

SCOPE OF WORK

PART 1

**NON PROJECT SPECIFIC for REGION 2**

October 20, 2014

PROJECT NUMBER: Non Project Specific for Surveying and Right of Way Services

PROJECT LOCATION: Region Two or other CDOT regions in Colorado

THE COMPLETE SCOPE OF WORK INCLUDES THIS DOCUMENT (ATTACHED TO THE CONTRACT FOR CONSULTANT SERVICES) AND, IF REFERENCED,

PART 2, Dated: October 20, 2014

PART 3, Dated: October 20, 2014

PART 2 and PART 3 ARE AVAILABLE AS SEPARATE DOCUMENTS.

**PROJECT SCOPING AND SPECIAL PROVISION**

SECTION 1 - PROJECT SPECIFIC INFORMATION

- 1.01 Project Goal ..... 1
- 1.02 Project Location ..... 1
- 1.03 Work Duration ..... 1
- 1.04 Consultant Responsibility ..... 1
- 1.05 Work Product ..... 1
- 1.06 Work Product Completion ..... 2
- 1.07 Additional Project Information ..... 2
- 1.08 Scope of Work Organization..... 3

SECTION 2 - PROJECT MANAGEMENT AND COORDINATION

- 2.01 CDOT Contacts..... 4

SECTION 3 - PROJECT DESCRIPTION

- 3.01 Surveying ..... 5
- 3.02 Right-Of-Way Plans Preparation ..... 6
- 3.03 Photogrammetry (TMOSS)..... 6
- 3.04 Administrative Support..... 6
- 3.05 Traffic Control ..... 6
- 3.06 Quality Control ..... 6
- 3.07 Title Work..... 7

SECTION 4 - GENERAL INFORMATION

- 4.01 Contract Provisions ..... 8
- 4.02 Authorization to Proceed ..... 8
- 4.03 Project Coordination ..... 9
- 4.04 Routine Reporting and Billing ..... 9
- 4.05 Personnel Qualifications ..... 10
- 4.06 CDOT Computer/Software Information ..... 10
- 4.07 Computer Data Compatibility..... 10
- 4.08 Project Standards ..... 11

SECTION 5 - PRECONSTRUCTION WORK TASK DESCRIPTIONS

- 5.01 Project Initiation and Continuing Requirements..... 12
- 5.02 Project Development..... 12
- 5.03 Preliminary Design..... 13

SECTION 6 SUBMITTALS ..... 15

SECTION 7 CONTRACT CONCLUSIONS

- 7.01 Supplemental Work ..... 18
- 7.02 Contract Completion..... 18

**SECTION 1**  
**Project Specific Information**

**1.01 Project Goal.** This project is intended to provide project support for specific surveying and right-of-way activities in Region Two.

**1.02 Project Location.** Consultant activities will be in the Region 2 area. Region two includes the following counties: Baca, Bent, Custer, Crowley, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Otero, Prowers, Pueblo and Teller in Colorado. The contract may be used in other regions within the state of Colorado if necessary.

**1.03 Work Duration.** The work on this contract will be subject to supplements and funding from projects for specific work tasks as needed for a period of two years.

**1.04 Consultant Responsibility.** The Consultant is responsible for (defined by project Scope of Work):

- A. Presurvey Meeting
- B. Progress Meetings
- C. Secure Right of Entry
- D. Traffic Control and Traffic Control Plan
- E. Underground Utility Locates
- F. Survey Data Research
- G. Establish Ground Control
- H. Property/Boundary Surveys as needed
- I. TMOSS Survey
- J. Map Compilation
- K. Right-of-Way Research including adjoiners vesting deeds, title commitments, or memorandums of ownership
- L. Right-of-Way Plan/Map Preparation
- M. Right of Way Mapping (Mapping of existing right of way only)
- N. Right-of-Way Staking (Existing ROW, new ROW, and easements as necessary delineated for Appraisal)
- O. Right-of-Way Monumentation (CDOT Monument)
- P. Property Monumented Land Survey (As required per Colorado Revised Statutes)
- Q. Review By Registered Professional Surveyor
- R. Slope and Structure Staking
- S. Final TMOSS Survey

**1.05 Work Product.** The Consultant work products are (defined by project Scope of Work):

- A. Project Schedule
- B. Man-hour Proposal
- C. Cost Proposal

- D. Project Progress Meeting Minutes
- E. Traffic Control Plan(s)
- F. Monument & Surveyed Ground Control
- G. Project Control and Land Survey Diagram(s)
- H. Digital TMOSS Data
- I. Photography Products
- J. All Documents Found In Research
- K. Preliminary and Final Ownership Map
- L. Original Field Notes
- M. Survey Reports
- N. Monuments on Right-of-Way Lines
- O. Sealed ROW Plans and copies as filed in the County
- P. Quality Control Reports
- Q. Electronic Data

Detailed work product requirements are described in the following Sections and in Part 2.

**1.06 Work Product Completion.** All submittals are subject to approval by the CDOT Contract Administrator or his designee.

**1.07 Additional Project Information.** Additional information regarding this project is included in the following documents:

- A. CDOT Metric Conversion Manual (Current Ed.)
- B. CDOT Survey Manual (Current Ed.)
- C. CDOT Right-of-Way Manual (Current Ed.)
- D. CDOT Standard Specifications for Road and Bridge Construction (Current Ed.)
- E. CDOT Engineering Computing Manual (Current Ed.) (InRoads TMOSS, InRoads Geometry for ROW, etc.)
- F. CDOT M & S Standards (Current Ed.)
- G. FHWA Manual on Uniform Traffic Control Devices for streets and roads (MUTCD) (Current Ed.)
- H. CDOT InRoads TMOSS coding booklet (Current Ed.)
- I. CDOT Task Order Manual (Current Ed.)
- J. CDOT CADD and/or other CDOT manuals not mentioned above.

Copies of these documents are available for free download on the CDOT website, the others may be obtained from CDOT Reproduction, 4201 East Arkansas Avenue, Room 107, Denver, Colorado 80222. A moderate fee, determined by document size, will be charged. An additional charge will be added for requests by mail or for billing. Please provide a notice of two working days prior to obtaining the document(s) in person. The most recent edition of any CDOT publication will apply to individual task orders issued under this contract and new editions will apply to new task orders issued after the release of a new manual or publication.

**1.08** **Scope of Work Organization.** Project Scopes of Work are divided into parts; Part 1, a project specific section; Part 2, includes general descriptions of preconstruction tasks, and Part 3, includes services after the design. Part 1 is attached to the contract. Part 2 and Part 3 are included in the scope but are distributed separately from the contract.

This draft scope of work has been carefully reviewed by the Department and reflects a plan of approach based on the known goals. One factor determining the selection of a Consultant is the ability of that consultant to analyze the project goals, evaluate the work elements, and formulate a work plan. This process may produce new approaches or modification to the project work elements. Because of that, all consultants should be aware that the Final Scope of Work for a project will be produced with the input of the selected Consultant.

**SECTION 2**  
**PROJECT MANAGEMENT AND COORDINATION**

**2.01**    **CDOT Contacts**

The Contract Administrator for this project is:

Karen Rowe,  
Region Transportation Director, Region 2

Active day-to-day administration of the contract will be delegated to the CDOT Project Manager:

Tom Adams  
Professional Land Surveyor II, Region 2

Colorado Department of Transportation  
Region 2 Right of Way  
905 Erie Avenue  
Pueblo, Colorado 81002

Telephone (719) 546-5454  
FAX (719) 546-5414

## SECTION 3 PROJECT DESCRIPTION

The consultant shall provide support in the following work disciplines:

### **3.01 SURVEYING**

- A. Surveying general procedures
- B. Global Positioning System (GPS) surveys
- C. Aerial surveys
- D. Preliminary surveys
- E. Construction surveys
- F. Perform survey data research and preliminary field reconnaissance
- G. Secure right of entry using CDOT forms (Form 730a)
- H. Geodetic surveys using FGCC Standards & Techniques including Blue Booking (Conventional & GPS)
- I. Project Control Networks tied to geodetic surveys based on NAD 83(92) (Conventional or Fast Static GPS) or current datum used by CDOT.
- J. Vertical Control based on NAVD 88 datum
- K. Blue Book Vertical control with the National Geodetic Survey
- L. Locate & Survey BLM & GLO Aliquot & Public Land Survey System Corners.
- M. TMOSS survey (InRoads TMOSS Coding format) (Total Station, GPS RTK, etc.).
- N. Right-of-Way Surveys
- O. Locate & Survey all private property monumentation required to resolve property ownerships and locations and their intersections with the existing and proposed CDOT Right of Way.
- P. Property Surveys
- Q. Prepare preliminary ownership maps
- R. ALTA/ACSM Surveys (As required per ACSM.)
- S. Prepare monument recovery forms and records (CDOT, NGS, USGS, BLM or required by Colorado survey laws)
- T. Stake ROW Parcels, TE's, SE's, and PE's for appraisers
- U. Final Monumentation of ROW Line, SE's and PE's
- V. Comply with all applicable Colorado Revised Statutes
- W. Prepare survey report using MicroStation V8 or newer, and InRoads. Using CDOT's latest configuration found at:  
[http://www.dot.state.co.us/DesignSupport/CDOT\\_MicroStation\\_Inroads\\_Configuration/Index.htm](http://www.dot.state.co.us/DesignSupport/CDOT_MicroStation_Inroads_Configuration/Index.htm)
- X. Prepare a quality-control report
- Y. Slope and Structure Staking using design data. (Post-design/Pre-construction)
- Z. Compute As-Constructed InRoads TMOSS survey and final earthwork. (Post Const.)

### **3.02 RIGHT OF WAY PLANS PREPARATION**

- A. Perform research, calculations and drafting to determine existing CDOT Right-of-Way within project limits defined by metes and bounds on the project coordinate system. Deliver electronic data in InRoads and MicroStation.
- B. Resolve private property/boundary locations and the intersection of these boundary lines with the existing and proposed CDOT Right of Way.
- C. Research ownership deeds
- D. Prepare Right-of-Way Plans and Legal Descriptions. See - Scope of Work - Part 2, Section 1.02 I and Section 2.03 h for more detail.

### **3.03 PHOTOGRAMMETRY**

- A. Compile point #, Y, X, Z, code, and comment data using InRoads TMOSS codes (not a conversion to InRoads TMOSS codes). InRoads TMOSS format and methodology is described in the InRoads TMOSS booklet and InRoads Survey Data Reduction training manual.
- B. Through ground supplemental survey (1) find & locate any ROW Markers and property corners (2) define all features on the project - fences, signs, culverts, all underground features, utilities, pavement and features with sensitive elevation requirements.
- C. Provide digital ortho-rectified photos in TIF World (TIFW) format.
- D. Provide MicroStation drawings of InRoads TMOSS survey data

### **3.04 ADMINISTRATIVE SUPPORT**

- A. Perform clerical or word processing duties
- B. Prepare billings and monthly progress reports

### **3.05 TRAFFIC CONTROL**

- A. Perform traffic control with planning, signing and properly trained personnel, using MUTCD manual as a guide
- B. Provide traffic control plans to be reviewed by the R-2 Traffic Engineer prior to implementation.

### **3.06 QUALITY CONTROL**

- A. Prepare a report that describes the procedures incorporated into the work to assure and control the quality.

### **3.07 TITLE WORK**

- A. Performs title research and prepares memorandums of ownership for parcels to be acquired by CDOT.
- B. Arranges for title policies for and on behalf of the Colorado Department of Transportation.

## SECTION 4 GENERAL INFORMATION

**4.01 Contract Provisions.** The contract between CDOT and the Consultant shall be a specific rate-of-pay contract. This basic non-project specific contract will set up the framework for project specific task orders. Funds for actual work will be committed only by task order and not by the NPS contract. The task order shall be initiated by:

- A. Preparing a project specific Scope of Work.
- B. Negotiating the number of hours by classification for each work element with the project manager.
- C. Identifying the other direct costs needed to accomplish the Scope of Work.
- D. Applying the pre-approved rates as established in the basic contract.
- E. Negotiating the product delivery dates.
- F. Identifying the total cost of work and resources needed to meet the project schedules.

Each task order shall include a Scope of Work that describes the specific work to be done. This Scope of Work shall be in specific detail in order to provide a basis for the negotiation of the number of work hours. A meeting on the project site with the CDOT Project Manager (CDOT/PM) is required for each Scope of Work prepared. In the event the consultant experiences unexpected cost/rate changes, annual rate changes, changes in the project team and/or costs, delays during the term of the task order that require that the performance time of a task order be extended the consultant shall request an amended task order. The consultant shall submit three copies with original signatures to the project manager of an amended task order request letter as outlined in the CDOT Task Order Manual (Current Edition) specifying the items to amend and the reasons for the amendment. Back up documentation supporting the request such as certified payroll reports detailing the salary or personnel change or documentation that substantiates any delays are required with the request. The CDOT Project Manager then requests an amended task order from the CDOT Agreements and Consultant Management section. Approval of the amended task order is by the Chief Engineer or designee. All amendments to the task order require this formal process. Changes during the course of a task order are not permitted unless the consultant has requested an amendment. No payments will be made for work accomplished after the expiration date of the task order. Payments of rates differing from or not included in the original task order cannot be made without a formal amendment to the task order.

**4.02 Authorization to Proceed.** Work will not commence until the written notice-to-proceed is received by the Consultant and all work will be completed within the allotted time. No payments can be made for work accomplished outside the limits of the timelines set up by the task order.

Unanticipated changes that require that the performance time be extended must be documented. These are unanticipated changes to the work schedule not caused by the

consultant. The consultant shall request that the task order be formally amended to extend the time. The consultant shall submit a letter to the project manager detailing the reasons for the request, documenting the time lost, and asking for the amendment for a time extension.

**4.03 Project Coordination.** The routine working contact will be between CDOT/PM and the Consultant Project Manager (C/PM) as defined in this part one. Each Project Manager will provide the other with:

- A. Synopses of their respective contacts (both by telephone and in person) with others
- B. Copies of pertinent written communications

The Consultant is responsible for coordinating all sub-consultants and team members.

**4.04 Routine Reporting and Billing.** The Consultant will provide the following on a routine basis:

- A. Coordination of all contract activities by the C/PM
- B. The periodic reports and billings required by CDOT Procedural Directive 400.2
- C. Minutes of all Meetings. The minutes will be completed and will be provided to the CDOT/PM within five (5) working days after the meeting. When a definable task is discussed during a meeting, the minutes will identify the "Action Item", the agency responsible for accomplishing it, and the proposed completion date.
- D. In general, all reports and submittals must be accepted by CDOT prior to their content being utilized in follow-up work efforts.
- E. The consultant shall submit a progress report with each billing.
- F. The progress report shall include a statement addressing the project schedule and any delays encountered.
- G. The primary consultant shall be responsible for checking and verifying all sub consultant and team member billings for compliance with the contract before submitting to CDOT for payment.
- H. The consultant must use the following personnel classifications for their firm's personnel when submitting task order proposals and billings to CDOT:

- Right of Way Manager
- Professional Land Surveyor II
- Professional Land Surveyor I
- Land Survey Intern II
- Land Survey Intern I
- Engineering/Physical Science Technician II
- E/PST I
- E/PST Assistant 1
- E/PST Assistant 2
- E/PST Assistant 3

The consultant shall assign each employee a title from the preceding list in lieu of the terms Project Manager, Party Chief, Instrument operator, draftsman, CADD operator, office tech, etc.

- I. Monthly Status Reports. Each billing shall include a status report that includes the total man-hours bid compared to the total billed to date for each position, a percent complete for each work element.

**4.05 Personnel Qualifications.** The Consultant Project Manager (C/PM), must be approved by the CDOT Contract Administrator. Tasks must be supervised by Licensed Professional Surveyors who are registered with the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors.

**4.06 CDOT Computer/Software Requirements.** The primary hardware used by CDOT is a Personal Computer - Windows based operating system, and the types of software are:

Earthwork - InRoads  
Drafting - MicroStation  
Survey Control - Trimble Geomatics Office (TGO), Trimble Business Center (TBC).  
Survey - InRoads TMOSS coding (developed by CDOT to convert total station surveys, GPS and aerial surveys to MicroStation formats) and InRoads Survey.  
Geometry - InRoads  
ProjectWise, Microsoft Word, Excel, Access, Outlook, Power Point and Project are used at CDOT.

**4.07 Computer Data Compatibility.** CDOT presently utilizes four data formats which consultants shall be required to use for submitting survey and design data: TMOSS (Topography Modeling Survey System using the InRoads coding), InRoads and MicroStation.

The data format used by the consultant to submit surveying data shall be as determined by the CDOT/PM. The data format for submitting design computer files shall be compatible with InRoads Software. The data format shall be submitted in English Units in US Survey feet unless otherwise determined by the CDOT/PM.

The consultant shall immediately notify the CDOT/PM if the firm is unable to produce the desired format for any reason and cease work until the problem(s) is/are resolved.

Refer to Part 2 Section 2, Submittals, for additional information regarding InRoads TMOSS, InRoads, MicroStation and the acceptable transmittal media.

**4.08 Project Standards**

- A. General. The following is a list of technical references applicable to CDOT work. The Consultant is responsible for ensuring compliance with the listed references. Conflicts in criteria shall be resolved by the CDOT/PM.

*Colorado Revised Statutes, CDOT Survey Manual, Bureau of Land Management Instructions to Surveyors, State Board of Registration Bylaws and Rules, CDOT Right of Way Manual, NOAA National Geodetic Survey Specifications, Code of Federal Regulations, CDOT Road and Bridge Specifications, CDOT Computing Manual, Geometric Geodetic Accuracy Standards for Using GPS Equipment, Code of Ethics for Surveyors and Employees, ALTA/ACSM standards*

- B. Specific Criteria. Attachment B is a list of specific project criteria (not applicable to a NPS contract and not attached). The list is comprehensive and may include items that are not required for tasks defined in this scope. The Consultant shall submit the pertinent criteria to the CDOT/PM at one of the periodic progress meetings prior to initiating work.

**SECTION 5  
WORK ACTIVITY ASSIGNMENTS**

This list encompasses the consultant's individual task responsibility. The consultant shall perform all work tasks which are indicated below by an 'X' mark in the consultant column, in accordance with the forms and conditions of Part 2, Part 3, and the standards described in the manuals and documents associated with this contract in 1.07 and 4.08 after coordination and consultation with CDOT. The Consultant is also responsible for coordinating the required work schedule for those tasks accomplished by CDOT and other agencies.

**PRECONSTRUCTION**- See Part 2 for Work Tasks and Task Descriptions.

|                    |  | <u>CDOT/OTHER</u> | <u>CONSULTANT<br/>&amp;/or SUBS</u> |
|--------------------|--|-------------------|-------------------------------------|
| <b><u>5.01</u></b> | <b><u>Project Initiation and Continuing Requirements</u></b> |                   |                                     |
|                    | A. Initial Project Meeting                                   | <u>  X  </u>      | <u>  X  </u>                        |
|                    | B. Project Schedule Reviews<br>(Deliverables Deadlines)      | <u>  X  </u>      | <u>  X  </u>                        |
|                    | C. Initiate Survey   | <u>  X  </u>      | <u>  X  </u>                        |
|                    | D. Right of Entry & Permits                                  | <u>      </u>     | <u>  X  </u>                        |
|                    | E. Traffic Control   | <u>      </u>     | <u>  X  </u>                        |
|                    | F. Initial Submittals  | <u>      </u>     | <u>  X  </u>                        |
|                    | G. Progress Meetings   | <u>      </u>     | <u>  X  </u>                        |
|                    | H. Safety  | <u>      </u>     | <u>  X  </u>                        |
|                    | I. Project Management  | <u>      </u>     | <u>  X  </u>                        |
| <b><u>5.02</u></b> | <b><u>Project Development</u></b>                            |                   |                                     |
|                    | A. Communication and Consensus Building                      |                   |                                     |
|                    | B. Contact List  | <u>      </u>     | <u>  X  </u>                        |
|                    | C. General Meetings  |                   |                                     |
|                    | 1. Small Group   | <u>      </u>     | <u>  X  </u>                        |
|                    | 2. Project Review  | <u>      </u>     | <u>  X  </u>                        |
|                    | D. Communication Aids  | <u>      </u>     | <u>  X  </u>                        |
|                    | 1. Graphics Support  | <u>      </u>     | <u>  X  </u>                        |
|                    | E. Route Location Surveys                                    |                   |                                     |
|                    | F. Survey Manual General Procedures                          |                   |                                     |
|                    | 1. Equipment Checking  | <u>      </u>     | <u>  X  </u>                        |
|                    | 2. Calibration   | <u>      </u>     | <u>  X  </u>                        |
|                    | 3. Error reduction   | <u>      </u>     | <u>  X  </u>                        |
|                    | 4. Field notes   | <u>      </u>     | <u>  X  </u>                        |
|                    | 5. Preliminary Survey scope                                  | <u>      </u>     | <u>  X  </u>                        |
|                    | 6. Presurvey conference                                      | <u>      </u>     | <u>  X  </u>                        |
|                    | 7. Special use permit  | <u>      </u>     | <u>  X  </u>                        |
|                    | 8. MUTCD Traffic Control                                     | <u>      </u>     | <u>  X  </u>                        |
|                    | 9. Permission to Enter Property                              | <u>      </u>     | <u>  X  </u>                        |
|                    | 10. Underground utility locates                              | <u>      </u>     | <u>  X  </u>                        |

|  | <u>CDOT/OTHER</u> | <u>CONSULTANT</u><br><u>&amp;/or SUBS</u> |
|--|-------------------|---|
| G. GPS Surveys                         |                   |   |
| 1. GPS survey specifications           | _____             | <u>X</u>                                  |
| 2. Error reduction                     | _____             | <u>X</u>                                  |
| 3. Equipment checking and calibration  | _____             | <u>X</u>                                  |
| 4. GPS survey methods                  | _____             | <u>X</u>                                  |
| 5. Static & Fast Static Network design | _____             | <u>X</u>                                  |
| 6. GPS planning                        | _____             | <u>X</u>                                  |
| 7. GPS vertical survey                 | _____             | <u>X</u>                                  |
| 8. GPS Horizontal survey               | _____             | <u>X</u>                                  |
| 9. Project and LS Control Diagrams     | _____             | <u>X</u>                                  |
| 10. CORS                               | _____             | <u>X</u>                                  |
| 11. OPUS                               | _____             | <u>X</u>                                  |
| H. Aerial Surveys                      |                   |   |
| 1. General                             | _____             | <u>X</u>                                  |
| 2. Ground control                      | _____             | <u>X</u>                                  |
| 3. Photo control Horizontal            | _____             | <u>X</u>                                  |
| 4. Photo control vertical              | _____             | <u>X</u>                                  |
| 5. Photo control survey report         | _____             | <u>X</u>                                  |
| 6. InRoads TMOSS Coding                | _____             | <u>X</u>                                  |
| 7. Tolerance verification              | _____             | <u>X</u>                                  |
| 8. Photogrammetry Specifications       | _____             | <u>X</u>                                  |
| 9. Deliverables                        | _____             | <u>X</u>                                  |
| I. Right of Way                        | _____             | <u>X</u>                                  |
| 1. Early ROW                           | _____             | <u>X</u>                                  |
| 2. ROW Review                          | _____             | <u>X</u>                                  |

**5.03 Preliminary Design**

|                                      |       |          |
|--------------------------------------|-------|----------|
| A. Preliminary Surveys               |       |          |
| 1. General                           | _____ | <u>X</u> |
| 2. Reconnaissance                    | _____ | <u>X</u> |
| 3. Research                          | _____ | <u>X</u> |
| 4. Railroad Research                 | _____ | <u>X</u> |
| 5. Horizontal Tolerance verification | _____ | <u>X</u> |
| 6. Control Survey                    | _____ | <u>X</u> |
| 7. Horizontal Control Survey         | _____ | <u>X</u> |
| 8. Vertical Control Survey           | _____ | <u>X</u> |
| 9. Differential Leveling             | _____ | <u>X</u> |
| 10. Project Control Diagram          | _____ | <u>X</u> |
| 11. Right of Way Survey              | _____ | <u>X</u> |
| 12. Land Survey Control Diagram      | _____ | <u>X</u> |
| 13. Boundary Analysis                | _____ | <u>X</u> |
| 14. InRoads TMOSS Coding             | _____ | <u>X</u> |

|   | <u>CDOT/OTHER</u> | <u>CONSULTANT</u><br><u>&amp;/or SUBS</u> |
|---|-------------------|---|
| 15. Topographic Survey                        | _____             | <u>  X  </u>                              |
| 16. Drainage Survey                           | _____             | <u>  X  </u>                              |
| 17. Utility Survey                            | _____             | <u>  X  </u>                              |
| 18. Staking for Appraisal                     | _____             | <u>  X  </u>                              |
| <br>  |                   |   |
| B. Utility Coordination                       |                   |   |
| 1. Location Maps                              | _____             | <u>  X  </u>                              |
| 2. Contact Locate Services                    | _____             | <u>  X  </u>                              |
| 3. Reviews and Investigations                 | _____             | <u>  X  </u>                              |
| 4. Underground Locates                        | _____             | <u>  X  </u>                              |
| 5. Ditch Co. Coordination                     | _____             | <u>  X  </u>                              |
| <br>  |                   |   |
| C. Right of Way                               |                   |   |
| 1. Research                                   | _____             | <u>  X  </u>                              |
| 2. Ownership Map                              | _____             | <u>  X  </u>                              |
| <br>  |                   |   |
| D. Final Design                               |                   |   |
| 1. Right of Way Plans and Authorization Plans | _____             | <u>  X  </u>                              |
| 2. Post Field Inspection Review Revisions     | _____             | <u>  X  </u>                              |

**SECTION 6  
SUBMITTALS**

|   |   | <u>CDOT/OTHER</u> | <u>CONSULTANT<br/>&amp;/or SUBS</u> |
|---|---|-------------------|-------------------------------------|
| <b><u>Part 1, Section 4 - Project Initiation and Continuing Requirements</u></b>    |   |                   |                                     |
| 4.04-B  | Periodic Reports & Billings   | _____             | <u>X</u>                            |
| 4.04-C  | Meeting Minutes   | _____             | <u>X</u>                            |
| <b><u>Part 2, Section 1.01 – Project Initiation and Continuing Requirements</u></b> |   |                   |                                     |
| 1.01-A  | Man-hour Estimates  | _____             | <u>X</u>                            |
| 1.01-A  | Project Cost Worksheet  | _____             | <u>X</u>                            |
| 1.01-B  | Project Schedule  | _____             | <u>X</u>                            |
| 1.01-C  | Survey Plan   | _____             | <u>X</u>                            |
| 1.01-D  | Permission to Enter Forms   | _____             | <u>X</u>                            |
| 1.01-E  | Traffic Control Plan  | _____             | <u>X</u>                            |
| 1.01-F  | Initial Submittal of InRoads TMOSS  | _____             | <u>X</u>                            |
| 1.01-F  | Initial Submittal of an Original Plan Sheet   | _____             | <u>X</u>                            |
| 1.01-G  | Meeting Minutes   | _____             | <u>X</u>                            |
| <b><u>Part 2, Section 1.02 - Project Development</u></b>                            |   |                   |                                     |
| 1.02-A-1  | Permission to Enter Contact List  | _____             | <u>X</u>                            |
| 1.02-E-1-b  | Equipment Calibration   | _____             | <u>X</u>                            |
| 1.02-E-1-d  | Field Notes   | _____             | <u>X</u>                            |
| 1.02-E-1-f  | Preliminary Survey Conference Minutes   | _____             | <u>X</u>                            |
| 1.02-E-1-g  | Special Use Permits   | _____             | <u>X</u>                            |
| 1.02-E-1-h  | Traffic Control Plan  | _____             | <u>X</u>                            |
| 1.02-E-1-i  | Executed Permission to Enter Forms  | _____             | <u>X</u>                            |
| 1.02-E-1-j  | Underground Utility Reports   | _____             | <u>X</u>                            |
| 1.02-E-2-a to 1.02-E-2-h  | GPS Quality Control Report  | _____             | <u>X</u>                            |
| 1.02-E-3-e  | Photo control survey report   | _____             | <u>X</u>                            |
| 1.02-E-3-f  | Raw unedited file, .DC or .SDR, InRoads<br>.CTL, .FWD and .DGN electronic files   | _____             | <u>X</u>                            |
| 1.02-E-3-g  | Quality control report  | _____             | <u>X</u>                            |
| 1.02-E-3-h  | Specifications called for   | _____             | <u>X</u>                            |
| 1.02-E-3-i  | Planning maps, flight plan, camera<br>calibration report, negatives, contact prints,<br>photo index, photo enlargement prints,<br>digital images, analytical aerial<br>triangulation report, planimetric feature<br>identification, InRoads TMOSS<br>supplemental survey, mapping sheets,<br>digital terrain models, digital<br>elevation models, contours,<br>ortho-photography data | _____             | <u>X</u>                            |
| 1.02-E-4-a-(3)  | ROW Preliminary Cost Estimate   | _____             | <u>X</u>                            |

|  | <u>CDOT/OTHER</u> | <u>CONSULTANT</u><br><u>&amp;/or SUBS</u> |
|--|-------------------|---|
| 1.02-E-4-a-(4) Relocation Study  | _____             | <u>X</u>                                  |
| 1.02-E-4-a-(9) Plat of Existing Right of Way   | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.03 - Preliminary Design</u></b>  |                   |   |
| 1.03-A-3 Researched materials  | _____             | <u>X</u>                                  |
| 1.03-A-10 Project Control Survey Diagram   | _____             | <u>X</u>                                  |
| 1.03-A-12 Land Survey Control Diagram  | _____             | <u>X</u>                                  |
| 1.03-A-14 InRoads Files (.FWD, .ALG, .DTM)   | _____             | <u>X</u>                                  |
| 1.03-A-15 Digital Topographic Survey (.DGN)  | _____             | <u>X</u>                                  |
| 1.03-A-16 Drainage Survey  | _____             | <u>X</u>                                  |
| 1.03-A-17 Utility Survey   | _____             | <u>X</u>                                  |
| 1.03-A Survey Field Notes (Hardcopy and/or Electronic)   | _____             | <u>X</u>                                  |
| 1.03-B Utility Location Maps   | _____             | <u>X</u>                                  |
| 1.03-C-1 Right of Way Research   | _____             | <u>X</u>                                  |
| 1.03-C-1 Memoranda of Ownership  | _____             | <u>X</u>                                  |
| 1.03-C-2 Preliminary Ownership Map (for Field Inspection Review plan set)                      | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.04 - Final Design</u></b>  |                   |   |
| 1.04-A Right of Way Authorization Plans  | _____             | <u>X</u>                                  |
| 1.04-A-4 Area Calculations   | _____             | <u>X</u>                                  |
| 1.04-A-5 Authorization Plans   | _____             | <u>X</u>                                  |
| 1.04-A-6 Legal Descriptions  | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.05 - Data</u></b>  | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.06 - Survey Plats</u></b>  | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.06 - Right of Way COGO Data</u></b>                                    | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.07 - Plans</u></b>   | _____             | <u>X</u>                                  |
| <b><u>Part 2, Section 1.08 - Electronic Data Submittals</u></b>                                | _____             | <u>X</u>                                  |
| <b><u>Part 3, Section 1 - Post Design Plan Modifications</u></b>                               |                   |   |
| <b><u>Part 3, Section 2 - Pre-construction Services</u></b>                                    |                   |   |
| 2.01-A Stake Project Alignment Centerline  | _____             | <u>X</u>                                  |
| 2.01-B Slope Stake   | _____             | <u>X</u>                                  |
| 2.01-C Stake Clearing Line   | _____             | <u>X</u>                                  |
| 2.01-D Stake Minor Structures (culverts)   | _____             | <u>X</u>                                  |
| 2.01-E Stake Major Structures (CBC's & Bridges)  | _____             | <u>X</u>                                  |
| 2.01-F Stake ROW Parcels and Easements for Appraisal and Acquisition                           | _____             | <u>X</u>                                  |
| 2.01-G Restaking if required based on Project Engineer's inspection and/or revisions to design | _____             | <u>X</u>                                  |
| <b><u>Part 3, Section 3 - Post Construction Services</u></b>                                   |                   |   |
| 3.01 Final Earthwork Determination   | _____             | <u>X</u>                                  |
| 3.02 "As-Built" Plans  | _____             | <u>X</u>                                  |

|      |                                       |       |              |
|------|---------------------------------------|-------|--------------|
| 3.03 | Revisions to Final Right of Way Plans | _____ | <u>  X  </u> |
| 3.04 | Monument Right of Way                 | _____ | <u>  X  </u> |
| 3.06 | Record Plan Set                       | _____ | <u>  X  </u> |

## SECTION 7 CONTRACT CONCLUSIONS

**7.01 Supplemental Work.** This contract will be supplemented by task orders for specific tasks during a two-year period.

**7.02 Contract Completion.** This Contract will be satisfied upon acceptance of the following items if applicable to supplement(s) by task order:

- Project Schedule
- Project Progress Meeting Minutes
- Traffic Control Plan(s)
- All Documents Found In Research
- All Permission to Enter Forms
- Monumented & Surveyed Ground Control
- Digital InRoads TMOSS Data
- All Electronic Data from InRoads and MicroStation packages
- Photography Products
- Legally Filed Survey Plans
- Preliminary Ownership Map
- Original Field Notes
- Sealed Project Control and Land Survey Control Diagram(s)
- Survey Report (Including monument recovery forms)
- Quality Control Report
- Monumented and Sealed ROW Plans
- Legal Descriptions, Signed and Sealed
- NOAA - NGS Blue Book
- Memorandums of Ownership
- Title Commitments and policies
- Deposited ROW Plans

and the completion of review of contract submittals.