Shelburne St. Roundabout

Project Status

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The “Rotary”
A Relic of the Early 1900’s

Figure 1: The “Rotary” in the 1940’s
The “Rotary”
A Relic of the Early 1900’s

Figure 2: The “Rotary” in 2011

Not much has changed with the streets at the intersection in nearly 80 years. The “rotary” was enlarged and raised in that time, but most of the major changes occurred outside of the roadways, mainly with business/residence changes and landscaping reductions.
Identified Issues

The “Rotary’s” Problems

- High Vehicular Volumes = 19,200 vehicles per day
- High Crash Location
  - In 2006 = 53 reported crashes in 5 years
  - In 2016 = 50 reported crashes in 5 years => No Improvement!
- The “Rotary”
  - Improper size and shape
    - Too small and restricts certain movements and storage
  - Improper location within the intersection
    - For sight distance and sight lines
- Left Turns
  - Generally high throughout the intersection
  - Awkward left turns around the “Rotary”
- Uncontrolled drive accesses
  - At Century 21, Majestic
- Adjacent school and churches – Not really an “issue”, but more of a consideration
- Elevated presence of bicyclists and pedestrians
  - Especially children to/from school
  - Long crosswalks
  - Inadequate number of crosswalks
- Aesthetically unappealing
  - A sea of pavement
  - Lack of landscaping
- Aging and failing (or soon-to-be failing) utilities
  - 37,000+ feet (>7 miles) buried utilities
- Lack of modern stormwater treatment
The Solution

The Modern Roundabout

Modern Roundabout in Waterbury, VT
The Solution
The Modern Roundabout

- Can handle 19,200 vehicles per day without needing new lanes*
- Expected crash reduction of up to 72%.
- Geometry of the Roundabout focuses user’s sight distance by obscuring and reveal certain perspectives.
- Left turns become right turns and become more predictable to all users
- Adjacent drives will be controlled.
- Crosswalks will be shorter in length, only cross one lane of traffic at a time and are located at highly visible locations.
- The Roundabout’s central and splitter island create opportunity for aesthetic treatments.
- New trees and shrubs throughout the project.
- Buried utility infrastructure will be updated and consolidated in neatly assembled corridors and easily (and safely) accessible for maintenance personnel.
- New buried sand filters and detention vaults to treat stormwater without surcharging the existing downstream infrastructure.

*An excerpt from NCHRP Report 672, Transportation Research Board (TRB), 2010:
**Challenges**

No Small Feats

**Ledge**
- Shallow in a lot of places (<2’ in some locations outside of streets).

**Archaeology**
- Stone flakes, likely from debris from Native American stone tool manufacturing and cooking activities, were discovered.
- Attempts to recover some artifacts will occur concurrently with construction.

**Stormwater Treatment**
- Locust Street structures will be deep (10’-12’ to the top).

**Contaminated Soils & Groundwaters**
- Four properties are/were fueling stations throughout history.
- Currently investigating magnitude of contamination and estimating mitigation and remediation techniques if encountered and associated costs for these techniques.
Challenges
No Small Feats (cont’d)

Utilities

- 7 miles of buried utilities, some which are nearly 100 years old.
- Existing sewer system to be re-lined by DPW ahead of the project to protect them.
- The entire first construction season will be dedicated to relocating and/or building new infrastructure while maintaining existing services.
Budget/Costs

Nothing’s Free

The City entered into a Finance & Maintenance Agreement on 23 May 2019.

Construction Estimate (includes utility relocation): $7,155,000

State’s Engineering: $888,000 spent out of $950,000 budget (93%)

Rights-of-Way: $154,000 spent out of $175,000 budget (88%)

City’s Engineering and Utility Design: 100% reimbursable

Sewer Re-lining – DPW: 100% reimbursable
Remaining Schedule

Nearing the Backstretch

**January 2020**
Solicit bids for Public Outreach contract

**March 2020**
Drop dead date for City’s condemnation of properties; Final Plan development re-starts

**June 2020**
Plans submitted for Construction Contracting

**September 2020**
Contract Award

**Spring 2021**
Groundbreaking
Thank You!

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