STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A.CONTI, JR.
SECRETARY

October 30, 2009

Mr. Patrick DeCorla-Souza
Federal Highway Administration
Office of Policy and Governmental Affairs
Highway Pricing and System Analysis Team Leader
400 Seventh Street SW
Washington, DC 20590

SUBJECT: Value Pricing Pilot Program Application for the Charlotte Regional High Occupancy Vehicle (HOV)/High Occupancy Toll (HOT) Feasibility Plan

Dear Mr. DeCorla-Souza:

It is a pleasure to forward to you this Value Pricing Pilot Program application for the City of Charlotte on behalf of the Mecklenburg-Union Metropolitan Planning Organization (MUMPO) here in North Carolina. MUMPO serves the Charlotte region, which is one of the fastest growing in the country. Options for dealing with congestion, such as would be afforded by HOV and/or HOT lanes, will be a crucial component of addressing travel patterns in and throughout the community.

On behalf of MUMPO and the North Carolina Department of Transportation, I want to express my appreciation for the sincere efforts of your staff to work with us in this process.

To discuss the application further, please contact me or Mr. Timothy Gibbs with the City of Charlotte Department of Transportation, who prepared the application on MUMPO's behalf. I may be contacted via e-mail at *biswas@ncdot.gov* or telephone at 919-~~715-2465~~ 508-1865. Additionally, Mr. Gibbs can be contacted at tgibbs@charlottenc.gov or at 704-336-3917.

Sincerely,

Dr. Mrinmay (Moy) Biswas , P.E., Manager
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STALLINGS
UNION COUNTY
WAXHAW
WEDDINGTON
WESLEY CHAPEL
WINGATE

October 28, 2009

Mr. Patrick DeCorla-Souza
Federal Highway Administration
Office of Policy and Governmental Affairs
Highway Pricing and System Analysis Team Leader
400 Seventh Street SW
Washington, DC 20590

SUBJECT: Value Pricing Pilot Program Application for the Charlotte Regional High Occupancy Vehicle (HOV)/High Occupancy Toll (HOT) Feasibility Plan

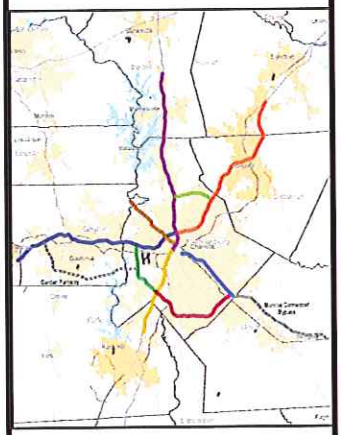
Dear Mr. DeCorla-Souza:

As Chairman of the Mecklenburg-Union Metropolitan Planning Organization (MUMPO), I am pleased to sign this positive letter of support to the 2009 Value Pricing Pilot Participation Program grant for the Charlotte, NC metropolitan area. MUMPO serves the central, core areas of the Charlotte region, which is one of the fastest growing in the country. This grant application is a logical extension of the work that we recently completed in the *Charlotte Region Fast Lanes Study*. That study included freeway and major arterial corridors to determine which might be good candidates for consideration as managed lane facilities. It continues to become more and more painfully obvious to those of us here in the Charlotte area that we cannot depend on existing revenues alone and that we must look to other strategies in highly congested corridors to improve mobility and roadway capacity to address long-term demand. Due to rising costs, we must more aggressively manage use of these lanes so as to improve roadway efficiency. Value pricing strategies can provide choices to motorists who otherwise will have to deal with ever increasing traffic congestion.

On behalf of MUMPO, I encourage the project selection committee to recognize the level of collaboration that has and will continue to occur in the Charlotte region and award funding for this valuable project. Please contact Mr. Timothy Gibbs with the City of Charlotte Department of Transportation if you have questions regarding this letter. Mr. Gibbs may be contacted at tgibbs@charlottenc.gov or 704-336-3917.

Sincerely,

R. Lee Myers, Chairman



I-77
HIGH OCCUPANCY VEHICLE LANES
HOV
THE ROAD TO THE FUTURE

Fast Lanes
GET THERE!

Moving Towards Implementation

Charlotte Region's *Fast Lanes* Network (Phase 3)

Proposal to:

Federal Highway Administration
Value Pricing Program

Submitted By:

Mecklenburg-Union
Metropolitan Planning Organization
North Carolina Department of
Transportation
Charlotte Department of Transportation

11/3/2009

Charlotte Region's *Fast Lanes* Network (Phase 3)

MECKLENBURG-UNION MPO PROPOSAL TO FHWA

A. PROGRAM AGENCIES

Requesting Agency

Mecklenburg-Union Metropolitan Planning Organization
600 East Fourth Street
Charlotte, NC 28202

Requesting Agency Contact Information

Robert Cook, AICP
MUMPO Secretary
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Timothy Gibbs, AICP
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Partnering/Supporting Agencies

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1542 Mail Service Center
Raleigh, NC 27699-1542

Division 10
716 West Main Street
Albemarle, NC 28001

City of Charlotte, North Carolina
Department of Transportation
600 East Fourth Street
Charlotte, NC 28202

B. AUTHORITY SOUGHT

FHWA Value Pricing Program funding is requested for the Charlotte Region's Value Pricing Project described herein, including authorization to apply tolls/user fees upon the selected components of the highway network defined by this study.

C. DESCRIPTION OF REQUESTING AGENCIES

Mecklenburg-Union Metropolitan Planning Organization

The Mecklenburg-Union Metropolitan Planning Organization (MUMPO) is responsible for coordinating transportation policies and programs for local governmental jurisdictions within the Charlotte Urbanized Area. MUMPO, in cooperation with the State of North Carolina, develops the long-range transportation plans and programs for two of the counties in the Charlotte region. While there are three other MPO's in the bi-state region, the Value Pricing Project nominated in this application will be confined to MUMPO's jurisdiction because of the leadership role that MUMPO and Charlotte have assumed in pursuing pricing initiatives. MUMPO was an early sponsor of the regional congestion pricing study that examined HOT lanes in the greater Charlotte region. That study included public forums, technical findings of study activities and recommendations for adoption of a managed lane network for the region.

North Carolina Department of Transportation

The North Carolina Department of Transportation (NCDOT) is one of North Carolina's largest state government agencies, with more than 14,000 employees. The department provides high-quality transportation for North Carolina travelers, by building or operating highways, rail, aviation, ferries, public transit and bicycle and pedestrian facilities. The department's mission is:

> *Connecting people and places in North Carolina – safely and efficiently, with accountability and environmental sensitivity.*

NCDOT has been instrumental in many prior partnerships with MUMPO, the Charlotte Department of Transportation (CDOT) and Charlotte Area Transit System (CATS). These partnerships included the implementation of HOV lanes on I-77 and a regional assessment of high-occupancy vehicle (HOV) and high-occupancy toll (HOT) options for various transportation corridors - the Charlotte Region *Fast Lanes* Study.

The North Carolina Turnpike Authority (NCTA) is the division of the NCDOT responsible for planning, designing, building, operating and maintaining toll roads within the state. NCTA is in the process of implementing various toll roads throughout the state, including the Monroe Connector/Bypass in Union County. This proposed toll road in the MUMPO planning area connects directly to US-74 and I-485, two highly-ranked corridors for congestion pricing in Charlotte and Mecklenburg County.

The City of Charlotte

The City of Charlotte provides crucial support to transportation initiatives in the region, particularly in the area of long range transportation planning. There are two City departments which play major roles in planning, maintaining or operating the area's transportation system. The Charlotte Department of Transportation (CDOT) maintains local streets within the corporate limits. The department's Transportation Planning Division collaborates with the North Carolina Department of Transportation (NCDOT) to undertake long-range transportation planning for the region through a variety of ongoing and project-specific initiatives. CDOT's transportation planners also prepare regional travel demand forecasts for NCDOT and other agencies in the Charlotte region. Charlotte Area Transit System (CATS), a municipal department, operates public transportation services within Charlotte and Mecklenburg County, as well as regional commuter bus routes and vanpool services in adjoining counties in North and South Carolina.

D. DESCRIPTION OF CONGESTION PROBLEM BEING ADDRESSED

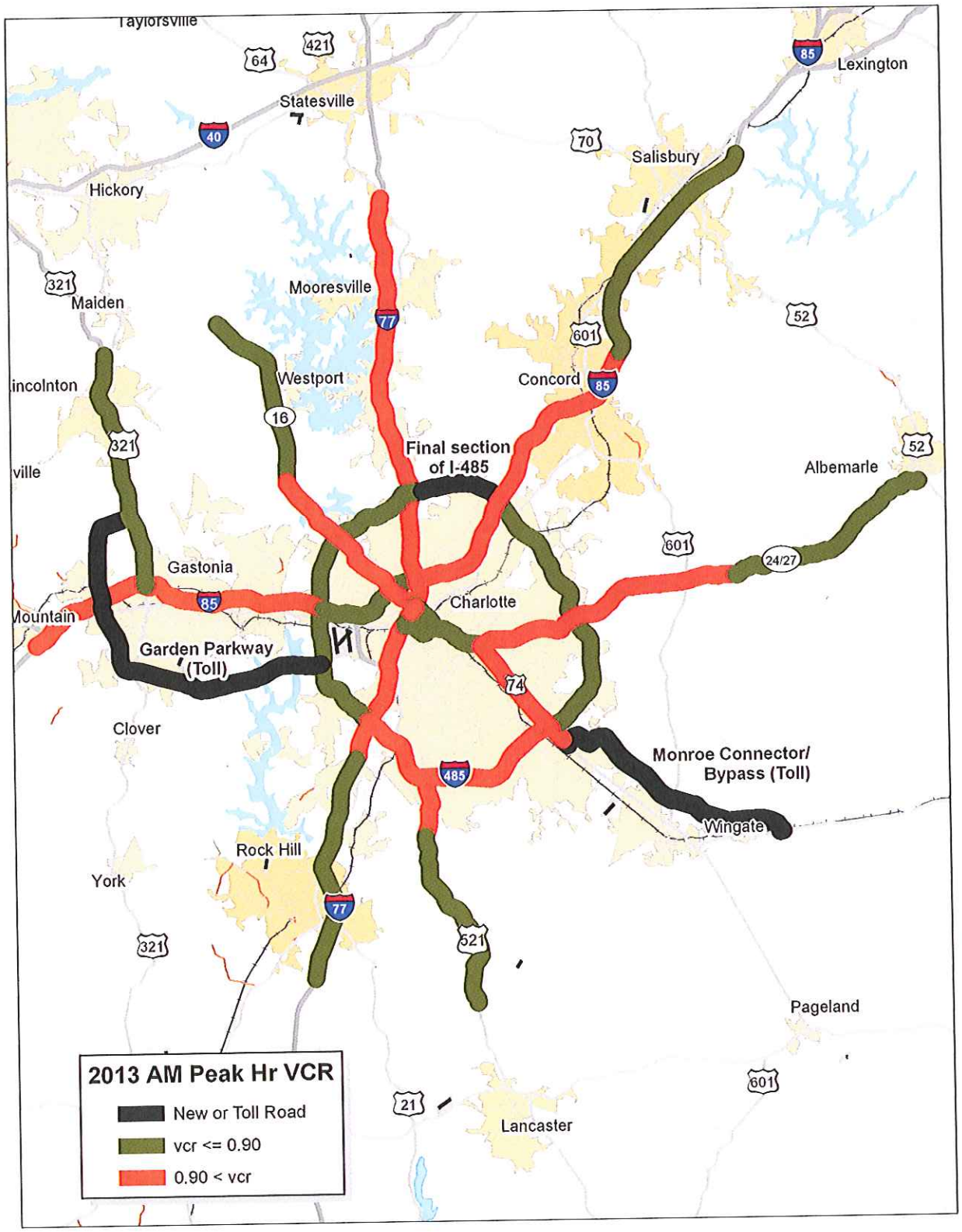
According to the 2008 American Community Survey, Mecklenburg County is the most populous county in North Carolina, with 890,515 residents. The population of Mecklenburg County increased by 9 percent from 2000 to 2008, and it was the 9th fastest-growing county in North Carolina during this period. Union County is the ninth most populous county in the state, with 193,255 residents. Between 2000 and 2008, Union County was the fastest-growing county in North Carolina. Its population increased by 54 percent during this period.

According to the 2009 Annual Mobility Report from Texas Transportation Institute, the Charlotte urban area ranked 23rd in congestion per peak traveler, with the average peak traveler experiencing 40 hours of congestion per year. Charlotte's congestion ranking increased from 32nd to 23rd between 2005 and 2007. In 2000, Charlotte ranked 26th in delay per peak traveler, with the average peak traveler experiencing 34 hours of congestion annually. Charlotte's congestion, as measured in delay per peak traveler, has increased by 18 percent from 2000 to 2007.

Based on the 2008 American Community Survey, the City of Charlotte is the 18th most populous city in the United States, with a population of 687,456 residents. Of the 20 largest cities in the country, Charlotte was the second fastest-growing city between 2000 and 2008, experiencing a 21 percent increase in population. The Charlotte Metropolitan area ranks 34th in population and was the fifth fastest-growing metropolitan area of the 50 largest metropolitan areas in the United States.

In Phase 1 of the regional *Fast Lanes* study (described in Section E below), the initial screening criteria included the level of congestion occurring in the corridors under study. Based on the congestion screening criteria, the segments of the corridors located in the MUMPO planning area were the most congested (see Figure 1). Forecasted travel speeds along these corridors could be as low as 25 miles per hour during the peak hours in 2013. Without major additional roadway capacity and operational improvements, congestion would continue to worsen in the future.

FIGURE 1: 2013 VOLUME- TO- CAPACITY RATIOS BASED ON METROLINA TRAVEL DEMAND MODEL RESULTS



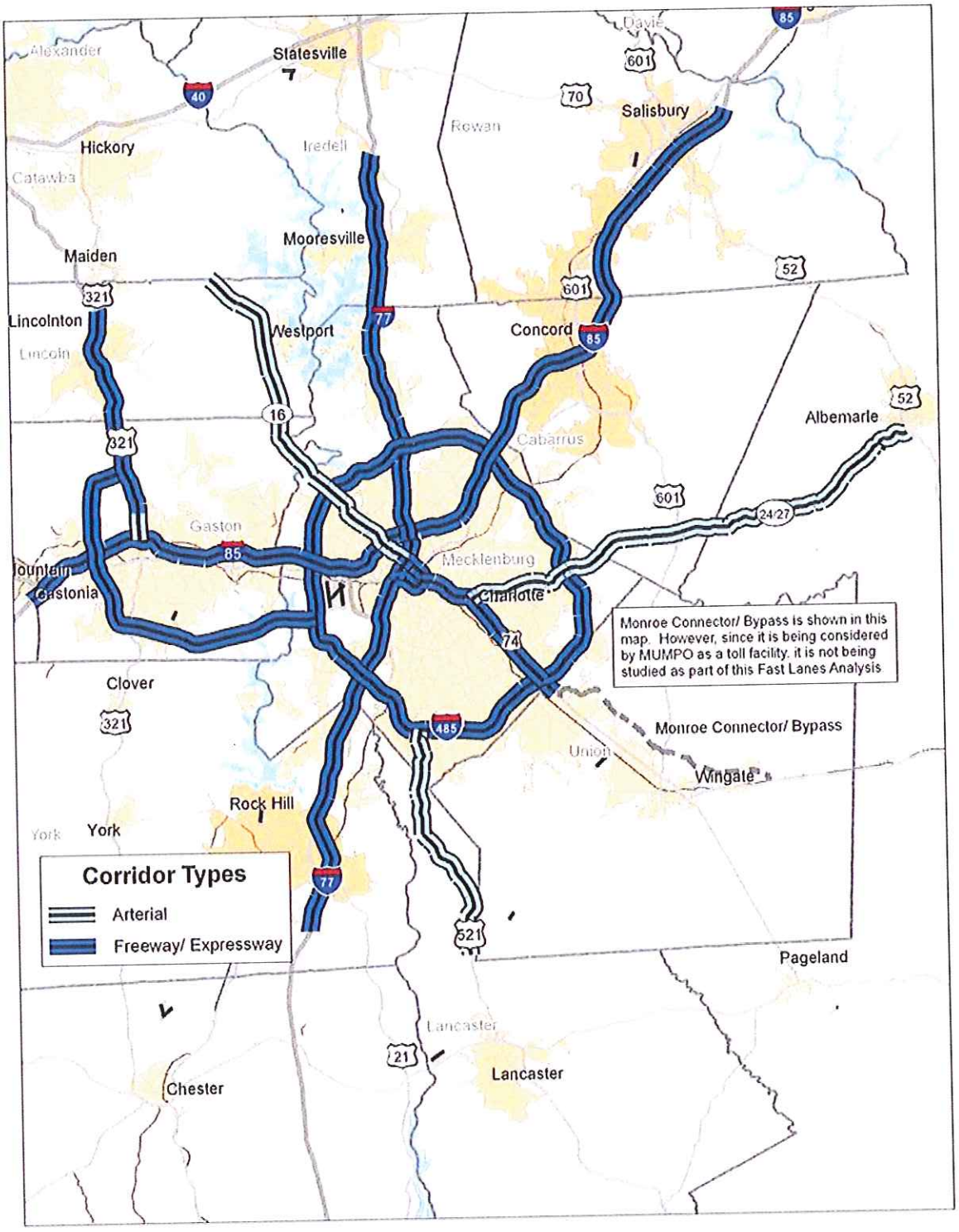
E. DESCRIPTION OF THE PROPOSED PRICING SYSTEM AND GOALS

With increasing volumes of traffic using the Charlotte-Mecklenburg region's road network, and given the persistent physical, financial and environmental constraints to the widening of major highways, an emphasis on serving travel demand through innovative use of existing or planned roadway capacity is ever more compelling. In 2004, a design-build widening project sponsored by NCDOT resulted in HOV lanes being built along 10 miles of I-77 between Huntersville and Charlotte. This was the first, and is still the only, HOV facility in North Carolina (see **Figure 2**). NCDOT, CDOT, CATS, FHWA, MUMPO and local agencies partnered to implement the preferential lanes and provided the operational support and transit service needed to make this project successful.

FIGURE 2: FIRST HOV LANES (I-77) IN NORTH CAROLINA

Based on public acceptance of the I-77 HOV facility, CDOT, NCDOT, the South Carolina Department of Transportation (SCDOT) and other agencies in the Charlotte region initiated an examination of existing and planned major highways throughout a 10-county area to identify where *Fast Lanes* – HOV, HOT or truck-only-toll (TOT) facilities – could improve roadway capacity. The region-wide, comprehensive assessment – the *Fast Lanes* Study – was initiated in 2006. **Figure 3** illustrates the 12 primary corridors, totaling approximately 334 miles, analyzed in that study's first phase.

FIGURE 3: INITIAL STUDY CORRIDORS

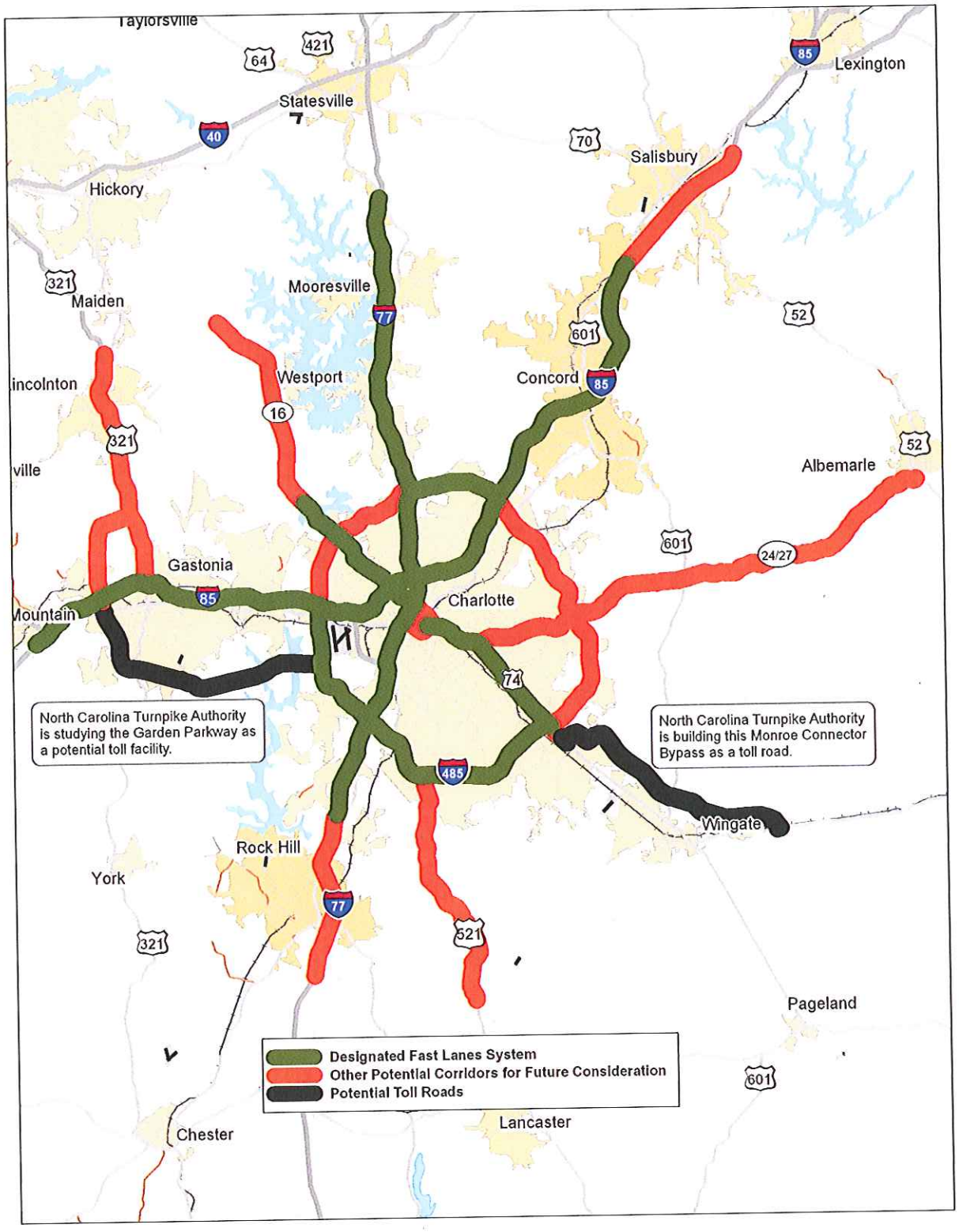


The *Fast Lanes* Study was one of the very few regional assessments in the United States of a comprehensive freeway and arterial roadway network, and it was done entirely with local funding provided by state, regional, and local agencies. The study's findings included pricing as a primary means of enhancing and preserving the region's ability to move traffic and (at least partially) fund new freeway lanes.

Studies of similar *Fast Lanes* projects around the country showed that successful implementation requires a thorough analysis of the technical, financial and institutional feasibility of a managed lanes strategy. All three perspectives are important, and any missing perspective can preclude successful study outcomes, based on experiences from other HOT lane demonstrations. The Charlotte Region *Fast Lanes* Study provided information for MUMPO, NCDOT, CDOT and other key stakeholders in the region so they could assess corridor performance against criteria established for all three feasibility perspectives. Specifically, the study dovetailed into parallel regional efforts by NCDOT, CDOT and MUMPO to identify how future transportation improvements could be financed. To assess institutional feasibility, outreach among a wide range of representative business, government, institutional and advocacy groups though in-depth interviews was used to gauge interest and support for preferential lanes in general and congestion pricing in particular. Findings helped shape the methodology for defining regional feasibility and identifying issues that would be relevant to public support and acceptance, building a strong foundation for this subsequent effort.

Whereas the *Fast Lanes* study yielded evidence of the potential success for *Fast Lanes* in the Charlotte region, the implementation of the system is currently limited by phasing of projects on a corridor-by-corridor basis, while also maintaining network or system connectivity benefits. Phasing of improvements will be important in achieving the highest potential for early success and in minimizing impacts and risk associated with implementation of *Fast Lanes* projects. Phasing of improvements also will consider the programming of other projects in the study corridors. The Charlotte Region *Fast Lanes* Study yielded nine preferred corridors for *Fast Lanes*, and these are shown in **Figure 4**.

FIGURE 4: REGIONAL *FAST LANES* NETWORK FOLLOWING PHASE 2



One of the primary concerns for transportation planning in the Charlotte region is the inadequacy of financial resources to advance projects to implementation. Although the *Fast Lanes* network has been modeled (with an HOV 3+ system) to potentially raise $15 - $65 million in annual revenues in 2013, the capital cost of construction of the regional network (which extends beyond the MUMPO planning area) is between $2.3 and $5.1 billion. A regional network of *Fast Lanes* will not fully recover the cost of construction within a 30-year timeframe.

The purpose of this Value Pricing Program proposal is to explore and advance in the MUMPO area of the Charlotte region a concept recently attempted in the Seattle, Washington, area – early tolling of an interstate prior to and during construction of new infrastructure. This involves facilitating a change in philosophy from exclusive tax-funding of new infrastructure to a user-fee approach through a phased, incremental tolling application on area highways. Complementing the consideration of early and incremental tolling, this Value Pricing project will also explore public acceptance for other funding options such as 1) gas tax increase, 2) peak hour pricing, 3) vehicle miles of travel (VMT) fee, 4) variable (real-time) pricing, and 5) truck-only tolls. The Charlotte-Mecklenburg urban area, represented by the MUMPO regional jurisdiction, will investigate the desire for and feasibility of revenue options such as incremental pricing implementation and/or early tolling of corridors to address transportation infrastructure improvements, enhancements to capacity, and active management of congestion. Different approaches will be developed and tested with the public to determine the strategies which have the most desirability and likelihood for implementation. The highest-priority corridors, ultimately implemented by local voter affirmation, would be funded in whole or in part by congestion pricing or other new revenue sources implemented on the affected highways. Revenues would be generated to advance construction, while at the same time demonstrating the ability of congestion pricing to provide mobility benefits during the construction period.

The proposed Value Pricing Program grant would provide seed funding for the Charlotte-Mecklenburg (MUMPO) planning area to define the role and institutional structure of new funding mechanisms such as congestion pricing on a regional scale, measure public opinion regarding the use of such fees on highways to advance funding for construction, develop estimates for how early tolling or other approaches would affect revenue generation and project scheduling and implementation, and assess multi-modal transportation funding desires across and in geographic or other sectors of the MUMPO area.

The objectives of the proposed program will be to:

- Provide a replicable framework for integrating congestion pricing with advance planning and construction of improvement corridors (similar to the approach used by the Washington State Department of Transportation for SR-520)
- Develop a better understanding of the policy and technical issues associated with the use of congestion pricing and alternative financing (such as fuel tax increases) in the Charlotte-Mecklenburg urbanized area
- Build on the recently-completed Regional *Fast Lanes* Study and test community acceptance for HOT lanes to foster broad understanding and support of congestion pricing for HOT lanes and other pricing applications
- Familiarize the public with the concept of congestion pricing in advance of construction and/or concurrent with incremental implementation

- Assess public acceptance and the desirability for a voter-affirmation model in selected corridors
- Define and develop the concept of locally based, self-sustaining transportation pricing corridors to launch the regional system plan as outlined and adopted by MUMPO

F. FACILITIES INCLUDED IN PRICING PROGRAM

The nine corridors advancing to Phase 2 of the Charlotte Region *Fast Lanes* Study were evaluated using the following factors:

- Demand. The projected numbers of persons and vehicles that would use a *Fast Lane* during peak periods, compared to similar numbers for adjacent general-purpose lanes.
- Travel time savings. Estimated times saved during peak periods by *Fast Lanes* users when compared to travel times of motorists traveling in the general-purpose lanes.
- Comparison of estimated revenues to operating and maintenance costs. This comparison reveals the extent to which the annual projected revenues for a corridor cover estimated annual operating and maintenance costs.
- Other projects or studies impacting possible timing of *Fast Lanes* implementation. An analysis of how the timing or sequencing of implementation of other projects could affect proposed *Fast Lanes* improvements.

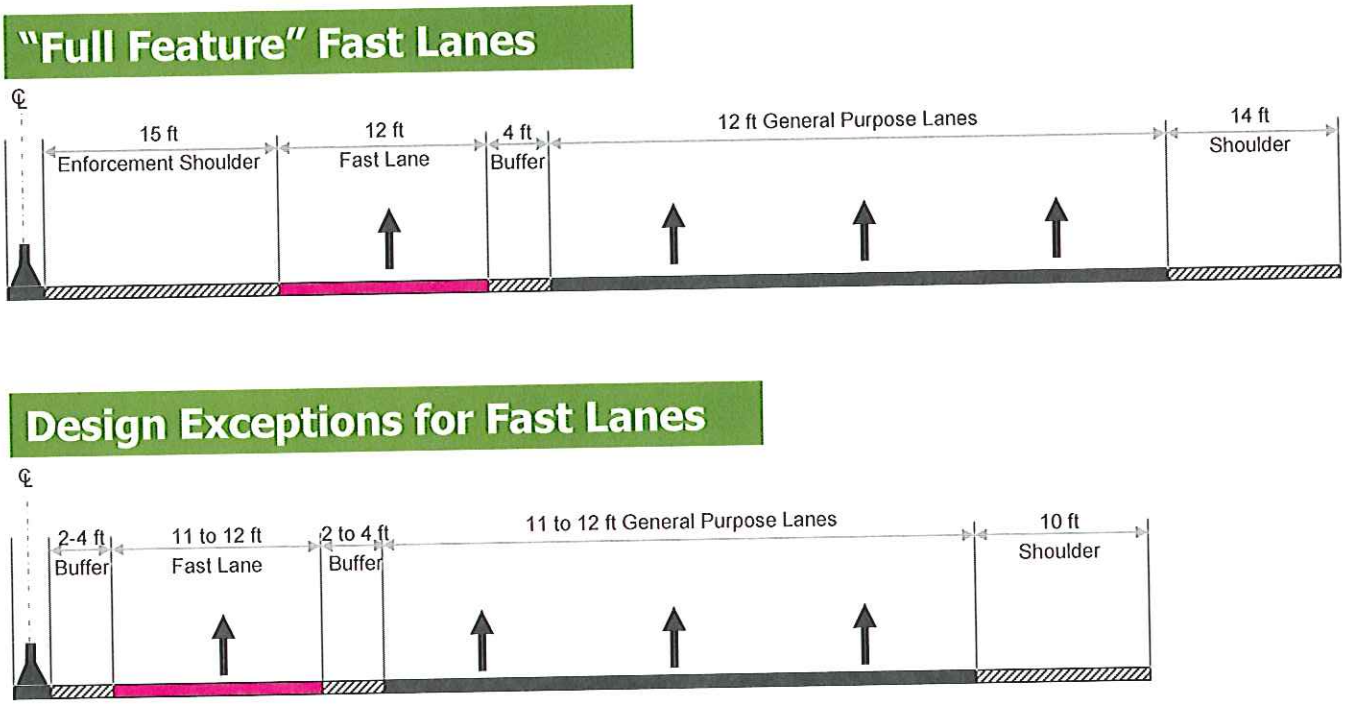
During the *Fast Lanes* study, the following two design approaches were considered when developing managed lane construction cost estimates:

- "Full feature" uses widths provided by NCDOT for shoulders, lanes and the buffer separation between *Fast Lanes* and the adjacent general purpose lanes. This provides for a flexible design that can facilitate effective lane management and enforcement.
- Use of design exceptions where needed would be consistent with practices used along I-77 for implementing this facility between I-85 and I-277 (Brookshire Freeway) as well as mirroring HOT lanes in many cities across the country.

Figure 5 compares a "full feature" cross section with the cross section that would be developed on constrained highway segments by allowing design exceptions.

In this application, which focuses on the MUMPO area, only the corridors within Mecklenburg and Union Counties would be evaluated to determine public support for priorities, network integration and other factors affecting phasing. The key, core components of a regional network of *Fast Lanes* are all located within the MUMPO area.

FIGURE 5: CROSS SECTION COMPARISON



G. TOLL IMPLEMENTATION STRATEGY

While the preferred implementation of tolling on the *Fast Lanes* network would be dynamic pricing, there are various policy options that must be considered and ratified prior to adoption of the toll policy. In the *Fast Lanes* study, revenue forecasts were conducted that illustrate choices. Toll revenues were dynamically optimized on a five-minute basis for individual corridor segments for the weekday morning peak, midday, afternoon peak and evening periods. From the modeling results, different revenue and toll estimates were generated by varying key policy choices, none of which have been determined as the final toll policy for the region:

- Pricing objective. HOT lanes can be operated to achieve a variety of different objectives. Some facilities might be operated to maximize toll revenues, which is appropriate when the HOT lane facility must cover its capital costs. Other facilities that are not financially constrained can be operated to maintain a target level of service or to minimize aggregate travel time costs for commuters within a corridor or for the overall network. Tolls were established in the Charlotte Region *Fast Lanes* Study to 1) maximize revenues, and 2) minimize the aggregate dollar value of time costs in each corridor. For both scenarios, the managed lane was limited to carrying no more than 1,600 vehicles per hour per lane.

- Carpool policy. Tolls were estimated for these policy scenarios – HOV 2+ free, HOV 3+ free, and all users pay.

- Travel (usage) demand. Vehicle volumes used in the tolling model to generate the revenue forecasts were derived from Metrolina travel demand model runs: 1) where the current HOV 2+ free policy would be in effect for the HOT lanes, and 2) where the HOT lanes would be operated as tolled general purpose lanes (unrestricted use).

H. ANTICIPATED BENEFITS

Congestion pricing on Charlotte-Mecklenburg freeways offers the promise of reducing motorists' delays and stress, making trip times more predictable, and increasing the dependability of deliveries. If free flow traffic conditions can be maintained either partially on select lanes or an entire corridor during pre-construction and post-implementation peak periods, an average commuter using a 10-mile freeway segment twice daily could save 10 to 20 minutes each day. Over the course of a year this is equal to a week or two of work or leisure time.

I. SOCIAL AND ECONOMIC EFFECTS

Pricing programs represent a significant shift in the way that Charlotte-Mecklenburg residents react to transportation. Pricing motivates drivers to adopt travel behaviors that maximize economic utility. In turn, pricing changes travel habits to manage congestion at peak hours and use the existing infrastructure most effectively. This can produce immediate benefits to the regional economy, while also providing revenue for advancing the construction of *Fast Lanes* years ahead of schedule, thus compounding regional economic benefits.

A significant social benefit of the proposed project will be the involvement of locally-driven decisions. The scope of work involves the consideration of implementing pricing on a network of corridors or on specific corridors. Those potential decisions would be affirmed by voters. Local residents will determine the acceptance of pricing on the sets of freeway corridors affecting their mobility, and to an extent, the form of that implementation. This is a novel approach to addressing geographic equity concerns, which places additional emphasis on adequate public outreach, involvement, and communication. This key factor is reflected in the proposed scope of work.

J. ROLE OF ALTERNATIVE MODES OF TRANSPORTATION

Alternative modes of transportation play a major role in the *Fast Lanes* program. In 2003 and 2004, representatives of CATS participated in operations planning for implementation of the HOV facility along I-77. They also served on the Steering Committee for the Regional *Fast Lanes* Study. The implementation of *Fast Lanes* will provide for an expanded base of fixed guideway (express bus) transit and HOV rideshare services. Advancing the implementation of tolling may also improve travel time reliability for preferential vehicles (buses and carpools) traveling on selected corridors. Key stakeholders in the MUMPO area recognize that the success of early implementation of tolling for congestion reduction will be partially dependent upon having adequate transit services present in the corridor(s) to accommodate diverted trips. This factor will be continuously monitored and implemented throughout the study.

K. SCOPE OF WORK FOR PROJECT

The following scope of work has been defined for this project.

Task One: Project Advisory Committee

By leveraging existing institutional partnerships from the regional *Fast Lanes* study – including two state DOT's and multiple other entities – technical and policy guidance committees will be formed early in the project. These committees will aid the project team in focusing efforts that can gauge the public's understanding and acceptance for new revenue options such as tolling as an early action item for proposed construction of freeway lanes or conversion or extension of HOV lanes.

It is anticipated that the committees will have approximately 10-20 members each. Likely transportation members, comprising half of the committee, will represent the same agencies that participated in the regional *Fast Lanes* study:

- MUMPO
- NCDOT/NCTA
- CDOT
- CATS
- Gaston Urban Area Metropolitan Planning Organization
- Rock Hill-Fort Mill Area Transportation Study
- Cabarrus-Rowan Metropolitan Planning Organization
- Rocky River Rural Planning Organization
- Lake Norman Rural Planning Organization

Additional non-traditional members will represent lower-income and disadvantaged communities, business and commerce interests, and advocates for commuters or residents. Groups have yet to be identified in the context of this proposal, but the intent is to provide for a well-rounded base of guidance for the development of publicly-acceptable early tolling and incremental implementation options.

Task Two: Program Definition and Analysis

The project team, in partnership with the technical and policy guidance committees, will refine the program definition as proposed here. The significant need for public outreach and involvement concerning new revenue options will lead to defining a new framework for locally-controlled pricing corridors. The program's purpose, goals, and objectives must be clearly understood and confirmed by the key parties so that ultimately, they can answer the succinct question, "What's in it for each of us?" This task will develop a messaging plan for communicating the goals and objectives through a variety of channels.

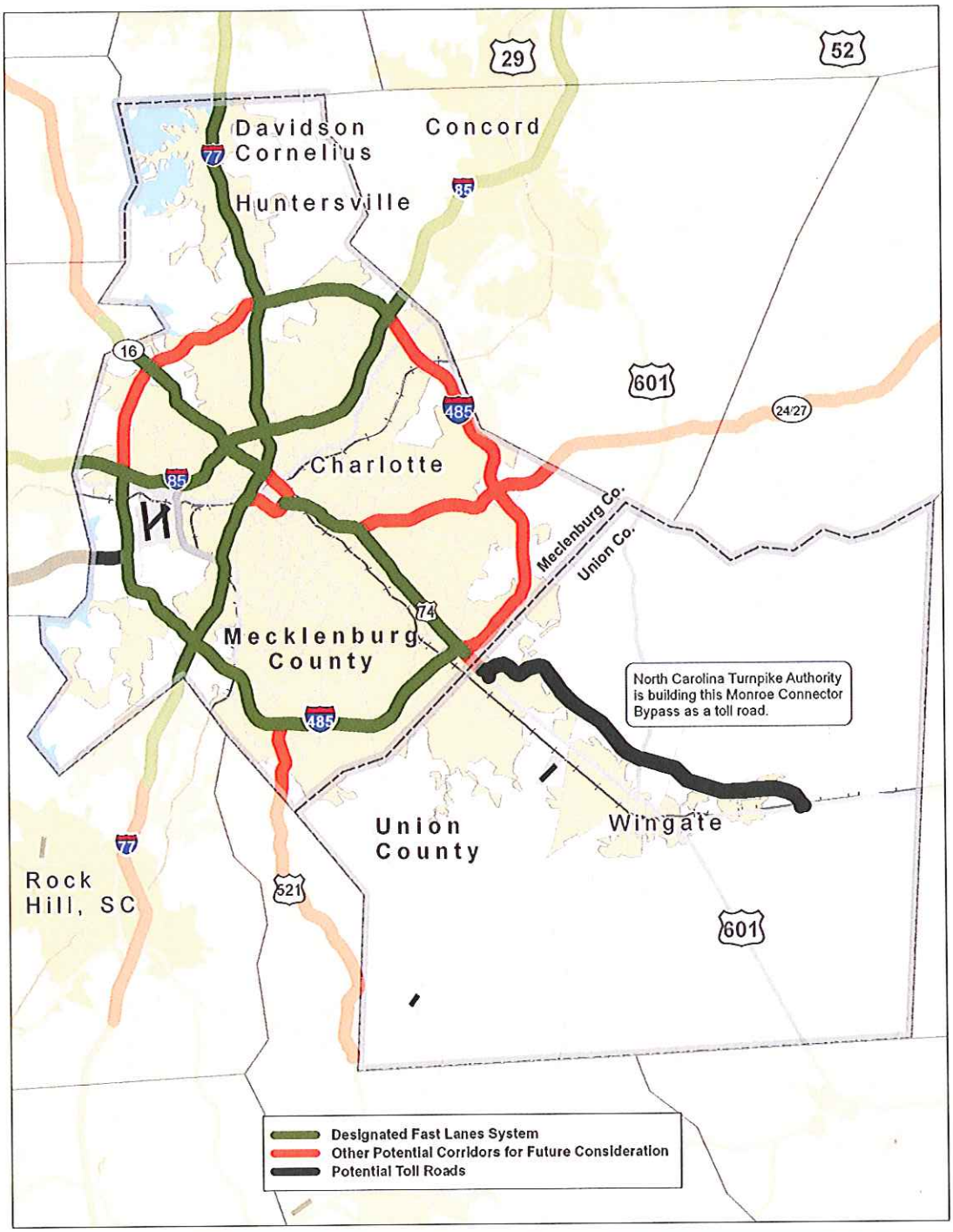
Various types of supporting analysis will be conducted. Clearly stating traffic and congestion trends within the target corridors, cataloguing currently anticipated revenue shortfalls in the 2035 Long Range Transportation Plan expected to be approved by MUMPO within two to three months, describing the near-term improvement program, and projecting revenues needed to keep pace with growing volumes and congestion will be important components of this task. The project team will chart the progress that MUMPO is making, or not making, in closing gaps between financial resources, adequate infrastructure, and performance metrics.

Task Three: Examine New Framework Alternatives

The core concept in this proposal is the development of a framework for defining new acceptable funding options (e.g. local gas tax, early tolling as a means of advancing revenue for construction of *Fast Lanes*

and/or incremental implementation of new toll concepts on a "pay as you go" basis). In Task Three, the project team will develop a framework document that will be used for implementation of the program moving forward in the MUMPO planning area. The focus of this task will be the development of a politically-feasible pricing policy that advances the intent of the *Fast Lanes* study and helps build support from the public for implementation of key parts of the network or specific corridors. **Figure 6** highlights the Phase 2 corridors from the *Fast Lanes* study in the MUMPO planning area, as well as the region's first planned toll road. That toll road – the Monroe Connector/Bypass – is also within MUMPO's area

FIGURE 6: PHASE 2 CORRIDORS IN MECKLENBURG-UNION (MUMPO) AREA



The document prepared in Task 3 will illustrate the primary revenue and pricing/early tolling options available to MUMPO (e.g. increased gas taxes, pricing all lanes, peak hour tolls, truck only tolls, pricing HOV lanes to HOT lanes (partial pricing), pricing interchange ramps or bypass routes, etc.). In Task 3, the project team will also examine the technical feasibility of the strategies, identify institutional partnerships necessary to complete the *Fast Lanes* or pricing projects, prepare a plan for engaging the public, define coordinated messaging and communication strategies, explain the financial implications (revenue generation, cost per user, etc.), and establish baseline benchmarks for public support.

Task Three will include a screening process to identify those *Fast Lanes* corridors within the MUMPO area which provide the greatest opportunity for congestion reduction. Corridor screening would also be based on where public support for new funding options appears to be strongest.

There is a precedent in Charlotte and Mecklenburg County for using this type of framework to build consensus for transportation system improvements. In 1998, local jurisdictions in Mecklenburg County completed a *2025 Integrated Transit/Land-Use Plan* which proposed a rapid transit system as a means of supporting land use initiatives to attain the regional vision of a "Centers and Corridors" land use plan. In order to realize the benefits of the Plan, Charlotte-Mecklenburg citizens approved a one-half percent sales tax for public transportation improvements in a 1998 referendum. Over the past 10 years, sales tax revenues, in conjunction with Federal and State financial assistance, have funded construction of North Carolina's first light rail transit (LRT) line, the CATS Blue Line in south Charlotte. Sales tax revenues have also facilitated significant expansion of the CATS bus system and continued planning for extending the Blue Line to northeast Charlotte, as well as planning and design for a commuter rail line to Northern Mecklenburg County. In 2007, Charlotte-Mecklenburg citizens rejected an attempt to repeal the transit sales tax by voting to continue the tax levy in a countywide referendum. Local support for public transit expansion has continued to grow as Charlotte-Mecklenburg residents experience the benefits of new, innovative transportation investments.

Task Four: Analysis for Early Tolling/Incremental Implementation

In Task Four, the project team will describe the key parameters for the nine study corridors within the MUMPO planning area and provide the technical basis for costs and benefits to be understood for individual and adjacent corridors. The technical assessment will focus upon each corridor's markets. This will include profiling the patterns of use of each corridor to determine who is using the corridor (including the split in each direction for each peak period between local-local, local-external, and external-external origin/destinations), route and mode diversion possibilities for the corridor, and socio-economic scalability for impacts assessment. Much of this information will be synthesized from the regional *Fast Lanes* study.

The profiling process will yield a matrix of use conditions, which will be necessary for assigning benefits/costs upon identifiable travel market or demographic profiles. In essence, this profile allows a traveler to self-assess the mobility benefits and individual costs from the implementation of early tolling/incremental implementation, answering the question, "How will this help me and what will it cost me?" The resulting documentation will provide a sketch analysis for each profile within each corridor, a technique called a Traveler Profile Analysis. Within these profiles, the project team will develop the boundaries of revenue generation for various pricing options, consistent with the framework documentation from Task 3. The assessment of pricing options will include revenue maximization, demand optimization, and ease of collection. Options will be presented within the context of each corridor's assessment, allowing local residents to respond to the discrete policy choices most relevant to them.

Task Five: Build Public Acceptance

The public and business leaders in the greater Charlotte region have already been engaged through a variety of preliminary efforts to define new revenue sources for transportation. The "Committee of 21" endorsed tolling (and even consideration of tolling existing general purpose lanes) as one of their four recommendations for funding transportation improvements in Mecklenburg County. One-on-one interviews conducted during the recent regional *Fast Lanes* study to test interest in congestion pricing as a means of providing mobility and modal choices revealed no intrinsic or organized opposition to tolls.

Moving forward, building public acceptance will require a broader and more targeted effort for the study corridors within the MUMPO area. A robust public assessment effort will be conducted to provide education about the framework (including need for action), and, the identified costs/benefits per corridor for each traveler profile. Through a combination of stated preference surveys, focus groups, virtual open houses, and other engagement tools, feedback from different groups of stakeholders will be tabulated in order to confirm or refute the technical benefit/cost calculation. The specific application of each type of assessment will be driven by the specific issues identified in the tolling strategy from the framework alternatives in Task Three. Furthermore, the project team will need to be conscious of previous research conducted by UCLA identifying the political calculus for congestion pricing, which stipulates that a vested interest in the allocation of the revenue must accompany the pricing proposal. The project team will test the desirability for stakeholder groups to self-affirm by specified means their reactions to early tolling and/or incremental implementation options.

Task Six: Pilot Program Design

While the public acceptability tasks are being conducted, the project team will develop a pilot program, including design and administration for advancing new revenue concepts such as the early tolling approach. This will include a pilot program structure, specific strategies to be implemented concurrent with an investment and funding schedule, how the project's success or effectiveness will be measured and evaluated over time, and coordination with various stakeholder groups. The intent of this design will be to prepare for corridor-based "referendums" on specific plans for implementation.

L. PROJECT TIMELINE

TASKS:	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
1: Project Advisory Committees												
2: Program Definition and Analysis												
3: Examine New Framework Alternatives												
4: Analysis for Early Tolling/ Incremental Implementation												
5: Build Public Acceptance												
6: Pilot Program Design												

M. PROJECT BUDGET

TASKS:	Cost
1: Project Advisory Committees	$40,000
2: Program Definition and Analysis	$40,000
3: Examine New Framework Alternatives	$40,000
4: Analysis for Early Tolling/ Incremental Implementation	$100,000
5: Build Public Acceptance	$220,000
6: Pilot Program Design	$60,000
Total (Tasks 1-6)	$500,000
Local (20%)	$100,000
Federal (80%)	$400,000

N. PUBLIC INVOLVEMENT AND OUTREACH

The scope of work's descriptions for Tasks Two and Five indicate the intended approach of public outreach and involvement for this network or system-based effort. The proposed activities build upon an extensive base of public engagement in the region. The proposed work plan intends to advance the following public outreach and involvement activities:

- Ongoing Public Opinion Assessments. Over the past two years, an appointed citizens group comprised of local business and community leaders, known as the "Committee of 21", explored transportation issues facing the City of Charlotte and Mecklenburg County. The committee examined numerous revenue options for meeting local highway needs. A key recommendation of the "Committee of 21" included tolling all lanes along interstates within the County in order to raise revenues for freeway expansion. During the Charlotte Regional *Fast Lanes* Study, one-on-one interviews were conducted with 15 key stakeholders representing a cross-section of governmental, commercial and citizen interests. The purpose of these interviews was to assess public opinion on congestion pricing in the Charlotte region, and this group of interviewees supported congestion pricing as a means of providing options for motorists and preserving capacity along congested roadways.

  Public education and discourse is an essential element to continue throughout all facets of project development. As decisions regarding operations, pricing and toll policies, and multimodal use of priced facilities are in flux, obtaining public input and participation is crucial to maintaining informed consent and acceptance of these strategies. This proposal envisions a continuation of public and stakeholder opinion assessments and outreach for the use of pricing. This will include targeted assessment of public opinion and development of communication materials. Tactics will include communication support, regional market research and assessment activities, and select-audience market research. Continuous discussions and referrals to elected officials in the MUMPO area will also be a crucial component of this endeavor.

- Regional Program Branding. MUMPO and its partners will expand the *Fast Lanes* brand into a comprehensive, cooperative effort for the congestion pricing program. This program will be branded in such a way that the public will have a recognizable reference for discourse. The existing website, www.fastlanes.org, will continue to be used for disseminating information and providing a place for citizens to provide input.

- Value Added Marketing. Studies have found that commuters tend to adjust to price fluctuations with varying levels of elasticity. Short-term shocks have a more significant impact on behavior than long-term structural changes. In order to be effective throughout the life of the program's implementation, MUMPO and its partners will identify value added marketing opportunities to explore market differentiation and maximize the effect of price options.

- Proactive Public Relations. Public relations for the proposed pricing program will endeavor to 1) provide a formal gateway to the media, policymakers, and other stewards of public acceptance, and, 2) handle immediate requests for information. Public relations are not simply an extension of marketing and public information, but are also a continuing, long-term commitment to a meaningful dialogue with the public. The intent of the proactive public relations component is to research and report on the program's ability to meet the public's objectives, meaningfully interact with the media, analyze and interpret how public opinion and attitudes can help the regional pricing program adapt to public and policy expectations, and provide comprehensive information to decision-makers directly involved in the program.

O. PLANS FOR MEETING LEGAL AND ADMINISTRATIVE REQUIREMENTS

The NCTA is currently authorized to study, plan, develop and undertake preliminary design work on up to nine toll facilities in the state. The NCTA is authorized to design, establish, purchase, construct, operate and maintain the following projects:

- Monroe Connector/Bypass (which is located within MUMPO's planning area at the eastern terminus of the US-74 and I-485 corridors)
- Gaston East-West Connector (which is partially located in MUMPO's area)
- Cape Fear Skyway
- I-74 (Brunswick County)
- Mid-Currituck Bridge
- Triangle Expressway (Triangle Parkway and Western Wake Parkway)

Any other project assigned to or proposed by the NCTA must be approved by the North Carolina General Assembly prior to construction. Before the NCTA will consider a project for a toll road, it must receive a recommendation from local officials that the construction be studied as a priced facility. The NCTA is authorized to collect tolls on any existing interstate highway for which the United States Department of Transportation has granted permission by permit, or any other lawful means, to do so.

By law, NCTA is prohibited from converting any segment of the non-tolled State Highway System to a tolled facility. However, in June 2006, Senate Bill 1381 was amended to allow tolling of a segment of NC-540 under construction as of July 1, 2006, with the approval of the local MPO's. That roadway is located in Wake and Durham counties and extends from I-40 southwest to NC-55. It is anticipated that this study will provide the justification for generating support from MUMPO and its key local jurisdictions, particularly those in Mecklenburg County. Implementing specific pricing strategies may require legislative authorization.

P. PRIVATE ENTITY PARTICIPATION

North Carolina has adopted some of the more flexible models of project delivery, such as "public-private partnerships" or "PPPs". NCTA is using the PPP procurement approach to build the Mid-Currituck Bridge project.

Q. ELECTRONIC TOLL COLLECTION

The NCTA is relying on the most up-to-date technology for new toll facilities in North Carolina. The NCTA has started to build its first facility – the Triangle Expressway in Wake County. NCTA helped found the Alliance for Toll Interoperability, a coalition of 30 turnpike authorities from Canada to Mexico dedicated to establishing uniform, seamless, and interoperable processed that facilitate toll collections. NCTA has also been an early proponent of video-based tolling.

The Charlotte area pricing program will be fully compatible with NCTA systems of toll collection, but may use transponder-based communications to augment video tolling under the *Fast Lanes* system (so as to provide the ability for HOV toll benefits).