

# COMPLETE STREETS IN MEDFORD



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## Complete Streets Prioritization Plan

(MassDOT Complete Streets Funding Program Tier II)

This study was completed by the Metropolitan Area Planning Council (MAPC) in partnership with Toole Design Group and the City of Medford. MAPC is Greater Boston's regional planning agency whose mission is to promote smart growth and regional collaboration.

This document was produced with input from the City of Medford, including the Mayor, Engineering Department, Department of Public Works, Planning Department, , and local residents and stakeholders.

MAPC would like to particularly thank Cassandra Koutilidis for her guidance, input, and support throughout this process.

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June, 2016

Prepared for  
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MassDOT Complete Streets Funding Program Project Prioritization Plan (Revised 3/31/16)

Municipality

Medford

MassDOT District

4

Date

8/4/2016

Name/Title

Cassandra Koutalidis, City Engineer

| Project Details |                                                     |                                                                                                      | EJ                               | Complete Streets Location                         |                                                                   |                                                                 | Project Origin and Type                                                            |                                                                                                              | Complete Streets Needs |                   |                     |                  |                               |                      |                    |                                                                                       | Complete Streets Funding Request |                                    |                                                       | Construction Schedule                                   |                                                 |
|-----------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------|-------------------|---------------------|------------------|-------------------------------|----------------------|--------------------|---------------------------------------------------------------------------------------|----------------------------------|------------------------------------|-------------------------------------------------------|---------------------------------------------------------|-------------------------------------------------|
| Rank            | Project Name                                        | Project Description                                                                                  | Environmental Justice Population | Project Limits                                    | Project Start Location: X,Y Coordinates<br>(MA State Plane meter) | Project End Location: X,Y Coordinates<br>(MA State Plane meter) | Complete Streets Project Origin<br>(planning documentation or supporting analysis) | <a href="#">Complete Streets Project Type</a><br>(refer to the <a href="#">Eligible Projects Worksheet</a> ) | Safety                 | ADA Accessibility | Pedestrian Mobility | Bicycle Mobility | Transit Operations and Access | Vehicular Operations | Freight Operations | Will this project be in Coordination with other Communities?<br>(list, if applicable) | Total Estimated Project Cost     | Complete Streets Funding Requested | Other Funding Source(s) and Amount<br>(if applicable) | Anticipated Construction Duration<br>(number of months) | Desired Construction Start Date<br>(month/year) |
| 1               | High Street at Brooks Elementary School             | School Safety Improvements: Curb extension, RRFB, 'Your Speed' signs, ADA-complaint ramps, bike lane | Yes                              | In front of Brooks Elementary School              | 230596, 907963                                                    | -                                                               | CS Needs Assessment                                                                | S5, S17, B2, P2, P3, P8, P9, P12, T1                                                                         | X                      | X                 | X                   | X                |                               |                      |                    | No                                                                                    | \$65,000                         | \$65,000                           | \$0                                                   | 1                                                       | September 2016                                  |
| 2               | West Medford Sq (Warren St, Canal St, Playstead Rd) | Pedestrian Improvements: Install Curb extensions, widen crosswalk, ADA-complaint ramps               | Yes                              | Intersection                                      | 230353, 907906                                                    | -                                                               | CS Needs Assessment                                                                | S6, S17, P2, P3, P8, P9, T1                                                                                  | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$81,000                         | \$81,000                           | \$0                                                   | 2                                                       | September 2016                                  |
| 3               | Tufts Pool and Park (Main St at Medford St)         | Pedestrian Improvements: Curb extensions, RRFB, construct pedestrian island, ADA ramps               | Yes                              | Intersection                                      | 232387, 905828                                                    | -                                                               | CS Needs Assessment                                                                | S17, P2, P3, P7, P8, P9, P12                                                                                 | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$147,600                        | \$147,600                          | \$0                                                   | 4                                                       | September 2016                                  |
| 4               | Haines Square (Salem Street at Spring Street)       | Pedestrian Improvements: Curb extensions, new sidewalk, improve median, ADA ramps                    | Yes                              | Intersection                                      | 233610, 908121                                                    | -                                                               | CS Needs Assessment                                                                | S6, S13, P2, P3, P7, P9                                                                                      | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$67,400                         | \$0                                | \$67,400                                              | 2                                                       | July 2017                                       |
| 5               | Medford Square Improvements                         | Traffic Calming & Pedestrian Improvements: Install curb extension, RRFB, ADA ramps                   | No                               | Intersection of Salem, Ashland, and River Streets | 232253, 907631                                                    | -                                                               | CS Needs Assessment                                                                | S6, S17, P2, P3, P8, P9, P12                                                                                 | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$55,000                         | \$55,000                           | \$0                                                   | 2                                                       | September 2016                                  |
| 6               | Winthrop Street Circle at High Street               | Traffic Calming & Ped Improvements: ADA ramps, pavement markings, "Yield" signs                      | No                               | Intersection                                      | 231450, 907942                                                    | -                                                               | CS Needs Assessment                                                                | S7, S17, S18, P2, P3, P9                                                                                     | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$30,000                         | \$30,000                           | \$0                                                   | 2                                                       | October 2016                                    |
| 7               | Boston Avenue Corridor                              | Bicycle Improvements: Install bike lanes                                                             |                                  | High Street to Somerville Line                    | 229854, 907941                                                    | 231966, 905578                                                  | CS Needs Assessment                                                                | S1, S17, B2, T2                                                                                              | X                      |                   |                     | X                |                               | X                    |                    | Arlington, Somerville                                                                 | \$68,000                         | \$21,400                           | \$46,600                                              | 2                                                       | October 2016                                    |
| 8               | Riverside Avenue at Spring St/Light Guard Drive     | Ped Improvements: Curb extension, crosswalk, upgrade pedestrian signal, ADA ramps                    | Yes                              | Intersection                                      | 233371, 906829                                                    | -                                                               | CS Needs Assessment                                                                | S3, S6, S17, P2, P3, P9                                                                                      | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$113,000                        | \$0                                | \$113,000                                             | 2                                                       | September 2017                                  |
| 9               | Main Street at Frederick Avenue/Hancock             | Pedestrian Improvements: Install crosswalk and stop lines, ADA-compliant ramps                       | No                               | Intersection                                      | 232133, 906591                                                    | -                                                               | CS Needs Assessment                                                                | S3, P2, P3, P9                                                                                               | X                      | X                 | X                   |                  |                               |                      |                    | No                                                                                    | \$29,000                         | \$0                                | \$29,000                                              | 2                                                       | September 2017                                  |
| 10              | Forest Street at Webster Street                     | Pedestrian Improvements: Reduce curb radius, install crosswalk, ADA-compliant ramps                  | No                               | Intersection                                      | 232317, 908084                                                    | -                                                               | CS Needs Assessment                                                                | S6, S13, S17, P2, P3, P9                                                                                     | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$25,000                         | \$0                                | \$25,000                                              | 2                                                       | September 2018                                  |
| 11              | George Street Corridor                              | Traffic Calming & Ped Improvements: Sidewalk, ADA ramps, repave road, speed table                    | Yes                              | Winthrop Street to Main Street                    | 231274, 907157                                                    | 232050, 906914                                                  | CS Needs Assessment                                                                | S8, S17, P2, P3                                                                                              | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$70,000                         | \$0                                | \$70,000                                              | 2                                                       | September 2018                                  |
| 12              | Main Street at South Street                         | Pedestrian Improvements: RRFB, reduce curb radius, improve drainage at crosswalks                    | Yes                              | Intersection                                      | 232044, 907423                                                    | -                                                               | CS Needs Assessment                                                                | S6, S17, P2, P3, P9, P12                                                                                     | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$75,000                         | \$0                                | \$75,000                                              | 2                                                       | September 2018                                  |
| 13              | Main Street at Harvard Street                       | Pedestrian Improvements: Curb extensions, re-stripe crosswalks, ADA-compliant ramps                  | Yes                              | Intersection                                      | 232278, 906143                                                    | -                                                               | CS Needs Assessment                                                                | S6, S17, P2, P3, P8, P9                                                                                      | X                      | X                 | X                   |                  |                               | X                    |                    | No                                                                                    | \$50,000                         | \$0                                | \$50,000                                              | 1                                                       | September 2018                                  |

|    |                                            |                                                                                                        |     |                                      |                |                |                     |                          |   |   |   |   |    |          |     |          |   |                |
|----|--------------------------------------------|--------------------------------------------------------------------------------------------------------|-----|--------------------------------------|----------------|----------------|---------------------|--------------------------|---|---|---|---|----|----------|-----|----------|---|----------------|
| 14 | Playstead Road at Irving Street            | Pedestrian and Accessibility Improvements at Transit Station: Curb extension and ADA ramps             | No  | Intersection                         | 230191, 907995 | -              | CS Needs Assessment | P2, P3, P8, P9           | X | X | X |   | No | \$15,000 | \$0 | \$15,000 | 1 | September 2019 |
| 15 | Sharon Street Accessibility Improvements   | Accessibility Improvements: Install ADA-compliant ramps at Arlington St and Fairfield St intersections | Yes | Arlington Street to Fairfield Street | 229799, 907731 | 230207, 907422 | CS Needs Assessment | P2, P3                   | X | X | X |   | No | \$25,000 | \$0 | \$25,000 | 2 | September 2019 |
| 16 | Winthrop Street at Victory Park            | Bike & Ped Improvements: Install crosswalk, ADA-compliant ramps, shared lanes                          | No  | Park entrance                        | 230892, 908518 | -              | CS Needs Assessment | S17, B8, P2, P3, P9      | X | X | X | X | No | \$25,000 | \$0 | \$25,000 | 2 | September 2019 |
| 17 | Canal Street at Prescott Street            | Pedestrian Improvements: Construct sidewalks, crosswalks, ADA-compliant ramps                          | Yes | Intersection                         | 230436, 907743 | -              | CS Needs Assessment | P2, P3, P9               | X | X | X |   | No | \$57,000 | \$0 | \$57,000 | 2 | September 2019 |
| 18 | Transit Shelters at Medford Sq & Haines Sq | Transit Improvements: Transit Shelters at 2 MBTA stops                                                 | Yes | MBTA Stops                           | 233610, 908121 | 232253, 907631 | CS Needs Assessment | T1, T3                   | X |   |   | X | No | \$16,000 | \$0 | \$16,000 | 2 | September 2020 |
| 19 | Playstead Road at Winthrop Street          | Curb extensions, re-stripe crosswalk, improve median, ADA-compliant ramps                              | No  | Intersection                         | 230361, 909092 | -              | CS Needs Assessment | S13, S17, P2, P3, P8, P9 | X | X | X | X | No | \$90,700 | \$0 | \$90,700 | 2 | September 2020 |
| 20 | Main Street at Stearns Avenue              | Pedestrian Improvements: Install crosswalks, ADA-compliant ramps                                       | Yes | Intersection                         | 232088, 906719 | -              | CS Needs Assessment | P2, P3, P9               | X | X | X |   | No | \$29,700 | \$0 | \$29,700 | 1 | September 2020 |

# COMPLETE STREETS IN MEDFORD

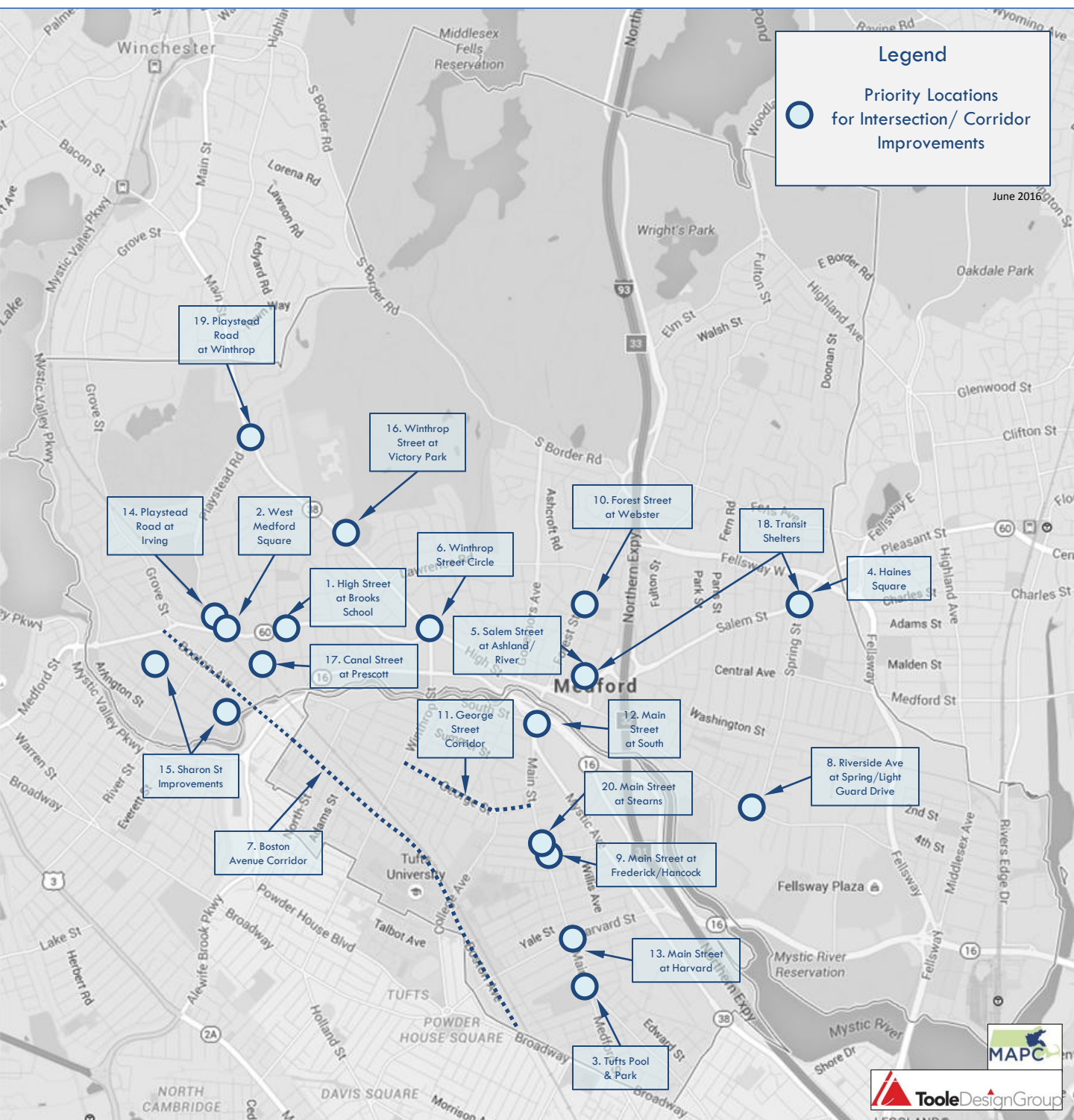


## Legend



Priority Locations  
for Intersection/ Corridor  
Improvements

June 2016



# COMPLETE STREETS IN MEDFORD



## Memorandum: Complete Streets Prioritization Plan Methodology

### I | Summary

The City of Medford's Complete Streets Prioritization Plan is informed by a process of stakeholder engagement, an analysis of the City's existing conditions, and application of weighted Evaluation Criteria. Potential project locations were identified through previous public meetings, outreach to stakeholders, City priorities, and supplemented using MAPC's "Planning for Active Streets Tool (PAST)," a geospatial tool that conducts community-level analyses of transportation network gaps and utility. Once identified, these project sites were visited and evaluated in the field by the project engineering consultant, Toole Design Group. Recommendations and cost estimates for each site were prepared. Finally, the Evaluation Criteria were applied to each project in order to rank the projects and create the City's Complete Streets Prioritization Plan.

### II | Stakeholder Engagement Process

Identification of project locations and proposals was informed by a three-part stakeholder engagement process. First, a Working Group meeting was convened at Medford City Hall on April 14<sup>th</sup>. Of the nine total attendees, four were City of Medford staff, including representatives from the Engineering Department, Office of Community Development, the Mass in Motion project, and the Department of Energy and the Environment. Two Medford residents representing the local cyclist group (Medford Bicycle Advisory Commission (MBAC)) and the pedestrian advocacy group (Walk Medford) were also in attendance, as well as MAPC and Toole Design Group staff.

The Working Group worked collaboratively to identify areas of concern in Medford. The City of Medford staff framed their recommendations based on complaints and suggestions from the Medford Disability Commission, local residents, previous traffic studies, and City of Medford priorities. Recommendations by the advocates representing the pedestrian and cyclist communities in Medford were informed by the pedestrian and cyclist connectivity and safety concerns, as well as findings from the Bicycle Infrastructure Master Plan, recently finalized by the MBAC. The Working Group collaboratively identified approximately 30 project locations and determined the weighted evaluation criteria to be used in the Prioritization Plan.

Following this initial Working Group Meeting, the advocates from Walk Medford and MBAC conducted outreach among their respective constituencies. Walk Medford and MBAC each provided comprehensive lists of potential projects, as identified by their group's membership. Approximately 70 additional projects were proposed in total throughout this outreach process. Due to the sheer number of suggestions, it was necessary to set aside some project suggestions based on feasibility, scale, and/or eligibility. These proposed projects may be added to a comprehensive action list or otherwise revisited by the City.

The final step in the stakeholder outreach process was a meeting with Medford Mayor Stephanie M. Burke on April 21<sup>st</sup>. The purpose of this meeting was to provide an overview of the MassDOT funding opportunity, share project proposals to date, and obtain a high-level perspective on City priorities. The Mayor was able to provide guidance on which projects were high priority and which could be set aside based on feasibility or other concerns.

### **III | Planning Active Streets Tool (PAST)**

PAST is designed to map the utility of pedestrian and cyclist infrastructure at the community level. PAST was used to identify the high, moderate, and low utility roads (as determined by population density, traffic, and proximity to services such as schools, businesses, and transit) as well as the availability of sidewalks for pedestrians. Of major concern are high-utility roads that have either no sidewalks or sidewalks only on one side of the street. The result was a map of the gaps in sidewalk infrastructure throughout Medford.

PAST was also used to determine roadway utility for cyclists. Using the same criteria (population density, proximity to services, and traffic), Medford's streets were classified based on lowest, low, moderate, high and highest utility for cyclists and mapped in a comprehensive bike utility map. The PAST results are used to identify the areas in Medford demonstrating high demand for bicycle and pedestrian infrastructure.

### **IV | Site Visits**

Because of the volume of projects proposed in Medford, it was not possible for Toole Design Group engineers to visit each project location. Therefore, field visits were broken into two sessions. First, MAPC staff and the City Engineer visited a number of potential project sites on May 2<sup>nd</sup>. Next, Toole Design Group engineers, accompanied by City engineering staff and MAPC staff, visited potential project locations in Medford on May 3<sup>rd</sup>. These sites were of higher priority and/or potentially required more complicated interventions.

This fieldwork provided the consultants with an opportunity to observe the sites, evaluate the concerns posed by residents and City staff, measure existing infrastructure, and develop initial suggestions for possible interventions. Toole Design Group consultants then utilized these field notes and feedback from the stakeholder engagement process to create specific recommendations and cost estimates for each project.

### **V | Evaluation Criteria**

The Evaluation Criteria used to rank projects in the Prioritization Plan was selected by the Working Group at their April 14<sup>th</sup> meeting. The selected criteria, to be weighted equally, include the following factors: Demand, Safety, Constraints, and Priority. The tables in Appendix A provide detail on the ranking process for all factors within each of the Evaluation Criteria.

Each of the Evaluation Criteria is weighted equally at 25% each. There were a total of 31 points available for the Demand criterion, 12 total points available for Safety, a total of 9 points available for Constraints, and 6 for Priority. Each project was evaluated according to the weighting schemes detailed above for each of the Criteria. For each category, total points received by a project was divided by the total points available and multiplied by 25%. These four weighted values were then added together to determine a project's final score and ranking within the Prioritization Plan.

## VI | Final Submission

The final ranking from the Evaluation Criteria determined the order of projects on the Prioritization Plan. However, not all projects can be completed within the first year of the Complete Streets program due to funding constraints (capped at \$400,000) and time constraints (projects must be completed by June 30, 2017). Therefore, some lower-ranking projects were submitted for funding from MassDOT in year one of the program. The City intends to complete the higher ranking and unfunded projects with either Chapter 90 money, capital funds, or to submit the projects in future years of the Complete Streets Program, if funding is available.

The Prioritization plan was submitted to MassDOT on June 29, 2016, and requests \$400,000 for the following projects:

|                                            |           |
|--------------------------------------------|-----------|
| 1. High Street at Brooks Elementary School | \$65,000  |
| 2. West Medford Square                     | \$81,000  |
| 3. Tufts Pool and Park                     | \$147,600 |
| 4. Medford Square Improvements             | \$55,000  |
| 5. Winthrop Street Circle at High Street   | \$30,000  |
| 6. Boston Avenue corridor Bicycle Lanes    | \$21,400* |

The City submitted a Tier III Project Application to MassDOT on July 11, 2016 to request funding for these six projects.

\*The additional costs of this project will be covered by City funds.

## Appendix A

| Evaluation Criteria Weighting Scheme: Demand                                                    |      |                                                                     |
|-------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------|
| Factor                                                                                          | Rank | Description                                                         |
| Aligns with Priorities in Medford Bicycle Advisory Commission's Bike Infrastructure Master Plan | 0    | No Impact                                                           |
|                                                                                                 | 3    | Recommended by MBAC                                                 |
| Collocated with Medford Scholars Walking Route                                                  | 0    | No Impact                                                           |
|                                                                                                 | 3    | Project location on Medford Scholars Walking Route                  |
| Bike Utility Analysis                                                                           | 0    | Lowest Bike Utility                                                 |
|                                                                                                 | 1    | Low Bike Utility                                                    |
|                                                                                                 | 2    | Moderate Bike Utility                                               |
|                                                                                                 | 3    | High Bike Utility                                                   |
|                                                                                                 | 4    | Highest Bike Utility                                                |
| Sidewalk Gap Analysis                                                                           | 0    | No Impact: Sidewalks on 1 or Both Sides                             |
|                                                                                                 | 1    | No Sidewalks on a Low Utility Road                                  |
|                                                                                                 | 2    | No Sidewalks on a Moderate Utility Road                             |
|                                                                                                 | 3    | No Sidewalks on a High Utility Road                                 |
| Strava Heat Map: Current Use                                                                    | 0    | No Impact                                                           |
|                                                                                                 | 1    | Some Use (Green)                                                    |
|                                                                                                 | 2    | Moderate Use (Yellow)                                               |
|                                                                                                 | 3    | High Use (Red)                                                      |
| Proximity to Parks, Trails and Recreation                                                       | 0    | No Impact                                                           |
|                                                                                                 | 1    | Less than 0.75 mi from nearest park, trail or recreational facility |
|                                                                                                 | 2    | Less than 0.5 mi from nearest park, trail or recreational facility  |
|                                                                                                 | 3    | Less than 0.25 mi from nearest park, trail or recreational facility |
| Proximity to Transit Stations                                                                   | 0    | No Impact                                                           |
|                                                                                                 | 1    | Less than 0.75 mi from nearest transit station                      |
|                                                                                                 | 2    | Less than 0.5 mi from nearest transit station                       |
|                                                                                                 | 3    | Less than 0.25 mi from nearest transit station                      |
| Connected to Complete Streets Projects in Surrounding Communities                               | 0    | No Impact                                                           |
|                                                                                                 | 3    | Connects to CS project in neighboring community                     |
| Proximity to Schools                                                                            | 0    | No Impact                                                           |
|                                                                                                 | 1    | Less than 0.75 mi from nearest school                               |
|                                                                                                 | 2    | Less than 0.5 mi from nearest school                                |
|                                                                                                 | 3    | Less than 0.25 mi from nearest school                               |
| Proximity to City Center                                                                        | 0    | No Impact                                                           |
|                                                                                                 | 1    | Less than 0.75 mi from City Center                                  |
|                                                                                                 | 2    | Less than 0.5 mi from City Center                                   |
|                                                                                                 | 3    | Less than 0.25 mi from City Center                                  |
| Total Points Available                                                                          | 31   |                                                                     |

| Evaluation Criteria Weighting Scheme: Priority |      |                                    |
|------------------------------------------------|------|------------------------------------|
| Factor                                         | Rank | Description                        |
| City Staff Priority                            | 0    | Project is not a priority location |
|                                                | 3    | Project is a priority location     |
| Geographic Equity                              | 0    |                                    |
|                                                | 3    |                                    |
| Total Points Available                         | 6    |                                    |

| <b>Evaluation Criteria Weighting Scheme: Safety</b> |      |                                                     |
|-----------------------------------------------------|------|-----------------------------------------------------|
| Factor                                              | Rank | Description                                         |
| High-Speed Roadway                                  | 0    | No Impact                                           |
|                                                     | 1    | Low Speed                                           |
|                                                     | 2    | Moderate Speed                                      |
|                                                     | 3    | High Speed                                          |
| Increases ADA Accessibility                         | 0    | No Impact                                           |
|                                                     | 3    | ADA Accessibility Improvement Project               |
| High Numbers of Pedestrian and Cyclist Crashes      | 0    | No Impact (0 Crashes)                               |
|                                                     | 1    | Low Crash Numbers                                   |
|                                                     | 2    | Moderate Crash Numbers                              |
|                                                     | 3    | High Crash Numbers                                  |
| Low Stress Facility                                 | 0    | No Impact: Not Suitable for Cyclists or Pedestrians |
|                                                     | 1    | High Stress                                         |
|                                                     | 2    | Moderate Stress                                     |
|                                                     | 3    | Low Stress                                          |
| Total Points Available                              | 12   |                                                     |

| <b>Evaluation Criteria Weighting Scheme: Constraints</b>    |      |                                                                                                                   |
|-------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------|
| Factor                                                      | Rank | Description                                                                                                       |
| Affordable Projected Design and Construction Costs          | 0    | Construction cost exceeds \$400,000 and no supplemental funds available                                           |
|                                                             | 1    | Construction cost exceeds \$400,000; supplemental funds available                                                 |
|                                                             | 2    | Affordable construction cost; additional design needed                                                            |
|                                                             | 3    | Affordable construction cost; no additional design needed                                                         |
| Design and Construction can be Completed by June 2017       | 0    | Construction timeline exceeds 1 year                                                                              |
|                                                             | 3    | Construction timeline is within 1 year                                                                            |
| Located within City Jurisdiction and on City-Owned Roadways | 0    | Not Located within City jurisdiction and on City-owned roadways                                                   |
|                                                             | 1    | Intersects with a roadway not owned by City; Project requires significant collaboration with other entity         |
|                                                             | 2    | Intersects with a roadway not owned by City; Project does not require significant collaboration with other entity |
|                                                             | 3    | Located within City jurisdiction and on City-owned roadways                                                       |
| Total Points Available                                      | 9    |                                                                                                                   |

# COMPLETE STREETS IN MEDFORD



| Project Location                                                         | Project Proposal                                                                                     | Score | Demand |       |       | Safety |       |       | Lack of Constraints |       |       | City Priority |       |       |
|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------|--------|-------|-------|--------|-------|-------|---------------------|-------|-------|---------------|-------|-------|
|                                                                          |                                                                                                      |       | Points | Total | Score | Points | Total | Score | Points              | Total | Score | Points        | Total | Score |
| High Street at Brooks Elementary School                                  | Curb extension, RRFB, 'Your Speed' signs, ADA-complaint ramps                                        | 0.77  | 20     | 31    | 0.16  | 11     | 12    | 0.23  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| West Medford Square (Warren Street at Canal Street and Playstead Road)   | Curb extension, widen crosswalk, ADA-complaint ramps                                                 | 0.76  | 22     | 31    | 0.18  | 10     | 12    | 0.21  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Tufts Pool and Park (Main Street at Medford Street)                      | Curb extensions, RRFB, construct pedestrian island, ADA-compliant ramps                              | 0.76  | 19     | 31    | 0.15  | 11     | 12    | 0.23  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Haines Square (Salem Street at Spring Street)                            | Curb extensions, construct sidewalk, improve median, ADA-compliant ramps                             | 0.72  | 14     | 31    | 0.11  | 11     | 12    | 0.23  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Medford Square (Salem Street at Ashland Street and River St)             | Curb extension, RRFB, ADA-compliant ramps                                                            | 0.68  | 12     | 31    | 0.10  | 10     | 12    | 0.21  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Winthrop Street Circle at High Street                                    | ADA-compliant ramps, pavement markings, "Yield" signs                                                | 0.68  | 15     | 31    | 0.12  | 9      | 12    | 0.19  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Boston Avenue Corridor (Arlington Line to Somerville Line)               | Install bike lanes                                                                                   | 0.67  | 16     | 31    | 0.13  | 8      | 12    | 0.17  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Riverside Avenue at Spring Street/Light Guard Drive                      | Curb extension, install crosswalk, upgrade pedestrian signal, ADA-compliant ramps                    | 0.67  | 13     | 31    | 0.10  | 9      | 12    | 0.19  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Main Street at Frederick Avenue/Hancock Street                           | Install crosswalk and stop lines, ADA-compliant ramps                                                | 0.67  | 13     | 31    | 0.10  | 9      | 12    | 0.19  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Forest Street at Webster Street                                          | Reduce curb radius, install crosswalk, ADA-compliant ramps                                           | 0.65  | 16     | 31    | 0.13  | 7      | 12    | 0.15  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| George Street Corridor                                                   | Improve sidewalk, ADA-compliant ramps, repave roadways                                               | 0.63  | 16     | 31    | 0.13  | 12     | 12    | 0.25  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Main Street at Harvard Street                                            | Curb extensions, re-stripe crosswalks, ADA-compliant ramps                                           | 0.62  | 20     | 31    | 0.16  | 10     | 12    | 0.21  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Playstead Road                                                           | Curb extension, ADA-compliant ramps, bicycle lanes or sharrows                                       | 0.62  | 17     | 31    | 0.14  | 5      | 12    | 0.10  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Main Street at South Street                                              | RRFB, reduce curb radius, improve drainage at crosswalks                                             | 0.61  | 18     | 31    | 0.15  | 7      | 12    | 0.15  | 7                   | 9     | 0.19  | 3             | 6     | 0.13  |
| Sharon Street at Arlington Street and Fairfield Street (2 Intersections) | ADA-compliant ramps at 4 corners                                                                     | 0.61  | 11     | 31    | 0.09  | 7      | 12    | 0.15  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Winthrop Street at Victory Park                                          | Install crosswalk, ADA-compliant ramps, bicycle lanes                                                | 0.60  | 13     | 31    | 0.10  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Canal Street at Prescott Street                                          | Construct sidewalks, crosswalks, ADA-compliant ramps                                                 | 0.59  | 14     | 31    | 0.11  | 5      | 12    | 0.10  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Transit Shelters at Medford Square and Haines Square                     | Transit Shelters at all MBTA stops                                                                   | 0.59  | 12     | 31    | 0.10  | 7      | 12    | 0.15  | 8                   | 9     | 0.22  | 3             | 6     | 0.13  |
| Playstead Road at Winthrop Street                                        | Curb extensions, re-stripe crosswalk, improve median, ADA-compliant ramps                            | 0.59  | 11     | 31    | 0.09  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Main Street at Stearns Avenue                                            | Install crosswalks, ADA-compliant ramps                                                              | 0.57  | 16     | 31    | 0.13  | 9      | 12    | 0.19  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| High Street Corridor                                                     | Sharrows or bicycle lanes                                                                            | 0.57  | 24     | 31    | 0.19  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Winthrop Street at Lorraine Road                                         | Construct sidewalk, ADA-compliant ramps                                                              | 0.56  | 12     | 31    | 0.10  | 4      | 12    | 0.08  | 9                   | 9     | 0.25  | 3             | 6     | 0.13  |
| Winthrop Street (Somerville Line to Mystic River)                        | Bike Lanes                                                                                           | 0.55  | 16     | 31    | 0.13  | 8      | 12    | 0.17  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Salem Street Corridor                                                    | Construct raised crosswalk, install signage, sharrows                                                | 0.51  | 14     | 31    | 0.11  | 7      | 12    | 0.15  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Police Station Access Improvements at 100 Main Street                    | Restripe crosswalk, repair sidewalk                                                                  | 0.50  | 12     | 31    | 0.10  | 10     | 12    | 0.21  | 7                   | 9     | 0.19  | 0             | 6     | 0.00  |
| Boston Avenue at Winthrop Street                                         | Curb extensions, re-stripe crosswalks, ADA-compliant ramps, install pedestrian countdown indications | 0.50  | 10     | 31    | 0.08  | 8      | 12    | 0.17  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Lawrence Road at Lincoln Street/Damon Street                             | Install crosswalks, ADA-compliant ramps                                                              | 0.50  | 15     | 31    | 0.12  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Harvard Street Corridor (Mystic Valley Pkwy to Somerville Line)          | Sharrows                                                                                             | 0.49  | 18     | 31    | 0.15  | 6      | 12    | 0.13  | 8                   | 9     | 0.22  | 0             | 6     | 0.00  |
| Playstead Road at Woburn Street/Osborne Street                           | Curb extension, install crosswalks and Stop sign, ADA-compliant ramps                                | 0.48  | 13     | 31    | 0.10  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| College Avenue/Walnut Street Corridor                                    | Bike lanes, Contra-flow lanes                                                                        | 0.46  | 18     | 31    | 0.15  | 3      | 12    | 0.06  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Sagamore Avenue at Lakeview Avenue                                       | ADA-compliant ramps at 4 corners                                                                     | 0.46  | 10     | 31    | 0.08  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Fire Station Access Improvements (437 Riverside Avenue)                  | ADA-compliant ramps                                                                                  | 0.44  | 8      | 31    | 0.06  | 6      | 12    | 0.13  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Commercial Street Crosswalk                                              | Install crosswalk, ADA-compliant ramps                                                               | 0.39  | 5      | 31    | 0.04  | 5      | 12    | 0.10  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Locust Street Corridor                                                   | Bicycle lanes, bicycle box, curb cuts to connect to off-road paths                                   | 0.38  | 6      | 31    | 0.05  | 4      | 12    | 0.08  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |
| Grove Street at Bussell Road                                             | Reconstruct intersection, crosswalk, ADA-compliant ramps                                             | 0.35  | 7      | 31    | 0.06  | 2      | 12    | 0.04  | 9                   | 9     | 0.25  | 0             | 6     | 0.00  |



# Project 1. High Street (Route 60) at Brooks Elementary School

## Proposed Project:

- Construct curb extensions on both ends of the existing crosswalk across High Street to shorten crossing distance and increase pedestrian visibility;
- Install Rectangular Rapid Flashing Beacon (RRFB) to improve vehicular yielding;
- Install Your Speed Dynamic Feedback signage on both High Street approaches to the school frontage;
- Reconstruct ADA-compliant ramps;
- Install eastbound bicycle lane and westbound shared lane with parking lane on south side.

## Conceptual Plan:



Repair Existing Dynamic Speed Feedback Sign

Proposed Rectangular Rapid Flashing Beacon

Proposed Rectangular Rapid Flashing Beacon

Proposed Dynamic Speed Feedback Sign

Eradicate Existing Skewed Crosswalk and Realign, Reconstruct Curb Ramps

Proposed Curb Extensions

- **Cost Estimate:** \$65,000
  - RRFB: \$15,000
  - Speed Feedback Signs: \$7,000
  - Pavement Markings (Crosswalks): \$1,000
  - ADA Ramps: \$12,000
  - Relocated Catch basins: \$10,000
  - Curb Extensions: \$20,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) westbound and bicycle lanes with parking eastbound along High Street.
- **Construction Timeline:** 30 days

## Existing Conditions:





## Project 2. West Medford Square: High Street at Warren Street/Canal Street/Playstead Road

### Proposed Project:

- Construct curb extensions on key locations throughout West Medford Square at intersection corners and sidewalk termini to shorten crossing distance, slow turning vehicles and increase pedestrian visibility;
- Widen the existing narrow crosswalk across High Street at Playstead Road to approximately 10 feet in width;
- Reconstruct ADA-compliant ramps.

- **Cost Estimate:** \$81,000
  - Pavement Markings: \$3,000
  - ADA Ramps: \$27,000
  - Curb Extensions: \$50,000
  - Tree removal/relocation: \$1,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along High Street.
- **Construction Timeline:** 60 days

### Existing Conditions:



### Conceptual Plan:



Proposed Widened  
Marked Crosswalk

Eradicate Existing  
Stop Line

Proposed Marked  
Crosswalk

Proposed Curb  
Extensions with  
Curb Ramps

Relocate  
existing tree  
blocking curb  
ramp



# Project 3. Tufts Pool & Park: Main Street at Medford Street

## Proposed Project:

- Construct curb extensions on at existing crosswalk across Main Street and align Main Street to tighter approach angle, install stop sign rather than Yield;
- Install Rectangular Rapid Flashing Beacon (RRFB) to improve vehicular yielding at Willard Avenue, Main Street, and Medford Street;
- Reconstruct ADA-compliant ramps and construct new ADA-compliant ramps at curb extensions;
- Construct raised island at Main Street and Medford Street and propose parallel parking along the edges
- **Cost Estimate:** \$147,600
  - RRFB: \$40,000
  - ADA Ramps: \$36,000
  - Curb Extensions: \$25,000
  - Crosswalks and Pavement Markings: \$1,000
  - Signs: \$600
  - Raised Island: \$45,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Main Street and Medford Street.
- **Construction Timeline:** 120 days

## Existing Conditions:



## Conceptual Plan:



- Proposed Curb Ramps and Rectangular Rapid Flashing Beacon
- Proposed Curb Extensions and Curb Ramps
- Replace Existing Yield with Stop Sign and Stop Line
- Proposed Rectangular Rapid Flashing Beacons and Crosswalks
- Newly Constructed Raised Island
- Proposed Parallel Parking
- Proposed Curb Ramp
- Proposed Stop Signs and Stop Lines
- Proposed Curb Ramps

Concept, Cost and Construction Estimate are presented for discussion purposes only.



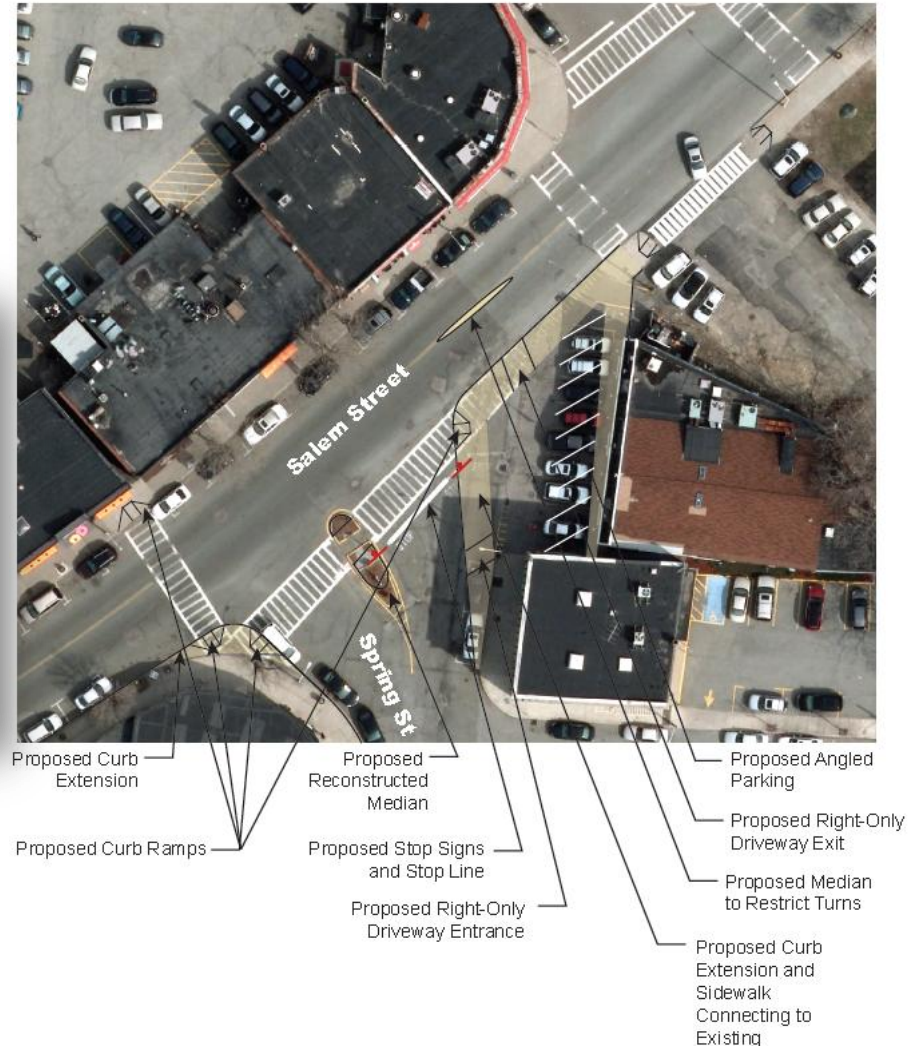
# Project 4. Haines Square: Salem Street at Spring Street

## Proposed Project:

- Construct curb extensions on Spring Street and Salem Street;
- Construct sidewalk along east side of Salem Street;
- Decommission the existing head-in parking at Alexander's and one-way drive aisle serving angled parking;
- Construct median along Salem Street to discourage left-turn exiting from the newly constructed one-way driveway;
- Reconstruct median at Spring Street to provide passable pedestrian refuge;
- Reconstruct ADA-compliant ramps and construct ramps for new curb extensions.
- **Cost Estimate:** \$67,400
  - ADA Ramps: \$12,000
  - Curb Extensions and Sidewalk: \$50,000
  - Signs: \$400
  - Medians: \$5,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Salem Street.
- **Construction Timeline:** 60 days



## Conceptual Plan:





# Project 5. Medford Square: Salem Street at Ashland Street/River Street

## Proposed Project:

- Construct curb extensions on both ends of the existing crosswalk across Salem Street to shorten crossing distance and increase pedestrian visibility;
- Install Rectangular Rapid Flashing Beacon (RRFB) to improve vehicular yielding;
- Reconstruct ADA-compliant ramps.
- **Cost Estimate:** \$55,000
  - RRFB: \$15,000
  - ADA Ramps: \$20,000
  - Curb Extensions: \$20,000
- **Construction Timeline:** 60 days
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Salem Street.

## Existing Conditions:



## Conceptual Plan:



Potential Curb Extension to End of On-Street Parking (Physical Bump Out or Tactical, for example, Planters)

Proposed Curb Ramps with Tactile Warning Strips Throughout Intersection

Removal of One Existing Parking Space

Proposed Rectangular Rapid Flashing Beacons

Eradicate Existing Skewed Crosswalk and Realign to 90 Degrees

Potential Curb Extension to End of On-Street Parking (Physical Bump Out or Tactical, for example, Planters)

Concept, Cost and Construction Estimate are presented for discussion purposes only.



# Project 6. Winthrop Circle at High Street

## Proposed Project:

- Construct curb ramps at five intersections
- Stripe splitter islands at all approaches
- Install "Yield" signs at all approaches
- Stripe dotted line circle at roundabout
- Shorten crosswalks for pedestrians

**Cost Estimate:** \$30,000

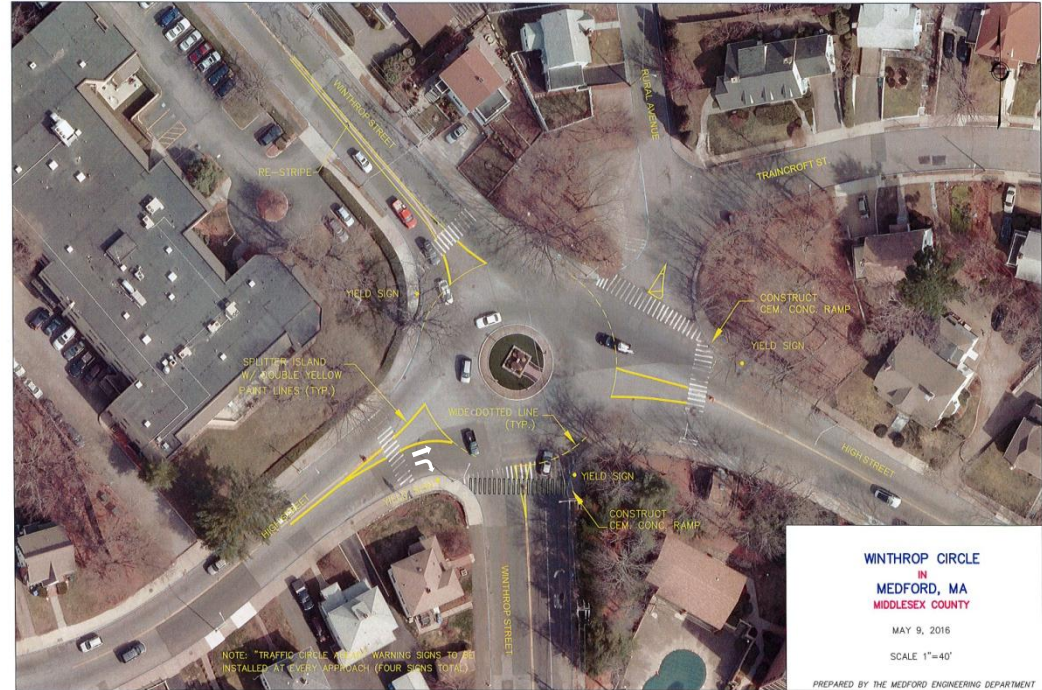
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan



WINTHROP CIRCLE  
IN  
MEDFORD, MA  
MIDDLESEX COUNTY

MAY 9, 2016

SCALE 1"=40'

PREPARED BY THE MEDFORD ENGINEERING DEPARTMENT



# Project 7. Boston Avenue Corridor: Arlington Line to Somerville Line

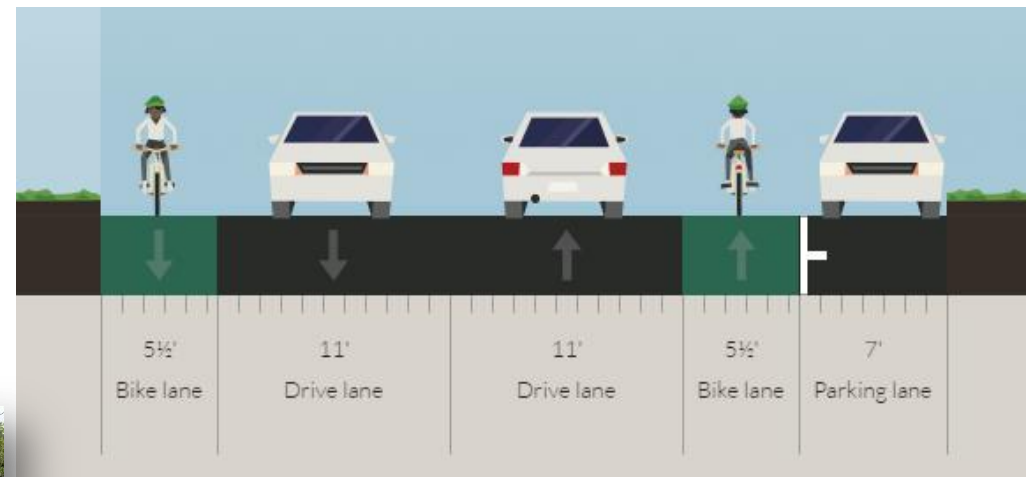
## Proposed Project:

- Install northbound bicycle lane and southbound shared lane with two parking lanes
- or
- Install northbound bicycle lane and southbound bicycle lane with one parking lane
- **Cost Estimate:**
  - Estimate: \$ 68,000  
Bicycle lane and shared lane: approximately \$34,000 per mile (approximately 2-mile corridor), including associated signage and pavement markings (with parking on both sides).
  - or
  - Estimate: \$ 82,000  
Two Bicycle lanes: approximately \$41,000 per mile (approximately 2-mile corridor), including associated signage and pavement markings (with parking on one side).
- **Construction Timeline:** 60 days

## Existing Conditions:



## Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



## Project 8. Riverside Avenue at Spring Street/Light Guard Drive

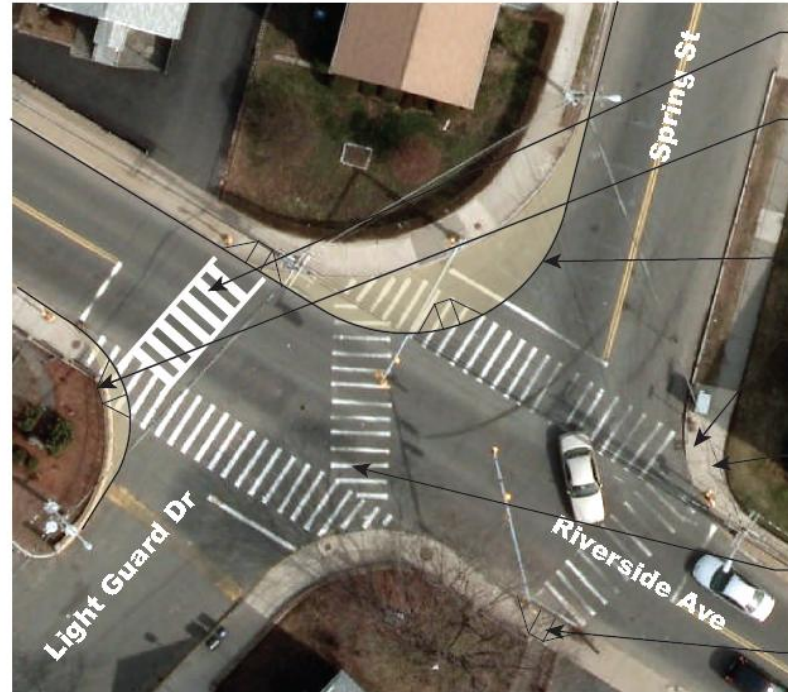
### Proposed Project:

- Construct curb extension on the northwest corner of the intersection to shorten crossing distances, slow turning vehicles and increase pedestrian visibility;
- Install missing crosswalk across Riverside Avenue on westbound approach;
- Upgrade pedestrian signal equipment and countdown and audible indications and install missing equipment on southwest corner;
- Reconstruct ADA-compliant ramps;
- Decommission existing misaligned curb ramp on Riverside Avenue.
- **Cost Estimate:** \$113,000
  - Pedestrian Signal Equipment: \$20,000
  - Pavement Marking/Eradication: \$1,000
  - ADA Ramps: \$12,000
  - Relocated Catch Basins: \$10,000
  - Curb Extension/Sidewalk repairs/Wall reconstruction: \$70,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Riverside Avenue.
- **Construction Timeline:** 60 days

### Existing Conditions:



### Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



# Project 9. Main Street at Frederick Avenue/Hancock Street

## Proposed Project:

- Mark stop lines on the Main Street approaches to the pedestrian signal;
- Mark crosswalk across Main Street, west of Hancock Street serving bus stops on either side of Main Street;
- Construct ADA-compliant ramps at the termini of both crosswalks;
- Realign existing signal heads and pedestrian indications to face correct approaches.
- **Cost Estimate:** \$29,000
  - Pedestrian Signal Equipment: \$10,000
  - Pavement Markings: \$1,000
  - ADA Ramps: \$18,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Main Street.
- **Construction Timeline:** 45 days

## Existing Conditions:



## Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



## Project 10. Forest Street at Webster Street

### Proposed Project:

- Reduce curb radius on north side of intersection and widen sidewalk 2' along Webster Avenue up to existing curb cut
- Reduce curb radius on south side
- Install ADA compliant curb ramps on each side of intersection
- Stripe crosswalk across Webster Street

**Cost Estimate:** \$25,000

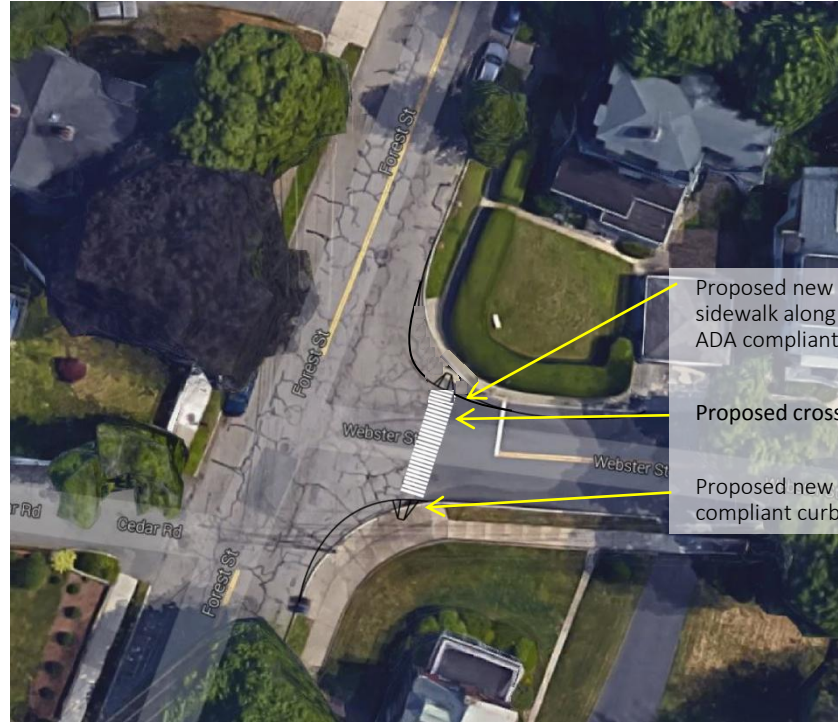
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

### Existing Conditions



### Conceptual Plan



Proposed new curb with 2' widened sidewalk along Webster Street and ADA compliant curb ramp

Proposed crosswalk

Proposed new curb and ADA compliant curb ramp



# Project 11. George Street Corridor

## Proposed Project:

- Repave roadway
- Install ADA compliant curb ramps at the intersection with College Avenue, Gourley Road, and Clark Street
- Upgrade sidewalk and ramps at George Street at Winthrop Street intersection
- Speed Table at George Street/Winthrop Street

Cost Estimate: \$70,000

Construction Timeline: 60 days

Additional Design/Study Needed: No

## Existing Conditions



## Conceptual Plan





## Project 12. Main Street at South Street

### Proposed Project:

- Install Rapid Flashing Beacon at crosswalks
- Tighten curb radius to reduce crossing distance for pedestrians and to reduce vehicular volumes
- Tactical improvements at Route 16/I-93 on-ramp, including paint and flex bollards
- Improve drainage at crosswalks

**Cost Estimate:** \$75,000

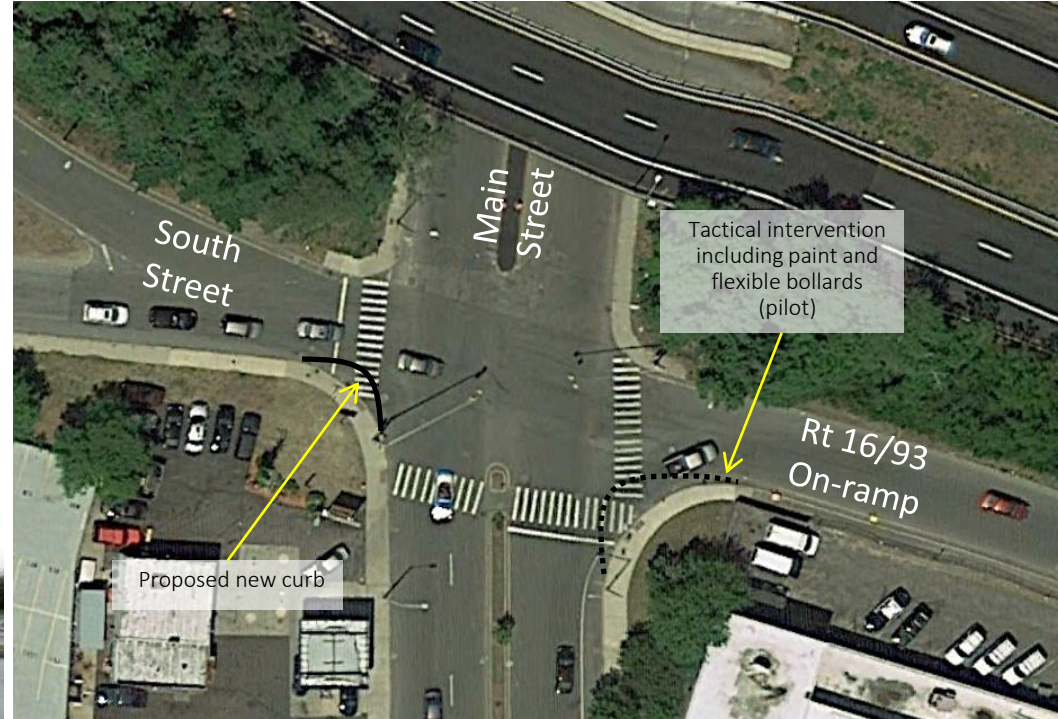
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

### Existing Conditions



### Conceptual Plan





## Project 13. Main Street at Harvard Street

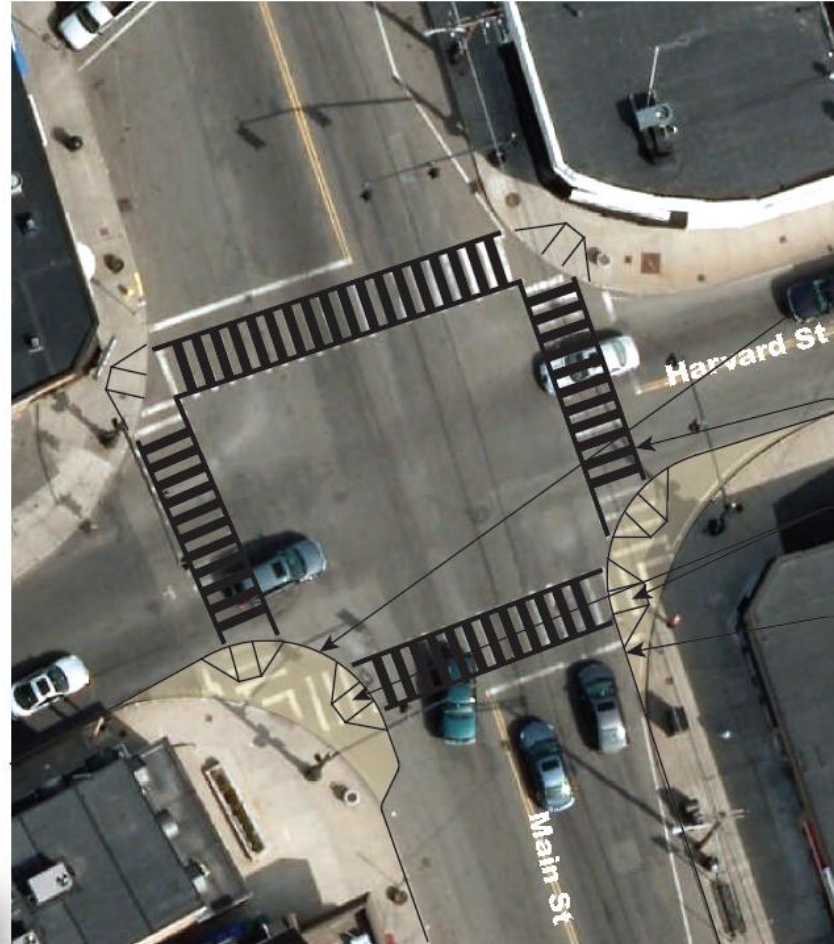
### Proposed Project:

- Construct curb extensions on south ends of Main Street and Harvard Street intersection;
- Refresh all crosswalks;
- Reconstruct ADA-compliant ramps and construct ramps at new curb extensions.
- **Cost Estimate:** \$50,000
  - Crosswalks: \$2,000
  - ADA Ramps: \$18,000
  - Curb Extensions: \$30,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Main Street and Harvard Street.
- **Construction Timeline:** 30 days

### Existing Conditions:



### Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



## Project 14. Playstead Road at Irving Street

### Proposed Project:

- Curb extension on Playstead road at Irving Street. Installation of curb ramps on both sides of street at Irving Street

**Cost Estimate:** \$15,000

**Construction Timeline:** 30 days

**Additional Design/Study Needed:** No

### Existing Conditions



### Conceptual Plan





# Project 15. Sharon Street at Arlington Street & Fairfield Street

## Proposed Project:

- Install ADA compliant curb ramps at all (four) corners of the intersections

**Cost Estimate:** \$25,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



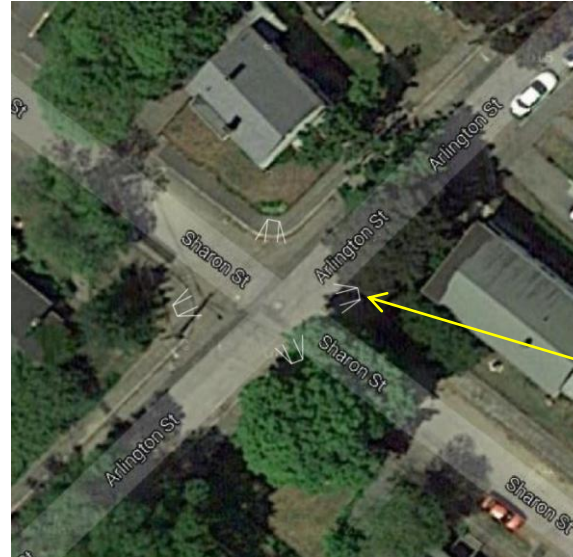
Sharon at Arlington



Sharon at Fairfield



## Conceptual Plans



Proposed curb ramps at all corners





## Project 16. Winthrop Street at Victory Park

### Proposed Project:

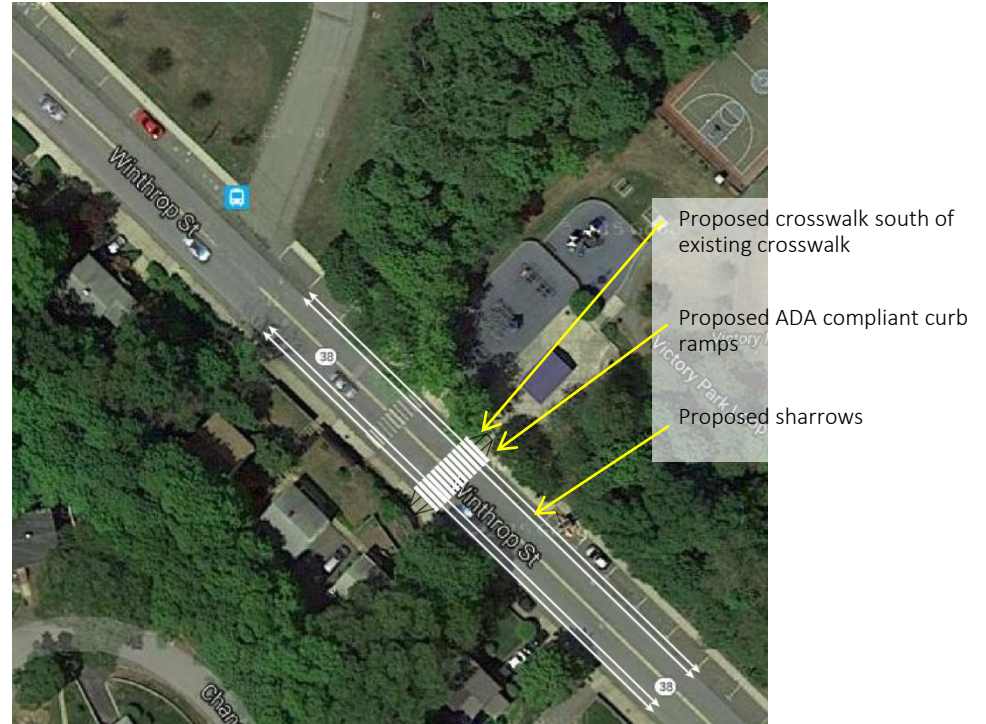
- Stripe crosswalk south from existing crosswalk to meet existing curb ramps
- Install ADA compliant tactile curb ramps
- Stripe shared lane markings ("sharrows") on Winthrop Street.

**Cost Estimate:** \$25,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

### Conceptual Plan



### Existing Conditions





## Project 17. Canal Street at Prescott Street

### Proposed Project:

- Construct sidewalks at south side of Prescott Street and east side of Canal Street to complete the sidewalk leading up to and across the railroad tracks;
- Reconstruct ADA-compliant ramps and construct new ramps for newly constructed sidewalks;
- Mark crosswalks connecting new ADA-compliant ramps.
- **Cost Estimate:** \$57,000
  - Sidewalks: \$20,000
  - ADA Ramps: \$36,000
  - Crosswalks: \$1,000
- **Construction Timeline:** 60 days

### Existing Conditions:



### Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



## Project 18. Transit Shelters at Medford Square and Haines Square

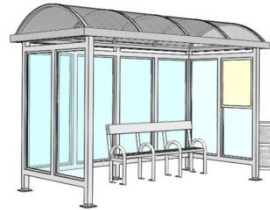
### Proposed Project:

- Construct transit shelters in Medford Square (Riverside Drive) and Haines Square

**Cost Estimate:** \$ 8,000 each (does not include shipping)

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No



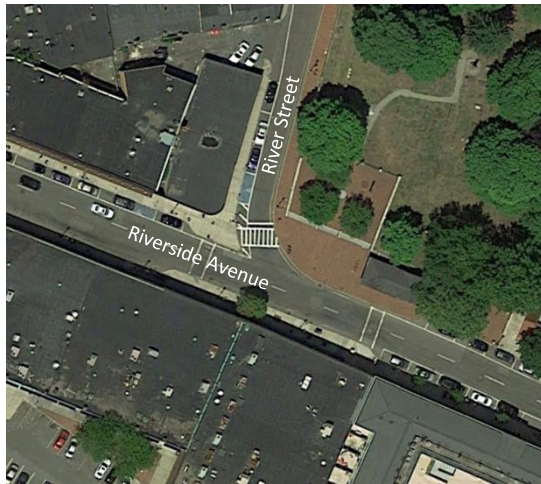
### Shelter Images



Gable roof (Duo-Gard Industries)



Barrel Vault (Duo-Gard Industries)



Medford Square



Haines Square



## Project 19. Playstead Road at Winthrop Street

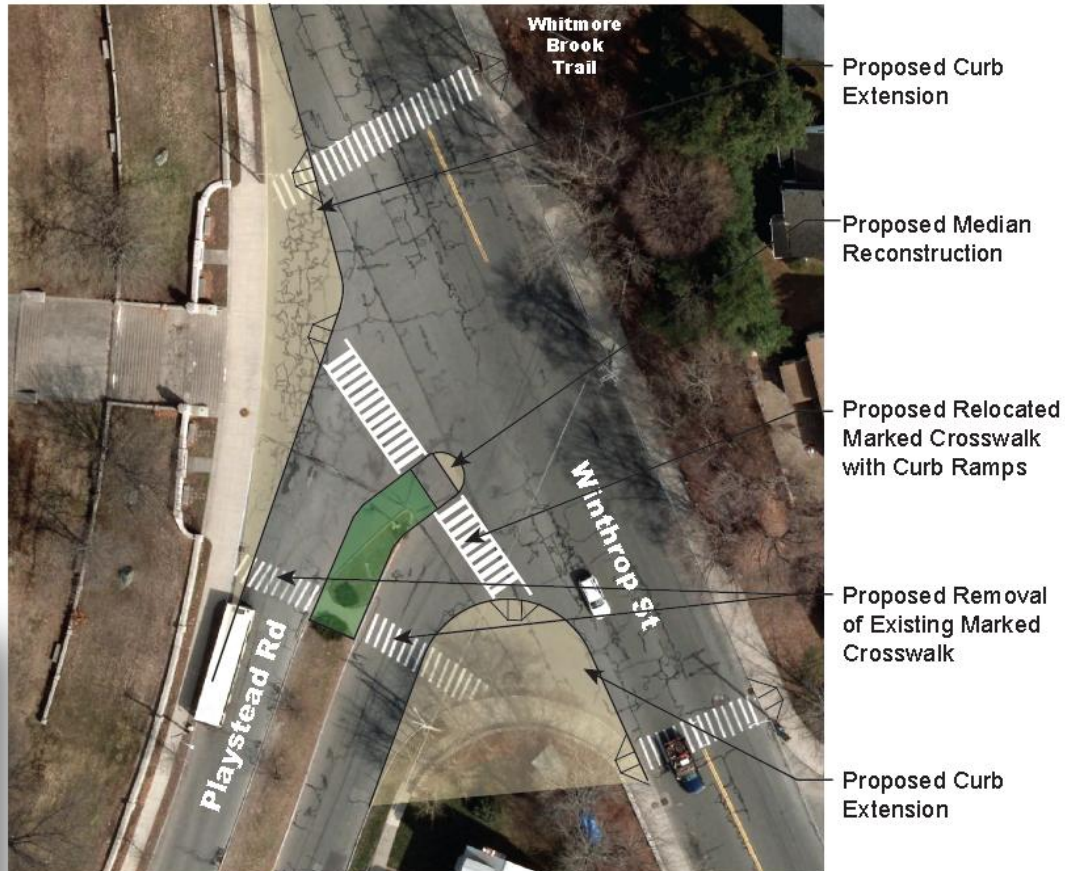
### Proposed Project:

- Construct curb extensions on Playstead Road therefore shortening conflict zone for bicycle lane on Winthrop Street and slowing turning vehicles, further promoting the truck restriction on Playstead Road;
- Reset crosswalk pavement markings;
- Construct ADA-compliant ramps for new curb extensions;
- Construct cut-through path at median on Playstead Road;
- Coordinate with MBTA on bus route U-turn around on Winthrop Street.
- **Cost Estimate:** \$90,700
  - Pavement Markings/Eradication: \$2,400
  - ADA Ramps: \$18,000
  - Additional Tactile warning strips: \$300
  - Curb Extensions with Sidewalk: \$70,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Playstead Road.
- **Construction Timeline:** 60 days

### Existing Conditions:



### Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.





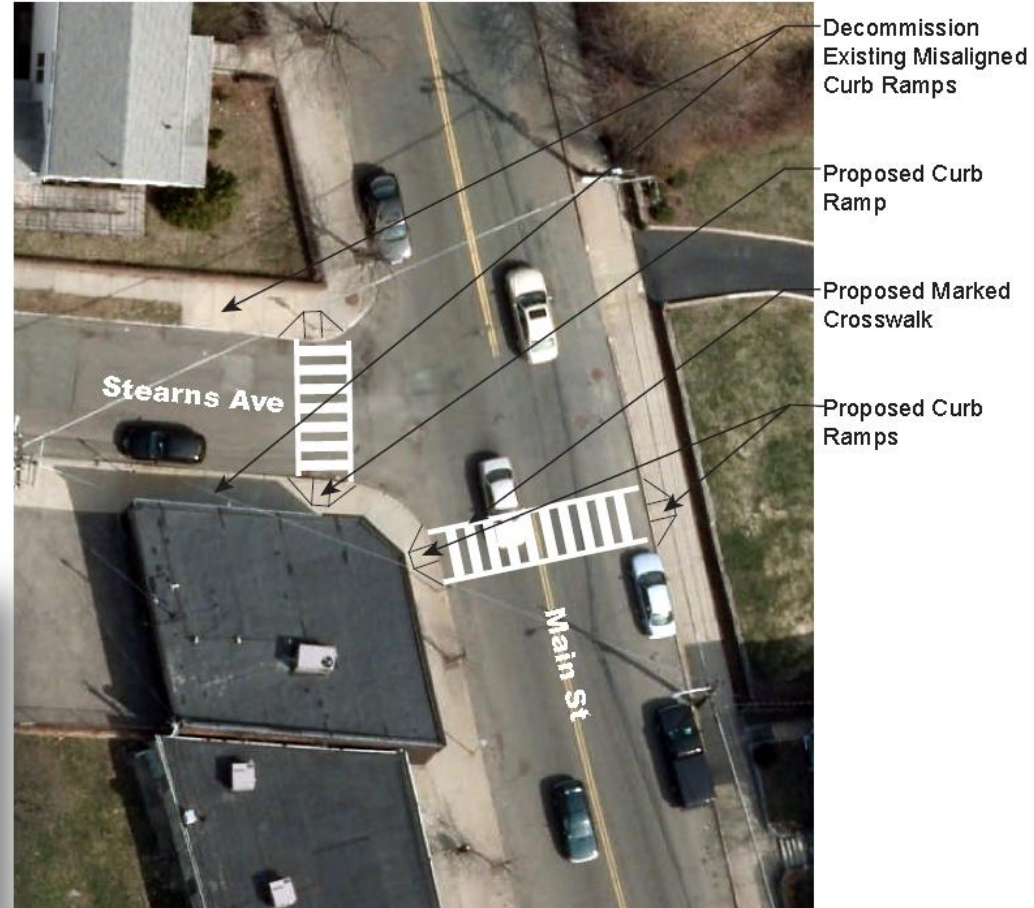
## Project 20. Main Street at Stearns Avenue

### Proposed Project:

- Mark crosswalk across Stearns Avenue, aligned with the Main Street sidewalk on the west side;
- Mark crosswalk across Main Street, south of Stearns Avenue serving bus stops on either side of Main Street;
- Construct ADA-compliant ramps at the termini of both crosswalks;
- Decommission existing curb ramps on Stearns Avenue.
- **Cost Estimate:** \$29,700
  - Pavement Markings: \$1,500
  - ADA Ramps: \$12,000
  - Relocated Catch basins: \$10,000
  - Decommissioned ramp reconstruction: \$6,000
  - Remove/Reset Bus Stop Signage: \$200
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Main Street.
- **Construction Timeline:** 30 days

### Existing Conditions:

### Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.





# Unranked. Playstead Road at Chardon Street and Gorham Street

## Proposed Project:

- ADA compliant curb ramps at Chardon Street and Gorham Street

**Cost Estimate:** \$15,000

**Construction Timeline:** 30 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan





# Unranked. High Street Corridor

## Proposed Project:

- Throughout 1.75 mile corridor, stripe sharrows or bicycle lanes, as space allows. Over longer term, explore options, such as removing on-street parking to incorporate more higher safety bicycle facilities
- Designate a parking lane along the road to narrow travel lanes

**Cost Estimate:** \$80,000

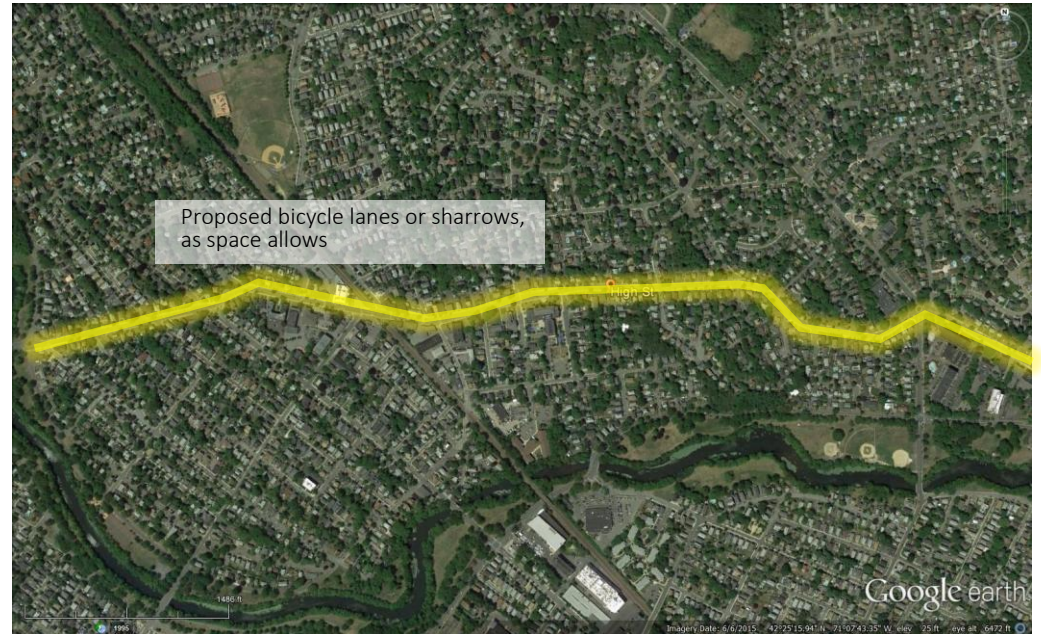
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** Yes

## Existing Conditions



## Conceptual Plan





# Unranked. Winthrop Street at Lorraine Road

## Proposed Project:

- Improve bus stop conditions by installing sidewalk and curb ramps along Winthrop Street from corner of Lorraine Road to Smith Lane
- Install sidewalk and curb ramp along Winthrop Street from corner of Lorraine Road to Joe's Gas / Auto Repair

**Cost Estimate:** \$50,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan





# Unranked. Salem Street Corridor

## Proposed Project:

- Gateway treatment and narrow travel lanes to calm traffic exiting from I-93
- Improve signage and crosswalk at Hadley Place
- Stripe shared lane markings along corridor in near term; over longer term explore options for additional bicycle facilities, such as bicycle lanes or separated bicycle lanes

**Cost Estimate:** \$50,000

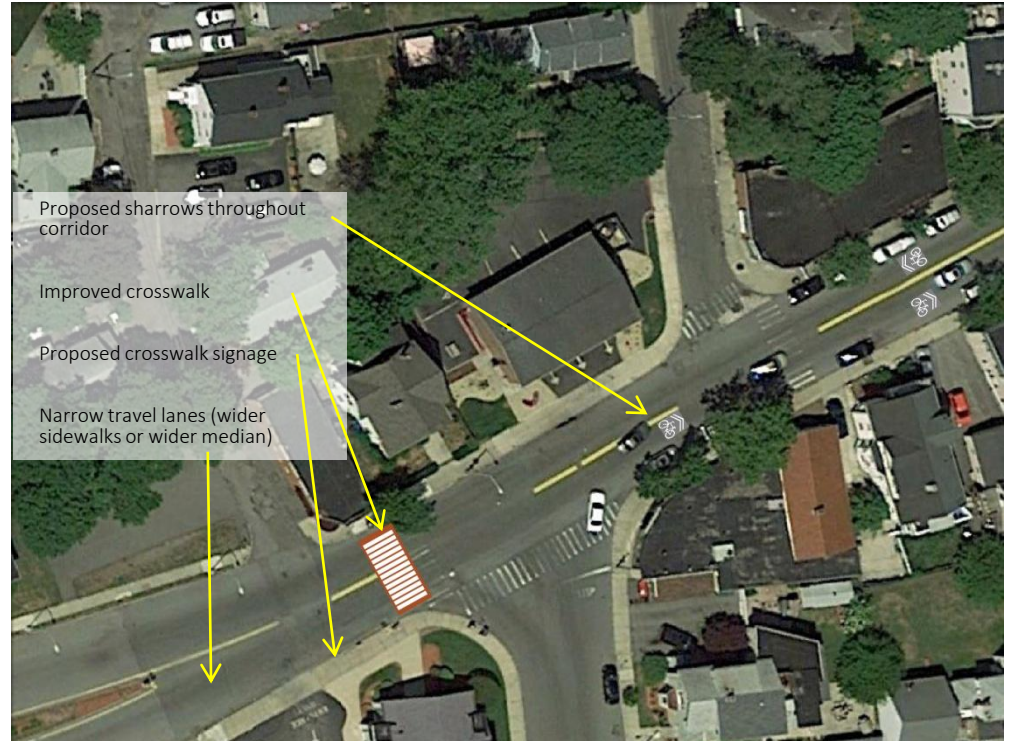
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan





# Unranked. Police Station Access Improvements (100 Main Street)

## Proposed Project:

- Restripe crosswalk
- Repair cracked sidewalk panel

**Cost Estimate:** \$5,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan





# Unranked. Boston Avenue at Winthrop Street

## Proposed Project:

- Construct curb extensions on all corners of the Boston Avenue and Winthrop Street intersection;
- Repave existing faded crosswalks;
- Construct ADA-compliant ramps for the new curb extensions;
- Install Pedestrian Countdown Indications throughout intersection
- **Cost Estimate:** \$71,200
  - Pavement Markings: \$1,200
  - ADA Ramps: \$24,000
  - Curb Extensions: \$30,000
  - Pedestrian Countdown Indications: \$16,000
- **Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and markings along Boston Avenue and Main Street.
- **Construction Timeline:** 30 days

## Existing Conditions:



## Conceptual Plan:



Proposed Curb Extensions with Curb Ramps

Remark Existing Faded Crosswalks

Proposed Pedestrian Countdown Indications Throughout Intersection

Proposed Curb Extensions with Curb Ramps

Concept, Cost and Construction Estimate are presented for discussion purposes only.



# Unranked. Lawrence Road at Lincoln Road and Damon Street

## Proposed Project:

- Install crosswalks and ADA compliant curb ramps across Damon Street at Lawrence Street (north side and south side)
- Install crosswalks and ADA compliant curb ramps across Lincoln Road at Lawrence Street (north side and south side)

Cost Estimate: \$30,000

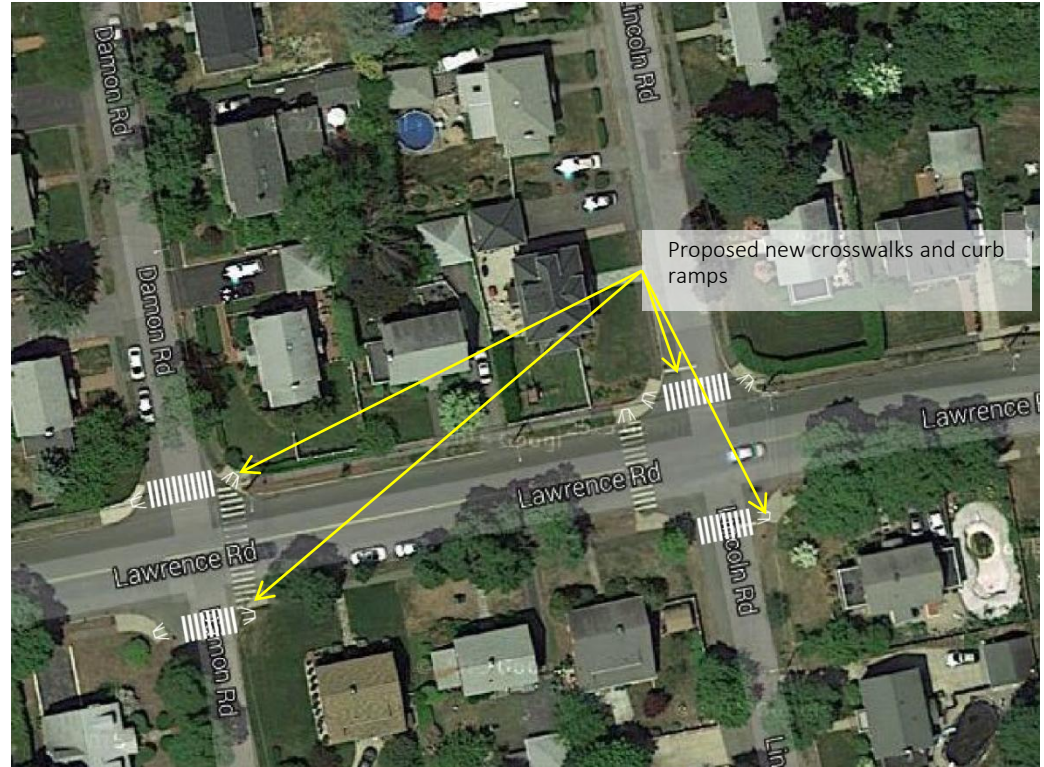
Construction Timeline: 60 days

Additional Design/Study Needed: No

## Existing Conditions



## Conceptual Plan





# Unranked. Harvard Street Corridor

## Proposed Project:

- Install shared lanes ("sharrows") along the roadway

Cost Estimate: \$20,000

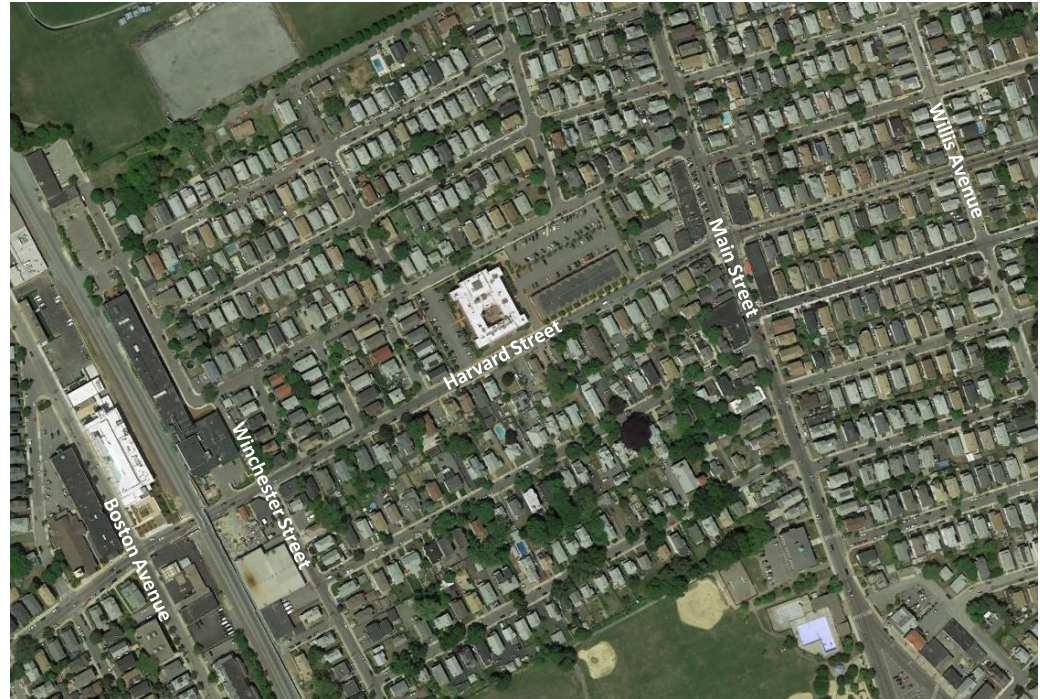
Construction Timeline: 60 days

Additional Design/Study Needed: No

## Existing Conditions



## Conceptual Plan





# Unranked. Playstead Road at Woburn Street/Osborne Road

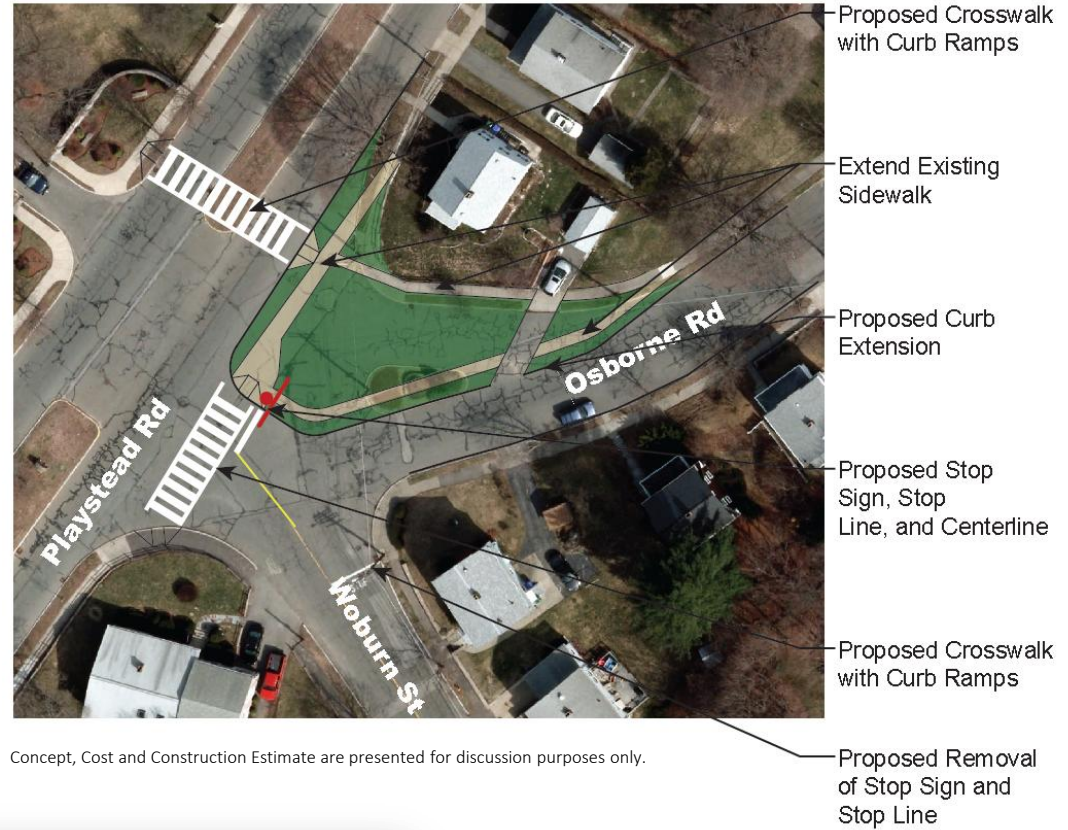
## Proposed Project:

- Decommission the northern access to Osborne Road (one-way eastbound roadway) through the construction of a curb extension on the northeast of the intersection to tighten the overall footprint of the intersection. This tightening will shorten crossing distances, reduce driver confusion and reduce conflict points within the intersection for all users;
- Consider two-way travel operations on Osborne Road;
- Mark crosswalks across the Woburn Street approach and Playstead Road, north of Woburn Street;
- Install Stop sign to control the Woburn Street approach to Playstead Road, with associated stop line and centerline;
- Construct ADA-compliant ramps at the termini of both crosswalks.
- Cost Estimate:** \$90,200
  - Pavement Markings: \$3,000
  - ADA Ramps: \$12,000
  - Remove/Reset Stop Sign: \$200
  - Curb Extension/Median removal: \$50,000
  - New Sidewalk: \$25,000
- Alignment with Bicycle Infrastructure Master Plan:** Install bike accommodations – signage and shared lane markings (sharrows) along Playstead Road.
- Construction Timeline:** 60 days

## Existing Conditions:



## Conceptual Plan:



Concept, Cost and Construction Estimate are presented for discussion purposes only.



# Unranked. Sagamore Avenue at Lakeview Avenue and Jackson Road

## Proposed Project:

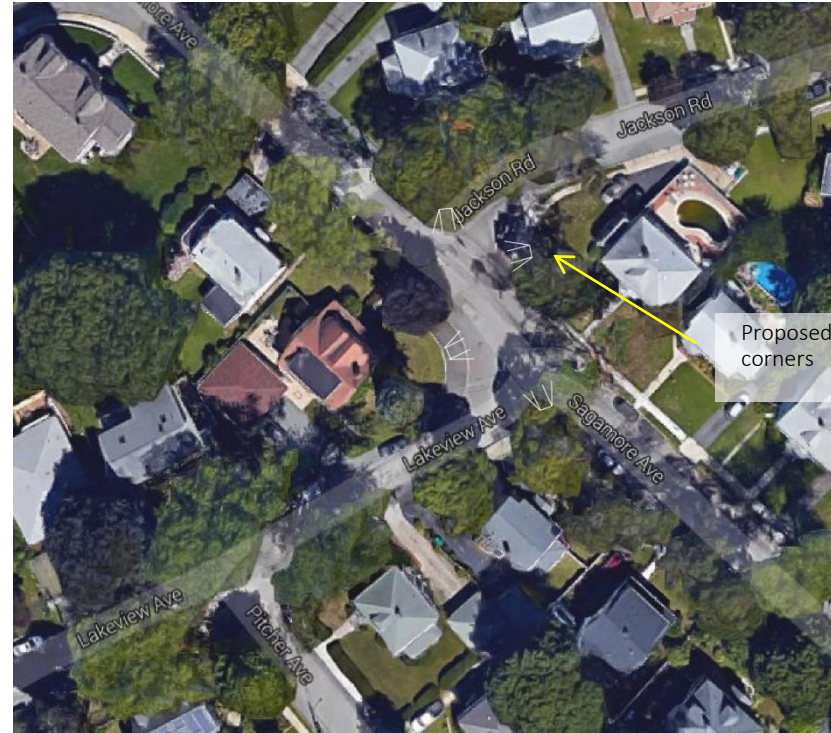
- Install ADA compliant curb ramps at four corners of intersections

**Cost Estimate:** \$12,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Conceptual Plan



## Existing Conditions





# Unranked. Fire Station Access Improvements (437 Riverside Ave)

## Proposed Project:

- Complete reconstruction of the access ramp to Fire Station to make it ADA accessible

**Cost Estimate:** \$50,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions





# Unranked. Commercial Street Crosswalk

## Proposed Project:

- Crosswalk at location where east side crosswalk ends just south of southbound on-street parking
- Install ADA compliant curb ramps

**Cost Estimate:** \$7,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Conceptual Plan



## Existing Conditions





# Unranked. Locust Street Corridor

## Proposed Project:

- Stripe bicycle lanes or buffered bicycle lanes throughout corridor, space permitting. Over longer term consider design for separated bicycle lanes.
- Stripe bicycle box southbound at Mystic Valley Parkway intersection
- Stripe green-painted bicycle lane (for added visibility) through intersection towards off-road paths
- Install curb cut for bicycle access to off-road paths
- Formalize “cow path” to connect to existing off-road paths
- Install signage directing cyclists towards underpass to access Mystic River Reservation

**Cost Estimate:** \$100,000

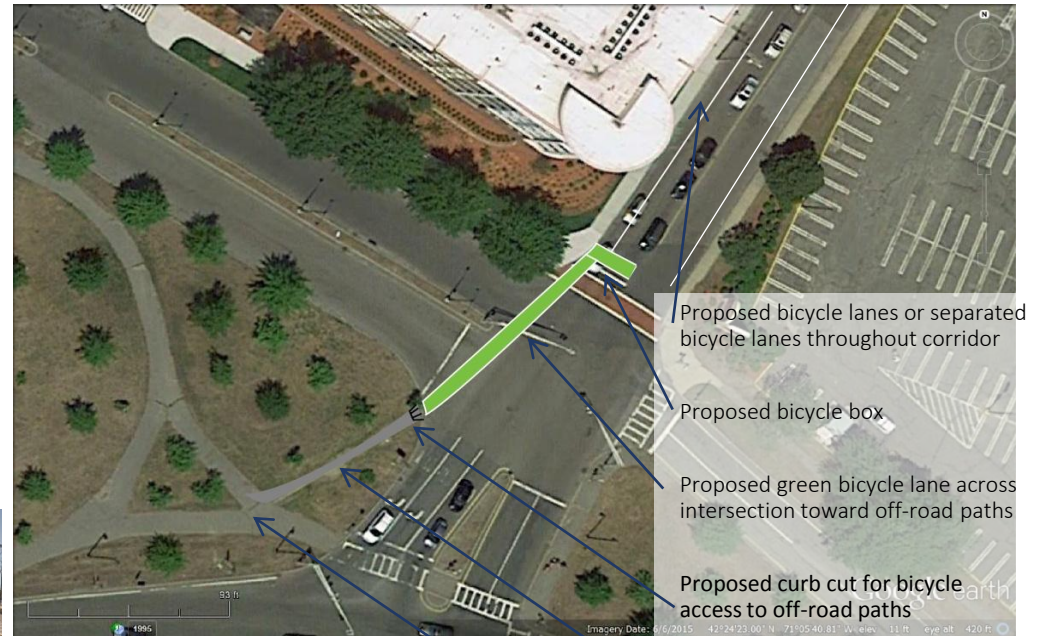
**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions



## Conceptual Plan





# Unranked. Grove Street at Bussell Road

## Proposed Project:

- Reconstruct intersection to provide a T-intersection
- Construct crosswalks
- Construct ADA-compliant ramps

**Cost Estimate:** \$60,000

**Construction Timeline:** 60 days

**Additional Design/Study Needed:** No

## Existing Conditions

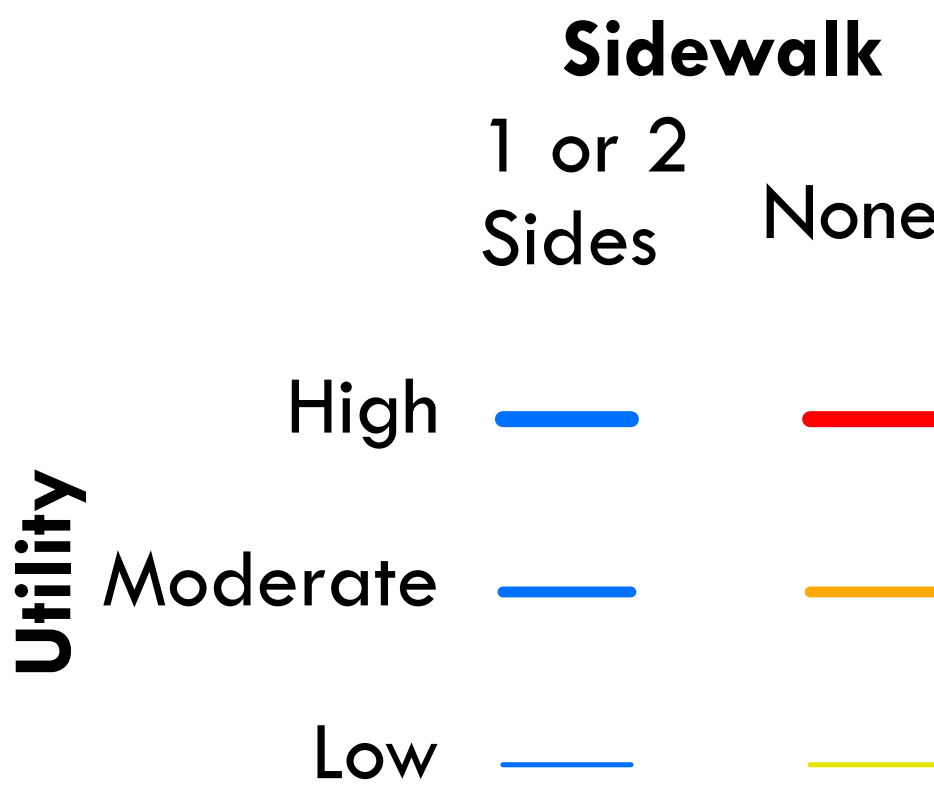


## Conceptual Plan



# Medford Utility Scores

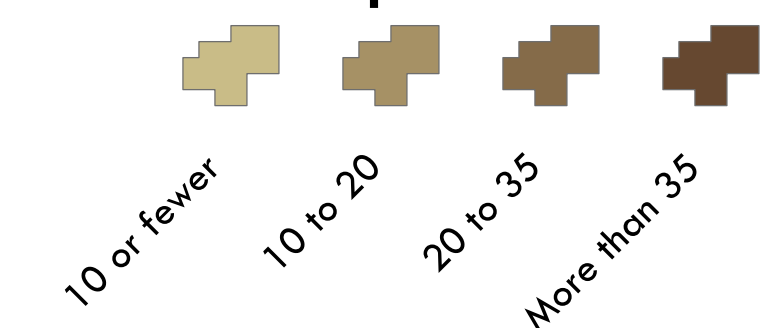
## Sidewalk Gap



- Restaurants
- Retail Businesses
- Schools**
  - Public
  - Other
  - Ⓣ Commuter Rail Stations
  - Operational

## Census Blocks (2010)

### Residents per Acre



- Rivers and Streams
- + Water Bodies
- + Open Space

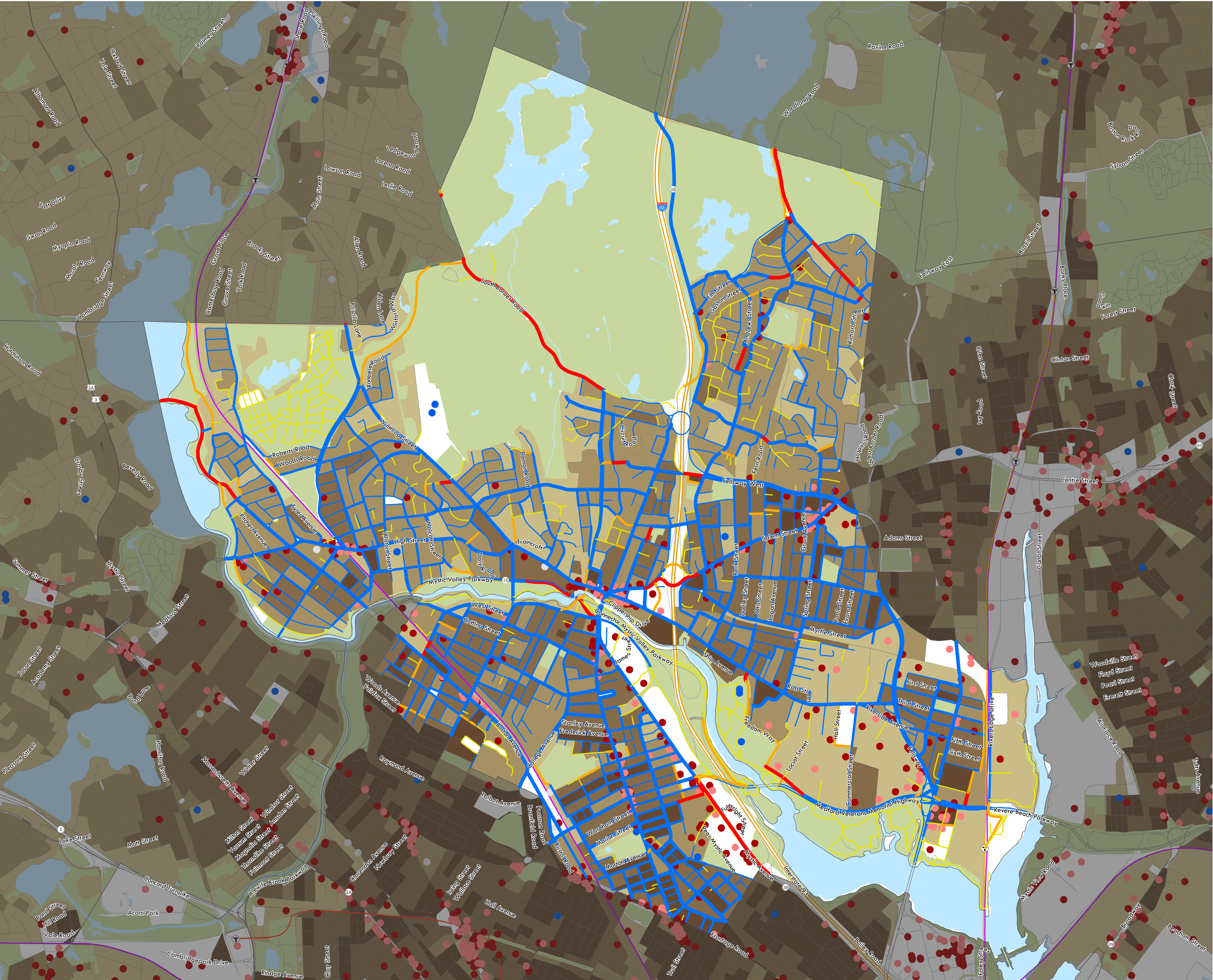


The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

Produced by:  
Metropolitan Area Planning Council  
60 Temple Place, Boston, MA 02111 | (617) 933-0700

Data Sources:  
Metropolitan Area Planning Council (MAPC)  
Massachusetts Geographic Information System (MassGIS)  
Massachusetts Department of Transportation (MassDOT)  
Massachusetts Bay Transit Authority (MBTA)  
Census 2010

May, 2016



# Medford Utility Scores

## Bike Utility

### Bike Utility

- Lowest
- Low
- Moderate
- High
- Highest

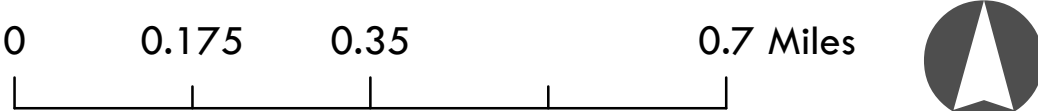
### Census Blocks (2010)

- #### Residents per Acre
- 10 or fewer
  - 10 to 20
  - 20 to 35
  - More than 35

- Restaurants
- Retail Businesses

### Schools

- Public
- Other
- Commuter Rail Stations
- Operational
- Rivers and Streams
- Water Bodies
- Open Space



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