

COLUMBUS CONSOLIDATED GOVERNMENT INSPECTIONS & CODES DEPARTMENT

Smart Communities Innovation Challenge: Mobile Government Edition

First let me say, "Thank You" for your generosity with this grant. This is such a unique combination of software, hardware and training from two great companies that I'm sure you're overwhelmed with applications. Thank you for giving GIS professionals a grant like this to work with. It helps us to help others when city budgets like ours are still tight. R. Brian Lackey, GISP

2 | ORGANIZATIONAL PROFILE

Columbus Consolidated Government (A consolidated city and county government)

Department Responsibilities: *Responsible for the examination of building plans, processing permit applications, issuing permits, collection of fees and scheduling of inspections to decide code compliance*

Organization Mailing Address: P.O. Box 1340, Columbus, GA 31902

Organization physical site address: Development Resource Center, 420 10th Street, 2nd Floor, Columbus GA 31901

Estimated population within demonstration project or jurisdiction: 202,824

Estimated number of employees in organization: 22

Primary organization contact: John Hudgison, Director

Primary contact phone number and email address: jhudgison@columbusga.org and (706) 225-3878

Secondary organization contact: R. Brian Lackey, GIS Analyst, GISP, and document author

Secondary contact phone number and email address: blackey@columbusga.org and (706) 225-3975

3 | INFORMATION ON THE PROPOSED GIS/GPS PROJECT

Program Name

Problematic Sign Ordinance Enforcement

Program Description

The Inspections & Codes Department has an immediate need to get a handle on the overabundance of illegally placed signage around the county. Enforcement of the sign ordinance could best be described as a game of, “Wack A Mole”. Considering that some marketers in the county know the ordinance and that the sign inspector doesn’t work on weekends, they intentionally deploy illegal signs on Friday night then retrieve them Sunday night shows the level of gamesmanship involved. Compound that with the limitation that there is only one Sign Inspector tasked with doing fieldwork which means that the field work side of the enforcement of the ordinance takes up the balance of his time leaving very little time for researching ROW ordinances which are critical in court cases. Our sign inspector sometime even works weekends just to keep a loose grasp on the problem. The first step to solving this problem is to inventory the problem. We’ll accomplish that by supply the Sign Inspector with a high quality, mapping grade, data collector so that he can more quickly capture the location of the illegal signs throughout the day and on weekends. Along with the integrated camera in the Zeno 20, the pictures and mapping grade point will enable the back office zoning technician to complete the enforcement process through ArcGIS Online, which brings us to the second step. We’re in the process of re-writing the job description of the Zoning Technician to include entry level GIS knowledge. This person will essentially be the back office support person for the sign inspector in the field. Since the zoning technician will be able to see in ArcGIS Online the points collected in the field by the sign inspector, the picture of the sign, and any attributes he is adding into the feature class, he or she will be able to get a head start on any necessary city ordinance research. The collection of ROW information helps three different city departments. The GIS Division needs to be able serve up ROW attribute information to our Public Works Department for their Dig Permitting program. It helps the Director of the Inspections & Codes Department to see the bigger picture in terms of quantity and trends in sign locations around the county which most importantly be used to help justify hiring more personnel. The biggest benefactor however is our community because this will reduce the proliferation of unsightly, visual pollution.

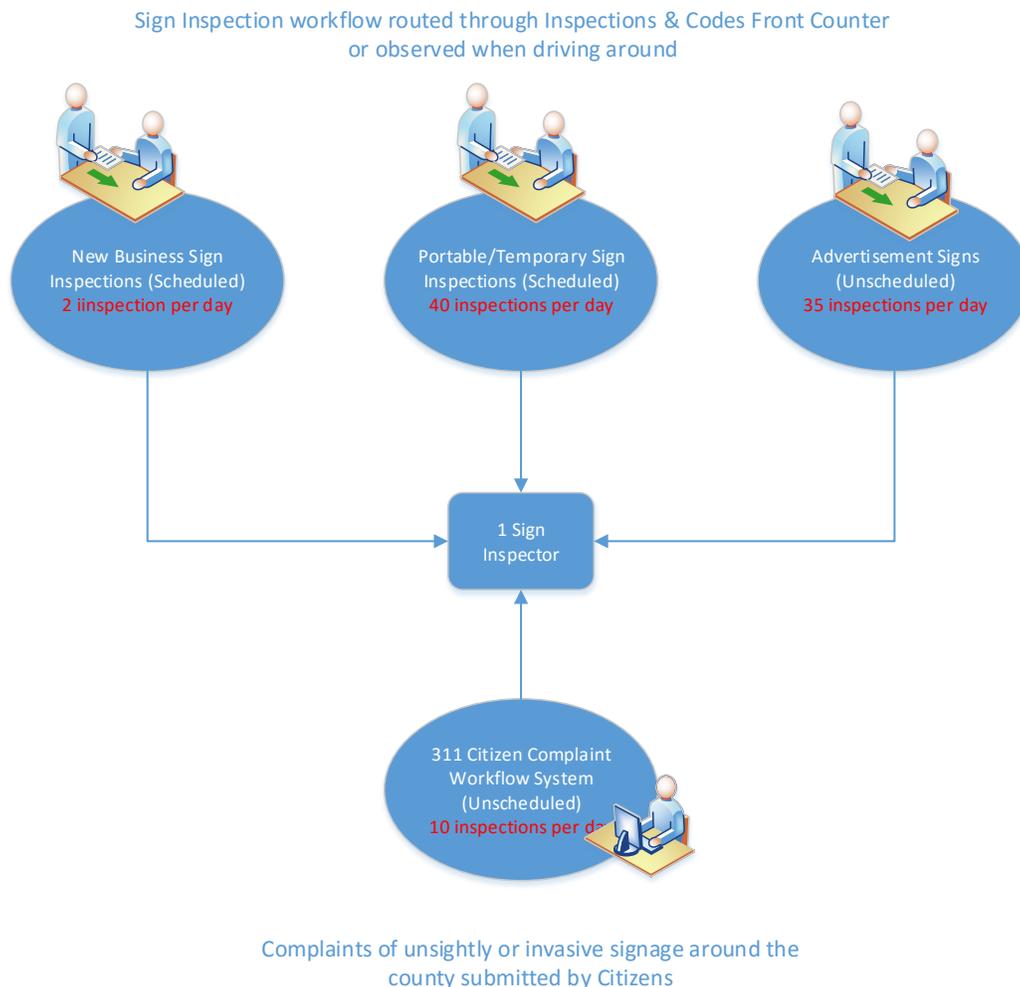
Program Goals & Objectives

- Reduce the number of court contested sign citations
- Increase the number of inspections performed in the field by Sign Inspector
- Capture ROW information for inclusion in our street centerline feature class
- Educate general public on proper sign placement

Units of measure for determining success of project

Ultimately, the single biggest measurement of success of this project will be in the reduction of times the city's sign inspector's citations are contested in court or settled just prior to court. Every time he has to appear in court, he's not in the field inspecting signs. Using a handheld to capture points and pictures will more than likely dissuade someone from wanting to contest a citation. Another measurement will be in efficiency; how many more signs can be inspected per day or per week by the use of hand held technology. Over a period of time, the more location based point data that can be collected and compared back to researched ROW information, we'll better be able to do hot spot analysis on consistent areas of violations. But that is only a measurement from the perspective of the city government whereas we really want to use this as a learning opportunity to properly educate the citizen on proper sign placement. Good Government is transparent not punitive.

4 | PROBLEM WORKFLOW DIAGRAM



5 | DESCRIPTION OF CURRENT USE OF GIS TECHNOLOGY

The Inspections & Codes Department currently uses ArcGIS Online to show the public which structures are awaiting demolition. This public facing app was created solely from a spreadsheet list. Other than that, no data is being actively collected in the field or converted from spreadsheets by department personnel. Inspections & Codes depends on the GIS Division to create new data from Excel tables or GPS projects using GIS Division data collectors. The GIS Division has recently changed direction from being a centralized GIS to a hybrid model GIS. Now the need exists for departments such as Inspections & Codes to begin collecting and or converting data on their own for inclusion back into the GIS.

6 | DESCRIPTION OF GPS AND/OR MOBILE DEVICE CURRENTLY USED BY YOUR ORGANIZATION

The Inspections & Codes Department does not currently own a mobile device for field work. However, the GIS Division allows us to borrow their **2008 Trimble GeoXH Explorer 6000 Series**. In 2014, the sign inspector requested GIS personnel to locate and collect the locations of commercial billboard in the county. For this project, an employee on light duty from our Public Works Department was tasked to be the field personnel and to collect point features and attribute data while GIS personnel provided back office post processing and general project management support. The project was finished ahead of schedule. However, since then, the feature class has not been kept current and we will need to re-collect new billboard locations. This project taught us much in terms of the daily process of GPS field data collecting and how important it is to keep data fresh.

7 | DESCRIPTION OF PLAN TO DISTRIBUTE DATA AND MOBILE APPLICATION THROUGHOUT THE CITY GOVERNMENT

The most important component that we will be able to share from this project is the actual ROW numbers and ordinances. This information will be consumed the most by the largest department in the city, Public Works as they have the greatest immediate need. A key problem Public Works has is that they frequently have to do maintenance work on homeowner's properties and need to know precisely where the ROW easement line is located. Having this information easily accessible in our GIS will enable the work crews to better plan out their workdays and will help field supervisors when called out to quickly address and mitigate a dispute with a homeowner before things escalate.

8 | DESCRIPTION OF ANTICIPATED ADDITIONAL USES OF TECHNOLOGY PROVIDED AFTER INITIAL PROJECT COMPLETION

This is just the first step in getting the Inspections & Codes Department onto a trajectory towards using more handheld technology. It is our hope to branch out with an array of field data collectors once we've proven ourselves with this particular pilot project. Case in point, whereas we'd like to deploy ArcCollector in mass on iPhones for the purpose of crowdsourcing data, we foresee a smaller number of Zeno units being the real workhorse in this plan by performing the more specialized field work requiring positional accuracy. It is also our hope to use the field-to-back office workflow as a model for other technicians in Inspections & Codes. While it remains to be seen how many additional Zeno units we would acquire in the long term, the other elements of this grant, namely the Navigator and Survey 123 software will have as equally a powerful impact on our short term effectiveness.

9 | TOTAL NUMBER OF FIELD WORKERS YOU ANTICIPATE USING FINAL PRODUCT

Regarding the immediate need by the Sign Inspector, there will be eight persons consistently using the final product; Director, Sign Inspector and Zoning Technician. I'm including our Director because he too goes into the field. Beyond that, one copy of Navigator can be used by the Sign Inspector but we need to allocate the four remaining copies of Navigator to the other Property Inspectors for routing efficiencies. Our GIS Division is the addressing authority for Muscogee County, they guarantee and provide the routing function to all of our emergency responders. By using Navigator, we can source our own address points in the app which will cut down on our field inspectors, including the sign inspector, not finding the citizen.

- ESRI ArcGIS for Desktop Basic Zoning Technician
 - ArcGIS Online Inspections Services Coordinator
 - Survey123 Inspections Services Coordinator
 - ESRI Collector on Zeno 20 Sign Inspector
 - Navigator for ArcGIS Sign Inspector
- Property Maintenance Coordinator
- Property Maintenance Inspector (1)
- Property Maintenance Inspector (2)

10 | DESCRIPTION OF PERCEIVED BENEFITS OR ROI.

“As the city continues to grow and with the limit that has been placed on billboards, businesses and political persons are jockeying for space. Many of them do not know the city right of way and that they can vary from street to street. Many people have a negative feeling toward government and the regulations that they have. For us to have a person in the field with the equipment to help explain to citizens the location of their signs gives them a “peek behind the curtain” and they better understand that we are enforcing rules that benefit all citizens.

A secondary benefit is to my Property Inspectors. As the complaints come in they are all over the City of Columbus as they follow a case from beginning to end. To have them be able to map out their route with Navigator will help them be more efficient of their hours at work. The more efficient they are the more complaints and sites they can get to during the day.”

John C. Hudgison CBO, Assoc. AIA

Building Inspections & Code Enforcement Director

Development Resource Center

Columbus Consolidated Government