#### Scope of Work for SCOTT CEMETERY INVESTIGATIONS Town of Thoroughfare, Prince William County, Virginia

#### WSSI #21466.03 June 2021

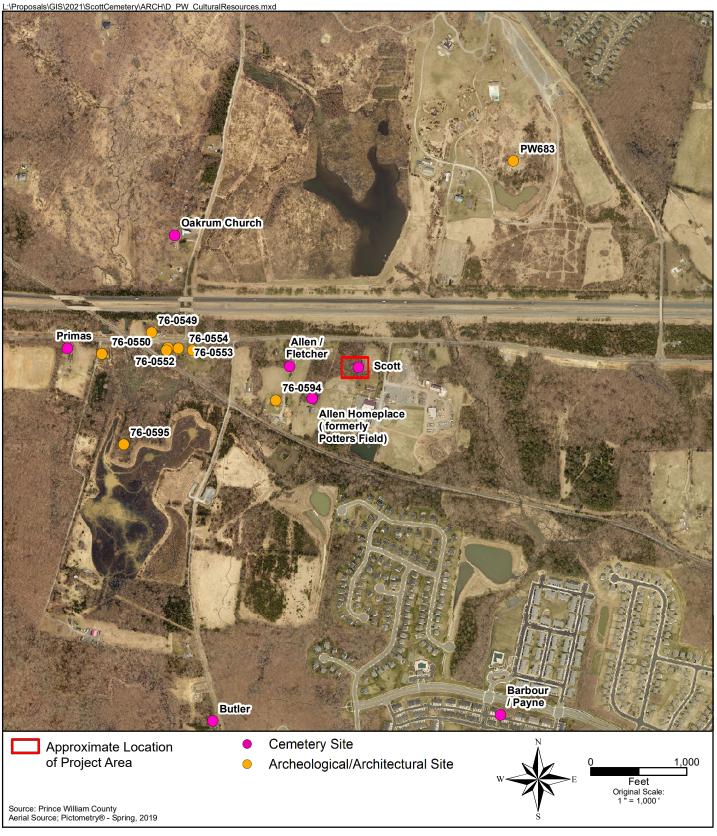
## INTRODUCTION

This transmittal presents a Scope of Work for conducting cemetery investigations at the reported site of the Scott Cemetery, which is located along John Marshall Highway (Route 55) in the unincorporated town of Thoroughfare, in Prince William County, Virginia (Figure 1). The work will involve a combination of non-invasive investigations using Ground Penetrating Radar (GPR) and Electromagnetic Conductivity (EM), and *if warranted*, hand/machine excavation to determine the limits of the unmarked burials within the cemetery. All cemetery work will adhere to all applicable local and state ordinances and regulations. A statement of qualifications for all key personnel is presented below and resumes are appended.

The Scott Cemetery, a family burial plot associated with the local African American, Native American, and other residents of Thoroughfare, was recorded by Ronald Turner of Prince William County in 1996 and in 2001. Mr. Turner described its location as "about 165 feet south of John Marshall Highway (Route 55) and roughly 100 yards east of 16111 John Marshall Highway" with the approximate coordinates: N38° 49.190 W077° 40.143. The cemetery was overgrown and neglected at the time of its recordation. Turner estimated that the cemetery contained between 75 and 100 burials, although no one he interviewed could recall any burials in the previous 30-40 years. Although some gravesites were reportedly marked with fieldstones, the cemetery also was thought to contain unmarked graves. The cemetery was recently cleared of all vegetation, the possible field stone markers, and possibly evidence of depressions or other indicators (Figure 2).

Prince William County is one of the few localities that had codified the treatment of historic cemeteries. If there is historical or physical evidence of a cemetery on land to be developed in Prince William County, the county requires that the applicant conduct an archeological cemetery delineation to verify its presence and to define its boundaries. The objective of the delineation is to survey locate the limits of the cemeteries by determining the absence/presence of any additional grave shafts features that do not have visible indicators. The archeologically defined limits of the burials are then used to establish a 25-foot perimeter buffer around the cemetery on the site plan or subdivision plat and plan under submission. The ordinance also establishes right of access to the cemetery, construction grading requirements, vegetative requirements, and maintenance requirements.





### Figure 1: Cultural Resources Map, Prince William County, VA Showing Approximate Recorded Location of Scott Cemetery



Figure 2: Current Conditions (May 2021)

## NON- INVASIVE INVESTIGATIONS

**Please note**: No ground disturbance or disturbance of *in-situ* human remains is intended or expected for the non-invasive Ground Penetrating Radar (GPR) and Electromagnetic Conductivity (EM) survey.

## **Public Outreach**

Several community meetings have previously been held with the descendent community, Prince William County staff, the landowner, and other interested parties about the historic cemeteries in the Town of Thoroughfare. Given the immense public interest in this project an additional public meeting should be conducted to present the results of the GPR and EM investigations, answer questions and receive public feedback or comments.

## Ground Penetrating Radar (GPR)

Under the supervision and direction of a Wetland Studies and Solutions, Inc. (WSSI) archeologist, GeoModel Inc. will conduct a Ground Penetrating Radar Survey (GPR) survey to identify grave features and/or disturbance at the reported location of the Scott Cemetery and its vicinity (not to exceed one-acre in size). A GeoModel licensed Professional Geologist with over 20 years of experience will be conducting the grave detection survey.

The GPR survey will be conducted using a hand-towed GSSI radar digital computer control unit and a 400-megahertz (MHz) transducer. The depth of investigation of the 400-MHz



transducer is about nine feet in sand and less in clay soils. GPR transects will be made in parallel directions perpendicular to the grave orientation at appropriate interval spacing across the survey area. Any possible graves located will be marked on the ground with spray paint or pin flags, as appropriate.

## **Electromagnetic Conductivity Survey**

The Electromagnetic Conductivity (EM) survey will be conducted with a Geonics EM61-MK2, a high sensitivity, high resolution, time-domain electromagnetic conductivity meter and metal detector that is used to detect high soil conductivity areas and metallic objects (Figure 3). The EM61-MK2 consists of a powerful transmitter that generates a pulsed primary magnetic field, which induces eddy currents into nearby metal objects. The decay of these currents is measured by two receiver coils mounted on the coil assembly. The responses are recorded and displayed by an integrated computer based digital data logger. The data logger will be subsequently downloaded to the main computer back in the GeoModel, Inc. main office and a computer contour map will be generated from the data (Figure 4).

As with the GPR survey, the EM transects will be made in parallel directions perpendicular to the grave orientation at appropriate interval spacing across the survey area. Any possible graves located will be marked on the ground with spray paint or pin flags, as appropriate.

#### **Survey Location of Anomalies**

Any anomalies suspected to be grave features found during the GPR and EM investigations will be survey located using Differential GPS or conventional field survey methods, depending on specific field conditions. A survey drawing locating said features will be produced and included in the final report. The survey data will be provided digitally.

#### **Results of the Fieldwork**

The results of the cemetery investigation will be described in a manner that follows the DHR guidelines outlined in their Guidelines for Conducting Historic Resources Survey in Virginia (DHR 2017). The report will include: Title Page, Table of Contents, Introduction/Description of the Project Undertaking, Historic Context/Background of the Scott Cemetery and the Town of Thoroughfare, Research Design and Objectives, Results of Fieldwork (illustrated with a map showing the survey-located locations of any GPR/EM anomalies, maps and aerial photography exhibits illustrating the location of the cemetery in reference to the landscape, plan and profile drawings, and photographs), Summary and Recommendations, References Cited, and Qualifications. WSSI will also complete the DHR Virginia Cultural Resource Information System (VCRIS) forms to record the cemetery as a historic resource with the state. The report will be subject to review by the Prince William County.





Figure 3: Geonics EM61-MK2 Image courtesy of GeoModel Inc.

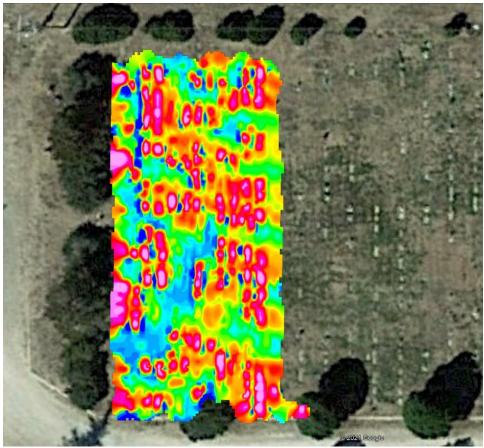


Figure 4: Example of Electromagnetic Conductivity Map of Cemetery Hobbs, New Mexico Image courtesy of GeoModel Inc.



## STATEMENT OF QUALIFICATIONS

### **Boyd Sipe - Project Manager**

Mr. Sipe manages the Archeology department of Wetland Studies and Solutions, Inc. (WSSI) and oversees all archeology and architectural history work, all field crews conducting Phase I, II, III, and cemetery investigations and the associated archival and historic documentary research, report production, and coordination with regulatory agencies. He ensures WSSI's effective project completion and coordination with regulatory agencies, including State Historic Preservation Officers, so that development plans can be reconciled with existing cultural resources, from prehistoric rock shelters to quarters for enslaved laborers and significant cultural landscapes.

Mr. Sipe has managed a number of high-profile investigations for WSSI clients, including sensitive cemetery delineations, the discovery of three ships along Alexandria's colonial waterfront, and redevelopment of historic public housing with higher density affordable housing.

#### Matt Turner – Geologist/Geophysicist

Mr. Turner is a professional geologist and geophysicist and has managed a diverse range of geophysical projects worldwide. Mr. Turner has over twenty years of professional geological, geophysical, and archeological experience with commercial and governmental clients, and is an expert in ground penetrating radar, geophysical, and archeology surveys. Mr. Turner has conducted numerous ground penetrating radar (GPR), electromagnetic conductivity (EM) and geophysical surveys in the United States (including Hawaii and Alaska) Japan, Africa, the Middle East, Jamaica and Mexico.

Mr. Turner's 2020 cemetery work involved a GPR survey at the Historic Pioneer Cemetery located in South Lake Tahoe, California, where he confirmed and located 105 burials. Mr. Turner also conducted a GPR survey at the Stanton Family Cemetery in Buckingham County, Virginia, where he confirmed 36 known burials and located an additional 13 unmarked graves within the approximately 65 by 68-foot cemetery.

#### John P. Mullen - Principal Investigator for Archeology

Mr. Mullen currently serves as Principal Archeologist and Assistant Manager for the Archeology department of Wetland Studies and Solutions, Inc. and has over 30 years of experience in conducting archeological research projects within Virginia and the Middle Atlantic region. He has spent most of his career working on some of the largest and most complicated urban archeological sites in the City of Richmond, such the Richmond Floodwall and Tredegar Iron Works, and in the City of Alexandria, where over the last 25 years he has directed such projects as: Old Town Village, the Orange & Alexandria Railroad yard, which became the operational headquarters of the U.S. Military Railroads



during the Civil War; the Hotel Indigo site, which contained the remains of the 1755 Carlyle warehouse and the remnants of an 18th-century sailing ship; and at Robinson Landing, which contained the well-preserved remains of an entire late 18th to early 19th century city block and the remnants of three additional sailing vessels. His current responsibilities include management of department staff, overseeing projects at all stages, and interaction with clients and regulatory agencies. Mr. Mullen currently serves on the Virginia Department of Historic Resources (DHR) State Review Board (SRB).

#### **Daniel Baicy – Field Director**

Mr. Daniel Baicy has over 18 years of professional experience in archeological research and fieldwork in the Middle Atlantic, Southeast, Deep South, and Midwest regions of the U.S. with a specialization in cultural resource management. He has participated in archeological research and excavation on diverse prehistoric and historic period archeological sites, including lithic quarries and reduction stations, Archaic camps, Woodland Period villages, Civil War battlefields and campsites, historic cemeteries, late 18th through 20th century domestic sites, four 18th century ships, an intact 18th century warehouse, and an entire block of early 19th century homes and businesses in the city of Alexandria, Virginia. He is proficient in field and laboratory techniques, technical report writing, GPS Trimble use and applications, and AutoCAD mapping.

Mr. Baicy's current responsibilities as a Senior Associate Archeologist include client and agency interaction, the supervision of archeological field crews conducting Phase I, II, and III investigations, consultation and preparation of budgets, and the preparation of proposals and technical reports. He was most recently certified as a HAZWOPER Hazardous Materials Technician, VDOT Traffic Safety and Flagger, and CSX and Norfolk Southern Railroad Safety. Mr Baicy was part of a team that was awarded the 2016 Walter Brennan Award for Professional Archaeology by the City of Alexandria, Virginia for the Hotel Indigo site.



## IF WARRENTED: ARCHEOLOGICAL INVESTIGATIONS

## Verification of Grave Features

The soil anomalies identified as possible grave features during the GPR and the EM surveys should be verified or "ground-truthed" through archeological excavation to confirm if they represent grave shafts. This is necessary due to the possibly of false positives and false negatives generated during the remote sensing surveys. This proposed work is described below.

#### **Public Outreach**

At a minimum, public meetings should be conducted prior to the next step involving ground disturbing archeological work to review results of the GPR and EM investigations, and again, to present the results of the archeological investigations and receive public comments.

### **Test Unit Excavation**

The archeological work will involve a combination of hand and machine excavation. Prior to any mechanical trenches or stripping, WSSI archeologists will hand excavate four (4) three-foot square (3 by 3 foot) test units, or the equivalent thereof in smaller test units, to examine and record the soil stratigraphy at the site. The soils should consist of approximately 9 to 12 inches of plowed topsoil overlying subsoil; however, the extent of soil disturbance within the cemetery location is unknown.

No grave shafts or in situ burials will be excavated if encountered and identified.

## **Cemetery Boundary Delineation**

The next stage of the fieldwork will consist of the mechanical excavation of a series of backhoe trenches, or large blocks areas to determine if graves are present and if so, to determine the cemetery dimensions. The location and positioning of the trenches or blocks is dependent on the data provided from the GPR/EM surveys and will be subject to change based on these results. Ideally, the trenches will be excavated around the perimeter of the known, visible limits of a cemetery; in this instance, the trenches will expose the outermost identified soil anomalies, to verify if they represent grave shafts/interments, and additional trenches or block excavation will be placed adjacent to the first trenches.

The mechanical removal of the topsoil will be conducted using a backhoe equipped with a smooth-bladed bucket. Trenches will measure 4 feet wide (the width of the bucket) and will be excavated down to sterile subsoil, which is estimated to be between 9 and 12 inches deep. The top of the subsoil exposed in each trench will be hand-scraped using a flat shovel and/or trowel in order to determine the absence or presence of any additional grave shafts



features and to delineate any grave stains which may be present. This work will involve only the delineation of the grave shafts which clearly show up as stains below the topsoil and which are identified as graves based on their shape and orientation. Any identified burials, or other historic or cemetery-related features, will be documented with photographs and drawings. No attempt will be made to excavate within the grave shafts or to get to burial levels.

#### **Survey Location of Grave Features**

If any grave shafts or other possible historic cemetery-related features are identified during the cemetery investigation, they will be survey located using Differential GPS or conventional field survey methods, depending on specific field conditions. A survey drawing locating said features will be produced and included in the final report. The survey data will be provided digitally.

## **Unanticipated Discoveries**

No disturbance of *in-situ* human remains is intended or expected for this project. However, if said remains are found within disturbed contexts, Thunderbird Archeology will confirm that said remains are human in consultation with Dr. Dana Kollmann, a skeletal biologist at Towson University. Any bone fragments recovered from disturbed soil contexts will be examined by Dr. Kollmann in person at the WSSI Archeology Laboratory in Gainesville, VA or will be transported to the Archaeology and Forensic Science Laboratory on the campus of Towson University in Maryland. Dr. Kollmann will inventory and examine all identified human skeletal remains using standardized techniques of bioarcheological and forensic anthropological analysis. If the presence of human remains is confirmed, Thunderbird Archeology will first notify the Landowne and Prince William County authorities of the discoveries.

The location of any artifacts, including coffin hardware, nails, ceramics or grave goods will be plotted on a field map of the excavations. All recovered artifacts will be dry-brushed, photographed, and inventoried, using a Structured Query Language (SQL) Server database in order to record all aspects of an artifact description.

Any displaced remains, coffin hardware or other funerary items and artifacts will be temporarily housed at the WSSI Archeology Laboratory. The preferred disposition of all recovered materials is reburial within the site but will follow all state and local ordinances and regulations. The details regarding the reinterment of displaced human remains and funerary items can be worked out during the public engagement process.

All storage facilities will be climate controlled and located within a locked and secured locations.



#### **Results of the Fieldwork**

Upon completion of the archeological fieldwork, the results of the investigation will be incorporated into the previous report describing the results of the GPR/EM survey. This report will also follow DHR guidelines as outlined in their *Guidelines for Conducting Historic Resources Survey in Virginia* (DHR 2017). The report will include: Title Page, Table of Contents, Introduction/Description of the Project Undertaking, Historic Context/Background of the Scott Cemetery and the Town of Thoroughfare, Research Design and Objectives, Results of Fieldwork (a map showing the survey-located locations of any grave shafts or other historic or cemetery-related features exposed, historical and modern maps and aerial photography exhibits illustrating the location of the cemetery in reference to the landscape, plan and profile drawings, and photographs), Summary and Recommendations, References Cited, and Qualifications. Along with our findings included in the report, WSSI will update the cemetery DHR VCRIS form. The report will be subject to review by the Prince William County.

### REFERENCES

Department of Historic Resources (DHR)

2017 *Guidelines for Conducting Historic Resources Survey in Virginia*. Virginia State Department of Historic Resources, Richmond, Virginia. <u>https://www.dhr.virginia.gov/pdf\_files/SurveyManual\_2017.pdf</u>.

 $L: \label{eq:linear} L: \label{linear} L: \lab$ 



## Boyd Sipe, M.A., RPA

#### Manager-Archeology



**Firm Association** Wetland Studies and Solutions, Inc. (WSSI)

Direct Phone Line (703) 679-5623

Project Assignment Project Manager

#### Years of Experience

With this firm: 16.75 With other firms: 5

#### Education

M.A./Archaeology and Heritage/The University of Leicester

## Registrations & Certifications

2021/Register of Professional Archaeologists

HAZWOPER Hazardous Materials Technician Training

2021/HAZWOPER 8-Hour Review

#### Associations

Society for Historical Archaeology

Middle Atlantic Archaeological Conference

## Arlington National Cemetery Stream Restoration Millennium Project Arlington, Virginia

Mr. Sipe served as Project Manager for the cultural landscape documentation related to the expansion of Arlington National Cemetery (known as the Millennium Project) and the future restoration of 1,700 lf of badly degraded stream channel that flows through the site. As part of the environmental and preservation compliance process, pursuant to compliance with Section 106 of the National Historic Preservation Act of 1966 and regulations in 36 CFR Part 800, documentation of the cultural landscape of the Millennium Site has been included in a Memorandum of Agreement (MOA) between ANC, the National Park Service (NPS), and the Virginia State Historic Preservation Officer to mitigate adverse effects.

#### James Bland Development Property, City of Alexandria, VA.

Mr. Sipe conducted archival research and authored the documentary study for this five city block project and conducted oral history interviews from several long-time residents of the area. Based on his research, a Phase I archeological survey was recommended and a research design was developed. Mr. Sipe supervised the Phase I archeological work which resulted in the identification of two archeological sites that warranted further investigation.

#### Architectural Reconnaissance Survey & Preliminary Information Form (PIF) Preparation - Highland Springs, Henrico County, Virginia

Serving as the Project Manager on a survey of 240 representative historic properties. The survey area contains homes, churches, civic buildings, and 40-to-50 commercial properties in this early streetcar suburb of Richmond. Historic maps geo-referenced by GIS staff assisted in identifying which properties to survey. Oversaw all survey efforts and preparation of a Preliminary Information Form (PIF) to evaluate the proposed Highland Springs Historic District potential for listing on the National Register of Historic Places.

#### Contrabands and Freedmen's Cemetery Memorial, City of Alexandria, VA.

Under the supervision of Alexandria Archaeology, investigations were conducted between May and December of 2007 at the Contrabands and Freedman's Cemetery (44AX179). Thunderbird Archeology was also contracted to assist with public interpretation for the memorial. Mr. Sipe assembled a team to design the City's official website and historical brochure for the site. He authored all text for the web site and assisted in the brochure design and layout. Finally, Mr. Sipe managed additional excavations and supervised archeological monitoring during construction of the Memorial.

#### Lyndam Hill II Property (44FX0223), Fairfax County, VA.

Mr. Sipe served as Principal Investigator during the Phase II site evaluation and Phase III data recovery of site 44FX0223, a circa 1720 to 1769 outlying farm quarter site in Fairfax County, Virginia, and served as primary author for the Phase II and co-author for the Phase III reports describing the results of the investigations. Intact historic features and artifact deposits indicated the discrete locations of an overseer's house and a dwelling for enslaved laborers, a unique and rarely identified site type in Virginia. Major research issues in the archeology of regional slavery including the lifeways and material culture of the enslaved and overseers, ethnicity, agency, and plantation provisioning were re-considered in view of findings at the site.



#### **PROFESSIONAL PROFILE: MATTHEW S. TURNER, P.G.**

### **ADDRESS AND TELEPHONE:**

GeoModel, Inc. PO Box 1320 Leesburg, VA 20177 (703) 777 9788 Phone (703) 777 3814 Fax

#### SUMMARY OF PROFESSIONAL EXPERIENCE:

Mr. Turner is a professional geologist and geophysicist and has managed a diverse range of geophysical projects worldwide. Mr. Turner has over twenty years of professional geological, geophysical, and archeological experience with commercial and governmental clients, and is an expert in ground penetrating radar, geophysical, and archeology surveys. Mr. Turner has conducted numerous ground penetrating radar (GPR), electromagnetic conductivity (EM) and geophysical surveys in the United States, Hawaii, Alaska, Japan, Africa, the Middle East, Jamaica and Mexico.

#### **PROFESSIONAL HISTORY:**

1991 - Present	<b>GeoModel, Inc.</b> Senior Scientist and Project Manager for a geophysical consulting and geological firm. Mr. Turner has conducted numerous ground penetrating radar (GPR) and other geophysical and archeological surveys worldwide.
1987 - 1991	<b>Earth Resources Corporation</b> Senior Project Manager for a company specializing in earth management services. Supervised and conducted numerous geophysical surveys including EM and GPR surveys.
1983 - 1987	<b>Technos, Inc.</b> Project Manager for a geophysical consulting firm. Conducted numerous EM and GPR geophysical investigations.
1980 - 1983	<b>Fort Hays State University</b> Teaching assistant for mineralogy, petrology, and field methods at a major Kansas university geology department.
1977 - 1980	Western Technologies, Inc. Engineering Geologist for a geotechnical consulting firm in the Las Vegas, Nevada area.

#### **Resume of Matthew Turner**

#### **PROFESSIONAL HISTORY (Continued):**

1975 - 1976	<b>Holosonics, Inc.</b> Geophysicist operating downhole geophysical logging equipment along the Alaska Pipeline.
1973 - 1975	<b>Fugro, Inc.</b> Geologist - conducted numerous geologic investigations. Conducted geologic mapping of numerous sites.

#### **CREDENTIALS:**

Master of Science (M.S.), Fort Hays State University, Kansas, 1983, Major in Geology. Bachelor of Science (B.S.), Northern Arizona University, 1973, Major in Geology, Minor in Antrhopology.

40-Hour Hazardous Waste Site Workers Training Course for Hazardous Waste Operations and Emergency Response, as required by OSHA 1910.120.

#### **PROFESSIONAL AFFILIATIONS:**

Certified Professional Geologist, Virginia, No. 343 Registered Professional Geologist, Georgia, No. 1198 Registered Professional Geologist, Florida, No. 517 Certified Professional Geologist, Alaska, No. 81

#### **KEY PROJECTS:**

Ground Penetrating Radar (GPR) survey, Brownstown, Pennsylvania. Conducted field survey for an archeological study to locate foundations and historic remnants on the 0.5 acre Hellburg Archeological site in Brownstown, PA. Numerous foundations, possible buried structures, buried debris, and a mill race were located and mapped.

Ground Penetrating Radar (GPR) survey, Leesburg, Virginia. GPR data processing and interpretation for an archeological study at the North Springs Behavioral Hospital, to locate possible old walls, structures, foundations, and gravesites.

Ground Penetrating Radar (GPR) survey, Palmetto, Florida. Analyzed GPR data for an archeological study to locate old walls and foundations at the historic Gamble Sugar Cane Mill just off State Highway 683 (near 1903 Ellenton-Gillette Road) in Palmetto, Florida.

Ground Penetrating Radar Survey, Menorah Gardens, Florida. Conducted 3-D modeling of ground penetrating radar data to locate and map hundreds of gravesites at cemeteries in Palm Beach Gardens and Fort Lauderdale.

#### **Resume of Matthew Turner**

#### **KEY PROJECTS - CONTINUED:**

Port Royal, Jamaica. Conducted ground penetrating radar survey for archeological survey in Jamaica. Coordinated with the Jamaica National Trust during project. Participated in News Conference to discuss results.

Warri, Nigeria, Africa. Conducted geophysical and ground penetrating radar (GPR) surveys for Mosunmolu Ltd. at the Shell Petroleum Development Company of Nigeria Limited, Warri to locate contaminated soil. Presented findings to Royal Dutch Shell personnel at project meeting.

Abu Dhabi, United Arab Emirates (U.A.E.). Conducted a groundwater study for Nasa International Group at the Abu Dhabi Golf Course, including a ground penetrating radar survey to map groundwater under site.

#### **PROFESSIONAL REPORTS AND PUBLICATIONS:**

"Ground Penetrating Radar and Visualization" <u>GeoInformatics</u> <u>Magazine</u>, August/ September 2004 (online) Issue.

"Ground Radar" <u>RF Innovations Magazine</u>, Issue 15, May/June 2002.

"The Importance of a Complete Understanding of the Geology at Contaminated Sites," <u>The Professional Geologist</u>, Volume 32, Number 10, September 1995.

"A Systematic Approach for Assessing Groundwater Contamination Sites," presented at the 17th Environmental Symposium, American Defense Preparedness Association, Atlanta, Georgia, April 1990.

"Assessing Contamination at and Treatment for a Low-pH Leachate Plume," <u>Hazardous</u> <u>Materials Control</u>, May-June 1989.

"Contaminant Assessment and Remedial Action for a Low pH Leachate Plume in a Surficial Aquifer," Second National Outdoor Conference and Exposition, NWWA, Las Vegas, Nevada, May 1988.

"Characterization of Groundwater Contamination by Direct Sampling Through Hollow Stem Augers," Second National Outdoor Conference and Exposition, NWWA, Las Vegas, Nevada, May 1988.

"The Use of Surface and Downhole Geophysical Techniques to Characterize Groundwater Flow in a Fractured Bedrock Aquifer System," Second National Outdoor Conference and Exposition, NWWA, Las Vegas, Nevada, May 1988.

"Auditing Existing Monitor Wells," FOCUS Conference on Southeastern Groundwater Issues, Tampa, Florida, October 1986.

#### **Resume of Matthew Turner**

### **PROFESSIONAL REPORTS AND PUBLICATIONS - CONTINUED:**

"In-Situ, Time-Series Measurements for Long-Term Groundwater Monitoring," ASTM Symposium on Field Methods for Groundwater Contamination Studies and Their Standardization, Cocoa Beach, Florida, February 1986.

"Correlation Between Field Geophysical Measurements and Laboratory Water Sample Analysis," Fifth National Symposium and Exposition on Aquifer Restoration and Groundwater Monitoring, Columbus, Ohio, May 1985.

"Quantitative Geomorphology of the North Fork Big Creek Drainage Basin," Ellis County, Kansas, 115th Annual Meeting, Kansas Academy of Science, Atchison, Kansas, March 1983 (Masters' Thesis).

#### NEWS MEDIA

<u>Fox News- 2005 TV Interview</u>, Mr. Turner was interviewed by Greta Van Susteren of FOX NEWS on July 28, 2005 concerning Ground Penetrating Radar and its use in Aruba.

<u>Court TV- 2005 TV Interview</u>, Mr. Turner was interviewed by Catherine Crier of Court TV on July 28, 2005 concerning Ground Penetrating Radar in Aruba.

<u>WTKR- 2005 TV Interview</u>, Mr. Turner was interviewed by WTKR on February 12, 2005 in Chesapeake, Virginia concerning the use of GPR to locate a landfill under some homes.

<u>Newspaper Article-</u> August 27, 2004 article in the Georgetown Times, Georgetown, South Carolina. Article discusses Mr. Turner's August 25<sup>th</sup> 2004 court appearance as an expert witness on Ground Penetrating Radar in the lawsuit of Pate vs. Belle W. Baruch Foundation.

<u>2004 TV Interview</u>, "Search for Lost Drainage Well" in Polk County, Florida. Mr. Turner was interviewed by Bay News Channel 9 -TV on May 24, 2004 to discuss locating a lost drainage well using geophysical methods.

<u>2004 TV Interview</u>, Mr. Turner was interviewed by WFTV Channel 9, Orlando on March 26, 2004, concerning location of gravesite using GPR on Ormond Beach, Florida.

<u>Newspaper Article-</u> December 4, 2002 article in Loudoun Times-Mirror, Leesburg, Virginia. Matthew Turner discusses Ground Penetrating Radar and the interview with CNN.

<u>CNN- 2002 TV Interview</u> with David Ensor of CNN. Mr. Turner discussed Ground Penetrating Radar and it use in Iraq to locate WMD's. TV Interview was aired on November 11, 2002 on CNN's "Wolf Blitzer Reports" program.

<u>1999 News Conference</u>, Jamaica, Mr. Turner participated in a news conference in Port Royal Jamaica discussing the results of a Ground Penetrating Radar survey to locate the ruins of Old Port Royal City, Jamaica. News conference reported in January 22, 1999 issue of Weekend Observer Newspaper.

#### EXPERT WITNESS AND COURT TESTIMONY

<u>Pate vs. Belle W. Baruch Foundation-</u> Mr. Turner was called to testify in court as a ground penetrating radar (GPR) expert witness in a case involving a buried inlet in South Carolina. Mr. Turner also gave a deposition for the ground penetrating radar work conducted by GeoModel, Inc. at the inlet site.

<u>Conrail vs. American Premier Underwriters-</u> Mr. Turner signed an affidavit for ground penetrating radar work conducted by GeoModel, Inc. for Blank, Rome, Cominsky, McCauley LLP, Attorneys at Law. GPR work was used to delineate areas of buried debris at a rail yard in Hollidaysburg, PA.

<u>Menorah Gardens Cemetery, Florida-</u> Mr. Turner obtained ground penetrating radar information on gravesites for Hunton & Williams Attorneys at law for a court case involving SCI Corporation and the Menorah Gardens Cemetery in Florida.

<u>Cemetery Dispute, Maryland-</u> Conducted ground penetrating radar survey to assist Ayres, Jenkins, Gordy & Almand, P.A. in a court case involving a former cemetery in Maryland.

## John P. Mullen, MA, RPA

Principal Archeologist/Assistant Manager

Firm Association Wetland Studies and Solutions, Inc. (WSSI)

Project Assignment Principal Archeologist

**Years of Experience** With this firm: 16.75 With other firms: 15

#### Education

MA/Anthropology/The Catholic University of America

BA/Anthropology/University of Massachusetts, Amherst

# Registrations & Certifications

2021/Registered Professional Archeologist/16262

2021/8-Hour HAZWOPER Hazardous Materials Technician Review

2009/HAZWOPER 40-hour Hazardous Materials Technician /OSHA/2009060514

#### Awards:

2016 Brenman Award for Outstanding Professional Archaeologist (City of Alexandria)

#### **Associations:**

Council of Virginia Archaeologists

Society for American Archaeology

#### Mr. Mullen's relevant experience includes:

## Archeological Cemetery Services – Prince William County 12th High School Site - Prince William County, Virginia

Mr. Mullen served as Principal Investigator for this project, which included archeological cemetery delineation, archival research, preparation and processing an application with the DHR, the archeological removal of human remains from the cemetery under said permit, analysis and data recovery reporting, and coordination with agency staff, media, and descendant families, and arrangement for reinterment of remains at another location on the site. A total of eleven burials were recovered from the site. Based on the archeological evidence, the burials located within the cemetery date to the period post-1850 to post-1880. Archival records do not clearly mention the cemetery, its occupants, or its exact location, and the individuals at site 44PW1947 may never be positively identified. However, based on the available evidence, at least some of the individuals were possibly associated with the family of William and Cordelia Lynn, who owned the land containing the cemetery during this time period.

#### Cemetery Delineation of Site 44PW1234 at the Bristoe Station Battlefield Heritage Park - Prince William County, Virginia

Mr. Mullen served as Principal Investigator for an archeological investigation of a suspected Civil War-era cemetery (Site 44PW1234). Pedestrian inspection, probing, hand trenching and shovel test pit excavation in the original study area and the additional testing corridor found no conclusive evidence of human burials. Very few soil anomalies were identified within the study area and the few that were identified were irregularly shaped and spaced. Based on their shape and orientation, the anomalies encountered during the investigation were interpreted as evidence of earlier tree falls or rodent disturbances. The work was conducted for the Historic Preservation Division of the Prince William County Department of Public Works, under a Certified Local Government grant. The Bristoe Station Battlefield Heritage Park is under an historic preservation and open-space easement recorded October 20, 2009 in the Circuit Court of Prince William County and the easement is held by the Virginia Board of Historic Resources (DHR). All archeological work performed within the boundaries of this property was subject to the terms of the easement. Permission to conduct the archeological work was granted by DHR.

**Robinson Landing (Robinson South Terminal) – City of Alexandria, Virginia** Mr. Mullen served as Principal Investigator for the Documentary Study and Archeological Investigations of this city waterfront block, Site 44AX0235. Excavations revealed late 18th to early 19th century residential and commercial buildings foundations, numerous privies with well preserved "night soil", a flagstone and cobblestone portion of the ca. 1780 alley known as the Strand, a brick sidewalk with stone curbs, the foundations and intact wood floorboards of the ca. 1783 Hooe's Warehouse and the foundations from the ca. 1851 Pioneer Mill, which was the largest building in Alexandria at that time and a well-known landmark. Additionally, evidence of 18th and 19th century wharves and other structures by which land was created within the original course of the Potomac were extant beneath the foundations. The remains of three vessels were integrated into the network of bulkhead and crib wharves; the ships appear to date to late 18th century.

Wetland DAVEY & company

## Daniel Baicy, M.A., RPA

#### Senior Associate Archeologist



**Firm Association** Wetland Studies and Solutions, Inc. (WSSI)

Direct Phone Line: (703) 679-5693

Project Assignment Principal Investigator

**Years of Experience** With this firm: 6.75 With other firms: 11

Education: 2003/M.A. in Anthropology, East Carolina University

# Registrations & Certifications

2021/Register of Professional Archaeologists

HAZWOPER Hazardous Materials Technician Training

2021/HAZWOPER 8-Hour Hazardous Materials Technician Review

#### Mr. Baicy's relevant experience includes:

#### Hotel Indigo (220 South Union) – City of Alexandria, Virginia

A *Documentary Study* (research and report) and an *Archaeological Evaluation* were required prior to the construction of this boutique five-story hotel located at the foot of Duke Street along the historic waterfront of Old Town Alexandria. Under the direction of Mr. Baicy, the archeological work resulted in the discovery of the oldest structural remains found to date in Alexandria: the 1755 public warehouse on Point Lumley. Four privies dating to the late 18th to early 19th century, a brick-lined well and late 19th and 20th century factory and warehouse foundations were also evaluated and documented. The remnant of a colonial-era ship was found deeply buried in one corner of the site; the ship had been used as the framework to create new land along the Potomac waterfront. Mr. Baicy worked closely with the site developer, the City Archaeologist, maritime archeologists from the United States Navy, and the Maryland Archaeological Conservation Lab to prepare the ship and warehouse timbers for specialized analysis and conservation, and to complete the field investigations. Finally, Mr. Baicy was the primary author of the report presenting the results of the fieldwork.

#### Compass Creek Cemetery Investigations – Loudoun County, Virginia

Mr. Baicy served as archeology field director during Phase III mitigation and removal of six human interments at the historic Cool Springs Farm family cemetery. Based on the analysis of grave goods and coffin hardware, all human burials located within the cemetery postdate 1790. No definitive end date could be established; however, the assemblage suggested that the interments date prior to 1830.

# 4009 Enterprise Road Cemetery (18PR1096) Delineation – Prince Georges County, Maryland

Mr. Baicy served as field director and principal author for this project. The archeological cemetery delineation was conducted around the Enterprise Road Cemetery (18PR1096), which is situated within an  $\pm 0.19$  acre outparcel located adjacent to the north side of Route 50, approximately 830 feet southeast from the intersection with Enterprise Road (Route 556) within the 4009 Enterprise Road property, in Prince Georges County, Maryland. No graves were located outside the limits of the outparcel; therefore, the limits of the cemetery do not extend significantly outside its marked outparcel limits. The project was conducted for Greenlife Property Group, LLC.

# Alternative 13<sup>th</sup> High School, Phase II, Site 44PW1599 – Prince William County, Virginia

Mr. Baicy served as field director for a Phase II evaluation of Site 44PW1599, a multicomponent site. The project involved site relocation, close-interval shovel testing, and several 1 x1 m test units. The site contained the potential for subsurface features related to an early 19<sup>th</sup> century occupation and was recommended for Phase III mitigation. The project was conducted for Prince William County Schools.

Wetland a DAVEY . company