

MAINE STATE LEGISLATURE

The following document is provided by the
LAW AND LEGISLATIVE DIGITAL LIBRARY
at the Maine State Law and Legislative Reference Library
<http://legislature.maine.gov/lawlib>



Reproduced from scanned originals with text recognition applied
(searchable text may contain some errors and/or omissions)



The Enhanced 9-1-1 Addressing Officer Manual

Fifth Edition - April 2011

**Public Utilities Commission
Emergency Services Communication Bureau
18 State House Station
Augusta, Maine 04333-0018
www.maine911.com**

The Enhanced 9-1-1 Addressing Officer Manual - Edition 5

Table of Contents

1. Introduction	
1. Purpose of Enhanced 9-1-1	4
2. Purpose of Manual	4
3. Contact Names & Numbers	5
4. Telephone Company Contacts	6
5. Glossary of Enhanced 9-1-1 Terms	7
2. The Addressing Officer	
1. Responsibilities of the Addressing Officer	11
2. Designating or Changing An Addressing Officer	13
3. Addressing Officer Confirmation Form	14
4. Administrative Rules Relating to the Addressing Officer	15
3. Maintaining An Addressing System	
1. Assigning A New Address	16
2. Changing An Address	17
3. Confidentiality of 9-1-1 ALI data	18
4. Maintaining the Emergency Road Network	
1. Maintaining the Emergency Road Network	19
2. Maine E9-1-1 Road/MSAG Update Form	21
3. Instructions for Completing Road/MSAG Update Form	22
4. Examples of Indicating Road Updates on Maps	25
5. Designating Emergency Service Zones	
1. Designating Emergency Service Zones	31
2. Samples of Completed Emergency Service Zone Form	32
3. Sample Preliminary Emergency Service Zone Form	35
6. Keeping the 9-1-1 Database Current	
1. Telephone Company Service Order Process	36
2. Database Error Report Process	36
3. Sample Incorrect ALI Report Form	37
7. Publicizing 9-1-1	
1. Statutes related to Publicizing 9-1-1	38
2. Telephone Book Listings	39
3. Emergency Vehicles and Printed Materials	40
4. The Bureau Website	40
8. A Glimpse of the Future of 9-1-1	
1. NextGen 9-1-1	41
Appendix A - Frequently Asked Questions	
Addressing Questions	42
Wireless Questions	43
VOIP Questions	44
Signage Questions	45
Confidentiality of E9-1-1 Data	46
Appendix B - Sample Address Notification Letter	49
Appendix C - Road Measurement and Property Numbers	50
Road Measurement and Address Table	51
Appendix D – NENA and Postal Standard Road Naming Conventions	61
Road Suffix Abbreviations Table	64

1.0 Introduction

1.1 Purpose of the Enhanced 9-1-1 System

Enhanced 9-1-1 is an emergency communication system that automatically displays the address of a caller at a 9-1-1 emergency center when called from a wireline telephone. If a caller is hysterical, becomes unconscious, or hangs up, the call taker will still know where to send help. This also helps if the caller does not speak English or is unfamiliar with his or her location. When dialed from a wireless phone, the 9-1-1 call taker's computer screen shows an approximate location in the form of latitude and longitude coordinates that are automatically displayed on a map.

The Emergency Services Communication Bureau (ESCB) is responsible for the management and maintenance of statewide E9-1-1 service. The ESCB currently contracts with Fairpoint Communications for E9-1-1 equipment, software, database management and support. Therefore, when a document refers to the E9-1-1 Service Provider it is referring to Fairpoint Communications.

The Bureau contracts with the Maine Office of GIS (MEGIS) for mapping and addressing support to towns and mapping support for PSAPs. Maps in .pdf format for each town are hosted on the MEGIS web site at www.maine911.com.

1.2 Purpose of this Manual

This manual is a reference for Addressing Officers to help them carry out their responsibilities to manage addresses, E9-1-1 road network, and other emergency service information for their city, town, or county unorganized territories. Most communities have completed the initial E9-1-1 addressing, i.e. the creation of locatable addresses that allows residents to realize the full benefits of the E9-1-1 system. In order for the E9-1-1 system to continue to work properly, the address information and emergency road network must be regularly maintained. This maintenance is the responsibility of the Addressing Officer (AO).

This manual does the following:

1. Identifies the responsibilities of the Addressing Officer;
2. Offers instruction on maintaining an address network;
3. Explains the methodology for providing road network and Master Street Address Guide (MSAG) changes to the E9-1-1 system; and
4. Describes the process of keeping the E9-1-1 database current.

1.2.1 Using the Manual

Instructions that are **bolded** are critical instructions to be followed by all Addressing Officers. This manual includes copies of forms. However, because forms can be modified over time it is best to visit the ESCB Web Site for the most up to date versions of the forms. For current forms and more information on the Enhanced 9-1-1 program, visit the ESCB website: www.maine911.com

Section 1 Introduction, Contacts and Glossary
Also included on the web site is an Addressing Guidebook. This is a primer for creating locatable addresses. This is very useful for communities who are in the initial addressing process and it can also be used as a reference to help Addressing Officers with tricky address situations.

1.3 Contact Names and Numbers

There are three groups who have a part in 9-1-1 addressing and emergency response information management for the ESCB. Below is a list of areas of responsibility for each group and their contact information. If you ever have a question and are not sure who the appropriate group would be, please call the ESCB contacts who will be happy to help you with any questions.

For questions on the following:

- Responsibilities of the Addressing Officer
- Designating an Addressing Officer
- Postal Service Issues
- Assigning of New Addresses
- Designating or Changing Emergency Service Zones and Emergency Responders
- Telephone Company Coordination Issues
- Any other questions about 9-1-1 or addressing where you are not sure who to contact:

Emergency Services Communication Bureau

Jeanne Locke, E 9-1-1 Database Manager
Phone: (207) 287-6084 Fax: (207) 287-1039
E-mail: Jeanne.Locke@maine.gov

Or

Robin Dayton, Enhanced 9-1-1 Database Coordinator
Phone: (207) 287-6086 Fax: (207) 287-1039
E-mail: robin.m.dayton@maine.gov

For questions on the following:

- Changes or additions to the Enhanced 9-1-1 Road Network (MSAG Changes)
- Completing the Maine Enhanced 9-1-1 Road/MSAG Update Form
- Indicating Road Updates on Maps
- For assistance with addressing or location information
- All technical issues and questions regarding mapping

MEGIS E911 Support Group
175 Statehouse Station
Augusta, ME 04333-0175
Toll Free: 1-800-665-2830
Toll Free Fax: 1-866-710-7381
Email: Megise911.gis@maine.gov

E9-1-1 maps for each town can be found on the MEGIS E911 Maps Web site at:

http://www.maine.gov/megis/catalog/e911rds_tiles.shtml. Bob White is the manager of the MEGIS E911 Support Group.

For questions about the Enhanced 9-1-1 databases such as:

- Reporting changes to addresses in the Enhanced 9-1-1 Database
- Requesting copies of an MSAG or telephone number list

FairPoint Database Management Center

Toll Free: 1-866-984-1610

Fax: 1-866-925-3488

Email: fpe911DBMC@fairpoint.com

Deb Wall is the manager of Fairpoint 911 Database Management Group. Her team is responsible for addresses for Fairpoint Communications (formerly Verizon) and, because Fairpoint is the State's E9-1-1 Service Provider, she is also responsible for the operation of the overall E9-1-1 Database.

1.4 Landline Telephone Company Database Contacts

This table includes contact names for 9-1-1 support within the other telephone companies operating in Maine. You might use these contacts to change or correct addresses of residents whose road name changes, etc. They might contact you to get a valid address for a customer.

COID	Company	Phone	Fax	Email
BDF	Great Works Internet	1-800-829-1011 option 9	732-932-0187	Sphilpot@staff.gwi.net
FAIR	FairPoint** (former Verizon)	1-866-984-1610	1-866-925-3488	fpe911dbmc@fairpoint.com
CHINA, CST, MAINE, NM237, NM238, SID, STND	FairPoint** (formerly China, Community Service, Maine Tel, Northland, Sidney, and Standish) <i>**The 2 Fairpoints are the same company but some functions, including database, are still operated separately</i>	(716)326-1241	(207) 377-1319	kwall@fairpoint.com
CMCST	COMCAST	720-267-1524	720-267-1026	e911_support@cable.comcast.com
CRCME	OTT Communications (formerly Pine Tree Networks or Country Roads Comm.)	(207) 688-8811 ext. 8802	(207) 688-8833	maggie.willette@ottcommunications.com
CTCG/HOC	Choice One/One Communications	585-530-2670	585-278-1751	e911team@onecommunications.com
MCI	Verizon Business			
MIDME	Mid Maine Communications	(207) 992-9959	(207) 992-9997	e911@midmaine.com
OXNET	Oxford Networks	(207) 333-6300 ext 3024	(207) 333-3489	jwilliams@oxfordnetworks.com
PUA	PAETEC Communications			e911@paetec.com
TDS	TDS Telecom	(765) 522-0211	(608) 830-5572	mary.rux@ldstelecom.com
TWT	Tidewater/Lincolnvile Telephone Company	(207) 380-9927	(207) 563-9936	anne@lintelco.net
UNITY	Unitel, Inc.	(207) 948-3922	(207) 948-3021	unitel911@uninet.net
UNRV	Union River Telephone Company	(207) 584-9911	(207) 584-9997	pleighton@rivah.net

1.5 Glossary of Enhanced 9-1-1 Terms

ADDRESSING COORDINATOR:

A representative designated by a community to be the contact person for address conversion efforts with the Emergency Services Communication Bureau and MEGIS. This local contact person may or may not be the community's Addressing Officer. Typically, when a town completes address conversion, the responsibilities for addressing and Enhanced 9-1-1 information transfers from the Addressing Coordinator to the Addressing Officer.

ADDRESSING OFFICER (Municipal or County) (AO):

A representative designated by a community who is responsible for all issues involving the development and maintenance of address information for the Enhanced 9-1-1 addressing and routing databases. For unorganized territories, Counties will designate a representative to manage addresses in the townships.

ALI (Automatic Location Identification):

A system capability that enables an automatic display of information defining a geographical location (e.g., a street address or lat/long for wireless calls) of the telephone used to place the 9-1-1 call; this feature is available in Enhanced 9-1-1 systems. When the address in the ALI database does not match what a caller says his address is, a report, called an ALI Discrepancy, is created by the PSAP. The AO may be asked to help resolve this problem.

ANI (Automatic Number Identification):

A capability that enables the automatic delivery of the ten-digit number of the telephone used to place the 9-1-1 call; this feature is available in Enhanced 9-1-1 systems.

COMMUNITY

Any municipality, plantation, or unorganized township in Maine.

EMERGENCY SERVICES COMMUNICATION BUREAU (ESCB or Bureau):

The state bureau within the Public Utilities Commission responsible for provisioning and managing Enhanced 9-1-1 in Maine, often referred to as the 9-1-1 Bureau.

EMERGENCY ROAD NETWORK (E911 Road Network)

All public and private roads that emergency vehicles could travel when responding to a call. The roads to be included in a community's emergency network are determined by the municipal Addressing Officer. These roads will have address ranges assigned to them.

ENHANCED 9-1-1 (E9-1-1):

An improved emergency communication system which automatically displays the location and phone number of a caller at a call answering center, known as a Public Safety Answering Point. Enhanced 9-1-1 also automatically routes a 9-1-1 call to the appropriate Public Safety Answering Point, based on the address of the caller or the tower location for wireless calls.

ENHANCED 9-1-1 SERVICE PROVIDER:

The Enhanced 9-1-1 Service Provider for Maine is FairPoint Communications, Inc., as contracted by the ESCB. The Service Provider supplies the E9-1-1 equipment, software, database management, system maintenance and support.

ESZ (Emergency Service Zone), ESN (Emergency Service Number):

Defines a geographical territory consisting of a unique combination of town, law enforcement, fire department, and EMS coverage areas. Each town in Maine has at least one ESZ. Some towns have more ESZ's because different emergency service providers respond to different parts of a town. An ESZ is identified by an ESN (Emergency Service Number). An ESN, which is associated to each street address range, is used to route a call to the appropriate PSAP and to populate hot buttons for the PSAP to use to dispatch the right responders.

GIS (Geographic Information System):

A graphical mapping system where data is tied to an electronic map. The E9-1-1 Road Network and the Emergency Service Zones are maintained in a GIS by MEGIS. Aerial photos are also used in the GIS to help locate roads and structure addresses. In the PSAPs a GIS is used to map a caller's location to assist in directing emergency responders to the caller.

GPS (Global Positioning System):

A constellation of 24 satellites orbiting the earth at 10,900 nautical miles. These satellites emit signals that can be monitored by GPS receivers, and those signals are used to locate the geographical position of the receiver. GPS is sometimes (depending on cellular company, some use triangulation to locate caller) used to provide the latitude and longitude of a wireless caller.

LANDLINE (also called wireline):

This is traditional telephone service. The address associated to the telephone number will display in the ALI. The call will map using the address range in the MSAG.

MASTER STREET ADDRESS GUIDE (MSAG):

The computerized geographical file and database which consists of all the official streets, address ranges, and ESZ's within the 9-1-1 system area. In Maine, this would be the entire state. This database is the key to the selective routing capability of Enhanced 9-1-1 systems, and requires constant updating to keep up to date with

valid addresses. Municipal Addressing Officers provide the updates to this system via MEGIS. The MSAG is used by Landline and VoIP carriers to validate addresses provided by their customers.

MEGIS (Maine Office of Geographic Information Systems):

A state agency working with the Emergency Services Communication Bureau to support community addressing efforts, road network updates, and MSAG maintenance. All changes to streets and address ranges should be reported to MEGIS on the appropriate Road Update Form which can be found herein and at www.maine911.com.

NEXTGEN 9-1-1

First there was Basic 9-1-1, then Enhanced, next there will be NextGen9-1-1 (NG9-1-1). The NG9-1-1 System uses newer technologies such as IP networks to process 9-1-1 calls and, over time, will allow a 9-1-1 calltaker to receive other types of information like text, video, pictures, etc. The NextGen system puts more emphasis on GIS and mapping to route calls to appropriate PSAPs. NG9-1-1 will, at some point in the future, accept text message 9-1-1 "calls" but changes in the telecommunications industry must take place first to prepare for texting to 9-1-1. The NG9-1-1 system is still being developed and not yet in use in Maine.

PSAP (Public Safety Answering Point):

An office where a 9-1-1 call is initially answered, these are sometimes called 9-1-1 call answering centers. Twenty-six PSAPs are currently used to cover the State of Maine, some are County operated, some are run by the State Dept. of Public Safety, and some are in Municipal Police Departments.

SELECTIVE ROUTING

An E9-1-1 feature that allows for calls to route to the appropriate PSAP based on the address of the caller, via the ESZ. For wireless calls, routing is done based on the location of each sector of a carrier's tower.

STREET ADDRESS GUIDE (SAG):

A list which consists of all valid streets and address ranges within a community. This database is the key to the selective routing capability of E9-1-1 systems, and requires constant updating after the initial file or list is established.

VOICE OVER INTERNET PROTOCOL (VoIP):

A type of telephone service that uses Internet Protocol (IP) to send and receive voice calls. VoIP 9-1-1 calls will display both an address and a latitude/longitude coordinate.

WIRELESS TELEPHONE SERVICE (cell phones):

A type of telephone service that uses cellular towers to send and receive calls. Wireless call ALI displays have a latitude/longitude coordinate which is used to plot

Section 1 Introduction, Contacts and Glossary

the call location onto a map. The ALI display will show the address of the cell tower used to deliver the call. Wireless Phase 1 calls will plot on the map at the tower location. Phase 2 calls will map at the caller's location. All cellular phone services in Maine are now capable of achieving Phase 2 locations (the location of the caller) but this can be affected by signal strength and the phone used by the customer.

2.0. The Addressing Officer

2.1 Responsibilities of the Addressing Officer

The Addressing Officer (AO) is responsible for creating and providing address information to the Emergency Services Communication Bureau or its designee (MEGIS, FairPoint), and must have signature authority on behalf of the community for doing so. Each municipality and plantation must designate an Addressing Officer. County Commissioners with populated unorganized territories must also designate an Addressing Officer to serve its unorganized townships.

The basis for this position and its responsibilities are found in the rules originally adopted by the Emergency Services Communication Bureau in 1996, pursuant to 25 M.R.S.A. § 2926 (See section 2.3).

Typical responsibilities of the Addressing Officer include:

- 1. Assigning addresses and communicating new addresses to town residents.**
For new dwellings, a physical address must be provided to the telephone carrier in order for the resident to procure landline or VoIP telephone service. The Addressing Officer will assign addresses to residents and will notify them in writing of their new address. See Section 3.1 for details.
- 2. Approving and providing correct road name and number range information.**
For any new road, road name change, address range change, or road jurisdiction (public, private) change, an MSAG Update form must be sent to MEGIS immediately. Each community should have a map book from MEGIS with its official road names and address ranges. The maps are to be used to communicate address corrections, new streets, road extensions, etc. to MEGIS for update into the MSAG and the GIS.
- 3. Providing updates on changes to address ranges as they occur or providing verification at least annually.** Anytime a town adds a new road or changes an address range (i.e., a road is extended or closed), the Addressing Officer must notify the MEGIS immediately. Road updates are to be coordinated with the town Road Commissioner or Public Works Director so that the needed information can be supplied on the Road Update Form.
- 4. Verifying and/or correcting addresses with the local phone company(s) or with ESCB.** This is critical to ensuring the correct name and location of an emergency caller is available to the E9-1-1 system. The old-to-new address conversion list, originally provided by a local Addressing Committee to the US Post Office when they converted rural route addresses to street-like addresses, can be very helpful with this process. The ESCB will often reach out to the Addressing Officer to verify addresses supplied by customers to telephone service providers or to verify

5. **Indicating the community's Emergency Service Zone(ESZ)(s).** An ESZ is a geographic area in a community comprised of specific roads and ranges of addresses that are served by a unique combination of police, fire and EMS agencies. Most towns will have just one ESZ because the same police, fire and EMS agencies serve the entire town. However, a town that is served by two ambulance services would have two ESZs, for example, a town with a lake in the middle of town may have one ambulance respond to half the town and another to the other half. It is the Addressing Officer's responsibility to notify the ESCB in writing when the town intends to make a change in emergency response provider.
6. **Resolving discrepancies that arise with any addressing information in the Enhanced 9-1-1 databases.** An Addressing Officer will be asked to resolve problems with addressing information discovered by the Enhanced 9-1-1 system. For example, if a caller's address on the 9-1-1 equipment does not match the address reported by the caller itself, or the address is missing, the Addressing Officer will be asked to help resolve the ALI discrepancy.
7. **Act as a local guide for collection of new or missing road data.** The Emergency Services Communication Bureau will periodically collect, using GPS technology, new or missing roads in a given town. The Addressing Officer will need to act as a local guide or make arrangements for another local guide, to assist the Bureau in collecting this information. This data will be used to update the road centerline maps.
8. **In the community, other responsibilities of the Addressing Officer might include:**
 - Answering citizens questions about addressing.
 - Monitoring local development activities with the planning board, CEO, town planner or city engineer, for the creation of new roads and subdivisions to assign new addresses.
 - Calculating and issuing property numbers.
 - Updating the community's address database as needed.
 - Communicating changes in road maintenance jurisdiction (see Road Update Form)

Many communities and counties feel the best person to be designated as an Addressing Officer is one who routinely assigns property addresses or issues building permits. In many cases, the AO is the assessor, code enforcement officer, public works director, and sometimes the chair of the Board of Selectmen. These people have firsthand knowledge of new development within their community. Other communities assign the police chief, fire chief or rescue unit chief to this position because these people best understand the importance of accurate and complete addressing information. However, if an emergency department head is

Section 2 Addressing Officer

assigned this task, it is imperative that an internal process be developed to keep this person informed of developments within the town.

2.2 Appointing or Changing An Addressing Officer

An Addressing Officer must be designated on an official form. **Anytime there is a change of Addressing Officer, a new form must be completed and returned to the Emergency Services Communication Bureau.** The current version of the “Addressing Officer Confirmation Form” can be found on the next page. The most current form is also available on the ESCB website at www.maine911.com/communities/index.htm.

To find out who the current Addressing Officer is for your community or another community, visit the ESCB website at www.maine911.com/communities/911contacts.

When filling out the Addressing Officer appointment form please indicate which Municipality (or County in the case of unorganized territories) the appointment will represent. We can often tell by the address but there are times when the address is a different town than the town being represented. Also, if this appointment is for a County Addressing Officer, please indicate this because we have several towns with the same name as a county so there can be confusion if “County” is not specifically indicated.

**Emergency Services Communication Bureau
Addressing Officer Confirmation Form**

The following individual is designated as the Addressing Officer. This individual is authorized to approve and provide addressing information to the Emergency Services Communication Bureau for Enhanced 9-1-1 purposes.

<u>MUNICIPALITY or COUNTY REPRESENTED:</u> <i>(if this is for a County Addressing Officer, please indicate so)</i>				
ADDRESSING OFFICER INFORMATION:				
First Name	MI	Last Name	Suffix	Title
Address				
City		State	Zip	
Phone:		Fax		
Email:				
AUTHORIZATION:				
Signature of Authorizing Official*			Title	
Printed Name of Authorizing Official			Date	

*Authorizing officials can be either the Chief Administrative Officer or Head Elected Official.

Please sign and return this form to:

Jeanne Locke
 Emergency Services Communication Bureau
 18 State House Station
 Augusta, ME 04333-0018 or
 FAX: (207) 287-1039 or
Jeanne.Locke@maine.gov

If you have questions, please call 287-6084 for assistance.

2.3 Administrative Rules Relating to the Addressing Officer (Municipal Coordinator)

The basis for these responsibilities is found in the following excerpt from the Chapter 1 operating rules adopted by the Emergency Services Communication Bureau in 1996, pursuant to 25 M.R.S.A. § 2926¹. The following sections detail the responsibilities for municipalities and Addressing Officers regarding updating E9-1-1 address database information.

§6. *Procedures for Developing and Maintaining Address and Routing Databases.*

1. *Address and Routing Database Development.*

- A. *Physical Addresses.*** *Each municipality participating in the Enhanced 9-1-1 system shall provide the Bureau with a list of accurate physical addresses for all published residential and business telephone subscribers and coin-telephones within its municipal boundaries. These addresses shall be linked with responding telephone numbers in telephone companies customer service databases.*
- B. *Master Street Address Guide.*** *Each municipality participating in the Enhanced 9-1-1 system shall provide the Bureau with accurate roadnames, number ranges, and emergency service zones (ESZ) for the purpose of creating the Master Street Address Guide (MSAG). The MSAG shall be used to route 9-1-1 calls to the proper PSAP and display the correct ANI/ALI information.*

2. *Address and routing database maintenance.*

- A. *Municipal Maintenance.*** *After establishment of the MSAG, each municipality participating in the Enhanced 9-1-1 system shall continue to verify the accuracy of the routing information contained in the MSAG and to advise the Bureau, on an as-occurred basis, of any changes in road names, the establishment of new roads, changes in address numbers used on existing roads, closing and abandonment of roads, changes in police, fire, emergency medical service or other appropriate agencies, jurisdiction over any address, annexations and other changes in municipal and county boundaries, incorporation of new communities or any other matter that will affect the routing of 9-1-1 calls to the proper PSAP.*

§7. *Procedures for cooperation and coordination with telephone utilities and municipalities for implementation.*

- 1. *Municipal Coordinator (Addressing Officer).*** *Each municipality participating in the Enhanced 9-1-1 system shall designate an individual to serve as its Municipal Coordinator (Addressing Officer) for all issues involving the development and maintenance of address information for the Enhanced 9-1-1 addressing and routing databases.*
- 2. *Database Maintenance.*** *Each Municipal Coordinator (Addressing Officer) shall notify the Bureau and Service Provider of any changes, deletions and additions to the MSAG on an as-occurred basis. The Service Provider shall update the MSAG within 24 hours of notification by a municipality. Each municipality shall review the MSAG yearly, at a minimum, to ensure accuracy of the data and the emergency service zones.*

¹ http://www.maine911.com/laws_rules/rules.htm

3.0 Maintaining an Addressing System

Below are instructions for maintaining an addressing system. Communities may want to tailor these recommendations to meet their needs.

Communities must develop a process for assigning addresses so that all internal departments and external agencies (i.e., Emergency Services Communication Bureau, U.S. Postal Service, the Maine Office of GIS and telephone companies) are notified as needed.

3.1 Assigning a New Address

1. When a request is made for an address assignment, the property's location should be obtained, along with any identifying structures or landmarks that may help locate the new structure or property requiring the address.

New addresses should always be verified by field checks to be sure that the addresses have been assigned sequentially and on the correct side of the road.

2. New address requests should be handled the same day they are received whenever possible as residents may be waiting for an address before they can obtain phone service.
3. Creditable measuring devices, such as a "Ready Wheel" that measures road frontage, should be used to help assign addresses.
4. Use Appendix C The Road Measurements and Property Numbers tables to calculate the correct address
5. Review your map book and street index provided by the Maine Office of GIS, to see if the new address has affected the address range on the road, the road name, or to see if it is a new road. (The address range should be checked between intersections, as well as from the road's origin to the road's end.) If it is a new road or the road address range has been affected, you will need to notify MEGIS immediately, utilizing the "Maine Enhanced 9-1-1 Road/MSAG Update Form". See Section 4.3 – Road Change Process.

It is the responsibility of the MEGIS E911 Support Group to update your changes to the Enhanced 9-1-1 Service provider within one business day of receiving all the information they need to make the change. Should you have a more immediate need, please indicate this on the form. Missing information may delay the needed update.

After each update is made, MEGIS will print and send updated mapbook sheets to each Addressing Officer in 11 x 17 format for insertion into his/her map book.

Section 3 Maintaining Addresses

6. Assign the address and notify the customer in writing of the new address. See Appendix B for sample address notification letter.
7. Send a copy of the notification letter to the following agencies or departments
 - The local postmaster by mail on town letterhead.
 - The tax clerk or assessor.
 - The town/city clerk.
 - The registrar of voters
 - MEGIS
 - Other appropriate local agencies or internal departments.
8. Immediately update the town's address map, tax database, and address database (if separate from the tax database)
9. Depending on the level of activity during the year, or at least once each year, updated maps should be distributed to the community's user agencies. Map users might include emergency services providers, as well as tax assessors and other town agencies. These maps are now available on the MEGIS website as Adobe PDF files. Visit http://www.maine.gov/megis/catalog/e911rds_tiles.shtml to access these files.

Each of the mapbook tiled pages is designed to be printed on 11 x 17 paper. In addition to the tiled pages in the mapbooks, the MEGIS 911 Mapbooks web page includes an overall base map for each municipality which is designed to be a wall size map. This PDF file can be printed at a copy shop or anywhere there is a large paper printer or plotter. These PDF's can be adjusted to print on smaller paper though the readability may be impacted.

3.2 Changing An Existing Address

Changing an existing address should only be done when necessary. This may be because addresses were previously issued in error, addresses are causing problems with postal delivery, addresses are causing a problem for emergency responders, addresses where the building density has changed and the addressing increment initially used no longer works. Although a community has the authority to change a road name, it is not popular among current residents and this practice can confuse emergency responders. If you have a situation where it appears existing residents' addresses should be "fixed", feel free to call MEGIS or the ESCB for assistance.

- If the road name is changing or the address range for the road is changing you must notify the MEGIS E911 Support Group using the Road/MSAG Update Form.
- If the road name or range is not affected by the change, just individual addresses, you need only to follow steps 6 through 8 above. If an address is reassigned, it is important to provide this information to MEGIS so they can update the residents' address in the E9-1-1 system.

3.3 Confidentiality of 9-1-1 ALI (Automatic Location Identification) data

The ALI database includes the customer names, their addresses, and their telephone numbers for all landline telephone subscribers in the state. This database is used by the E9-1-1 system to show addresses associated to telephone numbers in a PSAP for emergency response only.

25 MRSA, Chapter 352, Section 2929 defines confidential information to include, “the names, addresses and telephone numbers of persons listed in E9-1-1 databases.”

While Fairpoint and the ESCB can provide this information to Addressing Officers, the information can only be used for address validation purposes and cannot be shared by the Addressing Officer for any other reason due to the confidential status defined by the statute.

When an Addressing Officer requests a copy of his/her community's ALI database, all telephone numbers that are coded as “unlisted” are removed from the list. Once the AO is finished with the list it should be destroyed to protect confidential information.

For more information on the confidentiality of 9-1-1 data see Appendix A.

4.0 Maintaining the Emergency Road Network

In order to ensure the E9-1-1 system will work properly, the road network, corresponding address range information, and the resulting Master Street Address Guide (MSAG) must be updated as changes occur. **Please notify the MEGIS E9-1-1 Support Group when any of the following occurs:**

- A new road is added.
- A road name is changed.
- A road is extended.
- A road is closed.
- An address range change occurs.
- A road is in the wrong location on a map.
- The jurisdiction of a road changes (public to private, private to public, summer-only maintenance to year round maintenance, etc.)

Upon naming a new road and developing its address range, it is a good idea to have the USPS to review it, particularly if your Post Office serves more than just your town. This can prevent mail delivery issues that can happen when the same road name is used by two towns who are served by the same Post Office.

Town AOs may ask Fairpoint or the ESCB to review their address ranges and residents' addresses and a list of the MSAG, the ALI database, and/or the ESZs can be provided to you (use of the ALI list must adhere to the confidentiality rules as discussed in Section 3.3). Periodically, the Emergency Services Communication Bureau will ask a town to verify the address ranges of each road in town, and to verify their ESZ designation(s) – see Section 5 for more discussion of ESZs.

4.1 Partnership between E9-1-1 and MaineDOT

In 2009, the ESCB joined with MaineDOT in the maintenance of a statewide road inventory. This partnership coordinates work that was going on separately in two state agencies in an effort to minimize duplication and improve accuracy and timeliness. If your town changes the jurisdiction (public vs. private) or the maintenance of a road (summer-only, winter-only, or year round), even if it has not physically changed, that change should be reported to MEGIS. By updating road information as changes occur, municipalities will receive more correct URIP payments (Urban Rural Initiative Program, which pays towns to maintain their roads, payment is calculated on the # of lane miles of public roads) from MaineDOT.

To make this work, a single road update process was developed. This is why the road update form was modified to include road jurisdiction information. **Addressing Officers must now coordinate with their town's Public Works/Road Commissioner to update road jurisdiction information** (public or private and if public - summer, winter, or year-round maintenance)

4.2 The MSAG

The Master Street Address Guide is a database that contains all the valid communities, street names, address ranges, and ESNs for the State of Maine. It is used by all the telephone carriers to validate addresses. It is synchronized with the GIS maps maintained by MEGIS and the MSAG itself is also maintained by MEGIS.

The MSAG follows industry standards for database format and representation of road names and other attributes. This may cause a bit of confusion to you when you see an MSAG list for your community because your road names may not look exactly like you have them listed. One example of a National standard used in the MSAG is the USPS Standard for road suffix abbreviations. The MSAG will abbreviate according to this standard even though a road's legal name is the spelled out, for example Ocean Meadows will be Ocean Mdws in the MSAG. Standardization is needed because many companies use the MSAG for address validation and these system to system checks need to be standard in order to work well. See Appendix E for more details and a list of standard suffixes.

4.3 Road Update Process

Whenever there is a change in your road network send the information to MEGIS immediately so that the MSAG can be modified to accept new addresses.

Changes must be reported on the Maine Enhanced 9-1-1 Road Update/MSAG Form (on following page). **A map must be attached to the form (for any physical changes). Send the form and map to the MEGIS E911 Support Group.** This form may be faxed, mailed, or emailed. The form must be signed, however if emailed and sent from **the email address on record** for the Addressing Officer, it will be accepted. Instructions for completing the form follow. The form is also available electronically at <http://www.maine911.com/communities/forms.htm>.

Upon receipt of the update form, MEGIS will record the change with the Enhanced 9-1-1 Service Provider within one business day. **Failure to provide the MEGIS E911 Support Group with this information may delay installation of phone service or impact the display of address information should 9-1-1 be called.**

Include with the Maine Enhanced 9-1-1 Road Update/MSAG Form a copy of the appropriate page from the town's Enhanced 9-1-1 map book with sketched-in changes. MEGIS will return to you a revised street index and map book page once the required map changes are made.

Email, Mail or Fax completed Maine Enhanced 9-1-1 Road/MSAG Update Forms to:

MEGIS E911 Support Group
175 State House Station
Augusta, ME 04333-0175
FAX: 1-866-710-7381 (toll free)
Megise911.gis@maine.gov

Maine Enhanced 9-1-1 & MaineDOT Road / MSAG Update Form

(use a separate form for each request & attach a copy of map, sketch, or plan)

SECTION 1: Contact Information		Today's Date:
Community:		Effective Date:
Daytime Phone:	E-Mail:	
Printed name of Addressing Officer:	Signature of Addressing Officer:	

SECTION 2: Complete the appropriate section for the change request

<input type="checkbox"/> A. New Street Is This Street Public: Y or N	
1. Street Name:	2. Length:
3. Intersected Street & Address:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	
5. If Maintained by Town, Circle One: year round summer only winter only	

<input type="checkbox"/> B. Street Extension Is This Street Extension Public: Y or N	
1. Street Name:	2. Length Added:
3. Old Address Range- Low: High: Circle One: odd even both ESN:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	

<input type="checkbox"/> C. Street Name Change Is This Street Public: Y or N	
1. Old Name:	2. New Name:

<input type="checkbox"/> D. Delete Street Was This Street Public: Y or N	
1. Street Name:	2. If Partial; List Length Removed:
3. Old Address Range- Low: High: Circle One: odd even both ESN:	
4. New Address Range- Low: High: Circle One: odd even both ESN:	

<input type="checkbox"/> E. Address Range Change	
1. Street Name:	
2. Old Address Range- Low: High: Circle One: odd even both ESN:	
3. New Address Range- Low: High: Circle One: odd even both ESN:	

<input type="checkbox"/> F. Street Jurisdiction and/or Maintenance Change	
1. Street Name:	2. If Partial; List Length Changed:
3. Old Jurisdiction: private public	4. New Jurisdiction: private public
5. Old Maintenance by Town: year round summer only winter only none	
6. New Maintenance by Town: year round summer only winter only none	

Remarks / Other:

<input type="checkbox"/> MaineDOT Jurisdiction / Node Map If you need this type of map, check off this section.
--

SEND TO: MEGIS E911, 175 State House Station, Augusta, 04333-0175**FAX:** 1-866-710-7381 (toll free) **E-Mail:** Megise911.gis@maine.gov

Maine Enhanced 9-1-1 Road/MSAG Update Form Instructions

General Instructions:

1. Indicate only one road change per form.
2. This form must be signed by the municipality's Addressing Officer. If emailing an electronic copy of the form MEGIS will accept an unsigned version if the email comes from the email address on record for the Addressing Officer. *If you are an agent acting on behalf of the Addressing Officer, a letter stating the delegation of authority must accompany the changes. Report any changes of the Addressing Officer to the Emergency Services Communication Bureau, (207) 287-6084, or complete the form on page 14 of this manual.*
3. Be as complete as possible. Provide additional information in "Remarks" or on additional sheets of paper as needed.
4. **Provide a copy of the map page with a sketch, or plan to help explain the changes in roads.**
5. Keep a copy for your records.
6. Email, Fax, or Mail the completed form to the MEGIS E911 Support Group.

Section 1 -- Contact Information

This section must be completed and signed by the community's designated Addressing Officer. The phone number should be a DAYTIME phone number, if possible, for the Addressing Officer. If not, indicate hours you can be reached at the listed number. Include an email address if at all possible as that can often be the most expedient communication method.

There are times when a town knows about a change that will happen at a certain point. We use two dates on our form to allow you to send in the form early to get the change made for a future effective date.

Section 2 -- Type of Road Change

In most cases a change can be recorded using just one of the blocks A through F. Determine which Block is the most appropriate to communicate your change. Complete the appropriate block within this section. Use the Remarks block if your change does not fit into any of the A through F blocks. Also, even if you are using one of the Blocks, add any additional information to help with the change into the Remarks block.

- A. New Street** -- This block should be used if the adding a new road to the community's emergency road network, regardless of whether it is a public or private way. **It is very important that you indicate whether the road is public or private.** If you do not know, consult with your Public Works/Road Commissioner to get that information.
1. Street Name – be sure to include the Street suffix (St, Rd, Ln, Cir, Blvd, etc.)
 2. Length – be sure to include the unit you used to measure the length – feet, miles, etc. Also, check decimal points.

Section 4 Maintaining the Road Network

3. **Intersecting Street & Address** – this tells us where to map the new road. It is the address on the main road where the new road joins it. The address will be even if on the left side and odd if on the right (assuming your ranges follow the convention). Think of this as what address you would have assigned if it had been someone's driveway and not a new road.
 4. **New Address Range** – provide the lowest possible house number to the highest possible house number and then circle whether the range should include just even numbers, just odd numbers or both odd and even numbers. Most roads will be both but there are roads, such as one along a lake where all the addresses will be on the odd side of the road only, or a road that runs down the town line where the left side will be in one town and the right side will be in another town. ESN refers to the emergency service number for that road. See Section 5 of this manual for more information on ESNs. Most towns will have one ESN for the whole town.
 5. **If maintained by town** – this is part of the jurisdiction question – please check with your Public Works office or your Road Commissioner to determine whether this road is town maintained.
 6. ***A copy of a map or sketch of any new street must accompany each request.***
- B. Street Extension** -- This block should be used if you are adding length to a road. One of the more common reasons is new development at the end of a road where the road needs to be lengthened to accommodate the new homes. Indicate the old address range and the new address range in the spaces provided. Please include units in the length added field and only include the amount you are adding to the road. Again, please indicate whether this new section of road is public or private.
- C. Street Name Change** -- This block should be used for all road name changes. A change in street suffix (ST, RD, AV, LN, etc.) or pre-directional (E, W, S, NW, etc) is considered a road name change. Examples: Smith Lane to Smith Street or E Smith Lane to Smith Lane.
- D. Delete Street** -- This block should be used if you are removing a road, or part of a road, from the emergency road network. For example, the town decided to abandon or close a road. Please verify that any previous addresses on this road to be deleted are reassigned to other roads.
- E. Address Range Change** -- Any time the address range for an existing road/street changes without any length changes, complete this section. An example of this would be to resolve an issue with density of addresses to accommodate new structures (road was addressed using a 50 foot increment but new development occurred close together and not enough addresses are available so the town must re-create the address range with a 25 foot increment).

Section 4 Maintaining the Road Network

Use section B of the form any time there is a new structure beyond the actual address range of the road. For example, if the current range on the road is 3 to 75 and someone builds a home on the existing road but past the last address of 75, the town would use this form to notify MEGIS of the new address range of 3 to 77.

SPECIAL NOTE: If your town did not go through the initial MEGIS addressing process and provided existing addresses to MEGIS as the address range, it is recommended that these address ranges be modified to accommodate potential addresses for each road. This can be done over the long-term as changes take place. This practice will reduce the amount of future maintenance.

F. Street Jurisdiction and/or Maintenance Change

Please use this block to indicate a jurisdiction change only. This would be when a road changes from private to public or vice versa. This block should also be used when the town maintenance of the road changes. If the town maintains the road in the summer only in the past but will now maintain it year-round, use this block to report that change.

If only part of the road is changing maintenance or jurisdiction, please indicate the length of the part that is changing and include your unit of measure (feet, miles) to help us map it correctly.

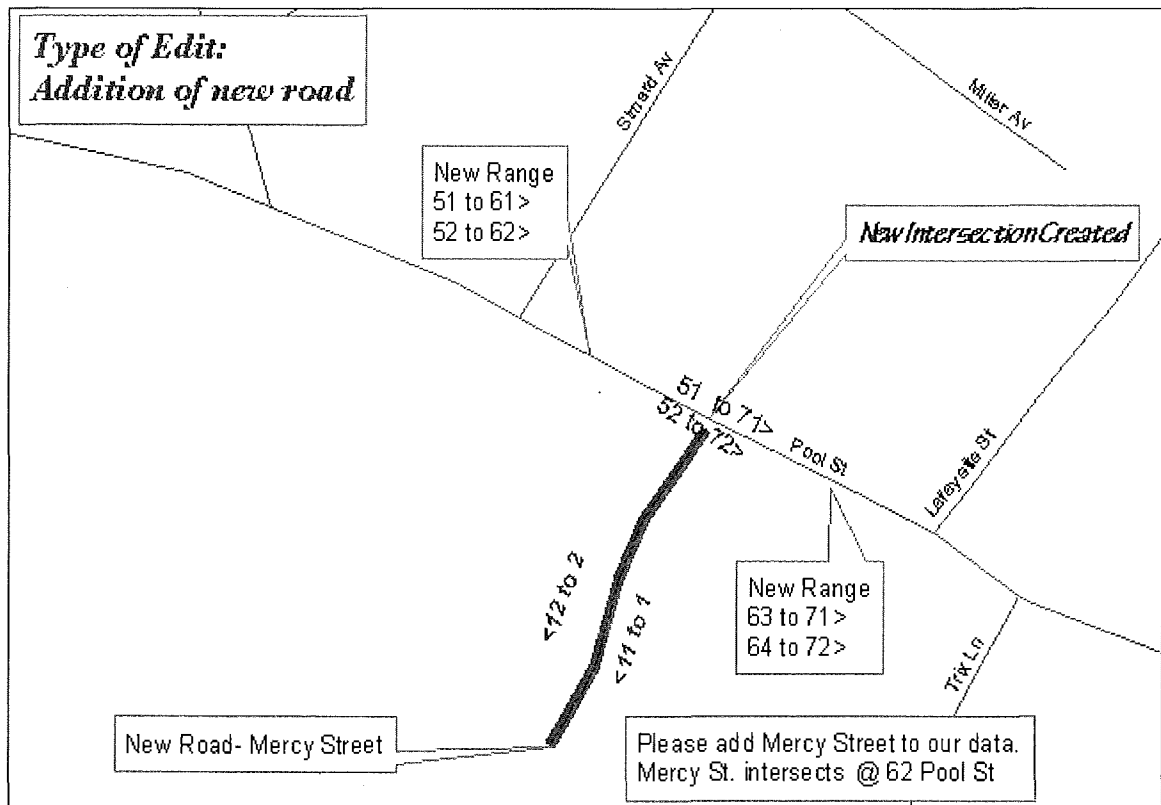
Remarks -- Use this area for any additional information regarding your change. You may also use this area to send in individual address assignments. It is also helpful if you send MEGIS a copy of the notification letter when you assign addresses. MEGIS will validate them against the MSAG to ensure that the address will map properly during a 9-1-1 call.

MaineDOT Jurisdiction/Node Map – this is a check off box to request a map showing public road jurisdictions (State Hwy, State Aid, Townway) and DOT nodes (numbers at intersections).

Send the completed form and any accompanying materials to MEGIS. MEGIS will log in the change to their tracking system and for any public road change, MEGIS and DOT will work together to update their respective databases.

Samples of various map edits and the corresponding form completion can be found below on pages 24 – 30. For more information visit the MEGIS website at: <http://www.maine.gov/megis/projects/e911.shtml>

4.4 Examples of using the MSAG/ROAD Update Form to indicate Road Changes



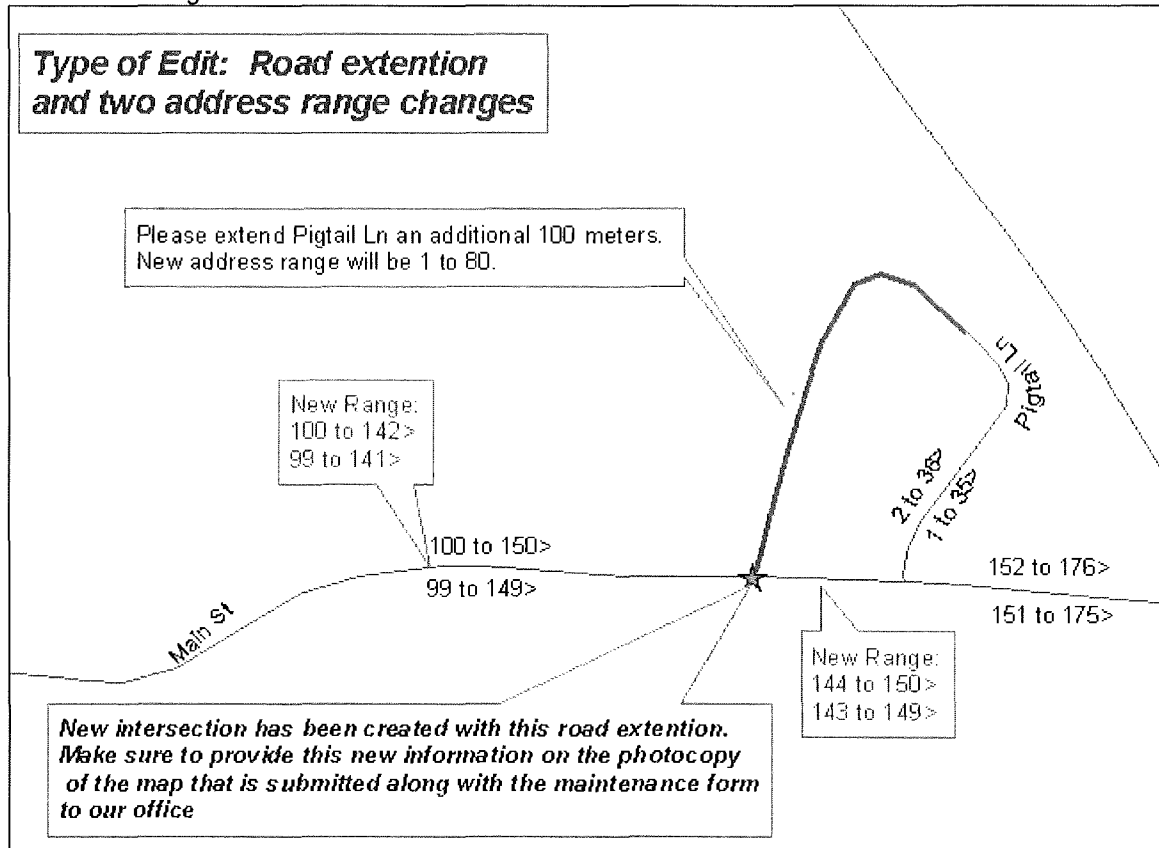
A. Adding a Road/Street:

Map Edits:

- Carefully draw the road on the map or use a copy of the updated tax map.
- Indicate the name of the new road.
- Print address range for each new street segment (intersection to intersection) for both left and right sides for the new road.
- Print the address for the intersection location (#62 in the example).
- Update the address ranges on the intersecting road (Pool St)

Maine Road/MSAG Update Form:

<input type="checkbox"/> A. New Street Is This Street Public: <u>Y</u> or N	
1. Street Name: <u>Mercy Street</u>	2. Length: <u>600 ft</u>
3. Intersected Street & Address: <u>62 Pool St</u>	
4. New Address Range- Low: <u>1</u> High: <u>12</u> Circle One: <u>odd</u> <u>even</u> <u>both</u> ESN: <u>52</u>	
5. If Maintained by Town, Circle One: <u>year round</u> <u>summer only</u> <u>winter only</u>	



B. Road Extension with Address Range Changes

Map Edits:

1. Carefully draw the road extension on a copy of the map. Indicate the new address range for the road (Pigtail Ln)
2. Note the address of the newly created intersection (144 Main)
3. Note the new address range breaks caused by new intersection (Main St)

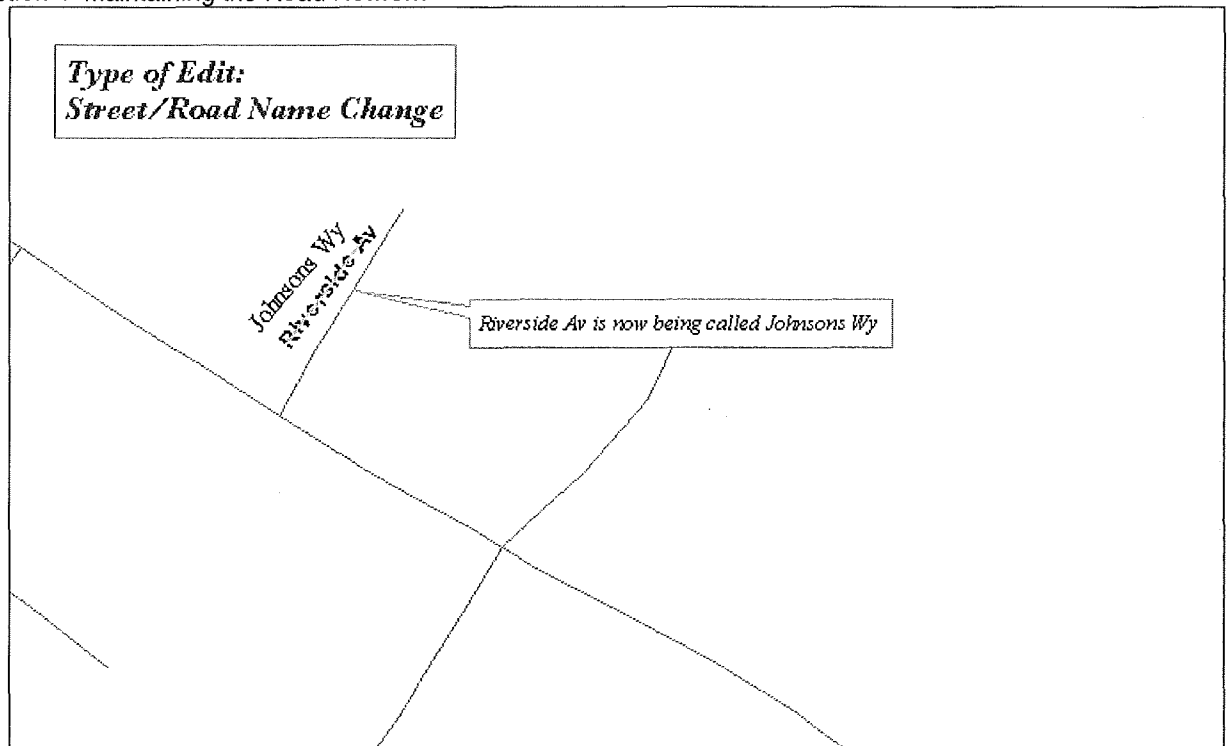
Maine Road/MSAG Update Form:

<input type="checkbox"/> B. Street Extension Is This Street Extension Public: <input checked="" type="radio"/> Y or N	
1. Street Name: <i>Pigtail Lane</i>	2. Length Added: <i>100 meters</i>
3. Old Address Range- Low: 1 High: 36 Circle One: odd even <input checked="" type="radio"/> both ESN: 42	
4. New Address Range- Low: 1 High: 80 Circle One: odd even <input checked="" type="radio"/> both ESN: 42	

Remarks:

The extension of Pigtail forms a new intersection at 144 Main St

Section 4 Maintaining the Road Network



C. Street Name Change:

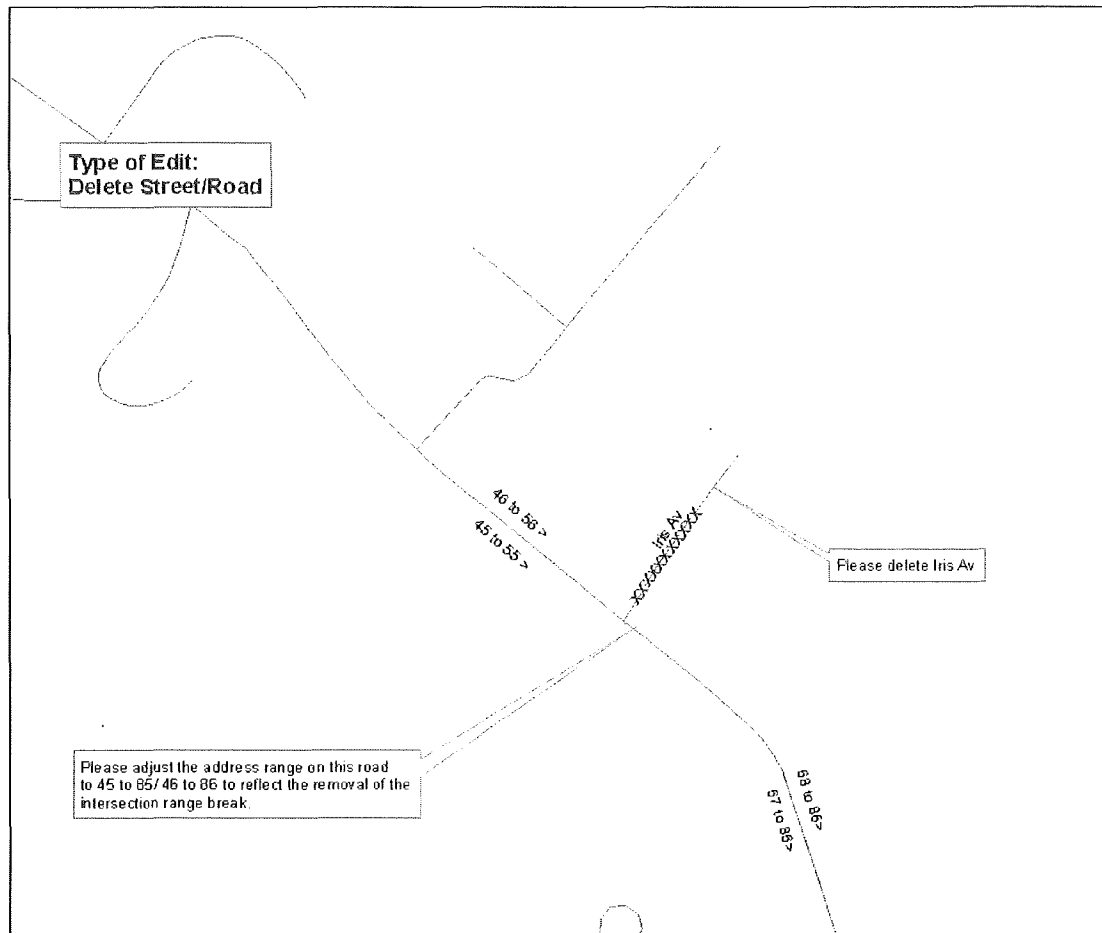
Map Edits

- Cross out the part of the road name that is incorrect.
- Write the correct information next to printed name.
- Use hatch marks to show extent of road if it could otherwise be confusing.

Maine Road/MSAG Update Form:

<input type="checkbox"/> C. Street Name Change Is This Street Public: <input checked="" type="radio"/> Y or N	
1. Old Name: <i>Riverside Avenue</i>	2. New Name: <i>Johnson Way</i>
Remarks: <i>Town changed road name to eliminate similar sounding/duplicate road name within the town.</i>	

Section 4 Maintaining the Road Network



D. Deleting a Road:

Map Edits:

- Delete the road by “x”ing out what is to be removed or where it needs to be cut off.
- Mark the extent of the delete with double hatch marks.
- Place a definite mark where the road section ends.
- Adjust the address ranges on intersecting road to reflect removal of the intersection address range break

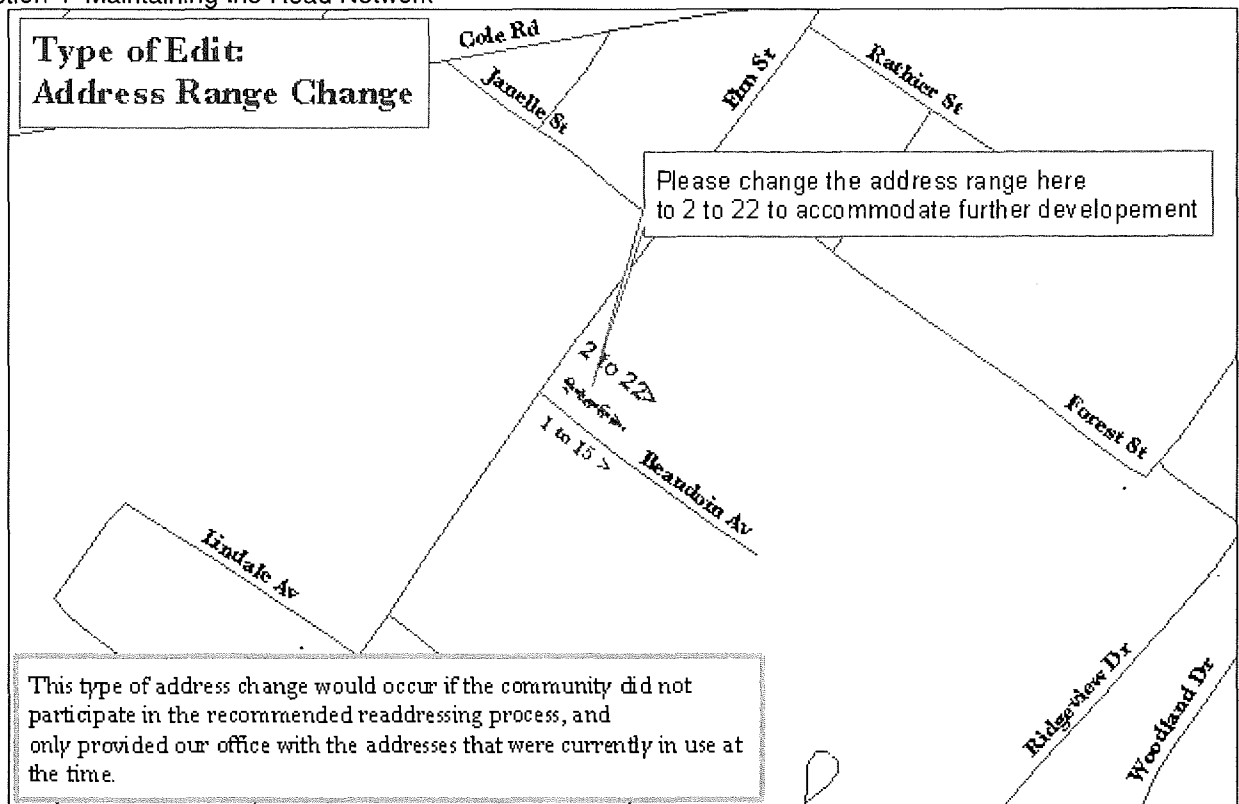
Maine Road/MSAG Update Form:

<input type="checkbox"/> D. Delete Street Was This Street Public: <u>Y</u> or N	
1. Street Name: <i>Iris Avenue</i>	2. If partial, list length removed: <i>delete all</i>
3. Old Address Range- Low: High: Circle One: odd even both ESN: <i>115</i>	
4. New Address Range- Low: 0 High: 0 Circle One: odd even both ESN:	

Remarks:

Iris Avenue is no longer a thru road. Combine address ranges of main road on either side of Iris Av.

Section 4 Maintaining the Road Network



E. Changing an Address Range:

Map Edits:

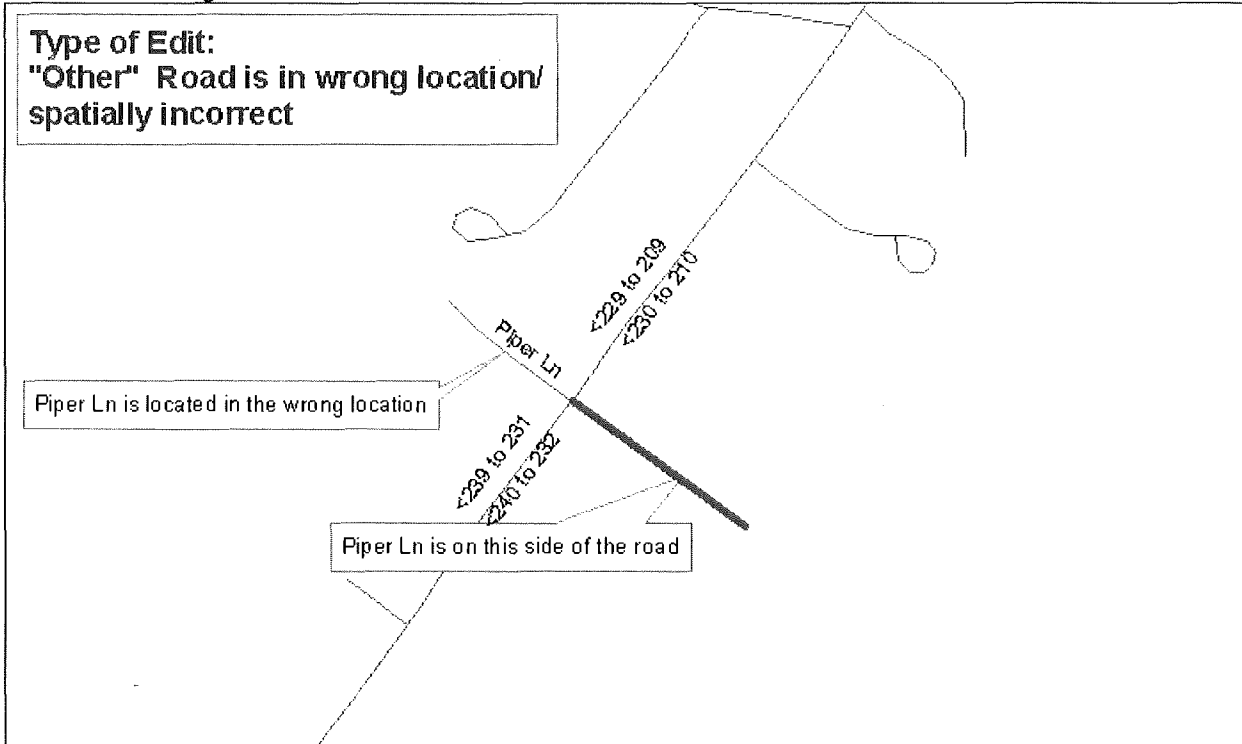
- Cross out the part of the address range that is incorrect.
- Write the correct information next to printed number.

Maine Road/MSAG Update Form:

<input type="checkbox"/> E. Address Range Change							
1. Street Name: <i>Beaudoin Avenue</i>							
2. Old Address Range- Low: 1		High: 15		Circle One: odd even <u>both</u>		ESN: 230	
3. New Address Range- Low: 1		High: 22		Circle One: odd even <u>both</u>		ESN: 230	

Remarks:

Range in subdivision is being extended for new buildings.



Remarks /Other: Map is spatially incorrect

Map Edits:

- Mark up map to reflect the correct location of the road

Maine Road/MSAG Update Form:

Remarks: ☐ Piper Ln is on the wrong side of the road. All the data pertaining to this road is still correct (i.e., road name and address range data). The address ranges before and after the intersection with Piper Ln with Main St are still the same.

5.0 Emergency Service Zones (ESZs)

An Emergency Service Zone is a unique geographical area. Each zone is made up of a unique combination of Town, Police, Fire, and Rescue Services that are assigned to respond to emergencies within that zone. In most communities, there is one zone per town but in some towns there are two or more Emergency Service Zones. A town could have more than one ESZ when there is more than one responder for a particular emergency type (law, fire, EMS) in the town. For example, in a town where a lake sits in the middle of town, it is faster for one ambulance service to respond on the north side of the lake, while a second ambulance service can reach the south end of the lake faster. This town would have two ESZ's, even though the police and fire department responders are the same for both ends of town. An ESZ can have many roads in it or, in some cases, just a single residence. A road may also be split into more than one ESZ (i.e., Main St. address range 1-50 is served by ACME Rescue and 51-200 is served by XYZ Ambulance).

For communities starting the addressing process, the Addressing Officer must identify each unique combination of emergency services provider agencies responding within your town's borders. Additionally, if your town uses more than one combination of responders, you must submit a map or list to depict, by street and address range, which service providers respond to which street addresses. **The accuracy of this information is critical. It is imperative that you consult with your police, fire and ambulance officials to develop the list or mark up the map.** This data will display on a dispatcher's screen in the 9-1-1 centers (PSAPs) and will automatically populate hot keys (one-push buttons) that dispatch the appropriate emergency responder for a given area.

Several different examples follow for your review. Note that an ESZ is identified by an ESN (Emergency Service Number) which is required when submitting any changes on the MSAG/Road Update form. Feel free to give the ESCB a call for assistance in identifying your Emergency Service Zones.

First Responder Services: The ESCB recommends that towns with licensed first responders list the first responder on the ESZ, not the ambulance service, unless multiple ambulances serve definable geographic areas of towns. The ESCB will review and make recommendations based on specific dispatch situations.

5.1 Sample Emergency Service Zones

Example 1: The same combination of police, fire and rescue services cover the entire geographic area of Smithtown. In this situation, there is only one ESZ.

Emergency Service Zone Number	Name of Service by Type	Name of Dispatch Agency For Service
1	<i>Police</i>	
	Smithtown PD	Smithtown Dispatch
	<i>Fire</i>	
	Smithtown Fire	Smithtown Dispatch
	<i>Ambulance or First Responder:</i>	
	Smithtown Ambulance	Smithtown Dispatch

Example 2: In Faketown, there are two different ambulance services in town, but the same police and fire department serve the entire town. Therefore, Faketown has two different ESZs.

Emergency Service Zone Number	Name of Service by Type	Name of Dispatch Agency For Service
35	<i>Police:</i>	
	Faketown Police Department	Faketown Dispatch
	<i>Fire:</i>	
	Faketown Fire Department	Faketown Dispatch
	<i>Ambulance or First Responder:</i>	
36	Queen City Ambulance	Queen City Dispatch
	<i>Police:</i>	
	Faketown Police Department	Faketown Dispatch
	<i>Fire:</i>	
	Faketown Fire Department	Faketown Dispatch
	<i>Ambulance or First Responder:</i>	
	Kingdom Ambulance	Faketown Dispatch

Example 3: The town of Doeville does not have its own police department so it relies on the State Police and Sheriff's Dept to cover police calls.

Emergency Service Zone Number	Name of Service by Type	Name of Dispatch Agency For Service
390	<i>Police</i>	
	Maine State Police/Sheriff's Dept.	MSP/Sheriff's Dept.
	<i>Fire</i>	
	Doeville Fire Department	Doeville Fire Dept.
	<i>Ambulance or First Responder:</i>	
	Doeville First Responders	Doeville Fire Dept.

Example 4: The town of Hopeville has a remote section that is cut off by a large lake. It is faster for the neighboring town, Friendship, to respond to this area in case of fire so they have a contract for services to do so. In this case, Hopeville would have two ESZs		
Emergency Service Zone Number	Name of Service by Type	Name of Dispatch Agency For Service
187	<i>Police:</i>	
	Hopeville Police Department	Hopeville Dispatch
	<i>Fire:</i>	
	Hopeville Fire Department	Hopeville Dispatch
	<i>Ambulance or First Responder:</i>	
456	Delta Ambulance	Augusta Dispatch
	<i>Police:</i>	
	Hopeville Police Department	Hopeville Dispatch
	<i>Fire:</i>	
	Friendship Fire Department	Friendship Dispatch
	<i>Ambulance or First Responder:</i>	
	Delta Ambulance	Augusta Dispatch

The Emergency Services Communication Bureau (ESCB) requests that you verify ESZ information annually. **However, as the Addressing Officer for your community, you are responsible for notifying the ESCB immediately any time there is a change in emergency service providers, the dispatch of a provider, or an emergency service zone coverage area.** The form on page 35 can be used for this purpose.

5.2 Changing an ESZ

While most communities have their ESZ's already designated, there are changes to be made from time to time. **When a community decides to change an emergency service provider a letter should be sent to the ESCB at least two weeks prior to the change.** The letter should indicate:

- what service is changing (police, Fire, EMS)
- the name of the new service
- the roads to be served by the new service (if not the entire town), and
- the effective date of the change.

This type of change requires modification to the telephone switches so it could take a week or so to get this done and tested.

If you are a multi-ESZ town and need to modify which roads are assigned to each ESZ, please send in a list and/or a map of roads and address ranges to be changed and the associated ESN. Send this into the ESCB as indicated on the form on page 35. A change of roads assigned to an existing ESN can usually be accommodated within two business days.

5.3 Public Safety Answering Points (PSAP),

Each community is assigned to a PSAP, also known as 9-1-1 Call Centers. 9-1-1 calls are automatically routed to the correct PSAP through the ESZ. Each PSAP has a

backup in case they should have issues and then there is a third PSAP designated as the default PSAP in case the primary and the backup should fail. PSAPs can be counties, towns, or State Police dispatch centers.

5.3.1 Changing PSAPs

Communities contract with their assigned PSAP for call answering services, but a community may only change PSAPs with approval from the Public Utilities Commission (PUC). This is a formal process and requires changes in the system to be made by the ESCB. Should your community wish to change its PSAP, please call the ESCB at least two months prior to the desired change date. The ESCB will give you instructions on how to file a request with the PUC.

5.4. Dispatching Changes

Agencies (Ambulance, Fire, Police) providing emergency services may change the entity who dispatches them. These changes require that modifications be made in the switches so it is important that the ESCB be notified of these types of changes. Dispatch changes do not require PUC approval. As Addressing Officer you may not always hear of these kinds of changes but the ESCB may contact you to request information or an official letter from your town regarding the change or to update the ESZ.

EMERGENCY SERVICE ZONE DESIGNATION FORM

Instructions: For each ESZ, please note the name of the emergency service provider by type and the name of the agency that dispatches the service. Each unique geographically split combination of police, fire and rescue should represent a separate zone. See attached examples. Reproduce the form as necessary.

If multiple ESZs are indicated, attach a list of all streets and address ranges in your town and the appropriate ESN (ESZ number) for each. Roads can be split between ESZs by splitting the address ranges. Mapping assistance is available from MEGIS if needed.

Municipality: _____

Effective Date: _____

Name & Title of Person Completing Form: _____

Signature: _____

Emergency Service Zone Number	Name of Service by Type	Name of Dispatch Agency for Service
1	<i>Police:</i>	
	<i>Fire:</i>	
2	<i>Ambulance or First Responder:</i>	
	<i>Police:</i>	
3	<i>Fire:</i>	
	<i>Ambulance or First Responder:</i>	
4	<i>Police:</i>	
	<i>Fire:</i>	
	<i>Ambulance or First Responder:</i>	

Return to: Jeanne Locke ESCB, 18 SHS, Augusta, ME 04330-0018. Fax: 207-287-1039. Email: Jeanne.Locke@maine.gov

6.0 Keeping the 9-1-1 Database Current

Maine's 9-1-1 Automatic Location Information (ALI) database contains all the telephone numbers and addresses of landline subscribers within the state. Local telephone companies feed their service order activity to this database on a daily basis. See Section 3 for information on the address maintenance and change process.

6.1 The Telephone Order Service Process

Towns do not need to keep track of the phone numbers of residents as properties transfer or renters move. People requesting new telephone service are asked by the telephone company to provide the address of the location where service will be installed. The service order clerk validates the address against the MSAG.

If a person ordering service is unable to give the telephone company a valid address, the telephone company will contact the town AO for this information or will ask the resident to contact the town for an address. It is important to handle these requests promptly (same day if possible) because until a valid 9-1-1 address is provided, the record will not be part of the 9-1-1 database.

Sometimes a telephone company will call because they do not have any record of a street that a customer provided or the address does not fit within the current range. This often happens for a couple of reasons. First, customers may refer to a road by a name other than the 9-1-1 name. Secondly, the town may not have notified MEGIS of a new road or road extension. In the latter example, you will need to complete the Maine Enhanced 9-1-1 MSAG/Road Update Form and send it to the MEGIS E911 Support Group. MEGIS will ensure it gets into the 9-1-1 database and gets reported to telephone companies. See Section 4.2 for how to complete this form.

6.2 Database Error Report Process (Incorrect ALI Reports – ALI Discrepancies)

The address displayed by the E9-1-1 system is verified by the 9-1-1 call taker upon receipt of a call. If the address reported by the caller is different from the address displayed, an error report is generated. These reports are referred to as Incorrect ALI Reports or ALI Discrepancies. A sample is provided in Section 6.3 below .

The PSAP forwards the Incorrect ALI Report to FairPoint within 24 hours of the call. FairPoint determines which phone company is responsible for the record and refers the report. A representative from the referred phone company will call the Addressing Officer for verbal verification of the correct address. Administrative Rule requires that these error reports are handled within three business days so the correct information can be updated in the 9-1-1 database quickly.

6. 3 Sample ALI Discrepancy Report

172-108

Incorrect Location Information Report			
Printed On:	6/12/2009 3:18:52 AM		
PSAP:	Westbrook PD		
Agent:	wnorto	Console ID:	2204
Calling Number:	(207) 892-XXXX		
<hr/>			
Problem Report			
• Incorrect ANI	Change to:		
• ALI Misrouted	Route to:		
• Incorrect ESN	Change to:		
• Incorrect Address	Change to: 182 FALMOUTH RD		
• Incorrect EMS Agency	Change to:		
• Incorrect Fire Agency	Change to:		
• Incorrect Police Agency	Change to:		
<hr/>			
Remarks			
<hr/>			
ALI: 204 RESID 03:12 06/12 (207) 892-XXXX COID=FAIR XXXXXXXXXXXXXXXXXXXX 188 FALMOUTH RD			
WINDHAM ME			
ESN=074 MTN:207-892-6154 LAT: LON: ELV: COP: COP:			
WINDHAM PD WINDHAM FIRE RESCUE			

Friday, June 12, 2009

Page 1 of 2

7.0 Publicizing 9-1-1

7.1 Maine Statutes Designating 9-1-1 as the Emergency Telephone Number

The following is an excerpt from Maine Statutes regarding the publication of 9-1-1 once activated within a community. At this point E9-1-1 has been activated for all Maine towns.

25 MRSA §2932. Designated emergency telephone number

1. Designated emergency telephone number. *The primary telephone number to be used in a telephone exchange to request emergency services following the activation of E-9-1-1 services for that exchange, including the number for telecommunications devices for communication for the deaf, hard-of-hearing and speech-impaired, is 9-1-1.*

2. Publishing of 9-1-1. *A publisher of a directory of Maine telephone numbers for use by telephone subscribers in Maine must include in a conspicuous portion of the directory:*

A. For any area within the directory in which E-9-1-1 has not been activated, the emergency numbers of the State Police and any sheriffs' departments that serve the area; and

B. For any area within the directory in which E-9-1-1 has been activated, the number 9-1-1 as the primary telephone number to request emergency services. The number "9-1-1" must be accompanied by words indicating it is accessible by teletypewriter device, or TTY, such as "TTY/Voice." A publisher is not required to update a directory following an activation of E-9-1-1 within the directory area until the next regular printing of the directory.

3. Commercial use of the number 9-1-1. *The number 9-1-1 may not be used for commercial purposes in a manner that is deceptive or likely to produce confusion with respect to its use as the primary emergency telephone number to request emergency services.*

4. Display of 9-1-1. *When displayed on signs and in other formats designed to advertise the number and its use to the public printed after the effective date of this subsection or on emergency vehicles, 9-1-1 must be:*

A. Printed in plain block numerals with a dash between the numerals;

B. Accompanied by the word "emergency"; and

C. Except in the case of emergency vehicles, accompanied by words indicating accessibility by teletypewriter device, such as "TTY/Voice."

7.2 Telephone Book Listings

Following the activation of Enhanced 9-1-1, towns should make the following adjustments to the white page municipal or county listings as applicable:

- a. If a town had a 7 or 10 digit emergency number listed for police, fire or EMS, it needs to be removed in accordance with Maine State Law (25 MRSA §2932).
- b. The town can list 9-1-1 as its emergency number. Consult with your local telephone company about any associated charges.
- c. Towns electing to list non-emergency numbers for police, fire and rescue should include them with other town (or county) business listings and it must be identified as “non-emergency” or “business”.

Example:

Doeville, Town of:

Emergency	9-1-1
Assessor's Office	xxx-xxxx
City Clerk	xxx-xxxx
Fire Dept (non-emergency)	xxx-xxxx
Police Dept (non-emergency)	xxx-xxxx
School Dept	xxx-xxxx

It is the responsibility of the individual municipality or county to contact the telephone company business office and request the changes described above.

Telco business office telephone numbers can be found near the front of the telephone directory.

Municipal PSAPs have slightly different requirements. Contact the ESCB for more information.

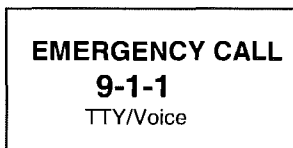
7.3 Emergency Vehicles and Printed Materials

Many towns elect to advertise 9-1-1 on emergency vehicles. Maine State Law requires the use of plain block letters with dashes between the numerals and it must be accompanied by the word "EMERGENCY." (See Example A below.)



Example A Display of 9-1-1 on Emergency Vehicles

If a town purchases telephone stickers or other materials advertising 9-1-1 as the emergency number, the same rule applies as with emergency vehicles. In addition, it must be accompanied by words indicating it is accessible by teletypewriter devices such as "TTY/Voice." (Example B)



Example B Sample telephone sticker

7.4 The ESCB Website

For the most current information about Enhanced 9-1-1, visit the ESCB website at www.maine911.com. Features include:

- Community information
- Forms and Guidebooks
- Public Information
- Kids 9-1-1, an interactive educational page
- Statutes and pending legislation
- Administrative Rules
- Telephone company information
- PSAP resources



www.maine911.com/kids

8.0 A Glimpse of the Future of 9-1-1

8.1 NextGen 9-1-1

The emergence of new communications devices, smart phones, etc. that allow text messages, photos, video, and other information types to be transmitted has caused current 9-1-1 systems to become outdated because they can only receive voice calls generated by telephone systems. These new devices prompted emergency service organizations to review the current E9-1-1 system designs and start preparing for the delivery and receipt of these new types of information. The new design is called NextGen 9-1-1 and it uses digital internet protocol (IP) networks to process 911 calls. New NextGen 9-1-1 standards are being developed and tested across the country. Planning and design of a NextGen 9-1-1 system for Maine has begun with installation possibly beginning as early as 2013. This design will include the ability to process older analog calls as well as other communication medias that are technically able to send requests to 9-1-1.

In NextGen9-1-1, Geographic Information Systems (GIS) play a major role in routing calls to the appropriate PSAP. This reliance on mapped data will increase the system's dependence on prompt and accurate information from the Municipal Addressing Officers.

APPENDIX A

- Frequently Asked Questions

The questions below are geared to Addressing Officers. This list attempts to include questions you may have yourself, and questions you may be asked by your constituents. More general E9-1-1 FAQs can be found at <http://www.maine911.com/faq/index.shtml>

Addressing Questions

Is Enhanced 9-1-1 available in towns with "RR Box" addresses?

People without a street address (e.g., 58 Pine Lane) can still call 9-1-1 for emergencies. They will not benefit from the system's location safety feature until their town completes addressing and they have a street address assigned to them.

Why is addressing a critical part of Enhanced 9-1-1?

A 9-1-1 caller's address (stored in the Enhanced 9-1-1 system) routes the call to the correct PSAP so that emergency services can be dispatched immediately. With older 9-1-1 systems, calls were routed by telephone exchange and did not always reach the correct public safety answering point. Knowing the emergency caller's address helps dispatchers send emergency services to the scene quickly.

Do communities have the authority to create physical addresses?

Yes. Every Maine community has the legal authority to create physical addresses under Municipal Home Rule Powers, Article VIII, Part 2, Section 1 of the Constitution of the State of Maine and Title 30-A M.R.S.A Section 3001. In the unorganized territories, the County has the authority to create addresses.

What happens if a 9-1-1 caller's address is not correct?

There are procedures that 9-1-1 call centers (PSAPs) must follow to report addressing discrepancies after a 9-1-1 caller has notified them of the error. These errors are researched and resolved as appropriate. An addressing officer may be called by a telephone company, MEGIS, or the ESCB for help with these errors.

Why am I getting more calls from residents for an address assignment?

In addition to the phone companies, more and more banks, utilities, insurance companies, etc. are requiring physical addresses. The Street Address assigned by the municipal Addressing Officer is the official address for a resident.

What happens if a person moves?

When you notify your telephone company of a new address, their system will automatically update this change in the Enhanced 9-1-1 database. **However, with VoIP services, the customer must update his/her address in the VoIP**

provider's system. This is usually an online procedure. Not doing this is often the cause behind the VoIP ALI error reports we receive from PSAPs.

Street signs keep disappearing in my town, what can I do?

Theft of street signs is against the law and is a problem in many communities. They are a vital part of the 9-1-1 system as they allow responders to find callers faster. If you see someone stealing or vandalizing signs, call 9-1-1.

Why does my address not show in my GPS unit, in my navigation device, or on sites like Google Earth?

GPS companies usually get data from national or global commercial data providers who may not have the most up to date files. These companies will update their data on their schedules and we have no control over that. MEGIS does provide updated streets and address range data on their web site where a commercial company can go to get updates. Some of these companies have error reporting features on their web site where you can tell them about issues which may speed up the update of your area.

If my address is not in my GPS, will it show up if I dial 9-1-1?

The data maintained by MEGIS is the data used in the E9-1-1 system. If the address range is in the MSAG then it will show up in the PSAP when you dial 9-1-1. You may contact MEGIS or the ESCB to verify an address in question.

Wireless/Cellular Questions

Does 9-1-1 work from my cell phone?

Yes, all cell phone companies doing business in Maine have activated 9-1-1 dialing.

When I call 9-1-1 from my cell phone will the dispatchers know where I am?

Cell phones cannot give your address like a traditional phone does but a latitude/longitude is provided. Try to have your address ready, or use landmarks, mile markers and road signs to describe where you are.

What is Phase II 9-1-1 service?

Phase II is a requirement of the Federal Communications Commission for wireless phone companies to provide an approximation of the 9-1-1 callers location in the form of latitude and longitude. All wireless phone companies operating in Maine have implemented this capability.

Your website says my cell phone company finished Phase II. Will dispatchers know where I am now?

At least to a point. The accuracy of the latitude and longitude can vary depending on the signal strength of your phone in relation to the tower that transmits your call. At the very least the call taker will know what sector of the

tower your call is using, more likely the lat/long will be within a couple hundred feet of your location. The more information you can provide the dispatcher about where you are, the faster we'll find you.

What shows up at the PSAP when I make a 911 call from a wireless device?

With a wireless call the caller's name and address are not available in the call center. The address of the cell tower used to make the call and a latitude/longitude location for the caller will be displayed at the PSAP. The lat/long will be mapped at the PSAP and the closest address to this point will be derived where applicable (using a reverse geocode process).

VoIP Questions

Can I dial 9-1-1 from my VoIP phone?

You can reach emergency assistance by dialing 9-1-1 on most VoIP phones. However, there are important differences between some VoIP 9-1-1 emergency dialing and traditional 9-1-1 service from a standard phone. If not enough information is available to route the call, your call may arrive at a remote private call relay center, which will try to send the call to the right PSAP using information provided by the ESCB annually.

How do I know what level of 9-1-1 service I have with my VoIP phone?

The best way to find out is to research, on the web site of your VoIP provider, the features as it pertains to 9-1-1. Search for "emergency calling." Once you know its features, you should notify all potential phone users, including frequent visitors and babysitters.

How is a VoIP 9-1-1 call routed to the correct 9-1-1 center?

When you sign up for VoIP service, you are asked to register your location. For a call to go to the right 9-1-1 center, it **MUST** correspond to your official physical address. This address allows the VoIP provider to route the call to the right place. You cannot use a PO Box or Rural Route address.

What if my 9-1-1 call is misrouted to the wrong 9-1-1 center?

If your VoIP call is routed to the wrong 9-1-1 center, you should tell the call taker the city, county and state where you need help. The call taker will likely attempt to transfer your call to the right 9-1-1 center, but it is always a good idea to have the phone numbers of the police, fire and rescue on hand for easy reference.

Does 9-1-1 know where I am when calling from my VoIP phone?

Probably. No matter where your call routes, the 9-1-1 call taker will first ask you to either provide or verify your location, name, and telephone number. If this information is not available automatically, your call routes to a remote, private call relay center that will determine where your call needs to go based on the information you provide.

Can I call 9-1-1 from my VoIP phone when I'm traveling?

Some VoIP providers offer the ability to travel with your phone. If so, the provider should also offer a way to update your registered address. Unfortunately the time it takes to update this address varies. The safest thing to do is if you travel with your phone on a temporary basis, is use another phone to dial 9-1-1 if you need help.

Do service outages affect my ability to call 9-1-1?

They might. Just as a cordless phone may not work without power, your VoIP phone may not work without power either. As a result, you may be unable to make any calls, including those to 9-1-1, during an electrical outage. Similarly, if your cable or broadband service is interrupted, it may keep you from being able to make outbound calls.

If I use an OnStar or ATS service in my car, will my location be displayed?

OnStar and ATS services relay calls to the right PSAP based on the lat/long of the vehicle, similar to a wireless call.

Signage Questions

What can be done to improve house number signage?

This is a very common concern, particularly in the rural areas where mailboxes are spread out. Towns have done various things to encourage residents to post house numbers. The first step is to have an Addressing Ordinance that describes the desired signage for residents. A few towns have also enacted an enforcement ordinance which requires residents to put appropriate signs up and they may charge a nominal fine for non-compliance. Other towns have purchased signs and given them to homeowners to put up. Some town public safety groups have assisted residents with posting their house numbers.

How do I know what types of signs are appropriate?

The following are guidelines for house number signs:

- Number on the Structure or Residence. Where the residence or structure is within 50 (fifty) feet of the edge of the road right-of-way, the assigned number shall be displayed on the front of the residence or structure in the vicinity of the front door or entry.
- Number at the Road Line. Where the residence or structure is over 50 (fifty) feet from the edge of the road right-of-way, the assigned number shall be displayed on a post, fence, wall, the mail box, or on some structure at the property line adjacent to the walk or access drive to the residence or structure.
- Size, Color, and Location of Number. Numbers shall be of a color that contrasts with their background color and shall be a minimum of four (4) inches in height. Numbers shall be located to be visible from the road at all times of the year.

- Proper number. Every person whose duty is to display an assigned number shall remove any different number which might be mistaken for, or confused with, the number assigned in conformance with this ordinance.
- Interior location. All residents and other occupants are requested to post their assigned number and road name adjacent to their telephone for emergency reference.

9-1-1 Data Confidentiality Questions

Where does The Emergency Services Communications Bureau (ESCB) get its Authority?

Maine Revised Statute (MRSA) Title 25 Chapter 352 Emergency Services Communication subsection 2926 established the Bureau to implement and manage E9-1-1 and includes the requirement to set the “standards and procedures for developing and maintain the system databases and for ensuring the confidentiality of those databases pursuant to Section 2929.” Subsection 2926 also includes the requirement to set through Rule making “Procedures for developing and maintaining address and routing information.”

Is the E-9-1-1 database confidential?

Yes. 25 MRSA Chapter 352 Section 2929 defines confidential information to include, “the names, addresses and telephone numbers of persons listed in E9-1-1 databases.”

Who owns the databases:

The Bureau owns the database system. “The system databases, wherever located or stored, are the property of the Bureau and their confidentiality is governed by 25 MRSA Chapter 352 Section 2929.”

Can the E-9-1-1 data be used for commercial purposes?

No. E9-1-1 confidential information may not be utilized for commercial purposes.

Can the Bureau provide a complete listing of street names and address ranges for a town?

Yes, the Bureau can provide a town a complete list of street names and address ranges for that town as the MSAG (master street address guide) is not confidential. The Bureau can also provide a confidential list of names, addresses and published landline telephone numbers for residents of a town. This name, address and telephone number list is confidential and may only be used by the Addressing Officer for address validation.

What can the E-9-1-1 data be used for?

The E-9-1-1 data may be used by the designated Municipal Addressing Officer (AO) to validate addresses in the town for use in the E9-1-1 system.

What does the Addressing Officer do?

The Addressing Officer adds, updates, and maintains local road data which is managed in the Master Street Addressing Guide (MSAG) database. The Addressing Officer determines road names, locations, the distance of new roads, any road changes or deletions and determines the range of house numbers for each road. The Addressing Officer also creates addresses in accordance with the procedures set by the Bureau as described in The Enhanced 9-1-1 Addressing Officer Manual. The Addressing Officer provides this information to the Maine Office of Geographic Information Systems (MEGIS), the phone company, the US Post Office and other town departments such as the Code Enforcement and Tax Assessor.

Do Municipalities issue property numbers?

Yes. The only authorized entity in the State of Maine that may create ranges of addresses and property numbers is the Addressing Officer designated in each town. In the case of the Unorganized Territories it is the County Addressing Officer.

Can the Post Office assign addresses?

No. Only the Addressing Officer can assign physical addresses. A Post Office can assign mailing addresses but it is desirable that the town-assigned physical address also serve as the mailing address to avoid confusion in an emergency situation.

Should the AO work with the Post Office when creating new addresses?

Yes. To best meet the goal of a single physical address serving both emergency and mail purposes, before finalizing a new street name and address range, the AO should talk to the Post Office to avoid causing mail delivery problems. Conflict with new street names happen most often when a Post Office delivers mail to more than one town with the same zip code. A nearby town utilizing the same zip code may have a road with the same street name and address range. This becomes difficult for the Post Office to deliver to the right place.

Why does an Addressing Officer work with the phone company?

The Bureau requires the phone companies to validate addresses that are assigned to phone services so that when someone calls 911, the police, fire or ambulance service can find the caller quickly at the correct address. Sometimes the address given by the customer will not validate to the MSAG database and the phone company will contact the Addressing Officer for help to fix the problem. If an address is missing from the MSAG database, the Addressing Officer must work quickly to resolve the error.

Does the Bureau or the Addressing Officer manage or maintain phone numbers?

No. Only the phone company manages and maintains phone numbers.

For more information, please visit our website at www.Maine911.com. The State Statutes, regulations and manuals cited in this memorandum are available on our website. Should you require any further assistance, please call the Bureau at 287-6084.

APPENDIX B

SAMPLE ADDRESS ASSIGNMENT NOTIFICATION LETTER

TOWN LETTERHEAD

Notice of New Address

Date:

Property owner

Mailing Address

Re: Assessor Map/Lot _____

Dear Owners Name:

Insert Town Name adopted the State of Maine E-911 addressing standards as a part of our municipal ordinance in ????. In order to answer 911 calls properly and to provide emergency services as fast as possible; we are required to maintain accurate road and addressing information.

You have either submitted a building permit for a new habitable structure, or you need a new address due to the creation of a new road, or some issue has arisen which requires clarification of your address. The address shown below is your correct address effective insert date. Please retain this letter as a permanent record of your address.

Old Address:

NEW ADDRESS:

For Fire and Rescue purposes, please place and display the number(s) assigned to your property(s) prominently on or near your front door, visible from the street. The height of each number should be at least 4 inches and made of reflective material. If your house or building is located more than 75 (or not visible) from the road, please place the numbers at the beginning of your driveway. These simple requirements will assist emergency responders in locating you, as well as assisting utilities, delivery services and others who may need to find you.

Thank you for your assistance and cooperation. Should you require any additional information or assistance please call me at ???.

Sincerely,

E-911 Addressing Officer

Copies to:

Post Office

Maine Office of GIS (MEGIS) or Maine Emergency Services Communication Bureau (ESCB)

Town Depts

?? Police Dept.

?? Fire Dept

?? Ambulance Service

APPENDIX C

Using Road Measurement and Property Number Tables to Assign New Addresses

If a community uses a 25, 50 or 100 foot numbering interval to assign property numbers, use the enclosed property numbering tables and follow the steps below to assign the correct address to a new structure:

1. Measure the distance from the beginning of the road to an imaginary line running perpendicular from the front entrance of the new structure to the road. Use an accurate measuring device, such as a measuring wheel borrowed from a utility, neighboring town, or road agent. If such a measuring device is unavailable, determine the distance as accurately as possible with a measuring tape or by pacing off the distance.
2. If the front door of the structure cannot be seen from the road, measure to a point where the middle of the driveway meets the road. In either case, note which side of the road the new structure is on.
3. Identify the correct measuring interval (25, 50, or 100 feet) used to assign property numbers on that road. Also, identify the odd and even sides of the road.
4. Using the correct table, find the footage range between which your measurement falls.
5. Select the correct odd or even property number from the table, depending on which side of the road the new structure is located.

Appendix C:
Road Measurements and Property Numbers Based on 25 Foot Numbering Interval

Footage Down Road				Footage Down Road				Footage Down Road			
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	25	1	2	1,200	1,225	97	98	2,400	2,425	193	194
25	50	3	4	1,225	1,250	99	100	2,425	2,450	195	196
50	75	5	6	1,250	1,275	101	102	2,450	2,475	197	198
75	100	7	8	1,275	1,300	103	104	2,475	2,500	199	200
100	125	9	10	1,300	1,325	105	106	2,500	2,525	201	202
125	150	11	12	1,325	1,350	107	108	2,525	2,550	203	204
150	175	13	14	1,350	1,375	109	110	2,550	2,575	205	206
175	200	15	16	1,375	1,400	111	112	2,575	2,600	207	208
200	225	17	18	1,400	1,425	113	114	2,600	2,625	209	210
225	250	19	20	1,425	1,450	115	116	2,625	2,650	211	212
250	275	21	22	1,450	1,475	117	118	2,650	2,675	213	214
275	300	23	24	1,475	1,500	119	120	2,675	2,700	215	216
300	325	25	26	1,500	1,525	121	122	2,700	2,725	217	218
325	350	27	28	1,525	1,550	123	124	2,725	2,750	219	220
350	375	29	30	1,550	1,575	125	126	2,750	2,775	221	222
375	400	31	32	1,575	1,600	127	128	2,775	2,800	223	224
400	425	33	34	1,600	1,625	129	130	2,800	2,825	225	226
425	450	35	36	1,625	1,650	131	132	2,825	2,850	227	228
450	475	37	38	1,650	1,675	133	134	2,850	2,875	229	230
475	500	39	40	1,675	1,700	135	136	2,875	2,900	231	232
500	525	41	42	1,700	1,725	137	138	2,900	2,925	233	234
525	550	43	44	1,725	1,750	139	140	2,925	2,950	235	236
550	575	45	46	1,750	1,775	141	142	2,950	2,975	237	238
575	600	47	48	1,775	1,800	143	144	2,975	3,000	239	240
600	625	49	50	1,800	1,825	145	146	3,000	3,025	241	242
625	650	51	52	1,825	1,850	147	148	3,025	3,050	243	244
650	675	53	54	1,850	1,875	149	150	3,050	3,075	245	246
675	700	55	56	1,875	1,900	151	152	3,075	3,100	247	248
700	725	57	58	1,900	1,925	153	154	3,100	3,125	249	250
725	750	59	60	1,925	1,950	155	156	3,125	3,150	251	252
750	775	61	62	1,950	1,975	157	158	3,150	3,175	253	254
775	800	63	64	1,975	2,000	159	160	3,175	3,200	255	256
800	825	65	66	2,000	2,025	161	162	3,200	3,225	257	258
825	850	67	68	2,025	2,050	163	164	3,225	3,250	259	260
850	875	69	70	2,050	2,075	165	166	3,250	3,275	261	262
875	900	71	72	2,075	2,100	167	168	3,275	3,300	263	264
900	925	73	74	2,100	2,125	169	170	3,300	3,325	265	266
925	950	75	76	2,125	2,150	171	172	3,325	3,350	267	268
950	975	77	78	2,150	2,175	173	174	3,350	3,375	269	270
975	1,000	79	80	2,175	2,200	175	176	3,375	3,400	271	272
1,000	1,025	81	82	2,200	2,225	177	178	3,400	3,425	273	274
1,025	1,050	83	84	2,225	2,250	179	180	3,425	3,450	275	276
1,050	1,075	85	86	2,250	2,275	181	182	3,450	3,475	277	278
1,075	1,100	87	88	2,275	2,300	183	184	3,475	3,500	279	280
1,100	1,125	89	90	2,300	2,325	185	186	3,500	3,525	281	282
1,125	1,150	91	92	2,325	2,350	187	188	3,525	3,550	283	284
1,150	1,175	93	94	2,350	2,375	189	190	3,550	3,575	285	286
1,175	1,200	95	96	2,375	2,400	191	192	3,575	3,600	287	288

Appendix C
Road Measurements and Property Numbers Based on 25 Foot Numbering Interval

Footage Down Road		Number		Number	Footage Down Road		Number		Number	Footage Down Road		Number		Number
From	To	Odd	Even		From	To	Odd	Even		From	To	Odd	Even	
3,600	3,625	289	290		4,800	4,825	385	386		6,000	6,025	481	482	
3,625	3,650	291	292		4,825	4,850	387	388		6,025	6,050	483	484	
3,650	3,675	293	294		4,850	4,875	389	390		6,050	6,075	485	486	
3,675	3,700	295	296		4,875	4,900	391	392		6,075	6,100	487	488	
3,700	3,725	297	298		4,900	4,925	393	394		6,100	6,125	489	490	
3,725	3,750	299	300		4,925	4,950	395	396		6,125	6,150	491	492	
3,750	3,775	301	302		4,950	4,975	397	398		6,150	6,175	493	494	
3,775	3,800	303	304		4,975	5,000	399	400		6,175	6,200	495	496	
3,800	3,825	305	306		5,000	5,025	401	402		6,200	6,225	497	498	
3,825	3,850	307	308		5,025	5,050	403	404		6,225	6,250	499	500	
3,850	3,875	309	310		5,050	5,075	405	406		6,250	6,275	501	502	
3,875	3,900	311	312		5,075	5,100	407	408		6,275	6,300	503	504	
3,900	3,925	313	314		5,100	5,125	409	410		6,300	6,325	505	506	
3,925	3,950	315	316		5,125	5,150	411	412		6,325	6,350	507	508	
3,950	3,975	317	318		5,150	5,175	413	414		6,350	6,375	509	510	
3,975	4,000	319	320		5,175	5,200	415	416		6,375	6,400	511	512	
4,000	4,025	321	322		5,200	5,225	417	418		6,400	6,425	513	514	
4,025	4,050	323	324		5,225	5,250	419	420		6,425	6,450	515	516	
4,050	4,075	325	326		5,250	5,275	421	422		6,450	6,475	517	518	
4,075	4,100	327	328		5,275	5,300	423	424		6,475	6,500	519	520	
4,100	4,125	329	330		5,300	5,325	425	426		6,500	6,525	521	522	
4,125	4,150	331	332		5,325	5,350	427	428		6,525	6,550	523	524	
4,150	4,175	333	334		5,350	5,375	429	430		6,550	6,575	525	526	
4,175	4,200	335	336		5,375	5,400	431	432		6,575	6,600	527	528	
4,200	4,225	337	338		5,400	5,425	433	434		6,600	6,625	529	530	
4,225	4,250	339	340		5,425	5,450	435	436		6,625	6,650	531	532	
4,250	4,275	341	342		5,450	5,475	437	438		6,650	6,675	533	534	
4,275	4,300	343	344		5,475	5,500	439	440		6,675	6,700	535	536	
4,300	4,325	345	346		5,500	5,525	441	442		6,700	6,725	537	538	
4,325	4,350	347	348		5,525	5,550	443	444		6,725	6,750	539	540	
4,350	4,375	349	350		5,550	5,575	445	446		6,750	6,775	541	542	
4,375	4,400	351	352		5,575	5,600	447	448		6,775	6,800	543	544	
4,400	4,425	353	354		5,600	5,625	449	450		6,800	6,825	545	546	
4,425	4,450	355	356		5,625	5,650	451	452		6,825	6,850	547	548	
4,450	4,475	357	358		5,650	5,675	453	454		6,850	6,875	549	550	
4,475	4,500	359	360		5,675	5,700	455	456		6,875	6,900	551	552	
4,500	4,525	361	362		5,700	5,725	457	458		6,900	6,925	553	554	
4,525	4,550	363	364		5,725	5,750	459	460		6,925	6,950	555	556	
4,550	4,575	365	366		5,750	5,775	461	462		6,950	6,975	557	558	
4,575	4,600	367	368		5,775	5,800	463	464		6,975	7,000	559	560	
4,600	4,625	369	370		5,800	5,825	465	466		7,000	7,025	561	562	
4,625	4,650	371	372		5,825	5,850	467	468		7,025	7,050	563	564	
4,650	4,675	373	374		5,850	5,875	469	470		7,050	7,075	565	566	
4,675	4,700	375	376		5,875	5,900	471	472		7,075	7,100	567	568	
4,700	4,725	377	378		5,900	5,925	473	474		7,100	7,125	569	570	
4,725	4,750	379	380		5,925	5,950	475	476		7,125	7,150	571	572	
4,750	4,775	381	382		5,950	5,975	477	478		7,150	7,175	573	574	
4,775	4,800	383	384		5,975	6,000	479	480		7,175	7,200	575	576	

Appendix C
Road Measurements and Property Numbers Based on 25 Foot Numbering Interval

Footage Down Road				Footage Down Road				Footage Down Road			
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
7,200	7,225	577	578	8,400	8,425	673	674	9,600	9,625	769	770
7,225	7,250	579	580	8,425	8,450	675	676	9,625	9,650	771	772
7,250	7,275	581	582	8,450	8,475	677	678	9,650	9,675	773	774
7,275	7,300	583	584	8,475	8,500	679	680	9,675	9,700	775	776
7,300	7,325	585	586	8,500	8,525	681	682	9,700	9,725	777	778
7,325	7,350	587	588	8,525	8,550	683	684	9,725	9,750	779	780
7,350	7,375	589	590	8,550	8,575	685	686	9,750	9,775	781	782
7,375	7,400	591	592	8,575	8,600	687	688	9,775	9,800	783	784
7,400	7,425	593	594	8,600	8,625	689	690	9,800	9,825	785	786
7,425	7,450	595	596	8,625	8,650	691	692	9,825	9,850	787	788
7,450	7,475	597	598	8,650	8,675	693	694	9,850	9,875	789	790
7,475	7,500	599	600	8,675	8,700	695	696	9,875	9,900	791	792
7,500	7,525	601	602	8,700	8,725	697	698	9,900	9,925	793	794
7,525	7,550	603	604	8,725	8,750	699	700	9,925	9,950	795	796
7,550	7,575	605	606	8,750	8,775	701	702	9,950	9,975	797	798
7,575	7,600	607	608	8,775	8,800	703	704	9,975	10,000	799	800
7,600	7,625	609	610	8,800	8,825	705	706	10,000	10,025	801	802
7,625	7,650	611	612	8,825	8,850	707	708	10,025	10,050	803	804
7,650	7,675	613	614	8,850	8,875	709	710	10,050	10,075	805	806
7,675	7,700	615	616	8,875	8,900	711	712	10,075	10,100	807	808
7,700	7,725	617	618	8,900	8,925	713	714	10,100	10,125	809	810
7,725	7,750	619	620	8,925	8,950	715	716	10,125	10,150	811	812
7,750	7,775	621	622	8,950	8,975	717	718	10,150	10,175	813	814
7,775	7,800	623	624	8,975	9,000	719	720	10,175	10,200	815	816
7,800	7,825	625	626	9,000	9,025	721	722	10,200	10,225	817	818
7,825	7,850	627	628	9,025	9,050	723	724	10,225	10,250	819	820
7,850	7,875	629	630	9,050	9,075	725	726	10,250	10,275	821	822
7,875	7,900	631	632	9,075	9,100	727	728	10,275	10,300	823	824
7,900	7,925	633	634	9,100	9,125	729	730	10,300	10,325	825	826
7,925	7,950	635	636	9,125	9,150	731	732	10,325	10,350	827	828
7,950	7,975	637	638	9,150	9,175	733	734	10,350	10,375	829	830
7,975	8,000	639	640	9,175	9,200	735	736	10,375	10,400	831	832
8,000	8,025	641	642	9,200	9,225	737	738	10,400	10,425	833	834
8,025	8,050	643	644	9,225	9,250	739	740	10,425	10,450	835	836
8,050	8,075	645	646	9,250	9,275	741	742	10,450	10,475	837	838
8,075	8,100	647	648	9,275	9,300	743	744	10,475	10,500	839	840
8,100	8,125	649	650	9,300	9,325	745	746	10,500	10,525	841	842
8,125	8,150	651	652	9,325	9,350	747	748	10,525	10,550	843	844
8,150	8,175	653	654	9,350	9,375	749	750	10,550	10,575	845	846
8,175	8,200	655	656	9,375	9,400	751	752	10,575	10,600	847	848
8,200	8,225	657	658	9,400	9,425	753	754	10,600	10,625	849	850
8,225	8,250	659	660	9,425	9,450	755	756	10,625	10,650	851	852
8,250	8,275	661	662	9,450	9,475	757	758	10,650	10,675	853	854
8,275	8,300	663	664	9,475	9,500	759	760	10,675	10,700	855	856
8,300	8,325	665	666	9,500	9,525	761	762	10,700	10,725	857	858
8,325	8,350	667	668	9,525	9,550	763	764	10,725	10,750	859	860
8,350	8,375	669	670	9,550	9,575	765	766	10,750	10,775	861	862
8,375	8,400	671	672	9,575	9,600	767	768	10,775	10,800	863	864

Appendix C
Road Measurements and Property Numbers Based on 25 Foot Numbering Interval

Footage Down Road		Number		Number	Footage Down Road		Number		Number	Footage Down Road		Number		Number
From	To	Odd	Even		From	To	Odd	Even		From	To	Odd	Even	
10,800	10,825	865	866		12,000	12,025	961	962		13,200	13,225	1057	1058	
10,825	10,850	867	868		12,025	12,050	963	964		13,225	13,250	1059	1060	
10,850	10,875	869	870		12,050	12,075	965	966		13,250	13,275	1061	1062	
10,875	10,900	871	872		12,075	12,100	967	968		13,275	13,300	1063	1064	
10,900	10,925	873	874		12,100	12,125	969	970		13,300	13,325	1065	1066	
10,925	10,950	875	876		12,125	12,150	971	972		13,325	13,350	1067	1068	
10,950	10,975	877	878		12,150	12,175	973	974		13,350	13,375	1069	1070	
10,975	11,000	879	880		12,175	12,200	975	976		13,375	13,400	1071	1072	
11,000	11,025	881	882		12,200	12,225	977	978		13,400	13,425	1073	1074	
11,025	11,050	883	884		12,225	12,250	979	980		13,425	13,450	1075	1076	
11,050	11,075	885	886		12,250	12,275	981	982		13,450	13,475	1077	1078	
11,075	11,100	887	888		12,275	12,300	983	984		13,475	13,500	1079	1080	
11,100	11,125	889	890		12,300	12,325	985	986		13,500	13,525	1081	1082	
11,125	11,150	891	892		12,325	12,350	987	988		13,525	13,550	1083	1084	
11,150	11,175	893	894		12,350	12,375	989	990		13,550	13,575	1085	1086	
11,175	11,200	895	896		12,375	12,400	991	992		13,575	13,600	1087	1088	
11,200	11,225	897	898		12,400	12,425	993	994		13,600	13,625	1089	1090	
11,225	11,250	899	900		12,425	12,450	995	996		13,625	13,650	1091	1092	
11,250	11,275	901	902		12,450	12,475	997	998		13,650	13,675	1093	1094	
11,275	11,300	903	904		12,475	12,500	999	1000		13,675	13,700	1095	1096	
11,300	11,325	905	906		12,500	12,525	1001	1002		13,700	13,725	1097	1098	
11,325	11,350	907	908		12,525	12,550	1003	1004		13,725	13,750	1099	1100	
11,350	11,375	909	910		12,550	12,575	1005	1006		13,750	13,775	1101	1102	
11,375	11,400	911	912		12,575	12,600	1007	1008		13,775	13,800	1103	1104	
11,400	11,425	913	914		12,600	12,625	1009	1010		13,800	13,825	1105	1106	
11,425	11,450	915	916		12,625	12,650	1011	1012		13,825	13,850	1107	1108	
11,450	11,475	917	918		12,650	12,675	1013	1014		13,850	13,875	1109	1110	
11,475	11,500	919	920		12,675	12,700	1015	1016		13,875	13,900	1111	1112	
11,500	11,525	921	922		12,700	12,725	1017	1018		13,900	13,925	1113	1114	
11,525	11,550	923	924		12,725	12,750	1019	1020		13,925	13,950	1115	1116	
11,550	11,575	925	926		12,750	12,775	1021	1022		13,950	13,975	1117	1118	
11,575	11,600	927	928		12,775	12,800	1023	1024		13,975	14,000	1119	1120	
11,600	11,625	929	930		12,800	12,825	1025	1026		14,000	14,025	1121	1122	
11,625	11,650	931	932		12,825	12,850	1027	1028		14,025	14,050	1123	1124	
11,650	11,675	933	934		12,850	12,875	1029	1030		14,050	14,075	1125	1126	
11,675	11,700	935	936		12,875	12,900	1031	1032		14,075	14,100	1127	1128	
11,700	11,725	937	938		12,900	12,925	1033	1034		14,100	14,125	1129	1130	
11,725	11,750	939	940		12,925	12,950	1035	1036		14,125	14,150	1131	1132	
11,750	11,775	941	942		12,950	12,975	1037	1038		14,150	14,175	1133	1134	
11,775	11,800	943	944		12,975	13,000	1039	1040		14,175	14,200	1135	1136	
11,800	11,825	945	946		13,000	13,025	1041	1042		14,200	14,225	1137	1138	
11,825	11,850	947	948		13,025	13,050	1043	1044		14,225	14,250	1139	1140	
11,850	11,875	949	950		13,050	13,075	1045	1046		14,250	14,275	1141	1142	
11,875	11,900	951	952		13,075	13,100	1047	1048		14,275	14,300	1143	1144	
11,900	11,925	953	954		13,100	13,125	1049	1050		14,300	14,325	1145	1146	
11,925	11,950	955	956		13,125	13,150	1051	1052		14,325	14,350	1147	1148	
11,950	11,975	957	958		13,150	13,175	1053	1054		14,350	14,375	1149	1150	
11,975	12,000	959	960		13,175	13,200	1055	1056		14,375	14,400	1151	1152	

Appendix C:
Road Measurements and Property Numbers Based on 50 Foot Numbering Interval

Footage Down Road		Number		Footage Down Road		Number		Footage Down Road		Number	
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	50	1	2	2,400	2,450	97	98	4,800	4,850	193	194
50	100	3	4	2,450	2,500	99	100	4,850	4,900	195	196
100	150	5	6	2,500	2,550	101	102	4,900	4,950	197	198
150	200	7	8	2,550	2,600	103	104	4,950	5,000	199	200
200	250	9	10	2,600	2,650	105	106	5,000	5,050	201	202
250	300	11	12	2,650	2,700	107	108	5,050	5,100	203	204
300	350	13	14	2,700	2,750	109	110	5,100	5,150	205	206
350	400	15	16	2,750	2,800	111	112	5,150	5,200	207	208
400	450	17	18	2,800	2,850	113	114	5,200	5,250	209	210
450	500	19	20	2,850	2,900	115	116	5,250	5,300	211	212
500	550	21	22	2,900	2,950	117	118	5,300	5,350	213	214
550	600	23	24	2,950	3,000	119	120	5,350	5,400	215	216
600	650	25	26	3,000	3,050	121	122	5,400	5,450	217	218
650	700	27	28	3,050	3,100	123	124	5,450	5,500	219	220
700	750	29	30	3,100	3,150	125	126	5,500	5,550	221	222
750	800	31	32	3,150	3,200	127	128	5,550	5,600	223	224
800	850	33	34	3,200	3,250	129	130	5,600	5,650	225	226
850	900	35	36	3,250	3,300	131	132	5,650	5,700	227	228
900	950	37	38	3,300	3,350	133	134	5,700	5,750	229	230
950	1,000	39	40	3,350	3,400	135	136	5,750	5,800	231	232
1,000	1,050	41	42	3,400	3,450	137	138	5,800	5,850	233	234
1,050	1,100	43	44	3,450	3,500	139	140	5,850	5,900	235	236
1,100	1,150	45	46	3,500	3,550	141	142	5,900	5,950	237	238
1,150	1,200	47	48	3,550	3,600	143	144	5,950	6,000	239	240
1,200	1,250	49	50	3,600	3,650	145	146	6,000	6,050	241	242
1,250	1,300	51	52	3,650	3,700	147	148	6,050	6,100	243	244
1,300	1,350	53	54	3,700	3,750	149	150	6,100	6,150	245	246
1,350	1,400	55	56	3,750	3,800	151	152	6,150	6,200	247	248
1,400	1,450	57	58	3,800	3,850	153	154	6,200	6,250	249	250
1,450	1,500	59	60	3,850	3,900	155	156	6,250	6,300	251	252
1,500	1,550	61	62	3,900	3,950	157	158	6,300	6,350	253	254
1,550	1,600	63	64	3,950	4,000	159	160	6,350	6,400	255	256
1,600	1,650	65	66	4,000	4,050	161	162	6,400	6,450	257	258
1,650	1,700	67	68	4,050	4,100	163	164	6,450	6,500	259	260
1,700	1,750	69	70	4,100	4,150	165	166	6,500	6,550	261	262
1,750	1,800	71	72	4,150	4,200	167	168	6,550	6,600	263	264
1,800	1,850	73	74	4,200	4,250	169	170	6,600	6,650	265	266
1,850	1,900	75	76	4,250	4,300	171	172	6,650	6,700	267	268
1,900	1,950	77	78	4,300	4,350	173	174	6,700	6,750	269	270
1,950	2,000	79	80	4,350	4,400	175	176	6,750	6,800	271	272
2,000	2,050	81	82	4,400	4,450	177	178	6,800	6,850	273	274
2,050	2,100	83	84	4,450	4,500	179	180	6,850	6,900	275	276
2,100	2,150	85	86	4,500	4,550	181	182	6,900	6,950	277	278
2,150	2,200	87	88	4,550	4,600	183	184	6,950	7,000	279	280
2,200	2,250	89	90	4,600	4,650	185	186	7,000	7,050	281	282
2,250	2,300	91	92	4,650	4,700	187	188	7,050	7,100	283	284
2,300	2,350	93	94	4,700	4,750	189	190	7,100	7,150	285	286
2,350	2,400	95	96	4,750	4,800	191	192	7,150	7,200	287	288

Appendix C
Road Measurements and Property Numbers Based on 50 Foot Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
7,200	7,250	289	290	9,600	9,650	385	386	12,000	12,050	481	482
7,250	7,300	291	292	9,650	9,700	387	388	12,050	12,100	483	484
7,300	7,350	293	294	9,700	9,750	389	390	12,100	12,150	485	486
7,350	7,400	295	296	9,750	9,800	391	392	12,150	12,200	487	488
7,400	7,450	297	298	9,800	9,850	393	394	12,200	12,250	489	490
7,450	7,500	299	300	9,850	9,900	395	396	12,250	12,300	491	492
7,500	7,550	301	302	9,900	9,950	397	398	12,300	12,350	493	494
7,550	7,600	303	304	9,950	10,000	399	400	12,350	12,400	495	496
7,600	7,650	305	306	10,000	10,050	401	402	12,400	12,450	497	498
7,650	7,700	307	308	10,050	10,100	403	404	12,450	12,500	499	500
7,700	7,750	309	310	10,100	10,150	405	406	12,500	12,550	501	502
7,750	7,800	311	312	10,150	10,200	407	408	12,550	12,600	503	504
7,800	7,850	313	314	10,200	10,250	409	410	12,600	12,650	505	506
7,850	7,900	315	316	10,250	10,300	411	412	12,650	12,700	507	508
7,900	7,950	317	318	10,300	10,350	413	414	12,700	12,750	509	510
7,950	8,000	319	320	10,350	10,400	415	416	12,750	12,800	511	512
8,000	8,050	321	322	10,400	10,450	417	418	12,800	12,850	513	514
8,050	8,100	323	324	10,450	10,500	419	420	12,850	12,900	515	516
8,100	8,150	325	326	10,500	10,550	421	422	12,900	12,950	517	518
8,150	8,200	327	328	10,550	10,600	423	424	12,950	13,000	519	520
8,200	8,250	329	330	10,600	10,650	425	426	13,000	13,050	521	522
8,250	8,300	331	332	10,650	10,700	427	428	13,050	13,100	523	524
8,300	8,350	333	334	10,700	10,750	429	430	13,100	13,150	525	526
8,350	8,400	335	336	10,750	10,800	431	432	13,150	13,200	527	528
8,400	8,450	337	338	10,800	10,850	433	434	13,200	13,250	529	530
8,450	8,500	339	340	10,850	10,900	435	436	13,250	13,300	531	532
8,500	8,550	341	342	10,900	10,950	437	438	13,300	13,350	533	534
8,550	8,600	343	344	10,950	11,000	439	440	13,350	13,400	535	536
8,600	8,650	345	346	11,000	11,050	441	442	13,400	13,450	537	538
8,650	8,700	347	348	11,050	11,100	443	444	13,450	13,500	539	540
8,700	8,750	349	350	11,100	11,150	445	446	13,500	13,550	541	542
8,750	8,800	351	352	11,150	11,200	447	448	13,550	13,600	543	544
8,800	8,850	353	354	11,200	11,250	449	450	13,600	13,650	545	546
8,850	8,900	355	356	11,250	11,300	451	452	13,650	13,700	547	548
8,900	8,950	357	358	11,300	11,350	453	454	13,700	13,750	549	550
8,950	9,000	359	360	11,350	11,400	455	456	13,750	13,800	551	552
9,000	9,050	361	362	11,400	11,450	457	458	13,800	13,850	553	554
9,050	9,100	363	364	11,450	11,500	459	460	13,850	13,900	555	556
9,100	9,150	365	366	11,500	11,550	461	462	13,900	13,950	557	558
9,150	9,200	367	368	11,550	11,600	463	464	13,950	14,000	559	560
9,200	9,250	369	370	11,600	11,650	465	466	14,000	14,050	561	562
9,250	9,300	371	372	11,650	11,700	467	468	14,050	14,100	563	564
9,300	9,350	373	374	11,700	11,750	469	470	14,100	14,150	565	566
9,350	9,400	375	376	11,750	11,800	471	472	14,150	14,200	567	568
9,400	9,450	377	378	11,800	11,850	473	474	14,200	14,250	569	570
9,450	9,500	379	380	11,850	11,900	475	476	14,250	14,300	571	572
9,500	9,550	381	382	11,900	11,950	477	478	14,300	14,350	573	574
9,550	9,600	383	384	11,950	12,000	479	480	14,350	14,400	575	576

Appendix C
Road Measurements and Property Numbers Based on 50 Foot Numbering Interval

Footage Down Road		Number		Footage Down Road		Number		Footage Down Road		Number	
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
14,400	14,450	577	578	16,800	16,850	673	674	19,200	19,250	769	770
14,450	14,500	579	580	16,850	16,900	675	676	19,250	19,300	771	772
14,500	14,550	581	582	16,900	16,950	677	678	19,300	19,350	773	774
14,550	14,600	583	584	16,950	17,000	679	680	19,350	19,400	775	776
14,600	14,650	585	586	17,000	17,050	681	682	19,400	19,450	777	778
14,650	14,700	587	588	17,050	17,100	683	684	19,450	19,500	779	780
14,700	14,750	589	590	17,100	17,150	685	686	19,500	19,550	781	782
14,750	14,800	591	592	17,150	17,200	687	688	19,550	19,600	783	784
14,800	14,850	593	594	17,200	17,250	689	690	19,600	19,650	785	786
14,850	14,900	595	596	17,250	17,300	691	692	19,650	19,700	787	788
14,900	14,950	597	598	17,300	17,350	693	694	19,700	19,750	789	790
14,950	15,000	599	600	17,350	17,400	695	696	19,750	19,800	791	792
15,000	15,050	601	602	17,400	17,450	697	698	19,800	19,850	793	794
15,050	15,100	603	604	17,450	17,500	699	700	19,850	19,900	795	796
15,100	15,150	605	606	17,500	17,550	701	702	19,900	19,950	797	798
15,150	15,200	607	608	17,550	17,600	703	704	19,950	20,000	799	800
15,200	15,250	609	610	17,600	17,650	705	706	20,000	20,050	801	802
15,250	15,300	611	612	17,650	17,700	707	708	20,050	20,100	803	804
15,300	15,350	613	614	17,700	17,750	709	710	20,100	20,150	805	806
15,350	15,400	615	616	17,750	17,800	711	712	20,150	20,200	807	808
15,400	15,450	617	618	17,800	17,850	713	714	20,200	20,250	809	810
15,450	15,500	619	620	17,850	17,900	715	716	20,250	20,300	811	812
15,500	15,550	621	622	17,900	17,950	717	718	20,300	20,350	813	814
15,550	15,600	623	624	17,950	18,000	719	720	20,350	20,400	815	816
15,600	15,650	625	626	18,000	18,050	721	722	20,400	20,450	817	818
15,650	15,700	627	628	18,050	18,100	723	724	20,450	20,500	819	820
15,700	15,750	629	630	18,100	18,150	725	726	20,500	20,550	821	822
15,750	15,800	631	632	18,150	18,200	727	728	20,550	20,600	823	824
15,800	15,850	633	634	18,200	18,250	729	730	20,600	20,650	825	826
15,850	15,900	635	636	18,250	18,300	731	732	20,650	20,700	827	828
15,900	15,950	637	638	18,300	18,350	733	734	20,700	20,750	829	830
15,950	16,000	639	640	18,350	18,400	735	736	20,750	20,800	831	832
16,000	16,050	641	642	18,400	18,450	737	738	20,800	20,850	833	834
16,050	16,100	643	644	18,450	18,500	739	740	20,850	20,900	835	836
16,100	16,150	645	646	18,500	18,550	741	742	20,900	20,950	837	838
16,150	16,200	647	648	18,550	18,600	743	744	20,950	21,000	839	840
16,200	16,250	649	650	18,600	18,650	745	746	21,000	21,050	841	842
16,250	16,300	651	652	18,650	18,700	747	748	21,050	21,100	843	844
16,300	16,350	653	654	18,700	18,750	749	750	21,100	21,150	845	846
16,350	16,400	655	656	18,750	18,800	751	752	21,150	21,200	847	848
16,400	16,450	657	658	18,800	18,850	753	754	21,200	21,250	849	850
16,450	16,500	659	660	18,850	18,900	755	756	21,250	21,300	851	852
16,500	16,550	661	662	18,900	18,950	757	758	21,300	21,350	853	854
16,550	16,600	663	664	18,950	19,000	759	760	21,350	21,400	855	856
16,600	16,650	665	666	19,000	19,050	761	762	21,400	21,450	857	858
16,650	16,700	667	668	19,050	19,100	763	764	21,450	21,500	859	860
16,700	16,750	669	670	19,100	19,150	765	766	21,500	21,550	861	862
16,750	16,800	671	672	19,150	19,200	767	768	21,550	21,600	863	864

Appendix C:
Road Measurements and Property Numbers Based on 50 Foot Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
21,600	21,650	865	866	24,000	24,050	961	962	26,400	26,450	1057	1058
21,650	21,700	867	868	24,050	24,100	963	964	26,450	26,500	1059	1060
21,700	21,750	869	870	24,100	24,150	965	966	26,500	26,550	1061	1062
21,750	21,800	871	872	24,150	24,200	967	968	26,550	26,600	1063	1064
21,800	21,850	873	874	24,200	24,250	969	970	26,600	26,650	1065	1066
21,850	21,900	875	876	24,250	24,300	971	972	26,650	26,700	1067	1068
21,900	21,950	877	878	24,300	24,350	973	974	26,700	26,750	1069	1070
21,950	22,000	879	880	24,350	24,400	975	976	26,750	26,800	1071	1072
22,000	22,050	881	882	24,400	24,450	977	978	26,800	26,850	1073	1074
22,050	22,100	883	884	24,450	24,500	979	980	26,850	26,900	1075	1076
22,100	22,150	885	886	24,500	24,550	981	982	26,900	26,950	1077	1078
22,150	22,200	887	888	24,550	24,600	983	984	26,950	27,000	1079	1080
22,200	22,250	889	890	24,600	24,650	985	986	27,000	27,050	1081	1082
22,250	22,300	891	892	24,650	24,700	987	988	27,050	27,100	1083	1084
22,300	22,350	893	894	24,700	24,750	989	990	27,100	27,150	1085	1086
22,350	22,400	895	896	24,750	24,800	991	992	27,150	27,200	1087	1088
22,400	22,450	897	898	24,800	24,850	993	994	27,200	27,250	1089	1090
22,450	22,500	899	900	24,850	24,900	995	996	27,250	27,300	1091	1092
22,500	22,550	901	902	24,900	24,950	997	998	27,300	27,350	1093	1094
22,550	22,600	903	904	24,950	25,000	999	1000	27,350	27,400	1095	1096
22,600	22,650	905	906	25,000	25,050	1001	1002	27,400	27,450	1097	1098
22,650	22,700	907	908	25,050	25,100	1003	1004	27,450	27,500	1099	1100
22,700	22,750	909	910	25,100	25,150	1005	1006	27,500	27,550	1101	1102
22,750	22,800	911	912	25,150	25,200	1007	1008	27,550	27,600	1103	1104
22,800	22,850	913	914	25,200	25,250	1009	1010	27,600	27,650	1105	1106
22,850	22,900	915	916	25,250	25,300	1011	1012	27,650	27,700	1107	1108
22,900	22,950	917	918	25,300	25,350	1013	1014	27,700	27,750	1109	1110
22,950	23,000	919	920	25,350	25,400	1015	1016	27,750	27,800	1111	1112
23,000	23,050	921	922	25,400	25,450	1017	1018	27,800	27,850	1113	1114
23,050	23,100	923	924	25,450	25,500	1019	1020	27,850	27,900	1115	1116
23,100	23,150	925	926	25,500	25,550	1021	1022	27,900	27,950	1117	1118
23,150	23,200	927	928	25,550	25,600	1023	1024	27,950	28,000	1119	1120
23,200	23,250	929	930	25,600	25,650	1025	1026	28,000	28,050	1121	1122
23,250	23,300	931	932	25,650	25,700	1027	1028	28,050	28,100	1123	1124
23,300	23,350	933	934	25,700	25,750	1029	1030	28,100	28,150	1125	1126
23,350	23,400	935	936	25,750	25,800	1031	1032	28,150	28,200	1127	1128
23,400	23,450	937	938	25,800	25,850	1033	1034	28,200	28,250	1129	1130
23,450	23,500	939	940	25,850	25,900	1035	1036	28,250	28,300	1131	1132
23,500	23,550	941	942	25,900	25,950	1037	1038	28,300	28,350	1133	1134
23,550	23,600	943	944	25,950	26,000	1039	1040	28,350	28,400	1135	1136
23,600	23,650	945	946	26,000	26,050	1041	1042	28,400	28,450	1137	1138
23,650	23,700	947	948	26,050	26,100	1043	1044	28,450	28,500	1139	1140
23,700	23,750	949	950	26,100	26,150	1045	1046	28,500	28,550	1141	1142
23,750	23,800	951	952	26,150	26,200	1047	1048	28,550	28,600	1143	1144
23,800	23,850	953	954	26,200	26,250	1049	1050	28,600	28,650	1145	1146
23,850	23,900	955	956	26,250	26,300	1051	1052	28,650	28,700	1147	1148
23,900	23,950	957	958	26,300	26,350	1053	1054	28,700	28,750	1149	1150
23,950	24,000	959	960	26,350	26,400	1055	1056	28,750	28,800	1151	1152

Appendix C:
Road Measurements and Property Numbers Based on 100 Foot Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
0	100	1	2	4,800	4,900	97	98	9,600	9,700	193	194
100	200	3	4	4,900	5,000	99	100	9,700	9,800	195	196
200	300	5	6	5,000	5,100	101	102	9,800	9,900	197	198
300	400	7	8	5,100	5,200	103	104	9,900	10,000	199	200
400	500	9	10	5,200	5,300	105	106	10,000	10,100	201	202
500	600	11	12	5,300	5,400	107	108	10,100	10,200	203	204
600	700	13	14	5,400	5,500	109	110	10,200	10,300	205	206
700	800	15	16	5,500	5,600	111	112	10,300	10,400	207	208
800	900	17	18	5,600	5,700	113	114	10,400	10,500	209	210
900	1,000	19	20	5,700	5,800	115	116	10,500	10,600	211	212
1,000	1,100	21	22	5,800	5,900	117	118	10,600	10,700	213	214
1,100	1,200	23	24	5,900	6,000	119	120	10,700	10,800	215	216
1,200	1,300	25	26	6,000	6,100	121	122	10,800	10,900	217	218
1,300	1,400	27	28	6,100	6,200	123	124	10,900	11,000	219	220
1,400	1,500	29	30	6,200	6,300	125	126	11,000	11,100	221	222
1,500	1,600	31	32	6,300	6,400	127	128	11,100	11,200	223	224
1,600	1,700	33	34	6,400	6,500	129	130	11,200	11,300	225	226
1,700	1,800	35	36	6,500	6,600	131	132	11,300	11,400	227	228
1,800	1,900	37	38	6,600	6,700	133	134	11,400	11,500	229	230
1,900	2,000	39	40	6,700	6,800	135	136	11,500	11,600	231	232
2,000	2,100	41	42	6,800	6,900	137	138	11,600	11,700	233	234
2,100	2,200	43	44	6,900	7,000	139	140	11,700	11,800	235	236
2,200	2,300	45	46	7,000	7,100	141	142	11,800	11,900	237	238
2,300	2,400	47	48	7,100	7,200	143	144	11,900	12,000	239	240
2,400	2,500	49	50	7,200	7,300	145	146	12,000	12,100	241	242
2,500	2,600	51	52	7,300	7,400	147	148	12,100	12,200	243	244
2,600	2,700	53	54	7,400	7,500	149	150	12,200	12,300	245	246
2,700	2,800	55	56	7,500	7,600	151	152	12,300	12,400	247	248
2,800	2,900	57	58	7,600	7,700	153	154	12,400	12,500	249	250
2,900	3,000	59	60	7,700	7,800	155	156	12,500	12,600	251	252
3,000	3,100	61	62	7,800	7,900	157	158	12,600	12,700	253	254
3,100	3,200	63	64	7,900	8,000	159	160	12,700	12,800	255	256
3,200	3,300	65	66	8,000	8,100	161	162	12,800	12,900	257	258
3,300	3,400	67	68	8,100	8,200	163	164	12,900	13,000	259	260
3,400	3,500	69	70	8,200	8,300	165	166	13,000	13,100	261	262
3,500	3,600	71	72	8,300	8,400	167	168	13,100	13,200	263	264
3,600	3,700	73	74	8,400	8,500	169	170	13,200	13,300	265	266
3,700	3,800	75	76	8,500	8,600	171	172	13,300	13,400	267	268
3,800	3,900	77	78	8,600	8,700	173	174	13,400	13,500	269	270
3,900	4,000	79	80	8,700	8,800	175	176	13,500	13,600	271	272
4,000	4,100	81	82	8,800	8,900	177	178	13,600	13,700	273	274
4,100	4,200	83	84	8,900	9,000	179	180	13,700	13,800	275	276
4,200	4,300	85	86	9,000	9,100	181	182	13,800	13,900	277	278
4,300	4,400	87	88	9,100	9,200	183	184	13,900	14,000	279	280
4,400	4,500	89	90	9,200	9,300	185	186	14,000	14,100	281	282
4,500	4,600	91	92	9,300	9,400	187	188	14,100	14,200	283	284
4,600	4,700	93	94	9,400	9,500	189	190	14,200	14,300	285	286
4,700	4,800	95	96	9,500	9,600	191	192	14,300	14,400	287	288

Appendix C
Road Measurements and Property Numbers Based on 100 Foot Numbering Interval

Footage Down Road		Number	Number	Footage Down Road		Number	Number	Footage Down Road		Number	Number
From	To	Odd	Even	From	To	Odd	Even	From	To	Odd	Even
14,400	14,500	289	290	19,200	19,300	385	386	24,000	24,100	481	482
14,500	14,600	291	292	19,300	19,400	387	388	24,100	24,200	483	484
14,600	14,700	293	294	19,400	19,500	389	390	24,200	24,300	485	486
14,700	14,800	295	296	19,500	19,600	391	392	24,300	24,400	487	488
14,800	14,900	297	298	19,600	19,700	393	394	24,400	24,500	489	490
14,900	15,000	299	300	19,700	19,800	395	396	24,500	24,600	491	492
15,000	15,100	301	302	19,800	19,900	397	398	24,600	24,700	493	494
15,100	15,200	303	304	19,900	20,000	399	400	24,700	24,800	495	496
15,200	15,300	305	306	20,000	20,100	401	402	24,800	24,900	497	498
15,300	15,400	307	308	20,100	20,200	403	404	24,900	25,000	499	500
15,400	15,500	309	310	20,200	20,300	405	406	25,000	25,100	501	502
15,500	15,600	311	312	20,300	20,400	407	408	25,100	25,200	503	504
15,600	15,700	313	314	20,400	20,500	409	410	25,200	25,300	505	506
15,700	15,800	315	316	20,500	20,600	411	412	25,300	25,400	507	508
15,800	15,900	317	318	20,600	20,700	413	414	25,400	25,500	509	510
15,900	16,000	319	320	20,700	20,800	415	416	25,500	25,600	511	512
16,000	16,100	321	322	20,800	20,900	417	418	25,600	25,700	513	514
16,100	16,200	323	324	20,900	21,000	419	420	25,700	25,800	515	516
16,200	16,300	325	326	21,000	21,100	421	422	25,800	25,900	517	518
16,300	16,400	327	328	21,100	21,200	423	424	25,900	26,000	519	520
16,400	16,500	329	330	21,200	21,300	425	426	26,000	26,100	521	522
16,500	16,600	331	332	21,300	21,400	427	428	26,100	26,200	523	524
16,600	16,700	333	334	21,400	21,500	429	430	26,200	26,300	525	526
16,700	16,800	335	336	21,500	21,600	431	432	26,300	26,400	527	528
16,800	16,900	337	338	21,600	21,700	433	434	26,400	26,500	529	530
16,900	17,000	339	340	21,700	21,800	435	436	26,500	26,600	531	532
17,000	17,100	341	342	21,800	21,900	437	438	26,600	26,700	533	534
17,100	17,200	343	344	21,900	22,000	439	440	26,700	26,800	535	536
17,200	17,300	345	346	22,000	22,100	441	442	26,800	26,900	537	538
17,300	17,400	347	348	22,100	22,200	443	444	26,900	27,000	539	540
17,400	17,500	349	350	22,200	22,300	445	446	27,000	27,100	541	542
17,500	17,600	351	352	22,300	22,400	447	448	27,100	27,200	543	544
17,600	17,700	353	354	22,400	22,500	449	450	27,200	27,300	545	546
17,700	17,800	355	356	22,500	22,600	451	452	27,300	27,400	547	548
17,800	17,900	357	358	22,600	22,700	453	454	27,400	27,500	549	550
17,900	18,000	359	360	22,700	22,800	455	456	27,500	27,600	551	552
18,000	18,100	361	362	22,800	22,900	457	458	27,600	27,700	553	554
18,100	18,200	363	364	22,900	23,000	459	460	27,700	27,800	555	556
18,200	18,300	365	366	23,000	23,100	461	462	27,800	27,900	557	558
18,300	18,400	367	368	23,100	23,200	463	464	27,900	28,000	559	560
18,400	18,500	369	370	23,200	23,300	465	466	28,000	28,100	561	562
18,500	18,600	371	372	23,300	23,400	467	468	28,100	28,200	563	564
18,600	18,700	373	374	23,400	23,500	469	470	28,200	28,300	565	566
18,700	18,800	375	376	23,500	23,600	471	472	28,300	28,400	567	568
18,800	18,900	377	378	23,600	23,700	473	474	28,400	28,500	569	570
18,900	19,000	379	380	23,700	23,800	475	476	28,500	28,600	571	572
19,000	19,100	381	382	23,800	23,900	477	478	28,600	28,700	573	574
19,100	19,200	383	384	23,900	24,000	479	480	28,700	28,800	575	576

APPENDIX D

This document is included as a reference for Addressing Officers so that you will have an understanding of how your street names are represented in the MSAG and display at the PSAPs.

Criteria for Representing Road Names in the Maine 9-1-1 MSAG System

12/2/10

1.0 Introduction

This document, from the Maine Emergency Services Communication Bureau (ESCB) is intended to provide criteria and guidance to telephone carriers about how road names are represented in Maine's E9-1-1 system. In the State of Maine the municipalities and, for unorganized territories, the counties are the legal authority to name roads. In the current E9-1-1 and the future Next Generation 9-1-1 systems it is important that a road name representation standard be followed to facilitate communication between systems. To standardize, we adopted the NENA (National Emergency Number Association) standard (which is the USPS Postal Addressing Standard, Publication 28) for road name representation. Using these standards for representing road names in the system does not change the legal name of the road.

2.0 Maine Address Standard Criteria

For entering road names into the MSAG and ALI databases, the following criteria is to be used to represent road name. We have included discussion of Pre and Post directional fields for clarification.

The last word in a legal road name, unless it is a directional (east, west, northeast, southwest, etc.) will be treated as a suffix and will be abbreviated according to the NENA standard which can be found at <http://pe.usps.gov/cpim/ftp/pubs/Pub28/pub28.pdf>. The list of standard suffixes and their standard abbreviations is included in this manual in Section 2.5 beginning on page 64.

2.1 Post and Pre Directionals

If the last word in a road name is a directional word then this will be abbreviated in a Post-Directional Field. If the first word in a road name is a directional word it will be put into the Pre-Directional Field. (**See note below for exceptions to the Pre-Directional format.) An example of Post-Directional is:

55 Maine Avenue North or Northwest will become

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55		MAINE	AVE	N	FARMINGDALE
55		MAINE	AVE	NW	FARMINGDALE

An example of Pre-Directional is:

55 North (or South)Maine Avenue which will become

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55	N	MAINE	AVE		FARMINGDALE
55	S	MAINE	AVE		FARMINGDALE

**Exceptions to the Pre-Directional convention is when a road name has ONLY a directional word such as North Road or West Street. These would be represented as:

HOUSE NUM	PRE DIR	STREET	SUFFIX	POST DIR	COMMUNITY
55		NORTH	RD		FARMINGDALE
55		WEST	ST		FARMINGDALE

For those carrier database systems that do not break out the Pre or Post Directional Fields, the directional should still be entered into the system in the abbreviated format, either before or after the rest of the road name, such as MAINE AVE NW or W MAINE AVE.

2.2 Suffix Convention

For any "last word" in a legal road name that is in the USPS Standard Suffix List, the word will be abbreviated. The current list of USPS Suffixes (as of 12/2/10) is included in this document in Section 2.5 of this appendix for your convenience, but always refer to the USPS Standard, Pub. 28 document for the definitive list of standard suffixes.

For those carrier systems that separate out the road name and the suffix, then this abbreviated word would be put into the Suffix Field. For those systems that do not store suffix in a separate field, the word should still be abbreviated according to the Standard.

2.3 When not in the Suffix List

For those “last words” that are not listed in the Standard Suffix List, these will not be abbreviated and will not be inserted into the Suffix Field. The following table is a list of road names (last word in the name), that are currently in use in Maine but are not in the Postal Standard Suffix List. These will be spelled out in the Street Name Field. If new road names are created where the last word does not exist in the Standard, either as a Post Directional or a Suffix, then it will be spelled out in the Street Name Field.

Access	Cross	Intervale	Retreat
Acres	Cutoff	Keep	Rips
Arm	Den	Knob	Rock
Arterial	Driveway	Ledges	Rocks
Bank	Eddy	Loch	Side
Battery	Edge	Lookout	Siding
Bog	Elbow	Marsh	Sounds
Breeze	Entry	Mist	Straits
Byway	Escape	Notch	Stretch
Call	Exit	Overlook	Strip
Campground	Farm	Pasture	Throw
Circuit	Fireroad	Patch	Thrush
Circus	Gate	Pier	Turn
Close	Glade	Pit	Villas
Colony	Gulch	Pocket	Wharf
Commonwealth	Haze	Pool	Woods
Connection	Head	Promenade	
Connector	Hideaway	Rangeway	
Cross	Highlands	Reach	

2.4 Highways and routes with numbers

A similar database standardization has also been applied to roads with route numbers such as State Highway 3 and U.S. Route 202. These types of road names are standardized in the MSAG database as Route 3 and Route 202. There is no distinction between the type of route in the MSAG at this time. With new NG9-1-1 standards, currently in development at NENA, this may change.

2.5 EXCERPT from USPS Postal Addressing Standards - Appendix C Dated April 2010

C1 Street Suffix Abbreviations The following table lists examples of suffix forms that are primary street suffix names, common street suffixes or suffix abbreviations, and recommended official Postal Service standard suffix abbreviations.

Primary Street Suffix Name	Commonly Used Street Suffix or Abbreviation	Postal Service Standard Suffix Abbreviation
ALLEY	ALLEE	ALY
	ALLEY	
	ALLY	
	ALY	
ANEX	ANEX	ANX
	ANNEX	
	ANNX	
	ANX	
ARCADE	ARC	ARC
	ARCADE	
AVENUE	AV	AVE
	AVE	
	AVEN	
	AVENU	
	AVENUE	
	AVN	
	AVNUE	
BAYOU	BAYOO	BYU
	BAYOU	
BEACH	BCH	BCH
	BEACH	
BEND	BEND	BND
	BND	
BLUFF	BLF	BLF
	BLUF	
	BLUFF	
BLUFFS	BLUFFS	BLFS
BOTTOM	BOT	BTM
	BTM	
	BOTTM	
	BOTTOM	
BOULEVARD	BLVD	BLVD
	BOUL	
	BOULEVARD	
	BOULV	
BRANCH	BR	BR
	BRNCH	

	BRANCH	
BRIDGE	BRDGE	BRG
	BRG	
	BRIDGE	
BROOK	BRK	BRK
	BROOK	
BROOKS	BROOKS	BRKS
BURG	BURG	BG
BURGS	BURGS	BGS
BYPASS	BYP	BYP
	BYPA	
	BYPAS	
	BYPASS	
	BYPS	
CAMP	CAMP	CP
	CP	
	CMP	
CANYON	CANYN	CYN
	CANYON	
	CNYN	
CAPE	CAPE	CPE
	CPE	
CAUSEWAY	CAUSEWAY	CSWY
	CAUSWA	
	CSWY	
CENTER	CEN	CTR
	CENT	
	CENTER	
	CENTR	
	CENTRE	
	CNTER	
	CNTR	
	CTR	
CENTERS	CENTERS	CTRS
CIRCLE	CIR	CIR
	CIRC	
	CIRCL	
	CIRCLE	
	CRCL	
	CRCLE	
CIRCLES	CIRCLES	CIRS
CLIFF	CLF	CLF
	CLIFF	

Appendix D
Road Name Representation in the Database

CLIFFS	CLFS	CLFS
	CLIFFS	
CLUB	CLB	CLB
	CLUB	
COMMON	COMMON	CMN
COMMONS	COMMONS	CMNS
CORNER	COR	COR
	CORNER	
CORNERS	CORNERS	CORS
	CORS	
COURSE	COURSE	CRSE
	CRSE	
COURT	COURT	CT
	CT	
COURTS	COURTS	CTS
	CTS	
COVE	COVE	CV
	CV	
COVES	COVES	CVS
CREEK	CREEK	CRK
	CRK	
CRESCENT	CRESCENT	CRES
	CRES	
	CRSENT	
	CRSNT	
CREST	CREST	CRST
CROSSING	CROSSING	XING
	CSRD	
	CROSSING	
	CRSSNG	
	XING	
CROSSROAD	CROSSROAD	XRD
CROSSROADS	CROSSROADS	XRDS
CURVE	CURVE	CURV
DALE	DALE	DL
	DL	
DAM	DAM	DM
	DM	
DIVIDE	DUV	DV
	DIVIDE	
	DV	
	DVD	
DRIVE	DR	DR
	DRIV	
	DRIVE	
	DRV	
DRIVES	DRIVES	DRS
ESTATE	EST	EST
	ESTATE	
ESTATES	ESTATES	ESTS

	ESTS	
EXPRESSWAY	EXP	EXPY
	EXPR	
	EXPRESS	
	EXPRESSWAY	
	EXPW	
	EXPY	
EXTENSION	EXT	EXT
	EXTENSION	
	EXTN	
	EXTNSN	
EXTENSIONS	EXTS	EXTS
FALL	FALL	FALL
FALLS	FALLS	FLS
	FLS	
FERRY	FERRY	FRY
	FRRY	
	FRY	
FIELD	FIELD	FLD
	FLD	
FIELDS	FIELDS	FLDS
	FLDS	
FLAT	FLATS	FLT
	FLT	
FLATS	FLATS	FLTS
	FLTS	
FORD	FORD	FRD
	FRD	
FORDS	FORDS	FRDS
FOREST	FOREST	FRST
	FORESTS	
	FRST	
FORGE	FORG	FRG
	FORGE	
	FRG	
FORGES	FORGES	FRGS
FORK	FORK	FRK
	FRK	
FORKS	FORKS	FRKS
	FRKS	
FORT	FORT	FT
	FRT	
	FT	
FREEWAY	FREEWAY	FWY
	FREEWY	
	FRWAY	
	FRWY	
	FWY	
GARDEN	GARDEN	GDN
	GARDN	

Appendix D
Road Name Representation in the Database

	GRDEN	
	GRDN	
GARDENS	GARDENS	GDNS
	GDNS	
	GRDNS	
GATEWAY	GATEWAY	GTWY
	GATEWY	
	GATWAY	
	GTWAY	
	GTWY	
GLEN	GLENS	GLN
	GLN	
GLENS	GLENS	GLNS
GREEN	GREEN	GRN
	GRN	
GREENS		GRNS
GROVE	GROV	GRV
	GROVE	
	GRV	
GROVES		GRVS
HARBOR	HARB	HBR
	HARBOR	
	HARBR	
	HBR	
	HRBOR	
HARBORS	HARBORS	HBRs
HAVEN	HAVEN	HVN
	HVN	
HEIGHTS	HT	HTS
	HTS	
HIGHWAY	HIGHWAY	HWY
	HIGHWY	
	HIWAY	
	HIWY	
	HWAY	
	HWY	
HILL	HILL	HL
	HL	
HILLS	HILLS	HLS
	HLS	
HOLLOW	HLLW	HOLW
	HOLLOW	
	HOLLOWS	
	HOLW	
	HOLWS	
INLET	INLT	INLT
ISLAND	IS	IS
	ISLAND	
	ISLND	
ISLANDS	ISLANDS	ISS

	ISLNDs	
	ISS	
ISLE	ISLE	ISLE
	ISLES	
JUNCTION	JCT	JCT
	JCTION	
	JCTN	
	JUNCTION	
	JUNCTN	
	JUNCTON	
JUNCTIONS	JCTNS	JCTS
	JCTS	
	JUNCTIONS	
KEY	KEY	KY
	KY	
KEYS	KEYS	KYS
	KYS	
KNOLL	KNL	KNL
	KNOL	
	KNOLL	
KNOLLS	KNLS	KNLS
	KNOLLS	
LAKE	LK	LK
	LAKE	
LAKES	LKS	LKS
	LAKES	
LAND	LAND	LAND
LANDING	LANDING	LNDG
	LNDG	
	LNDNG	
LANE	LANE	LN
	LN	
LIGHT	LGT	LGT
	LIGHT	
LIGHTS	LIGHTS	LGTS
LOAF	LF	LF
	LOAF	
LOCK	LCK	LCK
	LOCK	
LOCKS	LCKS	LCKS
	LOCKS	
LODGE	LDGE	LDG
	LDGE	
	LODG	
	LODGE	
LOOP	LOOP	LOOP
	LOOPS	
MALL	MALL	MALL
MANOR	MNR	MNR
	MANOR	

Appendix D

Road Name Representation in the Database

MANORS	MANORS	MNRS
	MNRS	
MEADOW	MEADOW	MDW
MEADOWS	MDW	MDWS
	MDWS	
	MEADOWS	
	MEDOWS	
MEWS	MEWS	MEWS
MILL	MILL	ML
MILLS	MILLS	MLS
MISSION	MISSN	MSN
	MSSN	
MOTORWAY	MOTORWAY	MTWY
MOUNT	MNTN	MT
	MT	
	MOUNT	
MOUNTAIN	MNTAIN	MTN
	MNTN	
	MOUNTAIN	
	MOUNTIN	
	MTIN	
	MTN	
MOUNTAINS	MNTNS	MTNS
	MOUNTAINS	
	NECK NCK NCK	
	NECK	
ORCHARD	ORCH	ORCH
	ORCHARD	
	ORCHRD	
OVAL	OVAL	OVAL
	OVL	
OVERPASS	OVERPASS	OPAS
PARK	PARK	PARK
	PRK	
PARKS	PARKS	PARK
PARKWAY	PARKWAY	PKWY
	PARKWY	
	PKWAY	
	PKWY	
	PKY	
PARKWAYS	PARKWAYS	PKWY
	PKWYS	
PASS	PASS	PASS
PASSAGE	PASSAGE	PSGE
PATH	PATH	PATH
	PATHS	
PIKE	PIKE	PIKE
	PIKES	
PINE	PINE	PNE
PINES	PINES	PNES

	PNES	
PLACE	PL	PL
PLAIN	PLAIN	PLN
	PLN	
PLAINS	PLAINS	PLNS
	PLNS	
PLAZA	PLAZA	PLZ
	PLZ	
	PLZA	
POINT	POINT	PT
	PT	
POINTS	POINTS	PTS
	PTS	
PORT	PORT	PRT
	PRT	
PORTS	PORTS	PRTS
	PRTS	
PRAIRIE	PR	PR
	PRAIRIE	
	PRR	
RADIAL	RAD	RADL
	RADIAL	
	RADIEL	
	RADL	
RAMP	RAMP	RAMP
RANCH	RANCH	RNCH
	RANCHES	
	RNCH	
	RNCHS	
RAPID	RAPID	RPD
	RPD	
RAPIDS	RAPIDS	RPDS
	RPDS	
REST	REST	RST
	RST	
RIDGE	RDGE	RDG
	RDGE	
	RIDGE	
RIDGES	RDGS	RDGS
	RIDGES	
RIVER	RIV	RIV
	RIVER	
	RVR	
	RIVR	
ROAD	RD	RD
	ROAD	
ROADS	ROADS	RDS
	RDS	
ROUTE	ROUTE	RTE
ROW	ROW	ROW

Appendix D
Road Name Representation in the Database

RUE	RUE	RUE
RUN	RUN	RUN
SHOAL	SHL	SHL
	SHOAL	
SHOALS	SHLS	SHLS
	SHOALS	
SHORE	SHOAR	SHR
	SHORE	
	SHR	
SHORES	SHOARS	SHRS
	SHORES	
	SHRS	
SKYWAY	SKYWAY	SKWY
SPRING	SPG	SPG
	SPNG	
	SPRING	
	SPRNG	
SPRINGS	SPGS	SPGS
	SPNGS	
	SPRINGS	
	SPRNGS	
SPUR	SPUR	SPUR
SPURS	SPURS	SPUR
SQUARE	SQ	SQ
	SQR	
	SQRE	
	SQU	
	SQUARE	
SQUARES	SQRS	SQS
	SQUARES	
STATION	STA	STA
	STATION	
	STATN	
	STN	
STRAVENUE	STRA	STRA
	STRAV	
	STRAVEN	
	STRAVENUE	
	STRAVN	
	STRVN	
	STRVNUE	
STREAM	STREAM	STRM
	STREME	
	STRM	
STREET	STREET	ST
	STRT	
	ST	
	STR	
STREETS	STREETS	STS
SUMMIT	SMT	SMT

	SUMIT	
	SUMITT	
	SUMMIT	
TERRACE	TER	TER
	TERR	
	TERRACE	
THROUGHWAY	THROUGHWAY	TRWY
TRACE	TRACE	TRCE
	TRACES	
	TRCE	
TRACK	TRACK	TRAK
	TRACKS	
	TRAK	
	TRK	
	TRKS	
TRAFFICWAY	TRAFFICWAY	TRFY
TRAIL	TRAIL	TRL
	TRAILS	
	TRL	
	TRLS	
TRAILER	TRAILER	TRLR
	TRLR	
	TRLRS	
TUNNEL	TUNEL	TUNL
	TUNL	
	TUNLS	
	TUNNEL	
	TUNNELS	
	TUNNL	
TURNPIKE	TRNPK	TPKE
	TURNPIKE	
	TURNPK	
UNDERPASS	UNDERPASS	UPAS
UNION	UN	UN
	UNION	
UNIONS	UNIONS	UNS
VALLEY	VALLEY	VLY
	VALLY	
	VLLY	
	VLY	
VALLEYS	VALLEYS	VLYS
	VLYS	
VIADUCT	VDCT	VIA
	VIA	
	VIADCT	
	VIADUCT	
VIEW	VIEW	VW
	VW	
VIEWS	VIEWS	VWS
	VWS	

Appendix D
Road Name Representation in the Database

VILLAGE	VILL	VLG
	VILLAG	
	VILLAGE	
	VILLG	
	VILLIAGE	
	VLG	
VILLAGES	VILLAGES	VLGS
	VLGS	
VILLE	VILLE	VL
	VL	
VISTA	VIS	VIS
	VIST	
	VISTA	

	VST	
	VSTA	
WALK	WALK	WALK
WALKS	WALKS	WALK
WALL	WALL	WALL
WAY	WY	WAY
	WAY	
WAYS	WAYS	WAYS
WELL	WELL	WL
WELLS	WELLS	WLS
	WLS	