STATE OF VERMONT

ENHANCED 9-1-1 BOARD

- Importance of Addressing Standards
- Addressing Standards
- Numbering Examples

WHY ARE ADDRESSING STANDARDS SO IMPORTANT?

Enhanced 9-1-1 or E9-1-1 is a system that selectively routes 9-1-1 calls to Public Safety Answering Points (PSAPs) based on a locatable address assigned to a phone number. Using the address provided by the Enhanced 9-1-1 Database, the call-taker's map display is also populated with a mapped location of the caller.

When a 9-1-1 call is made from a landline phone, call-takers are automatically provided with the caller's phone number, address, and the designated emergency service providers (police, fire & ems) for the caller's location. When a 9-1-1 call is made from a wireless phone, call-takers are provided with the caller's phone number, the address of the tower that processed the call, as well as the latitude/longitude coordinates of the caller.

> **Please note that the accuracy of the latitude/longitude coordinates is based on several factors:** type of wireless handset used, the type of wireless location technology used by the wireless carrier, and the number of towers located within the proximity of the call. The coordinates will rarely provide the exact location of the caller.

The Enhanced 9-1-1 System reduces the response time in an emergency due to the factors listed below:

> **Location Based Call Routing –** As mentioned above, calls are routed to each PSAP based on the location of the caller. Call-takers are also provided with data identifying the emergency response location as well as the appropriate emergency service responders to contact.
>
> **Distance Based Addressing –** As detailed in Vermont's E9-1-1 Addressing Standards, E9-1-1 addressing is distance based. The address number assigned to a structure will tell emergency service providers approximately how far along a road they need to travel to reach the scene. For example, if a municipality uses the standard 5.28 ft. increment the Fire Department will know that a call for a structure fire at 730 Birch St is located approximately three-quarters of a mile down the road.

The Importance of <u>ACCURATE</u> 9-1-1 Addressing

If a resident of your town dials 9-1-1 and is unable to speak, or is prematurely disconnected, how will responders know the location of the emergency? Could there be a delay in emergency response due to invalid or missing address information in the E9-1-1 Databases? An address alone is not helpful if it is inaccurate or outdated. An inaccurate address, in many cases, is no better than no address at all.

It cannot be overly emphasized that, despite all of the technology in place for Enhanced 9-1-1 service, if Vermont's Enhanced 9-1-1 Databases do not contain accurate locatable addresses to which call-takers can direct emergency responders, the benefits of Enhanced 9-1-1 are drastically reduced.

The E9-1-1 Databases **<u>must</u>** contain current accurate locatable address information for the system to work effectively. In fact, the efficiency of the Enhanced 9-1-1 System is dependent upon municipalities performing the necessary ongoing maintenance of their data.

While all VT municipalities have long since transitioned to E9-1-1 addressing, the Enhanced 9-1-1 Board continues to rely on a committed level of support and cooperation from each municipality to both maintain and ensure the integrity of Vermont's Enhanced 9-1-1 Databases.

Vermont's E9-1-1 Addressing Standards provide direction and support to Vermont municipalities and ensure a uniform and intuitive addressing system, wherever possible, to facilitate swift emergency response.

Vermont Enhanced 9-1-1 Board

Addressing Standards

August 2012

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TABLE OF CONTENTS

Section 1. Administering and Maintaining the Municipal Addressing System 5
Section 2. Road Naming 5
Section 3. Standard Suffixes 7
Section 4. Driveways and Private Roads 7
Section 5. Numbering/Measuring Increments 7
Section 6. Assigning Numbers 8
Section 7. Standards for Road Naming & Numbering Between Neighboring Towns 9
Section 8. Road Signs 9
Section 9. Displaying Address Numbers 10
Section 10. Readdressing 10
Appendix A – Maintenance Responsibilities & Municipal Coordinator Checklist 11
Appendix B – Address Notification Letter Samples 17
Appendix C – USPS Suffix Listing 21
Appendix D – Readdressing Checklist 27

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31 010 001. ADDRESSING STANDARDS

The Enhanced 9-1-1 System requires locatable addressing. This document was developed by the Enhanced 9-1-1 Board to provide municipalities with basic locatable addressing standards that ensure compliance with enhanced 9-1-1 system requirements.

Existing addressing systems will continue to be supported; however, if the municipality chooses to either readdress their town or an individual road, or when new roads are created, the following standards must be adhered to.

Addressing situations may arise that are not covered in these standards. If this occurs, communities shall contact the Enhanced 9-1-1 Board for assistance.

Section 1. Administering and Maintaining the Municipal Addressing System

(a) Municipalities shall follow VT E9-1-1 Standards for naming new roads, for measuring new roads, for assigning numbers to new structures, for updating maps, for informing its emergency service providers of new addresses, for assigning and informing new residents of their official address.

(b) Municipalities shall immediately inform the State Enhanced 9-1-1 Board in accordance with the *Municipal Government Enhanced 9-1-1 Maintenance Responsibilities* information sheet of any new road names and structure numbers. (see Appendix A)

- When a request is made for an address assignment, the resident's location shall be obtained, along with any identifying structures or landmarks that help to locate the structure or property requiring the address.
- Requests should be handled within five business days, whenever possible.
- Addresses must be assigned by going to the location and taking linear measurements with a third wheel, measuring tape or a GPS device.

(c) Upon final approval of road names and numbers, the municipal governing body shall send written notification to all affected property owners, the Enhanced 9-1-1 Board, the United States Postal Service (USPS), and emergency service providers (see Appendix B).

- Municipalities shall advise property owners of their responsibility to notify residents of new addresses.
- Municipalities shall coordinate with the USPS, as needed, to send written notification of address changes to all property owners of the addresses involved.

(d) When a new address has been assigned and notifications have been completed, municipalities need to update their maps. Updates shall be sent immediately to the Enhanced 9-1-1 Board Office according to the instructions on the Municipal Government Enhanced 9-1-1 Maintenance Responsibilities information sheet.

(e) Municipal records shall be updated with new address information in accordance with 30 V.S.A Chapter 87.

Section 2. Road Naming

(a) Road names (not suffixes and/or directionals) shall be spelled out as per USPS addressing standards (USPS Publication 28).

- Incorrect – North Pond Mdw Rd
- Correct – N Pond Meadow Rd

(b) Every distinct road shall be a separate named road. This includes private roads.

(c) There shall be no duplicate street names within a municipal boundary. Road naming between municipalities that include the same postal delivery area(s) shall require careful coordination between municipalities in order to prevent mail/parcel delivery confusion.

(d) A named road shall be essentially continuous, without gaps.

(e) There shall be no identical and similar-sounding names (e.g., BEACH and BEECH, MAIN and MAINE, FLOWER and FLOUR; or BEACH and PEACH).

(f) Use of directional or suffixes to distinguish separate, non-contiguous streets (e.g., PALM CT, PALM AVE, PALM ST, N PALM CT) will not be permissible.

(g) Use of primary street names that are also used as suffixes or directional (e.g., COURT ST SOUTHEAST BLVD) will not be permissible.

(h) Special characters should be avoided whenever possible. However, we have listed special characters that are acceptable:

Comma (,)	Ampersand (&)	Semi Colon (;)
Forward Slash (/)	Apostrophe (’)	

(i) Streets within multi-structure complexes (e.g., business/college campus, multi-unit apartment/housing complex) shall be named and each structure individually addressed with a unique number.

(j) Streets within mobile home parks shall be named and each lot individually addressed with a unique number.

(k) Road names should be assigned based on traffic patterns. Road networks are often like stream networks, with main stems of high traffic volume, and tributaries with less traffic. Where a road forks into two roads, the fork with the higher traffic volume should continue with the same name.

(l) The name of a road or street that has a historical reason for having its name should retain its name.

(m) When/where readdressing is necessary the street that has the most number of houses on it, and thus would require the most effort to coordinate residents, shall retain its name. (see Section 10. Readdressing)

(n) When/where readdressing is necessary the name of the street that is used for the longest distance or is most heavily travelled should be kept. (see Section 10. Readdressing)

(o) Road names shall only change where there is a substantial intersection, or at town boundaries.

(p) The street that has had its name for the longest period of time should retain its name.

(q) There is no need for street/road names to correspond with official town highway numbers.

(r) State and U.S. highways shall be assigned their highway names, with the format of the highway type (“US Route” or “VT Route”). Examples of locatable addresses include “447 US Route 2” or “1550 VT Route 100B”.

(s) If a local name is already in use for a U.S. or Vermont highway (e.g., Main St.), it can maintain the local name as its official name. To avoid confusion, local names shall only be assigned to US and Vermont highways in towns where the highway appears to be, and functions as, a local road. Generally, the official highway name is preferred.

(t) Every road must have a single, official name for Enhanced 9-1-1 purposes. Many Vermont roads are known by alternate road names. If desired, the municipality can note alternate common road names in its official list of road names.

(u) For roads that connect two other roads, but have a middle section that is little-used or impassable (at least in winter) there are several options:

- Assign a single name to the road and number the road sequentially starting at the more traveled end. This option is recommended when the middle section is passable and used for most of the year.
- Assign different names to each end of the road and choose a point in the middle of the impassable section where the name changes. This option is appropriate only if the middle section is truly impassable. Each road's numbering would start from its intersection road (where most or all traffic originates) and end at the middle point.
- Assign a single name to the road, but choose a point in the middle section where the road changes from "East" to "West" or from "North" to "South". For example, "Burly Hill Road E" and "Burly Hill Road W". These constitute two distinct road names, thus it is not preferred since the roads have similar names. The numbering for each road would start at the intersection road (where most or all traffic originates) and end at the middle point.

Section 3. Standard Suffixes

Every official road name shall have a corresponding standard suffix that is in accordance with the USPS standards. (see Appendix C)

Section 4. Driveways and Private Roads

When assigning a new road name to a private road, every attempt shall be made to encourage private road owners with three or more dwellings to join the naming and addressing process.

Standards for Driveways and Private Roads:

(a) A shared driveway of any length having three or more addresses on it shall be defined as a private road. All structures on the new private road shall be readdressed according to Section 5 & 6. Private roads shall be named as per Section 2.

(b) A driveway having one or two addresses on it may be defined as either a driveway or as a private road if there is potential for future development.

(c) Signage of private roads shall be determined by the municipality in accordance with the most recently issued Vermont Agency of Transportation's *The "Orange Book" A Handbook for Local Officials.*

(d) Private roads shall generally be named distinctly from public roads to avoid any misconceptions or confusion, except where the extension of a public road name to a private road is logical.

Section 5. Numbering/Measuring Increments

The measuring increment is the distance between successive structure numbers (for example, from 100 to 101). For an increment of .001 miles (5.28 feet), structure number 1000 would be 1 mile down the road. Because even-numbered structures are on one side of the road, an interval

of .001 miles allows structures on the same side of the road to be 10.56 feet apart. An interval of .01 miles (52.8 feet) requires structures on the same side of the road to be no less than 105.6 feet apart, which may not work for urban and village areas.

From the effective date of these standards forward, the Enhanced 9-1-1 Board requires that municipalities adopt a frontal interval addressing system of 1/1000th of a mile (5.28 feet) when addressing or readdressing roads. This interval is required because:

- The address is easily converted to the distance along a road (e.g., 708 Smith Street is .708 miles from the beginning of the road).
- Only very rarely would a road be long enough (5 miles) to have numbers greater than 4 digits (9999).
- Allows for future development as there are 500 possible even addresses and 500 possible odd addresses per mile that can be assigned.
- The interval is short enough for more urban area and trailer parks.
- Several Municipalities in Vermont that did not use this addressing interval during the initial addressing endeavor have already had to readdress to accommodate unforeseen development.

Enhanced 9-1-1 Board approved addressing increments other than the 5.28' – including grandfathered addressing schemes – must be maintained. If the approved addressing system is no longer sustainable the 5.28' increment must be used.

Section 6. Assigning Numbers

(a) The locatable address shall consist of a number, a street name, and location information (if applicable). A building/common place designation cannot be used as a substitution for a street name.

(b) Official street numbers shall proceed from a logical point of origin and shall be in proper numerical sequence in relation to other lots with frontage on the same street/road.

(c) For most roads there is a logical start point at which addressing should begin (at zero), generally at the section of the road which connects to a larger traffic artery. Numbering should begin at the section where emergency responders are most likely to enter the road, so numbers will be ascending as responders search for a location.
When there is no obvious section with greater traffic flow, the start point shall be selected at the end that is closer to the town center, or at the end which is otherwise the logical "zero" point for addressing. Note that whatever method is selected shall be applied consistently within the municipality.

(d) Odd numbers shall be assigned to structures on one side of the street and even numbers to structures on the other side of the street. Towns shall make sure to choose that one side of the road will always be odd and the other side will always be even (e.g., odds always on left and evens always on right) to avoid any possible confusion addressing/readdressing in the future. Note that whatever method is selected shall be applied consistently within the municipality.

(e) Numbers shall be assigned to all structures which are inhabited or which have or may have any type of phone service.

(f) Corner lots shall be assigned a number according to the access point/driveway.
(g) Non-specific addresses, such as "Corner of Main and State Streets" shall not be used.
(h) The logical grammatical order of address elements shall follow USPS conventions: street number, pre-directional, primary street name, suffix, post-directional, and location, if any (e.g., 100 W MAIN ST SE APT 201).
(i) Multi-unit structures (apartment buildings, condos, etc.) shall be given one primary number per building (e.g., 111 MAIN ST) and apartments or suites shall be given numbers or letters as location indicators (e.g., 111 MAIN ST APT A, or 111 MAIN ST APT 1).
(j) Primary street numbers should not be longer than six digits.
(k) Fractional addressing (e.g., 101 ½ MAIN ST) is not permissible.
(l) Duplicate numeric addressing of multiple sites (e.g., 100 MAIN ST & 100B MAIN ST) is not permissible. They must be numbered individually (e.g., 100 MAIN ST & 102 MAIN ST).
(m) Hyphenated address numbers (e.g., 41-656 BELL ST) are not permissible.
(n) Leading zeros shall not be used in addresses or location designations. (e.g., 0145 MAIN ST or 234 CENTER APT 0102).

Section 7. Standards for Road Naming & Numbering Between Neighboring Towns

(a) If names of non-contiguous streets are duplicated between towns, or between town and village, the numbering shall not overlap (e.g., 16-628 HIGH ST, Barton & 1-21 HIGH ST, Orleans). This is especially an issue where mail delivery in one town is performed by a post office in another town. In such a case, every effort shall be made to avoid using the same street names. If this is not possible, every effort must be made to avoid duplicate house numbers.
(b) When a road runs from one town to another it may change names at the town border.
(c) When neighboring towns agree to keep the same name of a connecting road running between towns, the measuring and numbering shall be continuous from one town to the next (e.g., 7-1780 Keiser Pond Rd, Peacham & 2072-3837 Keiser Pond Rd, Danville).
(d) Numbering along US and State Highways shall follow the same rules for other named roads passing between towns. For long highways spanning many towns, it may not be practical to use sequential numbering from end-to-end. However, for a highway spanning just 2 or 3 towns the numbering will ideally be sequential for the full length of the highway. Optimal numbering along road or highway requires coordination with the neighboring towns to prevent any possible overlapping addresses.

Section 8. Road Signs

Naming and mapping roads are among the first steps in an addressing or readdressing process. Placing road signs is one of the final tasks. To assist both emergency service personnel and the general public, signs must be visible and maintained in accordance with the most recently issued Vermont Agency of Transportation's *The "Orange Book" A Handbook for Local Officials*.

Section 9. Displaying Address Numbers

Structures in cities are much easier to mark than those in rural areas where the structures are often obscured by trees or are so far off the road as to not be visible. To ensure that all house numbers are visible, it may be necessary to make special provisions for posting numbers in rural areas. Listed below are the Enhanced 9-1-1 Board's standards for displaying address numbers:

(a) Address numbers must be a minimum of 3 inches high, 2-1/2 inches wide and reflective.
(b) A number shall be placed on the front of every addressed structure.
(c) Mailboxes shall be marked with the house number. Where mailboxes are not in front of the house or structure to be marked, a number shall be displayed on the structure, if it is visible from the road.
(d) If the structure is not visible and no mailbox is beside the driveway leading to the structure, a sign or number post shall be erected to display the number. This sign or number post could display the number either vertically (from the top) or horizontally (from the left).
(e) Shared driveways shall be marked both at the beginning of the driveway and where the driveway splits to each specific structure.
(f) In Vermont, it is very important that the address number be placed high enough that it will not be obscured by snow during an average winter.

Section 10. Readdressing

It is much easier to complete a measured readdressing project if road naming activities are completed BEFORE house numbering begins. During the road renaming and renumbering process, the Enhanced 9-1-1 Board recommends that the municipal governing body declare a moratorium on road name changes until the addressing conversion process is complete. (see Appendix D)

STATUTORY AUTHORITY: 30 V.S.A. § 7053

EFFECTIVE DATE: April 17, 1995 Secretary of State Rule Log # 95-28

AMENDED: March 2011 (Renumbered from 30 020 001)

Appendix A – Maintenance Responsibilities & Municipal Coordinator Checklist

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Municipal Government
Enhanced 9-1-1 Maintenance Responsibilities

Updated 14 January 2013

Inaccurate database information may cause confusion and prevent the PSAP from initiating a fast response to an emergency.

Municipalities are required by law (30 V.S.A. §7056 (a)) to maintain the following:

1. Municipal 9-1-1 Coordinator – appointed by the Select Board – to be a liaison to the Enhanced 911 Board on all database and mapping maintenance issues.
2. Municipal address system - increment, odd/even, direction of numbering, road naming.
3. Municipal 9-1-1 atlas - submit to the Board map updates for any changes to sites and/or roads as they occur.
4. Master Street Address Guide (MSAG) database.
5. Emergency Service Zone (ESZ) database and associated emergency service provider information.

The person appointed by the Select Board to be the Municipal 9-1-1 Coordinator should possess basic math and map reading skills and be comfortable talking to people.

Maintenance Guidelines

1. Addressing System

Wherever possible, put an addressing maintenance system in place that utilizes an existing process (permits for driveway, construction, subdivision, etc.).

When a request for a new address is made, obtain an approximate location along with identifying structures or landmarks. Many municipalities use a measuring wheel to measure from an existing driveway to the new driveway and use that measurement to calculate the new address.

Requests for an address assignment should be handled the same day, whenever possible.

We recommend that the municipality notify, in writing, the post office and emergency service providers of any new sites and/or roads.

Keep your maps up-to-date. We recommend that communities have one set of paper maps and make changes on an "as occurred" basis in red pen. Some local 9-1-1 Coordinators recommend marking the date the change was made, too.

2. Municipal 9-1-1 Atlas

Public Safety Answering Points (PSAPs) rely heavily on their map displays to locate emergencies. Therefore it is imperative that the municipality keep their maps up to date by doing the following:

- Submit to the Board, as they occur, updates to sites/and or roads using the *GIS Update Form* so that it can be updated on the PSAPs map display;

- Fill out *the GIS Update form* completely: include a comment and/or site description, indicate the atlas sheet page and check the box that indicates the type of change;
- Mark on the atlas sheet page approximate structure locations and indicate the address that was assigned by the town to that site and the date the assignment was made;
- Draw on the atlas sheet page the approximate location of a new road;
- Send a photocopy of the marked up atlas sheet page along with the *GIS Update Form.*

3. MSAG Database

Dial tone providers use this database to ensure that an address provided by a customer requesting phone service falls within an address range on a road within the municipality he/she lives in. Board staff and the Board's Database Maintenance vendor can assist with completing an *MSAG Update Form*. Board staff can also work with you to incorporate these changes onto the 9-1-1 maps, if you have not already followed the procedure outlined above.

Once a year, the Enhanced 9-1-1 Board will send each municipality a complete MSAG database printout to review and sign.

4. ESZ Database

The ESZ database information must be updated *immediately* when:

- Primary providers of police, fire or EMS services change;
- Dispatching arrangements for those services change;
- Emergency telephone numbers for police, fire or EMS dispatch services change;
- Geographical jurisdiction of primary police, fire or EMS services changes.

Contact the Board prior to any change made to the ESZ Database to ensure that the change will not impact 9-1-1 call handling and delivery of emergency response. Then mark ESZ changes on the municipal 9-1-1 atlas and send it along with a completed *ESZ Update Form* to the Board.

Forms and instructions are also available by calling the Board's offices at 1-800-342-4911. Call anytime for help filling out the forms.

Once a year, the Enhanced 9-1-1 Board will send each municipality a printout of their ESZ information (listing their ESNs and corresponding Emergency Service Providers) to review and sign.

E9-1-1 Coordinator Responsibilities Checklist

Updated 14 January 2013

For E9-1-1 Coordinator training and/or review please do not hesitate to contact us at (802) 828-4911, 800-342-4911 (VT only), or E911-info@state.vt.us.

Site/Building Addition or Change

- Determine distance (a measuring wheel works best) to center of new curb cut/driveway and calculate new site address using the *New Address Calculation* worksheet.
- Complete a *GIS Update* form, along with a copy of the corresponding atlas page with the new site location clearly marked, and send to the E9-1-1 Board.
- If adding/deleting a site that will change the High/Low range or Odd/Even/Both indicator on your MSAG (Master Street Address Guide), complete the *MSAG Update* form and send to E9-1-1 Board.
- Please notify appropriate parties of the changes made (e.g., property owner(s), Post Office, Emergency Service Agencies, telephone companies, road crew, etc.).

Road Addition or Change

- Complete a GIS Update form, along with a copy of the corresponding atlas page with the new/updated road information clearly marked, and send to the E9-1-1 Board.
- Complete the MSAG Update form and send to E9-1-1 Board.
- Please notify appropriate parties of the changes made (e.g. property owner(s), Post Office, Emergency Service Agencies, telephone companies, road crew, etc.).
- A shared driveway with three or more sites should be changed to a private road re-addressed. Note – existing addresses must be recalculated following the instructions above.

Emergency Service Zone (ESZ) Addition or Change (e.g., primary providers of police, fire or EMS services change; dispatching arrangements for those services change; emergency telephone numbers or geographical jurisdiction of police, fire or EMS services change.)

- Notify the E9-1-1 Board in advance of any changes to emergency service providers or emergency phone numbers.
- Coordinate with the E9-1-1 Board in advance of emergency service provider coverage area changes.

Annual ALI Audit and MSAG Review

The ALI Audit and MSAG Review are used to resolve discrepancies in your town's E9-1-1 data; they are sent to E9-1-1 Coordinators yearly.

- ALI Audit – Automated comparison of the addresses in the Telephone Number (TN) Database to the town's GIS data.
- MSAG Audit – Review of all existing town road names, low and high address ranges, and ESZ assignments to each range.
- ESZ/ESA – Review of each town's ESZs and their corresponding Emergency Service Agencies.

Review TN Database Periodically for Accuracy

- E9-1-1 Coordinators may request a complete Telephone Number (TN) list for their town from the E9-1-1 Board for the purpose of review and correction of records in the TN database. This listing is strictly confidential; a written, signed request acknowledging confidentiality is required to obtain this listing.

Other

Visit our website (http://e911.vermont.gov/) for further information on:

- E9-1-1 Viewer & E9-1-1 Responder (web map apps that can be downloaded to your computer, tablet, or smartphone)
- PMF Maps (electronic GIS data, available for download, updated monthly)
- E9-1-1 Coordinator Listings
- E9-1-1 Coordinator Forms (GIS Update, MSAG Update, etc.)
- Submitting additions/changes electronically

Appendix B – Address Notification Letter Samples

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Sample Letter – New Address Notification (should be printed on town letterhead)

Date

Property Owner
Address
Town, VT, Zip

RE: Assignment of E9-1-1 Locatable Address

Dear Property Owner:

Towns in Vermont are responsible for the assignment of property addresses for emergency purposes.

Your property on (insert street name here) has been assigned the following address:

Address # & Street Name
Town, VT, Zip

If you have any questions don't hesitate to contact me at: (insert municipal contact info here)

Sincerely,

Municipal Contact Name
Title

CC: Enhanced 9-1-1 Board
United States Postal Service
Emergency Service Providers

Sample Letter – Change of Address (should be printed on town letterhead)

Date

Property Owner
Address
Town, VT, Zip

RE: Change in E9-1-1 Locatable Address

Dear Property Owner:

Towns in Vermont are responsible for the maintenance of property addresses for emergency purposes.

Due to (insert reason for addressing change here) the 9-1-1 address for your property has been changed:

Current Address	New Address
Address # & Street Name	Address # & Street Name
Town, VT, Zip	Town, VT, Zip

If you have any questions don't hesitate to contact me at: (insert municipal contact info here)

Sincerely,

Municipal Contact Name
Title

CC: Enhanced 9-1-1 Board
United States Postal Service
Emergency Service Providers

Appendix C – USPS Suffix Listing

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Publication 28 - Postal Addressing Standards
Appendix C
C1 Street Suffix Abbreviations

The following table lists examples of suffix forms that are primary street suffix names and recommended official Postal Service standard suffix abbreviations.

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
ALLEY	**ALY**
ANNEX	**ANX**
ARCADE	**ARC**
AVENUE	**AVE**
BAYOU	**BYU**
BEACH	**BCH**
BEND	**BND**
BLUFF	**BLF**
BLUFFS	**BLFS**
BOTTOM	**BTM**
BOULEVARD	**BLVD**
BRANCH	**BR**
BRIDGE	**BRG**
BROOK	**BRK**
BROOKS	**BRKS**
BURG	**BG**
BURGS	**BGS**
BYPASS	**BYP**
CAMP	**CP**
CANYON	**CYN**
CAPE	**CPE**
CAUSEWAY	**CSWY**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
CENTER	**CTR**
CENTERS	**CTRS**
CIRCLE	**CIR**
CIRCLES	**CIRS**
CLIFF	**CLF**
CLIFFS	**CLFS**
CLUB	**CLB**
COMMON	**CMN**
COMMONS	**CMNS**
CORNER	**COR**
CORNERS	**CORS**
COURSE	**CRSE**
COURT	**CT**
COURTS	**CTS**
COVE	**CV**
COVES	**CVS**
CREEK	**CRK**
CRESCENT	**CRES**
CREST	**CRST**
CROSSING	**XING**
CROSSROAD	**XRD**
CROSSROADS	**XRDS**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
CURVE	**CURV**
DALE	**DL**
DAM	**DM**
DIVIDE	**DV**
DRIVE	**DR**
DRIVES	**DRS**
ESTATE	**EST**
ESTATES	**ESTS**
EXPRESSWAY	**EXPY**
EXTENSION	**EXT**
EXTENSIONS	**EXTS**
FALL	**FALL**
FALLS	**FLS**
FERRY	**FRY**
FIELD	**FLD**
FIELDS	**FLDS**
FLAT	**FLT**
FLATS	**FLTS**
FORD	**FRD**
FORDS	**FRDS**
FOREST	**FRST**
FORGE	**FRG**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
FORGES	**FRGS**
FORK	**FRK**
FORKS	**FRKS**
FORT	**FT**
FREEWAY	**FWY**
GARDEN	**GDN**
GARDENS	**GDNS**
GATEWAY	**GTWY**
GLEN	**GLN**
GLENS	**GLNS**
GREEN	**GRN**
GREENS	**GRNS**
GROVE	**GRV**
GROVES	**GRVS**
HARBOR	**HBR**
HARBORS	**HBRS**
HAVEN	**HVN**
HEIGHTS	**HTS**
HIGHWAY	**HWY**
HILL	**HL**
HILLS	**HLS**
HOLLOW	**HOLW**
INLET	**INLT**
ISLAND	**IS**
ISLANDS	**ISS**
ISLE	**ISLE**
JUNCTION	**JCT**
JUNCTIONS	**JCTS**
KEY	**KY**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
KEYS	**KYS**
KNOLL	**KNL**
KNOLLS	**KNLS**
LAKE	**LK**
LAKES	**LKS**
LAND	**LAND**
LANDING	**LNDG**
LANE	**LN**
LIGHT	**LGT**
LIGHTS	**LGTS**
LOAF	**LF**
LOCK	**LCK**
LOCKS	**LCKS**
LODGE	**LDG**
LOOP	**LOOP**
MALL	**MALL**
MANOR	**MNR**
MANORS	**MNRS**
MEADOW	**MDW**
MEADOWS	**MDWS**
MEWS	**MEWS**
MILL	**ML**
MILLS	**MLS**
MISSION	**MSN**
MOTORWAY	**MTWY**
MOUNT	**MT**
MOUNTAIN	**MTN**
MOUNTAINS	**MTNS**
NECK	**NCK**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
ORCHARD	**ORCH**
OVAL	**OVAL**
OVERPASS	**OPAS**
PARK	**PARK**
PARKS	**PARK**
PARKWAY	**PKWY**
PARKWAYS	**PKWY**
PASS	**PASS**
PASSAGE	**PSGE**
PATH	**PATH**
PIKE	**PIKE**
PINE	**PNE**
PINES	**PNES**
PLACE	**PL**
PLAIN	**PLN**
PLAINS	**PLNS**
PLAZA	**PLZ**
POINT	**PT**
POINTS	**PTS**
PORT	**PRT**
PORTS	**PRTS**
PRAIRIE	**PR**
RADIAL	**RADL**
RAMP	**RAMP**
RANCH	**RNCH**
RAPID	**RPD**
RAPIDS	**RPDS**
REST	**RST**
RIDGE	**RDG**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
RIDGES	**RDGS**
RIVER	**RIV**
ROAD	**RD**
ROADS	**RDS**
ROUTE	**RTE**
ROW	**ROW**
RUE	**RUE**
RUN	**RUN**
SHOAL	**SHL**
SHOALS	**SHLS**
SHORE	**SHR**
SHORES	**SHRS**
SKYWAY	**SKWY**
SPRING	**SPG**
SPRINGS	**SPGS**
SPUR	**SPUR**
SPURS	**SPUR**
SQUARE	**SQ**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
SQUARES	**SQS**
STATION	**STA**
STRAVENUE	**STRA**
STREAM	**STRM**
STREET	**ST**
STREETS	**STS**
SUMMIT	**SMT**
TERRACE	**TER**
THROUGHWAY	**TRWY**
TRACE	**TRCE**
TRACK	**TRAK**
TRAFFICWAY	**TRFY**
TRAIL	**TRL**
TRAILER	**TRLR**
TUNNEL	**TUNL**
TURNPIKE	**TPKE**
UNDERPASS	**UPAS**
UNION	**UN**

Primary Street Suffix Name	USPS Standard Suffix Abbreviation
UNIONS	**UNS**
VALLEY	**VLY**
VALLEYS	**VLYS**
VIADUCT	**VIA**
VIEW	**VW**
VIEWS	**VWS**
VILLAGE	**VLG**
VILLAGES	**VLGS**
VILLE	**VL**
VISTA	**VIS**
WALK	**WALK**
WALKS	**WALK**
WALL	**WALL**
WAY	**WAY**
WAYS	**WAYS**
WELL	**WL**
WELLS	**WLS**

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Appendix D – Readdressing Checklist

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Municipal Readdressing Process – Tasks and Timeline

Updated 14 January 2013

1. The town must contact the Enhanced 9-1-1 Board office in writing, on town letterhead, requesting that the town, or a portion of the town, be readdressed according to the 5.28ft increment. (one day)

2. The Enhanced 9-1-1 Board staff meets with the town officials and officials from the United States Postal Service (USPS) to confirm which portion or areas of the town need to be readdressed. This meeting will define roles and responsibilities of the Board staff, town, and USPS officials. (one day)

3. The Enhanced 9-1-1 Board staff conducts fieldwork to capture sites and roads that need to be readdressed. (four weeks)

4. The Enhanced 9-1-1 Board staff obtains an initial extract of all the telephone numbers in the ALI database impacted by the new address information. The Board staff will provide a listing of old and new addresses to the town selectboard for approval. (four weeks)

5. The town selectboard gives final approval on addressing information, and if there are any changes they must be provided to the Enhanced 9-1-1 Board. (one week)

6. The town must draft and approve an address notification letter. The letter must be approved by the USPS if the letter is being sent out jointly. (one week)

7. The postmaster reviews address information as a paper printout and compares the addresses to all delivery routes to ensure they are efficient as to delivery of mail. If conflicts arise, they need to be resolved between the town and USPS. If changes to the addresses are required, then they must be sent to the Enhanced 9-1-1 Board so they may be updated on the Enhanced 9-1-1 maps. (one week)

8. The postmaster completes and sends the USPS edit sheets to the Address Management System (AMS) in Portland, ME. Addresses will be entered into the National Address File and each address will be assigned a zip-plus-four code. The postmaster that has the most deliveries to a town needs to take the lead on completing the edit sheets with the new address information. Please note: The AMS is used to update addresses with the USPS only and is not used to update addresses in the E9-1-1 Database. (8 – 16 weeks)

9. Once that postmaster has confirmed that the addresses are loaded in the AMS, the postmaster shall notify the town selectboard in writing. The town then notifies the Enhanced 9-1-1 Board. (one day)

10. Enhanced 9-1-1 Board staff notifies all the phone companies that currently have records in the ALI Database for the town that upcoming significant changes will be made to the MSAG and ALI records due to address changes. (one day)

11. Enhanced 9-1-1 Board Staff identifies the MSAG updates needed to accommodate the new addresses (new road ranges may also need to be added to the MSAG). Enhanced 9-1-1 Board Staff will submit all necessary MSAG update requests (MSAG CRs) to the DBMS Provider using 9-1-1 Net. (one day)

12. The town mails the address notification letters to all property owners. The town is responsible for the cost of postage. (three weeks)

13. The town needs to closely coordinate the timing of the mailing of address notification letters with Enhanced 9-1-1 Staff so that the GIS data, MSAG and records in the ALI Database are updated simultaneously.

14. Enhanced 9-1-1 Board staff obtains a second extract of all telephone number records in the ALI database impacted by the new address information. The extract will be reviewed to determine if there have been any service order updates since the initial extract to identify any additional database changes needed. Enhanced 9-1-1 Board staff will submit all necessary TN change requests (TNCRs) to the DBMS provider using 9-1-1 Net. The DBMS Provider will then refer these changes to the appropriate TSP(s) who shall submit service orders to update each TN record in the 9-1-1 Database as requested. (two weeks)

15. Enhanced 9-1-1 Board staff confirms that all ALI Database record changes have been performed by the phone companies, prior to MSAG ranges being modified. Ranges which had to be adjusted to accommodate both old and new addresses during the updating process will be readjusted to reflect the actual low and high address number. In addition, road names which no longer exist will be removed from the MSAG. MSAG changes are to be made using 9-1-1 Net. Enhanced 9-1-1 Board staff will confirm that all MSAG changes have been processed as requested. (three days)

16. To avoid confusion during emergency response, it is strongly recommended that the town supply all property owners with new address numbers so the old addresses can be immediately removed.

Vermont Enhanced 9-1-1 Board

Numbering Examples

February 11, 2013

This document is intended to be used in conjunction with the Vermont Enhanced 9-1-1 Board Addressing Standards. It was designed to assist Towns in the process of measuring and assigning addresses.

Measuring

Use of an accurate measuring device, such as a manual walk-behind measuring wheel or a vehicular mounted/installed measuring device, is vital when assigning 9-1-1 addresses. Car odometers are notoriously imprecise and cannot display distances accurately enough to determine proper numbering.

Numbering Examples

The following pages provide examples of how to assign numbers for several different types of structures and roads:

- Assigning Addresses Using 5.28 ft. Increment
- Assigning Addresses with Access Points in Neighboring Towns
- Apartments, Duplexes, and Condos
- Businesses
- Shared Driveways/Stacked Addresses
- Mobile Home Parks
- Preplanning Subdivisions
- Circular/Loop Streets
- Cul-de-sacs
- Crossing Town Lines

Assigning Addresses Using the 5.28 Foot Increment

When assigning numbers, the middle of the driveway should determine the number. Structures should always be numbered according to where the driveway is located, not which road the house faces.

Note: The numbers highlighted in yellow represent the number of feet from the beginning of the road to the middle of each driveway.

Assigning Addresses with Access Points in Neighboring Towns

When a site is located in one town and the access to that site is located in a neighboring town the Enhanced 9-1-1 address will be assigned based upon the access point. In the example listed below, both 595 & 621 have been added to the GIS data using access point addressing; they are addressed as Forrest Rd, Bridport.

Apartments, Duplexes, and Condos

Apartments and other multi-tenant structures should be numbered with the main building and then assigned apartment/unit numbers such as 101, 102, 201, or A, B, C. The full address for an apartment would then become 24 Burkeside Rd, Unit A.

Businesses

Businesses and business districts should be numbered the same as apartments, with the middle of the building determining the number and the offices or businesses in the building being numbered as suites. This rule may also be applied to "office parks" where each business has its own small building.

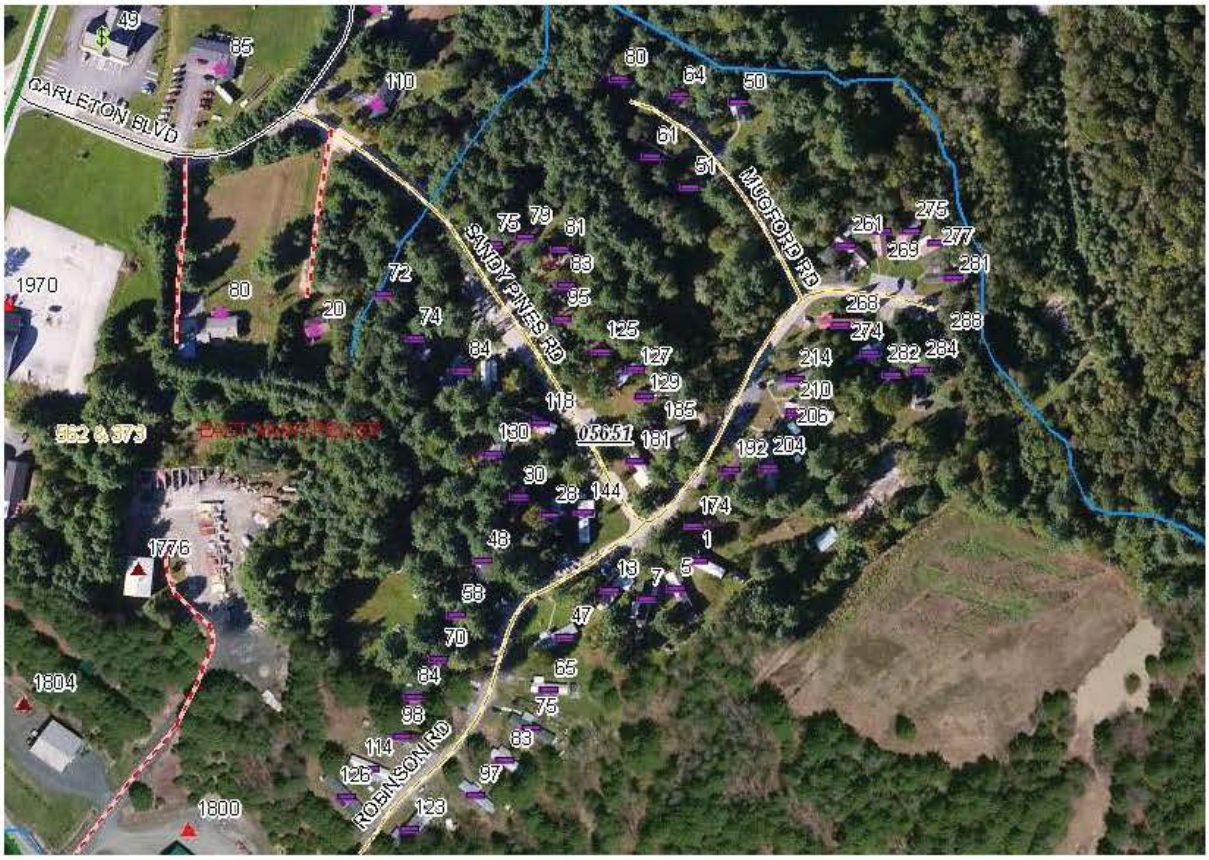
Shared Driveways/Stacked Addresses

Houses/addressed structures that share a driveway should be given individual numeric addresses (e.g., 4531 & 4533 VT Route 12) based on the access point from the main road. Fractional addresses (e.g., 4531 1/2) and duplicate numeric addresses (e.g., 4531A & 4531B) are not allowed.

Note: A shared driveway of any length having three or more addresses on it shall be defined as a private road and must be readdressed as such.

Mobile Home Parks

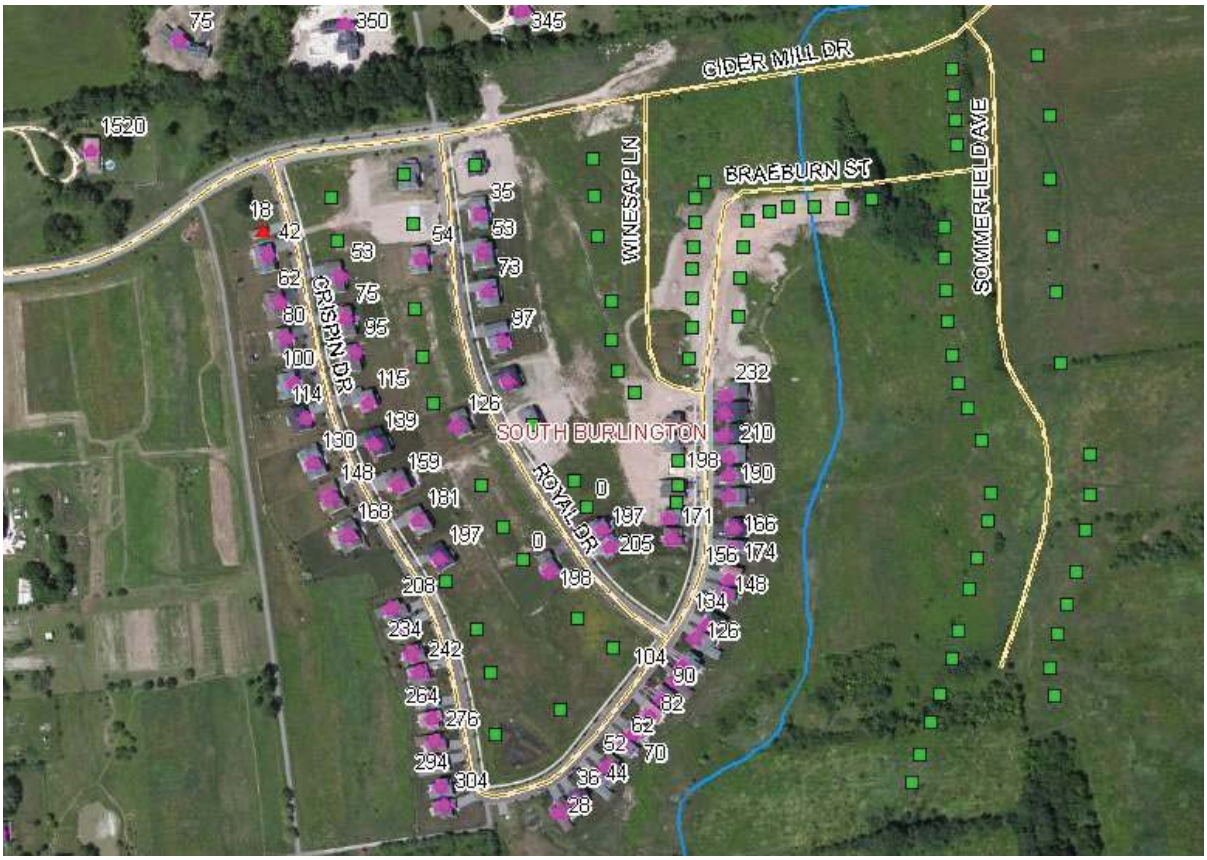
Mobile Home Parks should be numbered just like any other development. Streets within the mobile home park should each be assigned names, and addresses for any lots on each street should be assigned using the towns chosen measuring increment.



Preplanning Subdivisions

New subdivisions are a great opportunity to do a day's work in just a few minutes. Municipalities can make preliminary road name & number assignments once they receive maps from the developer. As work on the subdivision progresses, updates to name & number assignments can be made by the Town if needed.

Reminder: Developers do <u>not</u> have the authority to assign street names and addresses. That authority belongs to the Town.



Circular/Loop Streets – Example 1

Address numbers on circular/loop streets should be calculated using the towns chosen measuring increment. Care should be taken to make sure that numbering is done consecutively in a logical direction around the circle/loop and that the assignment of odds/evens remains consistent throughout.

Note: The example below shows even numbers are on the right and continue that way consistently around the outside of the loop. Odd numbers are on the left and continue that way around the inside of the loop.

Circular/Loop Streets – Example 2

Address numbers on circular/loop streets should be calculated using the towns chosen measuring increment. Care should be taken to make sure that numbering is done consecutively in a logical direction around the circle/loop and that the assignment of odds/evens remains consistent throughout.

Circular/Loop Streets – Example 3

Address numbers on circular/loop streets should be calculated using the towns chosen measuring increment. Care should be taken to make sure that numbering is done consecutively in a logical direction around the circle/loop and that the assignment of odds/evens remains consistent throughout.

Cul-de-sacs

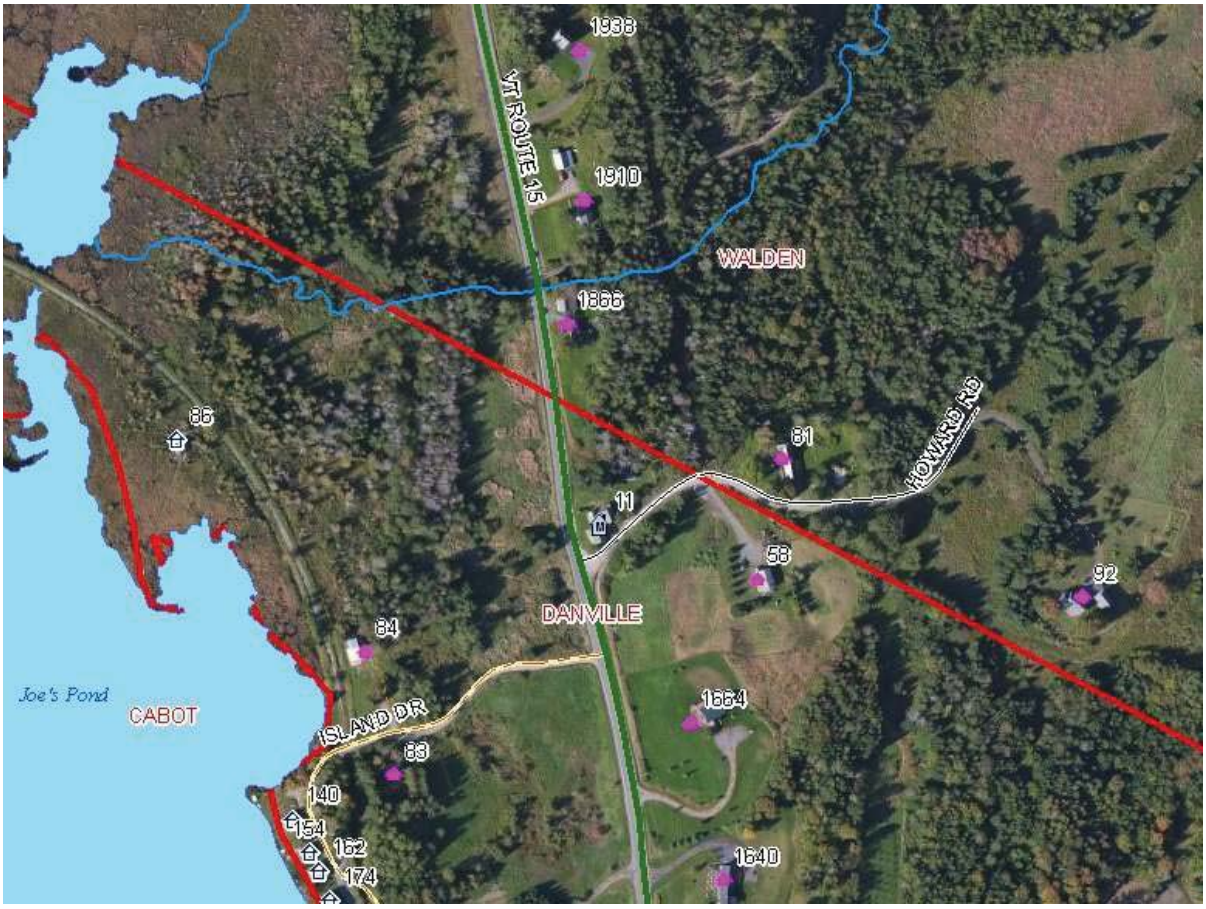
Cul-de-sacs are a special case when addressing structures. The cul-de-sac should be split down the middle with an imaginary line, and the addresses assigned accordingly with odds on one side and evens on another. This will create an instance at the end of the cul-de-sac of an odd address abutting an even address (see 157 & 158 Sugar Ridge Rd).

Note: On rare occasions there may be structures inside the cul-de-sac. When this occurs, number the structure or structures in the way that will fit best.

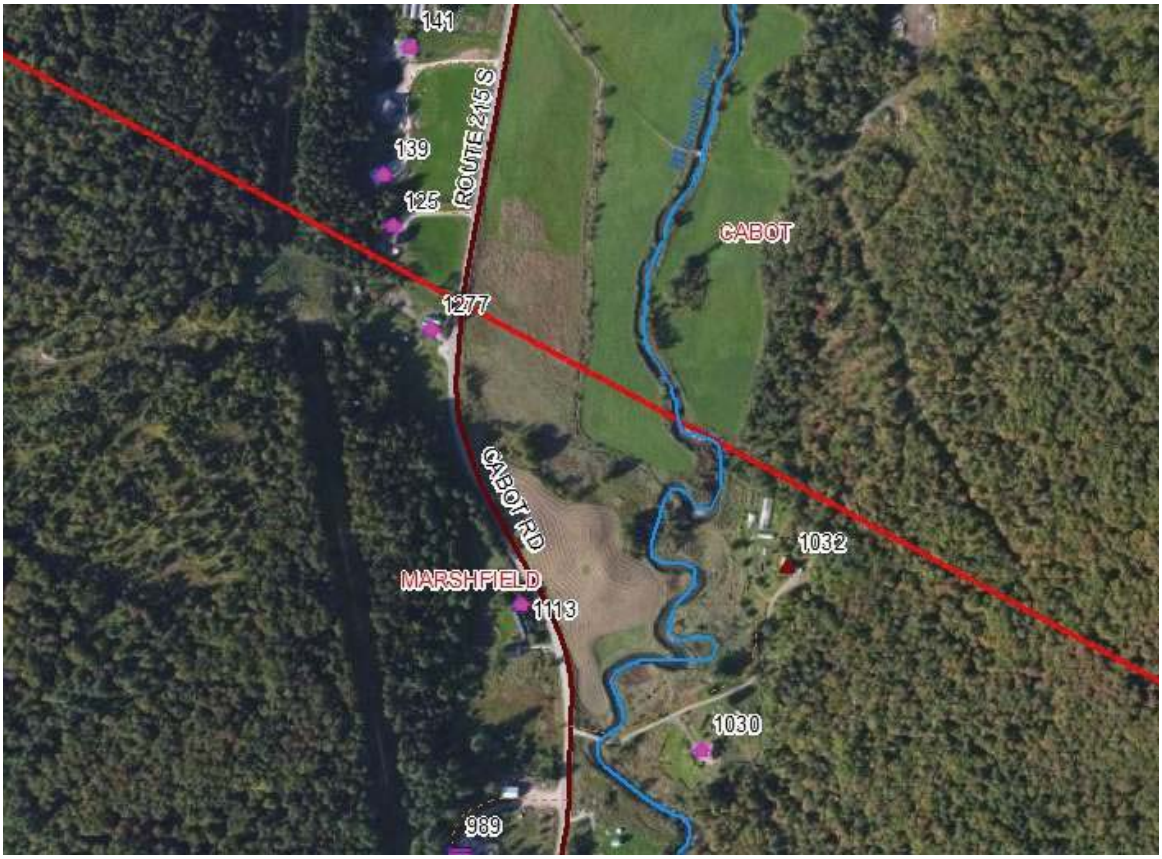
Crossing Town Lines – Example 1

When crossing Town lines, consideration will be given to road names & measuring increments.

When neighboring towns agree to keep the same name of a connecting road running between towns, the measuring and numbering shall be continuous from one town to the next (e.g., VT Route 15, Danville & Walden).



Crossing Town Lines – Example 2

When crossing Town lines, consideration will be given to road names & measuring increments.

When the name of a connecting road changes at the town border, numbering for each road should be based on each town's measuring increment and direction of travel.