

AASHTO PRACTITIONER'S HANDBOOK

03

August 2016

MANAGING THE NEPA PROCESS FOR TOLL LANES AND TOLL ROADS

This Handbook provides recommendations for conducting National Environmental Policy Act (NEPA) studies for projects involving toll lanes and toll roads. Issues covered in this handbook include:

- Addressing tolling in the transportation planning process
- Preparing to initiate the NEPA process for a tolled project
- Developing the purpose and need and range of alternatives
- Traffic forecasting for tolled alternatives
- Environmental justice issues related to tolling
- Addressing other direct and indirect impacts of tolling
- Coordinating NEPA reviews with a project financing and procurement
- Considering tolled alternatives in a re-evaluation or supplemental NEPA document

The Practitioner's Handbooks are produced by the Center for Environmental Excellence by AASHTO. The Handbooks provide practical advice on a range of environmental issues that arise during the planning, development, and operation of transportation projects.

The Handbooks are primarily intended for use by project managers and others who are responsible for coordinating compliance with a wide range of regulatory requirements. With their needs in mind, each Handbook includes:

- key issues to consider;
- a background briefing;
- practical tips for achieving compliance; and
- a list of reference materials.

In addition, key regulations, guidance materials, and sample documents for each Handbook are posted on the Center's web site at <http://environment.transportation.org>



Center for Environmental Excellence by AASHTO



American Association of State Highway and Transportation Officials

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This material is based upon work supported by the Federal Highway Administration under Cooperative Agreement No. DTFH61-07-H-00019. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the Federal Highway Administration.

Overview



This Handbook provides recommendations for conducting National Environmental Policy Act (NEPA) studies for projects involving toll lanes and toll roads. It covers issues associated with the NEPA process itself as well as a range of related issues, such as developing tolling policies in the transportation planning process and coordinating a NEPA study with a procurement for a public-private partnership (PPP).

Tolling has received increased attention in recent years as a method for addressing transportation needs. This trend has resulted from many factors, including the expanded availability of electronic toll collection; the inadequacy of traditional funding sources for transportation projects; the removal of certain legal restrictions on tolling under Federal law; and the success of toll projects both in the United States and around the world. Recent legislation seems likely to continue the trend toward tolling by increasing States' authority to allow for the development of toll lanes and toll roads.

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Background Briefing

The basic requirements applicable to the NEPA process for a tolled project are the same as those for a typical federally funded highway project. But as described in this section, toll projects also involve some distinct legal and regulatory issues, which create additional opportunities and constraints that need to be considered when carrying out the NEPA process.

Adoption of Transportation Planning Decisions in the NEPA Process. Transportation agencies can use the transportation planning process to produce decisions or analyses that can later be adopted for use in the NEPA process, including decisions regarding the use of tolls and PPPs. For highway and transit projects, there are two main sources of authority for adopting planning decisions for use in the NEPA process:

- **23 CFR 450 Appendix A:** The statewide and metropolitan transportation planning regulations allow transportation planning products to be adopted for use in the NEPA process, based on criteria set forth in 23 CFR 450.212(b) and 450.318(b) and in Appendix A to the regulations. Appendix A states that “If the financial plan for a metropolitan transportation plan indicates that funding for a specific project will require special funding sources (e.g., tolls or public-private financing), such information may be included in the purpose and need statement.”¹
- **23 USC 168:** This statute provides additional legal authority to adopt planning-level decisions for use in the NEPA process; it is distinct from the process described in Appendix A to 23 CFR Part 450.² Like Appendix A, this statute authorizes adoption of decisions regarding “whether tolling, private financial assistance, or other special financial measures are necessary to implement the project.”³

¹ 23 CFR Part 450, Appendix A, Part II, Paragraph 8.

² See 23 CFR 450.212(d) and 450.318(e) (implementing 23 USC 168).

³ 23 USC 168(c)(1)(A).

Consideration of Non-Tolled Alternatives. In guidance on NEPA compliance for toll roads, FHWA has identified three circumstances in which a NEPA study can focus solely on tolled alternatives:

- when tolling is assumed in the transportation planning process as the basis for meeting fiscal constraint;
- when tolling is an element of the purpose and need; and
- when non-tolled alternatives are eliminated from consideration during the alternatives screening process.⁴

In a 2015 guidance document, FHWA reiterated that “the specific goals and objectives of a project, such as urgency, congestion relief, or financial infeasibility of non-tolled alternatives, could narrow the range of reasonable alternatives to only tolled alternatives.”⁵ The guidance also cautions, however, that even if there is a valid justification for eliminating non-tolled alternatives, it may be advisable to continue examining non-tolled alternatives if there is public opposition to tolls.

Authority to Implement Tolling on Federal-Aid Highways. Federal law allows tolling on the Interstate System and other Federal-aid highways under specific circumstances. In a NEPA context, these restrictions are relevant because they may influence the way a project is defined and the types of alternatives that can be considered. Currently, there are four main sources of authority to allow tolled facilities on new or existing Federal-aid highways:

- **23 USC 129:** Section 129 lists several types of toll projects that can be implemented on Federal-aid highways, including certain facilities on the Interstate System. It provides broad authorization for tolling on existing and new non-Interstate System highways. It also allows tolling for some types of projects on the Interstate System, including: adding new tolled lanes to an existing Interstate; converting a non-tolled bridge on an Interstate to a tolled bridge; and building new tolled Interstate highways.
- **23 USC 166:** Section 166 authorizes the conversion of existing high-occupancy vehicle (HOV) lanes to HOV/toll (HOT) lanes. This authority applies to highways on and off the Interstate System.
- **Interstate Reconstruction and Rehabilitation Pilot Program:** This program allows for tolling existing highways on the Interstate System as part of a project involving reconstruction or rehabilitation of those highways. This program is limited to three facilities, which must be in different states.
- **Value Pricing Pilot Program:** This program allows for a wide range of tolled projects to be authorized on new and existing highways, both on and off the Interstate System. The main requirement is that the project must involve some form of “value pricing” (also called congestion pricing). Participation is limited to 15 states, local governments, or other public authorities. Multiple projects can be authorized under a single agreement.

All of these laws and programs contain specific conditions that must be met in order for tolling to be authorized. For additional information on FHWA's tolling and pricing programs, see the Reference Materials section of this Handbook.

Fiscal Constraint. FHWA will not issue a NEPA decision document for a project in a metropolitan area unless that project is included in the fiscally constrained metropolitan transportation plan.⁶ Fiscal constraint, in essence, is a finding that projected revenues are sufficient to cover the projected costs of the projects in the plan. FHWA's fiscal constraint guidance recognizes that toll revenues can be considered as one source of revenue to satisfy fiscal constraint requirements.⁷ The need to make a fiscal constraint determination may require projections to be made regarding anticipated toll revenues well before any final decisions have been made regarding toll rates.

Major Project Financial Plans. All federally funded highway projects with an estimated cost of \$100 million or more are defined as “major projects” under 23 USC 106. For a major project, the sponsor is required to develop a financial plan that describes the project, the proposed construction schedule, the estimated cost, and the revenue sources and financing strategies that will be used to pay for the project.⁸ For projects with costs over \$500 million, the financial plans must be submitted to FHWA for approval. The financial plan typically is developed during the later stages of the NEPA process and submitted for FHWA approval shortly after NEPA completion.

⁴ D.J. Gribbin, Chief Counsel, FHWA, to D. Nicol, FHWA Division Administrator, Colorado, “NEPA Analysis for Toll Roads” (Oct. 15, 2004).

⁵ For additional information, see FHWA, “Public–Private Partnership Oversight: How FHWA Reviews P3s” (Jan. 2015), p. 19.

⁶ FHWA also requires at least one project phase to be included in the metropolitan transportation improvement program (TIP), which must be consistent with the statewide transportation improvement program (STIP).

⁷ FHWA, “Financial Planning and Fiscal Constraint for Transportation Plans and Programs Questions & Answers” (April 15, 2009; last updated Oct. 29, 2015), Section 11.

⁸ For additional information, see FHWA, “Major Project Financial Plan Guidance” (Dec. 2014).

Procurement of PPPs during the NEPA Process. The procurement process for a PPP may be initiated, or even completed, in parallel with the NEPA process.⁹ FHWA's regulations include safeguards to ensure that early initiation of the PPP procurement does not affect the objectivity of the NEPA process. For example, the private partner is prohibited from preparing the NEPA document or having any decision-making responsibility in the NEPA process. In addition, any PPP contract must ensure that no commitments are made to any alternative prior to completion of the NEPA process.¹⁰

Environmental Justice (EJ) and Tolling. Under an Executive Order on environmental justice (E.O. 12898), all Federal agencies are required to take action to identify and address any “disproportionately high and adverse effects” of their actions on minority and low-income populations. FHWA has implemented this mandate through its Order 6640.23A. This order directs FHWA managers and staff to “take into account mitigation and enhancement measures and potential offsetting benefits to the affected minority and/or low-income populations” when determining if effects are disproportionately high and adverse.¹¹ In addition, the order states the conditions under which FHWA may approve a project that would cause disproportionately high and adverse effects on a low-income and/or minority population:

- If the project will have disproportionately high and adverse effects on low-income populations (regardless of minority status), FHWA must ensure that the project includes all “practicable” measures to avoid or reduce the disproportionately high and adverse effects. The order states that “[i]n determining whether a mitigation measure or an alternative is ‘practicable,’ the social, economic (including costs), and environmental effects of avoiding or mitigating the adverse effects will be taken into account.”¹²
- If the project will have disproportionately high and adverse effects on minority populations, FHWA must ensure that (1) there is a substantial need for the project, based on the overall public interest; and (2) alternatives that would have less adverse effects on protected populations have either “severe” environmental or socio-economic impacts or would involve “increased costs of an extraordinary magnitude.”¹³

FHWA also has issued guidance on how to address EJ issues in the NEPA process.¹⁴ In addition, FHWA has published several reports with advice on methodologies for EJ analyses and examples of EJ analyses for toll projects. (See the FHWA publications listed in the Reference Materials section of this Handbook.)

Title VI. Title VI of the Civil Rights Act is a Federal law that prohibits a recipient of Federal funds, including state DOTs and public transit agencies, from engaging in discrimination against any person on grounds of race, color, or national origin.¹⁵ Any member of a protected class under Title VI may file a complaint with the U.S. Department of Transportation (U.S. DOT), alleging that he or she was subjected to discrimination. As part of the NEPA process, it is prudent to document that the U.S. DOT agency has specifically considered compliance with Title VI, especially if the EJ analysis has concluded that the project will have disproportionately high and adverse effects on minority populations.

Key Issues to Consider

Addressing Tolling in the Transportation Planning Process

- Does the statewide and/or metropolitan long-range plan establish any policies regarding for tolling?
- Has a toll feasibility study been conducted for this project? If so, what are the key conclusions of that study?
- Have toll revenues from this project been assumed in making a fiscal constraint determination for a transportation plan or transportation improvement program? If so, what specific assumptions were made?

Preparing to Initiate the NEPA Process for a Tolled Project

- Has the planning process produced any decisions or analyses that can be adopted in the NEPA process?
- Are improvements to the traffic model needed in order to develop forecasts for tolled alternatives?

⁹ See 23 CFR Part 636. For additional information, see FHWA, “Public–Private Partnership Oversight: How FHWA Reviews P3s” (Jan. 2015).

¹⁰ 23 CFR 636.109(b).

¹¹ FHWA Order 6640.23A (June 14, 2012), Sec. 8(e).

¹² FHWA Order 6640.23A (June 14, 2012), Sec. 8(f).

¹³ FHWA Order 6640.23A (June 14, 2012), Sec. 8(g).

¹⁴ FHWA, “Guidance on Environmental Justice and NEPA” (Dec. 16, 2011).

¹⁵ 42 USC 2000d.

- What Federal legislation provides authority to implement tolling for this project? Does that legislation include constraints that may be relevant when developing tolled alternatives?
- What expertise will be needed on the consultant team to ensure that tolled alternatives are adequately analyzed in the NEPA process?
- Is any change in state law needed to enable the project sponsor to carry out a tolled project?
- Is tolling controversial? What is the likelihood of litigation challenging the project?

Developing the Purpose and Need and the Range of Alternatives

- Has the transportation planning process provided a basis for incorporating tolling into the purpose and need?
- Even if tolling is not included in the purpose and need, are there other grounds—e.g., lack of financial feasibility—for eliminating non-tolled alternatives? If so, how will this be documented?
- Even if a basis exists for eliminating non-toll alternatives, are there other reasons to continue considering non-toll alternatives in the NEPA process?
- Are there different tolling concepts (e.g., tolling only new lanes vs. tolling all lanes) that need to be considered as alternatives to one another in the NEPA process?
- What criteria will be used for comparing alternatives? Do these criteria fully capture the relevant differences associated with tolled and non-tolled alternatives?

Traffic Forecasting for Tolled Alternatives

- Are improvements to the model needed before the NEPA forecasts are developed?
- What toll rates will be assumed in the traffic forecasts in the NEPA study? Are those assumptions consistent with the revenue projections used in fiscal constraint findings or other financial forecasts?
- Are there other important assumptions regarding tolling that need to be reflected in the traffic model—e.g., different toll rates based on time of day?
- What assumptions will be made about tolling on other facilities under the No Action alternative? For example, is there a basis for assuming that some existing non-tolled facilities will become tolled in the forecast year?
- Are separate traffic and revenue (T&R) forecasts being prepared for the same project concurrently with the NEPA process? Do those T&R forecasts differ from the NEPA traffic forecasts?

Environmental Justice Issues Related to Tolling

- What are the potential effects of tolling on minority and low-income communities?
- What are the potential benefits of tolling to minority and low-income communities?
- What mitigation measures, if any, will be considered for impacts on minority and low-income communities?
- How will compliance with FHWA Order 6640.23A be documented?
- How will compliance with Title VI of the Civil Rights Act be documented?

Coordinating the NEPA Process with Project Financing and Procurement

- How will the NEPA process be coordinated with project financing and procurement?
- Will a PPP be used? If so:
 - When will the selection of a private-sector partner occur in relation to the NEPA process? If there is overlap with the NEPA process, how are the two being coordinated?
 - What are the objectives of private sector investors (if known) and how do they relate to project assumptions and features—for example, project scope, termini, purpose and need, range of alternatives?
 - What ground rules will be established regarding communications between the NEPA team and any potential private investors?

Considering Tolled Alternatives in a Re-Evaluation or Supplemental NEPA Document

- Were tolled alternatives considered at all in a previous NEPA document for this project? If so, what analysis did that document include, and what conclusions did it reach about tolling?
- If tolling was rejected in a previous study, what are the reasons for reconsidering it now?
- What public outreach is needed to inform the public of the possibility that tolling will be considered?
- What project elements will change if the project is modified to include tolls?
- How will tolling affect the project's transportation performance and/or impacts?
- With tolling, will the project still meet the purpose and need?
- Is a supplemental EIS likely to be needed?

Practical Tips

1 | Addressing Tolling in the Transportation Planning Process

This section of the Handbook identifies several specific approaches that can be used to address tolling in the transportation planning process. The planning process provides an opportunity to resolve fundamental policy issues regarding the role of tolling in the state or region's transportation system. It also provides an opportunity to develop the financial and traffic analyses that demonstrate the viability of tolled alternatives in a specific corridor or regional network. And it may help to demonstrate that toll revenues are needed to meet fiscal constraint requirements. By taking advantage of these opportunities, transportation agencies can help to lay the foundation for a focused and efficient NEPA process.

Developing a Region-Wide Toll Policy. A comprehensive regional policy regarding highway tolls can provide the foundation for considering tolls in the environmental review process for individual projects. Within a metropolitan area, the development of a regional toll policy could be led by the metropolitan planning organization (MPO) and/or the state DOT, and would likely involve toll road authorities, local governments, and many other stakeholders. A regional toll policy could address issues such as:

- Policy rationale for tolling (e.g., raising revenue, managing congestion, reducing emissions)
- Reliance on tolls to demonstrate fiscal constraint
- Use of all-electronic toll collection
- Designation of tolled corridors
- Assessment of equity and environmental justice concerns related to tolling
- Measures to minimize or offset the impact of tolls

Conducting Toll Feasibility Studies. When conducted as part of transportation planning, a toll feasibility study can save time in the NEPA process by helping to clarify the type of tolled alternatives that would be viable and the financial and operational benefits of those alternatives. Specifically, a tolling feasibility study provides a starting point for assessing:

- Type of toll facility (e.g., HOT lanes)
- Potential toll rates on the facility
- Potential toll revenue generated by the toll facility
- Effects of tolling on traffic diversion to other routes
- Potential construction costs
- Potential use of a PPP
- Project phasing options

Developing Project-Specific Analyses for Adoption in NEPA. The planning process also can be used to prepare analyses for a specific toll project with the intention of adopting those analyses in a future NEPA process for that project. These analyses could build on the vision set forth in a region-wide toll policy, and they may incorporate financial and other data from a tolling feasibility study. These analyses could include:

- Drafting a purpose and need statement
- Determining that non-tolled alternatives are not reasonable
- Determining the elements of a tolled alternative
- Evaluating equity-related impacts of tolling
- Developing measures to minimize and mitigate effects of tolling
- Identifying other facilities that are expected to be tolled under the No Action condition.
- Developing assumptions to support inclusion of the tolled project in the fiscally constrained plan and TIP.

The decision to adopt any of these analyses or decisions for use in the NEPA process would be made by the Federal lead agency during the NEPA process.¹⁶ (See Background Briefing.)

Incorporating Toll Revenues into a Fiscal Constraint Analysis. If the planning process has identified toll revenues as a funding source for a project, the anticipated toll revenue can be incorporated into a preliminary analysis showing how fiscal constraint requirements can be met for the MPO's long-range plan (and, if applicable, the TIP and STIP). As noted earlier, it is not necessary to meet the fiscal constraint requirement at the pre-NEPA stage; fiscal constraint only needs to be shown prior to completion of the NEPA process. Nonetheless, an early analysis of fiscal constraint may help to inform the development and screening of alternatives in the NEPA process by providing a basis for assessing financial feasibility of both tolled and non-tolled alternatives. In addition, early consideration of fiscal constraint helps to build relationships with MPO staff, which can reduce the risk of delays in obtaining MPO approvals during the NEPA process.

2 | Preparing to Initiate the NEPA Process for a Tolled Project

Once a potential toll project is identified, there may be an expectation that the NEPA process should begin right away. But before starting the NEPA process, it is beneficial to assess whether the necessary technical resources, expertise, and legal authorities are in place—especially if the project is being implemented in a region that does not have significant prior experience with tolling. This section discusses some of the important topics to cover when preparing to initiate the NEPA process for a toll project. Considering these issues early will help to avoid delays after the NEPA process is under way.

Adopting Planning Decisions for Use in the NEPA Process. If tolling has been considered in the transportation planning process, the project sponsor should meet with the Federal lead agency to discuss what decisions or analyses can be adopted from the planning process for use in the NEPA process. For example, the planning process may provide a basis for defining the proposed project as a tolled project from the outset. The planning process also may provide information that can be adopted regarding the regional impacts and benefits of tolling. By the same token, the planning process also may have revealed significant public concerns about tolling, which may suggest the need to continue consideration of non-tolled alternatives in the NEPA process.

Modeling Capability. One of the most important issues to consider before initiating the NEPA process is the adequacy of the existing travel forecasting model. A model that may be sufficient for non-tolled projects is not necessarily sufficient to carry out an alternatives analysis for a tolled project. Developing the necessary capabilities often takes significant time and resources, so it is best done before the NEPA process begins. For example, it may be necessary to develop a time-of-day model, with the capability to predict variations in volumes throughout the day, rather than a model that predicts total daily volumes and simply makes assumptions about the share of that traffic that will occur during peak periods.

Study Area. The study area for a project with tolled alternatives may be broader, in some ways, than the study area for a project that only includes non-tolled alternatives. The reason is that tolling can have wide-ranging effects on traffic patterns, extending well beyond the immediate geographic area of the project. As initial traffic forecasts are received, the project team should examine the effects of tolling on the regional traffic network as a whole and ensure that the study area (at least for traffic-related impacts) is broad enough to include other facilities that will be meaningfully affected by tolling.

¹⁶ In this Handbook, any references to the “FHWA” or the “Federal lead agency” include a state acting as the Federal lead agency pursuant to a NEPA assignment program under 23 USC 326 or 327.

Financial Expertise. While project financing is not the main focus of the NEPA process, issues related to project financing and procurement often play a key role in the alternatives analysis for a toll road project. For example:

- Non-tolled alternatives can be eliminated in the NEPA process based on a demonstration of financial infeasibility. Financial expertise would be needed to prepare documentation showing that non-tolled alternatives are not financially feasible.
- The analysis of tolled alternatives in the NEPA process requires assumptions to be made about toll rates and the toll rate structure. Financial expertise is needed to ensure that these assumptions are reasonable.
- The NEPA process cannot be concluded until the project is included in a fiscally constrained long-range plan. For a tolled project, toll revenues generally are assumed as part of the fiscal constraint demonstration, often along with other funding sources. Financial expertise is needed to prepare documentation showing how toll revenues, combined with other sources, can be used to pay for the project.

Given the importance of these issues in a tolled project, it is highly beneficial to have agency staff and consultants with project financing expertise available to assist the NEPA team in developing tolled alternatives and in drafting documents that discuss the financial feasibility of tolled and non-tolled alternatives. Financial expertise is especially important when documenting fiscal constraint determinations for tolled projects that will use innovative financing methods.

PPP Expertise. Many toll roads are developed as public–private partnerships—for example, concession contracts under which a private party will be responsible for design, construction, financing, operating, and maintaining the project. If a PPP is being considered, it is beneficial to develop plans for the PPP procurement and the NEPA process in parallel with one another, so that the NEPA strategy can inform the approach to the PPP procurement and vice-versa. For example, it is critical for the PPP procurement to be conducted in a manner that does not create bias or the appearance of bias in the NEPA process. Early coordination between the NEPA and PPP teams can help to ensure that all communications and documentation involved in the PPP procurement are fully consistent with this principle.

Legislative Authority. The pre-NEPA stage should also be used to identify any gaps in the project sponsor’s legislative authority related to implementation of the proposed toll project. For example, some states lack authority to implement tolling on certain facilities, or lack authority to use a PPP. If these legal issues are not resolved prior to initiation of the NEPA process, they may create uncertainty about the viability of tolled alternatives and/or procurement methods that could be used for a toll project. If the necessary legislative authority is in place from the outset of the NEPA process, it will help to reduce uncertainty and thereby reduce the potential for delay in the NEPA process.

3 | Developing the Purpose and Need and the Range of Alternatives

If the transportation planning process has been used effectively, it will help to define the purpose and need and the range of alternatives under consideration in the NEPA process—possibly justifying the elimination of non-tolled alternatives. If this work has not been done, or has not led to clear results, additional analysis will be needed within the NEPA process before deciding whether the NEPA process can focus solely on tolled alternatives.

Deciding Whether to Include Tolling in the Purpose and Need. The concept of tolling can be incorporated directly into the purpose and need for a project. For example, if a state DOT or MPO has established a plan for completing a network of tolled lanes, a project that is intended to complete a link in that network could include tolling as an element of its purpose and need. The decision to incorporate tolling into the purpose and need would have to be based on a solid underlying foundation in the planning process. If this approach is followed, the alternatives considered in the NEPA study would consist entirely of tolled alternatives that meet the defined purpose and need for the project. Of course, it is also appropriate to adopt a “tolling-neutral” purpose and need statement, which allows for consideration of both tolled and non-tolled alternatives.

Deciding Whether to Consider Only Tolled Alternatives. As noted earlier, the range of alternatives considered can in some cases be limited to tolled alternatives. Obviously, this can be done if the purpose and need specifically calls for a tolled project. Even if the purpose and need does not call for tolling, non-tolled alternatives still could be eliminated if they are determined to be financially infeasible and that determination is supported with documentation. On the other hand, even in situations where it is legally acceptable to focus solely on tolled alternatives, a decision still could be made to consider both tolled and non-tolled alternatives. Reasons to consider both non-tolled and tolled alternatives could include:

- Preserving the option of selecting a non-tolled alternative at the end of the NEPA process if tolling is found to be unacceptable or infeasible
- Providing the public with a greater opportunity to consider the pros and cons of tolling and to offer their perspectives before a decision is made on tolling
- Avoiding disputes over the adequacy of the legal justification for focusing solely on tolled alternatives

Deciding Whether to Consider Various Types of Tolled Alternatives. In many cases, the tolled alternatives considered in a NEPA document all share certain common elements—for example, all tolled alternatives involve the same toll rate structure. But in some cases, it may be appropriate to consider different approaches to tolling as alternatives to one another in the NEPA process (e.g., tolling only new lanes vs. tolling all lanes). In any case, the assumptions made in defining tolled alternatives should be documented in the same manner as other decisions about the definition of alternatives considered in the NEPA process.

Considering Other Revenue Sources as Alternatives to Tolling. The transportation planning process can and should be used to establish transportation funding priorities and, as such, it can be used in some cases to identify tolling as the designated revenue source for a specific project. If the planning process has identified tolling as the revenue source for a project, that decision provides a rationale for eliminating non-tolled alternatives, including those that rely on tax increases or other revenue increases to avoid the need for tolls. Where the planning process did not provide clear direction regarding the need for tolls, it is still possible to engage the statewide and/or metropolitan planning process in parallel with NEPA and use that process to resolve underlying policy issues regarding which revenues will be used for which projects.

Developing Alternatives Evaluation Criteria. The criteria typically used for evaluating non-tolled alternatives may not fully capture the potential benefits and impacts of tolled alternatives. When tolled alternatives are being considered, it may be appropriate to develop additional evaluation criteria that help to distinguish among the alternatives. Examples include:

- **Equity.** Tolls frequently raise concerns about issues related to the fairness (equity) of the distribution of the benefits and burdens of toll costs. These concerns may relate specifically to the impact of tolls on minority and low-income groups, as well as broader concerns about equity among different areas or user groups within the affected region. To respond to equity concerns, evaluation criteria may need to be developed regarding the effect of tolled and any non-tolled alternatives on the distributions of transportation benefits and costs.
- **Traffic Diversion.** Tolls typically cause some trips to divert from the tolled route to non-tolled routes or tolled routes with lower tolls. Traffic diversion could result in increased congestion on these alternative routes, and the increased traffic also could have other negative effects, such as increased noise or air quality impacts. Therefore, it is important to consider where traffic diversion may occur and to develop appropriate criteria for evaluating traffic diversion effects.
- **Timing of Construction.** For toll projects, one of the principal benefits of tolling could be the potential for toll revenues to accelerate construction of the project. Therefore, when considering tolled alternatives in the NEPA process, it may be appropriate to develop evaluation criteria that specifically incorporate the timing of construction and the potential for acceleration of project benefits.
- **Financial Feasibility.** Consideration of tolls also may be based on an assumption that non-tolled alternatives are not financially feasible. When financial feasibility is considered, it is important to explain the criteria used to assess feasibility and document the rationale for determining that an alternative is or is not financially feasible.

4 | Traffic Forecasting for Tolled Alternatives

As discussed earlier, the evaluation of tolled alternatives in the NEPA process requires a travel demand model with the capability to take into account the effects of tolling on traffic volumes and patterns. The following issues should be considered when preparing traffic forecasts for tolled alternatives.

Defining the No-Action Alternative. The assumptions regarding tolling under the No-Action alternative will have important implications for the analysis of both the benefits and impacts of a tolled alternative. In defining the No-Action alternative, an important issue to consider is whether any currently non-tolled facilities will become tolled in the future. For example, if the region's long-range transportation plan includes a commitment to implement a region-wide network of tolled highways, it may be appropriate to assume implementation of that tolled network in the No-Action forecasts.

Defining the Tolled Alternatives. The modeling results for tolled alternatives will depend on certain assumptions that are made in the traffic model regarding the physical and operational characteristics of tolled alternatives. For example, traffic modeling for a tolled alternative normally requires assumptions to be made regarding some or all of the following items:

- Toll rates by vehicle class
- Type of tolling
- Toll rates by vehicle occupancy status
- Toll collection locations
- Toll collection methods (e.g., all-electronic)

If toll feasibility studies were completed prior to the NEPA process, those studies may provide a basis for defining these elements of the tolled alternatives. Statewide or regional toll policies also may inform the definition of the tolled alternatives. In any case, the NEPA process should document the assumptions used in analyzing tolled alternatives.

Sensitivity Analyses. Given the multiplicity of assumptions made in modeling tolled alternatives, as well as the sensitivity of the results to those assumptions, it often is prudent to perform sensitivity analyses to assess how different assumptions could change the results of the analysis. For example, one possible approach is to conduct a sensitivity analysis that includes a range of potential future toll rates. A sensitivity analysis does not necessarily reflect a “worst case” scenario; rather, it provides a general indication of the extent to which higher or lower toll rates could affect the traffic forecasts shown in the NEPA document.

Relationship to Traffic and Revenue Forecasts. The NEPA traffic forecasts are intended to provide the basis for an informed Federal decision about the project. For projects involving a PPP or bond financing, it also will be necessary at some point to prepare investment-grade traffic and revenue (T&R) forecasts. The T&R forecasts serve a different purpose from the NEPA forecasts: they provide assurances to investors that traffic levels will be sufficient to support the toll revenues anticipated for the project. These two sets of traffic forecasts generally are conducted separately and involve different methodologies. In many cases investment-grade T&R forecasts are prepared after the NEPA process is completed. But if the investment-grade T&R forecasts are prepared during the NEPA process, it is prudent to include an explanation in the NEPA documentation of any notable differences between the NEPA forecasts and the T&R forecasts.

5 | Environmental Justice (EJ) Issues Related to Tolling

It is essential to give early consideration to EJ issues when developing the methodologies for environmental impact assessment for a tolled project. The tips in this section provide just a starting point for developing these methodologies.

Types of Effects on Minority and Low-Income Populations. All Federal agencies must assess the potential for their actions to cause “disproportionately high and adverse” effects on minority and low-income populations. For a tolled project, there are several types of impacts that may need to be considered in an EJ analysis, such as:

- **Economic Impacts of Tolling**—e.g., costs of toll payments, increased vehicle operating costs, increased delay costs (resulting from use of alternative routes to avoid tolls and/or greater congestion on non-tolled routes).
- **Economic Benefits of Tolling**—e.g., reduced congestion, improved reliability, lower user costs for those who take the tolled route, increased access to job opportunities, overall increase in economic development.
- **Community Impacts**—e.g., traffic diversion causing increased traffic on neighborhood streets; loss of access if important routes serving the community are converted from non-tolled to tolled.
- **Air Quality and Noise Impacts**—e.g., air quality hot-spots resulting from increased congestion at locations where traffic congestion has increased as a result of traffic diversion.

In addition, certain tolling practices may have different effects on low-income groups. For example, toll collection systems often provide lower toll rates and/or discounts to vehicles equipped with transponders. Vehicles without transponders may also be charged higher fees. Because low-income users may have greater difficulty obtaining a transponder, they may be less able to take advantage of the lower tolls and discounts available to transponder users. By the same token, measures to promote wider access to transponders can help to minimize the impacts of tolls on low-income users.

Methodologies for Assessing Impacts on Minority and Low-Income Populations. Methodologies for conducting EJ analyses are evolving, and the specific EJ issues associated with tolled projects may vary considerably.¹⁷ Therefore, it is important to devote focused attention, early in the NEPA process, on developing the methodologies that will be used to assess effects of tolling on minority and low-income populations. Keep the following points in mind when developing these methodologies:

- Both beneficial and adverse effects should be considered. Moreover, a project may have both beneficial and adverse effects on the same community. For example, a project could have the beneficial effect of providing improved access to jobs and shorter travel times while also having the negative effect of increasing the cost of travel or increasing congestion on toll-free routes.
- An EJ analysis is not just a single analysis, but a set of distinct analyses relating to various aspects of the project’s effects on low-income and minority populations. For example, an EJ analysis for a tolled project may involve an assessment of both economic effects and traffic diversion effects on minority and low-income populations. Moreover, an analysis of economic effects may itself involve several components—for example, toll costs, vehicle user costs, delay costs, etc.

¹⁷ FHWA has published several reports with advice on methodologies for EJ analyses and examples of EJ analyses for toll projects. These publications are listed in the Reference Materials section of this Handbook.

- Assumptions about toll rates play a key role in the EJ analysis. At a basic level, toll rates affect the traffic diversion analysis, which is used to determine congestion impacts on non-tolled alternative routes. In addition, toll rates affect the out-of-pocket costs to users of the toll facility, and thus are a key part of any assessment of economic impacts on minority and low-income populations. Toll discounts, if any, also can play an important role in an assessment of economic impacts on minority and low-income populations.
- Different study areas may be appropriate for different aspects of the EJ analysis. For example, the methodology for evaluating traffic diversion, noise, or air quality effects on minority and low-income populations may focus primarily on those populations in the project area, while the methodology for assessing the economic effects on road users may take into account minority and low-income populations within a broader geographic area (the “travelshed”).
- Methodologies that are simple and low-cost may produce misleading results. For example, an economic effects analysis that focuses solely on toll costs may be misleading if it does not also take into account other components of economic impacts and benefits—for example, the reduction in operating costs for users of the tolled facility, the benefits of increased reliability, or the increased operating costs resulting from congestion on other facilities.
- Information important for the EJ analysis may be difficult to obtain. For example, an analysis of economic impacts on minority and low-income populations may require some understanding of the demographic composition of the users of the toll facility as well as the users of alternative routes. There are various ways to obtain this type of data, such as user surveys, polls, and license-plate surveys, but these methods often involve significant limitations or difficulties. Therefore, early attention should be given to identifying the populations that could be affected by tolling.
- The NEPA document will facilitate compliance with FHWA Order 6640.23A if the NEPA document discusses minority populations and low-income populations distinctly rather than lumping them together in a single analysis of “EJ impacts.” The order includes separate requirements regarding approval of projects with disproportionately high and adverse effects on low-income populations and projects with such effects on minority populations.¹⁸
- Keep in mind that an agency’s obligation to consider effects in a NEPA document is governed by a “rule of reason.” With an EJ analysis, as with any other analysis, an agency has discretion to determine that a particular type of EJ analysis is not feasible given the difficulty or cost of obtaining the data, or the potential for intrusion on the privacy of individual members of low-income or minority communities. The rationale for any such decisions should be documented in the project file.

Determining If Effects Are “Disproportionately High and Adverse.” FHWA Order 6640.23A states that an action’s effects on minority and low-income population are “disproportionately high and adverse” if the effects (1) are “predominately borne” by a minority population and/or a low-income population; or (2) will be suffered by the minority population and/or low-income population and those effects are “appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or non-low-income population.”¹⁹ When considering whether an effect is “disproportionately high and adverse,” practitioners may take the following factors into account: planned mitigation measures, offsetting benefits to the affected minority and low-income populations, the design, the comparative impacts, and the relevant number of similar existing system elements in non-minority and non-low-income areas.²⁰

Outreach to Minority and Low-Income Populations. An EJ analysis should be accompanied by public outreach efforts to minority and low-income communities in the project area, and the results of that public outreach should in turn inform the EJ analysis. For tolled projects, the scope of the public outreach effort should reflect the types of impacts that tolling could cause. Typically, these impacts will include both localized effects on minority and low-income communities in the immediate vicinity of the project and effects on communities located within the broader area served by the project.

Mitigation for Impacts on Minority and Low-Income Populations. Depending on the results of the impacts analysis, it may also be appropriate to consider adopting measures to mitigate the effects of tolling on minority and low-income populations. Examples include:

- Incorporating project elements that benefit public transit users (e.g., park-and-ride lots)
- Paying for improvements in public transit service (e.g., purchasing transportation vehicles)
- Dedicating a share of toll revenues to public transit service (if the project generates excess toll revenue)
- Allowing public transit vehicles to use the toll facility without paying a toll
- Providing reduced tolls for vehicles with toll transponders

¹⁸ FHWA Order 6640.23A (June 14, 2012), Sec. 8(f), (g).

¹⁹ FHWA Order 6640.23A (June 14, 2012), Sec. 5(g).

²⁰ See FHWA, “Environmental Justice Reference Guide” (April 1, 2015), p. 13.

- Taking steps to encourage transponder usage through actions such as:
 - Providing transponders at reduced or no cost
 - Setting a low minimum balance for loading transponders
 - Targeted outreach to minority and low-income communities to encourage transponder usage
- Providing toll discounts for frequent users and/or specific populations
- Implementing traffic-control measures to reduce traffic diversion through minority and low-income communities
- Improving toll-free alternative routes to offset traffic-diversion effects on those routes

There may be financial, administrative, or even legal constraints that make certain types of measures infeasible to implement. For example, there may be no excess toll revenues that can be dedicated for transit service. In addition, some state laws require toll revenues to be used solely for the road network or even for the facility on which the tolls were collected. These types of constraints should be taken into account when deciding what mitigation measures, if any, will be adopted for tolling-related impacts.

In addition to considering mitigation measures, the analysis also should consider aspects of the project itself that inherently benefit minority and/or low-income populations. For example, a toll project may increase the speed and reliability of public transit services on routes that use the toll facility. If the project has notable benefits to minority and/or low-income communities, those benefits should be captured in the EJ analysis.

Compliance with FHWA Order 6640.23A. As noted earlier, FHWA Order 6640.23A establishes conditions under which FHWA can approve an alternative that has effects on minority populations and/or low-income populations. Compliance with this order should be documented in the final EIS, ROD, or FONSI. Important points to keep in mind:

- FHWA may consider minimization and mitigation measures as support for concluding that the project will not have disproportionately high and adverse effects on low-income and minority populations. For this to be done, the measures should be identified as commitments and included in the ROD or other NEPA decision document.
- In some cases, even with such commitments, FHWA may still conclude that the project will have disproportionately high and adverse effects on low-income and/or minority populations. If that conclusion is reached, FHWA will approve the project only under certain conditions, as defined in FHWA Order 6640.23A. (See Background Briefing.)

6 | Addressing Other Direct and Indirect Impacts of Tolled Alternatives

This section identifies broad categories of impacts in addition to environmental justice that should be considered as part of an impacts analysis for a toll project. The level of detail and methodology used for these impact analyses will depend on the circumstances of each project.

Direct (Footprint) Impacts. Tolling is sometimes viewed as an operational characteristic that does not affect the footprint of a roadway, but in fact tolling can affect the project footprint in a number of ways. Tolling may require additional right-of-way to accommodate toll-collection facilities. Tolling also could reduce the footprint (by comparison to a non-tolled alternative) if tolling reduces traffic volumes to the point that a facility with fewer lanes can accommodate projected demand. It also is possible, of course, that tolling will have no effect on the project footprint.

Air and Noise Impacts. Because tolling affects traffic volumes, it has the potential to affect any impacts that are directly dependent on traffic volumes—principally, air quality and noise. In most cases, the methodologies for air quality and noise impacts analyses themselves do not change for a tolled project; rather, the results of those analyses may be different for tolled alternatives, because the traffic volumes used in those analyses are affected by tolling. For example, traffic diversion resulting from tolling could result in increased traffic noise impacts in low-income and minority communities.

Transportation System Impacts. Tolling on a major facility can have a ripple effect on transportation choices made by users throughout the transportation system. One obvious example is that some users will choose to avoid the toll by shifting to non-tolled routes or shifting their trips to times of day when tolls are lower. On the other hand, the availability of a congestion-free route on the toll road may actually increase throughput on that route during the peak hour. And the cost of the toll, combined with increased congestion on toll-free routes, may cause some users to shift from automobile travel to public transit. The transportation impacts analysis should seek to capture these wide-ranging effects of tolling on the transportation system, to the extent that they can be meaningfully estimated by the traffic model.

Regional Equity Impacts. In addition to equity effects that may be considered as part of the EJ analysis, a toll road may also raise broader concerns about regional equity. For example, in a large metropolitan area, a proposal to toll one major route into the central business district while leaving another route toll-free may be perceived as unfairly favoring one part of the region

over another. Concerns about the fairness of the tolling proposal will likely be closely connected with a broader set of concerns about the overall distribution of transportation funding as well as transportation taxes and fees. These issues—which relate to transportation funding policies, not environmental impacts—can be difficult to address in a NEPA document. Nonetheless, they are often central to the public debate regarding a proposed toll project. Therefore, some consideration should be given to addressing concerns about regional equity when considering the impacts of tolled alternatives.

Cumulative Impacts. In addition to the issues normally considered in a cumulative impacts analysis for a highway project, a toll project may involve additional issues, such as the transportation and socio-economic effects associated with implementing multiple toll projects within a region. The cumulative impacts analysis should consider whether the population affected by the proposed project also would be affected by other recent or reasonably foreseeable future toll projects.

7 | Coordinating the NEPA Process with Project Financing and Procurement

For many toll projects, the NEPA process must be coordinated with a separate process in which the state DOT or other public agency reviews competing proposals for a PPP. As discussed in the Background Briefing, it is possible to initiate the procurement process, select the private-sector partner, and give the private-sector partner notice to proceed on preliminary engineering work, all before completion of the NEPA process. This flexibility makes it possible to accelerate project development, but also raises issues that will need to be carefully considered in order to protect the integrity of the NEPA review. Examples include:

Interdependence of NEPA and Procurement Decisions. The NEPA process and the procurement process are inter-dependent. On one hand, the procurement process requires some definition of the basic project location, design concept, and mitigation requirements—and these basic project features are defined through the decision-making process in NEPA. But on the other hand, the NEPA process for a toll project must be informed by some understanding of the project features that potential private investors consider to be essential; otherwise, the NEPA process may result in approval of a project that meets environmental requirements but is unworkable economically as a toll road. Thus, if a state anticipates using some form of public-private partnership, it is useful for the NEPA team to begin thinking about the RFP as early as possible.

Factors to Consider in Determining Timing of the RFP. It is important to consider the appropriate timing of the RFP in relation to major milestones in the NEPA process. For example, will the RFP be issued before or after the announcement of a preferred alternative? In deciding the timing of the RFP, some factors to consider include:

- Schedule for beginning project construction
- Potential for the RFP process to generate new ideas that require modification of alternatives
- Potential for the RFP process to affect public confidence in the NEPA process
- Potential to negotiate more favorable prices for design and construction by commencing the RFP process earlier

Role of Private Sponsor in NEPA Process. The responsibility for NEPA compliance rests with Federal agencies. For a highway project, a state DOT may play a substantial role in helping FHWA carry out these NEPA responsibilities. Private developers cannot take over these NEPA responsibilities, but can contribute technical information, including proposed engineering plans, environmental data, and other materials. It may be helpful to establish a communications protocol regarding interactions between the NEPA team and potential private-sector partners. This protocol could identify the types of information that can be provided to the potential developers by the NEPA team, as well as the type of information that can be submitted by the potential developers to the NEPA team.

8 | Considering Tolled Alternatives in a Re-Evaluation or Supplemental NEPA Document

For many toll projects, the consideration of tolling first arises after the NEPA process is under way or even after it has been completed. In these situations, the NEPA team is faced with a decision about how to adapt an existing or completed NEPA process to incorporate consideration of tolled alternatives. Typically, a re-evaluation is prepared, and in some cases a supplemental EIS or supplemental EA is required.

Assessment of Previous Analysis and Decisions. The extent of the new analysis needed will depend on what has been done previously to consider tolled alternatives. If the previous NEPA document focused just on non-tolled alternatives, it will be necessary to develop and evaluate new alternatives that include tolls. In addition, if the previous NEPA document specifically considered and rejected tolling, that document may include findings that need to be revisited and updated to reflect current conditions and policies. For practitioners, this means that a critical early step is to examine the previous NEPA document thoroughly and assess how tolling was addressed. The analysis in that document then becomes the starting point for determining what additional analysis is needed.

Assessment of Public Expectations and Outreach Needed. When a project is approved without tolls, and an agency later announces that the project is being considered for tolling, there is a clear need for early and ongoing public outreach—not only to comply with NEPA, but to address concerns and objections that arise from such an important change. The need for public outreach will be even greater if the project is being developed in an area where tolls are relatively uncommon, or where the tolling proposal involves features that are new to the area, such as congestion pricing. The public involvement effort should also take into account the distinctive effects associated with tolling. For example, tolling may expand the number of minority and low-income communities that need to be engaged in the public outreach effort.

Developing Tolled Alternatives. Developing tolled alternatives can be a substantial effort in its own right; it is not necessarily a simple matter of adding tolls to the previously approved alternative. The operational characteristics of the toll facility will need to be defined, and there may be reasons to consider different approaches to tolling as alternatives to one another. In addition, it is possible that physical elements of the alternative itself will change when tolls are included. For example, in some cases, tolls reduce traffic volumes to the extent that a smaller facility (fewer lanes) is acceptable. Tolls also result in traffic diversion, which in turn may require improvements to other roads to be included as part of the project. Given the complexity of these issues, the process of defining and refining the tolled alternatives often takes considerable time, both before and during preparation of the re-evaluation or supplemental NEPA document.

Effect on Previous Alternatives Screening Decisions. The preparation of a re-evaluation or supplemental EIS or EA does not necessarily involve revisiting alternatives screening decisions made earlier in the NEPA process. But it is prudent to consider the effect of any new information on prior screening decisions to ensure that those decisions remain valid. For example, it is important to consider whether alternatives were eliminated in the screening process based on performance characteristics similar to those that are considered acceptable when analyzing tolled alternatives. If inconsistencies are identified, it may be necessary to revisit those screening decisions. There may still be valid reasons to eliminate those alternatives, but the rationale for doing so may need to be updated or expanded.

Updates to Traffic Forecasting Model. If the previous study considered only non-tolled alternatives, there may be a need for significant technical work to develop the modeling capability needed to develop forecasts for tolled alternatives. In addition, even if tolls were considered previously, there may be a need for improvements to the model now that tolled alternatives are being considered in detail. For example, the model may need the ability to consider traffic diversion issues in specific locations, and developing that capability at the necessary level of detail may require improvements to the model.

Assessing Changes in Benefits. In terms of their transportation benefits, tolled alternatives often perform more poorly than non-tolled alternatives. The basic reason is that the tolled alternative generally carries less traffic than a non-tolled alternative while causing greater congestion on other routes due to traffic diversion. The reduction in benefits is not necessarily problematic as long as it is disclosed. It is possible, however, that traffic volumes with tolls could be so much lower that they raise questions about whether the project still meets the purpose and need. In addition, if the performance of tolled alternatives is very low, it may call into question the basis for eliminating other low-performing alternatives in the screening process. The over-arching issue to consider is whether the addition of tolling would reduce project benefits in a way that weakens the rationale for decisions made earlier in the study process.

Assessing Changes in Impacts. The consideration of tolled alternatives can affect many aspects of the impacts analysis in a NEPA document. At the most obvious level, tolls can dramatically affect traffic forecasts, due to the tendency of traffic to divert away from the tolled facility to other non-tolled (or lower-tolled) routes. Those changes in traffic patterns can affect environmental impacts that are linked to traffic (such as air and noise), and can also change the project's socio-economic impacts, including impacts on low-income and minority populations. These changes in impacts may, in turn, require reconsideration of findings made under other laws, if those findings hinged on analyses related to traffic. For example, the lead agency may need to re-assess certain findings made under Section 106 of the National Historic Preservation Act, Section 4(f) of the U.S. Department of Transportation Act, or Section 7 of the Endangered Species Act.

Deciding What Additional NEPA Review Is Needed. Considering tolling for the first time after completion of the NEPA process will require, at a minimum, a re-evaluation of the completed study. The re-evaluation will need to consider all of the impacts of the tolled alternatives by comparison to the impacts of the non-tolled alternative approved in the previous study.

- If the original document was an EA or categorical exclusion, FHWA must decide whether the impacts associated with tolling would be significant. If so, then an EIS would be required. If not, FHWA could prepare a re-evaluation or supplemental EA documenting the impacts associated with tolling, and then issue a revised FONSI.
- If the original document was an EIS, FHWA must decide whether tolling would result in significant impacts that were not previously considered. If so, a supplemental EIS would be required. If not, FHWA could prepare a re-evaluation or EA documenting the impacts associated with tolling, and then issue a revised ROD (or equivalent document) approving the tolled project.

Reference Materials

Statutes, regulations, and guidance documents cited in this Handbook are available on the AASHTO Center for Environmental Excellence web site, <http://environment.transportation.org>.

Planning–Environmental Linkages

FHWA, “Guidance on Using Corridor and Sub-Area Planning to Inform NEPA” (April 2011)
23 CFR Part 450 (transportation planning regulations)
23 USC 168 (planning–environmental linkage authority)

Tolling and Pricing

FHWA, “NEPA Analysis for Toll Roads” (Oct. 15, 2004)
FHWA, Road Pricing: Tolling Programs (website)
http://www.fhwa.dot.gov/ipd/revenue/road_pricing/tolling_pricing

Fiscal Constraint

FHWA, “Financial Planning and Fiscal Constraint for Transportation Plans and Programs Questions & Answers” (April 15, 2009)
FHWA, “Transportation Planning Requirements and Their Relationship to NEPA Process Completion” (Jan. 28, 2008)
FHWA, “Supplement to January 28, 2008 Transportation Planning Requirements and Their Relationship to NEPA Process Completion” (Feb. 9, 2011)
FHWA, “Financial Planning and Fiscal Constraint for Transportation Plans and Programs Questions & Answers” (updated Oct. 19, 2015)

Major Projects Financial Plans

FHWA, “Major Project Financial Plan Guidance” (Dec. 2014)

Environmental Justice

FHWA, Order 6640.23A, “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” (June 14, 2012)
FHWA, “Environmental Justice Reference Guide” (April 2015)
FHWA, “Environmental Justice Emerging Trends and Best Practices Guidebook” (Nov. 2011)
FHWA, “Environmental Justice and NEPA in the Transportation Arena: Project Highlights” (Feb. 2013)
FHWA, “Guidance on Environmental Justice and NEPA” (Dec. 16, 2011)

Public–Private Partnerships and Design–Build Procurement

FHWA, “Public–Private Partnership Oversight: How FHWA Reviews P3s” (Jan. 2015)
FHWA, “Public–Private Partnership Concessions for Highway Projects: A Primer” (Oct. 2010)
23 CFR Part 636 (design-build regulations)

ADDITIONAL RESOURCES

PRACTITIONER'S HANDBOOKS AVAILABLE FROM AASHTO CENTER FOR ENVIRONMENTAL EXCELLENCE:

- 1 Maintaining a Project File and Preparing an Administrative Record for a NEPA Study
- 2 Responding to Comments on an Environmental Impact Statement
- 3 Managing the NEPA Process for Toll Lanes and Toll Roads
- 4 Tracking Compliance with Environmental Commitments/Use of Environmental Monitors
- 5 Utilizing Community Advisory Committees for NEPA Studies
- 6 Consulting under Section 106 of the National Historic Preservation Act
- 7 Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects
- 8 Developing and Implementing an Environmental Management System in a State Department of Transportation
- 9 Using the SAFETEA-LU Environmental Review Process (23 U.S.C. § 139)
- 10 Using the Transportation Planning Process to Support the NEPA Process
- 11 Complying with Section 4(f) of the U.S. DOT Act
- 12 Assessing Indirect Effects and Cumulative Impacts under NEPA
- 13 Developing and Implementing a Stormwater Management Program in a Transportation Agency
- 14 Applying the Section 404(b)(1) Guidelines in Transportation Project Decision-Making
- 15 Complying with Section 7 of the Endangered Species Act

For additional Practitioner's Handbooks, please visit the Center for Environmental Excellence by AASHTO web site at: <http://environment.transportation.org>

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