

COOPERATION, COMPROMISE, AND CONSENSUS

Pennsylvania's Approach to Developing Transportation Improvements

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Pennsylvania's integrated project development process provides for the protection of environmental resources. This wetland mitigation site replaced habitat affected by construction of I-476 ("Blue Route") seen in background.

During the development boom of the 1950s and 1960s, state departments of transportation envisioned "progress" in terms of providing sound engineering solutions to transportation problems. Unfortunately, this focus sometimes resulted in highways built with too little regard for the natural, cultural, and socioeconomic resources that lay within the proposed right-of-way. In the past two decades, numerous laws have been passed to protect environmental resources from the negative effects of development.

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State Departments of Transportation now recognize that the effects of transportation development reverberate beyond the shoulders of the road to influence wildlife, water quality, and air quality—even the quality of life in nearby neighborhoods. The contribution of the Pennsylvania Department of Transportation (PennDOT) to progress in the 1990s and beyond is to provide safe, efficient, and environmentally responsible transportation systems that are also responsive to the concerns of surrounding communities.

Translating this philosophy into practical action has entailed the adaptation of established engineering procedures to comply with stricter regulations for assessing the environmental consequences of federal actions. Under the National Envi-

ronmental Policy Act (NEPA) of 1969, a state DOT must prepare an Environmental Impact Statement (EIS) for any federally funded transportation improvement project that could significantly affect natural, cultural, or socioeconomic resources. The EIS is a comprehensive assessment of a project's impacts, but approval of the document does not constitute an all-encompassing environmental clearance. Depending on the resources affected, the state DOT also may be required to obtain a variety of permits from federal or state regulatory agencies before proceeding to construction. The EIS and permit preparation efforts have required increasingly extensive coordination with federal and state resource and regulatory agencies. Adding to the complexity of the environmental review process,



Agency Coordination Meetings focus on interactive discussion and consensus.

NEPA also mandates wide-ranging public involvement in decision making.

Thus, a thorough approach to project development involves the integration of environmental analysis and engineering design and collaboration among the state DOT, the Federal Highway Administration (FHWA), federal and state resource and regulatory agencies, local elected officials, and the general public.

PennDOT has consolidated its procedures for preliminary engineering design and environmental impact studies into a 10-step Transportation Project Development Process. Emphasizing the need to build consensus on sensitive environmental and community issues, PennDOT has provided ample opportunity for active agency and public involvement throughout the process. Presented in this article is a brief overview of PennDOT's process, highlighting the pivotal role of Agency Coordination Meetings (ACMs) in fostering cooperation and consensus.

New Emphasis on Coordination

In the 1960s, PennDOT's Bureau of Design formulated a six-volume *Design Manual* (1), which still serves as the procedural manual for the engineering aspects of the state's highway and bridge improvements, from preliminary and final design

to construction. Because it predates NEPA and its spin-off legislation, the *Design Manual* offers no guidance on compliance with environmental regulations and permitting procedures.

In 1982, PennDOT issued its first comprehensive set of guidelines for preparing an EIS. For the rest of the decade, two distinct sets of procedures guided the preliminary design of improvement options and the assessment of impacts on the environment. Neither of these incorporated structured agency or public coordination programs. Too often, consultation with the environmental resource and regulatory agencies was limited to the minimum required under NEPA: review of a draft EIS. Permit applications were prepared in accordance with state and federal laws late in the process, usually after final engineering design was already under way.

Recognizing the need for ongoing coordination with the agencies, as well as early preparation for addressing permitting issues, PennDOT instituted its ACM in 1989. Every month, the ACM gathers PennDOT administrators and project teams, FHWA representatives, and participants from the following state and federal resource and regulatory agencies:

- U.S. Army Corps of Engineers
- Environmental Protection Agency
- U.S. Fish and Wildlife Service

- Pennsylvania Department of Community Affairs
- Pennsylvania Department of Environmental Resources
- Pennsylvania Historical and Museum Commission
- Pennsylvania Game Commission
- Pennsylvania Fish and Boat Commission

Agency representatives at ACMs act as advisors, guiding PennDOT's project teams in developing environmentally sensitive transportation improvements. Working closely with these representatives throughout preliminary design and EIS studies, project teams can resolve a wide range of environmental issues that often mired past transportation improvement efforts in conflict. The goals of the ACM are to

- Promote effective communication between project teams and the agencies;
- Identify sensitive resources that may be of concern to the agencies before alternatives are developed;
- Identify appropriate study methodologies and requisite documentation;
- Enlist agency assistance in carrying out environmental investigations; and
- Resolve environmental issues early in the EIS process, well before permit applications are submitted for formal action.

An ACM takes place every month at a convenient location in the state capital of Harrisburg. Project teams are required to make presentations at ACMs at critical stages in the project development process. Discussions, moderated by the meeting chairman, follow each project presentation. Unlike typical question-and-answer sessions, these discussions are open forums in which the Department and the agencies often reach important agreements about the direction of a project. Agencies may request additional information to clarify certain aspects of a project presented at the ACM. From the discussion, Project Team representatives compile their own lists of follow-up items to be completed by the next scheduled ACM or within some other time frame agreeable to all concerned parties. PennDOT personnel also prepare official ACM minutes to

record topics discussed and understandings reached at each meeting.

Evolution of an Integrated Project Development Process

In establishing the ACM forum, PennDOT laid the foundation for the 10-step Transportation Project Development Process presented in a handbook for EIS projects (2), which was released in August 1993. This process is the culmination of PennDOT's efforts to merge engineering and environmental procedures into a cohesive set of operating guidelines. It incorporates elements of the Integrated NEPA/404 Process developed by a federal multiagency task force. As a result of the July 1992 interagency agreement, the U.S. Army Corps of Engineers (USACOE) now accepts an EIS as background documentation for the Section 404 permit application, and uses the Department's public hearing on an EIS as a public forum for Section 404 concerns. This enables the Record of Decision and the Section 404 permit to be issued concurrently, expediting project development. The ACM allows PennDOT to expand on the integrated NEPA/404 process by addressing the concerns of a wide variety of permitting and reviewing agencies early in the project development process.

The 10 steps in PennDOT's Transportation Project Development Process are

1. Internal Administrative Activities;
2. Agency and Public Scoping;
3. Analysis and Review of Project Needs;
4. Preliminary Alternatives Development and Review;
5. Detailed Alternatives Development and Review;
6. Draft EIS Preparation and Distribution;
7. Comments, Analysis, and Coordination;
8. Final EIS Preparation and Circulation;
9. Record of Decision; and
10. Mitigation Report.

Presented in Figure 1 is a simplified visual-

ization that highlights the important steps in the process. This process provides a systematic, collaborative decision-making framework that fosters an environmentally sensitive engineering approach and promotes consensus among agencies and the public. Some of the key techniques for achieving these goals are described as follows.

Agency and Public Scoping (Step 2)

Based on FHWA's scoping procedures, this step provides an opportunity for early identification of potentially complex or controversial issues. Early agency coordination aids in determining the scope of

the study, the level of analysis, the study team participants, and the various technical requirements necessary to carry out the project. Because public support is just as influential in advancing projects as agency concurrence, it is essential to encourage public involvement in the early stages of development. Therefore, the Project Team makes its first appearance at the ACM in Step 2, and a public meeting is held to introduce the study to local residents.

Comprehensive Needs Analysis (Step 3)

The project team evaluates existing transportation conditions in the study area and forms a picture of potential future traffic conditions based on plans for commercial, industrial, and residential development. Studies are conducted to identify current and anticipated problems that must be solved or deficiencies that must be corrected in order to provide safe, efficient transportation facilities. A summary of the evaluation of needs is presented at an ACM.

Environmental Overview (Step 4)

In the past, alignments were often drawn first, and sensitive features in the vicinity were identified later. Through coordination with agencies, local officials, and residents, the project team locates natural, cultural, and socioeconomic resources in the study area before engineering studies begin. Engineers can focus on avoiding and minimizing impacts to sensitive features from the outset, limiting the amount of refinement and modification needed during detailed design efforts. Consultation with the agencies throughout alternatives development averts potential controversies, repetition of studies, and costly delays.

Two-Step Approach to Alternatives Development and Review (Steps 4 and 5)

In Phase 1, engineers develop a wide range of preliminary improvement alternatives. These are evaluated for feasibility,

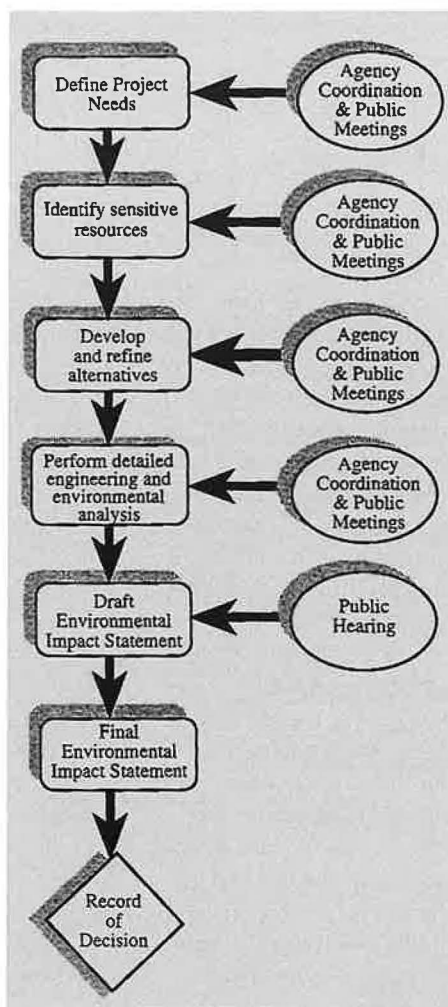


FIGURE 1 Major stages in PennDOT's Transportation Project Development Process.

effectiveness in satisfying recognized needs, and sensitivity to the environment. The project team presents these alternatives and a full preliminary assessment of their impacts at an ACM and a public meeting. Based on the results of the analysis and input from agencies and the public, the project team narrows the range of alternatives to be studied further. Working with the alternatives that "passed" preliminary analysis, engineers modify designs to avoid or further minimize environmental impacts. As in preliminary alternatives development, each option undergoes rigorous evaluation, and agencies and the public review and comment on the modified plans. On the basis of input from all interested parties, the project team further refines the alternatives. Typically, only detailed alternatives are evaluated in an EIS.

Early Preparation of Permit Applications (Step 6)

In keeping with the integrated NEPA/404 process, PennDOT works closely with USACOE on projects involving impacts on wetlands and other water resources. PennDOT's Transportation Project Development Process is structured to facilitate concurrent preparation of the Section 404 permit application and the EIS. The ACMs provide ample opportunity for project teams to consult other permitting authorities about study methodologies, documentation requirements, or even the identification of affected resources.

Promoting Effective Communication and Building Consensus

The ACMs have fostered a close working relationship between the Department and the agencies, who are invited to become active participants in the development and evaluation of projects. Depending on agency time constraints, some representatives sometimes take a "hands-on" approach to assisting with environmental studies. They have gone out in the field with project teams to delineate wetlands,



PennDOT encourages citizens to actively work with project teams in developing transportation improvements.

find species in their natural habitats, assess historical resources, and perform a host of other resource investigations. Thus, agency expertise has enhanced the quality of the Department's environmental studies.

Such cooperation strengthens the agencies' confidence in the Department by providing solid proof that project teams take their responsibility to the environment seriously. This is the first step in building consensus among the agencies. Likewise, meaningful interaction is the key to gaining the trust of those who would be affected by a project. The process provides frequent opportunities for the public to review the Department's efforts, to identify their needs as transportation consumers, and to express their concerns as members of affected communities. Public meetings are held throughout the scoping, needs analysis, and alternatives development steps of the process, and newsletters are distributed to interested citizens to keep them informed of the latest project developments. These public involvement techniques encourage effective communication, which allows the Department to diffuse potential controversies and prevent confrontations that could block consensus.

Consensus is commonly defined as a

majority opinion; however, the process does not include a formal polling mechanism for quantifying support for or opposition to any aspect of the project. For the purposes of this process, consensus denotes a general, sometimes conditional, agreement that agencies and the public accept the project team's conclusions, findings, or recommendations as valid based on information gathered up to that point. Within the 10-step process, a project team formally evaluates its efforts to build consensus among agencies and the public at five critical stages of project development:

1. Project purpose and need (after Step 3),
2. Alternatives to be carried forward into detailed study (after Step 4),
3. Alternatives to be evaluated in the draft EIS (after Step 5),
4. Alternative selected for implementation (after Step 7), and
5. Appropriate measures to minimize environmental impacts (after Step 8).

If any agency or public concerns remain unresolved at these points in the process, the project team must consider performing additional studies to address them. It may be appropriate to employ formal conflict

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