

Amendment 1 to Capital Area Council of Governments Interlocal Agreement for 9-1-1 Geographic Information System Database Management

The Capital Area Council of Governments ("CAPCOG") entered into an Interlocal Agreement (ILA) with Williamson County on October 1, 2020. This amendment is authorized under Section 13.3 of the original ILA, which amendments by mutual agreement. The purpose of this amendment is to update the scope of work and data requirements related to the transition to Next-Generation 9-1-1 (NG9-1-1) that is expected to occur between September 30 and December 31, 2021, and to extend the performance period and add funding to cover the costs of performing work during these months.

AMENDMENT

Section 4: Effective Date and Term of Contract is amended as follows:

4.1: This contract takes effect October 1, 2020, and terminates on ~~September 30~~ December 31, 2021, unless terminated sooner under Section 10.

Section 5: Contract Price and Payment Terms is amended as follows:

5.1: For work performed under this agreement, CAPCOG agrees to compensate Williamson County an amount not to exceed \$503,227.20.

5.2: Williamson County agrees to invoice CAPCOG for ~~one quarter~~ of the amounts listed under section 5.1 within five business days of the end of each of the following quarters and as directed by CAPCOG for work performed during these quarters:

October 1 – December 31, 2020: \$99,577.27, due by close of business, Friday, January 8, 2021;

January 1 – March 31, 2021: \$99,577.26, due by close of business, Wednesday, April 7, 2021;

April 1 – June 30, 2021: \$99,577.26, due by close of business, Thursday, July 8, 2021;

July 1 – September 30, 2021: \$99,577.26, due by close of business, Thursday, October 7, 2021; and

October 1 – December 31, 2021: \$104,918.15, due by close of business, Monday, January 10, 2022.

Attachment A: Scope of Work is amended as indicated in Attachment A to this document.

Attachment B: Technical Requirements is amended as indicated in Attachment B to this document.

Williamson County

CAPITAL AREA COUNCIL OF GOVERNMENTS

By: 
Bill Gravell (Aug 10, 2021 18:38 CDT)
Name: Bill Gravell
Title: County Judge

Date: Aug 10, 2021

By: 
Betty Voights
Executive Director

Date: 9/6/21

Date of County Governing Body Approval:

Attachment A: Scope of Work

Overview

The goal of this scope of work is to facilitate the exchange of geospatial information between CAPCOG and the PUBLIC AGENCY to help ensure that efficient and accurate response to emergency calls and text messages in all areas of the Capital Area Emergency Communications District. In order to accomplish this:

1. Calls and texts must be routed to the correct public safety answering point (PSAP);
2. The correct emergency service provider must be dispatched to the appropriate location; and
3. The emergency responders must be able to know the most efficient route to reach that location.

Definitions

Core 9-1-1 GIS data terminology:

1. **9-1-1 GIS Database:** The geospatial database maintained and updated by the PUBLIC AGENCY that includes, at a minimum, all address points ([SSAPs](#)), road centerlines ([RCLs](#)), PSAP boundaries, Emergency Service Boundaries (ESBs), [Emergency Service Zone \(ESZ\) boundaries](#), and city limit (municipal) boundaries for the PUBLIC AGENCY's provisioning boundary
2. **Data Layer:** Also known as a Feature Class, is a group of geographic features that reside in a table of information with corresponding locations on the earth (map) represented as either points, lines, or polygons.
3. **Address Points ([SSAPs](#)):** A data layer of points identifying sites or structures associated with a street address, or the location of access to a site or structure, but may also represent landmarks.
4. **Road (Street) Centerlines ([RCLs](#)):** A data layer of lines estimating the centerline of a roadway that contains information such as road name, road classification, and address range
5. **City Limit (Municipal) Boundary:** A polygon data layer representing the geographic extent of a city's administrative boundary, not including any extra-territorial jurisdiction. [Updates to City Limit boundaries are used to update PSAP, ESB, and ESZ boundaries.](#)
6. **Automatic Location Information (ALI) Database:** A tabular database of landlines telephone numbers with associated location information used to route 9-1-1 calls to a PSAP.
- 5.7. **Master Street Address Guide (MSAG) Database:** A tabular database of street names and house number ranges within their associated communities defining ESZs and their associated Emergency Service Numbers (ESNs) to enable proper routing of 9-1-1 calls.

Specialized NG9-1-1 GIS terminology:

1. **Provisioning Boundary:** The authoritative polygon data layer that defines the PUBLIC AGENCY's geographic area of 9-1-1 GIS responsibility. This should be the entire extent of the PUBLIC AGENCY's administrative boundary, plus any other adjacent areas or minus areas within its administrative boundaries as agreed to between the PUBLIC AGENCY and another city or county. Provisioning boundaries may only be modified with express written concurrence between the PUBLIC AGENCY, adjacent PUBLIC AGENCIES, and CAPCOG.

Note:

The provisioning boundary should include the area that the PUBLIC AGENCY assigns address points and road names under its own authority, plus any other areas that the PUBLIC AGENCY does not have such authority, but with which it has entered into an exclusive agreement to obtain this information for the 9-1-1 GIS database. Situations that may warrant a change to a provisioning boundary include (but are not limited to): municipal annexations, disannexations, consolidation of two or more municipalities, formation of new municipalities, changes in PSAP service areas, and changes in emergency responder service areas.

2. ~~Public Safety Answering Point (PSAP)~~ **boundary**: The authoritative polygon data layer representing the geographic area within a provisioning boundary served by a single 9-1-1 call center (a PSAP), to which all emergency requests are initially routed.
3. **Emergency Service Boundary (ESB)**: A polygon data layer that represents the geographic area of responsibility for emergency response providers within the geographic extent of the provisioning boundary. Each 9-1-1 GIS database includes, at a minimum, a law ESB layer, a fire ESB layer, and an Emergency Medical Services (EMS) ESB layer.
4. **Emergency Service Zone (ESZ)**: A polygon data layer representing the area within a provisioning boundary served by a unique combination of law, fire, and EMS responders. ESZs are optional for inclusion in the NG9-1-1 GIS database.
5. **Database Schema**: Also known as Data Model, is the database structure with regard to field properties, including data type, field value constraints, etc. Converting one database schema to another involves field-matching (field-mapping) and other compatibility considerations.
- ~~5-6.~~ **Geo-MSAG**: A geospatially-based database that replaces the MSAG and is created and managed using a road centerline GIS dataset. A city or county must first transition from a traditional tabular MSAG to a Geo-MSAG before it can transition to NG9-1-1. In order to qualify to initiate the transition to a Geo-MSAG, a county must achieve at least 98% match between ALI to RCL records as described later in this document.
- ~~6-7.~~ **Globally Unique IDs (GUIDs)**: A unique identifier that is assigned to each record (feature) in an PUBLIC AGENCY's 9-1-1 GIS database; a GUID uniquely identifies a feature both within the PUBLIC AGENCY's 9-1-1 GIS database provisioning boundary and across all 9-1-1 GIS databases.

Quality Control terminology:

1. **Enterprise Geospatial Data Management System (EGDMS)**: A cloud-based quality control platform provided by AT&T/Intrado used for identifying critical errors that affect call and dispatch routing that will ultimately be used by the PUBLIC AGENCY ~~that to~~ provisions (determines acceptable) data ~~for to~~ CAPCOG's NG9-1-1 system in the near future. EGDMS cannot assess "significant" errors that affect dispatch.
2. **Data Hub**: a cloud-based quality control platform provided by GeoComm that, in addition to being able to identify critical errors, can also identify "significant" and "other" errors in an PUBLIC AGENCY's 9-1-1 GIS database. DataHub is the system that will provide data to a call taker's map display in the near future.
3. **New Error**: Any error present in the PUBLIC AGENCY's 9-1-1 GIS database update for the first time.
4. **Legacy Error**: Any error in the PUBLIC AGENCY's 9-1-1 GIS database update that was also present in a preceding update

5. **Accuracy Rate:** The percentage of features that have been assessed by EGDMS, DataHub, or both, as being free of errors or matching a related database.

5-6. **Error Rate:** The ~~ratio of total number of~~percentage of features that have been assessed as having a critical error, significant error, or as not matching a related database.~~errors to total number of features (records) within a specific data layer, or in aggregate for a defined geographic area~~

6-7. **Critical Error:** Any error in the PUBLIC AGENCY's 9-1-1 GIS database ~~update found by the AT&T/Intrado Enterprise Geospatial Database Management (assessed by~~ EGDMS) or GeoComm's DataHub ~~quality control software~~ that cause, or have a potential of causing, a critical fault in the routing of a 9-1-1 emergency service request call or text to the correct PSAP; the EGDMS system prevents data with critical errors from being uploaded to the NG9-1-1 system. Examples include (but are not limited to) gaps and overlaps between several of the data layers described above.

7-8. **Significant Error:** Any error in the PUBLIC AGENCY's 9-1-1 GIS database update found by GeoComm's Data Hub quality control software that cause, or have a potential of causing, a critical fault in Computer-Aided Dispatch (CAD) mapping platforms or other related systems.

8-9. **Other Error:** Any error in the PUBLIC AGENCY's 9-1-1 GIS database identified by GeoComm's Data Hub quality control software other than a "critical" or "significant" error.

Task 1: Basic Work

Task 1 involves information gathering and data preparation needed for the 9-1-1 GIS database but does NOT involve updating the 9-1-1 GIS database directly.

Task 1.A: PUBLIC AGENCY shall submit to CAPCOG, at least once a month, a comprehensive record of 9-1-1 related information needed for complete and updated 9-1-1 GIS database records for all areas within the PUBLIC AGENCY's Provisioning Boundary consisting of:

1. Street Addresses
2. Roads
3. City limit boundaries
4. PSAP boundaries
5. Law ESB
6. Fire ESB
7. Emergency Medical Service ESB
- 7-8. ESZs
- 8-9. Other pertinent information

Data submitted by PUBLIC AGENCY must adhere to requirements laid out in Attachment B.

Task 1B: PUBLIC AGENCY shall enter into and maintain agreements with all other local governments with the authority to assign address points, assign road names and address ranges, ~~alter PSAP boundaries, or alter ESB boundaries~~alter municipal boundaries, or change the geographic coverage of emergency service providers in order to ensure that these entities provide such data to PUBLIC AGENCY in a timely manner. When such changes occur, PUBLIC AGENCY shall provide CAPCOG with adequate advance notice of any substantive changes that could or should affect PSAP boundaries, ESB boundaries,

provisioning boundaries, or any sub-contracting in order for an orderly transition as a result of any pending new agreement, amendment, or agreement termination.

Task 1C: PUBLIC AGENCY shall be responsible for conveying any relevant information deriving from CAPCOG regarding 9-1-1 GIS database integrity to other local governments and governmental entities partially or wholly within its provisioning boundary.

Task 1D: PUBLIC AGENCY shall provide to CAPCOG information from any County Commissioners' Court meetings or City Council meetings that would affect PUBLIC AGENCY's performance of this contract, including (but not limited to) changes to PSAPs, ESBs/ESZs, annexation, or subcontracting. PUBLIC AGENCY's Project Representative is expected to keep track of County Commissioners Court and City Council meeting agendas to determine if an item may affect the performance of this contract, and notify CAPCOG's project representative of any such issues as soon as possible, but no later than 2 days prior to the Commissioners Court or City Council meeting. Such information includes, but is not limited to, annexation notices, disannexation notices, and interlocal agreements related to emergency services and coverage areas. To the extent possible, CAPCOG will use the ESB and ESZ data submitted by the PUBLIC AGENCY in the 9-1-1 system. However, CAPCOG reserves the right to make adjustments to these data and/or reinstate prior versions if the data submitted by PUBLIC AGENCY are found to have errors. PUBLIC AGENCY is responsible for downloading and using the latest authoritative version of the ESZ/ESB files used in the 9-1-1 system from CAPCOG at the beginning of each month to avoid repetition of errors if they have occurred.

Task 1.E: PUBLIC AGENCY shall send at least one representative to each scheduled quarterly 9-1-1 GIS User Group meetings (GMUG) and at least one training workshop hosted by CAPCOG during the performance period of this agreement.

Task 2: GIS Work

Task 2 involves GIS work needed for directly maintaining and updating the 9-1-1 GIS database. This is work that CAPCOG would need to perform if the PUBLIC AGENCY did not do so. CAPCOG's expectation is that this work would be by a person, either on staff or subcontracted by the PUBLIC AGENCY, with responsibilities, knowledge, skills, education, and experience comparable to the state's "Geographic Information Specialist II" job description.¹ PUBLIC AGENCY must maintain at least one ESRI's ArcGIS software license as specified in Attachment B in order to carry out this work. Task 2 includes the following sub-tasks:

Task 2.A: PUBLIC AGENCY shall submit all information required under Task 1.A that corresponds to GIS data layers in the 9-1-1 GIS database. This will be provided in ESRI File geodatabase format (.gdb) pursuant to CAPCOG guidance at least once a month to CAPCOG, or more frequently as specified by CAPCOG once PUBLIC AGENCY has completed the transition to NG9-1-1. PUBLIC AGENCY shall first submit data to EGDMS and Data Hub in order to address any mismatches between the ALI database and PUBLIC AGENCY's RCL and address point data, "critical" errors, ~~or~~ and "significant" errors. These quality control systems require the 9-1-1 GIS database to match the standardized database schema (data model) for these systems through field-matching (field-mapping) procedures and other standards. Based on the recommendations of CAPCOG's GIS Planning Committee, CAPCOG staff will develop performance

¹ Available online at: <http://www.hr.sao.texas.gov/CompensationSystem/JobDescriptions/>

standards for target error rates, and will communicate these performance standards to PUBLIC AGENCY at a later date through guidance.

Task 2.B: PUBLIC AGENCY shall address any errors identified by EGDMS and Data Hub validation checks (reports) or CAPCOG Quality Control reports from those systems as soon as possible, but no later than the following conventional monthly submission to CAPCOG. This includes coordination with adjacent PUBLIC AGENCIES and CAPCOG where necessary.

Task 2.C: PUBLIC AGENCY shall address any other discrepancies identified by authorized stakeholders including, but not limited to, PSAP 9-1-1 call-takers.

Task 2.D: At least once a month, PUBLIC AGENCY shall back up the 9-1-1 GIS database and store it in a secure place. PUBLIC AGENCY shall include a record of the dates the database was backed up in the activity reports that are required to be submitted with quarterly invoices.

Task 2.E: In addition, PUBLIC AGENCY shall maintain the ~~automatic location information (ALI)~~ and MSAG databases within the PUBLIC AGENCY's provisioning boundary. This includes, but is not limited to, correcting telephone number database errors, maintenance and quality-control of an accurate 9-1-1 call location map, and providing ~~Master Street Address Guide (MSAG)~~ updates and corrections to the database vendor. If PUBLIC AGENCY has met the required 98% match between ALI to RCL s determined by Intrado and transitioned to a GeoMSAG, MSAG database updates and management will be made through uploads of the RCL GIS feature class to EGDMS.

Content of Quarterly Reports

Along with each quarterly invoice, PUBLIC AGENCY will submit an activity report that contains all of the following information related to activities that occurred in the quarter:

- For each applicable governmental entity with administrative boundaries within PUBLIC AGENCY's provisioning boundary, PUBLIC AGENCY shall provide a summary of actions taken each month relevant to the 9-1-1 GIS database ~~or certify that no action was taken relevant to the 9-1-1 GIS database, including any new records added since the last update and errors corrected.~~
- ~~If applicable, t~~The date and time of the PUBLIC AGENCY's last backup of its 9-1-1 GIS database each month of the quarter.
- Dates and basic summaries (such as total number of features) of data submissions to CAPCOG.
- A summary of any work that involved resolution of boundary issues with other entities, correction of errors and resolution of any other issues related to this contract
- An explanation for any performance issues ~~in the prior month~~during the quarter and corrective action that will be taken to address and prevent such issues in the future, including:
 - Late or incomplete data submissions;
 - ~~Submission of data with legacy errors;~~
 - ~~Submission of data with new errors;~~
 - Failure to meet performance expectations for ALI to RCL match accuracy rates, critical error accuracy rates, and-or significant error rates; and
 - Any other issue identified by CAPCOG in a performance report.

CAPCOG will provide PUBLIC AGENCY the template to use for activity reports.

CAPCOG Guidance and Direction

In addition to the Performance Reports identified in Task 2.B, CAPCOG may issue technical guidance or direction to PUBLIC AGENCY's Project Representative that provides further clarification, interpretation, and details. Failure to follow any such guidance would constitute a performance deficiency for this agreement.

Prior to transitioning PUBLIC AGENCY to NG9-1-1, CAPCOG will issue an addendum with a modified scope of work that will cover expectations once a transition to NG9-1-1 occurs. CAPCOG also anticipates issuing updated performance goals for critical error accuracy rates, significant error accuracy rates, and frequency of database updates once a local government has transitioned to NG9-1-1 following the 7/23/2021 GISPC meeting.



CAPCOG NG9-1-1 Transitional GIS Data Requirements Version 2.0-3 ~~(20172021)~~

1 Summary

The following geospatial data and corresponding attribute specifications are required to be regularly maintained by each county for Mapped Automated Location Information (ALI) and use in a Next Generation 9-1-1 system which relies on GIS for call and dispatch routing through the, Location Validation Function (LVF) and Emergency Call Routing Function (ECRF).

This document is referenced in the Capital Area Council of Governments Interlocal Agreement for 9-1-1 Geographic Information System Database Management Capital Area Emergency Communications District Interlocal Contract for Geographic Information System Data and the Capital Area Emergency Communications District Interlocal Contract for Next Generation 9-1-1 Database Program documents and is commonly called "Attachment B Requirements".

The GIS Data requirements in this document are a condensed version of, and based upon, data standards created by NENA (National Emergency Number Association). ~~standards~~ as they are developed and evolve over time. ~~We are in a lengthy transitional period to Next Generation 9-1-1 (NG9-1-1). These d~~Data model standards should be more thoroughly reviewed in the "NENA Standard for NG9-1-1 GIS Data Model" document. Specifics regarding address point placement methodologies should be reviewed in the "NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1" document. There are other useful resources and training, as well, that and CAPCOG has created and -will-can provide several of these on its own Web Site.

As per "Task 1.A and Task 2.A" in "Attachment A: Scope of Work", pPlease provide monthly updates of the 9-1-1 datasets referenced in this document in ESRI file geodatabase format to the GeoComm GIS Data Hub, Intrado EGDMS, and CAPCOG FTP location by close of business the ~~the~~ 1st business day of each month. This ensures that data is available for the PSAPs by close of the 7th business day of that month. ~~Submissions may be sent up to five business days before the 1st business day of the next month, but ideally would be sent on the 1st business day as CAPCOG wants to capture as many edits as possible that happen over the course of a given month.~~ Incomplete datasets or other data abnormalities related to requirements may be returned to the county for correction, and must be returned by close of business the 5th business day, however, this does not guarantee that the submission will be included in the dataset provided to the PSAPs. If there is a situation in which a submission is not possible by the end of the 1st business day of the month, CAPCOG must be made aware and will work with county to obtain that month's data. ~~To be included in that month's PSAP update, the data must be returned to CAPCOG by the 5th business day of that month.~~

CAPCOG will update, create, and otherwise manage the PSAP and Provisioning Boundaries for each local jurisdiction and provide these data layers to jurisdiction for Task 2: GIS Work. CAPCOG will also provision these datasets to both quality-control systems for their use in call and dispatch routing as well as map display and reference. As described in "Task 1B, county shall enter into and maintain agreements with all other local governments with the authority to assign address points, assign road names and address ranges, alter municipal boundaries, or change the geographic coverage of emergency service providers in order to ensure that these entities provide such data to county in a timely manner. When such changes occur, local jurisdiction shall provide CAPCOG with adequate advance notice of any substantive changes that could or should affect PSAP boundaries, ESB/ESZ boundaries, provisioning boundaries, or any sub-contracting in order for an orderly transition as a result of any pending new agreement, amendment, or agreement termination.

To the extent possible, CAPCOG will use the ESB and ESZ data submitted by the local jurisdiction in the 9-1-1 system. However, CAPCOG reserves the right to make adjustments to these data and/or reinstate prior versions if the data submitted are found to have errors. The local jurisdiction is responsible for downloading and using the latest authoritative version of the ESZ/ESB files used in the 9-1-1 system from CAPCOG at the beginning of each month to avoid repetition of errors if they have occurred. Note

that regardless of any such changes made by local governments within their provisioning boundary, those changes will not be made in the 9-1-1 system until this information is provided to CAPCOG, CAPCOG accepts the information, and makes the corresponding changes in the 9-1-1 system.

Regarding database fields and data types, each is very specific and must follow the exact guidelines outlined below. ~~For example, the "L_ESN" field must be Text type with a character width of 5.~~ Remember to keep the field names in your database the same as those listed, and in the same order, and that all entries for every field must be in UPPER CASE. The complete attribute definitions shown in the GIS data tables are described and defined in the "Database Format" sections for each dataset. The data fields shown as **Mandatory** and **Conditional** must be present in the data. In the tables below, the column **M/C/O** is to indicate whether the attribute values is Mandatory (**M**), Conditional (**C**), or Optional (**O**).

- **Mandatory** signifies an attribute value must exist
- **Conditional** signifies that if the attribute information exists in the real world, it must be included. If no value exists for the feature, the individual value is left blank without an empty space (if text), or 0 (if numeric)
- **Optional** signifies an attribute value may or may not be included in the data field

In the GIS data tables below, the **TYPE** column indicates the data type used for the data field.

- **TEXT** – string of alphanumeric characters including any combination of alphabetical letters A-Z and numbers 0-9
- **DATE** – Date and **time** using ISO 8601 compliant formats which are in the format of YYYY-MM-DD HH:MM:SS
- **DOUBLE** – double precision floating point numeric values with decimals

LONG – whole numeric values ranging from -2,147,483,648 to 2,147,483,647 without ~~decimals~~decimals in the GIS data tables below, the **WIDTH** column indicates the number of allowable characters within each field.

2 Road Centerlines (RCL)

This line data represents road networks in the CAPCOG region. This layer includes the street names and address ranges used to assign an address.

2.1 Graphic (Spatial) Edits

Each named street needs to be represented in the GIS graphically and include attribution for all database fields listed below. All unnamed streets included in the street centerline layer are required to have the designation "DRVW" entered in the 'street name (ST_NAME)' field and have any other relevant attribute information completed, including the 'CLASS' field. When a street centerline is created or edited, several sources and methods can be used, including current aerial imagery, georeferenced survey plats, computer-aided design (CAD) files, parcels, mapping-grade GPS units in the field, or other authoritative sources or methods. The positional accuracy of addressed structures should be within +/- 5 feet of the center of the roadbed (the part on which vehicles travel) noting that when roadways are divided (i.e by a median) the roadbeds on each side should have a centerline drawn. In all cases each new street centerline will need to be split, or checked for gaps, at each jurisdiction and ESN line/boundary intersection. Street segment direction must be correct as well. These items and other geometric relationships are referred to as "topology", and especially important for NG9-1-1 purposes.

2.2 Database Format

<u>FIELD NAME</u>	<u>M/C/O</u>	<u>TYPE</u>	<u>WIDTH</u>	<u>DESCRIPTION/ VALID ENTRIES</u>
SOURCE	M	TEXT	75	Agency that last updated the record, i.e. FAYETTE, TRAVIS
PROVIDER	M	TEXT	75	The name of the regional 911 authority <i>CAPCOG will populate</i>
LAST_MOD	M	DATE	26	Date of last update using ISO 8601 format
EFF_DATE	O	DATE	26	Date the new record information goes into effect in ISO 8601 format
SEGMENTID	OM	LONG	DEFAULT	Unique segment ID <i>CAPCOG will populate prior to uploading to PSAP. -May also serve as a placeholder field to populate SITEUNGID field</i>
RCL_UNIQID	M	TEXT	100	<u>ID for each road segment – CAPCOG will populate Globally Unique ID for each road segment. Ex. 894RCL@co.blanco.tx.us</u>

COUNTRY	M	TEXT	2	Country name represented by two capital letters
L_STATE	M	TEXT	2	Left state name by two letters defined by USPS publication 28
R_STATE	M	TEXT	2	Right state name by two letters defined by USPS publication 28
L_COUNTY	M	TEXT	40	Fully spelled county name on the left side of the road
R_COUNTY	M	TEXT	40	Fully spelled county name on the right side of the road
L_MUNI	M	TEXT	100	Name of municipality on Left, if none populate with "UNINCORPORATED"
R_MUNI	M	TEXT	100	Name of municipality on Right, if none populate with "UNINCORPORATED"
L_MUNI_DIV	C	TEXT	100	Name of municipality division on Left, i.e. "WARD 5 FRIENDSHIP DISTRICT"
R_MUNI_DIV	C	TEXT	100	Name of municipality division on Right i.e. "WARD 5 FRIENDSHIP DISTRICT"
L_NBRHOOD	O	TEXT	100	Name of neighborhood or subdivision on Left
R_NBRHOOD	O	TEXT	100	Name of neighborhood or subdivision on Right
L_RNG_PRE	C	TEXT	15	Part of an address preceding the numeric address on Left
R_RNG_PRE	C	TEXT	15	Part of an address preceding the numeric address on Right
LF_ADDR	M	LONG	DEFAULT	Left address number at the FROM node
LT_ADDR	M	LONG	DEFAULT	Left address number at the TO node
RF_ADDR	M	LONG	DEFAULT	Right address number at the FROM node
RT_ADDR	M	LONG	DEFAULT	Right address number at the TO node
L_PARITY	M	TEXT	1	E, O, B, Z for Even, Odd, Both, or Zero (if the range is 0 to 0)
R_PARITY	M	TEXT	1	E, O, B, Z for Even, Odd, Both, or Zero (if the range is 0 to 0)
L_POST_COM	C	TEXT	40	City name for the ZIP of an address, as given in the USPS on Left
R_POST_COM	C	TEXT	40	City name for the ZIP of an address, as given in the USPS on Right
L_ZIP	C	TEXT	5	5-digit numeric postal code area on Left
R_ZIP	C	TEXT	5	5-digit numeric postal code area on Right
L_ESN	M	TEXT	5	5-digit Emergency Service Number as identified by MSAG-ESN on Left. If the ESN number only has 2-3 digits, it must be preceded by zeros
R_ESN	M	TEXT	5	Emergency Service Number as identified by MSAG-ESN on Right. Must be preceded by zeros if less than 5 digits, i.e. "00088" for ESN 88
L_MSAG	M	TEXT	30	Valid service community as identified by MSAG on Left
R_MSAG	M	TEXT	30	Valid service community as identified by MSAG on Right
PRE_MOD	O	TEXT	15	Word or phrase separate from type and direction that precedes PRE_DIR i.e. Access, Alternate, Business, Connector, Extension, Scenic, Spur, Ramp Underpass, Overpass
PRE_DIR	C	TEXT	2	Leading directional prefix N, S, E, W, NE, NW, SE, SW
PRE_TYPE	C	TEXT	20	Spelled out word or phrase that precedes and identifies a type of thoroughfare
ST_NAME	M	TEXT	60	Legal street name as assigned by local addressing authority
ST_TYPE	C	TEXT	4	Type of street following the street name, valid entries on USPS Pub 28
POST_DIR	C	TEXT	2	Trailing directional suffix N, S, E, W, NE, NW, SE, SW
POST_MOD	C	TEXT	12	Word or phrase separate from type and direction that follows ST_NAME
FULL_NAME	M	TEXT	125	Full street name, should be a concatenation of 4 fields : PRE_DIR, ST_NAME, ST_TYPE and POST_DIR with no trailing or leading spaces
ST_ALIAS	C	TEXT	125	Entire alias street name assigned to street segment
ONE_WAY	O	TEXT	2	B, FT, TF for Both , FROM node to TO node, TO node to FROM node
SP_LIMIT	O	LONG	DEFAULT	Posted speed limit in MPH
CLASS	M	TEXT	4	Street type designation code (See ROC Codes below)
RDCLS_TYP	O	TEXT	15	See valid Road Class Types below
NOTES	O	TEXT	75	Additional information

2.2 ROC Codes ('Street Type' Designation)

IH – Interstate

US – US highways

SH – State highways
 FM – Farm to Market, Ranch Road, Ranch to Market
 LS – City Street, County Road, Park Road, Recreational, Frontage Road
 AC – Access Road, Crossover
 PVT- Private Road
 TR – Toll Road
 RAMP- On-ramp, Off-ramp
 DW — Driveways

2.3 Road Class Types

Primary
 Secondary
 Local (City, Neighborhood, or Rural Road)
 Ramp
 Service (usually along a limited access highway)
 Vehicular Trail (4WD, snowmobiles)
 Walkway (Pedestrian Trail, Boardwalk)
 Alley
 Private (service vehicles, logging, oil fields, ranches, etc.)
 Parking Lot
 Trail (Ski, Bike, Walking / Hiking Trail)

3 Site / Structure Address Points (AP)

This point data represents addressable sites, structures, or property entrances that exist within the CAPCOG region.

3.1 Graphic (Spatial) Edits

All addressed site/structures must be represented in the address point layer. When a site/structure point is created or edited, several sources and methods can be used, including aerial imagery, georeferenced survey plats, computer-aided design (CAD) files, parcels, mapping-grade GPS units in the field, or other authoritative sources and methods. When the actual structure location is known, the symbol should represent the general center of the structure. In other cases, please refer to the “NENA Information Document for Development of Site/Structure Address Point GIS Data for 9-1-1” document. In any case, the positional accuracy of structures or designated site locations should be within +/- 25 feet of their true location or intended designation.

3.2 Database Format

FIELD NAME	M/C/O	TYPE	WIDTH	DESCRIPTION/ VALID ENTRIES
SOURCE	M	TEXT	75	Agency that last updated the record, i.e. HAYS, WILLIAMSON
PROVIDER	M	TEXT	75	The name of the regional 911 authority <i>CAPCOG will populate</i>
LAST_MOD	M	DATE	26	Date of last update using ISO 8601 format
EFF_DATE	O	DATE	26	Date the new record information goes into effect in ISO 8601 format
SITE_ID	MO	LONG	DEFAULT	Unique site ID <i>CAPCOG will populate prior to uploading to PSAP. May also serve as a placeholder field to populate SITEUNGID field</i>
SITEUNQID	M	TEXT	100	Globally Unique unique ID for each address site <i>or structure. Ex. 2545AP@co.lee.tx.us – CAPCOG will populate</i>
COUNTRY	M	TEXT	2	Country name represented by two capital letters
STATE	M	TEXT	2	State name by two letters defined by USPS publication 28
COUNTY	M	TEXT	40	County name or equivalent fully spelled out
MUNICIPAL	M	TEXT	100	Name of municipality, if none populate with “UNINCORPORATED”
MUNI_DIV	C	TEXT	100	Name of municipality division i.e. “WARD 5 FRIENDSHIP DISTRICT”
NBRHOOD	C	TEXT	100	Name of neighborhood or subdivision where the address is located
ADDNUM_PRE	O	TEXT	15	Part of an address leading the numeric address
ADDR_NUM	M	LONG	DEFAULT	Numeric identifier of a location along a thoroughfare
ADDNUM_SUF	C	TEXT	15	Part of an address following the address number i.e. ½, B

PRE_MOD	O	TEXT	15	Word or phrase separate from type and direction that precedes PRE_DIR i.e. Access, Alternate, Business, Connector, Extension, Scenic, Spur, Ramp Underpass, Overpass
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PRE_DIR	C	TEXT	2	Leading directional prefix N, S, E, W, NE, NW, SE, SW
PRE_TYPE	O	TEXT	20	Spelled out word or phrase that precedes and identifies a type of thoroughfare
ST_NAME	M	TEXT	60	Legal street name as assigned by local addressing authority
ST_TYPE	C	TEXT	4	Type of street following the street name, valid entries on USPS Pub 28
POST_DIR	C	TEXT	2	Trailing directional suffix N, S, E, W, NE, NW, SE, SW
POST_MOD	O	TEXT	12	Word or phrase separate from type and direction that follows ST_NAME
FULL_NAME	M	TEXT	125	Full street name, must be identical to the site's related road FULL_NAME
ST_ALIAS	C	TEXT	125	Entire alias street name assigned to related street segment
FULL_ADDR	M	TEXT	170	Full address, should be a concatenation of ADDNUM_PRE + ADDR_NUM + ADDNUM_SUF + FULL_NAME with no extra, leading and trailing spaces
ESN	M	TEXT	5	Emergency Service Number associated with the address and community name Preceded by '0' if digits are less than 5
MSAG_COM	M	TEXT	30	Valid service community associated with the location of the address
POSTAL_COM	M	TEXT	40	City name for the ZIP of an address, as given in the USPS
ZIP	C	TEXT	5	5-digit numeric postal code area
ZIP4	O	TEXT	4	ZIP plus 4 code without the dash
BLDG	O	TEXT	75	One among a group of buildings that have the same address
FLOOR	O	TEXT	75	A floor, story or level within a building
UNIT	O	TEXT	75	A suite or group of rooms within a building that share the same entrance
ROOM	O	TEXT	75	A single room within a building
SEAT	O	TEXT	75	A place where a person sits within a building i.e. cubicle
LANDMARK	O	TEXT	150	The name by which a prominent feature is publicly known or Vanity address
MILEPOST	C	LONG	DEFAULT	A posted numeric measurement from a given beginning point
SITE_TYPE	C	TEXT	50	Type of feature identified by the address i.e. residential, office, store, school
POINT_X	O	DOUBLE	DEFAULT	Longitude of point in decimal degrees using EPSG: 4326
POINT_Y	O	DOUBLE	DEFAULT	Latitude of point in decimal degrees using EPSG: 4326
NOTES	O	TEXT	254	Additional location information, which is not a building, floor, unit, room or seat
ELEVATION	O	DOUBLE	DEFAULT	Height above Mean Sea Level in meters

4 Emergency Service Zones (ESZ)

This polygon data consists of the intersection of law enforcement, fire district, and emergency medical service and telephone exchange boundaries in the CAPCOG region.

4.1 Graphic (Spatial) Edits

These areas need to accurately reflect the boundaries of each geographically unique combination of fire, law and EMS responder zones. This layer is created and maintained by overlaying with some combination of street centerlines, municipal (i.e. city limit) boundaries, parcels boundaries, or other data to determine each jurisdiction's emergency response service areas. As new emergency response services are added to, or change in an area, this boundary file will need to be modified accordingly. Communications must be regularly preserved with all fire, law, and emergency medical responders to obtain the information required to maintain updated ESZ boundaries. These ESZ boundaries should be within +/- ~~50~~3 feet of their true location with no gaps or overlaps. These items and other geometric relationships are referred to as "topology", and especially important for NG9-1-1 purposes. **In addition, it is very important that all features with identical attribute information are merged into one multipart polygon.**

4.2 Database Format

<u>FIELD NAME</u>	<u>M/C/O</u>	<u>TYPE</u>	<u>WIDTH</u>	<u>DESCRIPTION/ VALID ENTRIES</u>
SOURCE	M	TEXT	75	Agency that last updated the record, i.e. BASTROP, BURNET
PROVIDER	M	TEXT	75	The name of the regional 911 authority <i>CAPCOG will populate</i>
LAST_MOD	M	DATE	26	Date of last update using ISO 8601 format
EFF_DATE	O	DATE	26	Date the new record information goes into effect in ISO 8601 format
ES_UNQID	M	TEXT	100	ID for each emergency service polygon - <i>CAPCOG will populate</i>
LAW	M	TEXT	60	Name of law service provider
FIRE	M	TEXT	60	Name of fire service provider
MEDICAL	M	TEXT	60	Name of medical service provider
COUNTRY	M	TEXT	2	Country name represented by two capital letters
STATE	M	TEXT	2	State name by two letters defined by USPS publication 28
COUNTY	M	TEXT	40	County name fully spelled out
URI	M	TEXT	254	URN/URL for routing. Example: sip:sos.law@city.eoc.tx.us sip:sos@ausxtxem1.travis.tx.us
URN	M	TEXT	50	The URN for the Emergency Service or other Well-Known Service*
ESN	M	TEXT	5	ESN of the responding agency preceded by '0' if number of digits < 5
TANDEM	M	TEXT	3	911 Selected Router Code
TANDEM2	C	TEXT	3	911 Selected Router Code
ESSID	M	TEXT	2	Unique tandem routing code <i>CAPCOG will populate</i>
ESNGUID	M	TEXT	8	Concatenation of ESN and ESSID separated by a single forward slash "/" <i>CAPCOG will concatenate</i>
AVCARDURI	C	TEXT	254	URI for the vCARD of contact information

* Example: "urn:service:sos" for a PSAP or "urn:service:sos.ambulance" for an ambulance service

5 Emergency Service Boundaries (ESB)

This polygon data consists of Emergency Service Boundary layers that define the geographic area for the primary providers of response services in the CAPCOG region.

5.1 Graphic (Spatial) Edits

Each of these layers is used by the ECRF to perform a geographic query to determine which Emergency Service Providers are responsible for providing service to a location in the event a selective transfer is desired, to direct an Emergency Incident Data Document to a secondary PSAP for dispatch, or to display the responsible agencies at the PSAP. In addition, Emergency Service Boundaries are used by PSAPs to identify the appropriate entities/first responders to be dispatched. Each Emergency Service Boundary layer may contain one or more polygon boundaries that define the primary emergency services for that geographic area. As new emergency response services are added to, or change in an area, this boundary file will need to be modified accordingly. Communications must be regularly preserved with all fire, law, and emergency medical responders to obtain the information required to maintain updated boundaries. These Emergency Service Boundaries should be within +/- 3 feet of their true location with no gaps or overlaps and can be created by dissolving the Emergency Service Zones polygon data. These items and other geometric relationships are referred to as "topology", and especially important for NG9-1-1 purposes. In addition, it is very important that all features with identical attribute information are merged into one multipart polygon

There MUST be a separate Emergency Service Boundary layer for each type of service. The set of Emergency Service Boundaries MUST include, at a minimum, the following:

- Law Enforcement
- Fire
- Emergency Medical Services (EMS)

Other Emergency Service Boundaries MAY include, but are not limited to:

- Poison Control
- Forest Service
- Coast Guard
- Animal Control

5.2 Database Format

<u>FIELD NAME</u>	<u>M/C/O</u>	<u>TYPE</u>	<u>WIDTH</u>	<u>DESCRIPTION/ VALID ENTRIES</u>
<u>DISCRPAGID</u>	<u>M</u>	<u>TEXT</u>	<u>75</u>	<u>Agency that last updated the record, i.e. BASTROP, BURNET</u>
<u>DATEUPDATE</u>	<u>M</u>	<u>DATE</u>	<u>26</u>	<u>Date of last update using ISO 8601 format</u>
<u>EXPIRE</u>	<u>O</u>	<u>TEXT</u>	<u>26</u>	<u>Unique tandem routing code CAPCOG will populate</u>
<u>EFFECTIVE</u>	<u>O</u>	<u>TEXT</u>	<u>26</u>	<u>The date and time when the information in the record is no longer considered valid.</u>
<u>ES_NGUID</u>	<u>M</u>	<u>TEXT</u>	<u>254</u>	<u>Globally unique ID for each emergency service boundary polygon – Ex. 210EMS@blanco.co.tx.us</u>
<u>STATE</u>	<u>M</u>	<u>TEXT</u>	<u>2</u>	<u>State name by two letters defined by USPS publication 28</u>
<u>AGENCYID</u>	<u>M</u>	<u>TEXT</u>	<u>100</u>	<u>A Domain Name System (DNS) domain name which is used to uniquely identify an agency. Ex. austintexas.gov</u>
<u>SERVICEURI</u>	<u>M</u>	<u>TEXT</u>	<u>254</u>	<u>URN/URL for routing. Example: sip:sos@ausxtxem1.travis.tx.us</u>
<u>SERVICEURN</u>	<u>M</u>	<u>TEXT</u>	<u>50</u>	<u>The URN for the Emergency Service or other Well-Known Service*</u>
<u>SERVICENUM</u>	<u>M</u>	<u>TEXT</u>	<u>15</u>	<u>The numbers that would be dialed on a 12-digit keypad to reach the emergency service appropriate for the location. Ex: 911</u>
<u>AVCARDURI</u>	<u>C</u>	<u>TEXT</u>	<u>254</u>	<u>URI for the vCARD of contact information</u>
<u>DISPLAYNAME</u>	<u>M</u>	<u>TEXT</u>	<u>60</u>	<u>Name of the service provider that offers services within the area of an Emergency Service Boundary</u>

56 Municipal Boundary

This polygon data represents municipal boundaries in the CAPCOG region.

5-16.1 Graphic (Spatial) Edits

When city limits change due to annexations, metes and bounds surveys or other related information must be acquired to update the city limit boundaries. Coordinate geometry (COGO) – is one of the preferred methods for calculating coordinate points from surveys and can be used to update the city limit boundaries in the GIS within ~~+/- or~~ 50-3 feet of their true location with no gaps or overlaps

5-26.2 Database Format

<u>FIELD NAME</u>	<u>M/C/O</u>	<u>TYPE</u>	<u>WIDTH</u>	<u>DESCRIPTION/ VALID ENTRIES</u>
<u>SOURCE</u>	<u>M</u>	<u>_TEXT</u>	<u>75</u>	<u>Agency that last updated the record, i.e. CALDWELL, LLANO</u>
<u>PROVIDER</u>	<u>M</u>	<u>_TEXT</u>	<u>75</u>	<u>The name of the regional 911 authority CAPCOG will populate</u>
<u>LAST_MOD</u>	<u>M</u>	<u>_DATE</u>	<u>26</u>	<u>Date of last update using ISO 8601 format</u>
<u>EFF_DATE</u>	<u>O</u>	<u>_DATE</u>	<u>26</u>	<u>Date the new record information goes into effect in ISO 8601 format</u>
<u>POLY_ID</u>	<u>OM</u>	<u>_LONG</u>	<u>DEFAULT</u>	<u>Numeric Polygon ID CAPCOG will populate <u>prior to uploading to PSAP. May also serve as a placeholder field to populate MUNIUNQID field</u></u>
<u>MUNIUNQID</u>	<u>M</u>	<u>_TEXT</u>	<u>100</u>	<u>Globally Unique ID for each municipality - . Ex. 9847INCM@austintexas.gov CAPCOG will populate</u>

COUNTRY	M	TEXT	2	Country name represented by two capital letters
STATE	M	TEXT	2	State Name (eg: TX)
COUNTY	M	TEXT	40	County name fully spelled out
MUNI_NM	M	TEXT	100	Name of municipality i.e. "AUSTIN"

Attachment B, Part 2:

Guidance Document for CAPCOG Next Generation 9-1-1 GIS Data (Version 2, 2020)

Guidance Document for CAPCOG Next-Generation 9-1-1 Geographic Information System (GIS) Data Version 2: April 2020

Introduction:

As the Transition Workflow Cycle of the Next-Generation 9-1-1 Database Program Interlocal Agreement (ILA) describes, our region is moving closer and closer to deploying a Next-Gen 9-1-1 system that enables emergency calls to route to the correct PSAP based on GIS data. This transition begins the process of moving away from our traditional MSAG-based (tabular database) routing system to one that will be faster, more reliable, and enable multimedia such as pictures and videos to be sent to 9-1-1 call takers. However, in order to move to this new system, several changes need to be made to our workflows and data. Perhaps the biggest change is that we will be utilizing new cloud-based software packages to assist with quality control (QC). One of these solutions will also ultimately become the mechanism by which 9-1-1 GIS data is supplied to PSAPs, which could ultimately be done at any time throughout the month as opposed to just once.

The intention of this document is to serve as a guide for county coordinators in the preparation of this transition, and to provide detailed technical information regarding how to prepare the 9-1-1 GIS data submission. CAPCOG reserves the right to unilaterally update this guidance document at any time.

Summary of Changes:

Below is a list of items we need to accomplish, as outlined in the Transition Workflow Cycle of the ILA.

- Create globally unique IDs (GUIDs) for all features in all feature classes of the GIS database in order to track changes to data over time
- Utilize the "Last_Modified" date field in order to track new and legacy data
- Incorporate emergency service boundaries into data or determine a process to create and manage them
- Determine if changes to PSAP boundary coverage areas need to be made
- Determine if changes to provisioning boundaries need to be made
- Participate in training opportunities for the EGDMS and Data Hub QC platforms
- Field map and upload data to EGDMS and Data Hub
- Retrieve errors from QC software and correct them

Globally Unique IDs (GUIDs):

In a Next-Gen 9-1-1 system, a new requirement has been set by NENA (National Emergency Number Association) that stipulates data must include Globally Unique IDs, or GUIDs. GUIDs are created by constructing unique feature IDs using a format as described in the associated document provided by CAPCOG.

Each GUID should remain unchanged for the life span of the GIS data so that it supports the resolution of errors through quality control discrepancy reporting, and allows for us to track changes to data overtime.

Using the “LAST_MOD” Field:

Attachment B of the ILA, entitled “CAPCOG NG9 1-1 Transitional GIS Data Requirements” describes a “LAST_MOD” or Last Modified date field in each of the GIS data layers and is marked as mandatory for completion. In order for CAPOG to begin tracking what is ‘new’ data and what is ‘legacy’ data, we need this field to be completed in each of the data layers. Our goal in differentiating between these two datatypes is so that we can determine if progress is being made in data error correction. Use of this field will also be monitored and included in the performance reports that CAPCOG will send out each month.

If there is a GIS feature that was created prior to October 1, 2019 and the LAST_MOD field is NULL or otherwise not known, this field should be populated with a date of 10/1/2019 and will be counted as legacy data. One way to have this field updated automatically when editing or creating features is to use ‘editor tracking’ on the feature class. This can be done by right-clicking the feature class in ArcCatalog and then selecting ‘Properties’. When the Feature Class Properties dialog box opens, select the ‘Editor Tracking’ tab. The below image shows how this can be set up:

The screenshot shows the 'Feature Class Properties' dialog box with the 'Editor Tracking' tab selected. The 'Enable editor tracking' checkbox is checked. Under 'Update these fields when a feature is created', the 'Creator Field' and 'Create Date Field' are both set to '<None>'. Under 'Update these fields when a feature is edited', the 'Editor Field' is set to '<None>' and the 'Edit Date Field' is set to 'LAST_MOD'. At the bottom, the 'Record Dates in' section has 'Database Time' selected with a radio button. A note at the bottom states: 'Pre-existing dates in create date and edit date fields will be considered to be in the specified time zone. UTC is recommended if there are no dates. See the on-line help for more information.'

- Check the 'Enable editor tracking' box
- Set the 'Edit Date Field' to LAST_MOD
- Select 'Database Time' to record dates

New Quality Control (QC) Platforms:

The Capital Area Emergency Communications District (CAECD) has purchased two all-new quality control systems for our counties to use. These will be used as a means to not only quality control GIS data and return the results of errors but, in the case of the Enterprise Geospatial Database Management System (EGDMS), will actually *provide* data to the functional elements of a NG9-1-1 environment. Again, in NG9-1-1, GIS data is the driver of call routing!

Enterprise Geospatial Database Management System (EGDMS)

Vendors: AT&T and Intrado

The Enterprise Geospatial Database Management System (EGDMS) is a web application that serves as the front-end user interface for the NENA Spatial Interface (SI) requirement. GIS data submitted through EGDMS is validated, coalesced, and used for provisioning to NG9-1-1 (sometimes referred to as i3) systems which are called the ECRF and LVF. These stand for Emergency Call Routing Function and the Location Validation Function. Both of these elements are major components in the NG9-1-1 environment

One of the biggest advantages in moving to this system is that it will enable counties the ability to update PSAP map data much more frequently than our current workflow of just once a month.

EGDMS includes the following features:

- Secure 2-factor authentication
- A file upload user interface that enables customers to identify the contents of the upload
- Acceptance of file geodatabase files and shapefiles (although no one should be using shapefiles!)
- Attribute field mapping configuration that is customer driven
- Automated schema change detection and error notification
- Automated email notification for upload and processing status
- GIS data validation report retrieval

As a QC platform, EGDMS will find “critical” errors as outlined in [Transition Workflow Cycle Attachment A: Scope of Work of the ILA](#). Critical errors have the potential to negatively affect the call routing process and, as such, need to be corrected. Please review the EGDMS user guide for detailed

A note: CAPCOG will provide a spreadsheet that shows the fields used by EGDMS and the corresponding CAPCOG data model fields. This will aid in the field mapping portion of configuring your agency EGDMS account.

Each coordinator, and in some cases staff, will be provided a username by Intrado in order to login. Previous Entrust tokens can still be used. Those that do not have Entrust tokens will be provided one by CAPCOG. Entrust tokens are key fobs that provide a unique number that is to be used when accessing EGDMS.

After an initial upload of GIS data has been submitted to EGDMS, Intrado will then provide a subsequent training session in which they will discuss how to retrieve errors from the system.

~~**EGDMS also provides the user with the ability to mark features as exceptions, however only in the road centerline Feature Class. This is because EGDMS does not look for critical errors in address point, ESZ, or city limits data**~~

~~**Note: due to technical issues with EGDMS that have not yet been resolved as of February 28, 2020, County will only be required to start using EGDMS after it receives notification from CAPCOG's project representative to do so.**~~

GeoComm GIS Data Hub

~~Vendor: GeoComm~~

~~The GeoComm GIS Data Hub is a robust web-based GIS data management solution that helps transform, quality check (QC), report, aggregate, and provision GIS data using predefined, standardized processes to ensure the timely delivery of GIS data to your 9-1-1 system. Offering virtually unlimited quality control tools, GIS Data Hub ensures greater accuracy of the data and helps you meet your obligated GIS responsibilities for NG9-1-1. The GIS Data Hub is designed to simplify the user experience. Your system administrator grants access to only content specific to your role, project and/or client. As a System User, your primary role is submitting GIS data for validation.~~

Data Hub is able to do the following:

- ~~• Provide GIS data insights through rigorous quality control and reporting processes~~
- ~~• Transform disparate GIS datasets into a common schema (which is based on the NENA GIS data model)~~
- ~~• Aggregates GIS datasets into a seamless coverage area~~
- ~~• Provides map data packages formatted to meet 9-1-1 mapping and Computer Aided Dispatch (CAD) systems~~

In addition to also being able to find critical errors like EGDMS, Data Hub will also find "significant" and "other" errors as described in the Transition Workflow Cycle of the ILA Attachment A: Scope of Work, significant error types are those that negatively impact dispatch systems and other systems used for routing of emergency vehicles. As such, they should be corrected. ~~Other error types are those that, while they may not impact system functionality, are recommended to be corrected to maintain~~

~~**This QC platform also offers users the ability to create an exceptions field in their GIS data that can be used to keep Data Hub from continuously reporting errors that are not actual (or legitimate) errors**~~

~~Please review the Data Hub user guide to find detailed information about the system and what all it is capable of doing.~~

New GIS Data:

~~In addition to the traditional GIS data submitted to CAPCOG, there will be some new Feature Classes that will be required for data submissions to EGDMS, Data Hub, and CAPCOG.~~

Provisioning Boundary:

~~This polygon layer defines the area of GIS data provisioning responsibility, with no unintentional gaps or overlaps. It should contain (include) all your agency's data within it. The Provisioning Boundary must be~~

agreed to by all adjoining data provisioning providers. When submitting GIS data, a 9-1-1 Authority (or 9-1-1 Authority designee) MUST only include GIS data for their geographic area of responsibility (provisioning boundary) and MUST ensure the data includes coverage for the entire extent of that area. CAPCOG will provide Provisioning Boundaries to all counties with the expectation that we will all work together should they need to be altered. These boundaries are continually updated and as they are finalized, CAPCOG will make updated versions available to all partner 9-1-1 authorities to use in the subsequent month's data upload, and quality checks should be made only against the provisioning boundaries provided by CAPCOG.

Emergency Service Boundaries:

Not to be confused with Emergency Service Zones (ESZs, sometimes referred to as ESNs) which are polygon layers that represent unique combinations of fire, law, and EMS responder zones for a geographic area, Emergency Service Boundaries are **individual** GIS data layers that define the geographic area for **single** response service types. This means that instead of one polygon layer representing all responder types, there are now three separate GIS layers for Law, Fire, and EMS. Each of these layers is used by the NG9-1-1 system to perform a geographic query to determine which Emergency Service Providers are responsible for providing service to a location. Emergency Service Boundaries are used by PSAPs to identify the appropriate entities/first responders to be dispatched.

There MUST be a **SEPARATE** Emergency Service Boundary layer for each type of service.

The set of Emergency Service Boundaries MUST include the following:

- Law Enforcement (LAW)
- Fire
- Emergency Medical Services (EMS)

The addition of ESBs does not mean that our traditional ESZ (sometimes referred to as ESN) layer will be discontinued. CAPCOG still expects counties to maintain and submit ESZ layers as they have. Counties MAY maintain the Emergency Service Boundary layers as a combined or single layer for each emergency service, however, when exchanging emergency service boundary information in an NG9-1-1 environment, Emergency Service Boundaries MUST be exchanged as individual layers for each emergency service type (e.g. one for law, one for fire, and one for EMS).

ESB maintenance is described in detail in the CAPCOG document titled "Globally Unique IDs (GUIDs)".

Note, these new layers must be in the correct schema which CAPCOG will also provide. The schema that will be used is also shown in the associated "EGDMS Field Mapping to CAPCOG" spreadsheet.

***Expected Field Values:** With the addition of the ESBs to our workflow, there are a couple of new fields that come with these layers that have haven't used before. Please consult the associated field mapping documentation for further information. The new fields are:

- **Service URI:** In the case of ESBs, this field corresponds to the PSAP covering that area and should only be completed if the responding agency is also a PSAP
- **Ex:** The Leander PD polygon in the LAW ESB for Williamson County would get the associated Service URI for the Leander PD PSAP. However, the polygon for Granger PD's coverage area would NOT get a Service URI as it is not a PSAP. A list of Service URIs for

each PSAP can be found in the Transitional Guidance folder CAPCOG uploaded to the FTP site.

- **Discrepancy Agency ID:** This is the name of the data source. It will be the name of the county submitting the upload.
- **Agency ID:** Domain name of the agency (county) uploading. A list of these domains can be found in the “How to Create Globally Unique IDs (GUIDs)” document

PSAP Boundaries:

PSAP boundaries are a single GIS layer that is comprised of polygons (in some cases just a single polygon) that show the geographic coverage area for PSAPs within your county. The primary use for this layer is to route and deliver 9-1-1 calls to the correct PSAP, thus making it the **most important layer**. It is critical that there are no **gaps or overlaps** between external (at county borders) and internal (boundaries within the county). This layer will be managed and edited by CAPCOG but it is absolutely imperative that county coordinators work with CAPCOG to ensure things are correct.

CAPCOG will provide to the counties PSAP boundaries we have created and will continually make updates to them as needed and send to county coordinators. Coordinators will need to review this layer and send CAPCOG any suggested edits or questions. CAPCOG created these using the city limits layer submitted by each county. Coordinators should use the latest PSAP boundaries provided by CAPCOG for the subsequent month's data upload. Quality checks should be made only against the provisioning boundaries provided by CAPCOG.