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MEMORANDUM

To: Programming Coordinating Committee

Date: March 3, 2010

From: CMAP Staff

Re: Full Circle Community Mapping and Planning Program - GPS

Introduction

The Full Circle project is a web-based community mapping and planning program designed to empower communities to collect local data to support planning, and development, policy decisions. The project supports the gathering and rendering of information for different uses. Since the project began in 2004, it has assisted several municipalities, community-based organizations, and other development organizations to address core planning issues like housing, transportation, land use, workforce development, public health and safety, social services coordination and neighborhood redevelopment among others. In 2009, CMAP initiated the expansion of the program into the collar counties and also purchased new GPS equipment (Topcon GMS-2 Pro) to complement Full Circle's parcel-based mapping system.

Full Circle goals

Full Circle's primary goal is to empower community residents and organizations to plan the development of their neighborhoods. The tool assists them in creating a well-informed, shared vision by:

- Articulating community concerns within local and regional planning processes
- Giving community residents access to the best planning tools to plan their surroundings
- Establishing mechanisms for continuous exchange of data, ideas, goals and intentions between planners, community residents, and policy makers.



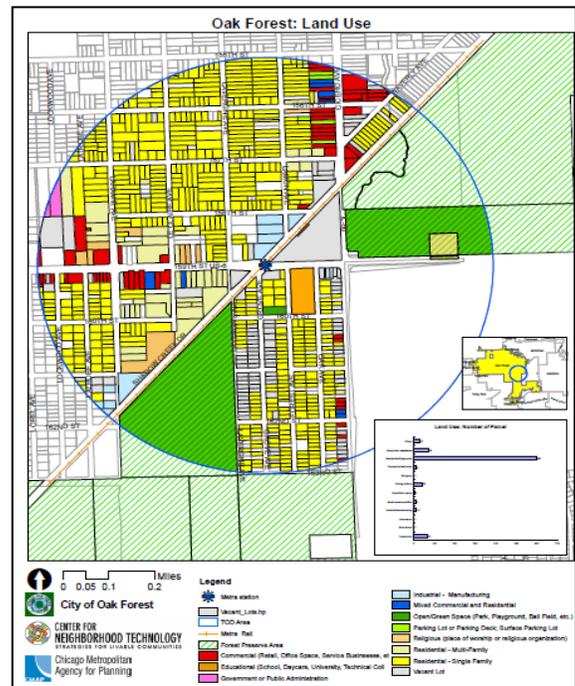
Community Application

Full Circle program is grounded on the belief that best planning occurs when information is readily available and is shared across different segments of the society (municipal governments, non-profits and community residents). The success of any planning effort depends on the involvement and continuous support of community residents and other local stakeholders. Community residents are usually the best sources for up-to-date information about their neighborhoods. Without their support, planning may even run counter to the vision of the community.

Full Circle hinges on two core activities; data collection and face-to-face participatory planning sessions in which stakeholders can express their vision about the future they want for their community. The program combines cutting-edge technology with participatory planning to inform sound planning decisions. Through the program, communities are able to identify and analyze issues, raise community awareness, solve problems, and take advantage of existing opportunities. The mapping process usually involves on-the-ground observation of physical attributes of the built environment and/or face-to-face interviews with community residents, business owners and policy makers.

Public data sources such as the Assessor's Office and the Recorder of Deeds provides a wealth of information that is essential for planning. However, public data sources are often outdated and do not cover all aspects of community planning. The Full Circle data collection tool is designed to complement such public data sources by providing accurate and up-to-date information for smaller geographical areas.

Full Circle has a strong technology component that combines Geographic Information System (GIS) and internet applications to capture, analyze and disseminate parcel, business or block-level information in real-time. Using data collected with high-tech tools, participating communities get access to accurate and up-to date information that they can use to articulate a shared vision for their community. To date, the project has supported many planning initiatives including: Transit Oriented Development(TOD)/Cargo Oriented Development(COD), zoning review, natural resources planning, historic preservation, arterial enhancements, commercial corridor revitalization, downtown redevelopment, etc.



How it works

Community volunteers, municipal planners, and CMAP staff canvass the study area collecting and entering data remotely via handheld devices, laptops or desktop computers. Data collection is based on the needs of the users. Data input is transmitted instantaneously to central Geographic Information System (GIS) servers at CMAP that make the data available in real time, allowing users to generate maps, tables, charts and other resources that are essential for sound planning. Full Circle mapping system is very useful for local planning, as it pulls together public information (land use, property value, business type etc) and local customized data inputs such as building condition, proposed future land use and other survey data to inform planning. Users can extract information and they can also add new information into the system.

Uses

The typical applications of Full Circle toolkit can broadly be classified as follows:

- a. *Inventory /Asset Mapping*: What assets, infrastructure or amenities can be leveraged for development?
- b. *Change Detection and Time Series Data Monitoring*: What new developments are occurring and how are they changing over time?
- c. *Public Mood Detection*: How do people feel about current or future situation?
- d. *Predictive Analytics*: How might certain policy decisions impact the current or future situation?
- e. *Decision Support and Planning*: Mapping priority areas, opportunities, and revealing existing challenges (red flags)

GPS Equipment

Municipalities and other government agencies often deal with transportation and public works projects that involve tracking public utilities or infrastructure that are located in the public right of way for which no formal addresses exist. Public utilities like fire hydrants, lamp posts, sidewalk benches, bus stops, and storm or sewer manholes cannot be accurately mapped with a parcel-based system. Mapping such features often requires capturing the coordinates of their precise locations rather than the entire parcels on which they are located. The GPS equipment has proven to be very effective in mapping such features.

Examples of how the program has been used

Collar Counties Expansion Initiative

For six years, Full Circle program was confined to the City of Chicago and South Cook. In line with CMAP's strong commitment to providing technical assistance to all communities across the 7-county region, the agency initiated the expansion of the project to the collar counties in January 2009. A lot of suburban municipalities have shown great interest in using the Full Circle system, among other CMAP's technical assistance tools, to enhance their planning processes. CMAP initiated a pilot program to provide grants to suburban municipalities that were interested in participating in the Full Circle program. All suburban municipalities in the metro region were invited to submit proposals for

mapping and planning assistance through their Regional Council of Mayors (COMs) or Council of Governments (COGs). Proposals were received from the following communities: City of Evanston, Village of Barrington, Village of Carpentersville, Village of South Elgin, United City of Yorkville, and the Chicago Southland Economic Development Corporation (on behalf of SSMMA). The proposals were evaluated according to the following criteria:

- Capacity for collecting data and documenting local assets (15%)
- Demonstrated need for local data (15%)
- Relevance of the proposed project to planning and community development (15%)
- Capacity to utilize and disseminate collected information (15%)
- Capacity for hosting public planning forums (15%)
- Capacity for long-term administration of the proposed project (15%)
- Suitability of the area to be served (10%)

Of the six proposals received, five met the criteria stated in the RFP and were awarded mapping assistance grants totaling \$93,525.40. The grant award to each applicant community is listed in the table below:

APPLICANT	REQUESTED AMOUNT	AMOUNT AWARDED
Village of South Elgin	\$25,000	\$25,000
City of Yorkville	\$21,000	\$21,000
Village of Carpentersville	\$11,950	\$11,950
Village of Evanston	\$22,000	\$18,700
Village of Barrington	\$18,445.40	\$16,025.40
TOTAL	\$99,245.40	\$93,525.40

Through the expansion initiative, CMAP has been able to directly support community planning efforts in the region through existing Full Circle partnerships with the following municipalities:

1. **Village of South Elgin:** Mapping properties in the floodplains along Fox River
2. **United City of Yorkville:** City Parkway system tree survey project
3. **City of Evanston:** Public safety audit and business inventory of Howard commercial corridor
4. **Village of Barrington:** Comprehensive citywide business information survey
5. **Village of Carpentersville:** Business inventory of the main commercial corridors.



United City of Yorkville

As part of the implementation strategy for the 50/50 tree planting program, Yorkville has promoted the planting of trees to improve the quality of life in the city. The trees are meant to provide shade screening, wildlife habitat, pollution control, increase property values, and create a general sense of well-being in the community. Yorkville used Full Circle tool to document tree locations, species, health caliper size as well as existing land use and presence of overhead utility lines. The city also used the newly acquired Topcon GMS-2Pro GPS equipment to map over 8,000 trees. The data from the tree survey project has been incorporated into the city's GIS database and is being used to:

- prepare an action plan for the 50/50 Parkway Tree Planting Program
- identify locations for new trees
- determine trees of marginal health that need to be monitored or removed
- develop a tree canopy and landscaping ordinance for the city
- quantify the diversity of trees that should be planted under the new landscaping ordinance
- Assess the scope of future disease susceptibility (e.g. emerald ash borer)

City of Evanston

Evanston's business inventory included a safety audit of Howard street commercial corridor. The project had two main objectives:

- To collect and analyze quantitative (business inventory) and qualitative (building condition, perceived safety issues, business owner concerns) data that will assist the city in updating its strategies for improving the business environment in the corridor.
- To use Full Circle technology and mapping capabilities to improve and strengthen citizen participation in the planning process.

Survey instruments were developed to assess the physical condition of buildings and document safety perceptions based on the principles of Crime Prevention through Environmental Design (CPTED). The information gathered was used to:

- describe and map the physical conditions along Howard Street commercial corridor
- establish a benchmark from which to measure the efficiency and progress of future planning initiatives
- update property owner and merchant contact information
- establish communication on the needs and interests of business owners
- find out what is good and bad about conducting business (SWOT analysis) on Howard Street.

The city is planning on using the Howard project as a model for similar planning efforts in west Evanston.

Village of Barrington

Barrington's Full Circle project involved conducting a comprehensive business survey of 915 local businesses. The survey included 690 face-to-face interviews with business owners or managers and collected data on such attributes as; business types, square footage, occupancy status, facade condition, handicap accessibility, availability of parking, number of employees, business vacancies, and leasing or sales agent information among others. A picture of each business establishment was also taken. The information collected was incorporated into the village's GIS system and used to:

- establish baseline data for use in evaluating current and future commercial land use which will become useful in updating the Village's comprehensive plan in 2010
- create the Village's first comprehensive standardized database of contact information for commercial properties for all village departments
- Update business contact information for emergency responders like the police, fire and public works departments
- undertake a comprehensive analysis of the village's commercial sector
- Create an online business directory
- recruit new businesses and retain existing ones

Village of South Elgin

The village of South Elgin has experienced significant flooding within the Fox River floodway for many years, forcing it to institute strict restrictions on new construction within the flood hazard areas. The village utilized Full Circle mapping resources to assess structures and land-use within the floodplain and to determine structures that are more likely to need emergency response during flooding. GPS equipment was used to determine elevations of foundations, driveways, and attached garages in the floodplain. The project also documented flood proofing, potential code violations, substantial structural improvements and/or damages and accessory structures. This information was used by the village to

- determine areas that are likely to see flooding in specific events.
- Identify properties in the floodplain that have structures where substantial damage is likely to occur.
- Inform the public what they may be allowed to do on properties in the floodplain.
- Creates a historical record of what has been constructed on floodplain properties.
- Improve the village's status with the Community Rating System, which affects flood insurance rates within the Village.

Overall, the Full Circle project provided a comprehensive tool for the Village and the public to better manage floodplain properties to reduce the effects of flooding.

Supporting community planning efforts in the region has been the main focus of Full Circle since the program began in 2004. The Full Circle program will continue to support the implementation of the *GO TO 2040* plan through direct interaction with municipal planners as well as providing value-added planning resources to local planning efforts.

For more information see: <http://www.cmap.illinois.gov/fullcircle/>

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