



**ENGINEERING • SURVEY**  
**PLANNING • ENVIRONMENTAL**

## “Where the Forest Meets the Asphalt” –The Reality of Site Development in Vermont Today



## Who:

Trudell Consulting Engineers (TCE) is a locally owned multi-disciplinary consulting firm founded in 1975.

We are a team of 22 – 11 women and 11 men

## Presenters:

- John Pitrowiski, P.E. – Vice President/Engineer - [john.pitrowiski@tcevt.com](mailto:john.pitrowiski@tcevt.com)
- Karina Dailey, P.W.S., C.W.B. – Senior Ecologist – [karina.dailey@tcevt.com](mailto:karina.dailey@tcevt.com)
- Mark Day, L.L.S. – Vice President/Senior Surveyor – [mark.day@tcevt.com](mailto:mark.day@tcevt.com)
- Jeremy Matosky, P.E. – President/Engineer – [jeremy.matosky@tcevt.com](mailto:jeremy.matosky@tcevt.com)

## What:

We specialize in site/civil engineering, environmental science, landscape architecture, and land surveying. Our clients include municipalities, private businesses, single family home owners, developers, and non-profit organizations throughout Vermont.

## Where:

We work Statewide! We have 2 offices – 478 Blair Park in Williston, and 42 Mapleville Depot, St. Albans.

## Examples of Clients Who Need Us:

- What is the highest and best use of my land?
- I want to build a 40-unit housing project – please permit.
- Can I subdivide my parcel?
- Does my project need ACT 250?
- Help, I have wetland issues and I don't even know what they are!
- I want to sell my house as a 3 bedroom but I only have a WW permit for a 2 bedroom
- I need an Alta Survey for a bank loan
- Stormwater is eroding my property, can you help?
- I can't find my property boundaries.
- Is a solar project good for this site?
- I need a really good trail map!
- Please prepare a wildlife and plant report for my parcel – Natural Resource Study
- Can you design and permit a gas station?



***“TCE is here to guide clients with VT land interests to build sound projects”.***



# Environmental Services

**We are often the first people out on the property identifying the Natural Resources.**

- Wetlands (delineation, permitting, advice)
- RTE, Wildlife and Plants (surveys, testimony)
- Ecology Restoration (streams, wetlands, etc)
- Erosion and Sediment Control
- Hydrology/Stormwater Studies/Culverts
- GIS Mapping, 3D modeling and Analysis
- Construction Observation
- Invasive Plant Management and Control



**“We assemble the pieces of the Development Puzzle”**

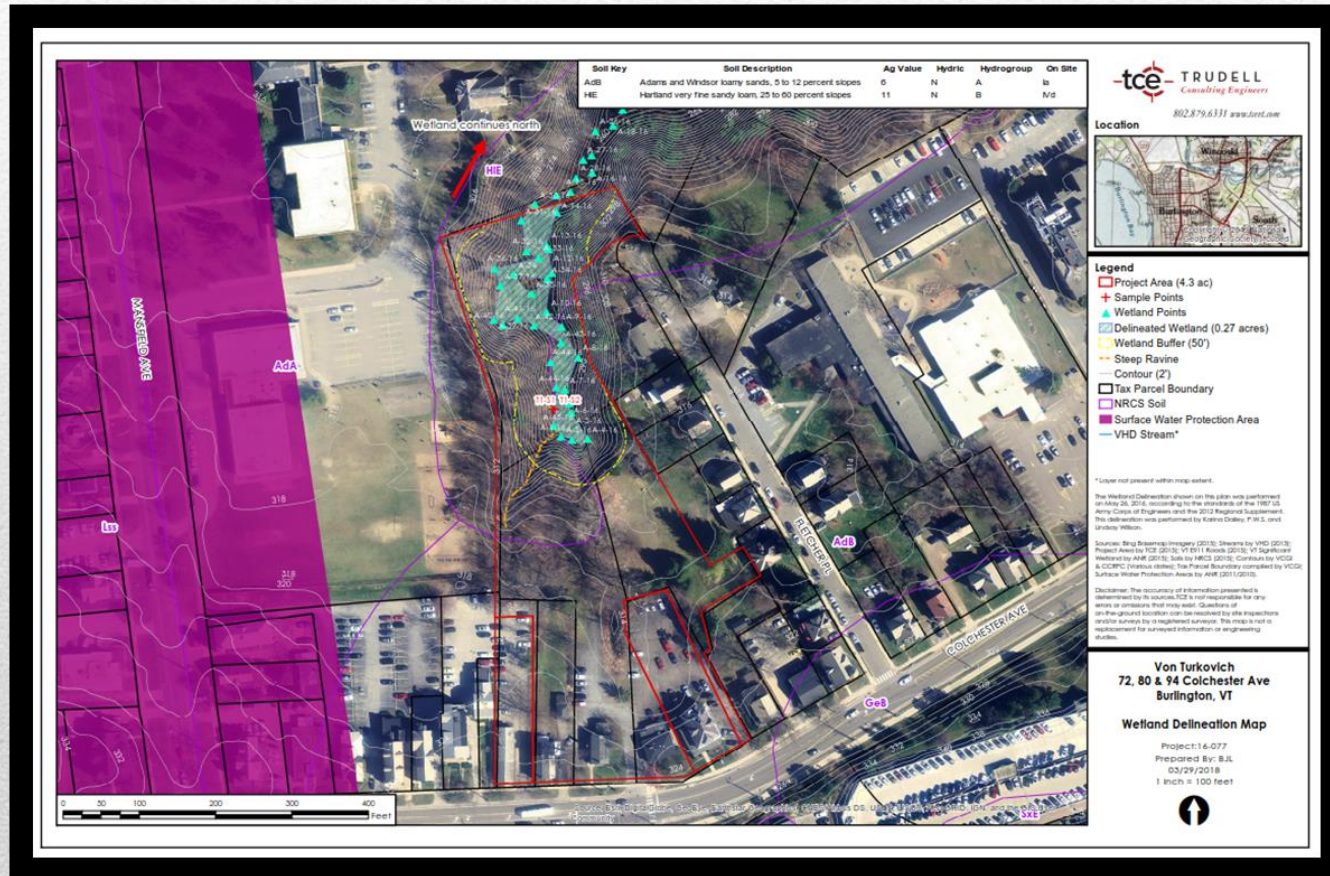
# Case Study 1 - Environmental



- Major housing shortage in Burlington
  - Contiguous property owners propose a collective development of 3 lots, allowing for utilization of large rear/interior area for new housing. A single building (approx. 23,418 sf) with 71 residential units is proposed, with both surface and underground parking. All existing, street-facing structures are proposed to be retained.
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# Feasibility Study

Identify Natural Resources Present and Permits Needed



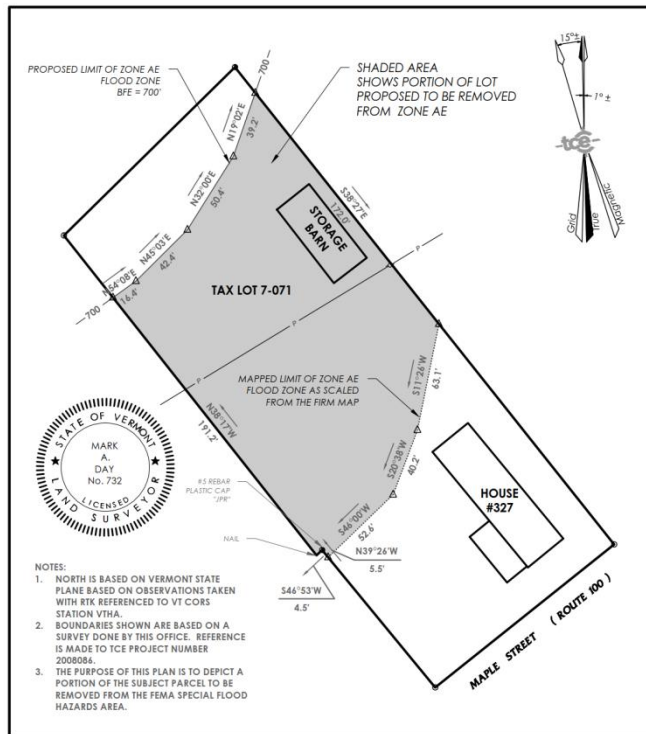
“We are connecting people to landscapes by design”

# Land Surveying

- Boundary Surveys
  - Boundary Adjustments
  - Subdivisions
  - Easement Surveys
  - ALTA/NSPS Land Title Surveys
  - FEMA (Elevation Certificates & LOMA's)
  - Topographic/Utilities/GPS
  - Construction Layout
  - Expert Testimony
- 



# Case Study - Survey



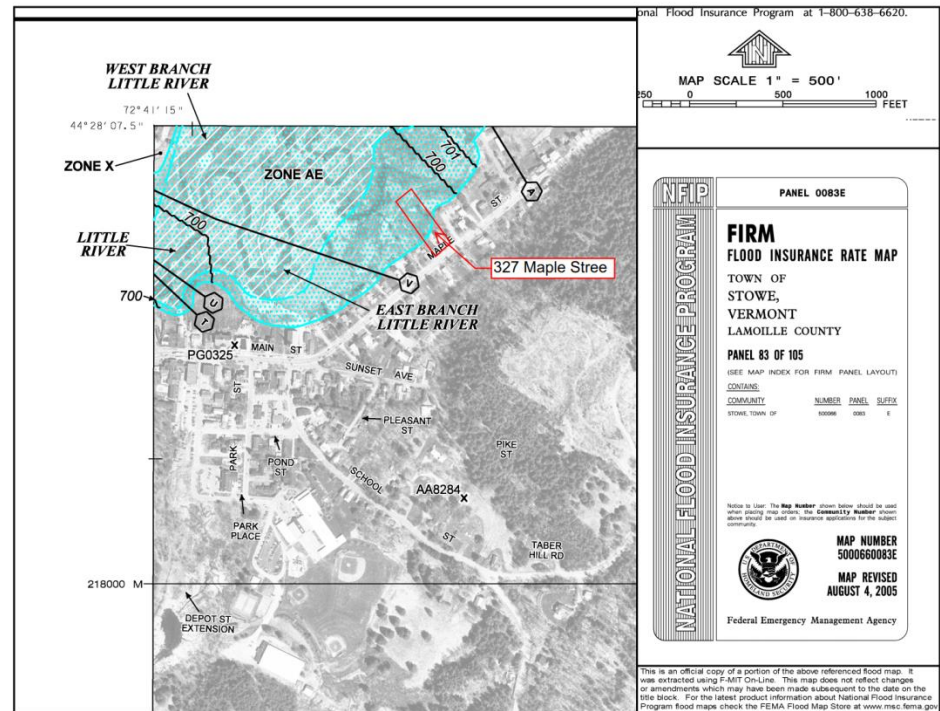
Project Name: **DIANN PERCEY - 327 MAPLE STREET, STOWE, VERMONT**

Sheet Title: **LOMA SITE PLAN**

Date: **5/11/16** Drawn By: **MAD**

Scale: **1" = 50'** Project Engineer: **MAD**

Project Number: **16-061** Approved By: **MAD**



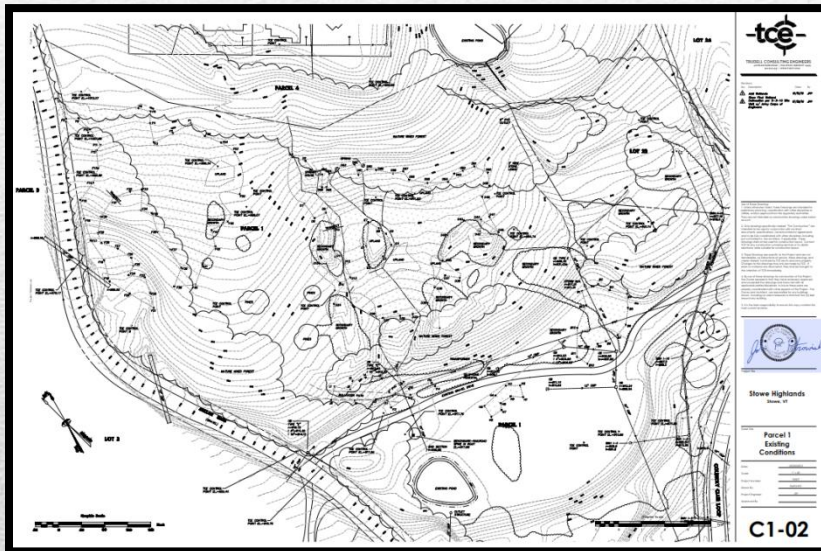
## FEMA – Letter of Map Amendment (LOMA)



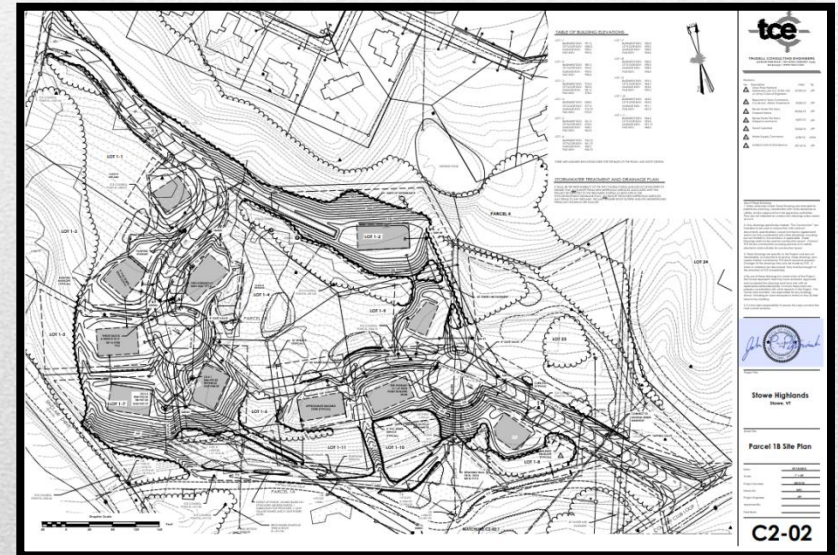
# Case Study 2 -Engineering

## Stowe Club Highlands

### Existing



### Proposed



Development Stages: Feasibility Study, Wetland Delineation, Topo Survey, EC Plan, Sketch Plan, Regulatory Communication, Design and Permitting, Construction Oversight, on-going Monitoring.

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**A** LOT 1A-2 EXISTING VEGETATIVE GROWTH  
FACING NORTHWEST



**D** LOTS 1A  
FACING SOUTH



**B** LOT 1A-1  
FACING SOUTHEAST LAON SINCLAIR DRIVE



# Clients We Work With

Meeting our client's needs, on time and on budget, is the foundation of our business and drives the decisions and actions we take on a daily basis.



**Realtors  
Attorneys  
Municipalities  
Architects  
Land Trusts  
Other Consultants  
Private Landowners  
Developers  
Ski Resorts**

# Permits....

**Stormwater Discharge Permit**

**VT Wetland Permit**

Army Corps Wetland/Water Permit

Shoreland Protection Permit

Stream Alteration Permit

**Water and Wastewater Permit**

Water System Permit to Construct/Operate

**Act 250 Permit**

Act 248 Permit

**Local Permitting**

VTrans Curb Cut Permit

Allocations



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“We assemble the pieces of the Development Puzzle”

# Engineering Services

**Does your Client have a general idea but needs  
To make the project a reality?**

- Site Design/Concept Plans/Master Plans
- Building Expansion and Future Phasing
- Local Regulatory Review
- Culvert Design and Install
- Water/Wastewater Design
- Stormwater Master Planning
- Annual Inspections
- Erosion Control and Stabilization
- Traffic Studies
- Construction Observation
- HOA assessments and compliance plans for new town regulations



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As an architect builds a house, we build the yard.

# Questions?



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***Thank you!***

Vermont Underground Locators  
494 Blair Park Road  
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## Powerful Visualization Tools

Sell Homes Before They Are Constructed

Showcase 3D Panoramas via Web Link

Explore Lot Development Potential

Real Time Rendering

3D Video Tours With Little To No Downtime

User-Controlled 3D Walkthroughs



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