

Office of State Planning Coordination | Research Analysis

Establishing the **ADDRESSING STANDARD** for Delaware

written by
Martin Wollaston, Steven Thorp
& Miriam Pomilio

**October
2013**


*serving the public good,
shaping tomorrow's leaders*
www.ipa.udel.edu

prepared by
Institute for Public Administration
School of Public Policy & Administration
College of Arts & Sciences
University of Delaware

prepared for the
Delaware Geographic Data Committee

through the
Office of State Planning Coordination

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Preface

The Institute for Public Administration (IPA), a unit within the School of Public Policy & Administration at the University of Delaware, coordinated the preparation of this report with the Delaware Office of State Planning Coordination (OSPC). For 40 years, IPA has addressed the policy, planning, and management needs of its partners in Delaware. This report summarizes a yearlong effort by IPA and OSPC to establish an addressing standard for Delaware.

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Director, Institute for Public Administration

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1. Introduction

Address data is vital for any state agency. Almost every state agency collects information about their customers, facilities, permits, users, etc. Most of the time, this information includes an address. Many state agencies do not have the ability to spatially locate these addresses because there is not a single authoritative source for the data. If the state were able to coordinate the local addressing data into a statewide dataset, agencies could begin to spatially visualize their data and provide services based on more informed decisions.

In the interest of developing a statewide addressing dataset, the Delaware Geographic Data Committee (DGDC) through the Office of State Planning Coordination (OSPC) contracted with the University of Delaware's Institute for Public Administration (IPA) in October 2012. IPA's task was to:

“facilitate a working group comprised of professionals throughout the state established by the Office of State Planning Coordination (OSPC) to define standards for the GIS data associated with the Addressing of parcels in Delaware.”

The work also included “research on federal Addressing Standards, including pilot projects initiated by the U.S. Census Bureau.” IPA worked with OSPC staff to facilitate meetings with the professionals in this state who manage these addressing issues on a daily basis to identify ways to create a standardized statewide addressing dataset. This document summarizes the findings of this initiative.

2. Background

2.1 Background of Addressing in Delaware

Over the past ten years, DGDC has been interested in standardizing addressing in our state. The state's counties assign addresses for parcels within their jurisdictions, but this information is not readily available on a statewide basis. Each of the three counties uses a different methodology and software for its E-911 emergency response centers, so the actual attributes and formats of its addressing data could not be easily standardized statewide.

There are two datasets used for addressing: a point dataset and a range (line) dataset. The counties maintain point address files as well as line (road centerline) address range files. It is in the state's interest to use both datasets from each county and merge them into statewide datasets. Using both the point and range address files results in higher accuracy in locating addresses.

2.2 National Addressing Initiatives

2.2.1 U.S. Census Bureau

In 2011, the U.S. Census Bureau began an initiative called the Geographic Support System (GSS) to improve address coverage, provide continual spatial feature updates (such as building locations), and improve the quality and efficiency of address canvassing by the 2020 Census. The GSS initiative would contribute to improving the Master Address File (MAF) and the Topologically Integrated Geocoding and

Referencing System (TIGER) database. The GSS supports a targeted address canvassing in lieu of a complete address canvassing. In this way, addresses used for the census would provide the most comprehensive coverage of individuals by getting the most representative sample, without having to get a complete coverage of addresses. The canvassing will require national addressing standards for database submissions. The addresses must be mail-able, physically locatable, and geo-locatable for the improved GSS to work properly. This is most problematic for areas that use rural-style (RR numbers) addressing, which are not physically locatable addresses.

The address data would be provided by government partners, mainly states and counties. The involvement of local-level partners should help in the creation of more accurate data. The GSS would be updated continually through the next decade to provide the U.S. Census Bureau with the most up-to-date address database. Sussex County was selected as a participant in the trial phase of the GSS and has provided the U.S. Census Bureau its address database for testing and use. This pilot project started on February 1, 2013, and open submissions into the database are anticipated to begin by 2014.

2.2.2 National Geospatial Advisory Committee

The National Geospatial Advisory Committee (NGAC) was commissioned by the Federal Geographic Data Committee (FGDC) in 2012 to research and provide guidance for the creation of a National Address Database. FGDC requested the following points be covered, which are covered fully in Appendix A of this document:

- The need for a National Address Database and the benefits and potential savings and efficiencies that will be realized.
- Potential concerns about a National Address Database, including privacy issues.
- Possible approaches for the development of a National Address Database, including the roles of federal, state, local, and tribal governments as well as other stakeholders.

NGAC studied the need for a national address database and concluded that this database is needed to help support emergency response and public safety, improve government services, defragment the current address system, achieve real and potential cost savings, and identify unrealized benefits. Currently, the government uses a variety of private databases with redundant, and possibly conflicting, information. The creation of a national database will result in savings as the costs of redundancy and fragmentation are eliminated.

There are concerns with creating a national address dataset using current databases maintained by federal agencies. Titles 13 and 39 of the U.S. Code place limits on sharing address data that is collected and stored by the U.S. Census Bureau and United States Postal Service (USPS). Title 13 of the U.S. Code restricts the U.S. Census Bureau from sharing its MAF and TIGER databases with non-Census Bureau personnel. Title 39 of the U.S. Code places the same type of restriction on the address database used by the USPS.

NGAC also noted that privacy is an important consideration. The national address database should not contain the names of individuals residing at the addresses nor list any personally identifiable information. Similarly, military addresses pose a privacy risk and all identifiable information must be removed.

There also is the option of creating a hybrid framework whereby the address database is organized by states and their address data is disseminated to the national database. NGAC recommended the application of a formal cost-benefit analysis to choose the best database development option. NGAC's report can be reviewed in Appendix B of this document.

2.2.3 National Emergency Number Association

The National Emergency Number Association (NENA) has its own standards for road name and numbering assignments to ensure safe and efficient emergency responses. NENA has a road naming and numbering convention that emergency agencies and governments use nationwide as the standard for address creation. The NENA standards contain a comprehensive overview of every aspect of addressing, including but not limited to:

- A single, distinct, continuous name for a road.
- Procedure for how road names should be changed.
- Differentiation between similar sounding names.
- Procedures for addressing multi-structure complexes.
- Naming conventions for new roads.

NENA members agree that proper addressing standards are critical to maintaining efficient emergency dispatching and response times. The creation of address standards would allow complete development of the Next Generation (NG) 911 system, which aids emergency services in responding to emergency calls with technology such as GPS and dispatching systems. Appendix C provides the full NENA road naming and numbering standards.

3. Process

3.1 Addressing in Delaware Stakeholder Meetings

The addressing working group identified several key stakeholders in the state with whom to meet to discuss issues surrounding addressing. The meetings were informal and similar issues were discussed with each participant.

The addressing working group met with John Laznik of the University of Delaware's Center for Applied Demography and Survey Research (CADSR) on October 16, 2012. CADSR uses address data and geocoding services heavily in its statewide work. Mr. Laznik explained that he creates his own addressing standards for each project that he undertakes to increase the efficiency and accuracy of his analysis. Many datasets that are used have disparities among them in naming conventions, such as varying abbreviations of the word "Drive," because there is no state addressing standard. This variation in data requires the use of a "crosswalk" between datasets in order for one database to be used with other databases using different standards. A crosswalk is a common key to convert attributes in datasets to enable them to be used together in analysis without having to change the actual data. Mr. Laznik mentioned that state agencies often work from spreadsheet-style lists for their address data. Conversion to a Geographic Information System (GIS) would create more support for a statewide system among the various agencies. Lastly, Mr. Laznik mentioned that there is very little coordination among counties regarding address

standards and geocoding. All three counties would need to support and coordinate with the state if such a system is to be established.

On November 7, 2012, the working group met with Mike Townshend from the Delaware Department of Natural Resources and Environmental Control (DNREC). Mr. Townshend explained that he uses Esri products for his work and his main concern is DNREC's end-users—the general public. The public wants accuracy in locating addresses on the DNREC system, and Mr. Townshend uses a service that provides what he called “Google-like” results. One issue he mentioned is that he cannot do batch jobs, and he would like desktop integration in what is now only a web-based application. Mr. Townshend recently informed IPA during the writing of this summary that the service that DNREC had been using when he was interviewed in November 2012 is no longer being used. DNREC now uses services hosted by Esri that are provided at no cost.

On November 7, 2012, the group met with Matthew Laick from the Delaware Department of Safety and Homeland Security (DSHS). Mr. Laick explained that his department is responsible for all public safety and/or emergency responders. Mr. Laick uses the files from each of the three counties to generate a statewide centerline file for addresses. Mr. Laick uses a geocoder he developed to process the statewide centerline file to locate an address. The processed information goes out to clients through a server using Esri GIS software. He emphasized the need for very accurate and up-to-date results for emergency responders. Mr. Laick stated that he receives updated files from the counties every two to three months. He also said that he has found that the counties' centerline files are the most accurate.

Each of the three counties in Delaware performs its own parcel addressing assignments, except for a limited number of municipalities that perform the addressing assignments themselves. All three counties maintain their own addressing data, and each has its own standards for storage. The addressing storage standards used are different because the data is tailored to the requirements of the various E-911 dispatching systems used in each county. The standards and processes explained below were gathered from individual meetings with representatives of each of the counties.

3.2 New Castle County

The addressing working group met with Pat Susi of the New Castle County Office of Information Technology on November 20, 2012. Mr. Susi stated that the address data used by the county is critical because the E-911 system requires accurate address data. The E-911 system is updated every two to three months as a batch file update with the county's new and removed property addresses.

With the creation of a statewide geocoder and address database, Mr. Susi hopes that the process of data conversion and hosting would be simplified. He also said he believes that New Castle County would provide its address data for a statewide system. However, Mr. Susi was critical of the idea of creating a statewide address data standard because each county and department needs a different standard for their own specific uses. The creation of a “crosswalk” system may be of importance due to the statewide addressing product. If standards were created, Mr. Susi explained that the address data standards should be set to minimum U.S. Census Bureau standards. Mr. Susi also mentioned that the public has requested an online, interactive addressing product to use in New Castle County, but such a product is not available at this time.

In New Castle County, addresses are assigned prior to the recordation of the plan, as seen in Appendices D and E. When assigning street names, the proposed name is checked against other street names in the ZIP code, immediate area, or fire block to ensure the names are not similar. To prevent confusion, county employees try to avoid street block duplication in the same area when assigning numbering. Numbers are assigned within the block and are based on 50-foot intervals. A corner lot get two addresses on submission, but its final address is determined when the submitted plan indicates the direction of the property's front door. In New Castle County, the cities of Newark, Smyrna, and Wilmington do their own addressing. However, Wilmington only does minor addressing such as minor subdivision and parcel management, while New Castle County assigns addresses for major subdivisions. New Castle County maintains the address data developed by other municipalities in its records. The New Castle County Department of Public Safety gets a quarterly update of this data for use with its E-911 system.

3.3 Kent County

On December 5, 2012, the addressing working group met with Mike Ward of the Kent County Planning Department. Within Kent County, any new subdivision recorded and processed starts the addressing process. Kent County reviews submitted street names to verify that they have not been used and are not similar to current street names in the county or, if the parcel is near a county boundary, in adjacent counties. Addresses for corner parcels are not finalized until building permits are issued because the addresses depend on the direction in which the buildings are facing. Addresses are submitted through the subdivision process. If a particular subdivision sunsets, the addresses are released and the approval process for addresses must occur again.

There are municipalities within the county that manage their own addressing, but their address data gets submitted to Kent County for recordation, which is also used for E-911. Those municipalities are Dover, Harrington, Milford, Smyrna, and Viola. Kent County, however, only does major subdivision addressing for Milford and Harrington. These municipalities also must request street-naming approval from Kent County before addresses are assigned. The addressing policy for Kent County is available for review in Appendix F.

Kent County is moving toward an ArcServer-based addressing system for its addressing needs. Mr. Ward expressed interest in sharing addressing data for a statewide addressing database and geocoder as long as the data was not able to be consumed for public use.

3.4 Sussex County

On December 5, 2012, the address working group met with Megan Nehrbas from the Sussex County Addressing Department. Sussex County has two processes dealing with addressing within the county depending on whether it is rural, standalone addressing, or subdivision addressing. For its rural addressing process, Sussex County assigns an address to a property when the exact location of the property is determined during recordation (when a permit is issued). Depending on parcel placement along the road, the parcel will have to follow the county interval numbering system. The subdivision addressing process is somewhat different. Subdivisions must be approved by DelDOT, go through the public hearing process, and obtain approval from the county's planning and zoning department and mapping and addressing department. Sussex County assigns the addresses when parcels are recorded. Sussex County also performs addressing on vacant, undeveloped parcels if development is planned in the future and recorded.

One notable exception for assigning addresses occurs when a parcel is on a corner lot; the address is not assigned until the location of the driveway is determined. Sussex County has a reserved road name list to avoid duplicates, but no list exists for subdivision names. Sussex County is considering the creation of a list for subdivision names.

Sussex County has agreements with municipalities and “areas that have their own postal services” within the county to allow them to perform their own addressing. Ms. Nehrbas maintains a listing of the towns, town contacts, and the town agreements. There is no deadline for municipalities to provide Sussex County with updates to their address data. Sussex County operates on the premise of an “as needed” basis. Sussex County also helps many towns with assigning addresses for annexed properties.

Ms. Nehrbas does not foresee a problem in the future with regard to participating in the creation of a statewide address database and geocoder and providing the county’s address data to the state system. She reported that Sussex County is not expecting any system changes in the future, as the last addressing system update (hardware/software) occurred in 2005. Sussex County’s addressing ordinance is available for review in Appendix G.

3.4.1 Statewide Addressing Meeting

OSPC and IPA hosted a meeting in Dover with all identified stakeholders in the state on January 16, 2013, to discuss the many ways in which the Delaware addressing project could directly affect them. Identified stakeholders who attended this meeting included representatives from each of the three counties, DNREC, DSHS, the Department of Health & Social Services (DHSS), CADSR, and the communities of Newark, Smyrna, Lewes, and Seaford.

Stakeholders were asked how the creation of an addressing database would help them in their operations. A representative from DSHS explained that access to a statewide geocoder would allow more efficient operations in disease-outbreak tracking, management of hospital records, an increase in proactivity, and visualization of health data to effectively communicate information internally and with the public. A representative of CADSR stated it collects address data to increase the accuracy of its demographic and population projections. An address geocoder would allow for increased efficiency regarding time for verification and data accuracy. A representative from DNREC outlined three areas in which the address geocoder would be useful initially in their operations. The geocoder would allow accurate location data regarding structures they own, as the structures may not be located directly on the road listed as their address. Also, the geocoder would allow higher compliance with Freedom of Information Act requests because many addresses submitted to DNREC are not valid; therefore, no data can be released to requesters. The geocoder would allow checking the given address against the database to ensure the address is correct. Finally, a statewide geocoder could potentially save costs to state departments in the future.

The stakeholders also outlined various uses for the geocoder for other agencies. It was suggested that the Division of Revenue could use the geocoder for the verification of business addresses. The Division of Public Health could use the geocoder to assist in verifying food establishment locations and deal with issues involving properties with multiple addresses attributed to them. The Department of Education

(DOE) could use the geocoder for verifying addresses of children and daycare facilities statewide to ensure that education requirements are being met.

There was a consensus among stakeholders in the meeting that the counties would benefit from using the statewide geocoder as a form of address data verification. The counties would have no use for statewide addresses or geocoding as they are only interested in addresses within their own jurisdictions and perform their own geocoding. The stakeholders in this meeting were in favor of continuing the development of the address database and geocoder and for its implementation, as outlined by this project.

4. Outcome

It was evident from the workshops and meetings that the counties maintain the most accurate and up-to-date addressing information for their respective jurisdictions. As such, the ideal scenario would be to use data from each county to build the statewide datasets. The state will need to obtain both the point address files and the centerline address files from the counties to accomplish this initiative. All three counties have agreed to participate.

DSHS already has a process to conflate the county address data into a statewide data source for its internal use. This process is being recommended for adoption by the state to create the statewide addressing datasets.

CADSR performs contract work for DOE with regard to the eSchool system. A portion of that contract is to geocode the residences for all students. CADSR maintains its own database of addresses for this application and field verifies addresses. Another very important component of the eSchool application is the ability to assist the data-entry user with auto fill options for street names. It would be valuable to develop this type of user-entry assistance for agencies to use for data collection.

In addition, CADSR creates “place” information for address data for other grant projects. The “place” information includes, but is not limited to, types and names of businesses and/or places located at a specific address (i.e., business or church name). While this data is extremely helpful and useful, it is very difficult to maintain. That type of information, therefore, would not be included in the statewide dataset. Statewide data must be easily updated with an authoritative source to maintain up-to-date, accurate data.

5. Methodology and Implementation

5.1 Methodology

The three counties have the most accurate addressing data (both point and centerline), which should be considered the authoritative source. Each county maintains different attribute names in its datasets, and it is not the intent of this state addressing effort to change the counties’ work processes. Therefore, a crosswalk would need to be developed to allow a standard set of attributes to be used for the statewide datasets. The crosswalk should be based on national standards.

DSHS already has developed a model to conflate the three county datasets into the appropriate statewide datasets. During the development of this project, Mr. Laick offered it to OSPC for wider state use in the future. Delaware should capitalize on the work already developed by DSHS and use it for this initiative. Since the statewide dataset will be dependent upon each county's data, close coordination with the counties will be needed because any changes in the schema of county data would affect the final model. The minimum attributes for each of the datasets are as follows:

Address Point File Attributes

- Address Number
- Apartment or Unit Number
- Road Name
- Pre-direction
- Pre-type
- Type
- Suffix Direction
- Name
- ZIP Code
- ZIP Code Name
- County
- Subdivision Name
- Community
- Primary Address

Centerline Attributes – Minimum for Geocoding from Centerline Files

- Address Low Left
- Address High Left
- Address Low Right
- Address High Right
- Street Name
- Pre-direction
- Pre-type
- Type
- Suffix Direction
- Zip Code Right
- Zip Code Left
- County
- Label
- Community Right
- Community Left
- Zip Code Name Right
- Zip Code Name Left
- County Unique ID

- Speed Limit (if available)
- One Way Direction (if available)
- Travel Time (if available)

5.1.1 Implementation

There are initiatives underway at the state level that should provide the ideal avenue for distribution and storage of the statewide addressing datasets. However, these initiatives are still under development.

The Geospatial Data Exchange is an existing distribution system that could be used as an interim solution for delivery of the data. If the data is too large for the Geospatial Data Exchange, then an alternate means of distribution will need to be employed. When the statewide Enterprise GIS solution is completed, the statewide addressing should be migrated to that system. At that time, it is anticipated that the counties would be able to replicate their data nightly into that system. The model would conflate the data to provide the most accurate and up-to-date addressing information on a daily basis.

6. Future Endeavors

The workshops held by IPA and OSPC included a variety of agencies and entities interested in addressing. From these workshops, two additional needs were identified that should be explored:

6.1 Geocoding Service

Currently there is no single application used by all state agencies for their geocoding needs. Agencies are using a variety of sources, and some are paying for the service. During the workshops it became apparent that agencies would like a single system that utilizes authoritative state-driven data for geocoding purposes.

6.2 Address Verification System (AVS)

The eSchool application used by DOE uses a system to improve accuracy of addresses during data entry. An Address Verification System (AVS) should be established that checks addresses against the authoritative database to ensure accurate information across agencies. The AVS would draw street names and approved ranges from the dataset as agencies input address data into their organizational databases, providing them with the means to ensure accurate address collection for their customers.

Both of these future endeavors should be explored with the interested parties and built to meet the needs of the agencies.

7. Appendices

Appendix A: Federal Geographic Data Committee Address Content Standard Proposal

Appendix B: The Need for a National Address Database

Appendix C: National Emergency Number Association Road Naming and Numbering Standard

Appendix D: New Castle County Addressing Procedures

Appendix E: New Castle County Address Assignments for Record Plan Submittals

Appendix F: Kent County Street Naming Policy

Appendix G: Sussex County Ordinance No. 1800

Appendix A: Federal Geographic Data Committee Address Content Standard Proposal

PROJECT TITLE

Address Content Standard.

SUBMITTING ORGANIZATION

FGDC Subcommittee on Cultural and Demographic Data (SCDD).

OBJECTIVES

To provide consistency in the maintenance and exchange of address data and enhance its useability.

SCOPE

The Address Content Standard (the Standard) will be an FGDC data content standard. The Standard will provide semantic definitions for components determined by the participants to be integral to the creation, maintenance, sharing, useability, and exchange of addresses and/or address lists. Within this scope, addresses are broadly defined as locators to places where a person or organization may reside or receive communications, but excluding electronic communications. An address list consists of one or more addresses. The Standard will additionally define an entity-relationship model for address data.

The semantic definitions and the entity-relationship model are initially focused on the address schema found within the United States and its territories with consideration given to making the model applicable globally.

Although the proposed Standard is national in scope, there will be an attempt to harmonize with the international approach.

JUSTIFICATION

Addresses are a key part of most data sets involving people and organizations as well as their activities, and many agencies maintain data keyed to addresses. There is a proliferation of agency address standards which have been developed in response to specific agency needs. By their very nature, these existing agency address standards present conflicting guidelines for creating and maintaining addresses and address lists. Existing agency address standards do not provide common semantic definitions which may be used by the myriad of organizations wishing to successfully exchange address data. Given the enormous expense of collecting, maintaining, and using address data, there is a need for an FGDC address content standard to improve the sharing and exchange of address data amongst Federal, state, and local governments and other interested participants. The Standard meets the general FGDC responsibility stated in OMB Circular A-119 for developing standards for implementing the NSDI, in consultation and cooperation with state, local, and tribal

governments, private and academic sectors and, where feasible, the international community. It additionally meets the responsibilities stated in OMB Circular No. A-16 to develop standards through the FGDC to ensure that the spatial data produced by all Federal agencies is compatible.

The Development of a National Digital Geospatial Data Framework identifies addresses as an element of framework data. Framework transportation data includes the centerlines of roads and identifies the attributes roads will have as identification code, functional class, name, and street addresses. The Standard will assist in developing this aspect of framework.

The development of the Standard is particularly timely in that Executive Order 12906 states the initial transportation, hydrology, and boundary elements of framework should be completed by January 1998 in order to support the decennial census of 2000. As Chair of the SCDD, the Department of Commerce (DoC), Bureau of the Census, has identified the development of the Standard as a means of furthering this goal.

BENEFITS

The Standard will benefit Federal, state and local governments and other participants interested in sharing and exchanging address data. Potential contributors to and users of framework data also will benefit.

APPROACH

All members of the SCDD will participate in developing the Standard. Members representing agencies having or developing agency address standards (DoC Bureau of the Census, the Department of Housing and Urban Development, and the Environmental Protection Agency) have expressed interest in actively developing the Standard and providing experts from within their agencies.

The SCDD plans on drawing from existing standards, which include an International Organization for Standardization (ISO) standard at the international level and various existing agency address standards or guidelines. The SCDD will contact non-FGDC agencies and organizations (such as the U.S. Postal Service) known to have an interest in addresses.

RELATED STANDARDS

The following address standards or guidelines have been identified to date:

Address Standardizer Documentation (Internal), DOC, Bureau of the Census, Geography Division

Address Quality Standards (draft), Department of Housing and Urban Development

Address Standard (ISO 11180), ISO

Cadastral Data Content Standard for the National Spatial Data Infrastructure (proposed), FGDC Subcommittee on Cadastral Data

Postal Addressing Standards (Publication 28), U.S. Postal Service

SCHEDULE

Work will begin on the Standard as soon as the proposal is approved by the FGDC's Standards Working Group (SWG). A working draft will be completed within nine months of

the start date. The working draft will be forwarded to the SWG for consideration for public review.

RESOURCES

The SCDD had adequate resources to accomplish most of the development and initial review processing of the Standard. However, additional resources will be needed to handle the full review and comment activity during non-Federal sector public review.

POTENTIAL PARTICIPANTS

Primary participants will be members of the SCDD. Three member agencies have produced some form of agency address standards; one agency is beginning to develop an agency address standard. Input from large address producers/users will be solicited (for example, the U.S. Postal Service).

TARGET AUTHORIZATION BODY

The SCDD is developing an FGDC data content standard. The SCDD may consider pursuing (at a later date) the development of the Standard as an American National Standards Institute (ANSI) Standard within the ANSI's technical committee for GIS, X3L1. The FGDC would serve as the Target Authorization Body until the Standard became an ANSI standard.

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Appendix B: The Need for a National Address Database

A Report Submitted by the National Geospatial Advisory Committee December 2012

1. Introduction and FGDC Guidance

Among the key issues assigned for National Geospatial Advisory Committee (NGAC) review during 2012, the Federal Geographic Data Committee (FGDC) requested advice regarding a National Address Database:

Numerous stakeholders have identified a critical need for a National Address Database. A complete, current, and accurate address list (such as street number, street name, city, state, zip), along with the associated geocodes and x, y coordinates (such as Latitude/Longitude, GML point geometry, spatial reference system) and associated metadata are essential for a variety of government and non-government functions, including emergency response, conducting the Census, income tax collection, delivering the mail, planning, routing, and many others. Currently, many agencies and organizations either collect, purchase, or lease address information in a non-coordinated fashion. The FGDC is requesting that NGAC develop a white paper addressing the following points:

- 1. The need for a National Address Database and the benefits and potential savings and efficiencies that will be realized*
- 2. Potential concerns about a National Address Database, including privacy issues*
- 3. Possible approaches for development of a National Address Database, including the roles of Federal, State, local, and Tribal governments, commercial partners, as well as other stakeholders¹*

In response, the NGAC formed a National Address Database Subcommittee² to prepare recommendations for consideration to the NGAC as a whole and to the FGDC. This report, which is organized as a response to the three points raised by the FGDC, is a summary of the analysis performed by the National Address Database Subcommittee and of the subsequent review and comment by the NGAC as a whole.

2. Vision

Current and accurate nationwide address data, in an open standards-based digital geospatial format, is critical to the quality and cost-effective provision of innumerable services provided by multiple levels of government and supporting commerce. It is an essential requirement for a variety of functions, including emergency management, as well as administration, research, publications, mapping, routing, navigation, and many other purposes.

The NGAC believes there is a critical need for a National Address Database as a single repository for storing, aggregating, and sharing essential address information. To meet this need, agencies closest to the task and with the most at stake must be empowered and funded to develop, maintain, and share standardized digital geospatial address data.

The NGAC proposes the following *Vision Statement* for a National Address Database.

“The National Address Database is an authoritative and publicly available resource that provides accurate address location information to save lives, reduce costs, and improve service provision for public and private interests.”

To achieve this vision, the National Address Database is conceived as:

“A continuously updated, nationwide, publicly available address database, with associated geographic coordinates, that meets the needs of Federal, Tribal, State and local stakeholders. The database stores all residential and non-residential structures and interior units, mailing addresses, plus other locations of critical interest (e.g., highways, bridges, and landmarks). This database is an inventory and a standards-based, distributed network of sources rather than a single, centralized database. Most address data are developed locally, with local and state custodians acting as regional integrators who merge local data into region-wide databases. The data are updated in a timely and quality-controlled manner. Federal stakeholders consume and use locally developed and aggregated address data stored in a standardized National Address Database.”

The NGAC also recognizes the significance of OMB Circular A-130, “*Management of Federal Information Resources*.”³ Section 7, subsection b notes, “*Government information is a valuable national resource. ... It is a means to ensure the accountability of government, to manage the government's operations, to maintain the healthy performance of the economy, and is itself a commodity in the marketplace.*” Section 7, subsection c adds, “*The free flow of information between the government and the public is essential to a democratic society.*” The issue of public access to the National Address Database must be discussed and resolved.

3. Why a National Address Database Is Needed

Currently, there is no publicly available address database that can be used for public safety, and other governmental purposes, to accurately locate any given address on a map throughout the United States. There are a myriad of reasons as to why the Nation needs a National Address Database. The primary reasons include:

3.1 Emergency Response and Public Safety

Addresses are the most commonly used way to communicate the location of an emergency. Improving the ability to locate an incident quickly and accurately for emergency response and public safety is the most compelling reason to develop and maintain a shared National Address Database. There is an increasing need to share accurate address location resources between public safety and emergency response agencies for coordination and/or the ability to provide fail-over backups to each other. This need will increase with the advent of Next Generation 9-1-1

3.2 Improve Services

Critical and essential government services, as well as businesses and individuals, depend on access to digital addresses and their geographic locations to satisfy their mandates, meet business objectives and achieve efficiencies. The Federal government alone builds, maintains and pays for multiple address databases that are, to varying degrees, redundant in terms of basic data. Each

responsible agency has a stake in maintaining these databases to meet its specific agency requirements in achieving its mission. The result is inconsistent national addresses, redundant business processes, and extra costs as multiple agencies expend budget on developing the same data.

The table below provides examples of how address data are used. The listed government agencies require high quality, current address data to perform their functions.

USERS	PURPOSE
FEMA	Pinpoint disaster areas, provide relief
Emergency Response, E9-1-1	Emergency response by first responders (police, fire, ambulance, rescue)
Department of Homeland Security	Locate and protect critical infrastructure
Public Safety	Crime analysis and response, incident/citation tracking
Voter Registration	Precinct assignment
State Dept. of Revenue	Sales tax collection and distribution
USPS, UPS, FedEx	Mail and package delivery
Census Bureau	Mail census and survey forms, geocode responses; Census gathering and tracking; locate non-respondents
Health and Human Services Agency	Track medical benefits, disease, births/deaths, and vulnerable populations.
Call Before You Dig (8-1-1)	Infrastructure protections, development coordination
Department of Transportation	Locate traffic accidents, access to FHWA funds to improve dangerous non-state roads.
Utilities (public & private)	Hookup, service calls, billing, broadband buildout
Map and address companies (e.g. MapQuest, Navteq and TomTom)	Repackage/reformat accurate data for insurance companies, location based service companies and utilities
Retail/Services (e.g., Sears, local plumber)	Delivery of goods and services, new site locations
Assessor/Taxation	Property and owner location
Planning & Zoning Office	Building permit, planning studies

3.3 Current Address Systems Are Fragmented

Many local Address Authorities, usually a city, town, or county, create addresses. The new address information is provided to the property owner and is usually distributed to other organizations that need it. These organizations include various city and county offices, the U.S. Postal Service (USPS), the Census Bureau, telephone companies, utilities, school districts, and 9-1-1 authorities. From that point, each of these organizations is responsible for maintaining its own address file. Significant problems result from the current fragmented state of address systems, including:

- Conflicting and incompatible standards for address data
- Budget and effort spent on maintaining competing redundant, incomplete, and scattered databases
- Wasted taxpayer money as multiple agencies collect and maintain similar data.
- 9-1-1 (emergency response), 8-1-1 (call-before-you-dig) and 3-1-1 (outage/repair) services cannot wait until structures are built or homes are occupied for the creation of address locations
- Timing inconsistencies in the assignment of addresses as parcels are created or changed
- Agency databases diverging over time

- Inconsistent delivery of new addresses to stakeholders
- Inconsistent capture of geographic coordinates of addresses
- Inconsistent assignment of addresses by geographic coordinates (reverse geocoding) for burgeoning location-based services commerce
- Agencies such as the USPS cannot keep up with, nor verify, the 2 million new addresses added each year and must rely on input from cities and their own carriers. The Decennial Census suffers from the same business-process problem. However, these inputs are often inconsistent or not timely.⁴

3.4 Real and Potential Cost Savings

Integrating and standardizing disparate address data will eliminate redundant data and processes, thus saving taxpayer dollars, improving efficiencies, as well as providing higher quality service, and authoritative address data for improved delivery of services. More importantly, this approach will further reduce the likelihood of address discrepancies and conflicts related to emergency response and government and commercial service provision, saving resources and lives.

- Many jurisdictions and government agencies maintain multiple, redundant or inconsistent address data about the same territories, causing significant additional expenses in both collecting the data and reconciling differences among the various databases.
- States working to collect and distribute sales taxes are struggling to do their work economically and equitably. Because tax rates can vary across each state, knowing which addresses are in each tax jurisdiction will improve collecting taxes on goods purchased by mail order or through the Internet.⁵
- Increased transparency and opportunities to identify potential cost savings will result from using addresses to conduct geographic-based fraud analysis.

3.5 Unrealized Benefits

Aside from improving the ability for emergency response and public safety to save lives by locating people quickly and accurately, a national-scale, accessible address database will also deliver significant secondary benefits. As an example of potential benefits, the Danish Government opened its address register to the public in 2002. A recent study determined the direct economic benefit of sharing their national address data is \$18 million annually. Seventy percent of the economic benefits went to the private sector, benefitting the economy directly, while thirty percent went to the public sector.

Similarly, the State of Oregon is advancing a centralized, web-based address point database that would be built and maintained by local address authorities. Justifications include decreasing overall effort and cost, increasing accuracy, access and improving emergency response and the provision of myriad other governmental services.

4. Potential Concerns with a National Address Database

4.1 Census and Title 13 Limits on Sharing Address Data

If not for the limitations on address data sharing under Title 13⁶, U.S. Code, the Census Bureau's Master Address File/Topologically Integrated Geographic Encoding and Referencing System (MAF/TIGER) System would be a logical starting point for a National Address Database. In addition to site addresses, there are coordinates associated with each housing unit, thus making it useful for emergency response in the public safety arena, as well as the delivery goods and services to

citizens in both urban and rural areas. The Census Bureau has decades of experience updating, verifying, and maintaining addresses, and more importantly, has built partnerships with thousands of governments that participate in the Census Bureau's address data update efforts. However, Title 13 constrains the use of MAF/TIGER data. Robert Groves, former director of the Census Bureau, stated in an interview with the Washington Post, "because of the Constitution, the country will always have a census. But how we do the census and surveys will have to change." For example, a unified National Address Database could include addresses, but not the occupant or owner of the structure at that address. The supplementary address could be maintained separately by the Census Bureau and a link established to the National Address Database.

Title 13, U.S. Code describes the overall duties and responsibilities of the U.S. Census Bureau. Given the complexities of modifying Title 13, the NGAC approach is to identify options for developing a National Address Database by focusing on changes to existing roles, responsibilities and workflows within the scope of existing statutes.

4.2 Addresses and Public Privacy

The NGAC recognizes that concerns with privacy issues are vitally important and need to be addressed in the development of a National Address Database. As a means to allay these concerns, we believe that a National Address Database should only contain addresses and not contain identities of individuals, owners, or occupants.

Addresses exist to better describe physical locations for human end-users. Address assignment is largely, if not entirely, a public act of government. Official recognition of an address is best when it comes from the appropriate address authority, but if a provider of public services (e.g., 9-1-1 authorities and public utilities) recognizes an address it is also inherently public information. It is strongly in the public interest to know if 9-1-1 and other services have the correct location for specific addresses. In addition, when address locations are publicly available, the public can act in its self-interest, sharing in the responsibility for the maintenance of accurate address data. There may be cases where addresses and their locations have a legitimate need for protection (e.g., military and other national security installations). In such cases, reasonable National Address Database policies should be developed to protect or exclude these addresses. The State of Florida's public records statutes, especially Chapter 92, provide examples of redaction related to public safety officials.

4.3 Census and USPS

A single Federal entity, such as the Census Bureau or U.S. Postal Service (USPS), or combination of the two, could be identified as the potential custodian of a National Address Database developed to be comprehensive in its structure. The Census Bureau currently maintains the Master Address File/Topologically Integrated Geographic Encoding and Referencing System (MAF/TIGER System), a nationwide address database, with cooperative input from the USPS and tribal, state and local governments. As discussed previously, the Census Bureau (Title 13), as well as the USPS (Title 39⁷), both cite federal law and court decisions for their inability to share their respective data inventories of street addresses and corresponding geographic coordinates. In addition, the irregular periodicity of the Census's data update cycle and the USPS's focus on only deliverable addresses are barriers that would need to be overcome if either organization were to steward a National Address Database. This could be accomplished by an approach such as the National Information Exchange Model (NIEM), which defines standard data structures and formats for data sharing.

4.4 Military Addresses

While there is a need for security of address information for military bases, this must be balanced with the public safety needs of the personnel living and working on these bases. Most military bases have agreements with local government agencies (city/county) for reciprocal services in the case of major emergencies or failures of key infrastructure. A number of bases have agreements with local counties for additional police support in the event of a major incident and for fire response in the case of a major fire. For these responding units to know where the emergency is, the base must share address and building number information with local governments. To balance the security needs, withholding the specific function of an address or building can protect information about “what the building is or how it is used.” While this is critical information for the first responders (military assets), it is not critical for the local agency responders. Rather the critical information is “where” the building is in relation to the streets and cross streets contained on the base. Sharing minimal locational information will facilitate emergency response and still protect the security interests of the nation and the base, as well as the privacy of its residents and workers. There are many cases of injury or death of military family members and military/civilian DOD personnel on military installations/ bases that might have been avoided if accurate addresses were available. The fact that DOD made a policy decision that where street addresses are provided to the 2010 Decennial Census Collection effort, that Census listers would not collect housing unit locations for addresses (x, y coordinate locations for housing units), for security and privacy reasons. This may still leave military, civilians and family members at increased risk. We believe the DOD, as well as the nation, must come up with an optimal solution that provides for a balance among security, privacy and safety concerns.

4.5 Additional Considerations

As a nation, we face several additional problems due to the lack of a National Address Database. Lives and property may be lost because first responders cannot quickly obtain an address to accurately locate an emergency event. In the wake of Hurricane Katrina, the lack of address information, which accurately located where people lived, slowed and frustrated rescue and recovery operations. It is a problem today as properties go into foreclosure and inconsistent address information hampers communication among courts, law enforcement, banks, inspectors, home owners and residents. Construction sites create an ongoing dispatch problem because there is often no worksite address where 9-1-1 centers can send assistance to injured workers. To address these concerns, and related issues of liability, a National Address Database should be built to the highest standards of accuracy.

5. National Address Database Development Options

5.1 Current Practices

Many local governments have developed centralized databases that share information across departments and with the local 9-1-1 authority. Successful models assign addresses early in the development process, beginning with the acceptance of subdivision plats and authorization of building permits. Geographic coordinates are added from GPS field measurements, orthophotography or official maps and sketches of building location submitted with the permit application. New addresses are verified with quality control procedures before being accepted. Information is sent to all stakeholders - directly or via a regional custodian - as soon as the address is issued.

In a few places, the county or 9-1-1 authority has become the regional custodian assuming responsibility for maintaining a central authoritative database. The regional custodian is responsible for synchronizing new information streaming in from cities and towns (with various levels of computer sophistication and in different formats). Corrections identified by any of the participants are reported back to the local and regional custodians where they are verified, standardized, documented, and distributed. Address and their geographic coordinates are made available to the public via the Internet; while personal information, such as name and phone number, are kept private.

Several states have developed a statewide system, or support their counties in the development of a federated system that maintains and delivers address data across the state. Maine, Connecticut, and Vermont collect address data from their towns. Rhode Island is developing a similar system. Ohio, Indiana, and West Virginia are building systems that will collect address data from their counties. Arkansas has created a state-level database of address ranges. States are also finding a variety of ways to fund these efforts. Vermont uses 9-1-1 fees to cover the cost of their system. The Ohio program includes both roads and addresses, and matches local funding with state capital funding and funding from other sources. Utah, using NTIA SBI funding, is in the process of signing contracts with counties that require the compilation and maintenance of a master address list (including geographic coordinates) via a public-facing, web-based end point. County Commissions must also designate a single point of contact for the ongoing address point project.

The National Emergency Number Association (NENA) is working diligently to assist local 9-1-1 authorities as they move to the Next Generation 9-1-1 (NG911). NG911 is driving requirements for better, more accurate mapping so that emergency calls made with mobile devices that transmit their location coordinates (points) can be accurately matched to street addresses and other map data, using GIS, to assist 9-1-1 dispatchers.

5.2 Best Practices

The National Address Database should be built using consistent, Federal government standards. The FGDC has adopted the United States Thoroughfare, Landmark, and Postal Address Data Standard (FGDC-STD-016-2011). Once implemented, this standard will make it significantly easier to share data across jurisdictions and upward to state and national repositories. The standard may also be useful for address data integrators to use as a common format for disparate address data coming from various local entities. It may be more useful to all as data templates and conversion tools become available to assist in its implementation.

The National Address Database data aggregation and maintenance process must be effective and efficient while allowing for flexibility from data partners to account for their diverse technological capabilities and resource availability. Options for the use of web services, bulk loading operations and cloud-based heads up editing are all likely to become part of the ultimate solution. Local expertise is critical to the initial National Address Database creation and its ongoing maintenance and enhancement; web-based strategies that deploy this expertise using standards-based technology platforms and databases will enhance efficiency and effectiveness. This is especially true when the need for data currency and quality control feedback mechanisms are examined.

5.3 Workflows and the Role of Government and the Private Sector

Strategic and business plans specifically oriented toward address data creation, maintenance and access need to be developed. There is a role for each level of government as well as the private sector. In general terms, these roles may include:

- Local government continues to be the Address Authority, creating new addresses as needed, using national standards and associating these addresses with x-y-z coordinates. An elevation, 'z' value, is critical for flooding and hurricanes as well as public response to multistory buildings. The addition of 'z' may take years to complete, but to achieve the highest standard of data the National Address Database should include this essential element.
- Counties or 9-1-1 authorities serve as the regional custodians of the data; receiving local updates and distributing address and coordinate data free of charge to the participants.
- States provide statewide coordination and technical support to local government and 9-1-1 authorities. States integrate the address data using accepted standards and provide data aggregation services to state and national interests.
- Federal government supports the National Address Database portfolio management, following the tenets of the A-16 Supplemental Guidance, as a shared resource allowing updates from authorized federal agencies, as well as state and regional custodians.
- Private sector is available to support data and system development for any level of government. It is further anticipated that the private sector would assist in the development of the National Address Database. If access is provided, commercial software companies could provide workflows and templates based on accepted national standards to facilitate the creation of address databases.

5.4 Development Options

Several potential options are identified for the development and management of a National Address Database. Examples include the following:

5.4.1 Option 1: Single Steward

A single Federal government agency, such as the Census Bureau, could be designated to coordinate the creation and maintenance of the National Address Database. This approach, while efficient, would necessitate mitigating the constraints of Title 13 and Title 39 if Census or USPS were selected as steward.

5.4.2 Option 2: Multiple Stewards

Specific stakeholder agencies (e.g., DHS, Commerce, USPS and HUD) could come together to form a new organization to steward a shared process for building a National Address Database. The Census Bureau has expertise and existing data resources to contribute, but it may be undesirable for the Census Bureau to build the National Address Database unless it is clearly developed or housed outside Title 13 restrictions. DHS has the most natural tie to the 9-1-1 community (local governments that are best positioned to ensure the accurate mapping of every address). The Department of Commerce and DHS have ties to residential addresses, plus additional commercial and industrial addresses, that the Census Bureau may not collect. These agencies may have stronger (more frequent) business drivers to keep a National Address Database current for business intelligence and services. A workflow and conversion templates will be required for the integration of multiple addressing systems as tables in a master database that is part of the National Address Database.

5.4.3 Option 3: Modify Existing Processes

The function of address collection currently undertaken by the Census Bureau could be transferred or contracted to the Office of the CIO of the Department of Commerce. Moving the function of producing a Master Address File (MAF), but not necessarily the staff and budget, from under the constraints imposed Title 13 would enable data sharing with other agencies. As a case in point, in 2009, NTIA's State Broadband and Data Development (SBDD) Program implemented the Recovery Act and the Broadband Data Improvement Act. Currently, many states are funded to develop address data to meet the requirements of this program. While NTIA and Census are both located in the Department of Commerce, NTIA is funding the development of address data and Census has the data, but cannot share it because of Title 13 restrictions. Note that implementing Option 3 may require statutory changes and/or budget reprogramming, but in this case, reprogramming would be within a single department.

5.4.4 Option 4: Leverage Existing Programs

The Middle Class Tax Relief and Job Creation Act of 2012 directed the establishment of a new 4G-based National Public Safety Broadband Network (NPSBN) based on single national network architecture. NPSBN will provide communication services to first responders nationwide. The NPSBN is being developed by FirstNet, a new independent authority established within the National Telecommunications and Information Administration (NTIA).

The two most important locations where NPSBN will need to provide coverage are at structures and along transportation corridors. State planning efforts for NPSBN implementation, funded in part by NTIA, will need many geospatial data layers to prioritize and select service coverage options in building an optimal NPSBN footprint with available resources. For this reason, data carried on address points and road centerlines are arguably the two most important data layers for evaluating proposed NPSBN build out alternatives. In addition, accurate addressing data is critical to the operations of first responders. To develop the capabilities needed to successfully build and operate the NPSBN, FirstNet could fund the development of a National Address Database as a component of the NPSBN – potentially through the State grant program.

5.4.5 Option 5 – State Based Integration and Coordination

Over the past decade the National States Geographic Information Council (NSGIC) has taken a leadership role in the debate about the best way to collect and distribute address data. A 2009 NSGIC report⁸ indicated that 23 states and the District of Columbia have coordinated address data at the state level, with 14 of them managing individual address points. A subsequent 2011 NSGIC report, *Address Points for the Nation; contrasting the functions of Address Points and Parcel Maps*,⁹ lays out a series of steps needed to assemble address points. In addition, a recent report commissioned by the Census Bureau, *Researching Address and Spatial Data Digital Exchange and Data Integration*,¹⁰ concluded that NSGIC was in a strong position to take a leadership role.

Based on this interest and success, one option is that a state-based association, such as NSGIC or the National Association of State Chief Information Officers (NASCIO), act as the coordinator of a national address point database.

5.4.6 Combine Options

While each option is presented separately, it may be that a combination of parts or all of several options may create a hybrid option to develop the National Address Database. Specifically, a combination of Option 2 and Option 3 may lead to a sustainable process that conforms to statutory, privacy and confidentiality concerns, as well as obtain much needed funding from an existing source, such as FirstNet, to facilitate the develop of a functional National Address Database.

6. Conclusion

A National Address Database will allow stakeholders to access local address resources developed and maintained by local data custodians. The creation, management, and support of this database should be a Federal priority. Efficiencies and service enhancements from the implementation of a National Address Database, as a consolidated national initiative, will undoubtedly be vast and attract widespread participation and use by multiple levels of government, the public, and private sector.

As part of the FGDC's current effort to revise and update the OMB Circular A-16 data themes and datasets, NGAC suggests that FGDC clearly identify the agency(s) with Federal responsibility for addressing issues.

Reconciling data and standardizing database structures within the various areas of government will require substantial effort. Furthermore, we recognize that private sector involvement will contribute to the complexity. Nevertheless, we believe that private sector engagement should be a part of the overall vision for a National Address Database and that the private sector will be a future partner of a successful, staged development. Furthermore, when data is put into the public domain, it leads to an informed public and creates new opportunities for the private sector. For example, vendors providing navigation services will be able to take advantage of the National Address Database to develop new products and services for their customers.

A National Address Database should be developed to aggregate and integrate local address data – to make it comprehensive and seamless at the national level on a regular frequency. This database should meet the needs of Federal, state, and local government, as well as provide opportunities for new products and services from the private sector. The NGAC believes that a National Address Database would provide significant benefits both to citizens and the economy.

7. Resources

- Census Address Data Guidelines:
<http://www.census.gov/geo/www/gss/gdlns/addgdln.html>
- NSGIC Addressing Resources:
http://www.nsgic.org/hottopics/addressing_coordination_issues.cfm
- Address Point Work Group:
<https://sites.google.com/site/addresspointworkgroup/home/best-practices-data-structure-models-standards>
- Census Bureau Address Ontology, v.11 [Draft]

8. Definitions

Address – The street number and street or road name or other designation assigned to a housing unit, special place, business establishment, or other structure for purposes of mail delivery and/or to enable emergency services, delivery people, and visitors to find the structure.¹¹ For the purposes of this report, the term address refers to a point location and includes x, y, (and possibly z) coordinates of the address point; where appropriate a distinction is made between situs and other point addresses; linear referencing systems are excluded from the current discussion.

Confidentiality – protecting identifiable information from unauthorized disclosure; relates to how information is protected after it is collected. Confidentiality details with whom information may be shared.

Privacy – respecting individuals’ freedom from unauthorized and unwarranted intrusion into their personal information. Privacy is whether or not something pertaining to an individual or group is known to others.

Right of Privacy¹² – the qualified legal right of a person to have reasonable privacy in not having his private affairs made known or his likeness exhibited to the public having regard to his habits, mode of living, and occupation.

¹ Federal Geographic Data Committee, “2012 Guidance to the National Geospatial Advisory Committee,” April 2012. <http://www.fgdc.gov/ngac/meetings/april-2012/2012-fgdc-guidance-to-ngac.pdf>

² The National Address Database Subcommittee is comprised of the following NGAC members: Mr. Gene Trobia, Co-Chair, Dr. Robert Austin, Co-Chair, Mr. Bert Granberg, Ms. Laurie Kurilla, Dr. Xavier Lopez, Brig. Gen. Jack Pellicci, U.S. Army (Ret), Ms. Cynthia Salas, and Ms. Molly Vogt. Mr. John Mahoney (FGDC), Mr. Timothy Trainor (U.S. Census Bureau), and Ms. Tricia Gibbons supported the subcommittee in its work.

³ OMB Circular A-130, “Management of Federal Information Resources”
http://www.whitehouse.gov/omb/Circulars_a130_a130trans4

⁴ Bonnell, Clayton, “Postal Service addressing problem,” U.S. Postal Service, e-mail sent to representatives of GITA, NENA, NSGIC, and URISA on December 3, 2007

⁵ The Streamlined Sales and Use Tax agreement involves a majority of the States; see
<http://www.streamlinedsalestax.org/>

⁶ Title 13, U.S. Code describes the roles and responsibilities of the U.S. Census Bureau.
http://uscode.house.gov/download/title_13.shtml

⁷ Title 39, U.S. Code describes the roles and responsibilities of the U.S. Postal Service.
http://uscode.house.gov/download/title_39.shtml

⁸ National States Geographic Information Council 2009 State Summary

⁹ http://nsgic.org/public_resources/Address_Points_FTN_Brochure_050311_Final.pdf

¹⁰ U.S. Census Bureau, “Researching Address and Spatial Data Digital Exchange and Data Integration”
<http://www2.census.gov/geo/research/GSS%20Initiative%20Digital%20Exchange%20ACCEPTED.pdf>

¹¹ U.S. Census Bureau Website, Decennial Management Division Glossary, address; see
<http://www.census.gov/dmd/www/glossary.html>

¹² Merriam Webster On-line Dictionary <http://www.merriam-webster.com/dictionary>

Appendix C: National Emergency Number Association

Road Naming and Numbering Standard

1. Every distinct road with two or more dwellings should be given a separate, unique name. This includes all private roads and driveways.
2. Each road should have one -- and only one -- correct name. A named road should be essentially continuous, without gaps.
3. Road names and/or numbers should only change when there is a substantial intersection, or at municipal boundaries.
4. When needing to name a road with two or more numbers in different sections, the name of the road that is used for the longest distance or is most heavily traveled should be kept.
5. A long driveway with only one house at its end might be named if the potential exists to erect additional structures along that driveway.
6. There should be no duplicate road names and/or numbers, such as Pine Road and Pine Lane in the same zip code and fire district.
7. There should be no similar-sounding names, such as Beach Avenue and Beech Avenue, Main Street and Maine Street, or Apple Hill Road and Apple Road in the same zip code and fire district.
8. Road names should be assigned based on traffic patterns. When a road forks into two roads, the fork with the higher traffic volume should continue the same name.
9. If a road has more than one branch at the end, use separate names and/or numbers for the multiple branches.
10. Roads should not be identified by a route number.
11. Avoid special characters, such as hyphens, apostrophes, periods, or decimals, in road names.

12. When having to rename roads with similar-sounding and/or numbers, consider the following:
- The road with a name of historical significance should have its name retained.
 - The road with the most properties on it, and thus a name change would affect a greater number of residents, should retain its name.
 - The road that has retained its name for the longest time or has been consistently signed for the longest time should retain its name. The same would be true for a road with a more descriptive name.
13. When naming roads that connect two other roads but have a middle section that is closed permanently or is impassable at certain times of year, consider:
- Retaining the current name for one end of the road and assign a different name to the other end of the road.
 - Retaining the same name at each end of the road and assign two-digit numbers to properties along one end of the road and three-digit numbers to properties along the other end. If this option is chosen and the potential exists to further develop the road in the future, lay out the numbers to insure that there is no possibility of having any three-digit numbered at the two-digit end and vice versa.
 - Assigning a direction to each end of the road, such as North Mountain Road and South Mountain Road.
14. When renaming roads in a jurisdiction with a significant summer population, send notices to seasonal residents, giving them an opportunity to mail in their road name suggestions within 30 days.
15. Use themes, such as wildlife, trees, or historic persons, to name unnamed roads. Use a specific theme to name private roads and driveways leading off a specific main road or around a specific body of water.
16. Roads within multi-structure complexes (e.g., business campus, multi-unit apartment complex) should be named and each structure individually addressed.

17. Keep road names short. They are easier to remember.

18. When naming new roads, consider the following suggestions:

- Avenue = a thoroughfare running principally in a north-south direction (or could be east-west depending on how "street" is defined).
- Circle = short road that returns to itself; circular or semi-circular roads.
- Court = Permanently closed road such as a cul-de-sac; dead-end road, usually under 1,000 feet in length, or horseshoe-shaped road.
- Lane = Private road or driveway.
- Loop = Short drive that begins and ends on the same road
- Road = most common designation for a secondary thoroughfare; generally indicates a heavily traveled route.
- Street = Usually found in cities or more congested areas; run principally in an east-west direction (or could be north-south depending on how "avenue" is defined).

19. Every official road name should have a corresponding standard suffix that complies with the National Emergency Nine One One Association's (NENA) standards.

Appendix D: New Castle County Addressing Procedures

Addressing Procedures

New Castle County does not assign addresses in the Municipalities of Newark and Smyrna. City of Newark street names, subdivision names and addresses are assigned by the Newark Police Department and can be contacted at (302) 366-7100.

The Town of Smyrna Planning and Inspections Department assigns subdivision names and addresses, however New Castle County still approves the street names. The Town of Smyrna Planning and Inspections Department can be contact at (302) 653-3486.

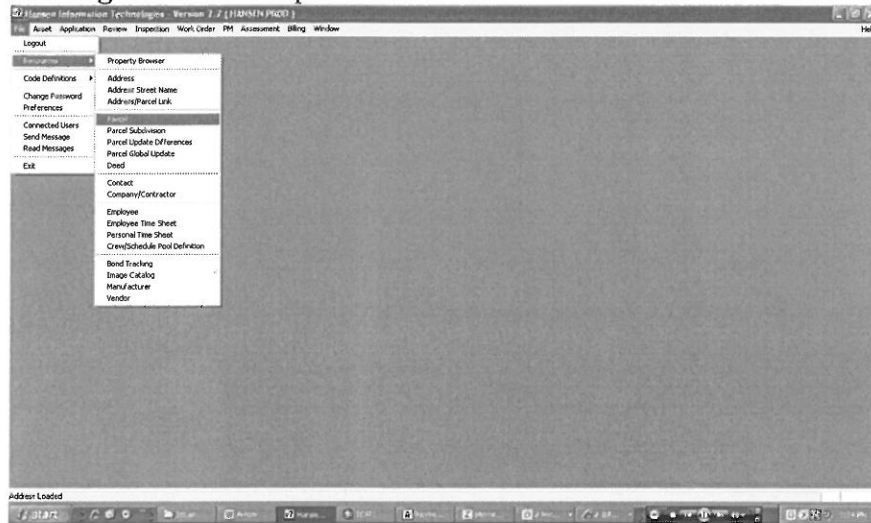
GIS

- 1. Updating the centerline file:** When adding, updating or removing an address make sure the address is in range on the centerline and on the correct side of the street. If changes need to be made to the centerline, notify Melissa Hughes so she can make the changes. If the centerline needs to be changed due to processing a plan, a log type of DRASSN needs to be added to the production log request. Comments should be entered in the DRASSN log so Melissa knows what needs updated.
- 2. Adding, updating or deleting the address points:** Before you can add or update address points you need to know what the ADDRKEY is. An ADDRKEY is created when an addresses is added or modified in Hansen. To find the ADDRKEY, run the Access query 'address assoc to parcel' located at G:\GovernmentCenter\LU\DrftRm\PAT\my_queries1. If you are adding an address point, create a new address point in the correct location and update the ADDRKEY field with the proper ADDRKEY. If you are updating an address point, move the address point to its proper location and update the ADDRKEY field with the proper ADDRKEY. There is a process that runs nightly that will update the rest of the fields in the address point layer as long as the proper ADDRKEY is placed in the ADDRKEY field. To delete an address point simply delete the address point and make sure the address is removed in Hansen. After all changes are made, the addresses in Hansen should match the addresses in the address points layer.
- 3. Adding address points in bulk by parcel:** This should only be done for one parcel at a time. Take note in which order you add the addresses into Hansen. Add the address points into GIS in the same order you added the addresses into Hansen. Run the Access query 'address assoc to parcel' located at G:\GovernmentCenter\LU\DrftRm\PAT\my_queries1. Save the Access query. Next export the saved query to and Excel file. Open the Excel file and sort by ADDRKEY. Add a new column titled "KEY". In the "KEY" column run the Fill-Series command starting with the first OBJECTID of the address points you created. Save the file and open it in Access. Save that file as a .dbf. Join this .dbf file to the address points layer in GIS by the "KEY" field in the .dbf file and the "OBJECTID" field in the address points layer. Next use the calculate command

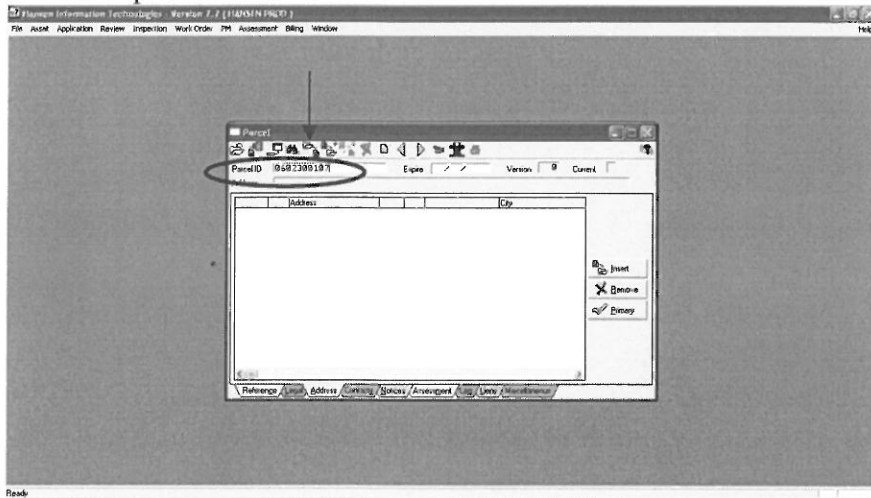
to populate the ADDRKEY field in the address points layer with the ADDRKEY field from the .dbf file. Populating attributes by using the join instead of entering them in by hand will make sure the attributes are formatted properly. There is a process that runs nightly that will update the rest of the fields in the address point layer as long as the proper ADDRKEY is placed in the ADDRKEY field.

Hansen

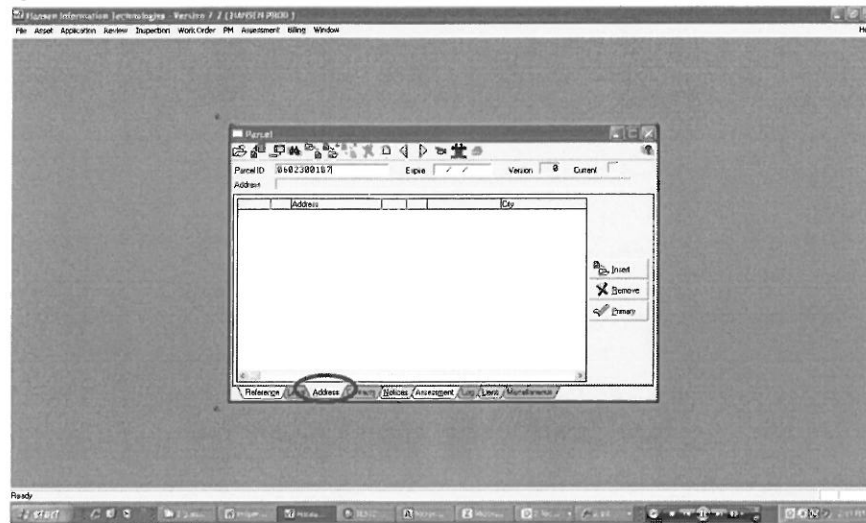
1. **Adding addresses:** Open Hansen. Go to File/Resources/Parcels.



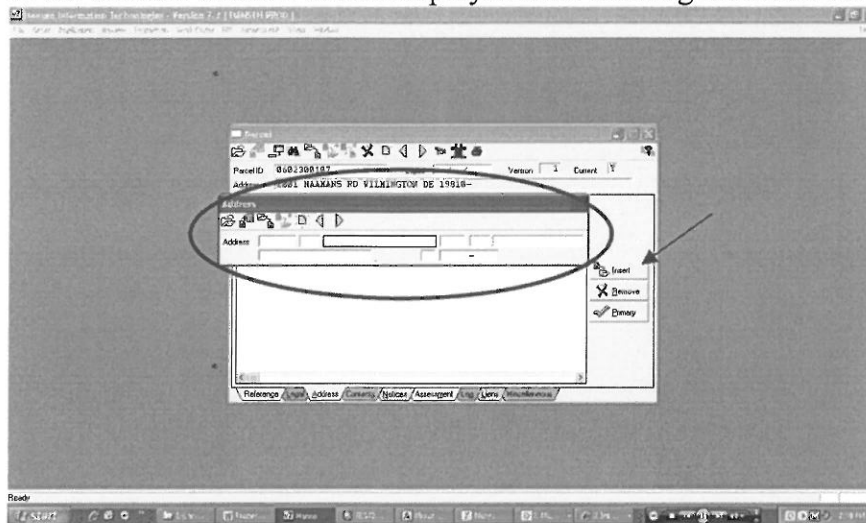
Enter the parcel number in the Parcel ID field. Hit load.



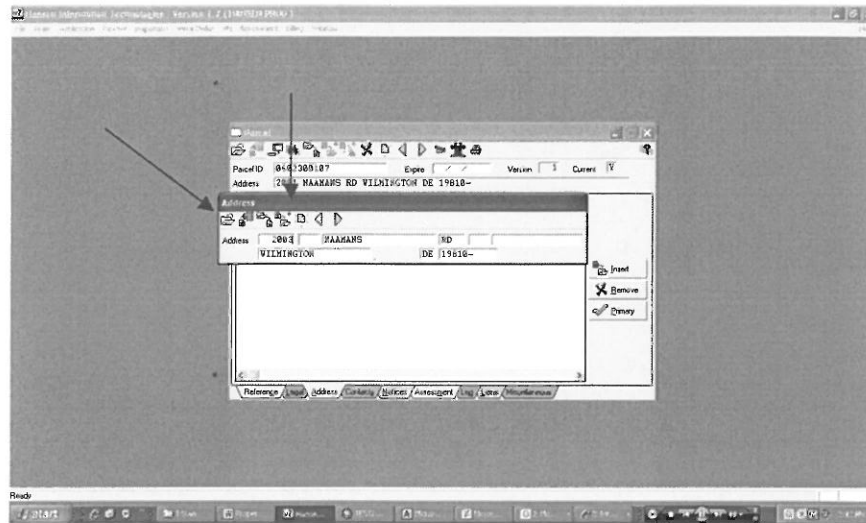
Click on the address tab at the bottom.



To add the address hit the “insert” button and then fill in the address information in the address window that is displayed after clicking the insert button.



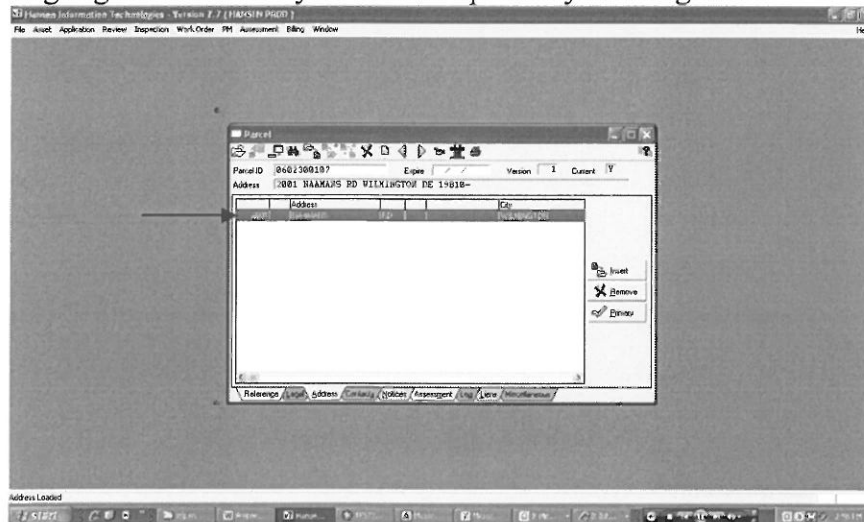
After filling in the address information click the “add” button, then hit the “close” button.



Logs or notices need to be added into Hansen when you add address into Hansen. To learn when and how to add logs or notices see section 5.

2. **Updating addresses:** Open Hansen. Go to File/Resources/Parcels. Enter the parcel number in the Parcel ID field. Hit load. Click on the address tab at the bottom.

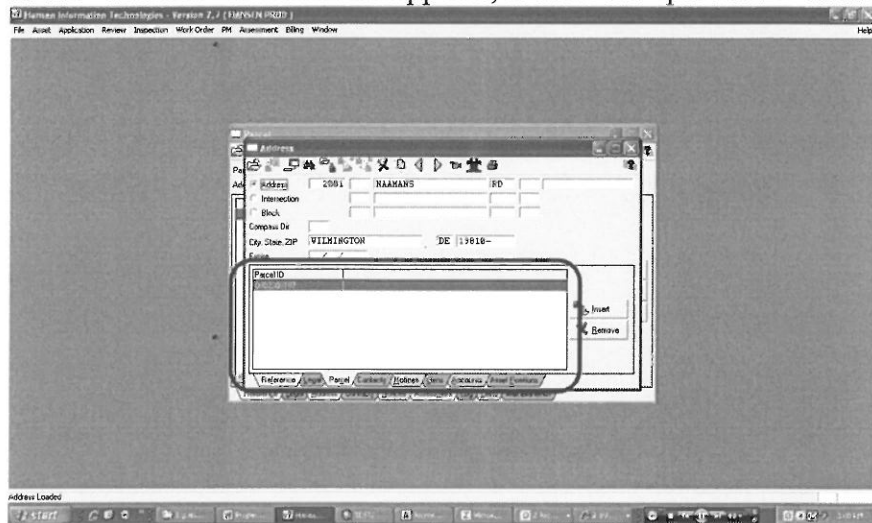
Highlight the address you want to update by clicking on it.



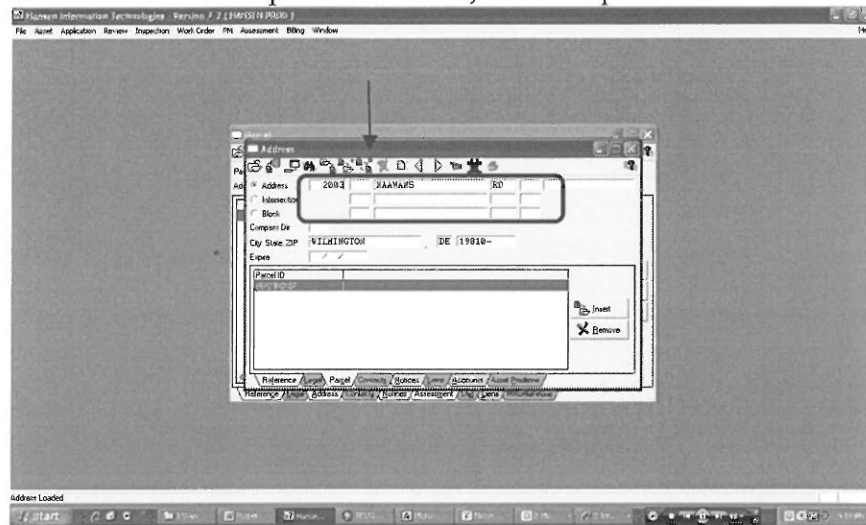
Hit the “open form” button.



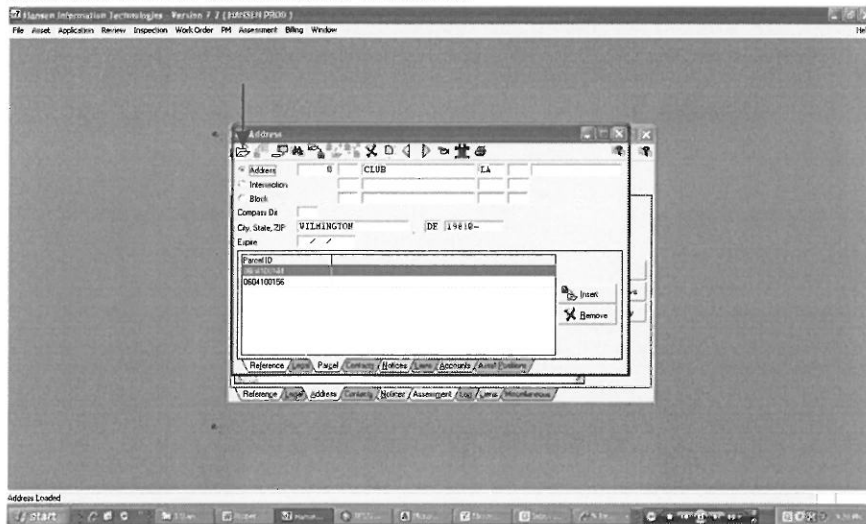
In the “address” window that appears, look in the “parcel ID” field



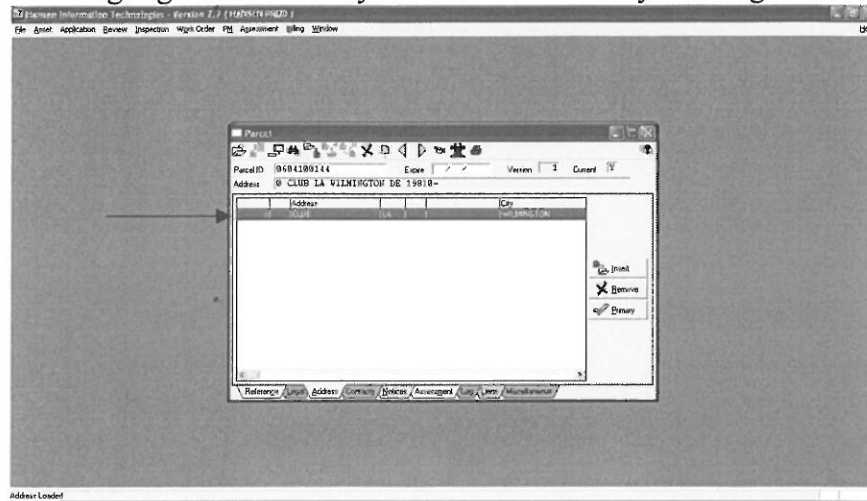
If only one parcel is listed then you can update the address in the “address” window. After the updates are done, hit the ‘update’ to save the address.



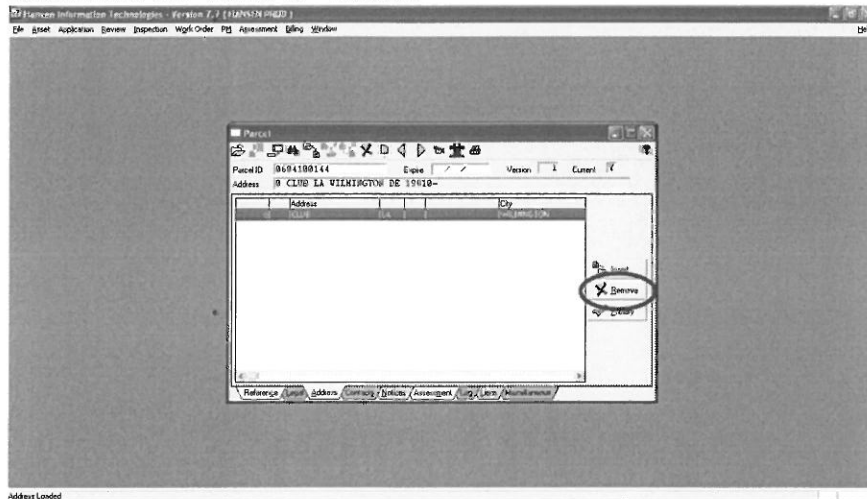
If more than one parcel is listed you will need to remove the address from the parcel and then add the correct address. To remove the address click the “close” button to close the address window.



Next highlight the address you want to remove by clicking on it.



Next click the “remove” button.

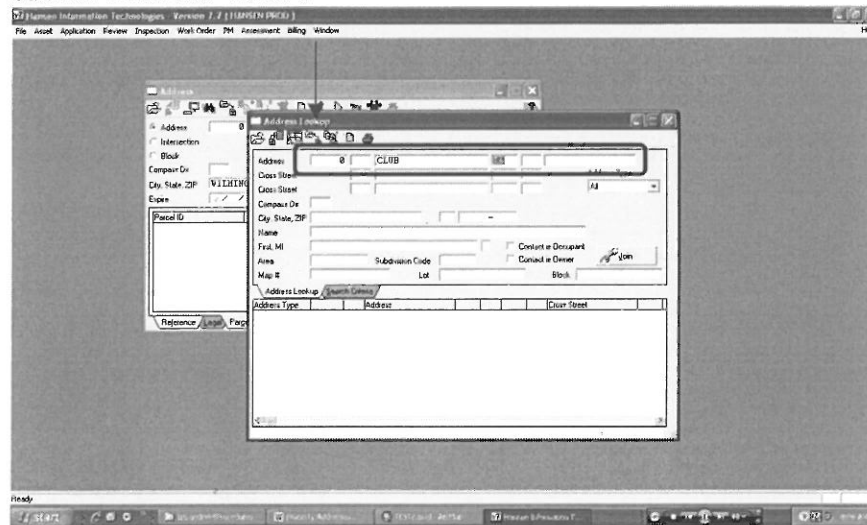


After removing the address follow section 1 to add the correct address.

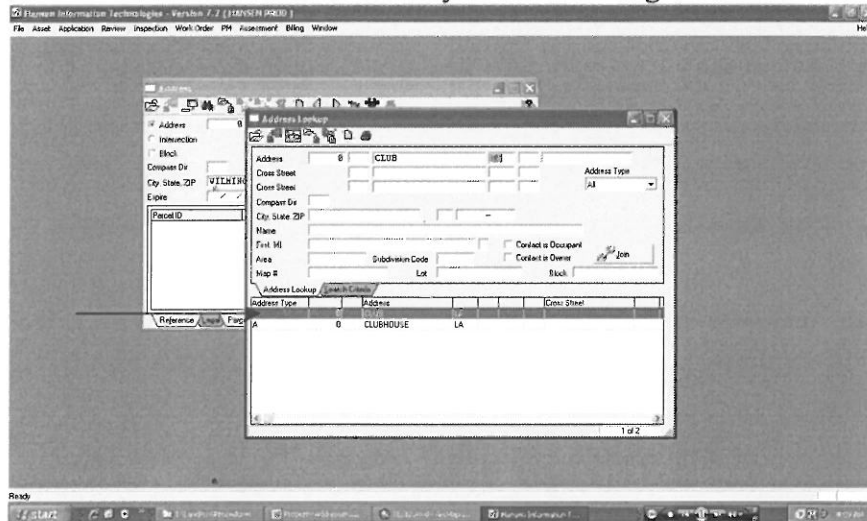
- 3. Removing an addresses:** Open Hansen. Go to File/Resources/Parcels. Enter the parcel number in the Parcel ID field. Hit load. Click on the address tab at the bottom. Highlight the address you want to remove by clicking on the address. Then click the “remove” button. Now you need to know if the address that was deleted is associated to another parcel.

The screenshot shows the SAP S/4HANA 1710 SP10 user interface. The top menu bar includes 'SAP S/4HANA Information Technologies - Version 1710 SP10', 'File', 'Account Application', 'Review', 'Work Order', 'PM', 'Assessment', 'Billing', 'Window', and 'Help'. The 'Exit' menu is open, displaying a list of options: 'Logout', 'Business Data', 'Code Definitions', 'Change Password', 'Preferences', 'Connected Users', 'Send Message', 'Read Messages', 'Exit', 'Calendar', 'Company/Contractor', 'Employee', 'Employee Time Sheet', 'Personal Time Sheet', 'Crew/Schedule Pool Definition', 'Bond Tracking', 'Image Catalog', 'Manufacturer', and 'Vendor'. The 'Exit' option is highlighted in the menu.

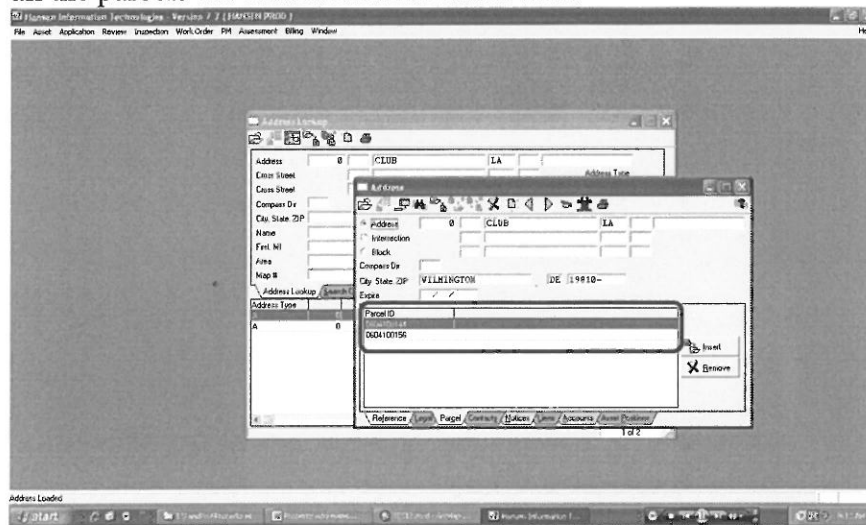
In the “address lookup” window that appears, enter the street number, name and suffix. Then hit “load”.



Then double click on the address you are checking on.



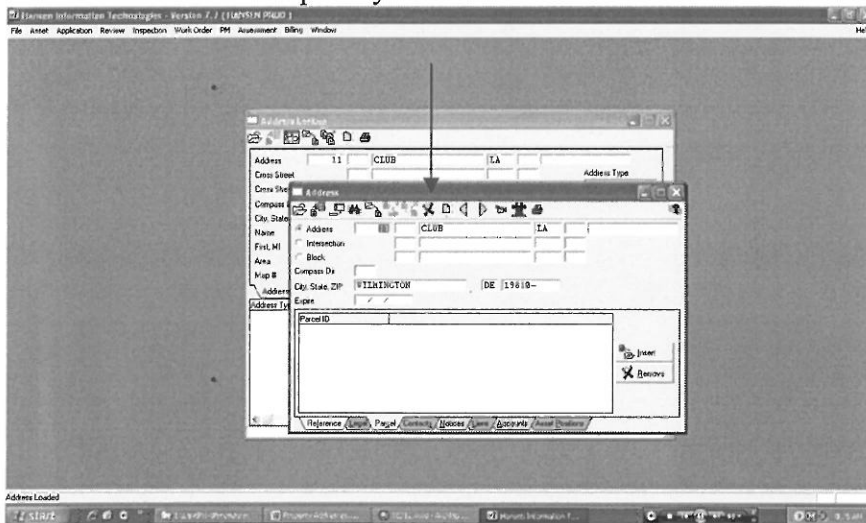
After you double click on the address, the “address” window will appear showing all the parcels the address is associated with.



If the address is associated with another parcel, then there is nothing else to do. If the address is not associated with another parcel then the address needs deleted on expired, see section 4.

4. **Deleting/expiring addresses:** Once an address is totally removed from all parcels, it either needs to be deleted or expired. Open Hansen. Go to File/Resources/Address. Click on the “lookup” button. In the “address lookup” window that appears, enter the street number, name and suffix. Then hit “load”. Then double click on the address you are checking on. After you double click on the address, the “address” window will appear showing all the parcels the address is associated with.

If the address is not associated with any other parcels, hit the “delete” button to delete the address completely out of Hansen.



- To add a notice: Open Hansen. Go to File/Resources/Parcels. Enter the parcel number in the Parcel ID field. Hit load.

After hitting the “insert” button, the “parcel notice” window will appear. In this window fill in the “notice” field with either DROP/L (if you sent an address letter) or DRIP/L (if you received an address letter). Also fill in the “effective” date field and add you employee number in the “by” field. In the comment field explain what is happening with the address (if an address is being changed, what was the old address and what is the new address, what structure on the property is the address associated with and also add “Letter is filed in addressing cabinet”. After the information is filled in hit the “add” button to complete the notice.

Parcel Notice

Parcel ID: 0304110145
Address: 59 BUNTING RIDGE RD WEVARD DE 19792-

Notice: DROP-1 WESTERN SEVT PROPERTY LOGA CHG

Effective Date: 10/11/2012

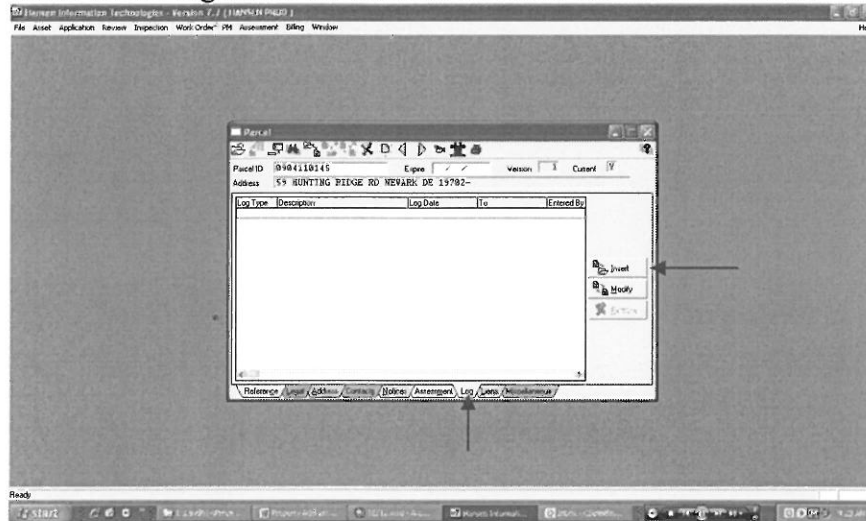
By: 10113

Comments: Address of 59 building assigned to the house located on this parcel. Letter filed in addressing cabinet.

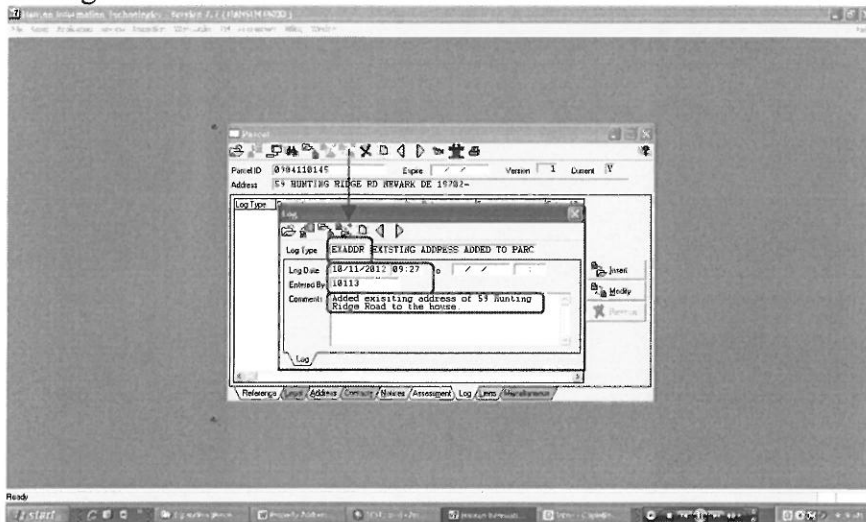
Buttons: Insert, Delete, Cancel

To add a log: Open Hansen. Go to File/Resources/Parcels. Enter the parcel number in the Parcel ID field. Hit load.

Click on the log tab at the bottom. Then hit the “insert” button.



After hitting the “insert” button, the “log” window will appear. In this window fill in the “log type with EXADDR. Also fill in the “log date” field and add you employee number in the “entered by” field. In the comment field state the existing address you are adding and explain what structure it is associated with. After the information is filled in hit the “add” button to complete the log.



Other

1. **Premise history file:** The police have a file called premise history. This file is based on physical addresses. Every call the police go out on they look up the address in the premise history file to see if they have any important information on the property, such as frequent police calls for domestic violence or if the people who live there are a known threat or if an occupant has a disability such as blindness or deafness. Therefore if an address is changed and there is a premise history file on the old address the police need to know to change the address. When you write the letter about the address change include the old and new address in the letter along with the parcel number so Bill Streets will know to change the premise history file.
2. **Common place file:** The police have a file called common place. This file is also based on physical addresses. This file is used to find an address if someone calling 911 does not know the address of where they are. An example would be if you called 911 from the Taco Bell on Kirkwood Highway and you did not know the address of the Taco Bell. You would tell the 911 operator that you are at Taco Bell on Kirkwood Highway. The 911 operator would look up Taco Bell in the common place file and have an address for every Taco Bell located in New Castle County. If you change an address you need to verify if it is in the common place file. To do this open up
I:\LandPriv\projects\POLICE\Dispatch_Database\dispatch.mdb and run the either “street lookup” query. If you changed the address of a common place notify Bobby Kerr in the NCC 911 center.
3. **Mailing Addresses:** If you change a property address and the owner is using the same mailing address you need to forward the address letter to Judy Sponagle-Smith in the NCC Treasury section, so she can change the mailing address in Hansen.
4. **Code Enforcement:** Every time an address is changed in Hansen, Al Washington in Code Enforcement needs to be notified via email.
5. **Sending out letters:** Letters are not always required to be sent out. Letters need to be sent out if addresses are assigned or changed due to receiving a phone call, assigned or changed when a building of a new structure involved or changing any part of someone’s physical address. Letters do not need to be sent out if you are assigning addresses for the zero address project. Letters should be addressed to the property owner and shown below are the people who needed to be copied on the letter.

The following people are always copied on all addressing letters:

Patrick W. Susi, New Castle County Government, GIS Administrator
Christina Jillard, United States Postal Service
Verizon, via email, de.911.dbmc@verizon.com
Chief William F. Streets, New Castle County Government, NCC Emergency Services
Terry Whitham, State of Delaware, 911 Administrator, via email, terry.whitham@state.de.us

2. The following people are to be copied on letters for addresses located in the City of Wilmington:

Jim DiPinto, Department of License & Inspections, via email, jdipinto@ci.wilmington.de.us
Director George Giles, Office of Emergency Management, via email, George.Giles@cj.state.de.us
Chief Michael Szczerba, Police Department, via email, Michael.Szczerba@cj.state.de.us
Captain Richard Danner, Wilmington Fire Department, via email, Richard.Danner@cj.state.de.us
Karen Flowers, Department of Fire Prevention, via email, Karen.Flowers@cj.state.de.us
Chris Madden, Mayor's Office, via email, cmadden@ci.wilmington.de.us
Mike Marinelli, Revenue Division, via email, mmarinelli@ci.wilmington.de.us
Dorien Snyder, Fire Marshal's Office, via email, dsnyder@ci.wilmington.de.us

3. The following 2 people are to be copied on letters for addresses located in the City of New Castle:

Jeff Bergstrom, Building Official and Fire Marshall, via email, jeff@newcastlecity.org

Mayor and Council, City of New Castle, 220 Delaware Street, New Castle, DE 19720

4. The following person is to be copied on letters for addresses located in the Town of Middletown:

Rae Yingling, Town of Middletown, Administrative Assistant

5. Copy the town hall or city hall when sending letters for addresses that are located in all the other municipalities.

William Streets' and Sandy Frisbey's letters are mailed out in bulk every Friday. The envelopes can be found next to Chris Siple's desk.

William Streets' letters are interofficed to the Public Safety Department.

Sandy Frisbey's letters are mailed to P.O. Box 9001, Bellmawr, NJ 08099-9321

Appendix E: New Castle County Address Assignments for Record Plan Submittals

Address Assignments for Record Plan Submittals

Street name(s) shown on a Record Plan being reviewed in the Department of Land Use need to be approved and address ranges assigned. (See **Different Scenarios** for determining approval or denial of proposed street names).

Street Name Approval

1. In GIS, open the LUEdit. Centerline
2. Click on **Table Options** and click on **Select by Attributes**.
3. Type **STREET_NAM LIKE** '(First 3 letters of street name)%'
4. Sort **LOL** field in Ascending Order.
5. Scroll through selected street name for duplicate street names and available hundred blocks ranges. If no available hundred blocks, select an existing hundred block ranges that is **not** in the same fire district.
6. A proposed street name may be duplicated with an existing street name if the street name has a different suffix, zip code, fire district and hundred block (see Street Address Ranges below).
7. In Access, under queries, open
G:\GovernmentCenter\LU\DrftRm\PAT\my_queries1\address assoc to parcel2
8. Under Oracle ODBC Driver Connect – User Name type 'r' and Password type 'r'
9. On the **Home** tab, click on **View**
10. Under STNAME type **Like** "(First 3 letters of street name)*"
11. Sort STNO and STNAME in **Ascending** order.
12. On the **Query Tools Design** tab, click **Run**
13. Scroll through for available hundred blocks. If no available hundred blocks, select an existing hundred block that is **not** in the same zip code. Write down the available hundred blocks for each street name.

Different Scenarios

A proposed street name may be duplicated with an existing street name if the street name has a different suffix, zip code, fire district and hundred block. *(Rule of Thumb: If there are 3 or more streets with the same name, regardless of which fire district or zip code, a proposed street with this name should be denied. Exceptions to this are Numbered streets and existing streets that continue into a new subdivision. Use good judgment)*

Jennifer Drive, 19701 and Christiana Fire District is proposed on a pending Record Plan. There is an existing Jennifer Court, 19803, Talleyville Fire District. The pending street name of Jennifer Drive can be approved due to a different street suffix. The hundred block assigned for Jennifer Drive cannot be duplicated with existing Jennifer Court's hundred block.

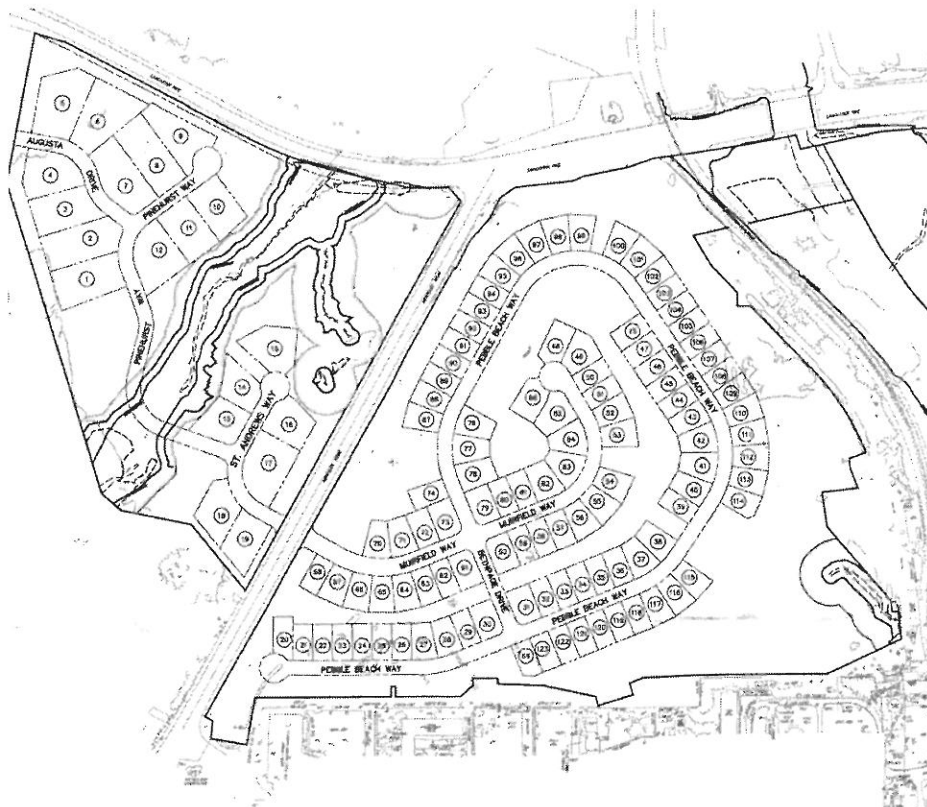
A proposed street name where the first 3 letters are duplicated multiple times can be approved. If there are more than 2 duplicate names within the same zip code and/or fire district, the street name would be denied.

Melissa Drive, 19701 and Christiana Fire District is proposed on a pending Record Plan. There are 3 existing streets with 'Mel', Melanie Drive, Melody Court and Melson Lane, in Christiana Fire District. Melissa Drive would be denied.

Residential Street Addresses

After approving the street names, the street addresses are assigned. Make a copy of the overall subdivision layout. Contact engineering firm for a copy, if necessary. Determine what hundred blocks to use for each street. There should be no duplicate hundred blocks within the proposed subdivision. Each street should have its own hundred block. *(Rule of Thumb: If a street requires more than 50 addresses on the even or odd side, then additional hundred block(s) will be needed. If possible, start a new hundred block at an intersection.)*

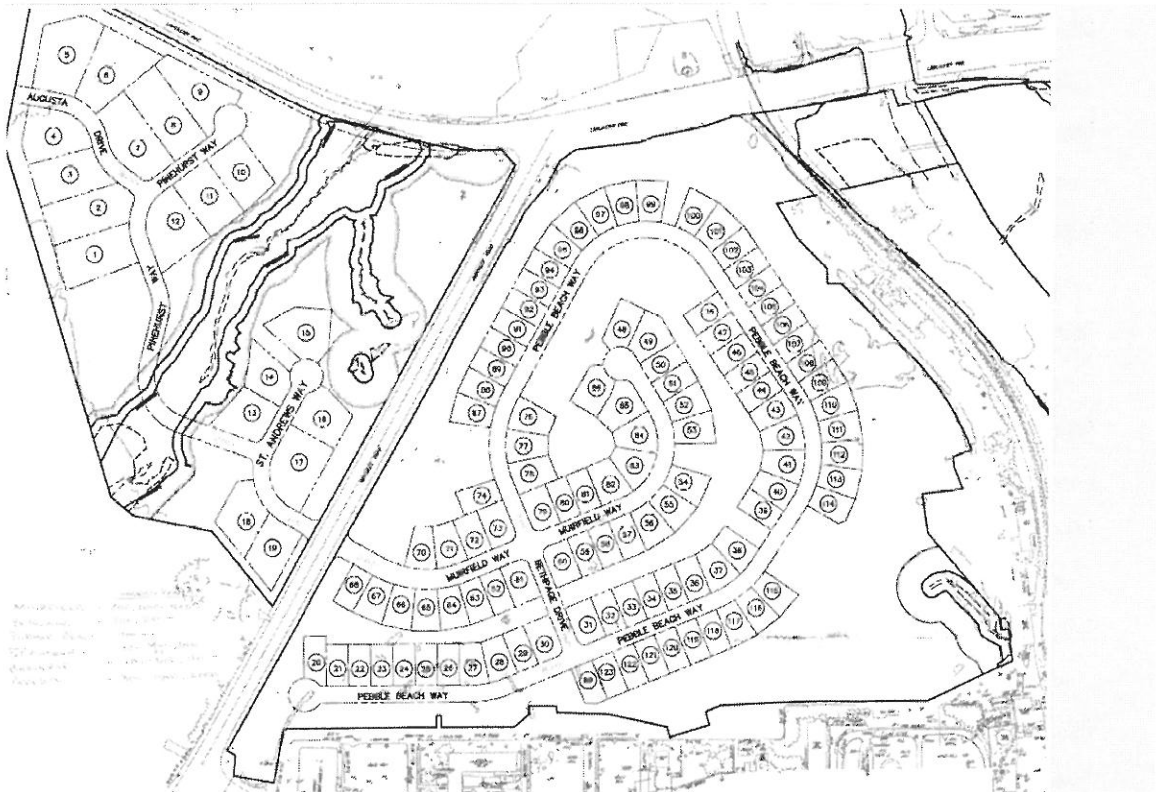
The residential subdivision plan below will be used as an example for addressing subdivisions. (See larger scaled maps in I:\LandPriv\Procedures\addressing_plan#.pdf)



I:\LandPriv\Procedures\addressing_plan.pfd

Step 1

Write down the streets with the available hundred blocks on the map or separate sheet. Start assigning the hundred blocks on the map. (*Rule of Thumb: The main entrance into the subdivision should be the lowest hundred block possible. The hundred blocks increase the further away from the entrance. This may not be possible in all cases. Use your best judgment*).



I:\LandPriv\Procedures\addressing_plan1.pfd

Step 2

Start addressing the lots in red with even numbers on the right as the range increases. An address is assigned for every 50' of road frontage; however, in a subdivision with townhouses, semi-detached/twins, and single family lots, addresses are assigned in sequence (2, 4, 6, 8... Main Street). In subdivision with larger single family lots, 1.00 acre or more, address are assigned based on 50' of road frontage.

When a street continues past an intersection, skip a number then continue addressing.

Allow spaces in addressing for open space and storm water parcels.

Lots that are in a cul-de-sac, addresses continue on the even and odd sides. The dividing line of where even and odd numbering stops is determined by extending the center of the cul-de-sac to the edge of the right-of-way.

Lots that are on the corner of two streets, addresses are assigned for both streets.

Examples of Residential Subdivision:

Lot 68 is set back from the intersection of Muirfield Way and Hercules Road. Even though this distance is less than 50', skip the "600" address and start with "602." When addressing the odd side, align address with the even side. Lot 70 will be assigned "607" to align with "606" and "608" on the even side.

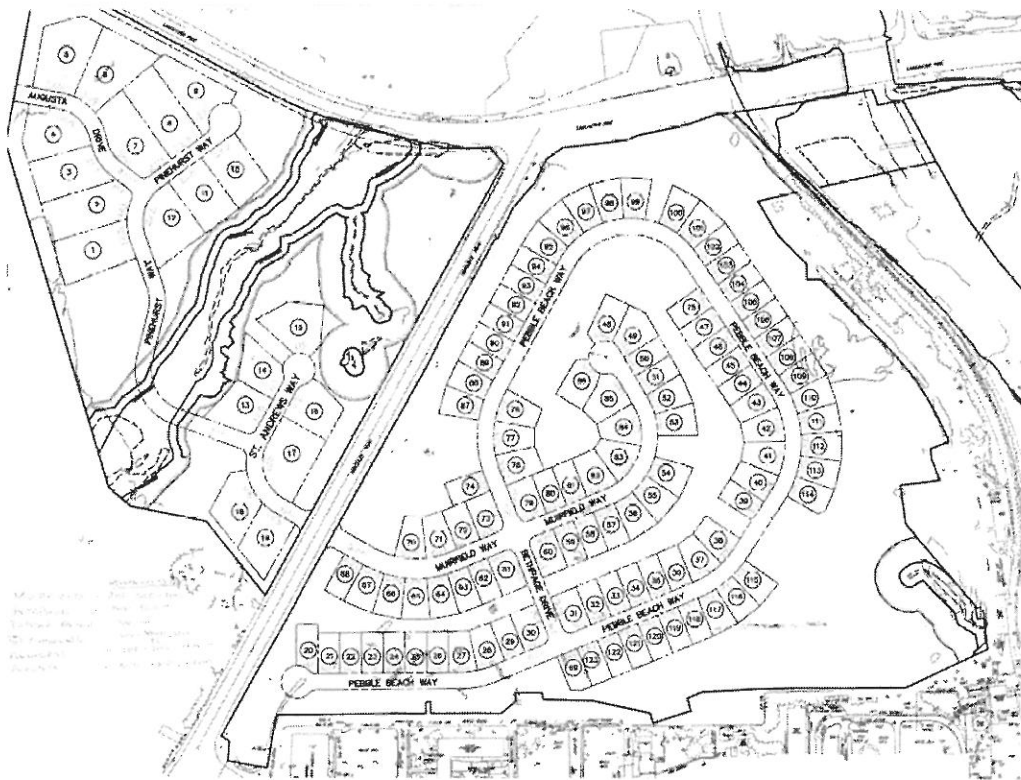
When a street continues past an intersection, skip a number then continue addressing. Lot 61 stops at the intersection of Bethpage Drive then Lot 60 continues on the other side of the intersection. Lot 61 is addressed "616" and Lot 60 is addressed "620."

Between Lots 53 and 54 is an open space parcel. Lot 54 is addressed as "632" Muirfield Way and Lot 53 is addressed as "636" Muirfield Way.

Lots 48, 49 and 86 are located in the cul-de-sac. By extending the centerline of the cul-de-sac. Lots 48 and 49 are on the even side and Lot 86 is on the odd side.

Bethpage Drive, Muirfield Way and Pebble Beach Way intersect creating 4 corner lots. Each one of these lots has an address on both streets.

Pebble Beach Way has more than 50 addresses on the odd side. The street was divided into 2 different hundred blocks. The divider between the 2 hundred blocks is Bethpage Drive.



I:\LandPriv\Procedures\addressing_plan2.pfd

Step 3

Send a letter and addressing plan to the engineering firm who submitted the record plan. Send copies of both the letter and addressing plan to everyone on the cc: list. (See I:\LandPriv\FORMS\Form Letters\New Address for Plan.doc for form letter). Include the subdivision planner's name who is reviewing the plan in the cc: list. If the address plan is for a municipality, remove the subdivision planners name and add the municipality in the cc: list.

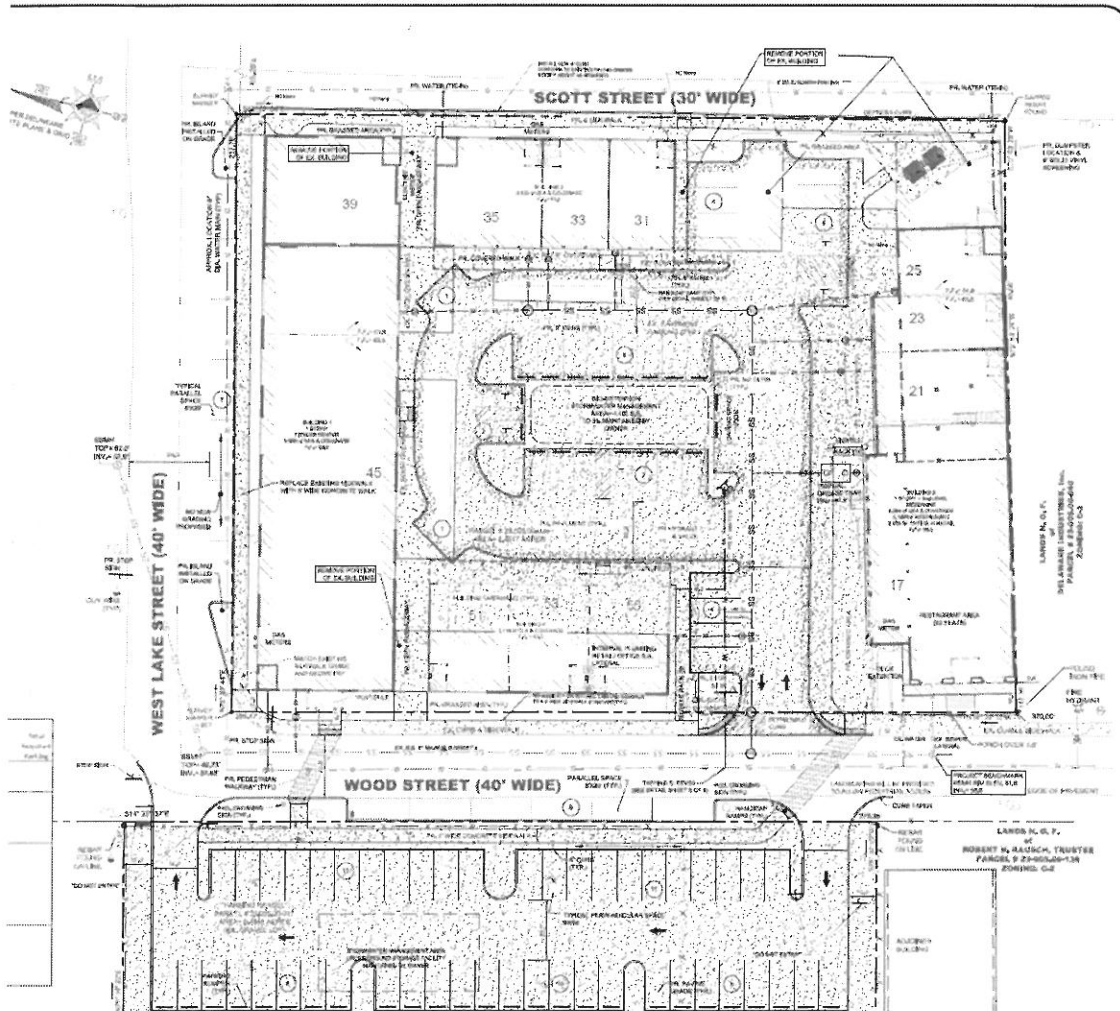
Step 4

If the addresses were assigned by a record plan being review by New Castle County, save a copy of the addressing letter as a pdf in G:\Government Center\LU\ApplicationXtender Files\PLANS\LU General\Application Miscellaneous. The file will name as follows: Application Number without a space, underscore then todays date. (Ex: 20120999_10182012).

Scan the addressing plan as a pdf document. Save the plan in the same folder but change the date to the next day. (Ex: 20120999_10192012).

Commercial/Industrial Street Addresses

If the commercial/industrial complex is being addressed off an existing road, determine what addresses are available on that road. For strip shopping centers, assign an address for every 20' of store front if possible. Address the buildings on the plan in red.

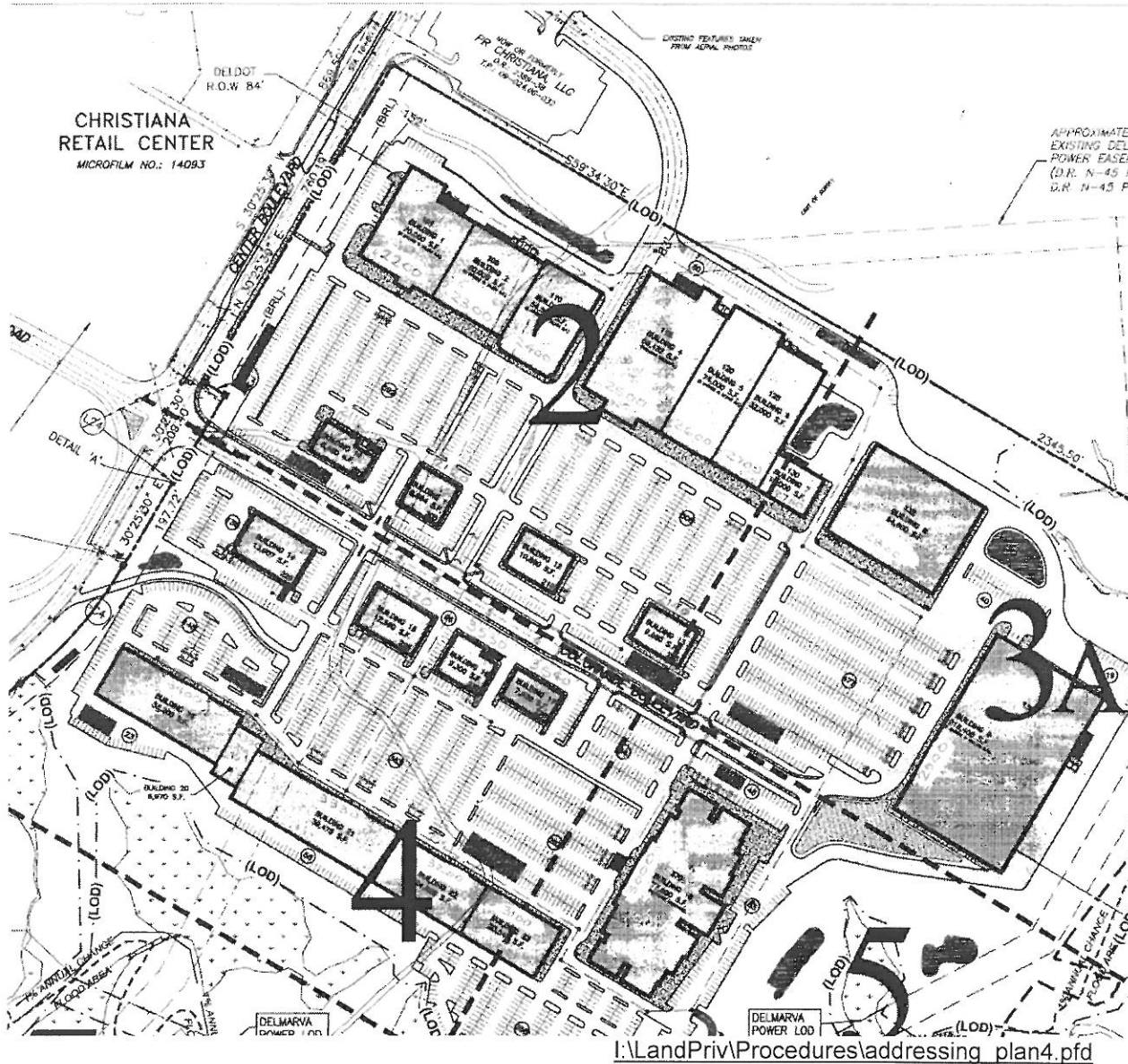


I:\LandPriv\Procedures\addressing_plan3.pfd

If there are not enough address on the existing street available, suggest to the subdivision planner and engineering firm that an interior access way be named. In large commercial/industrial complexes, it is recommended to name interior access way(s). When a street name(s) is submitted by the engineering firm, follow the steps described in **Street Name Approval**.

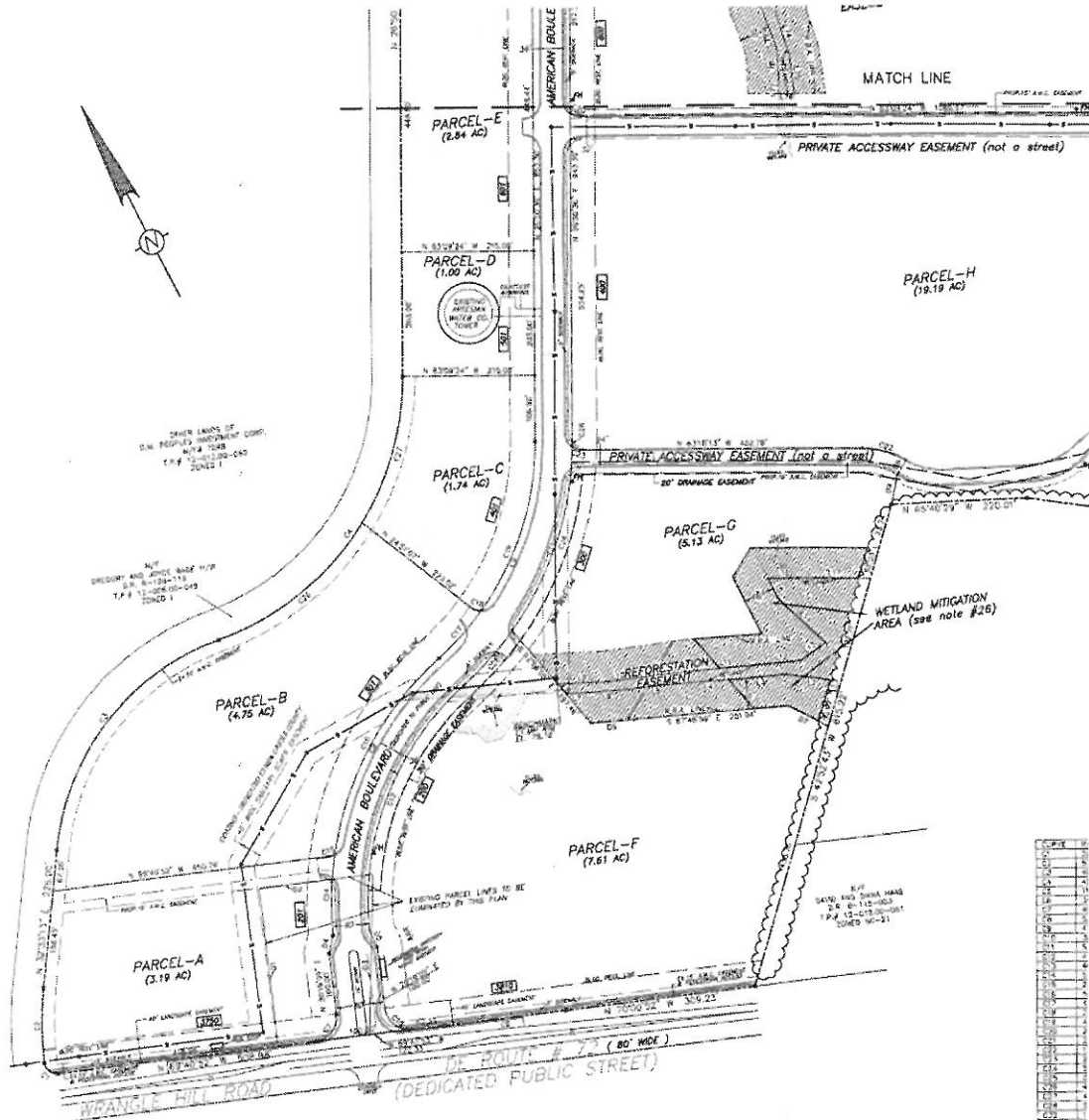
Once the street name(s) for the access way has been approved, make a copy of the overall subdivision layout. Determine what hundred blocks to use for each street. There should be no duplicate hundred blocks within the proposed complex. For commercial buildings, each should have its own hundred block. Strip shopping centers are assigned an address for every 20' of storefront. *(Rule of Thumb: Some smaller buildings within a large commercial complex can*

have the same hundred block. As shown below, the smaller buildings along the main boulevard have addressed with same hundred block. Use good judgment when addressing this way. Assign addresses that allow future division of these buildings.)



I:\LandPriv\Procedures\addressing_plan4.pfd

For industrial lots and/or buildings, addresses are assigned with even numbers on the right as the range increases. Each lot should have its own hundred block and with a corresponding odd address on the opposite side of the street. See map below for example.



I:\LandPriv\Procedures\addressing_plan5.pfd

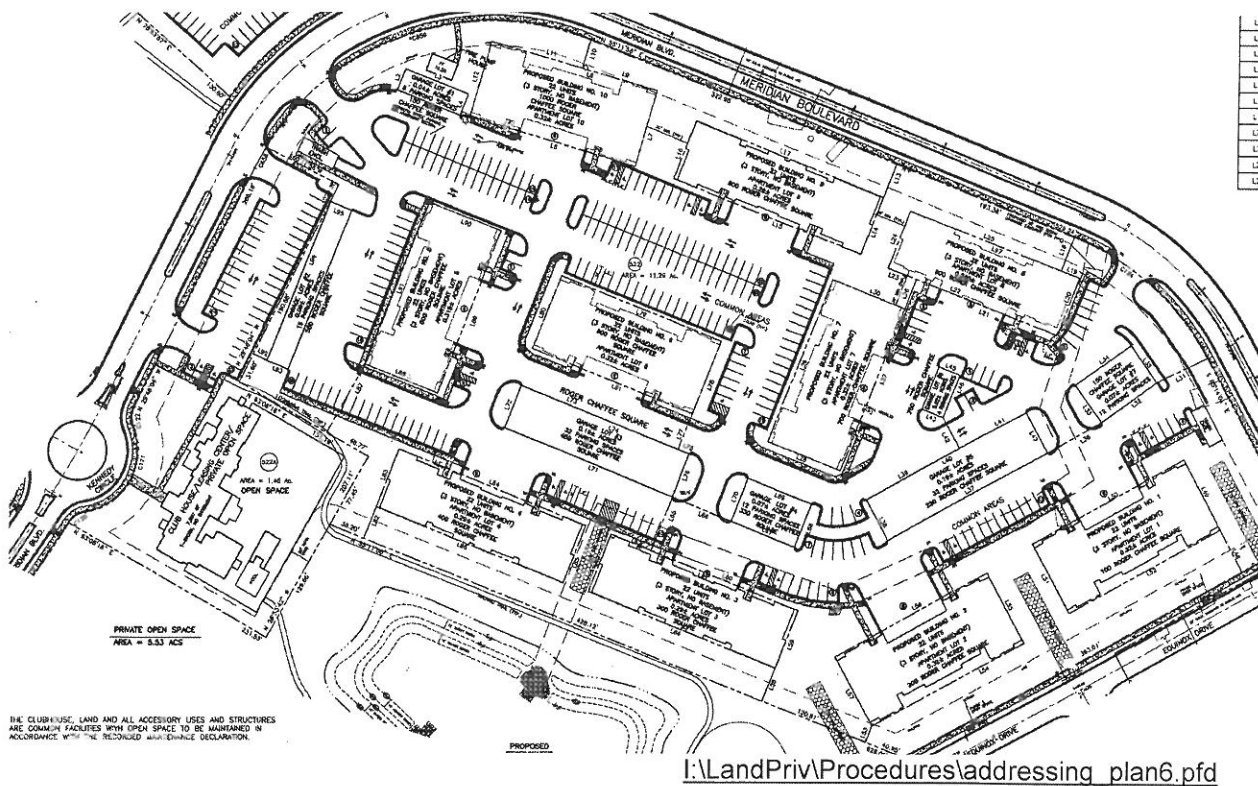
Send letter to appropriate parties. Follow Steps 3 and 4 from **Residential Street Addresses**.

Apartment/Condominium Street Addresses

If the apartment complex is being addressed off an existing street, determine what addresses are available on that street. Address the buildings on the plan in red.

In large apartment complexes, it is recommended to name interior access way(s). Suggest to the subdivision planner and engineering firm that an interior access way(s) be named. When a street name(s) is submitted by the engineering firm, follow the steps described in **Street Name Approval**.

Once the street name(s) for the access way has been approved, make a copy of the overall subdivision layout. Whenever possible, each building will be assigned its own hundred block. Usually, the addresses correspond with the building number. (Example: Building 1 can be addressed as 100, Building 2 can be 200, etc) (*Rule of Thumb: Some smaller buildings such as pump station, club house, garages, etc can have the same hundred block as one of the buildings. Use good judgment when assigning these smaller buildings. Some apartment complexes address their units with individual numbers based on the building, floor and unit numbers. Ex: Unit 8 on the third floor of Building 1 can be addressed as 138 Main Street*)



Send letter to appropriate parties. Follow Steps 3 and 4 from **Residential Street Addresses**.

Appendix F: Kent County Street Naming Policy

1. There shall be no duplicate or similar/sound alike (homonyms) nor closely resemble any existing street names; extensions such as Road, Street, Boulevard, Avenue, Alley, Lane, Court shall not constitute a difference in naming and must not contain any punctuations or symbols:

Example of extensions:

Smith Street – Smith Blvd. – Smith Ave. – Smith Lane

Example of similar name:

Smyth Street – Smyth Blvd. – Smyth Ave. – Smyth Lane

Example of sound alike:

Beach Avenue- **Beech Ave** – Peach Avenue – Linwood Drive – Lynnwood Drive
Apple Hill Road – Apple Road

Exception: If proposed streets are an extension of an existing street.

2. Cumbersome, corrupted or modified names, discriminatory or derogatory names, from the point of view of race, sex, colour, creed, political affiliation or other social factors shall be avoided.
3. Reuse of former street names should be discouraged because of the confusion this causes in property records.
4. Names of Living persons should be used only in exceptional circumstances
5. Only a persons last name should be used as a street name **or subdivision name** unless additional identification is necessary to prevent a duplication with an existing street name **or subdivision name** in Kent County and surrounding municipalities.
6. Qualifying words may be used when a newly created street is in actuality an extension of an existing street which cannot be or for which no numbers are available. North, South, East and Upper or Lower are appropriate qualifying words: (i.e. East Beach Avenue, and must be place first as opposed to last i.e. Beach Avenue East).
7. Name Changing: In the case of a name change, the name change should also include a petition stating the reason for the name change and include the names and addresses and signatures of the persons who reside on or own property that fronts on or is adjacent to subject street or road.
NUMBER 7 IS COVERED UNDER CHAPTER 179 PAGE 17901 “ROAD NAMING” IN THE KENT COUNTY CODE BOOK.
8. Pronunciation – The proposed street name must not be difficult to pronounce or be a name that can be pronounced in a number of different ways.
9. Spelling: The proposed street name must not be a name difficult to spell or be a name that can be spelled a number of different ways; (i.e. Fore Street, For Street, Four Street, 4 Street)

10. Directions can not be part of any street or road name (for example, Westover Road or Fossil Creek Drive North are not acceptable). North, South, East and West are intended to be directional features of the addressing system and lead to confusing addresses if included as part of the name. Directions must be placed ahead of the name (for example, East Smith Street).
11. Street and road names can not change at intersections. Continuations of existing streets or roads must use the existing name.
12. Road name suffixes must meet United States Postal Service standards as described in USPS Publication 28 Appendix C, Street Abbreviations, Subsection C1 Street Suffix Abbreviations.
13. All addresses will be assigned by Kent County's 911 Addressing Division. Lots in new developments will be assigned addresses by the same aforesaid Division.

SUBDIVISION NAMING POLICY:

1. There shall be no duplicate or similar/sound alike (homonyms) nor closely resemble any existing subdivision or site or place name.

Example:

Eagle Meadows – Eagle Nest – Eagle Landing – Eagle Pointe

Sound Alike Examples:

Beagle Meadows – Eagle Meadows

Eagle Landing – Beagle Landing - Linwood Village – Lynnwood Village

Exception: If proposed subdivision is adjacent to and an expansion of an existing subdivision.

2. Cumbersome, corrupted or modified names, discriminatory or derogatory names, from the point of view of race, sex, colour, creed, political affiliation or other social factors shall be avoided.

3. Names for subdivisions that could be construed as advertising a particular business shall be avoided.

4. Reuse of former subdivision names should be discouraged because of the confusion this causes in property records.

5. Names of Living persons should be used only in exceptional circumstances

6. Only a persons last name should be used as a subdivision name unless additional identification is necessary to prevent a duplication with an existing subdivision name in Kent County and surrounding municipalities.

7. Qualifying words may be used when a newly created street is in actuality an expansion of an existing subdivision. North, South, East and Upper or Lower are appropriate qualifying words: (i.e. Doe Run East).

8. Name Changing: In the case of a name change, the name change should also include a petition stating the reason for the name change and include the names and addresses and signatures of the persons who reside on or own property within said subdivision.

9. Pronunciation – The proposed subdivision name must not be difficult to pronounce or be a name that can be pronounced in a number of different ways.

10. Spelling: The proposed subdivision name must not be a name difficult to spell or be a name that can be spelled a number of different ways; (i.e. Mary Estates, Merry Estates)

Appendix G: Sussex County Ordinance No. 1800

AN ORDINANCE TO ADOPT CHAPTER 73 OF THE CODE OF SUSSEX COUNTY RELATING TO ADDRESSING AND STREET NAMING.

WHEREAS, it is determined that in order to better serve the health, safety and welfare of the citizens of Sussex County, it is necessary to revise the Code of Sussex County to adopt an ordinance that will establish standards for naming roadways, posting street signs and assigning numbers to all dwellings, principal buildings, businesses and industries; to assist emergency service agencies, the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Sussex County; and

WHEREAS, the County Council finds that this Ordinance will accomplish the above identified purposes.

NOW, THEREFORE THE COUNTY OF SUSSEX HEREBY ORDAINS:

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ADDRESSING AND STREET NAMING

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GENERAL PROVISIONS

§ 73-1 TITLE AND SCOPE.

*This chapter shall be known as the County-Wide Street Naming and Addressing Ordinance. It's purpose is to establish standards for naming roadways, posting street signs and assigning numbers to all dwelling, principal buildings, businesses and industries; and to assist emergency service agencies, the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of **Sussex County**.*

In some instances there may be exceptions to retain existing addresses. In these instances, addresses may be "grandfathered", but only after being reviewed and approved by Sussex County for grandfather status.

§ 73-2 GOALS.

The primary goal of this policy is to provide emergency service agencies with a complete set of accurate addresses, so that emergency victims can be located with greatest efficiency. This means adopting addressing standards that can be followed as a guide.

Secondary goals include:

1. *Conversion of rural route numbers to street addresses*
2. *Correcting address problems within current developments*
3. *Ongoing assigning of addresses to new development*
4. *Installation of road signs*
5. *Maintenance of countywide street name and address database*

§ 73-3 **OBJECTIVES.**

1. *To improve the quality of life for residents of **Sussex County** through easier delivery of mail and services,*
2. *To project a positive and progressive image to residents, prospective residents and developers, and*
3. *To promote the local tourist industry by making it easier for visitors to locate the attractions of **Sussex County**.*

ARTICLE II

STREET NAMING

§ 73-4 **STREET REQUIRING NAMES**

A roadway will be named if it meets at least one of the following conditions:

1. *If two or more dwelling units or business related buildings exist, or are proposed to be constructed, along the roadway or are served by the roadway.*
2. *If dwelling is serviced by a driveway longer than 500 Feet.*
3. *If a structure is not visible from the main road*
4. *If the roadway is maintained by the Delaware Department of Transportation.*

§ 73-5 **STREET NAME SELECTION**

The following standards will be used:

1. *A street name should be appropriate, easy to read (so that children can use the name in an emergency situation), and should add to community pride by promoting local heritage, history and traditions and reflect local geography and character.*
2. *Names with the same theme (i.e., flowers, states) are suggested for naming streets in an entire subdivision, as a means of general identification.*
3. *Historically used road names should be retained where possible.*
4. *Names tending to be confused as homonyms, having the same or similar pronunciation but with different spellings, are discouraged within a municipality, zip code, or emergency service zone area (e.g., Smith, Smyth or Smythe; Ellis or Allice; Allen or Alan).*
5. *Names which may be offensive (slang, double meanings, etc.) shall be avoided.*
6. *Use of frivolous or complicated words, or unconventional spellings in road names is discouraged.*
7. *Avoid sound-alike names (e.g. Bay View DR, Bayview DR or Brainard LN, Barnard LN).*
8. *Do not use special characters in road names such as hyphens, apostrophes or dashes.*
9. *Avoid the use of standard suffixes or directional suffixes or directional suffixes or prefixes as road/street names (e.g. North BLVD, Court ST, Avenue of Pines).*
10. *Avoid family names or individuals names, especially living persons and politicians.*

§ 73-6 **PREFIXES**

Directional prefixes will be used only when necessary, such as for distinguishing regions of a continuous road traversing several communities. A street may have no more than one directional prefix as follows: North, East, South, West. (North East Baker Street, for example, is discouraged.)

§ 73-7 **SUFFIXES**

The following are acceptable suffixes and the abbreviation should be used at all times.

Please see Insert 1 for the complete list of acceptable suffixes and where they can be used.

§ 73-8 **DUPLICATION OF STREET NAMES**

When naming new streets, duplication of names must be avoided within a

community, postal zip code and emergency service zone area. Sussex County Government will keep an updated list of the street names in the county to help prevent reuse of existing names.

If two or more streets in the same community, zip code or emergency service zone area have duplicate, or otherwise confusing names, the policy for Renaming Existing Streets must be considered. See Section 73-13.

A street name combination (prefix, primary name and suffix) should be used only once, and may not be used in any other alignment, within a community, zip code, or emergency service zone area (e.g. Jones Drive and Jones Circle; or West Jones Street and Jones Street West).

§ 73-9 **MULTI-MUNICIPAL ROADS**

Roads, which pass through, more than one municipality should bear the same name throughout the county wherever possible. Street and roadway name changes will only occur at street intersections.

§ 73-10 **NAMING NEW ROADS**

New streets will be named during the subdivision process. In case the requirements of an Incorporated Town subdivision ordinance contradict this policy, the more restrictive requirements will apply.

§ 73-11 **RESERVING NEW STREET NAMES FOR NEW DEVELOPMENT**

At the time of filing an application for subdivision, the developers or property owners shall submit to **Sussex County** Government a written request to reserve new street names, so that the names can be reviewed and approved to avoid possible duplication. Failure to do so will result in disapproval of the final map by the affected municipality.

Street name(s) become final upon recording of the final subdivision plan.

Street name(s) may be reserved for three years. If final recording of the preliminary subdivision plan does not occur within three years, a written request for a two-year extension of the street name reservation may be submitted to **Sussex County** Government. If such a request is not received, the name(s) will no longer be reserved.

Sussex County Government will review all subdivisions for conformance with this street naming policy at the time of preliminary plan review.

§ 73-12 **LENGTH OF NAME**

The following is the recommended character format for road/street names.

Prefix Directional 2 characters

Street Name 28 characters

Street Suffix up to 6 characters (must meet MSAG Standards)

Post Directional 2 characters

§ 73-13 **RENAMING EXISTING STREETS**

If an existing street needs to be renamed because of a duplicate name, or because of non-compliance with any other portion of this street naming policy, then the following procedures will be followed:

1. Eliminating Conflicting Street Names

In the case of two or more conflicting street names, **Sussex County** Government will use the following point system to recommend which street name should be changed. The street awarded fewer points should be changed.

POINT SYSTEM FOR RESOLVING STREET NAME CONFLICTS

<u>Condition</u>	<u>Points</u>
Older recognized name (if known)	1
Greater number of addresses	1
Arterial street	1
Historical relevance	1
Existing street signs	1
Relatedness of town/subdivision names	1

2. Notification of Conflict

Sussex County Government will notify the Incorporated Communities of a street name conflict. County Government will also provide an evaluation based on the point system listed above. Based on this evaluation, the County will recommend which street name should be changed. In the event of a tie, the Addressing Authority shall determine the street name to be retained.

3. Eliminating Conflicting Street Names

- a. Minor Streets - having 10 or less property owners
 - 1. Upon receiving the notification of conflict, the County officials shall determine which street is to be renamed.
 - 2. The County shall inform the property owners along the affected street of the need to change the street name and that the property owners may request an alternate name(s).
 - 3. Property owners have 30 days following the date of notification to provide street name requests to the County.
 - 4. The County shall select an alternate name for the street, and a second choice, giving preference to those names requested by the property owners, which meet standards established herein.

- b. Major Streets - having 11 or more property owners
 - 1. Upon receiving the notification of conflict, County officials shall determine which street is to be renamed.
 - 2. The County shall announce the need to change a street name at a County Council meeting within thirty (30) days of receiving the notification of conflict, and that the property owners may request an alternate name(s).
 - 3. Property owners shall then have thirty (30) days following the date of announcement to provide street name requests to the County.
 - 4. The County shall select an alternate name for the street, and a second choice within sixty (60) days from receiving the notification of conflict, giving preference to names requested by affected property owners, which meet standards established herein.

4. Alternate Street Name Review

Sussex County Government will review the name for compliance with the street name policy, and for duplication, and report acceptability to the requesting parties within 30 days of receipt of the request for name change. Second choice street names will be assigned if the first choice is not usable.

5. Notification of Name Change

Sussex County Government will notify the United States Postal Service (USPS), Delaware Department of Transportation (DELDOT), and emergency services of street name changes. The County will also notify the affected property owners.

§ 73-14 **STREET NAME CHANGE**

Currently there is a moratorium on all road name changes within Sussex County Addressing Jurisdiction. This moratorium will be lifted no sooner than 6 months after Sussex County reaches a 95% match rate between the Master

Street Addressing Guide (MSAG), and the Telephone Companies Automatic Location Identification (ALI) database. At that time this ordinance will be amended to include a process that will be followed for requests of road names to be changed.

§ 73-15 **EFFECTIVE DATE OF CHANGE**

Any street name change will become effective following expiration of a thirty (30) day period commencing from the date said change was authorized by the Community, or earlier at the discretion of the Community.

§ 73-16 **ADJACENT COUNTY COORDINATION**

Sussex County Government will coordinate road names and address numbers with adjacent counties so that road names and addresses at county boundaries are logical. Roads that traverse county boundary lines should have one name for the continuous length of the road. If road names change at county boundaries, they should change at a prominent landmark or intersection. Address ranges near county boundaries should also change at intersections or landmarks where feasible.

§ 73-17 **COUNTY ROAD NUMBERS**

A road with one county road number may have more than one road name if there are logical breaks in the road at which it is logical for the name to change.

§ 73-18 **PRIVATE LANES**

Private lanes, which are not owned or maintained by DELDOT, shall be named when there is more than one addressable building located on the road. See Sections 73-4, 73-21.3, 73-28.A.2.

ARTICLE III

STREET NAME SIGNS

§ 73-19 **INTRODUCTION**

*All public and private roads in **Sussex County** shall be identified by a sign and shall display the proper street name.*

§ 73-20 **DESCRIPTION OF SIGNS**

Street name signs shall be installed at all intersections; and shall comply in design, installation and maintenance, with the following requirements as outlined below.

Where possible existing street signs will be retained

1. Sign Color

The street name should be reflective or illuminated and of contrasting colors. (For example: green legend on a white background or black legend on a white background.)

2. Sign Height

Signs should be not less than seven feet above the top of the curb in business districts and not less than five feet above the ground in rural districts. The height from the ground to the bottom of a secondary sign mounted below another sign may be one foot less than noted herein.

3. Sign Placement

Signs should be placed with their faces parallel to the streets they name, as close to the intersection corner as practicable with the nearest part of each sign not less than one foot, and preferably two feet, back from both curb lines.

4. Sign Posts

Sign posts of signs erected inside a curb are not regulated. Signs that

are not posted behind a curb shall be of breakaway construction. Sign post material is not regulated.

5. Sign Letters

The street name shall appear in capital lettering at least six inches high. Supplementary lettering to indicate the type of street such as, ST, AVE, RD or directional information, such as N, S, NW may be in smaller lettering, at least four inches high.

6. In Lieu of Signs

The street name may also be placed in a vertical position on concrete or wood posts.

§ 73-21 RESPONSIBILITY FOR STREET NAME SIGNS

1. Existing Public Roads

Incorporated Communities and or DELDOT are responsible for fabricating and installing street name signs at the intersections of all existing public roads.

2. Existing Private Roads

Sussex County is responsible for fabricating and installing street signs at the intersections of all private streets.

3. New Public and Private Roads

*The subdivision developer shall be responsible for fabricating and erecting street name signs at the intersections of all new public and private roads. In new subdivisions, all street names must be approved prior to final subdivision approval. See **Sections** 73-4.2, 73-11, 73-12, 73-26.2.*

ARTICLE IV

ADDRESSING POLICY

§ 73-22 ADDRESSING AGENCY

The County shall establish and assign street address numbers in accordance with the guidelines set forth herein. All buildings used for residential, commercial, institutional or governmental purposes shall be provided with an address identifying the building.

§ 73-23 ADDRESSING METHODOLOGY

A. Frontage Interval/Grid Addressing System

The addressing system will be based on a on a grid/frontage interval system.

The address numbers will be 4 or 5 digits (depending on your location) and will be part of the Delaware State Plane coordinate system

The Frontage Interval Addressing System is based on the measurement of the intervals between the beginning of a road and the structures along the road. The frontage interval system will follow an interval guideline or measurement increments, which will yield approximately 528 possible address numbers per mile.

For each road in the county a starting address number will be obtained at the start point (intersection) of each road by the following approach (see also diagram 1):

- a) *Each road will be given a direction based on its overall meandering throughout the county. The direction will either be a road that transverses north – south or west – east. If the road is identified as a north – south road then the starting address value would be the last 5*

integer digits of the y value or the Northing value of the Delaware State Plane coordinate at that location. If the road is identified as a west – east road then the starting address value would be the last 5 integer digits of the x value or the Easting value of the Delaware State Plane coordinate at that location.

- b) Once the starting address number has been obtained the road will be divided into 20’ segments. Each 20’ segment of road will get an odd and even address number incrementally from its starting point. A perpendicular line is drawn from the structure to the road and the structure will acquire the address number of the 20’ segment of road that the perpendicular line intersects. It will acquire the odd or even address number depending upon which side of the road it is located on. If a structure cannot be given a point that is perpendicular to the road then the structure will be attached to the closest point on the road and given its 20’ segment address. An example of this is when a structure is accessed beyond the end of the road. This structure will receive the last address of the road.

The frontage interval system includes rules for the point of beginning of the road, the location of odd and even numbers along a road, the "take-off" point for semi-circular roads and numbering cul-de-sacs, numbering of diagonal roads, numbering of apartments and duplexes, numbering of businesses, trailer parks and stacked addresses.

The following list is a description of the generally acceptable numbering standards.

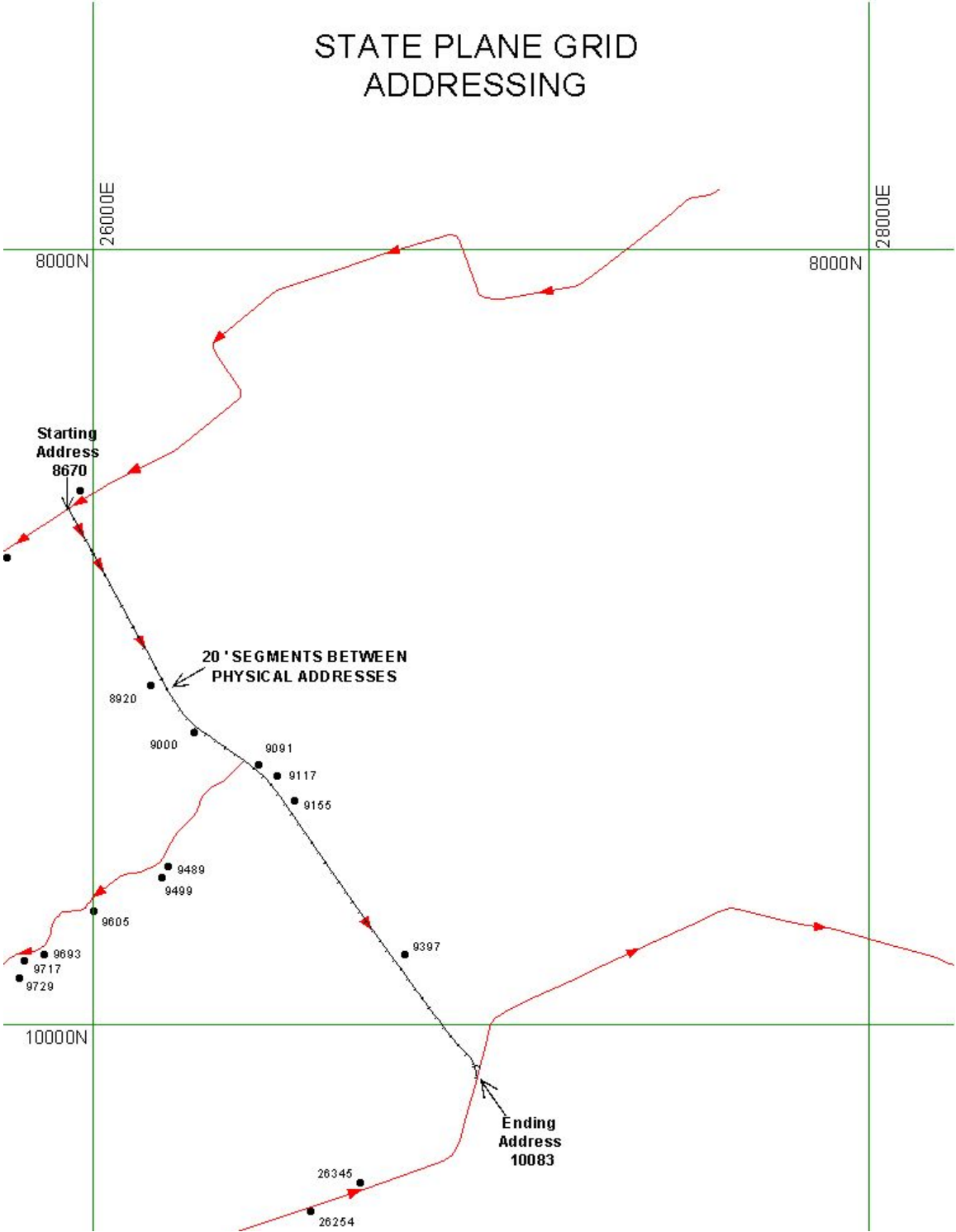


Diagram 1

1. The Frontage Interval

Assign numbers every (20 feet) or approximately each 1/264 mile. This will yield approximately 528 numbers per mile, 264 odd on one side and 264 even on the other side.

2. Odd/Even Number Location

Assign even numbers on the right side, from the point of beginning, and odd numbers on the left side, from the point of beginning. This may be reversed to conform to existing addresses.

3. Beginning Point

Numbering should begin at the West beginning point and proceed eastward or at the South beginning point and proceed northward. In the case of a dead-end road, the beginning point will be at the point of departure from the main road, regardless of direction. See [Section 73-28.8](#).

4. Fractional, Alphanumeric, Hyphenated Addresses

There should be no use of fractional addresses, alphanumeric address numbers, nor hyphenated address numbers (e.g. 34 1/2 Ash St, 123A Main St, 41-656 Bell St).

Rules one through four shall apply unless you are continuing a city numbering scheme, as in leaving a city or subdivision where other numbers are being used. In this case, the existing system in place will dictate the beginning, odd/even number. See [Section 73-23.10](#), [73-23.14](#).

Recommendations for specific numbering situations are below. The general logical order of address elements should follow United States Postal Service (USPS) conventions: road number, pre-directional (if any), primary road name, suffix, post-directional (if any), and secondary number (if any) (e.g. 110 S Main St, Apt 304).

5. Bridges

In the future, bridges may be numbered to identify them for purposes of references, just as houses.

6. Diagonal Streets

Diagonal streets should be treated as either north-south or east-west streets. Arbitrary decisions on the direction are acceptable, but the primary direction should be chosen.

7. Circular Streets

Circular streets and roads begin at the low numbered intersection and are numbered with the even numbers on the inside of the circle. The outside of the circle is numbered first and consecutively. The inside is then numbered to match and mix with the outside. This will result, in some cases, in fewer numbers on the inside of the circle, and also with spaces between the numbers.

8. Cul-de-sacs

Cul-de-sacs often require applying the rules for both dead-end streets and circular streets. Those without buildings in the center portion should be numbered as if the center line of the street bisects the cul-de-sac. The numbering begins from the intersection of the main road and ascends toward the cul-de-sac. Once in the cul-de-sac the numbers proceed odd around the left side of the circle and even around the right side of the circle progressing in the direction that the numbers increase. Odd and even numbers meet at mid-point or the back of the cul-de-sac.

On rare occasions there may be structures inside the cul-de-sac. When this occurs, number the structure or structures in the way that will fit best. Generally there are no houses in the middle ground.

9. Corner Lots

When assigning numbers to corner lots, use the driveway. When the driveway is obscured or if the structure is best reached for emergency purposes by the front door, assign the property number based on where the front door falls on the road.

10. Crossing County Lines

When crossing county lines, consideration will be given to an existing numbering system in that county. If no system exists, the numbering will stop at the county line. If a system does exist in that county, those numbers may continue, following these rules for distance and direction.

11. Stacked Addresses

Houses or trailers behind other houses or trailers facing the road, sharing a common driveway, should be numbered following the rules for distance and direction herein. Use of a hyphenated, alphanumeric or fractional number is discouraged (e.g. 254A, 254 ½, or 254-3). See [Section 73-23.4](#).

12. Apartments and Duplexes

Apartments and other multi-tenant structures should be numbered with the main building and then assigned apartment numbers as secondary location indicators (e.g. 202 Main St, Apt 303). If possible, use apartment numbers to indicate the floor location (e.g. Apt 303 is the third apartment on the third floor). If a building has a separate entrance for each unit, then each entrance will receive an address.

13. Businesses

Businesses and business districts should be numbered just as apartments, with the middle of the building determining the number and the offices or businesses in the building being numbered as suites (e.g. 225 Oak Dr, Suite 34). This rule may also be applied to "office parks" where each business has its own small building. See [Section 73-18](#).

14. Interfacing With Existing Systems

When interfacing with existing numbering systems, care should be taken in locating the last assigned number of the existing system. All possible sources should be checked to determine the last number.

15. Mobile Home Parks

Mobile home parks should be addressed the same as single family dwellings with all roads being named, and following the rules for distance and direction herein (e.g. 45 Forest Ln).

16. Highways

Highways with no numbering system in place or where the system is to be changed will be numbered from county line to county line, following the rules for distance and direction herein.

17. Structures

When assigning numbers, the middle of the structure should determine the address assigned. Structures should always be numbered according to where the driveway enters the road, not where the mailbox is. An exception to this is when the structure is obscured or if the structure is best reached for emergency purposes by the front door. In such cases, the address should be assigned where the front door falls on the road. See also [Section 73-23.9](#).

18. Preplanning Subdivisions

*New subdivisions will require street naming and address assignments to the lots prior to final approval. **Sussex County** Government must review the plan for compliance with the various sections of this policy,*

*as they relate to street naming and the assignment of address numbers. **Sussex County** Government must sign-off on this portion of the subdivision plan. See **Sections** 73-4, 73-21.3, 73-26.2. Pre-planning requires that corner lots be numbered in two directions, since it is unknown which way the houses might face on the lot. See Section 73-23.9.*

§ 73-24 EXEMPT BUILDINGS AND USES

The following buildings and uses will be exempt from the addressing system, but may be addressed at the request of the property owner.

- 1. Farm buildings which are not residential or commercial*
- 2. Accessory buildings which have uses that are accessory to the primary use of a residential, commercial, industrial, institutional, or governmental buildings.*
- 3. Unoccupied farm land or lots containing no dwelling(s) or businesses*

73-25 CHANGING ADDRESS NUMBERS

If an address number is changed for any reason, the County shall be responsible for changing the address number.

When such a change is made, the County shall notify the building owner to make the change, and the County will notify the United States Postal Service (USPS), and emergency services.

The owner of the building shall change the posted address numbers within thirty (30) days of receipt of such notice. The resident of the building will be responsible for notifying all suppliers and others of the address change.

§ 73-26 ADDRESSING NEW CONSTRUCTION AND DEVELOPMENT

1. Building Permit Requirements

Prior to beginning new construction, property owners shall submit an application for a building permit. When the building permit is issued an address will be assigned and mailed to the address submitted on the building permit.

2. Subdivision Requirements

No residential, commercial or industrial subdivision or land development shall be approved or recorded unless the street name(s) have been assigned. Addresses will be assigned immediately after the subdivision is recorded.

§ 73-27 RESPONSIBILITY FOR DISPLAY OF ADDRESS NUMBERS

No Certificate of Occupancy shall be issued until the assigned Property number has been displayed in accordance with the requirements of this ordinance.

It shall be the responsibility of each and every property owner, trustee, lessee, agent and occupant of each residence, apartment building, business or industry to purchase, post and maintain address numbers as required under this policy at all times.

It shall be the duty of the above mentioned, upon affixing a new address number, to remove any conflicting number.

It shall be unlawful to cover any address number with any sign, drapery, or other obstruction tending to conceal such number.

§ 73-28 SIZE AND LOCATION OF STREET ADDRESS NUMBERS

A. All address numbers must be displayed on a contrasting background and must be reflective.

1. Residences, Townhouses and Businesses

It shall be the duty of each and every property owner, trustee, lessee, agent and occupant of each resident, apartment building or business to display the assigned address number according to the guidelines set forth herein. The address shall be made up of numbers and letters that are light reflective and contrasting in color with the background on which they are affixed and shall be posted according to one of the two following methods:

(a) On the mailbox using 3" light reflective numbers and/or letters provided the address is clearly visible from both sides of the street or road it is located on and clearly identifies the structure the address belongs to. If the mailbox is not located directly in front of the property it is addressed to, or if multiple mailboxes are grouped together, a sign can be placed on the property in a location which clearly identifies which structure it belongs to or

(b) On the structure itself using 4" light reflective numbers and/or letters provided the address is posted on that portion of the structure that is most visible from the road or street the structure is located on and it clearly identifies the structure the address belongs to.

Whichever method is chosen, the address must clearly identify which structure the address belongs to and must be visible from both sides of the street or road the structure is located on or is closest to during both day and night time hours.

2. Private Lane and Long Driveways

If any residence, apartment building or business (except malls or shopping centers) is located so that the address number is not clearly visible from the street, an additional address number shall be posted at the intersection of the driveway with the public street. The additional address number shall be made up of numbers and/or letters which are not less than four inches in height, reflective, contrasting in color with the background on which they are affixed, visible day or night, and placed upon a post or other structure which displays the number at least forty-eight inches above the ground. The property owner is responsible for the installation of these additional sets of address identifiers.

3. Industrial and Commercial Structures in Low Density Areas

All industrial and commercial structures located in low density development areas, (areas in which small residential style address numbers are not visible from the road), shall display address numbers of not less than ten inches in height. The number shall be reflective, contrast in color with the background on which it is affixed and shall be visible day or night, from the street. When possible, the number shall be displayed beside or over the main entrance of the structure.

4. Apartment Buildings and High-rises

All apartment buildings and high-rises shall display address numbers above or to the side of the primary entrance to the building. Address numbers shall be reflective, contrast with the color of the background to which they are affixed, and shall be at least six inches in height to be visible day or night from the opposite side of the street facing the main entrance.

Apartment numbers for individual units within the complex shall be displayed on, above, or to the side of the doorway of each unit.

5. Bridges

In the future, and if this policy is amended, all bridges shall have displayed address numbers of not less than six inches in height, reflective, contrasting in color with the background on which they are affixed, visible day or night, and placed upon a post or other structure which displays the number at least forty-eight inches above the ground. Addresses shall be placed at each end of the bridge.

§ 73-29 **NOTICE TO COMPLY**

County officials and county employees should be authorized to enter upon private property for the purposes of inspection and to give notice by personal service or by certified mail to persons in violation of this policy directing them to abate the situation within thirty (30) days after issuance of such notice.

ARTICLE V

ENFORCEMENT

- A. *Enforcement of the penalties contained in this section of this Ordinance shall begin 18 months following the adoption of this ordinance. During the period between the date of adoption and the beginning date of enforcement, the County Mapping and Addressing Office shall inform the public of the adoption of the Ordinance, the requirements thereof, the consequences for failure to comply with the Ordinance and the date on which the County will begin to enforce the penalties for failure to comply.*

In the event any person, corporation or other legal entity shall violate the requirements of this Ordinance, the County or its designee shall take the following action regarding such violation.

1. *The alleged violator will be notified, in writing, of the portion or portions of the Ordinance they are alleged to have violated and all of the requirements necessary for them to complete in order to comply with the terms of the Ordinance. Such notice shall be sent by certified mail, return receipt requested to the person or entity at the address listed in the County tax records. If the violation is not resolved to the satisfaction of the County within fifteen (15) calendar days following receipt of said written notice, the violator shall be charged with a violation of the Ordinance and shall be assessed a fine in the amount of 50.00. A notice of the assessment of the fine shall be sent to the violator by certified mail, returned receipt requested at the addressed set forth in the County tax records.*
2. *If the violator has not complied with the requirements of the Ordinance within two (2) calendar weeks from the date of the letter notifying them of the assessment of the fine and the steps required to comply, an additional fine of \$100.00 per day shall be assessed beginning on the fifteenth day following receipt of notice sent by mail, returned receipt requested. Wherever notice is provided herein to be made by certified mail – return receipt requested, the County may elect, at its option, to deliver the notice by hand delivery to one of the property owners or another adult person in or upon the property at the time of the delivery. If and when a fine of \$100.00 per day begins to accrue it shall continue to accrue at that rate until the violation of Ordinance has been cured and the property is in compliance with this Ordinance. A properly authenticated photograph of the subject property, showing the absence of the information required by this Ordinance shall be considered sufficient proof of non-compliance in any enforcement action.*
3. *Fines and penalties assessed for a violation of the Ordinance shall be considered civil penalties and any action brought for the recovery of the penalties by the County shall be brought in the Justice of the Peace Courts under the jurisdictional statute contained in Title 10, Delaware Code, §9301.*
4. *In addition to the fines and penalties set forth in this section of the Ordinance, a person adjudged to have violated the terms of the Ordinance shall, in addition to any fines and penalties assessed, pay all court costs and assessments levied by the Justice of the Peace Courts.*

ARTICLE VI

EXECUTIVE SUMMARY OF RESPONSIBILITIES

§ 73-30 **COUNTY OFFICIALS**

County officials are responsible for:

1. *Assigning names to all public roads in compliance with the guidelines established herein*
2. *Resolving road name duplications within a community, zip code or emergency service zone area*
3. *Having a subdivision ordinance requiring that the applicant have approved street names for all proposed roads prior to receiving final subdivision approval and to enforce this ordinance*
4. *Passing ordinances to adopt names for all roads within the County*
5. *In the case that a street name must be changed, the County officials will inform property owners along the street, as described in **Section** 73-13.3.A., 73-13.3.B.*

- 6. *Fabricating and installing street name signs at the intersections of all existing private roads*
- 7. *Maintaining street name signs at the intersections of all existing private roads*
- 8. *County officials will have the responsibility for entering onto private property for the purpose of notifying persons who are in violation of this ordinance.*

§ 73-31 SUSSEX COUNTY GOVERNMENT – ADDITIONAL RESPONSIBILITIES

Sussex County Government shall also be responsible for:

- 1. *Administering this ordinance*
- 2. *Maintaining a countywide database of street names*
- 3. *Reviewing subdivision requests for conformance with this policy*
- 4. *Reviewing requests for street name changes for compliance with this policy*
- 5. *Reserving names for proposed development as set forth herein*
- 6. *Notifying the United States Postal Service (USPS), Delaware Department of Transportation (DELDOT) and emergency services of street name changes*
- 7. *Coordinating street names and address ranges with adjacent counties*
- 8. *Establishing, assigning and when necessary, changing address numbers in accordance with this policy.*

§ 73-32 UNITED STATES POSTAL SERVICE

The United States Postal Service (USPS) is responsible for:

- 1. *Maintaining a dual addressing system, delivering mail addressed to either address for a time period in accordance with their regulations*
- 2. *Maintaining a database of addresses as notification of address changes are received from the county*

§ 73-33 PROPERTY OWNERS AND RESIDENTS

Each and every property owner, trustee, lessee, agent and occupant of each residence, apartment building, business, industry or institution is responsible for:

- 1. *Purchasing, posting and maintaining assigned address numbers in conformance with the guidelines set forth herein*
- 2. *Removing old address numbers when new numbers are posted*

§ 73-34 DEVELOPERS

Developers shall be responsible for:

- 1. *Obtaining approval for street names prior to receiving final approval of subdivision applications*
- 2. *Purchasing and installing road name signs for all new roads*

ARTICLE VII

SOURCE GUIDES¹

- A. *The suffix chart attached as Attachment 1.*
- B. *The National Emergency Number Association’s book Addressing Systems: A Training Guide for 9-1-1, 1995, ISBN 1-883119-18-9.*
- C. *The United States Postal Service publication: Addressing Conventions, July 1989, filing number DM-940-89-03.*
- D. *The United States Postal Service publication: Postal Addressing Standards, August 1995, Publication 28.*

¹ Any addressing issues not addressed in this ordinance will be resolved using the standards recommended in the above referenced publications.



ATTACHMENT 1
Thoroughfare (Suffixes) Uses



Federal & State Highways 4 lanes or more (Arterial)

THOROUGHFARE	ABBREVIATION
BOULEVARD	BLVD
BYPASS	BY
FREEWAY	FRY
GATEWAY	GTWY
HIGHWAY	HWY
PARKWAY	PRKWY

County Roads that are State Maintained (Collector)

THOROUGHFARE	ABBREVIATION
AVENUE	AV
CROSSING	CRSG
EXTENSION	EXT
FERRY	FERRY
ROAD	RD
STREET	ST
WALK	WALK
WAY	WAY

Local Roads

State and Privately Maintained Subdivisions & Named Private Drives

THOROUGHFARE	ABBREVIATION	THOROUGHFARE	ABBREVIATION
ALLEY	ALY	MALL	MALL
BRANCH	BR	NECK	NECK
BOARDWALK	BLK	ORCHARD	ORCH
CIRCLE	CIR	PATH	PATH
COURT	CT	POINT	POINT
COVE	COVE	ROAD	RD
CROSSING	CRSG	SHORE	SHORE
DRIVE	DR	SQUARE	SQ
DRIVEWAY	DRWAY	STATION	STAT
HARBOR	HBR	STREET	ST
INLET	INLET	TERRACE	TER
LANDING	LNDG	WALK	WALK
LANE	LN	WAY	WAY
LOOP	LOOP		

Other suffixes not listed may be considered at the discretion of the County providing they meet valid street suffix abbreviations, as defined by the Master Street Addressing Guide (MSAG) official suffix guidelines.

ALL streets must have a suffix.

Contact: Sussex County Mapping & Addressing
2 The Circle
Georgetown, DE 19947

I DO HEREBY CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT COPY OF ORDINANCE NO. 1800 ADOPTED BY THE SUSSEX COUNTY COUNCIL ON THE 25TH DAY OF OCTOBER 2005.

ROBIN A. GRIFFITH
CLERK OF THE COUNCIL