

# GAGNAL

### Taylor Wiseman & Taylor

ENGINEERS I SURVEYORS I SCIENTISTS

124 Gaither Drive, Suite 150, Mt. Laurel, NJ 08054 856-235-7200 phone 856-722-9250 fax www.taylorwiseman.com

January 12, 2015

Re: PROPOSAL: P1117-00

Boundary Surveys for Land Acquisition, Various Parcels located in Woodbridge Township, Middlesex County, NJ

1	4	Project #	P1117-00
	7	Doc Index	900
	2	Contract #	DR-01
15	3	Doc Date	1112115

Department of the Treasury Division of Property Management & Construction Contracts & Procurement Unit 33 West State Street, 9th Floor, Plan Room Attn: Ms. Catherine Douglass PO Box 034 Trenton, NJ 08625-0034

Dear Ms. Douglass:

Taylor, Wiseman & Taylor (TWT) is pleased to submit our Proposal for the above-referenced Surveying Services, as well as our interest and commitment to the execution of these services if selected by the DPMC. Our firm has significant experience with boundary surveys performed to Green Acres standards, and realizes that a thorough understanding of the project setting and issues will be critical to the successful completion of this project. Through our past and current engagements with multiple state and county agencies, we have continually demonstrated our ability to perform these surveying services effectively and in a timely manner.

In addition to our considerable experience with Green Acres surveys, TWT is also quite familiar with Woodbridge Township, having performed a number of surveys in the township. We have often utilized the Woodbridge Township GIS mapping site as an additional resource for this type of work. The following is a brief selection of similar Green Acres surveys that Taylor Wiseman & Taylor has performed, and detailed profiles of five (5) relevant projects are included on the following pages, including two recent surveys within Woodbridge Township.

- Deer Run, Kingwood Township, Hunterdon County, 350-acre Green Acres Survey
- Appel Farm, Upper Pittsgrove Township, Salem County, 108-acre Green Acres Survey
- U.S. Silica/Maurice River Greenway, Maurice River Township, Cumberland County, 1,600-acre Green Acres Survey
- Bass River State Forest, Little Egg Harbor Township, Ocean County, 240-acre Green Acres Survey
- Vecchiotti Tract, Hamilton Township, Atlantic County, 460-acre Green Acres Survey

The key team members to be assigned to this project include experienced professional surveyors Donald L. MacKay, PLS; Samuel Previtera, PLS; George Leykum, PLS; George Gusrang, PLS; Glenn Ovalle, and Survey Technician, Ryan Rubano.

Our firm was founded as a Land Surveying firm in 1901, and has been in continuous operation ever since. Land Surveying was, and continues to be, a vital component of our firm. We have been an industry leader in the Land Surveying field since its inception and have been responsible for the development and implementation of much of the technology upon which the industry depends today. We are proud to have been a part of many definitive land surveys that have established significant State and Federal boundary lines, and to have participated in the retracement of historically significant boundaries including the Mason-Dixon Line and the Lawrence Line. Our key role in the surveying history of our region endows TWT with a depth of experience and knowledge that brings value to every project we undertake.

We appreciate the opportunity to submit our Proposal, and look forward to working with you on this contract. Please contact me if you have any questions or require any further information with regard to our proposal.

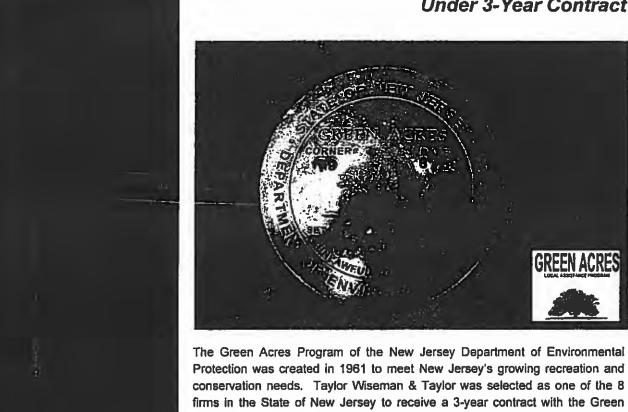
Respectfully submitted.

Respectfully submitted, Taylor Wiseman & Taylor

Samuel S. Previtera, PLS Survey Division Manager



### NJDEP Green Acres Property Surveys **Under 3-Year Contract**



Acres Program for surveying parcels over 100 acres in size.

We were retained by the NJDEP to perform a Green Acres Property Survey and prepare a Plan of Survey for the project site for numerous project sites including:

- South Jersey Pines Girl Scouts Property, S-1435, Evesham Township
- Vecchiotti Tract, S-1442, Hamilton Township
- J & M Land Company, Commercial Township
- Croes Property, Lacey Township
- Bass River State Forest, Little Egg Harbor Township
- Dividing/Nantuxent/Cedar/Black Creeks Greenway, Mullica Township
- M&R Industries, Mullica Township
- US Silica, Maurice River Township



Seabrook Farms





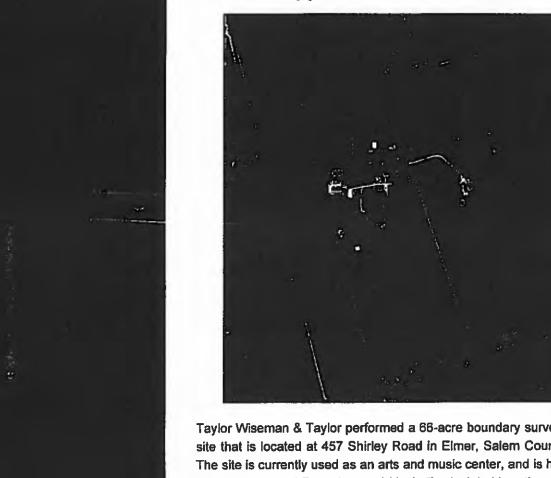
Taylor Wiseman & Taylor was selected by the New Jersey State Agriculture Development Committee (SADC) to complete the Boundary Survey and Description of Easements for the largest land acquisition in the 25-year history of New Jersey's Farmland Preservation Program.

The purchase of the property known as "Seabrook Farms," 1,890 acres of farmland in Mannington Township, Salem County, NJ, once featured on the cover of *Life Magazine*, was negotiated over a 10-year period. This project scope entailed performing extensive deed research, establishing a control network utilizing a Virtual Reference System, stream locations, description of easements, monumentation of the properties and completion of a Plan of Survey for submission to S.A.D.C.

www.taylorwiseman.com



### Appel Farm Arts and Music Center



Taylor Wiseman & Taylor performed a 66-acre boundary survey for a site that is located at 457 Shirley Road in Elmer, Salem County, NJ. The site is currently used as an arts and music center, and is home to the popular Appel Farm Arts and Music Festival, held on the grounds each summer.

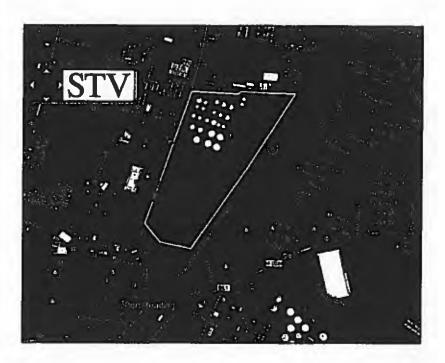
This survey proved to be quite challenging because the original deeds dated back to the early 1900's. We encountered several deed overlaps from adjacent lots. These issues required us to perform extensive deed research for the site and the adjoining properties. We established project control, located existing subsequently monuments, placed new concrete monuments, and prepared a Plan of Survey in accordance with NJDEP Green Acres Standards depicting the deed overlaps from the adjacent lots and an 11-acre exception area. A metes and bounds deed description and Surveyor's Certification Form were also prepared.

www.taylorwiseman.com



200-Acre Boundary Survey Woodbridge Township, NJ





Taylor Wiseman & Taylor performed a complex and detailed survey of this 200-acre, petroleum storage tank facility.

GPS and conventional surveying methods were utilized in the production of the survey plans.

Representative tasks included a complete outbound survey, wetlands locations, tidal datum determination, floodway lines, and monitoring well locations.

www.taylorwiseman.com



### Boundary / Topographic Property Survey Colonial Pipeline Co. Right-of-Way Linden Junction, NJ



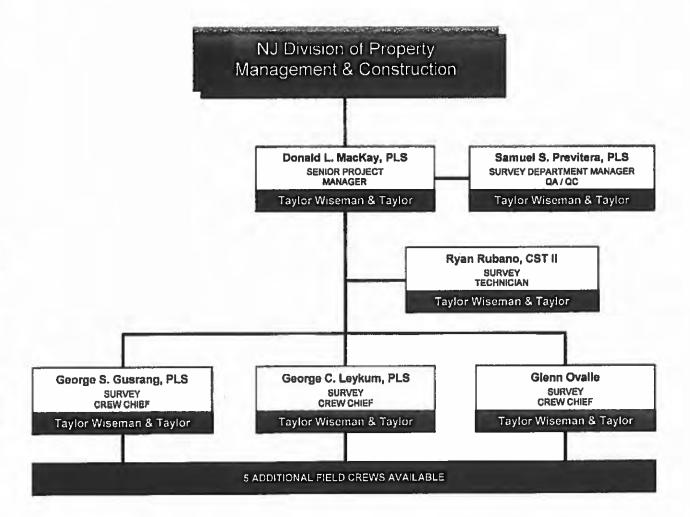
Taylor Wiseman & Taylor provided the necessary survey field work, data reduction, research and calculations for the preparation of a boundary survey in accordance with N.J.A.C. 13:40-5.1 (Land Surveyors; Preparation of Land Surveys). The project included surveying the properties adjacent to the transmission pipeline right-of-way in Woodbridge Township.

The topographic survey was compiled to comply with National Map Accuracy Standards for 1:600 scale mapping with a contour interval of one foot. Horizontal control was based on the current NJ survey grid information and the vertical control was be based on NAVD of 1988. The limits of the topography were the 50-foot wide strip of property owned by the pipeline company, from the northerly line of Arbor Street, to the railroad track just north of Scott Place, and E Street. All visible planimetric features were located and platted. The data was processed in a three-dimensional, AutoCAD digital format.



Boundary Surveys for Land Acquisition, Various Parcels Woodbridge Township, Middlesex County, NJ

#### PROJECT ORGANIZATION CHART







SAMUEL 8. PREVITERA, PLS Survey Division Manager

SUMMARY:

As TOTAL Survey Division Manager and a Senior Project Manager, Mr. Braxitera's experience includes commercial, industrial and municipal development and support services. He has extensive background in subdivision preparation, outbound and topographic surveys, environmentally sensitive area mapping, hazardous waste site surveying, data collection, along with AutoCAD computer experience for relative surveying matters.

#### **RELATED EXPERIENCE:**

Mr. Previtera is a Land Surveyor with 30 years experience in Land Surveying and Management for both public and private clients. He is responsible for the preparation of proposals, budgets, collections, contract negotiations, review and approval of all surveying work performed, planning and reduction of GPS data, mapping and legal description preparation, State Plane and Geographic Coordinate computations, boundary line analysis, preparation and mapping of engineering surveys, hydrographic mapping (mean sea level, stream cross sections, soundings), legal research (deed, filed maps, archive records, etc.), ALTA surveys, billing and client contact.

#### PROFESSIONAL REGISTRATION:

Professional Land Surveyor: New Jersey, Delaware, Pennsylvania

#### **AFFILIATIONS:**

New Jersey Society of Professional Land Surveyors Surveyors Association of West Jersey National Society of Professional Surveyors

#### **EDUCATION:**

Gloucester County College - AAS, Marketing & Management

### RELEVANT PROJECT EXPERIENCE

Walt Whitman Bridge-Philadelphia, PA- Gloucester City, NJ (for DRPA)
Outbound and topographic survey of existing 12 mile bridge corridor.

Ben Franklin Bridge- Philadelphia, PA- Camden, NJ (for DRPA) Outbound and topographic survey of existing 5 mile bridge corridor.

Battleship USS New Jersey – Camden, NJ (Cooper's Ferry Development Association)
ALTA/ACSM Land Title Survey, Outbound and topographic survey of proposed site of Battleship USS New Jersey
museum along the Delaware River.

Campbell's Field - Camden, NJ (Cooper's Ferry Development Association)

ALTA/ACSM Land Title Survey, Outbound and topographic survey of proposed site of Campbell's Field Baseball Stadium along the Delaware River.

Cooper's Ferry Development Association - Camden, NJ
Outbound and topographic survey of proposed site of Waterfront Baseball Stadium along the Delaware
River.

New Jersey State Aquarium Expansion - Camden, NJ (Cooper's Ferry Development Association) ALTA/ACSM Land Title Survey, topographic and boundary survey of site adjacent to existing aquarium for proposed expansion.



#### **Deptford Township MUA**

Gloucester County College-Blackwood-Barnsboro Road

Topographic Survey (7000 LF) along with road cross-sections of the existing roadway for proposed water main extension to Gloucester County College. Location of all existing utilities and research and plotting of adjacent Subdivision Maps and Deeds to accurately define the existing right-of-way of the roadway.

Woodbury Gardens Development

Topographic Survey along with road cross-sections of the existing roadways for proposed water main, sanitary & storm sewer and roadway reconstruction of the existing development. Location of all existing utilities and research and plotting of adjacent Subdivision Maps and Deeds to accurately define the existing right-of-way of the development roadways.

Independence Mall - Philadelphia, PA (for National Park Service)

Detailed topographic and boundary survey of Independence National Park including Independence Hall and adjacent 3 city block area.

Salem County Wastewater Conveyance System Infrastructure Improvements (Gloucester-Salem Regional County Alternative), Salem County, NJ

Performed Land Surveying of existing roadways and utilities for 30 +\- mile route for design of new subregional and regional sewer treatment facilities and conveyance structures within Penns Grove Borough, Carneys Point Township, Pennsville Township, Woodstown Borough, Pilesgrove Township, Salem City, Etsinboro Township, Quinton Township, and Lower Alloways Creek Township.

Franklin Mills Mall - Philadelphia, PA

Topographic and outbound survey of 320 acre site consisting of extensive research of records in verifying the boundaries. Preparation of an outbounds survey for base mapping.

Gloucester Marine Terminal - Gloucester City, NJ

Outbound survey of existing 135 acre terminal located along the Delaware River at the Walt Whitman Bridge

Pureland Industrial Complex - Logan Township, NJ

Hydrographic and topographic services for industrial complex encompassing over 300 acres.

Philadelphia Eagles Practice Facility - Philadelphia, PA

Outbound and topographic survey of existing Naval Hospital site.

County of Atlantic - Mays Landing, NJ

Outbound and topographic survey of proposed Bikeway over Egg Harbor River.

Ocean One Mail - Atlantic City, NJ

ALTA/ACSM survey for existing shopping pier over the Atlantic Ocean.

Cape May - Lewes Ferry - Cape May, NJ (for DRBA)

Detailed topographic survey for proposed parking expansion.

Township of Moorestown - Moorestown, NJ

Provided GPS control, topographic mapping, preparation of tax maps and preparation of associated mapping for the entire Township. GPS horizontal and vertical control based on North American Datum of 1983 (NAD83) and North American Datum of 1988 (NAVD88) was established throughout the Township. Digital aerial photogrammetry compiled at 1" = 100' with a two foot (2') contour interval serves as a base map. Tax maps for the entire Township were recompiled in a digital format and are in the process of being submitted to the State Department of the Treasury for approvals.



DONALD L. MACKAY, PLS Senior Survey Project Manager

#### SUMMARY:

Mr. MacKay organizes, schedules, supervises, and manages manpower resources and equipment required to complete specific surveying and mapping operations in the States and Commonwealths of Delaware, Maryland, New Jersey, Massachusetts, and Pennsylvania.

#### RELATED EXPERIENCE:

Mr. MacKay's responsibilities include but are not limited to the completion of title, topographic, control, right-of-way, riparian, hydrographic, utilities, and wetlands/stream encroachment surveys. He is experienced in electronic data collection techniques along with fast-static, reconnaissance, and target setting for GPS surveying.

He has also served as a consultant to assist in the updating of 26,000 railroad evaluation maps for Penn Central involving the merger with the Consolidated Rail Corp; conducted instrumentation control surveys in the field on five separate earthen dams for the U.S. Army Corps of Engineers; performed astronomic observations and calculations in the field for the state boundary line of Delaware-Pennsylvania "Great Circle" retracement and monumentation survey; completed hydrographic surveys in the field for several creeks and the Chesapeake and Delaware Canal; and performed wetlands and stream encroachment surveys in the field for many large developments. In addition, he has project managed the surveying work for several Pennsylvania Department of Transportation highway projects. Mr. MacKay has also been a Survey Course Instructor for the Pennsylvania Society of Land Surveyors Conference.

#### **REGISTRATION:**

New Jersey Professional Land Surveyor Delaware Professional Land Surveyor Maryland Professional Land Surveyor Pennsylvania Professional Land Surveyor Massachusetts Professional Land Surveyor

#### **EDUCATION:**

Rutgers University, Mathematics Program
Pennsylvania State University, Geographic Information Systems (GIS) Certificate Program
University of Delaware, Stormwater Management Professional Program

#### **AFFILIATIONS:**

- Pennsylvania Society of Land Surveyors: Secretary (2006), Chapter President (2003—2006)
- Pennsylvania Home Builders Association
- NJ Society of Professional Land Surveyors (Past Director)
- Cumberland-Salem Surveyors Association (Past President)
- Delaware Association of Surveyors (Past Director)
- Maryland Society of Surveyors
- American Congress on Surveying and Mapping
- Pennsylvania Mapping and Geographic Information Consortium (PAMAGIC)

#### REPRESENTATIVE PROJECT EXPERIENCE:

#### **Burlington County, NJ Farmland Preservation Surveys**

Taylor Wiseman & Taylor was contracted by the County of Burlington to facilitate the initiative for Farmland Preservation projects, including the following examples:

- BF&W Farm, Springfield, NJ, 400 acres
- Durr Farm Preservation, Columbus, NJ, 113 acres
- Alloway Farm, Shamong, NJ, 106 acres
- Stevenson Farm, Pemberton, NJ, 117 acres
- · Batten Farm, Lumberton, NJ, 12 acres
- Clayton East Farm, New Hanover, NJ, 198 acres
- Stattel Farm, Pemberton, NJ, 156 acres



#### ALTA/ACSM Land Title Surveys: Gloucester County, NJ

- Locust Grove
- Glassboro-Monroe Right-of-Way
- Sunoco Eagle Point
- Forest Park
- Gerro Plant Subdivision
- Colonial Gulf Woodbury
- Paulsboro Terminal DPCC Plan Update
- Pipeline to Buckeye

Substations, Generating Stations, Energy Transmission Lines, Pipelines and Related Surveys Various survey tasks were performed on these projects, ranging from 3D scanning of power equipment to detailed topography and measurements, to complete ALTA/ACSM Land Title Surveys of the property and easements associated with these sites. A sampling of projects is listed below:

- Atlantic City Electric Co. NJ Substations: Missouri Ave., Cedar, Mickleton, and Middle Stations.
- Atlantic City Electric Co. Power Stations: Cumberland Station Millville, NJ and BL England Station Upper Twp. NJ
- Morris Energy Group Power Stations: Bayonne, NJ, Camden, NJ, Dartmouth, MA, Elmwood Park, NJ, Newark, NJ, York, PA and Pedricktown, NJ.
- Atlantic City Electric Glassboro-Monroe Right-of-Way Survey and Metes and Bound Description
- PSEG Gas Pipeline directional underground dig project beneath the Hackensack River
- Buckeye and Plains All American underground pipelines: Greenwich Twp., NJ, Paulsboro, NJ, Delaware River Crossing at Philadelphia, and Philadelphia at the Schuylkill River.
- Colonial Pipeline Company underground pipeline projects in Woodbridge, NJ, Linden, NJ and Woodbury, NJ

#### Hackensack River PSE&G HDD

Secaucus, NJ

Project Type: Large Land Title Survey and Topography

<u>Specifications</u>: Prepare complete surveys for properties invovled with a PSEG horizontal directionsl dig under the Hackensack River to include all survey locations, boundary resolutions, set property corners, Surveying techniques: GPS and conventional.

Responsibilities: Contract preparation; supervise all field and office work; certify, sign, and seal complete survey plans; invoicing.

#### Commodore Business Center

Logan Township (Gloucester County, NJ)

Project Type: ALTA/ACSM Land Title Surveys

<u>Specifications</u>: Prepare complete surveys for commercial office and flex space properties to include all survey locations, boundary resolutions, set property corners, building heights and setbacks, and legal descriptions. Surveying techniques: GPS and conventional.

Responsibilities: Contract preparation; supervise all field and office work; certify, sign, and seal complete survey plans; invoicing.

#### Seaview Golf Club and Resort (now Seaview Marriott Resort)

Absecon (Galloway Township), Atlantic County, NJ

Project Type: Large Boundary/Property Survey

<u>Specifications</u>: Set accurate ground control network for survey field operations in NJ State Plane Coordinate System. Run conventional, total station survey traverse throughout project. Survey property corners, roadways, and improvements in order to produce a drafted property survey.

Responsibilities: Supervise and perform all field survey operations. Keep accurate field notes and logs of field work. Manage survey crews and work with resort management on this private and exclusive golf resort property.



GEORGE C. LEYKUM, PLS Senior Crew Chief

#### **SUMMARY:**

As a Party Chief within the firm's Survey Division since 1981, Mr. Leykum is responsible for the successful completion and documentation of a variety of field survey assignments as well as the supervision, quality control and safety of his field crew. Mr. Leykum has over 30 years of experience in field survey including route and control surveys, electronic data collection and Global Positioning Systems (GPS) surveying.

#### **RELATED EXPERIENCE:**

During Mr. Leykum's many years of experience with TWT, he has performed numerous field surveying assignments, as well as locations for the Subsurface Utility Engineering division. These have included highway baseline layout/reestablishment, vertical bench runs, highway cross sections, topographic data collection, bridge as-built/clearance surveys, intersection surveys/layout, right-of-way establishment, drainage/utility as-built surveys, stream cross-section surveys and wetland delineation surveys, as well as numerous construction stake-outs of buildings, bridges and highways.

Mr. Leykum is particularly experienced in electronic data collection techniques and acts as an instructor for other field personnel in this regard. He is also very experienced in "fast-static," reconnaissance and target setting for GPS surveying. His responsibilities also include the calibration of all conventional and electronic field survey instruments.

#### **EDUCATION:**

Stockton State College – Biology Coursework Atlantic County College – Mathematics Coursework Ocean County College – Surveying Coursework

#### REGISTRATION:

Professional Land Surveyor - New Jersey (1988)

#### AFFILIATIONS:

NJ Society of Professional Land Surveyors (West Jersey Chapter)

#### **CERTIFICATIONS & TRAINING:**

OSHA 1910.120(e) HAZWOPER
Amtrak Contractor Identification #KM2007
Work Zone Traffic Control
Adjustment Computations & Least Squares
Construction Layout Using GPS
Practical GPS
Secure Worker Access Consortium (SWAC)

Transportation Workers Identification Credential (TWIC)

OSHA 1910.119

Photogrammetry & Digital Orthophotography Surveying with GPS, Theory & Practice Practical Astronomy for Surveyors Verbal Communications for Surveyors Riparian Rights Map Filing Law

#### PROJECT HISTORY:

- · Large Boundary Survey Seaview Gold Club and Resort, Atlantic City, NJ
- Large Boundary Survey and Topo Hackensack River PSE&G HDD Secaucus, NJ
- Large ALTA/ACSM Land Title Surveys, Commodore Bus. Ctr., Logan Twp., NJ
- Large ALTA/ACSM Land Title Surveys, Cogen Power Plants, Various Sites (7) in NJ and PA
- Port Reading Terminal Title Survey, included Conrail parcel, Carteret, NJ
- Crown Vista Pipeline Crossing: Conrail Right-of-Way, Deptford (Gloucester County, NJ)
- Transcontinental Pipeline Surveys NJ, NY, MD, & PA
- Route 9 Forked River Control Baseline Surveys (Ocean County, NJ)
- Tuckerton Creek Spillway Rehabilitation As-Builts and Baseline Survey (Ocean County, NJ)
- Burlington City Waterfront Promenade (Burlington County, NJ)
- 15-Mile Trenton-Woodbury Loop Improvements (Burlington County, NJ)



- Route 73 Right-of-Way Surveys, Burlington County, NJ
- Church & Lenola Road Intersection, Burlington County, NJ
- Route 55, Sections11C & 12D, 9G, 10D, 11D, & 12E Highway Baseline Layout & Cross-Sections, Vertical Bench Runs, Topographic (Gloucester County, NJ)
- Intracoastal Waterway Survey, Manasquan, NJ to Cape May, NJ
- · Gateway Project: Admiral Wilson Boulevard (Route 30), Camden, NJ
- PSE&G Estuary Enhancement Project, Salem County, NJ
- Route 17 & Essex Road Intersection, Bergen County, NJ
- Route 9 & Tilton Road Intersection Improvements, Atlantic County, NJ

#### 5,437 Acres - Farmland Preservation Program

**Burlington County, NJ** 

Preparations of approximately 36 Surveys of Property covering numerous parcels of land encompassing approximately 5,437 acres of land were performed. The surveys were performed for the Burlington County Board of Chosen Freeholders as part of the Farmland Preservation program. The projects were located in various Townships in Burlington County. Deed and map research, aerial topographic mapping, were performed as part of this project.

#### Title Survey: Gloucester County Utilities Authority

West Deptford Township, Block 328

This tract lies adjacent to the Conrail tracks, the rail siding and Paradise Avenue. TWT provided on-call surveying and mapping services in 2007, as well as earlier (1999), preparing various proposed easement plans and easement sketches. As Survey Crew Chief, was responsible for field crew supervision, establishment of property/title lines, easement lines, topographic work and site control.

#### Sim Place ALTA/ACSM Land Title Survey

Pine Barrens, NJ

Survey Crew Chief for large-scale ALTA/ACSM Land Title Survey with topography on a 3,000 acre piece of land near Chatsworth in Bass River Township, Burlington County, NJ. The Pine Island Cranberry Company recently acquired these 3,000 acres, known as Sim Place, for the expansion of their existing facility which has been cultivating cranberries since the 1890's while preserving one of the largest areas of undeveloped wilderness in the US. TWT set monument corners and worked with the cranberry company's field personnel to clear-cut several selected property lines and set line pins for the client's use.

#### 143 Acres - Harrison Township

Gloucester County, NJ

Included boundary survey, title research and description of the property. This project also included the preparation of wetland mapping for submission to the New Jersey Department of Environmental Protection agency for a Letter of Interpretation as well as roadway and stream cross sections and a GPS control network for aerial mapping.

#### 5.270 Acres - The Francis Project

Cumberland & Cape May Counties, NJ

The Francis Project was a Title survey covering hundreds of parcels, which encompassed approximately 5,270 acres of land. The surveys were commissioned by Public Service Electric & Gas as part of the Estuary Enhancement Program in Commercial and Maurice River Townships in Cumberland County and Dennis Township in Cape May County. Records research, digital orthoimagery mapping, GPS control network and riparian claims investigations were performed for this project.

#### Crystal Village, 1203 Acres - City of Millville

Cumberland County, NJ

Included boundary survey, title research and description of the property. This project also included the preparation of wetland mapping for submission to the New Jersey Department of Environmental Protection agency for a Letter of Interpretation, as well as roadway and stream cross-sections, determination of Township boundary, and a GPS control network for aerial mapping.



GLENN A. OVALLE Survey Crew Chief

#### SUMMARY:

As a Party Chief within the firm's Survey Division since 2006, Mr. Ovalle is responsible for the successful completion and documentation of a variety of field survey assignments as well as the supervision, quality control and safety of his field crew. Mr. Ovalle's experience in field survey includes route and control surveys, electronic data collection and Global Positioning Systems (GPS) surveying.

#### RELATED EXPERIENCE:

Prior to employment with Taylor Wiseman & Taylor, Mr. Ovalle served as a Field Artillery Surveyor from 1998-2004 in the US Army and the NJ Army National Guard. Duties included recording field data, preparing schematic sketches, and marking survey stations, as well as performing astronomic observations, determining deviations for targets, and position area surveys with angular measuring equipment. He operated and performed preventative maintenance on vehicles, radios, weapons, and all survey equipment.

During Mr. Ovalle's subsequent years of experience with TWT, he has performed numerous field surveying assignments, as well as locations for the Subsurface Utility Engineering division. These have included highway baseline layout/reestablishment, vertical bench runs, highway cross sections, topographic data collection, bridge as-built/clearance surveys, intersection surveys/layout, right-of-way establishment, drainage/utility as-built surveys, stream cross-section surveys and wetland delineation surveys, as well as numerous construction stake-outs of buildings, bridges and highways.

Mr. Ovalle is particularly experienced in electronic data collection techniques and acts as an instructor for other field personnel in this regard. He is also very experienced in "fast-static," reconnaissance and target setting for GPS surveying. His responsibilities also include the calibration of all conventional and electronic field survey instruments.

#### **EDUCATION:**

U.S. Army Field Artillery Surveyor Course

#### **CERTIFICATIONS & TRAINING:**

OSHA 1910.120(e) HAZWOPER
Petroleum Refiners Safety Cert
Amtrak Contractor Identification
Transportation Workers Identification Credential
Northeast Sunoco Contractor
Delaware Valley Safety Council
E-Railsafe System Contractor Cert

#### **PROJECT HISTORY:**

Sim Place ALTA/ACSM Land Title Survey, Pine Barrens, NJ

Survey Crew Chief for large-scale ALTA/ACSM Land Title Survey with topography on a 3,000 acre piece of land near Chatsworth in Bass River Township, Burlington County, NJ. The Pine Island Cranberry Company recently acquired these 3,000 acres, known as Sim Place, for the expansion of their existing facility which has been cultivating cranberries since the 1890's while preserving one of the largest areas of undeveloped wilderness in the US. TWT set monument corners and worked with the cranberry company's field personnel to clear-cut several selected property lines and set line pins for the client's use.

5,437 Acres - Farmland Preservation Program, Burlington County, NJ

Preparations of approximately 36 Surveys of Property covering numerous parcels of land encompassing approximately 5,437 acres of land were performed. The surveys were performed for the Burlington County Board of Chosen Freeholders as part of the Farmland Preservation program. The projects were located in various Townships in Burlington County. Deed and map research, aerial topographic mapping, were performed as part of this project.



#### 150 Acres - Durr Tract, Burlington County, NJ

The Durr Tract survey covered numerous parcels of land, which encompassed approximately 150 acres of land. The survey was performed for a private client. The project is located in Mansfield Township, Burlington County. A GPS control network, deed and map research, aerial topographic mapping, wetlands mapping and stream cross sections for hydraulics and hydrology were performed as part of this project.

#### Valoro Ripeline East-West Connector, Linden, NJ

Begun in 2006, the project includes boundary surveying, topographic surveying and parcel mapping, including easement plans for a 1.1 mile pipeline project to produce a topographic Survey and Digital Terrain Model for the addition of an additional 20" diameter gas pipeline. The project links two sites with numerous constraints requiring detailed reporting of existing conditions. Obstacles to be resolved are numerous existing underground utilities, multiple railroad right-of-way crossings and a crossing under the New Jersey Tumpike (400' right of way). Project also includes centerline description of the proposed pipe, along with property plats indicating the necessary easement area for conveyance.

#### 675 Acres - Pemberton Pines, Burlington County, NJ

The Pemberton Pines survey covered numerous parcels of land, which encompassed approximately 675 acres of land. The survey was performed for a private client. The project is located in Pemberton Township, Burlington County. A GPS control network, deed and map research, aerial topographic mapping, wetlands mapping and stream cross sections for hydraulics and hydrology were performed as part of this project.

#### McGuire Air Force Base, Wrightstown, Runway 18/36 and Shoulders

This project included the survey field work, office reduction and drafting required to perform a ground based topographic survey for the project area designated. The topography was compiled to comply with National Map Accuracy Standards for 1:600 scale mapping with a contour interval of 1'. Horizontal control was based upon the New Jersey State Plane Coordinate System, NAD 1983 and the vertical control was based on NAVD of 1988. All visible planimetric features were located and platted in a three dimensional digital format. This project also included the designation of underground utilities along with the location and mapping of the same.

#### McGuire Air Force Base, Wrightstown, Runway 06/24 and Shoulders

This project included the survey field work, office reduction and drafting required to perform a ground based topographic survey for the project area designated. The topography was compiled to comply with National Map Accuracy Standards for 1:600 scale mapping with a contour interval of 1'. Horizontal control was based upon the New Jersey State Plane Coordinate System, NAD 1983 and the vertical control was based on NAVD of 1988. All visible planimetric features were located and platted in a three dimensional digital format. This project also included the designation of underground utilities along with the location and mapping of the same.

#### Welsbach E.P.A. Superfund Site, Highland and Klemm, Gloucester City, NJ

The Welsbach Highland and Klemm Superfund site in Gloucester City, NJ was part of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Soils on this site were found to contain thorium and other radioactive materials. Taylor Wiseman & Taylor provide ongoing excavation monitoring for soil samples and volumetric calculations for a period of two (2) years. The project limits grew throughout that time period as the contamination was found to have spread farther than previously expected. Periodic Depth of Excavation plans were prepared and submitted to the United States Army Corp of Engineers (U.S.A.C.O.E.). Upon final approval from the U.S.A.C.O.E. that the site was clean, Taylor Wiseman & Taylor provided the construction stakeout to restore the site to pre-construction elevations and the post construction survey.



GEORGE H. GUSRANG, PLS Survey Crew Chief

#### SUMMARY:

As a Party Chief within the firm's Survey Division, Mr. Gusrang is responsible for the successful completion and documentation of a variety of field survey assignments as well as the supervision, quality control and safety of his field crew. Mr. Gusrang has over 35 years of experience in field survey including conventional, electronic data collection and Global Positioning Systems (GPS) surveying. The majority of his professional career has been with Taylor Wiseman & Taylor.

#### **RELATED EXPERIENCE:**

During Mr. Gusrang's many years of experience with TWT, he has performed numerous field surveying assignments. These have included highway baseline layout/re-establishment, vertical bench runs, highway cross sections, topographic data collection, bridge as-built/clearance surveys, intersection surveys/layout, right-of-way establishment, drainage/utility as-built surveys, stream cross section surveys and wetland delineation surveys, as well as numerous construction stake-outs of buildings, bridges and highways.

Mr. Gusrang is particularly experienced in electronic data collection techniques and acts as an instructor for other field personnel in this regard. He is also very experienced in "fast-static," reconnaissance and target setting for GPS surveying. His responsibilities include the calibration of all conventional and electronic field survey instruments.

#### REGISTRATION:

Professional Land Surveyor. New Jersey

#### **AFFILIATIONS:**

Surveyors Association of West Jersey

#### **CONTINUING EDUCATION:**

OSHA 1910.120(e) HAZWOPER Transportation Workers Identification Credential (TWIC) Work Zone Traffic Control **Boundary Dispute Resolution** Surveying with GPS, Theory & Practice **Practical GPS** Construction Layout Using GPS Adjustment Computations & Least Squares Practical Astronomy for Surveyors Effects of Easements on Surveyors' Work Legal Research for Surveyors Attribute Data Collection **Data Collection Processing** Practice of Surveying in the Army Corps Introduction to GIS **GIS Applications GIS Data Conversions** The Internet & Surveying Riparian Rights Map Filling Law Photogrammetry & Digital Orthophotography Verbal Communications for Surveyors



#### PROJECT HISTORY:

Survey Project Manager for Highway Baseline Re-establishment, Vertical Bench Runs, Highway Cross Sections, Topographic Surveys, Right-of-Way Surveys, "As-Built" Drainage/Utility Surveys, Wetland Delineation Surveys, Intersection Surveys:

- Route 9 (MP 135.21) Bridge over Main Street, Control Survey, Re-establish Highway Baselines, Deck Replacement Survey, Topographic Surveys and Cross-Section Survey, Woodbridge Township, New Jersey
- Route 35 (10.0 miles) Control & Aerial Targets, Re-establish Highway Baselines, As-Bullt Bridge Surveys, Topographic Surveys, Middlesex County, New Jersey
- Route 9 (30 miles) Control & Aerial Targets, Re-establish Highway Baselines, As-Built Bridge Surveys, Topographic Surveys, Monmouth & Middlesex Counties, New Jersey
- Route 287, Control and Topographic Surveys, Cross-Section Surveys, Re-establish Highway Baselines, As-Built Bridge Surveys, Re-Establish Right-of-Way Survey, Middlesex County, New Jersey
- Route 29 @ Bridge Boulevard, Control and Topographic Surveys, Cross-Section Surveys, Reestablish Highway Baselines, As-Built Bridge Surveys, Re-Establish Right-of-Way Survey, As-Built Utility and Drainage Survey, Middlesex County, New Jersey
- US Route 183 Section 1, Re-establish Highway Baselines, Multiple New Right-of-Way (GPPM)
   Parcels, Control Survey, Re-establish Railroad Right-of-Way Survey, Control & Aerial Targets,
   Topographic Surveys, Wetlands Location Survey, Netcong, New Jersey
- US Route 46 Section 1, Re-establish Highway Baselines, Multiple New Right-of-Way (GPPM)
   Parcels, Control Survey, Re-establish Railroad Right-of-Way Survey, Control & Aerial Targets,
   Topographic Surveys, Wetlands Location Survey, Netcong, New Jersey
- Maple Ave (CR 537), Superstructure Replacement, Control Survey, Re-establish Highway Baselines, Re-Establish Right-of-Way Survey, Re-Establish Railroad Right-of-Way Survey, Topographic Surveys and Cross-Section Survey, Deck Replacement Survey, Wetlands Survey, Pennsauken, New Jersey
- Chapel Ave (CR 626), Superstructure Replacement, Control Survey, Re-establish Highway Baselines, Re-Establish Right-of-Way Survey, Re-Establish Railroad Right-of-Way Survey, Topographic Surveys and Cross-Section Survey, Deck Replacement Survey, Wetlands Survey, Cherry Hill, New Jersey
- Reconstruction of Intersections Sherman Ave. and the Boulevards, Control and Topographic Surveys, Cross-Section Surveys, Re-establish Highway Baselines, Multiple New Right-of-Way (GPPM) Parcels, Re-Establish Right-of-Way Survey, Re-establish Railroad Right-of-Way Survey, As-Built Utility and Drainage Survey, Vineland, New Jersey
- Route 34 (1.5 miles) Control & Aerial Targets, Re-establish Highway Baselines, As-Built Bridge Surveys, Topographic Surveys, Monmouth County, New Jersey
- Route 35 (2.0 miles) Control & Aerial Targets, Re-establish Highway Baselines, As-Built Bridge Surveys, Topographic Surveys, Monmouth County, New Jersey
- Route 22 (4.8 miles) Control & Aerial Targets, Re-establish Highway Baselines, As-Built Bridge Surveys, Topographic Surveys, Union County, New Jersey
- Route 9, Section 18, Control Survey, Re-establish Highway Baselines, Multiple New Right-of-Way (GPPM) Parcels, DEP/Tidelands Surveys, Topographic Surveys, Borough of Tuckerton, Ocean County, New Jersey
- Route I-280 (7 miles) Control & Aerial Targets, Morris & Essex Counties, New Jersey
- Main Street (CR 601) over Route 46 Superstructure Replacement, Re-establish Highway Baselines, Control Survey, Re-Establish Right-of-Way Survey, Topographic Surveys and Cross-Section Survey, Deck Replacement Survey, Passaic County, New Jersey
- Route 22, Control and Topographic Surveys, Cross-Section Surveys, Re-establish Highway Baselines, As-Built Bridge Surveys, Re-Establish Right-of-Way Survey, Warren County, New Jersey



RYAN M. RUBANO Survey Technician

#### SUMMARY:

Mr. Rubano has been with the firm since 2003 and is experienced with both field and office procedures involving a wide variety of survey tasks including topographic and boundary surveys, ALTA/ACSM land title surveys, construction permit plans, foundation and final surveys, utility and basin as-built plans, flood elevation certificates, wetland delineation plans, legal descriptions, and various types of construction layout. His technical knowledge includes AutoDesk Land Development Desktop, ESRI ArcView 3.3, Topcon GTS300 & GPT2000 Total Stations, SurveyPro Data Collection Software, and Leica Robotic Total Stations and GPS equipment.

#### **RELATED EXPERIENCE:**

Mr. Rubano has completed SPACESTARS certification in Geographic Information Systems(GIS)/Remote Sensing through the Burlington County Institute of Technology. He is Experienced with GPS Data Collection and conversion, taking drawings from an AutoCAD to GIS environment, digitizing base maps, populating GIS databases(.dbf), as well as utilizing ArcView extensions, including Network Analyst, Spatial Analyst, Image Analyst and 3D Analyst. His certification coursework culminated in the construction of a GIS for the school campus with an emphasis placed on disaster preparedness.

#### **EDUCATION:**

Kean University of New Jersey - Bachelor of Arts, Physical Education

#### CERTIFICATIONS:

8PACESTARS GIS Technician Certification NSPS/ACSM Certified Survey Technician – Level II

#### **TRAINING:**

ESRI ArcView 3.3 Software
AutoDesk Land Development Desktop Software
Topcon GTS300 & GPT2000 Total Stations
Metrotech Underground Utility Locators
OSHA 40-Hour HAZWOPER Training
Loss Prevention System Certification
Transportation Worker Identification Credential (TWIC)

"Real World Experience with GIS" Seminar API Work Safe Certification - Exxon/Mobil Trimble S6 Robotic Total Station Mala X3M GPR OSHA Annual Refresher Course Secure Worker Access Consortium (SWAC)

#### **RECENT PROJECT HISTORY:**

Fellowship Alliance Chapel (Major Site Plan), Medford Township, Burlington County, NJ Included the field collection, office reduction and drafting required to produce a base drawing comprised of multiple lots totaling 105 acres to be consolidated in order for the client to add multiple facilities to their existing facilities. Additional features of the base map included utility as-builts associated with the site, wetland delineation, and cross-sections of approximately 15,000 LF of roadway tied in with additional aerial topography of the site.

Minor Subdivision (Block 1303, Lote 3.01 & 2.04) – Southampton Township, Burlington County, NJ Included boundary survey, deed research, legal descriptions, and all drawings associated with the project, including Wetland delineation Plan for submission to the New Jersey Department of Environmental Protection agency for a Letter of Interpretation, Existing Conditions/Topographic Survey Plan and Minor Subdivision Plan.

Yale School (Major Site Plan) - Cherry Hill Township, Camden County, NJ Included boundary survey with extensive deed research for outbound resolution and all drawings associated with the project, including Wetland delineation Plan for submission to the New Jersey Department of Environmental Protection agency for a Letter of Interpretation, and existing Conditions/Topographic Survey to be utilized in the preparation of a Major Site Plan for a 12,000 SF building addition and associated improvements.



Name: Samuel S. Previtera, PLS
Title: Survey Division Manager / QA-QC
Firm: Taylor Wiseman & Taylor

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Burlington County NJ Farmland Preservation Surveys Burlington County, NJ \$40,000 Fee	Taylor Wiseman & Taylor	Boundary Surveys for 4 sites, covering over 350 acres	Project Manager / Surveyor	2	15%	2014	
Snowden Lane Major Subdivsion Princeton Twp, NJ \$25,000	Taylor Wiseman & Taylor	Boundary & Topgography Survey of 30-Acre Site	Project Manager / Surveyor	2	15%	2014	
NFI Industries (Multiple Projects) Burlington, Atlantic & Salem Counties, NJ \$35,000 Fee	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 3 Parcels totaling 145 acres	Project Manager / Surveyor	2	15%	2014	
Woolwich Township NJ Farmland Preservation Surveys Gloucester County, NJ \$35,000 Fee	Bach Associates	Boundary Surveys for 2 sites, covering over 135 acres	Project Manager / Surveyor	2	20%	2013/2014	
Gloucester County NJ Farmland Preservation Surveys Gloucester County, NJ \$125,000 Fee	Bach Associates	Boundary Surveys for 6 sites, covering over 500 acres	Project Manager / Surveyor	6	25%	2013/2014	
Conifer Realty Multiple Projects Camden, Cape May & Gloucester Counties, NJ \$27,500	Bach Associates	ALTA/ACSM Survey for 3 Parcels totalling 95 acres and 35 Apartment Buildings	Project Manager / Surveyor	3	20%	2013/2014	



Name: Donald L. MacKay, PLS Title: Senior Project Manager Firm: Taylor Wiseman & Taylor

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Sim Place ALTA/ACSM Land Title Survey Pine Barrens Burlington County, NJ \$150k	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 3,000 acre parcel	Project Manager / Surveyor	12	80%	2012-2013	
Colonial Pipeline Right-of-Way Survey Woodbridge Twp., NJ \$50k	Taylor Wiseman & Taylor	Survey of Property (R.O.W.)	Project Manager / Surveyor	3	60%	2013	
Colonial Tank Farm Survey Woodbridge Twp., NJ 200 Acres \$75k	Taylor Wiseman & Taylor	Survey of Property, Topography, Wetlands, Floodlines	Project Manager / Surveyor	6	20%	2013	
Green Acres Survey Kingwood Township, NJ 250 Acres \$80k	Taylor Wiseman & Taylor	Survey for Green Acres Program State Land Acquisition	Project Manager / Surveyor	12	15%	2009-2011	
North Hudson Sewerage Authority 11th Street Survey Hoboken, NJ \$20k	Taylor Wiseman & Taylor	Survey of Right-of-Way and Topography along several city blocks	Project Manager / Surveyor	1	50%	2014	
North Hudson Sewerage Authority Park Avenue Survey Weehawken and Union City, NJ \$40k	Taylor Wiseman & Taylor	Survey of Right-of-Way and Topography along several city blocks	Project Manager / Surveyor	2	50%	2012-2013	



Name: Ryan S. Rubano, CST II
Title: Survey Technician
Firm: Taylor Wiseman & Taylor

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Sim Place ALTA/ACSM Land Title Survey Pine Barrens Burlington County, NJ \$170,000 Fee	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 3,000 acre parcel	Survey Technician	5	20%	11/2012 - 4/2013	
Paglee-Bowman Tract Pemberton Township Burlington County, NJ \$50,000 Fee	Taylor Wiseman & Taylor	Boundary Survey for Green Acres (331-acre parcel)	Survey Technician	3	20%	1/2011 - 3/2011	
Horsehoe Bend Road Kingswood Township Hunterdon County \$80,000	Taylor Wiseman & Taylor	Boundary Survey for Green Acres (131-acre parcel)	Survey Technician	24	20%	10/2009 - 10/2011	
Burlington County NJ Farmland Preservation Surveys Burlington County, NJ \$100,000 Fee	Taylor Wiseman & Taylor	Boundary Surveys for 43+ sites, covering over 1,000 acres	Survey Technician	12	20%	1/2007 - current	
Burlington County College Multiple Projects Burlington County, NJ \$80,000 Fee	Taylor Wiseman & Taylor	Boundary, Topographic, Utility as-built surveys, Lot Consolidation Plan	Survey Technician	12	20%	1/2005 - ongoing	
Seabrook Farms Mannington Township Cumberland County, NJ \$379,000 Fee	Taylor Wiseman & Taylor	Boundary Survey for 1,890 Acre Site	Survey Technician	3	20%	6/2008 - 10/2008	

<sup>\*</sup>A KEY TEAM MEMBER IS A TECHNICAL OR MANAGEMENT PERSON DEVOTING 20% OR MORE OF THEIR TIME TO ANY PHASE OF THE PROJECT



Name: George C. Leykum, PLS Title: Survey Crew Chief Firm: Taylor Wiseman & Taylor

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Sim Place ALTA/ACSM Land Title Survey Pine Barrens Burtington County, NJ	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 3,000 acre parcel	Survey Crew Chief	12	90%	2012 - 2013	
Colonial Pipeline Right-of-Way Survey Woodbridge Twp., NJ \$50k	Taylor Wiseman & Taylor	Survey of Property (R.O.W.)	Survey Crew Chief	2.	50%	2013	
Logan Township Industrial Park Gloucester County, NJ \$55 M	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 1,100 acre parcel	Survey Crew Chief	10	60%	3/2005 - ongoing	
Seabrook Farms Mannington Township Cumberland County, NJ	Taylor Wiseman & Taylor	Boundary Survey for 1,890 Acre Site	Survey Crew Chief	4	90%	6/2008 - 10/2008	
Crystal Village Millville, NJ \$3.25 M	Taylor Wiseman & Taylor	Boundary Survey for 1,200 Acre Site	Survey Crew Chief	2	80%	2/2006 - 2/2007	
North Hudson Sewerage Authority 11th Street Survey Hoboken, NJ \$20k	Taylor Wiseman & Taylor	Survey of Right-of-Way and Topography along several city blocks	Survey Crew Chief	0.5	90%	2014	



Name: Glenn Ovalle Title: Survey Crew Chief Firm: Taylor Wiseman & Taylor

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Colonial Tank Farm Survey Woodbridge Twp., NJ 200 Acres \$75k	Taylor Wiseman & Taylor	Survey of Property, Topography, Wetlands, Floodlines	Survey Crew Chief	2	30%	2013	
Seabrook Farms Mannington Township Cumberland County, NJ	Taylor Wiseman & Taylor	Boundary Survey for 1,890 Acre Site	Survey Crew Chief	4	90%	6/2008 - 10/2008	
Command Ops Building Joint Base McGuire-Dix-Lakehurst Burlington County, NJ \$31,000	Government Services Integrated Process Team, LLC	Field collection, office reduction and drafting required for Topographic Survey for new Military Building t	Survey Crew Chief	4	20%	2010	
Emergency Repairs to Bulkhead Fortescue State Marina, Fortescue, Down Twp., NJ \$310 (fee)	Taylor Wiseman & Taylor	Topographic & Hydro Survey	Survey Crew Chief	3	20%	2008	
Logan Township Industrial Park, NJ \$55 M	Taylor Wiseman & Taylor	ALTA/ACSM Survey for 1,100 acre parcel	Survey Crew Chief	34	20%	2005-2008	



Name: George Gusrang, PLS
Title: Survey Crew Chief
Firm: Taylor Wiseman & Taylor

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Statewide Task Order Agreement for Survey & Mapping No. 2007DS657A \$3 million (Fee)	Taylor, Wiseman & Taylor	Field Surveys for 20 Assignments, Including GPS, Topographic, & Property Surveys	Survey Party Chief	30	65%	2008 - 2010	
Blue Anchor Dam Winslow Township, NJ \$75,000.00 (Fee)	Taylor, Wiseman & Taylor	Field Survey of Stream Cross Sections, Lake Depths & Dam Features	Survey Party Chief	4	20%	September 2010 - Present	
Statewide Task Order Agreement for Design Services No. 2008PM682I \$3 million (Fee)	Taylor, Wiseman & Taylor	Field Surveys in support of 23 Projects, Including Stream Sections, Dam Surveys & Misc. Roadways	Survey Party Chief	4	80%	2008 - 2010	
Statewide Task Order Agreement for Survey & Mapping No. 2005CE511B \$1.5 million (Fee)	Taylor, Wiseman & Taylor	Field Surveys for 19 Assignments, Including GPS, Topographic, & Property Surveys	Survey Party Chief	24	60%	2006 – 2008	
JFK Boulevard Bridge over Mill Creek, Bride #C3.64 Reconstruction \$179,800 (Fee)	Taylor, Wiseman & Taylor	Field Survey of Stream Cross Sections, Bridge "as-built", Topgraphic, Property Surveys	Survey Party Chief	4	20%	2010 - 2011	
Atsion Lake Dam Rehabilitation, Route 206 \$1.2 million	Taylor, Wiseman & Taylor	Field Survey of Stream Cross Sections, Lake Depths & Dam Features	Survey Party Chief	12	20%	2006 - 2010	

### PROJECT KEY PERSONNEL LIST

		PERCENTAGE OF TIM	E ASSIGNED TO PROJECT
FIRM NAME	KEY PERSONNEL & TITLE	SURVEY SERVICES	HOURLY WAGE LEVEL 1-7
Taylor Wiseman & Taylor	Donald L. MacKay, PLS, Senior Project Manager	70%	5
Taylor Wiseman & Taylor	Samuel S. Previtera, PLS, Survey Manager / QA-QC	5%	6
Taylor Wiseman & Taylor	Ryan Rubano, CST, Survey Technician	80%	4
Taylor Wiseman & Taylor	George C. Leykum, PLS, Survey Crew Chief	40%	3
Taylor Wiseman & Taylor	George S. Gusrang, PLS, Survey Crew Chief	40%	3
Taylor Wiseman & Taylor	Glenn Ovalle, Survey Crew Chief	40%	3
	•		

INSERT THE WAGE LEVEL FROM 1 TO 7 OF EACH KEY PERSON. DO NOT INSERT ANY HOURLY RATE

Boundary Surveys for Land Acquisition, Various Parcels Woodbridge Township, Middlesex County, NJ

#### PROJECT APPROACH

Founded in 1901, TWT has developed the methods and procedures necessary to ensure the efficient preparation of the surveys and property descriptions needed to provide a through, accurate, and complete exposition of properties being surveyed for Green Acres acquisition and Farmland Preservation.

As per the State of New Jersey Department of Environmental Protection, Green Acres Program; Scope of Survey Services and Standard Detail Requirements dated July 1, 2013, we will send out the proper notifications of parties and surveyors' right-of-entry forms for the particular subject and adjoining properties we may need to enter and cross. We will also prepare the Division Fax Notification and the Police Department Notification, as required in the project scope.

For this particular Blue Acres acquisition program, our approach to the survey work will consist of a thorough review of all title reports and supportive deeds supplied by the DPMC and perform additional research in the Middlesex County Clerk's office for title on adjoining parcels. On our prior surveys performed in Woodbridge Township, we have also relied on some the information available from the on-line Woodbridge Township GIS mapping site.

The deed boundaries will be plotted in a mosaic to provide a working model of the subject property to be surveyed. The N.J. 2012 Orthophotos will be used as the geo-referenced background upon which the approximate coordinate values will be computed for probable field search corners for the subject property and adjoiners.

Once this phase is completed, several of our eight available field crews will be provided with plans and coordinates from which to execute the field survey data collection effort. While this is underway, data files are being processed on a daily basis, plotted, and analyzed. Subsequent field surveying is then fine-tuned to yield more accurate search coordinates, ultimately minimizing field time and cost. This process produces the best results for additional data capture and for subsequent boundary analysis.

All field crews are outfitted with state-of-the-art surveying equipment. Each of the crews has a Trimble S6 Series Robotic Total Station, Trimble R8 GNSS GPS Receiver, and Trimble TSC3 Data Collector. Crucial field data files and office files can be easily accessed by the party chief in the field and the technician in the office, on-the-fly, via our in-house FTP site.

Virtual Reference Stations (VRS) in New Jersey, that make up the KeyNet GPS system of which TWT is a participating member, will be used to set site area control points via GPS. Each of the individual surveys and groups of surveys will be controlled in this manner. These control points will be set in such a way as to be recoverable up to, and beyond, 36 months. Once the control is in place, the surveys will be performed using conventional, terrestrial methods such as total station, rod, and tape. After demolition, these control points will be again used to set the final property corners.





Boundary Surveys for Land Acquisition, Various Parcels Woodbridge Township, Middlesex County, NJ

While the surveys are being drafted in AutoCAD and the descriptions are being prepared, the Composite Map will be generated, and constantly updated with the property corner tabulation information.

All fieldwork, surveys plans, and descriptions will be prepared using the specifications and format identified in the State of New Jersey Department of Environmental Protection; Green Acres Program; Scope of Survey Services and Standard Detail Requirements dated July 1, 2013.





Boundary Surveys for Land Acquisition, Various Parcels Woodbridge Township, Middlesex County, NJ

#### SCHEDULE NARRATIVE

In order to complete the requested surveys in the 120 calendar-day requirement, all three processes (Title Review and Research, Field Work, and Drafting and Submittals) must commence at the same time. The supportive deeds supplied with the title reports will be immediately plotted and checked for mathematical closure in CAD. While this is being done, adjacent deeds and plans will be researched and the Right of Entry Notices prepared. Two survey CAD technicians will work together to accomplish these tasks.

We will have several field crews working on the parcels simultaneously in order to have the field work done quickly. <u>All crews</u> are equipped with Trimble GPS and robotic total station surveying units. Accurate base control will be quickly established with GPS for each survey, and then terrestrial surveying methods will be used to locate existing monumentation and required survey locations. Field data is downloaded each day and processed that afternoon or the next morning by the Project Manager. The checked and adjusted data points will then be given to the CAD Technician for his use in boundary resolution with the surveyor and plan preparation.

The Taylor Wiseman & Taylor Survey Department is used to aggressive project schedules on large sites. We possess the experience manpower to perform this work on time and on budget.



6383



Date: January 13, 2015

Project Name: Boundary Survey for Land Aquisition, Various Parcels, Project No. P1117-00

Project Location: Woodbridge Township, Middlesex County, New Jersey

Client: State of New Jersey, Dept of Treasury/ DPMC / NJDEP Green Acres Program Authorization to Proceed: March 1, 2015 (Anticipated)

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Notifications Distributed including specific property Right-of-Entry, DEP Fax, Police Dept										-								П	T	П	T	П	$\dagger$	T		T			
Review Title Reports, Deeds, Public Records															П					П		П							ľ
Individual Survey Plan Preparation			1 I I L	•											П											$\top$		$\prod$	Ì
Deed Mosiac & Composite Map												П			П				Ţ	П		П		$\top$		$\top$		П	ľ
ield Operations						20:3693288	П	1							П			T		П	T	П	T	+	$\prod$			$\prod$	ľ
Preliminary Field Recon, Establish VRS-GPS Control & Set Local Control			30.24W				П	1													T	П		1	П			П	ľ
Survey of Properties				<b>建料</b>	e dine				П					T	П													П	
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Project Complete								7	7		7 7		7 7	7 7	7	7	7 7	7	7   7	7	7 17		7	7 7		7   7	7 1		י

### Final / Accepted Fee Proposal

## PROFESSIONAL SERVICES FEE PROPOSAL DIVISION OF PROPERTY MANAGEMENT & CONSTRUCTION

THIS FEE PROPOSAL TO BE RETURNED IN A SEPARATELY SEALED ENVELOPE TO:

DATE: January 26, 2015 PROJECT NO.: P1117-00

Division of Property Management & Construction 33 WEST STATE ST 9TH FLOOR, PLAN ROOM

P.O. Box 034

Trenton, NJ 08625-0034

Attention: CATHERINE DOUGLASS

۳	Project #	P1117-00
H	Doc Index	200
2	Contract #	DQ-01
		113615

THIS PROPOSAL DUE DATE, NO LATER THAN 2:00 PM, TUESDAY, JANUARY 13, 2015

FIRM NAME: Taylor Wiseman & Taylor

THE UNDERSIGNED PROPOSES TO PROVIDE ALL PROFESSIONAL SERVICES AS STATED IN THE REQUEST FOR PROPOSAL AND SCOPE OF WORK

 CONSULTANT SURVEY SERVICES
 \$ 95,215.00

 SUB CONSULTANT SURVEY SERVICES
 \$ N/A

 TOTAL LUMP SUM FEE FOR SURVEY SERVICES
 \$ 95,215.00

 CORNER MARKER SETTING ALLOWANCE
 \$ 25,026.00
 129 Conc. Mon's \$125 ea.

 129 ReBars \$69 ea.

TOTAL CONTRACT AMOUNT \$ 120,241.00

FOR 60 DAYS AFTER THE DUE DATE.

Signature and Title of Principle or Individual of the firm authorized to sign contractual documents:

Signature of the consultant below attests that the Consultant has read, understands and agrees to all terms, conditions and specifications set forth in the Request for Proposal (RFP) and Consultant Proposal Package.

Signature: Julius My Lymin

Print Name: Richard W. McGuire, PE, PLS, PP

**Date:** January 26, 2015

Witness Signature:

Title: Vice President

Print Name: Diane Davis

ATTACH PROOF OF REQUIRED INSURANCE COVERAGE

See attached requirements per "General Conditions to Consultant Agreement" Section 27, pp. 18-19

PROFESSIONAL LIABILITY INSURANCE

(\$100,000 MIN LIMIT/\$25,000 MAX DED

**CONSULTANT TASK/LABOR/FEE SHEET** 

Project # P1117-00

A/E: Taylor Wiseman & Taylor

Project Name: Boundary Surveys for Land Acquisition, Various Parcels

Project Location: Woodbridge Township, Middlesex County, NJ

PROJECT			CONSUL	TANTS LEVEL	OF EFFORT IN	HOURS/FEE			REPROD. COST	TOTALS
PHASE OR	LEVEL	7	6	5	4	3	2	1	PER PHASE INCLUD.	PER TASK
TASK	'HOURLY RATE	\$175.00	\$160.00	\$145.00	\$90.00	\$88.00	\$50.00	\$50.00	SUB CONSULTANT DOCUMENTS	HOURS S AMOUNT
SURVEY SERVICES	HOURS	2	4	115	430	275	275	15		
	THUOMA	\$350.00	\$640,00	\$16,675,00	\$38,700.00	\$24,200.00	\$13,750.00	\$750.00	\$ 150,00	\$95,215.00
	HOURS									
	AMOUNT	\$	s	\$	\$	•	\$	s	\$	\$
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	AMOUNT	s	\$	3	5		\$	s	s	s
	HOURS					Ī				
TOTAL	AMOUNT	\$	\$	\$	s	;	\$	\$	\$	\$
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\$95,215.00 GRAND TOTALS