

# Addressing in ArcGIS for NextGen 9-1-1

*Course Length:* 2 days  
*ArcGIS Version:* 10.x  
*App:* ArcMap

## Overview

As NextGen 9-1-1 (NG9-1-1) is implemented, addressing coordinators and other emergency response professionals are using ArcGIS as a tool for creating and maintaining the streets and addresses that make up the addressing model for a region. This course introduces the ArcGIS software using roads, address points, ESN boundaries and other datasets used in NG9-1-1. It teaches the tools that an address coordinator will need to explore, query, and maintain their addressing GIS database.

As new streets are built and homes and businesses added, it is imperative that the addresses given to these new structures be unique and uniform to facilitate first responders in the event of an emergency. So, in addition to getting participants familiar with the ArcGIS software, this course will teach the street naming best practices and addressing guidelines following the Frontage Interval Addressing System. The course is based on the text Addressing Systems, A Training Guide for 9-1-1 by Marc Berryman and updated to follow recent NENA guidelines.

## Audience

This course is written for addressing coordinators and anyone else who creates, maintains, or otherwise works with address and street data in a GIS.

## Topics Covered

### Day 1

#### Addressing Issues and an Introduction to GIS

- Why is it important that addresses are correct?
- When do we have to create or edit addresses?
- Who is involved/concerned with addresses?
- Why are standards important?
- Why GIS?
- What is ArcGIS?
- Understanding the ArcGIS platform
- Practice with simple ArcGIS Desktop

### Getting Started with ArcMap

- The ArcMap session – Map Documents, Data Frames and Layers
- Attribute tables
- Panning and zooming in the map
- Using Identify to get information about roads, addresses, and other layers
- Adding layers to the map
- Changing colors and symbols to get a better understanding of the map

### NG9-1-1 and the GIS Data Layers

- The NG9-1-1 Process
- GIS layers required and suggested for NG9-1-1

### Naming New Roads

- When do you have to name roads?
- What is the official name of a road?
- What type of roads do not need a name?
- Common road-name problems such as duplicate road names, similar sounding road names, and more than one name
- Road naming rules

### Querying Roads in ArcGIS

- Using Identify and Map Tips to get road name information
- Using the Find tool
- Labeling a road with the name
- Using Queries with wildcards to see if a road name is already being used
- Checking for problems with existing data using Sort and Summarize

## Day 2

### Street Centerline Requirements

- The rules for proper street centerline construction
- Rules for one-way streets, streets along a boundary, and other special cases
- The attributes required and recommended for street centerlines
- Choosing a direction for roads
- Assigning number ranges to roads

### Addressing Concepts

- Addressing systems
- Address Matching (Address Geocoding) Concepts
- How are addresses matched in a GIS?
- Understanding the attributes associated with an address for 9-1-1
- A quick address geocoding example

### Assigning New Addresses

- Understanding the Frontage Interval Addressing System
- Addressing structures, access points, and property centerpoints
- Special addressing situations such as bridges, condos, mobile home parks, loops, and circles.

### Address Matching in ArcGIS

- Creating an address locator
- Address matching, in detail
- Fixing un-matched addresses

### Basic Editing in ArcMap

- Starting an Edit Session
- Drawing in new roads and address points and editing ones that are already there
- Editing the attributes of roads and address points

## **Format**

In-person instruction with hands-on practice and course materials you can keep.

## **Prerequisites and Recommendations**

Knowledge of Microsoft Windows® and a basic understanding of 9-1-1 data and workflows.