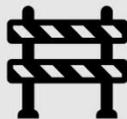




Exit 16 DDI

Diverging Diamond Interchange



CONSTRUCTION

January 12, 2023

Public Meeting



Housekeeping Items



- The meeting is being recorded and will be posted on the project website
- Remote attendees are muted throughout the presentation



For those joining us by computer or web browser

Questions may be entered in the Q&A Window at any time (button appears at the bottom of the screen)



For those joining us by phone

Press *9 to raise your hand to be called on during the question-and-answer session following the presentation



For those joining us in person

Please raise your hand and a member of our team will alert you when it's your turn to speak during the question-and-answer session

Zoom Orientation

View Options ▾

Zoom Ratio Fit to Window >

Exit Full Screen

Fit to Window
50%
100% (Original Size)
150%
200%
300%

VIEW OPTIONS:
Zoom Ratio,
Exit Full Screen

AUDIO:
Mute/Unmute
Audio Connection

CHAT:
Helpful links

RAISE HAND:
Raise hand
feature

Q&A:
Questions,
comments, Tech
Assistance

Mute Chat Raise Hand Q&A End

Today's Overview

- Project Scope
- Project Status/Schedule
- Project Construction





Colchester HES NH 5600(14) Scope

US Route 2/7 Corridor – 1.05 miles

Including:

- South Park Drive/Highpoint Ctr.
- I-89 Exit 16
- Mountain View/Lwr. Mtn. View Drives
- Hercules Drive
- Rathe Road/Champlain Drive
- Sunderland Woods Road
- Tigan Street (Winooski):
 - Traffic Signal Only
 - Part of the Main St. Revitalization Project

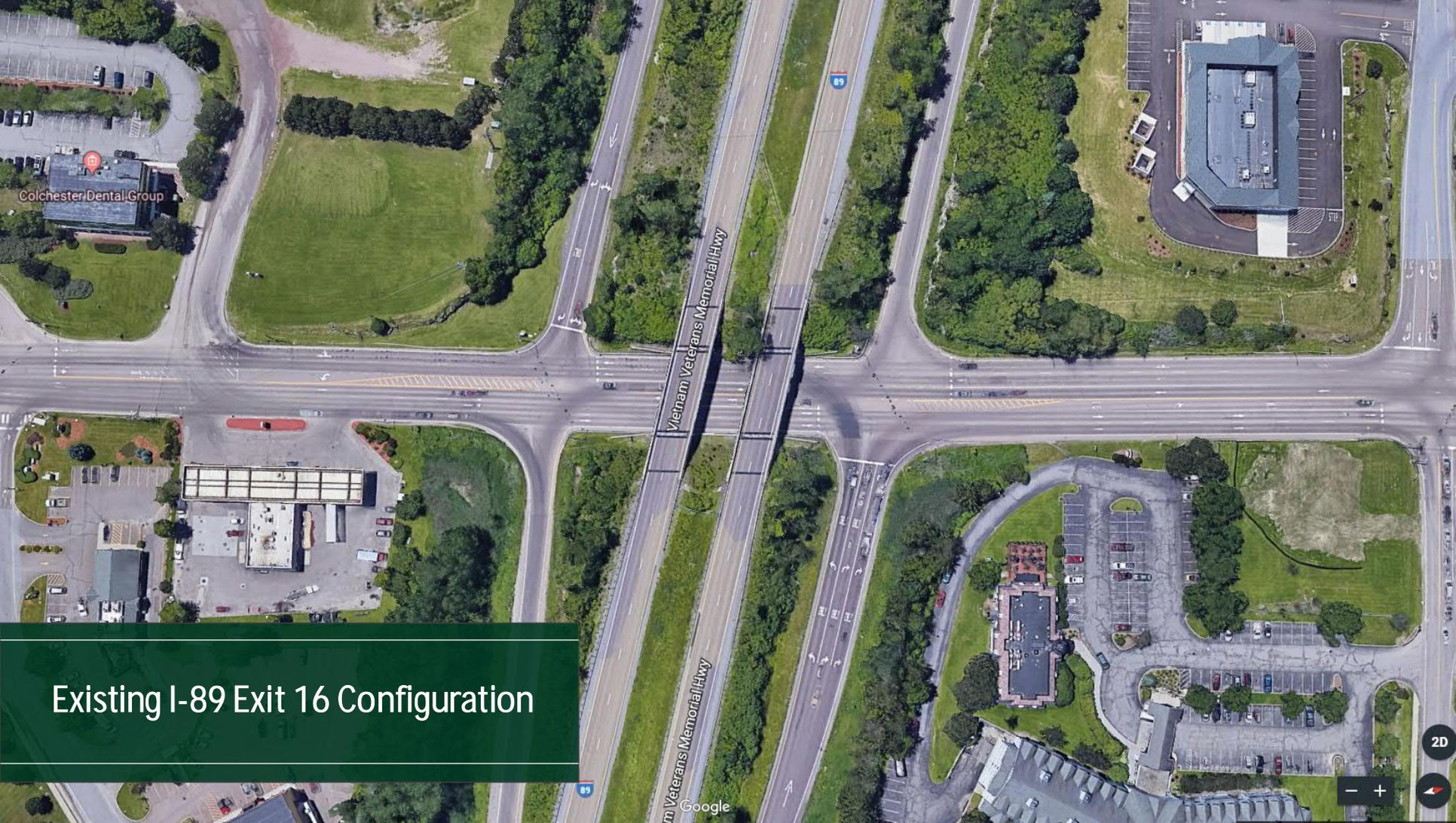




Colchester HES NH 5600(14) Scope

- Stormwater Treatment Infrastructure
 - 3 Ponds
 - 8 Grass Channels
- Roadway Banking Corrections
- New:
 - Signs
 - Pavement Markings
 - Traffic Signals
 - Roadway Drainage
- Reconfigured I-89 Exit 16 Interchange → DDI





Colchester Dental Group

Vietnam Veterans Memorial Hwy

Vietnam Veterans Memorial Hwy

Existing I-89 Exit 16 Configuration

COLCHESTER HES NH 5600(14) I-89 EXIT 16 DIVERGING DIAMOND



I-89 Exit 16 Re-configuration



I-89 Exit 16 Diverging Diamond Interchange

DDI Benefits

In over 117 Diverging Diamond Interchanges in the US, states have experienced:

- Over 37% reduction in crashes, injurious/fatal by 54%
- Over 50% increase in vehicular throughput

How a DDI performs efficiently:

- Eliminates signalized left turn movements for vehicles.
- Left turning movements Yield Condition allows movements during conflicting traffic phases.

Testament: 37 DDIs currently under construction; another 157 planned!



DDI Traffic Flow (1:05)



Bicycle and Pedestrian Flow (0:07)

DDIs in the Wintertime

- Of the 117 DDIs active in the US & Canada, 68 are built in areas where snow is expected annually (58%).
- Snow plowing happens normally.
- For some plow routes, use of the U-Turn on the Interstate will no longer be necessary.
- VTrans has discussed winter maintenance with Utah officials and concurred that the states share similar roadway clearing techniques.





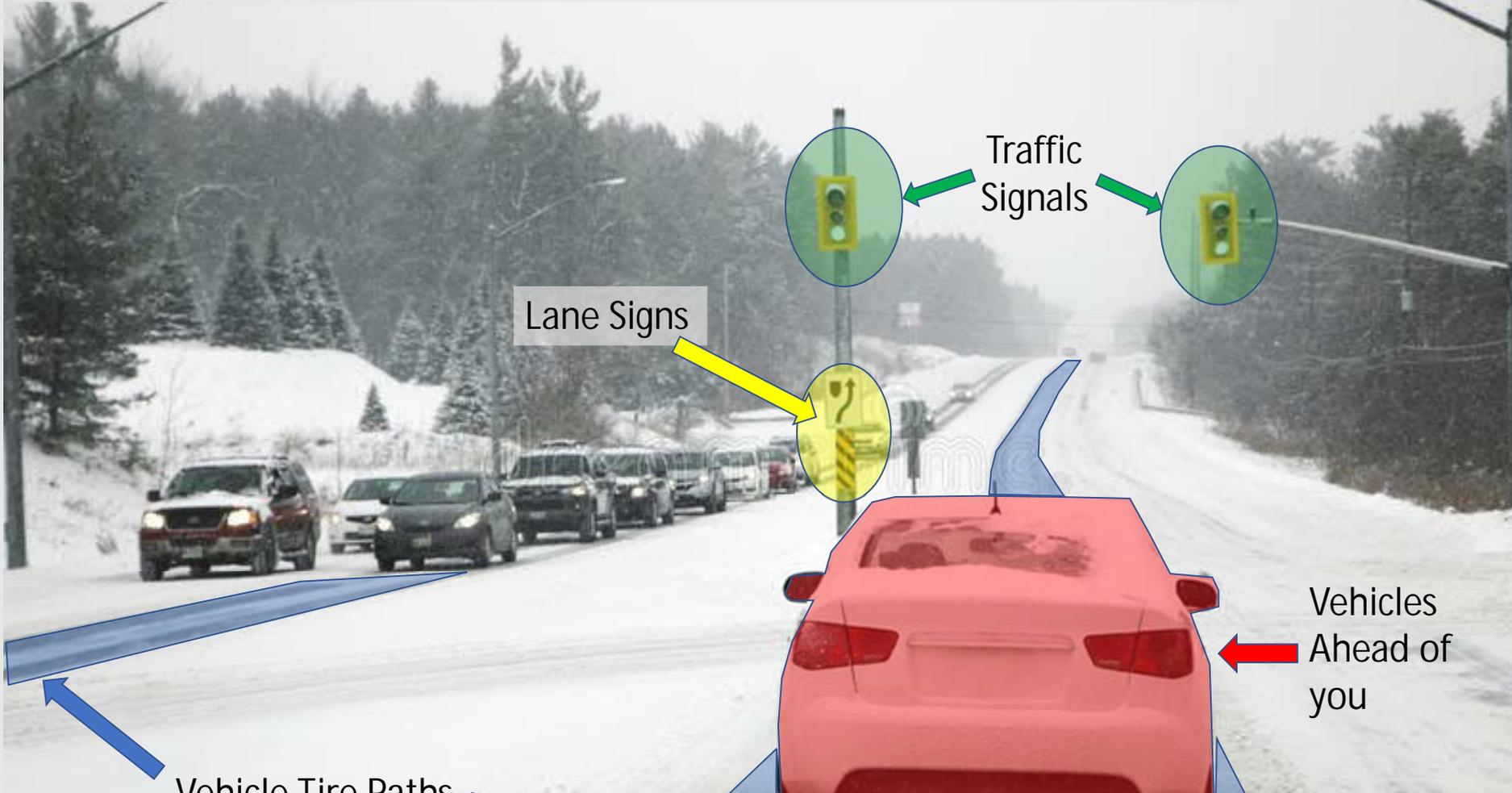
Robust Pavement
Markings



How Will I Find The Lanes in the Wintertime?!



Things you normally look for while driving in snow....



Traffic
Signals

Lane
Signs

Vehicles
Ahead of
you

Vehicle
Tire
Paths

are still there on the left side of the road!



Traffic Signals



Lane Signs



Vehicles Ahead of you



Vehicle Tire Paths

“People Can’t Figure Out the Winooski Circulator...”



Circulator

- Yield conditions
- Higher speeds, straightaways
- Sight distance, grade
- Awkward side streets & parking areas
- Pedestrian crossings at unexpected locations

DDI

- Traffic signal
- Stop-Go-Stop-Go, no choices/decisions to make
- Focus sight distance, no grade
- No side streets or parking
- Pedestrian crossings at predictable locations

Summary

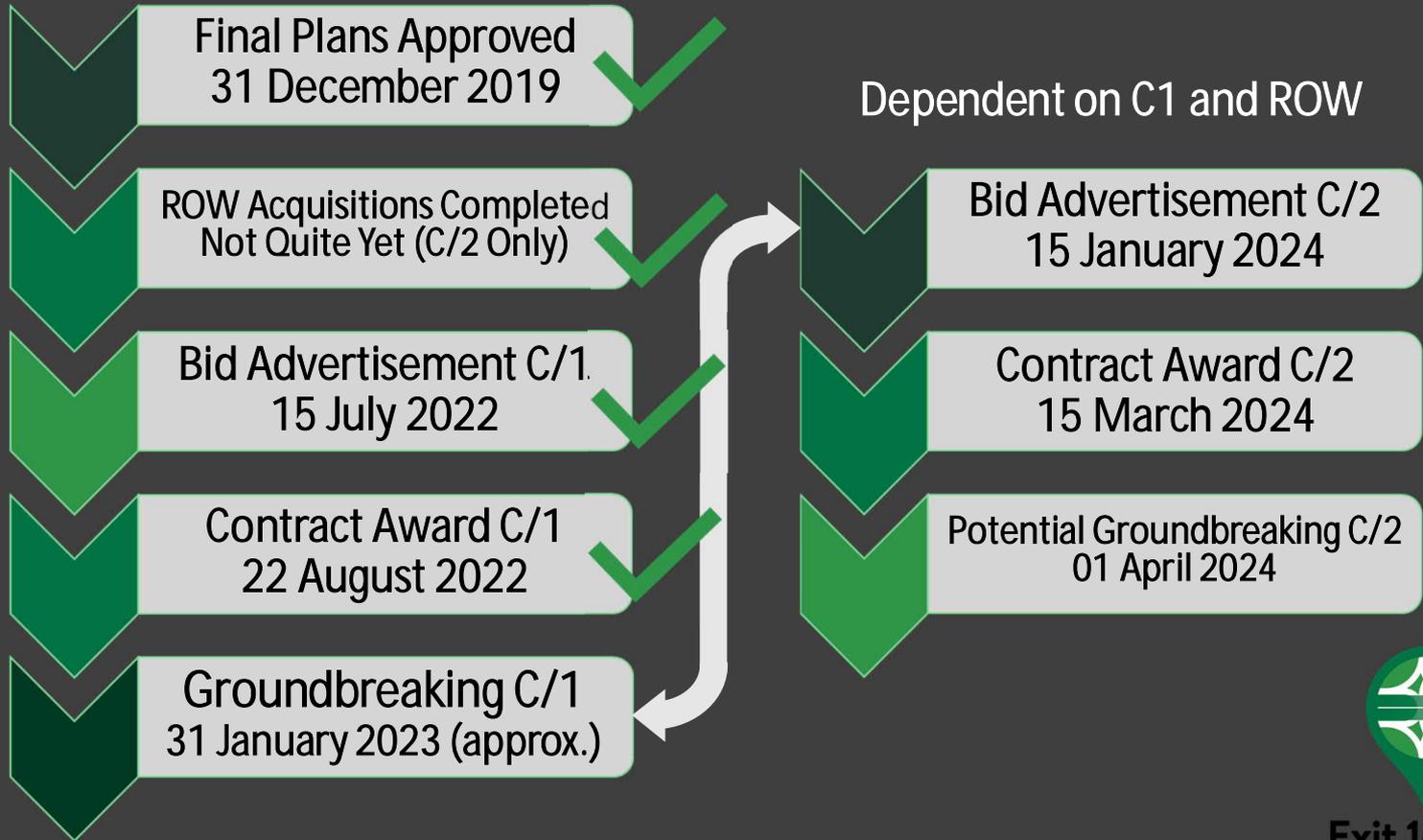
- Higher speeds, straightaways

Summary

- More fluid, less decisions to process



Project Status



Project Construction: 2 Construction Phases (2023-2026)

Night Work = 7:00 PM – 6:00 AM



Daytime roadway work will be restricted to one lane only. There may be multiple lane closures at night.

1st Phase – “Contract 1” or “C/1” (2023)

2nd Phase – “Contract 2” or “C/2” (2024-2026)

- Breakout required because buried infrastructure needs to be relocation prior to roadway surface work.
- It also makes construction more efficient later because the interchange contractor will not have work around or negotiate with the existing utilities (companies and transmissions/services).

Project Construction: 2nd Construction Contract (2024-2026)

Night Work = 7:00 PM – 6:00 AM



Daytime roadway work will be restricted to one lane only. There may be multiple lane closures at night.

- DDI, Roadway, Sidewalks, Signals, Signing, Landscaping work
- Drive accesses will be open
 - If a drive needs to be temporarily closed short-term, an alternate ingress/egress will be provided
- Night-time noise
 - The contractor will be required to utilize noise reduction mitigation measures. FHWA Construction Noise Handbook.

Project Construction: 1st Construction Contract (2023)

Night Work = 7:00 PM – 6:00 AM



Daytime roadway work will be restricted to one lane only. There may be multiple lane closures at night.

- Retaining Walls (Feb-Apr)
 - Can be constructed during the day (outside of traffic)
 - Probably one construction crew
- Utility Relocation (Apr-Sep)
 - Buried Waterline
 - Buried Telecommunication Duct
 - Buried Gas Lines
 - Probably two construction crews
- Ledge Removal (Feb-Aug)
 - Blasting is only allowed during the day

VTrans' construction staff reserves the right to modify how traffic flows and is managed based on real-time conditions.

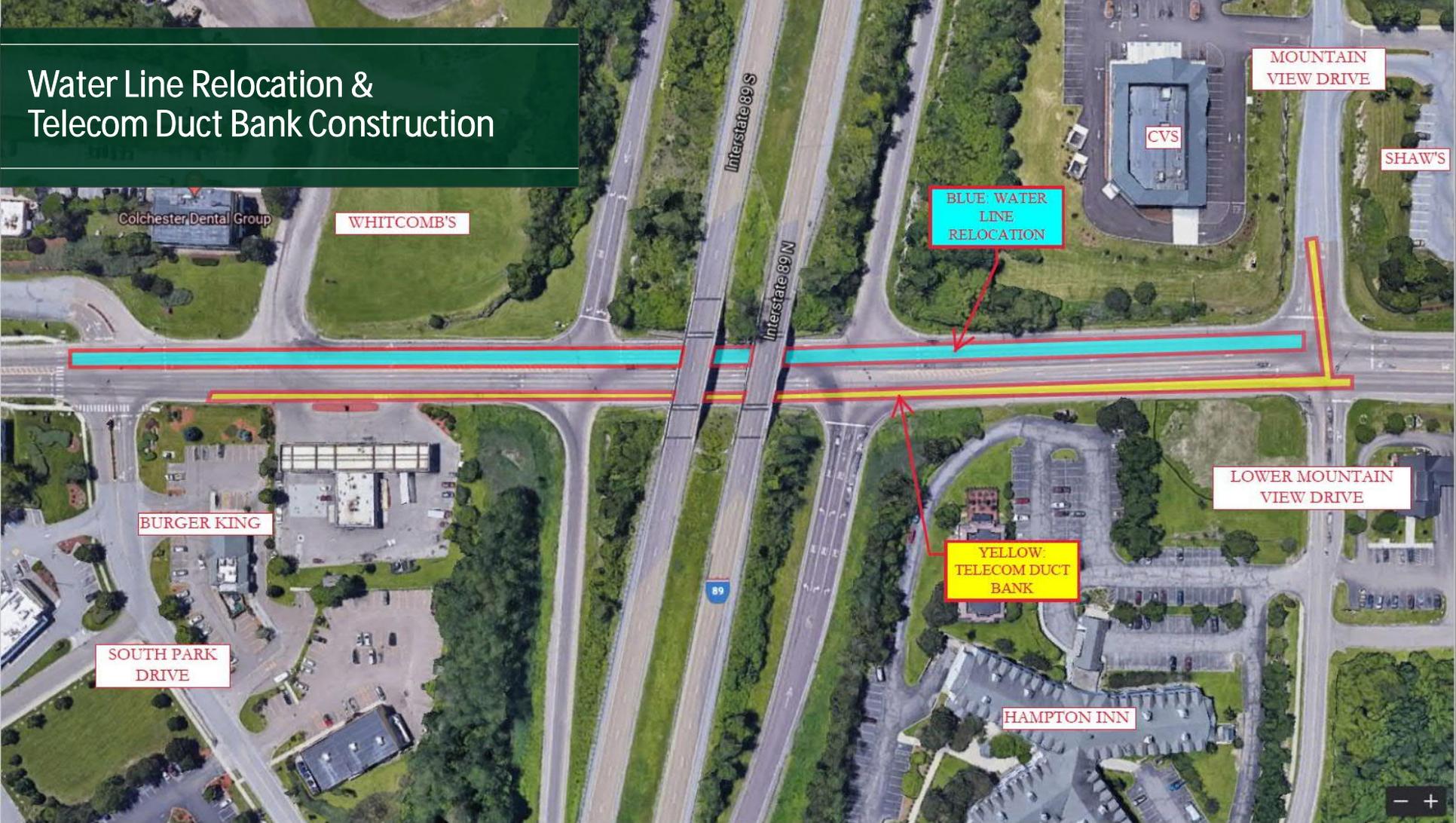
Retaining Wall Construction

This will allow pedestrians safe passage outside of the roadway and keep them separated from Contract 2 work zone.



Exit 16 DDI
Diverging Diamond Interchange

Water Line Relocation & Telecom Duct Bank Construction



MOUNTAIN VIEW DRIVE

CVS

SHAW'S

WHITCOMB'S

Colchester Dental Group

BLUE WATER LINE RELOCATION

LOWER MOUNTAIN VIEW DRIVE

YELLOW TELECOM DUCT BANK

BURGER KING

HAMPTON INN

SOUTH PARK DRIVE

89



Contract 1 Contractor



S.D. Ireland Brothers, Inc.
General Contractor/Site Work
Matt Wheeler, PM
Kurt Hutchins, APM



Maine Drilling & Blasting
Subcontractor/Ledge Removal

Project Details – 1st Construction Contract

- Retaining walls
- Underground Utility Relocation
 - Buried waterline, telecommunication duct, and gas lines
- Underground utility relocation will require blasting
 - Deep relocation
 - Approximately 12 feet
 - Shallow bedrock
 - Approximately 4 feet in certain locations

What blasting is:

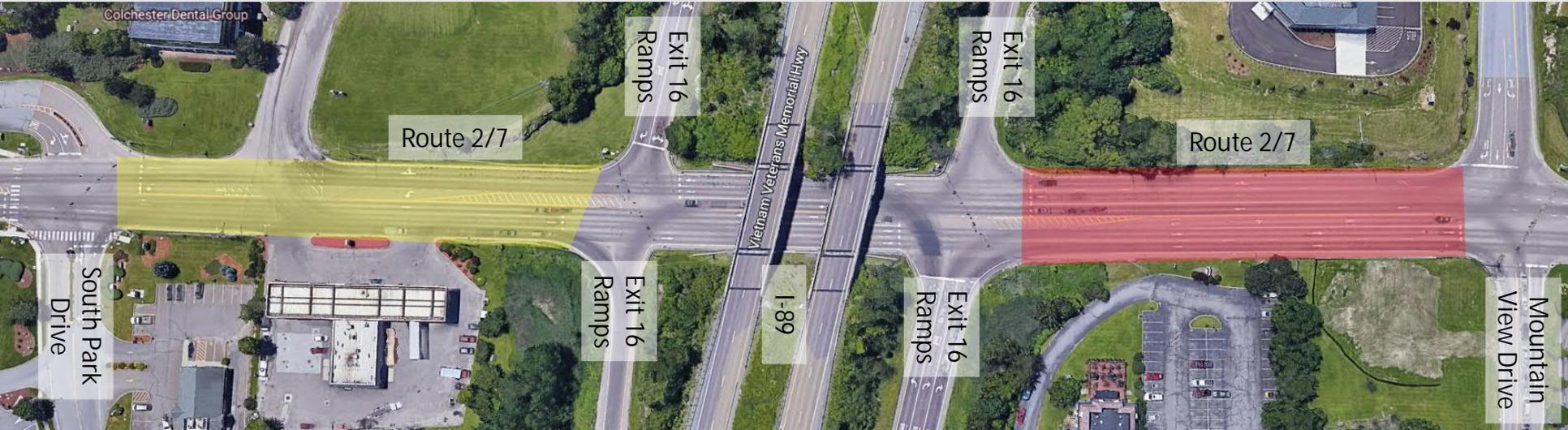
- A series of small, controlled explosions used to shatter rock
- Blasts will be underground and contained
- There will be a small rumbling in the ground

What blasting is NOT:

- Blasting is NOT like you see on TV or in movies
- There will be NO visible fireballs, clouds of dust or flying debris
- Buildings will NOT shake and rattle like an earthquake
- Blasting will NOT be loud

Blasting Location

- Anticipated between the I-89 Ramps and Mountain View Drive (red)
- Possible between South Park Drive and the I-89 Ramps (yellow)



Why conduct blasting:

- Most efficient way of rock removal
 - One blast can fracture rock that would take days or weeks using mechanical methods
- There are thousands of feet of underground utilities being installed
 - Blasting will expedite this process and the project in general

How will blasting be conducted:

- A series of small blasts
 - A delay is set between each blast to lessen vibrations
- Blasts will be contained with blasting mats
 - Placed over the top of the blasting area
 - Containing any debris from leaving the work area

Blasting Activities

Blasting is restricted to weekdays during non-peak hours.



- Blasting is restricted to weekdays during non-peak hours
 - Monday – Friday, excluding holidays
 - 9:00 AM – 3:00 PM
- Only after proper warning and safety measures are in place
 - Audible signals before blasting
 - Traffic stopped using rolling road blocks
 - Confirmation that the area is clear

Blasting Warning
Signals

Three Whistles
5 minutes to blast

Two Whistles
1 minute to blast

One Whistle
All clear

Blasting Contractor



- Maine Drilling and Blasting
 - Headquartered in Maine with locations throughout the northeast and as far as Georgia and Tennessee
 - Provide blasting services since 1956
- Many of their drillers and blasters have over 25 years of experience
 - Have completed many similar projects
 - Have worked in large cities, on college campuses, and other sensitive areas

What to expect:

- Lots of preparation
 - Audible signals
 - Rolling Road Blocks
 - People checking to make sure the area is clear
- A small rumble in the ground
 - Existing rock is very hard and brittle
 - Small delayed charges will be used
 - Blasting mats will contain any debris

What precautions are being taken:

- Pre-Blast surveys are being conducted at adjacent properties
- Seismographs are deployed throughout the project
- After a blast the area will be cleared by blasting specialists
 - They will ensure there are no undetonated charges
 - Only after clearance will motorists and the general public be allowed in the area



Vibration Monitoring

Public Outreach - Organization



Public Information Consultant
Megan Savage, Communications and Public Involvement Manager
Annabelle Dally, Senior Communications and Public Involvement Consultant



Stakeholders

Who are stakeholders?
Users. Residents. Businesses



CITY OF
WINOOSKI
VERMONT

Municipalities

Public Outreach - Scope



Information

- Project Scope
- Project Timeline & Schedule
- Construction Activities
- Traffic Updates
- Incident Management

Education

- Animations
- Videos
- Narratives
- Driving Simulator

Public Meetings, Event Booths, Website, Phone Hotline

Public Outreach

Multilingual Communications

- Arabic
- Bosnian/Serbian/Croatian
- Burmese
- French
- Kirundi
- Nepali
- Somali (Mai Mai)
- Spanish
- Swahili
- Pashto – **New!**

The Exit 16 DDI team continues to collaborate with City of Winooski and the Winooski School District to identify, manage, and coordinate communications with residents/users where English is not their primary language or written form of communication.



Exit 16 DDI
Diverging Diamond Interchange

Construction on the Exit 16 DDI Project is anticipated to begin in fall 2022 and continue through spring 2025. For additional information on the project, please visit the project website.

الحصول على معلومات إضافية حول المشروع، يرجى زيارة الموقع الإلكتروني للمشروع.

Để biết thêm thông tin về dự án, vui lòng truy cập trang web của dự án.

Para obtener más información sobre el proyecto, visite el sitio web del mismo.

有关该项目的其他信息，请访问该项目网站。

Wixii macluumaad dheeraad ah oo ku saabsan mashruuca, faadlan booqo website-ka mashruuca.

Для получения дополнительной информации о проекте, пожалуйста, посетите веб-страницу проекта.

Pour de plus amples informations sur le projet, veuillez consulter le site web du projet.

द प्रोजेक्ट पे अरहे दा असाफी मलुमातु लुआर, मेरिबानी वक्री द प्रोजेक्ट वीब साईटमा जानुहोस।

Wixii macluumaad dheeraad ah oo ku saabsan mashruuca, faadlan booqo website-ka mashruuca.

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Kwa maelezo ya ziada kuhusu mradi huo, tafadhali tembelea tovuti ya mradi.

Để biết thêm thông tin về dự án, vui lòng truy cập trang web của dự án.

العربية Español Soomaaliga

አማርኛ Kirundi 中文(简体)

Bosanski नेपाली Kiswahili

Français ភាសាខ្មែរ Tiếng Việt

Exit 16 DDI
Diverging Diamond Interchange

PROJECT OVERVIEW INTERACTIVE PSP WHAT IS DDI EQUIPMENT LIBRARY STAY INFORMED FAQS TRANSLATED MATERIALS

Vermont's First Diverging Diamond Interchange

Watch Educational Video

The Vermont Agency of Transportation (VTTRANS) is improving the roadway

www.Exit6DDI.vtrprojects.vermont.gov
info@Exit6DDI.vtrprojects.vermont.gov
24-Hour Project Hotline: 1-802-595-4399

VERMONT
AGENCY OF TRANSPORTATION



@VTransOnTheRoad



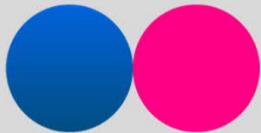
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Questions?



Exit 16 DDI

Diverging Diamond Interchange



Visit the project website:

www.Exit16DDI.VTransProjects.Vermont.gov



Call Our 24-Hour Project Hotline:

802-595-4399



Email Us:

info@Exit16DDI.VTransProjects.Vermont.gov