

SUBJECT: Infrastructure Design Directive
IDD-2020-02
Hazardous Material Investigations

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TO: Office of Infrastructure Divisions
District Offices
Transportation Design Community

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FILE REFERENCE:
PSESHARE: Design Directives

The following IDD shall be used to ensure consistency in the development of all projects to be let by NMDOT in relation to Hazardous Material Investigations which are authorized under section 2.2 in the NMDOT/FHWA Stewardship and Oversight Agreement (http://dot.state.nm.us/content/dam/nmdot/Business_Ops/NMDOT-FHWASTewardshipOversightAgreement.pdf). This IDD applies to all NMDOT and T/LPA projects, regardless of funding source.

The purpose of these investigations is to identify contamination or regulated materials/substances during the design of a project so that a plan to address it during construction may be charted. Greater detail may be found in the NMDOT's Hazardous Material Assessment Handbook. <http://dot.state.nm.us/content/dam/nmdot/PM/2010HMAH.pdf>

This directive contains instruction regarding how to determine if hazardous material investigations are warranted, to whom and when to submit a request for a hazardous material investigation, and charting a path through construction when contaminants and/or regulated materials are known to exist within the project limits. Details of each are discussed in the following sections.

1) How to determine if hazardous material investigations are warranted:

Whether or not hazardous material investigations are warranted depends entirely on the design scope and the project location. Such investigations are triggered if **ANY** or **ALL** of the following apply:

- 1A. Property will be acquired;
- 1B. Soil will be disturbed; particularly in an urban and/or non-residentially developed area; and/or
- 1C. If structures will be modified (buildings, bridges, etc.) or utilities relocated.

For NMDOT projects, if none of the above apply, then no hazardous material investigations are warranted and no further action is necessary. If any or all apply, proceed to No. 2.

For T/LPAs, some level of hazardous material investigation is required for all T/LPA projects. If none of the above apply, then an ISA Determination must be submitted to the EGB for concurrence/acceptance. Contact the EGB for guidance. If any or all apply, proceed to No. 2.

2) To whom and when to submit a request for a hazardous material investigation:

If any of the triggers in step 1 applies, the Project Development Engineer must submit a written request for evaluation to the Hazardous Material Investigation Bureau (HMIB), or the Environmental Professional working on behalf of the T/LPA. The request must include the scoping report, detailed descriptions of each of the triggers, the project schedule, and any specific concerns.

Hazardous material investigations may be initiated as early as STIP Planning and are typically completed well before the 90% design. With time and as the design is developed, the investigations become increasingly focused and the findings are evaluated for their effect, ultimately on construction. The result is project specific recommendations intended to minimize the risk to the NMDOT (or T/LPA) during construction posed by time delays and cost overruns, contaminant releases and exposure to staff and the public, regulatory fines, and damage to the NMDOT's (or T/LPA's) credibility.

Hazardous material investigations are timed to provide the level of information needed at each corresponding design stage. This relationship is illustrated in the table below. As these investigations take time to complete, timely submittal of requests is critical.

Design Stage	Assessment Phase	Comments
Project Planning to Preliminary Design (0 to 60%)	Initial Site Assessment (ISA)	Although not recommended before a project design is at least 30% complete, an ISA may be performed during the planning stages in order to reveal fatal flaws with certain design alternatives. The evaluation of data is necessarily limited by the absence of a preliminary design. The ISA is typically performed early in the design phase, after the conceptual design is complete. The goal is to identify and evaluate specific properties that could adversely affect the project and, to the extent possible, chart paths through design and construction to address concerns particular to the design. If conclusions cannot be drawn or paths cannot be charted with confidence, a PSI may be recommended.
	Preliminary Site Investigation (PSI)	The PSI is focused on specific areas of concern identified during the ISA and utilizes invasive (field sampling of soil, water, and/or building materials and analysis) and/or non-invasive (magnetic surveys) testing methods. With respect to contaminants in soil, if conclusions cannot be drawn or paths cannot be charted with confidence, a DSI may be recommended.
90% Design	Detailed Site Investigation (DSI)	The DSI focuses on defining the lateral and vertical extent of contamination in soil within the limits of a project. Invasive sampling techniques are common. The design team uses the detailed information to calculate quantities and estimate costs to address a particular concern.

3) Charting a path through construction:

The ISA, PSI, and DSI reveal contaminants and/or regulated materials existing within the limits of a project. The HMIB (or other environmental professional) evaluates these findings and charts a path through construction. Via the recommendations, the HMIB (or other environmental professional) advises the Project Development Engineer to:

- 3A. Insert project specific alerts and instruction into the design plan set;
- 3B. Estimate volumes of contaminated soil requiring excavation and enter the volume in the Summary of Quantities; and
- 3C. Insert project specific special provisions or notices to contractor into the contract book.