

City of Cambridge  
Department of Public Works

# Gore Street and Rufo Road Surface Reconstruction Design Kick-off Meeting 6.19.2018

# Design Kick-off | Meeting Agenda

- **Introduction of City Objectives**
  - Katherine Watkins, City Engineer
- **Gore Street and Rufo Road Design Discussion**
  - Kara Falise, Senior Engineer
- **Small Group Discussions**
- **Closing remarks**
- **Update on Current Utility Construction**
  - DivCO West / CSL

# 5 YEAR PLAN | **PLANNED CONSTRUCTION**



Interactive construction map: [www.cambridgema.gov/theworks/constructionmap](http://www.cambridgema.gov/theworks/constructionmap)



## INTRODUCTION | COMPLETE STREETS

Complete Streets are **streets for everyone**. They are designed and operated to enable **safe access for all users**. Pedestrians, bicyclists, motorists, and public transportation (transit) users of all ages and abilities are able to safely move along and across a Complete Street. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. They help buses to run on time and make it safe for people to walk to and from train stations.

More sidewalks and bicycle facilities are included, which provides **increased accessibility for pedestrians and cyclists**.

During design and construction of Complete Streets, our goal is to communicate projects with neighborhoods, facilitate an integrated design process, minimize disruption to community life and provide reasonable access for all users during reconstruction.

# INTRODUCTION | VISION ZERO

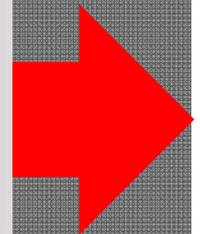
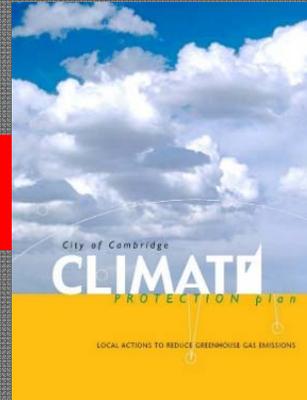
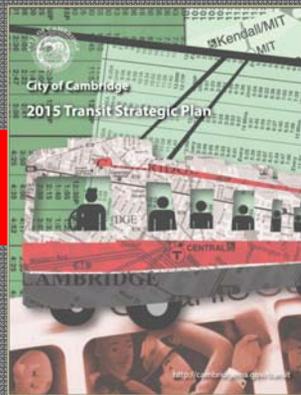
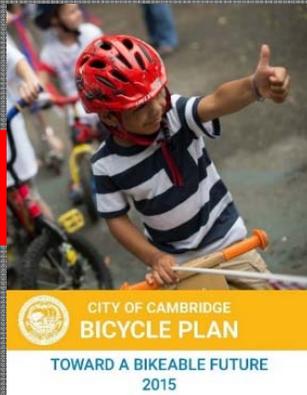
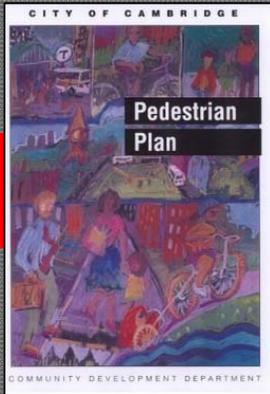
On March 21, 2016, the Cambridge City Council unanimously passed resolutions put forth by the City Manager to formally adopt Complete Streets and Vision Zero policies, showing that the City of Cambridge is committed to achieving these goals, assuring safe access for all users.

**Vision Zero calls for the elimination of fatalities and serious injuries resulting from traffic crashes**, and emphasizes that they can and should be prevented. The City of Cambridge is the 17th city in the U.S. to commit to a Vision Zero Policy.



# INTRODUCTION | GUIDING PLANS AND POLICIES

In addition to Complete Streets and Vision Zero



**Vehicle Trip Reduction Ordinance** established programs to encourage alternatives to single-occupancy vehicle travel (1992).

**Cambridge Growth Policy** emphasizes sustainable modes of transportation such as walking, biking and using transit and low-emission vehicles, which promote livability and help to improve air quality and reduce greenhouse gas emissions (1993/2007).

# 5 YEAR PLAN | SCOPE OF WORK

Our approach emphasizes **streets designed and operated for everyone**. Pedestrians, bicyclists, motorists, and transit users of all ages and abilities will be able to safely move along and across **Complete Streets**.



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Emphasis on accessibility – pedestrian ramps, sidewalks and universal design.



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Vision Zero calls for the elimination of fatalities and serious injuries resulting from traffic crashes.



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Transit improvements – accessibility of bus stops and transit priority, as feasible.



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Network of bike facilities – support people of all ages and abilities to bike safely throughout the city.



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Additional street trees and green infrastructure.



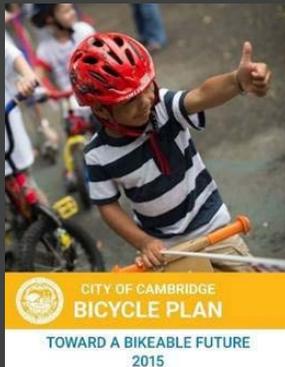
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Maintain and improve city infrastructure, and coordinate with private utilities to facilitate upgrades.

# DESIGN | BICYCLE FACILITIES

## Bicycle Facilities

- Improvements for bicycling will be considered in all projects undertaken in the City and will be guided by the Bicycle Plan.
- The Bicycle Plan lays out a vision for where we as a City want to be. The fundamental guiding principle for this plan is to enable people of all ages and abilities to bicycle safely and comfortably throughout the City. The Bicycle Plan provides the framework for developing a network of Complete Streets and supporting programs and policies that will help meet this goal.



# DESIGN | MAKING CONNECTIONS



# DESIGN | TRANSIT

A sustainable and efficient mode of transportation that moves people safely compared to driving in private automobiles.

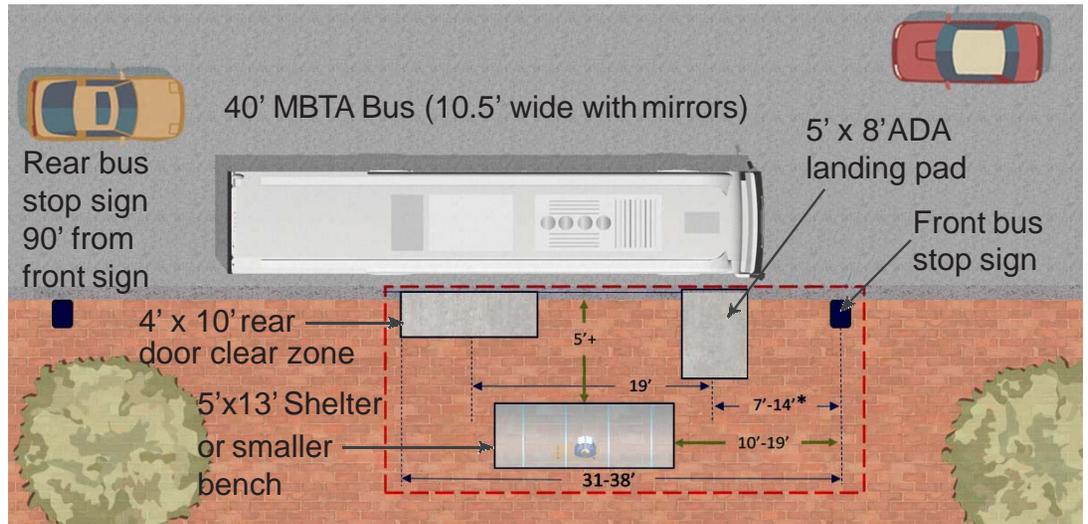
Transit considerations include:

## Accessibility

Ensure that bus stops are accessible and provide amenities when appropriate.

## Priority

City performed a bus delay and reliability assessment so that we can explore options for transit priority (e.g. dedicated lanes) in roadway projects where there are expected benefits.



# PROGRAMS | STREET & SIDEWALK

Street and sidewalk contracts are funded locally and by the state. These contracts are managed by the Department of Public Works. Construction generally includes surface enhancements such as:

- Paving
- Sidewalk and pedestrian ramps
- Traffic calming
- Street trees
- Stormwater management and green infrastructure
- Bike and transit improvements

## Toolbox Design Elements

**Raised Crosswalks**

**Flexi Pave [at trees]**

**Curb Extensions & Ramps**

**New Sidewalks**

**Sidewalk Construction**

**New Tree Planting**

# DESIGN | SIDEWALKS AND ACCESSIBILITY



Photo Credit:  
Christian Phillips Photography and Klopfer Martin Design Group



The City is committed to accessibility in all of our construction projects.

- All new sidewalks and pedestrian ramps will meet ADA /AAB requirements.
- Sidewalk widths vary by the type of street. Typically 5' sidewalk is required, but wider sidewalks are required on busier commercial streets and arterials.
- 4' min is required at new driveways and street trees. 3' min is allowable at existing street trees.
- Sidewalks will include a minimum 3' of sidewalk or accessible routes around existing trees.
- The best design for pedestrian crossings, particularly on narrow side streets, may be a modified raised crosswalk.



# SCOPE | STREET TREES

## Existing Street Trees

Existing street trees will be protected during construction and the sidewalks will be carefully evaluated to ensure adequate accessible routes through the neighborhood.

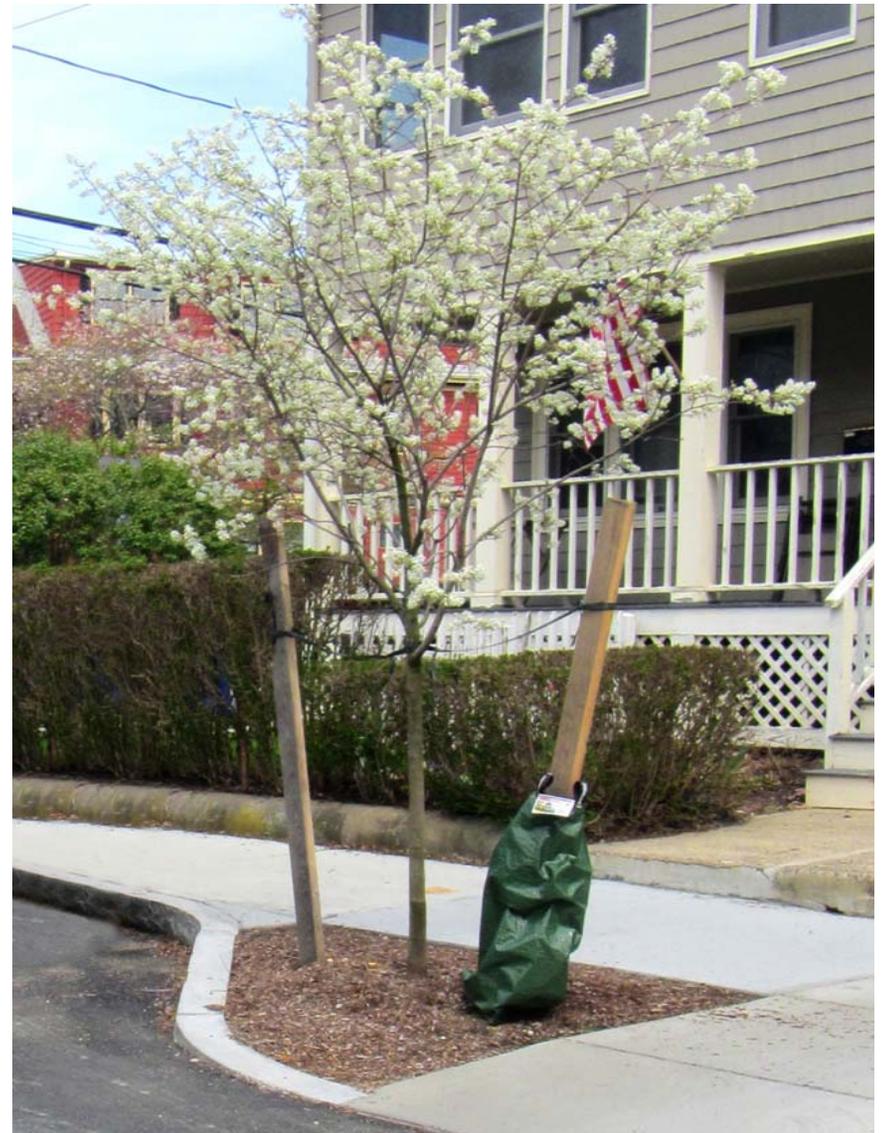
## New Tree Plantings

The City Arborist will review each street and sidewalk project to determine tree planting opportunities; evaluating the location of overhead and underground utilities, proximity to intersections, site lines, building setbacks, locations of entrances, etc.

- On **narrow sidewalks** (less than 8' wide), a minimum of 4' of sidewalk width will be retained adjacent to new trees.
- On **wider sidewalks** (8' wide or greater), a minimum of ½ of the overall sidewalk width will be retained for pedestrians.

## Back of Sidewalk Trees

The Arborist will work with residents interested in back of sidewalk tree plantings.



## GOALS

- **Protect existing** street trees during construction.
- Increase the number of street trees and maintain **accessible sidewalks**.

# SCOPE | GREEN INFRASTRUCTURE

The City is incorporating green infrastructure on projects, as conditions and space allow.

## Goals

- Stormwater discharges are contributing to at least 55% of impairments to Massachusetts' assessed waters.
- Goal: **improve the water quality** of stormwater before discharging to outfalls at the Alewife Brook and Charles River.

## Types of Improvements

- Porous asphalt
- Infiltrating catch basins
- Rain gardens/bio basins

## Siting Evaluation

- Soil conditions
- Groundwater
- Space constraints
- Maintenance



# SCOPE | CONSTRUCTION

The City is committed to working with residents and businesses throughout the construction process.

## Construction Coordination

- Project Manager and Community Relations Manager assigned to every project.
- Manage contractor and coordinate construction activities and community notifications.
- Standard Work Hours: Mon – Fri 7 am – 4 pm
- Maintain safe and effective traffic management plans to assist pedestrians, cyclists, drivers and buses travelling through project area.



# GORE STREET and RUFO ROAD | SCOPE

## Currently On-going

- New Gas Main and services by Eversouce
- Sewer Main to Somerville by Cambridge Crossing

## Proposed as part of City Surface Restoration Project:

- New water main and replacement of lead services.
- Sewer main rehabilitation and repairs
- Pavement profile restoration and repaving
- Accessible sidewalk reconstruction
- Tree plantings and improved drainage
- Community Process and Input Scope

# GORE STREET and RUFO ROAD | **SCHEDULE**

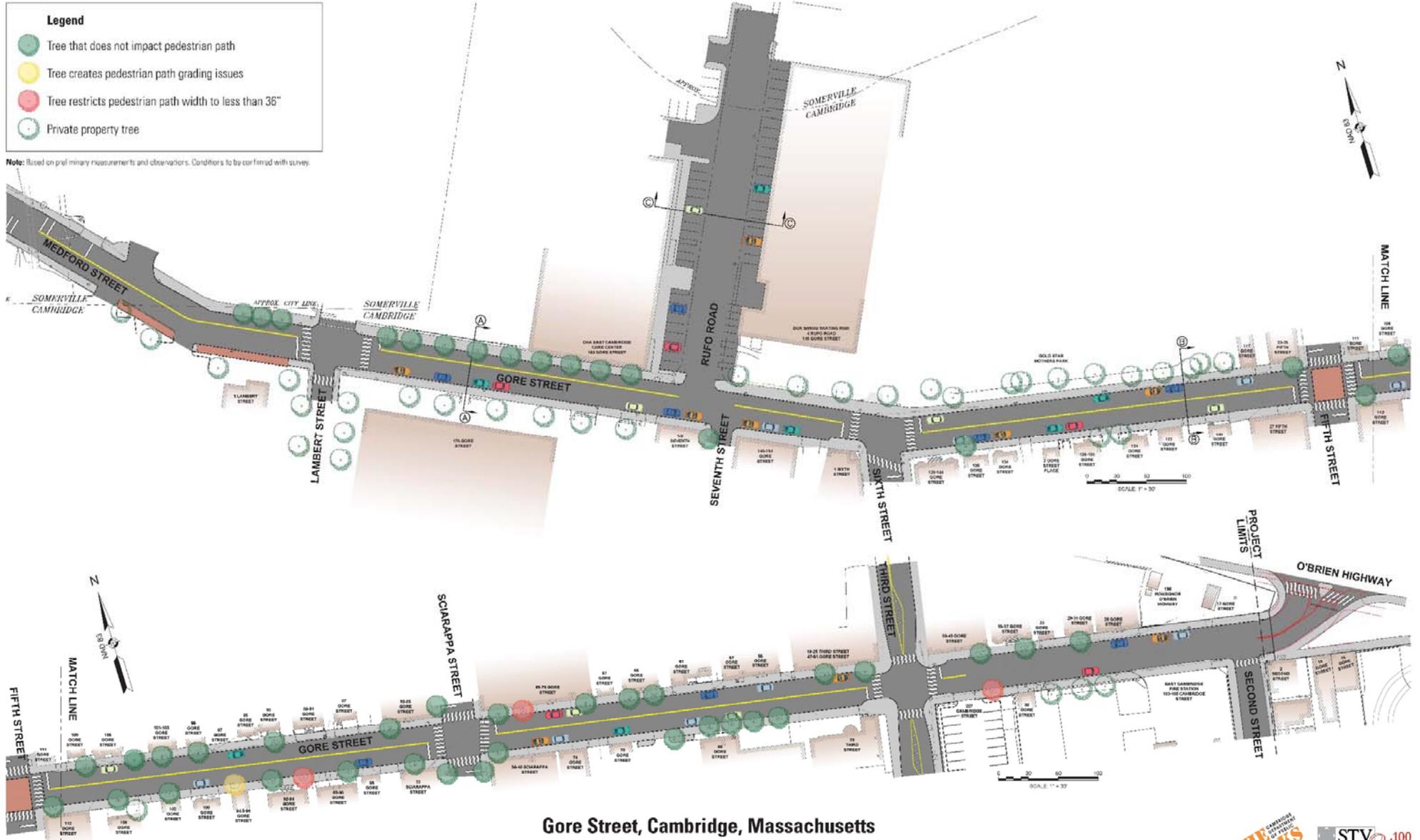
- **Early Summer (TONIGHT):** Design Kick-Off
  - Community Meeting to understand Conditions
- **Summer – Fall 2018:** Survey and Design Concepts
  - Community meeting to evaluate concepts
- **Winter 2018-2019:** Design Finalization
  - Community meeting to review design
- **Summer 2019:** Bidding for Construction
- **Fall 2019:** Construction Commencement
  - Community Meeting to kick-off construction

# GORE STREET and RUFO ROAD | EXISTING CONDITION

**Legend**

- Tree that does not impact pedestrian path
- Tree creates pedestrian path grading issues
- Tree restricts pedestrian path width to less than 36"
- Private property tree

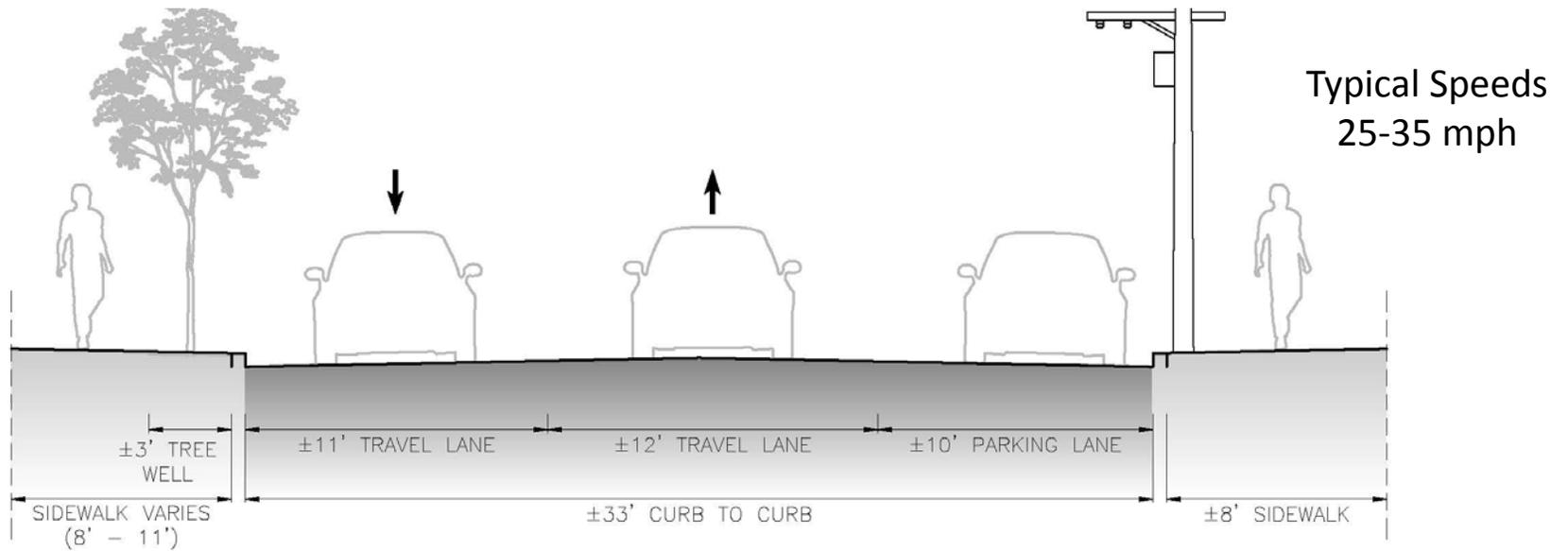
*Note:* Based on preliminary measurements and observations. Conditions to be confirmed with survey.



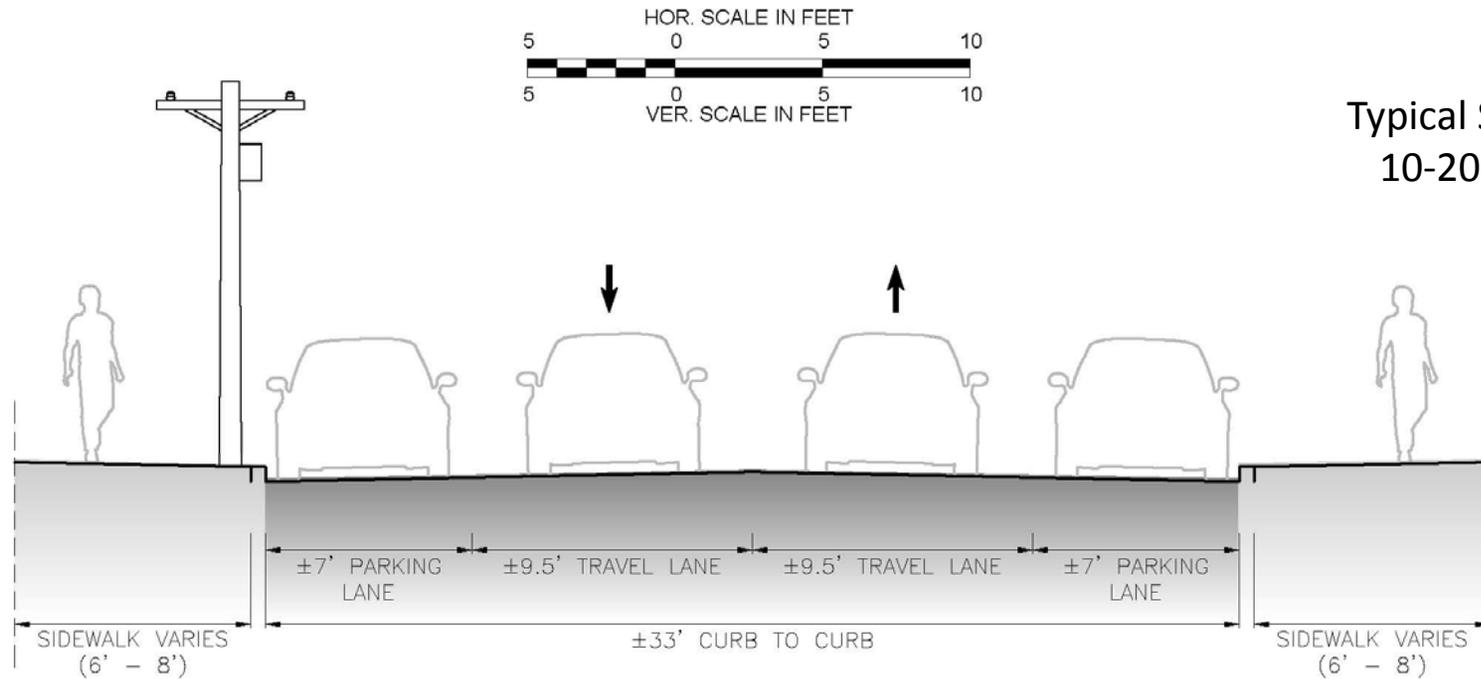
## Gore Street, Cambridge, Massachusetts

Design Kick-Off Meeting: Existing Conditions Figure  
June 19, 2018

# GORE STREET | EXISTING CROSS SECTIONS



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# GORE STREET | EXISTING CONDITIONS



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# GORE STREET | EXISTING CONDITIONS

## Concerns

Traffic Speed - Traffic Volume - Vehicle Maneuvers  
Driver Compliance - Visibility of posted signage  
Sidewalk Condition - Bump out Configuration  
Parking impacts - Construction Impacts  
Drainage Conditions

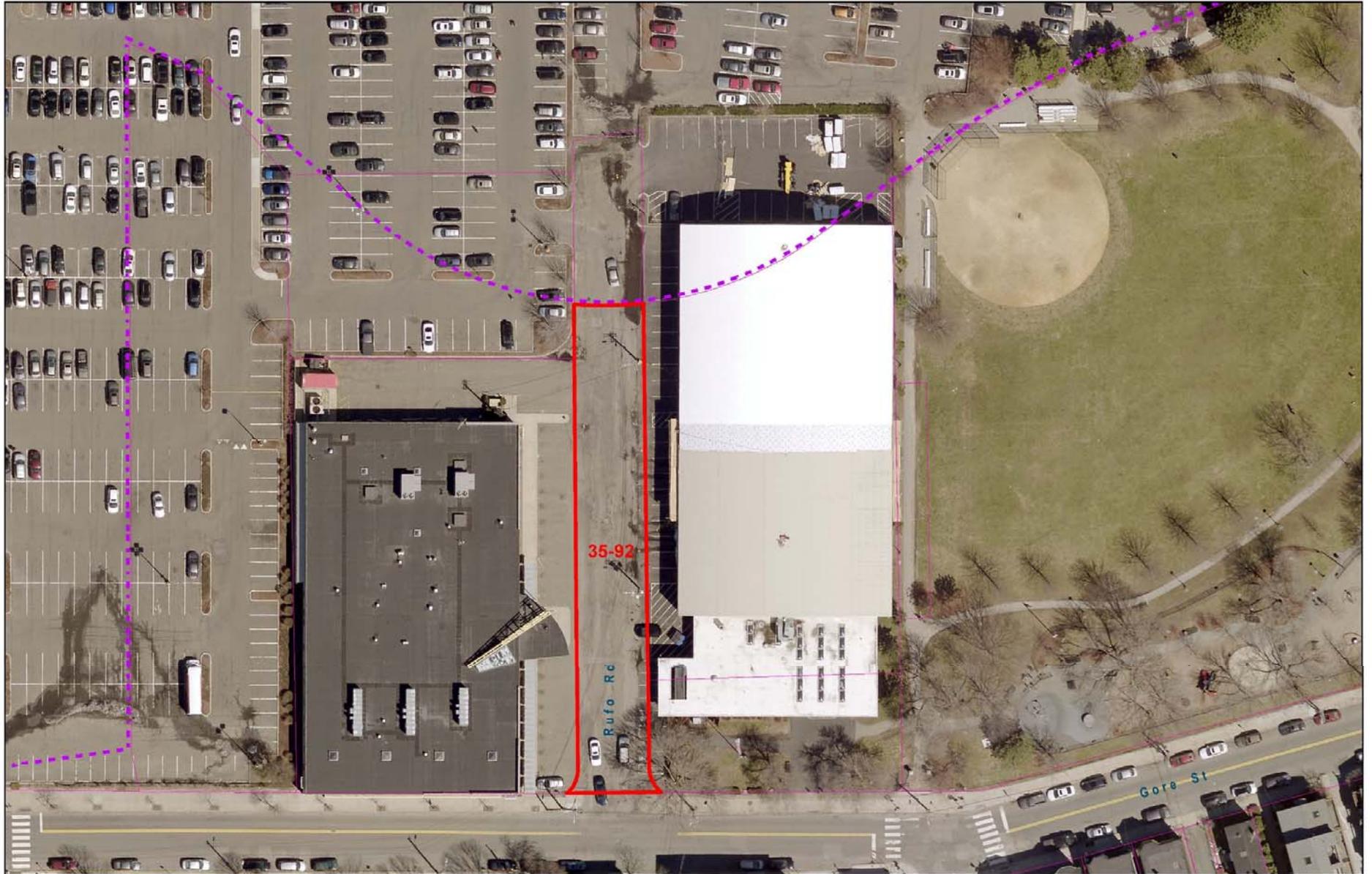
## Community Suggested Solutions

Traffic Calming - Traffic Enforcement  
Enhanced sidewalk design with Brick  
Trees for Residents that want them

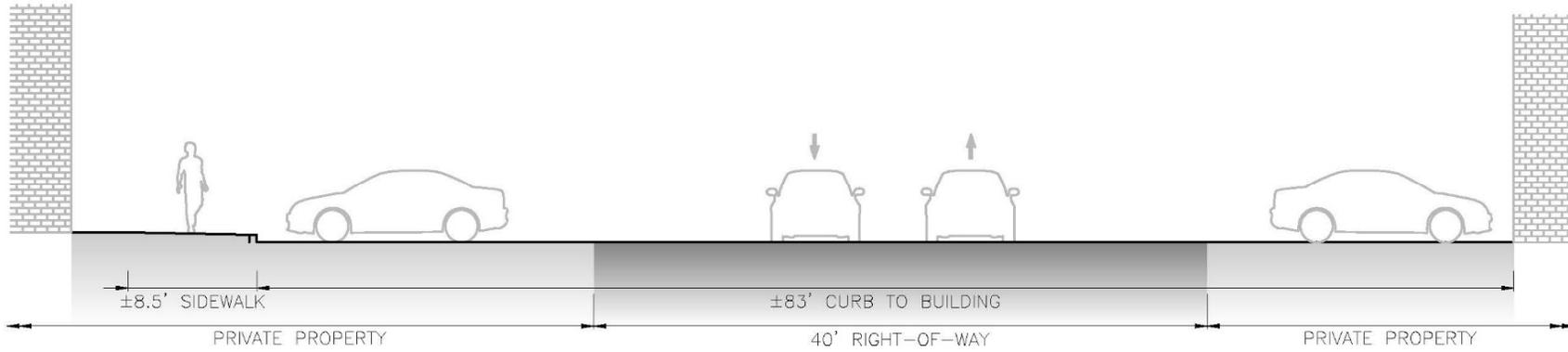
# RUFO ROAD | EXISTING CONFIGURATION



# RUFO ROAD | EXISTING CONFIGURATION



# RUFO ROAD | EXISTING SECTION



# RUFO ROAD | EXISTING CONDITIONS

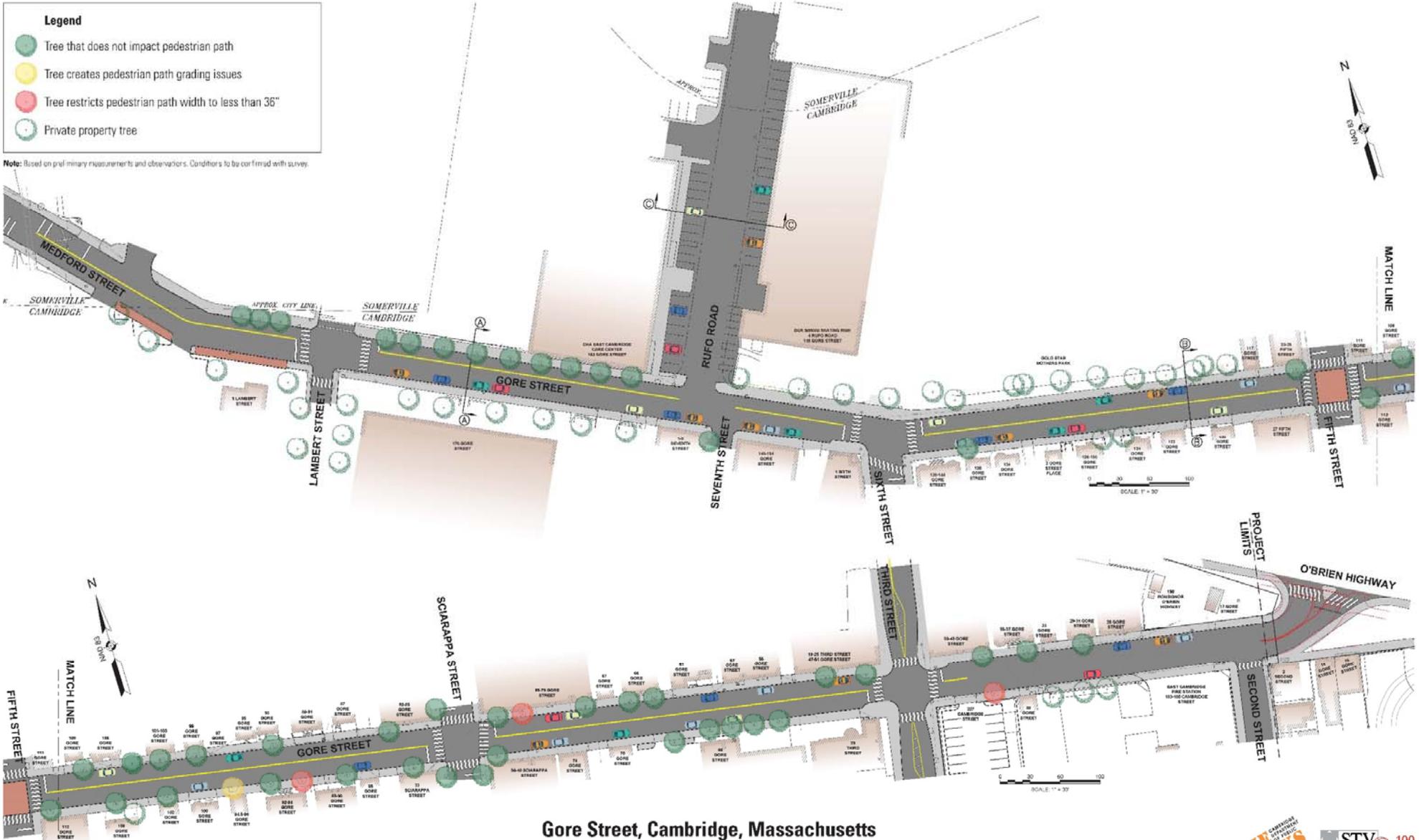


# GORE STREET | SMALL GROUP DISCUSSION

**Legend**

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Note: Based on preliminary measurements and observations. Conditions to be confirmed with survey.



## Gore Street, Cambridge, Massachusetts

Design Kick-Off Meeting, Existing Conditions Figure  
June 19, 2018



# GORE STREET and RUFO ROAD | **SCHEDULE**

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