Perceptions of Congestion Pricing in the Metropolitan Atlanta Region

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ABSTRACT

The Georgia Department of Transportation (DOT) commissioned Georgia Institute of Technology’s Center for Quality Growth and Regional Development (CQGRD) and Civil and Environmental Engineering (CEE) to conduct a comprehensive assessment of public perceptions of potential congestion pricing mechanisms in the Metropolitan Atlanta area. It is expected that a congestion-pricing project in this area will face similar obstacles to those seen in other areas of the country for example, resentment based on the perception that residents are being asked to pay for a previously “free” service. Furthermore, because of Atlanta’s history of racial inequalities and spatial economic segregation, equity questions might be more politically volatile than they would be in other metropolitan areas. One example is the Metropolitan Atlanta Rapid Transit System (MARTA) that currently only serves two counties in a twenty-four county region. For approximately 30 years, MARTA has been unable to extend service into the 2 surrounding suburban counties of the Metropolitan Atlanta Area (Nelson, Sanchez, Ross, 1997).

This paper presents the results of a project that explores advances in congestion pricing technologies, public acceptance of congestion pricing, case studies of five congestion pricing programs, and a review of other relevant strategies. It is part of the “Congestion Pricing Response” project currently being conducted at the Georgia Institute of Technology. The expectation is that this project, when completed, will help guide the Georgia Department of Transportation (GDOT) in the siting, evaluation, and implementation of future transportation pricing programs. We present preliminary results since the research is still underway.
Perceptions of Congestion Pricing in the Metropolitan Atlanta Region

Introduction

Traffic congestion is an increasing burden on American cities. Congested highways delay truck transport and commuters, causing economic and social losses to local businesses and residents and making the area as a whole less attractive to potential residents, investors and visitors. Drivers suffer increased stress and the resulting negative health effects. Long delays in car travel leads to greater amounts of pollutants being emitted into the atmosphere. As a result, one of the foremost challenges confronting towns, cities, regions and transportation providers is the reduction of congestion. Perhaps more importantly, the increasing cost of oil and our current dependence on it make even clearer the need for the introduction of greater efficiency, better management, more sustainable practice, and differential pricing in transportation system planning. There is an even greater expectation that congestion pricing will be a new source of funds to maintain existing and construct new infrastructure.

Congestion pricing is one strategy with the potential to respond to some of the challenges outlined above. Congestion pricing seeks to reduce demand, and thus the number of cars competing for space on the road, by making more explicit the costs of adding an additional driver to the lane. The result is freer-flowing travel in the managed lane and a more efficient use of all of the lanes in the managed corridor.

There is ample evidence that as congestion problems have worsened over time and as managed-lane projects in the United States have gained publicity, public officials’ attitudes towards congestion pricing have become more positive (Benjamin, et al., 2007). Yet American attitudes towards congestion pricing have been characterized and remain lukewarm at best (Swisher and Ungemah, 2006), and previous polls have found little support for time-of-day variable pricing (Weinstein and Dill, 2007).

The Georgia Department of Transportation (DOT) commissioned Georgia Institute of Technology’s Center for Quality Growth and Regional Development (CQGRD) and Civil and Environmental Engineering (CEE) to conduct a comprehensive assessment of public perceptions of potential congestion pricing mechanisms in the Metropolitan Atlanta area. It is expected that a congestion-pricing project in this area will face similar obstacles to those seen in other areas of the country for example, resentment based on the perception that residents are being asked to pay for a previously “free” service. Furthermore, because of Atlanta’s history of racial inequalities and spatial economic segregation, equity questions might be more politically volatile than they would be in other metropolitan areas. One example is the Metropolitan Atlanta Rapid Transit System (MARTA) that currently only serves two counties in a twenty-four county region. For approximately 30 years, MARTA has been unable to extend service into the
surrounding suburban counties of the Metropolitan Atlanta Area (Nelson, Sanchez, Ross, 1997).

This paper presents the results of a project that explores advances in congestion pricing technologies, public acceptance of congestion pricing, case studies of five congestion pricing programs, and a review of other relevant strategies. It is part of the “Congestion Pricing Response” project currently being conducted at the Georgia Institute of Technology. The expectation is that this project, when completed, will help guide the Georgia Department of Transportation (GDOT) in the siting, evaluation, and implementation of future transportation pricing programs. We present preliminary results since the research is still underway.

Research on attitudes towards congestion pricing programs around the country indicates the public holds many misperceptions about managed lane programs. This paper compares the results from sixteen focus groups (segmented by income, travel --corridor, and commute type) in the Atlanta area with perceptions of other managed lane projects from around the country. We identify similarities and variations and also examine the influence of technology in these broadly held perceptions. The results of this study will contribute to the evidence base of the public’s perception of pricing programs and provide guidance to agencies interested in the implementation of these and similar programs.

Overview of Congestion Pricing

Clogged, slow-moving freeways and interstate highways delay both truck transport and commuters, causing losses to local businesses, increasing pollution and travel time, threatening the quality of life and making the area as a whole less attractive to potential economic investors. Congestion pricing is the practice of charging drivers to use a specific lane or enter a designated area. The objective is to reduce demand, and thus the number of cars competing for space on the road, by making more explicit the costs of adding an additional driver to the lane or area. A refinement of this strategy is to vary the price to reflect demand—in many cases, the price is higher during peak travel periods and lower at other times of the day. One result is freer-flowing travel and reduced congestion for those drivers willing to pay the toll.

Congestion Pricing Technologies

New technologies now make it considerably easier to establish and enforce congestion-pricing program whether the program is limited to one lane or established as a cordon area as is the case in London. The most widely-used new technologies include electronic toll collection via transponders located in individual cars. Other capabilities and technologies including; the ability to read license plates; automatic vehicle occupancy detection and enforcement gantry lights are also being developed to assist in enforcement. These technologies allow for the separation of the users of a priced lane from those using the facility who do not have to pay the toll (e.g. a vehicle with two or three people inside). The existence of these technologies contributes significantly to our ability to implement managed lane projects.
Electronic toll collection and transponder use have often been received very well and drivers have responded favorably and adapted to using the new technology. However, there may be privacy concerns with some of the enforcement technology and users may react negatively to having their license plate read or their picture taken by a digital camera trying to determine vehicle occupancy used in determining trip costs.

Public Acceptance and Perceptions of Congestion Pricing

Congestion pricing is still relatively new in the United States, and in the past has proven politically unpopular (Ungemah and Collier, 2007, Swisher and Ungemah, 2006). While there is some evidence that American audiences are becoming slightly more comfortable with the idea of congestion pricing, the idea has not yet received wide spread support. Preliminary results suggest familiarity leads to more positive responses: people who have used a congestion-pricing facility or a toll lane before react more positively to the idea of a congestion-pricing facility than do those who have not. However, potential users may react negatively if they believe that a “free” facility is being taken away from them. Turning an HOV (high-occupancy vehicle) lane into an HOT (high-occupancy toll) lane may be more acceptable to the majority of users, but may provoke opposition from existing HOV users.

Users often cited equity as a concern, fearing that a congestion-free drive will be a privilege extended only to those who can afford it. Each of these, are issues that must be considered in the development of strategies to generate more broadly based support for congestion pricing projects. Results suggest one of the most beneficiary actions is the development of a detailed and comprehensive outreach program. The program should keep potential users informed as to the features and predicted consequences of the congestion pricing program and be able to adjust based on the concerns and views of potential users. Secondly, a successful program must anticipate heightened scrutiny in some areas, such as the potential equity issues and the planned use of the resulting revenue. Finally, it is important that those responsible for the implementation of the congestion pricing program be able to explain, clearly and memorably, what benefits will accrue and why they are worth incurring the costs of implementing the program.

Metropolitan Atlanta Congestion Pricing Study

Project Scope

The key objective of this congestion pricing study is to undertake a comprehensive evaluation of public perceptions and acceptability of potential congestion-pricing implementation and deployment strategies for the metropolitan Atlanta area. It is expected that this project will help guide GDOT in the siting, evaluation, and implementation of future pricing strategies. The project includes consideration of new technologies to be used in implementing congestion-pricing schemes, as well as potential consumer objections to congestion pricing and a summary of the most significant inputs to models or efforts to forecast consumer responses to pricing programs. In addition, the project will result in recommendations of strategies to guide
the implementation of congestion pricing programs. The research effort will provide a comprehensive examination of public perceptions and preferences in regard to the suitability of potential pricing applications in metropolitan Atlanta.

A focused literature review was conducted to examine public acceptance of previously implemented congestion pricing programs. The review of literature on public acceptance of previously implemented congestion-pricing programs included five case studies: the I-10 Katy Freeway in Texas; express lanes on I-15 near San Diego, California; State Route 91 near Riverside, California; MNPASS in Minneapolis, Minnesota; and E-470, a limited-access toll highway, in Denver, Colorado.

The review includes an examination of the relationships between use of revenues, consumer education, policy acceptance and implementation; newly introduced and forthcoming technologies; methods for implementing real-time pricing and consumers’ reactions to the use of such technologies; assessment of each projects’ research plans or methodology; assessment of focus group questionnaires or surveys and a compilation of the survey results to identify consumer preferences.

To further review previous implementation of congestion pricing programs the research team conducted a survey of transportation professionals who have previously implemented congestion pricing projects or programs. A total of 30 surveys were completed via telephone. These surveys were broken down into entities with existing congestion pricing facilities, entities with congestion pricing facilities in the planning process, and entities with non-congestion priced toll facilities to facilitate a comparative analysis.

In addition, a group of experts (practitioners and implementers) visited Atlanta for two days during which time the research team solicited their advice and experience in implementing value pricing projects. These experts were state, local, and federal transportation officials who have on-the-ground experience with implementing congestion-pricing schemes and related technologies. The two day visit was structured around a series of topics including: public perceptions of congestion pricing; stratifying acceptability by user demographic profile and across various types of pricing strategies; public response to congestion pricing; techniques and policies needed to implement congestion pricing; existing and evolving technologies supportive of congestion pricing; obstacles to congestion pricing and outcomes or benefits of implementing congestion pricing.

Sixteen focus groups were convened to identify and measure the attitudes, perceptions, preferences and general response to a variety of congestion pricing programs and to specific technologies and program characteristics. This includes an examination of different pricing technologies, toll collection methods, financing and pricing preferences (willingness to pay), and expectations and benefits associated with pricing programs. Focus group participants were also evaluated with regard to their familiarity with congestion-pricing technologies. Special topics were selected in order to solicit potential public objections to them—for example, if users consider congestion pricing “double taxation” or regard toll lanes as “Lexus lanes” established to benefit only the wealthy.
The preliminary results of these project tasks as they relate to public perceptions surrounding the implementation of congestion pricing programs are presented in the following section.

**Public Perceptions of Congestion Pricing**

In the past few years, a number of surveys of public perceptions of congestion-pricing projects have been conducted both on-line and by telephone (Ubbels and Verhoef, 2006 and Burris et al., 2007). The most obvious result when comparing results of the various surveys is that those conducted after a specific congestion-pricing was implemented generated more favorable opinions than those which were of hypothetical tolling projects.

Some studies rely on interviews with participants in past congestion-pricing implementation programs (Evans et al., 2007) or with specific local stakeholders (Benjamin et al., 2007). A few have used focus groups (Godbe Research and Analysis, 1998; Texas Transportation Institute, 2005; Cook Research, 2004) to obtain more detailed user perceptions.

The public’s perception of travel-demand management techniques are, such as congestion pricing, depends on a number of factors. Non-coercive measures are more acceptable than coercive measures (Gärling and Schuitema, 2007). The more effective the scheme is perceived to be at solving congestion or environmental problems, the weaker the probable public opposition (Gärling and Schuitema, 2007). Meanwhile, in the United States, the nature of government is inherently biased against significant policy change, and large projects are vulnerable to “last-minute withdrawal” from politicians or mounting public opposition (Ungemah and Collier, 2007). The withdrawal of support by local politicians, affects the perceptions of citizens.

There is some suggestion that as congestion problems worsen over time, and as managed-lanes projects in the United States have gained publicity, public attitudes towards congestion pricing are somewhat more positive. Benjamin et al. (2007), discussing the possibility of adding HOT lanes to a major arterial (Interstate 40) in a medium-sized city (Greensboro, North Carolina, with an estimated population of 237,000 in 2006) found that approximately as many leaders favored tolling highways as opposed them. Still, American attitudes towards congestion pricing have been characterized as lukewarm at best (Swisher and Ungemah, 2006), and others have found little support for time-of-day variable pricing (Weinstein and Dill, 2007).

**Public Objections to Congestion Pricing: A National Perspective**

It should be noted that different existing users are expected to have different attitudes towards a proposed congestion-pricing program. Those who already benefit from the free HOV lane, such as transit riders, drivers of super-low-emissions vehicles (SLEV), and carpoolers, may balk at the idea of sharing the HOV lane with single drivers, even those paying a fee (Swisher and Ungemah, 2006). In another context, regular users of the road, on which the proposed project will be implemented, may feel differently towards congestion pricing than occasional users.
Value pricing is widely recognized to be politically difficult because it adds a price to a public service previously perceived as free (Benjamin et al., 2007). A survey of travelers in Dallas and Houston found that the primary reason given for opposition to value pricing was dislike of the tolls and a view that taxes had already paid for the road was cited frequently (Burris et al., 2007). The view of value pricing as “double taxation” is also shared by many American political leaders (King, Manville, and Shoup, 2007). However, in public opinion studies support for tolls to fund roadway projects often increases when compared to raising gasoline taxes (Weinstein and Dill, 2007).

The political acceptability of congestion pricing may also depend on the proposed use of revenues (King, Manville, and Shoup, 2007). One study suggested that revenue uses benefiting individual drivers, such as decreasing road or fuel taxes, were more likely to win public support than revenue uses meant to benefit society as a whole (Gärling and Schuitema, 2007). Participants in focus groups for the San Diego I-15 FasTrak project reported that while they were unsure of how revenues were being used, they felt that revenues should be used mainly for highway projects. Improving public transportation was cited as a positive use of revenues by some, but overall participants advocated using toll revenues for improving roads and constructing new express lanes (Godbe, 1998). Focus groups in Atlanta recommended that revenues first be used to cover the capital, operations, and maintenance costs associated with converting to or constructing HOT lanes (Meyer et al., 2006).

For the San Joaquin Hills corridor, toll increases have received a lot of publicity, and therefore have drawn more criticism. Rates get bumped up automatically with traffic increase, up to $11 now (as of the time of the interview).

In Minnesota, broader-based tolling, anything extending the existing tollway to the entire roadway converting existing free lanes into a toll lane, has been criticized and opposed. Similarly, in Lee County, Fl implementing a toll on an already-existing facility is likely to present a problem even if variable/congestion pricing is used. On the I-15 corridor, regular drivers do not like monthly passes, but prefer FasTrak.

It is clear that there is no set formula for implementation of a congestion pricing program. However, there are similarities between the five cases. All five have barrier-separated sections; four have reversible sections. Four of the five are able to balance HOVs and SOVs in the same lane; while enforcement has been a difficulty, it should be recognized that a congestion-priced lane can accommodate both carpoolers and single drivers. We can tentatively conclude that (with the exception of SR-91, which had the additional variable of a prominent public-private partnership coming under fire) all show a trend of consumer acceptance of the congestion-priced facility rising after it opened. This is true whether or not SOVs (single-occupancy vehicles) were allowed to use the facility. Thus, it may be that the most difficult obstacles for a congestion-pricing project are faced before implementation begins.

In Maryland, the new Inter-County Connector (ICC) will connect Montgomery County (wealthiest county in MD) with Prince Georges County (primarily Black and lower income) and this has raised some equity concerns. These concerns are based more on income levels than on race. In Lee County, FL, higher education meant a slightly higher acceptance rate.
For the I-394 facility, there were no dramatic differences in responses from different demographics, but there were some minor differences. The very rich were more supportive of the project. Lower income groups had slightly higher support than mid-income groups. Support among transit riders was below 50%, because they were more likely to raise equity concerns. Finally, MnPass and corridor users showed higher support, likely due to familiarity with the facility.

Public support for SR-91 did decline after its opening—not because of the addition of a toll or because of perceived inequities in tolling, but as a result of the nature of the public-private partnership agreement and the non-compete clause. (Collier and Goodin, 2002) Public opposition was also based on the idea that CPTC was making excess profits off high tolls. When OCTA bought the SR-91 facility from CPTC, those concerns subsided.

On the I-15 corridor, participants in a 1998 focus group stated they were generally satisfied with the Express Lanes program, although regular users spoke more positively of the program than occasional users (Godbe Research and Analysis, 1998). According to the results of an 800-person telephone survey of I-15 Express Lane users completed in 2001, motorists of all income levels acknowledge the benefits of HOT lanes.

- Ninety-one percent approved of the travel time savings options provided by the I-15 Express Lanes;
- Sixty-six percent of non-Express lane users support the Express Lanes concept;
- Seventy-three percent of non-Express Lanes users agree that the HOT lane reduces congestion in the corridor;
- Eighty-nine percent of Express Lanes users support the extension of the Express Lanes;
- When considering the statement “People who drive alone should be able to use the I-15 Express Lanes for a fee”, 80% of the lowest income motorists using the I-15 corridor agreed with it, and low income users were more likely to support the statement than the highest income users (FHWA, 2003).

In effect, such results counter equity concerns raised by some regarding HOT lanes and their potential higher usage by low-income users.

In San Diego, results suggest converting an HOV lane to an HOT lane is not as politically charged as creating a new congestion-priced lane, since SOV drivers gain, rather than lose, options (King, Manville, and Shoup, 2007).

Several studies have found that familiarity with congestion pricing or managed lanes increases the likelihood that the user will support congestion pricing (Kockelman and Kalmanje, 2005; Burris et al., 2007). In the case of the variably-priced HOT lanes on I-394 in the Minneapolis/St. Paul metropolitan area, NuStats conducted three separate surveys; in November/December 2004, before the lane opened; between November 2005 and January 2006, six months after its opening; and a year after its opening, in May-June 2006 (Zmud et al., 2007). One subsequent observation, after a comparison of the results of the three surveys, was that

It seems that when an SP [stated preference] survey is done before respondents have any experience with the actual HOT lane context, their responses may tend to [be] “homogenized” to some extent. After the actual HOT lane system is
Moreover, those polled while living in areas without tolls were more likely to consider congestion pricing unfair (Podgorski and Kockelman, 2005).

An additional consideration is the way in which a pricing project is marketed. A study in Oahu found that when pricing was presented as “a time-of-day charge to manage congestion by inducing shifts to transit and travel times,” it only received 15% public approval. But when it was presented as “a user fee wherein those using the facility the most pay the most and where fees go toward road development and maintenance”, it garnered 42% acceptance (Ungemah and Collier, 2007).

**Equity Concerns**

Previous studies suggest that public opposition to congestion pricing decreases as tolls decrease (Gaunt et al., 2007). This is partly attributable to simple self-interest, as users may hope that if congestion pricing is actually implemented, the tolls will be minimal. However, concern over the absolute cost of the toll may also be related to the perception that managed lanes will function as “Lexus lanes,” available only to the wealthy. In the second panel survey of the MnPASS managed lanes on Interstate 394, the most often cited objection to letting single-occupied vehicles (SOVs) use carpool lanes was that only the rich would benefit; the second-most cited objection was that carpool lanes should be free to all (Douma, et al., 2007). The “Lexus lanes” objection was also prominent in early discussions of the I-15 Express Lanes project (Evans et al., 2007).

Ungemah (2007) divides concerns about equity into five types; participation equity, opportunity equity, modal equity, geographic equity, and income equity, however, his analysis focuses on geographic equity and income equity. Geographic equity concerns are similar to environmental-justice concerns in that a community may feel it is being asked to bear the burdens locally of a particular project seen as regionally beneficial—for example, the community may contain roads that become more congested as drivers try to avoid tolled roads. Income-equity concerns frequently center around the question of whether an additional toll is an unacceptable cost burden for low-income communities.

There is some evidence that higher-income potential users suffer less risk from a congestion-pricing scheme than lower-income potential users. In a survey conducted in the Netherlands respondents with higher incomes were less price-sensitive (Ubbels and Verhoef, 2006). An early look at I-15 FasTrak users found they were more likely to have higher levels of income and education, and to own homes, than non-users (Hultgren and Kawada, 1999). But surveys have not found differences between higher- and lower-income users’ attitudes towards congestion pricing (Weinstein and Dill, 2007).

On the SR-91 facility, lanes are not being used exclusively by wealthy drivers, but by a broad swath of society (Evans et al., 2007). A travel profile of SR-91 users conducted immediately after its opening found approval from both low- and high-income households (Ungemah, 2007).

Burris and Hannay (2003), surveying both users and non-users of QuickRide (Texas) in 1998, found that while there were no significant differences in perceptions or usage of
QuickRide amongst different socioeconomic groups, the surveyed users of QuickRide had significantly higher incomes than non-enrolled drivers.

Kockelman and Kalmanje (2005) and Gulipalli and Kockelman (2006) have discussed the possibility of credit-based congestion pricing, or CBCP. In this program all travelers receive an automatic credit to be applied to tolls. Modeling a CBCP policy in the Dallas-Fort Worth area using three different scenarios (Gulipalli and Kockelman, 2006) suggest that a majority of users would receive welfare gains. But CBCP has not been implemented in any of the existing congestion-pricing programs in the United States.

Public response to the MnPASS lanes seems to have been largely favorable. By 2006 nearly 60% of the surveyed public in Minnesota supported the option to pay a fee and bypass congestion (Halvorson and Buckeye, 2006). Despite continued concerns that the I-394 lanes would disproportionately benefit wealthier incomes, drivers of all income levels use the lane (Munnich, Jr., and Buckeye, 2007). A 2007 Wall Street Journal article on the MnPASS lanes included positive quotes from drivers, although a representative of the American Automotive Association's Minneapolis branch expressed the organization's position that the lanes should be available to all drivers at all times (Machalaba, 2007). The NuStats surveys found that support for the project was strong, with nearly two-thirds of those polled saying that allowing SOV drivers in the HOV lane for a fee was a good idea (Douma et al., 2007).

In addition, the approval of HOT lanes is widespread across various income groups, as you can see from Figure 1, below (Berman, 2007). Sixty-five percent of respondents to the survey conducted in spring of 2006, a year after MnPASS implementation, thought that MnPASS was a good idea (NuStats, 2006).

![Figure 1: Percentage of Minneapolis Consumers Surveyed Who Approve of Allowing Single-Occupancy Drivers to Use the Carpool Lane for a Fee (Berman, 2007)](image-url)}
None of the regions reported opposition to the pricing systems being mounted by any specific interest groups or coalitions. Some local transit agencies did express some outrage at first which was mitigated through revenue sharing and toll policies. HOV users did generally support the HOT concept, but at a lower level since there would be tolls in place for HOV-2 where no tolls previously existed. Upper and lower income groups support the concept in the focus groups. Some middle-class activists in the $50k to $75k income range expressed objections, but from two very different perspectives: 1) one middle-income group did not support the concept of pricing at all (objection by principle), and 2) one middle-income group did not support pricing because they perceive there will be negative impacts on lower income individuals.

Although the low income population uses the toll lanes less frequently than higher income populations (confirmed by surveys and panels), the low income population uses the system: 1) to keep important appointments, 2) to reach multiple jobsites, 3) when they are late to meetings, 4) when the toll costs are less than late arrival penalties for daycare, and 5) under other conditions where a need is perceived. None of the HOT systems have implemented any low income adjustments to tolls as there has been no expressed need for such adjustments. San Diego framed their system as providing choice: 1) you can choose to use the system, 2) you can choose not to use the system, or 3) you can choose to use the improved transit service that comes along with the system.

All of the regions expressed that HOT implementation will be significantly easier to implement when new capacity is constructed at the same time that pricing is implemented.

Public Education and Outreach

Support for tolling projects increases when respondents are provided more information about the topic (Weinstein and Dill, 2007). A directed and coordinated public education and outreach effort can provide the public with the necessary information to form opinions about a value pricing or managed lanes project. The successful implementation of I-394 MnPASS, after a decade and several failed attempts, can in part be attributed to this phenomenon. After a proposal for I-394 HOV conversion to HOT mains was withdrawn in response to public opposition Minnesota resurrected the project in 2001 with a revised public outreach strategy for value pricing (supported by a grant from FHWA’s Value Pricing Pilot Program) and was successful winning project approval in 2003 (Munnich, Jr., and Loveland, 2005).

Public education and political leadership were viewed by the MnPASS project team as crucial and they had hired a communications consultant to help coordinate efforts and an engineering firm to answer detailed questions and support the education component. Recognizing that there is more public trust for an initiative led by an academic institution rather than a governmental agency, the Humphrey Institute at University of Minnesota organized a Value Pricing Advisory Task Force of key and diverse community stakeholders. The public education effort focused on building strong stakeholder relationships. The outreach team held dozens of small group visits with legislators, interest group leaders, state government leaders, municipal officials, and transportation and transit advocates. They also held large group dialogues with civic groups and several public policy roundtable discussions between experts and the public, and
conducted marketing research and extensive media outreach to disseminate information (Munnich and Loveland, 2005).

Privacy issues are seen as being less important than portrayed in the press. “Privacy is a red herring.” In Florida, users of the bridge tolling systems can sign up for an anonymous account. Because so few users opted-in to the use of anonymous toll tags none of the major HOT systems have implemented this option. Nevertheless, protection of privacy must be considered in system implementation, even if anonymous accounts are not implemented.

The MnPASS team, through failed and successful efforts, developed a set of “lessons learned” as a reference for other value pricing project teams. These lessons and observations are listed below:

- It is difficult to maximize public outreach efforts without the support of higher-level officials who share their advocacy with the public. Minnesota’s governor participated in conversations with value pricing advocates.
- A “Grasstops” Coalition of community leaders is needed. MnPASS’ project team reached out to community leaders, discussed the concepts, and then asked supportive leaders to help contact their constituents and peers.
- An unanswered question (or accusation) can become an accusation believed. Minnesota formed a public outreach team to quickly answer any questions from the public. Common public concerns included technical feasibility, equity, impact on HOV use, and public acceptance.
- Constituents must understand the benefits that they will receive. Minnesota used customized messages (in addition to common themes) for each individual audience. For example, messages to businesses focused on reducing the cost of congestion and increasing reliability while messages to carpool advocates made assurances that they would maintain priority on the HOT lane and have more choices.
- The project team should focus on the benefits offered by value pricing rather than the costs; in other words, use terms that accentuate the positive. Minnesota uses “express lanes” and “MnPASS” rather than terms that emphasize user costs (like value pricing, congestion pricing, toll lanes, etc.) (Munnich, Jr., and Loveland, 2005).

Ungemah and Collier (2007) offer additional “lessons” for public education approaches. These include:

- Educate citizens about the current system of transportation funding to serve as a comparison to congestion/value pricing.
- Develop a \textit{simple} message to communicate the concept of congestion pricing/managed lanes. For example, in a survey about Houston’s I-10 HOT lanes, half of non-users were not aware of QuickRide or misinformed about its logistics.
- Use initial and on-going marketing—it is the key to success including branding the project early to make it readily identifiable.
- Raise public awareness of why pricing is being pursued instead of using a “traditional” financing scheme. Explain that it is often a means of more efficiently allocating transportation resources and of advancing the financial feasibility of a project.
• Explain how revenues will be spent. Focus on the positive benefits of congestion pricing.

Public acceptance of congestion pricing on the SR 91 facility has been largely positive on the San Joaquin facility, public acceptance levels exceed 90%, and Lee County, FL has had excellent acceptance. In Maryland, the biggest challenge to public acceptance was overcoming resistance to tolls in general and some equity concerns about the new construction associated with the ICC. The general concept of varying tolls based on time and congestion has been fairly well accepted by the public. Acceptance or Interstate 394 has been favorable. For the I-15 facility, overall acceptance has not been an issue. For the Quickride facility, there have been varied reactions to the facility with consistent opposition to any form of variable pricing.

When focus groups were conducted for SR 91, it was determined that a fixed toll schedule was more acceptable because people tend to “fear the unknown”. After the I-15 implementation in San Diego, there were thoughts about implementing dynamic pricing on SR-91. The technology would allow it however, it was decided to stay with the current toll schedule. In Minnesota, HOT Lanes and in Houston, HOV lanes have garnered the most support however, on the I-15 corridor, delivery and other businesses preferred monthly passes because it made it easier to attract customers and make deliveries.

The largest challenges to a congestion-pricing project, in terms of public acceptance, are familiarizing the public with the tolling mechanism and explaining the potential benefits, as opposed to the more evident costs. However, in most cases, public acceptance has increased once the congestion-pricing project has been implemented and shown to function smoothly.

A congestion-pricing project in metropolitan Atlanta would face similar obstacles. There may also be some public resentment based on distrust of state government and the perception that residents are being asked to pay for a previously “free” service. Furthermore, because of Atlanta’s history of racial inequalities, equity questions might be even more politically volatile than they would be in another city. Any congestion-pricing project would need to be carried out with awareness of these issues and a well-structured public information campaign with plenty of opportunities for public input and interaction with decision-makers.

Measuring Metropolitan Atlanta’s Attitude toward Congestion Pricing

Sixteen focus groups were assembled to identify and measure the attitudes, perceptions, preferences and general response to a variety of congestion pricing programs and to specific examples of pricing projects in the Atlanta area. This includes an examination of different pricing technologies, toll collection methods, financing and pricing preferences (willingness to pay), and expectations and benefits associated with pricing programs. In addition, the focus group participants were evaluated as to their current familiarity with congestion-pricing technologies and their feelings thereon.

1 According to one interviewee. 62% thought congestion pricing is a good idea and 28% think it is a bad idea. The remainder did not voice and opinion.
2 As of the writing of this paper, 16 focus groups have been completed and fifteen reports have been produced.
Special consideration was given to potential public objections to congestion pricing—for example, if users were to consider congestion pricing “double taxation” or regard toll lanes as “Lexus lanes” enjoyed only by the wealthy.

Group composition reflected the wide array of potential users and non-users in the region stratified by socio-economic profiles, trip-making characteristics, geography, awareness of pricing alternatives, as well as priorities for the congestion pricing program in the region. Information was solicited from focus group members on the presentation and implementation of a congestion pricing program for the region to include the identification of any concerns or apprehension they may have about a congestion pricing program.

The groups consisted of 8-12 participants (Table 1) and one facilitator for a 90-minute discussion and were conducted at a professional facility. Representatives of the Georgia Tech team observed the groups from behind a one-way mirror and utilized audio and visual recording. The questions for the focus groups are based on sets identified during the literature review and focus on public awareness of pricing options, preferences for pricing within the region, and constraints on individuals’ travel behavior among other topics.

Table 1 – Focus Group Participant Characteristics

<table>
<thead>
<tr>
<th>Commute Corridor</th>
<th>Other Characteristics</th>
<th># of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northside I-85</td>
<td>High Income ($100k + )</td>
<td>11</td>
</tr>
<tr>
<td>Northside I-85</td>
<td>Mid Income ($50k - $99k)</td>
<td>12</td>
</tr>
<tr>
<td>Northside I-85</td>
<td>Low Income (Under $49k)</td>
<td>10</td>
</tr>
<tr>
<td>Northside I-85</td>
<td>Regular Carpoolers</td>
<td>8</td>
</tr>
<tr>
<td>Northside I-75</td>
<td>General Users</td>
<td>8</td>
</tr>
<tr>
<td>Northside I-75</td>
<td>General Users</td>
<td>11</td>
</tr>
<tr>
<td>GA 400</td>
<td>Fast Pass Users</td>
<td>8</td>
</tr>
<tr>
<td>GA 400</td>
<td>Fast Pass Users</td>
<td>8</td>
</tr>
<tr>
<td>GA 400</td>
<td>Cash Toll</td>
<td>11</td>
</tr>
<tr>
<td>Varied</td>
<td>GRTA Express Bus Riders</td>
<td>12</td>
</tr>
<tr>
<td>Eastside I-20</td>
<td>General Users</td>
<td>11</td>
</tr>
<tr>
<td>Eastside I-20</td>
<td>General Users</td>
<td>9</td>
</tr>
<tr>
<td>Southside I-75</td>
<td>Mid Income ($50k - $99k)</td>
<td>7</td>
</tr>
<tr>
<td>Southside I-75</td>
<td>Low Income (Under $49k)</td>
<td>11</td>
</tr>
<tr>
<td>Southside I-75</td>
<td>High Income ($100k + )</td>
<td>8</td>
</tr>
<tr>
<td>Northside I-85</td>
<td>Gwinnett Express Bus Riders</td>
<td>12</td>
</tr>
</tbody>
</table>
Focus group participants were given information on three types of managed lanes (high occupancy toll [HOT], variable priced high occupancy toll [VHOT], and express lanes) and were presented with several questions including what they like or do not like about the types of managed lanes and under which conditions they would be likely to use the managed lanes. In all of these instances, respondents were asked to assume that there would be a guaranteed speed of 45-55 mph on the facility and that single-occupancy vehicles (SOV) would be allowed to pay to use the lanes (for both of the HOT options). There were also questions about the general nature of managed lanes and how they would operate, how they would be created, and how toll proceeds should be allocated.
Preliminary analysis of the focus groups responses suggests that public attitudes towards congestion pricing programs in Metropolitan Atlanta are similar to those seen in other areas of the United States. Respondents were generally open to listening to solutions that may reduce congestion. There was a general distrust of the ability of governmental agencies to provide guaranteed speeds or to properly manage the facilities or the proceeds from the tolls. There were also concerns about lanes being “taken away” from general use and congestion pricing amounting to “double-dipping” by the government since fuel taxes are already being used for road-building. This concern was raised with respect to current HOV users now having to pay if an HOV lane was converted to a toll lane, and with respect to general lane users losing a lane if general purpose lanes are converted to a tolled lane and they cannot afford it. Additionally, concerns about the fairness of congestion pricing programs were articulated.

When asked what attributes they liked about HOT lanes, respondents commented on guaranteed speeds, the ability of SOV to pay to use the facility, and the overall reduction of congestion on both the HOT and general purpose (GP) lanes. Dislikes of the HOT lane concept included a lack of trust that the guaranteed speed will be provided, concerns about accidents in the HOT lane, worries about the toll being in effect double taxation, and concerns about construction costs.

When asked what attributes they liked about VHOT lanes, respondents liked the market-driven nature of the concept, the possibilities for higher congestion relief, the increased flexibility, and the possibility for discounted toll prices at low congestion or off-peak hours. The dislikes of the VHOT concept included concerns about the complexity of implementing and utilizing a variable pricing scheme, difficulties that variation in tolls would have on [personal] travel expense budgeting, the potential for the tolls to be regressive (lower income drivers may not have the flexibility to avoid high toll times), and a distrust in the government’s ability to accurately verify vehicle speeds.

With regards to express lanes, respondents stated that the lanes would be beneficial for drivers with long commutes, increase safety due to a minimization of weaving into and out of the lane, and provide a good alternative for non-commuting vehicles driving from one side of town to the other without the need to stop. The dislikes of express lanes include concerns about the effect of breakdowns or accidents in the lane, the lack of convenience due to the limited number of access and egress point, and the potential confusion during the implementation phase and for out-of-town drivers.

When asked about the possibility of converting existing HOV lanes to managed lanes (any of the three options) there was a concern, especially from current HOV users, that it would constitute taking away something that is currently free. In general, however, there were roughly equal responses for HOV conversion and new construction.

Table 2 shows the results when respondents were asked whether or not they would pay to use each type of facility. They were instructed to assume that they were guaranteed a 45-55 mph average speed and the general lanes were moving 25-30 mph on average. All three facilities had strong positive responses with HOT being the most likely to be used.
Table 2 - Stated Willingness to Use Facility\(^3\)

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Yes</th>
<th>No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOT</td>
<td>106</td>
<td>31</td>
<td>77%</td>
</tr>
<tr>
<td>VHOT</td>
<td>100</td>
<td>44</td>
<td>69%</td>
</tr>
<tr>
<td>Express Lane</td>
<td>98</td>
<td>44</td>
<td>69%</td>
</tr>
</tbody>
</table>

Additionally, of those that stated that they would not use the facility regularly, many stated that they would use it on specific occasions such as; times with heavier than normal congestion, when the toll is low (particularly for the VHOT facility), running late to work, going to the airport, going out of town, and going downtown for a special event like a sporting event or concert.

Table 3 shows the difference in stated willingness to use a managed lane facility comparing the groups that were made up of those who regularly used current managed lane/corridor facilities (HOV and GA 400 fast pass users) with those groups made up of general purpose users. The table shows that there is a statistically significant\(^4\) difference in those who would be willing to use a managed lane facility. These results are consistent with the findings of Kockelman and Kalmanje (2005) and Burris et al., (2007) suggesting that familiarity with congestion pricing or managed lanes increases the likelihood that the user will support congestion pricing.

Table 3 – Stated Willingness to Use Facility – Prior Managed Lane Experience

<table>
<thead>
<tr>
<th>Focus Group Type</th>
<th>Percentage Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Focus Groups</td>
<td>71.8%</td>
</tr>
<tr>
<td>Managed Lane Users</td>
<td>97.2%</td>
</tr>
<tr>
<td>Non-Managed Lane Users</td>
<td>66.7%</td>
</tr>
</tbody>
</table>

There were several questions posed to the focus groups to gauge their thoughts on the how fair and equitable they thought the concept of congestion priced facilities. Many of the groups thought that managed lanes were generally fair stating that if managed lanes can reduce overall congestion, then everyone, including drivers in the general purpose lanes, would benefit. It was also mentioned that since use of the lanes would not be mandatory and that you could choose to pay to use the facilities as needed.

However, some specific concerns regarding equity and fairness were raised. The tolls were seen by some amounting to “double-dipping” by the government, since our taxes have already paid for the roads. Managed lanes were seen to be somewhat unfair to those who do not have the ability or flexibility to adjust commute times, form car pools, or

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\(^3\) These numbers account for 15 of the 16 groups and only include those that answered a specific “yes” or “no” to the question.

\(^4\) Obtained Z value of -2.965.
who are already using the existing HOV lanes at no charge. Furthermore, the tolls would be regressive to those with low incomes or those on fixed incomes. There were also some concerns that managed lanes (or lack thereof) may be unfair to the areas that do not get the facilities first.

The results from these focus groups contain much valuable information that will lead to a more thorough understanding of public attitudes towards and willingness to accept different congestion pricing facilities. The focus groups were segmented (see Table 1) to allow for more in-depth analysis taking into account how socio-demographic and other factors such as current commute experience and mode affect people’s attitudes towards congestion pricing.

**Conclusion**

These preliminary study results show that transportation planners and programmers in the Metropolitan Atlanta area face many of the same issues and public perceptions that have been seen in areas that have successfully implemented congestion pricing facilities throughout the United States. The work done during the planning and implementation stages of these projects will provide valuable guidance as the Metropolitan Atlanta area pursues congestion pricing strategies. Following is a list of preliminary findings that have arisen from this study.

**Findings:**

- It is important to start ‘messaging’ about the proposed implementation early in the process
  - a. One of the most important messages is that the HOT system provides choice for the users: 1) you can choose to pay and use the system, 2) you can choose not to pay and use the existing system, or 3) you can choose to use the improved transit service that is paid for by the system
  - b. The user community understands that the implementation of user fees lessens the reliance on gas taxes
  - c. Emphasize that managed lanes are not a short-term band-aid but one tool in a long term comprehensive plan
  - d. Develop different messages for different stakeholders
  - e. HOT lanes are not a major revenue source and are barely able to pay for themselves, so the major focus should be on the fact that the HOT lanes ensure that the revenues being spent on the system are returned directly to the corridor from which they are generated
  - f. Outreach should also focus on showing the public that the HOT lane is carrying more people/lane/hr that the general purpose lanes. They increase overall capacity.

- Potential negative impacts of road pricing on low income households has not turned out to be as significant as issue as was originally envisioned in public policy papers:
  - a. Focus groups and observation data have indicated that although the low income population uses the toll lanes less frequently than higher income populations, the low income population benefits significantly from the provision of the toll lanes
b. Low income populations are generally in favor of implementing HOT lanes because they have a need to use these lanes for specific types of trips and are willing to pay the costs to save time under certain conditions.

c. None of the HOT systems have implemented any low income adjustments to tolls as there has been no expressed need for such adjustments; hence, the Atlanta system does not need to provide low income toll adjustments.

- The transportation agency should not necessarily be the ‘face’ for HOT or toll project implementation; it is important to ensure that the individuals carrying the project message have clout with the user community.
- Finding local champions for the projects is a critical element of success (e.g. elected or appointed local officials at the county or city level); a seminar for local government officials on the benefits of HOT lanes might be a good venue for developing local champions.

The research in this study suggests that community representatives need to be involved early in the process of developing any HOT system. However, in addition to educating influential decision makers, it is also critical that regions implementing pricing strategies conduct public outreach campaigns. Such campaigns can include direct mail contact, interaction with stakeholders, and interaction with the print, radio, and television media.

To communicate with users, most of the regions have developed a newsletter (similar in format to those sent by water, gas, or electric utilities) that they send to their customers every month or quarter. This kind of outreach effort, however, only reaches existing customers. Additional public outreach efforts are recommended. Internal education of engineers is also considered by panelists to be an important element of project success. Engineers have standard procedures, following prescribed formulas and design criteria in the AASHTO Green Book. However, in implementing HOT systems in space-constrained corridors, it is often a challenge to meet standard design criteria. The need for design flexibility and cooperation between state and local officials is often required to implement projects on constrained corridors.

The research conducted for this project suggests that public acceptance for congestion pricing programs is higher after project implementation than in hypothetical scenarios. The hypothetical scenarios presented to the study focus groups were generally well accepted (see table 3). It can be expected that using the guidance of previously successful programs around the U.S. that Metropolitan Atlanta transportation planners, programmers, and policy makers can generate public support for congestion pricing initiatives in the Atlanta area.
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