

# **INVITATION TO BID**

## **FLOOD-CONSTRUCTION SERVICES FOR SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH**

**BID #6644-17**



**SUBMITTAL DUE DATE  
APRIL 11, 2017  
10:00 A.M.**

**BOULDER COUNTY PURCHASING  
2025 14<sup>TH</sup> STREET  
BOULDER CO 80302**

[purchasing@bouldercounty.org](mailto:purchasing@bouldercounty.org)

# INVITATION TO BID

## BID #6644-17

### FLOOD-CONSTRUCTION SERVICES FOR SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH

Boulder County Parks and Open Space (BCPOS) is soliciting bids from qualified and experienced Contractors to secure construction services for South St. Vrain creek restoration at Hall Ranch (Project) located just west of the town of Lyons. The upstream limits are just east of Andesite Bridge and extend to the Old St.Vrain Road Bridge at the downstream end. These services are required to restore approximately 1.2 miles of South St. Vrain creek, which was damaged by the flood of September 2013, including main and overflow channels, banks, riparian and upland areas to a safe, natural, resilient, functioning, and ecologically rich habitat using a holistic approach. Restoration will occur in compliance with the Contract Documents prepared by the Boulder County and provided with this Invitation to Bid. The selected contractor will complete all construction aspects of the project before December 31, 2017.

This project is supported by grants from United States Department of Agriculture, Natural Resource Conservation Service, CFDA# 10.923, Emergency Watershed Protection (EWP) program and administered through the Colorado Water Conservation Board's Colorado Watershed Program and State of Colorado funds provided from the State Disaster Emergency Fund with matching funds from Boulder County. This project is contingent upon Boulder County receiving an executed grant agreement (Grant Agreement) from the Colorado Water Conservation Board (CWCB). This agreement has been signed by Boulder County and is currently in CWCB's approval process. A draft grant agreement is attached to this ITB, and this project and associated contract will be subject to the terms and conditions of this Grant Agreement and EWP program requirements.

#### **CONTRACT LANGUAGE:**

The successful contractor will be required to enter into a Contract for Services. Additionally, the selected contractor shall execute the attached **National Resources Conservation Services (NRCS) Emergency Watershed Protection Program Requirements for Procurement Contracts Addendum** as part of any contract with the county, and comply with all NRCS requirements set forth in that addendum.

The selected contractor will comply with all state and local licensing requirements, including but not limited to, filing the State of Colorado Statement of Foreign Entity Authority paperwork, if contractor is not a Colorado company.

Contractor shall be authorized to do business in the State of Colorado and shall provide the County a current Certificate of Good Standing evidencing such authorization. Furthermore, Contractor shall be responsible for all applicable sales and employment taxes.

This project will require the selected Contractor to adhere to the NRCS Emergency Watershed Protection Grant Program Requirements for Procurement Contracts; therefore, all invoices

submitted to Boulder County must contain sufficient information detailing expenses. Invoices shall be submitted on company letterhead and include, but not limited to, depending on activity completed, project name, date(s), description of work performed, quantity of materials purchased, if applicable, number of material units purchased, if applicable, rate per hour, number of hours worked, mileage, mileage rate, administrative fees and complete site address of the project as awarded by the County.

The selected Contractor will be required to be in good standing with the Federal Government, any agency that is not in compliance or in violation of Federal law will not be considered by Boulder County. Boulder County will not conduct business with any entities listed on the Federal Debarment Checklist.

Boulder County (County) is an Equal Opportunity Employer and no otherwise qualified individual shall be subject to discrimination on the basis of race, color, religion, creed, national origin, ancestry, sex, age, sexual orientation (incl. transgender status), physical or mental disability, marriage to a co-worker and retaliation for engaging in protected activity (opposing a discriminatory practice or participating in an employment discrimination proceeding) in any phase of employment for this position.

**CONFLICT OF INTEREST:**

Any party that has developed, designed or drafted specifications, requirements, statements of work and/or has participated in planning activities for this Project shall be excluded from consideration for the award of this Project.

**SAM.GOV REGISTRATION:**

Please provide a copy of your business' registration in sam.gov with your proposal.

**DUNS NUMBER:**

Please provide your business' DUNS number with your proposal.

**W-9 REQUIREMENT:**

Provide a copy of your business's W-9 with your proposal.

**PRE-BID MEETING:**

**A Mandatory, Pre-Bid Meeting, is scheduled for Wednesday, March 22, 2017, at 9:00 a.m.** Interested parties are to meet at the BCPOS office at 5201 St. Vrain Road, Longmont, Colorado, 80503. Bidders will be asked to sign-in; a brief project orientation will be given and instructions for vehicle pooling to the project sites will be addressed. The parking area is very limited at the project sites and access is partly via private property. Unescorted, individual site visits are not permitted. A representative from your company must be in attendance at the meeting.

**Bids from firms not represented at the Mandatory Pre-Bid Meeting will not be accepted.**

**BID BOND:**

A bid guarantee from each bidder equivalent to five percent (5%) of the bid price. The bid guarantee shall consist of a firm commitment such as a bid bond, certified check, or other

negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

**BONDS:**

Both a payment and a performance bond are required for this project and must equal 100% of the proposed cost. Please include the cost of this bonding into the total proposed cost. Payment and Performance Bond requirements are addressed in the attached Sample Contract. Bonds must be received and approved, by the County, prior to work commencing. A Notice of Final Settlement will be required and retainage on all invoices.

**ATTACHMENTS:**

The following documents are part of this ITB:

1. ITB Document
2. Attachment A: Sample Contract
3. Attachment B: Draft CWCB and Boulder County Sub-Agreement (Grant Agreement)
4. Attachment C: Qualification Statement
5. Attachment D: South St. Vrain Creek Restoration Construction Specifications
6. Attachment E: South St. Vrain Creek Restoration Construction Drawings.
7. Attachment F: Wildlife Closure Map
8. Attachment G: Operation, Inspection & Maintenance Plan
9. Attachment H: Quality Assurance Plan
10. Attachment I: NRCS Addendum

**INSURANCE REQUIREMENTS:**

Insurance requirements are addressed in the attached Sample Contract and are listed below. All insurance requirements must be received and approved, by the County, prior to work commencing.

General Liability: \$1,000,000, Each Occurrence  
\$2,000,000 General Aggregate

The County shall require Products/Completed Operations coverage to be provided for up to a minimum of two (2) years after completion of construction project.

Automobile Liability: \$1,000,000 Each Accident

Workers' Compensation and Employer's Liability: Statutory Limits

Umbrella or Excess Liability: \$3,000,000

Pollution Liability: \$1,000,000, Each Occurrence

If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that

continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed.

In the event Contractor owns, or agrees to be responsible for the use, operation and maintenance of an above-ground petroleum storage tank, fuel truck, or performs fueling services, Contractor shall maintain Pollution Liability Insurance, or similar third-party environmental liability, at a minimum limit not less than \$1,000,000 per occurrence combined single limit with a \$1,000,000 annual aggregate providing coverage for damages against, but not limited to, bodily injury, property damage, clean up, corrective action including assessment, remediation and defense costs.

Note that the above insurance amounts are the minimum required for this project. Projects will not be awarded to contractors that do not meet the minimum insurance requirements for this project.

Additionally, the successful contractor will be required to comply with the insurance requirements as specified in the SubRecipient Grant Agreement between the State of Colorado Water Conservation Board and Boulder County.

**WRITTEN INQUIRIES:**

All inquiries regarding this BID shall be submitted via e-mail to the Boulder County Purchasing Office at [purchasing@bouldercounty.org](mailto:purchasing@bouldercounty.org) on or before **Wednesday, March 29, 2017, 1:00 p.m.** A response from the County to all inquiries shall be posted and sent via email no later than **Monday, April 3, 2017, by end of business day.**

**SUBMITTAL INSTRUCTIONS:**

Bids are due at the Administrative Services Front Desk or the email box listed below (preferred), for time and date recording and verification on or before **Tuesday, April 11, 2017, 10:00 a.m. Mountain Time.**

**Your response can be submitted in the following ways. Please note that e-mail responses to this solicitation are preferred, but are limited to a maximum of 25MB capacity. Electronic Submittals must be received in the e-mail box listed below. Submittals sent to any other box will NOT be forwarded or accepted. This e-mail box is only accessed on the due date of your questions or bids. Please use the Delivery Receipt option to verify receipt of your email.**

E-Mail            [purchasing@bouldercounty.org](mailto:purchasing@bouldercounty.org); identified as BID #6644-17 in the subject line.

-or-

**US Mail**        **One (1)** unbound copies of your submittal, printed double-sided, 11 point, on at least 50% post-consumer, recycled paper must be submitted in a sealed envelope, clearly marked as **BID #6644-17**, to the Administrative Services Reception Desk at 2025 14th Street, Boulder, CO 80302. Please allow at least 2 days for delivery of USPS Priority and Express Mail.

All BIDs must be received and time and date **recorded and verified** at the Administrative Services Front Desk by the above due date and time. Sole responsibility rests with the Offeror to see that their BID is received on time at the stated location(s). Any BID's received after due date and time will be returned to the bidder. No exceptions will be made.

The Board of County Commissioners reserve the right to reject any and all BIDs, to waive any informalities or irregularities therein, and to accept the proposal in whole, or portions of the proposal that, in the opinion of the Board, is in the best interest of the Board and of the County of Boulder, State of Colorado.

**Americans with Disabilities Act (ADA):**

If you need special services provided for under the Americans with Disabilities Act, contact the ADA Coordinator or the Human Resources office at (303) 441-3525 at least 48 hours before the scheduled event.

FLOOD – Construction Services for South St. Vrain Creek Restoration at Hall Ranch

**DROPBOX LINK FOR PLANS**

**COPY and PASTE link to your browser**

<https://www.dropbox.com/s/3b61dk0wft6bduk/Attachment%20E%20-%20South%20St.%20Vrain%20Creek%20Restoration%20Construction%20Drawings.pdf?dl=0>

## TERMS AND CONDITIONS

1. Bidders are expected to examine the drawing, specifications, schedule of delivery, and all instructions. Failure to do so will be at the bidder's risk.
2. Each bidder shall furnish the information required in the Invitation to Bid.
3. The Contract/Purchase Order will be awarded to that responsible bidder whose submittal, conforming to the Invitation to Bid, will be most advantageous to the County of Boulder, price and other factors considered.
4. The County of Boulder reserves the right to reject any or all bids and to waive informalities and minor irregularities in bids received, and to accept any portion of or all items proposed if deemed in the best interest of the County of Boulder to do so.
5. No submittal shall be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the County Purchasing Agent or delegated representative.
6. A signed purchase order or contract furnished to the successful bidder results in a binding contract without further action by either party.
7. Late or unsigned bids will not be accepted or considered. It is the responsibility of bidders to insure that the bid arrives at the Administrative Services Front Desk or appropriate email box prior to the time indicated in the "Invitation to Bid."
8. The proposed price shall be exclusive of any Federal or State taxes from which the County of Boulder is exempt by law.
9. Any interpretation, correction or change of the bid documents will be made by Addendum. Interpretations, corrections and changes of the bid documents made in any other manner will not be binding, and bidder shall not rely upon such interpretations, corrections and changes. The County's Representative will not be responsible for oral clarification.
10. Confidential/Proprietary Information: Bids submitted in response to this "Invitation to Bid" and any resulting contract are subject to the provisions of the Colorado Public (Open) Records Act, 24-72-201 et.seq., C.R.S., as amended. Any restrictions on the use or inspection of material contained within the bid and any resulting contract shall be clearly stated in the bid itself. Confidential/proprietary information must be readily identified, marked and separated/packageged from the rest of the bid. Co-mingling of confidential/proprietary and other information is NOT acceptable. Neither a bid, in its entirety, nor bid price information will be considered confidential/proprietary. Any information that will be included in any resulting contract cannot be considered confidential.
11. Boulder County promotes the purchase/leasing of energy efficient, materials efficient and reduced toxic level products where availability, quality and budget constraints allow. Bidders are expected whenever possible to provide products that earn the ENERGY STAR and meet the ENERGY STAR specifications for energy efficiency with power management features enabled. Bidders are encouraged to offer products and equipment with post-consumer recycled-content materials. Products should be packaged and delivered with a minimum amount of recycled packaging that adequately protects the product, but is not excessive.

**BID #6644-17**  
**FLOOD-CONSTRUCTION SERVICES FOR**  
**SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH**

**BACKGROUND:**

Boulder County through its Parks and Open Space Department (BCPOS) owns and manages majority of subject project areas (also referred to as Hall Meadows). Colorado State Highway 7 borders the construction limits to the north, and Old St. Vrain Road (CR 84S) borders the construction limits on the south. The construction areas also contain a few private properties, as well as land owned by the City of Longmont.

The South St. Vrain Creek experienced damage to its stream course, banks, riparian and upland areas, as well as ditches, bridges, roads and private homes from the 2013 flood. South St. Vrain Creek is an alluvial system that was highly altered during the historic 2013 flood event. Natural alluvial channels in lower gradient reaches generally meander through the valley, occasionally shifting lateral and/or vertical position on the landscape during large flood events. In the case of the recent flood, South St. Vrain Creek experienced an episodic shift in the channel planform and cross-section geometry and substantial sediment aggradation and deposition occurred throughout the project area. As a result, the channel widened as the banks receded and new flow paths formed through the floodplain. If given enough time, the channel may eventually adjust to the severely altered condition. However, this process could take many years, and without intervention, the channel could continue to shift position. To minimize the threat to existing infrastructure, engineered improvements are required to stabilize the channel and restore ecologic function

The very severe damage in this project area was due to the volume and velocity of water and amount of sediment and other debris immediately exiting the canyon and entering the valley. The braided channels, avulsions, deposition and flooding patterns formed as a result of this energy and volume seeking its path through the loose alluvial fields, combined with the constrictions of existing roads, bridges, ditches and home infrastructure. Additionally, a high volume of sediment was deposited in this reach as the valley gradient lessened and water velocity slowed. As a result, numerous locations within project area are unstable, eroding and channelized, undefined and prone to shifting paths, have aggraded or degraded in elevation, and temporarily linearized and hardened. Severe impacts outside of the creek bed included damaged roads, homes, ditches and pipeline infrastructure that continue to be under the threat of new flooding. In addition, the town of Lyons was severely impacted by the 2013 flood and remains at risk.

Specific impacts within the project reach include:

1. In sections, the low flow channel location of South St. Vrain Creek is now on a perched, aggraded, braided, channel midway in the floodplain cross section.
2. The post-flood low flow channel location of the stream is now adjacent to Highway 7. The high flow channel is along the toe of Old South St. Vrain Creek Road. Emergency work completed in spring 2014 moved the low flow channel north toward Highway 7 in another new flood created channel.



3. The Longmont water main crossing was exposed by the floodwater and filled with sediment along the split flow channel that now serves as the post-flood low flow channel.
4. The South Ledge Ditch headgate was located off-channel and served by pipe diversion from the pre-flood channel before the flood. The diversion and headgate were destroyed by the flood when the channel relocated.
5. The Meadows Ditch headgate was a channel edge diversion from the pre-flood channel. While part of the headwall remains, the diversion itself is non-functional due to damage to the headgate, inlet sedimentation, and the stream gradient change at the headgate.
6. A stream hard point was created following the 1969 flood. The hard point was created using overburden and waste rock from the immediately upstream Andesite Quarry to protect the downstream overbank pasture. Unfortunately, this hard point directs flow against the highway embankment and towards the homes further downstream. During the 2013 flood, this hard point caused water to flow against the left bank adjacent to the Colorado Highway 7 and washed away enough of the highway to cause its closure until it could be temporarily repaired. It was also a source of flooding concern to the residents on the left bank further downstream.
7. The bridge providing access to the Andesite Quarry and the upstream access to the homes along Old South St. Vrain Creek Road was washed away during the 2013 flood.
8. A stream avulsion occurred during the 2013 flood that resulted in a new post-flood low flow channel mostly located on non-County owned property. During the avulsion, the cutting of the new channel included eroding a portion of the edge of Colorado State Highway 7, to a post-flood location at the toe of the repaired highway embankment.

The conditions which are creating the greatest threats include:

1. Proximity of post-flood creek alignment to infrastructure.
2. Unstable and eroding condition of creek channels, compounded by braiding and split-flow paths.
3. Elevation changes to creek bed and water surface.
4. Linearized and hardened channels with increased velocity.

In the last two years, numerous projects led by various entities have been undertaken within the project area. Emergency debris removal, which was funded by FEMA, removed debris within the post-flood channel below the 5-year flow event. This occurred primarily near the Andesite Bridge, the Old St. Vrain Bridge, and along the southern high flow channel where it was constrained within existing vegetation. Some grading was completed post-flood on private property to protect homes along Highway 7. To minimize the risk to these homes and others, BCPOS removed some sediment within a post-flood channel, and constructed a rock vane to split high flows into two newly created post-flood channels. The northern channel is the main stem, while the southern channel alignment receives some water during high spring flows. Three

years of high spring flows following the September 2013 flood have continued to shape the stream channels, but have not led to any new avulsions or severe erosion, however areas of instability remain. During the spring of 2015, the City of Longmont rebuilt its water pipeline and diversion infrastructure, and restored the stream channel to its pre-flood alignment immediately downstream. Additionally, BCPOS, working with the St. Vrain Chapter of Trout Unlimited, Colorado Parks and Wildlife, the US Fish & Wildlife Service and the Colorado Water Conservation Board, rebuilt the South Ledge and Meadows ditches into a shared diversion structure that chases grade upstream so as to preclude the need for a diversion dam that would inhibit fish passage. In addition to these repairs, a number of other projects are anticipated throughout the corridor , some of which might start concurrently with the project described herein, many of which will be funded by FEMA, including:

1. Reconstruction of the Otto, Carl Holcomb, and Mathews ditches.
2. Repairs to the Andesite Quarry access road on the County's Hall Ranch 2 property.
3. Replacement of the Andesite Bridge at the west end of Old St. Vrain Road by Boulder County Transportation.

The goals of this project are to:

Restore and improve the channel and surrounding floodplain areas to protect life and property and provide a safe, natural, resilient, functioning, and ecologically rich habitat utilizing natural system principles and onsite materials to the extent possible to expedite recovery from the 2013 floods and set up for better performance in future flood events. Components to meet goals include incorporating natural channel diversity and character, re-establishing floodplain benches for lateral connectivity, reducing longitudinal connectivity constraints, improving flow conveyance and sediment transport, promoting naturally functioning stream processes, protecting public and private infrastructure, improving public safety, repairing unstable erosion scars in high-risk areas, and revegetating denuded areas.

### **SCOPE OF WORK:**

The Project consists of main and overflow channel grading and reshaping, restoring floodplain connectivity, installation of instream rock structures, bioengineered bank stabilization, incorporation of engineered large wood structures at stream banks and floodplain, riparian and upland revegetation collectively using mitigation measures to reduce the impact of future flood and that will be sustainable, resilient and benefit ecological values.

Major items of work include:

1. Secure applicable permits prior to construction startup. (Please reference permits under additional information)
2. Mobilization, project controls, site erosion control, demobilization, and creek restoration at several project reaches per construction drawings and specifications.
3. Site preparation including survey, sediment and erosion control Best Management Practices (BMP), soil analysis and testing, removing, and stockpiling topsoil.
4. Clearing and grubbing within limits of disturbance especially woody material having DBH less than 6 inches at 4.5 feet above ground surface.

5. Removal of abandoned utilities appurtenances and flood generated trash and debris along the project corridor.
6. Removal of flagged trees i.e. trees over 6 inches for re-use within project limits. Salvage trees greater than 12 inches with root wad intact per the plans and specifications for potential reuse in large wood structures (LWD).
7. Dewatering temporary excavations in channel and off channel.
8. Selective native streambed stripping, stockpiling and replacement of existing native river bottom material (sand, gravel, cobbles).
9. Channel and floodplain excavation in conformity with the lines and grades shown in the construction drawings.
10. Sorting and stockpiling of in-situ larger, alluvial rounded rock and boulder material located in designated areas within the grading limits.
11. Hauling excess unwanted material to predetermined disposal site.
12. Final excavation and fills (shaping) of the reconstructed or rehabilitated creek bottom as shown on the construction drawings, after other mass grading has been completed such as fine grading to create pools, bank contouring and low flow channel.
13. Installation of large wood structures of different types for bank stabilization, flood plain roughness and ecological values.
14. Installation of instream rock structures such as riffle crest, riffle floodplain sill, floodplain sill overflow rock ramp and knick point stabilization.
15. Installation of instream boulders for channel roughness and complexity.
16. Installation of bank stabilization structures such willow cuttings in cobble toe, willow cuttings in existing rip rap, and boulder toe construction.
17. Prepare final grades, incorporate soil amendments, install erosion control fabric, seeding and mulching for riparian and upland revegetation.
18. Planting of trees, shrubs, dormant log poles, perennial (tubelings), willow cuttings and willow fascines as shown on the construction drawings.
19. Caging specified plantings against beaver and small mammal herbivory.
20. One year plant establishment, including necessary corrective measures such as replanting if needed and/or temporary watering as determined by the contractor for plant survival.
21. Restoration of all disturbed areas within project limits and project closeout.

#### **ADDITIONAL INFORMATION:**

##### **1. Pre-Construction Meeting**

Prior to commencement of work, the selected Contractor, any subcontractors and the persons responsible for coordination of the work shall meet with representatives from Boulder County. The meeting will be held at the Boulder County Parks and Open Space Administrative Building, 5201 St. Vrain Road, Longmont, Colorado 80503. Please call 303-678-6200 for directions. The detailed preconstruction conference agenda will be provided to the selected contractor for review prior to the meeting and the contractor is responsible for providing base line schedule to the County's representative at the meeting. Also weekly periodic progress meeting will be conducted at project facility to discuss schedule, progress, coordination, submittals, and job related problems.

## **2. BCPOS Commitments**

BCPOS will provide digital Drawings and Specifications files as needed by the Contractor in order to fulfill the terms of the Contract.

## **3. Permits**

BCPOS and the Contractor will share responsibility for obtaining permits and licenses. BCPOS will obtain the following permits:

1. U.S. Army Corps of Engineers Section 404 permit;
2. U.S. Fish and Wildlife Service threatened and endangered species consultation;
3. State Historical Preservation Office (SHPO) Section 106 clearance
4. Boulder County Land Use permit;
5. Boulder County Stream Restoration permit, including floodplain development permit and grading permit;
6. Boulder County Transportation right of way permit;
7. Colorado Department of Transportation special use and/or access permit

Please refer to section 107 of project specification for permit status. Project mobilization is contingent upon acquiring all applicable permits.

## **4. Staging Areas**

Staging areas are identified on the Drawings.

## **5. Non-County Landowner Permission**

Boulder County will obtain permission from all landowners required to complete the PROJECT as specified in this document; access and/or work on private land. Boulder County will not authorize commencement of work until all permissions are secured. Contractor will be responsible for following all conditions of the permissions.

## **6. Contractor Commitments**

The Contractor agrees to work in a timely and efficient manner, and in accordance with the Drawings and Specifications to accomplish the tasks specified in this Project.

## **7. Permits**

BCPOS and the Contractor will share responsibility for obtaining permits and licenses as described in the construction drawings and specifications. Contractor will obtain permits required for construction, including the following:

- a. Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Division Storm Water General Permit for Construction Activities.
- b. CDPHE Construction Dewatering Wastewater Discharge Permit
- c. Oversize/Overweight permits.

Collectively referred to hereinafter as “**Contractor-required permits.**”

## **8. Time Limit**

Permitting will commence within ten (10) calendar days of the date of the execution of the Contract

and written Notice to Proceed provided by BCPOS's representative, and Contractor-required permit applications will be submitted to applicable approval agencies within twenty (20) calendar days of the execution of the Contract. Project mobilization will commence within ten (10) calendar days of approval of all Contractor-required permits. The Project is to be completed before December 31, 2017

Project construction will be limited by the wildlife closures depicted in the attached "Wildlife Closures Map". A golden eagle nest occurs within half mile of downstream project area adjacent to existing old South St. Vrain Bridge and the closure will be in effect from December 15 to July 15. With the anticipated construction start date of mid-June, the impacts of the golden eagle closure may have very limited effect on construction for this project due to the limited geographic extent.

**In the event the Contractor is unable to commence work as agreed to, the Boulder County Commissioners may rescind the bid award and proceed to award the Contract to another bidder based on BID #6644-17, re-bid the work, or proceed in any lawful manner the County deems necessary.**

#### **9. Equipment**

All equipment and vehicles utilized by the Contractor shall meet all the requirements of federal, state and local regulations without limitation including all U. S. Department of Transportation (USDOT), and Colorado Department of Transportation (CDOT) safety regulations.

#### **10. Staging Area**

All equipment must be maintained and in good working order. Continuous, excessive oil and hydraulic fluid leakage will not be tolerated and will be cause to have the machinery removed from the project site and including removal of any contaminated soil by the Contractor.

All operators shall have the skills to operate the machinery in a responsible, safe, and efficient manner while being conscientious of the natural resource values. The Contractor is responsible for providing on-site portable toilet facilities for their staff.

#### **11. Overnight Camping**

Boulder County prohibits any overnight camping; Operational staff is not authorized to be present at Project site from sunset to sunrise, the open space property will remain closed during these hours to the contractor and its subcontractors and/or designated representatives and/or agents.

#### **12. Hours of Operation**

Contractor work hours shall be Monday to Friday, 7:00 a.m. to 5:00 p.m. Work on Saturdays and Sundays, nights, and federal holidays shall not be allowed unless approved, in writing, by the County.

**BID #6644-17**

**SELECTION CRITERIA**

**FLOOD-CONSTRUCTION SERVICES FOR  
SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH**

**SELECTION CRITERIA:**

In order to be eligible for consideration, a Contractor must submit all information as requested herein. Omission of any of the required information may be grounds to reject the Contractor's bid from further consideration. The selection criteria will include, but is not limited to:

- A. Technical ability, capacity, experience and skill of the contractor, and key team members assigned to the project.
- B. Past experience of the company having successfully completed projects of similar size and complexity, including stream restoration projects.
- C. Quality and/or performance of work provided on previous projects.
- D. References and recommendations from former customers and/or design engineers and clients.
- E. Financial ability, sufficiency of resources, and bonding capacity to undertake and successfully complete the project.
- F. Organization and completeness of the statement of qualifications.
- G. Other relevant information provided by the contractor.
- H. Firm selection will be based on the bid that provides Boulder County with the best cost and quality project.
- I. Ability to commence the work within ten (10) calendar days of approval of all Contractor-required permits and to complete construction before December 31, 2017 from the date of mobilization.

**BID #6644-17**  
**BID SUBMITTAL SECTION**  
**FLOOD-CONSTRUCTION SERVICES FOR**  
**SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH**

**BID TAB**

<b>South St. Vrain Creek Restoration</b>								
<b>Item</b>	<b>Bid Item Code</b>	<b>EWP Quantity</b>	<b>BCPOS Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>EWP Cost</b>	<b>BCPOS Cost</b>	<b>Total Cost</b>
Clearing and Grubbing	201-00000	22.4	3.2	AC				
Removal of Structures and Debris	202-00005	4	1	LOAD				
Removal of Tree (6 to 12 inch DBH)	202-00010	56	7	EA				
Removal of Tree (12+ inch DBH)	202-00011	40	9	EA				
Unclassified Excavation (Stripping Native Streambed)	203-00001	8,958	2,273	BCY				
Unclassified Excavation (Complete in Place)	203-00002	11,986	853	BCY				
Unclassified Excavation (Haul Offsite)	203-00003	38,129	6,669	BCY				
Unclassified Excavation (Sort/Screen/Stockpile 6 to 12 inch Rock)	203-00005	2,448	204	TON				
Unclassified Excavation (Sort/Screen/Stockpile 12 to 24 inch Rock)	203-00006	744	62	TON				
Unclassified Excavation (Sort/Screen/Stockpile 24+ inch Rock)	203-00007	72	6	TON				
Stormwater Management	208-00001	1	0	LS				
Time-Released Watering	209-00200	3,828	473	EA				
Dewatering	211-03005	1	0	LS				
Seeding (Upland)	212-00005	12.7	1.6	AC				
Seeding (Riparian)	212-00022	4.9	0.4	AC				
Soil Conditioner	212-00032	17.6	2.0	AC				

Spray-On Mulch Blanket	213-00012	16.5	2.0	AC				
Perennial (Tubeling)	214-00901	5,917	0	SF				
Willow Cuttings in Existing Riprap	214-01011	43	48	EA				
Willow Cuttings	214-01015	7,629	1,412	EA				
Dormant Log Poles	214-01026	69	29	EA				
Fascines	214-01032	171	0	LF				
Beaver Protection Fence	214-01040	1	0	LS				
Vole Protection Fence	214-01041	1	0	LS				
Trees and Shrubs	214-01050	3,828	473	EA				
Large Wood Structure Type 1	214-01228	5	0	EA				
Large Wood Structure Type 2	214-01229	4	3	EA				
Large Wood Structure Type 3	214-01230	3	1	EA				
Large Wood Structure Type 4	214-01231	15	4	EA				
Large Wood Structure Type 5	214-01232	17	4	EA				
Large Wood Structure Type 6	214-01233	6	2	EA				
Transplanting Mature Willows	215-01016	270	28	EA				
Soil Retention Blanket (Special)	216-0030	5,053	0	SY				
Noxious Weed Management	218-00000	1	0	LS				
Protection of Migratory Birds	240-00000	1	0	EA				
Riffle Structure	506-03000	12	4	EA				
Riffle Floodplain Sill	506-03001	410	165	LF				



Floodplain Sill	506-03002	605	0	LF				
Habitat Boulder	506-03004	250	125	EA				
Overflow Rock Ramp	506-03005	3	0	EA				
Knickpoint Stabilization Structure	506-03006	6	0	EA				
Willow Cuttings in Existing Cobble Toe	506-00419	1,707	567	LF				
Boulder Toe	506-00431	512	149	LF				
Import 6 to 12 Inch Rock	506-05000	444	37	TON				
Import 12 to 24 Inch Rock	506-05001	480	40	TON				
Import 24+ Inch Rock	506-05000	2,172	181	TON				
Beaver Dam Analogue	508-00001	2	0	EA				
Fence (Plastic)	607-11525	9,468	1,302	LF				
Construction Surveying	625-00000	1	0	LS				
Mobilization	626-00000	1	0	LS				
Construction Zone Traffic Control	630-00012	1	0	LS				
<b>Project Total</b>								
<b>Alternate Bid Item</b>								
Unclassified Excavation (Extended Haul Offsite)	203-00004	38,129	6,669	BCY				

**BID #6644-17  
SIGNATURE PAGE  
FLOOD-CONSTRUCTION SERVICES FOR  
SOUTH ST. VRAIN CREEK RESTORATION AT HALL RANCH**

**SIGN AND RETURN THIS SUBMITTAL PAGE WITH YOUR BID.**

<b>Contact Information</b>	<b>Response</b>
Company Name including DBA	
List type of organization (Corporation, Partnership, etc)	
Name and Title of Person authorized to contract with Boulder County	
Name and Title of Person submitting Bid	
Email address for Person submitting Bid	
Company Address	
Company Telephone Number	
Company Website	
Company Fax Number	

**By signing below I certify that:**

I am authorized to bid on my company's behalf.

I am not currently an employee of Boulder County.

None of my employees or agents is currently an employee of Boulder County.

I am not related to any Boulder County employee or Elected Official.

**I am not a Public Employees' Retirement Association (PERA) retiree.**

\_\_\_\_\_  
**Signature of Person Authorized to Bid on  
Company's Behalf**

\_\_\_\_\_  
**Date**

Note: If you cannot certify the above statements, please explain in a statement of explanation.

# ATTACHMENT A

## SAMPLE CONTRACT

THIS CONTRACT ("Contract") is entered into between the COUNTY OF BOULDER, State of Colorado, acting by and through its Board of County Commissioners ("County") and COMPANY NAME ("Contractor"), Address, City, State, zip code, telephone number 000-000-0000 and fax number 000-000-0000, (collectively, the "Parties").

In consideration of the rights and obligations specified below, the County and the Contractor agree as follows:

1. Incorporation into Contract: The following documents (the "Contract Documents") are each expressly incorporated into this Contract by reference:

(The successful proposer shall execute the attached Emergency Watershed Protection Program Addendum as part of any contract with the county, and comply with all requirements set forth in that addendum.

a. The attached Invitation for Bid, and Bid Specifications of Boulder County BID together with any alterations and/or modifications to these Specifications ("the Bid Documents");

b. The attached Contractor's proposal in response to the Bid Document (the "Proposal") including the fee schedule.

2. Work to be Performed: The Contractor agrees that it will, in a good and workmanlike manner, at its own cost and expense and strictly in accordance with this Contract, including all documents incorporated herein, furnish all labor, material and equipment and do all work necessary, or incidental to complete construction of the following Boulder County project: NAME OF PROJECT (hereinafter referred to as the "Project"). Contractor shall be authorized to do business in the State of Colorado and shall provide the County a current Certificate of Good Standing evidencing such authorization. Furthermore, Contractor shall be responsible for all applicable sales and employment taxes.

3. Quality of Performance: The Contractor shall perform the Contract in a manner satisfactory and acceptable to the County. The County shall be the sole judge of the quality of performance.

4. Schedule of Work: The Contractor shall perform the Work during the hours designated by the County so as to avoid inconvenience to the County and its personnel and interference with

the County's operations. All hours as specified in the BID documents.

5. Payment: In consideration of the foregoing, the County hereby agrees to pay to the Contractor the amounts required for the completion of the project at the base bid amount of \$0,000.00, all according to the provisions and subject to the conditions as set forth in the Contract Documents. Contractor shall submit, in writing, to Boulder County, a request for all payments. Upon receipt of applicable guaranties/warranties as specified in paragraph 8, Representations, Guaranty and Warranties, final payment shall be paid upon the satisfactory completion of the Project and provided that no claims are made against the Project, based upon responses from the Notice of Final Settlement. Contractor is responsible for submitting a final invoice for any retainage held. The County, in its sole discretion, shall determine satisfactory completion.

Invoices submitted must contain sufficient information detailing all expenses. Invoices shall be submitted on company letterhead and include, but not limited to, depending on the activity completed, designated project name, date(s), type of work performed, rate per hour, number of hours worked, mileage, mileage rate, and any associated administrative fees. Additionally, all invoices should contain the current date, invoice number, amount due and current return address.

- a. Send completed invoices to:  
[pospayables@bouldercounty.org](mailto:pospayables@bouldercounty.org) or to  
Boulder County  
Parks and Open Space Department  
Attention: A/P  
5201 St. Vrain Road  
Longmont, CO 80503
- b. Failure to submit invoices in a timely manner and in accordance with the terms of this Contract may cause a delay in payment.
- c. The County reserves the right to recoup any damages incurred as a result of Contractors failure to submit invoices pursuant to the terms of this paragraph.

6. Term and Time: This Contract shall begin and become effective on and as of the date of execution by the parties which date is specified on the signature page of this Contract. It is further agreed that time is of the essence and work shall begin within five (5) days of execution of the Contract, and when a

"Notice to Proceed" has been issued by the County, unless determined differently by the County, in its sole discretion, and be COMPLETED IN DAYS OR COMPLETION DATE FROM DATE OF NOTICE TO PROCEED, WEATHER PERMITTING, unless additional time shall be allowed by the County, in writing. The Contract shall be in full force and effect, subject to the Termination provisions as set forth in paragraph 21 of this Contract.

7. Retainage: The County reserves the right to withhold a retainage of ten percent (10%) on any or all payments until all of the work is accepted by the County, at its sole discretion, as satisfactory and complete.

8. Representations, Guaranty and Warranties: Contractor shall furnish the County with a written guaranty covering all labor, materials and workmanship incorporated in the work for one year upon completion of the Project. Where the specifications require additional warranties or guarantees, the Contractor shall procure such warranties and deliver them to the County on completion of the work. Such warranties will not lessen the Contractor's responsibilities under the purchase order documents. Whenever warranties or guarantees are required by the specifications for a period longer than one year, such longer period shall govern. Contractor acknowledges final payment terms as specified in paragraph 5, Payment.

Contractor represents and warrants the following to The County, as a material inducement to the County to execute this Contract, which representations and warranties shall survive the execution and delivery of this Contract, any termination of this Contract, and the final completion of the work.

- a. Execution of this Contract and performance thereof is within the Contractor's duly authorized powers;
- b. Any individual executing this Contract is authorized to do so by the Contractor;
- c. The Contractor is authorized to do business in the State of Colorado and is properly licensed by all necessary governmental and public and quasi-public authorities having jurisdiction over the Work and the project; and
- d. The Contractor and its subcontractors, if any, are financially solvent, able to pay all debts as they mature, and possessed of sufficient working capital to complete the work and perform all obligations under the Contract.

9. Bond Submittal: The combined bonds are required and must be in an amount equal to one hundred percent (100%) of the contract amount as specified in paragraph 5, Payment.

a. Payment Bond: This Contract shall not take effect or be in force until said Contractor shall have furnished and delivered to the County a surety bond acceptable to the County, in a penal sum equal to the nearest integral \$100.00 in excess of the estimated Contract price as per proposal hereto attached, duly executed by a corporate surety, qualified and licensed to do business in Colorado and maintaining a general agent therein.

b. Performance Bond: This Contract shall not take effect or be in force until said Contractor shall have furnished and delivered to the County a surety bond acceptable to the County, in a penal sum equal to the nearest integral \$100.00 in excess of the estimated Contract price as per proposal hereto attached, duly executed by a corporate surety, qualified and licensed to do business in Colorado and maintaining a general agent therein.

10. Permits, Licenses, Locates and Codes: The Contractor shall have full responsibility for identifying and obtaining, prior to the start of work under this Contract, and for maintaining throughout the term of this Contract, any permits and licenses which may be required in order to carry out the work. The Contractor shall also be responsible for following all State and County codes, which may be required in order to carry out the Project. The Contractor shall also be responsible for all "locates" of all public utilities related to performing work under the terms of this Contract. The Contractor shall also be responsible for insuring that any of its subcontractors performing work under the terms of this Contract also satisfy the provisions of this paragraph.

11. Contractor Licensing: General contractors, HVAC contractors, and roofing contractors require licensing through Boulder County. Electricians and plumbers must be state-licensed and registered with the Boulder County Building Safety and Inspection Division. It is the responsibility of the Contractor to apply for and ensure the appropriate Contractor's license is obtained prior to project commencement. In addition, the Contractor is responsible for submitting a copy of the current license to the Parks and Open Space Contract Coordinator as listed in paragraph 23, Notices. Project shall not proceed until said document is

received by the Parks and Open Space Contract Coordinator, if applicable, as determined by the Boulder County Building Safety and Inspection Division. The Contractor will comply with all state and local licensing requirements, including but not limited to, filing the State of Colorado Statement of Foreign Entity Authority paperwork, if Contractor is not a Colorado company.

12. Sustainability: The County encourages the Contractor to incorporate the practice of recycling and/or reuse of construction and/or de-construction materials in a manner that will allow maximum recycling/reuse of Project materials.

13. Indemnity: The Contractor shall be liable and responsible for any and all damages to persons or property caused by or arising out of the actions, obligations, or omissions of the Contractor, its employees, agents, representatives or other persons acting under the Contractor's direction or control in performing or failing to perform the Work under this Contract. The Contractor will indemnify and hold harmless the County, its elected and appointed officials, and its employees, agents and representatives (the "indemnified parties"), from any and all liability, claims, demands, actions, damages, losses, judgments, costs or expenses, including but not limited to attorneys' fees, which may be made or brought or which may result against any of the indemnified parties as a result or on account of the actions or omissions of the Contractor, its employees, agents or representatives, or other persons acting under the Contractor's direction or control.

14. Governmental Immunity: Nothing in this Contract shall be construed in any way to be a waiver of the County's immunity protection under the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, et seq., as amended.

15. Insurance Requirements: The Contractor shall procure and maintain at its own expense, and without cost to the County, the following kinds and minimum amounts of insurance for purposes of insuring the liability risks which the Contractor has assumed until this Contract has expired or is terminated:

a. Commercial General Liability.

Coverage should be provided on an Occurrence form, ISO CG0001 or equivalent. The policy shall be endorsed to include Additional Insured endorsements CG 2010 (or equivalent), Designated Construction Projects General Aggregate Endorsement CG2503 (or equivalent) and Additional Insured (for products/completed operations) CG 2037 (or equivalent).

Minimum limits required of \$1,000,000 Each Occurrence, \$2,000,000 General Aggregate and \$2,000,000 Products Completed Operations Aggregate". The County requires Products/Completed Operations coverage to be provided 2 years after completion of construction. An endorsement must be included with the certificate.

b. Automobile Liability.

Bodily Injury and Property Damage for any owned, hired, and non-owned vehicles used in the performance of the Contract. Minimum limits \$1,000,000 Each Accident.

c. Workers' Compensation and Employer's Liability.

Workers' Compensation must be maintained with the statutory limits. Employer's Liability is required for minimum limits of \$100,000 Each Accident/\$500,000 Disease-Policy Limit/\$100,000 Disease-Each Employee.

d. Umbrella / Excess Insurance

Umbrella/Excess Liability insurance in the amount \$3,000,000.00, following form.

e. Pollution Liability.

Coverage shall cover the Contractor's completed operations. The coverage must also include sudden and gradual pollution conditions including clean-up costs when mandated by governmental authority, when required by law or as a result of a third party claim. Minimum limits required are \$1,000,000 Per Loss and \$1,000,000 Aggregate. If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed.

f. Professional Liability (Errors and Omissions).

Professional liability coverage with minimum limits of \$1,000,000 Per Loss and \$1,000,000 Aggregate. Professional Liability provisions indemnifying for loss and expense resulting from errors, omission, mistakes or malpractice is acceptable and may be written on a claims made basis. The



contractor warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of two (2) years beginning at the time work under this Contract is completed.

The Contractor shall forward certificates of insurance directly to the Boulder County Parks and Open Space Department, 5201 St. Vrain Road, Longmont, Colorado, 80503, Attention: demonstrating that the insurance requirements have been met prior to the commencement of Work under this Contract.

Boulder County shall be named as an additional insured for General Liability and Pollution Liability, as designated in the contract. Additional insured shall be endorsed to the policy.

The additional insured wording shall be as follows: County of Boulder, State of Colorado, a body corporate and politic, is named as Additional Insured.

Certificate Holder:

Boulder County  
Attn: Risk Manager  
P.O. Box 471  
Boulder, CO 80306

Notice of Cancellation: If any insurance company refuses to provide the required notice, the Contractor or its insurance broker shall notify the County of any cancellation, suspension, and/or nonrenewal of any insurance within seven (7) days of receipt of insurers' notification to that effect.

STATE OF COLORADO INSURANCE REQUIREMENTS:

Additionally, the Contractor shall be required to comply with the State's insurance requirements as specified in the Grant Agreement. Contractor shall provide a certificate of insurance to the County, demonstrating the insurance requirements have been met prior to the commencement of Work under this Contract.

16. Nondiscrimination: The Contractor agrees to comply with the letter and spirit of the Colorado Anti-Discrimination Act, C.R.S. § 24-34-401, et seq., as amended, and all applicable local, state and federal laws respecting discrimination and unfair employment practices. Boulder County prohibits unlawful discrimination on the basis of race, color, religion, gender, gender identity, national origin, age 40 and over, disability,

socio-economic status, sexual orientation, genetic information, or any other status protected by applicable federal, state or local law and the Boulder County Policy manual (of which is available upon request).

17. Nondiscrimination Provisions Binding on Subcontractors: In all solicitations, either by competitive bidding or negotiation, by the Contractor for any Work related to this Contract to be performed under a subcontract, including procurement of materials or equipment, the Contractor shall notify each potential subcontractor of the Contractor's obligations under this Contract, and of all pertinent regulations relative to nondiscrimination and unfair employment practices, as set forth above.

18. Sanctions for Noncompliance: In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, as determined by the County within its sole discretion, the County shall impose such contract sanctions as it may determine to be appropriate, including, but not limited to:

- a. withholding of payments to the Contractor under the Contract until the Contractor complies with the nondiscriminatory provision set forth in paragraph 16 of this Contract; and/or
- b. cancellation, termination, or suspension of the Contract, in whole or in part, effective upon seven (7) days written notice to the Contractor pursuant to paragraph 21 of this Contract.

19. Subcontractors: The Contractor will include the provisions of paragraphs 16 through 18 in every subcontract, including procurement of materials and leases of equipment. The Contractor will take such action with respect to any subcontractor or procurement as the County of Boulder may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the County may, at its own discretion, enter into such litigation to protect the interests of the County.

20. Post Completion: Final payment made to the Contractor, on account of the work, shall not operate to relieve the Contractor of responsibility for faulty material or workmanship, and unless otherwise provided, the Contractor shall remedy any defect due thereto and pay for any damages resultant there from.

21. Termination and Related Remedies:

a. The other provisions of this Contract notwithstanding, financial obligations of Boulder County payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted and otherwise made available. Boulder County is prohibited by law from making financial commitments beyond the term of its current fiscal year. The County has contracted for goods and/or services under this Contract and has reason to believe that sufficient funds will be available for the full term of the Contract. Where, however, for reasons beyond the control of the Board of County Commissioners as the funding entity, funds are not allocated for any fiscal period beyond the one in which this Contract is entered into, the County shall have the right to terminate this Contract by providing seven (7) days written notice to the Contractor pursuant to paragraph 23, and will be released from any and all obligations hereunder. If the County terminates the Contract for this reason, the County and the Contractor shall be released from all obligations to perform Work and make payments hereunder, except that the County shall be required to make payment for Work which has been performed by the Contractor prior to the effective date of termination under this provision; and, conversely, the Contractor shall be required to complete any Work for which the County has made payment prior to providing written notice to the Contractor of the termination. In such an event, Boulder County is released from all liability whatsoever and will not be responsible for payment of any costs or expenses incurred in reliance upon this Contract beyond that amount which has been appropriated and made available for this Contract and neither party shall have any further liability hereunder, said Contract to cease and terminate as of such date.

b. If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract, or fails to perform any provision of the Contract, the County, after seven (7) days written notice to the Contractor and without prejudice to any other remedy it may have, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor or, at its option, may terminate the Contract and may finish the Work by whatever method it may deem expedient, if such expense exceeds the unpaid balance of the Contract, the Contractor shall pay the difference to the County.

c. In the event the County exercises either of the termination rights specified in paragraphs 21(a) or 21(b),

this Contract shall cease to be of any further force and effect, with the exception of all Contract remedies which are specified herein and may otherwise be available to the parties under the law, and with the exception of any rights or liabilities of the parties which may survive by virtue of this Contract.

d. The preceding provisions notwithstanding, the County may terminate this Contract, either in whole or in part, for any reason, whenever the County determines that such termination is in the County's best interests. Such termination shall be effective after the County provides seven (7) days written notice to the Contractor pursuant to paragraph 23.

Termination of work hereunder shall be effected by the delivery to the Contractor of a "Notice of Termination" specifying the extent to which performance of work, under the Contract, is terminated and the date upon which such termination becomes effective. After receipt of the "Notice of Termination", the Contractor shall cancel its outstanding commitments hereunder covering the procurement of materials, supplies, equipment and miscellaneous items. In addition, the Contractor shall exercise all reasonable diligence to accomplish the cancellation or diversion of its outstanding commitments covering personal services and extending beyond the date of such termination to the extent that they relate to the performance of any work terminated by the notice. The Contractor shall then submit a written claim for all outstanding amounts to the County, due within the timeframe as specified, thirty (30) days, upon receipt of "Notice of Termination", from the County.

22. Independent Contractor: The Parties recognize and agree that the Contractor is an independent contractor for all purposes, both legal and practical, in performing services under this Contract, and that the Contractor and its agents and employees are not agents or employees of Boulder County for any purpose. As an independent contractor, the Contractor shall be responsible for employing and directing such personnel and agents as it requires to perform the services purchased under this Contract, shall exercise complete authority over its personnel and agents, and shall be fully responsible for their actions.

Contractor acknowledges that it is not entitled to unemployment insurance benefits or workers' compensation benefits from Boulder County, its elected officials, agents, or any program administered or funded by Boulder County. Contractor shall be entitled to unemployment insurance or workers' compensation insurance only if unemployment compensation coverage or workers' compensation coverage is provided by Contractor, or some other entity that is

not a party to this Contract. Contractor is obligated to pay federal and state income tax on any monies earned pursuant to this Contract.

23. Notices: For purposes of the notices required to be provided under paragraphs 15, and 21, all such notices shall be in writing, and shall be either sent by Certified U.S. Mail - Return Receipt Requested, Electronic Mail (Email) or hand-delivered to the following representatives of the parties at the following addresses:

For the County: Parks and Open Space Department  
Attention:  
5201 St. Vrain Road  
Longmont, CO 80503  
[Contract\\_Staff@bouldercounty.org](mailto:Contract_Staff@bouldercounty.org)

For the Contractor: Name of Company  
Project Contact  
Address  
City, State ZIP  
EMAIL

In the event a notice is mailed pursuant to the provisions of this paragraph, the time periods specified in paragraph 21 shall commence to run on the day after the postmarked date of mailing.

24. Statutory Requirements: This Contract is subject to all statutory requirements that are or may become applicable to counties or political subdivisions of the State of Colorado generally. Without limiting the scope of this provision, the Contract is specifically subject to the following statutory requirement:

Contract payments may be withheld pursuant to C.R.S. § 38-26-107 if the County receives a verified statement that the Contractor has not paid amounts due to any person who has supplied labor or materials for the project.

25. Prohibitions on Public Contract for Services: Pursuant to Colorado Revised Statutes (C.R.S.), § 8-17.5-101, et seq., as amended, the Contractor shall meet the following requirements prior to signing this Contract (public contract for service) and for the duration thereof:

A. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.

B. The Contractor shall not enter into a contract with a subcontractor that fails to certify to the Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this public contract for services.

C. At the time of signing this public contract for services, the Contractor has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this public contract for services through participation in either the E-Verify Program or the Department Program.

D. The Contractor shall not use either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while this public contract for services is being performed.

E. If Contractor obtains actual knowledge that a subcontractor performing work under this public contract for services knowingly employs or contracts with an illegal alien, the Contractor shall: notify the subcontractor and the County within three days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and, terminate the subcontract with the subcontractor if within three days of receiving the notice required pursuant to the previous sentence, the subcontractor does not stop employing or contracting with the illegal alien; except that the contractor shall not terminate the contract with the subcontractor if during such three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.

F. Contractor shall comply with any reasonable requests by the Department of Labor and Employment (the Department) made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).

G. If Contractor violates any provisions of this Section of this Contract, the County may terminate this Contract for breach of contract. If the Contract is so terminated, the Contractor shall be liable for actual and consequential damages to the County.

26. Amendments: This Contract may be altered, amended or repealed only on the mutual agreement of the County and the Contractor by a duly executed written instrument.

27. Assignment: This Contract shall not be assigned or subcontracted by the Contractor without the prior written consent of the County.

28. Complete Agreement/Binding Effect: This agreement represents the complete agreement between the Parties hereto and shall be fully binding upon the successors, heirs, and assigns of the Parties, if any, during the term hereof.

29. Governing Law: The laws of the State of Colorado shall govern the interpretation and enforcement of this Contract. Any litigation that may arise between the parties involving the interpretation or enforcement of the terms of this Contract shall be initiated and pursued by the parties in the Boulder Courts of the 20<sup>th</sup> Judicial District of the State of Colorado and the applicable Colorado Appellate Courts.

30. Breach: Any waiver of a breach of this Contract shall not be held to be a waiver of any other or subsequent breach of this Contract. All remedies afforded in this Contract shall be taken and construed as cumulative, that is, in addition to every other remedy provided herein or by law.

31. Termination of Prior Agreements: This Contract cancels and terminates, as of its effective date, all prior agreements between the parties relating to the services covered by this Contract, whether written or oral or partly written and partly oral.

32. Invalidity Provision: Should any of the provisions of this Contract be held to be invalid or unenforceable, then the balance of the agreement shall be held to be in full force and effect as though the invalid portion was not included; provided, however, that should the invalidity or unenforceability go to the essence of the agreement or be of substantial nature, then the Party or Parties who would receive the benefit of the provision, were it not invalid or unenforceable, shall have the option to terminate this Contract, forthwith.

33. Third Party Beneficiary: The enforcement of the terms and conditions of this Contract and all rights of action relating to such enforcement shall be strictly reserved to the County and the Contractor, and nothing contained in this Contract shall give or allow any claim or right of action whatsoever by any other or third person. It is the express intent of the parties to this Contract that any person receiving services or benefits under this Contract shall be deemed an incidental beneficiary only.

34. Conflict of Provisions: In the event of any conflict between the terms of this Contract and the terms of any attachments or addenda, the terms of this Contract shall control.

35. Information and Reports: The Contractor will provide to authorized governmental representatives, including those of the County, State and Federal Government, all information and reports which they may require for any purpose authorized by law. The Contractor will permit such authorized governmental representatives access to the Contractor's facilities, books, records, accounts, and any other relevant sources of information. Where any information required by any such authorized government representative is in the exclusive possession of a person other than the Contractor, then such Contractor shall so certify to the County, and shall explain what efforts it has made to obtain the information.

The Contractor agrees to maintain such records and follow such procedures as may be required under the State's Grant Program and any such procedures as Boulder County may prescribe. In general, such records will include information pertaining to the contract, obligations and unobligated balances, assets and liabilities, outlays, equal opportunity, labor standards (as appropriate), and performance.

All such records and all other records pertinent to this contract and work undertaken under this contract shall be retained by the Contractor for a period of seven (7) years after final audit of this project, unless a longer period is required to resolve audit findings or litigation. In such cases, Boulder County shall request a longer period of record retention.

Boulder County and other authorized representatives of the state and federal government shall have access to any books, documents, papers and records of the consultants which are directly pertinent to the contract for the purpose of making audit, examination, excerpts, and transcriptions.

Boulder County and duly authorized officials of the state and federal government shall have full access and the right to examine any pertinent documents, papers, records and books of the Contractor's involving transactions related to this local program and contract.

36. Execution by Counterparts; Electronic Signatures: This Contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall constitute one



and the same instrument. The Parties approve the use of electronic signatures for execution of this Contract. Only the following two forms of electronic signatures shall be permitted to bind the Parties to this Contract: (1) Electronic or facsimile delivery of a fully executed copy of a signature page; (2) The image of the signature of an authorized signer inserted onto PDF format documents. All use of electronic signatures shall be governed by the Uniform Electronic Transactions Act, CRS §§ 24-71.3-101 to -121.

37. No Suspension or Debarment: The undersigned parties certify that they are not suspended or debarred, or otherwise excluded from or ineligible for participation in Federal Assistance Programs under Executive Order 12549.

IN WITNESS WHEREOF, the Parties have executed and entered into this Contract as of the latter day and year indicated below.

Executed by BOULDER COUNTY on \_\_\_\_\_.

COUNTY OF BOULDER  
STATE OF COLORADO

ATTEST: \_\_\_\_\_

\_\_\_\_\_  
Chair, Board of  
County Commissioners

\_\_\_\_\_  
Clerk to the Board  
Of Commissioners  
(SEAL)

CONTRACTOR

\_\_\_\_\_  
Name & Title

Executed by CONTRACTOR on \_\_\_\_\_  
(Date)

CONTRACTOR'S CERTIFICATION OF COMPLIANCE

Pursuant to Colorado Revised Statute, § 8-17.5-101, et seq., as amended 5/13/08, as a prerequisite to entering into a contract for services with Boulder County, Colorado, the undersigned Contractor hereby certifies that at the time of this certification, Contractor does not knowingly employ or contract with an illegal alien who will perform work under the attached contract for services and that the Contractor will participate in the E-Verify Program or Department program, as those terms are defined in C.R.S. § 8-17.5-101, et seq., in order to confirm the employment eligibility of all employees who are newly hired for employment to perform work under the attached contract for services.

CONTRACTOR:

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (Print or Type)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

Note: Registration for the E-Verify Program can be completed at:  
<https://e-verify.uscis.gov/enroll/>.

**STATE OF COLORADO**  
**Colorado Water Conservation Board**  
**SubRecipient Grant Agreement**  
**with**  
**Insert Grantee's Full Legal Name**

**1. PARTIES**

This Subrecipient Grant Agreement (hereinafter called "Grant") is entered into by and between Insert Grantee's Name, whose address is Address, City, State, Zip (hereinafter called "Grantee"), unique entity identifier (DUNS Number) Enter DUNS Number and the STATE OF COLORADO, acting by and through the Colorado Water Conservation Board, whose address is 1313 Sherman Street, #720, Denver CO 80203, (hereinafter called the "State" or "CWCB").

**2. EFFECTIVE DATE AND NOTICE OF NONLIABILITY.**

This Grant shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the "Effective Date"). The State shall not be liable to pay or reimburse Grantee for any performance hereunder, including, but not limited to costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

**3. RECITALS****A. Authority, Appropriation, and Approval**

Authority to enter into this Grant exists in §37-60-101 through -121 C.R.S. and funds have been budgeted, appropriated and otherwise made available pursuant to Governor's Emergency fund, Executive Order #D2014-012, and funds made available by the U.S. Department Of Agriculture, Natural Resources Conservation Service (NRCS), CFDA # 10.923, Federal Award Identification Number (FAIN) TBD, and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination have been accomplished from and with appropriate agencies.

**B. Consideration**

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Grant.

**C. Purpose**

The purpose of this grant agreement is to fund and implement approved projects under the NRCS Emergency Watershed Protection Program. Those projects support long-term expenditures of funded entities in response to and recovery from the September 2013 floods in Colorado.

**D. References**

All references in this Grant to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

**E. Selection**

This grant is exempt from the Procurement Code under CRS §24-101-105 (1)(a)(II).

**4. DEFINITIONS**

The following terms as used herein shall be construed and interpreted as follows:

**A. Budget**

"Budget" means the budget for the Work described in **Exhibit B**.

**B. Cost Sharing Funds**

"Cost Sharing Funds" means the portion of project costs not paid by Federal funds. Cost Sharing Funds are the same as Matching Funds.

**C. Evaluation**

“Evaluation” means the process of examining Grantee’s Work and rating it based on criteria established in §6 and Exhibit A.

**D. Exhibits and other Attachments**

The following are attached hereto and incorporated by reference herein:

- Exhibit A – Statement of Work,**
- Exhibit A-1 – Technical Scope of Work,**
- Exhibit A-2 – Plan of Operations,**
- Exhibit A-3 – Operation and Maintenance Plan,**
- Exhibit A-4 – Quality Assurance Plan,**
- Exhibit A-5 – Statement of Work, Administrative Requirements**
- Exhibit B – Project Budget,**
- Exhibit C – Grant Assurances**
- Exhibit C-1 – Assurances Construction Programs**
- Exhibit C-2 – Applicable Federal Laws and State Grant Guidance**
- Exhibit C-3 – Emergency Watershed Protection Technical Assistance**
- Exhibit C-4 – General Terms and Conditions Grants and Cooperative Agreements (USDA/NRCS)**
- Exhibit C-5 – Colorado Supplemental Provisions (3/30/2013)**
- Exhibit C-6 – Assurances Relating to Real Property Acquisition**
- Exhibit C-7 –NRCS Supplement to OSHA Parts 1910 and 1926-Construction Industry Standards and Interpretations**
- Exhibit C-8 –Supplemental Provisions for Federal Awards, and**
- Exhibit D – Option Letter.**

**E. Goods**

“Goods” means tangible material acquired, produced, or delivered by Grantee either separately or in conjunction with the Services Grantee renders hereunder.

**F. Grant**

“Grant” means this Grant, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Grant, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

**G. Grant Funds**

“Grant Funds” means available funds payable by the State to Grantee pursuant to this Grant.

**H. Matching Funds**

“Matching Funds” means the portion of project costs not paid by Federal funds. Matching Funds are the same as Cost Sharing Funds.

**I. Party or Parties**

“Party” means the State or Grantee and “Parties” means both the State and Grantee.

**J. Program**

“Program” means the NRCS Emergency Watershed Protection Program grant program that provides the funding for this Grant.

**K. Recipient**

“Recipient” means a Colorado State agency that receives an Award. In this agreement, the Recipient is the Colorado Water Conservation Board.

**L. Review**

“Review” means examining Grantee’s Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in §6 and Exhibit A and C.

**M. Services**

“Services” means the required services to be performed by Grantee pursuant to this Grant.

**N. Subcontractor**

“Subcontractor” means third-parties, if any, who are not subgrantees, engaged by Contractor to provide goods, services or construction.

**O. Subgrantee**

“Subgrantee” means third-parties, if any, engaged by Grantee to aid in performance of a federal program. A subgrantee may also be a subrecipient.

**P. Subrecipient**

“Subrecipient” means a non-federal entity that receives a Subaward from a Recipient to carry out part of a federal program, but does not include an individual that is a beneficiary of such program.

**Q. Work**

“Work” means the tasks and activities Grantee is required to perform to fulfill its obligations under this Grant and **Exhibit A and C**, including the performance of the Services and delivery of the Goods.

**R. Work Product**

“Work Product” means the tangible or intangible results of Grantee’s Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys, maps, materials, or work product of any type, including drafts.

**5. TERM**

**A. Initial Term-Work Commencement**

This agreement shall commence on the effective date, as detailed under the project schedule in **Exhibit A**. The agreement shall terminate # months following the Effective Date/Month Day, Year unless sooner terminated or extended by a formal amendment to this grant as outlined in **§H.i**.

**B. Two Month Extension**

The State, at its sole discretion upon written notice to Grantee as provided in **§16**, may unilaterally extend the term of this Grant for a period not to exceed two months if the Parties are negotiating a replacement Grant at or near the end of any initial term or any extension thereof. The provisions of this Grant in effect when such notice is given, including, but not limited to prices, rates, and delivery requirements, shall remain in effect during the two month extension. The two-month extension shall immediately terminate when and if a replacement Grant is approved and signed by the Colorado State Controller.

**C. State’s Option to Extend**

The State may require continued performance for an additional period, at the same rates and same terms specified in the Grant. If the State exercises this option, it shall provide written notice to Grantee at least 30 days prior to the end of the current Grant term in form substantially equivalent to **Exhibit D**. If funded and exercised, the provisions of the Option Letter shall become part of and be incorporated into this Grant. The total duration of this Grant, including the exercise of any options under this clause, shall not exceed five years.

**6. STATEMENT OF WORK**

**A. Completion**

Grantee shall complete the Work and its other obligations as described herein and in **Exhibit A** on or before Month Day, Year **TBD**. The State shall not be liable to compensate Grantee for any Work performed prior to the Effective Date or after the termination of this Grant.

**B. Goods and Services**

Grantee shall procure Goods and Services necessary to complete the Work. Such procurement shall be accomplished using the Grant Funds and shall not increase the maximum amount payable hereunder by the State.

**C. Employees**

All persons employed by Grantee, Subcontractors or Subgrantees shall be considered Grantee’s, Subcontractor’s or Subgrantees’ employee(s) for all purposes hereunder and shall not be employees of the State for any purpose as a result of this Grant.

**7. PAYMENTS TO GRANTEE**

The State shall, in accordance with the provisions of this §7, pay Grantee in the following amounts and using the methods set forth below:

**A. Maximum Amount**

The maximum amount payable under this Grant to Grantee by the State is Insert Max \$ Amount, as determined by the State from available funds. Grantee agrees to provide any additional funds required for

the successful completion of the Work. Payments to Grantee are limited to the unpaid obligated balance of the Grant as set forth in **Exhibit A and B**. Final costs will be agreed upon during the pre-design conference. These costs consist of costs from contracts awarded to contractors, and eligible Grantee in-kind construction costs for materials, labor, and equipment. The Sponsor shall provide NRCS documentation to support all eligible construction costs. The maximum amount payable by the State to Grantee during each State fiscal year of this Grant shall be:

**\$XXX,XXX in FY2017**

**B. Payment**

**i. Interim and Final Payments**

All payments allowed under this Grant and in **Exhibit A** shall comply with State Fiscal Rules and be made in accordance with the provisions of this Grant or such Exhibit based on cost reimbursement as specified in **§7.A.**, above. Grantee shall initiate any payment requests by submitting invoices to the State in the form and manner set forth and approved by the State.

**ii. Interest**

The State shall fully pay each invoice within 45 days of receipt thereof if the amount invoiced represents performance by Grantee previously accepted by the State. Uncontested amounts not paid by the State within 45 days may, if Grantee so requests, bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. Grantee shall invoice the State separately for accrued interest on delinquent amounts. The billing shall reference the delinquent payment, the number of day's interest to be paid and the interest rate.

**iii. Available Funds-Contingency-Termination**

The State is prohibited by law from making fiscal commitments beyond the term of the State's current fiscal year. Therefore, Grantee's compensation is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions, set forth below. If federal funds are used with this Grant in whole or in part, the State's performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Grant shall be made only from available funds encumbered for this Grant and the State's liability for such payments shall be limited to the amount remaining of such encumbered funds. If State or federal funds are not appropriated, or otherwise become unavailable to fund this Grant, the State may immediately terminate this Grant in whole or in part without further liability in accordance with the provisions herein.

**iv. Erroneous Payments**

At the State's sole discretion, payments made to Grantee in error for any reason, including, but not limited to overpayments or improper payments, and unexpended or excess funds received by Grantee, may be recovered from Grantee by deduction from subsequent payments under this Grant or other Grants, grants or agreements between the State and Grantee or by other appropriate methods and collected as a debt due to the State. Such funds shall not be paid to any person or entity other than the State.

**C. Use of Funds**

Grant Funds shall be used only for eligible costs identified herein and/or in the Budget.

**D. Matching Funds**

Grantee shall provide Matching Funds as provided in **Exhibit B**, "Local Matching Funds". Grantee shall have raised the full amount of Local Matching Funds prior to the Effective Date and shall report to the State regarding the status of such funds upon request. The Grantee's obligation to pay all or any part of any matching funds, whether direct or contingent only extends to funds duly and lawfully appropriated for the purposes of this Agreement by the authorized representatives of the Subrecipient and paid into the Grantee's treasury or bank account. The Grantee represents to the State that the amount designated "Grantee's Matching Funds" in **Exhibit B** has been legally appropriated for the purposes of this Agreement by its authorized representatives and paid into its treasury or bank account. The Grantee does not by this Agreement irrevocably pledge present cash

reserves for payments in future fiscal years, and this Agreement is not intended to create a multiple-fiscal year debt of the Grantee. The Grantee shall not pay or be liable for any claimed interest, late charges, fees, taxes or penalties of any nature, except as required by the Local Agency's laws or policies.

**E. Reimbursement of Grantees' Costs**

The State shall reimburse the Grantee's allowable costs, not exceeding the maximum total amount described in **Exhibit B** and **§7**. The State shall reimburse the Grantee for the federal share or the "NRCS Funds" and the State Matching Funds" as shown on Exhibit B, of properly documented allowable costs related to the Work after review and approval thereof, subject to the provisions of this Agreement and **Exhibit A, B and C**. However, any costs incurred by the Grantee prior to the Effective Date shall not be reimbursed absent specific allowance of pre-award costs and indication that the federal award funding is retroactive. Allowable costs shall be:

**i. Reasonable and Necessary.**

Reasonable and necessary to accomplish the Work and for the Goods and Services provided.

**ii. Net Cost.**

Actual net cost to the Grantee (i.e. the price paid minus any items of value received by the Subrecipient that reduce the cost actually incurred).

**F. Close Out.**

The Grantee shall close out this Grant within 90 days after the end date. Grant close out entails submission to the State by the Grantee of all documentation required by this Grant, and Grantee's final reimbursement request. The State shall withhold 5% of the allowable costs until all final project documentation has been submitted and accepted by State as substantially complete. If the project has not been closed by Natural Resources Conservation Service (NRCS) within 1 year and 90 days after the end date due to Grantee's failure to submit required documentation that the State has requested from the Subrecipient, then the Grantee may be prohibited from applying for new federal awards through the State until such documentation has been submitted and accepted.

**G. Erroneous Payments.**

The closeout of a federal award does not affect the right of NRCS or CWCB to disallow costs and recover funds on the basis of a later audit or other review. Any cost disallowance recovery is to be made within the record retention period.

**8. REPORTING - NOTIFICATION**

Reports, Evaluations, and Reviews required under this **§8** shall be in accordance with the procedures of and in such form as prescribed by the State and in accordance with **§19**, if applicable.

**A. Performance, Progress, Personnel, and Funds**

Grantee shall submit all financial, performance, and other reports to the State upon expiration or sooner termination of this Grant, containing an Evaluation and Review of Grantee's performance and the final status of Grantee's obligations hereunder. In addition, Grantee shall comply with all reporting requirements, if any, set forth in **Exhibits A and C**.

**B. Litigation Reporting**

Within 10 days after being served with any pleading in a legal action filed with a court or administrative agency, related to this Grant or which may affect Grantee's ability to perform its obligations hereunder, Grantee shall notify the State of such action and deliver copies of such pleadings to the State's principal representative as identified herein. If the State's principal representative is not then serving, such notice and copies shall be delivered to the Executive Director of the Department of Natural Resources.

**C. Noncompliance**

Grantee's failure to provide reports and notify the State in a timely manner in accordance with this **§8** may result in the delay of payment of funds and/or termination as provided under this Grant.

**D. Subcontracts and Subgrants**

Copies of any and all subcontracts or subgrants entered into by Grantee to perform its obligations hereunder shall be submitted to the State or its principal representative upon request by the State. Any and all subcontracts or subgrants entered into by Grantee related to its performance hereunder shall comply



with all applicable federal and state laws and shall provide that such subgrants be governed by the laws of the State of Colorado.

#### **E. Violations Reporting**

Grantee must disclose, in a timely manner, in writing to the State and to the NRCS, all violations of federal or state criminal law involving fraud, bribery, or gratuity violations potentially affecting the Grant.

Penalties for noncompliance may include suspension or debarment (2 CFR Part 180 and 31 U.S.C. 3321).

### **9. GRANTEE RECORDS**

Grantee shall make, keep, maintain and allow inspection and monitoring of the following records:

#### **A. Maintenance**

Grantee shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services (including, but not limited to the operation of programs) or Goods hereunder. Grantee shall maintain such records (the "Record Retention Period") until the last to occur of the following: (i) a period of three years after the date this Grant is completed or terminated or a longer period as required in the exhibits, or (ii) final payment is made hereunder, whichever is later, or (iii) for such further period as may be necessary to resolve any pending matters, or (iv) if an audit is occurring, or Grantee has received notice that an audit is pending, then until such audit has been completed and its findings have been resolved. If any litigation, claim, or audit related to the Grant starts before expiration of the Record Retention Period, the Record Retention Period shall extend until all litigation, claims, or audit findings have been resolved and final action taken by the State or NRCS. NRCS, a cognizant agency for audit, oversight or indirect costs, and the State may notify Grantee in writing that the Record Retention Period shall be extended. For records for real property and equipment, the Record Retention Period shall extend three years following final disposition of such property.

#### **B. Inspection**

Grantee shall permit the State, the federal government and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and/or transcribe Grantee's records related to this Grant during the Record Retention Period for a period of three years following termination of this Grant or final payment hereunder, whichever is later, to assure compliance with the terms hereof or to evaluate Grantee's performance hereunder. The State reserves the right to inspect the Work at all reasonable times and places during the term of this Grant, including any extension. If the Work fails to conform to the requirements of this Grant, the State may require Grantee promptly to bring the Work into conformity with Grant requirements, at Grantee's sole expense. If the Work cannot be brought into conformance by re-performance or other corrective measures, the State may require Grantee to take necessary action to ensure that future performance conforms to Grant requirements and exercise the remedies available under this Grant, at law or inequity in lieu of or in conjunction with such corrective measures.

#### **C. Monitoring**

Grantee shall permit the State, the federal government, and other governmental agencies having jurisdiction, in their sole discretion, to monitor all activities conducted by Grantee pursuant to the terms of this Grant using any reasonable procedure, including, but not limited to: internal evaluation procedures, examination of program data, special analyses, on-site checking, formal audit examinations, or any other procedures. All monitoring controlled by the State shall be performed in a manner that shall not unduly interfere with Grantee's performance hereunder.

#### **D. Final Audit Report**

If an audit is performed on Grantee's records for any fiscal year covering a portion of the term of this Grant, Grantee shall submit a copy of the final audit report to the State or its principal representative at the address specified herein.

### **10. CONFIDENTIAL INFORMATION-STATE RECORDS**

Grantee shall comply with the provisions of this §10 if it becomes privy to confidential information in connection with its performance hereunder. Confidential information, includes, but is not necessarily limited to, state records, personnel records, and information concerning individuals.

### **A. Confidentiality**

Grantee shall keep all State records and information confidential at all times and to comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State records and information in the possession of Grantee shall be immediately forwarded to the State's principal representative.

### **B. Notification**

Grantee shall notify its agent, employees, Subcontractors, Subgrantees, and assigns who may come into contact with State records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before they are permitted to access such records and information.

### **C. Use, Security, and Retention**

Confidential information of any kind shall not be distributed or sold to any third party or used by Grantee or its agents in any way except as authorized by this Grant or approved in writing by the State. Grantee shall provide and maintain a secure environment that ensures confidentiality of all State records and other confidential information wherever located. Confidential information shall not be retained in any files or otherwise by Grantee or its agents, except as permitted in this Grant or approved in writing by the State.

### **D. Disclosure-Liability**

Disclosure of State records or other confidential information by Grantee for any reason may be cause for legal action by third parties against Grantee, the State or their respective agents.

## **11. CONFLICTS OF INTEREST**

Grantee shall not engage in any business or personal activities or practices or maintain any relationships which conflict in any way with the full performance of Grantee's obligations hereunder. Such a conflict of interest would arise when a Grantee's employee, officer or agent, or any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties indicated herein, has a financial or other interest in or receives a tangible personal benefit from Grantee's receipt of the federal award and/or entry into this Grant Agreement. Officers, employees and agents of the Grantee may neither solicit nor accept gratuities, favors, or anything of monetary value from Subcontractors or Subrecipients or parties to subcontracts or subgrants. Grantee acknowledges that with respect to this Grant, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Grantee shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Grantee's obligations to the State hereunder. If a conflict or appearance exists, or if Grantee is uncertain whether a conflict or the appearance of a conflict of interest exists, Grantee shall submit to the State a disclosure statement setting forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the apparent conflict constitutes a breach of this Grant.

## **12. REPRESENTATIONS AND WARRANTIES**

Grantee makes the following specific representations and warranties, each of which was relied on by the State in entering into this Grant.

### **A. Standard and Manner of Performance**

Grantee shall perform its obligations hereunder in accordance with normal standards of care, skill and diligence in the industry, trades or profession and in the sequence and manner set forth in this Grant.

### **B. Legal Authority – Grantee and Grantee's Signatory**

Grantee warrants that it possesses the legal authority to enter into this Grant and that it has taken all actions required by its procedures, by-laws, and/or applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Grant, or any part thereof, and to bind Grantee to its terms. If requested by the State, Grantee shall provide the State with proof of Grantee's authority to enter into this Grant within 15 days of receiving such request.

### **C. Licenses, Permits, Etc.**

Grantee represents and warrants that prior to performing any work required in **Exhibit A**, and that at all times during the term hereof it shall have, at its sole expense, all licenses, certifications, approvals,

insurance, permits, and other authorization required by law to perform its obligations hereunder. Grantee warrants that it shall maintain all necessary licenses, certifications, approvals, insurance, permits, and other authorizations required to properly perform this Grant, without reimbursement by the State or other adjustment in Grant Funds. Additionally, all employees and agents of Grantee performing Services under this Grant shall hold all required licenses or certifications, if any, to perform their responsibilities. Grantee, if a foreign corporation or other foreign entity transacting business in the State of Colorado, further warrants that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process. Any revocation, withdrawal or non-renewal of licenses, certifications, approvals, insurance, permits or any such similar requirements necessary for Grantee to properly perform the terms of this Grant shall be deemed to be a material breach by Grantee and constitute grounds for termination of this Grant.

### **13. INSURANCE**

Grantee and its Subgrantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

#### **A. Grantee**

##### **i. Public Entities**

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Subgrantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Subgrantee's liabilities under the GIA.

##### **ii. Non-Public Entities**

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in §13(B) with respect to Subgrantees that are not "public entities".

#### **B. Grantee and Subgrantees**

Grantee shall require each Grant with Subcontractors or Subgrantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

##### **i. Worker's Compensation**

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Subgrantee employees acting within the course and scope of their employment.

##### **ii. General Liability**

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows: (a) \$1,000,000 each occurrence; (b) \$1,000,000 general aggregate; (c) \$1,000,000 products and completed operations aggregate; and (d) \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Subgrantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

##### **iii. Automobile Liability**

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

##### **iv. Additional Insured**

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

**v. Primacy of Coverage**

Coverage required of Grantee and Subgrantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

**vi. Cancellation**

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and Grantee shall forward such notice to the State in accordance with §16 (Notices and Representatives) within seven days of Grantee's receipt of such notice.

**vii. Subrogation Waiver**

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Subgrantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

**C. Certificates**

Grantee shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. Certificates showing insurance coverage of Subcontractors shall be provided by Grantee to the State within seven business days of execution of a contract between Grantee and Subcontractor or Subgrantee. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Subgrantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any subgrant, Grantee and each Subgrantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this §13.

**14. BREACH**

**A. Defined**

In addition to any breaches specified in other sections of this Grant, the failure of either Party to perform any of its material obligations hereunder, in whole or in part or in a timely or satisfactory manner, constitutes a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Grantee, or the appointment of a receiver or similar officer for Grantee or any of its property, which is not vacated or fully stayed within 20 days after the institution or occurrence thereof, shall also constitute a breach.

**B. Notice and Cure Period**

In the event of a breach, notice of such shall be given in writing by the aggrieved Party to the other Party in the manner provided in §16. If such breach is not cured within 30 days of receipt of written notice, or if a cure cannot be completed within 30 days, or if cure of the breach has not begun within 30 days and pursued with due diligence, the State may exercise any of the remedies set forth in §15. Notwithstanding anything to the contrary herein, the State, in its sole discretion, need not provide advance notice or a cure period and may immediately terminate this Grant in whole or in part if reasonably necessary to preserve public safety or to prevent immediate public crisis.

**15. REMEDIES**

If Grantee is in breach under any provision of this Grant, the State shall have all of the remedies listed in this §15 in addition to all other remedies set forth in other sections of this Grant following the notice and cure period set forth in §14(B). The State may exercise any or all of the remedies available to it, in its sole discretion, concurrently or consecutively.

**A. Termination for Cause and/or Breach**

If Grantee fails to perform any of its obligations hereunder with such diligence as is required to ensure its completion in accordance with the provisions of this Grant and in a timely manner, the State may notify Grantee of such non-performance in accordance with the provisions herein. If Grantee thereafter fails to promptly cure such non-performance within the cure period, the State, at its option, may terminate this entire Grant or such part of this Grant as to which there has been delay or a failure to properly perform. Exercise by the State of this right shall not be deemed a breach of its obligations hereunder. Grantee shall continue performance of this Grant to the extent not terminated, if any.

**i. Obligations and Rights**

To the extent specified in any termination notice, Grantee shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding orders, subcontracts and/or subgrants with third parties. However, Grantee shall complete and deliver to the State all Work, Services and Goods not cancelled by the termination notice and may incur obligations as are necessary to do so within this Grant's terms. At the sole discretion of the State, Grantee shall assign to the State all of Grantee's right, title, and interest under such terminated orders, Subgrants, or subcontracts. Upon termination, Grantee shall take timely, reasonable and necessary action to protect and preserve property in the possession of Grantee in which the State has an interest. All materials owned by the State in the possession of Grantee shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Grantee to the State and shall become the State's property.

**ii. Payments**

The State shall reimburse Grantee only for accepted performance up to the date of termination. If, after termination by the State, it is determined that Grantee was not in breach or that Grantee's action or inaction was excusable, such termination shall be treated as a termination in the public interest and the rights and obligations of the Parties shall be the same as if this Grant had been terminated in the public interest, as described herein.

**iii. Damages and Withholding**

Notwithstanding any other remedial action by the State, Grantee also shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Grant by Grantee and the State may withhold any payment to Grantee for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Grantee is determined. The State may withhold any amount that may be due to Grantee as the State deems necessary to protect the State, including loss as a result of outstanding liens or claims of former lien holders, or to reimburse the State for the excess costs incurred in procuring similar goods or services. Grantee shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

**B. Early Termination in the Public Interest**

The State is entering into this Grant for the purpose of carrying out the public policy of the State of Colorado, as determined by its Governor, General Assembly, and/or Courts. If this Grant ceases to further the public policy of the State, the State, in its sole discretion, may terminate this Grant in whole or in part. Exercise by the State of this right shall not constitute a breach of the State's obligations hereunder. This subsection shall not apply to a termination of this Grant by the State for cause or breach by Grantee, which shall be governed by §15(A) or as otherwise specifically provided for herein.

**i. Method and Content**

The State shall notify Grantee of such termination in accordance with §16. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Grant.

**ii. Obligations and Rights**

Upon receipt of a termination notice, Grantee shall be subject to and comply with the same obligations and rights set forth in §15(A)(i).

**iii. Payments**

If this Grant is terminated by the State pursuant to this §15(B), Grantee shall be paid an amount which bears the same ratio to the total reimbursement under this Grant as the Services satisfactorily performed bear to the total Services covered by this Grant, less payments previously made. Additionally, if this Grant is less than 60% completed, the State may reimburse Grantee for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Grant) incurred by Grantee which are directly attributable to the uncompleted portion of Grantee's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Grantee hereunder.

**C. Remedies Not Involving Termination**

The State, in its sole discretion, may exercise one or more of the following remedies in addition to other remedies available to it:

**i. Suspend Performance**

Suspend Grantee’s performance with respect to all or any portion of this Grant pending necessary corrective action as specified by the State without entitling Grantee to an adjustment in price/cost or performance schedule. Grantee shall promptly cease performance and incurring costs in accordance with the State’s directive and the State shall not be liable for costs incurred by Grantee after the suspension of performance under this provision.

**ii. Withhold Payment**

Withhold payment to Grantee until corrections in Grantee’s performance are satisfactorily made and completed.

**iii. Deny Payment**

Deny payment for those obligations not performed, that due to Grantee’s actions or inactions, cannot be performed or, if performed, would be of no value to the State; provided, that any denial of payment shall be reasonably related to the value to the State of the obligations not performed.

**iv. Removal**

Demand removal of any of Grantee’s employees, agents, Subcontractors, or Subgrantees whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable, or whose continued relation to this Grant is deemed to be contrary to the public interest or not in the State’s best interest.

**v. Intellectual Property**

If Grantee infringes on a patent, copyright, trademark, trade secret or other intellectual property right while performing its obligations under this Grant, Grantee shall, at the State’s option (a) obtain for the State or Grantee the right to use such products and services; (b) replace any Goods, Services, or other product involved with non-infringing products or modify them so that they become non-infringing; or, (c) if neither of the foregoing alternatives are reasonably available, remove any infringing Goods, Services, or products and refund the price paid therefore to the State.

**16. NOTICES and REPRESENTATIVES**

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party’s principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

**A. State:**

Kevin Houck
Colorado Water Conservation Board
Room 718
1313 Sherman Street
Denver, CO 80203
Email: kevin.houck@state.co.us

**B. Grantee:**

Name and Title of Person
Department Name
Address 1
Address 2
Town, State Zip
Email

## **17. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE**

Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Grantee in the performance of its obligations under this Grant shall be the exclusive property of the State. Copies of all such materials and Work Product shall be delivered to the State by Grantee upon completion or termination hereof. The State shall have a non-exclusive license in such Work Product to copy, publish, display, transfer, and prepare derivative works, to the extent that such Work Product is not considered the proprietary and confidential commercial information of Grantee or a Subgrantee working with Grantee. Materials containing proprietary and confidential commercial information shall be marked as such and such information within those materials shall be clearly identified prior to being provided to the State.

## **18. GOVERNMENTAL IMMUNITY**

Notwithstanding any other provision to the contrary, nothing herein shall constitute a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended. Liability for claims for injuries to persons or property arising from the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act and the risk management statutes, CRS §24-30-1501, et seq., as amended.

## **19. STATEWIDE GRANT MANAGEMENT SYSTEM**

If the maximum amount payable to Grantee under this Grant is \$100,000 or greater, either on the Effective Date or at anytime thereafter, this **§19** applies.

Grantee agrees to be governed, and to abide, by the provisions of CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102 concerning the monitoring of vendor performance on state Grants and inclusion of Grant performance information in a statewide Grant management system.

Grantee's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Grant, State law, including CRS §24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Grantee's performance shall be part of the normal Grant administration process and Grantee's performance will be systematically recorded in the statewide Grant Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Grantee's obligations under this Grant shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Grantee's obligations. Such performance information shall be entered into the statewide Grant Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Grant term. Grantee shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Grantee demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel & Administration (Executive Director), upon request by the Colorado Department of Natural Resources, and showing of good cause, may debar Grantee and prohibit Grantee from bidding on future Grants. Grantee may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (CRS §24-105-102(6)), or (b) under CRS §24-105-102(6), exercising the debarment protest and appeal rights provided in CRS §§24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Grantee, by the Executive Director, upon a showing of good cause.

## **20. GENERAL PROVISIONS**

### **A. Assignment, Subcontracts, and Subgrants**

Grantee's rights and obligations hereunder are personal and may not be transferred, assigned or subgranted without the prior, written consent of the State. Any attempt at assignment, transfer, or subgranting without such consent shall be void. All assignments, subgrants, or Subgrantees approved by Grantee or the State are subject to all of the provisions hereof. Grantee shall be solely responsible for all aspects of subcontracting and/or subgranting arrangements and performance.

## **B. Binding Effect**

Except as otherwise provided in §20(A), all provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective heirs, legal representatives, successors, and assigns.

## **C. Captions**

The captions and headings in this Grant are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

## **D. Counterparts**

This Grant may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

## **E. Entire Understanding**

This Grant represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

## **F. Indemnification-General**

To the extent permitted by law, Grantee shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Grantee, or its employees, agents, Subgrantees, or assignees pursuant to the terms of this Grant; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. 2671 et seq., as applicable, as now or hereafter amended.

## **G. Jurisdiction and Venue**

All suits, actions, or proceedings related to this Grant shall be held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

## **H. Modification**

### **i. By the Parties**

Except as specifically provided in this Grant, modifications of this Grant shall not be effective unless agreed to in writing by the Parties in an amendment to this Grant, properly executed and approved in accordance with applicable Colorado State law, State Fiscal Rules, and Office of the State Controller Policies, including, but not limited to, the policy entitled MODIFICATIONS OF CONTRACTS - TOOLS AND FORMS.

### **ii. By Operation of Law**

This Grant is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification automatically shall be incorporated into and be part of this Grant on the effective date of such change, as if fully set forth herein.

## **I. Order of Precedence**

The provisions of this Grant shall govern the relationship of the Parties. In the event of conflicts or inconsistencies between this Grant and its exhibits and attachments including, but not limited to, those provided by Grantee, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

- i.** Colorado Special Provisions,
- ii.** The provisions of the main body of this Grant,
- iii.** Exhibit A, Statement of Work,
- iv.** Exhibit B, Project Budget,
- v.** Exhibit C, Grant Assurances, and
- vi.** Exhibit D, Option Letter.

## **J. Severability**

Provided this Grant can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof.



**K. Survival of Certain Grant Terms**

Notwithstanding anything herein to the contrary, provisions of this Grant requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if Grantee fails to perform or comply as required.

**L. Taxes**

The State is exempt from all federal excise taxes under IRC Chapter 32 (No. 84-730123K) and from all State and local government sales and use taxes under CRS §§39-26-101 and 201 et seq. Such exemptions apply when materials are purchased or services rendered to benefit the State; provided however, that certain political subdivisions (e.g., City of Denver) may require payment of sales or use taxes even though the product or service is provided to the State. Grantee shall be solely liable for paying such taxes as the State is prohibited from paying for or reimbursing Grantee for them.

**M. Third Party Beneficiaries**

Enforcement of this Grant and all rights and obligations hereunder are reserved solely to the Parties, and not to any third party. Any services or benefits which third parties receive as a result of this Grant are incidental to the Grant, and do not create any rights for such third parties.

**N. Waiver**

Waiver of any breach of a term, provision, or requirement of this Grant, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

**O. CORA Disclosure**

To the extent not prohibited by federal law, this Grant and the performance measures and standards under CRS §24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, CRS §24-72-101, et seq.

**THE REST OF THIS PAGE INTENTIONALLY LEFT BLANK**

## **21. COLORADO SPECIAL PROVISIONS**

These Special Provisions apply to all Grants except where noted in italics.

### **A. 1. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).**

This Grant shall not be deemed valid until it has been approved by the Colorado State Controller or designee.

### **B. 2. FUND AVAILABILITY. CRS §24-30-202(5.5).**

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

### **C. 3. GOVERNMENTAL IMMUNITY.**

No term or condition of this Grant shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

### **D. 4. INDEPENDENT CONTRACTOR.**

Grantee shall perform its duties hereunder as an independent contractor and not as an employee. Neither Grantee nor any agent or employee of Grantee shall be deemed to be an agent or employee of the State. Grantee and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Grantee or any of its agents or employees. Unemployment insurance benefits will be available to Grantee and its employees and agents only if such coverage is made available by Grantee or a third party. Grantee shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Grant. Grantee shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. Grantee shall (a) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (b) provide proof thereof when requested by the State, and (c) be solely responsible for its acts and those of its employees and agents.

### **E. 5. COMPLIANCE WITH LAW.**

Grantee shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

### **F. 6. CHOICE OF LAW.**

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this grant. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Grant, to the extent capable of execution.

### **G. 7. BINDING ARBITRATION PROHIBITED.**

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this Grant or incorporated herein by reference shall be null and void.

### **H. 8. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.**

State or other public funds payable under this Grant shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Grantee hereby certifies and warrants that, during the term of this Grant and any extensions, Grantee has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Grantee is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Grant, including, without limitation, immediate termination of this Grant and any remedy consistent with federal copyright laws or applicable licensing restrictions.

**I. 9. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. CRS §§24-18-201 and 24-50-507.**

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Grant. Grantee has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Grantee's services and Grantee shall not employ any person having such known interests.

**J. 10. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.**

*[Not applicable to intergovernmental agreements]* Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

**K. 11. PUBLIC GRANTS FOR SERVICES. CRS §8-17.5-101.**

*[Not applicable to agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental agreements, or information technology services or products and services]* Grantee certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this Grant and will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Grant, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Grantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant or enter into a grant with a Subgrantee that fails to certify to Grantee that the Subgrantee shall not knowingly employ or contract with an illegal alien to perform work under this Grant. Grantee (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Grant is being performed, (b) shall notify the Subgrantee and the granting State agency within three days if Grantee has actual knowledge that a Subgrantee is employing or contracting with an illegal alien for work under this Grant, (c) shall terminate the subgrant if a Subgrantee does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Grantee participates in the State program, Grantee shall deliver to the granting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Grantee has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Grantee fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the granting State agency, institution of higher education or political subdivision may terminate this Grant for breach and, if so terminated, Grantee shall be liable for damages.

**L. 12. PUBLIC GRANTS WITH NATURAL PERSONS. CRS §24-76.5-101.**

Grantee, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she (a) is a citizen or otherwise lawfully present in the United States pursuant to federal law, (b) shall comply with the provisions of CRS §24-76.5-101 et seq., and (c) has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Grant.

SPs Effective 1/1/09

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**THE PARTIES HERETO HAVE EXECUTED THIS GRANT**

**\* Persons signing for Grantee hereby swear and affirm that they are authorized to act on Grantee's behalf and acknowledge that the State is relying on their representations to that effect.**

<p style="text-align: center;"><b>GRANTEE</b>  <b>INSERT-Legal Name of Grantee</b>  By: INSERT-Name of Authorized Individual  Title: INSERT-Official Title of Authorized Individual</p> <hr/> <p style="text-align: center;">*Signature</p> <p>Date: _____</p>	<p style="text-align: center;"><b>STATE OF COLORADO</b>  <b>John W. Hickenlooper, Governor</b>  Department of Natural Resources  Robert W. Randall, Executive Director</p> <p>By: _____  Tom Browning, CWCB Deputy Director</p> <p>Signatory avers to the State Controller or delegate that Grantee has not begun performance or that a Statutory Violation waiver has been requested under Fiscal Rules</p> <p>Date: _____</p>
<p style="text-align: center;">2nd Grantee Signature if Needed  By: INSERT-Name of Authorized Individual  Title: INSERT-Official Title of Authorized Individual</p> <hr/> <p style="text-align: center;">*Signature</p> <p>Date: _____</p>	<p style="text-align: center;"><b>LEGAL REVIEW</b>  Cynthia H. Coffman, Attorney General</p> <p>By: _____  Signature - Assistant Attorney General</p> <p>Date: _____</p>

**ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER**

**CRS §24-30-202 requires the State Controller to approve all State Grants. This Grant is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.**

<p><b>STATE CONTROLLER</b>  <b>Robert Jaros, CPA, MBA, JD</b></p> <p>By: _____</p> <p>Date: _____</p>
---

**EXHIBIT A- STATEMENT OF WORK**

**US DEPARTMENT OF AGRICULTURE NATURAL  
RESOURCES CONSERVATION SERVICE**

**OPERATION AND MAINTENANCE PLAN**

Landowner/Operator:

Job Location \_\_\_\_\_ Sec: \_\_\_\_ T: \_\_\_\_ R:

Prepared By: \_\_\_\_\_ Date:

**OVERVIEW**

**GENERAL RECOMMENDATIONS**

- An effective operation and maintenance program includes:
- Maintain open channel vegetation for flow efficiency, erosion control and wildlife habitat and aesthetics.
- Repair or replace bank protection materials displaced by erosion, animals, vehicles and vandalism.
- Maintain grade control structures necessary for stream bottom and bank stability.
- Periodically remove sediment bars that may damage bank protection, reduce channel capacity, or damage stream channel stability. Sediment removal must consider wetland regulation, fill and removal permit regulation, fish and wildlife habitat needs, and period of the year work can be performed.
- Maintain improvements provided for wildlife habitat, and riparian vegetation.
- Maintain safety measures for protection of people and animals.
- Maintain travel-ways that provide access for operation and maintenance of open channel systems and associated measures.
- Maintain installed fences to control access.
- Repair any vandalism, vehicular or wildlife damage.

**SITE SPECIFIC CONSIDERATIONS.**

## **EXHIBIT A-2 QUALITY ASSURANCE PLAN**

Prior to commencement of work and/or solicitation of bids, Grantee shall submit to CWCB for review by CWCB and NRCS and concurrence a Quality Assurance Plan (QAP), per the attached sample. The QAP shall outline technical and administrative expertise required to ensure the works of improvement are installed in accordance with the plans and specifications, identify individuals with the expertise, describe items to be inspected, list equipment required for inspection, outline the frequency and timing of inspection (continuous or periodic), outline inspection procedures, and record keeping requirements. A copy of the final QAP shall be provided to NRCS prior to commencement of construction.

**XXX Repair Project**

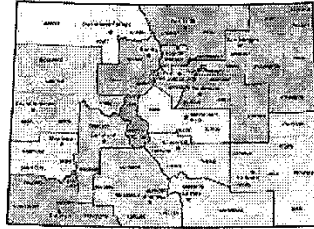
Project Sponsor


Prepared on  
By

---

# QUALITY ASSURANCE PLAN

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 United States  
Department of  
Agriculture  
Natural Resources  
Conservation Service

UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

Denver, Colorado



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## Overview

This quality assurance plan is for an EWP project using the following components (check all that apply and edit as necessary to match project components):

Streambank Shaping (excavation & fill)	Bioengineering
In-Stream Rock Structures	Live Stakes
Toe Rock and/or Rock Riprap	Brush Mattresses
Toe Wood Along Bottom of Bank	Tree Planting
Large Woody Debris Structures	Boulder Clusters
Combination Rock & Wood Structures	Bottomless Culvert
Open Drainage Ditches	Constructed Riffles
Tree Revetments	Water Diversions
Bankfull Bench Construction	Sediment Removal
Stream Crossing	Grade Control Structures

Personnel assigned to the project should have experience observing the installation of the components identified in the above table.

### QA Personnel

**Technical Representative (Tech Rep):** someone with construction experience to assist with construction implementation of the project. This may be a soil conservation technician, soil conservationist, civil engineering technician, district conservationist, or consultant's representative.

**Surveyor:** someone with survey equipment and experience to assist with spot-checking structure grades and elevations; establishing survey control points for use by the contractor; and for completing as-built survey.

**Stream Restoration Specialist (SRS):** a person assigned to the project with specialized skills, training, education, and experience implementing stream restoration projects. Verify CWCB/NRCS partners available for this position at the time of contracting.

**Design Engineer:** the engineer, stream restoration specialist, or other qualified licensed person responsible for designing the project.

### Specific Personnel Recommended for this Project

District Conservationist:	Greg Langer, NRCS
Technical	Greg Langer, NRCS
Construction Inspector:	To be determined.
Design Engineer:	Mark A. Morton, P.E., GMS, Inc., Consulting Engineers

Surveyor:	To be determined.
Utility (Water)	Kevin Walker, Cascade Metropolitan District

**Quality Control (QC)**

The Contractor is responsible for quality control (QC) to build the project according to the construction specifications and drawings. This responsibility is required by the general specifications section. Major QC items include:

1. **Surveys:** The Contractor is responsible for construction stakeout of the work, and meeting grades and elevations required by the drawings.
2. **Utilities:** Verify that the Contractor has located utilities before starting work at the project site. Ask the Contractor, visit the site to see the utility markings, and request utility locate reference number.
3. **Pollution Control:** The Contractor is responsible for preventing pollution of surface and ground water from contamination or from sediment runoff. See specifications for pollution control.
4. **Dewatering:** The Contractor is required to divert or remove water from the work site, or to work in low flow conditions.
5. **Excavations and Embankments:** The Contractor needs to meet the grades and slopes required by the drawings.
6. **Rock and Aggregates:** The rock must come from a CDOT-approved quarry (with a copy of test results or certifications), or from a source approved by the design engineer.
7. **Material Certifications:** The Contractor shall provide documentation which certifies that the materials provided comply with the contract requirements. If specified for this project, material certifications for the following are required (items not required for this project are shown in light gray):
  - (a) Crushed aggregates- test results as required by specifications.
  - (b) Erosion Control Fabric- manufacturer's product data showing compliance with specifications.
  - (c) Geotextile- manufacturer's information showing compliance with specifications.
  - (d) Structure Rock - quality and test results as required by the specifications. (e) Seeding and mulching materials - documentation of seed mix
  - (f) Silt fence or Erosion Control Wattles- manufacturer's product data showing compliance with specifications.
  - (g) Trees & shrubs- invoice showing source and quantity.
  - (h) Erosion Control Wattles- manufacturer's product data showing compliance with specifications.
  - (i) Lumber and timber- manufacturer's certification of grade and species

**Quality Assurance Plan (QAP)**

The Natural Resources Conservation Service (NRCS) Quality Assurance Program will be conducted to assure that the specified contract quality of materials and workmanship is attained. The primary responsibility of the QA personnel is to observe the operations of the Contractor to assure compliance with the construction contract. This includes the physical examination of materials brought on to the site; observation of the placement of materials; observation of the construction techniques; observation of quality control and construction management operations by the Contractor; periodic and continuous observation of construction work. The Quality Assurance Plan may be updated to include changing project conditions and to reflect lessons-learned during construction.

The intensity/frequency of the quality assurance activities is shown in Table 1 - . Conduct periodic quality assurance observations and checks of the Contractor's Quality Control to verify that measurable qualities of the work meet the contract requirements.

The following is a description of the **minimum** quality assurance activities required:

1. The design engineer and technical representative shall attend the **preconstruction meeting** that should be arranged by the landowner to include the contractor. Design engineer will give an overview of the project with the drawings and answer questions related to the design.
2. Spot check **construction staking** and survey control to ensure the work is properly staked before work starts. Assist the Contractor with establishing survey control for each major work item, particularly in the identification of normal flow and bankfull flow elevations.
3. Read the construction specifications, drawings, design report, and the QAP. Review required **submittals** for compliance with the contract requirements. Contact the design engineer if or landowner if there is a problem.
4. Regularly **communicate** with the contractor to stay abreast of work in progress and upcoming work activities, including work requiring quality control tests. Keep the design engineer informed of project status and concerns.
5. Be familiar with sensitive plant and animal species and know how to identify them. Specific concerns for this project are: none.
6. Inspect **equipment and materials** to ensure they are clean and free of any material that could contain or hold seeds. This needs to be done before contractor starts work.
7. Make sure contractor is meeting **pollution control specifications** and only disturbing ground and vegetation as needed for construction.
8. Make sure the contractor has a **spill-response kit** on-site.
9. Take **digital photographs** of work progress to provide a representative photo record of the project. Photo-document key stages of major work items to record images of foundation preparations, installation of buried features, and completed work. Photographs should include date/time stamp. Share photographs with design engineer or SRS.
10. Review/observe **subgrade preparations** for all rock structures to ensure compliance with the drawings and specifications before contractor places the rock structure. Accomplish this in a timely manner to avoid delaying the contractor's work. Visually check the stability of the subgrade and foundation; rock, filter, fill, and/or geotextile.
11. Review/observe proper **placement and use of geotextile and coir fabric materials**. The fabrics must be installed properly to prevent backfill washout under the structures.
12. Verify the **backfill material** for rock structures is an acceptable mix of gravel and cobble per specifications.

### **Preconstruction Meeting**

The Sponsor should work with the landowner, technical representative, inspector, and design engineer to establish a mutually agreeable date and time for meeting. Communications to the contractor should be by the landowner (or sponsor). Someone should be identified to take notes. Include a discussion of the following items in addition to standard pre-construction agenda items.

- (1) Introductions and lines of communications.
- (2) The design engineer will give an overview of the drawings and specifications.
- (3) Point out temporary benchmarks and any layout work accomplished, such as staking for major work items (structures, project start, and end).

- (4) Site conditions, special constraints, and site-specific safety concerns.
- (5) Contractor is responsible for utility locates. Ask the contractor to provide a copy of confirmation for utility locates.
- (6) Remind the contractor to limit disturbance to the site. Discuss **pollution control** requirements to include erosion and sediment control.
- (7) **Permit requirements** and conditions. Other special environmental concerns?
- (8) Equipment cleaning requirements.
- (9) Discuss tree planting, seeding, and live stakes. Live stakes should be installed during dormant season, but that isn't always possible.
- (10) Discuss working from bank or during low flow conditions whenever possible.
- (11) Discuss any time restrictions, such as winter shutdown, high flow months, and avoiding disturbance during spawning seasons.
- (12) Review equipment and material **cleaning requirements**. Importance of preventing spread of invasive species, such as didymo.
- (13) Construction surveying requirements- contractor is responsible for meeting lines, grades, and elevations for structures and bank shaping.
- (14) Discuss **fill material and rock source**- rock must be from a CDOT approved quarry or other source approved by the engineer.
- (15) Identify and discuss access routes and staging areas.
- (16) Discuss harvesting of on-site materials as applicable. Tree removal and use requires pre-approval by landowner.
- (17) Get contractor's estimate of **construction duration**. Some contractors may have a construction schedule they are trying to meet.
- (18) Discuss work sequencing including critical work activities, milestones and project deadlines.
- (19) Discuss disposition and protection of utility systems throughout the project site and identify special construction requirements associated with utilities.

## **Equipment**

The QA personnel should have a minimum of the following equipment available when needed:

1. Survey Equipment
  - a. GPS or total station surveying equipment for setting survey control points, temporary benchmarks, spot-checks, and for as-built survey.
  - b. Survey level
  - c. Hand level for quick elevation checks
  - d. Survey rod, reflector, receiver, etc.
  - e. Measuring tape, 200 foot minimum.
  - f. Weather resistant field books for taking notes and pens or pencils
  - g. Stakes, flags, ribbon, permanent markers, etc.
2. Photographic Equipment

- a. Digital camera with the following minimum features: date/time stamping, video recording, and some zoom capability.

### 3. Special Clothing

- a. Backpack and clothing suitable for working at remote sites with highly variable weather conditions,
- b. Chest waders and personal safety equipment for working in stream, if necessary
- c. Studded wading boots
- d. Other clothing as appropriate to provide the required services

### 4. Other Special Equipment

- a. Mobile telephone
- b. Notebook computer or similar device for making notes while on-site (optional- nice-to-have).

## **Performance Time**

For estimated project duration, see the performance time in the design report. The actual time for construction is subject to many changing variables, with site conditions at the top of the list.

## **Desirable Skills for Technical Representative**

### 1. Skills

- a. Ability to understand the plans and specifications.
- b. Ability to maintain construction records.
- c. Basic photography.
- d. Basic math and reading.
- e. Ability to assist with basic layout, staking, quantity, and "as-built" surveys.
- f. Ability to get to the project site and walk across uneven terrain.
- g. Ability to operate the equipment required to meet the QAP requirements.
- h. Good communications skills to communicate with the Contractor, landowners, and personnel of other federal, state, and local government agencies. Ability to communicate in person, by email, written reports, telephone, fax, and through legible handwritten documentation.

### 2. Training & Experience

- a. On-the Job Training for stream restoration work.
- b. Attend stream restoration related training when it is made available.
- c. Some experience on a stream restoration project site.
- d. Some knowledge or training in geomorphic stream design, such as Rosgen Level I or equivalent.

## **Inspection and Requirements Checklist**

At a minimum, all work shall be periodically observed for compliance with the construction documents. The following are items of work and QA activities for this project. Not Applicable items are shown in light gray.

**Table 1 - Quality Assurance Activities and Frequencies**

A.	Description	Staff	Inspection Frequency
	Field verification of design, setting or checking survey control for structures, and staking out structure locations	SRS and/or Design Engr & Surveyor	Once
	Attend <b>preconstruction meeting</b> - good opportunity for everyone to get familiar with project	Tech Rep and SRS or Design Engr	Once
	Mobilization and coordination with the landowner	Tech Rep	Periodic
	Approve clearing limits; make sure the contractor has coordinated access route with landowner; and make sure contractor doesn't disturb more vegetation than	Tech Rep	Periodic
	Monitoring of materials and equipment being delivered to the project site-random weekly spot checks with documentation in job diary. Frequency will vary depending on Contractor's delivery schedule and level of trust established.	Tech Rep	Weekly
	Pollution control work, including erosion & sediment control measures	Tech Rep	Weekly
	Conformance with grades, structure geometry, & elevations. Make sure contractor is using a level, tape, or other survey equipment. If in doubt, contact Design	Tech Rep	Periodic
	Seeding and mulching of disturbed areas after grading is completed and before work shutdowns (before holidays & weekends)	Tech Rep	Weekly
	Ensure the site is stabilized before predicted rain storms. Banks protected. Wood structures anchored. Equipment and materials out of flow path of rising stream levels.	Tech Rep	Periodic
	Coordination of tree removal with landowner and trees for project use flagged and approved by landowner	Tech Rep	Once
	Rock riprap and rock toe installation-verification of keys, proper geotextile installation, etc.	Tech Rep	Periodic
	Geotextile installation	Tech Rep	Continuous
	Crushed aggregate installation and compaction	Tech Rep	Periodic
	Seeding, mulching, and erosion control fabric	Tech Rep	Periodic
	Periodic site visits and at critical times during construction	Design Engr or SSR	Periodic
	Tree planting and restoration of temporary access roads/staging areas	Tech Rep	Periodic
	Call or email the Design Engr to discuss any work that doesn't seem right or to relay questions from the contractor	Tech Rep	As Needed
	Pre-completion inspection of work while contractor still has equipment and materials on-site	Tech Rep & Design Engr or SRS	Once
	Keep written field notes and take digital photographs of work progress	Tech Rep	Periodic
	Final inspection and certification of work completed	Design Engr or SRS	Once
	Construction status updates to Design Engr or SRS via mail	Tech Rep	Weekly
	Assist with data collection for as-built drawings	Tech Rep & Surveyor	Once
	Submit as-built drawings to NRCS	Design Engr	Once

## EXHIBIT A-3 – STATEMENT OF WORK – ADMINISTRATIVE REQUIREMENTS

- 1.1 Program Overview. This grant will give financial support for a specific project under Emergency Watershed Protection (EWP) Assistance Phase II – 2013, Colorado Flood Recovery Project. Damage was caused by unusually heavy rainfall runoff and subsequent flooding in September, 2013, and resulting in Presidential Disaster Declaration #FEMA-4145-DR. Phase I of the recovery project consisted of installing exigent project measures and was completed in October, 2014. Phase II will consist of completing non-exigent projects. The specific work to be completed is described in **Exhibit A-1**. Those projects support long-term expenditures for approved projects in response to and recovery from the September 2013 floods. Federal funds are made available by the United States Department of Agriculture, Natural Resources Conservation Service, (NRCS) CFDA # 10.923. The State funds are provided from the State Disaster Emergency Fund.
- 1.2 Subaward Information. Funds for this subrecipient grant agreement are made available by the U.S. Department Of Agriculture, Natural Resources Conservation Service, Federal Award Identification Number (FAIN) #68-8B0516-**TBD** Federal Award Project Description: \_\_\_\_\_ . This award is not for R&D. The indirect cost rate for the grantee is 0.
- 1.3 Project Expenses. All eligible expenses are listed in the budget table in **Exhibit B**. Expenses incurred by Grantee after the Effective Date are eligible for reimbursement under this Grant agreement.
- 1.4 Non-Federal Match: This Grant requires a non-federal Local Matching Funds of 12.5% of the total Grant budget. Documentation of expenditures for the non-federal Local Matching Funds is required with each drawdown request. The match  may or may not  include in-kind match.
- 1.5 Grantee accepts all financial and other responsibility for excess costs resulting from its failure to obtain, or its delay in obtaining, adequate land and water rights, permits, and licenses needed for the emergency watershed protection measures described in **Exhibit A-1**.
- 1.16 This agreement may become null and void 120 calendar days after the date CWCB has signed and executed this agreement if a solicitation for bids has not been publicly advertised or a contract has not been awarded.
- 1.17 The furnishing of financial, administrative and/or technical assistance above the original funding amount by NRCS is contingent on there being sufficient unobligated and/or uncommitted funding in the EWP Program that is available for obligation in the year in which the assistance will be provided. NRCS cannot make commitments in excess of funds authorized by law or made administratively available. Congress may impose obligational limits on program funding that constrains NRCS' ability to provide such assistance.
- 1.18 The furnishing of the administrative and technical services by CWCB and NRCS is contingent upon the continuing availability of appropriations by the Congress from which payment may be made and shall not obligate NRCS if the Congress fails to so appropriate.
- 1.19 In the event of default of a construction contract awarded pursuant to this Agreement, any additional funds properly allocable as construction costs required to ensure completion of the job are to be provided in the same ratio as construction funds are contributed by the parties under the terms of this Agreement. Any excess costs including interest resulting from a judgment collected from the defaulting contractor, or his or her surety, will be prorated between the Sponsor and NRCS in the same ratio as construction funds are contributed under the terms of the Agreement.
- 1.20 Additional funds, including interest properly allocable as construction costs as determined by NRCS, required as a result of decision of the CO or a court judgment in favor of a claimant will be provided in the same ratio as construction funds are contributed under the terms of this Agreement. CWCB and NRCS will not be obligated to contribute funds under any Agreement or commitment made by the Sponsor without prior concurrence of NRCS.
- 1.21 The State Conservationist may make adjustments in the estimated cost to CWCB and NRCS for constructing the EWP project measures. Such adjustments may increase or decrease the amount of estimated funds that are related to differences between such estimated cost and the amount of the awarded contract or to changes, differing site conditions, quantity variations, or other actions taken

under the provisions of the contract. No adjustment will be made to change the cost sharing assistance provided by CWCB and NRCS nor reduce funds below the amount required to carry out NRCS' share of the contract.

1.22 NRCS, at its sole discretion, may refuse to cost share should the Sponsor, in administering the contract, elect to proceed without complying with their responsibilities as set out in this agreement.

**2. DELIVERABLES:**

- 2.1 Grantee shall submit narrative and financial reports describing project progress and accomplishments, any delays in meeting the objectives and expenditures to date as described in §3 of this **Exhibit A-3**. Progress reports could include the number of planning efforts initiated, the number of planning efforts in progress, the number of planning efforts completed, and key issues and milestones reached during the quarter.
- 2.2 The following accomplishments and deliverables will be provided to the State and the NRCS:
  - 2.2.1 Completion of the technical requirements for \_\_\_\_\_ (Project Name) as described in **Exhibit A-1**.
  - 2.2.2 One copy of the final engineering plans, specifications signed and sealed by a licensed professional engineer for the project per **Exhibit C-3 §1**,
  - 2.2.3 Signed NRCS-ADS-78 supported by an attorney’s opinion (See **Exhibit C-3 §4** and **Exhibit C-6**),
  - 2.2.4 One copy of the construction bid package with engineer’s cost estimate,
  - 2.2.5 One copy of the quality assurance plan per **Exhibit A-4**,
  - 2.2.6 One copy of the operation and maintenance plan per **Exhibit A-3** and **Exhibit C-3, §3**,
  - 2.2.7 Certification that the project was installed in accordance with the plans and specifications,
  - 2.2.8 As-built drawings of final construction sign by a licensed professional engineer within 30 days of completion of construction,
  - 2.2.9 Quantities of the units of work applied for each site within 30 days of completion of Construction, and
  - 2.2.10 Adhere to all work scope requirements outlined in **Exhibit A** and assurances outlined in **Exhibit C**.

**3. REPORTING REQUIREMENTS:**

**3.1 Quarterly Financial Status and Progress Reports.** The project(s) approved in this Grant are to be completed on or before the termination date stated in §5 of the Grant Agreement. Grantee may be required to submit quarterly financial status and programmatic progress reports for each project identified in this agreement using the forms provided by and/or in the manner requested by the Colorado Water Conservation Board throughout the life of the grant. One copy of each required report with original or electronic signatures shall be submitted in accordance with the schedule set by the project manager so that the State’s reporting requirements (below) can be met. (The order of the reporting period quarters below are irrelevant to the grant. If the grant is open during the “report period” reports for that period are due on the dates listed. If the grant is for more than one year, reports are due for every quarter that the grant remains open.)

<b>Report Period</b>	<b>Report Due Date to CWCB</b>
October – December	January 15
January –March	April 15
April – June	July 15
July – September	October 15

**3.2 Final Reports:** Grantee shall aid the State as necessary in the submission of final financial status and progress reports that provide final financial reconciliation and final cumulative grant/project accomplishments within 45 days of the end of the project/grant period. The final report may not include unliquidated obligations and must indicate the exact balance of unobligated funds. The final



reports may substitute for the quarterly reports for the final quarter of the grant period. If all projects are completed before the end of the grant period, the final report may be submitted at any time before its final due date.

**4. TESTING AND ACCEPTANCE CRITERIA:**

The CWCB shall evaluate this Project(s) through the review of Grantee submitted financial and progress reports. The CWCB and NRCS may also conduct on-site monitoring to determine whether the Grantee is meeting/has met the performance goals, administrative standards, financial management and other requirements of this grant. The CWCB will notify Grantee in advance of such on-site monitoring.

**5. PAYMENT:**

**5.1 Payment Schedule:** The CWCB will approve reimbursements as invoices and backup documentation is submitted by the Grantee. Invoices shall not be submitted more often than monthly.

**5.2 Payment Amount:** Local Matching Funds shall be documented with every payment request. Excess Local Matching Funds documented and submitted with one reimbursement request shall be applied to subsequent requests as necessary to maximize the allowable reimbursement.

**5.3 Adjustments:** If agreed to by the CWCB and NRCS, adjustments may be made to and between individual DSR costs without amending this agreement as long as the total estimated eligible construction costs described in Exhibit B is not exceeded.

**6. ADMINISTRATIVE REQUIREMENTS:**

**Required Documentation:** Grantees shall retain all procurement and payment documentation on site for inspection. This shall include, but not be limited to, purchase orders, receiving documents, invoices, vouchers, equipment/services identification, and time and effort reports.

**6.1** Sufficient detail shall be provided with reimbursement requests to demonstrate that expenses are allowable and appropriate as detailed below:

**6.1.1 Equipment or tangible goods.** When requesting reimbursement for equipment items with a purchase price of or exceeding \$5,000, and a useful life of more than one year, the Grantee shall provide a unique identifying number for the equipment, with a copy of the Grantee's invoice and proof of payment. The unique identifying number can be the manufacturer's serial number or, if the Grantee has its own existing inventory numbering system, that number may be used. The location of the equipment shall also be provided. In addition to ongoing tracking requirements, Grantee shall ensure that equipment items with per unit cost of \$5,000 or more are prominently marked in a manner similar to the following: Purchased with funds provided by the USDA, NRCS.

**6.1.2 Services.** Grantees shall include contract/purchase order number(s) or employee names, the date(s) the services were provided and the nature of the services.

**6.2 Procurement:** A Grantee shall ensure its procurement policies meet or exceed local, state, and federal requirements. Grantees should refer to local, state, and federal guidance prior to making decisions regarding competitive bids, sole source or other procurement issues. In addition:

**6.2.1** Any sole source transaction in excess of \$100,000 shall be approved by CWCB Procurement. Written documentation of purchases will be made available for review by CWCB staff upon request.

**6.2.2** Grantees shall ensure that: (a) All procurement transactions, whether negotiated or competitively bid, and without regard to dollar value, are conducted in a manner that provides maximum open and free competition; (b) Grantee shall be alert to organizational conflicts of interest and/or non-competitive practices among contractors that may restrict or eliminate competition or otherwise restrain trade; (c) Contractors who develop or draft specifications, requirements, statements of work, and/or Requests for Proposals (RFPs) for a proposed procurement shall be excluded from bidding or submitting a proposal to compete for the award of such procurement; and (d) Any request for exemption of item a-c within this subsection shall be submitted in writing to, and be approved by the authorized Grantee official.

- 6.2.3 Grantee shall verify that the Contractor is not debarred from participation in state and federal programs. Subgrantees should review contractor debarment information on <http://www.epls.gov>.
- 6.2.4 When issuing requests for proposals, bid solicitations, and other published documents describing projects or programs funded in whole or in part with these grant funds, Grantee and Subgrantees shall use the phrase -“This project is supported by grants from the by the United States Department of Agriculture, Natural Resources Conservation Service, CFDA # 10.923 and State of Colorado funds are provided from the State Disaster Emergency Fund.”
- 6.2.5 Grantee shall ensure that no rights or duties exercised under this Grant, or equipment purchased with Grant Funds having a purchase value of \$5,000 or more, are assigned without the prior written consent of the USDA, Natural Resources Conservation Service.
- 6.2.6 Grantee shall ensure that all funds are needed to supplement and not to supplant the Grantee’s own funds.

**6.3 Additional Administrative Requirements:**

The Grantee must request approval in advance for any change to this Grant Agreement, using the forms and procedures established by the CWCB.

**EXHIBIT B – PROJECT BUDGET**

BUDGET:

Project/Activity Line	NRCS Funds (75%)	State Matching Funds (12.5%)	Local Matching Funds (12.5%)	Total
	\$	\$	\$	\$
	\$	\$	\$	\$
	\$	\$	\$	\$
	\$	\$	\$	\$
Total Budget	\$	\$	\$	\$

## **EXHIBIT C – GRANT ASSURANCES**

### **ASSURANCES CONSTRUCTION PROGRAMS**

By accepting this grant, the grantee certifies that it:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
5. Will ensure the design engineer will provide on-site supervision at the construction site to ensure that the complete work conforms to the approved design plans and specifications throughout the project and will furnish progress reports and such other information as may be required by CWCB. The grantee must request written approval of the design engineer replacement from the CWCB administrative contact and must include the qualifications and the signature of the replacement signifying his or her willingness to serve on the project.
6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
9. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol

and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

10. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
11. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
12. Reserved.
13. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
14. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
15. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
16. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
17. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
18. Pay the contractor(s) as provided in the contract(s).
19. For in-kind construction services (materials, labor, and/or equipment supplied by the Sponsor), develop a Plan of Operations describing the construction services to be performed including estimated quantities and values. The Plan of Operations shall be concurred in by CWCB at the pre-design conference. Construction services for equipment shall not exceed published FEMA equipment rates unless otherwise documented and concurred in advance by CWCB rates considered fair and reasonable by the CWCB Technical and/or Administrative Contact.

The following documentation is required to support the Grantee's request for reimbursement of in-kind construction services:

- a. Invoices covering actual costs of materials used in constructing the eligible EWP project measures.
  - b. Records documenting the type, quality, and quantities of materials actually used in constructing the eligible EWP project measures.
  - c. Daily time records for each employee showing name, classification, wage rate, hours, and dates actually employed for constructing the eligible EWP project measures.
  - d. Equipment operating records showing the type and size of equipment, hourly rate, actual hours of operation and dates used to install the eligible EWP project measures. Equipment idle time is not eligible in-kind construction services, even if on the job site, and should not be included in the equipment operating records.
20. Submit billings for reimbursement to the CWCB on a monthly basis. Final payment request shall be submitted within thirty (30) calendar days of completion of the works of improvement. All requests for reimbursement shall include all appropriate and complete documentation to support the reimbursement request. The required supporting documentation for reimbursement of construction costs include invoices and proof of payment to the contractor showing the items and quantities installed and certified by the engineer of record along with any supporting documentation such as quantity calculations, rock weight tickets, etc.
- The required supporting documentation for reimbursement of in-kind construction expenses will include employee time sheets, employee hourly rate, equipment operating logs, equipment hourly rate, and material quantities and invoices.
21. Take reasonable and necessary actions to dispose of all contractual and administrative issues arising out of the contract(s) awarded under this agreement. This includes, but is not limited to, disputes, claims, protests of award, source evaluation, and litigation that may result from the project. Such actions will be at the expense of the sponsor including legal expenses.
22. Ensure that any special requirements for compliance with environmental and/or cultural resource laws are incorporated into the project.
23. Will arrange and pay for any necessary location, removal, or relocation of utilities. EWP program regulations prohibit NRCS from reimbursing the Sponsor or otherwise paying for any such costs; nor do the costs qualify as a Sponsor cost-share contribution.
24. Ensure that technical and engineering standards and specifications of NRCS are adhered to during construction of the Project, as interpreted by CWCB Technical Contact. Provide CWCB Technical Contact progress reports as necessary and agreed to. Progress reports should include technical on-site inspections of work accomplished for the period, work planned, results of material tests, deficient work products and/or tests with corrective actions taken, modifications anticipated, technical problems encountered, contractual issues and other relevant information.
25. Ensure that all contractors on NRCS assisted projects are performing their work in accordance with OSHA regulations, NRCS Supplement to OSHA Parts 1910 and 1926, and the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5) (see Attachment). The Sponsor is responsible for periodically checking the contractor's compliance with safety requirements.
26. Arrange for and conduct a final inspection with the CWCB and NRCS representative of completed emergency watershed protection measures, and certify that the project was installed in accordance with contractual requirements.

27. Be responsible for ensuring their System for Award Management (SAM) registration is active throughout the life of the agreement so that reimbursements are not delayed.
28. That once the project is completed and all requests for reimbursement submitted, any excess funding remaining in the agreement (over and above the NRCS commitment of up to 75 percent of actual construction costs and within the not-to-exceed amount) will be de-obligated from the agreement.

## EXHIBIT C-1 – APPLICABLE FEDERAL LAWS AND STATE GRANT GUIDANCE

The following are incorporated into this contract without limitation:

1. Age Discrimination Act of 1975, 42 U.S.C. Sections 6101, et seq.
2. Age Discrimination in Employment Act of 1967, 29 U.S.C. 621-634
3. Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. 12101, et seq.
4. Equal Pay Act of 1963, 29 U.S.C. 206(d)
5. Immigration Reform and Control Act of 1986, 8 U.S.C. 1324b
6. Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. 794
7. Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d
8. Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e
9. Title IX of the Education Amendment of 1972, 20 U.S.C. 1681, et seq.
10. Section 24-34-301, et seq., Colorado Revised Statutes 1997, as amended
11. The applicable of the following:
  - 11.1. Cost Principals for State, Local and Indian Tribal Governments, 2 C.F.R. 225, (OMB Circular A-87);
  - 11.2. Cost Principals for Education Institutions, 2 C.F.R. 220, (OMB Circular A-21);
  - 11.3. Cost Principals for Non-Profit Organizations, 2 C.F.R. 230, (OMB Circular A-122), and
  - 11.4. Audits of States, Local Governments, and Non-Profit Organizations (OMB Circular A-133); and/or the Colorado Local Government Audit Law, 29-1-601, et seq, C.R.S., and State implementing rules and regulations.
  - 11.5. Immigration Status -Cooperation with Federal Officials, CRS 29-29-101, et seq.
  - 11.6. Copeland Act, 40 U.S.C. S 276c and 18 U.S.C. SS 874.
  - 11.7. Contract Work Hours and Safety Standards Act, 40 U.S.C. SS 327-333, regarding labor standards for federally assisted construction subawards.
  - 11.8. Wild and Scenic Rivers Act of 1968, 16 U.S.C. SS 1271 et. seq., related to protecting components or potential components of the national wild and scenic rivers system.
  - 11.9. National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470, Executive Order No. 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974, 16 U.S.C. 469a-1 et. seq.
  - 11.10. Robert T. Stafford Disaster Assistance and Emergency Relief Act (Stafford Act), 42 U.S.C. 5121 et seq., as amended.
  - 11.11. National Flood Insurance Act of 1968, 42 U.S.C. 4001 et. seq.
  - 11.12. Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 104.
  - 11.13. Department of Defense Authorization Act of 1986, Title 14, Part B, Section 1412, Public Law 99-145, 50 U.S.C. 1521.
  - 11.14. USA PATRIOT Act of 2001, (Pub. L. 107-56).
  - 11.15. Digital Television Transition and Public Safety Act of 2005, (Pub L. 109-171)
12. Reserved
13. Privacy Reserved
14. Prohibition against use of Federal Funds for Lobbying, 31 U.S.C. 1352
15. None of the funds made available through this agreement shall be used in contravention of the Federal buildings performance and reporting requirements of Executive Order No. 13123, part 3 of title V of the National Energy Conservation Policy Act, 42 U.S.C. 8251 et. Seq., or subtitle A of title I of the Energy Policy Act of 2005 (including the amendments made thereby).
16. None of the funds made available shall be used in contravention of section 303 of the Energy Policy Act of 1992, 42 U.S.C. 13212.
17. Buy American Act, 41 U.S.C. 10a et seq.
18. Relevant Federal and State Grant Program Guidance including all OMB guidance related to Federal Awards is in Title 2 of the CFR, subtitle A, Chapter II, Part 200, and 7 C.F.R. part 624 – Emergency Watershed Protection.



## EXHIBIT C-2 – EMERGENCY WATERSHED PROTECTION TECHNICAL ASSURANCES

By accepting this grant, the grantee certifies that it:

1. Shall ensure that engineering services required to plan or implement the Scope of Work, **Exhibit A** are performed as follows:
  - a. Individuals and/or organizations providing engineering services shall employ a professional engineer licensed in Colorado who directly supervises the staff performing the services or who serves as a Principal.
  - b. Project designs, drawings and specifications must meet NRCS standards and technical criteria, and shall be timely forwarded to the CWCB for submittal to the NRCS State Conservation Engineer for functional review and concurrence. Prior to contracting for construction, submit project documents to the CWCB representative in **§16** of this agreement.
  - c. A Professional Engineer will seal engineering documents and the following statement shall appear with the engineer's signature on the cover sheet of construction drawings and within all reports:

*“I certify to the best of my professional knowledge, judgment and belief, these plans (or this report, etc.) meets applicable NRCS standards.”*

2. Working through the CWCB representative in **§16** of this agreement, obtain NRCS concurrence if the Grantee desires to increase the level of protection over and above that described in the NRCS Damage Survey Report (DSR) or authorized by EWP Program rules. The Grantee or another entity will be responsible for paying 100 percent of the costs attributable to upgrades or additional work.
3. Develop O&M (Operation and Maintenance) Plans for projects that have structural elements, working through the to the CWCB representative in **§16** of this agreement, submit O&M plans to CWCB for CWCB and NRCS review, and ensure O&M tasks are carried out in accordance with the plan. In accordance with EWP program regulations, grant funds cannot pay for performance of O&M tasks, nor can they be counted as an in-kind contribution by the CWCB or the Grantee. Upon completion of the project, assume responsibility for operation and maintenance as outlined in **Exhibit A-3**.
4. Secure property rights and submit an ADS-78 form(s), *Assurances Relating to Real Property Acquisition*, to the CWCB for submittal to the NRCS Program Manager, see **Exhibit C-6**. This includes any rights associated with required environmental mitigation. An attorney's opinion must be attached to the form certifying an examination of the real property instruments and files was made and found to provide adequate land title, rights, permission and authority for the purpose(s) of the project. All costs relative to obtaining property rights will be borne by the Grantee. In accordance with EWP program regulations, grant funds cannot reimburse these costs nor can they be counted as an in-kind contribution by the WCB or Grantee.
5. 6. Accept all financial and other responsibility for excess costs resulting from their failure to obtain, or their delay in obtaining, adequate land and water rights, permits and licenses needed for the Project
6. Ensure all applicable Federal, State, and local permits are obtained and work is performed in accordance with permit requirements. All costs relative to obtaining required permits will be borne by the Grantee or subrecipients. In accordance with EWP program regulations, NRCS cannot reimburse these costs nor can they be counted as an in-kind contribution by the CWCB or the Grantee.
7. Comply with all NEPA requirements, and Grantee must review the NRCS DSR prior to developing construction plans and starting construction and comply with NEPA restrictions identified in the DSR. NRCS may perform tasks associated with NEPA requirements, with CWCB support as needed.

8. Comply with all cultural resource requirements as determined by NRCS and CWCB in accordance with the National Historic Preservation Act.
9. Comply with Endangered Species Act requirements including implementation of U.S. Fish and Wildlife avoidance and minimization measures, and conservation measures identified for threatened and endangered species.
10. Procure and manage contracts for equipment or services in accordance with established Sponsor procurement policy and 2 CFR 200.317 through 200.326, "Procurement". The sponsor will ensure all applicable requirements of this agreement are included in agreements with subrecipients.
11. Create and manage implementation agreements with local entities to construct Phase II recovery projects in accordance with established Sponsor procurement policy and 2 CFR 200.317 through 200.326, "Procurement". The Grantee will ensure all applicable requirements of this agreement are included in any agreements with subrecipients.
12. Conduct all procurement activities in a manner that provides, to the maximum extent possible, free and open competition.
13. Submit monthly progress reports throughout the duration of this agreement to the CWCB representative in **§16** of this agreement.
14. Submit a request for reimbursement of costs incurred under this agreement to CWCB. Reimbursement requests shall be submitted on a monthly basis to the the CWCB representative in **§16** of this agreement, beginning at the end of the first full month after the agreement is signed. Final payment request shall be submitted within 30 calendar days after completion or expiration of this agreement.
15. All requests for reimbursement shall include all appropriate and complete documentation to support the reimbursement request such as: invoices; proof of payment to consultants; or employee time sheets along with the employee's hourly rate, hours worked, and date work was performed. Use the Federal Travel Regulations as a guideline for requesting reimbursement of any travel costs incurred in completing tasks authorized under this agreement.
16. Receive payment under this Agreement using electronic funds transfer (EFT) procedures in accordance with 31 C.F.R. § 208.
17. Be responsible, without recourse to the State of Colorado, NRCS or USDA, for the settlement and satisfaction of all contractual and legal issues arising out of arrangements entered into between the Sponsor and others to carry out approved project activities. Matters concerning violation of law should be referred to the federal, state, or local authority having proper jurisdiction.
18. To the extent allowed by law, hold and save NRCS free from any and all claims or causes of action whatsoever resulting from the obligations undertaken by the Sponsor under this agreement or resulting from the work provided for in this agreement
19. Be responsible for all administrative expenses (including but shall not be limited to facilities, clerical expenses), and legal counsel necessary including the fees of such attorney or attorneys deemed necessary by NRCS to resolve any legal matters.
20. Be responsible for 100 percent of all ineligible construction costs, and 100 percent of any unapproved upgrade to increase the level of protection over and above that described in the DSR.
21. For contracts, provide CWCB a copy of solicitation notice, bid abstract, and notice of contract award, or other basis of cost and accomplishment
22. Take reasonable and necessary actions, including legal action, if required, to dispose of any and all contractual and administrative issues arising out of the contract(s) awarded under this agreement to include but not be limited to, disputes, claims, protests of award, source evaluation, and litigation that may result from the project, and bringing suit to collect from the contractor any moneys due in

connection with the contract. Any monies collected will be distributed to the parties in the same ratio as contributions are made.

23. Retain all records dealing with the award and administration of contract(s) for three (3) years from the date of the sponsor's submission of the final Request for Reimbursement or until final audit findings have been resolved, whichever is longer. If any litigation is started before the expiration of the three (3) year period, the records are to be retained until the litigation is resolved or the end of the three (3) year period, whichever is longer. Make such records available to the Comptroller General of the United States or his or her duly authorized representative and accredited representatives of the U.S. Department of Agriculture or cognizant audit agency for the purpose of making audit, examination, excerpts, and transcripts.
  - a. Submit requests for a time extension to this agreement, (if necessary), in writing to the CWCB representative in **§16** of this agreement no less than thirty-five (35) days prior to the expiration date of the agreement. Submit the written, signed request to the CWCB Technical Contact in addition to the Administrative Contact.
21. This agreement shall be effective upon signature by the Colorado State Controller. All work required under this agreement shall be completed in accordance with this agreement. Any work performed prior to receiving a fully executed agreement is not eligible for reimbursement. Any change in the effective dates of this agreement must be by written amendment and signed by the grantee, the State and the Colorado State Controller prior to the expiration date.
22. The furnishing of financial and other assistance under this subrecipient agreement is contingent on the availability of funds appropriated by Congress from which payment may be made and shall not obligate the United States Department of Agriculture, NRCS or the State upon failure of the Congress to appropriate funds.
23. This agreement may be executed in any number of counterparts and all of said counterparts taken together shall be deemed to constitute one and the same instrument. By signing this agreement the Grantee assures the CWCB that the program or activities provided for under this agreement will be conducted in compliance with all applicable Federal civil rights laws, rules, regulations, and policies.
24. Employees of NRCS shall participate in efforts under this agreement solely as representatives of the NRCS. To this end, they shall not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of the Sponsor or any member of the Sponsor. They also shall not assist the Grantee or any member the Grantee with efforts to lobby Congress, or to raise money through fundraising efforts. Further, NRCS employees shall report to their immediate supervisor any negotiations with the Grantee, or any member of the Grantee, concerning future employment and shall refrain from participation in efforts regarding such party until approved by the NRCS.
25. Employees of the State or Grantee shall remain its employees while carrying out their duties under this agreement and shall not be considered as Federal employees or agents of the United States for any purpose under this agreement.

## EXHIBIT C-3

# NATURAL RESOURCES CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE

## GENERAL TERMS AND CONDITIONS GRANTS AND COOPERATIVE AGREEMENTS

### I. APPLICABLE REGULATIONS

- a. The recipient, and recipients of any subawards under this award, agree to comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>.
- (1) 2 CFR Part 25, "Universal Identifier and System of Award Management"
  - (2) 2 CFR Part 170, "Reporting Subaward and Executive Compensation Information"
  - (3) 2 CFR Part 180, "OMB Guidelines To Agencies On Governmentwide Debarment And Suspension (Nonprocurement)"
  - (4) 2 CFR Part 182, "Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)"
  - (5) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles, And Audit Requirements for Federal Awards"
- b. The recipient, and recipients of any subawards under this award, assure and certify that they have and/or will comply with the following regulations, as applicable. The full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>.
- (1) 2 CFR Part 175, "Award Term for Trafficking in Persons"
  - (2) 2 CFR Part 417, "Nonprocurement Debarment and Suspension"
  - (3) 2 CFR Part 418, "New Restrictions on Lobbying"
  - (4) 2 CFR Part 421, "Requirements for Drug-Free Workplace (Financial Assistance)"
- c. Allowable project costs will be determined in accordance with the authorizing statute, the purpose of the award, and to the extent applicable to the type of organizations receiving the award, regardless of tier. The following portions of the Code of Federal Regulations are hereby incorporated by reference (the full text of Code of Federal Regulations references may be found at <http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1> and <http://www.ecfr.gov/>).
- (1) 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles And Audit Requirements For Federal Awards"
  - (2) 48 CFR Part 31, "Contract Cost Principles and Procedures"

### II. UNALLOWABLE COSTS

The following costs are not allowed:

- a. Costs above the amount authorized for the project
- b. Costs incurred after the expiration of the award including any no-cost extensions of time
- c. Costs that lie outside the scope of the approved project and any amendments thereto
- d. Compensation for injuries to persons or damage to property arising from project activities

This list is not exhaustive. For general information about the allow ability of particular items of costs, please see 2 CFR Part 200, "Subpart E - Cost Principles", or direct specific inquiries to the NRCS administrative contact identified in the award.

### III. CONFIDENTIALITY

- a. Activities performed under this award may involve access to confidential and potentially sensitive information about governmental and landowner issues. The term “confidential information” means proprietary information or data of a personal nature about an individual, or information or data submitted by or pertaining to an organization. This information must not be disclosed without the prior written consent of NRCS.
- b. The recipient’s personnel will follow the rules and procedures of disclosure set forth in the Privacy Act of 1974, 5 U.S.C. Section 552a, and implementing regulations and policies with respect to systems of records determined to be subject to the Privacy Act. The recipient’s personnel must also comply with privacy of personal information relating to natural resources conservation programs in accordance with section 1244 of Title II of the Farm Security and Rural Investment Act of 2002 (Public Law 107-171).
- c. The recipient agrees to comply with NRCS guidelines and requirements regarding the disclosure of information protected under Section 1619 of the Food, Conservation, and Energy Act of 2008 (PL 110-246), 7 U.S.C. 8791.

#### **IV. PRIOR APPROVAL REQUIREMENTS**

The following are the most common situations requiring prior approval. However, the recipient is also bound by any other prior approval requirements of the applicable administrative provisions and Federal cost principles.

- a. Purpose or Deliverables.—When it is necessary for the recipient to modify the purpose or deliverables, the recipient must submit a written request and justification for the change along with the revised purpose or deliverables of the award to the NRCS administrative contact. The request should contain the following:
  - 1. Grant or agreement number
  - 2. Narrative explaining the requested modification to the project purpose or deliverables
  - 3. A description of the revised purpose or deliverables
  - 4. Signatures of the authorized representative, project director, or both
- b. Subcontractual Arrangement. — The recipient must submit a justification for the proposed subcontractual arrangements, a statement of work to be performed, and a detailed budget for the subcontract to the NRCS administrative contact. Subcontractual arrangements disclosed in the application do not require additional postaward approval.
- c. Absence or Change in Project Leadership.—When a project director or the person responsible for the direction or management of the project—
  - 1. Relinquishes active direction of the project for more than 3 consecutive months or has a 25 percent or more reduction in time devoted to the project, the grantee must notify the NRCS administrative contact in writing, identifying who will be in charge during the project director’s absence. The notification must include the qualifications and the signature of the replacement, signifying his or her willingness to serve on the project.
  - 2. Severs his or her affiliation with the grantee, the grantee’s options include—
    - i. Replacing the project director. The grantee must request written approval of the replacement from the NRCS administrative contact and must include the qualifications and the signature of the replacement signifying his or her willingness to serve on the project.
    - ii. Subcontracting to the former project director’s new organization. The grantee must request approval from the administrative contact to replace the project manager and retain the award, and to subcontract to the former project director’s new organization certain portions of the project to be completed by the former project director.
    - iii. Relinquishing the award. The grantee must submit to the NRCS administrative contact a signed letter by the grantee and the project director that indicates that the grantee is relinquishing the award. The letter must include the date the project director is leaving and a summary of progress to date. A final Standard Form (SF) 425 reflecting the total amount of funds spent by the recipient must be attached to the letter.

3. Transfers the award to his or her new organization, the authorized organization's representative at the new organization must submit the following to the NRCS administrative contact as soon as the transfer date is firm and the amount of funds to be transferred is known:
  - i. The forms and certifications included in the application package
  - ii. A project summary and work statement covering the work to be completed under the project (deliverables and objectives must be the same as those outlined in the approved proposal)
  - iii. An updated qualifications statement for the project director showing his or her new organizational affiliation
  - iv. Any cost-sharing requirements under the original award transfer to the new institution; therefore, cost-sharing information must be included in the proposal from the new organization

**Note:** The transfer of an award from one organization to another can take up to 90 days to accomplish, which may result in a delay in the project director resuming the project at the new organization.

- d. Budget Revisions.—Budget revisions will be in accordance with 2 CFR Part 200.308.
- e. No-Cost Extensions of Time. —When a no-cost extension of time is required, the recipient must submit a written request to the NRCS administrative contact no later than 35 days before the expiration date of the award. The request must contain the following:
  - The length of additional time required to complete the project and a justification for the extension
  - A summary of progress to date
  - An estimate of funds expected to remain unobligated on the scheduled expiration date
  - A projected timetable to complete the portions of the project for which the extension is being requested
  - Signature of the grantee and the project director
  - A status of cost sharing to date (if applicable)

**Note:** An extension will not exceed 12 months. Only in exceptional cases will more than one extension be granted. Requests for no-cost extensions received after the expiration of the award will not be granted.

## V. PAYMENTS

- a. Payment by NRCS to the entity will be made monthly or quarterly (whichever is mutually agreed upon by both parties) on a reimbursable or advanced basis upon completion of work outlined herein. Payment will be executed upon the submission of a properly executed form SF-270. The SF-270 must cite the agreement number, remittance address, and billing period. The SF-270 must be sent to the NRCS administrative contact at the address identified in block 8 of the Notice of Grant/Agreement Award.
- b. Unless otherwise specified in the award, the recipient must receive payments through electronic funds transfers.
- c. Recipients requesting advances should request payments in amounts necessary to meet their current needs pursuant to procedures contained in the Federal administrative provisions and **31 CFR Part 205**.
- d. The method of payment between the recipient and its contractors will be in accordance with the policies and procedures established by the recipient except that the contractors may not use the USDA Office of Financial Management/National Finance Center method to request payments. If the grantee makes advance payments to contractors, the grantee must ensure that the timing of such payments is designed to minimize elapsed time between the advance payment and the disbursement of funds. Payment requests from the grantee's contractors will not be sent to NRCS for review or approval.
- e. Accounting records for all costs incurred under this award must be supported by source documentation. Such documentation includes, but is not limited to, canceled checks, paid bills, payroll records, and subcontract award documents. Labor cost charges to this award must be based upon salaries actually earned and the time actually worked on this award. All project costs must be incurred within the approved project period of this

award, including any approved no-cost extension of time. Costs that cannot be supported by source documentation or that are incurred outside of the approved project period and budget may be disallowed and may result in award funds being returned to the Federal Government by the recipient.

## **VI. FINANCIAL REPORTING**

- a. Recipients must submit a Federal Financial Report (FFR), SF 425 and 425A, in accordance with the following schedule (recipients may download the applicable form at <http://www.forms.gov>):

<u>Quarterly Schedule</u>	<u>Report Due Date</u>
October 1 to December 31	January 31
January 1 to March 31	April 30
April 1 to June 30	July 30
July 1 to September 30	October 30

Reports must be submitted on an accrual accounting basis. Failure to submit reports in accordance with the above schedule may result in suspension or termination of award.

- b. A final Report must be submitted no later than 90 days after the completion of the award. For final FFRs, reporting end date must be the end date of the project or agreement period. The reports should be submitted to the NRCS administrative contact identified in award notifications.

## **VII. PERFORMANCE MONITORING AND REPORTING**

- a. The recipient is responsible for monitoring day-to-day performance and for reporting to NRCS. If the project involves subcontractual arrangements, the recipient is also responsible for monitoring the performance of project activities under those arrangements to ensure that approved goals and schedules are met.
- b. Every 6 months the recipient must submit a written progress report. Each report must cover—
1. A comparison of actual accomplishments with the goals and objectives established for the reporting period and, where project output can be quantified, a computation of the costs per unit of output.
  2. The reasons why goals and objectives were not met, if appropriate.
  3. Additional pertinent information including, where appropriate, analysis and explanation of cost overruns or high unit cost.
- c. The recipient must submit a final performance report within 90 days after completion of project.

## **VIII. SPECIAL PROVISIONS**

- a. The recipient assures and certifies that it will comply with the minimum-wage and maximum-hour provisions of the Federal Fair Labor Standards Act.
- b. Employees of NRCS will participate in efforts under this agreement solely as representatives of the United States. To this end, they may not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of the recipient. They also may not assist the recipient with efforts to lobby Congress or to raise money through fundraising efforts. Further, NRCS employees must report to their immediate supervisor any negotiations with the recipient concerning future employment and must refrain from participation in efforts regarding such parties until approved by the agency.
- c. Employees of the recipient will not be considered Federal employees or agents of the United States for any purposes under this agreement.

**IX. PATENTS, INVENTIONS, COPYRIGHTS, AND ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER**

- a. Allocation of rights of patents, inventions, and copyrights must be in accordance with 2 CFR Part 200.315. This regulation provides that small businesses normally may retain the principal worldwide patent rights to any invention developed with USDA support.
- b. In accordance with 37 CFR Section 401.14, each subject invention must be disclosed to the Federal agency within 2 months after the inventor discloses it in writing to contractor personnel responsible for patent matters. Invention disclosure statements pursuant to 37 CFR Section 401.14(c) must be made in writing to:

Acquisitions Division  
Grants and Agreements Team  
1400 Independence Avenue, SW.  
Room 6823 South Building  
Washington, DC 20250

- c. USDA receives a royalty-free license for Federal Government use, reserves the right to require the patentee to license others in certain circumstances, and requires that anyone exclusively licensed to sell the invention in the United States must manufacture it domestically.
- d. The following acknowledgment of NRCS support must appear in the publication of any material, whether copyrighted or not, and any products in electronic formats (World Wide Web pages, computer programs, etc.) that is substantially based upon or developed under this award:
  - “This material is based upon work supported by the Natural Resources Conservation Service, U.S. Department of Agriculture, under number [recipient should enter the applicable award number here].”

In addition, all publications and other materials, except scientific articles or papers published in scientific journals, must include the following statement:

- “Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture.”

The recipient is responsible for ensuring that an acknowledgment of NRCS is made during news media interviews, including popular media such as radio, television, and news magazines, that discuss in a substantial way work funded by this award.

**X. COST-SHARING REQUIREMENTS**

- a. If the award has specific cost-sharing requirements, the cost-sharing participation in other projects may not be counted toward meeting the specific cost-share requirement of this award, and must come from non-Federal sources unless otherwise stated in the applicable program announcement.
- b. Should the recipient become aware that it may be unable to provide the cost-sharing amount identified in this award, it must—
  1. Immediately notify the NRCS administrative contact of the situation.
  2. Specify the steps it plans to take to secure replacement cost sharing.
  3. Indicate the plans to either continue or phase out the project in the absence of cost sharing.
- c. If NRCS agrees to the organization’s proposed plans, the recipient will be notified accordingly. If the organization’s plans are not acceptable to NRCS, the award may be subject to termination. NRCS modifications to proposed cost sharing revisions are made on a case-by-case basis.
- d. Failure by the recipient to notify NRCS in accordance with paragraph (b) above may result in the disallowance of some or all the costs charged to the award, the subsequent recovery by NRCS of some of the NRCS funds provided under the award, and possible termination of the award, and may constitute a violation



of the terms and conditions of the award so serious as to provide grounds for subsequent suspension or debarment.

- e. The recipient must maintain records of all project costs that are claimed by the recipient as cost sharing as well records of costs to be paid by NRCS. If the recipient's cost participation includes in-kind contributions, the basis for determining the valuation for volunteer services and donated property must be documented.

#### **XI. PROGRAM INCOME**

Income derived from patents, inventions, or copyrights will be disposed of in accordance with the recipient's own policies. General program income earned under this award during the period of NRCS support must be added to total project funds and used to further the purpose and scope of this award or the legislation under which this award is made.

#### **XII. NONEXPENDABLE EQUIPMENT**

Recipients purchasing equipment or products with funds provided under this award are encouraged to use such funds to purchase only American-made equipment and products. Title to nonexpendable equipment purchased with award funds will vest in the recipient upon completion of the award project and acceptance by NRCS of required final reports. When equipment is no longer needed by the recipient and the per-unit fair market value is less than \$5,000, the recipient may retain, sell, or dispose of the equipment with no further obligation to NRCS. However, if the per-unit fair market value is \$5,000 or more, the recipient must submit a written request to the NRCS administrative contact for disposition instructions.

#### **XIII. LIMIT OF FEDERAL LIABILITY**

The maximum financial obligation of NRCS to the recipient is the amount of funds indicated in the award as obligated by NRCS. However, in the event that an erroneous amount is stated on the approved budget, or any supporting document relating to the award, NRCS will have the unilateral right to make the correction and to make an appropriate adjustment in the NRCS share of the award to align with the Federal amount authorized.

#### **XIV. MODIFICATIONS AND TERMINATIONS**

NRCS may amend or modify the award through an exchange of correspondence between authorized officials of the recipient and NRCS. The award is subject to termination if NRCS determines that the recipient has failed to comply with the terms and conditions of the award. In the event that the award is terminated, the financial obligations of the parties will be those set forth in 2 CFR Part 200.339.

#### **XV. AWARD CLOSEOUT**

Award closeout is the process by which NRCS determines that all required project activities have been performed satisfactorily and all necessary administrative actions have been completed.

**EXHIBIT C-4**  
**State of Colorado**  
**Supplemental Provisions for**  
**Federally Funded Contracts, Grants, and Purchase Orders**  
**Subject to The Federal Funding Accountability and Transparency Act of 2006 (FFATA), As**  
**Amended**  
**(Revised as of 3-20-13)**

The contract, grant, or purchase order to which these Supplemental Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the contract or any attachments or exhibits incorporated into and made a part of the contract, the provisions of these Supplemental Provisions shall control.

1. **Definitions.** For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.
  - 1.1. **“Award”** means an award of Federal financial assistance that a non-Federal Entity receives or administers in the form of:
    - 1.1.1. Grants;
    - 1.1.2. Contracts;
    - 1.1.3. Cooperative agreements, which do not include cooperative research and development agreements (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);
    - 1.1.4. Loans;
    - 1.1.5. Loan Guarantees;
    - 1.1.6. Subsidies;
    - 1.1.7. Insurance;
    - 1.1.8. Food commodities;
    - 1.1.9. Direct appropriations;
    - 1.1.10. Assessed and voluntary contributions; and
    - 1.1.11. Other financial assistance transactions that authorize the expenditure of Federal funds by non-Federal Entities.

Award *does not* include:

    - 1.1.12. Technical assistance, which provides services in lieu of money;
    - 1.1.13. A transfer of title to Federally-owned property provided in lieu of money; even if the award is called a grant;
    - 1.1.14. Any award classified for security purposes; or
    - 1.1.15. Any award funded in whole or in part with Recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of 2009 (Public Law 111-5).
  - 1.2. **“Contract”** means the contract to which these Supplemental Provisions are attached and includes all Award types in §1.1.1 through 1.1.11 above.
  - 1.3. **“Contractor”** means the party or parties to a Contract funded, in whole or in part, with Federal financial assistance, other than the Prime Recipient, and includes grantees, subgrantees, Subrecipients, and borrowers. For purposes of Transparency Act reporting, Contractor does not include Vendors.
  - 1.4. **“Data Universal Numbering System (DUNS) Number”** means the nine-digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet’s website may be found at: <http://fedgov.dnb.com/webform>.
  - 1.5. **“Entity”** means all of the following as defined at 2 CFR part 25, subpart C;
    - 1.5.1. A governmental organization, which is a State, local government, or Indian Tribe;
    - 1.5.2. A foreign public entity;

- 1.5.3. A domestic or foreign non-profit organization;
  - 1.5.4. A domestic or foreign for-profit organization; and
  - 1.5.5. A Federal agency, but only a Subrecipient under an Award or Subaward to a non-Federal entity.
- 1.6. **“Executive”** means an officer, managing partner or any other employee in a management position.
  - 1.7. **“Federal Award Identification Number (FAIN)”** means an Award number assigned by a Federal agency to a Prime Recipient.
  - 1.8. **“FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252. FFATA, as amended, also is referred to as the “Transparency Act.”
  - 1.9. **“Prime Recipient”** means a Colorado State agency or institution of higher education that receives an Award.
  - 1.10. **“Subaward”** means a legal instrument pursuant to which a Prime Recipient of Award funds awards all or a portion of such funds to a Subrecipient, in exchange for the Subrecipient’s support in the performance of all or any portion of the substantive project or program for which the Award was granted.
  - 1.11. **“Subrecipient”** means a non-Federal Entity (or a Federal agency under an Award or Subaward to a non-Federal Entity) receiving Federal funds through a Prime Recipient to support the performance of the Federal project or program for which the Federal funds were awarded. A Subrecipient is subject to the terms and conditions of the Federal Award to the Prime Recipient, including program compliance requirements. The term “Subrecipient” includes and may be referred to as Subgrantee.
  - 1.12. **“Subrecipient Parent DUNS Number”** means the subrecipient parent organization’s 9-digit Data Universal Numbering System (DUNS) number that appears in the subrecipient’s System for Award Management (SAM) profile, if applicable.
  - 1.13. **“Supplemental Provisions”** means these Supplemental Provisions for Federally Funded Contracts, Grants, and Purchase Orders subject to the Federal Funding Accountability and Transparency Act of 2006, As Amended, as may be revised pursuant to ongoing guidance from the relevant Federal or State of Colorado agency or institution of higher education.
  - 1.14. **“System for Award Management (SAM)”** means the Federal repository into which an Entity must enter the information required under the Transparency Act, which may be found at <http://www.sam.gov>.
  - 1.15. **“Total Compensation”** means the cash and noncash dollar value earned by an Executive during the Prime Recipient’s or Subrecipient’s preceding fiscal year and includes the following:
    - 1.15.1. Salary and bonus;
    - 1.15.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), Shared Based Payments;
    - 1.15.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of Executives and are available generally to all salaried employees;
    - 1.15.4. Change in present value of defined benefit and actuarial pension plans;
    - 1.15.5. Above-market earnings on deferred compensation which is not tax-qualified;
    - 1.15.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the Executive exceeds \$10,000.
  - 1.16. **“Transparency Act”** means the Federal Funding Accountability and Transparency Act of 2006

(Public Law 109-282), as amended by §6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.

**1.17 “Vendor”** means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the Federal award. Program compliance requirements do not pass through to a Vendor.

- 2. Compliance.** Contractor shall comply with all applicable provisions of the Transparency Act and the regulations issued pursuant thereto, including but not limited to these Supplemental Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.
- 3. System for Award Management (SAM) and Data Universal Numbering System (DUNS) Requirements.**
  - 3.1. SAM.** Contractor shall maintain the currency of its information in SAM until the Contractor submits the final financial report required under the Award or receives final payment, whichever is later. Contractor shall review and update SAM information at least annually after the initial registration, and more frequently if required by changes in its information.
  - 3.2. DUNS.** Contractor shall provide its DUNS number to its Prime Recipient, and shall update Contractor’s information in Dun & Bradstreet, Inc. at least annually after the initial registration, and more frequently if required by changes in Contractor’s information.
- 4. Total Compensation.** Contractor shall include Total Compensation in SAM for each of its five most highly compensated Executives for the preceding fiscal year if:
  - 4.1.** The total Federal funding authorized to date under the Award is \$25,000 or more; and
  - 4.2.** In the preceding fiscal year, Contractor received:
    - 4.2.1.** 80% or more of its annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
    - 4.2.2.** \$25,000,000 or more in annual gross revenues from Federal procurement contracts and subcontracts and/or Federal financial assistance Awards or Subawards subject to the Transparency Act; and
  - 4.3.** The public does not have access to information about the compensation of such Executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d) or § 6104 of the Internal Revenue Code of 1986.
- 5. Reporting.** Contractor shall report data elements to SAM and to the Prime Recipient as required in §7 below if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to Contractor for providing any reports required under these Supplemental Provisions and the cost of producing such reports shall be included in the Contract price. The reporting requirements in §7 below are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor’s obligations under this Contract, as provided in §2 above. The Colorado Office of the State Controller will provide summaries of revised OMB reporting requirements at <http://www.colorado.gov/dpa/dfp/sco/FFATA.htm>.
- 6. Effective Date and Dollar Threshold for Reporting.** The effective date of these Supplemental Provisions apply to new Awards as of October 1, 2010. Reporting requirements in §7 below apply to new Awards as of October 1, 2010, if the initial award is \$25,000 or more. If the initial Award is below \$25,000 but

subsequent Award modifications result in a total Award of \$25,000 or more, the Award is subject to the reporting requirements as of the date the Award exceeds \$25,000. If the initial Award is \$25,000 or more, but funding is subsequently de-obligated such that the total award amount falls below \$25,000, the Award shall continue to be subject to the reporting requirements.

**7. Subrecipient Reporting Requirements.** If Contractor is a Subrecipient, Contractor shall report as set forth below.

**7.1 ToSAM.** A Subrecipient shall register in SAM and report the following data elements in SAM *for each* Federal Award Identification Number no later than the end of the month following the month in which the Subaward was made:

**7.1.1** Subrecipient DUNS Number;

**7.1.2** Subrecipient DUNS Number + 4 if more than one electronic funds transfer (EFT) account;

**7.1.3** Subrecipient Parent DUNS Number;

**7.1.4** Subrecipient's address, including: Street Address, City, State, Country, Zip + 4, and Congressional District;

**7.1.5** Subrecipient's top 5 most highly compensated Executives if the criteria in §4 above are met; and

**7.1.6** Subrecipient's Total Compensation of top 5 most highly compensated Executives if criteria in §4 above met.

**7.2 To Prime Recipient.** A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

**7.2.1** Subrecipient's DUNS Number as registered in SAM.

**7.2.2** Primary Place of Performance Information, including: Street Address, City, State, Country, Zip code + 4, and Congressional District.

**8. Exemptions.**

**8.1.** These Supplemental Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.

**8.2** A Contractor with gross income from all sources of less than \$300,000 in the previous tax year is exempt from the requirements to report Subawards and the Total Compensation of its most highly compensated Executives.

**8.3** Effective October 1, 2010, "Award" currently means a grant, cooperative agreement, or other arrangement as defined in Section 1.1 of these Special Provisions. On future dates "Award" may include other items to be specified by OMB in policy memoranda available at the OMB Web site; Award also will include other types of Awards subject to the Transparency Act.

**8.4** There are no Transparency Act reporting requirements for Vendors.

**9. Event of Default.** Failure to comply with these Supplemental Provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.

**EXHIBIT C-5 – ASSURANCES RELATING TO REAL PROPERTY ACQUISITION**

U.S. Department of Agriculture  
Natural Resources Conservation Service

NRCS-ADS-78  
5-88

**ASSURANCES RELATING TO REAL  
PROPERTY ACQUISITION**

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A. **PURPOSE** – This form is to be used by sponsor(s) to provide the assurances to the Natural Resources Conservation Service of the U.S. Department of Agriculture which is required in connection with the installation of project measures which involve Federal financial assistance furnished by the Natural Resources Conservation Service.

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B. **PROJECT MEASURES COVERED** –

Name of project \_\_\_\_\_

Identity of improvement or development \_\_\_\_\_

Location \_\_\_\_\_

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C. **REAL PROPERTY ACQUISITION ASSURANCE** –

This assurance is applicable if real property interests were acquired for the installation of project measures, and/or if persons, businesses, or farm operations were displaced as a result of such installation; *and* this assurance was not previously provided for in the watershed, project measure, or other type of plan.

If this assurance was not previously provided, the undersigned sponsor(s) hereby assures they have complied, to the extent practicable under State law, with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. 4601-4655), as implemented in 7C.F.R. Part 21. Any exceptions taken from the real property acquisition requirements under the authority of 42 U.S.C. 4655 because of State law have been or is hereby furnished to the Natural Resources Conservation Service along with the opinion of the Chief Legal Officer of the State containing a full discussion of the facts and law furnished.

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D. **PURPOSE** –

The undersigned sponsor(s) hereby assures that adequate real property rights and interests, water rights if applicable, permits and licenses required by Federal, State, and local law, ordinance or regulation, and related actions have been taken to obtain the legal right to install, operate, maintain, and inspect the above-described project measures, except for structures or improvements that are to be removed, relocated, modified, or salvaged before and/or during the installation process.

This assurance is given with the knowledge that sponsor(s) are responsible for any excess costs or other consequences in the event the real property rights are found to be inadequate during the installation process.

Furthermore, this assurance is supported by an attorney's opinion attached hereto that certifies an examination of the real property instruments and files was made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired. If any of the real property rights or interests were obtained by condemnation (eminent domain) proceedings, sponsor(s) further assure and agree to prosecute the proceedings to a final conclusion and pay such damages as awarded by the court.

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\_\_\_\_\_  
(Name of Sponsor)

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

This action authorized at an official meeting \_\_\_\_\_

\_\_\_\_\_ on \_\_\_\_\_

day of \_\_\_\_\_, 20\_\_,

at \_\_\_\_\_

State of \_\_\_\_\_

Attest: \_\_\_\_\_

(name)

\_\_\_\_\_

(title)

\_\_\_\_\_  
(Name of Sponsor)

**By:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

This action authorized at an official meeting \_\_\_\_\_

\_\_\_\_\_ on \_\_\_\_\_

day of \_\_\_\_\_, 20\_\_,

at \_\_\_\_\_

State of \_\_\_\_\_

Attest: \_\_\_\_\_

(name)

\_\_\_\_\_

(title)

**THIS IS A SAMPLE ATTORNEY'S OPINION  
<SPONSOR OR REPRESENTING FIRMS LETTERHEAD>**

OPINION OF TITLE

<Date>

<Name>

State Conservationist  
USDA-Natural Resources Conservation Service

<Address 1>

<Address 2>

<City, ST Zip>

RE: Assurances Relating to Real Property Acquisition

Smith Creek Project, EWP, Smith County, State

Dear, <Name>:

As Attorney for the <Town/Village/County of \_\_\_\_\_>, I certify an examination of the real property instruments and files for the referenced project were made and they were found to provide adequate title, right, permission and authority for the purpose(s) for which the property was acquired.

\_\_\_\_\_  
<Signature of Attorney>

<Title Block>



## EXHIBIT C-6

### NATURAL RESOURCES CONSERVATION SERVICE SUPPLEMENT TO OSHA PARTS 1910 AND 1926 CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS

The Contractor shall comply with OSHA (Occupational Safety and Health Administration) Parts 1910 and 1926, Construction Industry Standards and Interpretations, and with this supplement.

Requests for variances or waiver from this supplement are to be made to the Contracting Officer in writing supported by evidence that every reasonable effort has been made to comply with the contractual requirements. A written request for a waiver or a variance shall include--

- (1) Specific reference to the provision or standard in question;
- (2) An explanation as to why the waiver is considered justified; and
- (3) The Contractor's proposed alternative, including technical drawings, materials, or equipment specifications needed to enable the Contracting Officer to render a decision.

No waiver or variance will be approved if it endangers any person. The Contractor shall not proceed under any requested revision of provision until the Contracting Officer has given written approval. The Contractor is to hold and save harmless the Natural Resources Conservation Service free from any claims or causes of action whatsoever resulting from the Contractor or subcontractors proceeding under a waiver or approved variance.

Copies of OSHA Parts 1910 and 1926, Construction Industry Standards and Interpretations, may be obtained from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

#### 1.0 GENERAL CONTRACTOR REQUIREMENTS:

1.1 SAFETY PROGRAM. Each Contractor is to demonstrate that he or she has facilities for conducting a safety program commensurate with the work under contract. The Contractor is to submit in writing a proposed comprehensive safety program to the Contracting Officer for approval before the start of construction operations. The program is to specifically state what provisions the Contractor proposes to take for the health and safety of all employees, including subcontractors and rental equipment operators. The program shall be site specific and provide details relevant to the work to be done, the hazards associated with the work, and the actions that will be necessary to minimize the identified hazards.

1.2 PRECONSTRUCTION SAFETY MEETING. Representatives for the Contractor are to meet with the Contracting Officer (CO) or the CO's representative before the start of construction to discuss the safety program and the implementation of all health and safety standards pertinent to the work under this contract.

1.3 JOINT SAFETY POLICY COMMITTEE. The Contractor or designated on-site representative is to participate in monthly meetings of a joint Safety Policy Committee, composed of the Natural Resources Conservation Service (Contracting Local Organization in locally awarded contracts) and Contractor supervisory personnel. At these meetings the Contractor's project manager and the Contracting Officer will review the effectiveness of the Contractor's safety effort, resolve current health and safety problems, and coordinate safety activities for upcoming work.

1.4 SAFETY PERSONNEL. Each Contractor is to designate a competent supervisory employee satisfactory to the Contracting Officer to administer the safety program.

1.5 SAFETY MEETINGS. A minimum of one "on-the-job" or "toolbox" safety meeting is to be conducted each week by all field supervisors or foremen and attended by mechanics and all construction personnel at the jobsite. The Contractor is to also conduct regularly scheduled supervisory safety meetings at least monthly for all levels of job supervision.

1.6 SAFETY INSPECTION. The Contractor shall perform frequent and regular safety inspections of the jobsite, materials, and equipment, and shall correct deficiencies.

1.7 FIRST AID TRAINING. Every Contractor foreman's work crew must include an employee who has a current first aid certificate from the Mine Safety and Health Administration, American Red Cross, or other state-approved organization.

1.8 REPORTS. Each Contractor is to maintain an accurate record of all job-related deaths, diseases, or disabling injuries. The records shall be maintained in a manner approved by the Contracting Officer. A copy of all reports is to be provided to the Contracting Officer. All fatal or serious injuries are to be reported immediately to the Contracting Officer, and every assistance is to be given in the investigation of the incident, including submission of a comprehensive narrative report to the Contracting Officer. Other occurrences with serious accident potential, such as equipment failures, slides, and cave-ins, must also be reported immediately. The Contractor is to assist and cooperate fully with the Contracting Officer in conducting accident investigations. The Contracting Officer is to be furnished all information and data pertinent to investigation of an accident.

1.9 CERTIFICATION OF INSURANCE. Contractors are to provide the Contracting Officer or his or her authorized representative with certificates of insurance before the start of operations indicating full compliance with State Worker's Compensation statutes, as well as other certificates of insurance required under the contract.

## 2.0 FIRST AID AND MEDICAL FACILITIES:

2.1 FIRST AID KITS. A 16-unit first aid kit approved by the American Red Cross is to be provided at accessible, well-identified, locations at the ratio of at least 1 kit for each 25 employees. The first aid kits are to be moisture proof and dust tight, and the contents of the kits are to be replenished as used or as they become ineffective or outdated.

2.2 EMERGENCY FIRST AID. At least one employee certified to administer emergency first aid must be available on each shift and duly designated by the Contractor to care for injured employees. The names of the certified employees shall be posted at the jobsite.

2.3 COMMUNICATION AND TRANSPORTATION. Prior to the start of work, the Contractor is to make necessary arrangements for prompt and dependable communications, transportation, and medical care for injured employees. At least one stretcher and two blankets shall be readily available for transporting injured employees.

2.4 FIRST AID AND MEDICAL REPORTS. The Contractor is to maintain a record system for first aid and medical treatment on the jobsite. Such records are to be readily available to the Contracting Officer and are to include--

(a) A daily treatment log listing chronologically all persons treated for occupational injuries and illnesses;

- (b) Cumulative record of injury for each individual;
- (c) Monthly statistical records of occupational injuries, classified by type and nature of injury; and
- (d) Required records for worker's compensation.

2.5 SIGNS AND DIRECTIONAL MARKINGS. Adequate identification and directional markers are to be provided to readily denote the location of all first aid stations.

2.6 EMERGENCY LISTING. A listing of telephone numbers and addresses of doctor, rescue squad, hospital, police, and fire departments is to be provided at all first aid locations.

### 3.0 PHYSICAL QUALIFICATIONS OF EMPLOYEES:

3.1 GENERAL REQUIREMENTS. Persons employed throughout the contract are to be physically qualified to perform their assigned duties. Employees must not knowingly be permitted or required to work while their ability or alertness is impaired by fatigue, illness, or any other reason that may jeopardize themselves or others.

3.2 HOIST OPERATORS. Operators of cranes, cableways, and other hoisting equipment shall be examined annually by a physician and provided with a certification stating that they are physically qualified to safely operate hoisting equipment. The Contractor is to submit a copy of each certification to the Contracting Officer.

3.3 HEAVY EQUIPMENT OPERATORS. It is recommended that operators of trucks and heavy construction equipment be given physical examinations to determine if they are physically qualified to perform their assigned work without endangering themselves or others.

3.4 MOTOR VEHICLE OPERATORS. Operators of motor vehicles engaged primarily in the transportation of personnel are to be 18 years of age or older and have a valid state operator's permit or license for the equipment being operated. The operators must have passed a physical examination administered by a licensed physician within the past year showing that they are physically qualified to operate vehicles safely.

### 4.0 PERSONAL PROTECTIVE EQUIPMENT:

4.1 HARDHAT AREAS. The entire jobsite, with the exception of offices, shall be considered a hardhat area. All persons entering the area are, without exception, required to wear hardhats. The Contractor shall provide hardhats for visitors entering hardhat areas.

4.1.1 LABELS. Hardhats shall bear a manufacturer's label indicating design compliance with the appropriate ANSI (American National Standards Institute) standard.

4.2 POSTING. Signs at least 3 by 4 feet worded as follows with red letters (minimum 6 inches high) and white background shall be erected at access points to designated hardhat areas:

#### CONSTRUCTION AREA - HARDHATS REQUIRED BEYOND THIS POINT

These signs are to be furnished and installed by the Contractor at entries to shops, construction yards, and job access points.

### 4.3 SAFETY GOGGLES (DRILLERS)

4.3.1 DRILLERS AND HELPERS. Drillers and helpers operating pneumatic rock drills must wear protective safety goggles.

## 5.0 MACHINERY AND MECHANIZED EQUIPMENT:

5.1 SAFE CONDITION. Before any machinery or mechanized equipment is initially used on the job, it must be inspected and tested by qualified personnel and determined to be in safe operating condition and appropriate for the intended use. Operators shall inspect their equipment prior to the beginning of each shift. Any deficiencies or defects shall be corrected prior to using the equipment. Safety equipment, such as seatbelts, installed on machinery is to be used by equipment operators.

5.2 TAGGING AND LOCKING. The controls of power-driven equipment under repair are to be locked. An effective lockout and tagging procedure is to be established, prescribing specific responsibilities and safety procedures to be followed by the person or persons performing repair work. Mixer barrels are to be securely locked out before permitting employees to enter them for cleaning or repair.

### 5.3 HAUL ROADS FOR EQUIPMENT

5.3.1 ROAD MAINTENANCE. The Contractor shall maintain all roadways, including haul roads and access roads, in a safe condition so as to eliminate or control dust and ice hazards. Wherever dust is a hazard, adequate dust-laying equipment shall be available at the jobsite and utilized to control the dust.

5.3.2 SINGLE-LANE HAUL ROADS. Single-lane haul roads with two-way traffic shall have adequate turnouts. Where turnouts are not practical, a traffic control system shall be provided to prevent accidents.

5.3.3 TWO-WAY HAUL ROADS. On two-way haul roads, arrangements are to be such that vehicles travel on the right side wherever possible. Signs and traffic control devices are to be employed to indicate clearly any variations from a right-hand traffic pattern. The road shall be wide enough to permit safe passage of opposing traffic, considering the type of hauling equipment used.

5.3.4 DESIGN AND CONSTRUCTION OF HAUL ROADS. Haul road design criteria and drawings, if requested by the Contracting Officer, are to be submitted for approval prior to road construction. Sustained grades shall not exceed 12 percent and all curves shall have open-sight line with as great a radius as practical. All roads shall be posted with curve signs and maximum speed limits that will permit the equipment to be stopped within one-half the minimum sight distance.

5.3.5 OPERATORS. Machinery and mechanized equipment shall be operated only by authorized qualified persons.

5.3.6 RIDING ON EQUIPMENT. Riding on equipment by unauthorized personnel is prohibited. Seating and safety belts shall be provided for the operator and all passengers.

5.3.7 GETTING ON OR OFF EQUIPMENT. Getting on or off equipment while the equipment is in motion is prohibited.

5.3.8 HOURS OF OPERATION. Except in emergencies, an equipment operator shall not operate any mobile or hoisting equipment for more than 12 hours without an 8-hour rest interval away from the job.

### 5.4 POWER CRANES AND HOISTS (TRUCK CRANES, CRAWLER CRANES, TOWER CRANES, GANTRY CRANES, HAMMERHEAD CRANES, DERRICKS, CABLEWAYS, AND HOISTS)

5.4.1 PERFORMANCE TEST. Before initial onsite operation, at 12-month intervals, and after major repairs or modification, power cranes, derricks, cableways, and hoists must satisfactorily complete a performance test to demonstrate the equipment's ability to safely handle and maneuver the rated loads. The tests shall be conducted in the presence of a representative of the Contracting Officer. Test data shall be recorded and a copy furnished the Contracting Officer.

5.4.2 PERFORMANCE TEST—POWER CRANES (Crawler mounted, truck mounted and wheel mounted). The performance test is to be carried out as per ANSI requirements. The test is to consist of raising, lowering, and braking the load and rotating the test load through 360° degrees at the specified boom angle or radius. Cranes equipped with jibs or boom-tip extensions are to be tested using both the main boom and the jib, with an appropriate test load in each case.

5.4.3 PERFORMANCE TEST—DERRICKS, GANTRY CRANES, TOWER CRANES, CABLEWAYS, AND HOISTS, INCLUDING OVERHEAD CRANES. This equipment is to be performance tested as per ANSI requirements.

5.4.4 BOOM ANGLE INDICATOR. Power cranes (includes draglines) with booms capable of moving in the vertical plane shall be provided with a boom angle indicator in good working order.

5.4.5 CRANE TEST CERTIFICATION. The performance test required by 5.4.2 and 5.4.3 is fulfilled if the Contractor provides the Contracting Officer a copy of a certificate of inspection made within the past 12 months by a qualified person or by a government or private agency satisfactory to the Contracting Officer.

5.4.6 POSTING FOR HIGH VOLTAGE LINES. A notice of the 10-foot (or greater) clearance required by OSHA 1926.550, Subpart N, shall be posted in the operator's cab of cranes, shovels, boom-type concrete pumps, backhoes, and related equipment.

5.4.7 BOOM STOPS. Cranes or derricks with cable-supported booms, except draglines, shall have a device attached between the gantry of the A-frame and the boom chords to limit the elevation of the boom. The device shall control the vertical motions of the boom with increasing resistance from 83° or less, until completely stopping the boom at not over 87° above horizontal.

5.4.8 SAFETY HOOKS. Hooks used in hoisting personnel or hoisting loads over construction personnel or in the immediate vicinity of construction personnel shall be forged steel equipped with safety keepers. When shackles are used under these conditions, they shall be of the locking type or have the pin secured to prohibit turning.

## 5.5 ROLLOVER PROTECTIVE STRUCTURES (ROPS)

5.5.1 ROLLOVER PROTECTIVE STRUCTURES. OSHA 1926, Subpart W, Overhead Protection, Sections 1001 and 1002 are applicable regardless of the year in which the equipment was manufactured and regardless of the struck capacity of the equipment.

5.5.2 EQUIPMENT REQUIRING ROPS. The requirement for ROPS meeting 5.5.1 above applies to crawler and rubber-tired tractors such as dozers, push-and-pull tractors, winch tractors, tractors with backhoes, and mowers; off-highway, self-propelled, pneumatic-tired earthmovers, including scrapers, motor graders and loaders; and rollers, compactors, water tankers (excluding trucks with cabs). These requirements shall also apply to agricultural and industrial tractors and similar equipment.

5.5.3 EQUIPMENT REQUIRING SEATBELTS. The requirements for seatbelts as specified in OSHA Subpart O, Motor Vehicles, Mechanized Equipment, and Marine Operations, Section 1926.602 shall also apply to self-propelled compactors and rollers, and rubber-tired skid-steer equipment.

## 6.0 LADDERS AND SCAFFOLDING:

6.1 LADDERS. OSHA 1926, Subpart L - Section 450. Ladders shall be used as work platforms only when use of small hand tools or handling of light material is involved. No work requiring lifting of heavy materials or substantial exertion shall be done from ladders.

6.2 SCAFFOLDING. OSHA 1926, Subpart L - Section 451. Scaffolds, platforms or temporary floors shall be provided for all work except that which can be done safely from the ground or similar footing.

6.3 SAFETY BELTS, LIFELINE, AND LANYARDS. OSHA 1926, Subpart E, Section 104. Lifelines, safety belts and lanyards independently attached or attended, shall be used when performing such work as the following when the requirements of 6.1 or 6.2 above cannot be met.

(a) Work on stored material in hoppers, bins, silos, tanks, or other confined spaces.

(b) Work on hazardous slopes, structural steel, or poles; erection or dismantling of safety nets, tying reinforcing bars; and work from Boatswain's chairs, swinging scaffolds, or other unguarded locations at elevations greater than 6 feet.

(c) Work on skips and platforms used in shafts by crews when the skip or cage does not block the opening to within 1 foot of the sides of the shaft, unless cages are provided.

## EXHIBIT C-7 – SUPPLEMENTAL PROVISIONS FOR FEDERAL AWARDS

**Subject to The Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (“Uniform Guidance”), Federal Register, Vol. 78, No. 248, 78590**

The agreement to which these Uniform Guidance Supplemental Provisions are attached has been funded, in whole or in part, with an award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the agreement or any attachments or exhibits incorporated into and made a part of the agreement, the provisions of these Uniform Guidance Supplemental Provisions shall control. In the event of a conflict between the provisions of these Supplemental Provisions and the FFATA Supplemental Provisions, the FFATA Supplemental Provisions shall control.

**1. Definitions.** For the purposes of these Supplemental Provisions, the following terms shall have the meanings ascribed to them below.

**1.1. “Award”** means an award by a Recipient to a Subrecipient funded in whole or in part by a Federal Award. The terms and conditions of the Federal Award flow down to the Award unless the terms and conditions of the Federal Award specifically indicate otherwise. 2 CFR §200.38

**1.2. “Federal Award”** means an award of Federal financial assistance or a cost-reimbursement contract under the Federal Acquisition Requirements by a Federal Awarding Agency to a Recipient. “Federal Award” also means an agreement setting forth the terms and conditions of the Federal Award. The term does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.

**1.3. “Federal Awarding Agency”** means a Federal agency providing a Federal Award to a Recipient. 2 CFR §200.37

**1.4. “FFATA”** means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by §6202 of Public Law 110-252.

**1.5. “Grant” or “Grant Agreement”** means an agreement setting forth the terms and conditions of an Award. The term does not include an agreement that provides only direct Federal cash assistance to an individual, a subsidy, a loan, a loan guarantee, insurance, or acquires property or services for the direct benefit of use of the Federal Awarding Agency or Recipient. 2 CFR §200.51.

**1.6. “OMB”** means the Executive Office of the President, Office of Management and Budget.

**1.7. “Recipient”** means a Colorado State department, agency or institution of higher education that receives a Federal Award from a Federal Awarding Agency to carry out an activity under a Federal program. The term does not include Subrecipients. 2 CFR §200.86

**1.8. “State”** means the State of Colorado, acting by and through its departments, agencies and institutions of higher education.

**1.9. “Subrecipient”** means a non-Federal entity receiving an Award from a Recipient to carry out part of a Federal program. The term does not include an individual who is a beneficiary of such program.

**1.10. “Uniform Guidance”** means the Office of Management and Budget Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, which supersedes requirements

from OMB Circulars A-21, A-87, A-110, and A-122, OMB Circulars A-89, A-102, and A-133, and the guidance in Circular A-50 on Single Audit Act follow-up. The terms and conditions of the Uniform Guidance flow down to Awards to Subrecipients unless the Uniform Guidance or the terms and conditions of the Federal Award specifically indicate otherwise.

**1.11. “Uniform Guidance Supplemental Provisions”** means these Supplemental Provisions for Federal Awards subject to the OMB Uniform Guidance, as may be revised pursuant to ongoing 22 guidance from relevant Federal agencies or the Colorado State Controller.

**2. Compliance.** Subrecipient shall comply with all applicable provisions of the Uniform Guidance, including but not limited to these Uniform Guidance Supplemental Provisions. Any revisions to such provisions automatically shall become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Subrecipient of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.

### **3. Procurement Standards.**

**3.1 Procurement Procedures.** Subrecipient shall use its own documented procurement procedures which reflect applicable State, local, and Tribal laws and regulations, provided that the procurements conform to applicable Federal law and the standards identified in the Uniform Guidance, including without limitation, §§200.318 through 200.326 thereof.

**3.2 Procurement of Recovered Materials.** If Subrecipient is a State Agency or an agency of a political subdivision of a state, its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

**4. Access to Records.** Subrecipient shall permit Recipient and auditors to have access to Subrecipient’s records and financial statements as necessary for Recipient to meet the requirements of §200.331 (Requirements for pass-through entities), §§200.300 (Statutory and national policy requirements) through 200.309 (Period of performance), and Subpart F-Audit Requirements of the Uniform Guidance. 2 CFR §200.331(a)(5).

**5. Single Audit Requirements.** If Subrecipient expends \$750,000 or more in Federal Awards during Subrecipient’s fiscal year, Subrecipient shall procure or arrange for a single or program-specific audit conducted for that year in accordance with the provisions of Subpart F-Audit Requirements of the Uniform Guidance, issued pursuant to the Single Audit Act Amendments of 1996, (31 U.S.C. 7501-7507). 2 CFR §200.501.

**5.1 Election.** Subrecipient shall have a single audit conducted in accordance with Uniform Guidance §200.514 (Scope of audit), except when it elects to have a program-specific audit conducted in accordance with §200.507 (Program-specific audits). Subrecipient may elect to have a program-specific audit if Subrecipient expends Federal Awards under only one Federal program (excluding research and development) and the Federal program’s statutes, regulations, or the terms and conditions of the Federal award do not require a financial statement audit of Recipient. A program-specific audit may not be elected for research and development unless



all of the Federal Awards expended were received from Recipient and Recipient approves in advance a program-specific audit.

**5.2 Exemption.** If Subrecipient expends less than \$750,000 in Federal Awards during its fiscal year, Subrecipient shall be exempt from Federal audit requirements for that year, except as noted in 2 CFR §200.503 (Relation to other audit requirements), but records shall be available for review or audit by appropriate officials of the Federal agency, the State, and the Government Accountability Office.

**5.3 Subrecipient Compliance Responsibility.** Subrecipient shall procure or otherwise arrange for the audit required by Part F of the Uniform Guidance and ensure it is properly performed and submitted when due in accordance with the Uniform Guidance. Subrecipient shall prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with Uniform Guidance §200.510 (Financial statements) and provide the auditor 23 with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit required by Uniform Guidance Part F-Audit Requirements.

**6. Contract Provisions for Subrecipient Contracts.** Subrecipient shall comply with and shall include all of the following applicable provisions in all subcontracts entered into by it pursuant to this Grant Agreement.

**6.1 Equal Employment Opportunity.** Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

“During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

**4.2** Reserved.

**4.3 Rights to Inventions Made Under a Contract or Agreement.** If the Federal Award meets the definition of “funding agreement” under 37 CFR §401.2 (a) and Subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that “funding agreement,” Subrecipient must comply with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the awarding agency.

**4.4 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended.** Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

**4.5 Debarment and Suspension (Executive Orders 12549 and 12689).** A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

**4.6 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352).** Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 25 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

**7. Certifications.** Unless prohibited by Federal statutes or regulations, Recipient may require Subrecipient to submit certifications and representations required by Federal statutes or regulations on an annual basis. 2 CFR §200.208. Submission may be required more frequently if Subrecipient fails to meet a requirement of the Federal award. Subrecipient shall certify in writing to the State at the end of the Award that the project or activity was completed or the level of effort was expended. 2 CFR §200.201(3). If the required level of activity or effort was not carried out, the amount of the Award must be adjusted.

**8. Event of Default.** Failure to comply with these Uniform Guidance Supplemental Provisions shall constitute an event of default under the Grant Agreement (2 CFR §200.339) and the State may terminate the Grant upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Grant, at law or in equity.

**9. Effective Date.** The effective date of the Uniform Guidance is December 26, 2013. 2 CFR §200.110. The procurement standards set forth in Uniform Guidance §§200.317-200.326 are applicable to new Awards made by Recipient as of December 26, 2015. The standards set forth in Uniform Guidance Subpart F-Audit Requirements are applicable to audits of fiscal years beginning on or after December 26, 2014.

## **10. Performance Measurement**

The Uniform Guidance requires completion of OMB-approved standard information collection forms (the PPR). The form focuses on outcomes, as related to the Federal Award Performance Goals that awarding Federal agencies are required to detail in the Awards.

Section 200.301 provides guidance to Federal agencies to measure performance in a way that will help the Federal awarding agency and other non-Federal entities to improve program outcomes.

The Federal awarding agency is required to provide recipients with clear performance goals, indicators, and milestones (200.210). Also, must require the recipient to relate financial data to performance accomplishments of the Federal award.

**EXHIBIT D - OPTION LETTER**

**SAMPLE OPTION LETTER**

<b>Date:</b>	<b>Original Grant CMS #:</b>	<b>Option Letter #</b>	<b>CMS Routing #</b>
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- 1) **OPTIONS:** Choose all applicable options listed in §1 and in §2 and delete the rest.
  - a. Option to extend the end date
  - b. Change in the amount of goods within current term
  - c. Change in amount of goods in conjunction with renewal for additional term
  - d. Level of service change within current term
  - e. Level of service change in conjunction with renewal for additional term
  - f. Option to initiate next phase of a contract
  
- 2) **REQUIRED PROVISIONS.** All Option Letters shall contain the appropriate provisions set forth below:
  - a. **For use with Options 1(a-e):** In accordance with Section(s) \_\_\_\_\_ of the Original Grant between the State of Colorado, Insert Name of Department or Higher Ed Institution , and Grantee's Name, the State hereby exercises its option for an additional term beginning Insert start date and ending on Insert ending date at a cost/price specified in Section \_\_\_\_\_, AND/OR an increase/decrease in the amount of goods/services at the same rate(s) as specified in Section \_\_\_\_\_. Identify the Section, Schedule, Attachment, Exhibit etc.
  - b. **For use with Option 1(f), please use the following:** In accordance with Section(s) \_\_\_\_\_ of the Original Grant between the State of Colorado, Insert Name of Department or Higher Ed Institution , and Grantee's Name, the State hereby exercises its option to initiate Phase indicate which Phase: 2, 3, 4, etc for the term beginning Insert start date and ending on Insert ending date at the cost/price specified in Section \_\_\_\_\_.
  - c. **For use with all Options 1(a-f):** The amount of the current Fiscal Year contract value is increased/decreased by \$ amount of change to a new contract value of Insert New \$ Amt to as consideration for services/goods ordered under the grant for the current fiscal year indicate Fiscal Year. The first sentence in Section \_\_\_\_\_ is hereby modified accordingly. The total contract value including all previous amendments, option letters, etc. is Insert New \$ Amt.
  
- 3) **Effective Date.** The effective date of this Option Letter is upon approval of the State Controller or \_\_\_\_\_, whichever is later.

<p><b>STATE OF COLORADO</b>  <b>John W. Hickenlooper, Governor</b>          Name of Agency or IHE</p> <hr/> <p>By: Insert Name &amp; Title of Person Signing for Agency or IHE</p> <p>Date: _____</p>
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**ALL GRANTS REQUIRE APPROVAL BY THE STATE CONTROLLER**

<p>CRS §24-30-202 requires the State Controller to approve all State grants. This Option Letter is not valid until signed and dated below by the State Controller or delegate. Grantee is not authorized to begin performance until such time. If Grantee begins performing prior thereto, the State of Colorado is not obligated to pay Grantee for such performance or for any goods and/or services provided hereunder.</p>
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**STATE CONTROLLER**  
**Robert Jaros, CPA, MBA, JD**

By: \_\_\_\_\_

Date: \_\_\_\_\_

## ATTACHMENT “C”

### CONTRACTOR QUALIFICATION STATEMENT

#### Instructions/Terms

1. This Contractor Qualification Statement (“CQS”) is required for bids submitted for the **Construction Services for Flood-Construction Services for South St. Vrain Creek Restoration at Hall Ranch Project**. This CQS shall be submitted to the County with your BID.
2. This CQS shall be completed by a director, officer or manager of the submitting firm who has sufficient knowledge to fully address all matters and respond to all inquiries herein.
3. The firm submitting this CQS (“Firm” or the “Contractor”) shall be fully responsible for and bound by all information, data, certifications and disclosures included in this statement and any attachments hereto.
4. The Contractor understands that the information and data provided in connection with this CQS, and any other relevant information obtained from any other sources regarding the Firm, shall be reviewed to determine whether it qualifies as a “responsible contractor” and whether its offer represents the best value to the county.
5. The Contractor understands that its failure to meet responsibility and qualification standards may render it ineligible to perform work on this project (hereinafter “Contract Work”).
6. It is the Contractor’s responsibility to carefully review and complete this document. The failure to submit information or documents required by this CQS, or the submission of any false statement, misrepresentation, or omission regarding a material fact concerning any aspect of this CQS, may render the Firm ineligible for contract.
7. The Contractor hereby agrees that if it is awarded the contract, this CQS, all terms and conditions specified herein, and all information, data, certifications and disclosures included in this statement or its attachments will be incorporated into the contract.
8. In the event a contract is awarded to the Firm and it is later determined that the Firm failed to disclose requested information, or made a false statement, misrepresentation, or omission regarding a material fact concerning any aspect of this CQS, the Firm may be considered in default and the County may terminate the contract immediately and/or withhold full or partial payment as it deems appropriate.
9. Where additional space is needed to provide requested information, the Firm should provide such information in separate, numbered attachments affixed to this CQS.
10. Label attachments to this CQS according to subject matter and include a table of contents listing the names and numbers of all attachments.

**Part I: Basic Qualifications**

**Section 1: Firm Background/Resources**

1. Name of Firm \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*\* Indicate whether the Firm is a corporation, joint venture, dba, Limited Liability Company, partnership, sole proprietorship or other type of business entity. If corporation, provide names of officers; if joint venture, provide names of joint ventures; if limited liability co., provide names of members; if partnership, provide names of partners; if sole proprietorship or other, provide names of owners.*

2. Address/Contact Information: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*\*Provide mailing address of Firm, website, e-mail, telephone number and fax number. If address is a branch office, also provide principal home office address.*

3. Years in Business: \_\_\_\_\_

4. Related Firms/Changes in Company Name:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*\*Identify any parent companies, subsidiaries, sister companies or holding companies to which the firm is related. If additional space is needed, provide information in an*

*attachment. If the Firm has previously operated under another name within the past five years, identify other names used.*

5. Identify all jurisdictions in which the Firm is licensed, registered or otherwise qualified to do business:

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*\*Use attachment if necessary; provide applicable license, certificate, and registration numbers for each jurisdiction.*

6. Recent Construction Volume: Provide annual construction volume in dollars performed by Firm in the past three years:

Year \_\_\_\_\_

Year \_\_\_\_\_

Year \_\_\_\_\_

7. Percentage of Work Self-Performed: Identify the percentage of work the Firm typically performs with its own work force: \_\_\_\_\_

8. Classifications of Work Self-Performed: Identify the types of work typically performed by the Firm with its own work force:

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9. Identify and submit company name, contact person, address, telephone number, and three references for all companies that will provide sub-contracted services to the Contractor for this project.

11. Industry References: Provide in an attachment three references from architects or engineers and three references from subcontractors that the Firm has worked with in the last five (5) years.

**Section 2: Required Disclosures**

The Contractor submitting this CQS shall answer the following questions with regard to the past five (5) years. If any question is answered in the affirmative, the Firm shall submit an attachment, providing details concerning the matter in question, including applicable dates, locations, names of projects/project owners and circumstances.

- 1. Has the Firm been debarred, suspended or otherwise prohibited from doing business with any federal, state or local government agency, or private enterprise?

Yes \_\_\_ No \_\_\_

- 2. Has the Firm been denied prequalification, declared non-responsible, or otherwise declared ineligible to submit bids or proposals for work by any federal, state or local government agency, or private enterprise?

Yes \_\_\_ No \_\_\_

- 3. Has the Firm defaulted, been terminated for cause, or otherwise failed to complete any project that it was awarded?

Yes \_\_\_ No \_\_\_

- 4. Has the Firm been assessed or required to pay liquidated damages in connection with work performed on any project?

Yes \_\_\_ No \_\_\_

- 5. Has the Firm had any business or professional license, registration, certificate or certification suspended or revoked?

Yes \_\_\_ No \_\_\_

- 6. Have any liens been filed against the Firm as a result of its failure to pay subcontractors, suppliers, or workers?

Yes \_\_\_ No \_\_\_

- 7. Has the Firm been denied bonding or insurance coverage, or been discontinued by a surety or insurance company?

Yes \_\_\_ No \_\_\_

- 8. Has the Firm been found in violation of any laws, including but not limited to contracting or antitrust laws, tax or licensing laws, labor or employment laws, environmental, health or safety laws\*?

Yes \_\_\_ No \_\_\_

*\*With respect to workplace safety laws, this statement is limited to willful federal or state safety law violations.*



9. Has the Firm or its owners, officers, directors or managers been the subject of any criminal indictment or criminal investigation concerning any aspect of the Firm's business?  
Yes \_\_\_ No \_\_\_
10. Has the Firm been the subject to any bankruptcy proceeding?  
Yes \_\_\_ No \_\_\_

**Part II: Past Performance Review**

**Section 1: Project Listings and Past Performance Data**

1. The Contractor shall submit a complete list of all projects, public and private, it has performed in the last five years in an attachment labeled "Past Projects." Highlight any projects that are similar in size, scope and complexity to the Contract Work. List projects in reverse chronological order, beginning with most recent. For each project listed, the Contractor shall provide the following information.
- a. The name, location and project number of the project.
  - b. The names, addresses and phone numbers of at least two owner representatives familiar with the Contractor's performance on the project (may include owners, project managers, architects, engineers).
  - c. The original bid/proposal price and the final contract price.
  - d. The original date for schedule completion and actual completion date.
  - e. Any performance ratings given to the Contractor (whether descriptive, e.g., good, satisfactory, or numerical, e.g., 80 out of 100, or other).
1. The Contractor shall submit a complete list of all open or on-going projects, public and private, in an attachment labeled "Current Projects." List projects in reverse chronological order, beginning with the most recent. For each project listed, provide the following information.
- a. The name, location and project number of the project and percentage of work complete to date.
  - b. The names, addresses and phone numbers of at least two owner representatives familiar with the Contractor's performance on the project (may include owners, project managers, architects, engineers).

- c. The original bid/proposal price and the estimated final contract price.
- d. The original date for schedule completion and estimated completion date.
- e. Any performance ratings given to the Contractor (whether descriptive, e.g., good, satisfactory, or numerical, e.g., 80 out of 100, or other).

**Section 2: Performance Evaluation Reports**

- 1. The Contractor shall submit an attachment, copies of all performance evaluation reports in its possession or control for all past and current projects, public and private for the past five years.
- 2. For purposes of this Section the term performance evaluation reports should be interpreted to mean any documents within the Contractor’s control or possession that were prepared to evaluate, rate or score in any way the contractor’s performance on projects.

**Section 3: Contractor Safety Record**

- 1. Provide the Contractor’s Workers Compensation Experience Modification Rating for the past three years, beginning with the most recent year available:

Year 1: [e.g. 2010: 1.0 ]

Year 2: [e.g. 2011: 1.1 ]

Year 3: \_\_\_\_\_

- 2. Provide the Contractor’s Lost Time Incidence Rate for the most recent year:

\_\_\_\_\_

- 3. Provide the Contractor’s Recorded Incidence Rate for the most recent year:

\_\_\_\_\_

4. Identify in an attachment any citations issued by federal or state safety agencies for serious violations issued in the past five (5) years. Provide a listing of the citation number, a brief description of the violation and the amount of penalty, if any, for each violation.

**Section 4: Pending Legal Matters**

1. Claims, Judgments, Lawsuits: Are there any pending claims, judgments, lawsuits or alternative dispute proceedings involving the Firm that involve potential damages of \$10,000 or more?

Yes\_\_\_\_No \_\_\_\_ If yes, provide details in an attachment.

2. Complaints, Charges, Investigations: Is the Firm currently the subject of any complaint, investigation or other legal action for alleged violations of law pending before any court or governmental agency?

Yes\_\_\_\_No \_\_\_\_ If yes, provide details in an attachment.

**Part III: Required Representations**

In submitting this CQS, the Firm makes the following representations, which it understands are required as a condition of performing the Contract Work and receiving payment for same.

1. The Firm will possess all applicable professional and business licenses required for performing work in Boulder County.

Yes\_\_\_\_No \_\_\_\_

2. The Firm satisfies all bonding and insurance requirements as stipulated in the solicitation for this project.

Yes\_\_\_\_No \_\_\_\_

3. The Firm and all subcontractors that are employed or that may be employed in execution of the Contract Work shall be in full compliance with Boulder County's requirements for workers' compensation insurance.

Yes\_\_\_\_No \_\_\_\_

4. If awarded the Contract Work, the Firm represents that it will not exceed its current bonding limitations when the Contract Work is combined with the total aggregate amount of all unfinished work for which the Contractor is responsible.

Yes\_\_\_\_No \_\_\_\_

5. The Firm represents that it has no conflicts of interests with Boulder County if awarded the Contract Work and that any potential conflicts of interest that may arise in the future will be disclosed immediately to Boulder County.

Yes \_\_\_\_ No \_\_\_\_

6. The Firm represents the price offered and other information submitted in connection with its bid for the Contract Work were arrived at independently without consultation, communication or agreement with any other offeror or competitor.

Yes \_\_\_\_ No \_\_\_\_

7. The Firm will ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex or national origin.

Yes \_\_\_\_ No \_\_\_\_

The undersigned hereby represents that all statements, representations, information and documents provided in or with this Contractor Qualification Statement and attachments hereto are complete, accurate and truthful.

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Position/Title

\_\_\_\_\_  
Firm Name




\_\_\_\_\_  
Notary Public

**Project:**  
**Flood-Construction Services for South St. Vrain Creek Restoration at Hall Ranch**

**COLORADO  
2013 PHASE II  
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM**

**SPECIAL PROVISIONS**

**SOUTH ST VRAIN CREEK RESTORATION**

<p>Scott Schreiber</p> 	<p>Signing as the Professional of record for the Special Provisions listed below Section 101 through Section 240 Section 508 – Beaver Dam Analogue Section 626 – Mobilization Section 630 - Construction Zone Traffic Control</p>
<p>Blair Hurst Vajda</p> 	<p>Signing as the Professional of record for the Special Provisions listed below: Section 214 - Large Wood Structures Section 506 - Rock Structures</p> <p>Contributed to the Special Provisions listed below: Section 108 – Prosecution and Progress (Assisted Matrix with list of Submittals and Inspections) Section 201 - Clearing and Grubbing (Edited the base specification developed by Matrix) Section 202 - Removal of Tree (Edited the base specification developed by Matrix) Section 203 - Unclassified Excavation (Edited the base specification developed by Matrix)</p>
<p>Julie Gamec</p> 	<p>Signing as the Professional of record for the Special Provisions listed below: Section 209 – Time Release Watering Section 212 - Seed and Soil Conditioning Section 213 – Mulching Section 214 - Planting Section 215 – Transplanting Mature Willows Section 216 – Soil Retention Blanket (Special) Section 506 – Rock Structures – (Assisted OTAK with Boulder Toe and Willow Cuttings in Cobble Toe portion)</p>

**COLORADO  
2013 PHASE II  
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM**

**SPECIAL PROVISIONS**

**SOUTH ST VRAIN CREEK RESTORATION**

This project incorporates by reference the Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction (2011). The Contractor shall use the 2011 CDOT specifications for the subject work. The following special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and plans.

**PROJECT SPECIAL PROVISIONS**

	<u>Date</u>	<u>Page</u>
Revision of Section 101 – Definition of Terms	(September 7, 2016)	3
Revision of Section 105 – Control of Work	(September 7, 2016)	5
Revision of Section 106 – Control of Material	(September 7, 2016)	14
Revision of Section 107 – Legal Relations and Responsibility to Public	(September 7, 2016)	16
Revision of Section 108 – Prosecution and Progress	(September 7, 2016)	19
Project Closeout (September 7, 2016)	21	
Revision of Section 201 – Clearing and Grubbing	(September 7, 2016)	25
Revision of Section 201 – Removal of Structures and Debris	(September 7, 2016)	28
Revision of Section 202 – Removal of Tree	(September 7, 2016)	30
Revision of Section 203 – Unclassified Excavation (Complete in Place)	(September 7, 2016)	32
Revision of Section 208 – Erosion Control (Stormwater Management)	(September 7, 2016)	36
Revision of Section 209 – Watering and Dust Palliatives	(September 7, 2016)	37
Revision of Section 209 – Time Release Watering	(September 7, 2016)	38
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**REVISION OF SECTION 101  
DEFINITION OF TERMS**

Technical Specifications related to construction materials and methods for the Work embraced under this Contract shall consist of the "Colorado Department of Transportation's Standard Specifications for Road and Bridge Construction", dated 2011.

All reference to the Colorado Division of Highways, Colorado Department of Transportation, and / or Department or Division shall also mean Boulder County Parks & Open Space

Certain terms utilized in the Specifications referred to in the paragraph above shall be interpreted to have different meanings within the scope of this Contract. A summary of redefinitions follows:

Subsection 101.01: Abbreviations.

"NRCS" Natural Resources Conservation Service  
"CWCB" Colorado Water Conservation Board  
"BCPOS" Boulder County Parks and Open Space  
"EWP" Emergency Watershed Protection  
"CDBG-DR" Community Development Block Grant – Disaster Relief  
"SSV" South St Vrain Creek  
"SSVCR" South St Vrain Creek Restoration

Subsection 101.28: "Department" shall mean the Boulder County Parks and Open Space.

Subsection 101.29: "Chief Engineer" shall mean the Engineer, Boulder County Parks and Open Space or their designated representative.

Subsection 101.51: "Project Engineer" or "Project Manager" shall mean the Engineer, Boulder County Parks and Open Space or their designated representative.

"Owner" shall be Boulder County Parks and Open Space  
"Owners Representative" shall be Boulder County Parks and Open Space  
"Boulder County Parks and Open Space", "Boulder County", "Owner", and "Sponsor" are all interchangeable.

Subsection 101.76: "State" shall mean Boulder County Parks and Open Space (where applicable).

"DBH" refers to Diameter at Breast Height which is considered to be 4.5 feet above ground for this project

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REVISION OF SECTION 101  
DEFINITION OF TERMS**

Below is a table outlining the specific personnel recommended for this project:

Sponsor's Representative:	Ernst Strenge (Boulder County), and/or representative
Technical Representative:	Laura Jones (Boulder County), and/or representative
Project Engineer	Prashant KC (Boulder County), and/or representative
Vegetation Specialist:	David Hirt (Boulder County), and/or representative
Stream Restoration Specialists:	Prashant KC (Boulder County), David Hirt (Boulder County) and/or representative
Design Team:	Scott Schreiber (Design Engineer, Matrix Design Group), Mike Rafferty (Design Engineer, Otak), Brandon Parsons (Landscape Designer, THK), and/or representative
Surveyor:	TBD (TBD) and/or representative



**REVISION OF SECTION 105  
CONTROL OF WORK**

Section 105 of the Standard Specifications is hereby revised for this project as follows:

**105.09 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS**

Subsection 105.09 shall have the second paragraph replaced as follows:

In case of discrepancy the order of precedence is as follows:

- (a) Special Provisions
  - 1. Project Special Provisions
  - 2. Standard Special Provisions
  - 3. Boulder County Special Provisions
  - 4. Boulder County Permit Provisions
- (b) Plans
  - 1. Detailed Plans
  - 2. CDOT Standard Plans
- (d) Supplemental Specifications
- (e) Standard Specifications

A hard copy of the Boulder County Special Provisions may also be obtained from the Boulder County Parks and Open Space.

Section 105 of the Standard Specifications is hereby revised for this project to include:

Supplemental Specification

**Project Management**

Section includes:

- 1. Project coordination.
- 2. Pre-construction conference.
- 2. Site mobilization conference.
- 4. Progress meetings.
- 5. Pre-Installation meetings.
- 6. Project Schedules.
- 7. Short Interval Schedules.
- 8. Delays and extensions.
- 9. Coordination drawings.
- 10. Incidental costs.
- 11. Correspondence and notices.

**1. PROJECT COORDINATION**

- A. Coordinate scheduling, submittals and work to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Any verbal authorizations, instructions or acknowledgments by anyone will not be binding unless followed up in writing by authorized representatives of the County or Contractor.

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**REVISION OF SECTION 105  
CONTROL OF WORK**

- C. Contractor will be responsible for notifying subcontractors and/or suppliers of their required attendance for any of the conferences/meetings.

2. **PRECONSTRUCTION CONFERENCE**

- A. After Notice to Proceed, a Preconstruction Conference to discuss Project Work will be held at a time and location designated by the County.

B. Agenda:

- 1. The Owner will prepare the agenda.
- 2. Review and discuss the following subjects at a minimum:
  - a. Required schedules.
  - b. Erosion/sediment control plans.
  - d. Sequencing of critical path Work items.
  - e. Work changes and clarification procedures.
  - f. Use of site, access, office and storage areas, security and temporary facilities.
  - g. Major product deliveries and priorities.
  - h. Contractor's safety plan.
  - i. Progress payment procedures.
- 3. Minimum attendance:
  - a. County representatives.
  - b. The Contractor's superintendent.
  - c. The County's Engineer.
  - d. Subcontractors' and Suppliers' representatives as the Contractor or the County deem appropriate.
  - e. Others as appropriate to the agenda.

3. **SITE MOBILIZATION CONFERENCE**

- A. The Contractor will schedule a conference at the Project site prior to Contractor occupancy.

B. Agenda:

- 1. Use of premises by County and Contractor.
- 2. County requirements and occupancy during construction.
- 3. Construction facilities and controls.
- 4. Temporary utilities.
- 5. Survey and construction layout.
- 6. Security and housekeeping procedures.
- 7. Schedules.
- 8. Procedures for testing.
- 9. Procedures for maintaining record documents.
- 10. Requirements for start-up of equipment.
- 11. Inspection and acceptance of equipment put into service during construction period.

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REVISION OF SECTION 105  
CONTROL OF WORK**

C. Attendance Required:

1. County representatives.
2. The County's Engineer.
3. Contractor.
4. Contractor's Superintendent
5. Major subcontractors.

4. PROGRESS MEETINGS

- A. At a time and location determined by the County and Contractor, Weekly Progress Meetings will be held.
- B. The purpose of these meetings is to discuss schedule, progress, coordination, submittals, and job related problems.

Agenda:

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems which impede planned progress.
5. Review of submittals and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Special Project Procedures.
8. Maintenance of progress schedule.
9. Corrective measures to regain projected schedules.
10. Planned progress during succeeding work period.
11. Coordination of projected progress.
12. Maintenance of quality and work standards.
13. Effects of proposed changes on progress schedule and coordination.
14. Other business relating to the Project.

- C. The Contractor will conduct the meetings, prepare and distribute meeting notes.

D. Attendance:

1. County representatives.
2. The County's Engineer.
3. Contractor.
4. Contractor's Superintendent.
5. Major subcontractors.
6. Suppliers and others as deemed necessary.

- E. Contractor will be responsible for notifying subcontractors and suppliers of their required attendance.

5. PRE-INSTALLATION MEETINGS

- A. When required in the individual specification section, convene a pre-installation meeting at work site prior to commencing work.
- B. Require attendance of parties directly affecting, or affected by, work of the specific Section.

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REVISION OF SECTION 105  
CONTROL OF WORK**

- C. Contractor shall notify the County, four days in advance of meeting dates.
- D. The Contractor will prepare an agenda, preside at meeting, record minutes, and distribute copies within two days after meeting to participants.
- E. Review conditions of installation, preparation and installation procedures and coordination of related work.

**6. CONSTRUCTION SCHEDULES**

- A. All EWP projects are required to be built to NRCS specifications or better. NRCS specifications are available online at <http://directives.sc.egov.usda.gov/>, under Handbooks, Title 210, National Engineering Handbook, Part 642.
- B. All creek work must be completed within 220 days of Financial Agreement date between NRCS and CWCB. Contractor responsible for notifying Boulder County of desired construction start date at least 30 days prior. Boulder County will attempt to issue an NTP by desired date, but cannot guarantee. (See section 512.13 Performance Time Limits <https://coloradoewp.com/sites/coloradoewp.com/files/document/pdf/NRCS%20EWP%20Program%20Manual.pdf>)
- C. In accordance with the General Conditions, the Contractor shall, within 10 days after Notice to Proceed is issued, shall deliver to the County 3 copies of a complete construction schedule which addresses all of the work required under the Contract.
- D. The schedules shall include the following information as a minimum:
  - 1. Detail of activities required for mobilization and start of construction.
  - 2. A plan for completion of work in sufficient detail to allow observation and monitoring by the County. Any activity longer than two weeks, with the exception of submittal and procurement activities, should be broken down into phases two weeks or less in length.
  - 3. Long lead procurement requirements.
  - 4. Submittal and shop drawings preparation and review times. Indicate critical dates for submission of specified shop drawings, product data, samples, and certificates. Allow ample time for review of submittals by the County and/or the County's Engineer.
  - 5. Include decision dates for products specified by allowance and for selection of colors/finishes.
  - 6. Duration of all activities.
  - 7. Dependencies and logic between activities.
  - 8. County-furnished materials and equipment, if any.
  - 9. The schedule will be time-scaled and cost loaded. The cost for performing each activity shall include all labor, material and equipment including overhead and profit. The sum of the costs of all activities shall equal the total contract value. The Contractor shall provide supplemental reports, such as computerized logic reports, if deemed necessary by the County to facilitate review of the proposed schedule.
  - 10. Contractor's Schedule shall be submitted with acknowledgements signed by authorized officials of each subcontractor listed in the bid confirming their review of the schedule and their ability to perform their portion of the work according to said Schedule.
- C. The schedule shall be the basis for establishing starting and completing dates of Work for the Project.
- D. Conform to accepted schedule, and arrange work in such a manner that it will be installed in accordance with the schedule.
- E. Update the schedule in accordance with requirements of the Project and the General Conditions.

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**REVISION OF SECTION 105  
CONTROL OF WORK**

- F. Coordinate letting of subcontracts, material purchases, delivery of materials, sequence of operations, and similar activities to conform to accepted schedule, and furnish proof of conformance as required by County.
- G. The Contractor shall be responsible for planning and scheduling the Work and monitoring progress of the Work with respect to the schedule. The Contractor shall be responsible for scheduling all work activities, including those of its subcontractors. The Schedules shall be feasible, workable and reasonable for the work, and shall be the Contractor's plan of construction for completing the contract work within the specified time periods.
- H. The County will review the Contractor's proposed Construction Schedule within a reasonable time and will provide comments, make inquiries regarding the schedule in a timely manner. The Contractor shall re-submit its revised Construction Schedule for review after incorporating the necessary changes and revisions to the County within 7 days of the issuance of the County's comments.
- I. The Construction Schedule, upon acceptance, will become the basis for determining schedule compliance, for determining the impact of changes to the Contract and delays to the Work.

**7. SHORT INTERVAL SCHEDULES**

- A. Short Interval Scheduling will be used throughout the construction process.
- B. The interval will be three weeks and will include the week submitted and two weeks thereafter.
- C. The schedules will be in sufficient detail to evaluate daily milestones and will correspond to the updated Construction Schedule.
- D. The Contractor shall prepare its short interval schedule and deliver several copies of it to each weekly job site meeting where it will be discussed, revised if necessary, and distributed to parties present.

**8. DELAYS AND EXTENSIONS OF TIME**

- A. The scheduled completion date shall be the same as the contractual completion date.
- B. The contract completion time shall include a period during which adverse weather conditions are anticipated and the work is expected to proceed at a slower pace. Because this has already been accounted for, no time extensions will be granted for delays due to adverse weather conditions between October 31 and March 31. All work must be completed by December 31<sup>st</sup>, 2017. The Contractor shall consider the impact of the anticipated weather and the consequences thereof in scheduling and planning the Work.
- C. Abnormal weather conditions encountered and weather impacts occurring beyond the parameters set forth in General Conditions on critical paths activities may be cause for a contract extension. The Contractor shall give notice to the County, in writing, within 2 days of the on-set of such conditions and the County shall determine:
  - 1. If it agrees with the conditions.
  - 2. Whether there is an impact to the critical path of the construction schedule.
- D. It is understood that all disruptive weather events with an average interval of (10) years or more between their occurrence and the occurrence of a similar event of equal or greater magnitude cannot be reasonably anticipated. For the purposes of this contract, weather information and historical data for the area in question shall be assumed to be the same as that measured at the nearest or most applicable record station of the Environmental Data Service of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce.

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REVISION OF SECTION 105  
CONTROL OF WORK**

- E. Weather days will be recorded by the Contractor and forwarded to the County within five (5) days of occurrence. Each record shall indicate the critical path activity(s) affected. It will be the Contractor's duty to perform on unaffected activities whenever possible during weather days.
  - F. There shall be no increase in the contract sum, time, or remuneration of any kind by County to Contractor for extensions due to adverse weather conditions unless approved in writing by the County.
  - G. When the County initiates a change, which has the potential to impact the stipulated contract completion date or milestone dates established above, the Contractor shall prepare a revised schedule to reflect the impact of the change. After the revised schedule has been mutually agreed upon, and Contractor has been authorized to proceed with the change, the revisions shall be incorporated into the Construction Schedule.
  - H. Time extensions will be considered only to the extent that there is insufficient remaining float time to absorb the changes. Float time is defined as the amount of the time between the earliest start date and the latest finish date on the accepted Construction Schedule. Contractor acknowledges and agrees that actual delays affecting paths of activities containing float time will not have any affect upon contract completion times, providing that the actual delay does not exceed the float time, per the latest updated and accepted version of the Construction Schedule.
9. COORDINATION DRAWINGS
- A. Provide information required by the County for preparation of coordination drawings.
  - B. Review drawings prior to submission to the County.
11. CORRESPONDENCE AND NOTICES
- A. Clearly identify correspondence, notices and submittals with project name, subject and detailed references to Drawings and Specifications.
  - B. Notify the County two working days in advance of required inspection.

**Construction Documentation**

- 1.1 SUMMARY
- A. Contractor shall perform scheduling of Work, monthly payment requests and project status reporting under these Contract Documents in accordance with requirements of this section.
  - B. Upon Award of Contract, Contractor shall immediately commence development of Progress Schedule to ensure compliance with schedule submittal requirements.
- 1.2 GENERAL
- A. The Progress Schedule shall be based on and incorporate milestone and completion dates specified in the Contract Documents.
  - B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times agreed on by both parties, unless an earlier (advanced) time of completion is requested by Contractor and agreed to by the County. Any such agreement shall be formalized by a Change Order.
    - 1. The County is not required to accept an earlier (advanced) schedule, i.e., one that shows early completion dates for the Contract Times.

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**REVISION OF SECTION 105  
CONTROL OF WORK**

2. Contractor shall not be entitled to extra compensation in event agreement is reached on an earlier (advanced) schedule and the Contractor completes its Work, for whatever reason, beyond completion date shown in earlier (advanced) schedule but within the Contract Times.
  3. A schedule showing the work completed in less than the Contract Times that has been accepted by the County shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and Substantial Completion. Project Float is a resource available to both the County and Contractor.
- C. Float Ownership: Neither the County nor Contractor owns float. The Project owns the float. As such, liability for delay of the Substantial Completion Date rests with the party whose unexcused delay, last in time, actually cause delay to the Substantial Completion Date:
1. For example, if Party A incurs unexcused delay and uses some, but not all of the float and Party B later incurs unexcused delay and uses the remainder of the float as well as additional time beyond the float, Party B shall be liable for the delay that represents a delay to the Substantial Completion Date.
  2. Party A would not be responsible for the delay since it did not consume the entire float and additional float remained; therefore, the Substantial Completion Date was unaffected by Party A.
- D. The Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing contract schedules and monitoring actual progress as compared to Progress Schedule rests with the Contractor.
- E. Failure of the Progress Schedule to include any element of the Work or any inaccuracy in Progress Schedule will not relieve the Contractor from responsibility for accomplishing the Work in accordance with the Contract Documents. The County's acceptance of the Progress Schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests, and shall not, in any manner, impose a duty of care upon the County, or act to relieve the Contractor of its responsibility for means and methods of construction.
- F. Transmit each item under form approved by the County:
1. Identify Project with County Contract name and number, and name of the Contractor.
  2. Provide space for Contractor's approval stamp and the County's review stamps.
  3. Submittals received from sources other than Contractor will be returned to the Contractor without the County's review.

**1.3 CONSTRUCTION SCHEDULE FORMAT AND LEVEL OF DETAIL**

- A. Contractor shall submit its Construction Schedule for review at the preconstruction conference. The Construction Schedule shall be completed and accepted by the County prior to issuing the Notice to Proceed. The Construction Schedule shall indicate all separate fabrication and field construction activities required for completion of the work, including but not limited to the following:
1. All Contractor, Subcontractor and assigned Contractor work shall be shown in a logical work sequence that demonstrates a coordinated plan of work for all contractors. The intent is to provide a common basis of acceptance, understanding and communication, as well as interface with other Contractors.
  2. Activities related to the delivery of County-furnished equipment to be Contractor-installed per Contract Documents shall be shown.
  3. All activities shall be identified through codes or other identification to indicate the building (i.e. buildings, sitework) and Contractor/subcontractor responsibility to which they pertain.
  4. Contractor shall break up the work schedule into activities of durations of approximately 15 working days or less each, except for non-field construction activities or as otherwise deemed acceptable by the County.

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REVISION OF SECTION 105  
CONTROL OF WORK**

- B. Contractor's failure to include any element of work required for performance of the work on the detailed construction schedule shall not excuse Contractor from completing all work required within the Contract time.
- C. Contractor shall update and issue weekly a three-week detailed bar chart schedule for all contracts with duration longer than 45 working days.
- D. The County will require the Contractor to utilize computer scheduling software, such as Microsoft Project or approved equivalent software for all scheduling including schedule updates unless otherwise approved by the County.

**1.4 MONTHLY SCHEDULE UPDATE SUBMITTALS**

- A. Following acceptance of Contractor's Schedule, Contractor shall monitor progress of Work and adjust schedule each month to reflect actual progress and any anticipated changes to planned activities:
  - 1. Each schedule update submitted shall be complete, including all information, Schedule format, and level of details as required under this Section.
  - 2. Each schedule update shall continue to show all work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed.
- B. Revising any report, schedule or narrative submitted to the County by the Contractor shall not have the effect of amending or modifying, in any way, the Substantial Completion date or milestone dates or modify or limit the Contractor's obligations established in the Contract Documents.
- C. Contractor shall thoroughly coordinate all changes to the Contract Drawings by making red line entries on an ongoing basis to a set of working drawings maintained at the job site. The Engineer's approval of the accuracy and current status of the record of changes to the As-Built Drawings (Redlines) will be a prerequisite to the Engineer's approval of request for each progress payment.

**1.5 RECOVERY SCHEDULE**

- A. If the monthly Schedule Update shows a completion date 10 calendar days beyond the Contract Completion date, or a delay of individual milestone completion dates, Contractor shall within 7 calendar days, submit to the County the proposed revisions to recover the lost time. As part of this submittal, Contractor shall provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, Contractor shall provide a schedule diagram comparing the original sequence to the revised sequence of work.
- B. Contractor shall provide supervision, labor, equipment and materials, as necessary, to recover the lost time.

**1.6 TIME EVALUATION FOR CHANGE ORDERS, AND OTHER DELAYS**

- A. Before Contractor is directed to proceed with changed work, Contractor shall prepare and submit, with his signed change order price quote request, a written narrative explaining how the changed work affects other schedule activities. The written narrative shall describe how the Contractor proposes to incorporate the changed work in the schedule, and how it impacts the current schedule update. The Contractor is responsible for requesting all time extensions or any impacts to the critical path.



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**REVISION OF SECTION 105  
CONTROL OF WORK**

- B. Contractor shall, in addition, comply with the requirements of Paragraph "A" above for all types of delays such as, but not limited to, Contractor/Subcontractor delays, asserted County or third party caused delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc. Contractor shall be responsible for all costs associated with the preparation of the Time Evaluation described in Paragraph "A" above, and the process of incorporating them into the current schedule update. The Contractor's Time Evaluation request must be based on the as-built critical path.

**1.7 TIME EXTENSIONS**

- A. Contractor is responsible for requesting time extensions for time impacts that, in the opinion of Contractor, impact the critical path of the current schedule update. Notice of changes of contract time shall be given in writing.
- B. Where an event for which either Contractor or the County is not responsible impacts the projected Substantial Completion date, Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. Contractor shall also include a detailed cost breakdown of the labor, equipment and material the Contractor would expend to mitigate time impact. Contractor shall submit its mitigation plan to the County within 14 calendar days from the date of discovery of said impact. Contractor is responsible for the cost to prepare the mitigation plan.
- C. Contractor's failure to request time, provide a written time evaluation or a mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.
- D. If Contractor does not submit a written time evaluation within the required 14 calendar days for any issue, it is mutually agreed that Contractor does not require a time extension for said issue.

**REVISION OF SECTION 106  
CONTROL OF MATERIAL**

Section 106.08 shall include the following:

Site Access and Storage

1.1 GENERAL

- A. The Contractor shall take all necessary precautions for the protection of the Work and the safety of the public. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise. The Contractor shall station such guards or flaggers and shall conform to such special safety regulations relating to traffic control as may be required by the public authorities within their respective jurisdictions. All signs, signals, and barricades shall conform to the requirements of the "Manual on Uniform Traffic Control Devices" 2009 Edition including the latest revisions.

1.2 HIGHWAY LIMITATIONS

- A. The Contractor shall make its own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to and from the site of the Work. It shall be the Contractor's responsibility to construct and maintain any access or haul roads required for its construction operations.
- B. All hauling by motor vehicles shall be confined to truck routes, except where otherwise authorized in writing by the County.

1.3 CONTRACTOR'S WORK AND STORAGE AREA

- A. The Contractor shall make its own arrangements for any necessary off-site storage or shop areas necessary for the proper execution of the Work. The Contractor shall submit a site plan, drawn to scale, of the proposed storage/trailer and/or construction site to the County for review and approval.
- B. The County will designate and arrange for the Contractor's use, a portion of the property (adjacent to the Work) for its exclusive use during the term of the contract as storage and shop area for its construction operations relative to this contract.
- C. Lands to be furnished by the County for construction operations, roads, and other purposes are as shown on the plans and/or specified herein. Should the Contractor find it necessary to use any additional land for its purposes during the construction of the Work, it shall provide for the use of such lands at its own expense. The Contractor shall obtain the County's or private property owner's written approval prior to using any additional land.

1.4 TEMPORARY STREET USE

- A. Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street, alley, way, or parking area during the performance of the Work hereunder, and it shall so conduct its operations as not to interfere unnecessarily with the authorized work of the Boulder County, utility companies, or other agencies in such streets, roadways, or parking areas.
- B. No Street shall be closed to the public without first obtaining the permission of the Board of County Commissioners and other proper governmental authority, where applicable. Where excavation is being performed in primary streets or highways, one lane of traffic shall be kept open in each direction at all times unless otherwise noted in the plans under the terms of the permits issued by the County, State, or other public agencies, as required.
- C. Fire hydrants on or adjacent to the Work shall be kept accessible to firefighting equipment at all times.

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**REVISION OF SECTION 106  
CONTROL OF MATERIAL**

- D. Temporary provisions shall be made by the Contractor to assure the use of sidewalks and the proper functioning of all gutters, sewer inlets, and other drainage facilities.
- E. Wherever necessary or required for the convenience of the public or individual residents or business places at street or highway crossings, private driveways, or elsewhere, the Contractor shall provide suitable temporary bridges or steel plates over unfilled excavations, except in such cases as the Contractor shall secure the written consent of the individuals or authorities concerned to omit such temporary bridges or steel plates, which written consent shall be delivered to the County prior to beginning the excavation. All such bridges or steel plates shall be maintained in service until access is provided across the backfilled excavation.
- F. Temporary bridges or steel plates for street and highway crossings shall conform to the requirements of the authority having jurisdiction in each case, and the Contractor shall adopt designs furnished by said authority for such bridges or steel plates, or shall submit designs to said authority for approval, as may be required.

**REVISION OF SECTION 107  
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

Section 107 of the Standard Specifications is hereby revised for this project as follows:

**107.02 PERMITS, LICENSES, AND TAXES**

Subsection 107.02 shall include the following:

Unless otherwise specified, the Contractor shall procure or ensure that all required permits and licenses are acquired; pay all charges, fees, and taxes, including permits procured for this project by others; and give all notices necessary and incidental to the due and lawful prosecution of the work. The costs of these permits will not be paid for separately, but shall be included in the work.

Prior to beginning work, the Contractor shall furnish the Engineer with a written list of all permits required for the proper completion of the contract. The list shall clearly identify the types of permits that must be obtained before work on any particular phase or phases of work can be started. Copies of the fully executed permits shall be furnished to the Engineer upon request. Below is a list of some applicable permits for this project. This list is not all inclusive and should be compared to list developed by contractor.

BCPOS and the Engineer will support the contract in applying for permits required as part of this project. Permits are in various stages of process and contractor should be able to easily obtain permits not acquired prior to the start of the project by BCPOS or the Engineer. Permits that are required are:

1. Boulder County Landuse Department Limited Impact Special Use Permit (Received)
2. Boulder County Floodplain Permit (Applied For)
3. Boulder County Grading Permit (Apart of Stream Restoration Permit)
4. US Army Corps Clean Water Act Section 404 Nationwide Permit 27 & 37 (Applied For)
5. Colorado Department of Transportation Right of Way Permit (In Process)
6. Boulder County Department of Transportation Right of Way Permit (In Process)
7. Storm Water Discharge Permit Colorado Department of Public Health and Environment (CDPHE) (Ready to Submit)
8. Construction Dewatering Wastewater Discharge Permit CDPHE (Ready to Submit)
9. State Department of Revenue Tax Exempt Permit (In Process)
10. Boulder County Stream Restoration Permit (In Process)

Contractor shall verify all appropriate permits have been acquired and transferred to their name, as applicable, prior to starting any work. Contractor must meet requirements of all permits acquired for this project.

Other clearances required as part of this project include:

1. Section 7 – Endangered Species Act:US Fish and Wildlife Service (USFWS) (Applied For)
2. Section 106 – National Historic Preservation Act (Applied For)
3. CPW SB40 Review (Prior to Construction)

Some clearances have been developed by the engineers and BCPOS, but will need to be verified by contractor prior to starting any work. Some clearances require review of the work area prior to start of work by a qualified individual. Please review requirements in this document for specifics. Contractor must meet requirements of all clearances acquired for this project.

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**REVISION OF SECTION 107  
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

**107.12 Protection and Restoration of Property and Landscape**

Subsection 107.12 shall include the following:

The Contractor shall protect in place existing riparian, wetlands, and other vegetation, except for those what must be removed to accommodate construction of the project. The Contractor shall fence specific areas of vegetation to be protected in the field as shown in the plans or as directed by the Engineer. All trees designated to be protected on the design plans and within the specifications will receive plastic fencing on all sides facing either direct construction or access routes.

The Contractor shall perform all the work in such a manner that the least environmental damage will result. Any questionable areas or items shall be brought to the attention of the Engineer for approval prior to vegetation removal or any damaging activity. Damaged or destroyed fenced trees, shrubs, or wetlands, which could have been avoided as determined by the Engineer, shall be replaced in kind at the expense of the Contractor.

If the protective vegetation fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is repaired to the Engineer's satisfaction. Replacement of the protective fence shall be at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

Before beginning construction, the contractor shall determine the location of all the existing approved OWTS components in the project area. The documents are scanned into septicmart.org. If there are unapproved OWTS, there may not be any information online. In this case, the owner should help with the general location of the system.

Heavy equipment shall be restricted from the surface of the absorption fields of nearby residences. Detailed information about the location of OWTS components can be found at [www.bouldercounty.org/env/water/pages/septicmartcheckrecords.aspx](http://www.bouldercounty.org/env/water/pages/septicmartcheckrecords.aspx).

**107.15 RESPONSIBILITY FOR DAMAGE CLAIMS**

Subsection 107.15 shall include the following:

All Insurance Policies and Certificates of Insurance issued for this project shall name as additional insured(s), Boulder County Parks and Open Space, whether private or governmental, the Boulder County Parks and Open Space officers and employees, and the Engineer and its agents and employees, and any other person(s), company(ies), or entity(ies) deemed necessary by the Boulder County Parks and Open Space.

Subsection 107.24 shall include the following:

The emission of dust into the atmosphere shall be minimized during handling and storage of construction materials, and the Contractor shall use such methods and equipment as are necessary to minimize or prevent dust during these operations.

Equipment and vehicles that are found to have emissions of exhaust gases or particulates that exceed applicable limits established by Federal, State or local laws or authorities, shall not be operated until corrective repairs or adjustments are made. If required by the County, the Contractor shall provide acceptable evidence that equipment and vehicles have been tested for exhaust emissions and have been found to be in compliance with applicable limits.

The Contractor shall carry out proper and efficient measures wherever and as often as necessary to reduce the dust nuisance, and to prevent dust from damaging crops, orchards, cultivated field, and dwellings, or causing a nuisance to persons. The Contractor shall be held liable for any damage resulting from dust originating from his operations under these specifications on County property or elsewhere.

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**REVISION OF SECTION 107  
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

**107.25 WATER QUALITY CONTROL**

Subsection 107.25 (b) *Construction Requirements* is hereby revised to include the following:

25. This project is subject to permits with the Colorado Department of Health for Stormwater Discharges and Dewatering Discharges Associated with Construction Activities. The permits shall be obtained by the Contractor. The Contractor shall prepare all applications required and submit to the Colorado Department of Health. The Contractor shall submit a copy of certification of the permit to the Engineer prior to the start of construction. The Contractor is responsible for all application permit fees.
26. This project is subject to US Army Corps of Engineers Nationwide Permit 37 for Emergency Watershed Protection, Nationwide Permit 27 for Aquatic Habitat Restoration, Establishment and Enhancement Activities and the Pre-Construction Notifications for the South St Vrain Creek Restoration.
27. Dewatering work for earthwork operations adjacent to or encroaching on, streams or water courses shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or water courses by construction of intercepting ditches, bypass channels, barriers, evaporation ponds, or by other approved means. Excavated materials or other construction materials shall not be stockpiled or deposited near or on streambanks, lake shorelines, or other water course perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the water course itself, except as approved by the County. Turbidity limits from the Dewatering Permit shall be followed.
28. Turbidity increases in a stream or other bodies of water that are caused by construction activities shall be limited to the increases above the natural turbidities permitted under the water quality standards prescribed for that stream or body of water. When necessary to perform required construction work in a stream channel, the prescribed turbidity limits may be exceeded, as approved by the Colorado Department of Public Health and Environment (CDPHE), and the County, for the shortest practicable period required to complete such work. This required construction work may include such work as diversion of a stream, or specified earthwork in or adjacent to a stream channel, and construction of turbidity control structures. Mechanized equipment shall not be allowed to operate in flowing water except as necessary and permitted to construct crossings or to perform the required construction.

Abatement of Noise pollution:

Contractor work hours shall be Monday to Friday, 7:00am to 5:00pm. Work on Saturdays and Sundays, nights, and federal holidays shall not be allowed unless approved in writing by the County.

For information on required steps to secure the Stormwater Discharge Permit and the Construction Dewatering Permit, the Contractor shall contact:

Colorado Department of Public Health and Environment  
WQCD-P-B2  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530  
Attn: Permits Unit, % Nathan Moore  
Phone: (303) 692-3555

**REVISION OF SECTION 108  
PROSECUTION AND PROGRESS**

Section 108 of the Standard Specifications is hereby revised for this project as follows:

**108.03 SCHEDULE**

Subsection 108.03 shall include the following:

Salient features to be shown on the Contractor's Progress Schedule are as shown in Commencement and Completion of Work.

All work must be completed by December 31, 2017.

**Section 201 (Clearing and Grubbing)**

Inspections

1. Clearing and grubbing limits prior to construction (Engineer, BCPOS, and Landscape Designer – 2 days notice)
2. Flagged trees prior to removal (Engineer, BCPOS, and Landscape Designer – 2 days notice)

**Section 202 (Removal of Structures and Debris)**

Submittals

1. Methods to remove debris and abandoned utility appurtenances (7 days before construction)
2. Written permission from property owners for disposal sites

Inspections

1. Field inspection before and after removal of utility appurtenances (Engineer – 2 days notice)

**Section 202 (Removal of Tree)**

Submittals

2. List of salvaged trees greater than 12" DBH in each size class, including bole diameter, length, rootwad diameter, and species (if known) (Engineer - 14 days before construction of large wood structures)

Inspections

1. Flagged trees prior to removal (Engineer, BCPOS, and Landscape Designer – 2 days notice)
2. Stockpiled woody material before incorporation in large wood structures (Engineer – 4 days notice)

**Section 203 (Unclassified Excavation)**

Submittals

1. Rock Screening Plan (to Engineer – 2 weeks after Notice to Proceed)
2. Written permission from property owners for disposal sites

Inspections

1. Construction observation during first day of in-channel construction (Engineer – 2 days notice)
2. Construction observation during first day of overflow channel construction (Engineer – 2 days notice)
3. Construction observation during first day of rock screening (Engineer – 2 days notice)
4. Construction observation during channel and floodplain grading between 68+00 and 70+00 right bank (Engineer – 2 days notice)
5. Construction observation during floodplain grading at upstream end of Overflow Channel C (Engineer – 2 days notice)
6. Construction observation during grading of the downstream segment of Overflow Channel D (Engineer – 2 days notice)

**Sections 214 (Large Wood Structures)**

Submittals

1. Qualified Forester Certification to verify each source of imported large wood material is free of disease and parasites (Engineer – 7 days notice)

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**REVISION OF SECTION 108  
PROSECUTION AND PROGRESS**

Inspections

1. Visual inspection of stockpiled large wood material salvaged during clearing and grubbing and tree removal actions (Engineer – 2 days notice)
2. Visual inspection of imported large wood material (Engineer – 2 days notice)
3. Construction observation during first installation of each type of large wood structure (Engineer – 7 days notice)
4. Construction observation during installation of large wood structures near SSV Sta 92+50 left bank (Engineer – 2 days notice)
5. Construction observation during installation of large wood structures between SSV Sta 68+00 and 70+00 right bank (Engineer – 2 days notice)

**Section 506 (Rock Structures)**

Submittals

1. Material gradations of each unique rock mix that is scheduled to be imported from quarry (To Engineer)
2. Photo documentation of each unique rock mix that is scheduled to be imported from a non-quarry source (To Engineer)

Inspections

1. Visual inspection of 5 CY sample of the each imported rock mix at source (e.g., quarry) prior to delivery (Engineer – 2 days notice).
2. Visual inspection of 5 CY sample of each rock mix after screening prior to placement (Engineer – 2 days notice)
3. Construction observation during first installation of each type of rock structure (Engineer – 2 days notice)
4. Construction observation during installation of riffle structure at SSV Sta 96+75 (Engineer – 2 days notice)
5. Construction observation during installation of knickpoint stabilization structures in Overflow Channel E (Engineer – 2 days notice)



**PROJECT CLOSEOUT**

**1.1 FINAL CLEANUP**

- A. The Contractor shall promptly remove all rubbish, debris, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the Work by the County will be withheld until the Contractor has satisfactorily complied with the foregoing requirements for final cleanup of the project site.

**1.2 CLOSEOUT TIMETABLE**

- A. The Contractor shall establish dates for equipment testing, acceptance periods, (as required under the Contract). Such dates shall be established not less than two weeks prior to beginning any of the foregoing items, to allow the County and its authorized representatives and consultants sufficient time to schedule attendance at such activities.

**1.3 FINAL SUBMITTALS**

- A. The Contractor, prior to requesting its final progress payment, shall submit the following items to the County:
  - 1. Written guarantees or warranties.
  - 2. Operations and Maintenance Manuals and instructions.
  - 3. Keys and keying schedule.
  - 4. Maintenance stock items; spare parts; special tools.
  - 5. Record Drawings: Maintain a set of Contract Drawings as Record Drawings. Mark to show installation that varies from the Work originally shown.
  - 6. Record Specifications: Maintain 1 copy of the Project Manual, including addenda, as Record Specifications. Mark to show variations in the Work performed in comparison with the text of the Specifications and modifications.
  - 7. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
  - 8. Releases executed by property owners adjacent to the project site attesting that the Contractor has restored any damage done to their property during construction.
  - 9. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.
- B. The working and final As-Built Drawings shall show, as a minimum, the following information:
  - 1. All changes in the work generated by documents such as Change Orders, Construction Bulletins, Requests for Information (RFIs), and Contractor originated proposals. Identify the documents generating changes from the working documents.
  - 2. Any sketches that accompanied the Change directive.
  - 3. The actual location, identification, and sizes of material, equipment, utilities, and elements of the project to the same level of detail as the original Contract drawings.
  - 4. The correct scale, grade, elevations, dimensions, and coordinates of changes.
  - 5. Changes or modifications that result from final inspection.

**1.4 COMPLETION OF THE WORK**

- A. When requested by the County, the Contractor shall certify that all Work on the project has been substantially completed in accordance with the approved Contract Documents.
- B. The date of Substantial Completion of the Project shall be the date when the construction is sufficiently completed, in accordance with the Contract Documents, as modified by any change orders agreed to by the parties, so that the County can occupy or utilize the project for the use for which it was intended.

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PROJECT CLOSEOUT**

- C. Final Acceptance of the Project shall be when the legislative body of the County has accepted the Project as evidenced by execution and recording of a Notice of Final Settlement.

**1.5 REMAINING PUNCH LIST ITEMS**

- A. Upon attaining Substantial Completion, by agreement between the parties some small remaining punch list items may remain to be completed by the Contractor, as provided, if any, under the provisions for "Completion of the Work" in Paragraph 1.4 A, herein.
- B. The County shall have the right to retain an additional amount of money from the final progress payment to the Contractor, equal to 150% of the estimate of the value of such uncompleted punch list items.
- C. Failure of the Contractor to complete or correct all such outstanding punch list work to the satisfaction of the County and its Engineer shall constitute a waiver by the Contractor of all rights to any and all claims it may have to all monies withheld by the County under the Contract to cover the value of such uncompleted or uncorrected items.

**1.6 MAINTENANCE, CORRECTION AND REPAIR PERIOD**

- A. The Contractor shall comply with the following correction and repair requirements:
  - 1. Warranty and Guarantee:
    - a. Contractor represents and warrants that it is and will be at all times fully qualified and capable of performing every phase of the Work and to complete the Work in accordance with the terms of the Contract Documents.
    - b. The Contractor warrants that all construction work and construction services shall be performed in accordance with generally accepted professional standards of good and sound construction practices and all requirements of the Contract Documents.
    - c. The Contractor warrants that the Work, including but not limited to each item of materials and equipment, shall be new, shall be of suitable grade of its respective kind for its intended use, shall be free from defects in design, engineering, materials, construction and workmanship, and shall conform in all respects with all applicable requirements of federal, state and local laws, licenses, and permits, the Contract Documents and all descriptions set forth, applicable construction codes and standards, and all other requirements of the Contract Documents.
    - d. Neither the right to inspect, nor the presence of the inspectors, consultants, or testing agencies hired by the County or the County, or their general review or approval shall relieve the Contractor from its obligations to perform the Work in accordance with the Contract Documents.
  - 2. Access to Work: The County, other representatives of the County, testing agencies, and governmental agencies with jurisdictional interests shall have access to the Work at reasonable times for their observation, inspections, and testing. The Contractor shall provide proper and safe conditions for such access.
  - 3. Tests and Inspections:
    - a. The Contractor shall give the County timely notice of readiness of the Work: for all required inspections, tests, or approvals, but in no event less than 48 hours' notice excluding weekends and holidays.
    - b. If Laws or Regulations of any public body having jurisdiction other than the County require any Work to specifically be inspected, tested, or approved, the Contractor shall furnish the County with the required certificates of inspection, testing, or acceptance. The Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in the County's acceptance of a Supplier of materials or equipment proposed as a substitution or "or equal" to be incorporated in the Work, or of materials or equipment submitted for approval prior to the Contractor's purchase thereof for incorporation in the Work. The cost of all inspections, tests, and approvals in addition to the above which are required by the Contract Documents will be paid by the County (unless otherwise specified).
    - c. The County will make, or have made, such inspections and tests as the County deems necessary to see that the Work is being accomplished in accordance with the requirements of the Contract Documents. Unless

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PROJECT CLOSEOUT**

- otherwise specified, the cost of such inspection and initial testing will be borne by the County. In the event such inspections or tests reveal noncompliance with the requirements of the Contract Documents, the Contractor shall bear the cost of corrective measures deemed necessary by the County and/or the County's Engineer, as well as the cost of subsequent re-inspection and re-testing. Neither observations by the County or the County's Engineer nor inspections, tests, or approvals by others shall relieve the Contractor from the Contractor's obligation to perform the Work in accordance with the Contract Documents.
- d. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to the County.
  - e. If any Work (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the County, it shall be uncovered for observation. Such uncovering shall be at the Contractor's expense.
  - f. If any work is covered contrary to the written request of the County Representative, it shall be uncovered for the County Representative's observation and replaced at the Contractor's expense.
  - g. If the County considers it necessary or advisable that covered work be observed by the County or inspected or tested by others, the Contractor, at the County's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing, as the County may require, that portion of the Work in question and shall furnish all necessary labor, material, and equipment. If it is found that such work is defective, the Contractor shall bear all direct, indirect, and consequential costs of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to fees and charges of engineers, Engineers, attorneys, and other professionals. However, if such work is not found to be defective, the Contractor shall be allowed an increase in the Contract Price for such uncovering, exposure, observation, inspection, testing, and reconstruction.
  - h. The Contractor shall permit on site videotaping, still photography, or motion picture photography of the construction project. The Contractor shall cooperate with and shall coordinate with County personnel or their authorized representatives in its efforts to carry out such videotaping and or photography.
  - i. The Contractor shall bear the inspection costs for any inspection time lost due to the work not being ready for inspection or the Contractor's failure to appear at the work site for any test or inspection which has been scheduled by the Contractor.
4. **County May Stop the Work:** If the Work is defective, or the Contractor fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, the County may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the County to stop the Work shall not give rise to any duty on the part of the County to exercise this right for the benefit of the Contractor or any other party.
  5. **Correction or Removal of Defective Work:** If required by the County, the Contractor shall promptly either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the County, the Contractor shall remove it from the site and replace it with non-defective Work. The Contractor shall bear all direct, indirect, and consequential costs of such correction or removal, including but not limited to fees and charges of engineers, attorneys, and other professionals, made necessary thereby.
  6. **One Year Correction Period:**
    - a. If within one year after the date of Notice of Final Settlement or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, the Contractor shall promptly, without cost to County and in accordance with County's written instructions, either correct such defective Work, or, if it has been rejected by County, remove it from the site and replace it with non-defective Work. If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, County may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement, including but not limited to fees and charges of engineers, attorneys and other professionals, shall be paid by the Contractor. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the

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PROJECT CLOSEOUT**

Work, the correction period for that item may start to run from an earlier date if so provided in the Contract Documents.

7. Acceptance of Defective Work: If, instead of requiring correction or removal and replacement of defective Work, the County prefers to accept the Work, the County may do so. The Contractor shall bear all direct, indirect, and consequential costs attributable to the County's evaluation of and determination to accept such defective Work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the County shall be entitled to an appropriate decrease in the Contract Price.
  
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the Contractor which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work.
  
- C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the County. If the Contractor fails to make such repairs or replacements promptly, the County reserves the right to do the work or to have the work done by others and the Contractor and its Surety shall be liable to the County for the cost thereof.

**REVISION OF SECTION 201  
CLEARING AND GRUBBING**

Section 201 of the Standard Specifications is hereby revised for this project as follows:

Subsection 201.01 shall be deleted and replaced with the following:

This work consists of clearing, grubbing, removing, and disposing of vegetation within the limits of disturbance required by the work. Vegetation and objects designated to remain shall be preserved free from injury or defacement. Clearing and Grubbing includes the removal of woody material that is measured to have a Diameter at Breast Height (DBH) less than 6 inches at 4.5 feet above ground surface. This work also includes stockpiling the limited quantity of topsoil within the project limits.

Subsection 201.02 shall be deleted and replaced with the following:

Areas of protection shall be designated by the Engineer and/ or Owner prior to construction. All trees, shrubs, plants, grasses and other vegetative materials within those areas of protection shall remain, except as approved by the Engineer. Every object that is designated to remain and is damaged shall be repaired or replaced as directed, at the Contractor's expense. Once all clearing and grubbing is completed and approved, no additional clearing shall be allowed unless approved, in writing, by the Engineer.

Clearing and Grubbing shall typically extend to the toe of fill or the top of cut slopes and shall not extend beyond the limits of disturbed area for the project. The Contractor shall install temporary plastic fence or demarcation flagging, acceptable to the Engineer, along the limits of construction prior to commencing with the clearing and grubbing. Clearing and Grubbing limits, limits of disturbance fencing and flagging, and woody material to be removed shall be approved by BCPOS and Engineer in the field prior to work.

Contractor shall harvest the limited quantity of topsoil within the limits of disturbance for the project and stockpile for later placement on the floodplain. Existing grasses do not need to be mowed or scalped and may be incorporated into the topsoil stripping of the site.

Woody material removed under Clearing and Grubbing that are less than 1-inch DBH will be chipped on site for incorporation into floodplain substrate material at Engineer's direction.

Woody material removed under Clearing and Grubbing that are between 1 and 6 inch DBH will be used in fascines, slash material for large wood structures, and other design elements as laid out in the Plans at the direction of the Engineer. Woody material of this size shall be stockpiled with branches intact to the extent possible. For trees with diameters equal to or less than 6 inches in diameter, the Contractor shall leave the stump and roots in place if they are below the proposed final grade. The portion of the stump and roots that are above the proposed final grade shall either, (a) be removed and chipped, or; (b) salvaged intact with the rest of the tree for incorporation into large wood structures as slash debris. Woody material that cannot be re-used in project elements will be chipped and spread across the floodplain as approved by BCPOS or Engineer. Crack willows shall be hauled off site. Siberian elms are to be removed, but can be reused on site. Locusts shall not be used. Owner or engineer can provide support as needed.

Avoid the unnecessary removal of trees or shrubs; for example, prune the aerial portions of trees and shrubs that hang over a project area and interfere with equipment. All trimming shall be done in accordance with good tree surgery practices.

Existing willows should be harvested and paid for separately per Section 215 (Transplanting Plant Material).

If noxious weeds are found before grading, areas to be disturbed shall be pre-treated before grading and paid for separately per Section 217 (Herbicide Treatment) and Section 218 (Noxious Weed Management).

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**REVISION OF SECTION 201  
CLEARING AND GRUBBING**

Non-native woody vegetation removed and not reused on site under Clearing and Grubbing shall be hauled off-site to an approved disposal site. Removal of non-native woody material is included in Clearing and Grubbing. Non-native material will be cleared and hauled away offsite. Burning of cleared material will not be permitted.

Sediment and debris removal shall be planned and performed according to Colorado NRCS Conservation Practice Standard 326- Clearing and Snagging- (Website Link: Colorado eFOTG- [https://efotg.sc.egov.usda.gov/efotg\\_locator.aspx?map=US](https://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=US)), and the following:

The contractor must provide a disposal plan for clearing and snagging for review and approval by the NRCS/sponsor/owner's representative. The disposal plan for anthropogenic debris must be according to all applicable local regulations and Colorado Department of Health and Environment requirements titled: 2013 Floods - Guidance: Management and Disposal of Flood Debris.

Except in areas to be excavated, all holes resulting from the removal of vegetation and obstructions shall be backfilled with suitable material and compacted.

Migratory birds, as well as their eggs and nests, are protected under the Migratory Bird Treaty Act (MBTA). The active nesting season for most migratory bird species in Colorado is between April 1 and August 31. To avoid a violation of the MBTA, conduct habitat-disturbing activities (F, clearing and grubbing, etc.) in the non-breeding season (September 1 to March 31). If work activities are planned between April 1 and August 31, remove or alter vegetation within construction footprints and road right-of-ways (ROW) prior to April 1 to discourage nesting within areas scheduled for summer construction. If the Contractor is unable to meet these requirements, the Contractor shall notify the Engineer prior to any vegetation removal. A qualified biologist shall conduct a nest survey within 1 week of construction. If no nests are present, construction may commence with the Engineers or Owners approval. See Revision of Section 240 for additional information.

If already on-site, some large downed woody material shall remain, particularly if embedded in stream deposits. Standing dead trees (snags) shall remain standing. Approval from the engineer is required to remove snags not indicated in the demo plan.

Areas of existing vegetation that are to be protected shall be delineated in the field so that heavy machinery is prevented from entering the areas and disturbance is avoided.

Clearing and snagging should only remove as much large wood as needed to reestablish the pre-flood capacity of the channel and floodplain. Leave large wood in the riparian zone where it does not create a risk to life or property, and where possible consider using logs to construct channel and bank stabilization measures.

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**REVISION OF SECTION 201  
CLEARING AND GRUBBING**

**METHOD OF MEASUREMENT**

Section 201.03 shall be replaced with the following:

Measurement of Clearing and Grubbing will be by *Area Basis*. The work to be paid for will be the number of acres acceptably cleared and grubbed, including scalping, within the limits shown on the plans or staked by the Engineer.

**BASIS OF PAYMENT**

Section 201.04 shall be replaced with the following:

Clearing and Grubbing will be paid for at the contract unit price bid per acre for each pay item that appears in the bid schedule. Payment will include all labor and equipment required to harvest topsoil and remove, haul, stockpile, chip native woody vegetation.

Payment will also include removal and haul offsite of non-native woody material less than 6 inch DBH.

Payment for willow harvesting shall be per Section 215 (Transplanting Plant Material).

Payment for temporary fence and flagging shall be included under Item 607 Fence (Plastic).

<b>Pay Item</b>	<b>Pay Unit</b>
Clearing and Grubbing	Acre

**REVISION OF SECTION 202  
REMOVAL OF STRUCTURES AND DEBRIS**

Section 202 of the Standard Specifications is hereby revised for this project to include the following:

Subsection 202.01 shall include the following:

This work includes removal of abandoned utilities appurtenances in the project area and flood generated trash and debris that requires removal as directed by the engineer.

**CONSTRUCTION REQUIREMENTS**

Subsection 202.02 shall include the following:

The contractor shall submit to the Engineer methods that will be utilized to remove debris along the project corridor. Methods proposed by the contractor will need approval by the Engineer, especially for areas that impact the active stream environment.

The Contractor shall remove and dispose of all visible abandoned utility appurtenances and flood generated debris that are located within the work area and abandoned as a result of this project. These items shall not be disposed of within the project limits.

The Contractor shall make all arrangements to obtain written permission from property owners for disposal locations outside the limits and view of the project. Copies of this written agreement shall be furnished to the Engineer before the disposal area is used.

Any object that is not designated to be removed and is damaged shall be repaired or replaced as directed by the Engineer, at the Contractor's expense. BCPOS will be required to approve replacement of any items removed in error.

1. Within 10 calendar days after the Notice to Proceed is issued, the Contractor shall submit to the County for review and approval, a Materials Handling Plan.
2. The Materials Handling Plan must be approved in writing by the County prior to the Contractor's commencement of work within the defined areas.
3. The Materials Handling Plan shall, at a minimum include: Detailed written procedures to be used to load and transport the debris to an approved landfill or recycling facilities.
4. The County will establish the limits of areas where debris is to be removed, or areas, objects or features that are designated to remain undisturbed.
5. In general, the work areas shall include the road section, stream channels, ditches, temporary approaches to bridges, detours and other areas as shown in the contract documents or directed by the County.
6. Debris removal beyond the areas of construction shall be done only where specified or directed by the County.
7. As detailed on the plans, it is expected that all materials encountered at the site will be classified as uncontaminated debris. If any material is encountered that can be classified as contaminated debris, it shall be reported to the County and at the County's direction stockpiled, tested and disposed of in accordance with all applicable regulations.
8. Removal and disposal of uncontaminated debris shall be taken to facilities accepting such designated wastes.
9. The Contractor is responsible for choosing appropriate disposal facilities and specifying those facilities to the County.



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**REVISION OF SECTION 202  
REMOVAL OF STRUCTURES AND DEBRIS**

**METHOD OF MEASUREMENT**

Subsection 202.03 shall include the following:

Removal of structures and debris will be measured per load based on a standard tandem dump truck est. at 10 cubic yards.

**BASIS OF PAYMENT**

Subsection 202.04 shall include the following:

The accepted quantities to complete removals as identified will be paid for on a unit price for all work required to remove and dispose of structures debris from the site.

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Structures and Debris	Load

**REVISION OF SECTION 202  
REMOVAL OF TREE**

Section 202 of the Standard Specifications is hereby revised for this project as follows:

Add the following subsection immediately following subsection 202.10 as follows:

**202.101 Removal of Trees.**

Trees removed on this project will fall into one of the following categories:

- All trees measured to have a Diameter at Breast Height (DBH) greater than 12 inches at 4.5 feet above ground surface will be salvaged with rootwad intact for potential re-use as key members in the various large wood structures proposed for this project. Desired rootwad width is 3 to 4 times the DBH of the tree. Salvaged trees will have a minimum length of 25 feet (if possible) and will be limbed to a limb length of no more than 24 inches, unless otherwise directed by engineer. Exceptions to salvage rootwad trees are those trees that are not in locations accessible with an excavator, or trees that have root systems growing out of rock.
- Trees between 6 and 12 inches DBH are designated for potential re-use in Large Wood Structures to add floodplain roughness. A limited quantity of trees in this size class will be removed with rootwad intact with minimum diameter of 3 times the DBH of the tree, to meet the quantities shown on the Plans. Salvaged trees will be limbed to a limb length no more than 24 inches, although a few trees in this size class may be salvaged with branches intact, at the direction of the Engineer in the field. Removal of the remaining trees shall include removing the tree and root material to 1 foot below proposed ground surface and backfilling the void.
- Trees less than 6-inch DBH are included in Section 201 (Clearing and Grubbing) for measurement and payment. Trees of this size class are not designated for reuse as key logs in Large Wood Structures, but they will be re-used for fascines or slash material in the large wood structures. Any trees not used as such and trees less than 1" DBH will be chipped on site for incorporation into existing substrate.

Tree removal with rootwads intact shall follow a detail provide by the Engineer at pre-construction meeting. Process includes excavating trench around rootwad of tree and use of excavator to topple tree over, and may necessitate climbing tree to cut to length prior to toppling.

Native woody material will be re-used to the extent possible on-site. Contractor shall take care to protect the intact rootwads and limbs, if present, from damage during handling, stockpiling, and eventual installation in large wood structures. Trees, branches, and rootwads that are not re-used in project elements shall be chipped and spread onsite at the direction of the Engineer in the field.

Only invasive trees that do not sprout new growth from dead material (e.g., Elm) will be considered for re-use onsite, as approved by BCPOS. All other non-native woody material shall become the property of the contractor, and hauled off-site to an approved disposal site at the Contractor's expense. The Contractor shall make all arrangements to obtain written permission from property owners for disposal locations outside the limits and view of the project. Copies of this written agreement shall be furnished to the Engineer before the disposal area is used.

Full removal of tree roots will be required for all trees that are in conflict with structure excavation limits.

All trees cut and removed, leaving roots intact in the ground, shall have remaining stumps cut as flush to the ground as possible, with no more than 4" protruding above finished grades. All non-native tree species, as designated by the Project Manager or Ecologist, shall have the cut stumps treated with an appropriate herbicide (refer to Section 217) within five minutes of cutting to prevent re-sprouting.

The Contractor shall identify and mark each tree to be removed. The Engineer shall be notified for inspection and approval of these marked trees. No tree greater than 6 inch DBH shall be removed without prior approval by the Engineer. Trees removed without prior approval of the Engineer shall be replaced at the Contractor's expense.

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**REVISION OF SECTION 202  
REMOVAL OF TREE**

Materials being stored for future use shall be stockpiled in areas designated on plans or approved by the Engineer. Areas shall be protected with fence and erosion control measures.

**METHOD OF MEASUREMENT**

Subsection 202.11 shall include the following:

*Removal of Tree (6 to 12 inch DBH)* and *Removal of Tree (12+ inch DBH)* will be measured and paid for at the contract unit price by the quantities as shown in the bid schedule or approved by the Engineer.

**BASIS OF PAYMENT**

Subsection 202.12 shall include the following:

Payment for *Removal of Tree (6 to 12 inch DBH)* includes tree removal, stockpiling salvaged materials, and chipping of remaining materials not designated for use elsewhere on the project. A limited quantity of trees in this size class will be required to be removed with rootwad and/or branches intact to meet the quantities shown on the Plans.

Payment for *Removal of Tree (12+ inch DBH)* includes tree removal with rootwad intact, stockpiling salvaged materials, and chipping of remaining materials not designated for use elsewhere on the project. Payment includes all work to prepare woody material for re-use on site.

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Tree (6 to 12 inch DBH)	Each
Removal of Tree (12+ inch DBH)	Each

**REVISION OF SECTION 203  
UNCLASSIFIED EXCAVATION**

Section 203 of the Standard Specifications is hereby revised for this project to include the following:

**DESCRIPTION**

Subsection 203.02 shall include the following:

This work consists of excavation and fills within the South St. Vrain Creek channel and floodplain and hauling excess material offsite. This work includes the selective stripping, stockpiling and replacement of existing native river bottom material (sand, gravel, cobbles) as described herein.

This work also consists of the final excavation and fills (shaping) of the reconstructed or rehabilitated South St Vrain Creek bottom as shown on the plans, after other mass grading has been completed. This includes fine grading to create riffles, pools, bank contouring, and creating a low flow channel with the typical dimensions and planforms indicated on the Plans. The Engineer may provide additional direction in the field on the location and dimensions of these channel features. The Engineer may direct the creation of micro-topography at their discretion to create small-scale stream channel and landscape features not shown on the plan set.

This work also includes the sorting, screening, and stockpiling of in-situ larger, alluvial rounded rock and boulder material located within the grading limits. This salvaged material will be used in later stages of construction to form river features and design elements.

Contractor shall provide a Rock Screening Plan as part of this work to describe the proposed methods to achieve/meet required rock mix gradations for instream rock structures and bank stabilization structures as depicted in design plans. The Rock Screening Plan shall include available equipment, proposed screening and stockpile areas, methods of creating and verifying accurate gradations for each specified rock mix, expected schedule for screening activities, a detailed list of assumptions for developing the price quote in the bid (including expected volume of material to be screened), and a brief summary of the Contractor's past experience with similar screening work. The Rock Screening Plan shall be submitted to Engineer and approved prior to implementation.

**CONSTRUCTION REQUIREMENTS**

Subsection 203.05 shall include the following:

Existing river conditions prior to ground disturbing activities shall be carefully documented with photographs or other approved method. The Contractor shall immediately notify the Engineer if the existing conditions appear to significantly vary from the surveyed topography shown on the Plans.

Channel grading is performed in multiple steps, beginning with mass grading. The proposed channel and floodplain shall be formed according to the typical sections and grading contours as shown on the plans. During this stage, all boulders greater than 30-inches in diameter that are suitable for use with design features shall be removed and stockpiled as close to the work area as possible. The Contractor shall also salvage and screen all rock excavated from within designated coarse sediment deposits in the floodplain and within the vicinity of pre-flood channels. In addition, a 45-foot wide and 18-inch thick layer of the existing river bottom material along the existing channel alignment is to be scraped and stockpiled/salvaged for eventual replacement as the surface layer of the design channel.

After the mass grading surface is prepared, fine grading will then occur in the bottom of the final multi-stage channel. The channel bottom will be reshaped by excavating a 12-inch (average) deep thalweg and pools, as shown on the plans. This excavated material will then be placed and graded into slightly elevated areas adjacent to the thalweg in the form of point bars and riffles as shown on the plans. Bed material cut during fine channel grading shall be used as fill for areas in the channel requiring alluvial fill. The placed material will then be track packed. This process is repeated until design depths and shaping

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**REVISION OF SECTION 203  
UNCLASSIFIED EXCAVATION**

are achieved. This work is often concurrent with the construction of riffle structures and placement of habitat boulders (separate pay items). Most of this work is performed by utilizing an excavator equipped with a thumb and assisted by either a second excavator, loader, tracked skid steer or small dozer. Graded channel elements shall be inspected and approved by the Engineer.

Where practicable, fine grading in run segments shall consist of shifting river substrate across the channel to enhance the existing low-flow channel shape without extensive disturbance to the bed.

The specific location of certain riffle crests and pool tail-outs may be adjusted under the supervision of the Engineer to better match existing conditions and minimize bed disturbance if field conditions differ from the existing conditions shown in the Plans.

If additional rock material is necessary for a given size class, the Contractor will need to sort, screen, and stockpile coarse rock during excavation to limit the quantity of imported material. It is the Contractor's responsibility to identify potential salvage areas in the field to collect substrate material for screening, but the Engineer will provide additional guidance. Target areas for screening will likely include relic (pre-flood) channels, and coarse rock uncovered during floodplain excavations. If additional material is still necessary to meet the project demand, the Contractor shall import material from an off-site source (separate pay item) as a last resort, if approved by the Engineer.

Screening shall be used to split the salvaged rock material into at least three size classes: 6-inch, 12-inch, and 24+ inch. This sorted and screened rock material shall be combined with the native streambed mix to form a well-graded mix. Refer to Section 506 (Rock Structures) for more detailed information about the required gradation of each rock mix. Rock shall continue to be sorted and screened until the demand is met for the coarse substrate mix, floodplain sill mix, and boulder mix, unless otherwise directed by the Engineer. For reference, pebble Count data collected during the design phase of the project, along with maps, can be found in the "Preliminary Basis of Design Report for South St. Vrain Creek Restoration at Hall Ranch", submitted to Boulder County by Matrix in September 2016 (refer to pages 46 and 47). It is important to note that these pebble counts were typically collected at existing riffles, and may represent a coarser substrate gradation than may be found elsewhere in the channel and floodplain. No bulk substrate samples have been collected.

**Soils Compaction Testing:**

1. The County may require the Contractor to perform QA/QC testing of geotechnical materials and work product in areas with substantial fill to determine the conformance of the Work with the requirements of the Contract Documents.
2. The Contractor, will retain a qualified consultant to perform any necessary Contractor's QA/QC testing to assist the Contractor in determining the state of materials incorporated into the Work.
3. The County's QA/QC program is for the sole use of the County to determine the quality of the Work and is in no way intended to replace the Contractor's QA/QC.
4. The frequency of the County's QA/QC compaction testing will be in conformance with the accepted industry standard of care and at the Engineer's discretion.
5. Areas of noncompliance, as determined by the County's QA/QC testing, shall be removed and re-compacted to conform to requirements of the Contract Documents upon receipt of test results. Costs for reworking and retesting backfill material to meet the requirements of the Contract Documents are at the Contractor's expense.
6. Fill materials shall be thoroughly mixed to achieve uniform moisture content, placed in uniform lifts no exceeding 8 inches in loose thickness, and properly compacted, unless otherwise approved by the Engineer. Soils that classify as GP, GW, GM, GC, SP, SW, SM, or SC in accordance with the USCS classification system (granular materials) should be compacted to 85 or more percent of the maximum modified Proctor dry density at moisture contents within 2 percent of optimum moisture content as determined by ASTM D1557. Soils that classify as ML, MH, CL, or CH

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**REVISION OF SECTION 203  
UNCLASSIFIED EXCAVATION**

should be compacted to 85 percent of the maximum standard Proctor density at moisture contents from 1 percent below to 3 percent above the optimum moisture content as determined by ASTM D698. It may be necessary to rework the fill materials more than once by adjusting moisture and replacing the materials, in order to achieve the recommended compaction and moisture criteria.

**METHOD OF MEASUREMENT**

Subsection 203.13(a) shall include the following:

*Unclassified Excavation (Stripping Native Streambed)* is measured by the volume in bank cubic yards of streambed material excavated to a depth of 18 inches and stockpiled for the reconstruction the channel.

*Unclassified Excavation (Complete in Place)*, and *Unclassified Excavation (Haul Offsite)* are measured by the volume of material excavated in bank cubic yards. The haul distance is assumed to be 5 miles roundtrip (2.5 miles each way) for offsite disposal of excavated material. These items include all work associated with fine grading and salvaging and stockpiling usable 30+ inch boulders uncovered during grading, although no separate unit of measurement will be made for these actions. When grading is partially complete and Engineer has visually approved the Work, the Contractor shall estimate the volume (bank cubic yards) of excavation in a method approved by the Engineer for partial payment. The Contractor shall also keep a running log of the number of truckloads hauled offsite, and the load capacity of each truck. When grading is fully complete, the Contractor shall be responsible for employing a licensed surveyor in the State of Colorado to conduct a final site survey, in accordance with industry standards, so that final excavation quantities can be computed. At a minimum, the topographic survey shall include a longitudinal survey of the channel thalweg, cross-sections of the main channel and floodplain at 200 foot intervals, and cross-sections along the crests of each proposed rock grade control in the main channel and floodplain (e.g., riffle crests, overflow rock ramp crests, knickpoint stabilization structure crests, floodplain sills). The Contractor shall provide the survey point file data in AutoCAD format to the Engineer for comparison to existing and design surfaces and to determine the final payment quantity.

*Alternate Bid Item - Unclassified Excavation (Extended Haul Offsite)* are measured by the volume of material excavated in bank cubic yards, assuming an extended roundtrip haul distance of 30 miles (15 miles each way) for offsite disposal of excavated material. This item includes all other work described in the base bid item (above) for Unclassified Excavation (Haul Offsite).

*Unclassified Excavation (Sort/Screen/Stockpile 6 to 12-inch Rock)*, *Unclassified Excavation (Sort/Screen/Stockpile 12 to 24-inch Rock)*, and *Unclassified Excavation (Sort/Screen/Stockpile 24+ inch Rock)* are measured by the ton of the usable material that is stockpiled after passing through the screening equipment. The quantity provided on the bid tab is based on an Engineer's rough estimate of the amount of material to be salvaged through screening during this project, and this quantity should be used as the basis of bid. The final volume of material salvaged through screening during construction may vary and will be measured using a method approved by the Engineer.

Bank Cubic Yards are defined as the "neatline" in-place volume of the material to be excavated between existing and finished grades. No expansion factors will be applied to Bank Cubic Yard excavation computations. Excavated quantities for structures and plantings will not be measured and paid for separately, but will be included in the cost of the item.

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REVISION OF SECTION 203  
UNCLASSIFIED EXCAVATION**

**BASIS OF PAYMENT**

Subsection 203.14 shall include the following:

*Unclassified Excavation (Stripping Native Streambed)* is measured by the volume of streambed material excavated to a depth of 18 inches and stockpiled in bank cubic yards. Payment includes the detailed stripping, handling, stockpiling of designated existing river materials. This item does not include reconstructing the channel bed with the salvaged native bed material.

*Unclassified Excavation (Complete in Place)* payment consists of excavation, placement, and compaction of material to be handled as part of channel and floodplain mass grading, as well as the fine grading to shape the in-stream channel features such as the contouring of a low flow channel, pools, and channel banks. Payment includes the replacement of salvaged native streambed materials in the design channel. Payment also includes selectively picking, handling, and stockpiling 30+ inch river boulders during mass grading in all project areas for reuse in Rock Structure features described in Section 506. This pay item also includes the as-built survey. The Contractor shall provide all materials, labor, equipment and incidentals necessary and required to conduct proper surveys required to measure quantities for payment.

*Unclassified Excavation (Haul Offsite)* payment includes the total volume excavated and hauled to an approved offsite location as part of channel and floodplain mass grading. For this base bid item, the Contractor shall assume an average roundtrip haul distance of 5 miles (2.5 miles each way). Payment includes all necessary excavation, transport, and handling to dispose of any excess material. Payment also includes selectively picking, handling, and stockpiling 30+ inch river boulders during mass grading in all project areas for reuse in Rock Structure features described in Section 506.

*Alternate Bid Item - Unclassified Excavation (Extended Haul Offsite)* payment includes the total volume excavated and hauled to an approved offsite location as part of channel and floodplain mass grading. For this alternate bid item, the Contractor shall assume an average roundtrip haul distance of 30 miles (15 miles each way). Payment includes all necessary excavation, transport, and handling to dispose of any excess material. Payment also includes selectively picking, handling, and stockpiling 30+ inch river boulders during mass grading in all project areas for reuse in Rock Structure features described in Section 506.

*Unclassified Excavation (Sort/Screen/Stockpile 6 to 12-inch Rock), Unclassified Excavation (Sort/Screen/Stockpile 12 to 24-inch Rock), and Unclassified Excavation (Sort/Screen/Stockpile 24+ inch Rock)* payment items consists of selectively excavating, on-site hauling, sorting, screening, handling, and stockpiling river boulders and cobbles suitable for reuse in Rock Structure features described in Section 506. The completion of the Rock Screening Plan submittal is included in this work.

**Pay Item**

**Pay Unit**

Unclassified Excavation (Stripping Native Streambed)	Bank Cubic Yard
Unclassified Excavation (Complete in Place)	Bank Cubic Yard
Unclassified Excavation (Haul Offsite)	Bank Cubic Yard
Alternate Bid Item - Unclassified Excavation (Extended Haul Offsite)	Bank Cubic Yard
Unclassified Excavation (Sort/Screen/Stockpile 6 to 12-inch Rock)	Ton
Unclassified Excavation (Sort/Screen/Stockpile 12 to 24-inch Rock)	Ton
Unclassified Excavation (Sort/Screen/Stockpile 24+ inch Rock)	Ton

**REVISION OF SECTION 208  
EROSION CONTROL  
(STORMWATER MANAGEMENT)**

Section 208 shall include:

“Erosion control” is interchangeable with “Stormwater Management Plan”.

Stormwater Management plans are provided as guidelines for the contractor. A permit form the CDPHE must be acquired prior to starting the project. An Stormwater Management Plan has been provided by the design team as guidance for permit applications. Design should be modified and updated based upon contractors means and methods. Temporary stream crossings might be required as part of this project depending on contractor means and methods. Temporary stream crossings should follow Boulder County Standards and will be included in the cost of the work being completed.

Erosion control will also include dust control on haul routes through watering and sweeping.

Available erosion control reference documents include UDFCD Volume 3 Stormwater Quality and CDOT M&S Standards.

Appropriate erosion control measures shall be installed downslope and parallel to contours for all disturbed areas including staging areas. The location of erosion control shall be shown on site plans submitted for building permit approval.

Stockpiled fill piles not disturbed over 30 days shall be properly covered and/or stabilized with temporary vegetation.

**METHOD OF MEASUREMENT**

Subsection 508.06 shall be modified to include:

Erosion control for the entire project shall be measured as lump sum and constitute erosion control for the entire project area. The erosion control measures must follow CDPHE guidelines.

**BASIS OF PAYMENT**

Subsection 508.06 shall be modified to include:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Stormwater Management	Lump Sum

Payment will include all necessary tools and equipment to install erosion control measures and upkeep.



**REVISION OF SECTION 209  
WATERING AND DUST PALLIATIVES**

Section 209 of the Standard Specifications are hereby revised for this project as follows:

Delete Subsection 209.06, Landscaping and replace with the following:

209.06 Landscaping. The Contractor shall furnish water for seeding, mulching, planting, transplanting, and any other landscape work required for the project. The Contractor will not be responsible for watering after final acceptance of the project.

**METHOD OF MEASUREMENT**

In Subsections 209.07 delete section and replace with the following:

There will be no separate measurement of water used for soil aggregates for moisture and density control, prewetting an excavated area, and dust palliatives.

**BASIS OF PAYMENT**

In Subsections 209.08 delete section and replace with the following:

There will be no separate payment of water used for soil aggregates for moisture and density control, prewetting an excavated area, and dust palliatives.

Full compensation for compliance, as required by this section, shall be considered to be in the prices paid for all contract items listed on the bid schedule, and no additional compensation will be allowed.

**REVISION OF SECTION 209  
TIME-RELEASE WATERING**

Section 209 of the Standard Specifications is hereby revised for this project as follows:

Subsection 209.01 shall include the following:

This work consists of supplying and placing Time-Release Water product to all container Trees and Shrubs as indicated on the plan.

Subsection 209.02 shall include the following:

Time-Release Water shall be Aquasorb as manufactured by SNF SAS., ZAC de Milieux, 42163 Andrezieux Cedex - France, or approved equal. Product unit shall consist of a polyacrylamide-based, cross-linked polymers ranging from 1 to 4 millimeters in size.

Aquasorb product shall be placed in water to hydrate per manufacturers recommendations prior to installing. Aquasorb will be evenly distributed around the entire root ball of the plant, at 2 oz. per plant, then back filled with amended soil.

**METHOD OF MEASUREMENT**

Subsection 209.07 shall include the following:

Time-Released Water product, water for both pre-watering and post-watering during planting and any incidentals necessary to complete this work will not be measured and paid for separately, but shall be included in the cost of Time-Released Water product.

**BASIS OF PAYMENT**

Subsection 209.08 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Time-Release Watering	Each

**REVISION OF SECTION 211  
DEWATERING**

Section 211 is hereby added to the Standard Specifications for this project as follows:

**DESCRIPTION**

This work consists of dewatering temporary excavations in accordance with Colorado Department of Health and Environment dewatering regulations to facilitate construction activities.

**MATERIALS**

The Contractor shall provide all required materials and equipment to facilitate dewatering. On-site materials meeting specifications may be used within the limits of construction to construct temporary dams and berms. Other materials such as plastic sheeting and sand bags may also be used if desired by the Contractor.

**CONSTRUCTION REQUIREMENTS**

The Contractor shall dewater, by pumping or by excavating trenches leading to a positive gravity outlet.

General: For all work, the Contractor shall provide suitable equipment and labor to remove water, and he shall keep the excavations dewatered so that construction can be carried on under dewatered conditions where required by the Drawings and Specifications. Water control shall be accomplished such that no damage is done to adjacent banks or structures. The Contractor is responsible for investigating and familiarizing himself with all site conditions that may affect the work including surface water, level of groundwater and the time of year the work is to be done. All excavations made as part of dewatering operations shall be backfilled with the same type material as was removed and compacted to 95 percent of maximum density (ASTM D698) or to 75 percent relative density (ASTM D2049), except where replacement by other materials and/or methods are required.

Surface Water Control: Surface water control generally falls in to the following categories:

- 1) Normal low flows along South St Vrain Creek;
- 2) Storm/flood flows along South St Vrain Creek;
- 3) Flows from existing storm drain pipelines; and
- 4) Local surface inflows.

The Contractor shall coordinate, evaluate, design, construct, and maintain temporary water control conveyance systems. These systems will not worsen flooding, alter major flow paths, or worsen flow characteristics during construction. The Contractor is responsible to ensure that any such worsening of flooding does not occur. The following is approximate storm flow data for South St Vrain Creek is for information only. This information was obtained from South St Vrain Creek Restoration at Hall Ranch Preliminary Basis of Design Report (Matrix, 2016).

<i>Design Point</i>	<b>Design Storm Hydrology (Years)</b>								
	<b>Base</b>	<b>1</b>	<b>1.5</b>	<b>2</b>	<b>5</b>	<b>10</b>	<b>25</b>	<b>50</b>	<b>100</b>
	[cfs]	[cfs]	[cfs]	[cfs]	[cfs]	[cfs]	[cfs]	[cfs]	[cfs]
South St Vrain Creek at the Confluence	25	232	470	681	1,063	1,605	3,168	4,933	7,234

The 100-year flood flow of 7,234 cfs has a one percent probability of being equaled or exceeded in any given year.

The Contractor will be responsible for diverting surface flow around the construction area so that the excavation for boulders and riprap remain free of surface water for the time it takes to install these materials, and the time required for curing of the concrete in the channel structures.

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**REVISION OF SECTION 211  
DEWATERING**

The Contractor shall, at all times, maintain a flow channel or route for South St Vrain Creek. Temporary structures such as berms, sandbags, pipeline diversions, etc., shall be permitted for the control of creek flow, as long as such measures are not a major obstruction to flood flows, do not worsen flooding, or alter historic flow routes. Existing trees and vegetation should be preserved as possible.

**Groundwater Control:** The Contractor shall install adequate measures to maintain the level of groundwater below the foundation subgrade elevation and maintain sufficient bearing capacity for structures, pipelines, earthwork, and rock work. Such measures may include, but are not limited to, installation of perimeter subdrains, pumping from drilled holes or by pumping from sumps excavated below the subgrade elevation. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations shall not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's expense.

**Special Dewatering Provisions for Instream Structures:** The Contractor shall isolate the work area from surface waters, and then draw down the groundwater level to an elevation below subgrade in a manner which will prevent "quick" conditions. The dewatering operation will be continuous, 24 hours per day, until the affected portion of the stream work is complete and the groundwater level can be allowed to rise without endangering the stability of existing or new features.

The Contractor should anticipate that even with the groundwater level lowered below subgrade where subgrade features are to be placed, conditions will be moist and possibly soft and easily disturbed by his activities. The Contractor is responsible to control such conditions and prevent loosening of the subgrade material and refrain from activities which would make the materials more permeable and/or inadequate to support the structure.

The Contractor may use special drain zones in his design for dewatering trenches or well points, as long as the system does not harm the permanent weep drain system or toe drain filter system's effectiveness. Any temporary dewatering trenches or well points will be restored following dewatering operations to reduce permeability in those areas as approved by the Engineer. Dewatering trenches are not acceptable on slopes where they may compromise the integrity of the sloped subgrade material.

**METHOD OF MEASUREMENT**

Dewatering will not be measured, but will be paid for on a Lump Sum basis for the entire project.

**BASIS OF PAYMENT**

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Dewatering	Lump Sum

**REVISION OF SECTION 212  
SEED AND SOIL CONDITIONING**

Section 212 of the Standard Specification is hereby revised as follows:

**DESCRIPTION**

Delete subsection 212.01 and replace with the following:

This work consists of soil preparation, application of fertilizer, soil conditioners, or both, and furnishing and placing seed. The work shall be in accordance with the Contract and accepted horticultural practices.

**MATERIALS**

Subsection 212.02 (a) shall include the following:

Maximum crop and weed content shall follow the Colorado Seed Certification Standards for certified seed:

Prohibited noxious weeds	None
Restricted noxious weeds	Less than 0.1%
Total other crop seed	Less than 1.0%

Seed shall be free of prohibited noxious weeds including, but not limited to, Canada thistle, diffuse knapweed, spotted knapweed, Russian knapweed, field bindweed, hoary cress, jointed goat grass, leafy spurge, musk thistle and yellow toadflax. Contractor shall furnish to the engineer a signed statement from supplier that the seed is free of noxious weeds. In addition, seed shall be free from cheatgrass (*Bromus japonicus* and *Bromus tectorum*). The Engineer/Ecologist reserves the right to refuse any seed lot with excessive weed seeds and non-native contaminant seed for all native seed mixes, and to require the use of a different seed lot. The Contractor shall be responsible for replacing any refused seed at no additional cost to the project.

If specified type or variety of seed is not available, substitutions must be submitted and approved by the Landscape Designer.

Subsection 212.02 (b) 1 shall include the following:

Fertilizer shall be Biosol Forte or approved equal and consist of a granular slow release all natural organic fertilizer with no chemical content, consisting of a fungal and bacterial biomass. The nutrient source shall be derived from fermented plant material along with nutrients such as cottonseed meal, soybean meal and trace elements all under constant sterile conditions with a minimum Nutrient (N-P-K) content of 7-2-1.

Nutrients shall be derived from fermented plant material and not contain any urea, animal waste, animal by-products or sewage material. Nutrient content of fertilizer shall be as follows:

Organic Matter > 75%, Carbon/Nitrogen ratio 5:1, Nitrogen (total) >7%. Nitrogen (water soluble) <0.5%, Phosphorus (P205) 2-4%, Potassium (K20) 1%, pH level of 6.5 -7.5. Nutrients shall be derived from fermented plant material and not contain any urea, animal waste, animal by-products or sewage material.

Subsection 212.02 (b) 2, paragraph four, last sentence shall be replaced with the following:

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**REVISION OF SECTION 212  
SEED AND SOIL CONDITIONING**

*Compost:* Compost shall consist of a carbon to nitrogen ratio between 10:1 and 20:1. Compost may consist of one or more of the following, or include other appropriate composts:

- (1) Well-aged dairy cattle manure
- (2) Well-aged municipal sludge
- (3) Composted yard wastesFood waste

The Contractor shall provide a participation certificate and test data showing the lab analysis on a Compost Technical Data sheet that verifies that the compost meets the requirements. Biosolids (from sewage treatment facilities) are not considered a viable ingredient in compost.

Subsection 212.02 (b) 2, shall include the following:

*Biochar:* Biochar shall be a USDA Certified Biobased Product. Biochar shall be made in a slow pyrolysis process and exceed 70% carbon content in the delivered product. The size of an individual piece of char shall range between 0.25 inches to 1.25 inches.

*Mycorrhizae:* Supplemental mycorrhizae, Quantum Growth VSC:

- (1) 1.32% humic acid (from peat humus)
- (2) 0.50% *Rhodopsuedomonas palustris*..... 1.0 E+6 cfu/ml
- (3) 0.25% *Bacillus amyloliquefaciens*..... 5.0 E+5 cfu/ml
- (4) 0.25% *Bacillus licheniformis*..... 3.0 E+5 cfu/ml
- (5) 0.25% *Bacillus megaterium*..... 1.0 E+5 cfu/ml
- (6) 0.25% *Bacillus subtilis*..... 2.0 E+5 cfu/ml

Supplemental mycorrhizae, Quantum Growth Light:

- (1) 0.5% *Rhodopsuedomonas palustris*..... 5.0 E+6 cells/ml
- (2) 99.5% de-ionized water

Delete subsection 212.02 (c).

**CONSTRUCTION REQUIREMENTS**

Subsection 212.03, paragraph one, table shall be replaced with the following:

<b>Zone</b>	<b>Fall Seeding</b>
Below 6000'	September 1 until consistent ground freeze

Delete subsection 212.04.

Delete subsection 212.05.

Delete subsection 212.06 (a) and replace with the following:

*Soil Preparation.* All disturbed areas shall be ripped to a minimum depth of eight (8) inches, with no more than a 10-inch interval between furrows. Slopes flatter than 2:1 shall have a well settled, firm, and friable seedbed four (4) inches deep. Slopes 2:1 or steeper shall be left in a roughened condition.

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**REVISION OF SECTION 212  
SEED AND SOIL CONDITIONING**

Slopes shall be free of soil clods, sticks, stones, and debris in excess of four (4) inches in any dimension, and be brought to the desired grade and line. Uneven grading of the soil surface is acceptable and encouraged to prevent further compaction from excess heavy machinery operation. All slopes shall be free of concrete and asphalt. No soil preparation for seeding shall occur when soil is frozen or in an extreme wet or dry condition.

Delete subsection 212.06 (b) and replace with the following:

(b) *Soil Conditioning.* Prior to seeding, soil conditioner shall be applied evenly to the soil surface. The following amendments shall be applied at the following rates to all seeding (upland) areas, combined seeding areas, and floodplain benches to be planted with willows:

1. Fertilizer – Biosol Forte or approved equal applied at 800-1200 lbs/acre
2. Compost – Applied at three (3) cubic yards (CY) per 1,000 square feet
3. Supplemental mycorrhizae – Quantum Growth VSC applied at 2 gal/acre and Quantum Growth Light applied at 1 gal/acre

The following amendments shall be applied at the following rates to all seeding (riparian) areas and areas to be planted with perennial (tubelings):

1. A Yard Waste Compost – Applied at six (6) cubic yards (CY) per 1,000 square feet
2. Supplemental mycorrhizae – Quantum Growth VSC applied at 2 gal/acre and Quantum Growth Light applied at 1 gal/acre

Biochar shall be applied to areas to be planted with perennial (tubelings) and areas to be seeded with ‘combined seeding’ on river right (looking downstream) as shown on plans at a rate of 5% by volume.

All soil amendments shall be applied uniformly over the soil surface and incorporated into the top eight (8) inches of soil. No measurable quantity of organic amendment shall be present on the surface after incorporation.

Delete subsection 212.06 (c) and replace with the following:

(b) *Seeding.* Seeding shall be accomplished within 24 hours of tilling or scarifying to make special seed bed preparation unnecessary. The seeding application rate shall be as designated in the Contract. All slopes flatter than 2:1 shall be seeded with grass or no-till drills followed by packer wheels. Drag chains are not allowed. Drills shall have depth bands set to maintain a planting depth between ½ and ¾ inch and shall be set to space the rows not more than seven (7) inches apart. Packer wheels that firm the soil over the drill row are required. Seed that is extremely small shall be sowed from a separate hopper adjusted to the proper rate of application. The Contractor shall notify the Engineer 24 hours in advance and request inspection of seeding areas prior to installation.

Seed drills must be clean of seed from previous seeding jobs before any seeding begins.

If strips greater than seven (7) inches between the rows have been left unplanted or other areas skipped, the Engineer will require additional seeding at the Contractor’s expense.

When requested by the Contractor and approved by the Engineer, seeding may be accomplished by broadcast or drill at twice the rate specified in the Contract at no additional cost to the project.

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**REVISION OF SECTION 212  
SEED AND SOIL CONDITIONING**

All seed sown by broadcast-type seeders shall be “raked in” or covered with soil to a depth of at least ¼ inch. Broadcasting seed will be permitted only on small areas not accessible to machine methods. Broadcast seeding shall proceed on freshly disturbed (raked or harrowed) soil surface and broadcast seed shall be immediately raked or harrowed into the surface. Raking shall be accomplished using metal-tined garden or landscape rakes; no plastic leaf rakes shall be allowed. If harrowing is used, an English harrow or its equivalent shall be required.

**Hydraulic seeding will not be accepted.**

Seeded areas damaged due to circumstances beyond the Contractor’s control shall be repaired and reseeded as ordered. Payment for this corrective work, when ordered, shall be at the contract prices.

Multiple seeding operations shall be performed as portions of job are completed to take advantage of growing conditions and to comply with Section 208 and subsection 212.03.

1. Seeding (Upland) – Prior to seeding, the soil conditioner shall be applied at 3 CY per 1000 SF and incorporated into the top eight (8) inches of soil.

Seed shall be applied at the percent of mix (% of mix) and application rate (PLS/Acre) that is designated on the plans under Seeding (Upland). Seed shall be applied to Seeding (Upland) areas shown on plans.

2. Seeding (Riparian) - Prior to seeding, the soil conditioner shall be applied at 6 CY per 1000 SF and incorporated into the top eight (8) inches of soil.

Seed shall be applied at the percent of mix (% of mix) and application rate (PLS/Acre) that is designated on the plans under Seeding (Riparian). Seed shall be applied to Seeding (Riparian) and Perennial (Tubelings) areas shown on plans.

3. Combined Seeding - Prior to seeding, the soil conditioner shall be applied at 3 CY per 1000 SF and incorporated into the top eight (8) inches of soil.

Seed shall be made up of 70% Seeding (Upland) and 30% Seeding (Riparian). Combined seeding shall be applied at the percent of mix (% of mix) and application rate (PLS/Acre) that is designated on the plans under both Seeding (Upland) and Seeding (Riparian).

Combined Seeding shall be applied to Combined Seeding areas, Willow Cutting areas, and Mature Willow areas as shown on plans.

All seeding shall occur between September 15<sup>th</sup> and December 31<sup>st</sup> as long as the ground is not frozen or too wet. BCPOS Representative and Landscape Designer shall approve the onsite conditions are suitable for seeding prior to seeding.



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REVISION OF SECTION 212  
SEED AND SOIL CONDITIONING**

**METHOD OF MEASUREMENT**

In Subsection 212.07, 1st paragraph, delete the 1st sentence and replace with the following:

The quantities of Seeding (Upland) and Seeding (Riparian) will not be measured but shall be the quantities designated in the Contract. Measurements will be made for revisions requested by the Engineer, or for discrepancies of plus or minus five percent of the total quantity designated in the Contract.

Delete subsection 212.07, and replace with the following:

Soil Conditioner shall be measured by the actual number of acres to which soil conditioner is applied and will be paid for as Soil Conditioner.

**BASIS OF PAYMENT**

Section 212.08 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Seeding (Upland)	Acre
Seeding (Riparian)	Acre
Soil Conditioner	Acre

The Contractor shall furnish the Landscape Designer with delivery tickets or bag weight tickets prior to placing any soil conditioner. Any soil conditioner placed by the Contractor without the Landscape Designer's approval will not be paid for.

Tags attached to bags of seed will not be removed until the bag is opened on site at the time of seeding.

Areas not requiring seeding that have been damaged due to the seeding operation shall be required as ordered. Payment for this corrective work shall be included in the price of the item.

**REVISION OF SECTION 213  
MULCHING**

Section 213 of the Standard Specifications is hereby revised for this project as follows:

**DESCRIPTION**

Subsection 213.01 shall include the following:

This work includes furnishing and applying spray-on mulch blanket or bonded fiber matrix for reclamation of disturbed areas as approved and inspected by the Landscape Designer and BCPOS.

**MATERIALS**

Subsection 213.02, delete Paragraphs 1-8.

Delete the last paragraph in subsection 213.02 and replace with the following:

(a) *Spray-on Mulch Blanket.* Spray on mulch blanket shall consist of the following:

- (1) Spray-on Mulch Blanket (Type 1) shall be a hydraulically applied matrix containing organic fibers, water soluble cross-linked tackifier, reinforcing natural and/or synthetic interlocking fibers. Mulch Blanket (Type 1) shall conform to the following:

<b>Properties</b>	<b>Requirement</b>	<b>Test Method</b>
Organic Fibers	71% Min.	ASTM D 2974
Cross linked Tackifiers	10% +/- 2% Min.	
Reinforcing Interlocking Fibers	10% +/- 1% Min.	
Biodegradability	100%	ASTM D 5338
Ground Cover @ Application Rate	90% Min.	ASTM D 6567
Functional Longevity	12 Months Min.	
Cure Time	< 8 hours	
<b>Application</b>		
Application Rate	3000 lbs./acre	

The organic fiber shall not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach. The organic fibers and reinforcing interlocking fibers cannot be produced from sawdust, cardboard, paper or paper by-products.

In subsection 213.02, delete Paragraph 21. “The metal landscape border shall consist of a strip of metal such as steel conforming to ASTM A 1011 or approved equal.”

**CONSTRUCTION REQUIREMENTS**

Subsection 213.03, delete subsections (a), (d) and (e).

Subsection 213.03 shall include the following:

No work shall occur when soil is extremely wet.

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REVISION OF SECTION 213  
MULCHING**

Subsection 213.03 (b) shall include the following:

Spray-on Mulch Blanket shall be applied to areas seeded with Seeding (Upland) and Combined Seeding,

Subsection 213.03 (b) shall delete the fourth paragraph and replace with the following:

Apply hydromulch and tackifier mixture at the following rate:

<b>Wood Cellulose Fiber Mulch</b>	<b>Tackifier</b>
3000 lbs./Acre	150 lbs./Acre

Subsection 213.03, delete (f) and replace with the following:

- (f) *Spray-on Mulch Blanket*. No chemical additives with the exception of fertilizer and bio nutrients will be permitted as described in section 212. Apply Spray-on mulch blanket in a uniform application using a 50-degree fan tip nozzle. Apply hydro slurry in two directions (from top of slope down and from toe of the slope up, where feasible, providing application at a minimum of two layers). Apply Spray-on Mulch Blanket to achieve 100% soil surface coverage at an average and uniform depth of 3 mm. Dilution rate of 100 gallons of water/50-pound bale. Flexterra HP Flex Growth Medium (FGM) or EcoFlex HP FGM or approved equal at dilution rate of 125-gallons water/50-pound bale may be substituted with prior approval by BCPOS and Landscape Designer. Water should be added and product should be mixed for the time specified by the manufacturer. Infiltration time must be allowed for between passes depending on ambient soil moisture and pre-treatment infiltration rates.

Hydro mulching vessel shall be filled with water to at least 1/3 capacity (high enough to cover agitators) prior to adding any material. Continue to fill vessel with water and slowly add the fibers while agitators are in motion. Run agitators at ¾ speed. Continue to mix tank per manufacturer’s specifications prior to application.

**METHOD OF MEASUREMENT**

Subsection 213.04 shall be replaced by the following:

The quantity of Spray-On Mulch Blanket will not be measured but shall be the quantity designated in the Contract, except that measurements will be made for revisions requested by the Engineer, or for discrepancies of plus or minus five percent of the total quantity designated in the Contract. Hydrolmulch and tackifier shall be paid for together as Spray-On Mulch Blanket.

**BASIS OF PAYMENT**

Subsection 213.05 shall be replaced by the following

<b>Pay Item</b>	<b>Pay Unit</b>
Spray-On Mulch Blanket	Acre

**REVISION OF SECTION 214  
PLANTING**

Section 214 of the Standard Specifications is hereby revised for this project as follows:

**DESCRIPTION**

Delete Subsection 214.01, and replace with the following:

This work consists of furnishing and planting Willow Cuttings in Existing Riprap, Willow Cuttings, Trees and Shrubs, Dormant Log Poles, Perennial (Tubelings) and Fascines as shown on the drawings.

**METHOD OF MEASUREMENT**

Subsection 214.02 shall include the following:

Boulder County has a supply of native wetland plants, shrubs and trees. Contractor shall use this source of plants, if available. Contractor should notify Boulder County at least two months in advance of the requested quantities, species and delivery date. If Boulder County is unable to supply the plants, contractor is responsible for obtaining plant materials.

Plant material, with the exception of Dormant Log Poles and Willow Cuttings, shall be procured from a licensed, qualified and competitive nursery facility specializing in the production of native plant materials, or from cutting areas as designated below.

Upon delivery, plants supplied by Boulder County must be inspected and accepted by a Boulder County Plant Ecologist.

Substitutions will not be permitted without written request and approval from the County. All substitutions must represent native species that occur naturally in Boulder County and surrounding watersheds and is appropriate for the elevation where the plant material will be planted, and do not represent horticultural cultivars or varieties.

Delete subsection 214.02 (a), and replace with the following:

- (a) *Willow Cuttings in Existing Riprap* – Willow Cuttings in Existing Riprap shall consist of willow cuttings installed into existing rip rap. Materials and method of collection shall be the same as Willow Cuttings.

Delete subsection 214.02 (b), and replace with the following:

- (b) *Perennial (Tubelings)*: Perennial (Tubelings) shall be supplied in 10 cubic inches (CI) containers as designated in the contract. All plants shall be from Colorado. Perennial (Tubelings) shall have been growing at least one growing season in the nursery. Perennial (Tubelings) shall not be shipped while in a dormant condition. Perennial (Tubelings) shall be a minimum of 6 inches in height when applicable to species and a root mass filling 75% of a 10-cubic inch container.

Contractor shall notify Boulder County and Engineer prior to ordering any Perennial (Tubelings). Boulder County shall approve the order and quantities of all Perennial (Tubelings).

Subsection 214.02 (c) delete the 2<sup>nd</sup> sentence.

Delete subsection 214.02 (d), and replace with the following:

- (d) *Soil Conditioning and Fertilizer*. Soil conditioner shall adhere to Section 212 of the Project Specifications.
- (e) *Willow Cuttings*. Willow cuttings shall be collected in areas within 1,000 vertical feet of elevation, and of similar hydrology to those existing at the planting site as directed by a qualified ecologist.

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REVISION OF SECTION 214  
PLANTING**

Willow cuttings of varying sizes (minimum 3/8-inch diameter) shall be installed as per the landscape plans.

No more than 20 percent of middle age plant material shall be taken from willow collection sites unless plant will be removed or transplanted during excavation and grading. Written consent from the property owner must be received in areas where harvesting will occur, and will specify if it is beneficial to take more than 20 percent of the plant material.

Willows shall be cut by hand. Transport of willow cuttings on the collection site may be by hand or machinery. No machinery will be used on any property without consent of the owner. Written consent of the owner including explanation of machinery type and limits of machinery travel shall be provided to the Engineer before machinery is used for willow transport.

Willow collection sites shall be left in good condition following the collection process. All slash will be removed and disposed of as part of the work. The collection team will be aware of all property lines and maintain cutting practices on lands that have provided consent only. Collections made on public lands must be permitted and carried out in accordance with local, state, and federal law. Willow cuttings grown in an approved nursery will be allowed.

The Contractor shall provide the Engineer and Vegetation Specialist two weeks' notice prior to beginning willow collection

- (f) *Trees and Shrubs:* Trees and Shrubs shall be supplied in 40 cubic inch containers and 14-inch deep pots as designated in the contract. 14-inch deep pot trees shall include Narrowleaf Cottonwoods, Plains Cottonwoods, and Peachleaf Willows. See plans for sizes of Trees and Shrubs.
- (g) *Dormant Log Poles:* Dormant Log Poles shall be collected or delivered as part of Boulder County's existing contract for plant material. Poles that are collected shall be harvested in a manner conforming to local, state, and federal law. Poles collected shall be harvested within the State of Colorado, in areas within 1,000 vertical feet of elevation and hydrology similar in flow and velocity to those existing at the planting site. Dormant Log Poles may be collected from the same location as Willow Cuttings and at the same time with appropriate property owner approval.

Dormant Log Poles shall be live cottonwood or peach leaf willow saplings or straight branches trimmed and cut to a length of 6 foot to 12-foot-long with a minimum diameter of 1.25 inches from cottonwood or peach leaf willow trees. These cuttings should be free from side branches. The root end of each pole should be cut at a 45-degree angle. The top cuts should be blunt. This serves as an indicator of which end of the pole to insert into the ground. Dormant Log Poles shall be collected and transported in a manner consistent with Willow Cuttings.

Provisions of CDOT Specification 240, Protection of Migratory Birds, shall be observed in the cutting and planting sites.

- (h) *Fascine:* The Fascines shall consist of 2 layers: a core and an outer layer. The core of the Fascine shall be living or dead woody material harvested during the clearing and grubbing process and will vary between 1" to 4" in diameter and a minimum of 5 feet long. The outer layer of the Fascine shall be live willow cuttings at least 3/8-inch diameter or larger and a minimum 5 feet long with the bottom end cut off at an angle and the top end with a straight cut.

Utilize 2" x 4" wood wedge stakes and .25 diameter machine spun bristle coil twine (tensile strength: 140 lbs.)

Subsection 214.03 (c) shall include the following

Planting pits shall be dug to a minimum of two (2) times the width of the ball or container being planted.

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REVISION OF SECTION 214  
PLANTING**

**CONSTRUCTION REQUIREMENT**

Subsection 214.03 (d) shall include the following:

Contractor shall install time-release watering to all Trees and Shrubs in accordance with Section 209 Time-Release Watering.

Delete subsection 214.03 (f).

Delete subsection 214.03 (g) and replace with the following:

*Willow Cuttings, Dormant Log Poles and Fascines.* All cuttings are to be delivered directly to the planting site from the collection or growing site. Plant materials are to be delivered to the planting site in the species, size and quantities identified by the plans and this Project Special Provision. Plant material shall be staged by species in separate and identifiable groups during unloading.

*Willow Cuttings.* All Willow Cuttings will be harvested while dormant, stripped of all branches, and cut into 3-foot long and 5-foot long segments with a 45-degree angle cut on the rooting end. The cuttings will be placed into water within one hour of cutting and soaked at a water depth of one (1) foot for 5-7 days prior to planting. Cuttings shall be maintained in a shaded, moist, and cool condition from the time of harvest through the time of installation, including during transportation and upon delivery to the site. The cuttings will be kept wet until placed into the ground and will not be allowed out of water for more than ten minutes during planting.

Willow Cuttings shall be planted in areas shown on plans. Final locations and elevations for Willow Cuttings shall be approved by Vegetation Specialist and Landscape Designer prior to installation. All willow plantings will be performed using *Salix sp.* cuttings. Willow Cuttings shall consist of one cutting per hole and planted at 3 foot on-center triangular spacing. See Willow Cutting detail in the Revegetation Plans. The cuttings shall be planted by inserting angled end first into the ground a minimum of 16 inches extending 6-8 inches into the water table or capillary fringe. All cuttings will be trimmed after installation to ensure that no more than 12 inches and no fewer than 3 to 4 live buds are left above ground. Care will be taken to avoid damage to buds during handling. Bark must not be separated from the cambium layer.

No area larger than 3 square feet shall be void of vegetation when planting 3 foot on-center.

*Dormant Log Poles.* Locations designated on planting plans shall be planted with dormant log poles as indicated. All cottonwood plantings will be performed using *Populus angustifolia* (Narrowleaf Cottonwood) and *Populus deltoides* (Plains Cottonwood) poles. The number of poles will be as indicated on the landscape plans. Dormant Log Poles shall be 6-12 feet in length. Log Cuttings should be at least 1.25 inches in diameter to ensure sufficient energy for rooting. Dormant Log Poles must be installed within 24 hours of delivery or harvesting.

Poles harvest from the project site be stored in water, flat cuts up. At least 2/3 of the total cutting length shall be covered with water. Cuttings shall be treated with Rootone F rooting hormone or an approved equal at the rate of 1 pound per 35 gallons of water.

*Fascine.* Live willow cuttings for Fascine bundles shall be stored submersed in water for between 5-7 days prior to planting. All live willow cuttings used in Fascines shall be harvested in accordance with section 214.03(g) *Willow Cuttings* of this document. The core of the Fascine shall be 6" to 10" in diameter. The outer layer shall be 1"-2" thick.

Fascine shall be secured together with .25 diameter machine spun bristle coil twine tied evenly every 2' on-center to keep the bundles tightly tied until placed in the ground and buried. On-site soil shall be worked over and around the bundles. Puddle with water and allow soil to settle, then repeat backfill procedure until Fascine is covered to three-quarters of bundle height.

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REVISION OF SECTION 214  
PLANTING**

The length of the Fascine bundle shall be placed parallel with the contour of the ground as directed by Vegetation Specialist and Landscape Designer and overlap adjacent Fascines a minimum of 6 inches. Place 2" x 4" wood stakes a minimum 3 foot-on-center spacing centered along bundle.

Vegetation Specialist and the Landscape Designer shall approve all locations of Fascines prior to installation.

*Perennial (Tubelings):* Perennial (Tubelings) shall be installed in locations shown on plans and shall be planted two (2) feet on center. See Perennial (Tubelings) detail in Revegetation Plans. Perennial (Tubelings) shall be planted following the incorporation of Soil Conditioner and placement of Soil Retention Blanket (Special). All Perennial (Tubelings) shall be planted after spring run-off has occurred. All Perennial (Tubelings) shall be field located by contractor and approved by BCPOS and Landscape Designer prior to planting.

Water shall be applied to Perennial (Tubelings) until soil is saturated. Perennial (Tubelings) shall be watered thoroughly three times a week for a period of one month.

Delete subsection 214.03 (h) and replace with the following:

*Willow Cuttings in Existing Riprap:* Using a stinger, 3-stem bundles of Willow Cuttings shall be inserted through existing rip rap in locations shown on plans. Willow cuttings shall be 3'-5' in length. The bottom of the willow bundle shall be cut at a 45-degree angle and inserted into existing riprap until the bottom 6"-8" of the willow cutting is submerged in the water table. The remaining exposed length shall be cut off to 12" above the existing grade. 3-4 live buds shall be left above the surface of the riprap after installation in completed.

Willow cuttings in existing riprap shall be planted in bundles of three (3) cuttings every six (6) linear feet and a maximum of two (2) feet above the ordinary high water line. Planting location of willow cuttings in existing riprap is subject to refinement in the field. Vegetation Specialist and the Landscape Designer shall approval all planting locations of willow cuttings in existing riprap prior to installation.

Subsection 214.04 shall include the following:

Planting of Trees and Shrubs shall occur between September 1<sup>st</sup> and November 31<sup>st</sup>.

Finishing: Beaver Protection Fence shall be installed around all cottonwoods, alders and birch. See plans for detail of Beaver Protection Fence. Vole Protection Fence shall be installed around all cottonwoods, alders, birch, chokecherry, plum and dogwood. See plans for detail of Vole Protection Fence. Trees that receive both (cottonwoods, alders and birch) Vole Protection Fence shall be installed prior to Beaver Protection Fence.

Planting of Willow Cuttings, and Dormant Log Poles shall occur between September 1<sup>st</sup> and November 31<sup>st</sup>.

All Perennial (Tubelings) shall be planted within the fall planting window. Fall planting shall occur after spring run-off and prior to October 31<sup>st</sup>. Contractor shall notify Boulder County prior to planting. Boulder County and Landscape Designer shall approve planting window prior to planting of Perennial (Tubelings).

Any completion date after the time frames described above or shown on the plans shall force the Landscape Establishment period to begin at the start of the next spring planting season.

Contractor to notify Boulder County no more than two (2) days after final installation of the Trees and Shrubs, Willow Cuttings, Dormant Log Poles, and Perennial (Tubelings). Boulder County and Landscape Designer shall approve final installation prior to acceptance.

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REVISION OF SECTION 214  
PLANTING**

Subsection 214.04 (b) shall include the following:

No fertilizer shall be placed within 50 feet of an existing wetland or stream.

Following the 12-month establishment period, 85% of the willow cuttings and dormant log poles shall be in a living condition. Contractor is responsible for replacing all dead material until the 85% survival rate is reached at the Contractors expense.

Delete subsection 214.04 (b) 1.

In subsection 214.05, 2<sup>nd</sup> paragraph, replace the term “brush layer cuttings” with “dormant log poles and willow cuttings.”

**METHOD OF MEASUREMENT**

Subsection 214.05 shall include the following:

Subsection 214.06, 1<sup>st</sup> paragraph, 1<sup>st</sup> sentence, replace the term “brush layer cuttings” with “willow cuttings in existing riprap” and add “cottonwood stakes and willow cuttings” between “planting, and “willow cuttings in existing riprap”.

Harvest and installation of willow cuttings included in Fascines and Willow Cuttings in Existing Riprap shall be included in the price of each.

Beaver Protection Fence and Vole Protection Fence shall each be paid for as a Lump Sum.

**BASIS OF PAYMENT**

Subsection 214.06 shall include the following:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule. Payment includes all materials, labor, and equipment necessary for a complete installation, including but not limited to, excavation, transport of materials, backfill, compaction and Rootone F rooting hormone.

Payment shall be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Perennials (Tubeling)	Each
Willow Cuttings in Existing Riprap	Each
Willow Cuttings	Each
Dormant Log Cutting	Each
Fascines	LF
Trees and Shrubs	Each
Beaver Protection Fence	LS
Vole Protection Fence	LS



**REVISION OF SECTION 214  
LARGE WOOD STRUCTURES**

Section 214 is hereby added to the Standard Specifications for this project and shall include the following

**DESCRIPTION**

Subsection 214.01 shall include the following:

Large Wood Structures work includes all equipment, materials, labor, and other costs associated with supplying material and installing large wood structures as indicated in the plans.

**MATERIALS**

Subsection 214.02 shall include the following:

Large wood structures consist of large woody material (LWM), ballast boulders, and slash woody debris (less than 6" diameter). LWM are individual trees or tree trunks, preferentially sourced with intact root mass, used to develop in-stream and floodplain large wood structures.

LWM elements shall not be hollow or rotten, and shall include bark. LWM shall be limbed to a limb length no more than 24", except as approved by engineer in field. LWM for construction shall be measured as follows:

- (1) Diameter at Breast Height (DBH): Measured 4.5 feet from the top of the rootwad or large end of the log if no rootwad is present. DBH of LWM shall be as specified on plans, unless approved by the engineer in the field.
- (2) Length: Measurement shall include total length of log, including root wad, if present. Length of LWM shall be as specified on plans, unless approved by the engineer in the field.

Many LWM elements are required to have rootwads intact, as specified on plans. To the extent practical, the rootwads shall have a diameter that is between 3 and 4 times the DBH of the attached tree.

All LWM shall be sourced from native tree species. Non-native tree species, such as Elm, that do not sprout new trees must be approved by the Owner's Representative. Any LWM sourced from outside the Project boundaries shall be certified disease- and parasitic insect-free by a qualified Forester and shall be approved by the Engineer prior to use. LWM shall be free of cracks, decay, or other structural deficiencies. Slow decaying wood species, such as conifers, are preferred to the extent feasible.

Ballast boulders shall meet the material requirements specified in Section 506 (Rock Structures). Ballast soil material shall be native fill consisting of coarse sediment and a lesser amount of finer material.

Salvaged slash debris will be used to fill void spaces between logs within each large wood structure. The material shall be salvaged in accordance to Section 201 (Clearing and Grubbing).

Procurement, Delivery, Storage, and Handling

It is the Contractor's responsibility to identify the off-site source(s), certify, procure, haul, and stockpile all imported LWM. LWM shall be harvested, handled, and stored according to subsection 202.101 Removal of Trees.

LWM for structures shall be secured from the following sources:

- (1) Salvaged trees removed during Project activities, as approved by the Engineer
- (2) Boulder County stockpiled trees at the following locations:
  - a. Hirschfield property – immediately east of 8305 Hwy. 66, Longmont (91 trees)

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**REVISION OF SECTION 214  
LARGE WOOD STRUCTURES**

- b. Swede Lake – 7171 Pike Road, Longmont (38 trees)
  - c. Lookout Farms - 5373 N. 107th (Hwy. 287), Longmont (10 trees)
  - d. 18976 N. St. Vrain Road (Hwy. 36), Lyons (16 trees)
- (3) Certified disease- and parasitic insect-free LWM sourced from outside Project Boundaries

Condition of available trees is unknown and will need to be verified.

The contractor shall take care to protect the root wads and branches from damage during handling and installation of large woody material. LWD that breaks and becomes unusable at stockpiled sites due to rot can be left at stockpile location. LWD that is broken and unusable at the Project location will be disposed of by contractor or utilized on site at Engineers discretion.

**CONSTRUCTION REQUIREMENTS**

Subsection 214.04 shall include the following:

Add the following subsections immediately following subsection 214.04 as follows:

**214.041 Large Wood Structure Placement.** Large wood structures shall be placed per the following:

- (a) Place LWM as specified and indicated in the Plans.
- (b) The contractor shall immediately notify the engineer if a specified log size is not available.
- (c) The location, number of logs, and configuration of large wood structures may vary in field due to site conditions, and the final location of these structures will be approved by the Engineer in the field prior to construction. After construction, final number of large wood structures installed shall be totaled for payment.
- (d) Burial depth/length and log orientation angles shall be as specified on plans, unless otherwise approved by the engineer in the field.
- (e) Large wood shall be secured in placement locations by designated anchoring method listed on the plans, unless otherwise approved by the engineer in the field.
- (f) Trench widths associated with log installation shall be limited to the log diameter plus 2 feet, and the contractor shall take care to minimize bank disturbance. Following construction, the contractor shall stabilize any disturbed banks using methods noted on the plans.

**214.042 Large Wood Structure Quality Control and Acceptance.** Large wood structures shall be accepted per the following:

- (a) Verify that LWM delivered to the placement site meets the applicable quality, size, type, species, and number of elements presented in the Plans. The Contractor shall furnish a list of available logs (onsite and offsite) to be used on the project. For each log, the list shall describe the tree species (if known), diameter (DBH), length, and rootwad diameter.
- (b) Verification of materials sourced within Project limits shall be by visual inspection of quality and by measurement of trunk length and diameter, and rootwad diameter if applicable.
- (c) Any large wood material sourced from outside Project limits shall include Forester certification documentation.
- (d) Rejected materials shall be transported off-site and disposed of at Contractor expense outside of Project limits.
- (e) Verify that large wood structures have been placed to lines and grades indicated in plans. Verification shall be by visual inspection and survey of grade if specific (or relative) elevations are identified on the Plans.

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**REVISION OF SECTION 214  
LARGE WOOD STRUCTURES**

**METHOD OF MEASUREMENT**

Subsection 214.05 shall include the following:

Each type of Large Wood Structure shall be measured by the number of installed structures as a unit quantity.

**BASIS OF PAYMENT**

Subsection 214.06 shall include the following:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule. Payment includes all materials, labor, and equipment necessary for a complete installation, including but not limited to, procurement of large wood material, excavation, transport and haul of materials, disposal and haul of excess soil, backfill, compaction, and placement of anchor ballast boulders and slash debris.

Only work directed by the Engineer that expands the scope of improvements or substantially changes the character of the work will be considered a basis for consideration of additional payment.

Salvage of onsite woody material is paid for separately by Section 201 (Clearing and Grubbing) and Section 202 (Removal of Tree). Salvage and/or importing additional ballast boulders are paid for separately per Section 203 (Unclassified Excavation) and Section 506 (Rock Structures) if approved by the Engineer. Excavations for pools that correspond to large wood structures and placement of native streambed mix in reconstructed channels shall be paid for separately per Section 203 (Unclassified Excavation).

<b>Pay Item</b>	<b>Pay Unit</b>
Large Wood Structure Type 1	Each
Large Wood Structure Type 2	Each
Large Wood Structure Type 3	Each
Large Wood Structure Type 4	Each
Large Wood Structure Type 5	Each
Large Wood Structure Type 6	Each

**REVISION OF SECTION 215  
TRANSPLANTING MATURE WILLOWS**

Section 215 of the Standard Specifications is hereby revised for this project to include the following:

**DESCRIPTION**

This work consists of transplanting Mature Willows in accordance with this specification and as directed by the Engineer.

**MATERIALS**

Mature willow plants shall be selected by Contractor and approved by BCPOS and Landscape Designer from plants presently growing in areas within the limits of disturbance.

**CONSTRUCTION REQUIREMENTS**

Willow Cuttings shall be taken from approved mature willow plants while dormant before buds appear. Contractor shall harvest Willow Cuttings from mature willow plants in accordance with the requirements in section 214.03 Willow Cuttings. All cuttings available for harvesting shall be collected, limits in section 214.03 do not apply.

Provisions of CDOT Specification 240, Protection of Migratory Birds, shall be observed in the cutting and planting sites.

The Contractor shall provide the Engineer and Vegetation Specialist two weeks' notice prior to beginning Transplanting Mature Willows.

Mature Willows shall be harvested while dormant and immediately planted in locations shown on plans. Exact locations and elevations for individual Mature Willows shall be field located by Vegetation Specialist and Landscape Designer.

Maintain 1' of cutting above ground. Mature Willows shall have a rootball between 3-5 feet deep and between 2-3 feet wide. Contractor can divide approved mature willow plants that will be used for Mature Willows if necessary.

Mature Willows shall consist of one willow plant harvested onsite and planted at 6 foot on-center. See Mature Willow detail in the Revegetation Plans. The Mature Willows shall be planted a minimum of 3 feet into the creek bank with the rootball extending a minimum of 6 inches into the water table or capillary fringe.

A minimum of 6 inches shall extend above the finished grade with no fewer than 3 to 4 live buds per cutting left above ground. Care will be taken to avoid snapping cuttings or damaging the rootball.

Contractor shall backfill Mature Willow planting with a slurry of native bank or streambed material. Mature Willow shall be watered in so as the ground is thoroughly saturated immediately following planting.

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**REVISION OF SECTION 215  
TRANSPLANTING MATURE WILLOWS**

**METHOD OF MEASUREMENT**

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule. Payment includes all materials, labor, and equipment necessary for a complete installation, including but not limited to, excavation, transport of materials, backfill, compaction and watering.

**BASIS OF PAYMENT**

The accepted quantities of transplanted Mature Willow shall be paid for at the contract unit price each. Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Transplanting Mature Willows	Each

**REVISION OF SECTION 216  
SOIL RETENTION BLANKET (SPECIAL)**

Section 216 of the Standard Specifications is hereby revised for this project to include the following:

**DESCRIPTION**

Soil Retention Blanket (Special) consists of stabilizing vegetation and utilized as erosion control.

**MATERIALS**

Soil Retention Blanket (Special) shall be Nedia C400B or approved equal. The blanket shall be 100% coconut fiber matrix stitch bonded between two biodegradable nettings with a total thickness of 0.31 inches and a tensile strength of 240 x 164 lb./ft.

**CONSTRUCTION REQUIREMENTS**

Soil Retention Blanket (Special) shall be installed in locations seeded with Seeding (Riparian) or areas where Perennial (Tubelings) are to be planted. See plans for locations.

Prior to the installation of the Soil Retention Blanket (Special) areas shall have soil conditioner and riparian seeding applied as described in the plans and Section 212 of the specifications. Perennial (Tubelings) shall be planted after the installation of the Soil Retention Blanket (Special).

Soil Retention Blanket (Special) shall be installed and secured according to the manufactures recommendations.

Contractor shall contact BCPOS and Engineer prior to Soil Retention Blanket (Special) order. Approval of locations and quantities shall be given by BCPOS prior to order.

**METHOD OF MEASUREMENT**

Subsection 216.04 shall be replaced with the following:

Soil retention covering, including staples, complete in place and accepted, will be measured by the square yard of finished surface. No allowance will be made for overlap.

**BASIS OF PAYMENT**

Section 216.05 shall include the following:

Payment shall be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Soil Retention Blanket (Special)	Square Yard

**REVISION OF SECTION 218  
NOXIOUS WEED MANAGEMENT**

Section 218 is hereby added to the Standard Specifications for this project and shall include the following

**DESCRIPTION**

**218.01** This work includes the prevention, control, and monitoring of noxious weeds through an Integrated Weed Management Plan using all methods that are available for the targeted weed species. Noxious weed management will include the prevention and control of noxious weeds identified in the project area. Effective noxious weed management procedures shall use a combination of the four basic methods: chemical, mechanical, cultural, or biological techniques, including prevention and monitoring.

The Contractor shall control and prevent the spread of noxious weeds throughout construction to comply with Title CRS 35-5.5, Colorado Weed Management Act.

Perform treatment in accordance with Colorado and Federal regulations. Provide BCPOS with current Commercial/Professional Applicator license upon request.

**MATERIALS**

**218.02 Chemical Treatment, Mechanical Control, Cultural Control and Biological Control.**

The material for Noxious Weed Management shall conform to the following:

*(a) Chemical Control.* Incorporate herbicide treatment in accordance to CDOT Standard Specification, Section 217, Herbicide Treatment. The pesticide applicator shall consult the most recent publication of the Colorado Weed Management Guide available on-line at <http://www.cerc.colostate.edu/titles/XCM205.html> through Colorado State University's Cooperative Extension Program. Changes by the Contractor to the provisions of the CWMG shall be pre-approved by the Engineer a minimum of 10 days prior to application.

Herbicides shall be labeled as described in Section 217, subsection 217.02 of the Standard Specifications, and Labeling information shall be provided to the Engineer in accordance with subsection 217.03.

The contractor is required to follow federal, state, and local regulations regarding herbicide materials and use.

Additional requirements:

- Do not apply herbicide during precipitation or when precipitation is forecasted within 24 hours of expected application, or in winds exceeding 5 miles per hour.
- Use only an approved aquatic formulation of a glyphosate-based herbicide (such as Rodeo) within 25 feet of creek.
- Transport and handle all herbicide materials according to the label. Store all herbicide materials in a secure place in the original container.
- Immediately respond to any leaks or spills according to the label.
- Read and follow information on herbicide label for the "Environmental Hazards" section and, if available, any information under the "Endangered Species Protection Requirements" section.
- Mix selected herbicide according to label.
- Apply selected herbicides on visible invasive rhizomatous perennial plants in the planting area.
- Dispose of any remaining herbicide mix according to the label

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**REVISION OF SECTION 218  
NOXIOUS WEED MANAGEMENT**

(b) *Mechanical Control.* Mechanical control shall consist of mowing and brush cutting, hand pulling, blading, grubbing, and the use of hand operated tools, such as power weeders, string trimmers, chain saws, brushhooks, or heavy equipment. Engineer or Owner shall approve any planned mowing.

(c) *Cultural Control.* Cultural control to enhance the vigor of desirable plants shall consist of native seeding and plantings using the appropriate project seed mix(es), mulching, and fertilizing, as appropriate in accordance with CDOT Standard Specifications, Sections 212, 213, 214, 216, and as shown on the plans.

(d) *Biological Control.* Biological control shall consist of the use of approved living organisms (insects, animals, or pathogens) with assistance provided by the Colorado Department of Agriculture’s Division of Plant Industry or Colorado State University Cooperative Extension.

**CONSTRUCTION REQUIREMENTS**

**218.03 Integrated Noxious Weed Management Plan.** The Contractor shall follow the project specific Integrated Noxious Weed Management Plan, provided by BCPOS. Once work has started, and during the active construction period, the Contractor shall update the schedule for noxious weed management work on a monthly basis, and submit the updated schedule to the Project Engineer. Revisions to the plan and schedule shall not be implemented until the proposed measures have been approved in writing by the Engineer

The plan will consist of the following elements:

- 1) Identification of Colorado’s List A and List B and List C noxious weed species.
- 2) Identification of Boulder County’s Noxious Weed List
- 3) Schedule of controls prior to topsoil salvage or earthwork operations.
- 4) Noxious weed management practices in sensitive areas, and for on-site wetlands and riparian habitat.
- 5) Schedule of onsite monitoring for List A and List B noxious weeds.

Below is also a table outlining the primary invasive plant species requiring treatment:

Table 1. Primary Invasive Plant Species Requiring Treatment

<b>Scientific Name</b>	<b>Common Name</b>	<b>Rhizomatous</b>
<i>Acosta diffusa</i>	Diffuse Knapweed	
<i>Acosta maculosa</i>	Spotted Knapweed	
<i>Bromus tectorum</i>	Cheatgrass	
<i>Carduus nutans</i>	Musk Thistle	
<i>Chondrila juncea</i>	Rush Skeletonweed	
<i>Cirsium arvense</i>	Canada Thistle	Yes
<i>Cirsium vulgare</i>	Bull Thistle	
<i>Euphorbia cyparissias</i>	Cypress Spurge	Yes
<i>Euphorbia myrsinites</i>	Myrtle Spurge	
<i>Fallopia japonica</i>	Japanese knotweed	Yes
<i>Hesperis matronalis</i>	Dame's Rocket	
<i>Kochia scoparia</i>	Kochia	
<i>Linaria genistifolia var. dalmatica</i>	Dalmatian Toadflax	
<i>Onopordum acanthium</i>	Scotch Thistle	
<i>Salvia aethiopsis</i>	Mediterranean Sage	
<i>Verbascum thapsus</i>	Mullein	



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**REVISION OF SECTION 218  
NOXIOUS WEED MANAGEMENT**

Prior to starting the Work, submit a proposed invasive species treatment schedule, including specific sequence and timing of control techniques, to BCPOS for review. Do not perform any Work until the schedule is approved by BCPOS.

The Contractor shall submit post construction mapping of those weeds listed in the Colorado Noxious Weed Act List A and List B that are present onsite at the time of project acceptance by the Engineer, and at other times as directed by the Engineer. This mapping shall be completed by the the Noxious Weed Management Supervisor.

**218.04 Noxious Weed Management**

*(a) Certifications.* All methods of seeding shall be in accordance with Section 212. All methods of mulching shall be in accordance with Section 213. All methods of herbicide application shall be in accordance with Section 217.

*(b) Procedures to Minimize Spread of Noxious Weeds.* The Contractor shall treat the weeds in accordance with the Integrated Noxious Weed Management Plan. Noxious weed plants and plant parts, including seed heads, that have been mechanically removed, shall be placed in appropriate bags or other suitable containers that can be tightly closed or sealed and shall be disposed of at a solid waste disposal facility. Topsoil infested with List A and List B noxious weeds shall be disposed of at a solid waste disposal facility.

Noxious weed management, after earthwork operations and stabilizing has been completed, shall not result in non-target injury. Any non-target injury shall be reseeded and re-mulched in accordance with Section 212 and 213 at no cost to the project.

Weed management practices for staging areas are to be approved by the Engineer prior to their construction. Project stage areas will be cleared of noxious weeds prior to mobilizing construction equipment. Weed infested staging areas shall be mowed and cleared of noxious weeds as described in Section 201, and sprayed with the appropriate herbicide as described in the Integrated Noxious Weed Management Plan.

If borrow material is used for any part of the project, the borrow material shall be weed-free and shall be obtained from a site preapproved by the Engineer. If the borrow is stockpiled it shall be stabilized and remain weed free for the duration of the project.

If imported topsoil is used for any part of the project, the topsoil shall be inspected by the Noxious Weed Management Supervisor and certified noxious weed free by the Noxious Weed Management Supervisor. If List A or List B noxious weeds are found in the topsoil, the material shall not be used on the project.

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**REVISION OF SECTION 218  
NOXIOUS WEED MANAGEMENT**

**METHOD OF MEASUREMENT**

Subsection 218.05 shall be replaced with the following:

Noxious Weed Management will not be measured separately, but will be paid for on a lump sum basis. The lump sum price will be full compensation for all work and personnel required to complete the item. The Contractor shall provide the Noxious Weed Management Supervisor. Herbicide treatment will be paid for in accordance with Section 217. Stripping of topsoil infested with noxious weeds will be paid for in accordance to Section 207. Mechanical removal of noxious weeds will not be measured, but shall be included in the work. Solid waste disposal shall be paid for in accordance to Section 250.

**BASIS OF PAYMENT**

Subsection 218.06 shall be replaced with the following:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

<b>Pay Item</b>	<b>Pay Unit</b>
Noxious Weed Management	Lump Sum

**REVISION OF SECTION 240  
PROTECTION OF MIGRATORY BIRDS  
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

Section 240 is hereby added to the Standard Specifications for this project as follows:

**DESCRIPTION**

**240.01** This work consists of protecting migratory birds during construction.

**MATERIALS AND CONSTRUCTION REQUIREMENTS**

**240.02** The Contractor shall schedule clearing and grubbing operations and work on structures to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years' experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Engineer.

- The wildlife biologist shall conduct dusk and dawn surveys of Bald Eagle roosts within seven days prior to the start of any construction during the eagle breeding season, October 15 to July 15. If a Bald Eagle roost is identified, construction activity shall not proceed within 0.25 mile of active nocturnal roost sites between October 15 and July 15.
- The wildlife biologist shall conduct raptor nest surveys within 0.5 mile of the construction site prior to the start of construction and prior to each construction phase. This survey can be done with binoculars. If construction activities are located within the Colorado Division of Wildlife (CDOW) recommended buffer zone for specific raptors, "NO WORK" zones shall be established around active sites during construction according to the CDOW standards or as recommended by the wildlife biologist in consultation with the CDOW. The "NO WORK" zone shall be marked with either fencing or signing. Work shall not proceed within a "NO WORK" zone until the wildlife biologist has determined that the young have fledged or the nest is unoccupied.

(a) *Vegetation Removal.* When possible, vegetation shall be cleared prior to the time when active nests are present.

Vegetation removal activities shall be timed to avoid the migratory bird breeding season:

- i. The Preble's active season is from May 1 through November 1.
- ii. Coordination with CPW on appropriate measures for protection for raptors is required.
- iii. Primary nesting season for migratory birds is from April 1st through July 31st.
- iv. Primary nesting season for nesting raptors is from February 1st through August 31st.
- v. Primary nesting season for Bald and Golden eagles is from October 15th through July 31st and December 15th through July 15th, respectively.

The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside CDOT right of way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

1. *Tree and Shrub Removal or Trimming.* If tree and shrub removal or trimming occurs a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

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**REVISION OF SECTION 240  
PROTECTION OF MIGRATORY BIRDS  
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

2. *Grasses and Other Vegetation Management.* Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right of way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the CDOT biologist. This buffer dimension may be changed if determined appropriate by the CDOT biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

- (b) *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:
  - (1) The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and CDOT has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.
  - (2) During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
  - (3) If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
  - (4) Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are  $\frac{3}{4}$  inch by  $\frac{3}{4}$  inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

- (c) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

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**REVISION OF SECTION 240  
PROTECTION OF MIGRATORY BIRDS  
BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

**METHOD OF MEASUREMENT**

**240.03** Protection of Migratory Birds will be measured by the lump sum for all work required through this specification. This work includes actual authorized number of hours a wildlife biologist is on site performing the required tasks, removal of nests and netting. During this period, the Contractor shall submit to the Engineer each week for approval a list of the workers who removed nests and the number of hours each one spent removing nests.

**BASIS OF PAYMENT**

**240.04** The accepted quantities measured as provided above will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Protection of Migratory Birds	Lump Sum

Payment for Protection of Migratory Birds will be full compensation for all work and materials required to complete the item, including wildlife biologist, wildlife survey, documentation (record of nest location and protection method), removal of nests, and netting.

Payment for Removal of Nests will be full compensation for all work and material required to complete the work. Maintenance and replacement, removal, and disposal of netting will not be measured and paid for separately, but shall be included in the work.

Clearing and grubbing will be measured and paid for in accordance with Section 201. Mowing will not be measured and paid for separately, but shall be included in the work.

Removal and trimming of trees will be measured and paid for in accordance with Section 202.

Fence (Plastic) will be measured and paid for in accordance with Section 607

**REVISION OF SECTION 506  
ROCK STRUCTURES**

Section 506 of the Standard Specifications is hereby revised for this project as follows:

**GENERAL**

Delete subsection 506.01 and replace with the following:

This work includes construction of in-channel and floodplain rock structures within the South St. Vrain Creek in accordance with these specifications and in conformity with the lines and grades shown on the plans. Each feature contains a variable number of boulders and rocks from on-site sources, supplemented by imported rock from an off-site source to be identified by the Contractor. Work includes the selection and placement of approved boulders and rocks into distinct features as shown on the plans, and bid items for importing three size classes of rock, including:

- a. Riffle structure
- b. Riffle floodplain sill
- c. Floodplain sill
- d. Willow cuttings in cobble toe
- e. Boulder toe
- f. Habitat boulder
- g. Overflow rock ramp
- h. Knickpoint stabilization structure
- i. Import additional 6 to 12 inch rock
- j. Import additional 12 to 24 inch rock
- k. Import additional 24 to 48 inch rock

Delineations of what constitutes a single “feature” is depicted on the plans. Construction will be limited to areas as shown on the plans or as approved by the Engineer.

**MATERIALS**

Delete subsection 506.02 and replace with the following:

Stone shall be hard, durable, resistant to weathering and to water action, free from overburden, spoil, shale, structural defects, and organic material, and shall meet the size class specified. Neither breadth nor thickness of a single stone shall be less than one-third its length.

Boulders for use in-channel features shall be rounded to subrounded, and diameters as specified in the planset (measured on the secondary axis, or B-axis). Rocks that make up subgrade materials or other less prominent portions of each feature may be angular. Specific details of the boulder and rock materials required for each feature are depicted in the typical details in the plans. Four types of rock mixes are necessary to construct the proposed rock and channel bed features in this project. The gradation of each type of rock mix and potential expected sources of material are shown in Table 506-1.

Boulders and rocks for use in the channel features shall be salvaged during construction activities per requirements in Section 203 and as approved by the Engineer and/or Owner’s representative. The Contractor may not remove boulders from existing bank stabilization measures unless approved by the Engineer in the field.

If additional rock and/or boulders are required for completion of the Work as shown on the plans, the Contractor will notify the Engineer immediately. Upon approval by the Engineer, the Contractor shall purchase and haul additional rock and/or boulders to the site. Material shall be supplied within a reasonable time frame to complete the Work per the Project Schedule. Rock color shall be similar to natural material found in the project area.

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**REVISION OF SECTION 506  
ROCK STRUCTURES**

**Table 506-1: Rock Mix Gradation Summary**

<b>Rock Mix Type</b>	<b>Dmin</b>	<b>D16</b>	<b>D50</b>	<b>D84</b>	<b>Dmax</b>	<b>Potential Sources of Material</b>
Native streambed mix	Sand	0.5 to 1	2 to 4	5 to 7	18 to 24	Salvage: Stockpiling substrate from limits of pre- and post-flood main channels, and deposits in select areas of the floodplain.
Coarse substrate mix	Sand	2	6	12	24	Salvage and Sorting: Native streambed substrate supplemented with coarse rock salvaged through sorting excavated material.
Floodplain sill mix	Sand	4	12	24	36	Salvage, Sorting, and Import: Native streambed substrate supplemented with coarse rock salvaged through sorting excavated material. Import remaining quantities.
Boulder mix	24	30	36	42	48	Salvage and Import: Remove and stockpile boulders as they are uncovered during excavation. Import remaining quantities.

A summary of rock mix requirements for each type of type of rock feature proposed for the project is shown in Table 506-2.

**Table 506-2: Rock Mix Placement Summary**

<b>Rock Mix Type</b>	<b>Structure Type</b>
Native streambed mix	Reconstructed Channel Bed in Pools and Runs
	Reconstructed Overflow Channel Bed
	Overflow Rock Ramp - Face
	Knickpoint Stabilization Structure – Run & Face
Coarse substrate mix	Riffle Structure - Face
	Willow Cuttings in Cobble Toe
Floodplain sill mix	Riffle Floodplain Sill
	Floodplain Sill
	Overflow Rock Ramp - Crest
	Knickpoint Stabilization Structure - Crest
Boulder mix	Riffle Structure - Crest
	Habitat Boulder
	Boulder Toe

Angular rock material may be used to construct the overflow rock ramp crest, knickpoint stabilization structure crest, riffle structure crest, riffle floodplain sill, floodplain sill, and boulder toe.

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**REVISION OF SECTION 506  
ROCK STRUCTURES**

**CONSTRUCTION REQUIREMENTS**

Delete subsection 506.03 and replace with the following:

Arrangement of boulders and rock within each feature and spacing between channel features will be as shown on the plans. The Contractor may be required to reposition or adjust the installation as directed in the field by the Engineer or their designated representative.

Rock shall be placed to minimize voids and form as smooth a surface as practical. This may require placing rock in multiple lifts, and backfilling voids with native streambed material, unless otherwise specified on the plans. For rock structures that involve placement of boulder mix material, dumping and backhoe placement alone is not sufficient to ensure a properly interlocked system. Boulders may be machine-placed and then arranged as necessary by use of an excavator with a multi-prong grappling device or by hand to interlock and form a substantial bond.

During ground preparation for each rock structure, the Contractor shall remove and replace unsatisfactory material with satisfactory materials in areas to receive fill, as directed by the Engineer. Fill voids of substrate material to provide uniform surface for proposed fills.

The Contractor is responsible for protection and maintenance of the rock structures including all individual elements during construction and until final acceptance of the work. Disturbance of adjacent, previously-constructed work shall be repaired by the Contractor at the Contractor's expense.

Any dewatering required during construction shall follow the approved construction dewatering permit requirements and/or water control plan.

**METHOD OF MEASUREMENT**

Delete subsection 506.04 and replace with the following:

Each of the following rock structure types will be considered and measured as a unit quantity, constructed and completed in place: Riffle Structure, Habitat Boulder, Overflow Rock Ramp, and Knickpoint Stabilization Structure.

Each of the following rock structure types will be considered and measured by linear feet, constructed and completed in place: Riffle Floodplain Sill, Floodplain Sill, Willow Cuttings in Cobble Toe, and Boulder Toe. Willow cuttings shall be paid for separately.

Importing additional rock and boulders will be measured per ton as approved by the Engineer. The quantity of imported rock provided on the bid tab is based on an Engineer's rough estimate, and final quantities may vary based on the quantity of salvaged material in each size class. The Contractor is expected to salvage as much material as feasible during excavation. Refer to Section 203 (Unclassified Excavation) for more information.



**-4-  
REVISION OF SECTION 506  
ROCK STRUCTURES**

**BASIS OF PAYMENT**

Delete subsection 506.05 and replace with the following:

The unit price for each rock structure type shall be full pay for all materials, labor, tools, and equipment necessary for a complete installation, including but not limited to, excavation, transport and haul of materials, disposal and haul of excess soil, backfill, compaction, and placement of rock. Only work directed by the Engineer that expands the scope of improvements or substantially changes the character of the work will be considered a basis for consideration of additional payment.

The pay items for each rock structure should not include the cost associated with providing rock materials. Sorting, screening, handling, and stockpiling rock material shall be paid for separately per Section 203 (Unclassified Excavation). Payment will be made for importing additional rock and boulders as a separate bid item (see below), as approved by the Engineer. Excavations for pools that correspond to riffle features and placement of native streambed mix in reconstructed channels shall also be paid for separately per Section 203 (Unclassified Excavation).

<b>Pay Item</b>	<b>Pay Unit</b>
Riffle Structure	Each
Riffle Floodplain Sill	Linear Feet
Floodplain Sill	Linear Feet
Willow Cuttings in Cobble Toe	Linear Feet
Boulder Toe	Linear Feet
Habitat Boulder	Each
Overflow Rock Ramp	Each
Knickpoint Stabilization Structure	Each
Import 6 to 12-inch Rock	Ton
Import 12 to 24-inch Rock	Ton
Import 24 to 48-inch Rock	Ton

**REVISION OF SECTION 508  
BEAVER DAM ANALOGUE**

Section of the Standard Specifications is hereby revised for and shall include the following:

**DESCRIPTION**

Subsection 508.01 shall be modified to:

This work consists of the construction of Beaver Dam Analogues in accordance with these specification and inconformity with the details and locations shown on the design plans.

Beaver dam analogues (BDAs) are channel-spanning structures that mimic or reinforce natural beaver dams. As such, they are semi-porous to water, sediment, fish and other water-borne materials.

Please see the “2015 Beaver Restoration Guidebook” (U.S. Fish and Wildlife Service (Janine Castro), National Oceanic and Atmospheric Administration (Michael Pollock and Chris Jordan), Portland State University (Gregory Lewallen), U.S. Forest Service (Kent Woodruff)) and/or under the direction and supervision of Dr. Michael Pollock, beaver guidebook principal author.

**MATERIALS**

Subsection 508.02 shall be modified to include:

Materials should be sourced from on site as much as possible. Materials include existing stream substrate material, woody material and branches removed during excavation or clearing and grubbing. The wood post of the BDA shall be composed of 4 to 12-inch diameter that are 6 to 10 feet in length found on site if possible. Post material shall be approved by Owner or Engineer prior to installation. Willow cuttings will be sourced on site and shall be approved by Engineer or Owner prior to installation. Other woody material such as branches can be sourced on site also.

Rock and cobble may be placed to create a scour resistant berm along the upstream and downstream faces of the structure. The berm will be used to enhance structure stability as deemed necessary based on site specific conditions, including streambed sediment size, channel confinement, and streambank erosion considerations.

Local or nearby alluvium such as muck, sand, and rock may be hand shoveled onto the structure for permeability adjustment. Desired soil types to adequately seal BDAs are: Sandy Loam, Clay, Clay Loam, Silty Clay.

Cobble and rock materials are not available within the channel. Obtaining these materials from the adjacent French Creek channel would result in stream bed/bank disturbance and is not felt to be beneficial. Permeability of the structures may be adjusted by using locally sourced finer materials such as mud, grass, leaves and other plant materials. Locally sourced weed free straw, or locally sourced weed free pasture grass hay may be used to adjust permeability. Use of straw reduces the demand for locally sourced native plant materials, does not introduce non-native materials, and has the potential for positive impacts.

**CONSTRUCTION REQUIREMENTS**

Subsection 508.06 shall be modified to include:

A complete construction sequence for a BDA would be to first install a line of posts using a hydraulic or pneumatic post pounder, followed by weaving branches in between the posts. An upstream face is then constructed first using cobble and other large material placed at the upstream base to prevent underscour, followed by successive layers of vegetation and finer-grained material until the structure has achieved the desired level of flow permeability and upstream pool depth.

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**REVISION OF SECTION 508  
BEAVER DAM ANALOGUE**

BDAs will be installed by driving untreated fir or pine posts into the channel bottom perpendicular to flow across the side-channel, and extending laterally up both banks. Posts will be installed at approximately 1-foot spacing, and shall be driven several feet into the substrate. Posts will be placed in an offset fashion with a 6" staggering as shown on the details. Post embedment depth will be at least 1.5 times the height of the structure. Typical embedment depths are approximately 5-10 ft. Posts will be placed 12-24 inches apart (center to center). An occasional variance (1/5 posts) will be allowed to account for technical difficulties of post placement causing inadvertent variation in spacing.

Rock and cobble to backfill behind BDA and allow for scour protection on downstream side shall be sourced onsite and compose of D50 greater than or equal to 12". Larger boulders can be used to anchor the structure where it ties into the banks. Rock and cobble may be placed to create a scour resistant berm along the upstream and downstream faces of the structure. The berm will be used to enhance structure stability as deemed necessary based on site specific conditions, including streambed sediment size, channel confinement, and streambank erosion considerations. Local or nearby alluvium such as muck, sand, and rock may be hand shoveled onto the structure for permeability adjustment. Desired soil types to adequately seal BDAs are: Sandy Loam, Clay, Clay Loam, Silty Clay. Local alluvium in channel was found to be sand and on adjacent flood plain was loamy sand.

Locally harvested willow branches are proposed to be collected from within project area. Willows are harvested and woven between the posts to form a basket-like structure across the side-channel at each BDA site. Willow will be harvested at a rate of not more than 30% of the vegetative coverage at any site. This may consist of removal of 30% of an individual clump, or entire clumps at not >30% of the number of clumps based on the density, age and vigor of the plants. All willow harvest sites, whether at actual structure site, or at alternative harvest sites, will be identified for by the Owner or Engineer prior to harvesting. Willow cuttings (or similar material) will be interwoven between the posts to create a self-supporting structure and semipermeable. Willow cuttings (or similar material) may be placed to buttresses the upstream or downstream face(s) of the structure. Willow will be obtained on site if possible. If inadequate amounts of willow are unavailable on site, willow will be obtained from within the watershed. Willow (or similar) of 1-5" diameter will be woven between posts and compacted.

If streambed is wetted, a handheld hydraulic pounder will be used to place posts. If streambed is dry, or at base flow conditions, a handheld hydraulic post pounder, or an excavator appropriately sized to meet project objectives and BMPs may be used to place posts within the channel. Under typical conditions, excavators with the following specifications will be used: 8 to 10 ft. track width, 18 to 22 ft. reach, < 3 to 8 psi, (< 4 psi per track) ground pressure. If an excavator within this size class is not available, the next smaller or larger excavator may be used. If streambed is wetted and flows are above base flow, an excavator of previous description may be used from streambank following the appropriate BMPs. If streambed is dry, pickup trucks or heavy equip such as a loader may enter stream channel to deliver material to the structure.

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**REVISION OF SECTION 508  
BEAVER DAM ANALOGUE**

**METHOD OF MEASUREMENT**

Subsection 508.06 shall be modified to include:

Beaver Dam Analogues will be measured per each structure and include all necessary work to acquire materials and install the structure as outlined in this specification.

**BASIS OF PAYMENT**

Subsection 508.06 shall be modified to include:

The accepted quantities will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Beaver Dam Analogue	Each

Payment will include all necessary material, tools and equipment to install the feature.

**REVISION OF SECTION 626  
MOBILIZATION**

Section of the Standard Specifications is hereby revised for and shall include the following:

Subsection 626.01 shall be modified to include:

Mobilization shall cover all work including labor, material and any incidental work and equipment necessary for mobilization of personnel, equipment and supplies at the project site. This item shall also include the establishment of the Contractor's offices, buildings, and other necessary facilities. This item may also include providing of required bonds, insurance and preparation of the project schedule. The removal of the Contractor's equipment, supplies, excess materials, and cleanup of the site is also included in this item. No mobilization can take place until all permits have been acquired along with applicable planning documents required of the permits.

Steam cleaning of all equipment is mandatory, before it is transported to the site, to remove both noxious plant seeds and aquatic nuisance species.

All hydraulic fluid used in machines on this project shall be bio-degradable.

A spill kit must be on-site during all work with heavy machinery.

During mobilization to the construction site, minimize disturbance to the primary stream channel, side channels, and streambanks.

**METHOD OF MEASUREMENT**

Measurement for Mobilization will be on a lump sum basis for the entire project.

**BASIS OF PAYMENT**

Subsection 626.02 shall be modified to include:

No measurement for payment shall be made of any of the work, materials, and equipment required for mobilization. Payment will be made as the work progresses. Fifty-percent (50%) of the lump sum bid price will be paid at the time of the first monthly progress payment. An additional thirty-percent (30%) will be paid when one-half the original contract amount is earned. The remaining twenty percent (20%) will be paid upon final acceptance of the project.

The lump sum bid price shall include all of the Contractor's costs of whatsoever nature including labor, material, and any incidental work and equipment necessary for mobilization of personnel, equipment and supplies at the project site. This item shall also include the establishment of the Contractor's offices, buildings and other necessary facilities, and all other costs incurred of labor and operations which must be performed prior to beginning the other items under this Contract. This item may also include provision of required bonds, insurance and preparation of the project schedule. The removal of the Contractor's equipment, supplies, excess materials, and cleanup of the site is also included in this item. Mobilization shall not exceed 15% of the total contract.

<b>Pay Item</b>	<b>Pay Unit</b>
Mobilization	Lump Sum

**REVISION OF SECTION 630  
CONSTRUCTION ZONE TRAFFIC CONTROL**

Section 630 of the Standard Specifications is hereby revised for this project to include the following:

The Contractor shall submit five (5) copies of a Traffic Control Plan (TCP) to the Engineer for approval at the preconstruction meeting. The TCP shall be in conformance to the Manual of Uniform Traffic Control Devices (MUTCD) and the CDOT standards. The TCP will be reviewed by the Boulder County Transportation, BCPOS and the Engineer.

Flaggers and all necessary traffic control devices shall be supplied and installed by the Contractor.

County Transportation Staff will provide a transportation management plan for the project at the time of building permit application. The plan will outline how progress and other information, such as commute interruptions, will be communicated to the public. The plan will include the following provisions:

- The applicant shall coordinate with the Transportation Department’s Public Information Officer, Andrew Barth (303-441-1032). The contractor may provide their own transportation management plan if desired for staff approval.
- Hours of hauling shall be from 8:00 AM to 4:30 PM to limit impacts on regular vehicular traffic, especially during peak commuter periods.
- Workers’ vehicles can be parked in designated approved areas that are outside of the road traveled way that do not conflict with the project work. Parking plans shall be shown on the site plans for approval.

The applicant shall submit a traffic control plan completed by a Traffic Control Supervisor (TCS) to the Transportation Department for review and approval. The TCS shall refer to the transportation management plan when developing the traffic control plan. The traffic control plan shall be submitted at the time of building application. The traffic control plan shall include:

- Flaggers and/or other traffic control measures shall be used at the intersections of the access points along Old St Vrain Road during hauling operations.
- Locations and types of warning signs along the roads shall be shown.
- The applicant shall coordinate with the Colorado Department of Transportation (CDOT) about the potential for traffic control at the intersection of State Highway 7 and Old St Vrain Road. Contact Gloria Hice-Idler at CDOT (970-350-2148).

**METHOD OF MEASUREMENT**

Subsection 630.15, delete all paragraphs and replace with the following:

No measurement for payment shall be made for any of the materials, work, and equipment required. Payment will be made as work progresses. 50% of the lump sum bid price will be paid in the first monthly progress payment; an additional 30% will be paid when one-half of original contract amount is earned; and the remaining 20% will be paid upon final acceptance of the project.

**BASIS OF PAYMENT**

Subsection 630.16 is hereby revised to include the following:

The payment shall be total compensation for all labor, equipment, materials, maintenance, and all incidentals necessary to prepare, implement, and maintain the approved traffic control plan in accordance with the plans and accepted. The removal of all TCP devices and materials is also included in the lump sum price for this bid item.

<b>Pay Item</b>	<b>Pay Unit</b>
Construction Zone Traffic Control	Lump Sum

**REQUIREMENTS OF THE 404 PERMIT  
REGARDING PREVENTION OF THE SPREAD OF AQUATIC INVASIVE SPECIES**

Equipment and gear that were previously used in another stream, river, lake, pond or wetland, and that are to be used in or near the waters on the project, shall be treated to prevent the spread of aquatic invasive species. These species include, but are not limited to:

- (1) Eurasian watermilfoil
- (2) Zebra mussel
- (3) Quagga mussel
- (4) New Zealand mudsnail

Equipment that shall be treated includes all parts of machinery and vehicles of all types and sizes that came into contact with the live water.

Gear that must be treated includes boots, waders, hand tools, and all other materials and attire used previously in the live water.

The Contractor shall use one of the following treatments:

1. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) Spray/soak equipment with a solution of commercial grade quaternary ammonium disinfectant compound containing at least 8.0% active ingredient diluted in solution to achieve at least 0.8% concentration (roughly 12 ounces of product per gallon of water). Specifically, a 1:15 solution of Quat 4 or Super HDQ Neutral institutional cleaner and water, could be used for effective treatment. Treated equipment should be kept moist for at least 10 minutes, managing rinsate as a solid waste in accordance with local, county, state, or federal regulations
2. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.). Spray/soak equipment with water hotter than 140 degrees Fahrenheit for at least 10 minutes. Do not move water from one water body to another. Be sure Equipment is dry before use.

Prior to moving such equipment onto the project, the Contractor shall submit to the Engineer a written list of the equipment and a signed certification that it was treated using one of the two methods specified above.

After project completion, this equipment shall be treated prior to its use in another stream, river, lake, pond or wetland.

**PROTECTED PLANTS AND WILDLIFE CONSERVATION MEASURES**

- 1) Summary
  - a) Section Includes
    - i) Pertinent criteria relating to the Endangered Species Act
    - ii) Migratory Bird Treaty Act
    - iii) Bald and Golden Eagle Protection Act
- 2) GENERAL
  - a) Coordination with BCPOS is critical and shall be implemented early in the construction process to limit or avoid construction delays.
  - b) The reach of South St. Vrain Creek encompassed in the project area is designated as a Mouse Management Area under the map of Preble's Meadow Jumping Mouse - Habitat Conservation Areas in the Boulder County Comprehensive Plan – Environmental Resources Element. Preble's meadow jumping mice (Preble's) are protected under the Endangered Species Act. (See attached map for Preble's Habitat Conservation Area).
  - c) Compliance with Migratory Bird Treaty Act and the Bald and Golden Eagle Act is required. A golden eagle nest occurs within 1/2 mile of the EWP #2 project area. No known bald eagle nests exist within the project area, although they have historically nested in this reach.
  - d) Project Specifics (these dates supersede all other dates with regard to species and vegetation protection)
    - i) The Preble's active season is from May 1 through November 1.
    - ii) Coordination with CPW on appropriate measures for protection for raptors is required.
    - iii) Primary nesting season for migratory birds is from April 1st through July 31st.
    - iv) Primary nesting season for nesting raptors is from February 1st through August 31st.
    - v) Primary nesting season for Bald and Golden eagles is from October 15th through July 31st and December 15th through July 15th, respectively.
  - e) Conservation measures for Preble's Meadow Jumping Mouse, Ute Ladies' Tresses Orchid, and Colorado Butterfly Plant
    - i) Pre-Construction:
      - (1) Minimize footprint of disturbance by limiting access points, staging, etc.
      - (2) Locate access routes in already disturbed areas.
      - (3) Contractor shall delineate, on the ground, areas of no entry for equipment.
      - (4) Project engineer will debrief onsite personnel of limits of work area, and other conservation measures.
      - (5) Follow stormwater guidelines and utilize best management practices to limit sedimentation, contamination, erosion.
    - ii) Project Implementation:
      - (1) The Contractor shall contact the Engineer or Owner to contact US Fish and Wildlife Service if Preble's, Colorado Butterfly plant, or Ute Ladies' Tresses are found within project area.
      - (2) Limit disturbance (crushing) or removal of vegetation. (Willows, trees, shrubs, and herbaceous plants within riparian and adjacent upland habitat.
        - (a) Limit disturbance to vegetation to the limits of disturbance as defined in the project plan set.
        - (b) Choose equipment size/type appropriately to minimize disturbance and soil compaction.
      - (3) Stage, operate, locate and refuel equipment outside of riparian and adjacent upland habitats.
        - (a) Operate equipment from previously disturbed or modified roadbeds or shoulders above riparian, when possible.
        - (b) Limit entrance and exit points in project area.
        - (c) Stockpile topsoil and debris outside of riparian area and protect from stream flows.
      - (4) During Preble's active season (May 1-November 1), work only during daylight hours. (Preble's are nocturnal).



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**PROTECTED PLANTS AND WILDLIFE CONSERVATION MEASURES**

- (5) Promptly remove waste to minimize site disturbance and attraction of predators.
  - (6) Cover exposed holes or loose dirt with tarps/boards to prevent entrapment.
  - (7) Use best management practices to limit construction disturbance.
    - (a) Soil compaction: Establish one access route preferably along existing disturbed surface or route.
    - (b) Soil compaction: Temporarily line access routes with geotextiles in wet, unstable soil.
    - (c) Weed control: Wash and inspect vehicles and equipment before entering or leaving project area.
    - (d) Weed control: Use only weed free certified materials, including gravel, sand, topsoil, mulch, and seed.
  - (8) Complete construction before beginning restoration activities.
- iii) Post-Construction:
- (1) Upon completion of project, revegetate all disturbed areas with native vegetation.
  - (2) Rip compacted areas prior to replanting with native vegetation.
  - (3) Fill and reseed with weed free material and native seed mixtures.
  - (4) Consider monitoring the revegetated area for success.
- f) Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act:
- i) Migratory Birds: If work requiring ground disturbance and/or removal of woody and herbaceous vegetation occurs during the primary breeding season (April 1st through August 31st), pre-construction surveys, using accepted bird survey protocols, for nesting migratory birds must be completed within one week prior to commencement of work (contractor's responsibility). Contractor must follow the CDOT Standard Specifications Section 240: Protection of Migratory Birds Biological Work Performed by the Contractor's Biologist for requirements and survey protocol.
  - ii) Raptors: If work occurs during the nesting season for raptors (February 1st through August 31st), pre-construction surveys for nesting raptors must be completed within one week prior to commencement of work. If nesting raptors are discovered, contractor will abide by the Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (<https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf>). Notification must be provided to OWNER to receive guidance.
  - iii) Eagles: Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act. The EWP #2 project area is within the Colorado Parks and Wildlife ½ mile recommended buffer zone of a known golden eagle nest. If work occurs during the nesting period for golden eagles (December 15th through July 15th). PRIOR to initiating work, the contractor must coordinate with the Colorado Parks and Wildlife Bird Conservation Coordinator (Liza Rossi – 970.871.2861) and the U.S. Fish and Wildlife Service (303-236-4773) to receive guidance.
    - (1) Although there are currently no known bald nests within one mile of the project site, bald eagles have historically nested in this area. If a bald eagle chooses to nest within one half mile of the project area between October 15<sup>th</sup> and July 31<sup>st</sup>, all work within the ½ mile buffer zone of the nest must stop and notification must be provided to Owner, Colorado Parks and Wildlife Bird Conservation Coordinator and the U.S. Fish and Wildlife to receive guidance.

**END OF SPECIFICATIONS**

BID #6644-17

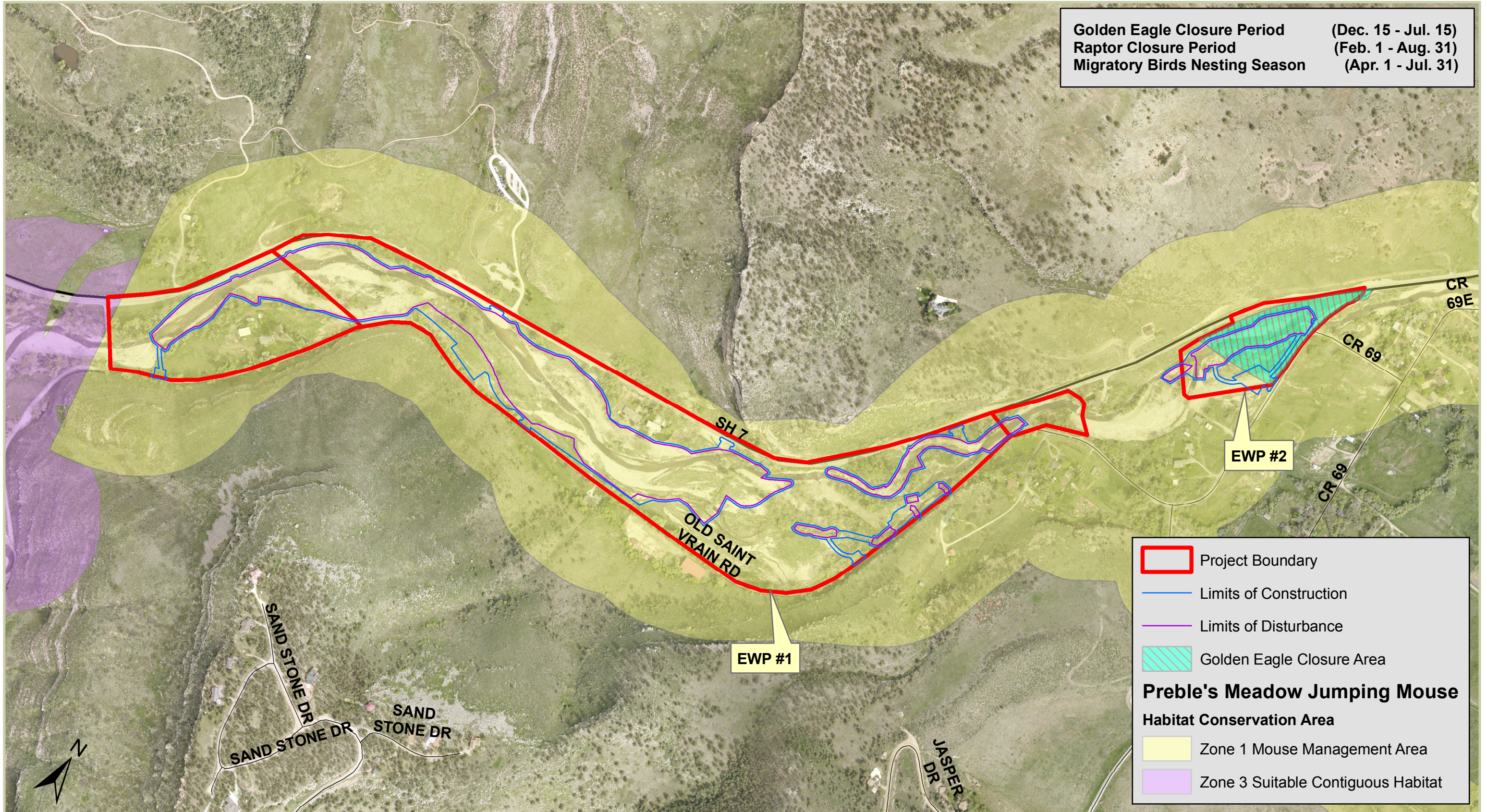
FLOOD – Construction Services for South St. Vrain Creek Restoration at Hall Ranch







DROPBOX LINK FOR PLANS

**COPY and PASTE link to your browser**

<https://www.dropbox.com/s/3b61dk0wft6bduk/Attachment%20E%20-%20South%20St.%20Vrain%20Creek%20Restoration%20Construction%20Drawings.pdf?dl=0>

Golden Eagle Closure Period (Dec. 15 - Jul. 15)  
 Raptor Closure Period (Feb. 1 - Aug. 31)  
 Migratory Birds Nesting Season (Apr. 1 - Jul. 31)



-  Project Boundary
-  Limits of Construction
-  Limits of Disturbance
-  Golden Eagle Closure Area
- Preble's Meadow Jumping Mouse Habitat Conservation Area**
-  Zone 1 Mouse Management Area
-  Zone 3 Suitable Contiguous Habitat

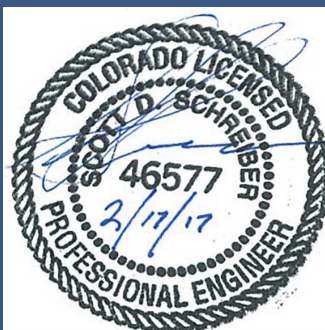


# Operation, Inspection, & Maintenance Plan

For  
South St. Vrain Creek  
Restoration



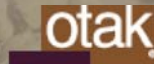
February 2017



Submitted by:



In association with:



Prepared for:

Boulder County, Colorado





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**Local Sponsor: Boulder County**  
**Nearest Town: Lyons, Colorado**  
**County: Boulder County**  
**Prepared by: Matrix Design Group**  
**Date: 02/03/2017**

## 1. Overview

Properly maintained stream channels and banks are beneficial to individual properties and surrounding landscape. Estimated life span for this installation is 20 years under normal flow conditions, however the actual O&M period will be as specified in the O&M agreement. You can usually increase the life span by effectively inspecting and maintaining the installation regularly. This document is sometimes referred to as an O&M Plan or an OIM Plan.

Proposed design plans developed as part of the initial construction project should be evaluated prior to maintain any restoration activities. Design intent and installation techniques should be evaluated with Boulder County or Design Engineers.

### a. General Recommendations

An effective operation, inspection, and maintenance program includes:

- Visually inspect the bank treatment and any installed structures at least annually, after spring runoff, and after other large flows. Make inspections after stream flow has returned to a safe level and other site conditions are safe. Repair damages as soon as practical.
- Check all banks, rock, wood, and structures for accelerated weathering, displacement, or significant changes since the original construction. Replace to original grades if necessary.
- Check for excessive scour, erosion, or aggradation that threatens to undermine critical constructed features and/or compromise project goals. Make corrective adjustments to address instabilities. Bankfull channel dimension changes and/or minor bank erosion is a natural occurrence. Minor adjustment of the bankfull channel is expected as stream channels adjust and natural stream processes occur. Adjustments that do not compromise the project goals do not warrant intervention.
- Inspect vegetation and plantings more frequently during the first year after construction. During the first part of the growing season, check the vegetation every week or two. Maintaining good bank vegetation is important to the success of the project.
- Maintain vigorous growth of desirable vegetation. This includes reseeding, watering, weeding, replanting, mulching, and removal of invasive plants when necessary.
- Monitor vegetation and plantings for damage caused by animals, insects, and disease. If necessary to protect vegetation, install fencing or other methods of protection.
- Investigate settlement or large cracks in the soil, streambanks, or structures to determine their cause and if repairs are needed.
- Remove debris that could cause damage to installed structures or bank treatments. Some debris is acceptable. Look for indications that debris is causing a variation in flow pattern that is directing water into the bank. Does debris appear to be adding pressure to the installed structure?
- Control burrowing animals that are causing damage to instream structures. Repair any damage caused by their activity. Typically, they need to be filled or clogged to prevent water flow through them.

- We recommend that you DO NOT mow or fertilize the vegetation within 35 feet of the edge of normal water flow, at a minimum.
- Take photographs of the installation for your own records and to share with NRCS technical representatives. Your feedback will help NRCS improve future installations. Also, if you have any questions regarding the severity of a potential maintenance problem, contact an NRCS representative or engineer for help.
- Monitor the installation as required by permit conditions (if applicable).
- Evaluate Boulder County Office of Emergency Management Threat Hazard Identification and Risk Assessment (THIRA) document for debris removal and woody vegetation management.
- Review Boulder County's Noxious Weed Plan for additional information on weed control.





## b. Specific Recommendations for your Installation

- Please evaluate design plans prior to any maintenance activities
- Follow the above general recommendations with emphasis on monitoring and maintaining all planted materials.
- Photo documentation along with geographical locations should be developed to evaluate changes over time,
- In the main channel, evaluate the lateral movement of the creek. Natural rates of channel migration should be considered acceptable, but excessive erosion near infrastructure should be evaluated. If excessive erosion causes the creek to approach infrastructure of concern, the owner of the infrastructure element should be approached, and an engineer should assess the risk and potential stabilization actions.
- For instream structures (riffles, sills, grade controls), replace crest rocks that have dislodged or washed away. Repair any damage to the streambanks where structures tie-into bank. Evaluate design plan details for structure parameters and techniques. Ensure flows are not being conveyed toward the banks and causing erosion. Evaluate to ensure structures are not being undercut.
- For overflow channels, inspect for headcut development, excessive erosion, and sediment plugs. Over time, the overflow channels are expected to experience natural boundary adjustments, and in some cases may eventually become the main channel flow path. Channel migration should be considered a natural process, and intervention is not necessary unless erosion threatens critical infrastructure.
- Monitor knickpoints within the existing wetland to determine if headcuts are propagating upstream. Additional knickpoint stabilization structures could be constructed, if necessary.
- For large woody material, evaluate integrity of structures. Stabilize any key members that are at risk of dislodging from the structures, and repair excessive bank erosion that reduces the ballast weight on the structure. Check wood members for rot and note anticipated lifetime. Be aware that certain species of large wood, such as cottonwood, may have a relatively short design life (perhaps less than 5 years). Clear excessive wood debris that has collected near wood structures if it results in an avulsion hazard near critical infrastructure or sensitive wetland habitat.
- Riffles and pools are expected to morph shape over time, but knickpoint stabilization rock structures and rock sills should remain relatively stable. Knickpoint should be evaluated to ensure structure has not degraded or additional headcuts have formed. If headcuts are starting to propagate upstream an engineer's evaluation should take place.
- If in doubt, contact an NRCS, Boulder County or Design Team representative for assistance evaluating any problems. The sooner a problem is identified, the better.




- Monitor seeding areas to determine vigor and success of seeding efforts. Apply additional amendments and reseed areas that remain void of vegetation after initial seeding.
- Monitor erosion control blanket. If a high flow event occurs and stakes are dislodged erosion control blanket could fold back on itself. This could cause a ripple effect and compromise the erosion control methods in a certain area causing larger erosion and vegetation impacts.

## 2. When Maintenance is Required?

### a. Examples of when maintenance is required:

<p>Structure backfill is washing out. Backfill behind an in-channel or bank stabilizing structure will compromise the stabilizing function of the installed structure.</p> 	<p>Boulders for an in-channel or bank stabilizing structure become dislodged or displaced. Displaced or failed portions of the structure could cause damage to the entire project reach.</p> 	<p>Invasive species take over the disturbed area, outcompeting the native seeding, cuttings, and container plants that were installed at time of construction.</p> 
<p>A property owner scavenges boulders from the in-channel structures for yard landscaping. All placed and installed features must remain intact throughout the duration of the O&amp;M agreement.</p>	<p>Seeding and container plants do not survive due to circumstances outside the sponsor's control, for example extreme drought, fire, and/or high flows wash material away. Replacement of plant material that does not survive is highly recommended. Consult with an ecologist prior to replacement to confirm failure mechanism, timing, and planting strategies.</p>	<p>The river has compromised the function of the bioengineering or riprap.</p> 

### b. Examples of when maintenance is not required

<p>Sediment and wood debris are deposited on a floodplain bench. Benches are designed to capture and hold these materials.</p> 	<p>Bankfull channel dimension changes and/or minor bank erosion occurs. Minor lateral migration of the bankfull channel is expected as stream channels adjust and natural stream processes occur. Adjustments that do not compromise the project goals do not warrant intervention.</p> 	<p>A significant flood event occurs beyond the projects design parameters and undermines or causes failure of installed structures.</p> 
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### 3. References

O&M Plans from NRCS Offices in Colorado (2011), Vermont (2009), Oregon (1997), West Virginia, and Michigan.

Guidance for Stream Restoration and Rehabilitation, Steven Yochum, PhD, PE, National Stream and Aquatic Ecology Center, US Forest Service, May 2016.

### 4. Sources for Additional Information

South St Vrain Creek Restoration at Hall Ranch Preliminary Basis of Design Report

South St Vrain Creek Restoration at Hall Ranch 80% Design Plans

Boulder County South St Vrain Creek: <http://www.bouldercounty.org/os/openspace/pages/ssv.aspx>

Colorado EWP Website: <https://coloradoewp.com/document/fact-sheet-operations-and-maintenance>.

St Vrain Creek Watershed Coalition: <http://www.saintvraincreekcoalition.org/>

NRCS National Operations and Maintenance Handbook:

[https://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs144p2\\_033945.pdf](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_033945.pdf)

National Emergency Watershed Protection Program Manual:

<https://directives.sc.egov.usda.gov/RollupViewer.aspx?hid=26433>

CWCB Standard Operating Procedure for Monitoring Channel Dimension and Locations

Boulder Office of Emergency Management; Threat, Hazard, Identification and Risk Assessment; Boulder County 2106 Spring Run-off Event and Sever Weather Season



Anniston, AL  
Atlanta, GA  
Colorado Springs, CO  
Denver, CO  
Niceville, FL  
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Tamuning, GU  
Washington, DC  
[www.matrixdesigngroup.com](http://www.matrixdesigngroup.com)

Point of Contact for  
Matrix Design Group:

**Scott Schreiber, PE**

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Office 303-572-0200



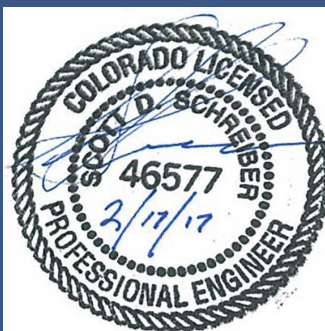
# Quality Assurance Plan

For  
South St. Vrain Creek  
Restoration

## Emergency Watershed Protection Program 1 & 2



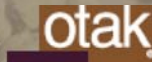
February 2017



Submitted by:



In association with:



Prepared for:

Boulder County, Colorado



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## 1. Overview

This quality assurance plan is for the South St Vrain Creek Restoration, including Emergency Watershed Protection (EWP) South St Vrain #1 and #2, project using the following components:

- Streambank Shaping
- In-Stream Rock Structures
- Toe Rock and/or Rock Riprap
- Toe Wood Along Bottom of Bank
- Large Woody Debris Structures
- Combination Rock & Wood Structures
- Bankfull Bench Construction
- Bioengineer
- Live Stakes
- Tree Planting
- Boulder Clusters
- Constructed Riffles
- Sediment Removal
- Knickpoint Stabilization
- Dormant Log Poles
- Willow Cuttings in Cobble
- Fascines

Personnel assigned to the project should have experience observing the installation of the components identified in the above table. Please see other design documents as appropriate to provide further information on design. If questions develop as part of this work please reach out to Owner, Sponsors, or Design Engineer.

## 2. Quality Assurance Personnel (QAP)

- **Sponsor's (Owner's) Representative:** someone with the authority to act on behalf of the sponsor.
- **Project Engineer:** person responsible for overall implementation of the project. They shall be a registered professional engineer in Colorado and have experience in construction management and stream restoration design and construction.
- **Vegetation Specialist:** person responsible for implementing the project's vegetation plan. They shall have education and experience with selecting and installing native riparian plant species. They shall oversee all re-vegetation activities.
- **Stream Restoration Specialist (SRS):** a person assigned to the project with specialized skills, training, education, and experience implementing stream restoration projects.
- **Technical Representative (Tech Rep):** someone with construction experience to assist with construction implementation of the project. This may be a project manager, civil engineering technician, or Sponsor's representative.
- **Surveyor:** someone with survey equipment and experience to assist with spot-checking structure grades and elevations; establishing survey control points for use by the Contractor; and for completing as-built survey.
- **Design Team:** Design Engineers, Stream Restoration Specialist, Landscape Designer, or other qualified person responsible for designing the project. They will assist with implementation of the project.

### a. Specific Personnel Recommended for this Project

Sponsor’s Representative:	Ernst Strenge (Boulder County), and/or representative
Technical Representative:	Laura Jones (Boulder County), and/or representative
Project Engineer	Prashant KC (Boulder County), and/or representative
Vegetation Specialist:	David Hirt (Boulder County) , and/or representative
Stream Restoration Specialists:	Prashant KC (Boulder County), David Hirt (Boulder County) and/or representative
Design Team:	Scott Schreiber (Design Engineer, Matrix Design Group), Mike Rafferty (Design Engineer, Otak), Brandon Parsons (Landscape Designer, THK), and/or representative
Surveyor:	TBD (TBD) and/or representative

## 3. Quality Control (QC)

The Contractor is responsible for quality control (QC) to build the project according to the construction specifications and drawings. This responsibility is required by the general specifications section. Quality Assurance personnel will verify that QC tasks are being done. Major QC items include:

- **Surveys:** The Contractor is responsible for construction stakeout of the work, and meeting grades and elevations required by the drawings.
- **Utilities:** The Contractor is responsible for locating utilities before starting work at the project site. Utilities should be marked, and utility locate reference numbers obtained.
- **Pollution Control:** The Contractor is responsible for preventing pollution of surface and ground water from contamination or from sediment runoff. See specifications for pollution control. Contractor should follow Stormwater Management Plan provided in construction documents.
- **Dewatering:** The Contractor is required to divert or remove water from the work site, as possible, or to work in low flow conditions. Contractor shall follow dewatering permit requirements.
- **Excavations and Embankments:** The Contractor needs to meet the grades and slopes required by the drawings.
- **Rock and Aggregates:** The Contractor shall provide rock from a CDOT-approved quarry (with a copy of test results or certifications), or from a source approved by the project engineer or their representative.
- **Material Certifications:** The Contractor shall provide documentation, which certifies that the materials provided comply with the contract requirements. If specified for this project, material certifications for the following are required (this list is not all inclusive and other submittals may be required as necessary, please review project specifications for list of submittals required.)
  - (a) Crushed aggregates – the material used to resurface any road should be tested for gradation.
  - (b) Erosion Control Fabric – manufacturer’s product data showing compliance with specifications.
  - (c) Geotextile – manufacturer’s information showing compliance with specifications.
  - (d) Structure Rock –visual inspection by the Technical Representative or Inspector.

- (e) Seeding and mulching materials – seed certification papers, certified lab results for compost, documentation of a weed-free seed mix
- (f) Seed – seed tags provided with species, variety, percent of mix, and pounds of pure live seed
- (g) Silt fence– manufacturer’s product data showing compliance with specifications.
- (h) Plastic fence– manufacturer’s product data showing compliance with specifications.
- (i) Silt fence– manufacturer’s product data showing compliance with specifications.
- (j) Trees & shrubs – invoice showing source, species, and quantity.
- (k) Sediment Control Logs – manufacturer’s product data showing compliance with specifications.
- (l) Large Woody Material - information showing compliance with specifications

## 4. Quality Assurance Plan (QAP)

The Boulder County Parks and Open Space (BCPOS) Quality Assurance Program assures that the specified contract quality of materials and workmanship is attained. The primary responsibility of the Quality Assurance (QA) personnel is to observe the operations of the Contractor to assure compliance with the construction contract. This includes the physical examination of materials brought on to the site; observation of the placement of materials; observation of the construction techniques; observation of quality control and construction management operations by the Contractor; periodic and continuous observation of construction work. The Quality Assurance Plan may be updated to include changing project conditions and to reflect lessons-learned during construction.

The intensity/frequency of the quality assurance activities are shown in Table 1 – located at the end of this document. Conduct periodic quality assurance observations and checks of the Contractor's Quality Control to verify that measurable qualities of the work meet the contract requirements.

The following is a description of the **minimum** quality assurance activities required:

- The Project Engineer, Vegetation Specialist, Stream Restoration Specialist and Technical Representative and Stream Restoration Specialist and technical representative shall attend the **preconstruction meeting** arranged by the sponsor to include the contractor. Project Engineer will give an overview of the project with the drawings and answer questions related to the design. Information with regards to permits and clearances will also be discussed.
- The Project Engineer and Stream Restoration Specialist, or Technical Representative shall spot check **construction staking** and survey control to ensure the work is properly staked before work starts. They will also assist the Contractor with establishing survey control for each major work item, particularly in the identification of normal flow and bankfull flow elevations.
- All listed personnel shall read the construction specifications, drawings, design report, and the QAP.
- Sponsor and/or Technical Representative shall review required **submittals** for compliance with the contract requirements. Contact the Project Engineer if or sponsor if there is a problem.
- The Technical Representative should be in daily communication with the contractor to stay abreast of work in progress and upcoming work activities, including work requiring quality control tests. All onsite personnel shall keep a weekly log of construction activities to provide to the Project Engineer to keep them informed on project status and concerns.
- All onsite personnel shall be familiar with sensitive plant and animal species and know how to identify them. A BCPOS biologist will provide briefing of conservation measures at pre construction meeting.
- Technical Representative should provide oversight of inspection of **equipment and materials** to ensure they are clean and free of any material that could contain or hold seeds. This should be a continual process and referenced in daily logs. Do this before contractor starts work, and whenever new materials and equipment arrive on-site.

- Technical Representative should verify that the contractor is meeting **pollution control specifications** and only disturbing ground and vegetation as needed for construction. This should be referenced in daily logs.
- Technical Representative should ensure the contractor has a **spill-response kit** on-site on a weekly basis and after use.
- Take **digital photographs** of work progress to provide a representative photo record of the project. Photo-document key stages of major work items to record images of foundation preparations, installation of buried features, and completed work. Photographs should include date/time stamp. Share photographs with design engineer and SRS on a weekly basis.
- Project Engineer shall review/observe **subgrade preparations** for all rock structures to ensure compliance with the drawings and specifications before contractor places the rock structure. Accomplish this in a timely manner to avoid delaying the contractor's work. Visually check the stability of the subgrade and foundation; rock, filter, fill, and/or geotextile.
- Project Engineer shall review/observe proper **placement and use of geotextile**. The geotextile must be installed properly to prevent backfill washout under the structures.
- Project Engineer or SRS or Vegetation Specialist shall review and observe proper placement of **erosion control fabric** according to drawings and specifications.
- Project Engineer or SRS shall verify the **backfill material** for rock structures is an acceptable mix of gravel and cobble per specifications. Check for proper compaction or consolidation of backfill materials.
- Project Engineer or SRS shall spot check **cut and fill slopes** to verify elevations with the drawings. Completed structural elevations (cross vanes, log vanes, etc.) must be within 0.25' of the specified elevations on the drawings unless the material or subgrade (bedrock) prevents this; final grade for benches, floodplains, and slopes must be within 0.5' of the specified elevations on the drawings.
- SRS and Project Engineer may direct the creation of micro-topography at their discretion to create small scale river and landscape features not shown on the plan set provided they are in-line with the vision of the project and not time intensive.
- SRS and Project Engineer may direct the installation of rock and wood features at their discretion to create small scale river and landscape features not shown on the plan set provided they are in-line with the vision of the project and not time or material intensive.
- Project Engineer and Technical Representative shall observe the installation of all stream crossings to verify construction and material specifications are met for foundation material, invert elevations, size and type of flow conveyance structure, fill material, compaction and protective armoring.
- Vegetation Specialist shall be present for the initiation of all seeding and mulching operations as well as the initiation of the planting of container plants.
- Vegetation Specialist shall be present for the initiation of all bioengineering treatments that include live staking.

## 5. Preconstruction Meeting

The Sponsor should work with the technical representative, stream restoration specialist, and design engineer to establish a mutually agreeable date and time for meeting. Communications to the contractor should be through any of the personnel listed in this document. Someone should be identified to take notes. Include a discussion of the following items in addition to standard pre-construction agenda items.

- Introductions and lines of communications.
- Overview of the drawings and specifications by Project Engineer.



- Point out temporary benchmarks and any layout work accomplished, such as staking for major work items (structures, project start, and end).
- Site conditions, special constraints, and site-specific safety concerns.
- Contractor is responsible for utility locates. Ask the contractor to provide a copy of confirmation for utility locates.
- Remind the contractor to limit disturbance to the site. Discuss **pollution control** requirements to include erosion and sediment control.
- **Permit requirements** and conditions. Other special environmental concerns? Cultural Resources? Historical sites?
- Discuss tree planting, seeding, and live stakes. Live stakes should be installed during dormant season, but realize that isn't always possible.
- Discuss working from bank or during low flow conditions whenever possible.
- Discuss any time restrictions, such as winter shutdown, high flow months, and avoiding disturbance during spawning seasons.
- Review equipment and material **cleaning requirements**. Importance of preventing spread of invasive species, such as didymo.
- Construction surveying requirements – contractor is responsible for meeting lines, grades, and elevations for structures and bank shaping.
- Discuss **rock source** – provided from off-site location or from acceptable on-site sources.
- Identify and discuss access routes and staging areas.
- Discuss harvesting of on-site materials as applicable. Are on-site materials available?
- Get contractor's estimate of **construction duration**. Some contractors may have a construction schedule they are trying to meet.
- Discussion of wildlife conservation measures including Endangered Species Act species conservation measures and migratory birds nest locations.

## 6. Equipment

The QA personnel should have a minimum of the following equipment available when needed:

- Survey Equipment
  - GPS, total station, or laser level for setting survey control points, temporary benchmarks, spot-checks, and for as-built survey.
  - Survey level
  - Hand level for quick elevation checks
  - Survey rod, reflector, receiver, etc.
  - Measuring tape, 200-foot minimum.
  - Weather resistant field books for taking notes and pens or pencils
  - Stakes, flags, ribbon, permanent markers, etc.
- Photographic Equipment
  - Digital camera with the following minimum features: date/time stamping, video recording, and some zoom capability.
- Special Clothing
  - Backpack and clothing suitable for working at remote sites with highly variable weather conditions,

- Chest waders and personal safety equipment for working in stream, if necessary
- Studded wading boots
- Other clothing as appropriate to provide the required services
- Other Special Equipment
  - Mobile telephone
  - Notebook computer or similar device for making notes while on-site (optional – nice-to-have).
- Safety Gear
  - Hard hat
  - Bright-colored safety vest.
  - Appropriate footwear, such as boots with toe and ankle protection.
  - Other applicable safety gear for site-specific conditions

## 7. Performance Time

For estimated project duration, see the performance time in the design report. Actual construction times vary due to weather, site conditions, flow levels, contractor efficiency, material delivery times, quantity of equipment, size of equipment, size of labor force, fuel availability, unforeseen problems, mechanical problems, personnel availability, traffic, accidents, and other unpredictable factors.

## 8. Desirable Skills for Quality Assurance Personnel

- Skills
  - Ability to understand the plans and specifications.
  - Ability to maintain construction records.
  - Basic photography.
  - Basic math and reading.
  - Ability to assist with basic layout, staking, quantity, and “as-built” surveys.
  - Ability to get to the project site and walk across uneven terrain.
  - Ability to operate the equipment required to meet the QAP requirements.
  - Good communications skills to communicate with the Contractor, sponsors, and personnel of other federal, state, and local government agencies. Ability to communicate in person, by email, written reports, telephone, and through legible handwritten documentation.
- Training & Experience
  - On-the Job Training for stream restoration work.
  - Attend stream restoration related training when it is made available.
  - Some experience on a stream restoration project site.
  - Some knowledge or training in geomorphic stream design, such as Rosgen Level I or equivalent.

## 9. Inspection and Requirements Checklist

At a minimum, periodically observe all work for compliance with the construction documents. The following are items of work and QA activities for this project.

### a. Table 1 – Quality Assurance Activities and Frequencies

✓	Description	Staff	Inspection Frequency
	Field verification of design, setting or checking survey control for structures, and staking out structure locations	SRS and Project Engr & Surveyor	Once
	Attend preconstruction meeting – good opportunity for everyone to get familiar with project	Tech Rep, SRS and Project Engr, Vegetation Specialist	Once
	Mobilization and coordination with the Sponsor	Tech Rep or SRS	Periodic
	Approve clearing limits; make sure the Contractor has coordinated access route with Sponsor; and make sure Contractor doesn't disturb more vegetation than necessary.	Tech Rep or SRS	Periodic
	Monitoring of materials and equipment being delivered to the project site – random weekly spot checks with documentation in job diary. Frequency will vary depending on Contractor's delivery schedule and level of trust established.	Tech Rep, Project Engineer, or SRS	Weekly
	Pollution control work, including erosion & sediment control measures	Tech Rep	Weekly
	Conformance with grades, structure geometry, & elevations. Make sure Contractor is using a level, tape, or other survey equipment. If in doubt, contact Project Engineer.	Project Engineer or Tech Rep	Periodic
	Seeding and mulching of disturbed areas after grading is completed and before work shutdowns (before holidays & weekends)	Vegetation Specialist or Tech Rep	Weekly
	Ensure the site is stabilized before predicted rainstorms. Banks protected. Wood structures anchored. Equipment and materials out of flow path of rising stream levels.	Vegetation Specialist or Tech Rep	Periodic
	Coordination of tree removal with Sponsor and trees for project use flagged and approved by sponsor	Vegetation Specialist or Tech Rep	Once
	Rock riprap and rock toe installation – verification of keys, proper geotextile installation, etc.	Project Engineer or Tech Rep	Periodic
	Geotextile installation	Project Engineer or Tech Rep	Continuous

✓	Description	Staff	Inspection Frequency
	Seeding, mulching, and erosion control fabric	Vegetation Specialist or Tech Rep	Periodic
	Periodic site visits and at critical times during construction	Project Engr, Vegetation Specialist, SRS, or Design Team	Periodic
	Tree planting and restoration of temporary access roads/staging areas	Vegetation Specialist or Tech Rep	Periodic
	Call or email the Design Team to discuss any work that doesn't seem right or to relay questions from the contractor	Project Engineer, Vegetation Specialist, SRS, or Tech Rep	As Needed
	Pre-completion inspection of work while contractor still has equipment and materials on-site	Tech Rep & Project Engr or SRS	Once
	Keep written field notes and take digital photographs of work progress	Tech Rep	Periodic
	Final inspection and certification of work completed	Project Engr, Vegetation Specialist, Tech Rep, or SRS	Once
	Construction status updates to Project Engineer or SRS via email	Tech Rep	Weekly
	Assist with data collection for as-built drawings	Tech Rep & Surveyor	Once
	Submit as-built drawings to NRCS	Project Engineer	Once



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Washington, DC  
[www.matrixdesigngroup.com](http://www.matrixdesigngroup.com)

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Matrix Design Group:

**Scott Schreiber, PE**

1601 Blake Street, Suite 200

Denver, CO 80202

Office 303-572-0200

# ATTACHMENT I

## ADDENDUM TO CONTRACT

### NATIONAL RESOURCES CONSERVATION SERVICES (NRCS)

#### EMERGENCY WATERSHED PROTECTION PROGRAM

#### REQUIREMENTS FOR PROCUREMENT CONTRACTS

This is an addendum to the [CONTRACT NAME], RFP \_\_\_\_\_, Agreement between [CONTRACTOR] (“Contractor”), and Boulder County, (the “County”).

The parties acknowledge that the above-referenced contract is subject to the provisions of 7 CFR Part 624. This addendum is hereby expressly incorporated into the agreement between Boulder County and the Contractor. To the extent that the terms of the Agreement and this Addendum conflict, the terms of this Addendum shall control.

**The following provisions are hereby added and incorporated into the above-referenced Agreement:**

#### **1. EQUAL EMPLOYMENT OPPORTUNITY**

Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of “federally assisted construction contract” in 41 CFR Part 60-1.3 shall include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, “Equal Employment Opportunity” (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and implementing regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

“During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.”

2. **Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended.** Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).
3. **Byrd Anti-Lobbying Amendment (31 U.S.C. 1352).** Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 25 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection.
4. **OSHA Compliance.** Contractors on NRCS assisted projects shall perform their work in accordance with OSHA regulations, NRCS Supplement to OSHA Parts 1910 and 1926, and the Contract Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor regulations (29 CFR Part 5) as set forth in Attachment A.

Except as modified herein, all terms and conditions of the existing contract between the parties remain in full force and effect.

IF THIS ADDENDUM IS INCORPORATED BY REFERENCE INTO THE CONTRACT, THE PARTIES DO NOT NEED TO SIGN THE ADDENDUM, AND THE SIGNATURE BLOCKS MAY BE REMOVED

Accepted by [CONTRACTOR] on

\_\_\_\_\_ (Date)

By: \_\_\_\_\_ TITLE

Accepted by BOULDER COUNTY on

\_\_\_\_\_ (Date)

\_\_\_\_\_ Chair



## EXHIBIT A

### NATURAL RESOURCES CONSERVATION SERVICE SUPPLEMENT TO OSHA PARTS 1910 AND 1926 CONSTRUCTION INDUSTRY STANDARDS AND INTERPRETATIONS

The Contractor shall comply with OSHA (Occupational Safety and Health Administration) Parts 1910 and 1926, Construction Industry Standards and Interpretations, and with this supplement.

Requests for variances or waiver from this supplement are to be made to the Contracting Officer in writing supported by evidence that every reasonable effort has been made to comply with the contractual requirements. A written request for a waiver or a variance shall include--

- (1) Specific reference to the provision or standard in question;
- (2) An explanation as to why the waiver is considered justified; and
- (3) The Contractor's proposed alternative, including technical drawings, materials, or equipment specifications needed to enable the Contracting Officer to render a decision.

No waiver or variance will be approved if it endangers any person. The Contractor shall not proceed under any requested revision of provision until the Contracting Officer has given written approval. The Contractor is to hold and save harmless the Natural Resources Conservation Service free from any claims or causes of action whatsoever resulting from the Contractor or subcontractors proceeding under a waiver or approved variance.

Copies of OSHA Parts 1910 and 1926, Construction Industry Standards and Interpretations, may be obtained from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

#### 1.0 GENERAL CONTRACTOR REQUIREMENTS:

1.1 SAFETY PROGRAM. Each Contractor is to demonstrate that he or she has facilities for conducting a safety program commensurate with the work under contract. The Contractor is to submit in writing a proposed comprehensive safety program to the Contracting Officer for approval before the start of construction operations. The program is to specifically state what provisions the Contractor proposes to take for the health and safety of all employees, including subcontractors and rental equipment operators. The program shall be site specific and provide details relevant to the work to be done, the hazards associated with the work, and the actions that will be necessary to minimize the identified hazards.

1.2 PRECONSTRUCTION SAFETY MEETING. Representatives for the Contractor are to meet with the Contracting Officer (CO) or the CO's representative before the start of construction to discuss the safety program and the implementation of all health and safety standards pertinent to the work under this contract.

1.3 JOINT SAFETY POLICY COMMITTEE. The Contractor or designated on-site representative is to participate in monthly meetings of a joint Safety Policy Committee, composed of the Natural Resources Conservation Service (Contracting Local Organization in locally awarded contracts) and Contractor supervisory personnel. At these meetings the Contractor's project manager and the Contracting Officer will review the effectiveness of the Contractor's safety effort, resolve current health and safety problems, and coordinate safety activities for upcoming work.

1.4 SAFETY PERSONNEL. Each Contractor is to designate a competent supervisory employee satisfactory to the Contracting Officer to administer the safety program.

1.5 SAFETY MEETINGS. A minimum of one "on-the-job" or "toolbox" safety meeting is to be conducted each week by all field supervisors or foremen and attended by mechanics and all construction personnel at the jobsite. The Contractor is to also conduct regularly scheduled supervisory safety meetings at least monthly for all levels of job supervision.

1.6 SAFETY INSPECTION. The Contractor shall perform frequent and regular safety inspections of the jobsite, materials, and equipment, and shall correct deficiencies.

1.7 FIRST AID TRAINING. Every Contractor foreman's work crew must include an employee who has a current first aid certificate from the Mine Safety and Health Administration, American Red Cross, or other state-approved organization.

1.8 REPORTS. Each Contractor is to maintain an accurate record of all job-related deaths, diseases, or disabling injuries. The records shall be maintained in a manner approved by the Contracting Officer. A copy of all reports is to be provided to the Contracting Officer. All fatal or serious injuries are to be reported immediately to the Contracting Officer, and every assistance is to be given in the investigation of the incident, including submission of a comprehensive narrative report to the Contracting Officer. Other occurrences with serious accident potential, such as equipment failures, slides, and cave-ins, must also be reported immediately. The Contractor is to assist and cooperate fully with the Contracting Officer in conducting accident investigations. The Contracting Officer is to be furnished all information and data pertinent to investigation of an accident.

1.9 CERTIFICATION OF INSURANCE. Contractors are to provide the Contracting Officer or his or her authorized representative with certificates of insurance before the start of operations indicating full compliance with State Worker's Compensation statutes, as well as other certificates of insurance required under the contract.

## 2.0 FIRST AID AND MEDICAL FACILITIES:

2.1 FIRST AID KITS. A 16-unit first aid kit approved by the American Red Cross is to be provided at accessible, well-identified, locations at the ratio of at least 1 kit for each 25 employees. The first aid kits are to be moisture proof and dust tight, and the contents of the kits are to be replenished as used or as they become ineffective or outdated.

2.2 EMERGENCY FIRST AID. At least one employee certified to administer emergency first aid must be available on each shift and duly designated by the Contractor to care for injured employees. The names of the certified employees shall be posted at the jobsite.

2.3 COMMUNICATION AND TRANSPORTATION. Prior to the start of work, the Contractor is to make necessary arrangements for prompt and dependable communications, transportation, and medical care for injured employees. At least one stretcher and two blankets shall be readily available for transporting injured employees.

2.4 FIRST AID AND MEDICAL REPORTS. The Contractor is to maintain a record system for first aid and medical treatment on the jobsite. Such records are to be readily available to the Contracting Officer and are to include--

- (a) A daily treatment log listing chronologically all persons treated for occupational injuries and illnesses;
- (b) Cumulative record of injury for each individual;
- (c) Monthly statistical records of occupational injuries, classified by type and nature of injury; and
- (d) Required records for worker's compensation.

2.5 SIGNS AND DIRECTIONAL MARKINGS. Adequate identification and directional markers are to be provided to readily denote the location of all first aid stations.

2.6 EMERGENCY LISTING. A listing of telephone numbers and addresses of doctor, rescue squad, hospital, police, and fire departments is to be provided at all first aid locations.

### 3.0 PHYSICAL QUALIFICATIONS OF EMPLOYEES:

3.1 GENERAL REQUIREMENTS. Persons employed throughout the contract are to be physically qualified to perform their assigned duties. Employees must not knowingly be permitted or required to work while their ability or alertness is impaired by fatigue, illness, or any other reason that may jeopardize themselves or others.

3.2 HOIST OPERATORS. Operators of cranes, cableways, and other hoisting equipment shall be examined annually by a physician and provided with a certification stating that they are physically qualified to safely operate hoisting equipment. The Contractor is to submit a copy of each certification to the Contracting Officer.

3.3 HEAVY EQUIPMENT OPERATORS. It is recommended that operators of trucks and heavy construction equipment be given physical examinations to determine if they are physically qualified to perform their assigned work without endangering themselves or others.

3.4 MOTOR VEHICLE OPERATORS. Operators of motor vehicles engaged primarily in the transportation of personnel are to be 18 years of age or older and have a valid state operator's permit or license for the equipment being operated. The operators must have passed a physical examination administered by a licensed physician within the past year showing that they are physically qualified to operate vehicles safely.

### 4.0 PERSONAL PROTECTIVE EQUIPMENT:

4.1 HARDHAT AREAS. The entire jobsite, with the exception of offices, shall be considered a hardhat area. All persons entering the area are, without exception, required to wear hardhats. The Contractor shall provide hardhats for visitors entering hardhat areas.

4.1.1 LABELS. Hardhats shall bear a manufacturer's label indicating design compliance with the appropriate ANSI (American National Standards Institute) standard.

4.2 POSTING. Signs at least 3 by 4 feet worded as follows with red letters (minimum 6 inches high) and white background shall be erected at access points to designated hardhat areas:

#### CONSTRUCTION AREA - HARDHATS REQUIRED BEYOND THIS POINT

These signs are to be furnished and installed by the Contractor at entries to shops, construction yards, and job access points.

### 4.3 SAFETY GOGGLES (DRILLERS)

4.3.1 DRILLERS AND HELPERS. Drillers and helpers operating pneumatic rock drills must wear protective safety goggles.

### 5.0 MACHINERY AND MECHANIZED EQUIPMENT:

5.1 SAFE CONDITION. Before any machinery or mechanized equipment is initially used on the job, it must be inspected and tested by qualified personnel and determined to be in safe operating condition and appropriate for the intended use. Operators shall inspect their equipment prior to the beginning of each shift. Any deficiencies or defects shall be corrected prior to using the equipment. Safety equipment, such as seatbelts, installed on machinery is to be used by equipment operators.

5.2 TAGGING AND LOCKING. The controls of power-driven equipment under repair are to be locked. An effective lockout and tagging procedure is to be established, prescribing specific responsibilities and safety procedures to be followed by the person or persons performing repair work. Mixer barrels are to be securely locked out before permitting employees to enter them for cleaning or repair.

### 5.3 HAUL ROADS FOR EQUIPMENT

5.3.1 ROAD MAINTENANCE. The Contractor shall maintain all roadways, including haul roads and access roads, in a safe condition so as to eliminate or control dust and ice hazards. Wherever dust is a hazard, adequate dust-laying equipment shall be available at the jobsite and utilized to control the dust.

5.3.2 SINGLE-LANE HAUL ROADS. Single-lane haul roads with two-way traffic shall have adequate turnouts. Where turnouts are not practical, a traffic control system shall be provided to prevent accidents.

5.3.3 TWO-WAY HAUL ROADS. On two-way haul roads, arrangements are to be such that vehicles travel on the right side wherever possible. Signs and traffic control devices are to be employed to indicate clearly any variations from a right-hand traffic pattern. The road shall be wide enough to permit safe passage of opposing traffic, considering the type of hauling equipment used.

5.3.4 DESIGN AND CONSTRUCTION OF HAUL ROADS. Haul road design criteria and drawings, if requested by the Contracting Officer, are to be submitted for approval prior to road construction. Sustained grades shall not exceed 12 percent and all curves shall have open-sight line with as great a radius as practical. All roads shall be posted with curve signs and maximum speed limits that will permit the equipment to be stopped within one-half the minimum sight distance.

5.3.5 OPERATORS. Machinery and mechanized equipment shall be operated only by authorized qualified persons.

5.3.6 RIDING ON EQUIPMENT. Riding on equipment by unauthorized personnel is prohibited. Seating and safety belts shall be provided for the operator and all passengers.

5.3.7 GETTING ON OR OFF EQUIPMENT. Getting on or off equipment while the equipment is in motion is prohibited.

5.3.8 HOURS OF OPERATION. Except in emergencies, an equipment operator shall not operate any mobile or hoisting equipment for more than 12 hours without an 8-hour rest interval away from the job.

#### 5.4 POWER CRANES AND HOISTS (TRUCK CRANES, CRAWLER CRANES, TOWER CRANES, GANTRY CRANES, HAMMERHEAD CRANES, DERRICKS, CABLEWAYS, AND HOISTS)

5.4.1 PERFORMANCE TEST. Before initial onsite operation, at 12-month intervals, and after major repairs or modification, power cranes, derricks, cableways, and hoists must satisfactorily complete a performance test to demonstrate the equipment's ability to safely handle and maneuver the rated loads. The tests shall be conducted in the presence of a representative of the Contracting Officer. Test data shall be recorded and a copy furnished the Contracting Officer.

5.4.2 PERFORMANCE TEST—POWER CRANES (Crawler mounted, truck mounted and wheel mounted). The performance test is to be carried out as per ANSI requirements. The test is to consist of raising, lowering, and braking the load and rotating the test load through 360° degrees at the specified boom angle or radius. Cranes equipped with jibs or boom-tip extensions are to be tested using both the main boom and the jib, with an appropriate test load in each case.

5.4.3 PERFORMANCE TEST—DERRICKS, GANTRY CRANES, TOWER CRANES, CABLEWAYS, AND HOISTS, INCLUDING OVERHEAD CRANES. This equipment is to be performance tested as per ANSI requirements.

5.4.4 BOOM ANGLE INDICATOR. Power cranes (includes draglines) with booms capable of moving in the vertical plane shall be provided with a boom angle indicator in good working order.

5.4.5 CRANE TEST CERTIFICATION. The performance test required by 5.4.2 and 5.4.3 is fulfilled if the Contractor provides the Contracting Officer a copy of a certificate of inspection made within the past 12 months by a qualified person or by a government or private agency satisfactory to the Contracting Officer.

5.4.6 POSTING FOR HIGH VOLTAGE LINES. A notice of the 10-foot (or greater) clearance required by OSHA 1926.550, Subpart N, shall be posted in the operator's cab of cranes, shovels, boom-type concrete pumps, backhoes, and related equipment.

5.4.7 BOOM STOPS. Cranes or derricks with cable-supported booms, except draglines, shall have a device attached between the gantry of the A-frame and the boom chords to limit the elevation of the boom. The device shall control the vertical motions of the boom with increasing resistance from 83° or less, until completely stopping the boom at not over 87° above horizontal.

5.4.8 SAFETY HOOKS. Hooks used in hoisting personnel or hoisting loads over construction personnel or in the immediate vicinity of construction personnel shall be forged steel equipped with safety keepers. When shackles are used under these conditions, they shall be of the locking type or have the pin secured to prohibit turning.

## 5.5 ROLLOVER PROTECTIVE STRUCTURES (ROPS)

5.5.1 ROLLOVER PROTECTIVE STRUCTURES. OSHA 1926, Subpart W, Overhead Protection, Sections 1001 and 1002 are applicable regardless of the year in which the equipment was manufactured and regardless of the struck capacity of the equipment.

5.5.2 EQUIPMENT REQUIRING ROPS. The requirement for ROPS meeting 5.5.1 above applies to crawler and rubber-tired tractors such as dozers, push-and-pull tractors, winch tractors, tractors with backhoes, and mowers; off-highway, self-propelled, pneumatic-tired earthmovers, including scrapers, motor graders and loaders; and rollers, compactors, water tankers (excluding trucks with cabs). These requirements shall also apply to agricultural and industrial tractors and similar equipment.

5.5.3 EQUIPMENT REQUIRING SEATBELTS. The requirements for seatbelts as specified in OSHA Subpart O, Motor Vehicles, Mechanized Equipment, and Marine Operations, Section 1926.602 shall also apply to self-propelled compactors and rollers, and rubber-tired skid-steer equipment.

## 6.0 LADDERS AND SCAFFOLDING:

6.1 LADDERS. OSHA 1926, Subpart L - Section 450. Ladders shall be used as work platforms only when use of small hand tools or handling of light material is involved. No work requiring lifting of heavy materials or substantial exertion shall be done from ladders.

6.2 SCAFFOLDING. OSHA 1926, Subpart L - Section 451. Scaffolds, platforms or temporary floors shall be provided for all work except that which can be done safely from the ground or similar footing.

6.3 SAFETY BELTS, LIFELINE, AND LANYARDS. OSHA 1926, Subpart E, Section 104. Lifelines, safety belts and lanyards independently attached or attended, shall be used when performing such work as the following when the requirements of 6.1 or 6.2 above cannot be met.

- (a) Work on stored material in hoppers, bins, silos, tanks, or other confined spaces.
- (b) Work on hazardous slopes, structural steel, or poles; erection or dismantling of safety nets, tying reinforcing bars; and work from Boatswain's chairs, swinging scaffolds, or other unguarded locations at elevations greater than 6 feet.
- (c) Work on skips and platforms used in shafts by crews when the skip or cage does not block the opening to within 1 foot of the sides of the shaft, unless cages are provided.