

# Huron Avenue Reconstruction

## Community-wide Meeting #2

6/26/12



CITY OF CAMBRIDGE  
COMMUNITY DEVELOPMENT DEPARTMENT

Environmental & Transportation Planning

and



<http://huronavenue.info>

## Agenda

- Welcome/ Project
- The community input process
- City policies
- Preliminary project goals
- Street design tools
- Questions
- Community input: positives and negatives about Huron Ave.
- Break out session
- Report back

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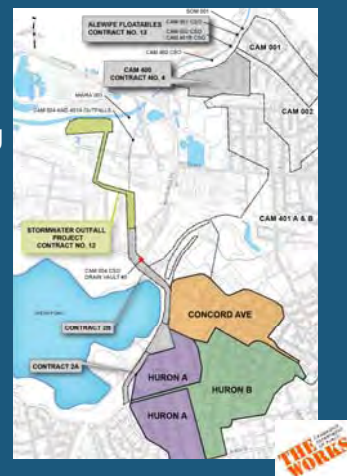
# The Project

Kara McSweeney Falise, PE  
Engineering Project Manager  
Department of Public Works

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## Alewife Brook Sewer Separation Project

- Court-ordered clean up of Boston Harbor requires implementation of the Long Term Control Plans for Combined Sewer Overflow (CSO) for Alewife Brook
- Opportunity for improved neighborhood infrastructure

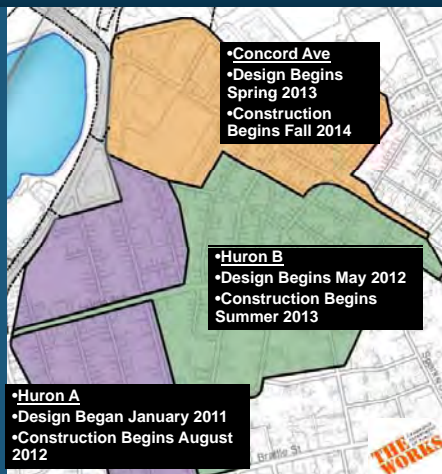


## Huron/Concord Project Areas

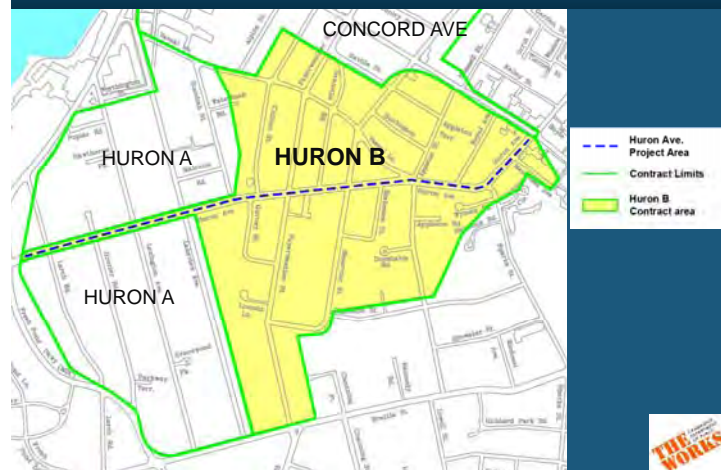
- Sewer Improvements on all 3 contracts complete by December 2015
- Surface restoration complete by 2016

### Sewer Separation Will:

- Eliminate CSOs from this neighborhood
- Improve stormwater quality discharges to Alewife Brook
- Marginal improvement on local flooding



## Huron B Project Area



## Huron B Project Scope

### •UTILITY IMPROVEMENTS

Sewer main construction and rehabilitation

Installation of new pipes and manholes

City water main pipes, hydrants and services (replace lead services with copper)

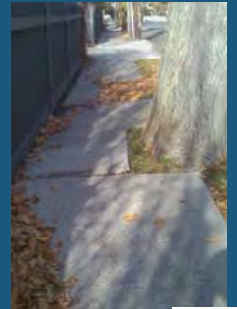
- Private Utility Upgrades and Repairs



## Huron B Project Scope

### •STREET & SIDEWALK IMPROVEMENTS

- New pavement and accessible sidewalks
- Enhanced pedestrian safety (traffic calming)
- Healthy tree canopy
- Water Quality Improvements



## Huron B Project Schedule

May 2012-	Design Process
June 2013	Subsurface Utility Design -Residential Street Surface Design Huron Ave Surface Design
Jul. 2013	Anticipated Start of Construction
Nov. 2014	Anticipated Completion of Construction

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## Residential Streets Design Schedule

### Community Meetings:

- Wednesday, June 27<sup>th</sup>:  
Huron B South Residential Streets
- Thursday, June 28<sup>th</sup>,  
Huron B North Residential Streets
- Next Round of Meetings in September 2012



### Field Investigations

- Boring Program to Begin July 2012

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## Huron Avenue Design Schedule

May 2012	Survey work done
June 2012	Begin community process
Sep. 2012	Conceptual design options presented to the community for feedback
Nov. 2012	Conceptual design selected
Feb. 2013	Engineering design complete
Jul. 2013	Construction begins
Nov. 2014	Construction is completed

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## Surface Redesign Community Process

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**Jeff Rosenblum, PE**  
Environmental & Transportation Planning  
Community Development Department

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## Outreach

- Survey
- Community-wide public meetings
  - June 2012: Community input
  - Sept. 2012: Conceptual design options shown to the community
  - Nov. 2012: Conceptual design selected
- Walks of Huron Avenue
- “Office hours”
- Website: <http://huronavenue.info>
- Make sure we have your contact info!

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## Huron Avenue is a...

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- Regional roadway *and*
- Neighborhood street *and*
- Retail district *and*
- Front yard.

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## City Policies

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## Growth Policy Document (1993, 2007)

### Policy #22

- Undertake reasonable measures to improve the functioning of the city's street network, without increasing through capacity, to reduce congestion and noise and facilitate bus and other non-automobile circulation.

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## Growth Policy Document (1993, 2007)

### Policy #23

- Encourage all reasonable forms of nonautomotive travel including, for example, making improvements to the city's infrastructure to support bicycling and walking.

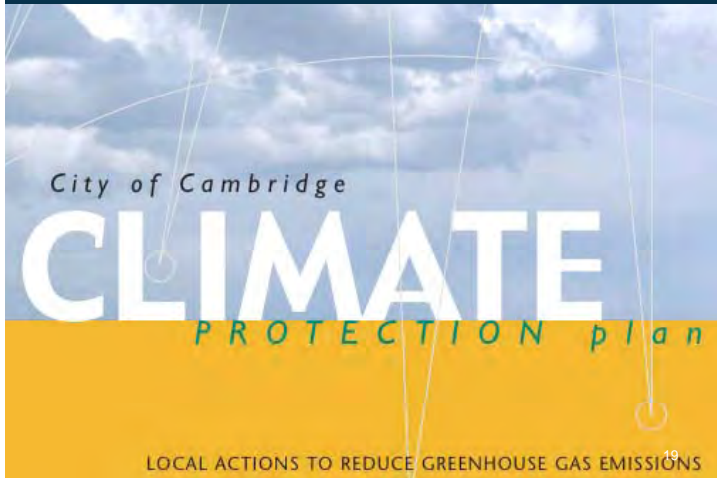
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## Vehicle Trip Reduction Ordinance (1992)

- Established bicycling and walking programs, planning, and funding
- Requires interdepartmental coordination



GHG emissions: reduction by 20% by 2010

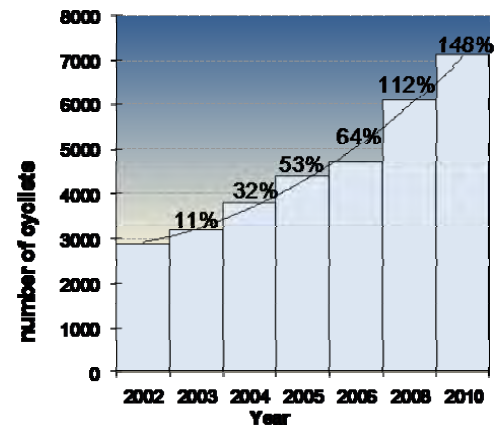


25% of residents walk to work  
Cambridge rated "most walkable city" in US



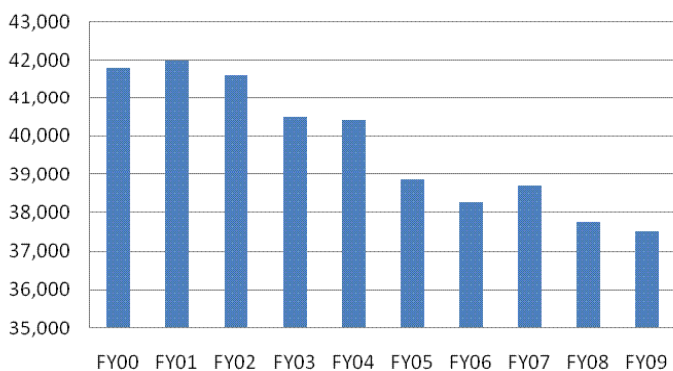
Only 50% employees drive to work

Bicycle trips more than doubled



Driving is declining in Cambridge

Resident Parking Permits



Draft Project Goals

- Safety
- Mobility
- Urban design

## Surface design: Preliminary project goals

### Safety

- Ensure safety for all users
- Improve conditions for walking, bicycling, and transit riders
- Design for safe traffic speeds

### Mobility

- Provide access for persons with disabilities \*
- Consider traffic flow and parking
- Improvements for bus stops

### Urban Design

- Reinforce residential character
- Enhance business district character
- Improve trees/ landscaping

### Others?

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## Existing Conditions



Transit riders



People walking



Bicyclists



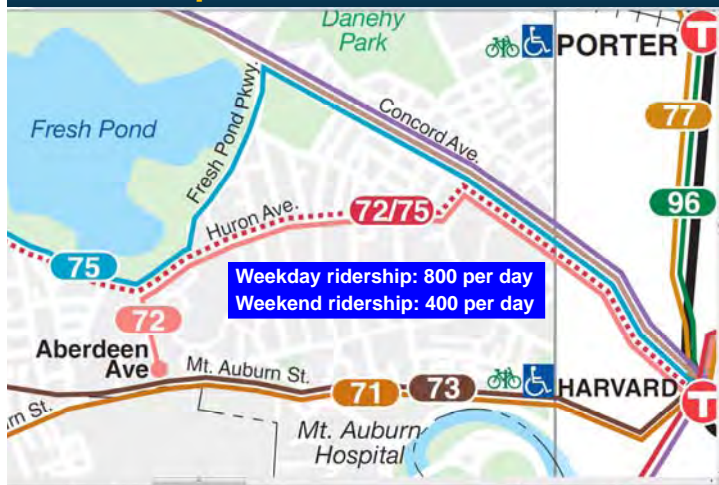
Drivers



Truckers

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## Transit map

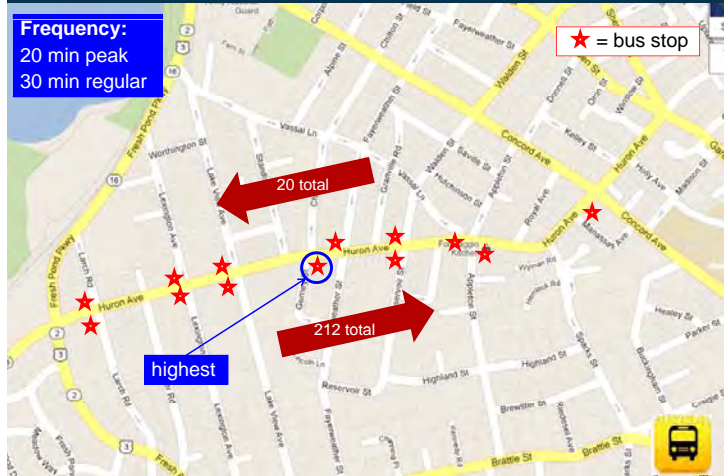


## Bus #72 weekday – Boardings

Frequency:  
20 min peak  
30 min regular

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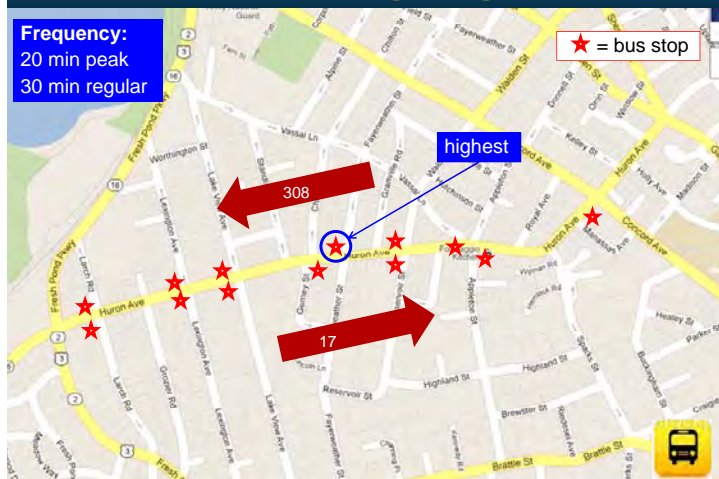
★ = bus stop



## Bus #72 weekday – Alightings

Frequency:  
20 min peak  
30 min regular

★ = bus stop



## Walking counts – AM peak 2 hours

Total number of walkers in the intersection

Number of walkers crossing Huron Avenue





# Walking counts – PM peak 2 hours



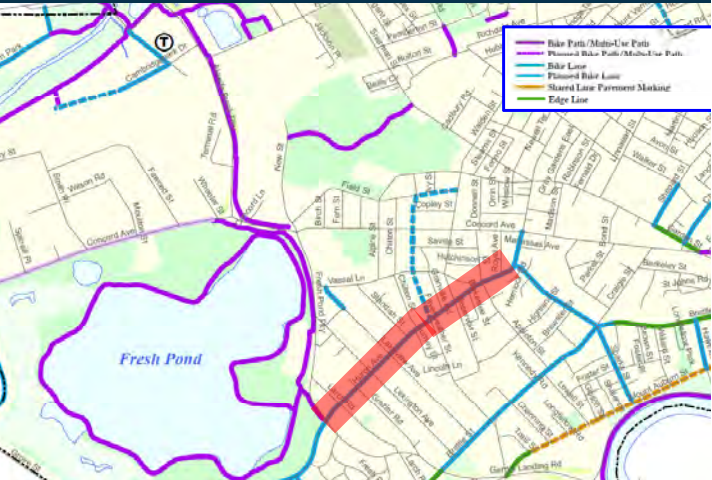
# Bicycle counts – AM peak per 2 hours



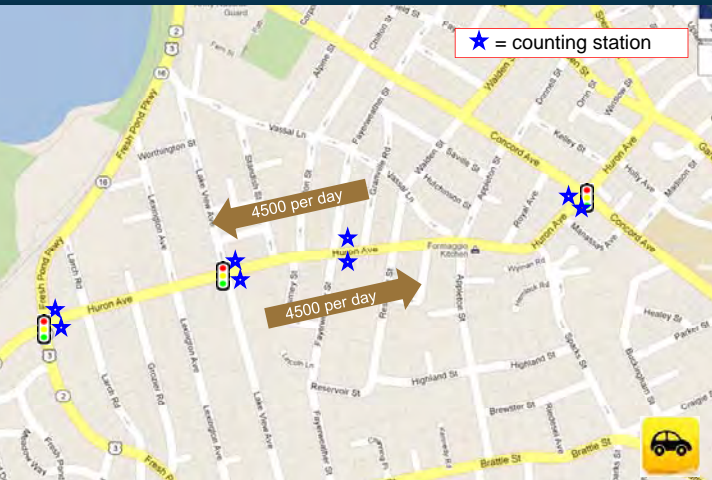
# Bicycle counts – PM peak per 2 hours



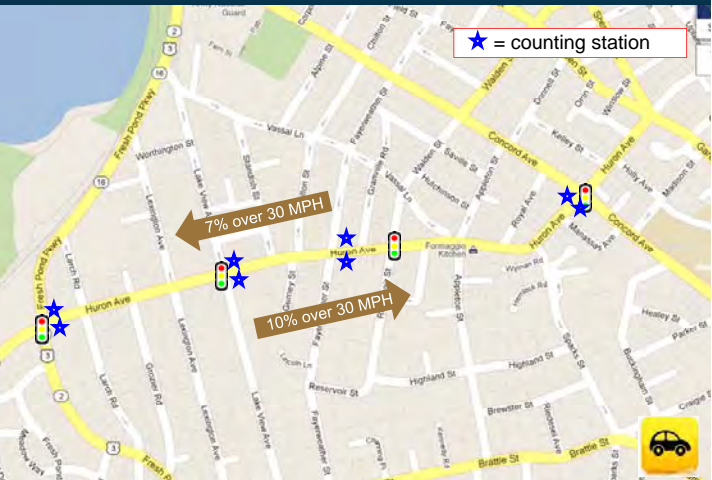
# Bicycle network



# Vehicle volumes – 9000 vehicles per day



# Vehicle speeds



## Parking

- Current parking regulations map (see map at tables)
- Parking utilization study (currently underway)

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## Huron Village business district issues

- Access to stores / parking
- Huron Village Identity: look and feel
- Pedestrian safety
- Active sidewalks (e.g., café tables)
- Potential “Bike Share” location

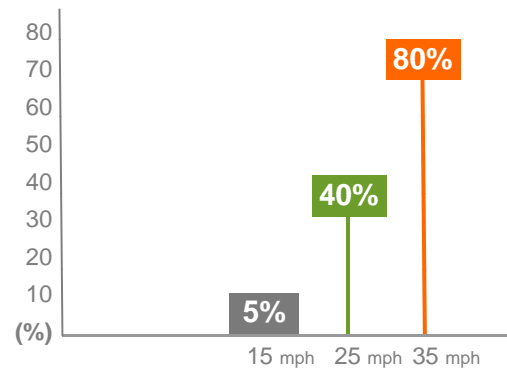
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## Street Design Goals

- Safety
- Mobility
- Urban design

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## Speed kills – pedestrian probability of death



Source: Pasanen (1992) <http://tinyurl.com/yuohtsg>

## Design goals: SAFETY/COMFORT

- Transit riders
  - Quality bus stops
- Pedestrians
  - Slow traffic down
  - Cars yield to waiting pedestrians
  - Sidewalk conditions
- Cyclists
  - Good intersection design
  - Designated travel space
- Drivers
  - Good visibility at intersections

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## Design goals: EFFICIENT

- Transit riders
  - Reduced travel time
- Pedestrians
  - Short wait time for crossing, short crossing distance
  - Convenient crossing locations
- Cyclists
  - Travel available along desired routes / turns
- Drivers
  - Maintain roadway vehicle throughput
  - Minimize travel time (minimize delays)
  - Available parking

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## Design goals: PLEASING

- Transit riders
  - Pleasant waiting area
- Pedestrians
  - Quality walking space
  - Places to gather and rest
- All
  - Enjoyable to look at and travel through
  - Trees and landscaping

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## Street Design Tools

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## Tools for slowing traffic

- Road diets (lane reduction)
- Narrower roadway
- Narrower travel lanes
- Chicanes

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## Road Diet: Massachusetts Avenue, 1996



## Narrower Roadway: Brookline Street



## Chicane: Brattle Street



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## Chicane: Lowell Street



## Pedestrian crossings

- Curb extensions
- Raised intersection
- Raised crosswalk
- Crossing islands

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## Curb extension – Lowell Street



## Curb extension – Upland/Raymond



## Raised intersection – Walden/Raymond



## Raised crosswalk – Columbia Street





### Raised crosswalk – Harvard Square



### Crossing island – Concord Ave.



### Crossing island – Sparks

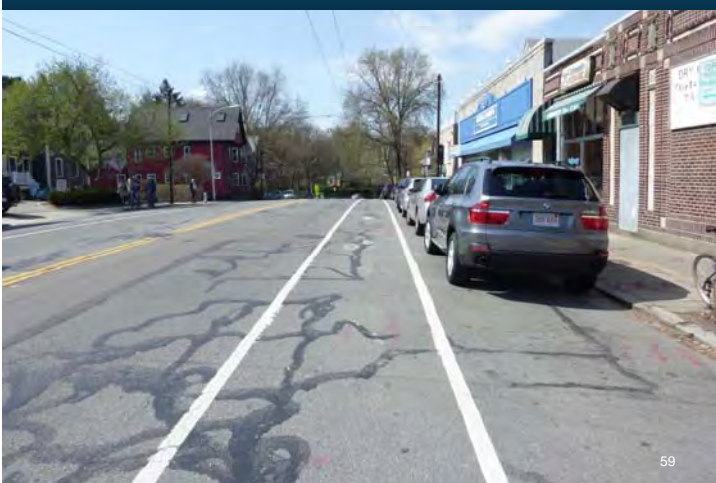


### Bicycle facilities

- Traditional bicycle lanes
- Separated bicycle lanes
- Contra-flow
- Intersections

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### Bike lanes – Huron Avenue



### Separated Bike Lanes – Concord Avenue





### Contraflow Lanes – Norfolk St.



### Intersection design – Broadway/Hampshire



### Intersection design – Porter Square



### Intersection design – Church Street left

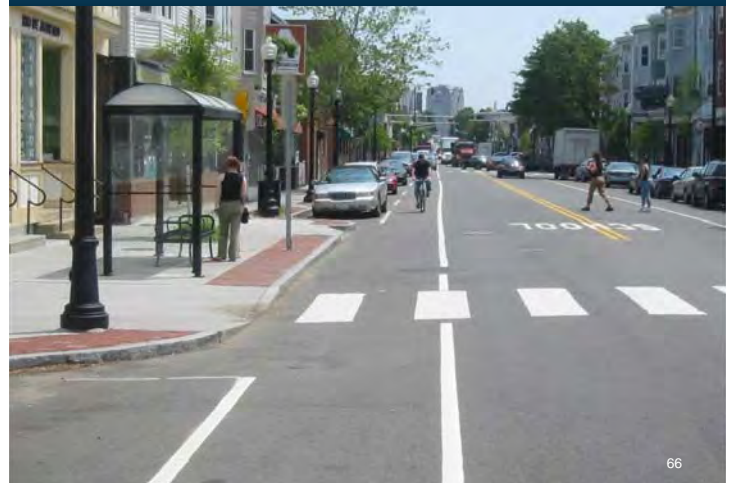


### Bus stops

- Distance between bus stops
- Bus stop curb extension
- Benches
- Shelters

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### Bus stop curb extension – Cambridge Street





## "Green Streets"

- Reduce paved surface
- Permeable surface
- Rain gardens / bioretention systems

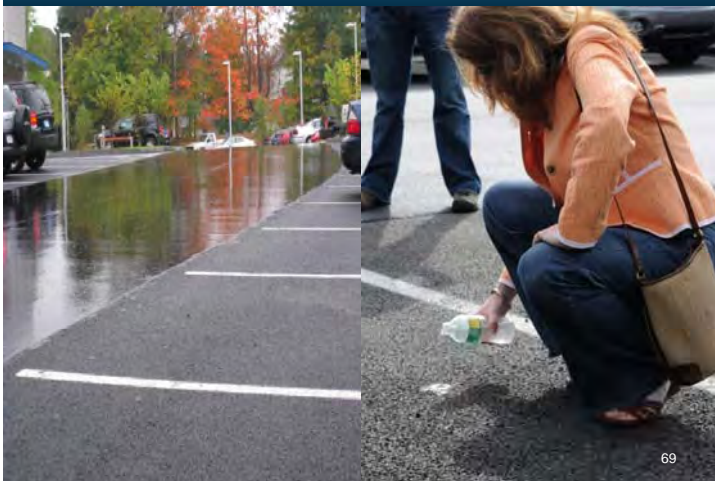
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## Integrated storm water management

- Reduce quantity of water entering the stormwater system
- Improve quality of water entering the stormwater system

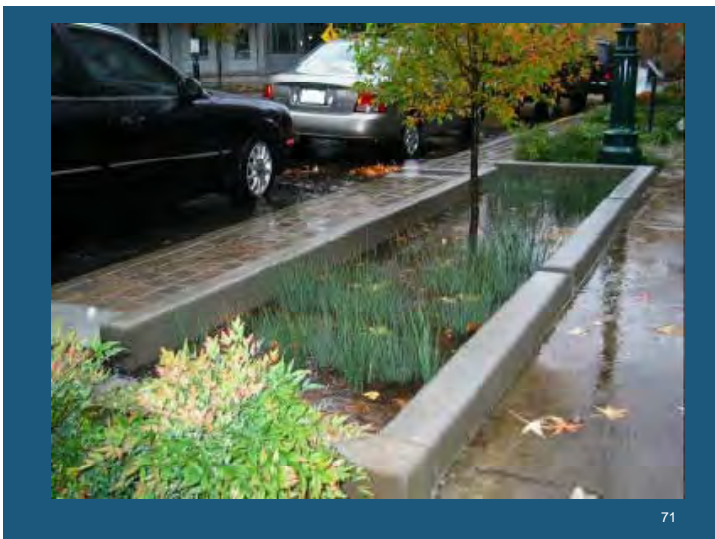
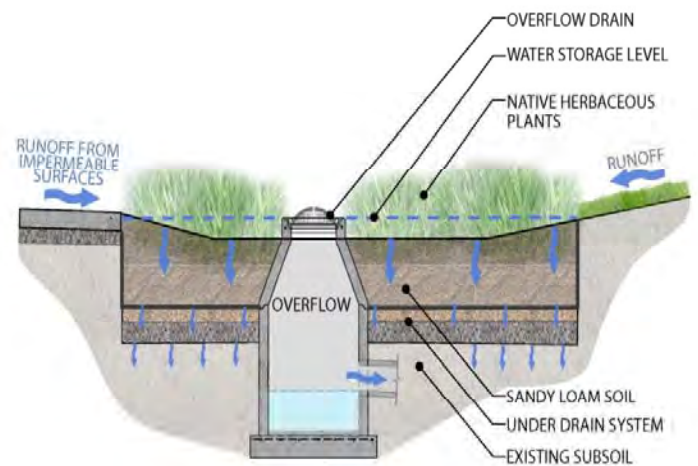
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## Porous pavement



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## Bioretention system (rain garden)



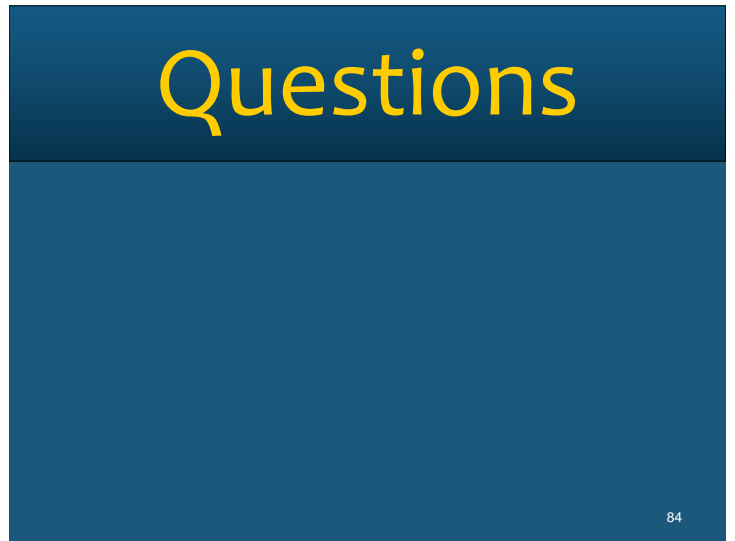
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# Community Input

## Break out session (30 minutes)

1. Fill out questionnaire individually
2. What do you like about Huron Avenue?  
What don't you like? Identify opportunities for improvement.
3. Observations, write on map
4. Summarize group

## Report back (30 minutes)

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## What's next?

- Survey
- Community-wide public meetings
  - June 2012: Community input
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