

TRANSPORTATION PLANNING AND PERFORMANCE MEASUREMENT IN WASHINGTON STATE

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INTRODUCTION

Transportation planning has provided information for decision makers for many years. Policy makers have relied on rational, technical methodologies that develop transportation objectives, analyze deficiencies, recommend potential solutions, and monitor transportation system performance. This approach to developing transportation plans and programs has served Washington State well in the past. However, in an era of declining transportation revenues, competing social needs, and heightened public scrutiny of government, transportation planners must rationally assess available revenues to provide fiscal reality to their proposals. Also, decision makers are now demanding implementation plans and regular progress reporting on the performance of their transportation plans and programs. The subject of this paper is to describe the process Washington State used for setting long term transportation priorities in Washington's Transportation Plan and the measures WSDOT is considering for monitoring transportation system performance.

THE PROGRAM AND PRIORITIZATION STUDY (PAPS)

The PAPS study was performed by Washington's Legislative Transportation Committee and was completed in 1993. It addressed the need to provide greater flexibility in priority programming of transportation projects and recommended more formal links between the programming and planning process. The study's major recommendations focused on the highway construction program structure and the process for prioritizing highway projects. The study recommended that the Department of Transportation:

1. Develop a highway system plan and base the programming process on that plan.
2. Restructure and simplify the highway construction program into three major programs (Maintenance, Preservation, and Improvements).
3. Develop prioritization methodologies using cost-benefit criteria for each of the major subprograms.
4. Develop a program trade-off process to allow decision makers (the Transportation Commission) the ability to review alternative highway programs and select the program providing the greatest benefits for the available revenues.

Most of the PAPS recommendations were embodied in revisions to Revised Code of Washington (RCW) 47.05 which was adopted by the 1993 Legislature.

THE STATEWIDE MULTIMODAL TRANSPORTATION PLAN

When the state legislature passed the Growth Management Act (GMA) in 1990, it required local governments to develop financially constrained 20 year comprehensive plans for land use and capital facilities. For transportation, the Act required these to be consistent with each other and with state transportation plans. Ensuring this consistency is a primary role of regional transportation planning organizations, creatures of Washington's GMA.

A separate statute also requires the Washington Transportation Commission to adopt a statewide, multimodal transportation plan (SMTP) for all areas of the state. This plan is to consist of a "state owned" component addressing those facilities owned and operated by the state. It is also to include a "state interest" component which deals with facilities that are owned and operated by others, but are of statewide importance. The SMTP is currently under development.

The WSDOT began developing the first piece of the SMTP, called the Highway System Plan (HSP), in 1991 by creating "service objectives" for state owned facilities (i.e., state highways, state ferries, and state airports) and state interest facilities. These objectives are divided into the major program areas of Maintenance, Operations, Preservation, and Improvements.

The various stages of developing the financially constrained Highway System Plan are depicted in the chart in Figure 1. The "All Needs" circle defines historical planning efforts that were usually not constrained to a revenue level.

The "Special Objective Needs" circle defines a smaller needs level within which deficiencies (and the projects to address them) must meet the appropriate performance measure (called a service objective). The process of setting service objectives excludes what may have historically been considered a "need." For state highways, this "Service Objective Needs" level is about \$30 billion over the next 20 years.

Since available revenues cannot fund the "Service Objective Needs" level over the next 20 years, Washington's Transportation Commission was

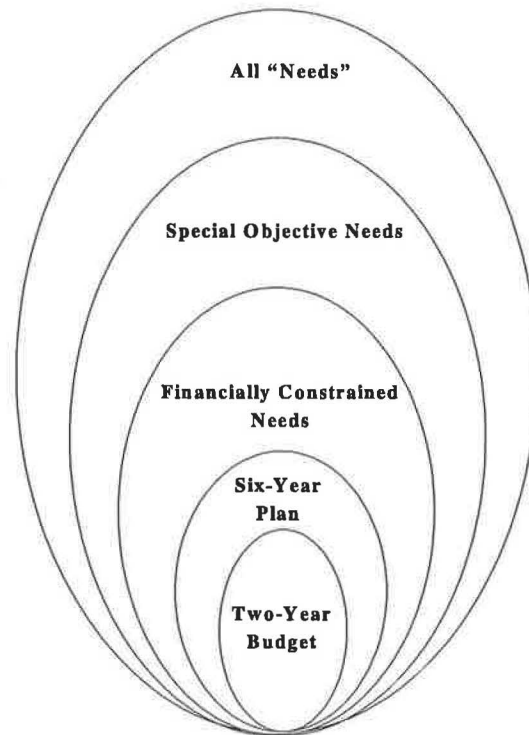


Figure 1. Financially Constraining Washington's Transportation Plan and Programs

required to select a smaller universe of deficiencies, called the "Financially Constrained Needs" level. This was accomplished by prioritizing the service objectives and programs and comparing these priorities to a realistic revenue forecast.

WSDOT staff will begin developing a Six Year Plan starting in January 1996. This will serve as the implementation vehicle for the 20 year transportation plan by identifying the highest priority six year needs. It too will be financially constrained to available revenues. One version of the six year plan will be constrained to "current law" revenues, i.e., those revenues currently authorized. Another version (or several other versions) will be constrained to various enhanced revenue scenarios. This plan will provide options for the Transportation Commission and Legislature to consider in 1997 as they consider a two year transportation budget.

PROGRAMMING PROJECTS FROM THE HIGHWAY SYSTEM PLAN

The foregoing discussion on the changing transportation planning environment describes the broadened scope of the transportation planning process in Washington. This enhanced planning provides substantial additional information to the program development process. At WSDOT, the two

functions were recently combined organizationally to reflect this increased linkage. But the programming process has seen much revision as well. ISTEA increased the level of stakeholder interest in the project programming stage while providing little additional funding. This has increased pressure on agencies to provide more effective investment programs. At WSDOT, that pressure has focused the project prioritization process almost exclusively into a cost-benefit approach.

The program structure of WSDOT's Highway Programs is identical to the Highway System Plan (HSP) format. System plan service objectives provide policy direction for each program. The constrained HSP determines which system deficiencies are eligible for project programming. Biennial investment levels in all programs are based on the 20 year target level and the expenditure plan defined in the HSP. Preservation Program levels and project priorities are developed from the appropriate ISTEA management systems (i.e., pavement and bridge). Improvement Program levels and project priorities are based on available revenues and cost benefit analyses. Each subprogram uses cost-benefit methodologies germane to the specific subprogram.

From the list of benefit-cost prioritized projects, the Transportation Commission selects a mix of projects providing the greatest net benefit to transportation users. This prioritized program is

submitted biennially to the Legislature for funding authorization. The first program developed under a constrained HSP and benefit-cost prioritization methodologies was approved by the legislature in May 1995.

MONITORING TRANSPORTATION SYSTEM PERFORMANCE

Performance of the state's transportation system is like the proverbial "beauty"—it's in the eye of the beholder. Washington's Legislature, Transportation Commission, and Department of Transportation have considered many measures, each with advantages and limitations, to assess performance of the transportation network. Generally, these measures fall into three categories:

1. *Efficiency Performance Measures:* These are usually of the form "output over input" and are intended to measure an agency's products based on the resources afforded it. With one exception, most of WSDOT's efficiency measures are internally reported to advise managers of workforce productivity. One exception is the measure of project benefits and costs (benefit cost ratios) that are used to prioritize projects in many WSDOT programs. These measures of

"funding efficiency" are very helpful in setting budget priorities for highway mobility and safety projects.

2. *Program Delivery Performance Measures:* For transportation construction programs, these are typically measures of contracts awarded on time or variations in project estimates, or percentage of program expended. These indicators are most frequently cited as measures of agency performance, rather than transportation system performance. They have historically been used by WSDOT to report program status to the Transportation Commission and Legislature.

3. *System Performance Measures:* These measures generally describe how the system is performing and are usually more relevant to the transportation customer. Measures of congestion, vehicle collisions, pavement condition, and transit usage fall into this category. Collecting the performance data is occasionally costly and data is usually open to multiple interpretations. Also, changes in data trends are slow to develop, which can frustrate shorter term elected officials.

Each indicator category provides a unique and useful perspective on the many facets of the transportation system and the agencies who deliver transportation services.