

110 Project Development Overview

110.1 General

The purpose of this chapter is to summarize the project development process, from long-range planning through project construction.

110.2 References

110.2.1 Long-Range Planning References

The New Mexico Department of Transportation (NMDOT) [Transportation Plan](#), current edition, is the NMDOT's long-range, multimodal transportation plan that will guide transportation efforts in the state over the next several years. NMDOT develops its long-range transportation plan in cooperation with regional transportation planning organizations (RTPOs) and metropolitan planning organizations (MPOs) in New Mexico.

110.2.2 Near-Term Planning References

The NMDOT's [Statewide Transportation Improvement Program](#) (STIP) is the state's transportation capital improvement program. The STIP guides near-term transportation work in New Mexico and provides a listing of prioritized and funded projects over a four-year period (as well as two additional years of unfunded projects). Federally-funded and regionally significant projects in New Mexico's MPOs are reflected in the STIP once they have been reflected in the MPO's Transportation Improvement Program (TIP). The Federal Highway Administration (FHWA) approves the STIP every two years.

110.2.3 Project-Specific References

The references below provide additional information on project management or specific aspects of project delivery, such as developing projects that are funded by the Local Government Road Fund or Emergency Relief Funds.

- [Emergency Relief Manual](#) - This FHWA publication describes procedures for projects funded by the FHWA's Emergency Relief Fund program.
- [NMDOT Local Government Road Fund Project Handbook](#) - This handbook outlines the procedures for the NMDOT, cities, counties, tribes, pueblos, and other state and federal agencies participating in the Local Government Road Fund Program.
- [NMDOT Tribal/Local Public Agency Handbook](#) - This handbook provides guidance to tribal and local public agencies working to develop and construct highway, street, and other multimodal transportation projects funded by the NMDOT with federal and/or state funds.
- [NMDOT/FHWA Stewardship and Oversight Agreement](#) - This agreement outlines the roles and responsibilities of the FHWA and the NMDOT with respect to project approvals and oversight activities associated with the Federal-Aid Highway Program.
- [Guide to Project Management Strategies for Complex Projects \(The Guide\)](#) - This guide assists transportation project managers and teams in delivering successful complex projects. The Guide presents a project management framework as well as proven methods and solutions tailored to the planning and management of complex transportation projects. NMDOT has incorporated components of this project management framework into its project development process. Specific elements that NMDOT has incorporated are discussed in Chapters 110, 120, 130, 140, and 200 of this Design Manual. The Guide is a Transportation Research Board (TRB) publication that is part of the Second Strategic Highway Research Program (SHRP 2) under the R10 Renewal Project.

110.3 Project Development Sequence

NMDOT's project development process is a multidisciplinary process beginning with the development of the State's long-range transportation plan and ending with project development and construction. Integrating planning, program development, and project delivery is important for the efficient and successful delivery of transportation projects identified in the STIP.

Understanding the project development sequence and process helps to ensure successful project delivery, and will help avoid expensive modifications and rework.

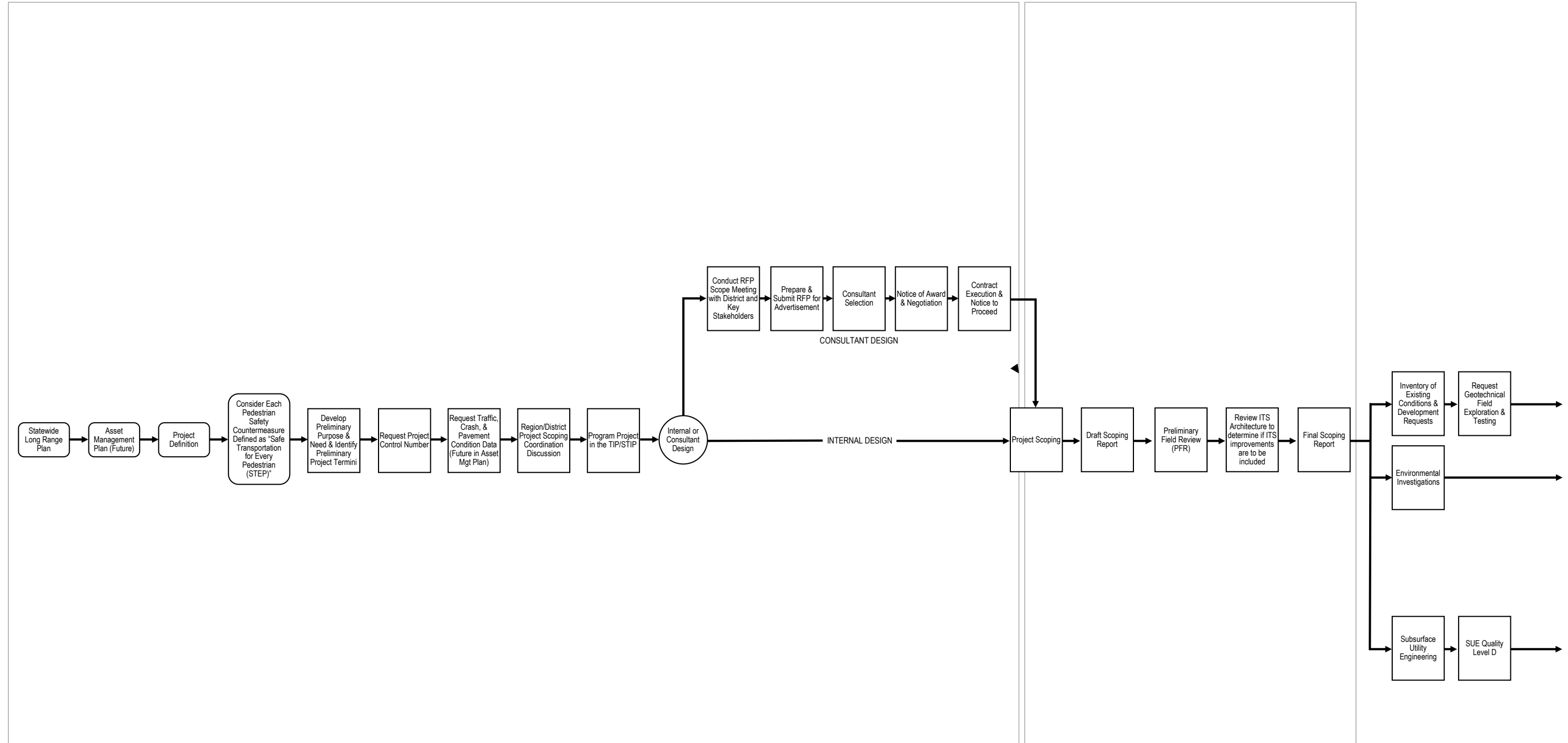
The phases of NMDOT's project development sequence are shown in Exhibits 110-1 through 110-4. Exhibit 110-1 and Exhibit 110-2 show the NMDOT's project development sequence for maintenance projects or smaller projects that are able to move forward with a Scoping Report. Exhibit 110-3 and Exhibit 110-4 show the NMDOT's project development sequences for more complex projects that must go through the Location Study Procedures process. A brief description of each phase is provided below.

- Planning
 - Long-range planning
 - Near-term planning
 - Project definition
- Phase I, Project Scoping, Conceptual, and Preliminary Design
 - Project Scoping or Location Study Procedures (Phase IA and Phase IB)
 - Phase IC, Environmental Documentation
 - Phase ID, Preliminary Design
- Phase II, Final Design
 - Grade and Drain
 - Plan-in-Hand
 - Plans, Specifications, and Estimates (PS&E)
 - Production Plans
- Phase III, Construction

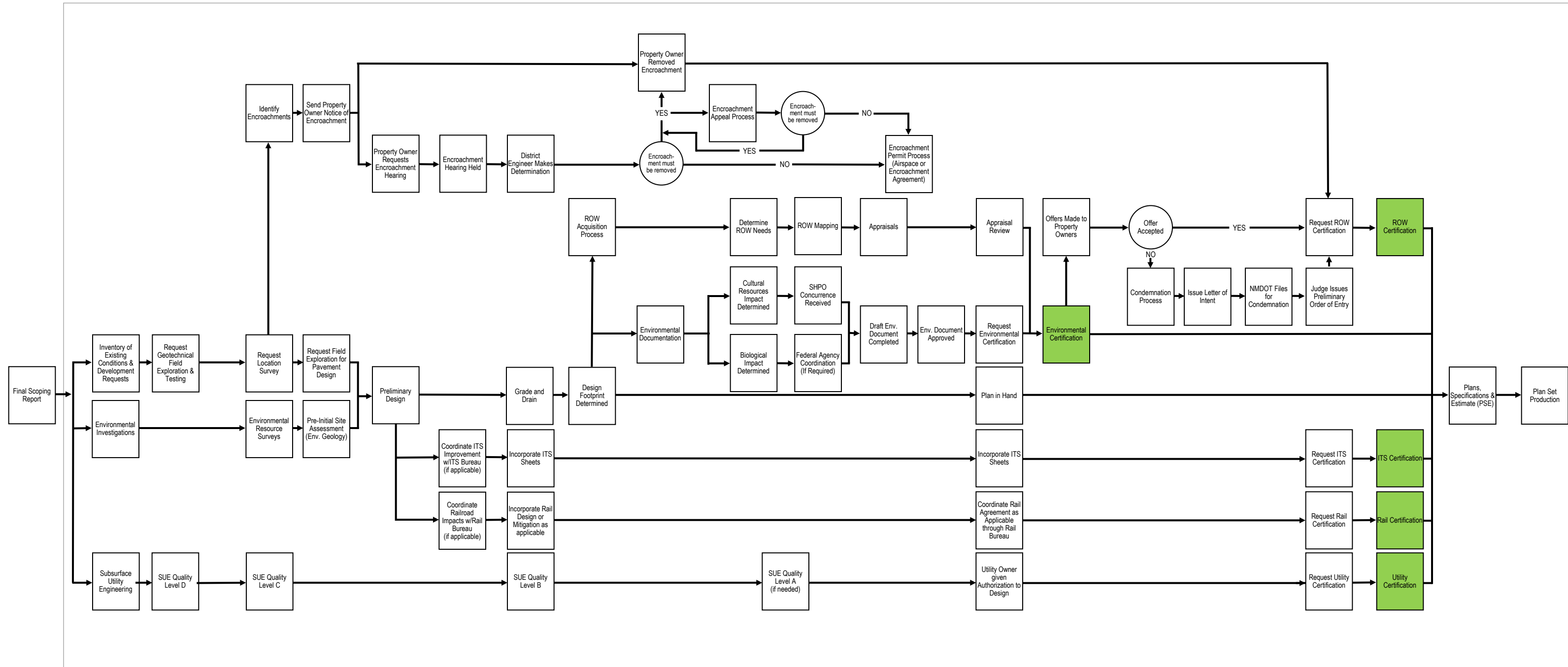
NMDOT Project Development Sequence—
Scoping Report Part 1

PLANNING

SCOPING



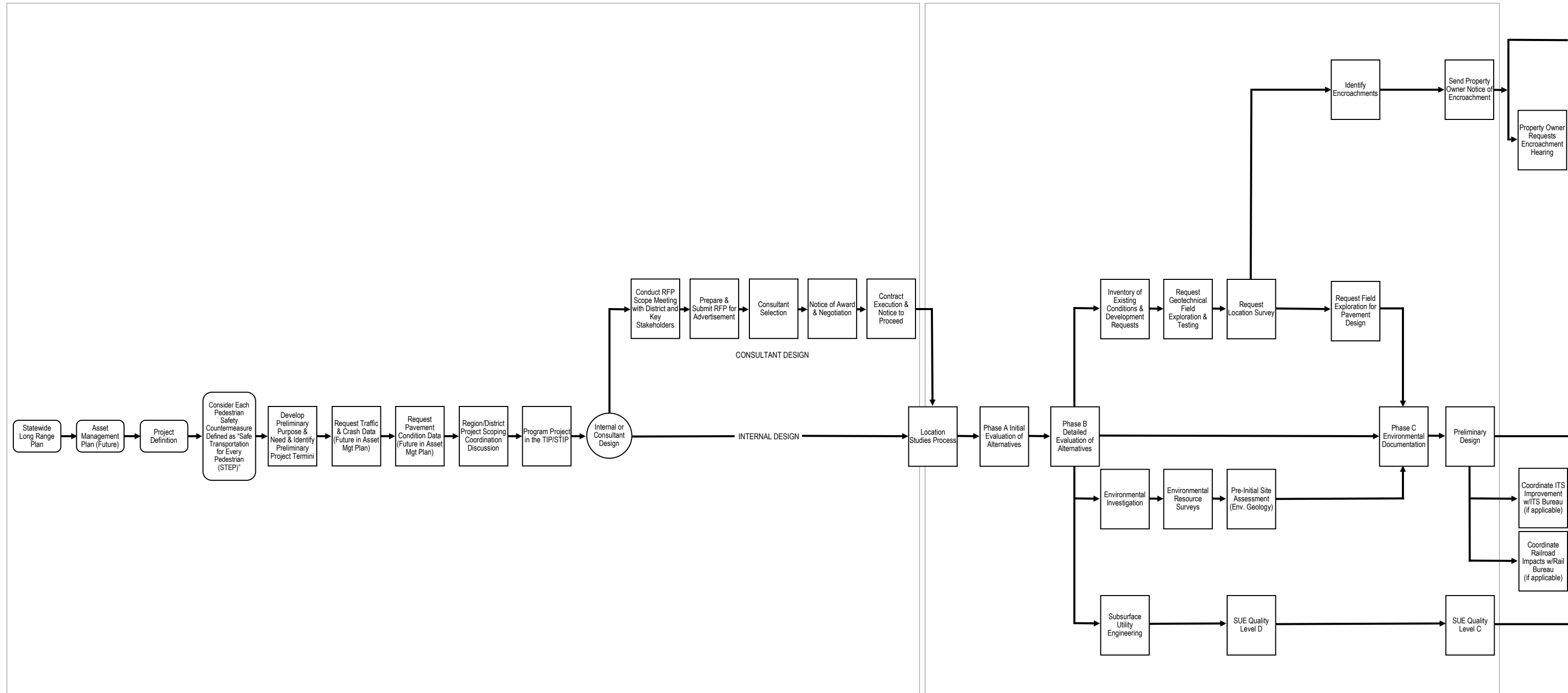
DESIGN



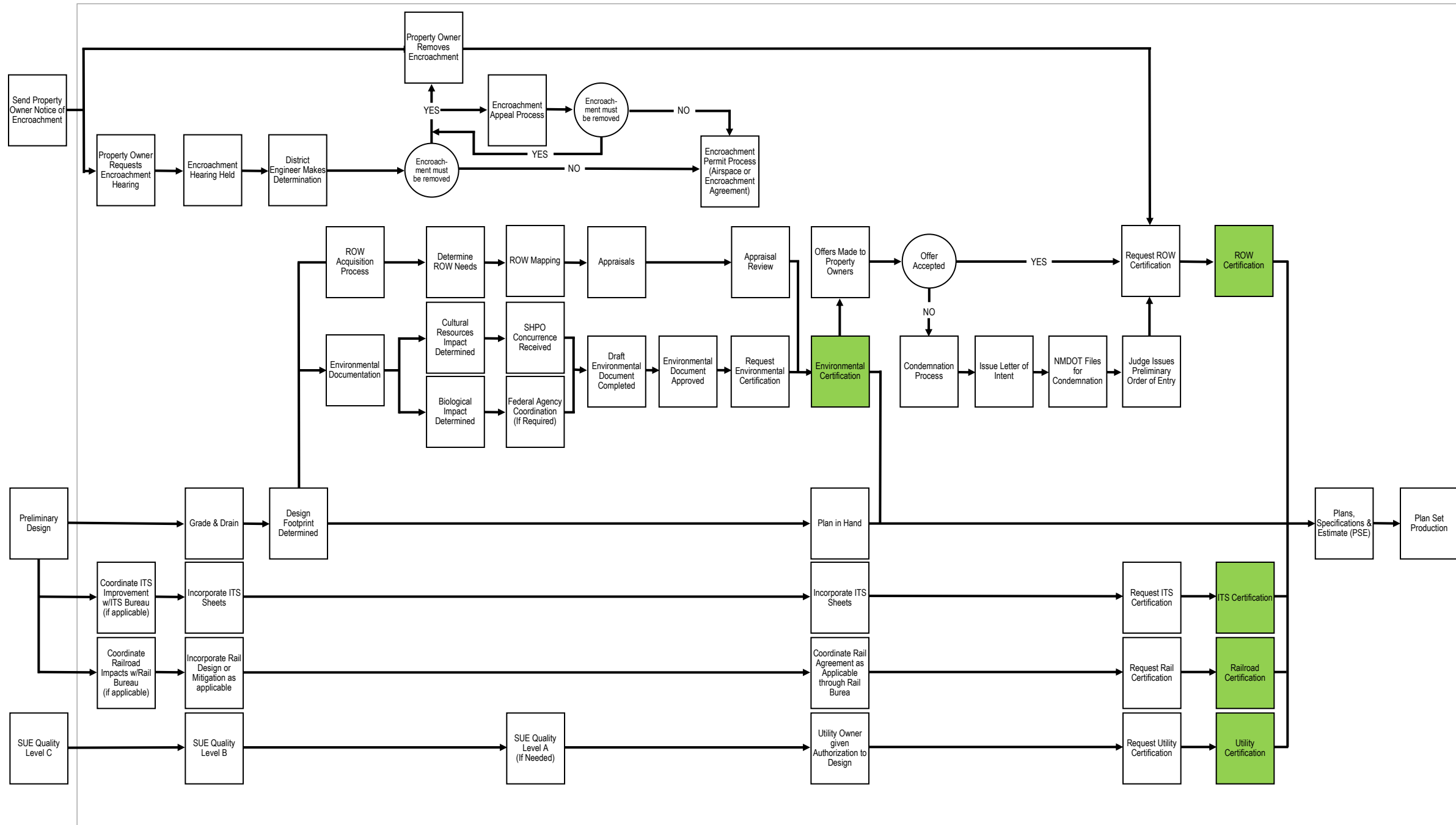
NMDOT Project Development Sequence—
Location Study Procedures Part 1

PLANNING

LOCATION STUDY PROCESS



DESIGN



110.3.1 Planning

Transportation planning is a cooperative process designed to foster involvement by all users of the system through a proactive public participation process. System users may include the business community, community groups, environmental organizations, the traveling public, freight operators, and the general public. In New Mexico, the transportation planning process is conducted jointly by the NMDOT, MPOs, RTPOs, and public transit operators.

110.3.1.1 Long-Range Planning

Long-range transportation planning establishes goals, objectives, and transportation system needs. Federal law requires states to develop and adopt a statewide long-range transportation plan that identifies transportation needs at least 20 years into the future. NMDOT's long-range transportation plan addresses the movement of people and goods throughout New Mexico, and it provides a strategic framework to guide transportation decision-making in New Mexico. A key function of NMDOT's long-range transportation plan is to help ensure that NMDOT has sufficient fiscal resources to build, operate and maintain the state's transportation system. The Statewide Planning Bureau is a division contained within the NMDOT that is responsible for developing NMDOT's statewide long-range multimodal transportation plan.

Chapter 120 of the Design Manual contains additional information regarding NMDOT's long-range planning process, as well as information on MPOs and RTPOs in New Mexico.

110.3.1.2 Near-Term Planning

The STIP is New Mexico's near-term transportation capital improvement program. The STIP must be consistent with NMDOT's long-range transportation plan and MPO TIPs. The New Mexico STIP provides a listing of prioritized and funded projects over a four-year period (as well as two additional years of un-funded projects). As required through federal law, the NMDOT updates the STIP every two years and it must be approved by the New Mexico Division of the Federal Highway Administration (FHWA-NM). The STIP is fiscally constrained so that program costs do not exceed estimated revenues.

Chapter 120 of the Design Manual contains additional information regarding the STIP.

110.3.1.3 Project Definition

The project definition phase of project development identifies the level of effort and general approach and steps needed to initiate projects. The required elements of the project definition phase are the same for projects involving a Scoping Report or the Location Study Procedures, and are shown in Exhibits 110-1 through 110-4. The required elements are discussed in Chapter 120.

The purpose of the project definition phase is to define the needed project, determine the level of effort, and program the project in the STIP or TIP. This phase of work establishes the design concept and scope for a proposed action and obtains funding authorization.

This phase of work also incorporates early project management exercises and documentation to determine project complexity, identify the project team, and identify potential project challenges and risk management strategies. The project management documentation that is developed incorporates elements from SHRP 2, R10 research and the Guide that focuses on 5-dimensional project management (5DPM). The SHRP 2, R10 project management documentation contained in Chapters 120 and 130 of this Design Manual is required for NMDOT projects. The only exception is that NMDOT does not require the SHRP 2, R10 documentation for maintenance projects.

Additional information about the project definition phase is contained in Chapter 120 of the Design Manual.

110.3.2 Phase I, Project Scoping and Preliminary Design

An overview of the project scoping and Preliminary Design phases is provided below. Detailed information about the project scoping phase is provided in Chapter 130 of the Design Manual.

Preliminary Design information is contained in Chapters 140 and 200 of the Design Manual.

SHRP 2, R10 Project Management Documentation

NMDOT requires all NMDOT projects to complete the SHRP 2, R10 project management documentation located at the end of Chapters 120 and 130 of this Design Manual. The only exception is that the SHRP 2, R10 documentation is not required for maintenance projects.

110.3.2.1 Project Scoping

The project scoping phase involves either the project scoping process or Location Study Procedures. The culmination of either of these processes is a final report that documents conceptual design for a project. In addition, this phase of work includes updating SHRP 2, R10 project management documentation developed during project definition.

Project Scoping Process and Report

A project Scoping Report is used for smaller projects that require few changes compared to existing conditions. These projects might include maintenance projects or projects involving minor changes to a roadway, such as the addition of rumble strips or guard rail. The project scoping phase will serve to further define the project once the project definition stage is complete. The project scoping effort involves:

- Understanding and documenting existing conditions
- Identifying design parameters for the project
- Documenting safety considerations
- Describing proposed improvements
- Identifying factors that could affect project development
- Conducting a preliminary field review meeting

Location Study Procedures and Report (Phases IA and IB)

The Location Study Procedures (Phases IA and IB) are focused on the following activities:

- Phase IA - Initial evaluation of alternatives
- Phase IB - Detailed evaluation of alternatives

Phases IA and IB are accomplished by performing either an alignment study or a corridor study. Alignment studies are prepared for less complex actions where the roadway location is already established. Corridor studies are prepared for more complex actions where the route location is not established, or the magnitude of improvements may result in a substantial change to an existing alignment (such as a new roadway or major changes to the typical section and/ or alignment of an existing highway). While the type of study may vary, the general approach is the same. Both

alignment and corridor studies address the same general steps including developing a project purpose and need; developing alternatives; assessing environmental, social and cultural effects; coordinating with stakeholder agencies; and conducting public outreach. Phases IA and IB serve to develop, evaluate, and refine the range of possible alternatives to achieve the need for an action.

110.3.2.2 Update SHRP 2, R10 Project Management Documentation

Near the end of project scoping or Location Study Procedures, SHRP 2, R10 project management documentation developed during project definition needs to be updated to reflect information gathered during project scoping or the Location Study Procedures process.

110.3.2.3 Phase IC, Environmental Documentation

The third phase, Phase IC, involves the preparation of an environmental document and subsequent processing in accordance with the National Environmental Policy Act (NEPA).

110.3.2.4 Phase ID, Preliminary Design

Phase ID is the Preliminary Design phase. This phase involves the development of preliminary engineering plans that receive a formal review by the NMDOT. The Preliminary Design phase includes a design review and inspection meeting before additional design work proceeds. During this phase, SHRP 2, R10 project management documentation developed during project definition is updated again to reflect information gathered and created during Preliminary Design. Chapter 140 of the Design Manual provides a discussion of NMDOT's engineering design process and lists the standard minimum plan information that is required for Preliminary Design.

110.3.3 Phase II, Final Design

Phase II is the final design phase in NMDOT's project development process. Phase II includes the following:

- Grade and Drain
- Plan-In-Hand
- Plans, Specifications, and Estimates (PS&E)
- Production Plans

Additional formal review by NMDOT is required at each step of this phase. Chapter 140 of the Design Manual provides a discussion of NMDOT's engineering design process and lists the standard minimum plan information that is required for Plan-In-Hand, PS&E, and Production Plans.

110.3.4 Phase III, Construction

Phase III is construction, when an NMDOT project is built.

