throughout MBTA facilities, stations, and administrative offices with newer, improved technology.
- Critical maintenance work: Manhole in ROW at State Street Station will be pumped down for inspection and potential repair.
- Tufts Medical platform wall and floor drains will be snaked and cleaned.
- Additional maintenance and repairs at all stations including painting, bench repairs, concrete repairs, floor and wall repairs, stair tread repairs and replacements, waste receptacle replacement, plumbing and HVAC maintenance and repairs, spider map replacements, and miscellaneous station inspections. If access is approved, mile markers will be cleaned or replaced



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Track Improvement Program 2023-2024

Phil Eng, MBTA GM & CEO
Sam Zhou, MBTA Chief Engineer

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Draft for Discussion & Policy Purposes Only

<https://www.mbta.com/trackprogram>

<https://www.mbta.com/performance-metrics/speed-restrictions>

As of
02.21.2024



Upcoming Community Engagement Events | *Calendar*

Open Houses

Thu., 1/25, 6 – 7:30pm, Cristo Rey High School

Wed., 2/21, 6:30 – 8pm, Zoom

Thu., 3/7, 6:30 – 8pm, Zoom

Thu., 4/11, 6 – 7:30pm, Boston Public Library

Tue., 5/14, 6 – 7:30pm, Mattapan Public Library

Mon., 8/19, 6 – 7:30pm, English High School

Station Pop-ups

Fri., 2/02, 6:30 – 8pm, Alewife

Fri. 3/08, 5 – 6:30 pm, Ruggles Station

Tue. 4/09, 3 – 4:30pm, Airport Station

Thu., 6/20, 5:00 – 6:30pm, Kenmore

Mon., 6/24, 6 – 6:30pm, Davis Square Station

Thu., 6/27, 5 – 6:30pm, Alewife Station

Thu., 8/08, 6 - 7:30pm, Malden Center Station

Tue., 8/20, 5 - 6:30pm, Quincy Center

Tue., 10/01, 5 - 6:30 pm, Park Street Center

Interpretation services will be made available in American Sign Language, Haitian Creole, Spanish, Vietnamese, Chinese, and Cape Verdean Creole. Additional languages are available upon request.



Questions



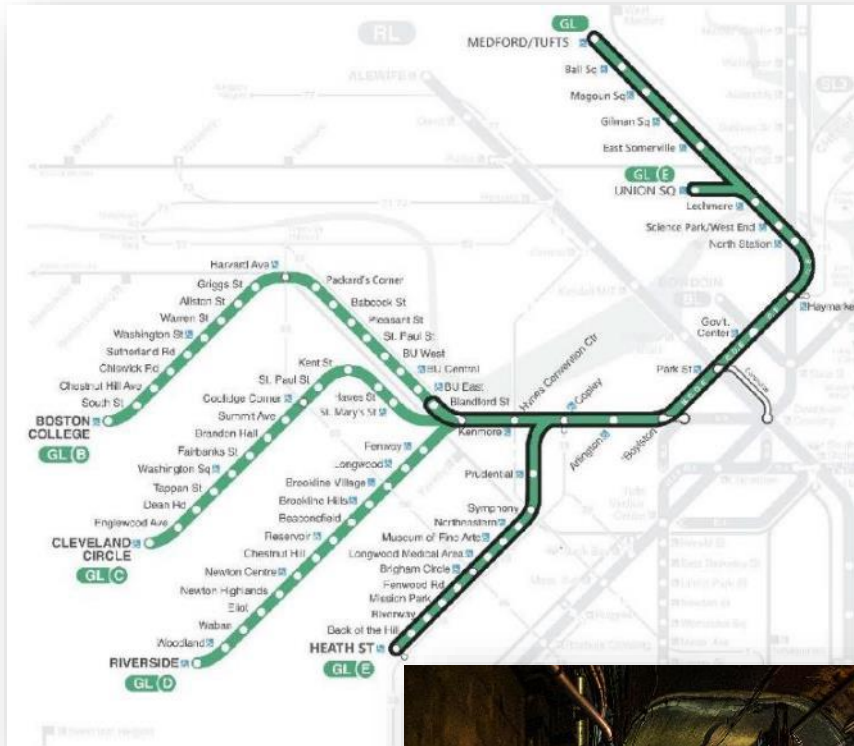
Previous Board TIP Updates



Track Improvement Program | Completed Work (1st portion of January Surge)

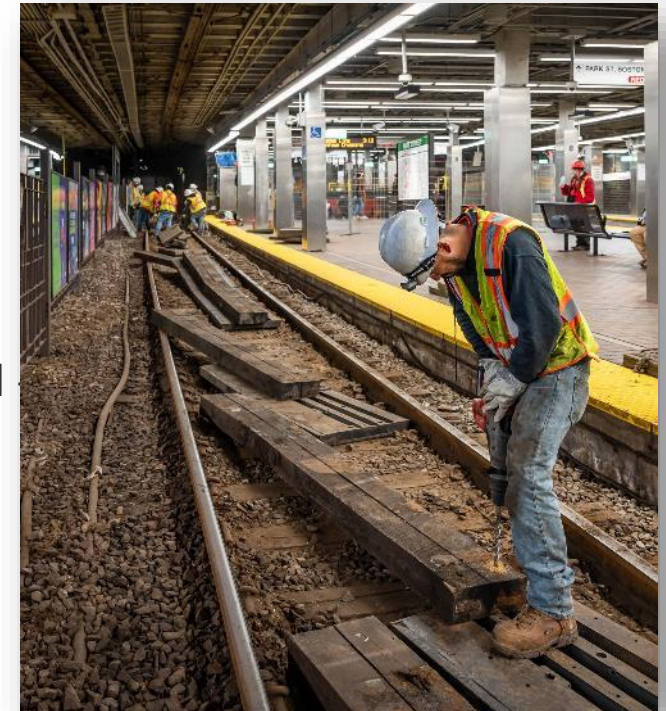
Reported
01.25.2024

GL Central Tunnel, and B North Stn - Babcock Street, E North Stn - Heath Street, C & D North Stn - Kenmore Stn, Jan 3-12, 2024

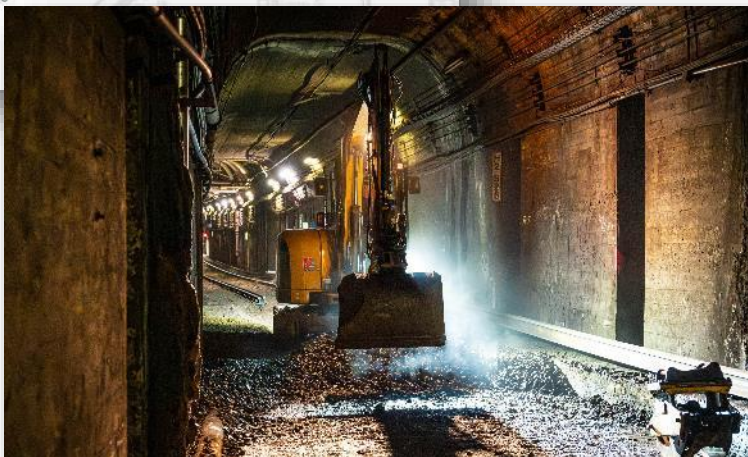


Metrics

- ✓ 4 Speed Restrictions cleared.
- ✓ NA travel time improved.
- ✓ 387 ties replaced.
- ✓ 3,047 ft rail replaced.
- ✓ 400 ft full depth track repairs
- ✓ 1330 ft track resurfaced & tamped smoother ride.
- ✓ 2 Switch Replacements/Rehabilitations
- ✓ 15 thermite welds.



Boylston to Park 01.03.2024



Boylston to Park 01.04.2024

Piggyback Work

- ✓ Boylston & Copley roof structural repairs
- ✓ Haymarket to North Stn tunnel inspections
- ✓ Hynes stair repairs and replacements and handrails/benches restored
- ✓ New Arlington elevator sump pump installed



Track Improvement Program | Completed Work (Surge)

Reported
01.25.2024

Green Line: Riverside to Kenmore, Dec. 11-20



Metrics

- ✓ 22 Speed Restrictions cleared (20 planned).
- ✓ ~4 min travel time improved.
- ✓ 2,767 ties replaced.
- ✓ 4,757 ft rail replaced.
- ✓ 600 ft full depth track repairs
- ✓ 48,840 ft track resurfaced & tamped - smoother ride.
- ✓ 8,918 ft rail thermal adjustment.
- ✓ 36 thermite welds.

Piggyback Work

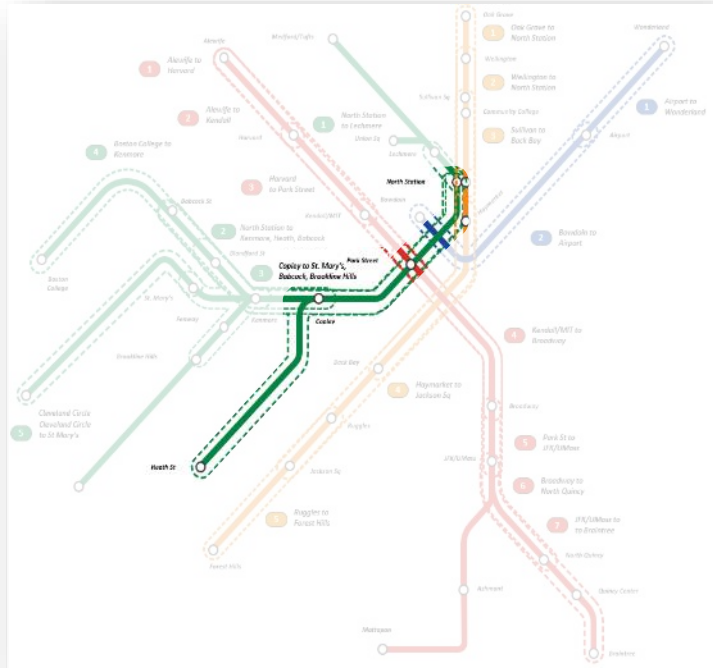
- ✓ Removed speed restrictions and resumed line speed on Lechmere Viaduct between Science Park & Lechmere, both directions.
- ✓ Dozens of switch certifications completed, four switch heaters repaired, 11 ground tests performed, 50 track circuits replaced.
- ✓ Catenary EB & WB replaced near Fenway Station.
- ✓ Riverside operators' roof replaced.



GL D Branch 12.12.2023



Green Line Surge: North Station to Kenmore, Heath, Babcock, Nov. 27 – Dec.5

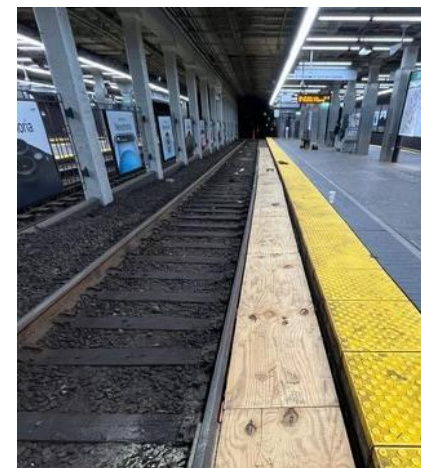


Metrics

- ✓ 12 Speed Restrictions cleared (10 planned)
- ✓ 530 feet full depth track reconstruction
- ✓ 3765 feet rail replaced
- ✓ 6725 feet rail tamping
- ✓ 62 Ties replaced
- ✓ 785 Plates swapped & regauged

Piggyback Work

- Critical tunnel structural repairs
- Hynes floor & stairs repaired
- Replaced some catenary sections
- Installed add'l E-ink signs
- Conducted tunnel inspections
- Inspected station overhead locations and stairs.
- Completed signal system cable, switches & junction boxes work
- Lechmere Viaduct Early Access

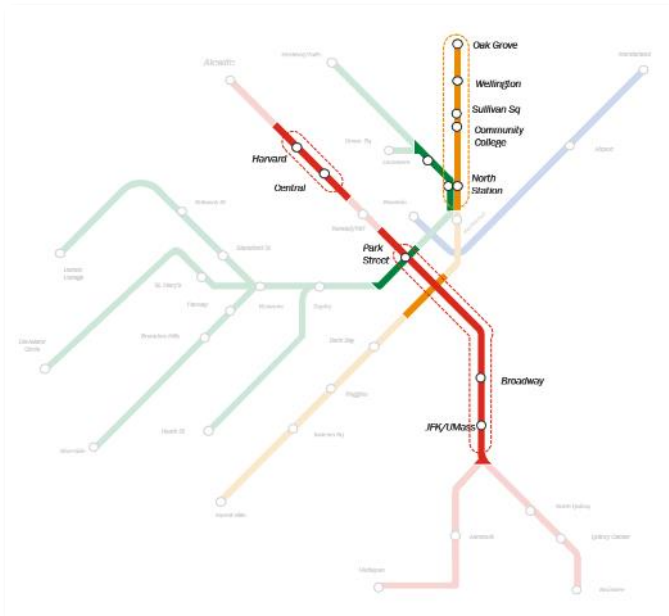


Station Upgrades



Red Line & Orange Line Weekend & Early Access

- Harvard to Central: Nov 4 – 5
- Oak Grove to North Station: Nov 7 – 12
- JFK/UMass to Park St: Nov 14 – 19



Metrics

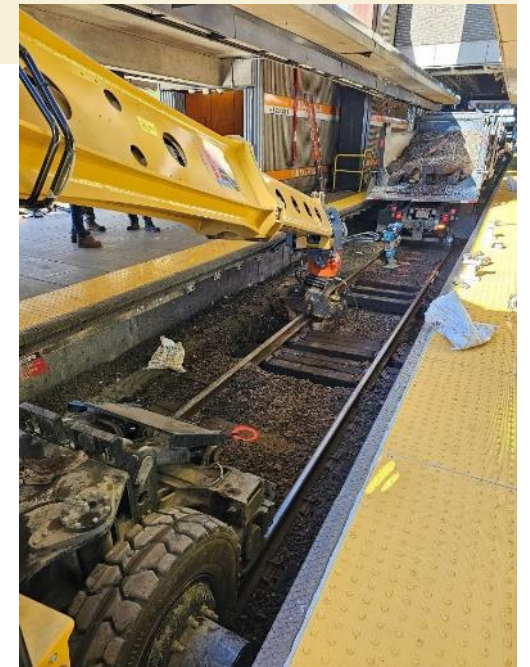
Red Line

- ✓ 10 Speed Restrictions cleared (7 planned)
- ✓ ~6 minutes travel time improved
- ✓ 146 ties replaced
- ✓ 2,202 feet rail replaced
- ✓ 6,305 feet of tamping

Orange Line

- ✓ 2 Speed Restrictions cleared
- ✓ ~1 minute travel time improved, NB
- ✓ 425 ties replaced
- ✓ 2,050 feet of tamping

OL Oak Grove to North Station



RL Park to JFK/UMass