

CAPCOG - GeoMap 2006 Update Scope of Services - Fee Schedule

As per the contract between the Capital Area Council of Governments ("CAPCOG") and The Sanborn Map Company, Inc. ("Sanborn") and the pending inter-local agreements ("Agreements") between the participating entities ("Participants") and CAPCOG, the attached table indicates the services selected by the Participants for the 2006 GeoMap Update Project. The table also indicates the regional cost reduction that can be realized if all the Participants execute the anticipated Agreements. If any of the quantities are altered due to increased or decreased participation, the figures per Participant will need to be adjusted per the CAPCOG contract. Upgrades may be available once the final tabulation of all Participants and funding is completed.

Statement of Work

Sanborn will be producing and delivering an assortment of digital imagery, topographic and planimetric data for the 2006 project. The goods and services selected by the Participants under the above referenced contractual agreements are listed on the attachment and graphically represented on the attached map inserts. More specific information about the products and processes can be found in the Sanborn Proposal contained in the CAPCOG contract.

The following tasks will be performed to support generation of these goods and services:

- ◆ Acquisition of digital imagery R,G,B and near IR for the production of 6-inch, 12-inch and 24-inch pixel orthophotography products with associated airborne GPS/IMU data
- ◆ Collection of ground control point locations, existing and new control points as necessary to support the analytical aerial triangulation of the digital imagery for the purposes of orthophotography and planimetric mapping
- ◆ Softcopy stereo compilation of new and updated DEM/DTM data and planimetric data as necessary to achieve the specified goods and services
- ◆ Ortho-rectification using new and existing DEM/DTM data; existing DEM/DTM data will be updated for ortho-rectification purposes unless contours are also being purchased in the areas selected for ortho-rectification
- ◆ Creation of new and update of existing planimetric features; feature lists will vary based on map scale and funding availability
- ◆ Creation of new DTM and contour data in the selected areas

Procedures

Sanborn will acquire digital aerial imagery at an altitude to achieve an *equivalent* negative scale of 1"=600', 1"=1500' and 1"=2,500 along an optimal flight line pattern. Prior to initiating the aerial imagery mission, a proposed flight line map will be developed using digital boundaries provided by the Participants. The flight plan will be submitted to the Participants's Project Manager for approval prior to initiating the aerial imagery mission. The aerial mission will proceed upon receipt of Participants's signed approval and authorization to proceed.

Sanborn will use a combination of conventional ground control augmented by airborne GPS/IMU (AGPS/IMU) data to control the FAAT. Sanborn will maximize the use of existing ground survey stations as control and checkpoints for the generation of orthophotographs. Suitable existing NSRS geodetic control will be used, supplemented where necessary by new semi-permanent ground control points. Ties will be made to existing Order B (two or more) and First Order horizontal control, and to vertical control of suitable (Second Order or better) quality, to ensure conformity with the specified datums (NAD83 and NAVD88). Vertical control will be established via a combination of Second Order digital geodetic leveling and First Order GPS surveys. Final coordinates will be provided on the Texas Plane Coordinate System, Central Zone in units of the U.S. Survey Foot.

Upon completing Austin's ground control phase, Sanborn will prepare and submit a final Survey Report. A Control Diagram will also be prepared which will address all existing and newly established control used as a basis for the subsequent photogrammetric work.

Fully analytical aerial triangulation will be performed on the new photography and control to support Softcopy compilation. The existing DTM and planimetrics will be updated using Softcopy compilation methods.

Softcopy photogrammetry workstations will be used to superimpose the existing 2003 DEM/DTM data and planimetric data against the new digital imagery. The existing DEM/DTM will be updated as necessary to allow for ortho-rectification of the new imagery and to produce new or update existing planimetric data as appropriate.

The Participants 1"=100', 1"=200' and 1"=400' Map Scale Orthophotography, planimetric and topographic features will be updated using the spring 2006 digital imagery.

The new or updated DEM/DTM will be applied to the digital imagery to differentially rectify the image to eliminate distortion. Once the imagery has been rectified, it will be structured and formatted in a seamless image database and re-sampled to the appropriate resolution. The final deliverable will be images in tiled GeoTIFF format with world files.

Accuracy Specifications

The accuracy specifications for the project will be as follows:

- ◆ ASPRS Class 1 Accuracy Standards for Large Scale Maps (100, 200 and 400)

Deliverables

- ◆ Project Initiation Phase
 - ◆ Project Work Plan (preliminary and final)
- ◆ Aerial Photography Phase
 - ◆ Flight line plan and control diagram
 - ◆ AGPS/IMU data
 - ◆ Post processed digital imagery
- ◆ Survey Control Phase
 - ◆ Control diagram
 - ◆ One hard copy and one digital (ASCII) file of the report outlining results of the ground Global Positioning Satellite observations
 - ◆ GPS observations, results, observation logs, and data analysis and adjustments
- ◆ Aerial Triangulation Phase
 - ◆ One copy of FAAT Report
- ◆ Digital Orthophoto Phase
 - ◆ One set of digital orthophotography in TIFF/TFW format DVD's that are compliant with the Digital Imaging Acceptance Criteria that is included in the Project Work Plan
 - ◆ One set of compressed digital orthophotography in MrSID format
- ◆ *Planimetric and Elevation Data*
 - ◆ Updated or new digital elevation (DEM) or terrain (DTM) models
 - ◆ Digital Arc Info files of planimetric data
- ◆ Data for DTM/DEM in ASCII file format

Acceptance Criteria

The following guidelines establish the Acceptance Criteria between Sanborn and the Participants. The review period is subject to an acceptance rating in a unit of delivery (i.e. tile). Sanborn divides the acceptance criteria into 3 distinct categories; each of which is subject to an acceptance rating that we base on the total number of features e.g., database attributes in a unit of delivery (i.e. tile). The three categories of acceptance criteria are, (1) data accuracy, (2) orthophotography accuracy, and (3) review periods.

1. Data Accuracy:
 - (a) Data Base Design:

Sanborn is responsible for achieving 100.0 percent accuracy when comparing compliance between the files/database and the database design/scheme specifications and all the topological system requirements (computer checkable). These requirements are system specific and necessitate a list of details, such as,

- ◆ inclusively, the database record is all features that the database design/scheme defines as having a database record;
- ◆ the database record includes only correct database relationships;
- ◆ features (data elements) correspond to a specific database record;
- ◆ attributes populate with valid value ranges;
- ◆ location of data within the map extent; and
- ◆ precision, fuzzy, and dangle tolerances are specific.

(b) Edge-Matching:

Sanborn is responsible for achieving 100.0 percent accuracy when edgematching (i.e., graphic cross-tile connection) all linear features within a delivery area. The point (x,y) at which a linear element crosses one tile, is the same value in the next tile.

(c) Snapping:

Sanborn is responsible for achieving 100.0 percent accuracy when snapping features that are part of a topologically structured coverage (i.e., polygon), and 98.0 percent for non-topologically structured linear features within 1/1000' (.001 feet for 100-scale mapping).

2. Orthophotography Accuracy:

Sanborn has developed a comprehensive Quality Control (QC) Plan for measuring the quality of digital orthophoto imagery. The QA Plan identifies specific standards and criteria to determine an acceptance value for criteria including the following:

- ◆ Horizontal Image Accuracy - typically based upon the project accuracy standards.
- ◆ Image Quality - depends on mosaicking, edgematching, brightness, shadows, and contrast.
- ◆ Other Issues - radial displacement, water reflections, and system anomalies.

Sanborn has developed and published Digital Imaging Acceptance Criteria for producing digital orthophotography for the Participants project. This document required signatures of both Sanborn's and the Participants's Project Managers as an agreement to the criteria to be applied during the production and QC of the orthoimagery by Sanborn and Quality Assurance of the Final Products by the Participants.

3. Review Periods:

(d) Participants's Web-based Review Period:

The Participants completes all web-based computer checks or tests on the data within 30 days of notice that the imagery has completed all QC checks by Sanborn and PBSJ and is determined acceptable for delivery. The Participants shall have 30 days to notify Sanborn of the status of the file as either (1) accepted (2) ready for delivery, or (3)



rejected (required additional re-work and QC by Sanborn without a complete edit).

(e) Participants's Post Delivery Review Period:

The Participants completes all computer checks or tests on the data within 30 days of delivery of the imagery. The Participants shall have 30 days to notify Sanborn of the status of the file as either (1) accepted (2) rejected (required additional re-work and QC by Sanborn without a complete edit).

(e) The Participants's Rejected Products:

The Participants reserves the right to reject the delivery area (web-based check) or complete database (final delivery) if, in the Participants's judgment, the file is unusable for the quality assurance process, i.e., and unreadable media.

(f) Sanborn's Review Period:

Sanborn validates and corrects all calls for redelivery of edited/rejected computer checked digital files within 30 days of notice or receipt from the Participants. If the final data delivery requires a redelivery because of failing to meet the acceptance criteria, then Sanborn's obligation is to review the entire data delivery or dataset and correct all errors or nonconformities found.

(g) Acceptable Error Rate:

Errors falling within the acceptance criteria (under 1 percent are within the contractual limits).

Invoicing and Payment Terms

Sanborn shall invoice monthly for percent complete. Payment terms for all valid invoices received are NET30 from date of invoice.

Production and Fee Schedule

Sanborn will commence work upon receipt of the signed work order from CAPCOG. Final data will be completed and delivered on or before the date contained in the Project Work Plan schedule. Delivery of final data is dependent upon actual date of acquisition of photography. Adjustments to the production and fee schedule will be made for any events that delay production.

Capital Area Council of Governments

INTERLOCAL CONTRACT FOR GEOMAP 2006

Art. 1. Parties and Purpose

- 1.1 The Capital Area Council of Governments ("CAPCOG") is a regional planning commission and political subdivision of the State of Texas organized and operating under the Texas Regional Planning Act of 1965, as amended, chapter 391 of the Local Government Code.
- 1.2 The City of Austin (the "City") is a Texas home-rule municipality that is seeking to obtain Geo Map Data Services.
- 1.3 CAPCOG has contracted with Sanborn Map Company, Inc. ("Sanborn") to provide these services to the City. This contract is entered into between CAPCOG and the City under chapter 791 of the Government Code so that the City can contribute to the cost of CAPCOG's contract with Sanborn and Sanborn can provide the City with additional geo-mapping services.

Art. 2. Goods and Services

- 2.1 CAPCOG agrees to furnish the City the Geo Map Data Services prepared by Sanborn for the City under its contract with CAPCOG. The Geo Map Data Services' specifications and timetable for delivery are described in the attached Work Order Exhibit to this contract.

Art. 3. Contract Price and Payment Terms

- 3.1. The City agrees to provide funding and/or in-kind services to CAPCOG under this contract with a total value of not to exceed \$400,000.00. The total contract value includes a project management fee equal to 2% of the price to be paid Sanborn under the particular work order executed to provide goods and services for the City. CAPCOG agrees to invoice the City for the management fee after acceptance of the deliverable under the work order and the City agrees to pay the invoice within 30 days after the date of the invoice.
- 3.2. CAPCOG agrees to provide funding and/or in-kind services to Sanborn under its Contract for the Capital Area Geospatial Base Map Project with a total value of not to exceed \$392,156.86.00.

Art. 4. Effective Date and Term of Contract

- 4.1 This contract takes effect on the date it is signed on behalf of CAPCOG and it ends, unless sooner terminated under Art. 6, on September 30, 2003.

Art. 5. Nondiscrimination and Equal Opportunity

- 5.1 CAPCOG and the City shall not exclude anyone from participating under this contract, deny anyone benefits under this contract, or otherwise unlawfully discriminate against anyone in carrying out this contract because of race, color, religion, sex, age, disability, handicap, national origin or veteran status.

Art. 6. Early Termination of Contract

- 6.1 If CAPCOG or the City breaches a material provision of this contract, the other may notify the breaching party describing the breach and demanding corrective action. The breaching party has five business days from its receipt of the notice to correct the breach, or to begin and continue with reasonable diligence and in good faith to correct the breach. If the breach cannot be corrected within a reasonable time, despite the breaching party's reasonable diligence and good faith effort to do so, the parties may agree to terminate the contract or either party may invoke the dispute resolution process of Art. 7.
- 6.2 If the City fails to pay CAPCOG the full contract price set out in paragraph 3.1, CAPCOG and Sanborn jointly own with the City any goods and services provided the City but not paid for. Joint ownership of these goods and services is automatically established among CAPCOG, Sanborn, and the City at the time of termination for nonpayment under paragraph 6.1 and continues until Sanborn is paid in full for the goods and services provided, at which time the City becomes the sole owner of the goods and services.
- 6.3 Termination for breach under paragraph 6.1 does not waive either party's claim for damages resulting from the breach,

Art. 7. Dispute Resolution

- 7.1 The parties desire to resolve disputes arising under this contract without litigation. Accordingly, if a dispute arises, the parties agree to attempt in good faith to resolve the dispute between themselves. To this end, the parties agree not to sue one another, except to enforce compliance with this Art. 7, until they have exhausted the procedures set out in this Article.
- 7.2 At the written request of either party, each party shall appoint one nonlawyer representative to negotiate informally and in good faith to resolve any dispute arising under this contract. The representatives appointed shall determine the location, format, frequency, and duration of the negotiations.
- 7.3 If the representatives cannot resolve the dispute within 30 calendar days after the first negotiation meeting, the parties agree to refer the dispute to the Dispute Resolution Center of Austin for mediation in accordance with the Center's mediation procedures by a single mediator assigned by the Center. Each party shall pay half the cost of the Center's mediation services.

7.4 The parties agree to continue performing their duties under this contract, which are unaffected by the dispute, during the negotiation and mediation process.

Art. 8 Notice to Parties

8.1 Notice to be effective under this contract must be in writing and received by the party against whom it is to operate. Notice is received by a party: (1) when it is delivered to the party personally; (2) on the date shown on the return receipt if mailed by registered or certified mail, return receipt requested, to the party's address specified in paragraph 8.2 and signed on behalf of the party; or (3) three business days after its deposit in the United States mail, with first-class postage affixed, addressed to the party's address specified in paragraph 8.2.

8.2 CAPCOG's address is 2512 IH-35, South, Suite 220, Austin, TX 78704, Attention: Betty Voights, Executive Director. The City's address is P.O. Box 1088, Austin, TX 78767, Attention: Toby Futrell, City Manager.

8.3 A party may change its address by providing notice of the change in accordance with paragraph 8.1.

Art. 9. Miscellaneous

9.1 Each individual signing this contract on behalf of a party warrants that he or she is legally authorized to do so and that the party is legally authorized to perform the obligations undertaken.

9.2 This contract states the entire agreement of the parties, and an amendment to it is not effective unless in writing and signed by all parties.

9.3 This contract is binding on and inures to the benefit of the parties' successors in interest.

9.4 Sanborn is a third-party beneficiary of this contract.

9.5 This contract is executed in duplicate originals.

CITY OF AUSTIN, TEXAS

CAPITAL AREA PLANNING COUNCIL

By _____
Toby Futrell
City Manager

By _____
Betty Voights
Executive Director

Date _____

Date _____