

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.

The Contractor shall provide an environmental compliance manager. It is acceptable for the environmental compliance manager to serve as the erosion control supervisor. 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.

Environmental Resources Requirements

Air Quality/Fugitive Dust

The Contractor shall 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.

The Contractor shall implement procedures for diminishing dust 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

Project: US 6 over Garrison Street

Project Sub Acct. No: 19478

July 10, 2014

DRAFT Technical Requirements

Section 5 – Environmental

- Covering of all trucks hauling dirt/sand or other loose material leaving or being brought onto the Site
- Watering or cover of excavated materials which remain on the Site
- 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.

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

Section 5 – Environmental

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's Noise Specialist. All exemption requests and permitting requirements will not be paid for separately, but will be included in the work.

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).

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. The cost for this operation shall be included in the Work.

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 non-compensable time extension Contract change order issued by CDOT.

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.

Project: US 6 over Garrison Street
Project Sub Acct. No: 19478
July 10, 2014
DRAFT Technical Requirements

Section 5 – Environmental

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 and/or paleontological 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 CDOT Project Engineer.

If archaeological or 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 receiving written notification from the CDOT Project Engineer.

Historic Resources

A review of the project area for historical resources has been completed. No known historic sites are located within or near the Project limits.

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 upon Acceptance by the Project Engineer.

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:

Section 5 – Environmental

Permits/Approvals	Permitting Agency
Air Pollution Emission Notice	CDPHE, APCD
Nighttime Noise Memorandum	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

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

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

The Contractor shall be responsible for all stormwater permit requirements until Project Acceptance is obtained. At that point the permit shall be transferred to CDOT for final closure. This includes the maintenance of all BMPs and seeded areas during construction. See Section 17 for a complete list of stormwater-sediment and erosion control requirements. The Contractor shall review and incorporate the latest requirements from CDOT for erosion and sediment control. Deliverables shall include a Stormwater Management Plan (SWMP), Site Map, SWMP Notebook and Spill Prevention Control and Countermeasure Plan (SPCC).

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 this spec shall be followed.

Section 5 – Environmental

Deliverables

At a minimum, the Contractor shall submit the following to CDOT for review, Approval and/or Acceptance:

	Acceptance or Approval	Schedule
Environmental Compliance Work Plan	Acceptance	Within 60 Days of NTP
Environmental Compliance Work Plan Updates	Acceptance	Quarterly
Fugitive Dust Permit	Acceptance	Prior to Construction
Nighttime Noise Memorandum	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

Section 5 – Environmental

Project Special Provisions

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.

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:

Section 5 – Environmental

-2-

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

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.

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.

Section 5 – Environmental

-3-

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

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.

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. 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.

3. *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:
 - (1) The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and CDOT has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.
 - (2) During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
 - (3) If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.

Section 5 – Environmental

-4-

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

- (4) Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are $\frac{3}{4}$ inch by $\frac{3}{4}$ inch or less.

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

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

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

Section 5 – Environmental

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.

Project: US 6 over Garrison Street
Project Sub Acct. No: 19478
July 10, 2014
DRAFT Technical Requirements

Section 5 – Environmental

-2-

**REVISION OF SECTION 250
ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT**

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.