The Role of the Environmental Review Process in Federally Funded Highway Projects: Background and Issues for Congress

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Summary

Under programs administered by the Department of Transportation's (DOT's) Federal Highway Administration (FHWA), certain highway and bridge projects may be eligible for federal funding. Project approval and the receipt of federal funds are conditioned on the project sponsor (e.g., a local public works or state transportation agency) meeting certain standards and complying with federal law. Activities necessary to demonstrate compliance with those requirements may be completed at various stages of project development. Although the names of each stage may vary from state to state, project development generally includes the following: planning, preliminary design and environmental review, final design and rights-of-way acquisition, construction, and facility operation and maintenance.

When there is debate over the time it takes to complete federal highway projects, the environmental review stage has been a primary focus of congressional attention concerning legislative options to speed project delivery. The current process includes activities necessary to demonstrate that all potential project-related impacts to the human, natural, and cultural environment are identified; effects of those impacts are taken into consideration (among other factors such as economic or community benefits) before a final decision is made; the public is included in that decision-making process; and all state, tribal, or federal compliance requirements applicable as a result of the project's environmental impacts are, or will be, met.

Compliance requirements depend on site-specific factors, including the size and scope of the project, and whether and to what degree it may affect resources such as parks, historic sites, water resources, wetlands, or urban communities. For all proposed federal-aid highway projects, however, some level of review will be required under the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. §4321 et seq.). Broadly, NEPA requires federal agencies to consider the environmental effects of an action before proceeding with it and to involve the public in the decision-making process.

The time it takes to complete the NEPA process is often the focus of debate over project delays attributable to the overall environmental review stage. However, the majority of FHWA-approved projects require limited documentation or analyses under NEPA. Further, when environmental requirements have caused project delays, requirements established under laws other than NEPA have generally been the source. This calls into question the degree to which the NEPA compliance process is a significant source of delay in completing either the environmental review process or overall project delivery. Causes of delay that have been identified are more often tied to local/state and project-specific factors, primarily local/state agency priorities, project funding levels, local opposition to a project, project complexity, or late changes in project scope. Further, approaches that have been found to expedite environmental reviews involve procedures that local and state transportation agencies may implement currently, such as efficient coordination of interagency involvement; early and continued involvement with stakeholders interested in the project; and identifying environmental issues and requirements early in project development.

Bills in the House and Senate (the American Energy and Infrastructure Jobs Act of 2012 (H.R. 7) and Moving Ahead for Progress in the 21st Century (MAP-21; S. 1813)) would reauthorize DOT programs. Both include provisions intended to expedite project delivery by changing elements of the environmental review process, particularly NEPA requirements. This report provides information on existing NEPA and environmental review requirements, particularly requirements that may be subject to change under the House and Senate proposals.

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Introduction

Under programs administered by the Department of Transportation's (DOT's) Federal Highway Administration (FHWA), certain highway and bridge projects may be eligible to receive federal-aid funding.[1] As a condition of receiving those funds, a project sponsor (e.g., a local or state transportation agency) must meet certain standards and requirements applicable to activities completed at every stage of project development. Although the names of those stages may vary somewhat from state to state, those stages generally include initial project planning, preliminary design/engineering and environmental review, final design and rights-of-way acquisition, construction, and facility operation and maintenance.

Each stage of project development is initiated and completed largely at the state or local level, with FHWA having ultimate responsibility for ensuring that individual projects comply with requirements applicable to federal-aid highways.[2] Also, each development stage involves a range of activities that will affect the time it takes to deliver the project. Required elements of the preliminary design and environmental review stage will vary by project, but generally include processes necessary to identify and demonstrate compliance with environmental requirements applicable to that project.

When there is debate over the time it takes to complete federally funded highway projects,[3] particularly debate over activities that may expedite or delay project delivery, various elements of the environmental review stage of project development have been the focus of attention. However, whether or the degree to which elements of that process may delay projects is unclear.[4]

The two most recent laws authorizing DOT programs included requirements intended to expedite the environmental review process that focused primarily on procedures necessary to demonstrate compliance with the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. §4321 et seq.).[5] Current legislation to authorize DOT programs in the House and the Senate (the American Energy and Infrastructure Jobs Act of 2012 (H.R. 7) and Moving Ahead for Progress in the 21st Century (MAP-21; S. 1813)) also include provisions intended to expedite project delivery that focus primarily on the NEPA process.[6]

[1] This report focuses on projects approved under programs administered by FHWA. Although they involve similar regulatory requirements, issues unique to transit projects approved under programs administered by the Federal Transit Administration (FTA) are not addressed in this report.

[2] Those requirements are largely established under Chapter 1, "Federal-aid Highways," of Title 23, "Highways" of the *U.S. Code*.

[3] In this report, reference to "federal-aid highways," "federal highways," or "federal highway projects" means projects that may receive federal funding pursuant to the Federal-aid Highways provisions of Title 23. Those projects include, but are not limited to, the initial construction, reconstruction, replacement, rehabilitation, restoration, or other improvements of a highway, road, street, parkway, right-of-way, bridge, or tunnel.

[4] See CRS Report R41947, *Accelerating Highway and Transit Project Delivery: Issues and Options for Congress*, by (name redacted) and (name redacted).

[5] The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU or SAFETEA; P.L. 109-59, for FY2005-FY2009) and the Transportation Equity Act for the 21st Century (TEA-21; P.L. 105-178, for FY1998-FY2003).

[6] H.R. 7 was reported favorably by the House Transportation and Infrastructure Committee on February 13, 2012. MAP-21 passed the Senate on March 14, 2012.

Despite the focus on the NEPA process, it is unclear whether or how changes to that process would result in faster highway project delivery. Available evidence regarding potential causes of project delays associated with environmental compliance is largely anecdotal and specific to unique, individual projects. Still, that evidence, while limited, points to issues or requirements apart from NEPA as more common causes of project delays.

This report identifies issues relevant to the debate over the role of the environmental review process in transportation project delivery. It identifies social and environmental issues that led Congress to enact the range of requirements that now make up the environmental review process, as well as selected requirements applicable to its implementation (particularly NEPA requirements). The report also identifies complexities in tying the environmental review process to federal-aid highway project delivery time. In particular, it identifies issues that make it difficult to determine the time it takes to complete the project development process, in general, or individual stages of development (e.g., activities related explicitly to environmental reviews); or to identify root causes of project delays tied to specific elements of the environmental review process. This report also discusses various approaches identified by transportation stakeholders as those that have expedited the environmental review process and overall project delivery.

Information and issues in this report were selected to help Members of Congress and their staff understand the NEPA compliance process as well as additional environmental compliance requirements that may be affected by H.R. 7 and MAP-21. Discussion of specific legislation is provided separately in CRS Report R42445, *Surface Transportation Reauthorization Legislation in the 112th Congress: MAP-21 and H.R. 7, Major Provisions*, coordinated by (name redacted).

Background and Overview of Issues

Activities that may take place during the environmental review process and how that process is implemented will vary from project to project, from state to state. The environmental review process does not involve compliance with a single federal compliance requirement. It involves processes necessary to demonstrate compliance with a potentially wide array of requirements applicable to projects approved under the Federal-aid Highways program. Broadly, for federally funded highway projects, it involves two separate, but related processes—preparing appropriate documentation required under NEPA; and identifying and demonstrating compliance with any additional state, tribal, or federal environmental requirements applicable to that project.

For a given project, how NEPA and other environmental compliance requirements must be demonstrated will largely depend on the degree to which the proposed project would have adverse effects on communities, natural or cultural resources (e.g., wetlands, endangered species habitat, historic sites, parks, or recreation areas), or special status land (e.g., farmland, floodplains, or coastal zones). Compliance with those requirements may include obtaining a permit, approval, study, or some level of analysis or consultation from an agency outside DOT.

NEPA was intended, in part, to ensure that federal agencies would consider the environmental impacts of an action among other factors (e.g., economic or community benefits) in the federal decision-making process. NEPA has two primary aims—to assure that federal agencies consider the environmental effects of their actions *before* proceeding with them and to involve the public in the decision-making process.

NEPA does not require an agency to elevate environmental concerns above other factors in the overall federal decision-making process. If the adverse environmental effects of a proposed action are adequately identified and evaluated, an agency is not constrained by NEPA from deciding that other project benefits outweigh the environmental costs and moving forward with the action. In contrast, other requirements applicable to federal-aid highways *may* dictate or somehow affect the outcome of a project decision. For example, other federal laws may require the selected project alternative to be the one with the least impact to a particular resource, prohibit FHWA approval of a project alternative that uses certain resources, require certain mitigation measures to limit a project's impacts, or require that certain activities take place in accordance with certain criteria (e.g., as specified in a permit or approval).

Environmental Reviews and Project Delays

Required elements of the environmental review process, particularly compliance with NEPA, will have an effect on project development. For example, before DOT can approve a project and allow final project design, property acquisition, or project construction to proceed, the project sponsor must appropriately document compliance with NEPA and complete any investigation, review, or consultation necessary to demonstrate compliance with other applicable environmental requirements. Further, it is DOT policy to use the NEPA compliance process as a mechanism to balance transportation decision making by taking into account the potential impacts on the human and natural environment and the public's need for safe and efficient transportation.[7]

State and local transportation agency officials and other stakeholders with an interest in transportation improvement generally acknowledge that elements of the environmental review process provide important protections to the human, cultural, and natural environment. However, those officials also sometimes argue that completing the process can be difficult and time-consuming. Some have argued, for example, that the time it takes to complete required NEPA documentation and supporting analysis or to obtain required input or approval from outside agencies can delay completion of federally funded transportation projects.

It is generally not disputed that the time it takes to complete the environmental review process for federally funded highway projects can take months or even years. What is unclear is the degree to which elements of the environmental review process directly or routinely *delay* project delivery. Determining the time it takes to complete activities associated with the environmental review process, or delays directly attributable to those activities, is difficult for several reasons including, but not limited to:

- **Limits to available data.** There is no centralized source of data regarding highway project delivery. States generally do not track project development time from planning to construction. States generally do not attempt to isolate elements of the environmental review process, which may overlap with preliminary project planning, design, or engineering activities. Further, there is no standard measure for determining when a project or the environmental review process, in particular, is completed "quickly" or would be considered "delayed."

[7] See *NEPA and Project Development: Program Overview* on FHWA's "Environmental Review Toolkit" webpage at http://environment.fhwa.dot.gov/projdev/index.asp.

- **The influence of local factors on project delivery.** The environmental review process may start, stop, and restart for reasons unrelated to environmental issues. Local and state issues have been shown to have the most significant influence on whether a project moves forward relatively quickly or takes longer than anticipated. Those issues include the project's level of priority among others proposed in the state; changes in funding availability; and local controversy or opposition to the project (which may or may not be connected to environmental issues).
- **The variation in project type and complexity.** The wide range of projects approved under programs administered by FHWA (e.g., bridge repair versus major new highway construction) do not easily allow an "apples to apples" comparison of the time it takes to complete the environmental review process or factors that may delay it. Anecdotal evidence regarding projects identified as "delayed" have involved multiple, complex causes of delay (including local issues) unique to *that* project, not a single cause that may be commonly applicable to other projects.
- **Variation among state requirements and implementation processes.** The effect of requirements under federal law may be difficult to isolate since local, state, or tribal requirements and procedures will also affect how environmental compliance requirements are implemented. State DOTs implement their project delivery process differently, depending on factors specific to their state and its needs. For example, some states may implement unique design and contracting processes that expedite project delivery that other states do not.
- **Time "saved" cannot be gauged.** Depending on the scope and complexity of the project, more time spent addressing environmental issues in the project planning and preliminary design stage may result in faster completion of final design and project construction (when delays may require actions that take more time and money to address). Time may also be saved when adverse project impacts that could lead to local opposition to the project are identified and addressed during the early stages of project development.

Challenges to Tying Project Delays to NEPA Compliance

Transportation agency officials and project sponsors have broadly identified environmental compliance requirements as a common source of frustration in completing the project development process. However, limits to and contradiction in available data make it difficult to clearly identify specific causes of delay that are directly and routinely attributable to specific elements of environmental compliance. Identifying a distinct root cause of a delay will arguably be necessary before effective "solutions" (procedures that would result in faster project delivery) can be identified. That is, knowing *that* a delay occurred may be irrelevant if it is not determined *why* the delay occurred. An understanding of *why* is useful in identifying a solution that directly addresses a problem's underlying cause.

Determining why a project was delayed may be difficult or may be attributable to multiple, interrelated factors. Generally, the more complex the project, the more complex the potential cause(s) of delay. For example, compared to a maintenance or repair project, a major new construction project will require more extensive review, documentation, or analysis to demonstrate compliance with NEPA and other applicable environmental requirements. However,

the following factors call into question the degree to which NEPA alone is a significant source of project delay in overall project development:

- **The majority of projects require limited review under NEPA.** The majority of FHWA-approved projects (approximately 96%) involve no significant environmental impacts and, hence, require limited documentation, analysis, or review under NEPA.
- **Compliance with DOT's "NEPA regulations" extends beyond what is required under NEPA.** DOT's "Environmental Impact and Related Procedures"[8] prescribe the policies and procedures to ensure that FHWA-approved projects will comply with NEPA as well as requirements established under Title 23 applicable to Federal-aid Highways (e.g., provisions applicable to the consideration of adverse economic, social, and environmental effects (under §109(h)), public hearings (§128), and preservation of parklands (§138)).
- **The NEPA compliance process is used to demonstrate compliance with all applicable environmental review requirements.** It is DOT policy that any investigation, review, or consultation necessary to demonstrate compliance with applicable environmental requirements be completed within the context of the NEPA process. This use of NEPA as an "umbrella" compliance process can blur the distinction between what is required under NEPA and what is required under separate authority.

Transportation agency officials asked to identify sources of frustration or delay in completing the environmental review process most commonly cite compliance requirements applicable to the protection of parklands, historic sites, wetlands, or threatened or endangered species. The potential root cause of delay in complying with those requirements could be attributable to a wide range of project-specific factors (e.g., incomplete permit applications, challenges in obtaining multiple approvals or permits for a complex project, or disagreement with a resource agency over appropriate methods to mitigate project impacts).

Both existing law and regulations implementing NEPA include explicit directives and requirements intended to streamline the NEPA process. Included among those requirements are procedures intended to coordinate efficient agency interaction and cooperation, reduce NEPA-related paperwork and duplication of effort (e.g., documentation and analysis that may be required by similar state, tribal, or federal requirements or from one stage of project development to the next), and integrate the consideration of environmental compliance issues in a project's planning stage. Barriers to efficiently implementing existing requirements may be project-specific or involve issues that may be difficult to address by simply amending or eliminating existing federal requirements.

This is not to suggest that there are not instances where preparation of documentation and analysis required under NEPA is not time-consuming or may contribute to delays in project delivery. However, it is unclear whether or what additional federal requirements may be implemented to expedite the NEPA process. Conversely, it is not clear whether the elimination of certain NEPA-specific requirements may expedite project delivery or would alter the framework for coordinating an already complex compliance process, resulting in additional project delay. For

[8] 23 C.F.R. Part 771.

a given project, whether changes to the NEPA process might result in faster project delivery will likely depend on the project's scope and complexity; the degree to which it is affected by "local" factors (e.g., state funding or project priorities); and compliance requirements applicable to the project, in addition to those under NEPA.

Highway Construction Impacts That Led to the Current Process

To understand why a complex array of requirements may apply to highway projects, it is useful to understand the social and environmental concerns that led Congress to enact the various laws that now form the framework of the environmental review process. Each requirement included within that process represents past efforts by Congress to minimize adverse impacts from federally funded highway projects or to minimize adverse impacts to certain communities or resources that Congress identified as needing some level of protection.

The current debate over the environmental review process frequently centers around the effect that completion of that process has on project delivery. The debate rarely recognizes the issues that led Congress to enact the requirements that now make up that process. Requirements included within the environmental review process, and procedures to demonstrate compliance with them, have evolved over the past 50 years. However, many of the requirements that are subject to particular scrutiny today were enacted between 1966 and 1972.

During the 1950s and 1960s, the public was becoming increasingly aware of and concerned about the impacts that human activity were having on the environment. Increasing attention turned to the effect that federally funded programs and projects were having on the human, cultural, and natural environment. One federal program that generated particular concern was the development and construction of the Interstate Highway System.

The Federal-Aid Highway Act of 1956 (P.L. 84-627) authorized and provided revenue sources for the construction of the National System of Interstate and Defense Highways (commonly known as the Interstate Highway System, Interstate System, or the Interstate). The Interstate System is a network of limited-access roads including freeways, highways, and expressways forming part of the National Highway System of the United States.[9] Construction of the Interstate System took approximately 35 years and resulted in a network of roads and bridges that currently includes over 45,000 miles of rural highways, suburban and urban freeways, and bridges.[10]

Although the connection of rural, urban, and suburban communities resulted in a host of economic and cultural benefits, construction of the Interstate System also brought certain adverse impacts to both the human and natural environment. Those impacts were seen particularly in the construction of the urban freeways. Planning for such projects often involved locating freeways within available open space or where land acquisition costs were relatively low. "Available open

[9] The National Highway System is approximately 160,000 miles of roadway important to the nation's economy, defense, and mobility.

[10] For more information about the Interstate Highway System, see the U.S. Department of Transportation's Federal Highway Administration website, "Celebrating the Eisenhower Interstate Highway System," http://www.fhwa.dot.gov/interstate/homepage.cfm.

space" often meant historic sites, parks, or recreation areas. Adverse impacts to those resources from highway projects drew increased attention from newly formed stakeholder groups with an interest in environmental protection and historic preservation.

Project planning that involved lower land acquisition costs often meant property acquisitions in densely populated, working-class or high-poverty neighborhoods. Resulting urban freeway projects had a disproportionate impact on the urban poor. One such example involved a segment of I-95 north of Miami. The route selected by local transportation officials cut through the inner-city community of Overtown, a once-thriving African-American community known as the "Harlem of the South." A 2009 FHWA report discussing lessons learned in complying with environmental requirements describes the project as follows:

> In 1957, the Overtown community was almost decimated by the development of the I-95 and I-395 freeways. The constructed roadway had a disastrous impact on the economic and social structure of the community. The community continues to shoulder the lingering effects of those negative impacts, and as a result there is also persistent anger towards and distrust of [the Florida Department of Transportation].[11]

Opposition to other urban freeway projects led to "freeway revolts" spearheaded by newly established environmental and social justice groups.[12] Freeway revolts took place in cities like Baltimore, Boston, Los Angeles, New Orleans, New York, Reno, and San Francisco. As a result, a significant number of projects were abandoned or significantly scaled back due to widespread public opposition, especially by those whose neighborhoods would be disrupted or who would displaced by the proposed freeways.

Elements of the Environmental Review Process

By the mid to late 1960s, Congress began to enact legislation intended to address the growing public concern over projects implemented under the Federal-aid Highways program. During that period, Congress also enacted legislation in response to increasing awareness and concern over the impacts of all federal actions—not just federal highway projects. Also during the 1960s and into the 1970s Congress began to enact a wide range of laws intended to identify, prohibit, control, or mitigate adverse impacts of human activities to specific community, natural, or cultural resources that Congress identified as in need of certain protection. This report identifies and summarizes requirements that have been identified as those most commonly applicable to federally funded highway projects.

[11] Report prepared by the John A. Volpe National Transportation Systems Center Research and Innovative Technology Administration, U.S. Department of Transportation for the Office of Project Development and Environmental Review, Federal Highway Administration, "Strategies and Approaches for Effectively Moving Complex Environmental Documents Through the EIS Process: A Peer Exchange Report," January 2009, available on the Federal Highway Administration's "Streamlining/Stewardship" website at http://environment.fhwa.dot.gov/strmlng/eisdocs.asp.

[12] For a discussion of issues related to freeway revolts and general issues with urban freeway construction, see "Paved with Good Intentions: Fiscal Politics, Freeways and the 20th Century American City," by Jeffrey A. Brown, Eric A. Morris, and Brian D. Taylor, in the University of California Transportation Center's *Access* magazine, Fall 2009, available at http://www.uctc.net/access/35/access35_Paved_with_Good_Intentions_Fiscal_Politics_.shtml.

Requirements Applicable to Federal-aid Highways

FHWA is prohibited from approving a project for funding under the Federal-aid Highway program until the project sponsor demonstrates that the proposed project will comply with all applicable federal, tribal, and state requirements. To the extent possible, compliance with any requirements that apply to a project, as a result of that project's effect on the human and natural environment, must be appropriately documented and demonstrated during the environmental review stage of project development.

Requirements specific to Federal-aid Highways include a host of standards, procedures, and conditions applicable to the various stages of project development. Several requirements (applicable primarily to activities that take place during the project planning, preliminary design, and environmental review phases of development) reflect concern over the effects of urban freeway construction (discussed above), including the following:

- **Directive to establish guidelines to assure consideration of adverse project impacts (23 U.S.C. §109(h)).** Directed DOT to establish guidelines to assure that possible adverse, economic, social, and environmental effects of proposed highway projects and project locations were fully considered during project development, and that final project decisions be made in the best overall public interest, taking into consideration the costs of eliminating or minimizing adverse effects to air, noise, and water pollution; destruction or disruption of man-made and natural resources; aesthetic values, community cohesion, and the availability of public facilities and services; adverse employment effects, and tax and property value losses; and injurious displacement of people, businesses, and farms.
- **Directive to establish noise standards (23 U.S.C. §109(i)).** Directed DOT to establish standards for highway noise levels compatible with different land uses. DOT cannot approve plans and specifications for any proposed federal-aid project unless it includes adequate measures to implement those noise standards. As implemented under DOT regulations, a project may be required to demonstrate compliance with applicable standards through an analysis of traffic noise impacts and, when necessary, to implement noise abatement measures.
- **Public hearings requirements (23 U.S.C. §128).** For a proposed project bypassing or going through any city, town, or village, a state transportation department is required to certify that it held or afforded the opportunity for public hearings; considered the economic and social effects of the project location, and its impact on the environment; and considered the consistency of the project with local planning goals and objectives.
- **Preservation of parklands requirements (23 U.S.C. §138).** More commonly referred to as "Section 4(f)"[13] requirements, DOT is prohibited from approving a

[13] The term "Section 4(f)" refers to the section of the Department of Transportation Act of 1966 (P.L. 89-670) under which the requirement was originally set forth. It was initially codified at 49 U.S.C. §1653(f) and only applied to DOT agencies. Later that year, 23 U.S.C. §138 was added with somewhat different language, which applied only to the highway program. In 1983, as part of a general recodification of the DOT Act, §1653(f) was formally repealed and codified in 49 U.S.C. §303 with slightly different language. This provision no longer falls under a "Section 4(f)," but DOT has continued this reference, given that over the years, the whole body of provisions, policies, and case law has been collectively referenced as Section 4(f).

> project that uses publicly owned (local, state, or federal) parks and recreation areas, wildlife and waterfowl refuges, and publicly or privately owned historic sites of national, state, or local significance. DOT may approve a project that uses a 4(f) resource only if there is no prudent and feasible alternative to do otherwise, and that use includes all possible planning to minimize harm to the resource.

Of the requirements specifically applicable to Federal-aid Highways, the preservation of parklands requirements may have the greatest effect on highway project development and delivery. Projects that would use a 4(f) resource require an evaluation analyzing project alternatives (including location and design shifts) that avoid the resource.[14] To be approved by FHWA, the evaluation must show that alternatives that would *not* use the resource would result in "truly unique problems," resulting in costs or community disruption of extraordinary magnitude. This test is often referred to as the "Overton Park Criteria," after a court case in the 1970s in Memphis, TN.[15] In approving the use of a 4(f) resource, FHWA must also consider the significance and importance of the resource itself.

SAFETEA amended Section 138 to allow for the use of a 4(f) resource if that use can be proven to have *de minimis* impacts to the resource.[16] Generally, *de minimis* impacts would result from the use of minor amounts of a particular resource. Such a determination requires concurrence from an official with jurisdiction over the resource. For example, for a transportation project adjacent to a publicly owned park, recreation area, or wildlife and waterfowl refuge, FHWA would be required to consult with, as appropriate, agencies within the Department of the Interior (e.g., the U.S. Fish and Wildlife Service, National Park Service, or the Bureau of Indian Affairs) or state or local park authorities. For historic sites, a *de minimis* impacts determination must be based on criteria established under the National Historic Preservation Act applicable to uses that will have no "adverse effect" on the site (16 U.S.C. §470f). The determination must receive concurrence from the State Historic Preservation Officer (SHPO) and, if appropriate, the Advisory Council on Historic Preservation (ACHP).

Compared to other environmental requirements likely applicable to federal-aid highway projects, Section 4(f) is unique in its limits on the use of a protected resource. Most requirements intended to protect communities or specific natural or cultural resources allow for adverse project impacts if those impacts are sufficiently identified and considered in the decision-making process. Some requirements may specify that a project implement certain mitigation measures or be implemented in accordance with an approval or permit from an agency responsible for protecting that resource. An outright prohibition on the use of a particular resource, except for *de minimis* impacts or under extraordinary conditions, is not common to other environmental requirements.

Requirements Applicable to "Federal Actions"

In the 1960s Congress debated legislative options to address potential adverse impacts associated with federal actions. An action may be deemed "federal" based on the role that a federal agency

[14] Depending on project alternatives under consideration for a given project, compliance with Section 4(f) requirements can be complex. This report does not discuss those requirements in detail. For more information, see the "Section 4(f)" website included in FHWA's "Environmental Review Toolkit," at http://www.environment.fhwa.dot.gov/4f/index.asp.

[15] *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971).

[16] See Department of Transportation, "Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites," final rule, 73 *Federal Register* 13367-13401, March 12, 2008.

plays in a project's approval or funding. A project funded under the Federal-aid Highways program would generally be considered a federal action. Two laws applicable specifically to federal actions that significantly affect the environmental review process for highway project development are NEPA and the National Historic Preservation Act (16 U.S.C. §470, et seq.).

As discussed previously, NEPA has two primary aims—to require federal agencies to consider the environmental impacts of a project and to give the public a meaningful opportunity to learn about and comment on the proposed project *before* a final decision is made. It is a procedural statute. That is, NEPA requires federal agencies to implement procedures to ensure that environmental impacts of a project are included among, but not elevated above, other factors considered during the federal decision-making process. If the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other benefits (e.g., community and economic benefits) outweigh the environmental costs and moving forward with the action. (The NEPA compliance process is discussed under "Demonstrating Compliance with NEPA.")

The National Historic Preservation Act (NHPA) declared a national policy of historic preservation to protect districts, sites, buildings, structures, and objects significant to American architecture, history, archaeology, and culture. NHPA did not mandate preservation of historic resources or prohibit adverse impacts to them, but Section 106 requires all federal agencies to *consider* the impacts of a proposal prior to taking any action that may affect a site included in, or eligible for inclusion on, the National Register of Historic Places.

NHPA also requires federal agencies to afford the Advisory Council on Historic Preservation (an independent federal agency created by the law) a reasonable opportunity to comment on federal actions that would affect properties on or eligible for inclusion on the National Register of Historic Places. For federally funded highway projects, FHWA must consult with the Advisory Council or the designated SHPO to determine project impacts to historic sites and potential ways to mitigate those impacts.

There are similarities between requirements established under Section 4(f) and Section 106, but also important differences between the statutes. Like NEPA, Section 106 establishes a procedural requirement that directs all federal agencies only to consider project impacts on certain resources. Section 4(f) applies only to DOT projects and prohibits the use of certain resources for those projects, except under certain conditions.

Additional federal laws and executive orders apply explicitly to federal actions that affect certain resources or communities. For example, a federally funded highway project may require compliance with additional requirements applicable to federal actions if that project may:

- involve the acquisition, rehabilitation, or demolition of real property that will displace persons from their homes, businesses, or farms as protected under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (42 U.S.C. §4601, et seq., more commonly referred to as the Uniform Act);
- affect wetlands or floodplains pursuant to Executive Order 11990 or Executive Order 11988, respectively;
- convert farmland to nonagricultural uses pursuant to the Farmland Protection Policy Act of 1981 (7 U.S.C. §4201 et seq.);

- cause disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment pursuant to Executive Order 12898; or
- affect human remains and cultural material of Native American and Hawaiian groups pursuant to the Native American Grave Protection and Repatriation Act (25 U.S.C. §3001 et seq.).

Requirements Applicable to Certain Resources

In addition to requirements applicable to federal-aid highways, specifically, and federal actions, in general, Congress has enacted a host of individual statutes intended to protect certain natural, environmental, and cultural resources from human-induced activities. A potentially long list of federal compliance requirements *could* apply to a given highway or bridge project, but requirements that will *actually* apply to a project will be limited by site-specific conditions and the degree to which the proposed project may affect protected resources. Broadly, highway projects may be subject to requirements intended to identify, minimize, or control adverse impacts to:

- **Land—**including land use that may affect the habitat of threatened or endangered plant and animal species, migratory birds, archaeological sites, and land designated as a national trail or national wilderness; and
- **Water resources or water quality—**including projects that may affect wetlands, aquatic ecosystems, navigable waters (e.g., rivers, streams, harbors), floodplains, coastal zones, or designated "wild and scenic" rivers, or projects that may affect water quality (e.g., discharge pollutants into U.S. waters).[17]

For a given federally funded highway project, compliance with a number of federal, state, or tribal regulations intended to identify, control, mitigate, or minimize project impacts to land and water resources may be required. Specific compliance requirements will depend on standards or regulatory requirements of that law and the degree to which the proposed project may adversely affect that resource. Depending on those factors, project development and implementation may require some level of consultation, analysis, or approval from an agency with jurisdiction over the resource. For example, a highway or bridge project that results in pollutants being discharged into wetlands, rivers, or streams or that may affect navigable waterways or harbors likely will require project development be completed in accordance with provisions established under the Clean Water Act or the Rivers and Harbors Act. Pursuant to those laws, the selection of a particular project alternative may require a permit or certification from the Army Corps of Engineers (the Corps), the Environmental Protection Agency (EPA), the United States Coast Guard, or a state or tribal water quality control agency.

[17] Air quality issues are also relevant to federal-aid highway project development. Under the Clean Air Act, FHWA must insure that transportation plans, programs, and projects conform to the state's air quality implementation plans. Conformance with a state implementation plan is largely determined during project planning. Issues associated with meeting federal air quality requirements are not discussed in this report.

Implementing the Environmental Review Process

The individual requirements discussed above were enacted by Congress after a particular concern arose or need was identified. For an individual project, several requirements involving similar compliance directives could apply. For example, depending on its impacts, a project may be subject to different public hearing or notification requirements under separate federal regulatory or statutory requirements.

The environmental review process is intended to function as the mechanism under which potentially duplicative requirements are identified and coordinated (including duplicative state or tribal requirements). Specifically, it is DOT policy that, to the fullest extent possible, any investigation, review, and consultation necessary to demonstrate environmental compliance be coordinated as a single process. The environmental review process *is* that single process. It forms the framework under which *all* applicable compliance requirements intended to protect the human, natural, or cultural environment are identified and demonstrated. Further, the NEPA compliance process forms the framework for completing the environmental review process.

In the past, suggestions made by transportation stakeholders to expedite project delivery, as well as legislative options proposed by some Members of Congress, have focused on requirements established specifically under NEPA. However, examples of individual projects delayed by environmental requirements more often involve issues associated with environmental compliance obligations established under separate state or federal requirements. In identifying and determining the potential effectiveness of nationally applicable approaches to expedite the environmental review process, it is necessary to distinguish between what is required explicitly under NEPA versus other federal environmental requirements.

Demonstrating Compliance with NEPA

The Council on Environmental Quality (CEQ) promulgated regulations implementing NEPA that were broadly applicable to all federal agencies.[18] CEQ required each federal agency to develop its own NEPA procedures specific to typical classes of actions undertaken by that agency.[19] In 1987, DOT promulgated "Environmental Impact and Related Procedures."[20] Those regulations prescribe the policies and procedures for FHWA to implement NEPA as it may apply to federally funded highway projects. They also include procedures necessary to ensure compliance with environmental requirements established under Title 23 applicable to Federal-aid Highways (e.g., procedures necessary to demonstrate compliance with requirements applicable to economic, social, and environmental effects, public hearings, and preservation of parklands (Section 4(f))). DOT's regulations have been revised periodically in accordance with legislative directives from Congress and to reflect court decisions applicable to DOT's implementation of both the NEPA process and its other environmental compliance obligations. Most recently, the regulations were modified to reflect the new environmental review process established under SAFETEA.

[18] 40 C.F.R. §§1500-1508.

[19] 40 C.F.R. §1507.3.

[20] 23 C.F.R. Part 771.

Identifying the Appropriate NEPA Document

For a given highway project that receives funding or approval under Federal-aid Highways programs, compliance with NEPA is demonstrated in the "NEPA document." Requirements that define the various categories of NEPA document and required elements of each are found in the NEPA regulations promulgated by both CEQ and DOT.

Transportation projects vary in type, size, complexity, and potential to affect the environment. To account for the variability of potential project impacts, NEPA regulations establish three basic "classes of action" that dictate how NEPA compliance will be documented and implemented. Determining the appropriate NEPA document and level of environmental review and analysis necessary for that document is dependent upon the answer to the following question: "Will the proposed action have any significant environmental impact?" Answers to that question, and the corresponding NEPA documents, are as follows:

- **Yes.** Those projects require an Environmental Impact Statement (EIS) followed by a final Record of Decision (ROD).
- **Maybe.** When the significance of a project's impacts is not clear, an Environmental Assessment (EA) must be prepared to determine whether an EIS is necessary or a Finding of No Significant Impact (FONSI) is appropriate.
- **No.** Those projects are categorically excluded from the requirement to prepare an EIS or EA; as such, those projects are generally referred to as Categorical Exclusions (CEs or CATEX).

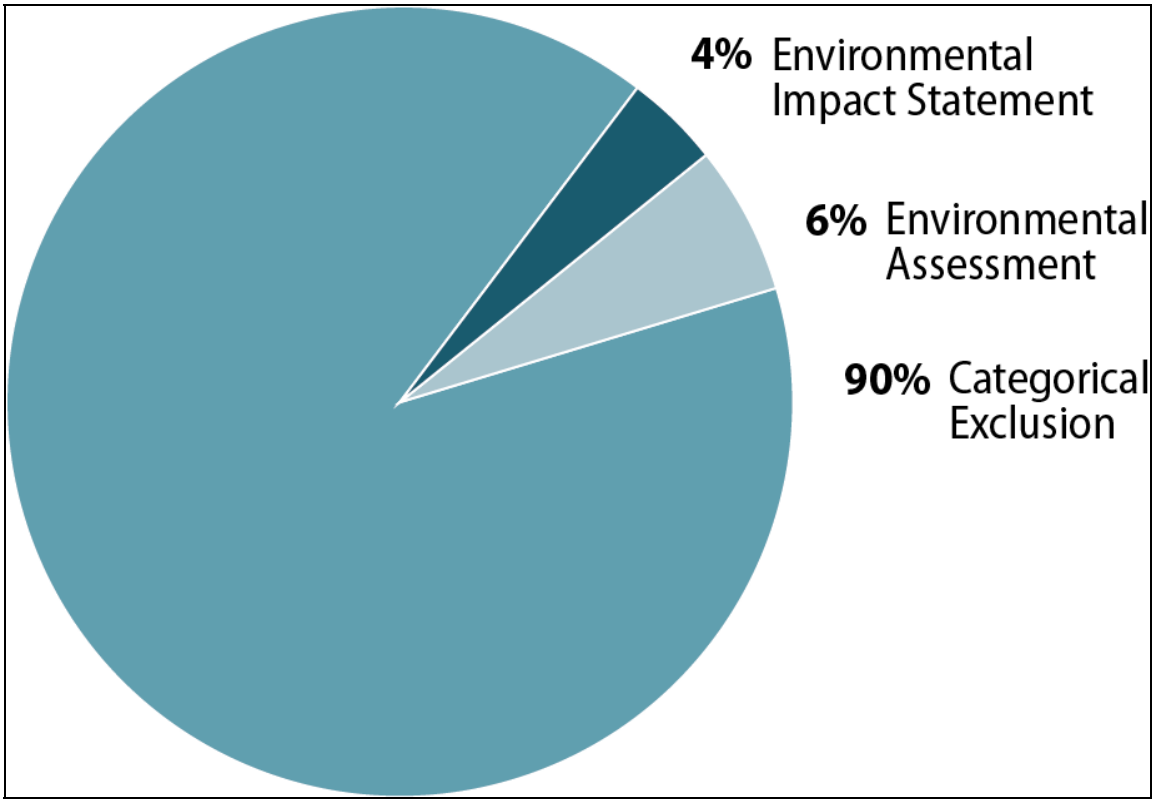
Pursuant to NEPA's aims, an evaluation of environmental impacts is required prior to commitment of federal resources. To meet that requirement, preparation of the NEPA document may begin in the project planning stage, but must be completed within the preliminary design and environmental review stage of project development. Generally, subsequent stages of project development (final design activities, property acquisition, or project construction) cannot proceed until the necessary NEPA document is complete and approved by FHWA.

FHWA-Approved Projects By NEPA Class of Action

Major highway projects that require an EIS are the most studied and discussed when there is debate over the time it takes to complete the NEPA process. Further, past legislative efforts to expedite the NEPA process have focused primarily on the NEPA process as it applies to EIS preparation. However, FHWA data from 1998 to 2007 show that approximately 4% of federal-aid highway projects approved under programs administered by FHWA required an EIS. Projects processed as a CE or with an EA/FONSI accounted for approximately 96% (see **Figure 1**).

Figure 1. FHWA-Approved Projects—By NEPA Class of Action

Average from 1998 to 2007



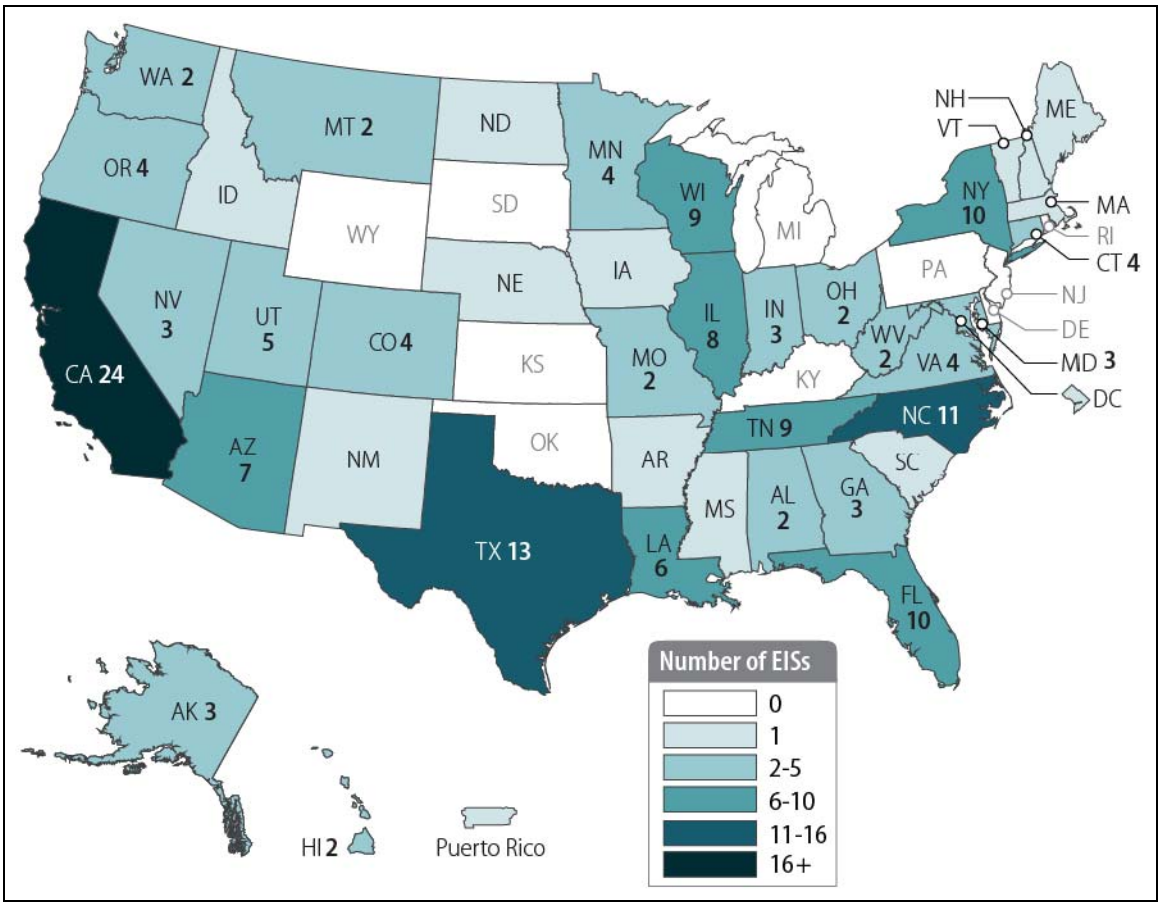
Source: Congressional Research Service, based on data available from FHWA's "Streamlining/Stewardship: Performance Reporting" website at http://environment.fhwa.dot.gov/strmlng/projectgraphs.asp.

More recent FHWA data illustrate a similar proportion of major new projects and smaller maintenance/rehabilitation projects. In FY2009, of the approximately 55,043 miles of roadway projects receiving federal-aid highway funds, approximately 50,166 miles (91%) involved reconstruction projects with no added roadway capacity, restoration and rehabilitation activities, or road resurfacing (i.e., projects likely to be processed as CEs). Approximately 4,877 miles of road construction projects involved new construction, relocation, or reconstruction with added capacity (i.e., projects likely to require preparation of an EA or EIS).[21]

In addition to representing a small number of overall projects, few projects currently being developed require an EIS. As of November 18, 2011, 10 states had no active projects that involved EIS preparation, 12 states and the District of Columbia and Puerto Rico were preparing 1, and 18 states were preparing between 2 and 5 (illustrated in **Figure 2**). Further, a significant number of active EISs (68 of 175 or 39%) were being prepared in just five states—California, Texas, North Carolina, Florida, and New York.

[21] These statistics apply to projects funded under the Federal-aid Highway program. For more detail, see the Federal Highway Administration's "Highway Statistics for 2009: Obligation of Federal-Aid Highway Funds For Highway Improvements Fiscal Year 2009 (Intended to Show Only Projects Authorized in FY 2009)," Table FA-10, October 2010, available at http://www.fhwa.dot.gov/policyinformation/statistics/2009/fa10.cfm.

Figure 2. Active FHWA Projects Requiring an EIS in Each State

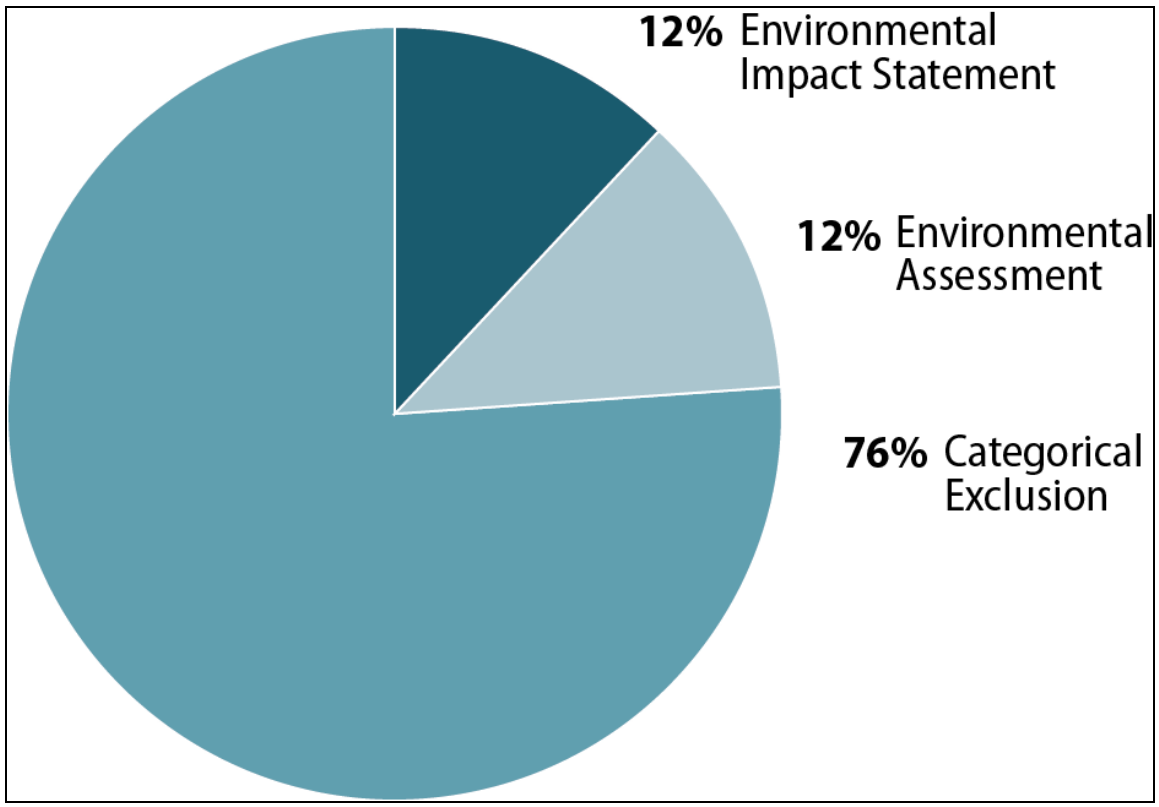


Source: Congressional Research Service, based on FHWA's list of Active and Inactive Environmental Impact Statements (EISs) as of November 18, 2011, available on the agency's "NEPA and Project Development" website at http://www.environment.fhwa.dot.gov/projdev/active_eis.asp.

While projects requiring an EIS represent a small proportion of total projects and a small number of active projects being developed in each state, they are more likely to be high-profile, complex projects that affect sizeable populations and take years, even decades, from planning to construction. They may cost millions, or even hundreds of millions, of dollars. For example, data from 1998 to 2007 regarding FHWA funding allocation show that while projects processed as CEs generally represent 90% of projects approved, those projects accounted for approximately 76% of FHWA program funds. Over that period, projects requiring an EIS accounted for approximately 4% of the total projects approved, but 12% of allocated program funds (see **Figure 3**).

Figure 3. Percentage of FHWA Program Funding Allocation by NEPA Class of Action

Average from 1998 to 2007



Source: Congressional Research Service, based on data available on FHWA's "Streamlining/Stewardship: Performance Reporting" website, http://www.environment.fhwa.dot.gov/strmlng/projectgraphs.asp/.

While a project requiring an EIS will likely cost more than a project processed as a CE, there is not necessarily a direct relationship between a project's cost and its level of environmental impacts. For example, it cannot be stated that projects that cost over $1 million, or even $10 million, will require an EIS. This point is illustrated by reviewing FHWA's list of "Major Projects," defined to include those expected to receive over $500 million in federal assistance.[22] Included on FHWA's list of currently active major projects are several that are being processed as CEs or with an approved FONSI.[23] For example, the "Loop 12/State Highway 35E Corridor" project in the Dallas-Fort Worth, TX, area is described as a reconstruction and widening project estimated to cost $1.6 billion. Project letting for that project began after approval of an EA/FONSI. Also included on the list is the "I-595 Corridor Improvements Project." That project, determined to be a CE, will add reversible lanes and involve major interchange improvements along 10.5 miles of the I-595 corridor in Florida. It is estimated to cost $1.8 billion.

[22] That definition of "Major Projects" was included among provisions in Section 1904 of SAFETEA that amended the "Project approval and oversight" requirements under 23 U.S.C. §106. The identification of a project as "major," in this context, is unrelated to its potential distinction as a "major federal action significantly affecting the quality of the human environment" pursuant to NEPA under 42 U.S.C. §4332(c).

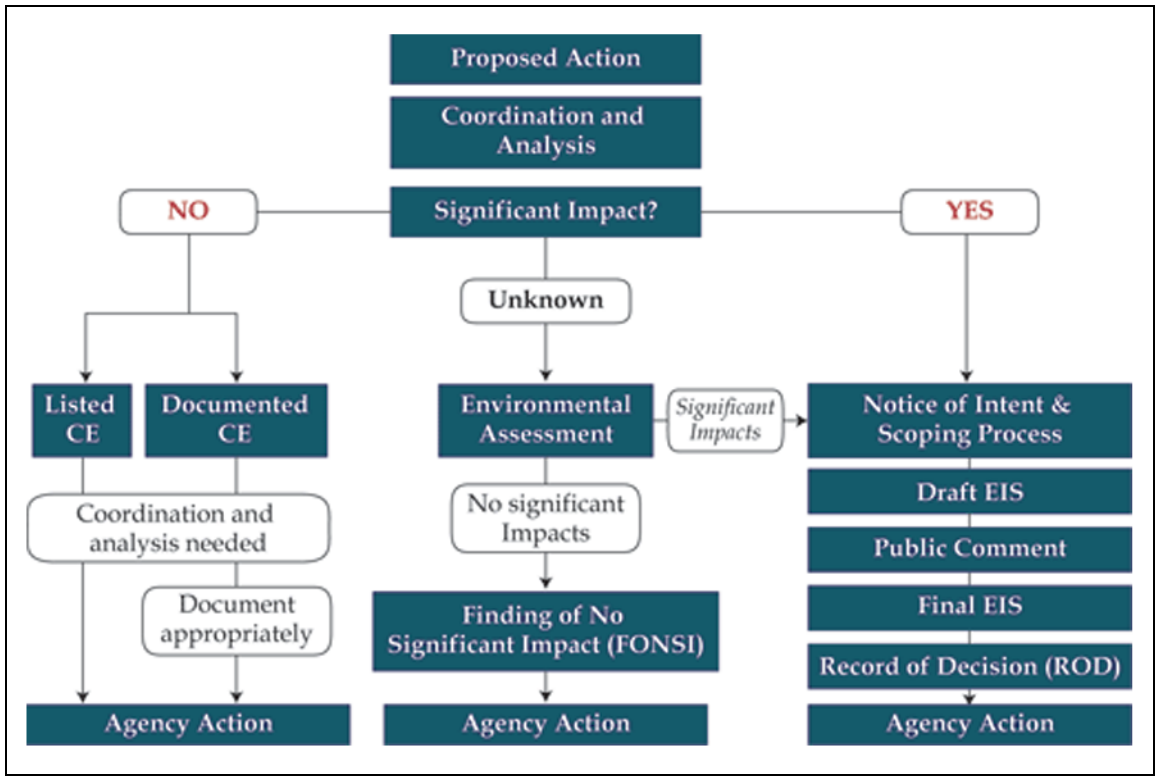
[23] See the *FHWA Active Project Status Report*, available on FHWA's "Project Delivery" website, https://fhwaapps.fhwa.dot.gov/foisp/publicActive.do.

Selected Requirements for Each Category of NEPA Document

Each NEPA document (EIS, EA, and CE) must include certain required elements (see **Figure 4**). That is, the NEPA document must show that environmental impacts were considered as part of the federal decision-making process, not a paperwork exercise to document impacts from a project after a decision was made.

Figure 4. NEPA Decision-Making Process

Required Elements of NEPA Documentation



Source: FHWA guidance document, *Integrating Road Safety into NEPA Analysis: A Primer for Safety and Environmental Professionals*, in the "FHWA Environmental Toolkit," available at http://www.environment.fhwa.dot.gov/projdev/pd6rs_primer_sec2.asp.

Requirements applicable to each element of each NEPA document, and how DOT requires an applicant for federal funds to demonstrate compliance with each element, largely evolved in the 20 years after NEPA was enacted. Those requirements are reflected in both CEQ and DOT regulations implementing NEPA. The evolution of the NEPA compliance process was also influenced by the courts. For example, the courts played a prominent role in determining issues such as what constitutes "significant" impacts, who must prepare an EIS, at what point an EIS must be prepared, and how adverse comments from agencies should be handled. Changes to required elements of the NEPA process, applicable to projects funded under DOT programs, are also made by Congress.

Selected requirements applicable to each category of NEPA document, including requirements established under SAFETEA, are discussed below.

Categorical Exclusion (CE) Determinations

As discussed above, projects processed as CEs represent the greatest proportion of projects approved for federal-aid highway funds. DOT defines CEs as actions that, based on past experience with similar actions, do not individually or collectively have a significant impact on any natural, cultural, recreational, historic, or other resource, or involve significant air, noise, or water quality impacts; and that will *not*

- induce significant impacts to planned growth or land use for the area;
- require the relocation of significant numbers of people;
- have significant impacts on travel patterns; or
- otherwise, either individually or cumulatively, have any significant environmental impacts.[24]

A project may meet these criteria, but still involve "unusual circumstances" that would require FHWA to ensure that a CE designation is appropriate. Unusual circumstances applicable to federally funded highway projects include substantial project controversy on environmental grounds; a significant impact on properties protected under Section 4(f) or Section 106 of the National Historic Preservation Act (NHPA); or inconsistencies with any federal, state, or local requirements relating to the environmental aspects of the action.[25]

DOT identifies two groups of surface transportation projects that would likely meet the CE criteria (absent any unusual circumstances applicable to the project). The first group includes specific actions that meet criteria applicable to CEs.[26] DOT has determined that these projects (presented in **Table 1**) will likely result in insignificant environmental impacts because they either do not involve or directly lead to construction or involve minor construction.

Table 1. Federally Funded Highway Projects Specifically Listed as CEs

Non-construction activities (e.g., planning, technical studies, or research activities).	Emergency repairs after a natural disaster or catastrophic failure.
Installing fencing, signs, pavement markings, small passenger shelters, and traffic signals that involve no substantial land acquisition or traffic disruption.	Deploying electronic, photonic, communication, or information processing systems to improve system efficiency or safety.
Altering a facility to make it accessible to elderly and handicapped persons.	Landscaping activities.
Implementing ridesharing programs.	Improving existing rest areas or truck weigh stations.
Scenic easement acquisition.	Installing noise barriers.
Activities in a state highway safety plan.	Constructing bicycle or pedestrian lanes or facilities.

Source: Congressional Research Service, taken from actions listed at 23 C.F.R. §771.117(c).

[24] 23 C.F.R. §771.117(a); further DOT criteria used to determine whether a project would meet necessary CE criteria extend from CEQ regulations defining CEs at 40 C.F.R. §1508.4.

[25] 23 C.F.R. §771.117(b).

[26] Listed at 23 C.F.R. §771.117(c).

A proposed action included in this list may or may not require an applicant for federal funds to submit supporting documentation to FHWA. Necessary paperwork could range from a simple checklist to substantial documentation. The extent of paperwork or supporting documentation is directly related to the extent of the impacts and necessary analysis of those impacts. For example, construction of a bicycle path or installation of traffic signals in a historic district may require some level of compliance with Section 106 of the NHPA or Section 4(f).

The second group of CEs includes actions that past DOT experience has shown to have substantial, but generally not "significant," effects.[27] For this group, DOT regulations include "examples" of actions commonly approved by FHWA that may meet the regulatory definition of a CE (presented in **Table 2**). Such projects require the project sponsor to provide FHWA with documentation to confirm that the project does not involve "unusual circumstances" resulting in significant environmental impacts. Unlike specifically "listed CEs" (**Table 1**), the potential universe of "documented CEs" is not limited to projects identified by DOT. Instead, FHWA may approve a CE designation for any action as long as documentation is provided that demonstrates the project meets the regulatory definition of a CE.

Table 2. Examples of FHWA-Approved Projects That May Be Classified as a CE

Actions That May Be Designated a CE with Appropriate Documentation and FHWA Approval

Highway modernization through resurfacing, restoration, rehabilitation, or reconstruction.	Bridge rehabilitation, reconstruction, or replacement.
Highway safety or traffic operations improvement projects.	New truck weigh station or rest area construction.
Approval for changes in access control.	Approval for disposal of excess right-of-way or for joint or limited use of right-of-way.
Acquisition of certain preexisting railroad right-of-way.	Land acquisition for hardship or protective purposes.
Construction of transportation corridor fringe parking facilities.	

Source: Congressional Research Service, taken from examples of actions listed at 23 C.F.R. §771.117(d).

Although they are excluded from the requirement to prepare an EIS or EA, CEs are sometimes incorrectly identified as being exempt from NEPA or having *no* environmental impacts. No *significant* environmental impact *under NEPA* does not mean the project has *no other* regulated environmental impacts. For example, to demonstrate that a project meets both the CE criteria and will comply with other environmental requirements, state DOTs routinely gather information regarding a CE's potential to

- involve work that requires highway traffic or construction noise abatement;
- be located within certain limits of a sole source aquifer or alter stream flow;
- involve the acquisition of more than minor amounts of temporary or permanent right-of-way;
- require a Section 4(f) evaluation or "an opinion of adverse effect" under Section 106 of NHPA;

[27] Listed at 23 C.F.R. §771.117(d).

- involve commercial or residential displacement;
- involve work in wetlands that would require a permit from the Corps; or
- be constructed in a county that lists federal threatened and endangered species.

A project may involve any one or more of these (or other) activities that will have some effect on the human or natural environment, yet have environmental impacts that do not rise to the level of "significant" under NEPA. However, the threshold of significant impacts is primarily relevant to NEPA compliance. Other laws intended to protect or mitigate impacts to natural or cultural resources will have their own compliance thresholds applicable to *that* law. FHWA approval of a project processed as a CE may be delayed if the project sponsor does not realize that its proposed project may be subject to compliance requirements in addition to NEPA.

Within its responsibilities to oversee the Federal-aid Highway program, FHWA typically establishes procedures with each state DOT regarding CE review and approval. In a given state, "listed CEs" generally require minimal documentation before FHWA approval. NEPA review for those projects would be included as part of FHWA's project oversight and approval obligations established under Title 23. For "documented CEs," FHWA either reviews the NEPA documentation as part of the project development process and any agreed-upon procedures as part of the project review and approval, or the state DOT does this review in accordance with a formal programmatic CE agreement established between FHWA and the state DOT.

A programmatic CE agreement sets forth specific project circumstances for which a CE could be processed, and maintains FHWA oversight and responsibility for the NEPA determination. A programmatic approach involves establishing a streamlined process for handling routine environmental requirements, commonly applicable to specific types of project (e.g., bridge maintenance or road resurfacing activities). It allows for repetitive actions to be considered on a programmatic basis rather than project by project. Established on a local, regional, or statewide basis, a programmatic CE may establish procedures for consultation, review, and compliance with one or more federal laws. FHWA suggests that, to the extent possible, state DOTs take a programmatic approach to CE determinations.

Apart from its potential to enter into programmatic CE agreements with FHWA, state DOTs may assume FHWA responsibility for CE determinations. Pursuant to provisions in Section 6004 of SAFETEA,[28] FHWA may assign and a state DOT may assume responsibility for determining whether certain highway projects meet the CE criteria. Under that authority, a participating state would be authorized to determine all CE applicability, including determining whether proposed projects that are not specifically listed under DOT's NEPA regulations may meet the CE criteria.

States that choose to assume FHWA responsibility would be required to do so in accordance with terms and conditions established in a memorandum of understanding (MOU) between the state and FHWA.[29] States assuming federal authority are legally liable for the NEPA determination. That is, FHWA would not be liable for the NEPA determinations for CEs in states participating in the program. FHWA would be required to conduct an annual review of a participating state's

[28] 23 U.S.C. §326.

[29] For more information, see memorandum from the U.S. Department of Transportation, Federal Highway Administration, to Directors of Field Services and Division Administrators, regarding "Guidance on the State Assumption of Responsibility for Categorical Exclusions (CE)," April 6, 2006, available at http://www.fhwa.dot.gov/hep/6004memo.htm.

process for making CE determinations. To date, three states (Alaska, California, and Utah) have requested and been assigned responsibilities under the Section 6004 program.

Environmental Impact Statements (EIS)

Projects requiring an EIS make up the smallest percentage of projects approved by FHWA, but have generated the most attention when debating NEPA's potential role in delaying highway projects. FHWA does not specifically identify actions that require an EIS. That determination must be made on a case-by-case basis. However, DOT identifies the following as examples of highway projects that normally require an EIS: a new controlled access freeway; a highway project of four or more lanes on a new location; and new construction or extension of a separate roadway for buses or high-occupancy vehicles not located within an existing highway facility.[30]

Both the steps to complete an EIS and the EIS itself include certain required elements. Each required element represents the evolution of NEPA compliance requirements—as established by CEQ and, in part, as a result of judicial interpretation of NEPA's mandate and how its procedural requirements must be implemented. Required components in EIS preparation are

- file a Notice of Intent (NOI)
- scope the environmental issues
- prepare a draft EIS
- circulate the draft EIS for comment
- prepare the final EIS
- issue a final record of decision (ROD)

The NOI serves as the formal announcement of the project to the public and to interested federal, state, tribal, and local agencies.[31] As soon as possible after, or in conjunction with, the determination that an EIS is needed, the agency is required to determine the scope of the project. During that process, the project sponsor/applicant for federal funds should determine which environmental laws, regulations, or other requirements may apply to the project. During the scoping process, routes that may pose certain challenges and could be avoided may be identified (e.g., the presence of terrain or resources that may involve potential engineering or technical problems, regulatory restrictions, or public opposition). For example, during the scoping process, a potential route or alignment may be identified that would avoid property of historical significance, endangered species habitat, or wetlands—each of which may require compliance with the NHPA, the Endangered Species Act, or the Clean Water Act, respectively.

Once the scope of the action and its environmental issues have been determined, EIS preparation can begin. Required elements of an EIS, including selected elements in DOT's NEPA regulations or FHWA policy, are summarized in **Table 3**.

[30] 23 C.F.R. §771.115(a).

[31] 40 C.F.R. §1508.22.

Table 3. Required Elements of an EIS as Implemented by FHWA

Elements of an EIS	Definition/Description
Purpose and need statement (§1502.13)	A brief statement, developed by the lead agency, specifying the underlying purpose of a project and the need to which the agency is responding. According to FHWA, this section may be the most important, as it establishes why the agency is proposing to spend large amounts of taxpayers' money while at the same time causing significant environmental impacts. A clear, well-justified statement explains to the public and decision makers that the use of funds is necessary and worthwhile, particularly as compared to other needed highway projects. The statement forms the basis on which potential alternatives to meet that need are identified and a final alternative is ultimately selected. It cannot be so narrow that it effectively defines competing "reasonable alternatives" out of consideration. The "purpose" may be a discussion of the goals and objective. The "need" may be a discussion of existing conditions that call for some improvement, including those applicable to transportation demand, safety, legislative direction, urban transportation plan consistency, modal interrelationships, system linkage, and the condition of an existing facility.
Alternatives (§1502.14)	Defined as the "heart" of the EIS, this section includes the identification and evaluation of all reasonable alternatives that may meet a project's purpose and need. FHWA requires the range of alternatives to include a discussion of how and why all reasonable alternatives were selected for consideration, and to explain why other alternatives were eliminated from detailed study. Each alternative, and its associated impacts, must be evaluated in sufficient detail to allow decision makers and the public an opportunity to compare the merits of each option.
Affected environment (§1502.15)	A succinct description of the environment of the area(s) to be affected or created by the alternatives under consideration. DOT requires this section to include a description of the existing social, economic, and environmental setting of the area potentially affected by all alternatives presented in the EIS. Data may include demographics of the general population served by the proposed project, as well as an identification of socially, economically, and environmentally sensitive locations or features in the proposed project area. For example, the EIS should identify the presence of affected minority or ethnic groups, parks, hazardous material sites, historic sites, or wetlands, among other factors.
Environmental Consequences (§1502.16)	Analysis of impacts of each project alternative on the affected environment, including a discussion of the probable beneficial and adverse social, economic, and environmental effects of each alternative. Where applicable, this section must include a description of the measures proposed to mitigate adverse impacts and methods of compliance with applicable legal requirements. FHWA recommends this section be devoted largely to a scientific analysis of the direct and indirect environmental effects of the proposed action relative to each alternative. Potential environmental consequences identified by FHWA include land use, farmland, social, economic, air quality, noise, water quality, wetland, wildlife, floodplain, or construction impacts; the requirement to obtain any permits; impacts to wild and scenic rivers, coastal barriers, threatened or endangered species, historic and archeological preservation, or hazardous waste sites; and any irreversible and irretrievable commitment of resources. This section would likely require input from other federal, state, tribal, or local agencies with expertise on the environmental consequences under review.
List of preparers (§1502.17)	List of names and qualifications of individuals responsible for preparing the EIS. FHWA requires this section to include lists of state and local agency personnel, including consultants, who were primarily responsible for preparing the EIS/performing environmental studies and FHWA personnel responsible for EIS preparation/review.
Appendix (§1502.18)	Prepared if necessary. An appendix normally consists of material that substantiates analysis fundamental to the impact statement.

Source: Congressional Research Service, taken from CEQ regulatory definitions under 40 C.F.R. §1502 and requirements and definitions applicable to highway projects included in FHWA guidance "NEPA and Transportation Decisionmaking: The Importance of Purpose and Need in Environmental Documents," and "Guidance for Preparing and Processing Environmental and Section 4(f) Documents."

The EIS is prepared in two stages, resulting in a draft and a final EIS.[32] Supplemental documents may be required in some instances. Among other requirements, the final EIS must identify the preferred project alternative; reflect an evaluation of all reasonable alternatives considered; identify and respond to public and agency comments on the draft EIS; and summarize public involvement. The final EIS should document compliance with requirements of all applicable environmental laws, executive orders, and other related requirements. If full compliance is not possible by the time the final EIS is prepared, it should reflect consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met. FHWA approval of the environmental document constitutes adoption of any findings and determinations in the EIS. The ROD presents the basis for the agency's final decision and summarizes any mitigation measures that will be incorporated in the project.

Each required element of the EIS involves compliance requirements established under both NEPA and other environmental requirements. For example, a clear delineation of project purpose and need is also necessary to meet the requirements under Section 4(f), executive orders on wetlands and floodplains, and permitting requirements established under Section 404 of the Clean Water Act. Identifying the potentially affected environment and analysis of environmental consequences also demonstrate that environmental impacts are considered during, not after, the decision-making process (as required under NEPA), but also include consultation, analysis, or input from resource agencies that may be necessary to ensure compliance with other applicable environmental law.

SAFETEA included several provisions that applied to projects that require an EIS. Section 6002 amended Title 23 by adding "Efficient Environmental Reviews for Project Decision-making" (§138). It established a new environmental review process applicable to all highways, transit, and multi-modal projects requiring an EIS. Among other requirements, the new process

- requires the project sponsor to notify DOT of the type of work, termini, length, general location of the proposed project, and a statement of any anticipated federal approvals;
- establishes a new entity required to participate in the NEPA process, referred to as a "participating agency," which includes any federal, state, tribal, regional, and local government agencies that *may have an interest in* the project;[33]
- requires the lead agency to establish a plan for coordinating public and agency participation in and comment on the environmental review process for a project or category of projects;
- requires the lead agency to establish a 60-day deadline on agency and public comments on a draft EIS and a 30-day deadline on all other comment periods in the environmental review process, except under certain circumstances (e.g., the deadline is extended by the lead agency for "good cause"); and
- prohibits claims seeking judicial review of a permit, license, or approval issued by a federal agency for highway or transit projects unless they are filed within 180 days after publication of a notice in the *Federal Register* announcing the

[32] 40 C.F.R. §1502.9.

[33] This category of agency participant in the NEPA process differs from a "cooperating agency," discussed below, that is defined as an agency having jurisdiction by law or special expertise with respect to any environmental impact of a proposed project or project alternative.

> final agency action, unless a shorter time is specified in the federal law under which the judicial review is allowed (previously, the six-year limit under the Administrative Procedure Act applied to NEPA-related claims).

DOT has produced guidance to help state DOTs implement SAFETEA's revised environmental review process and modified regulations implementing NEPA to reflect SAFETEA's amendments to Title 23.[34]

The National Cooperative Highway Research Program conducted a survey of state DOTs to determine their impressions of the new environmental review process established by SAFETEA. The DOTs responding to the survey were generally favorable regarding the act's requirements.[35] In particular, there was wide approval of the 180-day statute of limitations.[36] However, survey respondents expressed concerns about some provisions, including their impressions that it represented no major change from what state DOTs were doing previously; it duplicated existing coordination procedures; and DOT already involved outside agencies prior to implementing the new procedures. Further, many survey respondents expressed concern that some requirements of the new environmental review process seemed to run counter to streamlining initiatives by creating additional requirements that could have a negative impact on schedules and budgets.[37]

Under Section 6005, SAFETEA amended Title 23 to establish a "Surface Transportation Project Delivery Pilot Program" (§327). The pilot program allowed Oklahoma, California, Texas, Ohio, and Alaska to assume certain federal environmental review responsibilities (in addition to the assumption of CE determinations established under Section 6004, discussed above). Responsibility could be assumed for environmental reviews required under NEPA, or any federal law, for one or more highway projects within the state. As a condition of assuming federal authority, Congress required the state to waive its right to sovereign immunity against actions brought by citizens in federal court and consent to the jurisdiction of federal courts. That is, the state would become solely liable for complying with and carrying out the federal authority that it consents to assume.

To date, only California has agreed to and developed a program to participate in the pilot program. Other states declined, primarily due to state legislature concerns regarding the potential liability associated with assuming federal responsibility for NEPA.

Additionally, some state transportation agency officials and stakeholders with an interest in transportation project development have expressed concern over DOT requirements implementing the pilot program (as required pursuant to the directive in Section 6005). Those objections have centered largely around DOT's requirement applicable to rights-of-way (ROW) acquisitions in states that choose to assume federal authority under NEPA. As discussed earlier,

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[34] See "SAFETEA-LU Environmental Review Process, Final Guidance," November 15, 2006, available at http://www.fhwa.dot.gov/hep/section6002/index.htm and the Department of Transportation's "Environmental Impact and Related Procedures; Final Rule," 74 *Federal Register* 12517, March 24, 2009.

[35] See the National Cooperative Highway Research Program's "Legal Research Digest 54: Practice Under the Environmental Provisions of SAFETEA-LU," December 2010, available at http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_lrd_54.pdf.

[36] There was also wide approval of changes made to Section 4(f) under SAFETEA Section 6002, applicable to *de minimis* project impacts (see "Requirements Applicable to Federal-aid Highways") regarding the "preservation of parklands" requirements.

[37] See the summary of survey respondent impressions of SAFETEA provisions at pp. 16-21.

one of NEPA's primary aims is to ensure that federal agencies consider the impacts of their actions before proceeding with them. The NEPA process cannot simply document a decision that has already been made. This requirement means that federal funds cannot be used for ROW acquisitions (an action that could indicate that a final project decision has been made) before the NEPA process is complete. Currently, states may make ROW acquisitions using state funds on an at-risk basis. That is, they may purchase land using state funds, but risk losing future federal funding for that purchase if the project ultimately involves an alternative that does not use that property. By assuming DOT's authority, a state would assume federal agency-level responsibility to comply with NEPA. DOT has found that would mean, in its capacity as a federal agency, the state would be precluded from making such advanced ROW acquisitions.

Some have argued that the loss of a state's ability to make at-risk ROW acquisitions has been a disincentive to states that may otherwise want to assume federal authority under NEPA. However, when the fear of taking on federal liability and subjecting the state to the jurisdiction of federal court were primary reasons that states did not want to assume NEPA authority, it is unclear how states could be protected from potential judicial review if they are allowed to complete a transaction that *could appear* to violate one of NEPA's primary goals. Although state DOTs may be willing to accept that risk, a state legislature may not, particularly when an incentive for a state to assume the federal role under NEPA is to eliminate FHWA's oversight of the NEPA process (e.g., FHWA's legal sufficiency review of an EIS).

Environmental Assessments (EAs)

The third category of NEPA document is an EA. It is required for an action that is not a CE and does not clearly require an EIS, or where FHWA believes an EA would assist in determining the need for an EIS. An EA is intended to be a concise public document that serves to provide sufficient evidence and analysis for determining whether to prepare an EIS or a Finding of No Significant Impact (FONSI).[38]

In preparing an EA, the applicant, in consultation with FHWA, is required to consult with interested agencies at the earliest appropriate time to determine the project scope; determine which aspects of the proposed action have potential for social, economic, or environmental impact; identify alternatives and measures which might mitigate adverse environmental impacts; and identify other environmental review and consultation requirements which should be performed concurrently with the EA.[39]

The EA is subject to FHWA approval before it is made available to the public. The document itself need not be circulated, but must be made available for public inspection and comment (typically for at least 30 days). A notice of availability must be sent to state- and area-wide clearinghouses and should be published locally. Depending on FHWA-approved state procedures, a public hearing may or may not be required.

FHWA requires the basis of a request for a FONSI be clearly and adequately documented. Like an EIS, the EA or FONSI is required to clearly document compliance with NEPA and all other applicable environmental laws, executive orders, and related requirements. An approved FONSI functions as the final agency decision on a project.

[38] 40 C.F.R. §1508.9.

[39] 23 C.F.R. §771.119(b).

Like projects processed as CEs, determining the time it takes to complete an EA is difficult. Local and state transportation officials do not routinely, nor could they easily, track the time it takes to complete an EA. A distinct end point could be identified (issuance of a FONSI), but a starting point may be hard to identify. Further, since EAs likely require limited environmental review or analysis under NEPA, any analysis or review that is prepared to support a FONSI would likely be required under separate state or federal law. However, transportation agency officials have complained that EAs sometimes approach the length of an EIS. If that is the case, factors indirectly related to the NEPA compliance likely apply to the project. For example, a project that may involve local controversy or opposition, but still have no significant impacts, may require more analysis or documentation than anticipated. Also, a project with substantial environmental impacts to certain resources may require time-consuming consultation, analysis, or approvals from agencies outside DOT to confirm that no significant impacts will occur, or it could be an indication that an EIS should have been prepared initially.

Agency Roles and Responsibilities in the NEPA Process

The NEPA document is prepared by a "lead agency," and may require input and analysis from "cooperating" or "participating" agencies. Depending on the environmental impacts of a given project, both the lead and cooperating agencies are obligated to meet certain federal requirements. The time it takes to meet those obligations has been identified by transportation agencies as a potential source of frustration or project delay.

Lead Agencies

The "lead agency" is the federal agency responsible for preparing the NEPA document.[40] DOT must serve as the lead federal agency for a federally funded transportation project (FHWA generally serves as the lead for highway projects). The direct recipient of federal funds for the project must serve as a joint lead agency (a requirement explicitly established under SAFETEA). For a federal-aid highway project, that is typically the state DOT, but may include a local agency project sponsor or a federally recognized Indian tribal governmental unit. At the discretion of the required lead agencies, other federal, state, or local governmental entities may act as joint lead agencies. These include, but are not limited to toll, port, and turnpike authorities and metropolitan planning organizations (MPOs). For example, the U.S. Department of Homeland Security may serve as a joint lead agency with DOT and the project sponsor on a transportation improvement at a national border crossing.

In practice, the entity seeking federal funds will prepare the NEPA document, and other supporting environmental review documents, with guidance from FHWA (as necessary or as requested). FHWA, however, has ultimate responsibility to ensure that a project seeking federal funds will comply with the various laws, regulations, and executive orders applicable to the project. In that capacity, before final approval and project funding, FHWA is required to independently evaluate the necessary environmental documents and review the legal sufficiency of a final EIS[41] or Section 4(f) evaluation.[42] This review is intended to ensure that the Section 4(f)

[40] See 40 C.F.R. §1508.16.

[41] 23 C.F.R. §771.125(b). A legal sufficiency review of an EA may be required if FHWA determines that details of the individual project warrant such a review.

[42] 23 C.F.R. §774.7(d).

evaluation or NEPA document is consistent with legal requirements. It includes a review of the documentation and associated compliance efforts to determine if those efforts are sufficient to assure compliance with applicable law. A separate technical review of the final NEPA/Section4(f) document is also conducted by FHWA, prior to document approval.

Cooperating and, after SAFETEA, Participating Agencies

The lead agency must consult with and obtain the comments of any federal agency that has "jurisdiction by law or special expertise with respect to any environmental impact involved" in an action that requires an EIS.[43] In CEQ's NEPA regulations, those agencies are identified as "cooperating" agencies.[44] Pursuant to directive from Congress in SAFETEA, DOT's NEPA regulations were supplemented to also identify "participating" agencies, which may include any federal and non-federal agencies that may have an interest in the project.[45]

At the request of the lead agency, the cooperating agency is required to assume responsibility for developing information and preparing environmental analyses, including portions of the EIS related to its special expertise. Cooperating agencies are also obligated to provide comments on the NEPA document on areas within their jurisdiction, expertise, or authority. For projects requiring an EIS, that role may be set out in a memorandum of understanding or agreement between the agencies. The lead agency is also required to request comments from appropriate state, local, or tribal agencies; any agency that has requested to receive EISs on similar actions; and the project applicant.[46]

CEQ regulations specify requirements for inviting and responding to comments on the draft EIS (including requirements that specify a cooperating agency's duty to comment on the draft).[47] The lead agency is required to consider those comments and respond in one of the following ways:

- modify proposed alternatives, including the proposed action;
- develop and evaluate alternatives not previously considered;
- supplement, improve, or modify its analyses;
- make factual corrections in the EIS; or
- explain why the comments do not warrant further response from the lead agency, citing the sources, authorities, or reasons that support its position.[48]

As illustrated in the choices listed above, the lead agency is not precluded from moving forward with a project if it explains why a cooperating agency's comments do not warrant further response. However, FHWA suggests that every reasonable effort be made to resolve interagency

[43] 42 U.S.C. §4332(2)(C).

[44] 40 C.F.R. §1508.5.

[45] Specific only to DOT's NEPA requirements, "participating" agencies for federal highway projects are defined at 23 C.F.R. §771.107(h) as a state, local, tribal, or federal agency that may have an interest in the proposed project and have accepted an invitation to participate in the environmental review process.

[46] 40 C.F.R. §1503.1.

[47] 40 C.F.R. §1503.

[48] 40 C.F.R. §1503.4.

disagreements on actions before processing the final EIS. If significant issues remain unresolved, the final EIS shall identify those issues and any consultation or other effort made to resolve them.

Some highway projects have involved disagreements regarding the appropriate authority and extent of involvement of coordinating agencies in the NEPA process. For example, in 2003, Transportation Secretary Norman Mineta requested CEQ Chairman James Connaughton to clarify the role of lead and cooperating agencies in developing EIS statements of project purpose and need statements.[49] Secretary Mineta cited the sometimes lengthy interagency debates over those statements as a cause of delay in highway project development. In his response, Chairman Connaughton referred to CEQ regulations specifying that the lead agency has the authority and responsibility to define a project's purpose and need. Further, Chairman Connaughton referenced previous federal court decisions giving deference to the lead agency in determining a project's purpose and need. Chairman Connaughton's letter also quotes CEQ's regulations, citing the lead agency's "responsibilities throughout the NEPA process for the 'scope, objectivity, and content of the entire statement or of any other responsibility' under NEPA."

Public Involvement

To meet NEPA's goal applicable to public participation in federal decision making, CEQ's regulations require agencies to provide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform public stakeholders.[50] DOT procedures extend beyond those established under CEQ regulations to reflect requirements applicable to "public hearings" established under Title 23.[51] For example, EAs do not need to be circulated, but must be made available to the public through notices of availability in local, state, or regional clearinghouses, newspapers, and other means. Depending on a state's public involvement procedures (approved by FHWA), a public hearing may or may not be required for projects that proceed with an EA. Pursuant to DOT regulations implementing NEPA, documentation necessary to demonstrate compliance with Title 23's public hearing requirements (e.g., public comments or hearing transcripts) must be included in the final EIS or FONSI, as applicable.

Stakeholders that comment on surface transportation projects may be expected to vary depending on a project's impacts. They may include individuals or groups who may benefit from or be adversely impacted by the project, or special interest groups with concerns about the project's impacts on certain affected environments. For example, a highway project that involves upgrading existing roadways may involve construction activities that would affect adjacent homes or businesses. The project may elicit comments from the local business community (e.g., individual businesses, the Chamber of Commerce, or local development organizations) or area homeowners. A project that may affect sensitive environmental resources, such as wetlands or endangered species, may generate comments from local or national environmental organizations.

If a member of the public has concerns about a project's impacts, comments may be directed at virtually any element of the NEPA process or related documentation. Someone may disagree with the definition of project's purpose and need discussion, the range of "reasonable" alternatives

[49] Text of Secretary Mineta's May 6, 2003, letter, and Chairman Connaughton's May 12, 2003, response, are available at http://www.environment.fhwa.dot.gov/guidebook/Ginterim.asp.

[50] 40 C.F.R. §§1500.2(d). 1506.6.

[51] 23 U.S.C. §128.

selected for consideration and analysis, or the identified level of significance of the project's impacts (e.g., a FONSI was issued when the individual felt an EIS should have been required). Issues that arise during the public comment period may also be the subject of legal action. Critics of NEPA charge that those who disapprove of a federal project will use NEPA as the basis for litigation to delay or halt that project. Others argue that litigation results only when agencies do not comply with NEPA.[52]

Actual litigation played a prominent role in NEPA's early implementation. However, it may be the *threat* of litigation that affects its current implementation. The number of NEPA-related lawsuits filed annually against FHWA is low.[53] Still, the potential threat of litigation may result in an effort to prepare a "litigation-proof" NEPA document. This may be the case particularly for projects that are costly, technically complex (potentially requiring compliance with multiple environmental laws), or controversial (e.g., opposed by or individuals affected by the project or groups that anticipate adverse impacts to resources of concern to them). Some look at this positively, asserting that the fear of a lawsuit makes agencies more likely to adhere to NEPA's requirements. Others counter that the threat of litigation may lead to the generation of wasteful documentation and analyses that do not add value to, and slow, decision making.

Demonstrating Compliance with Additional Requirements

Unlike NEPA, which will apply in some way to all federally funded highway projects, additional environmental requirements applicable to a project will depend on site-specific conditions and potential impacts to resources at the site. For example, what and how requirements may apply to a project will depend on its effect on water quality, water resources, and land use as well as community, visual, noise, or social impacts, to name a few. While a wide array of requirements may apply to federally funded highway projects, certain federal requirements apply more commonly than other requirements. Also, certain compliance requirements have been identified by transportation stakeholders as those more likely to delay the environmental review process (see surveys and studies listed in **Appendix**). The most commonly applicable laws, and selected compliance requirements, are listed in **Table 4**.

[52] Plaintiffs have generally cited some inadequacy in the NEPA documentation as the basis for filing NEPA-related lawsuits (see CEQ's *Litigation Surveys* for each year from 2001 to 2009 on its "NEPA Litigation" web page at http://ceq.hss.doe.gov/legal_corner/litigation.html). They may charge, among other things, that an EIS or EA did not include sufficient analysis of all project alternatives, did not consider all "reasonable" project alternatives, did not adequately analyze the effects of project alternatives, or that an EA was prepared when an EIS should have been (i.e., a FONSI was issued when impacts were in fact significant).

[53] From 2001 to 2009, NEPA-related lawsuits filed annually against FHWA ranged from a low of three to a high of 12; see CEQ's *Litigation Surveys* cited in footnote 52.

Table 4. Federal Law Commonly Applicable to FHWA-Approved Projects

Federal Law	Selected Compliance Requirements
Section 4(f)	For projects that would use a 4(f) resource, an evaluation or a determination of *de minimis* impacts must be prepared (see the discussion regarding "Preservation of parklands" in the "Requirements Applicable to Federal-aid Highways" section). The evaluation or *de minimis* impacts determination requires some level of consultation with or concurrence from the official with jurisdiction over the resource (e.g., the Department of the Interior's U.S. Fish and Wildlife Service (FWS); federal, state or local park authorities; or the designated SHPO).
Section 106 of the National Historic Preservation Act	For projects that may affect a site included, or eligible for inclusion, in the National Register of Historic Places, FHWA must consult with the Advisory Council on Historic Preservation (ACHP) or the designated SHPO to determine impacts to the site and seek ways to avoid, minimize, or mitigate adverse impacts. Affected parties must be involved in mitigation plans.
Endangered Species Act (Section 7)	FHWA must prepare a biological assessment when the presence of threatened or endangered animals or plants is suspected to occur in the vicinity of a project. FHWA must consult with the federal agency of jurisdiction (FWS or the Department of Commerce's National Marine Fisheries Service (NMFS)) that will issue a biological opinion on whether the proposed action would jeopardize the continued existence of listed species, or destroy or adversely modify their designated critical habitats.
The Clean Water Act (Section 404)	Requires that the discharge of dredge and fill materials into navigable waters of the United States be done in accordance with review and permitting procedures administered by the Corps, under guidelines developed by EPA. Other federal agencies potentially involved in permit evaluation process include FWS or NMFS.

Source: Congressional Research Service, taken from requirements listed in FHWA's "Summary of Environmental Legislation Affecting Transportation," at http://www.fhwa.dot.gov/environment/env_sum.htm.

Note: This is not intended to be an exhaustive list of federal requirements potentially applicable to federally funded highway projects or a complete description of potentially applicable compliance requirements established pursuant to each law. However, the selected requirements illustrate the potential need to obtain permits or consult with agencies outside DOT. Further, federal laws selected for listing in this table represent those identified by transportation agency officials as a common source of delay in completing the environmental review process.

As illustrated by the requirements listed in **Table 4**, when a federal highway project involves regulated impacts to certain resources, an agency with jurisdiction over that resource may be required to provide some level of analysis, consultation, or approval before a project can proceed. Resulting consultation or approval may include directive(s) to the project sponsor regarding how or whether the proposed project may use the resource. These requirements can lengthen the time it takes to complete the overall environmental review process, if outside agency opinions, input, and/or evaluations are required before the NEPA review can be completed. Whether such requirements will lead to project delays could depend on a host of factors such as whether the project sponsor anticipated the need for outside agency approval or the workload of the agency processing the approval.

To integrate the NEPA compliance process and avoid duplication of effort associated with a project's overall environmental compliance obligations, CEQ's NEPA regulations specify that, to the fullest extent possible, agencies must prepare the NEPA documentation concurrently with any other environmental requirements. The appropriate NEPA documentation should demonstrate compliance with all applicable environmental requirements. It must indicate any federal permits, licenses, and other approvals required to implement the proposed project. This means that compliance requirements of any additional environmental laws, regulations, or executive orders must be identified (but not necessarily completed) during the NEPA process. If full compliance is not possible by the time the final NEPA document is prepared, the document should reflect

consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met.

Environmental Reviews and Project Development

To understand how the environmental review process may affect project delivery, it is useful to understand how the process fits into overall project development, as well as the challenges associated with measuring each stage of that development. It is also useful to recognize root causes of delay in completing the environmental review process, as well as how the process can lead to more efficient project development.

Stages of Project Development

Federal-aid highway funds are generally apportioned to each state by FHWA for the construction, reconstruction, and improvement of highways and bridges on eligible highway routes, and for other special-purpose programs. Individual state DOTs are responsible for determining how and on which projects those funds will be spent. In making that determination, multiple activities and decisions occur from the time a tribal or state DOT, metropolitan planning organization, or local program agency (such as a municipal public works agency) identifies a transportation-related need and a project addressing that need is constructed.

Each stage of project development is initiated and completed largely at the local, tribal, or state level, with ultimate project approval at the federal level—from FHWA for federally funded highway projects. Although the names and details of each step may vary from state to state, they generally include project planning, preliminary design and environmental review, final design and right-of-way acquisition, and project construction. Activities common to each phase of the project development process, including maintenance activities that may take place after project construction, are described in **Table 5**. The table also identifies potential environmental compliance obligations that may occur in each stage of project development.

Table 5. Stages of Federal-Aid Highway Project Development

Common Project Activities and Environmental Compliance Obligations in Each Phase of Development

Project Phase	Description/Common Activities	Common Environmental Compliance Obligations
Planning	Transportation program or project planning involves a cooperative process designed to foster involvement by all users of the planned system—such as the business community, community groups, environmental organizations, the traveling public, freight operators, and the general public. During this stage, a proactive public participation process is conducted by the metropolitan planning organization (MPO), state DOT, and transit operators. Among other activities, MPOs and state DOTs identify current and projected future transportation problems and needs, and analyze, through detailed planning studies, various transportation improvement strategies to address those needs. They also develop long-range plans and short-range programs for alternative capital improvement and operational strategies for moving people and goods.	Efforts have been made, in both FHWA guidance and statutory directive from Congress, to link statewide and metropolitan planning to the environmental review process. For example, Section 6001of SAFETEA requires the development of long-range transportation plans to include consultations with resource agencies responsible for land-use management, natural resources, environmental protection, conservation, and historic preservation, which may involve comparisons of resource maps and inventories; discussion of potential mitigation activities; and participation plans that identify a process for stakeholder involvement.
Preliminary design and environmental review	A project applicant identifies the preliminary engineering issues, such as proposed alignment of roadways, costs, and project details. This stage includes preliminary engineering and other activities and analyses, such as topographic or metes and bounds surveys, geotechnical investigations, hydrologic or hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, and general estimates of the types and quantities of materials and other work needed to establish parameters for the final design.	An applicant for federal-aid funds must determine the appropriate NEPA document to be prepared and identify various resources potentially affected by a proposed project and its alternatives. The final NEPA document must identify and demonstrate compliance with any other applicable environmental requirement, to the maximum extent possible, including completing necessary environmental or engineering studies, outside agency coordination or approvals, and public involvement.
Final design and right-of-way acquisition	Final construction plans and detailed construction specifications for the selected project alternative are prepared. If necessary, property appraisals and the acquisition of rights-of-way (ROW) or property to mitigate environmental impacts are made. Property acquisition that may involve the relocation of residents and businesses must be done in accordance with the Uniform Act of 1970. Also, if necessary, utilities are relocated. Project costs are finalized.	Property or material purchases cannot proceed until the NEPA document is approved by FHWA. Property acquisitions must be completed in compliance with requirements identified in the document. If late changes to the project are required, the environmental review process may have to be revisited if design changes result in unanticipated or previously unidentified environmental impacts.

Project Phase	Description/Common Activities	Common Environmental Compliance Obligations
Construction	The state DOT, or other project sponsor, requests and evaluates bids, and awards contracts. Project construction must reflect decisions made during the planning, environmental review, and design stages of project development.	Necessary permits or other compliance requirements identified during environmental review must be in place. Mitigation measures must be complete (e.g., installation of noise barriers or implementation of wetland mitigation). If elements of the project change, the environmental review process may have to be revisited if changes result in unanticipated environmental impacts.
Maintenance	Although not considered part of project development, the majority of projects funded under FHWA-approved programs involve activities that may be broadly described as "maintenance." Highway maintenance may include modernization through roadway resurfacing, restoration, rehabilitation, reconstruction, or adding shoulders or auxiliary lanes. Bridge maintenance may include rehabilitation, reconstruction, or replacement.	Identifying, planning, and implementing necessary maintenance activities are likely initiated and carried out at the local level, with state DOT approval. Maintenance activities would commonly involve a CE determination as well as an assessment of impacts that may require compliance with additional environmental requirements (e.g., impacts to historic sites or structures or endangered species habitat).

Source: Congressional Research Service, based on a review of state DOT practices.

Frequently, "environmental review" is considered synonymous with "NEPA compliance." That is not the case. However, completion of the NEPA compliance process and the overall environmental review process are linked by DOT's requirement that a project cannot be approved and subsequent stages of project development cannot proceed until the project sponsor appropriately documents compliance with NEPA and other applicable environmental requirements.

Challenges in Measuring Stages of Project Development

There are distinct activities associated with each stage of project development. However, the following factors make it difficult to estimate the time it takes to complete each stage:

- Most state and local transportation agencies do not maintain a centralized source of data tracking the time it takes to complete transportation projects. Further, there is no acceptable measure of when a project is delivered in a timely manner versus delayed. A project or a stage of its development may be considered "delayed" if it took the project sponsor longer than anticipated.
- Most state and local transportation agencies do not attempt to extract and measure the time it takes to complete individual activities attributable to a single stage of development (e.g., activities categorized distinctly as applicable to "environmental review"). Further, tracking that data may be difficult since elements of one phase may overlap with another (e.g., project planning activities may include elements of environmental review) and a distinct start and end point of individual activities may be difficult to identify.
- Project development may start, stop, and restart for reasons unrelated to environmental compliance. For example, EIS preparation may begin with publication of a NOI, but preparation may stop and restart due to changes in state

priorities, funding availability, or a host of other issues unrelated to NEPA. In such cases, the time between issuing a NOI and ROD are an inaccurate measure of the NEPA process.

- Differences between state DOT project development processes make it difficult to establish a nationally applicable measure of project development stages. Also, the influence of tribal- or state-specific environmental compliance requirements makes it difficult to isolate the time it takes to comply with federal requirements.

Considering these points, it is difficult to determine either the time it takes to meet specific elements of the environmental review process (e.g., NEPA compliance or agency consultations under the Endangered Species Act) or the degree to which completing the process delays project delivery. Further, it is not possible to assert, with any degree of accuracy, broad, nationally applicable values to the time it takes to complete the environmental review process. For example, there are no data available to substantiate a statement such as "environmental compliance accounts for X% to Y% of surface transportation project development time," or "compliance with NEPA or Clean Water Act permitting requirements delays X% to Y% of projects for X to Y months/years." Instead, it may be possible to determine "bridge reconstruction or rehabilitation in state A takes from X to Y months/years" if state A is one that tracks such information.

Also, it may be generally stated that the time it takes to deliver larger, more complex or controversial projects takes longer to complete than is typical for the majority of FHWA-approved highway projects (e.g., maintenance and rehabilitation projects). In addition to taking longer to complete due to their potential cost, size, and complexity, they will likely require compliance with more state, tribal, and federal requirements and may generate more public interest or opposition.

In 2002, the General Accounting Office (GAO) released a report that attempted to determine the typical amount of time it takes to complete overall project delivery as well as individual phases of project development for certain federally funded highway projects.[54] Data for this report were compiled based on the professional judgment of FHWA staff, staff of state departments of transportation, and transportation associations. According to FHWA, planning, gaining approval for, and constructing federally funded major highway projects that involved new construction typically took from nine to 19 years from planning to construction. FHWA estimated that the preliminary design and environmental review phase for those projects typically took from one to five years, depending on the complexity of the design and possible environmental impacts that must be considered.[55] It was noted that projects studied in the GAO report included those that would typically require an EIS and represent a small percentage of federally funded projects. It was also noted that, while there are many reasons new highway construction projects may take a long time to complete, most studies on project delivery focused only on the timely resolution of environmental issues to improve project completion times, rather than examining all aspects of project development.[56]

[54] U.S. General Accounting Office (now the Government Accountability Office), *Highway Infrastructure: Preliminary Information on the Timely Completion of Highway Construction Projects*, September 19, 2002.

[55] In addition to information from FHWA and state DOT staff, this report also looked at the time it took and the steps necessary to complete six new highway construction projects in California, Florida, and Texas (the largest in the state, in terms of federal funds received, and a randomly selected "medium-sized" project).

[56] Consistent with the factors that make it difficult to measure individual phases of project development, discussed above, GAO noted that federal and state governments do not maintain information centrally (or, in some cases, at all) (continued...)

Causes of Delay in Completing Environmental Reviews

Although the extent to which the environmental review process may delay project delivery is unclear, it is generally not disputed that the time it takes to demonstrate compliance with environmental requirements can be time-consuming, particularly in cases where EIS preparation is required. Also, while transportation agency officials may cite elements of the environmental review process as a source of frustration or delay, it is not clear what specific environmental compliance requirements currently and routinely lead to project delays or the root cause of those delays.[57] For example, a common complaint among transportation agency officials is that outside agencies (including FHWA review and approval of the final NEPA documents) do not provide necessary input or approval in a timely way. However, there is little information available that clearly indicates *why* that may be the case on anything other than a project-specific level.

Few studies have looked at the root causes of project delay directly attributable to the environmental review process. Available studies have looked at a limited number of major new construction projects that required an EIS. By their nature, those projects involve unique project-specific issues and are likely to involve complex design, engineering, and compliance issues. Causes of delay for those projects more likely represent the exception and not the rule.

A 2003 FHWA study that attempted to identify causes of delay in completing EISs was unable to identify common factors or conditions that directly or indirectly affected the time it took to complete the NEPA process.[58] Although timing varied by broad geographic region, it did not seem to vary in relation to the majority of other variables considered (e.g., the presence of certain "controversial issues" or the required participation of agencies outside DOT). Instead, it was observed that the time it took to complete the NEPA process may have been more affected by external social and economic factors associated with broad geographic regions of the country.[59]

Subsequent, albeit limited, study data and anecdotal evidence regarding individual projects also point to factors external to environmental reviews as those most likely to delay the process. In particular, causes of delay in completing environmental reviews arise primarily from potentially overlapping local and project-specific issues including, but not limited to, the following:

- **Local issues**—the project's level of priority among others proposed in the state; changes in funding availability; concerns of local property owners; or opposition to the project (which may or may not be connected to environmental issues).

(...continued)

on the time it takes to complete highway projects. GAO also noted that there was no accepted measuring stick with which to gauge whether project performance is "timely." To make its determination on project timing, GAO relied on a best estimate prepared by FHWA. According to FHWA, the estimate it provided to GAO was based on the professional judgment of its staff and several state DOTs.

[57] The identification of factors that currently affect project delivery is particularly relevant when considering legislative options to address potential causes of delay in the environmental review process. State DOTs have improved their environmental review procedures in the past 10 years. Also, FHWA has expanded its efforts to provide information and guidance on the process, including increased efforts to encourage states to implement programmatic agreements applicable to NEPA compliance and other environmental laws.

[58] Federal Highway Administration and the Louis Berger Group, *Evaluating the Performance of Environmental Streamlining: Phase II*, 2003, available on FHWA's "Streamlining/Stewardship" website, http://www.environment.fhwa.dot.gov/strmlng/baseline/phase2rpt.asp.

[59] Ibid., under "Conclusions 4.2."

- **Project-specific issues—**the project's technical complexity; changes in project scope or design; lawsuits or the threat of litigation (which may or may not be connected to environmental issues); poor consultant work; issues with city documentation; issues with new alignment or coordination with other transportation projects; or land use planning issues.[60]

As discussed previously, environmental requirements identified as a source of delay have been associated with selected requirements established under Section 4(f); the Endangered Species Act; the National Historic Preservation Act; and the Clean Water Act. If a project is delayed by requirements under those laws, that delay may be attributable to project-specific issues.

Efforts to identify specific problems or causes of delay in meeting requirements other than NEPA have found differing perceptions among resource agency and transportation agency officials. For example, in completing its obligations as part of the environmental review process, resource agencies have identified poor communication, problems with the project's alternative analysis, being given incorrect or incomplete information, disagreements or differences of opinion among agencies, or environmental or biological issues associated with the project. Transportation agency officials also cited disagreements or differences of opinion and environmental or biological issues associated with the project, but identified a lack of timely response from resource agencies as the primary problem.[61]

Benefits to the Environmental Review Process

When there is debate over potential options to expedite the environmental review process, that process may be viewed as simply an obstacle to overcome before a highway or bridge project can be built. Benefits to the process may be overlooked or hard to quantify. Potential benefits may generally be thought of as those associated with balancing transportation and infrastructure needs with environmental protection and community concerns. However, one benefit that is not often considered is the degree to which the environmental review process may ultimately save time and reduce overall project costs by identifying and avoiding problems in later stages of project development. A study prepared for the Transportation Research Board made this point when evaluating causes of delay in the construction phases of development.[62]

Among other findings, the study found that certain recognized management principles, identified as relevant to timely completion of highway construction projects, should be applied by state highway administrators and contractors. It found that adherence to these principles was often inconsistent and lacking, usually resulting in construction delays. Among the principles identified was the "Cost-Time Relationship," under which, the study found,

[60] Factors listed here are those that have been most commonly identified in surveys or studies conducted by FHWA and GAO, as well as selected university and transportation organizations. For a list of the surveys and studies used to prepare this report, see **Appendix**. Those surveys and studies have looked primarily at causes of delay applicable to projects that require an EIS.

[61] See "FHWA/Gallup Study on Implementing Performance Measurement in Environmental Streamlining," available at http://environment.fhwa.dot.gov/strmlng/gallup_05-07.asp.

[62] Thomas, H.R. and Ellis, R.D, *Avoiding Delays During the Construction Phase of Highway Projects*, Transportation Research Board, National Research Council, October 2001, NCHRP 20-24(12). Also see "The Root Causes of Delays in Highway Construction," a summary of the study's findings submitted for presentation by the authors at the TRB annual meeting in 2003, available at http://www.ltrc.lsu.edu/TRB_82/TRB2003-000646.pdf.

> More time spent in design identifying problems will reduce construction time and result in a shorter overall project time. A widely recognized principle is that spending more monies during planning and design will reduce the time and cost required for construction by avoiding unforeseen conditions, reducing to a minimum design errors and omissions, and developing schemes that will support the most efficient approach to construction. In the design phase, the opportunity to make decisions to influence the final project cost is greatest. Yet, the expenditure of project funds is comparatively minimal, typically about 10% of the capital budget.[63]

These study findings illustrate the potential problem with considering time spent in the planning or preliminary design stage as a delay. It is impossible to determine whether or how much time may be *saved*, and project delivery ultimately accelerated, by avoiding conditions identified early in the process.

Expediting Environmental Reviews

Lessons Learned

The potential for the environmental review process to expedite project delivery is illustrated in findings of a 2009 peer exchange between representatives from state DOTs and FHWA Division Offices. The exchange was intended to identify strategies to more effectively move complex environmental documents through the EIS process.[64] Participants presented information on projects in their states that had moved through the environmental review process quickly. They highlighted the challenges encountered, methods used to successfully and efficiently navigate the EIS process, and lessons learned from their experience. It was observed that the practices described by state DOTs represented a fundamental shift in the way agencies have conducted environmental reviews over the last 10 to 15 years. Those state DOTs were found to have

> embraced innovative and creative solutions to balance transportation and infrastructure needs with environmental protection and community concerns. The environmental review processes for the successful projects … were conducted in a collaborative and transparent manner, whereby [state DOTs] sought to include stakeholders early and often throughout development of the EIS. Such methods not only lead to a faster completion of the environmental review process, but perhaps more importantly, they result in the delivery of better quality projects, ones that fulfill the transportation needs of communities while maintaining protection of environmental resources at the same time.[65]

One recent event serves as a good example of how environmental compliance requirements can be coordinated efficiently. That event was the reconstruction of the I-35 bridge in Minneapolis after its August 1, 2007, collapse. A new bridge opened just over a year later on September 18,

[63] "The Root Causes of Delays in Highway Construction," p. 3.

[64] *Strategies and Approaches for Effectively Moving Complex Environmental Documents Through the EIS Process: A Peer Exchange Report*, prepared by the John A. Volpe National Transportation Systems Center Research and Innovative Technology Administration, U.S. Department of Transportation for the Office of Project Development and Environmental Review, Federal Highway Administration, January 2009, available on FHWA's "Streamlining/Stewardship" website at http://environment.fhwa.dot.gov/strmlng/eisdocs.asp.

[65] Ibid., under "Recommendations for Successful Tools & Techniques."

2008. The timing of that bridge reconstruction led to the question "Why can't all projects be completed that quickly?"

The answer to this question can be found, in part, in an FHWA study that examined how the key elements of the environmental review process were completed after a bridge collapse.[66] A primary factor cited in the study was that, in the wake of an emergency, the major causes of surface transportation project delay are absent. The "major causes of delay" identified were a lack of funding or priority in the state for the project; local controversy; interested stakeholder or local opposition; or insufficient political support.[67] Other potential causes of delay could still apply to emergency projects, including issues with the projects' complexity, poor consultant work, or the environmental review process.

The FHWA study looked at the Minnesota bridge collapse as well as other projects that involved bridge reconstruction after a collapse. Projects in the study illustrated how efficiently the environmental review process *could be* implemented if the more common sources of delay are absent and environmental review involves efficient interagency cooperation.

Bridge reconstruction for the I-35 project required the same environmental permits that would apply to any bridge reconstruction project of similar scope and scale. Despite the urgency of the project, there was no waiver or exemption from the environmental review or permit requirements. The replacement bridge was widened to accommodate future transit options, but did not increase capacity. The project fit the criteria necessary to be processed as a CE, but still required

- a permit issued by the Corps under Section 404 of the Clean Water Act;
- a bridge construction permit issued by the U.S. Coast Guard;
- an assessment of potential impacts to threatened and endangered species by a consultation team formed by FHWA, Minnesota DOT (MnDOT), and the Department of the Interior's U.S. Fish and Wildlife Service (FWS);
- a Minnesota Pollution Control Agency permit certifying compliance with the Clean Water Act's National Pollutant Discharge Elimination System and other requirements; and
- an assessment of potential cultural and historic issues through MnDOT's Cultural Resources Unit (CRU), in part, in accordance with a programmatic agreement with the Minnesota SHPO and tribes interested in reviewing state projects.

Efficient interagency coordination on the project was a factor identified as one associated with expedited reconstruction of the bridge. However, the efficiency of that agency interaction did not begin with this project. FHWA observed that staff from state and federal agencies involved in the environmental review process had worked collaboratively on past projects. The agencies established lines of communication and understood the tasks and concerns of each other's

[66] See "Meeting Environmental Requirements After a Bridge Collapse," prepared for the Office of Project Development and Environmental Review, Federal Highway Administration, U.S. Department of Transportation, and prepared by the John A. Volpe National Transportation Systems Center Research and Innovative Technology Administration, U.S. Department of Transportation, August 2008, available at http://www.environment.fhwa.dot.gov/projdev/bridge_casestudy.asp.

[67] Major sources of project delay cited in the bridge study are those identified in FHWA survey results included in **Appendix**.

agencies. Those existing relationships led to a quick response among those agencies after the bridge collapse. Further, FHWA and MnDOT recognized that by limiting the scope of the project, the environmental review process was expedited because no expanded environmental review was needed (e.g., it met the criteria applicable to a CE). Further, federal and state resources were focused on this project—its completion was a priority to the state.

Apart from issues cited in the FHWA bridge study, MnDOT cited its use of a design-build procurement process as an important factor in the expediting project completion. A "design-build" process brings designers and contractors together early in the project development process and allows for a shortened process completion time by overlapping design and construction.[68]

Lessons learned from projects completed relatively quickly as well as suggested solutions from transportation agency officials[69] involve certain common approaches or procedures that have or could streamline the environmental review process. Those approaches include the following:

- efficient interagency communication and project coordination;
- early and continued communication with stakeholders affected by a project;
- improvements in internal processes and procedures;
- demonstrated agency commitment to priority projects and project schedules; and/or
- programmatic approaches to meeting compliance obligations.

Each of these approaches can be implemented under existing standards and requirements applicable to federally funded highway projects. For example, CEQ and DOT regulations implementing NEPA include explicit requirements intended to identify potential environmental issues early in the project development process and coordinate efficient interagency cooperation. CEQ also provides federal agencies with guidance on improving the efficiency and timeliness of their environmental reviews under NEPA.[70] DOT provides guidance and information intended to assist state and local agencies in implementing the environmental review process more efficiently.[71]

[68] For more information about the bridge reconstruction project, see the Minnesota DOT "I-35W St. Anthony Falls Bridge" website at http://projects.dot.state.mn.us/35wbridge/index.html.

[69] See findings in the 2007 FHWA/Gallup study (cited in footnote 61).

[70] CEQ guidance "Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act," released on March 6, 2012, available at http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/efficiencies-guidance. CEQ stated that the guidance is part of its broader effort to "modernize and reinvigorate" federal agency implementation of NEPA and to support goals established in President Obama's August 31, 2011, memorandum, "Speeding Infrastructure Development through More Efficient and Effective Permitting and Environmental Review." For information about CEQ pilot programs established to support those goals, see http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/nepa-pilot-project.

[71] See FHWA's online "Environmental Review Toolkit," available at http://environment.fhwa.dot.gov/index.asp. It includes, for example, guidance and information regarding linking project planning and environmental requirements; NEPA requirements applicable to project development; a database of "lessons learned" related to streamlining and environmental stewardship; and guidance on compliance requirements such as those applicable to wetlands, Section 4(f), and historic preservation.

Administrative Efforts

In 2009, DOT initiated its "Every Day Counts" program to identify and implement approaches to shortening project delivery (among other goals). The program includes an evaluation of potential changes in DOT's role in implementing the environmental review process, including the following efforts:

- **Improve the link between project planning and environmental review**—sets up a framework for incorporating planning documents and decisions from the earliest stages of project planning into the environmental review process.
- **Enhance legal sufficiency reviews**—uses the process to identify the most common problems in NEPA and Section 4(f) document development, their root causes, and the measures local and state transportation agencies can take to avoid the problems; and encourages reviews when documents are in their draft stage, reducing the potential need for multiple legal reviews of a "final" document and helping to resolve conflict and potential controversy earlier in the process, when project schedules can better accommodate the change.
- **Expand the use of programmatic agreements**—identify new and existing programmatic agreements that may be expanded to a regional or national level.
- **Encourage the use of existing regulatory flexibility**—clarify existing requirements applicable to activities that may be allowed during the preliminary design phase of development and to ROW acquisition and utility relocation.

These issues identified by both DOT and state transportation agencies illustrate the need to more efficiently implement existing requirements or to identify barriers to implementing them.

Conclusions

There is little debate that delays in transportation project delivery can result in higher project costs, as well as delay potential positive economic advantages such as bringing project-related jobs to the community. Also, it is known that completing the environmental review process takes time, sometimes years for complex, major projects. Meeting environmental compliance requirements may result in project delays or, at least, a project taking longer than anticipated by its sponsor. However, what is unclear is whether or what specific elements of the environmental review process routinely delay project delivery.

The time it takes to complete the NEPA process is often the focus of debate over project delays attributable to the environmental review process. However, the influence of environmental requirements established under Title 23 and other federal law call into question the degree to which changes in the NEPA process will expedite the environmental reviews and accelerate project delivery. Further, although there are no comprehensive data and available information tends to be anecdotal, when delays in the environmental review process have been identified, they primarily stemmed from local or project-specific issues (e.g., project complexity, changes in state priorities, or late changes in project scope).

Regardless of potential changes to the NEPA process or the overall environmental review process, local factors will strongly influence project delivery time. State or local decision makers will continue to have the most significant influence on project delivery in their capacity to establish

(and change) project priorities, allocate available funds, and be influenced by local controversy or project opposition. A project's environmental review process may be efficiently executed and involve no delays in the process itself, but still take decades or never be completed if local and state issues are acting against the project.

The potential success of efforts intended to expedite the environmental review process would involve evidence that transportation projects were delivered more quickly. However, considering the limits to measuring the time it takes to complete the environmental review process, the relative success of a particular approach may be gauged in terms of the degree to which state or local transportation agencies find it useful in meeting their environmental compliance obligations.

Compared to transportation planning and project development during construction of the Interstate Highway System, state and local transportation agencies are more inclined to consider a project's effects on communities and resources. Apart from any potential changes to federal environmental review requirements, local and state agency decisions regarding transportation project planning, funding, and development will continue to be strongly influenced by a project's benefits and adverse effects to the environment and the community it serves.

Appendix. Surveys and Studies Applicable to the Environmental Review Process

In this report, summary information and conclusions regarding factors applicable to measuring the stages of project development, the time it takes to complete the environmental review process, and primary sources of delay or perceptions among transportation agency officials regarding causes of delay in completing the environmental review process were drawn from data included in the following surveys and studies conducted by FHWA, GAO, universities, or transportation organizations:

Federal Highway Administration (available on FHWA's "Environmental Toolkit: Streamlining/Stewardship—Performance Reporting" website, http://environment.fhwa.dot.gov/strmlng/es10measures.asp).

- *Evaluating the Performance of Environmental Streamlining: Phase II*, an FHWA-commission study conducted by the Louis Berger Group, 2003.
- FHWA surveys, *Reasons for EIS Project Delays* and *Information on Timeliness on Completing the NEPA Process*.
- *Strategies and Approaches for Effectively Moving Complex Environmental Documents Through the EIS Process: A Peer Exchange Report*, prepared for FHWA by DOT's John A. Volpe National Transportation Systems Center Research and Innovative Technology Administration, January 2009.
- *FHWA/Gallup Study on Implementing Performance Measurement in Environmental Streamlining*, "Implementing Performance Measurement in Environmental Streamlining," May 2007.

Government Accountability Office.

- *Highway Infrastructure: Stakeholders' Views on Time to Conduct Environmental Reviews of Highway Projects*, GAO-03-534, May 23, 2003.
- *Highway Infrastructure: Preliminary Information on the Timely Completion of Highway Construction Projects*, GAO-02-1067T, September 19, 2002.

University and Transportation Organization Studies.

- *What Influences the Length of Time to Complete NEPA Reviews? An Examination of Highway Projects in Oregon and the Potential for Streamlining*, by Jennifer Dill, Center for Urban Studies, Nohad A. Toulan School of Urban Studies & Planning, Portland State University, submitted for presentation at the 85th Annual Meeting of the Transportation Research Board, November 15, 2005 (revised).
- *Causes and Extent of Environmental Delays in Transportation Projects*, prepared by TransTech Management, Inc., for the American Association of State Highway and Transportation Officials (AASHTO), December 2003.
- Environmental Streamlining: A Report on Delays Associated with the Categorical Exclusion and Environmental Assessment Processes, prepared by TransTech Management, Inc., for AASHTO, October 2000.

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