



# Pelham Town Center Project



## Public Hearing

June 4, 2009

# Meeting Agenda

- Introduction (Chris)
- Project Need & Background (Chris)
- CSS Approach and Working Group (Chris)
- Roundabout Information (Trent)
- Review Dual Roundabout Alternatives A & B (Trent)
- Environmental Resources (Chris)
- Schedule, Funding, & Next Steps (Chris)
- Questions & Answer Period

Nashua Road

Windham Road

**State Maintained Routes**

**Town Center Intersections**

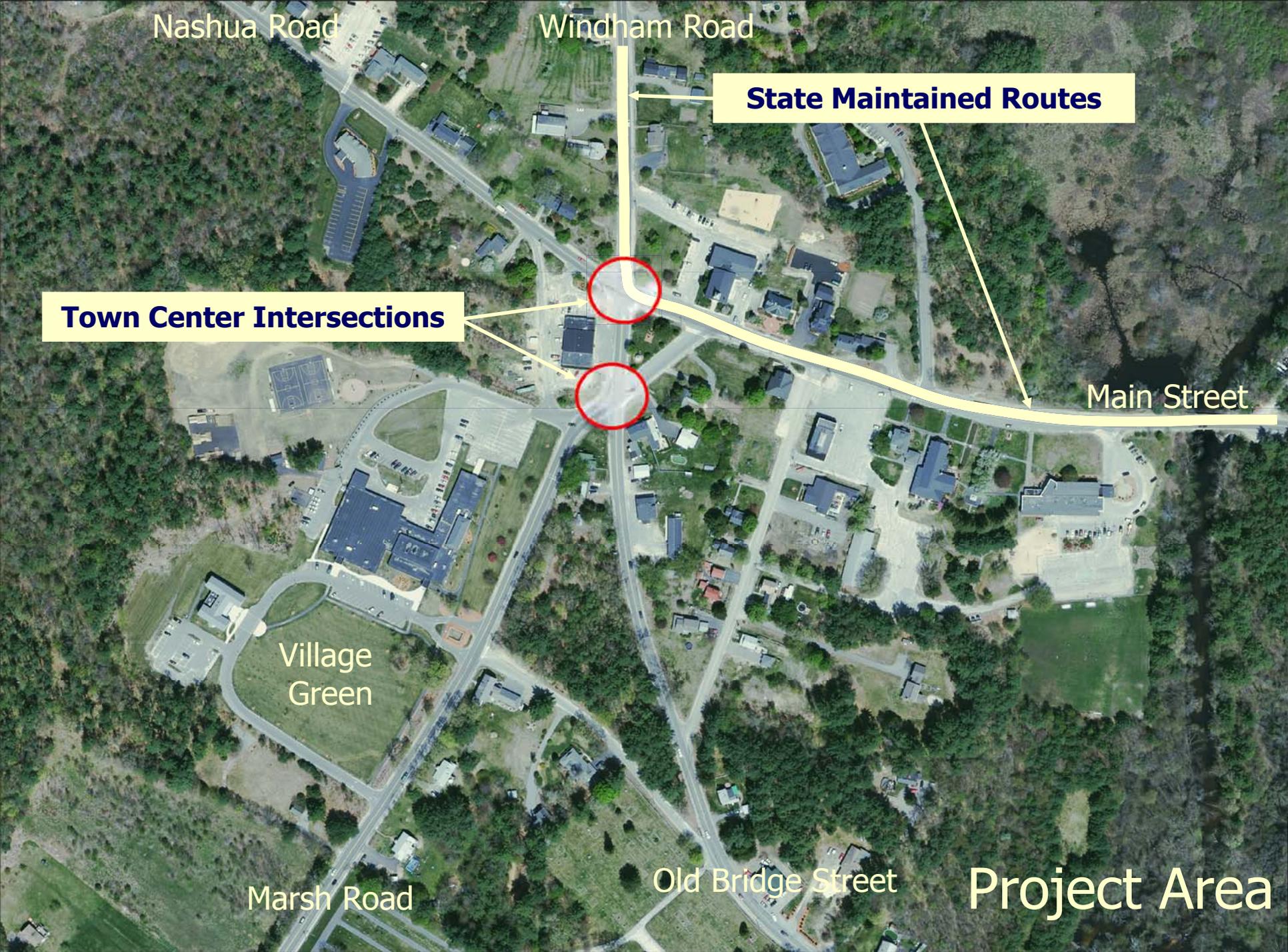
Main Street

Village Green

Marsh Road

Old Bridge Street

**Project Area**



# Project Need & Background

- Address Two Town Center Intersections
  - NH111A / Nashua Rd / Old Bridge St / Main St Intersection
  - NH111A / Old Bridge St / Common St Intersection
- Congestion & Safety Issues
  - Peak Hours (morning & evening commuter times)
    - Heavy traffic (13,000 vpd, projected 21,000 vpd in 2030)
    - Difficultly entering from side streets
    - Considerable backups on side streets
  - Numerous Accidents
    - 52 Crashes reported @ both intersections (3-Year Period, 99-01)
    - 49 Crashes reported @ both intersections (4½-Year Period, 02-06)
  - As traffic increases, congestion grows & safety diminishes

# Project Need & Background (con't)

- Project initiated (by local Officials) in 2003
- Project added to the TYP (2005-2014) as "Recommended Future Additions List" project
- Project received federal earmarked funding totaling \$3.94M dollars (\$3.15M federal dollars)
- Project subsequently added to TYP (2007-2016) as new project for construction in 2010.
- Project presently included in current TYP (2009-2018)

# Project Need & Background (con't)

- Based on Sensitive Nature & Characteristics of Area
  - Project identified as pilot CSS project
  - Pelham Selectboard in 2006 appointed 20 Pelham residents & Officials to serve on Project Working Group (WG)
  - Subsequently 2 more Pelham residents were added to WG
- WG consists of following representation (25 members)
  - Council on Aging
  - Historic Society & Congregational Church
  - St. Patrick's Church
  - Veterans
  - Schools
  - Neighborhood
  - Center Businesses
  - NHDHR
  - NRPC Commission
  - Planning Board
  - Zoning Board of Appeals
  - Conservation Commission
  - Selectboard
  - Police
  - Fire
  - NRPC & NHDOT

# Working Group Role

- Help Provide Early and Continual Input into the Project
- Be Liaison between Town and DOT
- Craft the Problem and Vision Statements
- Help identify the Alternatives & determine the Preferred Alternative
- Disseminate information and inform others of the Project

# Context Sensitive Solutions (CSS)

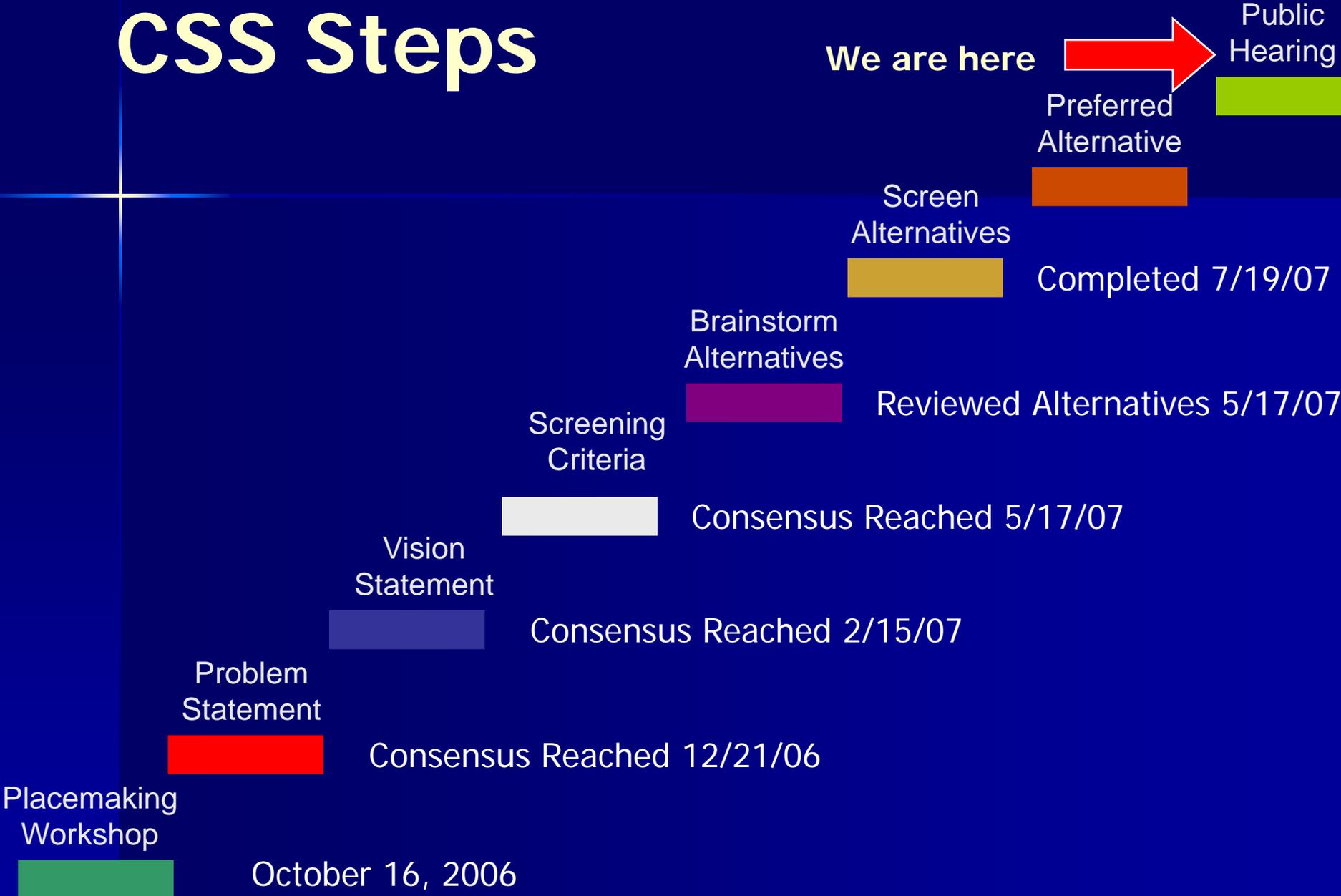
"A collaborative interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic and environmental resources, while maintaining safety and mobility."

# Consensus

"Consensus does not mean that everyone agrees, but that the principal groups and individuals can live with a proposal."

Nothing is perfect.

# CSS Steps



# Project Development Process for the Project

- Preliminary Design (2006-2009)

- Placemaking
- Problem/Vision/Goals
- Alternatives
- Public Informational Meeting
- Public Hearing



- Final Design (2009-2010)

- Detailed Design
- Purchase Right of Way
- Secure Permits

- Begin Construction (2011)

# Public Participation

## ■ Public Involvement Plan

- Introduction
- Project Background
- Project Team
- Project Process
- Working Group
- Communication



## ■ Project Website

- [www.nh.gov/dot/projects/pelham14491/index.htm](http://www.nh.gov/dot/projects/pelham14491/index.htm)

# Problem Statement



*Consensus  
Reached*

The Pelham Town Center is divided by multiple intersections containing high volumes and speeds of local and regional commuter traffic, creating congestion that negatively affects safety resulting in unacceptable delays. This detracts from the historic character and setting of the Town Center. No “sense of place” exists that promotes community pride or encourages activities that attract pedestrians and groups of people to gather. This area lacks alternative routes, gateway, and traffic calming features that introduce and highlight the historic character of the town center. The area is marked by inadequate pedestrian/ bicycle connectivity and amenities, and a complete lack of on-street parking, descriptive signage, and lighting.

# Vision Statement



*Consensus  
Reached*

The Pelham town center will be **enhanced** by changes to multiple intersections, which will make the town center **safer** and **more welcoming** to **drivers, pedestrians, and bicyclists**. These changes will enhance and **preserve** the small town **character, historic setting** and community **aesthetics**. Traffic movement for all approaches through the Pelham Town center will flow at a **slow, steady, safe, and efficient** manner for pedestrians, bicycles and vehicles.

**Gateway treatments** will provide an announcement to drivers that they are entering the Pelham Town center. The Town center will become a **focal point** that has connectivity and amenities, which contribute to a **sense of “place”, history, and pride**.

# Alternatives Investigated

- Interim Alternatives
  - 4-Way Stop
  - Signalize existing configuration
  - Signalize with traffic pattern change
- Roundabout Alternatives
  - Dual Roundabout Alternative A
  - Dual Roundabout Alternative B
  - Single 5-Leg Roundabout Alternative
- Signal Alternatives
  - Dual Signal Alternative A
  - Dual Signal Alternative B

# Preferred Alternative(s)

- Roundabout Alternatives

- Dual Roundabout Alternative A
- Dual Roundabout Alternative B

- Core Issue – Firestation

- Alternative A requires Firestation Relocation
- Alternative B severely compromises existing deficient & substandard facility, requires building retrofit & new auxiliary structure

# Roundabout Information

# Roundabouts

- What is a Roundabout
- How to Drive a Roundabout
- Advantages of Roundabouts
- Examples

# What is a Roundabout?

- Circular One-Way Intersection



**It Is NOT a Traffic Circle or Rotary !!!**

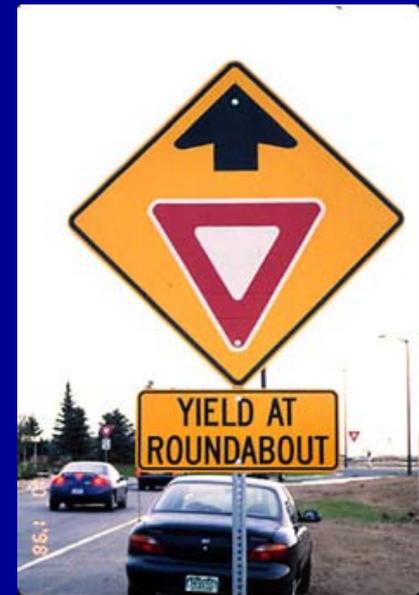


# They are NOT Traffic Circles

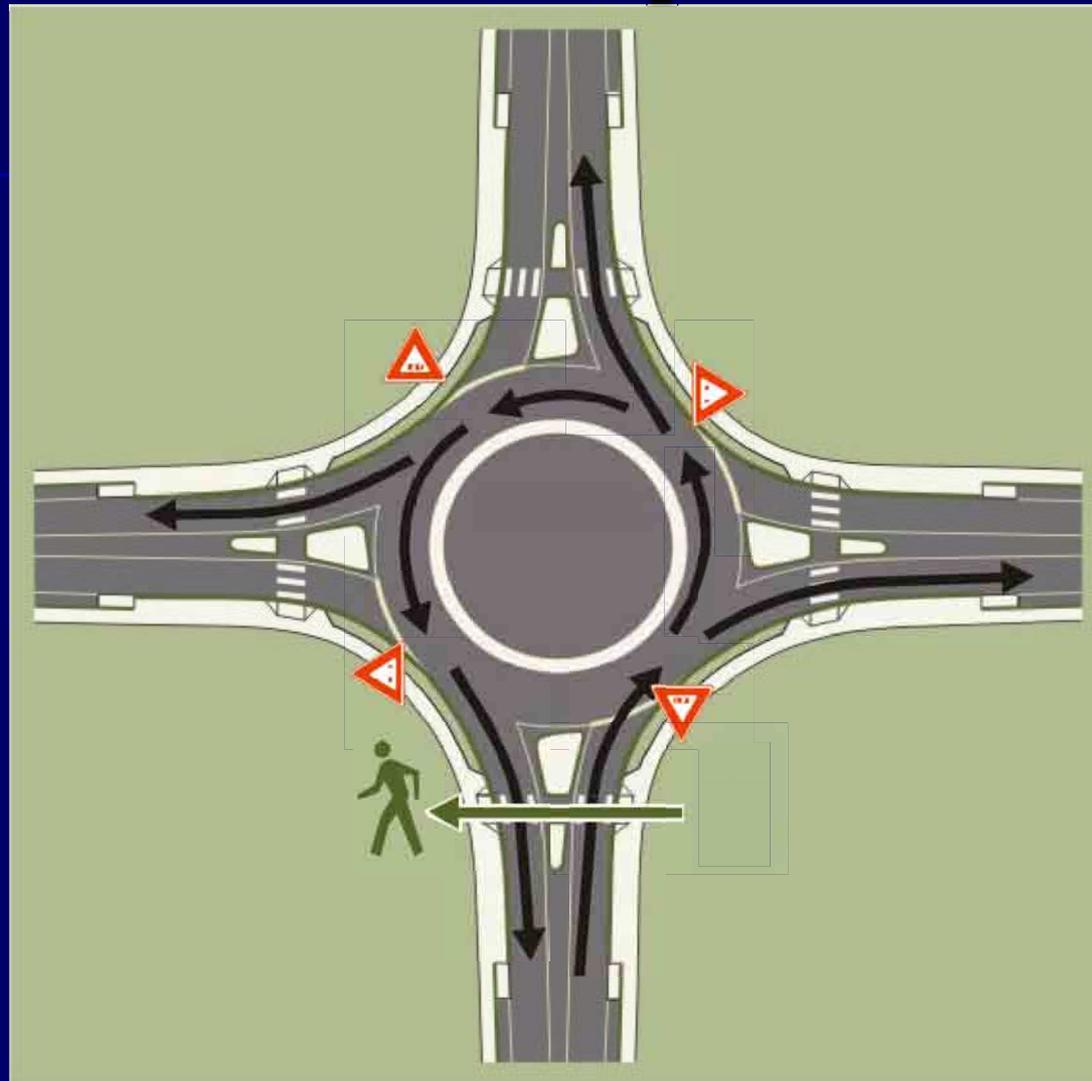


# How to Drive a Roundabout

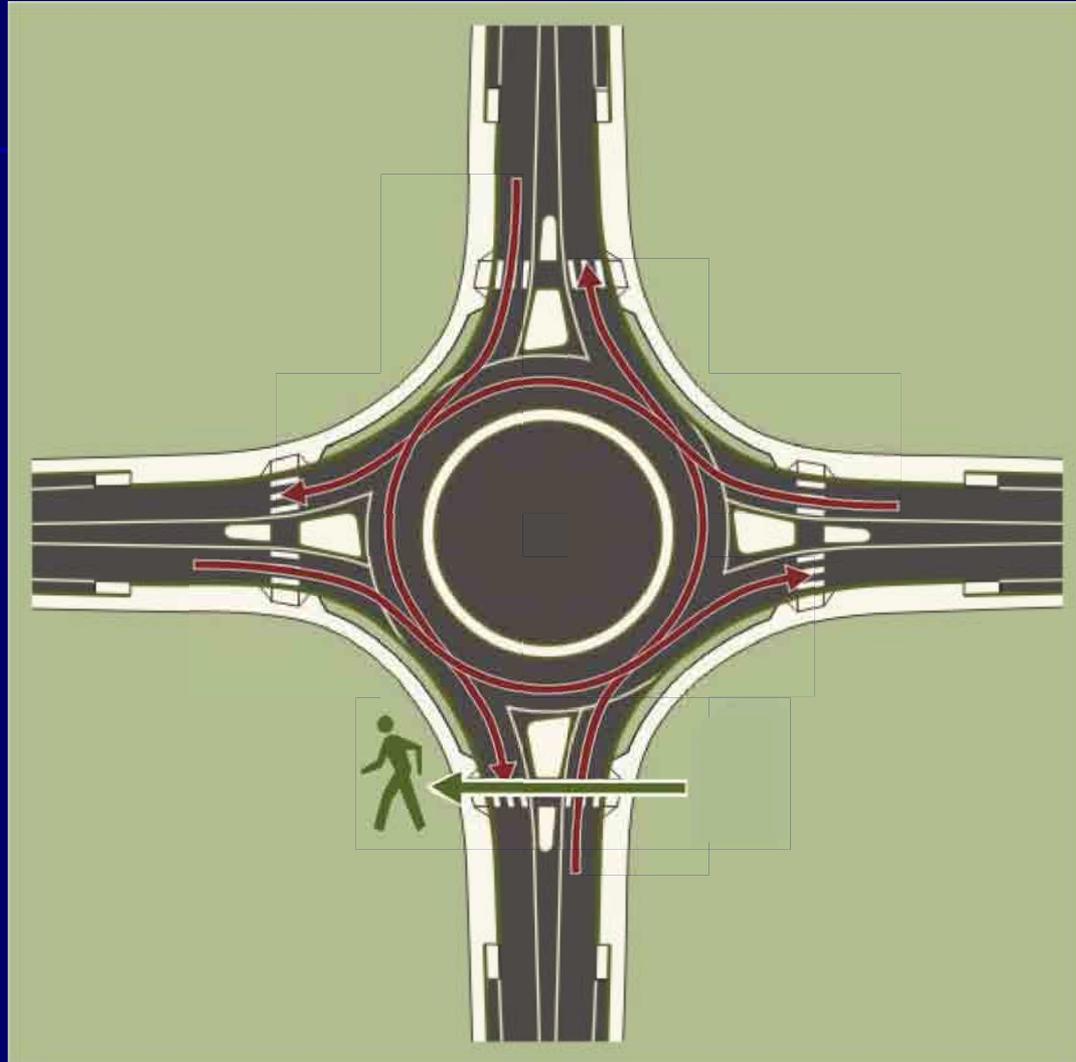
- Yield to Vehicles in the Roundabout
- Choose a Gap
- Enter the Roundabout
- Yield to Pedestrians When Entering and Exiting



# Roundabout Operations



# The Modern Roundabout



# Components of a Roundabout



Central island

Truck apron

Crosswalks

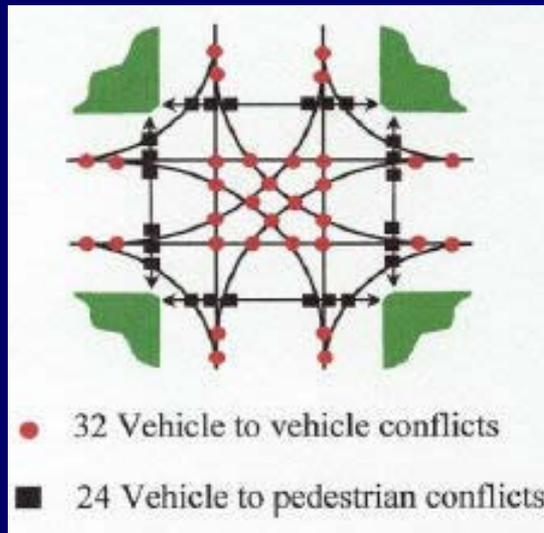
Splitter islands

# Advantages of Roundabouts

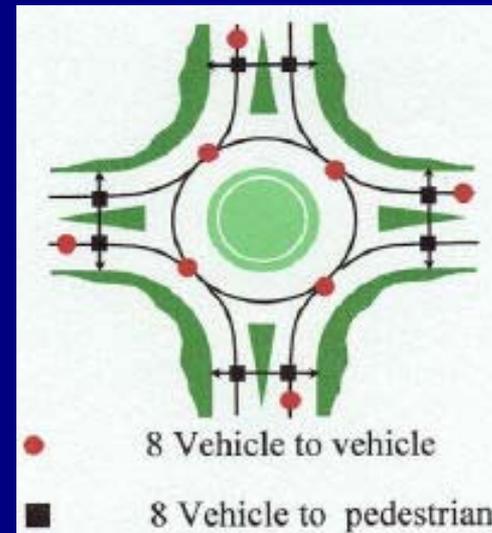
- Slow Speeds
- Saves Lives
- Improved Capacity of Intersection
- Reduced Pollution and Fuel Use
- Saves Money
- Aesthetic Treatments
- U-Turns Allowed and Convenient



# Crash Reduction



4-Way Intersection

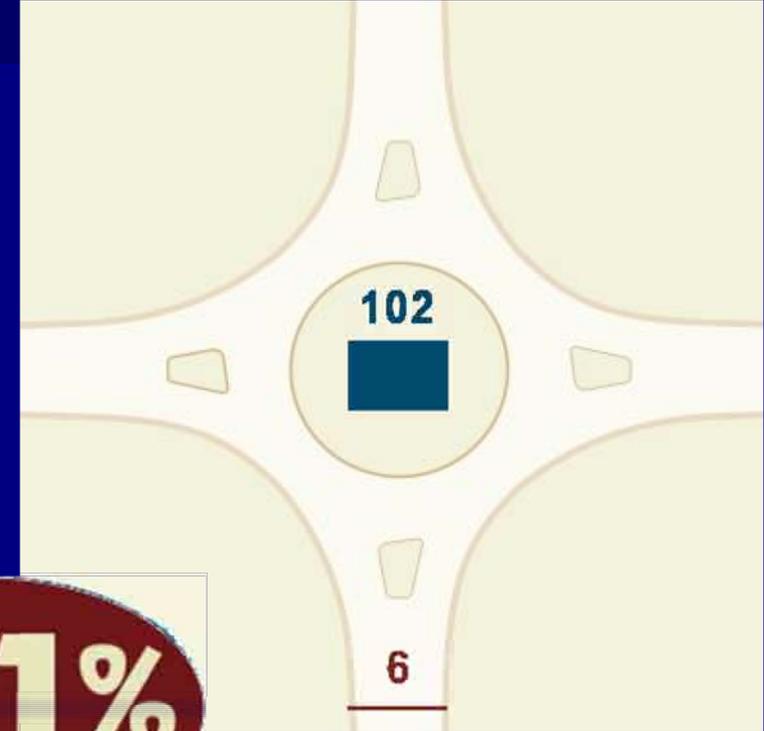


Roundabout

## 2 Way Stop Intersection



## Roundabout



**-81%**

**How do typical types of crashes compare between conventional intersections and roundabouts?**

# Roundabouts in NH

- Nashua – NH 130 Broad Street 16,000 ADT
- Nashua – Main Street 12,000 ADT
- Keene – Court Street 10,000 ADT
- Hanover (2)– NH 10 8,000 ADT
- Plymouth – US 3/NH 175A 12,000 ADT
- Meredith – US 3/ NH 106 14,000 ADT
- Keene – NH 101 50,000 ADT
- Rye – Foyes Corner 20,000 ADT
- Pelham – Town Center 21,000 ADT (2030)



**Nashua - Main Street**



**Nashua – Main Street**

# Nashua – Main Street





**Nashua – Broad Street**



NHS  
→ GAS  
SHOP  
MAY 20



Person in high-visibility vest sitting on the curb.

NH  
GA  
SH





ABF

ABF

ABF

83629

ABF  
WORLDWIDE

31449

NHSN  
CAR  
OV



Keene, NH

COURT ST - KEENE, NH

Vanasse Hangen Brustlin, Inc.  
Bedford, NH 03110



# Before – Overland Park, Kansas



# After – Overland Park, Kansas



# Before – College St. Asheville NC



# After – College St. Asheville, NC



**Yes they do work in snow country !!**



# Preferred Design Layouts

- Dual Roundabout Alternative A
- Dual Roundabout Alternative B

# Dual Roundabout Alternatives

	Alternative A	Alternative B
Redirects traffic from Old Bridge Street North to Marsh Road via Gibson Drive	X	X
Two roundabouts sufficiently sized and located to accommodate current and future traffic needs	X	X
Fewer conflict points will reduce accident frequency and severity	X	X
Traffic congestion and noise reduced with improved air quality	X	X
Requires relocation of the existing fire station	X	
Impacts the functional use of the existing fire station and require an additional auxiliary building for ambulances		X

# Dual Roundabout Alternative A

# Dual Roundabout Alternative B

# Primary Differences of Dual Roundabout Alternative B

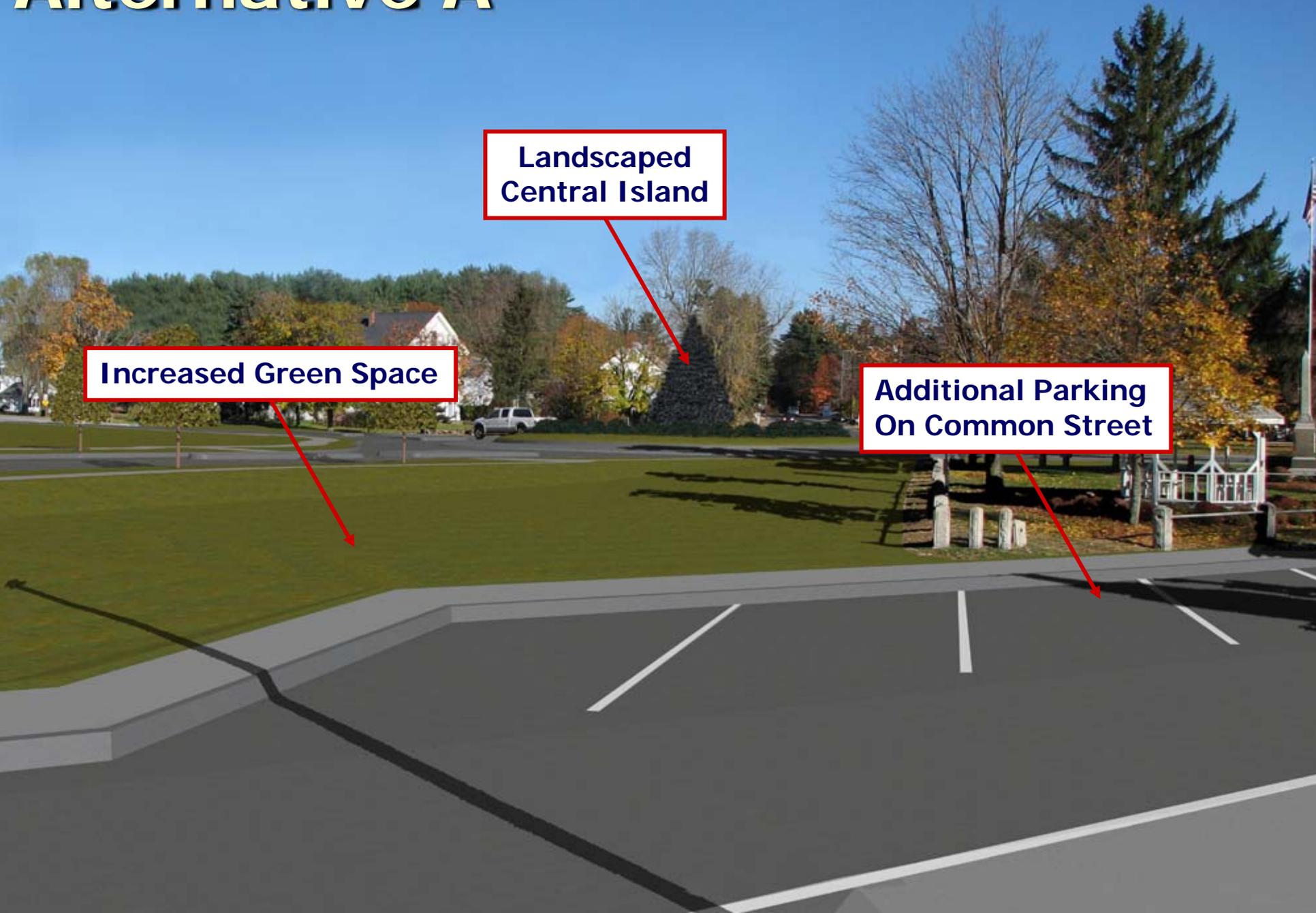
- Plans / Visualizations
- Constructibility
- Operation & Safety
- Maintenance

# Alternative A

**Landscaped  
Central Island**

**Increased Green Space**

**Additional Parking  
On Common Street**



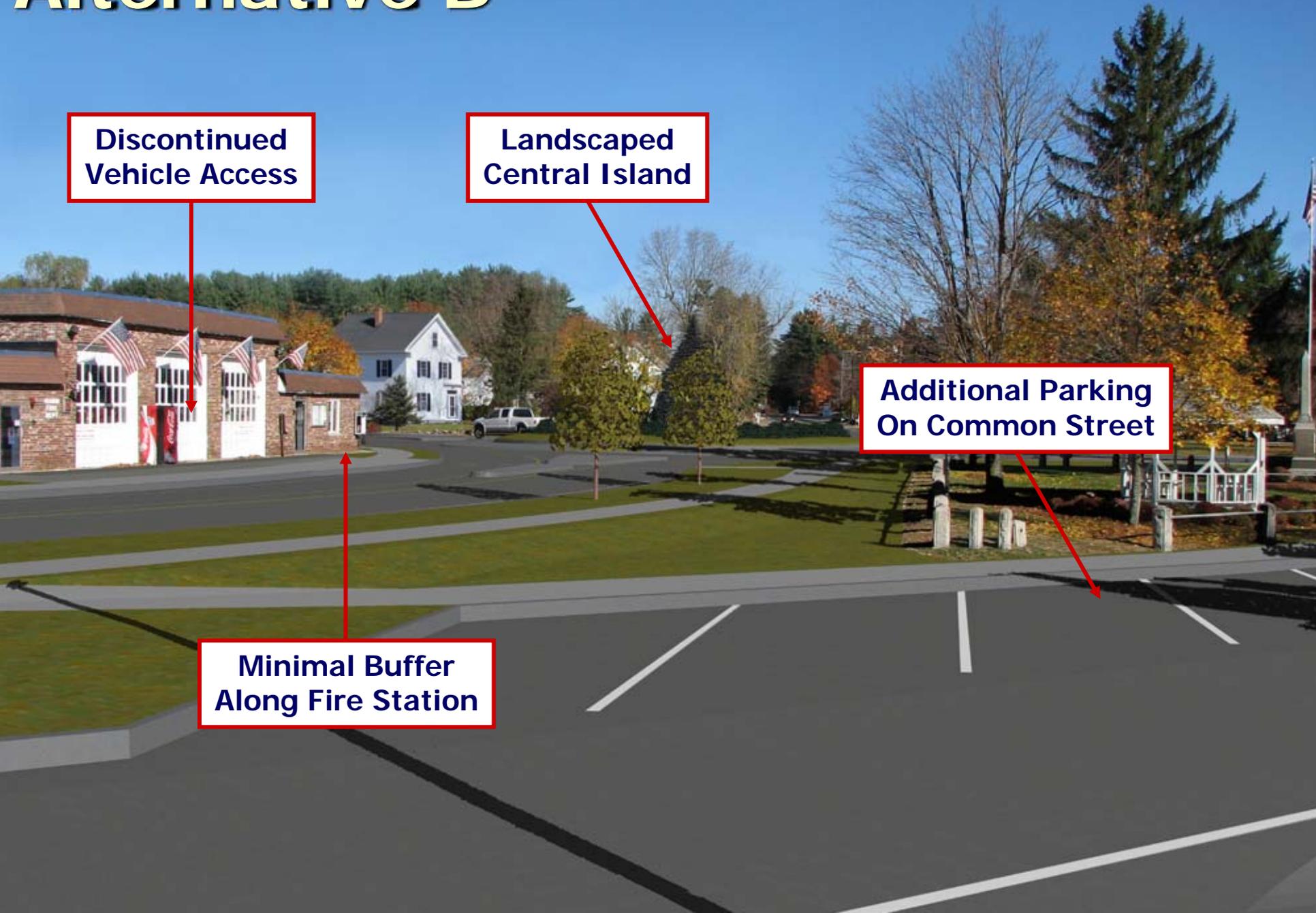
# Alternative B

**Discontinued  
Vehicle Access**

**Landscaped  
Central Island**

**Additional Parking  
On Common Street**

**Minimal Buffer  
Along Fire Station**

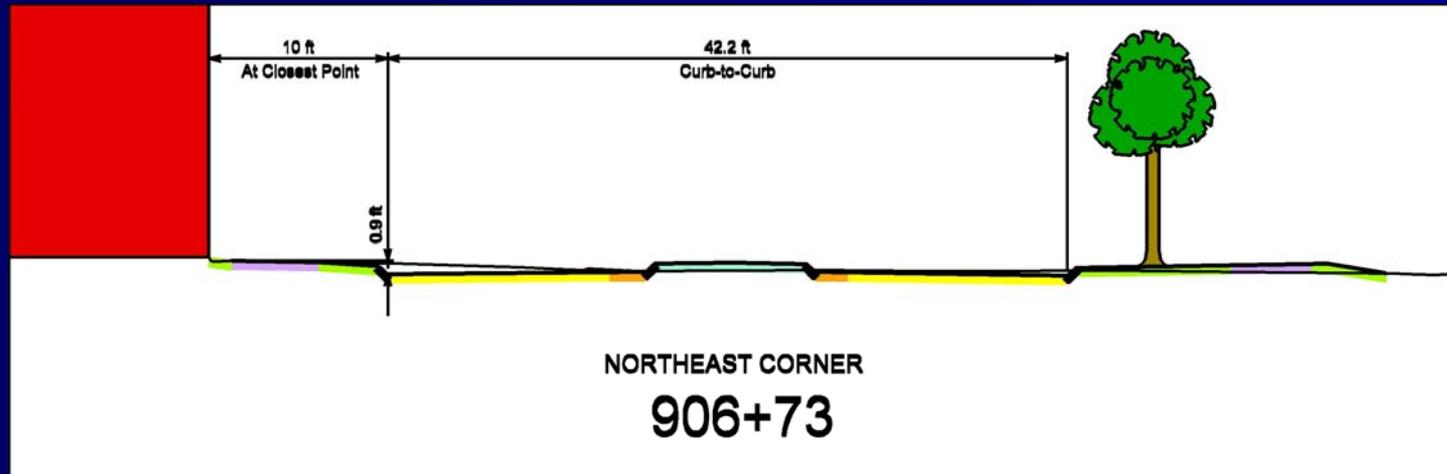


# Critical Cross-Sections



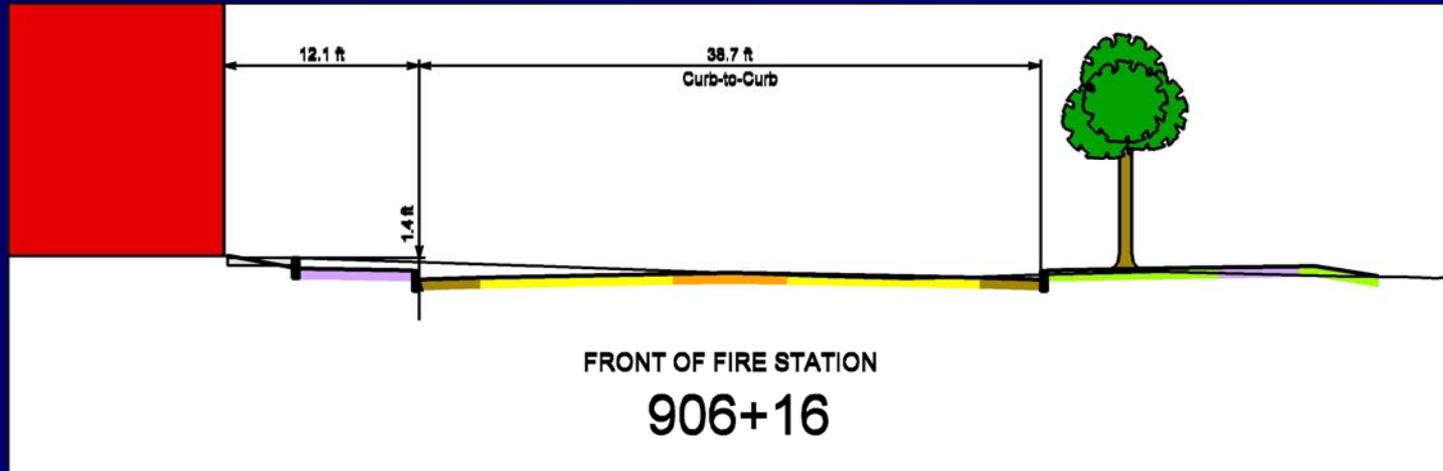
# Critical Cross-Sections

- Curb line is 10 ft from northeast corner of station
- Building elevation is 0.9 ft higher than proposed edge of pavement
- Pavement widens approaching roundabout
- Centerline grade generally matches existing roadway
- Road has curbing and sidewalks on both sides



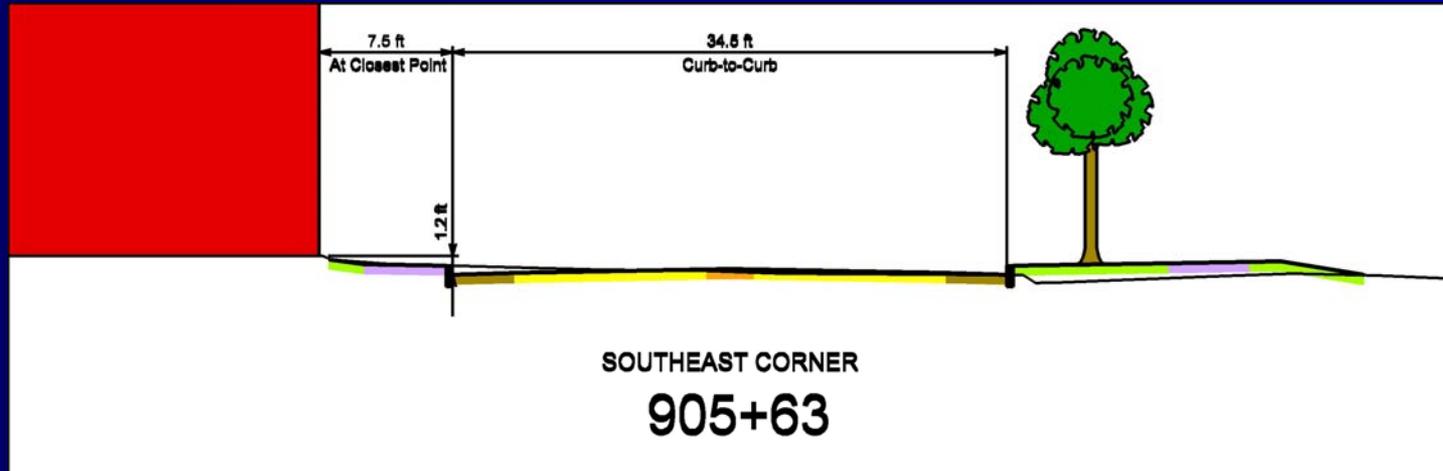
# Critical Cross-Sections

- Curb line is approximately 12 ft from front of station
- 1.4 ft elevation difference from concrete slab to proposed edge of pavement
- Vehicle access to the station would not be feasible



# Critical Cross-Sections

- Curb line is 7.5 ft from southeast corner of station
- Building elevation is 1.2 ft higher than proposed edge of pavement



# Alternative B

## Constructability Issues

- Excavation and compaction will be challenging with the fire station only a few feet away.
- Traffic control may require increased use of Woodbury Avenue as a temporary detour.
- Alternative A would allow for a construction staging area at the current fire station site.

# Alternative B Operations & Safety Issues

- Fire station will hinder visibility when approaching the roundabout.
- Sight distance from the Town Center parking lot will be limited by fire station.
- All emergency apparatus will be able to access rear of the station, although some movements will more challenging.

# Alternative B

## Maintenance Issues

- Snow removal will be necessary near the fire station due to lack of storage areas.
- Sidewalk maintenance agreements will be required for either alternative.

# Environmental Resources

- Natural Resources
  - Federal and State Permitting
- Cultural Resources
  - Historic
  - Section 106

# Environmental Resources

- Historic District
- Impaired Waters
- Wetlands
- Hazardous Materials
  
- NEPA & Environmental Document

# **Schedule, Funding, & Next Steps**

# Project Schedule

- To-Date 9 WG meetings, Placemaking Exercise, Public Workshop, & Public Informational meetings held
- Public Hearing
  - Layout Approval Req'd – Hearing Commission
  - Design Approval for NEPA Process Req'd – FHWA
- Final Design (2009 –2011)
  - Detailed design & development of contract plans
  - ROW procurement process
  - Application & receipt of necessary permits
  - Project's Advertisement for bids
- Construction (2011 – 2012)
  - Targeted to begin in Spring of 2011
  - Completion envisioned in Summer/Fall of 2012

# Project Costs

## ■ Dual Roundabout Alt. A

Engineering = \$ 350,000

ROW (private) = \$ 200,000

ROW (Town) = **\$ 437,500**

Construction = \$ 2,950,000

Total Project Cost = \$3,937,500

Potential Town Share = \$87,500

## ■ Dual Roundabout Alt. B

Engineering = \$ 350,000

ROW (private) = \$ 230,000

ROW (Town) = **\$ 407,500**

Construction = \$ 2,950,000

Total Project Cost = \$3,937,500

Potential Town Share = \$81,500

❖ Total Budget for the Project is **Fixed** at \$3.937M

❖ Two Federal Earmarks Designated for the Project

- To-date \$2.34M of Federal Budget Authority Received (\$805k Pending)

- Project funded at 80% federal, 20% state/town match

- Town responsible for 20% match of Town related ROW elements (i.e., firestation)

- Inflation at 3 – 4% per year equates to \$120,000/yr of diminished value

❖ Potential Town Share reflects the 20% matching funds for ROW costs associated with the firestation / Town properties.

# Core Project Issue

What is the best solution to address safety & congestion, as well as enhance the Town Center?

- Dual Roundabout Alternative A – requires a positive Town vote to relocate the firestation
- Dual Roundabout Alternative B – restricts access to rear of existing substandard facility & new auxiliary structure.



# Steps Necessary to Progress Project

- Selectmen's Support / Direction
- Positive Public Hearing – June 2009
- Execute Municipal Agreement
  - Outlining Maintenance & Work Zone Responsibilities

# Thank You

Questions ?

Comments ?

Concerns ?