

**BROKEN ARROW MUNICIPAL AUTHORITY
PROFESSIONAL SERVICES AGREEMENT
GIS SUPPORT SERVICES
PROJECT NUMBER: 2252170**

1. Professional Service Provider:

- a. Name: GEOGRAPHIC TECHNOLOGIES GROUP (GTG)
- b. Telephone No.: 919-222-1421
- c. Address: PO BOX 10135 GOLDSBORO, NC 27532

2. Project Title and Location: GIS Support Services

3. Contract for: Providing Professional GIS Consulting Services associated with public works projects for the Broken Arrow Municipal Authority. Professional services to include providing Geographic Information Systems Support Services and related support. The Professional Service Provider shall perform all duties, responsibilities and requirements set out in Attachment A hereto. The Professional Service Provider agrees that this professional service shall be treated as an important service to the BAMA and also agrees to commit the time necessary to perform the professional services in a professional manner.

4. Compensation: Professional Service Provider shall be compensated at the hourly rate in accordance with attached hourly rate schedule and the total compensation under this contract is Not to Exceed Fifty-One Thousand Six Hundred Fifty and No/100 (\$51,650.00) for the entire Scope of the Professional Services rendered. The parties agree that the Professional Service Provider's position is not a traditional BAMA employee position; therefore, the foregoing constitutes all the benefits and other forms of compensation due the Professional Service Provider, acting in the role of an independent contractor, and therefore ineligible for all other benefits paid to regular full-time BAMA employees. The Professional Service Provider shall be responsible for his own vehicle expenses and any other indirect costs incurred in fulfilling the stated contract requirements. The Professional Service Provider agrees to abide by and comply with all of the BAMA's Administrative Policies.

5. Invoicing and Payment: The Professional Service Provider shall submit invoices requesting payment for services rendered to the BAMA monthly in accordance with actual progress of the work on each work item. The invoices shall be in a format satisfactory to the BAMA. Payment will be made within 30 days following the first eligible BAMA meeting occurring after the date on the invoice.

6. Time for Performance: These duties, responsibilities and requirements shall begin upon the execution of this Contract and shall be completed within three hundred (300) calendar days after the date the Notice to Proceed is issued. The BAMA will issue a Notice to Proceed for each item of work identified under this agreement, following mutual agreement between the Professional Service Provider and the BAMA on the hours required for the work item.

7. Insurance: The Professional Service Provider shall acquire all insurance policies required for professional liability insurance, general liability, auto insurance, workers' compensation and/or health insurance. The Professional Service Provider shall provide proof of general liability and professional liability insurance coverage to the BAMA on or before the effective date of this Agreement.

During the performance of the services under this Professional Services Contract, the Professional Service Provider shall maintain the insurance coverage required below and the BAMA shall be named as an Additional Insured on each required policy:

- (1) General Liability Insurance, with a combined single limit of \$1,000,000 for each occurrence and \$1,000,000 in the aggregate;
- (2) Automobile Liability Insurance, with a combined single limit of not less than \$1,000,000 for each person, not less than \$1,000,000 for each accident and not less than \$1,000,000 for property damage; and
- (3) Professional Liability Insurance, with a limit of \$1,000,000 annual aggregate.

8. Indemnification: The Professional Services Provider agrees to defend, indemnify, and hold harmless the BAMA, and its agents and employees, from and against legal liability for all claims, losses, damages, and expenses to the extent such claims, losses, damages, or expenses are caused by the negligent or intentional acts, errors, or omissions of The Professional Services Provider, its agents or employees.

9. Immigration Compliance: The Professional Service Provider shall comply in all respects with all immigration-related laws, statutes, ordinances and regulations including without limitation, the Immigration and Nationality Act, as amended, the Immigration Reform and Control Act of 1986, as amended, and the Oklahoma Taxpayer and Citizen Protection Act of 2007 (Oklahoma HB 1804) and any successor laws, ordinances or regulations (collectively, the Immigration Laws”).

10. Governing Documents: The parties agree to perform this contract in strict accordance with the clauses, provisions, and the documents identified as follows, all of which are made part of this contract. In the event of conflict, these documents shall be interpreted in the following order:

- a. This Contract
- b. Special Provisions set out in this Contract
- c. Duly Authorized Amendments arising out of this Contract
- d. General Provisions set out in this Contract
- e. Professional Service Provider's Proposal for this Contract

11. Electronic Signatures:

The Parties agree this transaction may be completed by electronic means and an electronic signature on this Contract will be given the same legal effect as a handwritten signature and cannot be denied enforceability solely because is it in electronic form. If the Professional Services

Provider signs this Contract electronically and/or submits documents electronically, the Professional Services Provider agrees to comply with the BAMA's requirements for submission of electronically signed and/or submitted documents.

12. Governing Law: This agreement shall be governed by the laws of the State of Oklahoma and venue for any action concerning this Agreement shall be in the District Court of Tulsa County, Oklahoma.

13. Entirety of Agreement: The foregoing Professional Services Contract supersedes all previous negotiations and may not be modified except by a written order executed by the parties hereto.

14. Effective Date: This Contract is effective shall be effective upon signature of both parties.

REMAINDER OF PAGE INTENTIONALLY BLANK

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed by their duly authorized officers or representatives on the dates set forth below.

Broken Arrow Municipal Authority:

By: _____
Authority Chairperson

Date: _____

Attest: _____
City Clerk [Seal]

Date: _____

Professional Service Provider:

Geographic Technologies Group

By: Curtis A Hinton Jr.
Curtis Hinton Jr. President

Date: 5/10/2022

Attest:
By: James Kelt
James Kelt Vice President
Corporate Software

Date: 5/10/2022

Approved as to form:

Danny Littlefield
Assistant City Attorney

VERIFICATIONS

State of North Carolina)
) §
County of Wayne)

Before me, a Notary Public, on this 5th day of May, 2022,
personally appeared Curtis Hinton Jr., known to me to
be the (President, Vice-President, Corporate Officer, Member, Partner or Other: President
(Please circle or specify) of Geographic Technologies Group to be the identical person who
executed the within and foregoing instrument, and acknowledged to me that s/he executed the
same as his/her free and voluntary act and deed for the uses and purposes therein set forth.

My Commission Expires:

March 15, 2024

Dawn Reim
Notary Public

**BROKEN ARROW MUNICIPAL AUTHORITY
PROFESSIONAL SERVICES AGREEMENT**

TITLED: GIS SUPPORT SERVICES

PROJECT NUMBER: 2252170

SPECIAL PROVISIONS ATTACHMENT

SP - 1.0 SCOPE OF THE PROJECT:

Tasks Include

- 1.1. ArcGIS Enterprise GIS Upgrade
- 1.2. Enterprise GeoDatabase Support
- 1.3. Geo-Enablement of Tyler EnerGOV and Tyler Munis
- 1.4. ArcGIS HUB Review and Viewer Deployment
- 1.5. ADHOC GIS Services

SP- 2.0 SERVICES OF THE BAMA: THE BAMA WILL:

2.1. Furnish to Professional Service Provider all relevant data in its possession and needed guidance as necessary for the service provider to complete the contract requirements.

2.2. Designate in writing a person to act as its representative in respect to the work to be performed under this agreement. Such person shall have complete authority to transmit instructions, receive information, interpret, and define the BAMA's policies and decisions with respect to materials, equipment, elements, and systems pertinent to the services covered by this agreement.

SP - 3.0 SCOPE OF SERVICES: THE PROFESSIONAL SERVICE PROVIDER SHALL:

3.1 As outlined in the attached work plan (Exhibit A). The Consultant will submit a revised work schedule after this Agreement has been fully executed by BAMA.

3.2 Work will be billed at the rates in SP 4.0 herein and will include all costs associated with the performance of the work, including any support and supervision cost required from the Professional Service Provider.

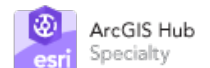
SP- 4.0 COMPENSATION BREAK DOWN

4.1 ArcGIS Enterprise Upgrade	\$24,150
4.2 Enterprise GeoDatabase Support	\$ 5,500
4.3 Geo-Enablement of Tyler EnerGOV and Tyler Munis	\$11,000
4.4 ArcGIS HUB Review and Citizen Viewer Deployment	\$ 6,000
4.5 ADHOC GIS Services	\$ 5,000
Total Contract Amount:	\$51,650

[END OF CONTRACT SPECIAL PROVISIONS]

City of Broken Arrow | OK

GIS Support Services



MAILING ADDRESS:

PO Box 10135
Goldsboro, NC 27532

PHONE: 919.222.1421

FAX: 919-429-4907



© GTG 2022

This document is and shall remain the property of GTG. The document may only be used for the purpose for which it was commissioned. Unauthorized use of this document in any form whatsoever is prohibited.

table of CONTENTS

Cover Letter	
Firm Experience	1
Proposed Projects.....	4
Enterprise GIS Upgrade	4
Enterprise Geodatabase Support.....	8
Geo-Enablement of Tyler EnerGOV and Tyler Munis.....	10
AD-HOC GIS Services	11
ArcGIS HUB Review and Viewer Deployment	12
Key Personnel	15

TESTIMONIALS

“ GTG offers the entire package of GIS and technical skills.
- Asset/GIS Systems Administrator,
City of Bozeman, MT

“ I’m relieved that we have a great group like GEOTG
to partner with moving forward. “
- IT Manager, Central Lincoln PUD

“ The very best GIS company period. I
have used them three times at three
different cities. “
- Assistant City Manager, Granbury, TX

“ You put our diverse set of users at ease with your calm demeanor and depth
of knowledge. Your approach was a perfect mix of education and fact-
finding. Very engaging. “
- City of Fremont, CA

“ GTG is the best company I have ever worked with. I am blown away by
how good you guys are. So much better than other companies. “
- GIS Manager, Wake County, NC

“ Your subject matter expertise, organization, clear
vision, sincerity, flexibility and most importantly,
clear and responsive communication at all times has
made this effort so successful. “
- IT Project Manager, Wake County Government

Additional Testimonials Upon Request



Willard Gustafson
GIS Division Manager
Information Technology Department

Dear Mr. Gustafson:

Geographic Technologies Group (GTG) has planned, designed, and implemented successful GIS solutions for over 700 local government organizations throughout North America. As a longstanding GIS partner of the City of Broken Arrow, we are very excited to propose GIS services focused on the continuation and advancement of the City's GIS program. Our recent projects with the City of Broken Arrow include the following: launching a GIS visualization Hub Site, core GIS platform installation and configuration, GIS security assessment, data synchronization with Munis, and provisioning of mobile applications, dashboards, and other GIS applications.

Our team of experts (many of which are former local government GIS staff) is handpicked for their local government and Esri GIS expertise. GTG is an award-winning GIS company receiving the following distinctions (as GTG and/or with our clients): Esri Cornerstone Partner Recognition Award, Esri Business Partner of the Year, Esri Best Citizen Engagement Award, Multiple Esri Local Government Special Achievement (SAG) Awards, URISA Best Web GIS, URISA Best Public-Sector GIS, and URISA Distinguished Exemplary Systems Award. GTG holds Esri specialties for Local Government, ArcGIS Online, ArcGIS Hub, and Release Ready. **We have seven Geographic Information Systems Professionals (GISPs), and two Project Management Professionals (PMPs)** on our team. Our combined experience offers new and innovative ways to use geospatial technology. As a client of GTG for many years, we hope to continue serving the City of Broken Arrow and assisting in attaining all of its GIS goals.

We believe we are uniquely positioned to continue to partner with the City of Broken Arrow. Our knowledge of the City and our high level of expertise with each of the City's GIS needs make us a logical choice. **We are truly invested in the success of the City's GIS initiative.** As such, we will bring the highest level of commitment, partnership, and ownership to all tasks. The entire GTG team would like to thank you for allowing us to propose these tasks. Should you have any questions, please call me at 919-344-2169 or email me at chinton@geotg.com.

Respectfully Submitted,

Mr. Curt Hinton, BA, MA, GISP

President, Geographic Technologies Group (GTG)
1299 Parkway Drive Ste. B Goldsboro, NC 27534 | P: 919.344.2169 | E: chinton@geotg.com



Firm Experience

Introduction - Services and Solutions

GTG specializes in GIS services that include strategic planning, GIS consulting and comprehensive data services, project support, cost estimating, software development, database design, application deployment/augmentation, implementation, GIS training, and on-call GIS support and maintenance. **We have assisted local government organizations with planning, designing, implementing, and maintaining their entire GIS programs for over twenty-four years.** Our team focuses almost solely on local government. We are a local government GIS Company. We are not an engineering company that does GIS as a sideline. GIS is all we do. We have a unique combination of staff that has the following characteristics:

- **Former local government GIS staff** – we have a staff steeped in local government experience. For example, we have seven former local government GIS Managers on staff from various locales around the United States.
- **Geographic Information Systems Professionals (GISP)** – GTG also has a cadre of GISPs. The GISP designation from Esri denotes a deep level of experience and understanding of GIS as it applies to local government. Only applicants that pass an arduous review process exhibiting the requisite commitment and time with GIS can receive this designation.
- **Project Management Professionals (PMP)** – Two key staff (Jason Marshall and Curt Hinton) have achieved this high-level of project management certification from the Project Management Institute. Both will continue to be instrumental in the Broken Arrow implementation. Additionally, Trey Hinton is pursuing his PMP intending to sit for the certification test this fall.

We empower government organizations by providing exceptional products and services, supporting our clients to better access GIS data, use GIS data, make better decisions using GIS data, improve efficiency, increase productivity, and save lives, time, and money using geospatial technology. Our experience with Broken Arrow will be invaluable for the continuance of GIS success at the City. The City has advanced rapidly from little GIS to an advanced and pervasive implementation. **GTG will ensure continuity.** Any other vendor would have to spend significant time and money acclimating to the Broken Arrow GIS environment. GTG is uniquely positioned to ensure that Broken Arrow has one of the most advanced GIS implementations in the Midwest.

ABOUT US

WWW.GEOTG.COM

*Beyond Location
Intelligence*



CUSTOMIZED SOLUTIONS COMMITTED TO CUSTOMER SUCCESS **Services & Solutions**

GTG specializes in GIS services that include strategic planning, GIS consulting and comprehensive data services, mapping services, software development, GIS training, and on-call GIS support and maintenance. Our highly qualified staff has assisted local government organizations with planning, designing, implementing, and maintaining their entire GIS programs for over twenty years. Our recent award-winning successes demonstrate our commitment to local government in Canada and the USA. We empower government organizations by providing exceptional products and services, supporting our clients to better access GIS data, use GIS data, make better decisions using GIS data, improve efficiency, increase productivity, and save lives, time, and money using geospatial technology. GTG offers a complete range of geospatial services.

Who We Serve

Villages, Towns, Cities, Counties, Multi-Regional Agencies, Public Works and Public Utilities and Water Districts, and Native American and Alaskan Tribes

We Create Location Intelligent Organizations

As one of the world's leading local government GIS strategic planning, design, and implementation companies, we are committed to advancing the science of location intelligence and geospatial technology. We want to inspire. We want to push the envelope, break through boundaries, solve problems, and introduce a new kind of decision support. We go beyond location intelligence to plan, design, build, implement, transform, and maintain geospatial technology. Our goal is to use spatial information to empower understanding, influence the decision-making process, offer new insights, reveal new data relationships, predict events, engage and educate the community, and solve problems of the future. The ultimate outcome is a smarter, more resilient, and sustainable government.

At-A-Glance

- ◆ In Business Since 1997 – 24 Years
- ◆ Over 700 Satisfied Clients
- ◆ 11 National Awards
- ◆ Esri Silver Partner
- ◆ Esri Specialties: ArcGIS For Local Government, ArcGIS Online, Release Ready, ArcGIS Hub
- ◆ Esri Business Partner of the Year
- ◆ Esri International Award for Mobile Applications
- ◆ Esri Special Achievement in GIS Award
- ◆ URISA Gold Award
- ◆ Esri Best Citizen Engagement Award
- ◆ Esri Cornerstone Partner Recognition
- ◆ American City and County Excellence Award in GIS
- ◆ URISA Exemplary Systems in Government
- ◆ URISA Excellence Award In GIS
- ◆ URISA City of Guelph Best Web GIS
- ◆ URISA City of Guelph Best Public-Sector GIS
- ◆ Herb Stout Exemplary Use of GIS Technology in Local Government
- ◆ URISA Distinguished Exemplary Systems Award

GEOSPATIAL SERVICES & SOLUTIONS

PLAN – DESIGN – IMPLEMENT – MAINTAIN

GIS STRATEGIC PLANNING

- ◆ GIS STRATEGIC PLAN
 - ◆ GAP ANALYSIS
 - ◆ KPI DEVELOPMENT
 - ◆ BENCHMARKING ANALYSIS
- ◆ GIS NEEDS ASSESSMENT
- ◆ GIS ASSESSMENT
- ◆ GIS CHECKUP
- ◆ GIS GOVERNANCE MODEL DEVELOPMENT
- ◆ GIS MATURITY MODEL DEVELOPMENT
- ◆ MOBILE GIS PLANNING
- ◆ IT/GIS TECHNOLOGY ASSESSMENT
- ◆ DIGITAL DATA ASSESSMENT
- ◆ DATABASE/GEODATABASE ASSESSMENT
- ◆ ESRI LICENSING ALTERNATIVES
- ◆ BEST GEOSPATIAL BUSINESS PRACTICES (BBP)
- ◆ STANDARD GIS OPERATING PROCEDURES (SOP)
- ◆ GIS GRANT WRITING

GIS SYSTEM DESIGN

- ◆ ENTERPRISE GIS SYSTEM DESIGN
- ◆ ESRI SOFTWARE ECOSYSTEM DESIGN
- ◆ GIS DATA MODEL DESIGN
 - ◆ GEODATABASE DESIGN
- ◆ WORKFLOW ANALYSIS
- ◆ ARCGIS HUB DESIGN
- ◆ GIS DATA AND DATABASE ARCHITECTURE AND DATA MAINTENANCE
 - ◆ GIS DATABASE MANAGEMENT SOLUTIONS
- ◆ GIS/IT SYSTEM ARCHITECTURE AND DESIGN
 - ◆ CLOUD/HOSTED AND MANAGED SOLUTIONS ARCHITECTURE
- ◆ ESRI CAPACITY PLANNING TOOL ANALYSIS
- ◆ FIBER OPTIC NETWORK DESIGN
- ◆ DATABASE INTEGRATION
- ◆ DATABASE MIGRATION DESIGN
 - ◆ ARCGIS UTILITY DATA MODELS
- ◆ TRANSITION DESIGN
 - ◆ ARCGIS DESKTOP TO ARCGIS PRO

GIS IMPLEMENTATION

- ◆ DEPLOYMENT
- ◆ GPS FIELD INVENTORY: MAPPING GRADE
 - ◆ EOS ARROW SERIES - TRIMBLE – BAD ELF – SPIKE DEVICE
 - ◆ COLLECTOR FOR ARCGIS GNSS TETHERING
- ◆ FIELD DATA COLLECTION
- ◆ DATA PROCESSING AND ANALYSIS
- ◆ DATA CONVERSION
- ◆ DATA MIGRATION
- ◆ SCRIPTING AND ETL DEVELOPMENT
- ◆ DATA EDITING AND DATA CLEAN-UP
- ◆ DATABASE WAREHOUSING
- ◆ DATABASE INTEGRATION AND INTEROPERABILITY
 - ◆ FME SAFE SOFTWARE SERVICES
 - ◆ GEOADAPTOR
- ◆ DATABASE UPGRADES AND MIGRATIONS
- ◆ ENTERPRISE SYSTEM INTEGRATION

- ◆ ESRI GIS SOFTWARE ECOSYSTEM SET-UP, CONFIGURATION, AND IMPLEMENTATION
 - ◆ ARCGIS ENTERPRISE
 - ◆ GEOEVENT SERVER
 - ◆ ARCGIS HUB
 - ◆ ARCGIS MONITOR
 - ◆ ENTERPRISE GEODATABASE
 - ◆ ARCGIS DESKTOP – ARCGIS PRO
 - ◆ ARCGIS ONLINE
 - ◆ ARCGIS WEB APPLICATIONS
 - ◆ ARCGIS OPEN DATA PORTAL
- ◆ CUSTOM ESRI GIS SOFTWARE SOLUTIONS
 - ◆ DESKTOP
 - ◆ MOBILE
 - ◆ WEB
 - ◆ DASHBOARDS
- ◆ ESRI WIDGET DEVELOPMENT
- ◆ GIS INFRASTRUCTURE CONSULTATION AND IMPLEMENTATION SERVICES
- ◆ ENTERPRISE GIS UPGRADE AND MIGRATION SERVICES
- ◆ GIS SECURITY ANALYSIS
- ◆ CERTIFICATE MANAGEMENT AND DEPLOYMENT
- ◆ ASSET MANAGEMENT
 - ◆ CITYWORKS
 - ◆ UNIVERUS – ASSETFINDA
- ◆ ELECTIONS AND REDISTRICTING SERVICES
- ◆ BUILDING INFORMATION MODELING (BIM) SERVICES
- ◆ SPATIAL MODELING
- ◆ DATA QUALITY CONTROL (QC) AND QUALITY ASSURANCE (QA)
- ◆ MAP CREATION/CARTOGRAPHY
- ◆ GEOREFERENCING AND INDEXING
- ◆ GIS TRAINING, EDUCATION, AND KNOWLEDGE TRANSFER
- ◆ GIS PROGRAMMING AND APPLICATION DEVELOPMENT
 - ◆ SOFTWARE AND LANGUAGES
 - ◆ DATABASES
 - ◆ GIS FRAMEWORKS
 - ◆ GIS SOFTWARES

GIS SOFTWARE SOLUTIONS

- ◆ ESRI TOTAL CUSTOMIZED SOLUTIONS
 - ◆ GREENCITYGIS FOR PARKS, RECREATION, AND NATURAL RESOURCES
 - ◆ SAFECITYGIS FOR PUBLIC SAFETY AND EMERGENCY OPERATIONS
 - ◆ UTILITYCITYGIS FOR PUBLIC WORKS AND PUBLIC UTILITIES
 - ◆ FIBERCITYGIS FOR TELECOMMUNICATIONS AND FIBER MANAGEMENT
 - ◆ SMARTCITYGIS FOR SMART TOWNS, CITIES, AND COUNTIES

MAINTENANCE & SUPPORT

- ◆ GEOSPATIAL SUPPORT PROGRAM™ (GSP)
- ◆ STRATEGIC PLAN UPDATES
- ◆ GIS TECHNICAL SUPPORT
- ◆ STAFF AUGMENTATION
- ◆ GIS EDUCATIONAL WEBINARS
- ◆ DATA LAYER MAINTENANCE
- ◆ DATA LAYER CREATION
- ◆ GIS TRAINING
- ◆ IT/GIS TECHNICAL SUPPORT
- ◆ CLOUD GIS MANAGEMENT
- ◆ DATABASE MAINTENANCE AND PERFORMANCE TUNING
- ◆ APPLICATION DEVELOPMENT
- ◆ EMERGENCY GIS SUPPORT

Proposed Projects

Starting in 2004, GTG has been a GIS partner of the city. In 2004, GTG implemented software that geo-enabled the City's IT systems. Since that time GTG has been a steady partner, assisting the City with a variety of GIS software and service needs. The following are projects that we are proposing for the City of Broken Arrow.

Enterprise GIS Upgrade

Scope of Services

Catalog and Backup Existing GIS Deployment

- Review existing GIS, identify functional and valid content and catalog GIS inventory
- Backup existing Enterprise Geodatabase
- Backup existing ArcGIS Enterprise deployment using the Esri WebGISDr Utility

Upgrade Existing ArcGIS Enterprise Deployment

- Upgrade ArcGIS Web Adaptor(s), the Portal for ArcGIS Site, the ArcGIS Server Site, and the ArcGIS Data Store to version 10.8.1
- Run GTG's battery of ArcGIS Enterprise tests to evaluate the success of the upgrade and the operation of the City's GIS
- Backup the existing ArcGIS Enterprise deployment using the Esri WebGISDR Utility
- Backup and migrate the City's existing GIS's content, service, and configuration directories to a shared network location
- Modify the existing system's content, service, and configuration directories to the network shared location
- Create and apply SQL connection Aliases on the GIS system
- Register SQL Alias SDE connection files and update the existing service suite to leverage the Aliased SQL connections

Upgrade Existing Enterprise Geodatabase

- Apply SQL Alias to the existing SQL Server instance
- Run maintenance scripts against Enterprise Geodatabase
- Upgrade Enterprise Geodatabase to version 10.8.1

Configure ArcGIS Enterprise Software for Production GIS

- Configure IIS and Certificates for two (2) new public-facing web servers
- Install and configure four (4) ArcGIS Web Adaptors (10.8.1) on each of the two (2) new public-facing web servers
- Install and configure Portal for ArcGIS (10.8.1) on one (1) new application server
- Install and configure ArcGIS Enterprise (10.8.1; hosting) on one (1) new application server
- Install and configure ArcGIS Enterprise (10.8.1; GIS/Mapping) on two (2) new

- application servers
- Install and configure ArcGIS Enterprise (10.8.1; Imagery) on two (2) new application servers
- Install and configure the ArcGIS Data Store (10.8.1; relational) on two (2) new application servers
- Configure and license a 10.8.1 Enterprise Geodatabase on a new dedicated SQL Server instance as a primary Data Store
- Configure and license a 10.8.1 Enterprise Geodatabase on a new dedicated SQL Server instance as a failover Data Store
- Document the new configuration pattern for the ArcGIS Enterprise 10.8.1 deployment

Migrate Existing Production GIS to New Architecture

- Attach new ArcGIS Enterprise components to the existing GIS deployment
- Modify 'hybrid' deployment to use the new GIS components as their primary endpoints and resources
- Modify service, content, and configuration directories to final locations
- Backup the 'hybrid' ArcGIS Enterprise deployment using the Esri WebGISDR Utility
- Test the old component detachment workflow to validate continued functionality during removal
- Remove existing ArcGIS Enterprise components from the 'hybrid' GIS, leaving only the 'new' components participating in the Production GIS
- Run GTG's battery of ArcGIS Enterprise tests to evaluate the success of the modification and the operation of the City's GIS
- Backup the 'new' production ArcGIS Enterprise deployment using the Esri WebGISDR Utility
- Backup Existing SQL Server Instance and restore the data to the new primary Enterprise Geodatabase and the failover Enterprise Geodatabase
- Decommission existing Enterprise Geodatabase instance

Migrate Imagery and Cached Services to the Imagery Site

- Publish Imagery and Cached Services to the Imagery Site
- Apply HTTP-301 URI rewrites on the two (2) public-facing Web Servers to resolve requests to the new locations of the imagery/cached services
- Validate the URI rewrites from SOAP, REST, and Web Application clients
- Disable, test, and remove the imagery and cached services from the GIS site
- Update critical applications and resources to leverage the appropriate ArcGIS Server URIs where identified

Implement a Testing/Development Deployment of ArcGIS Enterprise

- Configure IIS and apply SSL Certificates to the Development Server
- Install, license and deployment a single-machine base deployment of ArcGIS Enterprise on the internal-facing system
- Configure ArcGIS Enterprise to adhere to Esri's Web GIS/Base Deployment design pattern
- Create and license an Enterprise Geodatabase on the City's SQL Server machine to support the development environment

- Apply SQL Aliases on the Development GIS machine and the Enterprise Geodatabase
- Run GTG's battery of tests to confirm the functionality of the Development System
- Backup the Development ArcGIS Enterprise deployment using the Esri WebGISDR Utility

Documentation and Knowledge Transfer

- Create system documentation for the City of Broken Arrow's Development and Production GIS
- Create GIS architecture diagrams for the Development and Production GIS
- GTG will conduct two (2) two-hour long Knowledge Transfer sessions with the City of Broken Arrow's GIS team to demonstrate the design, functionality of, and appropriate use of the City's GIS
- GTG will provide general ArcGIS Enterprise system maintenance and administration recommendations

Assumptions:

- The City of Broken Arrow will provide and configure the necessary servers to support the ArcGIS Enterprise Deployments.
- The City of Broken Arrow's servers will meet the specifications outlined in GTG's Capacity Planning Tool (CPT) Analysis.
- The City of Broken Arrow will configure the appropriate networking, firewall, and load-balancing rules to support the functionality of the ArcGIS Enterprise deployments.
- The City of Broken Arrow has the necessary Operating System (OS), database (SQL Server), and GIS software (ArcGIS Enterprise) licenses to support the ArcGIS Enterprise deployments.
- The City of Broken Arrow will be responsible for acquiring and providing the necessary SSL(TLS) certificates for the internal- and external-facing machines.
- The City of Broken Arrow will be responsible for providing GTG with appropriate Administrative access to the City's network for remote support and system access.
- The City of Broken Arrow will create and/or provide Geographic Technologies Group (GTG) with the necessary application, service, and system accounts to access the existing and planned ArcGIS Enterprise systems and their underlying servers.
- Geographic Technologies Group (GTG) will complete the above tasks and provide documentation and training ("Knowledge Transfer") on the resultant GIS system.

Budget

Project Costs	Cost
Enterprise GIS Upgrade	\$24,150

Schedule

Tasks	Month 1				Month 2				Month 3			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Catalog and Backup Existing GIS Deployment												
Upgrade Existing ArcGIS Enterprise Deployment												
Upgrade Existing Enterprise Geodatabase												
Configure ArcGIS Enterprise Software for Production GIS												
Migrate Existing Production GIS to New Architecture												
Migrate Imagery and Cached Services to the Imagery Site												
Implement a Testing/Development Deployment of ArcGIS Enterprise												
Documentation and Knowledge Transfer												

 Task Completion/Deliverable

 Conference Call -Meeting

Enterprise Geodatabase Support

Enterprise Geodatabase Health-Check & Configuration Review

- Review existing Geodatabase ecosystem and document dependencies, relationships, and organization
- Catalog existing Enterprise Geodatabase content and identify functional tables, feature classes, and feature datasets
- Conduct a consolidated security assessment of the current Enterprise Geodatabase, including a user, group, and role report, a dataset access review, and summary of the geodatabase's current security model
- Synthesize the above findings into a consolidated report on the Enterprise Geodatabase's condition

Geodatabase Management & Operation Review

- Review and document the existing dataset ownership and sharing model of the organization's current enterprise geodatabase
- Analyze the current Enterprise Geodatabase to determine the use-patterns related to geodatabase versioning and replication
- Review the Enterprise Geodatabase system tables
- Provide a document describing the current operational patterns of use, the dataset ownership and access model, and overall health of the organization's Enterprise geodatabase and offering recommendations for improvements and the implementation of best practices

Enterprise Geodatabase Setup & Configuration Support

- Provide up to six (6) hours of support consultation related to setup, configuration, and implementation of the organization's Enterprise Geodatabase
- Offer recommendations related to the configuration and setup of the geodatabase's user and security model, data ownership, and data access
- Assist Broken Arrow in the identification and documentation of activities required and/or recommended for the population of, migration to, and roll-out of the organization's new Enterprise Geodatabase

Emergency Geodatabase Support Services

- Provide up to four (4) hours of emergency and/or after-hours support related to the implementation and/or configuration of the organization's Enterprise Geodatabase.

Budget

Task	Cost
Health-Check & Configuration Review	\$2,300
Management & Operation Review	\$1,000
Setup & Configuration Support	\$1,800
Emergency Support Services	\$600

Total Cost: \$5,500

Schedule

Tasks	Month 1				Month 2				Month 3			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Enterprise Geodatabase Health-Check & Configuration Review	●											
Geodatabase Management & Operation Review												
Enterprise Geodatabase Setup & Configuration Support						●						
Emergency Geodatabase Support Services												●

— Task Completion/Deliverable

● Conference Call -Meeting

Geo-Enablement of Tyler EnerGOV and Tyler Munis

GTG is the leading local government GIS integration specialist. Our team has worked with Broken Arrow for many years to geo-enable their IT systems. Recently, the City has migrated to Tyler EnerGOV and Tyler Munis and needs to have data from these systems geo-enabled. Additionally, the City would like to have Esri dashboards to view key metrics from these systems. Existing viewers will need to be updated to consume these data sets.

Geo-Enablement

- GTG will set up GeoAdaptor to extract the appropriate data from Tyler EnerGov and Tyler Munis.
- Data extracts will include cases, licenses, permits, work orders, development projects, and other key data.
- Data will be linked to existing features and/or address matched via address layers.

Application Configuration

- Reconfigure Vantage Points viewer to consume these new data layers.
- Create up to two dashboards configured to view and analyze data from these systems.
 - Work orders
 - Permitting
- GTG will have a kickoff scoping meeting to define dashboard content
- Broken Arrow will have a final review session to identify final refinement
- Training will be provided

Budget

Task	Cost
Geo-Enablement	\$5,000
Vantage Points Configuration	\$1,000
Dashboards	\$5,000

Total Cost: \$11,000

Schedule

Tasks	Month 1				Month 2				Month 3			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Geo-Enablement												
Application Configuration												

 Task Completion/Deliverable

 Conference Call -Meeting

ArcGIS HUB Review and Viewer Deployment

Overview and Scope of Services

GTG will work collaboratively with the City of Broken Arrow to revamp the City's public-facing ArcGIS Hub site, which will primarily be modeled after examples provided by the City. This will entail locating and plugging in existing organizational applications, linking City news and social media components, and providing an open data component to the ArcGIS Hub site. GTG will ensure themes match the City of Broken Arrow's official branding and will make an out-of-the-box effort to align the ArcGIS Hub site as an extension of the City's primary website. Additionally, this quote includes two review and feedback sessions between GTG and the City of Broken Arrow. GTG will also provide weekly project management updates throughout the course of the project.

GTG will also develop a public-facing Viewer in Esri's Web AppBuilder environment tailored for citizen use and awareness. This application will be deployed with out-of-the-box widgets, carry the City of Broken Arrow branding, and will leverage existing data layers from the City of Broken Arrow. The City of Broken Arrow will provide direction to GTG on the exact layers to be included and the desired functionality. Additionally, this quote includes two review and feedback sessions between GTG and the City of Broken Arrow. GTG will also provide weekly project management updates throughout the course of the project.

**This scope does not include the creation of new GIS data or editing GIS data provided by the City of Broken Arrow. The City of Broken Arrow will be responsible for generating specific narrative content for inclusion in the ArcGIS Hub site if necessary.*

Project Deliverables

- Two review and feedback sessions between GTG and the City of Broken Arrow
- Weekly project management updates throughout the course of the project

Budget

GTG proposes a lump-sum budget of \$6,000 to accomplish all of the steps outlined in this scope of work. The breakdown can be found below.

Task	Cost
Revamp the City's public-facing ArcGIS Hub site	\$3,500
Develop a public-facing Viewer in Esri's Web AppBuilder	\$2,500

Total Cost: \$6,000

Schedule

GTG proposes a schedule of twelve weeks from start to finish for this project. There will be periodic conference calls before each task starts, and at the completion of the project.

Tasks	Month 1				Month 2				Month 3			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Revamp the City's ArcGIS Hub site												
Develop a public-facing Viewer in Esri's Web AppBuilder												

Task Completion/Deliverable

On-site

Conference Call Meeting

AD-HOC GIS Services

GTG understands that the City of Broken Arrow may need ongoing ad-hoc services for unforeseen projects or needs. GTG is proposing a \$5000 budget based on the following hourly rates:

Title	Hourly Rate
GIS Consultant/Expert	\$225.00
GIS Director	\$196.00
Software Manager	\$193.00
GIS Systems Architect	\$173.00
Senior GIS Project Manager	\$130.00
GIS Technical Manager	\$129.00
GIS Project Manager	\$125.00
GIS Business Support Director	\$100.00
Senior GIS Analyst	\$98.00
GIS Analyst	\$79.00
Office Manager	\$63.00
GIS Technician	\$61.00
GIS Business Support Specialist	\$58.00
GIS Business Support Assistant	\$42.00

Software Solutions: GIS Application Development and Integration Services

FOR LOCAL GOVERNMENT: PLAN – DESIGN – IMPLEMENT – MAINTAIN

Geographic Technologies Group (GTG) has integrated GIS with the many local government management software solutions. Esri ArcGIS Implementation means seamless integration with your existing database solutions.

ARCGIS ENTERPRISE INTEGRATION

Extensive ArcGIS Enterprise Integrations with the following:

◆ Enterprise Asset Management Systems (EAMS)

- CityWorks
- AssetFinda
- Cartegraph
- Bentley

◆ Work Order Management Systems

- CityWorks
- Central Square
- Accela
- WorkForce
- Dude Solutions
- Cartegraph
- Salesforce

◆ Document Management Systems (DMS)

- Laserfiche
- Optix

◆ Public Safety Solutions

- Central Square
- Tyler Technologies
- New World Systems
- PTS
- CMI
- Motorola
- RapidSoS
- Southern Software
- Spillman
- Tiburon
- Firehouse
- TriTech
- Cyrun
- Emergitech

◆ Pavement Management

- MicroPaver
- Granite XP
- ViaTech

◆ Telecommunication and OSS/BSS

- ETI
- OSS
- BSS

◆ Enterprise Resource Planning (ERP)

- Accela
- CityWorks
- Central Square
- Innoprise
- Tyler Technologies
- New World Systems
- Harris
- Cayenta
- EnerGov
- Salesforce
- Visionaire

◆ Recreation Management and Parks

- ActiveNet
- Vermont Systems
- BookKing
- Max Solutions
- Amilia
- CivicPlus

◆ Business Specific Software

- FME
- NearMap
- Eagle View
- Google Maps API/ Google Earth
- National Weather Service and NOAA API
- Integromat
- Twitter API
- Active Directory
- Azure AD
- ADFS
- LDAP

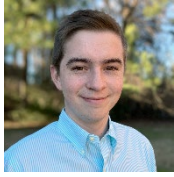
Our team of GIS programmers develop and integrate GIS applications for the effective and efficient management of local government. We have developed custom and off-the-shelf applications for all departments within local government. Let us show you how we can streamline your operations.

Key Personnel

GIS for local government is *all* that we do. With an experienced team of skilled GIS professionals, **we are prepared to fully support every need of the City of Broken Arrow.** The primary contact for the City will be Trey Hinton, Project Manager and Jason Marshall, GIS Director. Mr. Hinton will be responsible for the performance of the project coordination and the GTG team. All our selected team members are familiar with the city's GIS and standard software products.

GTG has a well-rounded team, with skills in every area of GIS, which will contribute to the successful completion of this project.





TREY HINTON, BS
Project Manager | 4 years of experience

EDUCATION: BACHELOR OF SCIENCE – Business Administration: International Business & Economics, *Liberty University* | **MASTERS** - GIS, *North Carolina State University*

Mr. Trey Hinton currently serves as a Project Manager for Geographic Technologies Group. While attending school, he had various internships with a variety of organizations. Mr. Hinton participated in two summer internships with GTG, where he was exposed to a wide variety of projects centered around data analytics. He also worked as a County Planning Intern for the County of Wayne, where he worked closely with the GIS department to select a location for a new state of the art convention center. Finally, he spent one summer as a Technology and Planning Intern with Southern Bank and Trust Company, where he helped to update the bank's servers and plan for future expansion. He is currently enrolled at North Carolina State University, gaining a master's degree in Geographic Information Systems and Technology. His geographic analysis experience includes ArcMap, georeferencing, and data generation using ArcMAP. While at GTG he has worked on several GIS technical projects for clients and has performed GIS data services including map creation, data creation, and data maintenance. He has performed digital data checks to determine the accuracy and completeness of the digital data. He also has significant experience in geodatabase creation, maintenance, and ArcGIS Online application creation.

PROJECT EXPERIENCE: Mr. Hinton has assisted with GIS data cleanup, data assessment, and data creation. The following are recent projects he has assisted on: **CAL FIRE, CA** - GIS Technical Services / **City of Newport, TN** - GIS Data Assessment and Creation / **City of Lawrenceville, GA** – GIS Support / **Town of Nags Head, NC** - Sign Inventory and GIS Applications / **City of Vancouver, WA** – Enterprise Support / **Westmoreland County, VA** - Professional GIS Services / **Town of Windsor, CA** – Application Development / **City of Fulshear, TX** – GIS Support

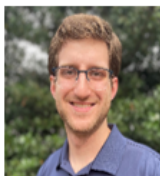


JASON MARSHALL, BA, MA, GISP, PMP
GIS Director and Project Manager | 16 years of experience

EDUCATION: MASTER OF ARTS – Applied Geography, Concentration in GIS, *University of North Carolina, Greensboro* / **BACHELOR OF ARTS** – Geography, *University of North Carolina, Greensboro*

Mr. Jason Marshall has over 16 years of GIS experience and has served as a Project Manager for many of GTG's GIS technical projects. He utilizes a strong local government and technical background to strategically assess needs and plan enterprise wide cross-departmental GIS and IT systems. He manages technology equipment research and coordinates with clients to implement hardware and software GIS and IT solutions. He also advises on the design and implementation of GIS software solutions applied to business process workflows. He has extensive technical expertise in the design, implementation, and configuration of ArcGIS Enterprise, ArcGIS Online, web GIS server architecture, system migration and operating system upgrades, consistent data collection, data integration, and data governance.

PROJECT EXPERIENCE: **City of Berkeley, CA** - GIS Needs Assessment, System Design, Strategic Plan, GIS Data Services, Digital Data Assessment, and GIS Data Architecture Design / **City of Unalaska, AK** - GIS Needs Assessment, System Design, Strategic Plan, GIS Data Services and Data Layer Creation and Enterprise Implementation / **Town of Windsor, CA** - GIS Needs Assessment and Strategic Plan



RIVES DEUTERMAN, BS
Project Manager | 6 years of experience

EDUCATION: BACHELOR OF SCIENCE – Environmental Science (Energy and Sustainability), Minor in Geography (GIS focus), *University of North Carolina, Chapel Hill*

Mr. Rives Deuterman serves as a Project Manager and Technical Support for Geographic Technologies Group. **At GTG, he assists with all of our consulting projects. Rives has experience in all Esri applications, specifically Esri ArcGIS.** Rives is involved in the GIS technology assessments, GIS, provides QA/QC procedures and detailed technical documentation. Rives recently worked with the City of Hobart, Indiana to create their online ArcGIS Hub. He is familiar with best GIS practices, staffing requirements, training, as well as on-call technical support. Rives frequently contributes to the documentation required for the scope of services for town, city, and county initiatives. He also facilitates the creation and delivery of project deliverables and overall communication with GIS stakeholders.

PROJECT EXPERIENCE: **City of Hobart, IN** - GIS Needs Assessment and 3-Year GIS Strategic Plan, plus Implementation / **Seminole Tribe of Florida** - GIS Needs Assessment and 5-Year GIS Strategic Plan / **Town of Caledon, ON** – GIS Needs Assessment and 5-Year GIS Strategic Plan / **City of Thousand Oaks, CA** – GIS Needs Assessment and 5-Year GIS Strategic Plan / **Santa Clara Valley Water District, CA** - GIS Needs Assessment / **City of Fort Pierce, FL** – GIS Strategic Roadmap and Implementation / **Cumberland County, NC** - GIS Needs Assessment and 3-Year GIS Strategic Plan.



ANDREW VALENSKI, BS, BA
Systems Analyst/Administrator | 8 years of experience

EDUCATION: BACHELOR OF ARTS – Geography, *University of Richmond* / **BACHELOR OF SCIENCE** – Environmental Studies, *University of Richmond*

Mr. Andrew Valenski currently serves as an Enterprise GIS Consultant for Geographic Technologies Group. He works with clients to design, implement, and maintain custom GIS applications and processes. **He helps clients determine what geo-spatial solutions works best for their organizational needs.** These solutions include the following: GIS strategic planning, enterprise implementation, governance models, customized GIS software and applications, GIS architecture, data management strategies, updates and maintenance, training plans, and on-call support. Mr. Valenski previously worked as a Spatial Intelligence Developer for the City of Charlotte, NC. While there, he designed, rebuilt, and deployed an enterprise GIS. He served as a Senior Geospatial Server Analyst for Esri where he worked with the solutions and support teams to deliver server-side and web solutions for strategic customers. During his time with Esri, he implemented organization-wide performance dashboards. He is also skilled with Adobe Coldfusion, FME, Accela Permitting System Integration, IoT, Smart City initiatives, MS Azure, 365, and Geocortex.

PROJECT EXPERIENCE: **City of Morgan Hill, CA** - Capacity Planning, Database Development, GIS Infrastructure Development, Script Development, Security Implementation / **City of Irvine, CA** - Infrastructure Development, Database Development, ArcGIS Portal Development, Integration Upgrades, Workflow Automation / **City of Mississauga, ON** - Database QA/QC, Data Integrity, Integration Upgrades, Script Development, Database Development



JESSY BEASLEY, MS, BS
Senior GIS Analyst | 7 years of experience

EDUCATION: MASTER OF SCIENCE – Geography, Certificate: GIS, East Carolina University / **BACHELOR OF SCIENCE** – Geography, *University of Florida*

Ms. Jessy Beasley has worked with GIS data and Esri products for over 7 years. **As a Senior GIS Analyst for GTG, she has completed GIS Data Assessments, performed data QA/QC, and has analyzed many different GIS software system architectures, integration, and GIS assets.** She is skilled at CAD data conversion and integration. She has developed GIS Training Plans and Standard Operating Procedures (SOPs). She served as a Physical Science Technician with the USDA-Agricultural Research Service, creating quality geodatabases that were used to build agricultural conservation plans throughout the Midwest. While at the USDA, she built multiple web applications using Esri's Story Maps and Web AppBuilder to ease information transfer among government officials and the public. She helps analyze the current use of GIS, identifying gaps in the current system, and will assist in providing recommendations for best practices on GIS usage.

PROJECT EXPERIENCE: **Contra Costa Water District, CA** - Data Integrity/Corrections, QC Process Automation, Data Migration, Tool Incorporation / **City of Lawrenceville, GA** - Data Migration, Data Validation, Application Development, Geoprocessing Automation / **CAL FIRE, CA** - Data Migration, Data QC, Data Integrity/Corrections, QC Process Automation, Workflow Automation, Data Collection.



JONATHAN WELKER, MS, BS
GIS Analyst | 9 years of experience

EDUCATION: MASTER OF ARTS – Geography (GIS), *Appalachian State University* / **BACHELOR OF SCIENCE** – Geography and Community and Regional Planning, *Appalachian State University*

Jonathan Welker currently serves as Senior GIS Analyst for Geographic Technologies Group. Mr. Welker has been employed with GTG since completing his degree. While attending school, he also provided GIS mapping and analysis services for NASA's Carbon Monitoring System (CMS) and was coauthor on the resulting 2014 publication. As part of the GTG team, he has provided technical support and cartographic services for numerous organizations, deployed, and conducted GIS training sessions on ArcGIS Desktop and Esri's ArcGIS Online suite, and processed and developed strategies pertaining to data editing and creation, database design, LGIM implementation, cartographic design, and spatial and tabular data analysis. He has extensive experience performing data layer creation, data collection, and conducting system architecture designs.

PROJECT EXPERIENCE: Mr. Welker has performed the following tasks for the **Town of Snowmass Village, CO**, the **Town of Windsor, CA**, and the **City of Roswell, GA**: 1) Migrated data into the LGIM data model, 2) Transitioned scanned documentation into feature-linked digital environment, 3) Designed, created, and edited digital data layers for multiple departments, 4) Reviewed, optimized, and populated attribution for key data layers, and 5) Quality assurance for all deliverables, tasks, workflows, and procedures.



SAMUEL STOKES, BA
GIS Analyst | 4 years of experience

EDUCATION: BACHELOR OF ARTS – Mathematics and Economics, *University of NC, Chapel Hill*

Samuel Stokes currently serves as a GIS Technician for Geographic Technologies Group. He has worked on many projects with a wide variety of scopes. He has experience creating, maintaining, and editing data. He uses geoprocessing tools and SQL queries to concatenate, calculate, append, extract, duplicate, dissolve, delete, project and analyze data. He also has extensive familiarity with Esri products such as ArcGIS (ArcMap, ArcCatalog, ArcSDE). He has launched viewers and applications, created cartographic maps, and maintained a geometric network for some of our most recent clients. Mr. Stokes has coordinated the address process and corrected existing addresses in coordination with other county departments (Planning, Building Services, Assessor, etc.), and maintained street centerlines.

PROJECT EXPERIENCE: Mr. Stokes has performed the following tasks for the **Lincoln County, WI**, the **Town of Windsor, CA**, and the **City of Lauderhill, FL**: 1) Georeferenced, indexed, and digitized a 500 GB dataset of road plans, 2) Edited and launched GIS viewers and applications on ArcGIS Online, 3) Created cartographic PDF maps, 4) Collected and digitized features as part of an asset management solution to Parks and Recreation clients., and 5) Edited and maintained a water-main geometric network.



BRYCE STEVENOSKY, BA
GIS Technician | 3 years of experience

EDUCATION: BACHELOR OF ARTS – Geography, *University of Delaware*

Mr. Bryce Stevenosky serves as a GIS Technician for Geographic Technologies Group. He has a graduate certificate in Geographic Information Systems and comes to us with over three years of experience in GIS and Web platforms. At GTG, he performs geodatabase management, data capture, and data cleanup. He also provides technical documentation and data analysis. Mr. Stevenosky is skilled in developing maps, applications and maintaining data layers. He has experience in SQL and Python and provides updates and maintenance for clients. He also responds to client requests and provides on-call technical support and as-needed GIS training. He has experience in ArcGIS Online implementation, as well as in ArcGIS Pro, Map, Catalogue, and Desktop.

PROJECT EXPERIENCE: **The Colony, TX:** Help with database design create domains and relates for feature classes; Onsite support for 3 weeks and collect data using collector app; Cleanup data as needed / **Green Engineering, NC:** Used engineer drawings and cad files to correctly portray water mains and other water related attributes (digitize and editing) / **City of Westmoreland, VA:** Verifying address values and editing spatial data / **Town of Windsor, CA:** Collecting and updating attributes for existing dataset



JORDON RHOTON, BA
GIS Technician | 3 years of experience

EDUCATION: BACHELOR OF ARTS – Geography, *University of Tennessee*

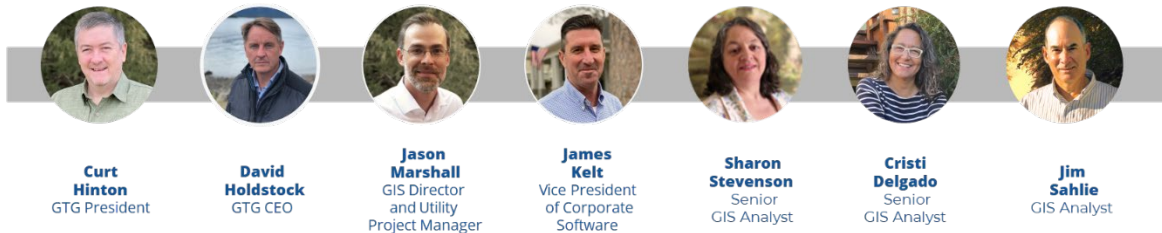
Mr. Jordan Rhoton currently serves as a GIS Technician for Geographic Technologies Group. While attending school, he spent time as a Transportation Planning Intern with the City of Kingsport, Tennessee where he contributed to a land use and transportation study of a development area, analyzing the area's existing GIS layers in ArcMap and making recommendations for infrastructure improvements. While at GTG he has worked on numerous GIS technical projects for clients and has performed GIS data services including map creation, data creation, and maintenance. He has also assisted with data assessments and performs visual assessments and data collection. He makes road centerline accuracy adjustments, he manages attributions, and he serves in the quality control role for data collection, creation, and maintenance.

PROJECT EXPERIENCE: Mr. Rhoton has performed these duties for a variety of clients and most recently the following projects: **CALFIRE, CA** – Data management and creation / **Town of Windsor, CA** – Data analysis and testing / **City of Richmond, BC, Canada** – Data assessment

Team Expertise

GTG is a full-service GIS firm. We support our clients in the design of their systems and solutions. We specialize in assisting city and county governments with the design, implementation, administration, management, and support of all facets of their systems. Our company hires only the most qualified GIS experts. We have extensive experience with ArcMap, ArcGIS Pro, ArcGIS Online, and ArcGIS Enterprise. Our team and company offer a unique mix of talent and certifications that will meet and exceed the expectations of the city as follows:

- **Geographic Information System Professionals (GISP)** – The Urban and Regional Information Systems Associations (URISA) certifies GIS professionals in regard to experience and competence in the field of GIS. A GISP certification is indicative of time in the GIS industry, experience, and engagement. Seven of our staff have attained GISP certifications.



- **Project Management Professionals (PMP)** – The Project Management Professional (PMP)® is the world's leading project management certification. Two of our staff hold this certification so far.
- **Esri Specialties** – Esri has a specialty certification process for its business partners. The process and requirements for attaining various specialties are arduous and a company must show an extensive track record and a high level of expertise to attain a specialty. GTG has the following specialties:



- **ArcGIS for Local Government Specialty** – Denotes expertise in local government, GIS, and the ArcGIS platform.
- **ArcGIS Online Specialty** – Identifies GTG as an expert with ArcGIS Online, ready to assist organizations to maximize the use of the ArcGIS Platform with technology and industry expertise, ready-to-use apps, content, and services.



ArcGIS for
Local Government
Specialty



ArcGIS Online
Specialty

- **Release Ready Specialty** – Identifies GTG as a partner that offers solutions, services, or content that uses the latest ArcGIS products. Additionally, Release Ready partners are early adopters of the latest Esri software releases.



- **ArcGIS Hub Specialty** – GTG is in the final stages of attaining the ArcGIS Hub Specialty. This denotes a high level of experience and competence with the implementation and support of the ArcGIS Hub ecosystem.



- **Esri Certifications** – As part of the Esri Specialties, Esri encourages partners to gain Esri Certifications. These certifications are varied. The following is the list of current, pending, and/or certifications that are being pursued by GTG staff:

- **Enterprise Administration Professional** – Andrew Valenski
- **ArcGIS Online Administration** – Trey Hinton
- **Enterprise Geodata Management Associate** – Jonathan Welker
- **Enterprise System Design Associate** – Jason Marshall

- **FME** – GTG is an active user of FME Server and FME desktop. We use the product set for various client projects. Jessy Beasley, GIS Specialist, FME Certified Professional certification.



- **Python Programming** – Multiple members of our team have an expert-level understanding of Python Programming. Led by Jessy Beasley, GTG has created a multitude of python scripts for various tasks and clients. Our latest project, GeoAddresser, is a tool for NG911 data normalization that calls python scripts for data analysis. Various team members have Python scripting skills.



Project Summary

Task	Cost
Enterprise GIS Upgrade	\$24,150
Enterprise Geodatabase Support	\$5,500
Geo-Enablement of Tyler EnerGOV and Tyler Munis	\$11,000
ArcGIS HUB Review and Viewer Deployment	\$6,000
ADHOC GIS Services	\$5,000
Grand Total:	\$51,650



GEOGRAPHIC TECHNOLOGIESGROUP®

Beyond Location Intelligence



919.759.9214



www.geotg.com

Geographic Technologies Group, Inc. (GTG) is one of the country's leading full-service local government GIS consulting companies. GTG's corporate headquarters is located in Goldsboro, North Carolina, with regional offices in Raleigh, North Carolina, and Longview, Texas. GTG has secured state, national, and international awards for software solutions and consulting services. Founded in 1997, GTG celebrates more than two decades of growth and success. Built on its tradition of deploying the very best GIS solutions for local government, GTG now has over 700 clients nationwide. A corporate culture of quality, understanding government operations, and commitment to our clients allows GTG to continue to build an outstanding GIS portfolio.



PLANNING



IMPLEMENTATION



DESIGN



MAINTENANCE & SUPPORT