Hazardous Material Document	When Prepared	Purpose	Level of Site-Specific Detail	Typical Limitations	Guidance/Resources	Guidance Modifications	Notes
Modified Phase I Environmental Site Assessment (MESA) for Corridor Projects	Project Development - Prepared as a supporting technical report for Environmental Assessments (EA) and Environmental Impact Statements (EIS).	Corridor or project-wide assessment of known soil and groundwater contamination, asbestos containing materials, and heavy metal-based paint.	Low to Medium	Site access is not provided and property owners are not available for interviews for corridor or project-wide assessments. Not practical to obtain site access for corridors with a large number of sites.	ASTM. E 1527-05 Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process.* Environmental Protection Agency. 40 CFR Part 312. *Standards and Practices for All Appropriate Inquiries*	Perform a Limited site reconnaissance ("windshield survey"), if site access is not available. Extend the ASTM Minimum Search Radius by 0.25 – 1 mile, or at the discretion of the environmental professional and/or where project footprint is uncertain. Include a general project description including the project footprint and any ROW to be acquired. Include a brief description of the environmental setting, such as topography, geology, and groundwater hydrology including estimated depth to groundwater and shallow groundwater flow direction. Include a map that summarizes the important features of the project and locations of sites with recognized environmental conditions and those of concern that may affect the project. Indicate if sites are up or downgradient of the corridor. Include interpretation of aerial photographs and search of local records for clandestine drug lab enforcements as appropriate.	A general discussion of asbestos containing materials and heavy metal-based paint should be included – notably for the demolition of structures. The site reconnaissance and historical document review should identify sites with potential concerns that could affect project design, right-of-way acquisition, construction, and decision for the preferred alternative, and that are not readily apparent in the agency database review. Findings and conclusions should be specific and give an opinion regarding the necessity for additional assessment or investigation. Information includes where and what monitoring during construction may be appropriate, and what remediation or monitoring actions may be prompted by site acquisition. The MESA must be complete enough to justify these recommendations.
Hazardous materials sections of Environmental Assessments and Environmental Impacts Statements	Project Development - Prepared as part of the National Environmental Policy Act (NEPA) document	Identify impacts to the project from sites with recognized environmental conditions or other hazardous material concerns and develop mitigation strategies.	Low to Medium	Site access is not provided and property owners are not available for interviews.	Colorado Department of Transportation. 2005. *Standard Specifications for Road and Bridge Construction.* Colorado Department of Transportation. October 2003. *Right of Way Manual.*	Section based on supporting MESA technical report. The section should include the following, at a minimum: Text description of work performed and compiled reports Description of properties that may affect the project due to recognized environmental conditions or other hazardous material concerns, Map showing properties of concern, Table listing properties of concern, including their addresses, and potential issues, Conclusions and recommendations about future actions that are needed and whether and how any properties affect the decision of the Proposed Action or the Preferred Alternative.	A general discussion of asbestos containing materials and heavy metal-based paint should be included – notably for the demolition of structures.
Limited Phase II Environmental Subsurface Investigations (Phase II)	Engineering Design - Conducted prior to final engineering design to assess the presence or absence of soil and groundwater contamination along a proposed construction alignment.	Corridor or project-wide assessment of potential soil and groundwater contamination to assist in planning for engineering options to minimize the necessary remediation and treatment of residual hazardous materials.	Medium	Right-of-entry required. Utility clearances needed prior to drilling.	Standard practices for subsurface soil and groundwater sampling, including OSHA (29 CFR 1910.120) and waste disposal (6 CCR 1007-2 and 1007-3)	Investigation scope should be prepared to meet the project-specific needs. The report scope should include the following, at a minimum: Description of work performed, Results and conclusions including maps, analytical data, boring logs, and text descriptions, Recommendations for final engineering design.	Performed in areas of potential soil and groundwater contamination that would affect selection of a final engineering design option.

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Initial Site Assessment (ISA) and ISA Checklist CDOT Form #881	Project Development - Prepared in support of a Categorical Exclusion. **OR** Right-of-Way Acquisition - Performed on properties that are to be acquired by, dedicated to, or sold/disposed by CDOT.	Provide an approach that is less comprehensive than a MESA for concurrence for the Hazardous Waste section of Form 128. **OR** Acquisition and dedication of right-of-way with minimal hazardous materials concerns.	Medium	Right-of-entry required. Site access necessary.	Colorado Department of Transportation. October 2003. *Right of Way Manual.* ASTM. E 1528-05 Standard Practice for Environmental Site Assessments: Transaction Screen Process. CDOT ISA Checklists. ISA requirements for property sale/disposal at discretion of environmental professional.	Search of local records for clandestine drug lab enforcements as appropriate.	A MESA should be conducted for all sites with recognized environmental conditions or potential environmental conditions, especially where excavation and/or acquisition is needed.
Modified Phase I Environmental Site Assessment (MESA) for Site-Specific Projects	Right-of-Way Acquisition - Performed on properties that are to be acquired by or dedicated to CDOT and are known or suspected of harboring hazardous waste.	Site-specific assessment of known or suspected soil and groundwater contamination, asbestos containing materials, and heavy metal-based paint.	Medium to High	Right-of-entry required. Site access necessary.	ASTM. E 1527-05 Standard Practice for Environmental Site Assessments: *Phase I Environmental Site Assessment Process.* Environmental Protection Agency. 40 CFR Part 312. *Standards and Practices for All Appropriate Inquiries*	Perform a site reconnaissance. Extend the ASTM Minimum Search Radius by 0.25 – 1 mile, or at the discretion of the environmental professional and/or where project footprint is uncertain. Search of local records for clandestine drug lab enforcements. Include a brief description of CDOT's most current plans regarding acquisition, excavation areas, temporary and permanent dewaterings, and other issues that may affect hazardous materials liability in acquisition or during project construction. Include a brief description of the environmental setting, such as topography, geology, and groundwater hydrology including estimated depth to groundwater and shallow groundwater flow direction. Include a map that summarizes the important features of the project and locations of sites with recognized environmental conditions and those of concern that may affect the project. Indicate if sites are up or downgradient of the site. Include interpretation of aerial photographs and search of local records for clandestine drug lab enforcements as appropriate.	

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Preliminary Site Investigations (PSI)	Right-of-Way Acquisition - Performed on properties that are to be acquired by or dedicated to CDOT and are known or suspected of harboring hazardous waste.	Assess the presence or absence of soil and groundwater contamination, asbestos containing materials, and heavy-metal based paint on a property or structure prior to acquisition.	High	Right-of-entry required. Sampling of suspect asbestos containing materials and heavy-metal based paint may be limited due to right-of-entry requirements.	Colorado Department of Transportation. October 2003. *Right of Way Manual.* *OSHA 29 CFR 1910.120.*	Investigation scope should be prepared to meet the project-specific needs. The report scope should include at a minimum: Description of work performed, Results and conclusions including maps, analytical data, boring logs, and text descriptions, Recommendations for follow-up actions to limit CDOT liabilities from the hazardous materials concerns and construction issues, Cost estimate to remediate, when appropriate.	A visual assessment of suspect asbestos containing material and heavy-metal based paint should be performed by a qualified environmental professional if sampling can not be performed.
Remedial Investigation/Feasibility Studies (RI/FS)	Right-of-Way Acquisition - Performed on properties with known soil and groundwater contamination that can not be avoided and the level of contamination requires a detailed, comprehensive investigation to further delineate the magnitude of contamination at the site.	Identify the mitigation and clean-up strategies and provide cost estimates for clean-up and mitigation.	High	Right-of-entry required, and intrusive work requires utility clearances.	Colorado Department of Transportation. October 2003. *Right of Way Manual.* *OSHA 29 CFR 1910.120* *Waste disposal regulations 6-CCR 1007-2 and 1007-3* *Colorado Water Quality Act 25-8-101 CRS et seq.*	Investigation scope should be prepared to meet the project-specific needs. The report scope should include at a minimum: Description of work performed, Results and conclusions including maps, analytical data, boring logs, and text descriptions, Recommendations for follow-up actions to limit CDOT liabilities from the hazardous materials concerns and construction issues, Cost estimate to remediate, when appropriate.	Coordination with the Colorado Department of Public Health and Environment (CDPHE) or the Colorado Department of Labor and Employment Division of Oil and Public Safety (OPS) may be required during the development of site-specific mitigation strategies.
Health and Safety Plan	Construction - Required, as stated in Section 250, when encountering suspected contaminated material, including groundwater, is possible at some point during project construction.	Protect worker health and safety and the environment.	High		Colorado Department of Transportation. 2005. *Standard Specifications for Road and Bridge Construction.* DHHS (NIOSH). *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities* *OSHA 29 CFR 19.10.120.*	Threshold values should be identified and the activities to be taken once reached should be clearly identified.	

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Site Investigation and Materials Management Plan	Construction - Required, as stated in Section 250, for sites with known soil and groundwater contamination and if encountering greater levels of contamination than previously identified.	Investigate the extent of the contamination, and properly handle and dispose wastes.	High	Understanding of waste characteristics, affected media, and concentrations is needed.	Colorado Department of Transportation. 2005. *Standard Specifications for Road and Bridge Construction.* *Waste disposal regulations including 6 CCR 1007-2 and 1007-3* *Colorado Water Quality Act 25-8-101 CRS et seq.* *OSHA 29 CFR 1910.120.*	None.	Coordination with the Colorado Department of Public Health and Environment (CDPHE).
Remediation Plan	Construction - Required, as stated in Section 250, to remediate soil and groundwater encountered.	Present at least three types of remedial action for the contaminated area as required by applicable statutes and regulations.	High	Often time limited due to project schedules.	Colorado Department of Transportation. 2005. *Standard Specifications for Road and Bridge Construction.* *Waste disposal regulations including 6 CCR 1007-2 and 1007-3* *Colorado Water Quality Act 25-8-101 CRS et seq.* *UST Remediation 7 CCR 1101-14* *OSHA 29 CFR 19.10.120.*	None.	Coordination with the CDPHE or the Colorado Department of Labor and Employment Division of Oil and Public Safety (OPS) is required during the development of site-specific mitigation strategies, and to obtain a No Further Action determination.