
11.0 Conclusions and Recommendations

11.0 Conclusions and Recommendations

The debate about the value of HOV lanes should be seen in the larger context of major transportation planning and growth issues in the Twin Cities region. This region, like many urbanized areas outside of the older densely populated Eastern and Midwestern cities, is dominated by SOV travel. It faces two basic types of strategies for mitigating future travel demand: 1) respond to the region's traditional reliance on and demand for SOV travel by building more general-purpose highway capacity; or 2) attempt to alter this pattern by also investing in alternative strategies, such as rail transit and HOV lanes.

Most regions, of course, will ultimately pursue some combination of both strategies with perhaps an emphasis on one or the other. Either strategy can potentially succeed or fail, and the success of each is likely to have different regional mobility outcomes. Some cities have, over the past decades, opted to try to “build their way out of congestion” with varying degrees of short-term success. Atlanta provides a cautionary lesson about the long-term implications of this strategy. Atlanta is one of the fastest growing human settlements in the history of the world. It has 12 lane freeway sections crossing the downtown. The results are the longest commutes of any U.S. urban area (including Los Angeles), increasing concerns about quality of life and business competitiveness, and failure to meet federal air quality standards resulting in countless lawsuits and the temporary withholding of federal highway funds. Georgia is now undertaking a major investment in rail transit and HOV facilities. Other regions, such as Portland and San Diego, have successfully embraced public transportation despite long histories of auto dependence, while others have not shared in this success.

The data suggests that the Twin Cities would more efficiently process traffic now and in the future (as projected by the current regional travel model) if the HOV lanes were opened to all traffic. Public opinion on the lanes is divided with a high level of support among users, and more of a desire for change among non-users. However, none of the survey markets had a majority of respondents in favor of opening the lanes to all traffic. Violation rates are relatively high compared to national experience, and enforcement is constrained by design parameters.

Opening the HOV lanes to all traffic involves significant capital and recurring operational costs, and raises potentially significant institutional issues involving buy-backs from the federal government, revised EISs, and potential litigation. Bus-only shoulders are not an equivalent replacement for transit operations as speeds and reliability are lower, and they cannot easily be constructed along all segments of the two corridors. Similarly, the opening of the barrier-separated HOV section of I-394 to mixed traffic, while feasible, is not optimal from an engineering and operational perspective.

Therefore, opening the HOV lanes to all traffic is a complicated operational and policy matter. More importantly, opening the HOV lanes to all traffic will also contribute to pointing the region toward reliance on future highway construction and expansion, and away from the development of alternative transportation systems and choices. If the HOV lanes are opened to all traffic, it is doubtful they could ever be reclaimed for HOV use if conditions warranted, and development of new HOV facilities would become highly unlikely. This is not a decision to be made lightly.

The findings of the study present a major policy dilemma for Mn/DOT. Each set of options – maintaining the status quo, opening the HOV lanes to all users, or modifying operation in some way (such as increasing vehicle eligibility for HOV lane use) – has advantages and disadvantages. These are summarized below:

- Maintaining the status quo involves no institutional, cost, or engineering design issues. It is responsive to the high degree of user support for the lanes. It provides incentives and rewards for non-SOV travel, thereby maintaining system capability should future conditions make HOV travel more attractive than current tools predict. A different future outcome could result from increased congestion, a more robust transit system, more dense land use development patterns, higher fuel prices, and non-attainment with federal air quality standards. This strategy does not maximize the current and forecast throughput capacity of the highway system or respond to the mixed support for the lanes evidenced by non-users.
- Opening the HOV lanes to all traffic would maximize vehicular throughput and respond to non-user sentiment for change of some type. It involves considerable cost and raises major institutional and design issues. It eliminates the ability to respond in the future to a need or demand for increased HOV travel, and is opposed by almost all lane users.
- Modifying the HOV lanes by granting access to new vehicular classifications has the potential to maximize person throughput and regional benefits, while meeting the expectations of some users and non-users for modified operation. However, doing so raises major equity, enforcement, and institutional issues given the design constraints and legal status of the lanes. In particular, what groups would be granted access and what would happen if increased HOV use in the future made it necessary to again restrict access? Lack of barrier separation makes it difficult to enforce more complicated strategies. Other modification options include changing hours of operation or the corridor distance in which the lanes operate, or using the HOV lanes to provide added capacity in the case of major incidents.
- Important differences between the I-35W and I-394 HOV lanes need to be considered. Public support for the I-35W HOV lanes is lower than for the I-394 HOV lanes, violation rates are higher, and enforcement is more difficult due to design constraints. While the I-35W HOV lane stops short of downtown, the I-394 HOV lane enters into the most effective operational section (barrier separated) as it approaches downtown. There is a more formalized and robust parking discount program for I-394 HOVs. However, the institutional issues and costs involved in changing the operation of the

I-35W HOV lanes are potentially greater due to the possible need to “buy-back” the lanes from the federal government.

- There are also important differences between the existing HOV lanes and any future extensions or new HOV lanes which might be constructed. Changing the operation of the existing HOV lanes is complicated by geometric constraints and historic institutional issues. This would not necessarily be the case with new HOV lanes. Thus, a policy which preserves the existing HOV lanes (flaws and all) so that they can eventually become part of a more robust carpooling/transit system, while applying the lessons learned from this study to new HOV lane construction, would be a completely logical approach.

Mn/DOT has adopted a long-term multimodal transportation policy of providing Advantages for Transit. It is unlikely that the region can, in the long term, “build its way out of congestion” by relying exclusively on the construction of new general-purpose highway lanes to meet future growth. It is, nevertheless, apparent that the current two limited HOV lanes are not achieving their full potential and that, in the short term, traffic throughput could be increased and congestion eased in these corridors by opening the lanes to all traffic. While this situation is not currently forecast to change, presently available forecasting tools in the Twin Cities region are not currently able to assess the impacts of more rapid regional economic growth nor the development of a greatly enhanced multimodal regional transportation system. The HOV lanes represent one component of a long-term Advantages for Transit strategy which also involves the development of light-rail transit, commuter rail, a full integrated regional bus system, and a range of travel demand management strategies. The long-term effects of such a multimodal system in a region of rapid economic growth could result in very high utility for each component of the system.

Therefore, we believe that opening the HOV lanes to all traffic today would be a misguided short-term response to a long-term problem, which Mn/DOT and the commuters of the Twin Cities would come to regret. If the HOV lanes were opened to all traffic, it would be difficult to recreate these lanes if conditions change in currently unanticipated ways; it would be equally difficult to justify the construction of new HOV lanes. Thus, a key pillar in a long-term strategy of providing Advantages to Transit and discouraging SOV use will have been abandoned before it was permitted the opportunity to mature into an effective system.

Important lessons have, however, been learned in this study, which Mn/DOT should consider in developing strategies for improving the operation of the existing HOV lanes and in planning for any future HOV lanes or expansions of the existing lanes. It is apparent that the HOV lanes are currently underutilized, that enforcement is difficult, and that barrier-separated HOV lanes work better. In order to address these problems, Mn/DOT should consider a range of strategies. While some of these strategies may be challenging to implement on the current lanes due to design constraints, they can more easily be adapted to new lanes in the future. These strategies potentially include the following:

- Increase the use of barrier separation;
- Provide better enforcement areas;
- Increase violation fines;
- Adjust hours of operation to focus on the most congested times;
- Use the lanes to help maintain traffic flow during major incidents;
- Make geometric improvements in access and egress points to the existing reversible barrier-separated lanes if opened to all traffic; and
- Seek to develop strategies for increasing person throughput by increasing the eligibility requirements for access to the lanes, including consideration of the HOT lane concept (High Occupancy/Toll lanes).

All possible strategies have advantages and disadvantages. For example, barrier separation reduces violation rates and improves the operation and attractiveness of the lanes, but also excludes commuters with destinations prior to the lane terminus, unless HOV on/off ramps are constructed, which can be a costly venture. HOT lanes raise issues of enforcement (barrier separation is a requirement), equity, and popular support. However, the HOT lane concept has been approved by the U.S. DOT and successfully implemented in several venues. HOT lanes have several potential advantages:

- Preserve the Advantages for Transit (and carpooling) inherent in the HOV lane concept;
- Provide opportunities for SOV drivers to purchase access to the lanes, thereby maximizing the utility of the HOT lanes and adjacent general-purpose lanes;
- Enable individuals to place a value on the cost of congestion; and
- Generate revenue to support further investment in transportation systems.

Although there is no history of toll lanes in Minnesota, HOT lanes are not general-purpose toll lanes (people have the choice of driving in free or toll lanes depending on the value they place on their time), and they have been successfully implemented in regions with equally strong freeway traditions. While opposed initially in areas such as Los Angeles and San Diego they have become popular once in operation. Recent market research in the Twin Cities has demonstrated increasing levels of support for the concept, and supportive legislation has already been introduced. Clearly, an educational effort would be required to develop public support for the concept. We believe that Mn/DOT should explicitly consider the HOT lane approach in its future highway planning activities.