



REQUEST FOR PROPOSALS

**CDBG-DR WATERSHED RESILIENCE & NRCS EMERGENCY WATERSHED PROTECTION
IMPLEMENTATION PROJECT:
COAL CREEK CANYON EWP PROJECTS**

DATE:

December 16, 2016

ISSUED BY:

Coal Creek Canyon Watershed Partnership
P.O. Box 7093
Golden, CO 80403
303-586-1491

PROJECT NUMBER:

WI 17-123

PROPOSAL DUE DATE:

January 9, 2017

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REQUEST FOR PROPOSALS (RFP)

Contact: Coal Creek Canyon Watershed Partnership
David Kamin
Watershed Coordinator
303-586-1491
david@cccwp.org

Pre-Proposal Meeting: A Mandatory Pre-Proposal Meeting will be held on 12/22/16 at 1pm at 30509 Hwy 72. The purpose of this meeting is to discuss this Request for Proposals (RFP) and to provide assistance to consultants in the interpretation of this RFP or any of its terms and conditions.

Written inquiry deadline: Written inquiries will be accepted until 12/30/16 and will be responded to in writing to all interested parties by email on 1/3/17.

Proposals must be received no later than: 1/9/17 at or before 4:00 p.m. MST.

Proposals received after this date and time will not be considered for award. The Partnership is not responsible for delays occasioned by the U.S. Postal Service or other means of delivery employed by the proposer.

One proposal shall be submitted in hard copy format and also via email as a PDF document.

Cost may not exceed: \$1,254,511

Deliver proposals to:
Coal Creek Canyon Watershed Partnership
P.O. Box 7093
Golden, CO 80403
303-586-1491
david@cccwp.org

Selection of CONTRACTOR, or a short list of CONTRACTORS, to then be interviewed will be made by January 12, 2017. If interviews are held, they will be scheduled for the week of January 9th and the selection team will work with selected CONTRACTORS to schedule a specific date and time.

Attention is called to the fact that not less than the minimum salaries and wages as set forth in the CONTRACT DOCUMENTS must be paid on this project, and that the CONTRACTOR must ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin (Davis Bacon Wages).

In the event that the proposer anticipates hiring employees to work on the JOB, the proposer should contact the local manpower office for qualified candidates (Section 3).

PROJECT BACKGROUND AND SCOPE

1.0 Project Background and Purpose

Heavy rains fell over the Coal Creek watershed in September 2013, causing flooding. Significant erosion occurred along many reaches of the Coal Creek, particularly on outer bends of the channel and adjacent to residential drive culverts. Imminent threats to structures and infrastructure were addressed with emergency repair projects implemented by the Natural Resources Conservation Service (NRCS). This repair work was referred to as “Phase I” repairs, which would be followed by “Phase II” repairs. The intent of a second phase of projects is to accomplish longer term restoration measures. The Coal Creek Canyon Watershed Partnership (CCCWP) projects are a Phase II project being implemented under the NRCS’s Emergency Watershed Protection (EWP) Program. CCCWP has been awarded grant funding from the NRCS, with match funding from the Colorado Water Conservation Board (CWCB) and a Community Development Block Grant - Disaster Recovery (CDBG-DR) Watershed Resilience Pilot Program. The total funding available for this project is \$1,254,511. These programs are working in Colorado to help communities recover from damage sustained in the federally-declared flood event of 2013. Project implementation grants are meant to address long-term catalytic watershed system improvements that build resilience in watersheds.

The overall project is comprised of three project reaches located along approximately 1.25-miles of Coal Creek Canyon in Jefferson County, Colorado. The sites are referred to as Area Start, Area 2, and Area 3. The locations are shown in Figure 1.

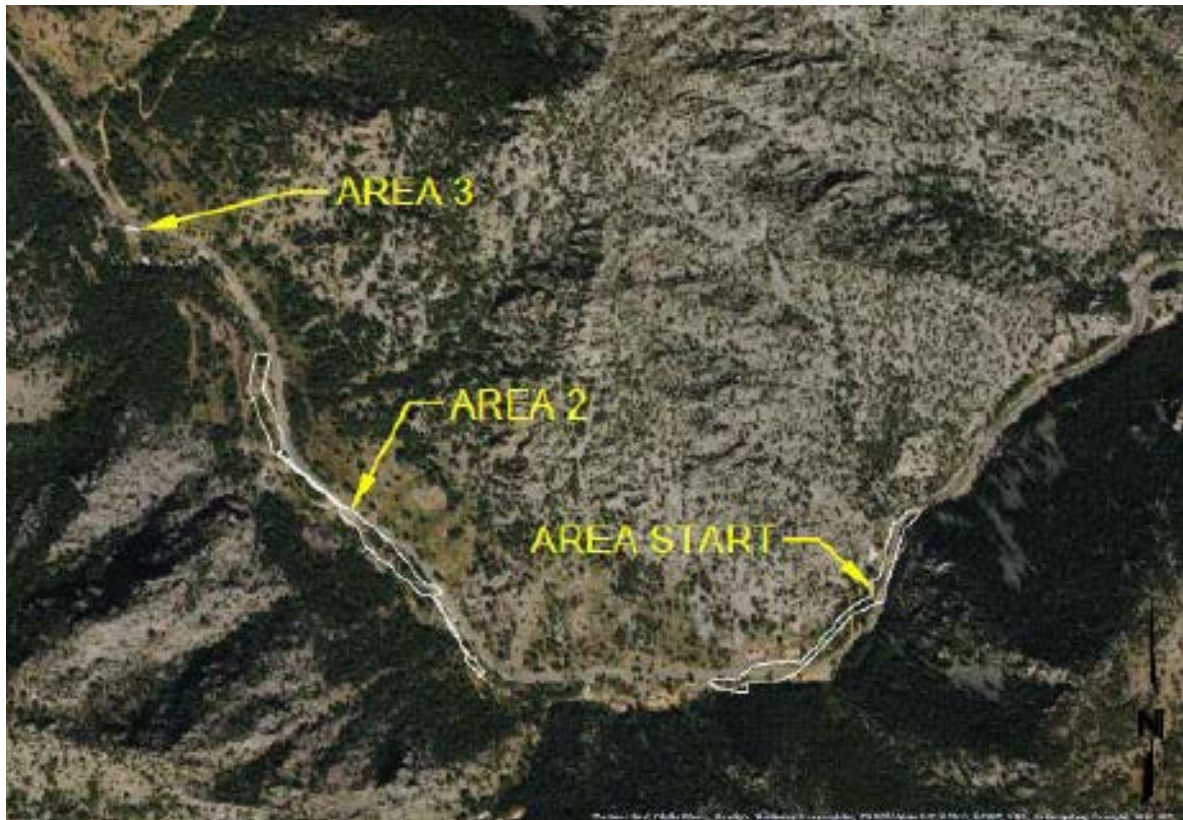


Figure 1 - Vicinity Map

The project proposes to remove unstable sediment and, where feasible, establish a vegetated floodplain. The project will also realign Coal Creek to better cross under Highway 72, as well as provide bioengineering and rock toe protection to stabilize streambanks throughout the reach. Disturbed areas throughout the project site will be planted with willows, trees, and shrubs, and/or will be seeded and mulched. The selected contractor shall perform or supply all necessary services as specified in this document, or pursuant to generally accepted standard industry practice, with regard to construction surveying, utility location and coordination, traffic control plans, stormwater discharge permit, erosion control best management practices, and as-built plans with associated GIS shape files.

Completion of the proposed work will create more resiliency within the watershed by re-establishing vegetation, removing excess sediment and debris, installing grade control to reduce channel incision, and repairing and re-enforcing banks to withstand higher flows. A more stable watershed should help reduce damage to residential structures, Highway 72, and drive crossings in the event of future flooding. However major risks still remain in many locations because it is impracticable within the scope of the project to create flood control measures that can completely remove structures from flooding. The intent and goal of the project is to create a more resilient watershed that will help mitigate, but not eliminate, possible future flood damage.

All construction work will be performed by a qualified contractor with experience on similar types of projects under the direction and supervision of the design engineer, hereto referred to as the ENGINEER in this RFP. The design plans were prepared by Olsson Associates and CCCWP anticipates working with Olsson for construction oversight, pending approval from the DOLA Watershed Program Manager.

CCCWP is a 501(c)3 nonprofit community coalition focused on post-flood recovery and resilience-building projects. Coal Creek Canyon is a unique small watershed that it is contained within Jefferson, Boulder, and Gilpin counties. This coalition is committed to promoting resiliency in the canyon through community engagement and river restoration projects.

CCCWP 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.

Further, the work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3), which states that: 1) Employment, training, contracting and other economic opportunities generated by HUD assistance shall, to the greatest extent feasible, be directed to low and very low-income persons residing within the project area; and 2) Contracts for work in connection with the projects shall, to the greatest extent feasible, be awarded to businesses which are located in, or owned substantially by persons residing in the project area. All CDBG-DR funded projects must, to the greatest extent feasible, comply with Section 3 when contracting for professional services.

The selected Contractor must adhere to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (Section 3). Selection will be made based on qualifications and the cost of proposed services that provide best value to the project.

1.1 Scope of Work

The following provides a summary of the items to be completed under the contract for construction for this project. CONTRACTOR will be responsible for bidding unit costs for project as specified in the FORMS.

1.1.1 Permitting

It is anticipated that the Army Corps permit and Jefferson County floodplain development and grading permits, will receive a provisional approval obtained by CCCWP prior to construction. The CONTRACTOR will be required to obtain the State Stormwater Discharge permit and associated erosion control plan and traffic control permit prior to commencing work. The traffic control/management plan must include:

- a. The applicant shall provide the haul routes to be used at permit application for approval.
- b. Flaggers and/or other traffic control measures must be used at the intersections of the access points on Highway 72 during hauling.
- c. Locations and types of warning signs along the roads shall be shown.
- d. The project shall be coordinated with the Colorado Department of Transportation

The CONTRACTOR is required to locate utilities prior to beginning construction. 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 Jefferson County permit approval. Stockpiled fill piles over 30 days shall be properly covered and/or stabilized with temporary vegetation.

1.1.2 Construction Surveying

The contractor will be responsible for all construction surveying and staking. Control will be provided by the design engineer. The contractor will also be responsible for as-built surveys with associated GIS shape files.

1.1.3 Construction

Complete construction of all improvements identified in the plans including providing a safe work environment, complying with permitting requirements, and close coordination with the ENGINEER. The contractor will address all landowner requests and concerns through the Coalition staff. Under no circumstance will the contractor do work for a landowner that is not approved by the design engineer and coalition staff. Project design and Construction Specifications can be found in Section 4 of this RFP.

This project is a stream and floodplain rehabilitation project that includes significant sediment removal. It is estimated that 3,400 cubic yards of sediment, deposited here by the flood, will need to be removed and exported offsite. In addition, approximately 20 loads of debris will also be removed and exported

offsite. It will be the contractor's responsibility to identify appropriate disposal locations. Access to the site is delineated on the plan sets. Following sediment removal, the contractor will shape and construct the proposed channel as designed and install aquatic habitat features. The design engineer will be responsible for and direct field fit revisions during construction. Finished floodplain grading will include the installation of soil amendments in preparation for revegetation. Revegetation will include seeding, mulching, live plant installation, willow and cottonwood staking and local live shrub transplants. The contractor will be responsible for watering once per week for approximately 6 months after planting.

1.1.4 Construction Administration

A. The management and administration of the Consultant's Construction Phase contract obligations including, but not limited to, the following activities:

- Provide all requisite bonds and insurance for the construction of the project;
- Possess the requisite licenses and assure that all subcontractors are also appropriately licensed and bonded for the tasks needed to complete the construction phase of the project;
- Procure and manage all construction contractors to complete the Construction Phase scope of work for the project;
- Hold weekly progress/construction meetings between the contractor, the coalition and the ENGINEER;
- Develop and update a construction management plan that includes Construction Phase quality control procedures, safety programs, construction document management protocol, etc.;
- Manage subcontractors (contracts, compliance, insurance, and bonds);
- Work with ENGINEER as they perform construction oversight and be responsive to necessary adaptive management, field fitting suggestions, and updated design;
- Prepare payment requests, relevant back up documentation, and maintain cash flow projection, including wage compliance with Davis-Bacon;
- Track permit compliance;
- Track Requests for Information and/or clarification (RFIs);
- Manage change orders and documentation necessary to support changes; all change orders require written approval from CCCWP prior to implementing work under the change order;
- Prepare as-built drawings;
- Coordinate all monitoring activity as described previously; and
- Administer warranties through the warranty period.

B. Site Security will be the responsibility of the contractor throughout the duration of the Construction Phase. The contractor will need to develop an acceptable security control plan to control access to the construction site during all phases of construction while maintaining traffic flow. The contractor will be responsible for construction of any alternate entrance locations or detours, as well as any repairs required to bring facilities back to their current condition. The contractor may close the site to the public during construction.

- C. Project Schedule requirements will include developing a detailed project construction schedule defining construction activities of each element of the project and their inter-relationships, along with milestone dates relative to project completion and permit requirements. Regular monitoring, updating, and reporting of the project schedule and implementation process will be required to demonstrate an efficient and timely delivery of the product. The detailed project schedule must include all critical path permit activities through the issuance of Proposed Agency Action by each respective permitting agency. Critical permits include any necessary permits that, if delayed, would delay the Project Schedule.
- D. Project Budget reporting requirements will include the preparation of a project budget monitoring protocol to provide regular updates on the status and attributes of the project. Provide documentation of any resultant changes in the projected project costs resulting from construction-related decisions and/or changes. Change orders, including additive change orders, are allowable. Circumstances that would warrant a change order are primarily those which would require shifting the project location. Note that all work must be done within the area covered in the environmental review. In addition, cost of services must not exceed the total funds awarded for this project, and construction costs must not exceed the Not to Exceed figure established at the time of contracting.
- E. Permitting requirements for the contractor during the Construction Phase will include compliance with all permit requirements as well as the responsibility for the completion of all necessary work activities needed for the completeness determination of all permits and approvals required to construct and operate the project. All permits, whether obtained by CCCWP or contractor, will become part of the project construction specifications and final design package. Permit completeness determination includes, but is not limited to, the following tasks:
- Develop a permitting compliance schedule and/or matrix, generating and/or assembling associated requisite technical data/documents as required for permit compliance;
 - Prepare permit applications and fees for all required permits with the exception of those obtained by the CCCWP;
 - Coordinate responses to Requests for Information (RFIs); and
 - Develop requisite permit compliance and monitoring programs associated with permits obtained by the design engineer along with any potential redesign activities required to achieve permit compliance.
- F. Design Compliance Review, will be included in the weekly construction meetings with CCCWP to validate that the design requirements are being provided during the Construction Phase. CCCWP will establish a small project team to communicate with the contractor during this phase. The meetings will occur at a frequency dictated by CCCWP and agreed upon by the contractor. One objective of these meetings will be to review the contractor's documentation of any resultant changes in the projected costs resulting from construction-related decisions and/or changes.

- G. Construction Document Management will be implemented as defined in the construction management plan to collect and store the following data in a readily retrievable manner: correspondence, payment requests, schedule updates, RFIs, change requests, and as-built drawings.
- H. Project Closeout will include activities needed to achieve final completion of the Construction Phase following the notification of Substantial Completion by the CCCWP. Closeout activities will include, but not be limited to, the completion of all punch list items defined at the point of Substantial Completion, final permit closeout, and project document transfer.
- I. Warranty Administration will be provided by the contractor throughout the requisite warranty period and will include activities such as: warranty request tracking, event documentation, and response. Geomorphic monitoring must conform to the CWCB Standard Operating Procedure for Topographic Survey of Stream Channels. The Contractor must directly interface with suppliers, subcontractors, and others for requesting and monitoring all warranty service needs and corrective activities, and provide any modification and/or updates to the project record drawings that may result from warranty activities. The warranty period for the Project will be 24 months from the date of closeout, unless otherwise negotiated and agreed upon between CCCWP and contractor and included in the amended Contract for Phase B – Construction Phase Services.
- J. The work under this project must be Davis-Bacon Act compliant. CCCWP is responsible for monitoring the consultant for Davis-Bacon compliance, including monitoring consultant’s weekly payroll. In addition, all work will comply with federal, state, and local law, including but not limited to the Copeland “Anti-Kickback” Act (40 USC 276c), Contract Work Hours and Safety Standards Act (40 USC 327-332), Fair Labor Standards Act (29 USC 102 et seq), and comply with minimum wage (8-16-101 CRS 1973, as amended), discrimination and affirmative action (24-34-402, 1973 as amended), and Colorado labor preference (8-17-101 & 102 CRS 2013, as amended).

1.2 Proposal Process

The intent of the Proposal Process is to select the lowest responsive and responsible proposer. Due to the overall schedule of the NRCS EWP program and deadlines for CDBG-DR grants, designs for the project are not yet fully completed. The plans and specifications included herein are preliminary only. Changes, including but not limited to adjustments to quantities, revised plan layouts, and updated specification revisions may still be made to the construction documents. The contractor is to provide a proposal, specifically unit prices, based on the preliminary construction documents provided with the RFP. The proposal price provided in the RFP will not be used as the final price. Instead, it is the intention of this process to bring the contractor on-board as part of a collaborative project partners team consisting of the CCCWP, the engineer, and the contractor. In the first 30 days or less, the contractor will operate under a contract to perform permitting tasks and to provide value engineering and support to the design team. This work will be paid using an hourly billing rate. The contractor and engineer will work together to clarify design details, design intent, discuss materials, and value engineer the project. Once a final plan set and quantities are developed, the contractor, using the **original unit costs** provided in the contractor’s initial proposal, will prepare a final proposal to be used for the project change order covering the physical construction of the project. If, during the project partners process,

further clarification of the design allows or necessitates that the contactor revise a unit price for the project the finalized unit costs may not exceed 10% above the original proposed unit costs. Unit costs will not be changed due to adjustments in quantities. This project partners' process to finalize the design and proposal will not exceed 30 days.

INSTRUCTIONS TO PROPOSERS

2.0 General

These instructions apply to proposal preparation for construction work for the Coal Creek Canyon Watershed Partnership.

2.1 Proposal

Each proposal must include and be made on the forms provided in FORMS. All FORMS shall be enclosed in a sealed envelope, addressed to CCCWP, showing on the face thereof the name of proposer and the project or submitted electronically as instructed in the request for proposals.

2.2 Qualifications of Proposer

Specific qualifications related to the project shall be submitted as required in the FORMS. Additional detail related to the information required on the FORMS is provided in the following sections.

2.2.1 Contractor Experience and Capability to Perform Work

Provide company background and relevant project experience using the PREVIOUS PROJECT EXPERIENCE table provided with the FORMS. Project experience should reflect work performed on stream stabilization improvements, stream and floodplain restoration, flood recovery, revegetation, and if projects involved alternative project delivery approaches. Provide up to six relevant project examples and note whether they were federally funded in part or in whole. In addition, for each project please provide the following:

- Narrative of project work and key components.
- Client contact information for each project.
- Up to 3 photos of completed work.

2.2.2 Experience and Qualifications of Project Team

Describe the contractor's team for the project. Include key staff on the PROPOSED PROJECT TEAM MEMBERS table provided with the FORMS.

2.2.3 Project Understanding and Value Engineering Approaches

Provide understanding of the project; potential risks that may directly affect cost, schedule, or project success; proposed contractor activities to mitigate the identified risk; and provide value engineering approaches for the proposed work.

2.2.4 Unit Costs

Provide unit costs using the attached BID SCHEDULE and/or electronic schedule included with the proposal documents. Approximate quantities for this project are included on the BID SCHEDULE, however, these shall not be considered final quantities. Final quantities will be determined following the project partners process described in Section 1.2.

2.2.5 Proposed Work Schedule and Workload Capacity

Due to the unique nature of flood recovery work in a natural disaster of this significance, sufficient contractor workload capacity is critical for this contract. Anticipated implementation of this project requires that construction be completed within 220 days of a signed Financial Assistance (FA) agreement between the Natural Resources Conservation Service (NRCS) and the Colorado Water Conservation Board. The anticipated signature date of the FA agreement is mid-January, 2017. The contractor's ability and commitment to perform this work in the available time frame is essential.

Provide a proposed work schedule with milestone deliverables and dates, with a completion date according to details listed in "Contract Term." Also, please list your proposed project team's current workload capacity and commitments in addition to its anticipated capacity for the Coal Creek Canyon project, through June 2017. Please state your team's commitment to accomplish this project in what is acknowledged to be a tight time frame.

2.3 Completion and Signing

Proposal must be legibly written in ink and must cover all of the items of work called for herein and no others. All of the blank spaces in the BEST VALUE BID FORM must be properly completed. Proposer must sign and give a complete business address. Proposal(s) by corporations must be signed with the name of the corporation followed by the signatures and designations of the President and Secretary (or other person authorized to bind it in the matter) and must have the corporate seal affixed thereto.

2.4 Bid Bond

All proposals must be accompanied by a bid bond at 5% of the proposed price. Proposals without a bid bond will be removed from consideration.

2.5 Addenda

Proposer must acknowledge the receipt of all Addenda on the proposal, in the place provided, and include it with the proposal. There will be at least one addendum, which will include the Pre-proposal Meeting attendee list and answers to questions.

2.6 Unbalanced Proposal

Any proposal that, in the opinion of owner, is unbalanced so that each item does not reasonably carry its own proportion of cost, or that contains inadequate or unreasonable prices for any item, may be rejected.

2.7 Site Inspection and Investigations

Prior to submitting a proposal, proposer(s) must inspect the work Site and its surroundings. It will be conclusively presumed that the inspection of the Site has been made by the submittal of a proposal.

DRAWINGS and SPECIFICATIONS, defining the work, were prepared on the basis of interpretation by ENGINEER of information derived from investigations of the work Site. Such information and data are subject to sampling errors, and the interpretation of the information and data depends to a degree on

the judgment of ENGINEER. In view of this, proposer is invited to make additional investigations. Information about the degree of difficulty of the work to be done cannot totally be derived from either the DRAWINGS and SPECIFICATIONS or from ENGINEER or ENGINEER's representatives.

Since the proposal information cannot be guaranteed, proposer will have assumed the risks attendant to successful performance of the work at the amount of the proposal and will never make claim for additional payments or time extensions on the grounds that the nature or amount of work to be done was not understood by proposer when submitting the proposal.

2.8 Inconsistencies and Interpretations

Any seeming inconsistencies between different provisions of the contract documents or any point requiring explanation must be inquired into by proposer, in writing, to owner at least five (5) days, excluding Saturdays, Sundays, and holidays, prior to the deadline for submission of proposal. A copy of the decision will be distributed only to those who have registered their contact information with CCCWP. After proposals are opened, all proposers must abide by the decision of CCCWP as to such interpretation.

If the decision or interpretation requires that addenda to the CONTRACT DOCUMENTS be issued, such ADDENDA will be distributed only to those who have registered their contact information with CCCWP. Each proposer must acknowledge the addenda in the proposal.

Only those interpretations, clarifications, and explanations issued in writing by CCCWP, either by addenda or by a formal written decision, will be binding. Oral or other interpretations, clarifications, or explanations will be without legal effect.

2.9 Award of Contract

CCCWP reserves the right to award the contract at any time within sixty (60) days from the date of the opening of proposals unless otherwise specified in the CONTRACT DOCUMENTS. CCCWP further reserves the right to reject any and all proposals and waive any and all informalities, and the right to disregard all non-conforming or conditional or counter proposals.

In evaluating the proposal, CCCWP will consider the following: capability of contractor to perform work, experience and qualifications of proposed construction team, project understanding and value engineering approaches, cost, and proposed work schedule and work capacity. Each of the five listed evaluation criteria will be scored and weighted specifically for the project as follows:

Contractor Experience and Ability of Contractor to Perform Work (0-5 points):

Previous experience by the construction team implementing stream channel modifications, stream bank stabilization, floodplain revegetation, previous flood recovery work, revegetation, understanding of the unique permitting requirements of river related construction projects, and previous experience working on Colorado watersheds. CCCWP will also consider prior experience with projects funded in whole or in part with federal funding.

Experience and Qualifications of the Proposed Construction Team (0-5 points):

Construction manager, key team members, and the construction company’s qualifications; defined responsibilities; key team member’s experience working together (continuity). Note team members with relevant experience with federally-funded projects involving regulations such as Davis Bacon and Section 3 of the Housing and Urban Development Act of 1968 (described above in Section 1 of this RFP).

Project understanding and Value Engineering Approaches (0-5 points):

Demonstrated understanding of the project goals and objectives, potential project risks, and evaluation of value added engineering approaches.

Cost (0-5 points):

Costs will be evaluated based on engineer’s estimate, current industry construction bids/proposals and competitiveness with other received proposals.

Proposed Work Schedule and Workload Capacity (0-5 points):

Demonstrated capacity to complete the work within the 220-day construction period and understanding of project components and scheduling.

Evaluation Criteria will be weighted as follows:

Evaluation Category	Score Range	Weighted Score Multiplier	Total Score Range
Contractor Experience and Capability to Perform Work	0-5	5	0-25
Experience and Qualifications of Team	0-5	5	0-25
Project Understanding/Potential Mitigation of Risks/Value Engineering	0-5	4	0-20
Cost	0-5	3	0-15
Proposed Schedule and Work Capacity	0-5	3	0-15

Upon receipt of proposals, CCCWP will tabulate each proposal. CCCWP will hold an opening to open and read aloud the received proposals. The selection committee will individually review and score each proposal and meet to make a selection. The scores will be compiled in order to rank the applicants from highest to lowest. While price is one of the primary factors in proposal selection, the selection committee will select the lowest responsive and responsible proposer, comparing price with qualifications. The best value contracting company(s) will be selected to enter into a professional services agreement with CCCWP, subject to the approval of the designated selection committee of the CCCWP. Interviews may be held with a short-list of top-scoring contracting companies if necessary and/or desired by the selection committee.

If a contract is to be awarded, it will be awarded to the proposer whose evaluation by CCCWP indicates to CCCWP that it is the lowest responsive and responsible proposer. If the contract is to be awarded, CCCWP shall enter into a change order for the project design phase within sixty (60) days after the selection of contractor date.

At the completion of the project design phase, the project team will develop a schedule and finalize plans and specifications for the project. The contractor will work with project team to finalize unit prices based on the field ready PLAN and SPECIFICATIONS. Original unit prices will be used unless specifically discussed and negotiated by the CONTRACTOR, ENGINEER, and CCCWP. Negotiated/verified unit prices may not exceed 10% above the originally proposed cost. Unit costs modifications will not be allowed for bid quantity changes. A third-party evaluator may be used in negotiating/verifying pricing. If contractor and CCCWP cannot come to an agreement on final unit prices at the end of the design phase, then no award will be given for the construction phase. If contractor and CCCWP successfully negotiate, NOTICE OF AWARD will be given.

2.10 Rejection of Proposal

If, at a minimum, any of the below-listed items are encountered, then the proposal will be deemed unacceptable.

1. Proposer(s) name is not on the plan holders list (established at the mandatory pre-proposal meeting);
2. Proposal is missing any of the Procurement Forms;
3. Proposal not signed by an authorized person of the corporation or company; and
4. Receipt of addenda not acknowledged by proposer on the proposal;

2.11 Failure to Execute Contract and Furnish Bond

If the successful proposer fails to execute the contract and furnish the performance and payment bonds and certificate of insurance within ten (10) days from the issuance of the notice of award, the proposer shall forfeit the proposal security accompanying the proposal. The proposal security shall be retained as liquidated damages by the CCCWP, and it is agreed that this said sum is a fair estimate of the amount of damages the CCCWP will sustain.

2.12 Confidential Information

Pursuant to the Colorado Open Records Act, C.R.S. §§ 24-72-201 et seq. (“Act”), all information contained in any bid or proposal is subject to public disclosure unless it meets one of the exceptions set forth in the Act. To avoid disclosure of trade secrets, privileged information, or confidential commercial, financial, geological, or geophysical data (“Confidential Information”), the proposer must clearly mark all Confidential Information as such and provide a written, detailed justification with its bid or proposal of the protected nature of the Confidential Information under Colorado law. This justification must address, at a minimum, the specific competitive harm that may result from any disclosure, the intrinsic value of the Confidential Information to the proposer, and any safeguards the proposer uses to protect the Confidential Information from disclosure.

By submitting a proposal, the proposer agrees to hold the CCCWP harmless from any claim arising from the release of Confidential Information not clearly marked as such by the proposer or lacking written, detailed justification supported by Colorado law.

PROPOSAL FORMS

BEST VALUE BID FORM

CDBG-DR WATERSHED RESILIENCE & NRCS EMERGENCY WATERSHED PROTECTION IMPLEMENTATION PROJECT: COAL CREEK CANYON EWP PROJECTS

Bid of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____, doing business as _____, (Corporation, Partnership, Individual).

In conformity with the preliminary CONTRACT DOCUMENTS, listed in the AGREEMENT between CCCWP and CONTRACTOR:

(I)(We) hereby certify that this BID is made and submitted without fraud or collusion with any other person, firm, or corporation whatsoever; that an examination has been made of the Site of the WORK and the CONTRACT form, together with the preliminary CONTRACT DOCUMENTS for the improvement.

(I)(We) understand the BIDDER(s) will be evaluated on five criteria based on information submitted in BID(s). The five evaluation criteria are: capability of contractor to perform work, experience and qualifications of proposed construction team, project understanding and value engineering approaches, unit costs, and proposed work schedule and work capacity

(I)(We) understand that the quantities of WORK shown herein are approximate only and are subject to increase or decrease; are to be performed at the unit prices shown on the attached schedule; and that, at the time of the evaluation of BID(s), totals of BID(s) will be based on the correct summation of item totals obtained from the unit prices BID.

(I)(We) understand that after selection of CONTRACTOR a CHANGE ORDER for PROJECT design phase of work will be given. Work performed during the design phase will be done at an hourly rate with a Not to Exceed amount. Work includes attending meetings and providing expertise and knowledge to assist in how to best deliver PROJECT goals. Work may also include equipment or product research, field investigation, permitting, public outreach, coordination, and project partnering activities.

(I)(We) understand at the completion of the PROJECT design phase, the project team will develop a bid schedule and finalize PLANS and SPECIFICATIONS for the PROJECT. CONTRACTOR will work with project team to finalize unit prices based on the field ready PLAN and SPECIFICATIONS. A third-party evaluator may be used in negotiating/verifying pricing. If CONTRACTOR and CCCWP cannot come to an agreement on unit prices at the end of the design phase, then no AWARD will be given for the construction phase. If CONTRACTOR and CCCWP successfully negotiate, NOTICE OF AWARD will be given.

(I)(We) propose to furnish all necessary machinery, equipment, tools, labor, and other means of construction and to furnish all materials specified, in the manner and at the time prescribed, all in accordance with the terms of the CONTRACT DOCUMENTS.

(I)(We) further propose to do all extra work that may be required to complete the contemplated improvement, at unit prices, lump sums, or time and materials to be agreed upon in writing prior to starting such WORK.

(I)(We) further propose to execute the AGREEMENT and BOND(s) within ten (10) days after receiving written NOTICE OF AWARD.

(I)(We) further propose to perform all WORK in accordance with the CONTRACT DOCUMENTS and in a good and workmanlike manner, and to renew or repair any WORK that may be rejected due to defective materials or workmanship, prior to final completion and acceptance of the PROJECT by CCCWP.

BIDDER acknowledges receipt of the following ADDENDA:

No. _____, dated _____, 20____ No. _____, dated _____, 20____
 No. _____, dated _____, 20____ No. _____, dated _____, 20____
 No. _____, dated _____, 20____ No. _____, dated _____, 20____

Evaluation Factor 1: Contractor Experience and Ability of Contractor to Perform Work

Provide information on a minimum of six projects in the table below. In addition, for each project please provide and attach the following:

- Narrative of project work and key components.
- Client contact information for each project.
- Up to 3 photos of completed work.

Previous Project Experience Chart						
No.	Project Name	Owner	Owner's Contact	Cost	Major Work Elements (see key below)	Alternative Delivery Approach Used (y/n)
1						
2						
3						
4						
5						
6						

Major Work Element Key (use for column 6)

- | | | |
|-------------------------|---------------------|---------------------------|
| 1. Stream Grading | 5. Sediment Removal | 8. Federally Funded |
| 2. Instream Structures | 6. Bioengineering | 9. Davis Bacon Compliance |
| 3. Large Woody Material | 7. Revegetation | 10. EWP |
| 4. Stream Stabilization | 8. Water Control | |

Evaluation Factor 2: Experience and Qualifications of Proposed Construction Team

Provide information for key individuals proposed to be used for this project in the table below. Please also provide additional information as needed to describe team members' qualifications.

Proposed Project Team Members			
Name	Position	Years with Company	Projects Worked on (use project No. above)

Evaluation Factor 3: Project understanding and Value Engineering Approaches

Evaluation Factor 4: Unit Costs

Provide unit costs on the UNIT PRICE BID SCHEDULE included with the RFP.

Evaluation Factor 5: Proposed Work Schedule and Workload Capacity

For purposes of this project, the proposed schedule is as follows:

Permit Completion and Final Design Revisions: 30 days from NTP

Construction Phase: 30 days from NTP to 220 days from signature of FA agreement

Construction Duration: 220 days from signature of FA agreement

Provide explanation of workload capacity and commitment to perform work on the required 220-day time frame. Attach a proposed construction schedule with the proposal.

UNIT PRICE BID SCHEDULE

BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS per the unit prices provided on the attached BID SCHEDULE:

Bid Form
Thursday, December 15, 2016

EWP
Upper Coal Creek - Preliminary Design: Olsson Project No. 016-1310
Area Start, Area 2, and Area 3

Item No.	Item Description	Unit	Quantity	Unit Cost	Item Cost
1	Mobilization	LS	1		
2	Construction Surveying	LS	1		
3	Dewatering Operations	LS	1		
4	Construction Zone Traffic Control	LS	1		
5	Erosion Control	LS	1		
6	Clearing and Grubbing	AC	2.9		
7	Temporary Construction Fence	LF	2,050		
8	Remove Tree	EA	24		
9	Rock Check Dam	EA	3		
10	Feature Boulder	EA	24		
11	Boulder Wall, 36-Inch, Double Stacked	LF	133		
12	Boulder, Toe, 24-Inch	EA	244		
13	Boulder, Toe, 36-inch	EA	408		
14	Boulder, Drop Structure, 24-Inch	EA	60		
15	Boulder, Drop Structure, 36-Inch	EA	134		
16	Willow Toe, Biolog	LF	635		
17	Willow Live Stakes	EA	1,076		
18	Rootwad	EA	5		
19	Unclassified Excavation, "Red" Sediment Removal	CY	2,576		
20	Unclassified Excavation, Complete in Place	CY	600		
21	Unclassified Excavation with Export of Excess Material	CY	845		
22	Riprap, D50 12-Inch, Void Filled	CY	1,064		
23	Removal of Debris	LOAD	21		
24	Soil Retention Covering, Erosion Control Fabric, Koirmat 700	SY	9,122		
25	Seeding, Broadcast, Zone 2	SF	3,852		
26	Seeding, Broadcast, Zone 3	SF	15,948		
27	Seeding, Broadcast, Zone 4	SF	96,052		
28	Seeding, Broadcast, Zone 5	SF	1,336		
29	Nebraska Sedge, Carex nebrascensis, 10-Cubic Inch	EA	83		
30	Creeping Spikerush, Eleocharis palustris, 10-Cubic Inch	EA	73		
31	Mountain Rush, Juncus arcticus ssp. Littoralis, 10-Cubic Inch	EA	73		
32	Three-Stamened Rush, Juncus ensifolius, 10-Cubic Inch	EA	31		
33	Panicled Bulrush, Scirpus microcarpus, 10-Cubic Inch	EA	31		
34	Narrowleaf Willow, Salix bebbiana, 48-Inch Cutting	EA	31		
35	Drummond's Willow, Salix drummondiana, 48-Inch Cutting	EA	53		
36	Narrowleaf Willow, Salix exigua, 48-Inch Cutting	EA	64		
37	Bluestem Willow, Salix irrorata, 48-Inch Cutting	EA	31		
38	Strapleaf Willow, Salix ligulifolia, 48-Inch Cutting	EA	40		
39	Whiplash Willow, Salix lucida ssp. Caudata, 48-Inch Cutting	EA	31		
40	Rocky Mountain Willow, Salix monticola, 48-Inch Cutting	EA	34		
41	Narrowleaf Cottonwood, Populus angustifolia, 60-Inch Cutting	EA	89		
42	Thinleaf Alder, Alnus incana ssp. Tenuifolia, D-60	EA	38		
43	Leadplant, Amorpha fruticosa, D-60	EA	76		
44	Western River Birch, Betula occidentalis, D-60	EA	31		
45	Mountain Mahogany, Cercocarpus montanus, D-60	EA	42		
46	Redosier Dogwood, Cornus sericea, D-60	EA	18		
47	Rocky Mountain Juniper, Juniperus scopulorum, D-60	EA	37		
48	American Plum, Prunus americanum, D-60	EA	108		
49	Chokecherry, Prunus virginiana ssp. Melanocarpa, D-60	EA	149		
50	Threelobed Sumac, Rhus trilobata, D-60	EA	113		
51	Golden Currant, Ribes aureum, D-60	EA	97		
52	Wood's Rose, Rosa woodsii, D-60	EA	78		
53	Western Snowberry, Symphoricarpos occidentalis, D-60	EA	108		
54	Mulching (Woodstraw)	AC	2.8		
55	Soil Amendments	AC	2.9		
56	Landscape Maintenance	LS	1		
Total Cost:					

TOTAL OF BASE BID: \$ _____
(Numbers)

_____ Dollars
(Words)

BIDDER STATES THAT:

1. MAJOR MATERIAL AND EQUIPMENT SUPPLIERS ARE:

MATERIAL THEY WILL SUPPLY:

2. MAJOR SUBCONTRACTORS ARE:

WORK THEY WILL PERFORM:

ATTEST:

By: _____
(Signature)

Name: _____
(Print)

(SEAL)

CONTRACTOR:

Company Name (Print)

By: _____
(Signature)

Name: _____
(Print)

Title: _____

Address: _____

Date: _____

PROJECT FORMS AND EXHIBITS

4.0 Project Design Plans

4.1 Project Construction Specifications

4.2 Sample Construction Contract

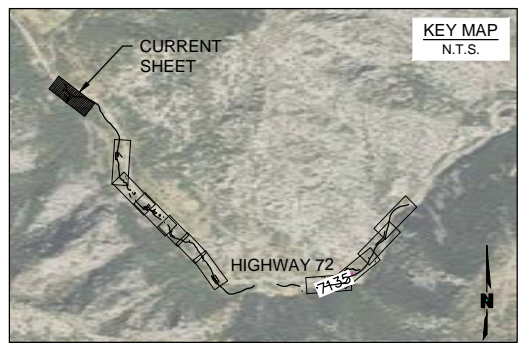
4.3 Supplemental Exhibits

- Bid Bond Form
- Performance and Payment Bonding Requirements
- Consultant and Subcontractor Certifications
 - Equal Employment Opportunity – Executive Order 11246
 - Section 3 & Segregated Facilities Certification
 - Noncollusion Affidavit of Prime Contractor
- Federal LABOR Standards Provisions
- Davis Bacon Wage Determination

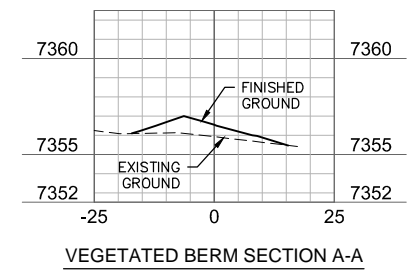
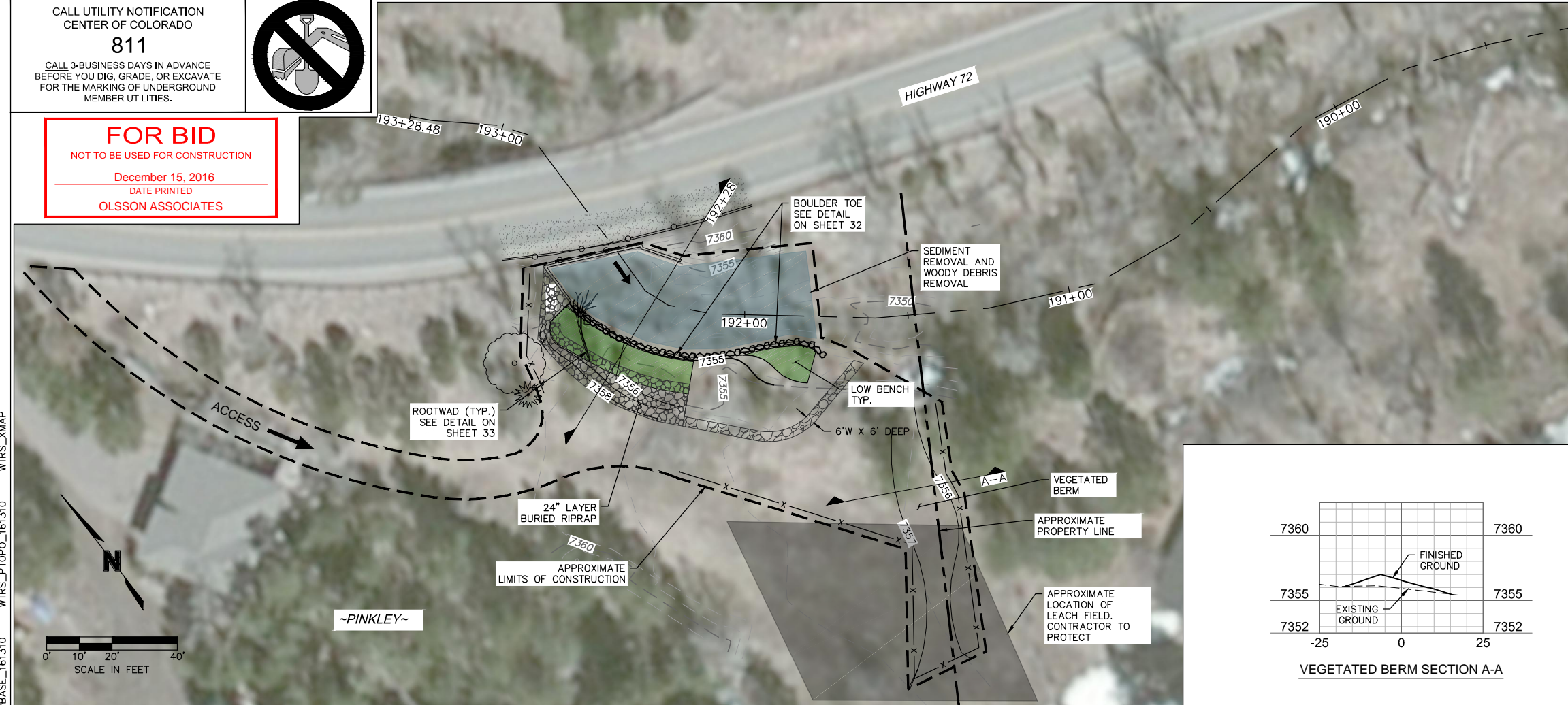
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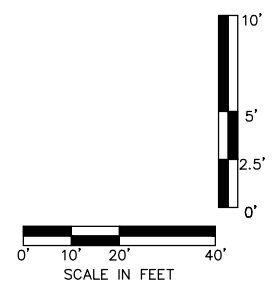
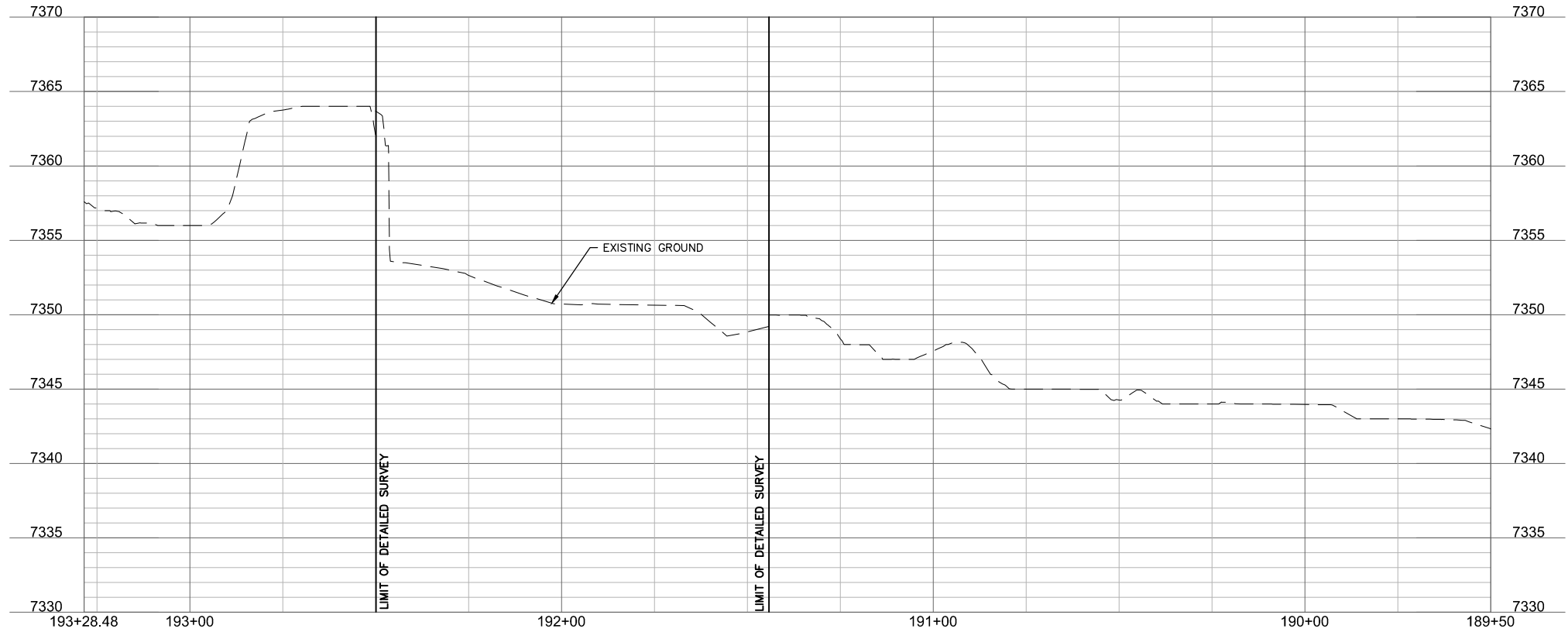
- LEGEND**
- LIMITS OF CONSTRUCTION
 - BURIED SOIL RIPRAP
 - BURIED RIPRAP CHECK STRUCTURE
 - BOULDER TOE
 - "RED" SOIL
 - WILLOW TOE
 - ROOTWAD
 - BOULDER GRADE CONTROL STRUCTURE
 - LOW BENCH
 - OVERFLOW
 - SEDIMENT OR WOODY DEBRIS REMOVAL
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 - DIRECTION OF FLOW
 - CONSTRUCTION FENCE

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VOLUME TABLE

0115307	0
0115307	0
0115307	0

NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.



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 WTRS_PTOPO_161310
 WTRS_XMAP
 WTRS_TBLK_161310
 WTRS_XTOPO_LIDAR_161310

REV. NO.	DATE	REVISIONS DESCRIPTION

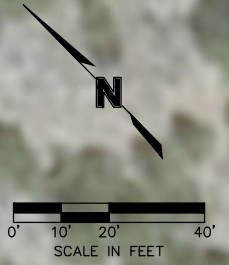
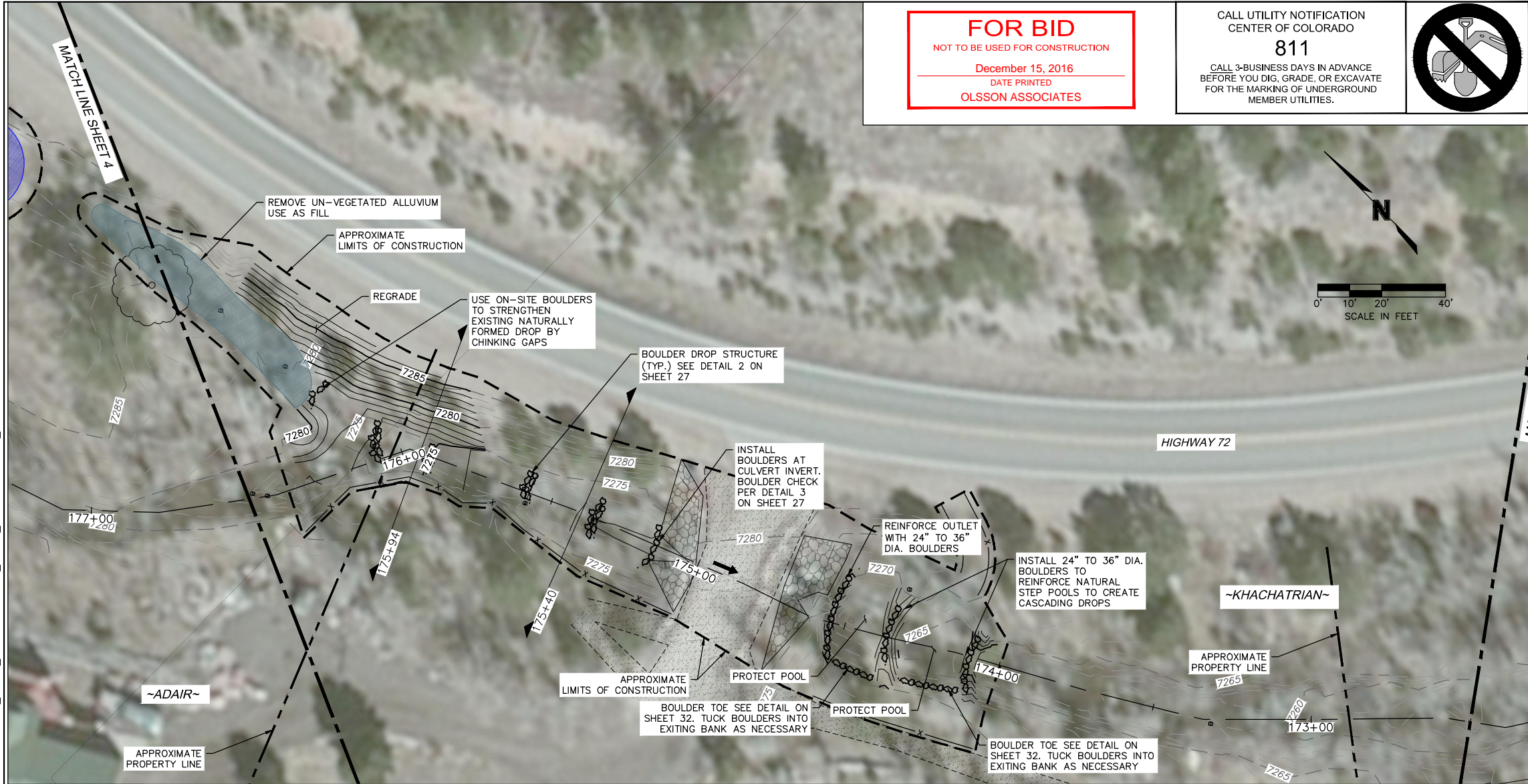
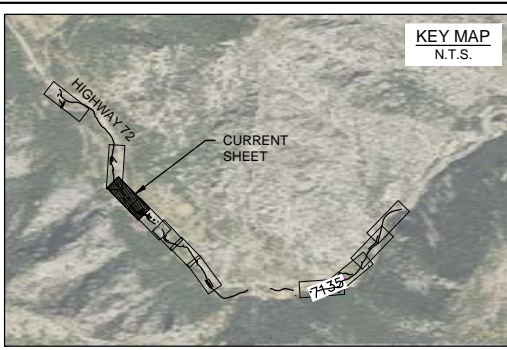
AREA 3 - PLAN AND PROFILE
FINAL SUBMITTAL
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
COAL CREEK IMPROVEMENTS
JEFFERSON COUNTY, COLORADO
2016

drawn by: CU
checked by: WS
approved by: DK
QA/QC by: DO
project no.: 016-1310
drawing no.:
date: 2016.12.09

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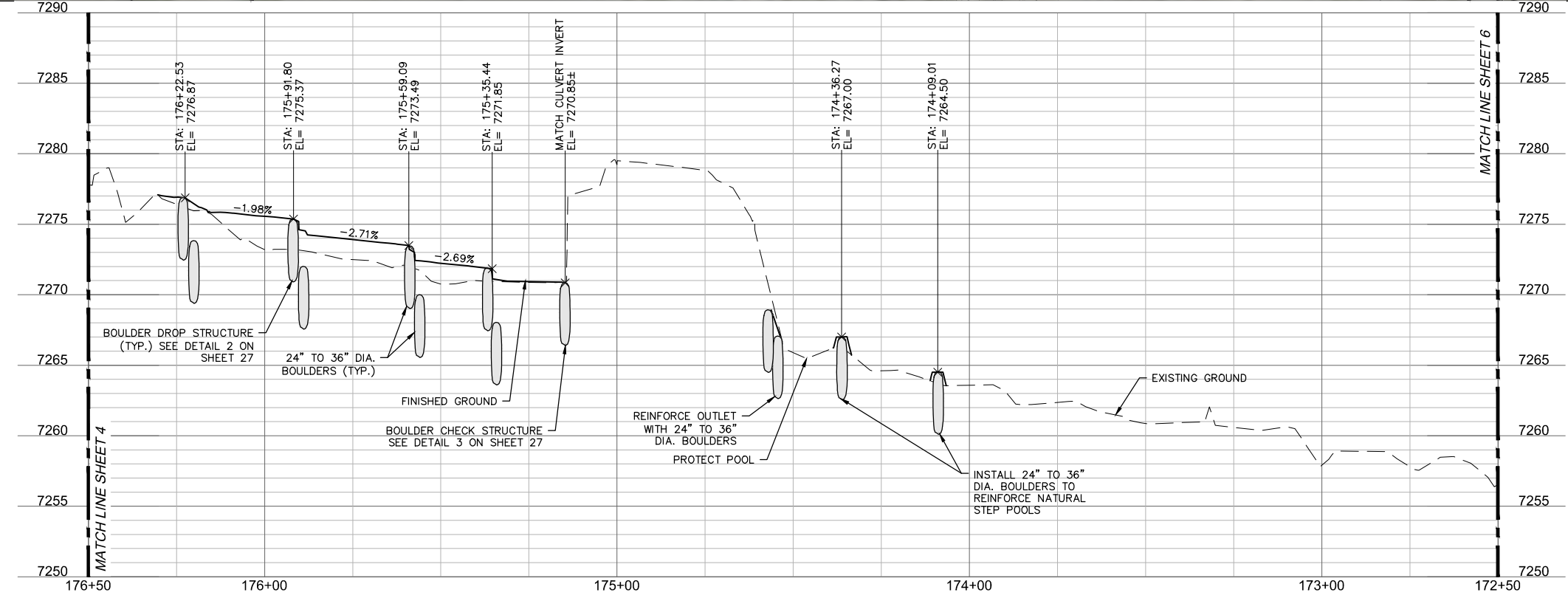
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- LEGEND**
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 - CONSTRUCTION FENCE

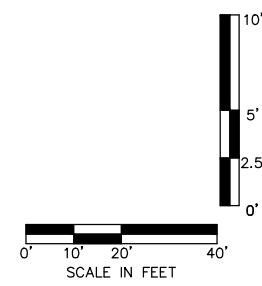
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VOLUME TABLE

ADAIR AND KHACHATRIAN	
CUT	12.48 CY
FILL	47.43 CY
NET	34.95 CY <FILL>

NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.



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REV. NO.	DATE	REVISIONS DESCRIPTION

AREA 2 - PLAN AND PROFILE
 FINAL SUBMITTAL

EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
 COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

2016

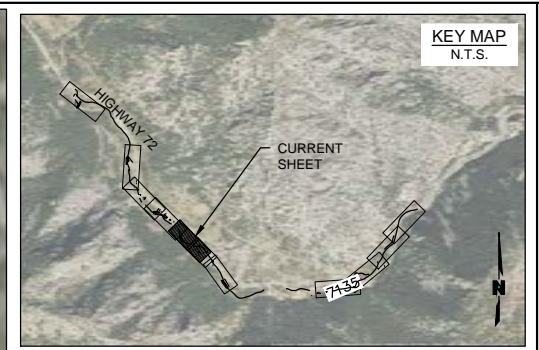
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 checked by: WS
 approved by: DK
 QA/QC by: DD
 project no.: 016-1310
 drawing no.:
 date: 2016.12.09

SHEET
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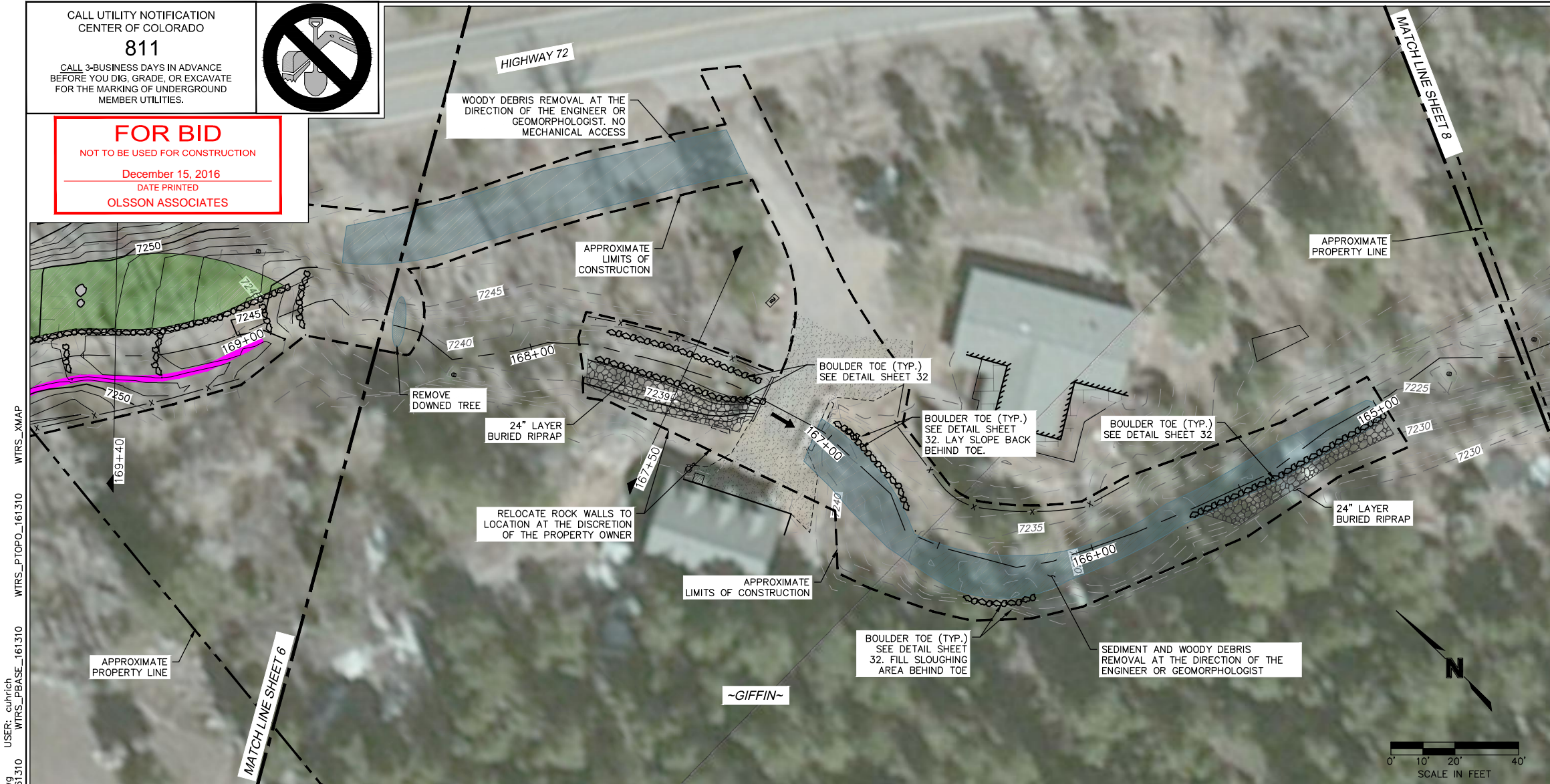
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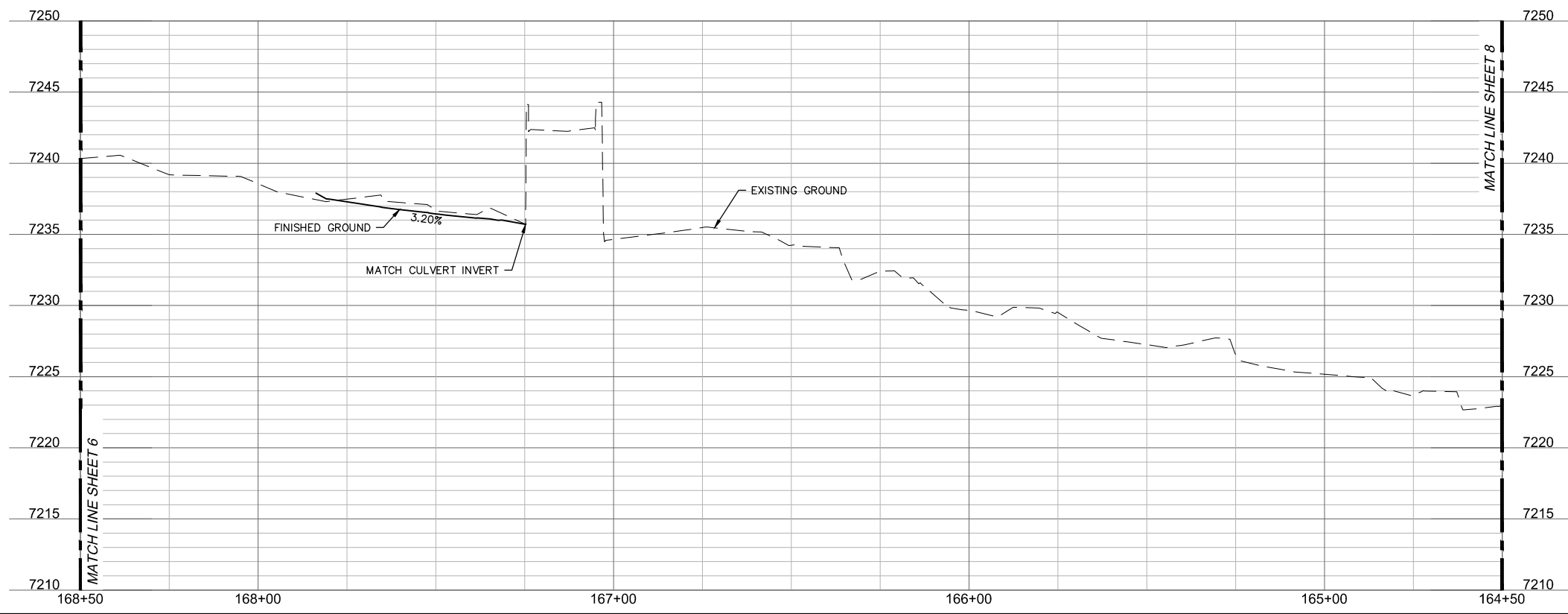
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REV. NO.	DATE	REVISIONS DESCRIPTION

VOLUME TABLE

GIFFIN	
CUT	15.53 CY
FILL	0.15 CY
NET	15.38 CY <CUT>

NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.



AREA 2 - PLAN AND PROFILE
FINAL SUBMITTAL

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COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

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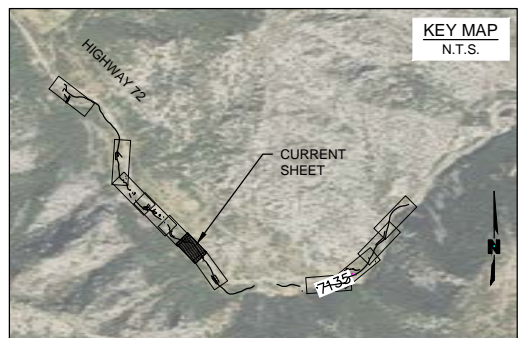
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approved by: DK
QA/QC by: DD
project no.: 016-1310
drawing no.:
date: 2016.12.09

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7 of 33

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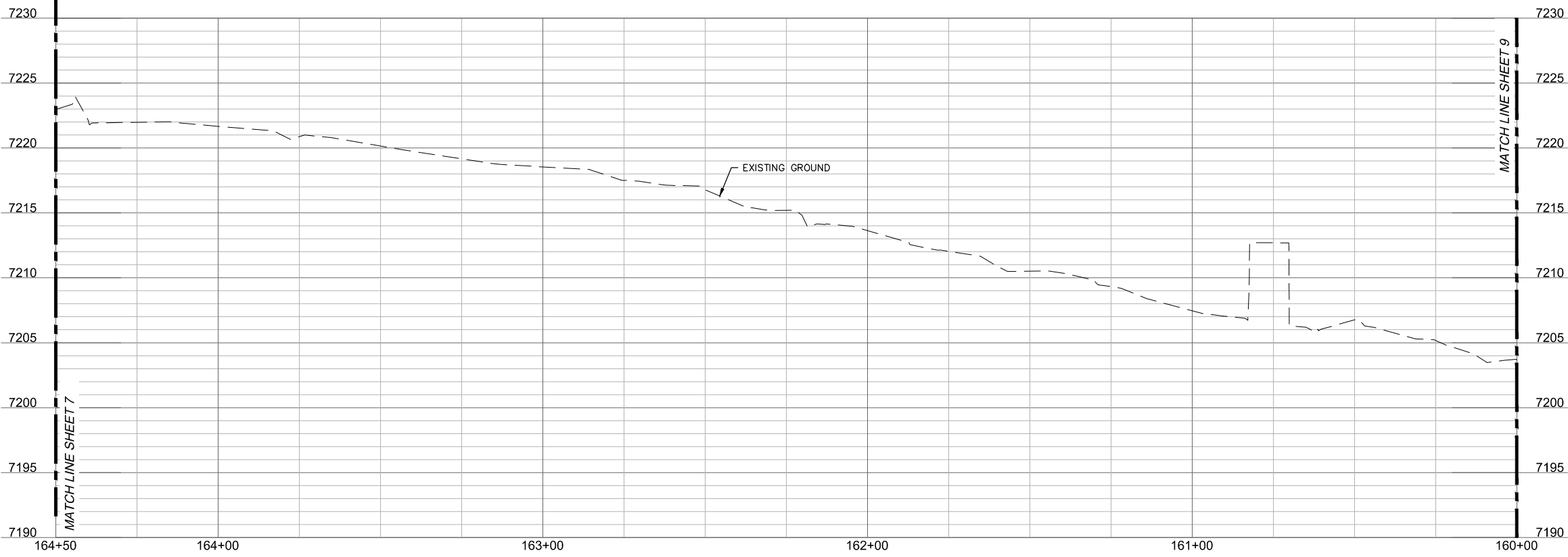
LEGEND

	LIMITS OF CONSTRUCTION
	BURIED SOIL RIPRAP
	BURIED RIPRAP CHECK STRUCTURE
	BOULDER TOE
	"RED" SOIL
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AREA 2 - PLAN AND PROFILE
FINAL SUBMITTAL

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COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

2016

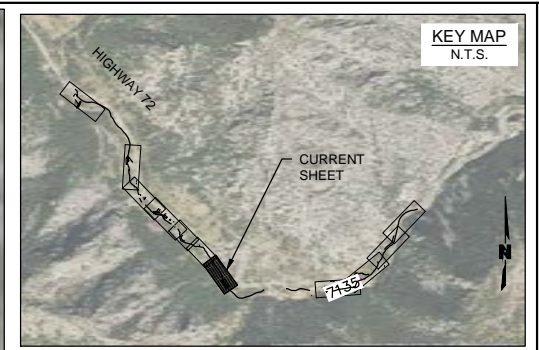
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drawing no.:	
date:	2016.12.09

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8 of 33

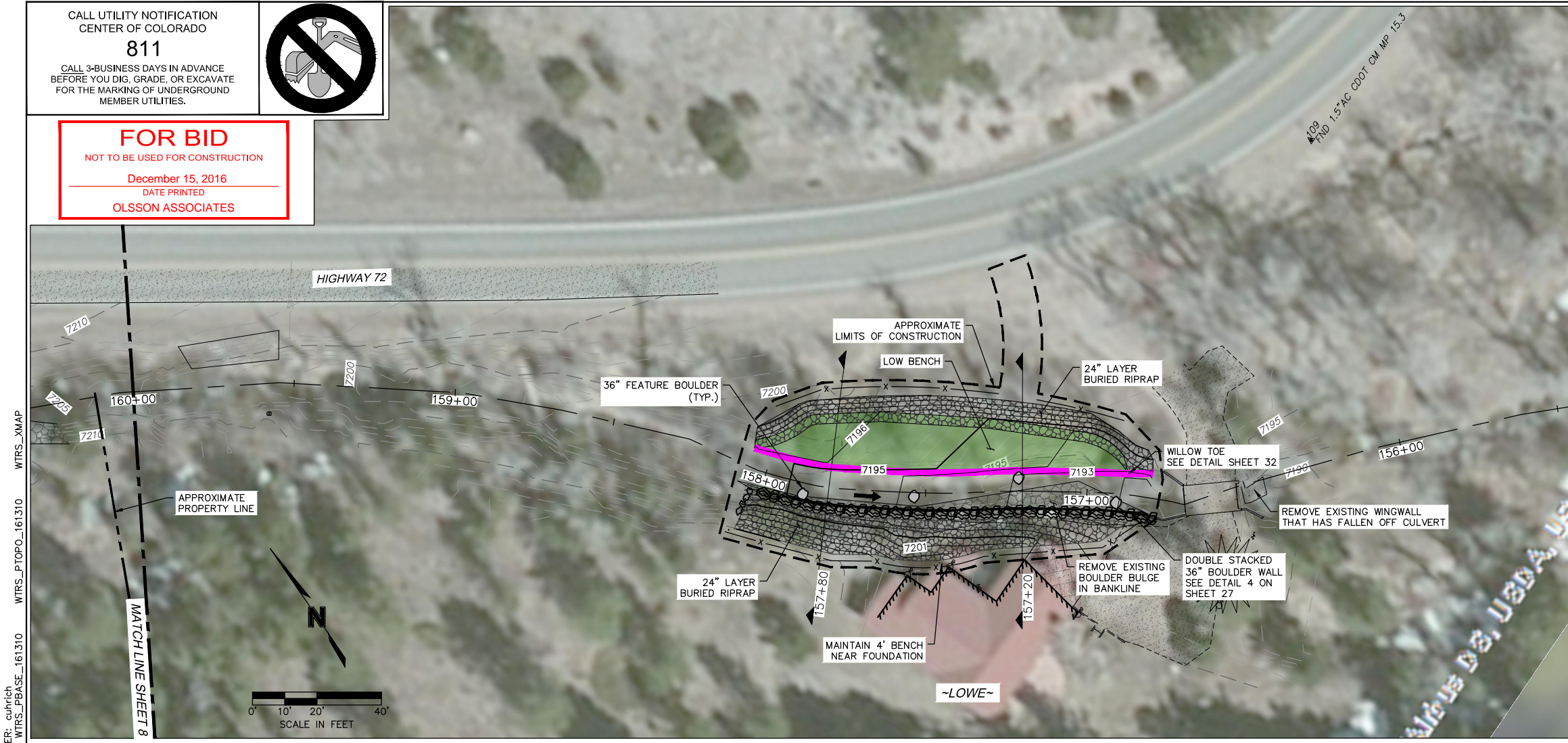
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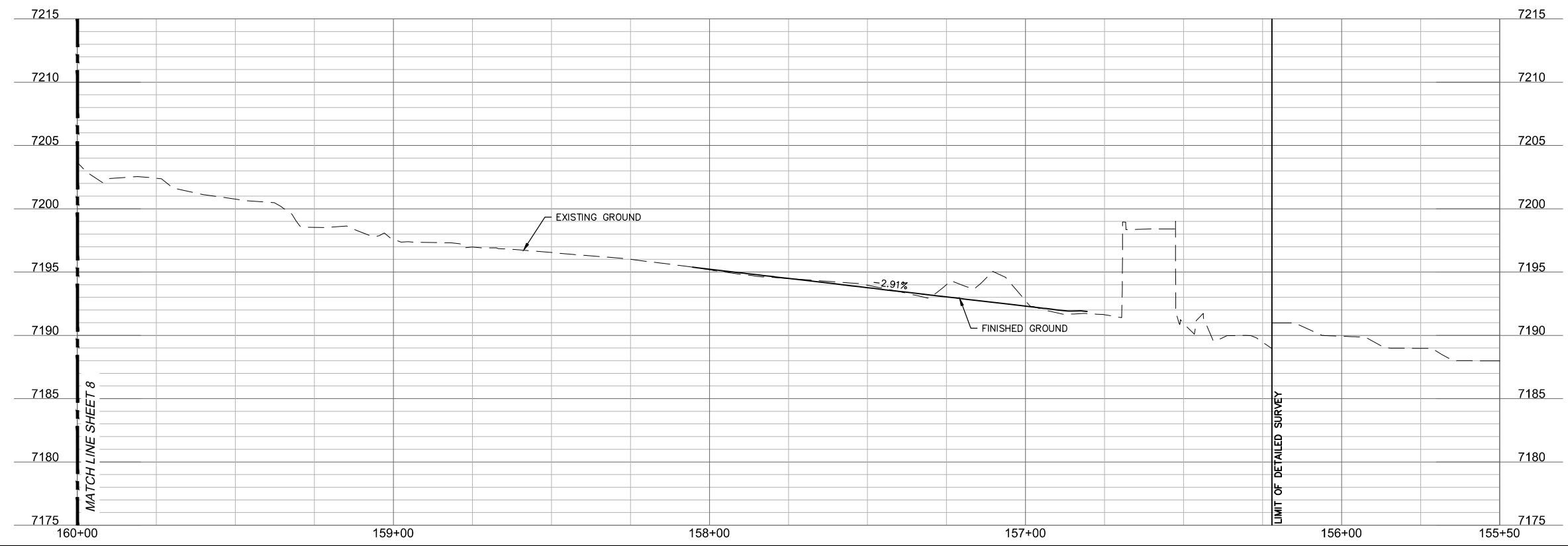
LEGEND

[Dashed line]	LIMITS OF CONSTRUCTION
[Cross-hatched pattern]	BURIED SOIL RIPRAP
[Stippled pattern]	BURIED RIPRAP CHECK STRUCTURE
[Dotted pattern]	BOULDER TOE
[Wavy pattern]	"RED" SOIL
[Pink line]	WILLOW TOE
[Green line]	ROOTWAD
[Blue line]	BOULDER GRADE CONTROL STRUCTURE
[Light green area]	LOW BENCH
[Light blue area]	OVERFLOW
[Light grey area]	SEDIMENT OR WOODY DEBRIS REMOVAL
[Circle]	FEATURE BOULDER
[Arrow]	DIRECTION OF FLOW
[X]	CONSTRUCTION FENCE

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VOLUME TABLE

LINE	CU	CY

NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.

AREA 2 - PLAN AND PROFILE
FINAL SUBMITTAL

EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

2016

drawn by: CU
checked by: WS
approved by: DK
QA/QC by: DD
project no.: 016-1310
drawing no.:
date: 2016.12.09

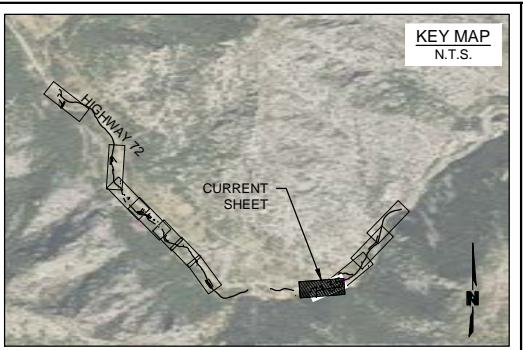
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9 of 33

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MEMBER UTILITIES.



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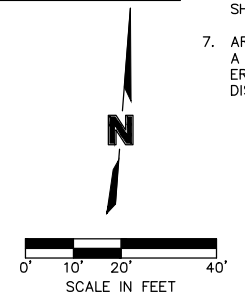
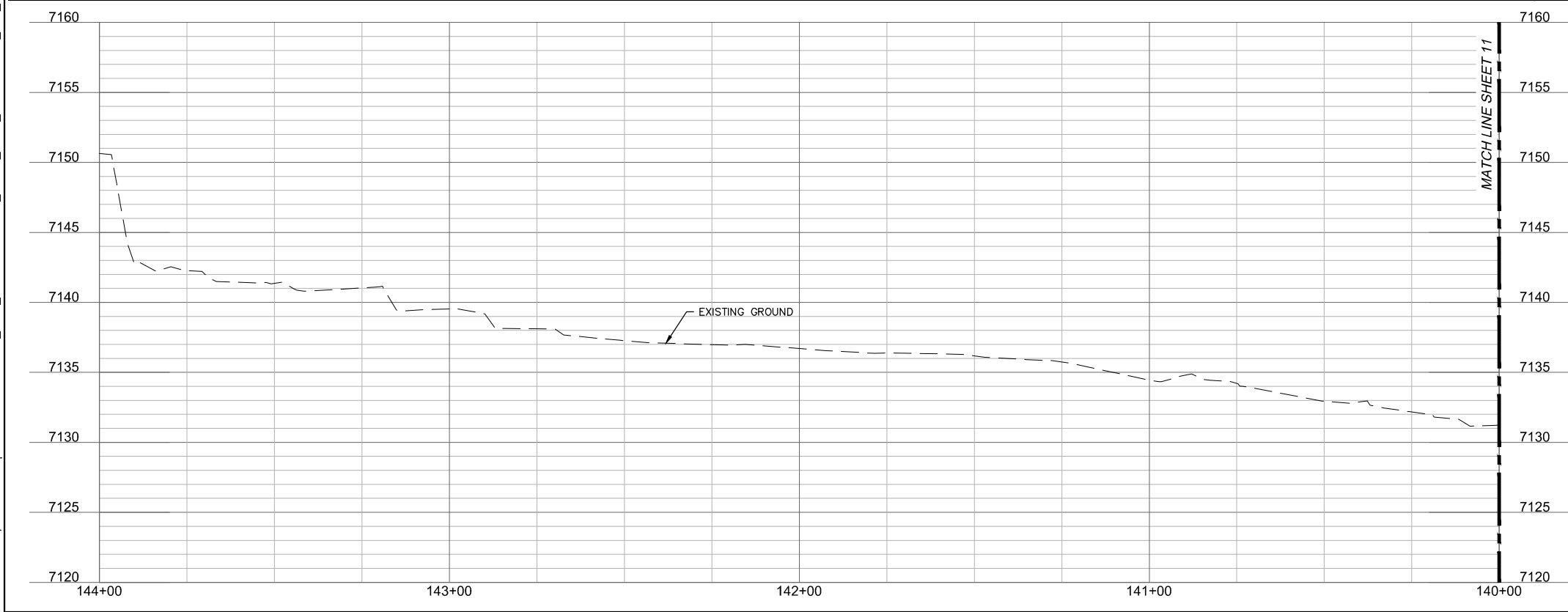
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- LEGEND**
- LIMITS OF CONSTRUCTION
 - BURIED SOIL RIPRAP
 - BURIED RIPRAP CHECK STRUCTURE
 - BOULDER TOE
 - "RED" SOIL
 - WILLOW TOE
 - ROOTWAD
 - BOULDER GRADE CONTROL STRUCTURE
 - LOW BENCH
 - OVERFLOW
 - SEDIMENT OR WOODY DEBRIS REMOVAL
 - FEATURE BOULDER
 - DIRECTION OF FLOW
 - CONSTRUCTION FENCE

- NOTES:**
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REV. NO.	DATE	REVISIONS DESCRIPTION



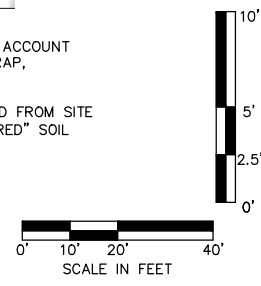
VOLUME TABLE

RINE	
CUT	8.0
ILL	4.0
NET	4.0

VOLUME TABLE

RED SOIL REMOVAL	
CUT	16.20
ILL	1.70
NET	14.50

- NOTES:**
- QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.
 - "RED" SOIL SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF. "RED" SOIL SHALL NOT BE USED ON-SITE.



AREA START - PLAN AND PROFILE
FINAL SUBMITTAL

EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

2016

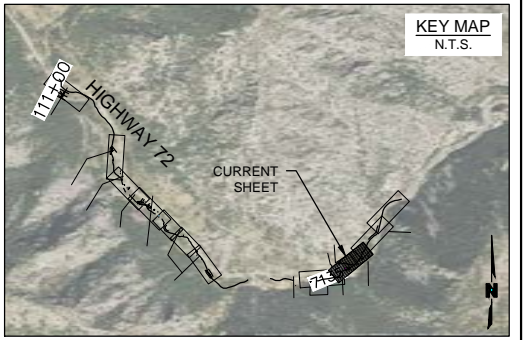
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approved by: DK
QA/QC by: DD
project no.: 016-1310
drawing no.:
date: 2016.12.09

SHEET
10 of 33

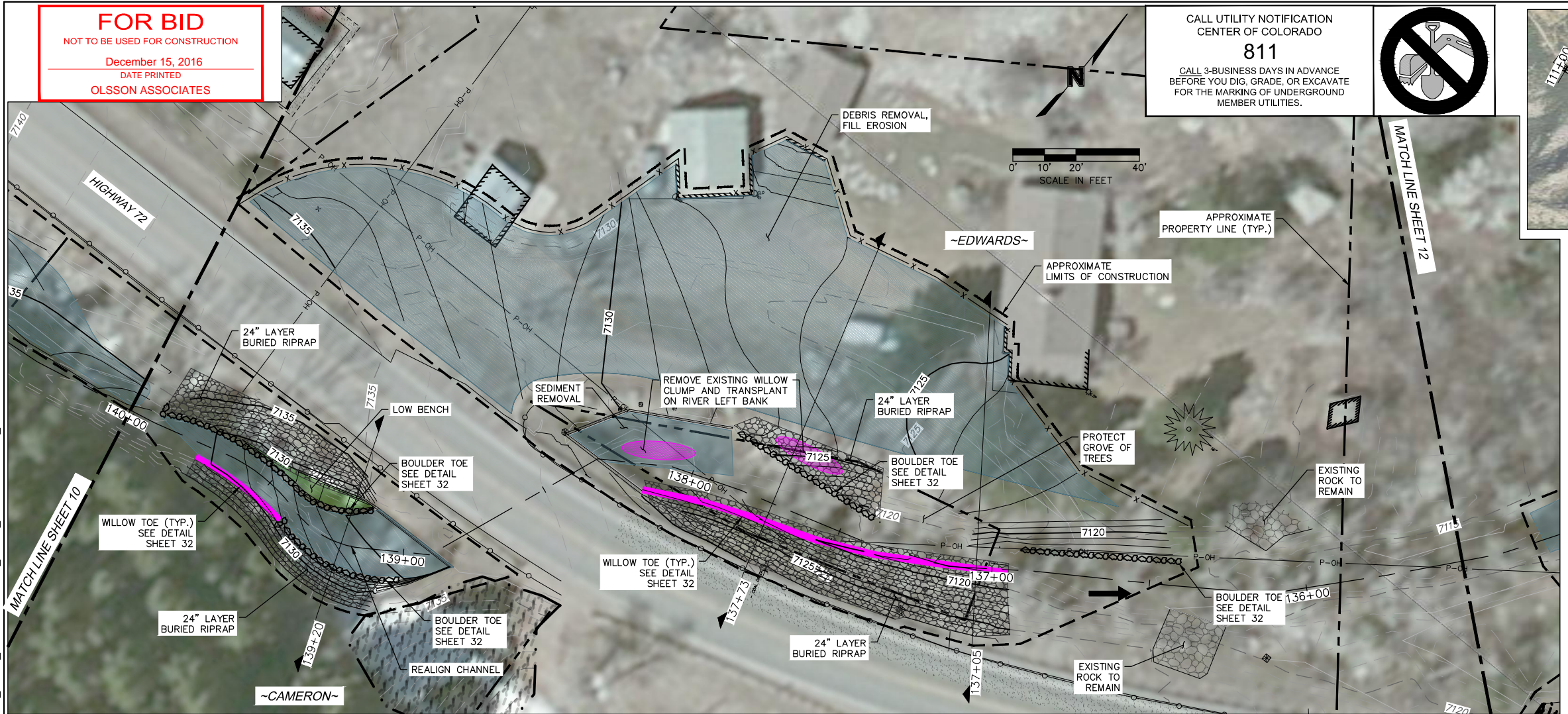
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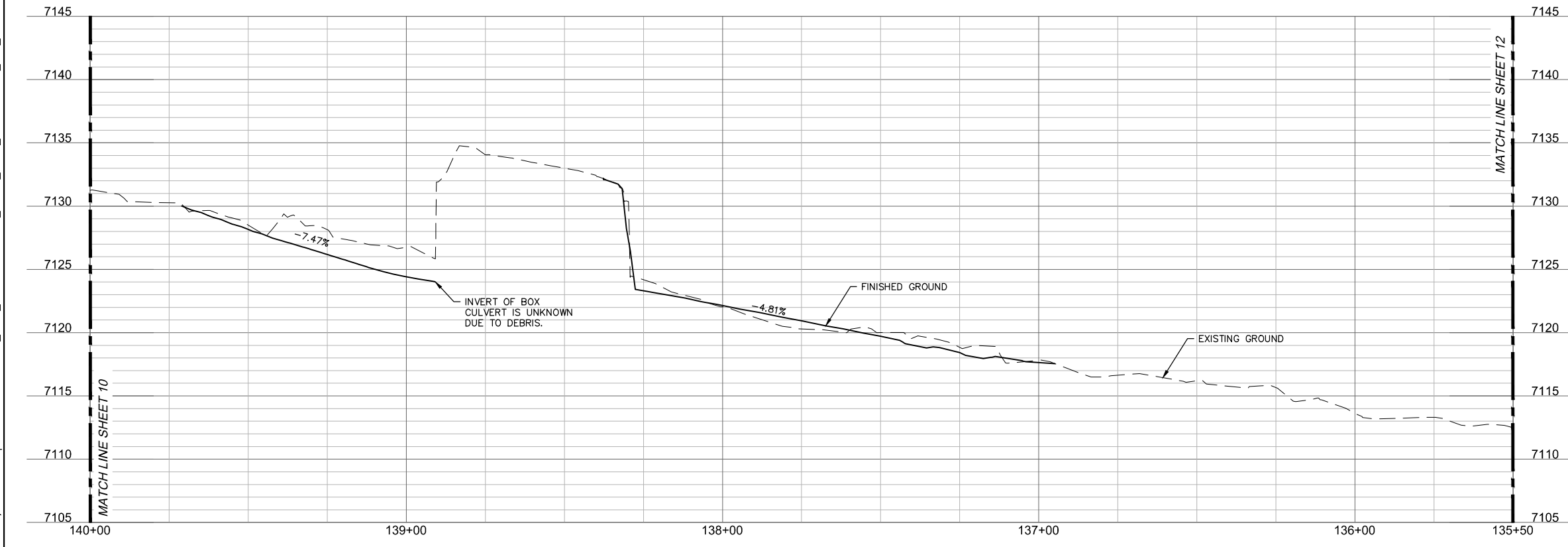
LEGEND

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VOLUME TABLE

CAMERON	
CUT	53.0
FILL	15.0
NET	38.0

NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.

VOLUME TABLE

EDWARDS	
CUT	88.40 CY
FILL	786.52 CY
NET	698.12 CY <FILL>

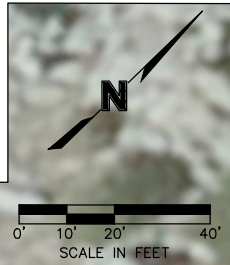
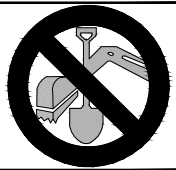
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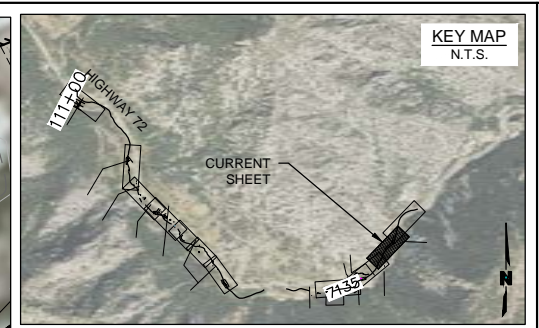
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 JEFFERSON COUNTY, COLORADO
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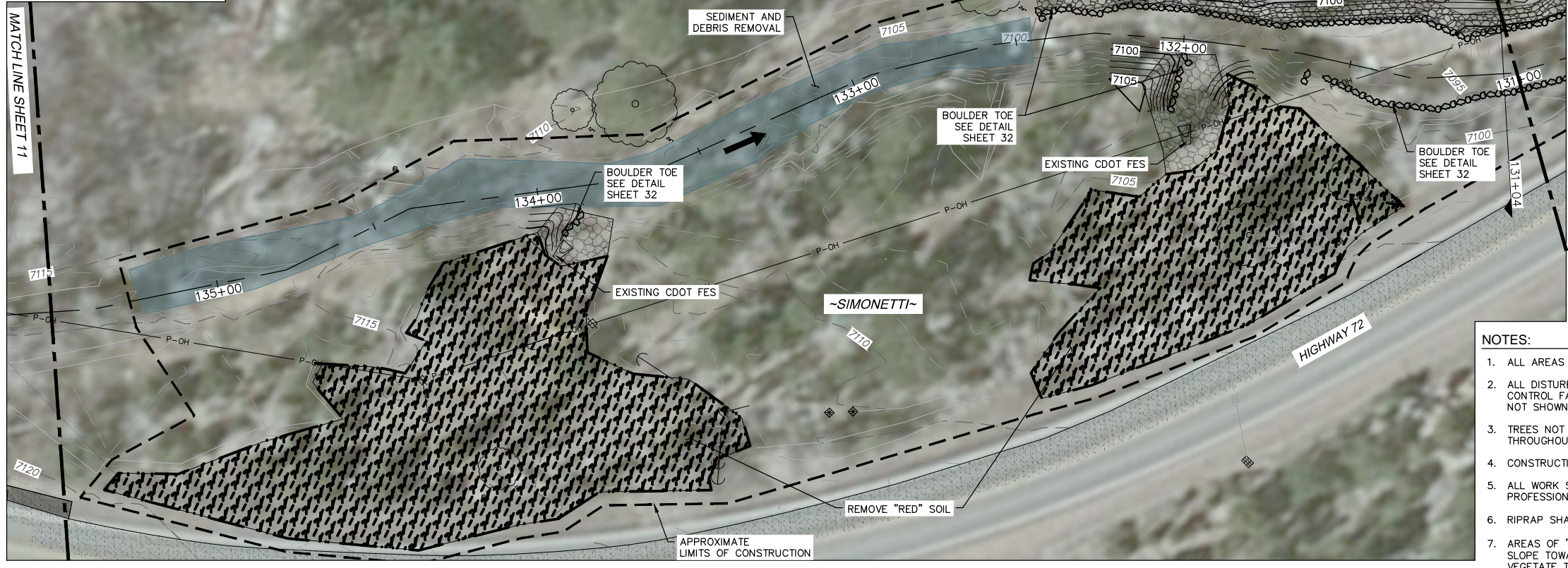
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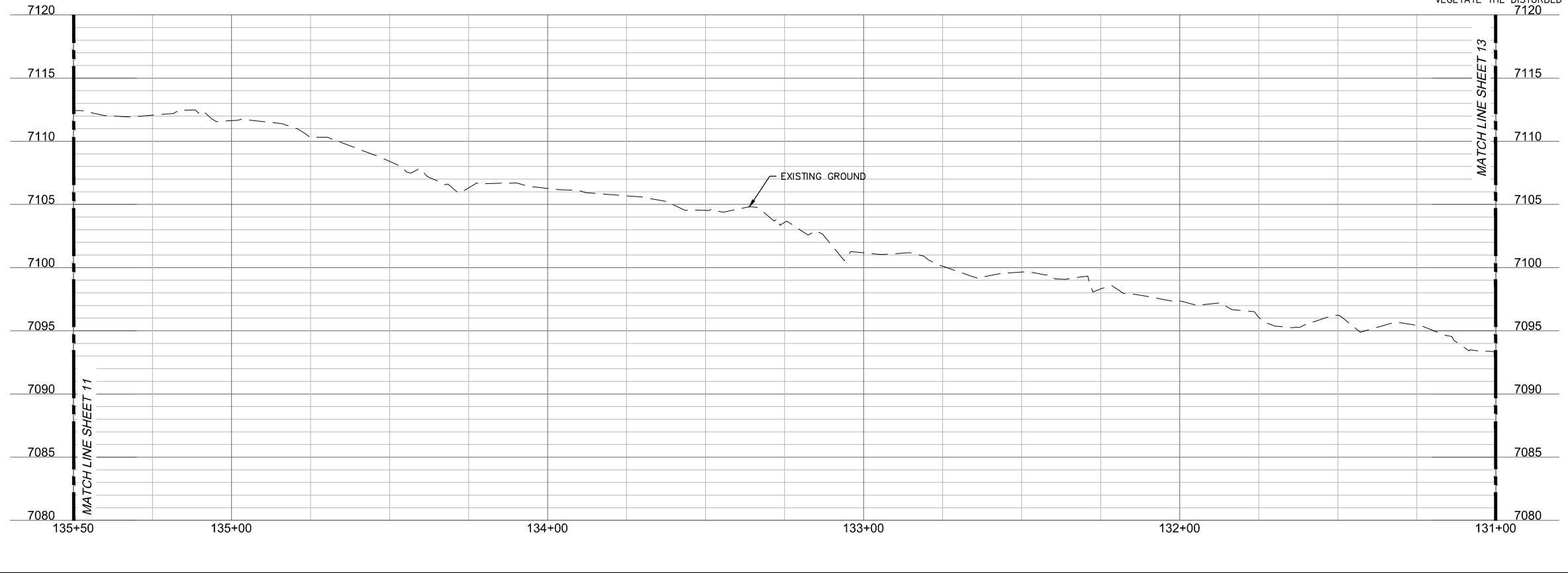
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LEGEND

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VOLUME TABLE

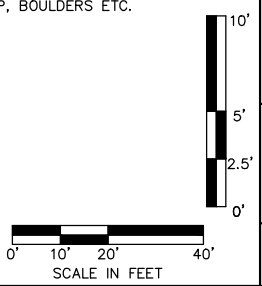
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NOTE: QUANTITIES IN TABLE DO NOT ACCOUNT FOR DISPLACEMENT FROM RIPRAP, BOULDERS ETC.

VOLUME TABLE

SECTION	START	END	CU	CY

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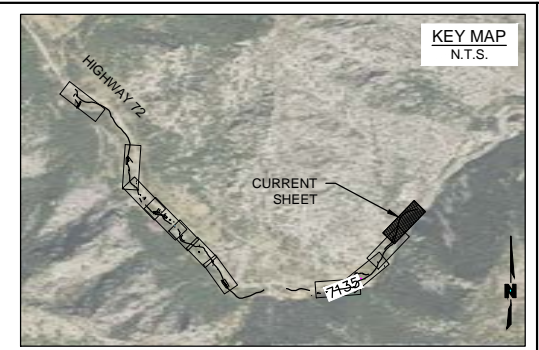
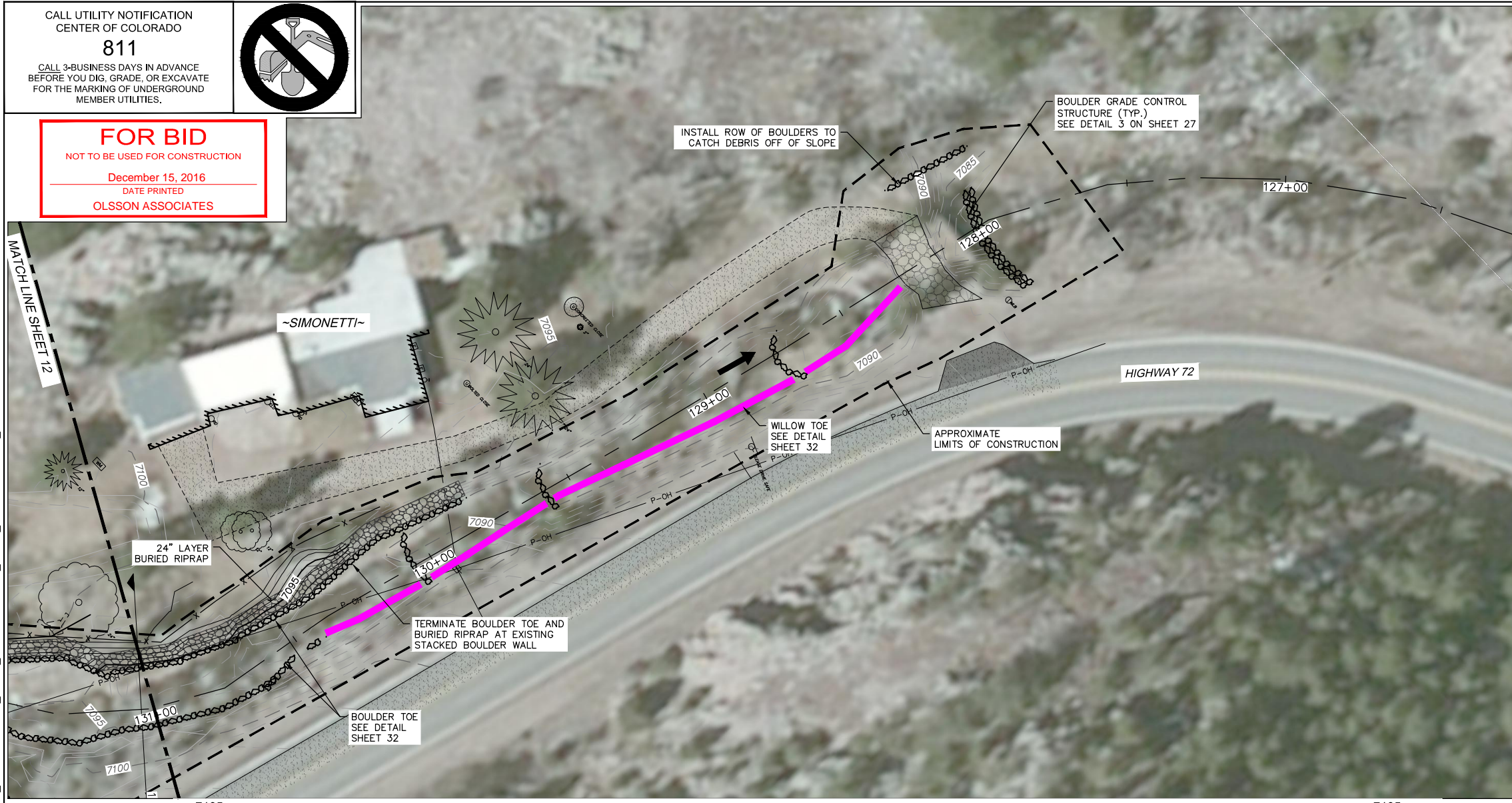
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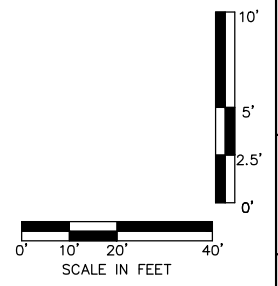
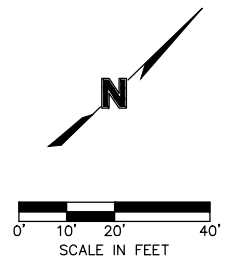
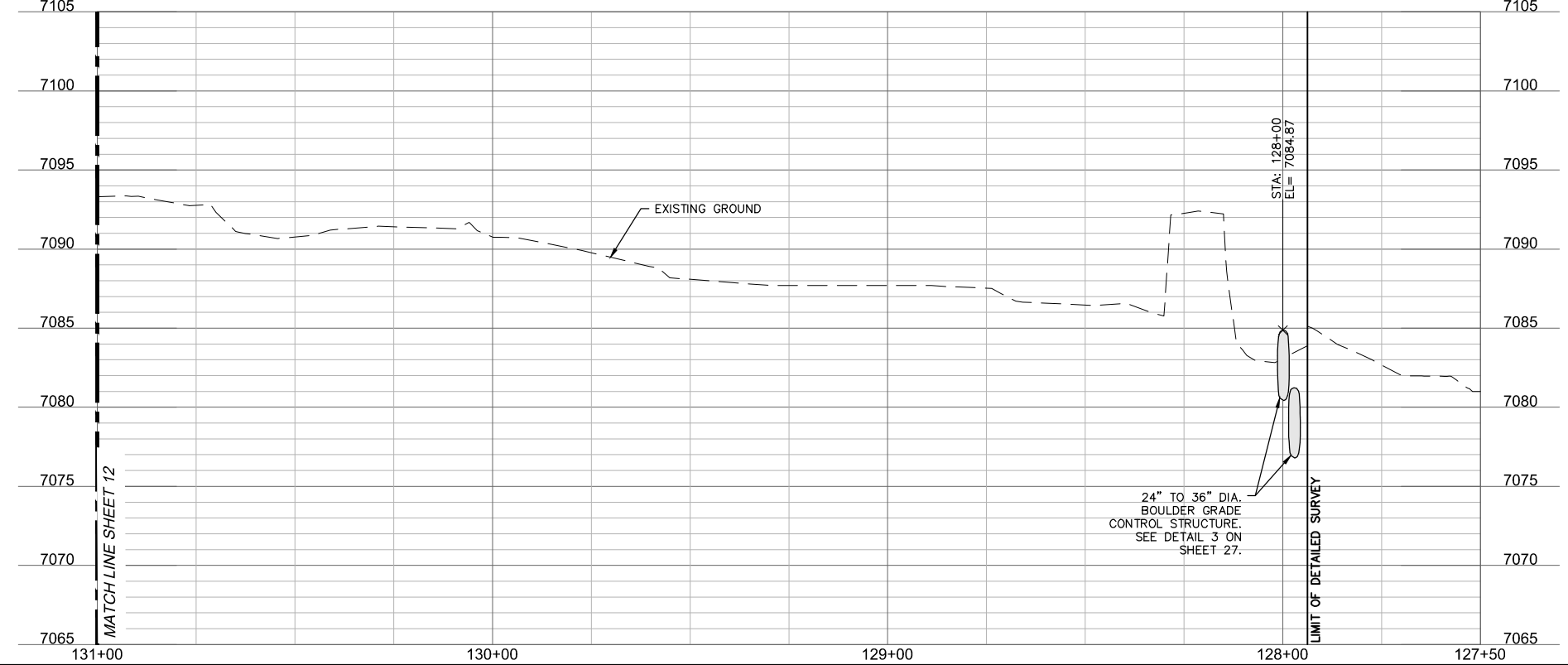
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FINAL SUBMITTAL

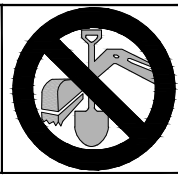
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COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

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13 of 33



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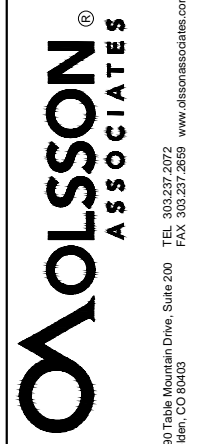
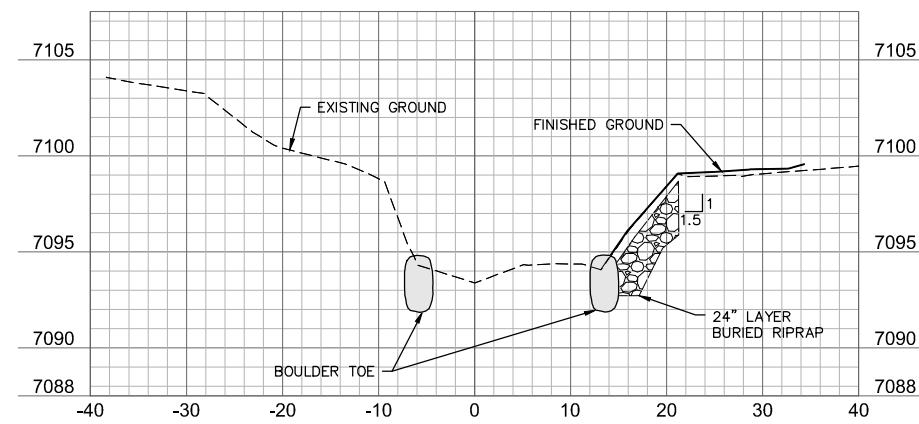
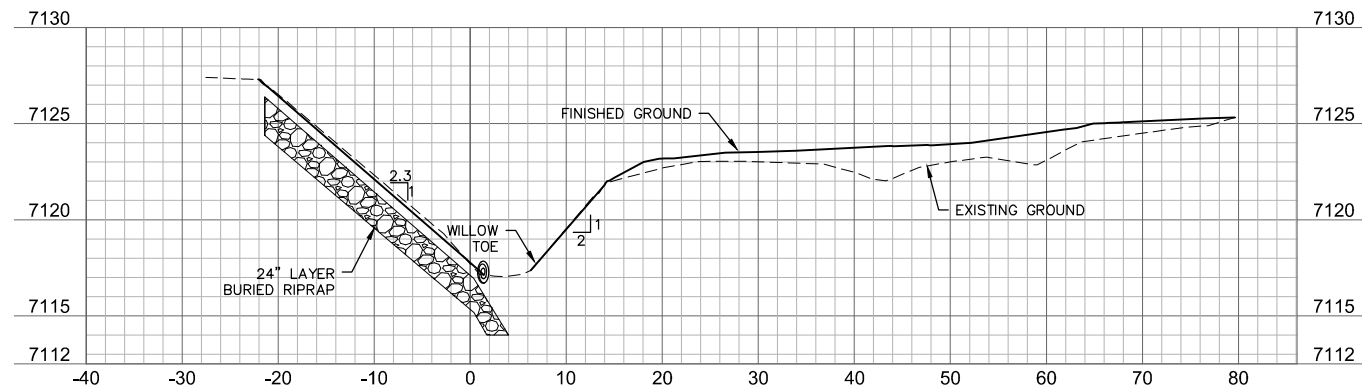
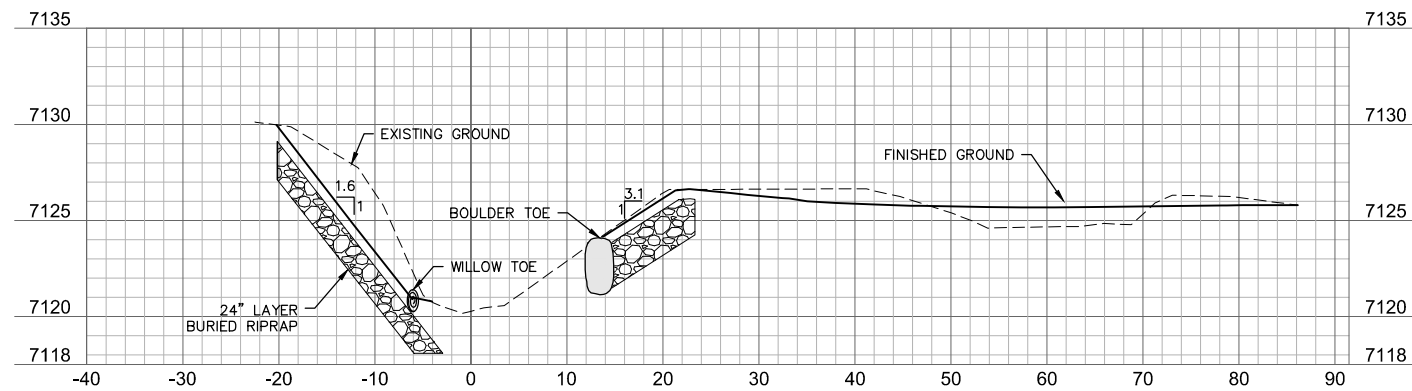
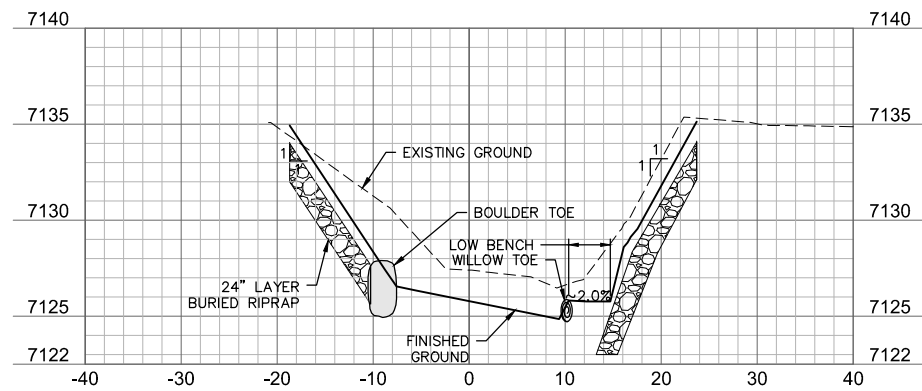
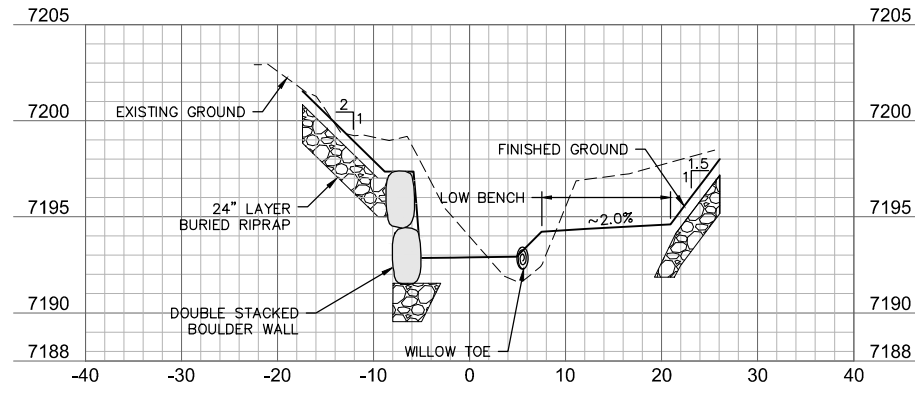
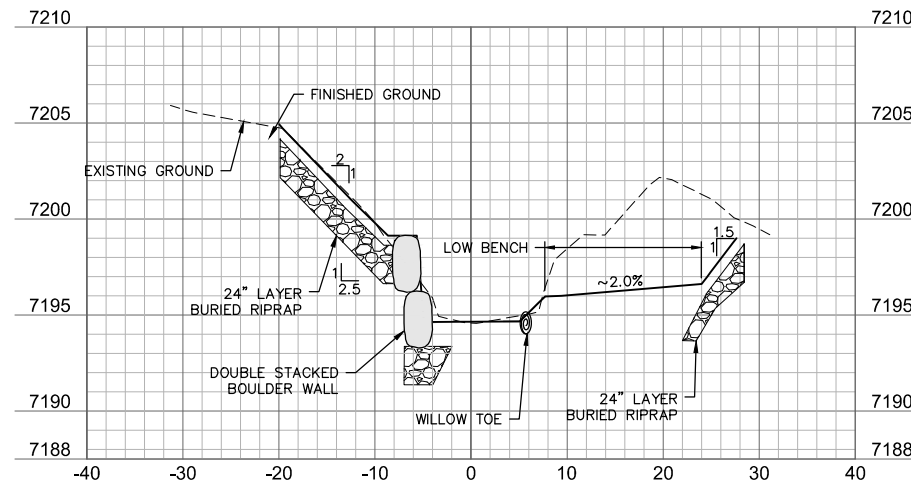
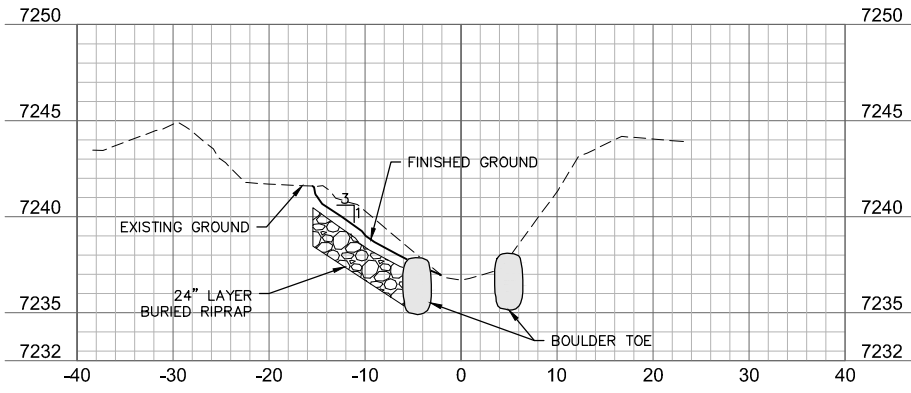
December 15, 2016

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NOTES:

1. VEGETATION AND EROSION CONTROL FABRIC NOT SHOWN FOR CLARITY.
2. SLOPES ARE APPROXIMATE.
3. SECTIONS ARE LOOKING UPSTREAM.



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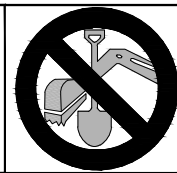
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AREA 3 - CROSS SECTIONS
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COAL CREEK IMPROVEMENTS
JEFFERSON COUNTY, COLORADO
2016

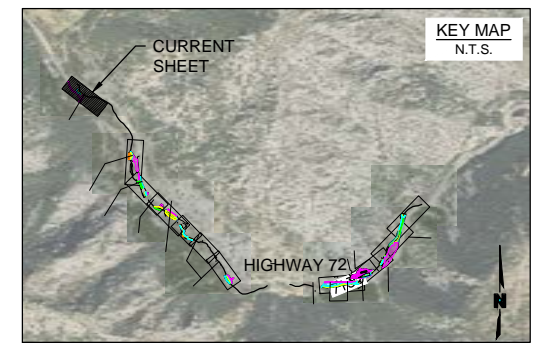
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 WTRS_PBASE_161310
 V_TPO_61310

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LEGEND

- ZONE 2: 0' TO 1' VERTICAL
- ZONE 3: 1' TO 2' VERTICAL
- ZONE 4C: 2' AND ABOVE VERTICAL (CONTAINERIZED PLANTINGS AND SEED)
- ZONE 4S: 2' AND ABOVE VERTICAL (SEED ONLY)
- ZONE 5: STEEP SLOPES OF 1.5:1 OR STEEPER

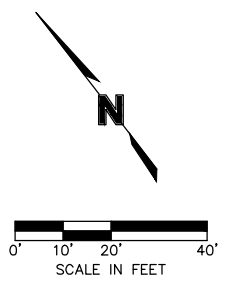
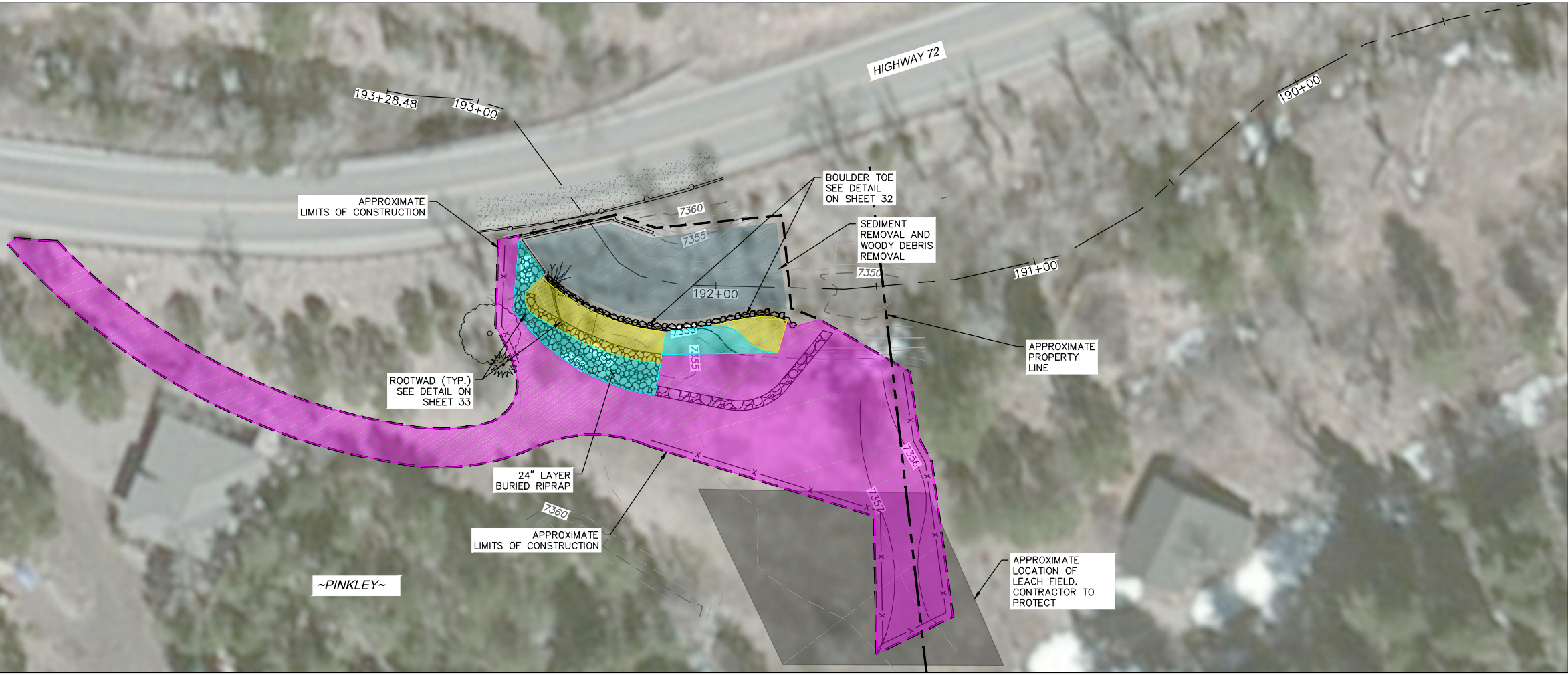
NOTE: 0' IS CHANNEL BOTTOM

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REV. NO.	DATE	REVISIONS DESCRIPTION

AREA 3 - PLANTING PLAN FINAL SUBMITTAL	2016
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JEFFERSON COUNTY, COLORADO	

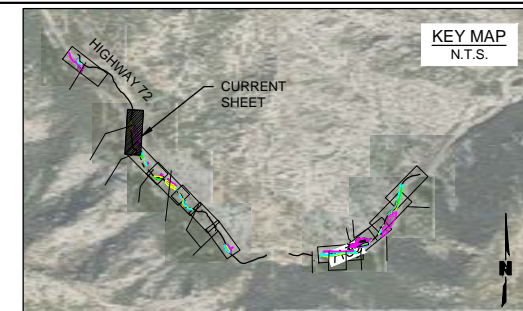
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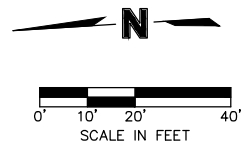
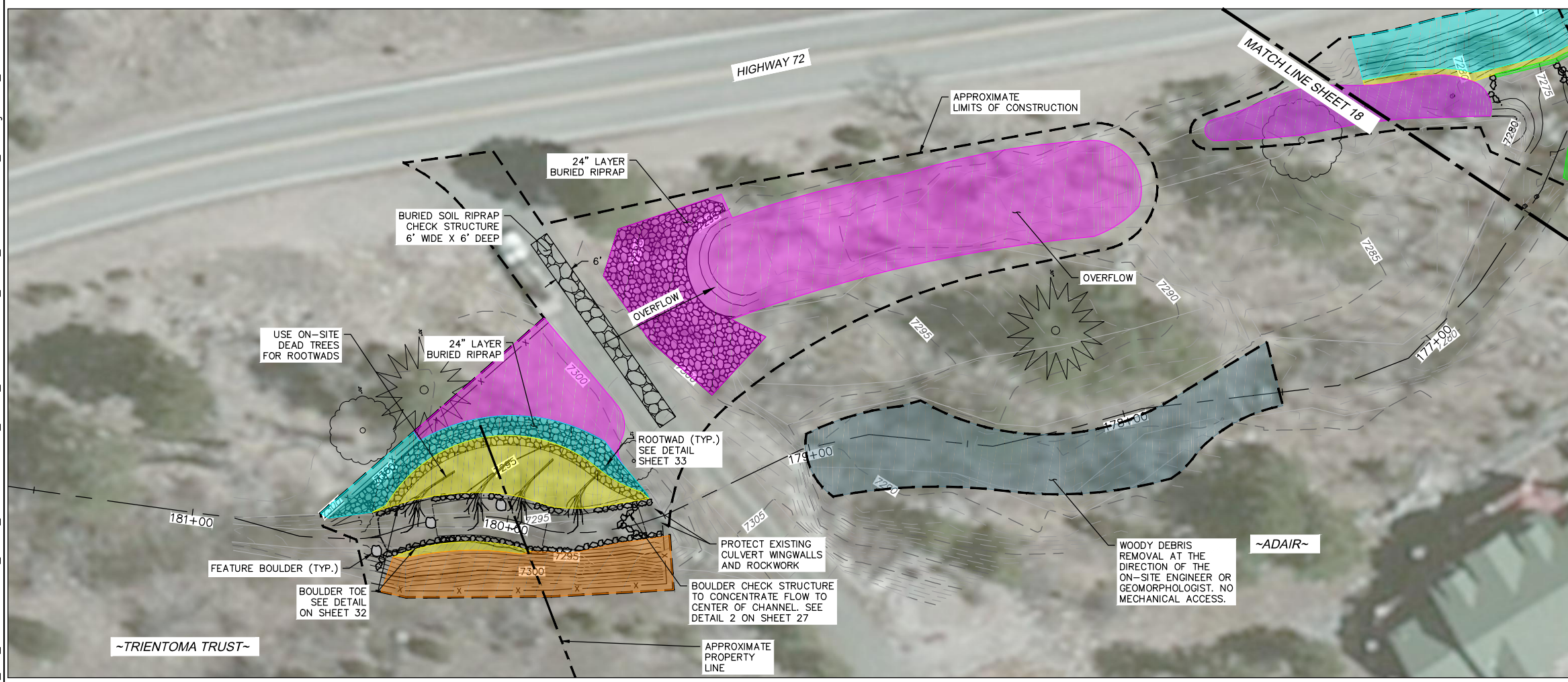


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REV. NO.	DATE	REVISIONS DESCRIPTION

AREA 2 - PLANTING PLAN
FINAL SUBMITTAL

EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
COAL CREEK IMPROVEMENTS

JEFFERSON COUNTY, COLORADO

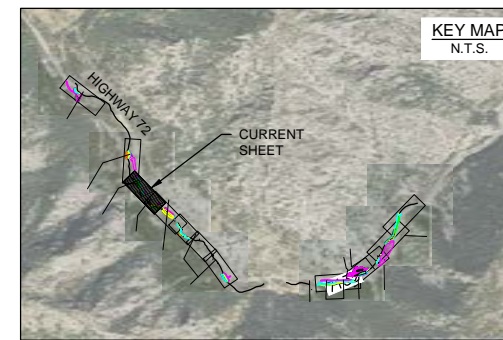
2016

drawn by: CU
checked by: WS
approved by: DK
QA/QC by: DD
project no.: 016-1310
drawing no.:
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KEY MAP
N.T.S.

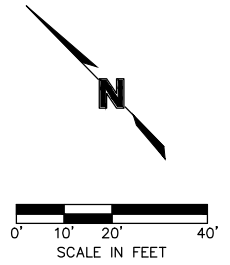
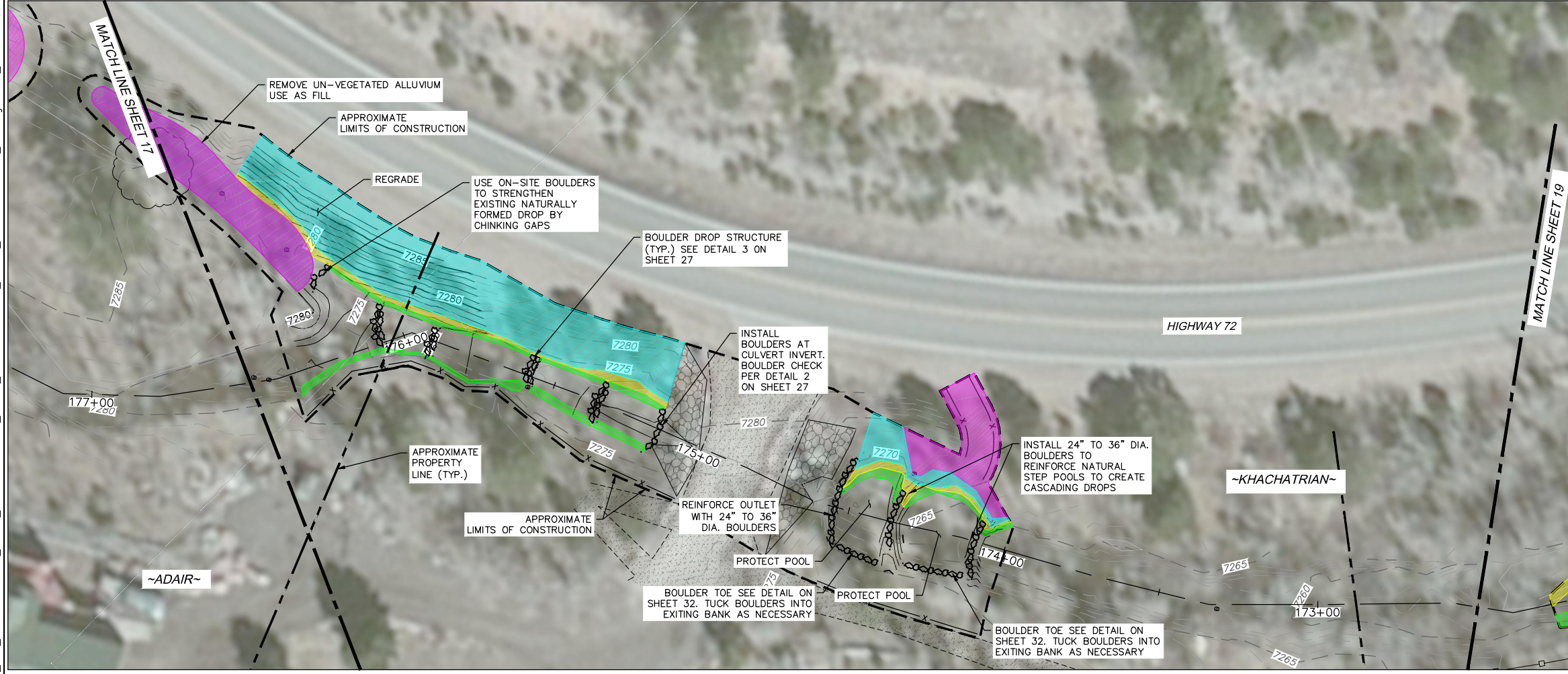
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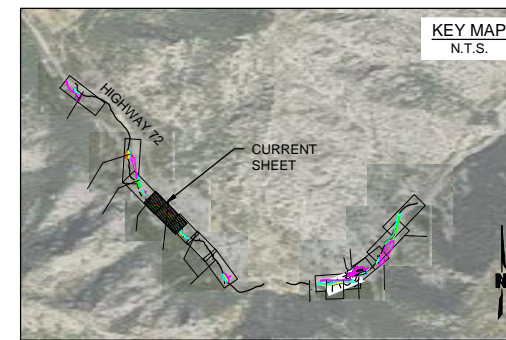
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		JEFFERSON COUNTY, COLORADO
		SHEET 18 of 33
drawn by: CU checked by: WS approved by: DK QA/QC by: DD project no.: 016-1310 drawing no.: date: 2016.12.09		

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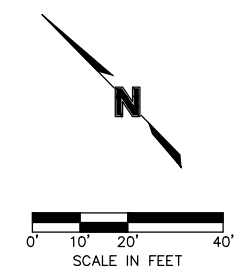
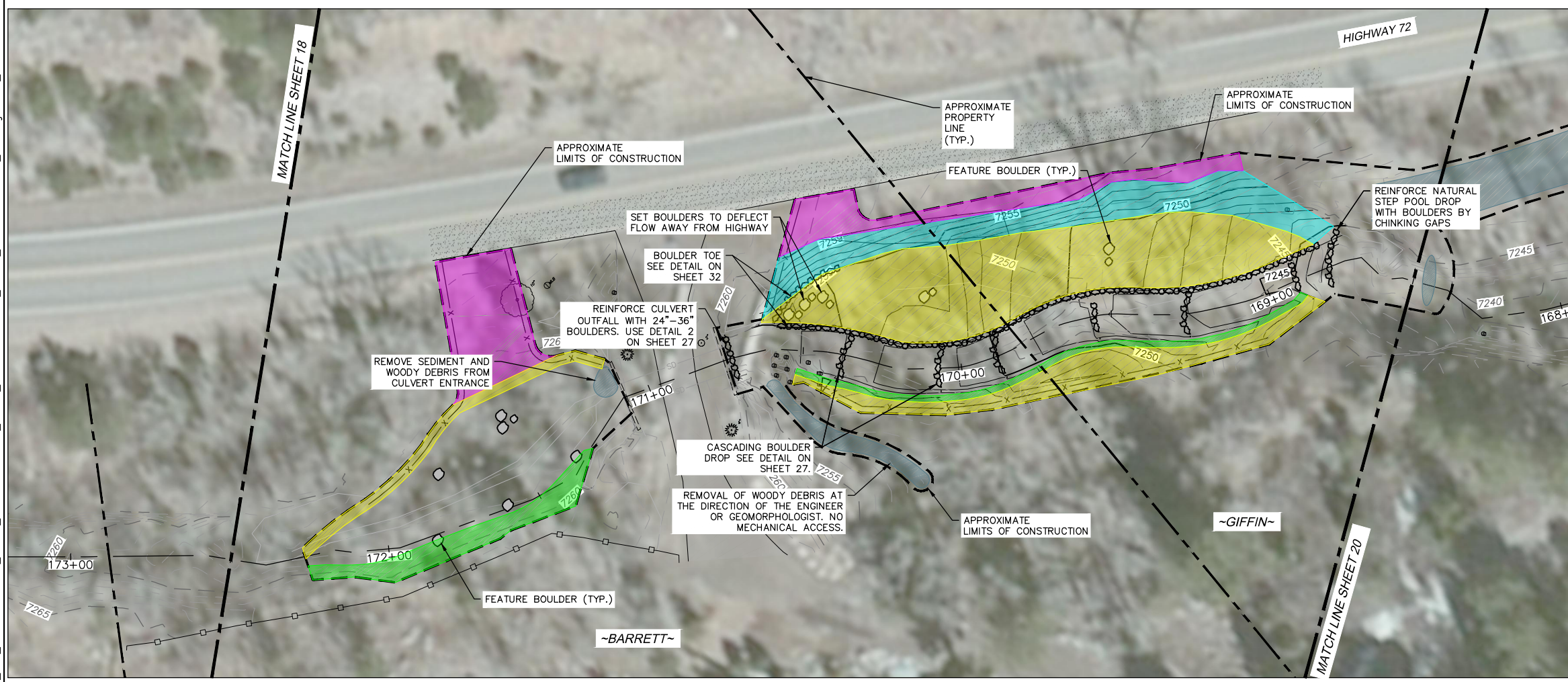
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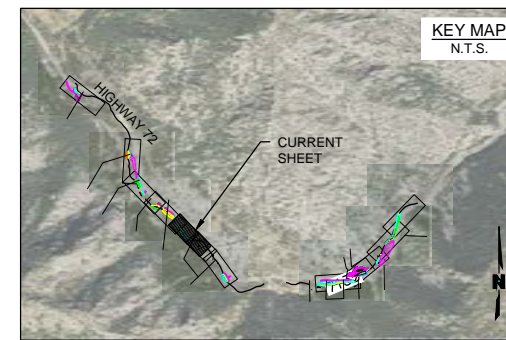
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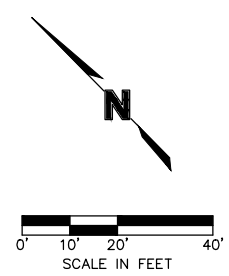
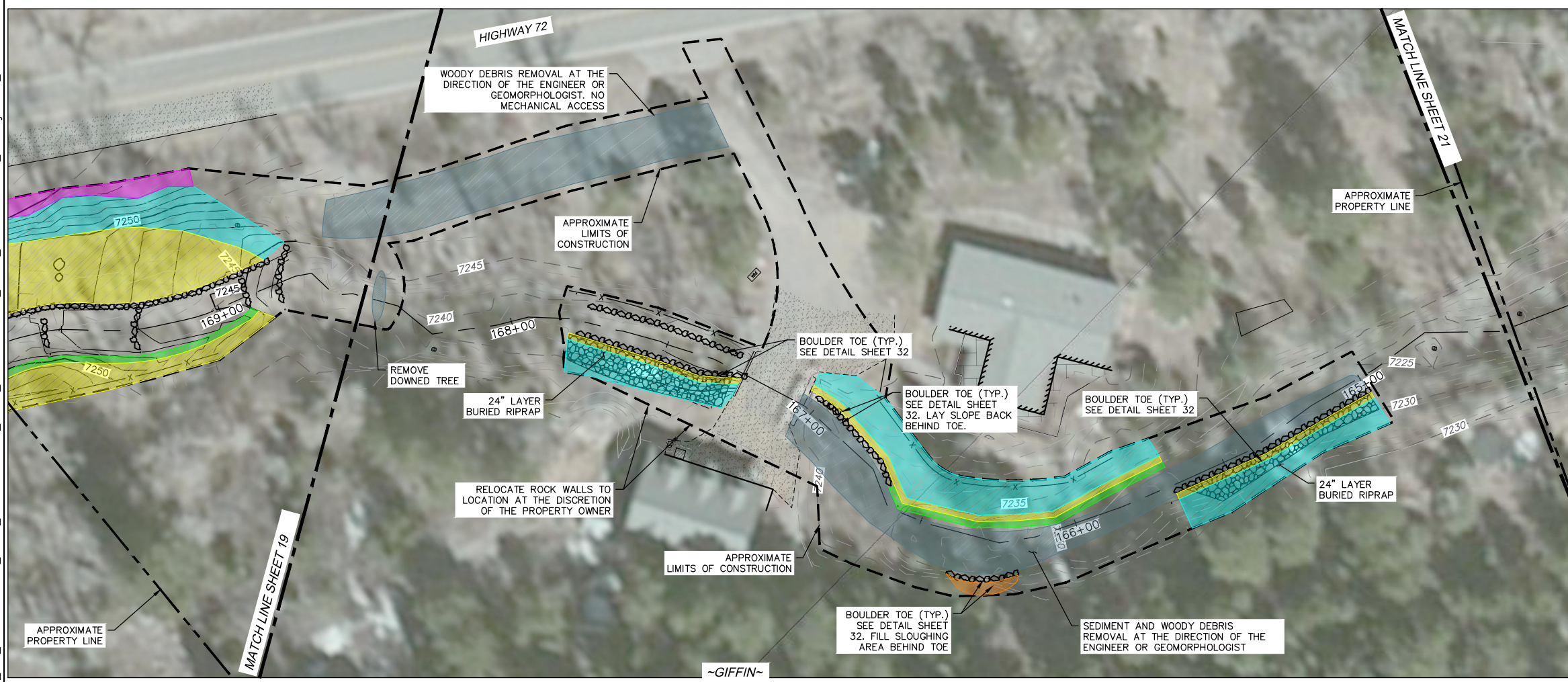


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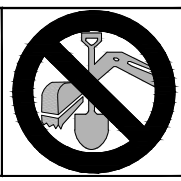
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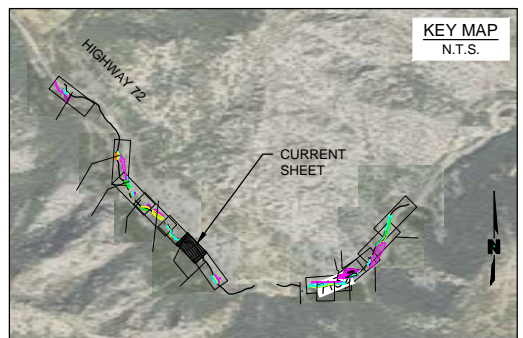
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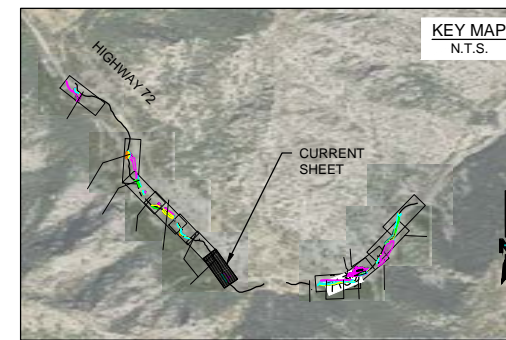
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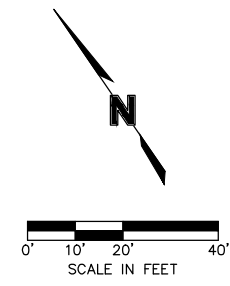
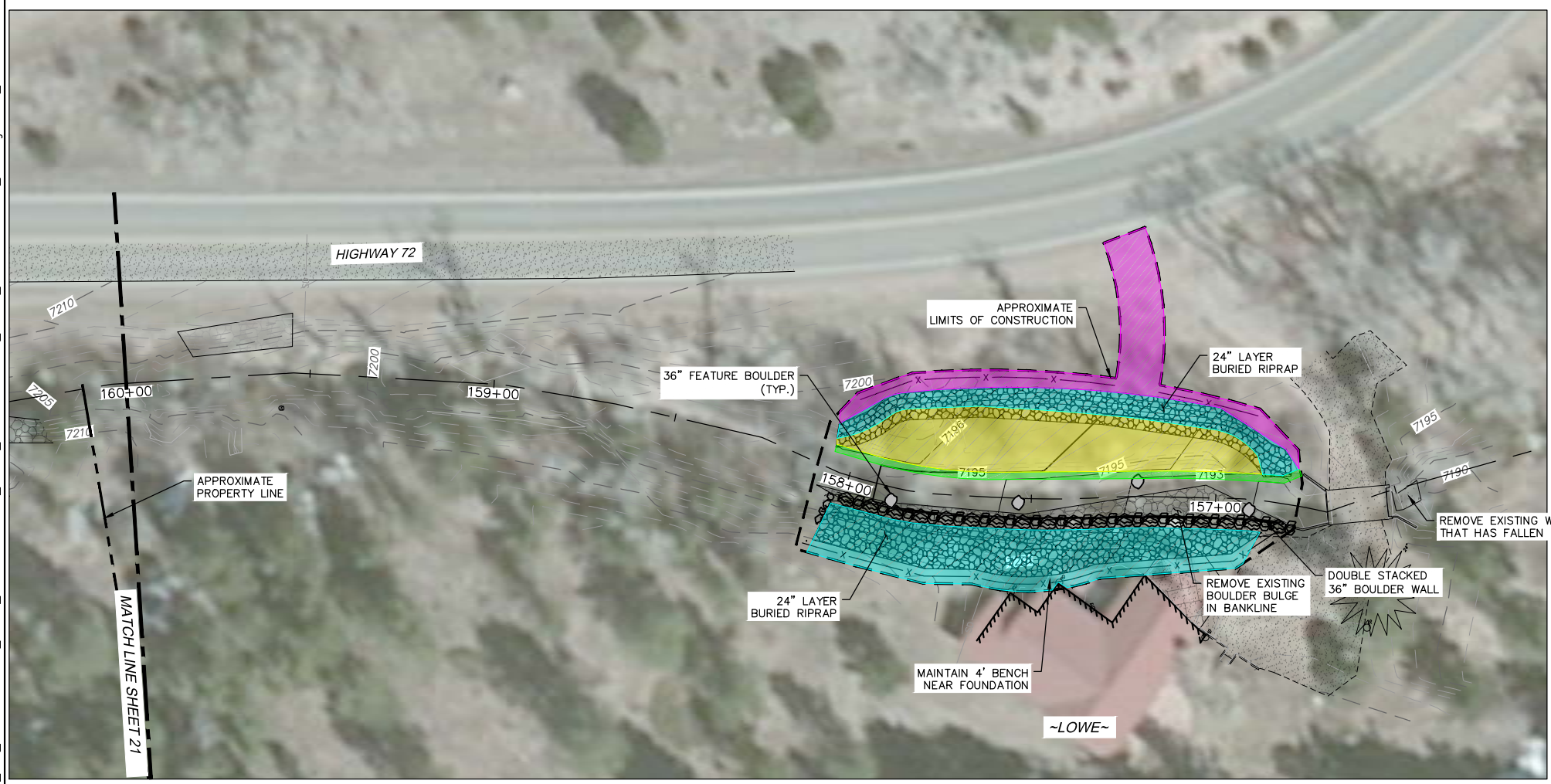
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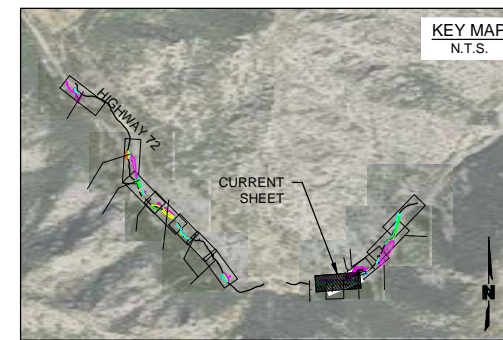
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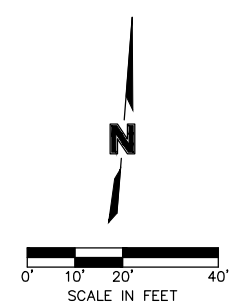
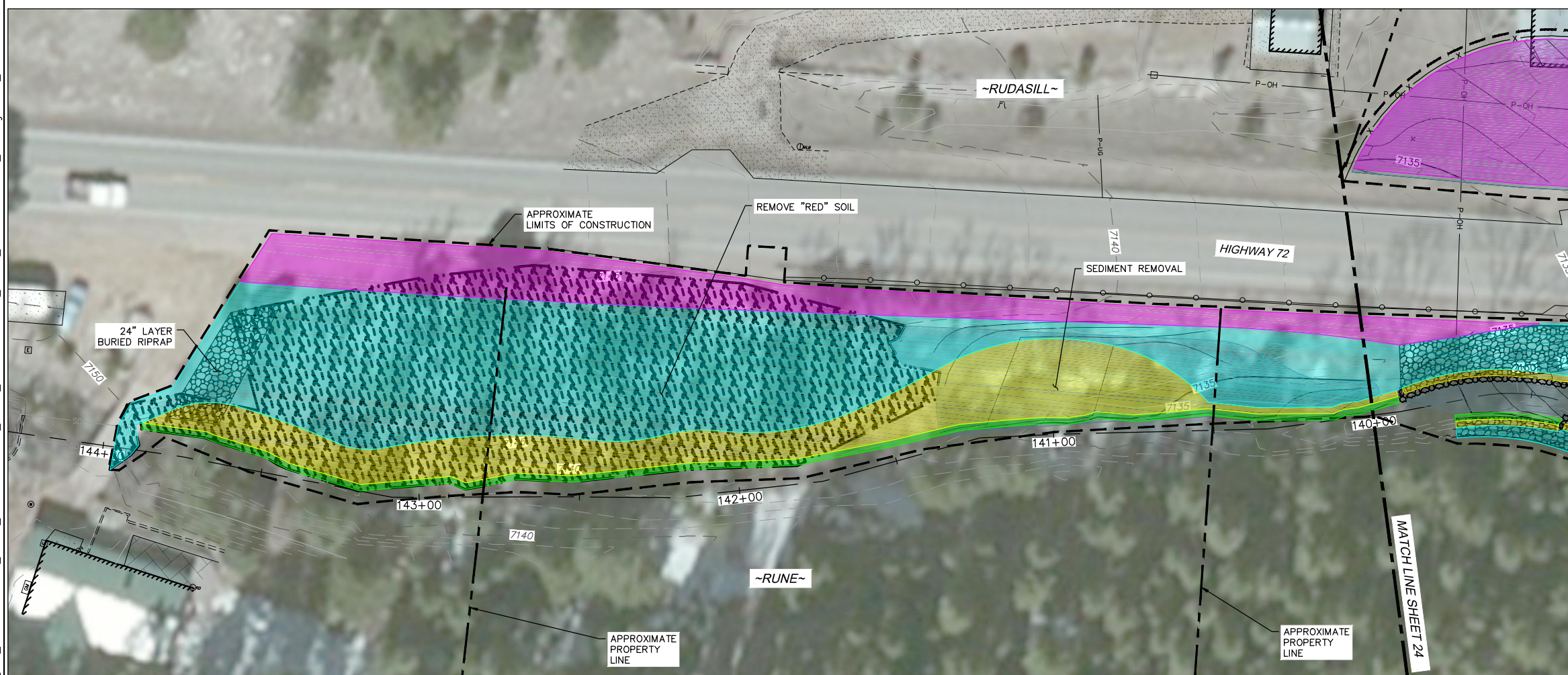
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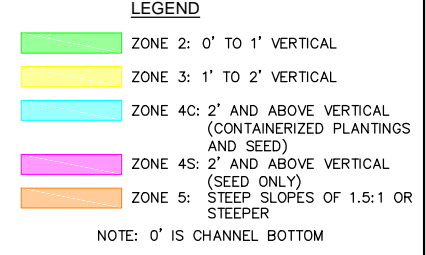
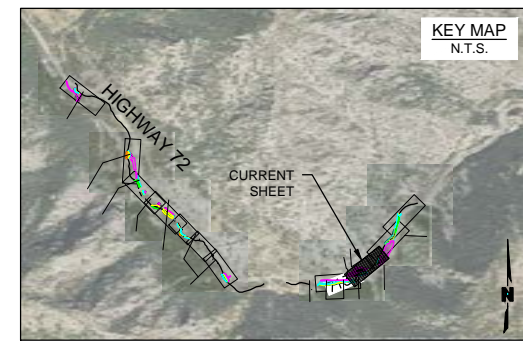
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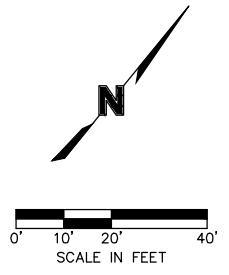
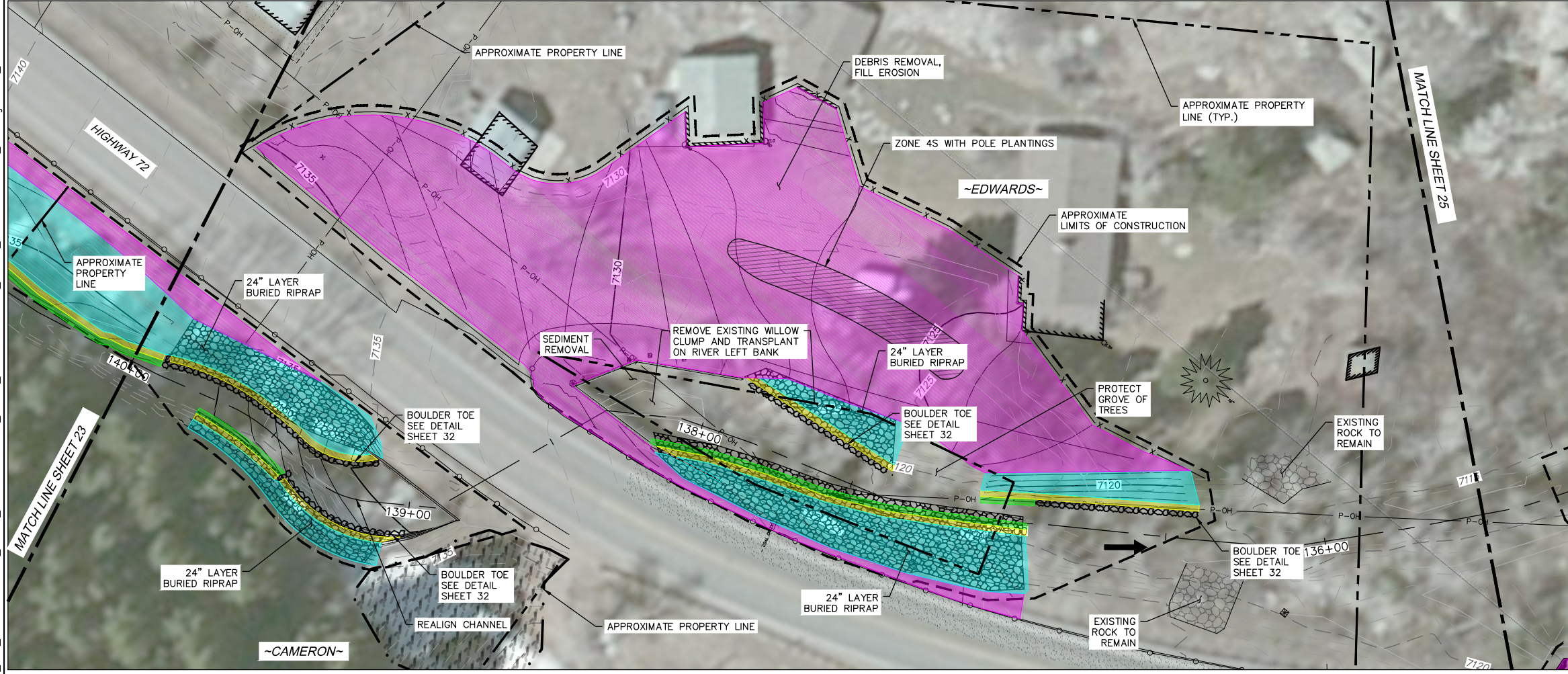
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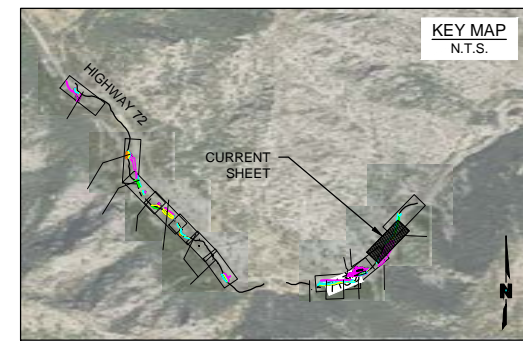
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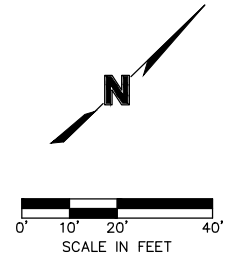
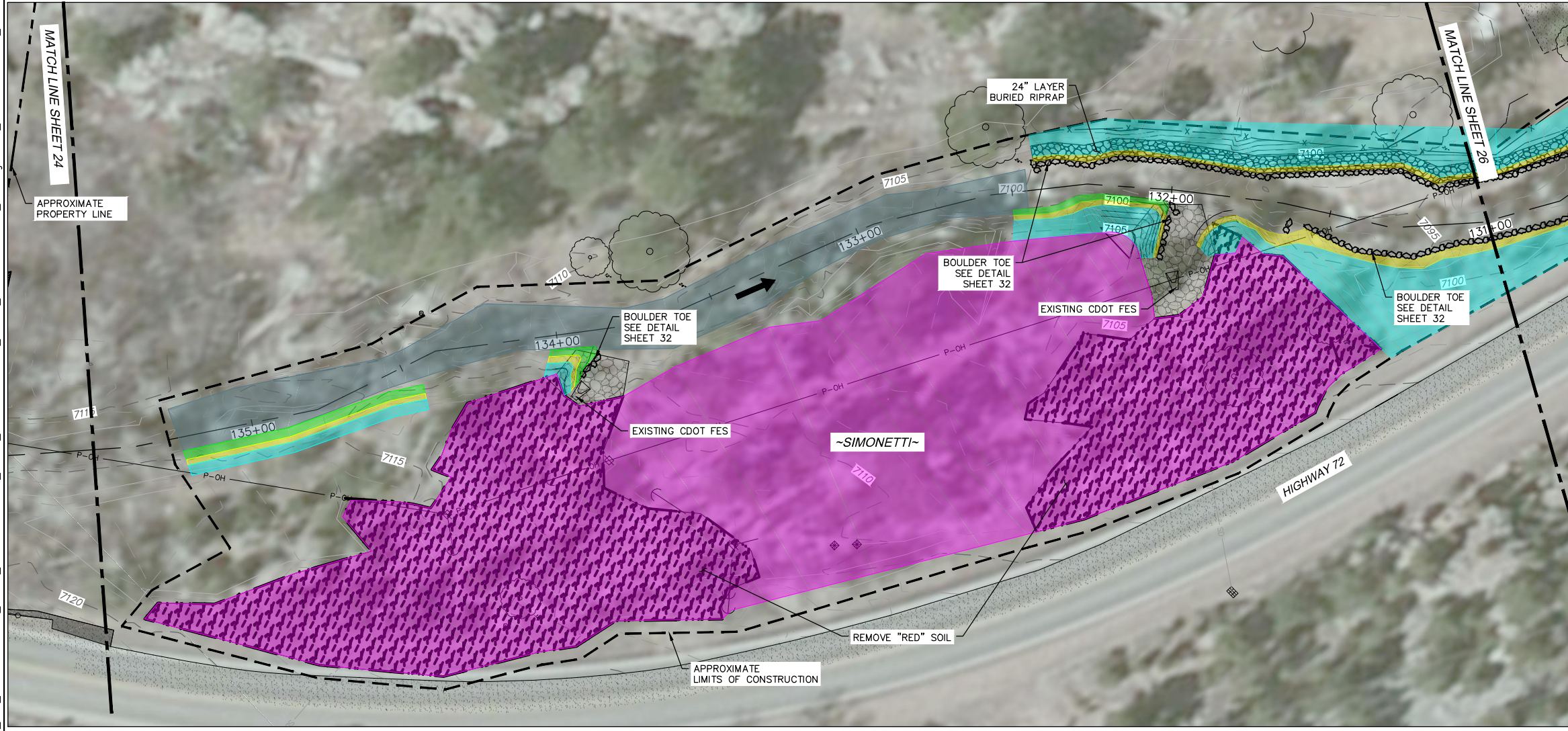
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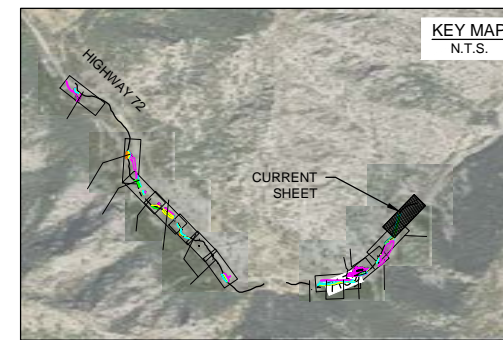
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EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM COAL CREEK IMPROVEMENTS	
JEFFERSON COUNTY, COLORADO	
drawn by: CU	
checked by: WS	
approved by: DK	
QA/QC by: DD	
project no.: 016-1310	
drawing no.:	
date: 2016.12.09	
SHEET	
25 of 33	

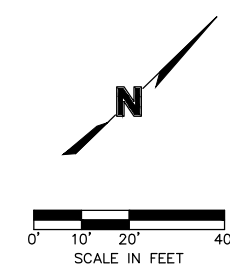
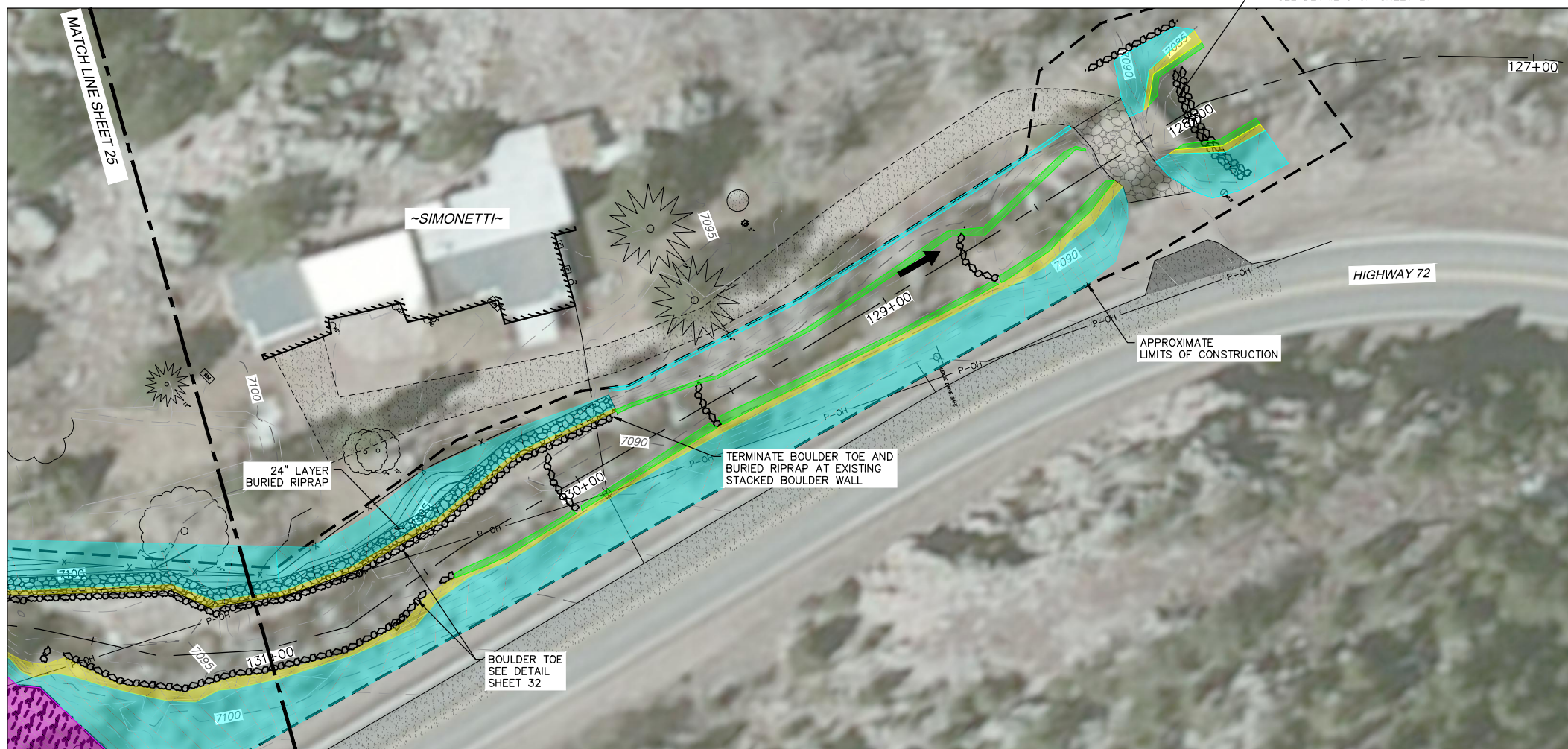
CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
CALL 3-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.



FOR BID
NOT TO BE USED FOR CONSTRUCTION
December 15, 2016
DATE PRINTED
OLSSON ASSOCIATES



- LEGEND**
- ZONE 2: 0' TO 1' VERTICAL
 - ZONE 3: 1' TO 2' VERTICAL
 - ZONE 4C: 2' AND ABOVE VERTICAL (CONTAINERIZED PLANTINGS AND SEED)
 - ZONE 4S: 2' AND ABOVE VERTICAL (SEED ONLY)
 - ZONE 5: STEEP SLOPES OF 1.5:1 OR STEEPER
- NOTE: 0' IS CHANNEL BOTTOM



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4890 Table Mountain Drive, Suite 200
Golden, CO 80403
TEL: 303.237.2072
FAX: 303.237.2659
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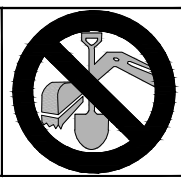
OLSSON ASSOCIATES ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL OR VERTICAL). THE EXISTING UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS HOWEVER THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.

REV. NO.	DATE	REVISIONS DESCRIPTION

AREA START - PLANTING PLAN FINAL SUBMITTAL	2016	
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM COAL CREEK IMPROVEMENTS		
JEFFERSON COUNTY, COLORADO		
drawn by: <u> </u> CU checked by: <u> </u> WS approved by: <u> </u> DK QA/QC by: <u> </u> DD project no.: <u> </u> 016-1310 drawing no.: <u> </u> . date: <u> </u> 2016.12.09		
SHEET 26 of 33		

DWG: F:\2016\1001-1500\016-1310\40-Design\AutoCAD\Final Plans\Sheets\WTRS\DWG\WTRS_PL_161310.dwg
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 USER: cuhrich
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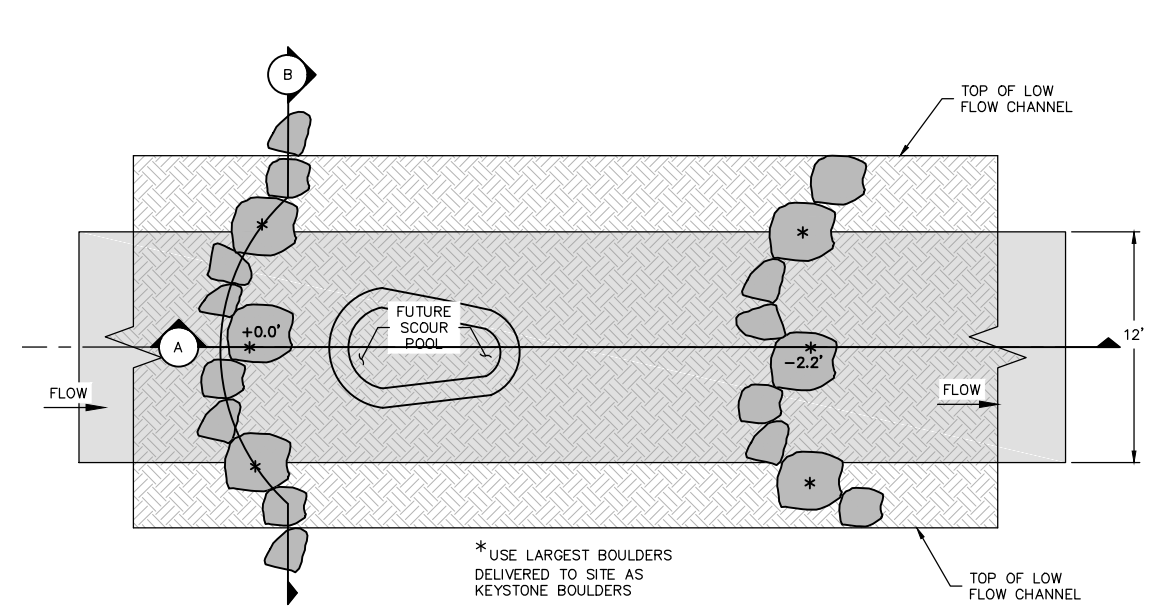


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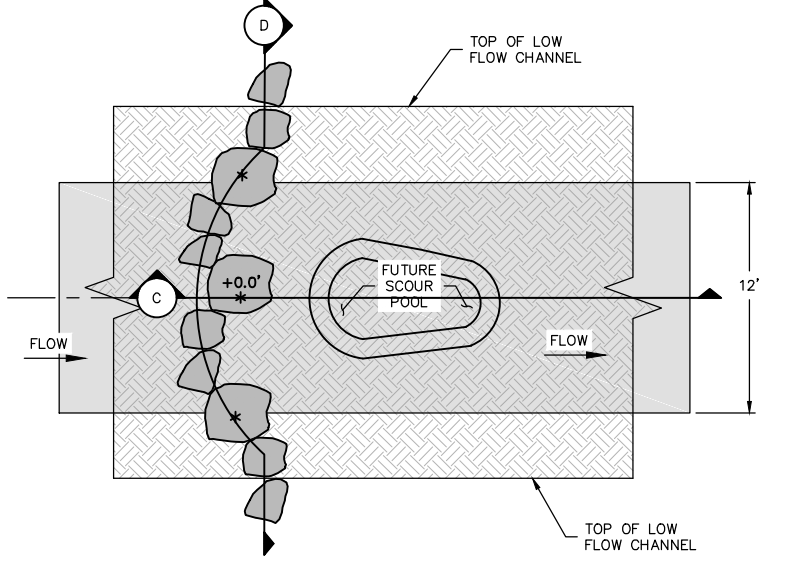
TABLE 1 - VOID FILLED RIPRAP MIX		
APPROXIMATE PROPORTIONS (LOADER BUCKETS)	MATERIAL TYPE	MATERIAL DESCRIPTION
5	RIPRAP	D ₅₀ = 12-INCH RIPRAP
3	VOID-FILLED MATERIAL	7-INCH MINUS CRUSHED ROCK SURGE (100% PASSING 7-INCH SIEVE, 80-100% PASSING 6-INCH SIEVE, 35-50% PASSING 3-INCH SIEVE, 10-20% PASSING 1.5-INCH SIEVE)
1	VOID-FILLED MATERIAL	2 TO 4-INCH COBBLE (ROUND WASHED RIVER ROCK THAT IS WELL-GRADED, 100% PASSING 6-INCH SIEVE, 35-50% PASSING 3-INCH SIEVE, 5-20% PASSING 2-INCH SIEVE)
1	VOID-FILLED MATERIAL	4-INCH MINUS PIT RUN SURGE (ROUND RIVER ROCK AND SAND, WELL-GRADED 90-100% PASSING 4-INCH SIEVE, 70-80% PASSING 1.5-INCH SIEVE, 40-60% PASSING 3/8-INCH SIEVE, 10-30% PASSING #16 SIEVE)
1	VOID-FILLED MATERIAL	TYPE II BEDDING
1/2 TO 1	VOID-FILLED MATERIAL	NATIVE TOPSOIL

TABLE 2 - BOULDER FILLER MATERIAL MIX		
APPROXIMATE PROPORTIONS (LOADER BUCKETS)	MATERIAL TYPE	MATERIAL DESCRIPTION
1	VOID-FILLED MATERIAL	7-INCH MINUS CRUSHED ROCK SURGE (100% PASSING 7-INCH SIEVE, 80-100% PASSING 6-INCH SIEVE, 35-50% PASSING 3-INCH SIEVE, 10-20% PASSING 1.5-INCH SIEVE)
1	VOID-FILLED MATERIAL	4-INCH MINUS PIT RUN SURGE (ROUND RIVER ROCK AND SAND, WELL-GRADED 90-100% PASSING 4-INCH SIEVE, 70-80% PASSING 1.5-INCH SIEVE, 40-60% PASSING 3/8-INCH SIEVE, 10-30% PASSING #16 SIEVE)
1	VOID-FILLED MATERIAL	TYPE II BEDDING
1/2 TO 1	VOID-FILLED MATERIAL	NATIVE TOPSOIL

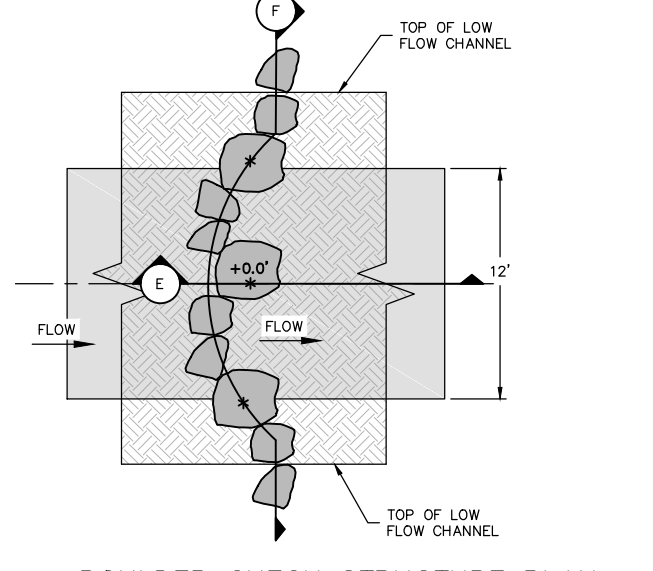
NOTES:
1. MIX PROPORTIONS AND MATERIAL GRADATIONS ARE APPROXIMATE AND ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER.
2. MATERIALS SHALL BE PACKED TIGHTLY BETWEEN BOULDERS TO WITHIN 1"-2" OF THE TOP OF BOULDERS.



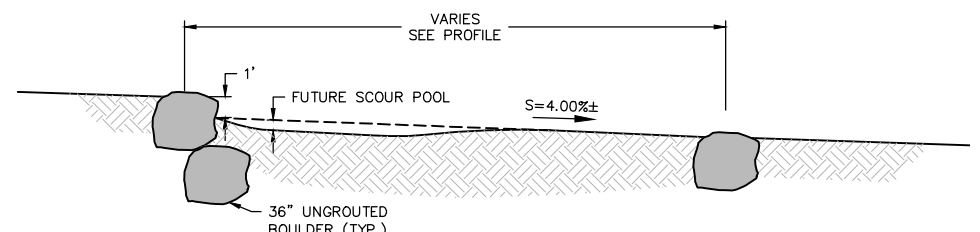
1 CASCADING BOULDER DROP STRUCTURE PLAN



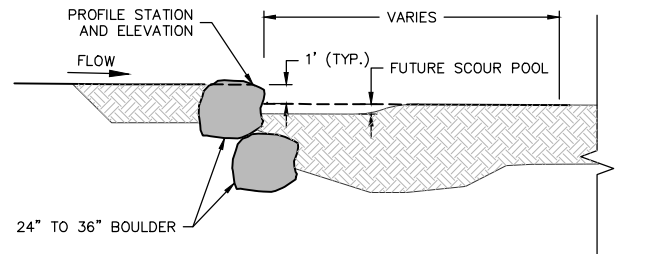
2 BOULDER DROP STRUCTURE PLAN



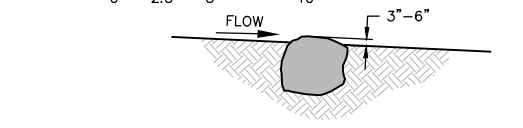
3 BOULDER CHECK STRUCTURE PLAN



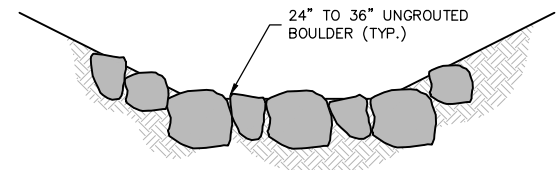
A CASCADING DROP STRUCTURE PROFILE



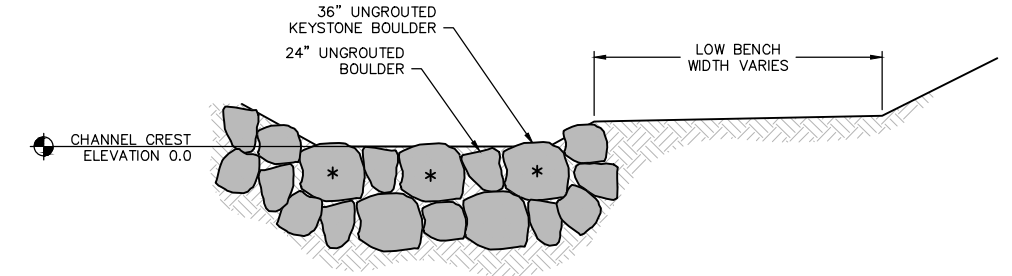
C BOULDER DROP STRUCTURE PROFILE



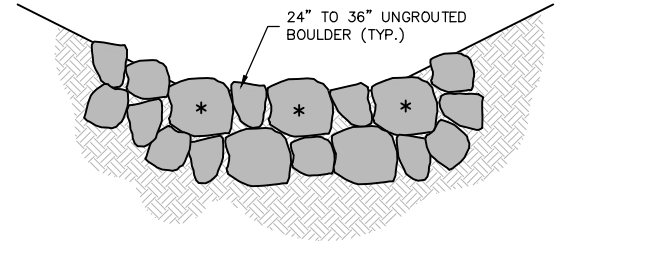
E BOULDER CHECK STRUCTURE SECTION



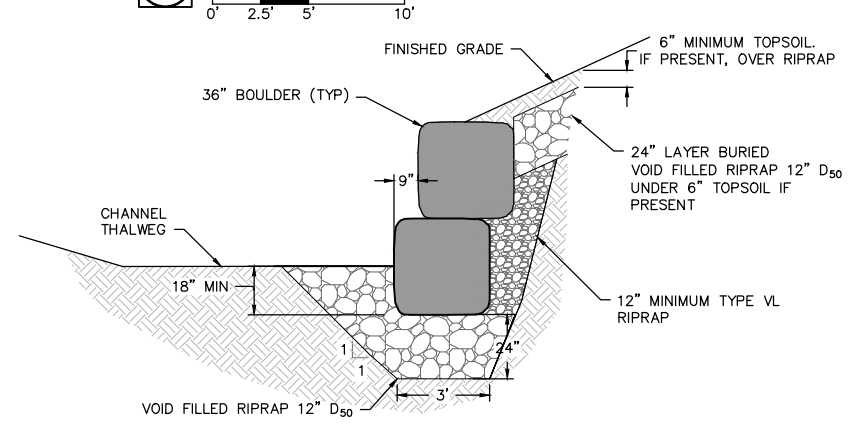
F BOULDER CHECK STRUCTURE SECTION



B CASCADING STRUCTURE SECTION ALONG CREST



D BOULDER DROP STRUCTURE SECTION



4 DOUBLE STACKED BOULDER WALL
N.T.S.

OLSSON ASSOCIATES
4690 Table Mountain Drive, Suite 200
Golden, CO 80403
TEL: 303.237.2072
FAX: 303.237.2659
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REV. NO.	DATE	REVISIONS DESCRIPTION

BOULDER DROP DETAILS
FINAL SUBMITTAL
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM
COAL CREEK IMPROVEMENTS
JEFFERSON COUNTY, COLORADO
2016

drawn by: CU
checked by: WS
approved by: DK
QA/QC by: DO
project no.: 016-1310
drawing no.:
date: 2016.12.9

DWG: C:\Temp\AcPublish_3220\WTRS_DROP_DT_161310.dwg USER: cubrich
DATE: Dec 16, 2016 10:05am XREFS: WTRS_PBASE_161310 WTRS_PTOPO_161310

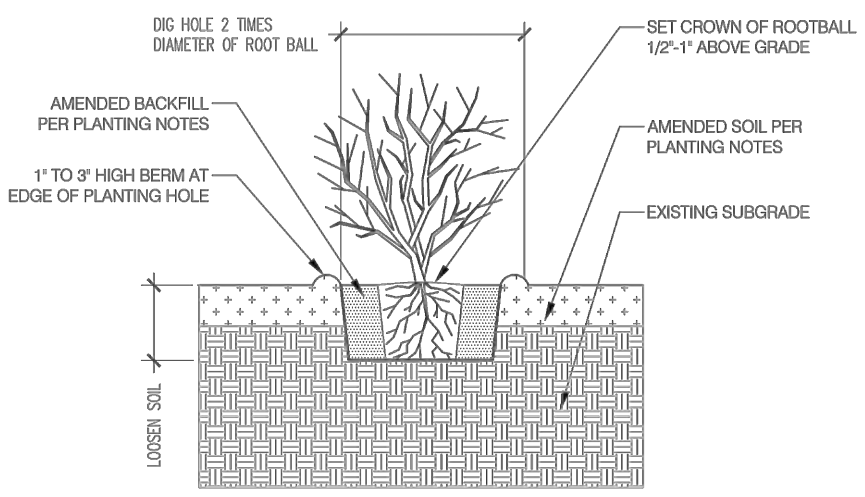
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GENERAL PLANTING NOTES:

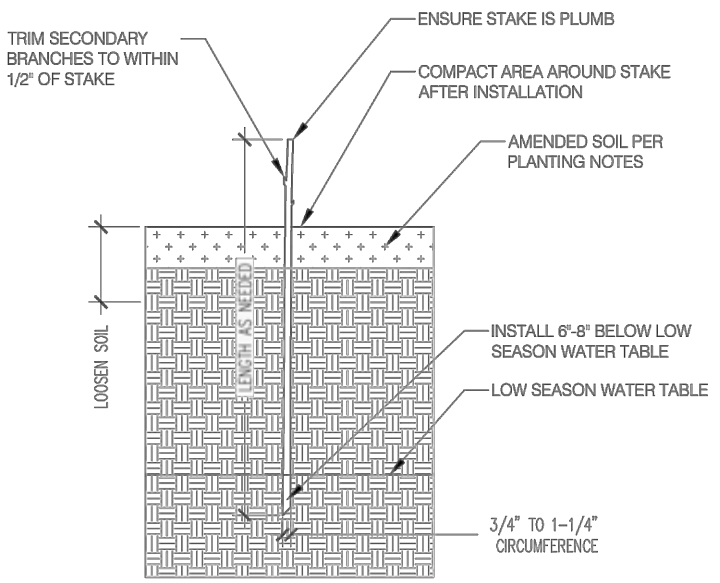
- THE HYDROLOGIC ZONES WILL BE FLAGGED AND IDENTIFIED BY THE EWP RESTORATION TEAM (INCLUDING DESIGN AND REVEGETATION SPECIALISTS), PRIOR TO PLANTING. HYDROLOGIC ZONES ARE BASED ON RELATIVE DEPTH OF BASE FLOW WATER SURFACE ELEVATION (WSEL).
- FOR AREAS DISTURBED BY RESTORATION ACTIVITIES, THE SOIL AND TOPSOIL SHOULD BE AMENDED WITH BIOCOMP/BIOSOL WITH A RECOMMENDED APPLICATION RATE OF 1,300 LBS/AC. BIOCOMP/BIOSOL SHOULD BE INCORPORATED INTO THE SITE THROUGH RAKING FROM 1/4-INCH TO A MAXIMUM OF 3/8-INCH IN DEPTH.
- ADDITIONALLY, FOR ALL AREAS, SOIL SHOULD BE "TOP DRESSED" WITH VERDYOL "GREEN" WITH A RECOMMENDED APPLICATION RATE OF 3,500 LBS/AC (MANUFACTURER RECOMMENDATION RATE, ALTHOUGH CAN REDUCE THIS RATE TO 2,000 LB/AC, IF NECESSARY TO REDUCE COSTS). VERDYOL IS PROVIDED IN 50-LB BAGS, WHICH SHOULD BE MIXED WITH WATER AT A 1-TO-1 RATIO (100 LBS VERDYOL PER 100 GALLONS OF WATER) AND INCORPORATED ON TO THE SITE AS AN AQUEOUS SLURRY.
- ALL CONTAINERIZED HERBACEOUS PLANT MATERIALS (GRASSES AND GRASS-LIKES) WILL BE PLANTED WITHIN ZONE 2 AND ZONE 3 ON 4-FOOT SPACING. ALL WOODY PLANT MATERIALS WILL BE PLANTED ON 6-FOOT SPACING WITHIN ZONE 2 AND ZONE 3. ALL WOODY PLANT MATERIALS WILL BE PLANTED ON 8-FOOT SPACING WITHIN ZONE 4C. NO WOODY PLANT MATERIALS WILL BE INSTALLED WITHIN ZONE 4S. ALL WOODY PLANT MATERIALS WILL BE INSTALLED ON 3-FOOT SPACING WITHIN ZONE 5. NO THE EXACT LOCATION OF LIVE PLANT MATERIAL WILL BE BASED ON FINAL GRADING, AS DETERMINED BY EMERGENCY WATERSHED PROTECTION (EWP) REVEGETATION ECOLOGIST WHO WILL BE ONSITE TO ASSIST WITH PROJECT IMPLEMENTATION.
- FOR CONTAINERIZED STOCK, ALL PLANTS SHOULD BE PRE-INSPECTED BY THE PLANTING CONTRACTOR TO HELP ENSURE QUALITY, PROPER HARDENING (2-WEEK MINIMUM), AND SPECIES CORRECTNESS. ANY DEAD, DYING, STRESSES, OR BADLY "ROOT-BOUND" PLANTS WILL BE REJECTED. PLANTING HOLES SHOULD BE HAND DUG OR DRILLED WITH AN AUGER WHERE NECESSARY TO ALLOW DEEP ROOT PENETRATION AND TO MINIMIZE "J-ROOTING". HOLES WILL BE DUG TWICE THE WIDTH AND EQUAL TO THE DEPTH OF THE ROOT BALL OF THE PLANT. HOLES WILL BE WATERED BEFORE PLANTING, THEN FILLED, TAMPING DOWN THE SOIL TO REMOVE AIR POCKETS, AND WATERED AGAIN IMMEDIATELY.
- FOR LIVE CUTTING MATERIAL, THE CONTRACTOR SHOULD EITHER: (1) HARVEST MATERIAL FROM PRE-IDENTIFIED SITE-SPECIFIC COLLECTION LOCATIONS FOR INSTALLATION UP TO TWO WEEKS PRIOR TO PLANTING BETWEEN FALL DORMANCY AND SPRING BUD BREAK, TRIMMED OF SIDE BRANCHES AND APICAL GROWTH, THEN SOAKED FROM FIVE TO SEVEN DAYS PRIOR TO PLANTING; OR (2) PURCHASE PROFESSIONALLY HARVESTED CUTTINGS THROUGH REPUTABLE VENDORS INCLUDING, BUT NOT LIMITED TO, COLORADO STATE FOREST SERVICE. ALL STAKES SHOULD BE OF AN ADEQUATE LENGTH TO REACH SIX INCHES INTO THE LOW-SEASON WATER TABLE, WITH ENOUGH STEM REMAINING SUCH THAT NO FEWER THAN THREE TO FOUR LIVE BUDS REMAINING ABOVE THE GROUND SURFACE. LATERAL BRANCHES REMOVED TO 1/2-INCH OF THE MAIN STAKE. ALL STAKES SHOULD BE PLACED OF AN ADEQUATE LENGTH TO REACH SIX INCHES INTO THE LOW-SEASON WATER TABLE, WITH STEMS TRIMMED SUCH THAT NO FEWER THAN THREE TO FOUR LIVE BUDS REMAINING ABOVE THE GROUND SURFACE.
- TO ESTABLISH VEGETATION ON RIPRAP, THE CONTRACTOR WILL PLACE PLANTING MEDIUM OVER THE RIPRAP TO PROMOTE ESTABLISHMENT OF LIVE STAKES, POLES, AND SEEDLINGS. LIVE STAKES AND/OR POLES WILL BE INSTALLED BETWEEN JOINTS OR OPEN SPACES OF RIPRAP (JOINT PLANTING). A STINGER (DEEP-REACHING HYDRAULIC PROBE OR MANUAL PROBE) AND/OR HAMMER-DRILL CAN ALSO BE USED IF JOINT PLANTING WILL NOT ALLOW STAKES AND/OR POLES TO REACH THE APPROPRIATE DEPTH. THE CONTRACTOR SHOULD UTILIZE STAKES OF AN ADEQUATE LENGTH TO REACH SIX INCHES INTO THE LOW-SEASON WATER TABLE, WITH ENOUGH STEM REMAINING SUCH THAT NO FEWER THAN THREE TO FOUR LIVE BUDS REMAINING ABOVE THE GROUND SURFACE. THE CONTRACTOR SHOULD PLACE ALL STAKES OF AN ADEQUATE LENGTH TO REACH 6-INCHES INTO THE LOW-SEASON WATER TABLE, WITH ENOUGH STEM REMAINING SUCH THAT NO FEWER THAN THREE TO FOUR LIVE BUDS REMAINING ABOVE THE GROUND SURFACE ENSURING GOOD HYDRATION AND TO ASSIST WITH SURVIVAL.
- FOR ALL ZONES, THE FINISH GRADES WILL BE LEFT NATURAL AND ROUGH WITH NO SMOOTH SURFACES, RIGHT ANGLES, OR STRAIGHT EDGES.
- ALL SEED SHOULD BE LABELED AS "CERTIFIED" AND SHOULD NOT INCLUDE THE PRESENCE OF NOXIOUS OR INVASIVE SPECIES PROHIBITED UNDER THE COLORADO SEED ACT (AS INDICATED ON THE TAG BY THE COLORADO SEED GROWERS ASSOCIATION APPROVED LABELING). ALL SEED SHOULD BE INSPECTED BY THE RESTORATION ECOLOGIST AND/OR WATERSHED COORDINATOR PRIOR TO INSTALLATION AND ALL TAGS MUST BE MAINTAINED FOR DOCUMENTATION BY THE WATERSHED COORDINATOR. OR THEIR DESIGNEE. PRIOR TO DELIVERY, SEED SHOULD BE PROCESSED BY THE SEED PROVIDER ON A "GRAVITY-TABLE" TO REMOVE NON-TARGET SEED TYPES, SUCH AS YELLOW SWEETCLOVER, ALFALFA, WOOD SORREL, AND OTHER POTENTIALLY INVASIVE SPECIES.
- ALL SEED RECOMMENDATIONS WITHIN ZONES 2 AND 3 ARE BASED ON THE 150 PLS PER SQUARE FOOT AND 120 PLS PER SQUARE FOOT FOR ZONES 4 AND 5, AS DETERMINED ON A PERCENTAGE BASIS BY SPECIES. ALL ZONES WILL BE BROADCAST SEED, HAND-RAKED TO 1/2- TO 3/4-INCH DEPTH TO MINIMIZE SEED LOSS, THEN SURFACE-PRESSED TO FACILITATE GOOD SEED-TO-SOIL CONTACT WITH THE SPECIFIED SEED MIX FOR EACH ZONE AS PRESENTED WITHIN THE SEEDING TABLES. SEEDING WILL ONLY BE PERFORMED BETWEEN SEPTEMBER 1 AND WHEN THE GROUND FREEZES AND WHEN THE GROUND THAWS AND JUNE 1ST, UNLESS APPROVED BY A TRAINED ECOLOGIST.
- ONCE THE SEED HAS BEEN PROPERLY APPLIED TO THE SITE, THE CONTRACTOR SHOULD APPLY WOODSTRAW OR BIODEGRADABLE 24-MONTH EROSION CONTROL BLANKETS (E.G. KOIRMAT 700) WITHIN 24 HOURS OF SEED APPLICATION AS NECESSARY. BIODEGRADABLE EROSION CONTROL BLANKETING WILL BE PLACED ON STEEP AND GRADED SLOPES. THE REMAINDER OF THE SITE, PRIMARILY WITHIN ZONES 4S, WILL BE APPLIED WITH A 75% COVER (5,000 LBS/AC) OF WOODSTRAW.
- REMOVAL OF TREES FOR THE PROJECT WILL NEED TO OCCUR OUTSIDE OF NESTING SEASON FOR MIGRATORY BIRDS (BETWEEN SEPTEMBER 1ST AND MARCH 31ST). IF THIS IS NOT POSSIBLE, THEN AN ACTIVE NEST SURVEY MAY BE REQUIRED.
- NO EQUIPMENT WILL BE ALLOWED IN THE RESTORATION AREA AFTER SEEDING OR PLANTING.
- CHEMICAL AND/OR MECHANICAL WEED ABATEMENT SHOULD BE FACILITATED BY THE WATERSHED COORDINATOR TO ASSIST IN ERADICATION OF INVASIVE AND NOXIOUS WEEDS. THE CONTROL OF NOXIOUS AND/OR INVASIVE SPECIES SHOULD BE BASED UPON SITE MONITORING FOR A MINIMUM OF THREE-GROWING SEASONS FOLLOWING ESTABLISHMENT. AN ITERATIVE WEED MANAGEMENT PLAN SHOULD BE IMPLEMENTED BY THE WATERSHED COORDINATOR BASED UPON THE RESULTS OF MONITORING.
- MUCH OF THE ECOTYPIC WOODY PLANT MATERIAL CAN BE PROVIDED BY COLORADO STATE FOREST SERVICE (CSFS) AND POTENTIALLY BY PRIVATE ENTITIES THROUGHOUT COLORADO AND ROCKY MOUNTAIN REGION. HERBACEOUS MATERIALS (FORBS, GRASSES, AND GRASSLIKES) WILL BE AVAILABLE THROUGH A COMBINATION OF CSFS AND PRIVATE NURSERIES.
- CONSTRUCTION EQUIPMENT, FUELS, AND OTHER PETROLEUM PRODUCTS SHALL NOT BE STORED OR STOCKPILES WITH 50 FEET OF THE CREEK OR OTHER AQUATIC HABITATS. FUELING SHOULD ONLY OCCUR WITHIN APPROVED DESIGNATED AREAS.



NOTES:

- WATER PREPARED PLANTING HOLES PER THE PLANTING NOTES.
- PLANT CONTAINERS PER PLANTING NOTES.
- MULCH THE NEWLY PLANTED AREA WITH WOODSTRAW AT 70% COVER.

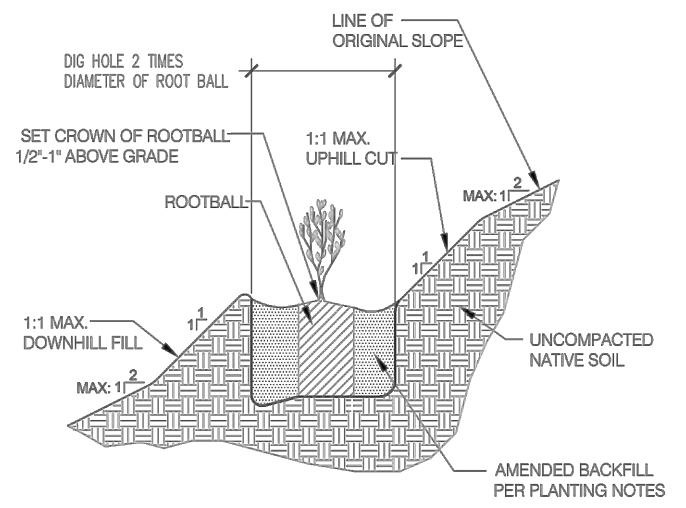
A CONTAINER PLANTING
NOT TO SCALE



NOTES:

- HARVEST STAKES PER PLANTING NOTES.
- PLANT IN LATE FALL BUT NOT WHEN GROUND IS FROZEN OR IN EARLY SPRING WHILE STILL DORMANT.
- PUSH OR USE A RUBBER Mallet TO DRIVE POINTED END OF STAKE INTO GROUND.
- MULCH THE NEWLY PLANTED AREA WITH WOODSTRAW AT 70% COVER.

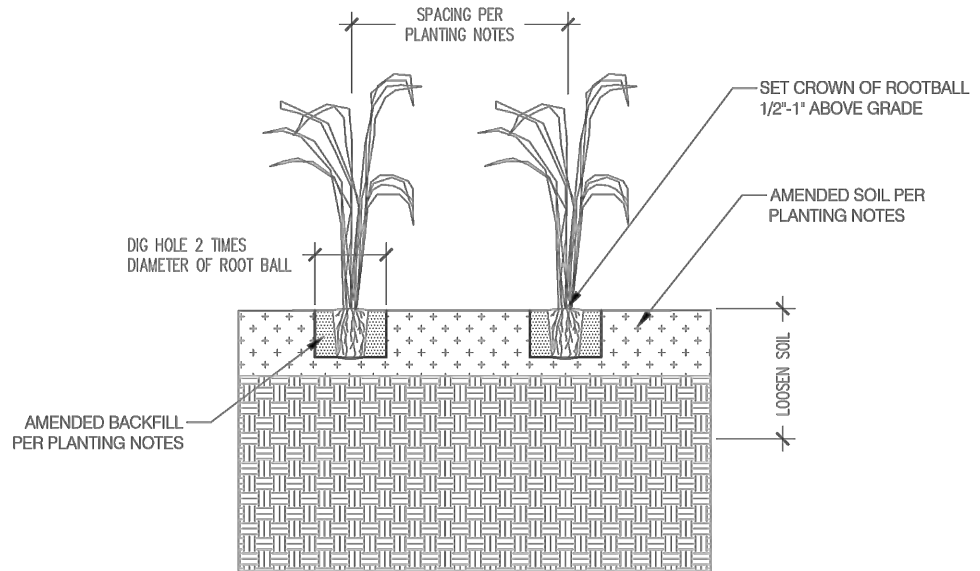
C LIVE STAKE INSTALLATION
NOT TO SCALE



NOTES:

- WATER PREPARED PLANTING HOLES PER THE PLANTING NOTES.
- PLANT CONTAINERS PER PLANTING NOTES.
- MULCH THE NEWLY PLANTED AREA WITH WOODSTRAW AT 70% COVER.

B CONTAINER PLANTING ON SLOPE
NOT TO SCALE



NOTES:

- WATER PREPARED PLANTING HOLES PER THE PLANTING NOTES.
- PLANT PLUGS PER PLANTING NOTES.
- MULCH THE NEWLY PLANTED AREA WITH WOODSTRAW AT 70% COVER.

D WETLAND PLUG INSTALLATION
NOT TO SCALE

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 WTRS_PBASE_161310
 WTRS_V_IPO_61310



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PLANTING NOTES AND DETAILS FINAL SUBMITTAL	EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM COAL CREEK IMPROVEMENTS	JEFFERSON COUNTY, COLORADO	REVISIONS



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NOT TO BE USED FOR CONSTRUCTION

December 15, 2016

DATE PRINTED

OLSSON ASSOCIATES

Zone 2: (0 to 1 Foot Above Water Surface Elevation) Containers/Stakes

Scientific Name	Common Name	Percent of Mix	Material Type	Container Size	Plant Spacing	Number of Plants		
						Start	Area 2	Area 3
Woody Species								
<i>Salix drummondiana</i>	Drummond's willow	12.5	cutting	48-inch cutting	6-foot spacing	9	7	
<i>Salix exigua</i>	narrowleaf willow	12	cutting	48-inch cutting	6-foot spacing	10	8	
<i>Salix monticola</i>	Rocky Mountain willow	12.5	cutting	48-inch cutting	6-foot spacing	9	7	
<i>Salix arifolia</i>	Slender willow	10	cutting	48-inch cutting	6-foot spacing	7	6	
<i>Salix ligulifolia</i>	strawleaf willow	10	cutting	48-inch cutting	6-foot spacing	7	6	
<i>Salix lasiolepis</i>	weeping willow	10	cutting	48-inch cutting	6-foot spacing	7	6	
Grassoids								
<i>Carex retrofracta</i>	Nebraska sedge	6	container	10 cubic inch	3-foot spacing	15	15	
<i>Eleocharis palustris</i>	creeping spikegrass	6	container	10 cubic inch	3-foot spacing	15	15	
<i>Linum catharticum</i>	mountain rush	6	container	10 cubic inch	3-foot spacing	15	15	
<i>Linum catharticum</i>	mountain rush	6	container	10 cubic inch	3-foot spacing	15	15	
<i>Cyperus microcarpus</i>	parrot's beak	6	container	10 cubic inch	3-foot spacing	15	15	
Total		100				140	114	

Zone 2: (1 to 2 Foot Above Water Surface Elevation) Containers/Poles/Stakes

Scientific Name	Common Name	Percent of Mix	Material Type	Container Size	Plant Spacing	Number of Plants		
						Start	Area 2	Area 3
Woody Species								
<i>Amelanchier alnifolia</i>	Shrubby alder	10	container	2-40	6-foot spacing	10	10	
<i>Betula occidentalis</i>	western river birch	8	container	2-40	6-foot spacing	10	10	
<i>Comarostaphylis</i>	rubus dogwood	8	container	2-40	6-foot spacing	10	10	
<i>Populus angustifolia</i>	narrowleaf cottonwood	15	cutting	60-inch cutting	6-foot spacing	10	10	
<i>Prunus virginiana ssp. melanocarpa</i>	chokecherry	10	container	2-40	6-foot spacing	10	10	
<i>Ribes aureum</i>	golden currant	5	container	2-40	6-foot spacing	10	10	
<i>Salix bebbiana</i>	narrowleaf willow	8	cutting	48-inch cutting	6-foot spacing	10	10	
<i>Salix drummondiana</i>	Drummond's willow	7	cutting	48-inch cutting	6-foot spacing	10	10	
<i>Salix exigua</i>	narrowleaf willow	8	cutting	48-inch cutting	6-foot spacing	10	10	
<i>Salix monticola</i>	Rocky Mountain willow	8	cutting	48-inch cutting	6-foot spacing	10	10	
<i>Salix lasiolepis</i>	weeping willow	8	cutting	48-inch cutting	6-foot spacing	10	10	
<i>Salix ligulifolia</i>	strawleaf willow	8	cutting	48-inch cutting	6-foot spacing	10	10	
Grassoids and Others								
<i>Carex retrofracta</i>	Nebraska sedge	3	container	10 cubic inch	3-foot spacing	15	15	
<i>Eleocharis palustris</i>	creeping spikegrass	3	container	10 cubic inch	3-foot spacing	15	15	
<i>Linum catharticum</i>	mountain rush	3	container	10 cubic inch	3-foot spacing	15	15	
Total		100				200	140	10

Zone 2: (2 to 3 Foot Above Water Surface Elevation) Seed

Scientific Name	Common Name	Percent of Mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lbs Required per Ac	PLS lbs Required Per Project Area		
						Start	Area 2	Area 3
Herbaceous/Decid								
<i>Centaurea strobilata</i>	hardhat	2	3	7,250,000	0.10	0.10	0.10	0.10
<i>Chrysanthemum</i>	wild chrysanthemum	2	3	50,000	2.96	0.40	0.40	0.40
<i>Horris arvensis</i>	wild mint	2	3	4,800,000	0.10	0.10	0.10	0.10
<i>Verbena stricta</i>	spice bush	2	3	1,900,000	0.13	0.10	0.10	0.10
<i>Monarda mollis</i>	wild bergamot	2	3	1,250,000	0.10	0.10	0.10	0.10
<i>Solidago missouriensis</i>	Missouri goldenrod	2	3	1,350,000	0.10	0.10	0.10	0.10
Grassoids								
<i>Elymus brevicaulis</i>	thickleaf wheatgrass	15	22.5	150,000	6.32	0.97	1.14	0.97
<i>Desmodium illinoense</i>	tufted vetch	15	15	1,812,000	0.36	0.50	0.50	0.50
<i>Elymus galei</i>	leaf mangrass	15	15	1,120,000	0.56	0.69	0.82	0.82
<i>Linum catharticum</i>	mountain rush	15	15	6,650,000	0.16	0.10	0.10	0.10
<i>Nasella vitidula</i>	green needlegrass	8	12	152,117	3.44	0.52	0.62	0.62
<i>Panicum smithii</i>	western wheatgrass	15	22.5	130,000	7.57	1.14	1.38	1.38
<i>Poa palustris</i>	low bluestem	15	15	2,078,000	0.36	0.50	0.50	0.50
<i>Poa secunda</i>	Sandberg bluestem	8	12	902,000	0.36	0.50	0.62	0.62
Total		100	180		21.85	4.62	4.68	4.68

Zone 4: (2+ Feet Above Water Surface Elevation) Containers

Scientific Name	Common Name	Percent of Mix	Material Type	Container Size	Plant Spacing	Number of Plants		
						Start	Area 2	Area 3
Woody Species								
<i>Amorpha fruticosa</i>	leadplant	10	container	D-60	6-foot spacing	53	20	3
<i>Cercocarpus montanus</i>	mountain mahogany	5	container	D-60	6-foot spacing	27	10	5
<i>Juniperus scopulorum</i>	Rocky Mountain juniper	5	container	D-60	6-foot spacing	27	10	0
<i>Prunus americana</i>	American plum	15	container	D-60	6-foot spacing	79	29	0
<i>Prunus virginiana ssp. melanocarpa</i>	chokecherry	15	container	D-60	6-foot spacing	79	29	3
<i>Rhus trilobata</i>	threeleaf sumac	15	container	D-60	6-foot spacing	79	29	5
<i>Ribes aureum</i>	golden currant	10	container	D-60	6-foot spacing	53	20	3
<i>Rosa woodsii</i>	Wood's rose	10	container	D-60	6-foot spacing	53	20	5
<i>Symphoricarpos occidentalis</i>	western snowberry	15	container	D-60	6-foot spacing	79	29	0
Total		100				629	196	24

Zone 4: (2+ Feet Above Water Surface Elevation) Seed

Scientific Name	Common Name	Percent of Mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lbs Required per Ac	PLS lbs Required Per Project Area		
						Start	Area 2	Area 3
Herbaceous/Decid								
<i>Helianthus divaricatus</i>	low flodane	2.5	3	1,450,000	0.16	0.14	0.10	0.10
<i>Galatella aristata</i>	blanketflower	2.5	3	188,959	0.89	1.07	0.35	0.35
<i>Helianthus pumilus</i>	leaf sunflower	2.5	3	200,000	0.85	1.02	0.33	0.33
<i>Solidago missouriensis</i>	Missouri goldenrod	4	4.8	1,850,000	0.15	0.24	0.10	0.10
<i>Thermopsis lanceolata</i>	spreadfruit golden banner	1	1.2	30,600	1.71	2.66	0.90	0.40
Grassoids								
<i>Astragalus thymoides</i>	Indian hogweed	5	6	881,741	1.44	2.24	0.73	0.73
<i>Bouteloua gracilis</i>	blue grama	7	8.4	780,000	0.47	0.73	0.24	0.24
<i>Bromus magister</i>	mountain brome	5	6	104,843	2.48	3.89	1.26	0.48
<i>Elymus canadensis</i>	Canada wildrye	5	6	100,000	2.54	3.96	1.29	0.49
<i>Elymus brevicaulis</i>	thickleaf wheatgrass	10	12	150,000	1.26	2.05	0.71	0.69
<i>Elymus trichocaulis</i>	Slender wheatgrass	10	12	215,000	2.40	3.79	1.29	0.47
<i>Nasella macrotis</i>	junegrass	5	6	2,057,000	0.13	0.20	0.10	0.10
<i>Nasella vitidula</i>	green needlegrass	8	9.6	152,117	2.75	4.29	1.38	0.53
<i>Panicum smithii</i>	western wheatgrass	15	18	130,000	5.90	9.19	2.98	1.14
<i>Poa secunda</i>	Sandberg bluestem	10	12	902,000	0.36	0.90	0.29	0.29
<i>Schizachyrium scoparium</i>	late bluestem	7.5	9	195,000	2.00	3.13	1.02	0.39
Total		100	128		27.39	42.78	14.94	6.69

Zone 5: Poles/Stakes

Scientific Name	Common Name	Percent of Mix	Material Type	Container Size	Plant Spacing	Number of Plants
						Area 2
Woody Species						
<i>Populus angustifolia</i>	narrowleaf cottonwood	35	cutting	60-inch cutting	3-foot spacing	30
<i>Salix drummondiana</i>	Drummond's willow	15	cutting	48-inch cutting	3-foot spacing	13
<i>Salix exigua</i>	narrowleaf willow	20	cutting	48-inch cutting	3-foot spacing	18
<i>Salix monticola</i>	Rocky Mountain willow	20	cutting	48-inch cutting	3-foot spacing	18
<i>Salix ligulifolia</i>	strawleaf willow	10	cutting	48-inch cutting	3-foot spacing	9
Total		100				88

Zone 6: Seed

Scientific Name	Common Name	Percent of Mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lbs Required per Ac	PLS lbs Required Per Project Area
						Area 2
Grassoids						
<i>Bouteloua gracilis</i>	blue grama	5	6	780,000	0.33	0.33
<i>Bromus magister</i>	mountain brome	5	6	104,843	2.48	0.33
<i>Calamagrostis canadensis</i>	bluejoint reedgrass	10	12	4,114,584	0.13	0.33
<i>Elymus canadensis</i>	Canada wildrye	5	6	100,000	2.54	0.33
<i>Elymus brevicaulis</i>	thickleaf wheatgrass	15	18	150,000	1.26	0.33
<i>Elymus trichocaulis</i>	Slender wheatgrass	10	12	215,000	2.40	0.33
<i>Glycerhiza</i>	leaf mangrass	10	12	1120,000	0.47	0.33
<i>Nasella macrotis</i>	junegrass	5	6	2,057,000	0.13	0.33
<i>Nasella vitidula</i>	green needlegrass	8	9.6	152,117	2.75	0.33
<i>Panicum smithii</i>	western wheatgrass	15	18	130,000	5.90	0.33
<i>Poa palustris</i>	low bluestem	5	6	2,078,000	0.13	0.33
<i>Poa secunda</i>	Sandberg bluestem	10	12	902,000	0.36	0.33
Total		100	128		21.85	1.94

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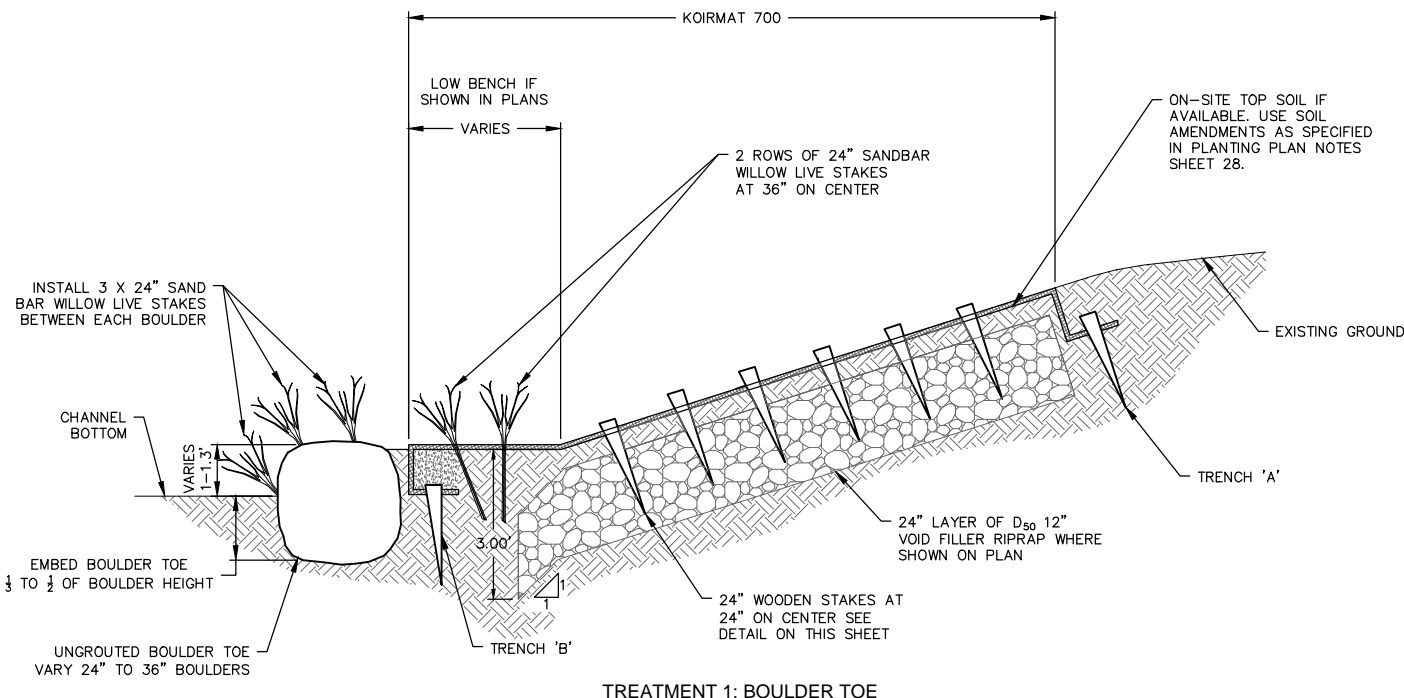
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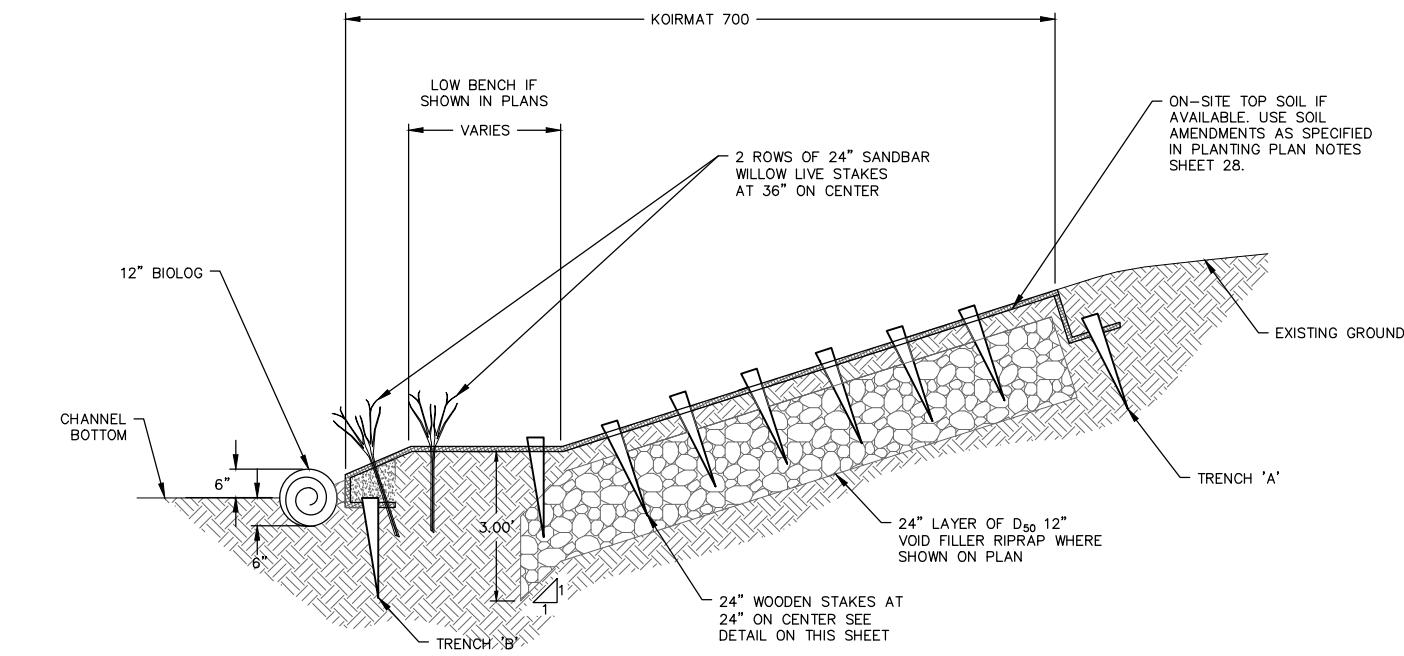
PLANTING TABULATION FINAL SUBMITTAL
EMERGENCY WATERSHED PROTECTION (EWP) PROGRAM COAL CREEK IMPROVEMENTS
JEFFERSON COUNTY, COLORADO
2016

drawn by: _____ CU
checked by: _____ WS
approved by: _____ DR
QA/QC by: _____ DO
project no.: 016-1310
drawing no.: _____
date: 2016.12.9

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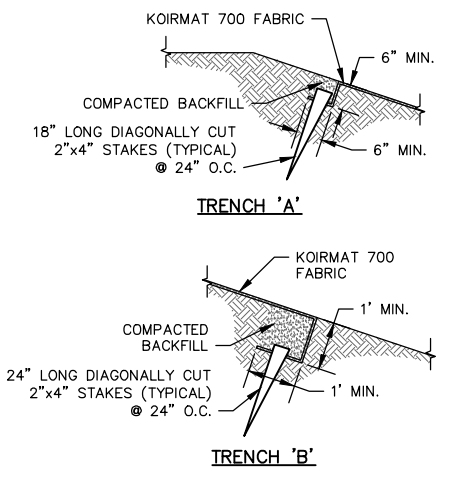
TREATMENT 1: BOULDER TOE



TREATMENT 2: WILLOW TOE

EROSION CONTROL BLANKET NOTES:

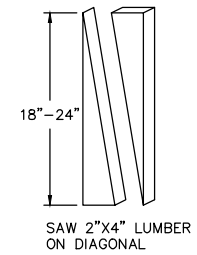
- CONTRACTOR SHALL USE STEEL PENETRATION RODS OR OTHER MEANS AS NECESSARY TO PENETRATE RIPRAP LAYER WITH WOOD STAKES.
- IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE CONTRACTOR SHALL PLACE TOPSOIL, IF PRESENT, AND PERFORM FINAL GRADING, RAKE SURFACE SMOOTH, SEED, BIOSOL AND VERYDOL, AND RE-RAKE TO COVER SEED BEFORE INSTALLING THE EROSION CONTROL BLANKET. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE, NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED.
- ALL AREAS OF CONSTRUCTION DISTURBANCE SHALL BE DECOMPACTED TO 18", SEEDED, RE-RAKED TO COVER SEED, BIOSOLED, AND MULCHED WITH FABRIC OR HYDROMULCH AS SHOWN ON DETAILS.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED (IN AREAS WHERE BLANKET IS NOT INSTALLED) AND THE EROSION CONTROL BLANKET REINSTALLED. STAKE SELVAGE (UNCUT) EDGES AT LEAST 4 INCHES FROM EDGE OF FABRIC.
- INSTALL BLANKET AT THE TOE OF SLOPE FIRST.
- THERE SHALL BE A MINIMUM 12" OVERLAP OF BLANKETS THAT IS STAKED IN THE MIDDLE WHERE BLANKETS JOIN. FOLD UNDER OR COVER ALL CUT EDGES 6".
- WOOD STAKES SHALL BE INSTALLED SUCH THAT THE TOPS OF STAKES ARE 3" ABOVE FINISHED GRADE.



1 FABRIC TRENCH DETAILS
Scale: 1"=2'

BIOLOG CONSTRUCTION NOTES:

- EXCAVATE 6" DEEP TRENCH JUST ABOVE CHANNEL.
- PLACE KOIRMAT 700 FOR BANK PROTECTION ON SLOPE WITH LOWER EDGE IN TRENCH. LAY 2 METER KOIRMAT FOR BIOLOG ON TOP. SECURELY STAKE ALL MATS IN TRENCH 6-10" FROM EDGE IN BOTTOM WITH DIAGONALLY CUT WOODEN 2"x4" STAKES, 24" LONG.
- PLACE 5# STRAW MULCH PER 100 SF ON 2 METER KOIRMAT FOR BIOLOG.
- CAREFULLY SCATTER SPECIFIED RATE OF ZONE 2 ON STRAW. COVER WITH 2" TOPSOIL AT LEAST 3' FROM EDGE OF TRENCH.
- LAY 10-12 DORMANT SANDBAR WILLOW STAKES IN CONTINUOUS ROW NEXT TO WETLAND PLANTS.
- USING AT LEAST 1 LABORER PER 3 LINEAR FEET OF BIOLOG, TIGHTLY ROLL UP BIOLOG, STARTING AT TOP EDGE, GENTLY ROLL INTO TRENCH.
- SECURE CREEK-SIDE EDGE OF BIOLOG 2' O.C. WITH 24" DIAGONALLY CUT 2"x4" STAKES.

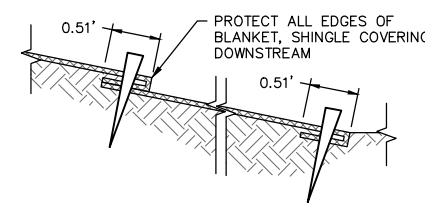


2 WOOD STAKE DETAIL
Scale: 1"=1'

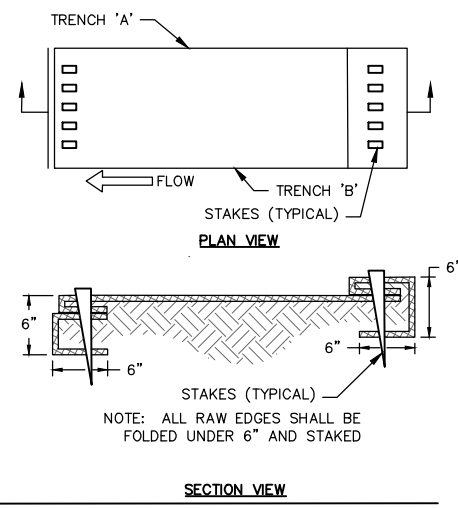
STAKE SOD, COIR OR COIR OVER COCONUT WITH 24" STAKES. STAKE COCONUT BLANKET ON UPPER SLOPE WITH 18" STAKES.

BLANKET OVERLAP NOTES:

- BLANKET END TREATMENTS SHOWN ARE OPTIONS FOR SECURING THE ENDS OF BLANKET INSTALLATIONS.
- USE 24" 2X4 STAKES TO SECURE COIR BLANKETS. 2' O.C. ALL SEAMS STAKED 18" ON CENTER.



3 BLANKET OVERLAP DETAIL
Scale: NOT TO SCALE



CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
CALL 3-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE, OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.



FOR BID
 NOT TO BE USED FOR CONSTRUCTION
 December 15, 2016
 DATE PRINTED
 OLSSON ASSOCIATES

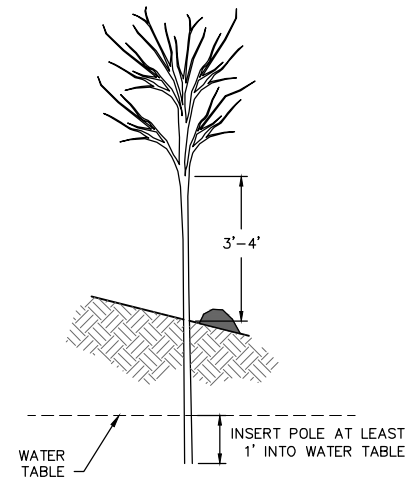
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REV. NO.	DATE	REVISIONS DESCRIPTION

PLANTING PLAN NOTES
 FINAL 30% SUBMITTAL
 CCCWC UPPER COAL CREEK
 START, AREA 2, AND AREA 3
 JEFFERSON COUNTY, COLORADO
 2016

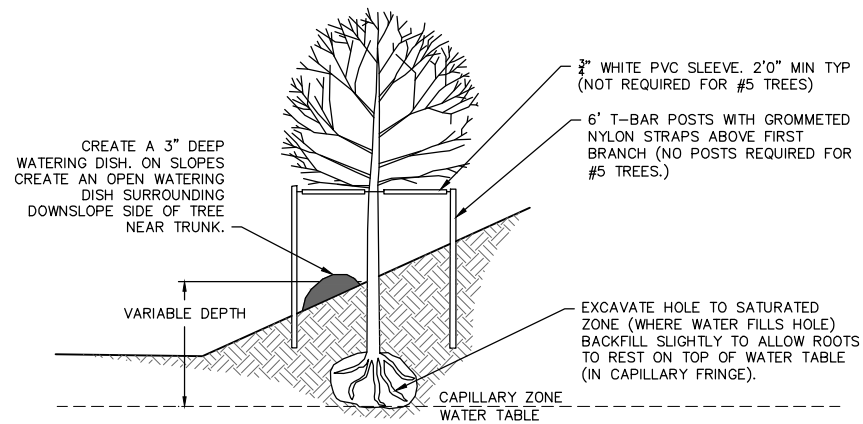
drawn by: CU
 checked by: WS
 approved by: DK
 QA/QC by: DO
 project no.: 016-1310
 drawing no.:
 date: 2016.12.09



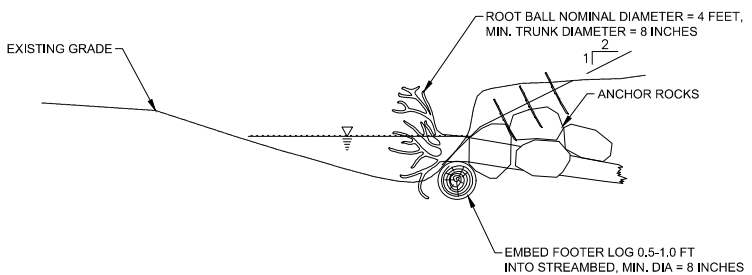
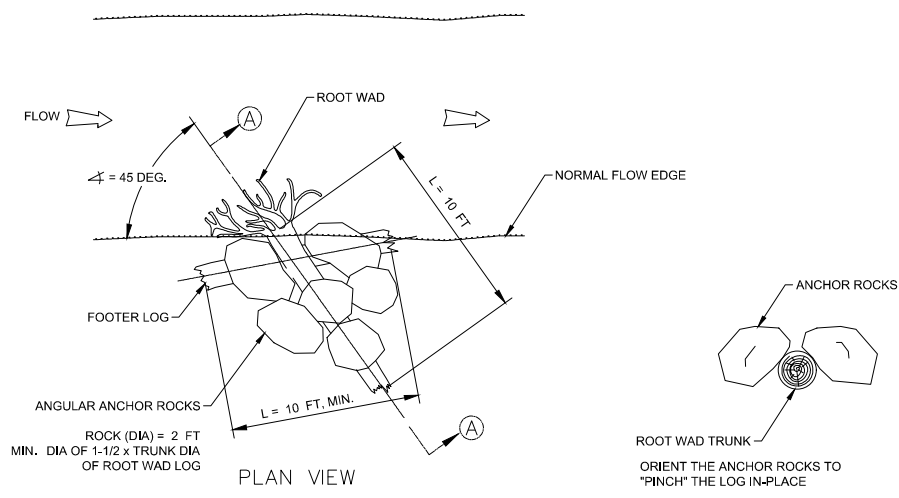
POLED COTTONWOODS NOTES:

1. COLLECT DORMANT TREES FROM APPROVED AREAS. CUT STUMPS LOW TO GROUND. CLEAN UP DEBRIS. TAKE ONLY WHAT IS APPROVED (25-30% TYPICAL). POLES SHOULD BE 2 1/2 TO 3 1/2 INCHES IN DIAMETER AND 10 TO 15 FEET LONG.
2. PLACE POLES' BUTT ENDS IN WATER UNTIL PLANTED.
3. STORE IN COOL SHADED LOCATION.
4. PLANT WITHIN 1 WEEK OF COLLECTION. BACKFILL HOLES WITH SPECIFIED SOILS AND AMENDMENTS.
5. TRIM THE LOWER BRANCHES OFF 1/2 THE HEIGHT OF TREE.
6. AUGER HOLES INTO GROUNDWATER. ALLOW WATER TO BACKFILL HOLE.
7. INSERT POLE 12" INTO GROUNDWATER.
8. BACKFILL HOLE AND TRIM ANY BRANCHES ON LOWER 1/3 OF THE TREE. REMOVE 1/3 TO 1/2 OF THE REMAINING UPPER BRANCHES.
9. CREATE A 3" DEEP WATERING DISH. ON SLOPES CREATE AN OPEN WATERING DISH SURROUNDING DOWNSLOPE SIDE OF TREE NEAR TRUNK.
10. PLACE BEAVER CAGES AS SPECIFIED.

1 POLED COTTONWOODS
Scale:NOT TO SCALE



2 DEEP PLANTING FOR #5 AND BALL AND BURLAP TREES
Scale:NOT TO SCALE



SECTION A
TYPICAL ROOT WAD DETAIL
NOT TO SCALE

- NOTES:**
1. ROOT WAD LOGS ARE TYPICALLY EMBEDDED 8-12 FEET INTO THE STREAMBANK.
 2. DISPOSE OF EXCESS SOIL AS AGREED UPON WITH THE LANDOWNER, OR AS SPECIFIED.
 3. PROTECT DISTURBED BANK SLOPE WITH SEEDING, MULCHING, AND EROSION CONTROL FABRIC. SEE TYPICAL DETAIL FOR EROSION CONTROL FABRIC.
 4. PROVIDE LIVE STAKES ACCORDING TO TYPICAL DETAIL. IF AVAILABLE, ON-SITE, WOODY SHRUB TRANSPLANTS MAY ALSO BE USED.



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REV. NO.	DATE	REVISIONS DESCRIPTION

PLANTING PLAN NOTES FINAL 30% SUBMITTAL	2016
CCCWC UPPER COAL CREEK START, AREA 2, AND AREA 3	
JEFFERSON COUNTY, COLORADO	

drawn by: CU	
checked by: WS	
approved by: DK	
QA/QC by: DO	
project no.: 016-1310	
drawing no.:	
date: 2016.12.09	

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FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.



FOR BID
NOT TO BE USED FOR CONSTRUCTION
December 15, 2016
DATE PRINTED
OLSSON ASSOCIATES

USDA United States Department of Agriculture
Natural Resources Conservation Service

ROOT WAD TYPICAL DETAIL

Designed: _____ Date: _____
 Drawn: _____
 Checked: _____
 Approved: _____

Revised: 8-22-2016; TJB
 Drawing No. CO-ENG-580-17
 Construction Dwg. Sheet ___ of ___

- ROOTWADS NOTES:**
1. THIS TREATMENT INVOLVES THE INSTALLATION OF LIVE PLANT MATERIAL DURING AND AFTER THE INSTALLATION OF ROOTWADS (SEE ROOTWAD DETAIL).
 2. CONIFEROUS TREES TO BE USED FOR ROOTWADS.
 3. WILLOW CUTTINGS (3-FOOT LONG) WILL BE PLACED DURING INSTALLATION OF THE ROOTWADS IN AREAS WHERE A PORTION OF THE CUTTING IS THE ELEVATION BETWEEN 1 AND 2 FEET ABOVE THE LOW-FLOW WATER SURFACE.
 4. CONTAINERIZED HERBACEOUS PLANTS (10CL) WILL BE PLACED AFTER THE ROOTWADS ARE INSTALLED IN AREAS PROTECTED FROM DIRECT FLOW/SCOUR (MAINLY ON THE DOWNSTREAM SIDE OF THE ROOTWAD) WHERE THE ELEVATION IS 1 FOOT OR LESS ABOVE THE LOW-FLOW WATER SURFACE.

TECHNICAL SPECIFICATIONS
FOR
UPPER COAL CREEK IMPROVEMENTS PROJECT
OLSSON PROJECT NO. 016-1310

GENERAL

This scope of work 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, with the following exceptions as amended below and additional Project Special Provisions and Supplemental Specifications.

Per CDOT Section 105.09, in case of a discrepancy the order of precedence is as follows:

- 1) Special Provisions
 - a. Project Special Provisions
 - b. Standard Special Provisions
- 2) Plans
 - a. Detailed Plans
 - b. Standard Plans
- 3) Supplemental Specifications
- 4) Standard Specifications

Per CDOT Section 105.09, “the Contractor shall not take advantage of any apparent error or omission in the Contract. If the Contractor discovers an error or omissions, the Engineer shall immediately be notified. The Engineer will make corrections and interpretations as necessary to fulfill the intent of the Contract.”

PROJECT SPECIAL PROVISIONS

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REVISION OF SECTION 201— REMOVAL OF DEBRIS 5

REVISION OF SECTION 202 — REMOVAL OF STRUCTURES AND OBSTRUCTIONS 6

REVISION OF SECTION 203 — EXCAVATION AND EMBANKMENTS 7

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**REVISION OF SECTION 101 —
DEFINITIONS AND TERMS**

Section 101 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 101.29 and replace with the following:

101.29 Engineer. The Engineer who designed the project acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project.

**REVISION OF SECTION 201 —
CLEARING AND GRUBBING**

Section 201 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 201.01 is replaced with the following:

The work consists of clearing of vegetation and within the limits of grading areas, staging areas, and access routes. The work also includes landfill disposal of debris (i.e. trash or vegetation that is not salvageable) that cannot be beneficially reused onsite. Vegetation and objects designated to remain shall be preserved free from injury or defacement, including the limbs and rootwads of large wood.

CONSTRUCTION REQUIREMENTS

Subsection 201.02 shall include the following:

The contractor shall retain and stockpile large boulders encountered during clearing and grubbing for reuse in structures and bank protection (Refer to Revision of Section 506—In-Channel Boulder Features). Management of large boulders for reuse will be paid for under Section 203.

The Engineer and/or Ecologist shall flag vegetation that shall not be disturbed before construction begins. The Contractor shall not disturb existing stands of vegetation that have been flagged for protection. The Contractor shall review flagged vegetation stands with the Engineer and/or Ecologist prior to the start of work.

BASIS OF PAYMENT

Subsection 201.04 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Clearing and Grubbing	Acre

Removal of woody material for beneficial reuse onsite or in the vicinity will be paid for under Section 202.

**REVISION OF SECTION 201—
REMOVAL OF DEBRIS**

Section 201 of the Standard Specifications is hereby revised for this project to include the following:

Subsection 201.01 shall include the following:

This work includes, but is not limited to, the removal of flood generated downed trees, stumps, woody debris, sediment, trash, and all other debris that are not designated or permitted to remain, as shown in the plans or as directed by the Engineer. Except in areas to be excavated, the resulting trenches, holes, and pits shall be backfilled and revegetated at no additional cost to the project.

CONSTRUCTION REQUIREMENTS

Subsection 201.02 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.

METHOD OF MEASUREMENT

Subsection 201.03 shall include the following:

Removal of debris will be measured per load based on a standard tandem dump truck estimated at 10 cubic yards.

BASIS OF PAYMENT

Subsection 201.04 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 debris from the site.

Pay Item	Pay Unit
Removal of Debris	Load

**REVISION OF SECTION 202 —
REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Section 202 of the Standard Specifications is hereby revised for this project as follows:

CONSTRUCTION REQUIREMENTS

Subsection 202.02 is shall include the following:

The Contractor shall remove all trees designated for removal or as directed by the Engineer. Approximately 5trees (pay item Remove Tree) are estimated to be beneficially reused onsite for pay item Rootwad construction. See revisions to section 214 for Rootwad specifications. Trees removed that are not designated for use in Rootwad construction shall be legally disposed of off site unless designated for additional on-site use by the Engineer.

BASIS OF PAYMENT

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Remove Tree	Each

**REVISION OF SECTION 203 —
EXCAVATION AND EMBANKMENTS**

Section 203 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 203.02 shall include the following:

Unclassified Excavation This work consists of excavation and fills within the Coal Creek channel and floodplain, as well as, disposal of excess material off site. This work includes the sorting and stockpiling of in-situ riprap, larger, alluvial rounded rock and boulder material located in the existing river bottom, banks, floodplain, and soil piles, to be used in later stages of construction to form river features (Section 506– In Channel Boulder Feature). The project scope also includes removal and disposal of “Red” sediment at the locations designated in the plans or as directed by the Engineer.

CONSTRUCTION REQUIREMENTS

Subsection 203.05 (Excavation) shall include the following:

Final grade cuts and fills shall not be steeper than 1.5: 1. The grading limits shown in the plan set shall be field fit based on site specific conditions at the direction of the Engineer.

Existing river conditions prior to mass grading shall be carefully documented with photographs or other approved method. Riprap materials (competent angular, sub-angular materials, and cobbles conforming to the requirements of Section 506 (Riprap)) shall be retained for re-grading and re-use on the Project; All rounded large cobbles (greater than 21-inch) and boulders suitable for use with in-channel Boulder Features (as shown on the river plans; see Section 506 (In-Channel Boulder Feature)) shall be removed and stockpiled as close to the work area as possible. Sorting and stockpiling of in-situ riprap, larger alluvial rounded rock and boulder material located in the existing river bottom, banks, floodplain, and soil piles, to be used in later stages of construction to form river features will not be paid for separately but shall be included in cost of the work. The proposed channel and floodplain shall be formed according to the typical sections and grading contours as shown on the plans or as directed by the Engineer.

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 provided they are in-line with the vision of the project and not time intensive.

BASIS OF PAYMENT

Subsection 203.14 shall include the following:

Payment includes the total volume excavated and reshaped into the final dimensions of the channel and floodplain. Payment includes haul away of any excess material to an approved on-site or offsite location. Payment includes the detailed sorting, stripping, stockpiling and replacement of select existing river materials as described above.

The work to be paid under pay item *Unclassified Excavation, "Red" Sediment Removal* consists of excavation in the locations shown in the plans, or as directed by Engineer, hauling, and disposal of "Red" sediment.

The work to be paid under pay item *Unclassified Excavation, Complete in Place* consists of excavation, placement, and compaction of material to be handled as part of channel grading, floodplain grading, and excavation to install structures.

The work to be paid under pay item *Unclassified Excavation with Export of Excess Material* consists of excavation, hauling, and disposal of excess cut material that is not used as fill.

The final compaction level of graded areas shall be consistent with the intent to re-establish vegetation. Final compaction level shall be approved by the Engineer.

Pay Item

Unclassified Excavation, "Red" Sediment Removal
Unclassified Excavation, Complete in Place
Unclassified Excavation with Export of Excess Material

Pay Unit

Cubic Yards
Cubic Yards
Cubic Yards

**REVISION TO SECTION 208 —
EROSION CONTROL**

DESCRIPTION

Subsection 208.01 shall include the following:

The Contractor shall develop a Stormwater Management Plan (SWMP) and obtain a construction stormwater permit and construction dewatering permit from CDPHE as applicable.

Erosion control measures shall be installed and maintained in the locations specified and as described in the SWMP. Erosion control measures will consist of, but is not limited to, silt fence, erosion control log, check dam, or other approved measures needed to satisfy the requirements of the stormwater and construction dewatering permits.

CONSTRUCTION REQUIREMENTS

Subsection 208.06 shall include the following:

Biodegradable hydraulic fluids shall be used for all heavy machinery.

Contractor will comply with equipment cleaning protocols to prevent the spread of New Zealand Mud Snails, other aquatic nuisance species (hitchhikers) , and noxious plant species prior to entering the site per requirements of the 404 Permits(details provided at the end of this specifications package).

A spill kit, including absorbent socks and booms, shall be kept onsite during all work with machinery (emergency pollutant isolation and clean-up materials, with procedures). All crew members shall be trained on how to use the spill kit equipment and where the materials are kept onsite. Engineer to approve Contractor plan for leaking equipment extraction from river (spill plan information to be included in SWMP).

Vehicle tracking pads are required to prevent tracking debris on Highway 42.

BASIS OF PAYMENT

Subsection 208.12 shall include the following:

Erosion Control shall include all materials and work necessary to satisfy the requirements of the stormwater and construction dewatering permits.

Pay Item	Pay Unit
Erosion Control	Lump Sum

**REVISION OF SECTION 211—
DEWATERING**

Section 211 is hereby added to the Standard Specifications for this project as follows:

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 Coal Creek;
- 2) Storm/flood flows along Coal 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 Coal Creek is for information only. This information was obtained from the Upper Coal Creek Watershed Restoration Master Plan by ICON Engineering, Inc., dated November 0214.

2-year Flood	53 cfs
5-year Flood	180 cfs
10-year Flood	374 cfs
25-year Flood	870 cfs
50-year Flood	1650 cfs
100-year Flood	3120 cfs

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.

The Contractor shall, at all times, maintain a flow channel or route for Coal 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. In the event existing trees or vegetation require removal for dewatering operations, no such removal can occur without the approval of the Engineer.

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 drop structures is complete and the groundwater level can be allowed to rise without endangering the stability of existing or new structures.

The Contractor should anticipate that even with the groundwater level lowered below subgrade where boulders and riprap is 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 the drop slope 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.

BASIS OF PAYMENT

Pay Item	Pay Unit
Dewatering	Lump Sum

**REVISION OF SECTION 212 —
SEED AND SOIL CONDITIONING**

Section 212 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 212.01 is replaced with the following:

The work consists of revegetating areas that have been disturbed as part of floodplain benching, channel grading, debris removal, staging, construction access, or otherwise. This work also includes revegetation that is specified as part of bank stabilization treatments (refer to Revision of Section 506)

CONSTRUCTION REQUIREMENTS

Subsection 212.06 shall include the following:

Onsite soil shall be amended with Biocomp/Biosol and Verdial in accordance with the plans.

BASIS OF PAYMENT

Subsection 212.08 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Seeding, Broadcast, Zone 2)	Square Feet
Seeding, Broadcast, Zone 3	Square Feet
Seeding, Broadcast, Zone 4	Square Feet
Seeding, Broadcast, Zone 5	Square Feet
Soil Amendments	Acre

Payment for Seeding shall include seed acquisition, transport, installation, and all other work necessary to complete the work.

Payment for Soil Amendments shall include amendments acquisition, transport, installation, and all other work necessary to complete the work.

**REVISION OF SECTION 213 —
MULCHING**

Section 213 of the Standard Specifications is hereby revised for this project as follows:

BASIS OF PAYMENT

Subsection 213.05 shall include the following:

Pay	Pay Unit
Mulching (Wood straw)	Acre

Payment for wood straw mulch will be full compensation for all work and materials necessary to furnish and apply the mulch.

**REVISION OF SECTION 214 —
PLANTING**

Section 214 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 214.01 shall include the following:

The work consists of furnishing all plants, labor, materials and equipment and performing all work necessary and incidental to installing container stock, piles and live cuttings as indicated in the plan set.

CONSTRUCTION REQUIREMENTS

Subsection 214.03 shall include the following:

It is recommended that the contractor source as much of the plant material as possible through the Colorado State Forest Service (CSFS). Willow cuttings may also be harvested on site if available. Live willow cuttings shall be done in coordination with Ecologist and shall conform to the special provisions in Revision of Section 214, Willow Cuttings.

BASIS OF PAYMENT

Subsection 214.06 shall include the following:

Pay Item	Pay Unit
Willow Live Stakes	Each
Nebraska Sedge, <i>Carex nebrascensis</i> , 10-Cubic Inch	Each
Creeping Spikerush, <i>Eleocharis palustris</i> , 10-Cubic Inch	Each
Mountain Rush, <i>Juncus arcticus</i> ssp. <i>Littoralis</i> , 10-Cubic Inch	Each
Three-Stamened Rush, <i>Juncus ensifolius</i> , 10-Cubic Inch	Each
Panicled Bulrush, <i>Scirpus microcarpus</i> , 10-Cubic Inch	Each
Narrowleaf Willow, <i>Salix bebbiana</i> , 48-Inch Cutting	Each
Drummond's Willow, <i>Salix drummondiana</i> , 48-Inch Cutting	Each
Narrowleaf Willow, <i>Salix exigua</i> , 48-Inch Cutting	Each
Bluestem Willow, <i>Salix irrorata</i> , 48-Inch Cutting	Each
Strapleaf Willow, <i>Salix ligulifolia</i> , 48-Inch Cutting	Each
Whiplash Willow, <i>Salix lucida</i> ssp. <i>Caudata</i> , 48-Inch Cutting	Each
Rocky Mountain Willow, <i>Salix monticola</i> , 48-Inch Cutting	Each
Narrowleaf Cottonwood, <i>Populus angustifolia</i> , 60-Inch Cutting	Each
Thinleaf Alder, <i>Alnus incana</i> ssp. <i>Tenuifolia</i> , D-60	Each
Leadplant, <i>Amorpha fruticosa</i> , D-60	Each
Western River Birch, <i>Betula occidentalis</i> , D-60	Each
Mountain Mahogany, <i>Cercocarpus montanus</i> , D-60	Each
Redosier Dogwood, <i>Cornus sericea</i> , D-60	Each
Rocky Mountain Juniper, <i>Juniperus scopulorum</i> , D-60	Each
American Plum, <i>Prunus americanum</i> , D-60	Each
Chokecherry, <i>Prunus virginiana</i> ssp. <i>Melanocarpa</i> , D-60	Each
Threeleaf Sumac, <i>Rhus trilobata</i> , D-60	Each
Golden Currant, <i>Ribes aureum</i> , D-60	Each
Wood's Rose, <i>Rosa woodsii</i> , D-60	Each
Western Snowberry, <i>Symphoricarpos occidentalis</i> , D-60	Each

Payment for plantings will be full compensation for all work and materials necessary to furnish and install said plant.

**REVISION OF SECTION 214—
WILLOW CUTTINGS AND WILLOW TOE (BIOLOG)**

Section 214 of the Standard Specifications is hereby revised for this project as follows:

Subsection 214.01 shall include the following:

This work consists of furnishing all plants, labor, materials and equipment and performing all work necessary and incidental to installing live willow cuttings and willow toe (biology) for the stabilization of soil. Willows may be harvested on-site, if available, from parent material identified by Ecologist. On-site harvesting must have the appropriate property access permission.

Subsection 214.02 shall include the following:

(e) *Willow cuttings*— Willow stakes shall be approximately the length specified in the pay item or plans, and between ½ and ¾ inches in diameter. All side branches shall be trimmed. Willow cuttings shall be cut from branches with smooth undamaged bark. Branches with thick, cracked bark shall not be used because there will not re-sprout effectively. Cuttings shall be cut about one foot from the ground. Cuts must be clean, without stripping the bark or splitting the wood. The base cuts shall be at a 45 degree angle to identify the root end of the cutting. The top shall be cut off, with a square cut so that the top of the stake is easily distinguishable from the bottom. Willow cuttings for use in Willow Toe (Biolog) do not require specific measurements or trimming. The harvesting site shall be left clean and tidy, to the satisfaction of the Engineer or Ecologist.

(k) *Transportation*. Immediately after cutting, all live cuttings shall be place in water so that the cut ends are covered in water, and the cuttings shall be stored in a cool location. Plants shall be stored in containers with water at least one foot deep. The containers shall be continuously shaded and protected from the wind. Cuttings shall be protected from drying at all times.

During transportation, the cuttings shall be placed in containers with water at least 1 foot deep in orderly fashion to prevent damage and to facilitate handling.

Upon arrival at the construction site, cuttings shall be inspected for acceptability. Only healthy, undamaged material will be accepted.

Subsection 214.06 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Willow Toe, Biolog	Lineal Foot

**REVISION OF SECTION 214—
LANDSCAPE MAINTENANCE**

Section 214 of the Standard Specifications is hereby revised for this project as follows:

Subsection 214.04 (b) 2 shall be replaced with the following:

Watering in Non-irrigated Areas— D-60 shrubs planted shall be watered by the Contractor three times per week for the first three weeks after installation and twice per week, after the first three weeks, until the first frost.

Subsection 214.06 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Landscape Maintenance	Lump Sum

**REVISION OF SECTION 214—
LARGE WOODY MATERIAL AND ROOTWAD**

Section 214 of the Standard Specifications is hereby revised for this project as follows:

DESCRIPTION

Subsection 214.01 shall include the following:

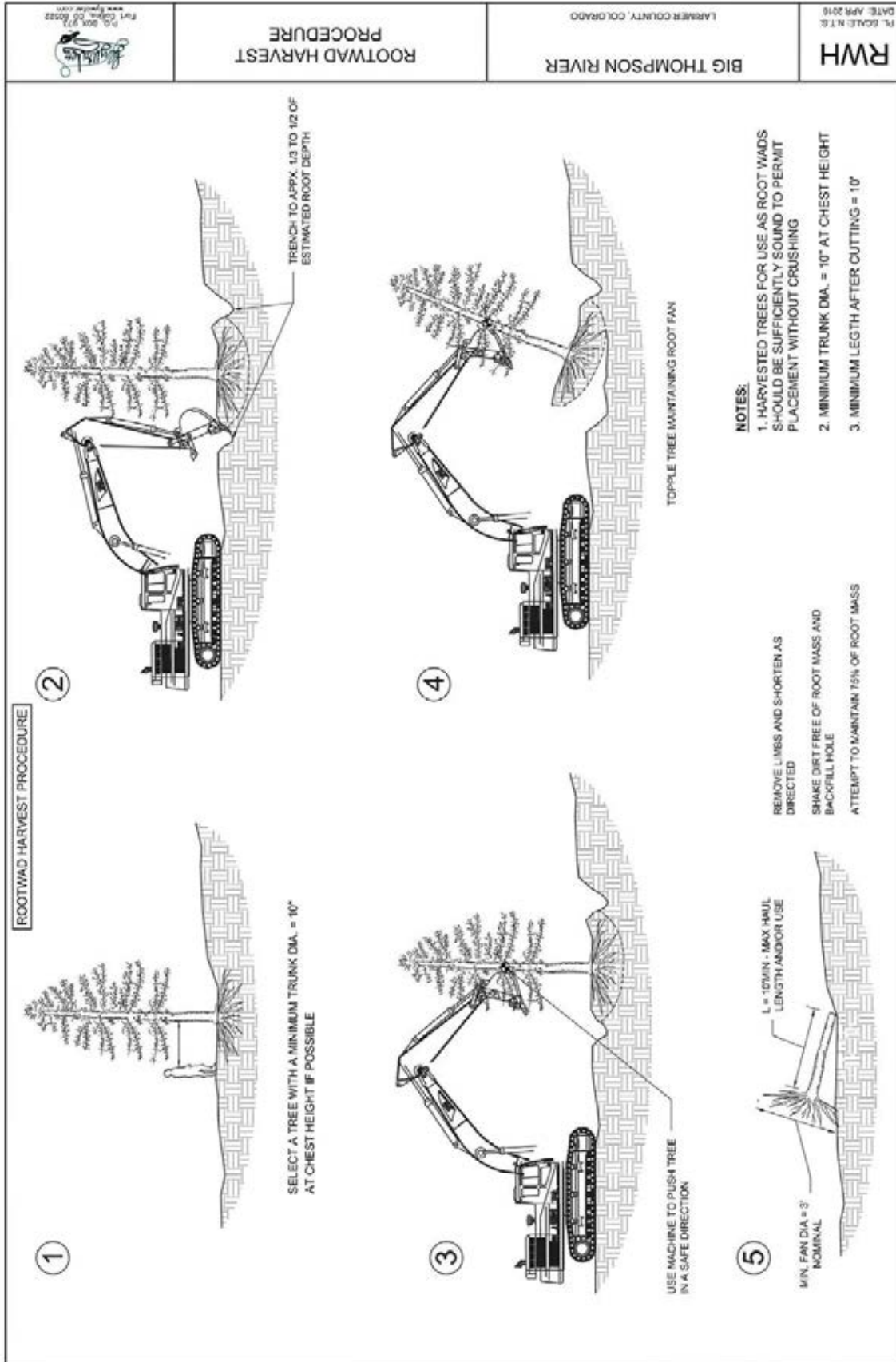
Rootwad. This work includes all equipment, materials, labor, and other costs associated with supplying and installing rootwads as indicated in the plans.

MATERIALS

Subsection 214.02 shall include the following:

Large woody material (LWM) are trees or tree trunks, preferentially sourced or harvested on site with intact root mass, used to construct rootwads and develop riparian habitat features and for low-flow to bankfull-discharge stabilization.

Large woody material shall be harvested per the details below.



LWM elements shall not be hollow or rotten, shall include bark, and be source from a coniferous tree. LWM may be limbed to 18" maximum length from trunk for transport, handling, and installation. Large woody material for construction shall include root mass and be measured as following:

- (1) Diameter: at 4.5 feet from the top of the rootwad.
 - a. Minimum diameter of 8- to 9-inches.
 - b. Nominal diameter of 10- to 12-inches.
 - c. Maximum diameter of 14- to 16-inches.
- (2) Length: 10 feet (minimum); longer trunk lengths up to the maximum practicable length (assumed 35+ feet) shall be provided. Length to be measured from top of log to bottom of log, which is to include the root wad.
- (3) The rootwad fan diameter shall be 3 feet minimum and 4 feet maximum.

Tree trunks without intact root mass shall be used as the footer log of the rootwad.

LWM shall be sourced from within the Project, be of non-invasive species, and be sourced from a coniferous tree. If insufficient LWM elements are generated by the Project, then LWM may be imported. 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.

Anchor rocks/boulders used in rootwad construction shall be per Revision of Section 506, Boulders.

Delivery, Storage, and Handling:

LWM shall be harvested, handled, and stored according to subsection 202.101 Removal of Trees.

The contractor shall take care to protect the root wads and branches from damage during handling and installation of the rootwad.

CONSTRUCTION REQUIREMENTS

Subsection 214.04 shall include the following:

Add the following subsections immediately following subsection 214.04 as follows:

214.041 Rootwad placement. Rootwad material shall be placed per the following:

- (a) Place Rootwads 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, element number, and configuration of rootwads 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 rootwad number shall be totaled for payment.
- (d) Large woody material in the rootwad shall be secured in placement locations by designated anchoring method detailed on the plans. The contractor shall notify the engineer of additional measures needed to secure elements beyond those outlined in the plans.
- (e) 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 woody material (LWM) Quality Control and Acceptance. Large woody material shall be accepted per the following:

- (a) Verify that LWM delivered to the placement site meets the applicable quality, size, type, and number of elements presented in the Plans. Verification of materials sourced within Project limits shall be by visual inspection of quality and by measurement of trunk length/diameter.
- (b) Any LWM sourced from outside Project limits shall include Forester certification documentation.
- (c) Rejected materials shall be transported off-site and disposed of at Contractor expense outside of Project limits.
- (d) Verify that LWM has been placed to lines and grades indicated in plans. Verification shall be by visual inspection and survey of grade if specific elevations are identified on the Plans.

METHOD OF MEASUREMENT

Subsection 204.05 shall include the following:

Rootwads shall be measured by the number of installed rootwads assemblies as indicated in the Plans. Rootwad pay item shall include the large woody material with root mass intact, footer log, six anchor rocks/boulders, and all other materials or work necessary to complete the work. Willow stakes installed with rootwads will be counted and paid for separately.

BASIS OF PAYMENT

Subsection 204.06 shall include the following:

Pay Item	Pay Unit
Rootwad	Each

**REVISION OF SECTION 216—
SOIL RETENTION COVERING, EROSION CONTROL FABRIC, KOIRMAT 700**

Section 216 of the Standard Specifications is hereby revised for this project as follows:

MATERIALS

Subsection 216.02 (a) shall include the following:

5. *Soil Retention Covering, Erosion Control Fabric, Koirmat 700.* Blanket shall be Koirmat 700 manufactured by Nedra Enterprises, Inc., or approved equal.

Subsection 216.02 (b) shall be replaced with the following:

Blanket Anchors. Blanket anchors shall be 18- to 24-inch wood stakes made from cutting a 2"x4" at a diagonal per details in the plan set.

CONSTRUCTION REQUIREMENTS

Subsection 216.03 (b) shall include the following:

Soil Retention Covering, Erosion Control Fabric, Koirmat 700 shall be installed in accordance with the plans.

METHOD OF MEASUREMENT

Subsection 216.04 shall be replaced with the following:

216.04 Soil retention covering, including anchors, 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

Subsection 214.05 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Soil Retention Covering, Erosion Control Fabric, Koirmat 700	Square Yard

**REVISION OF SECTION 506 —
RIPRAP, VOID FILLED**

DESCRIPTION

Subsection 506.01 shall include the following:

The work consists of placing buried void filled riprap in accordance with the materials and placement specifications for riprap described in Section 506 or as modified in these Project Special Provisions.

MATERIALS

Subsection 506.02 shall include the following:

Riprap, D50 12-Inch, Void Filled - Rock requirement are to comply with riprap as specified in 506.02 or as modified herein.

The color of riprap and void-fill materials used to fill the riprap voids shall be light gray or tan and shall be uniform. Samples of riprap and void-fill materials shall be submitted for the review and approval of the ENGINEER prior to construction.

Where "Riprap, D50 12-Inch, Void Filled" is designated on the Contract Drawings, riprap shall be mixed with the materials and associated proportions listed in the table below to fill the voids of the riprap:

Approximate Proportions (loader buckets)	Material Type	Material Description
5	Riprap	D50 12-Inch riprap
3	Void-fill material	7-inch minus crushed rock surge (100% passing 7- inch sieve, 80-100% passing 6-inch sieve, 35-50% passing 3-inch sieve, 10-20% passing 1.5-inch sieve)
1	Void-fill material	2 to 4-inch cobble (round washed river rock that is well-graded, 100% passing 6-inch sieve, 35-50% passing 3-inch sieve 5-20% passing 2-inch sieve)
1	Void-fill material	4-inch minus pit run surge (round river rock and sand, well-graded 90-100% passing 4-inch sieve, 70-80% passing 1.5-inch sieve 40-60% passing 3/8-inch sieve 10-30% passing #16 sieve)
1	Void-fill material	Type II bedding
½ to 1	Void-fill material	Native topsoil
Top layer	Top dressing	Additional 4 to 12-inch cobbles (round washed river rock that is well graded, 80-100% passing 12-inch sieve. 35-50% passing 6-inch sieve, 5-20% passing 4-inch sieve) shall be mixed in on the surface of the void-filled riprap (covering approximately 40% of the surface) prior to compaction of the void-filled riprap. Cobbles shall be fully embedded into the mass of the void-filled riprap.

Note: Mix proportions and material gradations are approximate and are subject to adjustment by the ENGINEER. No adjustment in unit price for void-filled riprap will be allowed based on modifications to the mix proportions.

Subsection 506.03 shall be replaced with the following:

The riprap and void-fill materials shall be thoroughly mixed prior to placement and shall be installed and compacted so that a dense, interlocked layer of riprap and void-fill material is provided with riprap voids completely filled. The loose material shall be placed in a single lift of sufficient height such that final grade will be achieved upon compaction. If the compacted material is below final grade. Placement of only the smaller void-fill materials to achieve final grade will not be permitted. Segregation of materials shall be avoided and in no case shall the combined material consist primarily of the void-fill materials. The density and interlocking nature of riprap in the mixed material shall essentially be the same as if the riprap was placed without filling the voids.

A top dressing of cobbles shall be mixed in on the surface of the void-filled riprap material prior to compaction of the riprap material. The cobbles shall consist of rounded river rock that is well graded, ranging in size from 4 to 12 inches and of uniform gray or tan color.

Compaction of the void-filled riprap shall be performed by running over the void-filled riprap with a large, heavy duty track excavator or dozer. The moisture content of the mixture shall be at optimum conditions prior to compaction and water shall be added as necessary at the direction of the ENGINEER. Compaction of void-filled riprap shall be reviewed and approved by the ENGINEER.

Where indicated on the DRAWINGS, a surface layer of moist topsoil shall be placed over the void-filled riprap. The topsoil surface layer shall be compacted to approximately 85% of maximum density and within two percentage points of optimum moisture in accordance with ASTM D698. Topsoil shall be added to any areas that settle.

The Contractor shall install a test section of at least 60 square feet of void-filled riprap for the review and approval of the Engineer prior to installation of the remaining void filled-riprap.

Elevation tolerance for the void-filled riprap shall be 0.10 feet. Thickness of void-filled riprap shall be no less than thickness shown and no more than 2-inches greater than the thickness shown.

BASIS OF PAYMENT

Subsection 506.05 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Riprap, D50 12-Inch, Void Filled	Cubic Yard

Payment for riprap will be full compensation for all work and materials necessary to furnish and install.

**REVISION OF SECTION 506 —
BOULDERS**

Section 506 of the Standard Specifications is hereby revised for this project to include the following:

GENERAL

Subsection 506.01 shall include the following:

This work includes construction of in-channel boulder features, including bank toe stabilization treatments, within Coal Creek. Each feature contains a variable number of boulders and rocks from on-site sources. Work includes the selection and placement of approved boulders and cobbles into distinct features as shown on the plans, including:

- a. Checks
- b. Drops
- c. Feature Boulder
- d. Boulder\ Toe

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 agreed to by the Engineer.

MATERIALS

Subsection 506.02 shall include the following:

BOULDERS

- 1. Boulders used shall be the type designated on the DRAWINGS and shall conform to Table 1.

Table 1: Boulder Properties

Boulder Classification	Nominal Size (inches)	Range of Smallest Dimension of Individual Rock Boulders (inches)	Maximum Ratio of Largest to Smallest Rock Dimension of Individual Boulders
B18	18	17-20	1.50
B24	24	22-26	1.50
B30	30	28-32	1.50
B36	36	34-38	1.50
B42	42	40-44	1.50
B48	48	45-51	1.50

- 2. The specific gravity of the boulders shall be two and one-half (2.5) or greater.

3. Boulder specific gravity shall be according to the bulk-saturated, surface-dry basis, in accordance with AASHTO T85.
4. The bulk density for the boulder shall be 1.3 ton/cy or greater.
5. The boulders shall have a percentage loss of not more than forty percent (40%) after five hundred (500) revolutions when tested in accordance with AASHTO T96.
6. The boulders shall have a percentage loss of not more than ten percent (10%) after five (5) cycles when tested in accordance with AASHTO T104 for ledge rock using sodium sulfate.
7. The boulders shall have a percentage loss of not more than ten percent (10%) after twelve (12) cycles of freezing and thawing when tested in accordance with AASHTO T103 for ledge rock, procedure A.
8. Rock shall be free of calcite intrusions. Revised 05/2016 31 37 00 - 5
9. Color:
 - a. The color of the boulders shall be gray with gray/blue hues or other acceptable colors approved by ENGINEER prior to delivery to the PROJECT site.
 - b. Color shall be consistent on the entire PROJECT and shall match the color of rock to be used for all other portions of the WORK.

CONSTRUCTION REQUIREMENTS

Subsection 506.03 shall include the following:

1. Following excavation and acceptance of subgrade by ENGINEER Boulder placement shall commence as follows:
 - a. Boulders shall be placed on the prepared subgrade in a manner which will minimize voids.
 - b. Voids between boulders exceeding 4" shall be chinked.
2. Feature Boulders serve an aesthetic function and as such shall be placed and rotated into final position as directed by ENGINEER in order to achieve the desired result.

METHOD OF MEASUREMENT

Subsection 506.04 shall include the following:

Construction of boulder features will be measured by either each boulder or lineal foot, constructed and completed in place and shall include all materials and work necessary to complete the work.

BASIS OF PAYMENT

Subsection 506.05 shall include the following:

The accepted quantities will be paid for at the contract unit price for each feature, including all labor and equipment required to complete the work.

Pay Item	Pay Unit
Feature Boulder	Each
Boulder Wall, 36-Inch, Double Stacked	Lineal Foot
Boulder Toe, 24-Inch	Each
Boulder Toe, 36-Inch	Each
Boulder, Drop Structure, 24-Inch	Each
Boulder, Drop Structure, 36-Inch	Each

Vegetation associated with each feature will be paid for under Sections 212-214.

**REVISION OF SECTION 625 —
CONSTRUCTION LAYOUT AND SURVEYING**

DESCRIPTION

Subsection 625.01 shall include the following:

The work consists of pre-construction surveying and layout, an As-Built survey, and utility locating.

CONSTRUCTION REQUIREMENTS

Subsection 625.03 shall include the following:

A pre-construction survey shall be conducted to mark the limits of grading and location of proposed in-stream features as indicated in the construction plan set.

A post-construction survey shall be conducted to survey the final stations, elevations, and dimensions of constructed in-channel features and bench grading, at a minimum.

Prior to mobilization of construction equipment, Ecologists on the Emergency Watershed Protection (EWP) team shall field flag critical stands of existing vegetation which are not to be disturbed. The Engineer shall review flagged areas with the Contractor prior to initiation of construction activities. Construction equipment shall not be mobilized before the Contractor has reviewed the flagged vegetation with the Engineer.

The Contractor shall be responsible for coordinating with local Utility owners (i.e. Colorado811) and conducting a private utility survey to locate utilities on-site.

Overhead facilities exist within the project area near Highway 42. The Contractor shall use caution when operating large vehicles beneath these lines, and maintain minimum clearance as required by utility owners.

**REVISION OF SECTION 626 —
MOBILIZATION AND DEMOBILIZATION**

DESCRIPTION

Subsection 626.01 shall include the following:

The contractor shall establish staging areas in coordination with the Engineer and Owner. The grading associated with creating this staging area is described in Section 203 and the revegetation after demobilization for this area is described in Section 212-214.) The Contractor shall use BMPs to best protect the floodplain area per Section 208. The Contractor shall restore any areas disturbed by staging that are outside the proposed grading as shown on the plans to pre-disturbance grade and native revegetation.

**REVISION OF SECTION 630 —
CONSTRUCTION ZONE TRAFFIC CONTROL**

DESCRIPTION

Subsection 630.01 shall include the following:

This work consists of developing and implementing a traffic control/management plan (TCP). The TCP shall be approved by a Traffic Control Supervisor and submitted to Jefferson County for review and approval.

The Contractor shall obtain Oversize/Overweight permits from CDOT if applicable.

**REQUIREMENTS OF THE 404 PERMIT AND SB 40
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 two treatments:

- 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

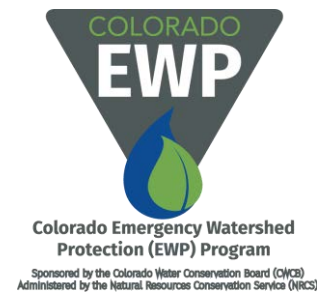
or

- 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.



REVEGETATION AND BIOSTABILIZATION RECOMMENDATIONS FOR UPPER COAL CREEK RESTORATION

TECHNICAL MEMORANDUM

Submitted to:

**Natural Resources Conservation Service
Denver Federal Center
Building 56, Room 2604
P.O. Box 25426
Denver, Colorado 80225**

Date:

December 15, 2016

Prepared by



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TECHNICAL MEMORANDUM

BACKGROUND

This technical memo contains three different projects, which are summarized below.

Upper Coal Creek Restoration “Start”: The goal of the Coal Creek project is to address the damage from 2013 flooding as well as to build a more resilient riverine system in response to future high flows. The “Start” is the most downstream segment of three separate areas slated for restoration. The project will include streambank restoration through sediment removal, bioengineering and/or armored features to stabilize stream banks and critical area treatments. These treatments are likely to include revegetation through container stock, willow staking, seeding, mulching, soil amendment and improvement, and/or cross vanes. Existing mature vegetation, such as woody vegetation, forbs, and grasses, will be preserved wherever possible.

Upper Coal Creek Restoration “Area 2”: The Area 2 restoration site along Coal Creek is a separate area located immediately upstream of the “Start” area. This site will undergo the same restoration treatments as the “Start” area, including those intended to improve ecological integrity and system resiliency. Area 2 represents a slightly longer segment of restoration along Coal Creek than the “Start” area.

Upper Coal Creek Restoration “Area 3”: The Area 3 restoration site is a separate section of Coal Creek upstream of the Area 2 site. This segment represents the smallest of the three sites along Coal Creek. Restoration treatments planned for this area are the same as those planned for the “Start” and Area 2 segments.

PROJECT AREA DESCRIPTION

The Coal Creek project areas are located in Coal Creek Canyon in Jefferson, County, CO, along State Highway 72, approximately 4 miles west of Highway 93.

The overall project area spans approximately 1.25 miles of total stream length, although the specific restoration sites are somewhat less. The “Start” area is located approximately 4 miles west of the intersection of Highway 93 and Highway 72, and is roughly 1,600 feet in length. Area 2 is located approximately 4.7 miles from the intersection of Highway 72 and 93, and is roughly 2,100 feet in length. Area 3 is the most upstream of the three segments, and is located approximately 5.3 miles from the intersection of Highway 72 and 93. This site represents the shortest segment at roughly 125 feet along Coal Creek.

HYDROLOGIC ZONE

To better facilitate plant material survival (seeds, cuttings and containers), the Upper Coal Creek restoration areas will be divided into hydrologic zones. Zones were identified using hydrologic models, aerial images, and base water surface elevation. The hydrologic zones will be flagged and identified by the Emergency Watershed Protection (EWP) restoration team (including design and revegetation specialists), prior to planting. Upper Coal Creek areas will be installed based on three hydrologic zones:

- Zone 2: 0 to 1 foot above surface elevation was estimated to be approximately 0.09 ac
 - 0.05 ac at Start
 - 0.04 ac at Area 2; and
 - 0 ac at Area 3.
- Zone 3: 1 to 2 feet above surface elevation was estimated to be approximately 0.35 ac

- 0.15 ac at Start
- 0.19 ac at Area 2; and
- 0.01 ac at Area 3.
- Zone 4: 2+ feet above surface elevation was estimated to be approximately 2.24 ac
 - 1.56 ac at Start
 - 0.48 ac at Area 2; and
 - 0.20 ac at Area 3.
- Zone 5: Slopes of 1.5:1 or steeper was estimated to be approximately 0.3 ac
 - 0 ac at Start
 - 0.03 ac at Area 2; and
 - 0 ac at Area 3.

SOIL AMENDMENTS

For all areas disturbed by restoration activities, the soil and topsoil should be amended with Biocomp/Biosol with a recommended application rate of 1,300 lbs/ac. Biocomp/Biosol should be incorporated into the site through raking from 1/4-inch to a maximum of 3/8-inch in depth. Additionally, for all areas, soil should be “top dressed” with Verdyol “Green” with a recommended application rate of 3,500 lbs/ac (manufacturer recommendation rate, although can reduce this rate to 2,000 lb/ac, if necessary to reduce costs). Verdyol is provided in 50-lb bags, which should be mixed with water at a 1-to-1 ratio (100 lbs Verdyol per 100 gallons of water) and incorporated on to the site as an aqueous slurry.

SEEDING, PLANTING, AND MULCHING

In the following sections, all seed and woody plant material recommendations were based on site elevation, county occurrence, hydrologic preference, topography, aspect preference, successional tier, habitat preference, soil texture, shade tolerance, and growth form, as well as attributes including root system structure and dimension (Ackerfield 2015, Mandel 2016). To maximize ecological fitness, all plant materials will be as ecotypic as possible. Ecotypic vegetation is beneficial in restoration efforts as it has co-evolved to live in local climates, soil types, and with local environmental pressures.

ZONE 2 (0 TO 1 FOOT ABOVE SURFACE WATER ELEVATION)

Given that the timing of installation will occur prior to spring runoff, and the associated high water velocity of Left Hand Creek through project area, Zone 2 will not be seeded or covered with woodstraw prior to the Spring 2017 runoff. Instead, it is recommended by the EWP revegetation ecologist that the Lefthand Watershed Oversight Group should install seed and woodstraw within Zone 2 after spring runoff between September 1 and when the ground freezes, if possible.

Containerized graminoids and woody plant materials are recommended for site installation within Zone 2. Species should be planted in suites to create a mosaic based on site condition and the submitted revegetation plan. Recommended species and percentages are presented in [TABLE 1](#).

All plants should be installed in the indicated numbers and size. No additional soil amendments are recommended as the previously described soil treatments should be adequate. To maximize ecological fitness, all plant sources should be as site-specific to the project location as possible. Plants should be pre-inspected by the planting contractor to help ensure quality, proper hardening (2-week minimum), and species correctness. As based on quadratic equation, the contractor will install all woody plants on 6-foot centers (1,393 plants/ac) whereas all herbaceous plants within this hydrologic group should be installed as 10-cubic-inch plugs on 3-foot centers (5,578 plants/ac). Planting holes will be hand dug or drilled with an auger where necessary to allow deep root penetration and to



minimize the possibility of “j-rooting”. Holes will be dug to twice the width and equal to the depth of the root ball of the plant. Holes will be watered before planting, then filled, tamping down the soil to remove air pockets, and watered again immediately. Containerized materials should be planted into appropriate soil moisture conditions to help facilitate survival. It is recommended that transplanted containers be installed on a maximum of 60% of the restorable hydric area to reduce the chance for over-allocation of budget.

Post-restoration weed treatment is recommended for implementation by the watershed coordinator to increase survival rates following installation. Chemical and/or mechanical weed abatement is recommended to assist in eradication of invasive and noxious weeds. The control of noxious and/or invasive species should be based upon site monitoring for a minimum of three-growing seasons following establishment. An iterative weed management plan should be implemented by the watershed coordinator based upon the results of monitoring.

TABLE 1: ZONE 2 (0 TO 1 FOOT ABOVE SURFACE WATER ELEVATION) CONTAINERS/STAKES

Scientific Name	Common Name	% of mix	Material Type	Container Size	Start Plant Number	Area 2 Plant Number
<u>woody species</u>						
<i>Salix drummondiana</i>	Drummond's willow	12.5	cutting	48-inch cutting	9	7
<i>Salix exigua</i>	narrowleaf willow	13	cutting	48-inch cutting	10	8
<i>Salix monticola</i>	Rocky Mountain willow	12.5	cutting	48-inch cutting	9	7
<i>Salix irrorata</i>	bluestem willow	10	cutting	48-inch cutting	7	6
<i>Salix ligulifolia</i>	strapleaf willow	10	cutting	48-inch cutting	7	6
<i>Salix lucida ssp. caudata</i>	whiplash willow	10	cutting	48-inch cutting	7	6
<u>graminoids</u>						
<i>Carex nebrascensis</i>	Nebraska sedge	8	container	10 cubic inch	23	18
<i>Eleocharis palustris</i>	creeping spikerush	6	container	10 cubic inch	17	14
<i>Juncus arcticus ssp. littoralis</i>	mountain rush	6	container	10 cubic inch	17	14
<i>Juncus ensifolius</i>	three-stamened rush	6	container	10 cubic inch	17	14
<i>Scirpus microcarpus</i>	panicled bulrush	6	container	10 cubic inch	17	14
Estimated Total		100			140	114

ZONE 3 (1 TO 2 FOOT ABOVE SURFACE WATER ELEVATION):

All seed should be from ecotypic sources and should represent the species and quantities presented in TABLE 2. Any deviation from the recommended species and quantities should be cleared through the project revegetation ecologist (R. Mandel and/or S. Copp Franz, Great Ecology). The contractor should apply the mix through broadcast seeding at a rate of 21.85 PLS lbs/ac, hand-raked to 1/8-to 1/4-inch depth to minimize seed loss, then surface-pressed through a water-filled press-wheel to facilitate good seed-to-soil contact. All seed must be labeled as “certified” and should not include the presence of noxious or invasive species prohibited under the Colorado Seed Act (as indicated on the tag by the Colorado Seed Growers Association approved labeling). All seed should be inspected by the revegetation ecologist and/or watershed coordinator prior to installation and all tags must be maintained for documentation by the watershed coordinator, or their designee. Prior to delivery, seed should be processed by the seed provider on a “gravity-table” to remove non-target seed types, such as yellow sweetclover, alfalfa, wood sorrel, and other potentially invasive species.

All seed recommendations are based on the 150 PLS per square foot, as determined on a percentage basis by species to facilitate ecological functionality, to minimize interspecific competition, and to promote proper revegetation. Once the seed has been properly applied to the site, the contractor should apply woodstraw or biodegradable 24-month erosion control blankets (e.g. KoirMat) within 24 hours of seed application as necessary. Biodegradable erosion control blanketing will be placed on steep and graded slopes. The remainder of the site, primarily within Zones 4S, will be applied with a 75% cover (5,000 lbs/ac) of woodstraw.

In addition to the seed mix, the contractor should install containerized graminoids and woody plant materials on the site. The contractor should species in suites to create a mosaic based on site condition and submitted plan. Recommended species and percentages are presented in TABLE 3. The exact location of live plant material will be based on final grading, as determined by Emergency Watershed Protection revegetation expert who will be onsite during project implementation.

The contractor should install all plants in the indicated numbers and size. No additional soil amendments are recommended as the previously described soil treatments should be adequate. To maximize ecological fitness, all plant sources should be as site-specific to the project location as possible. Plants should be pre-inspected by the planting contractor to help ensure quality, proper hardening (2-week minimum), and species correctness. As based on quadratic equation, the contractor will install all woody plants on 6-foot centers (1,393 plants/ac) whereas all herbaceous plants within this hydrologic group should be installed as 10-cubic-inch plugs on 3-foot centers (5,578 plants/ac).

For containerized material, planting holes will be hand dug or drilled by the contractor with an auger where necessary to allow deep root penetration and to minimize the chance of “j-rooting”. The contractor will dig holes to twice the width and equal to the depth of the root ball of the plant. Holes will be watered before planting, then filled, tamping down the soil to remove air pockets, and watered again immediately by the contractor. Containerized materials should be planted into appropriate soil moisture conditions to help facilitate survival. It is recommended that transplanted containers be installed on a maximum of 60% of the restorable hydric area to help reduce the chance for over-allocation of budget. Care should be taken to ensure that the installed containerized materials are not covered by Woodstraw at the time of product application.

For live cutting material, the contractor should either: (1) harvest material from pre-identified site-specific collection locations for installation up to two weeks prior to planting, trimmed of side branches and apical growth, then soaked from five to seven days prior to planting; or (2) purchase professionally harvested cuttings through reputable vendors including, but not limited to, Colorado State Forest Service.

TABLE 2: ZONE 3 (1 TO 2 FEET ABOVE SURFACE WATER ELEVATION) SEED

Scientific Name	Common Name	% of mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lb Required per Ac	Start PLS lb Required for Project Area	Area 2PLS lb Required for Project Area	Area 3 PLS lb required for project area
forb species								
herbaceous dicot								
				7,250,000	0.02	0.10	0.10	0.10
<i>Campanula rotundifolia</i>	harebell	2	3	55,334	2.36	0.40	0.44	0.10
<i>Glycyrrhiza lepidota</i>	wild licorice	2	3	4,800,000	0.03	0.10	0.10	0.10
<i>Mentha arvensis</i>	wild mint	2	3	1,000,000	0.13	0.10	0.10	0.10
<i>Mertensia ciliata</i>	alpine bluebells	2	3	1,250,625	0.10	0.10	0.10	0.10
<i>Monarda fistulosa</i>	wild bergamot	2	3	1,350,000	0.10	0.10	0.10	0.10
graminoids								
<i>Elymus lanceolatus</i> ssp. lanceolatus	thickspike wheatgrass	15	22.5	155,350	6.31	0.97	1.19	0.10
<i>Deschampsia caespitosa</i>	tufted hairgrass	10	15	1,812,500	0.36	0.10	0.10	0.10
<i>Glyceria grandis</i>	reed mannagrass	10	15	1,120,000	0.58	0.09	0.11	0.10
<i>Juncus arcticus</i> ssp. littoralis	mountain rush	10	15	6,950,000	0.09	0.10	0.10	0.10
<i>Nasella viridula</i>	green needlegrass	8	12	152,117	3.44	0.53	0.65	0.10
<i>Pascopyron smithii</i>	western wheatgrass	15	22.5	133,000	7.37	1.14	1.39	0.20
<i>Poa palustris</i>	fowl bluegrass	12	18	2,078,000	0.38	0.10	0.10	0.10
<i>Poa secunda</i>	Sandberg bluegrass	8	12	902,500	0.58	0.10	0.11	0.10
Estimated Total		75	112.5		21.85	4.03	4.68	1.50

TABLE 3: ZONE 3 (1 TO 2 FEET ABOVE SURFACE WATER ELEVATION) CONTAINERS/POLES/STAKES

Scientific Name	Common Name	%of mix	Material Type	Container Size	Start Plant Number	Area 2 Plant Number	Area 3 Plant Number *
<u>woody species</u>							
<i>Alnus incana ssp. tenuifolia</i>	thinleaf alder	10	container	D-60	13	16	3
<i>Betula occidentalis</i>	western river birch	10	container	D-60	11	13	3
<i>Cornus sericea</i>	redosier dogwood	5	container	D-60	7	8	0
<i>Populus angustifolia</i>	narrowleaf cottonwood	15	cutting	60-inch cutting	20	24	8
<i>Prunus virginiana ssp. melanocarpa</i>	chokecherry	10	container	D-60	13	16	3
<i>Ribes aureum</i>	golden currant	5	container	D-60	7	8	3
<i>Salix bebbiana</i>	Bebb's willow	8	cutting	48-inch cutting	11	13	3
<i>Salix drummondiana</i>	Drummond's willow	8	cutting	48-inch cutting	10	12	0
<i>Salix exigua</i>	narrowleaf willow	5	cutting	48-inch cutting	11	13	0
<i>Salix irrorata</i>	bluestem willow	5	cutting	48-inch cutting	7	8	0
<i>Salix lucida ssp. caudata</i>	whiplash willow	5	cutting	48-inch cutting	7	8	
<i>Salix ligulifolia</i>	strapleaf willow	5	cutting	48-inch cutting	7	8	0
<u>graminoids</u>							
<i>Carex nebrascensis</i>	Nebraska sedge	3	container	10 cubic inch	16	19	0
<i>Eleocharis palustris</i>	creeping spikerush	3	container	10 cubic inch	16	19	0
<i>Juncus arcticus ssp. littoralis</i>	mountain rush	3	container	10 cubic inch	16	19	0
Estimated Total		100			172	204	23
*Species were combined for ecological dominance due to the small planting area.							

To establish vegetation on riprap, the contractor will place planting medium over the riprap to promote establishment of live stakes, poles, and seedlings. Live stakes and/or poles will be installed between joints or open spaces of riprap (joint planting). A stinger (deep-reaching hydraulic probe or manual probe) and/or hammer-drill can also be used if joint planting will not allow stakes and/or poles to reach the requisite depth. The contractor should utilize stakes of an adequate length to reach six inches into the low-season water table, with enough stem remaining such that no fewer than three to four live buds remain above the ground surface. The contractor should place all stakes of an adequate length to reach six inches into the low-season water table, with enough stem remaining such that no fewer than three to four live buds remain above the ground surface helping to ensure good hydration and to assist with survival

Post-restoration weed treatment is recommended for implementation by the watershed coordinator to increase survival rates following installation. Chemical and/or mechanical weed abatement is recommended to assist in eradication of invasive and noxious weeds. The control of noxious and/or invasive species should be based upon site monitoring for a minimum of three-growing seasons following establishment. An iterative weed management plan should be implemented by the watershed coordinator based upon the results of monitoring.

ZONE 4 (2 + FEET ABOVE SURFACE WATER ELEVATION):

All seed should be from ecotypic sources, and should represent the species and quantities presented in TABLE 4. Any deviation from the recommended species and quantities should be cleared through the project revegetation ecologist (R. Mandel and/or S. Copp Franz, Great Ecology). The contractor should apply the mix through broadcast seeding at a rate of 27.39 PLS lbs/ac, hand-raked to 1/8- to 1/4-inch depth to minimize seed loss, then surface-pressed through a water-filled press-wheel to facilitate good seed-to-soil contact. All seed should be labeled as “certified” and should not include the presence of noxious or invasive species prohibited under the Colorado Seed Act (as indicated on the tag by the Colorado Seed Growers Association approved labeling). All seed must be inspected by the revegetation ecologist and/or watershed coordinator prior to installation and all tags must be maintained for documentation by the watershed coordinator, or their designee. Prior to delivery, seed should be processed by the seed provider on a “gravity-table” to remove non-target seed types, such as yellow sweetclover, alfalfa, wood sorrel, and other potentially invasive species.

All seed recommendations are based on the 150 PLS per square foot, as determined on a percentage basis by species to facilitate ecological functionality, to minimize interspecific competition, and to promote proper revegetation. Once the seed has been properly applied to the site, the contractor should apply woodstraw or biodegradable 24-month erosion control blankets (e.g. KoirMat) within 24 hours of seed application as necessary. Biodegradable erosion control blanketing will be placed on steep and graded slopes. The remainder of the site, primarily within Zones 4S, will be applied with a 75% cover (5,000 lbs/ac) of woodstraw.

In addition to the seed mix, the contractor should install containerized woody plant materials on the site. The contractor should plant graminoids and woody plant materials in suites to create a mosaic based on site condition and submitted plan. Recommended species and percentages are presented in TABLE 5. The exact location of live plant material will be based on final grading, as determined by Emergency Watershed Protection vegetation experts who will be onsite during project implementation.

TABLE 4: ZONE 4 (2+ FEET ABOVE SURFACE WATER ELEVATION) SEED

Scientific Name	Common Name	% of mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lb Required per Ac	Start PLS lb / Project Area	Area 2 PLS lb / Project Area	Area 3 PLS lb / project area
herbaceous dicot								
<i>Erigeron pumilus</i>	low fleabane	2.5	3	1,450,000	0.09	0.14	0.10	0.10
<i>Gallardia aristata</i>	blanketflower	2.5	3	189,959	0.69	1.07	0.35	0.13
<i>Helianthus pumilus</i>	dwarf sunflower	2.5	3	200,000	0.65	1.02	0.33	0.20
<i>Solidago missouriensis</i>	Missouri goldenrod	4	4.8	1,350,000	0.15	0.24	0.10	0.10
<i>Thermopsis divaricarpa</i>	spreadfruit golden banner	1	1.2	30,600	1.71	2.66	0.90	0.40
graminoids								
<i>Achnatherum hymenoides</i>	Indian ricegrass	5	6	181,741	1.44	2.24	0.73	0.28
<i>Bouteloua gracilis</i>	blue grama	7	8.4	780,500	0.47	0.73	0.24	0.10
<i>Bromus marginatus</i>	mountain brome	5	6	104,843	2.49	3.89	1.26	0.48
<i>Elymus canadensis</i>	Canada wildrye	5	6	103,000	2.54	3.96	1.29	0.49
<i>Elymus lanceolatus ssp. lanceolatus</i>	thickspike wheatgrass	10	12	155,350	3.36	5.25	1.71	0.65
<i>Elymus trachycaulus</i>	Slender wheatgrass	10	12	215,000	2.43	3.79	1.23	0.47
<i>Koeleria macrantha</i>	junegrass	5	6	2,057,500	0.13	0.20	0.10	0.10
<i>Nasella viridula</i>	green needlegrass	8	9.6	152,117	2.75	4.29	1.39	0.53
<i>Pascopyron smithii</i>	western wheatgrass	15	18	133,000	5.90	9.19	2.99	1.14
<i>Poa secunda</i>	Sandberg bluegrass	10	12	902,500	0.58	0.90	0.29	0.11
<i>Schizachyrium scoparium</i>	little bluestem	7.5	9	195,000	2.01	3.13	1.02	0.39
Estimated Total		100	150		27.39	42.70	14.04	5.69

TABLE 5: ZONE 4 (2+ FEET ABOVE SURFACE WATER ELEVATION) CONTAINERS

Scientific Name	Common Name	% of mix	Material Type	Container Size	Start Plant Number	Area 2 Plant Number	Area 3 Plant Number
woody species							
<i>Amorpha fruticosa</i>	leadplant	10	container	D-60	53	20	3
<i>Cercocarpus montanus</i>	mountain mahogany	5	container	D-60	27	10	5
<i>Juniperus scopulorum</i>	Rocky Mountain juniper	5	container	D-60	27	10	0
<i>Prunus americanum</i>	American plum	15	container	D-60	79	29	0
<i>Prunus virginiana ssp. melanocarpa</i>	chokecherry	15	container	D-60	79	29	3
<i>Rhus trilobata</i>	threeleaf sumac	15	container	D-60	79	29	5
<i>Ribes aureum</i>	golden currant	10	container	D-60	53	20	3
<i>Rosa woodsii</i>	Wood's rose	10	container	D-60	53	20	5
<i>Symphoricarpos occidentalis</i>	western snowberry	15	container	D-60	79	29	0
Estimated Total		100			529	196	24

The contractor should install all plants in the indicated numbers and size. No additional soil amendments are recommended as the previously described soil treatments should be adequate. To maximize ecological fitness, all plant sources should be site-specific to the project location. Plants should be pre-inspected by the planting contractor to help ensure quality, proper hardening (2-week minimum), and species correctness. As based on quadratic equation, the contractor should install all woody plant materials on 6-foot centers (1,393 plants/ac).

For containerized material, planting holes should be hand dug or drilled by the contractor with an auger where necessary to allow deep root penetration and to minimize “j-rooting”. The contractor will dig holes twice the width and equal to the depth of the root ball of the plant. Holes will be watered before planting, then filled, tamping down the soil to remove air pockets, and watered again immediately by the contractor. Containerized materials should be planted into appropriate soil moisture conditions to help ensure survival. It is recommended that transplanted containers be installed on a maximum of 60% of the restorable hydric area to minimize the chance for over-allocation of budget. Care should be taken to ensure that the installed containerized materials are not covered by woodstraw at the time of product application.

To increase survivability, temporary watering is recommended for container stock installed on drier soils within Zone 4. All container stock within Zone 4 should be watered three times a week for the first three weeks. After the first three weeks, the plants should be watered once a week until the first frost. For the first three years of plant establishment, the plants are recommended to be watered once a week between early May and the first frost.

Post-restoration treatment is recommended for implementation by the watershed coordinator in order to increase survival rates following installation. Chemical and/or mechanical weed abatement is recommended to assist in eradication of invasive and noxious weeds. The control of noxious and/or invasive species should be based upon site monitoring for a minimum of three-growing seasons following establishment. An iterative weed management plan should be implemented by the watershed coordinator based upon the results of monitoring.

ZONE 5 (STEEP SLOPES OF 1.5:1 OR STEEPER):

Slopes of 1.5:1 or steeper occur within Area 2 reach of Upper Coal Creek. All seed should be from ecotypic sources, and should represent the species and quantities presented in [TABLE 6](#). Any deviation from the recommended species and quantities should be cleared through the project revegetation ecologist (R. Mandel and/or S. Copp Franz, Great Ecology). The contractor should apply the mix through broadcast seeding at a rate of 21.88 PLS lbs/ac, hand-raked to 1/8- to 1/4-inch depth to minimize seed loss, then surface-pressed through a water-filled press-wheel to facilitate good seed-to-soil contact. All seed should be labeled as “certified” and should not include the presence of noxious or invasive species prohibited under the Colorado Seed Act (as indicated on the tag by the Colorado Seed Growers Association approved labeling). All seed must be inspected by the revegetation ecologist and/or watershed coordinator prior to installation and all tags must be maintained for documentation by the watershed coordinator, or their designee. Prior to delivery, seed should be processed by the seed provider on a “gravity-table” to remove non-target seed types, such as yellow sweetclover, alfalfa, wood sorrel, and other potentially invasive species.

All seed recommendations are based on the 150 PLS per square foot, as determined on a percentage basis by species to facilitate ecological functionality, to minimize interspecific competition, and to promote proper revegetation. Once the seed has been properly applied to the site, the contractor should apply biodegradable 24-month erosion control blankets (e.g. KoirMat) within 24 hours of seed application as necessary.

In addition to the seed mix, the contractor should install woody plant materials on the site. The contractor should plant the woody plant materials in suites to create a mosaic based on site condition

and submitted plan. Recommended species and percentages are presented in TABLE 7. The exact location of live plant material will be based on final grading, as determined by Emergency Watershed Protection vegetation expert who will be onsite during project implementation.

TABLE 6: ZONE 5 SEED

Scientific Name	Common Name	% of mix	Seeds/sq ft	Pure Live Seed (PLS) Weight	PLS lb Required per Ac	PLS lb Required for Project Area
graminoids						
<i>Bouteloua gracilis</i>	blue grama	5	6	780,500	0.33	0.10
<i>Bromus marginatus</i>	mountain brome	5	6	104,843	2.49	0.10
<i>Calamagrostis canadensis</i>	bluejoint reedgrass	10	12	4,114,584	0.13	0.10
<i>Elymus canadensis</i>	Canada wildrye	5	6	103,000	2.54	0.10
<i>Elymus lanceolatus ssp. lanceolatus</i>	thickspike wheatgrass	15	18	155,350	5.05	0.15
<i>Elymus trachycaulus</i>	Slender wheatgrass	10	12	215,000	2.43	0.10
<i>Glyceria grandis</i>	reed mannagrass	10	12	1,120,000	0.47	0.10
<i>Koeleria macrantha</i>	junegrass	5	6	2,057,500	0.13	0.10
<i>Nasella viridula</i>	green needlegrass	5	6	152,117	1.72	0.10
<i>Pascopyron smithii</i>	western wheatgrass	15	18	133,000	5.90	0.18
<i>Poa palustris</i>	fowl bluegrass	5	6	2,078,000	0.13	0.10
<i>Poa secunda</i>	Sandberg bluegrass	10	12	902,500	0.58	0.10
Estimated Total		100	150		21.88	1.34

The contractor should install all plants in the indicated numbers and size. No additional soil amendments are recommended as the previously described soil treatments should be adequate. To maximize ecological fitness, all plant sources should be site-specific to the project location. Plants should be pre-inspected by the planting contractor to help ensure quality, proper hardening (2-week minimum), and species correctness. As based on quadratic equation, the contractor should install all woody plant materials on 3-foot centers (5,578 plants/ac).

For live cutting material, the contractor should either: (1) harvest material from pre-identified site-specific collection locations for installation up to two weeks prior to planting between fall dormancy and spring bud break, trimmed of side branches and apical growth, then soaked from five to seven days prior to planting; or (2) purchase professionally harvested cuttings through reputable vendors including, but not limited to, Colorado State Forest Service.

TABLE 7: ZONE 5 WOODY PLANT MATERIALS

Scientific Name	Common Name	% of mix	Material Type	Container Size	Plant Number
woody species					
<i>Populus angustifolia</i>	narrowleaf cottonwood	35	cutting	60-inch cutting	30
<i>Salix drummondiana</i>	Drummond's willow	15	cutting	48-inch cutting	13
<i>Salix exigua</i>	narrowleaf willow	20	cutting	48-inch cutting	18
<i>Salix monticola</i>	Rocky Mountain willow	20	cutting	48-inch cutting	18
<i>Salix ligulifolia</i>	strapleaf willow	10	cutting	48-inch cutting	9
Estimated Total		100			88

To establish vegetation on riprap, the contractor will place planting medium over the riprap to promote establishment of live stakes, poles, and seedlings. Live stakes and/or poles will be installed between joints or open spaces of riprap (joint planting). A stinger (deep-reaching hydraulic probe or manual probe) and/or hammer-drill can also be used if joint planting will not allow stakes and/or poles to



reach the requisite depth. The contractor should utilize stakes of an adequate length to reach six inches into the low-season water table, with enough stem remaining such that no fewer than three to four live buds remain above the ground surface. The contractor should place all stakes of an adequate length to reach six inches into the low-season water table, with enough stem remaining such that no fewer than three to four live buds remain above the ground surface helping to ensure good hydration and to assist with survival

Post-restoration weed treatment is recommended for implementation by the watershed coordinator to increase survival rates following installation. Chemical and/or mechanical weed abatement is recommended to assist in eradication of invasive and noxious weeds. The control of noxious and/or invasive species should be based upon site monitoring for a minimum of three-growing seasons following establishment. An iterative weed management plan should be implemented by the watershed coordinator based upon the results of monitoring.

CONCLUSION

Ecotypic plant materials are available through the Colorado State Forest Service and other private entities within Colorado and the Rocky Mountains. Please note that the recommended containerized stock can be purchased from the Colorado State Forest Service. Any changes to seed mixes must be pre-approved by the EWP Vegetation Ecologist, Randy Mandel. Please let me know if there are any question and/or comments concerning the above information and we will work with you to find an answer and/or solution.

REFERENCES

- Ackerfield, J. 2015. Flora of Colorado. Botanical Resource Institute of Texas. 818 p.
- Giordanengo, J.H. and R.H. Mandel. 2015. Field Guide for Harvesting and Installing Willow and Cottonwood Cuttings. Synergy Ecological Restoration through grant support provided by Colorado Department of Natural Resources Colorado Water Conservation Board. 10 p.
- Giordanengo, J., R.H. Mandel, W.J. Spitz, M.C. Bossler, M.J. Blazewicz, S.E. Yochum, K.R. Jagt, W.J. LaBarre; G. Gurnee, R. Humphries, and K.T. Uhing. 2016. Living Streambanks: A Manual of Bioengineering Treatments for Colorado Streams. Colorado Department of Natural Resources, Colorado Water Conservation Board. 244 p. Accessed at <http://cwcb.state.co.us/environment/watershed-protection-restoration/Pages/main.aspx>.
- Mandel, R. 2016. Plant Restoration Database Version 1.1. Colorado Department of Natural Resources, Colorado Water Conservation Board. Updated May 2016. Accessed at <http://cwcb.state.co.us/environment/watershed-protection-restoration/Pages/main.aspx>.

Coal Creek Canyon Watershed Partnership Bid Build Construction Contract

THIS CONTRACT is made this ____ day of _____, 2017 by and between the **Coal Creek Canyon Watershed Partnership**, a Colorado nonprofit corporation (hereafter “the **Watershed Coalition**”), and _____, (hereafter the “**Contractor**”).

RECITALS

WHEREAS, The Watershed Coalition desires to have designed and constructed _____ as more fully described in an Invitation to Bid dated _____, 2017 (hereafter the “**Project**”).

WHEREAS, the Contractor provides professional construction services to the public and is fully qualified to perform the construction of the Project.

WHEREAS, pursuant to Title I of the Housing and Community Development Act of 1974, as amended, the State of Colorado Department of Local Affairs (“**DOLA**”) is authorized by the federal Department of Housing and Urban Development (“**HUD**”) to provide State of Colorado Community Development Block Grant Disaster Recovery Program funds (hereinafter referred to as “**CDBG-DR funds**”) to nonprofit organizations selected to undertake and carry out certain programs and projects under the State of Colorado Community Development Block Grant Disaster Recovery Program in compliance with all applicable local, state, and federal laws, regulations and policies.

WHEREAS, the Watershed Coalition, as part of its CDBG-DR grant agreement with DOLA under contract number CDBG-DR _____, has been awarded CDBG-DR funds for the purposes set forth herein (hereinafter referred to as the “**CDBG-DR Grant Agreement**”).

WHEREAS, pursuant to authority under Section 37-60-101 through 121 of the Colorado Revised Statutes funds have been budgeted appropriated and otherwise made available pursuant to the Governor’s Emergency fund, Executive Order #D2014-012 of the State of Colorado and funds have been made available by the U.S. Department of Agriculture, Natural Resources Conservation Service (“**NRCS**”), CFDA #10.923 in compliance with all applicable local, state, and federal laws, regulations and policies (hereinafter referred to as “**EWP funds**”).

WHEREAS, the Watershed Coalition has been awarded EWP funds for the purposes set forth herein pursuant to a SubRecipient Grant Agreement between the State of Colorado Water Conservation Board (“**CWCB**”) and the Watershed Coalition (hereinafter referred to as the “**EWP Grant Agreement**”).

WHEREAS, the Scope of Work (as hereinafter defined) included in this contract is authorized as part of the Watershed Coalition’s CDBG-DR Grant Agreement and the Watershed Coalition’s EWP Grant Agreement.

WHEREAS, it would be beneficial to the Watershed Coalition to utilize the Contractor as an independent entity to accomplish the Scope of Work as set forth herein and such endeavor would tend to best accomplish the objectives of the CDBG-DR Grant Agreement and the Watershed Coalition’s EWP Grant Agreement.

WHEREAS, the Watershed Coalition has designated _____, its Watershed Coordinator, to act as the “**Project Manager**” for this Project and other persons are designated to serve in quality assurance roles as specified in the Quality Assurance Plan as attached as Exhibit B to the EWP Grant Agreement (hereinafter the “**Quality Assurance Representatives**”).

NOW, THEREFORE, in consideration of the mutual promises, covenants and provisions contained herein, and the mutual benefits to be derived therefrom, the parties hereto agree as follows:

COVENANTS AND CONDITIONS

NOW, THEREFORE, in consideration of the promises and obligations set forth below, the Watershed Coalition and the Contractor agree as follows:

A. GEOGRAPHIC SCOPE OF WORK UNDER THIS CONTRACT

A. General.

The Project is to be constructed on property owned by third parties and not on property owned by the Watershed Coalition (see Section III, below). The general geographic area involved within the scope of this contract can be described as:

[Tailor description as needed, should be broad enough to avoid excluding a necessary parcel but be specific enough that it is limited to the intended scope of work.]

The foregoing may be referenced herein as the **“Project Area.”** All of the Project Area is contained within Jefferson County, Colorado.

B. Specific Affected Properties.

The specific parcels of real properties directly involved or significantly affected by the Project as presently known are as set forth on Exhibit A , attached hereto and incorporated herein as if fully set forth. These parcels may be referred to herein as the **“Affected Properties”**. The owners of the Affected Properties, as shown in the records of Larimer County, are as set forth on Exhibit A and may be referred to herein as the **“Affected Landowners.”**

C. Other Interested Properties.

Other parcels of properties that either adjoin or neighbor the specifically affected properties as presently known are may also be set forth on Exhibit A , attached hereto and incorporated herein as if fully set forth. These parcels may be referred to herein as **“Interested Properties”**. The owners of the Interested Properties, as shown in the records of Larimer County, are as set forth on Exhibit A and may be referred to herein as the **“Interested Landowners”**. It is not presently contemplated that the Contractor shall have any need to or will actually (i) perform any work under this Contract on any parcel that is only an Interested Property, (ii) use an Interested Property as a means of access, ingress or egress to perform any work under this Contract or (iii) otherwise set foot on, store equipment or materials (even temporarily) or directly impact any parcel of an Interested Property. In the event that any of the foregoing does occur, the Contractor will immediately notify the Project Manager and the Coalition’s Representative and appropriate remediation steps, if any are necessary, shall be taken at the Contractor’s sole cost and expense.

II. SCOPE OF WORK UNDER THIS CONTRACT (the “Work”)

A. General.

The Contractor shall construct the project in accordance with the design plans, drawings, and specifications provided in Exhibit B, complete all construction work necessary to complete the construction of the Project and furnish all equipment and materials needed for the completion of the Project in accordance with such plans, designs, drawings and specifications.

B. Consultation with the Watershed Coalition.

The Contractor shall communicate with the Project Manager and the Quality Assurance Representatives about the Project as necessary or appropriate in order to ensure that the Project is completed on time and in accordance with the goals, objectives and requirements of the Project as set forth in the Scope of Work, as hereinafter defined.

C. Specific Duties and Responsibilities.

Additional specifics for the Project are set forth in Exhibit B, captioned "Scope of Work" which is attached hereto and made a part hereof (hereafter the "**Scope of Work**").

- (i) Part 1 of the Scope of Work describes the plans and designs that have been heretofore prepared by or on behalf of the Watershed Coalition. Such plans and designs may be supplemented, reduced in scope or modified only as may be agreed upon by the Contractor, the Project Manager and the Technical Assurance Representatives.
- (ii) Part 2 of the Scope of Work sets for a breakdown of the Project into specific tasks to be accomplished by the Contractor.
- (iii) Part 3 of the Scope of Work contains a more detailed statement of the goals, objectives and requirements of the Project

D. Cleanup and Remediation.

The Contractor shall remove all debris and excess material generated by its work and to remediate and mitigate any disturbance of vegetation and soil conditions on the Affected Properties caused by or resulting from, either directly or indirectly, the work performed by the Contractor. Such cleanup and remediation shall be to the satisfaction of the Watershed Coalition in its reasonable discretion.

E. Compliance with Applicable Laws.

The construction of the Project will comply with all applicable laws including but not limited to those of, the County of Larimer, Colorado, the State of Colorado and all federal laws including, again without limitation, those set forth in the General Provisions attached hereto as Exhibit C which is, by this reference, incorporated herein as if fully set forth. The Contractor shall obtain any and all access, staging, transportation/hauling routes permits and approvals necessary for the completion of the Project. The Contractor and any and all subcontractors or tradespersons providing services to the Contractor in the performance of the work under this Contract shall obtain and maintain during the term of their work under this Contract all licenses that may be necessary under local, state or federal law.

F. Subcontractors.

The Contractor may not assign this Contract but may subcontract any or all of the work to be performed under this Contract. However, notwithstanding any subcontract of work, the Contractor shall supervised all work performed by such subcontractor and shall be strictly liable for the performance of such work and the compliance by such subcontractors with the terms of this Contract including, without limitation, their compliance with Paragraph E of this Section II. The General Conditions set forth in Exhibit C will be incorporated into each and every subcontract for work performed under this Contract. The Contract must certify that none of its subcontractors are ineligible or debarred through HUD or the General Services Administration.

G. Change Orders and Extra Services.

Upon the written request of the Watershed Coalition acting through the Project Manager, the Contractor shall, if requested, alter the design and construct additional improvements in addition to and/or instead of the design and improvements set forth in the Scope of Work. Notwithstanding the foregoing, services requested by the Watershed Coalition in writing shall only constitute a change order pursuant to this subsection if this Paragraph G of Section II is expressly referenced in that written request (a "**Change Order**"). The Contractor shall charge the Watershed Coalition for such extra services, if any, in accordance with the contract price adjustment, if any, set forth in the Change Order. If no contract price adjustment is referenced in the Change Order, the Contract Price as set forth In Section V shall remain unadjusted.

III. LANDOWNER RELATIONS

A. Landowner Authorization for Implementation/Construction Activities.

The Watershed Coalition has obtained executed Landowner Authorization, Consent and Limited Easement for implementation/construction activities from each of the Affected Landowners prior to the execution of this Contract. The Watershed Coalition will provide written notice to the Contractor of any Affected

Landowner who has not executed such a consent agreement or any instance in which such an executed consent agreement ceases to be in full force and effect. The Watershed coalition will work with the Contractor to get any and all access agreements from landowners necessary for the implementation of the agreement. The contractor may commence work on the affected properties unless the Scope of Work does not involve implementation or construction activities on the property and the Scope of Work can be accomplished without the Contractor needing access across the property of an Affected Landowner.

B. Contractor's Strict Compliance with terms of Landowner Authorizations.

The Contractor will not engage in any activities except as permitted under executed and effective Landowner Authorization, Consent and Limited Easement agreements entered into by the Watershed Coalition with Affected Landowners. The Contractor shall strictly comply with all terms, conditions and responsibilities of the Watershed Coalition and its Authorized Parties as provided under such agreements.

IV. TIME OF PERFORMANCE

The Contractor hereby agrees to commence Work under this Contract on or before a date to be specified in a written "Notice to Contractor to Proceed" issued by the Watershed Coalition and to fully complete all Work under this Contract within a period of consecutive calendar dates (weather permitting) until the contract period ends on _____ and as outlined in the Invitation to Bid. The Contractor agrees to pay, as liquidated damages the sum of \$ _____ for each calendar day or portion thereof between the end of such period and the actual completion of the Work under this Contract as further provided in Paragraph 45 of the General Conditions attached hereto as Exhibit C.

V. AMOUNT OF PAYMENTS TO CONTRACTOR AND TIME OF PAYMENTS

A. Total Amount of Payments.

The total amounts to be paid by the Watershed Coalition to the Contractor for completion of the Project and the performance by the Contractor of its obligations under this Contract shall not exceed the sum of **XXXXXX** Dollars (\$ _____) (the "**Contract Price**"). Any changes, whether additions or deductions, shall be made in writing and agreed upon by a change order pursuant to Section II, Paragraph G and expressly authorized by the Project Manager.

B. Invoices for Partial Completion.

The Contractor may bill the Watershed Coalition from time to time but no more frequently than on a monthly basis. Billings shall be made by invoice delivered electronically to the Watershed Coalition. Each invoice shall refer to the DOLA Grant Agreement number and the EWP Grant Agreement number and specify the task or tasks as set forth in Part 2 of the Scope of Work that have been completed since the last invoice together with the estimated cost of such completed task. The invoice may also include a pro-rata portion of the estimated cost of Task 1 Project Management. Notwithstanding the foregoing, the final five percent (5%) of the total contract amount (such 5% of the Contract Price is \$ _____ and is referred to as the "**Retainage Amount**") shall not be due and payable but shall instead be held back until the end of the contract and paid upon Completion..

C. Invoice for Final Payment upon Completion.

Upon completion of the Project and acceptance of the work in accordance with this Contract, the Contractor may invoice the Watershed Coalition for the balance of the full Contract Price (as such may have been adjusted by any change orders) including the Retainage Amount.

D. Dispute of any Invoice.

If the Watershed Coalition disputes any invoice for any reason, it shall notify the Contractor as soon as reasonably practicable. The Contractor understands that an invoice may be disputed by the Watershed Coalition after it has been submitted to DOLA and CWCB for payment pursuant to the terms of the CDBG-DR Grant and a delay notice of a dispute an invoice arising from a delay in either DOLA or CWCB accepting an invoice for payment or a delay in the Watershed Coalition in communicating such a dispute to the Contractor shall not preclude or prevent the Watershed Coalition from disputing the payment of any

invoice. No verbal or email communication from the Watershed Coalition shall constitute a waiver of the right to dispute any invoice.

E. Payment of Invoices.

Once an invoice from the Contractor has been accepted for payment, payment of each invoice shall be due and payable within three (3) business days after the Watershed Coalition receives reimbursement from both DOLA pursuant to the terms of the CDBG-DR Grant Agreement and from CWCB pursuant to the terms of the EWP Grant Agreement. If an invoice is received on or prior to the 1st business day of the month, the Watershed Coalition will submit the invoice to DOLA and CWCB for reimbursement on the 5th calendar day of the month. If an invoice is received after the 1st business day of the month, the Watershed Coalition will submit the invoice to DOLA and CWCB for reimbursement no later than the 5th calendar day of the following month. Payment of the final invoice shall be subject to the additional provisions contained in the applicable paragraphs of the General Conditions attached hereto as Exhibit C.

F. Qualifications on Obligations to Pay.

Notwithstanding any other terms of this Contract, the Watershed Coalition may withhold any payment (whether a progress payment or final payment) to the Contractor if any one or more of the following conditions exists:

- (i) The Contractor is in default of any of its obligations under this Contract.
- (ii) Any part of such payment is attributable to services which are not performed according to this Contract. (The Watershed Coalition will pay for only the part thereof attributable to services performed according to this Contract.)
- (iii) The Contractor fails to make payments promptly to any third parties used in the services for which the Watershed Coalition has made payment to the Contractor.
- (iv) The Watershed Coalition, in its good faith judgment, determines that the portion of the compensation then remaining unpaid will not be sufficient to complete the Project or any task according to this Contract. In such case, no additional payments will be due to the Contractor until the Contractor, at its sole cost, performs a sufficient portion of the Project or task so that the Watershed Coalition determines that the compensation then remaining unpaid is sufficient to complete the Project or task.
- (v) No partial payment shall be final acceptance or approval of that part of the Project or task paid for, or shall relieve the Contractor of any of its obligations under this Contract.

VI. PAYMENT AND PERFORMANCE BOND

The Contractor shall, within seven (7) calendar days after the execution of this Contract furnish the Watershed Coalition with a Performance Bond and a Payment Bond each in the penal amount of one-hundred percent (100%) of the Contract Price. Such bonds shall be obtained from a surety licensed to transact such business in the state of Colorado and acceptable to the Watershed Coalition. DOLA and CWCB. The expense of such bonds shall be borne by the Contractor. Such bonds shall be maintained until such time as the final payment is made by the Watershed Coalition to the Contractor in accordance with this Contract.

VII. CONTRACT DOCUMENTS

The documents that together comprise the entire agreement between the Watershed Coalition and the Contractor concerning the Project (the “**Contract Documents**”) consist of the following:

- A. The terms and conditions of the CDBG-DR Grant Agreement;
- B. The terms and conditions of the EWP Grant Agreement;
- C. This Contract
- D. The Exhibits to this Contract (Exhibit A, Exhibit B and Exhibit C);
- E. The Watershed Coalition’s Invitation to Bid dated _____;
- F. The Bid submitted by the Contractor dated _____;
- G. The Notice of Award dated _____;
- H. The Plans, Designs and Specification referenced in Part 1 of Exhibit B;

- I. Landowner Consent Agreements obtained by the Watershed Coalition from Affected Landowners in accordance with Paragraphs A and B of Section III of this Contract;
- J. The Notice to Contractor to Proceed issued by the Watershed Coalition pursuant to Section IV of this Contract.
- K. Any Change Orders prepared and authorized pursuant to Section II, Paragraph G of this Contract;
- L. Any amendments to this Contract provided that any such amendment is in writing, specifically references that it amends this Contract and is executed by the Contractor, in its sole discretion, and by the Watershed Coalition, in its sole discretion.

The foregoing constitutes the entire agreement between the Watershed Coalition and the Contractor and incorporates all prior verbal and written communications between the parties concerning the subject matter included herein.

In the event of conflicting provisions, requirements or discrepancies among the provisions of the Contract Documents, their provisions shall apply in the following order of priority:

- (i) The CDBG Grant Agreement unless an exception has been granted by DOLA in writing and in its sole discretion;
- (ii) The EWP Grant Agreement unless an exception has been granted by CWCB in writing and in its sole discretion;
- (iii) Amendments to this Contract;
- (iv) Change Orders for clarification of drawings, design or work to be performed;
- (v) This Contract;
- (vi) Exhibits to this Contract;
- (vii) Any applicable Landowner Consent Agreement;
- (viii) The Invitation to Bid; and then
- (ix) Other documents in a reverse order of chronology (latest documents given priority over older documents).

VIII. MISCELLANEOUS

A. Captions.

Each paragraph of this contract has been supplied with a caption to serve only as a guide to the contents. The caption does not control the meaning of any paragraph or in any way determine its interpretation or application.

B. Amendments in Writing.

No amendment or modification shall be made to this Contract unless it is in writing and signed by both parties.

C. Governing Law and Venue.

This Contract is governed by the laws of the State of Colorado. Any suit between the parties arising under this Contract shall be brought only in a court of competent jurisdiction in Larimer County, Colorado.

D. No Third-Party Beneficiaries.

The parties intend no third-party beneficiaries under this Contract. Any person other than the Watershed Coalition or the Contractor receiving services or benefits under this Contract is an incidental beneficiary only.

E. No Waiver.

No waiver of any breach or default under this Contract shall be a waiver of any other or later breach of default.

F. Addresses for Notices and Communications.

All notices required or permitted to be given under this Contract shall be in writing, sent by regular mail or by electronic delivery (email), addressed as follows:

Coal Creek Canyon Watershed Partnership	_____	Principal
Attn.: Watershed Coordinator		Contractor
P.O. Box 7093	XXX Main Street	
Golden, Colorado 80403	City, Colorado ZIP	
david@cccwp.org	@YYYY.com	

Either party may, by notice in writing to the other party, change the address to which notices to that party are to be given.

G. Authority.

Each party executing this Contract warrants that the individual executing this Contract is properly authorized to bind such party to this Contract.

IN WITNESS WHEREOF, the parties hereto have signed this Contract effective as of the day and year first above written.

CONTRACTOR *[replace with actual name]*

By: _____

Title: _____

COAL CREEK CANYON WATERSHED PARTNERSHIP

Cindy Pieropan, President

**Exhibit B
Scope of Work**

Part 1—Existing Plans, Designs and Specifications

Identify all plans, designs and specifications for the Project

Each of the foregoing is incorporated by this reference as if fully set forth herein.

Part 2—Breakdown of the Scope of Work into Tasks

		Estimated Cost	Estimated Completion Date
Task 1	Project Management	\$	
Task 2		\$	MONTH DAY, 2017
Task 3		\$	MONTH DAY, 2017
Task 4		\$	MONTH DAY, 2017
CONTRACT TOTAL		\$	MONTH DAY, 2017

The above is a sample. Tailor this section as appropriate to the Project

Part 3—More Detailed Statement of the Goals, Objectives and Requirements of the Project

Tailor this section as appropriate to the Project

Exhibit C General Conditions

INDEPENDENT CONTRACTOR

1. The relationship between the Contractor and the Coal Creek Canyon Watershed Partnership (CCCWP) is that of an independent contractor. The Contractor shall supply all personnel, equipment, materials and supplies at its own expense, except as specifically set forth herein. The Contractor shall not be deemed to be, nor shall it represent itself as, an employee, partner, or joint venturer of CCCWP. No employee or officer of CCCWP shall supervise the Contractor. **The Contractor is not entitled to workers' compensation benefits and is obligated to directly pay federal and state income tax on money earned under this Contract.**

PERSONNEL

2. The Contractor represents that it has, or will secure at its own expense, all personnel required in order to perform under this contract. Such personnel shall not be employees of, or have any contractual relationship to, CCCWP. All services required hereunder will be performed by the Contractor or under its supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under federal, state and local law to perform such services. None of the work or services covered by this contract shall be subcontracted without prior written approval of CCCWP. Any work or services subcontracted hereunder shall be specified in written contract or agreement and shall be subject to each provision of this contract.

INTELLECTUAL PROPERTY RIGHTS

3. The Contractor shall hold and save harmless CCCWP from any and all claims for infringement, by reason of the use of any patented design, device, material, process, or trademark or copyright, and shall indemnify CCCWP for any costs, expenses, and damages, including court costs and attorney fees, which it might be obligated to pay by reason of infringement at any time during the prosecution or after completion of its work under this Contract.

4. All work notes, reports, documents, computer programs (non-proprietary), computer input and output, analyses, tests, maps, surveys, or any other materials developed specifically for the Project are and shall remain the sole and exclusive property of CCCWP. The Contractor, upon request by CCCWP, agrees to provide documents or any other materials developed specifically for the Project in an electronically editable format (for example, Word or Excel). The Contractor shall not, without the prior written consent of the Project Manager, provide copies of any material prepared under this Contract to any other party other than the Coalition's Representative, CCCWP or, in accordance with the instructions of the Project Manager, to Affected Landowners or persons in attendance at Stakeholder Meetings.

CONFLICT OF INTEREST PROVISIONS

5. The Contractor represents, warrants and covenants that it presently has no interest and shall not acquire interest, direct or indirect, in any of the Affected Properties or any other real property or financial interest which would conflict in any manner or degree with the performance of its services hereunder. The Contractor further covenants that in the performance of this contract, no person having such interest shall be employed.

6. The Contractor represents, warrants and covenants that no member of the governing body of CCCWP, and no other officer, employee, or agent of CCCWP who exercises any functions or responsibilities in connection with the planning and carrying out of the Project has any interest, direct or indirect, in the Contractor or this Contract; and the Contractor shall take appropriate steps to assure compliance with this provision for the term of the Contract.

CONTRACTOR'S DUTIES

7. Notwithstanding anything to the contrary contained in this Contract, CCCWP and the Contractor agree and acknowledge that CCCWP enters into this Contract relying on the special and unique abilities of the Contractor to accomplish the Project. The Contractor accepts the relationship of trust and confidence established between it and CCCWP by this Contract. The Contractor covenants with CCCWP to use its best efforts. The Contractor shall further the interests of CCCWP according to CCCWP's requirements and procedures, according to the highest professional standards and in compliance with all applicable national, federal, state, municipal laws, regulations, codes, ordinances, and orders and with those of any other body having jurisdiction.

8. The Contractor represents, covenants, and agrees that it has and will undertake no obligations, commitments, or impediments of any kind that will limit or prevent it from the timely completion of the Project, loyally and strictly according to the best interests of CCCWP. In case of any conflict between interests of CCCWP and any other entity, the Contractor shall fully and immediately disclose the issue to CCCWP and shall take no action contrary to CCCWP's interests.

9. The Contractor has familiarized itself with the nature and extent of the Contract Documents, the geographic area of the Project and its physical characteristics, including without limitation the existing improvements, soil conditions, drainage, topography and all other features of the terrain and the local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect the cost, progress or performance of the work to be performed under this Contract.

10. The Contractor understands that it shall not be allowed any extra compensation by reason of any condition as described in Paragraph 9 above concerning which it might have fully informed itself prior to signing this Contract.

11. The Contractor is retained to perform work for CCCWP that includes confidential data, work product, and other privileged or confidential information that is protected under pertinent laws and CCCWP policies. In order to maintain the fact and appearance of absolute objectivity, loyalty, and professionalism, the Contractor shall not, without the prior written consent of CCCWP, do any of the following:

- a. Disclose at any time information obtained as a result of this contractual relationship to any third party;
- b. Make any public statements or appear at any time to give testimony at any public meeting on the subject matters with regard to which the Contractor is or was retained by CCCWP. To the extent that CCCWP provides written consent for the disclosure of information or authorizes the making of public statements, CCCWP may impose such conditions upon such disclosure or communications as it thinks appropriate, and the Contractor agrees to comply with those conditions. This provision shall not preclude the Contractor from providing information to law enforcement officials in connection with any criminal justice investigation.

12. The Contractor represents, covenants, and agrees that all of the services furnished, work performed and materials used by the Contractor under this Contract shall be of at least the standard and quality prevailing among highly competent professionals who perform work of a similar nature to the work described in this Contract and shall be of good quality, free from faults or defects and in conformance with the Contract Documents to the reasonable satisfaction of CCCWP.

13. The Contractor represents, covenants, and agrees that its work will be accurate and free from any material errors. The Contractor additionally represents, covenants, and agrees that the planning for the Project will conform to all foreseeable uses thereof. CCCWP approval shall not diminish or release the Contractor's duties since CCCWP is ultimately relying upon the Contractor's skill and knowledge.

14. The Contractor agrees to call to CCCWP's attention errors in any drawings, plans, sketches, instructions, information, requirements, procedures, and other data supplied to the Contractor (by CCCWP or any other party) that it becomes aware of and believes may be unsuitable, improper, or inaccurate in a material way. However, the Contractor shall not independently verify the validity, completeness, or accuracy of such information unless otherwise expressly engaged to do so by CCCWP. Nothing shall detract from this obligation unless the Contractor

advises CCCWP in writing that such data may be unsuitable, improper, or inaccurate and CCCWP nevertheless confirms in writing that it wishes the Contractor to proceed according to the data as originally given.

15. The Contractor represents, covenants, and agrees to furnish efficient business administration and superintendence and perform the services required by this Contract in the best, most expeditious and most economical manner consistent with the interests of CCCWP.

16. The Contractor shall promptly pay all bills for labor and material performed and furnished by others in performance of the Project.

17. The Contractor is solely responsible for its own review and understanding of the terms and requirements under the CDBG-DR Grant Agreement and shall fully comply with such requirements in performing the services required by this Contract.

18. The Contractor shall comply with the Watershed Best Management Practices, as referenced at <http://www.coloradoewp.com/guideline-and-resources>, so as to prevent harm from arising to the Affected Properties as a result of the Contractor's performance of work under this Contract.

COMPLIANCE WITH LAWS

19. This Contract is funded in whole or in part with CDBG-DR funds through the State of Colorado's Community Development Block Grant Program as administered by the Division of Local Government, Department of Local Affairs. Contractors are responsible for complying with those regulations and restrictions normally associated with federally-funded programs and any other requirements that the state may prescribe. The Contractor shall comply with all applicable laws, ordinances and codes of the state and local government and the Contractor shall save CCCWP harmless with respect to any damages arising from any tort done in performing any of the work embraced by this Contract.

20. Under Title VI of the Civil Rights Act of 1964, no person shall, on the grounds of race, color, creed, religion, sex or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance including funds received under the CDBG Grant Agreement.

21. Under Section 109 of the Housing and Community Development Act of 1974, no person in the United States shall, on the grounds of race, color, creed, religion, sex or national origin, be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this title including funds received under the CDBG Grant Agreement.

22. Under the Age Discrimination Act of 1975, as amended, (42 U.S.C. 610 et. seq.), no person shall be excluded from participation, denied program benefits, or subjected to discrimination on the basis of age under any program or activity receiving federal funding assistance including funds received under the CDBG Grant Agreement.

23. Under Section 504 of the Rehabilitation Act of 1973, as amended, (29 U.S.C. 794), no otherwise qualified individual shall, solely by reason of his or her disability, be excluded from participation (including employment), denied program benefits, or subjected to discrimination under any program or activity receiving federal funds including funds received under the CDBG Grant Agreement.

24. Under Public Law 101-336, Americans with Disabilities Act of 1990, no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.

25. Under Section 3 of the Housing and Community Development Act of 1968, Compliance in the Provision of Training, Employment, and Business Opportunities.

A. The work to be performed under this contract is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.

B. The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the part 135 regulations.

C. The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the qualifications for each; and the name and location of the person(s) taking applications for each of the positions; and the anticipated date the work shall begin.

D. The contractor agrees to include this section 3 clause in every subcontract subject to compliance with regulations in 24 CFR Part 135, and agrees to take appropriate action, as provided in an applicable provision of the subcontract or in this section 3 clause, upon a finding that the subcontractor is in violation of the regulations in 24 CFR Part 135. The contractor will not subcontract with any subcontractor where the contractor has notice or knowledge that the subcontractor has been found in violation of the regulations in 24 CFR Part 135.

E. The contractor will certify that any vacant employment positions, including training positions, that are filled (1) after the contractor is selected by before the contract is executed, and (2) with persons other than those to whom the regulations of 24 CFR part 135 require employment opportunities to be directed, were not filled to circumvent the contractor's obligations under 24 CFR part 135.

F. Noncompliance with HUD's regulations in 24 CFR part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.

G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (i) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation of compliance with section 7(b).

26. The Contractor certifies that it shall comply with the provisions of section 8-17.5-101 *et seq.*, C.R.S. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this contract or 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 Contract.

27. Under the Contract Work Hours and Safety Standards Act, as amended, (40 U.S.C. 327-332), workers must be compensated for overtime and be provided safe and healthy working conditions when working on federally assisted (including funds received under the CDBG Grant Agreement) construction projects.

28. The Contractor represents, warrants, and agrees (i) that it has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Contract through participation in either

the E-Verify or the Department Program; (ii) that the Contractor is prohibited from using either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed; and (iii) if the Contractor obtains actual knowledge that a subcontractor performing work under the public contract for services knowingly employs or contracts with an illegal alien, the Contractor shall be required to:

a. Notify the subcontractor and the contracting state agency or political subdivision within three (3) days that the Contractor has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

b. Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to 8-17.5-102(2)(b)(III)(A) 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.

29. The Contractor further agrees that it shall comply with all reasonable requests made in the course of an investigation under section 8-17.5-102(5), C.R.S. by the Colorado Department of Labor and Employment. If the Contractor fails to comply with any requirement of this provision or section 8-17.5-101 *et seq.*, C.R.S., CCCWP may terminate this contract for breach and the Contractor shall be liable for actual and consequential damages to CCCWP.

30. Equal Opportunity Clause:

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, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) 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 advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) 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.

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

(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said 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 or federally assisted construction 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.

(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) 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 the administering agency 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 vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

31. The 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).
32. The contractor must comply with all mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201)
33. Contracts will not be awarded to parties listed on the government-wide Excluded Parties List System 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.’ Contractors and subcontractors must be registered and active in SAM.gov at the time of contract award.
34. In accordance with the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352), contractors that apply or bid for an award of \$100,000 or more must certify that they will not and have 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. 1352. Contractors 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.

COMPLIANCE WITH DAVIS-BACON ACT PROVISIONS

35. The Project to which the construction work covered by this Contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

- A. 1. (i) Minimum Wages.** All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor as determined between three (3) and ten (10) days prior to the bid opening which determination is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein; provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.
- (ii)**
- (a)** Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
 - (1)** The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2)** The classification is utilized in the area by the construction industry; and
 - (3)** The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
 - (b)** If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140.)

(c) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing

apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

- (ii) (a) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The Contractor shall also submit payrolls for those weeks after work begins and where no work is performed for whatever reason with hours and payments marked with zeroes (0) until the final walk through is completed. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime Contractor to require a subcontractor to provide addresses and social security numbers to the prime Contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)
- (b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).
- (d) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.
- (iii) The Contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its

designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job and shall not require notice of planned interviews. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually

performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The Contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this Contract.

6. Subcontracts. The Contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a Contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this Contract the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration..... makes, utters or publishes any statement knowing the same to be false..... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

1 Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

2 Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

3 Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime Contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

4 Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

1 No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

2 The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

3 The Contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The Contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

INDEMNIFICATION

36. The Contractor shall comply with the requirements of all applicable laws, rules, and regulations in connection with the services of the Contractor, and shall exonerate, indemnify, and hold harmless CCCWP and

CCCWP, its officers, directors, agents, and all employees from and against it, and local taxes or contributions imposed or required under the Social Security, Workers' Compensation, and Income Tax Laws. Further, the Contractor shall exonerate, indemnify, and hold harmless CCCWP, Interested Parties, Affected Parties and CCCWP with respect to any damages, expenses, or claims arising from or in connection with any of the work performed or to be performed under this contract by the Contractor. This shall not be construed as a limitation of the Contractor's liability under this Contract or as otherwise provided by law.

INSURANCE

37. The Contractor agrees to procure and maintain in force during the terms of this Contract, at its own cost, the following minimum coverages:

- | | | |
|----|---|-------------|
| a. | Workers' Compensation and Employers' Liability
Waiver of Subrogation | Statutory |
| b. | Commercial General Liability | |
| | Bodily Injury & Property Damage General Aggregate Limit | \$1,000,000 |
| | Personal & Advertising Injury Limit | \$1,000,000 |
| | Each Occurrence Limit | \$1,000,000 |

The policy shall be on an Occurrence Form and include the following coverages: Premises Operations; Personal and Advertising Injury; Medical Payments; Liability Assumed under an Insured Contract; Independent Contractors; and Broad Form Property Damage. Coverage provided should be at least as broad as found in Insurance Services Office (ISO) form CG0001.

- | | | |
|----|---|-------------|
| c. | Professional Liability (errors and omissions) | |
| | Each Claim/Loss: | \$1,000,000 |
| | Aggregate: | \$2,000,000 |

This coverage shall remain in place for at least two years after the project is complete.

- | | | |
|----|---|-------------|
| d. | Commercial Automobile Liability Limits | |
| | Bodily Injury & Property Damage Combined Single Limit | \$1,000,000 |
| | Medical Payments per person | \$ 5,000 |
| | Uninsured/Underinsured Motorist | \$ 100,000 |

Coverage is to be provided on Business Auto, Garage, or Truckers form. Coverage provided should be at least as broad as found in ISO form CA0001 (BAP), CA0005 (Garage) or CA0012 (Trucker) including coverage for owned, non-owned, & hired autos.

38. Insurance required by this Contract shall be primary coverage, unless otherwise specified, and shall specify that in the event of payment for any loss under the coverage provided, the insurance company shall have no right of recovery against CCCWP and CCCWP or its insurers. All policies of insurance under this Contract shall be provided by a reputable insurance company or companies qualified to conduct business in Colorado. CCCWP reserves the right, but shall not have the duty, to reject any insurer which it finds to be unsatisfactory and insist that the Contractor substitute another insurer that is reasonably satisfactory to CCCWP. Property and Liability Insurance Companies shall be licensed to do business in Colorado and shall have an AM Best rating of not less than A- VI. This insurance shall be maintained in full force and effect during the term of this Contract and for the additional periods set forth herein and shall protect the Contractor, its agents, employees and representatives from claims for damages for personal injury and wrongful death and for damages to property arising in any manner from negligent or wrongful acts or omissions of the Contractor, its agents, employees, and representatives in the performance of the services covered herein.

39. All Insurance policies (except Workers' Compensation and Professional Liability) shall include CCCWP, Interested Landowners, Affected Landowners, CCCWP and its officers, directors, agents and employees as additional insureds as their interests may appear. The additional insured endorsement should be at least as broad as ISO form CG2010 for General Liability coverage and similar forms for Commercial Auto and Umbrella Liability.

40. Automobile insurance shall, without limitation, cover all automobiles used in performing any services under this Contract.

41. In the case of any claims-made insurance policies, the Contractor shall procure necessary retroactive dates, tail coverage and extended reporting periods to cover a period at least two (2) years beyond the expiration date of this Contract. This obligation shall survive the termination or expiration of this Contract.

42. The Contractor shall not cancel, materially change, or fail to renew required insurance coverages. The Contractor shall notify the Project Manager of any material reduction or exhaustion of aggregate limits. Should the Contractor fail to immediately procure other insurance, as specified, to substitute for any policy canceled before final payment to the Contractor, CCCWP may procure such insurance and deduct its cost from any sum due to the Contractor under this Contract.

43. Certificates showing that the Contractor is carrying the above-described insurance, and the status of the additional insureds, shall be furnished to CCCWP prior to the execution of this Contract by CCCWP. Certificates of insurance on all policies shall give CCCWP written notice of not less than fifteen (15) days prior to cancellation or change in coverage. The Contractor shall forthwith obtain and submit proof of substitute insurance in the event of expiration or cancellation of coverage.

H. *[Paragraph H is not applicable to this Contract and is intentionally omitted and left blank]*

BOOKS AND RECORDS OF THE CONTRACTOR

44. The Contractor agrees to maintain such records and follow such procedures as may be required under the state's CDBG-DR Grant Agreement and any such procedures as CCCWP 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.

45. 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 five years after final payment is made by CCCWP to the Contractor under this Contract project, unless a longer period is required to resolve audit findings or litigation. In such cases, CCCWP shall request a longer period of record retention.

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

47. CCCWP and duly authorized officials of the state and federal government shall have full access to and the right to examine any pertinent documents, papers, records and books of the Contractor involving transactions related to the CDBG Grant Agreement or this contract.

TIME FOR COMPLETION AND LIQUIDATED DAMAGES

48. Time is of the essence of each and every portion of this Contract. It is hereby understood and mutually agreed, by and between the Contractor and CCCWP, that the date of beginning and the time for completion as specified in Section IV of this Contract of the work to be done hereunder are essential conditions of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the "Notice to Proceed." The Contractor agrees that the Work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will insure full completion thereof within the time specified. It is expressly understood and agreed that the time for the completion of the Work set forth in this Contract is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality. Upon becoming aware of any reason why there may be a delay in the completion of any portion of the Work under this Contract, the Contractor shall notify the Project Manager and the Coalition's Representative of the nature and cause of the delay.

If the Contractor refuses, neglects or fails for any reason to complete the work within the time specified, or any proper extension thereof granted by CCCWP in its sole discretion, then the Contractor shall pay CCCWP the amount specified in this Contract, not as a penalty but as liquidated damages for such breach of contract. Such amount is fixed and agreed upon by and between the Contractor and CCCWP because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages CCCWP would in such event sustain.

PROJECT COMPLETION AND FINAL PAYMENT

49. Upon completion of work on the Project, the Contractor shall, within ten (10) calendar days send CCCWP notice that the Project has been completed (the “**Contractor’s Notice of Completion**”). This Notice of Completion shall be accompanied by an invoice from the Contractor for the balance of the Contract Price increased or decreased by any adjustment of such Contract Price made by any Change Order. It shall also be accompanied by an affidavit from the Contractor stating that all subcontractors, vendors, persons or firms who have supplied labor or materials for the work on the Project have been fully paid or satisfactorily secured and that all taxes, if any, have been paid. The Contractor’s Notice of Completion shall also be accompanied by a statement from the surety company that provided the Contractor’s payment and performance bonds, as required under Section VI of this Contract, consenting to final payment by CCCWP under this Contract.

50. Upon receipt of a Contractor’s Notice of Completion, CCCWP shall:

- a. Be entitled to publish a Notice of Final Settlement in accordance with the provisions of Colorado Revised Statutes Section 38-26-107;
- b. Be entitled to inspect the Affected Properties and provide written notice to the Contractor of either (i) any observed deficiencies in the work to have been performed under this Contract or (ii) the acceptance by CCCWP of the work performed under this Contract; provided, however, that such written notice shall not waive any claims CCCWP may otherwise have against the Contractor under this Contract.

51. Upon the expiration of the time allowed for claims to be made under the provisions of Colorado Revised Statutes Section 38-26-107 or within three (3) calendar days after receipt by CCCWP of reimbursement of the Contractor’s final invoice pursuant to the CDBG Grant Agreement, whichever comes later, CCCWP shall pay the Contractor the balance of the Contract Price increased or decreased by any adjustment of such Contract Price made by any Change Order less the amount of any claims received by CCCWP in accordance with the provisions of Colorado Revised Statutes Section 38-26-107.

52. By submitting a Contractor’s Notice of Completion to CCCWP, the Contractor, by such act, agrees to indemnify and save CCCWP, CCCWP, the Affected Landowners, the Interested Landowners and their respective agents harmless from any and all claims growing out of any demand (whether with merit or not) from any subcontractor, laborers, workmen, mechanics, material men and furnishers of machinery, equipment, tools, supplies or materials incurred by the Contractor in the performance of the work under this Contract.

53. The acceptance by the Contractor of final payment shall be and shall operate as a release of CCCWP of all claims and all liability to the Contractor for all claims for all work performed and materials provided in connection with this Contract.

AUDITS AND INSPECTIONS

54. CCCWP, its independent certified public accounts, the State Auditor of the State of Colorado, DHSEM and HUD or their delegates shall have the right to review and monitor the financial records, payroll records, records of personnel, invoice of materials and other components of the work and services provided and undertaken as part of the CDBG-DR project and this Contract, by whatever legal and reasonable means are deemed expedient by such persons. Such persons shall also be permitted to inspect all work and worksites at any time deemed appropriate by such persons.

SUSPENSION OF THE CONTRACT

55. If the Contractor fails to comply with the terms and conditions of this contract, or whenever the Contractor is unable to substantiate full compliance with provisions of this contract, CCCWP may suspend the contract pending corrective actions or investigation, effective not less than seven (7) days following written notification to the Contractor or its authorized representative. The suspension will remain in full force and effect until the Contractor has taken corrective action to the satisfaction of CCCWP and is able to substantiate its full compliance with the terms and conditions of this contract. No obligations incurred by the Contractor or its authorized representative during the period of suspension will be allowable under the contract except:

- a. Reasonable, proper and otherwise allowable costs which the Contractor could not avoid during the period of suspension;
- B. If upon investigation, the Contractor is able to substantiate complete compliance with the terms and conditions of this contract, otherwise allowable costs incurred during the period of suspension will be allowed; and
- C. In the event all or any portion of the work prepared or partially prepared by the Contractor is suspended, abandoned or otherwise terminated, CCCWP shall pay the Contractor for work performed to the satisfaction of CCCWP, in accordance with the percentage of the work completed.

TERMINATION OF THE CONTRACT

56. This Contract may be terminated by either party for a material breach of this Contract by the other party not caused by any action or omission of either the terminating party or DHSEM by giving the other party written notice at least three (3) days in advance of the termination date. The termination notice shall specify in reasonable detail each such material breach. In the event of such termination by either party, the Contractor shall promptly deliver to CCCWP all drawings, computer programs, computer input and output, analysis, plans, photographic images, tests, maps, surveys, and written materials of any kind generated in the performance of services under this Contract up to and including the date of termination. If this Contract is so terminated by the Contractor, it will be paid for all services rendered up to the date of termination, except as set forth in Section VI above. If this Contract is so terminated by CCCWP, the Contractor will be paid for all services rendered to the date of termination, except those services which, in CCCWP's judgment, constituted the grounds, in whole or in part, of the notice of termination, and except as set forth in Section V, above. Upon such payment, all obligations of CCCWP to the Contractor under this Contract shall cease.

57. In addition to the foregoing, this Contract may be terminated by CCCWP for its convenience and without cause of any nature by giving the Contractor written notice at least seven days in advance of the termination date. In the event of such termination, the Contractor will be paid for all services rendered to the date of termination, except as set forth in Section V, above, and upon such payment, all obligations of CCCWP to the Contractor under this Contract shall cease. Furthermore, in the event of such termination, the Contractor shall promptly deliver to CCCWP all drawings, computer programs, computer input and output, plans, photographic images, analyses, test, maps, surveys, and written materials of any kind generated in the performance of its services under this Contract up to and including the date of termination.

EXHIBIT VIII-I

INSTRUCTIONS TO BIDDERS

USE OF SEPARATE BID FORMS

These bid documents include a complete set of bidding and contract forms which are for the convenience of bidders. These forms are not to be detached from the Contract Document, filled out, or executed. SEPARATE COPIES OF BID FORMS ARE FURNISHED FOR THAT PURPOSE.

The documents to be submitted in a formal bid package are: appropriate bid documents (lump sum or unit price), bid bond, contractor/subcontractor certifications, insurance, and a list of subcontractors.

INTERPRETATIONS OF ADDENDA

No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the Coal Creek Canyon Watershed Partnership (CCCWP). Any inquiry received seven or more days prior to the date fixed for opening of Bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents, and when issued, will be on file in the office of the CCCWP at least five days before Bids are opened. In addition, all Addenda will be mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.

INSPECTION OF SITE

Each Bidder should visit the site of the proposed work and fully acquaint themselves with the existing conditions there relating to construction and labor, and should fully inform themselves as to the facilities involved, the difficulties and restrictions attending the performance of the Contract. The Bidder should thoroughly examine and familiarize himself with the Drawings, Technical Specifications, and all other Contract Documents. The Contractor by the execution of the Contract shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument or to visit the site and acquaint himself with the conditions there existing and the CCCWP will be justified in rejecting any claim based on facts regarding which he should have been on notice as a result thereof.

ALTERNATIVE BIDS

No alternative bids will be considered unless alternative bids are specifically requested by the technical specifications.

BIDS

All Bids must be submitted on forms supplied by the CCCWP and shall be subject to all requirements of the Contract Documents, including the Drawings, and these INSTRUCTIONS TO BIDDERS. All Bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Bid Form by the Bidder.

Bid Documents including the Bid, the Bid Guaranty, Federal Labor Standards HUD-4010, the Non-Collusion Affidavit and the Statement of the Bidder's Qualifications (if requested) shall be enclosed in envelopes (outer and inner), both of which shall be sealed and clearly labeled with the words "Bid Documents", project number, name of Bidder, and the date and time of bid opening in order to guard against premature opening of the Bid.

EXHIBIT VIII-I, Cont.

The CCCWP may consider as irregular any Bid on which there is an alteration of or departure from the Bid Form hereto attached and at its option may reject the same. If the Contract is awarded, it will be awarded by the CCCWP to a responsible Bidder on the basis of the lowest Bid and the selected Alternative Bid items, if any. The Contract will require the completion of the work according to the Contract Documents.

Each Bidder shall include in his Bid the following information:

PRINCIPALS

Names
Home Address, including City, State & ZIP Code

FIRM

Name & DUNS Number
Address, including City, State & ZIP Code

BID GUARANTY

The Bid must be accompanied by a **Bid guaranty, which shall not be less than five (5) percent of the amount of the Bid**. At the option of the Bidder, **the guaranty may be a verified check, bank draft, negotiable U.S. Government Bond (at par value), or a bid bond, (EXHIBIT VIII-M)**. A guaranty or a surety company listed in the latest issue of U.S. Treasury Circular 570 shall secure the Bid bond, <http://www.fms.treas.gov/c570/c570.html>. The amount of such Bid bond shall be within the maximum amount specified for such Company in said Circular 570. No Bid will be considered unless it is accompanied by the required guaranty. Certified bank drafts or checks must be made payable to the order of Coal Creek Canyon Watershed Partnership to be accepted. The Bid guaranty shall insure the execution of the agreement and the furnishing of the surety bond or bonds by the successful Bidder, all as required by the Contract Documents.

Revised Bids submitted before the opening of Bids, whether forwarded by mail or telegram, if representing an increase in excess of two (2) percent of the original Bid, must have the Bid guaranty adjusted accordingly; otherwise the Bid will not be considered.

Certified checks or bank drafts, or the amount thereof, Bid bonds and negotiable U.S. Government bonds of unsuccessful Bidders will be returned as soon as practical after the opening of the Bids.

COLLUSIVE AGREEMENTS

Each Bidder submitting a Bid to the CCCWP for any portion of the work contemplated by the documents on which bidding is based shall execute and attach thereto, an affidavit substantially in the form herein provided, to the effect that he has not entered into a collusive agreement with any other person, firm, or corporation in regard to any Bid submitted. **(EXHIBIT VIII-O.3)**

Before executing any subcontract the successful Bidder shall submit the name of any proposed subcontractor for prior approval and an affidavit substantially in the form provided herein.

EXHIBIT VIII-I, Cont.

STATEMENT OF BIDDER'S QUALIFICATIONS

Each Bidder shall **upon request of the CCCWP submit on the form furnished for that purpose, a statement of the Bidder's qualifications**, his experience record in constructing the type of improvements embraced in the contract, his organization and equipment available for the work contemplated, and, when specifically requested by the CCCWP, a detailed financial statement **EXHIBIT VIII-I.2**. The CCCWP shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his obligations under the Contract and the Bidder shall furnish the CCCWP all such information and data for this purpose as it may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the CCCWP that the Bidder is qualified to carry out properly the terms of the Contract.

UNIT PRICES

The unit price for each of the several items in the proposal of each Bidder shall include its pro-rata share of overhead so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price Bid represents the total Bid. Any Bid not conforming to this requirement may be rejected as informal. THE SPECIAL ATTENTION OF ALL BIDDERS IS CALLED TO THIS PROVISION, FOR SHOULD CONDITIONS MAKE IT NECESSARY TO REVISE THE QUANTITIES, NO LIMIT WILL BE FIXED FOR SUCH INCREASED OR DECREASED QUANTITIES NOR EXTRA COMPENSATION ALLOWED, PROVIDED THE NET MONETARY VALUE OF ALL SUCH ADDITIVE AND SUBTRACTIVE CHANGES IN QUANTITIES OF SUCH ITEMS OF WORK (i.e., difference in cost) SHALL NOT INCREASE OR DECREASE THE ORIGINAL CONTRACT PRICE BY MORE THAN TWENTY FIVE (25) PERCENT, except for work not covered in the Drawings and Technical Specifications as provided for in the Contract Documents. (If lump-sum Bids are deemed advisable due to local conditions, this section must be revised accordingly.)

CORRECTIONS

Erasures or other changes in the Bids must be explained or noted over the signature of the Bidder.

TIME FOR RECEIVING BIDS

Bids received prior to the advertised hour of opening will be securely kept sealed. The employee whose duty it is to open them will decide when the specified time has arrived, and no Bid received hereafter will be considered; except that when a Bid arrives by mail after the time fixed for opening, but before the reading of all other Bids is completed, and it is shown to the satisfaction of the CCCWP that the non-arrival time was due solely to delay in the mails for which the Bidder is not responsible, such Bid will be received and considered.

Bidders are cautioned that, while email modifications of Bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the Bid so modified or amended, subject to rejection.

OPENING OF BIDS

At the time and place fixed for the opening of Bids, the CCCWP will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.

EXHIBIT VIII-I, Cont.

WITHDRAWAL OF BIDS

Bids may be withdrawn on written or email request dispatched by the Bidder in time for delivery in the normal course of business to the time fixed for opening; provided, that written confirmation of any email withdrawal over the signature of the Bidder is placed in the mail and postmarked prior to the time set for Bid opening. The Bid guaranty of any Bidder withdrawing his Bid in accordance with the foregoing conditions will be returned promptly.

AWARD OF CONTRACT: REJECTION OF BIDS

The Contract will be awarded to the responsible Bidder submitting the lowest Bid complying with the conditions of the Invitation for Bids. The Bidder to whom the award is made will be notified at the earliest possible date. The CCCWP, however, reserves the right to reject any and all bids and to waive any informality in Bids received whenever such rejection or waiver is in its interest.

The CCCWP reserves the right to consider as unqualified to do the work of general construction any Bidder who does not habitually perform with his forces the major portions of the work involved in construction of the Improvements embraced in this Contract.

EXECUTION OF AGREEMENT: PERFORMANCE AND PAYMENT BONDS

Sections 38-26-105 and 38-26-106, CRS 2013, as amended, shall apply to all grants that require the contracting (or subcontracting) for construction or facility improvements. These sections require:

A PAYMENT BOND ON THE PART OF THE CONTRACTOR FOR PAYMENT OF ALL AMOUNTS LAWFULLY DUE WHEN THE CONTRACT PRICE IS FOR MORE THAN \$50,000. A "payment bond" is one executed in connection with a contractor to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract. (Section 38-26-105).

A PERFORMANCE BOND ON THE PART OF THE CONTRACTOR FOR NOT LESS THAN ONE-HALF (½) OF THE TOTAL AMOUNT PAYABLE BY THE TERMS OF THE CONTRACT WHEN THE CONTRACT PRICE IS FOR MORE THAN \$50,000. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract. (Section 38-26-106). Although State Statute requires only a 50 percent performance bond, the Department suggests all performance bonds be in payment of 100 percent of the contract price. The bonds shall be obtained from companies holding certificates of authority as acceptable sureties. A certified or cashier's check or a bank money order may be accepted in lieu of a bond.

Sample forms of both payment and performance bonds can be found in this guidebook beginning on **Exhibits VIII-N**

PRE-CONSTRUCTION CONFERENCE

Within ten calendar days of contract execution and prior to the commencement of work, the contractor or his representative and all known subcontractors shall attend a Pre-construction Conference with the Owner and/or his representative. The conference will serve to acquaint the participants with the general plan of contract administration and requirements under which the construction operation is to proceed,

and will inform the contractor and subcontractor in detail of their obligations under Indian preference, equal employment opportunity, and labor standards provisions, if applicable. **(EXHIBITS VIII-Q & Q.1)**

The date, time, and place of the conference will be furnished to the contractor by the Owner.

TAXES

All applicable state and local taxes shall be included in the bid.

WAGES AND SALARIES

Attention of Bidders is particularly called to the requirements concerning the payment of not less than the prevailing wage and salary rates specified in the Contract Documents and the conditions of employment with respect to certain categories and classifications of employees.

The rates of pay set forth under GENERAL CONDITIONS are the minimums to be paid during the life of the Contract. It is therefore the responsibility of Bidders to inform themselves as to Davis-Bacon and Related Act requirements as well as to the local labor conditions such as the length of work day and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustments of rates.

EQUAL EMPLOYMENT OPPORTUNITY

Attention of Bidders is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin. The contractor will be required to take affirmative action to ensure that employees and applicants for employment are not discriminated against.

"SECTION 3" COMPLIANCE IN THE PROVISION OF TRAINING, EMPLOYMENT AND BUSINESS OPPORTUNITIES

- Section 3 requires recipients and contractors to make a **good faith effort** to utilize Section 3 area residents as trainees and employees in connection with this project. **(EXHIBIT VIII-O.2A)**
- Section 3 also requires recipients and contractors to make a **good faith effort** to award contracts to Section 3 business concerns for work in connection with this project. **(EXHIBIT VIII-O.2)**
- Section 3 requires recipients and contractors to document their Section 3 **good faith efforts** taken and the results of these actions.
- For purposes of Section 3 training and employment, the Section 3 area is the unit of general local government. For purposes of contracting, the Section 3 area is the county in which the project is located.

Compliance with this requirement **should not** be construed to mean that the state's grantee can exclude all outside the Section 3 trainees, employees, and contractors in favor of local concerns. It is the policy of this program that contractors hired under this program be the **LOWEST QUALIFIED BIDDER** regardless of location. The state grantee is responsible for making a **good faith effort TO NOTIFY** potential beneficiaries, that the grantee's project is available. This should be done in conjunction with the normal bidding process. The actual selection of the **LOWEST QUALIFIED BIDDER** must be done treating all bidders equally. **BONUS OR PREFERENCE POINTS FOR BEING IN A "SECTION 3" AREA NOT ALLOWED!**

EXHIBIT VIII-M

BID BOND

KNOW ALL PEOPLE BY THESE PRESENT, that we, the undersigned _____
as Principal, and _____ as Surety, are hereby held
and firmly bound unto _____ as Owner in the penal
sum of _____ Dollars (\$ _____) for the
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, our heirs,
executors, administrators, successors and assigns. Signed this _____ day of _____ 20____.

The condition of the above obligation is such that whereas the Principal has submitted to
_____ a certain bid, attached hereto and hereby made
a part hereof to enter into a contract in writing, for the

NOW THEREFORE,

- (a) If said Bid shall be rejected, or in the alternate,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid,

that this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS THEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these present to be signed by their proper officers, the day and year first set forth above.

Principal (L.S.)

(SEAL)

Surety

By: _____

EXHIBIT VIII-N

PERFORMANCE AND PAYMENT BONDING REQUIREMENTS

Colorado Department of Homeland Security and Emergency Management regulations require a Grantee and/or its contractor (or subcontractors) performing the work to secure the following:

PAYMENT BOND. A "payment bond" is one executed in connection with a contractor to assure payment, as required by law, of all persons supplying labor and material in the execution of the work provided for in the contract. A Payment Bond is required on the part of the contractor for one-hundred percent (100%) of the contract price. The bond shall be obtained from a company holding a certificate of authority as an acceptable surety. A certified or cashier's check or a bank money order may be accepted in lieu of a bond.

PERFORMANCE BOND. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract. A Performance Bond is required on the part of the contractor for one-hundred percent (100%) of the contract price. The bond shall be obtained from a company holding a certificate of authority as an acceptable surety. A certified or cashier's check or a bank money order may be accepted in lieu of a bond.

WAIVER OPTION. If the total cost of the Project is less than \$50,000.00, Grantee may submit a written request to the State requesting waiver of these bond requirements in exchange for an irrevocable letter of credit.

(EXHIBIT VIII-N, continued)

PERFORMANCE BOND

KNOW ALL PEOPLE BY THESE PRESENTS: that

(Name of Contractor or Company)

(Address)

a _____ hereinafter called Principal, and _____
(Corporation/Partnership) (Name of Surety Company)

(Address)

hereinafter called SURETY, are held and firmly bound unto

(Name of Recipient)

(Recipient's Address)

hereinafter called OWNER, in the penal sum of \$ _____ Dollars in lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, successors, and assigns, jointly and severally, firmly in these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER dated the _____ day of _____ 20 _____, a copy of which is hereto attached and made a part hereof for the construction of:

PROJECT NAME: _____

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties in all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this

BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of _____ 20_____.

ATTEST:

Principal

Principal Secretary

By _____

(SEAL)

Witness as to Principal

Address

Address

ATTEST:

Surety

Witness as to Surety

By _____
Attorney in Fact

Address

Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

(EXHIBIT VIII-N, Continued)

PAYMENT BOND

KNOW ALL PEOPLE BY THESE PRESENTS: that

(Name of Contractor or Company)

(Address)

a _____ hereinafter called Principal, and _____
(Corporation/Partnership) (Name of Surety Company)

(Address)

hereinafter called SURETY, are held and firmly bound unto

(Name of Recipient)

(Recipient's Address)

hereinafter called OWNER, in the penal sum of \$ _____ Dollars in lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, successors, and assigns, jointly and severally, firmly in these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER dated the _____ day of _____ 20_____, a copy of which is hereto attached and made a part hereof for the construction of:

PROJECT NAME:

NOW THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUB-CONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK whether by SUB-CONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of _____ 19_____.

ATTEST:

Principal

Principal Secretary

By _____

(SEAL)

Witness as to Principal

Address

Address

ATTEST:

Surety

Witness as to Surety

By _____
Attorney in Fact

Address

Address

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

EXHIBIT VIII-O

CONTRACTOR/SUBCONTRACTOR CERTIFICATIONS

Grantee must require that prospective bidders complete and incorporate the following certifications as part of their bid submittal package.

1. EQUAL EMPLOYMENT OPPORTUNITY - EXECUTIVE ORDER 11246
2. SECTION 3 & SEGREGATED FACILITIES CERTIFICATION
3. NONCOLLUSION AFFIDAVIT OF PRIME CONTRACTOR

EXHIBIT VIII-O, Cont.

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 (30 F.R. 12319-25). The implementing rules and regulations provide that any bidder or prospective contractor, or any of their proposed subcontractors, shall state as an initial part of the bid or negotiations of the contract whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicates that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven calendar days after bid opening. No contract shall be awarded unless such a report is submitted.

CERTIFICATION BY BIDDER

NAME AND ADDRESS OF BIDDER (Include ZIP Code)

-
1. Bidder has participated in a previous contract or subcontractor subject to the Equal Opportunity Clause.
_____ Yes _____ No
-
2. Compliance reports were required to be completed in connection with such contract or subcontract.
_____ Yes _____ No
-
3. Bidder has filled all compliance reports due under applicable instructions.
_____ Yes _____ No
-
4. Have you ever been or are you being considered for sanction due to violation of Executive Order 11246, as amended.
_____ Yes _____ No
-

NAME AND TITLE OF SIGNER (Please type)

SIGNATURE

DATE

EXHIBIT VIII-O, Cont.

**CERTIFICATION OF CONTRACTOR REGARDING
SECTION 3 AND SEGREGATED FACILITIES**

Name of Contractor or Sub-Contractor

Project Name and Number

The undersigned hereby certifies that:

- (a) Section 3 provisions are included in the Contract if this is a Section 3 project.
- (b) No segregated facilities will be maintained as required by Title VI of the Civil Rights Act of 1964.

Name and Title of Signer (Type of Print)

Signature

Date

EXHIBIT VIII-O, Cont.

NONCOLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)
County of _____) ss.

_____ being first duly sworn, deposes and says that:

- (1) He is _____ of _____
_____, the Bidder that has submitted the attached Bid;
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
- (3) Such Bid is genuine and is not a collusive or sham Bid;
- (4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affined, has in any way colluded, conspired, connived or agreed, directly or indirectly with another Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix an overhead, profit or cost element of the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the (Local Public Agency) or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including is affined.

(Signed) _____

Title _____

Subscribed and sworn to me this

_____ day of _____, 19____

By: _____
Notary Public

My Commission expires: _____

CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents of all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, United States Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

SIGNATURE: _____

COMPANY NAME: _____

DATE: _____

Federal Labor Standards Provisions

U.S. Department of Housing and Urban Development Office of Labor Relations

Applicability

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 C FR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conform ed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH- 1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible, place where it can be easily seen by the workers.

(ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215- 0140.)

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider a s part

of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis- Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140.)

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the

contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section I(b)(2)(B) of the Davis-bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section I(b)(2)(B) of the Davis- Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been

communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017.)

(ii) (a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esalwhd/forms/lwh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour

Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5 (a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5 (a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph A.3.(ii)(b).

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph A.3.(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who

is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by

form HUD-4010 (06/2009)

the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3 which are incorporated by reference in this contract

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs 1 through 11 in this paragraph A and such other clauses as HUD or its designee may by appropriate instructions require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be

awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010. Title 18, U.S.C., "Federal Housing Administration transactions", provides in part: "Whoever, for the purpose of . . . influencing in any way the action of such Administration . . . makes, utters or publishes any statement knowing the same to be false . . . shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. The provisions of this paragraph B are applicable where the amount of the prime contract exceeds \$100,000. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph,

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

C. Health and Safety. The provisions of this paragraph C are applicable where the amount of the prime contract exceeds \$100,000.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96). 40 USC 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

General Decision Number: CO160012 12/09/2016 CO12

Superseded General Decision Number: CO20150012

State: Colorado

Construction Type: Heavy

Counties: Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, El Paso, Jefferson, Larimer, Mesa, Pueblo and Weld Counties in Colorado.

HEAVY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.15 for calendar year 2016 applies to all contracts subject to the Davis-Bacon Act for which the solicitation was issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.15 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2016. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/08/2016
1	01/15/2016
2	01/22/2016
3	03/11/2016
4	03/18/2016
5	03/25/2016
6	05/06/2016
7	06/03/2016
8	09/16/2016
9	10/07/2016
10	11/11/2016
11	12/09/2016

ASBE0028-001 07/01/2016

	Rates	Fringes
Asbestos Workers/Insulator (Includes application of all insulating materials, protective coverings, coatings and finishings to all types of mechanical systems).....	\$ 29.73	13.93

 BRCO0007-004 01/01/2016

ADAMS, ARAPAHOE, BOULDER, BROOMFIELD, DENVER, DOUGLAS AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 26.01	7.71

BRCO0007-006 05/01/2016

EL PASO AND PUEBLO COUNTIES

	Rates	Fringes
BRICKLAYER.....	\$ 24.95	9.39

ELEC0012-004 09/01/2016

PUEBLO COUNTY

	Rates	Fringes
ELECTRICIAN		
Electrical contract over		
\$1,000,000.....	\$ 28.00	11.00+3%
Electrical contract under		
\$1,000,000.....	\$ 24.85	11.00+3%

ELEC0068-001 06/01/2016

ADAMS, ARAPAHOE, BOULDER, BROOMFIELD, DENVER, DOUGLAS,
JEFFERSON, LARIMER, AND WELD COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 33.85	13.99

ELEC0111-001 01/01/2016

	Rates	Fringes
Line Construction:		
Groundman.....	\$ 18.79	22.25%+\$5.45
Line Equipment Operator.....	\$ 29.40	22.25%+\$5.45
Lineman and Welder.....	\$ 42.14	25.25%+\$5.45

ELEC0113-002 06/01/2015

EL PASO COUNTY

	Rates	Fringes
ELECTRICIAN.....	\$ 30.00	14.95

ELEC0969-002 06/01/2015

MESA COUNTY

	Rates	Fringes
ELECTRICIAN.....	\$ 24.00	7.92

ENGI0009-001 10/23/2013

	Rates	Fringes
Power equipment operators:		
Blade: Finish.....	\$ 25.04	9.15
Blade: Rough.....	\$ 24.73	9.15
Bulldozer.....	\$ 24.73	9.15
Cranes: 50 tons and under..	\$ 24.88	9.15
Cranes: 51 to 90 tons.....	\$ 25.04	9.15
Cranes: 91 to 140 tons.....	\$ 25.19	9.15
Cranes: 141 tons and over...	\$ 25.97	9.15
Forklift.....	\$ 24.37	9.15
Mechanic.....	\$ 24.88	9.15
Oiler.....	\$ 24.01	9.15
Scraper: Single bowl under 40 cubic yards.....	\$ 24.88	9.15
Scraper: Single bowl, including pups 40 cubic yards and over and tandem bowls.....	\$ 25.04	9.15
Trackhoe.....	\$ 24.88	9.15

IRON0024-003 11/01/2013

	Rates	Fringes
Ironworkers:.....	\$ 24.80	18.77
Structural		

LABO0086-001 05/01/2009

	Rates	Fringes
Laborers:		
Pipelayer.....	\$ 18.68	6.78

PLUM0003-005 06/01/2016ADAMS, ARAPAHOE, BOULDER, BROOMFIELD, DENVER, DOUGLAS,
JEFFERSON, LARIMER AND WELD COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 38.43	15.19

PLUM0058-002 07/01/2016

EL PASO COUNTY

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 35.60	13.65

PLUM0058-008 07/01/2016

PUEBLO COUNTY

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 35.60	13.65

PLUM0145-002 07/01/2016		

MESA COUNTY

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 35.17	11.70

PLUM0208-004 06/01/2015		

ADAMS, ARAPAHOE, BOULDER, BROOMFIELD, DENVER, DOUGLAS,
JEFFERSON, LARIMER AND WELD COUNTIES

	Rates	Fringes
PIPEFITTER.....	\$ 35.35	13.39

* SHEE0009-002 07/01/2016		

	Rates	Fringes
Sheet metal worker.....	\$ 32.56	15.96

TEAM0455-002 07/01/2015		

	Rates	Fringes
Truck drivers:		
Pickup.....	\$ 19.66	4.02
Tandem/Semi and Water.....	\$ 20.29	4.02

SUCO2001-006 12/20/2001		

	Rates	Fringes
BOILERMAKER.....	\$ 17.60	
Carpenters:		
Form Building and Setting...	\$ 16.97	2.74
All Other Work.....	\$ 15.14	3.37
Cement Mason/Concrete Finisher...	\$ 17.31	2.85
IRONWORKER, REINFORCING.....	\$ 18.83	3.90
Laborers:		
Common.....	\$ 11.22	2.92
Flagger.....	\$ 8.91	3.80
Landscape.....	\$ 12.56	3.21
Painters:		
Brush, Roller & Spray.....	\$ 15.81	3.26
Power equipment operators:		
Backhoe.....	\$ 16.36	2.48

Front End Loader.....	\$ 17.24	3.23
Skid Loader.....	\$ 15.37	4.41

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which

these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request

review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION