

The City of Columbus, Department of Public Safety

GIS Street Centerline Committee Report

Presented to:

Mitchell J. Brown, Director of Departments of Public Safety

Gary R. Cavin, Director of Department of Technology

October 7, 2005

A report on the accurate and timely maintenance of GIS
street centerline data within the City of Columbus,
Franklin County and surrounding areas



Lt. Charles W. Legg, Jr.
Columbus Division of Fire
Chairperson, GIS Street Centerline Committee

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City of Columbus
Mayor Michael B. Coleman

October 12, 2005

Mitchell J. Brown
Director Department of Public Safety

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Directors,

Under the authority of Gary Holland, Deputy Director of the Department of Public Safety, a committee consisting of representatives from the Departments of Public Safety, Public Service, and Technology was formed in June of 2005, to investigate and make recommendations as to how best to maintain the GIS street centerline data for Public Safety's 911 dispatch system for Fire and Police.

The attached report contains those findings and recommendation as put forth by the committee. In general, the committee recommends:

1. That the GIS position currently held by a consultant (Nick Soltes) become permanent.
2. That addressing authorities in each jurisdiction should maintain their own street and addressing data and send that data to their respective counties.
3. That a Franklin County based organization, such as MORPC or CARDA, be approached to coordinate all GIS street data within the Central Ohio region.
4. That the draft documents created by the committee concerning GIS data sharing standards and terms be adopted by the agency who ultimately takes ownership of the GIS data sharing repository.
5. That the City of Columbus Department of Technology be the authoritative central Ohio GIS repository of collected street and address data and that the collected data is shared with all Central Ohio agencies requesting the GIS data.
6. That a clear understanding is established between the Departments of Technology and Public Safety as to which GIS services (i.e. as street centerline and address data) the Department of Technology offers as a citywide shared service and those specifically used by Public Safety and therefore open to intra-department charge-backs.

Respectfully Submitted,

Lt. Charles W. Legg, Jr.
GIS Street Centerline Chair Person
Fire Information Technology Coordinator
Department of Public Safety, Division of Fire

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Introduction

In an effort to meet the State of Ohio standards of phase II wireless 911 for the City of Columbus, the Department of Public Safety recently upgraded the computer aided dispatching (CAD) system located at 1250 Fairwood Avenue. As part of this upgrade, a geographical information system (GIS) based street centerline model has replaced the existing proprietary text-based street addressing database model that the CAS system has used since its inception. The GIS based (geo-based) system plots a cell phone location against a coordinate system of latitude and longitude, thus revealing the location of the cell phone. To be effective all streets, address, and response zones must use the same coordinate system.

In the past the Police 911 communication technicians and uniformed Fire personnel jointly provide the maintenance of the text based street/address database, which is an integral part of the CAD system as developed by Public Safety Systems Incorporated (PSSI). Varied sources provide corrections and new street/address information, which the above personnel enter into the system.

With the advent of the new geo-based CAD system and its base requirement of a GIS street/address layer, the question of whom and how this data should be developed and maintained surfaced. These questions were topic of letters written by Police Chief Jackson and Fire Chief Pettus to Safety Director Brown in May of this year.

At Deputy Director Holland's request, a committee assembled in June of this year of stakeholders from the Divisions of Fire, Police, Communications, and Department's of Technology and Public Service, and a representative from 911 of Franklin County. The committee's charge from Deputy Directory Holland was to resolve these questions and deliver recommendations in the form of a report to Public Safety Director Brown and Technology Director Cavin. This report is the results of the committee's findings.

The Dilemma

As stipulated in the letters sent to Director Brown, Public Safety's 911 Communications Center must have a reliable and accurate GIS based street centerline layer for the new CAD system to work correctly to determine wireless 911 calls from cell phones capable of delivering global positioning system (GPS) data to the SBC 911 public safety answering points (PSAPs). The question raised is who will maintain this GIS layer and what will be the procedure to add new and maintain current streets, both in and outside the corporation limits of the City of Columbus.

Since the advent of the Visual Information System Integrating Our Neighborhoods (VISION) project in 1994, the City of Columbus has attempted to maintain a central repository of street centerline data as part of the Citywide GIS system. The Department of Technology (DoT) strongly suggests that the street-centerline data-layer residing on the City's GIS repository be the street centerline data for CAD.

However, the City Map Room, within the Division of Transportation and under Public Service, has the responsibility of assigning and validated streets and address within the City's corporation

limits but does not currently maintain the central repository data. This task is the responsibility of a DoT contract employee (Nick Soltes), who is under a temporary consulting contract with the Technology Department to work on GIS related projects, one of which is the maintenance of the City's GIS repository.

In addition, the Division of Fire, and to some extent Police, often respond beyond the City's corporation limit and depend on accurate street and addressing beyond the city limits of Columbus. The assurance of timely and accurate maintenance of surrounding municipality, township, and contiguous county streets is in question as the Map Room's main concern is with those streets within the corporate limits of the Columbus.

The GIS Street Centerline Committee

The committee appointed by Deputy Director Holland met the first week in June of 2005. The first business of the committee was the creation of a charter (see Appendix) that outlined the mission, purpose and objectives of the committee.

The mission of the GIS Street Centerline Committee is to create recommendations to ensure that the City's 911/CAD system will have accurate and up to date GIS street centerline data for the resolution of emergency response of Police and Fire assignments. The accomplishment of this mission is to ensuring the GIS street centerline data located on the City's GIS repository represents accurate street and address data within and outside the City of Columbus.

The purpose of the GIS Street Centerline Committee is to deliver recommendations as to how best to resolve the current dilemma of areas of responsibility and the maintenance of the City's GIS street centerline data's repository. The accomplishment of this purpose is to meet the following objectives:

1. Determine who is directly responsible for the ownership and maintenance of the GIS street centerline data layer encompassing the areas inside the corporation limits of Columbus Ohio.
2. Determine and establish guidelines and procedures to ensure street centerline data inside the City's corporation limit are updated in a timely and efficient Manner.
3. Determine who is directly responsible for the ownership and maintenance of GIS street centerline data layer encompassing the areas outside the corporation limits of Columbus Ohio.
4. Determine and establish guidelines and procedures to ensure street centerline data outside the City's corporation limit are updated in a timely and efficient manner.
5. Determine costs associated with implementing these objectives and identify funding mechanisms to cover those costs.

Active members on the committee were:

Department of Public Safety, Division of Fire:

Lt. Charles Legg (Chairperson), Battalion Chief Wesley Fullen,
Firefighter Frank Helenberger and Firefighter Darylee Foertsch

Department of Public Safety, Division of Police:

Lt. Ramona Patts

Department of Public Safety, Division of Support Services:

Bill Griffith

Department of Technology

Bill Wight and Carl Klein

Department of Public Service, Public Service Map Room:

Rick Garrabrant, 645-6391

Columbus Health Department

Jerry Pettit

Franklin County

Franklin County 911 Coordinator: Ken Borrer

Franklin County Auditor's Office: Fred Buttle and Vince Cerasini

The committee met on June 9, June 22, July 21 and August 11 of 2005. Please see minutes in the Appendix for meeting details. In addition, a sub-committee, chaired by Battalion Chief Wesley Fullen, convened separately and authored the two documents submitted with this report; *The Central Ohio GIS Cooperative Data Sharing Agreement* and the *Proposed Central Ohio Street Centerline Standard*.

Committee Findings

Addressing the five objectives of the committee charter, the following conclusions were drawn:

- (1) Committee members determined that the Department of Public Service, Division of Transportation (i.e. the "City Map Room") has ownership of all street centerline and addressing data within the City's corporation limits and is directly responsible for the collecting and maintaining of that data. In addition, the committee determined that the Department of Technology is directly responsible, for the time being, for entering data maintained by the Division of Transportation, into the citywide GIS street centerline data repository. This task is the responsibility of a contract employee (Nick Soltes), who is under a temporary consulting contract with the Department of Technology to work on GIS related projects, one of which is the maintenance of the City's GIS repository.

- (2) Committee members determined that currently there are no published procedures for the regular maintenance or timely updates of street centerline data within the corporation limits of the City of Columbus.
- (3) Committee members determined that at the current time no single agency or group is directly or officially responsible for ownership or the maintenance of street centerline data outside the City's corporation limits. However, the Franklin County Auditor's Reciprocal Data Agreement (CARDA) group has been collecting and coordinating general GIS street centerline data within Franklin County for some time and may be willing to act as the official agency for the sharing of GIS street centerline data for the central Ohio area. In addition, the Mid-Ohio Regional Planning Commission (MORPC) has a high level of visibility within the central Ohio area and should also be approached as a possible coordinating agency
- (4) Committee members determined that currently no official guidelines or procedures are in place to ensure the timely and accurate updating of GIS street centerline data outside the corporation limits of the City of Columbus exist. The committee drafted, under the guidance of the Department of Technology, the document *Proposed Central Ohio Street Centerline Standard*, that can be used as the City and regional data definition standard for the sharing and storing of GIS spatial data such as street centerline and addressing data. In addition, the committee drafted a second document, *The Central Ohio GIS Cooperative Data Sharing Agreement*, which suggests a methodology and provides a set of ground rules for the sharing of GIS street/address data between government agencies within central Ohio.
- (5) Committee members found that the cost associated with implementing a system for maintaining street centerline data within and outside the corporation limit of the city is vague. The individual (Nick Soltes) who is entering GIS street centerline data under the direction of the Department of Technology, is working under a contract, the funding of which is only secure until the end of the year.

The coordination of many jurisdictions outside the city limits is required to assure accurate street and addressing of those areas. Therefore, it is difficult to estimate the costs involved in creating an agency to coordinate the addressing and street data from such a variety of outside agencies.

In addition, there are hardware cost associated with storage of GIS data on servers and software costs associated with GIS software and utilities.

Committee Recommendations

- (1) The committee recommends that the position currently held by Nick Soltes become permanent. This assures that the Department of Technology continues to enter street centerline data, at least within the City limits and possibly outside those limits, in an accurate and timely manor. This may be accomplishment in one of two ways.

As a short-term solution, the onsite contract with the current consulting company that provides the services (Nick Soltes) be extended an additional year. This extension will cost approximately \$104,000 annually, based on 50.00 per hour charge.

An alternative and long-term solution is to create a GIS Technician position within the Department of Technology. This will cost approximately \$35,651 - \$53,476 annually (\$17.14 - \$25.71 per hour) depending on the skill level required. In addition, there are associated PERS and benefit costs. In either case, there is an additional cost of a new high end PC and GIS software, approximately \$4,500.

Furthermore, the committee recommends that the City of Columbus create procedures to assure the accurate and timely maintenance of GIS street centerline and addressing data for all streets and addresses within the corporation limits of the City of Columbus. The Departments of Public Safety, Public Service and Technology need to establish these procedures as soon as possible.

- (2) The committee recommends, as a long-term solution to maintaining street centerline data outside the City of Columbus, that the addressing authorities in each jurisdiction maintain their own data and send that data to their respective counties.

In the City of Columbus, the Public Service Map Room maintains the addressing and street data within jurisdictional boundaries of Columbus; therefore, the Map Room would maintain data and supply that data to Franklin, Delaware and Fairfield Counties. The counties would then append all of the source data for their counties into a countywide file. The City of Columbus would collect the countywide files, append them into a single addressing data file for central Ohio, and post this data on the Internet for downloading. In this scenario a spatial data administrator, hired by the Department of Technology and assigned to the Department of Public Safety, would maintain the data on an as needed basis.

In the event that the county is unwilling to collect and append jurisdictional street centerline data, a Department of Technology spatial data administrator could perform the collecting and appending of the data. This individual would handle the spatial extract, transfer and loading (SETL) of all repository data including street centerlines, address points and other layers required by the geo-based CAD. Although the job class for this new position is uncertain, the position of Information Systems Analyst or GIS Analyst and Programmer Analyst appears to be the closest fit. Both are pay grades 57, and receive \$44,720 to \$67,100 annually (\$21.50 to \$32.25 per hour) plus PERS and benefit costs. Alternately, the Department of Public Safety could hire a GIS Technician (\$35,651 - \$53,476 annually, \$17.14 to \$25.71 per hour plus benefits) to perform the street centerline GIS work fulltime within only Public Safety.

- (3) The committee recommends that the City of Columbus approach either the Franklin County Auditor's Reciprocal Data Agreement (CARDA) group or the Mid-Ohio Regional Planning Commission (MORPC) to investigate the possibility that their agency take ownership of *The Central Ohio GIS Cooperative Data Sharing Agreement* (see Appendix) drafted by the sub-

committee chaired by Battalion Chief Wesley Fullen. The committee believes that only a regional authority, such as Franklin County or MORPC, can coordinate street and address information collection in an authoritative but non-threatening manner. The committee emphasizes that the governing body and the keepers of the data do not need to be one in the same. The collected data would be of value to all Central Ohio emergency 911 dispatching centers, not just the City of Columbus.

[Received the following communication from Ken Borrer on September 15, 2005:

I sent FC Auditor Joe Testa a letter on August 18, 2005, requesting his office be the countywide repository for the GIS and maintain it. Today I received a reply from him and he says:

"It is in our mutual interest ...to confirm our commitment in staff time and resources to your emergency response mapping needs"

"In the spirit of our CARDA agreements we will continue to provide and maintain our base map adding other data sets such as this for our use and distributed without charge to all CARDA members"

"Resources are currently being applied to this effort and you should see a preliminary version of the dataset in the very near future"

I have a meeting today with Vance Cerasini and Bill Wight today to discuss this & finalize plans -- Ken Borrer]

- (4) The committee additionally recommends that whichever agency take ownership of the data sharing agreement, that they adopt the *Proposed Central Ohio Street Centerline Standard* (see Appendix), as the template for the sharing of that GIS data. The committee also recommends that whoever adopt the *Central Ohio GIS Cooperative Data Sharing Agreement*, that they include a cover letter for the document that minimizes the legal look and feel of the document.
- (5) The committee further recommends that the City of Columbus GIS data repository become the authoritative central repository of the collected data and that the data be shared with all those Central Ohio agencies requiring the information. This includes public access to public non-sensitive street/address information and that the data is available as a zipped shapefile download on the City's Internet. There may be some costs associated with this recommendation, but they should be minimal. The exception would be hardware and software costs the City of Columbus may incur if the City hosts the shared data on our GIS servers. The committee believes that the value of having accurate and timely GIS street/address data for the public's safety, both within and surrounding the City of Columbus, would off-set those costs.

- (6) In conclusion, there must be a clear understanding between the Department of Technology and the Department of Public safety as to which GIS services the Department of Technology offers as citywide services and those specific to the Department of Pubic Safety.

The primary mission of the Department of Public Safety is the protection of life and property of the citizens and visitors of Columbus and while Public Safety understands that fiscal responsibilities are required to fund GIS projects and endeavors, an accurate and up-to-date street centerline layer will benefits not only Public Safety, but the City as a whole. Therefore, all city agencies should share in the fiscal support of the GIS street centerline layer.

The Department of Public safety also relies on mission critical data maintained by other city agencies, such as hazardous materials locations (Health Department) and fire hydrant repair status (Public Service, Division of Water). While these layers are not under the direct control of Public Safety, they are vital to the mission of Public Safety. Therefore, there needs to be additional understanding of the importance of these layers to Public Safety and agreements made with the maintaining agencies to assure the timely maintenance and accessibility of that information for Public Safety's user in carrying out its mission.

This concludes the recommendations of the GIS Street Centerline Committee. The chair would like to thank all those who took of their time to attend meetings and research sources and information for this report.

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Appendix

Charter GIS Street Centerline Committee

The Central Ohio GIS Cooperative Data Sharing Agreement **Draft**

Proposed Central Ohio Street Centerline Standard **Draft**

Minutes of Committee Meetings

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City of Columbus

GIS Street Centerline Committee

Charter

This charter of the geographical information systems (GIS) Street Centerline Committee is created under the authority of Gary Holland, Deputy Director of the Department of Public Safety.

MISSION

The mission of the GIS Street Centerline Committee is to create recommendations to ensure that the City's 911/CAD (Computer Aided Dispatching) system will have accurate and up-to-date GIS street centerline data for the resolution of emergency response of Police and Fire assignments.

This mission is to be accomplished by ensuring GIS street centerline data located on the City's GIS repository represents accurate street and address data within and outside the City of Columbus.

PURPOSE AND OBJECTIVES

The purpose of the GIS Street Centerline Committee is to deliver recommendations as to how best to resolve the current dilemma of areas of responsibility and the maintenance of the City's GIS street centerline data's repository.

This purpose shall be accomplished by meeting the following objectives:

1. Determine who is directly responsible for the ownership and maintenance of the GIS street centerline data layer encompassing the areas inside the corporation limits of Columbus Ohio.
2. Determine and establish guidelines and procedures to ensure street centerline data inside the City's corporation limit are updated in a timely and efficient Manner.
3. Determine who is directly responsible for the ownership and maintenance of GIS street centerline data layer encompassing the areas outside the corporation limits of Columbus Ohio.
4. Determine and establish guidelines and procedures to ensure street centerline data outside the City's corporation limit are updated in a timely and efficient manner.
5. Determine costs associated with implementing these objectives and identify funding mechanisms to cover those costs.

COMMITTEE GUIDANCE

The GIS Street Centerline Committee will be self-governing and establish its own rules and other procedures consistent with this Charter. The committee shall meet on a regular basis determined by committee members in order to accomplish the purpose and objectives as set forth in this Charter. An interim report of the committee's activities shall be delivered to Deputy Director Gary Holland every two weeks, beginning June 15, 2005. A final report outlining findings and recommendations will be presented to Public Safety Director Mitchell Brown and Technology Director Gary Cavin no later than the close of business, August 1, 2005.

PARTICIPANTS

Initial members of this committee shall consist of representatives from the following agencies:

Department of Technology

- Carl Klein, 645-6389
- Bill Wight, 645-5390
- Bill Rogers, 645-0776

Department of Public Safety

- Lt. Charles Legg, 645-4643, Fire Division
- Lt. Ramona Patts, 645-4533, Police Division
- Bill Griffith, 645-7344, Support Services Division

Department of Public Service

- Rick Garrabrant, 645-6391

Franklin County

- Ken Borrer, 475-8892, Franklin County 911 Coordinator

Additional members may be assigned by committee members as needed.

PARTICIPATION

Committee members will be responsible for information gathering and the formulation of recommendations to resolve the objectives as set forth in this charter. Upon approval of the GIS Street Centerline Committee, information gathered and recommendations suggested will be made available to the Director of Public Safety, Mitchell Brown and the Director of Technology, Gary Cavin, in the form of a written report authored by the committee.

Any GIS Street Centerline Committee member that wishes to no longer participate in the GIS Street Centerline Committee should notify the committee Chair in writing within a reasonable time period. Committee members who wish to delegate meeting attendance to individuals other than themselves shall do so with the understanding that this does not relinquish their obligation to this committee.

CHAIR

The Chair of the GIS Street Centerline Committee, as assigned by the Deputy Director Gary Holland of the Department of Public Safety, is Lt. Charles Legg of the Division of Fire.

The Chair shall preside over all meetings of the GIS Street Centerline Committee. The Committee may replace the Chair if it deems this necessary to carry out its activities.

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**PROPOSED
CENTRAL OHIO
STREET CENTERLINE STANDARD
Version 1.0**

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1.0 Introduction

This document was generated under the direction of the GIS Street Centerline Committee as a proposed standard for spatial data exchange in support of 911. The GIS Street Centerlines Committee was created under the authority of Gary Holland, Deputy Director of the City of Columbus Department of Public Safety with a mission focused on ensuring that the City's 911/CAD (Computer Aided Dispatching) system will have accurate and up-to-date GIS street centerline data for the resolution of emergency response of Police and Fire assignments.

The City is not unique in its need for accurate and current street centerlines. The City represents only one of eighteen Public Safety Answering Points (PSAPs) in Franklin County and the State of Ohio is building a state wide 911 system called the Location Based Response System (LBRS). The committee has taken these facts into account in the development of this standard.

The committee recognizes the value of leveraging existing standards including the state's LBRS standard. Adhering to the LBRS standard wherever possible promotes the state LBRS initiative by minimizing the effort needed to use the regional street centerline in the state's system.

The goals of this specification are:

1. To meet the minimum requirements of City's 911/CAD application;
2. To support the requirements of other area PSAPs by not violating the *NENA Recommended Formats & Protocols for ALI Data Exchange, ALI Response & GIS Mapping*¹.
3. To support the state's LBRS by not violating the *Location Based Response System Data Specification*.²

To meet these goals, this standard borrows heavily and directly from the LBRS Data Specification and is intentionally identical wherever possible. In cases where this standard is a subset of the LBRS standard, the LBRS standard is referenced or included in hopes that data owners will attempt to fulfill the LBRS standard.

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2.0 General Requirements

2.1 Data Layers and Tables

2.1.1 LBRS Standard

The following data layers and tables will be compiled to meet the minimum LBRS requirement.

Data Element	Type	Description
Address Points	Point Layer	This layer contains unique point locations for addressable structures.
Street Centerlines	Line Layer	This layer contains street centerline segments.
Alternate Street Names	Table	This table contains alternate street names.
Centerline Points	Point Layer	This layer contains points locations used to create road centerlines.

2.1.2 Central Ohio Standard

While the list of data layers that this document covers is expected to grow, at this point it addresses only street centerlines.

Data Element	Type	Description
Street Centerlines	Line Layer	This layer contains street centerline segments.

2.2 Data File Formats

Exchange of spatial data should be done in shapefile³ format and fields should be in accordance to the database design in this specification. Exchange of non-spatial data tables should be delimited text files using the “|” character (ascii decimal value 124) as the text delimiter or fixed width text files with accompanying column length definitions. Database field names must be capitalized and consist of no more than 10 characters to be Shape file compatible.

2.3 Coordinate System and Projection

2.3.1 LBRS Requirements

The GIS data layer must conform to the following coordinate system and projection.

- *Ohio State Plane North or South (US Feet)*
- *North American Datum 1983 (NAD83)*
- *North American Vertical Datum 1988 (NAVD 88)*

Projection files must be included with the delivery.

2.3.2 Central Ohio Requirements

It is preferable, but not required, that spatial data be in a coordinate system from the following list:

- Ohio State Plane South, US Feet, NAD83;
- Ohio State Plane North, US Feet, NAD83;

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The LBRS standard requires projection files but does not reference a standard for the files. ESRI's ArcGIS produces projection files (*.prj) which can be submitted with the data, but are not required. This standard simply requires that the projection be sufficiently documented whether in a projection file or a text file. A projection file can be created for Ohio State Plane North or South, NAD 83 by copying the following examples into a text file and saving it with the shapefile name and the .prj extension:

State Plane North, NAD 83

```
PROJCS["NAD_1983_StatePlane_Ohio_North_FIPS_3401_Feet",GEOGCS["GC
S_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GR
S_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["D
egree",0.0174532925199433]],PROJECTION["Lambert_Conformal_Conic"]
,PARAMETER["False_Easting",1968500.0],PARAMETER["False_Northing",
0.0],PARAMETER["Central_Meridian",-
82.5],PARAMETER["Standard_Parallel_1",40.43333333333333],PARAMETE
R["Standard_Parallel_2",41.7],PARAMETER["Latitude_Of_Origin",39.6
66666666666666],UNIT["Foot_US",0.3048006096012192]]
```

State Plane South, NAD 83

```
PROJCS["NAD_1983_StatePlane_Ohio_South_FIPS_3402_Feet",GEOGCS["GC
S_North_American_1983",DATUM["D_North_American_1983",SPHEROID["GR
S_1980",6378137.0,298.257222101]],PRIMEM["Greenwich",0.0],UNIT["D
egree",0.0174532925199433]],PROJECTION["Lambert_Conformal_Conic"]
,PARAMETER["False_Easting",1968500.0],PARAMETER["False_Northing",
0.0],PARAMETER["Central_Meridian",-
82.5],PARAMETER["Standard_Parallel_1",38.73333333333333],PARAMETE
R["Standard_Parallel_2",40.03333333333333],PARAMETER["Latitude_Of
_Origin",38.0],UNIT["Foot_US",0.3048006096012192]]
```

This standard does not address Centerline Points (LBRS section 3.4) and therefore does not specify a vertical datum requirement.

2.4 Metadata

While it is a goal to implement a formal metadata standard, the minimum metadata required for version 1 of this document is contact information for the data owner or point of contact designated by the data owner. The contact should be knowledgeable of the data and able to answer reasonable questions about its accuracy and currency.

Both the LBRS and National Emergency Number Association (NENA) data standards site the Federal Geographic Data Committee Content Standard for Digital Geospatial Metadata⁴ for their acceptable metadata. Data owners are strongly encouraged to submit metadata in conformance to this standard.

2.5 Standards

2.5.1 LBRS Standard

[The LBRS] specification is not intended to be an “Addressing Standard” however a certain level of standardization is necessary to meet the needs of LBRS as defined in this database design specification. Rather than impose a strict set of addressing standards for LBRS this specification will integrate as much as possible with existing standards such as the *U.S. Postal Addressing Standard, Publication 28*

(<http://www.usps.com/ncsc/products/products.htm#publications>), the *National Emergency Number Association (NENA)* (www.nena.org), and the *Ohio Department of*

Transportation (ODOT). The standards meeting the requirements for LBRS are included in the Appendix of this specification.

2.5.2 Central Ohio Standard

As stated in the introduction, this specification is based on the LBRS specification, which references a number of other standards. In attribute table definition standard columns, this document references the LBRS standard rather than sighting the standard used by LBRS. The focus is on complying with the LBRS standard in support of the state initiative.

3.0 Database Specification

3.1 Address Points

Voluntary compliance to the LBRS standard is encouraged.

3.2 Street Centerlines

3.2.1 Definition

The Street Centerlines layer contains line segments representing street centerlines. The Street Centerlines layer contains the attributes necessary to support geocoding and E911 dispatch functions. A single street may be made up of multiple line segments. Each street segment has a unique identification number. Street segments related to street names stored in the street names table by this segment identification number. This allows a single street to have multiple names.

3.2.2 Dataset Name

Name	Type
STREET_CENTERLINES	Line Layer

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3.2.3 Attribute Definition

NAME	L	T	R	DATA DESCRIPTION	STANDARD
STR_ID	8	N	Yes	Data owner unique id if available.	NENA (fits within LBRS)
PRE_DIR	2	A	Yes	Street prefix directional: N, S, E, W, NW, NE, SE, SW	LBRS
PRE_TYPE	2	A	Yes	Prefix type: TR, CR, SR, US, I, EX	Fits within LBRS
STR_NAME	30	A	Yes	Street Name	LBRS
STR_TYPE	4	A	Yes	USPS Pub 28	LBRS
SUF_DIR	2	A	Yes	Street suffix directional: N, S, E, W, NW, NE, SE, SW	LBRS
L_ADD_FROM	5	A	Yes	Theoretical low address number on left side of road.	LBRS
L_ADD_TO	5	A	Yes	Theoretical high address number on left side of road.	LBRS
R_ADD_FROM	5	A	Yes	Theoretical low address number on right side of road.	LBRS
R_ADD_TO	5	A	Yes	Theoretical high address number on right side of road.	LBRS
L_CITY	30	A	Yes	City name left of street segment.	LBRS
R_CITY	30	A	Yes	City name right of street segment.	LBRS
L_COUNTY	3	A	Yes	County code left of street segment.	LBRS
R_COUNTY	3	A	Yes	County code right of street segment.	LBRS
L_ZIP	5	A	Yes	Zip code left of street segment.	LBRS
R_ZIP	5	A	Yes	Zip code right of street segment.	LBRS
L_FIPS	5	A	No	Left side FIPS code	LBRS
R_FIPS	5	A	No	Right side FIPS code	LBRS
DOT_RD_NUM			No	Road number required by ODOT	LBRS
DOT_RD_TYPE	1	A	No	DOT road type designation	LBRS
CARDINAL	1	A	No	Indicated as C for cardinal N for non-cardinal	LBRS
NLFID	14	A	No	Calculated Network Linear Feature Identifier.	LBRS
BEGIN_LOG	.001	N	No	3D Traversed distance from beginning point of segment in miles	LBRS
END_LOG	.001	N	No	3D Traversed distance of segment from MP_BEG in miles	LBRS

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3.2.4 Specification Requirements

- The digital street centerline will represent the centerline of the pavement of all public and private roads throughout the county. Any road that is divided, e.g.

boulevard or interstate, shall have a line representing each direction of the street pavement.

- The LBRS requires the development of potential address ranges for the street centerline. The potential address range will be computed for each street segment based on the spatial locations of the addresses along the road segment and the corresponding locations for addresses on adjacent segments.
- Address ranges on a series of connected street segments should have no gaps or overlaps. Also, with the exception of some corporate boundaries that are defined by the street centerline, the corresponding left and right addresses should differ by one.
- The address range should be determined to minimize the average distance between the actual addresses locations and their geocoded locations between all connected road segments. Occasionally, there are incorrect real-life addresses, which must be flagged as outliers and be left out when generating the address ranges. Outliers are considered non-geocodable, that is, their geocoded location (if any) falls unacceptably far from their actual location. A list of all outliers must be generated and be provided to the local addressing authorities for correction.
- It is understood that a road right-of-way centerline may not be the same as the road pavement centerline and, as indicated, the requirement is to deliver only the centerline of pavement. Curved road segments shall be presented as multiple points connected by straight arcs due to the limitations of the GIS software. However, it is required that a sufficient number of points shall be included in the curve to properly denote the pavement without the need for orthophotography or other imagery.
- All street line segments shall connect via collocated end points. Centerline segments shall be broken at defined intersections, including intersections with roads outside the county boundary.
- All street line segments which cross-jurisdictional boundaries shall be broken with the end points of the street centerline segments collocated at a point along the jurisdictional boundary. These boundaries include State, County, City, Township, and Zip Code.
- *Should the BEGIN_LOG and END_LOG fields be populated: the beginning and ending log point for each road segment is based on three dimensional computation of the road segment length using these points. Log point computation is described further in Appendix A.*
- *Should the NLFID field be populate: NLFID stands for Network Linear Feature Identifier. This value uniquely identifies a route within a county. It is a 14 character field based on a composition of several variables. NLFID is further defined in Appendix A.*

3.3 Alternate Street Names Table

Voluntary compliance to the LBRS standard is encouraged.

3.4 Centerline Points

Voluntary compliance to the LBRS standard is encouraged.

4.0 Optional Data Capture

It may be advantageous for the county to specify additional desired features and attributes to be captured during the project. This may be a cost effective way for the county to obtain additional information that is above and beyond what is required for LBRS. The following are some examples of additional features and attributes that may be considered by the county. The county may also negotiate directly with the vendor regarding the capture of additional information that is beyond the requirements for LBRS.

4.1 Centerline Attributes

Additional attribute data collected during the capture of the centerline data may be incorporated by the State into the LBRS system, however these features are outside the scope of the LBRS specifications. ODOT has expressed an interest to further support the collection of the following data as an option to the required data sets; these optional data attributes include the following:

- Number of Lanes
- Speed Limit
- Pavement Type

4.2 Place Names Table

The county may consider creating database of place names that can be linked to addressable structure locations. This database would store the names of places that a location is commonly referred such as Union Station, St Paul's Cathedral, Greyhound Bus Station, and Last Call Tavern. The place names database could have a table with two fields that include PLACE_ID and PLACE_NAME. The PLACE_ID would contain a unique identification number for the place or landmark. The PLACE_NAME would contain the name of the place or landmark. A many-to-many relationship could be established between the place name table and the address point layer.

5 Data Quality and Acceptance Requirements

Voluntary compliance to the LBRS standard is encouraged.

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References

1. *NENA Recommended Formats & Protocols For ALI Data Exchange, ALI Response & GIS Mapping*, January 2002,
http://it.ojp.gov/servlet/ShowDocument?attachment_id=161
2. *DRAFT Location Based Response System Data Specification version2*, January 2005, Ohio Geographically Referenced Information Program.
3. *ESRI Shapefile Technical Description*, July 1998, ESRI White Paper,
<http://www.esri.com/library/whitepapers/pdfs/shapefile.pdf>
4. *FGDC-STD-001-1998 Content Standard for Digital Geospatial Metadata*, June 1998, Metadata Ad Hoc Working Group Federal Geographic Data Committee,
http://www.fgdc.gov/standards/documents/standards/metadata/v2_0698.pdf

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THE CENTRAL OHIO GEOGRAPHIC INFORMATION SYSTEMS (GIS) COOPERATIVE

DATA SHARING AGREEMENT

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THE CENTRAL OHIO GEOGRAPHIC INFORMATION SYSTEMS (GIS) COOPERATIVE

DATA SHARING AGREEMENT

This Agreement is executed by and between the Central Ohio GIS Cooperative, having an office at (Address) _____ (hereafter collectively referred to as the Cooperative) and:

(Agency) _____, having an office at (Address) _____ which is legally recognized as a department, board, bureau, division, commission, committee, public authority, public benefit corporation, council, or office of a local political subdivision; non-profit corporations or other non-commercial entities; which has a responsibility to capture, develop, or maintain street centerline and/or address information for that political subdivision (hereafter referred to as the Member).

W I T N E S S E T H:

WHEREAS, the State of Ohio has developed a technical data specification for the collection and compilation of street centerline and address information to support the Ohio Geographically Referenced Information Program (OGRIP), Location Based Response System (LBRS) and,

WHEREAS, the State's specification is intended to serve as a minimum set of data requirements and standards for each of the data layers captured, developed, or maintained, to create the street centerline and site specific address layers for the State's LBRS, and,

WHEREAS, the Central Ohio GIS Cooperative has developed a technical data specification for the collection and compilation of street centerline and address information that is compatible with the State's LBRS but that also supports the broader requirements of Public Safety Answering Points (PSAP's) serving the Central Ohio Area, and established a framework and criteria for the development of a Central Ohio Geographic Information Systems (GIS) Data Sharing Program, and,

WHEREAS, this initiative includes a structure to implement the GIS Data Sharing Program and obtain broad representation among Central Ohio's varied GIS user community. The Cooperative's structure includes a Coordinating Body charged with providing policy recommendations to the Central Ohio GIS Cooperative and establishing a framework for the easy dissemination of GIS Data between agencies at minimal cost and without delay. The Cooperative's structure also includes a Clearinghouse which acts as a repository for spatial Metadata and other information shared by Members of the Cooperative. and,

WHEREAS, one of the purposes of the Central Ohio GIS Cooperative is to coordinate and standardize the technical data of the GIS programs in Central Ohio, the Cooperative wishes to encourage agencies of political subdivisions of Central Ohio and other non-profit corporations or other non-commercial entities to join and become Members of the Cooperative and participate in the sharing of GIS data.

NOW THEREFORE, in consideration of the mutual covenants herein contained, the parties do agree as follows:

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I. GENERAL TERMS AND CONDITIONS

A. Definitions- For the purposes of this Agreement, the following terms are defined:

1. Clearinghouse - a worldwide web site hosted by the Central Ohio GIS Cooperative, which acts as a repository for spatial Metadata and other information that promote cooperation among users in the GIS community.
2. Cooperative - refers to the Central Ohio GIS Cooperative and is the group of governmental agencies and not-for-profit entities which have executed Data Sharing Agreements for the purpose of exchanging and improving access to GIS Data for Members.
3. Cooperative Custodian - a custodian designated by the Coordinating Body for distribution, only within the Cooperative, of data for which the custodian may not otherwise be considered the primary custodian of such data.
4. Coordinating Body - acts as a Standing Committee of the Cooperative. Each Member Agency has one representative with voting rights on the coordinating body. The coordinating body would elect a chairperson, secretary, and other officers as needed to conduct the business of the Cooperative.
5. Data – consists of the digital databases or data layers that contain references to locations on the earth's surface.
6. Improved Data – includes any or all of the following: correction of errors; addition of missing features for feature categories already represented in the Data; improvement of positional accuracy; revision to improve the temporal quality of the Data; correction of descriptive attribute data for categories already represented in the Data; and any other action which improves the existing Data without creating new categories of data not previously present in the Data.
7. "Intermediary Custodian" – a Member, designated in writing by one or more Members, who agrees to act on behalf of such Member(s):
 - (i) as a Primary Custodian to collect and distribute Data owned by such Member(s) to other Members; and
 - (ii) as a Secondary Custodian to receive Data acquired from other Members who are Primary Custodians and redistribute it to Member(s) designating it as its Intermediary Custodian.

The Intermediary Custodian shall have the duty to notify the Coordinating Body of its designation to act on behalf of any Member upon designation by the Member. The Intermediary Custodian shall transmit to the Coordinating Body a copy of the document, signed by the Member, establishing the relationship between the Member and the Intermediary Custodian.
8. Member - an entity that executes a Data Sharing Agreement to participate in the Cooperative.
9. Metadata - information supplied by a Member which describes the characteristics of the Data, which must be in accordance with the Standards for information developed after Member joins the Cooperative.

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10. New Data - categories of information not previously present in the Data or Improved Data.
11. Primary Custodian - the Member that developed or owns the Data. Each collection of Data (database, file, layer, etc.) shall have a single Primary Custodian.
12. Secondary Custodian - a Member in possession of Data acquired from the Primary Custodian or from the Cooperative.
13. Standards - the criteria adopted and revised by the Coordinating Body for GIS Data, Improved Data, Metadata, transfer of Data, and/or hardware, software or other items included in the development, dissemination, and use of GIS.

B. Nature of the Agreement

The parties expressly acknowledge and agree that this Agreement sets forth the terms and conditions governing the services to be delivered and performance of services to be rendered by the parties.

C. Merger and Order of Precedent-

The term "Agreement" or "Contract" shall be deemed inclusive of the following items, as if merged and set forth herein at length:

Appendix A- The body of the Agreement (i.e., that portion preceding the signatures of the parties in execution);

Appendix B- Ohio Geographically Referenced Information Program Location Based Response System.

Appendix C- Central Ohio Street Centerline Standard

In the event of any inconsistency in or conflict among the document elements of the Agreement identified in Section C.1 herein, such inconsistency or conflict shall be resolved by giving precedence to the document elements in the following order:

First: Appendix A

Second- Appendix B

Third-Appendix C

D. Agreement Approval-

1. Member shall cause this Agreement to be executed by the appropriate corporate officer, having the authority to sign on behalf of the Member, by signature and affixation of corporate seal in the presence of a notary public.

E. Term and Termination-

1. This Agreement shall commence on the date the Agreement is fully executed by both parties and shall remain in effect until such time as the Agreement is terminated in

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accordance with the following provisions:

- a. Voluntary termination shall take effect upon ninety (90) days' written notice to the other party.
 - b. Termination for cause shall take effect after the Chairman of the Coordinating Body issues a notice of violation to the Member and such Member fails to cure the violations within thirty (30) days of such notice. Within ten (10) days of the termination date, the Member shall return all Data, Improved Data or New Data to the Primary Custodians.
2. Member agrees not to sell, disclose, or make available any Data, Improved Data or New Data obtained through the Cooperative to anyone subsequent to termination of the Agreement unless required to do so by law. If a Member is required, by law, to release data, improved data or new data, Member agrees to notify the Primary Custodian of such disclosure.
 3. If a Primary Custodian ceases to be a Member of the Cooperative, all Secondary Custodians of Data provided by such Primary Custodian shall continue to have the ability to use the Data in accordance with the terms and conditions of this Agreement.

F. Consideration- As a Member of the Cooperative, Member is entitled to receive and exchange GIS Data. In return, Member agrees to provide Data and Improved Data as specified in Part II, Section A of this Agreement.

G. Disclaimer- Neither the Central Ohio GIS Cooperative nor Member assumes any risk, liability or responsibility for the accuracy of Data, Metadata, New Data or material facts submitted by Member to the GIS Clearinghouse.

H. Liability Relating to Third Parties-

1. Member shall indemnify and hold the Cooperative harmless from and against any and all damages, expenses (including reasonable attorneys' fees), claims, judgments, liabilities and costs which may be finally assessed against the Cooperative in any action for infringement of a United States Letter Patent, or of any copyright, trademark, trade secret or other third party proprietary right, arising out of, or resulting from, Member's acts or omissions in relation to this agreement, provided that the State shall give Member (i) prompt written notice of any action, claim or threat of infringement suit, or other suit, (ii) the opportunity to take over, settle or defend such action, claim or suit at Member's sole expense, and (iii) all reasonable assistance in the defense of any such action at the expense of Member.
2. If principles of governmental or public law are involved, the Cooperative may participate in the defense of any action identified in this paragraph, but no costs or expense shall be incurred upon the account of Member without Member's written consent.

I. Force Majeure- Neither party will be liable for losses, defaults, or damages under these Agreements which result from delays in performing, or inability to perform, all or any of the obligations or responsibilities imposed upon it pursuant to the terms and conditions of these Agreements, due to or because of acts of God, the public enemy, acts of government, earthquakes, floods, strikes, civil strife, fire or any other cause beyond the reasonable control of the party that was so delayed in performing or so unable to perform provided that such party was not negligent and shall have used reasonable efforts to avoid and overcome such cause. Such party will resume full performance of such obligations and responsibilities promptly upon removal of any such cause.

J. Subcontracting-

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1. If Member hires a contractor to develop GIS data, contractor will be required to comply with Standards in providing Metadata.
2. Member shall give the Cooperative immediate notice in writing of any legal action or suit filed, and prompt notice of any claim made, against Member by any contractor or subcontractor which may result in litigation related in any way to this Agreement or which may affect the performance of duties under this Agreement.

K. Assignment-

1. The Cooperative agrees not to assign this Agreement without prior notice to the Member.
2. Member may not assign this Agreement without the prior written consent of the Cooperative.
3. All provisions contained in this Agreement shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of the parties hereto to the same extent as if each such successor or assign were named a party hereto.

L. Entire Agreement- These documents constitute the entire Agreement between the parties. No statement, promise, condition, understanding, inducement or representation, oral or written, expressed or implied, which is not contained herein shall be binding or valid. This Agreement shall not be changed, modified or altered in any manner except by written instrument executed by authorized representatives of both parties.

M. Applicable Law- This Agreement shall be governed by and construed in accordance with the laws of the State of Ohio.

N. Member's Status- The legal status of Member, its agents, officers and employees is that of an independent contractor. In no manner shall it or they be deemed employees of the Central Ohio GIS Cooperative.

O. Notices- All notices, demands, designations, certificates, requests, offers, consents, approvals and other instruments given pursuant to this Agreement shall be in writing and shall be validly given when mailed by registered or certified mail, or hand delivered, (i) if to the Cooperative, addressed to the Cooperative at its address set forth herein, and (ii) if to Member, addressed to Member at its address set forth herein. The parties may specify any address in the United States as its address for purpose of notices under this Agreement by giving fifteen (15) days written notice to the other party. The parties agree to mutually designate individuals as their respective representatives for purposes of this Agreement.

P. Conflict of Interest- If during the term of the Agreement Member becomes aware of an actual or potential relationship, which may be considered a conflict of interest, the Member shall notify the Cooperative in writing immediately.

Q. Severability- Should any provision of the Agreement be declared or found to be illegal, unenforceable, ineffective or void, then each party shall be relieved of any obligation arising from such provision; the balance of the Agreement, if capable of performance, shall remain in full force and effect.

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II. SPECIFIC TERMS AND CONDITIONS

A. Member's Responsibilities- Member warrants and represents the following:

1. **Population of GIS Clearinghouse** - Member agrees to populate the GIS Clearinghouse with Metadata in accordance with the Standards and other information regarding Member Representative, projects, training opportunities and other events of interest to the GIS community for the easy dissemination and use of its Data to Members as well as others. Information supplied by a Member which describes the characteristics of the Data created prior to Member's participation in the Cooperative is not required to meet such Standards.
2. **Maintenance and Improvement of Data-**
 - a. Member agrees that a significant benefit of the Cooperative is the potential for improvement of Data for all Members. Accordingly, Member agrees to provide Primary Custodians with any improved Data which may be produced during the Member's use of the Data, including work done by third parties such as consultants or contractors that may perform on behalf of the Member. Improved Data shall belong to the Primary Custodian of the original Data unless a separate agreement has been reached with the original Primary Custodian and notice thereof sent to the Coordinating Body.
 - b. Member shall provide Improved Data to the Primary Custodian in accordance with the Standards. Such Standards shall include references to or copies of relevant supporting information sources that the Primary Custodian would need to verify the improvements and incorporate them into the Data. Improved Data are to be provided to Primary Custodians in a timely manner but not less than annually. The Primary Custodian shall determine whether to incorporate the improvements into the Data.
3. **Data Sharing-** Where the Member is a Primary Custodian, such Member agrees to make Data available to the Cooperative. Such Member agrees to provide Data within a reasonable time to the Cooperative at an amount not to exceed the cost of media and delivery, unless specifically authorized to charge otherwise by Federal or State statute. In the event another Member requests Data which requires additional work such as programming, analysis, or conversion by the Primary Custodian, the Primary Custodian may, at its option, undertake the work and charge a fee limited to the actual cost of fulfilling the request, including personnel expense, unless otherwise specifically authorized to charge otherwise by Federal or State statute.
4. **Requests for Data-** Member agrees to forward any requests for Data to the Primary Custodian, unless disclosure of Member's records containing such data is otherwise required by law; and, in such latter case, Member agrees to notify the Primary Custodian of such disclosure.
5. **Release of Data, New Data, or Improved Data-**
 - a. Unless required by law, under no circumstances shall a Member release Data, New Data, or Improved Data in whole or in part for which it is not the Primary Custodian to a non-member of the Cooperative.
 - b. Unless otherwise restricted by law, there are no restrictions on the release of Data, New

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Data, or Improved Data in whole or in part by a Member of the Cooperative who is the Primary Custodian of such data.

c. Information exchanged or received from the Cooperative by a Member shall not be used for any commercial activity, marketing or advertising when the purpose of such activity is for profit or other commercial purpose.

6. **Member's Agents or Consultants-** Member shall ensure in writing that any Data transferred to or prepared by Member's agent or consultant will be in the custody and control of Member and shall not alter the rights and obligations of Member as a Primary or Secondary Custodian of the Data. Member agrees to adhere to the criteria adopted by the Coordinating Body regarding release of Data to an agent or consultant.

7. **New Data-**

a. Member acknowledges and agrees that New Data shall belong to the Member which produced it and that such Member shall be deemed the Primary Custodian of the New Data. Member may transfer Primary Custodian designation of the New Data to another Member upon mutual agreement and notice to the Coordinating Body. In the event that a dispute exists over ownership of New Data, the Coordinating Body shall be responsible for designating the Primary Custodian.

b. Members are encouraged to enhance, extend, or supplement the Data to meet their needs. Member, upon creating New Data, agrees to consult with all Primary Custodians upon whose Data the New Data may be based to notify them of the creation of the New Data.

8. **Standards-** Except for information supplied by a Member which describes the characteristics of the Data created prior to the Member joining the Cooperative or Standards adopted by other states and federal agency Members, Member agrees to adhere to all Standards adopted by the Coordinating Body as soon as practicable. The Central Ohio GIS Cooperative, through the Chairman of the Coordinating Body, shall notify Member of all Standards adopted and revised by the Coordinating Body for GIS Data, Improved Data, Metadata, transfer of Data, and/or hardware, software, or other items included in the development, dissemination, and use of GIS. While other states and federal agencies are not required to adopt Central Ohio GIS Cooperative's Standards, they are encouraged to consider them for their adoption, where appropriate.

9. **Privacy/Confidentiality-** Member agrees that no party will be required to disclose any Data for which it is not the primary custodian unless required by law.

10. **Member Representative-** Member agrees to designate a single representative who will act as the authorized liaison to other Members of the Cooperative for purposes of data sharing, notification of Improved Data, Clearinghouse information, and other communication as required by the Cooperative. Each representative shall be listed with name, business address, telephone and facsimile numbers, and e-mail address at the Clearinghouse.

11. **Member Status-** Member acknowledges that its participation in the Cooperative is contingent upon having and maintaining its status as a valid governmental Member, non-profit corporation or other non-commercial entity. If at any time Member's status has changed or is subject to change, Member shall immediately notify the Cooperative in writing of such change or potential change.

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B. Cooperative's Responsibilities-

1. **Standards-** The Cooperative, through the Coordinating Body, shall notify Member of all Standards adopted and revised by the Coordinating Body for GIS Data, Improved Data, Metadata, transfer of Data, and/or hardware, software, or other items included in the development, dissemination, and use of GIS.
2. **Disputes-** When disputes arise among Members of the Cooperative, the Cooperative, through the Coordinating Body, shall mediate such disputes.

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Committee Meeting Minutes

June 9, 2005
June 22, 2005
July 21, 2005
August 11, 2005

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Minutes

GIS Street Centerline Committee Meeting

June 9, 2005

Meeting was held June 9, 2005 at the Fire Training Complex located at 3639 Parsons Avenue at 8:30 AM.
The meeting was attended by:

Borden, Dave	Safety/Support Services	645-5776
Borrer, Ken	Franklin County 911	475-8892
Buttle, Fred	Franklin County Auditor	462-7291
Cerasini, Vince	Franklin County Auditor	462-7247
Foertsch, Darylee	Public Safety/Fire (FAO)	221-3132 ext 2391
Fullen, Battalion Chief Wes	Public Safety/Fire (FAO)	645-6422
Garrabrant, Rick	Public Service	645-6391
Griffith, Bill	Safety/Support Services	645-7344
Helenberger, Frank	Public Safety/Fire (FAO)	221-3132 ext 2391
Klein, Carl	Technology/	645-6389
Legg, Lt. Charles	Public Safety/Fire	645-4643
Wight, Bill	Technology/GIS	645-0776

The committee reviewed the GIS Street Centerline Charter. Chief Fullen suggested that the scope of the Charter be broadened to include all GIS layers of interest to the Department of Public Safety. Discussion followed that revealed while the points that Chief Fullen raised were important, they were not specifically part of this committee's original intent. The committee approved the Charter (with additions and changes suggested by Director Holland) and agreed to the deadline of August 1, 2005 for delivery of a written report to Directors Brown and Cavin.

General discussion followed concerning the three questions posed by Rick Garrabrant. Answers were provided primarily by Bill Wight as follows:

Explanation of DoT's current centerline maintenance strategy, by area;

Nick Soltes, who is working for DoT under a contract, is performing the maintenance and updates of street centerline data. Data for outside the City Limits was collected initially from GDT sources and has been added to City street centerline data layer.

Identification of what centerline data resources exist, by area;

Nick Soltes receives data from the City Map Room (streets within City limits) and adds it to the GIS centerline data layers. There is no procedure in place to update and maintain street data outside the City limits.

Determine the existing data update delivery schedule for these resources;

There is no set schedule at the current time.

Bill Wight feels confident that the current data contained within the City limits is fairly accurate.

Vance Cerasini announced that the Franklin County Auditor is working with data provided by the Censes Bureau and hope by the end of summer to have updated the County's data, including Delaware County. This will make available a reliable source of data for the Franklin and Delaware Counties. In addition, funding is not a major issue

with Franklin County, but the GIS work must be tied to the Auditor's mission of real estate appraisal and tax collection.

Ken Borrer raised the dilemma that he is faced as the Franklin County 911 Coordinator. He expresses the frustration that there are many different emergency agencies that are pursuing their own GIS solution to 911 response, some doing a very good job individually, but there is no coordinated effort to pull the different information together into one coherent regional solution. He is faced with a decision that he must make before this fall as to the use of an off-shelf-solution for e911 if no coherent regional solution surfaces. Fred Buttle and Vance Cerasini felt the Franklin County data is very close to what Mr. Borrer is requesting. Mr. Borrer was not convinced that what was being proposed would fulfill his needs.

Rich Garrabrant assured Ken Borrer that data within the City limits was there. The issue is with data outside the City limits. Ken Borrer agreed and said that was the problem. Each agency (township, county, community) feels their data is the best way to proceed, but no one wants to cooperate in gathering the data for a regional solution. The committee agreed that this was a problem and that it needs to be addressed, practically since major emergencies don't care what the political boundaries are drawn.

Chief Fullen entertained the idea that there needs to be a written document between these agencies and he felt it should be the job of this committee to create that document and present it to the Mayor or other responsible parties so that better corporation between the agencies could be fostered. Discussion followed with the overall feeling that such a document may be beyond the scope of this committee and that in the past hand shake agreements seemed to work better; at least in sharing information between townships and other small communities. Legal documents imply liabilities which can decrease the interest in cooperation between parties.

Discussion followed concerning how often updates need to be made to the street data used for the CAD system. After debate, it was agreed that weekly updates seemed to be a realistic goal. In addition, Bill Wight suggested that feedback needs to be in place so that street and address corrections discovered in the field can be feedback to the keeper of that data, either the City of Columbus or other responsible party.

Carl Klein pointed out that what ever we do, it must consist of a simple, short term plan otherwise this committee will not be able to meet its deadline. A more involved plan could be planned for the future and made part of the recommendations of this committee. Carl presented the committee with several goals should be resolved by this committee. We must identify the gaps and make recommendations of how to fill those gaps so that we can move this committee along. The Chair asked that he provide a list in writing so that it could be attached to the minutes (*see separate attachment*).

Ken Borrer suggested that the county be divided into quadrants to lessen the load as a whole. Also the 911 Technical Advisory Board, which is made up of mayors and other government leaders have Semi-monthly meetings and should be involved in coordinating these efforts. Agreements need to be established between these parties and should include what attributes are shared, time frames of updates, responsible parties, etcetera.

Bill Wight put forth that a mission needs statement needs to be drafted (*see attachment*) that outlines what Public Safety Services Incorporated (PSSI) needs for the GIS layer to work correctly with the CAD system. Also DoT's roll, both inside and outside the City limits needs to be stipulated and Nick's position needs to be made permanent to assure that street updates will continue. Perhaps a central GIS authority needs to be established to over see all the GIS layers.

Chief Fullen once again reminded the committee the importance of the other GIS layers proposed and currently within the City repository. It was suggested as a whole that priorities need to be established for those layers. In addition, Bill Wight requested that Chief Fullen send him the Federal guidelines for GIS concerning 911 dispatching systems; Chief Fullen said he would.

It was decided that the committee should meet every two weeks, so the next meeting will be on at 8:30 A.M. on June 22, 2005 at the Fire Complex. Lt. Legg will send out the notices via Outlook. Meeting was adjourned at approximately 10:30 AM.

Lt. Charles W. Legg, Jr.
Committee Chair

Minutes

GIS Street Centerline Committee Meeting

June 22, 2005

Meeting was held June 22, 2005 at the Fire Administrative Complex located at 3675 Parsons Avenue at 8:30 AM.
The meeting was attended by:

Borror, Ken	Franklin County 911	475-8892
Foertsch, Darylee	Public Safety/Fire (FAO)	221-3132 ext 2391
Fullen, Battalion Chief Wes	Public Safety/Fire (FAO)	645-6422
Griffith, Bill	Safety/Support Services	645-7344
Heller, Roger	Public Safety/Fire	989-8101
Holland, Dir. Gary	Public Safety	645-8210
Klein, Carl	Technology/	645-6389
Legg, Lt. Charles	Public Safety/Fire	645-4643
Lyons, Allison	Franklin County Board of Commissioners.	462-5729
Mason, Jerry	Public Safety/Fire	645-6385
Patts, Lt. Ramona	Public Safety/Police	645-4533
Pettit, Jerry	Cols Health Department	645-6275
Wight, Bill	Technology/GIS	645-0776

The committee reviewed the last meeting minutes. Ken Borror requested that the minutes be changed in reference to the 911 Governing Board, which should read the 911 Technical Advisor Board which meets semi-monthly. The 911 Governing Board only meets when needed. In addition, Bill Wight requested the minutes reflect that that the City used only GDT data and not Tiger data for the street centerlines. Also the correct spelling should be changed from GTD to GDT. The minutes were approved as amended.

Committee members introduced themselves. Jerry Pettit was present from the Columbus Health Department and is responsible for the tracking of chemical and hazardous materials data for the County. Allison Lyons was in attendance representing Franklin County Commissioner Paula Brooks.

A discussion started as to what the first priority of the committee should be. It was decided that the continued funding of Nick Soltes, who is currently entering centerline data within the City limits, was the highest priority. Carol Klein suggested that the committee must have a near goal of continuing the updating and correcting of centerline data within the City repository, while a long range plan must be established to see to future needs.

Deputy Directory Gary Holland addressed the committee to clarify what he sees as the mission of the committee. He stressed the important of the fiscal issues, which he felt may have been over looked by the committee in their initial meeting. This included an analyses of what the fiscal issues are and where funding can be obtained. This analyses needs to be including in any written recommendations to Director Brown and Cavin. In addition, he believes that, while possibly outside the scope of the committee, the drafting of some type of agreement is very important and does need to be addressed by the committee. He suggested that a sub-committee be created which would include Chief Fullen, Ken Borror, Lt. Patts, Bill Wight and Jerry Pettit that would investigate these issues. Ken Borror stated that he may not be able to participate due to his increased commitments with the county 911 activities.

At that time, Chief Fullen made available to the committee a written recommendation (*see attachment*) in which he is proposing the Division of Fire is the best qualified group to act as a "central gathering point" for all street centerline data. He believes the Fire Alarm Office (i.e. FAO or Fire Dispatching Center) is in a good position to

take on the responsibilities of maintaining the street centerline data inside and outside the city limits with the staff he currently has assigned to him. He stated that his staff already deals with other townships and municipalities in obtaining street and addressing information for the current dispatching system. Since representative from the City's Department of Public Service, Division of Transportation and Franklin County GIS were not present at the meeting, there was no feedback from their perspective concerning Chief Fullen's suggestion.

It was further suggested by Chief Fullen that standards and procedures adopted by the city of Sacramento, California could be adapted for our use. He presented the committee with copies of the maintenance procedures and standards as developed by the Sacramento Area GIS Cooperative. Links to electronics versions of those documents are below:

[GIS Cooperative Street Centerline Maintenance Procedures v1.0](#)

[GIS Cooperative Street Centerline Database Standards and Specifications v 1.2](#)

Lt. Legg asked Director Holland if there would be a problem between department directors in assigning street centerline duties to the Division of Fire. He felt that it was up to the committee to make a recommendation and if a good argument is made for that to happen, then he felt the directors would seriously consider what was recommended.

Lt. Patts commented that there may be some Homeland Security funding to support Nick's position since he would be providing a public safety service that could be considered regional in nature, thus qualifying as a Homeland Security issue. Director Holland agreed that it would be a good fit. Lt. Patts will look into what is available and what we need to do to secure funding. Bill said that Nick's contract continues to the end of the year, so funding would need to be arranged for after that time. He said that initially there would be considerable work in setting up and corrections, but that once that is done, the work load should drop off to just a maintenance load. Nick also currently does additional work for DoT, not just the street centerlines. Bill Wight also said that each street centerline needs to have unique street segment IDs and that they are very important to make sure all the parts work together. It is much more complicated than just drawing shape files.

Carl Klein recommended that Chief Fullen and Bill Wight form a sub-committee that could investigate the feasibility of the Division of Fire's FAO taking on the responsibilities of collecting and maintaining the street centerline data for the general Franklin county area. Director Holland agreed, but Assistant Chief Mason injected that what Chief Fullen was presenting was only a draft recommendation created by Chief Fullen and not a formal proposal from the Division of Fire. Final approval, including additional work loads or permanent positions for the FAO, would need to come from Fire Chief Pettus. It was agreed by the committee that Chief Fullen was to proceed with forming the sub-committee with the following as initial sub-committee members: Chief Fullen as the chair, Bill Wight, Lt. Patts, and Jerry Pettit.

Lt. Legg asked if Darylee Foertsch and Frank Helenberger (who currently are working with GIS within the FAO) were in permanent positions, they are not. They are still assigned to Emergency Services fire companies. Lt. Legg suggested that any proposal should include making their positions permanent, include continuing education in GIS technology and possibly adding a civilian position to the staff at the skill level currently held by Nick Soltes.

Bill Wight commented that there is currently a project outside the City that is using web-based front ends to input street data from different agencies into one common database. He will investigate and make part of the sub-committee's recommendations if this was O.K. with Chief Fullen.

Since the committee is on hold until Chief Fullen's sub-committee can meet and make recommendations, the next meeting date will be determined by the Chief Fullen. At that time he will present a report from his sub-committee.

The meeting was adjourned at approximately 9:30 AM.

Lt. Charles W. Legg, Jr.
Committee Chair
June 23, 2005

Recommendation Presented by Battalion Chief Wesley Fullen:

One of the primary recommendations to come from the June 9th meeting is that there be a “central point” for agencies to submit information.

This is a recommendation that the Columbus Division of Fire, Alarm Office be the central point for receiving and maintaining street centerline information for the City of Columbus for the following reasons:

1. Along with the Police Division, the Fire Division has higher priority need for accurate street centerline information than do other City agencies.
2. The Fire Division has the largest geographic service area, some of which is out of city or county limits.
3. The Fire Division has the largest instances of operational interaction with Fire/Rescue/EMS and Police agencies outside of the city limits.
4. The Alarm Office is positioned to ensure that the GIS information conforms to the requirements 9-1-1 Phase II.
5. The Alarm Office is in the best position to ensure that the content and format of street centerline information submitted by agencies outside of the City, conforms to a standard agreed upon by all agencies.
6. The Alarm Office is currently working with other PSAP's, and Fire/Rescue/EMS agencies in the Central Ohio Area to ensure communications interoperability, mutual aid and automatic response assignment and jurisdictional boundary congruence.
7. The Alarm Office is positioned to ensure proper interface between the CAD system and the GIS system.
8. The Alarm Office currently has one permanent staff position that updates CAD system information and one temporary staff position that is building Fire's GIS system. At the point that the GIS system is installed and tested, updating the GIS system will update the Geobase information within CAD system.
9. The Alarm Office has identified and is in the process of installing several additional informational layers in addition to street centerline information that are necessary to the mission of the Division and other Fire/Rescue/EMS agencies.
10. The Alarm Office is already working with the Health Department to incorporate that agency's hazardous material information into our GIS system.

Battalion Chief Wesley H. Fullen
Communications Center Coordinator
Centrex: 645.6422 Fire Line: 4490

Minutes

GIS Street Centerline Committee Meeting

July 21, 2005

Meeting was held July 21, 2005 at the Fire Administrative Complex located at 3675 Parsons Avenue at 8:30 AM.
The meeting was attended by:

Borror, Ken	Franklin County 911	475-8892
Fullen, Battalion Chief Wes	Public Safety/Fire (FAO)	645-6422
Holland, Dir. Gary	Public Safety	645-4239
Legg, Lt. Charles	Public Safety/Fire	645-4643
Wight, Bill	Technology/GIS	645-5390
Garrabrant, Rick	Public Service/Streets	645-6391
Helenberger, Frank	Public Safety/Fire	221-3132 ext. 2391

The committee reviewed the last meeting minutes and approved as written.

Lt. Ramona Patts from Police and Carl Klein of Technology could not make the meeting due to last minute arrangements for other meetings.

Old Business:

Battalion Chief Wes Fullen presented his sub-committee's report. Chief Fullen clarified the purpose of this sub-committee in that the Division of Fire's Alarm Office would act as a collection point for all GIS data, but that another Department such as Technology or Public Service would actually enter the GIS data. He presented the committee with 3 draft documents, a *Central Ohio GIS Cooperative Data Sharing Agreement*, *Location Based Response System Data Specification*, and a *Proposed Street Centerline Standard v 1.0*.

Chief Fullen proceeded to discuss the *Central Ohio GIS Cooperative Data Sharing Agreement* and reported that Bill Wight would discuss the other two documents. He stressed that the language needs to be changed in the document to a more generic form so that the City of Columbus is not dictating policy, we need to make it a cooperative agreement of all those involved. Lt. Patts pulled the document from the State of New York, so some of the language needs to be changed. The comments in red are from the City's Attorneys Office concerning legal aspects of the document.

Deputy Director Holland said that the City GIS was discussed at a recent Cabinet retreat and that the time may be ripe to move on requests to make this happen. We need a short solution for now, but also a long term solutions where the county Emergency Management or Homeland Security could take the lead.

It was suggest that the documents be cleaned up and presented to the Franklin County Public Safety Answering Point (PSAP) meeting scheduled for next week. Present the proposal that they take it over. Director Holland was concerned that the way the documents now reads the City of Columbus would be the controller, which he believes should be the Franklin County PSAP committee. It was agreed that any reference to the City of Columbus as the controller should be removed from the document.

It was brought up that the Franklin County CARDA is another group that might be interested in the documents. The CARDA group is the Franklin County group that passes out the GIS compact disks for the County. Could they manage or share the data with other counties? Ken Borror said they seemed to be interested in doing something like that. He also felt that the PSAP group was the group that would be interested in coordinating and distributing the data, rather than the CARDA group. Bill Wight felt it was important to cooperate with all the agencies including Delaware and surrounding counties. The Mid Ohio Regional Planning Committee (MORPC) also was mentioned and would also be a good group to contact.

Director Holland suggested that someone from the group should talk to those involved in CARDA and see if they would be receptive to our ideas, i.e. ownership and standard setting of the shared GIS data. Plan of action is to clean up the documents, removed any reference to City of Columbus being a controller and have Bill Wight present the draft to members of the CARDA group in August to gage their reaction. Chief Fullen said that Fire would be willing to collect data and pass it on. This is what they are doing right now with the current non-GIS system. Bill Wight will also check with the State of Ohio GIS people and see if they would be interested in any of the coordination from a state perspective. Bill explained that he got the street centerlines standards document from the State and they said we could us it as a standard.

Rick Garrabrant asked Bill if he felt the data the City had is inline with the standard. Bill felt that it was. The problem will be in trying to scrub old data that is currently within the non-GIS databases. The way it works now is that new streets are entered as they come into existence, but it is going to take a lot of time to check and confirm all old data, much of which is still in paper form. Bill does not have a big comment to the scrubbing of data, can only within their spare-time, of which there is little. Almost all this is secondary information, not the main attribute for the street centerline data. Most of the surrounding agencies have their own people doing this work. Only Grove City and Reynoldsburg do not have their own people.

Chief Fullen asked if there were any other layers of people that should be involved in the GIS/Street Centerline process. No one had any suggestions. It was discussed that a large project like this can be conducted from the top down or the bottom up. Right now there doesn't seem to be much interest at either end, but that may change as more emphasis is placed on GIS and the City of Columbus.

Bill Wight said that it would be a good idea to implement a web-based type tool that would allow anyone to provide feedback and report errors. The City does not have the people to cleanup all the data, only can do so much. He also said that there are new tools that will allow easy migration of AutoCAD data to GIS, which will help in the conversion of some data since a lot of the data is in the default standard of AutoCAD. Most of the problems and errors could be resolved with funding and personnel. Chief Fullen asked to make sure the data standards meet the needs of 911 since that is the main focus of using the GIS data. While not necessarily part of the 911 needs, the zip code data and Censes tract information should also be included in a standard for important reporting statistics.

Per Ken Borrer next Wednesday morning, (July 27) SBC will have a meeting to discuss GIS and 911. This will involve the 18 PSAPs. Several committee members will be present at the meeting. Chief Fullen asked if SBC will have test data available for testing before the cut over data. Ken did not think they would since it is either on or off for all the PSAPs.

Frank Helenberger asked if street speed limits could be included with the GIS street centerline attributes. Bill Wight said that while it is not part of the state's requirement, it is mentioned as a field one could voluntary populate. It is desirable from a network cost analysis standpoint.

Frank wanted to make sure they were included if routing was used for emergency equipment. A discussion followed about routing and it was decided that it was outside the scope of our committee, but never the less an important City action item for many departments and divisions.

Director Holland presented two practical concerns involving GIS:

1. The use of GPS/GIS for Building and Fire Inspection tracking (also Health inspectors)
2. Use of GPS/GIS for EMS tracking of vehicles

He also pointed out that Mayor's Cabinet is very aware of the use of GIS and that this may be a good time to get GIS items into budget requests. Particularly a GIS enterprise system that addresses all the needs of the City would be a good idea.

The following action items were created:

1. Chief Fullen and Bill Wight: clean up the draft documents and remove references to the City as a controller by Friday, July twenty-seventh.
2. Ken Borrer: contact the CADRDA group and see if there is any interest in a regional GIS coordination
3. Chief Fullen and Bill Wight: broadcast the cleaned up documents to those interested and receive feedback
4. Take approved document and present to CARDA group if they are interested
5. Get the GIS data requirements/standard from PSSI for the piece of software the City of Columbus, Department of Public Safety is using with the CAD system.

New Business:

The next meeting will be in three weeks: August 11, 2005 at 8:30 AM at the Fire Administrative Conference room.

The meeting was adjourned at approximant 9:30 AM.

Lt. Charles W. Legg, Jr.
Committee Chair
July 26, 2005

Meeting minutes amended August 2, 2005 and indicated by underlined text.

Minutes

GIS Street Centerline Committee Meeting

August 11, 2005

Meeting was held August 11, 2005 at the Fire Administrative Complex located at 3675 Parsons Avenue at 8:30 AM.
The meeting was attended by:

Borrer, Ken	Franklin County 911	475-8892
Fullen, Battalion Chief Wes	Public Safety/Fire (FAO)	645-6422
Legg, Lt. Charles	Public Safety/Fire	645-4643
Wight, Bill	Technology/GIS	645-5390
Garrabrant, Rick	Public Service/Streets	645-6391
Pettit, Jerry	Columbus Health Dept.	645-6275
Wolf, John	Public Safety/Support Serv.	645-7344

The committee reviewed the last meeting minutes and approved with corrections received from Bill Wight (see attachment).

Carl Klein of Technology could not make the meeting due to a meeting conflict, however he sent an email stating that he had looked over the materials and they looked fine to him. In addition, he believed he had nothing to add to a detailed discussion and would vote in favor of adopting the standards as presented in the draft documents.

Old Business:

Lt Legg reviewed the committee charter and emphasized that the purpose and objective of the committee is to deliver a report to the Directors of Public Safety and Technology with recommendations as to the five objectives presented in the charter. He believes that the committee has reached a point that these recommendations can be delivered and that initial task of the committee has been accomplished. The committee has already passed the deadline of August 1 in delivering the report.

Chief Fullen presented his sub-committee report. The two documents, a *Proposed Central Ohio Street Centerline Standard version 1.0* and *The Central Ohio GIS Cooperative Data Sharing Agreement*, were emailed to all committee members after the last meeting. Since Chief Fullen did not received feedback on either document, he proposed that the two draft documents be adopted as final drafts and that we move forward. A discussion then followed.

Bill Wight suggested that that the *Central Ohio Street Centerline Standard* draft should be shown to other counties for their feedback before a final version is released. He also suggested that that Mid Ohio Regional Planning Committee (MORPC) be contacted to see if they would be willing to act as the Central Ohio GIS Cooperative agency for distributing and receiving the agreement from other agencies.

Rich Garrabrant suggest that since the 'legalize' of the draft document is rather intimidating, a cover letter should be attached to the *Central Ohio Street Centerline Standard* that explains, in plain English, what we are attempting to accomplish, simply the sharing of information that would be valuable to all parties involved and the standard used when sharing the information. It was agreed that such an action made sense as many members believed the document was rather intimidating upon first glance. It was felt that this would be more important for smaller communities, which could be scared off by the legal look of the document.

Chief Fullen said that if MORPC agreed to be the parent of the document, they should be the agency to issue the cover letter. Rich further commented that the cover letter should emphasize that the document is only establishing a simple agreement to exchange GIS street centerline information using a standard set of rules so the data can be read by a common system.

Bill Wight commented that there might be some confusion concerning confidentiality of the data shared as written in the draft document. He suggested that the final draft should address this and that the final stitched together GIS product should be made available to everyone on the Internet, including the Public. He believed this would be acceptable as long as any confidential or sensitive data is removed from the data and that a disclaimer was included explaining this fact. He is only talking about street center lines, street names and address. No objections to this suggestion were raised by the committee members present.

Ken Borrer, who took the draft agreement to a recent meeting of the County Auditor's Reciprocal Data Agreement (CARDA) group, was asked what the CARDA group's reaction was to the document. He stated that they felt that the agreement was workable, but that they too were concerned with the intimidation factor, particular for smaller communities. He felt that a cover

letter would be a good idea and might minimize the legal look of the document. He also agreed that the cover letter should come from the issuing agency, CARDA, MORPC or someone else. Bill Wight commented that that governing body and the keepers of the data do not necessarily need to be one in the same. One agency could coordinate the agreements while another could host the servers where the data is stored, administered and disseminated.

Chief Fullen recommended that MORPC be approached to see if they would be interested in being the parent of the agreement. Bill Wight said that since he already has an informal contact with the group, he would check into seeing if MORPC officially would be interested in moving forward with becoming the cooperative for the final document.

Bill Wight commented that we still need to make sure the standards agreed upon work with the PSSI geo-server. One of the big differences is that the PSSI software is proprietary and requires MapInfo based geo-coding while the City uses ESRI software, which is a competing company. Chief Fullen said that he would get that information from Dennis of PSSI and forward to Bill. This concluded Chief Fullen's sub-committee report.

The committee then planed the course of action to create the report to be completed by this committee. We began by reviewing the five objectives of the committee and tentative actions for each item:

1. *Determine who is directly responsible for the ownership and maintenance of the GIS street centerline data layer encompassing the areas inside the corporation limits of Columbus Ohio.*

The committee determined that the Department of Public Service, Division of Transportation (i.e. the "Map Room") has ownership of all street centerline and addressing data within the City's corporation limits and is directly responsible for the collecting and maintaining of that data. In addition, the committee determined that the currently the Department of Technology is directly responsible for the entering of that data into the City's GIS street centerline data repository. This task is currently assigned to Nick Soltes, who is an outside contracted worker for the Department of Technology.

2. *Determine and establish guidelines and procedures to ensure street centerline data inside the City's corporation limit are updated in a timely and efficient Manner.*

The committee determined that there are no published procedures for the regular maintenance or timely updates of street centerline data within the corporation limits of the City of Columbus. The committee determined that a written procedure should be established that will ensure that street centerline data is updated on the City's GIS repository at least weekly.

(Bill Wight will create recommended procedures and associated costs that are to be forwarded to Lt. Legg for inclusion in the final report.)

3. *Determine who is directly responsible for the ownership and maintenance of GIS street centerline data layer encompassing the areas outside the corporation limits of Columbus Ohio.*

The committee determined that at the current time no single agency or group is officially directly responsible for ownership or the maintenance of street centerline data outside the City's corporation limits. However, the Franklin County Auditor's Reciprocal Data Agreement (CARDA) group has been collection and coordination general GIS street centerline data within Franklin County for some time and may be willing to act as the official agency for the sharing of GIS street centerline data for the central Ohio area.

(Ken Borror will contact the CARDA group with the Franklin County's Auditors office and investigate if they would be interested in taking ownership and responsibility of all GIS street centerline data outside the corporation limits of the City of Columbus. In addition, Bill Wight will be meeting with MORPC to check if they are receptive to becoming the parent organization of this standard.)

4. *Determine and establish guidelines and procedures to ensure street centerline data outside the City's corporation limit are updated in a timely and efficient manner.*

The committee determined that at the current no official guideline or procedures are in place to ensure the timely and accurate updating of GIS street centerline data outside the corporation limits of the City of Columbus exist. However, the committee did produced two tentative draft documents that can be used to facilitate this objective.

The first draft document is a *Proposed Central Ohio Street Centerline Standard version 1.0*, which establishes a standard for the spatial data exchange of GIS information in support of Central Ohio emergency 911 dispatching centers including the City of Columbus. The second draft document is *The Central Ohio GIS Cooperative Data Sharing Agreement* which suggests a mythology and set of ground rules for the sharing of that GIS data.

It is hoped that these finalized documents be utilized by a coordinating agency, such as Franklin County's CARDA or MORPC, for the collection and sharing of GIS street centerline data between interested parties.

5. *Determine costs associated with implementing these objectives and identify funding mechanisms to cover those costs.*

The cost associated with implementing these four objectives is vague at this time. Certain costs, such as those associated with Nick Soltes entering GIS street centerline data for within the City limits, are part of a grant program being utilized by the Department of Technology. It is recommended that this position become permanent in the short term and that a spatial data administrator be hired in the long term either by the Department of Technology, who will assign him/her to Public Safety on an as needed basis or that the Department of Public Safety hire him/her to perform GIS work fulltime for Public Safety. In addition, there will be hardware cost associated with storage of GIS data on servers and software costs associated with GIS software and utilities.

(Bill Wight will assemble the costs associated with these proposed positions for use in the final report.)

New Business:

It was decided by the committee that this will be the last formal meeting of the committee. Lt. Legg is to put assemble a draft of the report that will be presented to the Directors. That draft is to be sent to all committee members for feedback and recommendations. Once sufficient time has passed for feedback and review, he will assemble a final version the report that will be distributed to all members including Deputy Director Holland, who will see that the report is distributed to the Directors of Public Safety and Technology.

Lt. Legg expressed his appreciation for all those who have participated in the GIS Street Centerline Committee, particularly Ken Borror the Franklin County 911 Coordinator, Battalion Chief Wes Fullen Chief of the Division of Fire's Alarm Office and Bill Wight GIS Coordinator for the Department of Technology. While all members took of their time to attend meetings and review documents, these three were instrumental in drafting documents and attending additional meetings beyond the committee meetings. Thanks to all for your help in making the GIS Street Centerline Committee a success.

The meeting was adjourned at approximant 9:30 AM.

Lt. Charles W. Legg, Jr.
Committee Chair
August 11, 2005

Minutes

GIS Street Centerline Committee Meeting

July 21, 2005 as **corrected on August 2, 2005**

Meeting minutes amended August 2, 2005 and indicated by underlined text.

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The meeting was attended by:

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Holland, Dir. Gary	Public Safety	645-4239
Legg, Lt. Charles	Public Safety/Fire	645-4643
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The committee reviewed the last meeting minutes and approved as written.

Lt. Ramona Patts from Police and Carl Klein of Technology could not make the meeting due to last minute arrangements for other meetings.

Old Business:

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if they would be interested in any of the coordination from a state perspective. Bill explained that he got the street centerlines standards document from the State and they said we could use it as a standard.

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The following action items were created:

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3. Chief Fullen and Bill Wight: broadcast the cleaned up documents to those interested and receive feedback
4. Take approved document and present to CARDADA group if they are interested
5. Get the GIS data requirements/standard from PSSI for the piece of software the City of Columbus, Department of Public Safety is using with the CAD system.

New Business:

The next meeting will be in three weeks: August 11, 2005 at 8:30 AM at the Fire Administrative Conference room.

The meeting was adjourned at approximant 9:30 AM.

Lt. Charles W. Legg, Jr.
Committee Chair
July 26, 2005