1.0. INTRODUCTION

1.1. Background

Demand for increased mobility in the State of Nevada will continue at unprecedented levels as the State sustains an extraordinary rate of population and employment growth. Between 1990 and 2000, the Las Vegas metropolitan area was, by far, the fastest growing major metropolitan area in the United States. During this period, the population of the Las Vegas area grew by 83.3%; a rate of growth that has continued into the first decade of the 21st Century. Similarly, the State of Nevada population increased by 66.3% percent through the 1990's also making Nevada the fastest growing state in the union (Arizona, the second fastest growing state grew by 40.0% during the same period). This record rate of growth in the State has resulted in increased traffic congestion as travel demand rapidly exceeds the ability to provide sufficient transportation infrastructure. As travel demand has increased, congestion on freeways and highways has forced some of the excess demand to shift to traditional off-peak hours, a phenomenon that is exacerbated in Nevada by the non-traditional nature of the State's tourist and entertainment based economy. A focus on operating and maintaining the transportation system in conjunction with building new infrastructure is critical.

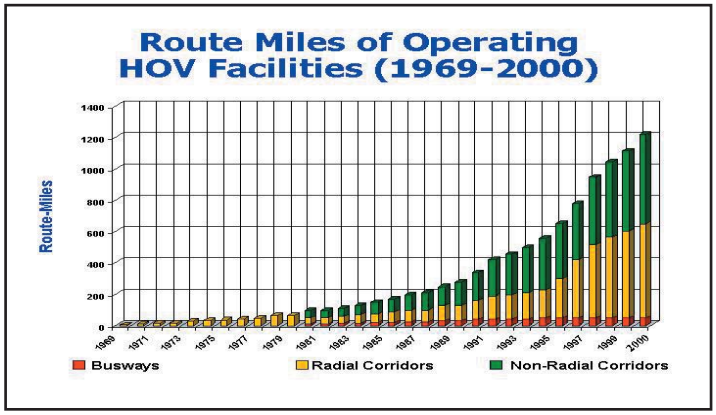
Figure 1: I-15, Las Vegas, Nevada

Southern Nevada residents consistently identify traffic congestion as a serious issue facing the State. According to the 2000 Census, 74.5% of all work trips within the Las Vegas Valley (and the State of Nevada) take place in single-occupant vehicles. By comparison, carpools constitute approximately 15.0% of all work trips in the Las Vegas Valley; a rate noticeably higher that the national average of 12.2%[1]. Conversely, transit travel in Las Vegas and the State of Nevada is below the nation average placing an emphasis on the provision of highway infrastructure to meet demand.

However, opposing pressures, such as continued congestion, limitations on traditional roadway expansion brought on by the federal Clean Air requirements and federal funding provisions may combine to offset further growth in the proportion of single-occupant vehicles.

Since the 1960's, many metropolitan areas within the United States have demonstrated the effectiveness of ramp metering, high-occupancy vehicle (HOV) and managed lanes facilities in promoting person movement and corridor mobility along congested routes. Currently, over 2100 ramp meters are used along freeways and expressways in 29 metropolitan areas within metropolitan areas in the United States to help regulate the flow of traffic entering these facilities[2]. Furthermore, about 130 HOV and managed lane facilities exist in about 30 metropolitan areas (Figure 2). This represents over 2500 lane-miles of HOV/managed lanes in operation to provide mobility options to transit and rideshare commuters.

Figure 2: Growth in HOV Route-miles from 1970 to 2000



In February 2005, the Nevada State Legislative Committee on Transportation introduced Assembly Bill 82 (AB82) to amend Chapter 484 of the Nevada Revised Statutes (NRS) to authorize the Nevada Department of Transportation (NDOT) to designate a lane on a highway to be used for high-occupancy vehicles (HOV) in certain circumstances. AB82 further requires that NDOT establish the conditions for the use of any such designated lane, including the number of occupants required in a vehicle to use the lane and the hours of the day in which the lane is restricted. AB82 prescribes the unlawful use of a designated lane as a misdemeanor punishable by a fine of $250.

[1]Pisarski, Alan, Commuting in America, 1992, and US Transportation Mobility Index published annually by Texas Transportation Institute.

[2]Fuhs, C.A., and Jon Obenberger, "HOV Facility Development: A Review of National Trends," Transportation Research Record No. 1781, "HOV and Demand Management 2002, Transportation Research Board, Washington, D.C., 2002.

With the passage of AB82, NDOT will be given the ability to utilize HOV lanes as a tool to provide additional mobility options to commuters and highway users within the State of Nevada. Furthermore, the basic guidance provided by AB82 allows NDOT maximum discretion to establish a range of HOV policies to provide for the planning, development, design, operation, maintenance and enforcement of these managed roadway facilities. The law also allows NDOT the flexibility to utilize related mobility management tools such as ramp metering and other types of designated, managed lanes to address growing travel demand within the State.

Recent freeway expansion initiatives in the Las Vegas Valley have highlighted the importance of considering HOV lanes, ramp metering and other mobility management tools in the planning and development of major projects. Federal requirements for environmental clearance of the US-95 freeway expansion project from Martin Luther King Boulevard to Craig Road have led to the recommendation of ramp metering and HOV lanes as part of the overall strategy to manage existing and future mobility needs within this corridor. As Las Vegas continues to grow, an increased emphasis on Federal environmental requirements will be necessary to preserve the environmental quality in the valley and the overall quality of life. Furthermore, limitations in traditional transportation funding will necessitate that NDOT considers HOV lanes (and other managed lanes) as way to ensure that new, large scale transportation projects provide the maximum mobility benefits and minimum impacts better positioning NDOT projects for federal approval and funding.

1.2. Purpose

The following policy statement addresses state and federal requirements by creating guidance to assist NDOT, local and regional transportation jurisdictions and authorities with the planning, design, construction, operation, maintenance and enforcement of managed lanes and ramp meters. Specific planning, operating and design parameters which comprise the development and implementation of these congestion management treatments for the State are included.

It is the intent of this policy to serve as a guide for the study, implementation, operation and evaluation of various projects and programs that collectively define the State's HOV, Managed Lanes and Ramp Metering System. The System should respond to the various state and federal laws currently guiding transportation improvements on the state's roadway system, including the NRS Chapter 484, the latest federal transportation act (SAFETEA-LU), and the federal Clean Air Act Amendments of 1990 (CAAA). As such, the Policy will be subject to periodic review and reassessment, both by the Department, by affected agencies, and by the general public.

The policy represents "a beginning" - a first attempt at assembling guidelines relating to HOV, managed lanes and ramp metering facilities in one document. The document is deliberately general. As new transportation facilities are opened in Nevada, experience may highlight changing conditions or deficiencies in particular policies that will necessitate further study and refinement before a definitive policy can be developed for some topic areas.

This policy specifies a process for periodically amending or deleting elements contained within. A Policy Board composed of members from NDOT is recommended to periodically review and amend this policy document and provide input to NDOT management and the Nevada state legislature. The Policy Board's purpose is to periodically, but no less than every two years, convene and review NDOT's role and experience the planning, implementation and operation of HOV and ramp metering projects throughout the state. Their authority will be to help foster consistency in practice and application, adopt standards of practice, adopt changes as seen appropriate to the state's HOV and Ramp Metering Policy and to make modifications to the state's HOV/Managed Lane and Ramp Metering technical resource manual chapters. Membership should be comprised of representative and affected NDOT divisions. Membership may be extended to other partnering public agencies if such membership is felt appropriate including the Nevada Highway Patrol, respective RTCs for northern and southern Nevada, affected cities and counties, transit providers and federal agencies (Federal Highway Administration and Federal Transit Administration). This organizational function can ensure internal and external support of the policy and help keep policy current.

This policy is intended to provide the framework to ensure statewide consistency for HOV lanes, managed lanes and ramp metering implementation, operation and design.