

Report By <u>MWL</u> Date <u>6/92</u>	STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION TRAFFIC INVESTIGATION REPORT TO THE STATE TRAFFIC COMMISSION	S.T.C. No. <u>171-9206-02</u>
Checked By <u>VAA</u> Date <u>6/92</u>		Loc. No. _____ Date to S.T.C. <u>JUN 12 1992</u>
Completion Dates _____	TOWN <u>Various</u>	Received By S.T.C. Date <u>JUN 12 1992</u>
Signals _____ Signs _____	LOCATION I-91 from Hartford to Windsor Locks, I-84 from East Hartford to Vernon and I-384 in Manchester	Approved By S.T.C. Date <u>JUN 16 1992</u>
Markings _____	REQUESTED BY BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS	Date _____ <i>Richard J. Howard</i>
S.T.C. Notified _____	DEPARTMENT OF TRANSPORTATION	Executive Secretary
Memo No. _____	HOW REQUESTED _____	
See Previous S.T.C. Report No. <u>171-8904-01</u>	DATE _____	

Recommendations:

Rescind STC Report No. 171-8904-01 which approved restrictions on the High Occupancy Vehicle Lanes for use by vehicles with three (3) or more persons, buses and motorcycles on the following roadways:

I-84 from approximately Main Street in East Hartford to Dobson Road in the Town of Vernon.

I-384 in the vicinity of Spencer Street in Manchester to I-84 in the Town of East Hartford.

Approve a restriction on the High Occupancy Vehicle Lanes for use by vehicles with two (2) or more persons, buses, and motorcycles on the following roadways:

I-91 from approximately Jennings Road in the City of Hartford to approximately Route 20 in the Town of Windsor Locks.

I-84 from approximately Main Street in East Hartford to Dobson Road in the Town of Vernon.

I-384 in the vicinity of Spencer Street in Manchester to I-84 in the Town of East Hartford.

The restrictions will be effective upon posting.

BY *Vincent Adams*

Division of Traffic

BUREAU OF ENGINEERING AND HIGHWAY OPERATIONS

Existing Conditions:

As part of the reconstruction of I-91 from Hartford through Windsor Locks the Department of Transportation has constructed a separate High Occupancy Vehicle facility.

Federal guidelines indicate that restrictions should be placed on the occupancy and type of vehicles that can use the lanes.

The HOV lanes will be in operations for 24-hours a day. The establishment of regulations will limit the use of lanes to vehicles with two or more persons, buses and motorcycles.

The purpose of the HOV is to increase the person moving capacity of the highway by requiring higher vehicle occupancy. Benefits to users include travel time savings, improved trip reliability, reduced energy usage and improved air quality. It will also promote the ride sharing.

The I-84 and I-384 HOV lanes have been subjected to much criticism regarding a lack of use since the lanes were opened in September 1989. Public perception of the success or failure of the HOV lanes is based on whether or not the facility appears to be fully utilized. The interpretation of "fully utilized" is in fact a reference to vehicular flow rates, as opposed to auto occupancy rates.

Maintaining a requirement of at least three people per vehicle on the HOV lanes provides more of an opportunity for energy savings, emissions reductions and reductions in vehicle miles travelled than a lower occupancy rate. However, the traveling public perceives highway lane under-utilization when they compare the number of vehicles in the HOV lanes with the number of vehicles in the general use lanes. The commuter that complains about under-utilization of the HOV lanes does not consider the environmental, transit or economic benefits associated with HOVs.

Reducing the auto occupancy requirement from three people per vehicle to two people per vehicle has been previously considered. Reducing HOV occupancy requirements has been done in other states, such as Texas. Houston recently changed their policy to allow at least two people per vehicle on all their HOV facilities during the peak period except for the Katy Freeway. The Katy Freeway occupancy requirement was increased from at least two people to a minimum of three people per vehicle to reduce the a.m. peak period congestion that was beginning to occur on this facility. There was also a study conducted in San Francisco that compared the results of allowing a minimum of two people per vehicle versus three or more people per vehicle. This study indicated that three or more occupants per vehicle should be applied in radial corridors where rail transit lines are located within several miles of the HOV facility. In other cases, two or more occupants per vehicle should be applied if capacity of the HOV lanes allows.

The Inventory and Forecasting Unit of the Bureau of Policy and Planning has forecast that an occupancy reduction on the I-84 and I-384 lanes from three people per vehicle to two people per vehicle could add approximately four hundred vehicles to the HOV lanes in the peak hour. This would not be a

significant enough increase, when added to present usage, to create congestion or reduce travel times on the HOV lanes. However, it would positively affect the perception of under-utilization of the lanes. Reducing the occupancy requirement could also change people's attitudes concerning carpooling. Finding one compatible person to carpool with is considerably easier and more convenient than having to find two people.

Based upon the preceding discussion, it is recommended that the Department reduce the auto occupancy requirement for HOV use from three persons per vehicle to two persons per vehicle for I-84 and I-384, and that the I-91 HOV lanes be opened with a requirement of at least two people per vehicle.