Hickory Landscape Master Plan

"Creative Horizons"

(1996)

Table of Contents

Acknowledgements

This Master Plan Study was begun in December 1995, and was concluded in February 1997. The following staff of the FWA Group participated in the preparation of this report:

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This study also included information and guidance from the Community Appearance Commission; Chairperson for 1995-96 was Jan Smithson; Chairperson for 1996-97 is Martha Younts. The City Manager's office, Brian Hiatt, Assistant Manager, and Gary McGee, Manager. Bob Tumey, City Horticulturalist, was also instrumental in the accomplishment of this study.

City council during the term of this study were:

Mayor, William R. McDonald III since 1981

City Council:

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Alderman:	Bruce Meisner, Ward 2
Alderman:	Larson H. Moore, Ward 3
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Introduction to Landscape Master Plan

Conceptually, the Landscape Master Plan strives to include elements of the natural environment in the setting, yet is predominantly based on the use of plant material in an ornamental sense. Mankind has always altered its surroundings in various ways, as Landscape Historian J.B. Jackson states, "The landscape at any one time is a reflection of the culture which built it."

The City of Hickory is an a wonderful and exciting point in its history, where an involved citizenship and staff are ready to establish the guidelines for new growth and rejuvenate the older areas. Hickory is unique in its character and setting as a "Gateway to the Mountains" as well as a trade and commerce hub. The emerging landscape character will need to respond to its uniqueness, its functional demands and its goal to become an unquestionably beautiful place.

The landscape design concepts presented here were developed over a period of time through a process that synthesized the contributions of the City of Hickory Staff, the Community Appearance Commission, City Council and input from other community groups. The Landscape Architects wove these contributions together with horticulture expertise, material availability and suitability, as well as a practical knowledge of implementation and maintenance capabilities.

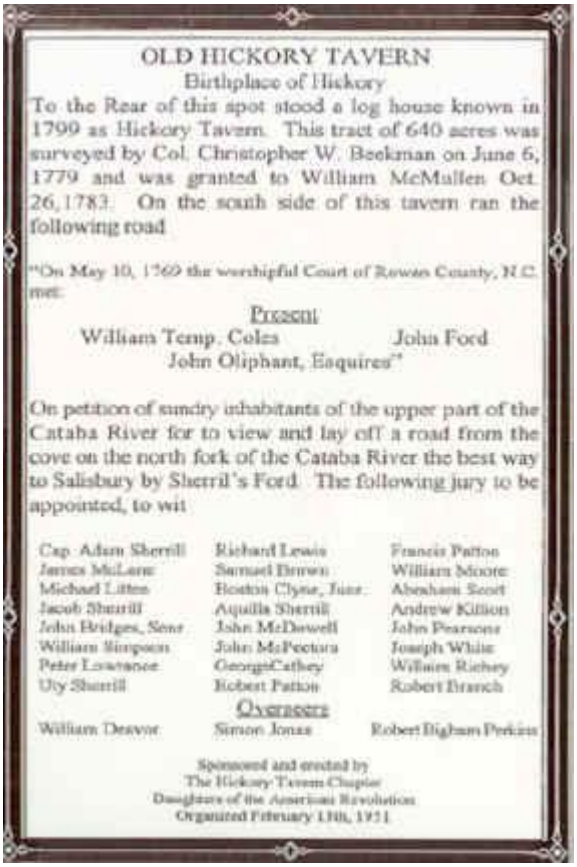
The plan zone in which Hickory is located allows the use of many evergreen plants including trees, large hollies, shrubs, even some which offer good seasonal bloom. Hardy evergreen plants are ideal for the sunny, windy and even freezing conditions found along the developed areas. Hickory's image can and should include a lot of evergreen and semi-evergreen presence to set it apart from other cities.

In order for the most visible lawns to remain as healthy as possible, a strong, 12 month maintenance program including liming, fertilization, weed control, over seeding and irrigation should be implemented. Since much of the ground surface will be lawn, this is a very important issue, and one with numerous rewards.

Irrigation for plants, trees and lawns in high value areas guarantees the best living conditions. Many cities with similar water management needs for large areas are switching to the radio and computer managed systems as recommended in this report. They allow more flexibility in controlling water applications.

A ground maintenance program is critically importing in that it provides both the finishing touches to any newly planted project as well as insuring the best growth conditions for all plant materials and lawns. Budgeted programs for fertilizers and other horticultural products, manpower and equipment need to be planned early so that the necessary resources are on hand as the maintenance tasks increase.

Union Square is an important part of Hickory's history



OLD HICKORY TAVERN

Birthplace of Hickory

To the Rear of this spot stood a log house known in 1799 as Hickory Tavern. This tract of 640 acres was surveyed by Col. Christopher W. Beekman on June 6, 1779 and was granted to William McMullen Oct. 26, 1783. On the south side of this tavern ran the following road

"On May 10, 1769 the worshipful Court of Rowan County, N.C. met.

Present

William Temp. Coles John Ford

John Oliphant, Esquires"

On petition of sundry inhabitants of the upper part of the Catawba River for to view and lay off a road from the cove on the north fork of the Catawba River the best way to Salisbury by Sherril's Ford. The following jury to be appointed, to wit

Cap. Adam Sherrill	Richard Lewis	Francis Patton
James McLaren	Samuel Brown	William Moore
Michael Litten	Boston Clyne, Junr.	Abraham Scott
Jacob Sherrill	Aquilla Sherrill	Andrew Killion
John Bridges, Senr.	John McDowell	John Pearsons
William Simpson	John McPeeters	Joseph White
Peter Lowrance	GeorgeCathey	William Richey
Uty Sherrill	Robert Patton	Robert Branch

Overseers

William Deaver Simon Jonas Robert Bigham Perkins

Sponsored and erected by
The Hickory Tavern Chapter
Daughters of the American Revolution
Organized February 13th, 1951

This plaque is located in Union Square

History of Hickory

The City of Hickory has an amazing history of growth and vitality based on hard work and the establishment of trade and industry. In the 126 years since it was incorporated, Hickory has gone from being a stop on the road in the mountains to becoming an industrial and cultural center.

The landscape has always been a reflection of the importance of a site and the wealth of the community. Since its early days, large maturing shade trees and open green spaces have marked Hickory as an important stop along the Railroad. As early as 1890, rows of street trees, especially along Union Square, told travelers and trades alike that Hickory was a vital place, one they should visit.

Today, Hickory continues to expand and faces the challenge of keeping up with its new growth. As stated before, the landscape should reflect the importance and vitality of the city. Street trees and special plantings at entryways, gateways and points of interest follow in the footsteps of Hickory's past. This Landscape Master Plan book represents Hickory's efforts to continue what their ancestors began. It establishes the guidelines for landscape work as required and approved by the City of Hickory, with goals for the next 10 years of development mapped out.

Historical views of Union Square

Historical Time Line

1779	Hickory is a "wide place in the road" (Freeze p. 265) on the stagecoach road between the mountains and Charleston.
1784-1800	Hickory Tavern was established. Legends say the name comes from the large tree which shaded the building.
1849	Horseford Toll Bridge built across the Catawba River. This was a vital link to the mountain trade.
1860	Western NC Railroad by-passes Newton to continue along the ridge line south of the Catawba River to Hickory.
1870	Grid pattern of streets established by W. P. Ivey Hickory is incorporated as Hickory Tavern Township
1873	Mountain wagon trade is heavy
1874	First official election is held
1878	Industrial growth begins along railroad tracks, approximately 1 mile west of depot beginning with Piedmont Wagon Company
1880	Southern Railroad takes over the tracks. (Richmond to Danville line)
1881	Law passed that only brick can be used when building near the railroad station due to the numerous fires which have plagued that area of the city.
1890	Trees planted on Union Square. Importance of the Railroad to Hickory is reflected in the landscaped grounds.
1900	Furniture factories established in Hickory
1904	7 acres of land purchased by the city government for the first public park.
1908	A comprehensive plan for numbering streets and avenues of Hickory is created.
1918-1940	"Non-Farm Boom" in Hickory, the development of textile, hosiery and furniture industry in Hickory begins to grow.
1937	Hickory Municipal Airport built by Works Progress Administration.
1940	First urban renewal projects begin in Hickory.

Bibliography / Sources

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Mohney, Kirk and Laura A. W. Phillips. *From Tavern to Town: The Architectural History of Hickory, North Carolina.* City of Hickory Historic Properties Commission, Hickory Landmarks Society, Inc., Hickory, NC 1988.

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Gateways and Corridors:
Concepts and Guidelines

With trade and commerce playing such an important role in the history and development of Hickory, it is only natural that the entryways, gateways and corridors of Hickory be given special design attention. The entry into the City provides the visitor's first and strongest impression of Hickory, it is a reflection of the city's citizens and businesses. To maximize impact, attractive views should be concentrated in this area.

Gateways should be located at major intersections around Hickory where traffic flow in and out of the city is the greatest. The confluence of Lenoir Rhyne Boulevard with Interstate 40 and Highway 321 at the Catawba River are examples of entryways. These areas need to "pop", to show what a growing and progressive city Hickory is. Large, broad plantings that sweep around the entryway and open it up visually can create a sense of space and grandeur that reflect the new growth in Hickory.

Entry spaces need to have clean geometric forms that are free from detractors like overhead utilities. By locating utilities to the back of the right-of-way and planting large maturing trees in front of these, an open appearance can be maintained in entryway intersections. Groupings of small flowering or evergreen trees in front of the larger trees add more seasonal interest and depth to the entryway. This increased the visual impact to the vehicle passengers as they move quickly along the roadway and differentiates between corridor and entryway.

These entryways also need to be friendly spaces that give off a sense of welcoming. Sidewalks, accent lighting and smaller, more detailed plantings of shrubs, ground covers and annuals can accomplish this. Keep in mind that any planting in these areas need to be in large masses and have high contrast in texture, color, form and size in order to be noticeable in traffic. Entryways much be big, bold and maintained at a higher level than corridors.

Gateway Design Characteristics

- circular theme
- utilities located at the back or site or buried
- large maturing trees with smaller trees and/or shrubs in front of them
- signage
- lighting
- seasonal color
- additional maintenance required

Planting and signage can be combined to create a strong entry.

Successful interchange planting along I-77

Different textures, sizes and heights
in a planting create greater interest

Corridors are the main routes of traffic into and out of the city. Patterns of shade and sunlight, openness and enclosure are most effective in these areas. These patterns help to carry traffic through areas in a more pleasant and relaxing manner. Different levels of landscape and maintenance will be required depending on the size, width, traffic load, and surrounding land uses.

New corridors should be reviewed during the planning process and should meet the landscape criteria as set forth in this document upon its completion. The same criteria applies to existing corridors which are proposed to be enlarged. Existing corridors where there are no current long term plans to make changes are the most difficult areas to bring up to design standards, but will have the most immediate effect on the appearance of Hickory.

Design criteria for corridors should include using the appropriate street trees for the area, spaced 40 - 60' on center for large maturing trees and 20 - 30' on center for small maturing trees. All utilities should be located on the same side of the street to keep the amount of "visual clutter" to a minimum. Where possible, locate utilities to the back of the right of ways and for all new or updated corridors, utilities should be buried.

To achieve a high quality, genteel effect, keep to the same species tree or pattern of trees in each corridor. While a monoculture is by no means desirable, too many species mixed together creates a hodge-podge effect that is more distracting than pleasant. Groupings of trees used in a repetitious pattern is also effective. For example, a corridor can be lines with large maturing maples for three blocks, then a grouping of crape myrtles clustered around an important intersection could be used for excitement and variety.

Corridor Design Characteristics

- street trees appropriate to corridor conditions (i.e. utility locations, Right-of-Way, medians, etc.)
- use of shrubs and/or seasonal color at stopping points
- predominately turf for lower maintenance

The careful use of a monoculture provides visual continuity to this corridor.

Corridor of mature trees in Charlotte, NC

For maximum results plant 12 - 14' trees for corridors

Tate Boulevard Gateway

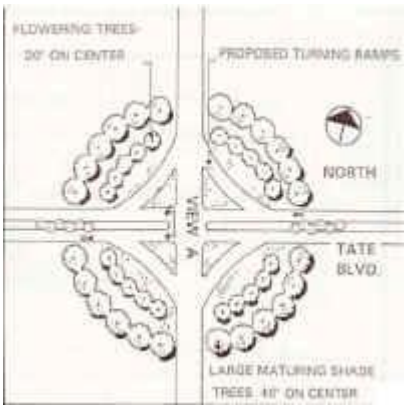
Concepts:

1. To create an eyecatching gateway onto Tate Boulevard at Fairgrove Church Road.
2. Provide large maturing shade trees at 40' intervals in a circular pattern around the intersection. Plant an inner circle of flowering trees at 20' intervals.
3. Provide turning ramps for both directions from Fairgrove Church Road to Tate Boulevard and from Tate Boulevard to Fairgrove Church Road.

View looking west at intersection of Tate Boulevard and Fairgrove Church Road

Redesigned intersection is more attractive and more functional.

Context Map



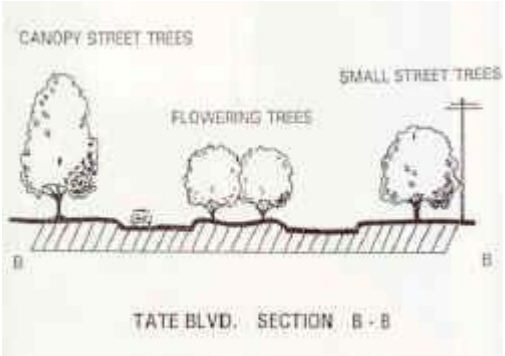
Turning ramps make the intersection safer.

Tate Boulevard Highway Overlay District

Concepts:

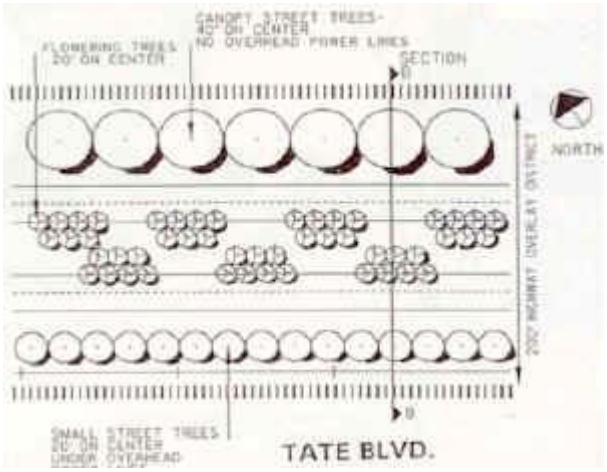
1. To create a 200' Highway Overlay District along Tate Boulevard.
2. Cooperate with existing developments to create an attractive streetscape.
3. Plant Canopy Street Trees at 40' intervals where there are no overhead power lines.
4. Plant Small Street Trees at 20' intervals under the overhead power lines.
5. Plant the median with Flowering Trees staggered at 20' intervals as shown. Trees are to be a minimum of 100' from all intersections.
6. Replant the existing median trees as necessary to conform to this plan.


Existing conditions along Tate Boulevard



Proposed plantings will add visual interest.

Context map



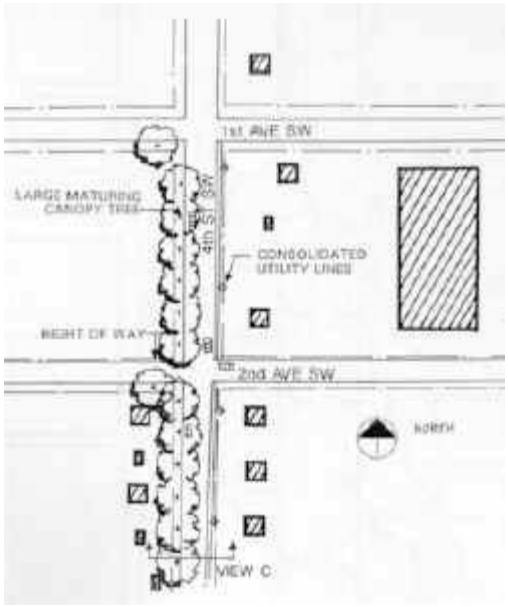
Recommended planting plan

Fourth Street Residential

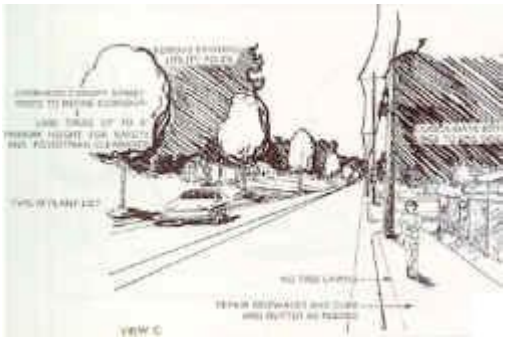
Concepts:

1. Consolidate overhead power, telephone, and streetlights to one side of the street.
2. Eliminate any existing tree lawns between sidewalks and road.
3. Repair sidewalks and curb and gutter as needed.
4. Provide large maturing shade trees at 40' intervals on the side of street without overhead lines.
5. More frequent human scaled light poles and limbed up trees provide greater security in residential areas.

Existing view looking southwest down Fourth Street (View C)



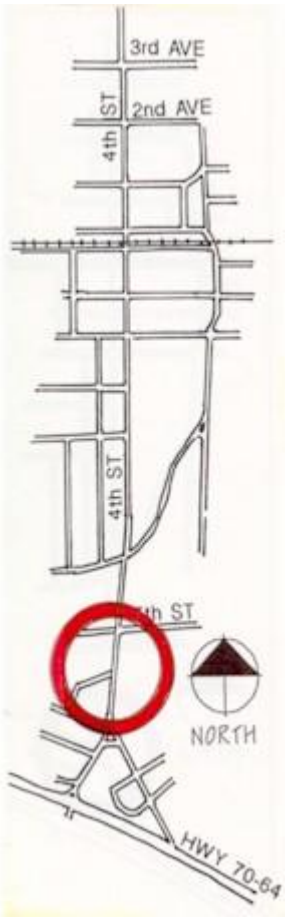
Recommendations for Fourth Street residential areas


Street level view of proposed changes

Fourth Street Commercial Gateway

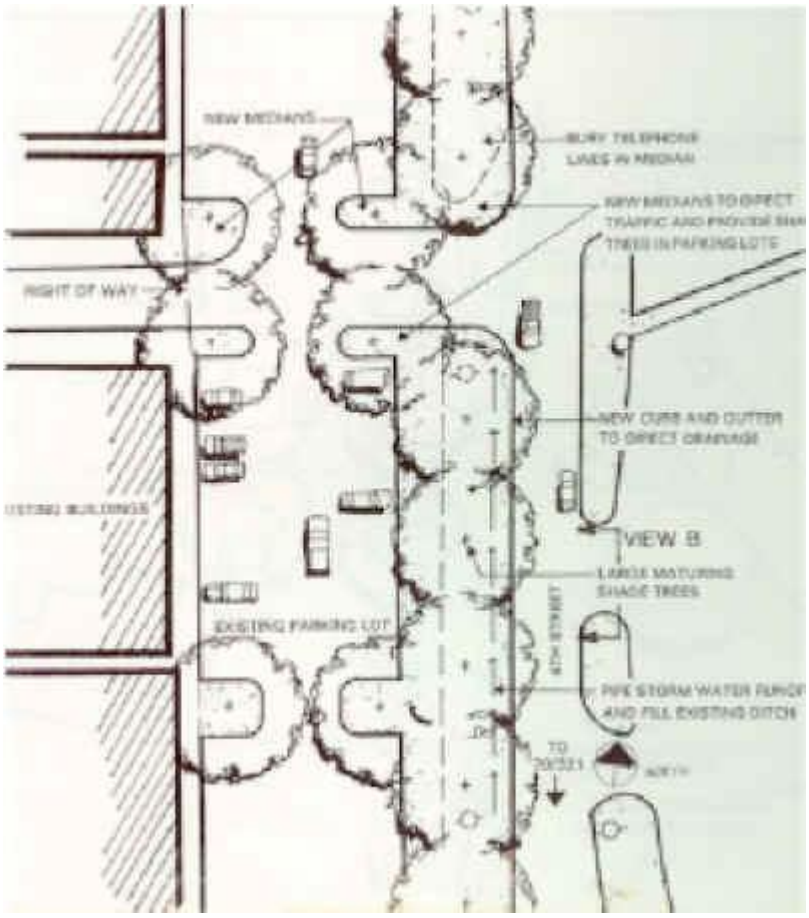
Concepts:

1. Consolidate power, telephone, and street lights to east side of the street.
2. Bury telephone and other utilities where possible, and remove poles on west side of street.
3. Provide curb and gutter to handle storm drainage.
4. Consolidate parking in Right of Way by reducing paved area to 65' parking bays.
5. Use large maturing shade trees to define corridor without blocking visibility to commercial uses.
6. Break up long expanses of paving with medians for tree planting.
7. Human scale, shade are used to enhance the environment.



Context Map


Existing store fronts (View B)



Fourth Street Gateway Recommendations

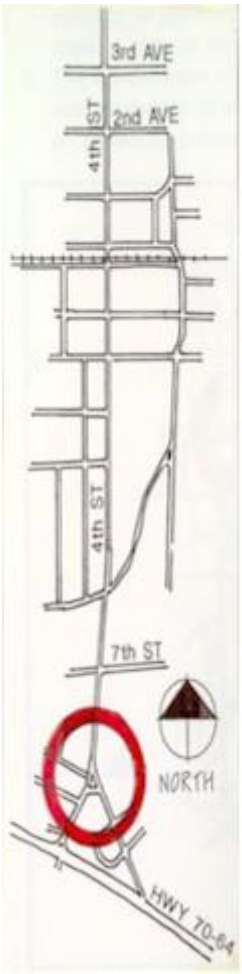

Proposed changes for commercial areas

Fourth Street Commercial Corridor

Concepts:

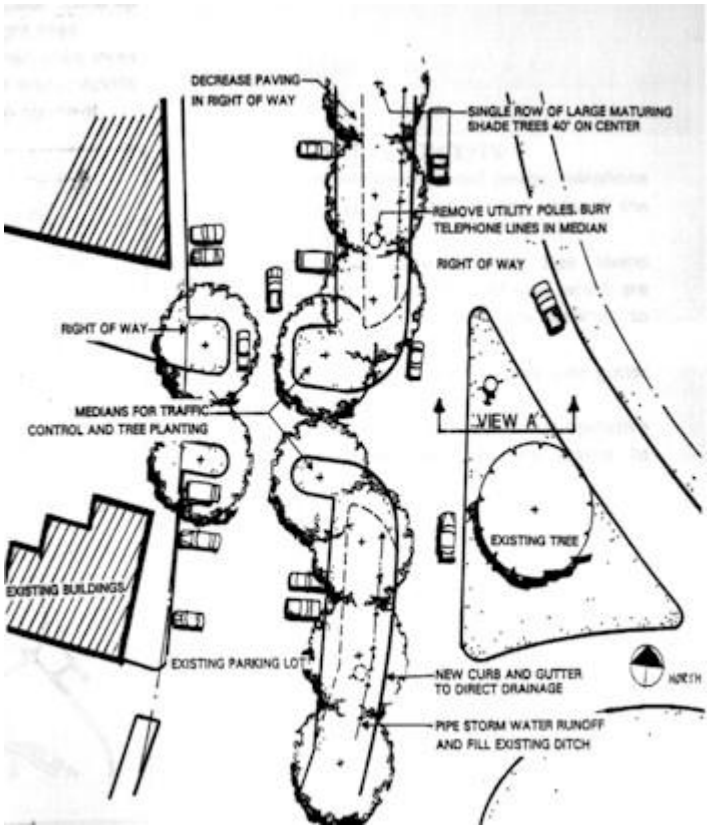
1. Consolidate overhead power, telephone, and street lights to east side of the street.
2. Bury telephone and other utilities where possible and remove poles from west side of the street.
3. Provide curb and gutter to handle storm drainage.
4. Consolidate parking in Right of Way by reducing paved area to 65' parking bays.
5. Use large maturing shade trees in open road areas or narrower canopy trees in areas with spreading restrictions to define corridor without blocking visibility to commercial uses.

6. Break up long expanses of paving with medians for tree planting.
7. Human scale, shade are used to enhance the environment.

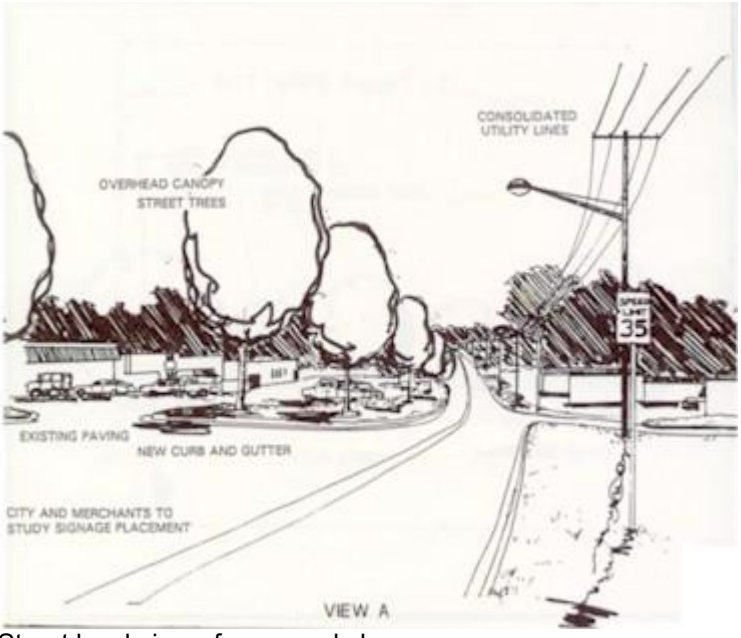


Context map

Existing view looking north along Fourth Street
View A



Fourth Street corridor recommendations

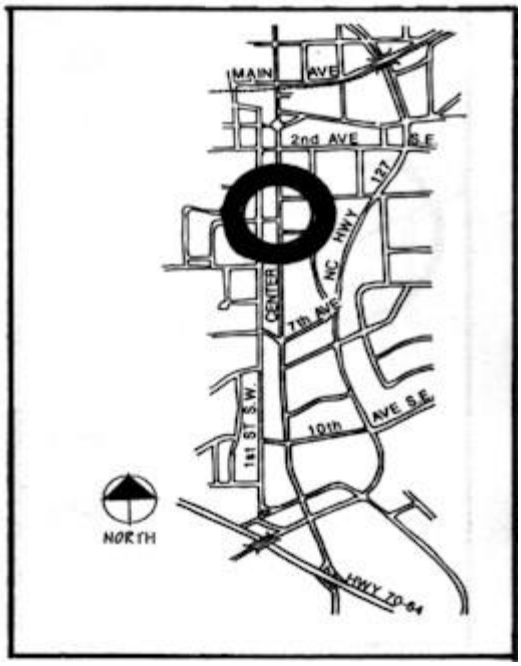


Street level view of proposed changes

South Center Street

Overall Concepts:

1. Consolidate overhead power, telephone, and street lights to one side of the street.
2. Bury telephone and other utilities where possible, and remove excess utility poles.
3. Provide curb and gutter to handle storm drainage and to control traffic.
4. Use large maturing shade trees to define corridor without blocking visibility to commercial uses. Limb up trees to provide clear sight lines.
5. The combination of human scale trees and a reduction of paved areas provide an enhanced outdoor environment.
6. Clear, grade and establish lawn on vacant lot. Provide a catch basin that connects to storm sewer system to prevent sediment and storm water from running over the sidewalk. Provide street trees appropriate to the site conditions along the property frontage.
7. Provide curb and gutter to handle storm drainage.



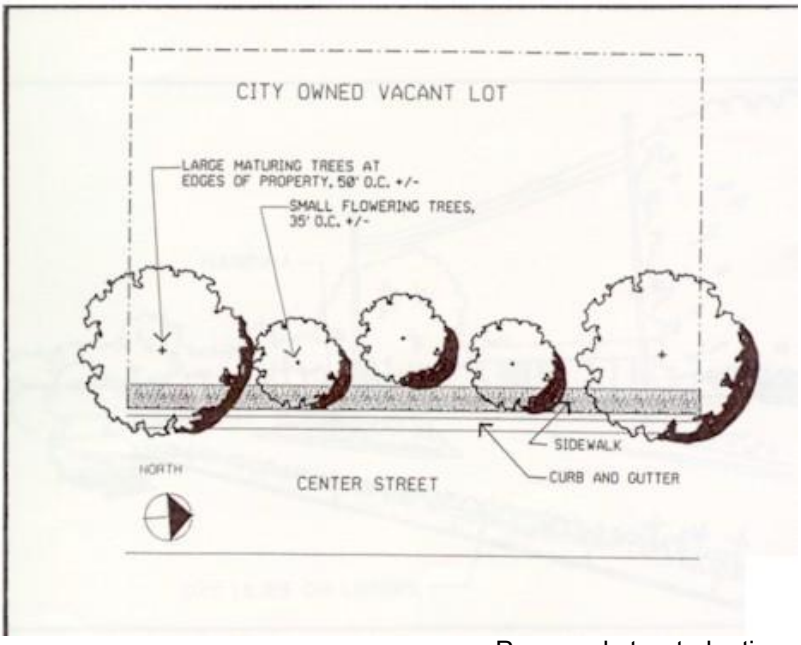
Context map

Residential Concepts:

1. Consolidate overhead power, telephone and street lights to one side of the street.
2. Eliminate any existing tree lawns between sidewalks and road which are too small for trees and are difficult to maintain.
3. Repair sidewalks and curb and gutter as needed.
4. Acquire right-of-way or co-operative agreement with property owner to plant new trees.
5. Provide large maturing trees at 40' intervals on the side of the street without overhead lines. If overhead lines are in conflict, use small maturing trees at 30' on center.
6. More frequent human scaled light poles and limbed-up trees provide greater security in residential areas.

7. Increase the level of maintenance so that the perception is that of a clean, neat and respected neighborhood.

Existing vacant lot



Proposed street plantings

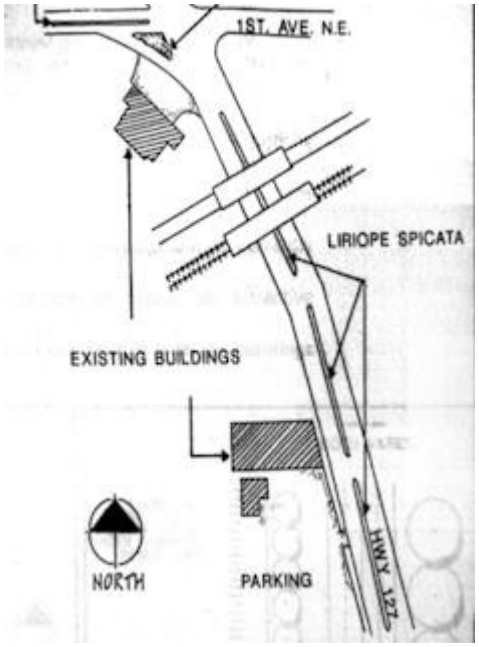
NC Highway 127 Median

Concepts:

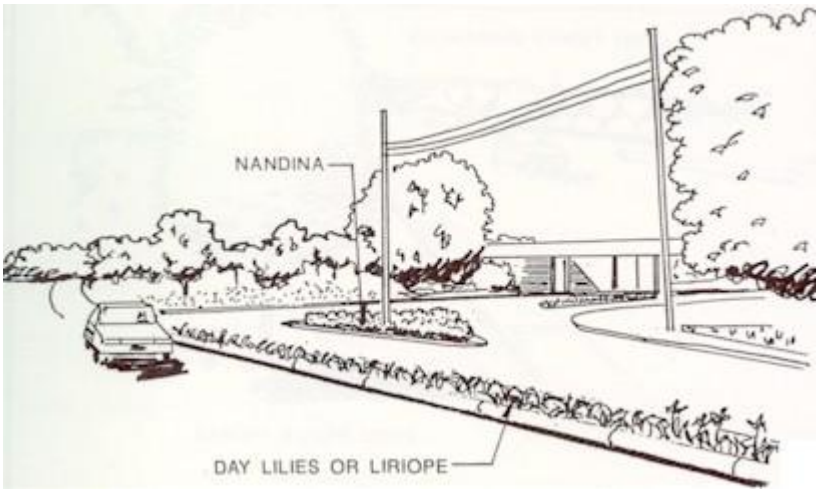
1. To soften the landscape along this corridor between 2nd Ave. N.E. and 1st Ave. S.E. by planting the medians.
2. Use plantings within the medians that are tolerant of urban conditions and have low maintenance requirements.
3. Irrigation to medians is recommended to support plantings.

Context map


Existing view of medians



Recommended planting areas

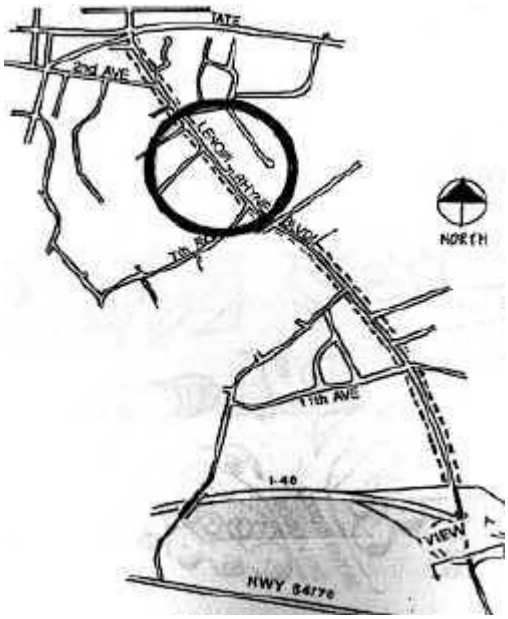


Medians after proposed changes

Lenoir-Rhyne Boulevard Corridor

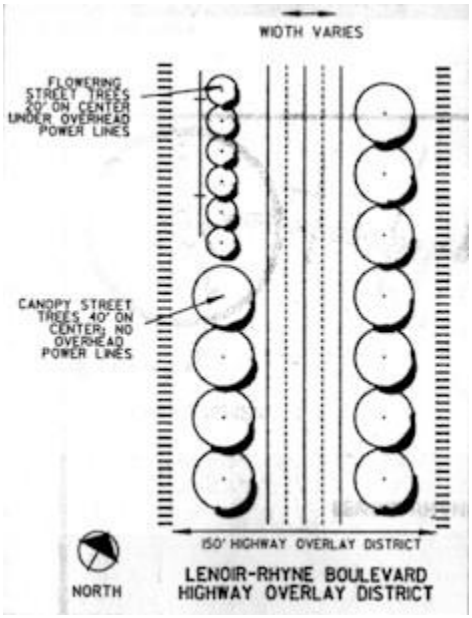
Concepts:

1. To develop this highway corridor as a major gateway into the City.
2. Create a 150' Highway Overlay District along Lenoir-Rhyne Boulevard, to set a standard for a continuous streetscape along both the undeveloped and developed properties.
3. Plant Canopy Street Trees at 40' intervals where there are not restrictions with overhead power lines.
4. Plant Flowering Street Trees at 20' intervals where there are restrictions with overhead power lines.
5. Create a Street Tree Ordinance to guide to development of currently undeveloped areas.
6. Cooperate with the existing developments to create an attractive streetscape along the entire corridor.
7. Complement the landscaping of the I-40 Interchange with the plantings along this corridor.

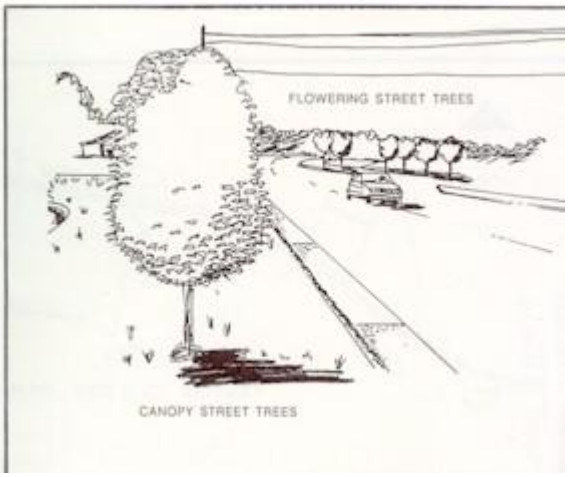


Context map


Existing view of Lenoir-Rhyne Boulevard
(View A)



Recommended planting plan



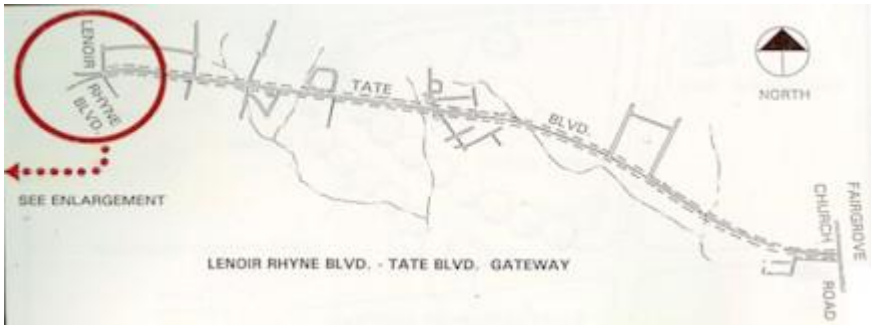
Street level view of proposed plantings
(View A)

Lenoir-Rhyne - Tate Boulevard Gateway

Concepts:

1. To create a gateway into Hickory from Lenoir Rhyne Boulevard to Tate Boulevard.
2. Provide large maturing shade trees at 40' intervals in a circular pattern around the intersection. Plant an inner circle of flowering trees at 20' intervals.
3. Provide turning ramps for both directions from Lenoir Rhyne Boulevard to Tate Blvd. and from Tate Blvd. to Lenoir Rhyne Blvd.
4. Maintain the planting around the existing Hickory sign to keep the sign visible.
5. Additional right-of-way or grading easement may be required for the proposed turning lanes.

Existing gateway to Hickory



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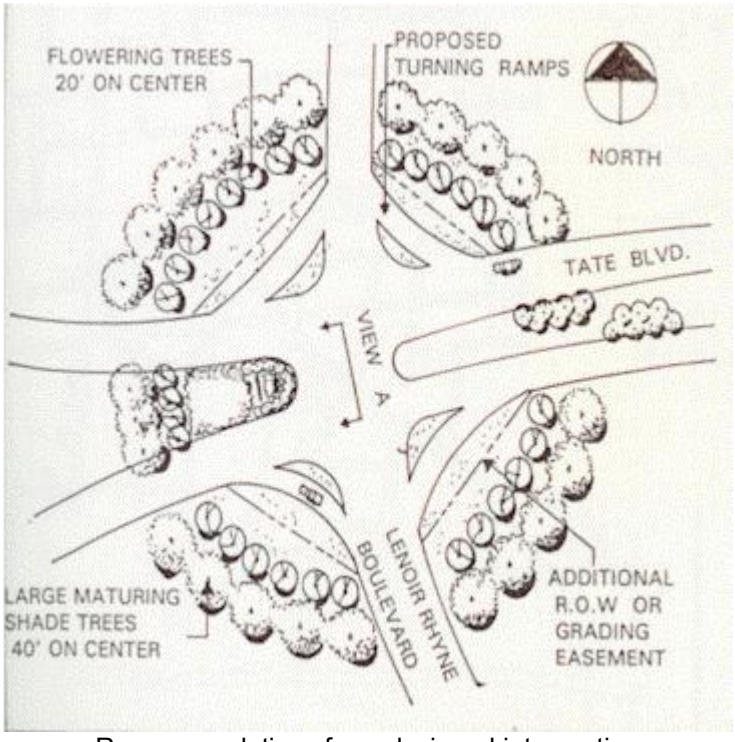
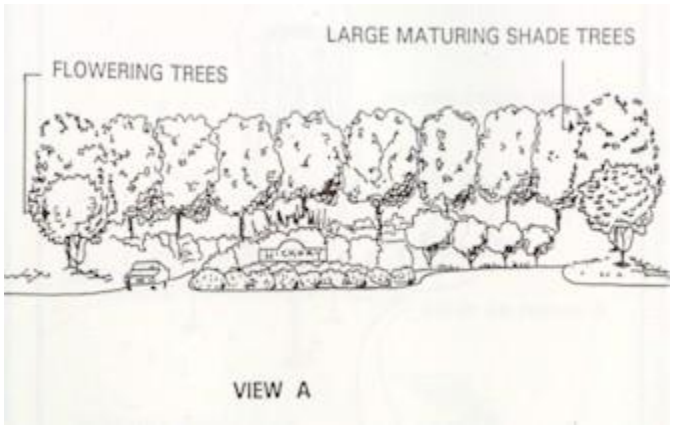


Recommendations for redesigned intersection

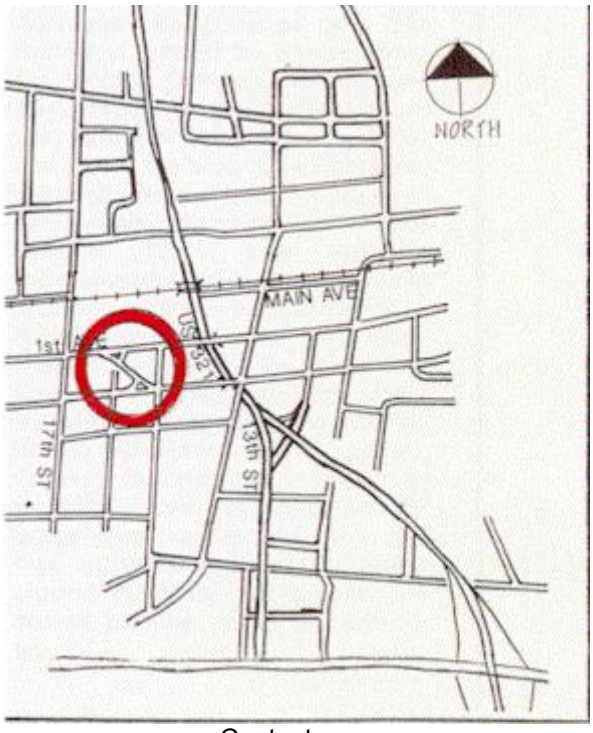


Proposed gateway creates a better sense of arrival.

Water Tower Area

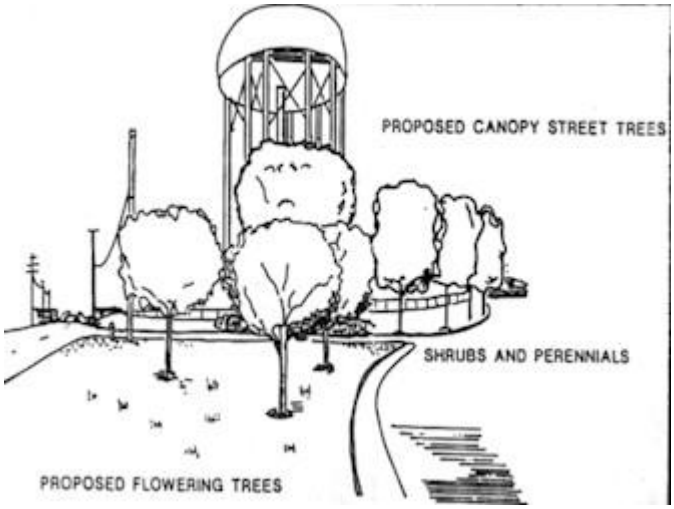
Concepts:

1. To create a more aesthetically pleasing streetscape at the water tower.
2. Provide canopy street trees along both sides of the street at 40' intervals and plant flowering trees at 20' intervals in the islands.
3. Create an area of color with a bed of flowering shrubs and perennials.

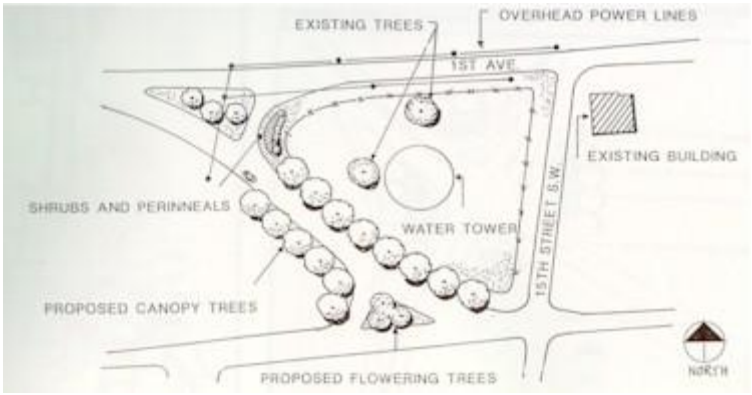


Context map


Existing view of water tower area



Street level view of proposed plantings



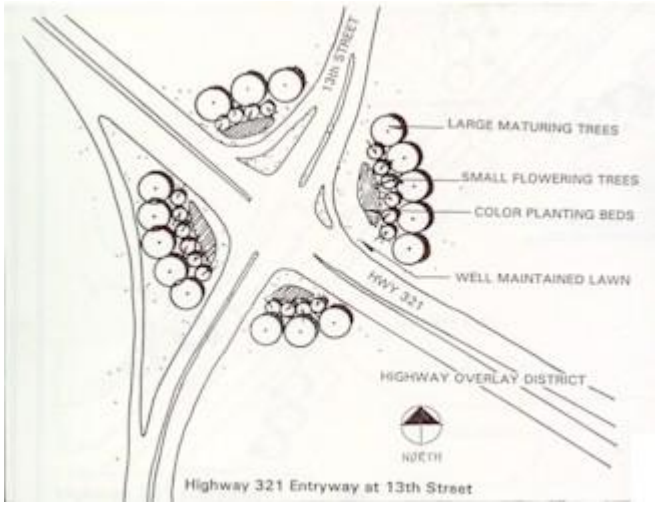
Recommended planting plan

US Highway 321 Guidelines

Concepts:

1. Highway 321 is a major traffic corridor and continues to serve as the connector to the mountains. Therefore, the entries to Hwy. 321 from I-40 and the Catawba River are very important. These areas should be planted to create major entry statements.
2. A Highway Overlay District should be created to influence existing development first through voluntary action, and later through the building permit process. Several existing companies, including Siecor, already have made significant contributions to the landscape along this corridor.
3. Appropriate tree plantings, per a Tree Ordinance, should be planted along the existing Right-of-Ways of Hwy 321. Where overhead utilities exist, use narrow or small flowering trees, and where the area is unobstructed, use large maturing trees. A design of the corridor should be created that used a mix of trees that of complimentary to each other while providing repetition and consistency.
4. Wherever possible, consolidate utility lines to one side of the road. The Community Appearance Commission should recommend legislation requiring all new development to bury utilities.
5. For yet to be developed areas such as the area from the new MDI site to the bridge over the Catawba River, the tree ordinance and building permit process should be used to obtain the desired plantings along the right-of-way.

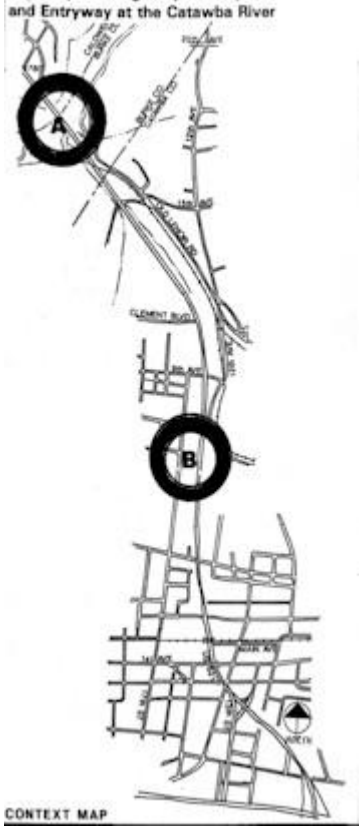
Context map



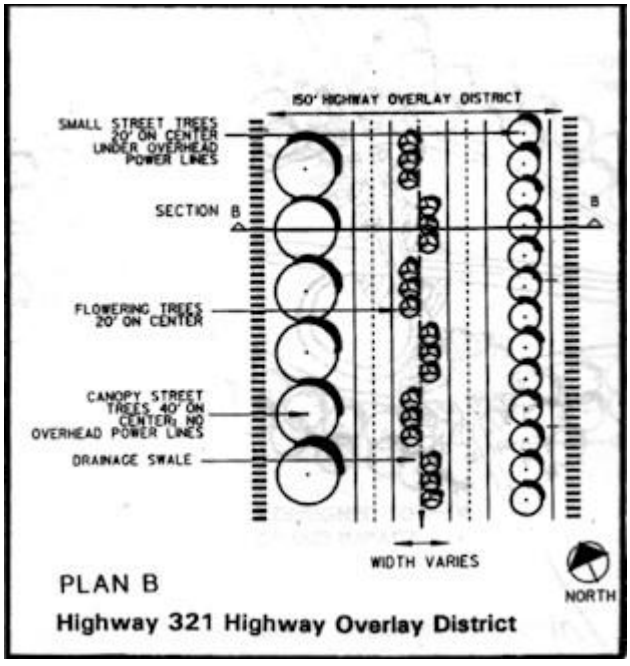
Recommendations for redesigned intersection

Existing view of Highway 321 and 13th Street intersection

Highway 321 Highway Overlay District
and Entryway at the Catawba River

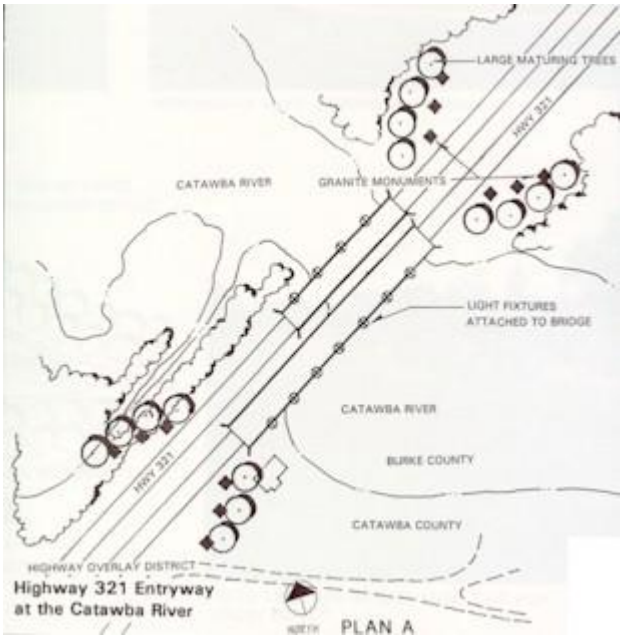


CONTEXT MAP



PLAN B

Highway 321 Highway Overlay District



Plantings by existing businesses like Siecor make a large impact to the quality of Hwy 321

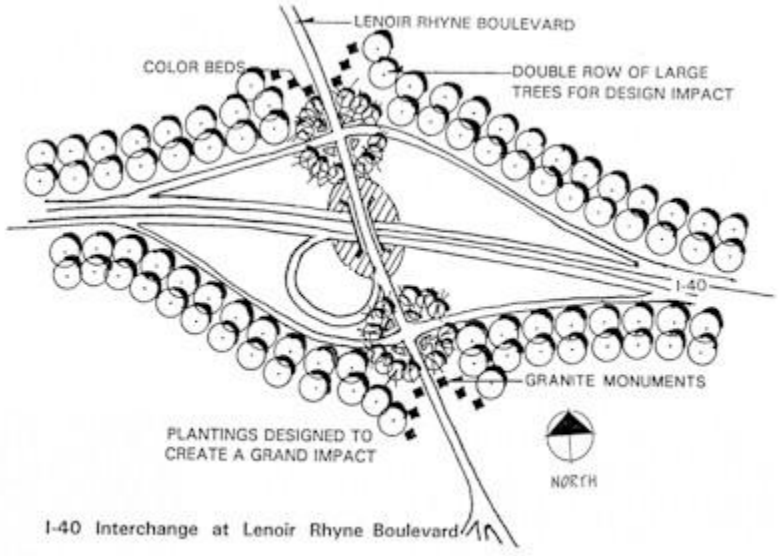
Highway 321

I-40 Interchange at Lenoir Rhyne Boulevard

Concepts:

1. Traffic volume and visible traffic congestion both indicate that the I-40 interchange will be re-designed to handle more volume in the near future. This re-design should also include significant landscape plantings, signage, lighting and other features to emphasize its significance as a major entryway to the City.
2. A Highway Overlay District is needed to influence the existing development that has grown without any guidelines in place. Tree plantings with the cooperation of private land owners is needed adjacent to the right-of-way.
3. A Tree Ordinance should be created for yet to be developed property.
4. Improve the design and image of the area within 1/2 mile on all sides of the interchange.

CONTEXT MAP



I-40 Interchange at Lenoir Rhyne Boulevard

Lenoir Rhyne at I-40 Interchange

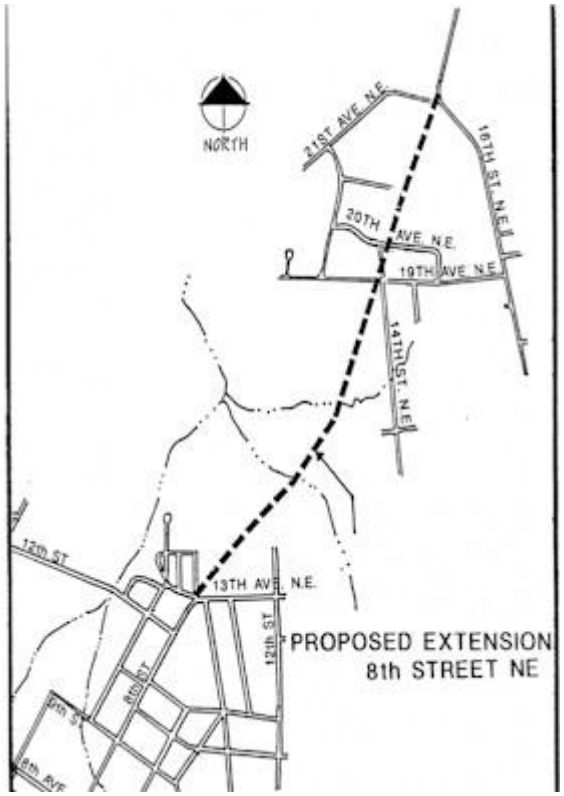
Trees line this interchange exit for visual impact.

Monuments make strong entryways.

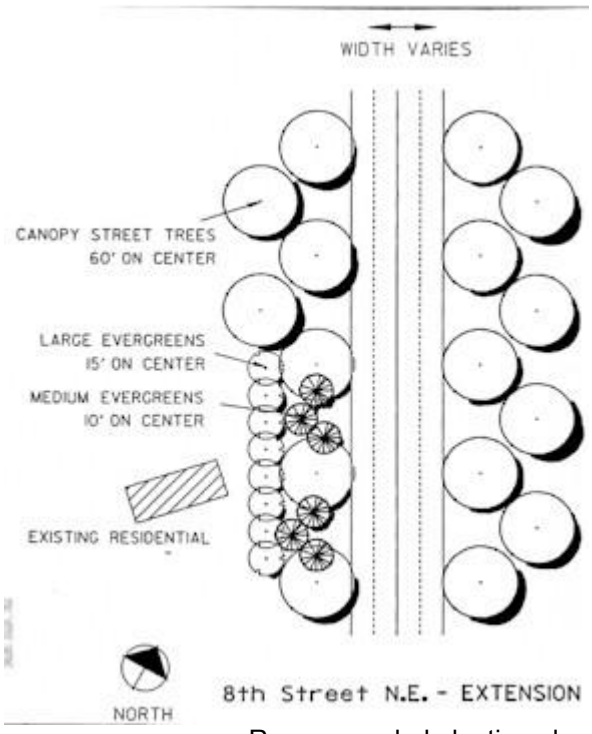
Eighth Street N.E. - Extension to Armory

Concepts:

1. To develop guidelines for a Landscape Corridor along the 8th Street N.E. Extension.
2. Work with NCDOT in the planning stages to assure that a percentage of their total construction budget is designated for landscaping. Propose that staggered rows of Canopy Street Trees, 2 1/2 - 3" caliper, be planted 60' on the center along both sides of the right of way with the initial construction.
3. Develop a Tree Ordinance to set Street Tree guidelines for the future development of the existing vacant properties.
4. Propose underground utilities along this corridor.
5. Provide screening to reduce visibility and noise to existing residential areas. Use a mix of evergreen plants, varying heights, textures, density and color.



Context Map



Recommended planting plan

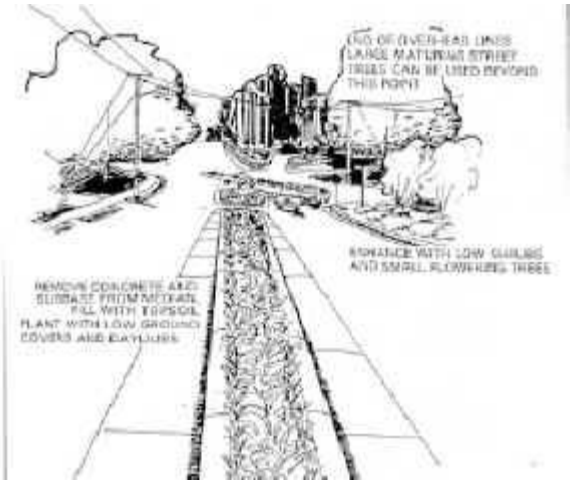
Downtown Entryway at Second Avenue

Concepts:

1. Improve entry image by removing concrete and gravel subbase from medians greater than 2' in width, filling with topsoil and planting with groundcover and daylilies.
2. Provide irrigation to plant materials in medians.
3. Plant low shrubs (less than 3' height) and small flowering trees in large median areas. Keep trees limbed up to a 6' height to allow easy pedestrian traffic and clear sight lines for vehicular traffic.
4. In the absence of overhead power lines and utility lines, large maturing canopy trees can be planted along the streets in downtown. This is contingent on sufficient root space being provided.

Context Map


Existing medians on Second Avenue



Street level view of proposed changes

Downtown Central Business District

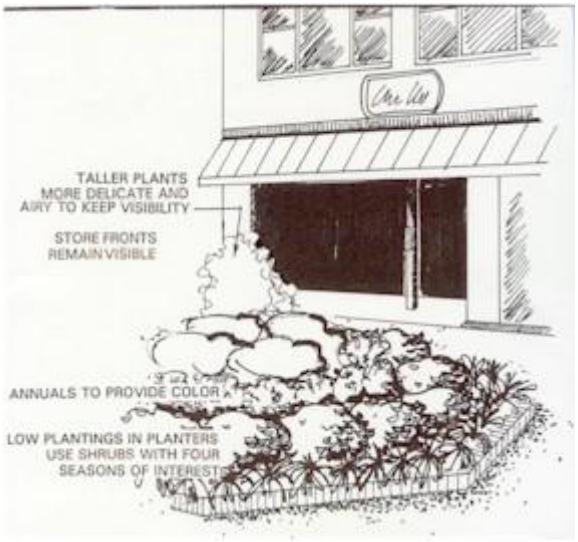
Problem Definition

Concepts:

1. Maintain visibility of storefronts. Do not allow plant growths to block views.
2. Plants should include a variety of textures, foliage, bloom color, and height differentiation to keep interest and spatial separation. Remove dangerous plants which could cause injury.
3. Lighting should be redesigned and fixtures selected to complement architecture.
4. Vehicular and pedestrian safety and visibility endangered by plant-blocked views.

Context map


Storefronts screened by plant growth



Redesigned planting bed adds color while opening views to storefronts

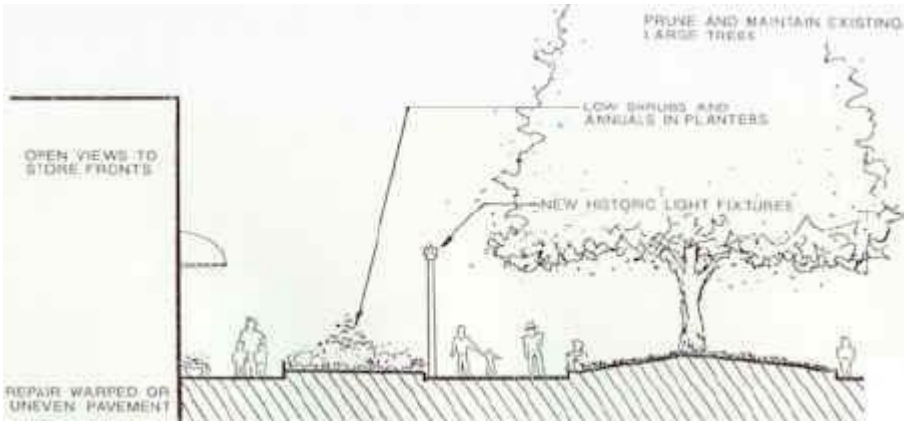
Downtown Central Business District

Concepts:

1. Utilize recommendations from a professional Arborist regarding care and maintenance of existing trees in the lawn of the Central Business District.
2. Remove existing material and boulders from planters in the main walk and plaza. Excavate and check for adequate drainage and provide irrigation. Fill planters with potting soil and plant with low shrubs and seasonal annuals.
3. Plant materials should vary in texture, color and height in order to create an interesting arrangement that enhances the Downtown.
4. Limit the size and quantity of annual beds. These areas would be great as Adopt-a-Spot beds with the City and/or CAC prescribing the types of plants to be used.
5. Keep visibility to storefronts free from obstructions.
6. Replace existing light fixtures with ones more appropriate to the historical nature of the architecture.
7. Improve the look of the public restrooms by the bus stop by removing the coniferous evergreens and replacing these with small ornamental trees. This will provide greater safety through increased visibility at the human scale while softening and screening the edges of the building.
8. Repair or replace warped or uneven pavements, particularly the cobblestone on the concrete base. Replace with brick or concrete pavers, or poured in place concrete.

Context map

Existing view of Union Square

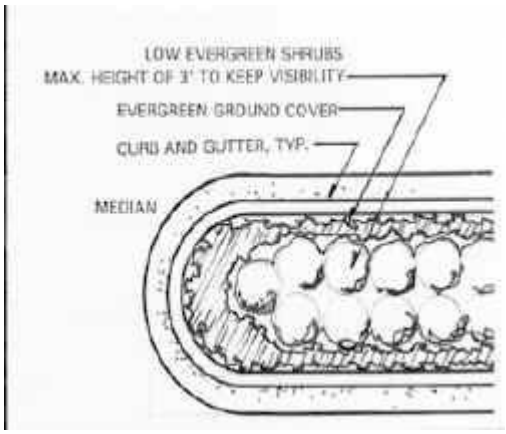


Cross-sectional view of proposed improvements

Downtown Central Business District
Traffic Medians

Concepts:

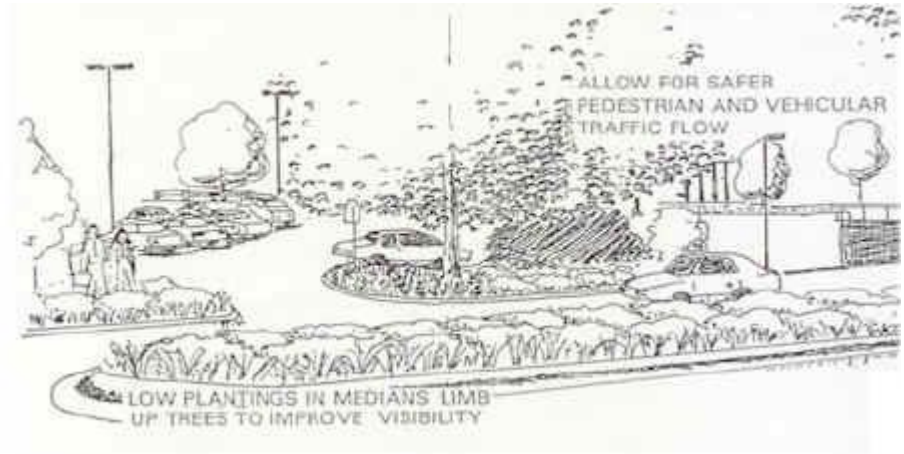
1. Remove existing plants. Amend soil, and add additional potting soil. Replant medians with shrub species which will not exceed 3' height. For long term planning, budget to replace these shrubs approximately every 10 years for improved health and aesthetics.
2. Limb up existing trees to improve visibility for pedestrian and vehicular traffic. Prune out dead and crossing branches to improve health of trees.



Recommended planting plan

Tall median plantings are hazardous to vehicular and pedestrian traffic

Existing downtown pedestrian crossing

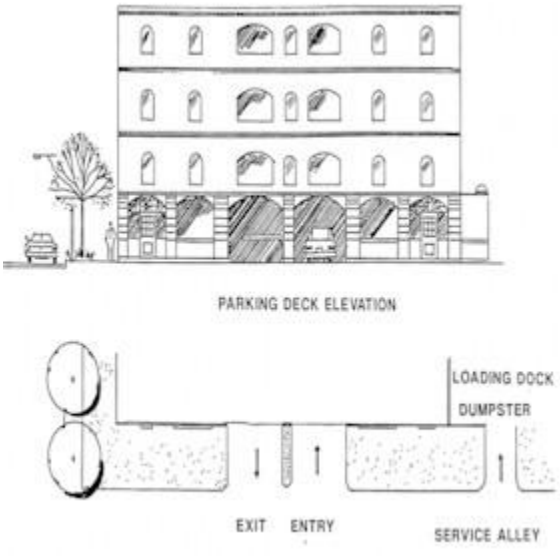


Parking Lot Design Design Standards

Concepts

1. Parking decks occur in areas where real estate is both high in value and limited parking spaces are available.
2. They are usually in downtown areas among existing buildings.
3. They are within easy walking distance of demand for public parking. Pedestrian and safety are important.
4. Security and accessibility are keys to successful use of the parking lots.

5. Streetscape elements should be continued along the perimeter of parking decks. Street trees, sidewalks, lighting and design details.
6. The architectural design of the parking deck shall blend in with the surrounding. The design of the street level should screen the parking from the street and provide visual interest to the pedestrian.
7. Plantings should harmonize with others in the area.
8. Parking decks should be setback a minimum of 12' from the street right-of-way. And meet all yard requirements for the district. The setback will include a 5' planting strip and a minimum 7' wide sidewalk.
9. The planting strip shall be planted with urban street trees or small street trees at a rate of 1 tree per 30' of street frontage.
10. The first parking level and any additional level with handicapped parking spaces should have a minimum 9' clearance.
11. All loading storage and trash facilities should be screened from the street and all pedestrian circulation areas.
12. It would be ideal if the ground level contained retail space which would provide pedestrian activity, security, and harmonize with surrounding retail uses.




Poor parking garage design

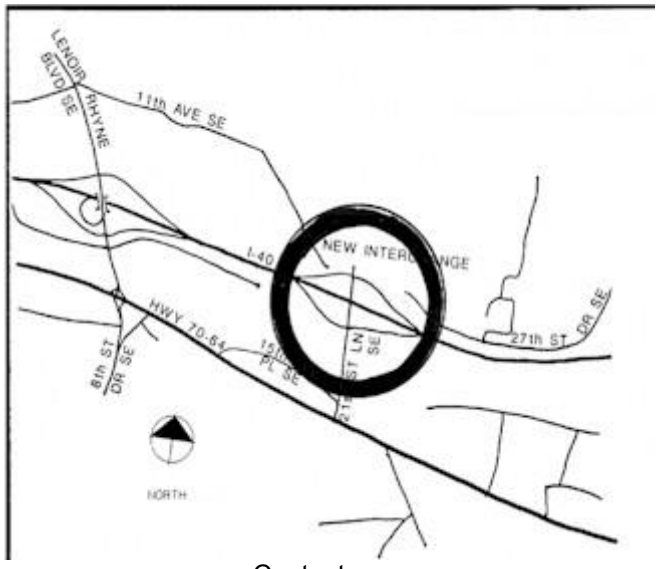
Creative parking garage design

These parking garages are all examples of attractive design. In each case an effort was made to accent the positive features (usually the architecture), while screening the negative ones (the cars). The result is a contiguous, sometimes seamless, element in the landscape.

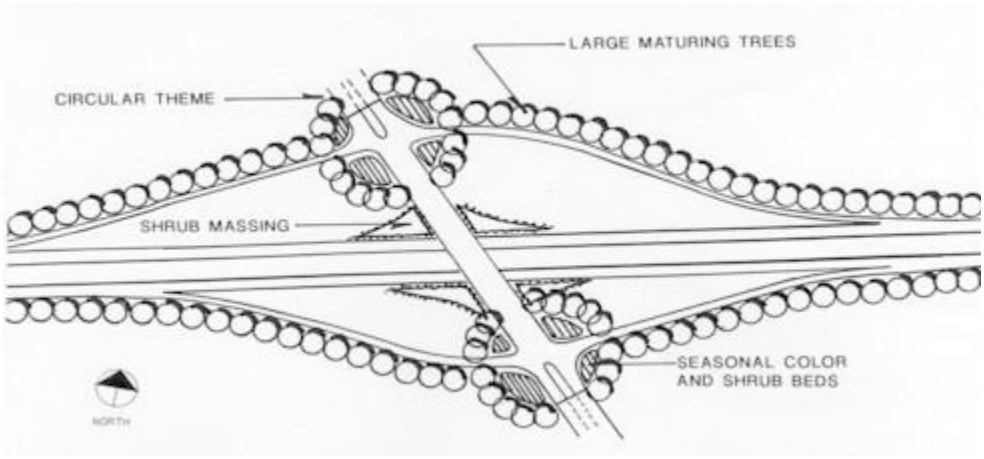
New I-40 Interchange

Concepts:

1. This interchange is currently being designed by NCDOT. Additional design work should include significant landscape plantings, signage, lighting and other features to emphasize its significance as a major gateway to the City.
2. A Highway Overlay District is needed to influence new development that will grow along this new interchange. The right-of-way should be established at 20' from edge of pavement to allow enough planting space to make an impact.
3. A Tree Ordinance should be created for undeveloped property.
4. Improve the design and image of the interstate within 1/2 mile of the interchange.



Context map



Recommended planting plan

Examples of immature interchange planting masses

Note the large planting beds

Landscape Quality Level Recommendations Relative to Land Use Categories

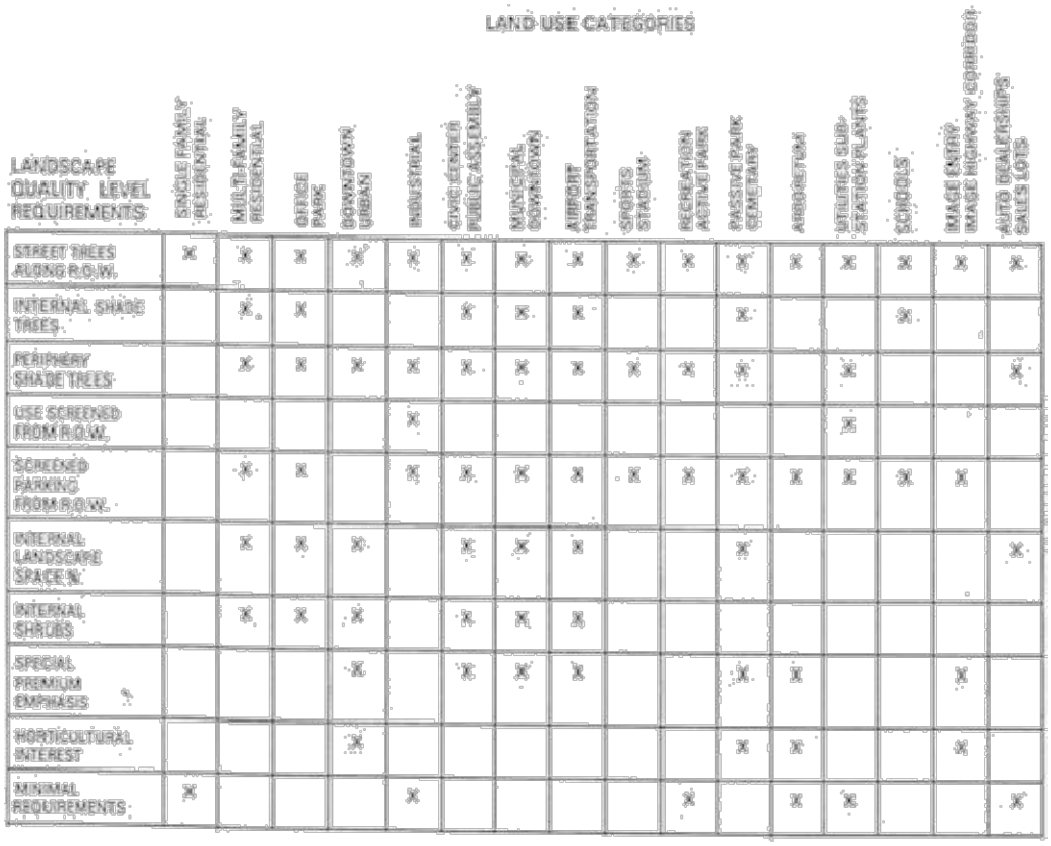
This matrix delineates our recommendations for legislation, ordinances, or guidelines for landscape development.

The requirements for the level of landscape quality - how much is to be planted, where, and what general type of planting is recommended is indexed with various land uses.

For example, where we expect users to care the most, plant the heaviest density of the best quality plants, and care the most for plants, at their own residence, our recommendations are minimal.

On the other hand, historically the public desires the best quality and extent of plantings in the uptown areas, at transportation centers, and in commercial areas. The guidelines for these areas are the most extensive.

In industrial and utility areas the guidelines call for a quality image along the street frontage and in the office or employee break areas, therefore not restricting the internal, heavy use areas of the property.



Soils: Concepts Relative to Plant Installation and Maintenance

Soil Types in Hickory

The most predominant soils in the Hickory area belong to the Cecil and Pacolet series. These soils are located on gently sloping uplands and both consist of shallow layers of sandy loam over a red clay subsoil. They are acidic soils with good drainage capabilities. However, they are low in organic content. Planting in these soils will require mixing the existing soils with a planting mix as specified in the tree planting details. These soils and the less predominant soils of the area are described below in more detail.

Cecil Series - CmB2, CmC2, CmD2, CnB2, CnC2, CnE3

The Cecil series is a well drained brown sandy loam. The surface is approximately 7" thick with a deep subsurface of red clay. This is an acidic soil with moderate drainage capabilities and moderate shrink swell potential.

Pacelot Series - PaF, PcD, BcC, PeE

The Pacelot series is a well drained gravelly sandy loam. The surface is about 6" thick with a red clay subsoil. This is an acidic soil with moderate drainage capabilities and modern shrink swell potential.

Appling Series - AsB, AsC2, AsE2

The Appling series is a well drained brown sandy loam. The surface is approximately 8" thick with a subsurface of yellow/brown clay. This is an acidic soil with moderate drainage capabilities and moderate shrink swell potential.

Hiwassee Series - HsB2, HsC2, HsD2, Hse, HwB2, HwC2

The Hiwassee series is a well drained red brown loam. The surface is approximately 6" thick with a subsurface of firm red clay. This is an acidic soil with moderate drainage capabilities and moderate shrink swell potential.

Congaree - Cy

This soil lies along the river beds. It is a well drained brown loam soil. This is a good farming soil and has good topsoil characteristics.

Wehadkee - Wd

This soil is located in floodplain areas. It is a poorly drained brown sandy loam.

Leveled Clayey Land - Lc

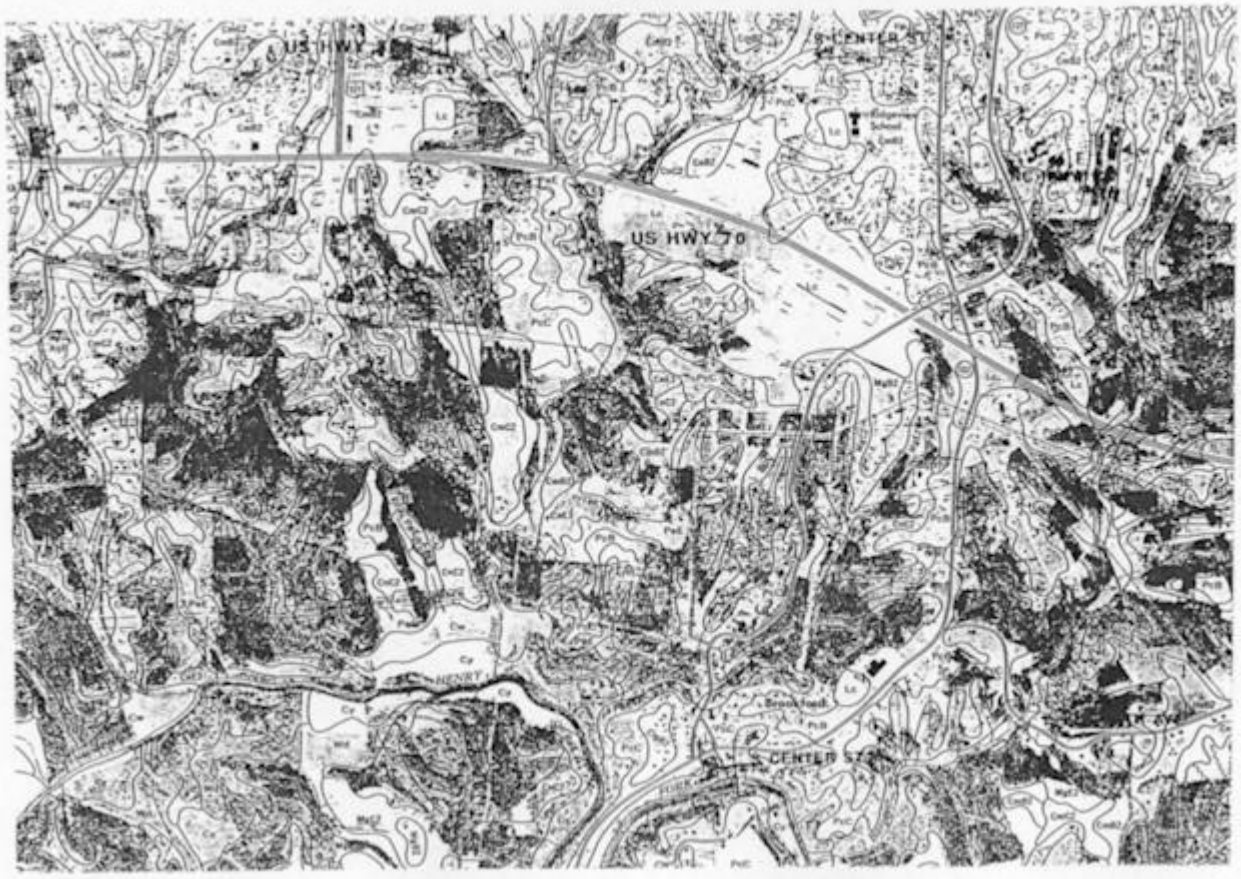
This consists of areas that have been altered so that the original soils cannot be recognized. On site examination is needed to determine the characteristics of this soil.

Chewacla - Cw

This soil lies along the river beds. It is a poorly drained brown loam flood plain soil. This soil has good topsoil characteristics.


SOILS MAP A
A
C
B
D
3RD AVE. N.W.
2ND AVE. N.W.
1ST AVE. SW
A - C
A - B

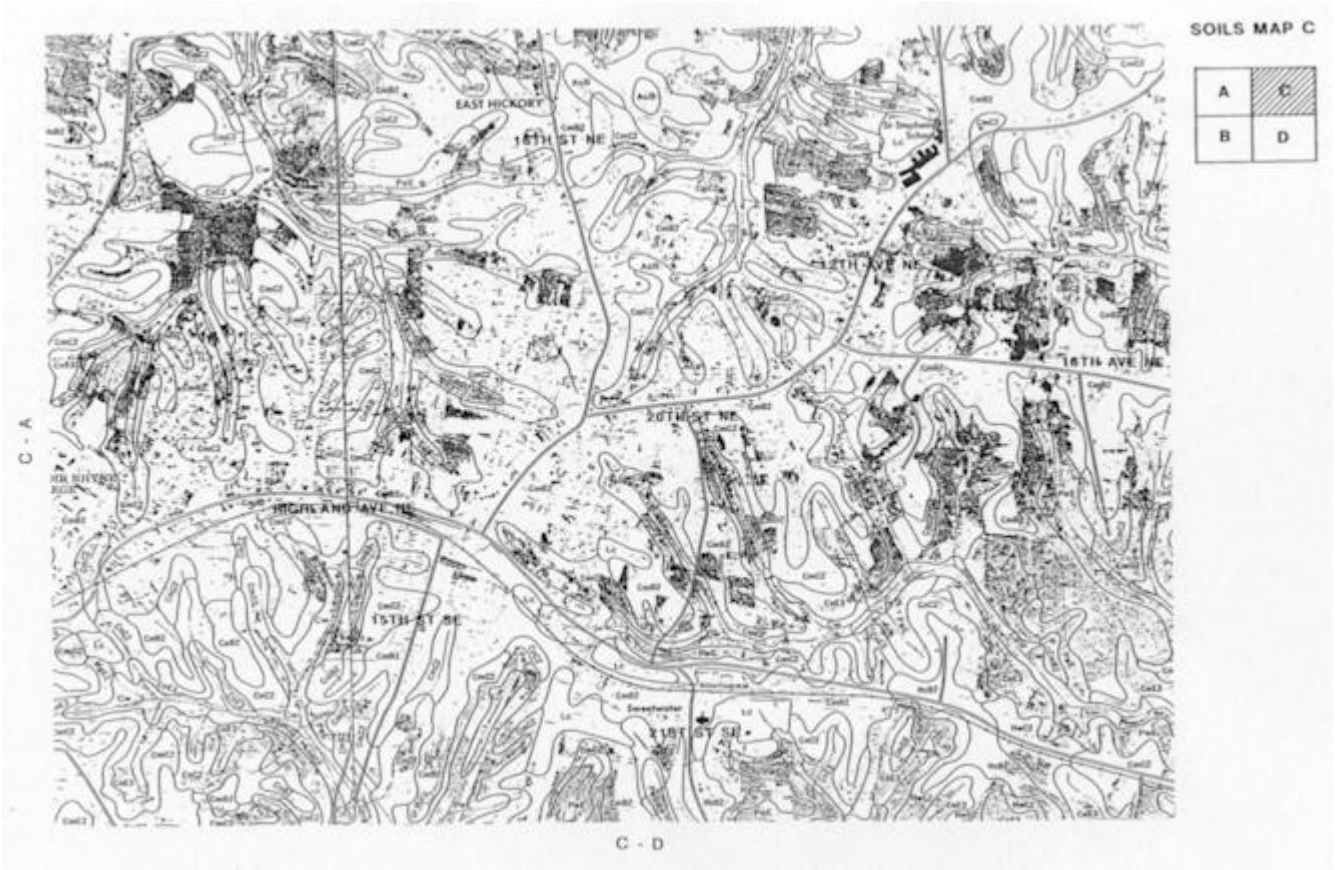
B - A



B - D

SOILS MAP B

A	C
B	D


SOILS MAP C
A
C
B
D
EAST HICKORY
16TH ST NE
12TH AVE NE
16TH AVE NE
20TH ST NE
HIGHLAND AVE NE
15TH ST SE
21ST ST SE
C - A
C - D

Design Criteria for Landscaping the City of Hickory

The purpose of this section is to define the criteria for identifying landscape materials that the City of Hickory can use to implement the designs in this Master Plan. Quality landscaping will enhance both existing developments as well as future growth. It will also help develop a sense of unity throughout the City.

In implementing the designs in this master plan, the City of Hickory should use top quality plant materials. All plants should be nursery grown stock to meet or exceed the American Standards for Nursery Stock by the American Association of Nurserymen, Inc. They should also conform to the following guidelines.

DECIDUOUS TREES
Trees should conform to branching caliper and height specifications of the A.A.N.. They shall have a single straight leader and shall be well shaped.

EVERGREEN TREES
Evergreen trees should have an internode no greater than 18" and shall be uniformly well shaped.

MULTI-STEM TREES
These trees should be evaluated according to their height, quality of the branches, and should also have an attractive branching habit and 3-5 trunk stems.

SHRUBS
All shrubs should be dense uniform and vigorous.

GENERAL
All plant materials should be free of insect and disease. They should be unconditionally guaranteed for one year. When installed all trees and shrubs should be mulched with 4" of pine bark or hardwood mulch.

PLANTING IMPLEMENTATION
Plants should be installed during the prime planting season. The planting season for the Hickory areas extends from Oct. 1st to May 1st of the following year.

PLANT CLASSIFICATION
All recommended plantings are classified by their suggested use:

Type	Classification
M	Canopy Street Trees
N	Urban Street Trees
O	Small Street Trees
P	Small Flowering Trees
Q	Large Flowering Trees
R	Street Trees for Screening
S1	Large Urban Shrubs
S2	Small Urban Shrubs

Top quality plant materials ensure an attractive landscape for years to come.

Larger plant materials at installation create a stronger impact.

Type S1 - Large Urban Shrubs

1. Shrubs with an average height greater than 3'.
2. These shrubs are planted to establish a screen between streets and parking lots or other less attractive site elements.
3. Shrubs should have a minimum height of 36" and be in a minimum of a 3 gallon container at the time of planting.

LARGE URBAN SHRUBS	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	SHADE TOLERANT	ATTRACTIVE FLOWER DISPLAY	SELECTED CULTIVARS	COMMENTS
ABELIA GRANDIFLORA GLOSSY ABELIA		+		+			+	'JOHN CREECH' 'SHERWOOD'	A SPREADING ROUNDED SHRUB WITH DARK GREEN LEAVES. LONG LASTING PINK FLOWERS.
CLEYERA JAPONICA JAPANESE CLEYERA		+		+			+		A GOOD HEDGE PLANT WITH A REDDISH BRONZE WINTER COLOR. WILL NOT TOLERATE WET SOILS.
ELAEAGNUS PUNGENS THORNY ELAEAGNUS		+			+			'X EBBINGI' 'FRUITLANDI'	LEAVES ARE GREEN ABOVE AND SILVER BELOW. WHITE FRAGRANT FLOWERS IN THE FALL. A VERY HARDY SHRUB.
EUONYMOUS JAPONICUS JAPANESE EUONYMOUS		+			+			'AUREUS'	GOLD SPOT EUONYMOUS HAS YELLOW CENTERED LEAVES. TRIMS WELL TO FORM A DENSE HEDGE.
EUONYMOUS KIAUTSCHOVICUS SPREADING EUONYMOUS		+			+			'MANHATTEN'	NICE SPREADING SHRUB WITH DARK GLOSSY LEAVES. MAKES A NICE HEDGE.
ILEX CORNUTA VAR. DWARF BURFORD HOLLY		+		+				'BURFORDII NANA'	A COMPACT CHINESE HOLLY.
ILEX CRENATA VAR. JAPANESE HOLLY		+	+					'HETZII'	A DENSE VASE SHAPED SHRUB. MAKES A NICE FOUNDATION OR HEDGE PLANTING.
ILEX GLABRA INKBERRY		+		-				'SHAMROCK'	AN UPRIGHT ROUNDED HOLLY THAT FORMS A NICE HEDGE. DOES GOOD IN WET SOILS.
JUNIPERUS CHINENSIS CHINESE JUNIPER		+		+				'HETZII' 'SEAGREEN' 'MINT JULEP'	DENSE SPREADING EVERGREENS. CREATE A GOOD HEDGE OR SCREEN.
LIGUSTRUM JAPONICUM JAPANESE PRIVET		+			+				FAST GROWING DENSE UPRIGHT SHRUB OR SMALL TREE. THIS SHRUB HAS SHINY DARK GREEN LEAVES.
NANDINA DOMESTICA HEAVENLY BAMBOO		+		+		+			THIS SHRUB HAS A LIGHT AIRY TEXTURE, BRIGHT RED FALL FRUIT AND RED WINTER FOLIAGE.
OSMANTHUS X FORTUNEI FORTUNES OSMANTHUS		+		+					A LARGE OVAL TO ROUNDED SHRUB. FRAGRANT FLOWERS IN THE FALL.
PRUNUS LAUROCERACUS OTTO LUYKEN LAUREL		+		+		+	+	'SCHIPKAENSIS' 'OTTO LUYKEN'	A NICE COMPACT SHRUB FOR FOUNDATION OR HEDGE PLANTING.

Type R - Street Trees for Screening

1. Trees with an average height over 6' and with dense foliage.
2. These trees are planted to establish an effective screen between the street and less attractive site elements or to screen residential areas from busy streets.
3. Trees should have a minimum caliper of 2" and a minimum height of 8' - 10' at the time of planting.

STREET TREES FOR SCREENING	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	ATTRACTIVE FLORAL DISPLAY	SHADE TOLERANT	TOLERATES URBAN CONDITIONS	TOLERATES WET SOILS	FALL COLOR	SELECTED CULTIVARS	COMMENTS
CRYPTOMERIA JAPONICA 'YOSHINO' YOSHINO CRYPTOMERIA		+		+							'YOSHINO'	A GRACEFUL PYRAMIDAL TREE WITH BRIGHT BLUE GREEN FOLIAGE.
X CUPRESSOCYPARIS LEYLANDII LEYLAND CYPRESS		+			+			+	+			THIS IS A VERY EASILY MAINTAINED PYRAMIDAL EVERGREEN.
ILEX X ATTENUATA 'FOSTER' FOSTER HOLLY		+		+								THIS IS A SLENDER CONICAL HOLLY.
ILEX OPACA AMERICAN HOLLY		+	+								'CAROLINA #2' 'GREENLEAF' 'CROONENBURG'	A DENSE PYRAMIDAL HOLLY WITH ATTRACTIVE RED BERRIES.
ILEX X 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY		+		+								THIS IS A DENSE PYRAMIDAL HOLLY SIMILAR TO ILEX OPACA.
TSUGA CANADENSIS CANADIAN HEMLOCK		+	+				+					A FINE TEXTURED EVERGREEN TREE. IT DOES BEST IN SHADY LOCATIONS.

Type O - Large Flowering Trees

1. Flowering trees with an average height over 30' and an average spread of 25'.
2. These trees are planted to establish a visual impact at large intersections and other large open special interest areas.
3. Trees should have a minimum of 2 1/2" caliper and a minimum height of 12' - 14' at the time of planting.

LARGE FLOWERING TREES	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	ATTRACTIVE FLORAL DISPLAY	SHADE TOLERANT	TOLERATES URBAN CONDITIONS	TOLERATES WET SOILS	FALL COLOR	SELECTED CULTIVARS	COMMENTS
MAGNOLIA GRANDIFLORA SOUTHERN MAGNOLIA		+	+			+	+					A VERY STATELY SPECIMEN TREE. THEY TEND TO DROP LARGE LEAVES IN THE SUMMER.
PYRUS CALLERYANA CALLERY PEAR	+				+	+		+		RED PURPLE	'ARISTOCRAT' 'REDSPIRE'	THIS TREE HAS AN EXCELLENT UNIFORM SHAPE AND A NICE FLORAL DISPLAY.

Type P - Small Flowering Trees

1. Flowering trees with an average height of 20' - 30' and an average spread of 25'.
2. These flowering trees are planted to establish a visual impact at intersections and other special interest areas.
3. Trees should have a minimum caliper of 2" and a minimum height of 8' at the time of planting.

SMALL FLOWERING TREES	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	ATTRACTIVE FLORAL DISPLAY	SHADE TOLERANT	TOLERATES URBAN CONDITIONS	TOLERATES WET SOILS	FALL COLOR	SELECTED CULTIVARS	COMMENTS
CERCIS CANADENSIS EASTERN REDBUD	✦			✦		✦	✦			YELLOW GREEN	'FOREST PANSY'	A SMALL NATIVE FLOWERING TREE WITH PURPLE FLOWERS.
CHIONANTHUS RETUSUS CHINESE FRINGE TREE	✦			✦		✦				YELLOW	'SERRULATA'	THIS TREE HAS ATTRACTIVE WHITE FLOWERS.
CORNUS FLORIDA FLOWERING DOGWOOD	✦			✦		✦	✦			RED	'CHEROKEE CHIEF'	EXCELLENT TREE FOR YEAR ROUND INTEREST. SUSEPTIBLE TO BORERS.
CORNUS KOUSA ORIENTAL DOGWOOD	✦			✦		✦	✦			RED PURPLE		THE ORIENTAL DOGWOOD FLOWERS 2-3 WEEKS AFTER CORNUS FLORIDA.
CRATAEGUS PHAENOPYRUM WASHINGTON HAWTHORN	✦			✦		✦		✦		RED PURPLE	'PRINCETON SENTRY'	THIS TREE IS KNOWN FOR ITS ATTRACTIVE RED FRUIT DISPLAY. PLANT THORNLESS VARIETIES.
LAGERSTROMIA CRAPE MYRTLE	✦				✦	✦		✦		YELLOW	'NATCHEZ' WHITE	THIS TREE IS VALUED FOR ITS SUMMER FLORAL DISPLAY AND ATTRACTIVE MULTI-STEM TRUNKS. THERE ARE MANY VAPIETIES WITH DIFFERENT FLORAL COLORS & PLANT SIZES.
MAGNOLIA SOULANGIANA SAUCER MAGNOLIA	✦			✦		✦				YELLOW BROWN		THIS MAGNOLIA HAS PURPLISH PINK FLOWERS IN MAY. LATE FROSTS CAN HURT THE FLORAL DISPLAY.
MALUS CRABAPPLE	✦			✦		✦		✦		RED, BROWN	'FLORIBUNDA' 'PINK SARGENT' WHITE	THERE ARE MANY VARIETIES & COLORS OF CRABAPPLES. THEY ARE USED FOR THEIR ATTRACTIVE FLORAL DISPLAY.
PRUNUS CERASIFERA PURPLE LEAF PLUM	✦			✦		✦				PURPLE	'THUNDERCLOUD'	THIS TREE IS USED FOR ITS PURPLE FOLIAGE. IT CREATES A NICE CONTRAST WHEN COMBINED WITH GREEN LEAF TREES.
PRUNUS X 'KWANZAN' CHERRY	✦			✦		✦		✦		YELLOW	'KWANZAN'	THIS TREE HAS A VERY ATTRACTIVE PINK FLORAL DISPLAY. IT IS ONE OF THE VARIETIES USED IN WASHINGTON, D.C.
PRUNUS SUBHIRTELLA YEDOENSIS 'YOSHINO' CHERRY	✦			✦		✦		✦		YELLOW	'YOSHINO'	THIS TREE HAS A VERY ATTRACTIVE WHITE FLORAL DISPLAY. THIS IS ONE OF THE VARIETIES USED IN WASHINGTON, DC

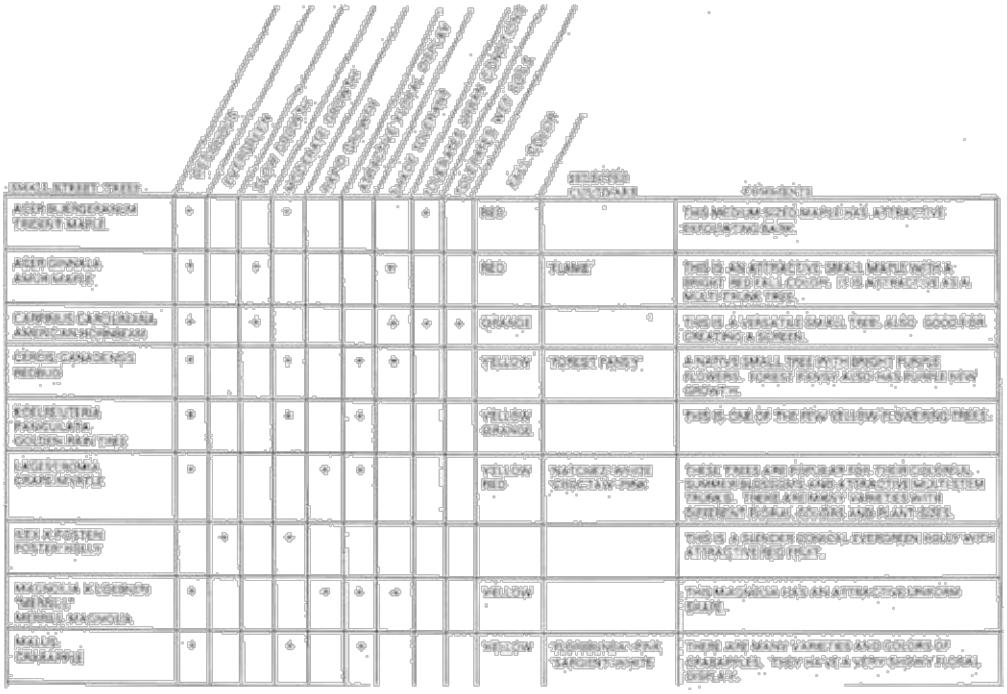
Type N - Urban Street Trees

1. Trees with an average height of 50' and an average spread of 25'.
2. These columnar trees are planted to establish a unified streetscape in urban areas where there are size restrictions due to buildings along the streets.
3. Trees should have a minimum caliper of 2 1/2" and a minimum height of 12' - 14' at the time of planting.

URBAN STREET TREES	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	ATTRACTIVE FLORAL DISPLAY	SHADE TOLERANT	TOLERATES URBAN CONDITIONS	TOLERATES WET SOILS	FALL COLOR	SELECTED CULTIVARS	COMMENTS
ACER RUBRUM COLUMNAR RED MAPLE	✦			✦						RED	'ARMSTRONG' 'BOW HALL'	THESE ARE NICE COLUMNAR VARIETIES OF THE COLORFUL RED MAPLE.
ACER SACCHARUM 'COLUMNAR' SUGAR MAPLE	✦			✦						YELLOW ORANGE	'TEMPLES UPRIGHT' 'NEWTON SENTRY' 'MONUMENTALE'	THESE UPRIGHT COLUMNAR VARIETIES WORK WELL ON URBAN STREETS.
CARPINUS BETULUS 'FASTIGIATA' FASTIGIATE EUROPEAN HORNBEAM	✦		✦							YELLOW	'FASTIGIATA'	THE DENSE BRANCHING HABIT OF THIS VARIETY CAN FORM AN EFFECTIVE SCREEN.
GINKGO BILOBA COLUMNAR GINKGO	✦		✦					✦		YELLOW	'PRINCETON SENTRY'	THIS IS A BEAUTIFUL COLUMNAR FORM OF THE GINKGO
QUERCUS 'ROBUR FASTIGIATA' PYRAMIDAL ENGLISH OAK	✦			✦				✦		BROWN	'ROBUR FASTIGIATA' 'ROSEHILL'	THESE VARIETIES ARE TOLERANT UPRIGHT OVAL URBAN TREES.
SOPHORA JAPONICA 'PRINCETON UPRIGHT' SCHOLAR TREE	✦			✦		✦		✦		YELLOW	'PRINCETON UPRIGHT'	THIS COMPACT VARIETY HAS THE SAME ATTRACTIVE FLOWERS AS SOPHORA JAPONICA.
TILIA CORDATA 'CORINTHIAN' COMPACT LITTLELEAF LINDEN	✦			✦						YELLOW	'CORINTHIAN' 'REDMOND'	THIS VARIETY HAS A UNIFORM FORMAL SHAPE.

Type 0 - Small Street Trees

1. Trees with an average height of 20' - 30' and an average spread of 25'.
2. These trees are planted to establish a unified streetscape in areas where there are obstructions from overhead power lines.
3. Trees should have a minimum caliper of 2" and a minimum height of 8' - 10' at the time of planting.



Type S2 - Small Urban Shrubs

1. Shrubs with an average height of less than 3'.
2. These shrubs are to be planted in urban street medians, to create texture and add interest to the urban landscape.
3. Shrubs should be a minimum of 18 - 24" and be in a minimum of a 3 gallon container at the time of planting.

SMALL URBAN SHRUBS	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	SHADE TOLERANT	ATTRACTIVE FLORAL DISPLAY	SELECTED CULTIVARS	COMMENTS
BERBERIS THUNBERGII JAPANESE BARBERRY	+			+				'CRIMSON PYGMY' 'ROSE GLOW'	A DENSE SHRUB WITH BURGUNDY FOLIAGE. IT DOES BEST IN FULL SUN.
COTONEASTER DAMMERI BEARBEARRY COTONEASTER		S			+		+	'CORAL BEAUTY' 'ROYAL BEAUTY'	A LOW SPREADING PLANT WITH SMALL WHITE FLOWERS IN MAY AND PURPLISH LEAVES IN THE WINTER.
COTONEASTER HORIZONTALIS ROCKSPRAY COTONEASTER		S		+			+	'TOM THUMB'	A DENSE SMALL SHRUB WITH A HORIZONTAL BRANCHING HABIT. GOOD FOR SLOPES.
COTONEASTER SALICIFOLIA DWARF VARIETIES WILLOWLEAF COTONEASTER		S		+	+		+	'REPANS' 'SCARLET LEADER'	A LOW SPREADING SHRUB WITH WILLOW LIKE LEAVES AND BRIGHT RED FALL BERRIES.
ILEX CORNUTA VAR. DWARF CHINESE HOLLY		+	+			+		'CARISSA' 'ROTUNDA'	A SMALL MOUNDED SHRUB. CARISSA HAS WAVY LEAVES.
ILEX CRENATA VAR. DWARF JAPANESE HOLLY		+	+			+		'HELLERI' 'GREENLUSTER'	A SMALL MOUNDED SHRUB WITH A VERY FINE LEAF TEXTURE.
ILEX VOMITORIA NANA DWARF YAUPON HOLLY		+		+		+		'SCHILLINGS DWARF'	A DWARF COMPACT SHRUB WITH PURPLISH NEW GROWTH.
JUNIPERI CHINENSIS VAR. DWARF CHINESE JUNIPER		+	+					'ARMSTRONG' 'SARGENTII' 'NICKS COMPACT'	A LOW SPREADING EVERGREEN SHRUB.
JUNIPERUS HORIZONTALIS PLUMOSA COMPACT ANDORRA JUNIPER		+		+				'YOUNGSTOWN'	A LOW SPREADING JUNIPER WITH GRAY GREEN FOLIAGE THAT TURNS PURPLE IN THE WINTER.
NANDINA DOMESTICA DWARF NANDINA		+		+				'GULF STREAM' 'HARBOUR DWARF'	THESE DWARF NANDINAS HAVE RED-PURPLE LEAVES IN THE WINTER.
RHAPHIOLEPSIS INDICA INDIAN HAWTHORN		+		+			+	'GULF GREEN'	A DENSE MOUNDED SHRUB. THE LEAVES TURN BRONZE IN THE WINTER.

Type M - Canopy Street Trees

1. Trees with an average height of 50' - 75' and an average spread of 40'.
2. These trees are planted to establish a unified streetscape in areas where there are no obstructions on either side. Open road conditions.
3. Trees should have a minimum caliper of 2 1/2" and a minimum height of 12' - 14' at the time of planting.

CANOPY STREET TREES	DECIDUOUS	EVERGREEN	SLOW GROWTH	MODERATE GROWTH	RAPID GROWTH	ATTRACTIVE FLORAL DISPLAY	SHADE TOLERANT	TOLERATES URBAN CONDITIONS	TOLERATES WET SOILS	FALL COLOR	SELECTED CULTIVARS	COMMENTS
ACER RUBRUM RED MAPLE	+			+					+	RED	'RED SUNSET' 'AUTUMN FLAME' 'OCTOBER GLORY'	THESE TREES DISPLAY AN EXCELLENT FALL COLOR. USE THE NAMED VARIETIES TO AVOID ROOT PROBLEMS. THE SHALLOW ROOTS CAN BE INVASIVE OF SIDEWALKS AND STORM DRAINS.
ACER SACCHARUM SUGAR MAPLE	+		+				+			YELLOW ORANGE	'COMMEMORATION' 'LEGACY' 'BONFIRE'	THIS IS AN EXCELLENT SHADE TREE. USE THE SELECTED VARIETIES FOR BEST HEAT TOLERANCE.
CLADRASTIS KENTUKEA AMERICAN YELLOWWOOD	+			+		+				YELLOW	'SINENSIS'	THIS IS A NICELY SHAPED MEDIUM SIZE TREE THAT MAKES AN ATTRACTIVE SPECIMEN. THE FLORAL DISPLAY IS BEST ON ALTERNATE YEARS.
FRAXINUS PENNSYLVANICA GREEN ASH	+				+			+	+	YELLOW	'PATMORE'	PATMORE IS AN UPRIGHT BRANCHING SEEDLESS VARIETY WHICH IS HARDY AGAINST BORER AND SCALE.
GINKGO BILOBA MAIDEN HAIR TREE	+		+					+		YELLOW	'MAGYAR UPRIGHT'	THIS IS A VERY TOLERANT TREE WITH DISTINCTIVE FERNLIKE FOLIAGE AND EXCELLENT FALL COLOR. PLANT MALE PLANTS ONLY.
LIRIODENDRON TULIPFERA TULIP TREE	+				+					YELLOW		THIS IS A LARGE STATELY TREE WITH YELLOW GREEN TULIP LIKE FLOWERS. THE SHALLOW ROOTS CAN CAUSE SIDEWALK AND ASPHALT DAMAGE.
PLATANUS X ACERIFOLIA LONDON PLANE TREE	+			+				+		YELLOW	'BLOODGOOD'	THIS IS A LARGE TREE FOR USE IN OPEN AREAS. THE ATTRACTIVE BARK CREATES WINTER INTEREST.
QUERCUS PALUSTRIS PIN OAK	+				+			+	+	RED		THIS IS AN ATTRACTIVE PYRAMIDAL OAK. IT DOES HOLD IT'S LEAVES INTO THE WINTER.
QUERCUS PHELLOS WILLOW OAK	+			+						YELLOW		THIS IS AN EXCELLENT STREET TREE WITH A FINE FOLIAGE TEXTURE. DIG FOR PLANTING IN THE SPRING ONLY.
SOPHORA JAPONICA JAPANESE PAGODA TREE	+				+	+		+		YELLOW	'REGENT'	THIS IS A NICE LARGE ORNAMENTAL FLOWERING TREE. IT DISPLAYS CREAMY WHITE FRAGRANT FLOWERS IN JULY.
TILIA CORDATA LITTLE LEAF LINDEN	+			+				+		YELLOW	'GREENSPIRE'	THIS IS A NICE UNIFORMLY SHAPED STREET TREE.
ZELKOVA SERRATA JAPANESE ZELKOVA	+				+			+		YELLOW ORANGE	'GREENVASE' 'VILLAGE GREEN'	EXCELLENT STREET TREE WITH A VASE SHAPE.

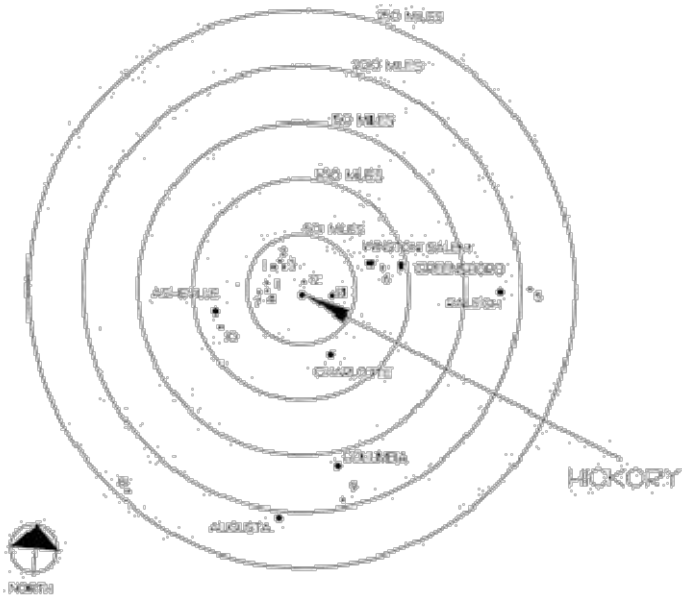
Plant Sources

TREES AND SHRUBS

1. Boyd Coffey and Sons Nurseries
   Route 7, Box 282
   Lenoir, NC 28645
   704-758-9063
2. Buffalo Creek Nursery
   Route 5, Box 389
   Lenoir, NC 28645
   1-800-442-0443
3. Janes Nursery
   Route 8 Box 370B
   Lenoir, NC 28645
   704-754-5274
4. M. J. Fitzgerald Nursery Inc.
   3890 Simpson Creek Road
   Morganton, NC 28655
   704-437-3107
5. Pender Nursery
   P. O. Box 155
   Garner, NC 27529
   1-800-942-1648
6. Piedmont Carolina Nursery
   1867 Sandy Ridge Road
   Colfax, NC 27235
   1-910-993-4114
7. Quaker Meadows Nursery
   2310 McConnaughy Lane
   Morganton, NC 28655
   704-437-2063
8. Select Trees
   P. O. Box 6671
   Athens, Georgia 30604
   706-769-9879
9. Shady Grove Plantation and Nursery
   3030 Charleston Rd., S.W.
   Orangeburg, S.C. 29115-9636
   1-800-534-5683
10. Worthington Farms
    Route 1, Box 575
    Greenville, NC 27834
    919-756-3827

PERENNIALS

11. Dogwood Nursery and Greenhouse
    107 Dogwood Drive
    Morganton, NC 28655
12. Hallmans Greenhouse and Nursery
    Route 2 Box 776
    Conover, NC 28618
    704-256-2312
13. Hefner's Nursery
    Route 4 Box 250
    Conover, NC 28613
    704-256-5271



NURSERY LOCATIONS IN RELATION TO HICKORY

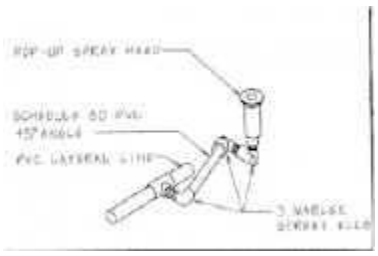
Irrigation Master Plan for City Wide Utilization

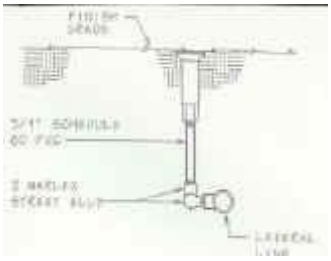
An irrigation system provides an underground, automatic, controlled supply of water for lawns and plants to promote and assist their growth. University tests have proven its effectiveness in reducing plant stress and required maintenance, all while improving appearance. Irrigation is a support system, used only in areas of high visual value.

Each installation typically uses a separate water meter, to avoid sewerage charge, a backflow preventor, to prevent contamination of potable water supply, and a controller to regulate location, time of day, frequency, and duration of spray. Also included are sensors which shut the spray off at freezing temperatures, and during rain storms. Lawns and shrub beds use pop-up spray heads which supply the water to the necessary areas.

The management of a vast city-wide network is made easy by specially designed controllers, such as RainBird's Maxicom System. These systems can also operate lighting and other devices in conjunction with irrigation controllers on each site. Across the nation, many cities have discovered the benefits of utilizing a telephone-cellular or radio- controlled central irrigation control system for the management of public property systems. This enables one manager to monitor and control watering throughout the city without physically having to be on each site.

The lush, colorful landscape, product of a well designed irrigation system





Landscape Lighting Recommendations

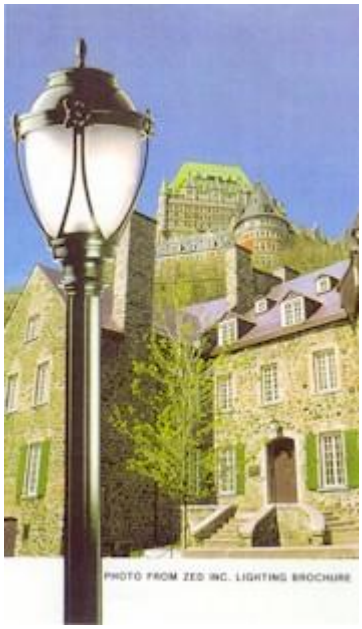
Coordination of landscape plantings and lighting design is important because it:

- Allows planning of overhead line routes relative to street tree plantings.
- Allows planning for the optimum placement of trees and lighting poles in parking lots.
- Prevents future conflicts as trees grow, affecting light placement and overhead line viability.

Lighting intensities (usually measured in foot-candles) vary relative to highway category, traffic volume, intersection and cross-street locations, and in the distance from light source. Highway Lighting Standards are utilized by the design engineers, placing higher light levels where security, safety, and decision making events are important. Accent lighting for entry statements, signage, and the illumination of special features can be utilized as a design tool to enhance landscape plantings.

Change can be effected when existing streets and highway corridors are upgraded; then overhead lines could be relocated and lighting revised to incorporate new landscape plantings as a part of road widening, redesign, and upgrade projects. Use of Right-of-Way easement agreements, coordinated design reviews, and interest by the Community Appearance Commission in the design process, as coordinated through the appropriate city department can be effective means of obtaining change.

Postcard shows original light fixtures used in Hickory



Appropriate lighting is needed for safety as well as design impact.

Project Process Charts

The master plan here contains "Gantt Charts" which serve to illustrate the process through which a particular project moves from preliminary master planning to reviews, to implementation.

This computer "modeling" of the process allows changes to be made in dates, scope of work, and length of tasks while continuing to illustrate the timeline for the project from start to finish. The computer chart facilitates changes while solving the completion dates' timetables for the planners.

These were assembled based on a start time of January 1996 and the earliest possible completion time. Projects can also be scheduled based on a tabulation of staff size available.

Because these charts would not translate well to WWW format, following are timelines from those charts. Actual charts are available at Julian Whitener Municipal Building.

	Duration	Start	Finish
Uptown Area	**289d**	**2/5/96**	**3/21/97**
Obtain Site Information	50d	2/5/96	4/15/96
Preliminary Master Planning	5d	2/15/96	2/21/96
Design	20d	2/22/96	3/20/96
Preliminary Master Planning	7d	3/19/96	3/27/96
Design	7d	3/28/96	4/5/96
Workshops	1d	4/9/96	4/9/96
Workshops	1d	4/10/96	4/10/96
Preliminary Utilities/Railroad/NCDOT Review	1d	4/11/96	4/11/96
Design	15d	4/12/96	5/2/96
Workshop Reviews	1d	5/3/96	5/3/96
Workshop Reviews	1d	5/6/96	5/6/96
Design	10d	5/7/96	5/20/96
Review by Utilities	30d	5/21/96	7/1/96
Review by Railroad / NCDOT	60d	5/21/96	8/13/96
Design	10d	8/14/96	8/27/96
Present Design to CAC	1d	8/28/96	8/28/96
Review/Approval of Design by City	8d	8/28/96	9/9/96
Complete Design	5d	9/10/96	9/16/96
Select/Purchase Planting Materials	20d	9/17/96	10/14/96
Demolition/Construction Phase 1	25d	10/8/96	11/11/96
Install Phase 1	28d	10/15/96	11/21/96
Demolition/Construction Phase 2	42d	1/6/97	3/4/97
Install Phase 2	35d	2/3/97	3/21/97
Complete landscape installation	0d	3/21/97	3/21/97

Master Planning

	Duration	Start	Finish
Master Planning	**342d**	**1/29/96**	**5/29/97**
Preliminary Master Planning Design	43d	1/29/96	3/27/96
Master Planning Design	68d	3/28/96	7/2/96
Workshops	1d	7/3/96	7/3/96
Workshops	1d	7/5/96	7/5/96
Master Planning Design	5d	7/8/96	7/12/96
Workshop Reviews	1d	7/15/96	7/15/96
Workshop Reviews	1d	7/16/96	7/16/96
Master Planning Design	5d	7/17/96	7/23/96
Review by Utilities	30d	7/24/96	9/4/96
Review by Railroad / NCDOT	60d	7/24/96	10/16/96

Present Master Planning Design to CAC	1d	8/27/96	8/27/96
Present Master Planning Design to City	15d	8/15/96	9/5/96
Master Planning Design	60d	10/17/96	1/13/97
Workshops	1d	1/14/97	1/14/97
Design	5d	1/15/97	1/21/97
Present Master Planning Design to CAC	1d	1/28/97	1/28/97
Review/Approval of M. Planning Design by City	15d	1/22/97	2/11/97
Complete Master Planning Documents	60d	2/12/97	5/7/97
Print Documents	15d	5/8/97	5/28/97
Issue Master Planning Documents	1d	5/29/97	5/29/97
Complete Master Planning	0d	5/29/97	5/29/97

Tate Boulevard

	Duration	Start	Finish
Tate Boulevard	**294d**	**4/16/96**	**6/9/97**
Obtain Site Information	15d	4/16/96	5/6/96
Design	30d	5/7/96	6/17/96
Preliminary Utilities/NCDOT Review	30d	6/18/96	7/30/96
Design	15d	7/31/96	8/20/96
Workshops	1d	8/21/96	8/21/96
Design	15d	8/22/96	9/12/96
Utilities Review	30d	9/13/96	10/24/96
NCDOT Review	60d	9/13/96	12/6/96
Design	10d	12/9/96	12/20/96
Present design to CAC	1d	1/28/97	1/28/97
Review/Approval of Design by City	32d	12/23/96	2/6/97
Complete Design	5d	2/7/97	2/13/97
Purchase Planting Material	25d	2/14/97	3/20/97
Install	60d	3/17/97	6/9/97
Complete Landscape Installation	0d	6/9/97	6/9/97

4th Street SW
from Hwy 70 to Main Street

	Duration	Start	Finish
4th St SW	**199d**	**5/7/96**	**2/14/97**
Obtain site information	10d	5/7/96	5/20/96
Design	10d	5/21/96	6/3/96
Preliminary Utilities/NCDOT Review	30d	6/4/96	7/16/96
Design	10d	7/17/96	7/30/96
Workshops	1d	7/31/96	7/31/96
Design	5d	8/1/96	8/7/96
Utilities Review	30d	8/8/96	9/19/96
NCDOT Review	60d	8/8/96	10/31/96
Design	10d	11/1/96	11/14/96
Present Design to CAC	1d	11/26/96	11/26/96
Review/Approval of Design by City	5d	11/27/96	12/4/96
Complete Design	5d	12/5/96	12/11/96
Purchase Planting Materials	15d	12/12/96	1/3/97
Install	30d	1/6/97	2/14/97
Complete Landscape Installation	0d	2/14/97	2/14/97

South Center Street
from Hwy 70 to 1st Street

	Duration	Start	Finish
South Center Street	**419d**	**5/21/96**	**1/9/98**
Obtain Site Information	15d	5/21/96	6/10/96
Design	15d	6/11/96	7/1/96
Preliminary Utilities/NCDOT Review	30d	7/2/96	8/13/96
Design	10d	8/14/96	8/17/96
Workshops	1d	8/28/96	8/28/96
Design	5d	8/29/96	9/5/96
Utilities Review	30d	9/6/96	10/17/19
NCDOT Review	30d	9/6/96	10/17/96
Design	10d	10/18/96	10/31/96
Present Design to CAC	1d	11/26/96	11/26/96
Review/Approval of Design by City	15d	11/6/96	11/26/96
Complete Design	5d	11/27/96	12/4/96
Purchase Planting Materials	15d	9/24/97	10/14/97
Install	60d	10/15/97	1/9/98
Complete Landscape Installation	0d	1/9/98	1/9/98

Hwy 127
from 1st St to Carolina Park

	Duration	Start	Finish
Hwy 127	**366d**	**6/11/96**	**11/13/97**
Obtain Site Information	15d	6/11/96	7/1/96
Design	10d	7/2/96	7/16/96
Preliminary Review Utilities/NCDOT	30d	7/17/96	8/27/96
Workshops	1d	8/28/96	8/28/96
Design	5d	8/29/96	9/5/96
Review by Utilities	30d	9/6/96	10/17/96
Review by NCDOT	60d	9/6/96	11/29/96
Design	5d	12/2/96	12/6/96
Present Design to CAC	1d	12/23/96	12/23/96
Review/Approval of Design by City	15d	12/9/96	12/30/96
Complete Design	5d	12/21/96	1/7/97
Purchase Planting Materials	15d	9/1/97	9/19/97
Install	30d	10/3/97	11/13/97
Complete Landscape Installation	0d	11/13/97	11/13/97

Lenoir-Rhyne Boulevard

	Duration	Start	Finish
Lenoir-Rhyne Blvd	**484d**	**7/2/96**	**5/22/98**
Obtain Site Information	15d	7/2/96	7/23/96
Design	30d	7/24/96	9/4/96
Preliminary Review Utilities/NCDOT	30d	9/5/96	10/16/96
Design	10d	10/17/96	10/30/96
Workshops	1d	10/31/96	10/31/96
Design	5d	11/1/96	11/7/96
Review by Utilities	30d	11/8/96	12/20/96
Review by NCDOT	60d	11/8/96	2/4/97
Design	10d	2/5/97	2/18/97
Present Design to CAC	1d	2/25/97	2/25/97
Review/Approval of Design by City	11d	2/19/97	3/5/97
Complete Design	5d	3/6/97	3/12/97
Purchase Planting Material	30d	2/9/98	3/20/98
Install	60d	3/2/98	5/22/98
Complete Landscape Installation	0d	5/22/98	5/22/98

Water Tower Area

	Duration	Start	Finish
Water Tower Area	**767d**	**7/24/96**	**7/20/99**
Obtain Site Information	15d	7/24/96	8/13/96
Design	15d	9/12/96	10/2/96
Workshops	1d	10/3/96	10/3/96
Design	5d	10/4/96	10/10/96
Review by Utilities	5d	10/11/96	10/17/96
Design	5d	10/18/96	10/12/96
Present Design to CAC	1d	10/29/96	10/29/96
Review/Approval of Design by City	10d	10/25/96	11/7/96
Complete Design	5d	11/8/96	11/14/96
Purchase Planting Material	15d	2/11/98	3/3/98
Install	30d	3/4/98	4/14/98
Complete Landscape Installation	326d	4/15/98	7/20/99

Hwy 321
from Hwy 70 to Clement Blvd

	Duration	Start	Finish
Hwy 321	**326d**	**4/15/98**	**7/20/99**
Obtain Site Information	45d	4/15/98	6/16/98
Design	60d	6/17/98	9/10/98
Preliminary Utilities/NCDOT Review	30d	9/11/98	10/22/98
Workshops	1d	10/23/98	10/23/98
Design	30d	10/26/98	12/4/98
Review by Utilities	30d	12/7/98	1/19/99
Review by NCDOT	60d	12/7/98	3/2/99
Design	35d	3/3/99	4/20/99
Present Design to CAC	1d	4/21/99	4/21/99
Review/Approval of Design by City	10d	4/21/99	5/4/99
Complete Design	25d	5/5/99	6/8/99
Purchase Planting Material	30d	6/9/99	7/20/99
Install	60d	10/2/99	12/24/99
Complete Landscape Installation	0d	12/24/99	12/24/99
Potential Phases	555d	10/17/96	12/16/99

Hwy 321
from Clement Blvd to MDI Site

	Duration	Start	Finish
Hwy 321	**501d**	**6/17/98**	**5/23/00**
Obtain Site Information	15d	6/17/98	7/8/98
Project Design	30d	7/9/98	8/19/98
Preliminary Utilities/NCDOT Review	30d	8/20/98	10/1/98
Project Design	15d	10/2/98	10/22/98
Workshops	1d	10/23/98	10/23/98
Project Design	25d	10/26/98	11/27/98
Utilities Review	30d	11/30/98	1/12/99
NCDOT Review	60d	11/30/98	2/23/99
Design	20d	2/24/99	3/23/99
Present Design to CAC	1d	3/24/99	3/24/99
Review/Approval of Design by City	30d	3/24/99	5/4/99
Complete Design	20d	5/5/99	6/1/99
Advertise Project	15d	6/2/99	6/22/99
Bid Project	15d	6/23/99	7/13/99

Award Project	15d	7/14/99	8/3/99
Select Planting Material	30d	8/4/99	9/14/99
Install	180d	9/15/99	5/23/00
Complete Landscape Installation	0d	5/23/00	5/23/00

8th Street Extension

	Duration	Start	Finish
8th Street Extension	**401d**	**7/30/98**	**2/15/00**
Obtain Site Information	15d	7/30/98	8/19/98
Design	60d	8/20/98	11/12/98
Preliminary Utilities/NCDOT Review	30d	11/13/98	12/24/98
Workshops	1d	12/28/98	12/28/98
Design	30d	12/29/98	2/9/99
Utilities Review	30d	2/10/99	3/23/99
NCDOT Review	60d	3/24/99	6/15/99
Design	35d	6/16/99	8/3/99
Present Design to CAC	1d	8/24/99	8/24/99
Review/Approval of Design by City	10d	8/25/99	9/7/99
Complete Design	25d	9/8/99	10/12/99
Purchase Planting Material	30d	10/13/99	11/23/99
Install	60d	11/24/99	2/15/00
Complete Landscape Installation	0d	2/15/00	2/15/00

Uptown Area

	Duration	Start	Finish
Uptown Area	**289d**	**2/5/96**	**3/21/97**
Obtain Site Information	50d	2/5/96	4/15/96
Preliminary Master Planning	5d	2/15/96	2/21/96
Design	20d	2/22/96	3/20/96
Preliminary Master Planning	7d	3/19/96	3/27/96
Design	7d	3/28/96	4/5/96
Workshops	1d	4/9/96	4/9/96
Workshops	1d	4/10/96	4/10/96
Preliminary Utilities/Railroad/NCDOT Review	1d	4/11/96	4/11/96
Design	15d	4/12/96	5/2/96
Workshop Reviews	1d	5/2/96	5/3/96
Workshop Reviews	1d	5/6/96	5/6/96
Design	10d	5/7/96	5/20/96
Review by Utilities	30d	5/21/96	7/1/96
Review by Railroad/NCDOT	60d	5/21/96	8/13/96
Design	10d	8/14/96	8/27/96
Present Design to CAC	1d	8/28/96	8/28/96
Review/Approval of Design by City	8d	8/28/96	9/9/96
Complete Design	5d	9/10/96	9/16/96
Select/Purchase Planting Materials	20d	9/17/96	10/14/96
Demolition/Construction Phase I	25d	10/8/96	11/11/96
Install Phase I	28d	10/15/96	11/21/96
Demolition/Construction Phase 2	42d	1/6/97	3/4/97
Install Phase 2	35d	2/3/97	3/21/97
Complete Landscape Installation	0d	3/21/97	3/21/97

New I-40 Interchange near Lenoir-Rhyne Blvd

	Duration	Start	Finish

New I-40 Interchange	**506d**	**7/9/98**	**6/20/00**
Obtain Site Information	15d	7/9/98	7/19/98
Project Design	35d	7/30/98	9/17/98
Preliminary Utilities/NCDOT Review	30d	9/18/98	10/29/98
Project Design	15d	10/30/98	11/19/98
Workshops	1d	11/20/98	11/20/98
Project Design	25d	11/23/98	12/28/98
Review by Utilities	30d	12/29/98	2/9/99
Review by NCDOT	60d	12/29/98	3/23/99
Design	20d	3/24/99	4/20/99
Present Design to CAC	1d	4/21/99	4/21/99
Review/Approval of Design by City	30d	4/21/99	6/1/99
Complete Design	20d	6/2/99	6/29/99
Advertise Project	15d	6/30/99	7/20/99
Bid Project	15d	7/21/99	8/10/99
Award Project	15d	8/11/99	8/31/99
Selecting Planting Material	30d	9/1/99	10/12/99
Install	180d	10/13/99	6/20/00
Complete Landscape Installation	0d	6/20/00	6/20/00

Financial Summary

The consultant team's recommendations followed the direction of the Appearance Commission and city staff in the selection of these 12 projects for emphasis in this study. The objective of this Master Plan is to serve as a guideline for development of these projects in a planned, organized manner to a high level of quality.

The chart of cost estimates is based on our best professional judgment in 1996 of project scope, cost, and complexity.

The list of funding alternatives is a compilation of various cities' and agencies' actual funding sources in nearby North Carolina regions.

Comprehensive Landscape Plan and Guidelines
Budget Ranges

	Project Phases	Plant Materials	Total (if Contracted)
1	Municipal Parking Lot	$ 26,000.00	$ 75,000.00
2	Uptown Area	87,000.00	250,000.00
3	Tate Boulevard	250,000.00	715,000.00
4	4th Street	52,500.00	151,000.00
5	South Center Street	52,500.00	151,000.00
6	NC Hwy 127	35,000.00	100,000.00
7	Lenoir-Rhyne Blvd	250,000.00	790,000.00
8	2nd Ave./Water Tower	50,000.00	143,000.00
9	US Hwy 321	325,000.00	928,000.00
10	US Hwy 321 out to MDI	250,000.00	715,000.00
11	New I-40 Interchange	105,000.00	302,000.00
12	8th Street Extension	158,000.00	450,000.00
	TOTAL	2,058,000.00	5,959,000.00

*NOTE: These projects are not listed in any order of priority.

Typical construction detail

Funding for Landscape Projects

How other municipalities and institutions accomplish budget planning.

Project Basis: New projects Repair projects Maintenance Budgets	Include landscape* in project's required budget, and do not allow it to be cut. Usually a percentage of budget or ratio to square footage. (i.e. $1.00/square foot) used in commercial projects. *Plants, lighting, irrigation, signage, site furniture, annual flowers, first years maintenance
City Ordinance Basis: Tree Ordinance Parking Lot Ordinance Landscape Ordinance	As builder or develop acquires building permit: They are required to install plants along right of way and internally. City cost: Inspections and plan approval by trained staff.
Bond Issues for specific projects	Voters agree to find specific projects for city's image improvement Examples: World's Fair Cities, Olympic Venues
Special Tax Based Issues: License Fees	Property Tax - A percentage of property tax set aside for public improvements. License Plate Fees (Vanity Plates) spent on landscape enhancements.
Revenue-Based Users' Fees	Percentage of parking revenue spent for site improvement Percentage of user fees returned to upgrade site
State and Federal Grants and Funds	ISTEA SBA Grants Tree City/Arborist Grants
Corporate and Individual Gifts	Donations of Adopt-a-Spots, Memorials, and adopted corridor areas

Planting in progress