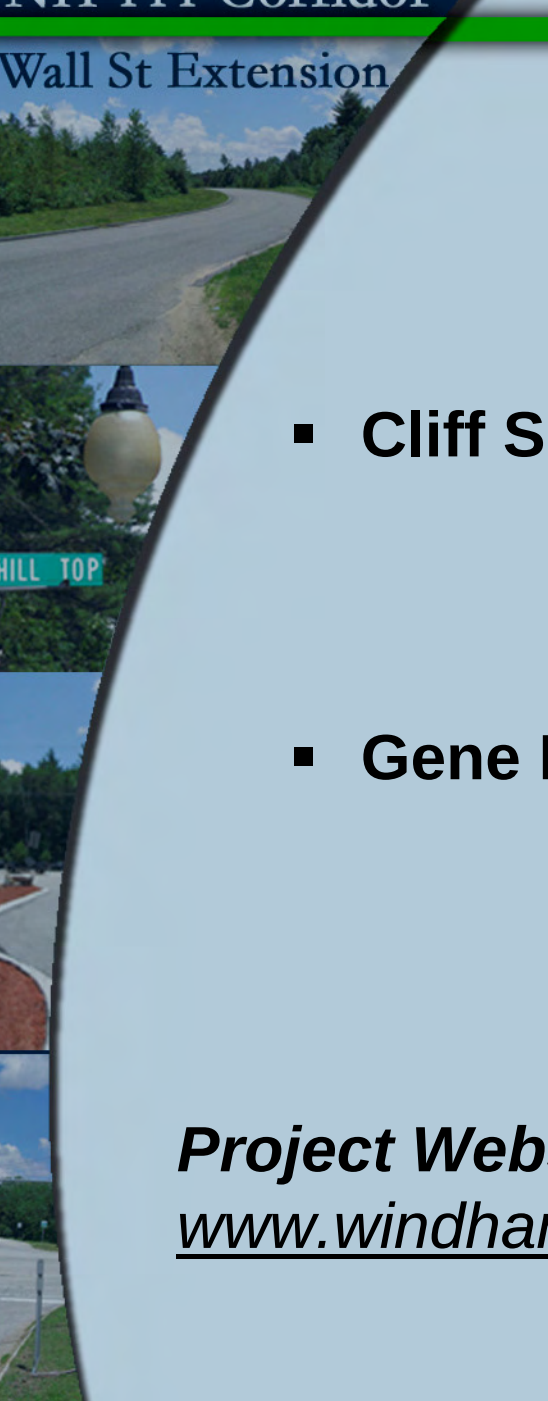

Town of Windham
ROCKINGHAM
PLANNING
COMMISSION
NH 111 Corridor &
Wall St Connector
Feasibility Study
Public Informational
Meeting
September 28, 2010
McFarland Johnson



ROCKINGHAM PLANNING COMMISSION

Presented By:

- **Cliff Sinnott – Executive Director**

  Rockingham Planning Commission

- **Gene McCarthy, P.E. – Project Manager**

  McFarland Johnson

Project Website:
www.windhamnewhampshire.com/updated/wallstreet.htm

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ROCKINGHAM PLANNING COMMISSION

Agenda

- Welcome/Introduction
- Project Background/History
- Context Sensitive Solutions Approach
- Project Problem and Vision
- Traffic Modeling
- Resource Identification
- Roundabouts
- Alternatives Development
- Public Comments & Questions
- Next Steps
- Adjourn



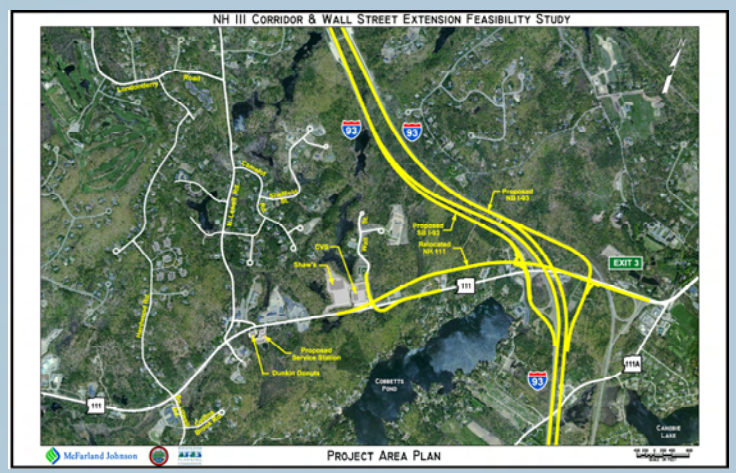
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ROCKINGHAM PLANNING COMMISSION

Project Background/History





- I-93 Exit 3 Final Design (2003);
- Final EIS (2004) & Federal Record of Decision (2005)
- Town requests mitigation including Wall Street Extension (to mitigate increased traffic from No. Lowell Road in town center)
- NHDOT Offered to fund extension study, including NH 111 Corridor Study Component

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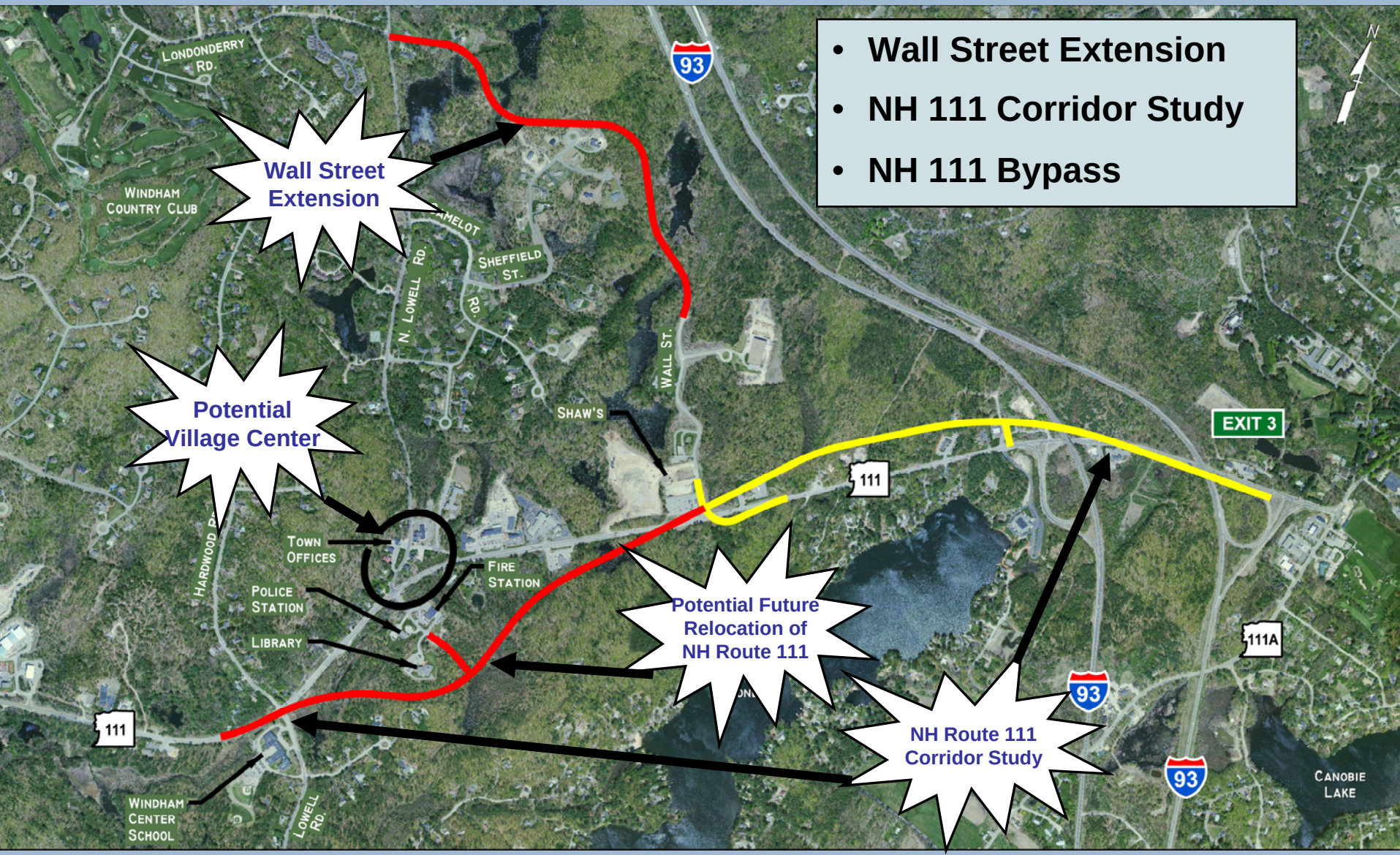
ROCKINGHAM PLANNING COMMISSION

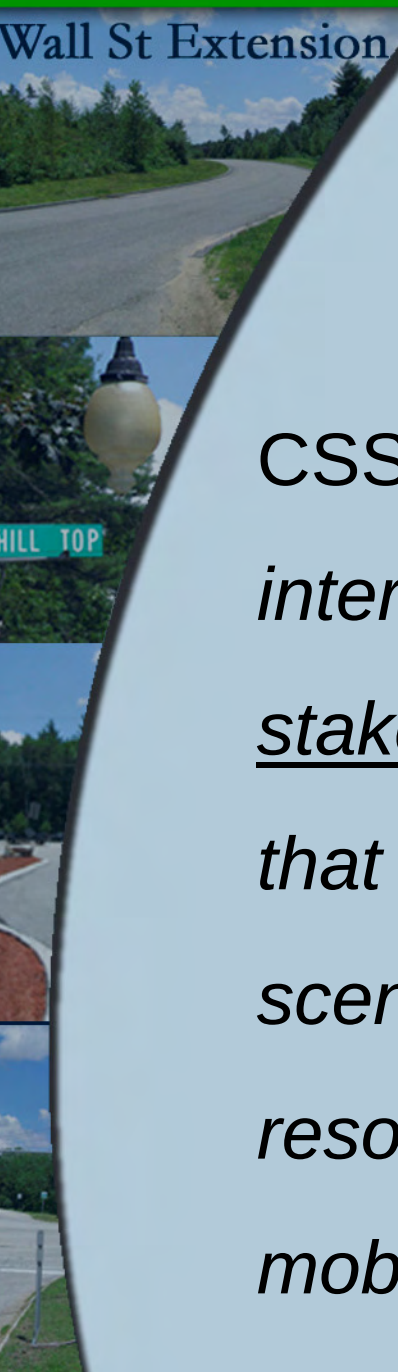
Project Advisory Committee

Board of Selectmen, Bruce Breton & Ross McCloud
Planning Board, Sy Wrenn
Historic District Commission, Kay Normington & Lorri Kimball (Alternate)
Town Administrator, David Sullivan
Highway Department, Jack McCartney
Police Department, Chief Gerald Lewis
Fire Department, Chief Tom McPherson
Conservation Commission, Jim Finn
Community At-Large, Bob Winmill & Robert Ashburn
RPC/MPO Commissioner, Annette Stoller
NHDOT, William Rose
SNHPC, Matt Caron

Project Staff: Cliff Sinnott, RPC; Laura Scott, Windham Community Development; Gene McCarthy, McFarland-Johnson

NH 111 Corridor





ROCKINGHAM PLANNING COMMISSION

Context Sensitive Solutions

CSS is defined by FHWA as "*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*".



ROCKINGHAM PLANNING COMMISSION

Study Steps

Make Short and Long Term Recommendations

Evaluate Alternatives

Develop Alternatives

Vision Statement

Problem Statement

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ROCKINGHAM PLANNING COMMISSION

Study Steps

Public Kickoff Meeting
Nov. 5, 2009

Problem Statement

Vision Statement

Public Meeting
Sept. 28, 2010

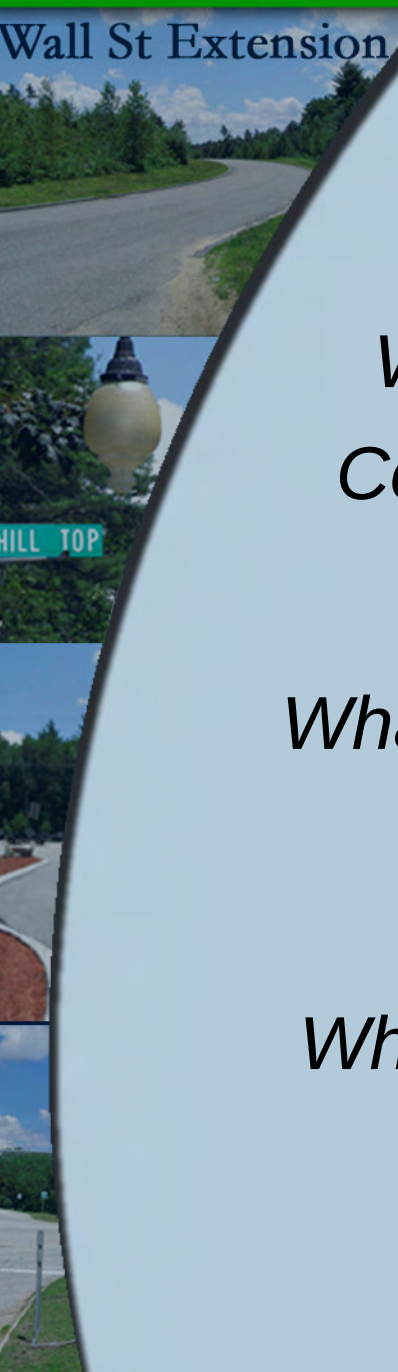
Develop Alternatives

Evaluate Alternatives

Make Short and Long Term Recommendations

Public Meeting

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Group Discussion

What are the problems along the NH 111 Corridor near the Windham Village Center?

What is your vision for the NH 111 Corridor in the Windham Village Center?

What is the link between the Extension of Wall Street and a Windham Village Center?





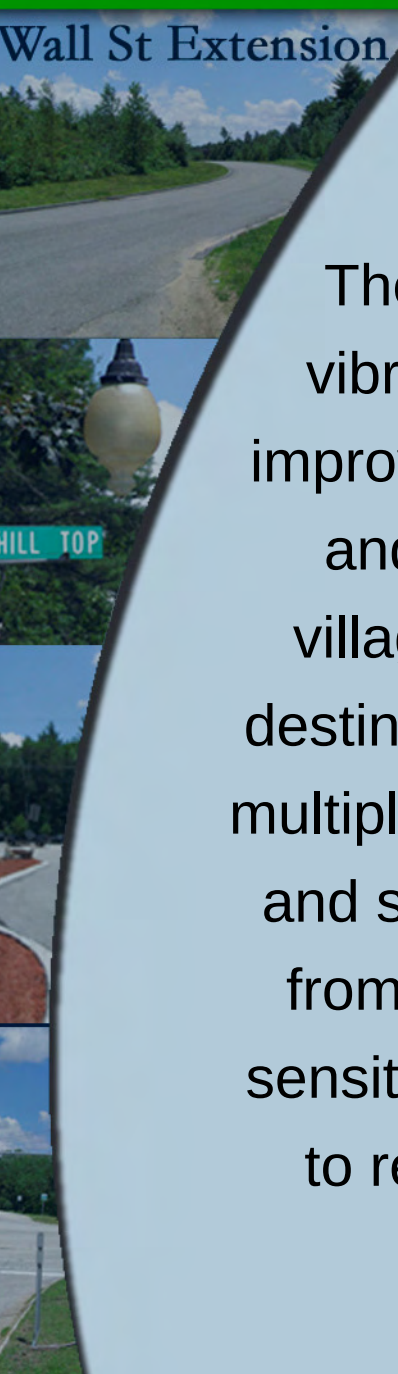




ROCKINGHAM PLANNING COMMISSION

Problem Statement

The Town of Windham, NH, lacks a vibrant town center. While zoning has been put in place to create a town center with a variety of civic, commercial and residential uses, as well as community gathering spaces, the high volume of traffic on local roads and on the state highway that bisects the town center have impeded its development. Improvements to Interstate 93 will further increase this traffic and prevent the desired development. Additional obstacles to success include a lack of connectivity between existing commercial uses, the lack of public utilities, natural resource constraints, the high volume of truck traffic, and the trend towards vehicle dependency.



Vision Statement

The historic town center of Windham, NH will become a vibrant, pedestrian-friendly village center accessed by an improved road system that serves travel patterns more safely and efficiently resulting in reduced traffic volumes in the village. Community gathering spaces, new retail and civic destinations, and a range of housing options will be served by multiple modes of transportation, will enhance the quality of life and sense of community for residents and will attract visitors from around the region. Planning and development will be sensitive to the environment, to adjacent historic districts, and to residential neighborhoods while improving connectivity between existing and new development.









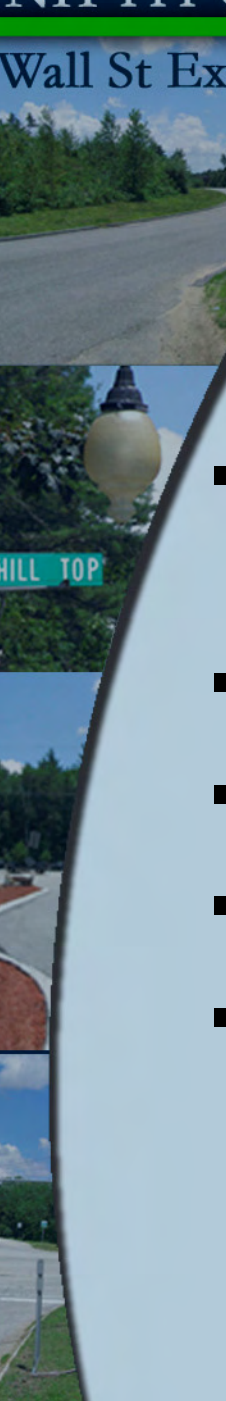
ROCKINGHAM PLANNING COMMISSION

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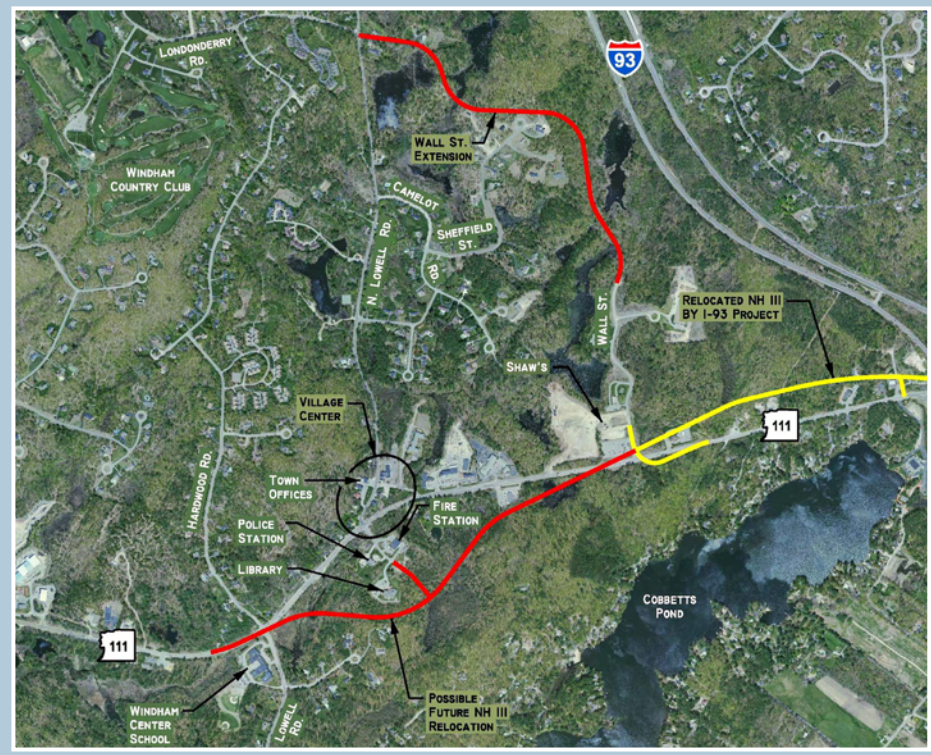
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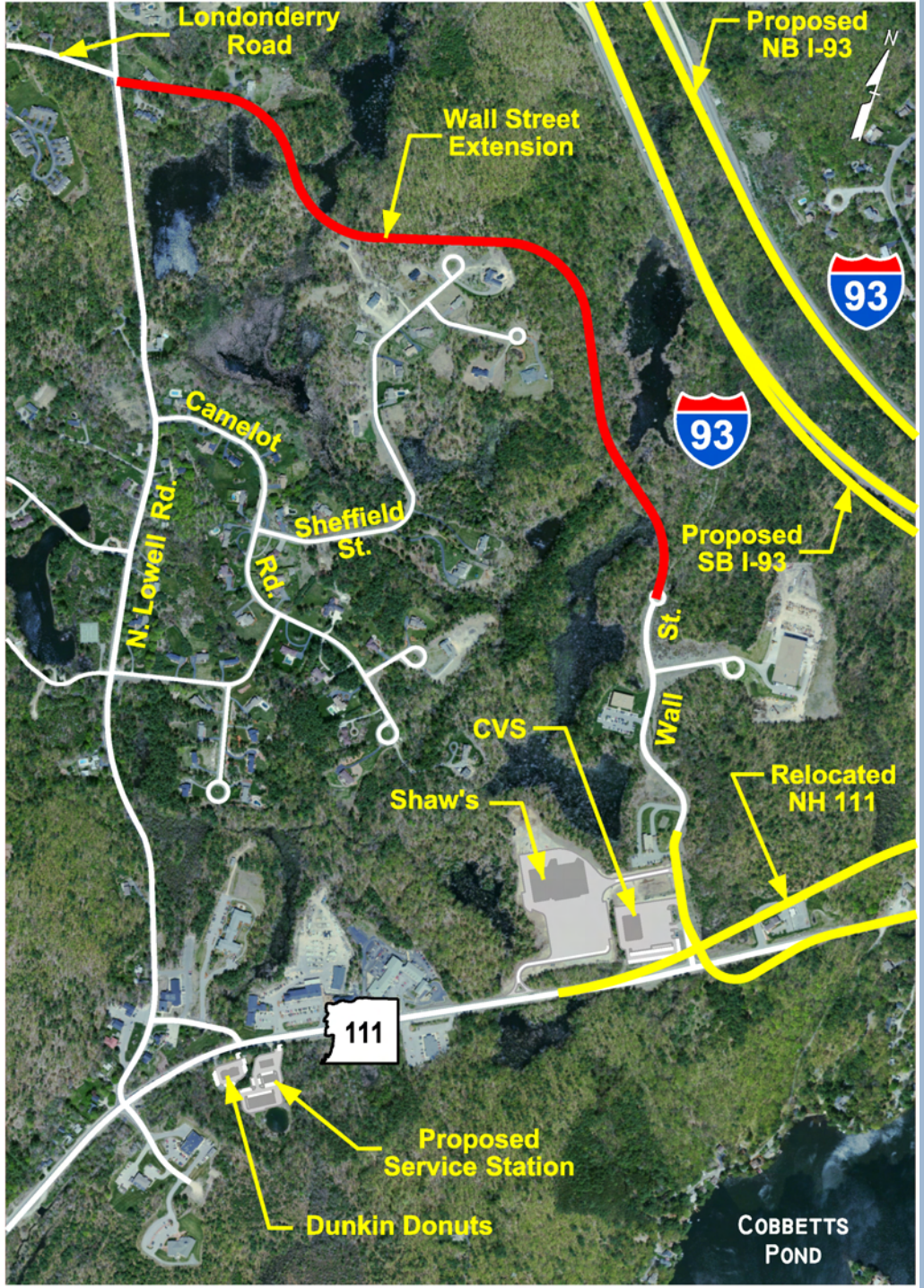
Traffic Modeling

- RPC Regional Demand Model
- Future Year 2035
- Realistic Land Use
- AM & PM Peak Periods
- Scenarios
  - No Build
  - Wall Street Extension
  - Wall Street Extension and NH 111 Bypass

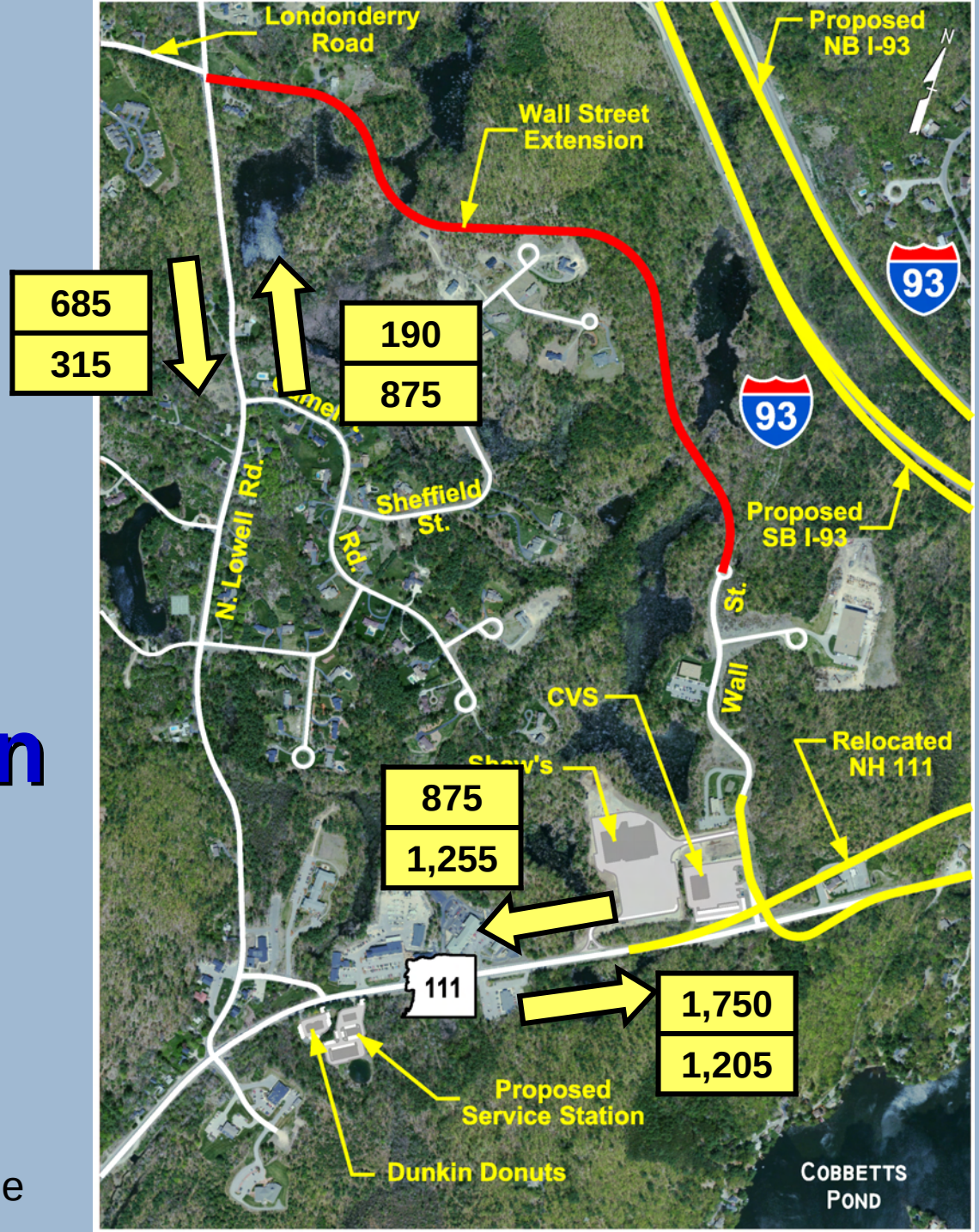


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Wall Street Extension



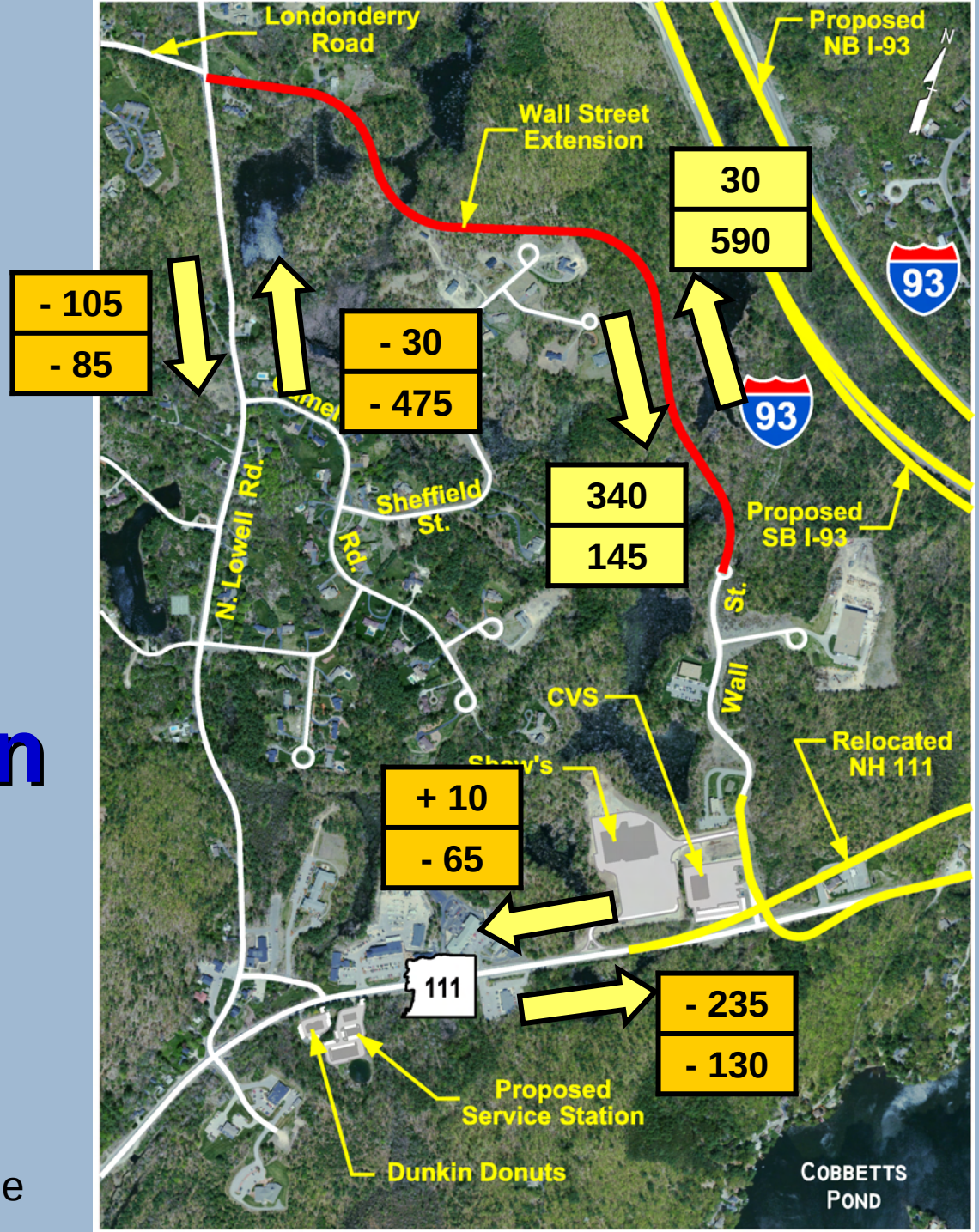
Wall Street Extension



AM
PM

2035 Peak Hour Volume

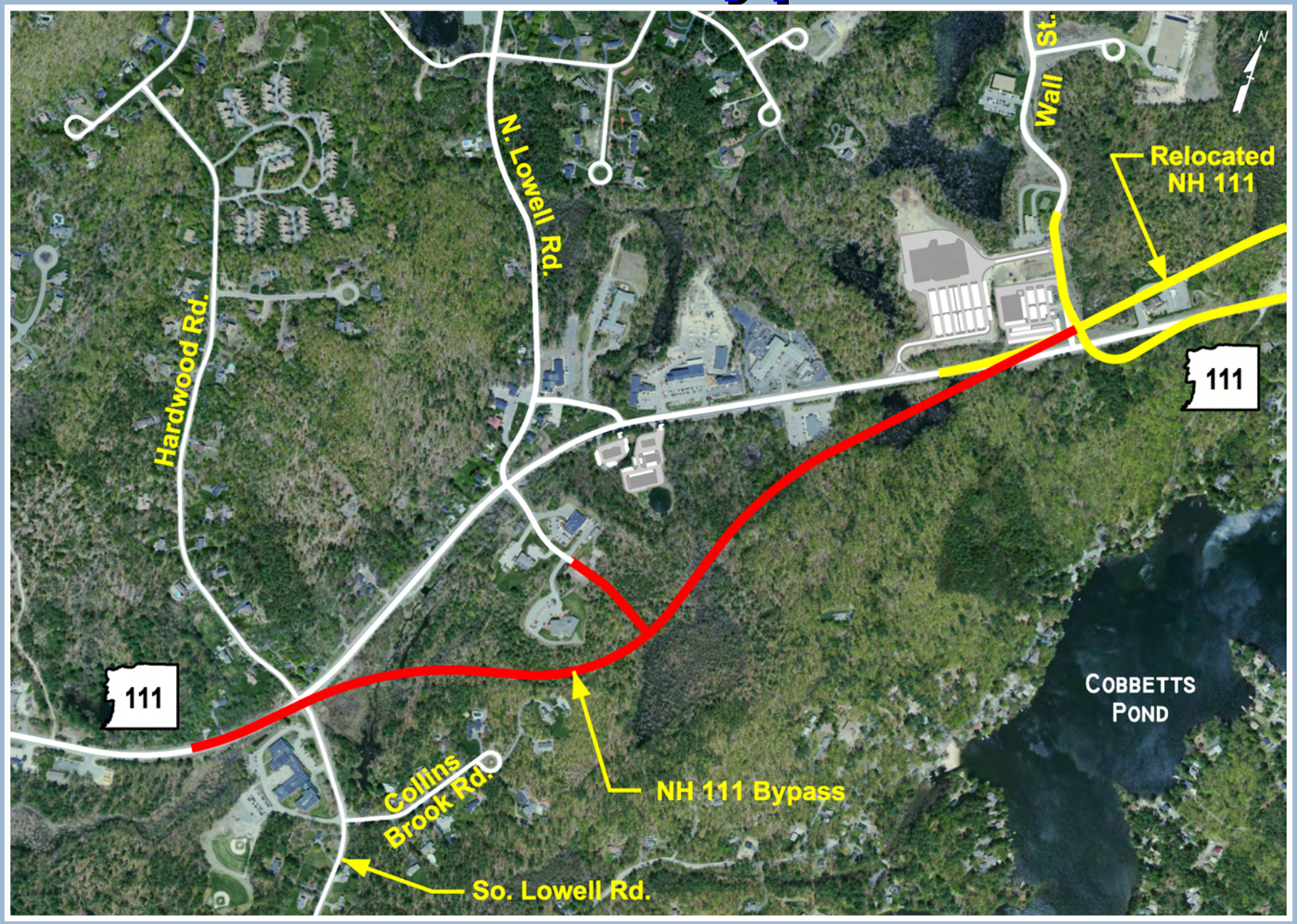
Wall Street Extension



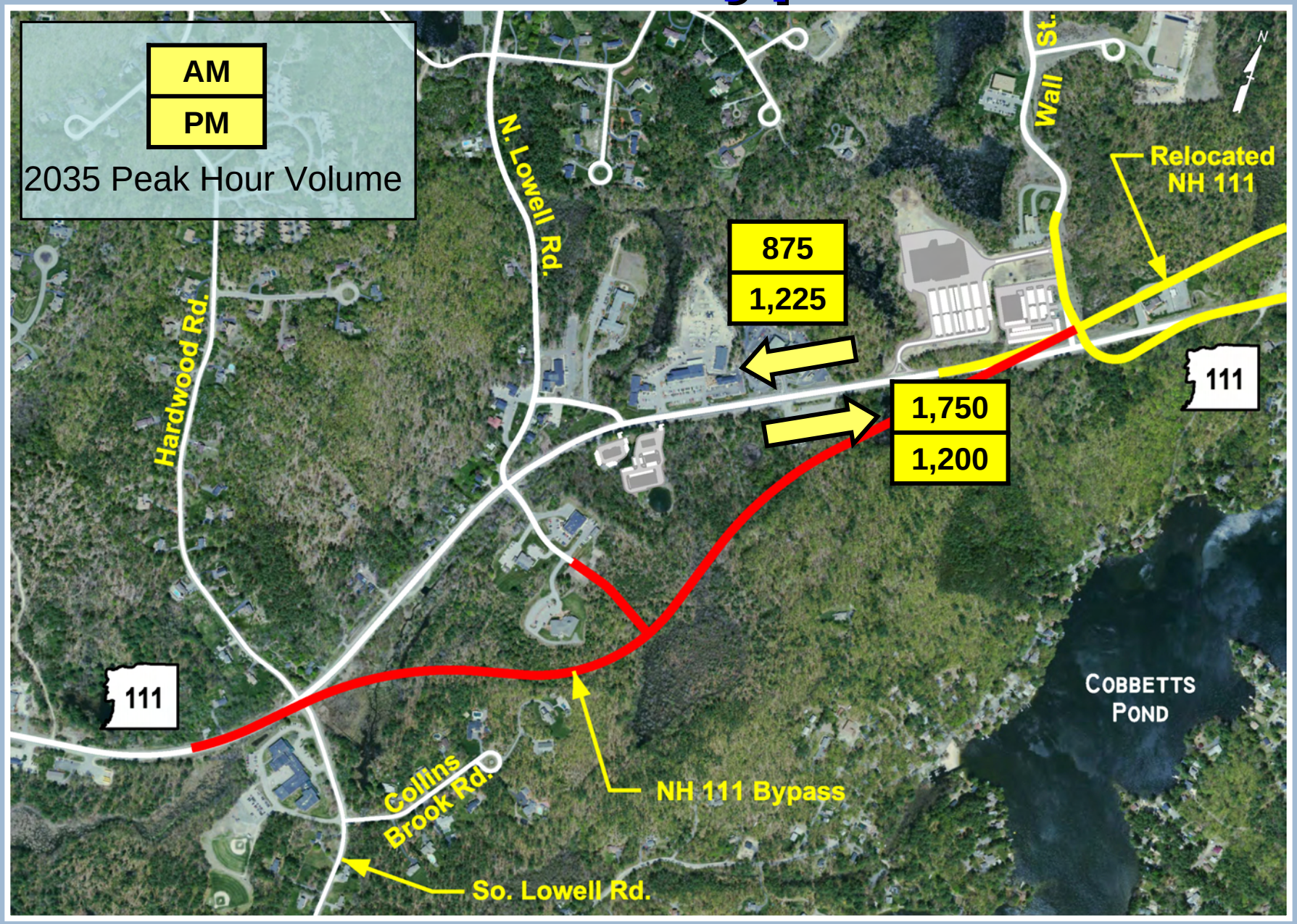
AM
PM

2035 Peak Hour Volume

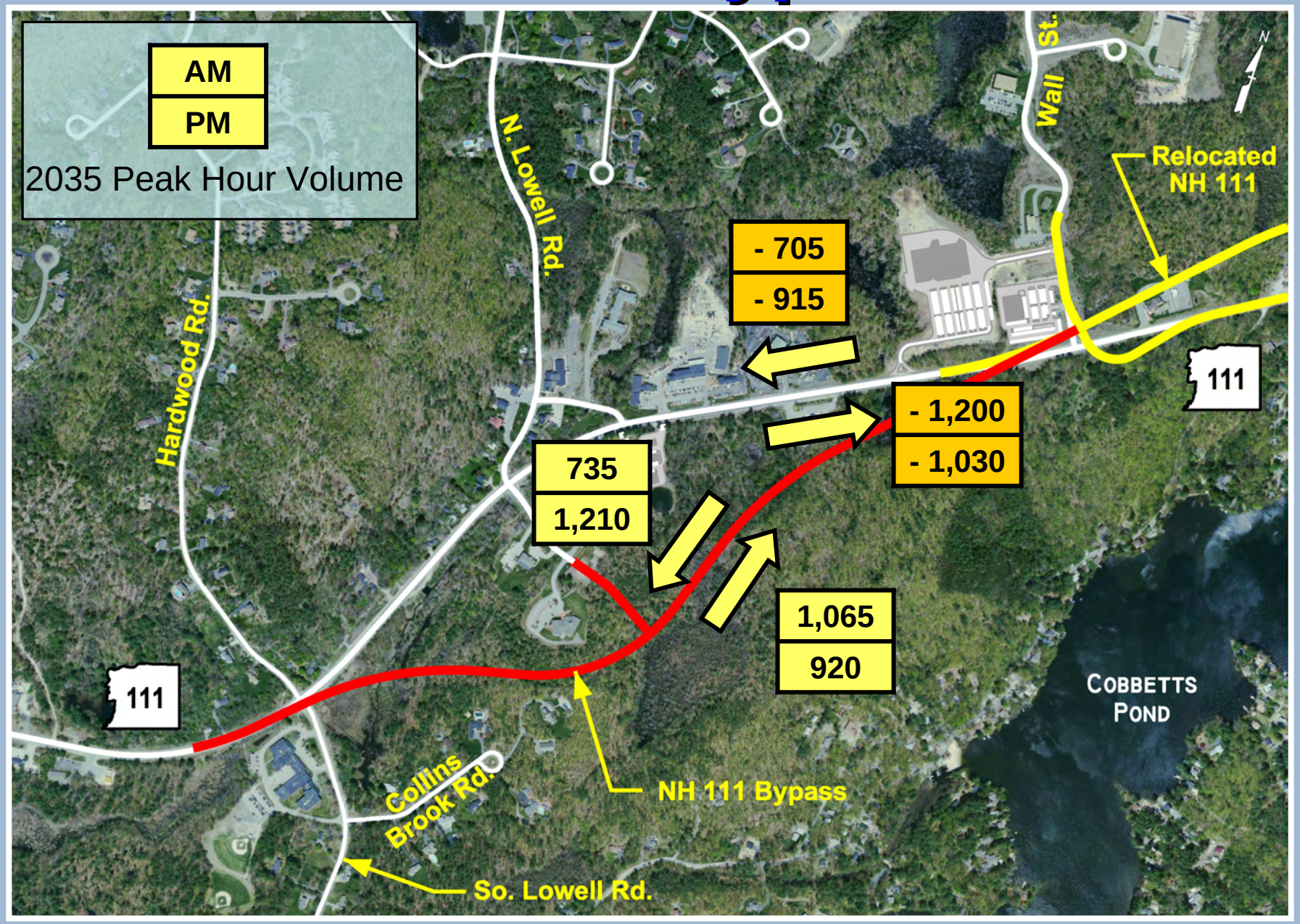
NH 111 Bypass



NH 111 Bypass



NH 111 Bypass





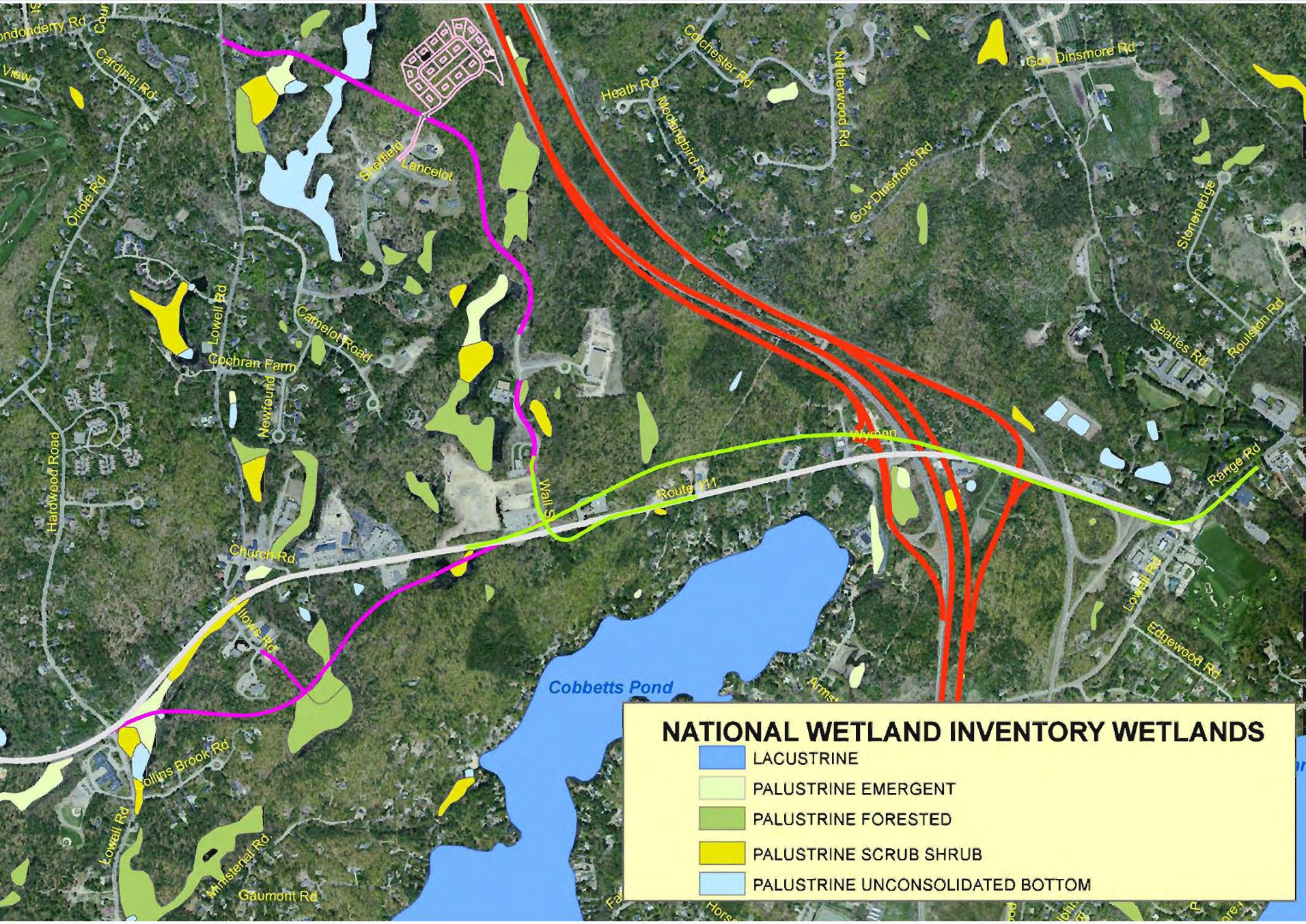
ROCKINGHAM PLANNING COMMISSION

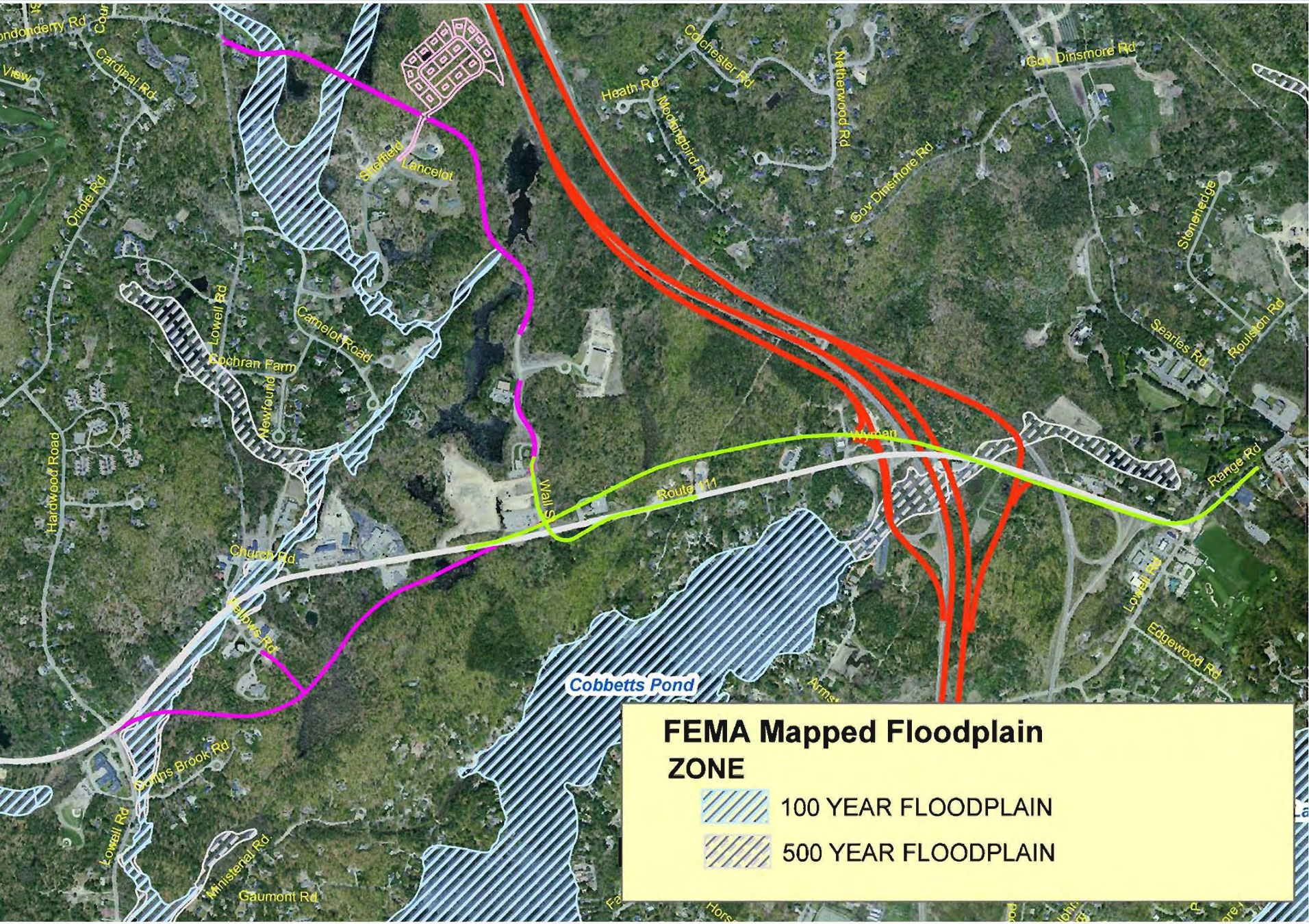
Natural Resource Identification

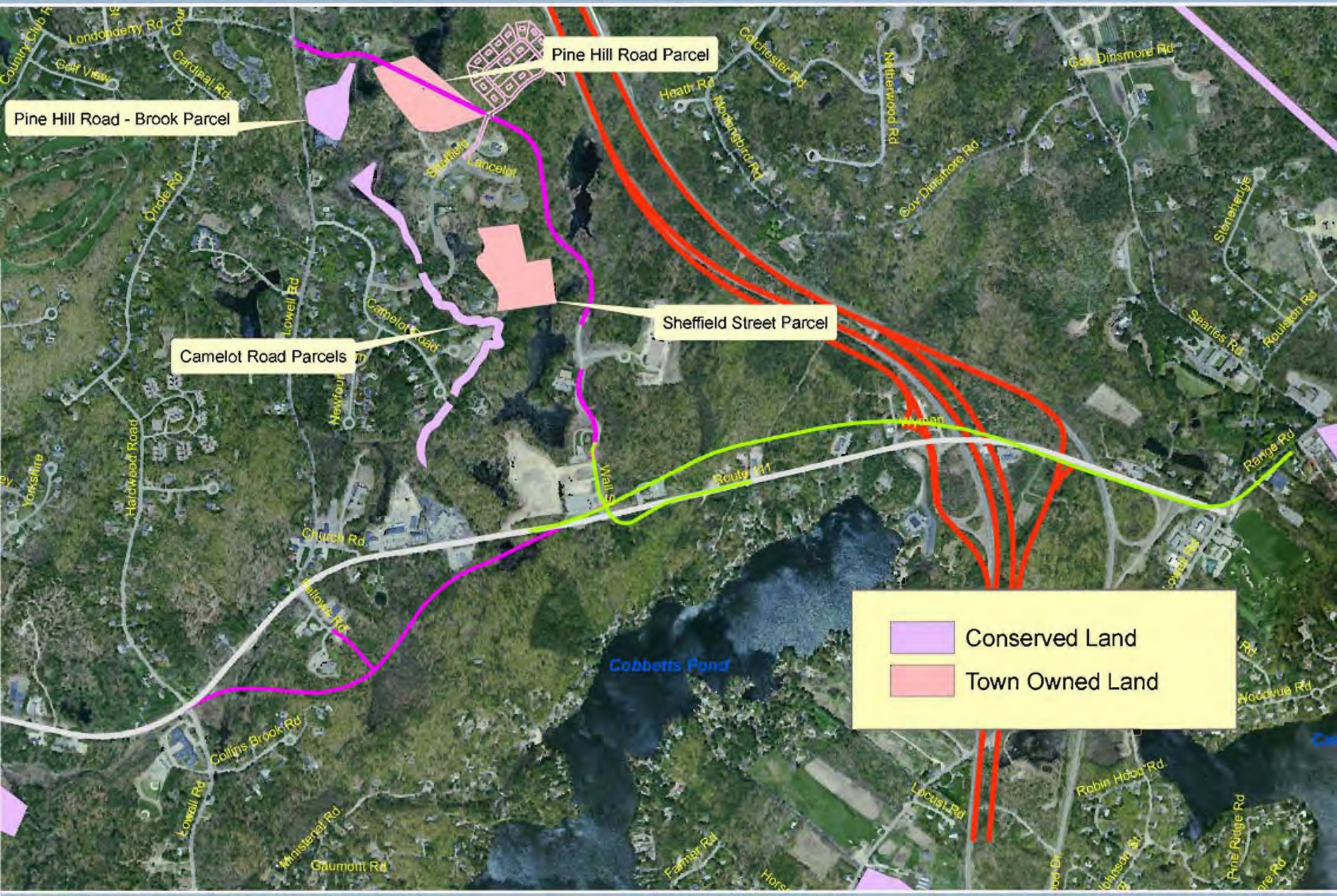




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Cardinal Rd
Oriole Rd
Lowell Rd
Cochran Farm
Newfound
Camelot Road
Sheffield
Lancelot
Heath Rd
Mockingbird Rd
Colchester Rd
Netherwood Rd
Gov Dinsmore Rd
Gov Dinsmore Rd
Stonehedge
Searles Rd
Roulston Rd
Hardwood Road
Church Rd
Wall St
Route 111
Wyman
Range Rd
Lowell Rd
Edgewood Rd
Cobbetts Pond
Collins Brook Rd
Lowell Rd
Ministerial Rd
Gaumont Rd
NATIONAL WETLAND INVENTORY WETLANDS
LACUSTRINE
PALUSTRINE EMERGENT
PALUSTRINE FORESTED
PALUSTRINE SCRUB SHRUB
PALUSTRINE UNCONSOLIDATED BOTTOM


Londonderry Rd
Cardinal Rd
Oriole Rd
Lowell Rd
Cochran Farm
Newfound
Camelot Road
Steffield
Lancelot
Heath Rd
Mockingbird Rd
Colchester Rd
Netherwood Rd
Gov Dinsmore Rd
Gov Dinsmore Rd
Stonehedge
Searles Rd
Roulston Rd
Range Rd
Wyman
Route 111
Wall St
Hardwood Road
Church Rd
Kelley's Rd
Cobbetts Pond
Lowell Rd
Edgewood Rd
Collins Brook Rd
Lowell Rd
Ministerial Rd
Gaumont Rd
FEMA Mapped Floodplain
ZONE
100 YEAR FLOODPLAIN
500 YEAR FLOODPLAIN


Pine Hill Road Parcel
Pine Hill Road - Brook Parcel
Sheffield Street Parcel
Camelot Road Parcels
Conserved Land
Town Owned Land
Cobbetts Pond
Londonderry Rd
Golf View
Cardinal Rd
Onote Rd
Lowell Rd
Hardwood Road
Yorkshire
Sheffield
Lancelot
Camelot Road
Newfoun
Wall St
Route 111
Church Rd
Hillcrest Rd
Collins Brook Rd
Ministerial Rd
Gaumont Rd
Farmer Rd
Locust Rd
Robin Hood Rd.
Pine Ridge Rd
Range Rd
Woodview Rd
Searles Rd
Roulston Rd
Stonehedge
Gov Dinsmore Rd
Nutherwood Rd
Mockingbird Rd
Health Rd
Colchester Rd



ROCKINGHAM PLANNING COMMISSION

Project History

Context Sensitive Solutions

Traffic Modeling

Questions and Comments

Resource Identification

Project Vision Statement

Project Problem Statement

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ROCKINGHAM PLANNING COMMISSION

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What is a Roundabout?

Circular One-Way Intersection


Main Street, Nashua

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

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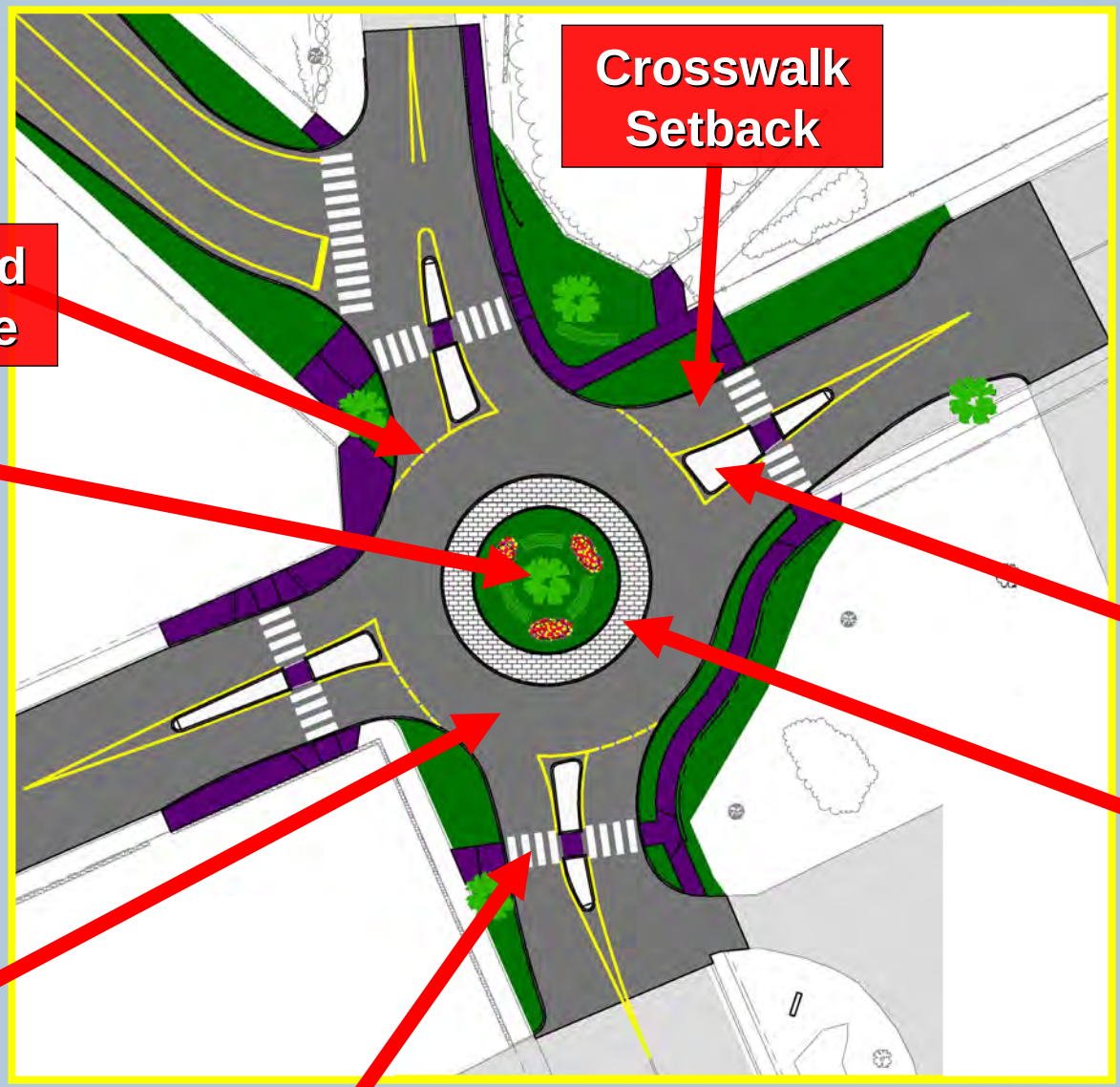
They are not Traffic Circles!



Kingston, NY

Wall St Extension





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Why Roundabouts?

- Higher capacity
- Smoother flow
- Safe (Save Lives)
- Aesthetic
- Reduced Pollution
- Slows all traffic
- Quicker and safer for pedestrians



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How to Drive a Roundabout

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



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Roundabouts are Safer because:



- Lower Speeds
- Fewer Conflicts
- Shorter Crosswalks

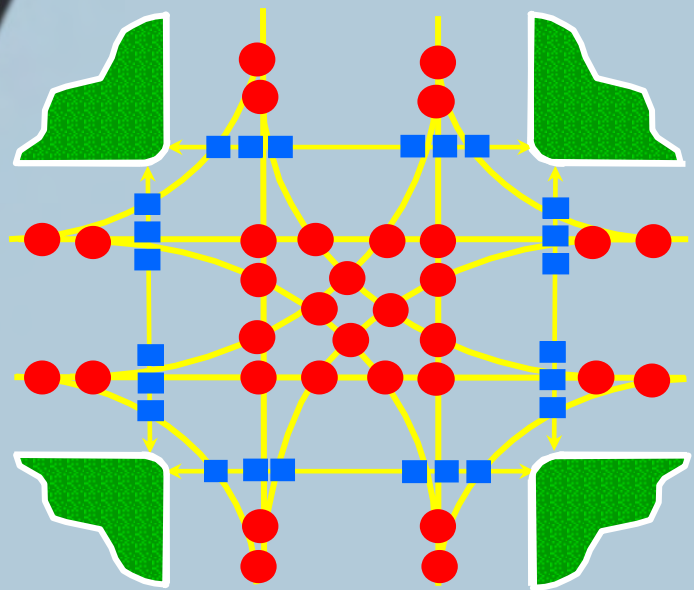
15
MPH

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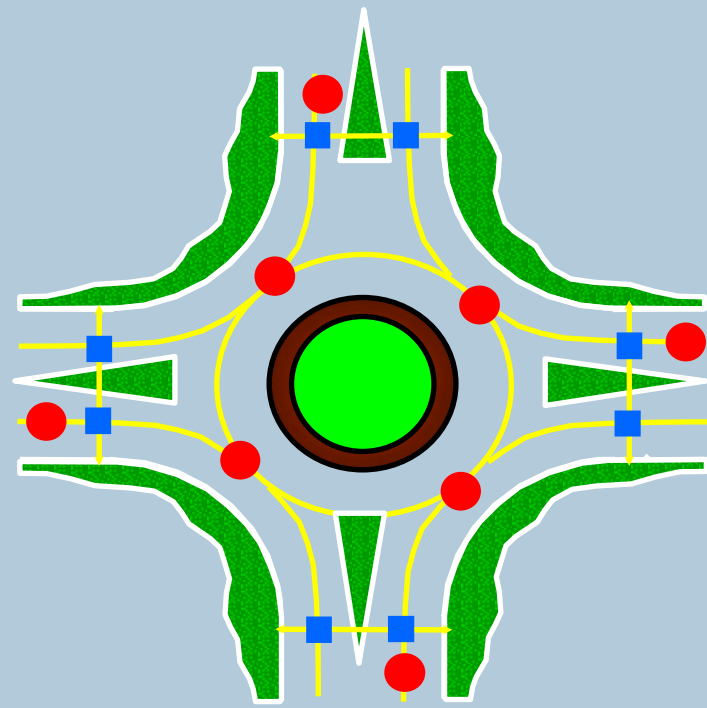


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Fewer Conflicts

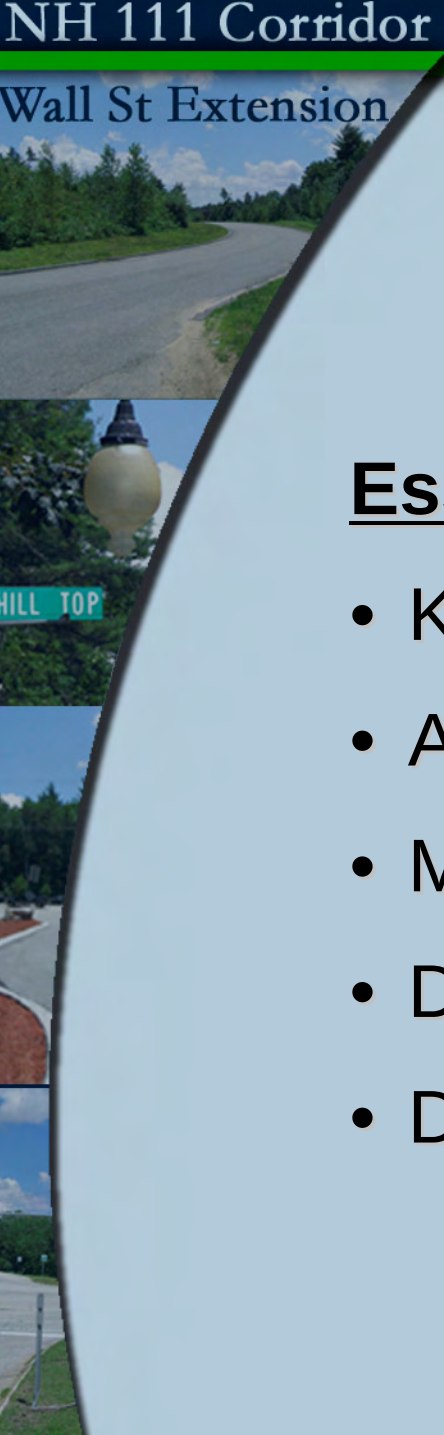


- 32 Vehicle to vehicle conflicts
- 24 Vehicle to pedestrian conflicts



- 8 Vehicle to vehicle conflicts
- 8 Vehicle to pedestrian conflicts

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Pedestrian Safety

Essential design elements:

- Keep vehicle speeds low
- Adequate size splitter islands
- Move crossings back from yield line
- Define crossing areas
- Discourage crossings to central island

NH 111 Corridor

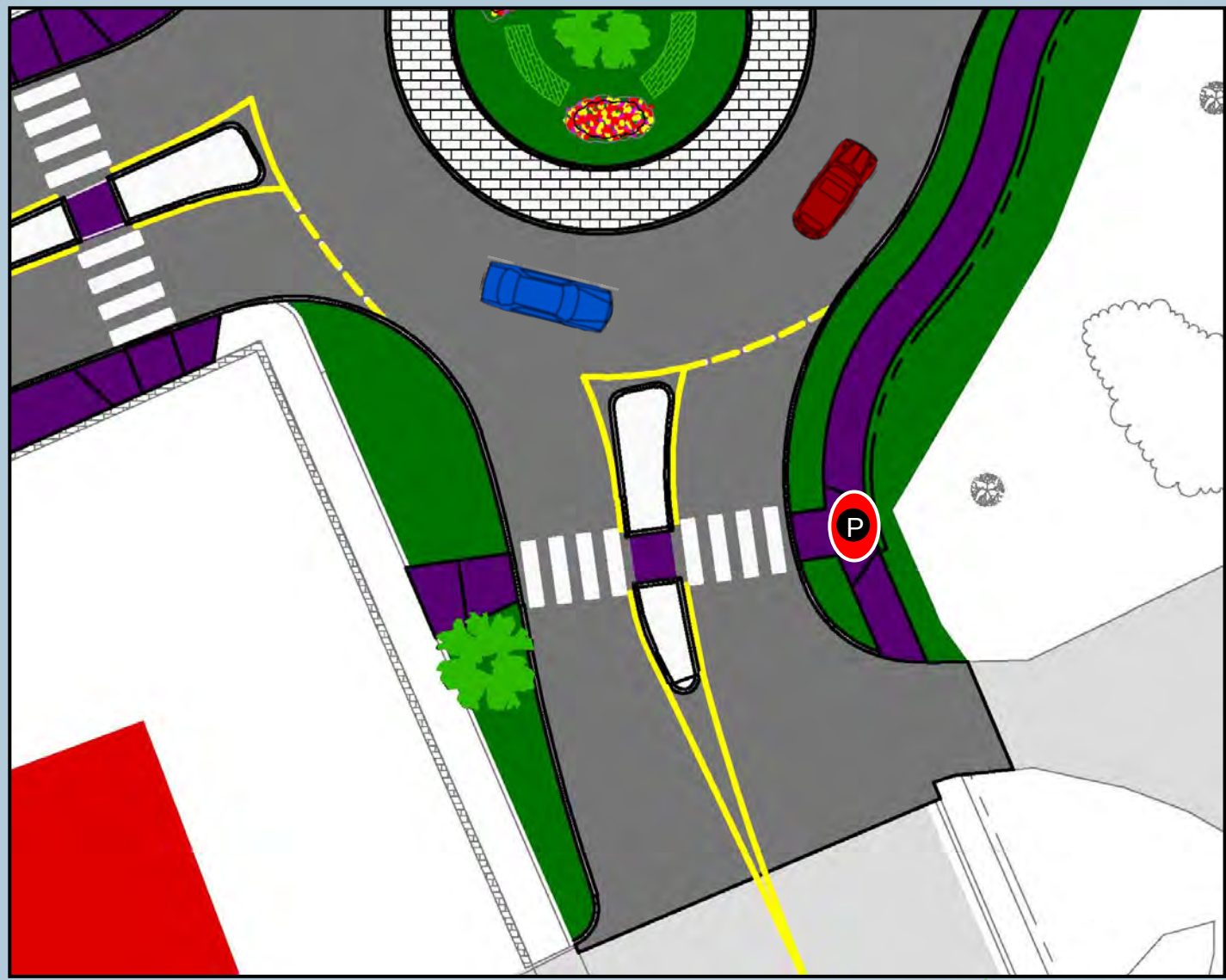
Wall St Extension











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NH 111 Corridor

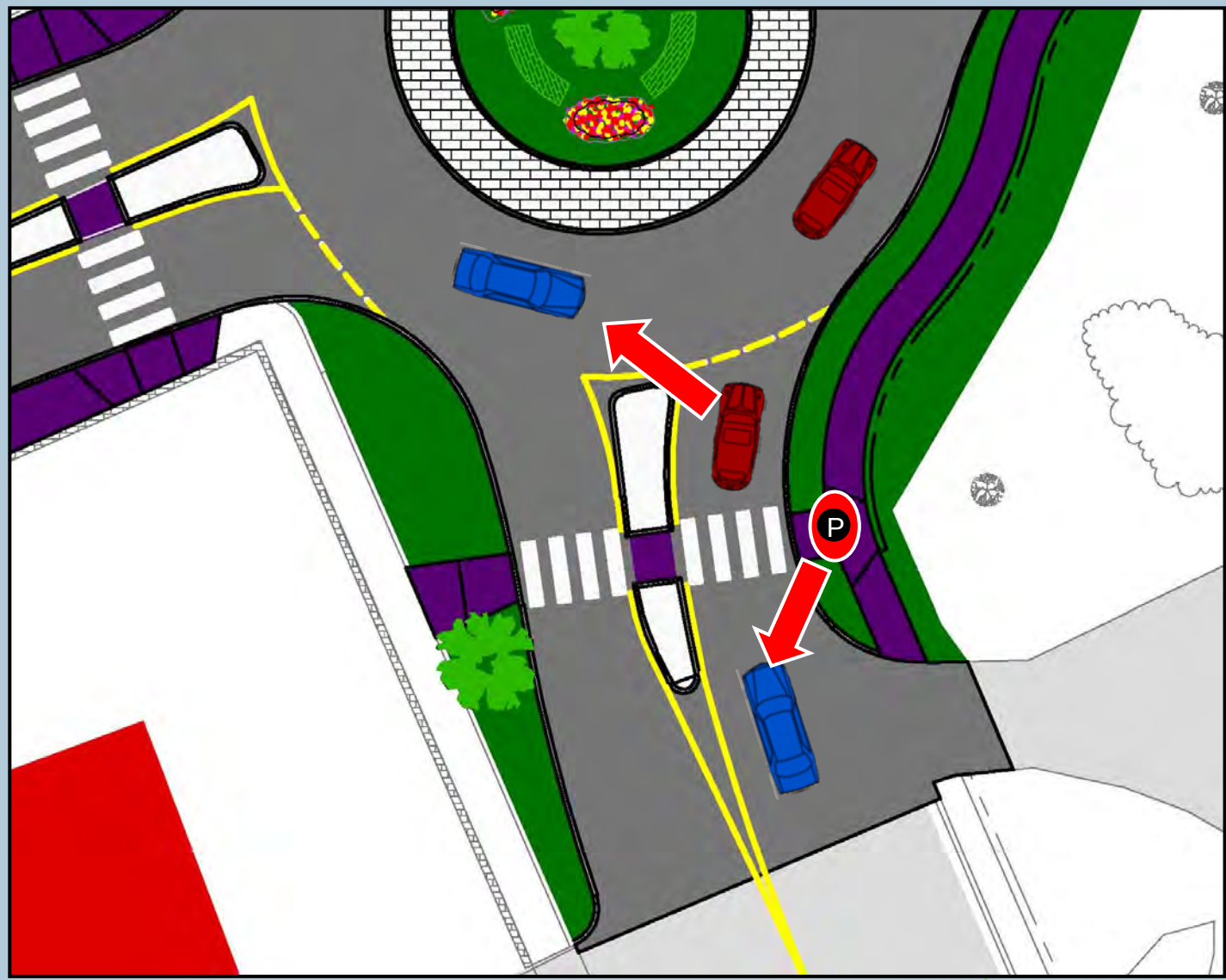
Wall St Extension











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NH 111 Corridor

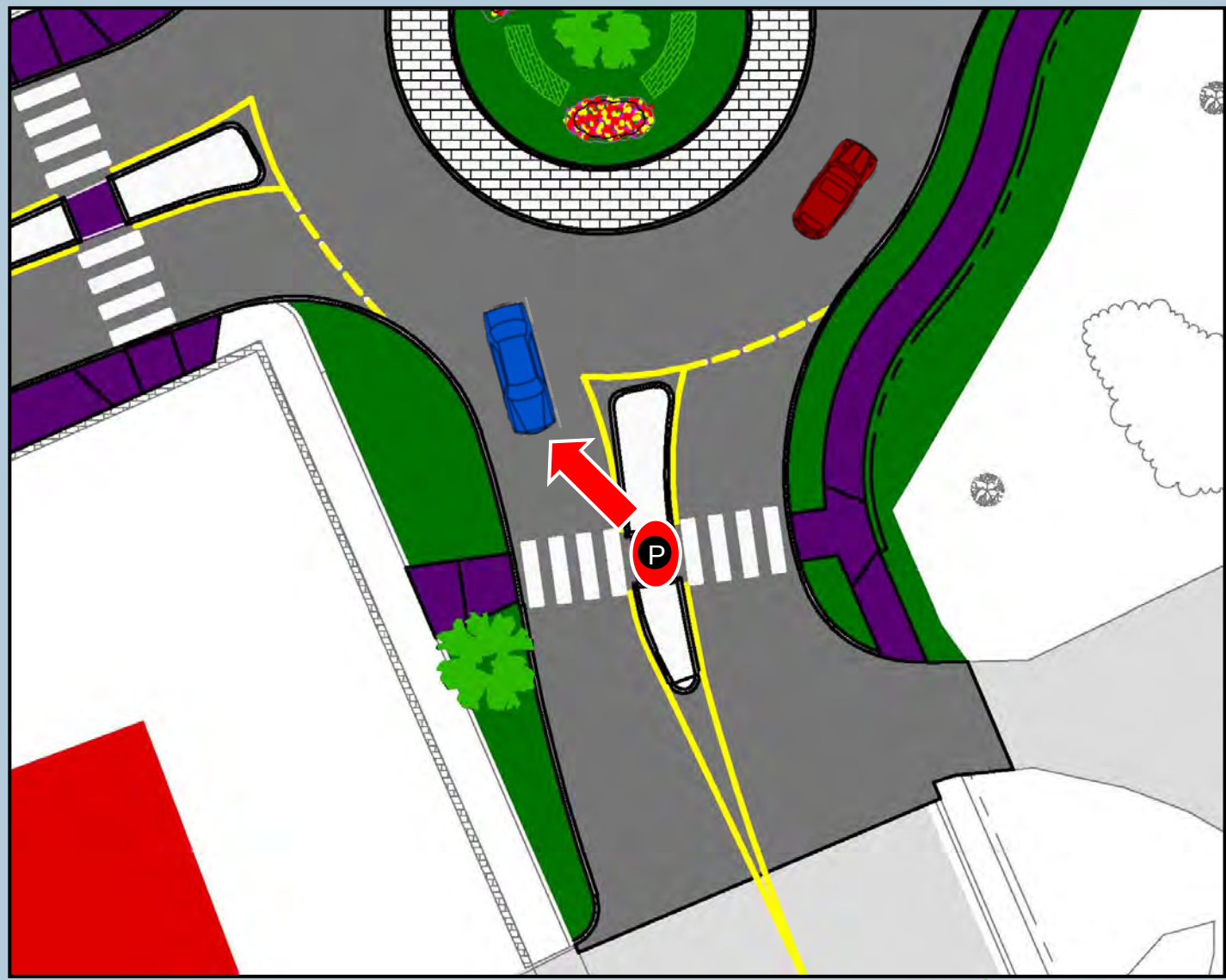
Wall St Extension











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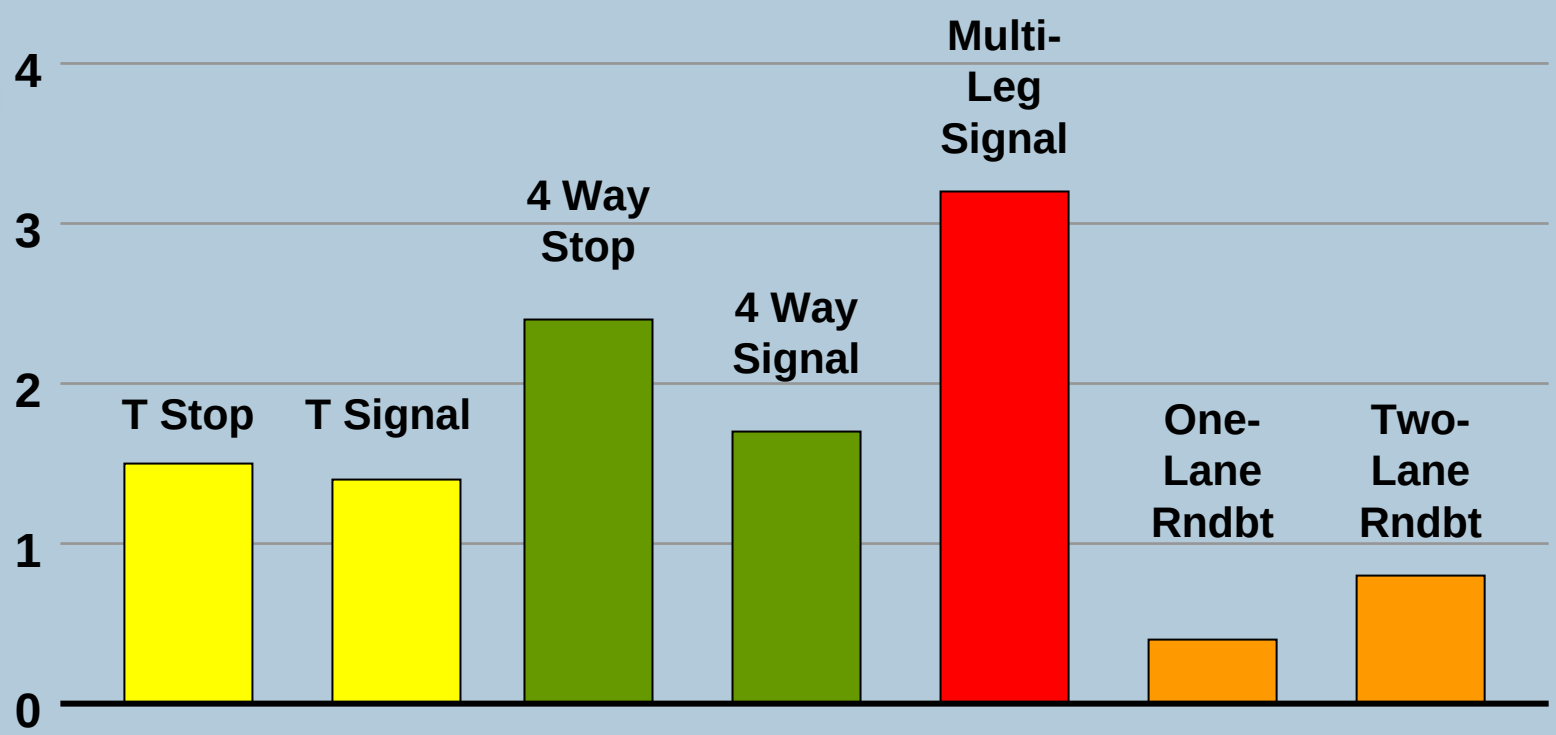
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If we compare crash rates

Crashes per Million Vehicles



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Roundabout Safety United States

Decrease in crashes:

- Overall: 35%
- Injury-producing: 75%
- Fatal or incapacitating: 90%
- Pedestrian: 35%
- Bicycle: 10%

Source: FHWA Study

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Environmental Sustainability



- Less water run-off, less pavement
- Less energy consumption, no traffic signal
- Less gasoline consumption, reduced idling
- Less pollution









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Aesthetics







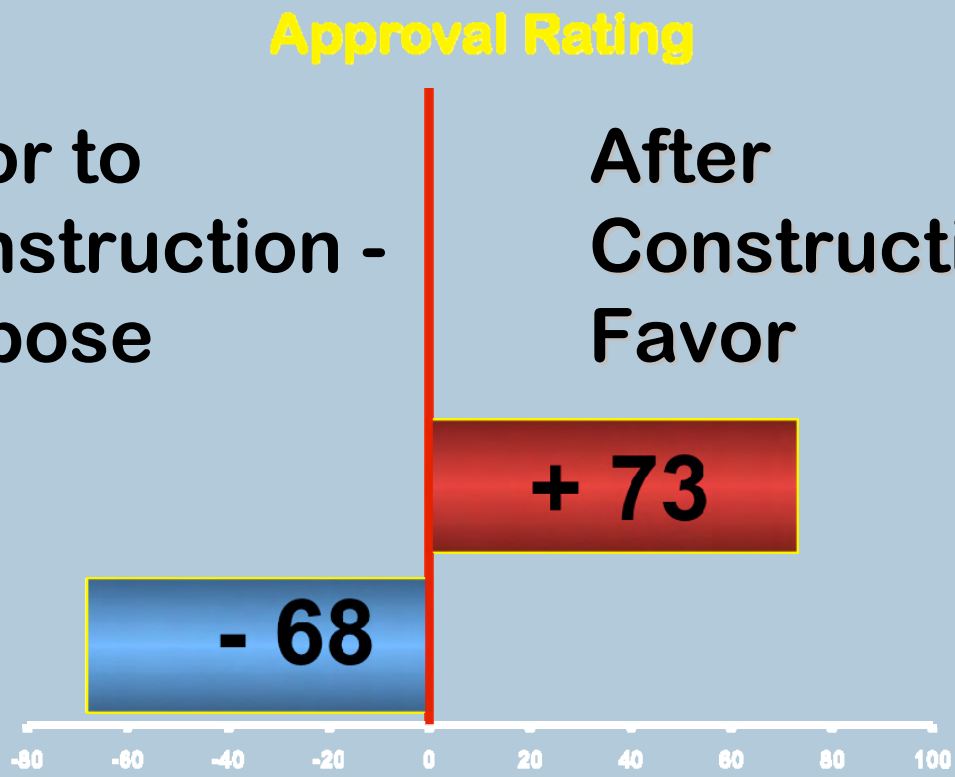


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Acceptance



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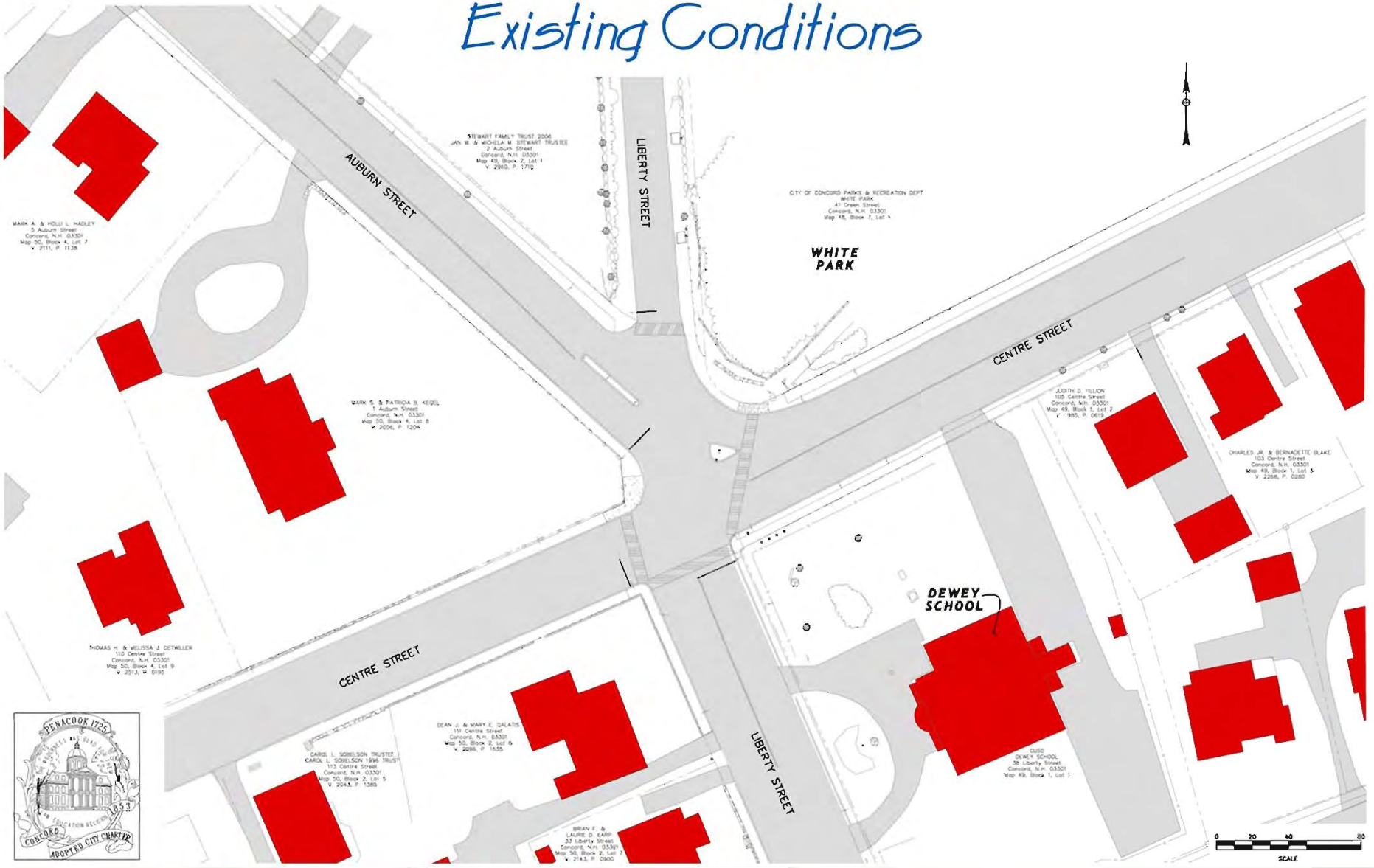




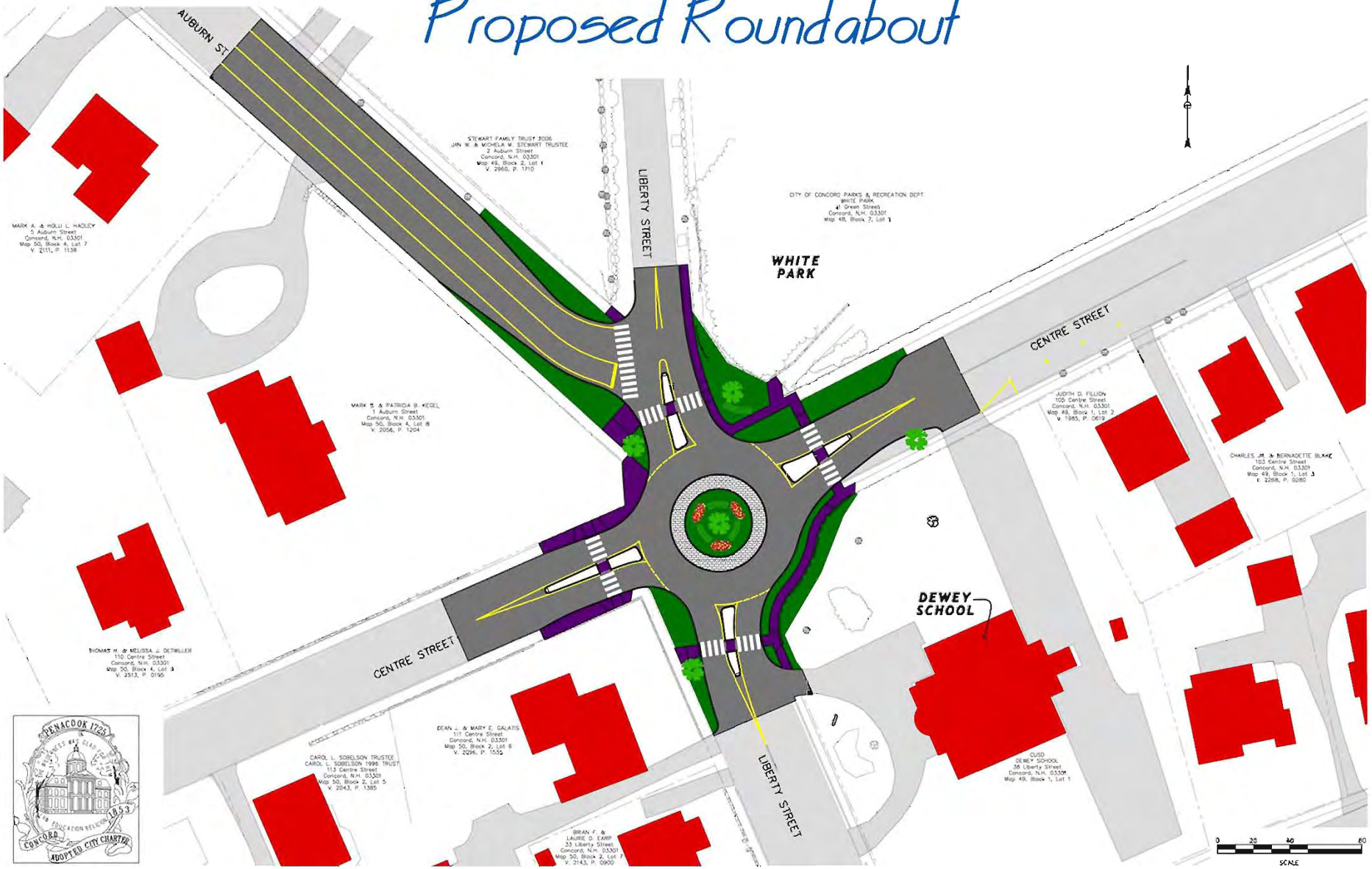
Roundabouts in NH

- Goffstown – Grasmere
- Goffstown – Mast Rd/Wallace Rd. (2010)
- Nashua (2)
- Keene (3)
- Hanover (2)
- Plymouth – Main Street
- Meredith – Parade Road (Route 106)
- Rye – Foyes Corner
- Concord – North State St./Franklin St.
- Concord – Centre St./Liberty St.
- Manchester – MHT Airport (2011)

Centre, Liberty, and Auburn Street Intersection
Existing Conditions



Centre, Liberty, and Auburn Street Intersection
Proposed Roundabout



Wall St Extension









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Concord – Centre/Liberty Streets



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Wall St Extension









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Meredith – Parade Road



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Nashua – Broad Street



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Wall St Extension









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Nashua – Main Street



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Wall St Extension









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Goffstown – Grasmere

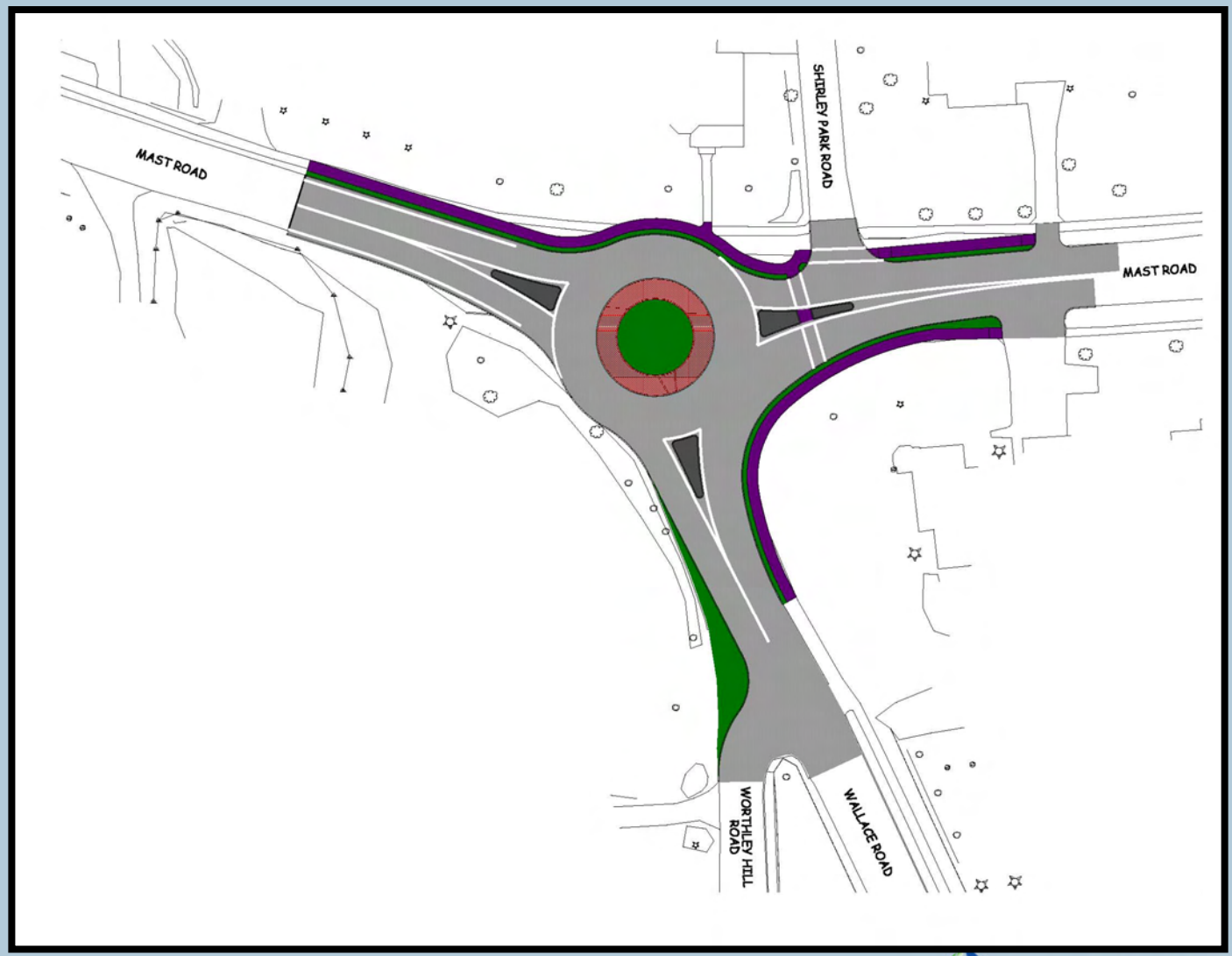


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Goffstown – Mast/Wallace Roads



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Wall St Extension









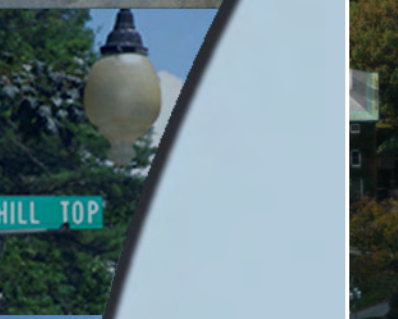
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Keene – Court Street

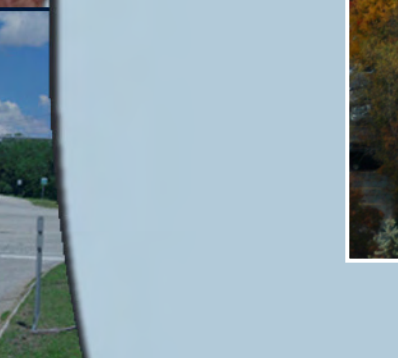


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Keene – Main/Marlborough/Winchester Streets



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Video



Questions on Roundabouts

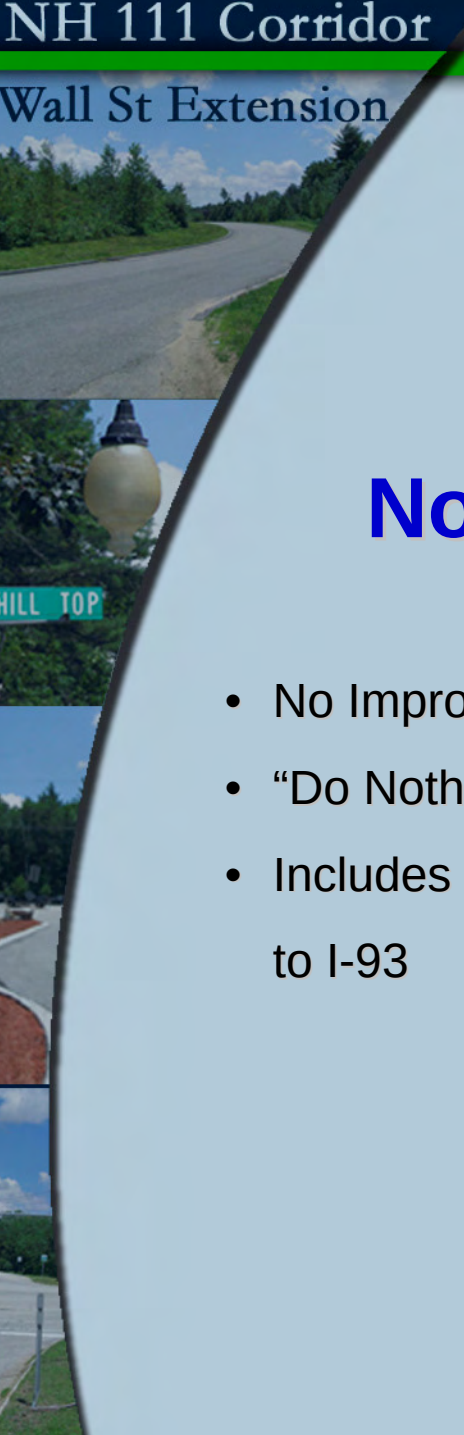


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Alternatives Development

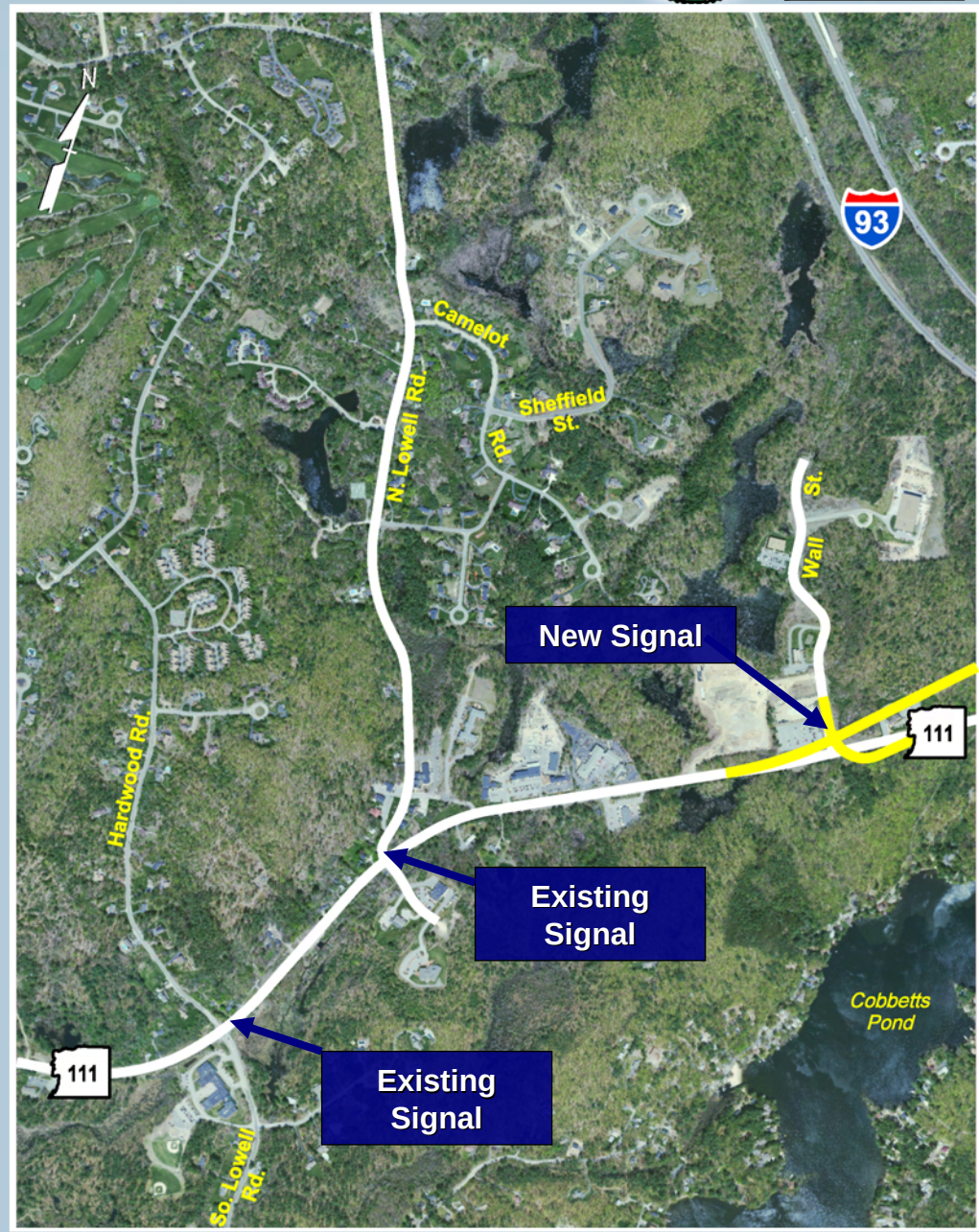


- No Build
- Wall Street Extension
- NH 111 Bypass
- NH 111 In-Corridor Improvements
  - Design Speed
  - Lane Configuration
  - Upgraded Signals
  - Roundabouts

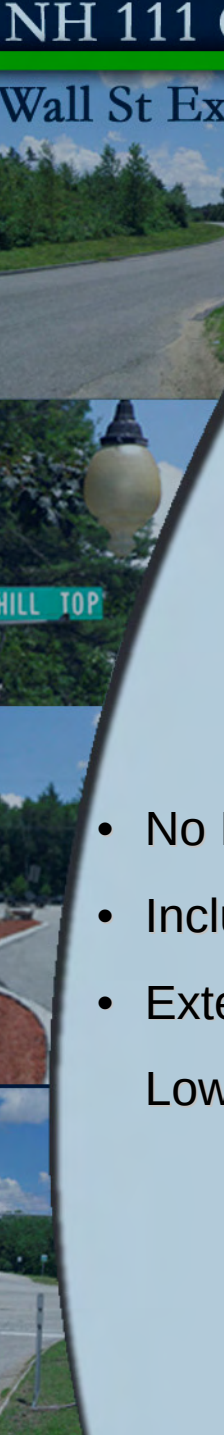


No Build

- No Improvements
- "Do Nothing" Alternative
- Includes Improvements to I-93

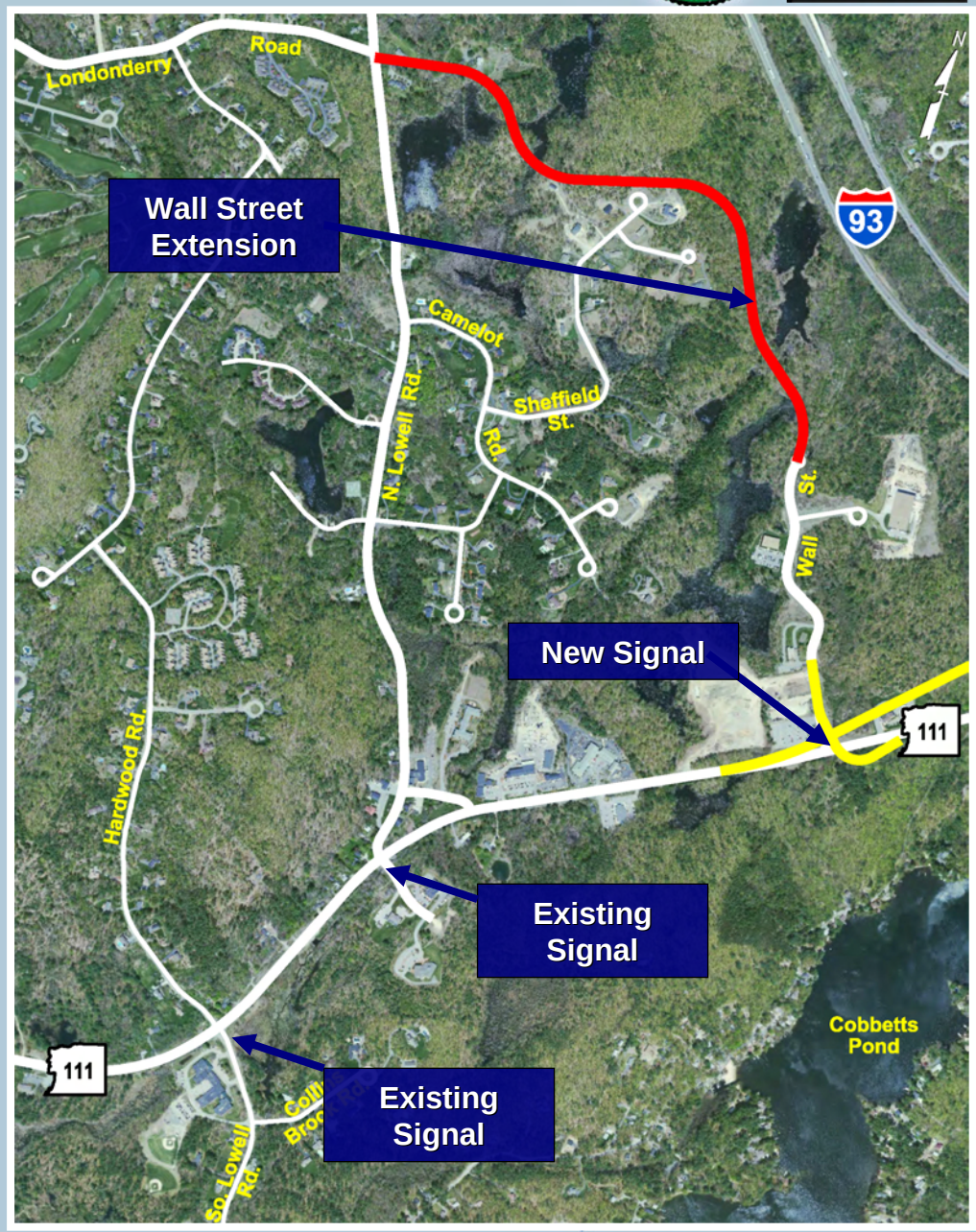


Wall St Extension



Wall Street Extension Alternative

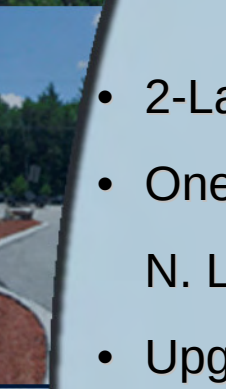
- No Improvements to NH 111
- Includes Improvements to I-93
- Extends Wall Street to North Lowell Road/Londonderry Road

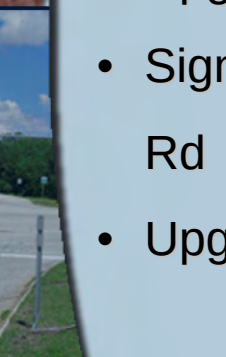


Wall St Extension



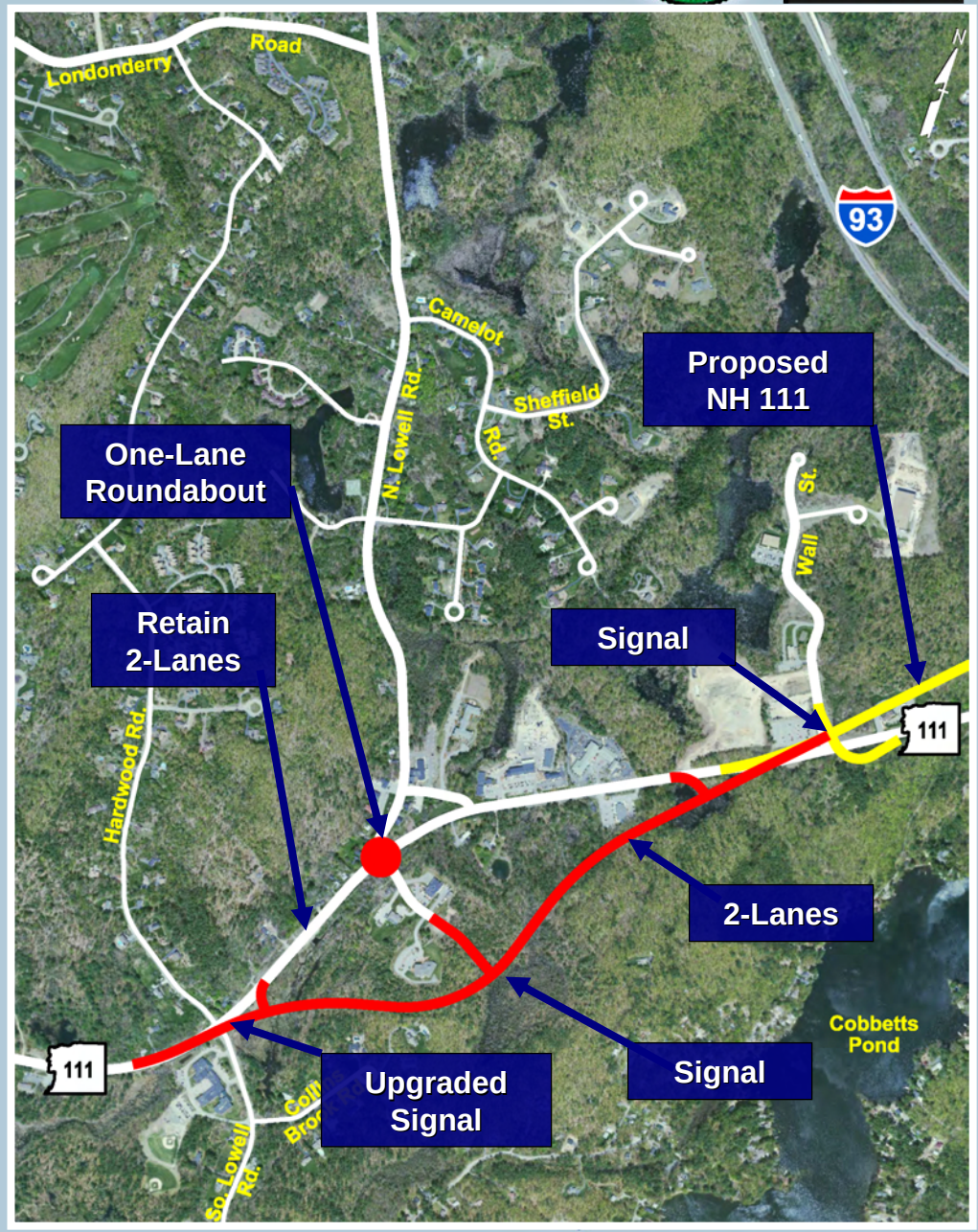






NH 111 Bypass Alternative

- 2-Lanes on NH 111
- One-Lane Roundabout at Existing N. Lowell Rd
- Upgraded Signal at S. Lowell Rd
- Signal at New NH 111 and Fellows Rd
- Upgraded Signal at Wall St





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Alternatives Development

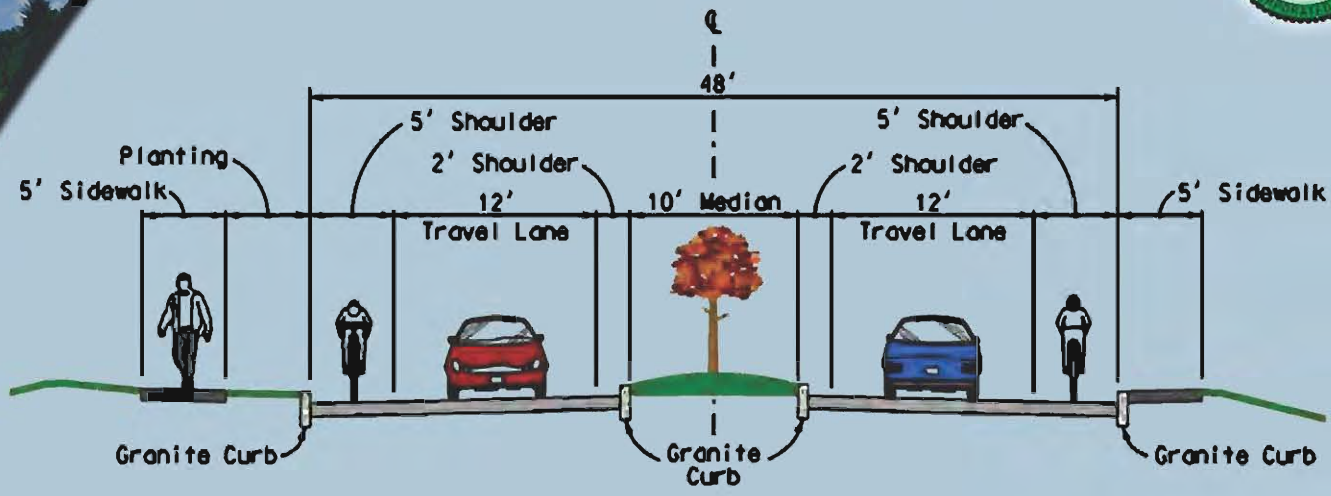


- No Build
- Wall Street Extension
- NH 111 Bypass
- NH 111 In-Corridor Improvements
  - Design Speed
  - Lane Configuration
  - Upgraded Signals
  - Roundabouts

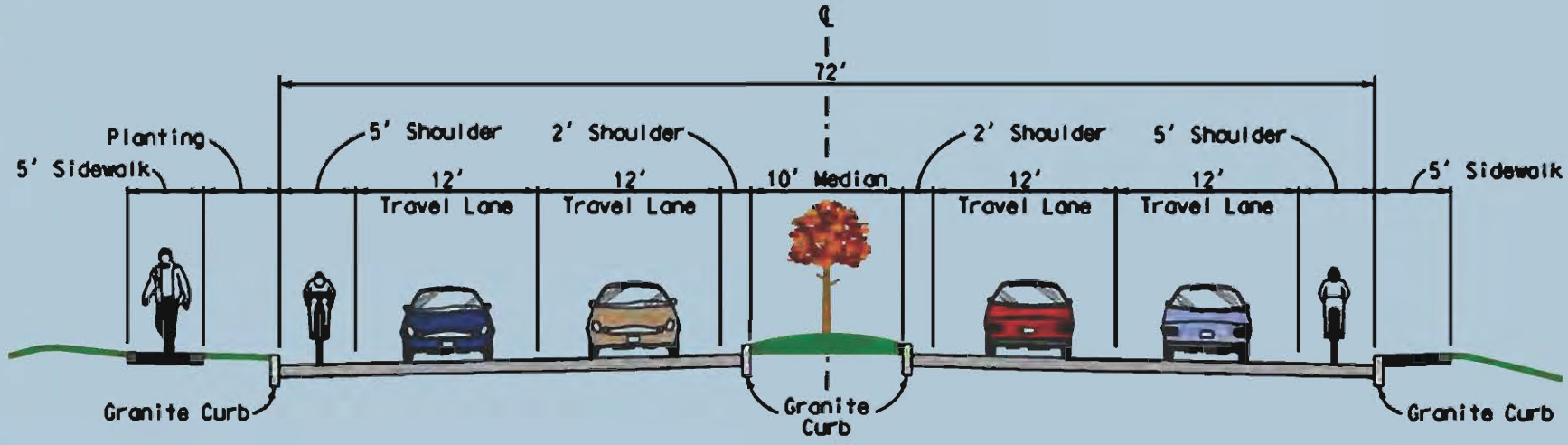
NH 111 Corridor

Wall St Extension





2 Lane Divided Section



4 Lane Divided Section

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NH 111 Corridor

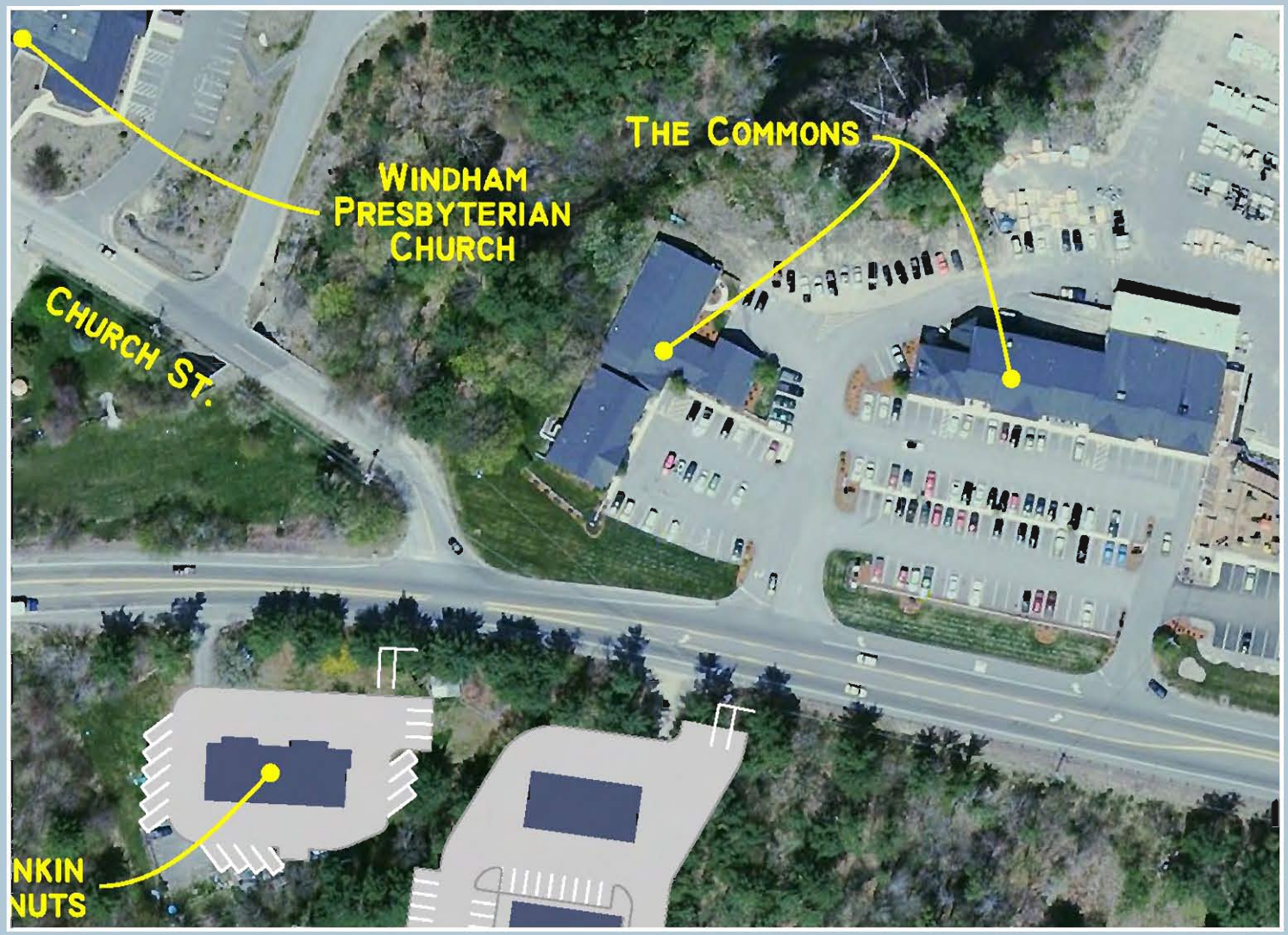
Wall St Extension











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NH 111 Corridor

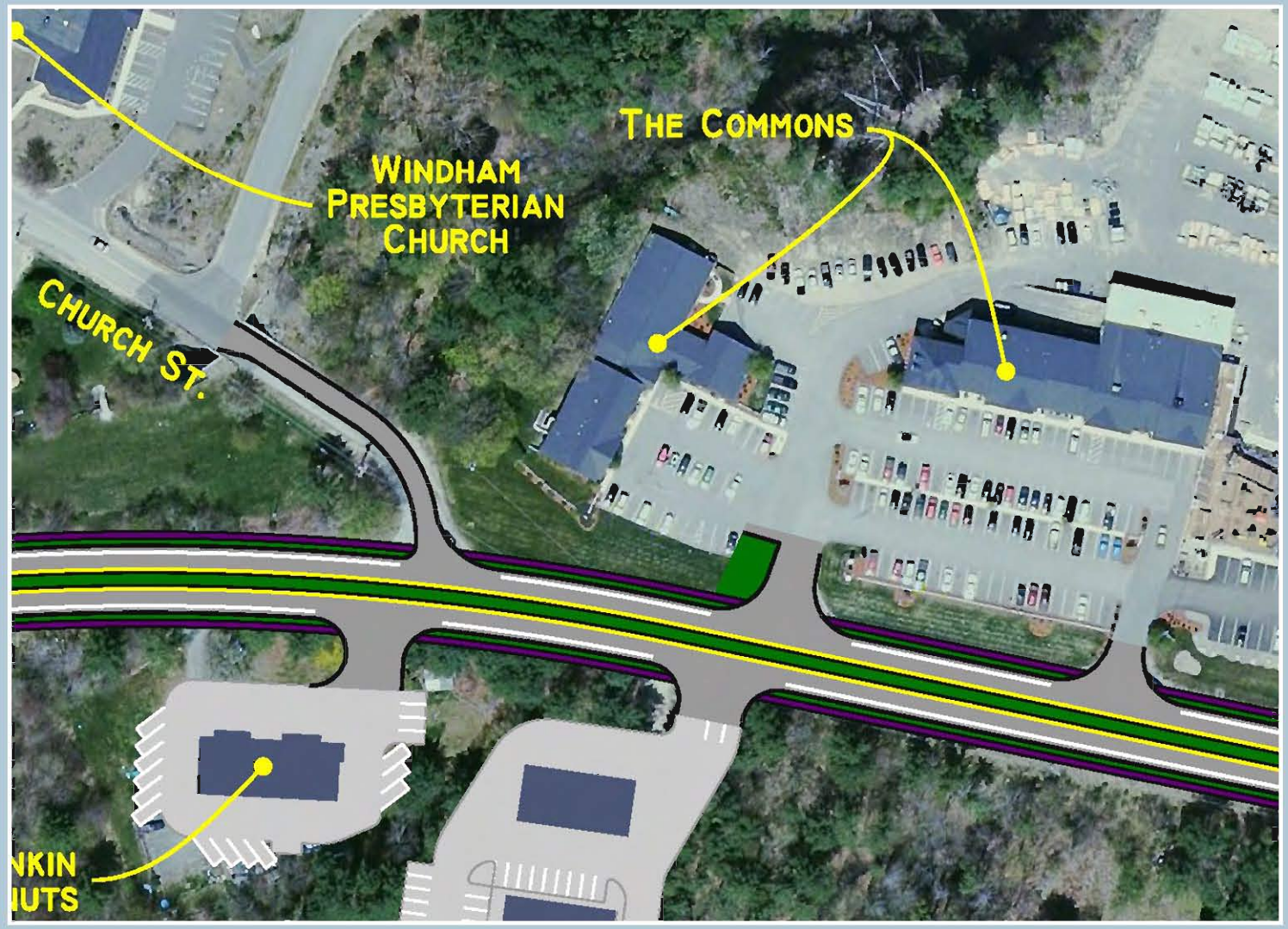
Wall St Extension











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NH 111 Corridor

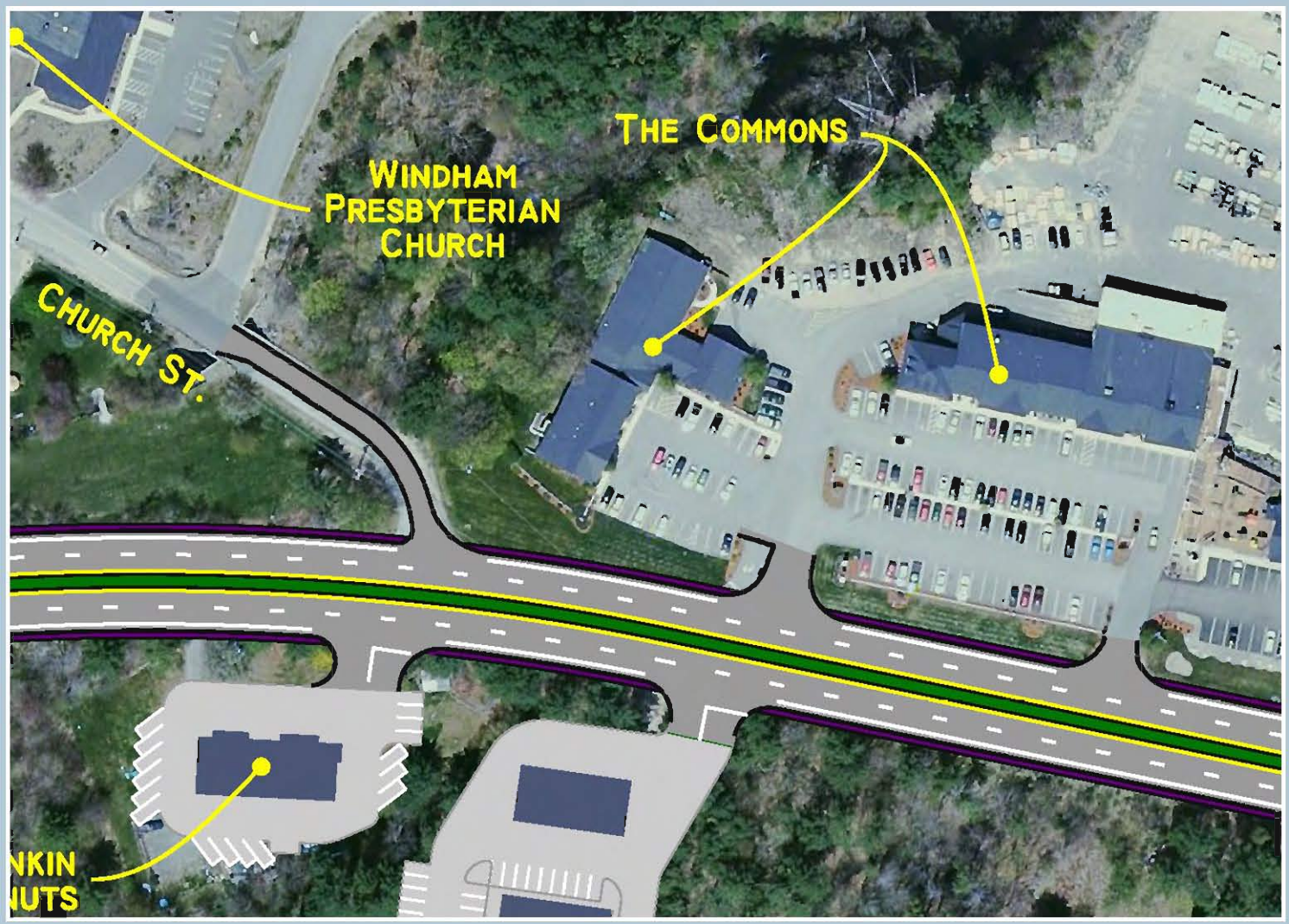
Wall St Extension











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NH 111 Corridor

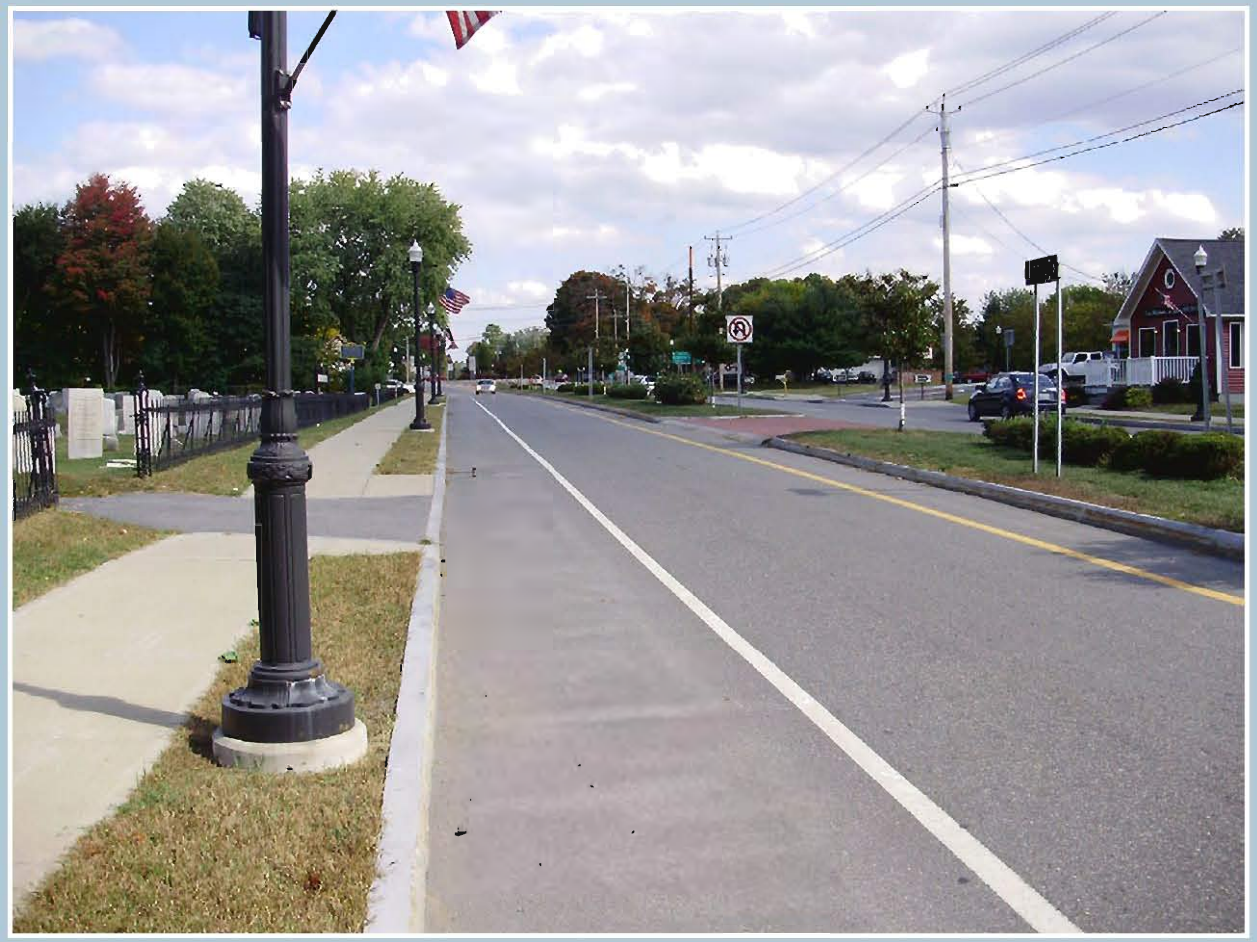
Wall St Extension











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NH 111 Corridor

Wall St Extension











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NH 111 Corridor

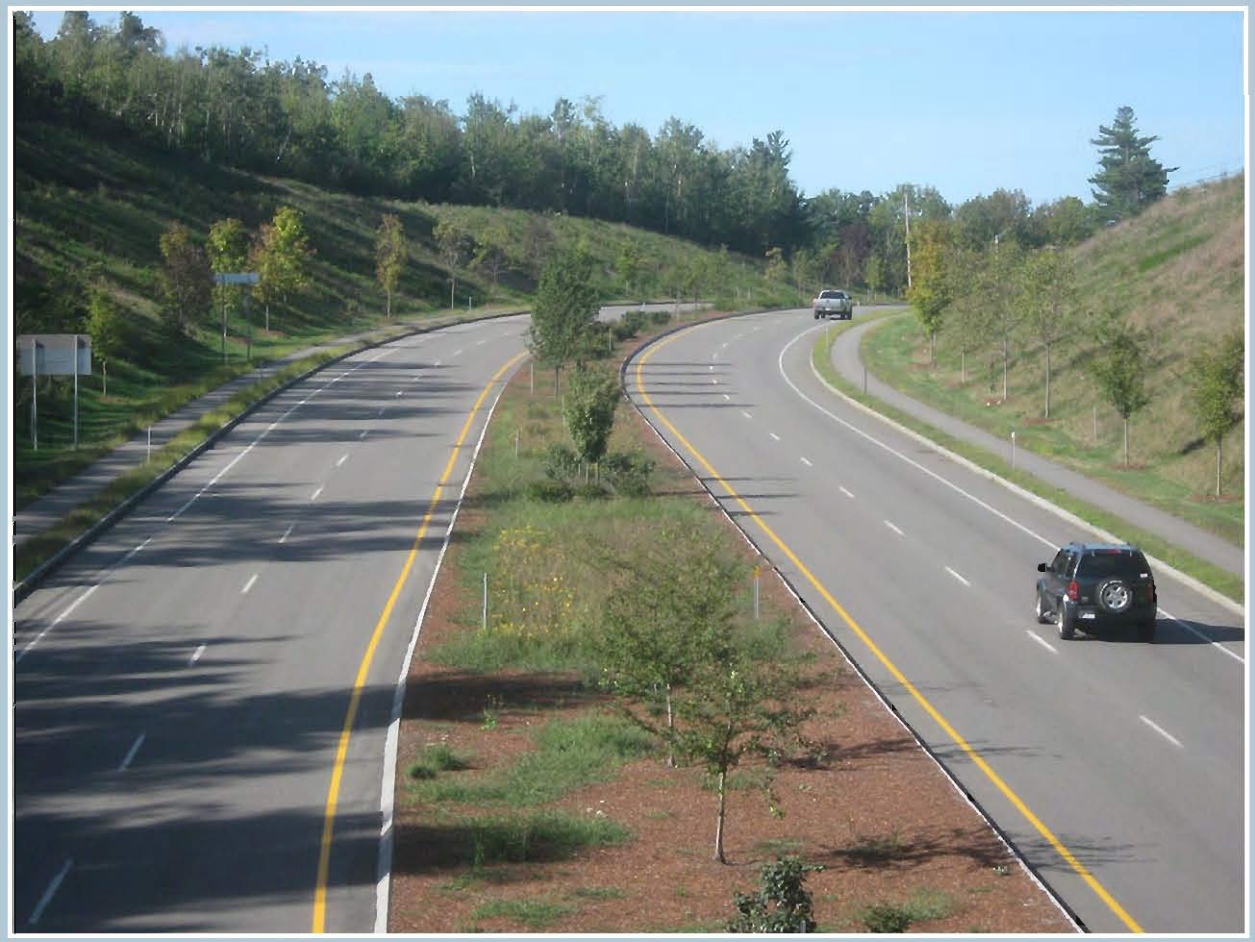
Wall St Extension











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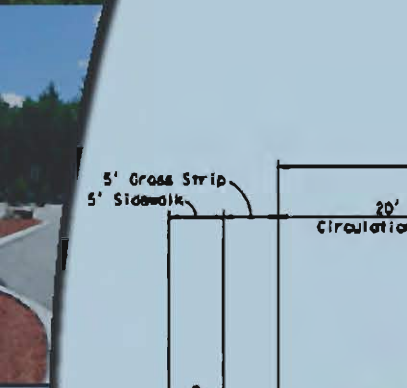
McFarland Johnson

NH 111 Corridor

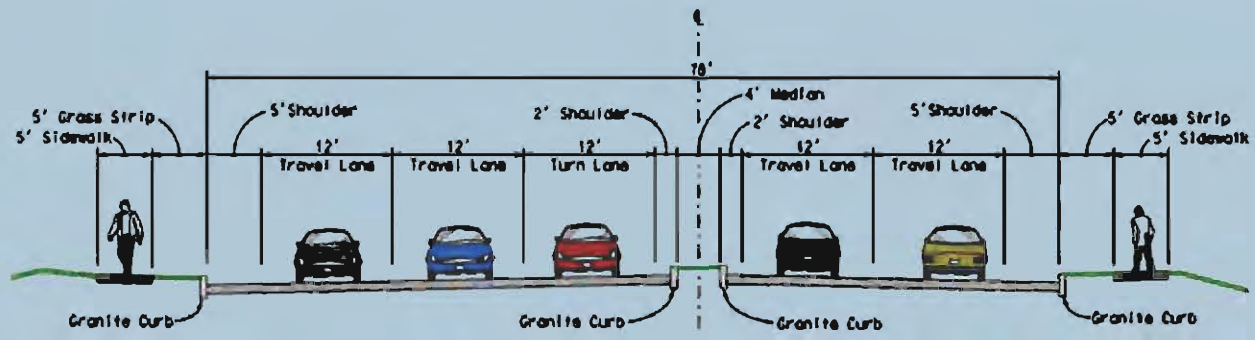
Wall St Extension



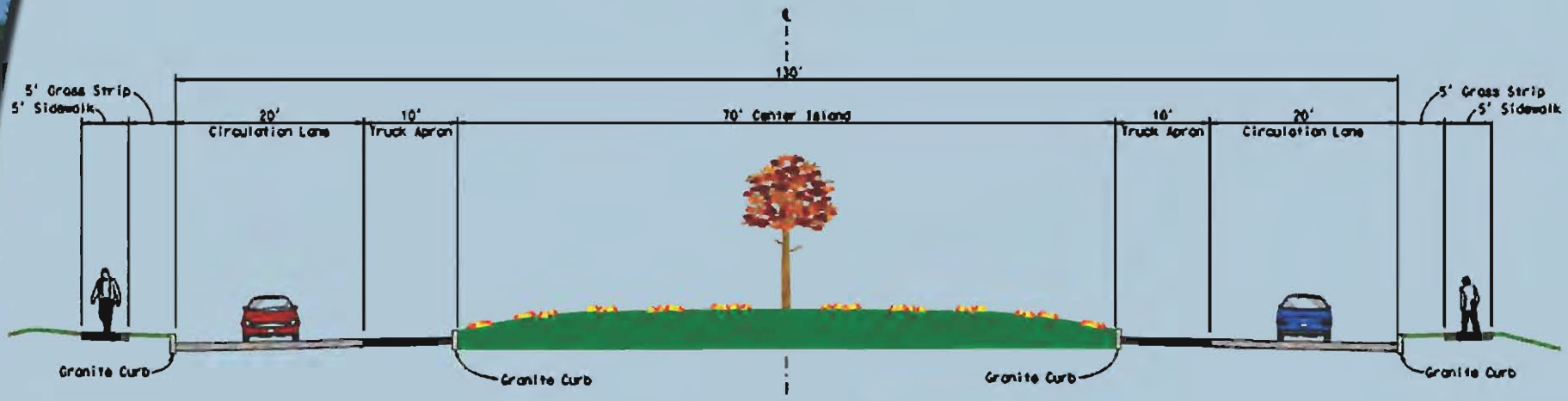








Section at Signalized Intersection



Section at Roundabout

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NH 111 Corridor

Wall St Extension











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Wall St Extension











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NH 111 Corridor

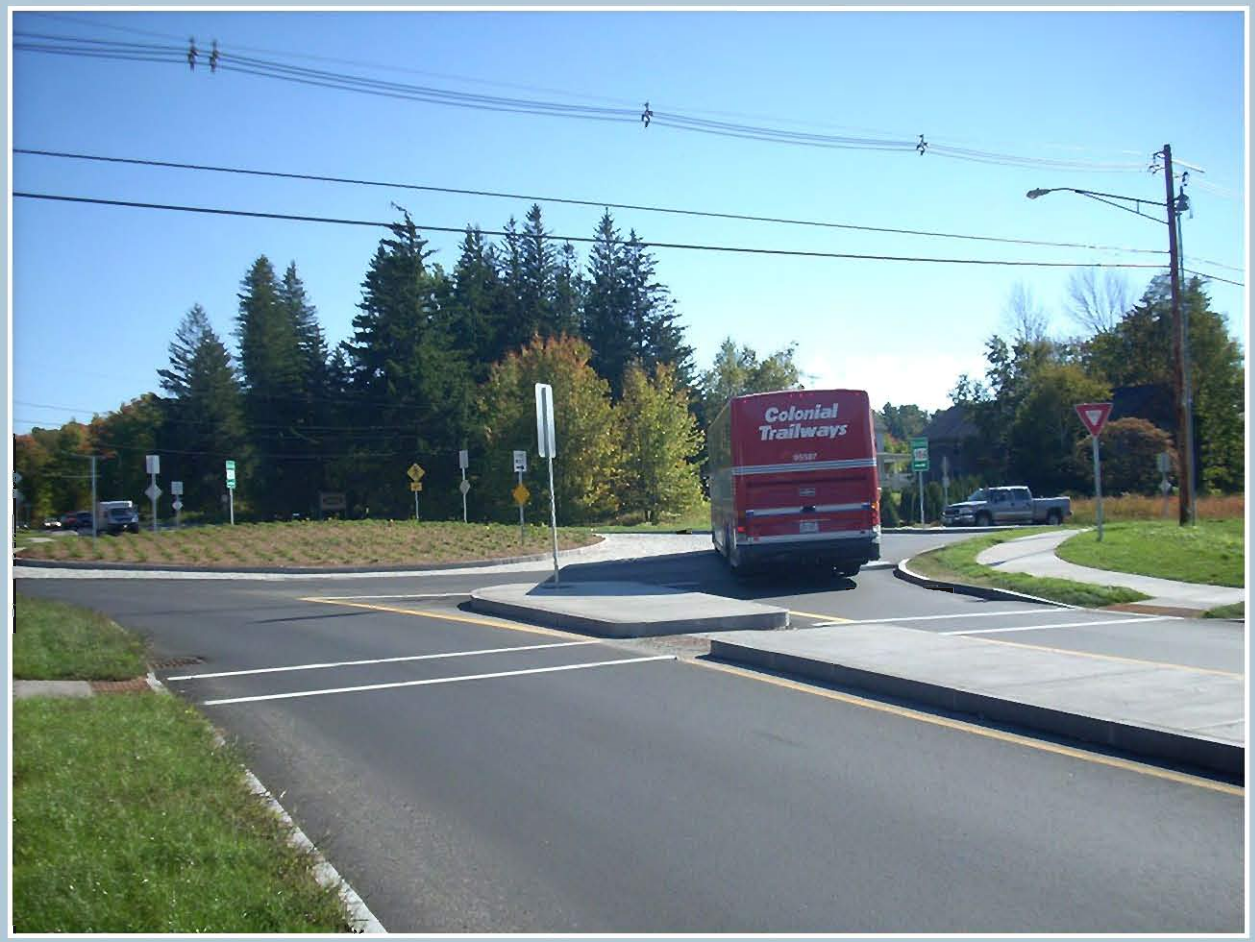
Wall St Extension











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Wall St Extension











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Wall St Extension











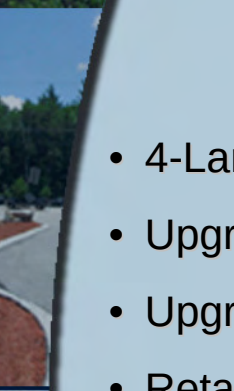
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McFarland Johnson

Wall St Extension



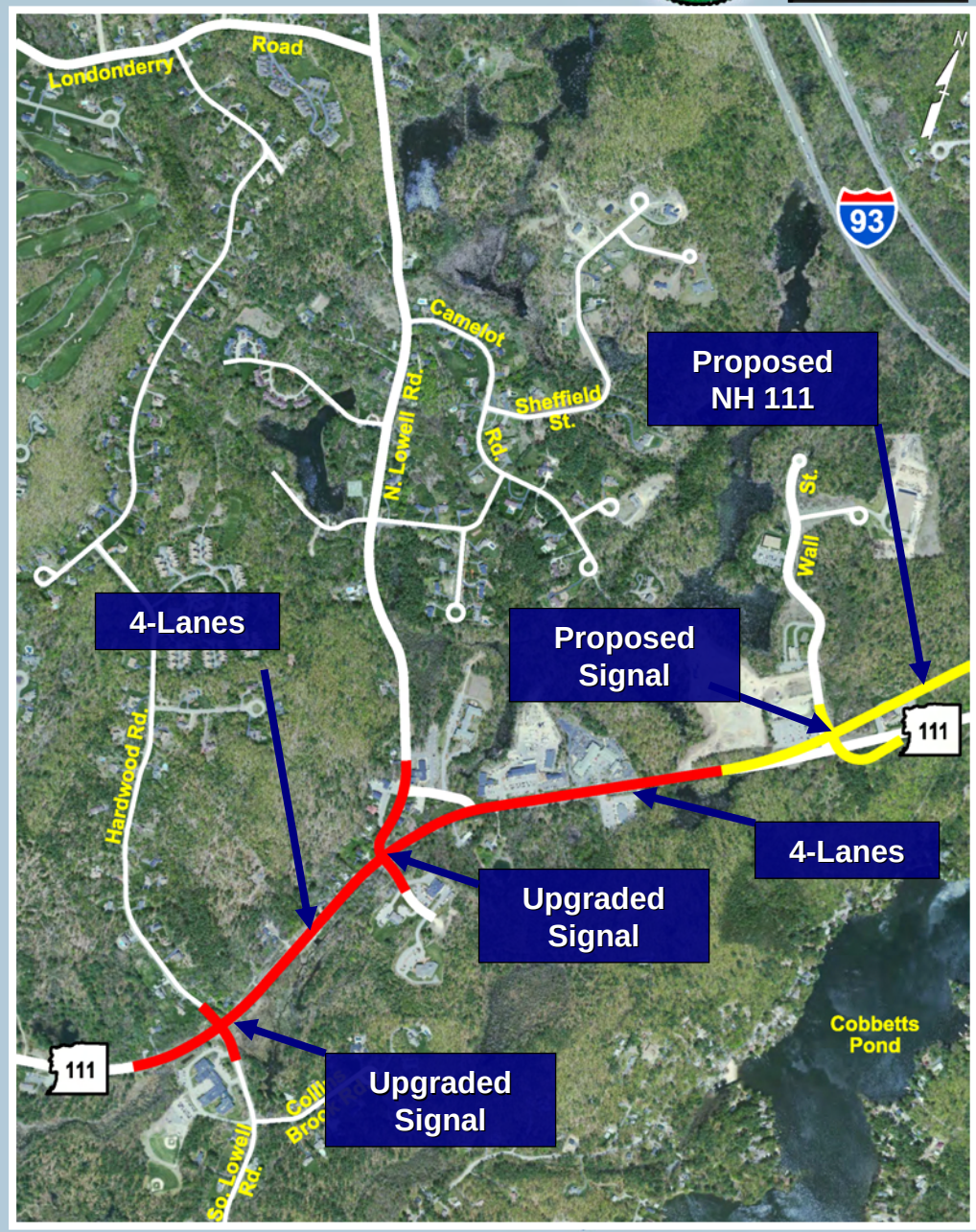






In-Corridor Signal Alternative

- 4-Lanes on NH 111
- Upgraded Signal at N. Lowell Rd
- Upgraded Signal at S. Lowell Rd
- Retain Proposed Signal at Wall St

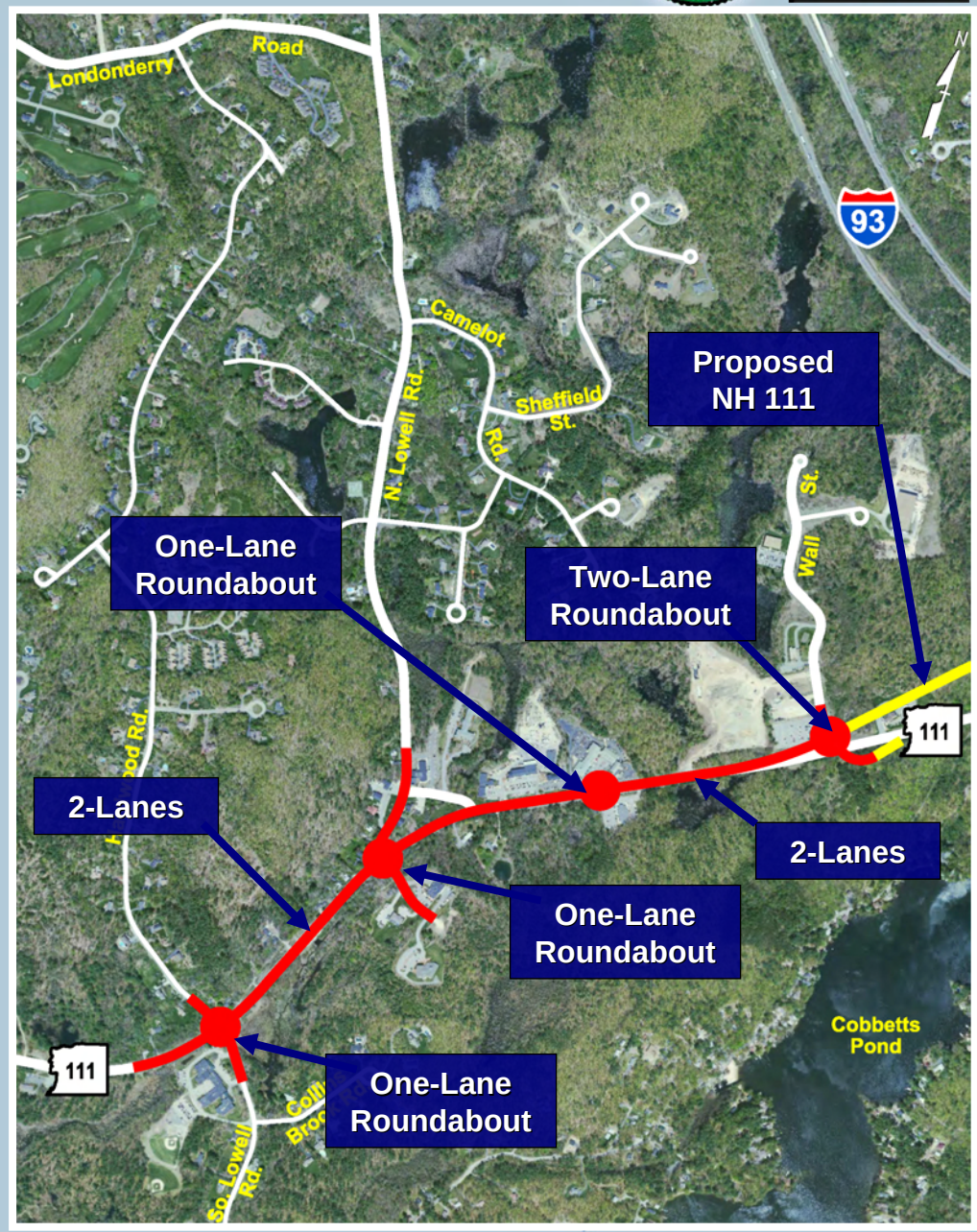


Wall St Extension

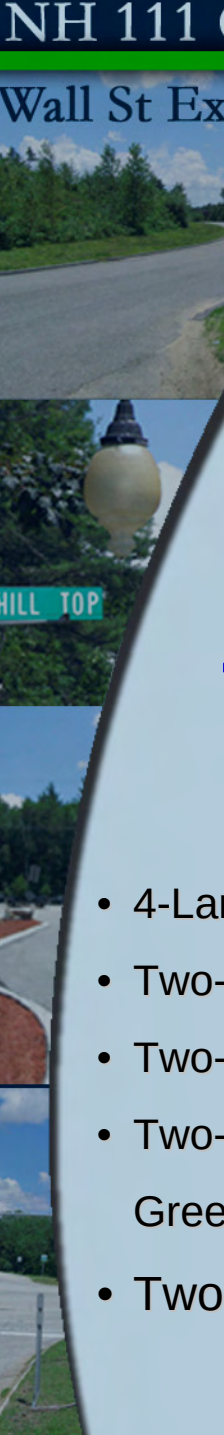


In-Corridor One-Lane Roundabout Alternative

- 2-Lanes on NH 111
- One-Lane Roundabout at N. Lowell Rd
- One-Lane Roundabout at S. Lowell Rd
- One-Lane Roundabout at Village Green/Post Office
- Two-Lane Roundabout at Wall St

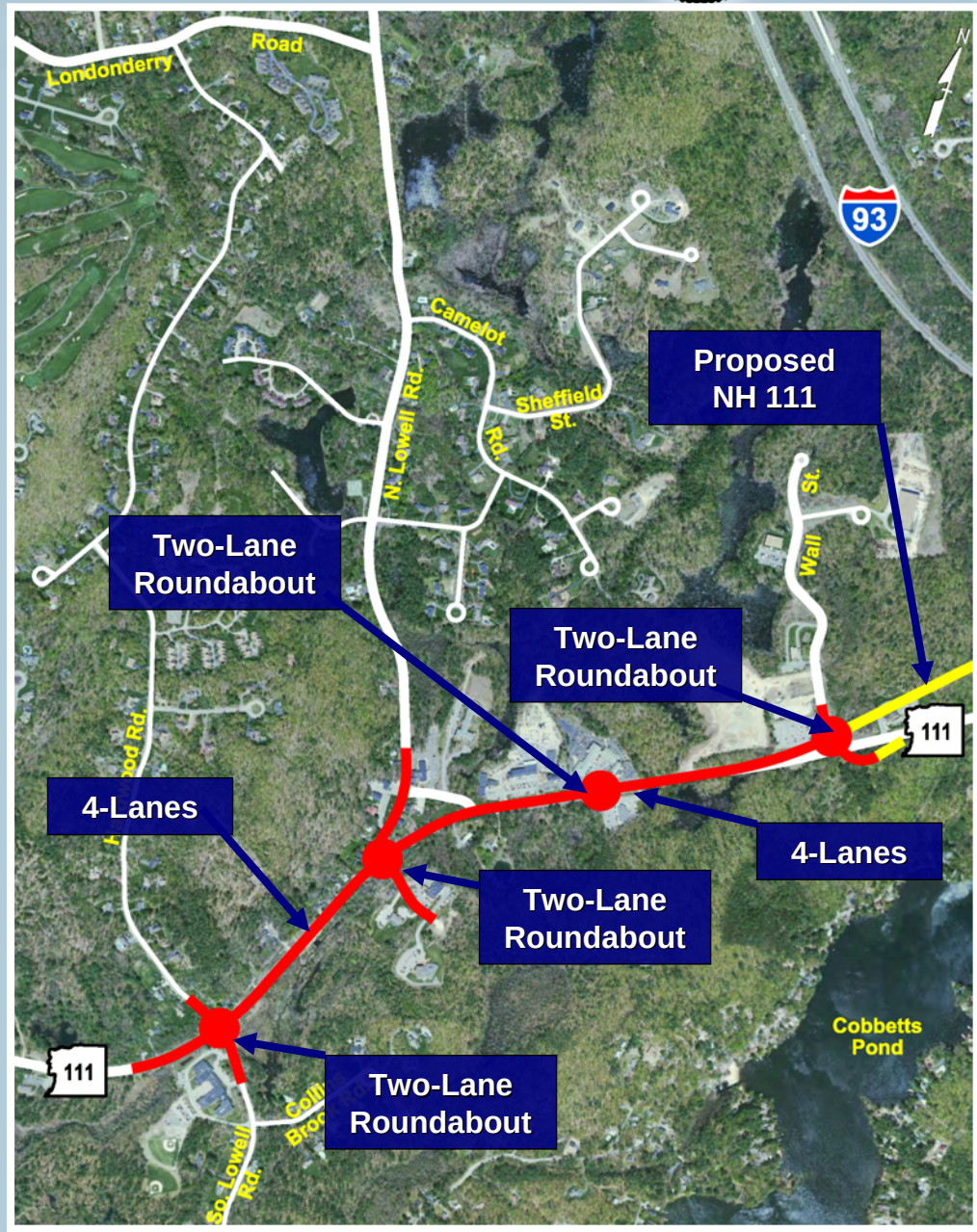


Wall St Extension



In-Corridor 2-Lane Roundabout 4-Lane Corridor Alternative

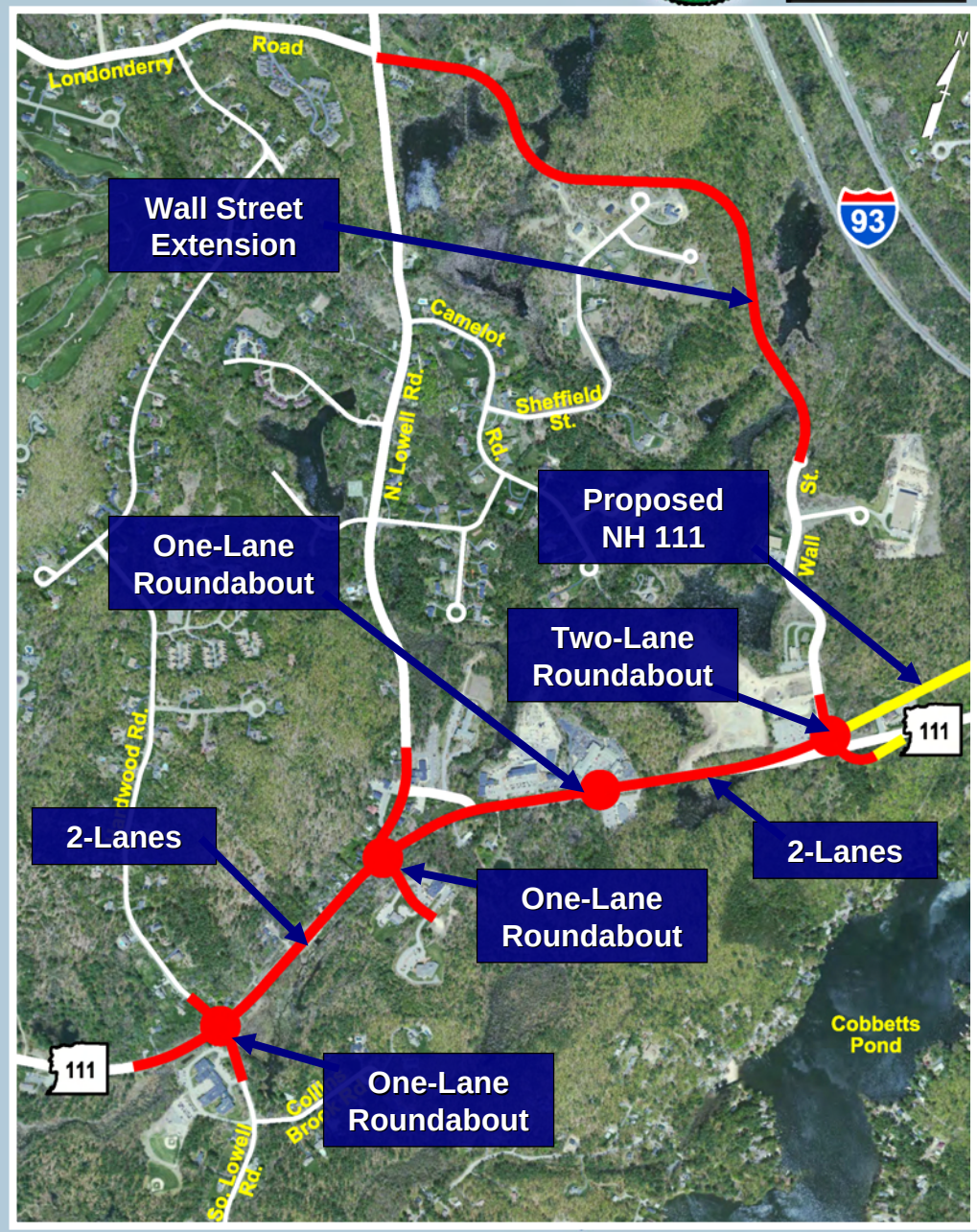
- 4-Lanes on NH 111
- Two-Lane Roundabout at N. Lowell Rd
- Two-Lane Roundabout at S. Lowell Rd
- Two-Lane Roundabout at Village Green/Post Office
- Two-Lane Roundabout at Wall St



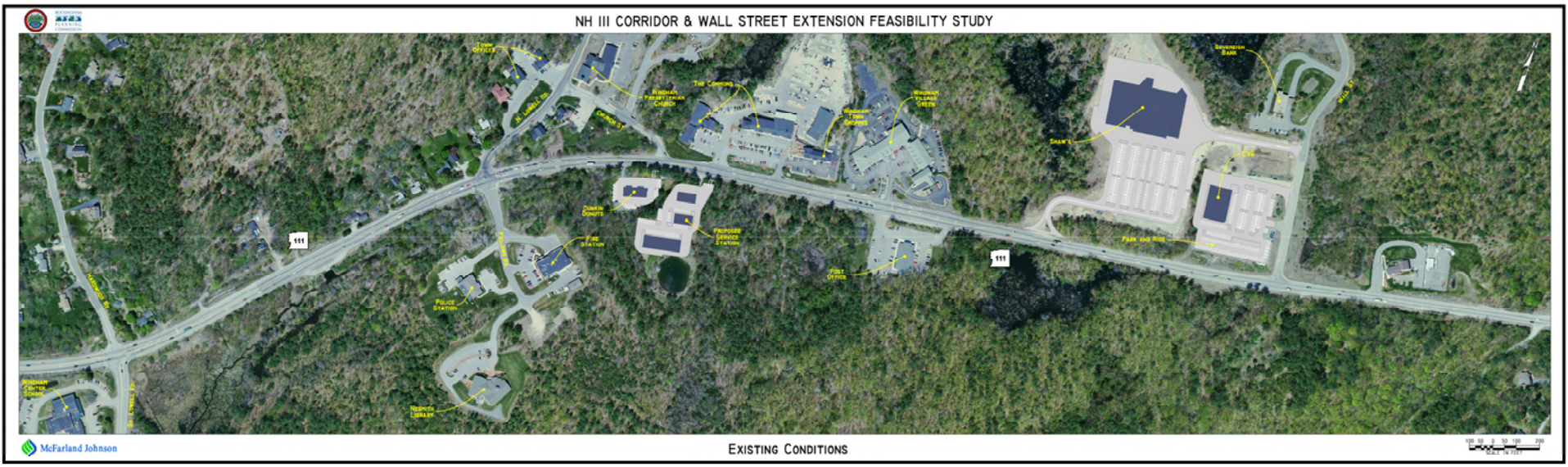
Wall St Extension

In-Corridor Roundabout with Wall Street Extension Alternative

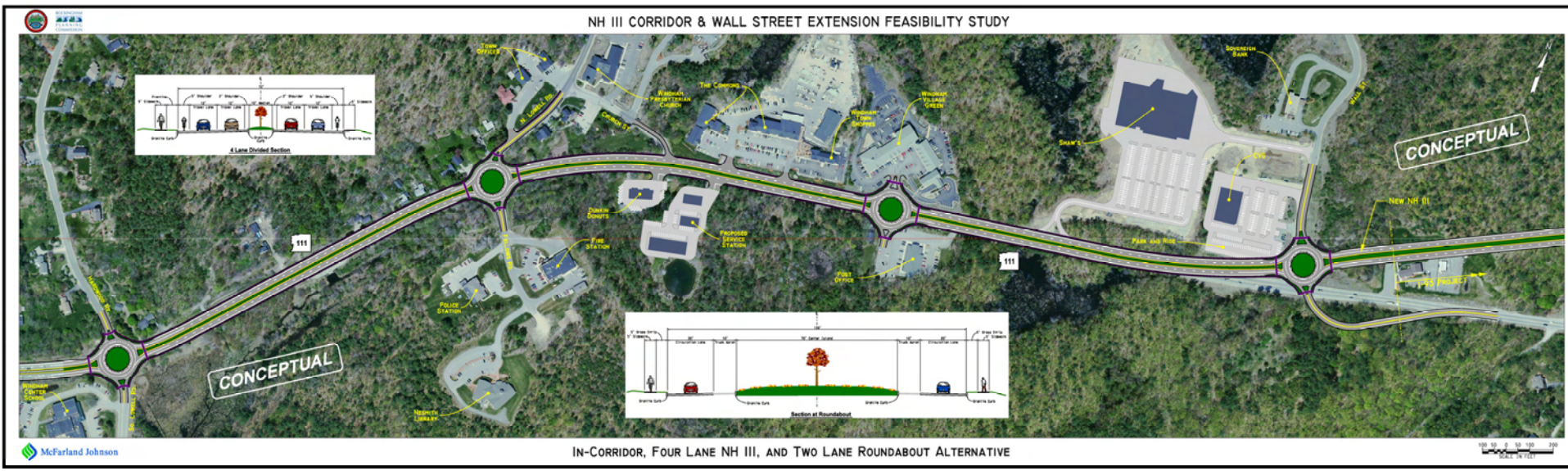
- 2-Lanes on NH 111
- One-Lane Roundabout at N. Lowell Rd
- One-Lane Roundabout at S. Lowell Rd
- One-Lane Roundabout at Village Green/Post Office
- Two-Lane Roundabout at Wall St
- Wall Street Extension



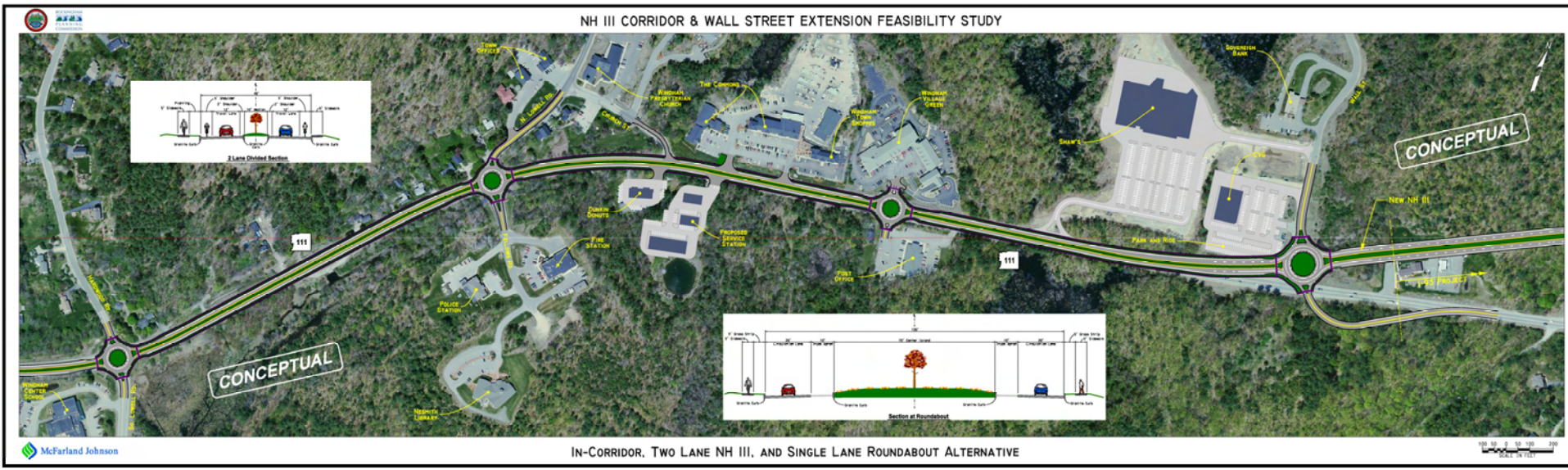
Existing Conditions



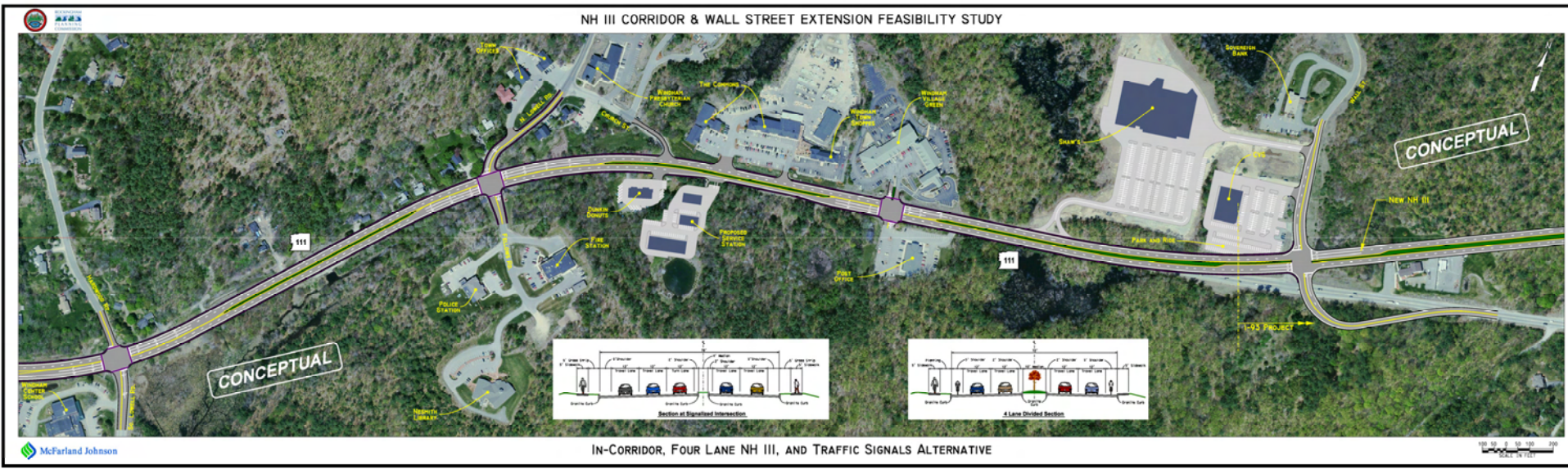
In Corridor, Four Lane NH 111, and Two Lane Roundabouts



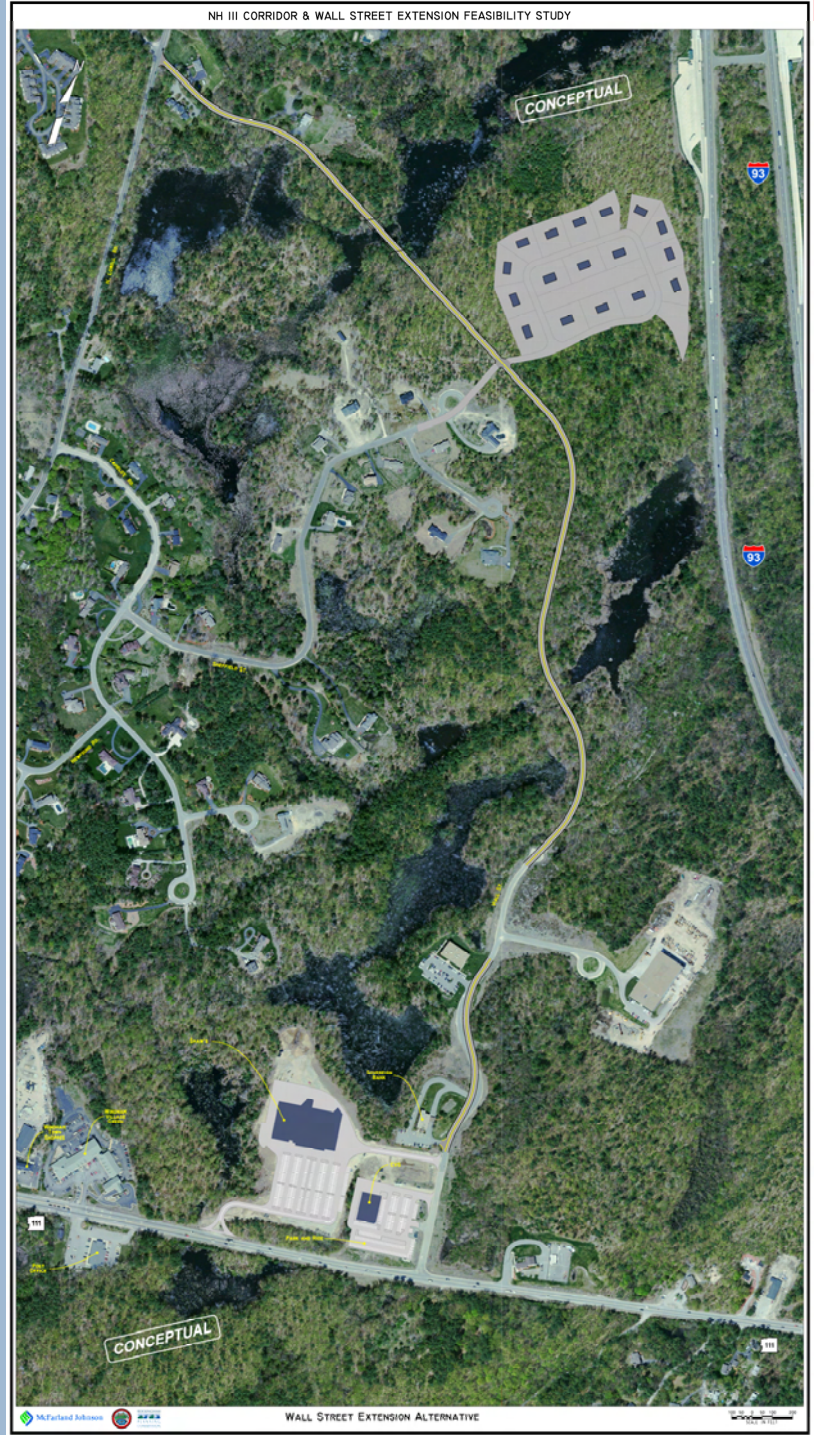
In Corridor, Two Lane NH 111, and Single Lane Roundabouts



In Corridor, Four Lane NH 111, and Traffic Signals



Wall Street Extension





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Questions / Comments

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