



U.S. Department  
of Transportation

**Federal Highway  
Administration**

Number 2  
June 1992

# SEARCHING FOR SOLUTIONS

*A Policy Discussion Series*

## Exploring Key Issues in Public-Private Partnerships for Highway Development



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A Policy Discussion Series

Number 2

# Exploring Key Issues in Public-Private Partnerships for Highway Development

*Summary of Seminar Proceedings:  
Prepared by Walcoff & Associates*

Sponsored by the Office of Policy Development  
Federal Highway Administration

November 21, 1991  
Washington, D.C.

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# Foreword

This report summarizes a Federal Highway Administration (FHWA) seminar on key issues in public-private partnerships for highway transportation.

The view that highway infrastructure is solely the responsibility of the government is changing. Some private sector interests are seeking opportunities to take a larger role in all phases of developing, financing, constructing, owning, and operating highway facilities. Top-level policy makers within the government also recognize that the private sector can offer significant contributions by increasing available resources—financial, technical, and entrepreneurial.

Consistent with the 1990 National Transportation Policy, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) provides State and local governments with new options to fund and develop much needed highway-related improvements. The ISTEA encourages States to develop new cost-sharing partnerships with the private sector. This trend began in several States during the 1980's when franchise agreements were made with private entities to finance, develop and operate new roads, or improve existing highways. The legislation also permits States, for the first time, to use tolls as a supplement to conventional fuel and vehicle taxes on much of the Federal-aid highway system.

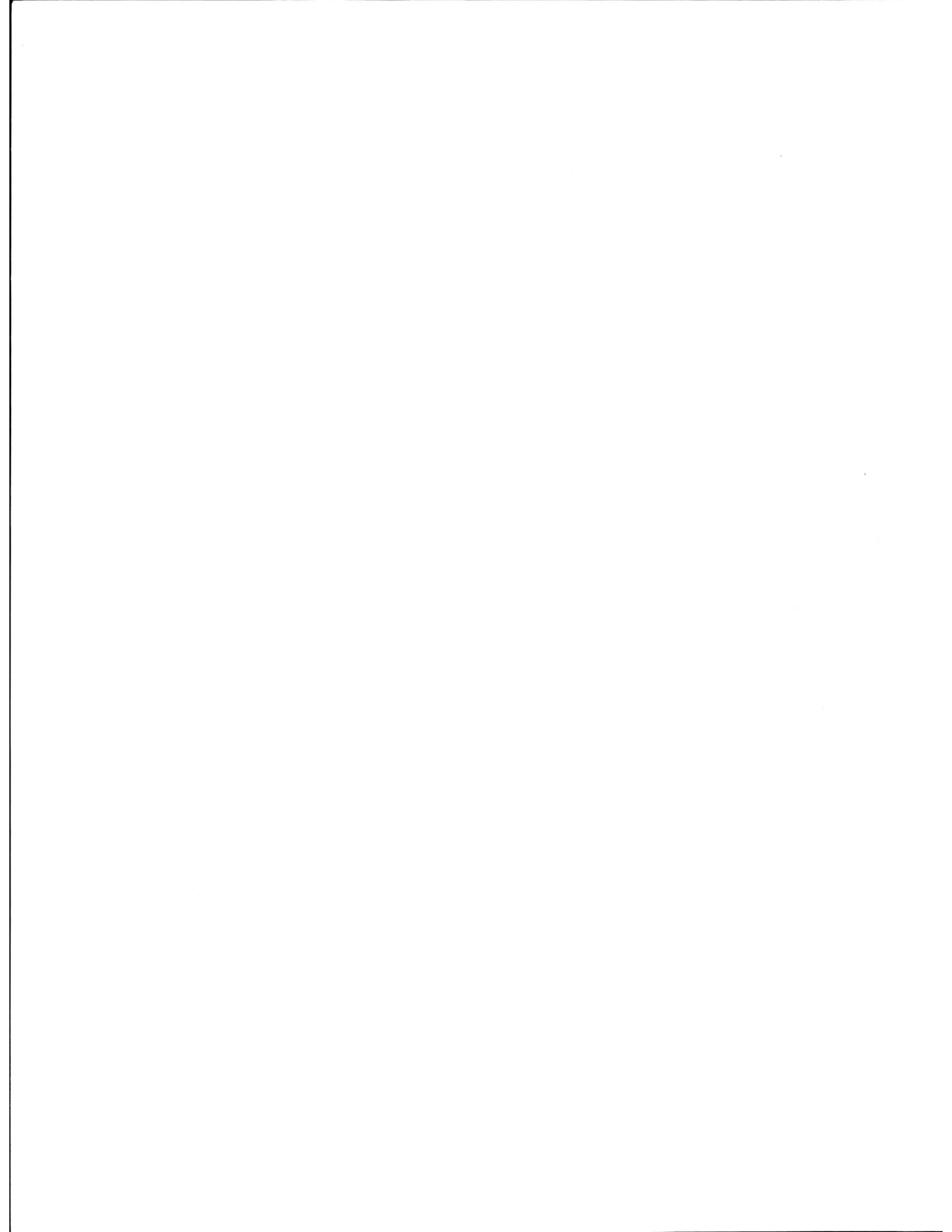
Provisions of the ISTEA, together with new technology, may make toll financing and public-private partnerships an attractive option by which States can capitalize on private sector resources such as new capital sources, user charge options, and innovations in design, construction, and operation. However, there remain significant issues regarding maintenance of public sector responsibilities in public-private partnerships—such as use of police powers, competition, monopoly rates of return, and system planning—which require systematic review.

To develop a more comprehensive view of the trade-offs that changes in public and private roles contribute toward facilitating transportation infrastructure improvements and to share these ideas with a wider audience, the FHWA Office of Program Development and Office of Policy Development held a one-day seminar to focus attention on the critical issues facing highway agencies in any transfer of traditional public functions to a partnership involving the private sector.

The seminar provided an opportunity for participants representing a wide range of disciplines and interest groups to discuss a variety of policy issues related to public-private partnerships. A variety of comments and proposals were discussed, ranging from ideas to make partnership projects easier to develop to allowing new forms of partnerships to happen. The seminar raised a number of issues about the possibilities and problems of public-private partnerships and showed that much remains to be learned about the consequences of applying privatization principals to transportation.

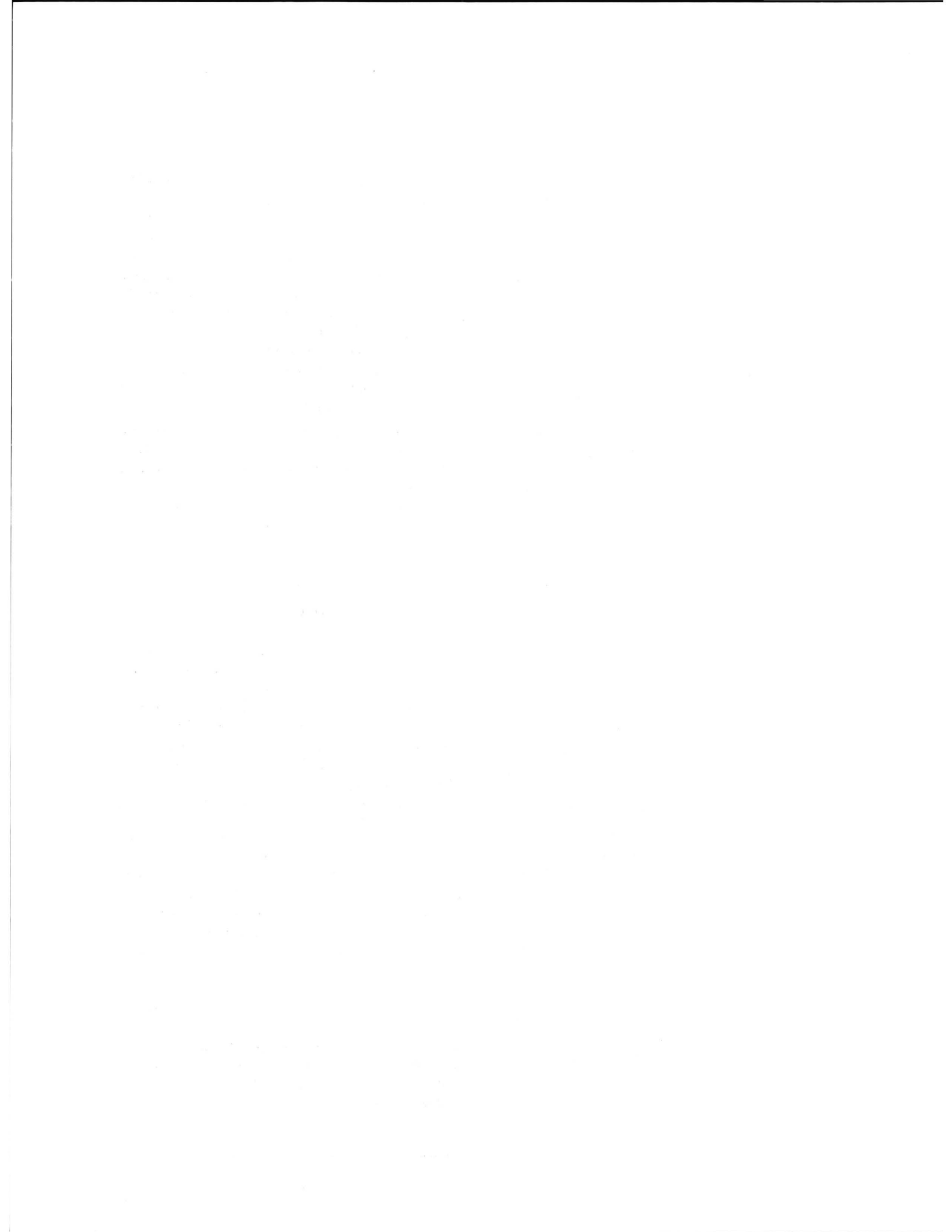
This report is the second in a series entitled *Searching for Solutions: A Policy Discussion Series*. The series will deal with key highway transportation issues such as congestion pricing, public-private partnerships, transportation and air quality, and transportation and economic productivity. Issue papers will emanate from policy seminars sponsored by the FHWA to gather viewpoints on important topics, or from FHWA policy research. We look forward to generating a wide-ranging dialogue on these and other important challenges facing transportation policy development.

Stephen C. Lockwood  
*Associate Administrator for Policy  
Federal Highway Administration*



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# Overview

On November 21, 1991, the FHWA Office of Policy Development held a seminar at its Washington, D.C., facility to discuss key issues in public-private partnerships for improving and expanding the Nation's transportation infrastructure. Participants (listed in appendix A) included FHWA staff, State transportation officials, and representatives of private-sector organizations interested in public-private partnerships.

The traditional view that Government is solely responsible for maintaining the infrastructure is changing as cities and States attempt to maintain aging roads and bridges with limited funds. Several States have introduced or passed legislation to encourage private-sector involvement and are developing projects with some elements of privatization. The *National Transportation Policy*, which outlines the U.S. Department of Transportation's goals, calls for Federal Government encouragement of private-sector initiatives in recognition of their potential contributions of financial resources, scheduling, and innovation. Subsequent to this seminar, on December 18, President Bush signed the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) which incorporates toll road provisions allowing for various public-private partnership possibilities (see Appendix C for details). Organizations in the private sector view this situation as an opportunity for a larger role in all phases of infrastructure development, construction, and operation.

In any public-private partnership, however, critical issues related to public-sector responsibilities must be resolved. This seminar focused on the following key issues from a public-sector perspective: (1) system design and route planning, including issues of coordination, urban planning, and their consequences, such as environmental concerns or congestion; (2) private exercise of governmental powers such as eminent domain and safety enforcement; (3) sharing of the potential risks and rewards associated with a project; and (4) the types of possible private participation and their scope.

The seminar agenda (appendix B) included presentations by representatives of California and Virginia, two States with substantial experience in privatization. These presentations were followed by panel discussions of public-private partnerships, first from the public perspective and, second, from the private perspective. Following each panel, ample time was allowed for open discussion among the participants. The seminar ended with reflections on the seminar's proceedings by Mr. Robert Poole, President of the Reason Foundation, and Mr. José Gómez-Ibáñez of Harvard University.

Several weeks prior to the seminar, the participants received a paper prepared by FHWA to help guide the discussion. The paper presented key issues from the public sector perspective. This overview contains discussion and questions on the issues described in the paper.

## 1. System Design and Route Planning

**System Coordination.** A key role of the public sector in providing highway transportation services is to assure a safe, environmentally acceptable, and interconnected highway system to meet public transportation or mobility needs. This broad system and planning perspective is in contrast with the private sector objective: to provide a transportation facility that is demand-responsive and capable of yielding an acceptable rate of return on investment. Nevertheless, limited public resources may cause extensive delays in providing the highways needed to meet demand unless private resources are also tapped. How can public objectives be met by retaining system integrity while providing an acceptable level of risk to the private sector? What affirmative public planning activities would make private participation more feasible? Are "profitable" projects by definition "good" projects? Who should originate projects? Should the public sector define projects in advance that would then be eligible for private development and operation? Or would this process stymie innovation that would otherwise be brought to infrastructure development?

**Urban Planning.** Urban area planning requirements and practices create additional complications for public-private partnerships; in addition to vertical coordination (coordination between Federal, State and local organizations), horizontal coordination among Metropolitan Planning Organizations and local jurisdictions must be used to reach agreement on project development plans. Intermodal and land-use planning, mass transit planning and coordination, the high cost of right-of-way, and significant safety and environmental regulatory requirements (such as the Clean Air Act amendments) make the urban planning process more complex. In turn, these complications require that additional effort be expended to develop projects under public-private partnerships. How should environmental responsibility be met as we shift toward more direct private sector involvement in project development? Can public-private partnerships under urban planning requirements keep risks to private sector investments at an acceptable level? Are guarantees or hold-harmless clauses appropriate?

**External Consequences.** External consequences, such as traffic congestion and environmental concerns, need to be addressed and resolved on a system-wide as well as project level. The traditional public sector method of addressing these concerns is to develop regulations that force consideration of the negative impacts of building or improving the system. The public and private sector must work together to find effective ways to address these needs within the regulatory framework and to ensure that each sector's interests are protected. For example, the public sector must assure that regulations will not be circumvented, and the private sector needs assurances that the rules governing project development and operation will not be changed to the detriment of profits after funds are invested. Measures need to be added so that socially beneficial activities can be rewarded.

Traffic congestion and environmental concerns can also be addressed using pricing mechanisms, such as peak-period or congestion pricing. Both the public and private sectors may use pricing. The public sector may consider the use of congestion pricing to help meet Clean Air Act requirements in nonattainment areas. The private sector is primarily interested in pricing as a way to

“sense” market prices and maximize returns while maintaining service quality; however, positive effects on air pollution levels could be an additional benefit. Will the public resist tolls based on congestion pricing? Should congestion pricing tolls be placed on existing facilities? What other congestion pricing implementation problems can be foreseen?

## 2. Private Exercise of State Police Powers

**Eminent Domain.** Powers to override individual property rights, such as the power of eminent domain, have traditionally been reserved for governments and regulated industries, which must act under legislated guidelines in the public interest. The alternative is negotiated purchase. Each method has its advantages and disadvantages. Can this power be shared with the private sector? What guidelines or due process procedures can assure proper exercise of these powers on behalf of the State?

**Safety Enforcement.** Should private operators have the power to set and enforce highway operating characteristics such as speed limits? What limits should be set on private operators seeking to define operating standards other than AASHTO traffic control standards? How should responsibility for regulatory or safety standards be handled if the standards are modified? Should this responsibility be shared between the public and private sector? Should liability be transferred to the public sector under the Build-Transfer-Operate (BTO) model, or should the private sector be required to obtain its own insurance to provide liability protection?

## 3. Sharing of Rewards and Risk

**Rewards.** Can a regulatory system be established that rewards private risk-takers and government, respectively, for taking on the additional risks related to public-private partnerships? If a purely private road facility were constructed, all profits would go to the private developer-operator. If, however, the State's powers are used for acquisition of right-of-way, liability protection, loan guarantees, and other purposes in support of the private



developer, should not the State share in the rewards of successful projects? Or would this be rewarding the State for the assumption of risks that it would have had in any case? Should profits exceeding certain levels be shared with the State? In what other ways could profits be shared? Should there be reimbursement to the State for services rendered to the private sector?

**Risks.** Many kinds of risks have been identified in the literature on public-private partnerships from the private sector viewpoint. But the public sector also has risk considerations. One principal risk identified by the public sector is that proper standards of road quality must be maintained, particularly as the facility approaches time of transfer to the public authority. State legislation usually addresses this issue by requiring oversight of private construction and maintenance operations. What other alternatives could help minimize risks to the public sector?

The public sector also faces an increased financial risk if subsidies or guarantees are offered to help the private sector overcome early hurdles in developing projects. Suggestions have been made to establish revolving funds and other techniques to support front-end project development costs. What elements of certainty must be reflected in public regulation if financing is to be assured, and what risks are involved in these approaches? If the public sector shares in the risks of a project, should it also share in the profits of the successful projects? Are subsidies necessary to reduce some risks to levels acceptable to private sector participants? Should the return on investment be adjusted?

**Failure to Perform and Remedies.** The word partnership in the term public-private partnership indicates that both parties have rights and responsibilities. What happens if either party does not meet its obligations? Under what circumstances could these problems arise? What remedies exist for the party adversely affected by the default of another party? Examples include failure of the private party to construct a facility after it has been given an exclusive franchise, and public sector failure to provide licenses and environmental approvals for the project. If changes in the public sector jeopardize a private sector project after the project has begun, how should this dilemma be resolved?

## 4. Type and Scope of Private Participation

**Exclusive Franchise Zones.** Specifications concerning size, time period, and contractual details are needed to define exclusive franchise zones; that is, areas in which a private operator is protected from competition by other parallel public or private highway facilities. What private commitments should be made under a quasi-monopoly franchise? How can these be defined? What are the salient contractual details that need to be negotiated? How is public participation achieved? Who represents the citizens in these negotiations? Is negotiation the best way to decide these questions?

**Regulation by Toll Levels or Rate of Return.** If the private sector builds the system links that are most profitable, how will the public sector fund the remaining connecting system links, particularly if rebates of public user fees are provided to private facility users? Questions have been raised about the making of "unreasonable" profits: should a State regulate the toll levels or the rate-of-return to a private toll road operator? Under what conditions is this regulation desirable? What are the important advantages and disadvantages of these two methods of regulation? What type of regulation is most likely to elicit the broadest range of benefits desired and anticipated from the public sector?

**Distribution of User Revenues and the Procurement Process.** The process that determines the equitable distribution of highway user revenues among jurisdictions reduces States ability to let large-scale design-build contracts. To what extent can this limitation be overcome through public-private partnerships? What are the benefits and pitfalls of design-build and traditional incremental contracting? What is the necessary relationship, if any, between use of public-private partnerships and use of design-build contracts? What is the appropriate involvement of the State in subcontracting by private developers in public-private partnerships? How should procurement laws be modified to accommodate public-private partnerships?





# Opening Remarks

In his opening remarks, Mr. Stephen Lockwood, FHWA Associate Administrator for Policy, established the seminar's informal tone and explained FHWA's interest in the topic of public-private partnerships.

Privatization has been an increasingly prominent feature of discussion about highway development, and public-private partnerships have become a continuing, though modest, trend. Nevertheless, despite the initiative of some States, the opportunities for new forms of public-private partnerships may be limited without the involvement of the Federal-aid program, particularly in regard to the significance of the Federal-aid system in metropolitan areas.

The *National Transportation Policy* takes these circumstances into account; it proposes liberalization of the use of tolls in the Federal-aid system and provides the opportunity for private-sector involvement in toll-road development. In addition, current bills before Congress contain the following proposals, among others: ability to convert free non-Interstate roads into toll roads, with fewer conditions for the conversion; the use of excess revenues for any transportation purposes within Title 23; an increase in the share of

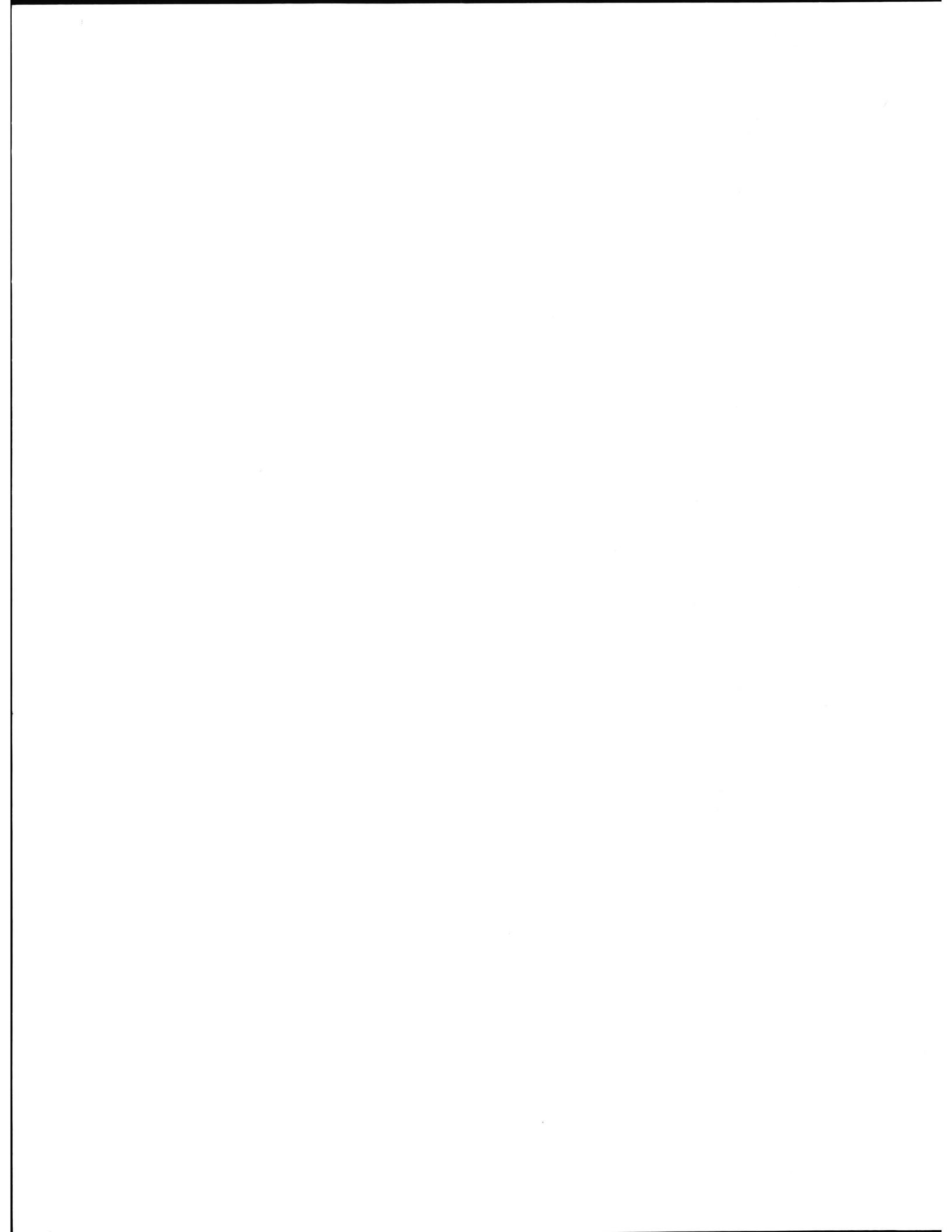
Federal funds for toll projects up to 50 percent; and availability of Federal funds for privately owned facilities in the context of contractual arrangements with the States. These provisions include the possibility for increased involvement by the private sector.\*

Further, although some States have grappled with several issues associated with public-private partnerships, other issues have not been publicly debated or fully discussed among representatives of Federal and State highway agencies. Therefore, the goal of this seminar is to help transportation officials gain a more comprehensive view of the trade-offs involved in the changing roles of the public and private sectors in improving the transportation infrastructure.

Mr. Tom Larson, FHWA Administrator, spoke to the group briefly, informing them of active discussion in Congress on the surface transportation bill. He indicated that an increase in public-private partnerships is inevitable, and that Federal law is changing to encourage these partnerships. He encouraged the participants to examine the issues in light of the current transportation environment and pending legislation because each offers significant motivation to move forward in this area.

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\* The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) passed on December 18, 1991, incorporated these proposals except that the matching ratio was increased to 80 percent for certain projects and a loan provision was added; see Appendix C for details.



# Case Studies: California and Virginia

## California Demonstration Projects

In July 1989, the State of California passed Assembly Bill No. 680 (AB 680), which authorized the California Department of Transportation (Caltrans) to initiate contracts with private businesses for four transportation demonstration projects. Mr. Carl Williams, Assistant Director of Caltrans, discussed California's experience with the public-private partnerships involved in these projects.

Mr. Williams prefaced his remarks by explaining why he thinks public-private partnerships will become increasingly common within the next decade and why public officials are uneasy about these partnerships. State governments are undergoing severe financial difficulties. Although the Federal Government is considering legislation that would apportion \$151 billion for transportation over the next six years, some State leaders are skeptical about the ultimate availability of these funds because of current Federal budget problems. At the same time, local governments are indicating a growing unwillingness to raise additional taxes for transportation purposes. On the other hand, the States cannot afford, and people will no longer tolerate, the indirect costs of delayed action to improve our highways, including the costs of congestion, air pollution, and loss of productivity.

This situation leads to a growing recognition that the private sector can help fill this significant gap between the need for highway improvements and State resources available for transportation. Some transportation workers are worried about the increase of privatization because they are afraid of losing work for themselves. Similarly, small contractors, who have traditionally been awarded contracts by public agencies, are afraid to compete with large consortia in these public-private partnerships. Mr. Williams asserted, however, that these fears are misguided because every State has a long backlog of projects and only certain projects from this backlog are suited to successful public-private partnerships. The majority are traditional government projects.

Mr. Williams explained that no single approach can be applied to all public-private

partnerships; each situation is unique. The extent to which project issues are important varies considerably in different environments. Caltrans had to resolve the following issues regarding its demonstration projects:

- *Ownership and liability.* California's private contractors were extremely concerned about their liability and the possibility of lawsuits and large awards for damages if they retained ownership of the highway facilities. Therefore, the provisions of AB 680 allow for a build-transfer-operate (BTO) type of partnership in which the private contractor builds the facility, transfers ownership to the State, and then leases the facility and operates it for 35 years, while collecting tolls. In this arrangement, the construction firm is liable only during the building phase; the State retains ownership of the facility during the operational phase and is liable for any torts.
- *Discriminatory changes in the law and how it is administered.* Private contractors were also concerned that they might lose property and contractual rights if a change in the legislature or administration occurred during project development or operation. They sought arbitration procedures that would bind both parties. The contractors also considered the possibility that the State could build a parallel freeway that would threaten their investment. Therefore, California established noncompetition zones to protect the construction consortia.
- *Ancillary development and value capture.* In some cases, private builders of highways may pursue land development and air rights to capture benefits that accrue to landowners adjacent to the highway facility.
- *Force majeure and compensation.* The private sector representatives had difficulty understanding that the transportation agency cannot promise to compensate for unanticipated problems and costs associated with delays in funding and project scheduling because the money must be appropriated by the legislature. Caltrans agreed to lobby for the compensation but could not promise repayment.

- *Bonding and insurance.* State representatives did not at first understand that the lenders, not the State, must be the beneficiaries of any insurance so that the lenders can complete a project in support of the consortium, if necessary.
- *Reviews of design specifications and standards.* The State agreed to a concurrent review process; i.e., designs are reviewed as the project progresses, while construction begins immediately on designs that are already approved. This procedure is foreign to government engineers.
- *Access to Government-owned right-of-way.* Without the use of public right-of-way, many private sector projects would be uneconomic. Therefore, some method to allow use of publicly owned right-of-way at reasonable cost (or no cost) is needed to enhance the chances of successful private highway ventures.
- *Maintenance services.* The private sector representatives believed that they could provide these services more economically and with the same standards as the State, and the State agreed.
- *Police services.* The State insisted that the California Highway Patrol be called on to police these roads. If, however, the Patrol fails to negotiate in good faith, the consortia can contract with local law enforcement agencies for this service.
- *Eminent domain.* Although authority to condemn property must remain with the State, the State must be willing to exercise this right in the contractor's behalf as a last resort. In this area, the contractor has an advantage in that he can offer more than the full market price for property if the owner balks at selling. The contractor must be assured, however, that the State will intervene if necessary.
- *Post-construction safety modifications.* Caltrans agreed to allow the private sector the same amount of time for completing safety modifications required by FHWA that State construction teams would be allowed.
- *Business concerns.* Several business concerns required negotiation; these included obtaining

a reasonable rate of return on the investment, estimating maintenance and operating costs, and raising high-risk capital before environmental clearance has been issued.

## Virginia's Dulles Toll Road Extension

The Dulles Toll Road Extension will be a 14-mile-long, four-lane, divided, urban highway. The extension will connect with the existing Dulles Toll Road at Washington-Dulles International Airport on its eastern end and follow a northwesterly direction to Leesburg, Virginia. The construction will be fairly complex because the roadway will have 35 bridges and 9 interchanges. The interchanges at the eastern end of the road will be the most difficult to design and construct because, in limited space, the road must provide access to Dulles Airport, connect with Route 28 (a six-lane divided roadway), and accommodate the use of two high-occupancy vehicle (HOV) lanes on the existing toll road.

Mr. Jim Hayes, Senior Assistant Attorney General for the State of Virginia, explained that the Dulles Toll Road Extension's construction is closely regulated by Virginia statutes. Therefore, his presentation focused on the three major approvals required before the private contractor can begin construction: the Commonwealth Transportation Board approval, the State Corporation Commission (SCC) approval, and the comprehensive agreement. In addition, the local jurisdictions affected by the roadway have an absolute veto power over it. This requirement gives the operator added incentive to work with local officials in the planning stages.

The Commonwealth Transportation Board's approval was for the project in general, the construction cost estimate, the design, and roadway connections. The information provided by the contractor at this point (particularly the engineering data) was general rather than specific. Because the Board and the Virginia Department of Transportation (DOT) staff considered the design to be preliminary, they were hesitant to approve it. However, the Board passed a resolution that identified the type of roadway, the various interchanges, and the type of each interchange, without any concrete engineering data, but with the proviso that State DOT standards must be met.

The second required approval was from SCC, Virginia's public utility regulatory

commission. This requirement places the private operator in a position similar to that of utilities and subject to the same controls. The application for this approval required far more detail than that for the Commonwealth Transportation Board. For example, because a determination of cost efficiency for the public interest was required at this time, information had to be available on right-of-way acquisition. During this approval process, toll rates were set based on three criteria: (1) the toll must be reasonable based on the users' benefits from the road, (2) the toll must not be so high as to discourage use of the roadway, and (3) the toll must provide no more than a reasonable rate of return for the investors.

In this case, as a result of design changes required to obtain SCC approval, the contractor was forced to resubmit the roadway design to the Commonwealth Transportation Board. Then, as the project developed, necessary changes in the design again made it inconsistent with the design approved initially. During two years of negotiations, the design was submitted to the Commonwealth Transportation Board three times for approval. Although public officials were unaccustomed to this recurring process and dubious about its results, they are now pleased with the plans.

The final approval, called the comprehensive agreement in the statute, is the operating contract between the private contractor and Virginia DOT. The agreement covers everything from design, construction, operation, and maintenance standards to anticipated widening and expansion. This agreement allowed a design-build approach, but the time used in negotiations allowed most of the construction plans to be developed and approved before construction. Therefore, the efficiencies associated with the design-build approach have not been fully realized. During the negotiations for the comprehensive agreement, the following issues were most significant:

- *Subsequent widening and expansion.* The statute calls for widening and expansion when it is economically feasible. The private sector, however, views economic feasibility differently than the State. The State can raise taxes to provide the necessary expansion; the private operator must weigh the amount of tolls that can be generated against the cost of the expansion. To resolve the issue, levels of service were identified against which the traffic demands could be reviewed annually.

A decision will be made about expansion when the review forecasts that expansion will be needed in two years to maintain predetermined levels of service.

- *Police powers.* The statute requires the State to police the roadway and allows for localities to aid them, if necessary. In specific negotiations on this function, the State police asked for an additional eight patrol officers, a building to house them, and all necessary equipment. These negotiations have been discontinued, perhaps because of the expense to the private operator; and the issue is unresolved.
- *Eminent domain.* Under the statute, the private operator may not file or exercise eminent domain to acquire any land. Some people have interpreted this provision to mean that no one can exercise this power for the private sector, since local governing bodies can only exercise the power specifically given to them by the legislature. This issue was settled when the Attorney General's office issued an official opinion interpreting the provision to allow local governments to exercise eminent domain in the operator's behalf.
- *Competition between the public and private sectors.* This issue arose because Virginia DOT and the Commonwealth Transportation Board conducted a thorough analysis to compare the costs associated with the project if completed by the public sector rather than the private operator. The result showed that the project could be completed 18 months earlier by the private operator, although the 40-year cost would be \$3 billion instead of \$1 billion if done by the public agency. Despite the fact that the higher cost would result in tolls of two dollars instead of one dollar, opinions expressed at public hearings were generally in favor of the private operator.
- *Sovereign immunity.* The State retains its sovereign immunity under the statute so that liability will fall very heavily on the operator. The project follows the build-operate-transfer (BOT) model; the private operator retains ownership for approximately 40 years during the operational phase. Therefore, any judgments resulting from poor design or maintenance may be attributed to the operator.

Mr. Hayes explained that the public-private partnership under the Virginia system places the primary responsibility on the private entity. The private organization identifies a corridor and the specific location, develops the design, secures the financing, and performs the construction, maintenance, and operation. The State supplies no significant funding and acts

primarily as a regulatory agency. SCC oversees the process, focusing on the financial aspects, while Virginia DOT is concerned with the engineering, construction, and maintenance aspects. Although the private organization assumes significant duties and risks under this system, significant rewards can also be realized.



# Panel on Public Sector Perspectives of Public-Private Partnerships

## Panel Discussion

This panel, moderated by Mr. Gene McCormick, FHWA Deputy Administrator, was composed of FHWA representatives and State transportation officials. Each panel member described his experience or concerns with public-private partnerships.

**Legal Issues of Privatization.** Mr. Tom Willett, FHWA Director of the Office of Engineering, classified the issues concerning public-private partnerships as primarily legal issues because the technical aspects of planning, design, and construction are basically the same whether they are performed by the public sector, the private sector, or a partnership. Therefore, the pertinent question is one of defining the rules that apply to the specific process by which the planning, financing, design, construction, and operation are performed.

FHWA does not put highways in place; that function belongs to the States. Furthermore, neither FHWA nor the State agencies are operated to make money; the private sector fulfills that role. On the other hand, pending legislation will probably allow Federal funds to be used in public-private partnerships. This money belongs to the States, but the States are responsible to the Federal Government for ensuring that Federal laws and policies are carried out in its use. The Federal Government cannot guarantee that the laws will remain unchanged. In public-private partnerships, the assumption is that the Federal Government will hold the States accountable. Later negotiations for specific projects will determine whether these requirements pass from the State to the private sector. Each set of agreements for public-private partnerships will be different, and their negotiations will provide interesting experiences for all involved.

**Chicago-Kansas City Toll Road Feasibility Study.** Mr. Dan Dees, Deputy Director of Planning and Programming for the Illinois Department of Transportation, discussed his participation in a feasibility study concerning

the construction of a toll facility between Chicago and Kansas City, a corridor long studied as a potential highway link. Several routes were studied, with the final selection linking the Indiana Toll Road on the east with the Kansas Turnpike on the west. The study outlined the conditions under which the project would be feasible financially and described a set of policy actions required for its implementation. Legislation that would have placed private companies under the auspices of a public Illinois State Toll Highway Authority was proposed in Illinois; while the legislation was not enacted, several issues were raised during the legislative debate that may be instructive in developing public-private ventures:

- *System coordination.* The public agency responsible for the relevant transportation network should approve connections with an investor-owned facility. For example, if the private facility crossed a State highway, the Illinois DOT would approve the designs, not the Illinois State Toll Highway Authority.
- *Environmental concerns.* This issue required intense Conference Committee negotiations. The resulting agreement stated that the private contractor would abide by any applicable State and Federal laws.
- *Competition.* This issue was not covered in the legislation; however, the Santa Fe Railroad has a main line that follows approximately the same route. This issue will undoubtedly arise at some point.
- *Eminent domain.* The Illinois State Toll Highway Authority would have used its eminent domain powers to help purchase the right-of-way for the highway only. If additional right-of-way were needed for other uses, the private organization would have been required to purchase it with its own resources.
- *Safety.* All State motor vehicle laws would have applied, and the Illinois State Police

would have patrolled the facility. However, the private operator would have been required to pay the costs for police support, but the details were not included in the final legislation.

- *Sharing of risks and rewards.* The legislation would have protected the State by mandating that State operating and maintenance standards be used, and that the Illinois State Toll Highway Authority be responsible for setting specifications in the charter. The private contractor would have payed all costs borne by the State, for example, in reviewing designs. The law would also have allowed the State to take over the facility if the project failed.
- *Franchise zones.* A charter would have been established to control operation at a specific location, such as a bridge or rail locations. The toll road charter did not include franchise zones around interchanges.
- *Toll levels.* The Illinois State Toll Highway Authority would have controlled the toll levels.
- *Tax credits.* Some constituencies wanted tax credits written into the law to give incentive to the private sector, but none were included.

The development of this legislation was guided by a philosophy of assisting private ventures, protecting the public interest, and letting the marketplace work.

**Arizona Takes the Plunge.** Mr. Harry Reed, Transportation Planning Director for the Arizona Department of Transportation outlined his experience in terms of four phases of a public-private partnership: taking the plunge, project design, gaining support, and implementation. Taking the plunge involves convincing bureaucrats that the use of public-private partnerships is a good idea. Arizona took the plunge when the decline in the economy reduced its transportation revenue from an anticipated \$6 billion to an actual \$2.9 billion. For the second phase, project design, the Arizona DOT drafted legislation for an unlimited number of pilot projects in the California format and an unlimited number of projects in the Virginia format.

The third phase, gaining support among several public and private interests, involved negotiation of the following issues:

- *Labor.* Although Arizona's State employees are not unionized, labor representatives protested that the projects would threaten public jobs. The Projects modeled on the California-format will follow the same processes that State highway programs presently follow because they are BTO projects. The Virginia-model projects have no special labor provisions.
- *Usage taxes.* Arizona truckers objected to the payment of State use taxes for mileage traveled on tolled highways that would be supplied through public-private partnerships. Therefore, the legislation allows trucking firms to be reimbursed for taxes (provided they document their use of the new road.)
- *Bidding process.* Associated General Contractors of America (AGC) wanted the legislation written under the low-bid process, but the Arizona DOT was successful in keeping this bureaucratic rule out of the legislation.
- *Number of projects.* Some legislators were concerned that the number of projects needed to be limited; the number was reduced to two projects under each model.
- *Funding.* The legislation forbids the use of State funds for the projects unless reimbursed, but does not define what constitutes State funds. For example, the Phoenix metropolitan area has a sales tax that provides a special regional fund that could be used for the projects.
- *Excess profits.* Excess profits will go back into the State highway user fund.
- *Alternative routes.* Reasonable alternative routes were devised in response to the concern of several legislators.
- *Eminent domain.* The State will exercise eminent domain powers when requested by the private entity, but only after reasonably thorough efforts by the private entity have failed.



- *Reasonable rate of return.* Some legislators wanted to establish the tolls. Instead, the California model was followed—tolls are set by the private operator, based on a negotiated reasonable rate of return.

As for the last phase, implementation, the law has passed the legislature, and the governor supports it. A conference took place in Phoenix just after the law passed for discussion of the issues. A request for qualifications was issued in January 1992, with a timeframe of two to three months. The private sector will help write the final proposal and identify the route. The program will be managed by the Arizona DOT front office through a special assistant reporting to the director. The person in charge of the program will have entrepreneurial attitudes, a prerequisite for making the program work.

**Conditions for Privatization in Florida.** Mr. Harold Worrall, Assistant Secretary for Administration and Finance, Florida Department of Transportation, described the environment for privatization in Florida, discussed legislation that has been passed there, and briefly outlined the issues involved.

Florida's legislation for public-private partnerships recognizes of the following factors. Florida has transportation needs of approximately \$40 billion and only \$12 billion in resources. The State has six of the ten fastest growing metropolitan areas in the United States. Florida also has a unique executive branch in which cabinet members are elected. Florida's right-of-way laws strongly favor property owners and offer little incentive for negotiations with the State. Competition between the public and private sectors is possible because a number of bridges and roads, some of which are currently operating, were built by public expressway authorities and the Florida Turnpike. Florida contains a large percentage of environmentally sensitive public lands. Finally, Florida has a stringent growth-management law, which states that infrastructure, such as waterworks, sewers, roads, and transportation facilities, must be in place before development can occur.

The privatization legislation requires legislative approval for each proposed project. Prior to consideration by the legislature, project proposals are submitted to the Florida DOT for review. The Florida DOT must

determine that the project is in the public's best interest, does not require State funds unless an overriding State issue arises, and has adequate safeguards against disruptions to travelers if the private operator defaults or the agreement is canceled. The Florida DOT becomes an arbiter in the proposal process, ensuring that a project complies with all Federal, State, and local policies and standards before specific legislation is drafted. The legislation is very flexible, with most issues to be resolved on a project-by-project basis. The following issues are addressed in the legislation:

- *Eminent domain.* The legislation leaves resolution of this issue to the Florida DOT. It states that eminent domain must be addressed by the Florida DOT implementing rule, which has just been drafted.
- *System coordination.* The legislation states that the private operator will follow all State laws, standards, and procedures, but it does not specify the involvement of the metropolitan planning organizations, which play a major role because of the growth-management law.
- *Toll regulation and rate of return.* The Florida DOT will be involved in regulating the tolls and establishing a reasonable rate of return.
- *Safety enforcement.* Troop K of the State Police, which is assigned to work with the Florida DOT, may be expanded to service the toll roads. Troop K currently polices the Florida Turnpike.
- *Transfer of ownership.* The time for transfer of ownership has not been resolved. The expressway authorities transfer ownership when the bonds are paid, but they are government entities. These projects will probably follow the BTO model.

Several of the issues are still unresolved because the implementing rule is still being written. The discussion at this seminar will help in developing the rule.

**The View from the FHWA Field Office.** The final panelist, Mr. Lyle Renz, Assistant Division Administrator for FHWA in California, discussed the issues from the viewpoint of the FHWA field offices. He indicated that the area of public-private partnerships encompasses

quasi-public transportation authorities, in some cases, and facilities other than toll roads. Rest areas, telecommuting centers, high-speed rail, fiber optics, and park-and-ride lots are currently being developed through public-private partnerships. As observed from the field level, FHWA and other Federal agencies do not deal well with the problems that these activities present. Usually, Federal agencies move slowly, making decisions in the field based on policy developed in Washington. Policy in these areas has not been developed, however, so answering the relevant questions will take some time. This process will require patience on the part of the private sector.

Mr. Renz also discussed the following issues:

- *System design.* System planning must consider the operational impact of public-private partnership projects on existing free routes. Planners must also determine whether a toll road will have the same environmental impact as a free route (for example, vehicle delay at toll plazas may increase emissions). These questions should be answered early in the planning process.
- *Eminent domain and police powers.* These powers should be left in the public domain.
- *Sharing of risks and rewards.* Private operators should gain all the rewards only if they take all the risks. Because States are sharing in the risks in many cases, they should also share in the rewards, and any profit beyond a reasonable return should revert to the State.

Mr. Renz urged public officials to take the initiative in supporting public-private partnerships because, without their support, the projects may not become a reality.

## Open Discussion

**Federal Aid.** One participant commented that Federal aid had not been mentioned in relation to these projects. He asked if the States were working on the assumption that public-private partnerships would work only if they were not entangled with the requirements that accompany Federal funds. Mr. Reed answered that Arizona probably will not use Federal

funds because their accompanying environmental requirements exceed those of the State. Mr. Dees replied that Illinois is reserving the Federal funds for public projects, leaving the private enterprises to solicit their own funds. Mr. Worrall stated the priorities for the use of Federal funds in Florida: first the public program, then the turnpike program, and finally public-private partnerships.

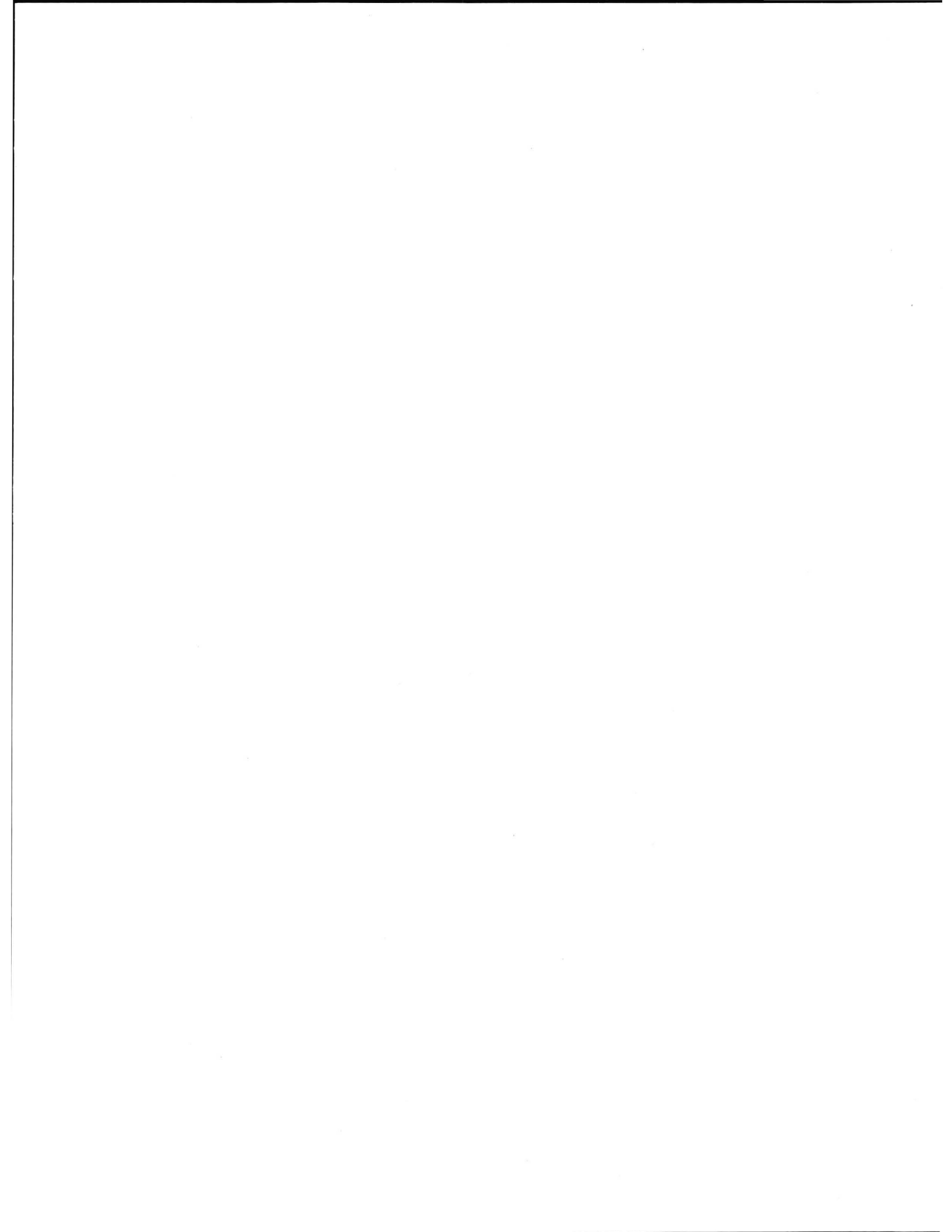
The panel was asked if they anticipated lobbying by the private sector for use of Federal funds. Mr. Worrall replied that he does expect lobbying, but that Florida also wishes to make the best use of its Federal funds in public projects. Mr. Renz related that a public toll road operator in California has asked that a National Environmental Protection Act (NEPA) document be prepared to facilitate securing the finances for the project.

One participant asked if the process could be simplified by coordinating the Federal and State requirements so that a private venture could operate with one focal point while taking advantage of available Federal funds. Panel members replied that anything is possible; however, they do not foresee such a process because private enterprise will want to move quickly, and the Federal environmental process is very slow. Some questioned whether Federal funds could be applied without additional environmental clearances. In any case, the States will look at their own priorities when deciding how to use Federal funds. Environmental issues are one of many to be addressed in the decision.

Another participant was more optimistic about the use of Federal funds in private projects, particularly if the environmental clearance has been obtained before proposals are sought. The preliminary planning and permitting stage is extremely expensive for the private firm, and the capital is at highest risk at this stage. Although the State faces the same risks, the costs are passed back to the taxpayer and are not calculated in the same way. The Federal money provides some social equity and makes securing resources for the project easier when it reaches the phase of pursuing backing from financial institutions. By meeting Federal aid requirements, one participant asserted, the private firm gains an ally in trying to resolve the environmental issues through FHWA because many of the requirements come from other agencies.

Another person stated that other Federal requirements, such as the procurement process or civil rights requirements, may have hidden costs. Furthermore, one participant stressed that if the State gains the environmental clearances and completes some of the initial processing, thereby reducing the initial risk, then the acceptable rate of return on the investment is also reduced. One person replied that although the preconstruction policy risk is great, it is still a small portion of the cost of the project. The greatest risks are whether the firm can build the facility at the projected cost and whether the actual use of the road (and therefore the toll revenues) will meet the projected figures. These two risks drive the acceptable rate of return.

**Assumption of Risks by the States.** Asked why the States do not believe it is in their interest to absorb some of the initial risks to attract more developers (although at a lower rate of return), panel members gave two answers. First, attracting developers is a good deal for the States only if a successful environmental review is highly probable. Second, the real advantage in privatization projects is their innovative approach, which may be lost if the State specifies the details of the project. In response, a participant questioned the importance of innovation when a State has such a shortage of funds and may be able to make optimum use of the Federal funds through public-private partnerships if environmental issues were not so important. He concluded that the States' best investment might be made in resolving some of the environmental issues.



# Panel on Private-Sector Perspectives of Public-Private Partnerships

Mr. Stephen Lockwood opened the session on private-sector perspectives by reflecting on the public-sector. First public-private partnerships will cause a re-examination of responsibilities on highway projects. While the public sector has an explicit responsibility in protecting the public interest, it will also have a less obvious responsibility of preserving the opportunities for private-sector participation. Second, some of the presumed problems from the public-sector viewpoint, such as standards, eminent domain, and liability, have been handled rather easily through legal, institutional, and administrative adjustments. However, other issues that will be more difficult to resolve have surfaced: origination of projects (whether from the public or private sector); monopoly protection and franchise zones; relationships between institutions, particularly different levels of government; public acceptability; and the way that the reallocation of responsibilities, risks, and rewards affects the financial nature of the project and its attractiveness to investors.

## Panel Discussion

Mr. Bill Reinhardt, editor of *Public Works Financing*, introduced the panel as the private sector's leading experts on public-private partnerships. Each panel member offered his view of public-private partnerships.

### Paradigms for Public-Private Partnerships.

Mr. Roger Feldman, who manages project financing for the law firm of McDermott, Will, and Emery, is chairman of the Privatization Council and sits on the executive committee of the Public-Private Ventures Division of the American Road and Transportation Builders Association. Mr. Feldman discussed public-private partnerships in terms of two alternative paradigms used in the transportation community. The first paradigm assumes that the public system is the best system to provide roads, and private enterprise should become involved in this activity only because the public system lacks the funds to maintain its performance in this

area. The second paradigm assumes that the private sector is a better provider of future surface transportation facilities because it moves faster and more economically and can, therefore, identify new opportunities that better respond to public need.

The underlying notion of the first paradigm is that because the public sector provides great value to the private developer through a public-private partnership, it should also be able to shift a majority of the risks to the private developer. Under the second paradigm, the private sector should only accept risks under its direct control; the public sector should create an environment conducive to private financing of projects, and be rewarded as more projects are undertaken by private enterprises.

Under the first paradigm, public ownership is the norm, and support for private development constitutes a subsidy. This paradigm supports a public sector argument that justifies a lower rate of return on investment to prevent the enrichment of private entities through the use of publicly provided right-of-way. Under the second paradigm, the rate of return to private investment must be competitive with that available to other projects in which private capital may invest.

Choosing between these two paradigms will be of utmost importance when the public and private sectors arrive at the negotiating table or when decisions are made regarding the use of Federal funds. Most States will need new legislation to address public-private partnerships. That legislation will also be driven by the choice between these paradigms.

**Project Costs/Rates of Return.** The second panel member was Mr. Steven Steckler, Senior Manager of the Price Waterhouse Transportation and Utilities Finance Group and Transportation Director for the Privatization Council. Mr. Steckler reminded the participants that a "free lunch" does not exist. Grants, tax exemptions, and tolls all impose costs. Ultimately, the money comes from the same pot. The key question in public-private partnerships is whether the user or the general taxpayer pays for a facility.



The previous discussions revolved around two models of public-private partnerships, the BTO and BOT models. Mr. Steckler asserted that other models, such as those involving leases between the public and private partners, may be more prevalent in the future, especially for projects to upgrade and expand or maintain existing facilities, such as bridges or airports.

Mr. Steckler maintained that if the public sector grants a monopoly to a private firm and invests in the project, some limitation should be placed on profits. However, regulation may not be justified and may discourage private investment if the project is risky and faces competition from other routes and modes. The question is whether toll levels or rate of return should be regulated, because fixing toll levels does not necessarily limit rate of return and vice versa. Mr. Steckler maintained that regulating the rate of return, perhaps combined with public sharing of the profits, is more efficient and allows the private company pricing flexibility within an upper limit.

Mr. Steckler also pointed out that the expected rate of return and the allowable rate of return can be very different. The expected rate of return is the sum of all possible (positive and negative) outcomes of the project weighted by their respective probabilities. The expectation for projects with profit ceilings of 15 percent is usually too low to attract investors because the developer takes the risk of losing everything while having only limited positive outcomes. The risk of postconstruction public policy changes can drive up the ceiling on rate of return; therefore, the negotiated agreement should be airtight in terms of long-term protection against adverse State actions. Demand uncertainty, particularly in undeveloped areas, and cost uncertainty pose the most significant risks and therefore have the greatest impact on the rate of return ceiling. Also, the costs of long-term debt may change in the time between negotiations and attempts to obtain financing. Therefore, the negotiated agreement should allow future changes to compensate for fluctuations in the financial market. Mr. Steckler concluded that it would be helpful for public-sector representatives to consider these points when negotiating with the private sector.

**Process Financing and Policy Issues.** Mr. Gerald Pfeffer, Senior Vice President of CRSS Equity Projects, Inc., discussed project financing and policy issues related to public-

private partnerships. Mr. Pfeffer suggested that the public sector will ultimately offer developers two alternative tracks for development. One track is modeled after California's recent experience, in which Caltrans encouraged private consortia to study the state highway system and identify projects that they found financially attractive. Caltrans then selected four projects for implementation, and the State will establish financial partnerships with the four consortia. For projects on this track, it is important to protect the developer's intellectual property rights, which emanate from its identification of a financially attractive project.

The second track involves projects that the public sector identifies and typically intends to complete. In this case, the public sector should carry the project through the environmental clearance phase because these costs and risks must be borne regardless of the entity completing the project. The only difference between a nontolled public road and a road that results from involving the private sector is the use of toll financing. Once a project has environmental clearance, it should be offered for competitive procurement of design, construction, financing, and operation. The selection of contractors should reflect an optimum balance of public and private interests. Only after no private interest can be identified for a project should Federal or State dollars be spent.

Regardless of the approach, privatization projects need some sort of clearly defined process, because developers currently spend as much time on the process as on the actual project.

Mr. Pfeffer felt strongly that market forces, rather than command-and-control regulations, should guide project development. The public utility type of regulatory environment carries too much future political risk. Freedom from this type of regulation is essential to capital formation. It is also critical to the success of projects that are financially dependent on congestion pricing. He expressed hope that Congress will consider tax exemption for debt because it can mean a considerable reduction in toll rates and is a primary difference in public and private financing.

Mr. Pfeffer contended that operations and maintenance costs are often overlooked in considering risks and rewards, but these costs to the private operator represent tremendous

savings to the taxpayer. He stated that Federal and State funds should be made available for these projects, which should be considered as extenders to public projects, particularly if they share in societal objectives beyond transportation, such as air quality.

Finally, Mr. Pfeffer focused on what he termed three red herrings in discussions of public-private partnerships:

- *Eminent domain.* Private firms in other industries, such as railroads, electric transmission lines, and pipelines, have exercised eminent domain for more than a century.
- *Speed and safety.* For liability reasons, no legitimate developer would post excessive speed limits on a facility.
- *Choice of projects.* Some people seem to think that the private sector practice of pursuing only the most financeable projects is somehow immoral. They must remember that the private developer is motivated primarily by the opportunity to earn a reasonable rate of return on its investment.

**Privatization and Existing Facilities.** Mr. Ralph Stanley of the Virginia Toll Road Corporation began his presentation with a brief discussion of methods of adding to the available capital for transportation infrastructure. He asserted that the capital ultimately comes from the people who use the facility, whether it comes through a public toll authority, is allocated by a State DOT or FHWA, or is raised by a group of users who back the privately issued debt. Differences between the public and private sectors give rise to many policy issues, several of which have been addressed in the legislation of various States.

Mr. Stanley commented on three aspects of the projects with which he has been involved. First, although the Virginia statute has settled the question of right-of-way in the Dulles Toll Road Extension project by allowing the county to exercise eminent domain powers in the firm's behalf, the issue could be a risky one for future projects. Second, because the permitting maze is costly and time consuming, it is a risk that private firms would like to minimize or eliminate. Third, a study is needed to provide traffic and revenue projections prior to partnership negotiations.

Mr. Stanley said that the only way to avoid these barriers to capital formation is to focus on projects to rehabilitate existing facilities. A number of bridges on the Interstate and State primary systems need repair, thereby constituting an enormous market of user-fee financeable bridge rehabilitation projects. These projects are not politically attractive, but they involve safety issues. Mr. Stanley suggested approaching the States or other entities owning the bridges (which may be water authorities, counties, or towns) and proposing to rehabilitate the bridges as toll projects. He asked for the reactions of State and Federal officials, assuming that the users and the owners would be in favor of the project. Various participants replied that the project could be approved. Toll levels should be tied to the cost of rehabilitation. One issue is that Federal funds may have to be paid back if the project is given to a private firm. The transportation officials participating in the seminar were not prepared to affirm this possible requirement.

One participant suggested that by using an existing facility as his example, Mr. Stanley had avoided the problem of environmental issues; still, there was the political problem of establishing tolls on previously free facilities that Mr. Stanley did not address. Mr. Stanley countered that, although tolls are not popular, he believes they are becoming more acceptable; furthermore, the demand for projects far exceeds the available funds. He indicated that in his scenario, he would contract with the city to discontinue the tolls at a specified time. City officials could inform the public of the terms of the contract in advance, promising them that the tolls are temporary.

Another participant discussed the difficulty of identifying projects that private contractors want to undertake, that they want to do only the high-priority projects. Public officials explained that the States are more inclined to support the high-priority projects in populous areas with public resources, because they affect more votes and involve higher traffic volumes. Mr. Stanley insisted that since all projects need to be done, the State could stretch its dollars by doing the low-priority projects and giving some high-priority projects to the private sector. Some public transportation officials expressed doubt that their organizations would reverse their views on which projects to undertake using that criteria.

Another participant asked what guarantee the public would have of remuneration for losses suffered in a massive accident. Mr. Stanley replied that under a public-private partnership the design and construction liability would be routine and insurance would cover whatever is possible. He would not, however, take ownership of the bridge. He contended that the public owner may already have tremendous liability depending on the remaining useful life of the bridge and that early rehabilitation of the facility would reduce risk.

One person reiterated that an important political issue is whether a private firm is entitled to a certain rate of return on projects that use federally subsidized assets. For nearly 30 years, FHWA has interpreted relevant laws as imposing an absolute ban on tolls, and it is unclear if the new transportation bill will change that interpretation.

To a suggestion that tolled facilities remain tolled indefinitely, with the toll receipts earmarked for transportation purposes, Mr. Stanley cited a survey indicating that the public's dislike of tolls stems from the perception that they are never discontinued. He would propose the signing of a contract requiring the removal of the toll at a specified future date as a tool in marketing the project to the public.

## Open Discussion

**The Value of the Private Sector.** One person suggested that some of the problems faced by the public sector could be overcome without public-private partnerships; rather, what is needed are more public toll authorities, which could raise funds in ways similar to those used by the private sector. But another person felt that the political will to impose tolls does not exist, nor will it exist in the next decade; meanwhile, roads are not being built, and bridges are not being repaired. One State official maintained that the political will exists, but even with all of the measures that the State can take, they are not enough to meet the need. Another participant felt that the private sector's biggest advantage is its willingness to assume risks that the public sector will not.

One participant commented that while toll or expressway authorities may be considered arms of the State, they are not State

administrative agencies and therefore do not have to follow the same cumbersome administrative procedures. The danger is that this environment is more conducive to corruption. Another participant suggested that an expressway authority has a bond agency as a "watchdog," and private entities are scrutinized by investors who guard against any loss to their investment.

Several participants asserted that the profit motive under which the private sector operates is a positive addition. The private sector encounters the same regulatory hurdles that the public sector must face; however, to make money, the private sector will make every effort to complete the project faster and with equal or greater quality. Further, the resources provided by the private sector are supplemental to public resources and thus complement them. One participant cautioned that toll-financed projects can also mislead legislators into believing that additional transportation dollars are not needed for other projects, leaving the State to fund only those projects that cannot support themselves. The debate continued with the comment that the purpose of government is to provide for those needs that cannot be provided for by the marketplace.

**Innovation.** The next topic of discussion dealt with what private enterprise can add to infrastructure projects in terms of innovation and whether that innovation is a natural product of private enterprise. Questions were raised concerning the importance of innovation for the types of projects being discussed. Participants affirmed its importance in various areas from design to financing. One innovative project recently proposed in Los Angeles involves placing eight miles of elevated roadway over a river rather than along its banks. Another was to rebuild a freeway to be financed, not by a toll, but in exchange for redevelopment rights along the freeway. However, one person warned that innovation may be limited because intellectual property rights are not adequately protected. He pointed out that innovations such as automatic vehicle identification transponders are being driven by market demand and the existence of patent laws to protect the technology, not on public or private financing. Another person stated that innovation is created by necessity.



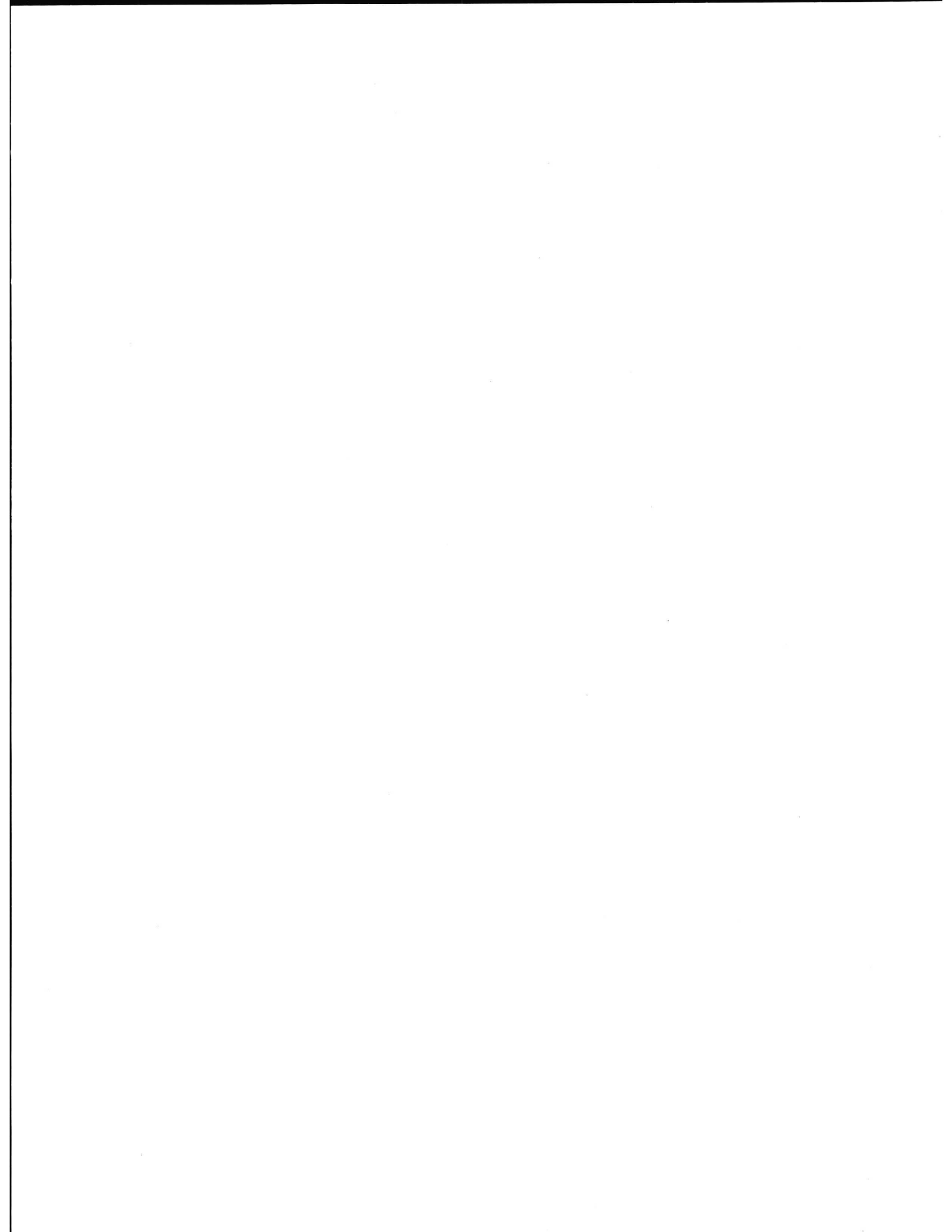
One participant suggested that the private sector is motivated to provide a higher level of quality because of the profit motive. Another person added that the public accepts different levels of service at different price levels in the private sector but not in the public sector. Public-private projects may provide an opportunity to offer premium service or special features.

One person described a public-private process in which the staff from both sides will meet immediately after the contract is signed to establish the joint mission and determine individual goals. Each side will share engineering solutions with the other as the project progresses. They expect that the projects will be completed ahead of schedule at a reduction in cost.

**Pricing.** One member of the group stated that a big difference in public and private toll road projects concerns the setting of an efficient toll level. The question is whether public authorities should be allowed to collect a return on their investment, and not merely relate the tolls to the cost of the facility. Several persons responded by citing examples of public authorities operating

in this manner, using the excess funds as seed money for other projects. In a public-private partnership, returns above a negotiated rate-of-return could be transferred to the public sector and be used for other transportation projects. Also, loans by the public sector to a public-private partnership project could be structured to provide returns to both partners.

**The Environment.** The final question concerned benefits that the private sector might bring in terms of environmental compliance. The response was that the private sector is being held to a higher standard because its motive is seen as profit only. Further, it was argued that the private sector goes to great lengths to make sure that environmental sensitivities are addressed, and therefore the environmentalists may trust the private sector more than it trusts public agencies. Participants also pointed out that having a large amount of equity at risk forces the private sector to identify potential opposition to projects, to overcome those objections early in the life of the project, and to work diligently to build public support. It was suggested that a public agency does not have the time or resources to perform these functions.



# Reflections on the Seminar Proceedings

**M**r. José A. Gómez-Ibáñez from Harvard University and Mr. Robert Poole from the Reason Foundation reflected on the seminar proceedings.

**José A. Gómez-Ibáñez.** Mr. Gómez-Ibáñez discussed the proceedings in the context of a study that he is conducting with Mr. John Meyer on the prospect of private toll roads in the United States. The study, using the four California demonstration projects and the Dulles Toll Road Extension as case studies, classified each road as one of two types: development roads or congestion relieving roads. The study focuses on two questions. First, are private toll roads financially viable and politically acceptable enough to be built? Second, are they worth encouraging? The results of the study indicate that the answer to both questions is yes, but not in large numbers, particularly compared to common estimates of the size of highway needs and the infrastructure backlog. Nevertheless, their importance will be greater than the numbers would indicate; their contribution will be in the form of new ideas that will provide a benchmark against which to measure and thereby stimulate a somewhat lethargic public road industry.

The financial viability and political acceptability of private toll roads hinge on five factors: (1) public acceptance of tolls; (2) the ability to cover construction costs through tolls; (3) reliance on developer aid or Government aid and its associated problems; (4) external factors, such as environmental issues; and (5) methods of coping with the potential problem of monopoly. In the study, public acceptance and monopolies were not as significant as anticipated. In each of the five case studies, monopolies were handled satisfactorily though differently in the legislation of the two States. External factors varied in significance, depending on the situation. Costs and financial aid had greater significance than expected and may create serious problems for the private operator.

The result is that the domain for public-private partnerships is a niche market. Even so, advocates of privatization argue that it

has three main advantages to the general public: (1) it increases the amount of investment that can be made in the road system; (2) the private sector can build roads faster and cheaper and has more flexibility to be efficient; and (3) privatization offers a new source of innovation. Critics of privatization contend that these advantages are exaggerated and that privatization creates monopoly and regulatory problems.

Although the arguments for added investment and cost savings are plausible, the study revealed little evidence of these benefits. The added investment of private capital for roads is costly because it displaces investment in some other sector. Moreover, the public can issue bonds for a public toll road in much the same way that a private toll road does. On the other hand, financing through some type of consumption tax, such as a gasoline tax, does not affect investments in other sectors. The important factor is whether the public will accept private toll roads more readily than public ones.

Although the private sector may ultimately offer cost savings, the evidence to date does not support this argument. In most cases the cost savings ascribed to either private or public ownership appear to be transfers of resources from one party to another, not net efficiency gains. In some cases, private development appears cheaper because of donated land, tax shields, and depreciation, all of which are transfers, not efficiency gains. In other cases, the public agency appears cheaper because it issues tax exempt debt and it does not pay taxes; again these are transfers.

The real benefit of privatization appears to be innovation. Three of the five case-study projects had either been abandoned or never considered by the State. Each project had an innovative aspect: a unique bridge design, higher tolling of single-occupancy vehicles, or peak-load pricing. The impact of these projects will be significant if the innovations are adopted elsewhere in the highway system. Therefore, projects involving privatization are important despite the fact that they may involve only a niche market.

**Robert Poole.** Mr. Robert Poole of the Reason Foundation reminded participants that the United States has a rich history of private toll roads developed in the late 18th and early 19th centuries. However, most of these private toll roads failed without ever making a profit, principally because of restrictive price regulations and numerous exemptions to the tolls. The major lesson to be drawn from that history is that the public policy and regulatory environment is crucial to the industry's viability.

Today's discussion indicates two distinct types of public-private partnerships: those identified and defined by the State and those proposed by the private sector. These two types require different sets of procedures. There have been cases, particularly in Britain, in which private firms have submitted unsolicited proposals for innovative projects only to have the Government open them to public bids. To encourage innovation, the system must also allow for deviations from public-sector design, construction criteria, speed limits, and other expectations.

The consensus seems to be that different levels of State involvement in public-private partnership imply different levels of regulation and sharing of rewards. If the State is allowing a monopoly to some degree or is providing right-of-way, land, or capital, it should have some controls. On the other hand, a project done entirely by the private sector with no implications of monopoly should have minimal regulation and reap the full rewards. Otherwise, these projects will not attract the capital necessary to complete them.

One issue that was not addressed earlier is that of transition problems at the end of a BOT franchise. The issue is how to ensure that the highway is maintained properly, i.e., that the private operator does not skimp on maintenance to obtain the highest return from the investment. One remedy would be to include plans to rebid the franchise when it expires. The private

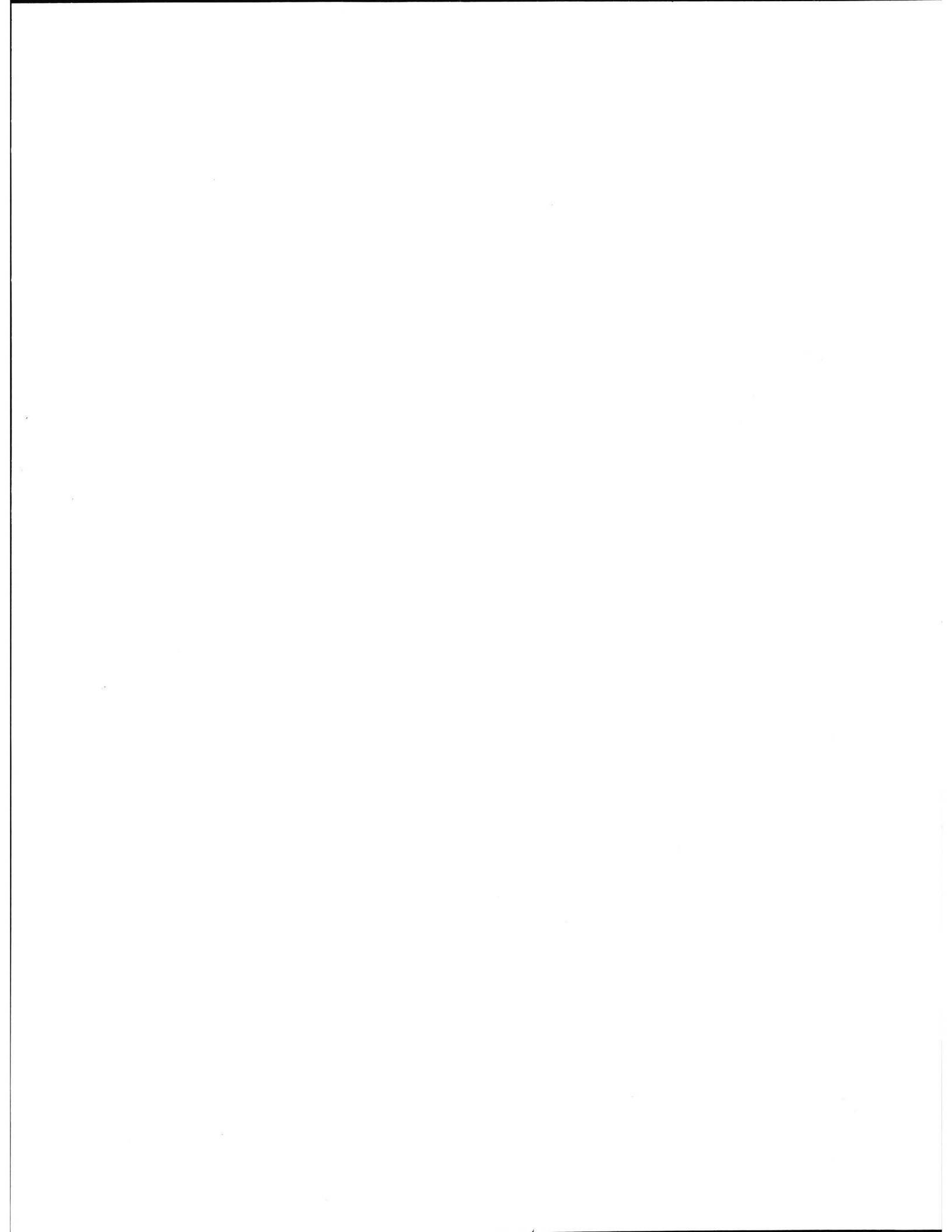
operator would have the incentive to maintain the facility if it wishes to retain the franchise, and the State would be motivated to ensure that the facility is maintained so that it will receive a higher bid for its continued operation.

The most important question of the day, according to Mr. Poole, is the extent and scope of privatization. He referred to Mr. Feldman's points concerning the opposing paradigms of public-private partnerships. Because of the gap between the needs and the resources, Mr. Poole suggested, transportation officials perhaps should reverse their thinking. Therefore, the first presumption would be that the private sector should undertake highway construction projects unless they are shown to be unfeasible. Then, the State would provide a residual role in developing all other projects. This concept could be tested by changing the rules on the selection of projects and requiring that the first criteria for granting of Federal aid is a determination of the feasibility of completing the project through the private sector. This approach should be explored with varying mixes of public-private partnerships in the project. Any use of private resources for the project would increase availability of funds for other public projects.

Another question on this topic is the extent to which tolls or direct user revenues, as opposed to indirect revenues such as the gasoline tax, should be used to provide financing for roads. One study indicates that congestion pricing in cities and axle-weight fees on intercity highways could replace the gasoline tax in those areas. A residual gasoline tax should be maintained, however, to fund highway projects in low-traffic, rural areas. One of the advantages of this plan is that it puts the perceived costs of the highway directly on its users.

Mr. Poole concluded that these concepts will deserve greater exploration as the problems in maintaining the infrastructure increase and resources remain limited.

**Appendix A:**  
**Seminar Participants**



# Seminar on Key Issues in Public-Private Partnerships for Highway Development

## Attendees

**Nancy Bennett**  
Federal Highway Administration

**John Berg**  
Federal Highway Administration

**Doug Birnie**  
Federal Transit Administration

**Madeleine Bloom**  
Federal Highway Administration

**Donald Camph**  
Aldaron

**Yuval Cohen**  
Parsons Brinckerhoff

**Cavelle Creightney**  
World Bank

**John Cuttrell**  
Federal Highway Administration

**Ted David**  
Apogee Research

**Dan Dees**  
Illinois Department of Transportation

**Ralph Erickson**  
Federal Highway Administration

**Mark Everett**  
Federal Highway Administration

**Roger Feldman**  
McDermott, Will, and Emory

**Maureen Gallagher**  
International Bridge, Tunnel, and Turnpike  
Association

**Roland Gamble**  
Texas Department of Transportation

**Gary Gittings**  
Pennsylvania State University

**David Goldstein**  
Federal Highway Administration

**Jim Hayes**  
Virginia Attorney General's Office

**Janice Hedemann**  
Maryland Department of Transportation

**Shelton Jackson**  
Office of the Secretary  
U.S. Department of Transportation

**Tom Jackson**  
Iowa Department of Transportation

**William Jameson**  
District of Columbia Department of  
Transportation

**Ed Kussy**  
Federal Highway Administration

**Merry Lawhead**  
Office of the Secretary  
U.S. Department of Transportation

**Jim Link**  
Federal Highway Administration

**Stephen Lockwood**  
Federal Highway Administration

**Paul Los**  
Federal Highway Administration

**Gary Maring**  
Federal Highway Administration

**Bill Marley**  
Federal Highway Administration

**Tim McDonald**  
Toll Road Corporation of Virginia

**Jerry McNesby**  
Delaware Department of Transportation

**William Menczer**  
Federal Transit Administration

**Frank Morretti**  
Highway Users Federation

**Mike Murphy**  
Colorado Department of Transportation

**Pat Nowak**  
Michigan Department of Transportation

**Jack Opiola**  
Toll Road Corporation of Virginia

**Ken Orski**  
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**Elizabeth Parker**  
Office of the Secretary  
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**Gerald Pfeffer**  
CRSS Inc.

**Alan Pisarski**  
Consultant

**Robert Poole**  
Reason Foundation

**Beth Poris**  
U.S. Department of Transportation

**Jerry Posten**  
Federal Highway Administration

**Edward Ramsdell**  
Research and Special Projects Administration  
U.S. Department of Transportation

**Harry Reed**  
Arizona Department of Transportation

**Bill Reinhardt**  
Public Works Financing

**Lyle Renz**  
Federal Highway Administration

**Patrick Sankey**  
American Road Transportation Builders  
Association

**Bert Schacknies**  
Federal Highway Administration

**Neil Schuster**  
International Bridge, Tunnel, and Turnpike  
Association

**J.R. Skinner**  
Federal Highway Administration

**Theresa Smith**  
Federal Highway Administration

**Ralph Stanley**  
Toll Road Corporation of Virginia

**Larry Staron**  
Federal Highway Administration

**Michael Swanson**  
Massachusetts Department of Public Works

**Earle Timpson**  
Delaware Department of Transportation

**B.J. Van Kavelaar**  
Delaware Department of Transportation

**Norm Van Ness**  
Federal Highway Administration

**Martin Weiss**  
Federal Highway Administration

**Tom Willett**  
Federal Highway Administration

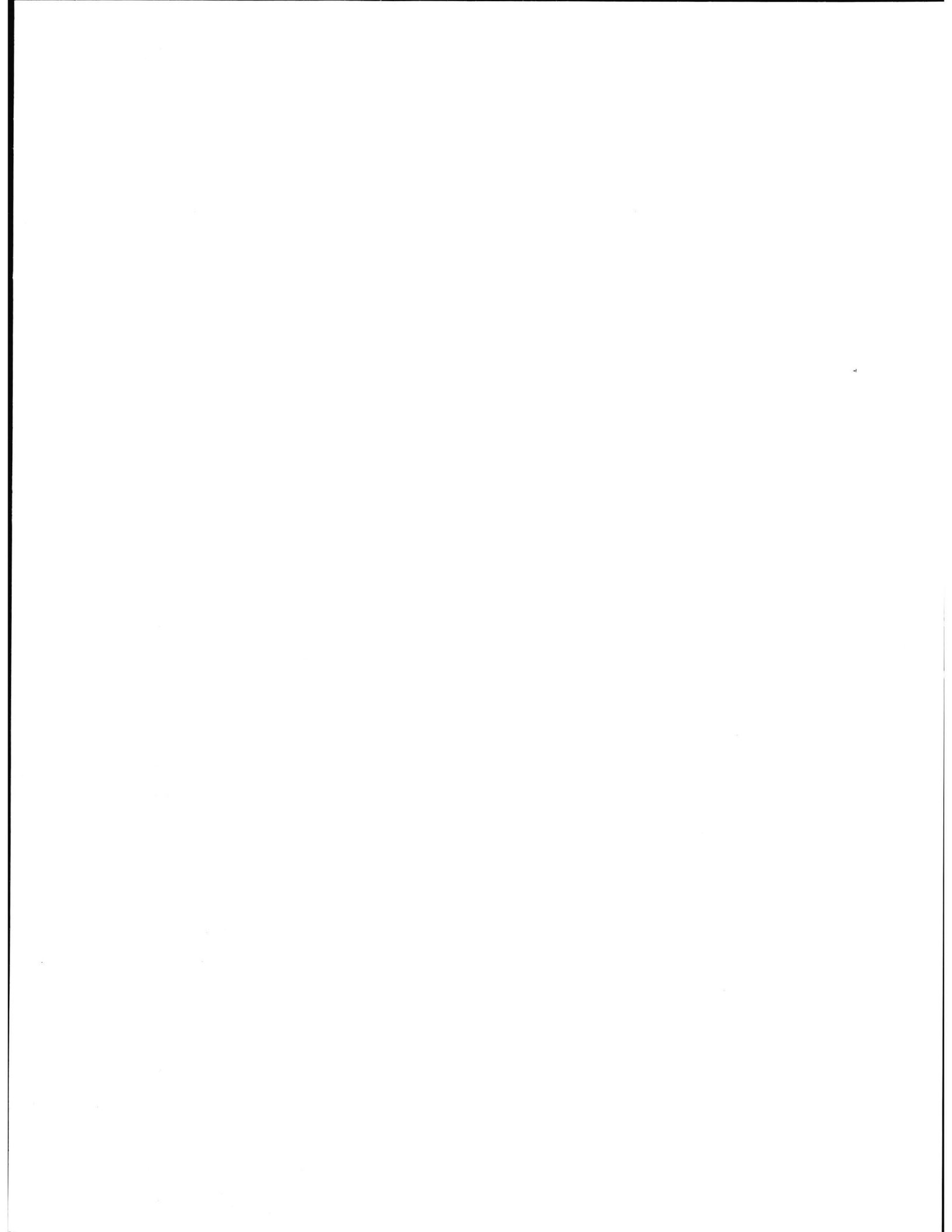
**Carl Williams**  
California Department of Transportation

**Harold Worrall**  
Florida Department of Transportation

**Jimmy Yu**  
Federal Transit Administration



**Appendix B:**  
**Seminar Agenda**

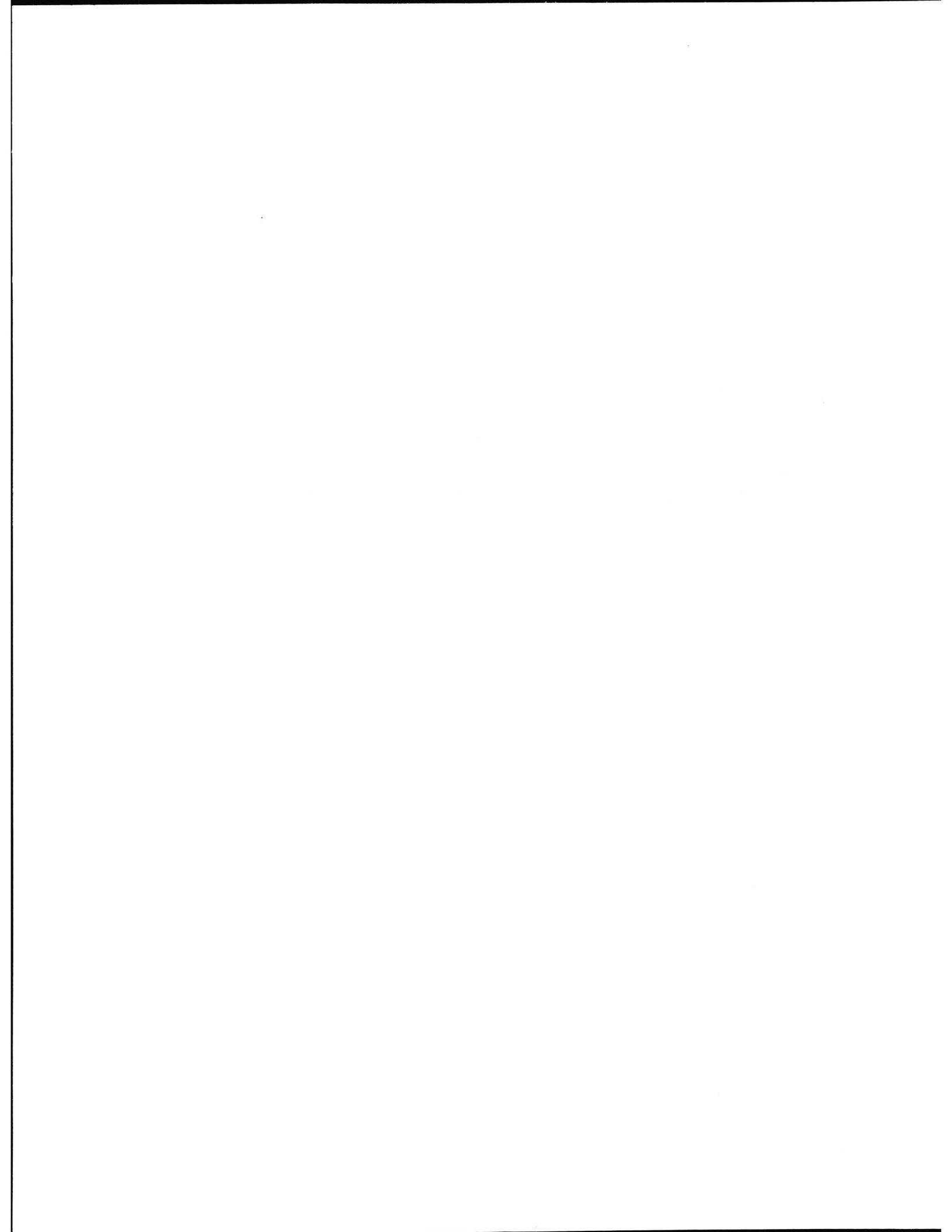


# **Public-Private Partnerships**

## **November 21, 1991**

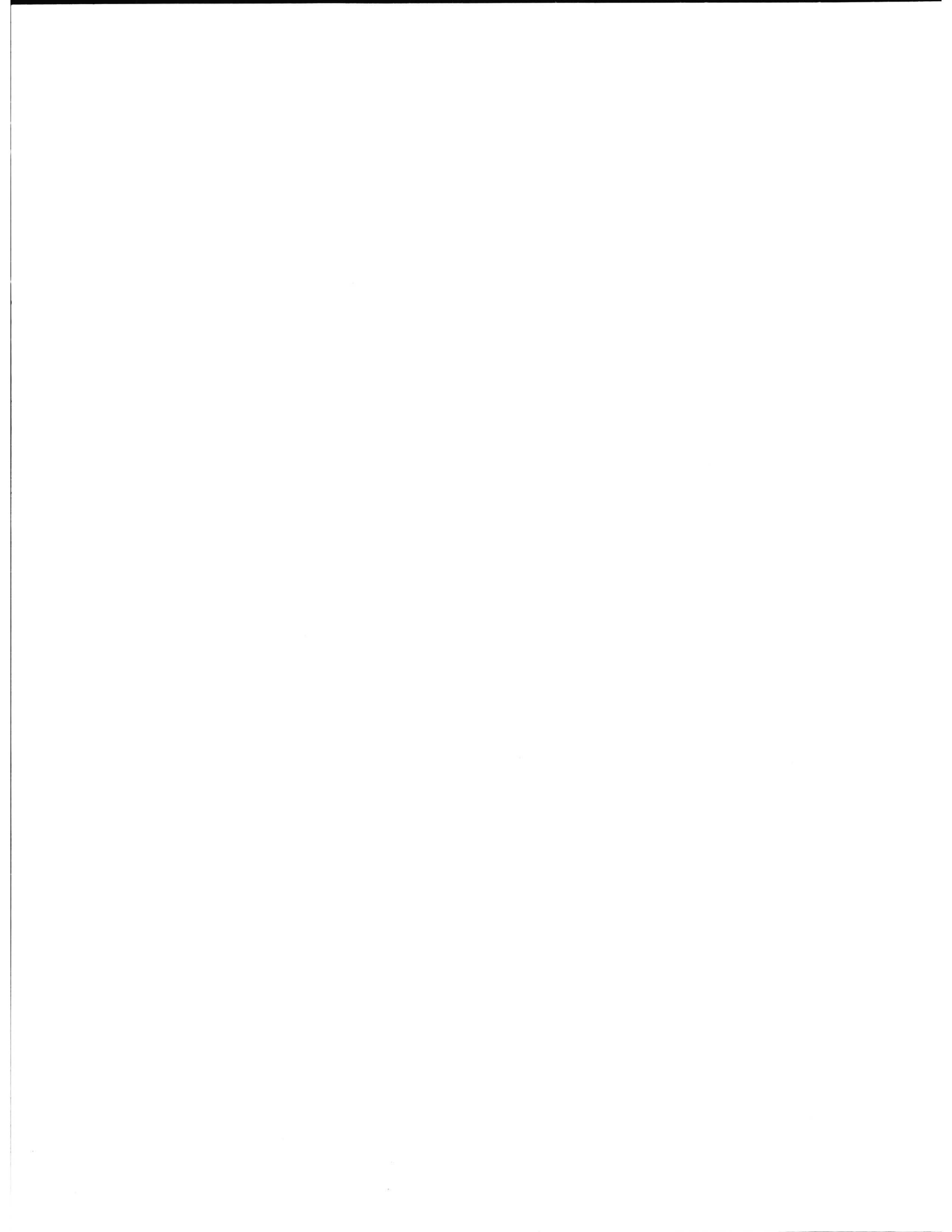
### **Seminar Agenda**

- 8:30    **Opening by Steve Lockwood and Tony Kane**
- 8:50    **Recent State Experiences with Public-Private Partnerships:**  
        Carl Williams, California DOT  
        Jim Hayes, Virginia Attorney General's Office
- 9:50    **Panel on Public Sector Perspectives on Public-Private Partnerships**  
        Gene McCormick, FHWA, Moderator  
        Tom Willett, FHWA Headquarters  
        Dan Dees, Illinois DOT  
        Harry Reed, Arizona DOT  
        Harold Worrall, Florida DOT  
        Lyle Renz, FHWA Field
- 10:40   **Open Discussion**
- 11:30   **Break for Lunch**
- 12:30   **Panel on Private Sector Perspectives on Public-Private Partnerships**  
        Bill Reinhardt, Public Works Financing, Moderator  
        Roger Feldman, McDermott, Will, and Emery  
        Gerald Pfeffer, CRSS Equity Projects  
        Ralph Stanley, Virginia Toll Road Corporation  
        Steve Steckler, Price Waterhouse
- 1:10    **Open Discussion**
- 2:50    **Reflections on Seminar Proceedings**  
        Robert Poole, Reason Foundation  
        José Gómez-Ibáñez, Harvard University
- 3:30    **Wrap-up by Steve Lockwood and Tony Kane**



## **Appendix C:**

# **Toll Road Provisions of the ISTEA**





# Toll Road Provisions of the ISTEA

Under the ISTEA, tolls are permitted to a much greater degree than in the past on Federal-aid facilities, i.e., roads, bridges and tunnels. Types of work that may be done are:

- 1) Initial construction of toll facilities (except for the Interstate),
- 2) 4R (resurfacing, restoring, rehabilitating, or reconstructing) work on toll facilities,
- 3) Reconstruction or replacement of free bridges or tunnels and conversions to toll facilities,
- 4) Reconstruction of free highways (except Interstate roads) to convert to toll, and
- 5) Preliminary studies to determine the feasibility of the above work.

For the first time private entities may own the toll facilities. The applicable public authority, regardless of ownership, must ensure that Title 23 requirements are being carried out. A State may loan the Federal share of a project's cost to another public or private agency constructing the project. Repaid loan funds may be used for any transportation purposes under Title 23.

Toll agreements must require that all toll revenues are used first for debt service, reasonable return on investment, and operation and maintenance. At the option of the State, the agreement may allow toll revenues in excess of these requirements. The toll agreement may also allow for continuation of tolls after debt is retired. Both of these allowances are subject to the requirement that excess toll revenues are used for transportation purposes under Title 23.

The Federal-aid share varies by project type, and is summarized in the table below.

Activities Eligible for Toll Financing and Public-Private Partnerships	Federal-aid Share (percent)			
	Interstate		Non-Interstate	
	Roads	Bridges/ Tunnels	Roads	Bridges/ Tunnels
Initial construction (except in the Interstate system) of a toll highway, bridge, tunnel, or approach thereto	NA	NA	50	80
Reconstruction of an existing toll highway, bridge, tunnel, or approach*	50	80	50	80
Resurfacing, restoring, and rehabilitating of a toll highway, bridge, tunnel, or approach*	50			
Reconstruction or replacement of a free (non-Interstate) highway, or a toll free bridge or tunnel on or off the Interstate, and conversion to a toll facility	NA	80	50	80
Preliminary studies to determine the feasibility of the aforementioned toll construction activities	50			

\*Note that an exception to the 50 percent share is that highway facilities under existing Federal toll agreements are eligible for 80 percent Federal-aid share until the expiration of the existing toll agreement.

