City of Somerville GIS Metadata

Parking Meters

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Feature class name: ParkingMeters
Feature class type: Point
Geographic Coordinate Reference: GCS_North_American_1983
Projection: NAD_1983_StatePlane_Massachusetts_Mainland_FIPS_2001_Feet

Description:
ESRI point feature class representing City of Somerville, Massachusetts street parking meters.

Data source: Applied Geographics, Inc., City of Somerville Traffic and Parking Department
Last update: June 2016
Update frequency: Not planned
Update status: Complete

History:
June 2016: Street parking meter locations mapped using a sub-meter accuracy GPS unit (Trimble GeoExplorer 6000 Series GeoXT) by Applied Geographics, Inc., using a street meter location inventory provided by the City of Somerville Traffic and Parking Department. Parking kiosks and parking lot meters were not included in this inventory or data collection.

Access constraints: Public data, no access constraints.
Intended use: General mapping, planning and analysis.

Attribute fields:

Field Name	Field Type	Field Description	Source
Object ID	Object ID	Internal feature ID	Automatically generated
Shape	Geometry	Feature geometry type	Automatically generated
POLETYPE	Text	Single or double head meter	Applied Geographics, Inc.
METERID*	Text	ID of meter	City of Somerville Traffic and Parking Dept.
STNAME	Text	Location of meter	City of Somerville Traffic and Parking Dept.
PHOTO	Text	Name of photo taken of meter	Applied Geographics, Inc.
DATE	Date	Date location was collected	Applied Geographics, Inc.
COMPANY	Text	Company data collected by	Applied Geographics, Inc.
COMMENT	Text	Comments about meter	Applied Geographics, Inc.
STATUS	Text	Current meter status	Applied Geographics, Inc.
X_Coord	Double precision	X Coordinate of meter	Applied Geographics, Inc.
Y_Coord	Double precision	Y Coordinate of meter	Applied Geographics, Inc.
DBLMETERID**	Text	If double meter, IDs of both meters on same pole	Applied Geographics, Inc.

*Unique identifier for each meter head.

**Non-unique identifier for double-headed poles, combining the METERIDs of the individual heads on each pole. DBLMETERID is therefore duplicated in the two records for each double-headed pole corresponding to the individual meter heads.

Note: See following pages for original documentation accompanying deliverable from Applied Geographics, Inc.

City of Somerville, MA
Parking Meter Mapping

Data Schema
FEATURE CLASS: PARKINGMETER

ATTRIBUTE NAME	FIELD DESCRIPTION	DOMAIN VALUES	FIELD TYPE	FIELD LENGTH
POLETYPE	Type of meter pole. Single or double head	Single, Double	Text	10
METERID	ID of meter		Text	5
DBLMETERID	If double meter, ID's of both meters on same pole		Text	10
STNAME	Location of meter		Text	100
PHOTO	Name of photo associated with meter		Text	100
DATE	Date meter location was collected		Date	
COMPANY	Company data collected by	AppGeo	Text	50
COMMENT	Comments about meter location		Text	254
STATUS	Current meter status	Active, Inactive	Text	10
X_COORD	X Coordinate of parking meter (US State Plane, Massachusetts Mainland NAD 83 US Feet)		Double	
Y_COORD	Y Coordinate of parking meter (US State Plane, Massachusetts Mainland, NAD 83 US Feet)		Double	

GPS Data Processing and Additional Notes:

GPS data was collected beginning on June 2, 2016 and continued through June 14, 2016. In total, 891 meters were collected of the approximately 969 which were listed in the "Meter Locations" spreadsheet (Sheet 1) provided by the City of Somerville. Additional meters were collected during our collection process which were not shown on sheet 1. There were also many meters which were not collected which were shown on sheet 1 as these meters were believed to have been removed or could not be found. Typically, it appeared that meters had been removed for ongoing construction in specific areas. One particular example were meters that were not found on the east end of Assembly Row between Canal and Foley streets. While aerial photography of the area shows parking spots existing, this street segment is currently undergoing construction and the meters were removed.

GPS data was collected with a Trimble Geoexplorer 6000 series GPS unit. An integrated camera allowed for photos to be taken with and integrated directly with the dataset. Photos were taken from the sidewalk, looking at the meter towards the street. GPS data was post processed in the office using Trimble Position desktop processing software. Data was then reviewed and points modified as necessary to make them align with the reality on the ground. As an example, with the close proximity of two meters on the same pole, and the submeter accuracy of the GPS unit, double head meter locations could very well show at an offset to each other. These points were moved slightly so they would show the correct alignment with the street to correctly reflect how they on the ground. An example is shown below:

Photo on left shows GPS data where the meters are approximately 4 feet apart. (each point has submeter accuracy).
The photo on the right, shows the points after they were corrected to show their correct alignment and location.

Double and Single Meters

For meters with a double head, the field “DBLMETERID” was populated. This will allow the end user to see which meters exist on the same pole. As an example, A26 and A27 exist on the sample pole. The DBLMETERID field was populated with A26-A27, where A26 was the meter on the left and A27 was the meter on the right looking from the sidewalk towards the street. Therefore, you can sort this field and find the two meters that share the same pole as this name will be duplicated in the same field as shown below:

POLETYPE	METERID	DBLMETERID
Double	A26	A26-A27
Double	A27	A26-A27

If the meter was a single head, DBLMETERID was populated with an “N/A”.

Meter Status

An attribute field called “STATUS” was added in order to be able to query out meters that no longer appear to be in service. During the data collection effort, many meters were found to be missing, though a pole existed. These poles without a meter, could be correlated with missing numbers in the sequence, and were therefore collected to be accounted for, and were tagged as “inactive”. In certain cases, these poles were marked as “bus stop” or in many other cases, there as a pole at a handicap space, or the meter was now blocked by a bike share. For all other meters that did not have an exception, their status was tagged as “active”. Examples of inactive types are below:

Meter removed for Handicap Spot (Meter K89)

Meter removed for Bus Stop (Sign for Bus stop on pole)

Meters in front of American Academy (Meter J23/J24)

Meters blocked by bike share (Meter A28)

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Viewing Photos within ArcGIS

AppGeo has provided the photos that were taken along with the GPS points for each meter. In order to view the photos through ArcGIS, follow the steps below:

1. In ArcGIS go to file - map document properties. In the Hyperlink base: field, put in the network link to the location of the photos.
    a. Example: Q:\Clients\c000.appgeo\Somerville GPS\Data\Final GPS Database\Photos
2. Click OK to accept and exit the map document properties dialog box
3. Open the Layer Properties dialgo box by right clicking on the Parking meter layer in the Table of Contents in ArcGIS.
4. Click on the Display tab
5. Under the Hyperlinks box, check the box “Support Hyperlinks using field:”
6. In the dropdown box, choose Photo
    a. Make sure that the radio button for “document” is chosen
7. Click OK to accept and exit the Layer Properties dialog box.