



Envisioning Needham Street

October 28, 2010

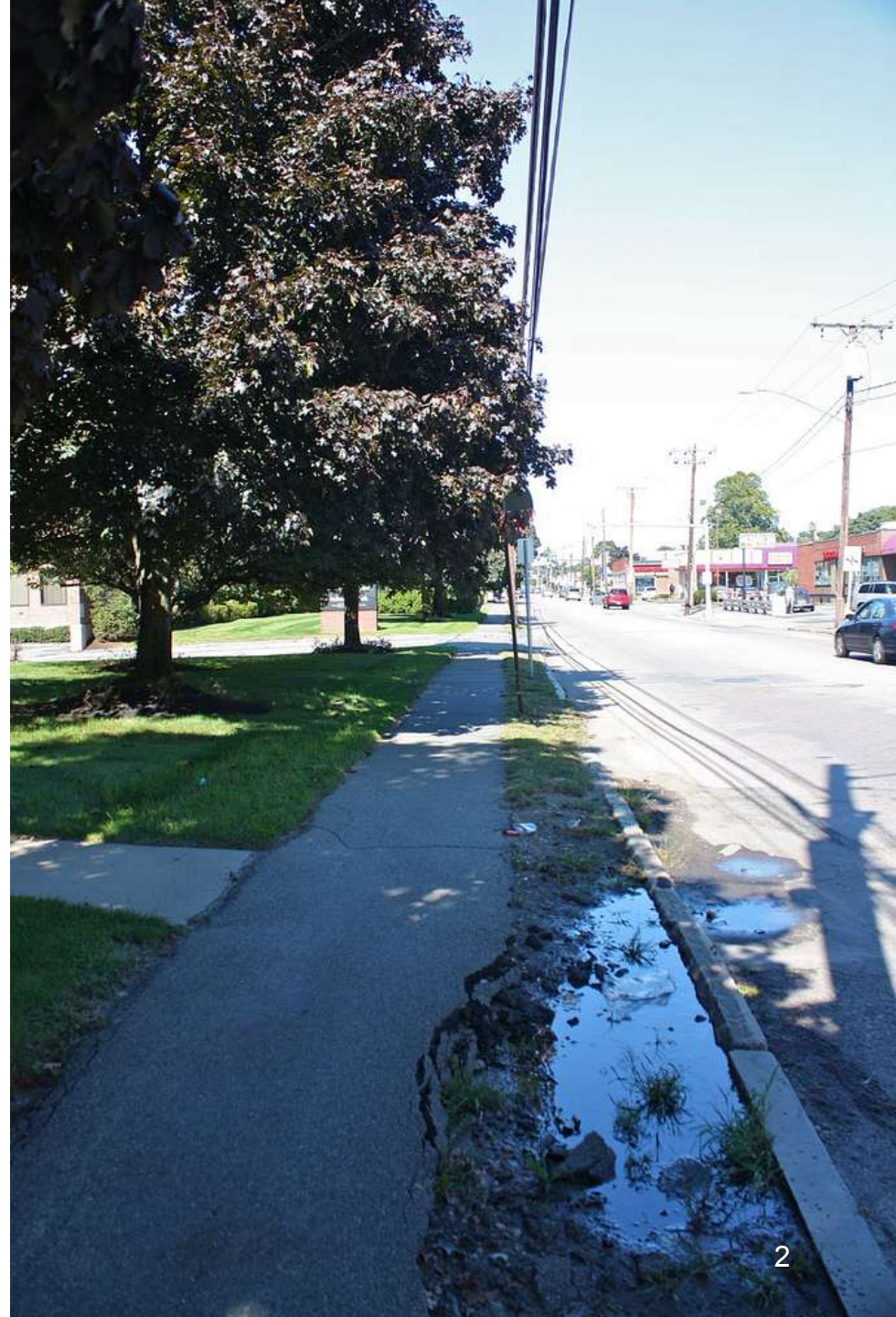


OVERVIEW

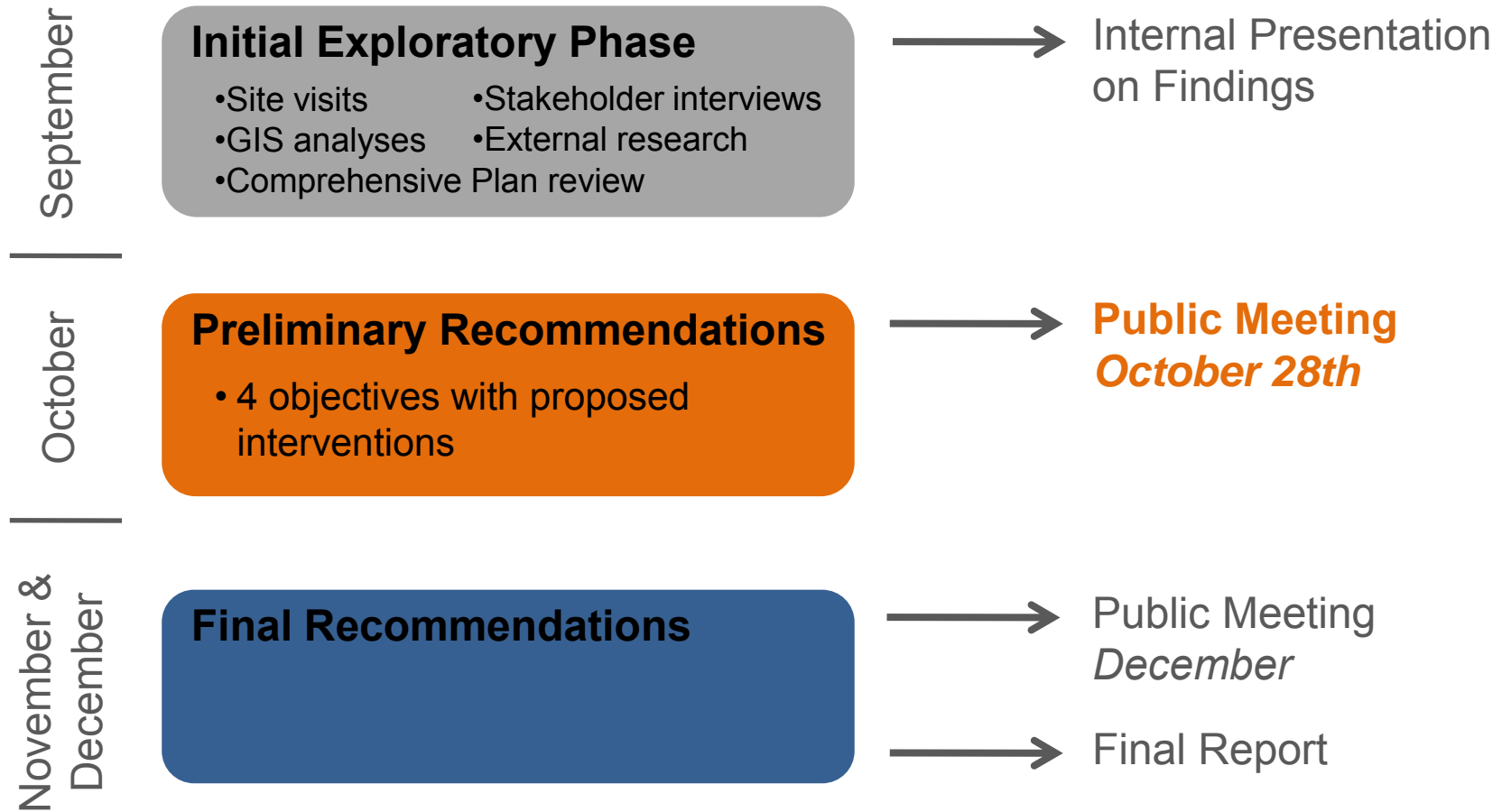
Who are we?

Why are we here?

What are we doing?



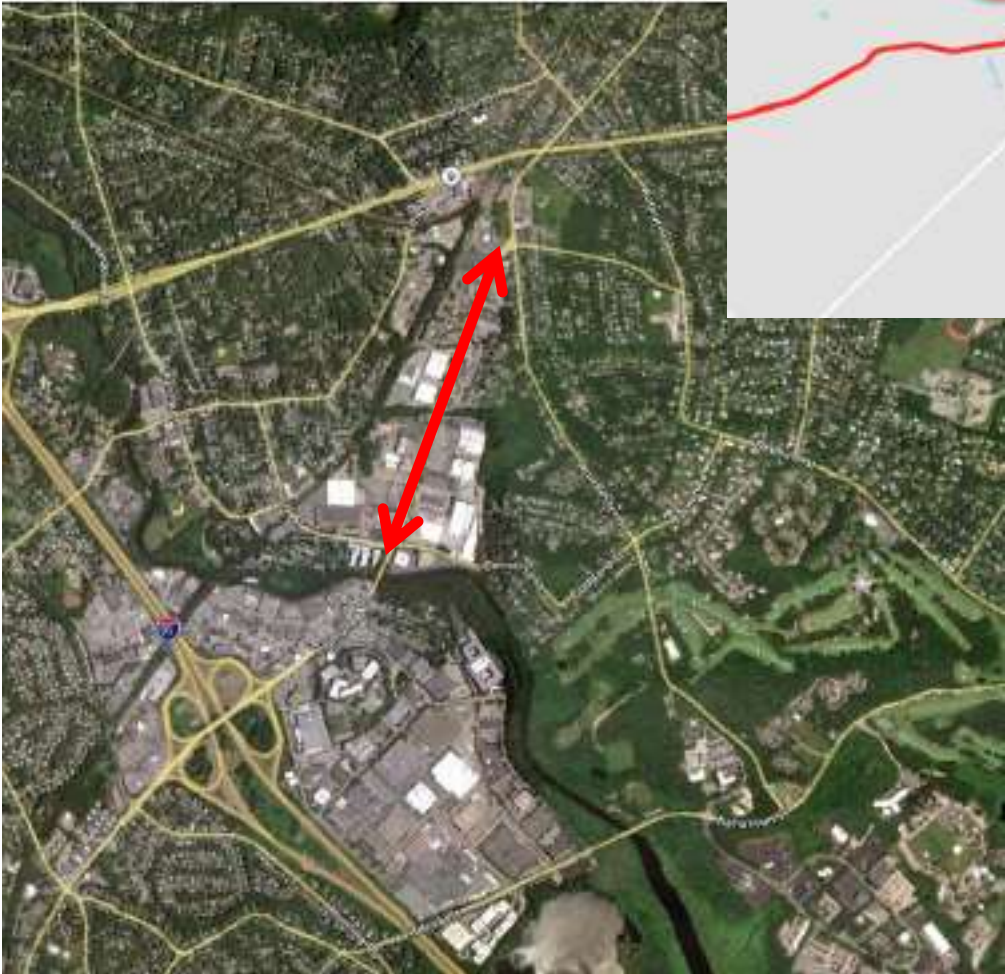
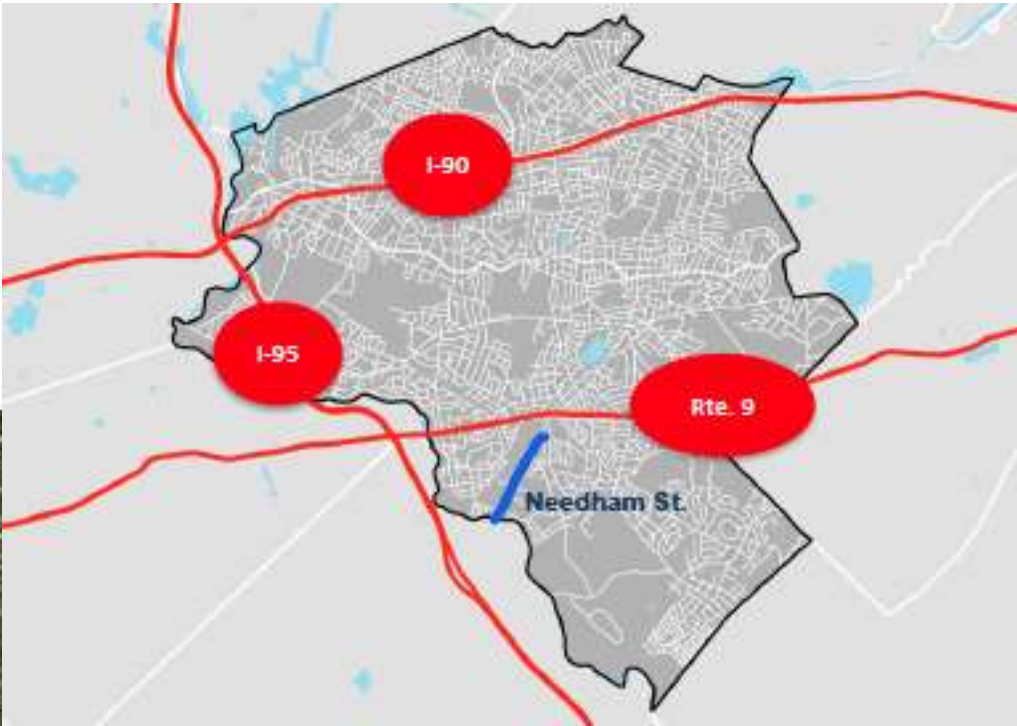
PROCESS





FINDINGS

CONTEXT



CONTEXT



CIRCULATION & MOBILITY

What Works

- Good local and regional accessibility
- Ample parking

What Doesn't

- Traffic congestion
- Few crosswalks
- Narrow, crumbling sidewalks
- Too many curb cuts
- Lack of grade separation
- No bike lanes
- Limited bus service



ECONOMY & MARKET

What Works

- Employment center
- Provides significant tax income to city
- Solid consumer base

What Doesn't

- High vacancy rates
- Loss of some industrial uses



LAND USE

What Works

- Horizontal mix of uses
- Industrial parcels sited away from street
- Large parcels allow for uses not found elsewhere in Newton

What Doesn't

- No vertical mix of uses
- Disconnected from surrounding neighborhoods



AESTHETICS

What Works

- Some landscaped areas
- Historic building & bridge

What Doesn't

- No cohesive visual identity
- Edges not well defined
- Lack of transparency
- Overhead wires
- Buildings not oriented to street
- Parking lots abut sidewalks



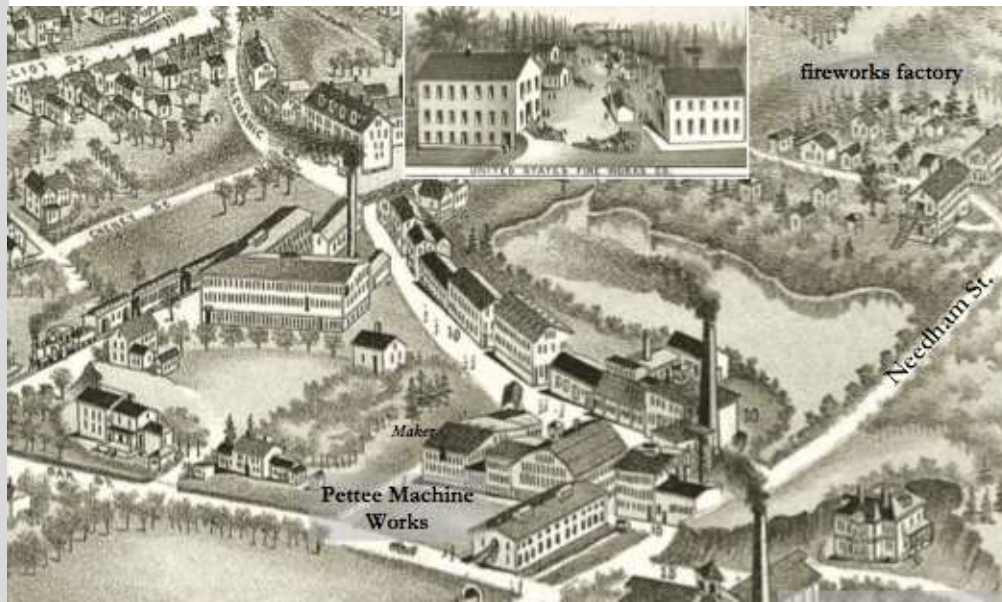
HISTORIC PRESERVATION

What Works

- Rich manufacturing history
- Mill building and bridge are on National Register of Historic Places

What Doesn't

- No interpretation of historic assets
- No connection to Upper Falls Historic District



OPEN SPACE

What Works

- Proximity to existing recreation areas & natural resources

What Doesn't

- Limited connections to existing recreation areas
- Nearby natural resources are hidden





OBJECTIVES & PROPOSED INTERVENTIONS

FOUR OBJECTIVES FRAME VISION

1. ■ Create a **safe** and **comfortable** environment for cars, bikes, and pedestrians
2. ■ Maintain existing **industrial uses** and promote **fine-grain mixed use**
3. ■ Create a more **cohesive** and **attractive** physical environment
4. ■ Create a recreational **open space network**

FOUR OBJECTIVES FRAME VISION

1

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- Create a recreational **open space network**

STREETSCAPE IMPROVEMENTS

- Landscaping & street trees
- Consistent sidewalk treatment
- Street furniture & lighting
- Buried utility lines
- Additional crosswalks
- Crosswalk treatment
- Planted median & lane restriping
- Bulb-outs
- Reduced number of curb cuts
- Roundabouts



NEEDHAM – WINCHESTER INTERSECTION

Objective 1: Safe and comfortable environment



NEEDHAM – WINCHESTER INTERSECTION

Objective 1: Safe and comfortable environment



Roundabout

Pedestrian-scale outdoor open spaces

Additional crosswalks

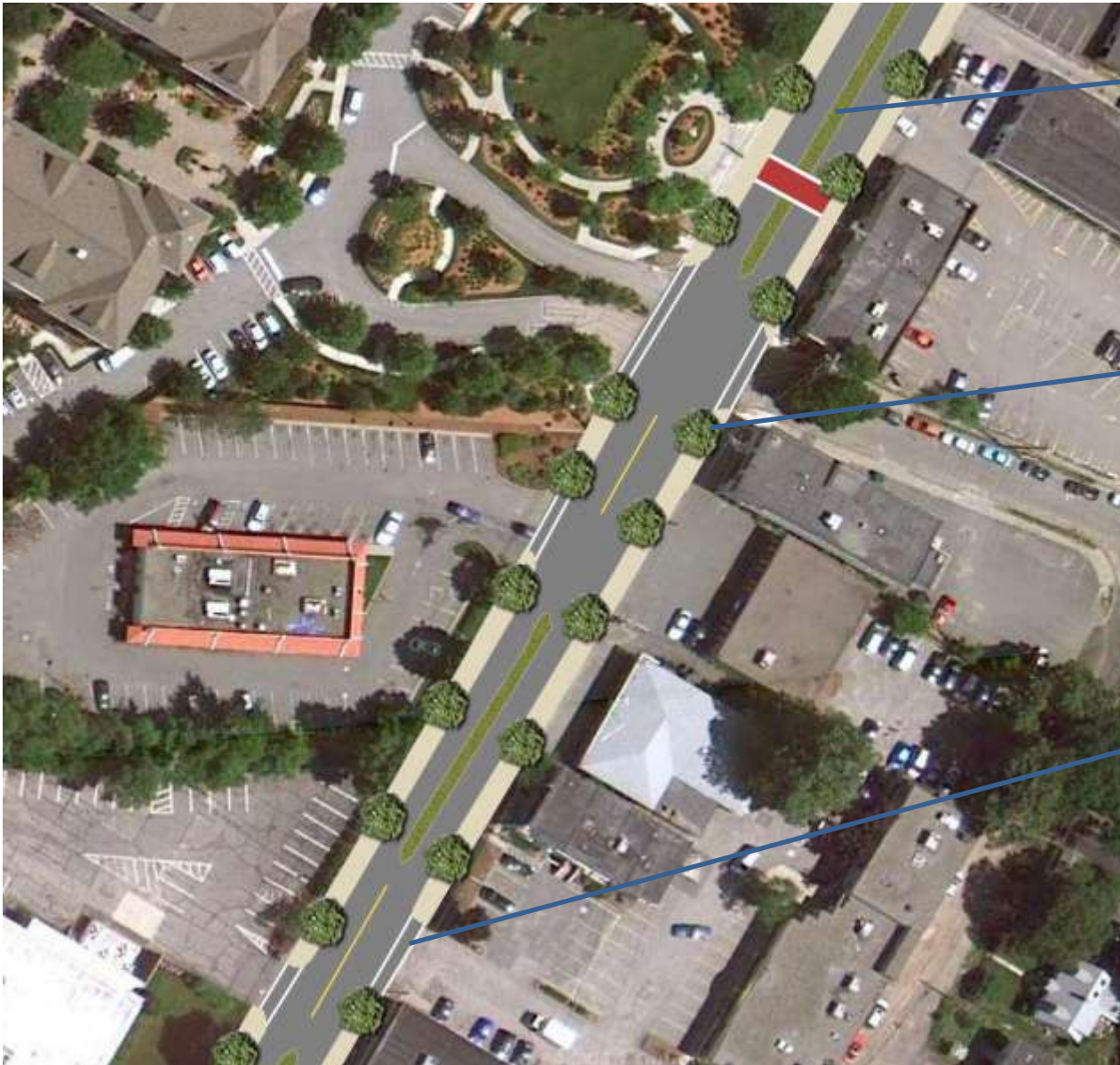
MID-NEEDHAM STREET

Objective 1: Safe and comfortable environment



MID-NEEDHAM STREET

Objective 1: Safe and comfortable environment



Planted median

Landscape improvements

Consolidated curb cuts

NEEDHAM – CHRISTINA – OAK INTERSECTION

Objective 1: Safe and comfortable environment



NEEDHAM – CHRISTINA – OAK INTERSECTION

Objective 1: Safe and comfortable environment



Bulb-outs at key points

Crosswalk differentiation

EXAMPLE STREET SECTION

Objective 1: Safe and comfortable environment



EXAMPLE PERSPECTIVE

Objective 1: Safe and comfortable environment



EXAMPLE PERSPECTIVE

Objective 1: Safe and comfortable environment



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EXAMPLE PERSPECTIVE

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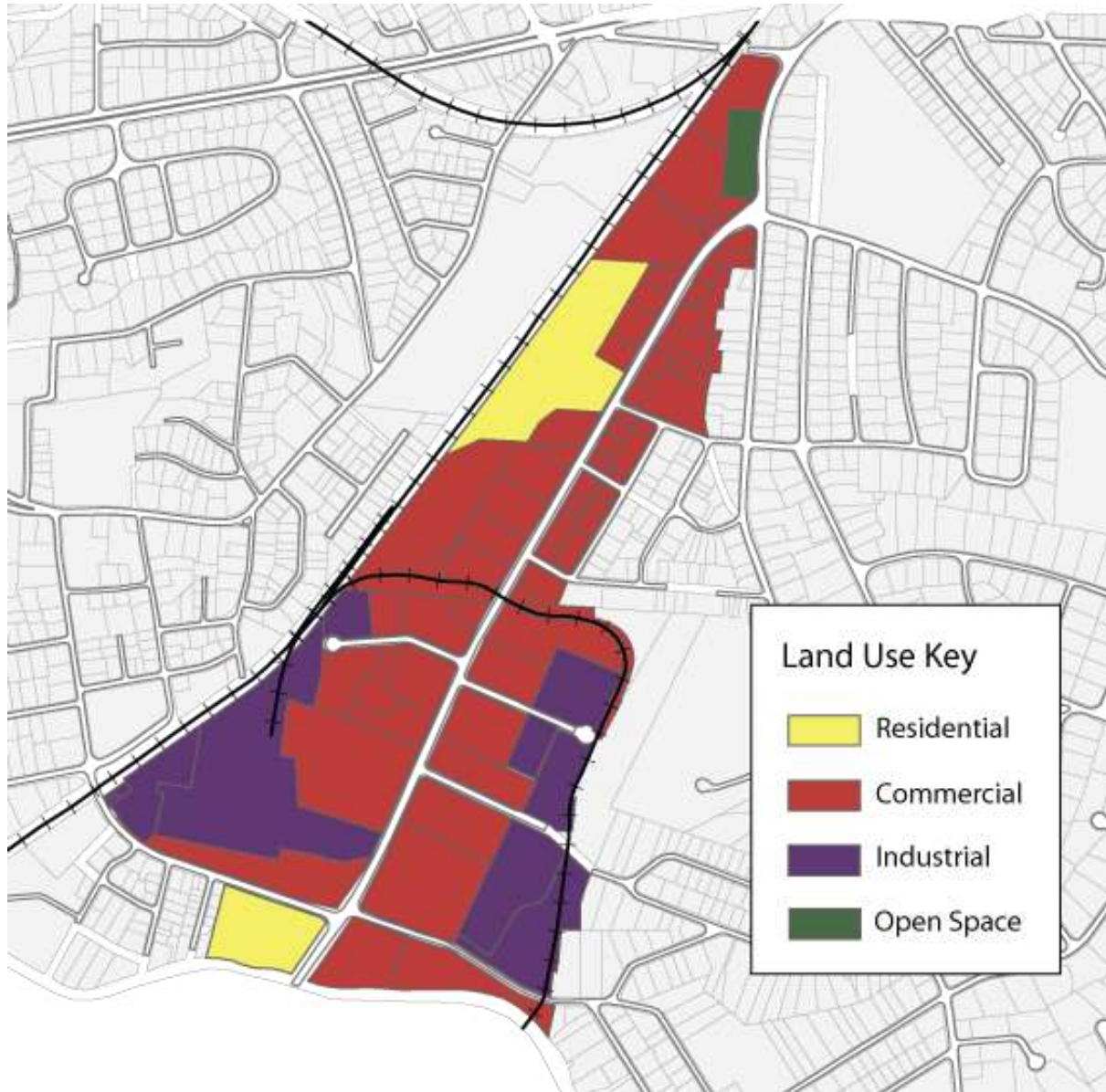
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EXISTING LAND USE



EXISTING BUILDING TYPOLOGIES



Multifamily



Multi-story office



Historic



Large-scale retail

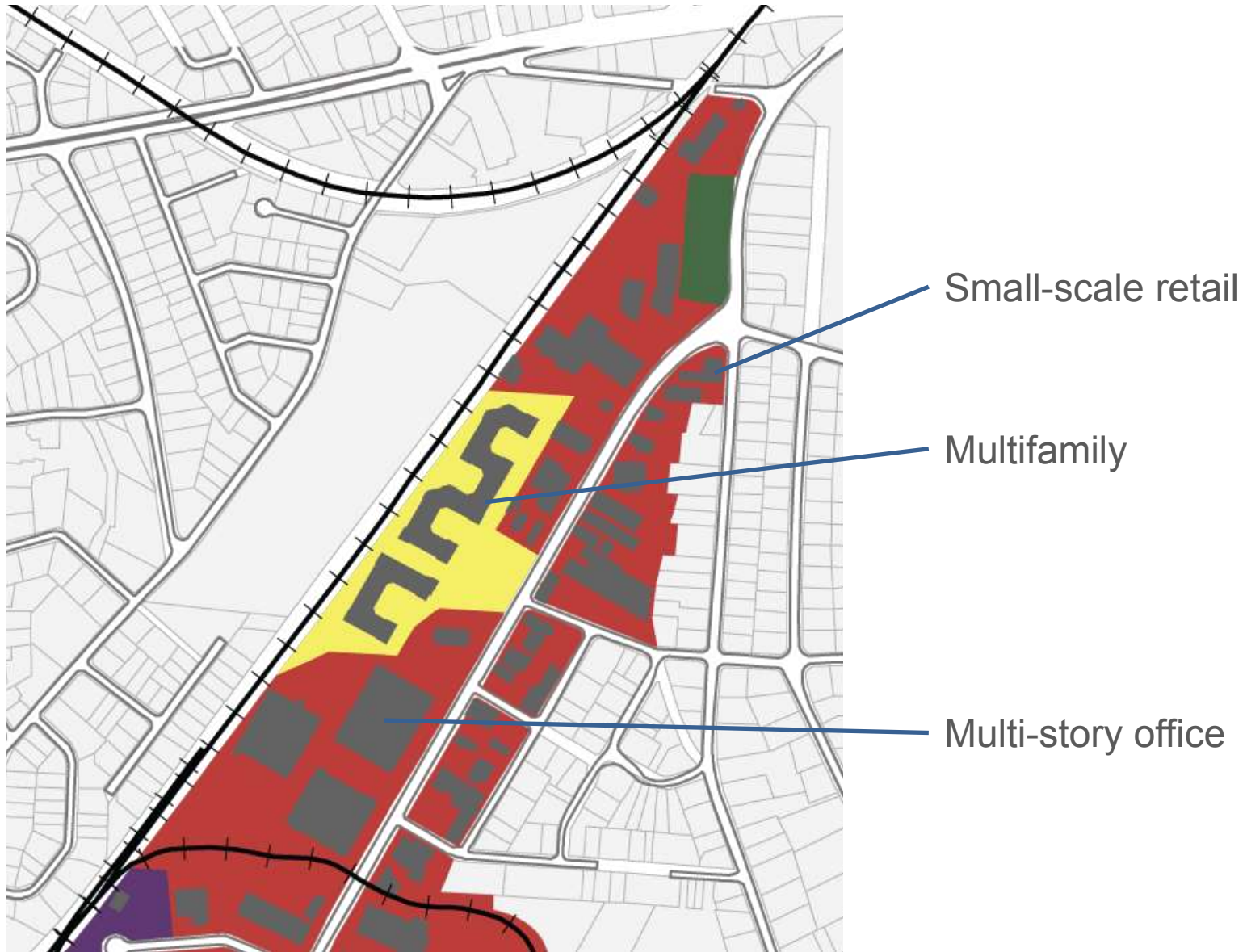


Small-scale retail



Industrial

EXISTING LAND USE AND BUILDING TYPOLOGIES



EXISTING LAND USE AND BUILDING TYPOLOGIES

Objective 2: Industrial uses and fine-grain mixed use



COMPREHENSIVE PLAN EXCERPTS

- Economic development vision
 - “Flexible Moderate Growth”
 - Selected development along Newton’s commercial corridors can augment its income and tax base
 - Growth of commercial developments and research office parks
 - New low environmental impact industries, such as informatics, biotechnology and health-care
 - More dense development, that may reflect urban trends and that may reduce tax burdens, in the commercial corridors
- Residential vision
 - Maintaining diversity of housing types
 - Maintaining economic diversity of housing
 - Development of housing in mixed use areas can lead to maintaining strong, vibrant...mixed use corridors

PROPOSED LAND USE & NEW TYPOLOGY



Vertical mixed-use building typology introduced



FOUR OBJECTIVES FRAME VISION

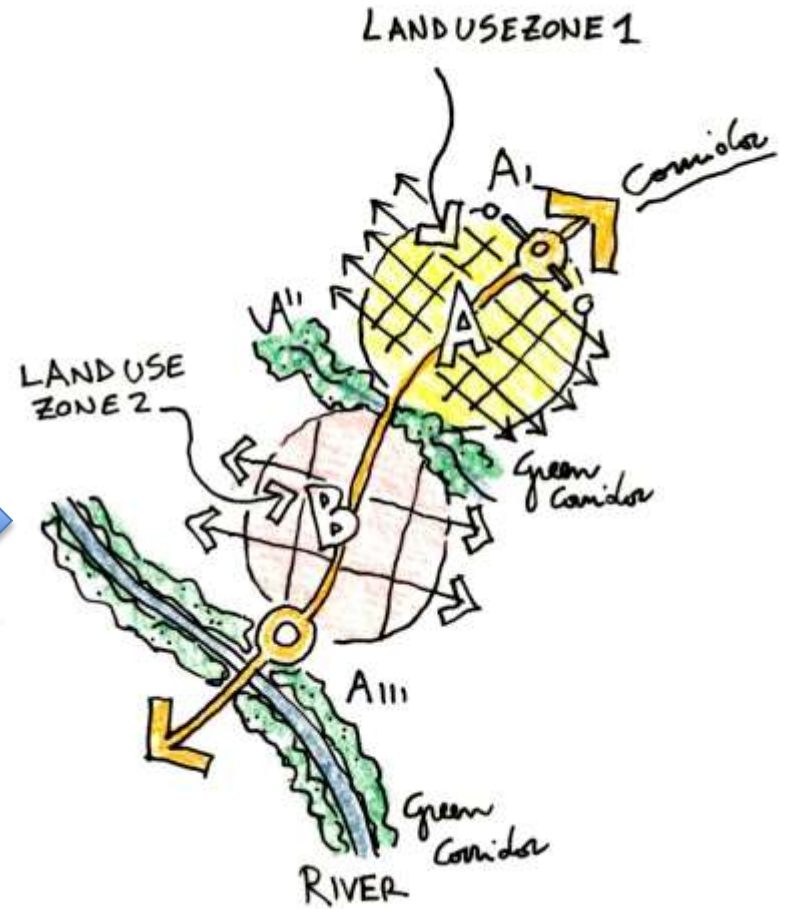
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ONE STREET, TWO ZONES



Lot size | Setbacks | Building footprint | Building height | Density

NORTH ZONE: EXISTING URBAN FIGURE

Objective 3: Cohesive and attractive environment



NORTH ZONE: SHORT RUN FIGURE GUIDE

Objective 3: Cohesive and attractive environment



Infill | Rear parking | Abut street | Pedestrian infrastructure | Consolidate curb cuts
Neighborhood tree buffer | Minimize neighborhood traffic

NORTH ZONE: LONG RUN FIGURE GUIDE

Objective 3: Cohesive and attractive environment



Uniform street parking | Abutted facades | Structured parking
Established central space | Residential use toward neighborhood

SOUTH ZONE: EXISTING URBAN FIGURE



Objective 3: Cohesive and attractive environment

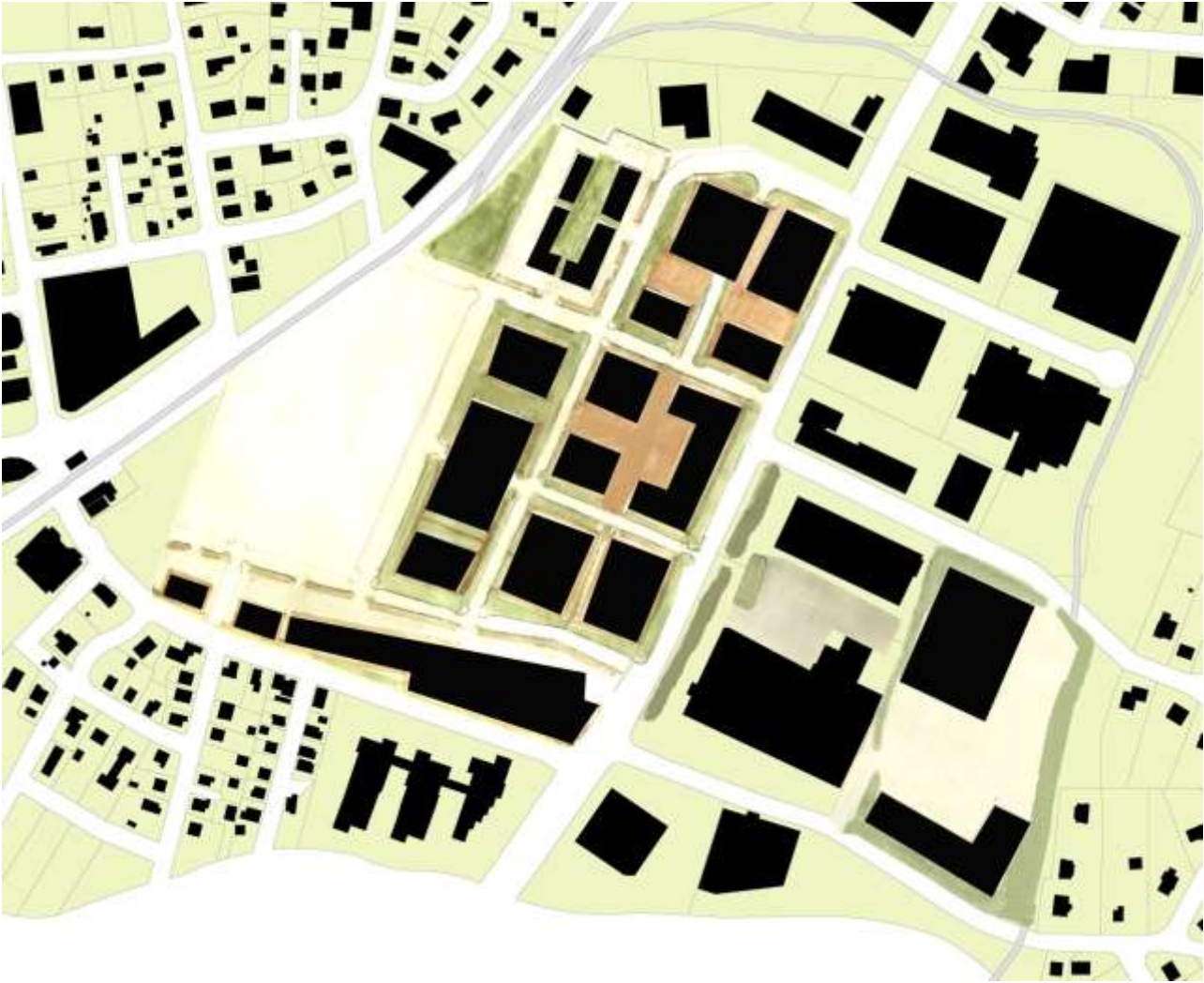
SOUTH ZONE: SHORT RUN FIGURE GUIDE

Objective 3: Cohesive and attractive environment



Infill | Abut street | Planned demolition only | Consolidate curb cuts
Rear overflow parking | Single-row parking | Respect owner lot lines

SOUTH ZONE: LONG RUN FIGURE GUIDE

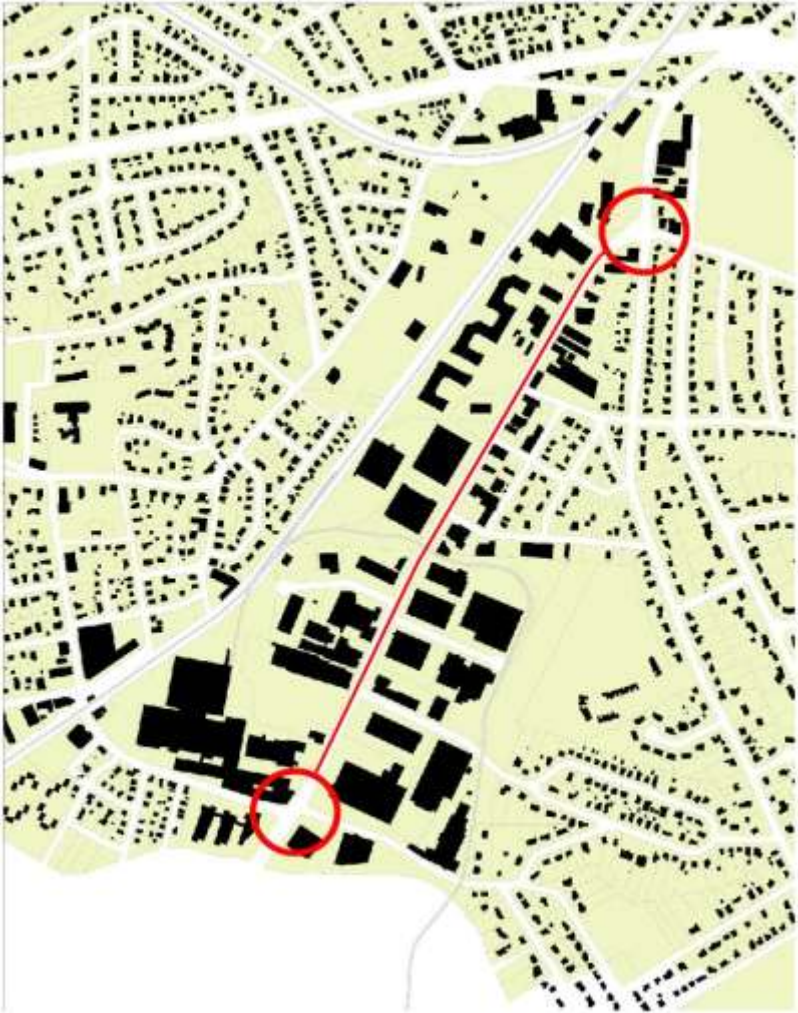


Transport and amenities | Unify circulation | Scale gradient to Upper Falls
Structured parking | Historic buildings

Objective 3: Cohesive and attractive environment

CORRIDOR GATEWAYS

Objective 3: Cohesive and attractive environment



Southern Gateway



Raised Crosswalk



Corner Build



Sculpture / Sign

CORRIDOR GATEWAYS

Objective 3: Cohesive and attractive environment

Northern Gateway



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COMPREHENSIVE PLAN EXCERPTS

NEWTON COMPREHENSIVE PLAN / THE 2003 NEWTON RECREATION AND OPEN SPACE PLAN

- A community which prides itself in being "*The Garden City*"
- Newton's over-riding vision is of a metropolitan community able to maintain and preserve its natural assets and resources and able to meet both the passive and active recreational needs of its citizens.
- As Newton faces future pressures toward buildout, only 2,300 of its over 11,000 acres remain in parcels that can be considered as open space. Some 1,000 acres of that open space are privately owned, more than half of that by private golf courses. The remainder is publicly owned, primarily in parks and playgrounds.
- Newton's natural resources lie within and above fewer than 12,000 acres, of which only a little more than 2,000 acres is land remaining in a largely natural state, about 300 acres is open water, and the rest is land substantially shaped to serve human habitation.
- The City of Newton has been recognized for environmental leadership - most prominently in its recycling and waste management programs, and more recently in its pursuit of high performance design standards for new public facilities.

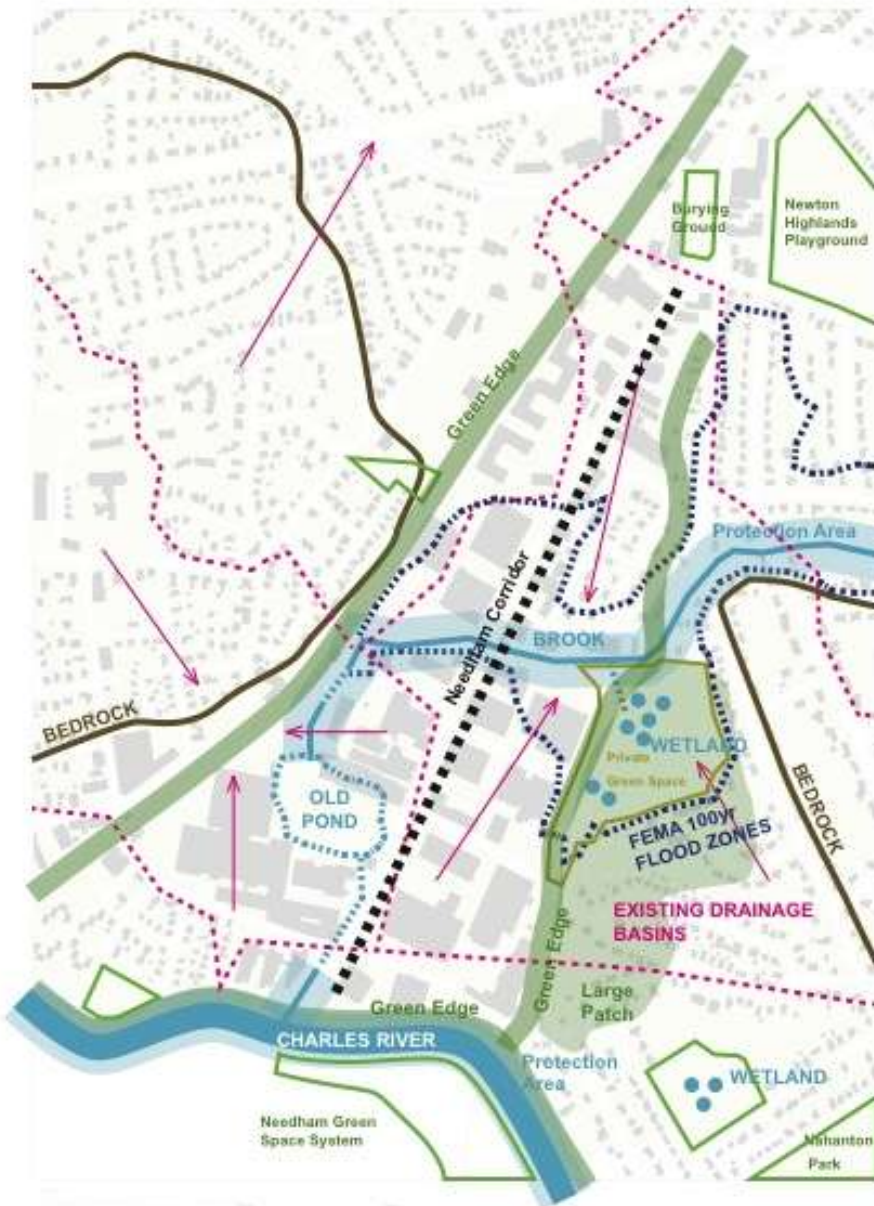
WATER RESOURCES

WATER BODIES - Protecting natural bodies of water. Preventing stormwater pollution via roadways to the added maintenance requirements of a largely engineered system to the natural process of eutrication.

THE CHARLES RIVER - Newton has twelve miles of riverfront property along the Charles, more than any other neighboring community. Municipal and collective responsibility to protect the river from both point source contamination and sudden inflows of storm water that carry pollutants. A vast majority of Newton's stormwater drains to the Charles.

STORMWATER AND WASTEWATER MANAGEMENT - Limiting and controlling storm water runoff. Limiting Run Off: Containment versus Bioretention to prevent additional pressure on city storm drain infrastructure, current policy in Newton's Engineering Division is that applicants for new development must present a plan to contain or manage stormwater on site in the event of a "100- year storm." Creation of "rain garden," or bio-retention area. Over the past several years, Newton has been systematically uncovering and addressing crossovers between storm water and sewer systems.

OPEN SPACE AS ECOLOGICAL SYSTEM



NEEDHAM CORRIDOR ECOLOGY AND GREEN SPACES FINDINGS

Predominant Plants and Plant Communities:
Characteristic of Southern New England lowland wetland vegetation with red maple, American elm, and ash species.

Successional areas with gray birch, white pine and red maple, and non native species.

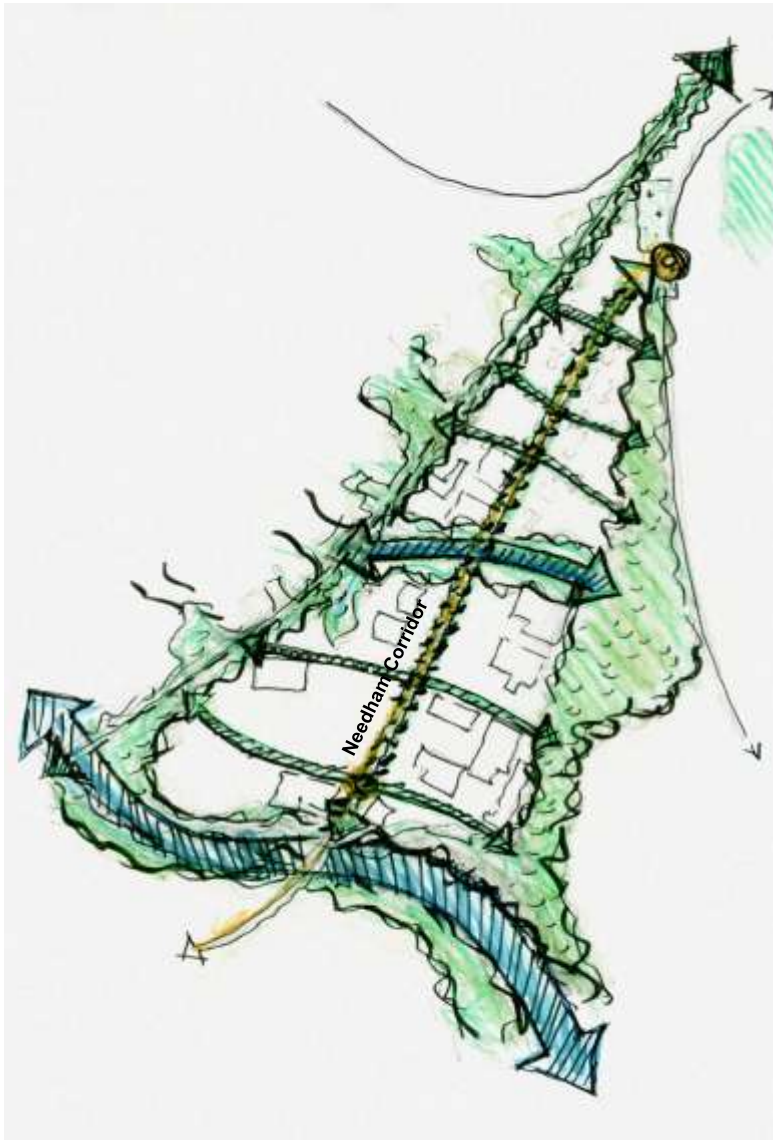
Buttonwood shrub swamps and spruce-tamarack wetlands.

Fisheries and Wildlife:
Characteristic of Southern New England

Green Spaces and Recreation on Site:
Larger Patch of wetland on the east side
Linear greens running North – South
Charles River System running East – West

PRINCIPLES FOR LANDSCAPE FRAMEWORK

NEEDHAM CORRIDOR PRINCIPLES FOR A LANDSCAPE FRAMEWORK



Base Framework for biodiversity conservation:

Human Use/Water Protection/Natural Vegetation/Wildlife Movement

Patches:

- *Promote large patches of vegetation*
- *Promote interaction between patches (connections and movement)*
- *Provide stepping of small patches*
- *Concentrate recreational opportunity on the edges*
- *Promote on site phytoremediation*
- *Design for straight and convoluted boundaries*
- *Promote microhabitat heterogeneity*

Water Flows:

- *Protect hydrologic function of wetlands*
- *Promote wetlands as pollutant filter*
- *Protect and enhance vegetation along small channels*
- *Provide dense floodplain vegetation (to reduce downstream flooding)*
- *Protect and enhance 'river-ladder' pattern*
- *Protect aquifers*

Natural Corridors:

- *Promote corridor width and connectivity*
- *Promote small patches attached to corridors ('rest stops')*
- *Mitigate habitat contrast*
- *Promote alternative routes*

LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS

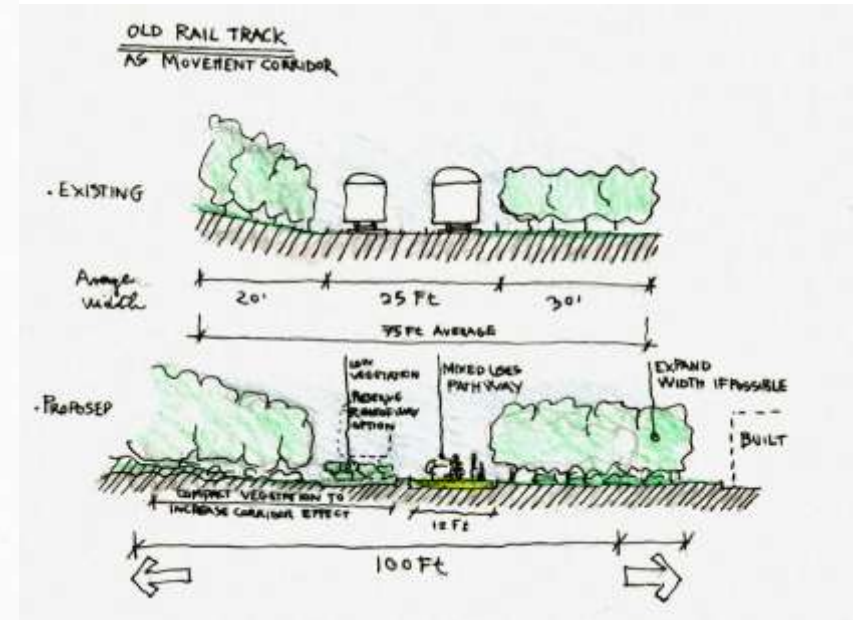
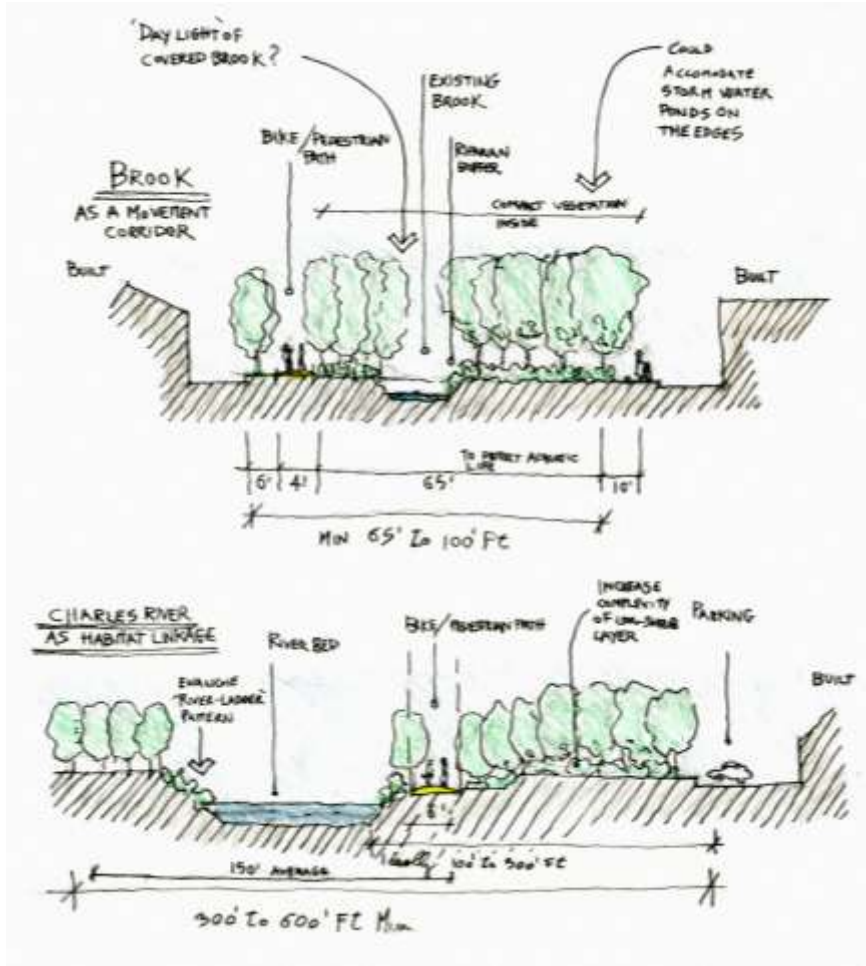


NEEDHAM CORRIDOR LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS

Base Framework:

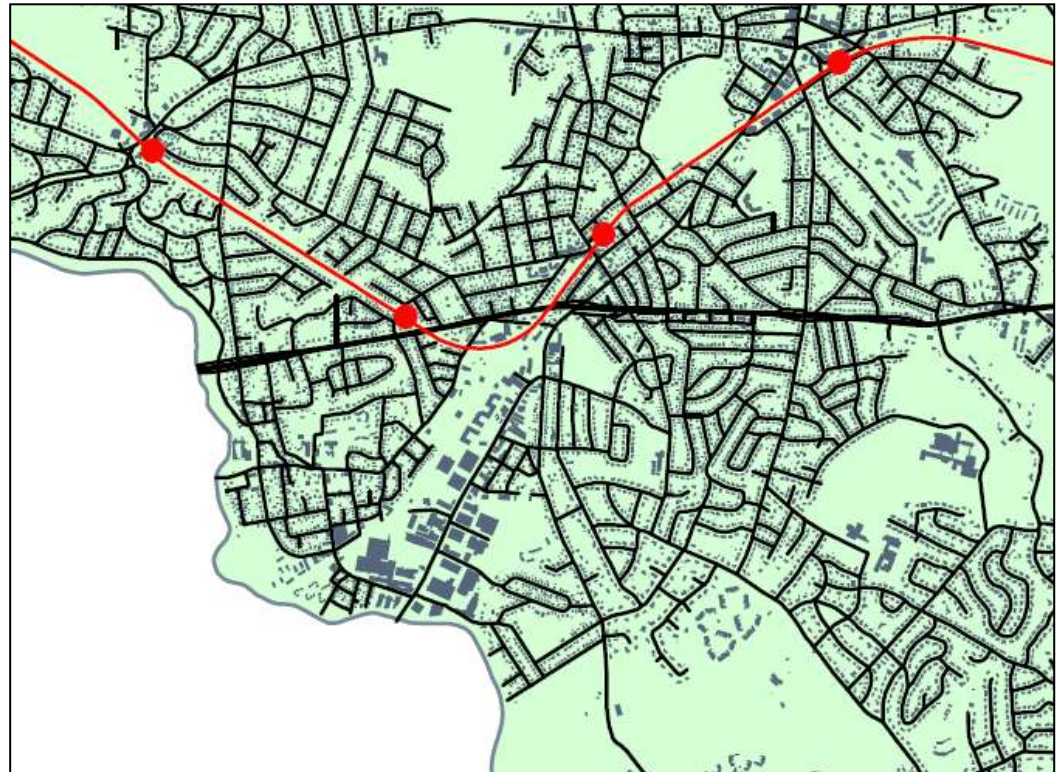
- Create a landscape hierarchy system to bring identity to the site
- The landscape framework will carry the water management system for the site (artificial + natural)
- Landscape improvements with autochthon species to promote corridor effect

LANDSCAPE FRAMEWORK: POSSIBLE ACTIONS

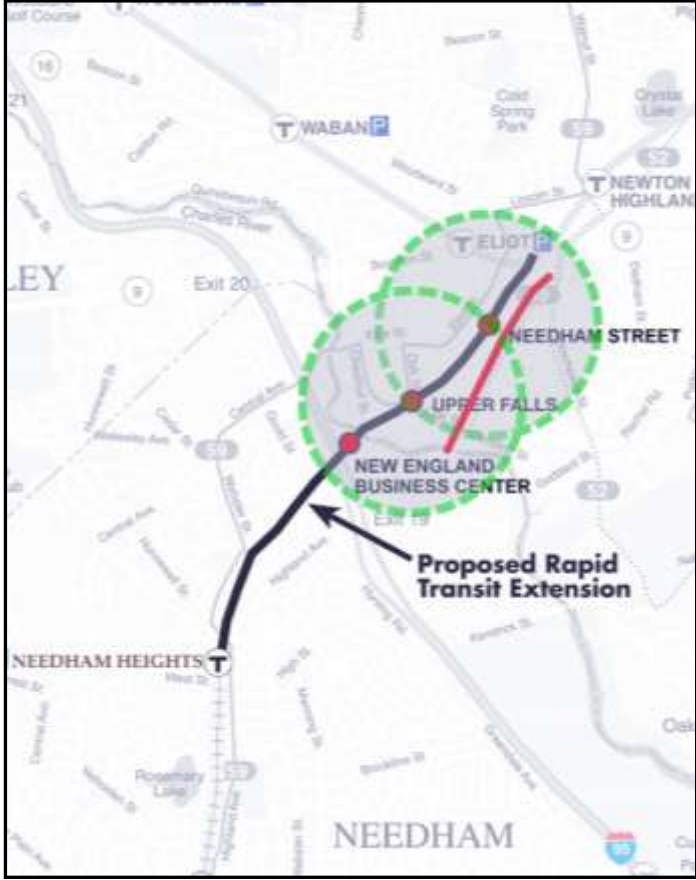
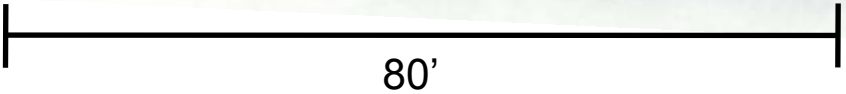


OPEN SPACE AS CIRCULATION NETWORK

- Long term: Retain flexibility for MBTA Green Line extension
- Short term: Recreational trail along corridor
- Link Needham Street corridor to surrounding neighborhoods using open space
- Provide neighborhoods direct pedestrian access to retail and jobs
- Connection to Upper Falls is a prime opportunity



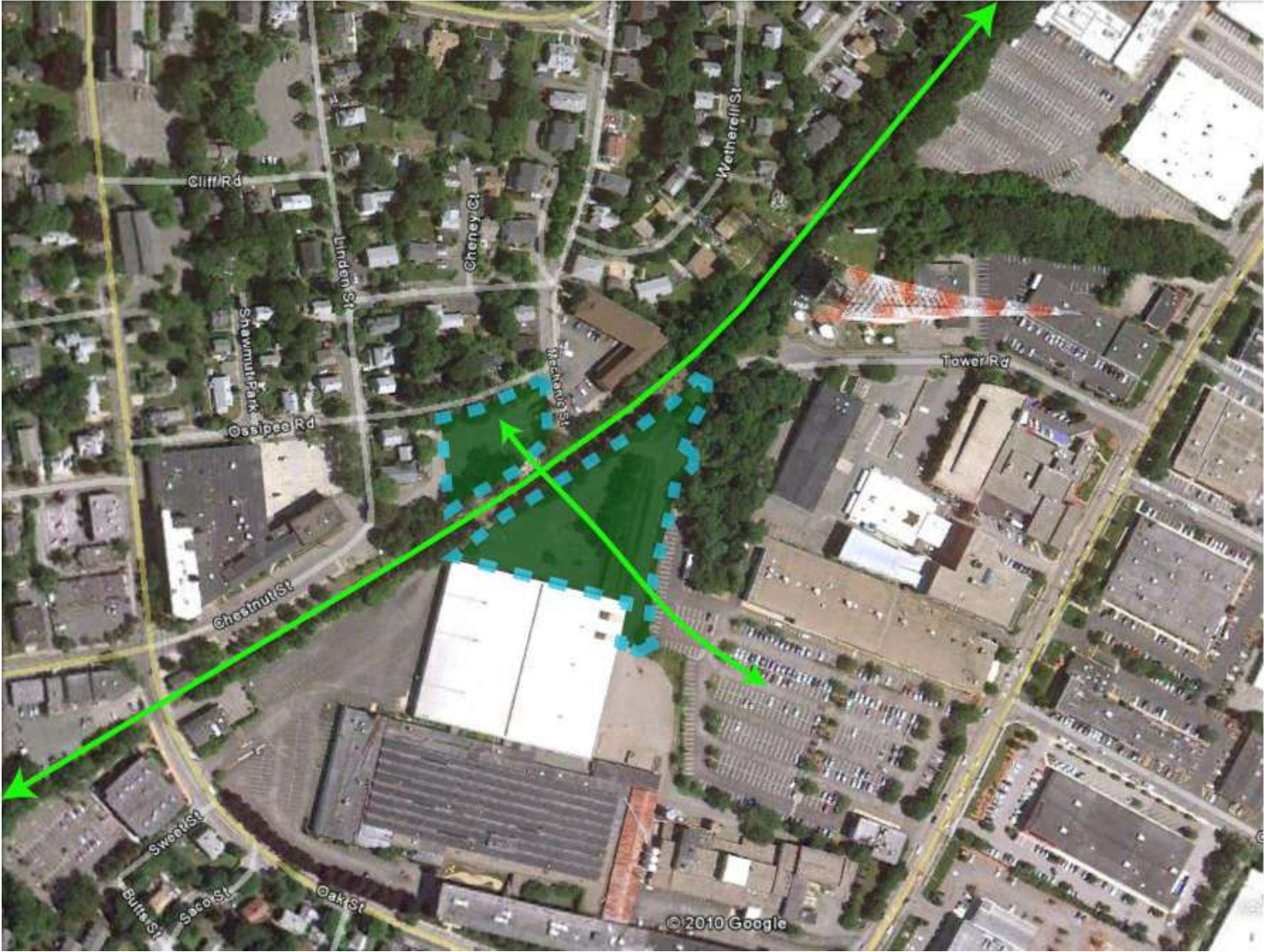
OPEN SPACE AS CIRCULATION NETWORK



Source: "Rail Service to Newton Upper Falls and Needham," Srdjan Nedeljkovic

CONNECTION TO UPPER FALLS

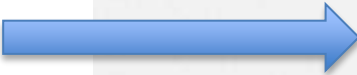
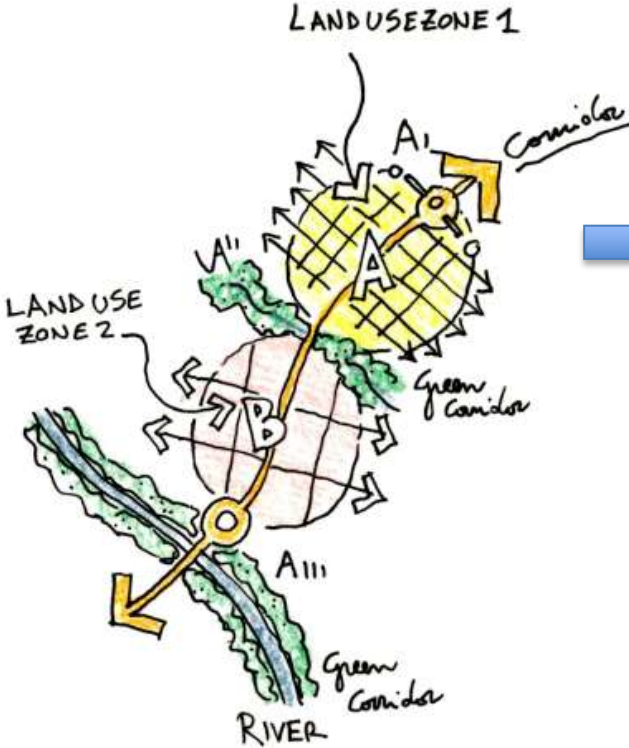
Objective 4: Recreational open space network



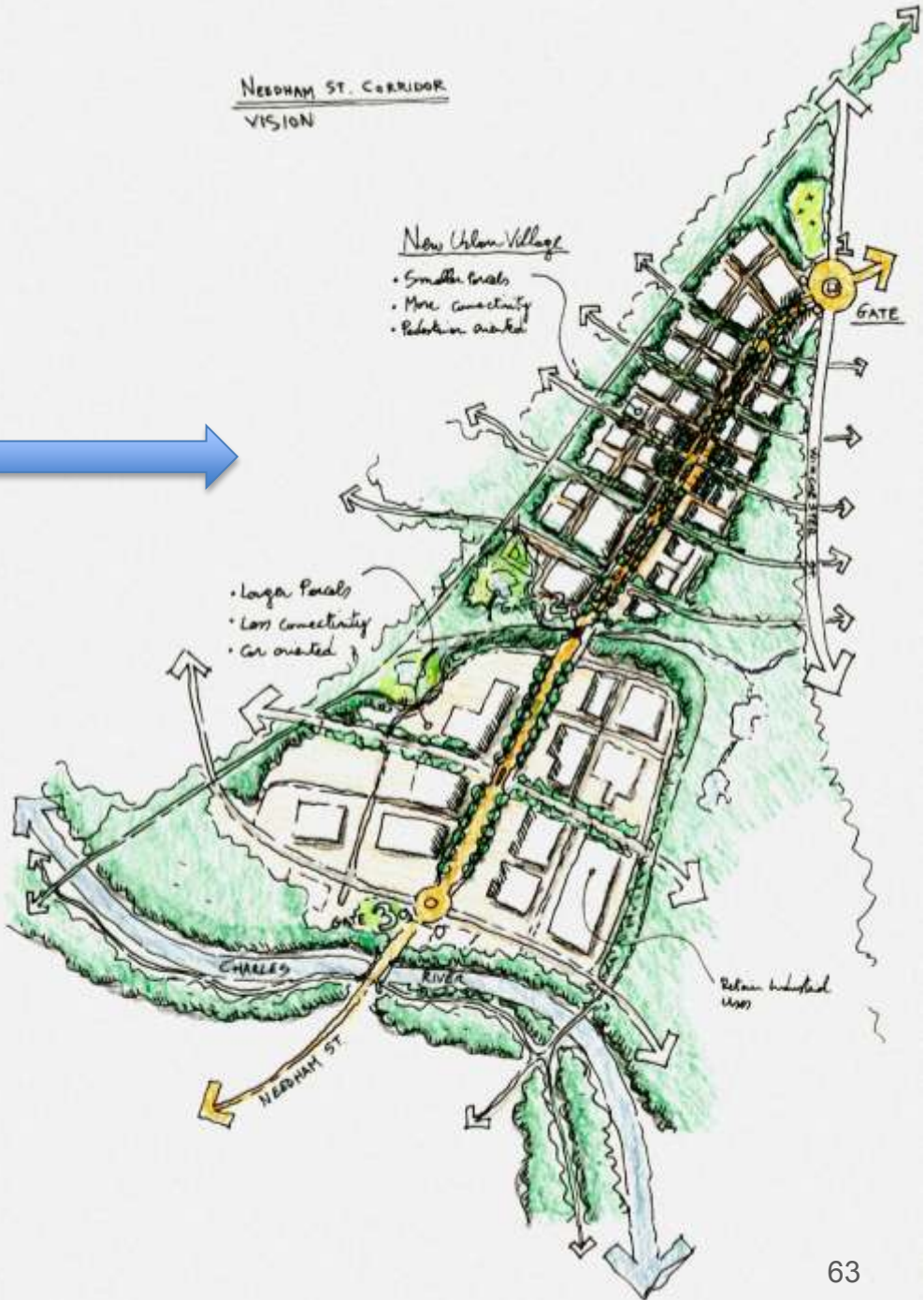


SUMMARY

SCHEMATIC VISION



NEEDHAM ST. CORRIDOR VISION



WRAP-UP

- Four objectives frame a vision for Needham St
 - 1) Create a safe and comfortable environment for cars, bikes, and pedestrians
 - 2) Maintain existing industrial uses and promote fine-grain mixed use
 - 3) Create a more cohesive & attractive physical environment
 - 4) Create a recreational open space network
- Next steps
 - Refine objectives and vision based on stakeholder feedback
 - Identify specific interventions
 - Evaluate financial feasibility
 - Propose potential zoning changes
 - Develop final plan



DISCUSSION





