

2. PROJECT PLANNING DEVELOPMENT AND DELIVERY (P2D2) PROCESS

2.1 P2D2 Process Overview

The P2D2 process may be conducted before the National Environmental Policy Act (NEPA) process, before all project construction funding is identified, and before issues are known or solutions have been considered. A flexible study process, P2D2 is used to identify transportation issues, priorities, and environmental constraints and opportunities. It can be used for planning analysis and to make planning decisions. Project decisions may include developing the purpose and need, recommending one or more refined alternatives to be evaluated in future NEPA processes, identifying stakeholders and issues of potential concern, prioritizing future projects, or developing key components for future analysis. Planning decisions may include determining what financial measures are needed or what type of improvement might meet transportation needs.



P2D2 studies can be conducted for a variety of transportation improvements, such as:

- ▶ Urban and rural interstate corridors
- ▶ Urban and rural state highway or major arterial corridors
- ▶ Existing and new interchanges
- ▶ Major arterial intersections
- ▶ Transportation system subareas

P2D2 studies should be conducted for transportation improvements that have the potential for a federal nexus, including, but not limited to, instances where:

- ▶ Federal funds or assistance will be used at some phase of project development;
- ▶ Federal funding or assistance eligibility must be maintained;
- ▶ Federal permits or approvals are required (Clean Water Act – Section 404 Individual Permit, US Department of Transportation Act – Section 4(f), Endangered Species Act – Biological Opinion for Section 7, etc.); and
- ▶ There will be new or revised access to the interstate system requiring Federal Highway Administration (FHWA) and South Dakota Department of Transportation (SDDOT) approval.

Examples of ongoing and previously completed P2D2 studies can be found here: https://dot.sd.gov/projects-studies/projects/special-studies#listItemLink_1182

The primary objective of the P2D2 process is to assess transportation needs and priorities. Assessment can be on a program level, such as evaluating transportation funding options, or at a project level. Project-level P2D2 studies, which have represented the majority of P2D2 studies completed, can range from large corridor studies to more localized studies, such as an interchange improvement. In all types of P2D2 studies, the goal is to gather enough detail so that the information developed can be used in future planning or NEPA. The P2D2 study process offers flexibility to complete either a full P2D2 study or the individual elements of the P2D2 process (**Figure 4**). For example, a project in the early planning stages may require only the development of a vision or a purpose and need statement, and an entire P2D2 study is not necessary.

2.2 Benefits of the P2D2 Process

Conducting a P2D2 study provides multiple benefits to SDDOT, FHWA, local agencies, resource agencies, and other project stakeholders. P2D2 studies can help inform planning decisions, streamline NEPA, and serve as a platform for stakeholders to discuss and prioritize transportation issues and project implementation. Depending on the contents and objectives of the P2D2 study, benefits may include the following:

- ▶ Building on decisions and information developed during the planning process in NEPA;
- ▶ Developing a purpose and need statement that provides the foundation for alternatives development and evaluation;

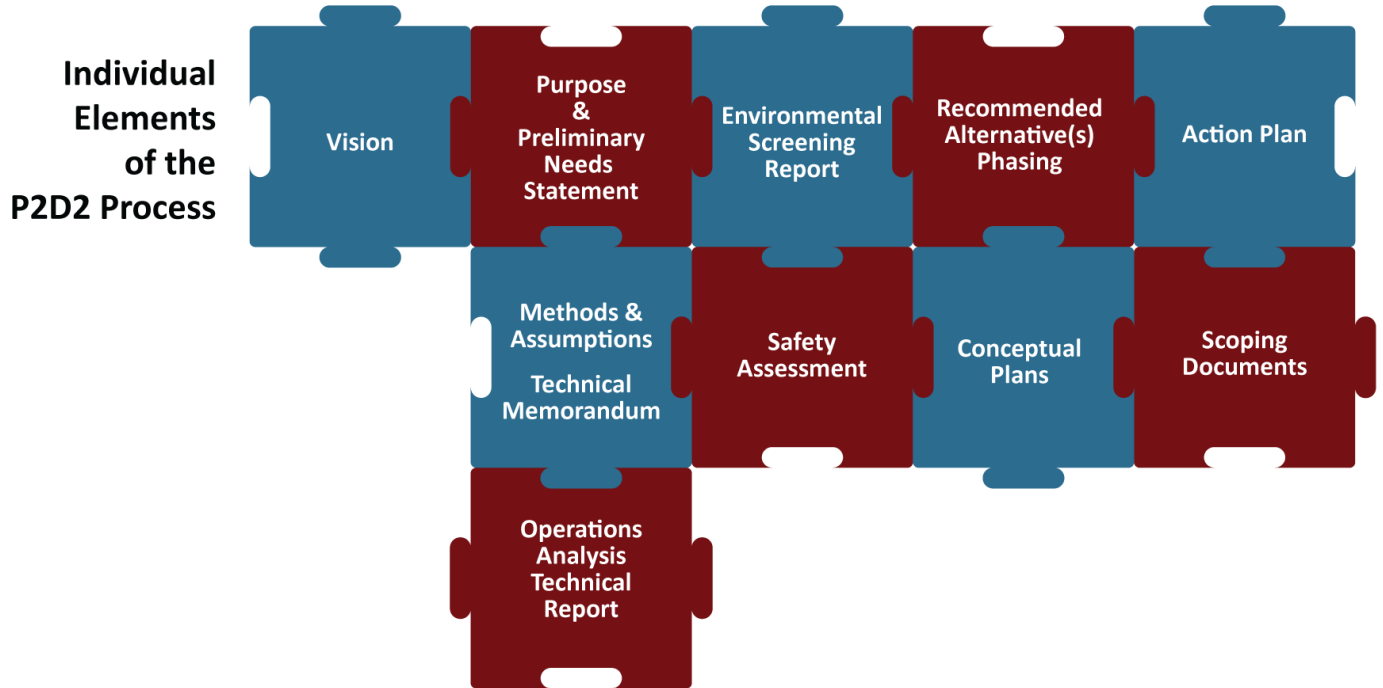
- ▶ Identifying and engaging affected local agencies and resource agencies at early stages and throughout the planning process;
- ▶ Building collaborative working relationships with local agencies, resource agencies, and the public by enhancing participation and coordination efforts;
- ▶ Conducting ongoing coordinated involvement of FHWA, SDDOT, resource agencies, and local agencies;
- ▶ Increasing qualitative and quantitative consideration of environmental constraints and opportunities early in the transportation planning process to help projects selected for funding proceed more quickly through the NEPA process during the project development phase;
- ▶ Identifying key environmental resources (i.e., resources that could require avoidance or minimization of impacts during alternatives development; or resources with lengthy environmental clearance processes that could affect the project schedule and budget) earlier in the process to tailor the environmental analysis during the NEPA process;

Pre-scoping – Before a P2D2 study is conducted, a pre-scoping process determines the reason for and expected outcomes, including:

- ▶ Why the study is being conducted, and
- ▶ What questions will be addressed.

If a project is likely to have federal involvement in the future, a P2D2 study is a good tool to help streamline future NEPA processes. Completing a P2D2 study does not guarantee federal funding.

Figure 4. Example Individual Elements of the P2D2 Process



- ▶ Assisting with Class of Action determination (Categorical Exclusion [CE], Environmental Assessment [EA], Environmental Impact Statement [EIS]) prior to project development;
- ▶ Reducing the duplication of work by conducting some detailed quantitative and qualitative environmental resource analysis at the planning stage;
- ▶ Improving the quality of information needed to make sound planning decisions and develop the most environmentally responsible and sustainable projects;
- ▶ Developing a clear project description and purpose and need statement;
- ▶ Preparing preliminary cost estimates of alternatives for NEPA studies and identifying funding;
- ▶ Developing Programmatic Agreements with resource agencies, as applicable, by early analysis of environmental resources;

- ▶ Identifying logical termini and project sections with independent utility and recommending a project phasing and action plan; and
- ▶ Providing stakeholders a plan on which they can base decisions such as land use, development, and preservation of right-of-way (ROW) for transportation facilities.

2.3 Project Definition

For project-focused P2D2 studies, the study area for resources reviewed, and any phase of the project identified in an action plan, must have logical termini and independent utility. Independent utility and logical termini mean that a project would be functional even in the absence of other projects in the area. This lays the appropriate groundwork for future NEPA analyses.

Logical termini and independent utility can be defined as:

- ▶ Rational end points for a transportation improvement
- ▶ Rational geographic extent for a review of the environmental impacts by resource

The FHWA guidance, entitled *NEPA Implementation, The Development of Logical Project Termini*, is available at:
https://www.environment.fhwa.dot.gov/legislation/nea/guidance_project_termini.aspx

SDDOT follows the general principles identified in the FHWA regulation [23 Code of Federal Regulations (CFR) 771.111(f)] for establishing logical termini and independent utility, as described below:

- ▶ Connect logical termini and independent utility and be of sufficient length to address environmental matters on a broad scope;
- ▶ Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements are made in the area;
- ▶ Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

During development of an action plan for corridor P2D2 studies, independent utility and logical termini will need to be identified for each independent project and project phase to the extent that the project and project phase provide a functional transportation system even in the absence of other projects or project phases.

2.4 Define the Existing and Future Transportation System

The transportation system includes the entire transportation network within the study area, including roadway, railroad, transit, bicycle, and pedestrian facilities. Evaluating existing and future transportation system conditions provides a framework for alternatives development and evaluation in the P2D2 study and provides the supporting documentation for the purpose and need as discussed in **Section 2.6**.

The existing transportation system is the transportation network within the study area as it exists today. The future transportation system is the transportation network within the study area as it would be 20 to 25 years in the future, if all of the transportation improvements listed in the Statewide Long Range Transportation Plan (LRTP) were implemented, including transit, bicycle, and pedestrian improvements (SDDOT, 2021a).

The current SDDOT *LRTP* is available at:
<https://dot.sd.gov/projects-studies/planning/long-range-plan>

Defining the existing and future transportation system helps provide a picture of the existing and future transportation system within the study area and determines how the alternatives impact future traffic conditions. This effort relies on professional judgment and general knowledge of the study area to determine the information sources needed to provide an overview of the existing and future transportation system. The level of detail of the information gathered should correspond with the importance of the specific element to the transportation system. Transportation system elements are described below.

2.4.1 Roadway

Information about the roadway network should be collected and discussed by functional classification categories (interstate, expressway, principal arterial, minor arterial, major collector, minor collector, and type of service [urban or rural]). Specific information includes:

- ▶ Through and auxiliary lanes,
- ▶ ROW and access,
- ▶ Arterial lanes and access,
- ▶ Traffic volumes,
- ▶ Major concentrations of travelers,
- ▶ Travel markets that use the transportation system geographic locations of the origins and destinations,
- ▶ Trip purpose (commuter/non-commuter trips),
- ▶ Local versus regional trips,
- ▶ Average length of trip,
- ▶ Adjacent and parallel transportation facilities that have an impact on the study area,
- ▶ Signalization, access points, interchanges, ramp lengths, and
- ▶ Other technology elements.

Other roadway network information includes current roadway features, lane configurations, roadway and ROW widths, adjacent land use characteristics, and building setbacks.

The SDDOT functional classification information is available at:

<https://dot.sd.gov/transportation/highways/highway-classification>

Information on railroads in South Dakota is available at: <https://dot.sd.gov/transportation/railroads/about-railroads>

2.4.2 Railroad

The study area should be assessed for existing and planned rail facilities, including locations, ROW widths, location and types of crossings, stations, speed of travel, crossing signalization, safety records, schedules, and usage rates.

This assessment helps develop an understanding of potential constraints and requirements that railroad facilities and operations may place on the alternatives development and analysis.

2.4.3 Bicycle and Pedestrian Facilities

The study area should be assessed for existing and planned bicycle and pedestrian facilities. Information about bicycle and pedestrian facilities should include locations and widths of routes, sidewalks, paths, trails, crosswalks, and lanes within the study area and connections to other transportation facilities. This assessment helps to identify missing bicycle and pedestrian, as well as multimodal connections among transit, vehicle, bicycle, and pedestrian facilities, that could be addressed as part of the alternatives development/analysis.

2.4.4 Transit

A P2D2 study should address transit types, including service levels within the study area. Information about transit services should also include routes and frequency. The study area should also be assessed for planned and existing intermodal connection facilities and stations, such as locations and sizes of park-and-ride lots, transit stations, and other facilities that encourage intermodal travel. Information about usage rates and capacity should also be collected.

2.5 Safety and Operations Methodology and Assumptions

For studies that involve multimodal traffic operations analysis and forecasting for future transportation conditions, an important part of P2D2 study initiation is to identify the methods and assumptions with coordination and approval by SDDOT and FHWA prior to the start of multimodal data collection and analysis. Determining the methods and assumptions for the assessment of existing and future multimodal operations is a critical piece to inform the purpose and need and the evaluation of alternatives.

2.5.1 Safety Assessment

The *South Dakota Strategic Highway Safety Plan* (SHSP) is a five-year vision for traffic safety strategy implementation across all public roads in South Dakota (SDDOT, 2024). The SHSP identifies various strategies to reduce traffic fatalities and serious injuries. For a P2D2 study, a predictive safety analysis using the *Highway Safety Manual* (AASHTO, 2010) should be completed for the study area to complement the SHSP. As stated in the *Highway Safety Manual*, “The predictive

method provides a quantitative measure of expected crash frequency under both existing conditions and conditions which have not yet occurred. This allows proposed roadway conditions to be quantitatively assessed...” (AASHTO, 2010).

South Dakota public transit information is available at:
<https://dot.sd.gov/transportation/public-transit>

The current South Dakota SHSP is available at:
<https://dot.sd.gov/transportation/highways/highway-safety>.

Chapter 15 of the SDDOT *Road Design Manual* provides guidance for traffic analysis and is available at: https://dot.sd.gov/doing-business/engineering/design-services/forms-manuals#listItemLink_1188

2.5.2 Operations Analysis

A technical memorandum of the operations and forecasting methods and assumptions should be submitted for review and comment by SDDOT and FHWA.

The memorandum should include:

- ▶ Study area and/or network for transportation system operations analysis
- ▶ Proposed measures of effectiveness (MOEs)
- ▶ Data collection methods and time periods
- ▶ Traffic analysis methods and assumptions
 - ◆ Proposed traffic analysis tools
 - ◆ Expected analysis time periods (with procedure for determination of time periods from data collection)
- ▶ Travel demand forecasting methods and assumptions
 - ◆ Forecasting years
 - ◆ Forecasting tools and models
- ▶ Documentation

Outputs from the traffic analysis may include the following:

- ▶ Delay
- ▶ Demand volume
- ▶ Density
- ▶ Flow rate
- ▶ Level of Service (LOS)
- ▶ Mode split
- ▶ Number of stops
- ▶ Queue length
- ▶ Speed
- ▶ Travel time
- ▶ Vehicle Hours of Travel (VHT)
- ▶ Vehicle Miles of Travel (VMT)
- ▶ Volume-to-Capacity (v/c) Ratio

The traffic analysis and forecasting methods should follow NEPA standards (e.g., forecasts using the approved regional travel demand model, if applicable). The P2D2 study documentation for traffic operations analysis and forecasting may consist of a separate traffic analysis report or a memo to be included as an appendix in the P2D2 Study Report. Keep in mind, however, that traffic analysis and modeling can add a large cost to a P2D2 study. The traffic operations analysis for each subsequent project must be updated to the current 20-year planning horizon travel demand model during the NEPA process.

2.6 Vision and Purpose and Need Statement

P2D2 study visions include strategies aimed at meeting each study area's unique transportation needs. Needs should be supported by population, employment, traffic, and safety data, as well as other appropriate considerations. A well-developed study vision and purpose and need statement can help

prioritize projects and project phases for project delivery. It can also provide a basis for the development of the purpose and need in future P2D2 and NEPA studies.

A first step in determining whether a P2D2 study is appropriate is to review the LRTP. If the area is considered a low priority, a P2D2 study may not adequately support long-range planning and may not be justified. The reasons for initiating a P2D2 study should be directly linked to the priorities contained within the LRTP.

A P2D2 study would be most effective for those areas where there is consensus that a transportation problem exists, it is identified as a priority in the LRTP, and there is no consensus about how to address the transportation problem. A P2D2 study can be used to consider options and identify solutions, constraints, and funding opportunities to advance projects in these priority areas. Once a decision to conduct a

Example Reason – Why is this P2D2 study being conducted? The reason for conducting this P2D2 study is to complete a high-level study of SD 1 to better understand transportation issues and environmental resources along the corridor. This P2D2 study will prioritize a list of short- and long-term projects that will benefit SD 1.

Example Vision – What is the Vision for the SD 1 corridor? The vision for SD 1 is to improve safety and travel time reliability along the corridor for all modes and accommodate future growth plans of the local communities.

Example Purpose– What is the preliminary purpose of the proposed transportation improvements along the SD 1 corridor? The preliminary purpose of the proposed transportation improvements along the SD 1 corridor is to improve safety, reduce existing and future traffic congestion, provide efficient access for existing and future development along the corridor, and improve multimodal operations and connectivity.

P2D2 study has been made, information in the LRTP can provide a foundation for the development of the study.

2.6.1 Purpose

The goal in drafting the purpose statement is to define as specifically as possible the fundamental reasons why the transportation improvements are being proposed, expressed as a desired transportation outcome. For example, many transportation improvements are proposed, at least in part, because it is believed they will help promote economic growth. The potential for economic development benefit should not be defined as a purpose. Instead, the purpose could be defined as providing the transportation infrastructure needed to support an economic development plan.

2.6.2 Preliminary Transportation Needs

The P2D2 study purpose and need statement should be developed in coordination with agency stakeholders with review by the general public. **The purpose and need should focus on transportation-related needs,** emphasizing the needs related to the transportation system and/or infrastructure.

Detail provided during planning reduces the amount of time spent on purpose and need development during the NEPA process. For some studies, the purpose and need statement may be a general vision and articulation of broad needs or specific to a localized transportation problem. For large corridors or programs, the purpose and need should be general enough to capture the localized issues inherent with individual projects (i.e., a project-specific purpose and need).

Developing a purpose and need statement is essentially the foundation of NEPA and the decision-making process. According to FHWA Technical Advisory T6640.8A Guidance for Preparing and Processing Environmental and Section 4(f) Documents, the purpose and need section should, "Identify and describe the proposed action and the transportation problem(s) or other needs which it is intended to address. This section should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the general public. This discussion should clearly describe the problems which the

Example Needs– *What are the preliminary needs for the transportation improvements along the SD 1 corridor?*

- ▶ Safety – Several intersections along the SD 1 corridor experience a higher than expected number of rear-end and approach turn/broadside crashes.
- ▶ Traffic Operations – Traffic operations along the corridor are congested today and expected to worsen by 2045 due to local and regional population and employment growth.
- ▶ Access – Access as currently provided and designed contributes to traffic operational and safety deficiencies along the corridor.

Example Goals/Objectives– *What are the goals and objectives for the SD 1 corridor?* The goals and objectives of the transportation improvements for the SD 1 corridor are to:

- ▶ Integrate with and support the social, economic, and physical land use plans of local communities.
- ▶ Protect and enhance the natural environment while improving the performance of the transportation system.

proposed action is to correct." A thoughtful purpose and need developed during a P2D2 study will increase the relevance of the P2D2

FHWA Technical Advisory T6640.8A Guidance for Preparing and Processing Environmental and Section 4(f)

Documents: https://www.environment.fhwa.dot.gov/legislation/nepa/guidance_preparing_env_documents

study information during the NEPA process and will help focus the P2D2 study in the same way that the purpose and need is foundational for the NEPA process.

2.6.3 Goals/Objectives

During the development of a P2D2 study purpose and need, there will often be items desired by local agencies, stakeholders, or the public that may not meet FHWA requirements to be included as part of the purpose and need. However, these items are still important to consider during the development and evaluation of alternatives. Goals and objectives can be used in addition to the purpose and need as evaluation criteria in the alternatives development and evaluation process.

2.7 Range of Alternatives Development

Initial concepts/alternatives for transportation improvements should be developed from reasonable options focused on addressing the purpose and need and issues identified in the evaluation of existing and future conditions. Initial alternatives should be coordinated with agency stakeholder input, public input, and technical input of the project team. The No-Action Alternative must be carried forward through the entire evaluation analysis as a baseline for comparison, even if it does not address the purpose and need.

For long corridors with varying issues and surrounding environments, initial concepts/alternatives may be categorized for the first

levels of evaluation before compiling corridor-wide recommendations. Example categories include:

- ▶ Highway
- ▶ Intersections/interchanges
- ▶ Multimodal elements
- ▶ Corridor management
- ▶ Technology

The initial alternatives developed for the P2D2 study are expected to be high-level concepts without design details. Corridor alternatives may consist of simple alignments with a general cross-section. Intersection and interchanges may be general concepts (e.g., diamond interchange, roundabout, continuous flow intersection) using simple illustrations or examples from other locations.

2.7.1 No-Action Alternative

Similar to the NEPA process, a P2D2 study should evaluate a No-Action Alternative. The No-Action Alternative typically does not meet purpose and need but is used as a baseline against which to compare alternatives. The No-Action Alternative does not provide any improvements beyond the existing transportation system; however, the No-Action Alternative includes safety and maintenance activities required to sustain an operational transportation system.

2.7.2 Technology Options

A P2D2 study may evaluate and recommend operational strategies based on existing and reasonably anticipated technologies at the time of the study, either as stand-alone alternatives or as supplemental options, to identify project recommendations to optimize safety and operational benefits.

Due to the difference in type and magnitude of benefits and impacts, technology elements

may be evaluated separately from the alternatives consisting of infrastructure options. The type and placement of new technological elements should properly integrate with existing intelligent transportation systems (ITS) infrastructure. Technology options will supplement the safety and operational performance of corridor infrastructure improvements but alone may be insufficient to meet purpose and need. These options may be combined with corridor infrastructure improvements to identify recommendations to optimize safety and operational benefits.

2.8 Alternatives Evaluation Criteria and Process

2.8.1 Alternatives Screening

A P2D2 study often develops, refines, and screens alternatives several times. The goal of the evaluation process is to identify and refine the transportation improvements that best meet the purpose and need of the project, while minimizing impacts to the human and natural environment. As such, documentation of the alternatives analysis and evaluation is critical if such recommendations are used during future NEPA processes. Documentation should include criteria (e.g., technical, environmental, economic) used to screen alternatives, a list of the parties involved in establishing alternatives evaluation criteria, and the reasons alternatives were eliminated, carried forward, recommended, or not recommended.

The intent of the alternatives development and evaluation process is to identify and screen a broad range of reasonable improvement alternatives for the area/corridor being studied. The application of

the evaluation process is flexible, and the process used should recognize the diverse elements of the specific study's transportation system and surrounding environment.

The alternatives development and evaluation process includes developing evaluation criteria based on the purpose and need and goals, developing a range of reasonable alternatives, and narrowing options and alternatives through a multi-tiered evaluation process. A P2D2 study is not required to screen alternatives down to a single alternative.

The evaluation process will document the elimination of alternatives to limit the need for consideration during future NEPA process(es) and identify transportation projects that will be more fully evaluated during future project development and NEPA documentation. The P2D2 alternatives evaluation process is flexible. All levels of evaluation do not need to be completed for the study to be valuable at informing NEPA.

Alternatives may be evaluated with respect to the transportation benefits provided, public input, and environmental consequences. The complexity of the evaluation process depends on the complexity of the study. Alternatives evaluation may involve several levels of analysis before the list of alternatives can be narrowed to a reasonable set for final evaluation.

Level 1- Purpose and Need Evaluation Criteria

The Level 1 evaluation will consist of determining those alternatives that meet purpose and need. During the Level 1 evaluation, alternatives are usually evaluated qualitatively, primarily using available data and the professional judgment of the project engineering and planning staff. Level 1

evaluation criteria should be developed to screen concepts using the primary elements of the project purpose and need, using Yes-or-No questions to determine if an alternative meets the purpose and need. An alternative/concept that has a “No” answer to any of the questions is considered to not fully meet the project purpose and need.

If a concept should be evaluated quantitatively and with more criteria to make an informed decision for recommendation, it can be carried forward to Level 2 evaluation for further evaluation. To identify the best possible solution, concepts can also be retained as elements to consider with alternatives that are carried forward to Level 2 evaluation. For example, a pedestrian/bicyclist grade separation may not fully meet the purpose and need as an independent alternative for a highway corridor, but it could be retained as an element to include in Level 2 alternatives to enhance multimodal safety and operational improvements along the corridor.

Level 2 and Beyond: Comparative Evaluation Criteria

The purpose of the Level 2 evaluation is to establish a means for comparing how well alternatives perform in meeting the project purpose and need in a cost-effective and least environmentally impactful manner. The Level 2 evaluation expands measures for each evaluation criterion from Level 1 evaluation and provides additional evaluation criteria based on project goals. Concepts/ alternatives carried forward from the Level 1 evaluation may be combined and/or refined to provide more information for further assessment in the Level 2 evaluation.

More information can be added, as appropriate, to understand the projected

study area traffic flows and potential safety components and community and environmental benefits and impacts, but the level of design should remain at a conceptual level. In Level 2 evaluation, the alternatives are evaluated to identify fatal flaws related to infeasibility or unacceptable community or environmental impacts and to compare how well each concept meets the project purpose and need and goals. To compare the impacts of alternatives, cross-sections and/or conceptual alignments may be developed with ROW width assumptions for each alternative based on appropriate standards for the roadway classification and multimodal elements.

Criteria are generally categorized by a category such as “safety,” “reliability,” or “environmental”; criteria associated with the category; and performance measures for each criterion that indicate how the criterion will be assessed. The performance measures can be quantitative or qualitative in nature. While most P2D2 studies do not include alternatives evaluation past the Level 2 evaluation, more detailed comparative criteria can be developed should additional evaluation levels be required.

At the P2D2 study stage, extensive traffic modeling is not required and usually not preferred when other methods are available. For example, evaluation criteria and performance measures for corridor travel demand and reliability can use the available regional travel demand model to compare alternatives. Project cost should be considered as an evaluation criterion only with a high-level assessment of general magnitude of cost (i.e., low, moderate, high, very high). Magnitude of cost is for information only and alternatives should not be screened out based solely on

project cost. The results of the Level 2 evaluation identify the alternatives that are most practical or feasible to carry forward as study recommendations.

Additional information on the alternatives evaluation process is available here: [23 CFR Appendix A to Part 450](#)

2.8.2 Recommend Alternative(s) for Future NEPA Studies

A P2D2 study is not required to screen alternatives down to a single Recommended Alternative. In fact, it is a best practice to not screen down too far. Most P2D2 studies conclude with several alternatives. Even so, all alternatives from a P2D2 study are not required to be evaluated in NEPA. Alternatives that are eliminated during the P2D2 study for not having met purpose and need or due to a fatal flaw may not be evaluated as part of the NEPA process. With any part of the NEPA process, the analysis of alternatives to be incorporated from the process must have a rational basis that has been thoroughly documented (including documentation of the necessary and appropriate vetting through the applicable public involvement processes). This record should be made available for public review during the NEPA scoping process. Results of the alternatives evaluation should be clear on the study recommendations that may move forward into future study. Next steps should be outlined for potential implementation of the alternatives and/or separate project phases, including anticipated process requirements and conceptual costs.

2.9 Environmental Resources and Issues

The scope of the environmental overview for a P2D2 study will vary depending on the type of

and reason for the P2D2, which will be outlined in the scope of work. An environmental overview is not an exhaustive list of environmental resources but should focus on those resources that may affect the alternative development and evaluation process or future NEPA projects in terms of budget and schedule. The Environmental Screening Report template includes potential environmental resources to be evaluated.

The goal of the overview should be to identify resources that may affect future NEPA actions, project schedules, or project costs; understand potential impacts on these resources; and identify potential avoidance, minimization, and mitigation measures. Resources that may affect future project development include those that may require avoidance or minimization of impacts during alternatives development, have lengthy environmental clearance processes, or are likely to be controversial or complicated.

2.9.1 Reasonably Foreseeable Effects

The analysis of potential impacts forms the basis for comparing the P2D2 study alternatives. NEPA uses the term “impact,” “effect,” and “consequences” synonymously. Impacts may be environmental (e.g., ecological, historical) or social and may be either beneficial or adverse. Beneficial impacts may occur when an alternative improves a situation (e.g., reduces traffic congestion).

Early in the planning stages, the project team should be able to identify potential environmental impacts and key environmental resources in the study area. The level of analysis will vary based on project-specific factors; however, the analysis will not be as robust as that conducted during a NEPA study

but should be of sufficient detail to screen out “fatal flaws” associated with design alternatives.

The description and analysis of impacts must be supported by the information and data presented in each specific resource section. As previously discussed, data and analyses should be commensurate with the importance of the potential impact, as identified during the scoping process with less important material summarized, consolidated, or simply referenced. It is easy to do a detailed impacts analysis during a P2D2 study because that is what most practitioners are used to doing during the NEPA process. However, environmental conditions and engineering design will likely change by the time the project is funded and the NEPA process begins. It is better to do the detailed impacts analysis during the NEPA process.

2.9.2 Mitigation Strategies

A P2D2 study could identify potential mitigation strategies for impacts identified with the alternatives. Mitigation strategies include measures that:

- ▶ Rectify the impact by repairing, rehabilitating, or restoring the affected environment;
- ▶ Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action;
- ▶ Compensate for the impact by replacing or providing substitute resources or environments.

The mitigation section of the P2D2 document should include:

- ▶ Avoidance and minimization strategies
- ▶ Mitigation strategy
- ▶ Basis for the mitigation strategies

- ▶ Appropriateness, reasonableness, and timing of the mitigation strategies relative to project planning and implementation
- ▶ Coordination required to obtain agreement on mitigation strategies
- ▶ Implementation and monitoring of mandated mitigation strategies
- ▶ Reasonableness and reliability of the mitigation strategies

For many environmental resources, mitigation in a P2D2 study will be standardized since the level of data collection and impact analysis required for a P2D2 study is meant to identify fatal flaws and next steps rather than mitigation for impacts from a Preferred Alternative, which occurs during the NEPA process. The mitigation measures in a P2D2 study are typically “next steps” to be addressed during a NEPA process.

2.10 Stakeholder and Public Involvement

Similar to the SDDOT planning and NEPA processes, stakeholder involvement is a key component of the P2D2 process that encourages stakeholder participation in the decision-making process from conception to completion. SDDOT has developed a Public Involvement Plan (PIP) to improve and strengthen engagement between SDDOT and the public on a range of activities, projects and plans it undertakes, building a relationship of trust and accountability between the agency and the public it serves. The PIP provides:

- ▶ An explanation of the SDDOT’s mission and the goods and services provided
- ▶ Activities and opportunities for public involvement
- ▶ Legal requirements for public involvement

- ▶ A guide for staff to develop effective public communication strategies for all activities
- ▶ A step-by-step public involvement process for some key processes and special considerations for more in-depth public involvement processes
- ▶ A process to track and improve communication and engagement between SDDOT and the public

Each P2D2 study will have a study-specific stakeholder involvement program developed from the SDDOT PIP. The goal of a stakeholder involvement program is to provide appropriate involvement throughout the process and solicit community feedback on steps such as the purpose and need statement, alternatives developed, the alternatives evaluation process, environmental analysis, and mitigation strategies.

The SDDOT Public Involvement Plan is available at: [Public Involvement Plan](#)

2.11 NEPA Class of Action Recommendation

This P2D2 document provides a framework for the long-term implementation of the transportation improvements as funding becomes available and is to be used as a resource for future NEPA documentation. During the P2D2 process, phasing the transportation improvements should be explored to develop implementable phases that meet potential funding scenarios and recommended NEPA Classes of Action for each phase. Phased implementation may be detailed during NEPA and final design. Fiscal constraint requirements must be satisfied for FHWA and

SDDOT to approve further NEPA documentation.

The data, information, and recommendations presented in the P2D2 document can be easily transitioned to define scope for a future NEPA process, including the following:

- Identification of additional data needs to further define purpose and need
- Logical termini and independent utility
- Alternatives that should be carried forward into the NEPA scoping process and why,
- Alternatives that were determined to be eliminated and why and should not be advanced into the NEPA process
- Issues of concern to federal, state, and local agencies; Native American tribes; and the public
- Environmental resources that exist in the study area, including which ones are likely to have the most bearing on alternatives development
- Identification of environmental resources that can be eliminated from detailed analysis
- Recommendations of methodologies and schedules for resources that need detailed analysis