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Town of Somers

WESTCHESTER COUNTY, N.Y.



COPY

November 17, 2005

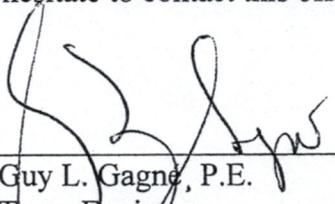
Jerome C. Williams, COO
Azertia USA, Inc.
2 John E. Walsh Blvd, Bldg 2
Peekskill, New York 10566

Re: Stormwater Mapping Contract

Dear Mr. Williams:

Enclosed, please find one original executed contract for your records. I would like to schedule a meeting here in my office with your office and the Highway Superintendent for December 1, 2005. Please call my secretary for a time that is convenient for you.

If you have any questions or concerns, please do not hesitate to contact this office.



Guy L. Gagne, P.E.
Town Engineer

GLG/wg

Enc.

cc: Town Board
Town Clerk w/original
Town Attorney
Highway Superintendent
Z:\PE\General files\Maps\signed contact-Azertia.doc



AZERTIA

WWW.AZERTIAUSA.COM

August 29, 2005

Town of Somers Storm Water Mapping Proposal

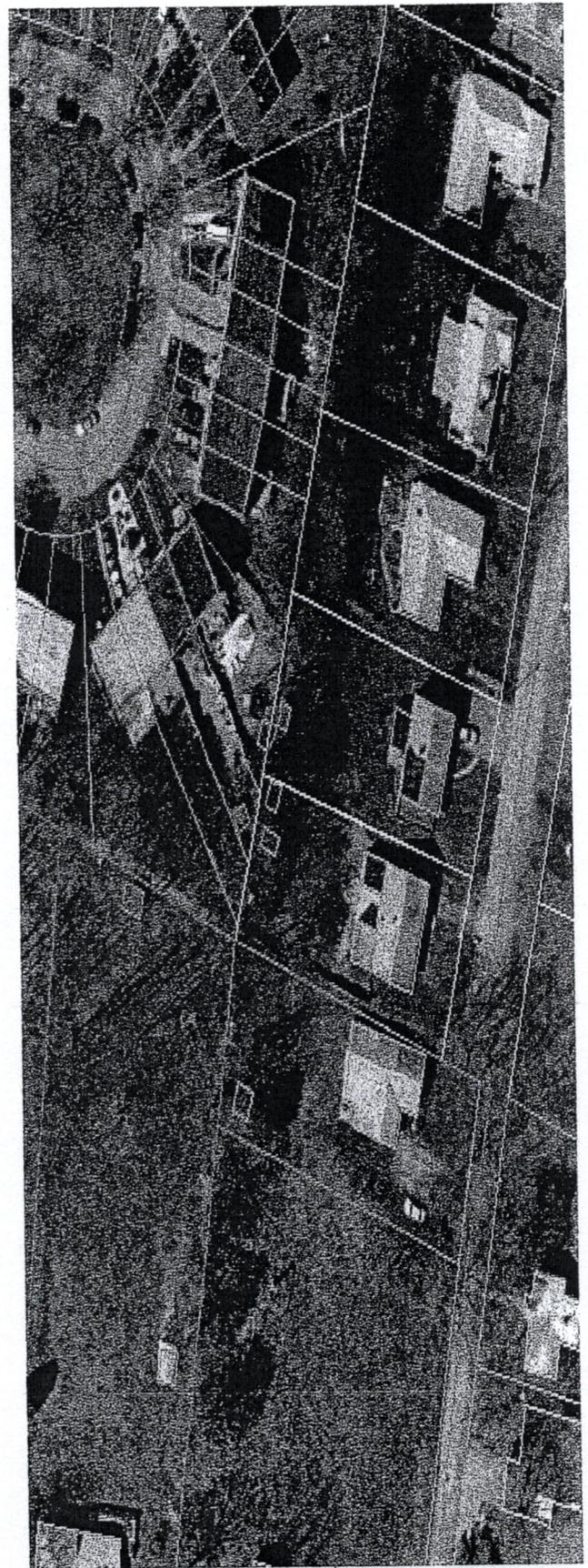


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About this Proposal

This document has been prepared at the request of the Town of Somers, NY. As a result of several meetings with Town of Somers personnel, Azertia USA (formerly Williams Associates) was asked to develop a project plan to create a storm water asset management system that will help the town comply with mandated EPA NPDES Phase II regulations. This proposal outlines the statement of work to create the system.

Azertia provides a team of professionals, with the skills, products and services necessary to satisfy your requirements and to provide the best total solution. Azertia is confident that it can implement a robust system to provide outstanding performance well into the future.

Business Profile

Azertia has a very clear mission: Solve problems, enhance productivity and improve customer satisfaction for infrastructure utilities and municipalities through cost-effective application of geo-spatial and related technologies.

Azertia USA, Inc. was created via a merger between Azertia Group International and Williams Associates, LLC. The company is headquartered in Peekskill, NY. The company provides geographic information systems (GIS) executive and technical management consulting, implementation services, data services and application software to select cross-industry clients.

Azertia USA, Inc. specializes in helping infrastructure utilities and municipalities cost-effectively apply AM/FM/GIS (Automated Mapping/ Facilities Management /Geographic Information Systems) and related technologies to their real world environments. Azertia' furnishes its products and services directly in North America and makes its products available worldwide via strategic partnerships with firms in Europe and Asia. Some of our local clients are:

- Montrose Improvement District
- Town of Yorktown
- Village of Croton-on-Hudson
- Village of Scarsdale
- Village of Ossining

The company's adherence to industry standards and commitment to true open systems combined with its innovative object-oriented software ensures flexibility and choice of hardware platform, database and user interface system.

Azertia has extensive experience in development of electric, gas, storm, water and wastewater utility industry solutions. Azertia has broad experience in the creation of databases required to support the implementation of AM/FM systems.

Data may be taken from a variety of sources, both hardcopy and digital, and converted directly into an intelligent AM/FM database. Our experience base includes:

- **Conversion of Hardcopy Maps** - Both the land base (curb lines, parcels, highways, railroads, rivers, streams, streets, etc.) and utility networks (electric circuit infrastructure, gas valves and mains, water lines/valves and hydrants, and waste water mains and manholes) can be captured from existing maps. Maps can be *scanned and converted to a digital format* that can be imported directly into an intelligent AM/FM database.
- **Import of Digital Maps (AutoCAD DXF, DWG, Shape files, etc.)** - Existing digital maps in AutoCAD or ESRI Coverage or Shape file formats can be *imported directly* into an intelligent AM/FM database.
- **Land Base Creation from Tax Maps and/or Commercial Sources** - Municipal tax maps can be an excellent up-to-date source for creating the land base on which to place a utility company's facility infrastructure. The *tax map data may be in either paper or digital format*. Commercial off-the-shelf data can be used either to supplement the tax maps or to create low cost land bases.
- **Scanning and Indexing of Records and Sketches** - Existing hard copy records such as valve books, tap service records, valve/hydrant maintenance data, and sketches can be scanned and stored as compressed digital images.
- **Field Surveys/Audits** - This *digital data can then be imported directly into an intelligent spatial database* eliminating the costly and error prone data entry normally associated with field surveys.
- **Global Positioning Satellite (GPS) Surveys** - Azertia can perform surveys to *capture real world locations* of specified facilities or assist the client in defining a procedure for the client to perform the survey. GPS collected data enables highly accurate placement of captured facilities in the spatial database.
- **Quality Assurance/Quality Control (QA/QC)** - Azertia will work with the client to put in place a QA/QC plan and procedure to ensure that the data captured meets all client requirements.

For more information, please visit us online at www.azertiausa.com.

Objectives

Azertia will create a storm water network database for the Town of Somers via a combination of data conversion and field work activity. Azertia will install its FACTS Viewer XF software product onsite to enable users to view, print and maintain the storm water assets.

Once completed, the Town will be able to perform the following tasks:

1. Create a complete storm water network map identifying all features including:
 - a. Catch Basins
 - b. Storm Manholes
 - c. Culverts
 - d. Storm Pipes
 - e. Structural BMPs
 - f. Larger Discharge Points directly feeding Structural BMP's such as retention ponds.
2. Monitor and maintain maintenance history data for Catch Basins, Discharge Points and Structural BMP's.
3. Create reports based on the maintenance data for Phase II compliance.
4. Create condition assessment reports in support of the GASB 34 Modified Approach.

Statement of Work

Task 1. Source Material Review & Extraction

One of the primary sources of storm water data is existing as-built drawings. These drawings are created when the subdivisions are constructed. Azertia will review existing digital as-built drawings to extract identified storm water features such as catch basins, pipes, manholes and BMPs. These account for approximately 15% of the existing storm water network. As per discussions with Town personnel, this appears to be approximately 50 detailed AutoCAD digital drawings. Azertia will also obtain updated information for base map layers such as parcels, streets, edge of pavement and water bodies from various available sources (engineering department data, Westchester County, etc.)

Task 2. Data Conversion

Azertia will extract storm water asset data from the as-built drawings in Task 1 and create a preliminary storm water network. This network will be created on top of base layers such as parcels, streets, easements. The preliminary network created in this task will be used for field work as defined in task 3.

Task 3. GPS Field Work

- a. Azertia's field crew will perform a Global Positioning System (GPS) field survey of the major subdivisions that have drainage systems installed. We estimate there are

approximately 3000 catch basins and related storm asset features within these subdivisions in the Town of Somers.

- b. Azertia will capture the pipe configuration for each catch basin via a manual review of each basin. In a limited number of cases, information may be unobtainable as certain basins may be covered with debris or too deep to look inside.
- c. Azertia will capture Major Discharge Points. Major discharge points are defined as the discharge points that are located along the major road and have the municipal drainage network connected to them. Smaller drainage pipes will not be captured as part of this project.
- d. The town has indicated that they do not have any catch basins outside of the subdivisions. However, there are culverts located all across the town. In order to capture these culverts, Azertia will provide a printed map of the town outside of major subdivisions. Highway Department personnel will mark all culverts on the map to accurately identify their location and associated attribute information (such as pipe size, material, condition etc.). Azertia will use these maps to digitize the culverts.

Task 4. Database Assembly

Azertia will digitize the piping between the catch basins and storm manholes using the pipe configuration captured in the field. In an event we are unable to determine the pipe layouts at selected catch basins, the Town Highway Department will provide us with a person familiar with the town's drainage system to assist in determining the correct configuration.

Task 5. Onsite Software Installation & Training

Azertia will install two (2) copies of its FACTS Viewer XF software and train up to 3 people in use of the the software.

Deliverables

1. Two (2) copies of the FACTS Viewer XF software Storm Water module
2. An integrated storm water database in ESRI Shapefile format
3. One (1) printed copy of the Storm Water map

Pricing & Schedule

Azertia estimates the project will take an elapsed time of 8 months to complete from the project start date. The time is based on assumptions listed in the Assumptions section of this proposal.

ITEM	DESCRIPTION	QTY	EST. CHARGES	EST. ELAPSED TIME
Project Services	Tasks 1-5		\$26,790	8 Months from start date
Software	FACTS Viewer XF Software	2	\$1,980	
TOTAL			\$28,770	

Terms & Conditions

- \$2,770 will be billed and is due upon contract signing and notification to proceed. Azertia will begin work upon receipt of the signed agreement and initial payment due. Thereafter, Somers will be invoiced in eight equal monthly installments of \$3,250. This will enable the last payment to be made post acceptance of the project deliverables.
- All payments are due within 30 days of receipt of invoice.
- Prices quoted are valid for a period of 30 days following the date of this proposal.
- Prices are subject to change due to customer revision requests or changes in project specifications. In the event of a change in specifications from those listed herein, Williams Associates' reserves the right to adjust pricing accordingly.
- In no event will Azertia USA be liable for any loss of data, lost profits, or any special, indirect or consequential damages in respect to any event or series of connected events related to the proposed project.
- The Laws of the State of New York shall govern orders issued for the project described herein.

Project Change Control Procedure

If required, changes to this Project Plan are admitted under the following process:

A Project Change Request (PCR) is the vehicle for communicating change. The PCR must describe the change, the rationale for the change and the effect the change will have on the project.

The designated Project Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party.

Both Project Managers will review the proposed change and will either approve it for further investigation or reject it. Azertia will specify any charges for such investigation. If the investigation is authorized, the Project Managers will sign the PCR, which will constitute approval for the investigation charges. The investigation will determine the effect that the implementation of the PCR will have on price, schedule and other terms and conditions of the agreement.

A written Change Authorization must be signed by both parties to authorize implementation of the investigated changes.

Assumptions

The estimates and schedule in this proposal are based upon the following assumptions:

1. The Town will assign a person from the Highway Department as the main point of contact for this project.
2. The Town of Somers shall provide staff members to work with the field crew(s) from Azertia from time to time during the project. The person or persons will have sufficient knowledge of the Town storm water system. The person(s) should be available during regular business hours for periods of up to 4 hours a day as required.
3. The Town shall supply Azertia with as-builts in digital and paper formats.
4. Where field data capture is required on high traffic streets and/or in otherwise inaccessible areas, Somers will provide personnel to assist with safely completing the fieldwork.
5. Azertia will perform field work only in the subdivisions that have drainage system assets being maintained by the Town. As there are culverts located in other areas of the Town, the Town will identify these culverts on printed maps provided to them by Azertia.
6. Town personnel will respond to inquiries and/or requests for information within 5 business days.
7. If Azertia is not able to determine pipe configurations at certain catch basins, a print out will be provided to the Highway Department. A person at the Highway Department will mark the pipes on the printout for entry into the database.
8. Azertia will provide the town with a list of Structural BMP's. The condition of these BMP's must be surveyed by the Highway Department personnel.
9. Somers will have or acquire the necessary computer hardware, system software and/or peripheral equipment as required to support implementation of the system to the proposed project schedule.
10. The pricing for parts of this proposal is based upon Town estimates of approximate 3000 features to be captured in the field. If the number of features to be captured exceeds this estimate by 10% or more, extra charges may apply.

Signature Page

An authorized Town of Somers signature in the space(s) provided indicates acceptance of the proposal and constitutes Notification to Proceed.

Agreed to for: **Town of Somers**
335 Route 202
Somers, N.Y. 10589

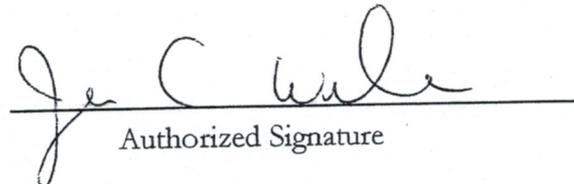
By 
Authorized Signature

Name:

Title:

Date:

Agreed to for Azertia USA, Inc.

By 
Authorized Signature

Name: Jerome C. Williams

Title: COO

Date: 11/2/05

Appendix A. Product Overview

FACTS Viewer Basic Edition

The FACTS (*Facility Automated Computer Tracking System*) Viewer Basic Edition is a very simple, yet powerful spatial data viewer built on top of the Map Objects developers tool kit from ESRI Corporation, Redlands, California. This software customized specifically for municipal and infrastructure users, offers an easy, intuitive interface to perform the basic, most often used GIS functions. FACTS Viewer enables users to display, query, and retrieve data. The program supports a wide variety of standard data sources. FACTS Viewer has an easy-to-use graphical user interface and powerful tools that can be used to create thematic maps and perform basic statistical analysis on geographic data. Highlights include:

- An intuitive, easy-to-use interface
- Pan and zoom through one or more map layers
- Spatial and attribute data query
- Create a buffer around selected features
- Measure distances on a map
- Label map features
- Locate an address
- Incorporate use of image formats (BMP, TIFF, JPG, and GIF)
- Save and retrieve projects
- Create and print basic maps
- Create and print basic reports
- Incorporate overview maps
- View legends and scale bars

FACTS Viewer XF

The FACTS Viewer eXtended Function modules extend the Basic Edition module to provide the functions needed to manage water distribution, wastewater collection, storm system and public works assets. The XF Water and Wastewater and Public Works and Storm modules provide these departments a comprehensive tool with which to manage and monitor their assets on a day to day basis. More importantly, it is a work flow based mapping tool that was designed with operations personnel in mind. Thus, you don't have to become a mapping expert, knee deep in complex technology to get something done. The FACTS Viewer XF modules make generating asset maps easy. FACTS Viewer enables users to track water main breaks and thus identify those pipes with higher breakage activity over time. This enables your organization to more intelligently apply annual main replacement funds rather than simply replace pipes on an arbitrary basis. FACTS Viewer XF also manages routine activities such as hydrant flushing and valve inspection. Users can create flushing and inspection routes and can create a list of hydrants and valves for field crew use. FACTS Viewer can be installed in a Windows 98 SE, Windows NT, Windows 2000 and/or Windows XP operating system environment.

Appendix B. Local Reference Accounts

Montrose Improvement District, Cortlandt Manor, New York

Montrose Improvement District, part of the Northern Westchester Joint Water Works located in Cortlandt Manor, needed to automate their mapping and record keeping. The goal was to have a dynamic, accurate computer based model of their water distribution system. The hard copy maps in use consisted of a compilation of maps from different sources, many at different scales with inconsistent information. Accumulated over the years, the maps were out of date and hard to use. In addition, the associated records (account cards, distribution valve cards and hydrant cards) made cross-referencing information difficult. The solution: implementation of integrated automated mapping/facilities management (AM/FM) system from Azertia. Azertia provided a complete solution that included:

- Electronically scanning the local tax maps covering the Montrose Improvement District service territory along with the account cards, distribution valve records and hydrant records.
- Combining and spatially referencing the tax map images into one comprehensive base map.
- Digitizing the water network inclusive of the pipes, distribution valves, and hydrants and building numbers from the hardcopy water network maps to create an integrated AM/FM database. A database that included the hydrant and valve record attribute data and the attached images of hardcopy records (account cards, distribution valve records and hydrant records).
- Creating and implementing a standard grid system
- Creating a road network with street centerlines
- Providing onsite software installation and user training

Once the system was operational, Montrose elected to ensure continued timely and accurate water network updates by awarding Azertia an ongoing Data Maintenance agreement. In this way, Montrose was able to:

- Eliminate the up-front need for expensive full function AM/FM software
- Eliminate the need to hire (and keep) technically trained "in-house" staff to maintain the system
- Have a qualified resource to call on at any time

The result is an accurate integrated water network management tool.

Town of Yorktown, New York Water Department

The Town of Yorktown, NY Water Department, part of the Northern Westchester Joint Water Works, needed to build a system that would automate facility network mapping and record keeping and enable them to accurately model the water system to meet the changing and growing needs of its population. In short, they needed a combination of products and services that would enable them to maintain the system on a daily operational basis yet also provide them with the means to plan for changes and additions in the water network model. The goal was to have a dynamic, accurate computer based model of their water distribution system. The hard copy maps in use consisted of a compilation of older network maps from different sources. In addition, the associated records (tap service cards) made cross-referencing information difficult. The solution: implementation of an integrated automated

mapping/facilities management (AM/FM) system from Azertia. Azertia is providing a complete solution that includes:

- Importing of the Yorktown Engineering Department parcel layer and other pertinent data layers into the system. This information will become the new base map (reference layer) on which the water network will be constructed.
- Electronically scanning the current Yorktown Water Department tap service card files (front and back) and linking each card to the appropriate parcel (meter location). This is estimated to be approximately 10,000 cards.
- Digitizing the water network on the new base map. This will include digitizing of the water mains and valves and other pertinent facilities, as they exist on the current hardcopy maps.
- Developing, organizing and performing the work plan to accurately capture critical facility location and selected other information in the field using Global Positioning System (GPS) satellite technology.
- Using data maintained in the Yorktown meter-billing database, import the consumption data and verify the data is complete and accurate as required to perform hydraulic analysis on the water network.
- Analyzing the network to identify those critical nodes in the network where water pressure readings are required.
- Creating and exporting water network segment link/node files in a format compatible for direct import and use with the targeted hydraulic analysis application program WaterCAD® for Windows water distribution analysis application software package from Haestad Methods, Waterbury, Connecticut.
- Installing the application software and database onsite at the Yorktown Water Department offices and performing onsite training of Yorktown personnel.

With the system now operational, Yorktown has elected to ensure continued timely and accurate water network updates by awarding Azertia an ongoing Data Maintenance agreement. The result is an accurate, integrated water distribution network management and modeling tool that will enable the Water department to better serve the people of Yorktown.

Village of Croton-on-Hudson, New York

Azertia was awarded a contract to implement a comprehensive AM/FM system for the water, wastewater and storm networks. The solution consists of application software, a variety of services and training. A key part of this project was the extensive field work to capture accurate locations and associated data for thousands of facilities (hydrants, valves, curb boxes, catch basins, etc.) using Global Positioning Satellite (GPS) technology. The project resulted in an accurate, integrated graphical

information system that will enable Croton to efficiently manage all of their infrastructure facility networks.

Village of Scarsdale, NY

The Village of Scarsdale needed guidance on how to implement a comprehensive geographic information system (GIS) that would support all of the various departments' operational needs now and well into the future. Having formed an internal GIS Steering Committee, the Village felt it was educated in GIS technology in general but needed a more specific plan to define how to achieve its goals.

The answer: A Modified Needs Assessment from Azertia. Given the level of GIS understanding and experience that Village personnel already had, Azertia presented a proposal to perform a "practical" needs assessment; an abbreviated version of the traditionally longer, more formal process. This will enable Scarsdale to cost-effectively produce the practical, timely, thorough yet specific plan it requires in significantly less time.

Azertia was then subsequently selected to provide services to create a complete infrastructure asset management system mapping database inclusive of the Village's water, sewer and storm network systems.

When the system is fully operational, Scarsdale has elected to ensure continued timely and accurate infrastructure network updates by awarding Azertia an ongoing Maintenance agreement. The result is an accurate, integrated infrastructure asset database and modeling tool that will enable the Village to better serve the people of Scarsdale.