

SCOPE OF WORK

**SCOPE OF WORK
PROJECT SPECIFIC
May 5, 2011**

CONTRACT TYPE: Project Specific /Non Task Specific

CONTRACT DATE: Anticipated September 2011

PROJECT NUMBER: FBR 0821-094 (18158)

PROJECT LOCATION: SH 82 Grand Ave. Bridge – Glenwood Springs
PROJECT CODE: 18158

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SECTION 1 PROJECT SPECIFIC INFORMATION

1.01 Planned Activities. The general planned activities include initial determination if rehabilitating the SH 82 Grand Ave. Bridge (Grand Ave. Bridge), an Asset owned by the State, to a sufficient level that the CBE deems acceptable, is possible. If the bridge cannot be rehabilitated, then the process of determining a suitable replacement structure will commence. Integral to either the rehabilitation or a replacement effort will be the Context Sensitive Solution (CSS) and public involvement processes and the required National Environmental Policy Act (NEPA) process.

Concurrent with the determination if the bridge should be rehabilitated or replaced (The Proposed Action), an investigation of perceived critical factors will be initiated. This investigation will examine items like, but not limited to: methods of handling traffic during The Proposed Action, potential business impacts, potential impacts to hot springs pool, railroad clearance requirements, potential impacts to utilities, key environmental factors and public concern. This information will be used to determine the level of NEPA for The Proposed Action and as a basis for criteria to evaluate options.

If The Proposed Action is a replacement, the State anticipates initiating an Environmental Assessment (EA) under NEPA to fully understand the issues, evaluate options, and consider impacts. All activity under this phase of the work will follow the CSS principles as outlined by CDOT. Following a decision document, the State may elect to retain the same consultant for final design or innovative project delivery if deemed appropriate.

If the consultant is retained for final design or innovative project delivery, the delivery of the project will continue to follow the CSS principles as outlined by the State. Accelerated bridge construction methods should be investigated.

1.02 Project Goals. This project is intended to produce the following improvements:

- Determine if the existing bridge can be rehabilitated or needs to be replaced to reach an acceptable sufficiency rating,
- Understand key critical factors of a rehabilitation or replacement alternative,
- Conduct the appropriate NEPA documentation associated with the proposed action,
- If retained to do so, conduct and conclude final design or innovative project delivery, and
- Follow the CSS principles as outlined by the State.

1.03 Project Location. The project study area is in the City of Glenwood Springs and Garfield County, extending from about 6th street on the north (approx. MP 0.10 on SH 82) to approximately 8th street on the south (approx. MP 1.20). Yet, the project area may be larger as a result of needed improvements to accommodate methods of handling traffic for The Proposed Action.

1.04 Project Cost. The total estimated cost for project is up to \$50,000,000. This amount would include all anticipated pre-construction and construction phases of the project, assuming that the full replacement path is chosen. CDOT, via option letter, may request to utilize the same consultant for all phases of pre-construction, but is not obligated to do so.

1.05 Work Duration. The time period for the work described in this scope is approximately 1,460 calendar days.

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1.06 Consultant Responsibility. CDOT has made a commitment to employ CSS principles on this Project. It is the Consultants responsibility to demonstrate in an additional (11 x 17) single page in the Appendix their understanding and approach to CSS on this Project.

The consultant will work with the established Project Leadership Team (PLT) to develop the final scope and details of the project.

The consultant is responsible for conducting project coordination, agency coordination, public participation, preparation and submittal of preliminary and final design plans, specifications, estimate and post design services as described in the following sections.

1.07 Work Product. The Project Team work products are:

- Rehabilitation feasibility report
- Critical factor determination report
- Public Involvement Plan
- Screening criteria and approach report
- Alternative comparison report
- NEPA documentation
- Preliminary design
- Cost estimates for preliminary designs
- Critical Path Method (CPM) Schedule
- Drawdown Schedule for overall project
- Final design
- Project Specifications
- Final estimates
- Constructability Review
- Value Engineering (Include construction experts including industry)
- Structural Selection Report
- Alternative Contracting Methods to accelerate construction
- Investigate Accelerated Bridge Construction (i.e. SPMT, jacking or launching methods)
- Roadside Design
- Meeting Minutes
- Drainage
- Surveying

The above list of Work Products is not intended to be complete; the detailed work product requirements are described in the following sections and will be Task Order driven.

1.08 Work Product Completion. All submittals must be accepted by the PLT and CDOT Contract Administrators or their designee.

1.09 Scope of Work Organization

This draft scope of work has been 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 that factors in the desires of the PLT. 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 input from the selected Consultant.

**SECTION 2
PROJECT MANAGEMENT AND COORDINATION**

2.01 CDOT Contacts. The Contract Administrator for this project is:

Joe Elsen, Program Engineer
202 Centennial Street
Glenwood Springs, CO 81601
Phone: 970-384-3332 Fax: 970-947-5133

The Project Manager, primary point of contact and administer of day-to-day activities is delegated to:

Peter Kozinski
714 Grand Avenue
Eagle, CO 81631
Phone: 970-328-6385

2.02 Project Coordination. Coordination will be required with, but not limited to, the following known agencies:

- Garfield County
- Eagle County
- Pitkin County
- City of Glenwood Springs
- Glenwood Hot Springs Pool
- Union Pacific Railroad
- Colorado Public Utilities Commission
- Utility Companies (City of Glenwood Springs utilities, Xcel Energy, SourceGas, Qwest and Comcast). This would also include a CDOT Fiber Optic line on the bridge.
- Colorado Bridge Enterprise
- Glenwood Springs Historic Preservation Commission
- U.S. Army Corps of Engineers (USACE)
- Colorado Division of Wildlife (CDOW)
- U.S. Fish and Wildlife Service (USFWS)
- Federal Highway Administration (FHWA)
- Roaring Fork Transit Authority (RFTA)
- Federal Emergency Management Agency (FEMA)
- Downtown Development Authority of Glenwood Springs

The Consultant should anticipate that a design that affects an agency will need to be supported by that agency prior to its acceptance by CDOT. Submittals to affected agencies will be coordinated with CDOT. Above is a list of known agencies. It should not be considered as complete.

All external CDOT-related Web sites shall be hosted on CDOT's server and developed in-house with assistance from the Web Team and the Office of Public Relations. The use of all Web 2.0 and similar social marketing applications on behalf of CDOT (including all regions, divisions and offices) is strictly prohibited unless authorized by the Director of the Office of Public Relations. No contractor or consultant working for CDOT will post material on behalf of the agency on such applications without expressed written consent of the Director of the Office of Public Relations.

SECTION 3 PROJECT DESCRIPTION

3.01 Background

The Grand Ave. Bridge (F-07-A) is located on State Highway 82, which is on the National Highway System. CDOT and CBE have identified the Grand Avenue Bridge as an On-System Poor Bridge. The existing bridge has a sufficiency rating of 47.4 and it is functionally obsolete as the lane and shoulder widths are substandard. The Grand Ave. Bridge is a “riveted plate girder continuous” bridge and was built in 1953.

The Bridge Structure is an asset owned by the CBE and the funding for the preconstruction activities are funded by the CBE. The Proposed Action for construction may however include other funding sources due to funding eligibility.

The objective of the SH 82 Grand Avenue Bridge Project is to determine the appropriate course of action to address the functionally obsolete Grand Ave. Bridge that connects Glenwood Springs across the Colorado River. This objective will be accomplished in several phases.

The first phase of this investigation will be a feasibility study to determine if the Grand Ave. Bridge can be rehabilitated to meet the desired objectives. The Feasibility Study will provide a detailed understanding of the pros and cons, viability and lifecycle options to rehabilitating the existing Grand Ave. Bridge structure.

Concurrent with the Feasibility Study will be the investigation into the “perceived critical factors” that may help shape screening, design and/or construction criteria. Items such as, but not limited to, methods of handling traffic during modification or construction, impacts to businesses, impacts to utilities, railroad clearance requirements, environmental factors, public involvement, typical bridge and roadway sections and compatibility with local plans shall be investigated.

Following the determination of the appropriate course of action (rehabilitation vs. replacement), the appropriate level of National Environmental Policy Act (NEPA) documentation will be conducted. At this time, CDOT anticipates that the NEPA documentation will be a concise Environmental Assessment (EA). The information gathered and documented in the feasibility study and “perceived critical factors” reports will be the basis for determining the appropriate level of NEPA and establishment of the purpose and need.

Following the decision document from the NEPA study, CDOT via Policy Memo 23, may opt to retain the same consultant team to perform final design of the recommendation from the decision document.

CDOT may also at any time, deemed appropriate, opt to move this project forward by use of “innovative project delivery” methods. If CDOT opts to employ innovative project delivery methods the selected consultant team is required to comply with CDOT’s direction.

3.02 Project Limits

The project limits extend from about one half mile either side of the existing bridge, 6th street on the north (approx. MP 0.10 on SH 82) to approximately 8th street on the south (approx. MP 1.20). Yet, the project area may be larger as a result of needed improvements to accommodate methods of handling traffic for The Proposed Action.

3.03 Work Elements

The consultant with support from stakeholders will develop a project approach for the Grand Ave. Bridge consistent with CSS and the project goals.

The work will include but not be limited to the following:

- a. Public Relations. Follow CSS principles regarding stakeholder involvement.
- b. Specialized Design. Complete all specialized investigation and design necessary to complete the Feasibility Study.
- c. Technical Reports. Collect and compile all necessary information needed to make informed decisions as it relates to the “perceived critical factors” and information needed for the NEPA document.
- d. Administrative Support. Provide clerical and word processing support as well as assist with exhibits and meetings (including meeting minutes).
- e. Context Sensitive Solutions. Apply the Context Sensitive Solutions (CSS) approach as outlined by CDOT. Participate in the project specific CSS team that will be formed for the project. Additional public and private meetings may be required. Participate in the PLT that will be formed for the project.
- f. Schedules. Develop and maintain a resource loaded critical path method (CPM) schedule for the project.
- g. Environmental Analysis. Collect, analyze and document environmental consequences of proposed actions.
- h. At CDOT’s discretion and if so authorized; perform all activities needed to design the recommendation from the NEPA decision document.
- i. At CDOT’s discretion and if so authorized; adjust design and delivery approach to an “innovative project delivery” method as directed by CDOT.
- j. Value Engineering (VE) Study. A team of transportation design and construction experts will perform a Value Engineering (VE) study. The VE study will be conducted early enough in the project development process to allow evaluation and incorporation of VE recommendations in the NEPA document or design process, as appropriate.

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- k. Survey.
- l. Structural and Roadway Design.
- m. Geotechnical Investigation and Design.
- n. Traffic Control/Construction Phasing.
- o. Right-of-Way Support.

**SECTION 4
KNOWN EXISTING FEATURES**

4.01 Major Structures.

On State Highway 82

MP 0.225 F-07-A (SH 82)

4.02 Utilities. Contact U.N.C.C. at 1-800-922-1987. (City of Glenwood Springs utilities, Xcel Energy, SourceGas, Qwest and Comcast). For CDOT owned utilities contact the CDOT Region 3 Traffic Section at 970-683-6271.

4.03 Irrigation Ditches. Unknown if irrigation ditches exist. Location and owners shall be determined by the Consultant.

4.04 Railroads. An active Union Pacific line exists, and the existing bridge does not meet current vertical clearance requirements.

4.05 Rivers. The Colorado River flows through the project location. The river has Base Flood Elevations and Floodway Determinations. All Local, State and Federal Floodplain Regulations shall be followed.

4.06 Geothermal Aquifer. The Leadville Limestone formation below the bridge site carries hot saline water that supplies the Hot Spring Pool and other springs and wells.

Note: The above is a list of the known features in the area. It should not be considered as complete. The Consultant should be alert to the existence of other possible conflicts.

SECTION 5
ITEMS TO BE FURNISHED BY CDOT

5.01 CDOT Manuals, Specifications, Standards, etc. can be obtained from CDOT Printing and Visual Communications Center (303-757-9214). A moderate fee, determined by document size, will be charged. Electronic Files of applicable CDOT standards and forms specified in this document will be provided free of charge.

5.02 Project Specific Items. Additional information regarding this project is included in the following documents:

- I-70 Mtn Corridor Context Sensitive Solution Website (www.I70mtncorridorcss.com)
- Traffic Data (<http://apps.coloradodot.info/dataaccess/>)
- SH 82 Corridor Optimization Plan
- Safety Assessment Report
- As Constructed Plans and ROW Plans
- Structural Inspection Reports
- Bridge Enterprise Rehabilitation Criteria
- Regional and Local Groundwater Flow Associated with Hot Springs in Glenwood Springs (Powerpoint Presentation)

Copies of these documents may be obtained from the CDOT Contract Administrators or their designee.

SECTION 6 GENERAL INFORMATION

6.01 Authorization to Proceed. Work will not commence until the written Notice-to-Proceed is issued by the State with certification from the Consultant that the work will be completed within the allotted time. The time charged will be exclusive of time lost for:

- a. Reviews and Approvals.
- b. Delays in not receiving responses/direction.
- c. Work may be required, night or day, on weekends, on holidays, or on split shifts.

CDOT must concur in time lost reports prior to the time lost delays being subtracted from time charges.

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

- a. Written synopses or copy of their respective contacts (both by telephone and in person) with others.
- b. Copies of pertinent written communications

6.03 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 (Monitoring Consultant Contracts).
- 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 effort.

6.04 Personnel Qualifications. The Consultant Project Manager (C/PM), must be approved by the CDOT Contract Administrator. Certain tasks must be done by Licensed Professional Engineers or Professional Land Surveyors who are registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors. National Institute for Certification in Engineering Technology may be required for project inspectors and testers (if applicable).

6.05 CDOT Computer/Software Information. The Project Team shall utilize the most recent CDOT adopted software. The primary types of software used by CDOT are:

Earthwork-	InRoads
Drafting-	MicroStation with CDOT's formatting, configurations and standards
Survey-	InRoads TMOSS (developed by CDOT to convert topographic survey to design format)
Geometry-	CDOT COGO (Coordinate Geometry)
Bridge-	Staff Bridge software shall be used in either design or design check
Estimating-	Trns*port (to be handled by CDOT). Bid items to be provided to CDOT in a compatible file format (i.e. Estimator) which will be imported into Trns*port.
Specifications-	Microsoft Word
Scheduling-	MS Project
E-File Management-	Project Wise
Noise Modeling	TNM v2.5
Miscellaneous-	MS Outlook, Excel, Power Point

6.06 Computer Data Compatibility. CDOT presently utilizes two data formats which Consultants shall be required to use for submitting survey, photogrammetry, and design data: InRoads TMOSS (Topography) Modeling Survey System and InRoads. The data format used by the Consultant to submit surveying and photogrammetric data shall be as determined by the CDOT/PM in coordination with the Region 3 PLS. The data format for submitting design computer files shall be compatible with the CDOT InRoads program. Preliminary and final design shall be submitted to CDOT electronically. 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.

6.07 Project Design Data and Standards

- a. General. Attachment A 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.
- b. Specific Criteria. Attachment B is a list of specific project criteria. 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 design.
- c. Construction Materials/Methods. The materials specified for construction and any indicated construction methods will be selected to minimize the initial construction and long-term maintenance cost to the State of Colorado. Non-typical construction materials and methods must be approved in writing by CDOT/PM.

**SECTION 7
WORK ACTIVITY ASSIGNMENTS**

This list establishes the consultant's individual task responsibility. The consultant shall maintain the ability to perform all work tasks which are indicated below by an 'X' mark in the consultant column in accordance with the applicable CDOT standards. Selected work tasks shall be assigned only after coordination and consultation with CDOT. The Project Team is responsible for coordinating the required work schedule for those tasks accomplished by CDOT and other agencies.

PRECONSTRUCTION

	<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
A. Project Initiation and Continuing Requirements:		
1. Initial Project Meeting	<u>X</u>	<u>X</u>
2. Review Environmental Mitigation Requirements	<u>X</u>	<u>X</u>
3. Independent Design Review	_____	<u>X</u>
4. Project Schedule	<u>X</u>	<u>X</u>
5. Develop Design Criteria	<u>X</u>	<u>X</u>
6. Initiate Survey	<u>X</u>	<u>X</u>
7. Right-of-Entry and Permits	_____	<u>X</u>
8. Traffic Control	_____	<u>X</u>
9. Initial Submittals	_____	<u>X</u>
10. Progress Meetings	<u>X</u>	<u>X</u>
11. Structure Review Meetings	<u>X</u>	<u>X</u>
12. Project Management	<u>X</u>	<u>X</u>
B. Project Development:		
1. Communication and Consensus Building		
a. Contact List	_____	<u>X</u>
b. Public Notices/Advertisements	_____	<u>X</u>
c. General Meetings		
(1) Small Group	<u>X</u>	<u>X</u>
(2) General Public	<u>X</u>	<u>X</u>
(3) Project Review	<u>X</u>	<u>X</u>
d. Communication Aids	_____	<u>X</u>
(1) Graphics Support	_____	<u>X</u>
(2) Newsletter	_____	<u>X</u>

	<u>CDOT/OTHER</u>	<u>SCOPE OF WORK CONSULTANT</u>
(3) Wall Displays	_____	<u> X </u>
(4) Study Model	_____	<u> X </u>
(5) Local Office	_____	<u> X </u>
2. Project Review Team	<u> X </u>	<u> X </u>
3. Route Location Surveys	<u> X </u>	_____
a. Presurvey Conference	<u> X </u>	<u> X </u>
b. Survey Data Research	_____	<u> X </u>
c. Secure Rights of Entry	_____	<u> X </u>
d. Project Control Survey		
(1) Locate or establish HARN Stations	<u> X </u>	<u> X </u>
(2) Monumentation	<u> X </u>	<u> X </u>
(3) Project Control	<u> X </u>	<u> X </u>
e. Photogrammetry		
(1) Camera Calibration Report	<u> X </u>	<u> X </u>
(2) Flight Plan	<u> X </u>	<u> X </u>
(3) Flight	_____	<u> X </u>
(4) Contact Prints	_____	<u> X </u>
(5) Negatives	_____	_____
(6) Enlargements	_____	_____
(7) Photo Index	_____	_____
(8) Supplemental Survey (wing points)	_____	<u> X </u>
f. Supplemental Surveying	_____	<u> X </u>
g. Accuracy Tests	<u> X </u>	<u> X </u>
h. Review (by Registered Professional Land Surveyor)	<u> X </u>	<u> X </u>
4. Conceptual Design		
a. Aesthetics	<u> X </u>	<u> X </u>
b. System Feasibility	_____	_____
c. Alternatives Analysis	_____	<u> X </u>
d. Final Alternatives Reports	_____	<u> X </u>
e. Interchange Approval Process	_____	_____

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5.	Data Gathering Analysis, and Mitigation Development		
a.	Traffic Related		
	(1) Traffic Study	_____	<u> X </u>
	(2) Accident Study	_____	<u> X </u>
	(3) Noise Study	_____	<u> X </u>
	(4) Air Quality		
	(a) Air Quality Monitoring	_____	<u> X </u>
	(b) Air Quality Analysis	_____	<u> X </u>
	(5) Alternate Transportation Sys.	_____	<u> X </u>
b.	Archaeology		
	(1) Gather Data & Analysis	_____	<u> X </u>
	(2) Mitigation Implementation	<u> X </u>	<u> X </u>
c.	Paleontology		
	(1) Gather Data & Analysis	_____	<u> X </u>
	(2) Mitigation Implementation	<u> X </u>	<u> X </u>
d.	Initial Geology Investigation	_____	<u> X </u>
e.	Water Quality		
	(1) Quality Analysis	_____	<u> X </u>
	(2) Quality Monitoring	_____	<u> X </u>
f.	Ecological Assessment	_____	<u> X </u>
g.	Historical		
	(1) Historical Bridge Clearance	<u> X </u>	<u> X </u>
	(2) Historical Study & Clearance	<u> X </u>	<u> X </u>
h.	Floodplain and Drainage Assessment	_____	<u> X </u>
i.	Right-of-Way		
	(1) Early ROW	<u> X </u>	<u> X </u>
	(2) ROW Review	<u> X </u>	<u> X </u>
j.	4(f)/6(f) Activity		
	(1) Evaluation	_____	<u> X </u>
	(2) Clearance/Concurrence	<u> X </u>	<u> X </u>
k.	Threatened and/or Endangered Species		
	(1) Determination of Presence	_____	<u> X </u>
	(2) Implement Mitigation	<u> X </u>	<u> X </u>
l.	Wetlands		
	(1) Wetlands Determination	_____	<u> X </u>
	(2) Wetlands Findings Report	_____	<u> X </u>

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m. Hazardous Materials		
(1) Field Search	_____	<u> X </u>
(2) Research	_____	<u> X </u>
(3) Conduct in-situ tests	_____	<u> X </u>
(4) Analyze and Assess Impacts	_____	<u> X </u>
n. Existing Roadway/Major Structure	<u> X </u>	<u> X </u>
o. Construction Requirements	<u> X </u>	<u> X </u>
p. Aesthetic Considerations	<u> X </u>	<u> X </u>
q. Utilities	<u> X </u>	_____
r. Economics	_____	<u> X </u>
s. Farmland	_____	<u> X </u>
t. Energy Usage	_____	<u> X </u>
6. Environmental Assessment (EA) Process	_____	<u> X </u>
7. Environmental Impact Study (EIS) Process	_____	_____
8. Design Report Process	<u> X </u>	<u> X </u>
9. Obtain Permits	<u> X </u>	<u> X </u>

C. Preliminary Design:

1. Design Field Surveys		
a. Presurvey Conference	<u> X </u>	<u> X </u>
b. Survey Data Research	<u> X </u>	<u> X </u>
c. Secure Rights of Entry	_____	<u> X </u>
d. Project Control Survey		
(1) Locate or Establish HARN Stations	<u> X </u>	<u> X </u>
(2) Monumentation	<u> X </u>	<u> X </u>
(3) Local Project Control	<u> X </u>	<u> X </u>
e. InRoads TMOSS Survey	<u> X </u>	<u> X </u>
f. Terrain Survey	<u> X </u>	<u> X </u>
g. Utility Survey	<u> X </u>	<u> X </u>
h. Hydraulic Survey	<u> X </u>	<u> X </u>
i. Material Survey	<u> X </u>	<u> X </u>
j. Supplemental Surveying	<u> X </u>	<u> X </u>
k. Survey Report	<u> X </u>	<u> X </u>
l. Accuracy Tests	<u> X </u>	<u> X </u>
m. Review (by Registered Professional Land Surveyor)	<u> X </u>	<u> X </u>
n. Wetland Boundary	<u> X </u>	<u> X </u>

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	<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
2. Traffic Engineering	_____	<u>X</u>
3. Materials Engineering	_____	<u>X</u>
a. Preliminary Soil Investigation	_____	<u>X</u>
b. Pavement Rehabilitation	_____	<u>X</u>
c. New Pavement Structure	_____	<u>X</u>
d. Pavement Justification	_____	<u>X</u>
e. Pavement Design Report	_____	<u>X</u>
f. Existing Bridge Investigation	_____	<u>X</u>
g. Foundation Investigation	_____	<u>X</u>
h. Geothermal	_____	<u>X</u>
4. Hydrology/Hydraulics Engineering		
a. Hydrology	<u>X</u>	<u>X</u>
b. Hydraulics	<u>X</u>	<u>X</u>
c. Preliminary Hydraulics Report	<u>X</u>	<u>X</u>
5. Utility Coordination		
a. Location Maps	_____	<u>X</u>
b. Reviews and investigations	_____	<u>X</u>
(1) "Potholing"-Excavation	_____	<u>X</u>
(2) "Potholing"-Surveying Utility Locations	_____	<u>X</u>
c. Relocation recommendations	_____	<u>X</u>
d. Ditch Company coordination	_____	<u>X</u>
6. Roadway Design and Roadside Development		
a. Roadway Design	_____	<u>X</u>
b. Roadside Development	_____	<u>X</u>
(1) Guardrail and delineator	_____	<u>X</u>
(2) Landscaping	_____	<u>X</u>
(3) Sprinkler Systems/Liquid Anti-Icing	_____	<u>X</u>
(4) Sound Barriers	_____	<u>X</u>
(5) Bike paths	_____	<u>X</u>
(6) Truck Escape Ramps	_____	_____
(7) Rest Areas	_____	_____
(8) Safety analysis	_____	<u>X</u>
c. Lighting Plan	_____	<u>X</u>

		<u>CDOT/OTHER</u>	<u>SCOPE OF WORK CONSULTANT</u>
7.	Right-of-Way		
	a. Research	<u> </u>	<u> X </u>
	b. Ownership Map	<u> </u>	<u> X </u>
8.	Major Structural Design		
	a. Structural Data Collection	<u> </u>	<u> X </u>
	b. Structure concept study	<u> </u>	<u> X </u>
	c. Value Engineering	<u> </u>	<u> X </u>
	d. Structure Selection Report	<u> </u>	<u> X </u>
	e. Foundation Investigation Request	<u> </u>	<u> X </u>
9.	Construction Phasing Plan	<u> X </u>	<u> X </u>
10.	Preparation for the FIR	<u> </u>	<u> X </u>
11.	Field Inspection Review	<u> X </u>	<u> X </u>
12.	Post FIR Revisions	<u> </u>	<u> X </u>
 D. Final Design:			
1.	Project Review	<u> </u>	<u> X </u>
2.	Design Coordination	<u> </u>	<u> X </u>
3.	Utility Coordination	<u> </u>	<u> X </u>
4.	Hydraulic Design		
	a. Data Review	<u> </u>	<u> X </u>
	b. Storm Water Pollution Prevention Plan	<u> </u>	<u> X </u>
	c. Major Structure Channel Design	<u> </u>	<u> X </u>
	d. Final Hydraulics Report	<u> </u>	<u> X </u>
5.	Interim Plans		
	a. Initiate ROW Authorization Process	<u> X </u>	<u> X </u>
	b. Final Utility Plans	<u> </u>	<u> X </u>
	c. Final Railroad Plans	<u> </u>	<u> X </u>
6.	Right-of-Way		
	a. ROW Plans Content	<u> </u>	<u> X </u>
	b. Title Insurance and Closing Services	<u> X </u>	<u> </u>
	c. Authorization Plan	<u> X </u>	<u> X </u>
	d. Appraisal Staking	<u> </u>	<u> X </u>
	e. ROW Plan Revisions (During Negotiations)	<u> X </u>	<u> X </u>

		SCOPE OF WORK	
		<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
7.	Materials Engineering		
	a. Materials Data	<u> </u>	<u> X </u>
	b. Stabilization validity	<u> </u>	<u> X </u>
	c. Stabilization Plan	<u> </u>	<u> X </u>
8.	Traffic Engineering		
	a. Permanent Signing/Pavement Marking Plans	<u> </u>	<u> X </u>
	b. Signalized Intersections	<u> </u>	<u> X </u>
	c. Traffic Control Plan	<u> </u>	<u> X </u>
9.	Roadside Planning		
	a. Landscaping	<u> </u>	<u> X </u>
	b. Other	<u> </u>	<u> X </u>
	(1) Sprinkler systems/Liquid Anti-Icing	<u> </u>	<u> X </u>
	(2) Bike paths	<u> </u>	<u> X </u>
	(3) Sound barriers	<u> </u>	<u> X </u>
	(4) Truck escape ramps	<u> </u>	<u> </u>
	(5) Rest Areas	<u> </u>	<u> </u>
	(6) Guardrail and delineator	<u> </u>	<u> X </u>
	(7) Safety analysis	<u> </u>	<u> X </u>
	c. Lighting Plans	<u> </u>	<u> X </u>
10.	Roadway Design	<u> </u>	<u> X </u>
11.	Final Major Structural Design		
	a. Structure Final Design	<u> </u>	<u> X </u>
	b. Preparation of Structure Plans and Specifications	<u> </u>	<u> X </u>
	c. Independent Design, Detail, and Quantity Check	<u> </u>	<u> X </u>
	d. Bridge Rating and Field Packages	<u> </u>	<u> X </u>
	e. Structure Final Review Plans and Specifications	<u> X </u>	<u> X </u>
12.	Construction Phasing Plan	<u> X </u>	<u> X </u>
13.	Plan Preparation for FOR	<u> </u>	<u> X </u>
14.	Final Office Review	<u> X </u>	<u> X </u>
15.	Construction Plan Package	<u> </u>	<u> X </u>

	<u>CDOT/OTHER</u>	<u>SCOPE OF WORK CONSULTANT</u>
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E. Corridor Management Support:

- | | | |
|----------------------------|-------|-------|
| 1. Design Control | _____ | _____ |
| 2. Information Services | _____ | _____ |
| 3. Budget Planning Support | _____ | _____ |

F. Value Engineering	<u> X </u>	<u> X </u>
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SERVICES AFTER DESIGN

A. Review of Shop Drawings	<u> X </u>	<u> X </u>
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B. Construction Services

- | | | |
|---|--------------|--------------|
| 1. Coordinate Schedule | _____ | _____ |
| 2. Provide field observation | _____ | _____ |
| a. Pile driving/caisson drilling | _____ | _____ |
| b. Major concrete pours | _____ | _____ |
| c. Placement of girders | _____ | _____ |
| d. Splicing of girders | _____ | _____ |
| e. Post-tensioning duct and anchorage placement | _____ | _____ |
| f. Post-tensioning operations | _____ | _____ |
| 3. Technical assistance | <u> X </u> | <u> X </u> |
| a. Design Support during Construction | <u> X </u> | <u> X </u> |
| 4. Submittals | _____ | _____ |
| a. Diary | _____ | _____ |
| b. Documentation/justification | _____ | _____ |
| c. Progress reports | _____ | _____ |
| d. Calculations, drawings, and specifications | _____ | _____ |
| e. Daily time sheets | _____ | _____ |

C. Post Design Plan Modifications	<u> X </u>	<u> X </u>
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D. Post Construction Services:

- | | | |
|----------------------------------|-------|-------|
| 1. Final earthwork determination | _____ | _____ |
| 2. As-built plans | _____ | _____ |

SCOPE OF WORK

	<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
3. Revisions to Right-of-Way Plans (Excess Land)	<u> X </u>	<u> X </u>
4. Monument ROW	<u> </u>	<u> X </u>
5. Set Property Corners (Remainders)	<u> </u>	<u> X </u>
6. Deposit ROW Plans	<u> </u>	<u> X </u>
E. Construction Engineering	<u> </u>	<u> </u>

**SECTION 8
SUBMITTALS**

CDOT/OTHER CONSULTANT

A. Project Initiation and Continuing Requirements:

1. Periodic Reports & Billings	_____	<u> X </u>
2. Meeting Minutes	_____	<u> X </u>
3. Project Schedule	_____	<u> X </u>
4. Completed Specific Design	_____	<u> X </u>
Criteria (Attachment B)	_____	<u> X </u>
5. Survey Plan	<u> X </u>	_____
6. Permissions to Enter (Form 730)	<u> X </u>	_____
7. Traffic Control Plan	_____	<u> X </u>
8. Initial Submittal of InRoads TMOSS and/or MOSS Compatible Data	_____	<u> X </u>
9. Initial Submittal of an Original Plan Sheet	_____	<u> X </u>

B. Project Development:

1. Public Communication Contact List	<u> X </u>	<u> X </u>
2. Route Location Survey:		
<input type="checkbox"/> Electronic Survey Files	<u> X </u>	_____
<input type="checkbox"/> Survey InRoads TMOSS Data	_____	<u> X </u>
<input type="checkbox"/> Monument Records	_____	<u> X </u>
<input type="checkbox"/> Control & Monumentation Plan Sheets	_____	<u> X </u>
<input type="checkbox"/> Aerial Photography Index Map Sheets	_____	<u> X </u>
<input type="checkbox"/> Aerial Photography Contact Prints	_____	<u> X </u>
<input type="checkbox"/> Aerial Photography Negatives	_____	<u> X </u>
<input type="checkbox"/> Photogrammetry		
Electronic Data	<u> X </u>	_____
Base Map Sheets	<u> X </u>	_____
Base Map Index Sheet(s)	<u> X </u>	_____
<input type="checkbox"/> Rectified Photos with Mylar Originals	<u> X </u>	_____
3. System Feasibility Study	_____	<u> X </u>
4. Final Alternatives Report	_____	<u> X </u>
5. System Feasibility Study	_____	<u> X </u>
6. Noise Assessment Report	_____	<u> X </u>
7. Air Quality Report	_____	<u> X </u>

SCOPE OF WORK

	<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
8. Archaeology Survey Report & Mitigation Plan	_____	<u> X </u>
9. Paleontology Preliminary Report & Mitigation Plan	_____	<u> X </u>
10. Water Quality Report	_____	<u> X </u>
11. Ecology Report	_____	<u> X </u>
12. Historical Bridge Clearance or Mitigation Plan	_____	<u> X </u>
13. Historical Cultural Resources Report	_____	<u> X </u>
14. Floodplain and Drainage Assessment Report & Mitigation Plan	_____	<u> X </u>
15. ROW Report	_____	<u> X </u>
16. 4(f)/6(f) Mitigation Plan	_____	<u> X </u>
17. Threatened and/or Endangered Species Assessment	_____	<u> X </u>
18. Wetlands Findings Report	_____	<u> X </u>
19. Hazardous Materials Findings	_____	<u> X </u>
20. Environmental Assessment (EA)		
a. Preliminary EA	_____	<u> X </u>
b. Certified Verbatim Transcript	_____	<u> X </u>
c. Finding of No Significant Impact (FONSI)	_____	<u> X </u>
21. Environmental Impact Statement		
a. Draft EIS	_____	_____
b. Certified Transcript of Meeting	_____	_____
c. Final EIS	_____	_____
21. Design Report Process		
a. Preliminary Design Report	_____	<u> X </u>
b. Final Design Report	_____	<u> X </u>
22. Permits		
<input type="checkbox"/> 401 Permit	_____	<u> X </u>
<input type="checkbox"/> 402 Permit	_____	<u> X </u>
<input type="checkbox"/> 404 Permit	_____	<u> X </u>
<input type="checkbox"/> Wildlife Certification	_____	<u> X </u>
<input type="checkbox"/> NPDES Storm Water Permit	_____	<u> X </u>
23. Preliminary Design		
a. Electronic Survey	_____	<u> X </u>
b. Traffic Data & Recommendations	_____	<u> X </u>

SCOPE OF WORK

	<u>CDOT/OTHER</u>	<u>CONSULTANT</u>
c. Soils Investigation Report	_____	<u>X</u>
d. Pavement Design Report	_____	<u>X</u>
e. Existing Bridge Condition Report	_____	<u>X</u>
f. Foundation Investigation Report	_____	<u>X</u>
g. Engineering Geology Plan Sheet(s)	_____	<u>X</u>
h. Preliminary Hydraulics Report	_____	<u>X</u>
i. Utility Relocation Recommendations	_____	<u>X</u>
j. Ditch Structure Plans	_____	<u>X</u>
h. Stabilization Plan	_____	<u>X</u>
i. FIR Plan Set	_____	<u>X</u>
24. Final Design		
a. Corrected FIR Plan Set	_____	<u>X</u>
b. Preliminary Cost Estimate	_____	<u>X</u>
c. List of Deviations from Standard Design Criteria	_____	<u>X</u>
d. Final Hydraulics Report	_____	<u>X</u>
e. Signing/Pavement Marking Plans	_____	<u>X</u>
f. Signal Warrants	_____	<u>X</u>
g. Signalized Intersection Plans and specifications	_____	<u>X</u>
h. Traffic Control Plan	_____	<u>X</u>
i. Structural Selection Report	_____	<u>X</u>
j. Foundation Investigation Request	_____	<u>X</u>
k. Structure Final Review Plans and Special Provisions	_____	<u>X</u>
l. Construction Phasing Plan	_____	<u>X</u>
m. FOR Plan Sheets and Special Provisions	_____	<u>X</u>
n. FOR Cost Estimate	_____	<u>X</u>
o. FOR Revised Plans and Special Provisions	_____	<u>X</u>
p. Final Review Revisions	_____	<u>X</u>
q. Final Utility Plan Set	_____	<u>X</u>
25. Roadside Planning		
a. Landscaping Plans & Specs.	_____	<u>X</u>
b. Certification of plant Availability	_____	<u>X</u>
c. Sprinkler System Plans & Specs.	_____	<u>X</u>
d. Bike path Plans & Specs.	_____	<u>X</u>

SCOPE OF WORK

CDOT/OTHER CONSULTANT

e. Sound Barrier Plans & Specs.	<u> </u>	<u> X </u>
f. Truck Escape Ramp Plans & Specs.	<u> </u>	<u> </u>
g. Rest Area Plans & Specs.	<u> </u>	<u> </u>
h. Lighting Plans	<u> </u>	<u> X </u>
C. Right-of-Way		
1. Title Commitments	<u> </u>	<u> X </u>
2. Preliminary Ownership Map (include in the FIR plan set)	<u> </u>	<u> X </u>
3. Area Calculations	<u> </u>	<u> X </u>
4. Authorization Plans	<u> X </u>	<u> X </u>
5. Legal Descriptions	<u> </u>	<u> X </u>
6. ROW Authorization Plans	<u> X </u>	<u> X </u>
D. Construction Plan Package		
1. Roadway Design Data Submittal	<u> </u>	<u> </u>
2. Major Structure Design Final Submittal	<u> </u>	<u> </u>
3. Record Plan Sets	<u> </u>	<u> </u>

**SECTION 9
CONTRACT CONCLUSION**

9.01 Supplemental Work. It is anticipated that this contract will be supplemented for:

- Design Support during Construction
- If so directed, innovative project delivery

9.02 Contract Completion. This Contract will be satisfied upon acceptance of the following items if applicable:

- Project Schedule
- Project Progress Meeting Minutes
- Feasibility Study
- NEPA Document & Decision Document
- Final Design Plans and Estimate
- Bid Plans, Specifications and Estimate
- All Permission to Enter Forms
- Monumented & Surveyed Ground Control Control Diagram(s)
- Legally Deposited Control Survey Diagram(s)
- Digital TMOSS Data
- Ownership Map
- Original Field Notes
- Survey Report (Including monument recovery forms)
- Monumented and Sealed ROW Plans
- Legally Deposited Survey Plans
- Legal Descriptions (Signed and Sealed)

and the completion of review of contract submittals. Additionally, CDOT shall retain all work products should the contract be terminated.