Municipal GIS Mapping

Glenn Davison, GIS Project Manager, NH DOT
Fay Rubin, GRANIT Director, UNH
Sean McNamara, LTAP Exchange Director
Bob Strobel, T^2 Project Director, UNH

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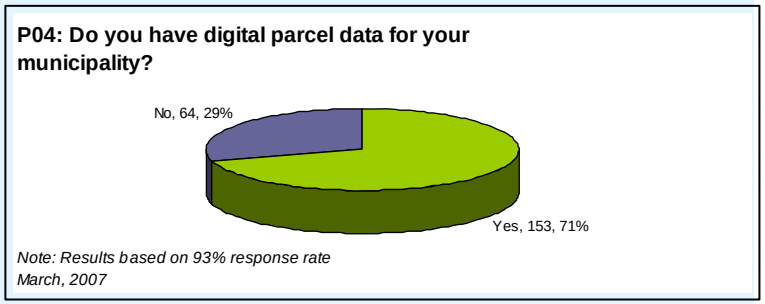
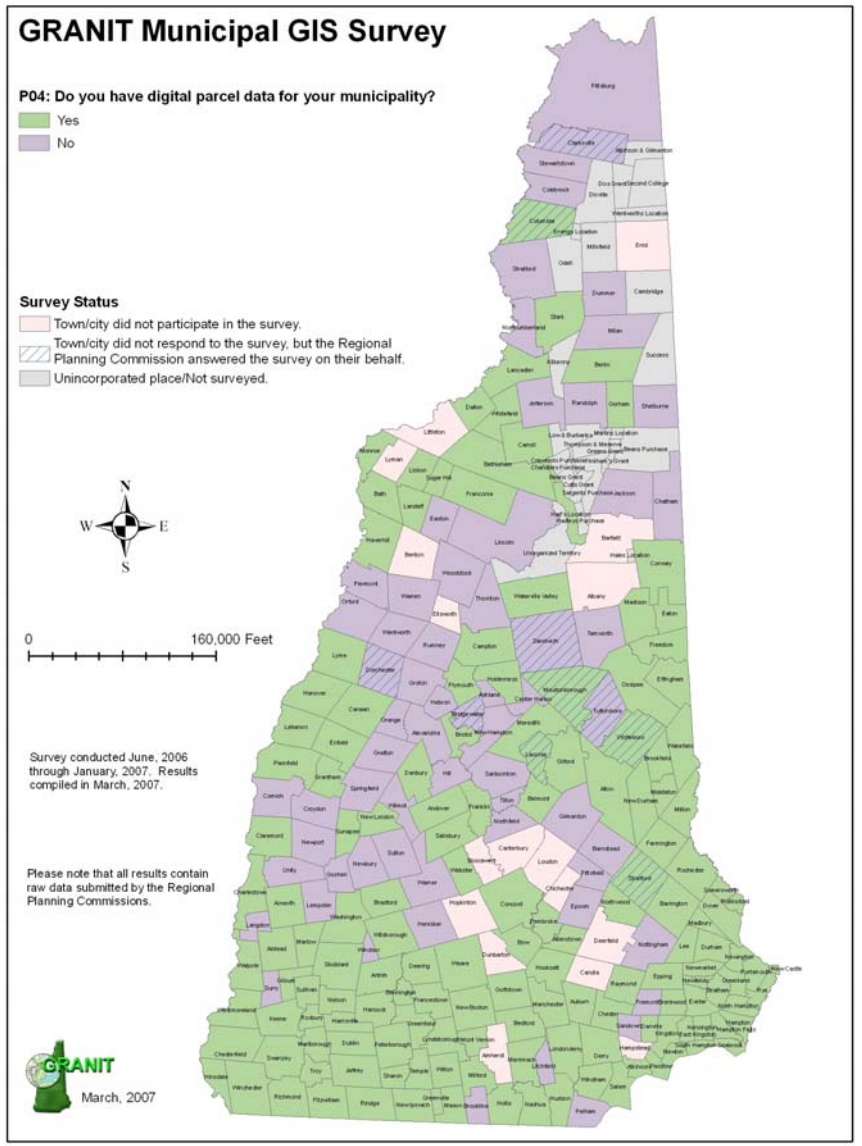
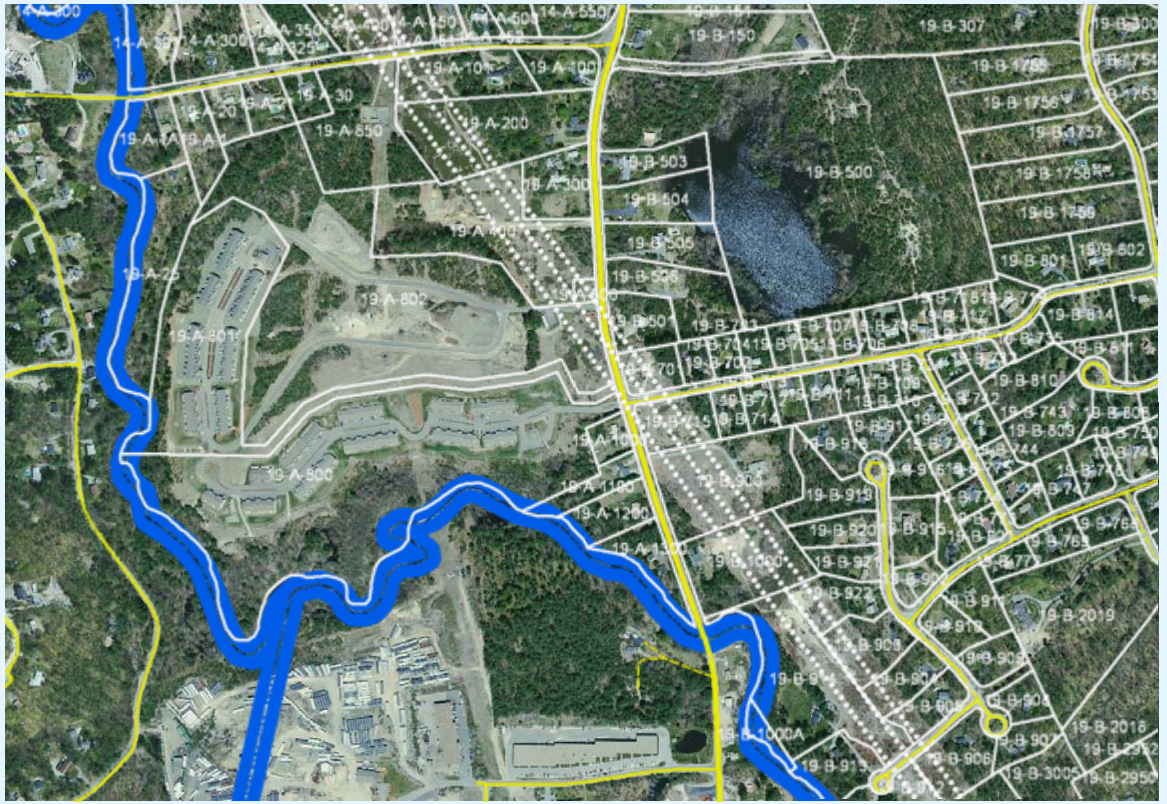
Current GIS Usage

- GRANIT survey of 234 municipalities in the state
- 93% of communities responded



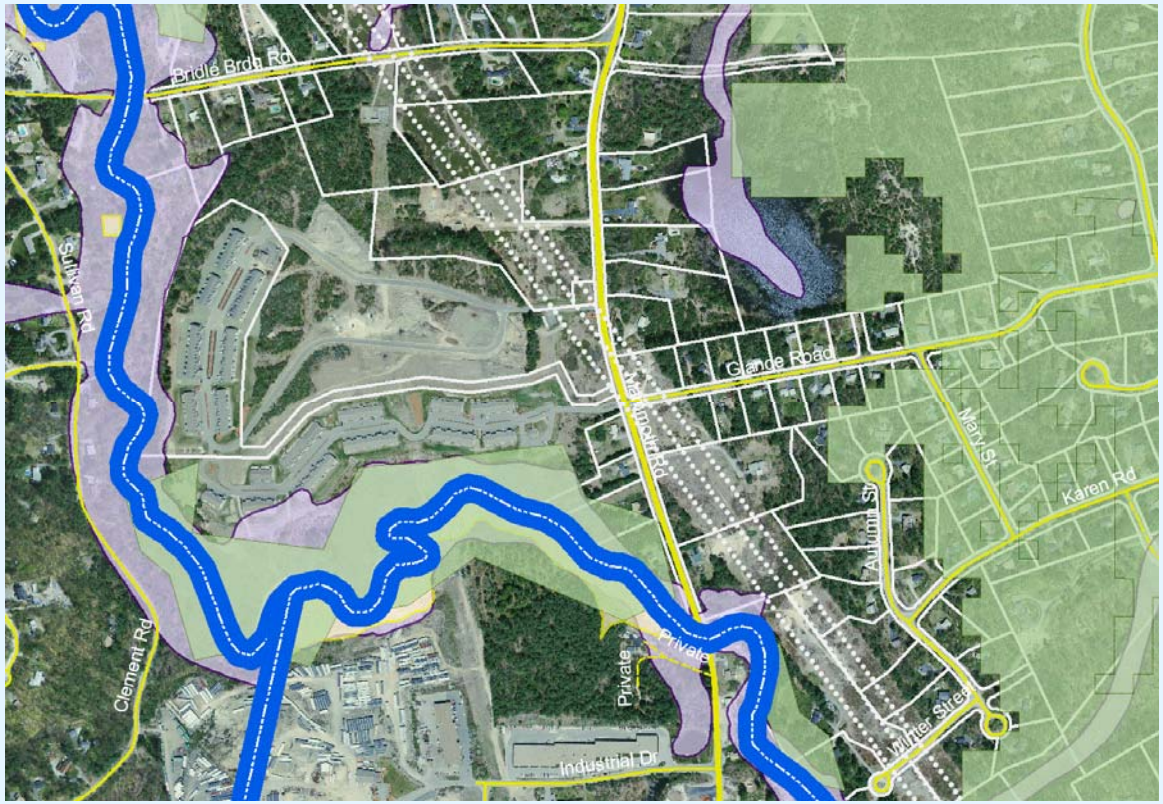


GIS for Municipal Applications



- Base imagery – 1 ft. color
- Town bounds
- Road centerlines
- Parcels
- Infrastructure

Using GIS for Master Planning



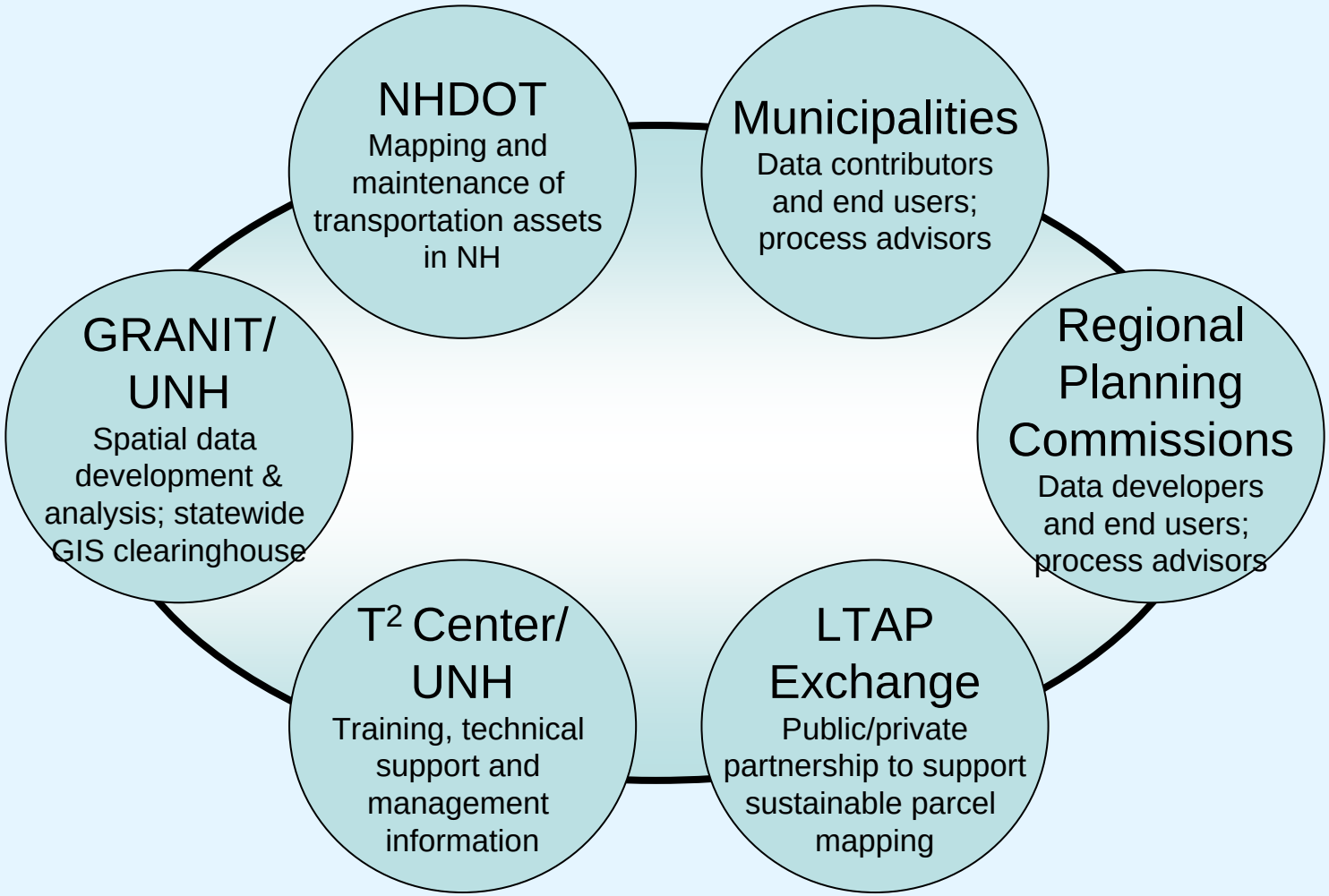
Natural Services Network:

- Water Supply Lands
- Flood Storage Lands
- Economically Important Soils
- Important Wildlife Habitat

Base Mapping Approaches

1985:	DOT establishes Steering Committee to explore use of CAD; Purchases McDonald Douglas which later became GDS
1989/1990	Agreement signed with USGS to develop 1:24,000 DLG files, including roadway base mapping; +/- 40 feet
1996/1997:	DOT moves to ESRI platform for GIS mapping
1998/1999:	GPS technology introduced into DOT mapping protocols; +/- 10-15 feet
2003/2004:	DOT moves to sub-meter GPS technology; < 3 feet
2006:	High resolution aerial photography used to support mapping; Multiple data assets collected based on visible features

Municipal GIS Project



What is GRANIT?

Mission: To promote the efficient use of New Hampshire's diverse resources by utilizing spatial information in an effective way and by providing geographic information and related tools to citizens and organizations.

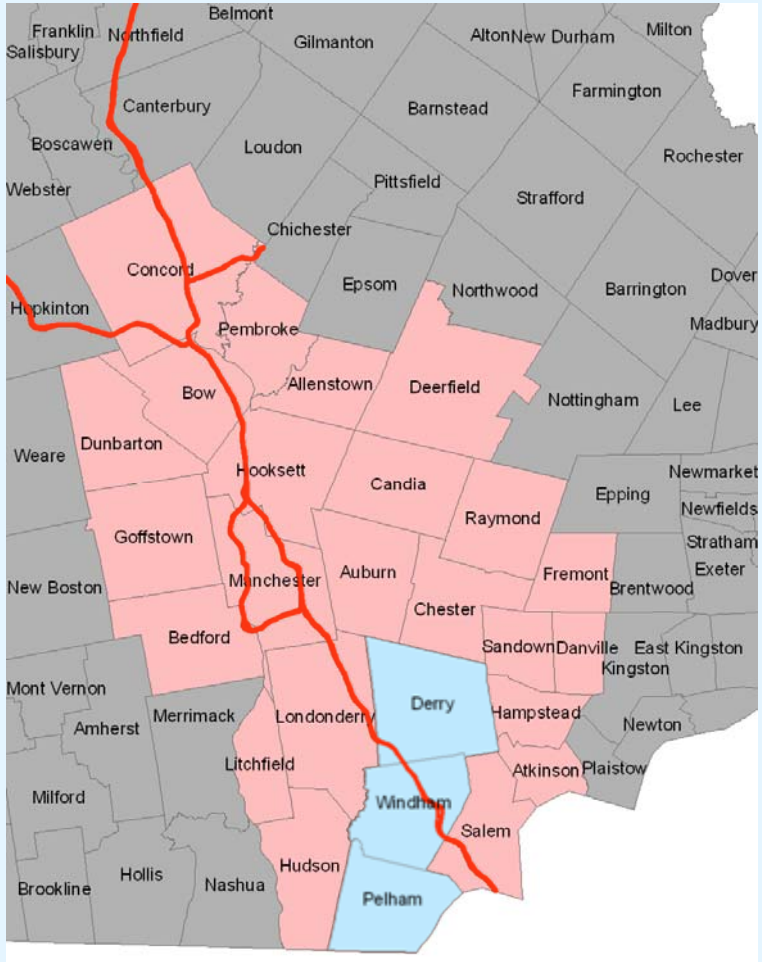
To accomplish this mission:

- Data development/archiving/distribution
- Coordination/standards development
- Applications/spatial analysis
- Training and technical support

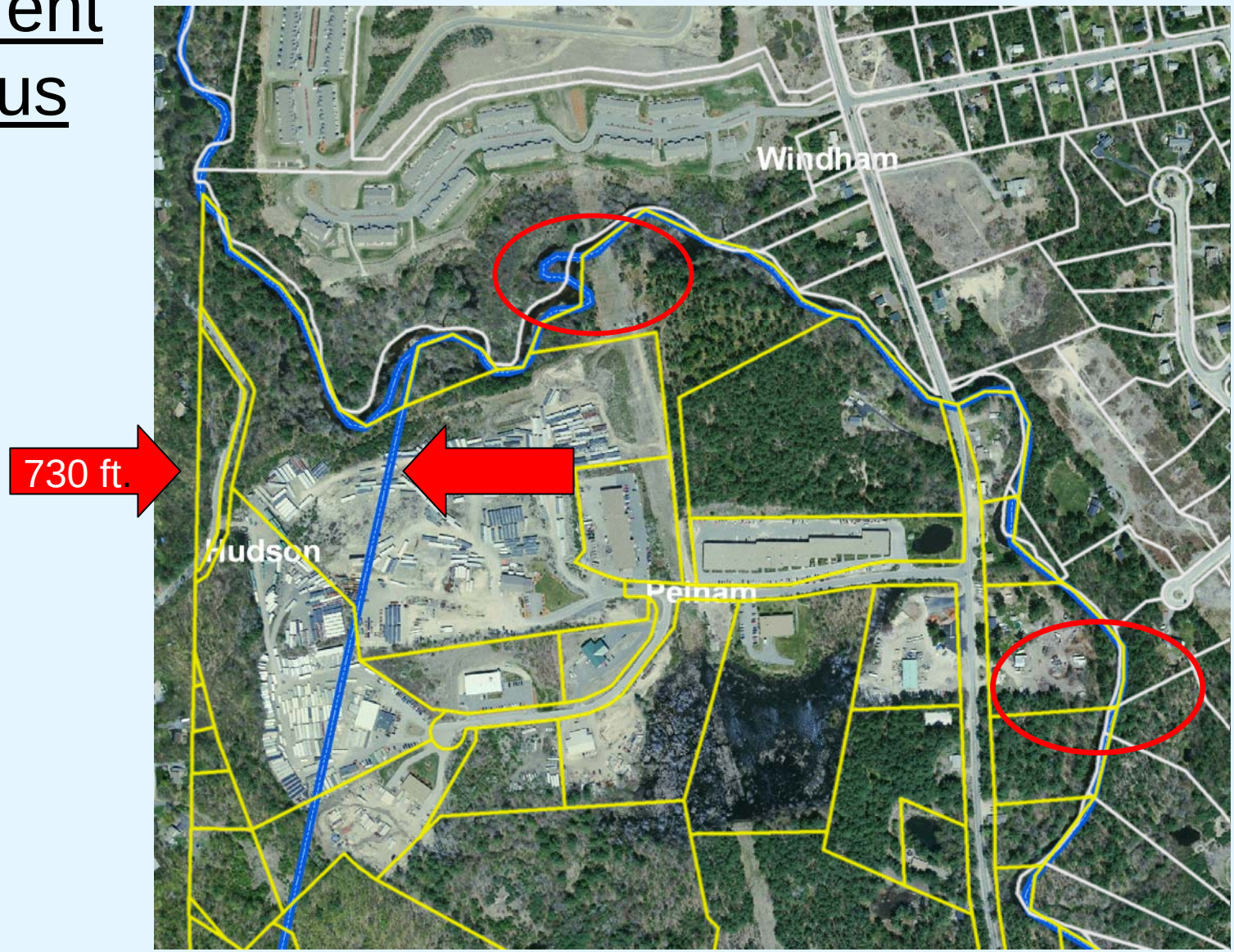
Project Overview

Work with 3 pilots towns to:

- Collect existing data and document “current conditions”
- Facilitate refinement of town boundary mapping
- Reconcile roads/parcels to high resolution imagery
- Create regional parcel mosaic
- Identify and document mapping issues

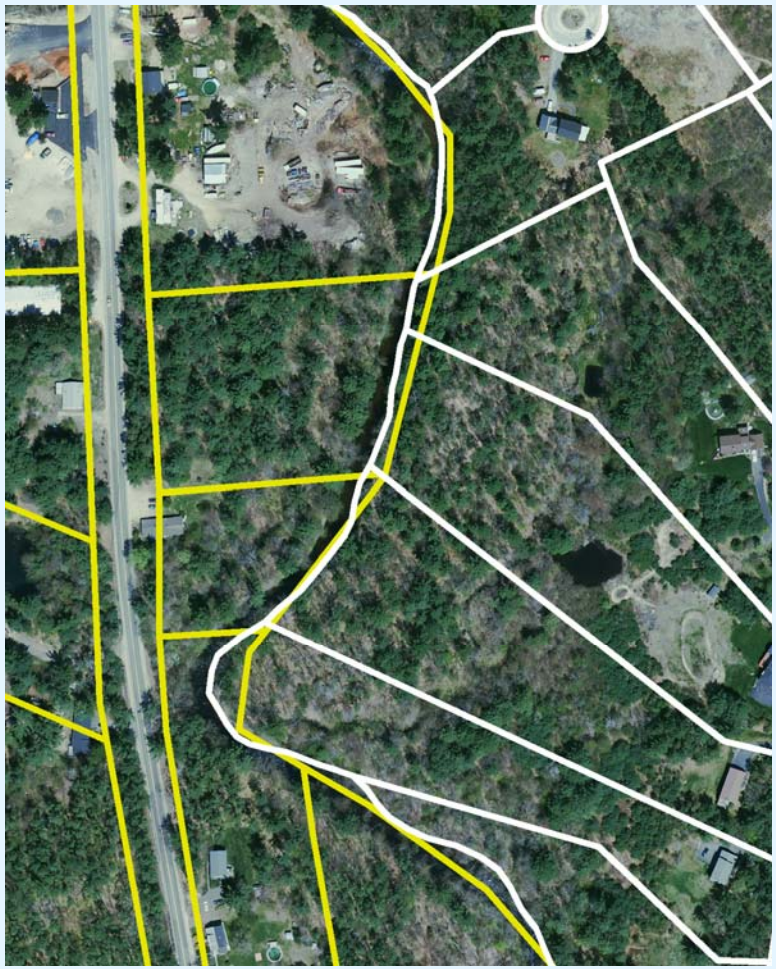


Current Status



Parcel Mosaic

Before Edgematching



After Edgematching

GRANIT Town Boundary Monument Catalog

NH GRANIT Town Boundary Monument Catalog

Home | View Data | Submit Data | Related Resources | Login

I forgot my user name...

Welcome to the NH GRANIT Town Boundary Monument Catalog, a statewide inventory of spatially referenced town monuments.

Objectives:

- Build, document, and maintain a GIS-based inventory of town boundary monuments in New Hampshire.
- Improve the accuracy of town boundary mapping in the state.

(c) National Oceanic and Atmospheric Administration/Department of Commerce

Please note that coordinates are required for all monuments.

Date of data collection:
Please provide a 4 digit year.

Were you the original field data collector? Yes M

Method used to collect data: GPS M

GPS information:

- GPS unit used: — Select GPS — M
- Type of processing conducted: — Process Type — M
- Estimated Positional Error (EPE) as reported on your receiver: — EPE — M

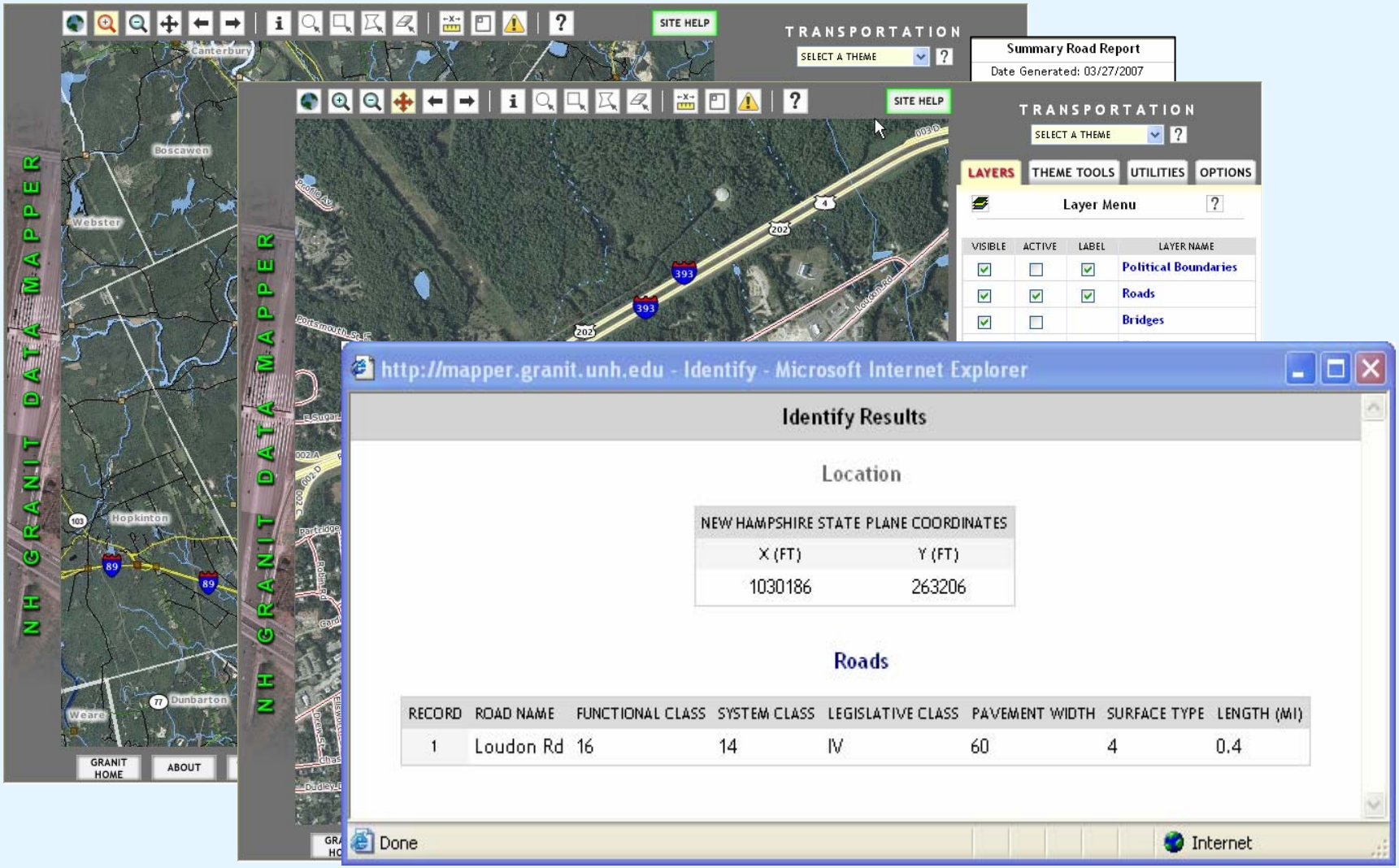
Towns sharing this monument:
Hold down the control key (PC) or option key (Mac) to select multiple towns.

Hudson
Salem
Windham

Enter the local identification number for the monument, if any: M

Enter the local name for the

Data Mapper: http://mapper.granit.unh.edu



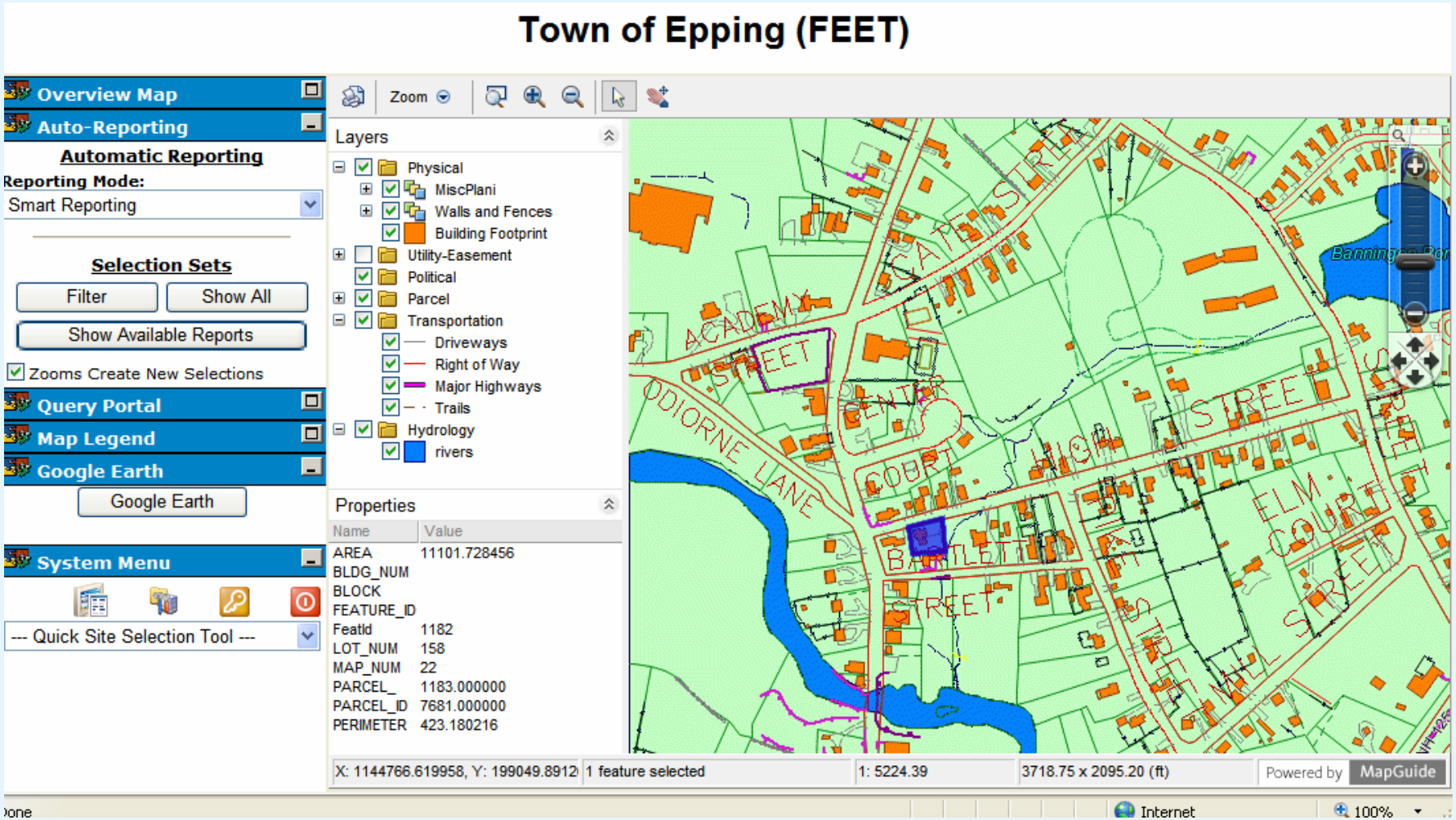
LTAP Exchange:

Mission: To create innovative partnerships between the public and private sectors to create and provide affordable and sustainable solutions for municipal GIS mapping and public works asset management.

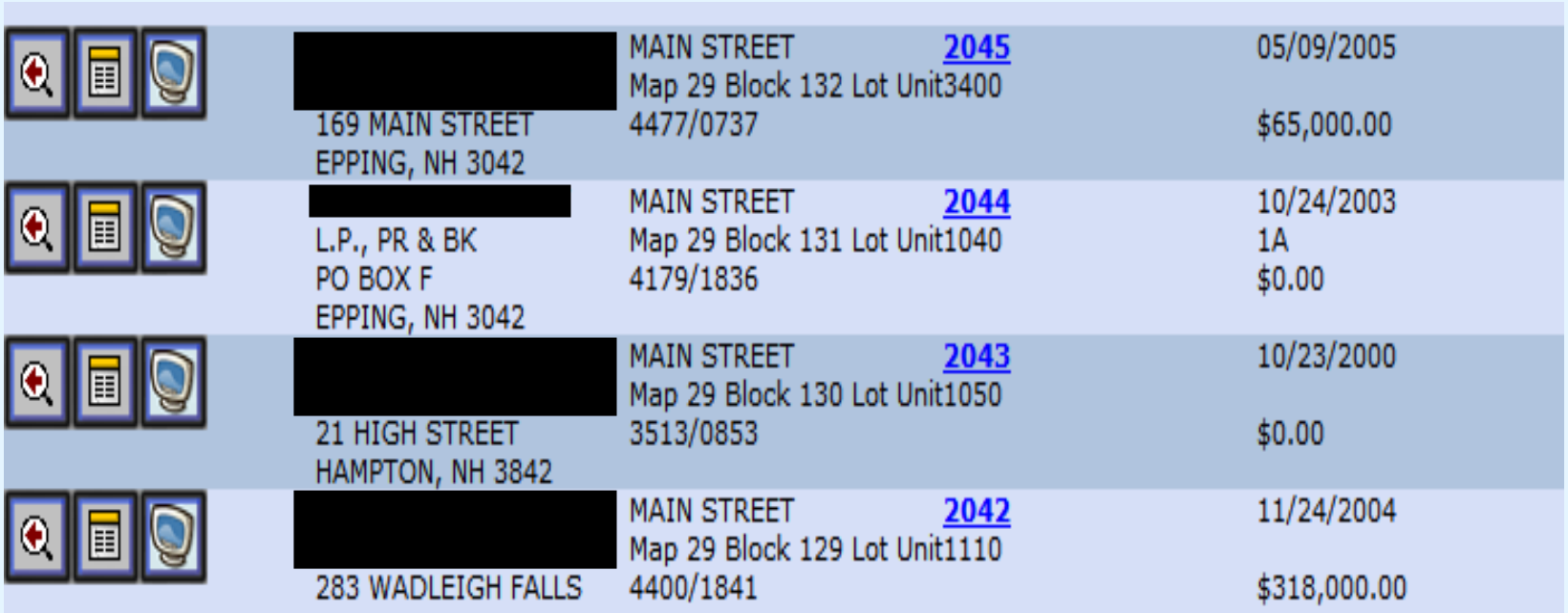
- Sustainability Partners
  - Private: Software and website developers, field hardware suppliers, GIS and tax assessment professionals, road / traffic / safety consultants
  - Public: DOT, GRANIT, T^2 centers, RPCs, CTAP, partner towns, other state and federal agencies

- Sustainable Municipal GIS Services
  - LTAP Exchange has put together partnerships with several providers to offer affordable, easy to use, online, municipal GIS services
  - Municipal GIS website acts as the central hub for up-to-date parcel and tax card data
  - Online permit systems provide trigger for map updates whenever parcel boundaries are modified or change ownership
  - Custom query / reporting features reduce repetitive “in house” town hall tasks and allow GIS system to be used as a central database application

- Municipal GIS Interface

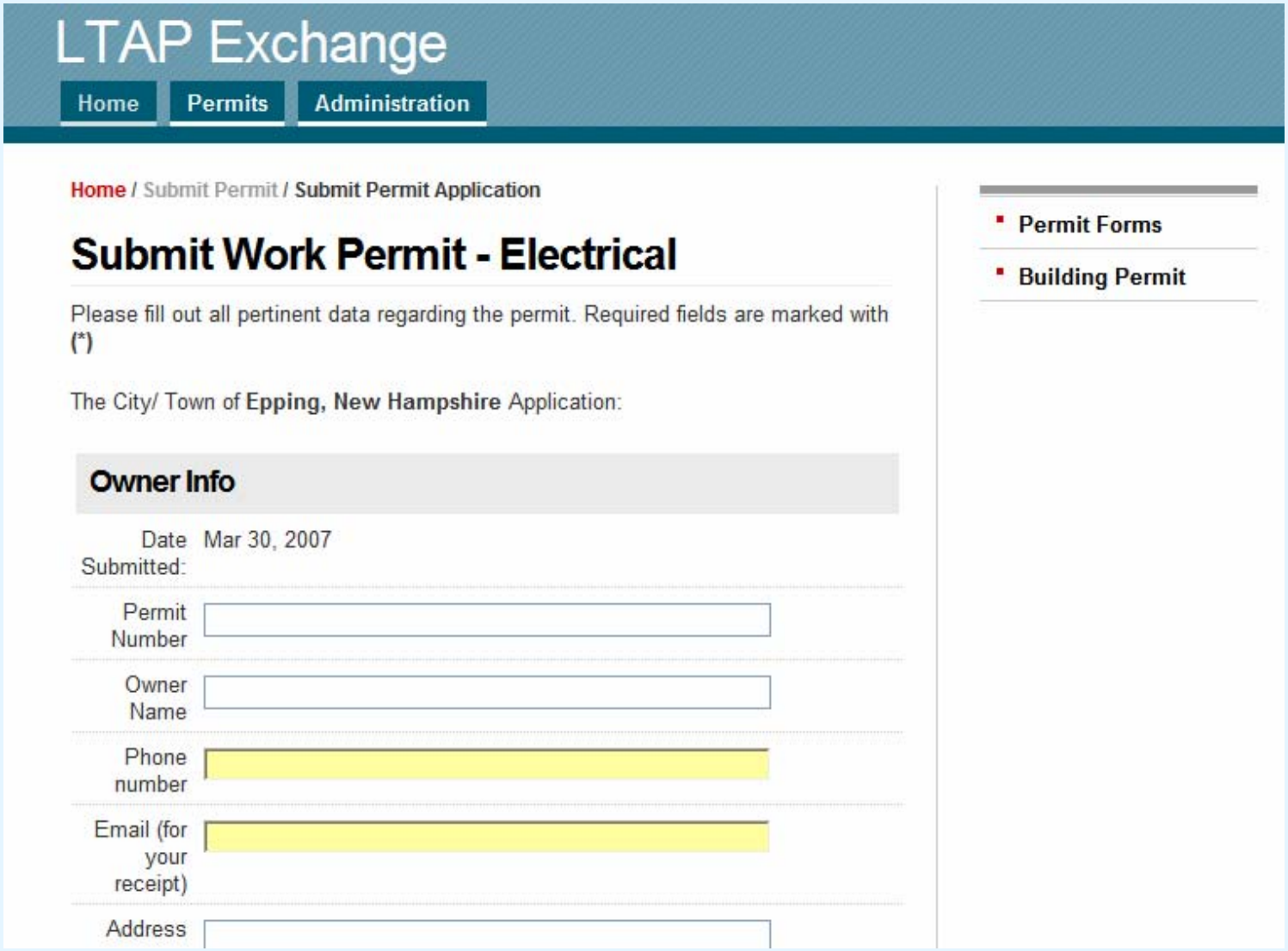


- Sustainable Municipal GIS Services
  - Map selections (e.g. individual parcels or buffer zones) allow for quick queries, links to tax card data (towns can limit user rights), generation of abutters lists to auto-fill permit applications



	[redacted] 169 MAIN STREET EPPING, NH 3042	MAIN STREET 2045 Map 29 Block 132 Lot Unit3400 4477/0737	05/09/2005 $65,000.00
	[redacted] L.P., PR & BK PO BOX F EPPING, NH 3042	MAIN STREET 2044 Map 29 Block 131 Lot Unit1040 4179/1836	10/24/2003 1A $0.00
	[redacted] 21 HIGH STREET HAMPTON, NH 3842	MAIN STREET 2043 Map 29 Block 130 Lot Unit1050 3513/0853	10/23/2000 $0.00
	[redacted] 283 WADLEIGH FALLS	MAIN STREET 2042 Map 29 Block 129 Lot Unit1110 4400/1841	11/24/2004 $318,000.00

- Online Permit Applications (coming soon)



- Online GIS Services – Other Features
  - Town sites can act as an online kiosk for consumers, retailers, citizens, real estates
    - Search for recently sold properties, properties for sale
    - Add in searches for specific retailers
    - Links to Google Earth
  - Online asset condition storage for public works managers and town administrators
    - Use in conjunction with LTAP Exchange PWS data collection and assessment software (next)
    - Create presentations showing roadway, drainage, and other conditions, current and pending work areas

- Google Earth link example

- Online GIS Services – Overall Goals
  - Provide affordable, easy to use, services that:
    - Pay for themselves through increased efficiency
    - Promote data consistency and sustainability within towns and at regional and state level
    - Provide online tools that benefit municipal managers, employees, citizens, consumers
    - Ease town, regional, and state level planning
  - Next: Public Work Asset Management Tools
    - Developed by LTAP Exchange in partnership with UNH T^2 Center

UNH Technology Transfer Center:

Mission: To improve road managers' and crews' knowledge of technology and management through education and training, a quarterly newsletter, technical assistance, and other forms of technology transfer.

- Training: Workshops and Seminars
  - Over 3000 people have taken classes
  - Roads Scholar Program
- Quarterly Newsletter
  - Over 1100 readers
- Information Services
  - Library & other formats

Public Works Town Services:

- Roads
- Road Signs
- Stormwater drainage

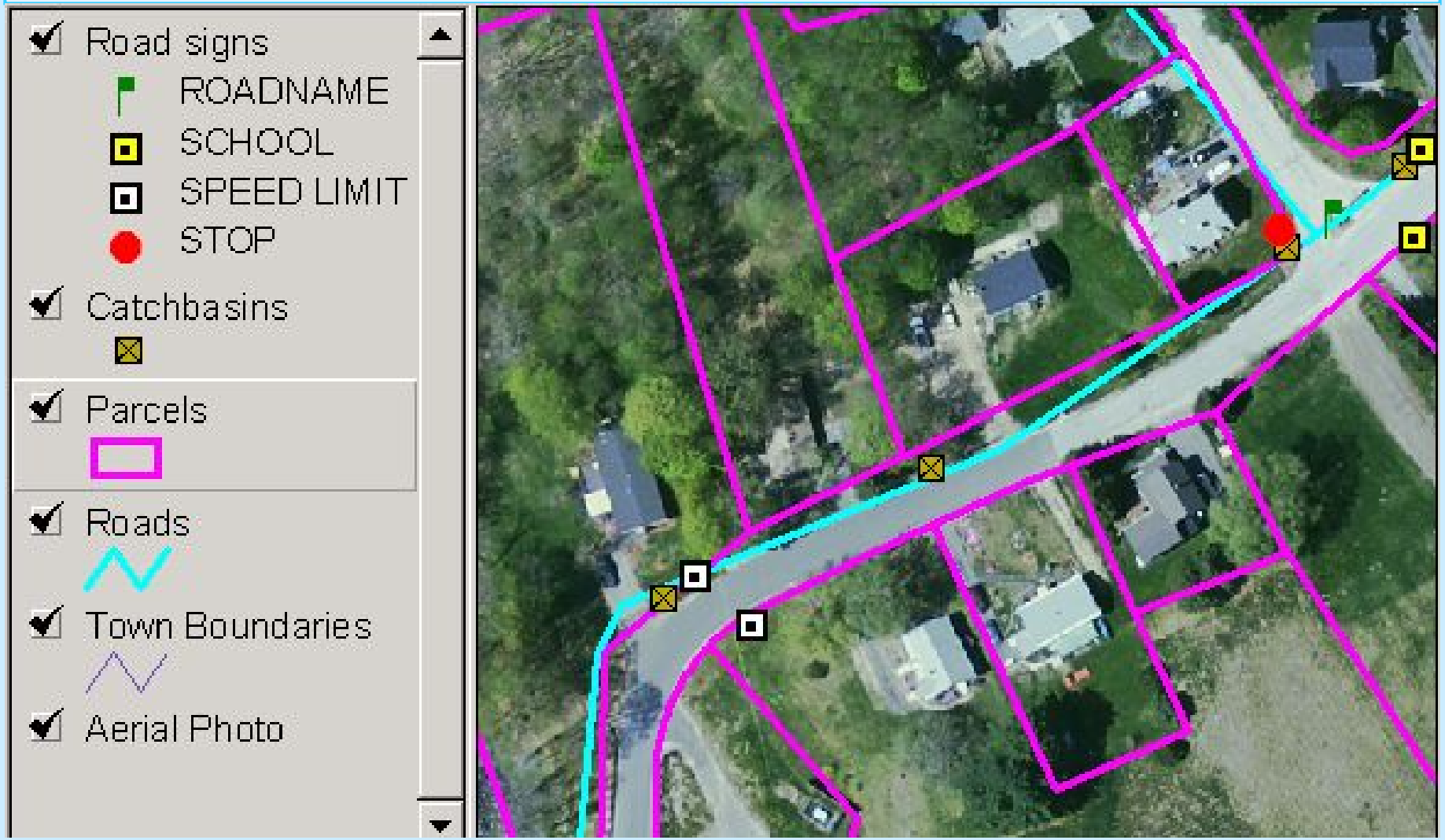
Assets

Each is an interconnected system (network) within itself AND with each other.

- They work together to provide safe and effective transportation to the public.
- They need to be managed together to be cost effective and with the lowest impact to users.

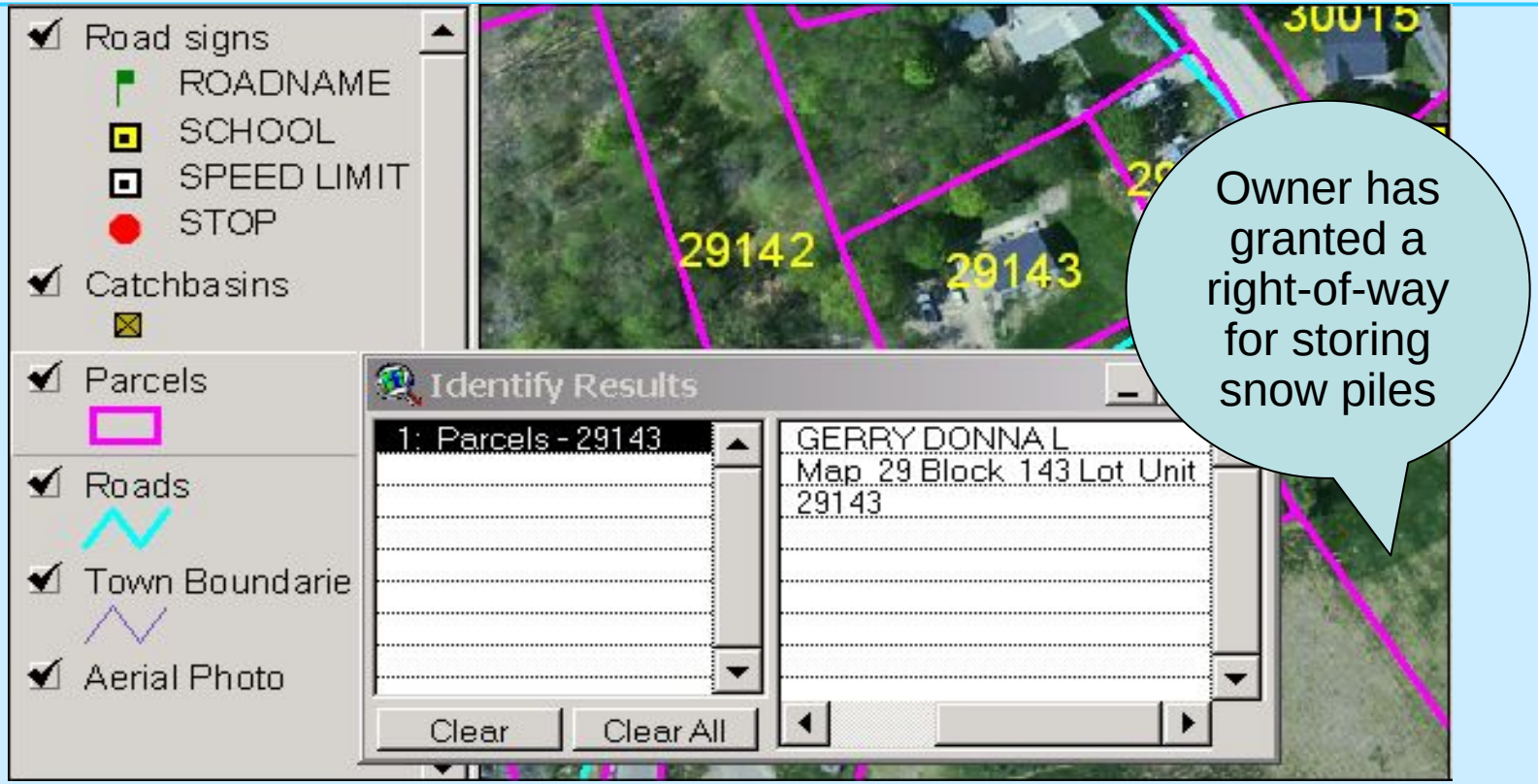
How to manage 3 systems together?

Use a map to tie them together by location



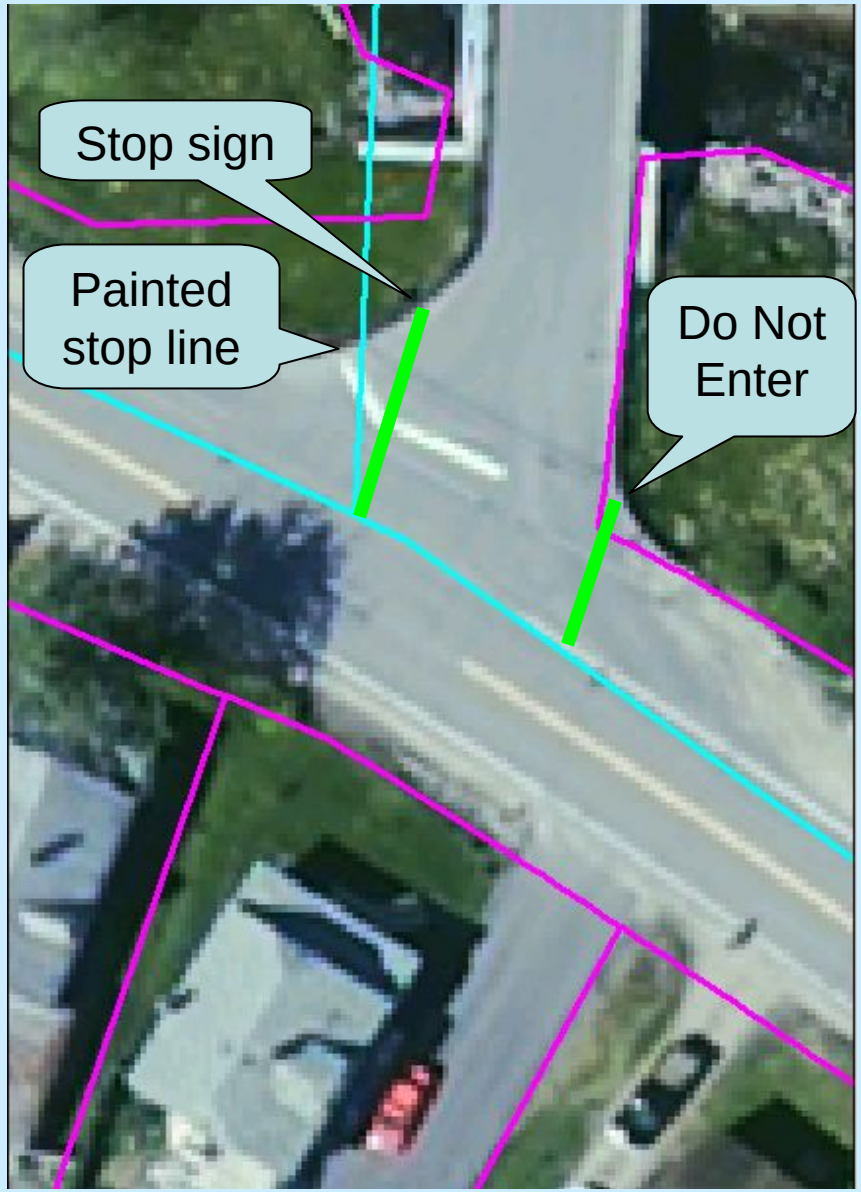
With parcel data:

- Obtain the owner info for access permission or notification of upcoming work.
- Show the address of adjacent owners.



Locating Assets:

1) Use the aerial photos
2) Use the distance to the road centerlines (state then local):
3) Use the parcel data (‘at edge of driveway to 323 Mill St’)



Tools for Asset Management:

- RSMSvis – road surfaces (July 2007)
  - Inventory roads and their conditions
  - Create a 10 yr budget plan comparing different funding levels and road network condition
  - Record maintenance history
- SIMSvis – road signs (Summer 2007)
  - Sign inventory, conditions, maintenance history
- DrainVis – stormwater management (June 2007)
  - Inventory, condition, maintenance history
- PWS Tracker – custom data collector (June 2007)
  - Collect the data you want, not what the program tells you

All work on a common map-based framework

T² provides:

- User training and technical support
  - Workshops for
    - PWMS suite: RSMSvis, SIMSvis, Drainvis, Tracker
    - Permitting system training for:
      - Town employees and Boards
      - Public users (live, recorded, and online)
      - Power Users (realtors, developers)
  - Technical support by:
    - Visit
    - Email
    - Telephone

Questions??

Contact	Phone	Email
Glenn Davison	603-271-7145	gdavison@dot.state.nh.us
Fay Rubin	603-862-4240	fay.rubin@unh.edu
Sean McNamara	603-817-5775	smcnamara@ltapexchange.net
Bob Strobel	603-862-4348	robert.strobel@unh.edu