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## 5.0 ENVIRONMENTAL REQUIREMENTS

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The Contractor shall comply with all requirements of all applicable environmental laws, Environmental Approvals, and Governmental Approvals issued there-under, whether obtained by CDOT or the Contractor. The Contractor shall prepare an Environmental Compliance Work Plan specifically identifying all of the environmental compliance requirements for the **Proposed** Project and the Contractor's approach for complying with those requirements. The Environmental Compliance Work Plan shall be submitted to CDOT for Acceptance within ~~60~~ 30 Days after NTP-1 or 30 Days prior to starting any Work that requires inclusion into the plan.

The Environmental Compliance Work Plan shall include:

1. All environmental mitigations and elements of the *US 6 Bridges-Design Build Project Reevaluation and Record of Decision 2 (ROD2) and in Appendix C - CDOT Mitigation Tracking Form.*
2. Description of means and methods to meet all commitments defined in the *US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2.*
3. Description of the process for tracking environmental commitments throughout the duration of the Work by the Contractor for all phases of final design and construction.

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The Contractor shall employ and utilize an Environmental Manager on the **Proposed** Project. The Environmental Manager shall lead a field review with CDOT environmental staff to discuss environmental issues at least once a month during active construction periods, and shall have the authority to stop construction if Work activities violate environmental laws or policies, or jeopardize human health and safety.

The Environmental Manager shall update the Environmental Compliance Work Plan every month and document any pertinent discussions that occur during the environmental field reviews. The updated Environmental Compliance Work Plan shall be submitted to CDOT monthly for review and approvalAcceptance.

Comment [SKR1]: Changed from Approval to Acceptance as per above and the deliverables.

### 5.1 Environmental Resources Requirements

#### 5.1.1 Air Quality

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).

The Contractor shall have water systems for street cleaning equipment capable of diminishing dust during sweeping operations and shall implement additional 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

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- covering of all trucks hauling dirt/sand or other loose Material leaving the Site
- watering ~~of~~ or cover of excavated materials which remain on the sSite
- use of engine pre-heater devices during wintertime construction

All non-road equipment ~~will~~shall use ultra-low sulfur diesel fuel. The Contractor ~~will~~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 stationary emissions equipment with consideration of public health and environment, and minimize excessive idling of inactive equipment or vehicles.

### 5.1.2 Noise

CDOT performed a preliminary noise analysis with abatement recommendations as part of the US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2. The findings of this analysis are included in the *Noise Technical Report* (Appendix J), Parsons Brinckerhoff (2012). The noise analysis was completed using the geometry assumptions documented in the US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2.

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#### 5.1.2.1 Existing Barriers

A system of existing noise barriers are located on the north and south sides of US 6 from Knox Court to Sheridan Boulevard. Existing noise barriers from Knox Court to Sheridan Boulevard are generally 8 feet tall and ~~area~~are located along private property lines at locations where US 6 is at the same grade as the surrounding community. These barriers are to remain in-place and any barriers impacted during construction ~~will~~shall be replaced in-kind.

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#### 5.1.2.2 New Noise Mitigation

No mitigation measures are recommended as they did not meet CDOT's updated 2011 ~~c~~Criteria. Any ~~final~~ design changes by the Contractor which trigger a Type 1 action as defined by the CDOT Noise Analysis and Abatement Guidelines (June 2011) ~~will~~shall require the Contractor to complete a new noise analysis and implementation of any required mitigation.

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#### 5.1.2.3 Construction Noise

The Contractor shall be required to prepare and submit to CDOT for Acceptance, a Noise Control Plan that outlines allowable daytime and nighttime uses, projected noise levels, and locations and types of noise abatement measures ~~that may be~~ required to meet specific noise limits for the associated construction Activities.

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The Contractor shall comply with all applicable City and County of Denver noise ordinances and regulations, which require construction between 7am and 9pm, unless the Contractor secures a variance from the City and County of Denver. If permits are required, they shall be acquired by the Contractor prior to the start of any associated construction Activities and the Contractor ~~will~~shall be solely responsible for compliance with the permit requirements.

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~~The Contractor shall use well maintained equipment with mufflers in good working condition. When nighttime construction noise occurs near residential receptors, the Contractor shall use noise blankets on equipment, quiet-use generators, and temporary noise walls/screens. During periods of extended or excessively loud nighttime construction noise, the Contractor shall provide residents immediately adjacent to construction activities hotel vouchers.~~

### 5.1.3 Historic and Archaeological Resources/Historic Section 4(f) Resources

The impacts to Historic and Non-Historic Section 4(f) Impacts and specific mitigation which have been documented and approved by FHWA as part of the ~~US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2~~ are included in the ~~Section 4(f) and Section 6(f) Technical Report~~ (Appendix K), Parsons Brinckerhoff (2012). A portion of ~~a~~ historically significant brick-lined sewer (the West and Southside Interceptor near the South Platte River Bridge) is impacted by US 6 improvements and ~~will shall~~ be removed and replaced. This sewer segment composes a small portion (~~0-10 percent~~ approximately 240 feet) of a seven mile stretch of historically significant functioning brick sewer. CDOT has recommended and SHPO ~~has~~ concurred that the removal of this segment is considered an *adverse effect*. CDOT, FHWA, SHPO, CCD, and Metro Wastewater ~~intend to are~~ developing a Programmatic Memorandum of Agreement (PAMOA) to mitigate this adverse effect. ~~The Contractor will not be responsible for the mitigations defined by the PA.~~ SHPO concurred that the mitigation for this ~~240-foot~~ impact can be addressed through this separate PMOA.

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If the Contractor's ~~W~~work results in any changes in effects to the sewer or any other historically significant resource, including utilities, described in the ~~US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2~~ or ~~in~~ changes to the Area of Potential Effect, the Contractor shall ensure a historian who meets the Secretary of Interior's standards documents ~~s~~ those proposed changes and provides ~~s~~ CDOT with all necessary information for coordination with the State Historic Preservation Officer under Section 106 of the National Historic Preservation Act. This shall include any additional easements (temporary or permanent), property acquisitions, or utility relocates that weren't previously cleared as part of the Section 106 consultation and Technical Report for Cultural Resources (Appendix I). Historic resources shall not be impacted until the Section 106 and Section 4(f) consultation process is complete and approved by CDOT, FHWA and SHPO. The Contractor shall also be responsible for updating the Section 4(f) evaluation for FHWA approval for historic properties as necessary.

**Table 5-1. Impacts to Historic Section 4(f) Resources**

Historic 4(f) Resource	Use by the <u>Proposed</u> Project (acres)
West and Southside Interceptor (5DV.10635.6)	240 linear feet

(Source: Section 4(f) and 6(f) Technical Report (Appendix K), Parsons Brinckerhoff (2012))

#### 5.1.3.1 Construction

The Contractor shall be responsible for notifying CDOT of any unidentified historic or archaeological resources encountered or unearthed during construction. Upon discovery of any

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historic or archaeological resources, the Contractor shall immediately cease work in the vicinity of the discovery, fence off the area, and notify the CDOT archaeologist or cultural resource staff by calling the Cultural Resource Program Manager at 303-757-9631. The Contractor shall not resume work in the area until receiving formal notification from CDOT allowing Work to re-commence. If historic or archaeological resources are discovered, CDOT will determine the resource mitigation requirements that the Contractor shall implement.

#### 5.1.4 Paleontology

Denver Formation fossils may be encountered during construction Activities. The Contractor shall provide ~~final~~ design plans to the CDOT paleontologist for review and prior to associated construction Activities to determine the extent of impact to the Denver Formation and if monitoring during construction is required.

#### 5.1.5 Parks and Recreation

##### 5.1.5.1 Non-Historic Section 4(f) Impacts

The impacts to Non-Historic Section 4(f) Impacts and specific mitigation which have been documented and approved by FHWA as part of the US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2 are included and described in the Section 4(f) and Section 6(f) Technical Report (Appendix K), Parsons Brinckerhoff (2012) and described in Table 5-2.

**Table 5-2. Impacts to Non-Historic Section 4(f) Resources**

Park or Recreation Resource	Use by the <u>Proposed</u> -Project (acres)
Barnum Park South	No use / <u>No impact</u> <u>Temporary occupancy</u>
Barnum Park North	<u>0.6390</u>
Barnum Park East	1.64
Frog Hollow Park	No use / No impact
Milstein Park	No use / No impact
South Platte River Trail	<u>No use / Temporary occupancy</u> <u>No direct use; temporary occupancy</u>

(Source: Section 4(f) and Section 6(f) Technical Report (Appendix K), Parsons Brinckerhoff (2012))

CDOT and the City and County of Denver Department of Parks and Recreation ~~are preparing~~ will provide an Intergovernmental Agreement (IGA) which will acknowledge these Section 4(f) impacts and provides specific mitigations for the 4(f) impacts. The Contractor ~~will~~ shall be responsible for providing all of those mitigations that are required of CDOT.

If the Contractor's Work results in impacts greater than what is listed to those Non-Historic Section 4(f) resources listed in the US 6 Bridges Design Build Project Reevaluation and Record

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of Decision ROD2, including temporary impacts occurring only during construction Activities, the Contractor shall be required to provide CDOT all necessary information for coordination with FHWA including an analysis evaluating avoidance alternatives and measures to minimize harm. If CDOT disagrees with the analysis they may ask for a revised analysis. If CDOT agrees with the analysis, they will request FHWA review and approve that there are no feasible and prudent avoidance alternatives and confirm that the analysis included all possible planning to minimize harm to Non-Historic Section 4(f) Section 4(f) properties. If FHWA approves the new impacts to Non-Historic Section 4(f) Impacts and any mitigation mitigation, CDOT ~~will~~ shall require the Contractor to provide those mitigations as part of the Work for the Project.

#### 5.1.5.2 Non-Historic Section 4(f) Construction

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Mitigation by the Contractor during construction for the temporary use of the South Platte River Trail by the Project would shall include providing detours, minimizing closure times, and providing public notices in advance of any closures. CCD Traffic Engineering Services and CCD Parks and Recreation has approved the following Temporary Trail and Pedestrian Detour (false defined in Section 16.2.8 Trail and Pedestrian Impacts) which the Contractor shall provide while the South Platte River Trail is closed during the construction Activities of the South Platte River Bridge.

*New bike path connection to 7th Avenue, 7th Avenue to Bryant Street, Bryant Street to 2nd Avenue, 2nd Avenue/Tejon Street to Bayaud to the ramp connection at South Platte River Drive. This detour shall be clearly signed and marked for all path users during all closures of the facility. All variances to this detour, including the route, shall be submitted for approval to CCD Traffic Engineering Services and CCD Parks and Recreation.*

The following restrictions shall apply to existing trail systems in the vicinity of the Project:

1. No trail closures shall be allowed from 5:00 a.m. to 8:00 p.m. any Day of the week.
2. Temporary trail detours will be allowed under the following conditions:
  - A. ~~Public information PIP~~ requirements shall be identified and appropriate public notifications provided.
  - B. The Contractor shall comply with the CDOT Construction Detour Standards for Multi-Use Trails.

The Contractor shall repair any construction impacts to the trail so that it is replaced in a condition as good as or better than it was prior to construction Activities. Vegetation impacted along the trail ~~will need to~~ shall be replaced and the detour route ~~will need to~~ shall be returned to its original condition. The Contractor shall ~~will~~ also be responsible for providing all of those mitigations that are required of CDOT in the Intergovernmental Agreement (IGA) between CDOT and the City and County of Denver Department of Parks and Recreation

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#### 5.1.5.32 Section 6(f) Impacts

The Land and Water Conservation Fund Act Section 6(f) impacts and specific mitigation are included and described in the US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2 and Section 4(f) and Section 6(f) Technical Report (Appendix K), Parsons

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Brinckerhoff (2012). The specific [Section 6\(f\)](#) resources and the amount of impact to each are described in Table 5-3.

**Table 5-3. Impacts to Section 6(f) Resources**

Park or Recreation Resource	Conversion of the <del>Proposed</del> Project (acres)
Barnum Park South	No conversion; 6(f) resources are located on opposite side of park, away from US 6 improvements
Barnum Park North	0.63
Frog Hollow Park	No conversion
South Platte River Floodplain	<del>Up to five acres to be determined by the design/build Contractor</del> <del>Conversion is estimated to be less than 5 acres.</del>
South Platte River Trail	No conversion
Milstein Park	No conversion

(Source: Section 4(f) and 6(f) Technical Report (Appendix K), Parsons Brinckerhoff (2012))

The ~~Proposed~~ Project's ~~Basic Configuration~~ would result in a permanent conversion of [Section 6\(f\)](#) resources into a transportation facility in Barnum Park North due to the construction of the WB US 6 on-ramp from Federal Boulevard ~~and the maintenance road immediately north of the ramp.~~ In addition, there will be permanent conversion in the South Platte River floodplain, which is ~~also~~ a [Section 6\(f\)](#) resource. The amount of this conversion is ~~expected to be minimal as is it only related to the footprint of the new US6 Bridge over the South Platte River. not yet known.~~ ~~These conversions at Barnum Park North and the South Platte River floodplain will~~ ~~could~~ be offset by providing ~~a new bicycle/pedestrian bridge and trail to connect the trails located in Barnum Park North and Barnum Park South, and/or the provision of a land-for-land replacement at a minimum one-to-one ratio in square footage and value, land to land mitigation from several parcels that will be acquired by the project and converted to parkland.~~

~~The impacts to Barnum Park North which are based on the design assumptions documented in the US 6 Bridges Design-Build Project Reevaluation and Record of Decision are known.~~ The impacts ~~of the Basic Configuration~~ to the South Platte River floodplain are not known but are expected to be less than 5 acres. The ~~C~~ontractor shall keep an accurate and detailed record of any changes to projected impacts at all [Section 6\(f\)](#) parks and all impacts to the South Platte River floodplain. These records need to include square footage of the impacts and the appraised value of that land. The Contractor will be required to furnish these records when requested so that CDOT can provide them to CCD, Colorado Parks and Wildlife (CPW) and the National Park Service (NPS) once all impacts are known.

If the Contractor's work results in impacts greater than what is listed to those [Section 6\(f\)](#) resources, ~~and prior to construction Activities,~~ the Contractor ~~will be required to~~ shall provide CDOT all necessary information for coordination approval and regulatory clearance with CCD,

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FHWA, CPW and NPS. If FHWA and NPS approve any new impacts to those Section 6(f) resources and any mitigations, ~~CDOT will require~~ the Contractor ~~to shall~~ implement those mitigations at the Contractors expense.

~~**5.1.5.3 Construction**~~

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~~Mitigation during construction for the temporary use of the South Platte River Trail by the Proposed Project would include providing detours, minimizing closure times, and providing public notices in advance of any closures. CCD Traffic Engineering Services and CCD Parks and Recreation has approved the following Temporary Trail and Pedestrian Detour which the contractor shall provide while the South Platte River Trail is closed during the construction of the South Platte River Bridge.~~

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~~*New bike path connection to 7th Avenue, 7th Avenue to Bryant Street, Bryant Street to 2nd Avenue, 2nd Avenue/Tejon Street to Bayaud to the ramp connection at South Platte River Drive. This detour shall be clearly signed and marked for all path users during all closures of the facility. All variances to this detour, including the route, shall be submitted for approval to CCD Traffic Engineering Services and CCD Parks and Recreation.*~~

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~~The following restrictions shall apply to existing trail systems in the vicinity of the Project:~~

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~~1. No trail closures shall be allowed from 5:00 a.m. to 8:00 p.m. any day of the week.~~

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~~2. Temporary trail detours will be allowed under the following conditions:~~

~~A. PIP requirements shall be identified and appropriate public notifications provided.~~

~~B. The Contractor shall comply with the CDOT Construction Detour Standards for Multi-Use Trails.~~

~~The contractor shall repair any construction impacts to the trail so that it is replaced in a condition as good as or better than it was prior to construction. Vegetation impacted along the trail will need to be replaced and the detour route will need to be returned to its original condition. The contractor will also be responsible for providing all of those mitigations that are required of CDOT in the Intergovernmental Agreement (IGA) between CDOT and the City and County of Denver Department of Parks and Recreation.~~

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**5.1.6 Vegetation**

The Contractor shall minimize tree removal and disturbance to vegetation. In riparian areas adjacent to the South Platte River that are subject to Colorado Senate Bill 40 (SB 40) all trees

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equal to or greater than 2 inches diameter at breast height (DBH) that are removed shall be replaced with native trees at a 1:1 ratio and shrubs that are removed shall be replaced with native shrubs at a 1:1 ratio based on total aerial coverage determined through the SB-40 Wildlife Certification required in Section 5.4.6. The Contractor shall follow the SB-40 mitigation plan approved by Colorado Parks and Wildlife after submittal of an application for an SB-40 Wildlife Certification (~~Section 5.4.6~~). In all other areas (non SB-40 areas), the Contractor shall comply with CDOT's tree replacement policy by replacing all trees equal to or greater than 4 inches DBH with native trees at a 1:1 ratio. Removal of additional trees and the substitution of one tree or shrub species with another must be approved by either the Regional CDOT Biologist or Landscape Architect. See Book 2, Section 17, Landscaping, for additional conditions related to vegetation.

The Contractor ~~will~~shall enhance and incorporate impacted landscape areas (irrigated or otherwise) into final design to ensure the existing landscape does not become fragmented. The Contractor ~~will~~shall reseed and protect temporary disturbance areas with CDOT-approved BMPS to avoid disturbance to existing vegetation, to the maximum extent possible. All seed, mulch and mulch tackifier ~~will~~shall be applied in accordance with CDOT Specifications requirements of the Contract. The Contractor ~~will~~shall implement the Noxious Weed Management Plan which is provided in the Biological Resources Report (Appendix G), or as otherwise approved by CDOT.

### 5.1.7 Visual

The Contractor shall comply with the aesthetic element requirements of ~~Book 2, Section 15; Book 2, Section 14, Lighting; and Book 2, Section 17, Landscaping~~the Contract Documents. The Contractor shall also apply the aesthetic guidance identified in the Aesthetics and Urban Design Technical Report (Appendix D) Parsons Brinckerhoff (2012). The Contractor shall submit and Aesthetics and Urban Design Application Plan that documents how they will or will not be able to implement the recommendations in Table 1 of the Aesthetics and Urban Design Technical Report. The Contractor shall provide the Aesthetics and Urban Design Application Plan to CDOT for Acceptance.

Staging areas that are to remain in place longer than 90 days shall be fenced and screened.

Temporary construction lighting shall be shielded and directed at work areas to minimize glare and ambient light conditions in nearby areas.

### 5.1.8 Wildlife

#### 5.1.8.1 Fish, Reptiles and Amphibians

Potential habitat for two Colorado Species of Special Concern - the common garter snake (*Thamnophis sirtalis*) and northern leopard frog (*Rana pipiens*) - was identified within the Proposed Project Area. ~~Where practicable, the~~ Contractor shall minimize vegetation disturbance and removal within the vicinity of the Platte River Bridge.

To avoid impacts to spawning fish and their beds, construction Activities of the South Platte River Bridge and ~~the construction of~~ any in-stream diversion structures shall be conducted during non-breeding season (August-March) or as otherwise specified in the SB-40 Wildlife Certification.

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### 5.1.8.2 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. The Contractor shall retain a qualified wildlife biologist with a minimum of three years experience conducting migratory bird surveys to implement the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to CDOT for Acceptance prior to commencement of any associated Work. - A biologist with less experience may be used by the Contractor subject to the Acceptance of CDOT based on review of the biologist's qualifications.

The Contractor shall be responsible for ensuring that migratory bird nests on Bridges, including but not limited to cliff swallow nests on both the South Platte River Bridge and the eastbound US 6 exit ramp at I-25, should be removed before April 1 or after August 31 to avoid causing a take. Additional migratory bird nest surveys shall be conducted by the Contractor to identify and prevent the construction of new bird nests between April 1 and August 31 consistent with the Section 240 Project Special Provision for the Protection of Migratory Birds, found in Book 2, Section 5.6, below.

### 5.1.9 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.

Based on the Hazardous Materials Technical Report (Appendix H), Parsons Brinckerhoff (2012), there is a potential to encounter contaminated soil and groundwater throughout the Project Area and will shall be addressed as described below.

Based on the ~~2012 design and analysis~~Basic Configuration, six properties with potential or recognized environmental conditions will be partially or completely acquired for the Project. In the Hazardous Materials Technical Report (Appendix H). Parsons Brinckerhoff (2012), there are descriptions of the six properties that CDOT is planning to acquire, It their hazardous material concerns, and the investigations that CDOT recommends prior to construction are: Prior to ROW acquisition, CDOT will conduct the following additional investigations.

- ~~Given the results of the July 2012 subsurface investigation, CDOT is conducting a Phase II investigation at 642 Federal Blvd. (Legend # 3 – Colorado Department of Transportation/Austria Motors) to further determine the extent/level of soil and groundwater contamination at the site. Depending on the results of that investigation, CDOT will either require additional investigation at 620 Federal Blvd (Legend No. 2 – U.S. Motels Federal, LLC) or reduce that sites risk ranking.~~
- The only other ROW site property with a hHigh risk ranking is 450 Federal Blvd (Appendix H Legend site #site #-16 – Charles S. Yamaguchi and Chiseka Yamaguchi/ Sound on Wheels). A 10 foot by 200 foot sliver of the site is needed as a temporary easement and therefore no additional investigation is required.

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- The other five ROW acquisition ~~three~~ sites with some hazardous materials concerns ~~ROW acquisition~~ have mMedium or lLow risk rankings so no additional investigation is required.

In addition to the proposed ROW acquisitions, thirteen sites with known or suspected soil and groundwater contamination are within the pProject study area. ~~CDOT is recommending but not requiring that the Contractor conduct ISA's and if necessary additional investigations to determine the potential presence of soil/groundwater contamination at these sites, potentially impacting areas within the Project footprint. This CDOT recommendation applies to site numbers 26-33 as described in Hazardous Materials Technical Report Table 4.~~

Given the results of the 2005 MESA, 2011 ISA, and 2012 hazardous materials analyses, CDOT ~~is also will~~ conducting a Phase II investigation at the area under/around the BNSF Bridge and the area around the location of the Tunnel/I-25 Bridge to further determine if soil/groundwater contamination is present in these areas.

Additionally, given the results of the July and October 2012 subsurface investigations completed by Olsson & Associates, indicating that RCRA metals are most likely present in soil and groundwater throughout the pProject study area, present and historic contamination with petroleum hydrocarbons, acquisition of properties with known/suspected contaminated soil and groundwater, and documented presence of lead based paint on two of the Bbridge Sstructures, a Materials Management Plan (MMP) and a Health and Safety Plan (HASP), as required by Section 250.03 of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 20114999) willshall be completed by the Contractor for the Projectused throughout the project area. Prior to demolition Activities of any Sstructures, or removal of utility lines, materials abatement will be conducted, -as necessary-, according to Section 250, Environmental, Health, and Safety Management, of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 49992011) and relevant Occupational Safety and Health Administration (OSHA) and other Sstate and Ffederal regulatory Rrequirements.

~~Additionally, given the results of the July 2012 subsurface investigation indicating that RCRA metals are likely present in soil and groundwater throughout the Project area, acquisition of properties with known/suspected contaminated soil and groundwater, and documented presence of lead based paint on two of the bridge structures, a Materials Management Plan (MMP) and a Health and Safety Plan (HASP), as required by Section 250.03 of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 1999) will be used throughout the project area. Prior to demolition of any structures or removal of utility lines, materials abatement will be conducted, as necessary, according to Section 250, Environmental, Health, and Safety Management, of the CDOT Standard Specifications for Road and Bridge Construction (CDOT, 1999) and relevant Occupational Safety and Health Administration (OSHA) and other regulatory requirements.~~

The Contractor shall develop a Materials Management Plan (MMP), Health and Safety Plan (HASP), and Spill Prevention Control and Countermeasures (SPCC) Plan to be submitted for review by CDOT within 21 Days prior to NTP2. The Contractor shall comply with all provisions set forth within the reviewed MMP, HASP, and SPCC.

The Contractor shall schedule a review meeting with CDOT prior to submittal of the MMP and HASP to discuss the MMP ~~and~~ HASP and SPCC. The Contractor's Environmental Manager and the Contractor's Safety Manager shall be present at the meeting. The Contractor shall

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incorporate modifications into the submitted MMP, HASP, and SPCC agreed to during this meeting.

The Contractor shall maintain documentation of all activities related to the MMP and the HASP during construction and shall make all such documentation available to CDOT upon request. The Contractor shall maintain records consistent with the requirements of the Contract Documents.

The Contractor shall comply with all applicable requirements, including, but not limited to, all federal, state, and local environmental laws and regulations and the *Standard Specifications for Road and Bridge Construction*, Section 250, *Environmental, Health and Safety Management and any project special revisions* for the management and disposal of the RHMs.

The Contractor shall coordinate all Work with CDOT and shall not discuss or negotiate with any regulatory agencies or third parties on behalf of CDOT. The Contractor shall notify CDOT within 24 hours if contacted by any regulatory agencies or third parties concerning RHMs associated or potentially associated with the Contract requirements.

The Contractor shall maintain documentation of all pertinent certifications of all Subcontractors and shall be available upon request by CDOT.

#### 5.1.9.1 Materials Management Plan

The MMP shall identify potential RHMs, their locations, the extent of impact, proposed Remediation Work, waste management procedures, avoidance measures, investigation measures, and a contingency plan for addressing unforeseen conditions. The plan shall identify the Contractor's representative responsible for environmental compliance (Environmental Manager), the proposed design and construction staff, and the approach to implementing the MMP. In addition to meeting the requirements of Section 250 of the *Standard Specifications*, the MMP shall include the following provision:

1. The Contractor shall manage all RHMs, including soils, groundwater, surface water, and other contaminated substances to prevent exposure to the environment, Proposed Project personnel and the public, and to prevent any contamination of non-contaminated areas. The Contractor shall classify such wastes according to one of the following categories:
  - A. Hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) requiring off-Site disposal and/or treatment
  - B. Contaminated soils requiring off-Site disposal
  - C. Soils to be stockpiled for further characterization
  - D. Soils with concentrations of waste constituents below regulatory concern that can be reused without restriction
  - E. Wastewater requiring off-Site disposal and/or treatment
  - F. Impacted water to be held for further characterization
  - G. Asbestos containing material (ACM) discovered during construction or demolition

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REQUEST FOR PROPOSAL – US 6 DESIGN BUILD PROJECT  
BR 0061-083, SUB ACCOUNT 18838(CN)

Book 2 – Technical Requirements  
Section 5 – Environmental Requirements  
Contract – December 10, October 9, 2012

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H. Lead-based paint associated with Structures, signage, light posts, etc.

I. Waste material to be contained for further characterization

J. Contaminated groundwater requiring on-Site treatment or off-Site disposal

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A scope of work shall be submitted to CDOT for Approval prior to commencing any Remediation Work Activities. The Contractor shall utilize the most cost-effective approach in the performance of any remedial action deemed necessary. Remediation Work shall not include sampling, characterization, stockpiling, or disposal of Materials that are determined not to require off-Site disposal and/or treatment.

The Contractor shall not allow Hazardous Substances to be spilled or tracked off-Site at any time during the Work.

The Contractor shall be responsible for locating storage facilities and disposal sites for RHMs that are to be removed from the Work Site.

The Contractor shall maintain documentation of completed waste profiles, manifest forms, and bill-of-lading forms for proper transportation and disposal of Materials off-Site. This information shall be available at all times for review by CDOT. The Contractor shall be held responsible for ensuring that all requirements of the transporter and the receiving disposal facility and the federal, state, and local statutes, rules, regulations, and ordinances are complied with and are properly documented.

The Contractor shall submit RHM reports to CDOT for monthly review on all Activities associated with the Contract. The Contractor shall coordinate with CDOT to determine the format of the report prior to the associated construction Activitiesphase.

The Contractor shall develop a Sampling Analysis Plan (SAP) to identify and characterize potential RHMs that may be encountered during the Work. The SAP shall also provide for monitoring/screening during construction Activities to provide safety controls in areas previously not identified. In addition to complying with Section 250 of the *Standard Specifications*, the SAP shall include:

1. Data quality objectives
2. Sample collection procedures (field screening, borehole drilling/abatement, monitoring well construction, soil, groundwater, and decontamination)
3. Quality control
4. Field equipment calibration procedures/frequency
5. Quality assurance objectives (data)
6. Provisions for corrective action, if needed

#### 5.1.9.2 Health and Safety Plan (HASP)

The Contractor shall distribute the HASP to all employees that could be potentially exposed to RHMs. The HASP shall be displayed or made available on-Site at all times. The Contractor shall develop and maintain on-Site all industrial hygiene information, including “right-to-know”

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~~REQUEST FOR PROPOSAL – US 6 DESIGN BUILD PROJECT  
BR 0061-083, SUB ACCOUNT 18838(CN)~~

Book 2 – Technical Requirements  
Section 5 – Environmental Requirements  
~~Contract – December 10, October 9, 2012~~

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information. In addition to meeting the requirements of Section 250 of the *Standard Specifications*, the HASP shall include the following provision:

The Contractor shall maintain documentation and provide information to CDOT, as requested, regarding potential or actual exposure to the public. The Contractor shall maintain records of all related incidents and notify CDOT and appropriate State authorities immediately.

#### 5.1.9.3 Spill Prevention Control and Countermeasures (SPCC) Plan

The Contractor shall prepare a SPCC Plan. The Contractor shall perform inspections per the Colorado Discharge Permit System – Stormwater Construction Permit (CDPS-SCP) to assure the construction best management practices (BMPs) are adequate for the Site conditions of the ~~Proposed~~ Project and are in good working condition. 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.

## 5.2 NEPA Reevaluation

If the Contractor proposes or creates the need for any environmentally significant project change as defined by each resource's policies, procedures, guidelines or regulatory requirements (including the election to include any Additional Requested Elements (AREs) which are listed in Book 2 Section 1) that results in a potential change to the environmental impact, the Contractor shall be responsible for documenting that change consistent with the requirements and conditions of CDOT Reevaluation Form (#1399). The Reevaluation Form (#1399) shall be submitted to CDOT for Approval if revisions to the Basic Configuration, previous clearances, and current environmental commitments or any other Work that was not approved as a part of the ~~US 6 Bridges Design Build Project Reevaluation and Record of Decision ROD2~~. FHWA review of Reevaluation Form (#1399) is required and typically requires at least four weeks. The FHWA review and approval must occur before the Work proposed in the Reevaluation Form #1399 can be performed. In addition the Contractor ~~will~~ ~~shall~~ be responsible for additional environmental documentation, permits, and mitigation resulting from impacts associated with any project change.

## 5.3 Environmental Commitments and Mitigation

The Contractor ~~will~~ ~~shall~~ be responsible for implementing required mitigation measures to minimize environmental harm from the ~~Proposed~~ Project. The Contractor will minimize both environmental impacts and impacts to adjacent property owners as detailed design decisions are made. Relevant mitigation requirements ~~will~~ ~~shall~~ be included in the final plan sheets or other required deliverables for the ~~Proposed~~ Project. The Contractor ~~will~~ ~~shall~~ maintain information on the implementation to provide to CDOT upon request to inform the public and/or interested commenting agencies of the progress in carrying out the adopted mitigation measures. The Contractor's public outreach meetings and materials shall include a summary of all environmental impacts and mitigations.

Mitigation measures for each resource ~~addressed in the FEIS and ROD2~~ have been identified and are listed in Appendix C - ~~CDOT~~ Mitigation Tracking Form.

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## 5.4 Environmental Permits

The Contractor shall be responsible for obtaining all governmental and agency permits required for the Work, not otherwise obtained by CDOT, including, but not limited to, the environmental permits in Table 5-5.

**Table 5-5. Required Environmental Permits**

Permits/Approvals	Permitting Agency
Clean Water Act Section 404 Nationwide Permit	U.S. Army Corps of Engineers (USACE)
Conditional Letter of Map Revision; Letter of Map Revision	Federal Emergency Management Agency – Urban Drainage and Flood Control District
Municipal Separate Storm Sewer System (MS4) Discharge Permit (City and County of Denver and CDOT MS4 discharge requirements)	Colorado Department of Public Health and Environment – Water Quality Control Division
CDPHE Colorado Discharge Permit System (CDPS) stormwater permit associated with construction activity	Colorado Department of Public Health and Environment – Water Quality Control Division
Clean Water Act Section 402 Construction Dewatering Permit, or Individual Construction Dewatering Permit if contaminated groundwater is expected to be encountered	Colorado Department of Public Health and Environment – Water Quality Control Division
Construction waste material and transportation of solid wastes	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Generation of contaminated materials during construction	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Notification as Resource Conservation and Recovery Act (RCRA) hazardous waste generator	Colorado Department of Public Health and Environment – Hazardous Materials and Waste Management Division
Air Pollution Emission Notice (APEN) and Construction Permit	Colorado Department of Health and Environment – Air Pollution Control Division
Stationary Source Air Quality Permit (Emissions from portable units, such as rock crushers, generators, asphalt plants, and cement plants, used during construction)	Colorado Department of Health and Environment – Air Pollution Control Division
Fugitive Dust Permit (Bridge Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Asbestos Abatement Permit (Bridge Demolition)	Colorado Department of Public Health and Environment – Air Pollution Control Division
Development of Materials Management Plan with approval by the Regional Planning and Environmental Manager	Colorado Department of Transportation

Permits/Approvals	Permitting Agency
Senate Bill 40 Certification	Colorado Parks and Wildlife
Street Occupancy Permit	City and County of Denver
Construction Permit	City and County of Denver
Construction Access Permits Traffic Control Plan	City and County of Denver
Noise Variance	City and County of Denver
Coordination and approval for <a href="#">contaminated materials</a> handling and management plan	City and County of Denver
Wastewater Discharge Permit	City and County of Denver
Design and construction plan review	City and County of Denver
Discharge Permit	City and County of Denver Wastewater Management Division
Occupancy Permit	City and County of Denver Parks and Recreation Department
Tree Removal Permit	City and County of Denver City Forester
<a href="#">Memorandum of Programmatic Agreement</a> for significant brick-lined sewer mitigation	State Historic Preservation Officer
Access/Construction Permit	Burlington Northern Santa Fe

**5.4.1 Colorado Discharge Permit System – Stormwater Construction Permit (CDPS-SCP)**

The Contractor shall be responsible for all stormwater permit requirements until the CDPS-SCP is closed. This includes the maintenance of all BMPs and seeded / landscaped areas until final stabilization has been achieved, all temporary BMPs have been removed, and there is no potential for erosion. The Contractor shall review and incorporate the latest requirements from CDOT for erosion and sediment control and according to other requirements in the Contract.

**5.4.1.1 Municipal Separate Storm Sewer (MS4) Permit**

CDOT has obtained an MS4 Permit for the storm drainage systems that it owns and maintains. The Contractor shall be responsible for complying with the terms and conditions of the CDOT MS4 Permit that pertain to the Project, as practical. The MS4 Permit is available on the web page at

<http://www.coloradodot.info/programs/environmental/water-quality/documents>

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The Contractor shall construct permanent water quality BMPs for the Project as necessary to comply with the requirements of the CDOT MS4 Permit. Permanent water quality BMPs for the Project shall include, but are not limited to, such components as sediment basins and proprietary vaults, water quality ponds, grass roadside ditches, and grass buffer strips.

The Contractor shall immediately notify CDOT of any suspected illicit or improper connections or discharges into any storm sewer system discovered during construction of the Project.

CDOT will be responsible for investigation of the suspected illicit connection and implementing corrective action. The Contractor shall not maintain, reconnect, or otherwise allow discharge of improperly disposed materials into the storm sewer system within the limits of the Project.

## 5.4.2 Wetlands/Waters of the U.S. and Section 404 Permit

### 5.4.2.1 Permit Application

The Contractor ~~will~~ shall be responsible for preparing a Clean Water Act, Section 404 Permit Application for impacts to wetlands and waters of the U.S., if necessary. The Application shall be submitted to CDOT for final review, approval and CDOT submittal to ACOE at least 30 days before the start of construction ~~A~~ activity which would impact wetlands or other waters of the United States. The impacts as documented in the ~~US 6 Bridges Design-Build Project Reevaluation and Record of Decision~~ ROD2 are anticipated to be limited to pilings placed to support the proposed three-span structure over the South Platte River and potentially permanent impacts to a wetland (0.002 acres/100 square feet) located in the northwest quadrant of the I-25/6<sup>th</sup> Avenue interchange. Should these impacts change, the Contractor ~~is~~ shall be responsible for submitting a Wetland Finding Report if impacts exceed the thresholds identified in the 2006 "Memorandum of Agreement Between FHWA and CDOT Regarding the Programmatic Approval of Wetland Findings". Depending on the final assessment of wetland impacts, a CDOT Functional Assessment of Colorado Wetlands (FACWet) may be required. The Contractor shall comply with the requirements and special conditions outlined in the Section 404 Permit (see Book 3).

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### 5.4.2.2 Wetlands Field Investigation and Identification

Wetlands field investigation and identification associated with the ~~Proposed~~ Project include, but are not limited to, the following Activities:

1. GPS files from both the 2004 and 2011 wetland delineation report, including the OHWM and WUS boundary will be provided to the ~~C~~ contractor and CDOT to assess impacts below the OHWM of the South Platte River and to wetlands within the ~~P~~ project area.
2. Prior to construction, the Contractor shall identify and mark (with orange fencing or flagging) all wetlands and Waters of the U.S. that have the potential to be impacted by the Work. The Contractor shall identify the wetlands and Waters of the U.S. that will actually be impacted by the ~~Proposed~~ Project, calculate the actual acreage of impacts, and submit that information to CDOT for review prior to commencement of the associated Work.
3. The Contractor shall report in the updated Environmental Compliance Work Plan all wetlands impacted during the previous month's Work. CDOT will utilize this information to complete annual monitoring requirements, if applicable, per conditions stipulated in the Section 404 Permit.

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#### 5.4.2.3 Impact Monitoring

Prior to construction, the Contractor shall fence off wetlands not to be impacted during construction Activities. Wetland and Waters of the U.S. locations are shown in the *2004 Wetland Delineation and 2011 Wetland Verification*, for consistency, in Book 3. Wetland boundaries shown on the Contract Drawings shall be used to calculate all impacts associated with the Proposed Project. The Contractor shall employ all applicable avoidance and minimization measures, strategies, and BMPs to minimize impacts and protect wetlands and waters of the U.S. to the greatest extent possible. The Contractor shall update CDOT throughout the duration of the Work on the calculations of estimated and actual wetland and Waters of the U.S. impacts. If at any time estimated impacts are calculated to change, immediate consultation with CDOT shall be initiated. Should waterway diversions be required, the Contractor shall submit a Diversion Plan to CDOT prior to beginning activity within the river. The Contractor shall be responsible for implementation of permits for any wetland and waterway impacts during construction.

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#### 5.4.2.4 Wetland and Waters of the U.S. Mitigation

The Contractor ~~must~~ shall mitigate for temporary and permanent wetland impacts, through banking, to both jurisdictional and non-jurisdictional wetlands on a 1:1 basis, at a minimum. CDOT will pay for mitigation banking credits for 100 square feet of wetland impacts based on anticipated impacts in the northwest quadrant of the I-25/6<sup>th</sup> Avenue interchange. The Contractor is responsible to pay for any additional wetland bank credits, beyond the CDOT provided 100 square feet, from a wetland mitigation bank approved by the USACE. CDOT requires mitigation for all permanent impacts to wetlands based on acreage.

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#### 5.4.3 Construction Dewatering Permit

The Contractor shall obtain a Construction Dewatering Permit from the CDPHE for any dewatering of groundwater during construction in accordance with WQCD requirements. The Contractor shall apply for this permit at least 30 Days prior to the start of discharge Activities.

The Contractor shall provide all information needed to assist the WQCD in their evaluation and setting of a water quality standard for this permit, which may include monitoring of the discharged water.

The Contractor shall monitor for any settlement caused by dewatering. The Contractor shall conduct a preliminary survey of any private property or buildings that may be affected by dewatering to establish existing conditions. The Contractor shall repair any damage caused by dewatering operations.

The Contractor shall construct settling ponds for effluent from dewatering operations, as required by the Construction Dewatering Permit.

Based on CDOT's experience with the I-25 and Alameda Bridge Replacement project, the elevated levels of metals found in the groundwater in this area are of concern and may require substantial treatment and remediation.

The Contractor ~~will be required to~~ shall pay all costs for permitting, and any required removal and treatment of groundwater.

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#### 5.4.4 SB-40 Wildlife Certification

The Contractor ~~will~~shall comply with the General and Special Conditions provided in the January 2003 “*Guidelines for Senate Bill 40 Wildlife Certification*” developed and agreed upon by the Colorado Division of Wildlife and the Colorado Department of Transportation. The Contractor shall prepare an application for a formal Wildlife Certification to Colorado Parks and Wildlife (CPW) for activities in riparian areas adjacent to the South Platte River that are subject to Colorado Senate Bill-40 (SB-40). CDOT ~~shall~~will review, approve and submit the application to CPW at least 60 days prior to planned construction or maintenance activities to allow for CPW review of the submitted documents and for follow-up coordination, if required. CPW shall complete its review of the application and issue SB-40 Certification or request additional information or mitigation commitments within 30 days of submittal.

#### 5.4.5 Miscellaneous

The CDPHE shall be contacted by the Contractor if groundwater monitoring wells will be disturbed. Refer to information about drainage and groundwater testing for specific monitoring well site locations Book 3).

### 5.5 Deliverables

At a minimum, the Contractor shall submit the following deliverables to CDOT for review, ~~A~~approval, and/or ~~A~~acceptance (Table 5-6):

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**Table 5-6. Deliverables by the Contractor**

Book 2 – Technical Requirements  
Section 5 – Environmental Requirements  
Contract – October 9, 2012

Deliverable	Review, Acceptance or Approval	Schedule
Environmental Compliance Work Plan	Acceptance	Within <del>60-30</del> Days <del>after</del> NTP 1 <u>or 30 days prior to starting any Work that requires inclusion into the Plan</u>
Environmental Compliance Work Plan updates	Acceptance	Monthly
Environmental permits (Section 5.4 above)	Acceptance	Per the requirements of the permit and the Contract Documents
Migratory bird nest survey	<del>r</del> Review	Prior to impacting existing structures that may contain active bird nests
Noise analyses, final geometry, and architectural details of noise barriers (if necessary)	Acceptance	Minimum 21 Days prior to Released for Construction (RFC)
Integrated Noxious Weed Management Plan	<del>r</del> Review	Within 60 Days after NTP 1
Materials Management Plan (MMP)	Approval	Minimum 21 Days prior to NTP 2
Health and Safety Management Plan (HASP)	Approval	Minimum 21 Days prior to NTP 2
Spill Prevention Control and Countermeasures (SPCC) Plan	Acceptance	Minimum 21 Days prior to NTP 2
Identification of Contractor or Subcontractors to perform Remediation Work	<del>r</del> Review	Prior to Subcontractors or Contractors commencing Remediation Work
Noise Control Plan	<del>Approval</del> Acceptance	As part of the RFC documents
Remediation Scope of Work	Approval	Prior to commencing Remediation Work
Monthly Recognized Hazardous Materials (RHM) reports	<del>r</del> Review	Monthly
Aesthetics and Urban Design Application Plan	Acceptance	Minimum 21 Days prior to NTP 2
CDOT NEPA Reevaluation Form #1399	Approval	Prior to conducting work that has not been approved under the <u>US-6 Bridges Design Build Project Reevaluation and Record of Decision</u> <u>ROD2</u>
<u>Clearly label environmentally sensitive areas (wetlands areas, Section 4(f), Section 6(f), etc.) with "No Parking and No Staging Area" on final plan sheets.</u>	<del>Acceptance</del> review	<u>As part of the final plan sheet approval</u> <u>submittal</u>

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## 5.6 Project Special Provisions

The following pages provide the modified standard specifications that shall be applicable to the ~~Proposed~~ Project.

This section sets forth modifications to the CDOT *Standard Specification for Road and Bridge Construction* for design-build projects. The first section contains revisions to Division 100 of the Standard Specifications. The second section contains revisions to Divisions 200 through 700 of the Standard Specifications, as well as Standard Special Provisions applicable to the ~~Proposed~~ Project.

These Contract Provisions are a revised version of CDOT's *Standard Specifications for Road and Bridge Construction*, and contain requirements generally applicable to the Work to be performed by the Contractor. In certain cases, provisions in Section 100 of the *Standard Specifications for Road and Bridge Construction* have been superseded by other provisions of the Contract Documents. For ease of reference, this document uses the same Section numbers as the *Standard Specifications for Road and Bridge Construction*, and identifies provisions of the Contract Documents that have replaced or modified the standard clauses.

All references to "Engineer" that are incorporated into this Section refer to the Contractor's Engineer, unless the context requires otherwise. Non-capitalized terms, such as "work" that are defined in Book 1, Exhibit A, shall have the meanings defined therein unless the context requires otherwise. References to "approve, approval or approved" shall mean "Approve, Approval or Approved" as defined in Book 1, Exhibit A, when the approval is by CDOT or a division of CDOT. If the interpretation(s) pursuant to this paragraph are not clear, CDOT shall decide, in its sole discretion, how these terms shall be interpreted.

When these specifications describe actions, Materials, means or methods that are required and that are qualified by phrases such as: "as directed by the Engineer", "when directed by the Engineer", "as determined by the Engineer", "with or without permission of the Engineer", "in the opinion of the Engineer", "unless authorized by the Engineer", "satisfactory to the Engineer", "as approved by the Engineer", or "unless another type is specified or is permitted with approval of the engineer", such phrases shall be disregarded. If it is not clear whether a phrase should be disregarded, CDOT will make that decision in its sole discretion.

When these specifications refer to "Department", "Resident Engineer", "Agricultural Engineer", "Bridge, Construction or Maintenance Engineer", "TMC system inspector", "Concrete Engineer", "Project Engineer", "Materials Engineer", "Commissioner", "Structural Metals Engineer", "Department's Lighting Engineer", "Geotechnical Engineer" or any other specific CDOT special engineer, such reference shall mean the CDOT Project Director.

When these specifications use the term "engineer" relating to the approval of any activities involving the use of explosives, such term shall mean the CDOT Project Director.

When an approval or authorization of the Engineer or CDOT is required in these specifications for the use of alternative or substituted processes or components, the Engineer shall mean CDOT. If it is not clear whether a phrase involves the use of alternative or substituted processes, CDOT will make that determination in its sole discretion.

If these specifications refer to an approval of any correction or repair that deviates from the Contract requirements, the approval must be by CDOT. If it is not clear whether a specification involves a correction or repair that deviates from the Contract requirements, CDOT will make that determination in its sole discretion.

When these specifications provide that reports, records or other documents shall be submitted to CDOT or to the Engineer, such reports shall be made available to CDOT and do not have to be submitted unless either they are otherwise listed in the deliverables in the Contract Documents, or are required shop drawings, warranties, parts lists, instruction sheets or manufacturer's drawings or specifications. Such documents shall be submitted to CDOT as required by the specifications.

When these specifications require actions, Materials, means or methods that are "either as indicated in the Plans or as designated by the Engineer," the Contractor shall disregard the phrase "or as designated by the Engineer."

When these specifications refer to the "Engineer" ordering work beyond the scope of work in the Contract, "Engineer" shall mean CDOT. Whenever in these specifications the Engineer may order work that results in additional costs to CDOT, the "Engineer" shall mean CDOT.

Any acceptances on behalf of CDOT or the State shall be performed by CDOT.

Any references to other standards, codes, or criteria, or to the latest version of other standards, codes, or criteria in Book 2 of the Contract Documents shall mean the latest version at the Proposal Due Date.

## PROTECTION OF MIGRATORY BIRDS

### BIOLOGICAL WORK PERFORMED BY THE CONTRACTOR'S BIOLOGIST

Section 240 is hereby added to the Standard Specifications for this ~~Proposed~~ Project as follows:

#### DESCRIPTION

This work consists of protecting migratory birds during construction.

#### MATERIALS AND CONSTRUCTION REQUIREMENTS

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. A biologist with less experience may be used by the Contractor subject to CDOT Approval based on review of the biologist's qualifications.

The wildlife biologist shall survey 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 CDOT for Review.

(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.

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 CDOT. 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, CDOT 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 CDOT biologist. This buffer dimension may be changed if determined appropriate by the CDOT. 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, CDOT 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) *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 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 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 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. 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 CDOT. 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 CDOT. 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.
- (d) CDOT Form 730, *Permission to Enter Property*, must be obtained to facilitate the wildlife biologist's ground surveys within adjacent property within 50feet of work limits, where Region Environmental Personnel have determined ground nesting bird habitat may be present. If Permission to Enter Property is denied by a property owner, the denial shall be recorded and placed in the Project file to document that due diligence was pursued.

## APPENDICES

Appendices A, B and N will be available after the [US-6 Bridges Design-Build Project Reevaluation and Record of Decision ROD2](#) is approved by FHWA

### APPENDIX A REEVALUATION

a. CDOT FORM 1399 – REEVALUATION FORM

APPENDIX B AGENCY COORDINATION LETTERS

APPENDIX C CDOT MITIGATION TRACKING FORM

APPENDIX D AESTHETICS AND URBAN DESIGN TECHNICAL REPORT

APPENDIX E AIR QUALITY TECHNICAL REPORT

APPENDIX F ARCHAEOLOGY AND PALEONTOLOGY TECHNICAL REPORT

APPENDIX G BIOLOGICAL RESOURCES REPORT

APPENDIX H HAZARDOUS MATERIALS TECHNICAL REPORT

APPENDIX I CULTURAL RESOURCES TECHNICAL REPORT

APPENDIX J NOISE AND VIBRATION TECHNICAL REPORT

APPENDIX K SECTION 4(F) AND 6(F) TECHNICAL REPORT

APPENDIX L TRANSPORTATION TECHNICAL REPORT

APPENDIX M WATER QUALITY REPORT

APPENDIX N TECHNICAL MEMORANDUM SUMMARIZING CHANGES FROM FEIS AND IMPACTS FOR LAND USE, SOCIAL AND ECONOMIC RESOURCES, ENVIRONMENTAL JUSTICE, FARMLANDS, ENERGY, AND CUMULATIVE EFFECTS