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TRANSMITTAL LETTER

PUBLICATION:

Publication 10A
November 2015 Edition

DATE:

November 9, 2015

SUBJECT:

**Design Manual, Part 1A
Pre-TIP and TIP Program Development Procedures
November 2015 Edition**

INFORMATION AND SPECIAL INSTRUCTIONS:

Publication 10A (Pre-TIP and TIP Program Development Procedures) is re-issued with this letter. The enclosed November 2015 Edition represents a complete publication. This Edition supersedes the September 2010 Edition and all subsequent changes. The effective date of the November 2015 Edition is December 1, 2015.

These new guidelines should be adopted on all new and existing projects as soon as practical without affecting any letting schedules.

This release includes incorporation of outstanding Strike-off Letters issued through August 31, 2015. Strike-off Letters issued on or after September 1, 2015 are still effective until they are incorporated into this publication.

Also, this release includes additions / deletions / revisions for the following:

*Chapter 1, Section 1.0 (revised reference to Publication 740, Local Project Delivery Manual)

*Chapter 3, Section 3.2 (provided updated information and credentials to access the Linking Planning and NEPA Screening Form System)

*Chapter 6, Section 6.3 (added safety studies, safety impacts, and crash analysis as possible considerations and evaluations to be included in a Detailed Studies Report (DSR)).

CANCEL AND DESTROY THE FOLLOWING:

Publication 10A (September 2010 Edition and all associated changes)

NOTE: Publication 10A is only available electronically via the PennDOT website.

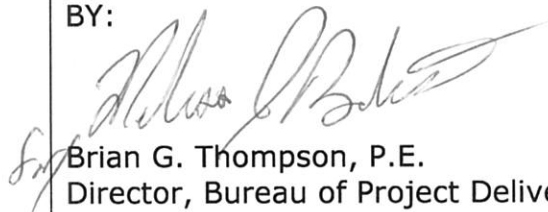
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Publication 10A

Design Manual Part 1A

Pre-TIP and TIP Program Development Procedures

November 2015 Edition

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DESIGN MANUAL PART 1A PRE-TIP AND TIP PROGRAM DEVELOPMENT PROCEDURES

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CHAPTER 1

INTRODUCTION

1.0 PURPOSE AND OBJECTIVES

This manual provides an overview of the Pre-TIP and TIP Program Development Procedures that are required to support the Pennsylvania Department of Transportation's (PennDOT) Transportation Program Development and Project Delivery Process (herein referred to as the Process) (Figure 1.1). PennDOT developed this manual to serve as a guide for planners, environmental staff, engineers, administrators, and others, both inside and outside PennDOT. These are the people responsible for conceiving and advancing proposals in a Metropolitan Planning Organization (MPO)/Rural Planning Organization (RPO) Long-Range Transportation Plan (LRTP) and projects included in the region's Transportation Improvement Program (TIP), the Statewide Transportation Improvement Program (STIP), and Twelve-Year Program (TYP).

The procedures are formally structured, flexible enough to meet local realities and needs, and scalable to be used by any size MPO/RPO and any size PennDOT District organization. The specific scalability and flexibility is left to the collaborative wishes of the MPO/RPO and District involved, subject to approval from the PennDOT Deputy Secretary for Planning and the Deputy Secretary for Highway Administration.

The procedures described in this manual are designed to guide all partners involved to collect, validate, share, and document the amount of information necessary to advance a proposal or project to the LRTP and the TIP/STIP. All efforts are to be geared to providing sufficient information to make decisions on planning and programming that result in a more predictable and contextually appropriate program that has accurate estimates of budget, scope, and schedule. If information is not needed, it should not be done. If information is needed, it should be accurate, valid, and useful to advancing the proposal or project to the program. It is understood that the Process will be examined and refined as experience dictates.

The goal of the pre-TIP program development phase of the Process is to link local land use with the regional LRTPs, with a coordinated, collaborative communications commitment from all partners. That includes citizens, interested parties, municipal governments, county governments, resource agencies, regional transportation planners, and PennDOT. The planning activities associated with an LRTP should be linked to environmental considerations covered by the National Environmental Policy Act (NEPA). These procedures can help ensure that planning activities will create appropriate and documented activities, and that the results of those activities will be incorporated in later environmental study or reports.

Regional LRTPs should be the result of active participation in the LRTP process by PennDOT District Office staff and leadership, with the support of PennDOT Central Office. There is a need for connectivity at all levels. All proposals being advanced for LRTP and TIP/STIP inclusion should follow this Process, and there is flexibility built into the Process so that different types of projects can follow slightly different paths to the same overall desired result - a more predictable, fiscally-constrained transportation program that is deliverable and sustainable. Familiarity with the procedures described herein will contribute to improved efficiency in the coordination and advancement of proposals that link land use and transportation planning principles, and which link planning phases and NEPA considerations.

The Process and related procedures, as outlined in this manual, were developed through a partnership of MPOs/RPOs, counties, municipalities, resource agencies, and the Federal Highway Administration (FHWA), over a period of years, and learning from best practices.

The intent of the Pre-TIP and TIP Project Delivery Procedures (Steps 1-5 of the Process) is to:

- Establish a clear link from the existing/planned land use in municipalities, counties, and regions to the transportation planning and programming processes which are affected by land use decisions, and which can affect future land use decisions.

- Create an environment where all involved understand how each part of the Process affects another, where flexibility and scalability are accepted and encouraged, and where there is respect for all human and capital resources involved in building an appropriate and predictable program.
- Establish a clear understanding of the types of information to be collected, activities to be conducted, the timing of both, and documenting each to the appropriate levels, so that the documentation meets the standards to be used in state (PA Act 120) and federal NEPA environmental study documentation.

Guidance for those highway and bridge problems and projects that are on municipal and county systems is available elsewhere. For information on the processes associated with developing a local transportation project, see Publication 740, *Local Project Delivery Manual*.

1.1 ORGANIZATION

A. Design Manual Series of Documents. This manual is Part 1A of a nine-volume series of documents that encompass PennDOT's Design Manual. The Design Manual (DM) series includes:

Publication 10	Part 1	<i>Transportation Program Development and Project Delivery Process</i>	Design Manual Part 1	(DM-1)
Publication 10A	Part 1A	<i>Pre-TIP and TIP Program Development Procedures</i>	Design Manual Part 1A	(DM-1A)
Publication 10B	Part 1B	<i>Post-TIP NEPA Procedures</i>	Design Manual Part 1B	(DM-1B)
Publication 10C	Part 1C	<i>Transportation Engineering Procedures</i>	Design Manual Part 1C	(DM-1C)
Publication 10X	Part 1X	<i>Appendices to Design Manuals 1, 1A, 1B, and 1C</i>	Design Manual Part 1X	(DM-1X)
Publication 13M	Part 2	<i>Highway Design</i>	Design Manual Part 2	(DM-2)
Publication 14M	Part 3	<i>Plans Presentation</i>	Design Manual Part 3	(DM-3)
Publication 15M	Part 4	<i>Structures</i>	Design Manual Part 4	(DM-4)
Publication 16	Part 5	<i>Utility Relocation</i>	Design Manual Part 5	(DM-5)

B. Contents of Design Manual Part 1A. Publication 10A, Design Manual Part 1A, *Pre-TIP and TIP Program Development Procedures*, contains seven chapters. Publication 10X, Design Manual Part 1X, *Appendices to Design Manuals 1, 1A, 1B, and 1C*, have two appendices. This section provides a brief summary of each.

[Chapter 1](#), Introduction, describes the purpose of Design Manual Part 1A and summarizes the contents of the subsequent chapters and appendices. This chapter also outlines the proper procedures for implementing modifications and additions to this document.

[Chapter 2](#), Transportation Program Development and Project Delivery Process, outlines the phases of the Process ([Figure 1.1](#)) from the introduction of transportation problems into the Process, to the inclusion of the proposals and projects on a TIP, and explains the goals and regulatory background driving the Process.

[Chapter 3](#), Step 1: Problem Assessment, describes the first phase of the formal Process where a transportation problem, need, or opportunity is first identified and documented to an MPO/RPO by the public, or where PennDOT internally assesses asset management goals and priorities.

[Chapter 4](#), Step 2: Problem Identification in Long Range Transportation Plan, focuses on the second phase of the Process. In this step, PennDOT and the MPOs/RPOs develop a list of prioritized problems and programs based on identified needs, and produce an LRTP, which forms the basis for current and subsequent TIPs. They work closely together to fashion appropriate documentation of proposals for later use.

[Chapter 5](#), Step 3: Proposal Initiation, discusses the third phase of the Process. This step will not be required of many projects that are ultimately listed on the LRTP/TIP. In this step, problems which need further study may be put through a series of activities, dependent on the complexity of the problem being studied, or the breadth of potential approaches and/or solutions. At the end of this step, proposals can be more clearly identified as projects on a TIP and the STIP, or they will be deferred, or if they require complex study activities, they will move to Step 4 to more clearly define the proposal.

Chapter 6, Step 4: Proposal Definition, describes the fourth phase of the Process for more complex proposals or candidate projects. Complex proposals from the Initiation Phase that require further examination and/or clarification before advancement as a specific project on the LRTP, and then the TIP, are handled in this step. This step also includes the cooperative prioritization of asset management projects for the LRTP and TIP/STIP.

Chapter 7, Step 5: Project Identification on TIP/STIP, explains the fifth phase of the Process. Projects are programmed by the MPO/RPO and included on the MPO/RPO's TIP and STIP. This step follows Step 2 activities for minor and less complex projects, or Step 4 activities for the most complex proposals.

Design Manual Part 1X, Appendix A, List of Acronyms, defines the acronyms most commonly used in the first five steps of the Transportation Program Development and Project Delivery Process.

Design Manual Part 1X, Appendix B, Glossary, defines terminology commonly used in the first five steps of the Transportation Program Development and Project Delivery Process.

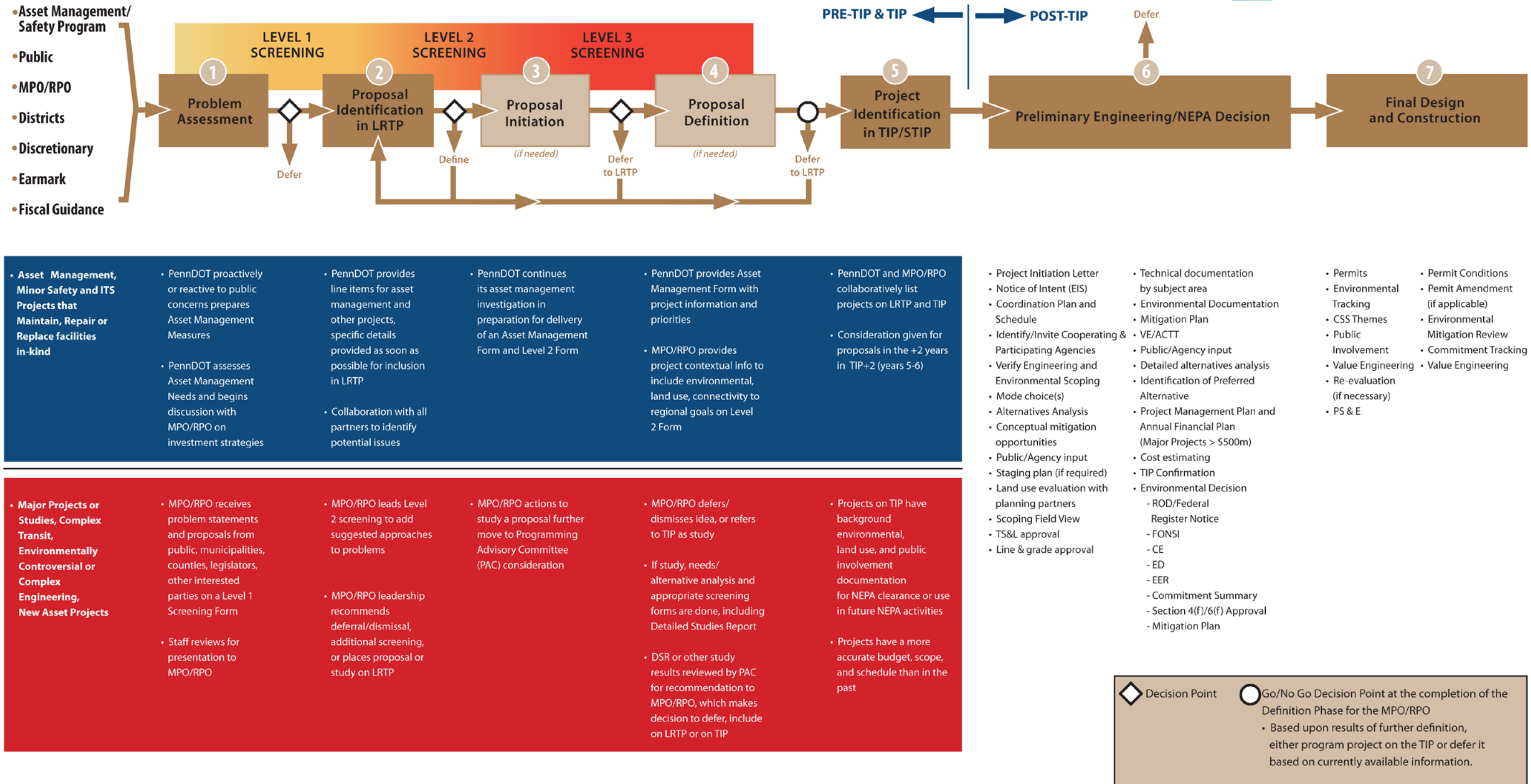
1.2 PROCEDURES FOR MODIFICATIONS OR ADDITIONS TO THIS DOCUMENT

This document is published in digital form to facilitate future changes and additions. PennDOT recognizes that the regulations and policies affecting its program development and project delivery procedures are continuously changing and that this manual must be a dynamic document to remain current. Whenever modifications or additions are required to improve the present procedures, the following procedure shall be followed:

- 1.** Bureau Directors and District Executives should submit suggestions in the form of revised pages in digital form to the Central Office Bureau of Project Delivery for evaluation and processing. The Bureau of Project Delivery is to evaluate and process the submittals, and coordinate with other Central Office Deputies and Bureaus as necessary concerning any changes and/or additions. The suggestions should include:
 - The title and page number of the existing procedures, if applicable.
 - The recommended revised page(s) and the Chapter into which it (they) should be incorporated.
 - The reasons for recommending modifications or additional procedures.
- 2.** The Director, Bureau of Project Delivery, will review the recommended changes or additional procedures, and transmit copies to the various affected Bureau Directors for their comments.
- 3.** The affected Bureau Directors shall provide their comments to the Director, Bureau of Project Delivery, who will take appropriate action.
- 4.** The Director, Bureau of Project Delivery, will submit the final version of all changes to FHWA for approval prior to issuing the revised manual.
- 5.** When modifications or additions are made to pages in this manual, a revision date will be indicated below the page number in the upper right-hand or upper left-hand corner, and the revision will be distributed to District Executives and Bureau Directors by the Bureau of Project Delivery by Transmittal Letter, and forwarded to Planning Partner Executive Directors by electronic correspondence methods by the PennDOT Center for Program Development and Management.



Transportation Program Development and Project Delivery Process



CHAPTER 2

TRANSPORTATION PROGRAM DEVELOPMENT AND PROJECT DELIVERY PROCESS

2.0 INTRODUCTION

The Process and procedures described in this manual evolved from previous PennDOT guidance for Environmental Impact Statements (EISs), Environmental Assessments (EAs), and Categorical Exclusion Evaluations (CEEs). It also evolved from planning and programming guidance to address process enhancements and modifications from current federal transportation legislation, and its associated regulations, policy, and guidance, as well as PennDOT initiatives and programs.

The flexibility provided by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005, along with PennDOT's goal to improve the overall quality of projects delivered in terms of budget, scope, and schedule, led to the establishment of seven primary objectives for the planning portion of the Process. They are shown below with major roles for the MPO/RPO, for the PennDOT Engineering District, and for PennDOT Central Office indicated for each:

- **Focus available funds and resources on the most appropriate transportation needs**

Establish project Purpose and Need in planning; eliminate unnecessary projects and unrealistic alternatives in planning.

MPO/RPO Roles

- Link local plans and goals to transportation needs, including asset management
- Share expertise and information proactively with all collaborative parties

District Office Roles

- Be involved early in planning at local, county, MPO/RPO levels as collaborators
- Share expertise and information proactively with all collaborative parties

Central Office Roles

- Centralize access to new information, data sources, including statewide priorities
- Share expertise and information proactively with all collaborative parties

- **Improve cost estimating for potential projects**

Undertake cursory engineering and environmental analysis prior to TIP/STIP activities; enable a detailed review of cost estimates by the MPO/RPO Technical or Coordinating Committee and/or appropriate PennDOT District cost estimating experts, as well as the Programming Advisory Committee for more complex projects (e.g., those projects requiring advanced study) before placing projects on the TIP; track cost estimate development and actual project costs compared to TIP/STIP estimates.

MPO/RPO Roles

- Share cost estimation methodologies with municipal, county partners and work with PennDOT staff in collaborative cost estimation process

District Office Roles

- Work collaboratively with MPO/RPO staff on cost estimation and documentation at the LRTP stage and into TIP/STIP development

Central Office Roles

- Provide biennial financial guidance, and measure effectiveness of estimate process involving DOT/Planning Partner collaboration on costs

- **Increase accuracy in project scheduling and improve predictability for project delivery**

Develop a better understanding of engineering, environmental, and public issues early in project planning to facilitate development of realistic schedules which will lead to more timely delivery of projects.

MPO/RPO Roles

- MPO/RPO Public Participation Plan should involve all interested parties in a variety of ways to clarify issues
- Begin environmental inventory early in process

District Office Roles

- Work with MPO/RPO staff to identify environmental issues and document for use to satisfy NEPA requirements, sharing all engineering, environmental, and public issues with MPO/RPO

Central Office Roles

- Share information that might affect schedules proactively with all parties

- **Develop better and more accurate project scopes**

Evaluate project alternatives, project design criteria, and conduct preliminary studies in planning; collect more project specific data during planning leading to a better understanding of potential project issues.

MPO/RPO Roles

- Use existing studies or develop screening activities associated with Level 2 forms preparation

District Office Roles

- Share design criteria and study issues with all partners
- Plan to do screening activities in collaboration with MPO/RPO

Central Office Roles

- Share information on how NEPA documentation should be done

- **Better reflect national, state, and local goals in the project prioritization and selection process**

Provide for the integration of identified policies and goals into project planning; develop consistent criteria for prioritizing and selecting potential projects.

MPO/RPO Roles

- Align state initiatives, county and municipal comprehensive plans with project selection, and select projects which consider communities, the environment, land use, and transportation planning

District Office Roles

- Assist MPO/RPO in identifying measures to prioritize and select projects which consider communities, the environment, land use, and transportation planning

Central Office Roles

- Assist MPO/RPO in identifying measures to prioritize and select projects which consider communities, the environment, land use, and transportation planning

- **Commence communication, coordination, and cooperation within and between PennDOT, the MPO/RPOs, the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), other transportation planning entities, tribal nations, and the resource agencies in planning**

Integrate PennDOT staff into MPO/RPO TIP development process; form Programming Advisory Committee to review transportation problems; work with tribal nations and the agencies earlier in the Process.

MPO/RPO Roles

- Involve interested parties in LRTP process, facilitate PennDOT interaction with local planners

District Office Roles

- Liaison with Federal agencies, resource agencies, other Districts, and MPO/RPO and other transportation planning agencies proactively and regularly

Central Office Roles

- Liaison with Federal and State agencies; monitor District and Central Office involvement in meetings with partners

- **Promote early public participation and public involvement**

Provide opportunities for more participation by the agencies and public at earlier stages beginning with the development of the Long Range Transportation Plan, and continuing through prioritization and project development.

MPO/RPO Roles

- Proactive and inclusive public and agency opportunities are provided at MPO/RPO plan level

District Office Roles

- Coordination of NEPA public and agency involvement activities when appropriate

Central Office Roles

- Stress public participation in State Transportation Commission hearings process

In the past, environmental analyses conducted in the NEPA process were often disconnected from the analyses used to prepare transportation plans, transportation improvement programs, and supporting corridor or sub-area studies through statewide, metropolitan, and rural transportation planning processes within Pennsylvania. Analyses and decisions occurring during transportation planning should be documented appropriately so that they can be carried through to the NEPA process. Analyses that are well documented may have to be updated and/or verified, depending on conditions and the timing of analyses, but original work should not have to be repeated in the NEPA process. Eliminating the need for rework can eliminate or reduce delays in implementation of transportation projects.

2.1 HISTORY

A national commitment to the environment was formalized through the passage of NEPA in 1969. NEPA established a national environmental policy and provided a framework for environmental decision-making by federal agencies. NEPA directs federal agencies, when authorizing, taking approval action, or issuing permits, to conduct environmental reviews to consider the potential impacts their proposed actions would have on the environment. NEPA also established the Council on Environmental Quality (CEQ), which is charged with the administration of NEPA. The NEPA process consists of a set of fundamental objectives that include interagency coordination and cooperation, and public participation in transportation project development decision-making. The CEQ promulgated the federal implementing regulations (40 CFR 1500 - 1508) for NEPA, which gave additional compliance details to all federal agencies. Each federal agency is authorized to implement its own regulations for NEPA. The FHWA/FTA implementing regulations can be found at 23 CFR 771.

Since the 1962 Federal-Aid Highway Act, federal authorizing legislation for expenditure of surface transportation funds has required metropolitan area long-range transportation plans and short-range transportation improvement programs to be developed through a continuing, cooperative, and comprehensive (3-C) planning process. Over successive authorization cycles, Congress has added and revised the substantive content expected from the 3-C planning processes.

Over the years, the PennDOT planning and NEPA processes were updated with additional requirements as the result of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the Transportation Equity Act for the 21st Century (TEA-21) of 1998, and SAFETEA-LU of 2005.

SAFETEA-LU promotes more efficient and effective federal surface transportation programs by including provisions for improving and streamlining the environmental process during the planning and development of transportation projects. These provisions are intended to enhance the consideration of environmental issues and impacts within the transportation planning process and to encourage the use of products from the planning process in the NEPA process. Specifically, the transportation planning provisions (Section 6001) and NEPA provisions (Section 6002) emphasize improved connectivity between the planning and NEPA processes and early and increased coordination, communication, and collaboration with resource agencies and the public.

In Section 6001 of SAFETEA-LU, Transportation Planning (codified as 23 USC §§134 and 135), Congress revised the transportation planning laws to require increased consideration of the environment in both statewide and metropolitan long-range transportation planning. The key changes were (1) a requirement to consult with resource and land management agencies, and to consider, as part of that consultation, any available conservation plans, maps, or resource inventories, and (2) a requirement to consider types of potential environmental mitigation activities in state and metropolitan long-range plans. FHWA updated its Statewide Transportation Planning and Metropolitan Transportation Planning regulations accordingly at 23 CFR Parts 450 and 500 on February 14, 2007, and FTA

concurrently published its final rulemaking on the update of its planning regulations at 49 CFR Part 613. In addition, the regulations at 23 CFR 450 included an Appendix A, which contained an updated version of the February 2005 guidance on the planning and NEPA linkage. In early 2007, FHWA and FTA issued joint legal program guidance (Integration of Planning and NEPA Processes (Appendix A: Linking the Transportation Planning and NEPA Processes, February 2007)) encouraging stronger linkages between the transportation planning and NEPA processes.

2.2 STATUTORY AND REGULATORY CONSIDERATIONS

The Process and the procedures discussed within Publication 10A, Design Manual Part 1A, *Pre-TIP and TIP Program Development Procedures* are in conformance with the following:

- SAFETEA-LU, 23 USC § 134 and 135
- FHWA Statewide Transportation Planning and Metropolitan Transportation Planning regulations, 23 CFR Parts 450 and 500
- FHWA/FTA Integration of Planning and NEPA Processes, February 2007 (23 CFR Part 450, Appendix A)
- Clean Air Act, 42 U.S.C. Parts 7401-7671
- US Environmental Protection Agency (EPA) Transportation Conformity Regulations, 40 CFR Part 93
- FHWA Environmental Impact and Related Procedures, 23 CFR Part 771

Other relevant state and federal laws and agency regulations on environmental procedures are incorporated herein by reference.

2.3 OVERVIEW OF THE PROCESS

The Process ([Figure 1.1](#)) applies to all projects regardless of the class of NEPA documentation, from conception of alternatives through construction of the actual project. The Process also applies to those projects that are 100 percent state funded (in both design and construction) that do not require federal action. All proposals coming out of an LRTP are expected to follow the Process. In addition, all asset management and minor safety proposals being advanced by PennDOT for inclusion in an LRTP and then on a TIP should follow this Process. The overall complexity of the problem and the level of available information will dictate which steps of the Process should be followed as explained in later chapters and within Publication 10B, Design Manual Part 1B, *Post-TIP NEPA Procedures*. While this Process is structured, it is designed to be scalable to all staffing levels of PennDOT District and MPO/RPO staff, and flexible to encompass local needs, procedures, and policies.

PennDOT will identify asset management, minor safety, and technology projects and share listings and information with MPO/RPO staff and leadership in a way that is determined to be effective for each District-MPO/RPO partnership. The goal is that PennDOT will create prioritized listings in concert with those planning partners, and that the Process of creating specific lists for an LRTP and then the TIP will be collaborative and cooperative. PennDOT can quickly identify, study, and then advance projects required to respond to results of natural or man-made disasters based on existing Department policy when needed. (See [Figure 2.1](#) for an overview of the procedures to be used in the Process.)

Projects (solutions) are less well defined in the beginning of the Process, and those that require major investment and new asset creation, will likely follow a more detailed process. That process includes more review in a structured way, as explained in later chapters, with a series of checks by the MPO/RPO, and by a collaborative Programming Advisory Committee (PAC). The PAC consists of the planning director, district executive, and the deputy secretaries for planning and highway administration (or their delegates) and can call upon specific subject matter experts. The PAC has an advisory role in the planning process.

It is likely that some problems will lend themselves to a combination of those efforts. It is important that the collaboration of the Department and its planning partners identify problem by problem, or project by project, which route is more likely to yield the desired results. This may require earlier identification of the scope, schedule, and budget needed to carry out this part of program development and project delivery. It is intended that the projects be put through the Process in a way that meets local, regional, and statewide visions in the way they are "scheduled" as they move through the Process.

It is incumbent upon the Department that it collects screening information as early as possible. That can be done cooperatively with the involved MPO/RPO and in a way that is consistent with the goals of scalability and flexibility in day-to-day workings among those groups. The study of the problem statements PennDOT advances are largely a PennDOT effort, with the Department charged with sharing that information with all partners. PennDOT will identify asset management measures, and identify asset management needs, and be involved in setting an asset management strategy in collaboration with the MPO/RPO involved. MPO/RPO should advance the linkage between land use and local planning. The NEPA process should be a shared responsibility between PennDOT Central Office and Districts, and the MPO/RPO. PennDOT builds its planning process in collaboration with all interested parties, the MPO/RPO, and resource agencies, as appropriate given the scale and nature of the project.

Details, scope, and challenges associated with transportation proposals that eventually will be included on the TIP and STIP should be identified far earlier in many instances in this Process. The budget, scope and schedule are identified sooner because costs, needs, and environmental impacts are identified, examined, and understood earlier. Here is a step-by-step description:

1. Problem Assessment. A transportation problem or proposal is brought to the attention of the MPO/RPO by an individual, agency, municipality, county, authority, or other organization, using the process employed by the MPO/RPO (a Level 1 Screening Form). The form helps begin to identify a need (problem statement) and a purpose statement to meet that need. Some of these problems or proposals may come first to a municipal or county planning agency, which does some of the background work and has information in hand to complete Level 1 screening. The issues brought to the attention of an MPO/RPO may require an initial assessment by staff and PennDOT, before being advanced to the technical committee or coordinating committee/board involved in the regional planning office. All problems or proposals submitted at Step 1 will either be dismissed or advanced to Step 2.

2. Proposal Identification in LRTP. Proposals to address transportation problems are evaluated using a Level 2 Screening Form. Readily available land use, community context, environmental, cost, and engineering information is collected collaboratively between PennDOT and the regional planning organization in a standardized way using the most appropriate personnel and documented on the screening form and attachments. Generally, PennDOT is responsible for providing engineering information, and the MPO/RPO community and regional context information. They share responsibility for collecting environmental information known at the time from available sources. The proposals are identified in an LRTP, and should be prioritized within funding categories, for example, Highway, Bridge, Transit, ITS, Rail Freight, Aviation, and Non-Motorized. These are not required to be specific proposals at this step, particularly when a study is the likely next step, or when the project is clearly asset management or a less complex proposal. Every project that can be specifically defined at this step should be, because it streamlines the Process's next steps. Many problems can be identified longer range in lists, and those longer range ideas can later become the basis for new, specific proposals that might be advanced to a TIP. The MPO/RPO, which includes municipal and county representation, along with PennDOT participation, makes the decision on the LRTP contents. Specific asset management and less complex projects can go from Step 2 directly to TIP consideration (Step 5), if the budget, scope, and schedule can be accurately predicted. The MPO/RPO has the decision authority to include specifics, line items, and project lists on the LRTP. Only those projects on an LRTP should be placed on the TIP. (See [Chapter 4](#) for more information.)

3. Proposal Initiation. Some more complex environmental or engineering proposals for study, and/or corridor-style proposals may need further refinement before determining if they should be advanced as projects for LRTP/TIP consideration (Step 5). If that is the case, the technical or coordinating committee in this step may recommend a course of action to the PAC, and the PAC will review the budget, scope, and schedule issues and return the recommendation on the proposal to the technical or coordinating committee for additional action. It is in this step that an approach to a project becomes more defined, that the next steps are identified. This is a step in a more detailed study process. Most problems or projects resulting from Steps 1 and 2 that are

in the Asset Management line items will not formally enter Step 3, but instead advance for activities associated with Step 4 (if needed to define using Level 2 and Asset Management Forms) or Step 5 (if already defined with a completed Level 2 Form). (See [Chapter 5](#) for more information.)

4. Proposal Definition. Further definition of the proposal, study of the various alternatives and their ability to meet Purpose and Need, as well as engineering and environmental procedures, occurs here, as needed. This step may include a Level 3 Form, or more detailed studies, as advanced by the MPO/RPO. This is a step normally reserved for more complex projects, where additional study, confirmation of existing information, or updating that information, is necessary. In the case of asset management and similar less complex projects, the activities here are the detailing of specific projects from the line items in Step 2 LRTP inclusion. If the proposal is placed on the LRTP as a study, the PAC can expect to be given another review and recommendation opportunity as the process unfolds and the proposal is more defined in Step 4. The MPO or RPO Technical or Coordinating Committee should review the results of the study and the recommendation of the PAC. The committee should then identify a preferred approach on the LRTP (potentially the TIP/STIP) for implementation or defer any further action. Some proposals will skip Step 4 because the work to define the needs and more clearly define the alternatives has already been accomplished. (See [Chapter 6](#) for more information.)

5. Project Identification on TIP+ 2Yrs. Candidate proposals are listed in funding categories and by prioritization in terms of timeliness of need to be addressed in regional TIPs, and become the short-range transportation planning document that is incorporated as the STIP. Generally, it is intended that the MPO/RPO and District(s) work together to create a listing of TIP (four years) plus two out years of projects listed, so that the projects in the "plus-2" are ready to be programmed should the four-year TIP be changed due to fiscal or other unintended and unanticipated events. The Process intends that all environmental screening and public participation activities are documented appropriately by this time, and that the documentation can be moved forward to NEPA practitioners for use, without the need for rework. The documentation is intended to be contained in the Screening Form database (Bureau of Planning and Research) and include associated attachments. This documentation may be digital data imported into the ECMS system. This is the handoff to preliminary engineering and environmental clearance activities for many projects. (See [Chapter 7](#) for more information.)

The problem assessments can be seen as falling into three general categories, consistent with Publication 10, Design Manual Part 1, *Transportation Program Development and Project Delivery Process*, Table 2.1, Table 2.2, and Table 2.3, and are summarized below.

NON-COMPLEX (MINOR) PROJECTS/PROBLEMS

Typical Examples: Standard Maintenance, Repair or In-Kind Replacement Work, Minor Safety Improvements

- Require Level 1 (from public) and/or Level 2 (from DOT or MPO/RPO) form, with PennDOT providing engineering information from its existing systems (Asset Management Form) and an MPO/RPO providing contextual information on community goals and visions
- Should be defined in a list in LRTP before TIP inclusion in first four years of TYP (plus 2 years)
- Most often advanced to the LRTP listing expediently for consideration as TIP projects at conclusion of Step 2, when they meet environmental screening requirements and have sufficient engineering and cost detail

MODERATELY COMPLEX PROJECTS/PROBLEMS

Typical Examples: Smaller planning studies, complicated environmental or engineering issues

- Will likely move through procedures depending on specifics of the issue at hand, with collection of the most appropriate level of information desired
- Require Level 2 screening information, perhaps Level 3 for further detail

- Should be defined on Long Range Transportation Plan before inclusion on TIP
- Most often advanced to the LRTP listing at a normal pace for consideration as TIP projects, including definition activities in Step 4

COMPLEX (MAJOR) PROJECTS

Typical Examples: New Assets, Major Improvements or Major Studies

- Require Level 2 screening activities, and likely Level 3 or a Detailed Studies Report
- Must be defined on LRTP
- Likely candidates for advancement from the LRTP listing to further definition activities (Step 4) potentially including a study of needs, public and stakeholder involvement, detailed environmental impacts/mitigation activities, cost factors, identification and narrowing of alternatives, and proposed solutions to the problem
- Require all phases of project delivery costs be identified in LRTP if pre-construction funding is included in TIP
- Additional definition activities after Step 3 or 4 should be developed in coordination with the regional planning organization and the associated PennDOT District and the appropriate funding source should be identified. (See Chapter 3 for more information)

The goal is delivery of projects more completely aligned with local land use, and regional, state and national land use priorities. The Process will result in earlier identification of the relationship of the alternatives to PennDOT principles, Governor's directives, and national policies and laws. Those state and national policies and approaches are aligned with the intended goal - delivery of the right projects in the right places at the right times and harnessing the right resources (people, information, and expertise). Further guidance for the MPO/RPO community, which includes PennDOT, is found in the *Long Range Transportation Planning Guidance*, promulgated by the Center for Program Development and Management.

Funding priorities begin with one rule - the preservation of the transportation system, transit services and infrastructure, and technology components for operations are the first to be examined for needs. In rare cases, existing facilities may be abandoned, or given to other responsible parties, such as municipal turnback programs. Unless a specific part of the system (e.g., a bridge, a section of roadway, an Intelligent Transportation System sign board) has outlived usefulness, preservation of the existing system is always the priority before improvements or additions to the system are pursued.

Considering environmental issues, looking at opportunities for mitigation, evaluating alternatives, and obtaining preliminary input from federal, state, and local agencies and the public during the transportation planning process can also help to manage the scope of both a program and individual proposals at an early stage. It facilitates incorporation of appropriate contextual information into the Process. A clear big picture assessment assists in prioritizing proposals and ensuring realistic schedules and costs are identified, which in turn facilitates the allocation of available funds and the management of public and government expectations.

Thoughtful consideration of environmental resources and issues during the planning process can shorten the NEPA project development portion of the overall project delivery process. Moreover, it can lead to better program and project decisions for both transportation and the environment through the early identification of alternatives that avoid and minimize impacts and fit better into their surroundings. For any given transportation problem, certain information must be gathered and evaluated. While some of these activities are clearly planning functions and others are clearly NEPA activities, there are many activities that can be completed in either phase. By understanding the relationship between planning and NEPA and what is ultimately required, a more cost-effective and smoother transition can be made between the two processes. In addition, the planning products can be tailored to provide a more solid foundation for the NEPA process, while simultaneously reducing or eliminating the need for redundant

studies and ultimately streamlining the Process. More information on environmental screening is included in [Chapter 4](#) and in Publication 10B, Design Manual Part 1B, *Post-TIP NEPA Procedures*.

Cost containment is a critical consideration of the project delivery process. Early coordination and identification of issues will allow for improved planning and design of projects which will reduce unforeseen cost increases as the project advances toward construction. Project budget is a factor in the context. A project's budget must be set prior to programming. The goal is accuracy in budgeting appropriate to the scale and scope of the project.

The Process was developed to thoroughly address all regulatory requirements and PennDOT initiatives in order to ensure quality transportation projects. With additional attention given to the identification of potential environmental impacts, public controversies, resource agency coordination, or other issues before a proposal is programmed as a project on the TIP/STIP, a more clear project scope will be known, and realistic schedules and cost estimates can be developed. Alternatives developed will be consistent with land use and transportation planning principles before they are programmed, will include consideration of context sensitive solutions, and be better defined as they enter the TIP/STIP, thus streamlining project delivery post-TIP/STIP.

The subsequent chapters discuss the Pre-TIP and TIP Project Delivery Procedures, which are Steps 1 through 5 of the Transportation Program Development and Project Delivery Process. Publication 10B, Design Manual Part 1B, *Post-TIP NEPA Procedures*, and Publication 10C, Design Manual Part 1C, *Transportation Engineering Procedures*, detail both Steps 6 and 7, the Preliminary Engineering/NEPA Decision and Final Design/Construction Phases of the Process.

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Transportation Program Development and Project Delivery Process Procedures

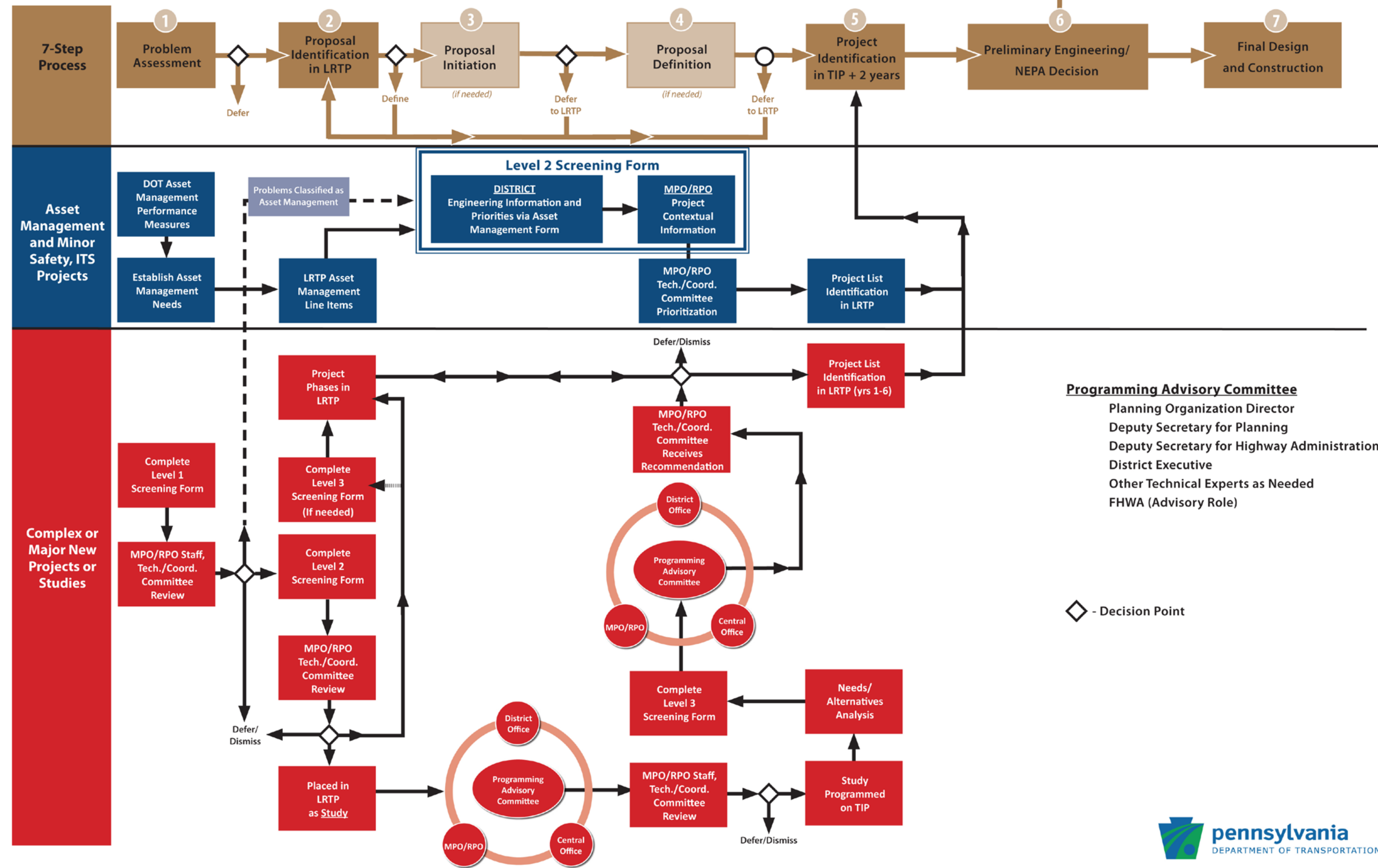


Figure 2.1

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CHAPTER 3

STEP 1: PROBLEM ASSESSMENT

3.0 INTRODUCTION

The first step in the Process is "Problem Assessment." The term is applied to the initial advancement of any transportation or transportation-related problem intended for consideration as part of a regional LRTP.

Any person can advocate that a problem exists. The individual MPO/RPO organization can set its rules for how those problems are presented, either directly to the MPO/RPO or through municipal or county planning agencies, municipal or county government boards, councils, and/or commissions. It should communicate the Process clearly to those who might become advocates for proposals.

Some problems could be dismissed immediately as not appropriate to the Process, or frivolous. (Examples: build a new high-speed rail line to transport milk from the farm to the dairy; Build elevated bikeways along all interstates; Hire more police for my township to stop speeders.) But most problems should be considered for potential inclusion in an LRTP, either in the short-term or long-term. This applies to issues presented by PennDOT, or by others.

Sources of problem assessment phase issues may include, but are not limited to:

- Existing LRTP goals and project lists from previous or existing LRTPs
- The advancement of raw ideas that came from citizens to municipal councils, boards, or commissions
- A municipal comprehensive plan set of goals and/or objectives that include transportation components
- A county comprehensive plan that prioritizes certain areas of development and/or redevelopment and the accompanying infrastructure support needed
- A PennDOT plan for work that is based on asset management methodology such as maintaining maintenance cycles for pavements
- A PennDOT plan for work that is based on performance measurement-based actions such as risk assessments, or roughness indices
- A bus, rail, or air transit provider's initiatives to improve or expand service
- A bicycle-pedestrian group's goals and objectives
- A legislative initiative or earmarked funds
- A private developer's anticipated plans

The list of problems entering Step 1 includes raw ideas generated by citizens, as well as specifically-defined proposals that are normally addressed as part of PennDOT's continuing asset management focus and philosophy, and an investment strategy that is a cooperative and collaborative effort of the MPO/RPO and PennDOT. The list can include information from prior planning efforts, and should be tied to stated community goals, municipal and joint municipal comprehensive plan goals, state, and national goals.

In short, problems can be identified by people who are engaged and paying attention to their surroundings, who communicate those issues to those who are responsible for planning and programming that leads to solutions. In fact, citizens living their daily lives in all communities recognize, or identify, problems associated with transportation. Examples of those types of problems might include:

- Too many crashes: A large number of crashes or severe crashes in an area
- Too much gridlock: Recurring congestion and event-related congestion
- We need good jobs: Economic development opportunities which require new or better access
- No other way to go: Lack of transit service to a particular neighborhood or employment center, or inadequate allowances for bicycle-pedestrian traffic
- Bridge component deterioration: Bridge replacement needs
- Fix this road: Pavement conditions requiring rehabilitation or restoration

It is important that all persons understand that the assessment of problems and planning associated with those problems may occur first at the local level of government. Effective local municipal and county planning efforts harness this citizen "recognition" of issues. It is effectively paired with the PennDOT and municipal asset management approaches to create a program.

Effective municipal and/or county comprehensive planning proactively seeks participation from all citizens. Local planning commissions meet regularly to discuss issues. Often, the public does not see this as an opportunity to make a difference, but citizens who speak up prove that while a single person may not be able to change the future of an area, a single idea can have great power. Individuals who speak up have been successful in many ways and in many areas in advancing transportation improvement projects simply by identifying a problem they have seen, or experienced. It is useful for PennDOT to be as involved as appropriate in local planning efforts, and to support municipalities by communicating its priorities and project information in a way that helps municipal planners do their planning. This might include technical assistance, or be as simple as continued sharing of information with municipalities to assist them in understanding the PennDOT planning process.

Municipal comprehensive plans (where they exist) help in the development of county comprehensive plans (required by the PA Municipalities Planning Code). Integration of county comprehensive plans and concepts into the regional LRTP is a way to link land use to the transportation planning process, and eventually the program development and project delivery processes. Efficient and effective project delivery is the desired result. Each MPO/RPO has forged relationships with its municipal and county planning partners, and it is important that PennDOT staff be as involved as appropriate at all times so that effective collaborative planning is the result of consistent communication and cooperation from all parties to the planning itself.

Planning for development and redevelopment, for economic opportunities, for new housing, for recreational and cultural plans, happens at the local level. The Commonwealth of Pennsylvania has more than 2,500 municipalities, and perhaps as many as 2,500 different ideas of what local planning should be, within state regulation, law, and guidance. There are vast differences in approaches, but the same desired outcome - clearer local vision about future development and the transportation infrastructure and programs that will be consistent with and supportive of that vision. Pennsylvania's Municipalities Planning Code guides planning for counties and municipalities and its regulations apply to plans and zoning undertaken by municipal and county governments in Pennsylvania.

It is important that municipalities have a cooperative relationship with county planning offices, and that all efforts are built to align municipal and county vision with statewide and national vision on transportation's role in the planning process. County planning offices should maintain good cooperative communications and relationships with MPO/RPO organizations, and with PennDOT Engineering District personnel. All parties should understand that any system that avoids duplication of effort and uses resources wisely at any level of the process benefits all partners. Earlier and more coordinated communication and cooperation will pay dividends in wise use of financial resources in the planning stages, and translates to more effective use of financial resources in project delivery.

PennDOT collects information in a variety of ways at a variety of levels, but it begins with daily interaction by the public with the county maintenance districts which repair and repave. Specific customer care center opportunities are offered to the public to collect maintenance concerns. Engineering Districts work closely with their county maintenance managers, assistant managers, and roadway program coordinators to identify continuing ways to maintain and sustain the highways and bridges, and consider other motorized and non-motorized modes.

PennDOT's efforts are best served when there is a clear liaison established between the MPO/RPO staff and Engineering District offices, and when County Planning, MPO/RPO, and PennDOT partners are engaged in regular and meaningful cooperative work plans and information sharing. PennDOT Engineering District Executives should designate a single point of contact, a District "liaison officer" within the District for the coordination of information sharing and meetings. It is appropriate for PennDOT or the MPO/RPO to schedule and facilitate meetings, and all interests are best served when the responsibility for that scheduling is clearly stated. In addition, local officials are encouraged to coordinate with PennDOT when updating municipal and county comprehensive plans, or any other local activities that are related to land use and transportation decision-making.

3.1 OBJECTIVE

The overall objective of the entire process is creation of a plan and program that relates transportation projects to local, county, regional, state, and national goals, in an environmentally-sensitive, land-use based, and fiscally responsible framework. All partners can and should move that process forward, without duplication of effort, by maximizing collaborative work practices and information sharing.

The most important task for PennDOT in problem assessment is to communicate clearly any expectations of a planning partner and any commitments to a planning partner. PennDOT should maintain an open and accessible communications channel through its District liaison officer, from citizen, county and MPO/RPO personnel, and to Central Office Bureaus and the PennDOT Office of Planning. At all levels of this process, information sharing should be regular, useful for the receiving parties, and minimize duplication of efforts to save money and time.

Public participation in the process, starting at the local government level, or at the regional planning level, should not be confused with "public involvement" conducted by a municipal, county, regional, or state agency. "Public involvement" is an outreach term associated with specific requirements for NEPA processes. Public participation in this reference refers to the public's ability to interact with its local government. The "Public Participation Plan" required of all MPOs and RPOs is a separate requirement that assures that specific interested parties have access to information associated with the planning processes (23 CFR 450.316, *Interested parties, participation and consultation*, as well as 450.322(i)).

The process, perspective and relationships are shown graphically below:

- **People** have a very local and sometimes neighborhood perspective, but can be aware of municipal, county, state and national goals. People attend municipal and county meetings and speak out about issues that concern them.
- **The municipality** has a decidedly local perspective, but should be aware of and consider county, regional, state, and national goals. The municipality may or may not do comprehensive planning, but should always consider the linkage between land use, community planning activities, and transportation planning.
- **The county** has a legal responsibility for countywide perspective and comprehensive planning, but should be aware of and consider local, regional, state, and national goals. Counties, through planning staff, usually interact regularly with local government, but perhaps not state government.
- **The MPO/RPO** has a regional transportation perspective and generates a Long Range Transportation Plan that considers local, county, multi-regional, state, and national goals. Professional planners at this level balance local needs with state and national priorities, and are the direct organizational link from county planning to state transportation planning.
- **The PennDOT District Office** has a District (multi-county, perhaps multi-MPO/RPO) perspective and has the lead role in advancing asset management projects for the existing system (highway, bridge and technology), capacity and safety issues. It maintains a working relationship with citizens, legislators, municipalities, counties, MPO/RPO agencies, economic development agencies, and with PennDOT Central Office technical experts.

- **The PennDOT Office of Planning (Center for Program Development and Management)** has a statewide perspective, providing guidance on funding matters and **program** development and maintenance. It must maintain alignment with state and national goals, and works cooperatively with the FHWA. It can also be a clearinghouse for support for planners from municipalities, counties, the MPO/RPO, or District Offices.

A. When PennDOT Advances a Transportation Problem or Proposal. PennDOT presents problem statements for assessment and advancement through the use of its asset management and performance management systems, including its risk assessment tools, Bridge Management System (BMS) sufficiency ratings, Roadway Management System (RMS) pavement preservation cycles, Congestion Management System (CMS) traffic studies; International Roughness Index (IRI) measurements, and others as appropriate or developed to meet specific needs.

For PennDOT-initiated problem statements or proposals, the PennDOT District Office is responsible for the completion of basic information on a Level 2 Form. MPO and RPO should advance the linkage between land use and local planning. The NEPA process should be a shared responsibility between PennDOT CO/ Districts and the MPO/RPO. PennDOT considers land use, community context, public and agency involvement, and environmental issues in advancing a problem. It documents its engineering information using the Asset Management Form, which includes readily available information populated from PennDOT internal systems, and presents it in a way that is useful to the MPO/RPO and other planning partners at the county and municipal levels. It is expected that the Asset Management Form will be attached to a Level 2 Form as appropriate, so as not to duplicate efforts.

The Asset Management Form can be attached to a Level 2 Form, that collects and documents known environmental issues that may impact the budget, scope, or schedule of a project, as a result of cursory analysis early in the process. A Level 2 Form can be completed at any time in the process, as an entry point for a specific proposal, or as the definition tool to refine line item listings as specific proposals, in a time frame appropriate for use by a specific District and its specific MPO/RPO partner.

Use of the standardized form(s) will facilitate eventual comparison of the problem and alternatives alongside those advanced by other initiating municipalities or problem advocates for inclusion in the regional LRTP, and later submission as candidate projects for the regional TIP and STIP.

PennDOT should complete its portion of a Level 2 Form, and that form would be presented to the MPO/RPO in the manner the MPO/RPO determines is best for that particular planning agency.

Screening activities in Step 1 provide the framework to:

- Assess problems (needs),
- Identify a range of potential solutions and alternatives,
- Establish preliminary goals and objectives, and
- Begin to define the scope of planning and public outreach necessary.

PennDOT District Office should begin planning activities in Step 1 to strengthen budget, scope, and schedule details by:

- Using PennDOT Asset Management Measures as the basis for identifying an asset management program to include an assessment of the costs associated with system preservation and maintenance
- Establishing specific Asset Management Needs by prioritizing and ranking projects based on such things as risk assessment tools and whatever contextual information is available
- Completing an Asset Management Form for the problems it identifies to meet asset management goals and sharing that information with all partners

- Completing appropriate information on Level 2 Form for identified projects and problems in coordination with the MPO/RPO staff
- Providing environmental and engineering support to MPO/RPO staff early in the planning process to include environmental expertise to identify the relative magnitude of environmental resources present and time/cost constraints associated with eventual environmental clearance and engineering expertise on the approaches available such as specific types of road treatments or repair methods
- Providing cost estimation assistance to MPO/RPO staff, counties, municipalities using the asset management methodology, or the most current cost estimation formulas used by the District in estimating phased project delivery function costs
- Focusing on potential environmental documentation classifications (CE, EA, EIS) early in the process
- Assisting MPO/RPO staff in consultation with resource agencies during early planning and LRTP development
- Coordinating any and all activities possible to avoid duplication of efforts and to use resources wisely

The PennDOT Office of Planning moves the process forward to focus on planning, and delivery of projects by:

- Addressing federal legislation requirements to link planning efforts and NEPA early in the planning process
- Providing environmental and technical support to MPO/RPO staff early in the planning process to include mapping and GIS capabilities
- Being an active coordinator between planning and project development phases early in the Process, including support as needed to partners involved in the planning process
- Developing and refining the organization structure to more appropriately address federal requirements, as well as, improve the project delivery process from Problem Assessment to Project Identification in TIP/STIP

The PennDOT Highway Administration Deputate moves the process forward to focus on asset management by:

- Providing asset management and performance measurement system information proactively to MPOs/RPOs
- Improve procedures for making environmental documentation level recommendations

The MPO/RPO moves the process forward by:

- Communicating clearly the expectations it has, or how expectations change through the evolution of the Process, based on local and regional conditions and needs
- Complete appropriate information on Level 2 Form for identified projects and problems in coordination with the PennDOT District staff

The vast majority of the problems that advance to consideration on the TIP are highway, bridge, and technology-related preservation types of problems that lengthen the service life of existing facilities, which has been and continues to be the top priority of local, regional, state, and national transportation officials.

PennDOT has established or will establish asset management performance measures and asset management needs assessments that are specific county-by-county.

Identifying information on the need associated with these problems should be proactively shared with the MPO/RPO staff as early and as often as possible. Communication with planning partners gives more complete situational awareness.

B. When Others Advance a Transportation Problem. A citizen, municipality, county planning office, or any other public or private organization can advance transportation problem statements for inclusion in the LRTP by using the Level 1 Screening Form. It will be a decision of each MPO/RPO, in collaboration with other partners, including PennDOT, how those forms are received and handled, once submitted to the MPO/RPO. The Level 1 Form completion enables advocates of a problem to better articulate the Purpose and Need of the problem and any relevant information known at the time the form is submitted. The MPOs and RPOs have established their own processes for advancing the problems to be considered for the LRTPs, and they still have the responsibility for and authority to create the LRTP and the TIP. PennDOT staff needs to be ready to address concerns that the MPO/RPO staff or leadership have regarding these problem statements.

Many MPO/RPO staff depend on municipalities to screen ideas from their own citizens, and that enables the community to continue to forge its land use and development future through planning, zoning, and highway occupancy permitting. The MPO/RPO can adopt its own set of procedures, or screens, to accomplish its purpose, and PennDOT should be proactively becoming part of those processes wherever possible. It is prudent for PennDOT to be seekers of information that will help formulate the PennDOT planning processes that choose appropriate budget, scope and schedule for asset management projects, safety projects, and related work. PennDOT needs to dedicate staff time and attention to the processes employed by MPO/RPO partners, including providing as much data and information as possible as early as possible in the process. Collaboration and cooperation will be necessary.

Municipalities should be depending on their own zoning, land use and other comprehensive planning information and tools. They may choose to use county government planning offices for assistance, as well as the regional MPO/RPO organization.

There is acknowledged disparity among municipalities, counties, MPO/RPO, and PennDOT from one office or District to another, in terms of human, capital, and information resources available. That is why it is vital that all partners in a planning region work collaboratively and cooperatively, and communicate regularly, and to tailor the approach used to gather information in planning and programming processes that make sense based on those differences. It is important also to acknowledge that a single PennDOT Engineering District office could be using multiple ways to work with multiple planning partners, and that a planning partner may use different approaches with several Districts. The underlying philosophies and goals are the same, but the methods utilized by one planning partner may require a different level of support from PennDOT, and likewise, PennDOT may be able to depend on different levels of support from those partners.

PennDOT's Office of Planning and the Highway Administration Office may have important data to add. Each MPO/RPO can use its resources to reach out and support municipalities, and offer and receive support from PennDOT. Where gaps exist in the accessibility of that information, it is incumbent upon all parties to coordinate the collection and sharing of information, then the agreement on which information will be used by all parties for consistency in planning.

One of the seven goals of the planning portion of the project delivery process is to improve communication, coordination, and cooperation within and among the state, regional, federal and other transportation planning entities. It is just as important that the municipal, multi-municipal, county, regional, state, and federal connection be maintained. The sharing of resources and information, and the validation of the accuracy and usefulness of those resources (including data, mapping, etc.) is a shared responsibility among municipalities, county and regional planning organizations, state and federal resource agencies, as early as this first step in the project delivery process.

This step also emphasizes early identification of all issues that may impact the wide range of options including what is already known about:

- Land use context as predicted
- Economic redevelopment and development activities
- Modal connectivity options
- Known funding sources
- Public participation and agency involvement

- Potential utility and right-of-way issues
- Potential environmental constraints (using existing environmental resource mapping)

The more detailed, complete, and consistent approach is designed to create a more efficient and effective project delivery process in the long term, and allow smarter choices in programming projects, then delivering them to construction completion and operational status.

The results of this step's preliminary screening effort include the verification of the problem, need, or opportunity that enables it to move forward to completion of a Level 2 Form for full consideration for the LRTP, or identifies that it can be dismissed from further consideration in the project delivery process, and perhaps handled in another way (e.g., education, enforcement). Specifically, screening requires that the advocate or involved local agency conduct a preliminary assessment of the problem from a broad perspective. This is a high level review and requires preliminary coordination and collaboration with planners who can help provide context from multiple perspectives including land use, economic development, environmental, financial, transportation system, and community desires.

The list of potential planners can include municipal, multi-municipal (e.g., Councils of Government), county, or state agencies, and can even extend to private individuals, organizations (e.g., Chambers of Commerce, Industrial Development Authorities), or non-governmental agencies. A key component of federal guidelines for an LRTP and TIP development is that parties agree to the use of the most updated and dependable data and other information sources and resources. PennDOT is committed to updating its information and systems integration of that data so that it can be used effectively, and eliminate waste of time and personnel resources.

MPO/RPO Guidance:

Specific guidance and assistance to the MPO/RPO community is provided by the PennDOT Office of Planning at each planning cycle, and as needed when changes occur. It covers such things as criteria for screening problems, the mechanics of program update procedures, asset management goals, and fiscal guidance. PennDOT's Office of Planning is committed to a continued and strengthened working relationship with all planning partners, including municipalities and counties seeking assistance, so that the planning processes for which each level of government is responsible are consistently aligned with state and national transportation program goals.

3.2 LEVEL 1 SCREENING FORM COMPONENTS

Level 1 considerations that the problem advocate has include the following:

- Problem description information
- Summary of need and/or opportunity and identification of any needs already documented
- Potential for impacts to protected environmental features
- Public and agency involvement as it exists at the time
- Funding source information

The Level 1 form is intended for use by all entities other than PennDOT and the MPO/RPO, which use a Level 2 form. Instructions on completing the Screening Forms will be provided by PennDOT's Office of Planning to the MPO/RPO community for distribution before each statewide planning cycle and between cycles as needed when changes occur. Changes might include new criteria or approaches from regulatory or statutory considerations, or embrace lessons learned from the Process itself.

Information and credentials to access the Linking Planning and NEPA Screening Form System can be acquired by:

- Calling the Linking Planning and NEPA Help Desk at (717) 525-5458.
- Emailing the PennDOT Statewide Programs resource account at RA-PennDOTLRTP@pa.gov.

The Linking Planning and NEPA Screening Forms System and instructions are available on the web at the following location:

<http://www.dot.state.pa.us/Intranet/PennDOT/LPNForms.nsf>

Additional accommodations will be provided by contacting the PennDOT Center for Program Development and Management, 6th Floor, Keystone Building, 400 North St., Harrisburg, PA 17120.

A. Submission of Level 1 Form. Level 1 Forms will be submitted to an MPO or RPO as the keeper of information, and a file of those forms should be made available for examination during normal business hours at each MPO/RPO office. Forms completed by individuals, municipalities, counties, organizations, and state agencies should be kept by the MPO/RPO for later updating and completion of Level 2 and Level 3 screening, as applicable. Once proposals are included on an LRTP, copies of the forms should be kept by PennDOT at its District Office and at MPO/RPO offices to facilitate communications and maintain a common operating picture on the latest documentation available to all decision makers. It is PennDOT's intent that the forms will be electronic, web-based, and easily shared among all partners, as well as the public.

3.3 STEP 1 SUMMARY

The transition from Step 1 Problem Assessment activities to Proposal Identification in the LRTP (Step 2) involves the review of appropriate documentation from the public about problems it has considered important enough to advance, and the MPO/RPO being provided information by PennDOT on its asset management measurements and needs.

Step 1 Products:

1. Completed Level 1 Form in the hands of MPO/RPO that considers:
 - Known Land Use Issues
 - Known Environmental Issues
 - Intermodal Considerations
 - Appropriate mapping and other documentation attachments as appropriate

Future Use of Products:

The Level 1 Form will be reviewed and used by the MPO/RPO, PennDOT, and other appropriate parties to collect more data, as needed, so that a more detailed Level 2 screening can be completed by those partners in the creation of a list of proposals for inclusion in the LRTP.

Step 1 Problem Assessment Activities for Asset Management and Less Complex Projects:

- PennDOT establishes and shares asset management measures information and needs listings with partners
- MPO/RPO receives Level 1 Form from citizens, agency, elected official, business concerns, etc.
- MPO/RPO staff determines actions appropriate for handling the form (dismiss from consideration as frivolous or inappropriate, or advance it to Step 2) and may choose to present to the technical committee or coordinating committee/board as appropriate to the region, or if authority is delegated to staff, takes appropriate action

Step 1 Problem Assessment Activities for Proposals Requiring More Study:

1. MPO/RPO receives Level 1 Form from citizens, agency, elected official, business concern
2. MPO/RPO staff determines actions appropriate for handling the form (dismiss from consideration as frivolous or inappropriate, or advance it to Step 2) and may choose to present to the technical committee or coordinating committee/board as appropriate to the region, or if authority is delegated to staff, takes appropriate action

CHAPTER 4

STEP 2: PROPOSAL IDENTIFICATION IN LRTP

4.0 INTRODUCTION

The regional LRTP drives each region's TIP and STIP. Problems advanced from Step 1 to Step 2 are studied further if necessary, and more data is collected and documented on the Level 2 Form so that all problems can be examined in the context of community, state, and national goals, or in the case of PennDOT-initiated asset management category projects, so that an asset management line item can be created for the LRTP, with details of the line item proposals provided to all partners as soon as possible and feasible.

The advancement of problems from Step 1 to Step 2 permits those problems to become more defined, and then alternatives to address the problems more fairly compared as they are considered for inclusion in the LRTP. Emerging from the Process as part of the LRTP, they can then be considered for further definition and programming as projects. Only those projects on the LRTP at this point, or in an amendment to the LRTP as needed, are intended for TIP consideration. PennDOT and other planning partner sponsors of problems should balance the desires of long term plans with the realities of financial and environmental stewardship. The product of sound planning at this step can be the most accurate budget, scope, and schedule possible at the earliest possible time.

A Long Range Transportation Plan (LRTP) is a comprehensive strategy for transportation and development at a regional/county level, developed and adopted by an MPO/RPO. Regional transportation planners create their own regional LRTP. An LRTP covers a minimum of 20 years, but may extend beyond that time horizon at the discretion of the State DOT or MPO/RPO, and is updated at least every four or five years depending on its attainment status under the Clean Air Act. It contains a financial plan whose total costs may not exceed projected revenue in order to demonstrate how the adopted transportation plan can be implemented. For illustrative purposes, the LRTP can also include a supplementary list of proposals for funding if additional revenues become available, and a plan for economic development. It is from that supplementary list of proposals that programmable projects may be developed in the future.

The transportation planning process provides an opportunity for citizens, government officials, planners, associated stakeholders, and other interested parties to come together to:

- Visualize the region's future,
- Identify trends within the region,
- Set goals,
- Establish projected transportation revenue amounts, and
- Prioritize transportation proposals for what the region hopes to achieve within the next 20 or more years.

Furthermore, the planning process allows for update cycles to ensure that the vision and goals are consistently revisited and reassessed to address a region's changing needs and support a region's desired transportation direction. Given the scale and longevity of transportation investments and the impact they have on a region's economy and quality of life, improvements to the transportation system demand deliberate and thoughtful planning. A realistic long-range transportation plan is critical in helping a region realize its vision for the future.

Selection of problems in an LRTP is a challenging task that requires the balancing of needs, resources, and priorities across many political jurisdictions. To work in a multi-jurisdictional environment, the prioritization and selection process cannot be solely driven by rigid rules, however it is necessary to meet basic minimum criteria to remain aligned among regions, and with federal and state rules, regulations, and policies. Rankings are compared to financing available by problem type (e.g., highway vs. bridge investment funds), and it is from that combination of the problem need and financial capacity that problems are programmed as projects for the TIP and STIP.

Baseline selection criteria are outlined in the LRTP Guidance document. Additionally, the Office of Planning will update the LRTP Guidance to be consistent with Federal and State policy direction as needed.

4.1 OBJECTIVE

The objective of Step 2 in the Process is for the MPO/RPO to work with partners to develop a list of prioritized proposals and programs suitable for evaluation as part of the planning process and then adopt an MPO/RPO Long Range Transportation Plan.

Using the Level 1 Forms received from the public, as a starting point, the MPO/RPO works with PennDOT, affected resource agencies, and other levels of government planning efforts to refine need(s) and opportunities by conducting a Level 2 Screening that further develops the understanding of the problem related to potential issues and impacts, and the level of consistency with state and regional goals and priorities. Public and agency involvement information is sought. All of this information is helpful to the MPO/RPO as it sets its LRTP. A Level 2 Form should be completed for all projects in the initial years of an LRTP, because those projects are likely candidates for TIP consideration.

LRTPs provide a general overview of environmental resources and potential environmental impacts associated with improvements to the transportation system, as well as conceptual mitigation opportunities at the planning level. Specific resource agency coordination measures should be included in the MPO/RPO Public Participation Plan, which is a federally-mandated requirement of every MPO/RPO planning process (23 CFR 450.316, *Interested parties, participation and consultation*, as well as 450.322(i)).

It is at this step that the working relationship between PennDOT staff and the MPO/RPO staff becomes closer as the partnership is developed further to define alternatives to address problems that meet planning district and regional goals aligned with the state's LRTP expectations and requirements, as well as local land use practices and goals.

Consistent and effective communications between and among all involved (municipalities, planning partners, PennDOT, and resource agencies) is required.

4.2 ROLES OF PARTIES

MPO/RPO:

The MPO/RPO is responsible for:

- Preparing the LRTP draft in accordance with federal regulations
- Applying a regionally-appropriate set of evaluation criteria for ranking proposals
- Prioritizing proposals
- Coordinating information gathering activities and meetings with PennDOT
- Supplying resource mapping or coordination of mapping activities among parties
- Coordinating the LRTP with municipal/county comprehensive plans
- Preparing or overseeing preparation of the Level 2 Form with PennDOT assistance
- Coordinating and communicating with original advocates of problems or proposals not advanced to or included in the LRTP
- Recommending courses of action to PAC for problems or proposals that are more complex
- Adoption of LRTP

More specific guidance is provided to the MPO/RPO by the PennDOT Office of Planning during each planning cycle and as changes occur.

Resource agencies are expected to provide:

- Technical support and communication on issues identified early in planning, as requested
- Review resource mapping and provide access to additional data/mapping as possible, when requested

PennDOT District is responsible for:

- Technical support to augment existing municipal, county, and MPO/RPO resources and expertise throughout the Process
- Attendance at meetings and active participation
- Sharing clear expectations, and communication within PennDOT using the appropriate chain of command and communications on issues raised by an MPO/RPO technical or coordinating committee/board

PennDOT Office of Planning is responsible for:

- Technical support and consultation with planning partners involved in prioritizing proposals
- Advice on screening and ranking criteria and applicability to state and national goals

4.3 LEVEL 2 SCREENING PROCESS

Level 2 Screening requires an evaluation of existing inventories of the environmental and socioeconomic context of the LRTP proposal nominee. It does not require extensive work beyond gathering existing source data. The Level 2 Screening builds on the data collected from Level 1 Forms from the public, and from measures and needs information sharing among PennDOT and the MPO/RPO. Screening results in an expanded, refined need(s) and opportunities statement that includes the identification of high level engineering issues that inform the range of costs anticipated for the candidate problem. Preliminary agency coordination and public involvement activities will aid in the data collection associated with this work effort resulting in ownership and a commitment for the candidate problem/proposal at the local (municipal and county) level.

The results of this Level 2 Screening effort include the identification of:

- Potential fatal flaws such as environmental issues, Right-of-Way or utility issues
- The potential range of solutions that might be appropriate, including multi-modal considerations
- Range of costs
- The level of consistency with state and regional priorities that enable the sponsor, MPO/RPO and PennDOT to assess the problem, need, or opportunity against other proposals and develop a shortlist of problems/programs to include in the LRTP, or dismiss from further consideration.

4.4 CLARIFYING PURPOSE AND NEED

Purpose and Need can be listed, or defined, in the planning portion of the Process as part of the Level 2 Screening process. Purpose and Need are foundational, and identify what the potential alternatives are intended to accomplish. It explains to the public and decision makers that the expenditure of funds is necessary and worthwhile. Purpose and Need drives the process for alternatives consideration, influences the environmental analysis, and ultimately the alternative selection. The initial Purpose and Need ideas can be submitted by the problem advocate and documented on the Level 1 Form. This step provides an opportunity for involvement by interested parties, resource agencies, and the general public for a problem to be included in the LRTP and perhaps be a programmable project for the TIP and STIP.

It is not necessary for the public to list a Purpose and Need statement on that Level 1 Form.

Although not specifically identified on the forms, Purpose and Need can be derived from the information documented. This information will be used more formally in the NEPA process, when the Purpose and Need statement(s) are required. This documentation as expressed on the forms serves as a foundation for the NEPA analysis later, and is refined as the project becomes more defined.

More information regarding Purpose and Need can be found in PennDOT Publication 319, *Needs Study Handbook*. An overview is provided here to help enable proposal sponsors to better understand important concepts regarding Purpose and Need.

A. Need. A need is a tangible, fact-based problem. The following are elements of a problem's need:

- Establishes evidence of a current or future transportation issue or deficiency
- Is factual and quantifiable
- Justifies commitment of resources and impacts to the environment
- Identifies a problem that is fixable/solvable
- Establishes and justifies logical termini (23 CFR 771.111(f))

There are many possible needs for a transportation proposal. Simpler proposals may have only one well-defined need (e.g., address safety concerns (weight limit, emergency services access)) while more complex proposals may have several needs (e.g., address connectivity, safety, and congestion). In some cases, more detailed examination may be necessary to define a proposal's needs.

The following elements must be considered in the establishment of a proposal's need(s):

1. Review available information - Regional, sub-area, and/or corridor planning can serve as the primary source for identifying a proposal's needs. Planning data offers descriptions of observable problem areas such as capacity deficiency or access, safety, design, or linkage (modal and intermodal connection) issues. Information and forecasts of vehicle miles of travel, travel demand, highway and travel speeds, traffic diversion, time of day characteristics, and traffic crash rates can be used to help identify needs. Asset management needs for reconstruction, rehabilitation or repair should also be considered. More information may need to be gathered and analyzed. Cooperation among parties to avoid duplication of efforts is desired.
2. Determine the basis for action - One or more of the following items may serve as the basis for action (list not all inclusive):
 - Structural Deficiencies - Is there a bridge weight restriction, pavement failure, etc.?
 - Safety - Is the proposal necessary to correct an existing or potential safety hazard? Is the existing accident rate excessively high? Why? How will the proposal improve it?
 - Poor Traffic Level-of-Service - Is the capacity of the present facility inadequate for the present traffic? Projected traffic? What capacity is needed? What is the Level of Service for existing and proposed facilities?
 - Functionally obsolete - Is existing facility inadequate for current types of vehicles (i.e., large trucks)?
 - Design Features - Are there deficiencies (e.g., substandard geometries, load limits on structures, inadequate cross-section, or high maintenance costs)? How will the proposal improve it?
 - Preventative Maintenance - Is there maintenance work needed to prevent future issues?
 - Inadequate Drainage Facilities - Does water pond or overtop the existing roadway?
 - Access Management - Are there access issues in the area?

- System Linkage - Is the proposal a "connecting link"? How does it fit into the transportation system?
- Transportation Demand - Is there reserve capacity for increasing traffic volumes?
- Legislation - Is there a Federal, State, or local government mandate for the action?
- Social Demands or Economic Development - Employment, schools, land use plans, recreation, etc.
- What projected economic development/land use changes indicate the need to improve or add to the highway capacity?
- Modal Interrelationships - How will the proposed facility interface with and serve to complement airports, rail and port facilities, mass transit services, etc.?
- National Defense/Security - Is the proposal needed to support national defense or national security goals/objectives?
- Consistency with Statewide/Metropolitan Transportation Plans - Would the proposal support the objectives identified in the applicable statewide or metropolitan transportation plan?
- Support for Land Use, Development or Growth Objectives - Would the proposed action be consistent with or support the local land use, economic development, and/or growth objectives for the area? (A full range of the considerations that should be included in identifying potential areas of need are included in Publication 319, *Needs Study Handbook*.)

3. Document the needs - For each need identified, it is important to document the evidence/facts that demonstrate that the need truly exists and is not merely a perception. Depending on the proposal's complexity, needs can be established and documented by:

- Indicating the specific need(s) on the Level 2 Form and attaching appropriate supporting information
- Performing a more detailed needs study analysis independent of or on the Level 3 Form and attaching it to the Level 2 Form

4. Determine the level of detail necessary - Needs analysis may involve varying levels of data gathering, field reconnaissance, historical record checking, public coordination, use of statistical data, and report preparation. The focus of these activities and the level of detail they produce will vary depending on the type and size of the proposal, the needs service area, and the extent of information already available. The Programming Advisory Committee (PAC) has the responsibility to recommend the level of detail that should be included in a needs analysis.

5. Utilize other staff, as needed - If additional analysis is necessary, the MPO/RPO/District will utilize additional staff to perform the analysis. It is necessary for the needs analysis to be a joint effort between the MPO/RPO and the District. Additional technical expertise from consultant staff or other sources should be utilized when appropriate.

EXAMPLES OF NEED:

- (1) There is existing congestion on the roadways serving the subject area that is projected to worsen in the future.
- (2) There are safety concerns because of deficiencies in the roadway network.
- (3) There is poor east-west mobility for truck access to redevelopment sites in the region.
- (4) There is no circumferential transit service.
- (5) There is poor east-west mobility from the region to the international airport.

B. Purpose. The purpose is what the proposal is intended to accomplish. A proposal's purpose is an overarching statement as to why the proposal is being pursued and the objectives that will be met to address the transportation deficiency. The level of specificity for defining purpose (not too specific/not too general) should be considered in relation to how that may impact the number and range of alternatives that will be developed. The Purpose and Need should not be defined so narrowly so as to artificially limit the range of alternatives considered, particularly for proposals that may be EIS or EA level projects.

Following are elements of a proposal's purpose:

- Can be used to develop and evaluate potential solutions
- Achievable
- Unbiased
- Comprehensive enough to allow for a reasonable range of alternatives, and specific enough to limit the range of alternatives
- Allows for a range of alternatives that are in context with the setting

EXAMPLE OF A PURPOSE (Based on the above example need statements):

The purpose of the proposal is to provide transportation mobility and safety improvements, relieve further congestion, and provide east/west access and mobility in the circumferential corridor south of the city.

Important Points to Remember -

- Consistent with NEPA, the Purpose and Need statement should be a statement of a transportation problem, not a specific solution. However, the Purpose and Need statement should be specific enough to generate alternatives that can yield real solutions to the issue-at-hand.
- A Purpose and Need statement that yields only one alternative for more complex proposals may indicate a Purpose and Need that is too narrowly defined.
- The more detailed the Purpose and Need analysis in planning, the more likely it can be used verbatim in the NEPA process. If it is not detailed enough, not supported by factual data, or not documented adequately, analyses may need to be repeated. Analyses may need to be revisited as time passes to ensure that changes in the context or in planning predictions do not change the specific needs.

Document the purpose - For each purpose identified, it is important to document the evidence/facts that demonstrate that the proposal's purpose is clearly defined. Depending on the proposal's complexity, purpose can be established and documented by:

- Indicating the specific purpose(s) on the Level 2 Form and attaching appropriate supporting information
- Performing a more detailed needs study analysis independent of or on the Level 3 Form and attaching it to the Level 2 Form (the Level 3 Form is a tool available at earlier steps to do more thorough examination of issues, but is not often used this early in the process)
- Use information from reviews by the public and resource agencies on any problem that may require and Environmental Impact Statement (EIS) or Environmental Assessment (EA)

4.5 USING CRITERIA TO ESTABLISH PRIORITIZED PROBLEMS

PennDOT is committed to the use of evaluation criteria throughout the Process that are consistent with federal regulations, and with PennDOT and Governor's office goals and ideals. Information on minimum criteria, or guidelines for application of criteria, will be shared with MPO/RPO planning partners by PennDOT's Office of Planning.

Each MPO/RPO is tasked with using those concepts, some of which have been incorporated into screening form items. But there is also flexibility given to those MPO/RPO partners to incorporate their own concepts and filters for problems that are presented.

Evaluation criteria should address, at a minimum:

- Mobility benefits
- Cost-effectiveness
- Economic development/redevelopment
- Environmental impacts
- Safety/Security/Technology linkage
- How the prioritized problems link to local goals
 - Municipal comprehensive plans
 - County comprehensive plans
- How the prioritized problems link to state goals and priorities
- How the prioritized problems address federal planning factors
- Consideration of all transportation modes

More specific criteria guidance will be provided by the PennDOT Office of Planning to regional MPO/RPO staff and leadership for each TIP update cycle.

4.6 PROBLEM PRIORITIZATION AND SELECTION

Establishing a selection process helps to ensure consistency between the goals and policies implemented through plans and programs and the mix of projects and investments of the TIP. Establishing a process during the LRTP development period allows for a more robust collaborative effort including input from both the public and stakeholders. However, project prioritization is not a mechanical process. It cannot and should not be overly prescriptive or inflexible. Each of the project criteria referenced in LRTP Guidance Appendix C should be viewed as a minimum set of criteria for which all problems statewide can be evaluated. Additional criteria and the weights assigned for all the criteria should be identified during the public participation process. It is intended that PennDOT District and Office of Planning staff be directly involved with the MPO/RPO to establish appropriate criteria, and to champion PennDOT initiatives in the Process.

In addition to using the road management pavement cycles and the bridge risk assessment tool to help identify maintenance needs, MPOs and RPOs may consider identifying the highest possible standard that all facilities can be expected to meet using the available maintenance funding. Targets based on measures like International Roughness Index (IRI) or percent structurally deficient (SD) bridge deck area may need to be established in such a way that they provide prioritization for all classes of assets.

Measures can also consider volume, land use, economic impact, and the population served. This approach recognizes that the total cost to maintain the current system will be several times the projected funding available and place a stronger emphasis on targeting investment decisions.

Development of criteria is addressed to the MPO/RPO community by the PennDOT Center for Program Development and Management in its LRTP Guidance document.

The MPO/RPO will then have to determine the amount of funding that will be spent on each type of problem and the ranked list can then be used to select problems up to the determined funding level.

GIS can also be used as a tool to assist in the selection of problems by providing greater context of the area. Overlaying candidate problems over current asset condition data may show which address the greatest areas of need. Also overlaying demographic data would help with the equitable distribution of problems across the communities in the region.

A. Proposal/Project Lists. The proposals/projects that are on regional TIPs and the STIP should be part of the most recent update of a regional LRTP, a list of problems and/or proposals that could be implemented during its planning horizon. Projects that are on the TIP must be included as an amendment to the LRTP list of short-term projects, if not generated from that list.

This problem list must be fiscally constrained. However, it is becoming more common for additional problems to be included, either in a supplementary list or as part of a scenario in which additional transportation revenues will become available during the planning horizon (the problems are often referred to as an "illustrative list" of problems).

Because the planning horizon is 20 years or more, different problems will be defined at varying levels of detail, ranging from near-term problems that are well defined and have reasonably accurate cost estimates, to long-range problems that are likely to undergo changes in terms of scope and budget before approaching implementation. In some cases, problems may also be defined more broadly as solutions that are not problem-specific, to encompass operations and management improvements that are less capital-intensive than typical transportation problems.

Modifications to the region's LRTP will be addressed as amendments, ensuring that the LRTP remains fiscally constrained and a proposal or project phase remains fully funded.

There are restrictions on the funding that can be used to finance certain problem types. For example, in most instances transit funding may only be used on transit problems, while bridge funds may only be used on bridge problems. In order to better demonstrate fiscal constraint by problem type, the LRTP lists have been grouped into four categories: Highway & Intelligent Transportation Systems (ITS); Transit; Bridge; and Bicycle/Pedestrian.

When the LRTP is created, after prioritizing problems and applying financial information, the basic approach is to:

- Include a list and map for each of the four problem categories listed above.
- Include the short-term TIP proposals and the more long-term problems that will be addressed later to comprise the plan.
- Include a map number, the problem name, the municipality where each problem is located, a general problem description, a cost estimate and the anticipated funding timeframe.
- At a minimum divide the funding timeframes into the TIP (yearly segments) by project phase, the TYP (two-year segments) by project phase, and a longer term outlook.
- Each segment includes projects that could reasonably be funded during that time frame.
- Projects that are outside of fiscal constraint should be listed in the Appendix for information purposes.
- Project specific planning studies that have been completed should be listed in the Appendix for information purposes.

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4.7 STEP 2 SUMMARY

The transition from Step 2 to future steps is different in different types of project environments. More complex projects that require additional study to define the projects will likely go through Steps 3 and 4 to refine them through studies for inclusion on the LRTP and TIP/STIP. More straightforward projects such as asset management or safety projects without complex engineering or environmental issues remaining might go from Step 2 more directly to Step 5, with the additional information and details provided by the responsible party (PennDOT or MPO/RPO) as soon as they are clear, in Steps 3 and 4. PennDOT can expect to complete its Asset Management Form and its Level 2 Form components in concert with MPO/RPO completion between the LRTP listings and the specific listings of projects on the LRTP and TIP.

A. Products.

1. Completed Level 2 Forms (as soon as possible)
 - a. More detailed information on land use, context, environmental impacts, engineering details provided in cooperative effort of PennDOT and MPO/RPO
 - b. Updated information on potential solutions or approaches
 - c. Cost estimates identified and updated funding information
 - d. Preliminary Purpose and Need statement to be carried forward
2. Regional Long Range Transportation Plan document
3. Clear understanding that LRTP has short range (TIP) and long range (later) goals
4. Decision made to advance through more simplified "blue" process, or proceed with study and definition activities under "red" process

B. Future Use of Products. The Level 2 Form will be used by the MPO/RPO, PennDOT, and other appropriate parties to collect more data, as needed, and as the basis for comparison among problems that are expected to be included in the early years of the LRTP (first four years, with a consideration for an extra two years of funding). The completed form can be updated as necessary in Steps 3 and 4, refining the problem statements and alternatives so that they can become candidate projects for an MPO/RPO LRTP and TIP in Step 5.

It is important to note that most asset management projects and less complex proposals may not have a Level 2 Form completed until after Step 2. It is permissible to have a line item list for these types of projects, with specific proposals having Level 2 Forms completed after the line items are listed in the LRTP. This is especially important to meet the goal of accurate and predictable budgets, scopes, and schedules that form the TIP listing. It is incumbent upon PennDOT to complete the Level 2 Form and attach appropriate Asset Management Form information, and for the MPO/RPO to document contextual information to complete the Level 2 Form before the projects are listed specifically on the LRTP and considered for the TIP.

It is not necessary to complete Level 2 Forms or Asset Management Forms for any proposals that are expected to be in later years, or part of an illustrative list in the LRTP.

C. Step 2 Proposal Identification in LRTP Activities for Asset Management and Less Complex Projects.

- PennDOT shares line item details for LRTP inclusion in collaborative and cooperative effort with MPO/RPO
- PennDOT provides as much detail as possible when specific proposals have trusted budget, scope, and schedule established, clarifying line items as soon as possible through completion of Level 2 Form and attached Asset Management Form.

- PennDOT remains responsible for cursory examination of potential impacts on environmental resources as it develops its listing
- Decision made cooperatively to advance potential projects that will define the dollars in the line items for the LRTP's first four years (TIP).

D. Step 2 Proposal Identification in LRTP Activities for Proposals Requiring More Study.

- MPO/RPO identifies what is needed to complete Level 2 screening information and assigns and/or monitors work (by MPO/RPO staff, PennDOT, county planner, other)
- Staff, technical committee or coordinating committee/board review of information
- Decision made by MPO/RPO to:
 - Defer or reject the proposal
 - Advance it for Level 3 screening activities immediately as next effort before placement on LRTP in this step
 - Advance it directly to LRTP if Level 2 screening meets MPO/RPO standards and PennDOT has completed its portion of the Level 2 Form
 - Advance the idea for more detailed study in Steps 3 and 4 with a recommendation to the PAC regarding proposals' inclusion on the LRTP/TIP for more complex, undefined, or controversial proposals.

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CHAPTER 5

STEP 3: PROPOSAL INITIATION

5.0 INTRODUCTION

The Proposal Initiation Phase is where problems and proposals that require more study are advanced by the MPO/RPO technical or coordinating committee for review by the Programming Advisory Committee (PAC). The PAC would make recommendations to the MPO/RPO for further action as the next step toward inclusion in an LRTP and then regional TIP and STIP. In a more informal way, for asset management and safety projects, or those without complex engineering or environmental constraints, this step is merely an acknowledgement by PennDOT and the MPO/RPO of the existing need to complete Level 2 Forms and attach the Asset Management Form documentation before Step 5 actions to place the projects on the LRTP and TIP.

5.1 PROGRAMMING ADVISORY COMMITTEE

The PAC will receive recommendations for advancement of specific project or study proposals from an MPO/RPO technical or coordinating committee or board. The recommendation will include the scope of the studies suggested. PAC membership includes PennDOT's Deputy Secretaries for Planning and Highway Administration or their designees, the affected MPO Executive Director or designee, the District Executive or designee, and the support staff necessary to address issues likely to be raised. Different support staff might be called upon in different circumstances, and should be ready to speak to issues of concern.

5.2 STEP 3 SUMMARY

The transition from Step 3 is intended to focus efforts to refine the activities connected to the proposal's next steps. In a complex project or proposal, it is a transition to Step 4, or a return to a previous step if the proposal is redefined and requires it. In the process for asset management, safety, and all non-complex environmental or engineering projects, there is no PAC participation anticipated.

A. Products.

1. Clear understanding of need for and scope of further study recommended
2. Clear understanding of financial impacts and investment strategy
3. Recommendation from PAC to MPO/RPO for further action
4. Decision by the MPO/RPO to advance to Step 4 definition, dismiss the proposal, and/or return it to the LRTP list of future projects

B. Future Use of Products. Step 3 activities are limited to the clearer pathway for further study of a specific proposal or a problem that requires more detailed studies to determine scope and phasing.

C. Step 3 Proposal Initiation Activities for Asset Management and Less Complex Projects. Steps 3 and 4 activities are covered by the formalization and refinement of the information on the Level 2 Form and are, in essence, combined in one action that covers Steps 3 and 4. This includes the Asset Management Form engineering information from existing PennDOT data that should be attached to and incorporated into the Level 2 Form. The MPO provides contextual information, including land use, conformity with local and regional goals, and environmental feature impacts that it is aware of using existing data sources. Once PennDOT and MPO/RPO staff has decided on a recommendation in a collaborative process, the technical or coordinating committee/board approves a project list for the regional LRTP and TIP. Included in this part of the Process is open dialogue among all parties to create lists that reflect reality of community, regional, state, and national goals, and fiscal constraints.

D. Step 3 Proposal Initiation Activities for Proposals Requiring More Study. If an MPO/RPO technical or coordinating committee/board has a recommendation to advance a proposal for more detailed study, it will be forwarded to the PAC. This is intended to be a face-to-face (infrequently required), web-based, or conference call meeting. If the PAC recommends additional detailed study, the scope of the study will be defined by the PAC in its recommendation to the MPO/RPO.

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CHAPTER 6

STEP 4: PROPOSAL DEFINITION PHASE

6.0 OVERVIEW

Problems that are determined in the Proposal Initiation Phase to need further examination and/or clarification before being advanced as a candidate for the LRTP and TIP process can enter the Proposal Definition Phase. Likewise, this is the final opportunity for less complex projects such as Asset Management types to finish defining the projects so that they can be included in the early years of the LRTP and considered for the TIP.

It is clearly the intent of the Proposal Definition Phase that elements of the planning process as outlined should be conducted in such a manner that the outcomes be usable in subsequent NEPA analyses with minimal duplication of effort.

The purpose of the phase is to ensure that the most complex proposals are effectively programmed and are more easily processed through the remaining portions of the Process. Additional examination or studies can be provided for a particular aspect of the problem that requires further clarification. It should be made clear that in some cases, only a portion of a proposal might be studied, while in other cases, a study will be examining all engineering and environmental aspects of an as-yet unrefined or undefined project. A more defined Purpose and Need may be required for the problem; additional environmental studies or analysis could be performed; additional public involvement activities as defined in NEPA may be needed. Additional alternatives screening and elimination of unreasonable alternatives can also occur in the Proposal Definition Phase with public and agency involvement, as necessary.

The MPO/RPO has the responsibility and authority to identify those proposals or projects that should enter the Proposal Definition Phase, after receiving the recommendation of the PAC in Step 3. The specific steps to be taken to complete the Proposal Definition Phase are outlined below. Greater detail for each of these steps is provided in this chapter.

1. A District Project Manager is assigned to oversee the preparation of the necessary studies, and Level 3 Screening activities are completed and documented using the Level 3 Form.
2. Detailed studies are conducted as required, including needs and alternative analysis.
3. A draft Detailed Studies Report (DSR) may be completed under PennDOT direction and presented by the MPO/RPO to the PAC for its recommendation.
4. The MPO/RPO acts on the DSR to either program a project on the TIP, or place a project or projects into the later years of the LRTP or illustrative lists for future TIP consideration. (Note: It is possible that from a single study, multiple projects might be identified and can be streamlined through the Process because necessary studies are already complete.)

6.1 LEVEL 3 SCREENING FORM

The Level 3 Form requires further refinement of the Purpose and Need of a problem or proposal through the assessment of potential solutions and key design considerations. The completion of this screening form improves the breadth and depth of the information revealed in prior screening work. Agency coordination to assess preliminary impacts and define a conceptual mitigation plan is required. Ultimately, the information documented on the Level 3 Form will enable the sponsor to conduct an analysis of risk, prepare a project timeline, and develop Year of Expenditure (YOE) costs suitable for presentation to the PAC, which recommends action to the MPO/RPO Coordinating Committee/Board.

Note: The Level 3 Form is also appropriate for use in Step 2: Proposal Identification in LRTP, without going through Steps 3 and 4 as needed, for less complex projects where detailed need and alternative studies are not required and sufficient detail is known to list a predictable budget, scope, and schedule on the LRTP and TIP. The Level 2 Form can be completed as early as Step 2, or as late as Step 4, for less complex proposals. In all cases, however, the Level 2 Form must be completed so that all projects are ranked using the same basic information for comparison. The appropriate sections of the Level 3 Form, if used early (as illustrated in "Red" process in Figure 2.1), can document detailed work. It can be used whenever there is further definition needed, and as with all forms, sections can be completed as required. It is not necessary to complete every item for every project. A Level 3 Form is a tool to document additional examination of issues that go beyond the scope of the Level 2 Form.

A. Alternatives Screening. Alternatives are possible solutions for addressing a problem's Purpose and Need. In planning, a multitude of alternatives can be considered for a problem. The goal of alternatives screening in planning is to narrow the alternatives to be considered during the NEPA portion of the Process. Typically, Categorical Exclusions (CE) problems, due to their non-complex nature, have only one alternative. In contrast, more complex problems, such as those determined to require an EIS, must evaluate "a range of reasonable alternatives" including a reasonable range and reasonable number of alternatives carried through the NEPA process. Problems being addressed with an EA must have at least one alternative plus the No Build Alternative, but may include several build alternatives carried through the NEPA process. EA level problems should include an analysis of alternatives considered, but dismissed because they did not meet needs or have unreasonable impacts. It is vital that the level of detail on the Level 3 Form be as complete and accurate as possible.

Problem advocates are required to submit proposed solutions on the screening form and are provided the opportunity on the form to identify any other solutions that have been considered and to justify their dismissal. The PAC has the responsibility for determining if adequate consideration has been given to problem alternatives prior to TIP consideration. All alternatives screening should be completed in accordance with the guidance provided in this section.

Alternatives should be developed with the goal of addressing the problem's Purpose and Need, as well as be able to stand alone (independent utility) with logical endpoints. For problems that have significant impacts and will likely be EIS proposals and projects, it is important to evaluate the following when developing alternatives:

- All reasonable alternatives (considering all modes),
- A reasonable number of alternatives, and
- A reasonable range of alternatives.

Alternatives must include land use considerations to ensure sustainability.

Avoidance and minimization of environmental impacts (natural, cultural, and socioeconomic) is an integral part of the alternatives development process as it follows NEPA principles. Although not in great detail, NEPA, along with other procedural and substantive statutes regulating resources (Section 404 of Clean Water Act, DEP Chapter 105 permit, Section 106 of National Historic Preservation Act, Section 7 of Endangered Species Act, etc.) need to be considered early during alternatives screening. This preliminary consideration along with avoidance and minimization efforts, supports future permitting requirements to help expedite project delivery. It is expected at this stage, the same level of analysis will be conducted as compared to the traditional NEPA phase.

Documentation of the work will advance the Process and can save time in later environmental screening and analysis as part of the NEPA process.

As a problem is being identified and initiated in planning, alternatives can be developed, then screened. These alternatives can include various modes of transportation, multiple corridors, as well as multiple alignments within a corridor.

The decision to eliminate any screened alternatives prior to the project being programmed on the TIP must be fully documented and only be based on one of the two following reasons:

- The alternative does not meet the identified Purpose and Need of the problem and/or
- Upon analysis, an alternative is not a reasonable alternative due to impacts and/or cost.

1. Screening Alternatives Based on Purpose and Need. When the Purpose and Need has been well-defined for a problem, the range of alternatives can be minimized. These alternatives are then carried forward for further examination in the NEPA process. Proper documentation of the Purpose and Need and alternatives screening, including proactive and appropriate public and resource agency involvement in accordance with an MPO/RPO Public Participation Plan is important to ensure that the results of this screening can be relied upon and incorporated into the NEPA analysis. Impacts to all interested and protected (Title VI and Environmental Justice) parties need to be examined.

The American Association of State Highway Transportation Officials (AASHTO) has developed AASHTO Practitioner's Handbook 07 (August 2007) Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects. The handbook can be found on the AASHTO website. PennDOT has its own Publication 319, *Needs Study Handbook*.

Not all alternatives will be able to meet an identified need(s) to the same degree. Some alternatives being considered may be able to meet a particular need better than other alternatives. The degree to which an alternative meets an identified problem need is part of the balancing of the overall decision-making process that occurs later in the Process. Alternatives should not be eliminated in planning simply because they do not meet all needs to the same degree or because they appear too costly without fully exploring all funding sources.

EXAMPLES:

(1) If the purpose of a problem is to provide a transportation improvement in a general traffic corridor, then an alternative that does not serve that corridor would not meet the Purpose and Need and should not be considered.

(2) If the need is to reduce congestion and the problem is in a suburban area, but the population statistics do not meet the current accepted thresholds for rendering bus or transit services economical, then further consideration of these modes would not be necessary.

2. Screening Alternatives Based on Impacts and/or Cost. In addition to screening alternatives that do not meet the Purpose and Need, it may be possible to narrow the range of alternatives by analyzing issues such as environmental impacts and cost. Screening alternatives based on the magnitude of impacts and/or cost requires more detailed data-gathering and analysis, relying heavily on the strength of documentation to justify an alternative being removed from consideration. This documentation will be referenced and be the basis for the start of the NEPA alternatives analysis later in the Process. Documentation should include public and agency input on the significance of impacts and/or cost.

EXAMPLES:

(1) If an alternative for a problem would require known habitat for a federally listed endangered species, this alternative may be eliminated from further consideration if an alternative with lesser or no impact to this resource is identifiable. It is important that this impact be fully documented with coordination information from the U.S. Fish and Wildlife Service (USFWS).

(2) If an alternative requires an additional structure (bridge) of an extended length to span a sensitive waterway or wetland compared to all other alternatives, and that additional structure is estimated to have an extraordinary cost (compared to the costs of the other alternatives), this alternative may be eliminated. The extra cost must be put in context of the total project costs. Does the extra structure double the project cost? Is the extra cost just an additional 5%?

B. Documentation. It is critical to attach all applicable documentation to a Level 2 or 3 Form, or Detailed Studies Report (DSR) if any planning studies are to be incorporated into the NEPA process/documentation. If an alternative is dismissed because it would not address the Purpose and Need, the documentation must show how that decision was reached. If an alternative is eliminated based on an environmental impact considered a particularly severe impact or combination of several severe impacts, documentation needs to establish the nature of that impact and explain that the alternative cannot be refined to avoid or reduce the impact. This documentation is likely to include documentation of the analysis of any considered solutions and/or meeting minutes from PAC meetings, MPO/RPO meetings, and any public or agency input received. Problems warranting more detailed analyses will also have alternatives screening addressed in the Definition Phase.

C. Reducing the Need to Reconsider Previously Dismissed Alternatives in NEPA. Alternatives screened out during the planning process will be less likely to require reconsideration later in the Process if their reasons for elimination are fully documented in the Level 2 or Level 3 Form along with a description of how key federal and state regulatory and resource agencies were engaged in planning decisions that dismissed these alternatives. To further ensure that these alternatives will not need to be reexamined in NEPA, keep the following in mind:

- The quality of information available in planning should be consistent with the level of data typically used to support an alternatives screening decision in NEPA (e.g., environmental, traffic, land use data). In some cases, there will be enough existing data to rely upon, but additional work may be needed to support the decision to dismiss an alternative based on impacts or cost.
- Alternatives should not be dismissed purely because they are less desirable than other alternatives. There are federal and state regulatory standards to alternative acceptability. Under NEPA, alternatives can only be eliminated if they are "unreasonable." If Section 404 of the Clean Water Act, Pa. Chapter 105 regulations, or Section 4(f) of the U.S. Department of Transportation Act applies, then alternatives can be eliminated only if they are "impracticable" or "not feasible and prudent", respectively. These standards need to be considered in planning if likely to be applicable to the problem, or previously screened alternatives may need to be reconsidered in NEPA.

Regulatory and resource agencies should provide agency input during the planning stage, especially if the alternatives being eliminated would have the potential to avoid or minimize impacts to regulated resources under their jurisdiction. For example, if an alternative will impact wetlands, and a wetland avoidance or minimization alternative is being dismissed, it is advisable to consult with the Pennsylvania Department of Environmental Protection (PADEP), the U.S. Army Corps of Engineers (USACE), and the U.S. Environmental Protection Agency (USEPA) before making that decision. Either the avoidance/minimization alternative must be shown to not satisfy the project needs, or the non-wetland impacts of the alternative being dismissed must be severe enough that the resource agencies governing wetlands will agree that this alternative would be impractical in Section 404 of the Clean Water Act terms; otherwise they may have difficulty in issuing a permit for the impacts to wetlands. If this would be determined to be the case later in the NEPA analysis, the previously dismissed alternative may need to be reevaluated. Alternatives can also be dismissed for not satisfying the project need.

D. Public Involvement. Problems have already been discussed at the MPO/RPO level during preparation of the regional LRTP. While extensive public outreach efforts are not anticipated to be added during this phase, the MPO/RPO may decide to incorporate specific public outreach elements in accordance with their Public Participation Plan, for clarity, or as factors affecting the proposal(s) advance or change. Timing and scope of these activities should be determined by the MPO/RPO in coordination with the District. The Level 3 Form is a place to record the dates and documentation of public involvement efforts in support of outreach activities as part of the MPO/RPO Public Participation Plan. Each MPO/RPO is required by federal law to have a Public Participation Plan that outlines the outreach efforts that are utilized in the development of the LRTP and TIP. Publication 295, *Project Level Public Involvement Handbook* provides more information about Public Participation Plans.

E. Agency Involvement. Communication and coordination with resource and regulatory agencies is essential early and often throughout the Process. In the Proposal Initiation Phase, the Level 2 or 3 Form can document agency meetings conducted, as well as discusses any potential mitigation opportunities identified and/or assessed.

F. Conceptual Engineering. The Conceptual Engineering portion of the Level 2 Form (or Level 3 Form if it is in use) is designed to provide key engineering data that is appropriate at this phase in the Transportation Project Delivery Process. Historically, the data in this portion of the form was completed as Part A of the Scoping Field View Form/CE Form. As such, the primary responsibility for completing this portion falls to PennDOT District personnel. Districts may be able to reach agreement with the MPO/RPO as to portions of the Conceptual Engineering section of the form that may be filled out by the MPO/RPO, or may also seek consultant support. The key aspects of the form include the following based on information available at the time:

- Limits of Work
- Right-of-way and utility details, including rail

- Design criteria and design exceptions
- Land use and economic development impacts and update on land use development since Level 2 screening
- HOP status (approved and pending)
- Traffic Control Measures during construction
- Roadway conditions current vs. proposed

Based on the conceptual engineering information, the anticipated NEPA Class of Action can be determined based on the significance of the environmental impacts.

G. NEPA Class of Action Determination. The appropriate Level 2 or Level 3 Form should be forwarded to the District Environmental Manager for a preliminary determination of the class of NEPA action likely to be necessary to achieve environmental approval (i.e., Level CE, EA, or EIS).

Federal actions, including projects that receive Federal aid-funding and/or required Federal approval/permits in any project phase, must comply with NEPA and its associated implementing regulations. NEPA applies to all Federal agencies and the many activities they undertake, regulate, or fund that could affect the environment. It requires Federal agencies to disclose and consider the environmental consequences of their proposed undertakings before deciding a course of action. NEPA also established the Council on Environmental Quality (CEQ), which is charged with the administration of NEPA. The NEPA process consists of a set of fundamental objectives that include interagency coordination and cooperation and public participation in proposal/project development and decision-making. The CEQ promulgated the federal implementing regulations (40 CFR 1500 - 1508) for NEPA, which gave additional details to all federal agencies on how to comply with NEPA. Each federal agency is authorized to implement its own regulations for NEPA. The Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) implementing regulations can be found at 23 CFR 771.

FHWA/FTA NEPA regulations established three Classes of Action, which prescribe documentation requirements for the NEPA process (For more information, refer to Publication 10B, Design Manual Part 1B, *Post-TIP NEPA Procedures*).

- **Class I Actions (Environmental Impact Statements):** Actions that would significantly affect the natural, cultural, and/or human environment require preparation of an EIS. EIS proposals tend to be complex, with substantial impacts to a variety of environmental resources. An example of such an action would be a new limited access highway.
- **Class II Actions (Categorical Exclusions):** Actions that do not individually or cumulatively have a significant environmental effect are categorically excluded from the requirement to prepare an EIS or an Environmental Assessment. The majority will likely be determined to be CEs. Examples include small bridge replacements, intersection improvements, resurfacing activities, minor widenings, construction of bicycle and pedestrian paths, traffic signal installation, and alteration of facilities to make them compliant with the American Disabilities Act (ADA). Additional types that may qualify as a CE can be found in 23 CFR 771.117(c) and (d).
- **Class III Actions (Environmental Assessments):** An Environmental Assessment (EA) is prepared for those problems for which the significance of impacts is not clearly established. More analysis is necessary to determine whether impacts are significant and an EIS will need to be prepared, or whether the environmental analysis can be concluded with a Finding of No Significant Impact (FONSI).

For problems where there will be no major federal action (including federal permits) or Federal-aid funding (100% State-funded in both design and construction), NEPA regulations do not apply. However, in the absence of federal funds or other major federal action, a state Environmental Documentation (ED) would be prepared for proposals that would be considered CEs under NEPA, and an Environmental Evaluation Report (EER) would be prepared for

proposals that would be EAs or EISs to comply with PA Act 120 (71 P.S. §512(a)(15)(b)) and other applicable state laws.

The NEPA class of action is determined based on the significance of impacts to the environment (natural, cultural, and/or human environment); therefore, the potential for each proposal's impacts must be identified. Impacts to the environment can be one of three types:

- **Direct Impacts** - Impacts caused by the action
- **Indirect Impacts** - Impacts caused by the action, but that are later in time or farther removed in distance but are still reasonably foreseeable
- **Cumulative Impacts** - Impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions

Once impacts are assessed for the proposal, the likely significance of the impacts should be considered (40 CFR 1508.27). There is no threshold to apply uniformly to all proposals to determine significance. The context and intensity of the impact(s) need to be examined for each individual proposal.

- Context refers to the setting and helps determine the significance of impacts. Questions to ask include: Is the impact to an entire watershed or limited to a single stream channel? Is the setting rural or urban? Is the impacted environment pristine or already disturbed? The context may need to be looked at from multiple perspectives. Are the impacts significant at a national, regional, statewide, and/or local level?
- Intensity is the degree to which a proposal may affect a resource and is determined through any of the following factors:
 - Adverse and beneficial considerations
 - Public health or safety involved
 - Unique or unusual area of setting
 - High degree of public controversy
 - Uncertainty or a precedent set
 - Land use changes
 - Relocations
 - Impacted historic properties or parklands
 - Threatened or Endangered Species affected
 - Known and substantial cumulative impacts

Input from resource and regulatory agencies, as well as the public, can help determine the significance of impacts.

It should be clearly understood that the preliminary assessment for NEPA documentation is not a binding determination since other factors during the project development process can affect the actual documentation required. Therefore, a generally conservative approach is recommended. Once assigned to a PennDOT project manager, this individual bears the responsibility to review the screening form information and bring any significant changes to the attention of the District Environmental Manager, who shall determine in coordination with FHWA if the class of NEPA action should be changed. Any modifications that arise during the Process that may affect the appropriate level of documentation are to be addressed through an additional scoping field view or appropriate agency coordination activity (i.e., office meeting, telephone conversation, etc.).

H. Multi-Disciplinary Screening Field View. Once the preliminary NEPA class of action determination is made, then a screening field view can be conducted to verify information that is suspect or incomplete, to ensure that other applicable transportation initiatives are being addressed, and gather any additional data deemed necessary to effectively decide if the proposal should be continued into the LRTP and on to TIP/STIP. The multi-disciplinary field view is not mandatory, but should be used when it adds value and promotes the ultimate goal of a more predictable and appropriate budget, scope, and schedule.

Any such field view should involve multiple agencies and/or municipal representatives. In cases where the anticipated level of NEPA action is a Level 2 CE, EA, or EIS, invitees to the field view are to include, at a minimum, the resource agencies that participate in Agency Coordination Meetings (ACM), and FHWA. Additional attendees may also include the project sponsor and/or municipal official at the discretion of the MPO/RPO. Invitations should come from the PAC and include either the Level 3 Forms for the prioritized/shortlisted proposals to be field viewed, or a summary of the key components of the forms including a description of the problem, its location, and any anticipated resource impacts.

The following topics should be reviewed/discussed at the field view:

- *Purpose and Need.* Field view participants should review the Purpose and Needs. The Purpose and Needs can be modified if field view participants decide it is appropriate. More information on needs can be found in Publication 319, *Needs Study Handbook*.
- *Reasonable range of potential solutions to address the needs.* Field view participants should examine the alternative solutions that may have been identified earlier in the Process. Other potential solutions may be identified and discussed at the field view.
- *Resource impacts and mitigation measures.* Field view participants should field verify the presence of potential resources in the area of the proposed alternative and clarify any potential impacts. Mitigation measures to discuss may include the application of the conceptual mitigation measures or proposal-specific measures identified during the field view.

Inviting the resource agencies to the field view is required for CE Level 2, EA, and EIS proposals for the following important reasons:

- Serves as an effective means of moving a conceptual engineering-level proposal directly to LRTP/TIP consideration rather than the Proposal Definition Phase
- Helps verify and clarify resource-related issues
- Satisfies the consultation requirements contained in the federal planning statutes and regulations
- Allows for addressing potential mitigation and/or permitting issues at the earliest possible stage

The resource agencies bear the responsibility for determining if their participation is warranted based on the information from the Level 2 or Level 3 Form provided as part of the invitation. If PennDOT and/or the MPO/RPO desire the participation of a specific agency to address problem-specific issues, direct communication with that resource agency beyond the broader invitation is encouraged.

The screening field view should be documented and included or attached to the Level 3 Form. The minutes of the field view should be attached to the form. If multiple field views need to take place for multiple problems or proposals, a summary of the decisions made for all proposals at each of the field views should be made as an attachment for the minutes. Any changes or additions to information on the Level 3 Form resulting from the field view should be made at this time.

6.2 PROGRAMMING ADVISORY COMMITTEE AND MPO/RPO COORDINATION

The Proposal Definition Phase concludes when the PAC recommends one of the following courses of action to the MPO/RPO and the MPR/RPO concurs with the recommendation:

- Elimination from further consideration (deferred or rejected)
 - Problem is dismissed or considered for a later submission, with original problem advocate notified of action

- Advancement to the LRTP for formal action and adoption
 - Proposal then competes with other TIP candidates in open adoption process according to MPO/RPO Public Participation Plan and adoption schedule communicated to the public, in meetings, and through electronic and paper products, as appropriate

The decision should be made by the MPO/RPO coordinating committee/board, after receipt of a recommendation from the PAC. Issues and comments provided by the resource agencies or other participants in the screening field view should be considered in making the decision. The documentation of this decision should be reflected on the Level 3 Form.

6.3 DETAILED STUDIES REPORT (DSR)

Historically there have been a number of different types of studies done to facilitate the funding and programming of transportation proposals for inclusion as identified projects on the TIP. These include feasibility studies, corridor studies, master plans, safety studies, etc. The content and approaches used in these studies have varied significantly, with a range of values and results. The concept of a DSR is to obtain more uniform and useful information at this stage (Step 4) of the Process, so better decisions can be made regarding proposals considered for the LRTP and TIP. Some of the proposals for which a DSR will be processed will be an EA or EIS, and are therefore relatively complex by nature and may constitute significant investments for study, design, and construction. Other proposals may be less complicated, but have features that warrant further clarification before they can be clearly defined as a potential LRTP/TIP project. Therefore, there is to be some flexibility in the level of detail deemed acceptable for the various components of the document, but the overall content framework should remain consistent.

Given the anticipated complexity of the proposals that enter the Proposal Definition Phase, and the fact that many may go through the NEPA process as an EA or EIS, the decision on how the DSR might be structured or conducted is the responsibility of the MPO/RPO, with a recommendation from the PAC, and the review responsibility over the DSR rests with the PAC, with a recommendation to the MPO/RPO for final approval. FHWA has final approval over the determination of the NEPA class of action to be taken (EIS or EA or CE); therefore, coordination with FHWA is advisable at the time the DSR is being prepared, particularly for those proposals where the significance of impacts and level of controversy may not be obvious.

The scope of the DSR may include any combination of the following topics (or additional topics, as determined) that are the focus of the detailed studies and/or have changed from what was included in the Level 3 Form as a result of the detailed studies:

- Description of the Problem (required)
- Purpose and Need (required)
- Study Area Description
- Alternatives Screening (required)
- Design Criteria (required)
- Environmental Analysis
- Safety Impacts/Crash Analysis
- NEPA Class of Action Analysis (required)
- Anticipated Cost (required)
- Proposed Schedule
- Public and Agency Involvement

The DSR may be prepared by MPO/RPO staff, District staff, or through a consultant contract. Consultants may provide services relating to the collection and analysis of data. Close coordination among all parties is encouraged as the approved report will be included with the Level 3 Form. The PAC recommends action to defer, modify, or advance it as a candidate project for the LRTP/TIP after completion of the activities. The MPO/RPO takes the formal action to adopt the LRTP/TIP in Step 5.

As a general rule, the DSR should contain all collected information on the proposal as described in the Level 3 Form, followed by the more detailed studies completed during the Proposal Definition Phase. Additional categories of study not identified above may be added if warranted by problem-specific issues.

If the focus of the DSR includes further clarification of Purpose and Need, Publication 319, *Needs Study Handbook* should be followed. Coordination with the MPO/RPO, the problem advocate, and appropriate stakeholders, including local officials, is recommended. The enhanced Purpose and Need is to be an integral part of the coordination efforts with PennDOT, FHWA, and the general public and resource agencies in accordance with an approved Public Participation Plan. It will also be a major factor in helping to better define the limits of the study area and the range of alternatives.

If the scope of the detailed studies is to further define the study area, focus should be on the proposal's logical termini and the identification of any natural resource or man-made conditions that act as physical limits for a study area (i.e., large water bodies, mountains, existing developments, designated growth areas, etc.). Resource agency coordination through ACM or on an individual agency basis may prove effective in helping to identify natural and cultural resources that may help refine study area limits as preliminarily determined through the definition of needs. Similarly, coordination with municipal and/or county planners and the general public can aid in the identification of key man-made factors or resources that may limit the extents of a reasonable study area for alternatives.

If alternatives are being further evaluated as part of the DSR, those alternatives identified in the screening form should be examined, as a minimum expectation. In addition, a full range of modal alternatives should be considered and evaluated (most often with EIS level, not lower levels of environmental approval). Once the appropriate modes are determined, a reasonable range of alternatives that can be accommodated within the proposed study area should then be considered and evaluated. Detailed guidance on the development and analysis of alternatives is found in Section 6.1.A. Ample opportunity for public and resource agency input must be provided to eliminate unreasonable alternatives from further analysis prior to formally entering the NEPA process. Publication 295, *Project Level Public Involvement Handbook* and the applicable MPO/RPO Public Participation Plan should be referenced in the identification of appropriate measures for outreach efforts. All MPOs and RPOs have an approved Public Participation Plan. It is a Federal requirement to periodically review the effectiveness of the procedures and strategies contained in the Public Participation Plan to ensure full and open participation.

If design criteria are being further studied, the evaluation should include a review of the primary design criteria that apply, and an analysis of the advisability of any proposed design exceptions. The intent of this study is not to evaluate every applicable design criteria, but to identify and evaluate those that could have the most significant impact on the study area limits, range of alternatives, and costs. The conclusions should identify any recommended exceptions to key design criteria that should be applied. Coordination with FHWA is recommended.

If further environmental analysis was determined to be needed, the DSR should include a summary of what had been identified in the Level 3 Form and all additional study and analysis that is performed in detailed study. Resource agency representatives should be coordinated with as appropriate. Detailed, field-based mapping of resources is not anticipated at this stage in the project delivery process, although alternative-specific rationale may warrant such mapping and analysis for key resources. Decisions on the level of detail that should be applied to this study are to be based upon any applicable PennDOT guidance or determined by the Project Manager in consultation with the PAC. For instance, in terms of potential wetland impacts, detailed, field-based delineation and survey of all wetland boundaries within the DSR study area is not anticipated to be required. Some field-based delineation of critical areas may be necessary as determined by the Project Manager. However, it is expected that most areas can be addressed through secondary data collection, windshield surveys, and/or professional judgment procedures. Therefore, qualitative and/or broadly quantitative analysis may be completed as part of the DSR, with survey-based quantitative analysis potentially deferred until the NEPA investigations at the discretion of the Project Manager and PAC. Once the resources with the highest potential for impact are identified, the DSR should address resource avoidance and minimization opportunities as well as provide conceptual mitigation opportunities.

If evaluation of safety impacts and crash analysis is specified as part of a DSR, then the DSR should include a summary of any safety analysis performed for the Level 3 screening. The DSR should also include additional detailed analysis of the safety performance of the existing condition and/or any alternatives (in the event of alternative analysis) under consideration. Any safety/crash analysis that is performed as part of a DSR should be completed per Publication 638, *District Highway Safety Guidance Manual* using the *Highway Safety Manual* methodologies.

All DSRs should review and confirm the most likely NEPA class of action to be taken, and the associated documentation for the project as it would be programmed on the TIP. Guidance to determine a NEPA class of action is found in [Section 6.1.G](#). The rationale for making the determination should be clearly presented in the DSR. Again, coordination with FHWA is recommended.

DSR cost estimates should incorporate year of expenditure. As such, this would be an update of the information presented in the Level 3 Form. The methodologies for preparing the cost estimate should be presented in the chapter and must be reviewed with the MPO/RPO and PennDOT District before the draft DSR is finalized. (Cost estimation guidance is provided by the Department as it is updated.)

The DSR should discuss the proposed schedule and whether conclusion of the detailed studies affected the schedule that had been identified previously in the Level 3 Form. The schedule should take into account the anticipated complexity of design and permitting, relative priority and funding availability, the projected class of NEPA documentation, and any other major factors as identified in this phase. The schedule should be reflected in the year of expenditure costing as described above.

Any additional public involvement and agency coordination that has taken place as part of the detailed studies should be documented as part of the DSR. These activities shall be completed in accordance with the applicable MPO/RPO Public Participation Plan and Publication 295, *Project Level Public Involvement Handbook*.

Applicable reference materials are to be attached as appendices of the DSR. The DSR as approved by the PAC must then be attached to the Level 3 Form and returned to the MPO/RPO with a recommendation for action. Meeting minutes or summaries for activities undertaken during this phase shall also be appended to the screening form.

6.4 RESOURCE AGENCY COORDINATION

Adequate agency coordination during the Proposal Definition Phase is as important as public involvement activities to minimize duplication of effort in future phases of the project delivery process. Resource agency coordination is to be conducted through the ACM process as coordinated through the Bureau of Project Delivery, Highway Delivery Division, Environmental Policy and Development Section. However, this does not preclude resource agency coordination outside the ACM when deemed to be appropriate. Anticipated CE proposals processed through the Proposal Definition Phase are to be presented to ACM as appropriate, with the input received documented in the DSR. Other proposals (EA and EIS) should be presented to ACM at least once during the development of the DSR, or twice if the PAC deems appropriate after review of the pre-draft DSR. Other ACM presentations may be required when interim studies are finalized on key issues as identified by the agencies at the initial meeting. ACM presentations, which are provided for resource agency informational purposes, should focus on the most critical issues addressed in the DSR. Documentation of the comments received by the agencies is to be appended to the report along with a response to the comments.

6.5 PUBLIC OUTREACH

It is clearly the intent of the Proposal Definition Phase that elements of the planning process as outlined should be conducted in such a manner that the outcomes be usable in subsequent NEPA analyses with minimal duplication of effort. Any public outreach should be reflective of the anticipated level of local controversy and/or the expected level of NEPA action and documentation, and should be prescribed in the MPO's/RPO's Public Participation Plan. Publication 295, *Project Level Public Involvement Handbook* can serve as an important reference for the identification of appropriate outreach activities. Additional outreach efforts may include newsletters, additional meetings, websites, and any other activities that have proven locally effective in obtaining input from the general public.

6.6 ROLE OF FHWA

FHWA's role is an advisory one throughout the Proposal Definition Phase, as the proposals being evaluated do not become federalized projects until they are officially approved in the TIP/STIP. Keep in mind, however, that once the project moves into the NEPA phase (Step 6, Publication 10B, Design Manual Part 1B, *Post-TIP NEPA Procedures*), FHWA will be involved. Their involvement and/or awareness during the planning process (Steps 1 to 5) will help to ensure that decisions made in planning can be carried forward effectively and used directly in the NEPA decision-making process.

6.7 STEP 4 SUMMARY

The transition from this step does one of three things: moves the project to Step 5 TIP inclusion with appropriate LRTP listing; defers funding to a later year or illustrative list in the LRTP for later TIP consideration, or restructures the proposal into smaller segments (e.g., a planning study for a corridor that moves part of the proposal to LRTP/TIP, and another to the LRTP for later inclusion).

A. Products.

1. Completed Detailed Studies Report (DSR) as applicable
2. Documentation of refined budget, scope, and schedule
3. Decision to defer the proposal, advance the proposal for LRTP/TIP inclusion, or restructure the proposal
4. List of LRTP/TIP projects that are less complex (blue process) are advanced to Step 5 for final ranking and TIP inclusion

B. Future Use of Products. The DSR is used to document data collection, analysis, and more complex environmental studies, and can be used to meet NEPA requirements. The revised estimates are used in TIP development and are part of the approval. The decisions made by MPO/RPO after consultation with the PAC determine the next steps and use of the DSR and related documents. The DSR is a valuable tool in preliminary engineering and formal NEPA processes in Step 6.

C. Step 4 Proposal Definition for Asset Management and Less Complex Projects:

- PennDOT and MPO/RPO collaborate on specific data finalizing TIP projects, and placement in the TIP phase of the LRTP or out years and/or as part of an illustrative list
 - PennDOT provides asset management screening information on engineering and environmental issues
 - MPO/RPO provides contextual information

D. Step 4 Proposal Definition Activities for Proposals Requiring More Study:

- MPO/RPO initiates activities to further study a proposal by:
 - Placing the proposal on the TIP as a study
 - Employing MPO/RPO or PennDOT staff or consultant staffing to refine information and define projects through alternatives analysis
 - Determining funding source
- PAC receives study results and recommends course of action to MPO/RPO

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CHAPTER 7

STEP 5: PROJECT IDENTIFICATION IN TIP/STIP

7.0 INTRODUCTION

The development of a regional Transportation Improvement Program (TIP) by an MPO/RPO is part of formal creation of a Statewide Transportation Improvement Program (STIP).

The official state programming document is the Twelve Year Program (TYP). The development and update of this program is guided by Act 120 of 1970 (71 PS, §512) which established the State Transportation Commission (STC) and its related duties and responsibilities. The STC adopts the TYP. The STIP is actually the first four years of three, four-year segments (e.g., the TYP that covers 2011-2022 includes the STIP for 2011-2014).

The official federal programming document is the STIP, which includes the MPO and RPO TIPs. MPOs are mandated to establish and carry out a cooperative, continuous, and comprehensive planning process in order to meet various planning and programming responsibilities that were established in legislation, like the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and the Clean Air Act. The MPOs develop and approve the TIPs. The Governor or his designee (currently the Secretary of the Pennsylvania Department of Transportation) must also approve the metropolitan TIPs and submit the entire STIP to the US Department of Transportation for approval.

The STIP also includes projects from the rural parts of the state. PennDOT and the RPO are jointly developing and approving rural TIPs. Therefore, for transportation planning and programming purposes, RPOs are presently functioning as MPOs. The Governor or his designee also approves these rural TIPs, as well as the overall STIP.

Partners in this planning effort include:

- State Transportation Commission
- Pennsylvania Department of Transportation on behalf of the Governor
- Metropolitan Planning Organizations and Rural Planning Organizations
- Public transportation agencies across the Commonwealth
- Pennsylvania Turnpike Commission
- Pennsylvania Department of Environmental Protection*
- U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration) and
- U.S. Environmental Protection Agency (EPA)*

*State and federal environmental agencies participate in assessing air quality impacts

Interested parties include:

- Citizens
- Affected public agencies
- Representatives of public transportation employees

- Freight shippers
- Providers of freight transportation services
- Private providers of transportation
- Representatives of users of public transportation
- Representatives of users of pedestrian walkways and bicycle transportation facilities
- Representatives of the disabled
- Agencies or entities responsible for safety/security operations
- Providers of non-emergency transportation services receiving financial assistance from a source other than title 49, U.S.C., Chapter 53

7.1 PURPOSE

The MPOs/RPOs are mandated by federal law and regulations to establish and carry out a cooperative, continuous, and comprehensive planning process to meet various planning and programming responsibilities established by legislation. The purpose of the TIP/STIP process is to select transportation improvements with the greatest benefit to the Commonwealth and individual counties/regions; and give all partners the flexibility to more effectively choose and approve the best mix of projects that meet their own varied needs. Transportation system preservation and management continues to be the highest priority in Pennsylvania and the individual MPO/RPO programs should emphasize asset preservation and management.

Asset management involves extending the life of existing facilities and their associated equipment and hardware or the repair of damage that impedes mobility or compromises safety; while, system management involves improving the reliability, safety, traffic flow, and security of existing facilities and their associated equipment and hardware. It is anticipated and recommended that at a minimum, at least 90% of an MPO/RPO's program resources be dedicated to system preservation including 85% of bridge improvement resources directed toward addressing structurally deficient bridges, unless otherwise approved. Exceptions may be made to this rule based on performance. Goals can change in later years, and will be shared.

For the purpose of PennDOT planning, a detailed listing of projects should be completed to cover the TIP (four years) plus two years outside that horizon, referred to as TIP-plus 2. The planning for the additional years allows for quick integration of projects that might be outside the expected funding level, but still important enough to be advanced quickly if planned projects are not programmed or bid.

The linkage between land use (existing and planned) and transportation decision-making will be a continuous and evolving process, with PennDOT's Office of Planning committed to being a champion for change based on success of planning efforts at the municipal, county, multi-county, MPO/RPO, or inter-planning organization levels.

This linkage is not permanently or rigidly defined. It can take many forms, including supporting in-fill, access management, brownfield or grayfield site development, implementing projects that enhance business opportunity zones, helping blighted communities with transportation projects/services, encouraging collaboration among governments, or coordinating with the Governor's initiatives. Existing gubernatorial initiatives and principles should be considered in the establishment of program priorities and included as part of project selection criteria.

Planning and programming efforts should achieve the tenets in state Act 120 and the federal transportation laws and regulations and achieve the goals and objectives expressed in the Commonwealth's Long Range Transportation Plan, in municipal and/or county comprehensive plans, county/regional long range transportation plans, in bicycle/pedestrian plans, greenway plans, and other key documents.

The keys to success include:

- Drawing candidate major capital and/or air quality non-exempt problems from existing long range plans for inclusion in the transportation program;
- Implementing processes and procedures that enhance State, MPO/RPO fiscal constraint with regard to long range planning and short range programming;
- Encouraging and promoting the development of a joint agency and public participation strategy;
- Continuing to share problem-specific data, especially as it relates to candidate problems that are not included on current long range plans or programs.

7.2 COORDINATION OBJECTIVES

The importance of coordination activities and communication throughout the Process cannot be overstated, but at this point in the Process, with the end product of a cohesive STIP close, the following activities are vital:

- Adopt a final schedule for the update of the transportation program in conjunction with planning partners and communicate it clearly to all parties.
- Gain local approval of MPO and RPO TIPs that permits air quality conformity analysis in a timely manner and reasonable public comment.
- Adjust planning and programming process(es) as quickly as possible, by reacting to new state and federal initiatives and any other changing circumstances expediently.
- Develop the STIP and MPO/RPO TIPs among all partners and interested parties through a continuing and collaborative process, based upon mutual trust, open communication and cooperation leading toward consensus.
- Share business plans, project and program data bases among all parties.
- Ensure that proposals are consistent with the county and/or regional comprehensive and long range transportation plans.
- Recognize the need for MPOs/RPOs to reserve funds in a line item for advanced studies (Purpose and Need, scoping, etc.) on the more environmentally complicated proposals before they are added to a TIP. Accordingly, budgets, scopes, and schedules must be appropriate for the area's economic, environmental, and social conditions.
- Coordinate the transportation programming process with the providers of all modes of transportation.
- Manage the interstate system on a statewide basis, encouraging planning partners and the District Offices to identify and comment on the interstate problems through the development of the TIPs. PennDOT will manage the interstate system on a statewide basis.

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7.3 PUBLIC PARTICIPATION OBJECTIVES

Public participation activities which began in Step 1 or Step 2 of the Process continue to be important, including the following objectives:

- Continue to conduct meaningful public outreach and involvement activities as documented in the planning partners' public participation plans.
- Meet all federal and state mandates, including Title VI and environmental justice requirements.
- Coordinate all public involvement activities among all affected partners and consolidate activities to avoid overlap and confusion. (e.g., conduct joint STC/MPO/RPO public hearings to gather early input to the program development process)
- Make each TIP available for public comment, before final adoption; each TIP should show:
 - Highway and bridge Programming Project listing (public version with long narratives)
 - Public transportation Programming Project listing (public version with long narratives)
 - Public transportation financial capacity analysis (MPOs only)
 - Air quality conformity determination report in non-attainment and maintenance areas only
 - Draft TIP modification procedures
 - Environmental justice (EJ) analysis (community profiles and methodology)
 - Public participation plan
 - TIP project prioritizing process.
- Establish a formal public comment time period (minimum 30 days), and planning partners conduct a public meeting or hearing to gather any comments/concerns on the TIP and related documents.
- Provide easy and complete access to all public documents, including the draft and final.
- TIPs, STIP and Twelve Year Programming Project listings, taking particular advantage of electronic communications and access where possible.

7.4 FINANCIAL GUIDANCE

Jointly developed and approved financial guidance will be established, to set funding targets for each MPO, RPO, public transportation operator, and PennDOT. The guidance will provide sufficient information for the affected partners and interested parties to begin to identify issues, negotiate, and reach consensus on their portion of the Program.

The financial guidance is important throughout the Process, but especially in Step 5 when the TIPs are finalized, taking into account prioritized proposals and the available funding sources, so that appropriate matches are made and projects advanced that support planning done by municipal, county, and regional planning organizations.

All projects will be based on cost estimate projections for the expected "year of expenditure." Phases of projects will be placed in the STIP appropriately by year, by available funding, and within the bounds of the financial guidance.

PennDOT will provide the MPO/RPOs with growth rates and a methodology for determining an inflation rate in the Financial Guidance so that TIPs are consistent.

The project delivery process outlined herein is designed to meet many of these requirements, but PennDOT also issues guidance for each TIP update cycle to help ensure that the full set of federal and state requirements are met. The contents of this handbook provide a broad overview for a TIP development process to go along with any separate guidance provided by PennDOT specific to a current TIP update cycle.

PennDOT and FHWA develop a completeness checklist at the beginning of the TIP update cycle to be sure that all the MPOs/RPOs submit the necessary information for eventual approval of the TIP/STIP. Therefore, a checklist for this phase is not included in this handbook as the requirements may change between TIP update cycles, due to adjustments in federal or state requirements and programs. These materials are mandated in order to satisfy all federal and state planning and programming rules and regulations, and to provide written documentation that the MPO/RPO has an adopted prioritization process.

PennDOT will assist MPOs/RPOs in the identification of projects or project phases that are not fully funded in the four years of the TIP, and need to be carried over and shown in the last eight years of the 12-Year Program and the MPO/RPO LRTP.

7.5 STEP 5 SUMMARY

Step 5 results in an updated LRTP and TIP that is predictable in budget, scope, and schedule, and that provides the Commonwealth with a program that is fiscally constrained, environmentally responsible, contextually appropriate, and sustainable by the community.

Those projects that are not included on the TIP are candidate projects in the TIP+2 time frame, and form the basis of a "shortlist" of projects that could be advanced in a short time frame. Projects that have been examined at Level 2 Form detail, or even Level 3, should retain information from the activities of the Process so that in the next TIP update or LRTP update, that information might be useful to the next planning group.

A. Products.

1. Updated LRTP showing TIP projects list
2. New illustrative list or list for the LRTP in out years
3. DSR or other report package to be handed to environmental practitioner for NEPA process
4. Engineering and environmental data that will be used by project designers

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