5.0 ENVIRONMENTAL REQUIREMENTS

The Contractor shall comply with all requirements of all applicable Environmental Laws and Governmental Approvals issued there under, whether obtained by CDOT or the Contractor. The Contractor shall prepare an Environmental Compliance Work Plan 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 Environmental Compliance Work Plan shall be updated every six months, to show the status of environmental compliance Activities, and shall be submitted to CDOT for Acceptance.

The Draft Environmental Compliance Work Plan shall be submitted to CDOT for Acceptance within 30 Days after NTP1. A Final Environmental Compliance Work Plan shall be submitted to CDOT for Acceptance no later than 30 Days prior to NTP 2. Delivery shall include one electric copy on CD-ROM and 2 paper copies of the Work Plan. Acceptance of this Work Plan will be required as a condition for issuance of NTP 2.

The Environmental Compliance Work Plan shall include:

1. All environmental mitigations and elements included in Book 3, Section 5; I-25 Environmental Assessment Reevaluation.
2. All environmental mitigations required in the Technical Requirements.
3. Description of means and methods to meet all the mitigation requirements.
4. Description of the process for tracking environmental commitments throughout the duration of the Work by the Contractor. The Contractor shall employ and utilize an Environmental Manager on the 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, regulations or permits, 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 Acceptance.

A Final Environmental Compliance work Plan shall be submitted to CDOT for Approval as a condition for Final Acceptance of the Project.

5.1 Environmental Resources Requirements

5.1.1 Visual Setting

The Contractor shall comply with the visual elements requirements in Book 4, I-25/Cimarron Aesthetic Plans and Details.

5.1.2 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).

Coincident with the Fugitive Dust Control Plan the Contractor shall develop and implement a construction air quality plan for minimizing dust. The plan will be a tool to control activity recognition and deploy BMPs (Best Management Practices) consistent but not limited to:

1. Require construction vehicle engines to be properly tuned and maintained.
2. Use water or wetting agents to control dust.
3. Have a wheel wash station and/or crushed stone apron (tracking pad) at egress/ingress areas to prevent dirt being tracks onto public streets.
4. Use street sweepers to remove dirt tracked onto streets.
5. Use a binding agent for long-term excavated materials.
6. Schedule work outside of normal hours for sensitive receptors; this should be necessary only in extreme circumstances, such as construction immediately adjacent to a church, outdoor playground, or school.

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 stationary emissions equipment with consideration of public health and environment, and minimize excessive idling of inactive equipment or vehicles.

A Construction Air Quality Plan and Fugitive Dust Control Plan shall be submitted to CDOT for Approval 30 days prior to NTP2.

5.1.3 Noise

5.1.3.1 Construction Noise

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

The Contractor shall comply with all applicable City of Colorado Springs noise ordinances and regulations, unless the Contractor secures a variance from the City. If permits are required, they shall be acquired by the Contractor prior to the start of any associated construction Activities and the Contractor shall be solely responsible for compliance with the permit requirements.

Construction noise impacts shall comply with the requirements of the Intergovernmental Agreement between the City of Colorado Springs and CDOT, provided in Book 3, Section 6.

5.1.4 Cultural/Historical Resources, Archaeological Resources, and Historic Section 4(f) and Section 6(f) Resources

The impacts to Cultural/Historic Resources, Archaeological Resources and Historic Section 4(f) uses and specific mitigations have been documented and approved by FHWA as part of the Environmental Assessment, I-25 Improvements through the Colorado Springs urbanized areas Re-Evaluation Section 4(f) and Section 6(f) discussions in Book 3, Section 5.

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

Historic 4(f) Resource	Use by the Project
Works Progress Administration (WPA) Floodwall along Monument Creek.	The Work shall not impact the WPA floodwall along Monument Creek.
Park or Recreation Resource	**Use by the Project (acres)**
Pikes Peak Greenway, Midland and Bear Creek Trails	Temporary closure during construction. Detours will need to be developed and approved by the City of Colorado Springs Parks staff.
America the Beautiful Park	Trail construction and construction traffic are anticipated to impact access to the America the Beautiful Park. In addition, coordination with adjacent park construction will be necessary to allow construction access to the park.

The Contractor shall be responsible for notifying CDOT of any unidentified historic, eligible for listing on the National Register of Historic Places, or archaeological resources encountered or unearthed during construction. Upon discovery of any 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. The Contractor shall provide archival photographic documentation if any historic buildings are to be demolished as part of this Project.

The Contractor shall 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.

5.1.5 Paleontology

Upon discovery of any paleontological resources, the Contractor shall immediately cease work in the vicinity of the discovery, fence off the area, and notify 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 paleontological resources are discovered, CDOT will determine the resource mitigation requirements that the Contractor shall implement.

5.1.6 Parks and Recreation

The Work is anticipated to impact the America the Beautiful Park and potentially other City of Colorado Springs parks. Where Work impacts City parks the Contractor shall comply to the requirements of the City of Colorado Springs Parks, Recreation and Cultural Services Department. The Contractor shall be responsible for obtaining advance approvals from the Parks, Recreation and Cultural Services Department for all proposed Work within City parks, including but not limited to landscaping and irrigation modifications, planter beds, sidewalks, retaining walls, noise barriers, and park facilities.

5.1.7 Vegetation

The Contractor shall minimize tree removal and disturbance to vegetation. In riparian areas adjacent to Monument and Fountain Creeks that are subject to Colorado Senate Bill 40 (SB 40) all trees 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 5.4.4. The Contractor shall supply this data to CDOT. For trees equal to or greater than 2 inches in diameter that are removed along the stretch of Fountain Creek that is to be reconstructed, replacement plantings may consist of 4 willow stakes per 1 tree removed. The Contractor shall submit in writing the quantity and location of all trees removed that they propose to replace with willows for approval by CDOT and CPW. The Contractor shall prepare a letter and mapping for the Senate Bill 40 Wildlife Certification for CDOT review and for CDOT submittal to the Colorado Division of Parks and Wildlife. 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. 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 2 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 accepted by the Regional CDOT Biologist or by a CDOT Landscape Architect. See Book 2, Section 17 – Landscaping, for additional conditions related to vegetation.

The Contractor shall enhance and incorporate impacted landscape areas (irrigated or otherwise) to optimize the longevity and maintainability of the existing vegetation. The contractor shall supply a native seed mix recommendation for CDOT review and Acceptance. The Contractor shall reseed and protect temporary disturbance areas with CDOT Approved BMPs to avoid disturbance to existing vegetation. All seed, mulch and mulch tackifier shall be applied in accordance with requirements of the Contract. The Contractor shall develop and implement the Noxious Weed Management Plan.

5.1.8 Wildlife

Fish, Reptiles and Amphibians: Habitat for sensitive species was not identified in the project area. However, Fountain Creek and Monument Creek do provide habitat for other common species. Impacts to Fountain Creek and Monument Creek and the surrounding wetland/riparian habitat shall be minimized as much as possible. Required mitigation per SB-40 Certification (see Section 5.4.4 SB-40 Wildlife Certification) shall be implemented as part of this project.

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 is advised to also prevent migratory birds from nesting by implementing techniques such as netting following the nest removal. The Migratory bird nest survey shall be submitted to CDOT acceptance prior to impacting existing structures that may contain active bird nests.

5.2 NEPA Reevaluation

If the Contractor proposes or creates the need for any environmentally significant project change (scope, design, construction technique, or schedule, etc.) as defined by each resource's policies, procedures, guidelines or regulatory requirements (including the election to include any changes to the Additional Requested Elements (AREs) which are listed in Book 2, Section 1 – General and otherwise included as part of the Contract Documents 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 of any other Work that was not approved as a part of the I-25 Environmental Assessment Reevaluation.

FHWA review of Reevaluation Form #1399 is required.. The FHWA review and approval must occur prior to CDOT's Approval and before the Work proposed in the Reevaluation Form #1399 can be performed. In addition, the Contractor shall be responsible for additional environmental documentation, permits, and mitigation resulting from impacts associated with any project change. The Contractor shall implement the potential changes to the environmental impacts at the Contractors expense and accept responsibility for any additional schedule impacts required for the associated approvals and regulatory clearances.

5.3 Environmental Commitments and Mitigation

The Contractor shall be responsible for implementing required mitigation measures to minimize environmental harm from the Project. The Contractor shall minimize both environmental impacts and impacts to adjacent property owners as detailed design decisions are made. Relevant mitigation requirements shall be included in the final Design Documents or other required deliverables for the Project. The Contractor 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.

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 5-1.

Some permits may have been obtained by CDOT during the development of the Basic Configuration and are available in Book 3, Section 5. Permits are subject to final review and approval by the Permitting Agency.

Table 5-1 Required Environmental Permits

Permits/Approvals	Permitting Agency
Clean Water Act Section 404-If required due to design changes	U.S. Army Corps of Engineers (USACE)
Municipal Separate Storm Sewer System (MS4) Discharge Permit (City of Colorado Springs and CDOT MS4 discharge requirements)	Colorado Department of Public Health and Environment – Water Quality Control Division
CDPHE Colorado Discharge Permit System (CDPS) storm water 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
Demolition Permit (Bridge/structure 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
Senate Bill 40 Certification	Colorado Parks and Wildlife

5.4.1 Municipal Separate Storm Sewer System (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. The MS4 Permit is available on the web page at http://www.coloradodot.info/programs/environmental/water-quality/documents

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.

5.4.2 404 Permit/Wetlands

CDOT has obtained the Section 404 Permit for the project Basic Configuration and ARE's as defined in the Request for Proposal documents. The Contractor shall comply with the requirements and special conditions outlined in the Section 404 Permit in Book 3, Section 5. If the Contractor modifies the Basic Configuration or ARE's the Contractor shall be responsible for preparing a Clean Water Act, Section 404 Permit Application for impacts to wetlands and waters of the U.S. The Application shall be submitted to CDOT for review and in advance of a subsequent submittal to CDOT for Approval and submittal to ACOE at least 45 Days before the start of construction Activity which would impact wetlands or other waters of the U.S. The Contractor 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". A CDOT Functional Assessment of Colorado Wetlands (FACWet) shall be performed if a Wetland Finding is required. The Contractor shall comply with the requirements and special conditions outlined in the Section 404 Permit in Book 3, Section 5.

Wetlands Field Identification: The Contractor shall delineate the project area for wetlands and adhear to special conditions outlined in the Section 404 Permit in Book 3, Section 5.

Wetland and Waters of the U.S. Mitigation: The wetland delineation report is provided in the Biological Resources Report by CDOT in Book 3, Section 5. All impacted wetlands shall be mitigated at a 1:1 ratio. The Contractor shall minimize wetland impacts as much as possible. Any required wetland mitigation shall be the responsibility of the Contractor. The Contractor shall coordinate with the ACOE to comply with Section 404 permit(s) for impacts to Wetlands and Waters of the US from the project. Any additional mitigation beyond the 1:1 wetland replacement as required by the ACOE shall be done in accordance with the Section 404 permit(s). Any changes to the basic configuration will require the Contractor to obtain approval of the changes to the Section 404 permit(s).

Wetlands Inspection, Establishment, Acceptance, and Warranty Period: Inspection, Landscape Establishment, Acceptance and the Landscape Warranty Period for wetland areas shall be subject to the applicable requirements of the Landscape Section. Substantial Landscape Completion, Landscape Establishment Periods, and Acceptance for wetlands areas shall be subject to compliance of the requirements of all applicable permits.

The Landscape Establishment Period for wetlands areas shall commence upon receipt of a written “Notice of Substantial Landscape Completion” for wetlands areas from CDOT and is not subject to prior Final Acceptance of the Project.

The Landscape Establishment Period for wetlands areas will last for 24 months and will begin the following spring if Substantial Landscape Completion for the wetlands areas is issued in the fall.

The Contractor shall provide CDOT with annual mitigation progress reports. The reports shall be submitted to CDOT before December 31st of each year, and shall include the following:

1. Project number, Section 404-permit number, and county where project is located.
2. Summary of the status of the wetlands.
3. Percent of ground surface area that is vegetated.
4. Percent of the vegetated area that contains wetland vegetation.
5. List of prevalent plant species and their wetland establishment status.
6. Location map.
7. Drawings as needed for illustration.
8. Photographs of mitigation area for each report.
9. Percent cover of noxious weeds.
10. Acreage determination of successful mitigation sites.

Upon completion of the Landscape Establishment period for wetlands areas, at the Contractor’s request, CDOT will inspect the wetlands to determine compliance to the requirements of the Contract Documents. Wetlands areas will not be accepted until a minimum of 70 percent of the mitigation site consists of wetland species and noxious weeds comprise of less than 5% of the total cover.

Acceptance of the wetlands areas will initiate the one (1) year wetlands Landscape warranty period and maintenance period. Throughout the wetlands landscape warranty and maintenance period the Contractor shall be responsible for remedial action and restoration of created wetlands.

Remedial action is defined action taken to correct failed wetland construction. This can include but is not limited to:

1. Re-evaluation of hydrology source.
2. Groundwater monitoring to identify and correct improper grade elevations.
3. Additional excavation or fill.
4. Replanting vegetation.

Restoration of created wetlands is defined as actions taken to improve the conditions of an existing wetland that has limited functions. Techniques can include, but are not limited to:

1. Replanting vegetation.
2. Re-configuration of improper ground elevation
3. Enhancing hydrology.

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 Water Quality Control Division (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.

All costs for dewatering Work shall be the obligation of the Contractor.

5.4.4 Senate Bill 40/Wildlife

The Contractor shall comply with the General and Special Conditions provided in the April 2013 “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 Fountain Creek and Monument Creek that are subject to Colorado Senate Bill-40 (SB-40). After CDOT's Approval, CDOT will submit the application to CPW at least 60 days prior to planned construction or maintenance Activities to allow 30 days for CPW review of the submitted documents and 30 days for follow-up coordination, if required.

CPW will complete its review of the application and issue SB-40 Certification or request additional information or mitigation commitments within 30 days of final submittal. The Contractor shall submit its application so as to allow CDOT sufficient time to complete these activities.

5.5 Recognized Hazardous Materials

Recognized Hazardous Materials (RHM's) 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, subsurface, groundwater, or on structures to be demolished, and maybe mixed with soil, water, and/or other waste materials.

RHM's have been identified at a number of locations within the Project. The Contractor's attention is directed to the Phase I and Phase II Environmental Site Assessments, groundwater sampling and testing studies, lead and 8-RCRA metals-based paint surveys, and other applicable Contract Documents, for information related to the RHM's. The Contractor is advised to thoroughly read and understand the findings and requirements in the environmental site assessments that have been prepared for the properties within the project limits. The Contractor shall develop a Materials Management Plan (MMP) to be submitted for Approval by CDOT within 60 days after NTP1 and shall be incidental to the project. The MMP shall include a Sampling and Analysis Plan (SAP) for areas that may not have been adequately characterized for disturbance. The Contractor shall comply with all provisions set forth within the Approved MMP.

In addition to the MMP and SAP, the Contractor shall develop a Health and Safety Plan (HASP), and a Spill Prevention Control and Countermeasures (SPCC) Plan for each segment of work, as required by Section 250.03 of the 2011 CDOT Standard Specifications for Road and Bridge Construction, CDOT MMP, and the CDOT Asbestos-Contaminated Soil Management SOP as appropriate. The draft plans of the HASP and SPCC shall be submitted to CDOT for review within 30 Days after NTP1. The final plans of the HASP and SPCC shall be submitted to CDOT for review no later than 30 Days prior to NTP 2. Acceptance of these plans will be required as a condition for issuance of NTP 2.

The Contractor shall schedule a review meeting with CDOT prior to submittal of the MMP, SAP, HASP, and SPCC to discuss. The Contractor's Environmental Manager and the Contractor's Safety Manager shall be present at the meeting. The Contractor shall incorporate modifications into the submitted MMP, SAP, HASP, and SPCC agreed to during this meeting.

The Contractor shall comply with all provisions set forth within the reviewed MMP, SAP, HASP, and SPCC and shall maintain documentation of all pertinent certifications of all Subcontractors which shall be available upon request by CDOT. 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.

Prior to demolition activities on any Right of Way of any structures, or removal of utility lines, the Contractor shall determine the presence or absence of lead or asbestos containing materials. If lead or asbestos is present, the Contractor shall conduct abatement in accordance with Section 250,
Environmental, Health, and Safety Management, of the 2011 CDOT Standard Specifications for Road and Bridge Construction, the CDOT Asbestos-Contaminated Soil Management Standard Operating procedure (CDOT 2011), the revised Section 250 Specification and relevant Occupational Safety and Health Administration (OSHA), and other State and Federal Requirements.

Monitoring Wells have been installed at the properties along the north-west corner of the interchange. The Contractor shall replace any monitoring well that is damaged from its work.

Payment for removal and disposal of Hazardous Materials from the Project site will be paid for by Force Account only. Time associated with hazardous materials removal and disposal shall be considered non-excusable and non-compensable.

Monthly Statement of Regulated Hazardous Materials Management: 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 activities.

Quarterly Summary of Hazardous Materials Management: The Contractor shall submit quarterly reports to CDOT for review and then subsequent submittal to CDPHE. The reports shall contain “Tasks/Activities Completed”, “Tasks Expected for Next Reporting Quarter”, “Percent Complete”, and “Issues to be Resolved”.

Sampling and Analysis Plan (SAP) : The Contractor shall develop a Sampling and Analysis Plan (SAP) to identify and characterize potential RHMs that may be encountered during the Work that have not been adequately characterized in existing reports based on the contractor’s construction design. 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, monitoring well construction, soil sampling and/or groundwater sampling methods, and decontamination)
3. Quality control

4. Field equipment calibration procedures/frequency
5. Quality assurance objectives (data)
6. Provisions for corrective action, if needed

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" 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."

The Contractor shall provide to CDOT identification of all Subcontractors to be used in the performance of Activities required within this section prior to performing any such Activity. The Contractor shall maintain documentation of all pertinent certifications of all Subcontractors and make available upon request to CDOT.

The Contractor shall be responsible for identification and performance of all Activities required within this Section associated with Utility Work being performed for the Project.

The Contractor shall be responsible for removal of any facilities and equipment installed within the Project limits related to performance of the Work under this Section prior to completion of the Project.

5.5.1 Materials Management Plan

The MMP shall identify potential RHM's, locations, extent of impact, proposed Remediation Work, and avoidance measures, investigation measures, and a contingency plan for addressing unforeseen conditions. The plan shall identify the Contractor's representative responsible for environmental compliance, the proposed design and construction staff, and approach to implementation of the MMP. In addition to meeting the requirements of Section 250 of the Standard Specifications the MMP shall include the following provisions:

The Contractor shall manage all RHM's including soils, groundwater, surface water, and other contaminated substances to prevent exposure to 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:

1. Hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) requiring off-Site disposal and/or treatment
2. Contaminated soils requiring off-Site disposal
3. Soils to be stockpiled for further characterization
4. Soils with concentrations of waste constituents below regulatory concern that can be

reused without restriction

5. Wastewater requiring off-Site disposal and/or treatment
6. Impacted water to be held for further characterization
7. Asbestos containing material (ACM) discovered during construction or demolition
8. Lead-based paint associated with Structures, signage, light posts, etc.
9. Waste material to be contained for further characterization
10. Contaminated groundwater requiring on-Site treatment or off- Site disposal

Prior to commencing any Remediation Work Activities, a scope of work shall be submitted to CDOT for Approval. The Contractor shall utilize the most cost effective approach in the performance of any remedial action deemed necessary. Remediation Work will 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 Project.

The Contractor shall be responsible for locating storage facilities and disposal sites for RHM's 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 receiving disposal facility and federal, state, and local statutes, rules, regulations and ordinances are complied with and properly documented.

At the conclusion of the implementation of the MMP and VCUP activities, a No Further Action Determination (NAD) petition for each of the properties where residual or unknown contamination is encountered within the Project, shall be prepared by the Contractor, submitted to the CDOT for review and acceptance, and then submitted to CDPHE for review and Approval. If no residual or unknown contamination is encountered a NAD will not be required. The NAD Petition shall include the following sections and appendices:

1. Project Background
2. Waste Management During Demolition
3. Characterization Sampling Data
    A. Soil Management and Disposal Data
    B. Waste Streams Disposed Offsite
4. Wastes Managed On Site
5. Right Of Way Maps
6. Groundwater Management and Disposal Data
7. Property Use Restrictions, Restrictions on Groundwater Use
8. Summary of Variances of Regulatory Standards
9. Qualified Environmental Professional Certification

10. Appendices
    A. Photographs, Figures, and Tables
    B. Analytical Results
    C. VCUP addendums and copies of correspondence with CDPHE and Colorado OPS
    D. Waste manifests

5.5.2 Miscellaneous

The Contractor shall be responsible for contacting the CDPHE if groundwater monitoring wells will be disturbed. Refer to information about drainage and groundwater testing for specific monitoring well site locations in Book 3, Section 5.

5.6 Deliverables

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

Deliverable	Review Acceptance or Approval	Schedule
Draft Environmental Compliance Work Plan	Acceptance	Within 30 days of NTP 1
Final Environmental Compliance Work Plan	Approval	No later than 30 Days prior to NTP 2
Environmental Compliance Work Plan Updates	Acceptance	Monthly
Final Environmental Compliance Work Plan	Approval	As a condition for Final Project Acceptance
Environmental Permits	Acceptance	Per the requirements of the permit and the Contract Documents.
Wetland Mitigation Plan (if required)	Acceptance	Prior to issuance of Released for Construction Documents
Annual Wetlands Mitigation Progress Reports (if required)	Acceptance	Prior to December 31 of every year
Migratory Bird Nest Survey	Review	Prior to impacting existing structures that may contain active bird nests during the acting active nesting seasons.
90% Construction Plans for Riparian Impact Areas	Acceptance	Required for submittal of SB 40 permit that must be obtained prior to construction in riparian impact areas
Landscape and Plant Establishment Plan for Riparian Areas	Approval	Prior to commencing landscaping of riparian areas
Materials Management Plan (MMP)	Approval	Within 60 days of NTP 1.
Health and Safety Management Plan (HASP)	Approval	Within 60 days of NTP 1.
Sampling Analysis Plan (SAP)	Acceptance	Within 60 days of NTP 1.
Identification of Subcontractors to Perform Remediation Work	Review	Prior to subcontractors Commencing Remediation Work
Remediation Scope of Work	Approval	Prior to commencing Remediation Work
Monthly RHM Reports	Review	Monthly

All deliverables shall also conform to the requirements of Section 3, Quality Management.