Frequently Asked Questions

What is an HOV lane?

"HOV" stands for "*High-Occupancy Vehicle*." HOV lanes are designated for carpool, vanpool and bus transit use. They carry more passengers in fewer vehicles than general purpose lanes and provide commuters an option to congestion. Encouraging ridesharing and transit use cuts the number of solo commuters who would otherwise use the roadway. By reducing dependence on solo travel, HOV lanes reduce congestion and help provide a reduction in emissions and thus improve air quality. Typically HOV lanes like those on I-77 are restricted to carpools with two or more persons.

What is a HOT lane?

"HOT" stands for "*High-Occupancy Toll*" lane. HOT lanes are designated for highoccupancy vehicles and others who are willing to pay a toll to use the lane. HOVs are typically allowed free or discounted use of the lane. Others typically pay a toll that is based on congestion and demand, with lower tolls during the off-peak period and higher tolls in the peak. Single occupant vehicles typically are allowed into HOT lanes if they pay the prevailing toll, but on some HOT lanes lower occupant two-person carpools are the only eligible users allowed to use the lane for a toll, while higher 3+ occupant vehicles are allowed free use.

What is a managed lane?

A managed lane is any dedicated lane or roadway on a freeway or arterial which is operated strategically to prevent it from becoming congested during peak periods of demand. Management tools typically applied include restrictions on eligibility, limitations on access or pricing users to better manage demand. HOV lanes are managed lanes that restrict use primarily through eligibility. Eligibility typically has included restrictions on the minimum number of persons per vehicle (to increase person-moving roadway efficiency) and allowed use by motorcycles and in some states hybrid vehicles (to encourage fuel efficiency). Other types of managed lanes can serve all types of users such as HOT lanes or toll/express lanes.

Why do we need HOV, HOT or managed lanes in the Charlotte Region?

By implementing dedicated lanes, the Charlotte Region joins many other congested US metropolitan areas in recognizing that building more lanes alone may solve a short term need, but not long-term mobility. Managing some of these added lanes can flexibly address future growth and preserve a part of the roadway for assured free-flow operation. Doing nothing takes potential travel options away from commuters and leaves everybody facing increasing congestion.

If we invest in transit guideways in the Charlotte Region, why do we need managed lanes?

Managed lanes are only part of a variety of improvements provided to manage travel demand and offer commuters and other users more travel choices. Other companion solutions involving highways, streets and transit are still needed and serve different travel markets, often in the same corridor.

What are the benefits of HOV, HOT and managed lanes?

The primary benefits are travel time savings and improved reliability over traveling in the general purpose lanes. Providing these benefits offers commuters a mobility choice they would not otherwise have. Other benefits include improved people-carrying capacity and operating performance on the designated lanes. Improved performance allows for improved air quality and greater roadway efficiency. Revenue generated, while typically covering only the cost of implementing and operating the pricing system, may also help defray some of the capital costs associated with building the designated lanes.

Other specific benefits:

- HOV, HOT and managed lanes are **convenient**. While these lanes help all travelers, they will be most convenient to HOV users, who can share driving responsibilities, reduce their travel time and increase their trip reliability.
- HOV lanes are **cost-efficient** by saving taxpayers money and providing an opportunity to move more travelers than a traditional general use lane. HOV lanes save commuters money through shared fuel, parking and vehicle wear-and-tear costs.

How are HOV, HOT and managed lanes implemented?

Dedicated lanes are implemented as the leftmost lane next to the median on freeways. They may be implemented in the median or right side of a major arterial roadway (where traffic signals exist). These lanes are not typically created by taking away lanes from general traffic. They are added to the existing roadway. Access may be allowed anywhere along the lane, or access may be restricted to certain locations as occurs on the HOV lanes along I-77.

Why the leftmost lane on freeways?

HOV lanes are designed to provide express travel for trips, and express traffic typically moves in the leftmost lanes. Restricting managed lane traffic to the leftmost lane allows the lane to operate more safely and helps prevent managed lane operation from being disrupted by merging traffic.

Where are the HOV lanes on I-77 in Charlotte?

The HOV lane in both northbound and southbound directions is the leftmost lane on I-77. The lanes are concurrent flow lanes; thus, the lanes run alongside the rest of the traffic, in the same direction, and without a physical barrier separating HOV lanes from the general purpose lanes. The lanes are marked with the diamond HOV symbol.

- Northbound: The lane begins north of the I-77/I-85 interchange and ends north of the I-77/W.T. Harris Boulevard interchange (a distance of about 5 miles).
- Southbound: The lane begins north of the I-77/I-485 interchange and ends south of the exit ramp for I-277 (Brookshire Freeway) and features a bypass of the I-77/I-85 interchange (a length of approximately 10 miles).

What are the operating hours of the HOV lanes?

The I-77 HOV lanes are open for HOV traffic 24 hours a day, 7 days a week. The HOV lanes are closed to general traffic unless otherwise posted. Other projects nationally either apply this operation policy or operate their HOV, HOT and managed lanes only

during the peak hours, allowing the lanes to be used by all traffic in the off-peak periods. Congestion, both occurring during the peak periods and from incidents at other times, and roadway design, determines the best particular operation policy for dedicated lanes. A 24-hour restriction to managed lane users ensures that the lanes are always freeflowing for HOV traffic.

Who can use HOV lanes in Charlotte now?

Vehicles with a minimum of two or more occupants can use HOV lanes, so long as the vehicle is not a truck with 3 or more axles or a vehicle pulling a trailer. Large trucks with three or more axles are prohibited. A large motor home is allowable if it is only two axles and has two or more occupants.

Are there any exceptions to the minimum number of occupants?

Yes, exceptions to the HOV 2+ rule are the following:

- **Motorcycles** For safety reasons, federal law requires HOV lanes to be open to motorcycles regardless of the number of riders.
- Emergency Vehicles Emergency vehicles may use HOV lanes when responding to an emergency. Emergency vehicles include any vehicle of a law enforcement agency or other governmental agency or public service corporation, including ambulances and identified vehicles of a police or fire department.
- Public Transportation Vehicles To improve round-trip efficiency, public transportation vehicles are allowed to use HOV lanes with the driver as the only passenger.
- **Privately Owned Buses** Any bus designed to carry 15 or more passengers, regardless of its occupancy, may use HOV lanes.

Why can't trucks use managed lanes?

A single directional lane is not conducive to serving trucks with other vehicles. If the managed facility provides two or more directional lanes and meets current design criteria for safe operation, then trucks could benefit and might be encouraged to use managed lanes. Some cities are currently attempting to design and build facilities to serve high volumes of trucks and help remove trucks from the general use lanes.

Who counts as an occupant?

An occupant is any person who occupies one seat in the vehicle. Pregnant mothers count as one occupant. An infant in an infant seat counts as one occupant.

How are HOV lane restrictions enforced?

Violators of HOV regulations are subject to a fine of approximately \$100 inclusive of court costs and two driver license points.

Are HOV lanes safe?

Yes. The safety and performance of HOV lanes which have been in operation for up to 30 years in some cities has shown that they are generally as safe as other travel lanes. A variety of local before/after studies from Texas, California and Washington have documented this finding

How would managed lanes be used in emergencies?

North Carolina law requires that motorists, upon approaching the scene of an accident, move their vehicles into a lane that is not the lane nearest parked or standing emergency vehicles and to continue traveling in that lane, at a reduced speed, until safely clear of the emergency vehicles. This law allows officers and emergency personnel to safely assist motorists injured in an accident. The law also prevents other accidents from occurring at the scene. Therefore, in some cases, general traffic may be required to reroute into or out of the HOV lanes upon approaching the scene of an accident. During extreme situations, NCDOT's Metrolina Regional Transportation Management Center (MRTMC) will determine the HOV facility's use. When this happens, MRTMC staff will advise motorists through a media release and dynamic message signs along the corridor.

Why not just build more general purpose lanes?

Local and state transportation agencies have a responsibility to provide travel opportunities and options in the most convenient and most responsible ways possible. The region's long range plan calls for building new roadways and added lanes as demand grows and funding becomes available. Planned transportation improvements and funding may not be enough to address future regional growth and congestion. Many transportation corridors have only limited opportunity for expansion, and some of this space may be better utilized by more efficient lane management. The current study will determine if some of these corridors are candidates for managed lanes.

What corridors are being considered for the study of managed lanes?

Both freeway and major arterial corridors are being studied and include:

Corridor	Description
Garden Parkway	Starting at US 321 north of Gastonia, going west and south to I-85, then heading east to Charlotte, terminating at I-485 near Charlotte/Douglas Airport.
I-77 North	Between I-85 in Charlotte (including existing HOV lanes) and US 21/ NC 115 (Exit 42) between Mooresville and Troutman in Iredell County.
I-77 South	Between Chester /York County Line (near Exit 73 in York County, SC) and I-85 in Charlotte.
I-85 North	Starting at I-77 (Exit 38) in Charlotte, going through Cabarrus County and terminating at Rowan/ Davidson County line near Long Ferry Road (Exit 81)
I-85 South	Between US 74 (Exit 10) and I-77 (Exit 38) in Charlotte.
1-277	Includes the entire I-277 loop between NC 16 (Brookshire Freeway) and US 74 (Wilkinson Boulevard).
I-485	Includes the entire I-485 loop around Charlotte in Mecklenburg County.
NC-16	Starting at Catawba/Lincoln County line at NC 150 and going southeast towards Charlotte; terminating at I-277/I-77 interchange.
NC 24/ NC 27	Between US-74 in Charlotte and US 52 in Albemarle.
US-74	Between I-277 loop in Charlotte to east of Wingate, terminating at Marshville.
US-321	Starting at I-85 (Exit 17) in Gastonia and going north and terminating at Lincoln/ Catawba County line.
US-521	Between SC 5 in Lancaster County, SC and I-485 South near Ballantyne/ Pineville area.

Findings from this study will be known in 2008.

I heard that HOV lanes don't always decrease air pollution. Is that true?

If the lanes are not used, then, yes, they may not have an impact on air pollution. Certain areas of the state like Charlotte are rapidly approaching a point in time in which they may be forced to look for other transportation options because of growing congestion and pollution. HOV lanes can be part of a balanced transportation plan to provide alternatives to congestion and address air quality.

Sometimes the HOV lanes on I-77 look underutilized. Why shouldn't they be opened to all traffic?

The purpose of HOV lanes is to move more people with fewer cars through carpooling, vanpooling and bus ridership. This means that HOV lanes can carry the same number of people (or more) as a general-purpose lane in half the number of cars even if only two people ride in each car. Buses can carry more people, as many as 50 solo commuters. This is the reason that HOV lanes often look less filled with vehicles than the adjacent general purpose lanes, but in fact, are performing better. The current study will examine opportunities to add other users to the current HOV lanes if there is sufficient capacity, without compromising facility performance for transit and rideshare users.

Will any existing lanes be converted to managed lanes?

No. Any managed lanes will be added to the existing travel lanes.

How much time will managed lanes save me?

Managed lanes provide the most benefit during congested, peak-hour travel and for longer-distance trips. HOV users around the country report saving an average of at least five minutes for shorter peak-hour trips and up to 25 minutes for longer trips. Improved trip reliability is another benefit.

How can I get information about park and ride facilities/carpools?

The Charlotte Area Transit System (CATS) sponsors programs to support ridesharing. These programs include ride-matching databases to help commuters find carpool or vanpool partners, coordination of employer ridesharing programs, vanpooling programs, and up-to-date information on public transit alternatives along I-77. Contact CATS at (704) 336-RIDE or at <u>www.ridetransit.org</u> to learn more about the agency's transit and ridesharing programs.

Who else has managed lanes?

Managed lanes exist in more than 35 urban areas in the United States and Canada. Most examples are HOV and HOT lanes. Some of the states with thriving HOV programs include Georgia, Virginia, Maryland, California, Texas, Tennessee and Washington. HOT lanes can be found in California, Minnesota, Texas, Colorado and Utah.