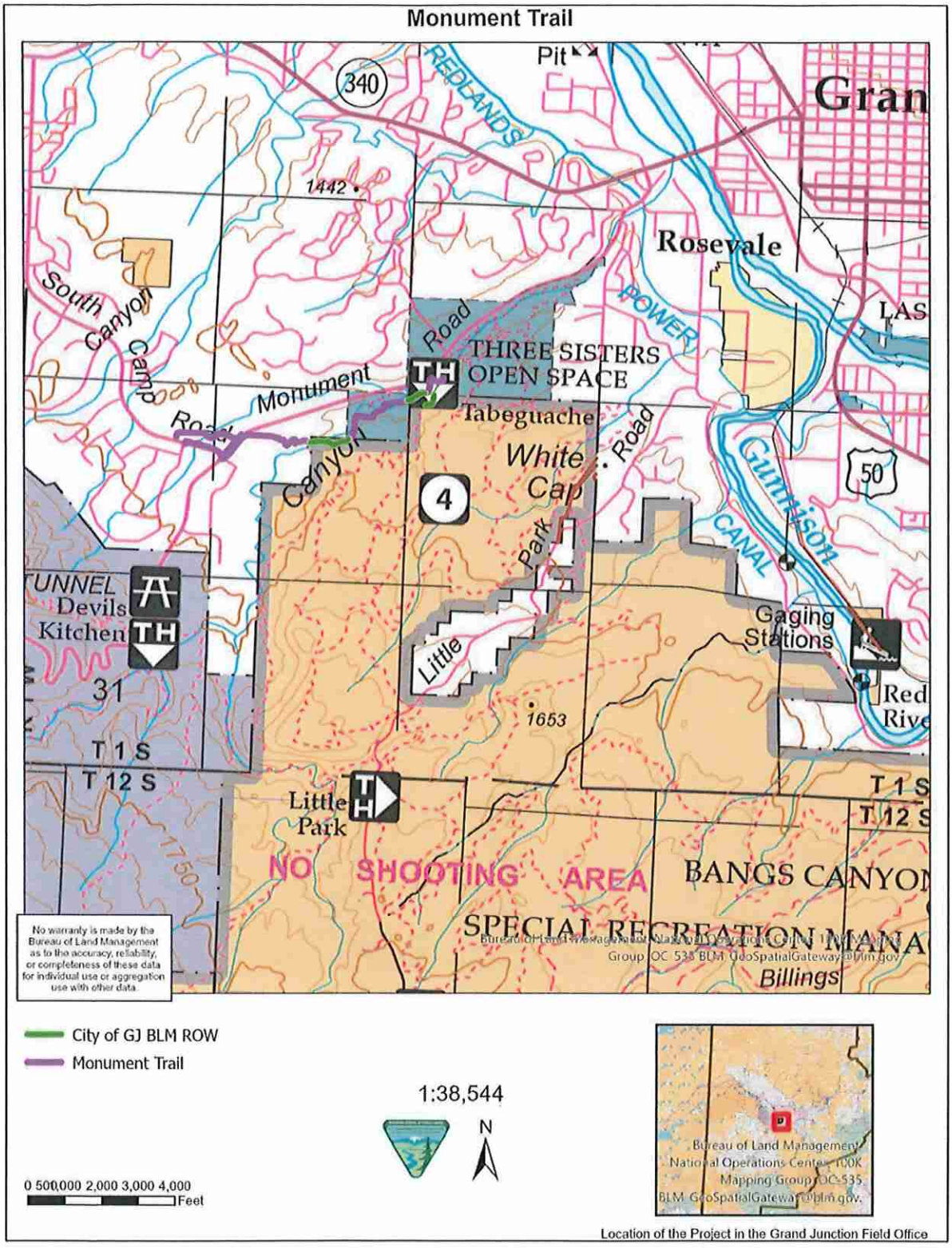
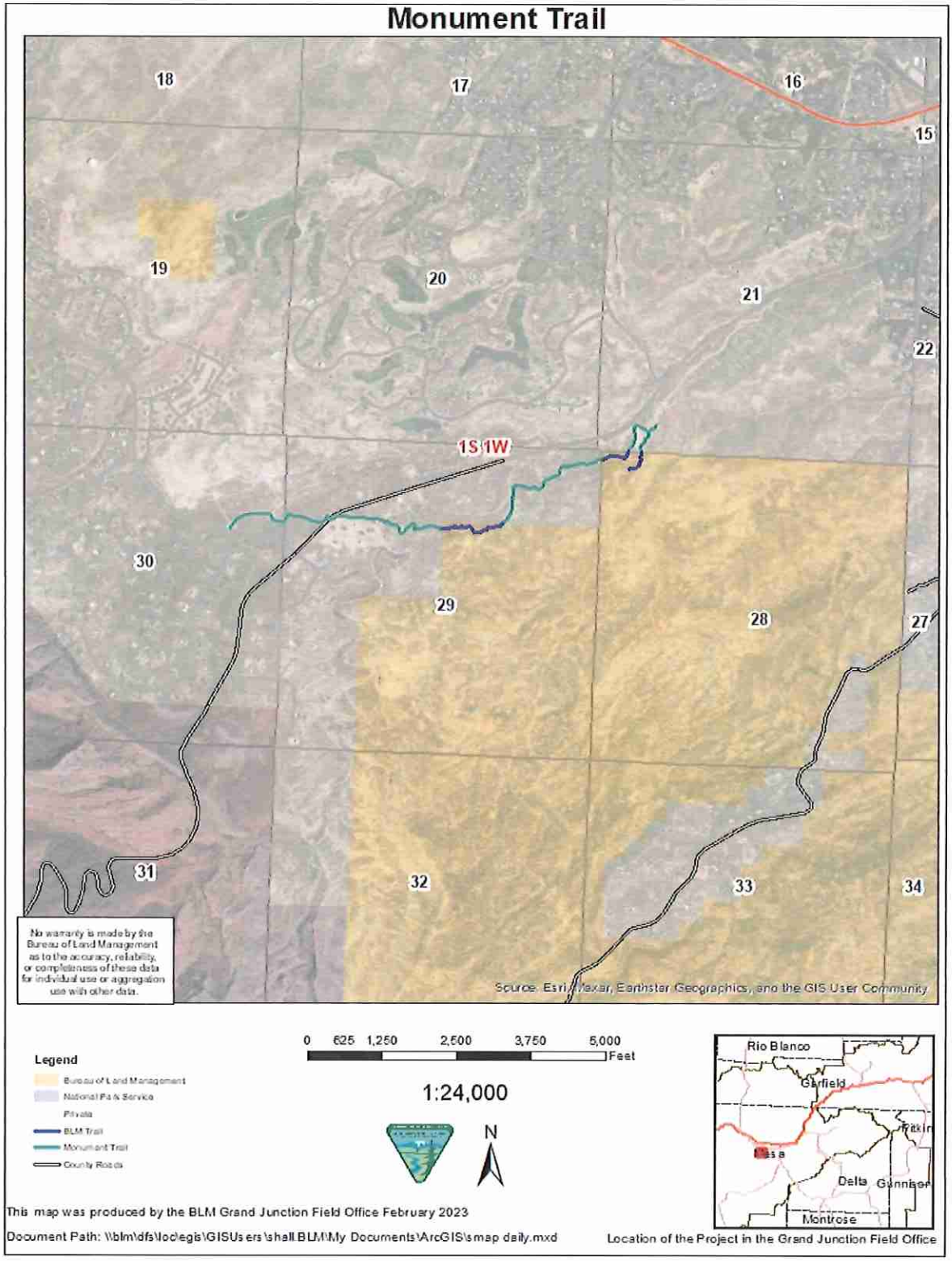
EXHIBIT A. PROJECT MAPS




Monument Trail
18
17
16
15
19
20
21
22
1S 1W
30
29
28
27
31
32
33
34
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregation use with other data.
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community
Legend
Bureau of Land Management
National Park Service
Private
BLM Trail
Monument Trail
County Roads
0 625 1,250 2,500 3,750 5,000
Feet
1:24,000
N
Rio Blanco
Garfield
Mesa
Delta
Gunnison
Montrose
This map was produced by the BLM Grand Junction Field Office February 2023
Document Path: \\blm\dfs\locegis\GISUsers\shall.BLM\My Documents\ArcGIS\smap daily.mxd
Location of the Project in the Grand Junction Field Office

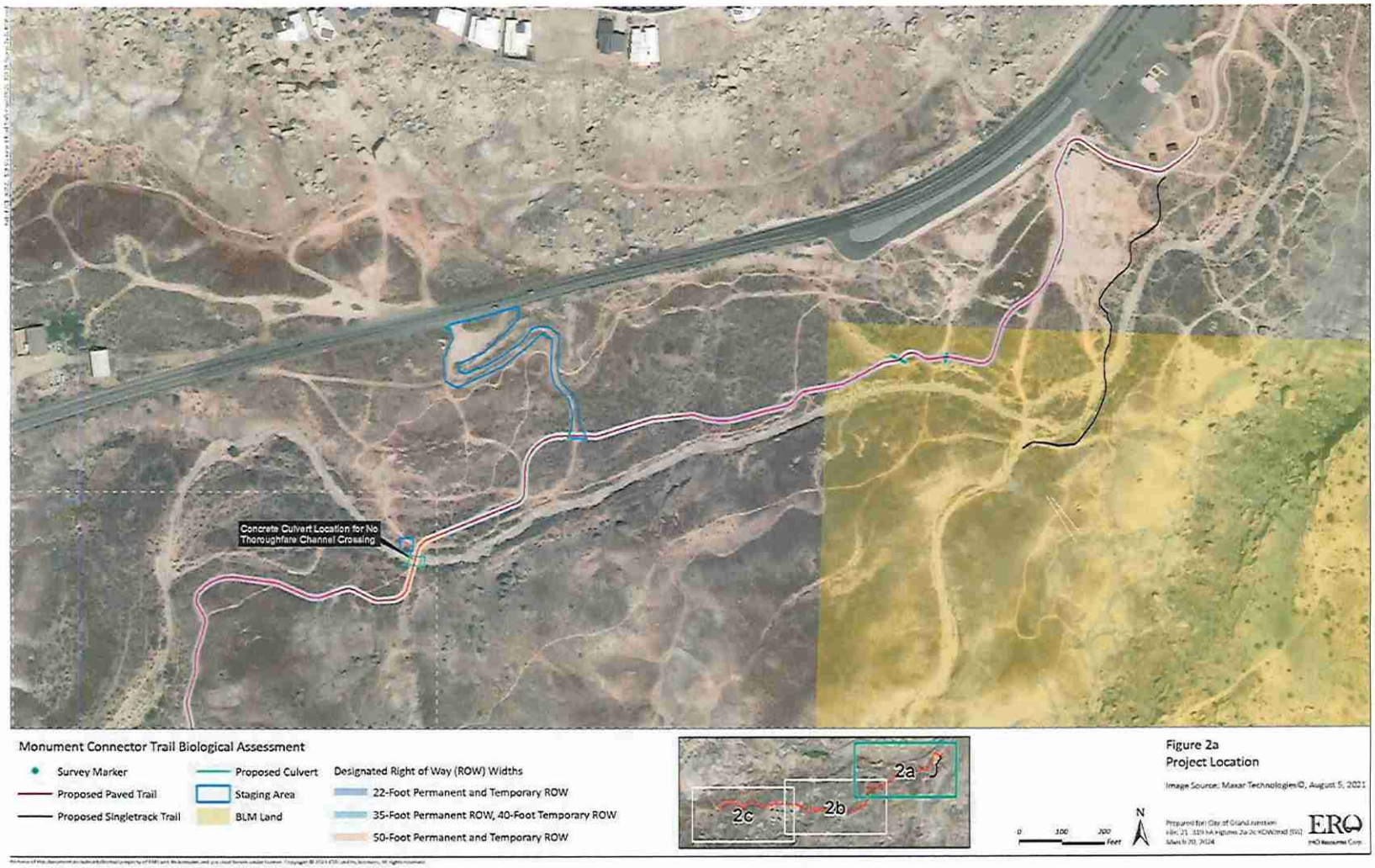

Concrete Culvert Location for No Thoroughfare Channel Crossing
Monument Connector Trail Biological Assessment
Survey Marker
Proposed Paved Trail
Proposed Singletrack Trail
Proposed Culvert
Staging Area
BLM Land
Designated Right of Way (ROW) Widths
22-Foot Permanent and Temporary ROW
35-Foot Permanent ROW, 40-Foot Temporary ROW
50-Foot Permanent and Temporary ROW
2a
2b
2c
0
100
200
Feet
N
Figure 2a
Project Location
Image Source: Maxar Technologies©, August 5, 2021
ERO

Figure 2b
Project Location

Image Source: Maxar Technologies©, August 5, 2021

EXHIBIT B. STIPULATIONS

SPECIAL STATUS SPECIES (Colorado hookless cactus)

1. The disturbance width along the trail will be confined to 22 feet in areas where CHC is located.
2. Construction equipment including concrete trucks will use the trail corridor as a travel way during construction.
3. All new soil-disturbing activities will be greater than 20 meters from current occupied CHC locations*.
4. Use of an access route during construction will not result in new disturbance to two CHC individuals located 18 meters from the route due to topography and existing disturbance/access use.
5. Dust-suppression measures will be used to control fugitive dust from access routes and areas of disturbance in the vicinity of the trail alignment.
6. All new soil-disturbing activities will be greater than 20 meters from current occupied CHC locations (mentioned previously)*.
7. Construction activities will occur outside of the blooming season (April 1 to June 30) to minimize impacts on pollination/pollinators.
8. Measures to control the spread of weeds will be conducted per the requirements in the BLM GJFO Integrated Weed Management Plan (BLM 2017) (mentioned previously).
9. Gravel will be procured from a weed free source to limit the introduction of knapweed or other invasives.

Additional general design features incorporated in the proposed action are listed below:

1. All staff, contractors, and volunteers responsible for any element of on-the-ground work will receive environmental awareness training prior to being allowed to work on this project. Training will include: (a) information on the legal and biological status of CHC, (b) the habitats important to the species, (c) awareness of mandatory conservation/avoidance measures, (d) information on fines and penalties for damaging or directly impacting CHC, and (e) reporting procedures if any violation occur.
2. Any unrecorded/new cactus documented during construction will be avoided, and the minimization measures/design features will be applied to these individuals.
3. All tools and equipment used for trail construction will be cleaned to prevent weed infestations. Disturbed areas will be reseeded with a BLM-approved seed mix.
4. The BLM and City will monitor for the presence of noxious weeds and control undesirable plants in disturbed areas.
5. The BLM and City will coordinate to close and potentially rehabilitate social trails near CHC.

6. The City will coordinate with the BLM for needed trail maintenance on BLM managed lands.

VISUAL

1. The concrete surface and aggregate base used for the shoulders of the paved trail must match the existing Lunch Loops paved bike path. The concrete must have a red tint that blends in with the natural red soils in the project area. All areas where vegetations has been removed or damaged from construction-related activities must be reseeded, planted, and restored.
2. The singletrack connector trail must be constructed following existing contours of the landscape to minimize visual contrast.

ABANDONMENT

1. Ninety days prior to termination of the ROW, Holder must contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination and rehabilitation plan. This plan must include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, top soiling or seeding. The AO must approve the plan in writing prior to Holder's commencement of any termination actions.

CULTURAL STIPULATIONS

1. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land must be immediately reported to the authorized officer. The holder must suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder must be responsible for the cost of evaluation, and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

2. Pursuant to 43 CFR 10.4(g) the holder must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the holder must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

GENERAL

1. The holder must construct, operate, and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the proposed plan of development. Any relocation, additional construction, or use that is not in accord with the approved plan of development, must not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations and approved plan of development, must be made available on the right-of-way area during construction, operation,

and termination. Noncompliance with the above are grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

2. The holder must notify the BLM authorized officer at least 90 days prior to non-emergency activities that will cause surface disturbance in the right-of-way. A "Notice to Proceed" must be required prior to any non-emergency activities that will cause surface disturbance on the right-of-way. Any request for a 'Notice to Proceed" must be made to the authorized officer, who will review the proposed action for consistency with resource management concerns such as special status species, cultural resource protection, and wildlife. The authorized officer may require the completion of special status species surveys or other resource surveys and monitoring by a third-party contractor at the expense of the holder. Additional measures may be required to protect special status species or other resources.

3. Construction sites must be maintained in a sanitary condition at all times; waste materials at those sites must be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, water used for pressure testing, and equipment.

3. Holder must maintain the ROW in a safe, useable condition, as directed by the Authorized Officer (AO) (A regular maintenance program must be included in the POD).

4. The BLM will approve all signs place on federal use or that indicate allowed uses on federal land. Uses on federal lands will be allowed in accordance with federal rules, regulations, and policies.

5. Use of pesticides and herbicides must comply with the applicable Federal and State laws. Pesticides and herbicides must be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, Holder must obtain from the AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the AO. Emergency use of pesticides must be approved in writing by the AO prior to use.

6. For projects with surface disturbance equal to or greater than one acre, a stormwater permit and stormwater management plan (SWMP) is required by the State of Colorado. Best Management Practices (BMPs) identified in the SWMP must be in place prior to any surface-disturbing activity. The holder must install additional BMPs as determined necessary by the authorized officer.

7. Holder of this right-of-way agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on this ROW (unless the release or threatened release is wholly unrelated to Holder's activity in this ROW). This agreement applies without regard to whether a release is caused by the Holder, their agent, or unrelated third parties.

8. The holder must comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder must comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601 et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (see 40 CFR, Part 702-799 and C:;Spcl":fally, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 must be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances must be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

9. Holder of this right-of-way grant, or the Holder's successor in interest, must comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et. seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.

FIRE PREVENTION AND CONTROL STIPULATIONS

1. The Holder must indemnify the United States for any and all injury, loss or damage to life or property, including fire suppression costs, the United States may suffer as a result of losses, claims, demands or judgments caused by Holder's use or occupancy of public lands under this grant or permit.

2. The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his or her judgment, conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment.

3. Holder must maintain the ROW in a safe, usable condition.

4. When performing construction and maintenance (including emergency repairs) activities during the "closed" fire season (May 10 – October 20), as set by Colorado State Law, or during any other closed fire season prescribed by the BLM Colorado State Director, the Holder, including any persons such as contractors, etc. working on their behalf, must equip at least one on-site vehicle with firefighting equipment, including, but not limited to, fire suppression hand tools (i.e. shovels, rakes, Pulaski's, etc.), a 16-20 pound fire extinguisher, and a sufficient supply of water for initial attack, with a mechanism to effectively spray the water (i.e., backpack pumps, water sprayer, etc.).

5. During conditions of extreme fire danger or when the State of Colorado and/or the BLM Colorado State Director issues a fire restriction order, operations must be limited or suspended in specific areas, or additional mitigation measures may be required by the BLM Authorized Officer.

6. In accordance with 43 CFR 2805.12(d) (or subsequent revisions), the Holder must do everything reasonable to prevent fires on or in the immediate vicinity of the ROW. The Holder

will immediately report fires to the BLM Authorized Officer **(970) 244-3000** or local fire dispatch **(970) 257-4800** and take all necessary fire suppression actions, when safe to do so, with their personnel and equipment on any fires they cause to ignite.

7. Holder must maintain the condition of the origin area of the fire from further damage to enable the Fire Investigator to properly assess the origin area and cause of the fire. The Holder must report to the Fire Investigator or BLM Incident Commander and must not enter into the origin area on fires unless given permission to do so.

8. The Holder will cooperate with the BLM in its efforts to investigate, suppress and respond to all future fires. The duty to "cooperate" includes, but is not limited to, the following duties regardless of whether BLM is on the scene:

   i. The duty to provide the BLM (Authorized Officer **(970) 244-3000** or local fire dispatch **(970) 257-4800** with reasonable and timely notice concerning all fires involving the Holder's facilities or discovered during routine operations.

   ii. The duty to share factual information with the BLM concerning fires, including but not limited to the names of Holder's employees and/or contractors with knowledge of the incident; and to allow employees and/or contractors to be interviewed by BLM's investigators regarding factual information relating to a fire.

   iii. It is the duty of the Holder to preserve the point of ignition, fire scene and reasonably account to the BLM for Holders actions taken at the scene of a fire.

   iv. The duty to minimize disturbance of potential evidence located at the scene; to not engage in any evidence collection or destructive testing without BLM and or its counsel's express written consent; to properly handle and preserve any evidence collected and to make all documents and evidence, including expert reports, available to the BLM in a rapid and timely manner upon request of BLM and/or its counsel.

   v. The duty to not hamper the BLM investigation of origin and cause of the fire; and to reasonably assist BLM's investigation at the scene.

   vi. The duty to provide information upon request of BLM and/or its counsel concerning the construction, monitoring, inspection, maintenance and/or repairs of any of Holder's facilities located at or adjacent to a fire.

   vii. The duty to provide information upon request of BLM and/or its counsel concerning the monitoring, inspection, and or alteration by Holder of any condition on public land, including but not limited to, public land adjacent to any of the Holder's facilities.

   viii. The duty, during BLM fire suppression efforts: to defer to and follow the instructions of the BLM's Incident Commander regarding activities within the boundaries of the fire and checking in and out of the fire; and to recognize BLM's primary authority over the incident scene.

APPLICANT COMMITTED DESIGN FEATURES

The following are applicant-committed design features, generally from the GJFO 2015 Resource Management Plan.

General/Notification

M&E-14: A pre-construction meeting will be held with the BLM before and to facilitate implementation of plans and ensure compliance with stipulations or conditions of approval. The BLM will be notified at least 48 hours prior to construction or reclamation work.

90-day notice is required for any maintenance activities. except where there are rare plant populations; in those cases, BLM requires additional 90-days' notice no later than the March preceding any work to be done.

R-11: Project design must take into consideration any existing vegetation surrounding the project that can be used for visual screening. Care must be taken to preserve the integrity of the vegetation and the vegetation must remain standing and undamaged when the cut-and-fill slopes are recontoured.

A-10: Improve engine technology (Tier 2 or better) for all mobile and non-road diesel engines to reduce NOx, PM, CO, and VOC emissions.

A-24: Utilize dust suppression techniques on unpaved surfaces including watering, chemical suppressants, and gravel.

A-30: Reduce unnecessary vehicle idling to reduce combustion emissions, ozone formation, visibility impacts, and fuel consumption.

A-32: Restrict surface disturbing activities to periods when wind speeds are less than 25 mph.

S-17: Native vegetation and soils will be protected and disturbance to them will be minimized.

H-6: Before activities take place, every pad, access road, or facility site will have an approved surface drainage plan for establishing positive management of surface water drainage, to reduce erosion and sediment transport. The drainage plan will include adaptive BMPs, monitoring, maintenance and reporting. BMPs may include run-on/run-off controls such as surface pocking or re-vegetation, ditches or berms, basins, and other control methods to reduce erosion. Pre-construction drainage BMPs will be installed as appropriate.

H-36: Limit surface disturbance near drainage features and minimize surface disturbance on steep slopes, fragile soils, saline soils, and Mancos shale derived soils.

H-43: Maintain appropriate vegetative/riparian buffers around water features to slow runoff and trap sediments and protect water quality. A minimum buffer distance must be 200 meters or greater where site conditions warrant.

M&E-44: Dust from vehicular traffic, equipment operations, or wind events will be controlled as needed. No application of surfactants or dust agents will proceed without BLM approval. In areas

with soils mapped as Mancos shale, application of water on native road surfaces will be limited, to minimize mobilization of selenium. In such areas, alternate dust abatement measures such as proper road surfacing and maintenance, and speed limits will be used, subject to BLM approval.

M&E-61: Cut and fill slopes will be protected against erosion by contour grading, microbasins or other measures approved by the BLM. Well anchored BMPs such as biodegradable matting, weed-free bales or wattles may also be used on cut-and-fill slopes and along drainages to protect against soil movement.

VR-10: Ensure that seed used for revegetation as well as straw and hay bales used for erosion control are certified free of noxious weeds.

V-14: Perform final reclamation recontouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.

WEED-11: Minimize soil disturbance. To the extent practicable, native vegetation must be retained in and around project activity areas, and soil disturbance kept to a minimum.

WEED-19: Remove mud, dirt, and plant parts from project equipment before moving it into a project area. Seeds and plant parts must be collected and incinerated when practical, or washed off in an approved containment area.

WEED-25: Clean all equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before leaving the project site if operating in areas infested with weeds. Seeds and plant parts must be collected and incinerated when possible.

WEED-26: When seeding has been specified for construction and maintenance activities, seed all disturbed soil (except travel route) soon after work is completed.

WEED-27: Use a certified weed-free seed mix suitable for local environmental conditions that includes fast, early growing (preferably native) species to provide quick revegetation. Consider applying weed-free mulch with seeding. (SOP)

WEED-28: Periodically inspect roads and rights-of-way for noxious weeds. Train staff to recognize weeds and report locations to the local weed specialist. Follow-up with treatment when needed.

WEED-29: When reclaiming roads, treat weeds before roads are made impassable. Inspect and follow up based on initial inspection and documentation.

WEED-30: To avoid weed infestations, create and maintain healthy plant communities whenever possible, including utility rights-of-ways, roadsides, scenic overlooks, trailheads, and campgrounds.

CR-4: The National Historic Preservation Act, as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during project implementation, work in that area must stop and the BLM Authorized Officer must be notified immediately. Within five working days the BLM Authorized Officer will inform the proponent as

to: a) Whether the materials appear eligible for the National Register of Historic Places; b) The mitigation measures the proponent will likely have to undertake before the site could be used (assuming in situ preservation is not practicable), (36 CFR 800.13); and c) A timeframe for the BLM Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Office, that the BLM Authorized Officer's findings were correct and mitigation was appropriate.

S-2: When saturated soil conditions existing on access roads or location, or when road rutting becomes deeper than 3 inches, construction must be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads and locations.

S-3: Topsoil must not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

FWS-51: Noise reduction techniques and designs will be used to reduce noise from compressors or other motorized equipment.

Additional Site-specific BMPs are as follows (not from GJFO RMP):

BR-5 Biological Monitors will be employed for construction activities in the following locations for the following species: Colorado hookless cactus, within 60 meters of documented populations.

BR-6 Must any previously unknown populations of the Federally listed plants be discovered, City's contractor will inform City and the BLM to assure compliance with the Endangered Species Act (ESA), and consultation with the U.S. Fish and Wildlife Service (USFWS) and ensuing mitigation can proceed to ensure timely completion of the proposed project.

BR-7 Biological monitors will be employed to conduct migratory bird surveys for any vegetation clearing required during the time period May 15 to July 15.

Additional general design features incorporated in the Proposed Action are listed below:

- All staff, contractors, and volunteers responsible for any element of on-the-ground work will receive environmental awareness training before being allowed to work on this project. Training will include (a) information on the legal and biological status of CHC, (b) the habitats important to the species, (c) awareness of mandatory conservation/avoidance measures, (d) information on fines and penalties for damaging or directly impacting CHC, and (e) reporting procedures must any violation occur.

- The City will hire BLM approved biologic monitors to protect plants during construction and maintenance activities

- Any unrecorded/new cactus documented during construction will be avoided, and the minimization measures and design features will be applied to these individuals.

- All tools and equipment used for trail construction will be cleaned to prevent weed infestations. Disturbed areas will be reseeded with a BLM-approved seed mix.

- The City will monitor for the presence of noxious weeds and treat noxious weeds in coordination with BLM

- The BLM and City will coordinate to close and potentially rehabilitate social trails near CHC.

- The City will coordinate with the BLM for needed trail maintenance on BLM-managed lands.

Long-term maintenance of the Monument Trail will be performed by the City throughout the life of the trail system. Maintenance will include repair of erosion-control features, culverts, noxious weed treatments, and trail clearing as needed.

CHC normally blooms in April through May, and populations fluctuate over time, requiring new surveys to determine appropriate avoidance activities. Any future construction or maintenance work on the Monument Trail will be coordinated with BLM ecologists, who will determine the extent of monitoring and survey that is required. The BLM will be notified in the fall prior to any planned maintenance work so that spring surveys can take place for CHC in the project area. Only ground-disturbing activities will require BLM coordination.

Paleontological Resources

PR-1 Culvert installation in PYFC 4/5 level areas of the Morrison Formation, Summerville Formation, or Entrada Sandstone. The Unanticipated Discovery Plan below outlines procedures to follow in the event that paleontological resources are encountered during ground-disturbing and other construction activities in the absence of a paleontological resources monitor:

1. Upon discovery/excavation of significant paleontological resources, immediately stop construction activities and inform the on-site construction foreman/supervisor of discovery. Do not attempt to remove the fossils.

2. The construction foreman/supervisor must contact the appropriate personnel (BLM, City, etc.) immediately and notify them of the discovery.

3. A salvage/recovery plan must be formulated with help of a BLM-permitted paleontologist. Construction activities in the area of discovery must be ceased until fossil salvage/recovery is completed and the area is cleared by the appropriate personnel.

4. Areas that were previously excavated in the project area (including associated spoils piles) must be inspected for additional paleontological resources. Paleontological monitoring during subsequent construction activities must be considered for the remainder of the project.

Soils

S-1 All soils compacted by movement of construction vehicles and equipment, will be 1.) loosened and leveled harrowing or disking to approximate pre-construction contours and 2.)

reseeded with certified weed-free native grasses and mulched (except in cultivated fields). The specific seed mix(s) and rate(s) of application will be determined by the BLM (see seed tables in the EA *Restoration* Section).

Traffic

T-1 The contractor will all make all necessary provisions for conformance with federal, state and local traffic safety standards and will conduct construction operations so as to offer the least possible obstruction and inconvenience to public traffic.

Water Quality

WQ-1 Construction activities will be performed by methods that prevent entrance or accidental spillage of solid matter, contaminants debris, and other objectionable pollutants and wastes into flowing streams or dry water courses, lakes and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts and thermal pollution.

EXHIBIT C. APPLICANT PLAN OF DEVELOPMENT

PLAN OF DEVELOPMENT

City of Grand Junction:

Monument Connector Trail

Prepared for—

Bureau of Land Management
Grand Junction Field Office
2815 H Road
Grand Junction, Colorado 81506

Prepared by—

ERO Resources Corporation
161 South 2nd Street
Hotchkiss, Colorado 81419
(970) 872-3020
ERO Project #21-319

March 2024

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CONTENTS

FIGURES

APPENDICES

TABLES

Proposed Monument Connector Trail Plan

1.0 Location, Description, and Design

The City of Grand Junction (City) is proposing to construct the Monument Connector Trail Project (project) to provide a continuous shared-use path from Lunch Loops/Tabeguache Trailhead to South Camp Road (trailhead) (project area; Figure 1). The City, in cooperation with the Bureau of Land Management (BLM), Colorado West Land Trust, and Mesa County, completed the Lunch Loops Connector Trail in December 2019 (phase one). The trail connects the Lunch Loops Trailhead to the Colorado Riverfront Trail and Las Colonias. The same organizations are working together to extend the trail from the Lunch Loops Trailhead on the east to South Camp Road on the west in phase two of the project, called the Monument Connector Trail (Monument Trail). The paved trail will be approximately 9,147 feet long with 1,625 feet crossing public lands in two segments in the BLM's Grand Junction Field Office (GJFO) Bangs Canyon Special Recreation Management Area. An additional 858 feet of connecting single-track trail (unpaved) with 416 feet crossing BLM GJFO land is also incorporated into the project. In total, the project will provide 10,005 feet of additional recreation trail (paved and single-track).

The City intends to construct, operate, maintain, and terminate a multiuse concrete trail with aggregate base shoulders on two segments of BLM land. The City has applied to the BLM for a right-of-way (ROW) grant along the trail on BLM land, including a 40-foot-wide temporary construction ROW and a 35-foot-wide permanent ROW, with a 22-foot wide ROW in areas with Colorado hookless cactus and 50-foot wide ROW in areas with concrete box culverts. The permanent ROW will be issued for a term of 30 years and contain terms, conditions, and stipulations. Federal lands crossed by the trail include BLM lands (managed by the GJFO). Detailed maps (Figures 2a through 2c) that display the trail, ownership and management, access points, and proposed activities including impact area are attached.

1.1 Legal Description

Below are the legal descriptions for the trail.

1.1.1 BLM-Managed Lands

NW4 NW4 Sec. 28 T1S R1W

SE4 NE4 Sec. 29 T1S R1W

SW4 NE4 Sec. 29 T1S R1W

1.1.2 City-Owned Lands

SW4 SW4 Sec. 21 T1S R1W

NE4 NE4 Sec. 29 T1S R1W

NW4 NE4 Sec. 29 T1S R1W

S2 NW4 Sec. 29 T1S R1W

SE4 NE4 Sec. 30 T1S R1W

1.2 Design

The trail design will follow the latest Colorado Department of Transportation Bicycle Facility Design guidelines with a minimum grade or cross slope of 1%, a maximum grade of 5% (with up to 8% grade over very short distances), and a maximum cross slope of 2%. Drainage swales (ditches) will be provided along both sides of the trail where space allows. Drainpipes perpendicular and under the trail will be located per engineering design. Swale berms will be located in the swales at each perpendicular pipe to catch sediment before it reaches the pipe. The trail construction will follow the City of Grand Junction Standard Specifications for Road and Bridge Construction, which references the Colorado Department of Transportation Construction Specifications. (See Appendix A for typical trail sections used on phase one of the trail on City-owned lands; these typical trail sections are proposed for use on phase two. Also included in Appendix A is a roll plot for phase two.)

2.0 Project Purpose and Need

The trail project is required to provide safe year-round nonmotorized recreation use (bicycle, e-bicycle, and pedestrian) and access from the lunch loop to residential areas to the west. Use of Monument Road for bicycle and pedestrian access creates an unsafe condition, and the City intends to provide for safe recreation and transportation access that is separated from Monument Road.

3.0 General Activities and Equipment

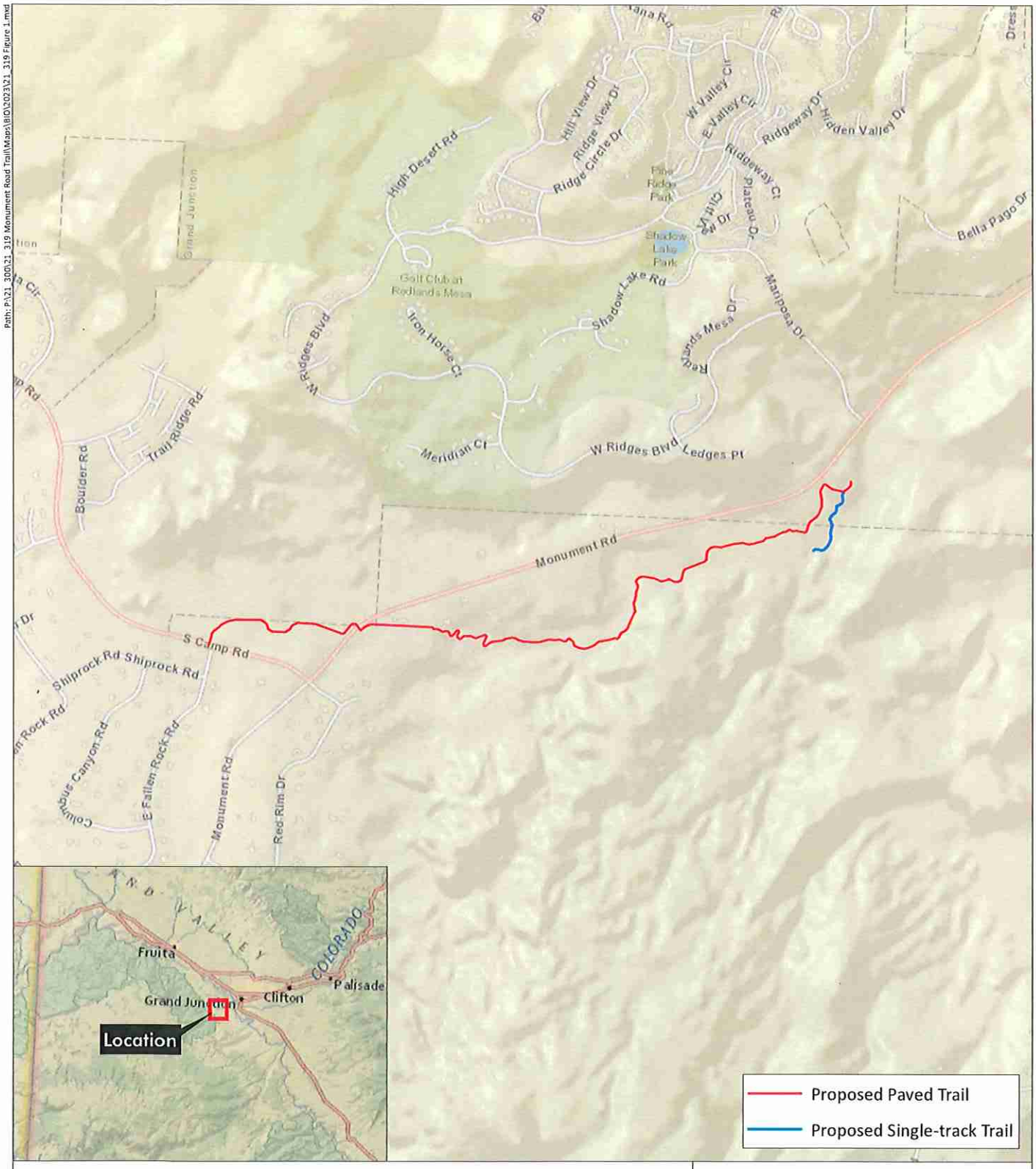
Maintenance activities and equipment are listed below with additional details in Section 4.0.

3.1 Access

- Drive-in access with ATV, light truck, front-end loader, dozer, concrete equipment, and crane (for placement of two preformed concrete box culverts) on existing roads as shown on figures, and along the trail ROW. Construction access will use existing access roads. The contractor may choose to place aggregate to stabilize the native material, but no asphalt or concreate will be needed.
- Turnaround locations (35-foot diameter) at staging areas as shown on figures.
- Walk-in access on existing trails if needed.

3.2 Staging and Storage

Three staging areas have been designated along the west, central, and east sides of the project area (Figures 2a through 2c). Staging will be on existing disturbed areas; the total staging area acreage is 1.54 acres.



Monument Road Trail Biological Assessment

Sections 21 and 28-30, T1S, R1W; Ute Meridian

UTM NAD 83: Zone 13N; 706485mE, 4324457mN

Longitude 108.614061°W, Latitude 39.044802°N

USGS Colorado National Monument and Grand Junction, CO Quadrangles

Mesa County, Colorado

0 750 1,500 Feet

N

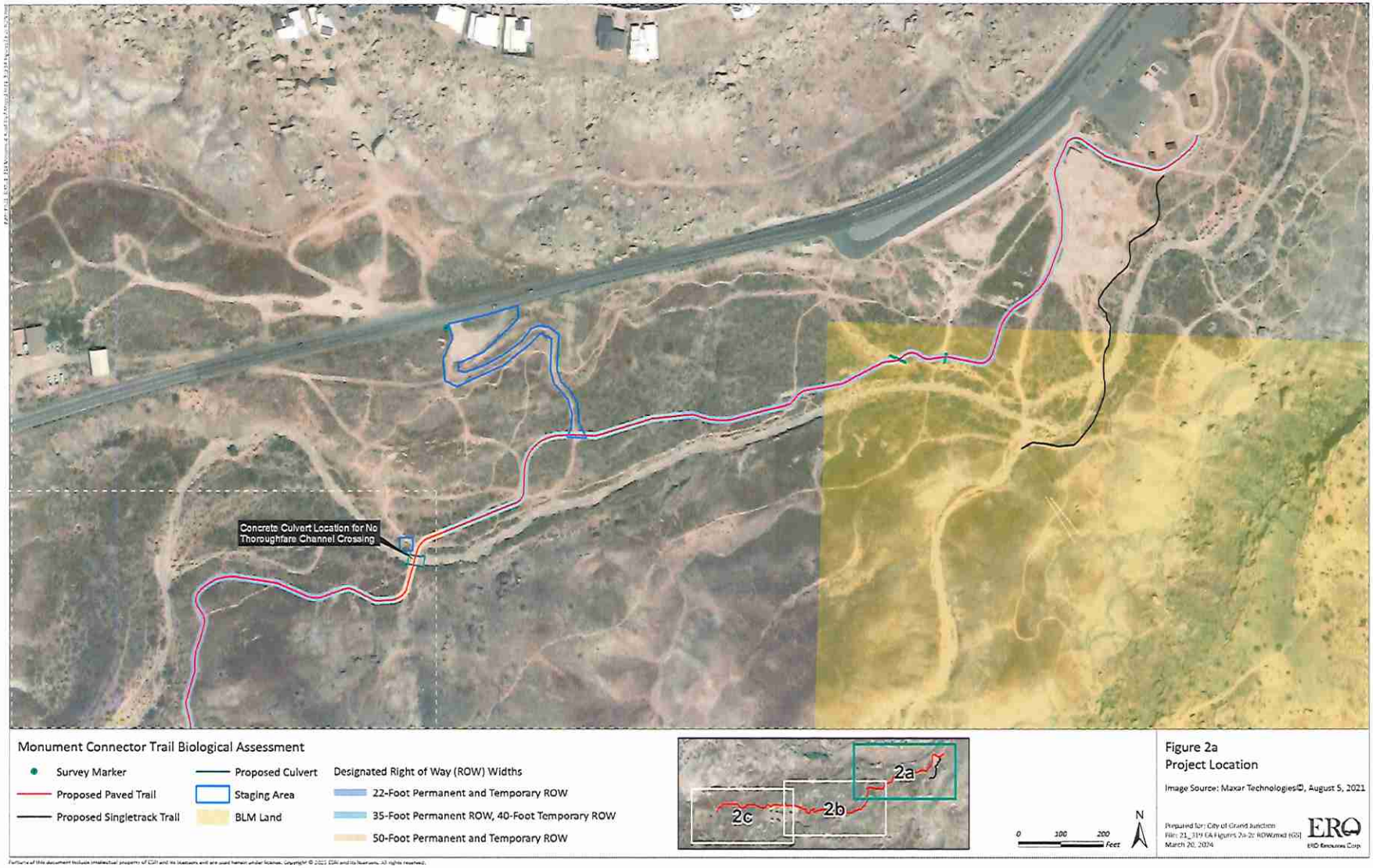
Figure 1
Vicinity Map

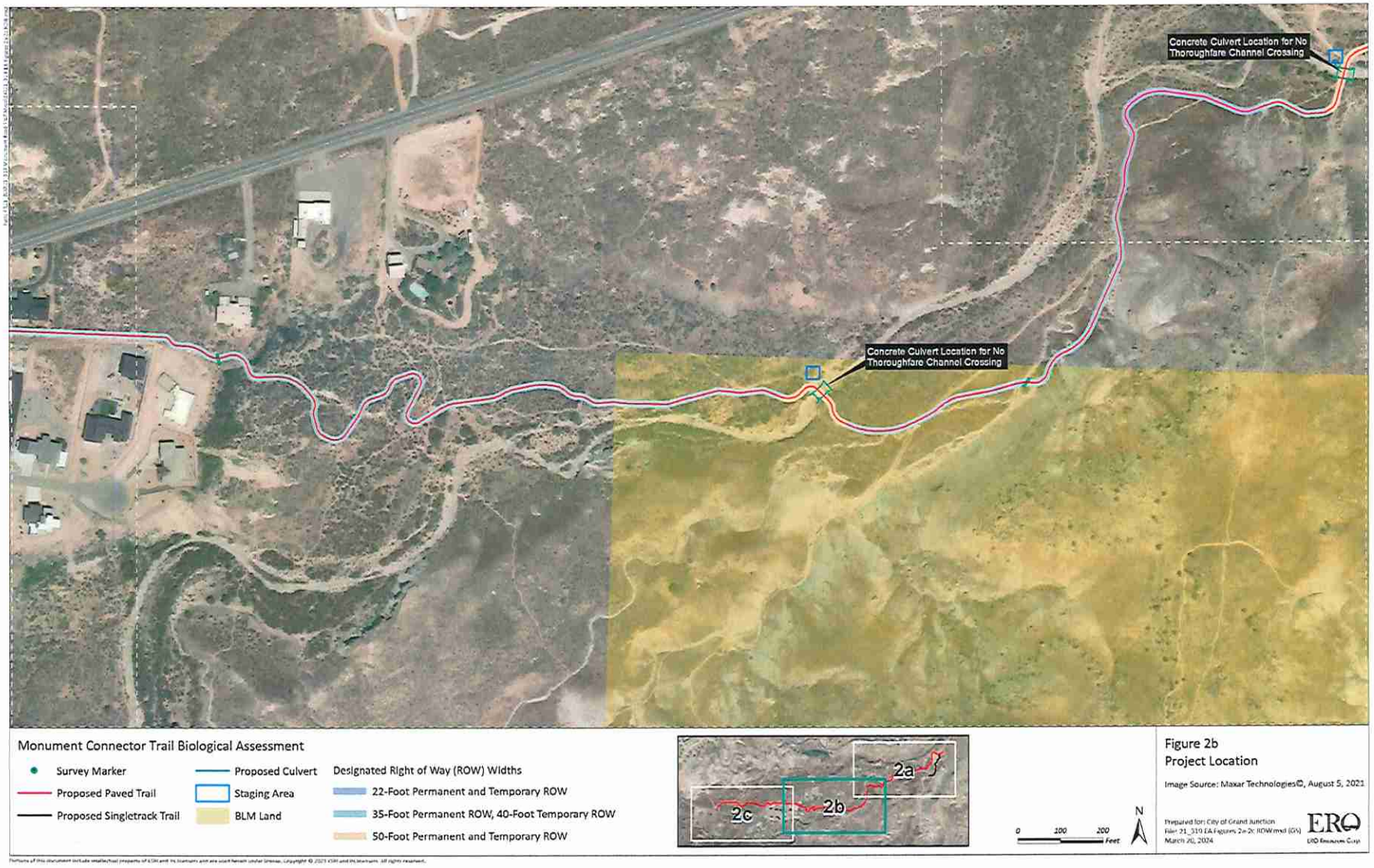
Prepared for: City of Grand Junction

File: 21_319 Figure 1.mxd (GS)

July 28, 2023

ERO Resources Corp.


Concrete Culvert Location for No Thoroughfare Channel Crossing
Monument Connector Trail Biological Assessment
Survey Marker
Proposed Paved Trail
Proposed Singletrack Trail
Proposed Culvert
Staging Area
BLM Land
Designated Right of Way (ROW) Widths
22-Foot Permanent and Temporary ROW
35-Foot Permanent ROW, 40-Foot Temporary ROW
50-Foot Permanent and Temporary ROW
2a
2b
2c
0 100 200 Feet
N
Figure 2a
Project Location
Image Source: Maxar Technologies©, August 5, 2021
ERO Resources Corp.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N
Figure 2b
Project Location
Image Source: Maxar Technologies©, August 5, 2021
Prepared for: City of Grand Junction
File: 21_319 EA Figures 2a-2c ROW.mxd (GN)
March 20, 2024
ERO
ERO Resources Corp


Monument Connector Trail Biological Assessment
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2a
2b
2c
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N
Figure 2c
Project Location
Image Source: Maxar Technologies©, August 5, 2021
ERO

- Three larger staging areas (Figure 2a, one just west of the trailhead parking for the Lunch Loop Trail; and Figure 2c, one at the western terminus of the trail along South Camp Road and one along Monument Road just east of the South Camp Road intersection) and two smaller staging areas where box culverts are needed for crossing the No Thoroughfare channel (see Figure 2b).
- Culverts, aggregate base, concrete forms, and other construction materials will be stored for a short term (typically less than a month) in the staging areas shown on Figures 2a through 2c and within approved ROW except where there is known habitat for threatened, endangered, or sensitive species to be protected (see Section 7.0, Design Features).
- Equipment and vehicle storage will be at City facilities, in the staging areas, or within approved ROW shown on Figures 2a through 2c.

3.3 Construction Activities

The concrete trail would generally follow existing grade and dips in terrain to naturally convey stormflow. In addition to a 16-foot total trail width (10 feet of concrete and 3 feet of shoulder on either side), an additional 7 feet of temporary construction buffer would be needed on both sides of the trail. The estimated maximum depth of excavation for trail construction is not expected to exceed 2 feet, other than the two areas where the trail crosses No Thoroughfare Canyon drainage. Additional design detail information is attached. Construction would follow these basic steps:

- The location of the trail would be excavated and leveled to provide a stable base and drainage for the concrete trail. Slopes would be laid back to prevent sloughing of material into the project working area.
- A concrete slip-form machine would be placed to follow surveyed string line, and concrete would be trucked in, poured, and set/cured. Aggregate base would be placed on either side of the trail for the shoulders. The anticipated quantities of material and number of trucks are shown in Table 1.
- Following construction, all disturbed areas would be regraded/contoured, seeded, and managed to prevent weed infestation.

Table 1. Tons of construction material and truck loads required.

Material	Tons	Truck Loads
Aggregate base	6,300	630
Concrete	3,400	170

The trail crosses the No Thoroughfare Canyon drainage in two places (Figure 2b). Two dual flood stage concrete box culverts (see Appendix A) would be installed where the trail crosses the channel, and extra working space around the culverts would be needed during construction (a total of 50 feet of permanent use for the span (100 feet either side of culvert centerline) of the culverts to accommodate operations and maintenance). A space of about 30 feet by 30 feet

would be utilized by the contractor at one side of the crossing to lift and place the precast boxes. The channel would be excavated to allow the concrete forms to be assembled. Forms to shape the concrete would be assembled on-site. Precast concrete structures may be used instead of cast-in-place construction depending on availability and costs. Wing walls to direct the flow would be installed.

3.4 Patrols and Minor Maintenance Activities

The City typically performs routine preventative and corrective maintenance for the trails system-wide in order to maintain safe infrastructure for recreating. City staff perform routine inspections of the trail at least once a year, or more frequently if warranted due to storm activity, vandalism issues, or reported damage. Patrols may be performed by ATV or on foot, depending on access, terrain, soil stability, and weather conditions.

Maintenance activities for trail structures may include the following:

- Repair or "shave" sections of pavement that are shifting
- Replace pavement sections that cannot be repaired
- Add aggregate to shoulders if needed
- Repair eroded areas
- Repair culverts

The parts and tools may be brought to the trail alignment or each structure via ATV or light truck. The maintenance activities will ensure the integrity and reliability of the trail and its appurtenant structures such as culverts and shoulders. Crews would sweep and/or plow the trail during winter after snows that are not expected to melt quickly, and generally once during the summer season. The trail would be reviewed for erosion and sediment issues twice each year, typically after storm events, and authorize additional sweeping if the need is identified.

Structures would be inspected approximately annually, or as needed, for evidence of maintenance requirements. Following weather incidents, more frequent inspections may be required. Access for inspection will be via ATV or pickup truck on designated improved or drive-in access routes, and on foot for designated walk-in access.

3.5 Equipment and Workforce

The City's goal is to begin the project as soon as possible, in 2024, and complete the construction within about 8 months.

It is anticipated that the following equipment and workforce may be on-site at any one time:

- Pickup (3; 3 to 5 people)
- Front-end loader (1-2; 1 operator per loader)
- Dozer (1-2; 1 operator per dozer)

- Concrete truck (1-3 at a time; 1 operator per truck with 2-4 people assisting)
- Rubber-tired backhoe/trackhoe (1; 1 operator)
- Small crane (1; 1 operator)
- Air compressor (1; personnel noted above)
- Hand tools including shovels and jackhammers (various numbers; personnel noted above)

3.6 Staking

Before construction commences, the construction surveyor will stake the proposed improvements on-site as shown in the construction documents. During construction, the surveyor will update any damaged or missing stakes as needed.

3.7 Contingency Planning

Contingency planning during construction will include communication priority (depending on injury or non-injury incident) and steps to take for a potential pollution spill. Potential for pollution at the project site will most likely come from the vehicles used to import materials (dump trucks, concrete trucks, cranes, etc.) and to grade and compact the trail subgrade (road grader and wheel drum compactor). The contractor will develop a contingency plan (Spill Prevention and Response Plan) to mitigate a potential pollution spill from a piece of equipment. The following spill control procedures will be implemented: containment, vessel, tank, and piping inspection and maintenance; spill response, containment and cleanup; and company policies on reporting and responding to spills. When not in use, all equipment will be parked in one of the three proposed construction access areas and protected from potential flooding.

3.8 Safety Requirements

City staff and construction workers will be required to wear Personal Protective Equipment (PPE) while working on site. PPE includes a hardhat, a safety vest, closed-toe boots, and safety glasses (gloves and hearing protection as needed). The contractor will host daily safety talks prior to commencing work each day.

4.0 Project Activities

4.1 Vegetation Management and Site Preparation

Overland construction methods will be used for vegetation management requirements, in addition to use of the authorized access and along the approved ROW. The clearing of vegetation may be required when necessary to support trail construction. There are a limited number of trees and shrubs located along most of the trail alignment (see Photo 1 and Photo 2 for representative vegetation conditions). Vegetation communities in the project area include sandy greasewood flats, sandy washes/disturbed areas, and salt desert scrub (see additional information on vegetation communities and dominant species in the project Biological Assessment). Primary shrubby vegetation that would require clearing includes greasewood,

Mormon tea, rabbitbrush, and sagebrush (Wyoming big sagebrush and black sagebrush) with some limited tamarisk. The remainder of the vegetation communities are primarily herbaceous with small subshrubs such as shadscale. Trimming and removal of vegetation may be completed with chainsaws or other hand-held equipment and mechanical equipment such as a dozer. Vegetation debris will be removed from the project area and disposed of appropriately. In authorized areas, trimmed vegetation may be chipped and spread along trail shoulders.

For the paved trail sections, a swath of vegetation clearing about 22 feet wide (in areas within 60 feet of sensitive plant locations) to about 40 feet wide (outside of the sensitive plant buffer of 60 feet and on slopes where additional grading is needed) will be required. For the single-track trail, most of the alignment is bare of vegetation and occurs on non-BLM lands.

Photo 1. Overview south from Monument Road toward trail alignment showing scattered greasewood and sagebrush community.

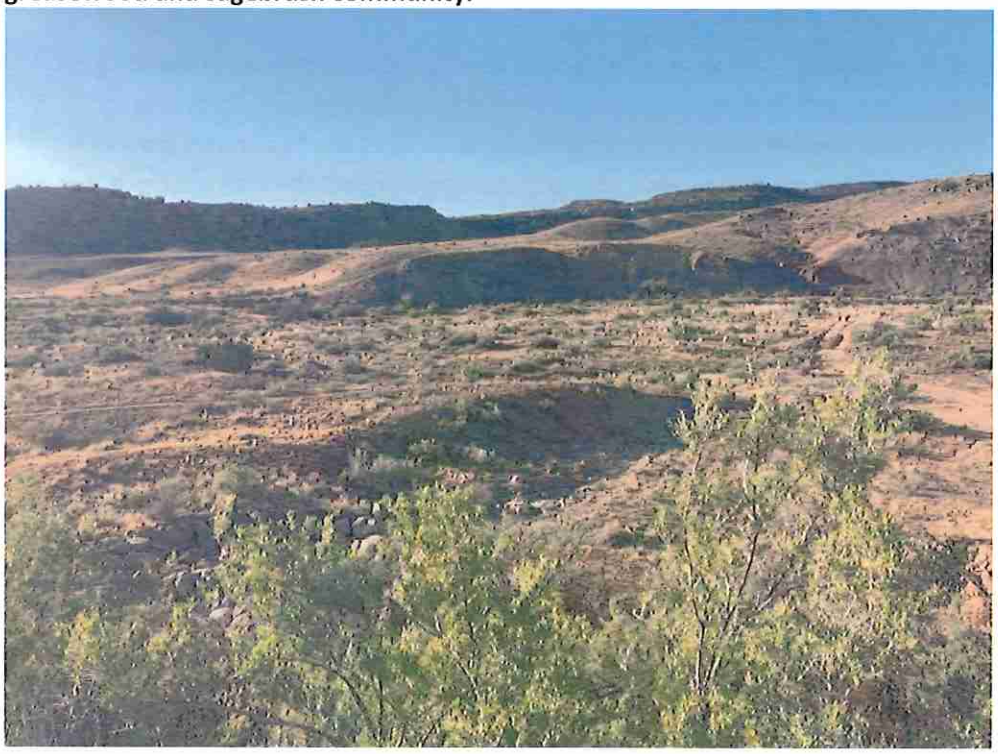
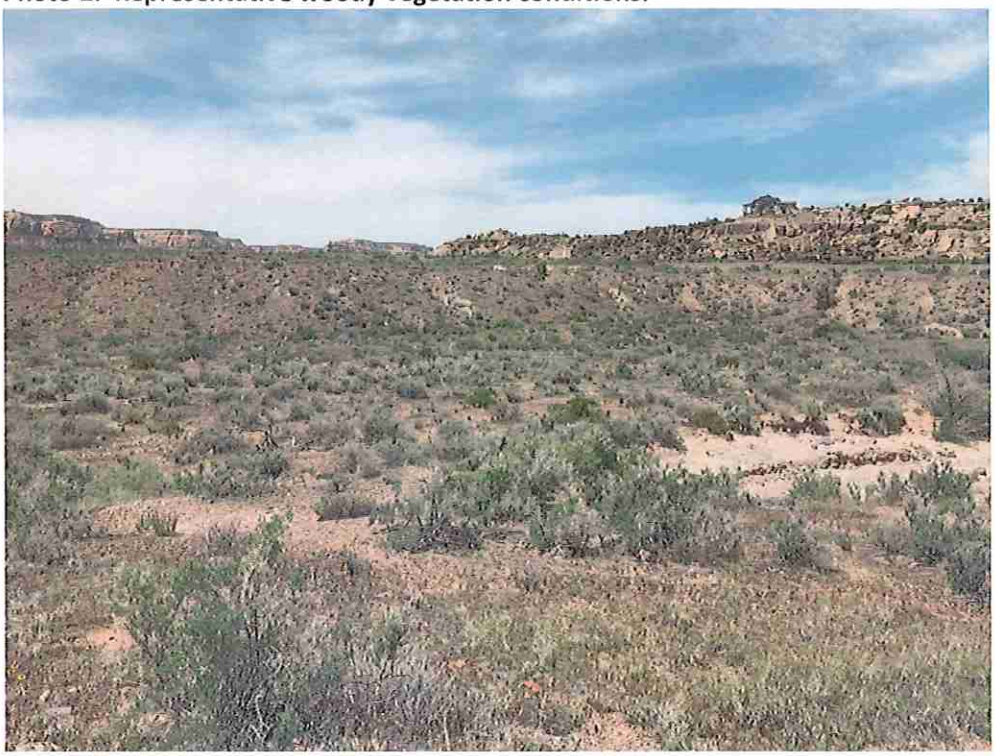


Photo 2. Representative woody vegetation conditions.

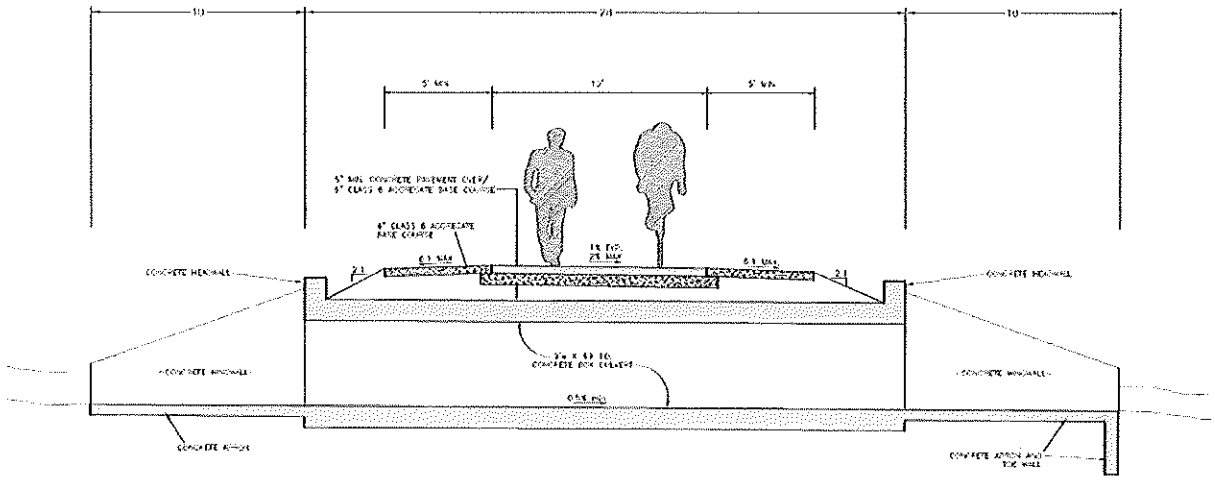


4.2 Site Excavation

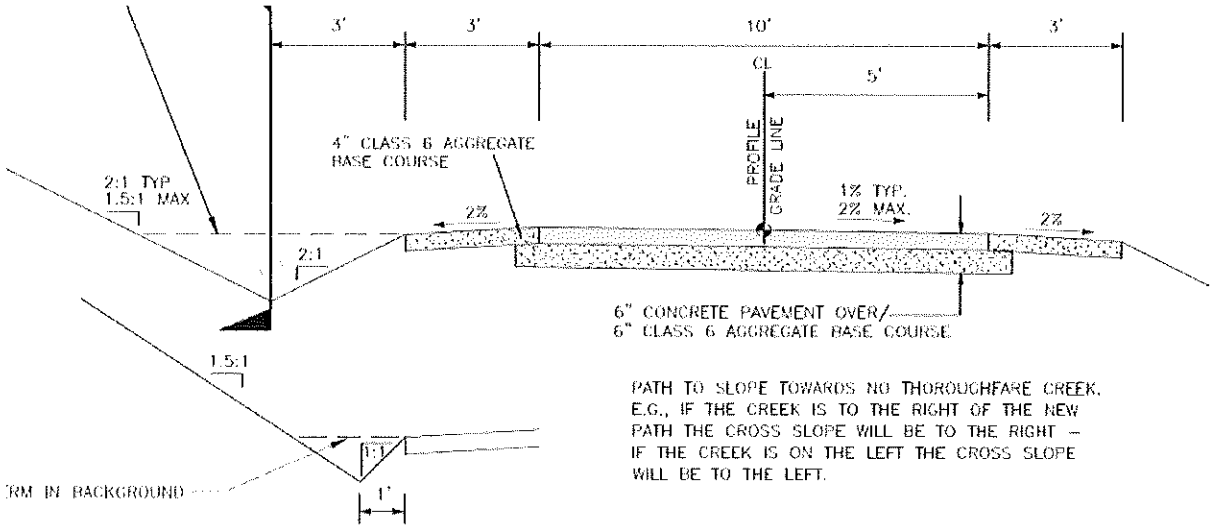
As noted above, the City has requested a 40-foot-wide temporary construction ROW across BLM lands and a 35-foot-wide permanent ROW. The proposed trail would be a 10-foot-wide concrete surface, with 3-foot-wide aggregate base course shoulders on either side (16 feet total). The single-track trail would be 4 feet wide.

A bulldozer would be used to clear and level the trail alignment after vegetation removal has been conducted. The intent, as noted previously, is to follow the natural topography and conduct fill or excavation at no more than 2 feet throughout the project area except in steeper areas and adjacent to the box culverts.

A proposed cross section of the trail is shown below.



MONUMENT ROAD TRAIL AT
NO THOROUGHFARE CREEK
CROSSING – SECTION VIEW



TYPCAL CROSS SECTION

4.3 Survey

Surveys were completed for cultural resources, paleontological resources, and biological resources (raptors, weeds and vegetation communities, rare plants, and wetlands and other waters of the U.S.).

The entire trail corridor on BLM and City-owned lands, including trail components and access routes, and respective buffer zones have been surveyed for cultural resources (see Archaeological Survey Findings Report). ERO surveyed a total of 42.8 acres, which includes the entire trail alignment with a 75-foot buffer (150-foot temporary ROW) (area of potential effect [APE]). Land within the APE is administered by the BLM (7.1 acres) and the City (35.7 acres). ERO archaeologists Kathy Croll and John Zachman conducted a Class III cultural resource survey of the entire APE on December 13, 2021, and May 10, 2022 (ERO 2022a).

Based on the presence of a fossiliferous sedimentary geologic formation in the project area, a preconstruction paleontological resources survey was requested by the BLM GJFO. Western Slope Paleontological Services (WSP) performed a pedestrian paleontological resources survey of the proposed trail alignments for 5 days in February, March, and April 2022. The survey was conducted in accordance with BLM Colorado Paleontological Resources Use Permit #COC76202 issued to Josh A. Smith of WSP on February 9, 2022, and expiring on December 31, 2022 (WSP 2022).

Raptor surveys were completed within a 1-mile buffer of the trail and maintenance access routes. A qualified biologist conducted the surveys in compliance with the "BLM Grand Junction Field Office (GJFO) Standards for Contractor Inventories for Special Status Plants, Significant Plant Communities & Noxious Weeds" on several dates both within and outside of the blooming season for Colorado hookless cactus (CHC) and the other target plant species. The survey included a 20-meter (66-foot) survey buffer and 60 meters (197 feet) on each side of the trail construction disturbance width (22-foot width), as well as a 20-meter buffer adjacent to staging areas and a temporary access route. The project design was adjusted after the initial survey to avoid impacts on CHC found; subsequent survey was required due to these changes as well as the identification of staging and access areas. The dates surveyed were April 20, 2022 (phenology check); May 13, 2022; and July 22, 2022. Transects were walked throughout the project area and varied depending on habitat, ranging from about 10 to 15 feet to about 2 to 3 feet in suitable habitat and when specimens were encountered. Disturbed, bare, greasewood flats and other unsuitable habitat areas were walked at wider transects. The May 2022 survey, conducted during blooming season when the CHC are more visible, also used wider transects in nonsuitable habitat. The July survey was conducted using 3- to 5-foot transects due to lower visibility, even in marginally suitable habitat. General vegetation communities and noxious weeds were surveyed (ERO 2022b).

A wetland delineation was conducted to identify the need for Clean Water Act permitting (ERO 2022c).

4.4 New Access

There will be no new access roads needed for the City trail activities.

4.5 Drive-In Access

Drive-in access will be along the approved ROW and via an existing access road on private land from Monument Road (see Figure 2a-2c). No other access will be required.

4.6 Reclamation

All areas from which the vegetation has been removed or damaged as a result of construction-related activities will be reseeded. The disturbed areas greater than about 2 to 3 square feet will be reseeded or revegetated using a planting mix that is agreed on by City and the landowner or BLM. BLM seed mixes have been coordinated with BLM ecologist Anna Lincoln.

The contractor will seed the disturbed areas at the end of construction with the specified seed mixes in Table 2 and Table 3. Seeding involves the mechanical or hand application of specific seed mixes appropriate for the site location and soil type. Seeding provides plant growth to stabilize the soil, reducing the likelihood of erosion or sediment transport. As soon as practical after the completion of construction activities, soil should be properly prepared for seeding. Preparing the seed bed will require loosening compacted soil to a depth of 4 inches, removing any stone greater than 1 inch in diameter, and leveling the site to reduce unnatural undulations in the soil surface (also see description of surface roughening below).

The choice of seed mix would dictate application rates and methods (see Table 2 and Table 3 for seed mixes). Seeding should always be accompanied by an additional best management practice (BMP), such as mulching or tackifying, to protect the seed and soil from erosion during the germination and growth process. Surface roughening and pocking are other successful reclamation approaches in areas where precipitation is limited and erosion is elevated. Surface roughening includes use of various measures, such as a sheep's foot roller, tracked excavator, or discing the surface to ensure it is adequately roughened to avoid erosional rilling that can result from artificially smooth surfaces. Seed areas would be inspected to ensure that the soil stabilization method (e.g., surface roughening, crimp mulch, etc.) was applied correctly and has not been compromised. The area would also be inspected for erosion and sediment deposition. Maintenance items will include regrading and seeding bare areas or areas of thin vegetative growth and adding additional BMPs as appropriate. If seeding cannot be accomplished due to seasonal or other constraints, temporary stabilization (such as mulch and mulch tackifier) would be used. This temporary stabilization would be inspected and maintained until permanent seeding is allowed. All seed, mulch, waddles, and other restoration materials would be certified weed free. Once construction is complete but prior to closure of the stormwater permit, the project area would be inspected monthly and following storm events. Once the stormwater permit is closed and the area is stabilized, there is a typical 2-times per year review for erosion and sedimentation issues, particularly after large storm events.

Table 2. City-owned lands seed mix.

Common Name	Scientific Name	PLS (lbs/ac)
Indian ricegrass	*Achnatherum hymenoides*	1

Common Name	Scientific Name	PLS (lbs/ac)
Thickspike wheatgrass	*Elymus lanceolatus*	2.3
Western wheatgrass	*Pascopyrum smithii*	7.5
Bluebunch wheatgrass	*Pseudoroegneria spicata*	2.3
Slender wheatgrass	*Elymus trachycaulus*	9.5
Red Mexican hat	*Ratibida columnifera*	0.5
Blanket flower	*Gaillardia*	1.5
Western yarrow	*Achillea millefolium*	0.5
	TOTAL	**25.00**

Hydroseed all disturbed areas at the construction site per subsection 212. Soil compaction shall be minimized for areas where permanent stabilization will be achieved through vegetative cover. PLS = pure live seed.

Table 3. BLM seed mix, greasewood flats, desert scrubland.

Common Name	Scientific Name	Variety	Percentage of Mix (%)	PLS (lbs/ac)
Western wheatgrass	*Pascopyrum smithii*	Arriba, Rosana	35	9.5
Bottlebrush squirreltail	*Elymus elymoides*	VNS	22	5.8
Alkali sacaton	*Sporobolus airoides*	VNS	1	0.27
Sand dropseed	*Sporobolus cryptandrus*	VNS	<1	0.09
Shadscale	*Atriplex confertifolia*	VNS	17	4.5
Four-wing saltbush	*Atriplex canescens*	Source N of CO-NM line or above 5,000 ft	23	6.2
Scarlet globemallow	*Sphaeralcea coccinea*	VNS	2	0.47
		TOTAL	**100**	**26.83**

Must be able to verify source. Double seeding rate for broadcast seeding. All seed will be certified weed free.

The reclamation procedures described above will be applied to all areas that result in temporary disturbance to vegetation greater than about 2 to 3 square feet, except where sensitive species are within 20 feet of disturbed areas and the City has been directed to avoid seeding activities.

4.7 Noxious Weed Plan

When native vegetation is disturbed, opportunities arise for populations of weedy species to increase or to invade disturbed areas. Disturbed corridors along access roads are particularly vulnerable to the increase of weedy vegetation. Invasive populations of weedy species often outcompete and can directly impact native plant populations, including special status species. Other impacts from an increase in weed infestations include the loss of forage for wildlife, decreased availability of habitat for wildlife, and a loss of biodiversity relative to undisturbed areas.

Weeds can be introduced during projects by vehicles, through improper treatment of equipment, and through revegetation seed mixtures. Wildlife, wind dispersal, and spreading by livestock are non-project-related means of increasing weedy species.

The City Parks department will be responsible for weed control after construction of the trail. Colorado West Land Trust may assist the City with trail maintenance and noxious weed control, pre- and postconstruction (they have assisted with this in the past on phase one). All chemical weed control will be in accordance with the BLM-approved herbicide formulations updated on April 4, 2019, except that the City no longer uses glyphosate. Noxious weed populations identified along the alignment will be treated by the City with BLM-approved chemicals

(Appendix B). To prevent reinfestation as well as unnecessary expense to the City, cooperation from the BLM will be expected in situations where an infestation is large and extends out from the alignment. Table 4 lists noxious weeds for the State of Colorado and Mesa County and their known occurrence in the project area. The City Parks department will survey, treat, and monitor for noxious weeds in coordination with the BLM. Weed spraying should be avoided in windy conditions and within 60 feet of sensitive species (CHC) occurrences.

Table 4. State of Colorado and Mesa County noxious weeds.

Common Name	Scientific Name	Mesa County	Colorado State List (CDA)	Occurrence in Project Area
Absinth wormwood	*Artemisia absinthium*	A	B	
African rue	*Peganum harmala*	Not known in county	A	
Black henbane	*Hyoscyamus niger*		B	
Bohemian knotweed	*Polygonum x bohemicum*	A	A	
Bouncingbet	*Saponaria officinalis*		B	
Bulbous bluegrass	*Poa bulbosa*		C	
Bull thistle	*Cirsium vulgare*	B	B	
Camelthorn	*Alhagi pseudalhagi*	Not known in county	A	
Canada thistle	*Cirsium arvense*	B	B	
Chicory	*Cichorium intybus*	G	C	
Chinese clematis	*Clematis orientalis*	A	B	
Common burdock	*Arctium minus*	G	C	
Common crupina	*Crupina vulgaris*	Not known in county	A	
Common mullein	*Verbascum thapsus*		C	
Common St. Johnswort	*Hypericum perforatum*		C	
Common tansy	*Tanacetum vulgare*	B	B	
Common teasel	*Dipsacus fullonum*		B	
Cutleaf teasel	*Dipsacus laciniatus*		B	
Cyprus spurge	*Euphorbia cypatissias*	A	A	
Dalmatian toadflax, broad-leaved	*Linaria dalmatica*	A	B	
Dalmatian toadflax, narrow-leaved	*Linaria genistifolia*		B	
Dame's rocket	*Hesperis matronalis*	A	B	
Diffuse knapweed	*Centaurea diffusa*	A	B	
Downy brome	*Bromus tectorum*		C	X
Dyer's woad	*Isatis tinctoria*	A	A	
Elongated mustard	*Brassica elongate*	Not known in county	A	
Eurasian watermilfoil	*Myriophyllum spicatum*		B	
Field bindweed	*Convolvulus arvensis*		C	X
Flowering rush	*Butomus umbellatus*	A	A	
Giant knotweed	*Polygonum sachalinense*	A	A	
Giant reed	*Arundo donax*	A	A	
Giant salvia	*Salvinia molesta*	Not known in county	A	
Hairy willowherb	*Epilobium hirsutum*	Not known in county	A	
Halogeton	*Halogeton glomeratus*		C	X
Hoary cress	*Cardaria draba*	B	B	
Houndstongue	*Cynoglossum officinale*	B	B	
Hydrilla	*Hydrilla verticillata*	Not known in county	A	
Japanese knotweed	*Polygonum cuspidatum*	A	A	
Johnsongrass	*Sorghum halepense*		C	

Common Name	Scientific Name	Mesa County	Colorado State List (CDA)	Occurrence in Project Area
Jointed goatgrass	*Aegilops cylindrica*	G	B	X
Leafy spurge	*Euphorbia esula*	A	B	
Mayweed chamomile	*Anthemis cotula*		B	
Meadow knapweed	*Centaurea nigrescens*	Not known in county	A	
Mediterranean sage	*Salvia aethiopis*	Not known in county	A	
Medusahead	*Taeniatherum caput-medusae*	Not known in county	A	
Moth mullein	*Verbascum blattaria*		B	
Musk thistle	*Carduus nutans*	B	B	
Myrtle spurge	*Euphorbia myrsinites*	A	A	
Orange hawkweed	*Hieracium aurantiacum*	Not known in county	A	
Oxeye daisy	*Chrysanthemum leucantheum*	B	B	
Parrotfeather	*Myriophyllum aquaticum*	Not known in county	A	
Perennial pepperweed	*Lepidium latifolium*	B	B	
Perennial sowthistle	*Sonchus arvensis*		C	
Plumeless thistle	*Carduus acanthoides*	A	B	
Poison hemlock	*Conium maculatum*		C	
Puncturevine	*Tribulus terrestris*	B	C	
Purple loosestrife	*Lythrum salicaria*	A	A	
Quackgrass	*Elymus repens*		C	
Redstem filaree	*Erodium cicutarium*		C	X
Rush skeletonweed	*Chondrilla juncea*	Not known in county	A	
Russian knapweed	*Acroptilon repens*	B	B	
Russian olive	*Elaeagnus angustifolia*	G	B	
Salt cedar (2 species)	*Tamarix chinensis* *Tamarix ramosissima*	B	B	X
Scentless chamomile	*Tripleurospermum perforata*		B	
Scotch thistle	*Onopordum acanthium, O. tauricum*	B	B	
Spotted knapweed	*Centaurea stoebe* ssp. *micranthos*	A	B	
Spotted x diffuse knapweed hybrid	*Centaurea* x *psammogena* = *C. stoebe* x *C. diffusa*	A	B	
Squarrose knapweed	*Centaurea virgata*	Not known in county	A	
Sulfur cinquefoil	*Potentilla recta*	A	B	
Tansy ragwort	*Senecio jacobaea*	Not known in county	A	
Velvetleaf	*Abutilon theophrasti*		C	
Wild caraway	*Carum carvi*		B	
Wild proso millet	*Panicum miliaceum*		C	
Yellow nutsedge	*Cyperus esculentus*		B	
Yellow starthistle	*Centaurea solstitalis*	A	A	
Yellow toadflax	*Linaria vulgaris*	A	B	
Yellow x Dalmatian toadflax hybrid	*Linaria vulgaris* x *L. dalmatica*		B	
Common reed	*Phragmites australis*	Watch		
Syrian bean caper	*Zygophyllum fabago*	Watch		
Yellow flag iris	*Iris psuedacorus*	Watch		

Sources and notes: Colorado Department of Agriculture (CDA) 2020; Mesa County 2020. CDA List "A" Species in Colorado are designated by the Commissioner for eradication. List "B" Species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species. List "C" Species are species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective

integrated weed management on private and public lands. The goal of such plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List "C" species. Mesa County "A" species are Colorado List "A" species known to exist/have existed in the county, and List "B" species are designated for eradication in the county. Mesa County "B" species include Colorado List "B" and List "C" species, each with specified management criteria for Mesa County.

During surveys, six species were documented in the project area: downy brome (Bromus tectorum), field bindweed (Convolvulus arvensis), halogeton (Halogeton glomeratus), jointed goatgrass (Aegilops cylindrica), redstem filaree (Erodium cicutarium), and salt cedar (Tamarix parviflora). The City Parks department will survey, treat, and monitor for noxious weeds in coordination with the BLM. Weed spraying should be avoided in windy conditions and within 60 meters of sensitive species (CHC) occurrences.

The design features listed in Appendix A that prevent the spread of noxious weeds will be followed.

4.8 Abandonment

Waste construction materials and rubbish from all construction areas will be collected, hauled away, and disposed of in an approved manner.

4.9 Survey Monuments

The City and contractors will protect all public survey monuments affected by or adjacent to the ROW. Survey monuments include but are not limited to the General Land Office and BLM cadastral survey corners, reference corners, witness points, and recognizable civil (both public and private) survey monuments. If any of the above are obliterated or disturbed, the City will report the incident in writing to the BLM and the respective installing authority if known. If BLM or General Land Office ROW monuments or references are obliterated during operations, the City will secure the service of a registered land surveyor or a BLM cadastral surveyor to restore the disturbed monument. Restoration will follow procedures found in the Manual of Surveying instructions for the Survey of Public Lands of the United States, latest edition. The City will record such survey in the appropriate county and send a copy to the BLM. If a BLM cadastral survey crew restores the disturbed survey monument, the City will be responsible for the cost of such survey.

5.0 Project Schedule

The construction work is planned to begin in the summer of 2023 and to be completed within 8 months.

6.0 Right-of-Way Requirements

On public lands, the City will conform to the GJFO BLM Standard Mitigation and BLM ROW stipulations for the ROW. The City will conduct maintenance and monitoring in accordance with the Grand Junction BLM ROW stipulations in the land use authorization. Other lands are owned by the City.

On public lands, the City will conform to the GJFO BLM Standard Mitigation and BLM ROW stipulations for the ROW. The City will conduct maintenance and monitoring in accordance with the Grand Junction BLM ROW stipulations in the land use authorization. Other lands are owned by the City. The City has requested a 35-foot-wide, 30-year ROW for the trail. The City has requested a 40-foot-wide temporary ROW for construction. For areas within 100 feet of the centerline for the concrete dual-flood phase box culvert on BLM-managed lands, the City has requested a 50-foot temporary and permanent ROW to allow for construction and maintenance (see Table 5).

Table 5. ROW lengths on Private and BLM-managed Lands.

ROW type	ROW width	ROW length	Ownership
Paved trail, no CHC*	40-foot temporary, 35-foot permanent	1,024	BLM
Paved trail, no CHC	40-foot temporary, 35-foot permanent	6,186	Private
Paved trail, CHC	22-foot temporary and permanent	401	BLM
Paved trail, CHC	22-foot temporary and permanent	1,136	Private
Paved trail, culvert	50-foot temporary and permanent	200	BLM
Paved trail, culvert	50-foot temporary and permanent	200	Private

Note: lengths vary slightly compared to previous totals provided in Section 2.1.1 due to rounding. *CHC = Colorado hookless cactus.

6.1 Trail Right-of-Way

The City has requested a 35-foot-wide, 30-year ROW for the trail.

6.2 Temporary Use Areas

The City has requested a 40-foot-wide temporary ROW for construction.

7.0 Design Features

Ninety-day notice is required for maintenance activities except where there are rare plant populations; in those cases, the BLM requires notice during the March preceding any work to be done.

The City will contact the BLM as soon as possible upon mobilization to complete emergency repairs. The City will provide the BLM with a list of structures and activities to be completed, disturbance limits, access routes to be used, and timeframe for implementation.

Emergency access will be allowed during any time of the year. In the event of an emergency, the City and its contractor(s) will notify the BLM immediately (within 24 hours) as soon as possible. The City will meet with the BLM on-site after an emergency to determine the required rehabilitation work and to establish a rehabilitation schedule.

If emergency access to the trail is required during wet weather, or if other maintenance activities result in the removal of vegetation or substantial vehicle impacts on existing native vegetation, revegetation of disturbed areas will be completed as directed by the BLM. Reclamation and revegetation will be implemented, as required, as soon as practical after any emergency road access or maintenance work needed to repair the trail.

If emergency maintenance is required during the winter or spring months, care will be taken to minimize erosion and sedimentation to the extent practicable, and effects will be mitigated after the emergency has been resolved in coordination with the affected land management agency or landowner.

The following commitments have been made for sensitive areas identified during biological and cultural resource surveys.

7.1 Cultural Resources

Within or overlapping the area of potential effect are three newly recorded resources (5ME23813.1, 5ME23814, and 5ME23815) and two isolated finds (5ME23816 and 5ME23817). All resources are recommended not eligible or nonsupporting for listing in the National Register of Historic Places. ERO recommends no further work upon concurrence with eligibility recommendations. A determination of "no historic properties affected" is also recommended pursuant to 36 Code of Federal Regulations (CFR) 800.4 of the National Historic Preservation Act.

7.2 Paleontological Resources

The survey was conducted in accordance with BLM Colorado Paleontological Resources Use Permit #COC76202 issued to Josh A. Smith of WSP on February 9, 2022, and expiring on December 31, 2022. The survey produced negative results, with no paleontological resources discovered in the project area. No further work is anticipated.

7.3 Biological Resources

Waters of the U.S.: While no wetland areas were mapped in the project area, one intermittent drainage (No Thoroughfare Canyon) and four ephemeral tributaries were mapped for a total of 0.802 acre of open water. More than 0.10 acre of ordinary high water mark would be impacted by the project; therefore, ERO recommends submitting a preconstruction notification to the U.S. Army Corps of Engineers to obtain authorization for the project under Nationwide Permit 14 or 42.

Endangered Species Act: The threatened species CHC (*Sclerocactus glaucus*) has occurrences in the project area. Table 6 lists recommendations with regard to this species.

Table 6. Design features specific to protecting CHC in the project area.

Potential Impact	Design Feature	Notes/Additional Description
Soil compaction	Revegetation measures; biological monitor	• The disturbance width along the trail will be confined to 22 feet in areas where CHC is located. • Construction equipment including concrete trucks will use the trail corridor as a travelway during construction. • All new soil-disturbing activities will be more than 20 meters from current occupied CHC locations.* • Use of an access route during construction will not result in new disturbance to two CHC individuals located 18 meters from the route due to topography and existing disturbance/access use.
Accidental crushing	Biological monitor; flagging/marking during construction; workforce education	• A biological monitor will provide an educational session with contractors and be on-site when work is being conducted in sensitive areas. • The biological monitor will ensure compliance with specific protection measures (e.g., install protective boulders) and/or short-term protection during construction (flagging, cones, barrier fencing, or other methods) coordinated with the BLM. • Activities will remain on existing designated impact areas. Vehicles will not deviate from the existing authorized access roads or the trail construction corridor. • Surface disturbance and the number of vehicles accessing the sensitive area will be minimized.
Increased soil erosion	Revegetation measures; stormwater management plan and measures	• Silt logs and other measures will be implemented during construction for control of soil erosion and stormwater management. • Trail design incorporates erosion control and stormwater management.
Use of herbicides and pesticides	All weed management will be per the BLM GJFO Integrated Weed Management Plan	• No infestations of noxious weeds requiring management were documented in sensitive areas during plant surveys. Jointed goatgrass was observed near the north end of the Monument Trail, and tamarisk was observed in the wash. Management of these weed infestations would not affect CHC populations. • Measures to control the spread of weeds will be conducted per the requirements in the BLM GJFO Integrated Weed Management Plan (BLM 2017).
Dust	Biological monitor; dust suppression; restriction of activities in sensitive areas to outside of blooming seasons	• Dust-suppression measures will be used to control fugitive dust from access routes and areas of disturbance in the vicinity of the trail alignment. • All new soil-disturbing activities will be more than 20 meters from current occupied CHC locations (mentioned previously).* • Construction activities will occur outside of the blooming season (April 1 to May 30) to minimize impacts on pollination/pollinators.
Noxious weeds	Clean tools and equipment used for trail construction; monitoring, then spraying and reseeding with native seed mix	• Soil disturbance may increase the spread of noxious weeds. Jointed goatgrass has been documented in the project area and could be spread by construction; tamarisk infestations are not anticipated to increase due to the project. • Measures to control the spread of weeds will be conducted per the requirements in the BLM GJFO Integrated Weed Management Plan (BLM 2017) (mentioned previously).*

*Although one segment of the existing construction access proposed for use as-is is less than 20 meters to a cluster of CHC, a significant topographic barrier would prevent any inadvertent impacts from vehicles and would minimize dust deposition.

Additional general design features incorporated in the proposed action are listed below:

- All staff, contractors, and volunteers responsible for any element of on-the-ground work will receive environmental awareness training before being allowed to work on this project. Training will include (a) information on the legal and biological status of CHC, (b) the habitats important to the species, (c) where occurrences are located in the project area, (d) awareness of mandatory conservation/avoidance measures, (e) information on fines and penalties for damaging or directly impacting CHC, and (f) reporting procedures should any violation occur.
- Any unrecorded/new cactus documented during construction will be avoided, and the minimization measures and design features will be applied to these individuals.
- All tools and equipment used for trail construction will be cleaned to prevent weed infestations. Disturbed areas will be reseeded with a BLM-approved seed mix.
- The BLM and City will monitor for the presence of noxious weeds and control undesirable plants in disturbed areas.
- The BLM and City will coordinate to close and potentially rehabilitate social trails near CHC.
- The City will coordinate with the BLM for needed trail maintenance on BLM-managed lands.

Long-term maintenance of the Monument Trail will be performed by the City throughout the life of the trail system. Maintenance will include repair of erosion-control features, culverts, and trail clearing as needed.

CHC normally blooms in April through May, and populations fluctuate over time, requiring new surveys to determine appropriate avoidance activities. Any future construction or maintenance work on the Monument Trail will be coordinated with BLM ecologists, who will determine the extent of monitoring and survey that is required. The BLM will be notified in the fall prior to any planned maintenance work so that spring surveys can take place for CHC in the project area. Only ground-disturbing activities will require BLM coordination.

Standard environmental protection measures associated with construction are shown in Appendix A.

9.0 Operation and Maintenance

9.1 Inspection/Patrols

Structures will be inspected approximately annually, or as needed, for evidence of maintenance requirements. Following weather incidents, more frequent inspections may be required. Access for inspection will be via ATV or pickup truck on designated improved or drive-in access routes, and on foot for designated walk-in access.

9.2 Work Schedule

The normal work schedule will be weekdays (Monday through Friday), approximately from 8am to 5pm. Emergency situations may result in activities outside the normal work schedule. Work will be completed when weather permits year-round but normally will occur between March and October. Exceptions will be in areas with seasonal restrictions identified by the BLM. In case of emergencies, work will be completed as soon as conditions allow.

9.3 Fire Control

Spark arresters are required for equipment generating sparks, including ATVs and chainsaws. No smoking will be allowed during construction activities. Common-sense practices regarding heat/spark sources, particularly in dry conditions, should be followed. Avoiding parking hot vehicles on dry shrubs and other logical avoidance practices will be followed (also see stipulations in Table 6).

9.4 Notification of BLM

The City will notify the BLM and appropriate landowners regarding the schedule and scope of work for construction of the trail as well as for future major maintenance activities. A preconstruction meeting will be held with the City, its contractors, environmental monitors, and agency representatives to review environmental and land use compliance for the project.

Ninety-day notice is required for maintenance activities except where there are rare plant populations; in those cases, the BLM requires notice during the March preceding any work to be done.

9.5 Emergencies

The City will contact the BLM as soon as possible upon mobilization to complete emergency repairs. The City will provide the BLM with a list of structures and activities to be completed, disturbance limits, access routes to be used, and timeframe for implementation.

Emergency access will be allowed during any time of the year. In the event of an emergency, the City and its contractor(s) will notify the BLM as soon as possible but no later than 24 hours. The City will meet with the BLM on-site after an emergency to determine the required rehabilitation work and to establish a rehabilitation schedule.

If emergency access to the trail is required during wet weather, or if other maintenance activities result in the removal of vegetation or substantial vehicle impacts on existing native vegetation, revegetation of disturbed areas will be completed as directed by the BLM. Reclamation and revegetation will be implemented, as required, as soon as practical after any emergency road access or maintenance work needed to repair the trail.

If emergency maintenance is required during the winter or spring months, care will be taken to minimize erosion and sedimentation to the extent practicable, and effects will be mitigated

after the emergency has been resolved in coordination with the affected land management agency or landowner.

10.0 References

BLM. 2017. BLM GJFO Integrated Weed Management Plan.

Colorado Department of Agriculture (CDA). 2020. Colorado Noxious Weed (Including Watch List), effective October 2020. https://drive.google.com/file/d/0Bxn6NtpJWc9JRFE3LW1RWFVXY1E/view?resourcekey=0-WalETB5Qp3zCjfRnar5t3g.

CNHP 2016. Recommended Best Management Practices for Managing Noxious Weeds on Sites with Rare Plants. http://www.cnhp.colostate.edu/download/documents/2016/BMP_Noxious_Weeds_on_Sites_with_Rare_Plants_CMui_SPanjabi_May_2016.pdf. May.

ERO. 2022a. Cultural Resource Survey Monument Connector Trail Mesa County, Colorado BLM GJFO CRIR 15922-01. December.

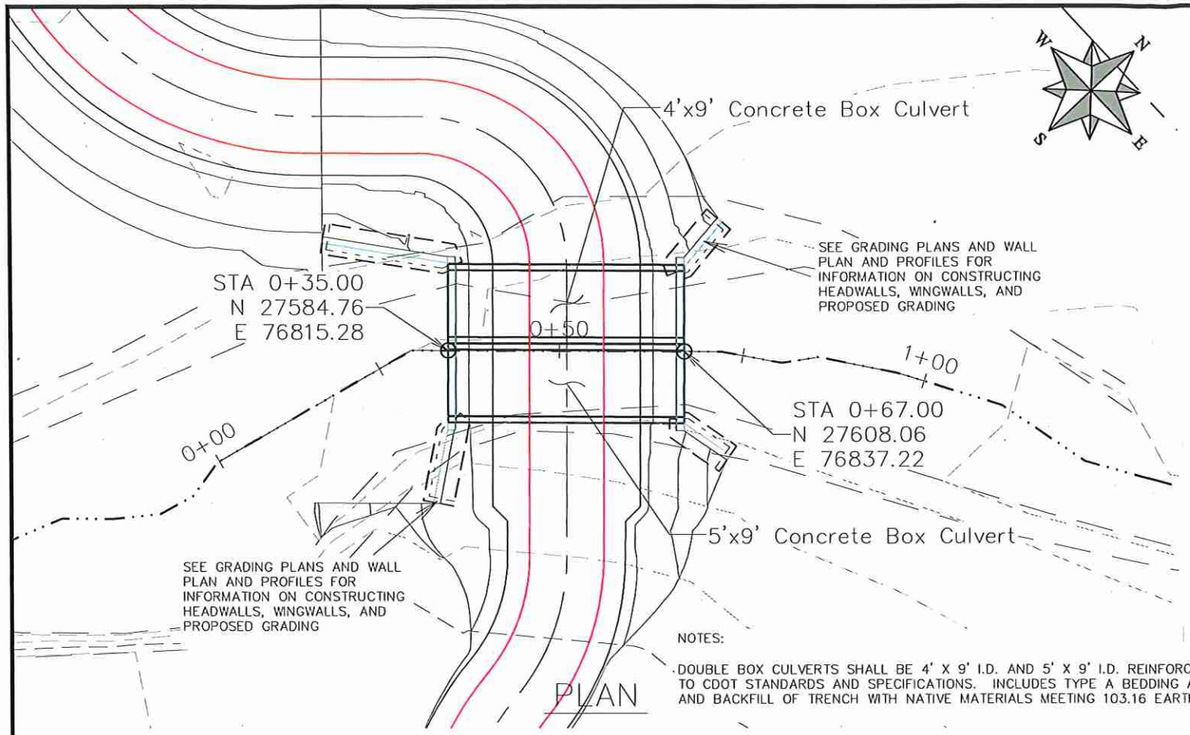
ERO. 2022b. Biological Survey Report, City of Grand Junction—Monument Connector Trail. November.

ERO. 2022c. Wetland Delineation Report, City of Grand Junction—Monument Connector Trail. September.

Mesa County. 2020. Mesa County Noxious Weed Management Plan. https://www.mesacounty.us/sites/default/files/2022-12/mesa-county-noxious-weed-plan.pdf.

Western Slope Paleontological Services, LTD (WSP). 2022. Paleontological Resources Survey Report for the Proposed "City of Grand Junction—Monument Connector Trail" in Mesa County, Colorado. August.

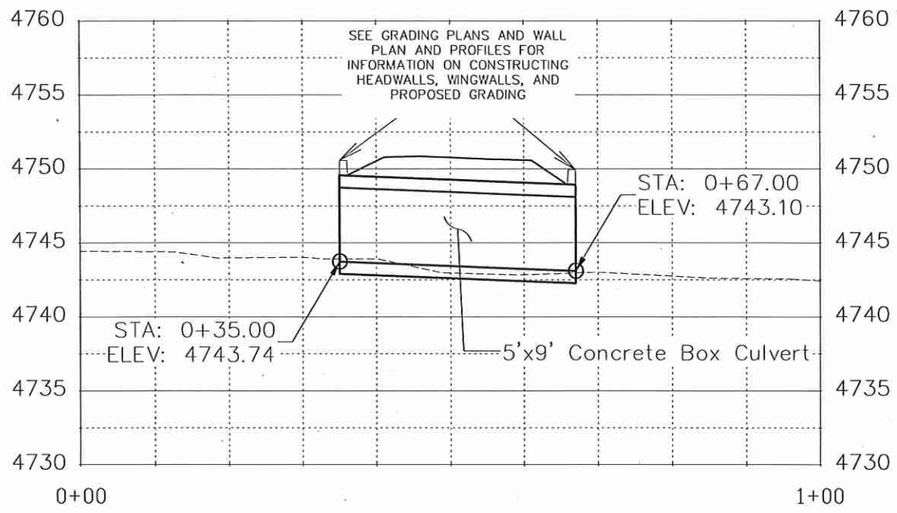
APPENDIX A
Typical Details and Roll Plot



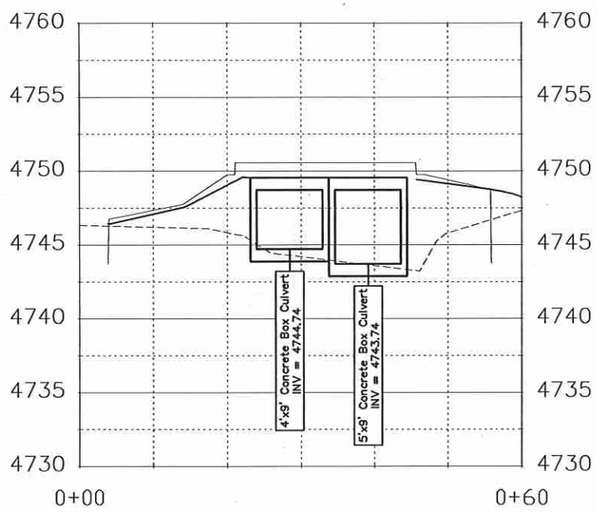
PLAN

NOTES:

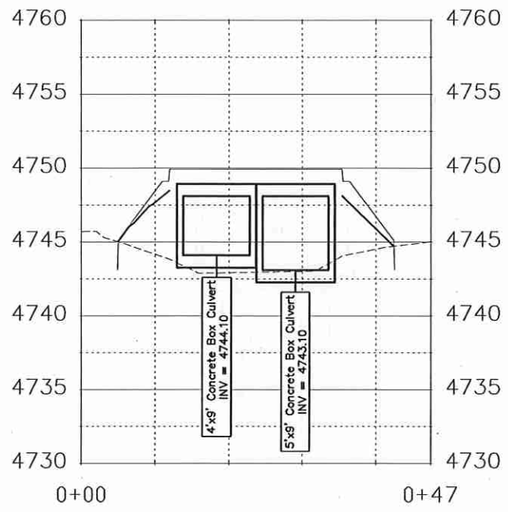
- DOUBLE BOX CULVERTS SHALL BE 4' X 9' I.D. AND 5' X 9' I.D. REINFORCED CONCRETE CONFORMING TO CDOT STANDARDS AND SPECIFICATIONS. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



PROFILE



UPSTREAM CROSS SECTION



DOWNSTREAM CROSS SECTION

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2023
DESIGNED BY KA DATE 2023
CHECKED BY KA DATE 2023
APPROVED BY KA DATE 2023

SCALES:
PLAN & PROFILE
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. G2208

MONUMENT CONNECT PHASE 2
BOX CULVERT PLAN & PROFILE – 1
November 8, 2023

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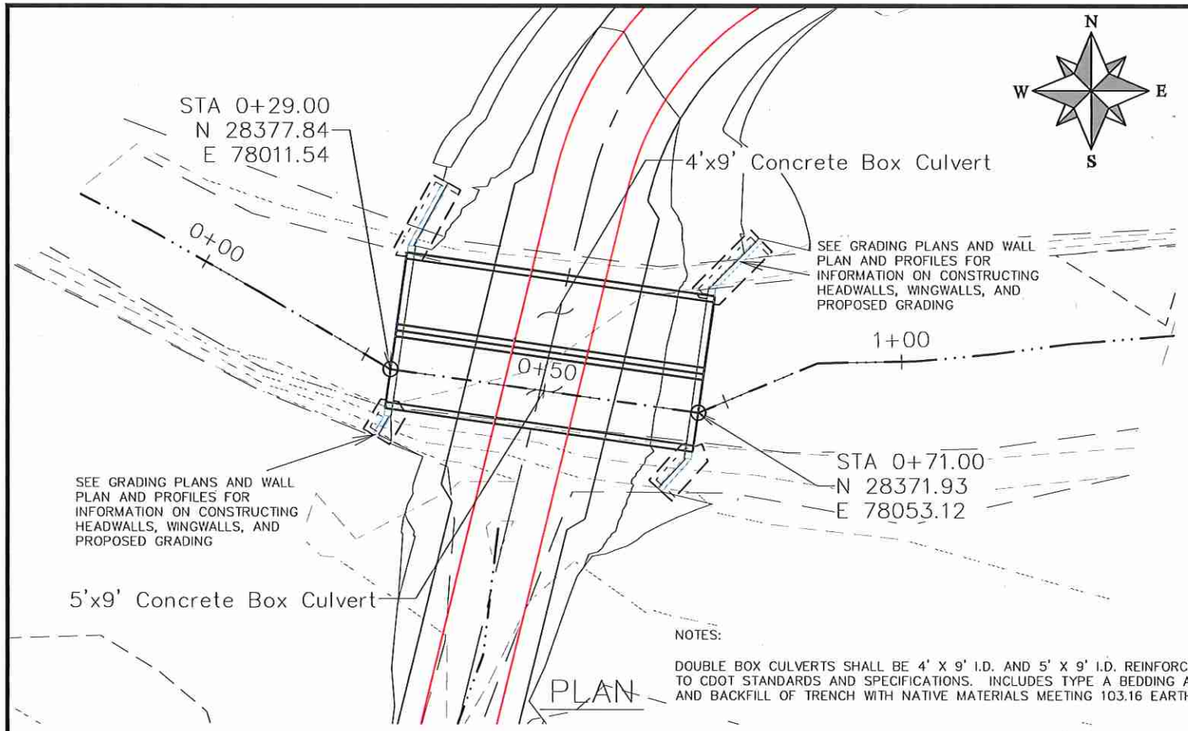
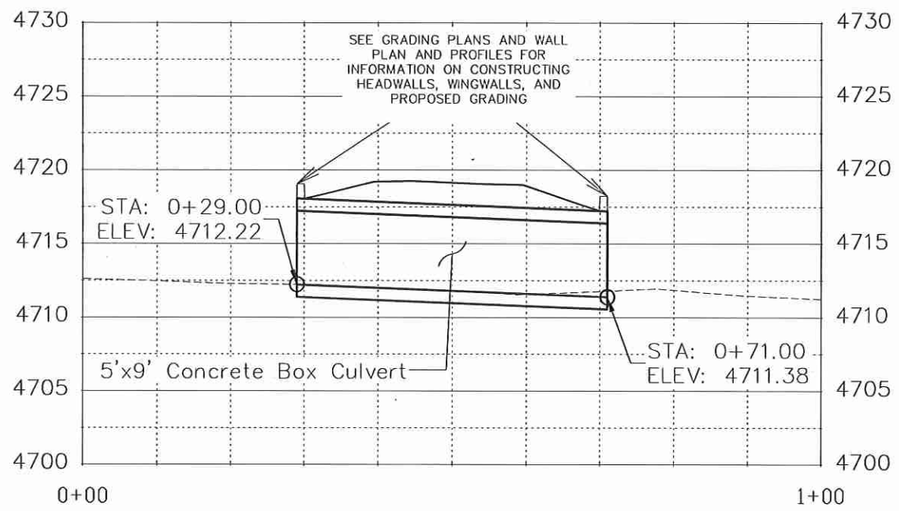


PLAN

NOTES:

DOUBLE BOX CULVERTS SHALL BE 4' X 9' I.D. AND 5' X 9' I.D. REINFORCED CONCRETE CONFORMING TO CDOT STANDARDS AND SPECIFICATIONS. INCLUDES TYPE A BEDDING AND HAUNCHING MATERIAL AND BACKFILL OF TRENCH WITH NATIVE MATERIALS MEETING 103.16 EARTH BACKFILL MATERIAL.



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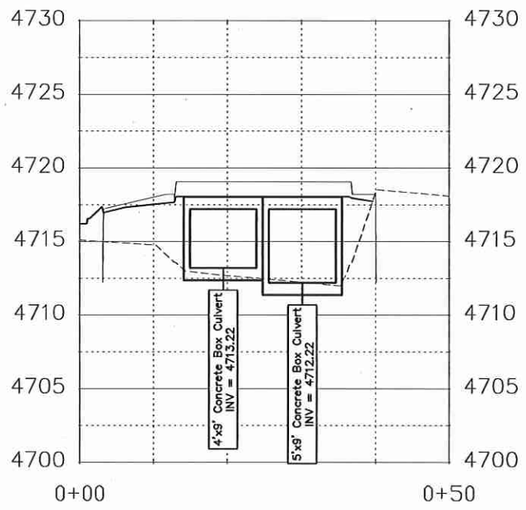

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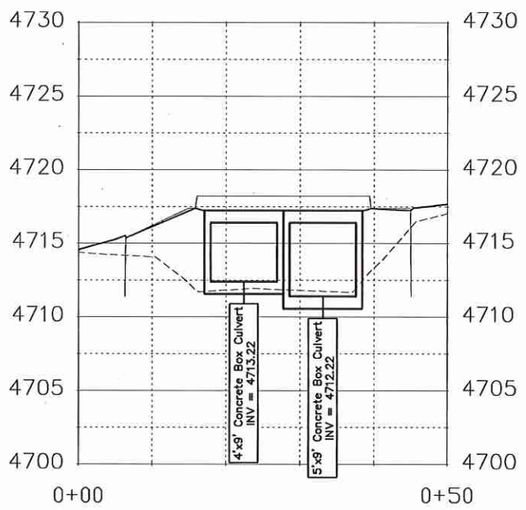

DOWNSTREAM CROSS SECTION

DESCRIPTION	DATE
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	

DRAWN BY HMC DATE 2023
DESIGNED BY KA DATE 2023
CHECKED BY KA DATE 2023
APPROVED BY KA DATE 2023

SCALES:
PLAN & PROFILE
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION
PROJECT NO. G2208

MONUMENT CONNECT PHASE 2
BOX CULVERT PLAN & PROFILE – 2
November 8, 2023

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MONUMENT CORRIDOR SHARED-USE-PATH PHASE 2 ALIGNMENT 3/13/2023

APPENDIX B
Design Features and BMP's Committed to by the City of Grand Junction

The following are applicant-committed design features.

General/Notification

M&E-14: A pre-construction meeting will be held with the BLM before and to facilitate implementation of plans and ensure compliance with stipulations or conditions of approval. The BLM will be notified at least 48 hours prior to construction or reclamation work. 90-day notice is required for any maintenance activities. except where there are rare plant populations; in those cases, BLM requires additional 90-days' notice no later than the March preceding any work to be done.

R-11: Project design should take into consideration any existing vegetation surrounding the project that can be used for visual screening. Care should be taken to preserve the integrity of the vegetation and the vegetation should remain standing and undamaged when the cut-and-fill slopes are recontoured.

A-10: Improve engine technology (Tier 2 or better) for all mobile and non-road diesel engines to reduce NOx, PM, CO, and VOC emissions.

A-24: Utilize dust suppression techniques on unpaved surfaces including watering, chemical suppressants, and gravel.

A-30: Reduce unnecessary vehicle idling to reduce combustion emissions, ozone formation, visibility impacts, and fuel consumption.

A-32: Restrict surface disturbing activities to periods when wind speeds are less than 25 mph.

S-17: Native vegetation and soils will be protected and disturbance to them will be minimized.

H-6: Before activities take place, every pad, access road, or facility site will have an approved surface drainage plan for establishing positive management of surface water drainage, to reduce erosion and sediment transport. The drainage plan will include adaptive BMPs, monitoring, maintenance and reporting. BMPs may include run-on/run-off controls such as surface pocking

or re-vegetation, ditches or berms, basins, and other control methods to reduce erosion. Pre-construction drainage BMPs will be installed as appropriate.

H-36: Limit surface disturbance near drainage features and minimize surface disturbance on steep slopes, fragile soils, saline soils, and Mancos shale derived soils.

H-43: Maintain appropriate vegetative/riparian buffers around water features to slow runoff and trap sediments and protect water quality. A minimum buffer distance should be 200 meters or greater where site conditions warrant.

M&E-44: Dust from vehicular traffic, equipment operations, or wind events will be controlled as needed. No application of surfactants or dust agents will proceed without BLM approval. In areas with soils mapped as Mancos shale, application of water on native road surfaces will be limited, to minimize mobilization of selenium. In such areas, alternate dust abatement measures such as proper road surfacing and maintenance, and speed limits will be used, subject to BLM approval.

M&E-61: Cut and fill slopes will be protected against erosion by contour grading, microbasins or other measures approved by the BLM. Well anchored BMPs such as biodegradable matting, weed-free bales or wattles may also be used on cut-and-fill slopes and along drainages to protect against soil movement.

VR-10: Ensure that seed used for revegetation as well as straw and hay bales used for erosion control are certified free of noxious weeds.

V-14: Perform final reclamation recontouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.

WEED-11: Minimize soil disturbance. To the extent practicable, native vegetation should be retained in and around project activity areas, and soil disturbance kept to a minimum.

WEED-19: Remove mud, dirt, and plant parts from project equipment before moving it into a project area. Seeds and plant parts shall be collected and incinerated when practical, or washed off in an approved containment area.

WEED-25: Clean all equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before leaving the project site if operating in areas infested

with weeds. Seeds and plant parts shall be collected and incinerated when possible.

WEED-26: When seeding has been specified for construction and maintenance activities, seed all disturbed soil (except travel route) soon after work is completed.

WEED-27: Use a certified weed-free seed mix suitable for local environmental conditions that includes fast, early growing (preferably native) species to provide quick revegetation. Consider applying weed-free mulch with seeding. (SOP)

WEED-28: Periodically inspect roads and rights-of-way for noxious weeds. Train staff to recognize weeds and report locations to the local weed specialist. Follow-up with treatment when needed.

WEED-29: When reclaiming roads, treat weeds before roads are made impassable. Inspect and follow up based on initial inspection and documentation.

WEED-30: To avoid weed infestations, create and maintain healthy plant communities whenever possible, including utility rights-of-ways, roadsides, scenic overlooks, trailheads, and campgrounds.

CR-4: The National Historic Preservation Act, as amended, requires that if newly discovered historic or archaeological materials or other cultural resources are identified during project implementation, work in that area must stop and the BLM Authorized Officer must be notified immediately. Within five working days the BLM Authorized Officer will inform the proponent as to: a) Whether the materials appear eligible for the National Register of Historic Places; b) The mitigation measures the proponent will likely have to undertake before the site could be used (assuming in situ preservation is not practicable), (36 CFR 800.13); and c) A timeframe for the BLM Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Office, that the BLM Authorized Officer's findings were correct and mitigation was appropriate.

S-2: When saturated soil conditions existing on access roads or location, or when road rutting becomes deeper than 3 inches, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads and locations.

S-3: Topsoil shall not be placed while in a frozen or muddy condition, when the subgrade is excessively wet, or in a condition that may otherwise be detrimental to proper grading or proposed sodding or seeding.

FWS-51: Noise reduction techniques and designs will be used to reduce noise from compressors or other motorized equipment.

Additional Site-specific BMPs are as follows:

BR-5 Biological Monitors will be employed for construction activities in the following locations for the following species: Colorado hookless cactus, within 60 meters of documented populations.

BR-6 Should any previously unknown populations of the Federally listed plants be discovered, City's contractor will inform City and the BLM to assure compliance with the Endangered Species Act (ESA), and consultation with the U.S. Fish and Wildlife Service (USFWS) and ensuing mitigation can proceed to ensure timely completion of the proposed project.

BR-7 Biological monitors will be employed to conduct migratory bird surveys for any vegetation clearing required during the time period May 15 to July 15.

Additional general design features incorporated in the proposed action are listed below:

• All staff, contractors, and volunteers responsible for any element of on-the-ground work will receive environmental awareness training before being allowed to work on this project. Training will include (a) information on the legal and biological status of CHC, (b) the habitats important to the species, , (c) awareness of mandatory conservation/avoidance measures, (d) information on fines and penalties for damaging or directly impacting CHC, and (e) reporting procedures should any violation occur. • The City will hire BLM approved biologic monitors to protect plants during construction and maintenance activities

• Any unrecorded/new cactus documented during construction will be avoided, and the minimization measures and design features will be applied to these individuals.

• All tools and equipment used for trail construction will be cleaned to prevent weed infestations. Disturbed areas will be reseeded with a BLM-approved seed mix.

• The City will monitor for the presence of noxious weeds and treat noxious weeds in coordination with BLM

• The BLM and City will coordinate to close and potentially rehabilitate social trails near CHC.

• The City will coordinate with the BLM for needed trail maintenance on BLM-managed lands.

Long-term maintenance of the Monument Trail will be performed by the City throughout the life of the trail system. Maintenance will include repair of erosion-control features, culverts, noxious weed treatments, and trail clearing as needed.

CHC normally blooms in April through May, and populations fluctuate over time, requiring new surveys to determine appropriate avoidance activities. Any future construction or maintenance work on the Monument Trail will be coordinated with BLM ecologists, who will determine the extent of monitoring and survey that is required. The BLM will be notified in the fall prior to any planned maintenance work so that spring surveys can take place for CHC in the project area. Only ground-disturbing activities will require BLM coordination.

Paleontological Resources

PR-1 Culvert installation in PYFC 4/5 level areas of the Morrison Formation, Summerville Formation, or Entrada Sandstone. The Unanticipated Discovery Plan below outlines procedures to follow in the event that paleontological resources are encountered during ground-disturbing and other construction activities in the absence of a paleontological resources monitor:

1. Upon discovery/excavation of significant paleontological resources, immediately stop construction activities and inform the on-site construction foreman/supervisor of discovery. Do not attempt to remove the fossils.

2. The construction foreman/supervisor should contact the appropriate personnel (BLM, City, etc.) immediately and notify them of the discovery.

3. A salvage/recovery plan should be formulated with help of a BLM-permitted paleontologist. Construction activities in the area of discovery

should be ceased until fossil salvage/recovery is completed and the area is cleared by the appropriate personnel.

4. Areas that were previously excavated in the project area (including associated spoils piles) should be inspected for additional paleontological resources. Paleontological monitoring during subsequent construction activities should be considered for the remainder of the project.

Soils

S-1 All soils compacted by movement of construction vehicles and equipment, will be 1.) loosened and leveled harrowing or disking to approximate pre-construction contours and 2.) reseeded with certified weed-free native grasses and mulched (except in cultivated fields). The specific seed mix(s) and rate(s) of application will be determined by the BLM (see seed tables in the EA Restoration Section).

Traffic

T-1 The contractor will make all necessary provisions for conformance with federal, state and local traffic safety standards and will conduct construction operations so as to offer the least possible obstruction and inconvenience to public traffic.

Water Quality

WQ-1 Construction activities will be performed by methods that prevent entrance or accidental spillage of solid matter, contaminants debris, and other objectionable pollutants and wastes into flowing streams or dry water courses, lakes and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailings, mineral salts and thermal pollution.

APPENDIX C
Herbicides Approved for Use on BLM Lands

Herbicides Formulations Approved for Use on Lands The BLM Administers in the 17 Western States

Update: April 4, 2019

Restrictions associated with exisitng Environmental Impact Statements and individual Environmental Assessments (EA) at the present time, may restrict the use of individual herbicide active ingredients allowed for a particular project within that state. Refer to current EAs prior to selecting the active ingredient(s) and subsequent formulation(s).

Refer to the complete label prior to considering the use of any herbicide formulation. Just because it has a Federal registration, it may not be registered in a particular State, for example California. Label changes can also impact the intended use through, such things as, creation or elimination of Special Local Need (SLN) or 24 (C) registrations, changes in application sites, rates and timing of application, county restrictions, etc.

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Aminopyralid	Milestone	Dow AgroSciences	62719-519
Aminopyralid + 2,4-D	ForeFront HL	Dow AgroSciences	62719-630
	GrazonNext HL	Dow AgroSciences	62719-628
Aminopyralid + Clopyralid	Sendero	Dow AgroSciences	62719-645
Aminopyralid + Metsulfuron methyl	Chaparral	Dow AgroSciences	62719-597
	Opensight	Dow AgroSciences	62719-597
Aminopyralid + Triclopyr	Capstone	Dow AgroSciences	62719-572
Bromacil	Alligare Bromacil 80	Alligare, LLC	81927-4
	Ceannard Bromacil 80DF	Ceannard, Inc.	58035-19
	Hyvar X	Bayer Environmental Science	432-1546
	Hyvar X	DuPont Crop Protection	352-287
	Hyvar X-L	Bayer Environmental Science	432-1548
	Hyvar X-L	DuPont Crop Protection	352-346
Bromacil + Diuron	Alligare Bromacil/Diuron 40/40	Alligare, LLC	81927-3
	Ceannard Diuron/Bromacil 80 DF	Ceannard, Inc.	58035-18
	DiBro 2+2	Nufarm Americas Inc.	228-227
	DiBro 4+2	Nufarm Americas Inc.	228-386
	DiBro 4+4	Nufarm Americas Inc.	228-235
	Krovar I DF	Bayer Environmental Science	432-1551
	Krovar I DF	DuPont Crop Protection	352-505
	Weed Blast 4G	SSI Maxim	34913-19
	Weed Blast Res. Weed Cont.	Loveland Products Inc.	34704-576

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Chlorsulfuron	Alligare Chlorsulfuron 75	Alligare, LLC	81927-43
	Chlorsulfuron E-Pro 75 WDG	Nufarm Americas Inc.	79676-72
	Nufarm Chlorsulf SPC 75 WDG Herbicide	Nufarm Americas Inc.	228-672
	Telar XP	Bayer Environmental Science	432-1561
	Telar XP	DuPont Crop Protection	352-654
Clopyralid	Alligare Clopyralid 3	Alligare, LLC	81927-14
	CleanSlate	Nufarm Americas Inc.	228-491
	Pyramid R&P	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-94
	Reclaim	Dow AgroSciences	62719-83
	Spur	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-89
	Stinger	Dow AgroSciences	62719-73
	Transline	Dow AgroSciences	62719-259
Clopyralid + 2, 4-D	Alligare Cody Herbicide	Alligare, LLC	81927-28
	Commando	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-92
	Curtail	Dow AgroSciences	62719-48
	Cutback	Nufarm Americas Inc.	71368-72
2, 4-D	2,4-D 4# Amine Weed Killer	UAP-Platte Chem. Co.	34704-120
	2,4-D Amine	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-72
	2,4-D Amine 4	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-19
	2,4-D Amine 4	Helena Agri-Enterprises, LLC (Helena Chemical Company)	42750-19-5905
	2,4-D LV 4	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-15
	2,4-D LV 6 Ester	Nufarm Americas Inc.	228-95
	2,4-D LV4	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-90
	2,4-D LV 6	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-20
	2,4-D LV6	Helena Agri-Enterprises, LLC (Helena Chemical Company)	42750-20-5905
	2,4-D LV6	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-93
	Alliagre 2,4-D Amine	Alligare, LLC	81927-38
	Alligare 2,4-D LV 6	Alligare, LLC	81927-39
	Aqua-Kleen	Nufarm Americas Inc.	71368-4
	Aqua-Kleen	Nufarm Americas Inc.	228-378
	Barrage HF	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-529
	Barrage LV Ester	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-504
	Base Camp Amine 4	Wilbur-Ellis Co., LLC (Wilbur-Ellis Co.)	71368-1-2935
	Base Camp LV6	Wilbur-Ellis Co., LLC (Wilbur-Ellis Co.)	2935-553
	Broadrange 55	Wilbur-Ellis Co., LLC (Wilbur-Ellis Co.)	2217-813-2935

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
2,4-D - continued	Clean Amine	Loveland Products Inc.	34704-120
	Clean Crop Amine 4	UAP-Platte Chem. Co.	34704-5 CA
	Clean Crop Low Vol 6 Ester	UAP-Platte Chem. Co.	34704-125
	Clean Crop LV-4 ES	UAP-Platte Chem. Co.	34704-124
	Combelt 4 lb. Amine	Van Diest Supply Co.	11773-2
	Combelt 4# LoVol Ester	Van Diest Supply Co.	11773-3
	Combelt 6# LoVol Ester	Van Diest Supply Co.	11773-4
	D-638	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-36
	Esteron 99C	Nufarm Americas Inc.	62719-9-71368
	Five Star	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-49
	Formula 40	Nufarm Americas Inc.	228-357
	Freelexx	Dow AgroSciences	62719-634
	HardBall	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-549
	Hi-Dep	PBI Gordon Corp.	2217-703
	Low Vol 4 Ester Weed Killer	Loveland Products Inc.	34704-124
	Low Vol 6 Ester Weed Killer	Loveland Products Inc.	34704-125
	Opti-Amine	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-501
	Platoon	Nufarm Americas Inc.	228-145
	Rugged	WinField-United (WinField Solutions, LLC)	1381-247
	Saber	Loveland Products Inc.	34704-803
	Salvo	Loveland Products Inc.	34704-609
	Salvo LV Ester	UAP-Platte Chem. Co.	34704-609
	Savage DS	Loveland Products Inc.	34704-606
	Savage DS	UAP-Platte Chem. Co.	34704-606
	Shredder 2,4-D LV4	WinField-United (WinField Solutions, LLC)	1381-102
	Shredder Amine 4	WinField-United (WinField Solutions, LLC)	1381-103
	Solution Water Soluble	Nufarm Americas Inc.	228-260
	Solve 2,4-D	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-22
	Unison	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-542
	Weedar 64	Nufarm Americas Inc.	71368-1
	WEEDestroy AM-40	Nufarm Americas Inc.	228-145
	Weedone LV-4	Nufarm Americas Inc.	228-139-71368
	Weedone LV-4 Solventless	Nufarm Americas Inc.	71368-14
	Weedone LV-6	Nufarm Americas Inc.	71368-11
	Whiteout 2,4-D	Loveland Products, Inc.	34704-1032
Dicamba	Alligare Cruise Control	Alligare, LLC	42750-40-81927
	Alligare Dicamba 4 Herbicide	Alligare, LLC	81927-55
	Banvel	Arysta LifeScience N.A. Corp.	66330-276
	Clarity	BASF Corporation	7969-137
	Diablo	Nufarm Americas Inc.	228-379
	Dicamba DMA	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-40

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Dicamba - continued	Kam-Ba	Drexel Chemical Company	19713-624
	Rifle	Loveland Products Inc.	34704-861
	Sterling Blue	WinField-United (WinField Solutions, LLC)	7969-137-1381
	Topeka	Rotam North America, Inc.	83100-34-83979
	Vanquish	Syngenta	100-884
	Vanquish Herbicide	Nufarm Americas Inc.	228-397
	Vision	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-576
Dicamba + 2, 4-D	Alligare Dicamba + 2,4-D DMA	Alligare, LLC	81927-42
	Brash	WinField-United (WinField Solutions, LLC)	1381-202
	Brush-Rhap	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-568
	Cimarron MAX - Part B	Bayer Environmental Science	432-1555
	Cimarron MAX - Part B	DuPont Crop Protection	352-615
	KambaMaster	Nufarm Americas Inc.	71368-34
	Latigo	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-564
	Outlaw	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-574
	Range Star	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-55
	Rifle-D	Loveland Products Inc.	34704-869
	Veteran 720	Nufarm Americas Inc.	228-295
	Weedmaster	Nufarm Americas Inc.	71368-34
Dicamba + Diflufenzopyr	Distinct	BASF Corporation	7969-150
	Overdrive	BASF Corporation	7969-150
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management* Lands in 17 Western *States Programmatic Environmental Impact Statement (PEIS), the aerial application of this herbicide* is prohibited.			
Diquat	Alligare Diquat Herbicide	Alligare, LLC	81927-43
	Diquat E-AG 2L	Nufarm Americas Inc.	79676-75
	Diquat E-Pro 2L	Nufarm Americas Inc.	79676-75
	Diquat SPC 2L Herbicide	Nufarm Americas Inc.	228-675
	Nufarm Diquat 2L Herbicide	Nufarm Americas Inc.	228-675
	Reward	Syngenta Professional Products	100-1091
Diuron	Alligare Diuron 4L	Alligare, LLC	81927-44
	Alligare Diuron 80DF	Alligare, LLC	81927-12
	Ceannard Diuron 80DF	Ceannard, Inc.	58035-16
	Direx 4L	DuPont Crop Protection	352-678
	Direx 4L	Makhteshim Agan of N. A. (ADAMA)	66222-54
	Diuron 4L	Drexel Chemical Company	19713-36

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Diuron - continued	Diuron 4L	Loveland Products Inc.	34704-854
	Diuron 4L	Makhteshim Agan of N. A. (ADAMA)	66222-54
	Diuron 80	Drexel Chemical Company	19713-274
	Diuron 80 WDG	Loveland Products Inc.	34704-648
	Diuron 80DF	WinField-United (WinField Solutions, LLC)	9779-318
	Diuron 80WDG	UAP-Platte Chem. Co.	34704-648
	Karmex DF	DuPont Crop Protection	352-692
	Karmex DF	Makhteshim Agan of N. A. (ADAMA)	66222-51
	Karmex IWC	DuPont Crop Protection	352-692
	Karmex XP	DuPont Crop Protection	352-692
	Parrot 4L	Makhteshim Agan of N. A. (ADAMA)	66222-54
	Parrot DF	Makhteshim Agan of N. A. (ADAMA)	66222-51
Fluridone	Alligare Fluridone	Alligare, LLC	81927-45
	Avast!	SePRO	67690-30
	Fluridone 4L	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-280
	Sonar AS	SePRO	67690-4
	Sonar Precision Release	SePRO	67690-12
	Sonar Q	SePRO	67690-3
	Sonar SRP	SePRO	67690-3
Fluroxypyr	Alligare Flagstaff	Alligare, LLC	81927-61
	Alligare Fluroxypyr	Alligare, LLC	66330-385-81927
	Comet Selective	Nufarm Americas Inc.	71368-87
	Vista XRT	Dow AgroSciences	62719-586
Fluroxypyr + 2,4-D + Dicamba	E-2 Herbicide	Nufarm Americas Inc.	228-442
Fluroxypyr + Clopyralid	Truslate Selective Herbicide	Nufarm Americas Inc.	71368-86
Fluroxypyr + Picloram	Alligare Triumph XTR Herbicide	Alligare , LLC	81927-64
	Surmount	Dow AgroSciences	62719-480
	Trooper Pro	Nufarm Americas Inc.	228-599
Fluroxypyr + Triclopyr	Alligare Cleargraze Pasture Herbicide	Alligare, LLC	81927-65
	PastureGard	Dow AgroSciences	62719-637
Glyphosate	Accord Concentrate	Dow AgroSciences	62719-324
	Accord SP	Dow AgroSciences	62719-322
	Accord XRT	Dow AgroSciences	62719-517
	Accord XRT II	Dow AgroSciences	62719-556
	Alligare Dryphosate 75SG	Alligare, LLC	81927-60
	Alligare Glyphosate 4 PLUS	Alligare, LLC	81927-9
	Alligare Glyphosate 5.4	Alligare, LLC	81927-8
	Aqua Neat	Nufarm Americas Inc.	228-365

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Glyphosate - continued	Aqua Star	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-59
	Aquamaster	Monsanto	524-343
	AquaPro Aquatic Herbicide	SePRO Corporation	62719-324-67690
	Buccaneer	Tenkoz	55467-10
	Buccaneer Plus	Tenkoz	55467-9
	Credit Xtreme	Nufarm Americas Inc.	71368-81
	Foresters	Nufarm Americas Inc.	228-381
	Gly Star Gold	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61
	Gly Star Original	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-60
	Gly Star Plus	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61
	Gly Star Pro	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-61
	Gly-4	Universal Crop Protection Alliance	42750-60-72693
	Gly-4 Plus	Universal Crop Protection Alliance	72693-1
	Gly-4 Plus	Universal Crop Protection Alliance	42750-61-72693
	GlyphoMate 41	PBI/Gordon Corporation	2217-847
	Glypro	Dow AgroSciences	62719-324
	Glypro Plus	Dow AgroSciences	62719-322
	Honcho	Monsanto	524-445
	Honcho Plus	Monsanto	524-454
	Imitator Aquatic	Drexel Chemical Company	19713-623
	Imitator DA	Drexel Chemical Company	19713-586
	Imitator Plus	Drexel Chemical Company	19713-526
	KleenUp Pro	Loveland Products, Inc.	34704-890
	Mad Dog Plus	Loveland Products, Inc.	34704-890
	Makaze	Loveland Products, Inc.	34704-890
	Mirage	Loveland Products Inc.	34704-889
	Mirage Herbicide	UAP-Platte Chem. Co.	524-445-34704
	Mirage Plus	Loveland Products Inc.	34704-890
	Rattler	Helena Agri-Enterprises, LLC (Helena Chemical Company)	524-445-5905
	Razor	Nufarm Americas Inc.	228-366
	Razor Pro	Nufarm Americas Inc.	228-366
	Rodeo	Dow AgroSciences	62719-324
	Roundup Custom	Monsanto	524-343
	Roundup Original	Monsanto	524-445
	Roundup Original II	Monsanto	524-454
	Roundup Original II CA	Monsanto	524-475
	Roundup PROMAX	Monsanto	524-579
	Roundup PRO	Monsanto	524-475
	Roundup PRO Concentrate	Monsanto	524-529
	Roundup PRO Dry	Monsanto	524-505
	Showdown	Helena Agri-Enterprises, LLC (Helena Chemical Company)	71368-25-5905

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Glyphosate + 2, 4-D	Campaign	Monsanto	524-351
	Imitator + 2,4-D	Drexel Chemical Company	19713-635
	Landmaster BW	Albaugh, LLC (Albuagh, Inc/Agri Star)	42570-62
	Landmaster BW	Monsanto	524-351
Hexazinone	Pronone 10G	Pro-Serve	33560-21
	Pronone 25G	Pro-Serve	33560-45
	Pronone MG	Pro-Serve	33560-21
	Pronone Power Pellet	Pro-Serve	33560-41
	Velosa	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5905-579
	Velpar DF	DuPont Crop Protection	352-581
	Velpar DF VU	Bayer Environmental Science	432-1576
	Velpar L	DuPont Crop Protection	352-392
	Velpar L VU	Bayer Environmental Science	432-1573
	Velpar ULW	DuPont Crop Protection	352-450
Hexazinone + Sulfometuron methyl	Oustar	Bayer Environmental Science	432-1553
	Oustar	DuPont Crop Protection	352-603
	Westar	Bayer Environmental Science	432-1558
	Westar	DuPont Crop Protection	352-626
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic Environmental Impact Statement (PEIS), the aerial application of this herbicide* is prohibited.			
Imazapic	Alligare Panoramic 2SL	Alligare, LLC	66222-141-81927
	Nufarm Imazapic 2SL	Nufarm Americas Inc.	71368-99
	Open Range G	Wilbur-Ellis Co., LLC (Wilbur-Ellis Co.)	2935-557
	Plateau	BASF Corporation	241-365
Imazapyr	Alligare Ecomazapyr 2SL	Alligare, LLC	81927-22
	Alligare Imazapyr 4SL	Alligare, LLC	81927-24
	Alligare Rotary 2 SL	Alligare, LLC	
	Arsenal	BASF Corporation	241-346
	Arsenal Applicators Conc.	BASF Corporation	241-299
	Arsenal PowerLine	BASF Corporation	241-431
	Chopper	BASF Corporation	241-296
	EZ-JECT Copperhead Herbicide Shells	EZ-JECT, Inc.	83220-2
	Habitat	BASF Corporation	241-426
	Habitat Herbicide	SePRO	241-426-67690
	Polaris	Nufarm Americas Inc.	228-534
	Polaris AC	Nufarm Americas Inc.	241-299-228
	Polaris AC	Nufarm Americas Inc.	228-480
	Polaris AC Complete	Nufarm Americas Inc.	228-570

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Imazapyr - continued	Polaris AQ	Nufarm Americas Inc.	241-426-228
	Polaris Herbicide	Nufarm Americas Inc.	241-346-228
	Polaris RR	Nufarm Americas Inc.	241-273-228
	Polaris SP	Nufarm Americas Inc.	228-536
	Polaris SP	Nufarm Americas Inc.	241-296-228
	SSI Maxim Arsenal 0.5G	SSI Maxim Co., Inc.	34913-23
	SSI Maxim Arsenal 5.0 G	SSI Maxim Co., Inc.	34913-24
	Stalker	BASF Corporation	241-398
Imazapyr + Diuron	Alligare Mojave 70 EG	Alligare, LLC	81927-25
	Imazuron	Nufarm Americas Inc.	228-654
	Sahara DG	BASF Corporation	241-372
	SSI Maxim Topsite 2.5G	SSI Maxim Co., Inc.	34913-22
Imazapyr + Metsulfuron methyl	Lineage Clearstand	Bayer Environmental Science	432-1578
	Lineage Clearstand	DuPont Crop Protection	352-766
Imazapyr + Sulfometuron methyl +	Lineage HWC	Bayer Environmental Science	432-1577
Metsulfuron methyl	Lineage HWC	DuPont Crop Protection	352-765
	Lineage Prep	Bayer Environmental Science	432-1579
	Lineage Prep	DuPont Crop Protection	352-767
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management* Lands in 17 Western *States Programmatic Environmental Impact Statement (PEIS), the aerial application of this herbicide* is prohibited.			
Metsulfuron methyl	Alligare MSM 60	Alligare, LLC	81927-7
	AmTide MSM 60DF Herbicide	AmTide, LLC	83851-3
	Cimarron MAX - Part A	Bayer Environmental Science	432-1555
	Cimarron MAX - Part A	DuPont Crop Protection	352-615
	Escort XP	Bayer Environmental Science	432-1549
	Escort XP	DuPont Crop Protection	352-439
	Patriot	Nufarm Americas Inc.	228-391
	PureStand	Nufarm Americas Inc.	71368-38
	Rometsol	Rotam North America, Inc.	831000-2-83979
Metsulfuron methyl + Chlorsulfuron	Cimarron Plus	Bayer Environmental Science	432-1572
	Cimarron Plus	DuPont Crop Protection	352-670
	Cimarron X-tra	DuPont Crop Protection	352-669
Picloram	Alligare Picloram 22K	Alligare, LLC	81927-18
	Grazon PC	Dow AgroSciences	62719-181
	OutPost 22K	Dow AgroSciences	62719-6
	Tordon 22K	Dow AgroSciences	62719-6
	Tordon K	Dow AgroSciences	62719-17

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Picloram - continued	Triumph 22K	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-79
	Triumph K	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-81
	Trooper 22K	Nufarm Americas Inc.	228-535
Picloram + 2, 4-D	Alligare Picloram + D	Alligare, LLC	81927-16
	Graslan L	Dow AgroSciences	62719-655
	Grazon P+D	Dow AgroSciences	62719-182
	GunSlinger	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-80
	HiredHand P+D	Dow AgroSciences	62719-182
	Pathway	Dow AgroSciences	62719-31
	Tordon 101 Mixture	Dow AgroSciences	62719-5
	Tordon RTU	Dow AgroSciences	62719-31
	Trooper P + D	Nufarm Americas Inc.	228-530
Picloram + 2, 4-D + Dicamba	Trooper Extra	Nufarm Americas Inc.	228-586
Rimsulfuron	Alligare Laramie 25DF	Alligare, LLC	81927-57
	Hinge	Rotam Borth America, Inc.	83100-40-83979
	Matrix SG	Dupont Crop Protection	352-768
Sulfometuron methyl	Alligare SFM 75	Alligare, LLC	81927-26
	Oust XP	Bayer Environmenatl Science	432-1552
	Oust DF	DuPont Crop Protection	352-401
	Oust XP	DuPont Crop Protection	352-601
	Spyder	Nufarm Americas Inc.	228-408
NOTE: In accordance with the Record of Decision for the *Vegetation Treatments Using Herbicides on Bureau of Land Management* Lands in 17 Western *States Programmatic Environmental Impact Statement (PEIS), the aerial application of this herbicide* is prohibited.			
Sulfometuron methyl + Chlorsulfuron	Landmark XP	Bayer Environmental Science	432-1560
	Landmark XP	DuPont Crop Protection	352-645
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ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Sulfometuron methyl + Metsulfuron methyl	Alligare SFM Extra	Alligare, LLC	81927-5
	Oust Extra	Bayer Environmental Science	432-1557
	Oust Extra	DuPont Crop Protection	352-622
	Spyder Extra Selective	Nufarm Americas Inc.	228-690
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Tebuthiuron	Alligare Tebuthiuron 20 P	Alligare, LLC	81927-41
	Alligare Tebuthiuron 80 WG	Alligare, LLC	81927-37
	Spike 20P	Dow AgroSciences	62719-121
	Spike 80DF	Dow AgroSciences	62719-107
	SpraKil S-5 Granules	SSI Maxim Co., Inc.	34913-10
Tebuthiuron + Diuron	SpraKil SK-13 Granular	SSI Maxim Co., Inc.	34913-15
	SpraKil SK-26 Granular	SSI Maxim Co., Inc.	34913-16
Triclopyr	Alligare Boulder 6.3	Alligare, LLC	81927-54
	Alligare Triclopry 4	Alligare, LLC	81927-11
	Alligare Triclopyr 3	Alligare, LLC	81927-13
	Element 3A	Dow AgroSciences	62719-37
	Element 4	Dow AgroSciences	62719-40
	Forestry Garlon XRT	Dow AgroSciences	62719-553
	Garlon 3A	Dow AgroSciences	62719-37
	Garlon 4	Dow AgroSciences	62719-40
	Garlon 4 Ultra	Dow AgroSciences	62719-527
	Pathfinder II	Dow AgroSciences	62719-176
	Relegate	Nufarm Americas Inc.	228-521
	Relegate RTU	Nufarm Americas Inc.	228-522
	Remedy	Dow AgroSciences	62719-70
	Remedy Ultra	Dow AgroSciences	62719-552
	Renovate 3	SePRO Corporation	62719-37-67690
	Renovate OTF	SePRO Corporation	67690-42
	Tahoe 3A	Nufarm Americas Inc.	228-520
	Tahoe 4E	Nufarm Americas Inc.	228-385
	Tahoe 4E Herbicide	Nufarm Americas Inc.	228-517
	Triclopyr RTU	Albaugh, LLC (Albuagh, Inc/Agri Star)	42750-173
	Trycera	Helena Agri-Enterprises, LLC (Helena Chemical Company)	5906-580
	Vastlan	Dow AgroSciences	62719-687

ACTIVE INGREDIENT	TRADE NAME	MANUFACTURER	EPA REG. NUMBER
Triclopyr + 2, 4-D	Alligare Everett	Alligare, LLC	81927-29
	Aquasweep	Nufarm Americas Inc.	228-316
	Candor	Nufarm Americas Inc.	228-565
	Crossbow	Dow AgroSciences	62719-260
Triclopyr + Clopyralid	Alligare Prescott Herbicide	Alligare, LLC	81927-30
	Brazen	Nufarm Americas Inc.	228-564
	Redeem R&P	Dow AgroSciences	62719-337

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