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I. EXECUTIVE SUMMARY

The Future

Over the next 20 to 25 years, Charlotte's Center City employment is expected to increase from 55,000 to 95,000. More than 30,000 people will choose to live in Center City, supporting a 24-hour environment. New cultural facilities and entertainment venues will be built, more exciting restaurants and specialty shopping will open, one or more major parks will be created, and events at the Arena, Convention Center and other venues will grow - all of which will attract additional visitors to Center City.

Whether people drive, take transit, ride bicycles or walk to Center City, everyone becomes a pedestrian once they arrive Uptown. That concept is fundamental to this plan. Those who commute by car will park and walk to their job. Rapid transit riders will arrive at their station and walk to their destination. A growing number of people will leave their homes in Center City and walk to work.

This *Center City Transportation Plan* provides a strategy, policies and implementation actions that will make these forms of transportation function smoothly in a dynamic Uptown environment. As the future unfolds, Center City's streets, sidewalks and parking will be transformed to support a pedestrian-friendly, transit-oriented, employment, cultural and entertainment center of the region. This is the strategy that can facilitate this transformation.

The study area of this Plan is defined in the most part by the I-77/I-277 freeway Loop and Twelfth Street which serves as a service street on the north side of the Loop. A few facility recommendations outside the Loop that relate strongly to transportation functions inside the Loop are also incorporated. These include removal of the Caldwell Street - Brevard Street connector, the extension of Fifth Street to Kings Road, and the connection of Davidson Street or another street to Euclid Avenue.

Primary Themes

- **Make Center City more pedestrian-friendly.**
Sidewalks will generally be wider and more aesthetically pleasing, with street trees, street furnishings and attractive paving.





It will be easier to cross streets, with fewer right-turn and left-turn lanes. There will be a coordinated system of wayfinding information to help people find their way around Center City on foot and by car, for easier access to destinations, services, transit stops and available parking. Center City, with the largest concentration of employment in the region and extensive residential, retail and entertainment facilities, provides the greatest opportunity to reduce mid-day use of automobiles, thus offering a substantial benefit to air quality.

- **Integrate the new transit system with the street network and sidewalks.**

When the five-corridor rapid transit system is complete, nearly every business, cultural attraction and entertainment destination in Center City will be within a five-minute walk from a transit stop or station. Once they get off the train or bus, every transit rider will become a pedestrian. The streets will be made more pedestrian-friendly to enhance the riders' walk to and from their destinations.

- **Make the walk from transit stops and parking facilities easier and more attractive.**

The transit journey doesn't end upon getting off the train or bus. The walk from the transit stop to the destination is a big part of the trip. A comfortable and attractive walk will encourage more people to use the transit system on a regular basis. This plan proposes a system of Pedestrian Street Design Standards that specify sidewalk construction standards and amenity guidelines for three levels of streets in Center City. Furthermore, every driver and their passengers will become pedestrians once they park; these same standards will also make the same sidewalks easy and attractive for commuters and visitors.

- **Make more streets two-way, so Center City is easier to navigate.**

One-way street systems can be confusing. They can lead to unnecessarily longer driving in the search for parking or a destination. They can be confusing to visitors and to people who are unfamiliar with Center City. Changing some one-way streets to two-way will help these

infrequent visitors as well as reduce congestion, air pollution and pedestrian conflicts.

- **Keep some streets one-way to get rush hour traffic to and from parking efficiently.**

Most commuters and visitors will still drive to Center City. The street system needs to get them to a parking space as efficiently as possible while minimizing traffic congestion and air pollution. Indeed, the location of existing parking decks will necessitate keeping some one-way pairs. To move traffic into and out of Center City as efficiently as possible, the main one-way streets of Third, Fourth, Fifth, Sixth, Church and College will remain one-way. These one-way streets will provide efficient access to and from Center City; the two-way streets will provide ease of circulation within Center City.

- **Encourage more traffic to use I-277 and an internal circulator route, instead of driving across Center City.**

In most cases, there is no need to drive across Center City. The need is to drive into Center City, then park and become pedestrians. Drivers approaching Center City on a major thoroughfare should use the exit nearest their destination. Several I-277 access points have "short weave" movements that can be unsafe, and this plan proposes modifications to make I-277 more serviceable. Furthermore, when feasible, drivers approaching on the street network should use an internal circulator route - consisting of McDowell, Stonewall, Graham and the 11th/12th Street couplet - as an alternative to using internal Center City streets. The traffic analysis for this plan found that streets within the freeway loop are functioning adequately and will continue to do so as Center City grows. But using these approaches will enhance circulation and reduce congestion as traffic volumes increase.

- **Make it easier to find parking spaces, especially for occasional visitors and major events.**

Once drivers have arrived in Center City, four "parking loops" will direct drivers to available parking decks along and near Tryon and Trade Streets. Electronic message signs will provide drivers directions to parking decks on these loops, and dis-



play real-time information on the availability of spaces in each deck. A Collaborative Parking System will allow businesses, merchants and restaurants to validate parking in any of the participating facilities. When the drivers and their passengers become pedestrians, a pedestrian signage system along the sidewalks will help them find their way to their destinations and back to their parking space.

This strategy for Center City transportation will:

- make *transit trips* to Center City more accessible, thereby encouraging more riders;
- make *driving trips* more efficient, thereby reducing congestion and air pollution; and
- make the *pedestrian* environment more attractive, encouraging people to come more often and stay longer and, most importantly, leave their automobiles parked for longer periods.

A Guide to this Center City Transportation Plan

Part One: Introduction (Pages 1-4)

This plan implements the transportation recommendations of the Center City 2010 Vision Plan and related plans developed since 2000. Part One sets the stage by giving the reasons for this new plan, listing basic assumptions and outlining how the plan will be applied.

Part Two: Vision (Pages 5-20)

This part spells out the vision that guides the transportation plan. This vision is articulated as a matter of policy primarily by the 2010 Vision Plan, but it is also shaped by other Uptown area plans, by trends in public and private development, and by the views of stakeholders and workshop participants consulted during this plan's development.

Part Three: Framework (Pages 21-30)

The Framework consists of two major elements that make up the starting point for planning the new Center City transportation system: the existing system and growth forecasts.

Existing System: This section describes the characteristics of the existing street network, pedestrian environment, and the transit, bicycle and parking facilities. Two special analyses were undertaken. One analyzed the pedestrian condition of every block face in the Uptown study area; this comprehensive atlas of baseline data played a key role in the new transportation system by helping define standards for streetscape design and other improvements supporting pedestrian use. A second analysis, focusing on automobile traffic, reached these conclusions:

- The streets leading into Center City - the "gateways" - are relatively uncongested during the peak commuter period.
- Most intersections in Center City are also operating well within their potential capacity.
- While the street network operates acceptably during morning and evening peak hours, congestion does exist on the major approach routes well outside the Center City.
- The number of vehicles entering Center City during the morning peak has remained relatively constant over the past several years.
- During the same time, the average number of people per vehicle has declined slightly.

Growth Forecasts are another factor that determines the framework for the new plan. These are the basic forecasts for Center City over the next 25 years.

- **Population: 30,200** total population by 2030 (a net increase of 22,400 persons)
- **Households: 17,000** households by 2030 (net increase of 12,800 additional households)
- **Employment: 95,000** employees by 2030 (net increase of 40,000 additional employees)





Part Four: Transportation Plan (Pages 31-87)

This is the heart of the Center City Transportation Plan. This section describes the strategic approach and presents recommendations for each transportation system component.

Strategic approach. The transportation system has certain “structural” features - The Square, the I-277/I-77 expressway loop, the street network, rapid transit stations, major pedestrian destinations, and major pedestrian streets. Against this structural backdrop are the moving pieces, the major transportation modes - vehicular, pedestrian, transit and bicycle. The plan focuses on how these modes interact with the streets, stations and destinations to assure an efficient transportation system. Seven important concepts guide this plan:

1. Everyone is a pedestrian.
2. Major destinations will be a five-minute walk from a transit station.
3. The key pedestrian streets support a direct walk from transit.
4. The key pedestrian streets also link neighborhoods and open space.
5. New office building locations should reinforce the concept of a walkable Uptown.
6. Center City can be a “park once” location, especially if motorists find a pleasant, walkable environment between their parking deck and destination.
7. Moving traffic into Center City efficiently means getting motorists to their parking destination more directly.

Plan Recommendations

The plan makes specific recommendations about land use and urban design, and then presents specific proposals for each of the four modes - pedestrian, bicycle, transit and vehicular - as well as for a collaborative parking system and a comprehensive way-finding system. The recommendations are listed below.

Land Use

1. **Use transportation and parking strategies to support growth** and intensification of various land uses, with emphasis on office employment.
2. **Provide multi-modal transportation solutions to support land use recommendations** that will produce a memorable, vibrant Center City.

Urban Design

3. **Promote pedestrian vitality** through the design of Center City streets by enhancing human scale and street-level features.
4. **Apply the Street Enhancement Standards Map** which is recommended for adoption.
5. **Apply the framework of vehicle and pedestrian/transit gateways and memorable streets** described in the Center City 2010 Vision Plan.

Vehicular Circulation

6. **Complete the proposed modifications to the I-77/I-277 Loop.** These nine projects would resolve specific problems (such as those stemming from short weave segments) and, in general, make the freeway loop more effective in distributing Center City traffic - a prerequisite to assuring smooth traffic flow within Center City.
7. **Convert selected one-way streets to two-way streets** to improve vehicular circulation within Center City. Nine conversions are proposed. Most notably, the remainders of Caldwell and the two segments of Brevard would be made two-way streets. This conversion enables Brevard to become a Signature Pedestrian Street with unique development opportunities between the Arena and the Convention Center, as well as to the north of the Arena.
8. **Retain selected one-way streets**, including the primary commuter streets in and out of Center City during peak morning and afternoon hours. These designated streets include Third, Fourth, Fifth, Sixth, College, Church, Eleventh and Twelfth.





- 9. Construct new streets or street segments** to improve connectivity and meet special needs. These new or modified streets include those in the vicinity of Gateway Station and Third Ward Park, an overpass over I-277 from Second Ward to Dilworth (Davidson or Alexander to Euclid), street extensions in First Ward and neighborhood residential streets in the future redevelopment of Second Ward.
- 10. Convert travel lanes on streets with excess lane capacity** and/or lane width to use for increased sidewalk widths, on-street parking, and/or bicycle lanes. These street segments are identified.
- 11. Modify turn lanes and intersections where turn lanes are unnecessary** for the estimated volume of turning traffic or where safety or pedestrian crossing conflicts are a concern. Eight intersection configurations are identified.
- 12. Modify or close rail grade crossings** where made necessary by expanded rail service to Center City. Five crossings are identified.

Parking

- 13. Create a “Collaborative Parking System” for the management of private and public parking facilities.** The intent is to organize and unify private and public parking assets in Center City through an entity that provides such services as a parking guidance or “wayfinding” system.
- 14. Expand the On-Street Parking system managed by the City,** by increasing the number of on-street spaces, expanding hours of operation, and offering payment options.
- 15. Develop an Off-Street Parking Policy framework for City participation in the parking component of mixed-use projects.** This policy would establish conditions for financial participation by the City in providing joint parking solutions for appropriate mixed use development, and consider such measures as “payment-in-lieu” of building new parking.

Wayfinding

- 16. Continue to expand the Pedestrian Wayfinding System,** are developed for the light rail transit line, and expand it throughout

Center City to provide kiosks and directional signs that orient and inform pedestrians.

- 17. Develop a Vehicular Wayfinding System,** in conjunction with the Collaborative Parking System, to direct motorists into Center City, guide visitors in navigating the street network, and help all locate the most readily accessible parking closest to their destination. The vehicular system will utilize dynamic signs to provide real-time information on available spaces in parking facilities, and will be coordinated with the pedestrian wayfinding system that will orient pedestrians once they have parked their car.

Transit

- 18. Capitalize on the synergies created by the new Charlotte Gateway Station** which serves as a multi-modal transit center, a pedestrian focal point, and a generator of office employment on West Trade Street.
- 19. Complete the North Corridor commuter rail and AMTRAK spine** along with the associated closing of the at-grade crossings at Ninth, Smith and Church Streets, modifications of the at-grade crossings at Brevard and Davidson Streets, extension of Martin Luther King, Jr. Boulevard (MLK, Jr. Boulevard), and construction of a pedestrian/bicycle overpass at Ninth Street.
- 20. Complete the north-south LRT transit spine** by extending the South Light Rail Transit (LRT) Corridor (and its related pedestrian and bicycle amenities) through Center City to become the North-east LRT Corridor.
- 21. Establish an east-west transit way** along Trade Street that (a) includes pedestrian-friendly streetscape improvements; (b) carries LRT or Bus Rapid Transit (BRT) services from the West and South-east Corridors; (c) connects West and East Charlotte via streetcar service; (d) provides local bus stops; and (e) links the two major transit nodes - the existing Charlotte Transportation Center and the future Charlotte Gateway Station.
- 22. Introduce east-west streetcar service,** first in Center City along the Trade Street transit way and, later, connecting with neighborhoods in East and West Charlotte; the Streetcar system should also





circulate within Center City and connect residential areas inside and outside the Loop with key Center City destinations.

Pedestrian Circulation

23. Adopt the Streetscape Standards and codify the standards in the UMUD and UR zoning districts and the Uptown Streetscape Design Guidelines.

23a. Apply the Hierarchy of Pedestrian Streets based on the Uptown Streetscape Standards

23b. Update the Uptown Streetscape Design Guidelines to incorporate these standards for the Center City.

24. Adopt the Street Enhancement Standards Map which identifies appropriate pedestrian and vehicular enhancements and serves to regulate their implementation at the time of private redevelopment or public infrastructure improvements.

Bicycle Circulation

25. Implement bicycle circulation improvements and integrate bicycle system with the adopted Charlotte-Mecklenburg Bicycle Transportation Plan. This includes bicycle lanes, signed bicycle routes and off-street routes; improvements to express-way underpasses and overpasses; and bicycle parking facilities.

25a. Bicycle Lanes, Signed Bicycle Routes, and Off-Street Routes should be designated in accordance with the city-wide bicycle plan

25b. Improvements to expressway underpasses and overpasses that improve bicycle access to Center City should be done in conjunction with vehicular and pedestrian improvements outlined in this Center City Transportation Plan.

25c. Bicycle parking facilities will be expanded through the recently amended zoning code requirement for new parking structures; through the street furniture element of the Pedestrian Street Standards in this document; and through project funding as it becomes available.

Part Five: Implementation (Pages 87-90)

The final chapter describes various tools and funding mechanisms that will help implement the recommendations of the *Center City Transportation Plan*. Key recommendations include a “General Annual Improvement Program”, the 2030 Long Range Transportation Plan, the CATS 2025 Transit System Plan, and Charlotte’s five-year Capital Investment Plan, as well as various State and Federal inter-governmental grant sources.

There are other means, as well. Revenue from the City’s on-street parking program could help fund the proposed parking and way-finding systems, or other projects. The City’s ongoing economic development efforts will generate activity that advances Charlotte’s economic growth and contributes to Center City’s vitality.

Finally, some of the key proposals of this plan - including the Street Enhancement Standards Map and the Pedestrian Street Standards - will be codified directly as well as through amendments to the zoning ordinance and streetscape standards. Future development in Center City will need to meet the standards. In many cases, new projects are already meeting many of those standards.





II. INTRODUCTION

Charlotte has a long-standing tradition of planning for its Center City, beginning in 1966 when it was still the city's major retail district. That year, the "Greater Charlotte Central Area Plan" emphasized wide streets for access to Uptown stores, and parking for shoppers near the Square. Later, as an office skyline took shape and, more recently, when residential neighborhoods were revitalized, new plans in 1980 and 1990 broadened the focus to address pedestrian and transit considerations. Now, the latest plan – the Center City 2010 Vision Plan (adopted in 2000) – brings more ideas and proposals for the public agenda that affect the Center City's transportation system.

Meanwhile, the vitality of Center City Charlotte brings ongoing, dynamic change. Light rail transit began service Uptown in the fall of 2007, and other transit corridors are being planned. New public facilities are opening, including the Arena, ImaginOn, and the new County Courthouse. A new multi-modal Charlotte Gateway Station on West Trade Street will affect how people come to Center City and how they move around once they are here. Private sector development plans continue to fuel growth in Center City, too. In particular, the prospect of several high-rise residential buildings means an expanding population base – and a changing residential character – for Center City.

Objectives

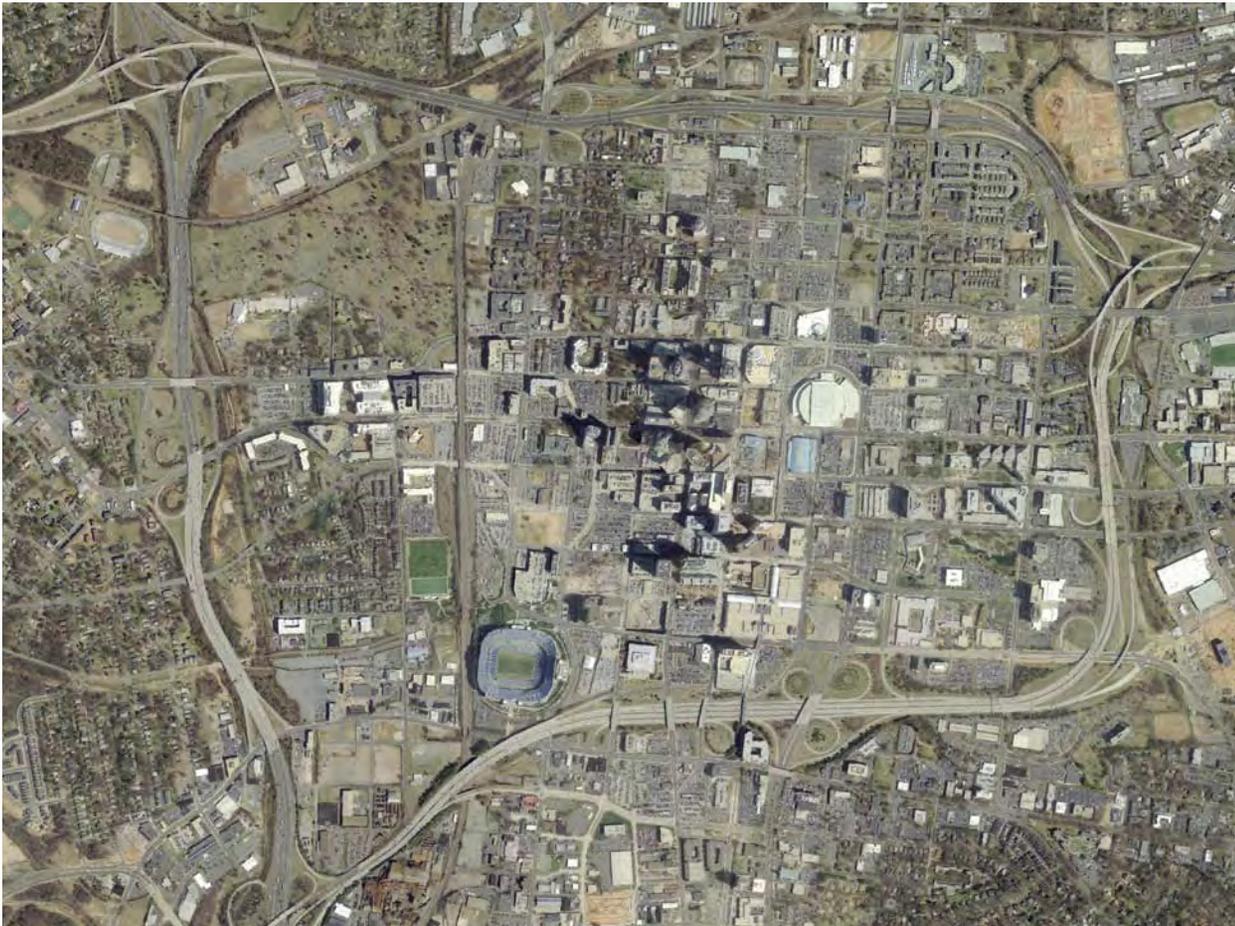
The *2010 Vision Plan* – as well as ongoing growth and change in Center City – makes it important to re-examine the way the transportation system is working and incorporate new proposals that will enhance the system to support growth through 2030.

This **Center City Transportation Plan** (CCTP) provides policy direction and strategies for implementing the *2010 Vision Plan's* transportation recommendations and those of subsequent planning studies.

Specifically, this plan's objectives are to:

- Implement transportation recommendations of the *Center City 2010 Vision Plan* and subsequent area plans,





Area of Center City Transportation Plan

Basic Assumptions

The approach to this study is guided by three fundamental assumptions.

1. *Center City is the regional economic hub and the heart of the city.*

Since Center City is the central business district and a vital hub of Charlotte, its influence extends well beyond its own boundaries. It is the nation's second largest banking center as well as the commercial capital of the Carolinas, and has the region's richest concentration of office, governmental, cultural, sports, entertainment, education and health facilities.

Charlotte's emphasis on Center City as the metropolitan center has been well established as a matter of policy. The **Centers and Corridors Plan** (1994) is Charlotte's basic growth policy and is built on Center City as the region's primary center. The plan encourages growth in existing centers and corridors in Charlotte-Mecklenburg in order to make better use of existing infrastructure and transportation and promote mixed-use development there while protecting lower-density neighborhoods in the "wedges" between the corridors.

- Implement transportation and parking strategies to support economic development in Center City, and
- Implement appropriate enhancements for all transportation modes.

The study area is depicted in the map on page 2. While the *Center City Transportation Plan* focuses on the area within the I-277 Loop, the importance of connections to adjacent areas is also considered.

2. *Employment and residential growth will continue in Center City.*

The Charlotte region boasts one of the most robust economies in the United States. A key objective of this *Center City Transportation Plan* is to develop transportation strategies to maximize economic development opportunities in the Center City and, by extension, the Charlotte region.

The forecasts of this plan and of other studies anticipate strong and sustained growth in the Center City between 2005 and 2030.



Centers and Corridors Plan

Over the next 25 years, employment in Center City is expected to grow from the current estimate of 55,000 jobs to about 95,000 in 2030. During the same period, the resident population in Center City will increase from the current estimate of 7,840 to 30,200.

3. The “Center City 2010 Vision Plan” sets the stage for this plan.

The **Center City 2010 Vision Plan** (adopted in 2000) is the latest in a series of comprehensive center city plans that have helped shape Center City’s form over the years. The plan envisions a

“livable and memorable” place with “distinct neighborhoods and unique infrastructure.” It proposes bold “catalyst projects” - such as a large central park near the federal courthouse, an urban village on North Tryon, and housing in Second Ward - to help make the vision a reality.

The plan’s transportation component highlights the notion of pedestrian-oriented “green streets,” along with one-way “workhorse streets” and an east-west transit corridor along Trade Street.

While the *2010 Vision Plan* is the platform for this Center City Transportation Plan, other technical studies were also reviewed for this plan, including a 1996 parking study and a 1998 analysis of street capacity. This plan also considers the 2003 *CATS Corridor System Plan*, which includes a description of how the five rapid transit corridors are expected to function in Center City and how specific streets will be used in this configuration.

The Role of this Plan

Given this background, what is expected of the “Center City Transportation Plan”?

The primary purpose of the CCTP is the definition of a comprehensive strategy, encompassing all modes, for implementing transportation improvements that support the recommendations of the *Center City 2010 Vision Plan* (2000) and related subsequent plans and actions.

The *2010 Vision Plan* is a comprehensive plan for all aspects of Charlotte’s Center City. This follow-up plan narrows the focus to the critical transportation elements and how those can be carried out to make the overall vision for Center City a reality. Accordingly, this plan plays an important role as part of the overall public strategy for maintaining Center City’s viability as a major employment center while also expanding its livability through increased residential, retail, public and entertainment activity.

In keeping with the *2010 Vision Plan*, this study gives particular emphasis to integrating pedestrian, bicycle and transit modes, in balance with the automobile, in the Center City’s transportation system - a concept referred to as “complete streets.”

How will this study be applied?

The *Center City Transportation Plan* will be used in a number of important ways that are more fully described in this report’s concluding chapter on “Implementation.” Among the key applications are these:

- Perhaps the most significant product of the plan is the **Street Enhancement Standards Map** (page 81) which codifies the study’s recommendations related to pedestrian and vehicular circulation, on-street parking, and other functions that will occur in the street rights-of-way and adjoining property frontage.
- Equally important, this plan includes a specific agenda of improvement projects (incorporated in policies) to the Center City street network and the I-277/I-77 Expressway Loop that will be implemented through the City’s Capital Investment





Plan (CIP), the Transportation Improvement Program (TIP) and other public initiatives, as well as in conjunction with specific private and public development projects.

- Key parking recommendations - a **collaborative public-private parking system** and a related, comprehensive **wayfinding system** - could mean fundamental change and exciting improvement for the way parking is made more available and accessible, and in the way visitors and commuters find their way into and around Center City.
- **Streetscape standards** are established for a hierarchy of pedestrian street types (page 75), to enhance the pedestrian environment, and these will be implemented through revisions to the Uptown Mixed Use District (UMUD) zoning district standards and the Uptown Streetscape Design Guidelines (USDG).
 - The recommendations for the streetscape and pedestrian environment set the stage for **amendments to the Zoning Ordinance**, the primary mechanism through which these recommendations can be implemented.
 - Furthermore, the **Uptown Streetscape Standards** (previously adopted as the Uptown Streetscape Design Guidelines) have been expanded to encompass all of Center City. The USDG are now limited to the Tryon Street Mall and Transit Corridor, but the CCTP incorporates design elements that are very similar to classifications in the USDG and greater priority is given in the CCTP to specifying pedestrian elements in the street network.

The *Center City Transportation Plan* provides a conceptual framework for why its recommendations are important for the transportation system, as well as a pragmatic course of action for carrying them out.

Public Involvement In The Preparation Of This Plan

Preparation of the *Center City Transportation Plan* began in 2003 with key stakeholder interviews in October 2003 followed by the first Community Workshop in January 2004. Presentations to interest groups occurred continuously between 2003 and 2005. Uptown Public Information Kiosks were displayed in December 2004 to communicate the purpose and components of the Study. Separate Workshops were held on Parking and Wayfinding in 2004 and 2005. A second Community Workshop was held in April 2005 followed by a second round of Key Stakeholder Interviews during May - July 2005.

City Council's Transportation Committee reviewed Study Policy Recommendations during September - November 2005, then referred the Study Policy Recommendations to City Council for consideration and action. City Council adopted the *Center City Transportation Plan*, including the Policy Statements and the Street Enhancements Standards Map on April 24, 2006.

Special Notes:

1. Concurrent with the preparation of this plan, the City of Charlotte prepared and adopted new *Urban Street Design Standards* (USDG). The standards resulting from this plan and those from the USDG are complementary to each other. The USDG are not applicable inside the I-77/I-277 Loop, and the *Center City Transportation Plan* is not applicable beyond the Loop.
2. Second Street was renamed as Martin Luther King, Jr. Boulevard after all of the maps and analyses tables contained in this Plan were completed. Thus, the "Second Street" name still appears on the maps and tables. However, the name has been changed in the text and the approved short form of MLK Blvd. is most commonly used.





III. VISION

The introductory chapter outlines the reasons for this new plan, which is the latest in a series of plans for Charlotte’s Center City over the last forty years. This plan focuses on transportation aspects of the Center City; specifically, on implementing recommendations of the comprehensive *Center City 2010 Vision Plan* and responding to more detailed sub-area plans as well as new developments since that plan was adopted in 2000.

Before the specifics of this plan can be developed, it is necessary to know the “vision,” or the view of the future, toward which we are moving. This vision is articulated as a matter of policy primarily by the *2010 Vision Plan*, but it is also shaped by other Uptown area plans prepared since 2000, by new public and private projects already under construction or planned for the near future, and by the views of stakeholders consulted during this plan’s development.

Public Plans And Policies

Center City 2010 Vision Plan

The *2010 Vision Plan* is the benchmark for current Center City planning. It continues a series of plans for Charlotte’s Uptown, beginning in 1966 with the Greater Charlotte Central Area Plan and continuing with the *Center City Plan* (1980), *Center City Urban Design Plan* (1990) and, most recently, the *2010 Vision Plan* (2000).

The *2010 Vision Plan* is the key plan because it represents the adopted policy of Charlotte City Council and guides public actions for Center City. In fact, several of its unique ideas - the plan calls them “catalyst projects” - have since been incorporated in adopted plans for Uptown neighborhoods, including a major park in Third Ward and future residential housing in Second Ward. The plan’s basic goal is:

“ . . . to create a livable and memorable Center City of distinct neighborhoods connected by unique infrastructure.”

- *Center City 2010 Vision Plan*

This goal articulates the Center City vision. What would it mean to make this vision a reality? We look first at the plan’s overall proposals, to understand





2010 Center City Vision Plan

the possibilities for the future sketched by the plan, and then focus in detail on the implications for the transportation system and this *Center City Transportation Plan*.

“A Livable, Memorable Place”

The *2010 Vision Plan* for Charlotte's Center City says it strives to create a “livable place, a memorable city.” A livable city means more neighborhood stores and services, open spaces and a wider range of housing options. This process is well underway. The revival of First Ward, the emergence of Gateway Village and the arrival of John-

son & Wales University signal the viability of Center City as a residential area invigorated by mixed uses and activities.

Charlotte's Uptown is becoming a great place to live. Can it also become “memorable?” Can it achieve distinctive features that readily identify Charlotte in the public mind? Some of the 2010 Vision Plan's boldest measures call for enhancing Center City's open space, and reclaiming more of it. Most notably, it recommends a major park near the federal courthouse that would become the “heart of a Center City park system.” The plan stretches the imagination and even envisions a cap built over part of the freeway and topped with a park.

Distinct Neighborhoods

Center City is more than an Uptown skyline. In fact, it goes beyond the original four wards and spills over (or under) the freeway to link Johnson C. Smith University with Central Piedmont Community College, and South End with North Tryon. Celebrating the unique characteristics of these varied neighborhoods is at the heart of the 2010 Vision Plan.

Inside the freeway loop, the plan emphasizes redeveloping the old Second Ward as a neighborhood with housing, a school, and a reconfigured Marshall Park; stimulating development of an “urban village” along North Tryon; and encouraging new development around a revitalized Little Sugar Creek. It promotes the emergence of new districts that consolidate government uses, continuing or higher education facilities, or sports and entertainment venues.

Unique Infrastructure

The role of transportation is central to this aspect of the *2010 Vision Plan*. The plan made much of a “network of green streets”





- literally, parkways along urban streets - to connect neighborhoods and parks in Center City. At the time of the plan's adoption, Charlotte was planning trolley, bus and light rail systems, and now it is examining a multi-modal station and a streetcar line. These infrastructure elements are a unique and important part of Charlotte's future plan for Center City.

Transportation in the 2010 Vision Plan

With that overall background, the 2010 Vision Plan's specific proposals related to transportation can now be summarized. The plan underscores the role of transportation facilities in accommodating the needs of a dynamic Uptown and supporting the land use recommendations that will help produce a memorable Center City.

1. Streets

The 2010 Vision Plan recognized a hierarchy of streets that would vary from traffic-carrying "workhorse" streets to pedestrian-friendly "green" streets. Regardless of their category, each of Center City's streets should support a comfortable and impressive walking environment.

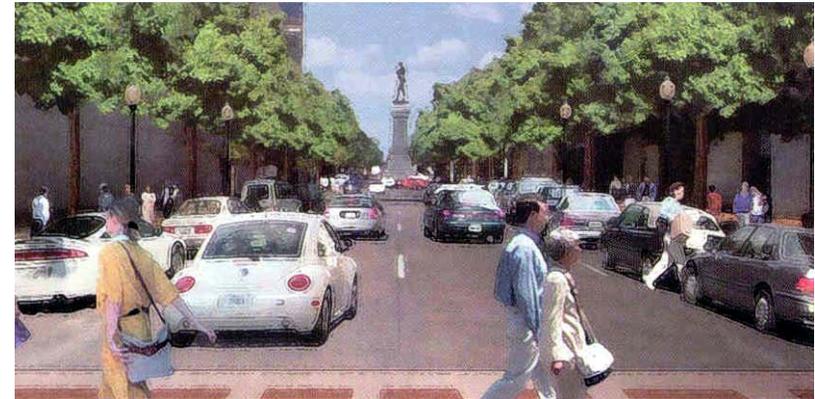
"Workhorse" Streets

Because of its preeminent role as a regional central business district, Center City must be accessible to the commuter. The private auto will be a major component of travel to work. Consequently, the plan says, the Uptown system should maintain key paired, one-way streets to accommodate roadway capacity requirements during peak hours.

The plan makes an important distinction about the role of Uptown streets, however. While these streets should deliver traffic to the city's business hub, they should not necessarily facilitate trips across Center City. In other words, while the importance of vehicular movement was stressed, it was also considered essential that a pleasant and safe pedestrian environment create comfortable paths from home and parking to office and other destinations.

"Green" Streets

An intriguing concept in the 2010 Vision Plan is the notion of "green" streets, a network of streets intended to connect neighborhoods and parks through Center City. These streets would be designed with

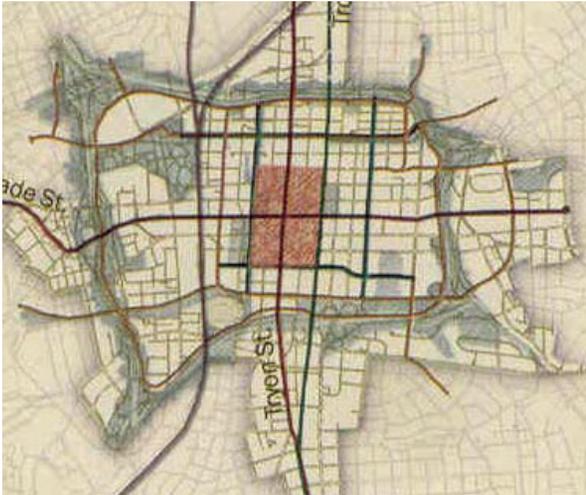


Workhorse Streets



Green Street





2010 Vision Plan Pedestrian Core



2010 Vision Plan Transit Corridor

narrow, two-way, local traffic only lanes. The road cross-section would include wide, park-like sidewalks for pedestrians and leisure activity, and on-street parking while still permitting lower volumes of vehicular access.

Green streets would serve a traffic-calming function by constraining vehicular speed and capacity. Distinctive entry features would reinforce the traffic limitations and signal to everyone that an “interesting” street lies ahead. These streets could be designed to accommodate a trolley circulator in the future, as well.

While the Center City Transportation Plan builds directly on the *2010 Vision Plan*, the terms “workhorse streets” and “green streets” have not been carried forward. The hierarchy of pedestrian-oriented streets results in far more streets functioning as “green streets” than proposed in the *2010 Vision Plan*. The retention of key one-way streets, and the focus of the vehicular way-finding system on them, is similar to the “workhorse” concept. However, the intent of the CCTP is to strengthen the emphasis on pedestrian circulation, which does not fit with the term, “workhorse.”

2. Pedestrians

The pedestrian theme is central to the *2010 Vision Plan*. It recommends a “pedestrian core” in the heart of Uptown - bounded by Seventh Street, Poplar Street, MLK Blvd. and the Light Rail Corridor - in which slower speed limits and signal timing adjustments should slow cars and protect sidewalk activity. Streets would be open to vehicular traffic, of course, but distinctive streetscape elements, landscaping and public art would be introduced throughout the designated area to emphasize the pedestrian ambiance.

3. Transit

Two years before the *2010 Vision Plan* was adopted, the *2025 Integrated Transit/Land Use Plan* had outlined a long-range plan for regional rapid transit corridors radiating from the Center City. The *2010 Vision Plan* for Center City emphasized the need to functionally integrate the different rapid transit modes in the heart of the city. For transit to work well in the Uptown area, the plan stated, new bikeways and pedestrian amenities would help create a transit-supportive environment.



Furthermore, the 2010 Vision Plan recommended an east-west transit corridor to supplement the existing bus operations of the Transportation Center. This “transit street” would have numerous stops to deliver riders along a major east-west arterial, while still allowing vehicular and service traffic. The plan stressed that its design and character would be a critical issue.

4. Parking

It will be several years before the rapid transit system is fully operational in the Uptown area, and until that time parking will remain a major need. In the interim, says the plan, public and private attention should focus on shared parking and on designing facilities with greater regard to aesthetics, pedestrians, and air quality standards. At the same time, policies and plans should be put in place to minimize the future need for parking spaces to provide balance with the growth of the transit system as transit gains a greater share of commuting ridership.



CATS 2025 Transit System Plan

CATS 2025 Transit System Plan

This plan spells out more details of the rapid transit plans first unveiled in the conceptual 2025 Integrated/Transit Land Use Plan. The earlier plan was the basis of Mecklenburg County’s 1998 voter referendum on a half-cent sales tax increase for transit. The more recent CATS 2025 Transit System Plan was adopted in 2002, four years after the first transit plan and two years after the 2010 Vision Plan. It is important

because it carries forward the original plan with greater specificity, and therefore with greater utility for this Center City Transportation Plan.

The major features of the proposed rapid transit system are well-known. It will include five corridors extending beyond I-485 in order to intercept trips coming in and out of Mecklenburg County and improve regional connectivity. Two of the corridors, in fact, extend into adjacent counties (Iredell on the North Corridor, Cabarrus on the Northeast Corridor, and potentially York on the South Corridor). Future expansion into Gaston and Union counties is possible. Eventually, there will be 28 miles of bus rapid transit guideways, 21 miles of light rail transit, 11 miles of streetcar, 30 miles of commuter rail, and an expanded network of buses and other transportation services throughout the region.

Center City Improvements

The planned improvements for Center City are designed not only to serve the central business district, but also to provide connectivity with surrounding communities and institutions. These improvements will benefit the entire region by enabling the individual transit corridors and local services to function as an integrated system. Plans for Center City - most of which may be short-term improvements - include:

1. **Two major transit nodes** - the existing **Charlotte Transportation Center** (renovated to accommodate the South and Northeast light rail line) and the proposed multi-modal **Charlotte Gateway Station** on West Trade - are designed to complement each other. Work on these two passenger facilities is expected to be completed over the next 10 years.
2. **North Corridor Commuter Rail and NCDOT Rail:** CATS and the Rail Division of the North Carolina Department of Transportation (NCDOT) are undertaking related detailed engineering studies of modifications to the Norfolk-Southern Railway corridor that traverses Center City between Graham and Cedar Streets. Together, they will be reconstructing and widening the rail embankment, altering



operations at some street grade crossings and developing the Charlotte Gateway Station in the block bound by the embankment and Trade, Graham and Fourth Streets.

3. **A South-Northeast light rail transit (LRT) spine** was created along the trolley/railroad corridor. This South Corridor LRT line opened in 2007. It will be extended as the Northeast Corridor LRT over the next 20 years.
4. **An East-West pedestrian/transitway** along the Trade Street corridor will connect Johnson C. Smith University with CPCC and Presbyterian Hospital. Transit services in this corridor will include the Southeast and West mass transit corridors, and streetcar and bus operations.
5. **Streetcars** will provide unique circulation services connecting Center City districts not only with each other but also with areas just outside I-277. Streetcars on Trade Street will extend out Central Avenue to the east, and along Beatties Ford Road to the west. The Trade Street Streetcar will be implemented in conjunction with the rest of the improvements planned along this street. A full Center City Streetcar Loop is envisioned by 2025.

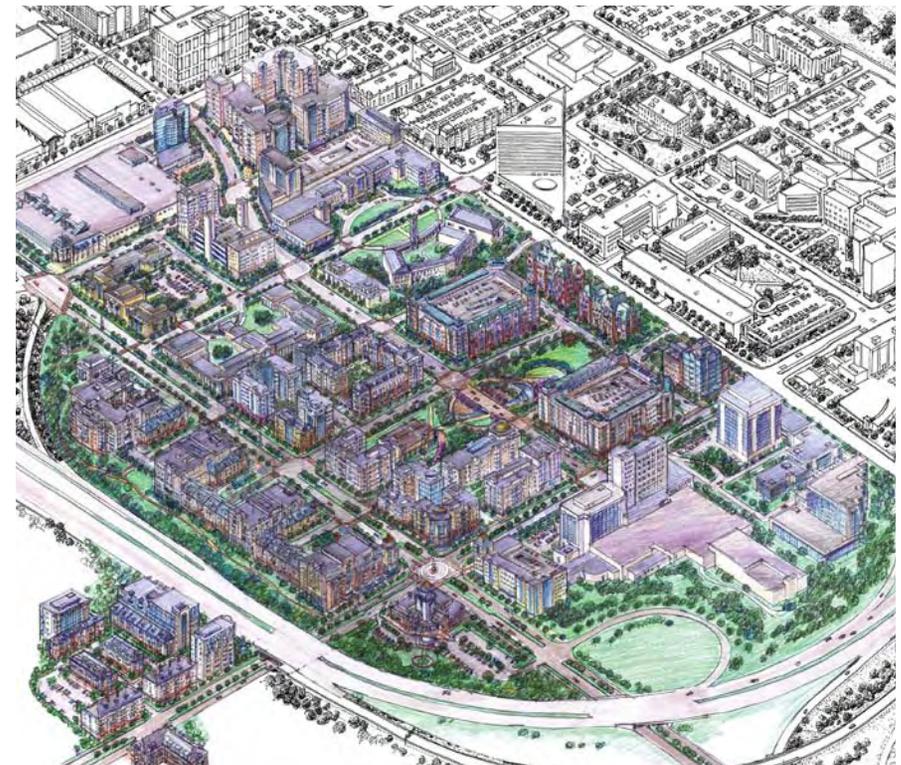
Second Ward Neighborhood Master Plan

A rebirth of the historic Second Ward neighborhood is charted by this plan, which carries out the *2010 Vision Plan's* concept of unique Uptown neighborhoods with pedestrian-oriented, mixed use development. The 11-block area is largely a government office park today, but under the new plan the area south of Third Street would again become a predominantly residential community, as it was in the 1960s before urban renewal.

Over the next 25 years or so, roughly 2,400 housing units could be built. One visually dramatic proposal calls for rebuilding Marshall Park as a terraced "Great Lawn," flanked by mid-rise housing. Some of the existing institutional buildings may be relocated, while community-oriented facilities (such as a multi-story high school) will be added. These elements will cre-

ate a "new urban fabric," eventually including neighborhood stores and services and a network of parks and open spaces. According to the Second Ward Plan, the transportation system will contribute to this new neighborhood in these ways.

- The street grid would be reconfigured, breaking up the super-blocks into smaller and varying block sizes considered more "neighborhood-friendly." This smaller block pattern would create an internal street network that would not affect general circulation in Center City.
- Stonewall Street and McDowell Street would be enhanced as boulevard streets, with their intersection being designed with a "gateway" monument and special paving. These two major streets would continue to be the primary linkage to areas immediately outside the I-277 Loop, primarily the East Morehead and Midtown areas.



Second Ward Neighborhood Master Plan





- The *Second Ward Plan* carries through the 2010 Vision Plan recommendation for a pedestrian-oriented “green” street treatment for MLK Blvd. and Davidson Street; however, the use of a trolley or streetcar is not mentioned.
- The plan recommends a system of shared parking structures as part of a “neighborhood parking strategy” and discusses structures, quantities and parking ratios in detail.

The new plan for Second Ward fundamentally “re-defines” a key part of Charlotte’s Uptown. It will be a long-term transition, but an estimated 57 percent of the 82 “developable acres” are controlled by the City, County or School Board, improving the prospects for coordinated development.

Third Ward Vision Plan

The Third Ward Vision Plan is another key public policy adopted since the *2010 Vision Plan* that has a bearing on this Center City Transportation Plan. A proposed Third Ward Park - called the “West Park” in the *2010 Vision Plan* - is sited in a largely undeveloped area. Eventually, the park is expected to be surrounded by new offices, restaurants and shops, and by mid-rise housing that overlooks the park. The vision plan provides extensive design guidelines and promotes pedestrian-oriented streetscapes, greenway extensions, and pedestrian linkages to surrounding neighborhoods and the proposed Multi-Modal Station nearby. Key recommendations would affect circulation in the Center City:

- MLK Blvd. should be extended to Cedar Street.
- Third Street would be modified to accommodate the park.
- The sections of MLK Blvd., Mint and Poplar Streets that are currently one-way would be converted to two-way (these modifications are consistent with the 2010 Vision Plan).

Government District Facilities Planning

Both the *2010 Vision Plan* and the *Second Ward Neighborhood Master Plan* proposed changes for the Charlotte-Mecklenburg Government Center area. For example, both plans proposed redevelop-



Government Center Master Plan

opment - for predominantly residential uses - of the Walton Plaza, the Charlotte- Mecklenburg Schools headquarters building, Metro School and the Mecklenburg Aquatic Center.

As a result, Mecklenburg County has coordinated a study of space needs for City, County and Charlotte-Mecklenburg Schools facilities. The review focuses on potential sites in the area bounded by Sixth Street, McDowell Street, Third Street and Caldwell Street. At this time, the principal development-related outcome of the plan has been the construction of the new County Courthouse at Fourth and McDowell, and an associated parking garage on the northeast corner





of the intersection. Related modifications to the intersection of Fourth and McDowell Street have been designed to enhance pedestrian circulation between the two facilities.

Cultural Arts Master Plan

The Arts and Science Council prepared a Cultural Arts Master Plan in 2003 which recommends the development and/or expansion in Center City of a variety of significant public facilities, including the expansion of Discovery Place, the Afro-American Cultural Center, and Spirit Square; the relocation of Mint Museum; and the development of two new theaters (seating 1,200 and 2,800 patrons), Second Ward High School Heritage Museum and the Bechtler Museum.

The emphasis that the plan places on Center City as the location for major cultural arts facilities suggests that the attraction of visitors to Center City, particularly during evenings and on the weekend, will expand the need for improved access and direction to parking facilities that have the primary function of serving daily office workers. This expanding need presents an income opportunity for the owners of parking facilities while, at the same time, increasing the need for coordinated management of and directional information for existing and future parking facilities. Additionally, the plan proposes a "Cultural District" Wayfinding System.

Development Since The 2010 Vision Plan

Since adoption of the *2010 Vision Plan* in 2000, several major facilities have been built or are under construction in Center City. Some facilities, such as the light rail transit line, were anticipated in the 2010 Plan. Others, such as the Arena, were proposed for a different site Uptown, and another, Johnson & Wales University, was not yet on the horizon. These developments are shaping, and in some cases reshaping, Center City and the *2010 Vision Plan*.

South Corridor Light Rail

The Charlotte Area Transit System (CATS) began light rail transit service in the Center City in November of 2007. The South Corridor LRT line includes four stations in the Uptown area: Seventh Street, Charlotte Transportation Center, Third Street/Convention Center and Stonewall Street. The full 15-station, 9.6 mile South Corridor extends from Uptown through South End to I-485.



South Corridor Light Rail Line

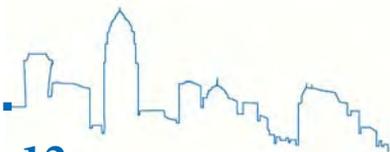
Arena

Charlotte's new Arena has been built on a two block site alongside the light rail alignment and directly across from the Charlotte Transportation Center. The LRT station and CATS' hub bus transfer station are well-positioned to serve many of these patrons, but the Arena - which seats between 18,000 and 20,500 - is a major traffic generator for vehicular traffic as well. NBA games will occupy the Arena 41 nights each year, and an estimated 150 to 200 events give the facility a full schedule, drawing thousands to Center City. Retail shops will also line the Arena's exterior on Trade Street.

Brevard/Caldwell Street at the Arena

To accommodate the building footprint of the Arena, it was necessary to create a single large block, modifying the street grid as follows:

- The section of Brevard between Fifth Street and Trade Street was removed.
- Fifth Street was rerouted between the LRT tracks and Caldwell Street.





- Brevard traffic, which is one-way southbound, was directed onto Fifth Street, which is one-way eastbound.
- Caldwell was made two-way between Trade and Fifth.
- Southbound Brevard traffic now follows a route eastbound on Fifth, southbound on Caldwell, eastbound on Fourth to the intersection of Fourth and Brevard, and returning to the southbound Brevard routing.

While this provided an adequate short-term solution to allow construction of the Arena, an improved long-term solution will be required.

ImaginOn

One block from the Arena - at the Seventh Street LRT station - "ImaginOn" draws more visitors to Center City. This joint effort of the Public Library and the Children's Theatre includes performance facilities, an early childhood education center, a teen center and a storytelling venue. The 102,000 square foot building features a large, multi-story public space that will contain interactive exhibits and serve as a public gathering and reception area. Development of the facility has included enhancements to the pedestrian space associated with the surrounding streets.

Johnson & Wales University

On the west side of Center City, the arrival of Johnson & Wales University has further energized the West Trade Street area where Gateway Village is located. The local campus of this national management and culinary university opened in 2004 with larger-than-expected enrollment of 1,200 students, and has grown to 3,000 students by 2007 (with projections for higher enrollment in future years).

Johnson and Wales' building program has created a major presence in Third Ward and its entire campus is within a half-mile of the proposed multi-modal Charlotte Gateway Station and located along the potential Trade Street Streetcar alignment. In the last two years, the school constructed a five-story main classroom building along West Trade Street, and two new dormitories on previously vacant land at Cedar Street and Fourth Street, adjacent to the Carolina Panthers practice field. The dor-



Charlotte Sports Arena



Johnson & Wales University



mitory complex will house 800 students, and another 550 students will reside in another student residence, City View Towers. An additional academic and administration building is planned for a site between Trade Street and Fourth Street, on the west side of the Norfolk-Southern embankment.

New Mecklenburg County Courthouse and Judicial Center

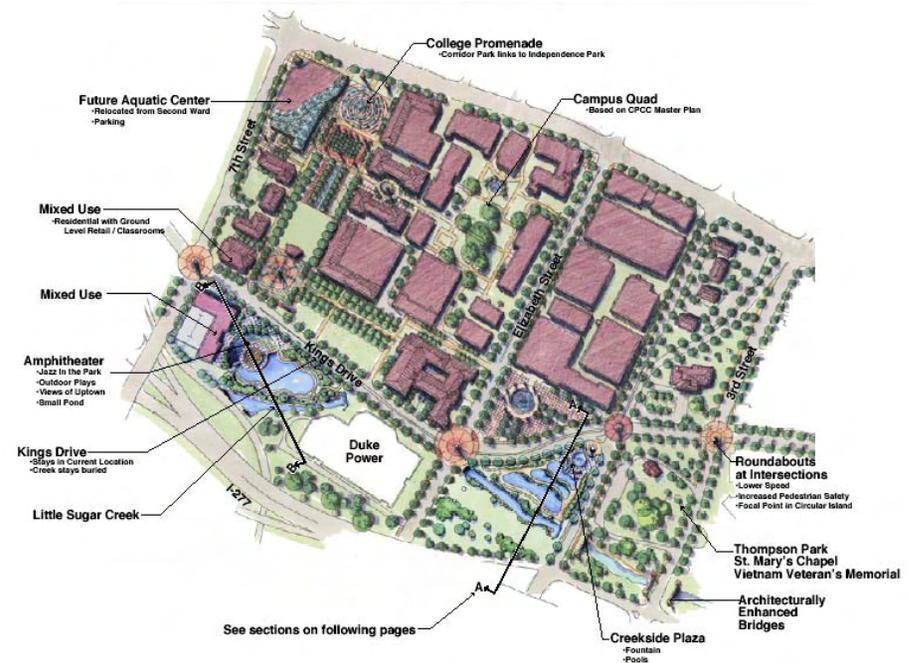
The Judicial Center is comprised of the new courthouse, adjacent renovated facilities for agencies of the criminal justice system and a new parking deck. The eleven-story courthouse is at the intersection of Fourth and McDowell Streets, on the former site of the old court parking facility that was demolished in 2003.

A new parking deck for the courts facilities was constructed across McDowell Street, next to the parking deck that currently serves the Sheriff's Office and Mecklenburg County jail facilities. The new courts parking facility has a capacity of 1,100 to 1,200 vehicles, and will also have retail space on the ground floor, and a tree-lined outdoor plaza facing the new courthouse.

The intersection of Fourth and McDowell was redesigned and reconstructed to facilitate the safe and convenient movement of visitors between the garage and the courthouse. The south-bound right turn lane has been removed from McDowell Street. The redesign includes a new surface with walking paths, tighter turning radius to reduce the length of crosswalks, and new crossing lights.

Little Sugar Creek Greenway

The Little Sugar Creek Greenway begins in the Optimist Park neighborhood north of Center City. It will run inside the I-277 Loop between the 10th Street underpass and 7th Street overpass, along the eastern segment of I-277 and eventually reach a point near the South Carolina state line. When fully developed, the greenway will provide pedestrian access and recreational amenities for residents of Center City and nearby neighborhoods. Portions of the greenway are under construction, while other areas - including those in Center City - are still under design consideration by the Mecklenburg County Park and Recreation Department.



Little Sugar Creek Greenway

Trends: Development Plans Announced For Center City

The pace of change in Center City is likely to keep its momentum in the coming years. Some key projects are in the planning stage that will refine the evolving character of Center City in the last half of this decade - and increase the number of Center City residents and pedestrians on the Uptown streets.

A multi-faceted, multi-modal Charlotte Gateway Station will integrate transportation services on West Trade Street. Office development, possibly with cultural facilities, is contemplated on South Tryon. Most notably, however, the next few years will see the advent of high-rise residential living in the heart of the Center City, with the announcement of six new residential towers, ranging from 16 to 53 stories, and the rehabilitation of a former office tower for condominiums.



The very strong Center City residential market is resulting in the development of many sites on Tryon Street and Trade Street that the *2010 Vision Plan* had anticipated would be office or employment sites. While the development activity has been positively received, the loss of sites on Tryon and Trade for office development could alter the employment growth dynamic in Center City, with fewer prime sites being available.

With the development of Johnson and Wales University, construction of the new Arena, development of an entertainment complex as part of the old convention center redevelopment, and the announcement of several residential projects on Trade Street, it can be said that Trade is emerging as an educational/entertainment/residential corridor, rather than a major employment street. While efforts are needed to encourage more development on Trade Street, this suggests that future employment could be concentrated more along the north/south Tryon Street corridor.

The following is a capsule summary of new development announced for Center City, as of early 2008.

West Trade Street Area

CATS Multi-Modal Station: “Charlotte Gateway Station”

The *Center City 2010 Vision Plan* proposed a “multi-modal facility” on West Trade Street that would bind Third Ward and Fourth Ward together and serve as a “catalyst for a renewed urban environment.” The Charlotte Area Transit System is leading development of this Uptown station that will link local and regional transportation modes with inter-city rail and bus service. The station will be an Uptown stop on the CATS North Corridor rapid transit line and connect with local bus and streetcar service, as well as Amtrak and Greyhound Bus service.

- Early estimates indicate the station will serve 5,000 to 8,000 North Corridor rail commuters, 3,500 Greyhound patrons and 1,500 Amtrak passengers.
- The Trade Street Streetcar will offer connections to other Center City locations, as well as future service along Beatties Ford Road and Central Avenue.

- Light Rail Transit (LRT) and/or Bus Rapid Transit (BRT) service from the Southeast and West transit corridors, as well as express bus services, will focus on the station.

The station will be near the Johnson & Wales University campus and the Gateway Village employment and housing center. The site design will facilitate pedestrian use and access for bicyclists, and be integrated with the planned Third Ward Park nearby. A Charlotte Gateway Station Area Plan is being prepared to capitalize on the influx of passengers and pedestrians to help generate new development on the vacant and underdeveloped parcels nearby.

Existing Federal Courthouse

The Jonas Federal Courthouse on West Trade Street is expected to be replaced by a new courthouse at the corner of Trade Street and Caldwell Street, adjacent to the new Arena. All federal court uses and offices will be moved into the new courthouse upon its completion.

Proposals for reuse of the current courthouse site have considered cultural and civic purposes and, most recently in December, 2004, Queens University proposed opening a law school in the old courthouse building. At the same time, plans for the nearby Charlotte Gateway Station and Third Ward Park include development of office and commercial structures across Graham Street on the west side of the building, and across Fourth Street on the south or back side of the building.

East Trade Street Area

New Federal Courthouse

The new federal courthouse, to be located on Trade Street in the block east of the Arena, will shift and increase employment in the Trade Street corridor.

Old Convention Center Redevelopment

Charlotte’s old convention center occupied a central Uptown block bounded by Trade,





College and Fourth Streets and the South Corridor LRT line. In June, 2005, the structure was imploded in preparation for redevelopment by a private developer. The site called "EpiCentre" will include a 53-story residential tower in combination with a retail and entertainment center. The complex will include a ten-screen movie theater, restaurants, bars, shops, offices and a hotel.

Bank of America Mixed-Use Development

In July 2005, Bank of America commenced development on a project on the east side of College Street between Trade and Fifth Street. The development includes a 15-story, 150 room Ritz Carlton Hotel, an office tower and an atrium that will be tied across College Street with the existing Founders Hall retail facility. The project also includes redevelopment of the Trade and College Street frontages of Founders Hall to create more street-level retail space.

South Tryon Street Area

Wachovia Mixed-Use Development

In May, 2005, Wachovia Bank unveiled plans for a new office tower of about 35 stories on South Tryon at First Street, with condominiums, two museums, the Afro-American Cultural Center, the Wake Forest University Business School and a theater as part of the mixed-use project. An attractive feature of the site for pedestrians is a proposed urban park that connects with the popular green space across the street at Ratcliffe Commons.

For the last decade the major thrust of office development and cultural facilities has been along North Tryon. This project promises to bring more balance to that geographic trend. It is expected to be the catalyst that will set in motion a number of other possible projects that have been discussed in recent years along South Tryon.

North Tryon Street Area

Cultural Facilities

North Tryon is currently the address of several significant arts and cultural facilities. The Cultural Facilities master Plan proposes strengthening of this district with expansion of Discovery Place, enhancements to the Main Library, redevelopment of Spirit Square and redevelopment of the Carolina Theater.

Higher Education

UNC-Charlotte has selected a location at Ninth and Brevard for an academic building that will make the university's program more accessible to working students and professionals living in Center City. The facility is expected to serve up to 7,500 students a day, and is readily accessible to the light rail line (which has the potential of providing a link to the main campus via the North Corridor LRT extension).

South Brevard Street

NASCAR Hall of Fame

Charlotte won a national competition for development of the Hall of Fame and an office building to house NASCAR's business operations. The complex is under construction, with completion projected for 2010, on a site bounded by MLK Blvd, Caldwell Street, Stonewall Street and Brevard Street. In concert with the Convention Center, with which NASCAR is to be connected, enhances the activity anchor at the south end of the Brevard Signature Pedestrian Street link to the Arena on the north.

Center City Residential

In a short period of time, during late 2004 and early 2008, various private developers announced dramatic plans for high-rise residential buildings - the first such towers in Center City. The first announcements were for sites close to the new Arena, and prospective buyers responded enthusiastically. Within a few months, more and larger plans were announced for locations in or near





the Uptown core, including the signature streets of Trade and Tryon. Some of the larger projects are mixed-use, with retail and/or office space on lower levels. If all high-rise projects are built, it would mean at least 1,680 new units in the next three years, a significant boost to the residential vitality of Center City. The announced high-rise residential tower projects include:

First Ward

- Courtside (Sixth and Caldwell) - 16 stories, 104 units, completed in late 2005.

Second Ward

- The Park (Third and Caldwell) - 21 stories, 107 units, planned for completion in late 2008.
- EpiCentre (on the former Old Convention Center site, described above) - 53 stories, 400 units, planned for completion in 2007.

Third Ward

- 230 South Tryon (Tryon and Third) - a rehabilitation of a 30-year-old former office building that, with 13 stories and 110 units, was completed in 2007.
- TradeMark (West Trade and Mint) - 28 stories, 162 units, was completed in late 2007.
- Novarre Group - redevelopment of the old Duke Power Building site with multiples high-rise residential buildings, a hotel, retail space and potentially office uses.

Fourth Ward

- Avenue (North Church and West Fifth) - 36 stories, 386 units, completed in 2007.
- The Vue (Pine and West Fifth) - 50 stories, 411 units, planned for completion in 2009.
- The Garrison (Graham Street at I-277) - a residential building with approximately 40 units.
- The Citadin (Graham and West Eighth) - a multi-building redevelopment of an existing apartment complex with buildings in the six to 20+ story range.

This surge in Uptown housing is indicative of a strong market interest in the Center City. While high-rise buildings have dominated the headlines, more low- and mid-rise housing have been constructed recently. The strong housing market will have the synergistic effort of supporting and stimulating retail Uptown. It also means more opportunities to walk to work, rather than commute. In sum, it underscores the need for creating a more walkable environment in Center City.

New Charlotte Knights Baseball Stadium

A set of complex land transactions involving the City, Mecklenburg County, the owners of the Knights and other private development interests is already affecting some properties and has the potential of affecting several others. At the present time, the prospective program involves the following major properties and activities, several of which will implement significant recommendations of this Plan:

- The original Third Ward Park site (two blocks bounded by Fourth, Mint and Graham Streets and MLK Blvd) will be the site of the new baseball stadium.
- The Third Ward Park is being designed for the site bounded by Mint, Third and Church Streets and MLK Blvd.
- These two developments will result in the following street modifications:
 - The closure of the Fourth to Third connector
 - The conversion of Fourth from one-way to two-way between Mint and Poplar
 - The closure of the Mint to Poplar connector
 - The conversion of Mint from one-way to two-way from Graham to Trade
 - The conversion of Poplar from one-way to two-way from Third to Sixth
 - The conversion of MLK Blvd. from one-way to two-way from Mint to College





- Redevelopment of Marshall Park and the current School Board office site to include:
 - A new Second Ward Park
 - Several multi-story residential buildings with some supporting retail uses
 - A new local street network similar to that proposed in the Second Ward Plan

Future Aspirations: The Views Of Stakeholders

An early step in the preparation of this Plan involved consultation with Center City stakeholders to determine their perceptions of the Center City and their aspirations for its future. Interviews were held with 35 key stakeholders, including business and civic leaders, developers, City and County staff, and representatives of neighborhood groups, cultural organizations and educational institutions. The stakeholders made several important points, summarized below.

Employment Growth

Several stakeholders had reservations about the plan's forecast that calls for an increase in Center City employment of approximately 40,000 workers in the next 25 years. Such a large increase (from 55,000 today to 95,000 in 2030) was generally considered unlikely.

- The major Center City employment drivers - such as Bank of America, Wachovia, Duke Energy - expect their rates of growth to slow considerably in comparison to the 1980s and 1990s.
- The most likely source of future Center City employment growth will be from multiple smaller employers and smaller entrepreneurs that are responsive to the Center City's lifestyle.
- Indeed, there was some concern that some businesses may leave the congestion and higher tax rate in Center City and move to areas elsewhere in Charlotte or outside Mecklenburg.
 - The consensus was that greater efforts are needed for Center City to retain its position as the employment center of the region.

Residential

- Residential growth was seen by stakeholders as the major market for Center City development over the next seven to ten years.
- The new housing is likely to be at densities higher than recent construction (a view expressed prior to many of the recent high-rise project announcements).
- More mixed-income choices are needed to maintain a good demographic mix.
- Residential areas also need open space to maintain a sufficient balance of green space, but these do not necessarily need to be large parks.
- There was some skepticism regarding the potential of realizing the residential emphasis of the Second Ward Master Plan, due to the cost of relocating County facilities.

Government

Government is a major Center City employer that is often overlooked in estimates of Center City employment.

- Uncertainty about the County's plans was frequently mentioned as an impediment to moving forward with the Second Ward, Third Ward and Government Center plans.
- The County may keep most of its employees Uptown, but could move some of its functions out of Center City to neighborhood or regional service centers.
- Plans for the North Tryon village proposed in the Center City 2010 Vision Plan are in development following the County's successful sale of the Hal Marshall Center in 2007.

Entertainment

Center City is the entertainment and cultural center of the Charlotte region, but stakeholders believe it could be stronger. Uptown entertainment is seen as an economic driver for Center City, but it is viewed as being on a small scale, relative to cities of comparable size.



- The new Arena location is a major opportunity for retail, upscale restaurants and other entertainment venues.
- The vitality of the area between the Arena and the Convention Center NASCAR Complex is important. Shopping is the number one activity for conventioners who need to have an easily-navigated experience within the area.
- Johnson & Wales will be a major contributor to the entertainment mix, but there are other opportunities and special attractions that could help Charlotte compete with larger cities, such as the planned relocation of the Charlotte Knights baseball team.
- The Mecklenburg County Aquatic Center attracts regional as well as national sports events, on the scale of some conventions. The center could potentially be relocated to another site, possibly in the same complex as the baseball stadium.

Higher Education

Trade Street is developing into an “educational corridor,” from Central Piedmont Community College in the east, to Johnson C. Smith University and Johnson & Wales University in the west, and a proposal has been made for a Queens College law school in the current Federal Courthouse when it is vacated in the next few years. The influx of Johnson & Wales students is expected to have a significant and positive impact on Center City entertainment, housing and employment. UNCC’s interest in an expanded Center City presence and the potential of the Wake Forest Business School being a part of Wachovia’s South Tryon project will add to this array of educational offerings.

Transportation

Stakeholders made the observation that, although there is congestion on many of the roads coming into Center City, there are relatively few traffic problems once in the Uptown area.

The most recurring stakeholder perception was that there is not enough parking in Center City. Several other points were made by the stakeholders:

Streets and Highways

- The I-277 Loop is perceived by stakeholders as having both positive and negative aspects. It provides good circumferential access to Center City and a clear definition of Center City boundaries, but it is also a barrier to long-term expansion and to integration of adjacent neighborhoods. There are also a number of functional problems with I-277 that will need to be resolved as traffic increases.
- Stronger linkages are needed to surrounding neighborhoods and activity centers such as Johnson C. Smith University, CPCC, South End, Dilworth, Midtown, Cherry, West Morehead, Wesley Heights and others.
- Within the loop, traffic congestion on Center City streets is seen as minimal. The arterial congestion points tend to be at intersections, such as Randolph and Wendover, that are two miles and farther from Center City.
- Arena traffic - and how it will impact Uptown residential, entertainment, and business traffic - was the concern most often raised by stakeholders.
- One-way streets in Center City too often are not visitor-friendly, inhibit retail development and cause conflicts in residential areas.

Parking

- Availability was a concern frequently raised by stakeholders. Evening and weekend parking is plentiful (many garages are free during non-business hours), but the location is not necessarily near desired activity venues.
- Some felt the cost of parking was too high, but others suggested increasing the cost as a way to force or gain ridership on the new transit system. Several of the larger Center City employers currently pay for, or subsidize employee parking. Bank of America subsidizes the Gold Rush, partly to provide access for employees to less expensive parking.





- Wayfinding is inadequate, particularly for visitors and area residents who visit infrequently. A three-tiered wayfinding system was suggested to improve the ease of finding destination points for visitors, workers and residents. The inability of the owners of privately-owned parking facilities (the majority of existing parking) to direct motorists, especially visitors, to their facilities, was often stated as a related problem.

These views of Center City stakeholders - together with adopted plans and policies and with the developments under construction or now being planned - provide the background for this Center City Transportation Plan and its proposals for a growing and changing Center City.

Pedestrians and Bicyclists

- Two views of pedestrian-friendliness were expressed. One view held that the traffic pattern is aimed at getting people in and out of Center City, and that objective conflicts with pedestrians. Others felt that Center City is very pedestrian-friendly and that this characteristic was often cited by out-of-town visitors.
- Surface parking lots, low-density building areas and the railroad embankment were all frequently cited as barriers to pedestrian movement.
- The growth of Johnson & Wales University is making West Trade Street a major pedestrian activity street.
- Bicyclists identified the shortage of safe access routes into Center City and across the I-277 Loop as their greatest concern.

Transit

- The general perception was that buses are costly and generally stop in poor locations. The Gold Rush is popular, but does not serve Center City residential districts.
- There was almost universal support for the new rapid transit system, although many interviewees were not familiar with the specifics of the Center City proposals.
- There was some concern that the multi-modal Station could be too large, but it was also felt that it would be a positive stimulus for the area. The traffic relationship to Third Ward and Fourth Ward residential areas was a concern.





IV. FRAMEWORK

Planning for Center City's future transportation system starts with an understanding of the vision or long-term direction desired for Center City Charlotte. The previous chapter sketched that vision, as it is found in adopted plans and policies, and as it is influenced by trends in public and private development. The purpose of the *Center City Transportation Plan* is to plan the transportation system that will support this vision.

That future transportation system will be a modification of the existing system, of course. Therefore, it is necessary to understand the characteristics of the existing system (and how it functions) as the background for the new plan. Furthermore, the new plan's framework is also shaped by the growth projections for Center City. Accordingly, this "Framework" chapter focuses on the existing transportation system and on population, housing and employment forecasts for the next 20 years.

Existing Transportation System

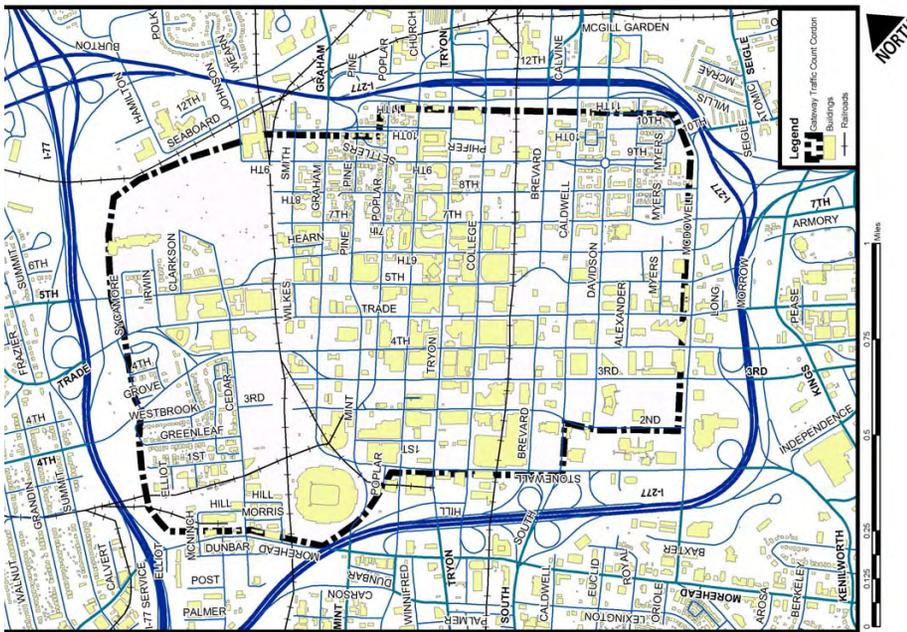
Existing Vehicular Network

While the street network serves pedestrian, bicyclist and transit users, the automobile is the predominant transportation mode. Therefore, an understanding of the existing transportation system begins with vehicular use and capacity of the street network.

A report prepared for the City in 2000 made these assumptions regarding travel to Center City in the morning peak hours:

- 85% of total Center City workers actually report to work in Center City on any given day;
- 78% of Center City workers arrive in the two-hour morning peak period;
- 80% of people traveling to Center City in the morning peak period are commuters destined to their jobs; the remainder are traveling for other purposes.





Gateway Traffic Count Cordon

- 6% of traffic entering Center City during the morning peak period consists of taxis, vans and commercial vehicles.

Based on data from the last decade, two significant observations can be made regarding traffic entering Center City Charlotte each morning:

Traffic volumes are well within the total capacity of the street system at the gateway locations - and have increased only slightly since 1995. The total volume of traffic entering Center City had grown significantly in the early 1990s, increasing 25 percent between 1991 and 1995. However, since the mid-1990s this volume has remained fairly constant, having grown less than two percent between 1995 and 2003. Table 3-1 charts the data on inbound peak hour traffic at entry points into Center City, over a 12-year period.

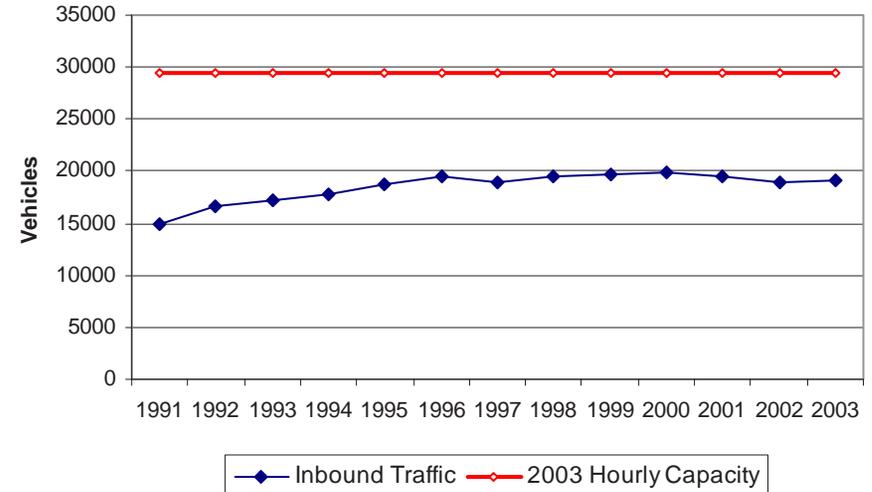


Table 3-1: Traffic Volumes, 1991-2003

(Morning Inbound Peak Hour Traffic at Gateway Locations)

The vehicle occupancy ratio has actually declined slightly over the last 12 years. In short, fewer cars entering Center City during the morning rush hour have more than one occupant. In 1991, the “vehicle occupancy ratio” (for non-transit vehicles) was 1.17. By 1995 it had decreased to 1.15, and in 2003 it was 1.11. While this decline is consistent with experience in metropolitan areas throughout the country, it is apparent that increases in vehicle occupancy are needed if the street system is to carry more people without expanding vehicular capacity.

On the whole, the street network functions well. An analysis of 2003 traffic data for the Center City Transportation Plan reached the following conclusions:

1. The streets leading into Center City - the “gateways” - are relatively uncongested during the morning peak commuter period.
2. Most intersections in Center City are also operating well within their potential capacity during this period. Only two intersections - Tenth and Graham, and Fifth and Graham - experience



“marginal” congestion, according to the criteria of the Charlotte Department of Transportation (CDOT).

3. While the street network operates acceptably during the morning and evening peak periods, congestion does exist on major approach routes to the Center City. In addition, selected exit ramps from the freeway loop to Center City are also congested during this period. These individual congested locations may, to some extent, be metering traffic that enters Center City at the gateways. In other words, drivers may be making individual adjustments as they seek routes to their destination that are less congested.
4. The number of vehicles entering Center City during the morning peak period has remained relatively constant over the past several years.
5. During the same time, the average number of people per vehicle declined slightly.

Traffic Conditions at Gateways

Gateway Streets are the streets entering Center City from or across the freeway loop that encircles Center City. The capacity of the transportation system at gateway locations is one of the key factors that could potentially affect the growth of Center City, since it creates a finite number of entry points into the Uptown street grid.

CDOT has used traffic counts at selected gateway locations to monitor performance at these locations over a number of years. This Center City Transportation Plan examined existing conditions by reviewing traffic counts performed in September, 2003. The reported peak-hours traffic volumes were compared with the hourly roadway capacities to derive an estimate of the overall performance both of the complete roadway system and of individual streets at these gateway locations. The analysis used a street capacity of 600 vehicles per lane per hour for two-way streets, and 750 vehicles per lane per hour for one-way streets. The results of the review are shown in Table 3-2.

Table 3-2: Traffic Volumes at Gateways (September, 2003)

Street	Location	Inbound Lanes	Capacity / Lane	Capacity	2003 Pk Hr. Vol.	2003 v/c Ratio
Graham	s. of 10th	2	600	1200	1081	0.90
10th	w. of Poplar	1	600	600	286	0.48
Church	n. of 10th	3	750	2250	1317	0.59
Tryon	n. of 10th	2	600	1200	704	0.59
Brevard	s. of 11th	3	750	2250	1111	0.49
Davidson	s. of 11th	1	600	600	422	0.70
Total	north	12		8100	4921	0.61
8th	w. of McDowell	1	600	600	93	0.16
7th	w. of McDowell	2	600	1200	1179	0.98
6th	w. of McDowell	2	750	1500	776	0.52
Trade	w. of McDowell	2	600	1200	588	0.49
4th	w. of McDowell	4	750	3000	2270	0.76
2nd	w. of McDowell	2	600	1200	612	0.51
Total	east	13		8700	5518	0.63
Stonewall	e. of Caldwell	2	600	1200	1276	1.06
Caldwell	s. of Stonewall	3	750	2250	1530	0.68
College	s. of Stonewall	3	750	2250	1658	0.74
Tryon	s. of Stonewall	2	600	1200	298	0.25
Mint	s. of Stonewall	2	600	1200	756	0.63
Total	south	12		8100	5518	0.68
4th	w. of Sycamore	2	600	1200	370	0.31
Trade	w. of Sycamore	2	600	1200	1647	1.37
5th	w. of Sycamore	2	600	1200	852	0.71
Cedar	n. of Morehead	1	600	600	389	0.65
Total	west	7		4200	3258	0.78
Total Cordon		44		29100	19215	0.66

The results of the analysis are consistent with those used by CDOT in previous gateway analyses. Two observations about the overall network are apparent from the most recent data:

Roadways leading into Center City operate well within capacity during the morning peak hour, as indicated by the overall volume compared with capacity. This measure is expressed in the table as a “v/c ratio.” For all locations, the composite ratio is 0.66, implying that the system overall is operating at approximately a two-thirds capacity.





Each major direction of approach to Center City is operating at a roughly comparable level, with volume-capacity ratios ranging from 0.61 to 0.78. One explanation for this balance is likely to be the existence of the I-277 Loop, which encircles Center City and allows for traffic approaching it to be redistributed to a number of streets that enter Center City from all directions.

An examination of individual streets leads to these conclusions:

Four intersections are operating at or near capacity, including two (portions of Stonewall and West Trade) that exceed theoretical capacity:

- Trade Street, west of Sycamore (volume-capacity ratio of 1.37)
- Stonewall Street, east of Caldwell Street (1.06)
- Seventh Street, west of McDowell Street (0.98)
- Graham Street, south of Tenth Street (0.90)

The four streets listed above represent the four major directional approaches to Center City. Each of these gateway locations is immediately adjacent to a freeway off-ramp (with the exception of Seventh Street on the east side), suggesting that these locations are being disproportionately affected by traffic approaching Center City by the freeways.

Not all gateways that are close to freeway off-ramps are equally congested. This may occur because of capacity limitations on the off-ramps or simply because these gateways are not as attractive as approach routes to the Center City because of other constraints.

Most other gateway locations are operating well within their potential capacities, with the volumes on the following streets being significantly below capacity.

- Eighth Street, west of McDowell Street (volume-capacity ratio of 0.16)

- Tryon Street, south of Stonewall Street (0.25)
- Fourth Street, west of Sycamore Street (0.31)

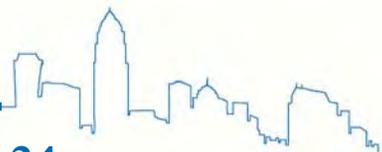
Traffic Conditions within the Center City

Once inside the expressway loop, past the gateway entry points, the principal streets that carry commuter traffic are performing well. Primary commuter streets are those intended to provide high capacity from the freeway loop to the Uptown core. They represent about half of the gateway capacity for inbound traffic into Center City and, in fact, do carry about half of the traffic entering Center City in the morning peak hours. The data in Table 3-3 indicate:

- All of these primary commuter streets function at an adequate level of service, and
- Furthermore, none of the streets operating at or above capacity are primary commuter streets.

Table 3-3: Traffic Volumes for Primary Commuter Streets at Gateways

Street	Location	Inbound Lanes	Capacity /Lane	Capacity	2003 Pk Hr. Vol.	2003 w/c Ratio
Church	n. of 10th	3	750	2250	1317	0.59
Brevard	s. of 11th	3	750	2250	1111	0.49
Total north		6	1500	4500	2428	0.54
6th	w. of McDowell	2	750	1500	776	0.52
4th	w. of McDowell	4	750	3000	2270	0.76
Total East		6	1500	4500	3046	0.68
Caldwell	s. of Stonewall	3	750	2250	1530	0.66
College	s. of Stonewall	3	750	2250	1658	0.74
Total South		6	1500	4500	3188	0.71
4th	w. of Sycamore	2	600	1200	370	0.31
5th	w. of Sycamore	2	600	1200	852	0.71
Total West		4	1200	2400	1222	0.51
Total Commuter		22	5700	15900	9884	0.62
Commuter/All Gateways		50%		54.60%	51.40%	





Existing Pedestrian Environment

In conjunction with the Center City Transportation Plan, CDOT staff undertook a detailed analysis of the pedestrian condition of every block face in the study area. The results provide baseline data for the existing pedestrian system in Center City. The analysis plays a key role in preparing the new transportation system plan by helping define plan standards for streetscape design and other improvements in the infrastructure supporting pedestrian use.

Rating Existing Conditions

The plan used the width of sidewalks as the primary measure of pedestrian quality in a city block. Numerous other factors contribute to the quality of the pedestrian environment, of course, including street furniture, trees, tree grates, landscaping, art, wayfinding signage - even the quality of the pavement, itself. However, width, or space, is seen as the foundation upon which pedestrian capacity, comfort and other qualitative attributes are achievable.

The pedestrian quality of each block face in Center City was classified in one of five categories:

Existing Quality Rating System

Quality Rating	Criteria
1. High Quality	Pedestrian space at least 22 feet wide (based on mall improvements to Tryon Street and the 100 block of Trade Street)
2. Medium-High	Medium-High Pedestrian space between 16 and 21 feet wide
3. Medium	Pedestrian space between 12 and 15 feet wide
4. Low-Medium	Pedestrian space at least 4 feet wide, with no specific separation from the curbline
5. Low Quality	Pedestrian space containing no sidewalk, a sidewalk of less than 4 feet, or a sidewalk of 4 feet or less but containing major intrusions such as utility poles or signs.

The result of the study is a complete atlas of pedestrian environment conditions on all blocks within Center City. There are a number of blocks in which two or more of these conditions apply to portions of the block face, and these conditions are noted in the atlas. The sample photographs on these pages illustrate the rating levels for existing sidewalks.

The quality assessment was supplemented by a “walkability analysis.” This analysis chronicled various needs and objectives to improve Center City walkability that are incorporated in the new transportation system plan presented in the next chapter.

Rating Enhancement Potential

Given these existing conditions, what is the possibility of improving them? In addition to evaluating existing quality, each block was assessed for the potential of expanding the width of the pedestrian space and thereby enhancing the quality of the space. This expansion could be done either:

- (a) *inside the curb line*, by using some of the existing pavement,
- (b) *outside the curb line* in unused right-of-way or on adjacent property.

Combining the existing quality and potential enhancement ratings produces a composite score for each block face. For example, a block face with a composite score of “3-High” would mean that the particular block has a medium quality rating but has high potential for improvement.

The overall evaluation was tabulated with the streets listed alphabetically and the blocks arrayed by address range and flanking streets. In addition to the qualitative rating, a photograph was taken to represent the condition of each block face (with multiple photographs where more than one condition was present). This planning resource is available from the Charlotte Department of Transportation.





Potential Enhancement Rating System

Inside the Curb Line (using some existing pavement space)	
<i>High</i>	Clear excess pavement width
<i>Medium</i>	Possible excess pavement width
<i>Low</i>	No possible excess pavement width
Outside the Curb Line (in unused right-of-way or adjacent property)	
<i>High</i>	Clear excess right-of-way or land that is vacant, a surface parking lot, and/or small one- or two-story buildings that lack historical significance
<i>Medium</i>	Some potential for expansion, but more likely not to occur without or until any future redevelopment
<i>Low</i>	Significant expansion obstacles, such as taller, newer buildings, or parking structures, historic buildings, or churches, at or very near the sidewalk

Existing Bicycle System

The development of a bicycle circulation system for Center City is in its infancy. The City’s adopted Charlotte-Mecklenburg Bicycle Transportation Plan (1999) identifies nine primary marked bicycle routes leading into Center City, but also notes there are major impediments to safe and convenient bicycle commuting.

The major impediments are associated with the I-277 Loop. Narrow street widths on approach streets outside the loop, constrained widths in the underpasses and overpasses, and the volume and speed of peak hour traffic in these locations, all affect development of a viable bicycle circulation system. The plan’s selection of routes attempts to minimize these constraints, but those that involve expressway overpasses and underpasses will require modifications at those locations before commuting conditions are improved.

These streets have been designated by the city-wide Bicycle Transportation Plan as “marked bicycle routes” for entry into Center City:

- Trade Street / Elizabeth Avenue
- West Fourth Street
- West Fifth Street
- East Tenth Street
- McDowell Street
- Kenilworth Avenue
- Mint Street
- West Morehead Street
- Johnson Street (to be connected to a proposed pedestrian/bicycle overpass when the rail crossing at Ninth Street is closed)

In addition to designated routes, elements of a bicycle system include marked bicycle lanes, bicycle trails, and bicycle parking.

Bicycle Lanes

The only actual marked bicycle lanes in Center City are portions of Fourth and Third Streets.

An additional bicycle lane has been built on Kenilworth Avenue as part of an overall improvement to that street as it enters Center City and becomes Stonewall Street. Bicycle lanes have been provided on both sides of Kenilworth/Stonewall, from Independence Boulevard to McDowell, improving access under the expressway loop.

Bicycle Trails

In constructing the trolley line from South End to Ninth Street, CATS provided a combination bicycle and pedestrian trail that parallels the tracks. With the coming of the South Corridor Light Rail Transit line along the same right-of-way, combination bicycle and pedestrian trails will be provided on both sides of the tracks, except





for the crossing of I-277. The South End Bicycle Pedestrian Connectivity Study evaluated other alternatives for connections between Uptown and South End.

While the trail will be an attractive and useful amenity for Center City pedestrians and bicyclists, it is more suited for casual cyclists than for commuters. The trail presents a number of obstacles for commuters: it does not go through the Convention Center, forcing bicyclists to find alternate routes; the trail becomes part of the train platforms, where concentrations of pedestrian traffic will hinder cyclists; and the sections between the platforms are too narrow to facilitate higher speeds that commuting cyclists prefer. However, other alternatives are planned between Center City from the South End over or under I-277.

Bicycle Parking

Convenient parking is a significant factor in stimulating the use of bicycles for commuting. Two recent initiatives will help increase the availability of parking:

- CDOT has installed several “inverted U-style racks” along the Tryon Street corridor. There is moderate funding to continue this effort.
- Charlotte City Council has approved a significant amendment to incorporate bicycle parking requirements in the City’s zoning code. The new provisions require all future parking structures to provide bicycle racks.

Existing Transit

The hub of the Charlotte Area Transit System (CATS) bus services in Center City is the Charlotte Transportation Center, which occupies the block defined Trade and Fourth Streets, the South Corridor Light Rail Transit line and Brevard Street. The Center has 20 off-street passenger platforms, as well as passenger-boarding locations on Brevard, Fourth and Trade Streets for express routes.

An estimated 1,000 express bus riders arrive in Center City during the morning peak period. Throughout the day, an estimated 15,000 persons get off or on CATS buses at the Transportation

Center. The Center’s two pavilions include transit information services, a bank branch, postal services, retail businesses and fast food restaurants.

The most heavily used east-west transit corridor is Trade Street. Each hour, 92 buses traverse Trade Street each way between College Street and Brevard Street, 61 buses pass through the intersection of Trade and Tryon, and 43 buses proceed west of Church Street.

The north-south corridor buses are evenly divided among Tryon, College and Church Streets, with approximately 20 to 30 buses on each street during the morning peak hour.

Existing Parking

An estimated 46,000 off-street parking spaces are available for commuters in Center City, and over 1,000 on-street parking spaces are available for shorter-term parking.

- The off-street inventory includes 22,897 parking deck spaces (excluding residential decks), identified in a 2004 CDOT study. In addition, 23,370 spaces are available on surface parking lots, based on information from Central Parking, a private firm.
- The on-street spaces are those in the Uptown core that are generally available to employees and visitors. The estimate, by Park-It, does not include on-street spaces in the residential wards, which are generally restricted for residents or by time.

Nearly all off-street parking in Center City is privately owned and operated. There is no overall parking management entity to provide the visiting public clear parking information.

The City of Charlotte manages on-street parking through Park-It, a CDOT program that subcontracts with a private company for meter collection and maintenance. The City does own two parking decks: the Government Center deck (799 spaces) and the Police Station deck (918 spaces). The Government Center deck provides some public access parking; the Police deck provides none.





Cultural, sports and entertainment events usually occur on evenings or weekends, and use available on-street and off-street spaces. Many office building decks are open evenings and weekends without charge. However, the lack of an information and directional system can make it difficult for visitors to easily locate and use the parking decks.

Charlotte's Uptown Mixed Use District (UMUD) zoning district in Center City requires certain new office and commercial uses to provide parking - those uses that contain more than 20,000 square feet of gross floor area and are located on lots with a street frontage greater than 40 feet on any single street. UMUD requires parking to be provided at the following rates:

- 0.50 spaces for each 1,000 sq. ft. up to 200,000 square feet of gross floor area;
- 0.75 spaces for each 1,000 sq. ft. over 200,000 sq. ft. up to 500,000 sq. ft.;
- spaces for each 1,000 sq. ft. over 500,000 sq. ft., up to 800,000 sq. ft.;
- 1.25 spaces for each 1,000 sq. ft. over 800,000 sq. ft.

These requirements are well below the parking ratios that office development and the financial sector typically expect or seek. Most recent office developments have provided more than the minimum number of required parking spaces.

Growth Forecasts

In addition to the existing transportation system, the number of people and jobs in Center City - and how much those numbers are likely to change in the future - determines the framework for developing a new Center City transportation plan. Forecasts for population, housing and employment provide an indication of the magnitude of growth expected in Center City over the next 25 years, through 2030.

Over the course of the Center City Transportation Plan, two studies were undertaken related to employ-

ment and population growth and attendant traffic and parking related forecasts. First, the CCTP consulting team prepared forecasts based using a 2025 forecast year. Second, in work related to the Long-Range Transportation Model, CDOT staff prepared forecasts utilizing a 2030 forecast year. While the 2025 forecasts covered more topics, the 2030 studies yield forecast data that place Center City in a consistent framework as the balance of the Mecklenburg-Union Metropolitan Planning Organization (MUMPO) planning area.

Therefore, in the following review of forecasts, where the 2030 studies cover the topic under consideration, those data are used. Otherwise, the 2025 studies are reported. Since there are differences in source data and forecast methods, any attempt to adjust these 2025 data to 2030 would not be reliable. Given the 20 to 25-year horizon that is involved, the respective data adequately support the conclusions that are being drawn.

Population

Forecast: 30,200 total population by 2030

Existing: 7,840 persons (2002)

Net Increase: 22,360 additional persons

Center City's population is expected to reach 30,200 by 2030. The projected 2030 population would mean increasing the area's 2000 population of 5,220 persons. By 2002, the resident population inside the expressway loop had grown to 7,840 persons and that number has increased in the last three years with the construction of more new housing, especially in First Ward.

Housing

Forecast: 17,000 households by 2030

Existing: 4,200 households (2002)

Net Increase: 12,800 additional households

Most of the Center City population will continue to live in multi-family units. Many of these units have been constructed in recent





years. Between 1998 and 2002, building permits were issued for 1,722 residential units (including 1,615 multi-family units). By 2002, the area had an inventory of 3,550 multi-family units and 650 single family homes.

Demand is expected to support approximately 5,150 additional units in Center City by 2025, bringing the total number of units to 9,350 in that year. (The recent announcements for seven high-rise towers alone would meet one-third of the projected increase, if all are built.) The estimates of market potential, based on recent building permit activity and recent inventory growth, suggest that these additional units would include 4,830 multi-family units and 320 single family units.

Employment

Forecast: 95,000 employees by 2030

Existing: 55,000 employees (2004)

Net Increase: 40,000 additional employees

The current employment base in Center City is estimated to be approximately 55,000 workers, and the forecasts expect that total number to increase to 95,000 by 2030. The sector components of this forecast - office, government and retail - are described below.

Office Employment Growth Forecast (2025)

Mecklenburg County employment forecasts for 2025 (the 2030 forecasts do not provide a comparable analysis) call for 19 million square feet of additional office space by that year, including 15.4 million square feet of growth in the financial and service sectors.

Center City Charlotte is expected to capture 38.3 percent of that new office growth - the same share it had during the period between 1996 and 2002. Based on that assumption, demand would be sufficient to fuel an increase of approximately eight million square feet of occupied office space in Center City - or an average of approximately 350,000 square feet annually. Center City's share of employment growth has actually grown over its

proportionate share of county growth in years prior to 1996. In fact, it reached 50 percent in 1998, 2001 and 2002. However, the explosive growth of those years may not be sustained on a consistent basis and, therefore, the more conservative figure of 38.3 percent is used in the forecast.

The forecast assumes employees will each require approximately 225 square feet of space. If Center City is expected to add eight million total square feet, dividing that number by the space utilization factor of 225 square feet per employee yields the estimate of about 35,500 additional office employees by 2025.

Government Employment Growth Forecast (2025)

The forecast of new government employees that will work in Center City includes 1,000 prospective City of Charlotte employees, 600 Mecklenburg County employees, and 500 Charlotte-Mecklenburg Schools employees.

Retail Employment Growth Forecast (2025)

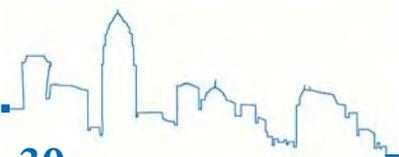
Retail spending by new Center City residents and employees will generate demand for new retail services and expansion of existing retail space - and, in turn, new retail employees.

The forecast uses standard "retail space sales productivity" and "employee space utilization rates" for that industry to estimate the quantity of new retail space that can be supported by the expenditures of new workers and residents. The resulting figure is 300,800 square feet of additional retail space by 2025 - or approximately 12,000 square feet of occupied space annually.

This new space in turn is estimated to be capable of supporting approximately 900 additional employees during this period - or an average of 36 new retail employees each year between 2000 and 2025.

The outlook for growth in Center City over the next 25 years, then, is for 22,400 additional residents; 12,800 new households; and 40,000 additional employees (almost all in the office sector).







V. TRANSPORTATION PLAN

The objective of the *Center City Transportation Plan* is to help fulfill the vision for Center City Charlotte (reflected in adopted plans and policies) as it grows and changes over the next 20 years. The plan for the future is necessarily shaped by how the existing system functions. It is also influenced by development trends and by employment and population forecasts. The previous chapters have summarized these factors. Now, the plan itself is presented. The underlying strategic approach used in developing the plan is first described, followed by recommendations for each transportation system component:

- **Land Use** page 35
- **Urban Design** page 35
- **Vehicular Circulation** page 36
- **Parking** page 51
- **Wayfinding** page 57
- **Transit** page 63
- **Pedestrian Circulation** page 66
- **Bicycle Circulation** page 87

Strategic Overview

Viewed from a three-dimensional perspective, the key structural features of Center City Charlotte’s transportation system might be visualized as a series of layers:

Trade and Tryon are Center City’s two major axial streets and their intersection, the **Square**, is Uptown’s historic and geographic center.

- *Tryon Street* is the corporate and cultural center of Charlotte. It is the headquarters location of two of the nation’s largest banks, Bank of America and Wachovia, and the prime business address in Charlotte. It is also the location of cultural facilities, most notably the Blumenthal Performing Arts Center and Discovery Place, as well as restaurants and entertainment venues.





- Trade Street is emerging as a street of equal importance as Tryon, but with its own character. It is the location of major government buildings and the new arena on the east, and Johnson & Wales University on the west. Gateway Village has made Trade Street a desirable business address, and it is also becoming a prime residential address with plans announced for several high-rise residential buildings.
- The Square - once a Native American trading crossroads, later the city's major shopping district, and now the commercial and office core of Center City - this intersection of Tryon and Trade is a major orientation point within Charlotte and the metropolitan region and the staging area for street fairs and public events.

The I-277/I-77 expressway loop is the physical boundary that marks Center City as a distinct, identifiable place. It serves to move auto traffic around the perimeter of Center City, with several access points allowing motorists to enter the Uptown area near their destination. However, it also presents a physical barrier between Center City and the surrounding neighborhoods, and an unattractive and uncomfortable entry point for pedestrians and bicyclists. The Center City 2010 Vision Plan stresses the importance of making the freeway loop less of an impediment to pedestrian circulation and neighborhood connectivity.

The street network is the grid that moves traffic to the various neighborhoods and destinations within Center City. It is not designed to move traffic through Center City (the expressway loop serves that purpose), but functions well in its primary role of distributing traffic within the area. Eventually, on their individual trips, motorists using the Uptown street system will leave their cars in parking facilities. In some cases, a wayfinding system may help motorists locate available parking close to their destination.

Rapid transit stations will soon be a new overlay on the Center City transportation system. In 2007, four stations opened on the South Corridor Light Rail Transit line (between College and Brevard) that enters Uptown Charlotte from South End. Later, the new multi-modal Gateway Station will be built on West Trade Street to serve the North

Corridor commuter rail line, the Southeast and West transit corridors, and the Center City Streetcar, as well as inter-city rail and bus service.

Major pedestrian destinations are those primary generators of pedestrian activity in the Center City, such as the Uptown office towers near The Square, the new arena, the North Tryon cultural and entertainment facilities on North Tryon, the Charlotte Convention Center on South College, CATS Transportation Center on East Trade, and Johnson & Wales University and Gateway Village on West Trade. Additional venues will open in the next two to three years.

Key pedestrian streets are the streets and walkways that link the major pedestrian destinations. The key streets are Tryon, Trade, and Brevard, which are supported by College (between Trade and Seventh), Fourth Street (between Poplar and Davidson) and Fifth and Sixth Streets (between College and Church). While all link the major pedestrian destinations, they have varying degrees of quality in their pedestrian accommodation and amenities.

Against this structural backdrop are the moving pieces, the major transportation modes - vehicular, pedestrian, transit and bicycle. This plan focuses on how these modes interact with the streets, stations, and destinations to assure an efficient transportation system. There are several important concepts that guide this plan.

1. Everyone is a pedestrian.

The key theme in this plan, building specifically on the 2010 Vision Plan, is the recognition that every motorist and every transit user becomes a pedestrian when they leave the transit station or the parking deck. A system of efficient, attractive, pedestrian-friendly streets can encourage all Center City employees, residents and visitors to take advantage of a walkable Uptown, with little need to drive between Center City destinations.

This pedestrian-friendly core will encourage more use of transit, because the Uptown will be highly walkable and convenient upon arrival. It will also encourage those who do drive to park once, and walk or use transit between Center City destinations, for the same



reasons. Their “park once” characteristic with Center City apart from other major centers in the region with attendant benefits to air quality.

2. Major destinations will be a five-minute walk from a transit station.

The new CATS rapid transit system will provide unprecedented walking accessibility in Center City. When the system is fully complete, most of Center City’s business, entertainment and educational venues will be within a five-minute walk from a transit station. This convenience will reinforce Center City as a uniquely accessible destination; in fact, nowhere else in the metropolitan region can so many people walk to so many different destinations.

3. The key pedestrian streets will provide a direct walk from transit.

The overlay of the new transit stations on Center City’s street system presents an opportunity to expand the key pedestrian streets. Each of the transit stations will or can be located on one of the grid streets that serve the core axial streets of Trade and Tryon. A five-minute walk along these streets from the transit stations will include all of the existing and potential business, cultural, entertainment and government destinations in Center City - all of the destinations that bring employees and visitors to Uptown Charlotte.

4. The key pedestrian streets will also link neighborhoods and open space.

The pedestrian network links the existing Uptown residential neighborhoods with each other and with the office core. By making all of these streets exemplary and attractive pedestrian streets, they will tie into the walkable residential neighborhood streets, making all of Center City a highly walkable environment. The neighborhood streets, and some parts of the streets that are within a five-minute walk from transit stations, also tie into the Center City greenway network, open space and the light rail corridor pedestrian way.

5. New office building locations should reinforce the notion of a walkable Uptown.

More office towers will be built Uptown in the years ahead to accommodate the projected employment growth. The office market will try to place those buildings as close to Tryon Street or Trade Street as possible, since those are the signature addresses in Center City. Even when Tryon and Trade building sites have been committed, the remaining building sites will still be within the five-minute walk from transit along the key pedestrian streets. To reinforce the notion of a walkable Center City (and regional accessibility to Uptown employment via transit), most future office buildings should be located within a five-minute walk from a transit station. This also underscores the city-wide goal of transit supportive development.

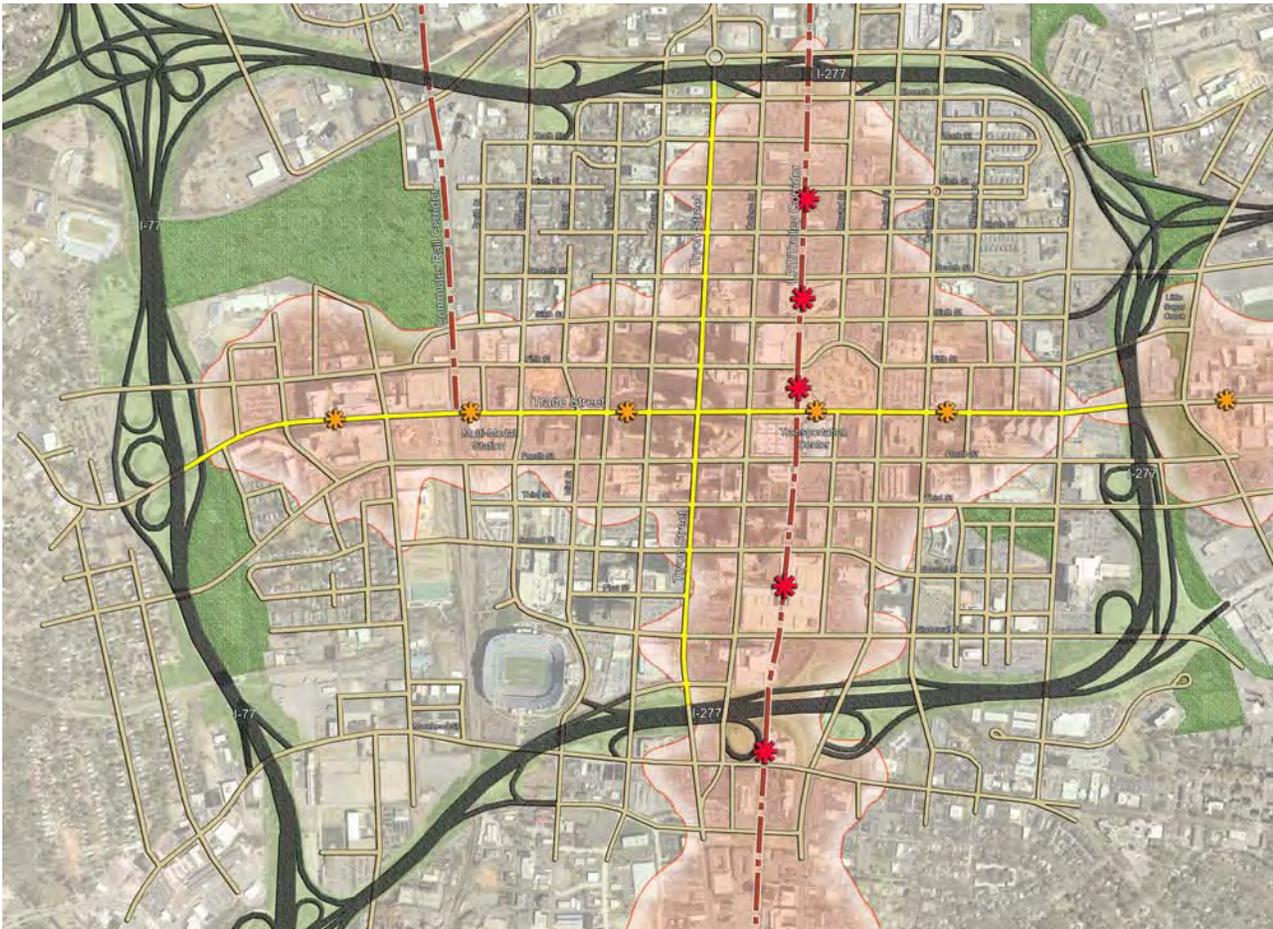
6. Center City can be a “park once” location, especially if motorists find a pleasant, walkable environment between their parking deck and destinations.

As new office buildings go up, surface parking will gradually be converted to building sites and an even greater percentage of parking in Center City will be provided in parking decks. Those new building sites, and the nearby parking structures that will be built, will be within a five-minute walk of a transit station. Since employees walk from the parking decks to their office buildings, the key pedestrian streets that serve transit users will need to be efficient, attractive walking environments for commuters who drive and park. If Center City visitors also use those decks, they will have an efficient, attractive walk to their destinations.

7. Moving traffic into Center City efficiently means getting motorists to their parking destination easily.

Even as transit use grows, the majority of employees (and visitors) will still drive to the Uptown area. Accommodating the motorist in the most efficient way remains a high priority - and that means getting motorists to their parking destination as easily as possible to minimize vehicular traffic on the streets - which also allows the streets to be more pedestrian-oriented.





Five Minute Walk from Transit Stations

The street system should emphasize efficient traffic flow into Center City - the basic commuting objective - rather than passage through the city. To facilitate efficient traffic flow, the system could be structured to encourage drivers arriving from outside Center City to use the expressway loop to circulate around Center City and then take the street into their parking space that is the shortest trip. The combination of McDowell, Stonewall, Graham and the Eleventh/Twelfth Street couplet can also aid this distribution around Center City to the shortest route to the driver's final destination.

Transportation Plan Components

The combination of these themes -

- all major destinations within a five-minute walk from transit,
- all drivers able to take a short drive on Center City streets to a convenient parking location,
- and each of them able to walk or use transit between Center City destinations rather than driving because of the pedestrian-friendly environment - is the strategic basis upon which the Center City Transportation Plan proposals are made.

While the emphasis of the plan is on pedestrian circulation (in accordance with the Center City 2010 Vision Plan), the sequence of the Plan Components builds first on the Land Use and Urban Design framework as defined in the 2010 Vision Plan, then proceeds to the Vehicular, Parking and Wayfinding elements that most significantly define the structure of the transportation system. Discussion of the Transit, Pedestrian and Bicycle modes follow in turn.



Land Use

Guiding Principles

The *Center City Transportation Plan* supports the land use pattern articulated in the *Center City 2010 Vision Plan* (pages 5-21):

- Encourage a mix of uses that maximizes land area and supports the intent of the Uptown Mixed-Use District (UMUD) ordinance.
- Identify land uses to create an appropriate ratio of residential units, office space, stores and entertainment facilities.
- Support Center City’s urban form by concentrating high-rise office along Trade and Tryon Streets.
- Tryon Street should remain the primary address for Uptown business; where possible, office uses should continue on North and South Tryon.
- On Trade Street, new offices should be promoted near the proposed Gateway Station to encourage commuter ridership.

To underscore the 2010 Vision Plan’s focus on concentrating employment in the Tryon and Trade corridors, that plan’s “Diagram: Transportation, Street and Parking Recommendations” (page 57 of the *2010 Vision Plan*) emphasizes a street and transit network that supports these two prime employment corridors.

Since completion of the 2010 Vision Plan, two additional programs have reinforced the importance of focusing employment in these two corridors and also enlarged the breadth of the north-south corridor. First, the 2025 Transit System Plan has programmed a north-south Light Rail Transit facility along the Trolley Line identified in the 2010 Vision Plan, and this has been followed by further studies that may focus the Southeast and West Transit Corridors in the Trade Street Corridor and add Commuter Rail to the “train station” (Charlotte Gateway Station) on West Trade Street. Second, the development of the Arena greatly altered the potential functioning of Brevard and Caldwell Streets.

The analysis and recommendations of this plan recognize the opportunity and need to focus office employment (as the major use in

a mixed-use strategy) along the Trade Street corridor and a Tryon Street corridor widened eastward to encompass the light rail corridor and the new potential of a pedestrian-supported entertainment and employment center along both segments of Brevard Street.

Plan Recommendations: Land Use

- 1. Use transportation and parking strategies to support growth and intensification of various land uses, with emphasis on office employment.**
- 2. Provide multi-modal transportation solutions to support land use recommendations that will produce a memorable, vibrant Center City.**

Urban Design

Guiding Principles

- The Center City 2010 Vision Plan establishes an urban design direction through its central Vision Statement: “To create a livable and memorable Center City of distinct neighborhoods connected by unique infrastructure.”
- Additionally, the 2010 Vision Plan states that: “Internal Center City streets and parking facilities must serve dual purposes: accommodating mobility requirements and serving as a major expression of Center City’s character.”

The transportation system is perhaps the largest infrastructure element to which the *2010 Vision Plan’s* vision of “uniqueness” can apply. The street rights-of-way, off-street pedestrianways and transit network (both with the street rights-of-way and its own exclusive rights-of-way) provide the primary connections. They also make up the most significant land area that is under public control. It is within these rights-of-way that the majority of mobility options will be





supported and in which a strong urban design statement can be made by the City and other public entities.

In order to foster a “Memorable” Center City, the 2010 Vision Plan established a series of key characteristics termed “pedestrian, mixed, balanced, designed and connected.” The recommendations of this plan will play a key role in the realization of some of these key characteristics to varying degrees:

- **Pedestrian:** Implementation of the Pedestrian Street hierarchy and associated design standards will greatly enhance the pedestrian experience, link activity centers to transit and parking, and connect the residential neighborhoods.
- **Mixed:** The street network improvements, Pedestrian Street hierarchy and transit recommendations are all directed at supporting a mixture of land uses.
- **Balanced:** The street network improvements and Pedestrian Street hierarchy are intended to provide continuity in the mobility system as infill development and redevelopment occur.
- **Designed:** The recommendations of CCTP call for a high design quality for the pedestrian realm as well as the overall streetscape. The “Gateway” treatments that are recommended for the I-77/I-277 overpasses and underpasses are specifically intended to define Center City with a consistent, high quality image statement.
- **Connected:** Development of the CCTP has responded directly to this 2010 Vision Plan recommendation for reducing the barrier that is presented by the expressway loop. This need has also been expressed by numerous stakeholders during the public involvement process. Recommendations for overcoming the barriers encompass both functional and aesthetic enhancements, including redesign of the existing overpasses and underpasses to better accommodate and attract pedestrians and bicyclists. These “Gateway” treatments are also intended to enhance the connection between Center City and surrounding neighborhoods.

This plan’s urban designed recommendations are intended to support the above key urban design objectives of the 2010 Vision Plan.

Plan Recommendations: Urban Design

3. **Promote pedestrian vitality** through the design of Center City streets by enhancing human scale and street-level features.
4. **Apply Street Enhancement Standards Map** are adopted April 2006 (see Recommendation 24 on page 83 in the Pedestrian Circulation section of this plan).
5. **Apply the framework of vehicle and pedestrian/transit gateways and memorable streets** described in the Center City 2010 Vision Plan.

Vehicular Circulation

Because of its role as a regional central business district, Center City must be accessible to the commuter . . . Although it is critical that these streets deliver traffic to the central business district, they should not facilitate trips across Center City.

- Center City 2010 Vision Plan

Guiding Principles

- Center City is a destination, with I-277 serving as a primary distributor of traffic into Uptown Charlotte.
- The street network is not intended to carry traffic rapidly through Center City, but to enable motorists to reach their destinations within Center City as efficiently as possible on a circulation system shared with pedestrians, transit users and bicyclists.
- The existing circulation system functions well, but improvements are needed to handle future increases in traffic that will result from the employment and residential growth expected in



Center City as well as to accommodate changes created by new developments.

Safe and efficient access is the basic objective in developing transportation strategies for commuters working in Uptown offices, for motorists attending events at entertainment venues, and for all others bound for destinations in Center City. At the same time, this Center City Transportation Plan balances that objective with an emphasis on strategies that reinforce and strengthen the pedestrian environment. The objective, then, becomes “complete streets” – ones that promote efficient vehicular circulation while also creating a pleasant and safe environment for pedestrians, transit users and bicyclists.

The *Center City 2010 Vision Plan* – recognized two major types of streets: traffic-carrying “workhorse streets” and pedestrian-friendly “green streets.” This plan does not carry forward the term “workhorse streets” but recognizes that paired one-way streets are needed to provide roadway capacity requirements and to serve parking facilities during peak hours as well as for special events.

Such streets, said the *2010 Vision Plan*, “emphasize high capacity from the freeway loop to the core. Although the importance of vehicular movement is stressed, a pleasant and safe pedestrian environment is essential to create comfortable paths from home and parking to office and other destinations.”

Improving Vehicular Circulation

The analysis of the existing street network confirmed that there are few serious congestion or capacity problems on Center City streets inside the freeway loop. Still, improvements are needed to incorporate specific recommendations of the *2010 Vision Plan* to address conditions at specific locations, to strengthen the notion of full-service “complete streets” in Center City and, especially, to accommodate the employment growth expected to occur in the next two decades.

Furthermore, transit will be playing a greater role in Center City’s future. This plan’s recommended modifications to the street and pedestrian system are intended to be consistent with the *CATS*

Transit System Plan (2003) as well as ongoing planning and design activities that will implement that plan. However, several initiatives are still in the planning stages that will have an impact on the vehicular capacity of Center City streets – (especially Trade, Fourth and Fifth, where they could result in changes to the proposed number of lanes or sidewalk width). It is expected that the ongoing *CATS* planning will take into account this plan’s recommendations and coordinate with CDOT to assure that adequate future street capacity is retained.

Overall, this *Center City Transportation Plan* proposes a series of measures that are intended to maintain access to and from Center City while enhancing the pedestrian environment, making the street network easier for visitors and occasional users to navigate, and discouraging through trips across Center City. The measures in the following pages fall under the categories below.

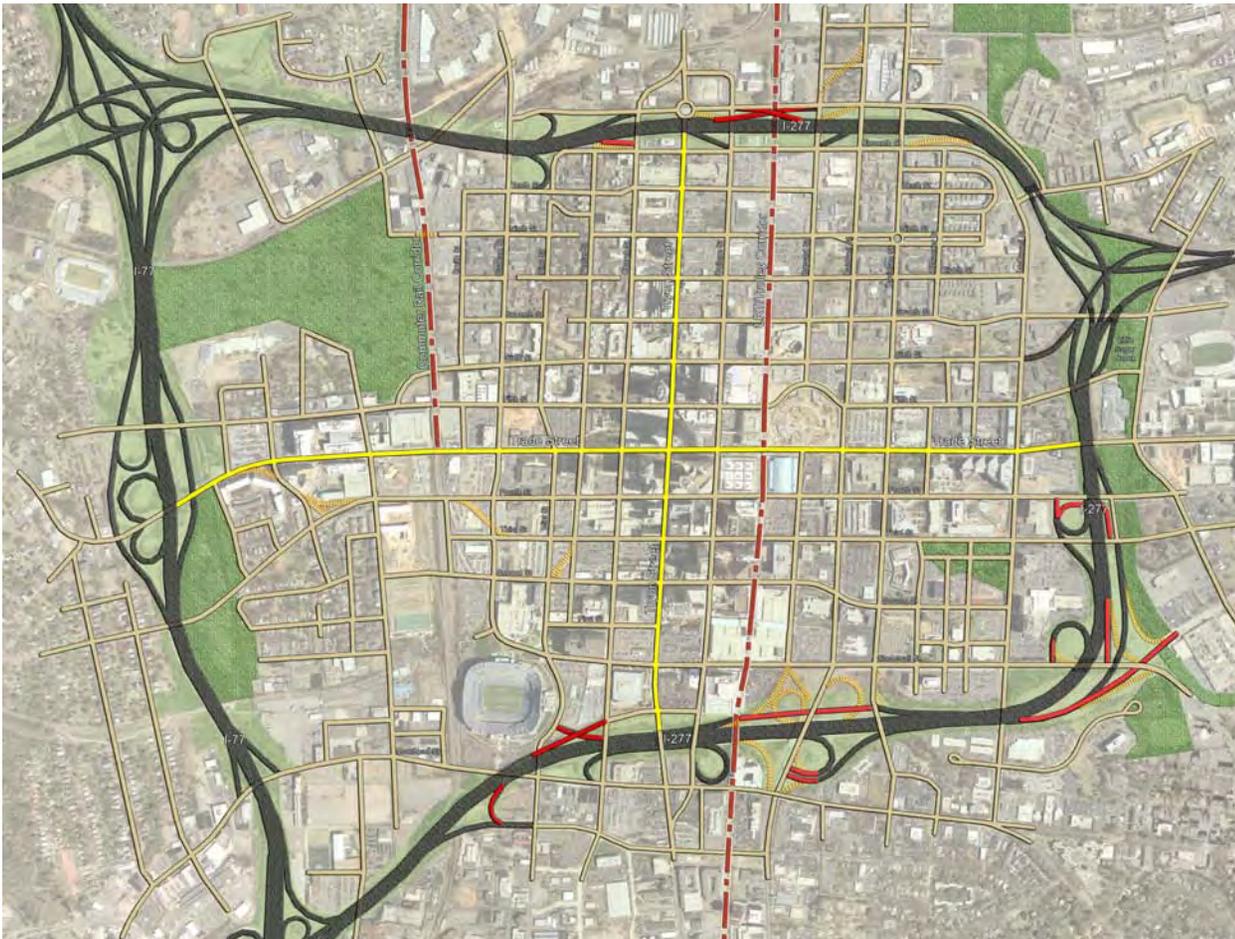
Types of Proposed Improvements

- A. Modifications to the I-77/I-277 Loop
- B. Conversion of some one-way streets to two-way streets
- C. Retention of some one-way streets
- D. Construction of some new streets
- E. Conversion of traffic lanes to pedestrian space, on-street parking and/or bicycle lanes
- F. Modifications of turn lanes and intersections
- G. Closure and modification of grade-level railroad crossings

A. Modifications To The I-77/I-277 Loop

A goal of the *Center City Transportation Plan* is to encourage the use of the I-277/I-77 Loop for access from all four directions. However, instead of using the loop to access Center City from the exit closest to their destination, some drivers use Center City streets to avoid the confusing and sometimes dangerous short weaving sections at some exits. As traffic grows in the years ahead, this could ultimately have a





A. Modifications to I-277

negative affect on the capacity of Center City's street network.

- One key strategy for encouraging more use of the I-77/I-277 Loop is to make modifications to access ramps and interchanges to relieve current congestion and conflict points, and to channel traffic more directly into the primary access streets of Center City.

- A second key strategy is to establish an internal "Circulator Route" within the I-77/I-277 Loop - a two-way peripheral loop around Center City composed of Graham, Stonewall, and McDowell Streets, combined with the 11th and 12th Streets one-way couplet.

The internal "Circulator Route," working in tandem with I-277, would enable drivers to circulate *around* Center City instead of driving across it. In order for drivers to easily take advantage of this internal route, the streets need to be connected conveniently to the freeway loop. For example, in the case of the 11th/12th one-way couplet, modifications to the I-277 exits and entrances are necessary to make this an effective part of the surface Circulator Route.

In regard to modifications to I-277, itself, the roadway's existing geometry presents several "short weaving sections" where traffic from entrance ramps conflicts with traffic heading toward an exit ramp. These sections are intimidating to the average driver, which discourages use of the freeway as a distributor into Center City. The measures listed below would improve the short weaving sections to make the loop more attractive for short trips. This would allow it to function more effectively as a distributor for Center City traffic.

These modifications need to go beyond merely functional modifications, however, to carry out the intent of the *2010 Vision Plan*. They need to create a high level of aesthetic design to reinforce Center City as the employment and entertainment center of the metropolitan region. The modifications are illustrated above.

It should be noted that I-277 is an interstate highway under the administrative jurisdiction of the North Carolina Department of Transportation, and modifications are subject to approval by the



Federal Highway Administration. Implementing the modifications would require a feasibility study (Interchange Modification Report, or “IMR”) that meets NCDOT requirements, and identification of funding sources. Most of the proposed modifications are not currently on the funded Transportation Improvement Projects list of funded projects.

A-1. Mint Street Interchange

This interchange would be modified to:

Rebuild the existing westbound entrance ramp from Church Street as an overpass to enable construction of a new westbound exit to go beneath it.

Provide a new westbound exit from I-277 onto Mint Street, to encourage use of the internal Circulator Route (McDowell/Stonewall/Graham/11th-12th Street) and to provide a second exit into Center City for westbound traffic on the south (Belk Freeway) side of the freeway loop.

Provide an access from eastbound and westbound Morehead Street to the existing eastbound collector/distributor road by way of southbound Mint Street, westbound Carson Boulevard, and a new connection from Carson Boulevard to the collector/ distributor, as a flyover over Morehead Street.

Eliminate the existing entrance ramp from westbound Morehead, with westbound Morehead using the new Carson Boulevard ramp instead.

A-2. Caldwell Street/South Boulevard Interchange

This interchange modification will greatly simplify a confusing interchange, facilitate the proposed changes to Caldwell and Brevard Streets, and allow pedestrians and bicyclists to cross I-277 between Center City and South End. It will:

Consolidate all directional movements onto a two-way Caldwell Street/South Boulevard route, thus eliminating the Caldwell and Brevard fragmentation.

Eliminate the direct connection to Brevard Street so that it can become a Signature Pedestrian Street supporting an entertainment district between the Convention Center and the Arena.

As a result, this modification will:

- provide a new southbound to eastbound movement;
- make a single street connection between the two-way Caldwell Street and the two-way South Boulevard;
- facilitate the movement of traffic exiting at this interchange onto the internal Circulator Route (McDowell/Stonewall/Graham/11th-12th Street);
- provide pedestrian crossings across I-277 between Center City and the South End; and
- make possible a new connection over I-277 from Davidson Street (or, alternatively, Alexander Street) to Euclid Street, as described later in this section under “New Streets.”

This modification is under construction as a major component of the City’s program that resulted in the NASCAR Hall of being developed here.

A-3. Stonewall/Kenilworth/Independence Interchange

Modifications to this interchange were recently completed by the City of Charlotte at I-277, Independence Boulevard and Kings Drive. Pedestrian and bicycle movement through the intersection will be enhanced by this project. The redesigned interchange will:

Modify the westbound exit ramps from Stonewall to I-277, northbound and southbound, to enhance pedestrian and bicycle circulation under the overpasses.

Provide a direct connection between the westbound/northbound exit ramp, from I-277 to Kenilworth, to Independence Boulevard.

Eliminate the existing northbound Independence Boulevard access ramp.





A-4. Fourth Street Interchange

This interchange currently requires southbound I-277 traffic headed for eastbound Third Street to (1) exit on a partial cloverleaf, (2) make a U-turn at Fourth Street onto the street that becomes a southbound I-277 entrance ramp from Fourth Street, and (3) then turn left onto Third Street. This configuration is cumbersome and requires traffic to pass through three separate traffic signals in addition to making a confusing U-turn.

The southbound exit ramp from I-77 would be modified by tightening the radius of the ramp, directing traffic headed for Third Street under the existing I-277 bridge over Fourth Street, and south on a new lane parallel to the existing northbound frontage road to Third Street. Traffic flow from the exit ramp going to Fourth Street would remain the same as it now exists.

A-5. Elimination of Davidson Street Entrance Ramp

The existing eastbound entrance ramp from just east of Davidson would be eliminated. Closing the eastbound entrance ramp east of Davidson. The traffic exiting Center City to the north would use Brevard Street, which will become a two-way street north of Fifth Street.

This will provide motorists an alternative to the more residential Davidson Street. Elimination of the ramp will also relieve the short weave that currently exists between the Davidson entrance ramp and the exit ramp from eastbound/southbound I-277 to southbound U.S. 74 (Independence Boulevard).

It will also, enable the conversion of Eleventh Street between Davidson and Tenth Street to be converted from one-way to two-way.

A-6. Twelfth Street Braided Ramps and North Tryon Street Exit

Rebuild the current ramps in order to provide a direct access from westbound I-277 to North Tryon Street.

A conceptual study, undertaken early in response to economic development interests

in the North Tryon Street Corridor, developed a proposal for modifying the exit ramps between Davidson Street and Church Street to provide a braided ramp pair of westbound exit and entrance ramps and a round-about intersection of 12th Street and North Tryon Street.

This configuration would provide a direct connection between I-277 and North Tryon Street, which does not currently exist but which is desirable. Under the design concept, the westbound entrance ramp from Twelfth to I-277 between Davidson and Caldwell, and the westbound exit ramp from I-277 to Twelfth between Brevard and Church, would be eliminated. The conceptual study provided two alternative braided ramp concepts for replacing these entrance/exit ramps.

A-7. Eleventh Street Connection at Church Street

Create an eastbound connection from Eleventh Street, which is now a two-way dead end street, to one-way eastbound Eleventh Street as part of the developing Circulator Route (McDowell/Stonewall/Graham/11th-12th Street). Expanding the existing two-way portion of Eleventh Street will be explored. Separate traffic signals would be required for the exit ramp and Eleventh Street at Church, similar to the existing configuration at the I-277 eastbound exit ramp to College Street. This modification supports development of the surface street inner loop.

A-8. Tenth Street to Eleventh Street Connection

Rebuild the existing exit ramp from eastbound I-277 to Tenth Street to tighten the radius, leaving enough room for a one-lane connection from Tenth Street to Eleventh Street. Eleventh Street between Pine and Church is now two-way, with no connection at either end.

This step will create a connection from Graham Street to one-way eastbound Eleventh Street, as part of the developing Circulator Route (McDowell/Stonewall/Graham/11th-12th Street).



A-9. Enhancement of I-77 Ramps at West Morehead Street

The ramps at West Morehead Street and I-77 are designed with high-speed curves that are not pedestrian-friendly. They need to be reconfigured to reduce vehicular speeds and minimize the length of the pedestrian crosswalk.

A-10. Enhancement of All Underpasses and Overpasses

Based on proposals in previous studies and requests from stakeholders, conceptual design studies have been prepared for the enhancement of all underpasses and overpasses on the I-77/I-277 Loop to make them more desirable for pedestrians and bicyclists.

Improvements would include cutting back the sloping retaining walls of the underpasses to provide pedestrian space behind the existing columns, providing widened sidewalks on the overpasses by either using excess pavement or employing structural outriggers, providing enhanced lighting, modifying landscape plantings to increase visibility, and incorporating quality finishes and artworks.

These concepts also include providing consistent design elements that enable the underpasses and overpasses to function as visual gateways into Center City, thus providing a significant urban design statement.

B. Conversion Of One-Way Streets To Two-Way Streets

At the start of the *Center City Transportation Plan*, several stakeholders suggested that Center City’s one-way streets should be converted to two-way streets. After extensive evaluation of all one-way streets, it was determined that some could be converted while others needed to remain two-way. Those that remain two-way are described on page 43. Those that are proposed for conversion to two-way streets, to improve overall vehicular circulation in Center City, are listed below. The proposals are illustrated on page 42.

B-1. Caldwell Street: Stonewall Street to Twelfth Street

The construction of the new Charlotte Arena resulted in Caldwell Street being converted to a two-way, four-lane boulevard from

Fourth Street to Fifth Street. This conversion also facilitates the conversion of Caldwell and Brevard Streets to two-way streets, potentially in two separate stages - one north of Fifth Street, the other south of Fourth Street.

The conversion of both Caldwell and Brevard is also facilitated by the removal of the high speed connector between the two and their conversion to two-way streets north of Twelfth Street. Similarly, the modification of the I-277 interchange with South-Caldwell as described above has facilitated the conversion of Caldwell to two-way south of Fourth Street.

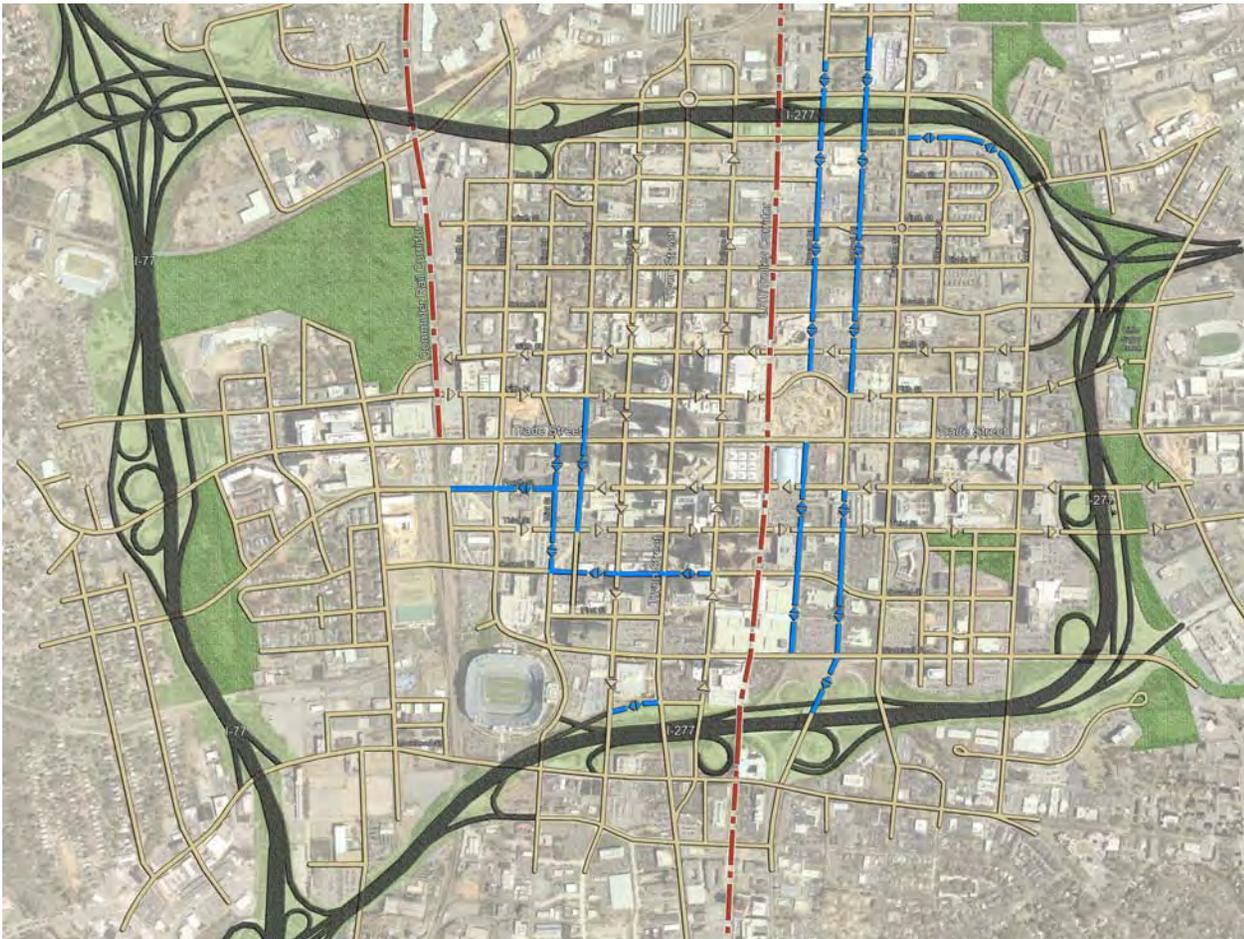
To replace the Caldwell-Brevard one-way couplet, **Caldwell will be converted to a two-way, four-lane street for its full length** from I-277 (Belk Freeway) on the south, to Twelfth Street on the north. In order to maintain pedestrian and landscape space north of Ninth Street and eliminate the need to rebuild the I-277 overpass, the section north of Ninth will have two northbound lanes and one southbound lane. This complements the capacity to be provided on Brevard Street as described above.

The modifications to Brevard and Caldwell Street are linked to the reconstruction of the I-277 interchange with Caldwell, Brevard and South Boulevard (previously described on page 39).

This conversion of Caldwell Street will accomplish several important objectives:

- Eliminate the awkward diversion of Brevard Street around the Arena.
- Enable Brevard to become a Signature Pedestrian Street, supporting development between the Convention Center and the new Arena, and to the north of the Arena.
- Achieve a smoother traffic flow with the reconstruction of the I-277/Caldwell/South Blvd. interchange.
- Provide a better vehicular and pedestrian connection with South Boulevard and the South End with Center City.
- Make navigation around Center City easier for visitors and occasional users by replacing two one-way streets with two two-way streets.





Brevard will be converted to a two-way, two-lane street from Trade Street to Stonewall Street, with on-street parking and wider sidewalks. The current reconstruction of the Caldwell-Brevard-South Boulevard interchange on I-277 has facilitated this conversion. With the conversion, Brevard will become a Signature Pedestrian Street linking the Arena and Convention Center visitor destinations, with the potential to become a significant retail, restaurant, employment, entertainment and hotel streets. Its adjacency to the Light Rail Transit line will further reinforce this potential.

B. Conversion of One-Way Streets to Two-Way Streets

B-2. Brevard Street: Trade Street to Stonewall Street

As described above, the construction of the Charlotte Arena bisected Brevard Street, with a connection along Fifth Street to Caldwell, which in turn was made two-way between Fourth Street and Fifth Street. While this is an adequate short-term solution, Brevard's function as a north-to-south one-way primary commuter route was greatly diminished. This major disruption also created the opportunity for Brevard and Caldwell Streets to assume new and significantly different functions.

B-3. Brevard Street: Fifth Street to I-277 Brookshire Freeway

Brevard Street will better serve vehicular circulation in Center City by **conversion to a two-way street from Fifth Street north to I-277** (Brookshire Freeway). The northern section of the street will also function as a Signature Pedestrian Street to support pro-posed redevelopment of the area north of the Arena. Brevard will be two-lanes, two-way between Fifth and Ninth. Between Ninth and I-277 it will be three lanes, with two lanes southbound and one lane northbound. (This asymmetrical configuration

corresponds to a similar situation on Caldwell Street in order to avoid the reconstruction of I-277 underpasses and overpasses.)

This will supplement the conversion of Caldwell Street to two-way, as described above. It will also provide a northbound exit from Center City for drivers headed to eastbound I-277 once the Davidson Street eastbound entrance ramp has been removed.



B-4. Poplar Street: MLK Blvd. to Sixth Street

Poplar Street is now one-way northbound from the intersection of Second and Mint Street to Sixth Street, then changes to two-way north of Sixth Street. It functions partially as a shorter one-way couplet with a shorter one-way southbound Mint Street. This pairing is not necessary for the traffic volumes on either street and creates avoidable confusion for visitors and occasional users. Additionally, southbound traffic from the residential Fourth Ward, north of Sixth Street, must divert onto Sixth Street to get to southbound Mint, which adds unnecessarily to traffic to Sixth Street.

Poplar Street will be converted to a two-way, two-lane street. As described in the following “New Streets” section, the Mint/Poplar connector will be removed with the development of the Third Ward Park, Poplar will extend from Third Street to Eleventh Street. On-street parking will be provided on both sides of Poplar where the right-of-way width and future development allows. This change will create better vehicular and pedestrian circulation between Fourth Ward and Third Ward.

B-5. Mint Street: Trade Street to MLK Blvd.

Mint Street will be converted to a two-way, two-lane street (from Trade to Second), with time-restricted on-street parking on both sides of the street. The conversion of both Poplar and Mint will enhance pedestrian circulation in the area, particularly at the intersections with MLK Blvd..

The pavement cross-section of Mint Street will be retained to support time-restricted on-street parking, to support special operations of the street associated with traffic management for events at Bank of America Stadium and the new baseball stadium, and to support activities at the new Third Ward Park.

B-6. MLK Blvd.: College Street to Mint Street

MLK Blvd. is now one-way, westbound, between College and Mint Street. Converting MLK Blvd. to a two-way, two-lane street will enhance connectivity and improve traffic flow by providing a two-way connector between McDowell Street and Cedar Street. The pro-

posed conversions of Mint, Poplar Streets and MLK Blvd. are consistent with the *Center City 2010 Vision Plan* as well as the *Third Ward Vision Plan*.

B-7. Eleventh Street: Caldwell Street to Tenth Street

Eleventh Street is now one-way, eastbound and southbound, between Caldwell and Tenth Street. At Tenth, Eleventh Street ties into McDowell Street, which is two-way. The one-way direction is necessary only because of the eastbound entrance ramp to I-277 just east of Davidson Street. Elimination of this ramp (see page 38), will remove an impediment to two-way traffic on this portion of Eleventh Street. Converting Eleventh Street to a two-way, two-lane street from Caldwell to Tenth, will provide additional connectivity for residents of First Ward as well as provide alternative routes for traffic using Tenth Street for access to Center City.

B-8. Fourth Street: Norfolk-Southern Overpass to Poplar Street

The preliminary conceptual plans for development of a new Charlotte Knights Baseball Park call for closing Third Street between Graham and Mint Streets. This *Center City Transportation Plan* also proposes closing the Fourth to Third connector (see page 38). In order to support these proposals, Fourth Street needs to become two-way from the Norfolk-Southern overpass to Poplar Street. The modification will require two eastbound lanes between the railroad and Mint Street and one lane between Mint and Poplar Streets.

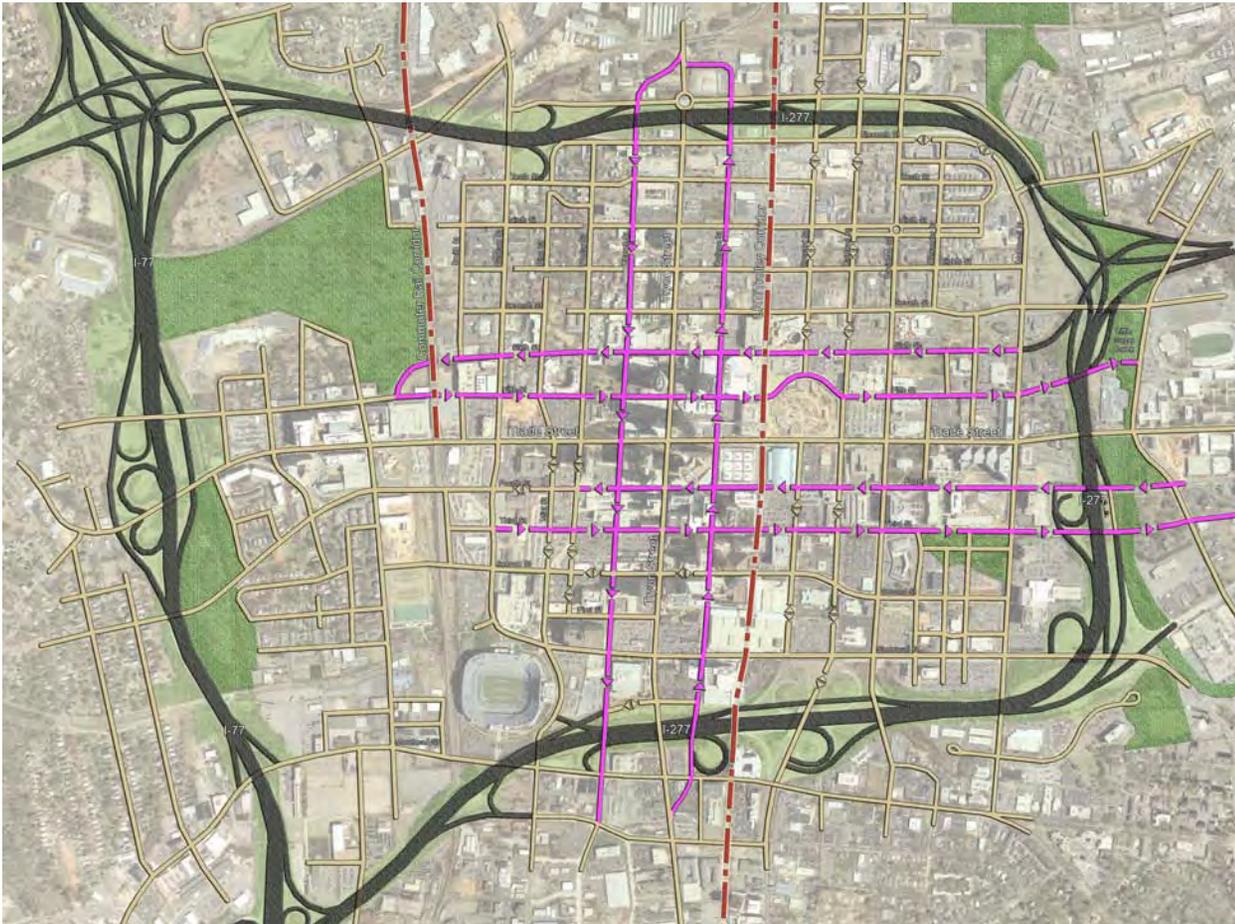
2I. Hill Street: Tryon Street to Church Street

Hill Street is only two blocks long, one of which is already two-way. Conversion of the block between Tryon and Church will provide better connectivity alternatives between the two streets. It will also enhance the operation of the College/Church one-way pair.

C. One-Way Streets To Be Retained

The following one-way streets will be maintained as part of the overall Center City vehicular circulation system (Page 44). The one-way streets will





C. One-Way Streets to be Retained

continue to serve as primary commuter streets in and out of Center City during peak morning and afternoon hours.

Most importantly, one-way pairs of Church and College Streets, and Fourth and Fifth Streets, serve approximately 90 percent of the existing structured parking spaces in Center City. Some of the garages are designed to be directly dependent on this system. Additionally, conversion of these streets would greatly constrain access to many other garages.

C-1. Third Street

Third Street is one of the primary eastbound routes out of Center City, and a primary entrance route into Center City from I-77 on the west. It begins just east of the Norfolk-Southern railroad tracks as a connector away from Fourth Street. It will be retained as a one-way primary commuter street through Center City east of Mint Street.

C-2. Fourth Street

Fourth Street is also a primary route into Center City, especially from the east, and operates as a one-way couplet with Third Street. It is also a primary commuter exit route to I-77 on the west side of Center City. Fourth Street will be retained as a one-way westbound primary commuter street from Kings Drive to Poplar Street as described above.

C-3. Fifth Street

Fifth Street is a primary commuter entrance into Center City from I-77 and a primary exit route to U.S. 74 (Independence Boulevard). It will be retained as a one-way eastbound

primary commuter street from just east of Cedar Street to I-277 and the connector with U.S. 74. The two-way portion of Fifth Street from I-77 to the connector with westbound Sixth Street, just east of Cedar Street, will remain two-way. As part of the proposed modifications to I-277, a new connection will be made from Fifth Street to Kings Drive, east of I-277.

A portion of Fifth Street is under consideration for fixed guideway transit services, either for light rail or bus rapid transit or as part of the Center City Streetcar.



C-4. Sixth Street

Sixth Street functions as a westbound one-way primary commuter street coupled with one-way eastbound Fifth Street. It is an important entrance route for commuters from U.S. 74 (Independence Boulevard) and I-277, though not as heavily used as westbound Fourth Street. It is also an important eastbound commuter exit to I-77 and the Beatties Ford Road corridor, transitioning to a two-way Fifth Street just east of Cedar Street near Gateway Village. It will be retained as a one-way eastbound primary commuter street from I-277 to the connector with Fifth Street.

C-5. Church Street

Church Street is a primary southbound commuter entrance route from I-277 Brookshire Freeway and a primary exit route to I-277 Belk Freeway and the South Tryon Street/South Boulevard corridor. Because of the many parking decks located on Church Street, it is especially important for commuter traffic. It will remain as a one-way southbound primary commuter street.

C-6. College Street

College Street is a major northbound commuter entrance route from I-277 Belk Freeway and the South Tryon Street corridor, and exit route to I-277 Brookshire Freeway and the North Tryon Street corridor. Many parking decks are also located along College Street, reinforcing its importance as a commuter street. It will be retained as a one-way northbound primary commuter route.

The blocks on College between Fifth and Stonewall have more lanes and more pavement width than necessary for vehicular traffic. This will allow reduction of the number of lanes and use of pavement for special services parking in some sections of the street (see page 44).

C-7. Eleventh Street

In order to support the operations of I-277, Eleventh Street will be retained as one-way eastbound, from Church Street to Caldwell Street.

C-8. Twelfth Street

Similar to Eleventh Street, Twelfth functions as an important distributor for I-277 traffic into Center City. Twelfth Street will be retained as one-way westbound, from Tenth Street to Graham Street. Proposed modifications to I-277 (page 38) will affect Twelfth Street.

D. New Streets

The following are new streets proposed for Center City (Page 46). These new streets will create better connectivity for vehicles, pedestrians and bicycles.

D-1. New and Modified Streets near the Charlotte Gateway Station and Third Ward Park

- **New Street: Fourth Street to MLK Blvd. (as extended)**
A new two-lane, two-way north-south street is proposed, between and paralleling the Norfolk-Southern railroad tracks and Graham Street. This new street will allow elimination of the connector from Fourth Street to one-way eastbound Third Street, helping to slow down the inbound traffic. It will also establish a better block pattern south of Fourth Street and west of Graham Street, supporting development associated with the Charlotte Gateway Station, a new Greyhound Bus Station and potential baseball stadium.
- **Third Street: New Street to Graham Street**
A new two-lane, one-way eastbound Third Street connector will be made between the New Street (above) and Graham Street. This will allow elimination of the connector with Fourth Street, slow traffic and support development of the block pattern as part of the Gateway Station.
- **MLK Blvd.: Graham Street to Cedar Street**
A two-lane, two-way extension of MLK Blvd. between Graham Street and Cedar Street, under the Norfolk-Southern railroad tracks, will provide an additional connection from the Third Ward neighborhood west of the railroad tracks into Center City. This connection will provide an additional alternative into and out of





D. Proposed New Streets

the city for both pedestrians, bicyclists and vehicles. It would be accomplished most appropriately and economically as part of the track reconstruction for Amtrak, North Corridor commuter rail and the Charlotte Gateway Station.

D-2. Euclid Street Connection across I-277

A new two-way, two-lane connection of Euclid Street to Alexander Street, Davidson Street or some other point is proposed to span I-277 between Stonewall

Street in Center City and Morehead Street in Dilworth. This connection will provide improved vehicular and pedestrian connections across the I-277 freeway between Center City and the Dilworth neighborhood, and will support the Second Ward Master Plan development. It will also support redevelopment activities in the Euclid/ Morehead area.

D-3. New Second Ward Streets

Several new two-lane, two-way streets were proposed as part of the Second Ward Master Plan for the area bounded by Third Street, Davidson Street, Stonewall Street and I-277. These streets will be constructed as implementation of the Second Ward plan proceeds.

D-4. Fifth Street Extension: McDowell Street to Kings Boulevard

This extension will provide an additional eastbound route out of Center City to Kings Drive and the Elizabeth neighborhood. Pedestrian and bicycle connections are proposed within the right-of-way on the south side of the ramp, as a connector between the Little Sugar Creek Greenway and McDowell Street. These improvements will also provide enhanced pedestrian connectivity between Center City and Central Piedmont Community College.

D-5. Myers Street Extension: Sixth Street to Seventh Street

A two-lane, two-way extension of Myers Street, between Sixth and Seventh Streets, will support ongoing First Ward development by providing enhanced vehicular and pedestrian connectivity.



D-6. Tenth Street: Tryon Street to Brevard Street

Redevelopment of the area on North Tryon now occupied in part by Mecklenburg County’s Hal Marshall Government Services Center has been under discussion for some time. As this redevelopment and development of vacant land in this area proceeds, Tenth Street will be connected from Tryon Street to Brevard Street. This will provide enhanced connectivity to support redevelopment. It will also improve pedestrian connectivity between residential First Ward and the Tryon Signature Pedestrian Street, as well as pedestrian access to the future Ninth Street LRT Station. Phifer Street currently exists between Tryon and College Streets to the south of this proposed alignment of Tenth Street. Phifer should be removed when Tenth is developed in this block.

D-7. New Streets in South Cedar Street area

The street network in the area south of the Third Ward residential area and west of the Norfolk-Southern Railway embankment is somewhat fragmented. Recent private development activities in the area have presented opportunities to reconnect portions of the network to enhance a grid system. Elliot Street and McNinch Street need to be connected across the old P&N rail corridor, which is being converted to a greenway trail. These connections will create a grid south of First Street. Elliott, McNinch and Hill Streets east of Cedar and north of West Morehead need to be upgraded and connected to provide a grid network. Similarly, McNinch, Clarkson, Cedar, Eldridge, Dunbar and Elliott Streets south of West Morehead will provide a grid network to support redevelopment of that area. These improvements will provide circulation alternatives and relieve traffic on Cedar Street and Morehead Street.

E. Conversion Of Travel Lanes And Excess Pavement

Several Center City streets have either more travel lanes than are needed and/or excess pavement width for the anticipated future traffic volumes. This presents an opportunity to reuse those lanes for purposes more in keeping with the goals of this Center City Transportation Plan.

On some streets, travel lanes will be reduced in order to provide increased sidewalk widths that meet the Pedestrian Street Standards. On others, on-street parking will be added for the greater convenience of short-term visitors to Center City, or to provide bicycle lanes.

E-1. Reuse for On-Street Parking and/or Bicycle Lanes

A travel lane on each of the following streets will be reused for a variety of purposes, including on-street parking, valet parking, bus stops, loading zones, and/or bicycle lanes.

- College Street, from Stonewall Street to Fifth Street
- Davidson Street, from Stonewall Street to Third Street
- MLK Blvd., from College Street to McDowell Street
- McDowell Street, from Seventh Street to Tenth Street
- Brevard Street, from Stonewall Street to Third Street
- Poplar Street, from Fifth Street to MLK Blvd.

E-2. Re-Use of Pavement for Additional Sidewalk Space

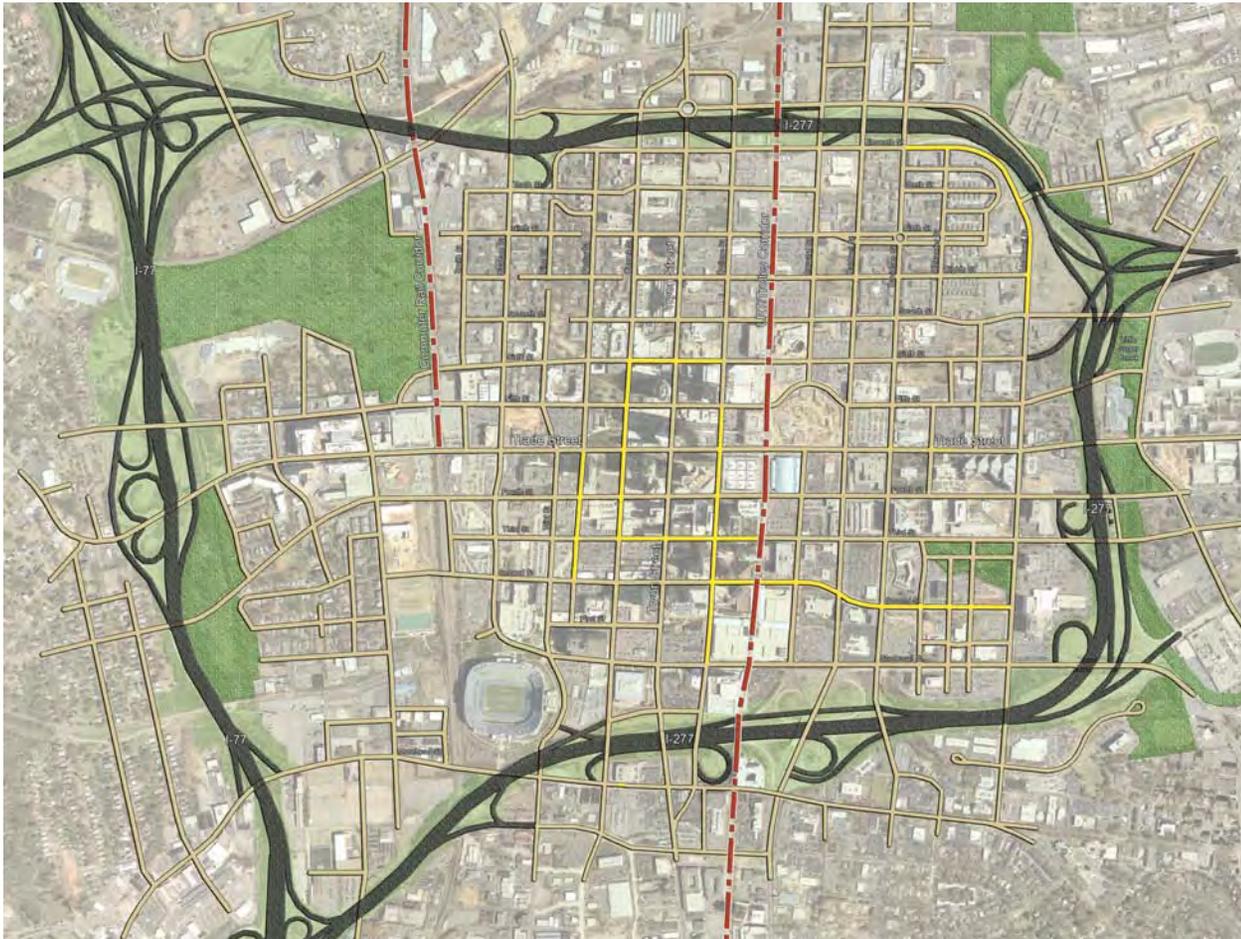
On the following streets, a travel lane or existing on-street parking will be eliminated and additional sidewalk space added to more closely meet the Pedestrian Sidewalk Standards:

- Sixth Street, from the Light Rail Transit line to Church Street
- Third Street, from Church Street to College Street
- Fourth Street, from College Street to Poplar Street
- Brevard Street, from Stonewall Street to Third Street

F. Turn Lane And Intersection Modifications

There are a number of right-turn and left-turn lanes throughout Center City that are unnecessary for the estimated volume of turning traffic. These can result in higher speed turning movements than are desirable to meet the 25-mile per hour goal for Center City. They also can cause conflicts with pedestrian crossings at intersections. At some intersec-





E. Conversion of Travel Lanes

tions, the geometric configuration prevents a continuity of traffic flow that would be desirable.

Modifications of turn lanes or intersection configurations will be made at the following intersections to resolve these conditions (Page 48):

- Tenth Street at Church Street
- Sixth Street at Graham Street
- Trade Street at Johnson & Wales Way
- Fourth Street at Johnson & Wales Way
- Fourth Street at Church Street
- Fourth Street at the entrance to the Grant Thornton Building parking garage
- Fourth Street at Davidson Street
- Third Street at Church Street
- Third Street at College Street

G. Rail Grade Crossing Closures And Modifications

The North Corridor rail program will support the CATS North Corridor Commuter Rail line and the AMTRAK Inter-City rail services managed by NCDOT. Both services will use the existing Norfolk-Southern Railway embankment that runs between and parallel to Graham and Cedar within Center City. North of I-277, the NCDOT AMTRAK line will use the CSX right-of-way which parallels and is approximately two blocks north of Twelfth Street. Development of the expanded rail services on these two rights-of-way will have

the following impacts on existing at-grade street crossings.

- Ninth Street - Close at-grade crossing and provide a pedestrian/bicycle bridge overpass for connectivity to Johnson Street and the Elmwood-Pinewood Cemetery
- Smith Street - Close at-grade crossing
- Church Street - Close at-grade crossing
- Brevard Street - Provide "Quad-gate" enhancements
- Davidson Street - Provide "Quad-gate" enhancements





As an additional benefit to the quality of life in Center City and the area north of I-277, these several modifications will enable the creation of a “quiet zone” within which the use of train whistles will not be required as trains approach the crossings.

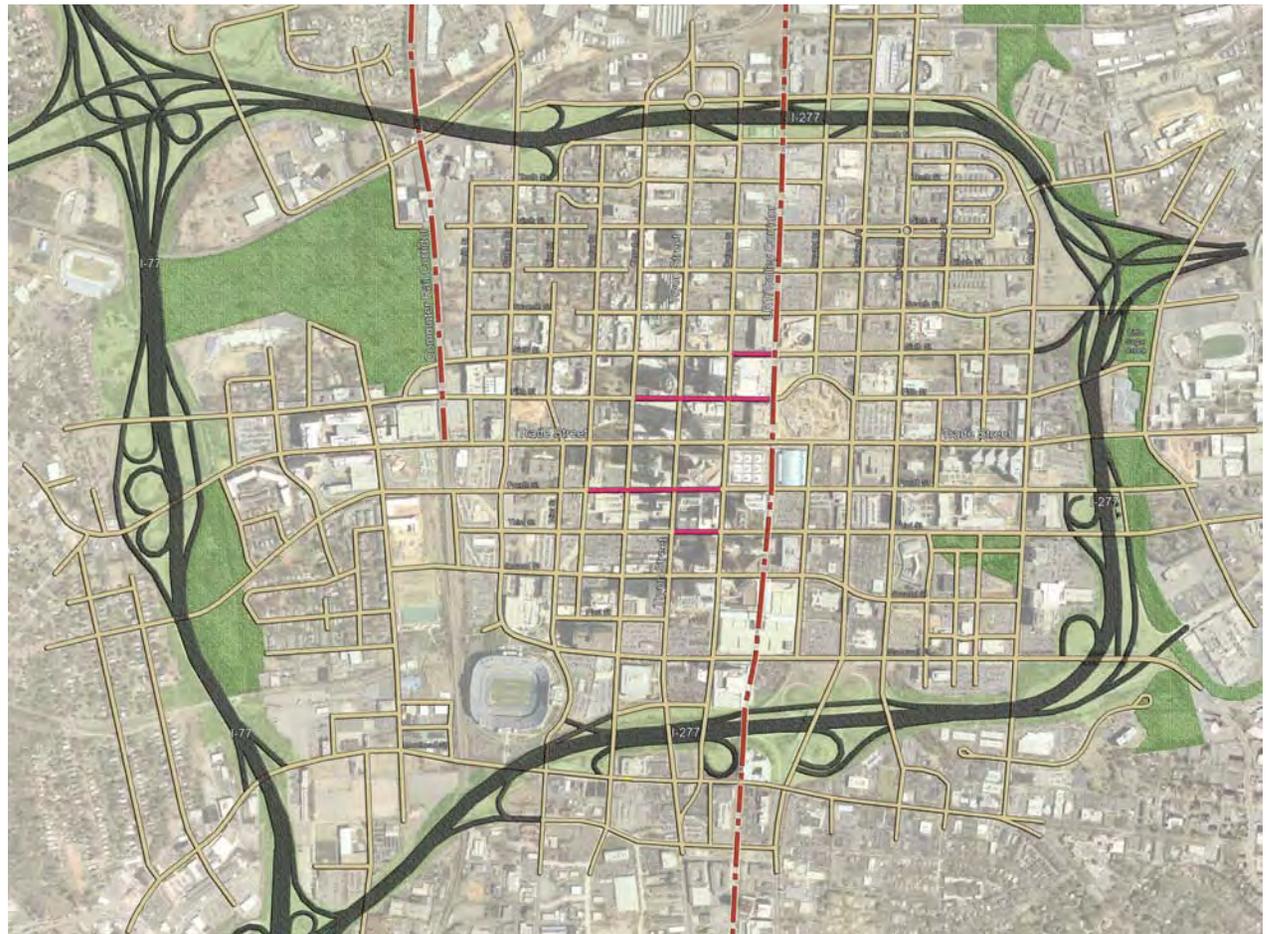
Can Center City Streets Accommodate Future Traffic Volumes?

Preparation of the *Center City Transportation Plan* included a detailed analysis to determine whether the future vehicular circulation system could accommodate traffic with the proposed changes.

The basic conclusion is that, yes, the Center City street network will be able to accommodate projected traffic volumes in the future, with the street modifications proposed in this plan.

The methodology used in this analysis, and the findings and conclusions, are described in *Appendix A* (page 91). Among the assumptions used are these:

- *In the future, the proportion of employees who work in Center City and commute by driving alone will be significantly lower than it is today.* This change will occur primarily as a result of major improvements in public transportation to and within Center City, and increases in the number of employees who both live and work in Center City.
- *In the future, more drivers will use the freeway loop and the internal circulator route to approach their destination in Center City, rather than travel lengthy segments of Center City streets.* In other words, they will follow the loop or circulator route to the point closest to their parking destination before entering the street grid system.
- *Most drivers will tend to avoid traveling from one side of Cen-*



E. Reduction of Pavement Width

ter City to the other, given the planned pedestrian orientation of the Center City core and the Trade Street and Tryon Street axes. In other words, proposed improvements that make Center City streets more pedestrian-friendly will tend to discourage faster-moving through traffic.

The analysis noted that while the overall street network should perform well, there may be localized congestion points that occur and will need to be addressed. At the same time, the Center City street grid enables drivers to readily make route adjustments on their own.





F. Operational Modifications

Street Enhancement Standards Map: Taken together, these recommendations for modifications to the pattern of vehicular circulation are numerous. They are brought together in the Center City Street Enhancement Standards Map as discussed in “Part Five: Implementation.” The Pedestrian Street Design Standards (page 75) provide the design requirements for the pedestrian space classifications indicated on this Map.

Plan Recommendations: Vehicular Circulation

6. Complete the proposed modifications to the I-77/I-277 Loop. These improvement projects will resolve specific problems (such as those stemming from short weave segments) and, in general, make the freeway loop more effective in distributing Center City traffic - a prerequisite to assuring smooth traffic flow within Center City.

7. Convert selected one-way streets to two-way streets to improve vehicular circulation within Center City. Nine conversions are proposed. Most notably, Caldwell and Brevard would be made two-way streets (and the interchange with I-277 Belk Freeway re-designed) to accommodate the Arena site, as well as to convert Brevard to a “Signature Pedestrian Street” with unique development opportunities between the Arena and the Convention Center.

8. Retain selected one-way streets, including the primary commuter streets in and out of Center City during peak morning and afternoon hours.

9. Construct new streets or street segments to improve connectivity and meet special needs. These new or modified

streets include those in the vicinity of Gateway Station and Third Ward Park, an overpass over I-277 from Second Ward to Dilworth (Davidson to Euclid), street extensions in First Ward and neighborhood residential streets in a future, redeveloping Second Ward.

10. Convert travel lanes on streets with excess capacity to use for increased sidewalk widths, on-street parking, or bicycle lanes. These street segments are identified on page 47.

11. Modify turn lanes and intersections where turn lanes are unnecessary for the estimated volume of turning traffic or where



safety or pedestrian crossing issues are a concern. Eight intersection configurations are identified on page 47.

12. Modify or close rail grade crossings where made necessary by expanded rail service to Center City. Five crossings are identified on page 48.

Parking

Until the transit system is expanded . . . Center City will continue to need a considerable amount of parking. In the interim, public and private attention should focus on shared parking and on designing facilities with regard for aesthetics and pedestrians as well as air quality standards. At the same time, policies should be put in place to minimize the future need for spaces.

- Center City 2010 Vision Plan

Guiding Principles

Parking structures and the access system must be designed and managed to support:

- development of employment and visitor activities;
- pedestrian-oriented streets;
- efficient use of investment; and
- development objectives for transportation and transit.

The expanding CATS transit system should substantially increase the number of employees commuting to Center City by transit in the future, but the majority of employees will continue to drive to work. In addition, out-of-town and occasional visitors to Center City who drive can be expected to increase given the growth in venues and activities. These employees and visitors will continue to require parking facilities. Furthermore, lending institutions typically require developers to demonstrate an adequate supply of parking to support their developments, even when transit service is available.

To keep Center City attractive for office development, and to maintain its position as the region's employment center, it will be necessary to provide the correct amount of parking needed to support new development. The *Center City Transportation Plan* parking policies have been developed with the goal of providing the correct, but not excessive, amount of parking needed to meet these goals while balancing parking supply with increased use of transit and other modes.

Estimating Future Parking Needs

The need to *accommodate employment* is the primary determinant of the off-street, non-residential parking supply in Center City.

36,000 is the current number of off-street parking spaces used on weekdays by Center City employees. This estimate is calculated as follows:

Existing employees	55,000
Minus employees that walk to work	-500
Employees commuting to Center City	= 54,500
Minus transit users (7.5%)	- 4,088
Employees who will drive to work daily	= 50,413
Minus daily absentee rate (10%)	- 5,041
Total Employees who will drive to work daily	= 45,371
Minus average vehicle occupancy (1.1)	- 4,125
Total Parking Space Usage in 2003	= 41,247
Minus parking spaces outside loop (0.3%)	- 1,207
Total Parking Spaces inside loop	= 40,010
Total Weekday Parking Space Usage (85%)	= 36,000

For operational efficiency, parking decks and lots generally accommodate a maximum of 85 percent of their total capacity. Thus, accommodating 36,000 occupied parking spaces requires approximately 41,400 spaces - which is less than the estimated current total supply of 46,000 off-street parking spaces available for daily commuters in Center City.





How will that number change in the future? In the next 25 years - by the time the new rapid transit system is complete - an additional 40,000 employees are expected in Center City, bringing the total work force to 95,000 employees, according to growth projections (page 28). By that time a greater percentage of commuters will be using the new transit system, but the majority of Center City employees will still drive to work and will need parking.

58,000 is the approximate total number of off-street parking spaces needed to accommodate 93,000* employees working in Center City.

Forecasted future employees	93,000
Minus daily absentee rate (10%)	- 9,300
Forecasted total daily employees in Center City	= 83,700
Minus estimated transit users (25%)	- 20,925
Forecasted employees who will drive to work daily	= 62,775
Minus parking spaces outside the loop (3%)	- 1,883
Forecasted employees who will park in Center City daily	= 60,892
Minus average vehicle occupancy (1.2)	- 10,149
Total Parking Space Usage in 2003	= 50,743
Plus 15% additional spaces needed for operating efficiency	+ 7,612
Forecasted Total Off-Street Spaces needed for 93,000 employees	= 58,355

New office buildings will be built to accommodate the growth in employment. These offices and other new buildings will displace surface parking lots, so additional parking decks will need to be built. While the number, size and location of future office buildings is highly speculative, several assumptions were made in order to derive an estimated number of new parking decks that might be constructed to support the future 95,000 Center City employees.

Potential parking sites were determined by identifying available land either on site or within close proximity of potential office building sites. The number of parking spaces by site was determined by

assuming various parking deck heights and spaces per floor, based on floor area ratio and deck footprint estimations.

The number of parking spaces by site was determined by dividing the area of the site (minus required setbacks) by 450 square feet per car. Parking structure size was determined by using the 450 square feet per car ratio and determining the number of floors underground or above ground. Above-ground floors were limited to avoid high rise classification. This exercise suggested that a possible total of 7,500 existing surface parking lot spaces would be displaced by new development over the next 20 to 25 years.

Using these assumptions, about 20,000 new parking deck spaces will be constructed in Center City over the next 20 to 25 years to accommodate the forecasted growth in employees.

Forecasted Total Off-Street Spaces needed for 93,000 employees	= 58,355
Minus existing off-street parking spaces	- 47,000
Plus existing off-street spaces estimated to be displaced	+ 8,257
Estimated new parking spaces needed	= 19,612

**Notes:*

- The parking analyses were based on an earlier employment forecast of 93,000, and have not been revised to match the more recent employment forecast of 95,000.
- The parking analysis is based on the supply related to employment and hotels. This is also the parking that is principally available to serve the entertainment and other predominantly off-hour needs. Residential development tends to provide its own exclusive use parking and, therefore, is not included in the analysis.
- As the CATS transit system plan is completed and service becomes available in all five corridors, commuter use of transit could be higher than 25 percent. If that is the case, the need for additional Center City parking spaces would decrease proportionately.





Managing Future Parking: A Policy Approach

The analysis of parking space needs suggests the number of off-street parking spaces will increase by nearly 50 percent - from about 40,000 spaces today to 58,000 - in the next 20 to 25 years. Private facilities will meet most of that demand, but for the Center City transportation system to function effectively as a whole, and to assure the area's continued economic viability, it is important that the Uptown parking system be accessible, well-managed and user-friendly.

That is not the case today. While the current parking supply is adequate to meet today's needs in terms of the number of spaces, the accessibility of such spaces - the ease of finding convenient parking - is another matter. The large number of privately owned and managed facilities can make it difficult for visitors to find either short-term or daily parking convenient to their destination. The system is fragmented and lacks overall coordination. It is important to develop a management scheme that would result in a coordinated parking supply, welcoming to the visitor, the tourist, new businesses, employees and the general public.

In fact, a collaborative system - including a parking guidance system and a common branding program - would be a more cost-effective approach for meeting parking needs than would complete reliance on parking deck construction.

It is not necessary to build a space for each additional future employee. In part, this is because more employees will live Uptown and walk to work, and more people will be riding the rapid transit system. But another key is to efficiently use existing facilities by coordinating available parking deck spaces to meet demand as it shifts during the day. It also works on a longer-term basis; for example, if one building has an over-supply of spaces because more employees are using transit, the building management can make these spaces available for the collaborative system and gain new users. A collaborative system is a cost-effective alternative to construction.

Maximizing the efficiency of the entire public and private parking system increases the value of the parking assets, reduces development costs, stabilizes user costs, and supports efficient use of the

transportation system, including transit. From the public policy standpoint, it is in the interest of an economically viable Center City to have parking facilities and access systems that are designed and managed to support pedestrian-oriented streets, transit development objectives, and efficient use of facility investment.

The transportation objective is to use the parking supply as efficiently as possible and to support it with a vehicular circulation pattern and a directional system that enables people to find parking as directly as possible.

This is the aim of a proposed policy approach - a collaborative public-private approach - for meeting the current and future parking needs of employees and visitors in Center City. It is the recommended choice among four possible options for the City of Charlotte.

- The City can stand by as the existing fragmented approach continues;
- The City can adopt parking maximums or impose a ceiling on the number of spaces;
- The City can begin constructing its own parking structures; or
- The City can facilitate a collaborative parking system.

The following description summarizes the proposed collaborative parking program, and makes recommendations about the City's role in on-street and off-street parking supply.

Managing Off-Street Parking: A Collaborative Parking System

The off-street parking system is fragmented and under numerous ownership and management models. Hours of operation, rate schedules, management of reserved and non-reserved parking, and design standards (such as lighting and security features) vary by facility. Little or no parking guidance or "wayfinding" exists - nor can one be developed in a fragmented environment - resulting in the presentation of a confused parking system to both the infrequent and frequent visitor.





This *Center City Transportation Plan* recommends a policy approach to improving management of the off-street system.

It should be emphasized that the objective of “changes in management of the parking system” does not refer to changes in management of specific facilities, but is aimed at unifying the parking system so that it looks, feels and is perceived as a system to users, rather than a fragmented series of parking opportunities.

Policy Recommendation:

Create a “Collaborative Parking System” for the management of private and public parking facilities. The intent of the Collaborative Parking System (CPS) is to organize the public and private parking assets in Center City to provide parking that is perceived by the various users as a unified and coordinated system. Elements of the system include:

- common branding and advertising;
- parking guidance or “wayfinding” system;
- known pricing scheme;
- common validation process;
- possible joint billing or clearinghouse;
- consistent specialized parking (van and car pooling);
- consistent enforcement; and
- consistent design and quality standards.

A Collaborative Parking System will provide opportunities for private owners and operators to more effectively market their parking facilities based on supported provided by the collaborative. Marketing and branding, as well as dynamic wayfinding signs that direct parkers to their facilities, are key components of the collaborative system.

Benefits to owners and operators should include higher revenues from increased utilization, the potential for subsidies by the collaborative to expand operating hours (and, ultimately, generate new revenue), and

financial and infrastructure support for new technology costs.

Appendix B presents examples of collaborative systems in six other cities.

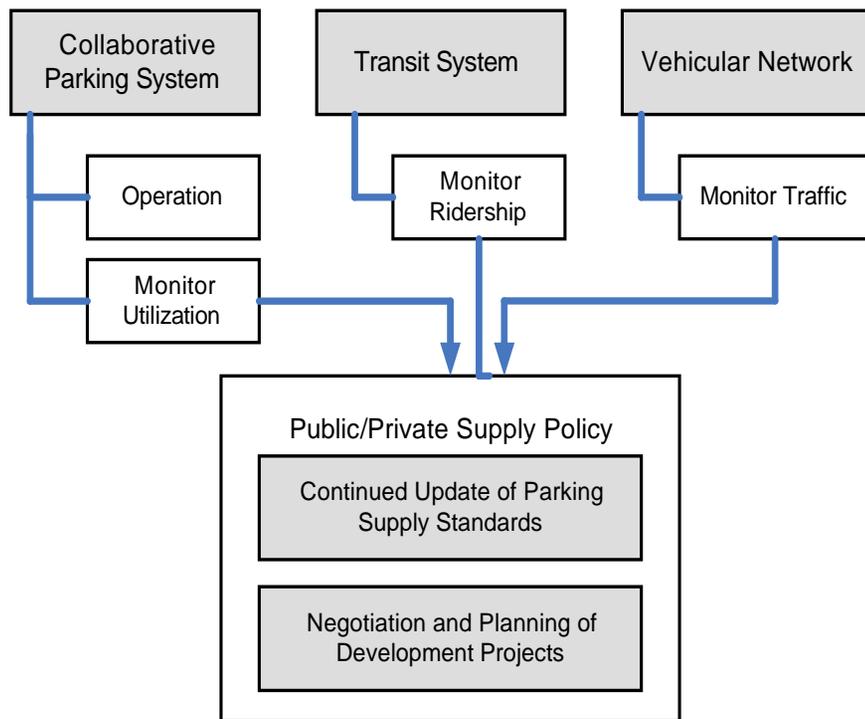
Many cities view parking as an economic development tool that can accelerate development and growth of a downtown area. Indeed, there is a growing movement by cities across the United States to leverage their parking resources to support economic development. Generally, these efforts involve public and private partnerships and, hence, the term “collaborative” parking systems. The common goal of these collaborative systems is to ensure that the right amount of parking is available to users, that all visitors can find parking, and that the public and private sectors work together for their mutual benefit.

Organizational Alternatives for CPS

The Collaborative Parking System should be organized under a single entity comprised of a board of directors that represents the ownership and stakeholders of the system. The board would hire a parking director to act on their behalf in implementing the technical aspects of the program as well as manage day-to-day coordination of the program. The board’s mission would be to set policies, direct investment and implement strategies for the membership.

Membership in the collaborative would be voluntary and may or may not be beneficial to every owner or operator in the Center City. The objective is to organize as many of the parking facilities in Center City into the collaborative as possible, so that an effective, user-friendly parking system is perceived by all who come to Center City. There are three possible organizational models that could create and manage the collaborative:

1. **The City of Charlotte** could create, organize and finance the collaborative. There are advantages in that the City has resources already in place in the “Park-It” program that may be more expedient in implementation. However, the parking supply is primarily privately-owned and, as such, there may be more interest by the stakeholders in establishing an organization that reflects more closely the ownership of the parking system.



as opposed to being one of a number of services managed by another organization such as CCCP. The board would hire a parking director to manage the CPS activities.

CCCP has recently agreed to operate the CPS under its auspices. A more detailed analysis of the above alternatives has been undertaken that led to this decision.

CPS Summary

The Collaborative Parking System has the potential of maximizing the use of existing parking assets (increasing income); reducing development costs (fewer new spaces to construct); reserving roadway capacity (improved vehicular circulation); and supporting the economic vitality of Center City (efficiently meeting work force parking needs). *Examples of collaborative parking systems in six other cities are described in Appendix B.*

Proposed City Policy For The On-Street Parking Supply

The City of Charlotte manages the Center City on-street parking system through "Park-It!" This program is contracted to an outside operator every few years through a bid selection process. The system functions well and generates significant net revenue after expenses (approximately a half million dollars per year).

On-street parking should always be oriented to the visitor or short-term parker, and should provide opportunities for easy access to destinations, and offer customer-friendly payment options. The proposed long-range improvements to the street network will expand the net number of on-street parking spaces significantly. The **Street Enhancement Standards Map**, (page 81) encompasses the siting of on-street parking throughout Center City.

A greater number of on-street parking spaces not only increases access to the Center City but also can result in increased revenue that could help support the proposed Collaborative Parking System and other parking policies described in this section.

Policy Recommendation:

Expand the on-street parking system program.

Expanding the system refers to increasing

2. **Charlotte Center City Partners (CCCP)** currently has an ongoing annual contract with the City to provide services to their constituency, which is primarily the private sector community within the Center City. The benefits to organizing under CCCP are that they already have a board of directors that is representative of the private sector and they are a known and trusted entity. The CCCP has existing resources and business networks and could potentially expand their services to incorporate the CPS. The CCCP could also hire a full-time director to manage the day-to-day operation of the CPS.
3. **The creation of a new non-profit entity** to focus only on day-to-day management of the CPS provides a third option. As a non-profit organization, the goal would be to reinvest any available funds back into improving the parking system. The non-profit entity would require a board of directors that represents the Uptown parking and business interests. As a new entity, it could ensure, a singular focus on the parking system,





the number of spaces located on-street, increasing the hours of operation, and offering customer-friendly payment methods. Elements of this policy include:

- expanding the supply of on-street parking spaces, as reflected in the Street Enhancement Standards Map;
- expanding the availability and hours of operation, by reducing the use of time-restricted spaces and considering evening operations; and
- enhancing operations with such measures as multi-space meters, valet parking, pay stations, and fine drop boxes.

Proposed City Policy for the Off-Street Parking Supply

As parking demand increases over the next 25 years, there will be many opportunities for the City of Charlotte to partner with the private sector in providing parking solutions as part of new mixed-use development projects. Very few communities are constructing stand-alone parking structures. The recommended model is the development of mixed-use projects that serve needs for shared parking, transit accessibility and multiple trip destinations. This model - with the City as a partner in jointly addressing parking needs - can result in efficient, effective and sustainable development that has positive impacts on development as a whole in Charlotte.

Policy Recommendation:

Develop an Off-Street Parking Policy program or framework for City participation in the development of parking as a component of mixed-use projects. Elements include:

- financial participation, either directly or through other components of the development;
- building on established sustainable measures;
- managing quantity, through involvement of the Collaborative Parking System;
- establishing shared parking criteria or guidelines;

- considering options for “payment-in-lieu of building new parking;”
- supporting the transportation system through site and location criteria;
- managing access through establishment of criteria; and
- establishing and supporting design criteria.

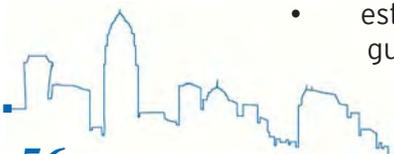
The elements establish a framework for the City to participate financially in projects that include parking components when these components are developing in coordination with the overall parking policies. The intent is to build on sustainable measures already established for economic development activities in Center City and provide an adequate parking supply that supports transit ridership, economic development and employment growth.

An estimated 5,000 to 7,000 parking spaces are vacant during the peak hour parking demand of the day in Center City. This represents between \$80 and \$100 million in parking construction that is being underutilized. This policy is aimed at facilitating an adequate investment in parking based on maximizing the use of the parking supply without overbuilding.

Establishing shared parking criteria, guidelines or an ordinance, will improve the ability to share parking resources. In addition, there may be opportunities to combine the parking needs of multiple developments in a single facility as part of a larger development project, rather than constructing parking on “piece-meal” basis by individual developers.

The primary tool for implementing this approach is the Collaborative Parking System. It can also be supported by “payment-in-lieu of parking” which requires the creation of a parking fund that can collect payments and reinvest in facilities that will serve multiple users more economically. A parking fund allows developers or business owners to make a payment to a funding entity that will provide their parking needs as part of a larger project, rather than building parking themselves.

Other elements of the policy are aimed at promoting the most efficient siting of new facilities that may serve multiple destinations,





activities or businesses, where access to and from the parking facility is in line with the goals of managing the roadway system capacity. Finally, there will be opportunities through the parking policy to support design criteria that promote unique, pedestrian-friendly and accessible parking facilities.

Summary - An Integrated Parking Program

The parking policy’s greatest impact is in concert with the development of a Collaborative Parking System (CPS) for unified management of the existing private off-street parking facilities in Center City.

The successful operation of CPS depends on the integration of four components, illustrated and described below:

Collaborative Parking System (CPS) Components

- **CPS** will be charged with the day-to-day operations of the parking system, including the parking guidance system, marketing, promotion, branding and related activities. CPS will also be responsible for monitoring use of the parking supply and responding to changes in demand by making adjustments in management or in coordination of planning for new construction.
- Transit ridership will also be monitored so that parking decisions can respond to increases in transit ridership by reducing the need for parking expansion.
- At the same time, operational changes, improvements or decisions on the **vehicular network** would also be communicated so that parking access, transit, parking availability and other aspects of a user-friendly system are not overlooked.
- Finally, these components are brought to bear on **public/private supply policy** and parking standards. Expansion of the public and/or private parking system would be in response either to planned changes or in support of proposed changes in land use development and economic growth within the Center City. Decreases or increases in parking requirements could be negotiated, depending on opportunities to serve needs with transit and the capacity of the roadway network.

The net benefit would be a parking system integrated with the transit system and the roadway network, so that resources are maximized, costs are reduced, and economic development is aggressively supported.

Plan Recommendations: Parking

13. Create a “Collaborative Parking System” for the management of private and public parking facilities. The intent is to organize and unify private and public parking assets in Center City through an entity that provides such services as a parking guidance or “wayfinding” system. (Page 54)

14. Expand the On-Street Parking system managed by the City, increasing the number of on-street spaces, expanding hours of operation, and offering payment options. (Page 56)

15. Develop an Off-Street Parking Policy framework for City participation in the parking component of mixed-use projects. This policy would establish conditions for financial participation by the City in providing joint parking solutions for appropriate mixed use development, and consider such measures as “payment-in-lieu” of building new parking. (Page 56)

Wayfinding

Guiding Principles

- Improve access, identification and connectivity to Center City.
- Enhance the image of Center City Charlotte by creating a user-friendly feel that reduces misdirected travel and disorientation among visitors, are both drivers and pedestrians
- Enable drivers to select parking close to their destination.
- Promote a sense of community and help create the perception of Center City as a safe and friendly environment.





What is “Wayfinding?”

Wayfinding is essentially a succession of directional clues comprising, primarily, visual elements. It exists in many scales and environments. It navigates people through a city street network, hospital corridors, airport or parking garage, calls attention to a storefront or provides information about an event. The term “wayfinding” was first used by Kevin Lynch, in his seminal 1960 book, *The Image of the City*, where he referred to maps, street numbers, directional signs and other elements as “way-finding” devices.

How Wayfinding Works

Good wayfinding systems help users experience an environment in a positive way and facilitates getting from point A to point B. When executed successfully, the system can reassure users and create a welcoming environment, as well as answer questions before users even ask them.

However, too much information can be as ineffective as too little. Developing a hierarchy of information is a critical part of wayfinding. The primary consideration is the user’s perspective. The speed, visual environment and distance from which the information will be viewed are key considerations. In short, “more” is not necessarily better; even a well-designed program can get lost in visual clutter.

The effectiveness of a wayfinding system also depends on typeface, font, size and spacing between letters and words. For example, a combination of uppercase and lowercase letters is easier to read than only uppercase. Color contrast is also essential for optimum readability. Similarly, elements of the system must be well-maintained. A strategy and plan for maintenance and updating is as important to success as the original design.

Wayfinding Objectives in Center City

In Center City Charlotte, vehicular and pedestrian wayfinding systems are proposed that will work together to direct motorists into Center city and to the most

easily accessible parking, and orient pedestrians around the city’s core.

The proposed system would provide information to assist visitors, employees, residents and others to find their way to desired destinations in Center City and back to transportation or parking. Signage will direct pedestrians to areas that are particularly remote from central areas. Furthermore, the wayfinding system will:

- provide navigational aids that consider first time and infrequent visitors,
- are accessible to visitors with impairments and considerate of seniors,
- are consistent in presentation and language,
- are compliant with city and state traffic and safety regulations, and
- can be realistically implemented, maintained and managed.

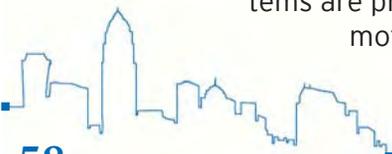
A family of signs will serve both vehicular and pedestrian navigation, and will provide clear directions to and from the I-277/I-77 freeway loop and major Center City streets. The “logic of concentric destinations” will be established for the system, starting with the regional highway network, to a Center City parking loop, then to parking, then to specific destinations.

A unique identity or “brand” will be developed for the system. The design vernacular must be easy to recognize and in keeping with Center City streetscape design standards. It should clearly communicate a positive image of Charlotte.

Vehicular Wayfinding

Employees who work in Center City, who travel in and out daily, are familiar with the area and many have regular parking spaces. On the other hand, many occasional and first-time visitors to Center City can become disoriented without some level of positive guidance either to their destination or to a nearby parking area.

- The **Vehicular Wayfinding System** will help people approach Center City from the regional highway network and then navi-





gate the Center City grid system and one-way streets to find their most convenient parking spot.

The system will improve circulation by eliminating visual clutter, providing useful and clear information, and incorporating a consistent and recognizable design theme. This vehicular system will be coordinated visually with the **Pedestrian Wayfinding System** to help market Center City, evoke a sense of pride, help create a distinct identity and improve the streetscape.

The vehicular and pedestrian wayfinding systems need to be fully coordinated, both functionally and graphically, to implement the basic intent of the *Center City Transportation Plan*: the creation of a pedestrian-friendly core, the idea that every motorist and every transit user becomes a pedestrian, and the effort to facilitate a “park once” approach to Center City circulation.

How the Vehicular System Works

To guide traffic from surrounding highways and streets to Center City parking destinations, the proposed Vehicular Wayfinding System has identified four parking loops that presently serve and will continue to serve the majority of existing and anticipated future Center City parking garages. The loops are based on the street system and freeway loop modifications envisioned in the Center City Transportation Plan.

Four Parking Loops

1. **South Tryon** - northbound College, westbound Fourth, southbound Church
2. **East Trade** - westbound Fourth, northbound College and eastbound Fifth
3. **North Tryon** - southbound Church, eastbound Fifth, and northbound College
4. **West Trade**- eastbound Fifth, southbound Church, and westbound Fourth

These four loops would direct visitors to within one block of a large majority of existing parking garages in Center City, and within two

blocks of virtually all anticipated future parking garage locations. The four loops can also interlock, since they direct motorists to common streets (Church, Fifth, College and Fourth) within one block of the Square.

The proposed vehicular wayfinding system actually consists of two coordinated sub-systems:

1. a **wayfinding sign system** that uses both static and dynamic messaging to provide directions to and from the regional highway network and Center City; and
2. a dynamic, **real-time parking information system**, as well as static identification signs, to direct motorists to parking facilities with available spaces in Center City.

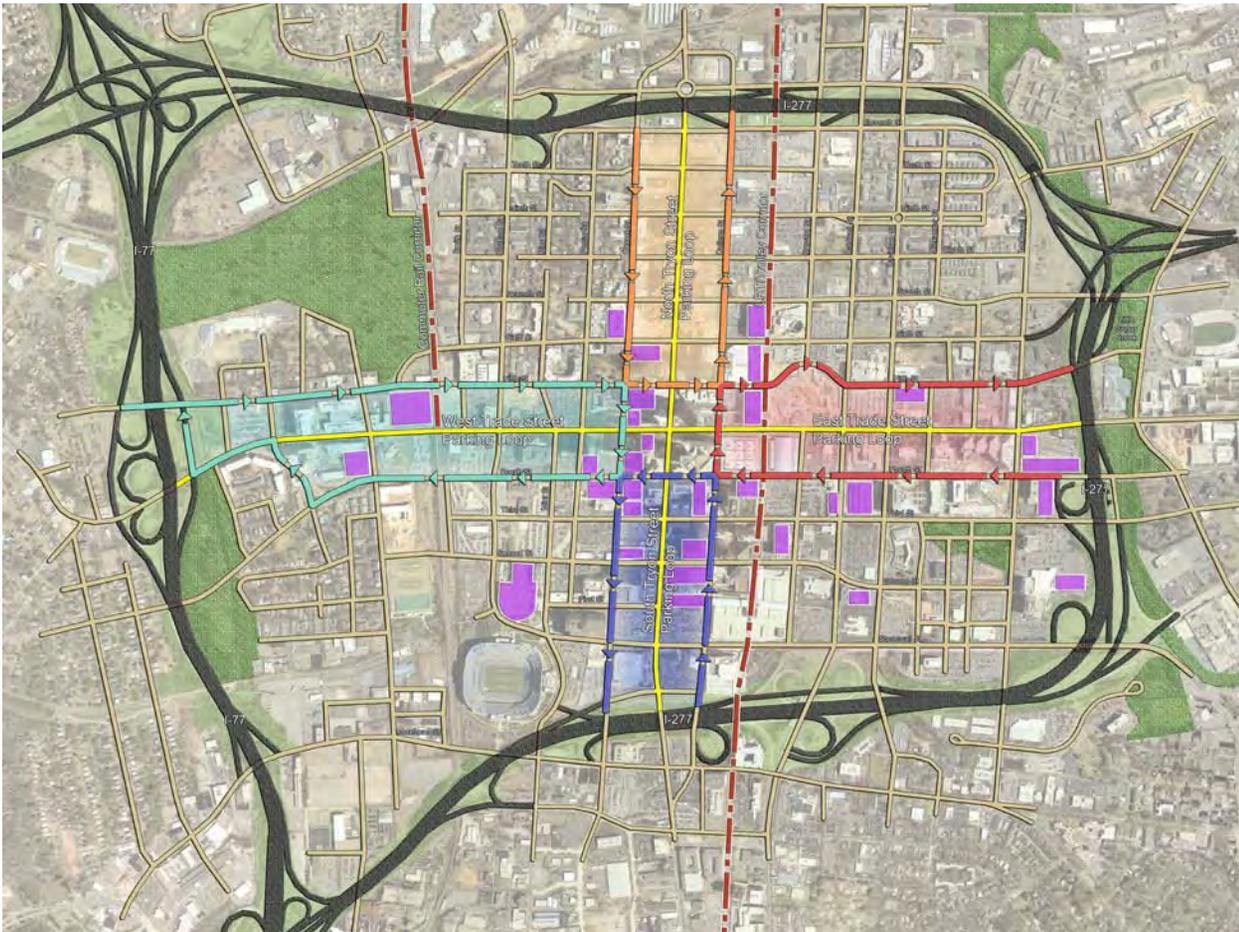
Typical wayfinding systems are limited to static signs but Center City’s system requires a higher level of technology, in addition to low technology items such as static signs or banners. A system of dynamic and static directional signs along expressways and thoroughfares approaching Center City, as well as the parking loop streets within Center City, will show the way to existing parking facilities (with the flexibility to evolve as new facilities are added). This system will be an integrated parking guidance system. It will provide direction to individual participating parking decks and, by means of electronically controlled displays, guide the motorist to facilities with available parking spaces.

Dynamic parking guidance systems offer an effective and rapid means of locating available parking. Permanent signs offer only a limited degree of effectiveness.

Dynamic systems, coordinated by a control center, track the available parking slots in parking decks and surface lots through the use of differential counters that monitor traffic going in and out of each facility. This real-time information is displayed electronically so that the motorist can drive directly to a parking facility that is conveniently located and has available parking.

The proposed system for Center city is similar to standard “dynamic messaging systems” used in other cities, except the manner in which it is used and the messages displayed. Ideally, all signs would be procured





Acommodating the Motorist – Parking Access Loops

from the same vendor who would also furnish a central computer control system and software designed to operate the signs. The computer system would be co-located with the City of Charlotte's traffic signal control system and share communications facilities, assuming spare conductors and/or fibers are available. Signs located along the regional highway network or away from existing traffic signal communication cables could be accessed by standard dial-up telephone lines.

Similar systems are currently in operation in St. Paul, Minnesota, and several European cities. St. Paul installed a parking directional system over ten years ago to provide clear directions to ten parking facilities serving their entertainment district. The system includes ten dynamic message signs (some of which display multiple parking sites with the respective number of spaces) and sixty or more static (fixed information) street and facility signs. A computer interface at each facility feeds data to a central system at the city's traffic signalization control room, where it is compiled and sent out to the dynamic signs. The "wiring" for the traffic signal management system also supports the message system.

Each participating Center City parking facility would have loop detectors for counting vehicles, and computer processing equipment to calculate the number of available parking spaces and communicate the information to the central computer - from where the information is sent to the electronic signs.

Induction loops can be installed along the entries and exits of the parking facility, which would then be connected to differential counters located near that parking facility. When the available spaces in the facility are empty, the counter would be set to the number of the available parking spaces. By counting the incoming and departing cars, the differential counter would compute the spaces currently available. From time to time the actual occupancy would be checked and the counter adjusted, if necessary. The number of available parking spaces would be reported continuously to the central computer by differential counters so that the dynamic parking signs may be updated with correct information.



The City of Charlotte is evaluating the possibility of replacing the twisted-pair copper communications cable technology used in its traffic signal system with newer alternatives. The central computer for the dynamic parking information system would be co-located with the City's traffic signal system. It would be possible for the software applications controlling the wayfinding system and the parking information system to run on the same computer system.

Static signing will also have a role in the Vehicular Wayfinding System. Signs will be required at intersections to direct motorists to parking facilities that may be off the primary route. This type of static signing might also provide an intermediate vehicular wayfinding system until the arrangements for the dynamic wayfinding system can be implemented.

Design and implementation of the vehicular wayfinding system must also take into consideration the existing directional signs to I-277, I-77, SR-74, etc., that already exist in center City. Assisting motorists in leaving is as important and helping them enter. All vehicular directional signs need to be part of the coherent system.

Implementation of the Vehicular Wayfinding System - whose primary purpose is to direct motorists simply and efficiently to a parking space in a garage, is dependent on the participation of parking garage owners and operators; thus,

- It will be necessary to first implement the proposed "Collaborative Parking System" (page 54) before beginning implementation of the Vehicular Wayfinding System.



Existing Pedestrian Wayfinding System

Pedestrian Wayfinding

As a result of the short-range need and the need to implement the Collaborative Parking System in order to support the South Corridor Light Rail Transit line, the pedestrian system preceded the vehicular system. However, design concepts for both the vehicular and pedestrian systems will be developed as an integrated system. A wayfinding program is most effective when supported by the whole community on many levels. Therefore, the fundamental premise of the design was to use nomen-





Typical Small Dynamic Vehicular Wayfinding Sign

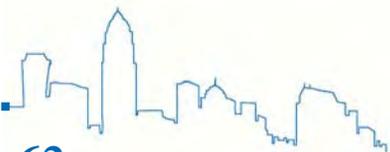


Existing NCDOT Dynamic Message Sign (message added)



Existing Pedestrian Wayfinding System

clature, vernacular, maps and general logic for both systems. A significant design element in the pedestrian system was the use of the four Parking Loops that will be central to the vehicular system. The pedestrian wayfinding system will use wayfinding maps along signature streets and within popular visitor areas, at transit centers and stations, and near major venues. Pedestrian directional signs to public transportation and major venues will be provided within a five-minute walk.





Public destinations will be prioritized in two types: (a) major destinations which receive 200,000 visitors or more each year, and (b) standard destinations, with yearly visitation of less than 200,000 visitors.

These signs will provide directions to “standard” destinations within a ten-minute walk, and directions to “major” destinations within a five-minute walk or for selected remote destinations. They will reinforce the area where the sign is located, and reinforce the vernacular of the wayfinding system.

Plan Recommendations: Wayfinding

16. Continue to expand the Pedestrian Wayfinding System, as developed for the light rail transit line, and expand it throughout Center City to provide kiosks and directional signs that orient and inform pedestrians. (Page 62)

17. Develop a Vehicular Wayfinding System, in conjunction with the Collaborative Parking System, to direct motorists into Center City, guide visitors in navigating the street network, and help all locate the most readily accessible parking closest to their destination. The vehicular system will utilize dynamic signs to provide real-time information on available spaces in parking facilities, and will be coordinated with the pedestrian wayfinding system that will orient pedestrians once they have parked their car. (Page 59)

Transit

Guiding Principles

- Offer people a choice in meeting their mobility needs.
- Enhance the area’s quality of life by attracting new employment and housing options and mixed-use development to the transit corridors.
- Reduce dependence on the automobile and ease future air pollution.

The *2025 Transit System Plan* charts the course for developing rapid transit service in five corridors, as well as making specific improvements in Center City Charlotte. It is in Center City that the five corridors converge and then radiate out to the rest of the system. The Center City improvements will enable these individual corridors to function as an integrated system.

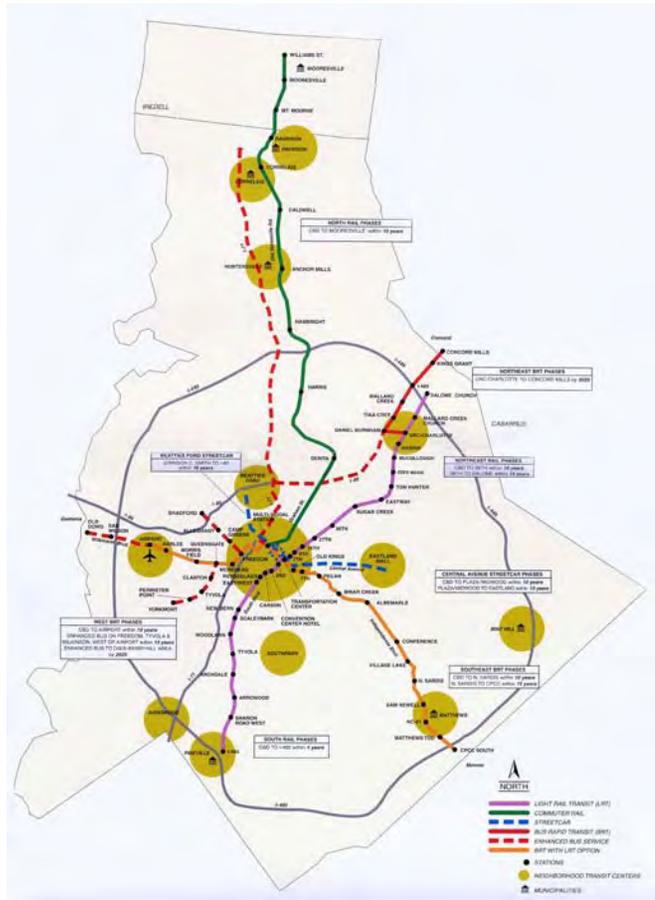
These improvements will also provide services for the Uptown area and connectivity with surrounding neighborhoods; specifically,

- **Two major transit nodes** - the Charlotte Transportation Center and the multi-modal Charlotte Gateway Station - are designed to complement each other even though they are located several blocks apart.
- **A north corridor spine** will add commuter rail and inter-city rail services to the existing Norfolk-Southern Railway embankment that runs between and parallel to Graham and Cedar Streets.
- **A north-south transit spine** will provide light rail transit service along the trolley and former railroad corridor between Brevard and College Streets.
- **A new east-west transit corridor** will have a pedestrian/transit way along Trade Street that connects Johnson C. Smith University on the west, with Presbyterian Hospital on the east. Ongoing route studies may result in locating part of the east-west transit service on Fourth and/or Fifth Streets.
- **Circulation services**, including a Center City streetcar line, will connect Center City residential and commercial districts with each other and with areas just outside the I-277/I-77 expressway loop.

Major Transit Nodes

The Charlotte Transportation Center is the bus transfer hub for the Charlotte Area Transit System. In addition to local bus service, the center also provides access to the South Corridor Light Rail Transit (LRT) station. The LRT passenger platforms enable riders who wish to transfer between rail and bus modes to do so along East Trade Street adjacent to the north side of the Transportation Center.





CATS Transit System Plan

LRT riders can also become pedestrians on Trade Street, of course, or have direct access to the main entrance of the new Arena. The Transportation Center will also serve the Streetcar route, as well as service on the Southeast and West corridors. The details of these services are being studied by CATS.

The Charlotte Gateway Station is a planned multi-modal center that is expected to spur additional development in the West Trade corridor. The Gateway Station is the terminus on the North Commuter Rail Transit Corridor. It is also being designed to connect CATS passengers with AMTRAK and Greyhound inter-city rail and bus services.

Pedestrians will be able to transfer between commuter rail and bus services and to the inter-city rail and bus services. Automobile drop-off and taxi operations will be separated from the other modes for pedestrian safety reasons.

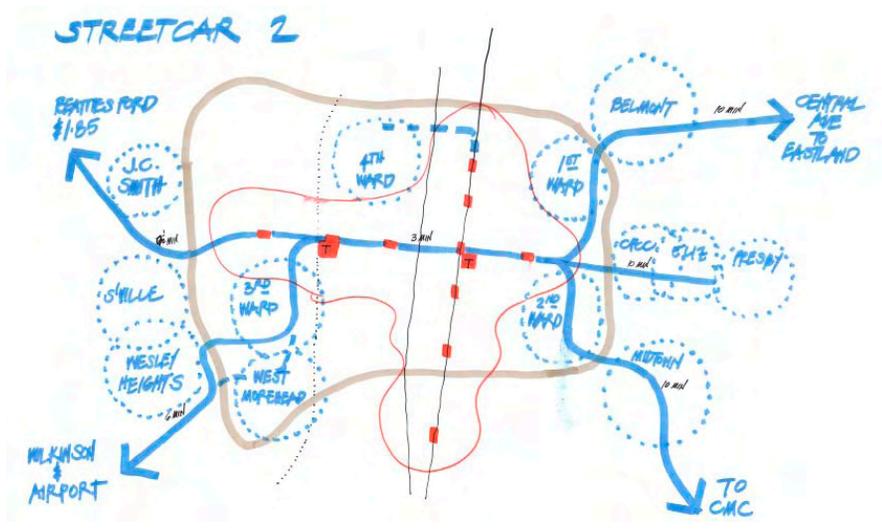
CATS expects to provide approximately 12 bus bays inside the Gateway Station, and buses will circulate in both directions through the station. CATS is studying the use of “dynamic bus allocation” to serve the two nodes, assigning buses on a flexible basis which would reduce the need to increase the capacity of the Charlotte Transportation Center. Express bus services serving east and south Charlotte will serve both transportation centers.

North-South and East-West Transit

A North-South Transit Spine is created by light rail transit (LRT) service along the South and Northeast Corridors. The South Corridor enters Center City at the Westin Hotel and terminates at the Charlotte Transportation Center; from that point, the Northeast Corridor begins with the Seventh Street Station. This latter station opened when the South Corridor began operations in 2007.

Eventually, a Ninth Street Station will be added as the Northeast Corridor is constructed and extends past Brookshire Freeway. The pedestrian, bicycle and urban design elements now included in the South Corridor will be extended through the Center City in conjunction with the Northeast LRT implementation.

A North Corridor Spine along the existing Norfolk-Southern Railway (N-S) embankment that runs between and parallel to Graham and Cedar Streets will support the North Corridor Commuter Rail program of CATS and the AMTRAK Inter-City rail services supported by NCDOT. Both services will utilize the Charlotte Gateway Station. Modifications to the associated N-S and CSX rail facilities will include closing the at-grade crossings at Ninth, Smith and Church Streets, and the installation of “quad-gate” crossing facilities on the at-grade crossing at Brevard and Davidson Streets. While the Church, Brevard and Davidson crossings are north of the I-277 Loop, the closing and modifications will affect traffic operations in Center City.



CATS Center City Transit Plan

These several modifications, taken together, will also enable the creation of a “quiet zone” that many Center City residents see as a benefit. The studies related to these overall rail modifications are also incorporating consideration and preliminary design of the extension of MLK Blvd. westward to Cedar Street and a pedestrian/ bicycle overpass at Ninth Street.

An East-West Transit Corridor on Trade Street will consist of several elements: (1) bus rapid transit (BRT) services along the Southeast and West corridors will use Trade Street (and potentially Fourth or Fifth Streets) as a transit way; (2) through-routing BRT or LRT services on these two corridors would provide connections between the Charlotte Transportation Center and Charlotte Gateway Station; (3) CATS local routes would operate along the transit way; and (4) the proposed Center City Streetcar, described below, would provide a mobility option suitable for short trips or the casual pedestrian.

In fact, the pedestrian ambience of Trade Street will be markedly improved by planned streetscape improvements comparable to those now in place on Tryon Street. The new Trade Street amenities will include shaded and protected passenger waiting areas, transit information and wayfinding, and street furniture and landscape.

Circulation Services

Streetcar Service is another form of transit circulation being planned for Center City. Streetcar service would run along Trade Street and eventually connect West and East Charlotte. Additional routes will provide linkage between Center City and nearby neighborhoods.

The primary streetcar service will begin along the Trade Street transit way. In a second phase, service will extend eastward along Elizabeth Avenue (East Trade) to Presbyterian Hospital and then along Hawthorne Lane and Central Avenue to Plaza-Midwood and Eastland Mall.

The expansion of streetcar operations westward along Trade Street and Beatties Ford Road is also being planned for the second phase. Extensions to Johnson C. Smith University and north to the proposed Beatties Ford Road transit hub would connect the Seversville, Biddleville, and University Park neighborhoods to Center City Charlotte.

The 2025 Transit System Plan also contained a recommendation for development of a streetcar loop that would follow a route along or near to Ninth, Davidson, Second and Poplar Streets. As further study of this concept was undertaken in the Preliminary Engineering phase, it was determined that the loop was not large enough to effectively augment pedestrian access to the Tryon and Trade corridors. As the study proceeded it was determined that a “spider-web” network of routes that focused on Trade Street and extended through Center City residential areas into neighborhoods immediately outside the I-277 Loop would provide a more effective service than a streetcar within Center City. This concept will be refined as the streetcar studies proceed.

CATS Bus Operations within Center City will need to be reviewed in light of the anticipated growth in bus volumes and as local and express services are expanded. CATS is already studying the “dynamic scheduling” of buses and planning to increase the capacity of the existing bays at the Charlotte Transportation Center.

A more comprehensive review should identify opportunities for the multi-modal Charlotte Gateway Station to serve as an additional





primary destination for routes in Center City. Furthermore, the review should identify and clarify the future capital improvements that will be needed to accommodate increasing bus volumes at the Transportation Center and Gateway Station.

The Center City Transportation Plan's traffic analyses show that the network has capacity to accommodate significant transit service in the east-west Fourth, Trade and Fifth Street corridor. Depending on the routes and technology finally selected, these recommendations may have to be revisited and revised after completion of the Charlotte Area Transit System's transit corridor studies.

Gold Rush, a free shuttle bus service using vehicles designed with a trolley appearance, has been in operation in Center City for several years. During the stakeholder interviews and other CCTP public contacts, considerable support for and interest in the continuation of the Gold Rush service was voiced. It is anticipated that this service will continue until the streetcar and other transit services come into operation. As this occurs, it is recommended that CATS consider appropriate modifications to the Gold Rush service as demand may suggest. Since the streetcar and other transit services are not planned in the Tryon Street corridor, and the Gold Rush route along Tryon is quite popular, some variation of that route may merit longer term operation.

Plan Recommendations: Transit

18. Capitalize on the synergies created by the new Charlotte Gateway Station which serves as a multi-modal transit center, a pedestrian focal point, and a generator of redevelopment on West Trade Street.

19. Complete the North Corridor commuter rail and AMTRAK spine along with the associated closing of the at-grade crossings at Ninth, Smith and Church Streets, modifications of the at-grade crossings at Brevard and Davidson Streets, extension of MLK Blvd. and construction of a pedestrian/bicycle overpass at Ninth Street.

20. Complete the north-south transit spine by extending the South LRT Corridor (and its related pedestrian and bicycle amenities) through Center City to become the Northeast LRT Corridor.

21. Establish an east-west transit way along Trade Street that a) includes pedestrian-friendly streetscape improvements; b) carries Bus Rapid Transit services from the West and Southeast Corridors; c) connects West and East Charlotte via streetcar service; d) provides local bus stops; and e) links the two major transit nodes - the Charlotte Gateway Station and the Charlotte Transportation Center

22. Introduce east-west streetcar service, first in Center City along the Trade Street transitway and, later, connecting with neighborhoods in East and West Charlotte; a Center City Streetcar should also circulate within Center City, connecting residential areas and key Center City destinations.

Pedestrian Circulation

Think of Center City as a series of walkable communities . . . create comfortable and interesting environments at the human scale

- Center City 2010 Vision Plan

Guiding Principles

- Pedestrians are the most important travelers in Center City.
- Everyone who comes to Center City is a pedestrian for some portion of their trip.
- With its high-density, high employment base, Center City has the potential for more pedestrian trips than any other location in the region.

The importance of a pedestrian-friendly core to the Center City transportation system cannot be over-emphasized. The complete pedestrian environment - referred to here as the pedestrian realm - should be a pleasant, positive experience to encourage Uptown





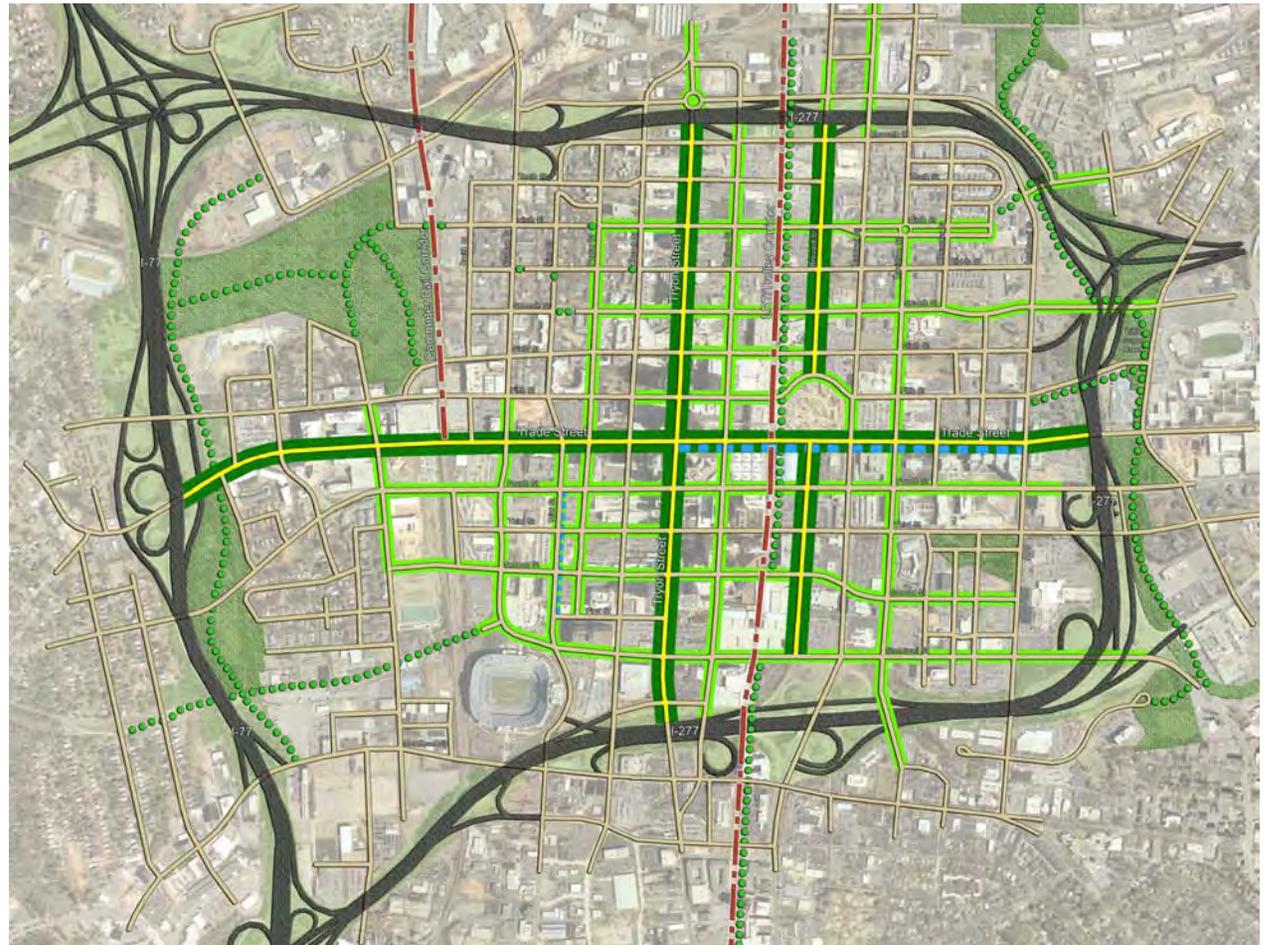
employees, residents and visitors to rely on sidewalks whenever possible once they have reached the Center City parking deck of transit station.

The importance of the pedestrian realm and a network of pedestrian streets as the basis for building a successful city center is underscored by urban designers. An attractive system of pedestrian connections will encourage pedestrian movement through the central core and attract “a diverse and concentrated mix of uses and foster economic interaction among these uses.” In the Urban Land Institute’s *Creating a Vibrant City Center* (2004), Cy Paumier stresses that “a successful central area should have more than one pedestrian-oriented “spine” or major street; Needed is a system of pedestrian connectors linking major activity anchors to the spine and to one another.” *Charlotte’s 2010 Vision Plan* further emphasizes “street-level development that enhances the pedestrian experience.”

Defining the Pedestrian Realm

This *Center City Transportation Plan* defines a network of pedestrian spaces which link the “spine” streets and connect activity centers and the expanding transit system.

Specifically, this plan uses professionally defined and locally adopted precepts to construct a *hierarchy of pedestrian streets*. The primary determinant of each class of street is the width of the pedestrian space. The proposed Center City pedestrian system includes a hierarchy of four classes of pedestrian streets (illustrated by accompanying photographs), and a variety of off-street pedestrian-ways:



Pedestrian Circulation

Overview of the Pedestrian System

On-Street Pedestrian Circulation

Class 1: Signature Pedestrian Streets (Page 70) the streets that form the spine of the system and support major activity corridors. The basic characteristic is a pedestrian realm that is 22 feet or more in width. Tryon Street was used as the model or benchmark for Class 1. (Refer to page 88 for more detail.)





Class 1: Tryon Street provides the model for SIGNATURE Pedestrian Streets



Class3: College Street north of Fifth Street provides as example of the 14' to 16' as defined for the SECONDARY Pedestrian Street



Class 2: West Trade Street in the Gateway Village Area provides an example of the 16' to 22' as defined for the PRIMARY Pedestrian Street

Class 2: Primary Pedestrian Streets (Page 71) connect sub-areas, activity centers and transit stations or transit stops to the Signature streets. The basic characteristic is a pedestrian realm that is 16 to 22 feet in width. (Refer to page 89)

Class 3: Secondary Pedestrian Streets (Page 71) are all other streets (except for the "special conditions" defined below) which serve the sub-areas of Center City and provide pedestrian linkage to the Primary and Signature streets. The basic characteristic is a pedestrian realm that is 14 to 16 feet in width. (Refer to page 74.)

Class 4: Linear Parks (Page 71) is a sub-category of Pedestrian Streets, with a pedestrian realm greater than 22 feet in width, that applies to only three specific locations that were established by earlier actions. (Refer to page 74)

Special Treatment Conditions (Page 72) provide for enhancements on Classes 1, 2, and 3 streets where the minimum width of the pedestrian realm cannot be achieved, as described on page 74.



Off-Street Pedestrian Circulation

Complementing the on-street system are important off-street opportunities for pedestrians, including **multi-purpose** trails that accommodate bicyclists as well as pedestrians, **urban open spaces** such as parks and plazas, and **enclosed pedestrianways**, such as Overstreet Mall and Latta Arcade. (Refer to page 83 for more detail.)



Class 4: The South side of Trade Street is designated as a Visual Corridor as represented by the block between Caldwell and Davidson Streets with the setback of the Federal Reserve Bank

However, in moving ahead to develop a plan for future pedestrian circulation, this plan now establishes Uptown Streetscape Standards that further define the street furnishing and landscape elements that are applicable to the pedestrian realm in each pedestrian street class.

The composite of these standards is illustrated by the Pedestrian Street Standards Table which identifies the specific classification for each block face in the pedestrian street system. First, however, the pedestrian street classes are described in more detail.

Proposed Pedestrian Circulation System

The recommended pedestrian circulation system includes two components. The first, and most extensive, involves the “pedestrian realm” within the street rights-of-way. Development of this component builds directly upon the preceding analyses. The second, the “off-street” component, utilizes the transit routes, open spaces and greenways in Center City to provide important pedestrian linkages. Both components are illustrated on the *Pedestrian Circulation Map* (Page 67).

Pedestrian Circulation in Street Rights-of-Way

The proposed system was developed through a series of workshops involving City of Charlotte staff, the HNTB consulting team and public stakeholders. Preliminary analysis by the staff and consultants had examined the existing system (page 25) and led to the hierarchy of pedestrian streets summarized above (page 67).



Special Treatment: The south face of Seventh Street west of Tryon Street, with Saint Peters Episcopal Church abutting the sidewalk, provides an example of a block face where expansion of the sidewalk width is probably not possible in the long term.





The supporting analysis and a preliminary pedestrian street hierarchy were presented at a Stakeholders Workshop. Participants prepared a series of maps expressing their interests in enhancing the pedestrian realm. The participants clearly supported the recognition of walking as the key mode of travel in Center City and the need to greatly enhance the quality of the pedestrian realm.

In a second workshop of staff and consultants, the application of the hierarchy of pedestrian streets was further refined. After review by the *Center City Transportation Plan* Steering Committee and other senior staff, the system was further refined and is represented on page 66, Pedestrian Circulation. Each of the pedestrian street classifications is described in more detail.

The basic characteristic of the recommended hierarchy of pedestrian streets is the width of the overall pedestrian realm – the distance from the back of the curb to the building line. This dimension also serves to define the “building setback” standard for each class of street.

In the following materials, the purposes and applications of the hierarchy are further described by text, cross section and plan graphics, and photographic examples. In the cross sections and plan graphics, the pedestrian realm is further articulated to define use or activity zones. The characteristics of the pedestrian area and the zones are further defined in the Pedestrian Street Standards Table (Page 75). The function of each activity zone is defined as follows:

- **Vehicle Zone:** While not a part of the “pedestrian realm”, the activity of the street pavement lane adjacent to the curb has a direct bearing on the activity on the sidewalk and is defined in the Center City Street Enhancement Guideline Map. Where the curbside lane is used for parking, valet parking, loading zones and other non-traffic activities, it provides an additional buffer between traffic and the pedestrian.
- **Amenity Zone:** This zone is located immediately behind the curb and is an area that accommodates a variety of street furnishings, landscaping and signage. Service to the curb lane also occurs in this zone. The amenity

zone also provides a buffer between the pedestrian zone and moving traffic.

- **Pedestrian Zone:** This zone supports the uninterrupted circulation of pedestrians.
- **Pedestrian or Sidewalk Active Use Zone:** In cases where the width is adequate, a zone adjacent to the building setback line can accommodate a variety of sidewalk related uses. The most common use of this zone is for outdoor dining associated with the street frontage of restaurants.
- **Optional Outdoor Active Use Zone:** In order to provide either additional outdoor activity (dining, etc.) or sidewalk-related activity where the width of the pedestrian realm will not accommodate such use, the area immediately adjacent to the sidewalk may be used for such activities.

Class 1: Signature Pedestrian Street

The pedestrian street system identifies three Signature Pedestrian Streets. These streets build upon the experience with Tryon Street which is broadly recognized as the most significant statement of Center City’s primary address and its “image;” or, in the terms of the *2010 Vision Plan*, a “Memorable” element.

The three Signature Pedestrian Streets are depicted graphically on the Pedestrian Circulation Map as a yellow street flanked by deep green bands.

Tryon Street is well established as Charlotte’s primary business address and, more recently, as the region’s cultural and entertainment address. Tryon is the model for the Signature Pedestrian Street concept. Tryon Street’s pre-eminence should be retained and built upon as the most significant of Center City’s “signature” streets.

- The streetscape design that now extends from Stonewall Street to Ninth Street will be extended northward under the I-277/Brookshire underpass to Twelfth Street, and southward across the I-227/Belk overpass to Morehead Street.



- The existing section will be upgraded to replace the older concrete square pavers that still exist in a few areas with the herringbone concrete brick paver pattern, to remove driveways as redevelopment opportunities permit, and to remove drop-off locations, such as the one at the Mint Museum of Craft + Design.

Trade Street is designated as the second Signature Pedestrian Street in Center City. This designation recognizes the street’s historical importance as the perpendicular trade route to Tryon that formed “The Square” - the intersection around which Charlotte was founded and grew. While development has not matched that of Tryon, recent planning initiatives and development trends support the designation as a Signature street. Furthermore, when the Tryon Street streetscape was constructed, it included the same quality of improvement for the 100 blocks of East and West Trade Street.

- A streetscape design for the length of Trade Street - from I-77 on the west to Kings Drive, across I-277, on the east - was to be prepared as part of the design work for the Center City Streetcar by the CATS. As part of that project, CATS prepared an urban design plan called the Trade Street Vision Plan for a high quality pedestrian street on Trade Street.

Brevard Street is designated as the third Signature Pedestrian Street as a result of the major changes - and new opportunities - occurring along that street. A one-block segment of Brevard was closed to accommodate the large Arena site. As discussed in the Vehicular Circulation section, the re-routing of traffic around the Arena provided an opportunity to change the transportation emphasis on Caldwell and Brevard Streets.

At least three factors support Brevard Street’s designation as a Signature Pedestrian Street: the Arena itself is a major activity center; the light rail transit stations will attract development to the corridor; and much of the land along Brevard itself is vacant and in large ownerships, making further development very likely.

- The *north* segment of Brevard, from the Arena to Eleventh Street (except for the block faces adjacent to First Ward School)

is conceived to be a “main street” for the mixed-use development that has been proposed in development plans for the area.

- The *south* segment of Brevard, from the Arena to Stonewall Street, will support similar development of vacant properties on both sides of the street. It would also provide a linkage between three major activity centers - the Arena, the Convention Center and the NASCAR Hall of Fame.

Class 2: Primary Pedestrian Street

The Primary Pedestrian Streets are intended to provide an enhanced width and quality of pedestrian realm to support pedestrian circulation to the Signature Pedestrian Streets, transit and other destinations.

This class of street is depicted on the *Pedestrian Circulation Map* (Page 67) as a gray street flanked by light green bands. The designation of a primary pedestrian street network is based on the following concepts.

- **Provide enhanced east-west pedestrian connectivity** between the established Tryon Street spine and future corridor activity that will develop along the LRT line and Brevard Street, as well as around the Arena and CATS Transportation Center.
- **Provide enhanced north-south pedestrian connectivity** to support the development of the Trade Street corridor by linking it to development opportunities on vacant land and redevelopment sites to the north and south. These linkages will also support the development of the Center City Streetcar and, potentially, other transit routes along the Trade Street corridor and the proposed multi-modal Charlotte Gateway Station.

Class 3: Secondary Pedestrian Street

The “Secondary Pedestrian Street” designation is applied to *all* Center City streets that are not designated as Signature streets, part of the Primary pedestrian street network,





or an established residential street in one of the four wards. All such streets will be enhanced to function as Secondary pedestrian streets.

These Secondary streets are shown on the *Pedestrian Circulation Map* (Page 67) as a gray street.

Class 4: Linear Park

This category is comparable to or a special part of Signature Pedestrian Streets and the same pedestrian street standards apply. It applies only to three specific locations, designated in prior actions of the City.

- **East Trade Street Visual Corridor** is an established setback of 50 feet on the south side of Trade Street, from College Street east to I-277.
- **Third Ward Park Pedestrian Corridor** is a 28-foot wide setback on the east side of Mint Street, from Trade Street to Fourth Street, to be developed to enhance pedestrian access to the proposed Third Ward Park. The setback, which would provide an enhanced pedestrian corridor to the park, was proposed in the Third Ward Vision Plan for Poplar Street, but due to a later change in the park site, it has been shifted to Mint Street. Negotiations on setback conditions for private development of the property fronting on Trade Street secured a commitment for construction of a large portion of the pedestrian space.
- **Third Street Pedestrian Corridor** is a **__-foot** wide setback on the south side of Third Street between Tryon Street and Church Street. The owner/developer of that block has agreed to the enhanced setback and pedestrian space to provide a pedestrian link between Tryon Street and the proposed Third Ward Park.

Special Treatment Conditions

In some cases, it may be unlikely that a block face can be improved to its designated classification, in either the short or long term, because of established conditions. In situations where the desired sidewalk width can-

not be achieved, the aim would be to enhance the pedestrian realm at that location through design features that convey the importance of the sidewalk to pedestrian flow and provide some additional measure of separation between the pedestrian and street traffic.

As a second type of “special treatment,” the pedestrian street classification has not been applied to the streets within the core areas of the older, established residential districts in the Third and Fourth Wards. Many of the streets in the Garden District of the First Ward will also continue to function in their current configuration. The pedestrian realm in those areas is appropriate to the scale of development and the generally low level of vehicular traffic in those areas.

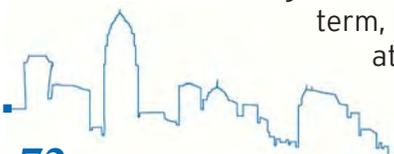
Special Concern: Overcoming the I-277 Loop Pedestrian Barrier

The expressway loop is a clear boundary encircling Center City and giving it a distinct identity. But it also presents a physical barrier between Center City and surrounding neighborhoods. If the goal for Center City is a pedestrian-friendly, transit-oriented employment and entertainment center, improvements are needed to make it physically and functionally attractive for pedestrians and bicyclists.

The expressway loop is a clear boundary encircling Center City and giving it a distinct identity. But it also presents a physical barrier between Center City and surrounding neighborhoods. If the goal for Center City is a pedestrian-friendly, transit-oriented employment and entertainment center, improvements are needed to make it physically and functionally attractive for pedestrians and bicyclists.

The *2010 Vision Plan* gave special emphasis to reducing this barrier: “Each bridge and overpass should be individually assessed to determine a series of measures to improve their physical conditions, specifically to attract pedestrian traffic. These efforts might include widening sidewalks, incorporating public art projects and improving pedestrian lighting under bridges.” The plan saw great possibilities:

“Rather than serve as a concrete and asphalt entrance to the city, the freeway’s overpasses could serve as canvasses for the city’s fin-

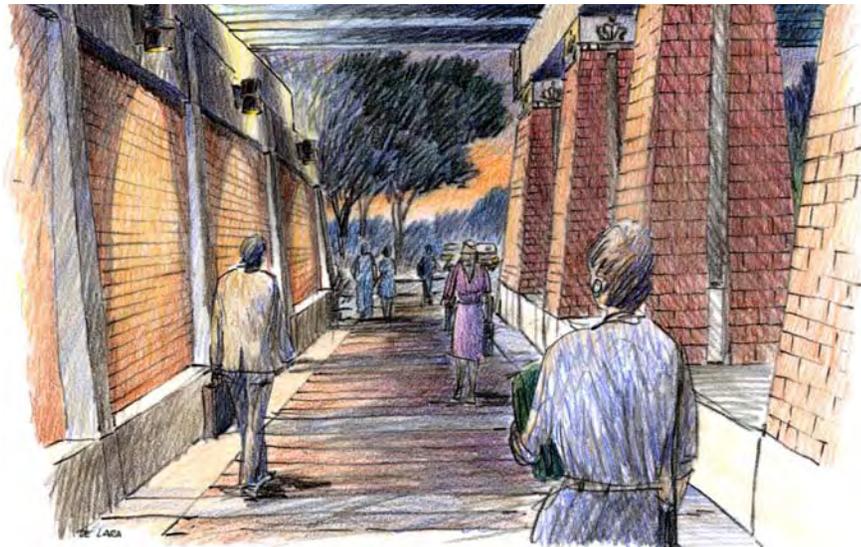




South Tryon Street/I-277 Bridge Urban Design Concept



East Trade Street/I-277 Urban Design Concept



Pedestrian Underpass



Fourth Street/I-277 Urban Design Concept





Brevard Street/I-277 Urban Design Concept



West Trade Street/I-77 Urban Design Concept

est art. Through their structure, pedestrian walkways, landscaping and murals, these bridges should make a positive statement about Charlotte’s commitment to its downtown and its architecture.”

During the preparation of this Plan the overpasses and underpasses were examined to determine where physical changes could be made to create safe, efficient and attractive pedestrian and bicycle crossings. The underpasses can be structurally modified to accommodate wider, more attractive pedestrian walkways.

- The heavily-traveled Fourth Street entrance could be modified in a way that also eliminates the awkward U-turn connection to Third Street. It appears possible that the I-277 bridge abutment could be modified, opening up enough space to allow for connecting the exit ramp under the bridge. This would allow a direct connection to Third Street, eliminate the U-turn for motorists, and allow wider pedestrian crossings. The sloped abutments on the bridge over Fourth Street (and most of the I-277 bridges) allows less space but there would still be ample room for improved pedestrian walkways at these locations as well.
- Several Center City streets cross over I-277 on bridges. The sidewalks on these bridges could be widened on the bridge deck, provided that traffic volumes will allow a decrease in the travel lane width or in the number of lanes. If not, a pedestrian sidewalk could be built as a width extension of the existing bridge.
- On the whole, a high quality of urban design treatments of these expressway crossings not only would improve pedestrian connectivity but would further distinguish Center City. The accompanying sketch concepts for “gateway” monumentation are examples of possible urban design treatments.

Pedestrian Street Design Standards

This *Center City Transportation Plan* proposes detailed standards for each category in the Pedestrian Street hierarchy - Signature, Primary, Secondary, Linear Park and Special Treatment Conditions. The recommended design standards consist of two key parts: The Street Enhancement Standards Map and the Standards Table. The legend and a portion of the Map are provided on page 81. The full



map is available on the City Website at www.charmeck.org, or a printed form can be obtained from CDOT.

These standards apply to a variety of elements that together define what is desirable for the pedestrian realm. The standards differ, of course, according to the type of street. A Signature street, which has the widest pedestrian space, must meet the highest standards. The photographs (pages 68-69) illustrate this basic intent. An illustrative cross-section and plan for each of the categories is also shown provides further illustration of the intent.

The standards are comprehensive. By way of illustration, they specify the type of amenities such as street trees, street furnishings (ranging from benches to drinking fountains to public art), and wayfinding signage. They further define such treatments as the kind of curb and the type of parking. They apply to all sorts of sidewalk activities, including vendors and cafes, and activities “at the building wall” such as ATM machines and banners.

When taken together, these recommendations for the creation of a hierarchy of pedestrian streets are numerous, similar to the scope of recommended modifications to the vehicular circulation network (page 36). **Both pedestrian and vehicular circulation, as well as on-street parking recommendations, are brought together in the composite Center City Street Enhancement Standards Map.**

The **Pedestrian Street Design Standards** in the following pages (75-81) provide the design requirements for the pedestrian space classifications indicated on that map.





STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
DESIGN STANDARDS OF THE PEDESTRIAN REALM				
DIMENSIONAL				
Overall Width – Back of Curb to Face of Building Please refer to cross section provided above	Minimum of 22 feet <u>Linear Parks Minimums as follows:</u> Trade Street = 50' Mint Street = 28' Third Street = 22' Ninth Street – Median Park	Minimum of 16 feet	Minimum of 14 feet	Will vary; 6 feet minimum desired.
Amenity Zone Width (Landscape and street furniture) – Located at back of curb	Minimum of 9.5 feet	Minimum of 5.5 feet	Minimum of 5.5 feet	1.5 foot
Pedestrian Zone Width	Minimum of 10 feet Minimum 8 feet clear at all times	Minimum of 8 feet Minimum of 6' clear at all times	Minimum 8 feet	Varies – pedestrian zone to remain clear
Pedestrian and/or Sidewalk Active Zone Width – Located between Amenity Zone and building face or right-of-way line	Maximum of 4 feet at 22 feet width. Any width beyond 22 feet may be used for sidewalk activities	Maximum of 2 feet at 16 feet width; maximum increases 0.5 feet for each 1.0' increase in overall width	None	None
ELEMENTS IN AMENITY ZONE				
Landscape Plantings				
Street Trees – Requirements and Spacing <u>Notes:</u> 1. Standards for spacing may vary from Tree Ordinance requirements for specific site plans approved by City Council and for specific site conditions; 2. See Exhibit 2, "Street Tree Types", for maps of tree species required in each block face).	- Tryon St. = 30' feet (27' feet to 33' adjustment for site conditions) - Others = Per Tree Ordinance - Linear Parks = By specific plan	Per Tree Ordinance	Per Tree Ordinance	Required where total width exceeds 10 feet. Per Tree Ordinance
- Trees in wells with curbs	Required. Permanent groundcover required in wells. Removable planter containers for seasonal plantings strongly encouraged.	Optional for amenity zone at minimum of 9.5 feet If used, Permanent groundcover required in wells. Removable planter containers for seasonal plantings strongly encouraged.	No.	No.
- Trees in wells with grates	Optional depending on specific pedestrian circulation conditions	Required	Required	Required where width exceeds 10'
Planter beds with curbs	Required	No	No	No
Flowerpots / Containers	Encouraged, especially where existing underground utility lines and utility vaults restrict in-ground plantings. Irrigation is required.	Optional; encouraged where existing underground utility lines and utility vaults restrict in-ground plantings. Irrigation is required.	Optional; encouraged where existing underground utility lines and utility vaults restrict in-ground plantings. Irrigation is required.	Optional where width exceeds 10'; encouraged where existing underground utility lines and utility vaults restrict in-ground plantings. Irrigation is required.
Grass in Planter Strip	Prohibited on Tryon Street. Optional on others based on level of activity and design review.	Permitted where predominant use is residential, and elsewhere based on level of activity and design review.	Permitted where predominant use is residential, and elsewhere based on level of activity and design review.	Prohibited
Irrigation and Underdrain Systems	Required	Required	Required	Required where width permits street trees and other street furniture
Utilities				
Utility Chase to Support Irrigation, Electrical and Other Streetscape Amenities	Required	Required	Required	Required if width permits planting
Utility Vaults and Vents See also: City Code, Chapter 19: Streets, Sidewalks and Other Public Spaces; Article XII, Utility Right-of-way Use	No vaults are permitted within the minimum setback area. The covers of any that are included in additional setback shall be finished with pavement to match the adjoining sidewalk or with grates that have openings a maximum of ¼ inch wide.	No vaults are permitted within the minimum setback area. The covers of any that are included in additional setback shall be finished with pavement to match the adjoining sidewalk or with grates that have openings a maximum of ¼ inch wide.	No vaults are permitted within the minimum setback area. The covers of any that are included in additional setback shall be finished with pavement to match the adjoining sidewalk or with grates that have openings a maximum of ¼ inch wide.	No vaults are permitted.



STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
Manhole and Valve Covers	Paint with color to complement paving materials	Paint with color to complement paving materials	Paint with color to complement paving materials	Paint with color to complement paving materials
Slot Drains	Permitted and encouraged were required for sidewalk widening that might otherwise result in inadequate curb height.	Permitted and encouraged were required for sidewalk widening that might otherwise result in inadequate curb height.	Permitted and encouraged were required for sidewalk widening that might otherwise result in inadequate curb height.	Permitted and encouraged were required for sidewalk widening that might otherwise result in inadequate curb height.
Overhead, pole-mounted power lines, other cables and other fixtures	Prohibited	Prohibited	Prohibited	Prohibited
Lighting				
General Ambient / Vehicular	Required On Tryon St. to match existing standard On other signature streets, Shoe Box of special consistent design throughout	Shoe Box standard as provided by Duke Power is Required. Special fixtures may be used if selected as the standard for special districts	Shoe Box standard as provided by Duke Power is Required	Shoe Box standard as provided by Duke Power is Required
Pedestrian	Required On Tryon St. to match existing standard On other signature streets, consistent design throughout	Deluxe Acorn as provided by Duke Power is Required. Special fixtures may be used if selected as the standard for special districts	Optional Where used, Deluxe Acorn is required - Special fixtures may be used if selected as the standard for special districts	Optional - Encouraged in conjunction with Bollards where on-street parking is not provided. Where used, Deluxe Acorn is required - Special fixtures may be used if selected as the standard for special districts
Electrical Service for Special Lighting	Required at trees and in planter beds	Required at trees and in planter beds	Optional	Optional
Electrical Service for Special Events	Recommended. Service to be sized based on anticipated usage.	Optional – Recommended in blocks adjoining Signature Streets. Service to be sized based on anticipated usage.	Optional – Recommended in blocks adjoining Signature Streets. Service to be sized based on anticipated usage.	Optional – Recommended in blocks adjoining Signature Streets where width will support other street furniture.
Signage and Signalization				
Signal Poles and Arms	Required. On Tryon St. to match existing standard; On other signature streets, consistent design throughout. Cable-hung and wood poles prohibited)	Required (Cable-hung and wood poles Prohibited)	Required (Cable-hung and wood poles Prohibited)	Required (Cable-hung and wood poles Prohibited)
Regulatory Signs.	As installed by the City.	As installed by the City.	As installed by the City.	As installed by the City.
Pedestrian Wayfinding	To be installed through City's program.	To be installed through City's program.	To be installed through City's program.	To be installed through City's program.
Vehicular Wayfinding – Emphasis on Parking	To be installed through City's program.	To be installed through City's program.	To be installed through City's program	To be installed through City's program. May be used in conjunction with bollards and light fixtures as additional space defining element
Parking Meters and Pay Stations	To be installed at City's option	To be installed at City's option	To be installed at City's option	To be installed at City's option
Street Furnishings				
Benches	Required – three per block face On Tryon St. to match existing standard On other signature streets, consistent design throughout	Required – two per block face	Required – two per block face. Optional in block faces that are predominantly residential	No
Bicycle racks	Three Required per block face Inverted-U type preferred. Special design encouraged as part of consistent furnishings system. Designs for integration with security elements encouraged where security elements are used.	Two Required per block face Inverted-U type preferred. Special design encouraged as part of consistent furnishings system. Designs for integration with security elements encouraged where security elements are used.	One Required per block face Inverted-U type preferred. Special design encouraged as part of consistent furnishings system. Designs for integration with security elements encouraged where security elements are used.	No





STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
Bollards	Optional; to be of consistent design throughout each Pedestrian Street.	Optional	Optional	Optional – Encouraged where on-street parking is not provided.
Fencing adjacent to curb	Prohibited	Prohibited	Prohibited	Optional – Encouraged where on-street parking is not provided, and where used in conjunction with bollards, lighting and other pedestrian safety elements. Where used, shall be decorative metal designed to be consistent with other elements. Height shall be 42 inches and in segments not to exceed 8 feet.
Fountains – Drinking	One Required per block face	One Required per block face	Optional	Optional
Kiosks	Encouraged. On Tryon St. to match existing standard On other signature streets, consistent design throughout	Optional	Optional	Optional
Newsracks (See City Newsrack Ordinance for further details)	Must be located within the amenity zone and so as to not impede ADA circulation standards. Placement at building wall is preferable location where additional space outside the pedestrian realm exists and property owner will permit.	Must be located within the amenity zone and so as to not impede ADA circulation standards. Placement at building wall is preferable location where additional space outside the pedestrian realm exists and property owner will permit.	Must be located within the amenity zone and so as to not impede ADA circulation standards. Placement at building wall is preferable location where additional space outside the pedestrian realm exists and property owner will permit.	Prohibited where ADA circulation standards are impeded. Placement at building wall is permitted location where additional space outside the pedestrian realm exists and property owner will permit.
Public Art	Strongly encouraged	Strongly encouraged	Strongly encouraged	Strongly encouraged
Public Telephones	Optional. Where used, design and color are to be consistent with other elements	Optional. Where used, design and color are to be consistent with other elements	Optional. Where used, design and color are to be consistent with other elements	Optional. Where used, design and color are to be consistent with other elements
Security Barrier Elements	Where desired or required, security barrier elements are to be designed into standard street furnishing elements to the greatest extent possible and provide minimal obstruction to pedestrian circulation	Where desired or required, security barrier elements are to be designed into standard street furnishing elements to the greatest extent possible and provide minimal obstruction to pedestrian circulation	Where desired or required, security barrier elements are to be designed into standard street furnishing elements to the greatest extent possible and provide minimal obstruction to pedestrian circulation	Where desired or required, security barrier elements are to be designed into standard street furnishing elements to the greatest extent possible and provide minimal obstruction to pedestrian circulation
Transit stop signage	As determined by CATS. Signage to be coordinated with other streetscape elements	As determined by CATS. Signage to be coordinated with other streetscape elements	As determined by CATS. Signage to be coordinated with other streetscape elements	As determined by CATS. Signage to be coordinated with other streetscape elements
Transit shelters	Permitted On Tryon St. to match existing standard On other signature streets, consistent design throughout	Permitted – Design and installation shall not impede pedestrian circulation and must meet all ADA standards	Permitted – Design and installation shall not impede pedestrian circulation and must meet all ADA standards	Permitted where space is available – Design and installation shall not impede pedestrian circulation and must meet all ADA standards
Trash containers	Required – three per block face On Tryon St. to match existing standard. On other signature streets, consistent design throughout	Required – two per block face	Required – two per block face	Required where space is available
Water Features	Encouraged	Encouraged	Encouraged where space is available	Encouraged where space is available
Color of Street Furnishings	Mall Green on Tryon Street. The predominant color for all Lighting, Signage and Signalization fixtures as well as for all Street Furnishings On Trade and Brevard Streets may be black or as established by special design programs.			
SURFACE TREATMENT				
Curbing	Tryon Street: - Granite; Other Signature Streets per special design.	Concrete (Granite Optional)	Concrete (Granite Optional)	Concrete (Granite Optional)



STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
Banding	Tryon Street: - 2' Wide Granite band at back of curb and along building edge of sidewalk; 2' wide Granite around tree wells and planter beds. Other Signature Streets per special design.	Optional	Optional	Optional
Pavement	Tryon Street: - Pre-cast concrete pavers to match Tryon Street blend. Other Signature Streets - Pre-cast concrete pavers to match Tryon Street blend or other based on special design.	Optional; Pre-cast concrete pavers encouraged except where brick are the established material in an established residential district.	Optional; Pre-cast concrete pavers encouraged except where brick are the established material in an established residential district.	Optional; Pre-cast concrete pavers encouraged except where brick are the established material in an established residential district.
Special Treatments – Insets for art, plaques, etc.	Strongly Encouraged	Encouraged	Encouraged	Encouraged
ACTIVITIES				
Street Closures				
Closure for Events	Tryon – Strongly encouraged for temporary and special events Brevard – Strongly encouraged for temporary and special events Trade – Closure for temporary and special events dependent upon streetcar and transit service to principal transit stations	Permitted to support activities on Signature Streets or for localized special events.	Permitted to support activities on Signature Streets or for localized special events.	Permitted to support activities on Signature Streets or for localized special events.
Activities on Sidewalk				
Closure for Events and Construction	Only where and as needed to support street closure for temporary and special events. Clear pedestrian circulation to meet ADA standards is to be maintained throughout length of block on at least one side of street	Only where and as needed to support street closure for temporary and special events. Clear pedestrian circulation to meet ADA standards is to be maintained throughout length of block on at least one side of street	Only where and as needed to support street closure for temporary and special events. Clear pedestrian circulation to meet ADA standards is to be maintained throughout length of block on at least one side of street	Only where and as needed to support street closure for temporary and special events. Clear pedestrian circulation to meet ADA standards is to be maintained throughout length of block on at least one side of street
Temporary Signage / Sandwich Board Signs	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone	Permitted but only within Amenity Zone – must not obstruct pedestrian zone	Permitted but only where Amenity Zone provides adequate width – must not obstruct pedestrian zone
Sidewalk Displays	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone	Permitted but only within Building Zone and Amenity Zone – must not obstruct pedestrian zone
Sidewalk Cafes / Seating	1. Encouraged subject to maintenance of a minimum clear pedestrianway of 8 feet. 2. Strongly encouraged in connection with additional seating in additional setback area, arcades, etc.	Strongly encouraged in connection with additional seating located in additional setback area, arcades, etc., and subject to maintenance of a minimum clear pedestrianway of 6 feet.	Permitted only in connection with additional seating located in additional setback area, arcades, etc., and subject to maintenance of a minimum clear pedestrianway of 6 feet.	Permitted only in connection with additional seating located in additional setback area, arcades, etc., and subject to maintenance of a minimum clear pedestrianway of 6 feet.
Street Artists / Buskers	Permitted and encouraged subject to management by CCCP and subject to maintenance of a minimum clear pedestrianway of 8 feet.	Permitted and encouraged in connection with additional public space located in additional setback area, arcades, etc., subject to management by CCCP, and subject to maintenance of a minimum clear pedestrianway of 8 feet.	Permitted and encouraged in connection with additional public space located in additional setback area, arcades, etc., subject to management by CCCP, and subject to maintenance of a minimum clear pedestrianway of 6 feet.	Permitted only by special exception granted by CCCP.
Vender Carts and Stands	Permitted and encouraged subject to management by CCCP and subject to maintenance of a minimum clear pedestrianway of 8 feet.	Permitted and encouraged in connection with additional public space located in additional setback area, arcades, etc., subject to management by CCCP, and subject to maintenance of a minimum clear pedestrianway of 6 feet.	Permitted and encouraged in connection with additional public space located in additional setback area, arcades, etc., subject to management by CCCP, and subject to maintenance of a minimum clear pedestrianway of 6 feet.	Permitted only by special exception granted by CCCP.





STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
Vehicular Activities Back of Curb				
Driveways / Curb Cuts	No new driveway crossings of sidewalks permitted; Modify existing with pedestrian safety elements; Eliminate existing if and as redevelopment permits.	New driveway crossings of sidewalks are discouraged; Existing to be modified with pedestrian safety elements	New driveway permitted; Pedestrian safety elements required; Existing to be modified with pedestrian safety elements	New driveway permitted; Pedestrian safety elements required; Existing to be modified with pedestrian safety elements
Driveways – Pedestrian Safety Elements	1. Sidewalk paving patters and materials to cross driveway clearly defining pedestrian right-of-way. 2. Stop signs and stop bars to be provided at inside edge of all exits.	1. Sidewalk paving patters and materials to cross driveway clearly defining pedestrian right-of-way. 2. Stop signs and stop bars to be provided at inside edge of all exits.	1. Sidewalk paving patters and materials to cross driveway clearly defining pedestrian right-of-way. 2. Stop signs and stop bars to be provided at inside edge of all exits.	1. Sidewalk paving patters and materials to cross driveway clearly defining pedestrian right-of-way. 2. Stop signs and stop bars to be provided at inside edge of all exits.
Inset Drop-off Lanes	Prohibited – Including for valet parking			
Vehicular Activities at Curb				
Automobile Parking	As provided on Street Enhancement Standards Map			
Transit Stops	Permitted	Permitted	Permitted	Permitted
Loading Zones	Only where and as designated			
Valet Parking (See Section 19-3321 of the Parking Ordinance for further details)	Allowed by permit As provided on Street Enhancement Guideline Map by "Special Parking " designation and subject to special conditions as may be established	Allowed by permit As provided on Street Enhancement Guideline Map by "Special Parking " designation and subject to special conditions as may be established	Allowed by permit As provided on Street Enhancement Guideline Map by "Special Parking " designation and subject to special conditions as may be established	Allowed by permit Permitted only where amenity zone is at least four feet wide and subject to special conditions as may be established.
Special Vehicle parking (motor scooters, etc.)	As may be provided in dedicated parking spaces	As may be provided in dedicated parking spaces	As may be provided in dedicated parking spaces	As may be provided in dedicated parking spaces
Activities at Building Wall				
ATM Machines	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway; Preferred to be associated with recessed entrance or other feature.	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway; Shall be associated with recessed entrance or other feature.	Permitted only where associated with recessed entrance or other feature that maintains clear pedestrianway	Permitted only where associated with recessed entrance or other feature that maintains clear pedestrianway
Arcades	Building arcades are encouraged to support sidewalk activities and supplement pedestrian flow, but shall not be permitted as a substitute for minimum setback standards set forth herein.	Building arcades are encouraged to support sidewalk activities and supplement pedestrian flow, but shall not be permitted as a substitute for minimum setback standards set forth herein.	Building arcades are encouraged to support sidewalk activities and supplement pedestrian flow, but shall not be permitted as a substitute for minimum setback standards set forth herein.	Building arcades are encouraged to support sidewalk activities and supplement pedestrian flow, but shall not be permitted as a substitute for minimum setback standards set forth herein.
Awnings	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Banners / Art	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Flowerpots / Containers	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
News Stands/Boxes	See standards in the "Street Furnishings" Section above.	See standards in the "Street Furnishings" Section above.	See standards in the "Street Furnishings" Section above.	See standards in the "Street Furnishings" Section above.
Pedestrian Lighting	Building lighting that supplements lighting of the pedestrian realm is encouraged	Building lighting that supplements lighting of the pedestrian realm is encouraged	Building lighting that supplements lighting of the pedestrian realm is encouraged	Building lighting that supplements lighting of the pedestrian realm is encouraged



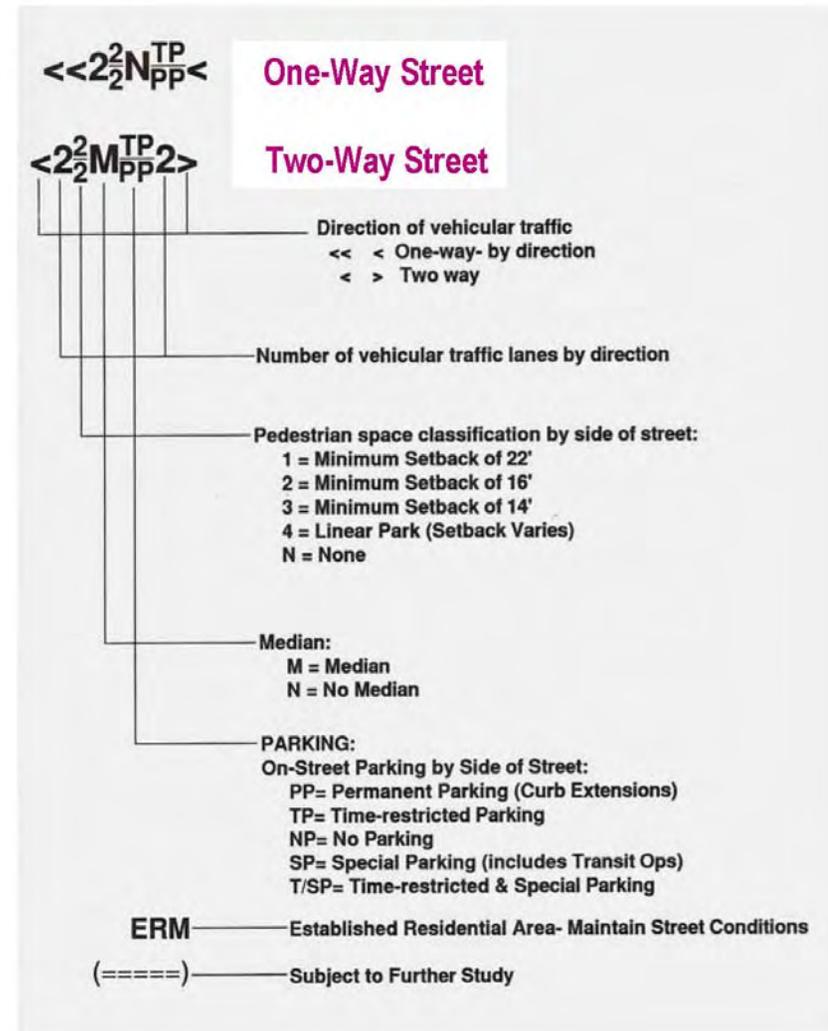
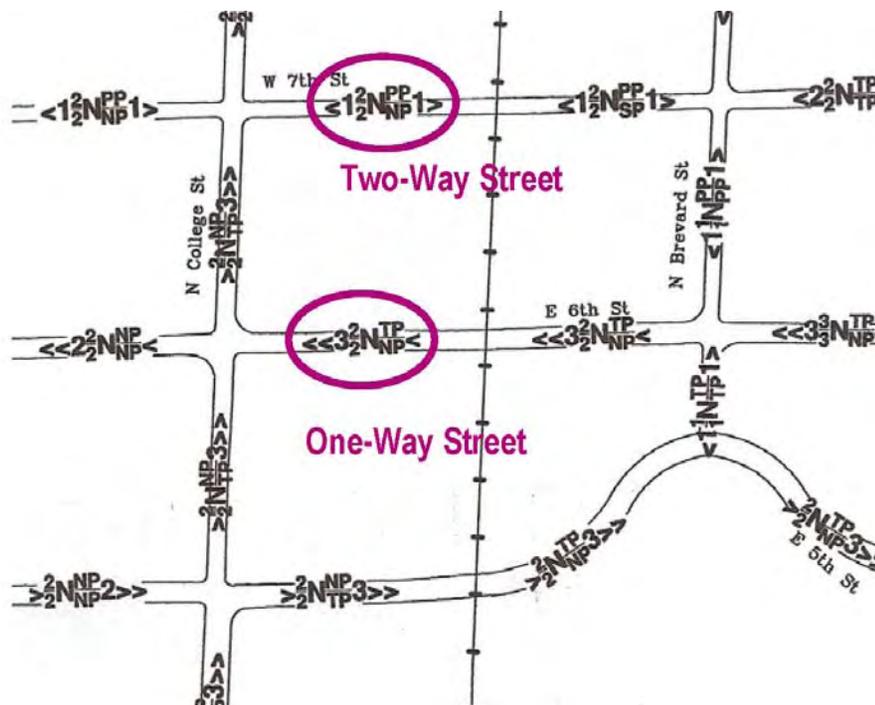
STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary	3. Secondary	Special Treatment (With Inadequate Pedestrian Width)
Seasonal or Event Displays	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Pedestrian Service Windows	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Signage – Permanent	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Signage – Temporary	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
Water Features	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 8 foot wide pedestrianway	Encouraged subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway	Permitted subject to right-of-way encroachment permit and sited so as to maintain minimum 6 foot wide pedestrianway
CROSSWALKS				
Special Surface Markings and/or materials	Required	Required	Optional at intersections of two Secondary Pedestrian Streets	Dependent on classification of street
Pedestrian Countdown Signals	Required at all signalized intersections	Required at all signalized intersections	Required at all signalized intersections	Required at all signalized intersections
Curb Extensions	Encouraged where Permanent Parking condition is provided.	Encouraged where Permanent Parking condition is provided.	Encouraged where Permanent Parking condition is provided.	Encouraged where Permanent Parking condition is provided.
Mid-Block Crosswalks	By special permit only. See Street Enhancement Standards Map for Locations.	By special permit only. See Street Enhancement Standards Map for Locations.	By special permit only. See Street Enhancement Standards Map for Locations.	By special permit only. See Street Enhancement Standards Map for Locations.
INTERSECTIONS				
Order of Precedence of Design Standards	<p>Design standards of Signature Pedestrian Streets shall take precedence over other classes of street treatment.</p> <p>At Independence Square (The Square), the established design standard of Tryon Street shall take precedence over the special design standards for Trade Street, subject to a new design of The Square being undertaken to further define its significance.</p> <p>At the intersection of Trade Street and Brevard, the special design of the street that is implemented first shall take precedence.</p>	Design standards of Signature Pedestrian Streets shall take precedence over other classes of street treatment.	Design standards of Signature Pedestrian Streets shall take precedence over other classes of street treatment.	Design standards of Signature Pedestrian Streets shall take precedence over other classes of street treatment.
Use of special pavement and other design features to further define the intersection	Strongly encouraged	Encouraged	Permitted	Permitted





Applying the Design Standards

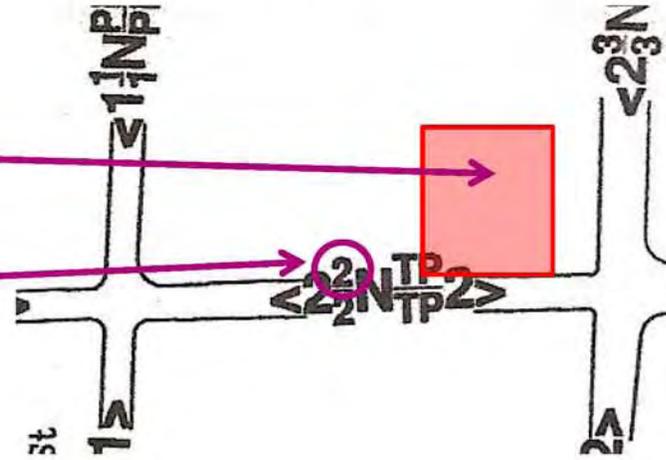
The Enhancement Standards Map and the Standards Table work together in the following manner and as illustrated on this and the following page. First, the owner of a land parcel locates the parcel on the map. Second, in the nomenclature legend the pedestrian space classification for the block face in which the parcel is located is identified. Third, the classification is identified in the appropriate column of the Standards Table and all of the standards in that column apply to the pedestrian realm for that frontage. In the example provided, the site abuts a class 2, or Primary Pedestrian Street. Thus, the standards in the "Primary" column of the Table are applicable. If the parcel is a corner site, the process must be applied on both block faces to determine the respective standards.





Applying the Street Design Standards

1. Locate site on the Enhancement Map
2. Determine Pedestrian Space Classification – In this case '2', or Primary Pedestrian Street
3. Determine applicable standards from Design Standards Table



PEDESTRIAN STREET STANDARDS TABLE

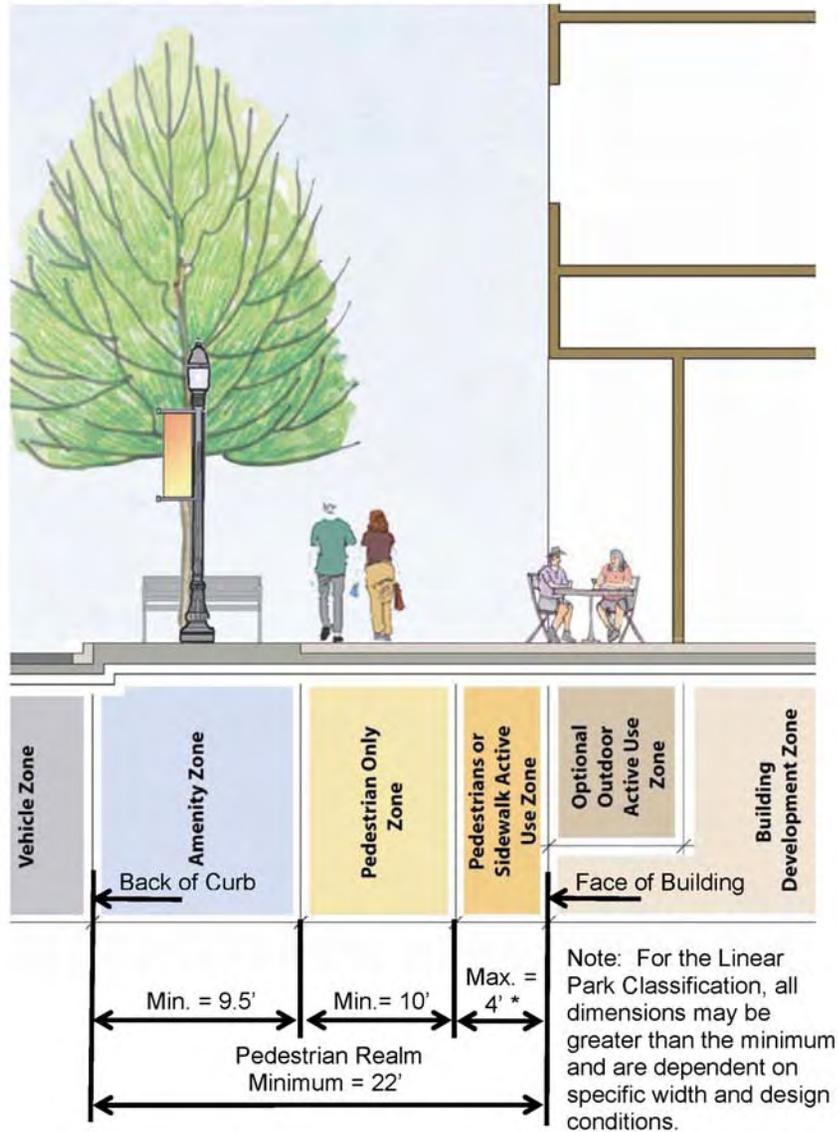
STREET CLASS STANDARDS	1. Signature and 4. Linear Parks	2. Primary
DESIGN STANDARDS OF THE PEDESTRIAN REALM		
DIMENSIONAL		
Overall Width – Back of Curb to Face of Building Please refer to cross section provided above	Minimum of 22 feet Linear Parks Minimums as follows: Trade Street = 50' Mint Street = 28' Third Street = 22' Ninth Street – Median Park	Minimum of 16 feet
Amenity Zone Width (Landscape and street furniture) – Located at back of curb	Minimum of 3.5 feet	Minimum of 5.5 feet
Pedestrian Zone Width	Minimum of 16 feet Minimum 8 feet clear at all times	Minimum of 8 feet Minimum of 6' clear at all times
Pedestrian and/or Sidewalk Active Zone Width – Located between Amenity Zone and building face or right-of-way line	Maximum of 4 feet at 22 feet width. Any width beyond 22 feet may be used for sidewalk activities	Maximum of 2 feet at 16 feet width; maximum increases 0.5 feet for each 1.0' increase in overall width

.... Etc.



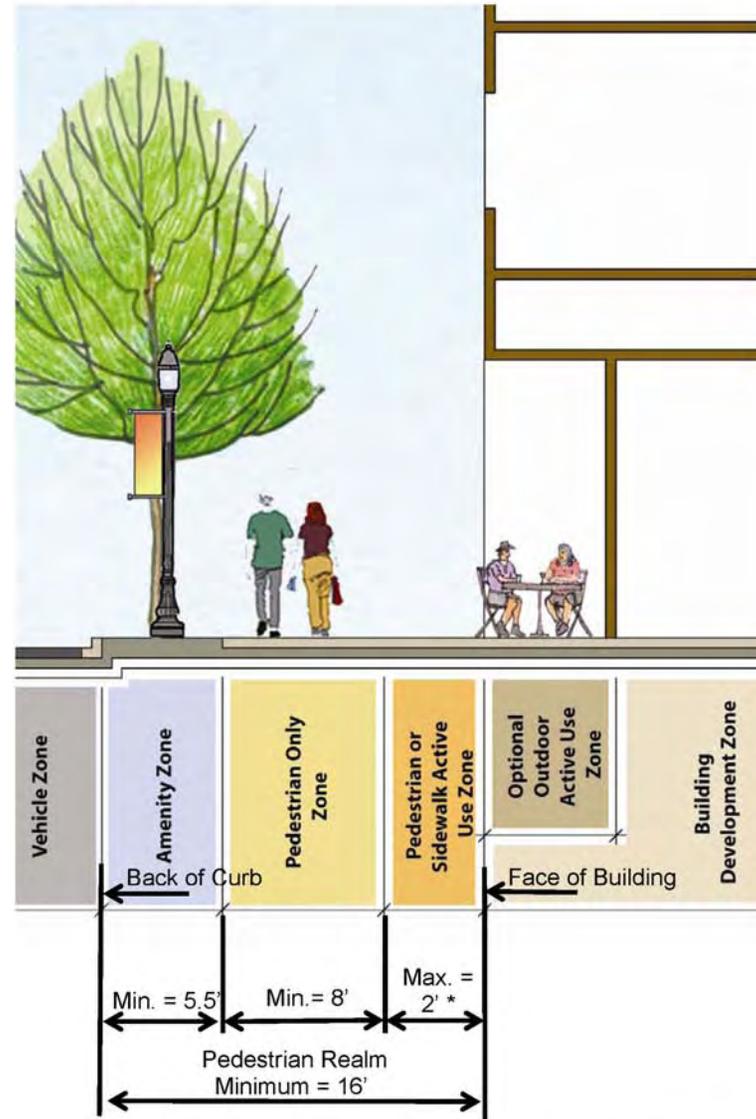


Activity Relationships and Dimensional Standards:
The "Signature Pedestrian Street" and The "Linear Parks"

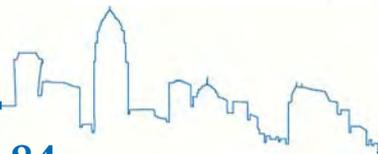


* Sidewalk Active Use Zone may be wider as long as the minimum Pedestrian Only Zone is maintained.

Activity Relationships and Dimensional Standards:
The "Primary Pedestrian Street"

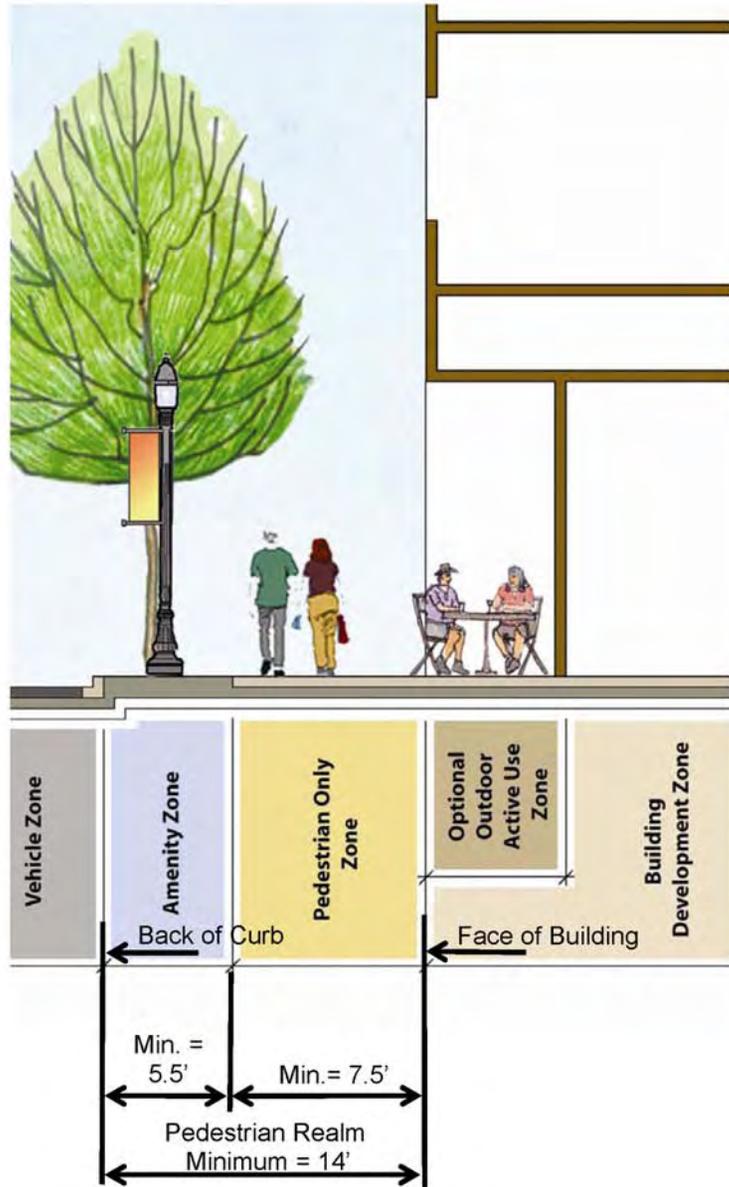


* Sidewalk Active Use Zone may be wider as long as the minimum Pedestrian Only Zone is maintained.

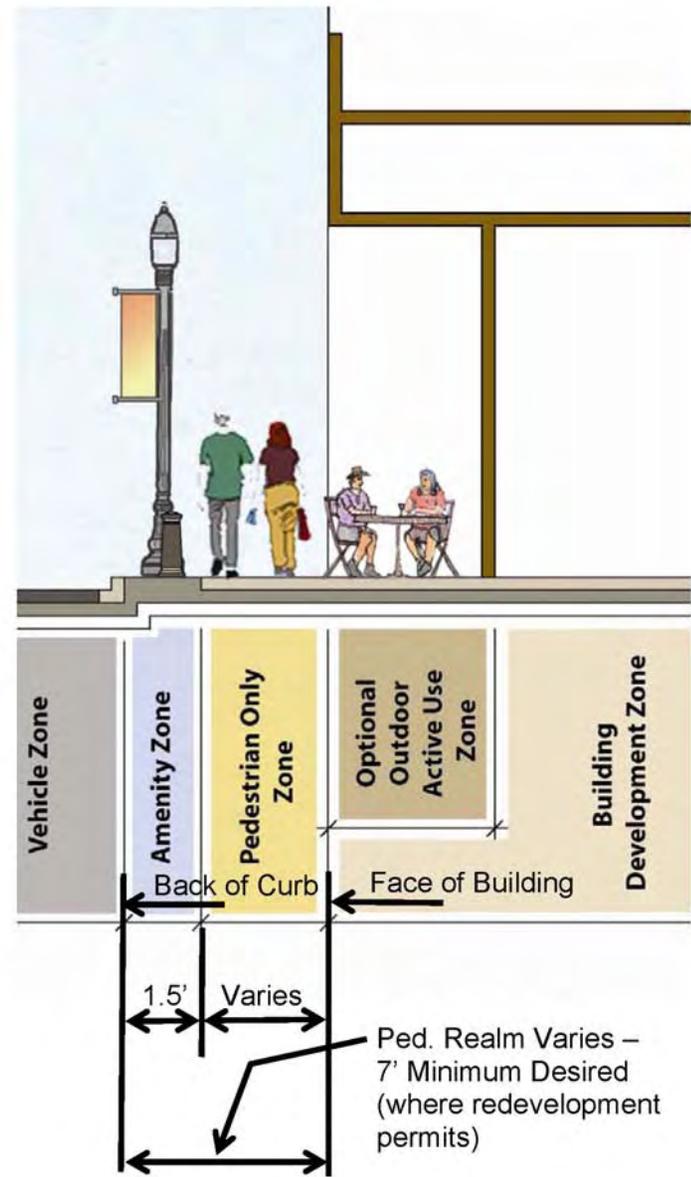




Activity Relationships and Dimensional Standards:
The "Secondary Pedestrian Street"



Activity Relationships and Dimensional Standards:
The "Special Treatment Pedestrian Street"





Off-Street Pedestrian Circulation

In addition to pedestrian circulation along streets, there are a variety of off-street opportunities for pedestrian use. These “off-street” pedestrianways are categorized in the following way, and shown on the Pedestrian Circulation Map (Page 67).

Multi-Purpose Trails accommodate bicyclists as well as pedestrians. This Center City Transportation Plan identifies these locations for such trails in Center City Charlotte:

- The South/Northeast Corridor Trolley and Light Rail Transit line will have pedestrian and bicycle paths flanking the corridor as it traverses Center City. This facility is intended to provide a level of service and quality approaching that which is intended for the Signature Pedestrian Streets. This system cannot go through the Convention Center with the transit line; therefore, College Street and MLK Blvd. will have to serve as a connection around the Convention Center. The proposals for both streets will result in pedestrian enhancements that will support this function.
- Irwin Creek Greenway already links Frazier Park, the Irwin Avenue School, the County’s “Ray’s Splash Planet” and Elmwood-Pinewood Cemetery. The trail needs to be extended southward to West Morehead Street and northward to provide linkage to the land area north of the Cemetery and the Greenville Neighborhood.
- The existing trail under the Norfolk-Southern rail embankment at Bank of America Stadium can extend into the Wesley Heights neighborhood by using the P&N Railroad right-of-way. This trail will also link the Irwin Creek Greenway with Center City.
- Little Sugar Creek Greenway penetrates the I-277 Loop between Seventh and Tenth Streets. There will be trail linkages to the greenway at the Tenth Street/I-277 underpass, the north side of the Seventh Street bridge and the south side of the Fifth Street extension to Kings Drive. Recently completed improvements to Stonewall/Kenilworth also provide enhanced bicycle and pedestrian access to the greenway.

- The existing residential wards - First, Third and Fourth - will have assorted small pedestrian linkages.

Urban Open Spaces that provide pedestrian and bicycle linkage include:

- Marshall Park (possibly reconfigured as proposed in the Second Ward Master Plan)
- The Green (on South Tryon Street)
- Fourth Ward Park
- Settlers Cemetery Park
- Elmwood/Pinewood Cemetery
- Bearden Park
- The I-277 Cap (proposed in the Second Ward Master Plan)
- numerous smaller parks and plazas

Enclosed Pedestrianways include:

- Overstreet Mall
- Latta Arcade
- Independence Square pedestrian mall (linking the Square, Iveys and Marriott)

Plan Recommendations: Pedestrian

23. Adopt the Uptown Streetscape Standards (page 75), including the categories of pedestrian streets and the standards for each street; specifically, codify these standards through these actions:

23a. Apply the Hierarchy of Pedestrian Streets based on the Uptown Streetscape Standards

23b. Update the Uptown Streetscape Design Guidelines to incorporate these standards for the Center City.

24. Update the Street Standards Map (page 81) which identifies appropriate pedestrian and vehicular enhancements and serves to regulate their implementation at the time of private redevelopment or public infrastructure improvements.



Bicycle Circulation

Creation of bikeways . . . is also critical. Once conditions are improved for biking and walking, Center City employers . . . should encourage individuals to use these facilities for commuting.

- Center City 2010 Vision Plan

Guiding Principles

- Bicyclists should have efficient and safe access to, from and within Center City.
- Bicycle facilities must be compatible with the street network while safely accommodating riders of all skills levels navigating the traffic conditions.

The *Center City Transportation Plan* subscribes to the notion of “complete streets.” This inclusive view of the transportation environment gives equal consideration to all users. A complete street is one that works not only for motorists but also for bicyclists, transit riders, and pedestrians (including those with disabilities). An incomplete street is one where there are gaps or too few usable sidewalks and bikeways. Thinking in terms of a “complete street” leads to accommodating bicycles as a routine part of planning, design and construction of transportation facilities.

The City of Charlotte already has an adopted city-wide *Charlotte-Mecklenburg Bicycle Transportation Plan* (1999) that includes the Center City street system. The recommendations of that plan (a few of which have been implemented) have been refined to constitute the bicycle circulation plan for this Center City Transportation Plan. The plan addresses general access to the Uptown area and some specific measures - bicycle lanes, signed bicycle routes, off-street routes, and parking.

Access into Center City

For the most part, the commuting cyclist tends to favor sharing the street with motor vehicles or using bicycle lanes at the edge of the pavement. The chief impediments to safe and convenient bicycle commuting to the Center City are associated with the I-277/I-77 expressway loop. Narrow street widths on approach streets outside the loop, constrained widths in the underpasses and overpasses, and the volume and speed of peak hour traffic on streets on both sides of the loop, were key factors in selecting bicycle routes during preparation of the *Charlotte-Mecklenburg Bicycle Transportation Plan*.

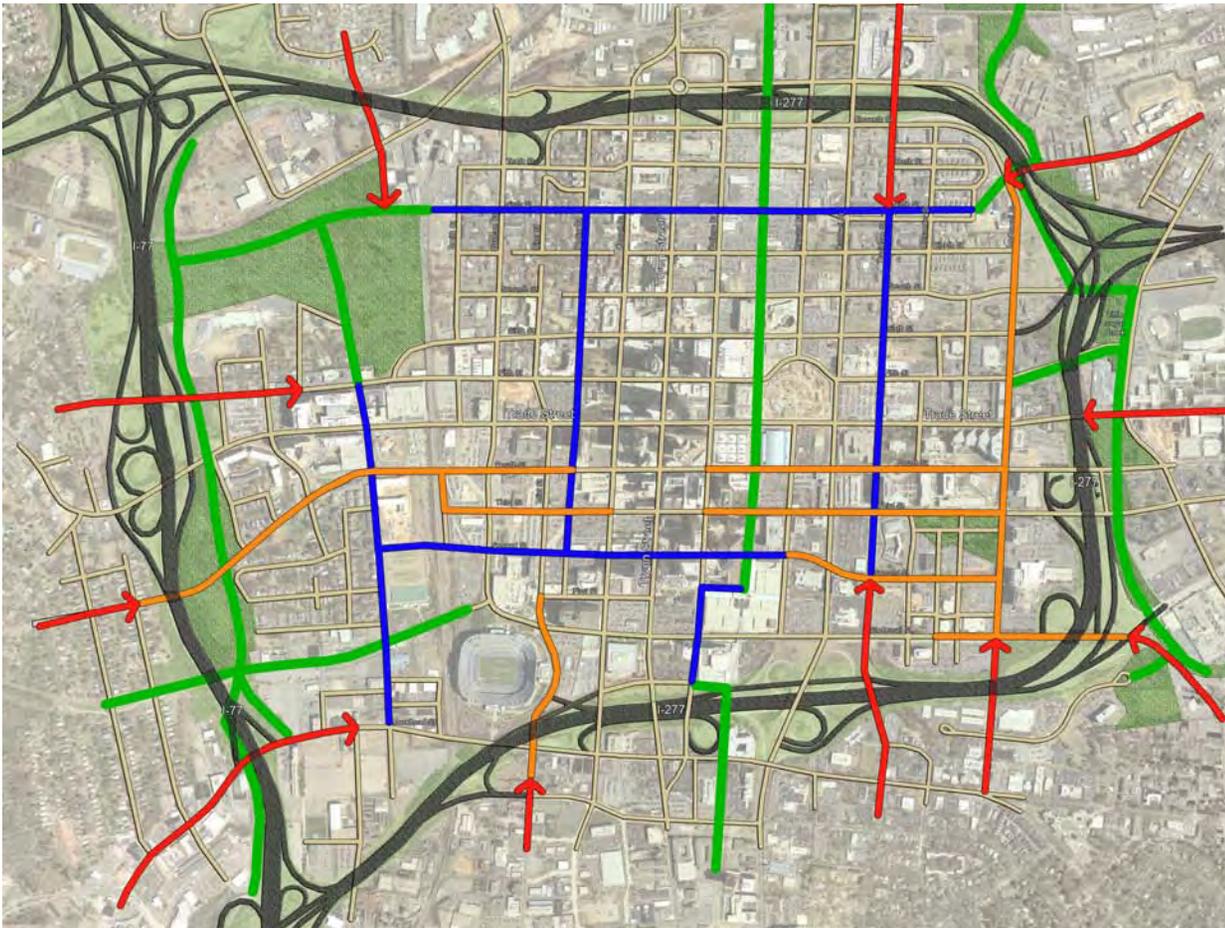
The following are the primary marked bicycle routes leading into Center City. To provide safe and convenient access into Center City for commuting cyclists, modifications to the expressway underpasses and overpasses (as described on page 37) will be necessary.

- Trade Street / Elizabeth Avenue
- West Fourth Street
- West Fifth Street
- East Tenth Street
- McDowell Street
- Kenilworth Avenue
- Mint Street
- West Morehead Street
- Johnson Street (to be connected to a proposed pedestrian/bicycle overpass when the rail crossing at Ninth Street is closed)
- Proposed connection of Davidson (or Alexander) Street over I-277 to Euclid Avenue

Bicycle Lanes

Bicycle lanes are a widely recognized road treatment that provide an exclusive space for cyclists to ride on a street with other traffic. The lane is identified with signs and road markings, and separated from the other





Bicycle Circulation

travel lanes by a wide painted stripe. In Center City, these dedicated lanes will be used primarily to support peak hour circulation by commuting cyclists along some of the busier routes:

- **McDowell Street** (both directions), from Stonewall Street to Tenth Street
- **Fourth Street** (both directions), from west of I-77 to the Norfolk-Southern rail embankment

- **Fourth Street**, westbound from McDowell to Poplar Street to Graham Street (this lane is not marked on the south side of the Charlotte Transportation Center because of bus operations)
- **Third Street**, from College to McDowell
- **Mint Street**, from south of West Morehead Street to First Street

In addition, bicycle lanes have already been designed and funded for construction on **Kenilworth Avenue**, from east of I-277 to McDowell Street.

Signed Bicycle Routes

A planned system of signed routes will link residential areas of Center City Charlotte. These will be marked along routes on which vehicular traffic is “calmed” and pedestrian and bicycle traffic is supported.

- **Ninth Street**, from Smith Street to Myers Street
- **MLK Blvd.**, from Cedar Street to McDowell Street
- **Poplar Street**, from Second to Ninth Street
- **Davidson Street**, from Second to Ninth Street
- **Second and College Streets**, serving the segment of the South Transit Corridor pedestrian and bicycle path in order to go around the Convention Center.

Off-Street Routes

The Pedestrian component of this Center City Transportation Plan identified various “multi-purpose trails” that are part of the off-





street circulation system in Center City (as described on page 83). Most of these multi-purpose facilities will also support bicycle traffic.

- **The South-Northeast Corridor transit line**
- **Irwin Creek Greenway**
- **Wesley Heights** neighborhood
- **Little Sugar Creek Greenway** and associated connections.
- A bicycle and pedestrian trail along the south side of Fifth Street, from McDowell Street to Kings Drive near **Central Piedmont Community College**
- A pedestrian and bicycle bridge replacing the Ninth Street grade crossing, providing access to the **Greenville** neighborhood.

25b. Improvements to expressway underpasses and overpasses that improve bicycle access to Center City should be done in conjunction with vehicular and pedestrian improvements outlined in this Center City Transportation Plan.

25c. Bicycle parking facilities will be expanded through the recently amended zoning code requirement for new parking structures; through the street furniture element of the Pedestrian Street Standards in this document; and through project funding as it becomes available.

Bicycle Parking

The availability of convenient and secure bicycle parking is considered a key factor in encouraging bicycle use. These measures have already been implemented:

- “Inverted U-style” racks have been installed along Tryon Street, on the blocks of Trade Street that flank Tryon, and on MLK Blvd. between Tryon and College Street. Moderate funding is available to continue this effort.
- The City of Charlotte Zoning Ordinance was amended in 2005 to require all future parking structures to provide bicycle racks.
- Bicycle parking racks are also included as a “street furniture” element in the Pedestrian Street Design Standards (page 75).

Plan Recommendations: Bicycle Circulation

25. Implement bicycle circulation improvements and integrate bicycle system with the adopted Charlotte-Mecklenburg Bicycle Transportation Plan, as noted in this section (pages 84-86). This includes:

25a. Bicycle Lanes, Signed Bicycle Routes, and Off-Street Routes should be designated in accordance with the city-wide bicycle plan





VI. IMPLEMENTATION

There are several policy and funding programs and tools which can be used to implement the recommendations of the Center City Transportation Plan (CCTP). This chapter discusses several implementation tools that may be used to carry out the improvements.

Dedicated Improvement Programs

Three specific programs are recommended to provide funding support for the key recommendations.

- **Capital Investment Plan (CIP) Line Item**
As a specific line item in the City's CIP, a "General Annual Center City Improvement Program" would provide an ongoing flow of funds for a variety of smaller improvements, such as conversion of time-restricted parking to full-time use, pedestrian enhancements, complementary improvements associated with a private or public development project or underground electrical installations.
- **General Improvement Fund, Using Specific Funding Sources**
An annual program similar to the CIP Line Item could be funded by other revenue sources, such as the special Taxing District or On-Street Parking revenues as discussed elsewhere.
- **Collaborative Parking System and Wayfinding System**
Once implemented, revenues from the Collaborative Parking System should be used to maintain and expand both the parking system and the wayfinding system.

Established Transportation Plans and Programs

There are a variety of programs and activities through which various modifications as proposed in the CCTS can be implemented.

2030 Long Range Transportation Plan (Mecklenburg Union Metropolitan Planning Organization)





This Federally-mandated statewide program defines and prioritizes proposed improvements to major highways and thoroughfares. Projects that are associated with the State Highway System are primary candidates for inclusion in the North Carolina Transportation Improvement Program. Requests have already been made for inclusion of improvements to interchanges on the I-277/I-77 Loop. Once the necessary Interchange Modification Report for the entire loop is prepared, and costs are defined, higher priority designations for these improvements will be sought.

2025 Transit System Plan

The 2025 Transit System Plan will play a major role in implementing transportation improvements in Center City. In addition to construction of specific transit projects, there are a variety of non-transit enhancements that will be implemented to support the transit system. Examples include:

- A pedestrian walkway has been constructed along the majority of the LRT line that runs between Brevard and College Streets, from south of I-277 to Ninth Street. The expansion of this line to accommodate the NE Corridor Light Rail Project will include construction of pedestrian ways on both sides of the line.
- Pedestrian streetscapes will be developed on block faces surrounding the new Charlotte Gateway Station on West Trade Street. New streets will be constructed south of Fourth Street to support the inter-city bus service and parking components of the Charlotte Gateway Station.
- A pedestrian/bicycle overpass at Ninth Street when the new North Corridor and NCDOT rail lines are constructed.
- CATS' planning and design for the new streetcar system includes streetscape for Trade Street that meets the "Signature Pedestrian Street" standard recommended by CCTS.

Capital Investment Plan (CIP)

The City of Charlotte maintains a five-year capital improvements program - called the Capital Investment Plan (CIP) - that is updated annually. The CCTS General Annual Im-

provement Program (above) has been proposed for inclusion in the CIP. Additional specific projects could be funded through the CIP.

Economic Development Program

The City's economic development program helps attract potential private development activities that are deemed to be important to Charlotte's economic growth. A recent example is the redevelopment of the Old Convention Center. The City of Charlotte is supporting that project by funding enhancements to the street operations and the pedestrian space on the block faces surrounding the site.

Commitment of Specific Income Sources

City programs produce revenue that could be used for implementing specific programs and projects. There are three special development taxing districts in Center City. The City of Charlotte contracts with Charlotte Center City Partners for the management of special programs in the districts. The maintenance of the Tryon Street Mall (and other streets) is one specific project in this program.

As noted earlier (page 51), the City's on-street parking management program - "ParkIt!" - produces positive net revenue that goes into the General Fund. The CCTP has recommended increasing the number of on-street parking spaces as well as extending operating hours. These actions will increase total revenue and, hopefully, net revenue. Since this revenue is derived specifically from parking, it is possible that it could be designated to implement the Collaborative Parking System or other specific improvements proposed in the CCTP (pages 54-58).

Private and Governmental Development Projects

The Street Enhancement Standards Map (page 81), has become a major tool in achieving the improvements recommended in this plan. Developers of Center City projects (both private and public) will be responsible for meeting the design standards and, in so doing, will play a role in implementing the CCTP recommendations.



In fact, projects are under construction or moving through the approval process that are providing pedestrian and streetscape improvements that meet most if not all of the standards. Several private projects that are in various stages from planning to construction have also agreed to meet the standards set forth in this plan. The Charlotte Arena, ImaginOn and Metro School are three public projects that have made positive contribution to both the street network and the pedestrian realm. Other significant public projects that are in the planning stage - and will advance the goals of the CCTS - include the Charlotte Gateway Station, Center City Streetcar, and Third Ward Park.

Additional Funding Sources

There is a variety of other funding sources and programs that can be used for the implementation of specific projects or to create general funding programs. The following potential sources have been identified. Some of these have been pursued with success. Others need to be explored.

Intergovernmental Grants or Funding

The City of Charlotte will pursue the use of State and Federal intergovernmental grant and funding sources wherever possible. Funding is currently being sought from two such sources: (1) the Congestion Mitigation and Air Quality (CMAQ) program for the parking and way-finding programs, and (2) State special economic development funds for the reconfiguration of the I-277/Caldwell Street/South Boulevard Interchange. The latter project is tied to the City's bid for the NASCAR Hall of Fame. Other programs will be investigated and pursued as identified. CMAQ funding from the Federal government comes through NCDOT and MUMPO. The City listed the Collaborative Parking System and Wayfinding System in the request list for fiscal year 2006 and has received notice that the project made the funding list. This funding will be adequate to implement the CPS and a large first phase of the wayfinding program.

Special Taxing Districts

The City has established Municipal Services Districts in Center City to support a variety of improvement and promotional activities. Charlotte Center City Partners provides administration of most of these programs under a City contract. The revenues from increasing the levy rate could be used to fund specific improvements or to make improvements in concert with specific development projects.

Self-Financing Bonds

North Carolina recently authorized the use of "Self-Financing Bonds" to channel future tax revenues from specific development projects to public improvements that will support that project. Since the program is relatively new, there is not an experience base to cite. However, the City is exploring its use on projects in Center City. Enhancements to the street and pedestrian system, development of parking facilities and the placement of overhead power lines underground would all be valid uses of the incremental tax revenues.

Parking Revenue

The City of Charlotte's "ParkIt!" on-street parking program generates significant revenue that could be used to service new debt. The on-street revenue can be monetized over a 20 to 30 year period which would generate significant capital for use today, much like an authority or utility. The capital generated by monetizing the revenue stream could be used to improve and support the parking system with the debt serviced by the revenue.

TMA Funding

A Transportation Management Association (TMA) is a federally created and supported association that is usually established through a partnership between the public and private sector in non-attainment air quality and congestion management areas. The TMA is used to develop a program to manage and improve various aspects of the transportation system, including parking. A TMA has stringent guidelines developed by the federal government but, more importantly, is a common mechanism which affords the ability to qualify for and obtain federal funding to support the program.





Lease-Back

There may be an opportunity to create a parking entity that could purchase and lease back a portion of the parking system in an effort to unify the overall parking system. The funding for the acquisition typically comes from a third party investor such as a real estate investment trust (REIT), pension fund or banking institution. The acquisition price is set by the ability of the existing parking revenue to service the debt or by the credit strength of the leasing entity.

Adopted Policies, Codes and Ordinances

The Zoning Ordinance is a key ordinance through which the streetscape and pedestrian recommendations can be implemented because the standards affect the curblines and building setback lines. Additionally, the Uptown Streetscape Guidelines, which currently focuses on the Tryon Street Mall and Transit Corridor, will be expanded to include all of Center City to implement the detailed recommendations of the pedestrian street hierarchy.

Center City Street Enhancement Standards Map

As potentially the most significant product of this *Center City Transportation Plan*, the "Street Enhancement Standards Map" (page 81) was adopted as City policy and serves a similar purpose as the Major Thoroughfare Plan and the Urban Street Design Guidelines. The map provides the basis for codifying the recommendations related to pedestrian and vehicular circulation, on-street parking and other functions that occur in the street rights-of-way and adjoining property frontage. It is a single document that concisely states the function, operations and streetscape character of every street block in Center City.

One important characteristic that is not defined by the map is the geometric baseline for each block. There is such a wide variation of existing conditions - centerlines, curblines, building setbacks, etc. - that definition of the geometric baseline for application of the standards on the map will have to be determined on a case-by-case basis, or through preparing an improvement plan for specific streets through several

blocks. Similarly, the map does not define recommended operational modifications such as the removal of curbside turn lanes and high speed connectors.

The Street Enhancement Standards Map is being used by the City to define the detail of specific street improvement projects, as well as the improvements to be provided in connection with the development of properties abutting the street, be they private or public. During the preparation of this *Center City Transportation Plan*, the draft version of the map has been used in the review of several private development projects. In most of these cases, the required improvements illustrated on the map have been well-received.

Zoning Code

There are two zoning classifications that cover the majority of the property in Center City - Uptown Mixed Use District (UMUD) and Urban Residential District (UR). Both emphasize a mixture of uses and contain provisions, such as building setbacks and references to the Uptown Streetscape Guidelines, that affect the quality of the pedestrian realm.

The text defining the standards of the districts also contains references to more recently adopted studies or regulations. Therefore, upon adoption of the recommendations of this *Center City Transportation Plan*, the street and pedestrian space enhancement standards will be supported by the zoning.

The Charlotte-Mecklenburg Planning Commission is planning to undertake a full review of the UMUD and UR district language in the near future. At that time, it would be appropriate for the changes in the text that stem from the recommendations of this Plan to be incorporated.





APPENDICES

Appendix A

Traffic Analysis of Vehicular Circulation Improvements

Purpose and Methodology

The Center City street network's ability to accommodate traffic in the future was evaluated by comparing estimates of the amount of traffic along specific corridors in Center City with the approximate capacity of the streets comprising those corridors.

It was assumed that future commuter traffic volumes will be proportional to the amount of commuter-occupied parking spaces in Center City. In addition, the percentage of commuters who drive to work in Center City in the future will be lower than it is today due to future enhancements in public transportation service and other factors.

To produce these future traffic estimates, the following procedure was followed:

1. The amount of future commuter parking spaces needed in Center City was estimated.
2. The likely location of these spaces were identified.
3. A spreadsheet model was developed to convert these estimates into peak-hour traffic within the various corridors.

These estimates were then compared with the capacities of the corridors at various locations (referred to as "cut-lines") to yield planning-level approximations of the ability of the Center City street network to accommodate future traffic volumes. This technique afforded the opportunity to quickly evaluate different street networks, and can also be adapted to test different assumptions about future parking conditions and transit usage.



Testing the Model on Existing Conditions

Before applying the model to alternative future scenarios, it was first applied to existing conditions in Center City. This evaluation was performed by comparing the traffic estimates produced by the model to traffic counts that had been conducted by the City at the gateway locations in the street network. These locations were evaluated at an early stage of this project, which determined that, collectively, only about two-thirds of the available capacity is required to accommodate existing traffic volumes in the morning peak hour.

The traffic estimates produced by the model were observed to closely approximate the existing volumes at these locations, and the model was therefore judged to be satisfactory.

Applying the Model to Future Conditions

Several alternative future scenarios were evaluated. As noted above, the total peak-hour traffic volume in each scenario was defined by applying factors to the number of future parking spaces in Center City. This value in turn was determined by estimating the location of new development and redevelopment within Center City, and adjusting the parking requirements downward to account for transit users (and other commuters who are not auto drivers). The resulting auto volumes were then assigned to the following alternative street networks:

1. **Existing network** (no changes)
2. **Modifications** to the existing network, including:
 - reduction in capacity of Trade Street to two (2) effective lanes;
 - conversion of portions of Caldwell Street, Brevard Street, Poplar Street, and Mint Street to two-way operation;
 - modification of the I-277/South Boulevard interchange, including elimination of the off-ramp east of Caldwell Street; and

- addition of a new Mint Street Ramp
3. **Additional modifications**, beyond those identified above, to include:
 - reduction in capacity of segments of College Street, Church Street and MLK Blvd. by one lane
 - extension of Euclid Street over I-277 between Morehead Street and Stonewall Street to connect to Davidson Street as a two-lane, two-way street.

Findings

Parking

1. Once the effects of future transit usage (and other non-auto commuting) are included, the number of parking spaces required by commuters in the future is estimated to grow to 50,700 spaces, representing a 27 percent increase (10,700 additional occupied spaces) over existing conditions. Throughout this analysis it was assumed that 75 percent of future Center City employees will be auto drivers, 25 percent will commute either by public transportation, car or vanpool, walk or bicycle. This assumption is consistent with results of the various transit corridor studies that have been conducted by the City over the past few years.
2. Most of the *total* future parking will need to be located in central and south-central Center City. The area bounded by Seventh Street, Caldwell Street, I-277 (Belk) and Poplar/Mint Streets will require almost 29,000 parking spaces, representing over 55 percent of the total occupied parking in Center City in the future. Thus, if commuters are discouraged from traversing the “core” of Center City, there will be more demand into Center City from the south than from the other directions. (Currently, about 29 percent of the morning peak-hour traffic into Center City enters the area from gateways on the south.)
3. Most of the *additional* parking spaces will need to be located in three broad areas;
 - south-central Center City (4,100 additional occupied spaces, a 46 percent increase);



- West Trade Street corridor (3,000 additional occupied spaces, 177 percent increase);
- North Tryon area (2,600 additional occupied spaces, 79 percent increase).

Constraints

1. One of the objectives of this study is the creation of a more pedestrian-friendly core within Center City, supported by enhanced transit service and improved pedestrian facilities. This area is defined generally as encompassing a two-to-three block area on either side of Tryon and Trade Streets. If commuter traffic is to be encouraged to drive only into Center City rather than traversing this area, commuters must approach their Center City destination from the closest point on the periphery of Center City, using either the I-277/I-77 freeway loop or a surface street loop (referred to as the Circulator Route in this study) comprised of Graham, Stonewall, McDowell, Eleventh and Twelfth Streets, to reach that point.
2. First Ward and Fourth Ward constrain travel to and from Center City from the north because of the lack of thoroughfares through these residential neighborhoods. In conjunction with the goal of discouraging travel through the heart of Center City, it is undesirable to attract vehicles through these residential areas. The greater the congestion entering Center City from the south (and west and east), the greater the likelihood of traffic entering from the north.
3. Another key corridor that will affect the overall distribution of traffic to and from Center City is on the west side. This approach to Center City is served by the fewest roadways (Trade, Fourth and Fifth Streets) and the fewest lanes, and thus has the lowest capacity of all four approaches. The increase in projected parking immediately east of the Norfolk-Southern railroad, coupled with the potential reduction in capacity on Trade Street, will place added pressure on this approach route into Center City. As noted above with respect to First and Fourth Wards, it will be important to ensure that sufficient capacity exists elsewhere to minimize congestion on approach routes to and from the west.

Conclusions: Projected Network Performance

1. **The Center City street network will be able to accommodate projected traffic volumes in the future, even with the street modifications tested in this analysis.**
The potential modifications reduce the capacity of individual streets, and thus tend to increase the volume/capacity (v/c) ratios in the affected corridors. However, most of these changes occur within Center City (i.e., inside the perimeter defined by the gateway locations). Thus, they have relatively little effect on the performance of the streets at the gateway locations. The cumulative v/c ratio at the gateways in the future is projected to range between 0.85 and 1.0 (theoretical capacity is 1.0), depending on the specific network and the assumptions that have been made regarding vehicular routing. In general, traffic volumes tend to decrease with increasing distance from the freeway loop, as commuters enter parking facilities.
2. **The potential street modifications will have a more significant effect within Center City as the capacity of individual corridors is reduced.**
This analysis has shown, however, that there will be sufficient capacity to accommodate revised traffic patterns that may result from such changes, albeit in a number of cases at v/c ratios that approach 1.0 across entire corridors at specific “cut-lines.”
3. **If commuter traffic is to be discouraged through the central core of Center City, as well as through First Ward and Fourth Ward, it is essential that alternative routes be provided.**
Both the I-277/I-77 freeway loop and the surface street loop are critical elements that will help redistribute commuter traffic around Center City, and therefore allow commuters to avoid traversing these sensitive areas.
4. **As peak-hour traffic volumes approach the capacity of the Center City network, it is likely that the percentage of commuters who travel in the single peak hour will decrease.**
The analysis does not reflect any such spreading of the peak. To the extent that this does occur, network performance will exceed the level expected.





Assumptions

These conclusions rely on a few key assumptions. They include:

- 1. In the future, the percentage of employees who work in Center City and commute by driving will be significantly lower than it is today.**
This change will occur primarily as a result of major improvements in public transportation to and within Center City, and increases in the number of employees who both live and work in Center City (and therefore will not need to drive to work).
- 2. This analysis presumes that in the future most drivers will use the I-277/I-77 freeway loop and the internal Circulator Route to approach their ultimate destination in Center City.**
The Circulator Route consists of Graham, Stonewall, McDowell, Eleventh and Twelfth Streets. The assumption is that drivers will use these alternatives rather than traverse lengthy segments of Center City streets. In particular, most drivers will tend to avoid traveling from one side of Center City to the other, given the planned pedestrian orientation of the Center City core with an emphasis on the Trade and Tryon Street corridors.
- 3. This analysis also presumes most drivers will change their routes to avoid congestion in one corridor if another corridor is relatively less congested.**
This is particularly likely in a grid system where alternative routes are readily available. Moreover, Charlotte has both a freeway loop in close proximity to Center City, and a surface street loop (the "Circulator Route" above) that will make such route adjustments particularly attractive.

The analysis performed in this study was conducted at a broad corridor level using planning approximations. It has determined that sufficient capacity will exist within the overall street network to accommodate future employment, using the assumptions described above, but it does not represent a detailed analysis of individual roadways or intersections. In particular, more detailed analyses of both the surface loop and of the interface between the surface streets and the freeway loop will be required in order to ensure that localized congestion does not occur.



Appendix B

Examples of Collaborative Parking Systems

The public and private parking system is one of the most critical components of a successful and vibrant downtown economy. In fact, many cities view parking as an economic development tool that can accelerate development and growth of a downtown. Parking is the only service a city provides that often competes with the private sector; however, the approach of the Center City Transportation Plan is to partner rather than compete with each other to the benefit of both parties and the local economy – hence, the term “collaborative” parking systems.

The following examples represent a growing movement by cities across the United States to leverage their parking resources to support economic development. Their common goal is to ensure that the right amount of parking is available to users, that all visitors can find parking, and that both the private and public sectors work together for their mutual benefit.

City of St. Paul, Minnesota

St. Paul implemented a variable message sign (VMS) system in 1997 – the first of its kind in the nation – primarily to direct tourists and visitors attending special events in the downtown. The goal is to create a visitor-friendly downtown in terms of access to parking.

The VMS system uses both “static message signing” (fixed signs) and sign boards displaying real-time parking availability in each of the participating parking facilities. The VMS uses a common design scheme and is easily recognized as parking guidance. The signage is purposely designed to “inform” rather than “direct” visitors to available parking, leaving the decision of where to park to the driver.

The program was funded by a Congestion Management and Air Quality (CMAQ) grant applied for by the City of St. Paul, the Federal Highway Administration and Minnesota Department of Transportation. Initially, there were seven garages and three surface lots (both public and private) in the system. The private parking owners and operators participated through contractual agree-





ments which identified the role and expectations of both the public and private participants.

St. Paul's system includes three components: (1) parking equipment for space counting and access control; (2) a computerized central communications system; and (3) electronic and static signs. This program is considered successful, although the technology is now outdated. The City of St. Paul is moving towards a full replacement and expansion of the system.

City of San Jose, California

San Jose has made it a priority to enable visitors find available parking more readily. The City of San Jose has designed a parking guidance system to direct visitors to special events, sports venues and convention center events. The system incorporates both static and dynamic (real-time) signing that displays current parking availability by those facilities participating in the program.

Information is provided to the parker through dynamic message signing, internet web pages, and an automated phone system. Phase I of the installation is estimated to cost about \$2.8 million and will include portable message signs and a parking guidance system of 42 dynamic and 117 static message signs. Eleven public and 15 private parking facilities will initially participate in the program. The program was designed with full expansion capability.

San Jose views this system as proactive support for the city's continued economic development. In practice, the system aids visitors and people unfamiliar with the downtown and displays information for the traveler about the location and amount of parking available. In so doing, it reduces travel time for the motorist, reduces congestion and air pollution, and increases garage revenue.

City of Milwaukee, Wisconsin

Milwaukee, which is comparable in population to Charlotte, has been striving to improve its downtown parking system through its "Park Once" program. The program's objective is to effectively market the downtown and

to conserve resources, reduce congestion and ultimately promote economic development.

"Park Once" enables motorists to park once in a convenient, easily located parking space and then use alternative means of transportation, if necessary, to visit the distinct sections of downtown. These alternative transportation modes include trolleys, walking, bike routes, country transit, and a shuttle service connecting the lakefront with the historic district, arena, convention center, businesses, and cultural, entertainment and shopping areas.

Milwaukee's strategy is to include both public and private parking by working out agreements on the respective roles of public and private owners and operators. The "Park Once" program benefits the owners through branding and joint marketing, establishing coordinated pricing strategies, incorporating a parking tax, and adopting common design standards for new facilities. The City also has a parking fund for payment-in-lieu of parking contributions for new development.

The City of Milwaukee recently applied for and received a \$1.5 million CMAQ grant for the planning, design and implementation of the first phase of a parking guidance system (PGS).

This system will include wayfinding for special event parking along the interstate link that runs directly through a portion of the downtown to the lakefront. This link provides access to much of the parking and attractions located in the downtown.

The PGS will include dynamic displays located along the interchange exits that direct parkers to facilities with available parking and away from congested areas or from areas where parking is not available. The initial objective is to use the parking guidance system to inform the estimated one million visitors to the city's lakefront each summer.

Cleveland, Ohio (University Circle, Inc.)

University Circle Incorporated (UCI) is a non-profit organization established to nurture the growth of University Circle, Cleveland's cultural, educational and medical center. More than 45 non-profit

institutions are members of UCI and share interests about safety, transportation, parking and the Circle environment.

The UCI parking system includes 11,000 parking spaces in 13 garages and 54 surface lots, and serves over 1.2 million visitors a year in addition to 14,000 residents and employees. UCI manages parking for special events, parking security, maintenance of parking structures and surface lots, enforcement of parking regulations, snow plowing, sign maintenance, landscaping, and horseback-mounted courtesy greeters.

City of Kalamazoo, Michigan

Kalamazoo is one of the true innovators of parking system management. They were first city to establish a collaborative parking system, “Central City Parking,” and brand it. Their original objective was to support and promote economic development downtown.

Central City Parking is managed by Downtown Kalamazoo, Inc., a group similar to Charlotte Center City Partners. Central City Parking is responsible for maintenance and management of all city on-street and off-street parking, plus numerous private parking facilities.

City of Dallas, Texas

The Central Dallas Association (CDA) is an entity created by private and public partnerships as the Transportation Management Association (TMA). This is a federal designation with specific requirements and responsibilities in air quality non-attainment areas. The TMA manages the transportation resources in the downtown core of Dallas.

The CDA created a brand, “Pegasus,” which manages access for some downtown parking facilities with smart card technology that is integrated into the toll road payment and access system. There are six downtown public and private parking structures participating in the program. Payment for parking is handled through the same back office clearinghouse used for the toll road smart card

payment system, so that no cash is needed for parkers using those integrated facilities.

Like all other examples cited here, the impetus behind this system was to create a more user-friendly parking system to encourage visitors to the downtown, increase revenues for participating facilities, and maximize existing assets before investing in expansion. All of these objectives support the end result, economic development.



Center City Street Enhancement Guidelines Map
 April 24, 2006

Legend

<<2²NTP<< One-Way Street

<<2²MTP<< Two-Way Street

Direction of vehicular traffic
 << < One-way-by direction
 > >> Two way

Number of vehicular traffic lanes by direction

Pedestrian space classification by side of street:
 1= Signature Pedestrian Street = 22' +
 2= Primary Pedestrian Street @ 16' to 22'
 3+ = Primary Pedestrian Street @ 22'
 3 = Secondary Pedestrian Street = 14' to 16'
 4 = Linear Park
 N = None

Median:
 M = Median
 N = No Median

On-Street Parking by Side of Street:
 PP= Permanent Parking
 TP= Time-restricted Parking - This designation will occupy a designated travel lane with general provisions for parking during non-peak periods.
 NP= No Parking
 SP= Special Parking (Includes Transit Ops)
 T/SP= Time-restricted & Special Parking

(=====) Subject to Further Study

ERM Established Residential Area- Maintain Street Conditions

SD Special Design of street section based on conditions



***Special Treatment Through Third Ward Park**

Remove Left Turn Lane

Streets in Area Per 2nd Ward Plan All-Plan All-Plan All-Plan All-Plan

Streets in Area Per 2nd Ward Plan All-Plan All-Plan All-Plan All-Plan

Streets in Area Per 2nd Ward Plan All-Plan All-Plan All-Plan All-Plan

Alternative Connection

Center City Transportation Plan Policies

Adopted by Charlotte City Council April 24, 2006

Consistency with the Transportation Action Plan (TAP)

The Center City Transportation Plan (CCTP) implements the Centers and Corridors strategy, Goal #1 of the TAP, by accommodating more employment, civic, cultural and residential development in the region's largest center. The CCTP also prioritizes transportation choices that are consistent with increased land use intensity, while improving safety and the person-flow efficiency of transportation facilities (Goal #2 of the TAP). The recommended transportation facilities will accommodate mobility requirements, while serving as a major expression of Center City's character.

Implementation Strategies

The following plans, programs and strategies are the means to implement the CCTP in a manner that is consistent with current City priorities and compatible with adopted plans and existing standards.

Plans and Programs (Affect, Update)

- 2030 Long Range Transportation Plan (MUMPO)
- Transit System Plan
- City's Economic Development Program
- City's Capital Improvement Program

Parking (Strategies)

- On-street parking supply and revenue
- Parking Collaborative Management Program
- Off-street parking supply and economic development objectives

Codes/Ordinances (Adopt/Amend)

1. Adopt Center City Street Enhancement Guidelines Map (See attachment)
2. Apply the Hierarchy of Pedestrian Streets
3. Update Uptown Streetscape Guidelines

Policies

Land Use – Guiding Principles

- Charlotte will be the premier city in the country for integrating land use and transportation choices
- Continue emphasis of the 2010 Vision Plan to *concentrate high-rise offices along Trade and Tryon Streets*, and near rapid transit stations
- Encourage mixtures of land uses to support the intent of UMUD

Center City Transportation Plan Policies

Adopted by Charlotte City Council April 24, 2006

Land Use – Policies

- Use transportation and parking strategies to support growth and intensification of various land uses, with emphasis on office employment
 - Provide multi-modal transportation solutions to support land use recommendations that will produce a memorable, vibrant Center City
-

Urban Design – Guiding Principles

- Center City streets should serve dual purposes - as major expression of Center City's character while accommodating mobility
- Quality of the pedestrian realm should be enhanced through Pedestrian Street Standards
- Tryon and Trade Streets should be the most memorable streets

Urban Design – Policies

- Promote pedestrian vitality through the design of Center City streets by enhancing human scale and street-level features.
 - Adopt and apply Street Enhancement Guidelines Map. Determine and apply special design treatments feasible on Special Design (SD) streets when land development or redevelopment occurs.
 - Apply framework of vehicle and pedestrian/transit gateways and memorable streets
-

Vehicle Circulation – Guiding Principles

- Center City is a destination and I-77/I-277 Loop is primary thoroughfare and distributor
- High-speed traffic flow is inconsistent with vision for Center City streets

Vehicle Circulation – Policies

- Modify or add ramps to I-77/I-277 loop to/from Center City
- Retain One-Way Streets:
 - College and Church Streets
 - Third, Fourth, Fifth, Sixth and Eleventh Streets
- Convert from One-Way to Two-Way:
 - Second Street
 - Brevard, Caldwell, **Mint, and Poplar Streets (Poplar: 2nd to 3rd Street) ***
 - Sections of Hill, **Fourth (Graham to Mint Street at Third Ward Park)** and Eleventh Streets to support pedestrian-oriented development

Center City Transportation Plan Policies

Adopted by Charlotte City Council April 24, 2006

- Construct new street segments:
 - **New and modified streets near Charlotte Gateway Station***
 - **New Street: 4th to 2nd Street***
 - **3rd Street: New Street to Graham Street***
 - **2nd Street: Graham Street to Cedar Street (Subject to Feasibility Study)***
 - **Poplar Street: 2nd Street to 1st Street***
 - Davidson Street – Euclid Street Connection
 - New Second Ward Streets
 - Fifth Street Extension: McDowell Street to Kings Boulevard
 - Myers Street Extension: Sixth Street to Seventh Street
 - Tenth Street: Tryon Street to Brevard Street

- Eliminate or modify high-speed connectors and turn lanes to enhance pedestrian travel:
 - Tenth Street at Church Street
 - Sixth Street at Graham Street
 - Trade Street at Johnson & Wales Way
 - Fourth Street at Johnson & Wales Way
 - Fourth Street at Church Street
 - Fourth Street at entrance to Grant Thornton Bldg garage
 - Fourth Street at Davidson Street
 - Third Street at Church Street
 - Third Street at College Street

Parking – Guiding Principles

- Parking structures and access system must be designed and managed to support the objectives for streets and transit
- A collaborative approach involving parking owners and managers of parking systems can enhance efficiency

Note: Proposals currently under review for an uptown baseball park and/or West Park may require re-addressing these policies **in bold. An update will be provided along with recommended policy changes, if needed, following decisions regarding these facility locations.*

Center City Transportation Plan Policies

Adopted by Charlotte City Council April 24, 2006

Parking – Policies

- Increase on-street parking
 - Balance parking supply with transit service
 - Implement Vehicular Wayfinding System to efficiently direct motorists to the parking supply available on a real-time basis
 - Utilize financial strategies to support parking as incentive for employment and retail development
 - Create a Collaborative Parking Management System
-

Transit – Guiding Principles

Transit development strategy in Center City is essential to:

- Support expanded and intensified mixture of land uses
- Reduce traffic and parking demands
- Emphasize mobility and vitality of streets providing clear connections to rapid transit

Transit – Policies

- Integrate recommendations for street operations and standards with new rapid transit stations and alignments.
 - Implement Pedestrian Wayfinding System
-

Pedestrian Circulation/Walkability – Guiding Principles

- Pedestrians are the most important travelers in Center City.
- Tryon and Trade Streets are models for most memorable streets
- Quality of pedestrian realm also needs to be enhanced along other streets

Pedestrian Circulation/Walkability – Policies

1. Adopt Center City Street Enhancement Guidelines Map
 2. Apply the Hierarchy of Pedestrian Streets
 3. Update Uptown Streetscape Guidelines
 4. Implement the Pedestrian Wayfinding System
-

Center City Transportation Plan Policies

Adopted by Charlotte City Council April 24, 2006

Bicycle Circulation – Guiding Principles

- Bicyclists require and deserve safe and efficient access to, from and within Center City
- Location and design of bicycle travel ways should be based on adequately serving a range of bicyclists' skills levels

Bicycle Circulation – Policies

- Create a network of dedicated bicycle lanes and signed routes
- Modify gateway underpasses and overpasses of I-77/I-277 Loop to enhance pedestrian and bicycle connectivity between Center City and surrounding neighborhoods