



SPR RESEARCH PROGRAM SECOND-STAGE PROBLEM STATEMENT FY 2008-09

ODOT Research Unit
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I. PROBLEM NUMBER

PEA-09-01

II. PROBLEM TITLE

Financing Mechanisms for Capacity Improvements at Interchanges

III. RESEARCH PROBLEM STATEMENT

ODOT uses various planning tools to manage the capacity and maintain the safety of state facilities. These tools include the ODOT Access Management Program, local government Transportation System Plans (TSPs), Transportation Planning Rule review, Interchange Area Management Plans (IAMPs), and Access Management Plans (AMPs). These tools provide a framework for ODOT to work with local governments when their actions potentially affect the performance of state facilities. Over time, for example, development pressures around state facilities eventually result in the need to increase capacity and the need to finance that increased capacity. Comprehensive plan and zoning map amendments set the stage for future transportation impacts, exceeding the capacity of the future planned transportation system.

In the case of interchanges, research has shown that the traffic impacts of up-zoning can be significant. A recent Portland State University study examined the effects of comprehensive plan amendments on interchange performance on the Oregon highway system (*Strathman, et al. 2005*). Plan amendments were found to have a substantial effect on rural interchange ADT, but their incidence was very limited. In urban core areas, the estimated effect of plan amendments was negligible, possibly due to interchange congestion or more effective land use planning. In urban fringe areas, plan amendments were estimated to account for about 5 percent of the subsequent interchange ADT, equivalent to about two years of the design life of these facilities.

To date, about seven Interchange Area Management Plans are in place and several more are in process. In the future, as the pressure for new development increases, local governments will likely need to consider ways to fund needed infrastructure expansion in interchange areas if IAMPs are to be amended.

The ODOT Planning Section has done a considerable amount of work on developing basic protocols for staff to use during the negotiation of fair, legally defensible and enforceable mitigation agreements with local governments and/or private developers during the development review process. "Chapter 5: Negotiated Mitigation Agreements" in ODOT's Development Review Guidelines was recently completed to support staff understanding of the opportunities and limitations that apply when negotiating such agreements, and to understand the legal framework within which the Agency may negotiate agreements for mitigation by developers and in cooperation with local governments. While this work lays out the existing framework under which mitigation agreements may be pursued, appropriate mechanisms for financing capacity improvements at interchanges have not been investigated. This research project would explore the financing tools available for local governments to use. Without clearly identified means to finance needed capacity improvements, ODOT planning tools are limited in their effectiveness.

IV. RESEARCH OBJECTIVES

The objective of this research project is to investigate the various legal mechanisms for local governments to finance capacity improvements near interchanges on the state highway system. The research will address the feasibility of impact fees, local improvement districts, reimbursement districts, systems development charges, and other financing mechanisms which might be appropriate for use at highway interchanges.

V. WORK TASKS, COST ESTIMATE AND DURATION

Task 1. Review of current ODOT policies and programs related to access management. The research project will first compile a comprehensive picture of ODOT's current authority and role in management of the capacity of the state highway system. This review will address such topics as access management, comprehensive plan review, interchange area management plans, access management plans, local transportation system plans, and negotiated mitigation agreements.

Task 2. Review of literature on local financing mechanisms for infrastructure improvements. This task will include an evaluation of financing mechanisms in terms of their legal basis, legal challenges, suitability for various applications, efficiency, costs of administration, impacts on local development, allocation of cost responsibility, and equity issues. The Technical Advisory Committee will assess the applicability of these financing mechanisms to both IAMPs and AMPs, and make a recommendation on whether the financing mechanisms can address both of these applications.

Task 3. Development of local financing alternatives. The information compiled in Tasks 1 and 2 will be used to develop a set of financing alternatives available to local governments, their suitability for financing capacity improvements in various scenarios, and procedures for their implementation in concert with capacity improvements required for new development at interchanges and possibly others areas.

Task 4. Production of final report. The final report will document the findings of each research task and provide a guide to the applicability and use of all of the financing mechanisms reviewed, for ODOT to use in its planning and negotiations with local governments on capacity improvements for new development.

Total Cost Estimate and Duration: \$65,000/12 months. If accepted as an OTREC project, the ODOT cost would be \$32,500.

VI. IMPLEMENTATION

The results of this project will be presented to ODOT staff through the published final report and through presentations to appropriate staff. With this information ODOT staff will have a useful tool in working with local governments to explore viable alternatives in financing transportation system improvements required to provide the necessary capacity for new development.

VII. POTENTIAL BENEFITS

As local governments seek to attract and accommodate new development through comprehensive plan and zone changes, the existing highway facilities may no longer have the capacity to handle likely increases in traffic as a result of such development. Thus the functioning of the facilities is compromised, affecting both operation and safety. Existing funding sources for transportation system improvements will continue to fall short of the needs which are brought about by new development. While ODOT already has developed a strong role in working with local governments on planning for future system needs, this research will strengthen ODOT's role in working with local governments to address this key issue of financing necessary improvements. These financing mechanisms are important for ensuring positive outcomes and accountability in the planning process.

VIII. SUBMITTED BY

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