

CONSTRUCTION SPECIFICATIONS

THE PROJECT

The Mineral County Fairgrounds Association (MCFA) property is located about 0.75 miles south of the city limits of Creede in Mineral County, Colorado southeast of the junction of Airport Road and Highway 149 (Drawing 100). This property is henceforth referred to as “the Site” and is outlined on Drawing 110. The Site covers almost 46 acres in the southwest quarter of Section 6, Township 41 North, Range 1 East, (N.M.P.M.). The elevation of the Site is approximately 8,640 feet.

The Site is zoned rural by Mineral County. The Site has been and is currently open space. Adjacent property uses include rural agriculture and open space to the east, the local airport and residential development to the west, open space to the north, and a recreational vehicle park to the south.

About 28 acres of the Site is located within the Willow Creek floodplain, and the remainder of the Site is a raised bench. A 0.16 mile portion of Willow Creek flows through the northeastern corner of the Site and converges southeast of the Site near the confluences with the Rio Grande River. This portion of Willow Creek is highly active and braided, and much of the floodplain alluvium consists of coarse gravels and cobbles. Wastewater treatment lagoons for Creede are located just to the north of the Site on the western edge of the floodplain. The effluent from the lagoons was directed in the 1980s into an old channel that transverses the property and now supports a string of wetland type plants.

MCFA has elected to voluntarily conduct a cleanup at the site sufficient to support a post-cleanup land use classification of “recreational use.” The post-VCUP site will be redeveloped into the county fairgrounds.

Specific project components include: Area A - wetlands reconstruction, Area B – Northern tip of Upper Bench, Area C – Stormwater conveyance channel, Area D - Contaminated soils along the Willow Creek floodplain, Area E - Contaminated soil to be capped in place, Area F – Upper Bench Paved Parking Area, Area G – Upper Bench

CONSTRUCTION SPECIFICATIONS

Horse Trailer Parking Area, Area H – Northeast corner of property to be restored at a later date, Area I – Offsite borrow area. (Drawing 110)

The VCUP Action is being carried out on land owned by MCFA (“Owner”). Remediation design, VCUP application, and construction observation services are being provided by American Geological Services, Inc. (“AGS”) under contract to the Owner. All aspects of the VCUP Action are to be accomplished under the authority of the Voluntary Cleanup and Redevelopment Act (Colorado Revised Statutes 25-16-301 to 311) as administered by the Colorado Department of Public Health and Environment (“CDPHE”) and are subject to the approval thereof.

Site access is via junction of Airport Road and Highway 149 (Drawing 100).

Inasmuch as certain work elements are to be conducted within or adjacent to wetland zones within the Willow Creek floodplain, aspects of the VCUP Plan have been presented to and approved under a Nationwide Permit No. 38 pursuant to Section 404 of the Clean Water Act (33 CFR 330) by the U.S. Army Corps of Engineers (USA COE, Durango, Colorado office, dated December 6, 2006). The USA COE has assign Action No. 2006 00502 to this activity. Contractor shall perform all site construction activities in compliance with this permit. MCFA shall maintain responsibility for performing long term monitoring activities and submission of required monitoring reports to the USA COE.

CONSTRUCTION SPECIFICATIONS

100 – MOBILIZATION

This section addresses the general requirements associated with pre-construction activities and mobilization to the MCFA property for purposes of accomplishing the MCFA Voluntary Cleanup Action (“VCUP Action”).

110 General

Contractor shall mobilize all equipment, manpower, and materials and supplies to the Site necessary to complete the MCFA Voluntary Cleanup Action in accordance with the MCFA Modified Voluntary Cleanup Application (AGS; January 24, 2007), as approved. The approval to the Modified Voluntary Cleanup Act Application for the MCFA property and the terms and conditions of the Voluntary Cleanup Plan Approval for the MCFA property (CDPHE; 03/28/2007 Memo) are incorporated herein.

Contractor shall field stake and clearly delineate any and all common boundaries between the MCFA property and surrounding surface ownership proximal to construction activity areas. Contractor shall also stake and delineate the Willow Creek Corridor.

120 Health and Safety

Contractor shall develop, maintain in effect, and adhere to a site-specific Health and Safety Plan (HASP) commensurate with the work effort to include emergency response procedures, personnel training, and recordkeeping. The principal health concern involves the lead contaminated soils and the potential for inhalation of dust generated by these activities. Contractor shall maintain a copy of the HASP at the Site, and make same available for review by interested parties on request. Onsite personnel shall be OSHA certified.

CONSTRUCTION SPECIFICATIONS

130 Protection of the Environment

Contractor shall perform all work in accordance with applicable laws, regulations, and ordinances.

The Willow Creek Corridor is to be protected at all times by adequate sediment control features, and all effort shall be made to ensure no work is conducted within the corridor.

130.10 Stormwater Management

Contractor shall develop, maintain in effect, and adhere to a Stormwater Management Plan, to include Best Management Practice (BMP) sediment controls, personnel training, and recordkeeping. Contractor will obtain, maintain in effect, and adhere to applicable Construction Stormwater Permit(s) from the Colorado Department of Public Health and Environment.

130.20 Site Access and Traffic Control

Contractor shall develop, maintain in effect, and adhere to a Traffic Control Plan for any activities that will affect Airport Road, Highway 149 or other public roads. The Traffic Control Plan will meet all Colorado Department of Transportation requirements. Contractor shall develop, maintain in effect, and adhere to a Site Access Plan to insure that only authorized personnel are allowed access to the site.

130.30 Equipment Decontamination

Contractor shall develop, maintain in effect, and adhere to an Equipment Decontamination Plan to remove contaminants that may have accumulated on

CONSTRUCTION SPECIFICATIONS

equipment, to protect the health and safety of the workers and the public, and to protect the environment. Equipment may include those items used during the excavation, temporary on-site storage, or on-site transportation of contaminated soil. All on-site heavy equipment and vehicles that were in contact with contaminated soils will be decontaminated prior to leaving the Site.

This plan does not apply to the decontamination of workers, personal protective equipment, or decontamination during emergency events, which should be discussed in the Site Specific Health and Safety Plan.

130.40 Dust Control

Contractor shall develop, maintain in effect, and adhere to a Dust Control Plan to minimize fugitive dust from construction activities, to protect the health and safety of the workers and the public, and to protect the environment. Contractor shall conform to all requirements set forth by the CDPHE Air Pollution Control Division including permitting.

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

200 – CONTAMINATED SOIL REMOVAL

This section addresses the removal of the historic tailings that have contaminated the soils with lead in the Willow Creek floodplain. Four areas of soil contamination will be excavated; (1) Area A - about 2.0 acres for the constructed wetlands, (2) Area B - 1.6 acres on the northern tip of the upper bench, (3) Area C- 0.1 acres for the storm water channel, and (4) Area D – 1.4 acres of the zone planned for future restoration of Willow Creek.

Approximate depth of contaminated soil is anticipated to range from about 12-inches in Area B, to as much as 18-inches in Areas A, C, and D. The excavated materials will be selectively hauled to and placed within the area for eventual recontouring and covering.

210 Protective Measures

Prior to commencing excavation, Contractor shall complete the following:

- (a) the area of the established Willow Creek Corridor shall be protected. These areas shall be delineated by lath or stake to ensure that the area is not disturbed during excavation activities. Prior to staking the contractor will meet with MCFA or its designated representative on-site to delineate the corridor area to be protected. The corridor will be 10-feet from the edge of the active stream channel(s).
- (b) sediment fencing shall be placed along the west side of the Willow Creek Corridor and other areas identified in the contractors approved Storm Water management Plan.

CONSTRUCTION SPECIFICATIONS

220 Excavation/Removal

Upon completion of all protective measures, excavation and removal of the contaminated soil shall commence.

Excavation shall be conducted by use of hydraulic excavator, loader, dozer (or other appropriate equivalent). Excavation shall be subject to the oversight of a qualified individual who shall retain responsibility for determinations relative to selective management of materials and maximum depth of excavation.

Excavation shall be executed to sufficient depth such that the contaminated material is removed.

220.10 Excavation of Area B - Northern Tip of The Upper Bench

Excavate approximately 1.6 acres of contaminated soil to a depth of 1.0-feet from the northern tip of the Upper Bench (Drawing 130).

220.20 Excavation of Area A - Constructed Wetlands

Excavate approximately 2.0 acres of contaminated soil to a depth of 1.0-feet from the constructed wetland area (Drawing 140). Excavated contaminated material to be handled per section 230. Excavate an additional 12-inches of clean soil/gravel from wetland area. This clean material to be used for berming the constructed wetland area and for capping material. Excavate existing wetlands earthen bridge and culvert after wetlands construction complete.

220.30 Excavation of Area C – Constructed Storm Water Channel

Excavate approximately 0.1 acres of contaminated soil to a depth of 1.0-feet from existing storm water channel (Drawing 130).

CONSTRUCTION SPECIFICATIONS

220.40 Excavation of Area D - Zone along Willow Creek

Excavate approximately 1.4 acres of contaminated soil to a depth of 1.0 to 1.5-feet from the planned Willow Creek Stream restoration floodplain (Drawing 130). Excavated contaminated material to be handled per section 230.

230 Excavated Material Disposition

All excavated contaminated materials shall be transported to Area E to be capped for final disposition through recontouring and capping (Drawing 130).

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

300 – WETLANDS MITIGATION CONSTRUCTION

This section addresses those required actions necessary to construct compensatory wetlands per the requirements of the Nationwide #38 404 Permit No. 2006 00502. MCFA or its designated wetlands consultant will monitor and direct the wetlands construction.

310 Rough Grading and Berm Construction of Wetlands Area

Contractor shall rough grade the constructed wetlands area to establish a gentle slope towards Willow Creek. The wetlands will initially be rough graded to six to twelve inches below final grade to allow for addition of additional soil materials. The grading plan contours are included in Drawing 140. The basin bottom will be contour graded into the low meandering channel, adjacent low wet terraces, and banks by excavating some areas and moving the soil to create varying depths. The bottom of the channel will be the lowest grade. The basin bottom should be relatively flat, but left in a roughened surface. The wetland areas will have about one to two feet of relief with the deepest areas along the channel bottom and following the downslope gradient. The soil from the current wetlands will be segregated and plant materials salvaged.

Contractor will construct a one to two foot high berm around the periphery of the constructed wetlands using clean spoil material derived from the wetlands excavation. Berm material shall be alternately placed on the sides of the wetlands alignment in order to establish protective berming along its extent. Contractor shall shape and consolidate each berm for long-term stability and integrity.

CONSTRUCTION SPECIFICATIONS

320 Placement of Clean Soil

Contractor will excavate and transport clean soil from the Upper Bench Area F per Section 530 Any soil removed during the construction of the wetlands will be combined with soils from the Upper Bench Areas. Six to twelve inches of clean soil will be placed within the constructed wetlands for growth medium.

330 Final Site Preparation of Wetland

Final site preparation shall commence upon completion of the placement of clean soil. Contractor shall ensure general uniformity of completed surface such that there is an aesthetic blend with the undisturbed existing wetland and the surrounding area. As warranted and subject to equipment access limitations on the sub-irrigated area, final site preparation may incorporate hand raking or similar means to establish final grade prior to revegetating with native species.

To the extent practicable, vegetative stands or pods should be extracted from the existing wetlands within Area E in an intact manner and transported directly to the constructed wetland area for placement as directed by the wetlands consultant.

Upon completion of the wetlands construction contractor shall excavate and remove the existing CSP culvert and earthen bridge located in the former wetlands area.

Revegetation of the constructed wetlands will be performed by MCFA.

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

400 – STORMWATER CONVEYANCE CHANNEL CONSTRUCTION

This section addresses construction of a stormwater conveyance channel between a culvert that has been installed on the northwestern side of the property and the constructed wetland area. The culvert was installed for a channel to divert storm water from running onto the central portion of the airport corner property.

410 Conveyance Channel

Contractor shall excavate a trapezoidal channel (nominally 2-foot depth with 2-foot base width and 3-foot crest width). Contractor shall excavate the drainage channel in accordance with Plans to establish a constant flow gradient in the northeasterly direction toward the wetlands. Excavation shall commence at the outfall of the culvert and be completed to a depth of 1.0 feet below grade. Excavation shall continue at the nominal -2% gradient for the approximately 250-foot length to the area, at which point channel depth shall be established to the existing grade of the wetland.

Spoil material derived from the channel excavation shall be alternately placed on the upslope and downslope sides of the channel alignment in order to establish protective berming on both sides along its extent. Contractor shall shape and consolidate each berm for long-term stability and integrity.

410.10 Install Culvert No. 1

Contractor shall excavate a trench for Culvert No. 1 within the stormwater conveyance channel and install a culvert for a future vehicle crossing. Contractor shall place a concrete seal or bedding zone of nominal 2-inch thickness over the initial 24-inch run at the culvert entrance. From that point, sufficient bedding (<2-inch diameter) material shall be provided within the trench to provide a smooth surface upon which a 24-inch diameter corrugated steel culvert shall be lain. On

CONSTRUCTION SPECIFICATIONS

completion, the trench shall be completely backfilled and consolidated utilizing excavation spoils.

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

500 – RECONTOURING AND CAPPING

This section addresses recontouring and capping of the contaminated soil area.

510 Protective Measures

Contractor shall install appropriate erosion and sediment control BMPs in accordance with the approved Stormwater Management Plan prior to initiating construction activity.

520 Recontouring

Contractor shall recontour the lower bench contaminated soil Area E to be capped in general accordance with Drawing 130 - Final Site Configuration. Final slope gradient shall be a constant smooth slope extending from the northwest corner of the property towards the southeast corner of the property. The recontouring shall provide an aesthetic blend with existing topography. The objective is to prepare a relatively level gently sloping area to receive the capping material.

In the event Contractor encounters items of potential historic or archeologic significance, Contractor shall immediately halt work in the immediately vicinity and notify the Colorado State Historic Preservation Office (CSHPO) and MCFA. CSHPO shall be responsible for determining the significance of any find, and work resumption/completion shall be subject to CSHPO or its archeological contractor's directives.

On completion of recontouring activities (i.e., when specified contours have been achieved), Contractor shall walk tracked equipment in an upslope/downslope pattern in a manner that provides final slope consolidation and leaves grouser

CONSTRUCTION SPECIFICATIONS

pad imprints perpendicular to the slope gradient to aid stabilization of subsequent cover placement.

530 Excavation and Transport of Cap Material

Contractor shall excavate the initial layer of cap material from the off-site clean soil borrow Area I (Drawing 110). This material will be transported across Highway 149 and placed on the cap area (Area E, Drawing 110). The cap material will be excavated and transported to the capping area by use of hydraulic excavator, loader, haul truck (or other appropriate equivalents).

Contractor shall excavate upper portion of cap material from the upper bench clean soil borrow Areas F and G (Drawing 110) to be later used for parking in general accordance with Drawing 130 - Final Site Configuration. These areas shall be delineated by lath or stake. The existing drainage ditch along the western boundary of the property and airport road will not be disturbed. The cap material will be excavated and transported to the capping area by use of hydraulic excavator, loader, haul truck (or other appropriate equivalents).

The existing drainage ditch along the western edge of the property and airport road is to be left intact. The parking surface shall be excavated in an ascending manner generally advancing to the east, with a nominal 0.5% upward gradient to the indicated toe line of the cut. Contractor shall initially strip the upper 12 to 18-inches of the vegetated surface of the parking lot footprint areas. Contractor may stockpile this soil material utilizing the appropriate BMP's in the Stormwater Management Plan. This material will be utilized for the upper portion of the cap.

Contractor shall then establish the interior (west edge) shoulder drainage conveyance channel crest elevation across the extent of the parking lot areas in a manner coincident with a vertical elevation 1-foot below the final elevations.

CONSTRUCTION SPECIFICATIONS

After removal and stockpiling of topsoil all cut material shall be loaded and transported directly to the recontoured surface area of the capping area, placed, and spread. [Note: In the event large rock or fragmented rock >12-inches in diameter is encountered, it shall be segregated and stockpiled for later landscaping or stream restoration uses. (i.e., not placed on the recontoured tailings area).

Perimeter walls shall be established at a nominal slope of 1H:1V. Contractor shall ensure walls are excavated into competent material capable of sustaining the specified 1H:1V wall slope over the long-term. Areas of potential concern may be overexcavated and layed back to establish a stable configuration; however, effort shall be made to minimize disturbance of vegetated ground wherever possible.

Final cleanout and dressing off of the drainage conveyance channel along the parking area extent shall be performed on completion of parking areas.

540 Construction of Simple Cap System

Cover placement shall consist of the following phases: (1) placement of cap material to a minimum thickness of 6-inches; (2) placement of available growth medium (stockpiled topsoil) atop the initial cap layer to a minimum thickness of 6-inches and, (3) final grading.

The initial 6–inch layer of cap material shall consist of placement of available material obtained from off-site Area I. Additional material may be obtained from onsite sources, to include: (a) non-topsoil material from the Area F parking lot excavation; and (b) non-topsoil material from Area G parking lot excavation; and, (c) clean salvage material from constructed wetlands excavation.

CONSTRUCTION SPECIFICATIONS

Placement of the growth medium zone shall be generally for aesthetic purposes, with achievable depth/thickness and vegetative success dependent on the volume of material available (i.e., not measurable performance criteria).

Final cover placement shall consist of placement of all available topsoil and organic material (growth media) obtained through onsite construction activity, to include: (a) material from the Area F parking lot excavation; and (b) material from Area G parking lot excavation; (c) topsoil material provided by MCFA from an off-site source and, (d) additional topsoil from areas outside parking Area F and G. If required, the borrow areas for this additional topsoil will be identified by MCFA or its designated representative.

Contractor shall walk tracked equipment in an upslope/downslope pattern in a manner that provides final slope consolidation and leaves grouser pad imprints perpendicular to the slope gradient to aid stabilization of subsequent cover placement.

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

600 – SITEWIDE REVEGETATION

MCFA shall be responsible for conducting the sitewide revegetation and the revegetation of the constructed wetlands. MCFA shall be responsible for all revegetation performance monitoring of the site per the requirements set forth in the VCUP.

-END OF SECTION-

CONSTRUCTION SPECIFICATIONS

700 - DEMOBILIZATION AND PROJECT CLOSEOUT

This section addresses completion of the construction activity, inspection and acceptance of work by MCFA, and final site closeout and demobilization efforts.

710 MCFA and CDPHE Inspection/Acceptance

On completion of all work items, Contractor shall notify MCFA. MCFA will coordinate a site inspection with CDPHE's Representative (Mr. Mark E. Walker). MCFA, AGS and CDPHE shall jointly accompany Contractor's Representative(s) in an inspection of the completed work to verify that all work was completed in general accordance with the Plans and Specifications. In the event exceptions are noted, Inspection parties will compile a "punch list" of items requiring further attention to address Owner's concerns.

Contractor shall adequately address any/all punch list items in a timely manner and again notify MCFA of completion. MCFA, at its own option shall either conduct a final inspection and/or otherwise accept work as satisfactory.

720 – Demobilization from Site

Demobilization shall consist of the removal of all equipment, materials, and supplies from the immediate construction work area as well as associated areas, to include the following:

- Contractor shall remove all equipment, materials, supplies, trash, etc. from immediate construction work area on the MCFA property. All disturbed surfaces within the work area that are not otherwise addressed in the above specifications shall be graded to a smooth, aesthetically blending surface consistent with completed construction.

CONSTRUCTION SPECIFICATIONS

- Contractor shall remove all temporary fencing associated with the site access.

730 Provision of “As-Built” Drawings and VCUP Certification Report

Contractor shall have a post construction topographic survey completed by a Colorado licensed surveyor. This survey shall be in sufficient detail in order to compile updated and/or revised drawings to reflect “as-built” configurations for all features of the work. Contractor shall provide “as-builts”, photographs, description and basis of any significant field changes, copies of field notes, and related items to MCFA not later than 30 days following completion and acceptance of work.

740 Post-Closure Site Monitoring and Maintenance

The MCFA VCUP Site shall be subject to post-closure monitoring and maintenance actions to ensure long-term site stability and overall effectiveness of the selected remedy. Inspections, maintenance, and reporting actions shall be carried out by MCFA.