

# STATEWIDE PARCEL MAPPING

---

## *The 4 W's*

### **1 Introduction.**

Beginning in April of 2009 the Right of Way Section of the Vermont Agency of Transportation set out on a mission. The vision was simple, to map of all of its right of way.

The Vermont Agency of Transportation (VTrans) has many business processes and operations that are dependent on being able to quickly and accurately identify VTrans legal right-of-ways (ROW). Unfortunately, the information and processes in place today make this data extremely challenging and time consuming to find. ROW data is stored in multiple disparate systems (silos), or is non-existent in some cases.

### **2 Mission Goals.**

The ROW section in VTrans has recently initiated a ROW Data Modernization project with the intent of identifying what data the state does have, and to bring as much of it as we can into a common platform for viewing and research. We are doing this to:

1. To enhance labor efficiency (e.g. time savings/increased productivity) by making right of way data readily available to multiple users. An outcome of enhanced labor efficiency is:
  - a. Streamlined project scoping and delivery.
2. Increase organizational effectiveness (e.g. higher quality results, business process improvements and cost avoidance), thereby yielding positive benefits for the State of Vermont and its citizens. Outcomes of increased organizational effectiveness are:
  - a. Reduced spending on unnecessarily redundant efforts.
  - b. Reduced costs for court cases and compensation payouts.
  - c. Greater effectiveness when field research and ground surveys are genuinely necessary, given access to existing ROW data, thereby focusing efforts (and costs) to just what is needed.
  - d. Reduced workload on ROW staff by providing Self-service to ROW data both internally and externally.

- e. Income from modernized property management (i.e. proactive sales of surplus property).

### 3 What have we done?

1. Perform Discovery (2009-2010). What are the resources? In this case I discovered many silos.

Assess the current state (2009-2011). What is the effectiveness and efficiency of the resources? Or put another way, what is the integrity and accuracy of the information? The answer to this question is a direct result of two things, the people responsible for maintaining it and the technology responsible for accessing and managing it.

The first thing I noticed is that there is no single source for right of way information and furthermore there is no integration or consistency between the different systems. The result or effect of this is that there is redundant and conflicting information. A user of this information is left with very low confidence in the accuracy and integrity of the information they are looking at.

2. Define the vision (2010-2011)
3. Analyze the Gap (2010-2012). What is the Gap between our current state and my vision?
4. Develop Action Plan (2011-2012)
5. Implementation is currently underway
  - a. We have mapped approximately 1100 miles out of the 2700 State Highway miles.
  - b. Out of the 255 political units or towns:
    - i. 18 do not have any State Roads
    - ii. Completed a first pass at mapping ROW for 89 (35%) towns
    - iii. 4 more are in process
    - iv. Which leaves 144 more to do (of the 144 communities left to look at, we have done a first pass at Routes 2, 7, 89, and 91).

- v. Completing a first pass of our existing right of way information would yield approximately 1900 miles (70%) of mapped right of way.

## 6. Completed a ROI

### 4 Where are we going?

1. Statewide authoritative right of way data set. The idea here is to create one-stop shopping for accurate right of way data that is usable in many different applications, e.g. transportation projects, transportation planning, district enforcement, utility permitting, private engineering and surveying, etc.
2. Interoperability. The goal of interoperability is to get the most use of the right of way data set as possible. We don't want it to be application centric, that is, you can use it across multiple platforms and recycle the information over and over again.
3. Integration with other business systems. The goal of integration is to enrich the attribution of the right of way data. We have project, business, financial and legal information that is managed in other non-spatial systems that is in some way connected to the right of way data. To be able to access all of this other information spatially would increase efficiency.

### 5 When will we get there? High Level Road Map.

The question that is most likely foremost on people's minds is when will this initiative be completed? I've estimated that we will have an authoritative right of way data set based on our existing right of way information around 2017.

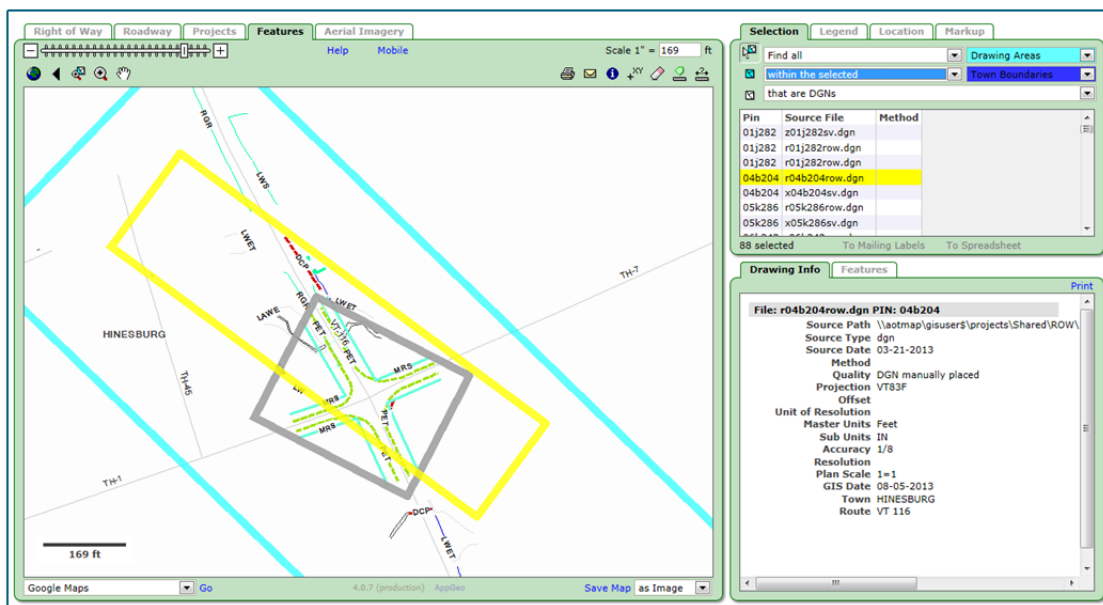
### 6 Why are we here in front of you today?

1. In part we're trying to connect this initiative to relevant topics. Some of the topics are:
  - a. Asset Management. What is the most important resource in the State of Vermont? I would argue that it is not the sugar maple, it is not our ski resorts, and it is not our transportation system. Collectively these resources are dependent upon the land on which they lie...we're trying to confirm and quantify the existing property rights that are owned by VTrans.

- b. Emergency readiness. How could we improve our response time during events like hurricane Irene? Tropical Storm Irene required rapid response to repair damaged roads and bridges. Permission wasn't always received for crossing private property (i.e. "Agreement for Entry; Limited Release" document) in advance. Compensation pay-outs for Irene related projects have amounted to approximately \$470,475.

There were also times during hurricane Irene when the use of heavy equipment was delayed waiting for ROW questions to be resolved. In the future, it would be helpful if equipment had GPS tracking capabilities and access to right of way information, so that actual travel paths across property could be mapped for determining if compensation was appropriate or not.

2. Transparency. We are here today to be transparent and to raise a level of awareness of what's going on within our organization and hopefully generate some support.



**ROW Map Viewer serves as a catalog and search tool**