FMCB Commuter Rail Update

December 17, 2018

Equipment Availability

Locomotive Availability
(last 12 weeks)

Target: 67 Locomotives Available

Legend: AM Locomotives Available — PM Locomotives Available — Locomotive Availability Target

Coach Availability
(last 12 weeks)
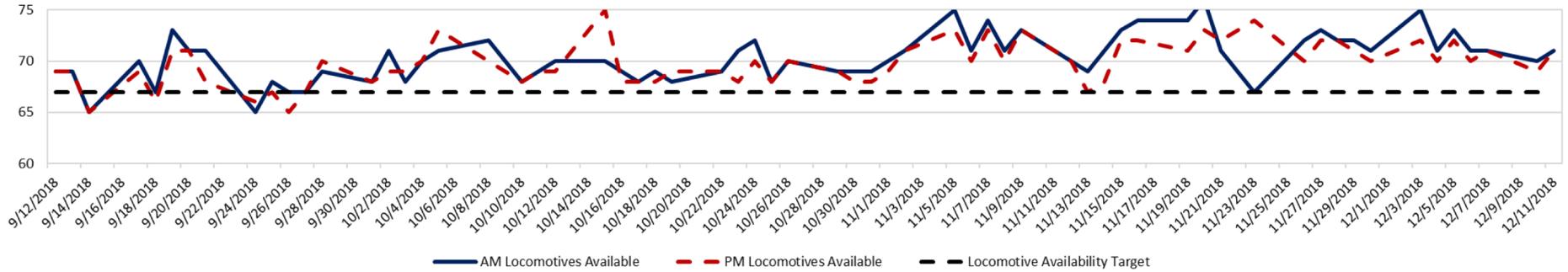
Target: 369 Coaches Available

Legend: Coaches Available — Coach Availability Target

On Time Performance

On Time Performance (OTP) by Week

Legend:
— OTP (within 5 minutes)   - - - OTP (within 10 minutes)   ⋯⋯ Passenger OTP

* November and December data not yet finalized
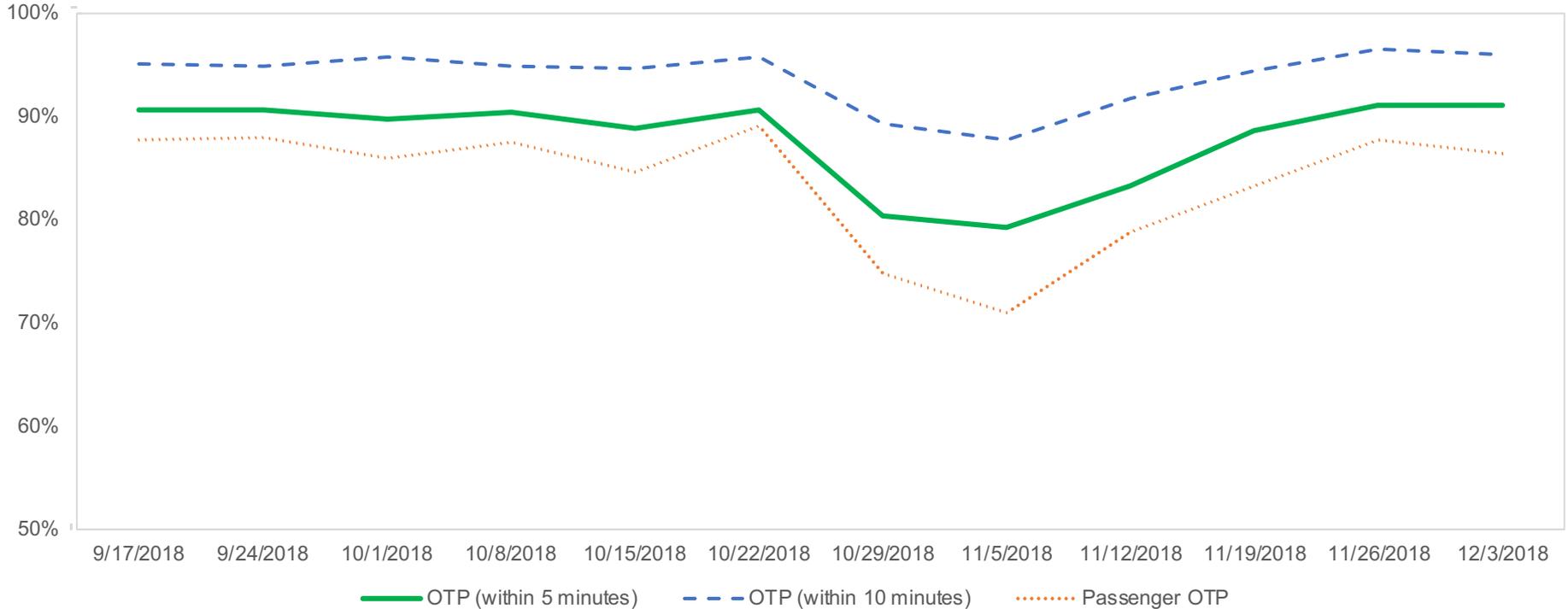
OTP Within 5 Minutes

	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	Trailing Year Average
Fairmount	97.9%	92.9%	96.8%	96.4%	97.9%	97.9%	95.3%	96.8%	95.2%	94.1%	97.2%	95.3%	96.1%
Fitchburg	84.6%	76.0%	91.7%	87.5%	86.7%	84.9%	87.0%	85.5%	88.0%	88.1%	87.1%	76.3%	85.2%
Franklin	87.3%	82.5%	91.8%	88.6%	89.2%	82.5%	84.9%	77.8%	80.2%	84.8%	82.8%	79.7%	84.2%
Greenbush	95.3%	90.7%	94.5%	85.7%	98.0%	94.6%	95.4%	93.5%	93.7%	94.7%	94.6%	91.7%	93.5%
Haverhill	86.9%	82.7%	88.9%	82.4%	90.6%	93.9%	93.0%	92.3%	92.6%	92.5%	92.5%	88.6%	89.8%
Kingston/Plymouth	95.0%	88.7%	93.8%	84.8%	94.0%	93.0%	90.1%	90.2%	91.6%	92.7%	90.6%	87.3%	91.0%
Lowell	89.9%	80.1%	91.4%	84.9%	90.9%	89.2%	92.7%	91.8%	93.0%	90.6%	89.6%	85.3%	89.0%
Middleboro	91.9%	91.3%	89.7%	85.6%	95.7%	90.3%	89.4%	88.1%	88.5%	91.8%	91.3%	88.3%	90.1%
Needham	91.4%	87.6%	95.3%	90.0%	91.4%	90.2%	92.0%	88.8%	91.6%	94.6%	89.9%	85.3%	90.6%
Newburyport	88.7%	76.1%	93.1%	85.8%	92.2%	92.7%	92.7%	91.9%	89.8%	92.6%	86.8%	85.2%	88.9%
Providence	88.9%	83.0%	92.2%	88.1%	86.5%	87.8%	87.1%	81.4%	86.6%	84.0%	82.5%	83.0%	85.9%
Rockport	87.5%	76.6%	92.4%	85.5%	92.7%	93.8%	92.2%	93.4%	90.1%	93.4%	86.4%	85.4%	89.1%
Stoughton	86.9%	83.0%	89.7%	86.5%	86.9%	87.1%	88.7%	81.1%	82.7%	84.3%	82.4%	80.1%	84.9%
Worcester	93.9%	86.7%	92.0%	89.6%	90.8%	88.0%	83.0%	78.9%	88.5%	93.3%	85.7%	82.4%	87.8%
Grand Total	**90.4%**	**83.9%**	**92.4%**	**87.5%**	**91.4%**	**90.3%**	**90.0%**	**87.8%**	**89.4%**	**90.8%**	**88.3%**	**85.2%**	**88.9%**

4   * November and December data not yet finalized   Below 85%   85% - 90%   Over 90%
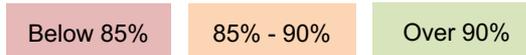
OTP Within 10 Minutes

|	December 2017	January 2018	February 2018	March 2018	April 2018	May 2018	June 2018	July 2018	August 2018	September 2018	October 2018	November 2018	Trailing Year Average
Fairmount	99.3%	95.1%	98.8%	98.4%	99.3%	99.5%	97.8%	98.8%	97.2%	97.2%	98.6%	98.0%	98.2%
Fitchburg	91.9%	84.2%	96.2%	93.1%	93.1%	93.2%	92.9%	93.0%	94.4%	93.7%	93.6%	85.7%	92.1%
Franklin	94.8%	89.6%	96.2%	94.4%	95.5%	91.9%	93.1%	87.5%	89.2%	92.2%	91.0%	90.9%	92.1%
Greenbush	97.6%	93.8%	97.3%	89.5%	98.9%	97.3%	97.8%	95.8%	96.8%	96.5%	96.9%	95.1%	96.1%
Haverhill	92.7%	89.1%	95.3%	89.8%	96.2%	96.5%	97.0%	96.5%	96.0%	96.5%	96.9%	94.1%	94.7%
Kingston/Plymouth	98.8%	92.5%	97.8%	89.3%	98.0%	96.6%	96.0%	95.8%	96.0%	96.2%	94.7%	91.0%	95.2%
Lowell	95.4%	90.0%	97.4%	92.1%	96.9%	96.7%	97.4%	97.0%	97.4%	96.5%	95.5%	94.4%	95.5%
Middleboro	95.4%	94.3%	95.3%	91.1%	98.3%	95.4%	95.2%	94.0%	92.2%	95.1%	94.7%	93.5%	94.5%
Needham	96.8%	93.5%	98.9%	96.2%	96.8%	95.1%	96.7%	94.9%	96.6%	98.7%	95.3%	93.4%	96.0%
Newburyport	96.2%	82.6%	97.3%	91.2%	97.1%	97.2%	96.2%	98.2%	96.1%	97.6%	93.5%	94.1%	94.7%
Providence	93.7%	89.4%	96.9%	92.9%	94.0%	94.1%	94.3%	90.8%	93.9%	92.5%	91.9%	90.8%	92.9%
Rockport	94.3%	81.5%	96.1%	90.6%	96.4%	97.2%	97.4%	97.0%	94.6%	98.1%	93.8%	91.8%	94.0%
Stoughton	94.3%	90.9%	94.9%	94.0%	94.7%	94.4%	94.2%	89.9%	90.3%	92.8%	89.8%	90.6%	92.5%
Worcester	97.3%	91.8%	96.1%	93.9%	96.2%	94.7%	90.2%	88.1%	93.7%	96.5%	91.9%	91.9%	93.5%
Grand Total	95.5%	89.8%	96.8%	92.8%	96.4%	95.7%	95.3%	94.0%	94.6%	95.7%	94.1%	92.6%	94.4%

5   * November and December data not yet finalized   Below 85%   85% - 90%   Over 90%
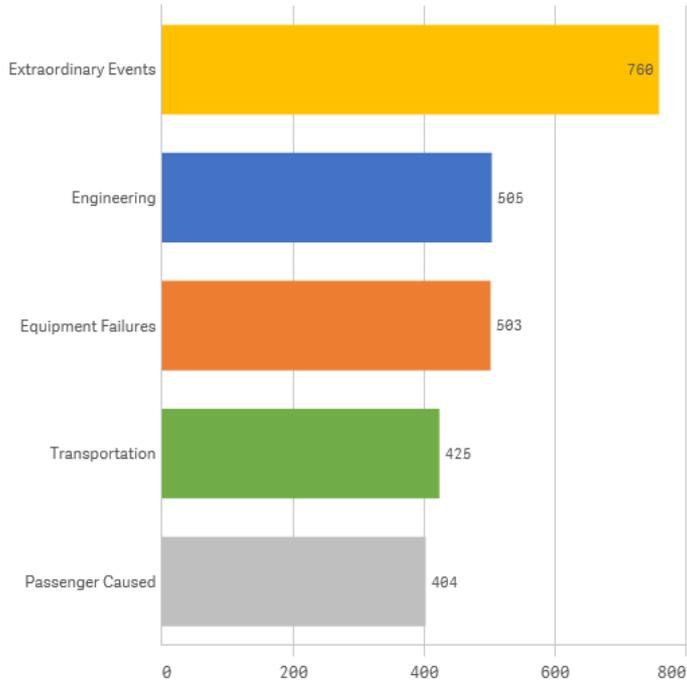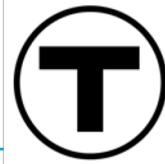
- November OTP was largely driven by the impact of leaf fall in wet conditions; the cause of over 18% of all primary delays, during the heaviest Oct-Nov rainfall in 10 years

- Significant rail contamination (black rail) across the network on November 4th and 5th, due to unusually heavy leaf fall, led to safety restrictions; these two days alone made up 16% of all delays

- Despite these results, the new rail-wash equipment worked well, helping to mitigate the effects of slippery rail

Worcester Line OTP Within 5 Min

93.9%	86.7%	92.0%	89.6%	90.8%	88.0%			88.5%	93.3%	85.7%	82.4%
12-2017	01-2018	02-2018	03-2018	04-2018	05-2018	06-2018	07-2018	08-2018	09-2018	10-2018	11-2018

Worcester Line OTP Within 10 Min

	12-2017	01-2018	02-2018	03-2018	04-2018	05-2018	06-2018	07-2018	08-2018	09-2018	10-2018	11-2018
												91.9%
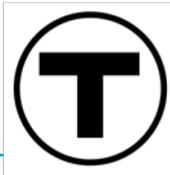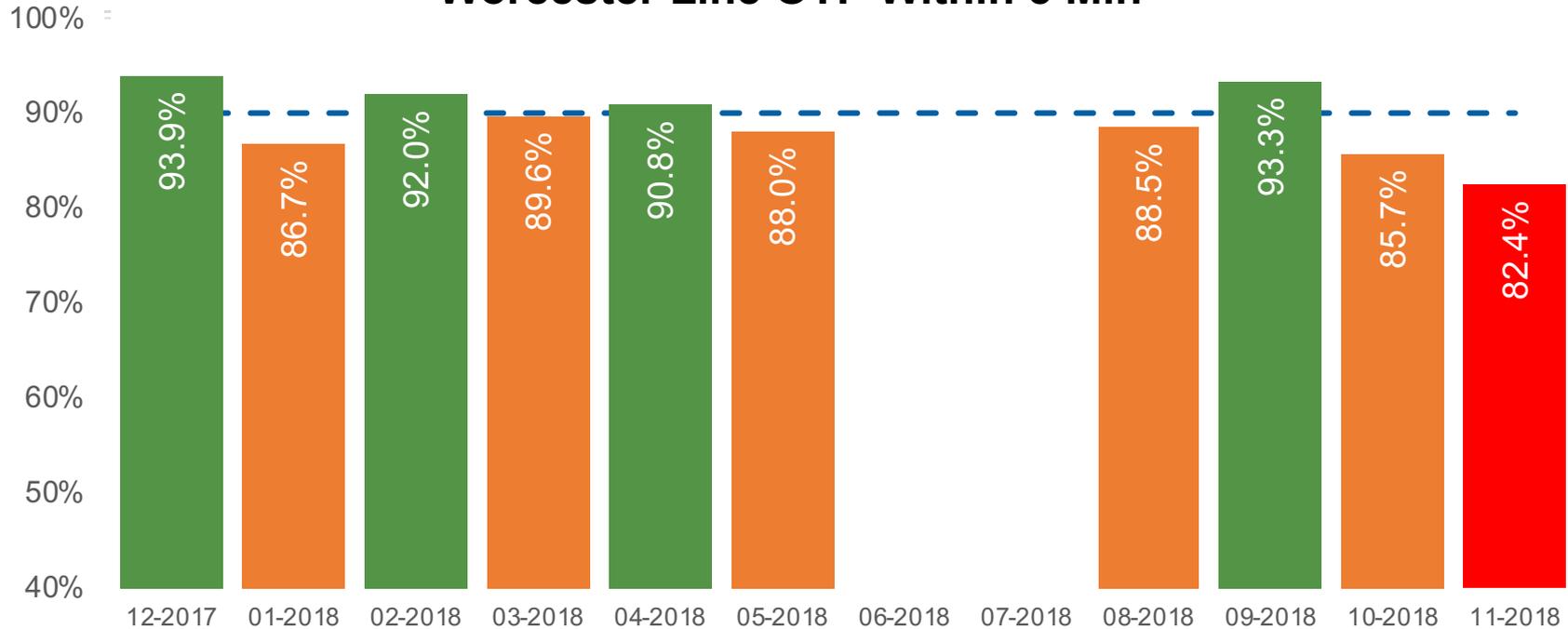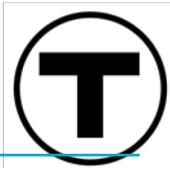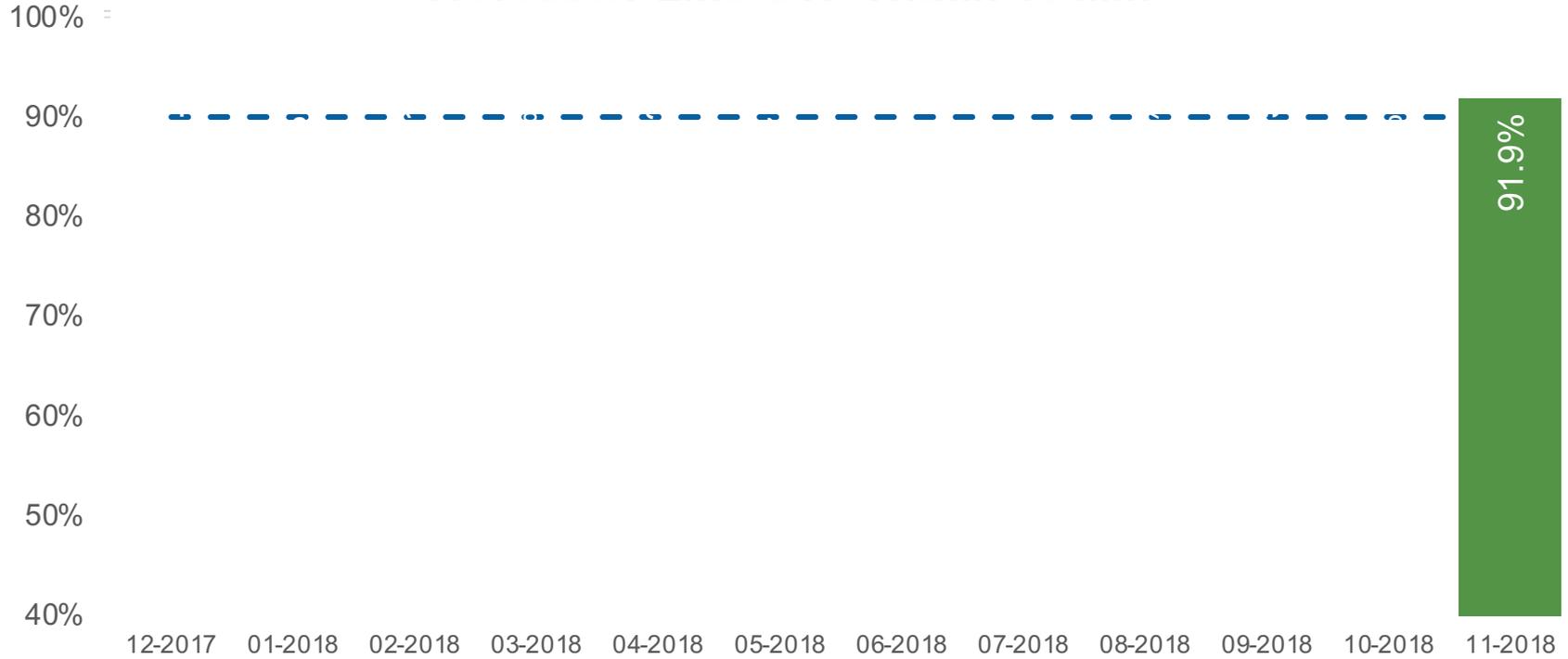
Worcester Line Performance

- Since June, the Worcester Line has been affected by planned works, including Positive Train Control (PTC) and required state of good repair maintenance.

- As with the rest of the network, railhead conditions were a significant factor during the month, as were mechanical related problems.

- December performance is 88% through December 13th, including a 100% weekday on December 11th.

- Overall 2018 performance is 87.2%, versus 79.6% in 2015 – 2017.

Haverhill Line Plan

Haverhill Line OTP Within 5 Min

Haverhill Line Plan

Haverhill Line OTP Within 10 Min

Month	OTP
12-2017	92.7%
01-2018	89.1%
11-2018	94.1%