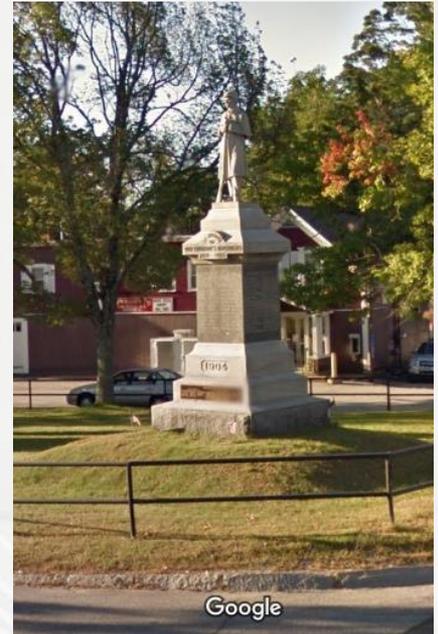


Chester 41848

Route 102 / Route 121 Safety Improvements

Selectmen's Meeting Presentation
August 23, 2018



Agenda

- Existing conditions
- Project history
- Project scope
- Roundabout basics
- Initial design concepts
- Project schedule

Existing conditions

- Traffic volume:
 - 8,600 / 6,500 vpd on Route 102
 - 4,500 / 3,600 vpd on Route 121
 - Long delays on Route 121
 - Need to plan for Exit 4A
- Speed limit: 35 mph at intersection

Existing conditions

- Crashes: 64 in 10 years
 - Severity – 13 with injuries
 - Failure to yield or stop
 - Right angle
 - Sideswipes along 102

Project history

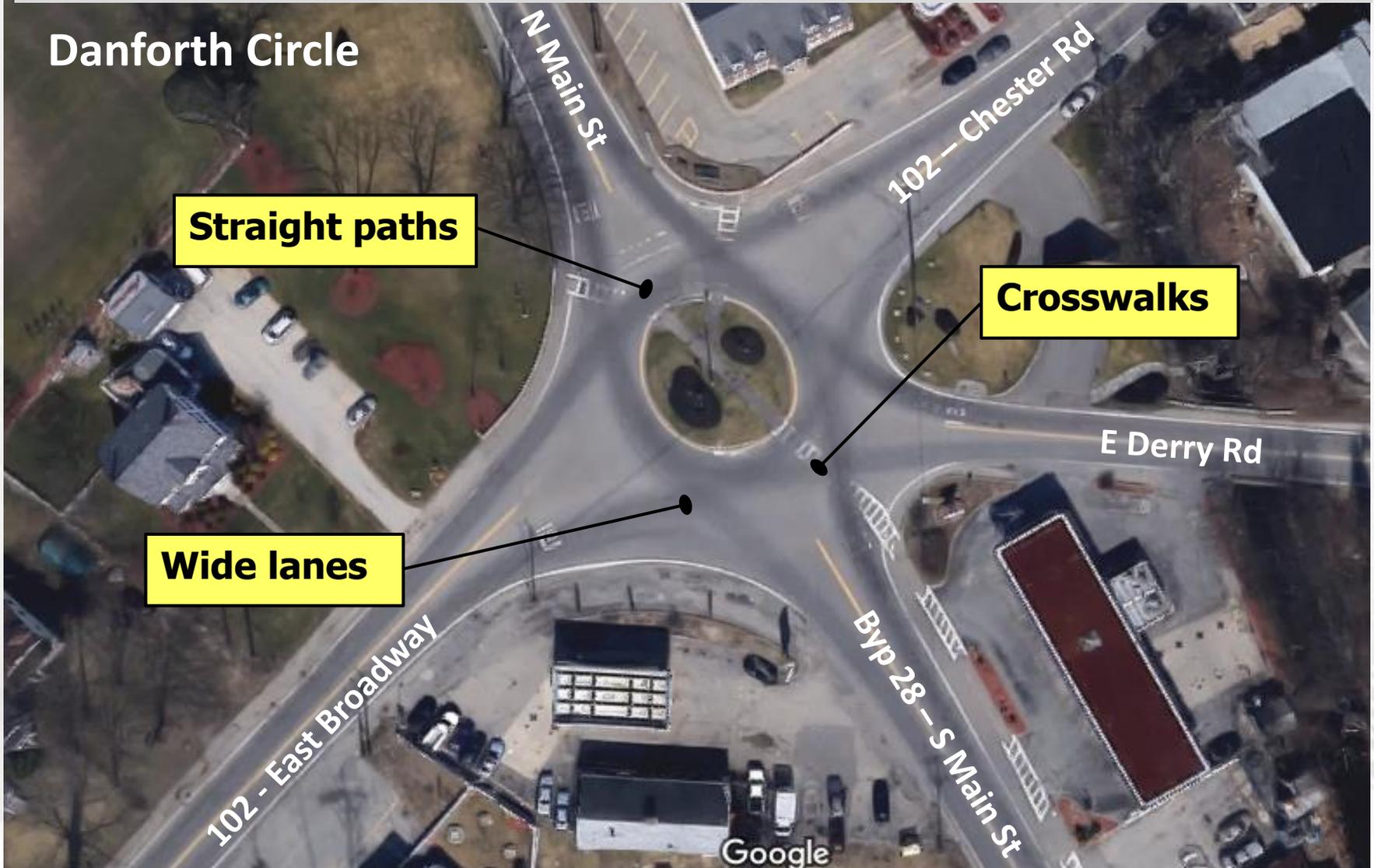
- Road safety audit conducted 2011
 - Short, medium, long term options
- Short-term: making stop signs visible
- Medium-term: flashing beacons

Project scope

- Long-term options
 - All-way stop
 - Traffic signal
 - Roundabout
- Goal: provide safe and efficient traffic operations
 - For current and future conditions
 - For all modes

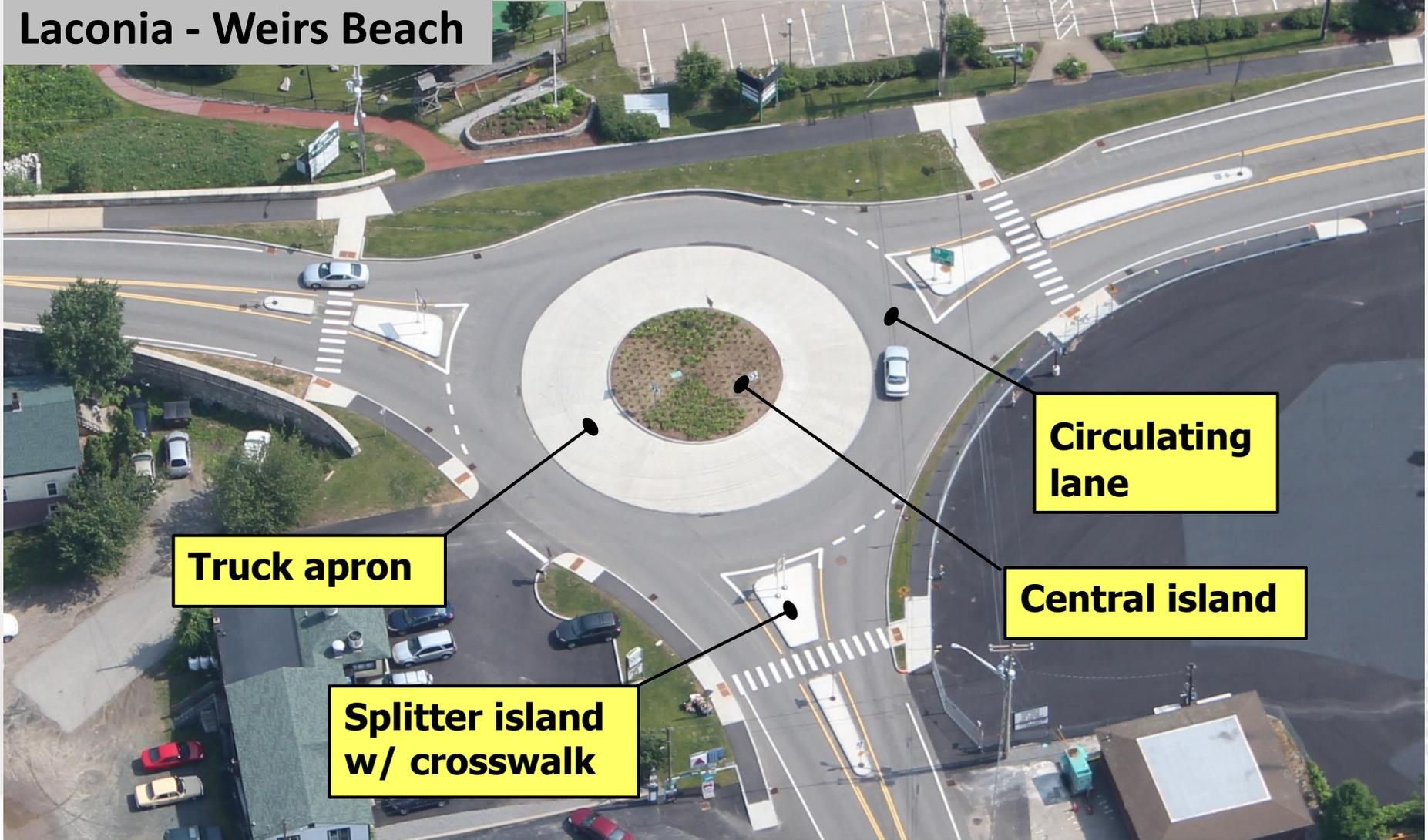
Traffic Circles vs. Roundabouts

Danforth Circle



Roundabout features

Laconia - Weirs Beach



Truck apron

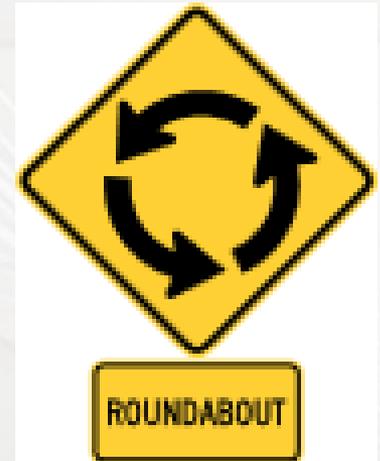
**Splitter island
w/ crosswalk**

**Circulating
lane**

Central island

Roundabout Rules of the Road

- Slow down – designed for 15-20 mph
- Watch for peds in crosswalk
- Look left / yield to traffic in roundabout
- Proceed through roundabout
- Watch for peds in crosswalk



How Do Roundabouts Improve Safety?

- Vehicles yield on entry
 - Small size keeps speeds low
 - Paths are deflected
 - Fewer conflict points
-
- Reduced chance of crashes
 - Reduced severity

Roundabout Performance

- 75% fewer injuries
- 90% fewer SI and fatalities
- Better traffic operations
- Safer bike/ped environment



111A

Before



Nashua Rd

Old Bridge St

111A

Main St

**Roundabout Example:
Pelham
NH 111A at Nashua Rd**

Google earth



Design



111A

Nashua Rd

Old Bridge St

111A

Main St

Pelham
NH 111A at Nashua Rd



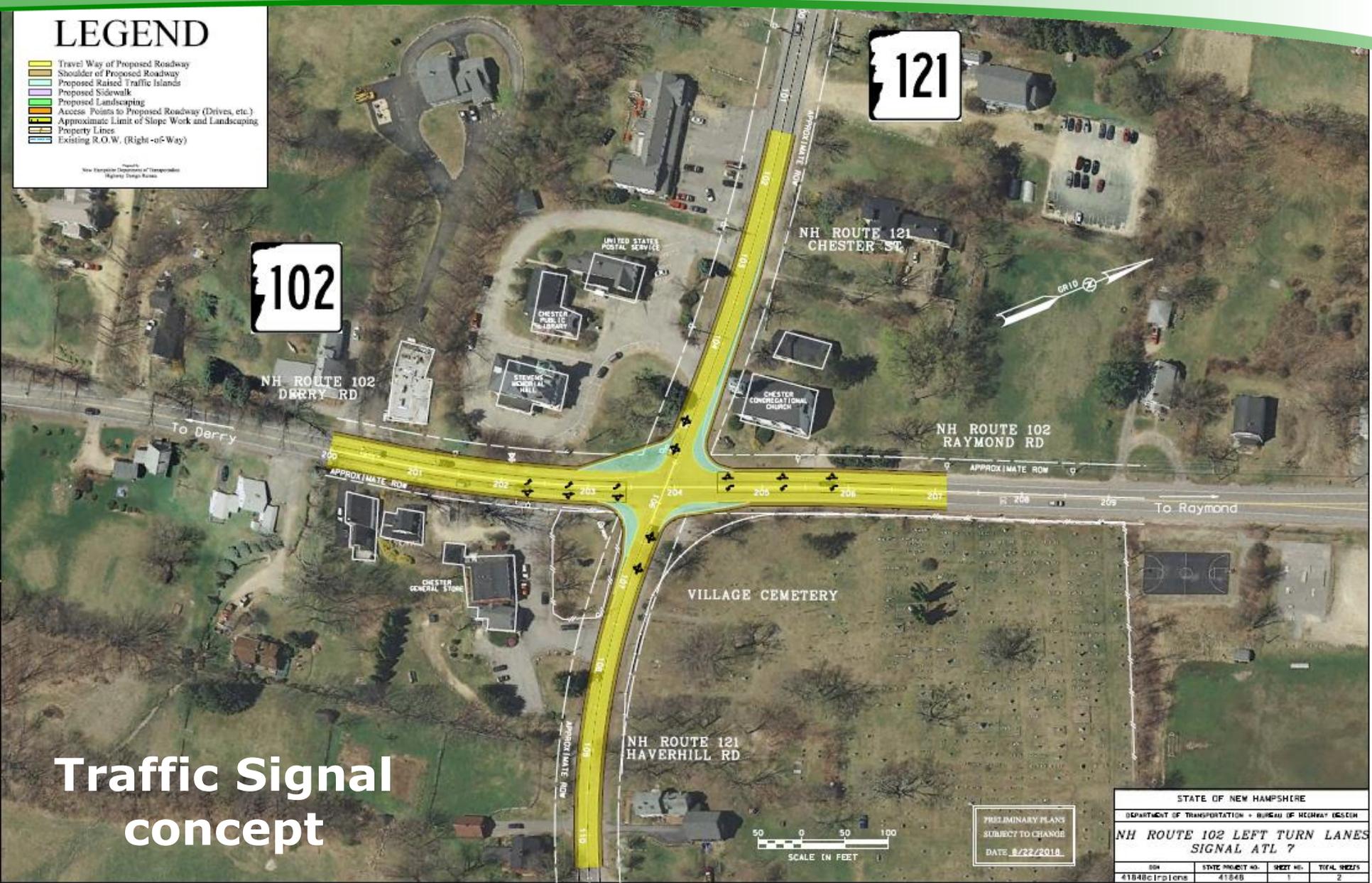
After

Pelham
NH 111A at Nashua Rd

LEGEND

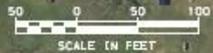
- Travel Way of Proposed Roadway
- Shoulder of Proposed Roadway
- Proposed Raised Traffic Islands
- Proposed Sidewalk
- Proposed Landscaping
- Access Points to Proposed Roadway (Drives, etc.)
- Approximate Limit of Slope Work and Landscaping
- Property Lines
- Existing R.O.W. (Right-of-Way)

Prepared by:
New Hampshire Department of Transportation
Highway Design Bureau



Traffic Signal concept

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE: 8/22/2018



STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION - BUREAU OF HIGHWAY DESIGN			
NH ROUTE 102 LEFT TURN LANES			
SIGNAL ATL 7			
DSN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
41848c1a10ns	41848	1	2

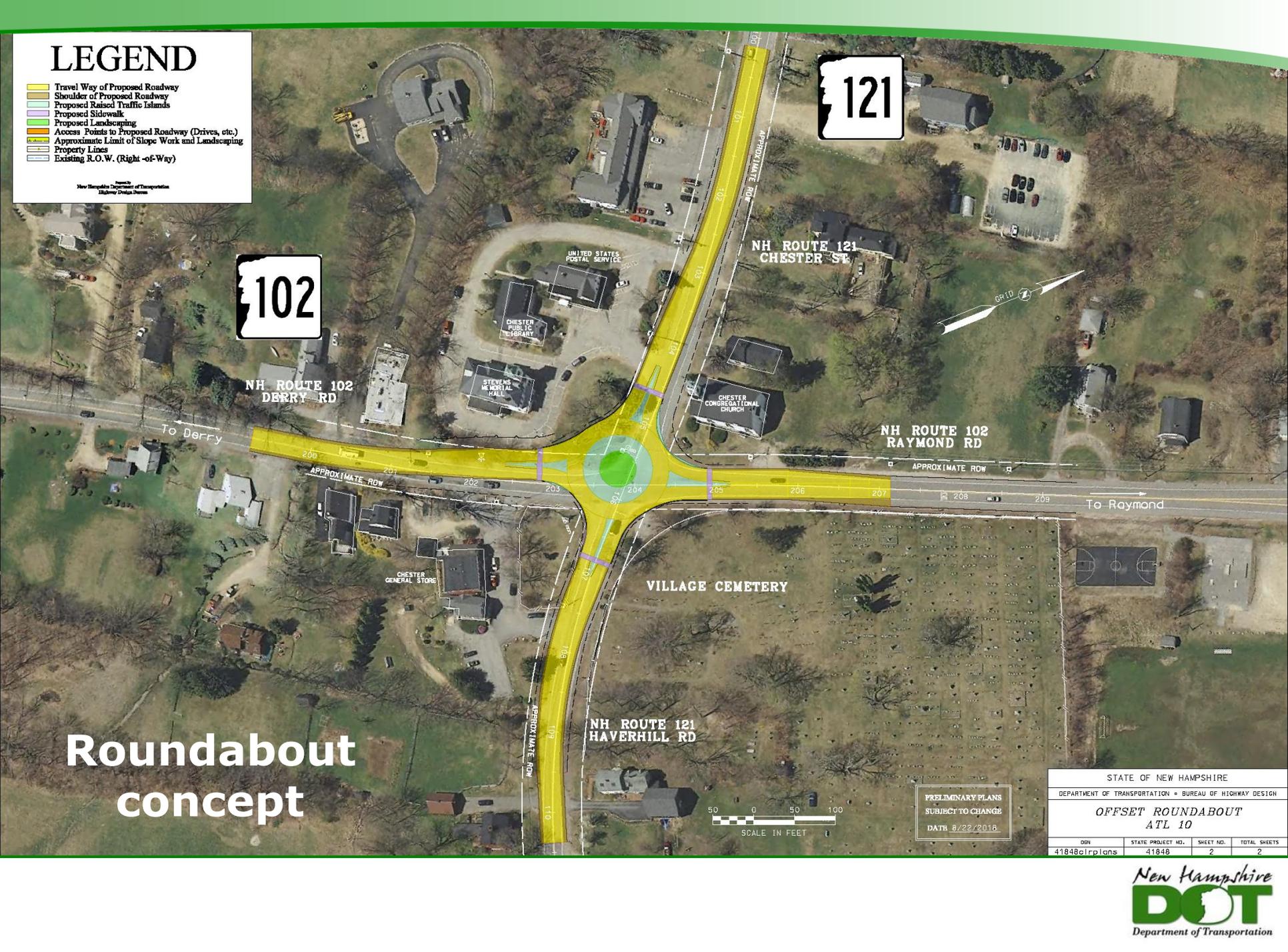


**Traffic Signal
concept**

LEGEND

- Travel Way of Proposed Roadway
- Shoulder of Proposed Roadway
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Issued by
New Hampshire Department of Transportation
Highway Design Section



102

121

NH ROUTE 102
DERRY RD

NH ROUTE 121
CHESTER ST

NH ROUTE 102
RAYMOND RD

NH ROUTE 121
HAVERHILL RD

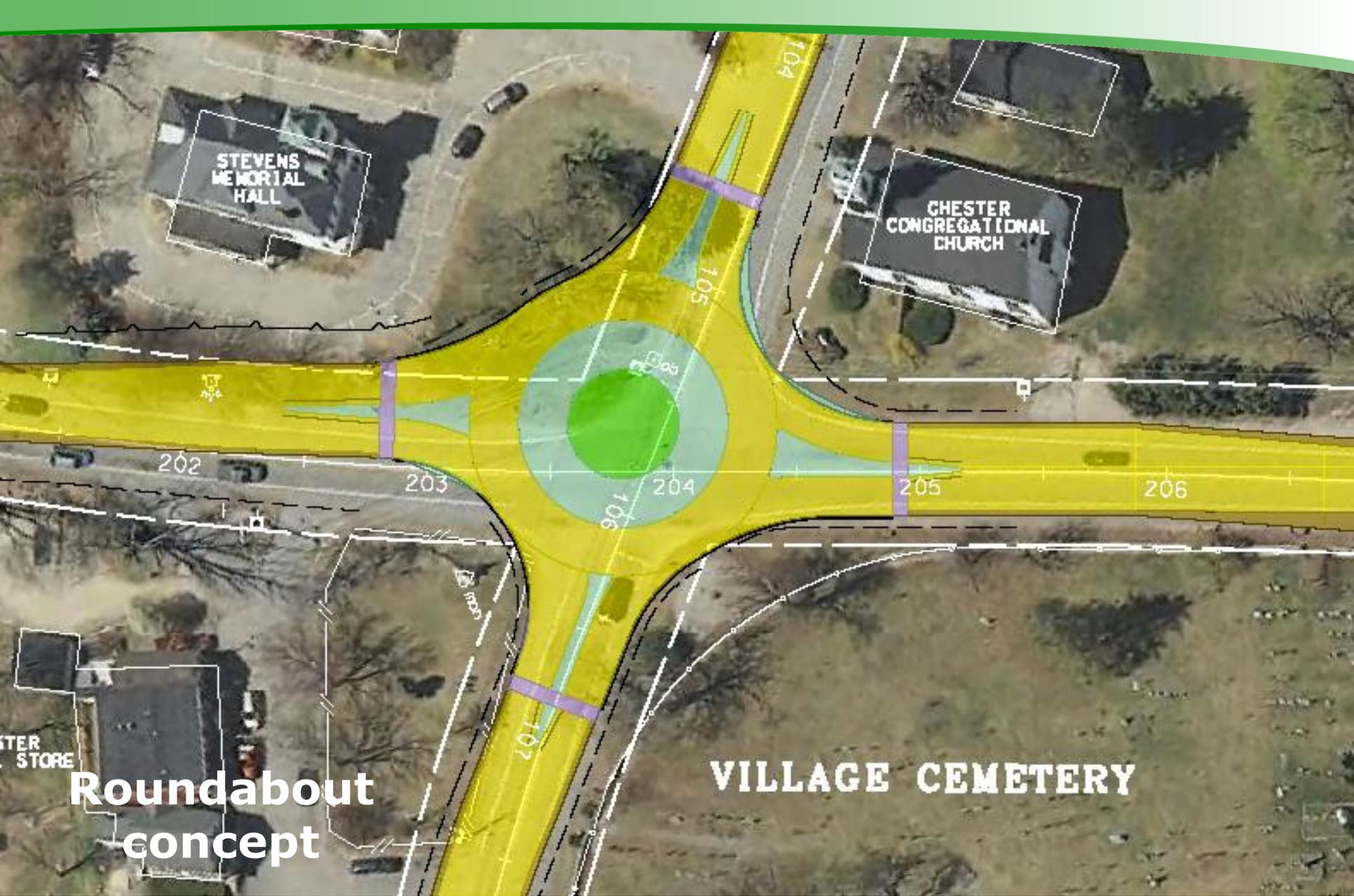
VILLAGE CEMETERY

**Roundabout
concept**

PRELIMINARY PLANS
SUBJECT TO CHANGE
DATE: 8/22/2018



STATE OF NEW HAMPSHIRE			
DEPARTMENT OF TRANSPORTATION • BUREAU OF HIGHWAY DESIGN			
OFFSET ROUNDABOUT ATL 10			
DDN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
41848/clr/plans	41848	2	2



Project schedule

- Survey done summer 2018
- Fall/winter 2018: informational mtg with early details and impacts
- Mid-2019: public hearing for preferred alternative
- 2019 to 2021: detailed design, right of way process

Questions?

Michael.Dugas@dot.nh.gov

603.271.2604