

# FOREWORD

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Project planning is a critical step in the development of transit capital improvements. This step focuses on a specific transportation need, identifies alternative actions to address this need, and generates the information necessary to select an option for implementation. The typical project planning effort addresses such issues as costs, benefits, environmental impacts, and financing to support project selection. It often spans a wide range of technical disciplines, ranging from engineering to patronage forecasting to the natural and social sciences. In many respects, project planning is the key step in project development since the selection of a project for implementation establishes the expectations for the improvements that will be achieved, the costs that will be incurred, and the environmental consequences that will result.

Project planning, as defined above, is often referred to as alternatives analysis. Alternatives analysis has been a key part of the Federal Transit Administration's (FTA) process for advancing local fixed guideway transit projects for over 25 years. 49 USC 5309(e)(1)(A) requires that projects requiring at least \$25 million in discretionary Section 5309 New Starts funding must be based upon the results of an alternatives analysis (and later, preliminary engineering). More importantly, an alternatives analysis has been a part of established planning practice for several decades. At its core, alternatives analysis is about serving local decisionmaking. An effective alternatives analysis answers the questions: What are the problems in a corridor? What are their underlying causes? What are viable options for addressing these problems? What are their costs? What are their benefits? What are the trade-offs among these options? To answer these questions, the alternatives analysis study covers a number of important activities, each of which is guided by a set of key planning and technical principles. It is these principles – and their application - which is the focus of this document.

This document serves as an *in-progress*, chapter-by-chapter update of FTA's (then the Urban Mass Transportation Administration's) seminal 1990 guidance on alternatives analysis, *Procedures and Technical Methods for Transit Project Planning*. As with that guidance, the following chapters provide helpful information on a number of technical activities – definition of alternatives; methods used to support an adequate analysis of capital and O&M costs, travel demand, and environmental impacts; development of a project

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financial plan – which support the alternatives analysis study process. Most of the information on the planning concepts, principles, and methods contained in the 1990 guidance remains valid today. With the updated chapters contained in this guidance, FTA simply clarifies procedural requirements (alternatives analysis deliverables, approval actions, etc.) which have changed since issuance of the 1990 document, and shares some of the lessons it has learned over the past decade with regard to each of the covered topics. These chapter updates will be posted on FTA's New Starts web page (<http://www.fta.dot.gov/library/policy/ns/ns.htm>) as they are completed. It is anticipated that revisions to the entire document will be completed by the end of 2003.

It is not FTA's intent to be prescriptive about how alternatives analysis should be performed. Nor is it FTA's desire to stifle creative thought on how to do project planning. This guidance reflects the experiences of a multitude of transportation planners in state and local governments, consulting firms, and the academic community. By bringing this experience together in one document, it is FTA's hope that this guidance will serve as a core resource for assisting local agencies organize and carry out their alternatives analysis study, as well as promote further improvements in technical methods and analysis.

The primary audience of this guidance is local project managers and technical staff involved in a corridor (or subarea) planning analysis in which one or more of the alternatives under study is, or includes, a fixed guideway transit facility. This audience typically includes staffs of metropolitan planning organizations, transit operators, state Departments of Transportation, local governments, and their consultants. While an alternatives analysis is required for all (non-exempt) New Starts projects, the alternatives analysis process - and the planning and technical principles which support it - is a useful framework for any planning study which seeks to help decisionmakers select an optimal strategy for addressing locally-defined transportation problems. Consequently, this guidance should be of interest to any local agency seeking assistance on the conduct of such a study, and in particular on the technical elements – costing, travel demand forecasting, financial planning – which comprise such a significant amount of the analysis.

This guidance is divided into three major parts:

- Part I: The Major Capital Investment Planning Process. This part provides an overview of the planning process for candidate New Starts projects. It begins with an introduction to FTA statutes, regulations, and policies regarding major investment planning. It contains a chapter on the systems planning process, and establishes the framework for moving from systems planning to a corridor-level alternatives analysis. Part I concludes with a discussion of a framework for the alternatives analysis study, including the scope of project planning and the roles and responsibilities of the principle study participants.

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- Part II: Conduct of the Technical Analysis. Part II explains, in summary fashion, methodologies for generating the technical information which typically constitutes an alternatives analysis. It provides guidance on technical elements that are a part of each study, including the management of the study, development of the alternatives, patronage forecasting, estimation of capital and operating costs, financial analysis, environmental impact estimation, and evaluation.
- Part III: The Decisionmaking Process. This part discusses how the technical information generated in the study is put together in a way that will assist project decisionmaking. It also presents procedures for the preparation and circulation of the draft environmental impact statement (EIS) or environmental assessment, should the alternatives analysis be performed under the review process required by the National Environmental Policy Act of 1969 (NEPA). Updated Part III discusses the continuum of decisions which occur during systems and corridor planning and project development, and describes how planning and subsequent NEPA review can be better linked to support decisionmaking.

FTA welcomes any questions and comments on this guidance. FTA policies and procedures - as well as the state of the art in transportation planning - are continually evolving, and FTA intends to continue to update these guidance chapters as necessary. Please address any correspondence to [planningmailbox@fta.dot.gov](mailto:planningmailbox@fta.dot.gov), or:

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