VTrans Policy, Planning & Intermodal Development Division
Mapping Section
Projects and Accomplishments

Highway Mapping System

The VTrans Mapping Section annually produces General Highway Maps, also known as Town Highway Maps for municipalities that have supplied changes on the Certificate of Highway Mileage. Over the course of the last year, Mapping has leveraged the new Highway Mapping System that was implemented in 2013 and refined in 2014. This tool that was built in part in-house, allows for the Town Highway Maps to be produced far more rapidly than in the past. In years past, Mapping would only produce the 50 to 60 maps for towns, cities and villages that had changes supplied. In 2014, all 320 Town Highway Maps were produced.

The goal for 2015 is to produce the full series of Town Highway Maps that will include all the changes received on the Mileage Certificates, reflecting the sunset of the "ancient road" acts, Act 178 of 2006 and Act 158 of 2008.

Route Log System

The Mapping Section produces over 1600 Route Logs, which are the straight line diagrams of the Federal Aid Highway System. The Route Logs provide an overview of the highway network and a snapshot of the information pertaining to a specific section of road, including widths, curve & grade, projects, AADT, crashes and other geometric information.

A series of the Route Logs has been produced and posted on-line for Agency staff, contractors and the public to access. Over the course of the next year, a new set of Route Logs will be produced and posted for on-line viewing and download. A mapping interface has been created to allow for better access to the proper Route Log.

Road Centerlines, Mileage, and the Linear Reference System (LRS)

To support the work within the Mapping Section and Agency, the master road centerlines with mileage data and linear reference system (LRS) are key data layers maintained within the geographic information system (GIS) by Mapping. The road centerline data layer is used in the production of the Town Highway Maps, highways shown on statewide maps, and the geometry used to create the LRS. This data is used by GIS users and decisions makers throughout the Agency.

Mapping Section Projects

Over the course of the year, the Mapping Section has worked on many special projects, including hosting a workshop on Bridge Data with a video of the proceedings being created in-house. This can be viewed at the following link:

Bridge and Culvert videos - https://www.youtube.com/playlist?list=PLJeQybT3HcnmZ5yTuns2lUniU8BlQq4Qg

Creation of a History web page that provides information regarding Vermont's highway history, but also instruction and linkage to historic project plans. This page can be found at http://vtransplanning.vermont.gov/maps/historic

The production of custom maps, including an AADT map in response to a pedestrian assessment in Rutland City (V:\Projects\Shared\Mapping\Mapping_Unit_Maps\TrafficFlowMaps\RutlandCity_AADT_Census.pdf), map series of the Motor Vehicle Dept. driver test routes, updated Bridge Inspection Map series, and updated Field Assessment Map series.

Statewide Parcel Mapping Initiative

The Mapping Section is working with a consortium of State Agencies, the Vermont Center for Geographic Information, regional planning commissions, VLCT, and others in the development of a standard and up-to-date statewide parcel data layer.

Light Detection & Ranging (LiDAR) Technology

VTrans Mapping continues to utilize LiDAR data and technology to support VTrans activities and has acquired high resolution data for 122 miles of highway corridors damaged by TS Irene and the Interstate 89, 91 and 189 corridors, as well as data collected through collaborative efforts.

LiDAR data is high resolution terrain data that allows for increased 3D modeling and analysis. Derived products include hill shades, contours, slope & aspect data, and other visualization layers. VTrans has worked cooperatively with other State Agencies, the Vermont Center for Geographic Information, and the Natural Resource Conservation Service in the submittal of a proposal to the US Geologic Survey for funding under the 3D Elevation Program (3DEP). This proposal is under consideration and may fund acquisition of LiDAR for remaining areas in Vermont.

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Sarah Kepchar (20%) of the Highway Safety Data Unit in the Highway Division is also part of the Mapping Section team, providing part-time assistance and specific expertise to the mapping effort.

On-Line Mapping Resources

- The Mapping Section has made accessible a substantial amount of data in a digital format on-line. Please find links to the maps and data posted by the VTrans Mapping Section.

Main Mapping Section's Page – http://vtransplanning.vermont.gov/maps

Annual Mileage Summaries - http://vtransplanning.vermont.gov/maps/publications

Town Highway Maps - http://vtransplanning.vermont.gov/maps/town_maps

Map Archive - http://vtransplanning.vermont.gov/maps/archive

Route Logs - http://vtransplanning.vermont.gov/maps/routelogs

General Transportation Resources Map - ftp://vtransmaps.vermont.gov/Maps/VermontMaps/2013/StateMap_RGB.pdf

VTrans District Map - ftp://vtransmaps.vermont.gov/Maps/DistrictMaps/StateMap_Districts_2013.pdf

Field Assessment Map Series – ftp://vtransmap.aot.state.vt.us./Maps/VTrans_data_Irene/VTrans_District_Maps/Field_Assessment_Series/

Rural Functional Class Map – http://vtransplanning.vermont.gov/sites/aot_policy/files/documents/highwayresearch/RuralFunclStatewide_2013.pdf

County-Town Map Series - http://vtransplanning.vermont.gov/maps/publications

Bridge & Culvert Inspection Maps - ftp://vtransmap.aot.state.vt.us./Maps/VTrans_data_Irene/Bridge_Inspection_Maps/

Federal Highway Map Series - ftp://vtransmap.aot.state.vt.us./Maps/FederalHighwaySystem/