CACHE COUNTY
CORPORATION

M. LYNN LEMON
COUNTY EXECUTIVE/SURVEYOR

199 N. MAIN
LOGAN, UTAH 84321
TEL 435-755-1850
FAX 435-755-1981

COUNTY COUNCIL
CORY YEATES
H. CRAIG PETERSEN
KATHY ROBINSON
BRIAN CHAMBERS
GORDON A. ZILLES
CRAIG "W" BUTTARS
JON WHITE

MEMORANDUM

TO: Jill N. Zollinger
County Clerk

FROM: M. Lynn Lemon
Cache County Executive/Surveyor

SUBJECT; FILING CONTRACT OR AGREEMENT

The attached 09-22-61 is herewith submitted for filing.

Please complete and return executive checklist to my office. Certified copies of this document are to be forwarded to:

1. County Auditor
2. County Attorney
3. County Executive
4. _____
5. _____
6. _____
7. _____

MLL:pwp

Please substitute
06/01/09 (kg)

JON HUNTSMAN, JR.
Governor
GARY R. HERBERT
Lieutenant Governor

State of Utah

Department of Technology Services

J, Stephen Fletcher
Chef Information Officer

Automated Geographic Reference Center

Jeannie Watanabe
Manager

RECEIVED
MAY 20 2009
EXECUTIVE

14 May 2009

M Lynne Lemon, County Executive
Cache County
179 North Main # 112
Logan City UT 84321

Pat
Signed Copy of Agreement

Dear Lynne: mhl 5/20/09

Enclosed is completed contract 091996 for $6,240.00 to fund the reimbursement for collection and delivery of corner coordinates, and/or construction of digital parcel database.
A request for payment has been processed to Accounts Payable; you should be receiving your GIS Grant funds shortly.

If you have any questions or if I can be of further assistance, please contact me at one of the following:
Phone - 801-538-3463
Fax – 801-538-3622
Email – tedwallace@utah.gov

We appreciate your work in implementing the GIS plan.

Sincerely,

Ted Wallace, CPM
Contract Administrator

Enclosure

CONTRACT # 091996

1. **CONTRACTING PARTIES:** This agreement is between the State of Utah, Department of Technology Services, Automated Geographic Reference Center (AGRC), 1 State Office Building Fl 6, Salt Lake City, Utah 84114-1201, (Agency Code 110) referred to as STATE, and the following County, which is a Government Agency.

County Name: Cache

Address: 179 North Main #112

City, State, Zip: Logan City, Utah 84321

Federal ID# 876000302 Vendor Code 44649BP Commodity Code 99999

2. **GENERAL PURPOSE OF CONTRACT:** The general purpose of this agreement is an AGRC grant for: Funding reimbursement for collection and delivery of Public Land Survey System section corner data as outlined in the Technical Direction for Acceptance and Analysis of Local Control Digital Data into BLM Cadastral Framework.

3. **CONTRACT PERIOD:** Effective date 2-16-2009. Termination date 8-31-2009, unless terminated early or extended in accordance with the terms and conditions of this contract. The STATE will conduct a mid-term contract review (June 30, 2009) to assure the work is being done or scheduled for completion within the terms of this contract. If progress toward competition of the work cannot be documented, the COUNTY risks the possibility of contract termination.

4. **GRANT VALUE:** $6,240 County will be paid a maximum of $$6,240 for funds authorized by this contract.

PREREQUISITE: A prerequisite to executing this contract as determined by the Cadastral Grant Committee which is authorized to manage the distribution of the grant funds, requires all COUNTIES applying for these funds to provide the STATE with the county PARCEL and PLSS section corner data that has been collected through this grant program in past years, before this agreement can be signed.

6. **ATTACHMENTS INCLUDED AS PART OF THIS CONTRACT:**
Attachment A: Standard Terms and Conditions
Attachment B: Scope of Work
Attachment C: Technical Direction for Acceptance and Analysis of Local Control Digital Data in BLM Cadastral Framework
Attachment D: Spread Sheet formatted for Electronic Data Deliverable
Attachment E: Example Tie Sheet- PLSS GPS Observation Sheet

Any conflicts between Attachment A and other Attachments will be resolved in favor of Attachment A.

7. **DOCUMENTS INCORPORATED INTO THIS CONTRACT BY REFERENCE BUT NOT ATTACHED HERETO:**
A. All other governmental laws, regulations, or actions applicable to goods and/or services authorized by this contract.

IN WITNESS WHEREOF, the parties sign and cause this contract to be executed.

CONTRACTOR

M. Lynn Lemon
Signature

3/9/09
Date

M. LYNN LEMON, COUNTY EXECUTIVE
Name and Title of Signer (Type or Print)

STATE

Jeannie Watanabe Date: 3/24/09
Jeannie Watanabe, Interim Manager
Automated Geographic Reference Center (AGRC)

Date: 5/7/09
Department of Technology Services

CONTRACT RECEIVED AND PROCESSED BY DIVISION OF FINANCE

Date: MAY 11 2009
Division of Finance

ATTACHMENT A

STATE OF UTAH – DEPARTMENT OF TECHNOLOGY SERVICES, AGRC STANDARD TERMS AND CONDITIONS

1. COUNTY: The COUNTY shall have no authorization, express or implied, to bind the State of Utah or the above State Agency to any agreements, settlements, liability, or understanding whatsoever, unless herein expressly set forth. Persons employed by the STATE and acting under direction of the COUNTY shall not be deemed to be employees or agents of the STATE.

2. AUTHORITY: Provisions of this contract are pursuant to the authority set forth in Sections I-07 of the State of Utah Accounting Policies and Procedures and any other relevant provisions of the STATE.

3. RENEGOTIATIONS OR MODIFICATIONS: This contract way be amended, modified, or supplemented only by written amendment to the contract, executed by the parties hereto, and attached to the original signed copy of this contract. AGRC has no obligation to perform any services not specified in the contract.

4. TERMINATION: This contract may be terminated, with or without cause, in advance of the specified expiration date by either party, upon 30 days prior written notice being given to the other party. On termination of this contract, COUNTY will make payment for all services rendered and/or costs obligated to date of termination.

5. CONTRACT JURISDICTION: The provisions of this contract shall be governed by the laws of the State of Utah.

6. SEPARABILITY CLAUSE: The declaration by any court or other binding legal source that any provision of this contract is illegal and void shall not affect the legality and enforceability of any other provision of this contract unless said provisions are mutually dependent.

7. INDEMNITY CLAUSE: The COUNTY agrees to indemnify, save harmless, and release the State of Utah and the State officers, agents. and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this contract by the COUNTY, its officers, agents, volunteers, or employees. The STATE agrees to indemnify, save harmless, and release the Utah County and the County officers, agents. and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this contract by the STATE, its officers, agents, volunteers, or employees.

8. NONAPPROPRIATION OF FUNDS: Contractual service obligations of the STATE to be fulfilled after the current fiscal year are contingent upon funds to maintain the servicing agency being appropriated, budgeted, or otherwise made available. If funds are not appropriated or otherwise available to maintain the servicing agency, this contract may be terminated without penalty by the STATE upon giving.thirty (30) days written notice.

9. DATA: All data received or compiled by the STATE under this contract becomes the property of the State of Utah. Access to and confidentiality of said data will be governed by the rules and procedures of the agency with whom the data originated when such rules are specified as an amendment to this contract.

10. DEADLINES: AGRC's agreement to all deadlines and costs in this contract is contingent upon the COUNTY's performance of such actions as are instrumental to the completion of this contract. If the COUNTY fails to act in a timely manner, AGRC may opt to consider the contract terminated under the conditions of Paragraph 4.

11. CONFLICTS: Conflicts, if any, between Attachment A and any other attachments will be resolved in favor of Attachment A.

ATTACHMENT B

SCOPE OF WORK
COUNTY GIS AND PLSS PROJECT

The State of Utah, Department of Technology Services, Automated Geographic Reference Center, referred to as STATE, is distributing Legislative authorized grants to several counties, referred to as COUNTY, for furthering GIS work and the Public Land Survey System.
The work to be performed is Cadastral Surveying and Mapping of Public Land Survey System section corners.

1. The grants are awarded based on bid proposals, outlining a specific area of interest for the work to occur, and the scope of work for each county will be defined in the bid. The bid proposal will include a map created by the COUNTY outlining general areas the corner data will be collected.

2. The work will be conducted by the COUNTY, or a contractor of the COUNTY, qualified by the State of Utah licensing requirements and following the work requirement as outlined in this contract and its attachments.

3. The STATE agrees the purpose of this program is to improve the quality of the Public Land Survey System and not necessarily focusing on the quantity of the section corners collected. The STATE will work with the COUNTIES to determine an acceptable deliverable based on the difficulty of the area being worked in and other possible obstacles.

4. The COUNTY will provide the following **deliverables** to the STATE according to the directions and requirements outlined in the contract and its attachments:

   - A **map** or sketch outlining a general area the corner data will be collected
   - The **Surveyor Narrative of Evidence** as outlined in "Attachment C"
   - The **Digital Data for Inclusion within PLSS Control Database** as outlined in "Attachment C" - Provide an electronic spread sheet, similar to "Attachment D" with all the newly collected points in the same spread sheet, and include information in all fields for each section corner.
   - The **Surveyor Narrative of GPS Procedures** as outlined in "Attachment C" - Provide an electronic (scan or document) tie sheet or PLSS GPS Observation Sheet for each point, similar to "Attachment E" with the file name of the tie sheet to be named the same as the BLM point ID. Example: UT260250S0010W0_500500.PDF

ATTACHMENT C

Technical Direction for Acceptance and Analysis of Local Control Digital Data into BLM Cadastral Framework

Introduction

A critical element with creation of a standard statewide cadastral framework is integrating data/positions which are essential to the stakeholders of the data. This technical direction specifically addresses the integration of local control supplied by the counties of Utah. Recent experiences with ground truthing by BLM, County Surveyors and Private Surveyors has brought to light questions regarding the reliability of the efforts to rehabilitate Public Land Survey System (PLSS) infrastructure. This work included not only remonumentation and GPS positioning observations of existent PLSS corners, but restoration of PLSS corners. Field returns in many cases have not distinguished whether rehabilitated PLSS corners are existent, obliterated, or restored by proportionate methods. The BLM and the State of Utah, Automated Geographic Reference Center (AGRC) engaged in extensive training throughout the state to provide technical direction for county efforts with rehabilitating the PLSS infrastructure. The training identified BLM PLSS Corner Collection requirements along with BLM GPS collection methodology. In spite of the periodic training, the BLM has received local control deliverables which do not meet BLM PLSS Corner Collection requirements. This technical direction provides not only updated BLM PLSS Corner Collection requirements, but will also provide direction for integration of the local control position into the standard statewide cadastral framework.

BLM PLSS Corner Collection Requirements

BLM Cadastral Survey maintains the authority to conduct original surveys of the PLSS and continues to maintain authority to conduct resurveys of federal interest lands and PLSS corners which control the location of federal interest lands. In Utah, state licensed Professional Land Surveyors hold authority to conduct dependent resurveys of the PLSS. When conducting resurveys the evaluation of local control as identified in the Manual of Survey Instructions, found in chapter 6 guides both the BLM and local surveyor acceptance of local control. Critical to such acceptance is the ability to trace the local control to the original PLSS survey. Similarly, submission of digital data representing local control must meet the same standards for acceptance. BLM PLSS corner collection requirements are a compilation of three deliverables; Surveyor Narrative of Evidence, Digital Data for Inclusion into PLSS Control Database and Surveyor Narrative of GPS Procedures.

Surveyor Narrative of Evidence

Corner recovery notes are required to be filed by private surveyors as per Utah Code; 17-23-17(7) (a). Clearly, corner recovery sheets differ from county to county, but their intent is the same; a requirement of the surveyor to provide evidence which traces local control to the original PLSS survey. The BLM PLSS Corner collection requirements regarding the surveyor's evidentiary narrative are:

- **Description of what was found** should include:
    - Physical description of the monument and its accessories.
    - If monument is of record provide:
        - Name and PLS # of surveyor responsible for setting monument.
        - Identify tracking # of the document of record.
    - If monument is not of record provide evidence supporting the decision to accept.
- **In the event that re-establishment of the monument is required**:
    - Identify in narrative that remonumentation occurred to replace deteriorating existent monument.
    - Obliterated corners which are re-established require the narrative to include evidence to support decision that corner was in fact obliterated, as per Chapter 5, Section 9 through Chapter 5, Section 14 in the Manual of Survey Instructions.
    - Restoration of lost corners requires narrative to include the method used to restore the lost corner, as per Chapter 5, Section 20 through Chapter 5, and Section 46 in the Manual of Survey Instructions.

Digital Data for Inclusion within PLSS Control Database

Most preferred deliverable of local control would be; a digital GCDB Measurement Management (GMM) Software control file, which is an anticipated output format from the AGRC Surveyors Office application. Acceptable file formats for submission of local control data along with aforementioned include; excel spreadsheet, access database, or delimited, field specified ASCII text file. Required data fields follow:

- Township Number & Direction and Range Number & Direction
- Meridian
- GCDB Point Identifier→refer to Existing GCDB dataset for correct Point Identifier
- Status of PLSS corner monument→populate field with one of the following
    - Existent
    - Obliterated
    - Lost
    - Original → meaning previously unmonumented Section Subdivision

- Monument description → identifies Surveyor Narrative of Evidence document
- Network Accuracy → As per IM No. 2001-186, include units
- Agency/PLS # of PLSS monument
- Datum
- State Plane Projection
- Northing
- Easting
- Horizontal Units
- Latitude→ Preferred Format: DDMMSS.SSSS
- Longitude→ Preferred Format: DDDMMSS.SSSS
- Vertical Datum
- Elevation
- Vertical Units
- Height
- Geoid Model
- Collection Method → identifies Surveyor Narrative of GPS Procedures document
- Contact Name
- Contact Phone Number
- Collection Date

Surveyor Narrative of GPS Procedures

The surveyor narrative of GPS procedures is fully described in the BLM, Instruction Memorandum No. 2001-186: Standards and Guidelines for Cadastral Surveys Using Global Positioning System Methods. This narrative shall be prepared and submitted to the project by the Professional Land Surveyor in responsible charge of the land survey project. Required elements of the narrative are summarized below:

- Make and Model of the GPS receiver, Antenna, and related equipment.
- A data collector report of all RTK field operations, including calibrations, duplicate point measurements.
- A processing generated report regarding the baseline processing results and the software and version number used.
- A processing generated report regarding the Network adjustment results including a summary of covariance's, standard deviation or RMS values and the software and version number used. *OPUS data sheet can satisfy this element*
- A network diagram, true line diagram or map showing the network configuration as designed. *OPUS data sheet can satisfy this element*

- A list of the HARN, CORS or reference stations used in the survey. *OPUS data sheet can satisfy this element*
- A list of coordinates by Pt Id including the datum, geoid model, epoch, and measurement units which are within same control network.
- Local and Network Accuracies.

Data Analysis and Acceptance of Local Control using GCDB Measurement Management (GMM) Software

GMM control file with all appended local control should have the comment field populated with the Agency Code found in Appendix A; GCDB Data Collection Attribute Definitions Version 2.0. Rejected control will remain in .con file, but will require an * in front of control entry.

Local control positions of PLSS corner which do not control the location of federal interests will follow existing guidance found in Utah P&G, 2006. The following guidance will only apply to local control positions of PLSS corners which control Federal interests:

- Township.txt file requires listing all rejected control with accompanying comment as to reason for rejection.
- Import of control using appended .con file should occur as an inraw.exe operation, and should occur before deleting any existing control for same PLSS corner.
    - The *import of control* function found in the control maintenance subroutine of inraw.exe will list coordinate mismatch measurements. Coordinate mismatch of greater than 20 feet requires flagging local position for possible rejection.
        - If documentation that accompanies local control deliverable can substantiate that local PLSS corner position can be traced to the original PLSS survey. Remove flag and continue to use local position.
        - If documentation accompanies local control deliverable which cannot substantiate that local PLSS corner position can be traced to the original PLSS survey. Reject local position.
- If GCDB point identifier (Pt Id) does not match PLSS Pt Id within existing GCDB dataset, then flag local position for possible rejection.
    - If documentation that accompanies local control deliverable can substantiate that local PLSS corner position can be traced to the original PLSS survey, then edit Pt Id to match existing GCDB dataset. Remove flag and continue to use local position.

- If documentation accompanies local control deliverable which cannot substantiate that local PLSS corner position can be traced to the original PLSS survey. Reject local position.

- Initial Least Squares Adjustment (LSA) of standalone townships will occur with local control allowed to float using the following assigned error estimates:
  - 1 ft - Local control positions which do not meet IM # 2001-186 standards
  - .656 ft – Local control positions using RTK method positioning which meet IM # 2001-186 standards
  - .328 ft - Local control positions which meet IM # 2001-186 standards for Control Network Accuracy
  - Results of LSA shows the local control position > 2X error estimate requires flagging the local position.
    - If documentation that accompanies local control deliverable can substantiate that local PLSS corner position can be traced to the original PLSS survey. Remove flag and continue to use local position.
    - If documentation accompanies local control deliverable which cannot substantiate that local PLSS corner position can be traced to the original PLSS survey. Reject local position.
- Proceed as per existing Utah GCDB Collection Guidance.

ATTACHMENT D

TOWNSHIP RANGE	MERIDIAN	POINTID	STATUS	MONUMENT DESCRIPTION	ACCURACY	AGENCY	DATUM	STATE PLANE PROJECTION	NORTHING	EASTING
T25S R1W	SLB&M	UT260250S0010W0_500500	Existent	3" BLM brass cap with tpost along side	RTK GPS	Torgersen	WGS84	Lambert Conformal Utah Central Zone	6674700.81	1530192.23

ATTACHMENT D

HORIZONTAL UNITS	LATITUDE	LONGITUDE	VERTICAL DATUM	ELEVATION	VERTICAL UNITS	ELLIPSOID HEIGHT	GEOID MODEL	COLLECTION METHOD	CONTACT NAME	CONTACT PHONE #	COLLECTION DATE
Survey Foot	N 38-38-34.78930	W 111-53-09.08762	NAVD88	7559.8	US SURVEY FT	7618.46	GEOID03	GPS RTK 3 MIN OBS	Rodney K. Torgersen	435-893-0081	10/17/2008

"Attachment E"

091996

PLSS GPS Observation Sheet

Project Name 0810SC1	Township			1/2 (2)	N S	Range		1/2 (2)	E W	Section		Meridian	
(Meridian Township Range)	T	2	5		S	0	1		W	1	0	(SL)	US

Contact's Name	Rodney K. Torgersen, PLS	Source Agency	Date
Contact's Phone	435-893-0081	Sevier County	October 17, 2008

Control Station

Name	CP-100	Type					Accuracy
		COR	HARN	TRI	(Other)	Rebar Control Point (OPUS Obs.)	Order
USGS Quad Name		Datum					State Utah
WATER CREEK CANYON		NAD27	NAD83	NAD83 (1994)	(WGS84)	Local	County Sevier

Latitude															Longitude															
N	3	8	-	3	8	-	3	4	.	7	8	9	3	0	W	1	1	1	-	5	3	-	0	9	.	0	8	7	6	2

Northing															Easting															
6	6	7	4	7	0	0	.	8	1						1	5	3	0	1	9	2	.	2	3						

Units	(Survey Foot)	International Foot	Meter	Coordinate Type	(State Plane)	UTM
Zone	Utah North	(Utah Central)	Utah South	Vertical Datum	NGVD29	(NAVD88)
Ellipsoid Height	M	7618.46	FT	Geoid Height	M	-58.66 FT

Base Receiver

Type	TRIMBLE	Model	R8	Serial Number	4732137054
Logging Interval	5 s	Elevation Mask	10°	PDOP Mask	6.0
Antenna Type	R8 MODEL 2				
Start Time	AM PM	End Time	AM PM		

Antenna Height

Session Beginning	1st M	2nd M	3rd M	Ave M
Session End	1st M	2nd M	3rd M	Ave M

Rover Receiver

Type	TRIMBLE	Model	R8	Serial Number	4732136995
Approximate Distance from Base Station	1 Miles	Antenna Type	R8 MODEL 2	Antenna Height	6.89 FT

Station Observation

Observation Type: (RTK) FAST STATIC STATIC OTHER

First Observation

Station Name (M1)						1	0	8	Description	COR SEC 10/11/14/15 GCDB#500500
Occupation Time	3 MIN								PDOP Best	RMS Best
Number of Measurements	180								PDOP Worst	RMS Worst

Second Observation

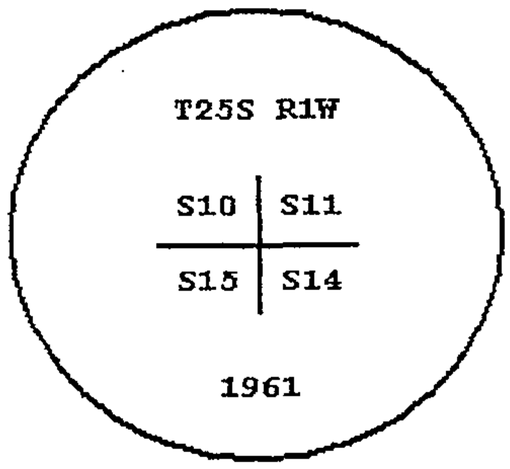
Station Name (M2)									Description	
Occupation Time									PDOP Best	RMS Best
Number of Measurements									PDOP Worst	RMS Worst
Inverse Distance Between M1 and M2	FT								Alternate Base Station Used	Yes No

Monument and Markings

Type / Size

Stone	Pipe/Cap		Post	Other
Size	Size	3" DIA. 36" LONG	Size	Size
Material	Material	BRASS	Material	Material

Sketch/Rubbing or Attach Photo of GPS Station Occupied
Show rotation of stampings/markings relative to North and describe briefly



BLM BRASS CAP WITH T-POST ALONGSIDE