

Project: US 6 over Garrison Street

Project Sub Acct. No: 19478

July 31, 2014

Technical Requirements

Section 5 – Environmental

Environmental Requirements

The Contractor shall comply with all environmental laws, regulations, approvals, and conditions required for the project, whether obtained by CDOT or by the Contractor. Actions listed within each environmental resource below are clarifications of, and additions to: CDOT Standard Specifications for Road and Bridge Construction, dated 2011; CDOT Project Special Revisions developed; and Standard Special Revisions.

The Contractor shall prepare an Environmental Compliance Work Plan (ECWP) for the Project, specifically identifying all of the environmental compliance requirements for the Project and the Contractor's approach for complying with the requirements. The ECWP shall include a table to track milestones including Contractor and CDOT roles, due dates, and completion dates. The ECWP shall be submitted to CDOT for Acceptance within 60 Days after Notice to Proceed for Design and prior to any construction activities.

The Contractor shall provide an Environmental Compliance Manager. It is acceptable for the Environmental Compliance Manager to serve as the Transportation Erosion Control Supervisor (TECS) if the Manager has been trained by CDOT and earned the new TECS certification. The compliance manager shall lead an environmental review meeting with CDOT environmental staff to discuss environmental issues every two weeks for the first 60 days following Notice to Proceed for Design, and at least monthly thereafter. The compliance manager shall have the authority to stop construction if Work activities jeopardize environmental laws, policy, or human health and safety. The ECWP tracking table and documentation of any pertinent events or discussions that occur during the environmental field reviews (including, but not limited to, meeting minutes of environmental review meetings) will be submitted to CDOT for Acceptance every quarter prior to Approval of progress payment. Please note, all items described in this section will not be paid for separately but will be included in the Work, unless noted otherwise.

Environmental Resources Requirements

Air Quality/Fugitive Dust

The Contractor shall ensure that all CDPHE-APCD air quality related approvals are in place prior to beginning demolition and/or construction work on the bridge. The contractor shall coordinate directly with the regulatory agencies issuing these approvals to obtain an Air Pollution Emission Notice (APEN), including a Fugitive Dust Control Plan and construction and demolition permit from the Colorado Department of Public Health and Environment (CDPHE) Air Pollution Control Division (APCD) prior to construction. All resulting air quality mitigation requirements and the costs to implement such mitigation that is a result of demolition or construction activity at the bridge or other areas of this project shall be included in the Work. This includes obtaining permits and approvals prior to the Work as well as the costs associated with ensuring compliance of these permits.

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The Contractor shall implement procedures for reducing and managing dust control which shall include BMPs consistent with the Fugitive Dust Control Plan, including but not limited to:

- Use of wind barriers and/or wind screens to minimize the spread of dust where large amounts of Material are stored
- Use of a wheel wash station and/or large diameter cobble apron at egress/ingress areas to minimize dirt being tracked onto public streets
- Use of water systems for street cleaning equipment capable of diminishing dust during sweeping operations on public streets
- Covering of all trucks hauling dirt/sand or other loose material leaving or being brought onto the Site
- Watering or cover of excavated materials or other materials which remain on the Site and have the potential to become airborne to levels which create a non-compliance condition with any permits or fugitive dust control plans.
- Use of engine pre-heater devices during wintertime construction

All non-road equipment shall use ultra-low sulfur diesel fuel. The Contractor shall minimize excessive idling of inactive equipment or vehicles. If construction equipment is creating excessive air quality emissions that have a potential to affect air quality for operators or persons working/living in the area, equipment shall be taken out of operation until fixed or replaced. The Contractor shall also locate any stationary emissions equipment that may be used in a manner that considers public health and environment.

Noise

CDOT reviewed the based configuration design for this project and determined that none of the design changes for this work would trigger a TYPE I noise action as defined in the current version of CDOT's Noise Analysis and Abatement Guidelines 2012. If any changes to the contractors design result in changes that trigger a TYPE I noise analysis to be completed, the analysis along with any new mitigation required under the TYPE I category and the costs to implement such mitigation that is a result of a design change, shall be included in the Work and must be approved by CDOT prior to the completion of the project. Any and all requirements of the CDOT Noise Analysis and Abatement Guidelines shall apply to this project through final design and construction for any changes proposed by the contractor.

Existing Barriers

Any existing noise barriers or other structures providing noise reduction benefit such as buildings, earthen berms, etc. and creates a direct line of sight barrier between the roadway and the noise sensitive receptor(s) (that are removed or modified by this project) will be required to undergo an evaluation for replacement barriers. This evaluation shall ensure that equivalent noise reduction benefit is maintained after the project is completed the same as it was benefiting before the project started. It is the responsibility of the contractor to provide documentation that will be approved by CDOT if these conditions are created through design changes in the project.

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No new lines of sight from a residential property or sensitive land use to traffic shall be created as part of this project without mitigation. These requirements are described within the current CDOT Noise Analysis and Abatement Guidelines.

Construction Noise

The Contractor shall comply with all Local Agency(s) noise ordinances and/or other restrictions applicable to nighttime construction activities for projects within the local municipal coverage areas. Projects falling within unincorporated areas of a County will be governed by County Code. The Contractor shall coordinate with the Local Agency(s) and/or CDOT for all necessary noise exemptions or notices, noise permit variances, and approvals to do night work as required. If Local Agency nighttime noise restrictions do not exist and/or there are no noise sensitive receptors in the project area, the approvals to do nighttime work shall be Approved through the CDOT engineer. Standard noise controls and best management practices for reducing equipment and construction activity noise levels shall be utilized in all cases and will be the responsibility of the contractor to consistently employ when working in noise sensitive areas after 9 p.m.

For this project, the Contractor is required to review and understand all local agency ordinances with project applicable night restrictions. When conditions apply, the contractor shall submit a nighttime noise ordinance memorandum(s) to all jurisdictional local authorities. This memorandum shall request construction noise exemptions for night work operations (at least two weeks prior to the proposed night work start date) where construction work is scheduled between the hours of 9:00 p.m. and 7:00 a.m. The following information should be included in the exemption request submittals and sent to the City/County Engineer:

1. Requesting entity
2. Contact person and phone number
3. Location of the work
4. Reasons night work is being requested
5. Type of activities proposed to occur at night
6. Equipment proposed to be used at night
7. Start and end date propose
8. Total number of nights work is proposed to occur

All nighttime construction activities subject to noise level restrictions cannot begin until the necessary documentation and notifications have been approved by the local agency authority, the CDOT Engineer and/or the Region 1 Noise Specialist. All Work required for complying with the Local Agency requirements including the Work associated with the exemption requests and permitting requirements will not be paid for separately, but will be included in the Work.

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Migratory Bird Treaty Act

The Contractor shall comply with the Migratory Bird Treaty Act (MBTA) at all times. The Contractor shall schedule clearing and grubbing operations and Work on Structures to avoid taking (pursue, hunt, take, capture or kill, attempt to take, capture, kill or possess) migratory birds protected by the MBTA. Project Special Specification 240 “Protection of Migratory Birds” is included at the end of this section. The Migratory bird nest survey memorandum shall be submitted to CDOT for Review prior to impacting existing structures that may contain active bird nests and prior to completing clearing/grubbing tasks. If an active nest is identified, the Contractor shall notify the Environmental Compliance Manager and CDOT Project Engineer within 24-hours.

Threatened and Endangered Species

No threatened and endangered species are located in the Project limits; therefore, no threatened and endangered species will be impacted.

Prairie Dog Mitigation

At the time of the Categorical Exclusion, prairie dogs were not identified within the Project limits. If prairie dogs will be impacted by the project, the Contractor shall follow the CDOT Impacted Black-Tailed Prairie Dog Policy (January 15, 2009). Delays due to prairie dog activity may result in compensable time extension Contract change order issued by CDOT.

Western Burrowing Owls

Prairie dog burrows were not identified within the Projects limits; therefore, there is no habitat for burrowing owls. If prairie dogs are identified prior to construction activities, a burrowing owl survey shall be completed by the Contractor. This survey shall be conducted in concurrence with the Protection of Migratory Birds field investigation as outlined in Project Special Revision 240. The reporting requirements shall also follow the requirements as set forth in Project Special Revision 240. The survey will be required for any construction activities occurring between March 15th and October 31st.

If burrowing owls are confirmed to be present the Contractor is directed to:

- Monitor the activities of the owls, noting and marking which burrows they are using. When all active burrowing owl burrows have been located and marked, construction activity may proceed within areas greater than 150 feet from the burrows until the owl has moved out, at which time all construction activities may commence.
- Delays due to Burrowing Owl activity may result in a compensable time extension Contract change order issued by CDOT.

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Wetlands

Wetlands and Waters of the US were not identified within the Project limits; therefore, a Section 404 permit is not required for this project. Should the project impact wetland and Waters of the US, the Contractor shall obtain a Section 404 permit.

SB 40

Senate Bill 40 resources were not identified within the Project limits; therefore, a Senate Bill 40 certification is not required for this project. Should the project impact a Senate Bill 40 resource, the Contractor shall obtain the Senate Bill 40 certification.

Archaeology and Paleontology

A review of the project area for archaeological resources has been completed. There are no known archaeological sites within or near the project areas. Archaeological resource monitoring is not required. However, if any archaeological resources are uncovered during construction the Contractor shall immediately cease work and notify the Environmental Compliance Manager and the CDOT Project Engineer. Steps may need to be taken to document, protect, and/or remove the resources as directed by CDOT. The Contractor shall not resume work within the area until coordination has occurred with the Environmental Compliance Manager and receiving written notification from the CDOT Project Engineer.

Paleontology

Fossils may be uncovered during excavation for the project (refer to the Paleontological Memorandum [US 6 and Garrison Paleontology Memorandum_071514.pdf] in the Reference Documents for further information). CDOT will furnish a paleontologist to monitor project excavations. The Contractor shall notify the Engineer 10 working days prior to the start of excavation operations to allow for scheduling of the monitor. If paleontological resources are uncovered during construction, steps may need to be taken to document, protect, and/or remove the resources as directed by CDOT. The Contractor shall not resume work within the area until coordination has occurred with the Environmental Compliance Manager and receiving written notification from the CDOT Project Engineer. See Revision of Section 107 at the end of this section.

Historic Resources

Historic review and consultation under Section 106 (36 CFR 800) of the National Historic Preservation Act (NHPA) has been completed for the project. Two historic resources were identified within the project Area of Potential Effect (APE): Bridge Structure F-16-ER (5JF4804) and the Meadowlark Hills Historic District (5JF4684). Bridge Structure F-16-ER is *not eligible* to the National Register of Historic Places (NRHP) and its replacement, therefore, results in *no historic properties affected* under Section 106.

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The Meadowlark Hills Historic District is *eligible* for inclusion on the NRHP, however it was determined that the project will not directly or indirectly effect the defining features of the resource, resulting in a determination of *no historic properties affected* under Section 106. If the project scope, limits, or design features change or if post-review discoveries are uncovered during construction the Region 1 Historian will need to be contacted to update the historic clearance.

Vegetation

Vegetation replacement shall follow Section 17.

Noxious Weeds

The Contractor shall conduct a survey for state and county listed weeds within the project area. If listed weeds are found, they shall be mapped and an Integrated Noxious Weed Management Plan developed to eliminate them from the project site and prevent them from spreading. The Contractor shall be responsible for implementing the plan prior to construction, upon coordination with the Environmental Compliance Manager and Acceptance by the Project Engineer.

Recognized Hazardous Materials

Recognized Hazardous Materials (RHM) are defined as the presence or suspected presence of hazardous substances which may require management and/or disposal. Hazardous substances may exist on the surface or subsurface, in groundwater or surface water, or on structures to be demolished or modified as part of the work; and may be mixed with soil, water, building matrices, and/or other waste materials. Recognized hazardous material research did not identify asbestos containing building materials on the bridge; however, lead-based paint was identified (refer to the Hazardous Materials Documentation [US 6 and Garrison Recognized Hazardous Materials Documentation_073014.pdf] in the Reference Documents for further information). All painted bridge components shall become the property of the Contractor and shall be recycled in accordance with CDOT Specification 250 (subsection 250.04).

Soil and groundwater sampling did not identify any constituents of concern. Depth to groundwater is approximately 10-14 feet below ground surface. Groundwater shall not be directly discharged into a storm sewer, ditch, wetlands or any Water of the State without a permit. See revision of Section 250 at the end of this section.

Bike Lanes

Bike lanes are located on both northbound and southbound lanes of Garrison Street. The Contractor shall coordinate with the City of Lakewood to develop a detour plan for the bike lanes during construction activities. This detour plan shall be approved by the City of Lakewood prior to impacting the bike lanes.

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NEPA Reevaluation

If the Contractor proposes or creates the need for any environmentally significant project change (scope, design, realignment of project beyond NEPA project study limits, construction technique, acquisition of additional right of way, or schedule, etc.) as defined by each resource's policies, procedures, guidelines or regulatory requirements that results in a potential change to the environmental impact or for need for environmental permitting, the Contractor shall be responsible for completing the additional environmental approvals/permitting.

Environmental Permits

This Work may require several environmental permits from various Federal, State and Local agencies.

Contractor Obtained Permits:

The Contractor shall be responsible for obtaining all governmental and agency permits required for the described Work, not otherwise obtained by CDOT, including but not limited to the following environmental permits:

Permit/Approval	Permitting Agency
Air Pollution Emission Notice	CDPHE, APCD
Nighttime Noise Memorandum (Exemption Request)	City of Lakewood
Construction Dewatering Permit	CDPHE Water Quality Control Division
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP)	CDPHE, Water Quality Control Division
City of Lakewood Stormwater Permit	City of Lakewood
Fugitive Dust Permit (bridge Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Demolition Permit (Bridge/Structure Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division

The Contractor shall deliver copies of these permits to the Engineer.

Stormwater

The Contractor shall be cognizant of, adhere to, and implement all requirements of the various environmental and stormwater permits that are necessary for construction and operation of the Project. The Contractor shall follow the requirements of the latest CDOT Stormwater Management Plan (SWMP) template and appropriate specifications. The Contractor shall be required to obtain all permits, unless otherwise indicated. The listing herein is not all-inclusive and it shall be the responsibility of the Contractor to determine all of the permits required to perform the Work. Because CDOT is the landowner, CDOT is partially liable for any Contractor negligence.

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Fines may be incurred upon the Project for permit non-compliance by CDOT or other regulatory agencies. Any non-compliance fines will be passed onto the Contractor. If conflicts exist between requirements of Section 5 and Section 12, the more stringent shall apply.

Colorado Discharge Permit System, Stormwater Construction Permit (CDPS-SCP)

Implementation of the permit requirements (i.e., SWMP, SWMP Site Map, and SPCC Plan) shall be a first construction item. Construction cannot begin until these items have been Accepted by CDOT. CDOT will review the Contractor's stormwater management activities throughout the duration of the Project for verification of compliance with the CDPS-SCP, CDOT's construction section of the MS4 Permit. The Contractor shall comply with CDOT *Standard Specifications*, Sections 101, 107 and 208.

The Contractor shall obtain a CDPS-SCP from the Colorado Department of Public Health and Environment (CDPHE) for construction of the Project prior to Work commencing. The CDPS-SCP shall be in the Contractor's name. The Contractor shall adhere to all requirements of the CDPS-SCP and the Construction Section of CDOT's MS4 Permit. Most, but not all, non-compliance issues and necessary Best Management Practices (BMP) maintenance will be noted during Monthly Inspections by CDOT, Regional Erosion Control Advisory Team (RECAT) inspections, in the 1176 inspection forms by the Transportation Erosion Control Supervisor (TECS), or in the daily stormwater log. The Contractor shall prevent the discharge of any sediment or pollutants into any storm drains or receiving waters during the life of the CDPS-SCP. The Erosion Control Supervisor (ECS) must have a TECS certification from CDOT in order to work on this project.

Storm Water Management Plan (SWMP)

The SWMP work shall include the CDOT SWMP template and a SWMP Site Map that documents the detailed erosion/sediment control BMPs and their locations. The Contractor shall submit a SWMP and SWMP Site Map for Acceptance by CDOT. The Contractor shall submit a SWMP and SWMP Site Map for Acceptance by the Local Agency for work outside CDOT ROW. The Contractor shall fill out the current CDOT SWMP template, including BMP narratives. The SWMP shall clearly describe the relationship between the phases of construction and the implementation and maintenance of the stormwater management controls. Any major modifications (i.e., change modification orders or minor changes revisions) to the CDOT SWMP template shall be submitted to CDOT for Acceptance. The Contractor shall revise the SWMP Site Map as necessary based on actual construction activities throughout the duration of the CDPS-SCP. All BMPs shall be listed on the SWMP Site Map per the requirements of the CDPS-SCP.

All documents pertaining to the CDPS-SCP shall be kept on-site in the CDOT Stormwater Management Plan (SWMP) Notebook (provided by CDOT) to maintain compliance with the SCP. Upon permit inactivation, the SWMP Notebook shall be turned over to CDOT and become the property of CDOT Project files.

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Best Management Practices (BMPs)

The Contractor shall install and maintain the construction BMPs for the Project in accordance with the CDOT *Erosion Control and Stormwater Quality Guide* and Sections 101, 107, and 208 of the *Standard Specifications*. Construction BMPs for the Project shall include, but are not limited to, those listed in the *Standard Specifications*, as well as, preservation of existing vegetation, surface roughening, tackifier or soil binder, soil retention blankets, temporary clean water diversions, storm drain and basins, protection of trees, hazardous waste and spill containment and saw water disposal, stabilized construction entrances, and pavement sweeping of the affected Project areas. The Contractor shall add a BMP narrative to the SWMP on how it is being used, and shall supply the manufacturer details to be placed in the SWMP Notebook. The Contractor shall have a complete supply of all necessary construction BMP Materials on Site at all times in preparation for construction water quality control emergencies.

Where permanent seeding operations are not feasible because of seasonal constraints (e.g., summer and winter months), the Contractor shall have mulch and mulch tackifier applied to disturbed areas to prevent erosion.

The Contractor shall use erosion control blankets on slopes steeper than 4H:1V, newly seeded slopes to control erosion, and to promote the establishment of vegetation.

Slopes shall be roughened at the end of each day. Concrete washout shall be contained.

Non-structural BMPs include, but are not limited to, litter and debris control, street sweeping, and landscaping and vegetative practices.

Spill Prevention Control and Countermeasures Plan (SPCC Plan)

The Contractor shall prepare a SPCC Plan for Acceptance by CDOT and submitted 21 Days prior to Construction will be in accordance with *Standard Specifications Section 208*. The SPCC shall establish operating procedures for handling pollutants and preventing spills. Pollutant sources include, but are not limited to, exposed and stored soils, paints, solvents, fertilizers or chemicals, vehicle tracking, management of contaminated soils, loading and unloading operations, outdoor storage activities, vehicle/equipment maintenance and fueling, significant dust or particulate generating processes, on-Site waste management practices, concrete truck/equipment washing, dedicated asphalt and concrete batch plants, and non-industrial waste sources that may be significant such as trash and portable toilets.

Drainage

The Contractor shall be responsible for temporary drainage of the Project area during construction of the Project. The Contractor shall keep all existing storm drainage systems used for temporary drainage of the Project in operating condition during construction. Prior to the start of construction, the Contractor shall locate and clean all existing storm drainage systems in accordance with Section 202 of CDOT *Standard Specifications*.

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Throughout the duration of the permit, the Contractor shall continually protect inlets from sediment and pollutants and, if needed, shall remove any material deposited in the systems as a result of the Contractor's activities. All inlets shall be identified on the SWMP Site Map and shall follow the requirements of Section 208 of CDOT *Standard Specifications*.

Transportation Erosion Control Supervisor

The Contractor shall assign to the Project an employee or subcontractor to serve in the capacity of the Transportation Erosion Control Supervisor (TECS). The TECS shall be a person other than the Superintendent and shall be a person dedicated solely to erosion/sediment control. The TECS shall be experienced in all aspects of construction and have satisfactorily completed a TECS training program authorized by CDOT. Certification that this requirement has been met shall be submitted to CDOT at NTP. A list of authorized TECS training programs will be provided by CDOT upon request by the Contractor.

The Contractor's TECS responsibilities shall follow the duties as laid out in *Standard Specifications*, Section 208, in addition to the following:

1. Direct the removal of sediment, trash, and debris from the construction BMPs and other drainage facilities within the affected areas of the Project.
2. Prepare a written report documenting that BMPs are adequate for the Site conditions of the Project and are in good working condition after inspections requiring documentation. The reports shall be kept with the SWMP inspection documentation and submitted to the CDOT Region Water Quality Manager. The appropriate form for this report will be supplied by CDOT. The inspections shall be made during the progress of the Work, during Work suspensions, and for the duration of the CDPS-SCP. During Project Work stoppages, inspections shall take place at least once every 30 Days, and within 48 hours after each event that causes surface runoff. After construction is complete, inspections shall take place at least once every 30 Days until the permit can be closed.
3. When Work is occurring in a Local Agency's jurisdiction, conduct inspections according to the required intervals of the Local Agency.
4. Implement the necessary actions to reduce anticipated or presently existing water quality or erosion problems resulting from construction Activities. The criteria for this action shall be based on water quality data derived from any inspections and monitoring operations or by any anticipated conditions (e.g., predicted storms) that could lead to unsuitable water quality situations.

Inspections

During the Project, multiple inspections by CDOT and the Contractor and their TECS will be occurring. Inspections shall be on the appropriate CDOT Forms and shall follow the requirements in *Standard Specifications*, Section 208.

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Prior to work commencing, a pre-construction conference shall be held with the CDOT's Region Water Quality personnel. In addition, when the first phase of BMPs has been installed, the Contractor shall notify CDOT's Region Water Quality personnel to come out and inspect the BMPs for proper installation. Work shall not begin until the BMP installation inspection has occurred. CDOT's Region Water Quality personnel will be inspecting the Site on a monthly basis, as well as during the surprise Regional Erosion Control Assessment Team inspections. The Region Water Quality personnel may inspect the Project at any time and document any non-compliance issues that need to be resolved immediately by the Contractor. Fines may be assessed to the Contractor with the potential of Project shut downs, depending on the severity of the non-compliance. Prior to Final Acceptance of the Project construction, CDOT's Region Water Quality personnel shall be notified to perform a final walkthrough inspection. Any items identified for maintenance, replacement, or removal shall be done immediately or liquidated damages may be incurred upon the Contractor.

Based on the Consent Order, the Project Superintendent or TECS shall perform daily inspections of all BMPs to observe, record, and determine the effectiveness of all BMPs and to order their maintenance if needed. The results of the daily inspections shall be recorded in a daily stormwater log, which will be provided by CDOT. The Contractor shall cooperate with Local Agencies that may perform their own stormwater inspections on this Project.

Colorado Discharge Permit System, Stormwater Construction Permit Closure

The Contractor shall be responsible for all stormwater permit requirements until the Project has achieved final stabilization (see Book 2, Section 17, Landscaping) and the CDPS-SCP permit can be closed. This includes the maintenance of all BMPs, maintenance of all seeded/landscaped areas, and removal of all BMPs once all erosion potential has been eliminated.

Construction Dewatering Permit

Dewatering may be required as a result of caisson construction. If required, the Contractor shall obtain the Construction Dewatering Permit from CDPHE for any dewatering of ground water during construction. The Contractor shall obtain this permit at least 30 days prior to the start of discharge. The Contractor shall assume all responsibilities of the permit. If groundwater contamination is encountered during construction activities, work will stop immediately at that location and the procedures outlined in Specification 250 shall be followed.

Deliverables

At a minimum, the Contractor shall submit the following to CDOT for review, Approval and/or Acceptance as part of this Work:

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Deliverable	Acceptance or Approval	Schedule
Environmental Compliance Work Plan	Acceptance	Within 60 Days of NTP-Design
Environmental Compliance Work Plan Updates	Acceptance	Quarterly
Fugitive Dust Permit	Acceptance	Prior to Construction
Nighttime Noise Memorandum (Exemption Request)	Approval	Prior to Construction
Integrated Noxious Weed Management Plan	Acceptance	Prior to Construction
Stormwater Management Plan (SWMP) and Site Map	Acceptance	Prior to Construction
Stormwater Management Plan Notebook	Acceptance	Prior to Construction
Spill Prevention, Control, and Countermeasure Plan (SPCC)	Acceptance	Prior to Construction
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP)	Acceptance	Prior to Construction
Construction Dewatering Permit	Acceptance	30 Days Prior to Dewatering
Environmental permits (See Environmental Permits above)	Acceptance	Per the requirements of the permit and the Contract Documents)
Migratory bird nest survey memorandum	Review	Prior to impacting existing structures that may contain active bird nests and completing clearing and grubbing tasks
Detour Plan	Approval (City of Lakewood)	Prior to impacting bike lanes

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Project Special Provisions

REVISION OF SECTION 107 ARCHAEOLOGICAL AND PALEONTOLOGICAL DISCOVERIES

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

Subsection 107.23 shall include the following:

Fossils may be uncovered during excavation for the project. CDOT will furnish a paleontologist to monitor project excavations. The Contractor shall notify the Engineer 10 working days prior to the start of excavation operations to allow for scheduling of the monitor.

If fossils are encountered, they will be evaluated and, if deemed important, removed prior to further excavation. When directed, the Contractor shall excavate the site in such manner as to preserve the fossils uncovered and shall remove them as directed by the Engineer. Such excavation will be paid for as extra work according to the provisions of Subsections 104.02 and 104.03.

For project FBR 0063-046 (US 6 Bridge over Garrison St.), as with similar projects impacting the Denver and Dawson Formations, intermittent spot monitoring will be appropriate for caisson drilling. Based on geologic maps of the project area, spot monitoring should take place when drilling extends deeper than approximately 10 feet or the current footprint of previously disturbed ground, whichever is deeper. Spot monitoring involves the paleontologist being on site only when drilled bedrock has accumulated in a 'spoils pile' and may be searched through. The paleontologist may determine when on site the necessary frequency of these spot checks. Continuous monitoring may be appropriate for any open excavation that extends into previously undisturbed bedrock. Both types of monitoring will require as much advance notice of the drilling and excavation schedules as possible.

Delays caused the Contractor for paleontological salvage may be cause for extension of contract time according to the provisions of Subsection 108.06.

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**SECTION 240
PROTECTION OF MIGRATORY BIRDS BIOLOGICAL WORK PERFORMED BY THE
CONTRACTOR'S BIOLOGIST**

Section 240 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

240.01 This work consists of protecting migratory birds during construction.

MATERIALS AND CONSTRUCTION REQUIREMENTS

240.02 The Contractor shall schedule clearing and grubbing operations and work on structures to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years' experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications.

The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Engineer.

- a) **Vegetation Removal.** When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31. All areas scheduled for clearing and grubbing between April 1 and August 31 shall first be surveyed within the work limits for active migratory bird nests. The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside CDOT right of way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

- 1) *Tree and Shrub Removal or Trimming.* Tree and shrub removal or trimming shall occur before April 1 or after August 31 if possible. If tree and shrub removal or trimming will occur between April 1 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

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SECTION 240

PROTECTION OF MIGRATORY BIRDS BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

- 2) *Grasses and Other Vegetation Management.* Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right of way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the contractor biologist. This buffer dimension may be changed if determined appropriate by the CDOT biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

- b) The Contractor's Wildlife Biologist will conduct raptor nest surveys within 0.5 mile of the construction site prior to the start of construction and prior to each construction phase. This survey can be done with binoculars. If construction activities are located within the Colorado Division of Wildlife (CDOW) recommended buffer zone for specific raptors, "NO WORK" zones shall be established according to the CDOW standards or by the CDOT Wildlife Biologist in consultation with the CDOW around active sites during construction.

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- c) The "NO WORK" zone shall be marked with either fencing or signing. Work shall not proceed within a "NO WORK" zone until the CDOT Biologist has determined that the young have fledged or the nest is unoccupied.
- d) *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:
 - 1) The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and CDOT has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.
 - 2) During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
 - 3) (3) If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
 - 4) (4) Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are $\frac{3}{4}$ inch by $\frac{3}{4}$ inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

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- e) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

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REVISION OF SECTION 250

ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT

Section 250 of the Standard Specifications is hereby revised for this project as follows:

Subsection 250.01 shall include the following:

Project construction operations below ground surface, particularly caisson excavations, have potential to encounter hazardous materials in soils and groundwater due to previous petroleum hydrocarbon release events in the project area. If contaminants are encountered low concentrations are expected. The Contractor will review the environmental field testing report prepared by Pinyon Environmental listed under Section 102 Revision. Workers shall be alert during excavations for visual and olfactory signs of contamination. If soil and/or groundwater contamination is encountered during construction activities, work will stop immediately at that location and the procedures outlined in this spec shall be followed.

The Contractor shall be responsible for the workers' health and safety, the general public and environment. The Contractor Health and Safety Office (HSO) and/or Monitoring Technician shall be on site as necessary to ensure proper handling, testing and disposal of any contaminated media, as detailed in the CDOT Standard Specification 250 and subsection 107.25.8 and all applicable local, state and federal regulations.

Contaminated water brought to the surface shall be contained in tank(s) or drums and disposed of properly. Contaminated groundwater shall not be directly discharged into a storm sewer, ditch, or any Waters of the State without a permit. Contaminated soils shall be properly handled, tested, and disposed of properly. All work including monitoring, sampling, testing, hauling and disposal will be paid using the Environmental Health and Safety Management Force Account.

Subsection 250.04 shall include the following:

Laboratory results confirmed that lead-based paint is present in the coatings of the steel bridge components, mainly girders. All painted steel items will become the property of the Contractor. Removal and recycling of the painted components shall be done in compliance with CDOT Spec 250 (subsection 250.04) and all applicable local, state and federal regulations. OSHA Regulation 1926.62 should be consulted for worker protection prior to removal of painted components.

Any paint chips that come loose shall be collected and disposed of properly. Engineering and administrative controls to minimize paint flaking and limit the generation of lead dust and fumes during torching and demolition shall be in place.