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Project 0-4160: Operating Freeways with Managed Lanes

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State and Federal Legislative Issues for Managed Lanes



Transportation professionals are currently considering the managed lane concept on major freeway projects in Texas cities. The term “managed lanes” encompasses a variety of facility types, including high-occupancy vehicle (HOV) lanes, high-occupancy toll (HOT) lanes, single-occupancy vehicle (SOV) express lanes, special-use lanes, toll lanes, and truck lanes. The premise of the managed lanes concept is to increase freeway efficiency and provide free-flow operations for certain freeway users by packaging various operational and design strategies. The strategies deployed offer the flexibility to be adjusted to match changing corridor and regional goals.

Perhaps one of the more critical and fundamental components of any managed lane project is the ability for a state or local jurisdiction to legally operate a roadway using a specific managed lane operational strategy. The

operation of different types managed lanes may be sufficiently different from typical freeway operation that it will require changes in legislation and/or regulation. If additional and more complex facilities are to be pursued, then appropriate legislation should be in place.

What We Did . . .

The goal of this research was to identify key legislative or policy changes necessary to facilitate the various managed lane operational strategies with respect to design, operation, enforcement, and other key issues governing their use. Issues explored included:

- federal, state, and local legislative or policy changes required to design, operate, and enforce managed lanes under a variety of control scenarios; and
- legal/regulatory flexibility needed to make appropriate operational and eligibility

changes over time as conditions change.

Researchers first put together a summary of all federal and Texas legislation that has an impact on the legality of operational strategies for managed lanes. Those operational strategies addressed include HOV lanes, value-priced and HOT lanes, exclusive lanes, separation and bypass lanes, dual facilities, and lane restrictions. They also investigated enforcement and operational flexibility. The focus was only on legislation authorizing the operation of managed lane strategies on various roadway categories. They did not include legislation associated with funding and financing managed lanes, which was addressed in a separate task, the results of which are in report 4160-9, *The Funding and Financing of Managed Lanes Projects*.

Researchers then looked at the specific laws and statutes to identify legislation that might help facilitate

managed lane operational strategies in Texas. In some instances, the existing legislation met the needs of TxDOT and needed no changes. In other instances, gaps in the legal code or statutes were found. If filled, they could provide TxDOT with the authorization to operate the entire gamut of managed lane scenarios with flexibility for operational changes over time.

Finally, the research team recommended changes to federal and state legislation that could help advance managed lanes issues. Some recommended changes were minor, but others needed entire new sections to address major gaps in the laws.

What We Found . . .

Current federal legislation is sufficient to enable TxDOT to establish all types of managed lane facilities on the Interstate Highway System in Texas, on state and county highways, and on local streets. Regulations regarding operational changes are also in place to guide TxDOT in the creation and long-term operation of such facilities. However, value-priced lanes, HOT lanes, and tolling to finance reconstruction or improvements are only possible through limited pilot programs established by Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act of the 21st Century (TEA-21). For these operational strategies to become widespread in the United States, support for a larger and more permanent program needs to be provided at the federal level.

Current Texas legislation provides for the operation of certain managed lanes scenarios. However, in some instances, the legislation is limited or non-existent. Table 1 provides a summary of the various

recommended changes. While the recommended needed are not numerous, they are critical to the long-term success of managed lanes in Texas. Highlights of some of the recommended changes follow.

Contractual Agreements

Legislation is needed that provides TxDOT with the authority to enter into contractual agreements with appropriate transportation-related agencies for the design, operation, and/or maintenance of transportation facilities, particularly managed lane facilities. TxDOT is currently limited in this regard, and allowing this authority would provide TxDOT the flexibility to efficiently and effectively develop managed lanes facilities through cooperation with other agencies across the state.

Managed Lanes

Texas legislation provides TxDOT with sufficient authority to design, construct, operate, or maintain dedicated HOV lanes on any multi-lane highway on the state highway system for the purpose of helping relieve traffic congestion. Currently, this legislation only defines and authorizes HOV lanes and value-priced lanes. Since managed lanes encompass these two operational strategies but can include more, TxDOT would benefit from adding a definition for the term “managed lanes,” thereby incorporating it into the authorization of congestion mitigation projects and facilities.

HOV Lanes

Current Texas legislation allows inherently low-emission vehicles (ILEVs) to use HOV lanes, which is allowed at the federal level in TEA-21. Since the number of ILEVs currently in operation in the United States and Texas is extremely small,

their impact on HOV systems is virtually undetectable. However, it is reasonable to expect that the number of ILEVs will grow steadily as more vehicle manufacturers design them and offer them for purchase. Thus, Texas may need to revisit this legislation in the future to ensure that the use of HOV lanes by single-occupant ILEVs does not adversely impact the operations of the HOV facility.

Value-Priced Lanes and HOT Lanes

The current legislation in place in Texas is sufficient regarding value-priced lanes or HOT lanes. Texas statutes already authorize TxDOT to charge a toll for the use of one or more lanes of a state highway facility, including an HOV lane, thereby permitting TxDOT to participate in the federal value-pricing program.

Exclusive Lanes

At this time, Texas has no specific statutes that give TxDOT the authority to establish exclusive truck lanes or facilities for the purposes of alleviating congestion, require trucks to use them, or exclude passenger cars from such lanes or facilities. However, given the potential benefits of such facilities, TxDOT should have the authority to create and operate truck-exclusive facilities for the purposes of congestion mitigation.

Separation and Bypass Lanes

Any separation or bypass facility designated for buses or HOVs in Texas would fall under those laws governing HOV lanes. Once again, Texas has no specific statutes that govern the establishment of separation or bypass facilities for trucks. However, the legislation

Table 1. Recommended Texas Legislation Changes.

Managed Lane Category	Operational Scenario	Principal Governing State Regulation Needing Changes or Additions
Managed Lanes	All	TTC ^{1,3}
HOV	All	Sec. 224.153(a) TTC
Exclusive	Truck	TTC ³
Separation / Bypass	Truck	TTC ³
Lane Restrictions	State	Sec. 201.901(a) TTC Sec. 621.006 TTC
	Municipality	Sec. 545.0651 TTC
Managed Lane Violation	State	Sec. 224.155 TTC
Enforcement	State	TGC ²
Operational Changes	All	TTC ³

¹ Texas Transportation Code

² Texas Government Code

³ No Specific Regulation Currently Exists, New Regulation Needed

recommended for the creation of exclusive lanes would be appropriate support for separation and bypass lanes.

Dual Facilities

Any managed lane facility using the dual operational concept in Texas falls under the jurisdiction of the state laws governing the specific strategies used by the operating entity, making any specific legislation regarding dual facilities unnecessary.

Lane Restrictions

Currently, only municipalities in Texas have the authority to establish lane restrictions based on vehicle class, and then only during the peak periods of the workday. Given the promising potential of such restrictions and the common practices of other states, TxDOT should have the authority be authorized to establish lane restrictions at any time for the purpose of relieving congestion, so

long as the restrictions do not violate federal regulations.

Managed Lane Violation

Currently, sufficient legislation and legal channels exist with which operating authorities can issue citations for managed lane violations. However, no single law covers all operating strategies on a statewide level. A law that addresses the violation of any managed lane facility in operation in Texas would help ensure that all managed lane strategies become widespread across Texas.

Enforcement

Legislation in Texas sufficiently addresses the need for managed lane enforcement, depending on which authority has the jurisdiction to employ or contract with law enforcement personnel to enforce appropriate laws governing the unlawful use of their respective managed lane facilities, so long as

the appropriate laws are in place prior to operation.

Automated enforcement is a controversial issue in the United States and has yet to become mainstream in the arena of managed lanes. Any managed lane facility that has vehicle occupancy as an operational strategy presents unique enforcement challenges that cannot be readily resolved with current automated technology. However, it is anticipated that technologies will advance in the future to overcome these challenges. Also, automated or remote enforcement for moving violations, separate from managed lane violations, may also be a viable option for agencies. In this case, the enforcement may require visual confirmation by personnel, and the technologies required may vary depending on the type of moving violation the agency wishes to enforce.

In all cases involving automated enforcement, legislative action may be necessary to decriminalize the violation of managed lane facilities

to authorize the use of such technologies in the future. A legislative provision allowing agencies to modify enforcement procedures and laws to accommodate new technological advancements as they become available could be a solution.

Operational Changes

An important feature of managed lanes is the flexibility to change the operational strategy of the facility to better meet the goals of the region it serves and maximize the benefits to its users and the impact on the transportation system as a whole. Therefore, TxDOT needs the authority to make operational changes when deemed appropriate.

The Researchers Recommend . . .

Some gaps exist that prevent TxDOT and other operational agencies from having the complete arsenal of options available to design, operate, and enforce managed lanes under a variety of control scenarios and make operational and eligibility changes over time as conditions change. At the federal level, FHWA fails to provide permanence to HOT lanes. At the state level, several gaps exist. The researchers recommend the following changes to remedy these gaps:

- allow TxDOT the authority to enter into contractual agreements with other transportation-related agencies for the design, operation, and/or maintenance of managed lane facilities;
- define managed lanes as an operational concept in Texas and authorize entities to develop these facilities for congestion mitigation purposes;

- allow entities operational flexibility with managed lane facilities;
- specifically allow ILEVs to operate on HOV lanes;
- authorize entities to develop exclusive lane facilities for congestion mitigation purposes;
- authorize TxDOT to establish lane restrictions for congestion mitigation purposes and remove the time-of-day limitation on the current municipal authorization for this strategy;
- make unlawful the violation of any managed lane facility in Texas punishable by fine; and
- allow law enforcement agencies to modify enforcement procedures and laws to accommodate new technological advancements as they become available.

Incorporating these recommended changes into the Texas statutes broadens the powers of TxDOT and other transportation organizations and provides them with the tools they need to successfully implement managed lane facilities in their jurisdictions in the most effective manner, thereby working to reduce congestion and enhance the mobility of Texans.

Implementation Status

Texas House Bill 1208 relating to the mitigation of traffic congestion on highways was signed into law by Governor Perry on 20 June 2003. It specifically includes wording regarding exclusive lanes and restricted lanes and addresses many of the issues brought forth in this research.

For More Details . . .

Related Report:

Report 4160-8, *State and Federal Legislative Issues for Managed Lanes*

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