

The Major Investment Study as a Planning and Policy Tool

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ABSTRACT

This thesis considers the Major Investment Study (MIS) requirement, which was established as part of the Federal urban transportation planning process in 1993 to set standards for the investigation of large-scale transportation investments. We first assesses the degree to which the MIS requirement is a useful tool for Federal policy. In pursuing this investigation, the current Federal policy context is established, the major features and intent of the MIS requirement are identified, and factors which affect the degree to which MIS can achieve its intent are explored. Second, by considering the application of MIS to the expansion of Tren Urbano in San Juan, Puerto Rico, we investigate the opportunities and concerns which MIS may present for local planning. Recommendations are offered both for improving the requirement as a Federal policy tool and for guiding the MISs in the Tren Urbano extension corridors.

Our analysis finds that the MIS requirement was designed to support three Federal policy principles: increasing local input, introducing non-transportation concerns, and giving fair consideration to transit. The requirement's emphases on collaboration among agencies and the use of broad goals and objectives are particularly useful in promoting these principles. Our analysis also identifies a number of factors which limit the effectiveness of the requirement. Some such factors should be addressed through modifications to the requirement. These include: reconciling the MIS process with NEPA; reconciling MIS with fiscal constraint; and addressing "political reality" projects. Other complicating factors result from broader tensions in the planning process and include: tensions between Federal programs and local decision-making, and persistency of modalism and modal bias. Though the flexibility of the requirement generates substantial short term uncertainty, it should probably not be altered until the longer-run impacts are clear.

Our analysis of the San Juan case suggests undertaking pre-MIS analysis followed by a series of MISs to perform system and extension planning for Tren Urbano. The opportunities offered by MIS include: emphasizing non-traditional goals which have local relevance such as improving accessibility and land use planning; and inviting a broad range of institutions to participate. The primary concerns in this application are: negotiating with FTA; asserting locally determined evaluation criteria over discretionary funding criteria; determining the number and timing of the studies; and designing a means of integrating MIS with NEPA.

Key words:

Major Investment Study (MIS), corridor planning process, ISTEA requirements, Federal policy, local participation, multi-modal considerations, fiscal constraint.

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Thesis Contents:

Chapter 1 presents the thesis research objectives, the motivation for research, and a detailed methodology. Most of this section has been reproduced in the previous introduction. Chapters 2,3 and 4 form the bulk of the general analysis, while chapter 5 focuses on the San Juan case analysis.

Chapter 2 provides a brief summary of the history of Federal policy in urban transportation planning culminating with a discussion of the policy context established by ISTEA. In Chapter 3, the MIS requirement and its intentions are defined; this chapter illustrates how MIS is designed to fit into the current policy context and to relate to other planning and project development processes, namely the broader planning process and the environmental review process.

Chapter 4 identifies those factors which enhance or detract from the ability of MIS to support the principles of Federal policy. This chapter also describes a number of local challenges, either arising from tensions in Federal policy or complexities of local implementation. Chapter 4 closes with a summary of findings and some recommendations to strengthen the MIS process.

The San Juan case study is presented in Chapter 5. The analysis first provides an excellent introduction to the project. It then identifies general opportunities and concerns associated with applying the MIS process to study Tren Urbano extension corridors. It continues by considering in greater depth those opportunities and issues which are particularly salient in specific extension corridors (Carolina Corridor and the Jardin Botanico Area). This chapter, too, closes with a summary of findings and recommendations intended to inform the design of MISs for the proposed expansion corridors.

Finally, concluding remarks are presented in Chapter 6. These address linkages between the general and case analyses as well as the topic of reauthorization.

1. Introduction

The Major Investment Study (MIS) requirement was established in 1993 to set standards for the investigation of transportation investments which are either high-cost or high-impact. The requirement is part of the Federal urban transportation planning process and establishes a cooperative, locally driven process for considering highway and transit alternatives at the corridor level.

Since its inception in 1962, the Federal transportation planning process has evolved from one directed toward planning the U.S. Interstate Highway System to one addressing varied urban transportation needs. To meet these needs, Congress and the modal administrations of US DOT have modified planning requirements over the past three decades with the intention of increasing local input to the planning process to complement State and Federal influence, opening the planning process to consider related, non-transportation concerns (such as environmental, economic and social issues), and encouraging the process to consider transit in a fair manner. These efforts have also recognized the reality of increasingly constrained funding sources for transportation. More than any previous legislation, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) embraced these trends in Federal policy. As one of several regulatory requirements developed under ISTEA, the principles of the MIS requirement are closely linked with this policy context.

1.1 Research Objectives

The research presented here has two primary objectives. The first is to assess the degree to which the MIS requirement is indeed a useful tool for Federal policy given the policy context established by ISTEA. This portion of the research seeks to understand how the MIS requirement was designed to support Federal policy as articulated in ISTEA and identify the factors which either enable or inhibit it from doing so. Where possible, we hope to recommend changes to improve the requirement and to highlight more general tensions in the planning process which impact the effectiveness of the MIS process.

The second objective of this research is to understand some of the major opportunities and concerns the MIS process presents for local planning efforts. Specifically, we consider the application of the MIS process to possible extensions for Tren Urbano, a new mass transit system under development in San Juan, Puerto Rico. This should allow us to explore the usefulness of the MIS process as a local planning tool as well as allow us to identify specific opportunities and concerns which the San Juan region may face when it undertakes MIS in the Tren Urbano extension corridors. Through this analysis we hope to recommend approaches which will allow San Juan to get the most out of the MIS process and to avoid, or at least anticipate, some of the pitfalls.

1.2 Motivation for Research

Several factors motivate this research and contribute to its timeliness. Established in 1993, the MIS requirement is relatively new. Though the newness of the requirement suggests it may be too early to assess many of its impacts, it should still be possible to identify some potential benefits and drawbacks of the requirement. The newness of the requirement also suggests that its understanding and implementation at both the Federal and local levels may still be malleable, and hence may be influenced by recommendations made here. Opportunities for influencing the MIS process are increased by the fact that the requirement is quite flexible and will be defined to a large extent at the local level and through practice and enforcement by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA).

Some reflection on the requirement may be valuable as Congress prepares to reauthorize the Surface Transportation Act in the fall of 1997. Though the MIS requirement is established in FTA and FHWA regulations and not in ISTEA legislation, suggestions for modifying the MIS requirement have been presented in Congressional hearings and in the reauthorization policy statements of various interest groups. Furthermore, we expect FTA and FHWA to issue revised regulations governing the planning process after reauthorization; to this end, the agencies have been engaged in joint efforts to evaluate the ISTEA planning requirements including MIS. This analysis will at the very least provide some context for understanding these discussions and may in fact contribute to them.

Beyond the question of reauthorization, MIS can be seen as one in a series of Federal policy efforts to improve the planning process by promoting certain principles. By identifying factors which make MIS useful, we may also identify more general mechanisms for promoting these policy principles. Similarly, by identifying factors which limit the effectiveness of MIS, we may be able to stimulate discussion on some of the fundamental tensions in the planning process so that they may be addressed.

The case study of San Juan is also quite timely. The major planning efforts associated with the first phase of Tren Urbano are largely complete, and construction is underway. This suggests the region can begin to turn its attention to the planning of future phases, a need deferred until now in favor of implementing Phase 1. The Tren Urbano system is important regionally because it is the centerpiece of a recent shift in local transportation policy which aims to increase access to urban centers by providing high-quality transit services, thereby slowing the growth of road congestion and, hopefully, reversing urban decline. Though there is an existing system concept for Tren Urbano, none of the proposed extensions have been fully defined, and they thus require a good deal of basic planning. The MIS process, which is new to San Juan, will be the vehicle for much of this planning. This research will identify key opportunities and concerns in preparation for undertaking MISs in the proposed extension corridors.

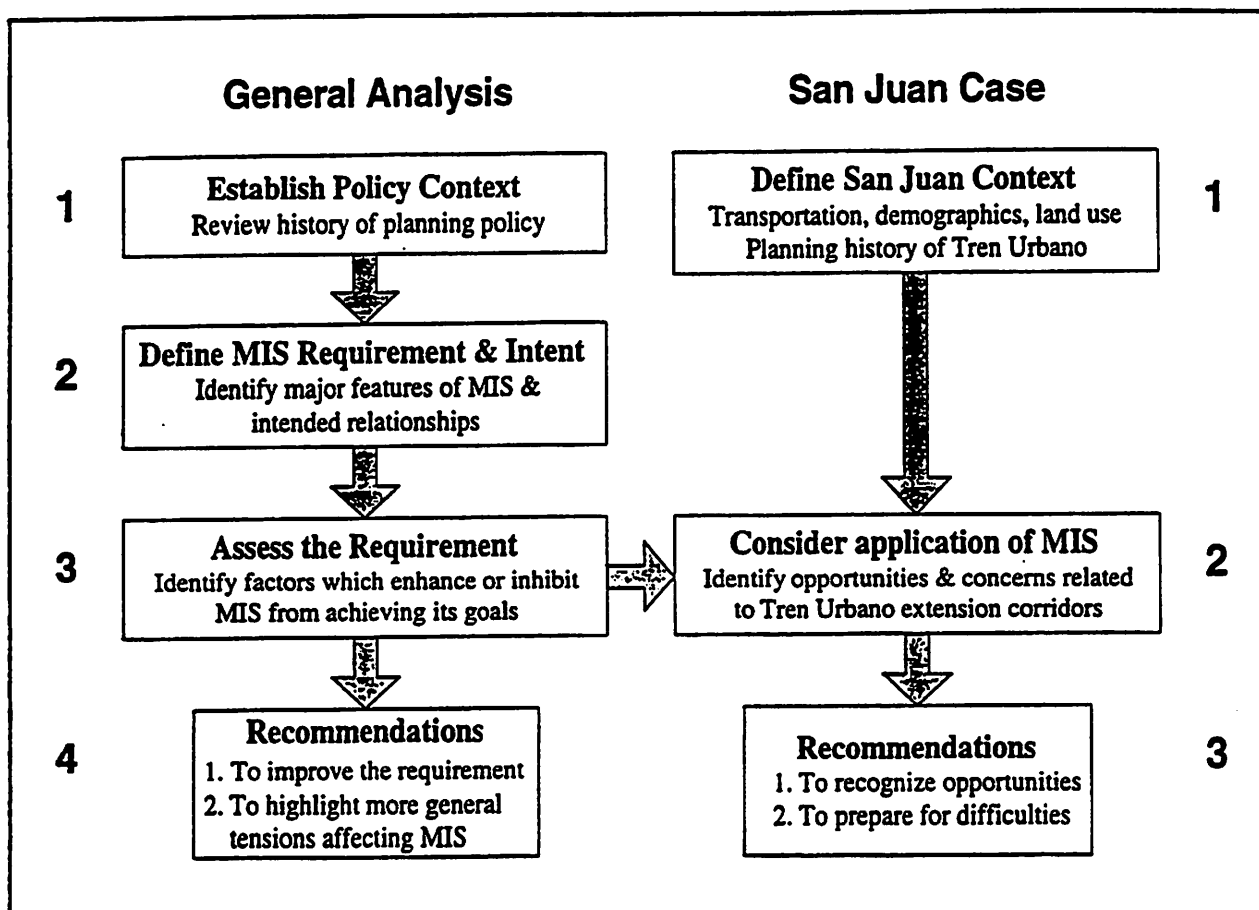


Figure 1: Research Methodology

Overview of methodology and Summary of Findings:

This section intends to summarize the research undertaken in this work and to summarize the findings and resulting recommendations into a useful format.

Five steps outline the analysis and results of this work. The general analysis consists of three steps designed to assess the degree to which the MIS requirement can be an effective tool for Federal policy. These are presented first. Step four recommends ways to strengthen the requirement and then a fifth step makes specific recommendations concerning the MIS requirement with future extensions of Tren Urbano. The following are the analysis steps and the resulting findings:

ANALYSIS:

1. Establish Policy Context. A review of the history of transportation planning policy starting with the initiation of the Federally required planning process in 1962 was conducted as part of step one. Trends were identified to help explain the significance of recent changes in Federal policy, such as those embodied in ISTEA. These trends were taken to indicate policy principles which form the current policy context under ISTEA and inform recent regulations, such as the MIS requirement. These five resulting principles were:

1. An increase in local input through increased local (metropolitan) decision-making authority;
2. The incorporation of non-transportation goals and objectives;
3. Encouragement of multimodal planning;
4. Responding to the reality of limited financial resources;
5. Transitioning from an era of construction to one of system-management.

2. Define MIS requirement and Intent. This step sought an understanding of the "intent" of the MIS requirement using the current policy context identified in Step 1. The MIS requirement was explained clearly in this step. Regulations and major features of the requirement were then consulted to ascertain key definitions and major features to link

the MIS requirement with the policy principles articulated by ISTEA. The MIS process was compared with previous corridor planning processes for highway and transit as a means of developing a full understanding of FTA (Federal Transit Administration) and FHWA (Federal Highway Administration) intentions for the requirement. Finally, the proposed relationships between the MIS requirement and related statutory and regulatory planning processes was examined as were the broader transportation planning process and the environmental review process.

Research found that the MIS does seek to further the principles identified in Step 1. The overall assessment of the MIS requirement suggests it employs useful mechanisms for increasing local input to the planning process, opening the planning process to consider non-transportation concerns, and to some degree, reducing the disadvantages faced by transit in the local planning process.

3. Assess the degree to which the requirement is able to achieve its intentions. This step identified the factors that act to promote or hinder MIS from achieving its intentions and, subsequently, made general assessments of the strengths and weaknesses of the requirement.

It was found that a number of factors complicate the MIS requirement from a policy perspective. In many cases, the MIS process highlights more general tensions in the planning process, which may hinder MIS from promoting the desired policy principles. Such tensions arise from the following factors: continued modalism at the Federal and local levels; reluctance to address the political reality model of project development; conflicts between Federal interests and local decision-making, particularly as posed by discretionary transit funding; the overall uncertainty generated by MIS's flexibility; and uncertainty about the impacts of the fiscal constraint requirement on large-scale projects. In addition, the most problematic tension generated by the MIS requirement itself results from potential redundancies and conflicts between MIS and NEPA (National Environmental Policy Act) processes.

Local challenges identified through this research include:

1. Establishing Roles and Responsibilities of Participants
 - Study leadership
 - Managing consultants
 - Engaging desired participants
 - Engaging the public
2. Study Design
 - Delineating study boundaries
 - Defining decision-making points
 - Defining study closure and measures of success
 - Timing the study
3. Technical challenges
 - Developing and employing non-traditional evaluation criteria
 - Relating MIS to NEPA
 - Relating MIS to the Long Range Plan
 - Consistency among multiple, simultaneous MIS
 - Determining trigger criteria or thresholds for major investments

RECOMMEDATIONS:

4. **General Recommendations.** Analysis of the MIS requirement showed that there were a number of issues which require resolution at the Federal level. Some factors identified suggest changes to the MIS requirement. Several of the factors call attention to tensions which, existing outside the MIS process, nevertheless may merit further thought. In general these policy issues generate concerns at the local level and may ultimately reduce the overall value of the MIS process.

CHANGES TO THE MIS PROCESS ARE MERITED:

- The question of how MIS relates to NEPA and the environmental review process is probably the most serious tension facing MIS at this time because it has immediate consequences at the local level.
- Completion of an MIS should be sufficient to allow the use of Federal funding to purchase right-of-way for reservation.

- The regulations should be more specific regarding MIS and fiscal constraint: the use of placeholders should not become an excuse for failing to revisit strategic planning decisions; and the alternatives considered in MIS should not be limited by the fiscal constraints established in the plan.
- As it currently stands, MIS does less than it could to address the question of “political reality” projects. A priority should focus on clarifying and standardizing the threshold criteria for MIS in a manner which exempts more projects than under current practice.

EXTERNAL TENSIONS WHICH IMPACT MIS:

- There is a general tension between Federal programs and the increasing emphasis on local (metropolitan) decision-making.
- There is a high degree of continuing local modal bias, or at least, differential treatment of highway and transit, which tends to place transit at a disadvantage.
- The relationship of MIS with fiscal constraint may have unintended, negative consequences for the planning of large-scale projects. FTA and FHWA should consider officially endorsing the 2-tract method.
- Inconsistency between Federal policy and field office interpretation and enforcement accentuates the level of uncertainty. FTA and FHWA field offices have different agency culture which can push the process in different directions for highway and transit alternatives and there may be significant regional variation.

5. San Juan Case Recommendations. Careful analysis of the San Juan case and the history of Tren Urbano was followed by several specific recommendations regarding the use of MIS in their future planning. The research strongly recommended the use of MIS in the study of potential Tren Urbano extension corridors and highway options. In addition, this analysis led to the formulation of several challenges for consideration:

- The challenge of balancing the desirability of performing well by Section 3 discretionary funding criteria with the potential planning benefits of employing various locally determined and non-transportation evaluation criteria;
- The complexity of using MIS placeholders in the Long Range Plan –placeholders offer practical benefits but may also present difficulties, for example by signaling a predetermined decision;

- The importance of negotiating with FTA through the MIS process in order to determine its expectations for the MIS process;
- The need to reconcile MIS with NEPA in a manner which preserves the benefits of MIS as a tool either for scanning a large number of alternatives or for identifying fatal flaws.

In sum, this research found that while the MIS requirement clearly has some useful features, it also raises a number of concerns which need to be addressed. Many of these concerns can be addressed through modifications to the MIS requirement while leaving the basic structure intact. These findings were borne out by the types of recommendations offered in the San Juan case analysis.

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