



75 Langley Drive • Lawrenceville, GA 30046-6935
(tel) 770.822.8720 • (fax) 770.822.8735

August 10, 2015

REQUEST FOR PROPOSAL
RP020-15

The Gwinnett County Board of Commissioners is soliciting competitive sealed proposals from qualified service providers to **Provide Geographic Information Systems (GIS) Basemap Update on an Annual Contract** with Four (4) Options to Renew for the Department of Information Technology Services.

Proposals must be returned in a sealed container marked on the outside with the Request for Proposal number and Company Name. Proposals will be received until **2:50 P.M. local time on September 14, 2015** at the Gwinnett County Purchasing Office, 75 Langley Drive, Lawrenceville, Georgia 30046. Any proposal received after this date and time will not be accepted. Proposals will be publicly opened and only names of submitting firms will be read at 3:00 P.M. A list of firms submitting proposals will be available the following business day on our website www.gwinnettcounty.com.

A pre-proposal conference is scheduled for **10:00 A.M. on August 25, 2015** at the Gwinnett County Purchasing Office, above listed address. All service providers are urged to attend. Questions regarding proposals should be directed to Terri Shirley, Purchasing Associate II at terri.shirley@gwinnettcounty.com or by calling 770-822-7788, no later than 3:00 P.M., **August 26, 2015**. Proposals are legal and binding upon the Bidder when submitted. One unbound original, six (6) bound copies and one (1) copy in adobe PDF on a cd of the entire proposal package.

Successful service provider will be required to meet insurance requirements. The Insurance Company should be authorized to do business in Georgia by the Georgia Insurance Department, and must have an A.M. Best rating of A-5 or higher.

Gwinnett County does not discriminate on the basis of disability in the admission or access to its programs or activities. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County Government should be directed to Michael Plonowski, Gwinnett County Justice and Administration Center, 770-822-8015.

The written proposal documents supersede any verbal or written prior communications between the parties.

Selection criteria are outlined in the request for proposal documents. Gwinnett County reserves the right to reject any or all proposals to waive technicalities and to make an award deemed in its best interest.

Award notification will be posted after award on the County website, www.gwinnettcounty.com and companies submitting a proposal will be notified via email.

We look forward to your proposal and appreciate your interest in Gwinnett County.

Terri Shirley
Purchasing Associate II

TS/jc

The following pages should be returned as part of your proposal document:

References Page, 7
List of Subcontractors Page, 8
Ethics Affidavit Page, 14
E-Verify Page, 15
Fee Proposal Schedule Page, 22-23



Gwinnett County GIS Basemap Annual Update 2016 - 2020

1. Introduction

The Gwinnett County Board of Commissioners is soliciting competitive sealed proposals from service providers to update our existing Geographic Information Systems (GIS) basemap update, including orthophotography.

2. Current Environment

The County utilizes the full suite of ESRI software applications in the creation and maintenance of our GIS data. In addition to our GIS application software we utilize Oracle as our database management system. The County is not interested in deviating from our existing software application or database management system environment, and will only entertain products that provide 100% compliancy and co-existence with our existing or future software environment.

Our current GIS data formats are limited to Esri Geodatabase, shapefiles, TIFF/TFW, and MrSID® image format. The standard desktop and server operating system is Microsoft Windows 2003 Professional, Server, and Advanced Server. Our standard application and database hardware consists of a variety of Hewlett Packard Proliant series file servers. Our typical desktop computer consists of Dell computers with 1 GB to 3 GB of memory. Our standard database management system for Geodatabase is Oracle.

Survey control points which have been established by the County and previous contractors will be provided for use in this project.

3. Project Description

The County is seeking proposals from service providers to provide Aerial Photography, LiDAR collection, digital elevation model, basemap updates, and digital orthophotography for our existing GIS on an annual basis. The County, in cooperation with the selected service providers, will determine which areas of the County will be updated on an annual basis. The County will provide our existing basemap database along with all attribute data as required to perform maintenance updates to the existing data. The data is in Geodatabase format along with all attribute data. The existing orthophotography is also stored in TIFF format; however, this data will be completely replaced each year with the new orthophotography data as a result of this project. All other basemap data will be provided and this will serve as the basis of which all maintenance updates will be performed. It is anticipated that at the end of this annual project we will have separate Geodatabases for each annual update, consisting of our existing data, and the new updated data annually. At the completion of the entire project, we will have updated data for each year beginning in 2016 with options to renew annually through 2020. Each subsequent year will result in updates applied to our existing or previous year's data and delivered as an entire basemap update, including new orthophotography for each year. The completed data must edge match seamlessly with the adjacent, existing map data resulting in completely seamless dataset, The completed data must conform to the County's existing Basemap Mapping Specifications and Geodatabase design requirements. See attached Basemap Mapping Specifications, including Appendix A for planimetric feature list, including Impervious Surface feature designation.

Proposals for this update project must clearly indicate adherence to the Geodatabase requirements of this proposal.

3.1. Project Area

The project will encompass the entire area of Gwinnett County, GA plus a 2500-foot buffer surrounding the border of the County. The area to be mapped shall also include extensions beyond the 2500' buffer in limited areas – as shown on detailed project map. This marked map shall be entitled the "County Contract Map" and shall be attached to and become a part of any contractual agreement. The area of the County is approximately 437 sq. miles.

3.2. Orthophotography

The County is seeking to replace our existing orthophotography with color, multi-spectral (4-band) fully digital orthophotography on an annual basis. The orthophotography should be delivered in GeoTIFF format (or TIFF format with World file—extension *.tfw). The orthophotography must be processed in a manner that will insure consistent color, tone and contrast throughout the entire dataset for the term of this project.

3.3. Planimetric and Topographic Data

The County is seeking to update our existing planimetric, topographic, and hydrographic data based on an annual basis in accordance with our Basemap Mapping Specifications. This should be accomplished with a combination of LiDAR, DEM, and DTM data and stereo-compilation annually. In addition to updating our existing data, the selected service provider should prepare our data in a manner that will improve our ability to produce high quality 3D, ArcGrid, Surface and TIN maps that are optimized for analysis, screen display and printed maps. Update percentage varies per layer and per year, but can be estimated at up to 25%. Existing mapping is available for viewing on the GIS Data Browser: <http://gis.gwinnettcounty.com/OnPointWebsite>, Engineers/Developers tab.

The County will consider the option of new Planimetric and Topographic mapping in the first year only, in lieu of update of existing Planimetric and Topographic data.

4. Requirements

4.1. Scheduling Requirements

Because of internal needs, we require the selected service provider to deliver updates to our existing impervious surface data prior to any other data deliveries, by May 15th each year. Service provider **that cannot adhere to this requirement will be considered non-responsive and will not be selected. This requirement will remain for the entire duration of this project 2016-2020 without exception. Any lapse or failure to meet this requirement at any time during the project may result in cancellation of the project.**

The annual delivery schedules must remain consistent for each year.

4.2. Documentation Requirements

The updates must be fully documented by entering a status code for each feature with each delivery clearly indicating all feature and attribute changes on an annual basis. This data will be considered as part of the annual update requirements and become part of each delivery. All changes to our existing data should be fully documented and supplied to the County. In addition, Ground Control and Aerial Triangulation reports are required annually. All documentation associated with this project must be delivered in Adobe PDF format.

4.3. Quality Control Process

Data quality control will be managed by the use of Esri's GIS Data ReViewer for error-tracking and data review information management. The service provider must be capable of using ESRI's ArcGIS Desktop extension GIS Data ReViewer. The extension must be kept current with the County's version of the software. For more information, see http://www.esri.com/software/arcgis/extensions/gis_data_reviewer/index.html

4.4. Project Coordination Requirements

The prime service providers will be responsible for the overall administration and coordination of projects as assigned. The prime service provider will be responsible for submission of documentation and execution of all services in an efficient and cost effective manner within the stated budget for each year. The prime service provider will also be responsible for establishing and maintaining project schedules and administration from inception to completion for all projects as assigned. The prime service provider is responsible for conducting and attending project review meetings on pre-defined schedules, based on the project plans. The prime service provider is expected to identify a single project manager, or point of contact for all projects as assigned. In an effort to eliminate administrative redundancy, reduce overhead charges, assure rapid communication and quality

control, the County will expect assignment of a project manager based on the specific project requirements. The prime service provider will be responsible for all project billing of any and all sub-contractors. The service provider is expected to work with County's GIS office staff to prepare and maintain all project plans and documentation.

5. Proposal Submission Instructions

5.1. Specific Instructions

The submitted proposal package should be responsive to the specific range of issues elaborated in this request. Submission of excessive "boiler plate" information, including sales brochures is discouraged. Service providers are requested to submit one **(1) unbound original, six (6) bound copies, and one (1) copy in Adobe® PDF format on a cd of the entire proposal package.**

5.2. Proposal Format and Content

Respondents are encouraged to submit clear and concise responses and excessive length or extraneous information is discouraged. In an effort to insure our ability to evaluate and choose a successful service provider for this project, respondents are encouraged to organize their proposal as follows:

Section 1 – Introduction and Executive Summary

Section 2 – Experience and Qualifications

Section 3 – Technical Response and Alternatives

Section 4 – References of Similar Projects

Section 5 – Project Management Information and Procedures

Section 6 – Cost Proposal (**Sealed in a separate envelope**)

Detailed instructions and requirements for use in preparing each section are as follows.

Section 1 – Introduction and Executive Summary

An executive summary should be prepared describing the major facts or features of the proposal, including any conclusions, assumptions, and general recommendations.

Section 2 – Experience and Qualifications

Provide a description of the special experience, capabilities, and technical resources that can be contributed to this assignment by the submitting firm. Briefly summarize experience in relation to this type of project in terms of technical scope, tasks involved, and deliverable products. Respondents should specifically discuss and relate to projects of equal size and complexity as Gwinnett County is seeking. Additionally, respondents should specifically discuss and relate to experience with updating existing basemap data in an Esri Geodatabase format. Project profiles for relevant GIS Data update projects should be included. Respondents are encouraged to include only projects that are similar or larger, in physical size, and complexity as the County. **Smaller or dissimilar projects are discouraged and should be avoided.** Additionally, respondents are encouraged to cite those projects in which members of the proposed project team were extensively involved.

Provide a project organization chart describing all key personnel of the proposed project team including point of contact with the County's agents; personnel responsible for performance of the project coordination of all sub-service providers; personnel responsible for performance of the project manager. Describe any special skills or experience that key personnel might contribute to the successful completion of this particular project. Provide resume information of all key individuals and managerial staff.

Section 3 – Technical Response and Alternatives

Respondents may elect to propose alternative approaches if it is felt they will provide technical, schedule, or cost advantages to this project. The respondents should cite the applicability of alternative approaches or procedures to accomplishing the objectives and requirements of this project. To assure that all proposals will be comparable alternatives will be evaluated against other projects in respect to relevant background and experience. Each respondent must provide a full and complete response to this proposal as written before any full or partial alternative is proposed.

Section 4 – Reference of Similar Projects

A minimum of three (3) references should be provided which demonstrate the required skills and resources to accomplish GIS related projects. The service provider should select references, which clearly represent a previous history of successful GIS data update projects of similar scope and size of the County. The references should be utilizing Esri software/database and be associated with projects for local, state, or federal governments. See attached reference sheet.

Section 5 – Project Management Information and Procedures

Respondents should provide details concerning the formal project management procedures employed on projects of similar size and scope. Each respondent should also include billing procedures, availability of Internet based project and billing status information.

Section 6 – Cost Proposal

Submit a comprehensive cost proposal that will be applied to this project, including any special fees. Fees should include professional fees charged to provide services typically required in projects with similar scope and any additional fees that may be part of this project. **Please complete the attached Cost Proposal form and deliver in a separate sealed envelope.**

6. Project Deliverables

The annual deliverables for this project are as follows:

1. Option1: Update of our existing Planimetric and Topographic data, including annotation, and Building elevation
OR
Option 2: New Planimetric and Topographic mapping –Year 1 only,(in lieu of update of existing data) and Update of the Year 1 Planimetric and Topographic data in Years 2-5, including annotation, and Building elevation
2. Color Digital Orthophotography
3. Expedited delivery update of Impervious Surface data (**THIS MUST BE DELIVERED EACH YEAR PRIOR TO ANY OTHER DATA WITHOUT EXCEPTION**)
4. LiDAR data - All .LAS files by County-defined mapsheet tile.
5. LiDAR Classification data
6. Digital Elevation Model data in Esri Grid format
7. Digital Terrain Model in Esri Grid format

All deliverables must cover the entire project area (see section 3.1). All datasets associated with this project must be delivered to the County on external hard drives supplied by the service provider. The external hard drives should be USB 2.0 compatible. The external hard drives will be used throughout this project and will become the property of Gwinnett County Government upon completion of the project.

6.1. Deliverable Options

Please complete cost proposals for both deliverable options. The decision of which option to choose is at the sole discretion of the selection committee.

7. Selection Procedure**7.1. Grading Criteria**

The proposal package will be evaluated based on their responsiveness to the criteria described below with those criteria's values weighted as follows:

1. Technical Experience	70	points
-------------------------	----	--------

The experience of the firm in preparation of projects of similar scope and size as indicated in this proposal. Emphasis will be placed on firms that have extensive experience in data update projects using of Esri based GIS applications, Geodatabases in coordination with Oracle databases. Emphasis will also be placed on firms with demonstrated successful implementation of basemap updating projects using Esri based technology. The referenced projects should be limited to those completed projects during the past three (3) years utilizing the same or similar software products in local, state, or federal government settings. The referenced projects should include detailed budget information.

2. Cost Schedule	20	points
------------------	----	--------

3. References	10	points
---------------	----	--------

SubTotal	100	points
----------	-----	--------

4. Bonus Points for onsite interview/demonstrations if requested.	10	points
---	----	--------

Possible Total	110	points
----------------	-----	--------

The County reserves the right to ask for additional information and clarification from or about any or all service provider's. The proposals will be evaluated in order to select the firms or teams which rate highest according to the criteria elaborated in above items. The selection committee then, at its discretion, may short list the highest scoring firms and open the cost proposals. Should the County choose to short list the firms, those making the list may be invited to participate in an oral presentation at the discretion of Gwinnett County. The expected project manager should attend any onsite interviews. The full cost of the proposal preparation and all costs incurred to participate in the oral presentation/interview/demonstration are to be borne by the proposing firm.

Based upon the results, the County will negotiate with the firm ranked highest in an attempt to reach agreement. The County reserves the right to negotiate with the highest scoring service provider(s) for price and concessions that are in the best interest of the County. If negotiations with the highest ranked firm are unsuccessful the County may then negotiate with the second ranked firm and so on until a satisfactory agreement has been reached.

**FAILURE TO RETURN THIS PAGE AS PART OF YOUR PROPOSAL DOCUMENT MAY RESULT IN
REJECTION OF PROPOSAL.**

References

Gwinnett County requests a minimum of three, (3) references where work of a similar size and scope has been completed.

1. Customer Name: _____
Address: _____
Description of Project: _____

Date Completed: _____
Contact Name: _____
Telephone: _____ Facsimile: _____
E-Mail Address: _____

2. Customer Name: _____
Address: _____
Description of Project: _____

Date Completed: _____
Contact Name: _____
Telephone: _____ Facsimile: _____
E-Mail Address: _____

3. Customer Name: _____
Address: _____
Description of Project: _____

Date Completed: _____
Contact Name: _____
Telephone: _____ Facsimile: _____
E-Mail Address: _____

Company Name _____

FAILURE TO RETURN THIS PAGE AS PART OF YOUR PROPOSAL DOCUMENT MAY RESULT IN REJECTION OF PROPOSAL.

LIST OF SUBCONTRACTORS

I do _____, do not _____, propose to subcontract some of the work on this project. I propose to Subcontract work to the following subcontractors:

NAME AND ADDRESS	TYPE OF WORK

Company Name_____

PROFESSIONAL SERVICES INSURANCE REQUIREMENTS

(For projects less than \$5,000,000)

1. Statutory Workers' Compensation Insurance
 - (a) Employers Liability:
 - ✓ Bodily Injury by Accident - \$100,000 each accident
 - ✓ Bodily Injury by Disease - \$500,000 policy limit
 - ✓ Bodily Injury by Disease - \$100,000 each employee
2. Commercial General Liability Insurance
 - (a) \$1,000,000 limit of liability per occurrence for bodily injury and property damage
 - (b) The following additional coverage must apply:
 - ✓ 1986 (or later) ISO Commercial General Liability Form
 - ✓ Dedicated Limits per Project Site or Location (CG 25 03 or CG 25 04)
 - ✓ Additional Insured Endorsement (Form B CG 20 10 with a modification for completed operations or a separate endorsement covering Completed Operations)
 - ✓ Blanket Contractual Liability
 - ✓ Broad Form Property Damage
 - ✓ Severability of Interest
 - ✓ Underground, explosion, and collapse coverage
 - ✓ Personal Injury (deleting both contractual and employee exclusions)
 - ✓ Incidental Medical Malpractice
 - ✓ Hostile Fire Pollution Wording
3. Auto Liability Insurance
 - (a) \$500,000 limit of liability per occurrence for bodily injury and property damage
 - (b) Comprehensive form covering all owned, nonowned, leased, hired, and borrowed vehicles
 - (c) Additional Insured Endorsement
 - (d) Contractual Liability
4. Professional Liability Insurance - \$1,000,000 (project specific for the Gwinnett County project) limit of liability per claim/aggregate or a limit of \$1,000,000 per occurrence and \$2,000,000 aggregate.
 - ✓ Insurance company must be authorized to do business in the State of Georgia.
 - ✓ Dedicated Limits per Project Site or Location (CG 25 03 or CG 25 04 or some other form)
5. Gwinnett County Board of Commissioners (and any applicable Authority) should be shown as an additional insured on General Liability and Auto Liability policies.
6. The cancellation should provide 10 days notice for nonpayment and 30 days notice of cancellation.
7. Certificate Holder should read:

Gwinnett County Board of Commissioners
75 Langley Drive
Lawrenceville, GA 30046-6935
8. Insurance Company, except Worker' Compensation carrier, must have an A.M. Best Rating of A-5 or higher. Certain Workers' Comp funds may be acceptable by the approval of the Insurance Unit. European markets including those based in London and domestic surplus lines markets that operate on a non-admitted basis are exempt from this requirement provided that the contractor's broker/agent can provide financial data to establish that a market is equal to or exceeds the financial strengths associated with the A.M. Best's rating of A-5 or better.
9. Insurance Company should be licensed to do business by the Georgia Department of Insurance.
*See above note regarding Professional Liability
10. Certificates of Insurance, and any subsequent renewals, must reference specific proposal/contract by project name and project/ proposal number.

11. The Contractor shall agree to provide complete certified copies of current insurance policy (ies) or a certified letter from the insurance company (ies) if requested by the County to verify the compliance with these insurance requirements.
12. All insurance coverages required to be provided by the Contractor will be primary over any insurance program carried by the County.
13. Contractor shall incorporate a copy of the insurance requirements as herein provided in each and every subcontract with each and every Subcontractor in any tier, and shall require each and every Subcontractor of any tier to comply with all such requirements. Contractor agrees that if for any reason Subcontractor fails to procure and maintain insurance as required, all such required Insurance shall be procured and maintained by Contractor at Contractor's expense.
14. No Contractor or Subcontractor shall commence any work of any kind under this Contract until all insurance requirements contained in this Contract have been complied with and until evidence of such compliance satisfactory to Gwinnett County as to form and content has been filed with Gwinnett County. **The Acord Certificate of Insurance or a preapproved substitute is the required form in all cases where reference is made to a Certificate of Insurance or an approved substitute.**
15. The Contractor shall agree to waive all rights of subrogation against the County, the Board of Commissioners, its officers, officials, employees, and volunteers from losses arising from work performed by the contractor for the County.
16. Special Form Contractors' Equipment and Contents Insurance covering owned, used, and leased equipment, tools, supplies, and contents required to perform the services called for in the Contract. The coverage must be on a replacement cost basis. The County will be included as a Loss Payee in this coverage for County owned equipment, tools, supplies, and contents.
17. The Contractor shall make available to the County, through its records or records of their insurer, information regarding a specific claim related to any County project. Any loss run information available from the contractor or their insurer relating to a County project will be made available to the county upon their request.
18. Compliance by the Contractor and all subcontractors with the foregoing requirements as to carrying insurance shall not relieve the Contractor and all Subcontractors of their liability provisions of the Contract.
19. The Contractor and all Subcontractors are to comply with the Occupational Safety and Health Act of 1970, Public Law 91-956, and any other laws that may apply to this Contract.
20. The Contractor shall at a minimum apply risk management practices accepted by the contractors' industry.

Surety Bonds (If Required)

All of the surety requirements will stay the same except the Surety Company must have the same rating as item 8 above.

Prior to the execution of the contract and at all times that this contract is in force, the service provider shall obtain, maintain and furnish the County Certificates of Insurance from licensed companies doing business in the state of Georgia, per attached requirements.

**ANNUAL
SERVICE PROVIDER CONTRACT
RP020-15 Provide Geographic Information Systems (GIS) Basemap Update on an Annual Contract**

This **CONTRACT** made and entered into this _____ day of _____, 20__ by and between Gwinnett County, Georgia (Party of the First Part, hereinafter called the "County"), and, (Party of the Second Part, hereinafter called the "Service Provider").

NOW THEREFORE, for and in consideration of the mutual promises and obligations contained herein and under the conditions hereinafter set forth, the parties do hereby agree as follows:

1. TERM:

This contract shall commence _____, for a one year period with one option to renew for an additional one year period for the Proposal RP020-15, Provide Geographic Information Systems (GIS) Basemap Update on an Annual Contract.

2. ATTACHMENTS:

Copies of the Service Provider's proposal, including all drawings, specifications, price lists, Instructions to Bidders, General Conditions, Special Provisions, and Detailed Specifications submitted to the County during the Proposal process (hereinafter collectively referred to as the "Proposal ") are attached hereto (Exhibit A) and are specifically incorporated herein by reference. In the event of a conflict between the County's contract documents and the Proposal, the County's contract documents shall control.

3. PERFORMANCE:

Service Provider agrees to furnish all skill and labor of every description necessary to carry out and complete in good, firm and substantial, workmanlike manner, the work specified, in strict conformity with the Proposal.

4. PRICE:

As full compensation for the performance of this Contract, the County shall pay the Service Provider for the actual quantity of work performed. Proposal amount shown on Exhibit A is the total obligation of the County pursuant to OCGA section 36-60-13 (a) (3). The fees for the work to be performed under this Contract shall be charged to the County in accordance with the rate schedule referenced in the Proposal (Exhibit A). The County agrees to pay the Service Provider following receipt by the County of a detailed invoice, reflecting the actual work performed by the Service Provider.

5. INDEMNIFICATION AND HOLD HARMLESS:

Service Provider agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents and employees from and against any and all liability, damages, claims, suits, liens, and judgments, for whatever nature, including claims for contribution and/or indemnification, for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons to the extent arising out of and attributed to the negligent acts, errors, or omissions of the Service Provider. Service Provider's obligation to protect, defend, indemnify, and hold harmless, as set forth hereinabove shall include any matter arising out of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations.

Service Provider further agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents, and employees from and against any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the Service Provider.

6. TERMINATION FOR CAUSE:

The County may terminate this Contract for cause upon ten (10) days prior written notice to the Service Provider of the Service Provider's default in the performance of any term of this Contract. Such termination shall be without prejudice to any of the County's rights or remedies provided by law.

7 TERMINATION FOR CONVENIENCE:

The County may terminate this Contract for its convenience at any time upon 30 days written notice to the Service Provider. In the event of the County's termination of this Contract for convenience, the Service Provider will be paid for those services actually performed. Partially completed performance of the Contract will be compensated based upon a signed statement of completion to be submitted by the Service Provider who shall itemize each element of performance.

8. CONTRACT NOT TO DISCRIMINATE:

During the performance of this Contract, the Service Provider will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, or disability which does not preclude the applicant or employee from performing the essential functions of the position. The Service Provider will also, in all solicitations or advertisements for employees placed by qualified applicants, consider the same without regard to race, creed, color, sex, national origin, age, or disability which does not preclude the applicant from performing the essential functions of the job. The Service Provider will cause the foregoing provisions to be inserted in all subcontracts for any work covered by this Contract so that such provision will be binding upon each subservice provider, providing that the foregoing provisions shall not apply to contracts or subservice providers for standard commercial supplies of raw materials.

9. ASSIGNMENT:

The Service Provider shall not sublet, assign, transfer, pledge, convey, sell or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm, or corporation without the previous consent of the County in writing.

10. WAIVER:

A waiver by either party of any breach of any provision, term, covenant, or condition of this Contract shall not be deemed a waiver of any subsequent breach of the same or any other provision, term, covenant, or condition.

11 SEVERABILITY:

The parties agree that each of the provisions included in this Contract is separate, distinct and severable from the other and remaining provisions of this Contract, and that the invalidity of any Contract provision shall not affect the validity of any other provision or provisions of this Contract.

12. GOVERNING LAW:

The parties agree that this Contract shall be governed and construed in accordance with the laws of the State of Georgia. This Contract has been signed in Gwinnett County, Georgia.

13. MERGER CLAUSE:

The parties agree that the terms of this Contract include the entire Contract between the parties, and as such, shall exclusively bind the parties. No other representations, either oral or written, may be used to contradict the terms of this Contract.

(Signatures Next Page)

IN WITNESS WHEREOF, the parties hereto, acting through their duly authorized agents, have caused this **CONTRACT** to be signed, sealed and delivered.

GWINNETT COUNTY, GEORGIA

By: _____

Charlotte J. Nash, Chairman
Gwinnett County Board of
Commissioners

ATTEST:

Signature

Diane Kemp, County Clerk
Board of Commissioners

APPROVED AS TO FORM:

Signature
Gwinnett County Staff Attorney

SERVICE PROVIDER: _____

BY: _____

Signature

Print Name

Title

ATTEST:

Signature

Print Name Corporate
Secretary (Seal)



RP020-15 Provide Geographic Information Systems (GIS) Basemap Update on an Annual Contract

Page 14

CODE OF ETHICS AFFIDAVIT

**(THIS FORM SHOULD BE FULLY COMPLETED AND RETURNED WITH
YOUR SUBMITTAL AND WILL BE REQUIRED PRIOR TO EVALUATION)**

In accordance with Section 60-33 of the Gwinnett County Code of Ordinances the undersigned bidder/proposer makes the following full and complete disclosure under oath, to the best of his/her knowledge, of the name(s) of all elected officials whom it employs or who have a direct or indirect pecuniary interest in or with the bidder/proposer, its affiliates or its subcontractors:

1. _____
(Company Submitting Bid/Proposal)

2. (Please check ☒ **one** box below)

☐ No information to disclose *(complete only section 4 below)*

☐ Disclosed information below *(complete section 3 & section 4 below)*

3. (if additional space is required, please attach list)

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

Gwinnett County Elected Official Name

4. _____ Sworn to and subscribed before me this

BY: _____
Authorized Officer or Agent Signature

_____ day of _____, 20__

Printed Name of Authorized Officer or Agent

Notary Public

Title of Authorized Officer or Agent of Contractor

(seal)

Note: See Gwinnett County Code of Ethics Ordinance EO2011, Sec. 60-33. The ordinance will be available to view in its' entirety at www.gwinnettcounty.com

1.16.13





75 Langley Drive • Lawrenceville, GA 30046-6935
(tel) 770.822.8720 • (fax) 770.822.8735

gwinnettcounty

RP020-15 Provide Geographic Information Systems (GIS) Basemap Update on an Annual Contract
Page 15

CONTRACTOR AFFIDAVIT AND AGREEMENT
(THIS FORM SHOULD BE FULLY COMPLETED AND RETURNED WITH YOUR SUBMITTAL)

By executing this affidavit, the undersigned contractor verifies its compliance with The Illegal Reform Enhancements for 2013, stating affirmatively that the individual, firm, or corporation which is contracting with the Gwinnett County Board of Commissioners has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act, in accordance with the applicability provisions and deadlines established therein.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services or the performance of labor pursuant to this contract with the Gwinnett County Board of Commissioners, contractor will secure from such subcontractor(s) similar verification of compliance with the Illegal Immigration Reform and Enforcement Act on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Gwinnett County Board of Commissioners at the time the subcontractor(s) is retained to perform such service.

E-Verify * User Identification Number

Date Registered

Legal Company Name

Street Address

City/State/Zip Code

BY: Authorized Officer or Agent
(Contractor Signature)

Date

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 201____

Notary Public
My Commission Expires:

For Gwinnett County Use Only:

Document ID # _____

Issue Date: _____

Initials: _____

* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is "E-Verify" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).
Rev. 6.20.13

GENERAL CONDITIONS
To Service Provider AGREEMENT

Article

- 1 Definitions
- 2 Contract Documents
- 3 Changes and Extra Work
- 4 Personnel and Equipment
- 5 Accuracy of Work
- 6 Findings Confidential
- 7 Termination of Agreement for Cause
- 8 Termination for Convenience of the COUNTY
- 9 SERVICE PROVIDER to Cooperate with other SERVICE PROVIDERS
- 10 Indemnification
- 11 Covenant Against Contingent Fees
- 12 Insurance
- 13 Prohibited Interests
- 14 Subcontracting
- 15 Assignability
- 16 Equal Employment Opportunity
- 17 Anti-Kickback Clause
- 18 Audits and Inspectors
- 19 Ownership, Publication, Reproduction and Use
- 20 Verbal Agreement or Conversation
- 21 Independent Service provider
- 22 Notices

1 DEFINITIONS

Wherever used in this Agreement, whether in the singular or in the plural, the following terms shall have the following meanings:

- 1.1 COUNTY-means Gwinnett County, Georgia, a political subdivision of the State of Georgia.
- 1.2 SUPPLEMENTAL AGREEMENT-means a written order to SERVICE PROVIDER signed by COUNTY and accepted by SERVICE PROVIDER, effecting an addition, deletion or revision in the Work, or an adjustment in the Agreement Price or the Contract Time, issued after execution of this Agreement.
- 1.3 CONTRACT-means the Agreement Documents specifically identified and incorporated herein by reference in Section 2, CONTRACT DOCUMENTS.
- 1.4 AGREEMENT EXECUTION-means the date on which SERVICE PROVIDER executes and enters into an Agreement with the COUNTY to perform the Work.
- 1.5 AGREEMENT PRICE-means the total monies, adjusted in accordance with any provision herein, payable to the SERVICE PROVIDER under this Agreement.
- 1.6 CONTRACT TIME-means the period of time stated in this Agreement for the completion of the Work.
- 1.7 SERVICE PROVIDER-means the party or parties contracting directly with the COUNTY to perform Work pursuant to this Agreement.
- 1.8 DEPARTMENT- means the Director or designee of requesting department(s) named in this solicitation.
- 1.9 DRAWINGS-means collectively, all the drawings, receipt of which is acknowledged by the COUNTY, listed in this Agreement, and also such supplementary drawings as the SERVICE PROVIDER may issue from time to time in order to clarify or explain such drawing or to show details which are not shown thereon.
- 1.10 SPECIFICATIONS-means the written technical provisions including all appendices thereto, both general and specific, which form a part of the Agreement Documents.
- 1.11 SUBSERVICE PROVIDER-means any person, firm, partnership, joint venture, company, corporation, or entity having a contractual agreement with SERVICE PROVIDER or with any of its subservice providers at any tier to provide a part of the Work called for by this Agreement.
- 1.12 WORK-means any and all obligations, duties and responsibilities, including furnishing equipment, engineering, design, workmanship, labor and any other services or things necessary to the successful completion of the Project, assigned to or undertaken by SERVICE PROVIDER under this Agreement.
- 1.13 LIAISON-Representative of the COUNTY who shall act as Liaison between the County and the SERVICE PROVIDER for all matters pertaining to this Agreement, including review of SERVICE PROVIDER'S plans and work.

2 CONTRACT DOCUMENTS

2.1 LIST OF DOCUMENTS

The Agreement, any required bonds, the General Conditions, the Appendices, the Detailed Scope of Work, the Specifications, the Drawings, the Exhibits, and all Agreement Supplemental Agreements shall constitute the Agreement Documents.

2.2 CONFLICT AND PRECEDENCE

2.2.1 The Agreement Documents are complementary, and what is called for by one is as binding as if called for by all. In the event there are any conflicting provisions or requirements in the component parts of this Agreement, the several Agreement Documents shall take precedence in the following order:

1. Supplemental Agreements
2. Agreement
3. General Conditions
4. Detailed Scope of Work
5. Specifications
6. Drawings

3 CHANGES AND EXTRA WORK

The COUNTY may, at any time, request changes in the work to be performed hereunder. All such changes, including any increase or decrease in the amount of the SERVICE PROVIDER'S compensation, which are mutually agreed upon by and between the COUNTY and the SERVICE PROVIDER, shall be incorporated in written Supplemental Agreements to the Agreement.

4 PERSONNEL AND EQUIPMENT

The SERVICE PROVIDER represents that it has secured or will secure, at its own expense, all personnel necessary to complete this Agreement; none of whom shall be employees of, or have any contractual relationship with, the COUNTY. Primary liaison with the COUNTY will be through its designee. All of the services required hereunder will be performed by the SERVICE PROVIDER under its supervision, and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under law to perform such services.

The SERVICE PROVIDER shall employ only persons duly registered in the appropriate category in responsible charge of supervision and design of the work; and further shall employ only qualified surveyors in responsible charge of any survey work.

The SERVICE PROVIDER shall endorse all reports, contract plans, and survey data. Such endorsements shall be made by a person duly registered in the appropriate category by the Georgia State Board of Registration, being in the full employ of the SERVICE PROVIDER and responsible for the work prescribed by this Agreement.

5 ACCURACY OF WORK

The SERVICE PROVIDER shall be responsible for the accuracy of the work and shall promptly correct errors and omissions in its plans and specifications without additional compensations.

Acceptance of the work by the COUNTY will not relieve the SERVICE PROVIDER of the responsibility for subsequent correction of any errors and the clarification of any ambiguities.

6 FINDINGS CONFIDENTIAL

The SERVICE PROVIDER agrees that its conclusions and any reports are for the confidential information of the COUNTY and that it will not disclose its conclusions in whole or in part to any persons whatsoever, other than to submit its written documentation to the COUNTY, and will only discuss the same with it or its authorized representatives. Upon completion of this Agreement term, all documents, reports, maps, data and studies prepared by the SERVICE PROVIDER pursuant thereto shall become the property of the COUNTY and be delivered to the DEPARTMENT.

Articles, papers, bulletins, reports, or other materials reporting the plans, progress, analyses, or results and findings of the work conducted under this Agreement shall not be presented publicly or published without prior approval in writing of the COUNTY.

It is further agreed that if any information concerning the PROJECT, its conduct, results, or data gathered or processed should

be released by the SERVICE PROVIDER without prior approval from the COUNTY, the release of same shall constitute grounds for termination of this Agreement without indemnity to the SERVICE PROVIDER, but should any such information be released by the COUNTY or by the SERVICE PROVIDER with such prior written approval, the same shall be regarded as public information and no longer subject to the restrictions of this Agreement.

7 TERMINATION OF AGREEMENT FOR CAUSE

If through any cause the SERVICE PROVIDER shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the SERVICE PROVIDER shall violate any of the covenants, agreements or stipulations of this Agreement, the COUNTY shall thereupon have the right to terminate this Agreement by giving written notice to the SERVICE PROVIDER of such termination, and specifying the effective date thereof, at least ten (10) days before the effective date of such termination.

Failure to maintain the scheduled level of effort as proposed and prescribed, or deviation from the aforesaid scheduler without prior approval of the COUNTY shall constitute cause for termination. In such event, all finished or unfinished documents, maps, data, studies, work papers and reports prepared by the SERVICE PROVIDER under this Agreement shall become the property of the COUNTY, and the SERVICE PROVIDER shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents, as determined by the COUNTY.

8 TERMINATION FOR CONVENIENCE OF THE COUNTY

The COUNTY may terminate this Agreement for its convenience at any time upon 30 days notice in writing to the SERVICE PROVIDER. If the Agreement is terminated by the COUNTY as provided in this Article 8, the SERVICE PROVIDER will be paid compensation for those services actually performed. Partially completed tasks will be compensated for based on a signed statement of completion to be submitted by the SERVICE PROVIDER which shall itemize each task element and briefly state what work has been completed and what work remains to be done. All such expenses shall be properly documented and submitted to the COUNTY for processing and payment. The County shall be the final authority in the event of any disputes over authorized costs between the COUNTY and the Service Provider.

9 SERVICE PROVIDERS TO COOPERATE WITH OTHER SERVICE PROVIDERS

If the COUNTY undertakes or awards other contracts for additional related work, the SERVICE PROVIDER shall fully cooperate with such other SERVICE PROVIDERS and the COUNTY employees or appointed committee(s), and carefully fit its own work to such additional work as may be directed by the COUNTY. The SERVICE PROVIDER shall not commit or permit any act which will interfere with the performance of work by any other SERVICE PROVIDER or COUNTY employees.

10 INDEMNIFICATION

SERVICE PROVIDER agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents and employees from and against any and all liability, damages, claims, suits, liens, and judgments, for whatever nature, including claims for contribution and/or indemnification, for injuries to or death of any person or persons, or damage to the property or other rights of any person or persons to the extent arising out of and attributed to the negligent acts, errors or omissions of the SERVICE PROVIDER. SERVICE PROVIDER'S obligation to protect, defend, indemnify, and hold harmless, as set forth herein above shall include any matter arising out of any patent, trademark, copyright, or service mark, or any actual or alleged unfair competition disparagement of product or service, or other business tort of any type whatsoever, or any actual or alleged violation of trade regulations.

SERVICE PROVIDER further agrees to protect, defend, indemnify, and hold harmless the COUNTY, its commissioners, officers, agents, and employees from and against any and all claims or liability for compensation under the Worker's Compensation Act arising out of injuries sustained by any employee of the SERVICE PROVIDER.

11 COVENANT AGAINST CONTINGENT FEES

The SERVICE PROVIDER warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by SERVICE PROVIDER for the purpose of securing business and that the SERVICE PROVIDER has not received any non-COUNTY fee related to this Agreement without

the prior written consent of the COUNTY. For breach or violation of this warranty, the COUNTY shall have the right to annul this Agreement without liability or at its discretion to deduct from the Agreement Price of consideration the full amount of such commission, percentage, brokerage or contingent fee.

12 INSURANCE

The SERVICE PROVIDER shall, at all times that this Agreement is in effect, cause to be maintained in force and effect an insurance policy (s) that will ensure and indemnify both GWINNETT COUNTY and SERVICE PROVIDER against liability or financial loss resulting from injuries occurring to persons or property or occurring as a result of any negligent error, act, or omission of the SERVICE PROVIDER during the term of this Agreement. The liability under such insurance policy shall be not less than as stated in the Proposal.

The SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, Worker's Compensation insurance in accordance with the laws of the State of Georgia.

The SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, Professional Liability Insurance with a limit of not less than that as stated in the Proposal.

Additionally, SERVICE PROVIDER shall provide, at all times that this Agreement is in effect, automobile liability insurance with a limit of not less than that as stated in the Proposal.

The policies shall be written by a responsible company(s), to be approved by the COUNTY, and shall be non-cancelable except on thirty-(30) days' written notice to the COUNTY. Such policies shall name the COUNTY as additional insured, except for worker's compensation and professional liability policies, and a copy of such policy or a certificate of insurance shall be filed with the Director at the time of the execution of this Agreement.

13 PROHIBITED INTERESTS

13.1 Conflict of Interest: The SERVICE PROVIDER agrees that it presently has no interest and shall acquire no interest, direct or indirect, that would conflict in any manner or degree with the performance of its services hereunder.

13.2 Interest of Public Officials: No member, officer, or employee of the COUNTY during his tenure or for one year thereafter, shall have any interest, direct or indirect, in this Agreement or the proceeds thereof.

14 SUBCONTRACTING

The SERVICE PROVIDER shall not subcontract any part of the work covered by this Agreement or permit subcontracted work to be further subcontracted without the DEPARTMENT's prior written approval of the subservice provider, except as may have been specifically stated in the SERVICE PROVIDER'S response to proposal per Exhibit A. The DEPARTMENT will not approve any subservice provider for work covered by this Agreement that has not been recommended for approval by the Department Director.

All subcontracts in the amount of \$5,000 or more shall include the provisions set forth in this Agreement.

15 ASSIGNABILITY

The SERVICE PROVIDER shall not assign or transfer whether by an assignment or novation, any of its rights, obligations, benefits, liabilities or other interest under this Agreement without the written consent of the COUNTY.

16 EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, the SERVICE PROVIDER agrees as follows: (1) the SERVICE PROVIDER will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin; (2) the SERVICE PROVIDER will, in all solicitations or advertisements for employees placed by qualified applicants, receive consideration for employment without regard to race, creed, color, sex or national origin; (3) the SERVICE PROVIDER will

cause the foregoing provisions to be inserted in all subcontracts for any work covered by the Agreement so that such provision will be binding upon each subservice provider, provided that the foregoing provision shall not apply to contracts or subcontracts for standard commercial supplies of raw materials.

17 ANTI-KICKBACK CLAUSE

Salaries of architects, draftsmen, technical engineers and engineers, and technicians performing work under this Agreement shall be paid unconditionally and not less often than once a month without deduction or rebate on any account except only such payroll deductions as are mandatory by law. The SERVICE PROVIDER hereby promises to comply with all applicable "Anti-kickback" laws, and shall insert appropriate provisions in all subcontracts covering work under this Agreement.

18 AUDITS AND INSPECTORS

At any time during normal business hours and as often as the COUNTY may deem necessary, the SERVICE PROVIDER shall make available to the COUNTY for examination all of its records with respect to all matters covered by this Agreement. It shall also permit the COUNTY to audit, examine and make copies, excerpts or transcripts from such records of personnel, conditions of employment and other data relating to all matters covered by this Agreement

The SERVICE PROVIDER shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred on the Project and used in support of its proposal and shall make such material available at all reasonable times during the period of the Agreement, and for three years from the date of final payment under the Agreement, for inspection by the COUNTY or any reviewing agencies, and copies thereof shall be furnished upon request. The SERVICE PROVIDER agrees that the provisions of this Article shall be included in any Agreements it may make with any subservice provider, assignee, or transferee.

19 OWNERSHIP, PUBLICATION, REPRODUCTION AND USE

All documents and materials prepared pursuant to this Agreement are the property of the COUNTY. The COUNTY shall have the unrestricted authority to publish, disclose, distribute, and otherwise use, in whole or in part, any reports, data, maps, or other materials prepared under this Agreement without according credit of authorship. The COUNTY shall hold harmless and indemnify the SERVICE PROVIDER against all claims arising out of such use of documents and materials without the SERVICE PROVIDER'S knowledge and consent.

20 VERBAL AGREEMENT OR CONVERSATION

No verbal agreement or conversation with any officer, agent, or employee of the COUNTY, either before, during, or after the execution of this Agreement, shall affect or modify any of the terms or obligations herein contained, nor shall such verbal agreement or conversation entitle the SERVICE PROVIDER to any additional payment whatsoever under the terms for this Agreement. All changes to this Agreement shall be in writing and appended hereto as prescribed in Article 3 above.

21 INDEPENDENT SERVICE PROVIDER

The SERVICE PROVIDER shall perform the services under this Agreement as an independent service provider and nothing contained herein shall be construed to be inconsistent with this relationship or status. Nothing in this Agreement shall be interpreted or construed to constitute the SERVICE PROVIDER or any of its agents or employees to be the agent, employee, or representative of the COUNTY.

22 NOTICES

All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid.

FAILURE TO RETURN THIS PAGE AS PART OF YOUR PROPOSAL DOCUMENT MAY RESULT IN REJECTION OF PROPOSAL.
FIRM INFORMATION

The undersigned acknowledges receipt of the following addenda, listed by number and date appearing on each:

Addendum No. Date

Addendum No.

Date

Certification Of Non-Collusion in Proposal Preparation

(Signature)

(Date)

The County requires that all who enter into a contract for the physical performance of services with the County must satisfy O.C.G.A. § 13-10-91 and Rule 300-10-1-.02, in all manner, and such are conditions of the contract.

In compliance with the attached specifications, the undersigned offers and agrees, if this quote is accepted by the Board of Commissioners within one-hundred-twenty (120) days of the date of proposal opening, to furnish any or all of the items upon which prices are quoted, at the price set opposite each item, delivered to the designated point(s) within the time specified in the quote schedule. By submission of this proposal, I understand that Gwinnett County uses Electronic Payments for remittance of goods and services. service providers should select their preferred method of electronic payment upon notice of award. For more information on electronic payments, please refer to the [Electronic Payment](#) information in the instructions to Bidders.

Legal Business Name

(If your company is an LLC, you must identify all principals to include addresses and phone numbers in your submittal)

Federal Tax ID

Address

Does your company currently have a location within Gwinnett County? Yes ☐ No ☐

Representative Signature

Print Authorized Representative's Name

Telephone Number

Fax Number

E-Mail Address

COST PROPOSAL SHOULD BE SUBMITTED IN A SEPARATE SEALED ENVELOPE CLEARLY MARKED “RP02-15” COST PROPOSAL

FAILURE TO RETURN THIS PAGE AS PART OF YOU PROPOSAL DOCUMENT MAY RESULT IN REJECTION OF PROPOSAL.

Cost Proposal

OPTION 1 DELIVERABLES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.Update of Existing Planimetric and Topographic data annually	\$	\$	\$	\$	\$
2.Color Digital Orthophotography annually	\$	\$	\$	\$	\$
3.Expedited delivery update of impervious surface data annually	\$	\$	\$	\$	\$
4.LiDAR QL2 Acquisition and delivery of data in Year 3	\$	\$	\$	\$	\$
5.LiDAR QL2 Classification and delivery of data in Year 3	\$	\$	\$	\$	\$
6.Processing and delivery of DEM data annually	\$	\$	\$	\$	\$
7.Processing and delivery of Raster DTM data annually	\$	\$	\$	\$	\$
OPTION 1 ANNUAL PROPOSAL TOTAL	\$	\$	\$	\$	\$
OPTION 1 TOTAL PRICE				\$	
OPTION 2 DELIVERABLES	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.New Planimetric and Topographic mapping – Year 1 only and Update of the Year 1 Planimetric and Topographic data in Years 2-5	\$	\$	\$	\$	\$
2.Color Digital Orthophotography annually	\$	\$	\$	\$	\$
3.Expedited delivery update of impervious surface data annually	\$	\$	\$	\$	\$
4.LiDAR QL2 Acquisition and delivery of data in Year 3	\$	\$	\$	\$	\$
5.LiDAR QL2 Classification and delivery of data in Year 3	\$	\$	\$	\$	\$
6.Processing and delivery of DEM data annually	\$	\$	\$	\$	\$
7.Processing and delivery of Raster DTM data annually	\$	\$	\$	\$	\$
OPTION 2 ANNUAL PROPOSAL TOTAL	\$	\$	\$	\$	\$
OPTION 2 TOTAL PRICE				\$	

ALL PRICES MUST INCLUDE ALL NECESSARY PROFESSIONAL AND TRAVEL EXPENSES REQUIRED TO COMPLETE THE SERVICES AS REQUIRED.

Company Name_____

Gwinnett County, Georgia GIS Basemap



Mapping Specifications

Revised: July 16, 2015

By: Sharon Stevenson, GIS Manager

1. INTRODUCTION

1.1 General Mapping Specifications

1.1.1 Map Accuracy

The Contractor will produce base maps in strict accordance with accepted stereophotogrammetric procedures, as specified in the FGDC Geographic Information Framework Data Content Standards, for each map scale. The maps shall be compiled for each area at a scale equal to or larger than the scale required. Map compilation scales for the areas to be mapped will be limited to an approximate five-times (5X) enlargement over the scale of the aerial photography for each respective area. Example: a photo scale of 1" = 500' is the maximum scale allowed for a compilation scale of 1" = 100'. Only precision analytical and/or softcopy stereoplotting instruments of recognized proven accuracy shall be used in compilation work.

1.1.2 Basic Modular Unit

The 1" = 400' map is the smallest scale map included in these specifications and is designated the "Basic Modular Unit" in a series of maps which provide for four map scales, as follows:

- a. 1" = 400'. The boundaries of each Basic Modular Unit shall be the grid ticks of the Georgia State Plane Coordinate System evenly divisible by 10,000 ft. in north-south and east-west directions.
- b. 1" = 200'. Each map will be one-quarter (1/4) of a Basic Modular Unit (see subsection 1.2.2 a.). The neat image area shall be bounded by the Georgia grid ticks whose eastings and northings are evenly divisible by 5,000 ft.
- c. 1" = 100'. Each map will be one-sixteenth (1/16) of a Basic Modular Unit (see subsection 1.2.2 a.). The neat image area shall be bounded by the Georgia grid ticks whose eastings and northings are evenly divisible by 2,500 ft.
- d. 1" = 50'. Each map will be one-sixty-fourth (1/64) of a Basic Modular Unit (see subsection 1.2.2 a.). The neat image area shall be bounded by the Georgia grid ticks whose eastings and northings are evenly divisible by 1,250 ft.

1.1.3 Numbering of the Basic Modular Units

Each Basic Modular Unit map shall be identified by a map number derived from selected paired digits of the east and north coordinates of the southwest corner of the module. For example, a map with the lower left corner coordinates of E = 640,000 and N = 530,000 will be known as Map Number 6543. The digit "6" in the 1,000,000th place of the east coordinate is paired with the "5" in the 100,000th place of the north coordinate; the digit "4" in the 10,000th place of the east coordinate is paired with the "3" in the corresponding position in the north coordinate. These four digits uniquely define the modular map unit in any one county. Thus, the map in Gwinnett County having coordinates for its southwest corner of E = 2,660,000 and N = 1,010,000 can be identified as Gwinnett County Map Number 6061. The map numbers at the 1" = 400' scale will contain only four digits. The map numbers at the 1" = 200' scale and the 1" = 100' scale will contain only six digits. For these larger scales, the first four digits of the map numbers shall be those of the Basic Modular Unit with the addition of a two-digit suffix determined according to the chart in Appendix I. There will be a decimal point or underscore between the four digits of the Basic Modular Unit and the suffix, for example Gwinnett County Map Number 6061.15 or 6061_15.

1.2 Deliverable Products

1.2.1 Aerial Imagery

Vertical aerial imagery will be flown at a scale of 1" = 500' for the areas that will be mapped at a scale of 1" = 100'.

- a. Flight plan

- b. 4-band Multi-spectral digital photo image files on DVD or external hard disk drives
- c. Camera calibration report
- d. Digital navigation report to include x, y, z, omega, phi, kappa with associated statistical quality for each image center.
- e. Photo indexes
 - (1) One (1) negative of indexes, or digital alternative
 - (2) One (1) digital based continuous tone positive of the indexes

1.2.2 Horizontal and Vertical Control

- a. Schematic diagram of horizontal and vertical control
- b. All survey records
- c. Computations

1.2.3 Analytical Triangulation

- a. Diapositives or digital alternative
- b. Aerial triangulation report:
 - (1) graphic layout
 - (2) Computer plot of analytical control
 - (3) Aerial Triangulation Computations
 - (4) Narrative

1.2.4 Basemap Maps

1.2.4.1 Format

The final delivery data must be in ArcGIS[®] Geodatabase format and of the same version number as the County at time of delivery, our current version is 10.1 SP1. Gwinnett County will not accept data that is not compatible with our current version of ArcGIS[®] Server, Oracle[®], GeoTIFF, or MrSID[®] at time of delivery.

1.2.4.2 Media

The digital data files will be provided on DVD and external USB 2.0 hard disk drives compatible with the County's hardware and software for reading such media. The DVD media and external USB 2.0 hard disk drives become the property of Gwinnett County at the completion of the project and will not be returned to the service provider.

1.2.5 Digital Orthophoto Maps

Digital orthophotos will be prepared for the entire area specified on the 'County Contract Map' (see section 2.1). Final deliverables will be in GeoTIFF format. This data is to be delivered to the County on DVD or external USB 2.0 hard disk drives compatible with the County's hardware and software for reading such media.

1.2.6 LiDAR Data

All raw data captured will be delivered. Raw LiDAR data will be delivered in .LAS file format

A report of LIDAR collection parameters will be delivered in digital format, including, but not limited to, make/model of equipment used, point spacing, point density, pulse rate, field of view and aircraft altitude.

1.2.7 Digital Elevation Model

County-wide Digital Elevation Model (DEM) in ESRI GRID format will be delivered.

1.2.8 Digital Data Media Retention

All computer tapes, disks, CDs, DVD's and external hard disk drives and any other digital data media are to be maintained until 3 months after the completion of the project.

1.2.9 Miscellaneous

All other materials not listed above that were used in the preparation of the maps described in this RFP.

2. AERIAL IMAGERY

All aerial imagery shall be captured in full color multispectral images using digital photography methods, utilizing plane-mounted cameras which meet the criteria stated in this section.

2.1 Project Area and Contract Map

The location, size, and boundaries of the areas to be mapped will be outlined on an overlay of a 1" = 2,000' scale quadrangle map and further subdivided and designated in a way to show the number and scales of the final base maps to be prepared. The area to be mapped shall extend a minimum of 1000' feet beyond the County boundaries. The area to be mapped shall also include a minimum of 5280' feet in limited areas – see detailed project map. This marked map shall be entitled the "County Contract Map" and shall be attached to and become a part of any contractual agreement. The flight plan proposed by the Contractor shall be drawn on a copy of this map or on a map that is acceptable to the County, and submitted to the County for approval prior to flying aerial photography.

2.2 Conditions During Imagery Collection

Vertical photography shall be flown during the period when deciduous trees are barren, between the hours of 10:00 A.M. and 2:30 P.M. Eastern Standard Time, and when the sun angle or elevation is not less than 30 degrees above the horizon. For some mapping purposes (other than production of orthophotos) these hours may be extended, with the prior written permission of the County. Photography will not be undertaken when the ground is obscured by snow, haze, fog, or dust; when streams are not within their normal banks; or when the clouds or cloud shadows will appear on more than five percent (5%) of the area in any one photograph. The photographs shall not contain objectionable shadows caused by relief or low solar altitude. Photographic targets will be used to mark horizontal control points for aerial triangulation and control of base map compilation. The Contractor will inform the County when the targets are placed and remove the targets within ten (10) days of the last flight day.

2.3 Scale of Aerial Images

The altitude above average ground elevation for aerial photography shall be such that the images will be at the scale specified in the following schedule:

Map Scale	Image Scale
1"=100'	1"=500'

Images deviating from the following scales by more than five percent (5%) may be rejected.

2.4 Flight Plan

The Contractor will submit a flight plan for approval of all photography to be flown. Flight lines will coincide with the centerline of each tier of maps. Each flight line will be flown continuously across the project area. The principal points of the first two and the last two exposures of each flight strip shall fall outside the boundaries of the area to be mapped. All side boundaries shall be covered by a minimum of twenty-five percent (25%) of the photo image format.

2.5 Re-flights

Imagery deemed unacceptable by the County will be reflight. Unacceptable aerial imagery shall be corrected by the Contractor at no additional cost to the County, with re-flight coverage overlapping the accepted photography by a sufficient amount to provide continuous stereoscopic coverage.

2.6 Spacing of Aerial Imagery

Overlapping aerial imagery in each flight line shall provide full stereoscopic coverage of the area to be mapped.

2.7 Endlap

Photography used in the development of orthophoto maps shall have an endlap of approximately eighty percent (80%) to ensure that full stereo coverage is available for the entire county.

2.8 Sidelap

Sidelap shall be adequate to satisfy the requirement for map-centered photography or that will allow the contractor to satisfy the requirements for the digital products that are to be developed in accordance with these specifications. Minimum sidelap shall be thirty (30%).

2.9 Crab

Crab in excess of three (3°) degrees may be cause for rejection of a flight line or any portion thereof in which the excess crab occurs.

2.10 Tilt

Tilt of the camera/sensor from verticality at the instant of exposure shall not exceed three (3°) degrees, nor shall it exceed five (5°) degrees between successive exposure stations. Average tilt over the entire project shall not exceed one (1°) degree.

2.11 Pitch

Pitch of the camera/sensor from verticality at the instant of exposure shall not exceed three (3) degrees, nor shall it exceed five (5°) degrees between successive exposure stations. Average tilt over the entire project shall not exceed one (1°) degree.

2.12 Aircraft

The aircraft to be used shall be equipped with all essential navigational and photographic instruments (such as airborne GPS and IMU) and operated by a well-trained and experienced crew and flown by a licensed pilot. Performance of the aircraft shall be adequate to complete the proposed project in accordance with these specifications. All operations shall be in conformity with applicable official and Federal Aviation Administration (FAA) regulations and ordinances.

2.13 Aerial Camera

The digital aerial camera used shall have forward motion compensating devices. An U.S. Geological Survey (USGS) camera calibration report no more than three (3) years old is required for each camera used to obtain aerial photography. The camera calibration report shall be submitted to the County for approval before proceeding with work. The methods, procedures, and requirements described in this subsection shall be those utilized by USGS and will be included in the camera calibration report.

2.13.1 Camera and Lens

The aerial camera shall be a precision aerial mapping camera equipped with a low distortion, high resolution lens. The calibrated focal length of the lens shall be 153 millimeters \square 3.0mm (6 inch focal length). The characteristics of a nominal 6-inch camera shall be as follows:

- (1) Focal length, 153 mm \square 3.0mm Universal Aviogon, Pleogon A, or equivalent.
- (2) The lens should have an area-weighted average resolution (AWAR) of at least 85.00 line pairs per millimeter as determined by the U.S. Geological Survey.
- (3) Usable angular field, at least ninety degrees.
- (4) The following table lists the minimum acceptable radial and tangential resolution cycles (line pairs) per millimeter (measured with type V-F spectroscopic emulsion on micro flat glass plates exposed at maximum lens aperture):

<u>0⁰</u>	<u>7.5⁰</u>	<u>15⁰</u>	<u>22.5⁰</u>	<u>30⁰</u>	<u>35⁰</u>	<u>40⁰</u>
57	57	48	40	34	14	14

2.13.2 Shutter speed and efficiency

- (1) The camera shall be equipped with a between-the-lens shutter of variable speed as approved by the County. The range of speed settings shall be such that in conjunction with flight height and aircraft speed, the camera will produce negatives that will result in high definition photographs. The shutter shall also have a speed of 1/200 second or slower for laboratory testing.
- (2) The effective exposure time and the efficiency of the shutter as mounted in the camera will be measured at maximum aperture and the shutter shall have a minimum efficiency of 70 percent at a speed of 1/200 second.
- (3) This test shall be made in accordance with "Method I", American National Standard PH3-48-1972 (R1978).

2.13.3 Digital Image Quality

Digital photography images shall be of sufficient quality for 6 inch pixel (1/2 foot) resolution.

2.13.4 Disposition of Digital Aerial Photo Image Files

The digital aerial photography image files are the property of the County and shall be delivered to the County when the base mapping is completed, unless otherwise directed. All digital imagery must be delivered to the county on external USB 2.0 hard disk drives that become the property of the County.

3. HORIZONTAL AND VERTICAL CONTROL

3.1 General

Sufficient horizontal and, if applicable, vertical control surveys shall be established by the Contractor for all photogrammetric mapping purposes. Prior to the establishment of the necessary basic horizontal and vertical control, the Contractor shall make a thorough search of the project area for existing control of second order accuracy or better, as established by the National Geodetic Survey (NGS, formerly the United States Coast and Geodetic Survey [CGS]) or the State of Georgia. Additional control points to be established will be monumented with permanent monuments as described in subsection 4.5. All such control recovered or established shall be utilized to the fullest extent. The Contractor will indicate on a copy of the County Contract Map the horizontal control stations (existing and to be established), that will be used on the project. The Contractor will provide a brief description of the equipment and methods to be used for new ground surveys prior to conducting any control surveys, if required. All basic horizontal control shall be established by Global

Positioning. The horizontal and vertical control surveys will be performed under the supervision of a Georgia licensed Land Surveyor.

A minimum of one hundred eighty (180) first-order control points will be set county-wide: two Blue Booked and the other will be "B" order county-wide. These points will consist of a main control point with intervisible a back azimuth point. When using GPS to establish permanent control, the Contractor shall adhere to the specifications for first-order surveys in the most current relevant Federal Geodetic Control Sub-Committee (FGCS) document (currently Geometric Geodetic Accuracy/Version 5.0) for the two Blue Booked points and to the requirements in this RFP for the other "B" order survey points. Horizontal and vertical survey control shall be established by the contractor appropriate to support a photogrammetric base mapping, DEM production, and digital orthophotography base mapping, consistent with ASPRS Class 1 Accuracy Standards. Subsequent mapping activities will produce digital orthophotography, digital planimetrics, and contours at two (2) foot intervals in the areas mapped at 1" to 100' scale, at four (4) foot intervals in those areas mapped at 1" to 200' scale, and at eight (8) foot intervals in those areas mapped at 1" to 400' scale. The contractor shall recover and utilize all existing control, subject to requirements of list in this RFP, to the fullest extent.

3.2 Horizontal Control Surveys

All horizontal control will be established by using Global Positioning System techniques and conform to current NGS second order class I standards. The horizontal control shall be extended from existing survey control, and shall be correlated to the Georgia State Plane Coordinate System, 1983 North American Datum, 1994 HARN adjustment. The Contractor shall compute, adjust, and provide Georgia State Plane Coordinates descriptions of all horizontal control stations. All records and computations (unadjusted and adjusted) will be delivered to the County for approval before any map compilation is begun. Pairs of intervisible monuments will be set when additional horizontal control is required. Monumented stations shall be described and referenced in field books.

3.3 Vertical Control Surveys

All basic vertical control shall be extended from existing NGS, or Georgia DOT bench marks and referenced to the National Geodetic Vertical Datum, 1988 adjustment. The vertical control survey shall be established according to NGS standards and procedures, and the survey shall be of third order accuracy or higher. The Contractor will indicate on a copy of the County Contract Map all vertical control lines to be surveyed and will submit the copy to the County for approval prior to any field work. All basic vertical control lines and photo point control shall be established as closed or looped lines and tied to monuments of third order accuracy or higher. The maximum length of a line between control or junction monuments shall not exceed 10 km for a single-run line and 25 km for a double-run line unless second order procedures are used. Error of closure of the third order circuit in feet shall not be greater than 0.05 times the square root of the length of the level line in miles. The Contractor shall compute, adjust, and furnish elevations based on National Geodetic Vertical Datum, 1988 Adjustment, and shall provide complete descriptions of all vertical control bench marks. All field records and computations (unadjusted and adjusted) will be delivered to the County for approval prior to any map compilation.

3.4 Photo Control Points

The Contractor will indicate on a copy of the County Contract Map all photo control points for each aerial photograph. The Contractor shall deliver a digital GIS format County Contract Map with all photo control points marked.

3.5 Permanent Monuments

A permanent monument is defined as a shaft of concrete, metal, or precast concrete with metal reinforcement in or on which a survey disk or cap is imbedded or affixed, and which is capable of being detected by commonly used magnetic or electronic locators; is buried or driven nearly vertically in the earth in such a way so as to possess horizontal stability; and is extended below the normal frost line or a minimum depth of 30 inches below the ground surface unless a subsurface obstruction

dictates a lesser depth. A survey disk or cap with a stem set flush in a drill hole in bedrock, rock outcrop, or concrete structure shall also be defined as a permanent monument. Monuments shall be one-half (1/2) inch inside diameter or greater iron pipes, one-half (1/2) inch diameter or greater solid metal rods, or four (4) inches by four (4) inches or greater concrete shafts. If iron pipes or rods are used without concrete, they must be flush with or below the ground surface. Iron pipes or rods projecting one (1) inch or more above the ground surface shall be encased in concrete from the disk or cap to eight (8) inches below the ground surface. The disk or cap of each monument established by the Contractor shall be stamped with the County name and a sequential number obtained from the traverse. In the event that both vertical and horizontal control are to be established along the same route, the vertical control shall be established on horizontal control monuments that are accessible; no additional vertical control permanent monuments will be required along such routes.

3.6 Survey Records

The following information shall be delivered to the County:

a. Field Notebooks and Data Collector Printouts. Field notebooks shall be carefully and neatly prepared, identified, indexed and preserved. All data regarding the establishment and extension of horizontal and vertical control, including descriptions of all established and recovered monuments, shall be recorded. Where existing control points are recovered by the Contractor in extending the basic control required by the contract, the field notebooks shall contain:

- (1) information as to the general condition of the recovered mark,
- (2) the original description,
- (3) exact letter and numbers stamped on (not cast in) the mark;
- (4) amended description, if applicable,
- (5) additional tie data, if any,
- (6) a sketch of the location as appropriate to facilitate future recovery.

The field notebooks or printouts from data collectors shall contain the name and the field address/location of the party chief, and the identity and calibration data of the survey instruments. Electronic distance measurement instruments (EDM) must be checked on an NGS calibrated base line before field measurements are begun. The standard error of the EDM must meet or exceed the requirements as stated in the FGCC Classification, Standards of Accuracy for the order and class of survey being performed. Each field notebook or printout from a data collector shall be numbered and marked on the cover with a brief description of its contents, shall be carefully indexed, and shall have all pages numbered. Each horizontal traverse line and vertical control line shall be identified in the field book by number and brief description. The first page used on each day of field work shall be dated. Each field notebook shall be free of erasures. The County may reject any line of horizontal or vertical control established by the Contractor if any erasure is made in recording the data for that line.

b. Computations. All computations and adjustments of control data shall be referenced to the source documents. All field records, horizontal and vertical computations, and control data shall be delivered to the County for review and approval prior to running of Fully Analytical Aerial Triangulation (FAAT).

c. Control Diagram. The Contractor shall furnish a schematic control diagram. This diagram will indicate all horizontal and vertical control pertinent to this project and will be shown on a copy of the contract map. This schematic diagram shall show all existing and established control points properly identified in their approximate location. It will also show all traverse lines with their designations, including the beginning and ending points.

d. Control Data. The Contractor shall provide the County with the complete information as listed below for all monumented control points established and/or recovered by the Contractor:

(1) Information on control points established by the Contractor. This information shall be collected on monument description cards and shall include the following information.

- a) Designation of stations (name and sequential number).
- b) Establishing agency (name of Contractor or subcontractor who established the control point).
- c) Date of establishment.
- d) Horizontal and/or vertical control data.
- e) A complete description of the nature and location of the point to include a “to reach” description referenced to nearby landmarks and identified by field survey ties (bearing and distance) to three or more definable photo image points in the immediate vicinity.
- f) The location of each marked horizontal control point, symbolized on the face of the appropriate photograph by a triangle and annotated on the back with reference to its station designation as in a) above.

3.7 Feet/Meter Conversions

The U. S. Survey Foot (1 meter = 3.2808333333 feet) shall be used in all conversions of The Georgia State Plane Coordinates from meters to feet or feet to meters. All final control data shall be in feet, and the datum used (e.g. NAD 83) will be noted on any sheets bearing coordinates.

3.8 Global Positioning System (GPS)

The Contractor will establish all horizontal control through the use of the Global Positioning System (GPS). GPS satellite surveying is a three-dimensional measurement system based on observations of the radio signals of NAVSTAR Global Positioning System. The GPS observations are processed to determine station positions in Cartesian coordinates (X, Y, Z), which can be converted to geodetic coordinates (latitude, longitude, and height-above-reference ellipsoid).

3.8.1 Information Required for GPS

The Contractor will provide the following information:

- 1) a description of the equipment to be used;
- 2) a detailed description of the field and office methods and techniques to be used;
- 3) documentation showing the Contractor’s training and/or experience in the use of GPS;
- 4) a listing of the software that will be used to process and adjust the raw tracking data;
- 5) certification that the software is capable of producing results that meet the specified survey accuracy standards (software can be certified by processing test data sets collected on FGCC GPS test networks).

3.8.2 GPS Specifications

When using GPS to establish control surveys, the Contractor shall adhere to the specifications in the “Geometric Geodetic Survey Standards and Specifications for Geodetic Surveys Using GPS Relative Positioning Techniques” as incorporated into the Federal Geodetic Control Committee’s (FGCC) “Standards and Specifications for Geodetic Control Networks” (the Contractor shall use the most recent version of proposed GPS specifications until such time as the FGDC incorporates GPS specifications into its Standards and Specifications for Geodetic Control Networks).

3.8.3 Survey Records

All original field survey notes, records, books, logs, diskettes, CD’s, DVD’s, or field data recording media of any form, hard-copy or digital, will be delivered to the County. The

Contractor will provide for back-up of these data in the event of loss during shipping. Pertaining specifically to GPS surveys, the following will also be provided to the County by the Contractor:

- (1) observation logs;
- (2) log of time offset measurements (when appropriate);
- (3) log of weather instrument comparison measurements (when appropriate);
- (4) a table summarizing stations occupied, observing start and stop times (UTC), satellites observed (NAVSTAR or Standard Vehicle numbers), receiver serial numbers, antenna eccentricity measurements, and any brief remarks that call attention to problems that are described in more detail in the logs;
- (5) a schematic prepared in digital DGN format at a scale of 1" = 2,000' showing all stations occupied and base lines measured. Different line types (dashed, dotted, etc.) should be used to indicate base lines common to an observing session. When survey points are too close together to be depicted clearly on the network schematic, they should be shown in an inset schematic;
- (6) equipment failure reports.

All data submitted must be neat, legible, and typed or written in black ink. All raw data must be checked. All computations must be checked and initialed.

All survey records must required in this section (4.8.3 Survey Records) must be supplied in digital format, no paper records will be accepted as a final delivery.

3.8.3.1 Observations and Reduced GPS Data

Observations submitted to the County will include the raw carrier phase measurements, digitized station occupation data such as weather measurements and antenna offset measurements (when appropriate), and digitized project data such as station listings. Reduced GPS data submitted to the County will include base line vector components in the Cartesian system (X,Y,Z), variance-covariance data (or variance-correlations), number of observations available/used in the solution, and standard deviation of the "range" residuals. When the "single" base line processing method (two-station solution) is employed, these data will be provided for all possible base lines dependent and independent. For example, if there were three receivers used during an observing session, three base lines will be processed; if there were four receivers, six base lines will be processed; and so on. When the "session" processing method (three or more station combined solution using all data from each observing session) is used, $r-1$ independent base line solutions will be provided where r is equal to the number of receivers collecting data simultaneously during an observing session. When the "network" processing method (two or more session combined solution using all data from each observing session) is used, $s-1$ independent base line solutions will be provided where s is the total number of stations in the network solution. The raw carrier phase observations will be submitted in the Standard Data Exchange Format as used by NGS or in an optional format approved by the County. The unadjusted base line vectors, station occupation, and project data will be submitted in accordance with NGS's Input Formats and Specifications of the NGS Data Base for GPS data.

3.8.3.2 Adjusted Data

All digital data submitted will contain adjusted coordinates whenever they appear (latitude, longitude, ellipsoid height). The adjusted coordinates must be the result of a three-dimensional least-squares minimally constrained adjustment in the reference system for the satellite ephemerides (WGS 72 or WGS 84). State plane coordinate values will be delivered in NAD 83. The Contractor will provide a hard-copy computer listing of the adjustment that includes all input and output. Minimal outputs are the residuals (actual corrections to observations), normalized residuals, reference-variance, correlations, adjusted base line vectors, and adjusted geodetic positions.

3.8.4 General Requirements

- 1) The monumented point for a proposed GPS station must be in a location suitable for occupation with a survey tripod, stand, tribrach, or GPS height pole. Monumented points located on vertical surfaces such as bridge abutment walls, building walls and retaining walls, etc. are not suitable GPS stations. If it becomes necessary to connect the GPS survey to a station that is not acceptable for direct occupation, a permanent offset station will be established and monumented and tied to the existing network station using traditional surveying methods.
- 2) All GPS points must be established in pairs. Only one coordinate position is required to be established; the second position will be used as an azimuth mark. The Contractor may establish the azimuth mark by utilizing solar or polaris observations.
- 3) All stations established using GPS will be monumented using permanent markers.
- 4) If an antenna is moved during an observing session, the set of observations for that session will not be acceptable.
- 5) The antenna must be located where there are no major obstructions overhead.
- 6) The antenna should be located where there will be a minimum of radio interference. Areas where radio interference is an issue; medium frequency radar and high power transmission antennas; high voltage power lines and transformers; microwave relay towers; and excessive noise from automotive ignition systems must be avoided.
- 7) The antenna should be positioned at a height so as to avoid ground reflection of the satellite signal.
- 8) The antenna must not be placed near metal structures.
- 9) The antenna phase center will be plumbed over the survey point using an optical plummet, collimator or similar instrument. The plumbing for antennas set up on tripods shall be checked with a plumb bob at least once during the survey. This check is for the purpose of determining gross plumb errors of 1 cm or more. When back-to-back sessions are observed and an antenna occupies the same station for both sessions, the tripod will be reset and replumbed between sessions.
- 10) All GPS receivers should have a signal input port for an external frequency standard.
- 11) Receivers must have the capability to track a minimum of four GPS satellites simultaneously.
- 12) The Contractor will occupy two or more local first or second order NGS marks during a project. Some vertical data must be obtained via GPS to obtain a model of the geoid in the project area; therefore, a minimum of two vertical control monuments must be occupied.
- 13) After the receiver has been set up, the Contractor shall perform the equipment tests as outlined in the manufacturer's instruction manuals. The tests must be performed at the commencement of the observations at a station.
- 14) The power source for equipment must be stable and continuous to minimize unnecessary breaks in the observations or damage to the equipment that would affect the quality of the data.

3.9 Airborne Kinematic GPS

Kinematic GPS positioning can be used for a variety of surveying and mapping applications. It is particularly useful for photogrammetric mapping. It can also be used to provide accurate exposure station positions of the aerial camera at the instant that a photograph is imaged.

If airborne GPS is to be used for this project, the Contractor will describe the equipment and the procedures that will be used.

4. ANALYTICAL TRIANGULATION

Fully Analytical Aerial Triangulation (FAAT) may be used to extend the horizontal ground control subject to the requirements stated below. Maps produced by techniques of aerial triangulation must use horizontal control established from the second order horizontal points indicated on the Contract Map. If the Contractor is unable to locate the horizontal control points indicated in the proposal to the State, other horizontal control that exists in close proximity may be substituted with the prior approval of the County. If no suitable substitutes exist, the Contractor will establish new photo control points by the appropriate survey methods. These new photo control points must be approved by the County. The Contractor will include as a minimum in the analytical triangulation adjustment all horizontal control that was shown on the Contract Map as points to be paneled or to be set and that was included in the proposal to the State.

4.1 Nominal Scales for Triangulation

Aerial triangulation may be used for horizontal scaling to produce maps of 1" = 400', 1" = 200' and 1" = 100'. The nominal scale of the mapping photographs will be 1" = 500' for the 1" = 100' maps.

4.2 Ground Coordinate Systems

All ground positions determined by aerial triangulation will be in the Georgia State Plane Coordinate System. Elevations of monumented positions will be used in FAAT computations.

4.3 Standards

4.3.1 Positional Accuracy

The root-mean-square error (vector of both northing and easting coordinate errors) of passpoints established by aerial triangulation shall not exceed one-fiftieth (1/50) of the denominator of the finished map scale.

4.3.2 Elevation Accuracy

The elevation accuracy of passpoints has to meet the required accuracy for topographic mapping at the mapping scales defined for this mapping effort.

4.4 Control Photographs

All targeted and photo identifiable control points to be used in aerial triangulation shall be located and symbolized on the digital images.

4.5 Passpoints

4.5.1 General Requirements

Passpoint locations will be manually selected by reviewing the control photographs with a pocket stereoscope or other suitable stereo-viewing device. Selected passpoints shall be located, symbolized, and labeled on the image side of the control photographs. All selected Passpoint locations will lie on unobscured level ground whenever topographic conditions permit. When aerial triangulation is being performed in support of orthophoto mapping, an additional effort will be made to avoid placement of passpoints in areas of very bright background which could render a passpoint unusable (not locatable) on the orthophoto images.

4.5.2 Distribution of Passpoints for Fully Analytical Aerial Triangulation

Individual frames will carry a minimum of nine (9) passpoints, with the exception of end frames of flight lines which will carry a minimum of six (6) passpoints. One (1) point will lie near the corner of each neat model, and one (1) point will lie near the nadir position of each neat model. It is recognized that deviation from the ideal distribution may be necessary for those photographs covering bodies of water or areas of heavy ground cover. Tie points between strips will occur with a

frequency of at least one (1) per frame. As a general rule, wing passpoints within lines of flight will also serve as tie points between strips.

4.6 Checkpoints

Checkpoints are horizontal control points that have been established by ground control procedures throughout the block for accuracy checking purposes and will not be used in the analytical adjustment. Checkpoints are desired and the contractor will indicate how many will be established and their location.

4.7 Digital Image Processing

4.7.1 Image Processing

All digital images will be clear and sharp in detail with particular emphasis on legibility in the shadows, have uniform tone, and have a degree of contrast permitting ground details to show clearly in dark-toned and light-toned areas as well as in the middle tones between the dark and light.

4.8 Point Marking or Fully Digital Alternatives

4.8.1 General Requirements

As a general rule targets will be marked on digital images.

4.8.2 Fully Analytical Aerial Triangulation With Mono-Comparator

All passpoints, checkpoints, and drop points (if any) will be marked stereoscopically on every frame with a Wild PUG point transfer instrument or equipment of equal or greater capability. The only exception to this requirement will be points falling in side-laps, but which are not intended to be used as strip tie points. All ground control points, passpoints, checkpoints, and drop points (if any) will be measured with a comparator having a least count of at least one micrometer and an intrinsic accuracy (calibration applied) of at least two micrometers (root-mean-square).

4.9 Aerial Triangulation Report

Immediately upon completion of all aerial triangulation work or sub-block portions and prior to any stereo compilation, the Contractor will prepare a formal aerial triangulation report for submission to the County. The report will include the following:

a. Graphic Layout. The limits of all analytical triangulation block or subblock computations will be indicated on a copy of the photocenter index of the aerial photography or on the computer plot of the analytical control points.

b. Computer Plot of Analytical Control. A digital plot of all control points contained in the analytical aerial triangulation computations will be generated on a digital image. All control points will be labeled with their field and/or computer designations... The plot will also contain the grid lines that define the extremities of the maps. The grid lines will be labeled with their corresponding northing and easting coordinate grid values. The plot will be labeled with the County name and map scale.

c. Aerial Triangulation Computations.

(1) Computations will include ground control data, triangulated ground point residuals, triangulated camera stations, triangulated ground points, and corrections applied to ground control.

(2) Computed coordinates of all control points, passpoints, checkpoints, and drop points will be labeled on a computer file with their field and/or computer designations. The printout will include the County name, Contractor's name, date of computations, and the name of the analytical program that was used to perform the computations, and the block or subblock designations. Root-mean-square (rms) error summaries will be given for bundle adjustment photographic measurement residuals or strip tie point residuals and

misclosures at control points. All FAAT computations will be delivered to the County for review prior to any stereo compilation.

d. Narrative. The report shall include a brief narrative tying together items 4.9 a., b., and c., including descriptions of laboratory equipment, procedures, and computer programs used. Also included in the narrative shall be:

- (1) A listing of all field control points thrown out of the analytical computations prior to the final run;
- (2) A full description of any codes utilized in the computations;
- (3) A full description of significant misfits encountered at control points and the steps taken to analyze such misfits and to rectify the discrepancies.

5. ORTHOPHOTO MAPPING

Specifications herein are based on the National Mapping Program 'Standards for Digital Orthophotos', 12/96.

5.1 Digital Orthophoto Imagery

For purposes of these specifications, "digital orthophoto imagery" is defined as the imagery that is obtained directly from digital aerial photography. The orthophoto imagery shall have fine grain quality and uniform density; shall preserve the clarity and detail of the original images to the maximum extent possible; and shall be free of dust marks, scratches, fog, streaks, stains, and blemishes of any kind. The imagery will be free of, double exposures, out-of-focus images, mismatched imagery and inconsistencies in tone and density from one image to an adjacent image that may interfere with the interpretability of ground features or that are aesthetically objectionable.

5.2 Ground Resolution

The horizontal ground resolution of the digital orthophoto pixels for the deliverable images will be as follows: 0.5' for 1" = 100' and 1.0' for 1" = 200' and 2.0' for 1" = 400' orthophoto images. Compression of the raster image to reduce the file size is permissible, provided, the resolution of the image is not deteriorated.

5.3 Image Radiometry

Image brightness values shall be represented by 256 gray levels and represented by a number in a range of 0 – 255. A value of 0 shall represent the color black and a value of 255 the color white. Areas where the rectification process is incomplete (i. e., lack of elevation data, gaps), shall be represented with a numeric value of 0.

5.4 Image Mosaicking

All digital orthophoto images shall be geometrically and radiometrically converted to enable adjacent scenes to be displayed simultaneously without obvious distinction between them.

When two or more digital orthophoto images are mosaicked, the image judged to have the best contrast shall be used as the reference image. The brightness values of the other images shall be adjusted to match that of the reference image. The join lines between the overlapping images shall be chosen so as to minimize the tonal variations. Localized adjustment values shall be performed to minimize tonal variances between join areas.

5.5 Radiometric Verification

Radiometric accuracy shall be verified by visual inspection of the digital orthophoto with the original unrectified image to determine if the digital orthophoto has the same or better image quality as the original unrectified aerial photography.

5.6 Accuracy Verification

Visual verification shall be performed for image completeness, to ensure that no gaps exist in either the image area or the overedge coverage. The accuracy of the file shall be verified by comparing image line and sample geometric coordinates to coordinates derived from higher order accuracies for the same points.

5.7 Seamless Imagery

All Images will be converted so that adjacent images can be displayed without obvious distinctions between them, as well as, the contrast of the images will be consistent. Seamless imagery will be delivered for the entire county, as well as, images for each individual map at a scale of 1' = 100'.

5.8 Digital Image Processing Procedures

Digital orthophotos require several types of inputs to produce an orthogonally rectified image from the original perspective image captured by the sensor. These inputs are the following: 1) the unrectified raster image scanned from the diapositive or directly acquired from a digital sensor, 2) a digital elevation model with the same area of coverage as the digital orthophoto, 3) the photo identifiable image and ground coordinates of ground control points, 4) calibration information about the sensor collector device and, 5) a user parameter file. These five inputs are used to register the image file to the sensor platform, to determine the orientation and location of the sensor platform with respect to the ground, and to remove the relief displacement from the image data. The Contractor will thoroughly describe the procedures and the equipment that will be used to obtain the digital imagery.

5.9 Digital Imagery Media

The Contractor will describe the media capability that they have for delivering the raster orthophoto imagery.

5.10 Accuracy

Digital orthophoto mapping shall meet horizontal National Mapping Accuracy Standards (NMAS). Ninety percent (90%) of all well-defined points tested shall fall within one-fortieth (1/40") of an inch of their ground position at the map scale.

All remaining inputs and processes (i.e., aerotriangulation control and methodology, sensor calibrations) used in digital orthophoto production must be sufficiently accurate to ensure that the final product meets NMAS.

5.11 Sample Orthophoto Digital Image

The Contractor will prepare a sample orthophoto digital image for approval by the County prior to the initial delivery of any orthophotos.

6. DIGITAL PLANIMETRIC MAPS

6.1 Compilation

All digital planimetric mapping is to be compiled on stereo photogrammetric plotters with a minimum of second-order precision. All stereo plotters are to be in calibration. The County may require proof of recent calibration of each plotter used on this project. The Contractor is to use industry accepted procedures in the recording of the digital data. The Contractor shall use fully analytical aerial triangulation to control the stereo models. All control is to be of sufficient accuracy to insure the final digital data's accuracy shall be within national map accuracy standards. The amount of data to be recorded from each stereo model is defined in the Gwinnett County GIS Database Design Document (Appendix A)

6.2 Planimetric Detail

All planimetric features listed in the Gwinnett County GIS Database Design Document which are identifiable on, or interpretable from, the aerial photographs will be captured on the digital maps; including, but not limited to, such features as:

- a. Land Use Features. All buildings, canals, ditches, reservoirs, highways, roads, streets, trails, railroads, railroad yards, quarries, cemeteries, orchards, wooded areas, tree lines, large lone trees (canopies ≥ 20 feet in diameter), major field boundary lines, ridge lines, fences, walls, and cross-country power and utility poles and towers.
- b. Structures. Bridges, tunnels, piers, retaining walls, power plants, dams, tanks, and airfields.
- c. Hydrographic Features. Rivers, streams, lakes, ponds, and marshes.
- d. Recreational Facilities. Parks, golf courses, and athletic fields.
- e. Utility Facilities. All identifiable public and private utility features are to be recorded.

In addition to the features listed above, such land use features as alleys, driveways, parking areas, and utility poles may be shown. Buildings will be plotted to scale at all map scales. Minor irregularities in building outlines not representable by one-twentieth ($1/20$) of an inch (.05 inch) at the map scale may be ignored. All roads and rivers whose widths do not exceed one-twentieth ($1/20$) of an inch (.05 inch) at the map scale will be plotted at one-twentieth ($1/20$) of an inch (.05 inch). County, district, and municipal boundaries shall be plotted from best available sources as provided by the County. Elevation of manholes and buildings (if elected) are to be included as a numeric field attribute. Elevations will be based on the National Geodetic Vertical Datum, 1929 Adjustment. Building elevations may consist of 3 attributes representing the low, medium and high elevations values. See Appendix A for full feature list and database design.

7. TOPOGRAPHIC MAPS

7.1 General

A “topographic” map is an orthophoto or cartographic base map upon which contour lines and points of spot elevation of the ground surface. Elevations will be based on the National Geodetic Vertical Datum, 1929 Adjustment. The topographic information may be depicted on an overlay which is registered to a base map with the prior written approval of the County.

7.2 Compilation

The topographic map manuscripts may be compiled utilizing the techniques of Fully Analytical Aerial Triangulation (FAAT). The technical specifications for FAAT will be as defined in the Section 5, except as described in subsection 8.3, below.

7.3 Vertical Control

For aerial photography at scales of either $1'' = 1,000'$ or $1'' = 500'$, vertical ground control must be established in order to utilize FAAT, and no high-to-low bridging may be employed to obtain vertical control at these scales. When using FAAT for extension of vertical control, field positions will be established at a minimum of two points every other stereo model along each flight line. The Contractor shall prepare a proposed vertical control layout on a copy of the $1'' = 1$ mile County Contract Map and shall submit it to the County for approval prior to any field work. The results of all field vertical control surveys and field notes will be submitted to the County for approval prior to any FAAT work. The vertical root-mean-square (rms) of the FAAT will not exceed $\frac{1}{4}$ of the specified contour interval. For example, rms for 2 foot contour interval shall not exceed 0.5 feet; rms for 5 foot contour interval will not exceed 1.25 feet. For small areas for which FAAT is

not utilized, a minimum of five (5) vertical and three (3) horizontal control points will be required for each stereo model compiled (see subsection 4.02 and 4.03).

7.4 Contour Lines

Contour lines shall be shown at a vertical interval of 2 feet on 1" = 100' scale topographic maps. Every fifth contour line will be an index contour, indicated by a line heavier than that used for the intermediate contours. Index contours will be labeled inside a break in the contour line at a frequency that will permit ease of interpretation and that is aesthetically acceptable. All contour lines will be solid and unbroken except where they pass through dense ground cover, in which case dashed lines will be used. In those areas where vegetation prohibits accurate plotting of contour elevation, the contour line elevations will be interpolated as accurately as possible from spot elevations measured photogrammetrically in places where the ground is visible.

7.5 Spot Elevations

Spot elevations will be determined by photogrammetric procedures from the aerial photography that was used to produce the contour lines. The spot elevations will be placed on topographic maps at: water levels of lakes, reservoirs and ponds; hilltops; saddles; bottoms of depressions; intersections of principal streets and highways; and ends of bridges. Where contour lines are more than inch apart, additional spot elevations shall be shown to more accurately portray the slope of the land.

7.6 Accuracy Requirements

Vertical ground elevations generated from FAAT shall be third order accuracy or higher. These FAAT elevations must be adequate to level the stereo model to an accuracy consistent with the following standards. Ninety percent (90%) of the elevations determined from the contours shall have an accuracy with respect to true elevation of one-half (1/2) of a contour interval or better, and the remaining ten percent (10%) shall not be in error by more than one (1) contour interval. A contour that can be brought within the stated vertical tolerance by shifting its location by one-fortieth (1/40) of an inch (.025 inch) will be considered to be plotted accurately. In densely wooded areas where heavy tree or brush cover fully obscures the ground and the contours are shown as dashed lines, ninety percent (90%) of the elevations determined from dashed-line contours shall have an accuracy with respect to true elevation of one (1) contour interval or one-fourth (1/4) the average height of the ground cover, whichever is greater.

7.7 Planimetric Features

The names of cities, towns, villages, rivers, major lakes, airports, streets, roads, railroads, and highways will be labeled on the topographic map to aid in orientations of the user. Care shall be taken in the placement of the labeling so as not to interfere with similar information on the base map.

7.8 Grid Lines

Grid lines at 5 inch intervals, running continuously across any printed topographic map, will be utilized rather than grid ticks and will constitute the outer boundaries of the map neat image area.

7.9 Accuracy Statements

The following accuracy statement shall appear on any printed topographic maps: Map compiled by stereophotogrammetric methods in accordance with

National Map Accuracy Standards.

7.10 Horizontal and Vertical Datum

A note will be placed in the border of any printed topographic map that will read as follows:

South Zone 1983 North American Datum
Vertical Datum 1929 Adjustment

7.11 Border Data

The following data shall be shown on any printed topographic map: map title, north arrow, grid coordinate values (labeled on all sides of map), match notes, horizontal and vertical datum, map scale, contour interval, map number, name of mapping Contractor, date of aerial photography, accuracy statement, and map legend.

8. DIGITAL MAPPING

8.1 Introduction

The purpose of this section is to provide the Contractor with a set of guidelines for digital mapping. This section also provides descriptions of terminology, data structure, accuracy, and data exchange specifications.

Information to be used in a digital mapping system will be stored in X and Y Georgia State Plane Coordinates. Thus, a road is represented in the digital mapping system by a number of points (X and Y coordinate pairs) that define its location. Digitizing may be accomplished by manually typing in coordinates, by using electronic tables that record coordinate points as the operator traces over the map information, by using automatic scanning (digitizing) devices, or by using stereo photogrammetric plotters equipped with digital encoders.

The digitization of topographic and land use information should be based on existing maps or stereo models. Items digitized from a stereo model may include cartographic features, contours, spot elevations, and land use features. The product of digital mapping must be topologically structured digital data sets.

8.2 Data Definitions

The following definitions of map data are presented to clarify their usage and meaning in these specifications.

a. Layer. A layer consists of the data contained on a map. Layers contain two or more components (see definition below and Database Design (Appendix A)). A cadastral map, a soil map, a topographic map, and a land use map would each be considered a layer. Some of the components of a cadastral layer include: plat lines; PIN numbers; right-of-way lines; transportation systems (roads, highways, alleys, and railroads); transportation names; hydrography (streams, rivers, and lakes); and County, township, municipality, public land, and subdivision boundaries.

b. Component. A component is a discrete type of data that, in combination with other components, creates a layer. Examples of components include soil lines, soil labels, PIN numbers, and right-of-way lines. Each component is composed of objects (see definition below) that graphically represents a component's extent (line or area) or that present information (symbols or text). The Database Design (Appendix A) contains a listing of components by layer.

c. Topological Data Structure. Topology is the study of the mathematical properties of geometric figures; it is a means of mathematically describing the relationship among points, lines, and areas used to define geographic entities. The use of a topological data structure is important for the effective creation and manipulation of geographic data. Topology allows the interrelationships of graphic objects to be specified. It also prevents the necessity of storing repetitive data. Thus, one line can represent a stream and the boundary of each of two adjacent areas or parcels. This structure allows the computer to generate areas based on node and line information. Topological structures allow the efficient analysis of lines or areas. Thus, road networks stored in a format with topological structure can be used for school bus routing, garbage truck routing, or emergency

service routing. Topology requires that several data items be maintained with relation to each node, line, and area.

d. Digital Data Sets. Digital data sets are computer files that store geographic data. Each data set may contain components from one or more layers. For example, a data set may contain the hydrographic names component associated with the topographic layer and the road name component from the cadastral layer. Or a data set containing soils lines components would also contain soil labels. A roads data set could contain pavement width, right-of-way limits, and road labels. The County will define the components that are to be contained in each digital data set.

e. Digital Mapping Product. The product of digital mapping must be topologically structured and digital data sets that store map objects using Georgia State Plane Coordinates and associated attribute information with each object. Each object (e.g., point, line, area) of a component must have associated attributes. These attributes will be agreed to by both the County and the Contractor before digitizing begins. The digital mapping product that a County receives may include a number of an individual data set (computer files), or all data may be integrated in a single database for use in a Database Management System. Attribute data may be stored as part of the geographic data set or in an associated database. Each graphic object must be assigned attributes according to a labeling scheme agreed on by the County and the Contractor. Thus, a road could have only the road name stored as an attribute of a road line (e.g., SR 1010) or it could have road name, road number, type of road, road width, road owner, etc. stored for each line that represents a road. Similarly, an area representing a parcel might only have the PIN associated with it, or it might have all information that the County maintains on that property associated with it. Associated information may be keyed in or merged into a data set from information that has already been stored in a computer-readable format.

8.3 Digital Accuracy

A number of issues must be addressed to ensure the accuracy of the digital product. Each map to be digitized should have been created using a Lambert conformal conic projection. The Georgia State Plane Coordinate System is based on the Lambert conformal conic projection. If the map to be digitized uses another projection, it should be digitized using the map's projection and then converted to the Lambert conformal conic projection.

The following digital accuracy requirements must be fully met to ensure product acceptability:

a. Scaling Accuracy Scaling refers to the initial setup of a map on a digitizing table. A minimum of three corner points (e.g., lower left, lower right, and upper right) of the map will be used to scale or tie the map to the surface of the earth through coordinate transformation algorithms. After a map is scaled, the accuracy of the transformation must be tested by digitizing a minimum of three points that were not used in setting up the map but have known X and Y Georgia State Plane Coordinates. The digitized coordinates will be checked against known coordinates to verify that they are within the acceptable tolerance. The maximum tolerance will be one-fiftieth (1/50) of an inch (.02 inch). The maximum tolerance at map scale is listed by scale in Table 9.3 b.

Table 9.3 b MAXIMUM ALLOWABLE SCALING ERRORS

Scale of Map	Maximum Scaling Error (at map scale)
1:4800 or 1" = 400'	+/- 8.0'
1:2400 or 1" = 200'	+/- 4.0'
1:1200 or 1" = 100'	+/- 2.0'
1:600 or 1" = 50'	+/- 1.0'

b. Digitizing Accuracy Digitizing accuracy refers to the results of comparing a check plot of a digitized line to the source map. This is accomplished by making a check plot of the digitized data at the same scale as the source map. The line width used for the check plot will not exceed .010 inch.

The resulting plot is laid on the digitized source map, and the two are placed on a light table. If any difference is detected between the digitized line and the source map line, the line must be redigitized. One special case exists with regard to line accuracy requirements. If the source map's lines are greater than 0.020 inches in width, the center of the lines must be digitized. The lines on the check plot of the digital data must overlay and not extend beyond the width of the original lines on the source map. Line smoothness and consistency shall be evaluated when reviewing line accuracy. Digitized data will form smooth lines and curves that are aesthetically pleasing and follow the lines they represent.

c. Attribute Accuracy After attributes are assigned to a source map (file), the map will be checked for accuracy, and all errors will be corrected. Testing for accuracy is best accomplished by the creation of test plots including attributes that can be placed over the base map on a light table and checked for accuracy. Errors are then corrected.

d. Edge Matching Accuracy No edge match tolerance will be allowed in digital mapping. Before digitizing, the Contractor shall examine all source maps for edge match problems. If the ends of lines or areas between adjoining maps are less than one-fiftieth (1/50) of an inch (.020 inch), the Contractor may use computer programs to align the end points. If the ends of lines or areas between adjoining maps are greater than one-fiftieth (1/50) of an inch (.020 inch), the Contractor and County shall agree on methods and procedures to be used for accomplishing edge matching.

9. LIDAR MAPPING

Unless otherwise specified, the Contractor will produce Lidar products which meet the USGS Quality Level 2 (QL2) as specified in the 'Lidar Base Specifications' document, Version 1.2, published November 2014, <http://pubs.usgs.gov/tm/11b4/pdf/tm11-B4.pdf>.

Appendix A - Feature List and Database Design

Plan/Topo Feature List and Database Design						
as derived from Database Design developed by ASI, July, 2000						
Revised for geodatabase model,						
Revised with Impervious surface changes, 2006,						
Revised for 2010 & 2015 updates						
LAYER	FEATURE TYPE	ATTRIBUTE	FEATURE	VALUE	DESCRIPTION	IMPERVIOUS
PLAN_Bldg_In	ARC	BLDG_CODE_LN	Public Buildings	100	Discernable Public Buildings	
			Mobile Homes	101	Discernable Mobile Holmes	
			Barns	102	Discernable Barn Structures	
			Building Under Construction	103	Any building currently under construction	
			Other Buildings	104	Misc. buildings not listed above and over 100 sq. ft.	
			Foundation	105	Foundation Outlines	
			Roof Break Lines	106	Lines that signify change in ownership of building	
PLAN_Bldg_ply	POLY	BLDG_CODE_PLY	Public Buildings	100	Public Building Polygon	Y
			Mobile Homes	101	Mobile Home Polygon	Y
			Barns	102	Barn Polygon	Y
			Building Under Construction	103	BUILDING under construction Polygon	Y
			Other Buildings	104	All other Buildings Polygon	Y
			Foundation	105	Foundation Polygon	Y
		BLDG_NAME_PLY	Proper name	Varies	Proper name if available, otherwise attribute will be blank	
PLAN_Bldg_ply_pub_anno	ANNO		Proper name		Proper public building name	
PLAN_Bldg_ply_oth_anno			Proper name		Proper other building name	
PLAN_BARRIER	ARC	BARRIER_CODE	Fences	200	Property Fence Lines	
			Masonry Walls	201	Non Retaining Wall Lines built using masonry	
			Retaining Walls	202	Retaining Wall Lines	
PLAN_HYDRO_In	ARC	HYDRO_CODE_LN	Lake	350	Outline of Lake / Reservoir (> 1 acre)	
			Waterway	351	Outline of Waterway (two sided River/Stream) (>10' wide)	
			Pond	352	Outline of Pond (< 1 acre)	
			Wetland	353	Outline of Wetland / Swamp	
			Dam	354	Outline of Any Concrete or Earthen Dams	
			Hydro Closure Line	355	Line used to close hydro features when they are coincident (i.e. Rivers changing to Reservoir)	
PLAN_HYDRO_PLY	POLY	HYDRO_CODE_PLY	Lake	350	Lake / Reservoir Polygon	
			River / Waterway	351	River/Waterway Polygon	
			Pond	352	Pond Polygon	
			Wetland	353	Wetland / Swamp Polygon	
			Dam	354	Concrete or Earthen Dam Polygon	
		HYDRO_NAME	Proper name	Varies	Proper name if available, otherwise attribute will be blank.	
		HIDDEN	Feature is Hidden	Y	FEATURE that is HIDDEN from view by Bridge or Pier	
			Feature is Visible	N	FEATURE that is Visible	
PLAN_Hydro_ply_lak_anno	ANNO		Lake		Proper Name of Lake / Reservoir	
PLAN_Hydro_ply_riv_anno			River		Proper Name of river or stream	
PLAN_Hydro_ply_pon_anno			Pond		Proper Name of Pond	
PLAN_HYDRO_cline	ARC	HYDRO_CODE_CLINE	Stream	400	Stream Centerline (for rivers and streams < 10' wide)	

Appendix A - Feature List and Database Design

LAYER	FEATURE TYPE	ATTRIBUTE	FEATURE	VALUE	DESCRIPTION	IMPERVIOUS
			Culvert	401	Centerline of Culvert if Floodwall is visible from photos	
			Hydro Connector	402	Connecting Line between disjointed segments of hydro centerlines or	
			Hydro Centerline	403	Hydro Centerline within water bodies	
		HYDRO_NAME_CLINE	Proper name	Varies	Proper name if available, otherwise attribute will be	
		HIDDEN	Feature is Hidden	Y	FEATURE that is HIDDEN from view by Bridge, Pier or	
			Feature is Visible	N	FEATURE that is Visible	
PLAN_Hydro_cline_str_anno	ANNO		Stream Name		Proper Name of river or stream	
PLAN_HYDRO_struct_ln	ARC	HYDRO_CODE_STRUCT_LN	Spillway	450	Outline of the Spillway area beneath a Dam	
			Paved Ditch	451	Outline of the hard surface portion of a paved or concrete ditch (water	
			Pier	452	Outline of Piers	
			Floodwall / Headwall	453	Outline of Floodwall / Headwall Lines	
			Catch Basin	475	Outline of Catch Basin	
PLAN_HYDRO_struct_pt		HYDRO_CODE_STRUCT_PT				
PLAN_Lcvr_ply	POLY	LCVR_CODE_PLY	Cemetery	250	Cemetery Polygon	
			Landfill	251	Polygon of areas used for Landfill purposes	
			Construction Sites	252	Polygon of areas under construction	
			Junkyard	253	Polygon of areas used for Junkyard purposes	
			Quarry	254	Polygon of areas where Quarrying is taking place	
			Rip Rap	255	Polygon of RipRap areas usually used to control erosion	
			Rock outcrop	256	Polygon of Rock Outcroppings	
			Paved Open Storage Area	257	Paved Open Storage Area	Y
			Unpaved Open Storage Area	258	Unpaved Open Storage Area – Other Surface	
		LCVR_NAME_PLY	Proper name	Varies	Proper name if available, otherwise attribute will be blank	
PLAN_Lcvr_auc_anno	ANNO		Areas under construction		Label with "AREA UC"	
PLAN_Lcvr_lan_anno			Landfills		Label with "LANDFILL" or proper name if available	
PLAN_Lcvr_cem_anno			Cemetery		Label with "CEMETERY" or proper name if available	
PLAN_Lcvr_qry_anno			Quarry		Label with "QUARRY" or proper name if available	
PLAN_Lcvr_jnk_anno			Junkyard		Label with "JUNKYARD" or proper name if available	
PLAN_Rec_ply	POLY	REC_CODE_PLY	Pool	300	Pool Polygon	Y
			Athletic Field/Court	301	Athletic Fields/Courts Polygon	Y
			Ball Fields	302	Ball Fields (Football, Baseball, Soccer) Polygon	
			Tennis Court	303	Tennis Courts Polygon	Y
			Basketball Courts	304	Basketball Courts Polygon	Y
			Athletic Track	305	Athletic Tracks (Race, Running, Horse, etc) Polygon	Y
			Golf Course Outline	306	Golf Course Polygon	
			Golf Green	307	Golf Green Polygon	
			Golf Tee	308	Golf Tee Polygon	
			Golf Path	309	Golf Path Polygon	Y
			Unpaved Playground Area	310	Playground – Unpaved Surface	
			Bleachers	311	Bleacher Polygon	Y
			Park Shelter	312	Park Shelter	Y

Appendix A - Feature List and Database Design

LAYER	FEATURE TYPE	ATTRIBUTE	FEATURE	VALUE	DESCRIPTION	IMPERVIOUS
			Paved Playground Area	313	Playground – Paved Surface	Y
			Badminton	314	Badminton Court Polygon	Y
			Hockey Rink	315	Hockey Rink Polygon	Y
			Horseshoe / Bocce	316	Horseshoe / Bocce Court Polygon	Y
			Shuffleboard	317	Shuffleboard Court Polygon	Y
			Volleyball	318	Volleyball Court Polygon	
			Disc Golf	319	Disc Golf Course Polygon	
			Skate Park	320	Skate Park Polygon	Y
			Camp Ground	321	Camp Ground Area Polygon	
		REC_NAME_PLY	Proper name	Varies	Proper name if available, otherwise attribute will be blank	
PLAN_Rec_pol_anno	ANNO		Pools		Label with 'POOL'	
PLAN_Rec_gol_anno			Golf Course		Proper Name of golf course	
PLAN_Struct	POLY	STRUCT_CODE	Canopy	150	Canopy Polygon	Y
			Ruins	151	Ruin Outline Polygon	Y
			Loading Dock	152	Loading Dock	Y
			Paved Areas	153	Paved Areas	Y
			Silos	154	Silo Polygon	Y
			Platform	155	Railroad Platform	Y
PLAN_Trans_rr	ARC	TRANS_CODE_RR	Railroad Centerline	500	Active Railroad Centerline	
			Abandoned Railroad	501	Abandoned Railroad Centerline	
			Railroad Grade	502	Old Railroad Grade Centerline where no track is visible	
		TRANS_NAME_RR	Name of railroad	Varies	Name of railroad, identical to graphic annotation.	
		HIDDEN	Feature is Hidden	Y	FEATURE that is hidden from view	
			Feature is Visible	N	FEATURE that is Visible	
PLAN_Trans_rr_anno	ANNO		Railroad Name		Proper Name of Railroad	
PLAN_Trans_maj_ln	ARC	TRANS_CODE_MAJ_LN	Paved Road	650	Edge of paved road	
			Curb	651	Edge of road that is curbed	
			Unpaved Road / Under Const	652	Edge of unpaved road or road under construction - gravel	
			Paved Alley	653	Edge of paved alley	
			Paved Parking	654	Edge of paved parking	
			Unpaved Parking	655	Edge of unpaved parking - gravel surface	
			Driveway	656	Edge of paved driveway	
			Bridge/Overpass	657	Outline of transportation bridges	
					Edge of Public Sidewalks - including any sidewalk that appears to be	
			Public Sidewalks	658	within the street right-of-way, and any sidewalk that	
			Runway	659	Outline of airport runways	
					Impervious area closure line. Usually used to close off impervious	
			Impervious Median	660		
			Unpaved Road Other (dirt/grass)	661	Unpaved Road Other (dirt/grass)	
			Unpaved Parking – Other Surface (dirt	662	Unpaved Parking – Other Surface (dirt / grass)	
			Unpaved Driveway	663	Edge of Unpaved Driveway	
PLAN_Trans_maj_ply	POLY	TRANS_CODE_MAJ_PLY	Paved Road	650	Paved Road Polygon	Y

Appendix A - Feature List and Database Design

LAYER	FEATURE TYPE	ATTRIBUTE	FEATURE	VALUE	DESCRIPTION	IMPERVIOUS
			Unpaved Road / Under Const	652	Unpaved Road Polygon - gravel surface	
			Paved Alley	653	Paved Alley Polygon	Y
			Paved Parking	654	Paved Parking Polygon	Y
			Unpaved Parking	655	Unpaved Parking Polygon - gravel surface	
			Paved Driveway	656	Paved Driveway Polygon	Y
			Bridge/Overpass	657	Bridge Polygon	
			Public Sidewalk	658	Public Sidewalk Polygon	Y
			Runway	659	Runway Polygon	Y
			Impervious Median	660	Median of Impervious Area	Y
			Unpaved Road Other (dirt/grass)	661	Unpaved Road Polygon - Other Surface (dirt/grass)	
			Unpaved Parking – Other Surface (dirt /	662	Unpaved Parking Polygon – Other Surface (dirt / grass)	
			Unpaved Driveway	663	Unpaved Driveway polygon	
PLAN_Trans_maj_ply_rdn_anno	ANNO		Road Names		Proper Name from existing dataset	
PLAN_Trans_maj_ply_ruc_anno			Roads Under Construction		Label with "ROAD U/C"	
PLAN_Trans_min_ln	ARC	TRANS_CODE_MIN	Tunnel Portals	700	Tunnel portal entrances	
			Trail	701	Trail Centerlines	
			Guardrail	702	Guardrails	
			Footbridge	703	Outline of Footbridges	
			Catwalk	704	Raised walk between areas in industrial sites	
			Gas Island	705	Gas Island Boundary (if Visible)	
			Billboard	706	Billboard	
			Other Roadway Sign	707	Other Large Roadway Signs (Not to be confused with stop signs, parking signs, etc.)	
PLAN_Trans_SHIELD	POINT	TRANS_CODE_SHIELD	Georgia Road Shield	900	SHIELD for Georgia State roadways	
			US Road Shield	901	SHIELD for US roadways	
			Interstate Shield	901	SHIELD of Interstate roadways	
PLAN_Trans_shield_geo_anno	ANNO		Georgia Roads		Proper Name of Georgia State roadways	
PLAN_Trans_shield_usa_anno			US roads		Proper Name of US roadways	
PLAN_Trans_shield_int_anno			Interstate Roads		Proper Name of Interstate roadways	
PLAN_Veg_ply	POLY	VEG_CODE_PLY	Tree Outlines	750	Tree Covered Area Polygon	
			Orchard	751	Orchard Outline Polygon	
PLAN_Veg_pt	POINT	VEG_CODE_PT	Single Tree	800	Location of a Single Tree greater than 20' canopy	
PLAN_Veg_ply_orc_anno	ANNO		Orchard		Label with "ORCHARD"	
PLAN_Util_pt	POINT	UTIL_CODE_PT	Fire Hydrant	850	Fire Hydrant POINT	
			Utility Pole	851	Pole used to carry electricity (All poles from Old Data)	
			Light Pole	852	Pole for Lighting only	
			Utility/Light Pole	853	Pole used for both UTILITY and Lighting purposes	
			General Manhole	855	Manhole - generic manhole captured from aerial photos.	
			Electric Substation	858	POINT defining an Electric Substation	
			Tower	859	POINT defining Location of Utility Tower (Radio,	
		ELEV	Elevation (ft)	Varies	Manhole Elevation	
PLAN_Util_pt_sub_anno	ANNO		Substation		Label with "SUBSTATION"	

Appendix A - Feature List and Database Design

LAYER	FEATURE TYPE	ATTRIBUTE	FEATURE	VALUE	DESCRIPTION	IMPERVIOUS
PLAN_Util_pt_mh_anno			Manhole Elevation		Label with Manhole Elevation	
PLAN_Util_ply	POLY	UTIL_CODE_PLY	Tank	900	Generic Tank Polygon	Y
			Transmission Tower	901	Large Electrical Towers Polygon - used to carry cross	Y
			Pump Station	902	Pump Station Polygon	
			Electric Substation Pad	917	Electric Substation Pad Polygon	Y
TOPO_2ft_ln	ARC	TOPO_CODE_2FT_LN	Index contours	550	Index contours	
			Index depression contours	551	Index depression contours	
			Obscured index contours	552	Obscured index contours	
			Obscured index depression contours	553	Obscured index depression contours	
			Intermediate contours	554	Intermediate contours	
			Intermediate depression contours	555	Intermediate depression contours	
			Obscured intermediate contours	556	Obscured intermediate contours	
			Obscured intermediate depression	557	Obscured intermediate depression contours	
		ELEV		Varies	Contour line elevations	
		HIDDEN	Feature is Hidden	Y	Hidden from view Buildings, bridges or contour labels	
			Feature is Visible	N	Visible	
TOPO_2ft_pt	POINT	TOPO_CODE_2FT_PT	Spot Height	600	Spot Height Point	
			Water Elevation	601	Water Elevations for flat bodies of Water	
		ELEV		Varies	Contour line elevations.	

General Information

Coordinate Precision	Double
Map Units	Feet
Coordinate System	Georgia West State Plane Zone (3676)
	NAD 83/94
	NAVD 88
Fuzzy Tolerance	0.001
Dangle Tolerance	0
Mapping Scale	1"=100'
Tile Size	2500' x 2500'

Notes

All features will be captured to ASPRS Horizontal Accuracy Standards for Large Scale Maps, Class 2, at 1"=100'.

The vertical control will support the production of 1"=100' digital orthophotos and the generation of 2' contours.

All annotation and titling will be developed for maps that are to be produced at a scale of 1"=100'.

Data will be captured for an area 1000' outside the project boundary.

All feature classes have attribute - PHOTODATE Date of aerial photography used in compiling the feature

All feature classes have attribute - UPDATE_CODE

Name	Value
Existing Features	Exist
Existing features that have been modified	Mod
New features added by Sanborn	New
Features no longer existing	Delete

All polygon feature classes have attribute IMPERVIOUS

Name	Value
Impervious Surface Area	Y
Not Impervious Surface Area	N

FAILURE TO RETURN THIS PAGE MAY RESULT IN REMOVAL OF YOUR COMPANY FROM COMMODITY LISTING.

RP020-15

Buyer Initials: TS

IF YOU DESIRE TO SUBMIT A "NO BID" IN RESPONSE TO THIS PACKAGE, PLEASE INDICATE BY CHECKING ONE OR MORE OF THE REASONS LISTED BELOW AND EXPLAIN.

☐ Do not offer this product or service; remove us from your bidder's list for this item only.

☐ Specifications too "tight"; geared toward one brand or manufacturer only.

☐ Specifications are unclear.

☐ Unable to meet specifications

☐ Unable to meet bond requirements

☐ Unable to meet insurance requirements

☐ Our schedule would not permit us to perform.

☐ Insufficient time to respond.

☐ Other

COMPANY NAME _____

AUTHORIZED REPRESENTATIVE _____

GWINNETT COUNTY
DEPARTMENT OF FINANCIAL SERVICES – PURCHASING DIVISION
GENERAL INSTRUCTIONS FOR PROPOSERS, TERMS AND CONDITIONS

I. PREPARATION OF PROPOSALS

- A. Each proposer shall examine the drawings, specifications, schedule and all instructions. Failure to do so will be at the proposer's risk.
- B. Each proposer shall furnish all information required by the proposal form or document. Each proposer shall sign the proposal and print or type his or her name on the schedule. The person signing the proposal must initial erasures or other changes. An authorized agent of the company must sign proposals.
- C. Individuals, firms and businesses seeking an award of a Gwinnett County contract may not initiate or continue any verbal or written communications regarding a solicitation with any County officer, elected official, employee or other County representative without permission of the Purchasing Associate named in the solicitation between the date of the issuance of the solicitation and the date of the final contract award by the Board of Commissioners. Violations will be reviewed by the Purchasing Director. If determined that such communication has compromised the competitive process, the offer submitted by the individual, firm or business may be disqualified from consideration for award.
- D. Sample contracts (if pertinent) are attached. These do NOT have to be filled out with the bid/proposal submittal, but are contained for informational purposes only. If awarded, the successful proposer(s) will be required to complete them prior to contract execution.
- E. Effective, July 1, 2013 and in accordance with the Georgia Illegal Reform and Enforcement, an original signed, notarized and fully completed Contractor Affidavit and Agreement should be included with your bid/proposal submittal, if the solicitation is for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia). Failure to provide the Contractor Affidavit and Agreement with your bid/proposal submittal may result in bid/proposal being deemed non-responsive and automatic rejection.

II. DELIVERY

- A. Each proposer should state time of proposed delivery of goods or services.
- B. Words such as "immediate," "as soon as possible," etc. shall not be used. The known earliest date or the minimum number of calendar days required after receipt of order (delivery A.R.O.) shall be stated (if calendar days are used, include Saturday, Sunday and holidays in the number).

III. EXPLANATION TO PROPOSERS

Any explanation desired by a proposer regarding the meaning or interpretation of the request for proposals, drawings, specifications, etc. must be requested by the question cutoff deadline stated in the solicitation in order for a reply to reach all proposers before the close of the proposal. Any information given to a prospective proposer concerning a request for proposal will be furnished to all prospective proposers as an addendum to the invitation if such information is necessary or if the lack of such information would be prejudicial to uninformed proposers. The written proposal document supersedes any verbal or written communication between the parties. Receipt of addenda should be acknowledged in the proposal. **It is the proposer's responsibility to ensure that they have all applicable addenda prior to proposal submittal.** This may be accomplished via contact with the assigned Procurement Agent prior to proposal submittal.

IV. SUBMISSION OF PROPOSALS

- A. Proposals shall be enclosed in a sealed package, addressed to the Gwinnett County Purchasing Office with the name and address of the proposer, the date and hour of opening, and the request for proposal number on the face of the package. Telegraphic/faxed proposals will not be considered. Any addenda should be enclosed in the sealed envelopes as well.

- B. ADD/DEDUCT: Add or deduct amounts indicated on the outside of the envelope are allowed and will be applied to the lump sum amount. Amount shall be clearly stated and should be initialed by an authorized company representative.
- C. Samples of items, when required, must be submitted within the time specified and, unless otherwise specified by the County, at no expense to the County. Unless otherwise specified, samples will be returned at the proposer's request and expense if testing does not destroy items.
- D. Items offered must meet required specifications and must be of a quality that will adequately serve the use and purpose for which intended.
- E. Full identifications of each item proposed, including brand name, model, catalog number, etc. must be furnished to identify exactly what the proposer is offering. Manufacturer's literature may be furnished.
- F. The proposer must certify that items to be furnished are new and that the quality has not deteriorated so as to impair its usefulness.
- G. Unsigned proposals will not be considered except in cases where proposal is enclosed with other documents that have been signed. The County will determine this.
- H. Gwinnett County is exempt from federal excise tax and Georgia sales tax with regard to goods and services purchased directly by Gwinnett County. Suppliers and contractors are responsible for federal excise tax and sales tax, including taxes for materials incorporated in county construction projects. Suppliers and contractors should contact the State of Georgia Sales Tax Division for additional information.
- I. Information submitted by a proposer in the proposal process shall be subject to disclosure after proposal award in accordance with the Georgia Open Records Act. Proprietary information must be identified. Entire proposals may not be deemed proprietary.

V. WITHDRAWAL OF PROPOSAL DUE TO ERRORS

No proposer who is permitted to withdraw a proposal shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn proposal was submitted.

To withdraw a proposal after proposal opening, the supplier has up to forty-eight (48) hours to notify the Gwinnett County Purchasing Office of an obvious clerical error made in calculation of proposal. Withdrawal of bid bond for this reason must be done in writing. Suppliers who fail to request withdrawal of proposal by the required forty-eight (48) hours shall automatically forfeit bid bond. Bid bond may not be withdrawn otherwise.

Proposal withdrawal is not automatically granted and will be allowed solely at Gwinnett County's discretion.

VI. TESTING AND INSPECTION

Since tests may require several days for completion, the County reserves the right to use a portion of any supplies before the results of the tests are determined. Cost of inspections and tests of any item that fails to meet the specifications shall be borne by the proposer.

VII. F.O.B. POINT

Unless otherwise stated in the request for proposal and any resulting contract, or unless qualified by the proposer, items shall be shipped F.O.B. Destination. The seller shall retain title for the risk of transportation, including the filing for loss or damages. The invoice covering the items is not payable until items are delivered and the contract of carriage has been completed. Unless the F.O.B. clause states otherwise, the seller assumes transportation and related charges either by payment or allowance.

VIII. PATENT INDEMNITY

The contractor guarantees to hold the County, its agents, officers or employees harmless from liability of any nature or kind for use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, for which the contractor is not the patentee, assignee or licensee.

IX. BID BONDS AND PAYMENT AND PERFORMANCE BONDS (IF REQUIRED)

A five percent (5%) bid bond, a one hundred percent (100%) performance bond, and a one hundred percent (100%) payment bond must be furnished to Gwinnett County for any proposal as required in the proposal package or document. **Failure to submit a bid bond with the proper rating will result in the proposal being deemed non-responsive.** Bonding company must be authorized to do business in Georgia by the Georgia Insurance Commission, listed in the Department of the Treasury's publication of companies holding certificates of authority as acceptable surety on Federal bonds and as acceptable reinsuring companies, and have an A.M. Best rating as stated in the insurance requirement of the solicitation. **The bid bond, payment bond, and performance bond must have the proper an A.M. Best rating as stated in the proposal when required in the proposal package or document.**

X. DISCOUNTS

- A. Time payment discounts will be considered in arriving at net prices and in award of proposal. Offers of discounts for payment within ten (10) days following the end of the month are preferred.
- B. In connection with any discount offered, time will be computed from the date of delivery and acceptance at destination, or from the date correct invoice or voucher is received, whichever is the later date. Payment is deemed to be made for the purpose of earning the discount, on the date of the County check.

XI. AWARD

- A. Award will be made to the highest scoring responsive and responsible proposer according to the criteria stated in the proposal documents. The County may make such investigations as it deems necessary to determine the ability of the proposer to perform, and the proposer shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any proposal if the evidence submitted by, or investigation of, such proposer fails to satisfy the County that such proposer is properly qualified to carry out the obligations of the contract.
- B. The County reserves the right to reject or accept any or all proposals and to waive technicalities, informalities and minor irregularities in the proposals received.
- C. The County reserves the right to make an award as deemed in its best interest, which may include awarding a proposal to a single proposer or multiple proposers; or to award the whole proposal, only part of the proposal, or none of the proposal to single or multiple proposers, based on its sole discretion of its best interest.
- D. In the event scores rounded to the nearest whole number result in a tie score, the award will be based on lowest cost.
- E. In the event that negotiations with the highest ranked firm are unsuccessful the County may then negotiate with the second ranked firm and so on until a satisfactory agreement has been reached.

XII. DELIVERY FAILURES

Failure of a contractor to deliver within the time specified or within reasonable time as interpreted by the Purchasing Director, or failure to make replacements of rejected articles/ services when so requested, immediately or as directed by the Purchasing Director, shall constitute authority for the Purchasing Director to purchase in the open market articles/services of comparable grade to replace the articles/services rejected or not delivered. On all such purchases, the contractor shall reimburse the County within a reasonable time specified

by the Purchasing Director for any expense incurred in excess of contract prices, or the County shall have the right to deduct such amount from monies owed the defaulting contractor. Alternatively, the County may penalize the contractor one percent (1%) per day for a period of up to ten (10) days for each day that delivery or replacement is late. Should public necessity demand it, the County reserves the right to use or consume articles/services delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.

XIII. COUNTY FURNISHED PROPERTY

The County will furnish no material, labor or facilities unless so provided in the RFP.

XIV. REJECTION OF PROPOSALS

Failure to observe any of the instructions or conditions in this request for proposal shall constitute grounds for rejection of proposal.

XV. CONTRACT

Each proposal is received with the understanding that the acceptance in writing by the County of the offer to furnish any or all of the commodities or services described therein shall constitute a contract between the proposer and the County which shall bind the proposer on his part to furnish and deliver the articles quoted at the prices stated in accordance with the conditions of said accepted proposal. The County, on its part, may order from such contractor, except for cause beyond reasonable control, and to pay for, at the agreed prices, all articles specified and delivered. Upon receipt of a proposal containing a Gwinnett County "Sample Contract" as part of the requirements, it is understood that the proposer has reviewed the documents with the understanding that Gwinnett County requires that all agreements between the parties must be entered into via these documents. If any exceptions are taken to any part, each exception must be stated in detail and submitted as part of the proposal document. If no exceptions are stated, it is assumed that the proposer fully agrees to the "Sample Contract" in its entirety.

When the contractor has performed in accordance with the provisions of this agreement, Gwinnett County shall pay to the contractor, within thirty (30) days of receipt of any department approved payment request and based upon work completed or service provided pursuant to the contract, the sum so requested, less the retainage stated in this agreement, if any. In the event that Gwinnett County fails to pay the contractor within sixty (60) days of receipt of a pay request based upon work completed or service provided pursuant to the contract, the County shall pay the contractor interest at the rate of ½% per month or pro rata fraction thereof, beginning the sixty-first (61st) day following receipt of pay requests. The contractor's acceptance of progress payments or final payment shall release all claims for interest on said payment.

XVI. NON-COLLUSION

Proposer declares that the proposal is not made in connection with any other proposer submitting a proposal for the same commodity or commodities, and that the proposal is bona fide and is in all respects fair and without collusion or fraud. Each proposer, if included in proposal documents, shall execute an affidavit of non-collusion. Collusion and fraud in bid preparation shall be reported to the State of Georgia Attorney General and the United States Justice Department.

XVII. DEFAULT

The contract may be canceled or annulled by the Purchasing Director in whole or in part by written notice of default to the contractor upon non-performance or violation of contract terms. An award may be made to the next highest rated responsive and responsible proposer, or articles specified may be purchased on the open market similar to those so terminated. In either event, the defaulting contractor (or his surety) shall be liable to the County for costs to the County in excess of the defaulted contract prices; provided, however, that the contractor shall continue the performance of this contract to the extent not terminated under the provisions of this clause. Failure of the contractor to deliver materials or services within the time stipulated on his proposal, unless extended in writing by the Purchasing Director, shall constitute contract default.

XVIII. TERMINATION FOR CAUSE

The County may terminate this agreement for cause upon ten days prior written notice to the contractor of the contractor's default in the performance of any term of this agreement. Such termination shall be without prejudice to any of the County's rights or remedies by law.

XIX. TERMINATION FOR CONVENIENCE

The County may terminate this agreement for its convenience at any time upon 30 days written notice to the contractor. In the event of the County's termination of this agreement for convenience, the contractor will be paid for those services actually performed. Partially completed performance of the agreement will be compensated based upon a signed statement of completion to be submitted by the contractor, which shall itemize each element of performance.

XX. DISPUTES

Except as otherwise provided in the contract documents, any dispute concerning a question of fact arising under the contract which is not disposed of shall be decided after a hearing by the Purchasing Director who shall reduce his/her decision to writing and mail or otherwise furnish a copy thereof to the contractor. The decision of the Purchasing Director shall be final and binding; however, the contractor shall have the right to appeal said decision to a court of competent jurisdiction.

XXI. SUBSTITUTIONS:

Proposers offering and quoting on substitutions or who are deviating from the attached specifications shall list such deviations on a separate sheet to be submitted with their proposal. The absence of such a substitution list shall indicate that the proposer has taken no exception to the specifications contained therein.

XXII. INELIGIBLE PROPOSERS

The County may choose not to accept the proposal of one who is in default on the payment of taxes, licenses or other monies owed to the County. Failure to respond three (3) consecutive times for any given commodity may result in removal from the list under that commodity.

XXIII. OCCUPATION TAX CERTIFICATE

Each successful proposer shall provide evidence of a valid Gwinnett County occupation tax certificate if the proposer maintains an office within the unincorporated area of Gwinnett County. Incorporated, out of County and out of State proposers are required to provide evidence of a certificate to do business in any town, County or municipality in the State of Georgia, or as otherwise required by County ordinance or resolution.

XXIV. PURCHASING POLICY AND REVIEW COMMITTEE:

The Purchasing Policy and Review Committee has been established to review purchasing procedures and make recommendations for changes; resolve problems regarding the purchasing process; make recommendations for standardization of commodities, schedule buying, qualified products list, annual contracts, supplier performance (Ineligible Source List) and other problems or requirements related to Purchasing. The Purchasing Policy and Review Committee have authority to place suppliers and contractors on the Ineligible Source List for reasons listed in the Gwinnett County Purchasing Ordinance.

XXV. AMERICANS WITH DISABILITIES ACT:

All contractors for Gwinnett County are required to comply with all applicable sections of the Americans with Disabilities Act (ADA) as an equal opportunity employer. In compliance with the Americans with Disabilities Act (ADA), Gwinnett County provides reasonable accommodations to permit a qualified applicant with a disability to enjoy the privileges of employment equal to those employees without disabilities. Disabled individuals must satisfy job requirements for education background, employment experience, and must be able to perform those tasks that are essential to the job with or without reasonable accommodations. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County should be directed to Michael Plonowski, Human Relations Coordinator, 75 Langley Drive, Lawrenceville, Georgia 30046, 770-822-8015.

XXVI. ALTERATIONS OF SOLICITATION AND ASSOCIATED DOCUMENTS:

Alterations of County documents are strictly prohibited and will result in automatic disqualification of the firm's solicitation response. If there are "exceptions" or comments to any of the solicitation requirements or other language, then the firm may make notes to those areas, but may not materially alter any document language.

XXVII. TAX LIABILITY:

Local and state governmental entities must notify contractors of their use tax liability on public works projects. Under Georgia law, private contractors are responsible for paying a use tax equal to the sales tax rate on material and equipment purchased under a governmental exemption that is incorporated into a government construction project: excluding material and equipment provided for the installation, repair, or expansion of a public water, gas or sewer system when the property is installed for general distribution purposes. To the extent the tangible personal property maintains its character (for example the installation of a kitchen stove), it remains tax-exempt. However, if the installation incorporates the tangible personal property into realty, e.g., the installation of sheetrock, it becomes taxable to the private contractor. See O.C.G.A. 48-8-3(2) and O.C.G.A. 48-8-63

XXVIII. STATE LAW REGARDING WORKER VERIFICATION

Effective July 1, 2013 State Law requires that all who enter into a contract for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia) for the County, must satisfy the Illegal Immigration Reform and Enforcement Act, in all manner, and such are conditions of the contract.

The Purchasing Division Director with the assistance of the Performance Analysis Division shall be authorized to conduct random audits of a contractor's or subcontractors' compliance with the Illegal Immigration Reform and Enforcement Act and the rules and regulations of the Georgia Department of Labor. The contractor and subcontractors shall retain all documents and records of its compliance for a period of five (5) years following completion of the contract. This requirement shall apply to all contracts for all labor or service contracts that exceed \$2,499.99 except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia.

Whenever it appears that a contractor's or subcontractor's records are not sufficient to verify the work eligibility of any individual in the employ of such contractor or subcontractor, the Purchasing Director shall report same to the Department of Homeland Security and may result in termination of the contract if it is determined at any time during the work that the contractor/or subcontractor is no longer in compliance with the Illegal Immigration Reform and Enforcement Act.

XXIX. SOLID WASTE ORDINANCE

No individual, partnership, corporation or other entity shall engage in solid waste handling except in such a manner as to conform to and comply with the current Gwinnett County Solid Waste Ordinance and all other applicable local, state and federal legislation, rules, regulation and orders.

XXX. GENERAL CONTRACTORS LICENSE

Effective July 1, 2008: All General Contractors must have a current valid license from the State Licensing Board for Residential and General Contractors, unless specifically exempted from holding such license pursuant to Georgia law (O.C.G.A. Section 43-41-17).

XXXI. INDEMNIFICATION

To the fullest extent permitted by law, the Contractor shall, at his sole cost and expense, indemnify, defend, satisfy all judgments, and hold harmless the County, the engineer, and their agents and employees from and against all claims, damages, actions, judgments, costs, penalties, liabilities, losses and expenses, including, but not limited to, attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, action, judgment, cost, penalty, liability, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be

liable, regardless whether such claim is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge or otherwise reduce any of the rights or obligations of indemnity which would otherwise exist as to any party or person described in this agreement. In any and all claims against the County, the engineer, or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation contained herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under Worker's Compensation Acts, disability benefit acts, or other employee benefit acts.

XXXII. CODE OF ETHICS:

“Proposer/Bidder” shall disclose under oath the name of all elected officials whom it employs or who have a direct or indirect pecuniary interest in the business entity, its affiliates, or its subcontractors. The “Proposer/Bidder” shall execute a Code of Ethics affidavit. Failure to submit the affidavit during the bid or proposal process shall render the bid or proposal non-responsive.

The act of submitting false information or omitting material information shall be referred to the Purchasing Policy & Review Committee for action pursuant to the Purchasing Ordinance or to the District Attorney for possible criminal prosecution.

Any business entity holding a contract with Gwinnett County that subsequent to execution of the contract or issuance of the purchase order employs, subcontracts with, or transfers a direct or indirect pecuniary interest in the business entity to an elected official shall within five (5) days disclose such fact in writing under oath to the Clerk of the Board of Commissioners. Failure to comply shall be referred to the Purchasing Policy & Review Committee for action pursuant to the Purchasing Ordinance or to the District Attorney for possible criminal prosecution.

Note: See Gwinnett County Code of Ethics Ordinance EO2011, Sec. 60-33. The ordinance will be available to view in its entirety at www.gwinnettcountry.com

XXXIII. PENDING LITIGATION:

A proposal submitted by an individual, firm or business who has litigation pending against the County, or anyone representing a firm or business in litigation against the County, not arising out of the procurement process, will be disqualified.

XXXIV. ELECTRONIC PAYMENT

Vendors accepting procurements should select one of Gwinnett County’s electronic payment options.

1. A vendor may select ePayables payment process which allows acceptance of Gwinnett County’s virtual credit card as payment for outstanding invoices. The authorized vendor representative must send an email to: vendorelectronicpayment@gwinnettcountry.com and indicate the desire to enroll in Gwinnett County’s virtual credit card payment process.
2. A vendor may select Direct Deposit payment process and the payment will be deposited directly into an account at their designated financial institution. To securely enroll in Direct Deposit, either access your online Vendor Login and Registration on the County’s web site and update the requested information on the Direct Deposit tab or mail a Direct Deposit Authorization Agreement form. The County will send a Payment Advice notification via email for both payment types. For more information about Electronic Payments, please go to the Treasury Division page on the County’s Web Site or click here -> Gwinnett County Electronic Payments.

DIRECTIONS TO GJAC BUILDING FROM I-85

Take I-85 north to Georgia Highway 316 (Lawrenceville/Athens exit). Exit Highway 120 (Lawrenceville/Duluth exit) and turn right. At sixth traffic light, turn right onto Langley Drive. Cross Highway 29 through the traffic light to the 4-way stop sign. The public parking lot is on the left. The Purchasing Division is located in the Administrative Wing-2ND Floor.