Project Overview

Burlington's Southern Gateway

Shelburne St. Roundabout

BURLINGTON, VT.

April 15, 2021
NPA – Ward 5

BURLINGTON, VT PUBLIC WORKS

VERMONT AGENCY OF TRANSPORTATION

Welcome to the Rotary!

Shelburne St. Roundabout
BURLINGTON, VT.

The “Rotary” (1931:2016)

Shelburne St. Roundabout
BURLINGTON, VT.

The “Rotary” (1942:2016)

Shelburne St.
Roundabout
BURLINGTON, VT.

Identified Issues

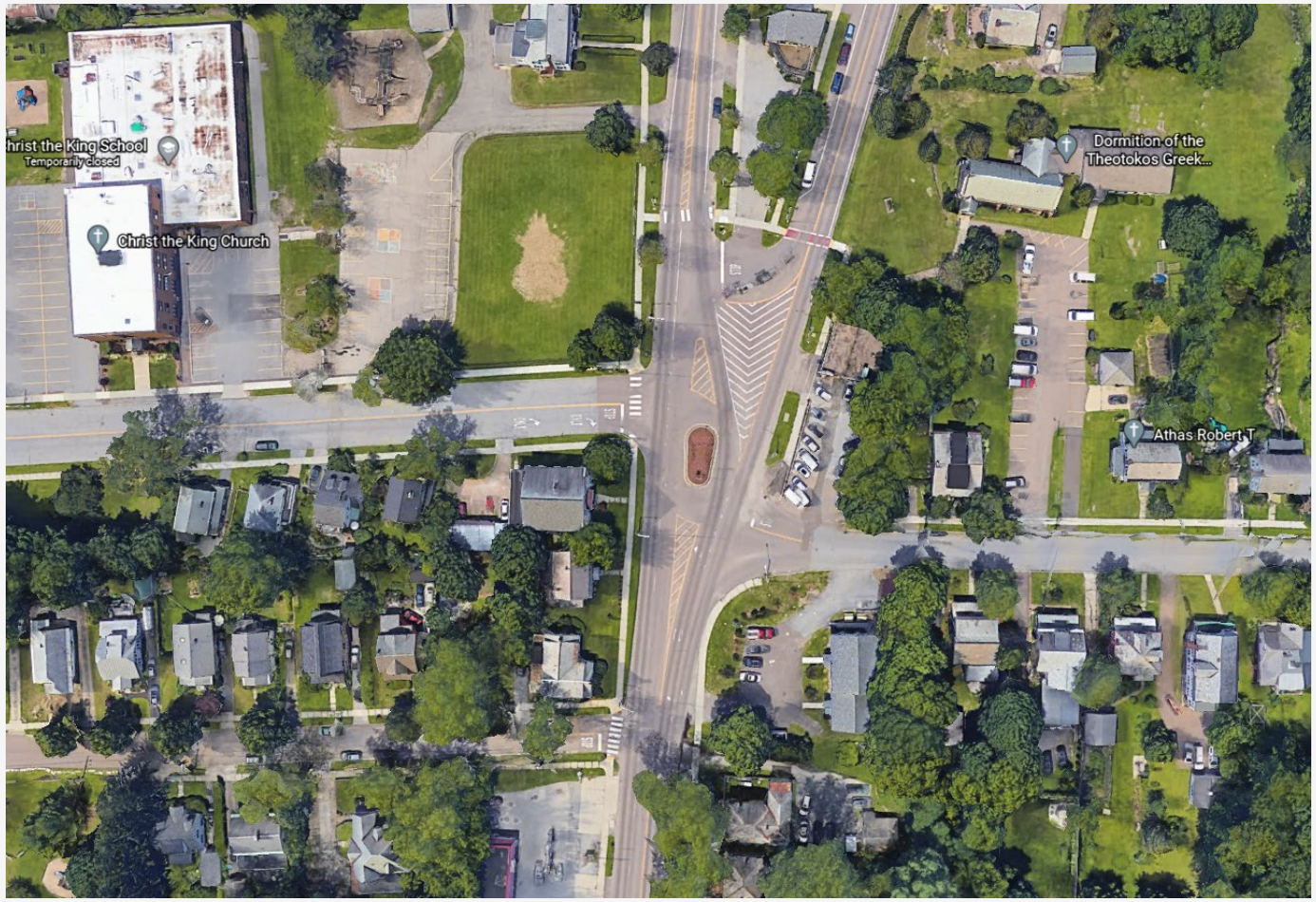
- Vehicle Volumes = 19,000 vpd
- High Crash Location
  - In 2006, 53 reported crashes in 5 years
  - In 2016, 50 reported crashes in 5 years
  - Has been on every HCL consecutively since at least 1998 (22 years)
- The "Rotary"
  - Improper size and shape
    - Too small and forces sharp turns
    - Does not discourage fast speeds
  - Improper location
    - Poor sight distance for certain movements

Identified Issues

- Left Turns
  - Comparatively high throughout intersection
  - Awkward movements around island
- Uncontrolled Drive Accesses
  - At Century 21 & at Majestic Car Rental
- High presence of bicyclist and pedestrians
  - School and churches are frequent destinations
  - Children
  - Long existing crosswalks
  - Inadequate number of crosswalks

Identified Issues

- Aging and failing utility infrastructure
- Lack of modern stormwater treatment
- Aesthetically unappealing
  - A sea of pavement
  - Lack of landscaping
  - Not welcoming as a gateway for city



The Solution:
The Modern Roundabout

Shelburne St.
Roundabout
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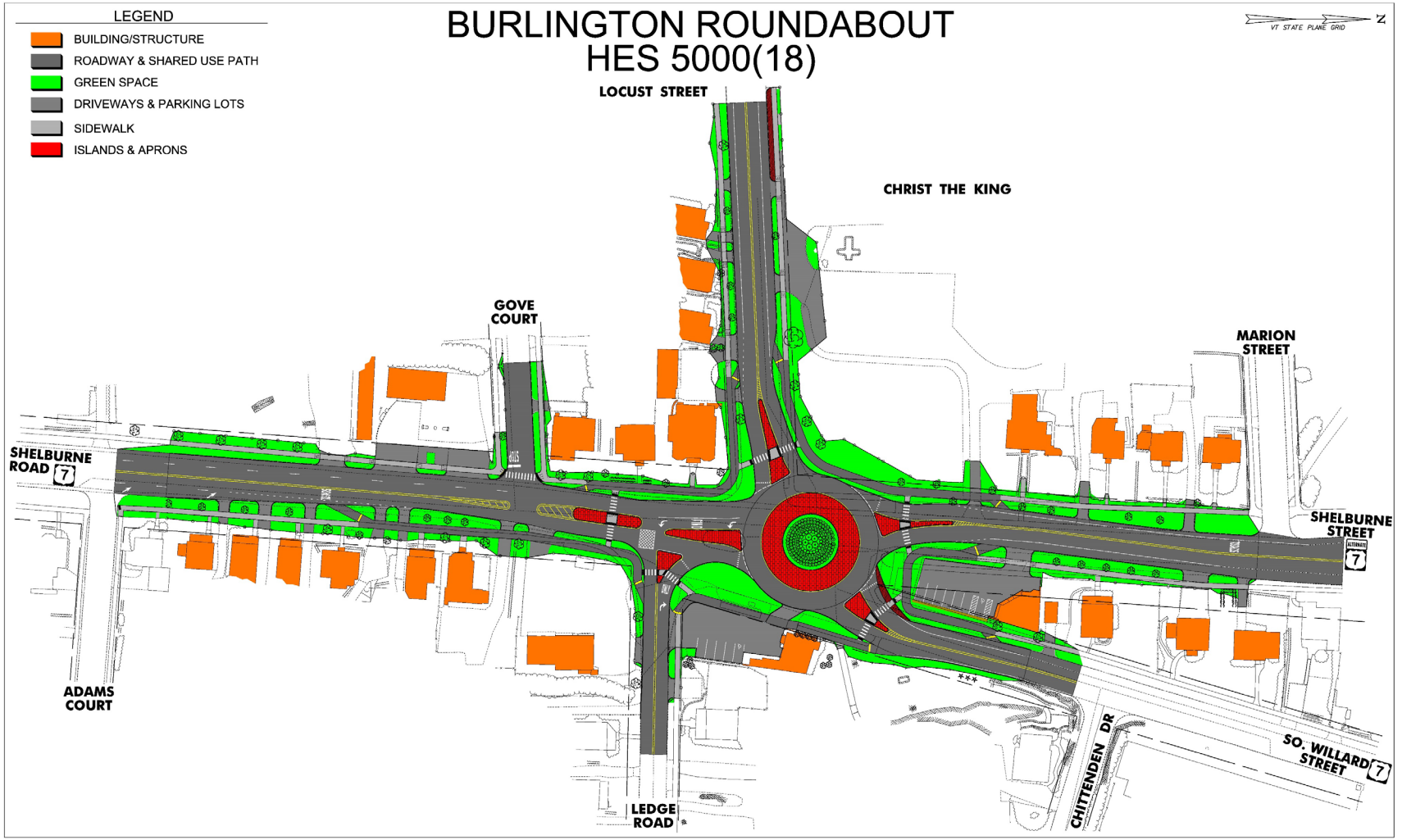
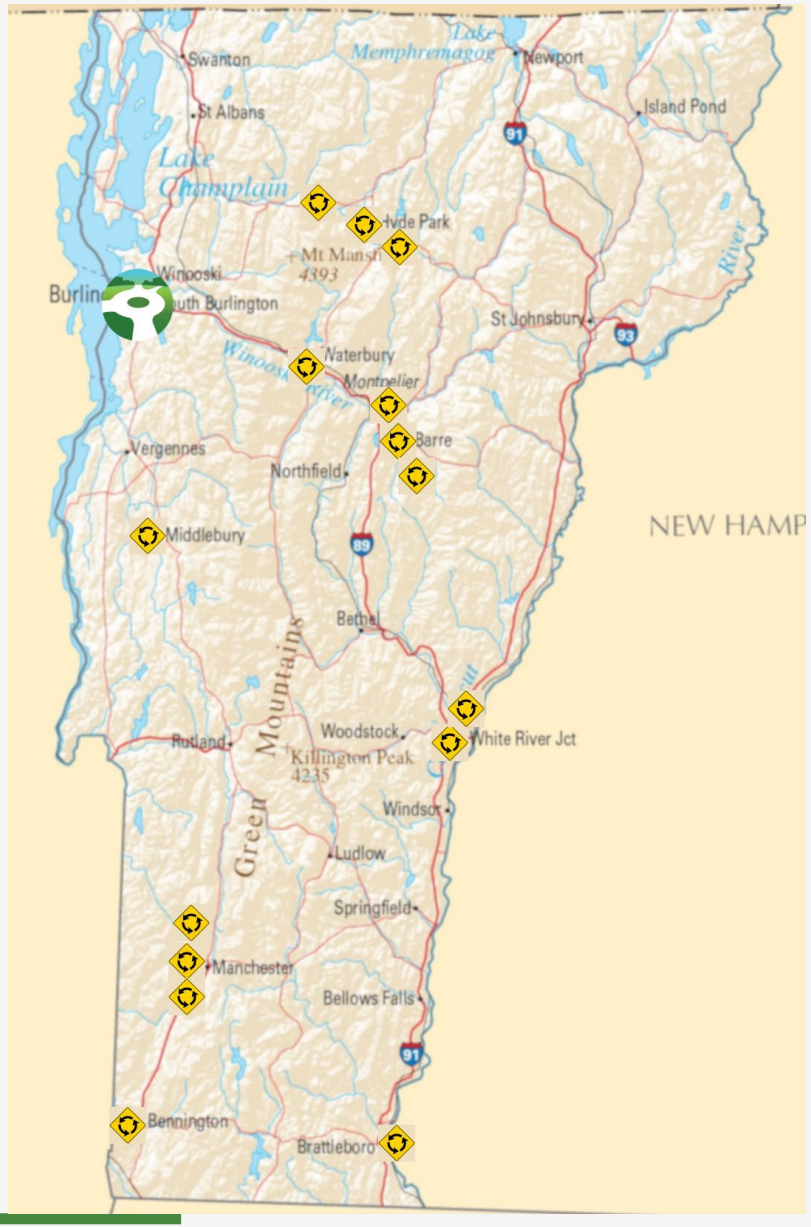


The Solution:
The Modern Roundabout

Shelburne St. Roundabout
BURLINGTON, VT.

- Can handle the 19,200 vpd without needing new travel lanes
- Expected crash reduction of up to 35% (75% reduction of injuries)
- Geometry of the roundabout focuses users' sight lines by revealing and obscuring 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 (crossing only one lane at a time at the splitter islands) and will be in highly visible locations.
- The Central Island will create an opportunity for aesthetic treatments (creating a city gateway).
- Buried utility infrastructure will be relocated and consolidated in duct banks for easy and safe maintenance accessibility
- New stormwater treatment infrastructure meeting the latest regulations.

The Solution:
Vermont's Modern Roundabouts



- 16 Active Modern Roundabouts
- 5 in Development
- 3 being Studied
- 1 in Construction (SSR)

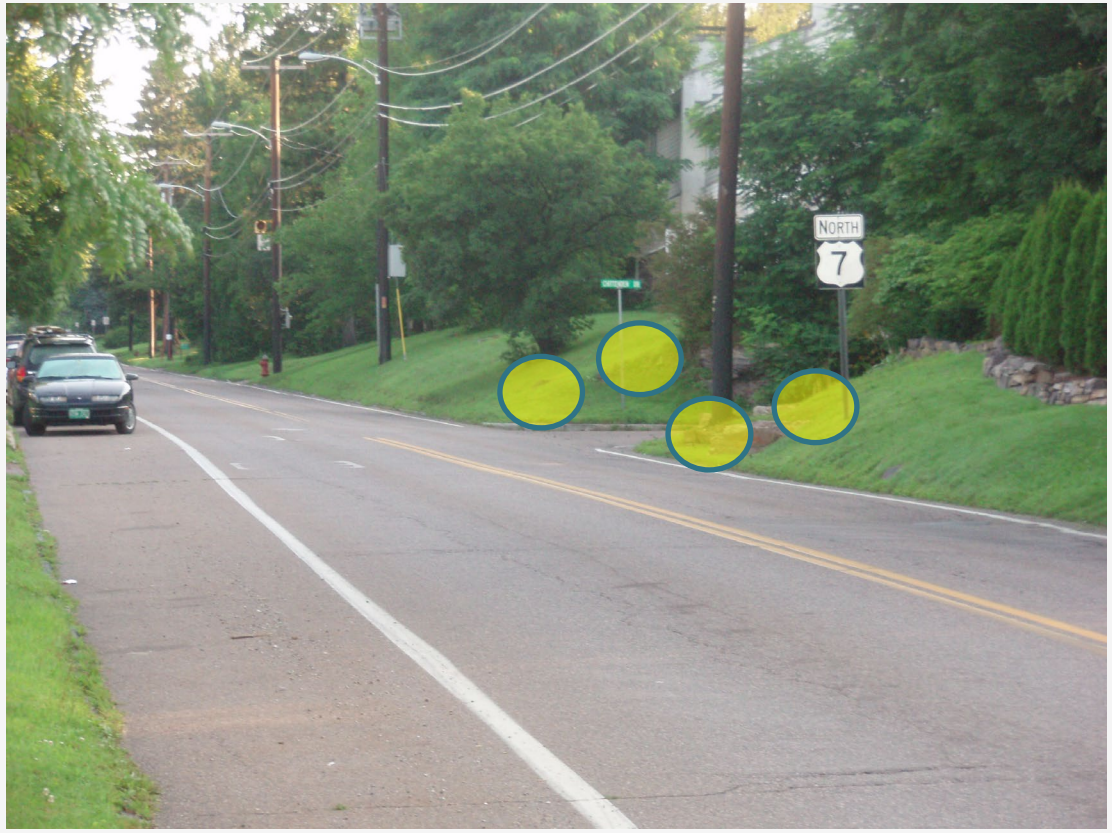
Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

<u>Ledge and Glacial Till</u>

- Borings located at depths of 3'-17'. Several knobs visible at surface throughout.
- Blasting in close proximity of houses and businesses will be a challenge. The bedrock is not conducive to drilling and ripping, so blasting will be necessary.



Challenges to Implementation
No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

Archaeology

- Phase I and II Archaeology investigations revealed Native American artifacts in the form of stone chips from tool manufacturing.
- A Phase III Arch activity will retrieve some of those artifacts during construction (UVM).

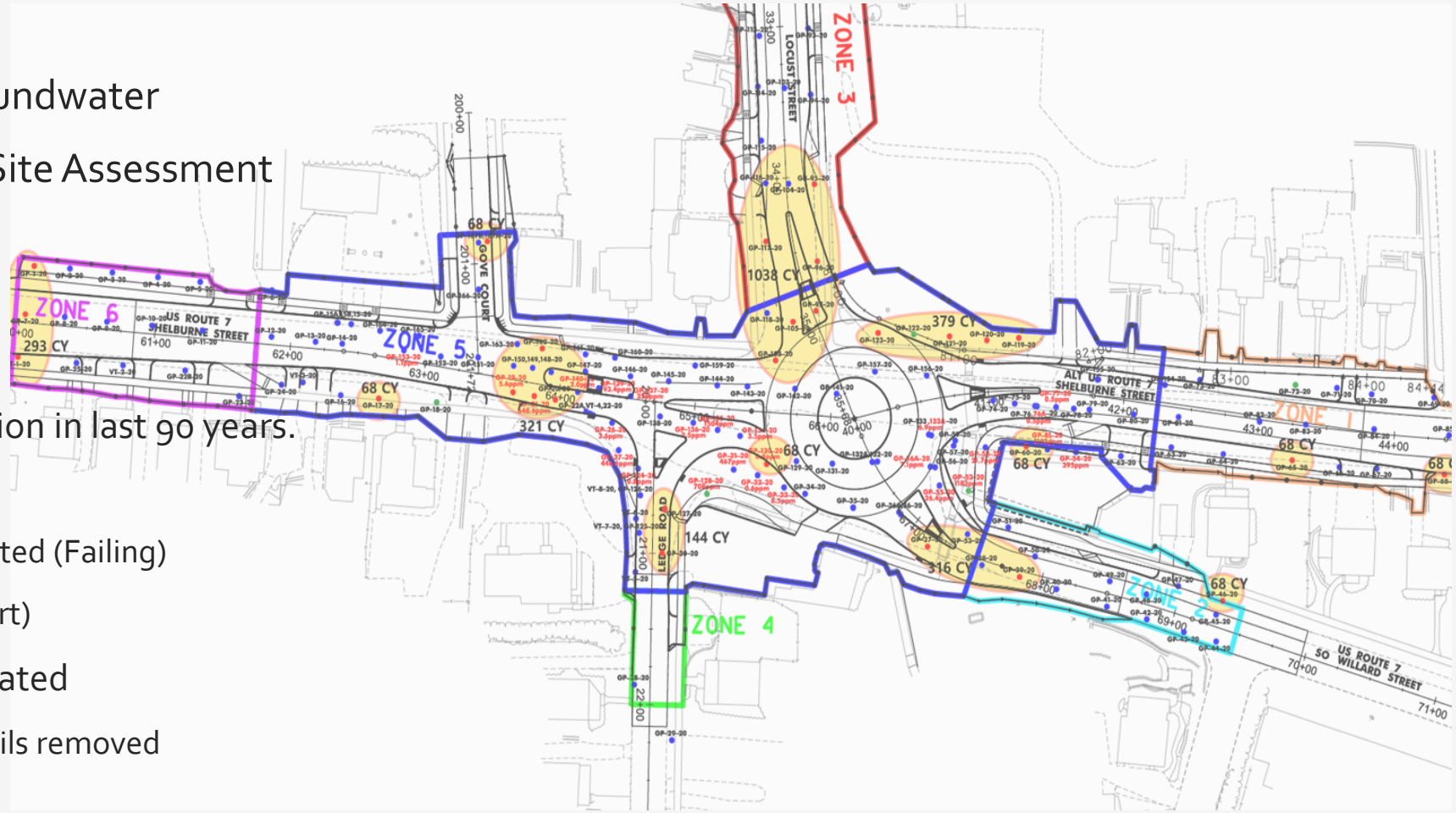
Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

Hazardous Materials

- Contaminated Soil and Groundwater
- Conducted Environmental Site Assessment (ESA).
  - 4 Gas Stations at intersection in last 90 years.
    - 2 SMAC'ed by VT DEC
    - 1 Currently being Mitigated (Failing)
    - 1 Site Active (Rotary Mart)
  - Development Soils anticipated
    - Top 6" existing urban soils removed



Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

Utilities

- Conducted Subsurface Utility Engineering (SUE) in 2015
  - Performed Quality Level B investigation with Ground Penetrating Radar
  - Performed Quality Level A investigation with potholing at 110 locations (photo)

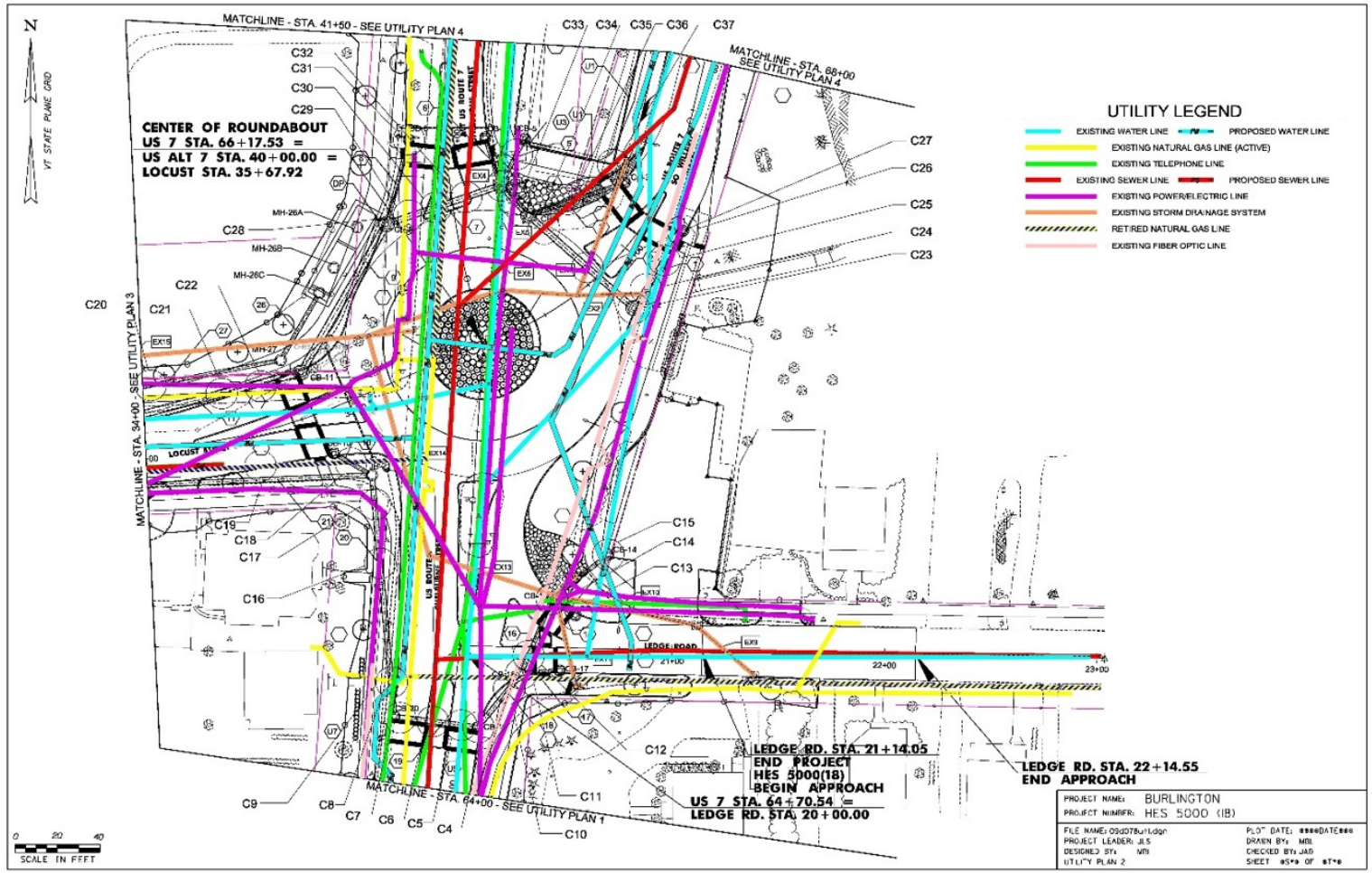
Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

Utilities

- 37,000 ft (~7 miles) of existing utilities
- Some active, some abandoned
  - Gas
  - Water
  - Sewer
  - Storm
  - Electric
  - Telephone
  - Telecom
  - Fiber
  - Cable TV



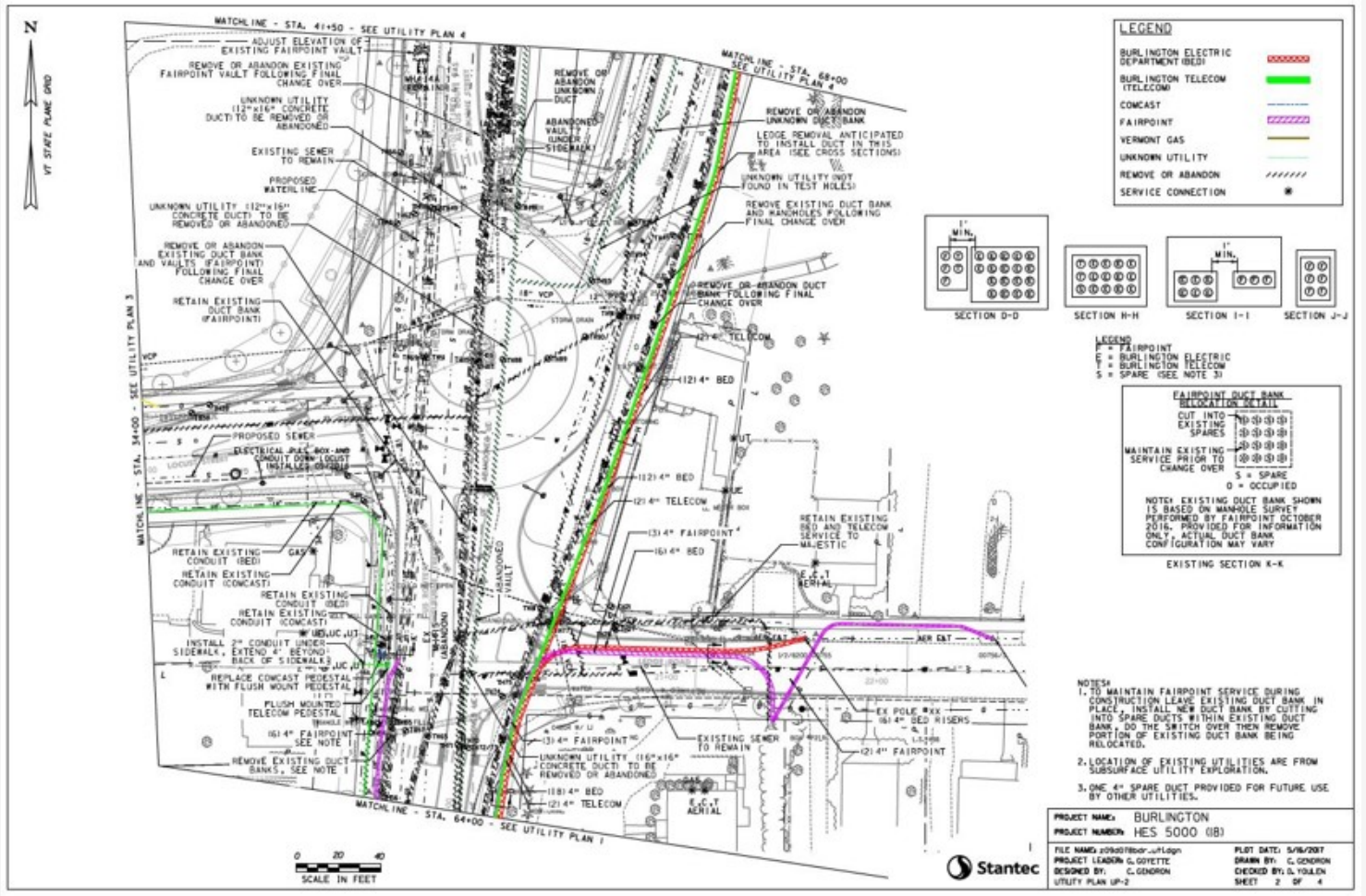
Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
BURLINGTON, VT.

Proposed Utilities

- Utility Duct Bank (Concrete-Encased)
  - As small as 1x3; as large as 4x5
  - New water line
  - Sleeve Existing Sewer Lines (COMPLETED)
  - To keep existing active services on while build new infrastructure.



Challenges to Implementation

No Small Feats

Shelburne St. Roundabout
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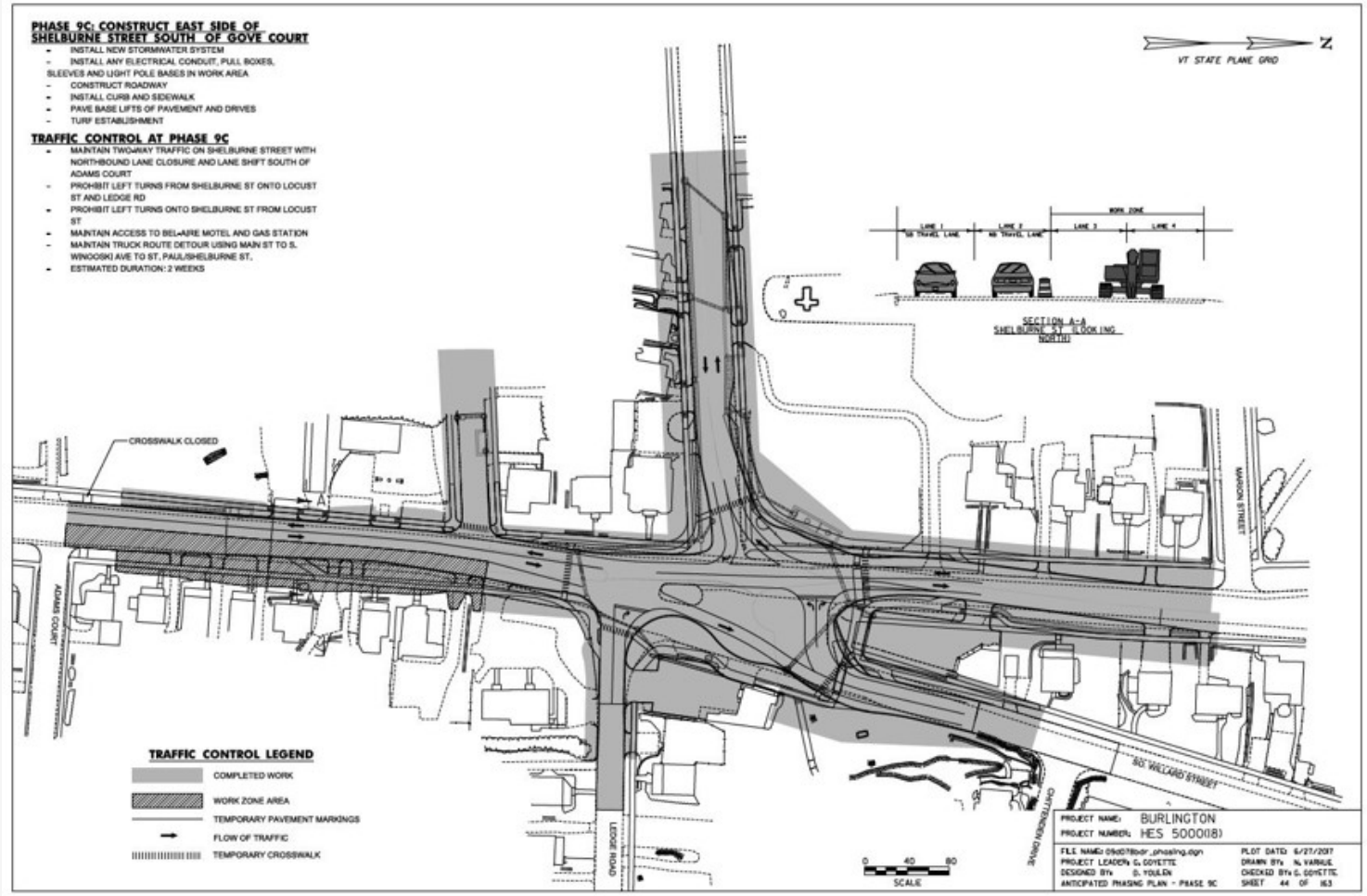
Transportation Management

- Maintain pedestrian and bicycle accommodations through construction
- Detours for certain construction phases
- Restrict Left Turns during construction (for certain phases)
- Potential off-site student pick-up/drop-off locations for school
- Comprehensive Construction Phasing/Sequencing Plan (photo)



Anticipated Construction Impacts

No Small Feats

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Ledge/Bedrock

- Shallow in places. Blasting required.
- Blasting Contractor will be available to the public for questioning.

Archaeological

- Excavation of historical artifacts by UVM.

Hazardous Materials

- Excavation of petroleum contaminated soils.
- Dewatering and treating of contaminated groundwater.

Utilities

- Build new buried infrastructure
- Keeping existing services active, there may be minor shut-offs with advanced warning.
- Disconnect and remove services after new services are installed

Transportation Management

- Many construction phases → TBD by Contractor
- Detours & Constant phase changes
- Lane and turning restrictions
- Maintaining driveway, bike, and pedestrian access

How we will engage with the public on these…

Public Outreach

The Importance of Communication

Shelburne St. Roundabout
BURLINGTON, VT.

WSP, Inc.

- Hired by VTrans
- In direct communication with VTrans and DPW
- Will be participating in **WEEKLY** meetings with the construction contractor and VTrans construction staff
  - Draft and broadcast traffic impacts
  - Manages Telephone Hotline & Project E-Mail Inbox
    - Take comments from public
    - Responds to questions directly or distributes to appropriate party for response
- **This is the FASTEST path for information to residents, businesses and commuters. See next slide.**

BURLINGTON, VT PUBLIC WORKS

VTrans Working to get you there Vermont Agency of Transportation

Schedule & Budget

Shelburne St. Roundabout
BURLINGTON, VT.

- Contract Award: ~May 1, 2021
- Contractor: S.D. Ireland, Inc.
- Work Begins in June/July 2021 – Schedule: *subject to change*
- 100% Federal Funded (-$171,000 for contamination clean-up: VT Petroleum Cleanup Fund)
- $7,777,777 contractor bid
- ***Meet S.D. Ireland at the Community Meeting (forthcoming) – keep your eyes open for an invite via E-Mail and USPS.***

Questions?

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BURLINGTON, VT.

Stay Involved

Shelburne St. Roundabout
BURLINGTON, VT.

Visit the Project Website:
https://vtrans.vermont.gov/projects/burlington-roundabout
Sign Up Here for E-Mail Notifications on Construction Activities and Traffic Updates

Email Us:
info@shelburnestreetroundabout.com

Call the 24-Hour Project Hotline:
802-496-8956