

A APPENDIX

Universe of Projects for Highway Discretionary (“Regional Target”) Funding & Evaluation Results

This appendix lists information about transportation projects that cities and towns in the region identified as their priority projects to be considered for funding through the Boston Region MPO’s Highway Discretionary (“Regional Target”) Program. It also contains the evaluation results of those projects scored by MPO staff based on the evaluation criteria.

Through an outreach process that seeks input from local officials and interested parties, the MPO staff compiles project requests and relevant information into a Universe of Projects list for the MPO. The Universe of Projects list includes projects in varied stages of development, from projects in the conceptual stage to those that are fully designed and ready to be advertised for construction. The MPO staff also collects data on each project to support the evaluation of projects. (Typically, at a minimum, a functional design report is required.)

The MPO’s project selection process uses evaluation criteria to make the process of selecting projects for programming in the TIP both more logical and more transparent. The criteria are based on the MPO’s goals and objectives, which were adopted for its current Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*.

The MPO staff uses the project information and evaluations to prepare a First-Tier List of Projects that have high ratings in the evaluation process and could be made ready for advertising in the time frame of the TIP. The MPO staff then prepares a staff recommendation for the TIP taking into consideration the First-Tier list and factors such as the construction readiness of the project, the estimated project cost, community priority, geographic equity (to ensure that needs are addressed throughout the region), and consistency with the MPO’s LRTP.

The MPO discusses the First-Tier List of Projects, the staff recommendation, and other information before voting on a draft TIP to release for a 30-day public review and comment period.

Table A-1 contains a summary of the evaluated projects in this year’s TIP development process. Projects that are programmed with MPO Target Funding in the FFYs 2017-21 TIP are in bold type.

A full list of the Universe of Projects (including those project that were evaluated and those projects that were not evaluated) is contained in Table A-2. Projects in bold type are programmed with Target Funding in the FFYs 2017–21 TIP.

TABLE A-1: FFYs 2017-21 TIP - Summary of Evaluated Highway Projects

TIP ID	Proponent(s)	Project Name	TIP/ LRTP Status	Total Rating (134 Points Possible):	Safety Rating (30 Points Possible):	System Preservation Rating (29 Points Possible):	Capacity Management / Mobility Rating (29 Points Possible):	Clean Air / Clean Communities Rating (16 Points Possible):	Transporta- tion Equity Rating (12 Points Possible):	Economic Vitality Rating (18 Points Possible):
606635	Newton and Needham	Reconstruction of Highland Ave., Needham St. and Charles River bridge	2018	77	18	16	14	13	3	13
607652	Everett	Reconstruction of Ferry St.	2019	75	14	15	15	10	12	9
607777	Watertown	Rehabilitation of Mount Auburn St. (Route 16)	N/A	71	18	10	16	12	6	9
605110	Brookline	Intersection and signal improvements at Route 9 and Village Square (Gateway East)	2018	70	9	14	16	7	10	14
607981	Somerville	McGrath Boulevard project	LRTP 2026-30	70	13	14	11	8	12	12
608449	Boston	Commonwealth Avenue, phases 3 and 4	N/A	69	17	12	11	8	10	11
606043	Hopkinton	Signal and intersection improvements on Route 135	2019	65	16	14	12	13	1	9
608347	Beverly	Traffic and safety improvements at three locations	2021	63	15	12	13	11	3	9
605034	Natick	Reconstruction of Route 27 (North Main St.)	2019	61	13	13	15	7	2	11
605789	Boston	Reconstruction of Melnea Cass Boulevard	2019	61	10	12	10	3 <i>(not fully evaluated)</i>	12	14
608348	Beverly	Rehabilitation of Bridge St.	N/A	60	12	13	13	9	5	8
606453	Boston	Improvements on Boylston St.	2020	60	7	6	15	12	8	12
608228	Framingham	Reconstruction of Union Ave.	2021	60	19	12	6	0	10	13
604810	Marlborough	Reconstruction of Route 85 (Maple St.)	2017	59	15	11	10	12	3	8
604123	Ashland	Reconstruction on Route 126 (Pond St.)	2020	57	12	10	15	8	3	9
29492	Bedford, Billerica and Burlington	Middlesex Turnpike improvements, phase III	2016-17	55	7	14	16	10	2	6
1671	Everett	Rehabilitation of Beacham St.	N/A	55	16	14	8	5	7	5
607409	Lexington	Reconstruction on Massachusetts Ave.	2016	55	14	14	13	8	2	4
607428	Milford	Resurfacing and intersection improvements on Route 16 (Main St.)	2019	55	14	15	9	5	5	7
605857	Norwood	Intersection improvements at Route 1 and University Ave./ Everett St.	2021	55	11	12	15	11	2	4
604996	Woburn	Bridge replacement, New Boston St. over MBTA	2021	55	9	1	21	12	0	12

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607309	Hingham	Reconstruction and related work on Derby St.	2017	54	19	10	14	6	1	4
605313	Natick (MassDOT)	Bridge replacement, Route 27 (North Main St.) over Route 9 (Worcester St.)	LRTP 2021-25	54	18	16	10	2	2	6
602261	Walpole (MassDOT)	Reconstruction on Route 1A (Main St.)	2020	52	13	11	10	6	3	9
605721	Weymouth	Intersection improvements at Middle St., Libbey Industrial Parkway and Tara Dr.	2016	52	17	11	11	4	4	5
602310	Danvers	Reconstruction on Collins St.	N/A	51	9	12	12	8	3	7
604935	Woburn	Reconstruction of Montvale Ave.	2017	51	17	12	10	6	2	4
606117	Boston	Traffic signal improvements at 10 locations	2016	50	7	11	6	4	12	10
604377	Gloucester	Washington St. and Railroad Ave.	N/A	49	10	10	5	5	6	13
606130	Norwood	Intersection improvements at Route 1A and Upland Rd./Washington St. and Prospect St./Fulton St.	N/A	47	13	7	14	3	3	7
606501	Holbrook	Reconstruction of Union St. (Route 139)	2021	46	10	6	13	3	5	9
601704	Newton	Reconstruction and signal improvements on Walnut St.	N/A	45	10	12	7	4	3	9
604652	Winchester, Stoneham and Woburn	Tri-Community Bikeway	2016	45	6	0	15	13	4	7
607888	Boston	Multi-use path construction on New Fenway	2019	44	6	0	14	7	8	9
604811	Marlborough	Reconstruction of Route 20 (East Main St.)	N/A	44	11	7	7	5	5	9
607901	Dedham	Pedestrian improvements along Elm St. and Rustcraft Rd. corridors	2021	44	10	0	14	6	2	12
601513	Saugus (MassDOT)	Interchange reconstruction at Walnut St. and Route 1 (phase II)	N/A	43	9	13	9	6	2	4
604989	Southborough	Reconstruction of Main St. (Route 30)	2018	43	8	13	10	6	1	5
606316	Brookline	Pedestrian bridge rehabilitation over MBTA off Carlton St.	2016	41	7	0	13	6	8	7
602077	Lynn	Reconstruction on Route 129 (Lynnfield St.)	2020	41	12	9	8	4	4	4
604231	Marlborough	Intersection and signal improvements on Route 20 (East Main St./Boston Post Rd.) at Concord Rd.	N/A	40	6	12	6	7	4	5
608352	Salem	Canal St. Bikeway	2019	40	6	0	11	6	10	7
605743	Ipswich	Resurfacing and related work on Central and South Main Sts.	N/A	38	10	9	5	4	2	8

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608146	Marblehead	Intersection improvements to Pleasant St. at Village/Vine/Cross Sts.	N/A	38	8	10	5	3	3	9
607732	Natick	Cochituate Rail Trail, phase two	2020	38	8	0	15	7	2	6
607249	Sudbury	Intersection improvements at Route 20 and Landham Rd.	N/A	37	16	7	4	5	0	5
605189	Concord	Bruce Freeman Rail Trail, phase 2C	2016	36	6	0	15	8	2	5
601607	Hull	Reconstruction of Atlantic Ave. and related work	N/A	36	9	9	5	6	3	4
603739	Wrentham	Construction of I-495/Route 1A ramps	N/A	35	9	8	8	10	0	0
604638	Danvers and Peabody (MassDOT)	Mainline improvements on Route 128 (phase II)	N/A	34	10	10	5	3	3	3
606002	Duxbury	Signal installation at Route 3 (NB and SB) ramps and Route 3A (Tremont St.)	N/A	33	6	11	10	4	0	2
601359	Franklin	Reconstruction of Pleasant St.	N/A	32	9	8	5	2	2	6
604735	Medfield	Reconstruction of North St.	N/A	30	7	8	2	4	2	7
604745	Wrentham	Reconstruction of Taunton St. (Route 152)	N/A	29	8	7	5	4	1	4
600518	Hingham (MassDOT)	Intersection improvements at Derby St., Whiting St. (Route 53) and Gardner St.	2018	28	11	10	5	-1	0	3
607899	Dedham	Pedestrian improvements along Bussey St.	N/A	25	7	3	1	4	7	3

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Acton	1656	Intersection Improvements at Massachusetts Avenue (Route 111) and Main Street (Route 27) (Kelly's Corner)	
Ashland	604123	Reconstruction on Route 126 (Pond Street), from the Framingham T.L. to the Holliston T.L.	2020
Bedford	607738	Minuteman Bikeway Extension, from Loomis Street to the Concord T.L.	
Bedford, Billerica & Burlington	029492	Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road (Phase III)	2016-17
Bellingham	940	South Main Street (Route 126), from Mechanic Street (Route 140) to Douglas Drive	
Bellingham	1718	South Main Street (Route 126), from Old Elm Street to Meadow Road	
Beverly	608348	Rehabilitation of Bridge Street	
Beverly	608347	Traffic and Safety Improvements at Three Locations	2021
Beverly	604369	Reconstruction & Improvements on Route 128 (Interchange 19) at Brimbal Avenue, Sohler Road, Dunham Road, Otis Road	
Beverly	607727	Interchange Reconstruction at Route 128/Exit 19 at Brimbal Avenue (Phase II)	
Boston	606117	Traffic Signal Improvements at 10 Locations	2016
Boston	606453	Improvements on Boylston Street, from Intersection of Brookline Avenue & Park Drive to Ipswich Street	2020
Boston	607888	Multi-use Path Construction on New Fenway	2019
Boston	606134	Traffic Signal Improvements on Blue Hill Avenue and Warren Street	2018
Boston	605789	Reconstruction of Melnea Cass Boulevard	2019
Boston	606226	Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	2020-21 (LRTP 2021-25)
Boston	604761	Multi-Use Trail Construction (South Bay Harbor) From Ruggles Station to Fort Point Channel	2017
Boston	608449	Reconstruction of Commonwealth Avenue, Phases 3 and 4	
Boston	601274	Reconstruction of Tremont Street, from Court Street to Boylston Street	
Braintree	1675	Braintree Split	
Brookline	606316	Pedestrian Bridge Rehabilitation over MBTA off Carlton Street	2018
Brookline	605110	Intersection & Signal Improvements at Route 9 & Village Square (Gateway East)	2018
Burlington	949	Route 62 (Wilmington Road)	
Burlington	950	South Bedford Street	
Cambridge	1716	Alewife Bicycle/Pedestrian Bridge	

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Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Cambridge	604993	Innovation Boulevard Streetscape & Pedestrian Improvements, Between Main Street & Binney Street (Phase I)	
Canton	603883	Reconstruction on Route 138, from I-93 to Dan Road	
Canton	900	East-West Connector, between Pleasant St. & Route 138	
Canton, Dedham, and Norwood (MassDOT)	087790	Interchange Improvements at I-95/I-93/University Avenue/I-95 Widening	
Chelsea	608078	Reconstruction of Broadway, from City Hall Ave to the Revere City Line	
Chelsea	1660	Chelsea Gateway Center Infrastructure Improvement Plan, Phase 3 (Everett Ave. Reconstruction)	
Chelsea	953	Reconstruction and Widening of Spruce Street, between Everett Avenue and Sixth Street	
Chelsea	1063	Reconstruction of Beacham and Williams Streets, from Spruce Street to Everett City Line	
Chelsea	1615	Spruce Street/Second Street/Carter Street Improvements	
Cohasset	608007	Corridor Improvements and Related Work on Justice Cushing Highway (Route 3A), from Beechwood Street to the Scituate Town Line	
Concord	605189	Bruce Freeman Rail Trail, Phase 2C	2016
Concord	602091	Improvements & Upgrades to Concord Rotary (Routes 2/2A/119)	
Concord	1441	Route 62 (Main St) Phase 3	
Concord	1450	Route 117 (Fitchburg Turnpike)	
Concord, Acton	606223	Bruce Freeman Rail Trail Construction (Phase II-B)	2018
Danvers	602310	Reconstruction on Collins Street, from Sylvan Street to Centre & Holten Streets	
Dedham	607899	Pedestrian Improvements along Bussey Street	
Dedham	607901	Pedestrian Improvements along Elm Street & Rustcraft Road Corridors	2021
Duxbury	606002	Signal Installation at Route 3 (NB & SB) Ramps & Route 3A (Tremont St)	
Duxbury	600650	Route 3A (Tremont Street) Bridge	
Duxbury	942	Intersection Improvements at Route 3A & Route 139	
Everett	607652	Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street	2019
Everett	1671	Rehabilitation of Beacham Street, from Route 99 to Chelsea City Line	
Everett & Malden	649	TeleCom Boulevard, Phase 2	
Framingham	608228	Reconstruction of Union Avenue, from Proctor Street to Main Street	2021
Framingham	955	Reconstruction of Route 126, from Route 9 to Lincoln Street	

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Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Framingham	356	Reconstruct Route 126 (Hollis Street), from Irving Street to the Ashland town line	
Framingham	602038	Edgell Road Corridor Project	
Framingham	606109	Intersection Improvements at Route 126/135/MBTA & CSX Railroad	L RTP 2026-30
Framingham	608006	Pedestrian Hybrid Beacon Installation at Route 9 and Maynard Road	
Franklin	601359	Reconstruction of Pleasant Street, from Main Street to Chestnut Street	
Franklin	607774	Resurfacing & Intersection Improvements on Route 140, from Beaver Street to I-495 Ramps	
Gloucester	604377	Washington Street And Railroad Avenue	
Hingham	607309	Reconstruction and Related Work on Derby Street from Pond Park Road to Cushing Street	2017
Hingham (MassDOT)	600518	Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street	2018
Holbrook	606501	Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street	2021
Holbrook	602260	Intersection Improvements at Abington Avenue and Plymouth Street	
Holliston	602462	Signal Installation at Route 16/126 and Oak Street	
Hopkinton	606043	Signal & Intersection Improvements on Route 135	2019
Hudson	1047	South Street	
Hudson	1488	Lincoln St. at Cox St. and Packard St.	
Hudson	1617	Route 85/ Route 62 Rotary Improvements	
Hudson (MassDOT)	601906	Bridge Replacement, Cox Street over the Assabet River	
Hudson and Marlborough (MassDOT)	603345	Reconstruction on Routes I-290 & 495 and Bridge Replacement	
Hull	601607	Reconstruction of Atlantic Avenue and Related Work, from Nantasket Avenue to Cohasset Town Line	
Ipswich	605743	Resurfacing & Related Work on Central & South Main Streets	
Lexington	607409	Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	2016
Lexington	604619	Route 4/225 (Bedford Street) and Hartwell Avenue	L RTP 2021-25

TABLE A-2: FFYs 2017-21 TIP - Universe of Projects

Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Lexington	1141	West Lexington Greenway	
Littleton	1460	Harvard Street	
Lynn	602077	Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	2020
Lynn	601138	Traffic Signals at 4 Locations (Contract E)	
Lynn	602081	Route 107 (Western Avenue)/Eastern Avenue	
Lynn	602093	Route 107 (Western Avenue)	
Lynn	943	Broad Street/Lewis Street /Route 129	
Lynn	944	Boston Street -Hamilton Street	
Lynn	1319	Route 129 (Boston St./Washington St.)	
Lynn	1320	Route 1 (Copeland Circle, Fox Hill Bridge)	
Lynn	1321	Route 1A Lynnway at Blossom Street	
Lynn	1322	Route 1A Lynnway intersection at Market St.	
Lynn	1323	Route 1A Lynn (GE Bridge Nahant Rotary)	
Lynn	1324	Blue Line Extension (Wonderland connection)	
Lynn	1454	Route 1 South (Jug handle lights at Goodwin Circle)	
Lynn	607306	Blossom Street Ferry Boat Discretionary Program (Phase III)	
Lynn	1672	Blossom Street Ferry Terminal	
Lynn (MBTA)	374	Lynn Garage	
Lynn, Malden, Revere & Saugus	351	Bike to the Sea, Phase 2	
Lynnfield, Wakefield	607329	Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	2020
Malden, Revere, and Saugus (MassDOT)	605012	Reconstruction & Widening on Route 1, from Route 60 to Route 99	
Marblehead	608146	Intersection Improvements to Pleasant Street at Village/Vine/Cross Streets	
Marlborough	604810	Reconstruction of Route 85 (Maple Street)	2017
Marlborough	604231	Intersection & Signal Improvements on Route 20 (East Main Street/Boston Post Road) at Concord Road	
Marlborough	604811	Reconstruction of Route 20 (East Main Street), from Main Street Easterly to Lincoln Street	
Marshfield (MassDOT)	604655	Bridge Replacement, Beach Street over the Cut River	2018
Marshfield (MassDOT)	605664	Resurfacing & Related Work on Route 3A	
Medfield	604735	Reconstruction of North Street, from Frairy Street to Pine Street	

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Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Medford	1146	Medford Square Parking	
Medford	1455	Medford Square Phase 2 Improvements	
Medford	1456	Medford Square Water Taxi Landing and Related Park Improvements	
Medford	1457	Medford Square Transit Center	
Medford	1458	Mystic River Linear Park	
Medway	602134	Resurfacing & Related Work on a Section of Village Street	
Medway	1167	Route 109 (Milford Street)	
Melrose	601551	Intersection & Signal Improvements at Main Street & Essex Street	
Milford	607428	Resurfacing & Intersection Improvements on Route 16 (Main Street), from Water Street to the Hopedale T.L.	2019
Milford	967	Veteran's Memorial Drive/Alternate Route	
Milford	608045	Rehabilitation on Route 16, from Route 109 to Beaver Street	
Millis	602364	Reconstruction of Village Street, from Main Street (Route 109) to the Medway Town Line	
Milton	608406	Reconstruction on Granite Avenue, from Neponset River to Squantum Street	
Natick	607732	Cochituate Rail Trail, Phase Two	2020
Natick	605034	Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line	2019
Natick	605313	Bridge Replacement, Route 27 (North Main Street) over Route 9 (Worcester Street) and Interchange Improvements	LRTP 2021-25
Needham and Wellesley (MassDOT)	603711	Rehab/Replacement of 6 Bridges on I-95/Route 128 (Add-a-Lane Contract 5)	2016-18
Newton	601704	Reconstruction & Signal Improvements on Walnut Street, from Homer Street to Route 9	
Newton	1067	Washington Street (Phase 2), from Commonwealth Avenue to Perkins Street	
Newton	600932	Reconstruction on Route 30 (Commonwealth Avenue), from Weston Town Line to Auburn Street	
Newton & Needham	606635	Reconstruction of Highland Avenue, Needham Street & Charles River Bridge, from Webster Street to Route 9	2018
North Reading	1673	Reconstruction of Route 28 (Main Street), from Larch Road to Route 62 (Lowell Road)	
North Reading	1674	Reconstruction of Route 62, from Route 28 (Main Street) to I-93	
Norwood	605857	Intersection Improvements at Route 1 & University Avenue/Everett Street	2021

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Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Norwood	606130	Intersection Improvements at Route 1A & Upland Road/Washington Street & Prospect Street/Fulton Street	
Peabody (MassDOT)	604638	Mainline Improvements on Route 128 (Phase II)	
Peabody, Salem	1655	Riverwalk/Greenway from Peabody Square to Salem Train Depot	
Quincy	1451	Quincy Center Multimodal MBTA Station	
Salem	608352	Canal St. Rail Trail construction (phase 2)	2019
Salem	005399	Reconstruction of Bridge Street, from Flint Street to Washington Street	
Salem	600986	Boston Street	
Saugus	601513	Interchange Reconstruction at Walnut Street & Route 1 (Phase II)	
Somerville (MassDOT)	607981	McGrath Boulevard Project	LRTP 2026-30
Somerville (MassDOT)	600831	I-93 Mystic Avenue Interchange (Design and Study)	
Somerville and Medford (MBTA)	1569	Green Line Extension Project (Phase II), College Avenue to Mystic Valley Parkway/Route 16	
Southborough	604989	Reconstruction of Main Street (Route 30), from Sears Road to Park Street	2018
Southborough	1064	Cordaville Road/Route 85 Rehabilitation	
Southborough and Westborough (MassDOT)	607701	Improvements at I-495 & Route 9	
Stow, Hudson	1139	Assabet River Rail Trail	
Sudbury	608164	Bruce Freeman Rail Trail, Phase 2D	
Sudbury	1037	Route 20/Horsepond Road	
Sudbury	1069	Route 20/Wayside Inn Road	
Sudbury	1305	Bruce Freeman Rail Trail, Phase 2E	
Sudbury (MassDOT)	607249	Intersection Improvements at Route 20 & Landham Road	
Walpole	602261	Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27	2020
Walpole	600671	Reconstruction of Route 1A, from Common Street to the Norfolk Town Line	
Walpole	1151	Walpole Central Business District	
Walpole	1152	Elm St Improvements	
Walpole (MassDOT)	997	Coney Street Interchange with Route 95	
Watertown	607777	Rehabilitation of Mount Auburn Street (Route 16)	

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Proponent(s)	TIP ID	Project Name	TIP/LRTP Funding Status
Wayland	601579	Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	2016
Westwood	608158	Reconstruction of Canton Street and Everett Street	
Weymouth	605721	Intersection Improvements at Middle Street, Libbey Industrial Parkway and Tara Drive	2016
Weymouth, Abington	601630	Reconstruction & Widening on Route 18 (Main Street), from Highland Place to Route 139	2016-19
Weymouth	608231	Reconstruction of Route 3A	
Wilmington	608051	Reconstruction on Route 38 (Main Street), from Route 62 to the Woburn C.L.	
Wilmington	1720	Lowell Street (Route 129) at Woburn Street	
Winchester, Stoneham, and Woburn	604652	Tri-Community Bikeway	2016
Winthrop	607244	Reconstruction & Related Work along Winthrop Street & Revere Street Corridor	
Woburn	604935	Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street	2017
Woburn	604996	Bridge Replacement, New Boston Street over MBTA	2021
Woburn	1153	Woburn Loop Bikeway Project	
Woburn	1449	Route 38 (Main St.) Traffic Lights	
Woburn	608067	Intersection Reconstruction at Route 3 (Cambridge Road) & Bedford Road and South Bedford Street	
Woburn	608097	Bridge Replacement & Related Work, W-43-028, Washington Street over I-95	
Woburn (MassDOT)	605605	Interchange Improvements to I-93/I-95	
Wrentham	604745	Reconstruction of Taunton Street (Route 152)	
Wrentham (MassDOT)	603739	Construction of I-495/Route 1A Ramps	

B APPENDIX

Roadway Project Funding Application Forms & Evaluations

This appendix provides an explanation of the project funding application form for roadway projects that is used to understand requests for funding and to evaluate projects for possible programming. MPO staff and project proponents update these project funding application forms when new information becomes available. The forms are used to evaluate projects using criteria that reflect MPO visions and policies. Some information is provided specifically by the project proponent and other information is provided by MPO staff or by various state agencies.

Project funding application forms are available on the MPO website, <http://www.ctps.org/>. Proponents enter the project information on-line. Other information is input by MPO staff or automatically updated through links to other databases.

ROADWAY PROJECT FUNDING APPLICATION FORMS

Overview Tab

Project Background Information

1 *ID Number*

The MassDOT Project Information System (PROJIS) number assigned to the project. If the project does not have a PROJIS number, an

identification number will be assigned to the project by the MPO for internal tracking purposes.

2 *Municipality(ies)*

The municipality (or municipalities) in which the project is located.

3 *Project Name*

The name of the project. (Source: MassDOT)

4 *Project Category*

(determined by MPO staff):

- Arterial and Intersection – Arterial roadway and intersection projects
- Major Highway – Limited access roadway projects
- Bridge – Bridge projects
- Bicycle and Pedestrian – Projects dedicated solely to bicycle and pedestrian facilities such as walkways, paths, and trails
- Transit – Transit projects consisting of improvements to trains, buses, and ferries
- Enhancement – Streetscape improvements and enhancements to transportation facilities
- Regional Mobility – Transportation demand management (TDM) and Transportation Systems Management (TSM) programs or projects

5 *MassDOT Highway District*

The MassDOT Highway District in which the project is located.

6 *MAPC Subregion*

The MAPC subregion in which the project is located.

7 *MAPC Community Type*

The MAPC community type in which the project is located as defined by land use and housing patterns, recent growth trends, and projected development patterns.

8 *Estimated Cost*

The estimated total cost of the project. (Source: MassDOT)

9 *Evaluation Rating*

The number of points scored by the project, if it has been evaluated.

10 *Description*

A description of the project, including its primary purpose, major elements and geographic limits. (Source: MassDOT).

11 *Project Length (Miles)*

Total length of project in miles.

12 *Project Lane Miles*

Total lane miles of project.

Project Background Information

P1 Community Priority

The priority rank of the project as determined by the community. (Source: Proponent)

Additional Status

13 MPO/CTPS Study

Past UPWP-funded studies or reports conducted within the project area.

14 Air Quality Status

The air quality status of the project in the MPO's travel demand model. Projects with "exempt" status do not add capacity to the transportation system. Projects with "model" status add capacity to the transportation system and are included in the travel demand model.

Readiness Tab

"Readiness" is a determination of the appropriate year of programming for a project. In order to make this determination, the MPO tracks project development milestones and coordinates with the MassDOT Highway Division to estimate when a project will be ready for advertising.

All **non-transit** projects programmed in the first year of the Transportation Improvement Program (TIP) must be advertised before the end of the federal fiscal year (September 30). That funding authorization is not transferred to the next federal fiscal year, therefore any "leftover" funds are effectively "lost" to the region. If a project in the first year of the TIP is determined as "not ready to be advertised before September 30," it

will be removed from the TIP and replaced with another project by amendment.

For projects in the first year of the TIP, it is important to communicate any perceived problems that may affect the schedule to the Boston Region MPO as soon as possible.

Project Background Information

15 Transportation Improvement Program (TIP) Status

Advertised, Programmed, Pre-TIP, or Conceptual (Source: MPO database):

- **Advertised** – projects have been advertised by the implementation agency for bids.
- **Programmed** – projects have been identified for funds in the current TIP.
- **Pre-TIP** – projects have received Project Review Committee (PRC) approval from MassDOT Highway Division and have an “active” PROJIS number, but do not have funds identified in the TIP.
- **Conceptual** – projects are project concepts or ideas that are not yet under design.

16 Functional Design Report (FDR) Status

The year that a functional design report was completed, if one has been conducted for the project.

17 Design Status

Current design status of the project in the MassDOT Highway Division Design Process.

Dates are provided where available. (Source: MassDOT Project Info)

- Project Review Committee (PRC) Approved
- 25% Submitted
- 25% Approved
- 75% Submitted
- 75% Approved
- 100% Submitted
- 100% Approved
- PS&E Submitted

18 Right-of-Way (ROW) Requirement

(Source: MassDOT Project Info):

Required – ROW action is required for completion of the project

Not Required – No ROW action required for completion of the project

19 Right-of-Way (ROW) Responsibility

(Source: MassDOT Project Info):

MassDOT Responsibility – Providing the required right-of-way is the responsibility of MassDOT.

Municipal Responsibility – Providing the required right-of-way is the responsibility of the municipality.

Municipal Approval – Municipal approval has been given to the right-of-way plan (with date of approval):

20 *Right-of-Way (ROW) Certification*

(Source: MassDOT Project Info):

Expected – Expected date of ROW plan and order of taking

Recorded – Date the ROW plan and order of taking were recorded at the Registry of Deeds

Expires – Expiration date of the rights of entry, easements, or order of taking

21 *Required Permits*

Permits required by the Massachusetts Environmental Policy Act (MEPA). (Source: MassDOT Project Info.)

Possible required permits include:

- Environmental Impact Statement
- Construction Engineering Checklist
- Clean Water Act Section 404 Permit
- Rivers and Harbors Act of 1899 Section 10 Permit
- MEPA Environmental Notification Form
- MEPA Environmental Impact Report
- Massachusetts Historical Commission Approval
- M.G.L. Ch. 131 Wetlands Order of Conditions
- Conservation Commission Order of Conditions

Safety Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO safety objectives:

- Reduce the number and severity of crashes, all modes
- Reduce serious injuries and fatalities from transportation
- Protect transportation customers and employees from safety and security threats

Project Background Information

22 *Top 200 Rank*

Ranks of highest crash intersection clusters in the project area listed within MassDOT's top 200 high crash intersection locations. The crash rankings are weighted by crash severity as indicated by Equivalent Property Damage Only (EPDO) values. (Source: MassDOT Highway Division 2011-2013 Top Crash Locations Report)

23 *EPDO/Injury Value*

An estimated value of property damage. Fatal crashes are weighted by 10, injury crashes are weighted by 5 and property damage only or nonreported is weighted by 1. (Source: MassDOT Highway Division, 2011-2013)

24 *Crash Rate/Crashes per Mile*

Intersection projects list the crash rate as total crashes per million vehicle entering the intersection. Arterial projects list the crash rate as total crashes per mile. (Source: MassDOT Highway Division, 2011-2013)

25 *Bicycle-Involved Crashes (Total EPDO)*

Total EPDO value of bicycle-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

26 *Pedestrian-Involved Crashes (Total EPDO)*

Total EPDO value of pedestrian-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

27 *Truck-Involved Crashes (Total EPDO)*

Total EPDO value of truck-involved crashes in the project area. (Source: MassDOT Highway Division, 2011-2013)

Proponent Provided Information

P2 *What is the primary safety need associated with this project and how does it address that need?*

Describe the need for the project from a local and a regional perspective. What are the existing safety needs/improvements the project is designed to address? How will this design accomplish those needed improvements? Please be as specific as possible. When applicable, this information should be consistent with project need information provided in the MassDOT Highway Division Project Need Form. (Source: Proponent)

Evaluation

Safety Evaluation Scoring (30 total points possible):

Crash Severity Value: Equivalent Property Damage Only (EPDO) index (up to 5 points)

- +5 EPDO value of 300 or more
- +4 EPDO value between 200-299

- +3 EPDO value between 100-199
- +2 EPDO value between 50-99
- +1 EPDO value less than 50
- +0 No EPDO value

Crash Severity Rate: Equivalent Property Damage Only (EPDO) index per VMT (up to 5 points)

- +5 Average annual EPDO per 1,000,000 VMT of 20 or more
- +4 Average annual EPDO per 1,000,000 VMT between 15-20
- +3 Average annual EPDO per 1,000,000 VMT between 10-15
- +2 Average annual EPDO per 1,000,000 VMT between 5-10
- +1 Average annual EPDO per 1,000,000 VMT less than 5
- +0 No EPDO rate

Improves truck-related safety issue (up to 5 points)

- +3 High total effectiveness of truck safety countermeasures
- +2 Medium total effectiveness of truck safety countermeasures
- +1 Low total effectiveness of truck safety countermeasures
- +0 Does not implement truck safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves truck safety at HSIP Cluster

Improves bicycle safety (up to 5 points)

- +3 High total effectiveness of bicycle safety countermeasures
- +2 Medium total effectiveness of bicycle safety countermeasures
- +1 Low total effectiveness of bicycle safety countermeasures
- 0 Does not implement bicycle safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves bicycle safety at HSIP Bicycle Cluster
- +1 Improves bicycle safety at HSIP Cluster

Improves pedestrian safety (up to 5 points)

- +3 High total effectiveness of pedestrian safety countermeasures
- +2 Medium total effectiveness of pedestrian safety countermeasures
- +1 Low total effectiveness of pedestrian safety countermeasures
- 0 Does not implement pedestrian safety countermeasures

If project scores points above, then it is eligible for additional points below:

- +2 Improves pedestrian safety at HSIP Pedestrian Cluster
- +1 Improves pedestrian safety at HSIP Cluster

Improves safety or removes an at-grade railroad crossing (up to 5 points)

- +5 Removes an at-grade railroad crossing
- +3 Significantly improves safety at an at-grade railroad crossing
- +1 Improves safety at an at-grade railroad crossing
- 0 Does not include a railroad crossing

System Preservation Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO system preservation objectives:

- Improve the condition of on- and off-system bridges
- Improve pavement condition on the MassDOT-monitored roadway system
- Maintain and modernize capital assets throughout the system
- Maintain and modernize capital assets throughout the system (surface condition of sidewalks)
- Prioritize projects that support planned response capability to existing or future extreme conditions (sea level rise, flooding, and other natural and security-related man-made hazards)
- Protect freight network elements, such as port facilities, that are vulnerable to climate-change impacts

Project Background Information

28 Existing Pavement Condition

(Source: MassDOT Roadway Inventory File)

Pavement Roughness (IRI) – International Roughness Index (IRI) rating reflects the calibrated value in inches of roughness per mile. IRI ratings are classified as follows:

- Good – Ranges of 0 - 190
- Fair – Ranges of 191- 320
- Poor – Above 320

29 Equipment Condition

Existing signal equipment condition. (Source: CMP, Massachusetts permitted signal information, municipal signal information, submitted design).

30 Natural Hazard Zones**

- Project lies within a flood zone
- Project lies within a hurricane surge zone
- Project lies within ¼ mile of an emergency support location
- Project lies within an area of liquefiable soils

**Please refer to the All-hazards Planning Application (hyperlink to http://www.ctps.org/map/www/apps/eehmApp/pub_eehm_index.html) for more information on natural hazard zones.

Proponent Provided Information

P3 What are the infrastructure condition needs or issues of the project area?

Please include additional pavement information from municipal pavement management programs.

In addition, qualitative descriptions of existing problems or anticipated needs can be provided. When applicable, this information should be consistent with project need information provided in the MassDOT Project Need Form. (Source: Proponent)

P4 How does this project address the infrastructure condition needs or issues in the project area?

Please include detail regarding the pavement management system employed by the community or agency, and of how this system will maximize the useful life of any pavement repaired or replaced by the project. (Source: Proponent)

P5 What is the primary security need associated with this project and how does it address that need?

Describe the need for the project from a local and a regional perspective. What are the existing security needs/improvements the project is designed to address? How will this design accomplish those needed improvements? Please be as specific as possible. When applicable, this information should be consistent with project need information provided in the MassDOT Highway Division Project Need Form. (Source: Proponent)

Evaluation

System Preservation Evaluation Scoring (29 total points possible):

Improves substandard roadway bridge(s) (up to 3 points)

+3 Condition is structurally deficient and improvements are included in the project

- +1 Condition is functionally obsolete and improvements are included in the project
- +0 Does not improve substandard bridge or does not include a bridge

Improves substandard pavement (up to 6 points)

- +6 IRI rating greater than 320: Poor and pavement improvements are included in the project
- +4 IRI rating between 320 and 191: Fair and pavement improvements are included in the project
- 0 IRI rating less than 190: Good or better

Improves substandard signal equipment condition (up to 6 points)

- +6 Poor condition, improvements are included in the project
- +4 Fair condition, improvements are included in the project
- 0 Does not meet or address criteria

Improves transit asset(s) (up to 3 points)

- +2 Brings transit asset into State of Good Repair
- +1 Meets an identified-need in an Asset Management Plan
- +0 Does not meet or address criteria

Improves substandard sidewalk(s) (up to 3 points)

- +3 Poor condition and sidewalk improvements are included in the project
- +2 Fair condition and sidewalk improvements are included in the project
- +0 Sidewalk condition is good or better

Improves emergency response (up to 2 points)

- +1 Project improves an evacuation route, diversion route, or alternate diversion route
- +1 Project improves an access route to or in proximity to an emergency support location

Improves ability to respond to extreme conditions (up to 6 points)

- +2 Addresses flooding problem and/or sea level rise and enables facility to function in such a condition
- +1 Brings facility up to current seismic design standards
- +1 Addresses critical transportation infrastructure
- +1 Protects freight network elements
- +1 Implements hazard mitigation or climate adaptation plans

Capacity Management/Mobility Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO capacity management/mobility objectives:

- Improve reliability of transit
- Implement roadway management and operations strategies, constructing improvements to the bicycle and pedestrian network, and supporting community-based transportation
- Create connected network of bicycle and accessible sidewalk facilities (at both regional and neighborhood scale) by expanding existing facilities and closing gaps

- Increase automobile and bicycle parking capacity and usage at transit stations
- Increase the percentage of population and places of employment within one-quarter mile of transit stations and stops
- Increase the percentage of population and employment with access to bicycle facilities
- Improve access to and accessibility of transit and active modes
- Enhance intermodal connections
- Support community-based and private-initiative services and programs to meet last mile, reverse commute and other non-traditional transit/ transportation needs, including those of the elderly and persons with disabilities
- Eliminate bottlenecks on the freight network

Project Background Information

31 *Bicycle and Pedestrian Facilities*

(Source: MassDOT Bicycle Facility Inventory and Roadway Inventory File and MPO bicycle GIS coverage)

Pedestrian Facilities:

- Sidewalks – Indicates if sidewalks are present on one side or on both sides of the roadway.
- Shared Use Path – Facilities with a stabilized firm surface and separated from motor vehicle traffic by an open space or barrier.
- Minimally Improved Path – Facilities with a rough surface and separated from motor vehicle traffic by an open space or barrier.

Bicycle Facilities:

- Cycle Track – Bikeways separated from parallel motor vehicle roadway by a line of parked cars, landscaping, or another form of physical barrier that motor vehicles cannot cross.
- Striped Bicycle Lane – A portion of a roadway (greater than or equal to 4 feet) which has been designated by striping, and pavement markings for preferential or exclusive use by bicyclists.
- Marked Shared Lane – Travel lanes with specific bicycle markings, often referred to as *sharrows*.
- Signed Route – Roadway is designated and signed as a bicycle route.
- Shared Use Path – Facilities with a stabilized firm surface and separated from motor vehicle traffic by an open space or barrier.
- Minimally Improved Path – Facilities with a rough surface and separated from motor vehicle traffic by an open space or barrier.

32 *Transit Vehicles Use of Roadway*

Identifies the fixed route transit vehicles using the roadway

33 *Usage*

- Average Daily Traffic Volumes
- Average Daily Truck Volumes
- Average Weekday Transit Rider Volumes
- AM Peak Hour Pedestrian Volumes
- AM Peak Hour Bicyclist Volumes
- PM Peak Hour Pedestrian Volumes
- PM Peak Hour Bicyclist Volumes

34 A.M./P.M. Travel Time Index^{*}**

Travel Time Index directly compares peak-period travel time conditions with free-flow travel time conditions. Travel time Index indicates how much contingency time should be considered to ensure an on-time arrival during the peak period versus optimum travel times.

Travel time index = average peak-period travel time / free-flow travel time

Information provided is determined by the Boston Region MPO's CMP Arterial Performance Dashboard. If a Project Funding Application Form does not have any CMP data listed, this does not necessarily mean that the roadway or intersection does not experience congestion problems; this simply means that data from the CMP are not available.

35 A.M./P.M. Speed Index^{*}**

Speed index is equal to the average speed divided by the posted speed limit of a Traffic Message Channel (TMC). Speed index indicates congestion more accurately than travel speeds alone because low travel speeds may be a result of low speed limits on certain facilities.

Speed Index = average speed / posted speed limit

Information provided is determined by the Boston Region MPO's CMP Arterial Performance Dashboard. If a Project Funding Application Form does not have any CMP data listed, this does not necessarily mean that the roadway or intersection does not experience congestion problems; this

simply means that data from the CMP are not available.

^{***}Please refer to the CMP Arterial Performance Dashboard (hyperlink to <http://www.ctps.org/map/www/apps/arterialHighwayPerformanceDashboard/index.html>) for data on roadway congestion in the MPO region.

Proponent Provided Information

P6 What is the primary mobility need for this project and how does it address that need?

Describe the need for the project from a local and a regional perspective. What are the existing or anticipated mobility needs the project is designed to address? Please include information on how the project improves level of service and reduces congestion, provides multimodal elements (for example, access to transit stations or parking, access to bicycle or pedestrian connections), enhances freight mobility, and closes gaps in the existing transportation system. For roadway projects, it is MPO and MassDOT policy that auto congestion reductions not occur at the expense of pedestrians, bicyclists, or transit users. Please explain the mobility benefits of the project for all modes. When applicable, this information should be consistent with project need information provided in the MassDOT Project Need Form. (Source: Proponent)

P7 What intelligent transportation systems (ITS) elements does this project include?

Examples of ITS elements include new signal systems or emergency vehicle override applications. (Source: Proponent)

P8 How does the project improve access for pedestrians, bicyclists, and public transportation? How does the project support MassDOT's mode shift goal of tripling the share of walking, biking, and transit travel?

Describe what improvements are in the project for pedestrians, bicyclists, and public transportation, and what level of improvement will be achieved over existing conditions. (Source: Proponent)

Evaluation

Capacity Management/Mobility Evaluation Scoring (29 total points possible):

Reduces transit vehicle delay (up to 4 points)

- +3 5 hours or more of daily transit vehicle delay reduced
- +2 1-5 hours of daily transit vehicle delay reduced
- +1 Less than one hour of daily transit vehicle delay reduced
- +0 Does not reduce transit delay

If project scores points above, then it is eligible for additional points below:

- +1 Improves one or more key bus route(s)

Improves pedestrian network and ADA accessibility (up to 5 points)

- +2 Adds new sidewalk(s) (including shared-use paths)
- +2 Improves ADA accessibility
- +1 Closes a gap in the pedestrian network
- 0 Does not improve pedestrian network

Improves bicycle network (up to 4 points)

- +3 Adds new physically separated bicycle facility (including shared-use paths)
- +2 Adds new buffered bicycle facility
- +1 Adds new standard bicycle facility
- +1 Closes a gap in the bicycle network
- +0 Does not improve bicycle network

Improves intermodal accommodations/connections to transit (up to 6 points)

- +6 Meets or addresses criteria to a high degree
- +4 Meets or addresses criteria to a medium degree
- +2 Meets or addresses criteria to a low degree
- +0 Does not meet or address criteria

Improves truck movement (up to 4 points)

- +3 Meets or addresses criteria to a high degree
- +2 Meets or addresses criteria to a medium degree
- +1 Meets or addresses criteria to a low degree
- +0 Does not meet or address criteria

If project scores points above, then it is eligible for additional points below:

- +1 Addresses MPO-identified bottleneck location

Project reduces congestion (up to 6 points)

- +6 400 hours or more of daily vehicle delay reduced
- +4 100-400 hours of daily vehicle delay reduced
- +2 Less than 100 hours of daily vehicle delay reduced
- 0 Does not meet or address criteria

Clean Air/Clean Communities Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO clean air/clean communities objectives:

- Reduce GHGs generated in the Boston Region by all transportation modes as outlined in the Global Warming Solutions Act
- Reduce other transportation-related pollutants
- Minimize negative environmental impacts of the transportation system, when possible
- Support land use policies consistent with smart and healthy growth

Project Background Information

36 CO₂ Impact

The quantified or assumed annual tons of carbon dioxide estimated to be reduced by the project. (Source: MPO Database)

37 Located in a Green Community

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA) certified Green Community. (Source: EOEEA)

38 Located in an Area of Critical Environmental Concern

Areas designated as Areas of Critical Environmental Concern by the Massachusetts Secretary of Environmental Affairs. (Source: MassGIS)

39 Located adjacent to (within 200 feet of) a waterway

Hydrographic (water related) features, including surface water (lakes, ponds, reservoirs), flats, rivers, streams, and others from MassGIS. Two hundred feet from the hydrographic feature is the distance protected by the Massachusetts Rivers Protection Act. (Source: MassGIS)

Proponent Provided Information

P9 How does the project relate to community character?

Is the project located in an existing community or neighborhood center or other pedestrian-oriented area? Explain the community context (cultural, historical, other) in which the project will occur and indicate the positive or negative effect this project will have on community character. (Source: Proponent)

P10 What are the environmental impacts of the project?

How will this project improve air quality, improve water quality, or reduce noise levels in the project area and in the region? Air quality improvements can come from reductions in the number or length of vehicle trips or from reductions in vehicle cold

starts. Water quality improvements can result from reductions in runoff from impervious surfaces, water supply protection, and habitat protection. Noise barriers can reduce noise impacts. (Source: Proponent)

Evaluation

Clean Air/Clean Communities Evaluation Scoring (16 total points possible):

Reduces CO₂ (up to 5 points)

- +5 1,000 or more annual tons of CO₂ reduced
- +4 500-999 annual tons of CO₂ reduced
- +3 250-499 annual tons of CO₂ reduced
- +2 100-249 annual tons of CO₂ reduced
- +1 Less than 100 annual tons of CO₂ reduced
- 0 No impact
- 1 Less than 100 annual tons of CO₂ increased
- 2 100-249 annual tons of CO₂ increased
- 3 250-499 annual tons of CO₂ increased
- 4 500-999 annual tons of CO₂ increased
- 5 1,000 or more annual tons of CO₂ increased

Reduces other transportation-related emissions (VOC, NO_x, CO) (up to 5 points)

- +5 2,000 or more total kilograms of VOC, NO_x, CO reduced
- +4 1,000-1999 total kilograms of VOC, NO_x, CO reduced
- +3 500-999 total kilograms of VOC, NO_x, CO reduced
- +2 250-499 total kilograms of VOC, NO_x, CO reduced
- +1 Less than 250 total kilograms of VOC, NO_x, CO reduced

- 0 No impact
- 1 Less than 250 total kilograms of VOC, NO_x, CO increased
- 2 250-499 total kilograms of VOC, NO_x, CO increased
- 3 500-999 total kilograms of VOC, NO_x, CO increased
- 4 1,000-1999 total kilograms of VOC, NO_x, CO increased
- 5 2,000 or more total kilograms of VOC, NO_x, CO increased

Addresses environmental impacts (up to 4 points)

- +1 Addresses water quality
- +1 Addresses cultural resources/open space
- +1 Addresses wetlands/resource areas
- +1 Addresses wildlife preservation/protected habitats
- 0 Does not meet or address criteria

Project is in an Executive Office of Energy and Environmental Affairs (EOEEA)-certified “Green Community” (up to 2 points)

- +2 Project is located in a “Green Community”
- 0 Project is not located in a “Green Community”

Transportation Equity Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO transportation equity objectives:

- Target investments to areas that benefit a high percentage of low income and minority populations

- Minimize any burdens associated with MPO-funded projects in low income and minority areas
- Break down barriers to participation in MPO-decision making

Proponent Provided Information

P11 Are any other transportation equity issues addressed by this project?

This answer should only be addressed by those projects that serve Title VI/non-discrimination populations. Please be specific. (Source: Proponent)

Evaluation

Transportation Equity Evaluation Scoring (12 total points possible):

Serves Title VI/non-discrimination populations (up to 12 points)

- +2 Serves minority (high concentration) population
- +1 Serves minority (low concentration) population
- +2 Serves low-income (high concentration) population
- +1 Serves low-income (low concentration) population
- +2 Serves limited-English proficiency (high concentration) population
- +1 Serves limited-English proficiency (low concentration) population
- +2 Serves elderly (high concentration) population
- +1 Serves elderly (low concentration) population
- +2 Serves zero vehicle households (high concentration) population

- +1 Serves zero vehicle households (low concentration) population
- +2 Serves persons with disabilities (high concentration) population
- +1 Serves persons with disabilities (low concentration) population
- +0 Does not serve Title VI or non-discrimination populations
- 10 Creates a burden for Title VI/non -discrimination populations

Economic Vitality Tab

The evaluation criteria below serve as a way to guide investments that implement the following MPO economic vitality objectives:

- Prioritize transportation investments that serve targeted development sites
- Prioritize transportation investments that support development consistent with the compact growth strategies of MetroFuture
- Minimize the burden of housing and transportation costs for residents in the region

Proponent Provided Information

P12 How is the project consistent with local land use policies? How does the project advance local efforts to improve design and access?

Explain how this project will support existing or proposed local land use policies. (Source: Proponent)

P13 How does the zoning of the area within ½ mile of this project support transit-oriented development and preserve any new roadway capacity?

Will the project have an impact on adjacent land uses? Please review the land use information if the project is expected to have an impact on land use. Is there a local project currently under development that would provide a better balance between housing and jobs in this corridor? If so, please provide details on the project status. (Source: Proponent)

P14 How is the project consistent with state, regional, and local economic development priorities?

Explain how this project will support economic development in the community or in the project area (Source: Proponent)

Evaluation

Economic Vitality Evaluation Scoring (18 total points possible):

Serves targeted development site (up to 6 points)

- +2 Provides new transit access to or within site
- +1 Improves transit access to or within site
- +1 Provides for bicycle access to or within site
- +1 Provides for pedestrian access to or within site
- +1 Provides for improved road access to or within site
- +0 Does not provide any of the above measures

Provides for development consistent with the compact growth strategies of MetroFuture (up to 5 points)

- +2 Mostly serves an existing area of concentrated development
- +1 Partly serves an existing area of concentrated development
- +1 Supports local zoning or other regulations that are supportive of smart growth development
- +2 Complements other local financial or regulatory support that fosters economic revitalization in a manner consistent with smart growth development principles
- 0 Does not provide for any of the above measures

Provides multimodal access to an activity center (up to 4 points)

- +1 Provides transit access (within a quarter mile) to an activity center
- +1 Provides truck access to an activity center
- +1 Provides bicycle access to an activity center
- +1 Provides pedestrian access to an activity center
- 0 Does not provide multimodal access

Leverages other investments (non-TIP funding) (up to 3 points)

- +3 Meets or addresses criteria to a high degree (>30% of the project cost)
- +2 Meets or addresses criteria to a medium degree (10-30% of the project cost)
- +1 Meets or addresses criteria to a low degree (<10% of the project cost)
- 0 Does not meet or address criteria

Other Tab

Cost per Unit

These two measures of cost per unit are derived by dividing project cost by quantified data in the MPO database. These measures can be used to compare similar types of projects.

40 \$ per User

Cost divided by ADT (ADT for roadway projects or other user estimate)

41 \$ per Lane Mile

Cost divided by proposed total lane miles

Additional Project Background Information

Targeted Development Areas

A targeted development area is located within ½ mile of the project area. Eligible targeted development areas include 43D, 43E, and 40R sites, Regionally Significant Priority Development Areas, Growth District Initiatives, and MBTA transit station areas.

- **43D Priority Development Site:** The Chapter 43D Program offers communities expedited permitting to promote targeted economic and housing development. Sites approved under the program are guaranteed local permitting decisions on priority development sites within 180 days. (Source:

Executive Office of Housing and Economic Development)

- **43E Priority Development Site:** The Chapter 43E Program promotes the expedited permitting of commercial, industrial, residential and mixed-use projects on sites with dual designation as a Priority Development Site and Growth District. Sites approved under the program are guaranteed state permitting decisions on priority development sites within 180 days. (Source: Executive Office of Housing and Economic Development)
- **40R Smart Growth Zoning Overlay District:** The program encourages communities to zone for compact residential and mixed-use development in “smart growth” locations by offering financial incentives and control over design. (Source: Department of Housing and Community Development)
- **Regionally Significant Priority Development Area:** A site or district that has been identified by the local municipality as an eligible and desirable site for housing and/or economic development, and which has been identified as a “regionally significant” site by MAPC through a subregional screening process that considers development potential, accessibility, environmental impacts, equity, and other factors.
- **Growth District Initiative:** The EOHEd initiative focuses on expediting commercial and residential development at appropriate locations for significant new growth. (Source:

Executive Office of Housing and Economic Development)

- **Eligible MBTA Transit Station Area:** Areas within ½ mile of existing or proposed subway, trolley, commuter rail, or ferry service, with the exception of “Undeveloped” station areas as defined by MAPC (www.mapc.org/TOD); or areas within ¼ mile of an MBTA “Key Bus Route.”

Municipality Provides Financial or Regulatory Support for Targeted Development

The proposed project will improve access to or within a commercial district served by a Main Street organization, local business association, Business Improvement District, or comparable, geographically targeted organization (i.e., not a city/town-wide chamber of commerce).

Local Efforts to improve Design and Access:

- Form-based codes
- Official design guidelines for new development/redevelopment
- Official local plan for pedestrian/bike/handicap access, the recommendations of which are reflected in the proposal



APPENDIX

Greenhouse Gas Monitoring and Evaluation

BACKGROUND

The Global Warming Solutions Act of 2008 (GWSA) requires statewide reductions in greenhouse gas (GHG) emissions of 25 percent below 1990 levels by the year 2020, and 80 percent below 1990 levels by 2050. As part of the GWSA, the Executive Office of Energy and Environmental Affairs developed the Massachusetts Clean Energy and Climate Plan (CECP), which outlines programs to attain the 25 percent reduction by 2020—including a 7.6 percent reduction to be attributed to the transportation sector.

The Commonwealth's 13 metropolitan planning organizations (MPOs) are integrally involved in helping to achieve greenhouse gas reductions mandated under the GWSA. The MPOs work closely with the Massachusetts Department of Transportation (MassDOT) and other involved agencies to develop common transportation goals, policies, and projects that would help to reduce GHG emission levels statewide, and meet the specific requirements of the GWSA regulation – *Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation (310 CMR 60.05)*. The purpose of this regulation is to assist the Commonwealth in achieving its adopted GHG emission-reduction goals by requiring:

- MassDOT to demonstrate that its GHG reduction commitments and targets are being achieved
- Each MPO to evaluate and track the GHG emissions and impacts of both its LRTP and TIP
- Each MPO, in consultation with MassDOT, to develop and utilize procedures to prioritize and select projects in its LRTP and TIP based on factors that include GHG emissions and impacts

The Commonwealth's MPOs are meeting the requirements of this regulation through the transportation goals and policies contained in their 2016 LRTPs, the major projects planned in the LRTPs, and the mix of new transportation projects that are programmed and implemented through the TIP.

The GHG tracking and evaluation processes enable the MPOs and MassDOT to identify the anticipated GHG impacts of the planned and programmed projects, and to use GHG impacts as criteria to prioritize transportation projects. This approach is consistent with the greenhouse-gas reduction policies of promoting healthy transportation modes through prioritizing and programming an appropriate balance

of roadway, transit, bicycle and pedestrian investments; as well as supporting smart-growth development patterns by creating a balanced multi-modal transportation system. All of the Commonwealth's MPOs and MassDOT are working toward reducing greenhouse gases with "sustainable" transportation plans, actions, and strategies that include, but are not limited to:

- Reducing emissions from construction and operations
- Using more fuel-efficient fleets
- Implementing and expanding travel demand management programs
- Encouraging eco-driving
- Providing mitigation for development projects
- Improving pedestrian, bicycle, and public transit infrastructure and operations (healthy transportation)
- Investing in higher-density, mixed-use, and transit-oriented developments (smart growth)

REGIONAL TRACKING AND EVALUATION IN LONG-RANGE TRANSPORTATION PLANS

MassDOT coordinated with the Boston Region MPO and regional planning agencies to implement GHG tracking and evaluation in developing each MPO's 2012 LRTPs, which were adopted in September 2011. This collaboration continued for the MPOs' 2016 RTPs, 2016–19 TIPs, and 2017–21 TIPs. This information is now being updated and included in the

Boston Region MPO's Amendment One to the 2016 LRTP, *Charting Progress to 2040*. Working together, MassDOT and the MPOs have attained the following milestones:

- As a supplement to the 2016 LRTPs and the Boston Region MPO Amendment One to *Charting Progress to 2040*, the MPOs have completed modeling and long-range statewide projections for GHG emissions resulting from the transportation sector. Using the Boston Region MPO's travel demand model and the statewide travel demand model for the remainder of the state, the MPOs have projected GHG emissions for 2020 no-build (base) and build (action) conditions, and for 2040 no-build (base) and build (action) conditions.
- All of the MPOs have addressed GHG emissions-reduction projections in their LRTPs, discussed climate change, and included a statement of MPO support to reduce GHG emissions as a regional goal.

TRACKING AND EVALUATING IN THE TRANSPORTATION IMPROVEMENT PROGRAM

In addition to monitoring the GHG impacts of capacity-adding projects in the LRTP, it also is important to monitor and evaluate the GHG impacts of all transportation projects that are programmed in the TIP. The TIP includes both the larger, capacity-adding projects from the LRTP and smaller projects, which

are not included in the LRTP that may affect GHG emissions. The principal objective of this tracking is to enable the MPOs to evaluate the expected GHG impacts of different projects and to use this information as criteria to prioritize and program projects in future TIPs.

In order to monitor and evaluate the GHG impacts of TIP projects, MassDOT and the MPOs have developed approaches for identifying anticipated GHG emission impacts of different project types. Since carbon dioxide (CO₂) is the largest component of GHG emissions overall, CO₂ has been used to measure the GHG impacts of transportation projects in the TIP and LRTP. All TIP projects have been sorted into two main categories for analysis: 1) projects with quantified impacts, and 2) projects with assumed impacts. Projects with quantified impacts consist of capacity-adding projects from the LRTP and projects from the TIP that underwent a Congestion Mitigation and Air Quality Improvement (CMAQ) Program spreadsheet analysis. Projects with assumed impacts include ones that would be expected to produce a minor decrease or increase in emissions, and those that would be assumed to have no CO₂ impact.

PROJECTS WITH QUANTIFIED IMPACTS

Travel Demand Model Set

This includes capacity-adding projects in the LRTP that were analyzed using the travel demand model set. No independent TIP calculations were done for these projects.

Reduction or Increase in the Number of Tons of CO₂ Associated with the Project

The Office of Transportation Planning at MassDOT provided spreadsheets that are used to determine CMAQ Improvement Program eligibility. Typically, the data and analysis required by MPO staff to conduct these calculations is derived from functional design reports submitted for projects at the 25-percent design phase. Estimated projections of CO₂ for each project in this category are shown in Tables C-1 and C-2. A note of “To be determined” is shown for those projects for which a functional design report was not yet available. Analyses are done for the following types of projects:

Traffic Operational Improvement

An intersection reconstruction or signalization project that typically reduces delays and therefore idling

- Step 1: Calculate the AM-peak-hour total intersection delay (secs)
- Step 2: Calculate the PM-peak-hour total intersection delay (secs)
- Step 3: Select the peak hour with the longer intersection delay
- Step 4: Calculate the selected peak-hour total intersection delay with improvements
- Step 5: Calculate the vehicle delay in hours per day (assumes peak-hour delay is 10 percent of daily delay)
- Step 6: Input the MOBILE 6/MOVES emission factors for arterial idling speed

- Step 7: Calculate the net emissions change in kilograms per day
- Step 8: Calculate the net emissions change in kilograms per year (seasonally adjusted)
- Step 9: Calculate the cost-effectiveness (first year cost per kilogram of emissions reduced)

Pedestrian and Bicycle Infrastructure

A shared-use path that would enable increased walking and biking and reduces automobile trips

- Step 1: Calculate the estimated number of one-way trips based on the percentage of workers residing in the communities of the facilities service area and the communities' bicycle and pedestrian commuter mode share
- Step 2: Calculate the reduction in vehicle-miles traveled per day and per year (assumes each trip is the length of the facility; assumes the facility operates 200 days per year)
- Step 3: Input the MOBILE 6/MOVES emission factors for the average commuter travel speed (assumes 35 mph)
- Step 4: Calculate the net emissions change in kilograms per year (seasonally adjusted)
- Step 5: Calculate the cost-effectiveness (first year cost per kilogram of emissions reduced)

Calculations may be performed on the following project types; however, there are no projects of these types in the TIP.

New and Additional Transit Service

A new bus or shuttle service that reduces automobile trips

Park-and-Ride Lot

A facility that reduces automobile trips by encouraging high-occupancy vehicle (HOV) travel through carpooling or transit

Bus Replacement

A new bus that replaces an old bus with newer, cleaner technology

PROJECTS WITH ASSUMED IMPACTS

Assumed Nominal Decrease or Increase in CO₂ Emissions

Projects that could produce a minor decrease or increase in emissions (but which cannot be calculated with any precision)

Examples include roadway repaving or reconstruction projects that add a new sidewalk or new bike lanes. Such projects would enable increased travel by walking or bicycling, but there may not be sufficient data or analysis to support any projections of GHG impacts. These projects are categorized as an assumed nominal increase or decrease from pedestrian and/or bicycle infrastructure, intelligent transportation systems (ITS) and/or traffic operational

improvements, transit infrastructure, and freight infrastructure.

No CO₂ Impact

Projects that do not change the capacity or use of a facility—for example, a resurfacing project that restores a roadway to its previous condition, and a bridge rehabilitation/replacement that restores the bridge to its previous condition—and which would be assumed to have no CO₂ impact.

More details on these projects, including a description of each project’s anticipated CO₂ impacts, are discussed in Chapter 3. The following tables display the GHG impact analyses of projects funded in the Highway Program (Table C-1) and Transit Program (Table C-2). Table C-3 summarizes the GHG impact analysis of highway projects completed from FFY 2015 and FFY 2016.

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
606223	Acton-Concord - Bruce Freeman Rail Construction (Phase II-B)	Quantified		TBD
607748	Acton - Intersection and Signal Improvements on SR 2 and SR 111 (Massachusetts Avenue) at Piper Road and Taylor Road	Quantified		TBD
606381	Arlington - Belmont - Highway Lighting Repair and Maintenance on Route 2	Qualitative		No assumed impact/negligible impact on emissions
604123	Ashland - Reconstruction on Route 126 (Pond Street) from Framingham Town Line to Holliston Town Line	Quantified	140,616	Quantified Decrease in Emissions from Complete Streets Project
29492	Bedford- Billerica- Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road, includes Reconstruction of B-04-006 (Phase III)	Quantified		RTP project included in the statewide model
608347	Beverly- Intersection Improvements at 3 Locations: Cabot Street (Route 1A/97) at Dodge Street (Route 1A), County Way, Longmeadow Road and Scott Street, McKay Street at Balch Street and Veterans Memorial Bridge (Route 1A) at Rantoul, Cabot, Water, and Front Streets	Quantified	582,422	Quantified Decrease in Emissions from Traffic Operational Improvement
608614	Boston - Superstructure Replacement, B-16-179, Austin Street over I-93 Ramps, MBTA Commuter Rail and Orange Line	Qualitative		No assumed impact/negligible impact on emissions
604173	Boston- Bridge Rehabilitation, B-16-016, North Washington Street over the Boston Inner Harbor	Qualitative		Qualitative Decrease in Emissions
607888	Boston- Brookline- Multi-Use Path Construction on New Fenway	Quantified	96,163	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
605733	Boston- Highway Lighting System Replacement on I-93, from Southampton Street to Neponset Avenue	Qualitative		No assumed impact/negligible impact on emissions
605733	Boston- Highway Lighting System Replacement on I-93, from Southampton Street to Neponset Avenue	Qualitative		No assumed impact/negligible impact on emissions
606453	Boston- Improvements on Boylston Street, from Intersection of Brookline Avenue and Park Drive to Ipswich Street	Quantified	1,780,834	Quantified Decrease in Emissions from Complete Streets Project
607759	Boston- Intersection and Signal Improvements at the VFW Parkway and Spring Street	Quantified		TBD
604761	Boston- Multi-Use Trail Construction (South Bay Harbor), from Ruggles Station to Fort Point Channel	Quantified	767,491	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608234	Boston- Randolph- Bridge Preservation of 3 Bridges: B-16-165, R-01-005 and R-01-007	Qualitative		No assumed impact/negligible impact on emissions
605789	Boston- Reconstruction of Melnea Cass Boulevard	Quantified		TBD
606226	Boston- Reconstruction of Rutherford Avenue, from City Square to Sullivan Square	Quantified		RTP project included in the statewide model
606134	Boston- Traffic Signal Improvements on Blue Hill Avenue and Warren Street	Quantified		TBD

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608009	Boxborough- Bridge Replacement, B-18-002, Route 111 over I-495	Qualitative		No assumed impact/negligible impact on emissions
608608	Braintree - Highway Lighting Improvements at I-93/Route 3 Interchange	Qualitative		No assumed impact/negligible impact on emissions
605110	Brookline- Intersection and Signal Improvements at Route 9 and Village Square (Gateway East)	Quantified	66,226	Quantified Decrease in Emissions from Complete Streets Project
606316	Brookline- Pedestrian Bridge Rehabilitation, B-27-016, over MBTA off Carlton Street	Qualitative		Qualitative Decrease in Emissions
608149	Burlington- Bridge Replacement, B-29-010, I-95/St 128 (NB) and I-95/St 128 (SB) over Route 3A (Cambridge Street)	Qualitative		No assumed impact/negligible impact on emissions
608482	Cambridge- Somerville- Resurfacing and Related Work on Route 28	Qualitative		No assumed impact/negligible impact on emissions
608484	Canton- Milton- Resurfacing and Related Work on Route 138	Qualitative		No assumed impact/negligible impact on emissions
608599	Canton-Foxborough-Norwood-Walpole- Stormwater Improvements along Route 1, Route 1A, and Interstate 95	Qualitative		No assumed impact/negligible impact on emissions
608611	Canton-Milton-Randolph - Replacement and Rehabilitation of the Highway Lighting System at the Route 24/Route 1/I-93 Interchange	Qualitative		No assumed impact/negligible impact on emissions
608206	Chelsea to Danvers- Guide and Traffic Sign Replacement on a Section of US Route 1	Qualitative		No assumed impact/negligible impact on emissions
BN1800	Community Transportation Program	Quantified		TBD
608220	Concord- Resurfacing and Related Work on Route 2	Qualitative		No assumed impact/negligible impact on emissions
608478	Concord- Resurfacing and Related Work on Route 2	Qualitative		No assumed impact/negligible impact on emissions
607954	Danvers- Bridge Replacement, D-03-018, St 128 over Waters River	Qualitative		No assumed impact/negligible impact on emissions
607901	Dedham- Pedestrian Improvements along Elm Street and Rustcraft Road Corridors	Quantified	13,608	Quantified Decrease in Emissions from Complete Streets Project
605608	Dedham- Resurfacing and Related Work on Route 109	Qualitative		No assumed impact/negligible impact on emissions
608596	Essex- Bridge Preservation, E-11-001, Route 133/Main Street over Essex River	Qualitative		No assumed impact/negligible impact on emissions
607998	Everett - Improvements at Madelaine English (SRTS)	Qualitative		Qualitative Decrease in Emissions
607652	Everett- Reconstruction of Ferry Street, South Ferry Street and a Portion of Elm Street	Quantified	415,498	Quantified Decrease in Emissions from Complete Streets Project
608210	Foxborough- Plainville- Wrentham- Franklin- Interstate Maintenance and Related Work on I-495	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608480	Foxborough- Walpole- Resurfacing and Related Work on Route 1	Qualitative		No assumed impact/negligible impact on emissions
607732	Framingham- Natick- Cochituate Rail Trail Construction including Pedestrian Bridge, N-03-014, over Route 9 and F-07-033=N-03-029 over Route 30	Quantified	78,019	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608228	Framingham- Reconstruction of Union Avenue, from Proctor Street to Main Street	Quantified	-196,862	Quantified Increase in Emissions
BN1570	Green Line Extension Project- Extension to College Avenue with the Union Square Spur	Quantified		RTP project included in the statewide model
606553	Hanover- Norwell- Superstructure Replacement, H-06-010, St 3 over St 123 (Webster Street) and N-24-003, St 3 over ST 123 (High Street)	Qualitative		Qualitative Decrease in Emissions
600518	Hingham- Intersection Improvements at Derby Street, Whiting Street (Route 53) and Gardner Street	Quantified	-113,400	Quantified Increase in Emissions
607309	Hingham- Reconstruction and Related Work on Derby Street, from Pond Park Road to Cushing Street	Quantified	351,994	Quantified Decrease in Emissions from Complete Streets Project
606501	Holbrook- Reconstruction of Union Street (Route 139), from Linfield Street to Centre Street/Water Street	Quantified	4,536	Quantified Decrease in Emissions from Complete Streets Project
607428	Hopedale- Milford- Resurfacing and Intersection Improvements on Route 16 (Main Street), from Water Street West to Approximately 120 Feet West of the Milford/Hopedale Town Line and the Intersection of Route 140	Quantified	186,883	Quantified Decrease in Emissions from Complete Streets Project
606043	Hopkinton- Signal and Intersection Improvements on Route 135	Quantified	1,194,782	Quantified Decrease in Emissions from Complete Streets Project
606632	Hopkinton- Westborough- Bridge Replacement, H-23-006=W-24-016, Fruit Street over CSX and Sudbury River	Qualitative		No assumed impact/negligible impact on emissions
607977	Hopkinton- Westborough- Reconstruction of I-90/I-495 Interchange	Quantified		RTP project included in the statewide model
608379	Lexington- Belmont- Arlington- Cambridge- Pavement Preservation on Route 2	Qualitative		No assumed impact/negligible impact on emissions
602077	Lynn- Reconstruction on Route 129 (Lynnfield Street), from Great Woods Road to Wyoma Square	Quantified	15,422	Quantified Decrease in Emissions from Complete Streets Project
604952	Lynn- Saugus- Bridge Replacement, L-18-016=S-05-008, Route 107 over the Saugus River (AKA - Belden G. Bly Bridge)	Qualitative		Qualitative Decrease in Emissions
607477	Lynnfield- Peabody- Resurfacing and Related Work on Route 1	Qualitative		No assumed impact/negligible impact on emissions
604810	Marlborough- Reconstruction of Route 85 (Maple Street)	Quantified	589,680	Quantified Decrease in Emissions from Complete Streets Project
608467	Marlborough- Sudbury- Resurfacing and Related Work on Route 20	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608217	Marlborough- Sudbury- Stormwater Improvements along Route 20	Qualitative		No assumed impact/negligible impact on emissions
604655	Marshfield- Bridge Replacement, M-07-007, Beach Street over the Cut River	Qualitative		Qualitative Decrease in Emissions
608069	Marshfield- Pembroke- Norwell- Hanover- Rockland- Hingham- Resurfacing and Related Work on Route 3	Qualitative		No assumed impact/negligible impact on emissions
608637	Maynard - Bridge Replacement, M-10-006, Florida Road over Assabet River	Qualitative		No assumed impact/negligible impact on emissions
603917	Medford- Stoneham- Woburn- Reading- Highway Lighting Rehabilitation on I-93 (Phase II)	Qualitative		No assumed impact/negligible impact on emissions
608522	Middleton- Bridge Replacement- M-20-003, RT 62/Maple Street over Ipswich River	Qualitative		No assumed impact/negligible impact on emissions
607763	Milton- Intersection and Signal Improvements at 2 Locations: SR 138 (Blue Hill Avenue) at Atherton Street and Bradlee Road and SR 138 (Blue Hill Avenue) at Milton Street and Dollar Lane	Quantified		TBD
607754	Milton- Intersection and Signal Improvements at Granite Avenue and Squantum Street	Quantified		TBD
605034	Natick- Reconstruction of Route 27 (North Main Street), from North Avenue to the Wayland Town Line	Quantified	177,811	Quantified Decrease in Emissions from Complete Streets Project
606635	Needham- Newton- Reconstruction of Highland Avenue, Needham Street and Charles River Bridge, N-04-002, from Webster Street (Needham) to Route 9 (Newton)	Quantified	729,389	Quantified Decrease in Emissions from Complete Streets Project
603711	Needham- Wellesley- Rehab/Replacement of 6 Bridge on I-95/Route 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 and W-13-023 (Add-a-Lane- Contract V)	Quantified		RTP project included in the statewide model
608609	Newton - Westwood, Bridge No. N-12-0056 and W-31-006: Clean and Paint Structural Steel	Qualitative		No assumed impact/negligible impact on emissions
607915	Newton- Wellesley- Weston- Bridge Maintenance of N-12-063, N-12-054, N-12-055 and N-12-056 on I-95/Route 128	Qualitative		No assumed impact/negligible impact on emissions
608610	Newton, Bridge Number N-12-055: Clean and Paint Structural Steel	Qualitative		No assumed impact/negligible impact on emissions
608052	Norwood- Intersection and Signal Improvements at US 1 (Providence Highway) and Morse Street	Quantified		TBD
605857	Norwood- Intersection Improvements at Route 1 and University Avenue/Everett Street	Quantified	1,003,363	Quantified Decrease in Emissions from Traffic Operational Improvement
608468	Peabody- Danvers- Resurfacing and Related Work on Route 1	Qualitative		No assumed impact/negligible impact on emissions
608208	Quincy- Milton- Boston- Interstate Maintenance and Related Work on I-93	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608208	Quincy- Milton- Boston- Interstate Maintenance and Related Work on I-93	Qualitative		No assumed impact/negligible impact on emissions
607133	Quincy- Superstructure Replacement, Q-01-039, Robertson Street over I-93/US 1/SR 3	Qualitative		No assumed impact/negligible impact on emissions
607481	Randolph- Quincy- Braintree- Interstate Maintenance and Related Work on I-93 (SB)	Qualitative		No assumed impact/negligible impact on emissions
608205	Reading to Lynnfield- Guide and Traffic Sign Replacement on a Section of I-95(SR 128)	Qualitative		No assumed impact/negligible impact on emissions
608219	Reading- Wakefield- Interstate Maintenance and Related Work on I-95	Qualitative		No assumed impact/negligible impact on emissions
607999	Revere- Improvements at Garfield Elementary and Middle School (SRTS)	Qualitative		Qualitative Decrease in Emissions
608521	Salem - Structural Steel Repairs, Bridge No. S-01-018	Qualitative		No assumed impact/negligible impact on emissions
608352	Salem- Canal Street Rail Trail Construction (Phase 2)	Quantified	9,979	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
608008	Saugus - Resurfacing and Related Work on Route 1	Qualitative		No assumed impact/negligible impact on emissions
608079	Sharon- Bridge Replacement, S-09-003 (40N), Maskwonicut Street over Amtrak/MBTA	Qualitative		Qualitative Decrease in Emissions
604989	Southborough- Reconstruction of Main Street (Route 30), from Sears Road to Park Street	Quantified	213,192	Quantified Decrease in Emissions from Complete Streets Project
607488	Southborough- Resurfacing and Related Work on Route 9, from the Framingham Town Line to White Bagley Road	Qualitative		No assumed impact/negligible impact on emissions
608476	Southborough- Resurfacing and Related Work on Route 30	Qualitative		No assumed impact/negligible impact on emissions
608613	Stoneham - Bridge Replacement, S-27-008, Marble Street over I-93	Qualitative		No assumed impact/negligible impact on emissions
602165	Stoneham- Signal and Intersection Improvements at Route 28/North Street	Quantified	139,709	Quantified Decrease in Emissions from Traffic Operational Improvement
605342	Stow- Bridge Replacement, S-29-001, (ST 62) Gleasondale Road over the Assabet River	Qualitative		No assumed impact/negligible impact on emissions
608255	Stow- Bridge Replacement, S-29-011, Box Mill Road over Elizabeth Brook	Qualitative		No assumed impact/negligible impact on emissions
607761	Swampscott- Intersection and Signal Improvements at SR 1A (Paradise Road) at Swampscott Mall	Quantified		TBD
607507	Wakefield- Bridge Deck Replacement, W-01-021 (2MF), Hopkins Street over I-95/St 128	Qualitative		Qualitative Decrease in Emissions

TABLE C-1: Greenhouse Gas Regional Highway Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
607329	Wakefield- Lynnfield- Rail Trail Extension, from the Galvin Middle School to Lynnfield/Peabody Town Line	Quantified		TBD
602261	Walpole- Reconstruction on Route 1A (Main Street), from the Norwood Town Line to Route 27, includes W-03-024 over the Neponset River	Quantified	215,006	Quantified Decrease in Emissions from Complete Streets Project
607533	Waltham- Bridge Replacement, W-04-006, Woerd Avenue over Charles River	Qualitative		No assumed impact/negligible impact on emissions
608004	Watertown- Improvements at Hosmer Elementary School (SRTS)	Qualitative		Qualitative Decrease in Emissions
601630	Weymouth- Abington- Reconstruction and Widening on Route 18 (Main Street) from Highland Place to Route 139 (4.0 Miles) includes Replacing W-32-013, Route 18 over the Old Colony Railroad (MBTA)	Quantified		RTP project included in the statewide model
608003	Weymouth- Improvements at Pingree Elementary School (SRTS)	Qualitative		Qualitative Decrease in Emissions
608483	Weymouth- Resurfacing and Related Work on Route 3A	Qualitative		No assumed impact/negligible impact on emissions
608214	Winchester- Stormwater Improvements along Route 3	Qualitative		No assumed impact/negligible impact on emissions
608097	Woburn- Bridge Replacement and Related Work, W-43-028, Washington Street over I-95	Qualitative		No assumed impact/negligible impact on emissions
604996	Woburn- Bridge Replacement, W-43-017, New Boston Street over MBTA	Quantified		RTP project included in the statewide model
604935	Woburn- Reconstruction of Montvale Avenue, from I-93 Interchange to Central Street (Approx. 1,850 FT)	Quantified	98,885	Quantified Decrease in Emissions from Complete Streets Project

TABLE C-2: Greenhouse Gas Regional Transit Project Tracking

Regional Transit Authority	Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
CATA	Acquire - Miscellaneous Support Equipment	Qualitative		No assumed impact/negligible impact on emissions
CATA	Acquire - Shop Equipment/Software Maintenance	Qualitative		No assumed impact/negligible impact on emissions
CATA	Buy Replacement 30-Foot Buses (3)	Quantified	1,278	Quantified Decrease in Emissions from Bus Replacement
CATA	Buy Replacement Trolley Buses (2)	Quantified	530	Quantified Decrease in Emissions from Bus Replacement
CATA	Construct - Bus Shelter-CATA HUB/COA	Qualitative		No assumed impact/negligible impact on emissions
CATA	Preventative Maintenance	Qualitative		No assumed impact/negligible impact on emissions
CATA	Rehab- Shelters Railroad, Park and Ride, Emerson Ave	Qualitative		No assumed impact/negligible impact on emissions
CATA	Rehab/Renovate - Bus Passenger Shelters	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Bridge and Tunnel Program	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Green Line Extension Project - Extension to College Avenue with the Union Square Spur	Quantified		RTP project included in the statewide model
MBTA	Green Line Overhaul	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Green Line Reliability Improvements	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Stations and Facilities	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Bus Overhaul	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Elevator Program	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Revenue Vehicle Program	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Emission Control Diesel Bus Selective System Reliability Program	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Bus Program	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-2: Greenhouse Gas Regional Transit Project Tracking

Regional Transit Authority	Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
MBTA	Positive Train Control	Qualitative		No assumed impact/negligible impact on emissions
MBTA	South Shore Parking Garage	Qualitative		No assumed impact/negligible impact on emissions
MBTA	Bus Procurement (60 Hybrid Buses)	Quantified	2,398,879	Quantified Decrease in Emissions from Bus Replacement
MBTA	Systems Upgrade	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	Acquisition of Bus Support Equipment/Facilities	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	Construct Miscellaneous Electric/Power Equipment	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	Construction of Bus Stations/Terminals	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	Mobility Management	Qualitative		No assumed impact/negligible impact on emissions
MWRTA	Non-Fixed Route ADA Paratransit Services	Quantified	6,653	Quantified Decrease in Emissions from Bus Replacement
MWRTA	Terminal, Intermodal (Transit)	Qualitative		No assumed impact/negligible impact on emissions

TABLE C-3: Greenhouse Gas Regional Highway "Completed" Project Tracking

MassDOT Project ID	MassDOT Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description	FFY of Contract Award
606284	Boston- Improvements to Commonwealth Avenue, from Amory Street to Alcorn Street	Quantified	162,389	Quantified Decrease in Emissions from Complete Streets Project	2015
605657	Medway- Reconstruction on Route 109, from Holliston Street to 100 Feet West of Highland Street	Quantified	707,616	Quantified Decrease in Emissions from Complete Streets Project	2015
605146	Salem- Reconstruction on Canal Street, from Washington Street and Mill Street to Loring Avenue and Jefferson Avenue	Quantified	66,226	Quantified Decrease in Emissions from Complete Streets Project	2015
604531	Acton- Assabet River Rail Trail	Quantified	61,690	from Bicycle and Pedestrian Infrastructure	2015
602000	Weston- Intersection and Signal Improvements at Route 30 (South Ave) and Wellesley Street	Quantified	214,099	Quantified Decrease in Emissions from Traffic Operational Improvement	2015
607209	Somerville- Cambridge- Reconstruction of Beacon Street, from Oxford Street to Cambridge City Line	Quantified	684,057	Quantified Decrease in Emissions from Complete Streets Project	2015
601579	Wayland- Signal and Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	Quantified	205,105	Quantified Decrease in Emissions from Traffic Operational Improvement	2016

TABLE C-4: Greenhouse Gas Regional Transit "Complete" Project Tracking

Regional Transit Authority	Project Description	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description	FFY of Contract Award
CATA	Bus Replacement - 30-Foot Bus (2)	Quantified	786	Quantified Decrease in Emissions from Bus Replacement	2015
CATA	Bus Replacement - Less than 30-Foot Bus (3)	Quantified	18,666	Quantified Decrease in Emissions from Bus Replacement	2015
MBTA	Revenue Vehicle Program - Bus Replacement (60)	Quantified	2,398,879	Quantified Decrease in Emissions from Bus Replacement	2015
MWRTA	Van Replacement (2)	Quantified	4,457	Quantified Decrease in Emissions from Bus Replacement	2015
MWRTA	Mini-Van Replacement (8)	Quantified	5,211	Quantified Decrease in Emissions from Bus Replacement	2015
MWRTA	Bus Replacement - Less than 30-Foot Bus (2)	Quantified	8,640	Quantified Decrease in Emissions from Bus Replacement	2015
CATA	Bus Replacement - 30-Foot Bus (4)	Quantified	1,660	Quantified Decrease in Emissions from Bus Replacement	2016
CATA	Bus Replacement - Less than 30-Foot Bus (3)	Quantified	10,151	Quantified Decrease in Emissions from Bus Replacement	2016
MBTA	Revenue Vehicle Program - Bus Replacement (369)	Quantified	1,264,520	Quantified Decrease in Emissions from Bus Replacement	2016
MWRTA	Bus Replacement - Less than 30-Foot Bus (5)	Quantified	20,107	Quantified Decrease in Emissions from Bus Replacement	2016

D APPENDIX

FFY 2016 Highway Projects Status

This appendix lists information about the status of roadway projects in the federal fiscal year 2016 element of the FFYs 2016–20 TIP.

TABLE D-1
Advanced construction projects

Project Number	Project Description	District	Funding Source(s)
603711	Needham- Wellesley – Rehab/Replacement of 6 Bridges on I-95/Route 128: N-04-020, N-04-021, N-04-022, N-04-026, N-04-027, N-04-037 & W-13-023 (Add-A-Lane – Contract V)	6	BR-AC

TABLE D-2
Projects advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
603917	Medford- Stoneham- Woburn- Reading – Highway Lighting Rehabilitation on I-93 (Phase III)	4	STP
601579	Wayland – Signal & Intersection Improvements at Route 27 (Main Street) and Route 30 (Commonwealth Road)	3	CMAQ
606176	Franklin- Wrentham- Plainville- Foxborough- Mansfield – Interstate Maintenance & Related Work on I-495 (NB & SB)	5	NHPP

TABLE D-3
Projects expected to be advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
29492	Bedford- Billerica- Middlesex Turnpike Improvements, from Crosby Drive North to Manning Road, Includes Reconstruction	4	STP
608000	Bedford – Improvements at John Glenn Middle (SRTS)	4	TAP
600867	Boston – Bridge Rehabilitation, B-16-237, Massachusetts Avenue (Route 2A) over Commonwealth Avenue	6	NHPP
605733	Boston – Highway Lighting System Replacement on I-93, from Southampton Street to Neponset Avenue	6	STP
606117	Boston – Traffic Signal Improvements at 9 Locations (Previously 18 Intersections)	6	CMAQ, STP
607685	Braintree – Bridge Rehabilitation, B-21-060 and B-21-061, ST 3 (SB) and ST 3 (NB) Over Ramp C (Quincy Adams)	6	NHPP
607345	Cohasset – Superstructure Replacement & Substructure Rehabilitation, C-17-002, Atlantic Avenue over Little Harbor	5	STP-BR-OFF
605189	Concord – Bruce Freeman Rail Trail Construction, from Commonwealth Avenue to Powder Mill Road, Includes 2 Railroad Bridges & 1 Culvert (Phase II-C)	4	CMAQ
606553	Hanover- Norwell – Superstructure Replacement, H-06-010, ST 3 over ST 123 (Webster Street) & N-24-003, ST 3 over ST 123 (High Street)	5	NHPP
607409	Lexington – Reconstruction on Massachusetts Avenue, from Marrett Road to Pleasant Street	4	HSIP
608059	Salem – Stormwater Improvements Along Route 107 (Salem Bypass Road)	4	STP-TE
607997	Saugus – Improvements at Veterans Memorial School (SRTS)	4	TAP

TABLE D-3 (CONTINUED)
Projects expected to be advertised in FFY 2016

Project Number	Project Description	District	Funding Source(s)
601630	Weymouth- Abington – Reconstruction & Widening on Route 18 (Main Street) from Highland Place to Route 139 (4.0 miles)	6	HSIP, STP, HPP (1998)
607755	Weymouth – Intersection & Signal Improvements at 2 Locations: SR 53 (Washington Street) at Mutton Lane & Pleasant Street	6	HSIP
605721	Weymouth – Intersection Improvements at @ Middle Street, Libbey Industrial Parkway and Tara Drive	6	CMAQ
603008	Woburn – Bridge Replacement, W-43-003, Salem Street over MBTA	4	NHPP

TABLE D-4
Projects that will be advertised in a future TIP element

Project Number	Project Description	District	Funding Source(s)
606316	Brookline – Pedestrian Bridge Rehabilitation, B-27-016, over MBTA off Carlton Street	6	CMAQ
607998	Everett – Improvements at Madelaine English (SRTS)	4	TAP
607999	Revere – Improvements at Garfield Elementary & Middle School (SRTS)	4	TAP
607488	Southborough – Resurfacing & Related Work on Route 9, from the Framingham T.L. to White Bagley Road	3	NHPP

TABLE D-5
Projects that were removed from the TIP

Project Number	Project Description	District	Funding Source(s)
607340	Wellesley – Resurfacing on Route 9, from Dearborn Street to Natick T.L.	6	NHPP
600703	Lexington – Bridge Replacement, L-10-009, Route 2 (EB & WB) over Route I-95 (Route 128)	4	NHPP
608134	Hingham- Brockton – Stormwater Improvements along Route 3A/Route 28	5	STP-TE

TABLE D-6
Projects that were added to the TIP

Project Number	Project Description	District	Funding Source(s)
604652	Stoneham- Winchester- Woburn – Tri-Community Bikeway Including New Bridge, W-43-029, over the Aberjona River	4	CMAQ
607498	Quincy – Bridge Maintenance of Q-01-051 on Route 3	6	NHPP
608180	Wellesley- Resurfacing on Route 9, from Limit of Add-A-Lane to east of Overbrook Intersection	6	NHPP

E APPENDIX

Transit Projects Status

This appendix is under development. It will list information about the status of transit projects programmed on previous elements of the TIP.



APPENDIX

Public Comments on the Draft FFYs 2017-21 TIP

This appendix contains a table of summarized public comments on the draft FFYs 2017–21 TIP received during the public comment period. (For the complete text contained in the comment letters, please refer to the compiled digitized version in PDF format at our TIP webpage: <http://www.ctps.org/tip>.)

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Atlantic Avenue over Little Harbor Inlet (Cohasset)	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO encourage MassDOT Highway Division to make it a priority to advertise the Atlantic Avenue over Little Harbor Inlet bridge project.	Comment submitted to MassDOT.
Bridge Replacement, Gleasondale Road over the Assabet River (Stow)	Support	<p>Legislative: Representative Kate Hogan, Senator James B. Eldridge</p> <p>Municipal: William Wrigley, Town Administrator; James H. Salvie, Chair of the Board of Selectmen</p>	<p>Support inclusion of the Replacement of the Gleasondale Road Bridge in the FFYs 2017-21 TIP.</p> <p>MassDOT observed signs of structural decay in December 2015. To ensure the safety of drivers, traffic across the bridge was restricted to one lane with an alternating one-way signal. MassDOT has developed a timeline to fully repair the bridge, which is dependent upon the project's inclusion in the FFYs 2017-21 TIP. Design funding for the project has already been made available and is shovel-ready.</p> <p>2.1 million drivers and cyclists use the bridge annually as the most direct route across the Assabet River in Stow, Hudson, and Maynard. The project will ensure its safety and convenience for area residents.</p>	Included in the statewide project list in FFY 2020.
Bruce Freeman Rail Trail (BFRT)	Support	<p>Organization: Friends of the Bruce Freeman Rail Trail</p> <p>Acton residents: Anne Anderson, Martin Burke, Robert Sekuler, Richard Fallon, Susan M. Johnson</p> <p>Arlington resident: Russ Cohen</p> <p>Chelmsford resident: Ram Narayan</p> <p>Concord residents: William Herring, David Clarke, Robert P. Comer, Nina Huber, Ron Bernard, Electa Tritsch, Roy Westerberg, Sue Felshin, Dave Lebling, Janet Rothrock, Nancy Kerr, Kimber Lynn Drake, Barbara Pike</p> <p>Framingham resident: Susan Haney</p> <p>Maynard resident: Kevin Feehily</p> <p>Sudbury residents: Helen Claire Sievers, LeRoy Sievers, Thomas Hollocher</p> <p>Westford residents: Michael Wolfberg, Wendy Wolfberg</p> <p>Weston resident: David Hutcheson</p> <p>Other: Robert Call</p>	<p>Support inclusion of the Bruce Freeman Rail Trail Phase 2C in FFY 2016 and Phase 2B in FFY 2018 of the TIP.</p> <p>The project will provide safe, off-road access for cyclists and pedestrians to local merchants and the West Concord Commuter Rail station, reducing vehicle trips and improving air quality. Other benefits noted by commenters include easier and safer travel across Route 2; increased tourism; recreational benefits; economic benefits to businesses in the area of the rail trail; recreational opportunities; the promotion of healthy activity; and benefits to the community.</p> <p>Several commenters request future inclusion of Phase 2D in the TIP.</p>	Included in the statewide project list in FFY 2018.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Bruce Freeman Rail Trail	Request	Sudbury resident: Pat Brown	<p>Requests information regarding what body considers the effect of the BFRT in Concord on the proposed Concord Rotary Redesign.</p> <p>Requests that information regarding the responsible agency for identifying any constraints or adverse impacts on potential designs for the Concord Rotary resulting from the design of the Route 2 crossing for BFRT Phase 2B be added to the TIP Interactive Database.</p> <p><i>[For further details, please refer to pages 33-34 of the compilation of comments.]</i></p>	No action at this time. Comment submitted to MassDOT.
Bruce Freeman Rail Trail (Phase 2D) (Sudbury)	Oppose	Sudbury resident: Daniel DePompei	<p>Opposes future inclusion of the Bruce Freeman Rail Trail (Phase 2D) in the TIP.</p> <p>Expresses concern that the project does not comply with local environmental bylaws and storm water regulations. Raises questions whether the project triggers Massachusetts Environmental Policy Act (MEPA) thresholds and whether MassDOT design requirements supersede local environmental bylaws and storm water regulations. Notes that the project right-of-way is located in a wetland, and proposes that MassDOT consider alternative alignments or alternate design standards for the trail.</p>	No action at this time. Project is in the LRTP. Comment submitted to MassDOT.
CMAQ Funding	Request	Organization: CrossTown Connect TMA	Requests using a moderate of CMAQ funding to help TMAs reach their goals of reducing congestion and air pollution and increasing economic growth.	CMAQ funding set aside for the Community Transportation / Parking / Clear Air & Mobility investment program in FFY 2021.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTER(S)	COMMENT (Summarized)	ACTION
Cochituate Rail Trail (Framingham & Natick)	Request	<p>Legislative: Representative David P. Linsky Municipal: Town of Natick, Board of Selectmen Framingham resident: Andrea Carr-Evans Natick resident: Sue Hur</p>	<p>Request that the Cochituate Rail Trail remain programmed in FFY 2018 of the TIP.</p> <p>The Town's efforts to build public and private support for the project, including acquisition, could be tremendously harmed by a delay. Natick has committed over \$800,000 to the project and is working collaboratively with MassDOT on design and acquisition, as well as with a non-profit for private fundraising and are eager to advance opportunities for public-private partnerships. The project would reduce the demand for parking at the Natick Commuter Rail station and provide safe recreation.</p>	Project remains included in the statewide project list in FFY 2018.
Community Path Extension	Support / Request	<p>Organization: Friends of the Community Path</p>	<p>Support inclusion of a full, off-road Community Path Extension (CPX) in the FFYs 2017-21 TIP.</p> <p>States that the CPX is the top-ranked priority in the MPO's 2014 evaluation of regional bicycle network gaps, with an MAPC prediction of up to 3 million bike and pedestrian trips per year.</p> <p>Request that all Green Line Design/Build bidders include Alternative Technical Concepts for a fully off-road CPX from the existing terminus in Somerville to the NorthPoint path terminus in Cambridge, and that MassDOT staff meet with the Friends of the Community Path to review their cost-saving alternative design. State that the FCP design keeps the CPX fully off-road and connecting to the NorthPoint Path, maintains all CPX street access points, and keeps the CPX on the south side of the corridor for safer and easier crossing. Note that this design's cost is similar to the reduced plan proposed by the Interim GLX team.</p>	Included in the MPO target list in FFYs 2017-21. Comment submitted to MassDOT.
Corridor Improvements and Related Work on Justice Cushing Highway (Cohasset & Scituate)	Request	<p>Joan Meschino, Candidate for State House of Representatives, Third Plymouth District</p>	<p>Requests that the MPO continue to review the Corridor Improvements and Related Work on Justice Cushing Highway and work with Hull and Cohasset to advance them for inclusion in a future TIP.</p>	Comment submitted to MassDOT.
Cost Overruns	Request	<p>Organization: Regional Transportation Advisory Council</p>	<p>Requests a better understand of cost overruns on several large projects, and asks the MPO to ensure the benefits of these projects still exceed the costs. Requests that RTAC be engaged in conversations with MassDOT and the MPO about how to minimize these overruns.</p>	No action on the TIP. Subject will be discussed at a future MPO meeting.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Cost-Effectiveness of Multi-Use Path Projects	Request	Sudbury resident: Pat Brown	Requests the MPO study the cost-effectiveness and actual benefits of off-road multi-use path CMAQ projects both in addressing statewide transportation issues. <i>[For further details, please refer to pages 33-34 of the compilation of comments.]</i>	No action on the TIP. The MPO will be discussing changes to the project selection process.
Delay to the Construction of Projects	Other	Organization: 495/MetroWest Partnership	Requests that the MPO recognize the economic impact of delaying projects in the 495/MetroWest Corridor. Projects such as Improvements at I-495 & Route 9 must be addressed sooner rather than later to successfully confront congestion, safety, air quality, and sustainable development issues in the region.	Comment considered by the MPO.
I-95 / I-93 Canton Interchange Project	Request	Municipal: Michael Jaillet, Westwood Town Administrator Organization: Neponset Valley TMA	Request inclusion of the Canton Interchange Project in the FFYs 2017-21 TIP. Towns in the TRIC region view the project as a top priority for the enhancement of economic development in the region and the Commonwealth. The project would eliminate progressively worsening traffic congestion problems which impair the region's potential economic growth. The project will bolster the efforts of the University Station project, the redevelopment of the 120 acres of University Office Park into a transit-oriented, mixed-use development.	Project not included in the FFYs 2017-21 TIP.
Intersection Improvements at Derby Street, Gardner Street, and Whiting Street (Hingham)	Support	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports inclusion of the Intersection Improvements at Derby Street, Gardner Street, and Whiting Street in FFY 2018 of the TIP. States the project will address traffic flow and safety issues through signal and roadway configuration upgrades and accommodations for cyclists and pedestrians.	Included in the MPO target list in FFYs 2017-18.
Pavement Preservation on Route 2 (Lexington, Belmont, Arlington, & Cambridge)	Support	Organization: Alewife TMA	Supports inclusion of the Pavement Preservation on Route 2 in the FFYs 2017-21 TIP.	Included in the statewide project list in FFY 2018.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Pedestrian Bridge Rehabilitation (Carlton Street Footbridge) (Brookline)		Municipal: Melvin A. Kleckner, Brookline Town Administrator	Requests that the Pedestrian Bridge Rehabilitation be programmed in FFY 2017 of the TIP, rather than FFY 2018. States that the two-year delay will inflate estimated construction costs as well as design engineering fees. Notes that the Town Meeting has overwhelmingly voted to support a series of warrant articles pursuant to Right-of-Way easements and design engineering appropriations for the footbridge, and has voted for authorization to secure all necessary easements. Local funding is fully programmed to meet all MassDOT final design development requirements and submittal dates. 75% design plans have been submitted, and MassDOT comments are expected in August. The Town and Kleinfelder Engineering will move forward with environmental review and permitting, as required. States that the footbridge project restores an historic pedestrian link to the Emerald Necklace and provides universal access to the Green Line.	Project remains included in the statewide project list in FFY 2018.
Project Evaluation	Request	Organization: Regional Transportation Advisory Council	Requests that off-street paths and transit projects be moved to separate scoring sheets from road projects so they can more easily be compared against each other, as currently off-street paths and transit projects do not score well on the criteria. Cross-modal tradeoffs should also be considered in transportation project and program development.	No action on the TIP. The MPO will be discussing changes to the project selection process.
Project Evaluation	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO give high value to a project's ability to deliver reductions in greenhouse gases during project evaluation.	No action on the TIP. The MPO will be discussing changes to the project selection process.
Project Evaluation Criteria	Other	Organization: Regional Transportation Advisory Council	Express appreciation for applying new criteria consistent with the MPO's goals and objects for project evaluation.	N/A
Project Evaluation Criteria	Other	Sudbury resident: Pat Brown	Express appreciation for applying new criteria consistent with the MPO's goals and objects for project evaluation.	N/A

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Project Selection	Request	Organization: Regional Transportation Advisory Council	Requests that the MPO program available funds in FFY 2021 of the TIP (and earlier, to the extent available, including staff recommended projects in FFY 2019) to smaller projects including Complete Streets, intersection improvements, community transit, and bicycle/pedestrian paths per the MPO's indicated priorities from 2015's scenario planning process, and considering the project evaluation score along with cost, readiness, and geographic quality. If major funded projects are delayed, ready-to-go projects should be identified that can be moved ahead in the TIP cycle.	Comment considered by the MPO.
Project Selection in the 495 / MetroWest Corridor	Support / Request	Organization: 495/MetroWest Partnership	Supports 23 projects within the 495/MetroWest Corridor in the FFYs 2017-21 TIP. Note the inclusion of the Reconstruction of I-90/I-495 Interchange, Resurfacing & Intersection Improvements on Route 16 (Milford), and MWRTA funding. Request consideration of 38 projects within the 495/MetroWest Corridor for TIP funding, four of which have been designated as "transportation nightmares" by the 495/MetroWest Partnership. <i>[For further details, please refer to pages 49-53 of the compilation of comments.]</i>	Programmed projects included in the FFYs 2017-21 TIP. Requested projects considered.
Projects in Acton, Boxborough, Littleton, and Maynard	Support / Request	Organization: CrossTown Connect TMA	Supports seven projects located in Acton, Boxborough, Littleton, and Maynard in the FFYs 2017-21 TIP. Requests that twelve projects in Acton, Boxborough, Littleton, and Maynard be advanced to the TIP as soon as possible. <i>[For further details, please refer to pages 38-40 of the compilation of comments.]</i>	Programmed projects included in the FFYs 2017-21 TIP. Requested projects considered.
Reconstruction and Related Work on Derby Street (Hingham)	Support / Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports inclusion of the Reconstruction and Related Work on Derby Street in FFY 2017 of the TIP. States the project will address capacity, congestion, and safety problems at the Route 3 ramps and along Derby Street. Requests that the design includes bicycle and pedestrian facilities.	Included in the MPO target list in FFY 2017.
Reconstruction of Atlantic Avenue (Hull)	Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Requests that the MPO continue to review the Reconstruction of Atlantic Avenue and work with Hull and Cohasset to advance them for inclusion in a future TIP.	Comment considered by the MPO.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Highland Avenue, Needham Street and the Charles River Bridge (Newton and Needham)	Support	<p>Legislative: Senator Michael F. Rush, Senator Ricahrd J. Ross, Representative Denise C. Garlick</p> <p>Municipal: Kate Fitzpatrick, Needham Town Manager</p>	<p>Support inclusion of the Highland Avenue/Needham Street Corridor Project in FFY 2018 of the TIP.</p> <p>The project lies at the heart of the N2 Corridor, which has seen recent development including the new TripAdvisor World Headquarters and a Marriott Residence Inn. A twenty seven acre parcel of land is being redeveloped. including office space, a hotel, and 390 units of market and affordable housing. MassWorks funding will support the reconstruction of two intersections, and inclusion of the balance of the project on the TIP will complete the project. Traffic studies confirm that the success of the N2 Corridor depends on the completion of the I-95/Route 128 Add-a-Lane and the planned improvements along Highland Avenue and Needham Street. Newton and Needham have lined up infrastructure investments to improve access and safety concurrently with this development and continue to look for additional transportation advancements. The project will help maximize economic development and mitigate traffic in the corridor, as well as provide safer vehicular and pedestrian mobility.</p>	Included in the MPO target list in FFY 2018.
Reconstruction of Main Street (Route 30) (Southborough)	Support	<p>Municipal: Karen Galligan, DPW Superintendent; Mark Purple, Town Administrator; Southborough Recreation Committee; Fire Chief Joseph C. Mauro; Police Chief Kenneth M. Paulhus</p> <p>Southborough residents: Kath Palm Reed, Doreen Ferguson, Valarie Lefavour, Joseph Palmer, Melissa Shields, Cynthia Foster, Walter Foster, William Harrington, Kathleen Barry, Brendan Barry, John W. Boland, Julie Fialkow</p>	<p>Support inclusion of the Reconstruction of Main Street in the FFYs 2017-21 TIP.</p> <p>The project will add sidewalks and reconstruction poor sidewalks, improving cyclists/pedestrian safety and access to government buildings and nearby schools. The roadway connects to Southborough's downtown commercial center, a preserved farm, and a passive recreation area. The project will also improve the poor condition of Main Street and improve the intersection with Route 85, which cannot currently accommodate its traffic levels. Intersection improvements will also allow for better maneuverability for school buses and large fire vehicles responding to emergencies.</p> <p>Several commenters expressed confidence that the project would pass at the Town's upcoming Special Town Meeting.</p>	Included in the MPO target list in FFY 2018.
Reconstruction of Main Street (Route 30) (Southborough)	Request	<p>Southborough resident: William Harrington</p>	<p>Requests that the "bump-out" in front of the library be reconsidered. The "bump-out" will negate the improvements at the intersection of Main Street and Route 30 by necessitating vehicles to reduce their speed while negotiating the proposed right-angle turn onto Common Street. It will also eliminate several needed parking spaces.</p>	Comment submitted to MassDOT.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTER(S)	COMMENT (Summarized)	ACTION
Reconstruction of Melnea Cass Boulevard (Boston)	Oppose	Jamaica Plain residents: Jeffrey Ferris, Anne McKinnon	Oppose inclusion of the Reconstruction of Melnea Cass in FFY 2019 of the TIP. The process by which the City of Boston has furthered the project is not consistent with MPO and MassDOT planning principles and guidelines. The project was originally connected to the Urban Ring, which is currently suspended. States that there have not been sufficient meetings or media releases to the general public regarding the project's current status or design, and there has not been an objective study of alternatives for various aspects of the project. The South Harbor Trail is intermixed with this project, but the implications in terms of cost and design are unclear. Notes that a two-way bicycle path exists in the corridor, questioning the need for an additional facility. The project cost has more than doubled since 2013, and the project is not at 25% design.	Included in the MPO target list in FFY 2019.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	Ashland residents: Janet McGann, KJ Leggett, Karthik Krishnaswamy, Megan Momtaheni, Erin Cote, R. Lightcap, Victoria Sadova, Susan Glueck, Karen McLoughlin, Nancy Puia, Brandi Kinsman, Rosemary Flaherty, Stephen Underwood, Adam Shuster, Brian Fabiano, Cliff Wilson, Elizabeth Glass, Karen Panike, Chufa He, Mary Schlipp, Cheryl Scott, Susan V. Ericson, Patricia Molyneux, Jane Scott, Nina Ashurst, Holly O'Brien, Julie Nardone, Evis Havari, Roland Houle, Beth Reynolds, Michele Hudak, Cheryl Cohen, Al Porter, Candice Wilson, Michael Kane, Vladimir Epifanov, Colin Hoogeboom, Glenn M. Travis, Matthew Richards, Delba Moraes, James Cashin, Joseph Coda, Ianna Ayala, Anne Primiano, Sarah Coleman, Praveen Dubey, Preston Crow, Todd Curlett, Mark Dassoni, Tonya Yaskovich, Jack Shear, Bertha Shear, Salonee [no surname given], Prasad Ramamoorthy, Pankil Patel, Tricia Kendall, Corey Fuellhart, Siva Anduri, Elizabeth Emberley, Lauren Keville, Kathryn Goettel, Dmitriy Sadov, Yolanda Greaves, Gagandeep K. Somal, Athanasios Bamis, Hans Hilpertshauser, Melissa Kenny, Anne Manning, Margaret Manning, Mark Galante, Andrea Green, Charles Green, Aleksandr Verbuk, Praveen Sharma, Shweta Saraswat	Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor. Several commenters request that the project receive funding in the earliest possible TIP element.	Included in the MPO target list in FFY 2020.

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PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	<p>Ashland residents (continued): Margie Matteson, Florence Newcum, Richard R. Klein, Marcia McMahon, Marie Gertje, Paul McCarrick, John Ho, Chris Graeff, Rose Marie Donaldson, Sanjay Yengul, Helen Brown, Jonathan Cain, Carol Chase Hardy, Vijay Pawarkar, David West Jr., Pamela Smith, Detlef Rethage, Karin Oleski, Vishwanath Iyer, Siddharth Bhojnagarwala, Vito A. Cappello, PJ Del Prete, Sara Hines, Ed Bates, Kimberly DeMeo, Melissa Forestal, Rod Holdaway, Andrea Novakowski, Anthony Minucci, Scott Davis, John C. Dudley, Inna Svirskiy, Scott Chalmers, Dave Sunderland, Lisa Wright, Lisa Edwards, Andre Rebelo, Steve Karra, Rosemary Forster, Deborah Rodgers, Mitchell Brown, Rebecca Graessle, David Roscoe, James A. Dublikar, Karen Seniuk, Claudio Silva, Visi Tilak, Tatyana Berestesky, Jon Justrom, Rajah Vedamurthy, Tracy Terry, Shanmugasundari Rajarathinam, Jacques Wagner, Bernice Lindbergh, James [no surname given], Kim McGreal, Gene Svirskiy, Sophia Tel, Alla Druker, Lauren Sexeny, Katana Queiroli, Hishan Fernando, Dennis Orтели, Edward Zdenek, Puja Patel, Rina E. Zarba, Deborah A. Begreen, Leenie Glickman, Susan Palefsky, P. Embree, Tracey Giglia, Lorraine Dorsey, John Yee</p>	<p>Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP.</p> <p>The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor.</p> <p>Several commenters request that the project receive funding in the earliest possible TIP element.</p>	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	<p>Ashland residents (continued): Vinicius Bremmenkamp, Sergey Maternovskiy</p> <p>Organizations: Ashland Business Association, Pond Street Working Group</p> <p>Framingham resident: Rob Palenchar</p> <p>Maynard resident: Renee Peters</p> <p>Westborough resident: Veronica M. Silva</p>	<p>Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP.</p> <p>The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents - including the many residents living in surrounding condo complexes - to travel to nearby shops and the Framingham Commuter Rail station, reducing vehicle trips and promoting healthy activity. The project will also promote economic development in the corridor.</p> <p>Several commenters request that the project receive funding in the earliest possible TIP element.</p>	Included in the MPO target list in FFY 2020.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction of Route 126 (Pond Street) (Ashland)	Oppose	Ashland resident: Leslie Saporetti	Opposes inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. States that the addition of sidewalks and bicycle lanes will create safety issues for families/home owners on Route 126, as well as have a negative impact on property values.	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Other	Framingham resident: Mike Connor	Opposes inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP if the plans do not include mitigation of speeding traffic along the route.	Included in the MPO target list in FFY 2020.
Reconstruction of Rutherford Avenue (Boston)	Support	Organizations: Design Review Committee, Friends of City Park Square Charlestown residents: Marc Older, Shelby Chapman-Hale, Liz Levin, Lynn Levesque, Ivey St. John Cambridge resident: Rebecca Nolan	Support inclusion of the Reconstruction of Rutherford Avenue in the FFYs 2017-21 TIP. Several commenters request programming the project in an earlier TIP element. The project area has seen increased volumes of vehicular, pedestrian, and cyclist activity due to recent developments, and the Wynn Casino will affect the area further. The proposed improvements will address dangerous travel conditions in the area, allowing for simpler and safer pedestrian/cyclist transportation within Charlestown and to neighboring communities.	Included in the MPO target list in FFYs 2020-21.
Reconstruction of Union Street (Route 139) (Holbrook)	Support / Request	Legislative: Senator John F. Keenan	Supports inclusion of the Reconstruction of Union Street in the FFYs 2017-21 TIP. Requests earlier programming of the project, stating it is ready and appropriate for action sooner than 2021. The project will improve the connection between Holbrook Town Center and the Holbrook/Randolph Commuter Rail station, setting the stage for future economic development based on the principles of transit oriented development. By improving walkability, adding bicycle lanes, and providing more handicap-accessible, the project also embraces the Complete Streets concept. Adds that the Town's collaboration with MassDOT and undertaking of several critical zoning reforms and public meetings demonstrates commitment to the project.	Project remains included in the MPO target list in FFY 2021.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTS(S)	COMMENT (Summarized)	ACTION
Reconstruction on Route 1A (Walpole)	Support	Organizations: Neponset Valley TMA	Supports inclusion of the Reconstruction of Route 1A in the FFYs 2017-21 TIP. States that the reconstruction will help to alleviate congestion on the route and create improved multimodal infrastructure. Improved intersections and pedestrian facilities will increase the safety of walking and cycling, which is important due to a number of MBTA bus stops along the road.	Included in the MPO target list in FFY 2021.
Safe Routes to School	Support / Request	Joan Meschino, Candidate for State House of Representatives, Third Plymouth District	Supports the Safe Routes to Schools program and requests that the MPO consider future projects that emerge from working with the municipalities of Cohasset, Hingham, Hull, and Scituate.	Included in the statewide project list in FFY 2017. Request considered by the MPO.
State of Transportation Funding	Other	Organization: 495/MetroWest Partnership	States that the lack of sound financial footing for transportation infrastructure continues to jeopardize the state's and region's economic recovery and future success. Due to these financial conditions, major projects that would have significant regional impact remain in the TIP's Universe of Projects. States that the draft FFYs 2017-21 TIP is a clear indication of the condition of transportation financing in the Greater Boston region.	Comment considered by the MPO.
TIP Document	Request	Sudbury resident: Pat Brown	Requests clarification in various sections of the TIP document, including: -- Executive Summary regarding Highway Program funding; -- Chapter 6 regarding funding sources. -- Appendix C regarding Greenhouse Gas Monitoring and Evaluation. <i>[For further details, please refer to pages 33 and 253 of the compilation of comments.]</i>	Additional edits were made to the document for clarification.
TIP Document	Request	David Mohler, Executive Director, Office of Transportation Planning, Massachusetts Department of Transportation (MassDOT)	Comment letter details specific comments and offers general guidance; includes requests for additional language, corrections, and clarification in various sections of the TIP document. <i>[For further details, please refer to pages 254-258 of the compilation of comments.]</i>	Incorporated into TIP document.
TIP Interactive Database	Request	Sudbury resident: Pat Brown	Requests that project ranking be restored to the TIP Interactive Database. <i>[For further details, please refer to page 253 of the compilation of comments.]</i>	Comment considered by MPO staff.

APPENDIX F: Summary of Public Comments on the Draft FFYs 2017-2021 TIP

PROJECT(S) / ISSUE(S)	REQUEST/ SUPPORT/ OPPOSE	COMMENTER(S)	COMMENT (Summarized)	ACTION
Transit Modernization	Request	Organizations: CrossTown Connect TMA, Alewife TMA Other: Joan Meschino	Request support for various transit modernization initiatives. Improvements to the Red Line include New Busways to Alewife Station; Alewife Garage Repairs Phase II; Improvements to Alewife, Braintree, and Quincy Adams; system support; general station improvements; new signals; and vehicle procurement. Commuter Ferry projects include vessel procurement; improvements at the Hingham Boat Terminal; and the Hingham Marine Intermodal Center.	Comment submitted to MassDOT.

The following comments were received too late to be considered by the MPO.

Projects in the 2nd Essex District	Support	Legislative: Senator Joan B. Lovely	Supports inclusion of the Canal Street Rail Trail Construction, Phase 2 (Salem), in the FFYs 2017-21 TIP. States the project will close the gap between the existing Marblehead Rail Trail and the shared-use path constructed alongside Canal Street to Mill Street. Supports inclusion of the Intersection Improvements at Three Locations (Beverly) in the FFYs 2017-21 TIP. States the project will either modernize or install signal equipment, improve bicycle accommodations, improve pavement, and install ADA-compliant wheelchair ramps at each intersection Expresses support for six additional projects in the 2nd District in the FFYs 2017-21 TIP.	The Salem and Beverly projects are included in the MPO target list in FFY 2019 and FFY 2021, respectively.
Reconstruction of Route 126 (Pond Street) (Ashland)	Support	Ashland resident: Kristen Giessler, Karen Gerard	Support inclusion of the Reconstruction of Route 126 in the FFYs 2017-21 TIP. The project will address cyclist and pedestrian safety issues by adding sidewalks and bike lanes. Currently, both cyclists and pedestrians must travel on the road, which is heavily traveled by vehicles of both Ashland residents and residents of nearby communities. These facilities will allow residents to travel to nearby shops and Downtown Framingham. The project will also promote economic development in the corridor.	Included in the MPO target list in FFY 2020.
Reconstruction of Route 126 (Pond Street) (Ashland)	Request	Ashland resident: Cynthia Dabrowski	Requests reconsideration of the construction of a rotary at Spyglass Hill Drive. States that a pedestrian crosswalk and signal would be sufficient to allow residents to cross Route 126. Notes that Framingham and Natick are removing rotaries in their communities.	
Reconstruction of Rutherford Avenue (Boston)	Support	Charlestown resident: Kate Kennen	Supports inclusion of the Reconstruction of Rutherford Avenue in the FFYs 2017-21 TIP. States that safety issues should be addressed, noting that the roadway is an evacuation route. Requests programming the project in the earliest possible TIP element.	Included in the MPO target list in FFYs 2020-21.

Compiled from 239 comments received during the June 24-July 24, 2016, public comment period, and those received through August 1, 2016. Full text of these comments are compiled into a PDF file and available through the TIP webpage at <http://www.ctps.org/tip>.



APPENDIX

MPO Glossary of Acronyms

Acronym	Definition
3C	continuous, comprehensive, cooperative [planning process]
A&F	Administration and Finance Committee [MassDOT]
AACT	Access Advisory Committee to the MBTA
ABP	Accelerated Bridge Program [MassDOT]
ADA	Americans with Disabilities Act of 1990
ADT	average daily traffic
AFC	automated fare collection [system]
AMPO	Association of Metropolitan Planning Organizations
APC	automatic passenger counter
APTA	American Public Transportation Association
ARAN	automatic road analyzer
ARRA	The American Recovery and Reinvestment Act of 2009
ASL	American sign language
ATR	automatic traffic recorder
AVL	automatic vehicle location
AWDT	average weekday daily traffic
BCIL	Boston Center for Independent Living
BRA	Boston Redevelopment Authority [Massport]
BRT	bus rapid transit
BTD	Boston Transportation Department
CA/T	Central Artery/Tunnel [project]
CAA	Clean Air Act of 1970
CAAA	Clean Air Act Amendments of 1990

Acronym	Definition
CATA	Cape Ann Transportation Authority
CBD	central business district
CFR	Code of Federal Regulation
CHSTP	Coordinated Public Transit Human Services Transportation Plan
CIC	Community Innovation Challenge
CIP	Capital Investment Program
CMAQ	Congestion Mitigation and Air Quality
CMP	Congestion Management Process
CNG	compressed natural gas
CO	carbon monoxide
CO ₂	carbon dioxide
CTPS	Central Transportation Planning Staff [to the Boston Region MPO]
CTTAP	Community Transportation Technical Assistance Program
DBMS	Database Management System
DCAMM	Division of Capital Asset Management and Maintenance [MA]
DCR	Department of Conservation and Recreation
DEIR	draft environmental impact report
DEP	Department of Environmental Protection
DMU	diesel multiple unit
DTA	dynamic traffic assignment
EERPAT	Energy and Emissions Reduction Policy Analysis Tool
EIR	environmental impact report
EIS	environmental impact statement
EJ	environmental justice
EOEEA	Massachusetts Executive Office of Energy and Environmental Affairs
EOHED	Massachusetts Executive Office of Housing and Economic Development
EOHHS	Massachusetts Executive Office of Health and Human Services
EPA	Environmental Protection Agency [federal]
EPDO	equivalent property damage only [index]

Acronym	Definition
ETC	electronic toll collection
FAST Act	Fixing America's Surface Transportation Act
FDR	functional design report
FEIR	final environmental impact report
FFGA	full funding grant agreement
FFY, FFYs	federal fiscal year, federal fiscal years
FHEA	Fair Housing Equity Assessment
FHWA	Federal Highway Administration
FONSI	finding of no significant impact
FTA	Federal Transit Administration
GANS	grant anticipation notes [municipal bond financing]
GHG	greenhouse gas [as in greenhouse gas emissions]
GIS	geographic information system
GLX	Green Line Extension [Green Line Extension project]
GPS	global positioning system
GWI	global warming index
GWSA	Global Warming Solutions Act of 2008
HOV	high-occupancy vehicle
HPP	high-priority projects
HSIP	Highway Safety Improvement Program
HTC	Healthy Transportation Compact
ICC	Inner Core Committee for the Inner Core subregion [of MAPC]
IMS	intermodal management system
INVEST	Infrastructure Voluntary Evaluation Sustainability Tool [FHWA]
IPCC	Intergovernmental Panel on Climate Change
IT&S	Information Technology and Systems [CTPS group]
ITDP	Institute for Transportation and Development Policy
ITE	Institute of Transportation Engineers
ITS	intelligent transportation systems

Acronym	Definition
JARC	Job Access and Reverse Commute [program]
LAP	language access plan
LCW	Livable Community Workshop
LEP	limited English proficiency
LNG	liquefied natural gas
LOS	level of service
LRTA	Lowell Regional Transit Authority
L RTP	Long-Range Transportation Plan
MAGIC	Minuteman Advisory Group on Interlocal Coordination
MAP-21	Moving Ahead for Progress in the 21st Century Act
MAPC	Metropolitan Area Planning Council
MARPA	Massachusetts Association of Regional Planning Agencies
MassDOT	Massachusetts Department of Transportation
MassGIS	[Commonwealth's] Office of Geographic Information
Massport	Massachusetts Port Authority
MassRIDES	MassDOT's statewide travel options program
MBCR	Massachusetts Bay Commuter Railroad
MBTA	Massachusetts Bay Transportation Authority
MCAD	Massachusetts Commission Against Discrimination
MEMA	Massachusetts Emergency Management Agency
MEPA	Massachusetts Environmental Policy Act
MGL	Massachusetts general laws
MHS	metropolitan highway system
MOU	memorandum of understanding
MOVES	Motor Vehicle Emissions Simulator [EPA]
MPO	metropolitan planning organization [Boston Region MPO]
MPOinfo	Boston Region MPO's email contact list
MWGMC	MetroWest Growth Management Committee
MWRC	MetroWest Regional Collaborative

Acronym	Definition
MWRTA	MetroWest Regional Transit Authority
NAAQS	National Ambient Air Quality Standards
NBPD	National Bicycle and Pedestrian Documentation Project
NEPA	National Environmental Policy Act
NHPP	National Highway Performance Program
NMHC	non-methane hydrocarbons
NOx	nitrogen oxides
NTD	National Transit Database
NTP	notice to proceed
O&M	operations and management
ODCR	Office of Diversity and Civil Rights [MassDOT]
OE	operating expenses
OTA	Office for Transportation Access [MBTA]
OTP	Office of Transportation Planning [MassDOT]
P3	Public Participation Plan
PBPP	performance-based planning and programming
PDM	Pre-Disaster Mitigation Program [federal]
PEV	pedestrian environmental variable
PL	public law [PL] funds, or metropolitan planning funds [FHWA]
PM	particulate matter [category of air pollution]
PMT	Program for Mass Transportation [MBTA]
ppm	parts per million
PSA	Project Selection Advisory Council
RCCs	Regional Coordinating Councils
RIF	roadway inventory file
RMV	Registry of Motor Vehicles [MassDOT division]
ROC	Rider Oversight Committee [MBTA]
ROW	right-of-way
RPA	regional planning agency

Acronym	Definition
RSA	Roadway Safety Audit [FHWA]
RSS	rich site summary [Web, feed]
RTA	regional transit authority
RTAC	Regional Transportation Advisory Council
RTC	Regional Transportation Center
SAFE	service and fare equity [Title VI]
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act—A Legacy for Users
SCCCT	Statewide Coordinating Council on Community Transportation
SCI	sustainable communities initiative
SDO	supplier diversity office
SFY	state fiscal year
SGR	state-of-good repair
SHRP	Strategic Highway Research Program
SHSP	Strategic Highway Safety Plan
SIP	State Implementation Plan
SNAC	special needs advisory committee
SNLA	Small Necessities Leave Act
SORE	statement of revenue and expenses
SOV	single-occupancy vehicle
SPR	Statewide Planning and Research
SRTS	Safe Routes to School [federal program]
STB	State Transportation Building [Boston]
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
TAM	transit asset management
TAP	Transportation Alternatives Program
TAZ	transportation analysis zone
TCMs	transportation control measures
TCRP	Transit Cooperative Research Program
TDM	travel-demand management, or transportation-demand management

Acronym	Definition
TE	transportation equity
TEAMS	Travel Efficiency Assessment Method
TIGER	Transportation Investment Generating Economic Recovery [TIGER Discretionary Grant program, federal]
TIP	Transportation Improvement Program
Title VI	Title VI of the Civil Rights Act of 1964
TMA [1]	transportation management area [FTA, FHWA]
TMA [2]	Transportation Management Association
TMC	turning movement counts
TOD	transit-oriented development
TRB	Transportation Research Board
TREDIS	Transportation Economic Development Impact System [software]
TSIMS	Transportation Safety Information Management System
TSM	transportation systems management [FHWA]
UFP	ultrafine particles
UPWP	Unified Planning Work Program
US	The United States of America
USDOT	United States Department of Transportation
USGS	US Geological Survey
UZA	urbanized area
V/C	volume-to-capacity ratio
VHT	vehicle-hours traveled
VMS	variable message signs
VMT	vehicle-miles traveled
VOCs	volatile organic compounds [pollutants]
VRH	vehicle revenue-hours
VRM	vehicle revenue-miles
WalkBoston	pedestrian advocacy group [Boston area]
WAT	walk-access transit

Acronym	Definition
WMM	weMove Massachusetts[MassDOT]
WTS	Women in Transportation Seminar
YMM	youMove Massachusetts [planning initiative]



APPENDIX

FFYs 2008–2021 TIP Funding by Municipality

PURPOSE and METHODOLOGY

Purpose

Appendix H summarizes the geographic distribution of Target Program funding within the MPO region between federal fiscal years (FFYs) 2008 and 2021. This data was first compiled for FFYs 2008 through 2013 as part of a response to the MPO's 2014 Certification Review by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). For this FFYs' 2017–2021 TIP, the data was updated to reflect the distribution of Target Program funding, as currently planned, through FFY 2021.

The purpose of this data collection and analysis is to understand the geographic spread of the TIP Target Program funding throughout the region. In other words, this exercise serves to illuminate which communities and areas of our metropolitan region have received Target Program funding for transportation construction projects.

Methodology

MPO staff took the following steps to develop the dataset:

- Recorded information about TIP projects and the amount of funding programmed in each federal fiscal year.
- For projects that spanned multiple municipalities, divided programmed funds equally by the number of municipalities located within the project area.
- For each federal fiscal year, calculated the amount of programmed funds associated with each municipality. Funding from FFYs 2008 to 2016 is displayed in a single column, while funding information is displayed for each FFY in the current TIP cycle.
- Recorded the total amount of programmed funds for each municipality for each fiscal year in the dataset.

To focus this compilation of data on transportation projects programmed for individual municipalities or groups of municipalities more directly, this dataset excluded several projects that have a regionwide scope. Examples of regionwide projects include traffic-management center operations and systemwide transit capital upgrades.

NEXT STEPS

The data summarized in this appendix (and future TIP funding data that is added to it) could be used in various ways to help guide spending decisions made in future TIPs. Some analyses that the MPO could perform in the future include:

- Add to this analysis TIP projects that are funded through statewide funding programs.
- Examine in more detail the geographic distribution of TIP funding per subregion, or MAPC community type.
- Examine TIP funding by community and compare that data to the number of road miles, the Chapter 90 apportionment, and the distribution of needs—as identified in the Long-Range Transportation Plan (LRTP), *Charting Progress to 2040*, Needs Assessment—for each community.

Maintaining a database to track the geographic distribution of TIP funding can serve as one important input into the funding decisions made each FFY. When considered in combination with other data, as described above, this data on geographic distribution of Target Program funding can help guide the MPO's public outreach and decision making to help ensure that, over time, we are meeting the transportation needs of the region.

TABLE H-1: TIP Target Programming by Municipality, FFYs 2008-2021

Municipality	FFYs 2008-16 TIP	FFY 2017 TIP	FFY 2018 TIP	FFY 2019 TIP	FFY 2020 TIP	FFY 2021 TIP	FFYs 2017-21 TIP	FFYs 2008-21 TIP	Additional Information
Hopkinton				\$ 8,501,376			\$ 8,501,376	\$ 8,501,376	
Hudson	\$ 11,114,480							\$ 11,114,480	\$300,000 split with Route 128 Business
Hull	\$ 1,885,976							\$ 1,885,976	
Ipswich	\$ 3,250,305							\$ 3,250,305	
Lexington	\$ 7,438,080							\$ 7,438,080	
Lincoln	\$ 22,492,311							\$ 22,492,311	\$39,584,874 split with Concord (602984)
Littleton	\$ 4,200,000							\$ 4,200,000	
Lynn	\$ 5,531,280				\$ 4,953,270		\$ 4,953,270	\$ 10,484,550	
Lynnfield									
Malden									
Manchester									
Marblehead									
Marlborough		\$ 5,613,636					\$ 5,613,636	\$ 5,613,636	
Marshfield	\$ 5,929,736							\$ 5,929,736	GATRA funding split with Duxbury
Maynard									
Medfield									
Medford									
Medway	\$ 12,062,567							\$ 12,062,567	
Melrose	\$ 4,405,030							\$ 4,405,030	
Middleton									
Milford	\$ 7,600,000			\$ 3,149,619			\$ 3,149,619	\$ 10,749,619	
Millis									
Milton									
Nahant									
Natick	\$ 4,450,987			\$15,459,553			\$ 15,459,553	\$ 19,910,540	
Needham	\$ 74,110,472	\$12,269,908	\$ 8,726,330				\$ 20,996,238	\$ 95,106,710	\$46,956,250 split with Dedham (603206); \$28,613,160 split with Wellesley (603711); \$15,464,292 split with Newton (606635)
Newton	\$ 10,988,203		\$ 7,732,146				\$ 7,732,146	\$ 18,720,349	\$7,197,384 split with Watertown (601686); \$15,464,292 split with Needham (606635)
Norfolk	\$ 2,711,153							\$ 2,711,153	\$8,133,460 split with Foxborough and Wrentham (602496)
North Reading									
Norwell									
Norwood						\$ 6,317,236	\$ 6,317,236	\$ 6,317,236	
Peabody									
Pembroke									Submit TIP funding requests through OCPC
Quincy	\$ 3,575,278							\$ 3,575,278	
Randolph	\$ 10,529,796							\$ 10,529,796	\$26,959,389 split with Canton, Dedham, and Westwood (87800)
Reading	\$ 8,072,234							\$ 8,072,234	
Revere									
Rockland	\$ 7,500,000							\$ 7,500,000	\$15,000,000 split with Weymouth (604510)

TABLE H-1: TIP Target Programming by Municipality, FFYs 2008-2021

Municipality	FFYs 2008-16 TIP	FFY 2017 TIP	FFY 2018 TIP	FFY 2019 TIP	FFY 2020 TIP	FFY 2021 TIP	FFYs 2017-21 TIP	FFYs 2008-21 TIP	Additional Information
Rockport									
Salem	\$ 10,126,263			\$ 2,595,840			\$ 2,595,840	\$ 12,722,103	
Saugus									
Scituate									
Sharon									
Sherborn									
Somerville	\$ 23,420,945	\$29,900,000	\$40,000,000	\$40,000,000	\$40,000,000	\$32,000,000	\$ 181,900,000	\$ 205,320,945	\$5,200,000 split with Belmont and Cambridge (600811)
Southborough	\$ 71,521		\$ 7,281,248				\$ 7,281,248	\$ 7,352,769	
Stoneham	\$ 1,809,703							\$ 1,809,703	\$5,429,110 split with Winchester and Woburn (604652)
Stoughton									Submit TIP funding requests through OCPC
Stow									
Sudbury									
Swampscott									
Topsfield	\$ 3,936,780							\$ 3,936,780	
Wakefield	\$ 2,254,636							\$ 2,254,636	
Walpole				\$18,584,373			\$ 18,584,373	\$ 18,584,373	
Waltham									
Watertown	\$ 5,387,812							\$ 5,387,812	\$7,197,384 split with Newton (601686)
Wayland									
Wellesley	\$ 60,001,722	\$12,269,908	\$ 994,184				\$ 13,264,092	\$ 73,265,814	\$28,613,160 split with Needham (603711)
Wenham									
Weston									
Westwood	\$ 24,638,546							\$ 24,638,546	\$26,959,389 split with Canton, Dedham, and Randolph (87800)
Weymouth	\$ 14,883,300	\$12,850,000	\$19,591,490	\$ 8,040,268			\$ 40,481,758	\$ 55,365,058	\$15,000,000 split with Rockland (604510)
Wilmington									
Winchester	\$ 1,809,703							\$ 1,809,703	\$5,429,110 split with Stoneham and Woburn (604652)
Winthrop									
Woburn	\$ 1,809,703	\$ 4,752,838				\$17,784,392	\$ 22,537,230	\$ 24,346,933	\$5,429,110 split with Stoneham and Winchester (604652)
Wrentham	\$ 2,711,153							\$ 2,711,153	\$8,133,460 split with Foxborough and Norfolk (602496)

GATRA = Greater Attleboro-Taunton Regional Transit Authority. MWRTA = MetroWest Regional Transit Authority. OCPC = Old Colony Planning Council.
TIP = Transportation Improvement Program.