

**Table 1: FFYs 2018 - 22 TIP Amendment Five
Draft for MPO Endorsement**

Project Information		Current FFY18 STIP Fed. Share	Current FFY18 STIP MBTA Match	Current Total	5/24/2018 TIP Amend. Fed. Share	5/24/2018 TIP Amend. MBTA Match	Proposed Total	Change	Explanation of Changes
---------------------	--	-------------------------------------	-------------------------------------	------------------	---------------------------------------	---------------------------------------	-------------------	--------	------------------------

Section 5307 Funds:

Revenue Vehicle Program	12.12.00	\$76,857,957	\$19,214,489	\$96,072,446	\$44,583,030	\$11,145,757	\$55,728,787	(\$40,343,659)	Green Line Train Protection (partially funded in FFY18) shifted to 5337.
Stations and Facilities Program	12.34.00	\$0	\$0	\$0	\$39,600,000	\$9,900,000	\$49,500,000	\$49,500,000	Iron Horse OCC project moved into FFY18
Elevator and Escalator Program	12.34.02	\$39,200,000	\$9,800,000	\$49,000,000	\$52,886,987	\$13,221,747	\$66,108,734	\$17,108,734	Project scope increased to include additional stations for FFY18
Signals/Systems Upgrade Program	12.63.01	\$64,000,000	\$16,000,000	\$80,000,000	\$73,840,000	\$18,460,000	\$92,300,000	\$12,300,000	Combines Signals and System Upgrades. Green Line Signals shifted to 5337.
Systemwide Signals Program	12.63.01	\$65,446,986	\$16,361,747	\$81,808,733	\$0	\$0	\$0	(\$81,808,733)	Signals and System Upgrades combined going forward
Totals		\$245,504,943	\$61,376,236	\$306,881,179	\$210,910,017	\$52,727,504	\$263,637,521	(\$43,243,658)	

Section 5337 Funds:

Revenue Vehicle Program	12.12.00	\$0	\$0	\$0	\$101,870,052	\$25,467,513	\$127,337,565	\$127,337,565	Green Line Train Protection added (when Bridges not ready for FFY18)
Bridge and Tunnel Program	12.24.05	\$140,512,259	\$35,128,065	\$175,640,324	\$0	\$0	\$0	(\$175,640,324)	Bridge Bundling Contract not ready for grant submission in FFY18
Stations and Facilities Program	12.34.00	\$108,483,134	\$27,120,784	\$135,603,918	\$106,601,632	\$26,650,408	\$133,252,041	(\$2,351,877)	Minor change to reflect current project cost estimate
Signals/Systems Upgrade Program	12.63.01	\$45,815,066	\$11,453,767	\$57,268,833	\$86,338,774	\$21,584,693	\$107,923,467	\$50,654,635	Combines Signals and System Upgrades. Green Line Signals shifted from 5337.
System Upgrades Program	12.44.00	\$20,000,000	\$5,000,000	\$25,000,000	\$0	\$0	\$0	(\$25,000,000)	Signals and System Upgrades combined going forward
Totals		\$314,810,459	\$78,702,615	\$393,513,074	\$294,810,458	\$73,702,615	\$368,513,073	(\$25,000,001)	

Section 5339 Funds:

Bus Program	11.14.00	\$15,922,023	\$3,980,506	\$19,902,529	\$15,922,023	\$3,980,506	\$19,902,529	\$0	No change
Totals		\$15,922,023	\$3,980,506	\$19,902,529	\$15,922,023	\$3,980,506	\$19,902,529	\$0	

Green Line Extension (FFGA):

Green Line Extension - New Starts (FFGA)	13.33.02	\$550,000,000	\$550,000,000	\$1,100,000,000	\$550,000,000	\$550,000,000	\$1,100,000,000	\$0	No change
Totals		\$550,000,000	\$550,000,000	\$1,100,000,000	\$550,000,000	\$550,000,000	\$1,100,000,000	\$0	

Other FTA/Discretionary Funding:

Quincy Center Bus Terminal	12.31.11	\$4,273,771	\$1,068,443	\$5,342,214	\$4,273,771	\$1,068,443	\$5,342,214	\$0	No change
Repurposed Bus Earmarks	11.24.01	\$2,039,691	\$509,923	\$2,549,614	\$2,039,691	\$509,923	\$2,549,614	\$0	No change
Positive Train Control - Discr. Grant	12.63.01	\$7,815,963	\$1,953,991	\$9,769,954	\$7,815,963	\$1,953,991	\$9,769,954	\$0	No change
Positive Train Control - RRIF/TIFIA	12.63.01	\$382,000,000	\$95,500,000	\$477,500,000	\$0		\$0	(\$382,000,000)	RRIF/TIFIA financing will not occur in FFY18
Hingham Commuter Float System	12.34.05	\$0	\$0	\$0	\$1,000,000	\$250,000	\$1,250,000	\$1,000,000	Recently awarded Ferry Discretionary Grant
Hingham Ferry Dock	12.33.05	\$0	\$0	\$0	\$6,050,000	\$6,050,000	\$12,100,000	\$6,050,000	Recently awarded Ferry Discretionary Grant
Totals		\$396,129,425	\$99,032,356	\$495,161,781	\$21,179,425	\$9,832,356	\$31,011,781	(\$374,950,000)	

**Table 2: FFYs 2018 - 22 TIP Amendment Five - Project-Level Backup
Draft for MPO Endorsement**

	Federal Share	MBTA Match	Total
5307 - Revenue Vehicle Program			
Overhaul of Neoplan 60' DMA Buses	\$10,477,324	\$2,619,331	\$13,096,655
Locomotive Overhaul	\$12,449,957	\$3,112,489	\$15,562,446
Locomotive and Coach Reliability Program	\$12,209,200	\$3,052,300	\$15,261,500
TIP Allowance	\$9,446,549	\$2,361,637	\$11,808,186
	\$44,583,030	\$11,145,757	\$55,728,787
5307 - Stations and Facilities			
Iron Horse Operations Control Center (IHOCC)	\$28,613,752	\$7,153,438	\$35,767,190
TIP Allowance	\$10,986,248	\$2,746,562	\$13,732,810
	\$39,600,000	\$9,900,000	\$49,500,000
5307 - Elevator and Escalator Program			
Elevator Program - BCIL	\$50,150,793	\$12,537,698	\$62,688,491
TIP Allowance	\$2,736,194	\$684,049	\$3,420,243
	\$52,886,987	\$13,221,747	\$66,108,734
5307 - Signals and System Upgrades			
Green Line Grade Crossings	\$16,800,000	\$4,200,000	\$21,000,000
Harvard Busway (5307 Funds)	\$6,245,294	\$1,561,324	\$7,806,618
Bus Route Safety and Service Improvements	\$6,000,000	\$1,500,000	\$7,500,000
Infrastructure Asset Management Program	\$17,129,197	\$4,282,299	\$21,411,496
TIP Allowance	\$27,665,509	\$6,916,377	\$34,581,886
	\$73,840,000	\$18,460,000	\$92,300,000
FFY18 - 5307 Totals:	\$210,910,017	\$52,727,504	\$263,637,521
5337 - Revenue Vehicle Program			
Green Line Train Protection	\$95,470,052	\$23,867,513	\$119,337,565
TIP Allowance	\$6,400,000	\$1,600,000	\$8,000,000
	\$101,870,052	\$25,467,513	\$127,337,565
5337 - Stations and Facilities			
Braintree and Quincy Adams Garage Rehab	\$64,000,000	\$16,000,000	\$80,000,000
Silver Line Gateway, Chelsea - Ph II	\$23,956,800	\$5,989,200	\$29,946,000
TIP Allowance	\$18,644,833	\$4,661,208	\$23,306,041
	\$106,601,633	\$26,650,408	\$133,252,041
5337 - Signals and System Upgrades			
45 High Street - Data Center Upgrades	\$9,799,244	\$2,449,811	\$12,249,055
Green Line Riverside to Reservoir - Signal & Track	\$73,360,000	\$18,340,000	\$91,700,000
TIP Allowance	\$3,179,530	\$794,882	\$3,974,412
	\$86,338,774	\$21,584,693	\$107,923,467
FFY18 - 5337 Totals:	\$294,810,458	\$73,702,615	\$368,513,073
5339 - Bus Program			
Harvard Busway (5339 Funds)	\$10,477,324	\$2,619,331	\$13,096,655
TIP Allowance	\$5,444,699	\$1,361,175	\$6,805,874
	\$15,922,023	\$3,980,506	\$19,902,529
FFY18 - 5339 Totals:	\$15,922,023	\$3,980,506	\$19,902,529

Note: Project list provided for informational purposes. Projects in the MPO-approved FFY19-23 TIP could potentially be accelerated into FFY18 if ready. The MPO would be informed of any adjustments that impact the FFY18 TIP.

**Table 3: FFYs 2018 - 22 TIP Amendment Five
Project Descriptions
Draft for MPO Endorsement**

TIP Project Name	Project Description
------------------	---------------------

5307 - Revenue Vehicle Program

Locomotive and Coach Reliability Program	This program will restore coaches and locomotives, beyond their useful life, to a state of good repair to support service and winter resiliency efforts
Locomotive Overhaul	Overhaul of locomotives in operation on commuter rail lines systemwide in order to improve reliability.
Overhaul of 32 Neoplan 60' DMA Buses	Overhaul of the Neoplan 60' Dual Mode Articulated buses that operate on the MBTA Silver Line Bus Rapid Transit routes.

5307 - Elevator & Escalator Program

Elevator Program - BCIL	Elevator improvements at various stations including Alewife, Harvard, Central, Park, Quincy Adams, Tufts, Andrew and Downtown Crossing.
-------------------------	---

5307 - Stations and Facilities Program

Iron Horse Operations Control Center	Construction of Iron Horse Park Operations Control Center building to provide an updated dispatch facility for Commuter Rail North (CRN) and Pan Am freight and to house the back-up Positive Train Control (PTC) data center.
--------------------------------------	--

5307 - Signals/Systems Upgrade Program

Harvard Square Busway Repairs (5307)	Rehabilitation of roadway, drainage and catenary infrastructure at the Harvard Square Busway.
Bus Route Safety and Service Improvements	To address accessibility, safety and operational deficiencies at select bus stops systemwide.
Green Line (Non-GLX) Grade Crossings	Replacement of existing at-grade crossings at various locations on the B and C branches of the Green Line along Commonwealth Avenue and Beacon Street.
Infrastructure Asset Management Program	Collection of infrastructure based asset data in order to update the SGR Database and manage asset and life cycle/risk management practices.

5337 - Revenue Vehicle Program

Green Line Train Protection	Procurement and installation of on-board and wayside equipment for a train monitoring system to determine allowable train separation, based on speed and location, and to prevent vehicles from passing a red signal.
-----------------------------	---

**Table 3: FFYs 2018 - 22 TIP Amendment Five
Project Descriptions
Draft for MPO Endorsement**

TIP Project Name	Project Description
------------------	---------------------

5337 - Stations and Facilities Program

Braintree and Quincy Adams Garage Rehabilitation	The full repair and rehabilitation of the Red Line’s Quincy Adams Station and Braintree Station parking garages
Silver Line Gateway - Phase 2	Includes the building of a new commuter rail station adjacent to the new Chelsea Bus Rapid Transit (BRT) Station located at the Mystic Mall, as well as decommissioning of the existing Chelsea Commuter Rail Station and signal prioritization.

5337 - Signals/Systems Upgrade Program

45 High Street - Data Center Upgrades	Includes new fire suppression/alarm system as well as power, fiber, HVAC and other data center improvements at the MBTA operations center at 45 High Street, Boston.
Green Line Riverside to Reservoir - Signal & Track Work	Replacement of track and signal system components on the Highland Branch of the Green Line from Reservoir to Riverside Stations, including replacement of obsolete 25 Hz track circuits with modern solid-state 100 Hz track circuits.

5339 - Bus Program

Harvard Square Busway Repairs (5339)	Rehabilitation of roadway, drainage and catenary infrastructure at the Harvard Square Busway.
--------------------------------------	---

Note: Project descriptions are preliminary only and are provided for informational purposes. In many cases, the scopes of work will become more fully developed as the design process proceeds and is completed.