

9/28/01

## **Core Uptown Streetscape Standards**

### **Location**

The area included in this plan is bounded by the following streets: Southeast side of Church Street the access ramp to I-277 on two sides and the Rail Transit Corridor. Two corridors within that boundary, The Tryon Street Mall and the Rail Transit Corridor are governed by other specific standards. See the Core Uptown Streetscape Plan for a graphic representation of the standards required.

### **Escrow**

The City will discuss the option of establishing an escrow account for site improvements if the project's total block face frontage is 25% or less than the block frontage for the entire block.

### **Definitions**

**Block**-A four-sided area bounded by four public streets with no public streets passing through that area.

**Block face**-One side of a block.

### **References**

The specific details referenced in this plan are located in one of the following documents:

CCTO- City of Charlotte Tree Ordinance

CMDS- Charlotte-Mecklenburg Development Standards

TSMSS- Tryon Street Mall Streetscape Standards (this is a specific section within the CMDS)

RTCSS- Rail Transit Corridor Streetscape Standards (this is a specific section within the CMDS)

Design Guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte

### **General Design Criteria - Required**

1. In siting street trees, light poles, benches, trash receptacles and flower pots along streets with on street parking every attempt shall be made to locate those elements between parking spaces to minimize potential conflicts with car door swings.
2. Recessed areas along the curb for valet or pick-up/drop-off zones are prohibited.
3. The location of streetscape elements must comply with all other applicable City and County ordinances.

### **Specific Design Criteria**

#### **1. Street Trees - Required**

- A. See CCTO for tree size, spacing and planting criteria.
- B. The species of tree to be planted are shown on the Core Uptown Streetscape Plan.
- C. Trees are either planted in tree grates or in planting strips. See CMDS for all planting details. See CMDS for minimum planting strip width. See Core Uptown Streetscape Plan for the location of planting strips and trees in grates.
- D. All street trees must be irrigated. If a project area is located in a block face that is contiguous with a Tryon Street Mall block face, the existing meter, double check valve and controller located in the mall shall be used to irrigate the tree. See detail TSMSS for projects that have a block face adjacent to the Tryon Street Mall, see detail CMDS for all others.

#### **2. Pavement - Required**

- A. The curbing shall be standard 1'-6" standard concrete curb and gutter, see CMDS detail 10.17A.
- B. The sidewalk pavement in the road right-of-way or building setback, whichever is greater, shall be 4 1/2" x 9" x 60mm (80mm for driveways) concrete pavers in a blend of three colors on a concrete subslab base. See the Design Guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte for the paver specifications and details for pavers over a concrete subslab base.

### **3. Pedestrian Lighting - Optional**

- A. Pedestrian lights shall be located in an alternating pattern with the street trees. The spacing shall be two times the spacing of the trees. For example, for large maturing trees planted 40' on center, the spacing for the lights shall be 80' on center. The actual location may need to be adjusted for field conditions.
- B. Pedestrian lights shall be located 80' on center, and the 80' spacing shall be used to determine the number of fixtures required. To adjust for site conditions, in field spacing may vary from 75' to 85'. The light fixtures shall match the existing light fixtures on Church Street from 2<sup>nd</sup> Street to 3<sup>rd</sup> Street in height, base and pole design, color and globe profile. Any new pedestrian lights in the core Uptown area include a solid globe cap to eliminate light being directed vertically. The light type shall be a 175 watt mercury vapor.
- C. All light poles shall be located 3' from the back of the curb to the center of the pole.

### **4. Benches - Optional**

- A. The bench for the Core Uptown area will be four feet and will be the same design as the benches used in the Rail Transit Corridor see RTCSS Bench.
- B. Benches shall be positioned perpendicular to the curb and shall be installed as two back-to-back benches. Benches shall be setback from the back of curb a minimum of 1' - 6".
- C. Benches shall be installed only if the sidewalk is a minimum of 11' - 6" as measured from the back of curb. That width allows for a minimum clear pedestrian area of 6'. That clear pedestrian passage shall be continuous and begin 5'-6" from the back of curb.
- D. Where the sidewalk width is 11' - 6" or greater, a set of back-to-back benches is required for every 150' of sidewalk frontage.

### **5. Trash Receptacles - Optional**

- A. Trash receptacle design shall be as per RTCSS Trash Receptacle detail.
- B. One trash receptacle is required per 175' of linear frontage on a block face.

### **6. Bus Shelters - Optional**

- A. Bus shelters shall be located as required by Charlotte Area Transit (CATS).

### **7. Flowerpots - Optional**

- A. Uptown facilities are encouraged to highlight the street with additional flowerpots.
- B. For flowerpots requirements see TSMSS Flowerpots.
- C. Flowerpots must be located to allow for a clear 6' pedestrian path. The outside edge of flowerpots may not be any closer than 3' to the face of curb.
- D. All maintenance for flowerpots shall be the responsibility of the entity that placed the flowerpots. If the pots are not maintained or are placed to block pedestrian traffic, the owner shall be given notice. If the entity does not comply, the City shall remove the flowerpots.

### **Maintenance**

The City shall maintain the Core Uptown street ROW's excluding all the flowerpots.

9/28/01

## Tryon Street Mall Streetscape Standards

### Location

The Tryon Street Mall shall extend from the John Belk Freeway Bridge to the Brookshire Freeway Bridge. See the Core Uptown Streetscape Plan for a graphic representation of the standards required within the Tryon Street Mall.

### Background

The original Tryon Street Mall was completed in 1985 and was located on Tryon Street from Stonewall Street to Eighth Street, and Trade Street from Church Street to College Street. Renovations have been or will be made to the original mall. The renovations retain the design characteristics of the original mall while improving the infrastructure and protecting existing trees. The mall expansion shall include all block faces along Tryon Street and extend from the John Belk Freeway Bridge to the Brookshire Freeway Bridge. Within the mall expansion area the streetscape shall conform to the Tryon Street Mall Streetscape Standards.

### Escrow

The City will discuss the option of establishing an escrow account for site improvements if the project's Mall block face frontage is 25% or less than the total length.

### Definitions

**Original mall** - The original Mall is the area constructed in 1985 and located on Tryon Street from Stonewall Street to Eighth Street, and Trade Street from Church Street to College Street (for purposes of reference in this document the original Mall will not include the block at the intersection of Tryon Street and Trade Street since those blocks contain a unique design that will not be repeated in any other locations).

**Mall expansion** - Any area(s) beyond the original Mall where the Tryon Street Mall Streetscape Standards are implemented.

**Block** - A four-sided area bounded by four public streets with no public streets passing through that area.

**Block face** - One side of a block.

**Mall block** - Two block faces within the mall that are opposite each other.

### References

The specific details referenced in this plan are located in one of the following documents:

CCTO- City of Charlotte Tree Ordinance

CMDS- Charlotte-Mecklenburg Development Standards

TSMSS- Tryon Street Mall Streetscape Standards (this is a specific section within the CMDS)

Design Guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte

### 1. General Design Criteria - Required

1. The existing Mall has a very consistent design that must be maintained in any Mall expansion. In laying out any expansion, one side of the street shall be symmetrical to the opposite side.
2. The building setback on the mall shall be a minimum of 20' from the back of curb.
3. No above ground, freestanding utility structures shall be permitted.
4. Recessed areas along the curb for valet or pick-up/drop-off zones are prohibited.
5. The location of streetscape elements must comply with all other applicable City and County ordinances.

### 2. Street Trees – Required

Willow Oak trees shall be located 30' on center; adjustments for site conditions allow for the spacing to vary from 27' on center to 33' on center. The Willow Oaks shall be planter in a planter. The center point of trees in tree planters shall be located no closer than 14' from the beginning of a radius of an intersection. See TSMSS-Street Trees details. If during construction an existing tree is damaged and the City determines that it must be replaced, then it shall be replaced as per the Mall standard, see TSMSS-Street Trees for details.

### 3. Drainage – Required

There must be a continuous drainage system through all planting areas. That drainage system must have positive flow for the length of the block and drain into the storm sewer system. The storm sewer must meet all City regulations. See TSMSS-Street Trees for location of drain:

#### **4. Irrigation – Required**

Each block face shall have a separate double check valve. The double check valve, accompanying meter and controller shall be positioned to be able to irrigate the entire block and shall be located at the end of the Mall block face with the lowest elevation for drainage of the system. The developer will only be required to install irrigation in those planters that they are installing. Each block face and any ornamental planters will be controlled with a different valve. The irrigation controllers shall be located on the bench support of the bench nearest to the meter and double check valves. All irrigation systems shall meet CMU requirements. See TSMSS-Irrigation for details.

If mall expansion does not include the lowest elevation in the block face, then the developer must install the irrigation components in the utility chase and stub out the system into the tree planters or ornamental planters. The developer will then be required to escrow the value of the drip irrigation for the planters that they installed. The City will be responsible for watering the planters until the irrigation meter; double check valves and controller are installed in that block face.

#### **5. Pavements – Required**

The material required for the sidewalk and planters for any mall expansion shall be as follows with colors and finishes to match the original Mall. All efforts shall be made to keep underground structures such as; lids for gas valves, water valves, manholes and meter boxes out of the sidewalk pavements. There shall be a concrete sub base under all pavements and in areas around tree planters the sub base shall be reinforced with rebar to prevent heaving by the trees. The following is the criteria for the pavements/hardscapes. See TSMSS-Pavements for details.

- **Curbing-** The curbing within the Mall shall be granite laid with a concrete footing.
- **Pavers-** The pavement of the Mall shall be 4 1/2" x 9" x 60mm (80mm for driveways) concrete pavers and be located in the area defined by the two granite bands. Pavers will be layed in a herringbone pattern that begins at the granite banding next to the curb. The pavers shall be a blend of three colors. See Design guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte for paver specifications and details for pavers over concrete subslab base.
- **Banding-** A 2' granite banding shall be located where the building intersects the sidewalk, that banding is located from granite curbing one side of the block to the other side of the block. 2' granite shall be located along the back of the curb and run from one end of the granite banding in front of the buildings to the other end of that granite banding. Under the curbside granite banding will be a utility chase for electricity, potable water and irrigation. Granite banding shall also be placed around the large and small ornamental planters. The pattern and dimensions of banding shall match the banding in the original Mall. See TSMSS- Large and Small Ornamental Planters for details.

#### **6. Utility Chase – Required**

The irrigation water, irrigation controller wire, and a spare sleeve shall be located in a utility chase immediately behind the curb under the 2' granite banding. Pull boxes shall be located at all places along the utility chase where the services go into or come out of the chase. (For example, at the street trees, the irrigation into the tree planter is fed from the pull box.) See TSMSS-Utility Chase for details.

#### **7. Ornamental Planters – Optional**

Ornamental planters are recommended for both block faces between Ninth Street and Tenth Street. Both large and small sizes shall be used and a minimum of three planters are required per block face. The edge of an ornamental planter shall be located no closer than 7' from a tree planter edge. Ornamental planter edges can be no closer than 20' and no farther than 25' from another ornamental planter. No tree planters are allowed between ornamental planters, but there shall be at least one street tree between the ornamental planters and the street intersection. If the ornamental planters are not installed then street trees shall installed between Ninth Street and Tenth Street. See TSMSS-Large and Small Ornamental Planters for details.

#### **8. Lighting - Optional**

Mall pedestrian fixtures, shoebox fixtures and signal mast arms shall match the original in design, color, finish and spacing. Spacing for pedestrian street fixtures shall range from 50' on center to 60' on center. The fixture at the end of each block face and the fixture closest to the center point of the block face shall include a mall pedestrian fixture and a shoebox type fixture. The pedestrian signals and signal mast arm that will be required will be the responsibility of the City but will require coordination with the developer. See TSMSS-Lighting for details.

#### **9. Benches – Optional**

Benches are double sided and the support posts for the benches are typically located six (6) feet from the centerline of the pedestrian light fixtures, on both sides of the light pole. Irrigation controllers for the Mall are located on the bench support post that is closest to the irrigation valves. To calculate requirements a minimum one set of benches per 75' of Tryon Street frontage is required. See TSMSS-Benches for details.

#### **10. Kiosks and Bus Shelters – Optional**

A kiosk or a bus shelter is required for each Mall block. The design of the kiosk or bus shelter shall match the existing structures in the Mall. Contact the City Engineer for construction documents for the kiosks and bus shelters in the original mall. A bus shelter or kiosk is required to house the back flow device for potable water; one back flow preventer is required for each mall block. The first project within a mall block that is 50% or greater of a block face (measured along the ROW of Tryon Street) is required to install a kiosk or bus shelter. The bus shelter shall be installed if there is an existing bus stop on the Tryon Street frontage or if CATS requires that there shall be a stop along the Tryon Street frontage.

#### **11. Flowerpots – Optional**

Pots for additional flowers are not required. If they are installed, flowerpots shall be one of the three standards in size, design and color. The flowerpots shall not be placed to impede pedestrian traffic through the area. A minimum 6' clear pedestrian area shall be maintained at all times. Maintenance for the flowerpots shall **not** be the responsibility of the City. If the pots are not maintained or are placed to block pedestrian traffic, the owner shall be given notice and if they do not comply, the City shall remove the flowerpots. See TSMSS-Flowerpots for details.

#### **12. Trash Receptacles – Optional**

There must be a minimum of three (3) trash receptacles per block face. The receptacles should be evenly distributed within that block face. The City removes the trash from the trash receptacles. See TSMSS-Trash Receptacles for details.

#### **13. Outdoor Eating Areas – Optional**

When installing a barricaded area for outdoors eating, a minimum 6' clear pedestrian path shall be maintained at all times.

#### **14. Regulatory Signage - Optional**

Regulatory signage shall be located on the pedestrian light poles.

#### **15. Potable Water – Optional**

To supply water sources for festivals and cleaning efforts ground hydrants are required at two locations per block face. Backflow preventers for the potable water are located in enclosed boxes within either a bus shelter or kiosk and shall be the responsibility of the entity that constructed the bus shelter or kiosk. The pipes into and from the backflow preventer shall be heated with heat tape to prevent freezing. There shall be one backflow preventer per mall block that will supply water to four ground hydrants, distributed two per block face. To distribute the water sources within the block, face the ground hydrants must be a minimum of 200' apart. All water systems shall meet CMU requirements. See TSMSS-Potable Water for details.

#### **16. Electric Service – Optional**

A 20-amp outlet is required in every other tree planter. There shall be one 100-amp outlet per mall block and it shall be located in a tree planter near the center of the block. All electrical service shall meet the appropriate codes for outdoor electric service.

**Maintenance**

The City shall maintain the Tryon Street ROW excluding any flowerpots.

9/28/01

## **Rail Transit Corridor Streetscape Standards**

### **Location**

The Rail Transit Corridor affected by these standards is located between the Convention Center and I-277 in Uptown. See the Core Uptown Streetscape Plan for a graphic representation of the standards required.

### **Escrow**

The City will discuss the option of establishing an escrow account for site improvements if the project's total block face frontage is 25% or less than the block frontage for the entire block.

### **References**

The specific details referenced in this plan are located in one of the following documents:

CCTO- City of Charlotte Tree Ordinance

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TSMSS- Tryon Street Mall Streetscape Standards (this is a specific section within the CMDS)

RTCSS- Rail Transit Corridor Streetscape Standards (this is a specific section within the CMDS)

Design Guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte

### **1. General Design Criteria – Required**

A. All buildings shall be setback a minimum of 35' from the centerline of the permanent Rail Transit Corridor tracks, per Section 9.906.9a. A minimum pedestrian path of 8' free of all elements including tree grates shall be maintained along the length of the Rail Transit Corridor. That path shall be setback 7' from the back of the curbing that edges the track bed to allow for the small maturing trees.

B. The first floors of all buildings along the Rail Transit Corridor, including structured parking, must be designed to encourage and complement pedestrian-scale interest and activity.

It is intended that this be accomplished principally by the use of transparent windows and doors arranged so that the uses are visible from and/or accessible to the street on at least 50% of the length of the first floor street frontage.

In addition combination of design elements must be used on the building facade and /or in relationship to the building at street level to animate and enliven the streetscape. These design elements may include but not be limited to the following: ornamentation; molding; string courses; belt courses; changes in material or color; architectural lighting; works of art; fountains and pools; street furniture; landscaping and garden areas; and display areas. In the event that ventilation grates or emergency exit doors are located at the first floor level in the building facade then they must be decorative.

Any design elements which extend into the public right-of-way on city or state maintained streets require an encroachment agreement with the City of Charlotte Department of Transportation (CDOT) or North Carolina Department of Transportation (NCDOT) respectively.

Where expanses of blank wall are necessary, they may not exceed 20 feet in length. A blank wall is a facade, which does not add to the character of the streetscape and does not contain transparent windows or doors or sufficient ornamentation, decoration or articulation as listed in the above paragraph.

The first floor and street level must be designed with attention to adjacent public or private open spaces and existing streetscape improvements. The provision of multiple entrances from the public sidewalk or open spaces is encouraged.

### **2. Trees – Required**

Required Trees- The required trees are small maturing trees. Required trees shall be spaced 60' on center (this spacing may be reduced by a maximum of 5' to adjust for site conditions). At on grade intersections, trees shall comply with CDOT sight distance triangles. All trees shall be irrigated and have a drain. The required small maturing trees must be planted in either a 4' grate or in tree planter with a minimum width of 7'(any tree planters shall terminate at station platforms). See CCTO for tree planting requirements. See RTCSS Tree Grate for details.

The small maturing trees shall be setback 5' from the back of curbing that edges the track bed. When locating trees offset a minimum of 3' from the catenary poles. The small maturing trees may be planted in pairs with the center point of each pair alternating with the pedestrian light poles. The trees shall be small maturing trees of one of the following species:

- Acer buergeranum/Trident Maple
- Acer campestre/Hedge Maple
- Carpinus caroliniana/American Hornbeam
- Lagerstroemia indica 'Muskogee'/Crape Myrtle
- Prunus xincam 'Okame'/Okame Cherry
- Prunus subhirtella 'Rosycloud'/Higan Cherry

The Rail Transit Corridor between streets shall contain the same species of small maturing trees on both sides of the track. The first trees planted in that section of the corridor shall determine the species.

### **3. Irrigation - Required**

A. Existing Irrigation System- If the area is presently served by the Rail Corridor Irrigation System, any alteration to the Rail Corridor setback area will continue to utilize the existing irrigation system. For existing irrigation system plans contact the City's Engineer. Proposed changes to the irrigation system must be submitted to the City prior to any alterations.

B. New Irrigation System- If a Rail Corridor setback area is not served by an existing irrigation system a new system shall be required. For a new system the meter, double check valve and controller shall be located underground but in a location accessible to the City maintenance crews; they cannot be located in buildings. The irrigation systems shall be maintained by the City of Charlotte. No additional structures shall be placed within the setback for the irrigation system. The double check valve shall be as per CMDS detail 40.04E.

### **4. Pavement - Required**

A. Concrete pavers shall be the sidewalk paver material for the Rail Transit Corridor. Precast concrete pavers shall be installed from the curbing that edges the track bed to the building face or to the 35' setback whichever is greater. The 9" x 4 1/2" pavers shall be a blend of three colors placed on a concrete sub slab base. See Design Guidelines for the Precast Paver System for the Public Sidewalks of Uptown Charlotte for paver specifications and details for pavers over concrete sub slab base.

B. If the pavement along the Rail Corridor Track drains toward the tracks then a trench drain shall be required within 10' of the curbing that defines the track area. If trench drains are required see RTCC Trench Drains for details

### **5. Trees - Optional**

Additional trees may be planted. Any additional trees shall be large maturing trees, which may be planted in either a 5' tree grates or in tree planter with a minimum width of 6'. See CCTO for tree planting requirements. The large maturing trees must be setback 15.5' from the back of the curbing that edges the track bed. Large maturing trees shall be spaced to align with the pedestrian lights. If the recommended trees are located in the Rail Transit Corridor ROW, then the existing irrigation (if available) will supply irrigation for those trees. If the recommended trees are outside the Rail Transit Corridor ROW then the developer will be required to maintain and provide an irrigation system for those trees.

Large maturing trees shall be of the following species:

Acer rubrum 'Armstrong'/Armstrong Maple

Acer rubrum 'Red Sunset'/Red Sunset Maple

Taxodium distichum/Bald Cypress

Ulmus parvifolia/Allee Lacebark Elm

Zelkova serrata 'Village Green'/ Japanese Zelkova

The Rail Transit Corridor between streets shall contain the same species of large maturing trees on both sides of the track. The first trees planted in that section of the corridor shall determine the species.

**6. Lighting – Optional**

A. Pedestrian lights shall be spaced 60' on center (this spacing may be reduced by a maximum of 5' to adjust for site conditions) to alternate with small maturing trees. One side of the Rail Transit Corridor must match the opposite side in the spacing of pedestrian lights. See RTCSS Lighting for details.

**7. Trash Receptacles - Optional**

A. Trash receptacles - One trash receptacle per 175' of linear frontage is required on each side of the Rail Transit Corridor tracks. The receptacles should be evenly distributed within that area. See RTCSS Trash Receptacle for details.

**8. Benches - Optional**

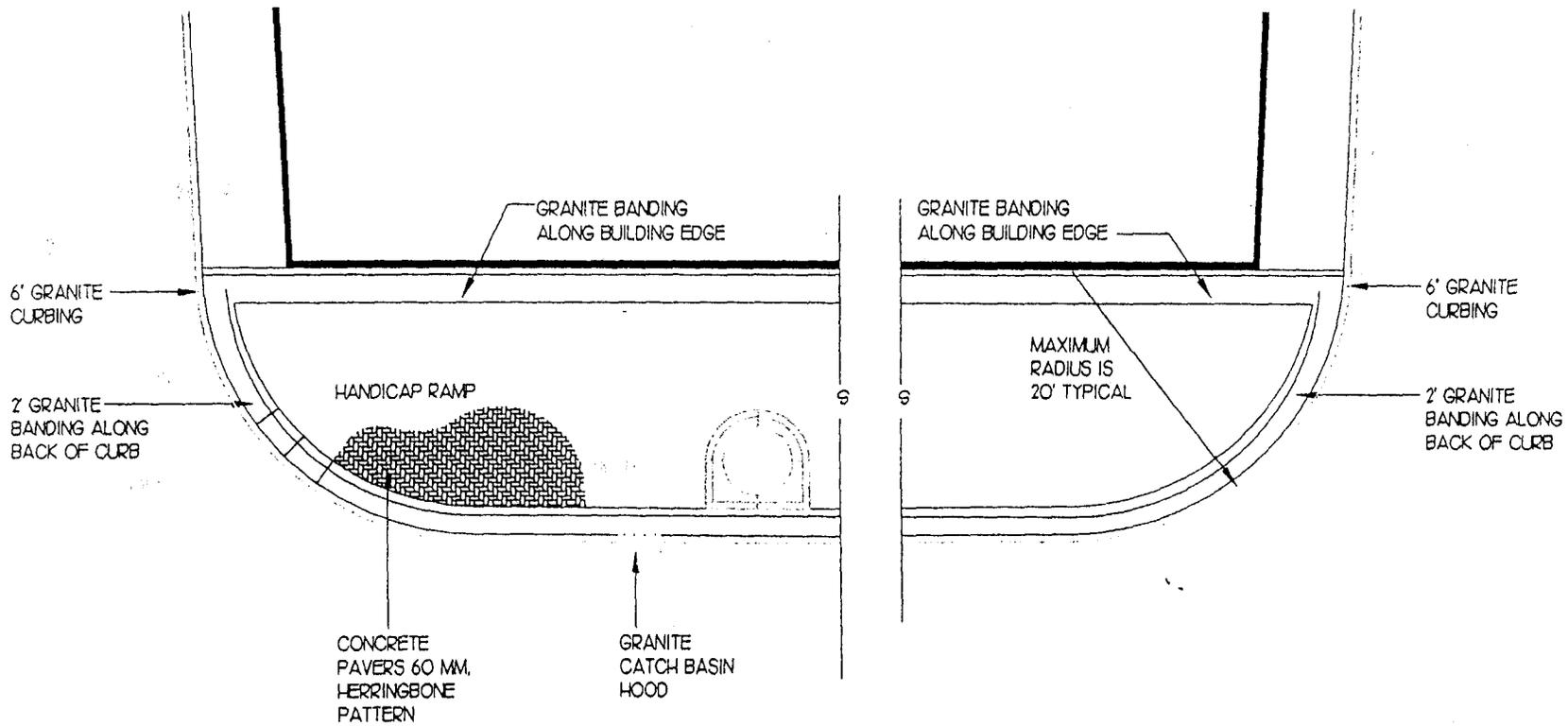
A. Benches- 12 linear feet of seating is required for every 75' of Rail Transit Corridor frontage. The seating may be provided with benches or other seating alternative outlined in the UMUD Ordinance. See RTCSS Bench for details. For other seating requirements see Section 9.906.4d. of the UMUD Ordinance.

**9. Flowerpots - Optional**

A. Flowerpots- Pots for additional flowers shall be one of the three standard in size, design and color. The flowerpots shall not be placed to impede pedestrian traffic through the area. A minimum 8' clear pedestrian area shall be maintained at all times. Maintenance for the flowerpots shall **not** be the responsibility of the City. If the pots are not maintained or are placed to block pedestrian traffic, the owner shall be given notice. If they do not comply, the City shall remove the flowerpots. See TSMSS Flowerpots for details.

**10. Maintenance**

A. The City shall maintain the area within the Rail Transit Corridor ROW unless superceded by an existing encroachment permit.



**NOTES:**

1. PAVERS PLACEMENT SHALL BEGIN AT CURBSIDE BANDING AND PROCEED TO BANDING ALONG BUILDING EDGE.
2. CATCH BASIN HOODS SHALL BE CONSTRUCTED OUT OF THE SAME GRANITE AS THE GRANITE CURBING.
3. A 2" GRANITE SHALL BE LOCATED ALONG THE BACK OF THE CURB. UNDER THE CURBSIDE GRANITE BANDING WILL BE A UTILITY CHASE FOR ELECTRICITY, POTABLE WATER AND IRRIGATION.
4. A 2" GRANITE BANDING SHALL BE LOCATED WHERE THE BUILDING INTERSECTS THE SIDEWALK, THAT BANDING IS LOCATED FROM THE CURBSIDE GRANITE BANDING AND CONTINUES TO THE CURBSIDE GRANITE BANDING ON THE OTHER SIDE OF THE BLOCK.
5. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.

REVISIONS

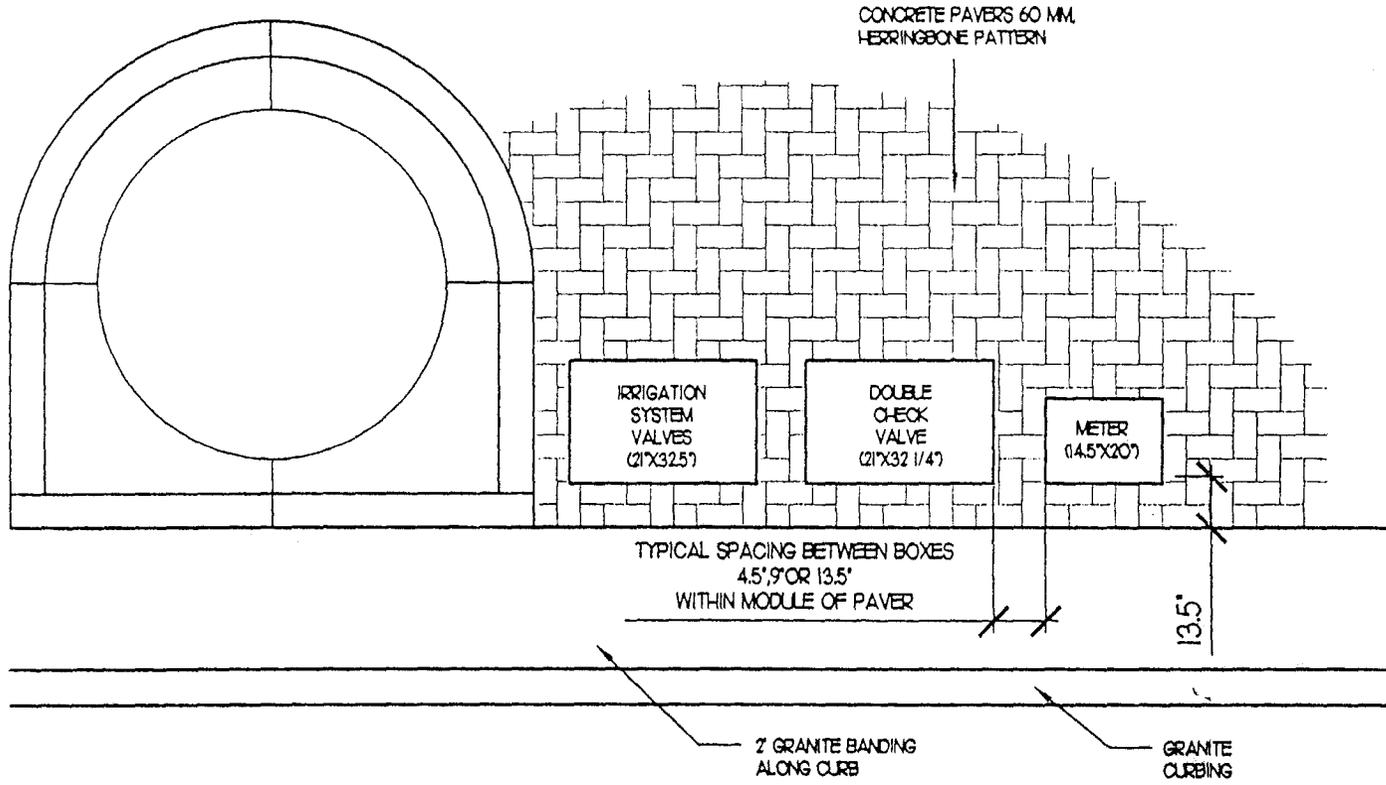
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CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
PAVEMENT

STD. NO.	REV.



CONCRETE PAVERS 60 MM.  
HERRINGBONE PATTERN

IRRIGATION  
SYSTEM  
VALVES  
(21'X32.5')

DOUBLE  
CHECK  
VALVE  
(21'X32 1/4')

METER  
(14.5'X20')

TYPICAL SPACING BETWEEN BOXES  
4.5', 9' OR 13.5'  
WITHIN MODULE OF PAVER

13.5'

2' GRANITE BANDING  
ALONG CURB

GRANITE  
CURBING

**NOTES**

1. EACH BLOCK FACE SHALL HAVE A SEPARATE DOUBLE CHECK VALVE, THAT DOUBLE CHECK VALVE, ACCOMPANYING METER AND CONTROLLER SHALL BE POSITIONED TO BE ABLE TO IRRIGATE THE ENTIRE BLOCK.
2. STREET TREES AND LARGE AND SMALL ORNAMENTAL PLANTER SHALL EACH BE ON A SEPARATE VALVE WITHIN A BLOCK FACE.
3. THE IRRIGATION CONTROLLERS SHALL BE LOCATED ON THE BENCH SUPPORT OF THE NEAREST BENCH.
4. IRRIGATION SYSTEM VALVES, DOUBLE CHECK VALVE, & METER MUST BE LOCATED UNDERGROUND.
5. EACH BOX SHALL BE A CONCRETE BOX WITH CONCRETE REMOVEABLE LID AND CAST IRON OPERABLE HAND ACCESS.
6. CITY SHALL PAINT CAST IRON OPERABLE HAND ACCESS TO MATCH PAVERS.

REVISIONS

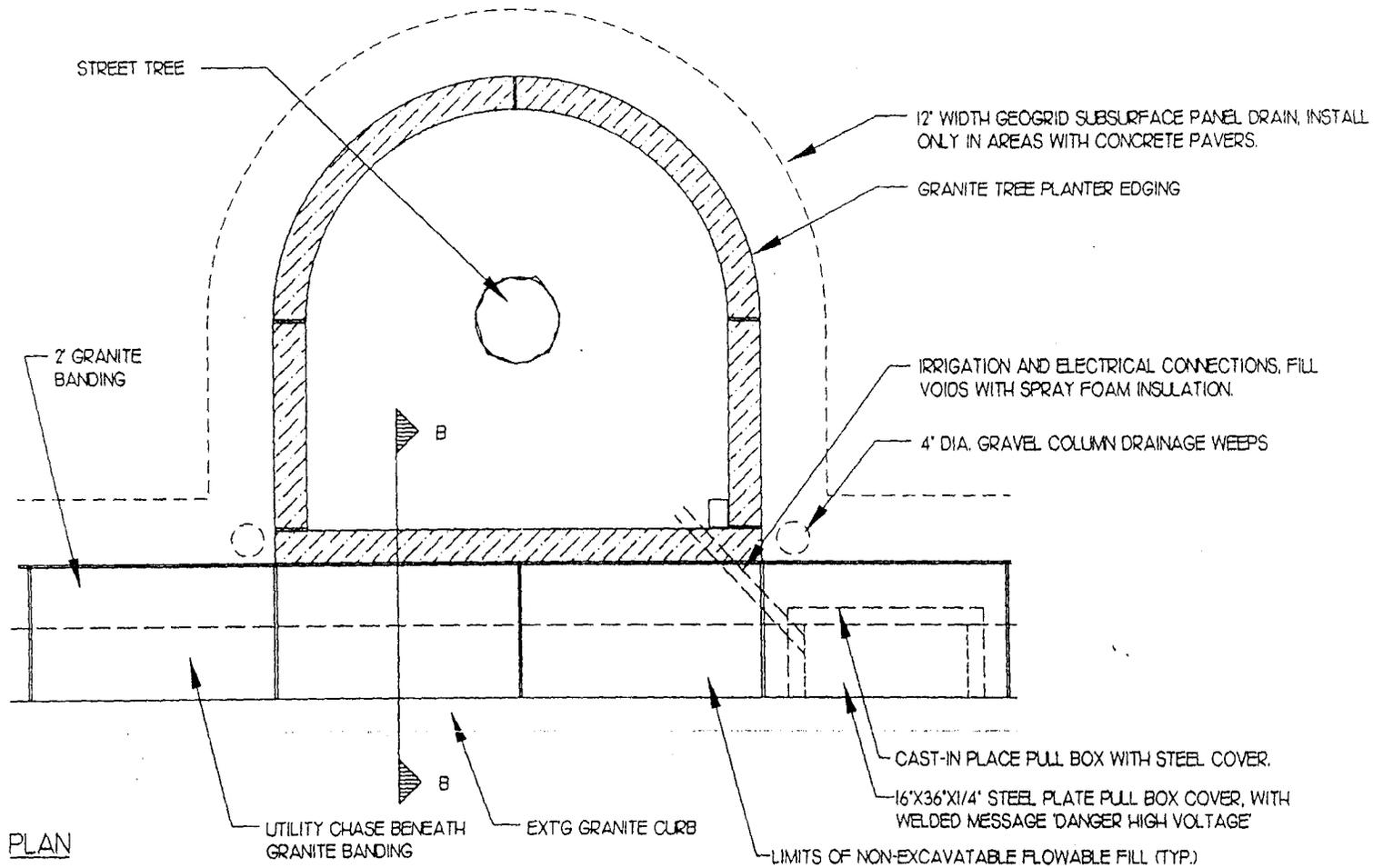
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**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

**TRYON STREET MALL STREETScape STANDARDS  
IRRIGATION**

STD. NO.	REV.



PLAN

**NOTES:**

1. THE REQUIRED IRRIGATION WATER, IRRIGATION CONTROLLER WIRE AND A 2" SPARE SLEEVE ARE LOCATED IN THE UTILITY CHASE.
2. PULL BOXES WILL BE LOCATED WHERE SERVICES ARE BROUGHT OUT OF THE CHASE I.E. AT STREET TREES, LARGE AND SMALL ORNAMENTAL PLANTERS.
3. THE GRANITE BANDING IMMEDIATELY ABOVE A PULL BOX SHALL BE MARKED WITH A 1" BRASS RING.
4. THE CHASE MAY ALSO CONTAIN OPTIONAL SERVICE SUCH AS POTABLE WATER AND ELECTRIC SERVICE. THE POSITIONING OF ALL SLEEVES SHALL MEET ALL EXISTING CODES.

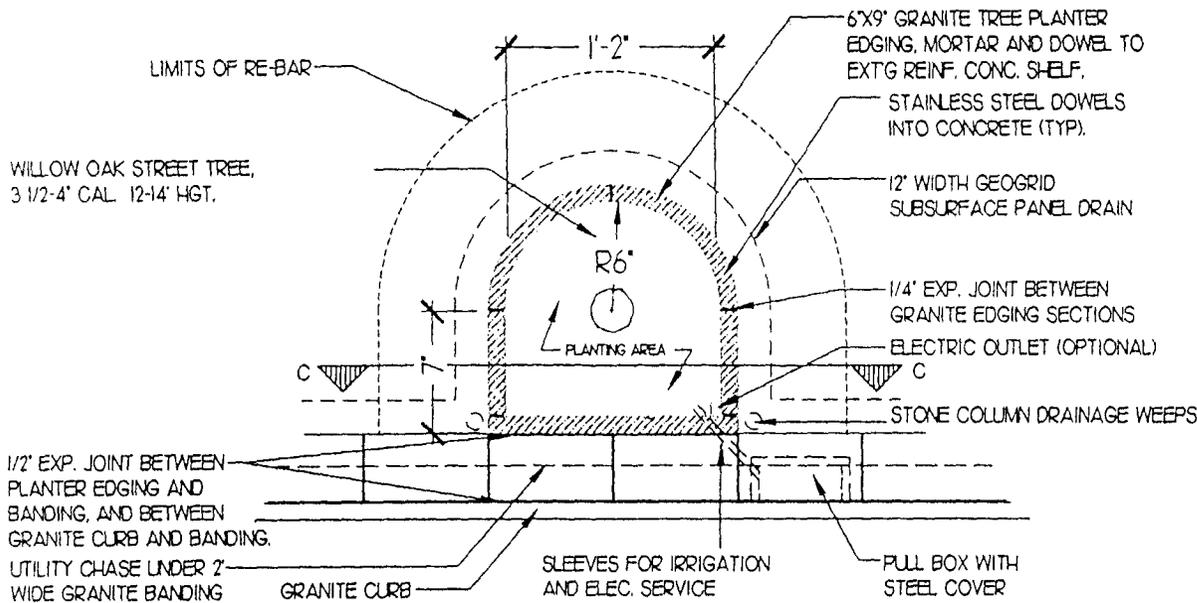
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REVISIONS		
NO.	DATE	DESCRIPTION

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
UTILITY CHASE

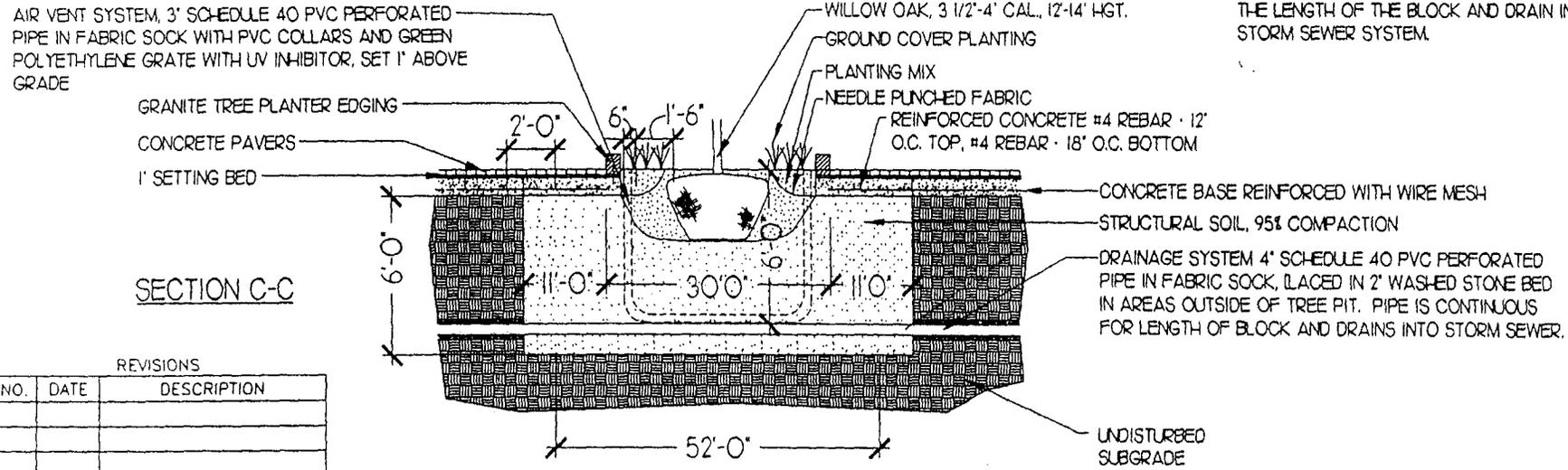
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PLAN

NOTES

1. STREET TREES ARE TO BE LOCATED 30' ON CENTER. ADJUSTMENTS FOR SITE CONDITIONS ALLOW FOR THE SPACING TO VARY FROM 27' ON CENTER TO 33' ON CENTER.
2. THE GRANITE EDGING SHALL HAVE A THERMAL FINISH ON THE TOP AND THE OUTSIDE EDGE, THE INSIDE EDGE SHALL HAVE A SAWN FINISH. THE OUTSIDE CORNER SHALL HAVE A STANDARD BLUNT FINISH.
3. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.
4. GROUND COVER SELECTION SHALL BE COORDINATED WITH THE CITY OF CHARLOTTE, LANDSCAPE MANAGEMENT DIVISION.
5. SEE CITY LANDSCAPE STANDARDS FOR BED PREPARATION, PLANT AND PLANTING MIX SPECIFICATIONS.
6. THERE MUST BE A CONTINUOUS DRAINAGE SYSTEM THROUGH ALL PLANTING AREAS. THAT DRAINAGE SYSTEM MUST HAVE POSITIVE FLOW FOR THE LENGTH OF THE BLOCK AND DRAIN INTO THE STORM SEWER SYSTEM.



SECTION C-C

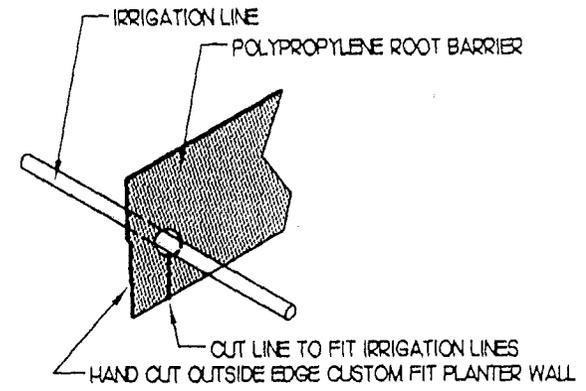
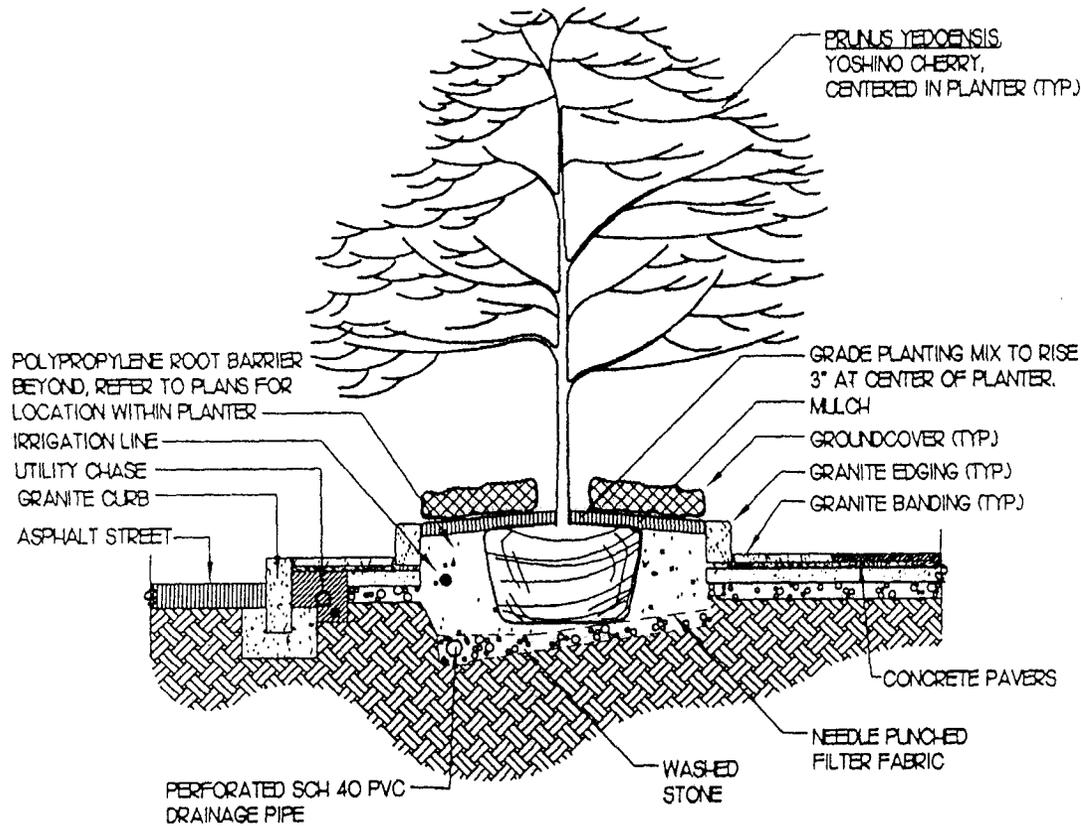
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NO.	DATE	DESCRIPTION

APPROVED DATE \_\_\_\_\_

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
STREET TREES

STD. NO.	REV.



ROOT BARRIER FORM DETAIL  
NOT TO SCALE

SECTION B-B

NOTES

1. THE LARGE AND SMALL ORNAMENTAL PLANTERS SHALL BE EDGED AND Banded WITH GRANITE AS SHOWN.
2. THE PLANTER EDGING SHALL HAVE A THERMAL FINISH ON THE TOP AND OUTSIDE EDGES, WITH A STANDARD BLUNT FINISH ON THE OUTSIDE CORNER. THE INTERIOR EDGE OF THE PLANTERS SHALL HAVE A SAWN EDGE.
3. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.
4. THE PLANTERS SHALL BE IRRIGATED WITH DRIP IRRIGATION AND SHALL BE ON A SEPARATE VALVE FROM THE STREET TREES. WITHIN A BLOCK A SINGLE VALVE SHALL CONTROL ALL ORNAMENTAL MATERIALS.
5. THERE MUST BE A CONTINUOUS DRAINAGE SYSTEM THROUGH ALL PLANTING AREAS. THAT DRAINAGE SYSTEM MUST HAVE POSITIVE FLOW FOR THE LENGTH OF THE BLOCK AND DRAIN INTO THE STORM SEWER SYSTEM.
6. GROUND COVER AND ANNUAL SELECTION SHALL BE COORDINATED WITH THE CITY OF CHARLOTTE, LANDSCAPE MANAGEMENT DIVISION.
7. SEE CITY LANDSCAPE STANDARDS FOR BED PREPARATION, PLANT AND PLANTING MIX SPECIFICATIONS.

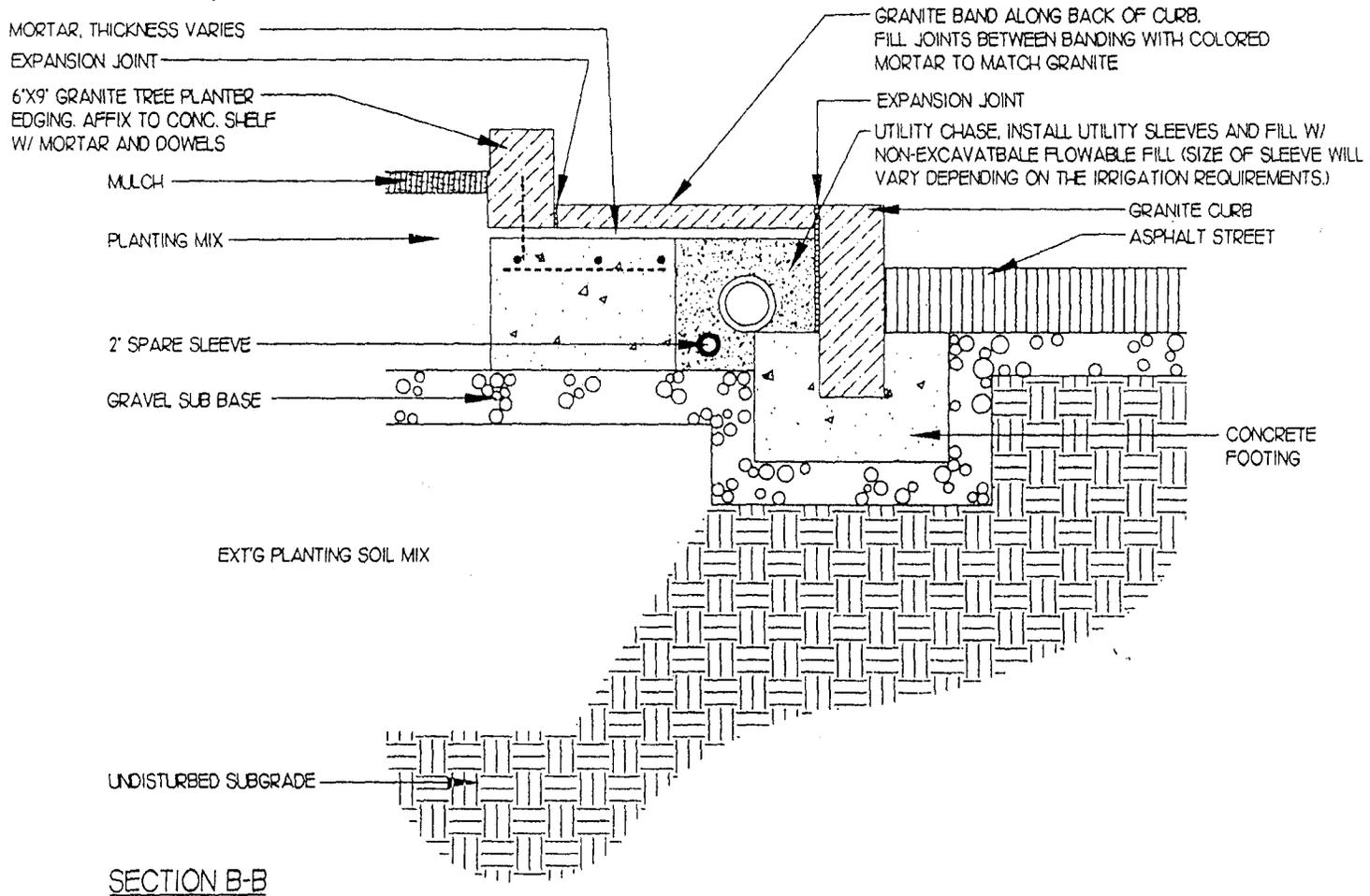
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REVISIONS		
NO.	DATE	DESCRIPTION

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
LARGE AND SMALL ORNAMENTAL PLANTER

STD. NO.	REV.



SECTION B-B

NOTES:

1. THE REQUIRED IRRIGATION WATER, IRRIGATION CONTROLLER WIRE AND A 2' SPARE SLEEVE ARE LOCATED IN THE UTILITY CHASE.
2. PULL BOXES WILL BE LOCATED WHERE SERVICES ARE BROUGHT OUT OF THE CHASE I.E. AT STREET TREES, LARGE AND SMALL ORNAMENTAL PLANTERS.
3. THE GRANITE BANDING IMMEDIATELY ABOVE A PULL BOX SHALL BE MARKED WITH A 1" BRASS RING.
4. THE CHASE MAY ALSO CONTAIN OPTIONAL SERVICE SUCH AS POTABLE WATER AND ELECTRIC SERVICE. THE POSITIONING OF ALL SLEEVES SHALL MEET ALL EXISTING CODES.

APPROVED DATE \_\_\_\_\_

REVISIONS		
NO.	DATE	DESCRIPTION

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETScape STANDARDS  
UTILITY CHASE

STD. NO.	REV.

12' GEOGRID SUBSURFACE  
PANEL DRAIN

CONC. PAVER, HERRINGBONE  
PATTERN 90 DEGREES TO STREET.  
PAVERS SHALL BE LAYED BEGINNING  
AT STREET SIDE OF SIDEWALK.

SAND SETTING BED (1" MIN)  
GEOTEXTILE FILTER FABRIC,  
INSTALL ON TOP OF CONC. BASE  
UNDER ALL CONC. PAVERS

CONC. BASE  
GRAVEL SUB BASE

4" DIA. PERF. PVC COLUMN DRAIN  
BACK FILL W/ GRAVEL. CUT  
THROUGH EXT'G CONC. BASE,  
GRAVEL AND SUBGRADE FOR 24"  
DEPTH.

2" WIDE GRANITE BAND ALONG BACK OF CURB. RESET W/  
MORTAR AFTER CHASE HAS BEEN INSTALLED.  
FILL JOINTS BETWEEN BANDING WITH COLOR MORTAR THAT  
MATCHES GRANITE.

EXPANSION JOINT  
CHASE, INSTALL UTILITY SLEEVES AND FILL W/  
NON-EXCAVATABLE FLOWABLE FILL.

GRANITE CURB  
ASPHALT STREET

CONCRETE FOOTING

UNDISTURBED SUBGRADE

**NOTES**

1. PAVERS PLACEMENT SHALL BEGIN AT CURBSIDE BANDING AND PROCEED TO BANDING ALONG BUILDING EDGE.
2. CATCH BASIN HOODS SHALL BE CONSTRUCTED OUT OF THE SAME GRANITE AS THE GRANITE CURBING.
3. A 2" GRANITE SHALL BE LOCATED ALONG THE BACK OF THE CURB. UNDER THE CURBSIDE GRANITE BANDING WILL BE A UTILITY CHASE FOR ELECTRICITY, POTABLE WATER AND IRRIGATION.
4. A 2" GRANITE BANDING SHALL BE LOCATED WHERE THE BUILDING INTERSECTS THE SIDEWALK, THAT BANDING IS LOCATED FROM THE CURBSIDE GRANITE BANDING AND CONTINUES TO THE CURBSIDE GRANITE BANDING ON THE OTHER SIDE OF THE BLOCK.
5. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.

REVISIONS

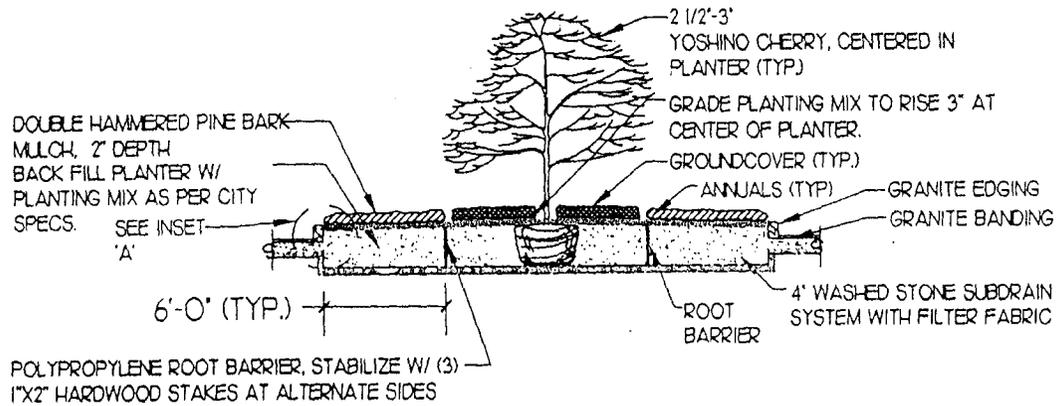
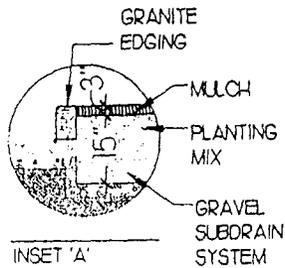
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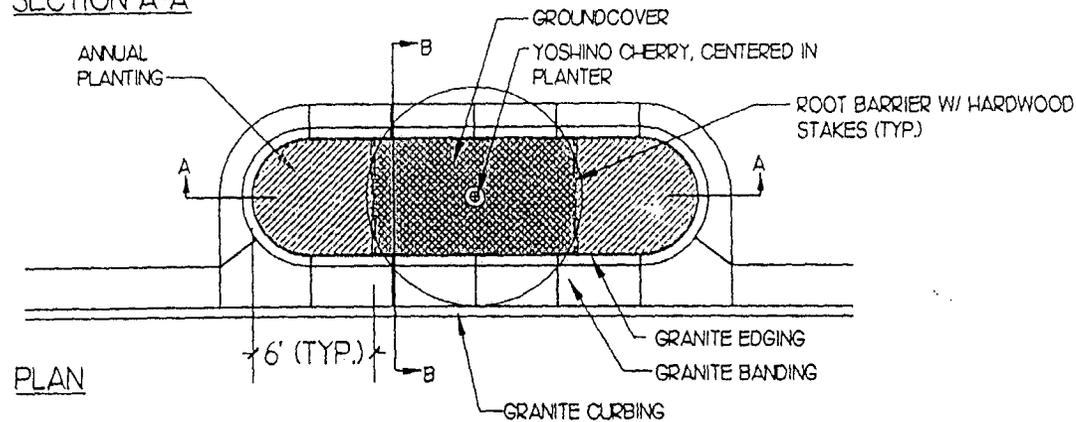
CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
PAVEMENT

STD. NO.	REV.



SECTION A-A



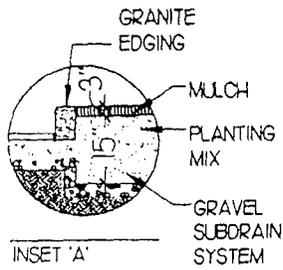
NOTES:

1. THE LARGE AND SMALL ORNAMENTAL PLANTERS SHALL BE EDGED AND Banded WITH GRANITE AS SHOWN.
2. THE PLANTER EDGING SHALL HAVE A THERMAL FINISH ON THE TOP AND OUTSIDE EDGES, WITH A STANDARD BLUNT FINISH ON THE OUTSIDE CORNER. THE INTERIOR EDGE OF THE PLANTERS SHALL HAVE A SAWN EDGE.
3. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.
4. THE PLANTERS SHALL BE IRRIGATED WITH DRIP IRRIGATION AND SHALL BE ON A SEPARATE VALVE FROM THE STREET TREES. WITHIN A BLOCK A SINGLE VALVE SHALL CONTROL ALL ORNAMENTAL MATERIALS.
5. THERE MUST BE A CONTINUOUS DRAINAGE SYSTEM THROUGH ALL PLANTING AREAS. THAT DRAINAGE SYSTEM MUST HAVE POSITIVE FLOW FOR THE LENGTH OF THE BLOCK AND DRAIN INTO THE STORM SEWER SYSTEM.
6. GROUNDCOVER AND ANNUAL SELECTION SHALL BE COORDINATED WITH THE CITY OF CHARLOTTE, LANDSCAPE MANAGEMENT DIVISION.
7. SEE CITY LANDSCAPE STANDARDS FOR BED PREPARATION, PLANT AND PLANTING MIX SPECIFICATIONS.

APPROVED DATE \_\_\_\_\_

REVISIONS		
NO.	DATE	DESCRIPTION

<p>CHARLOTTE - MECKLENBURG LAND DEVELOPMENT STANDARDS</p>	<p>TRYON STREET MALL STREETSCAPE STANDARDS SMALL ORNAMENTAL PLANTER</p>	<table border="1" style="font-size: small;"> <tr> <th>STD. NO.</th> <th>REV.</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	STD. NO.	REV.		
STD. NO.	REV.					



DOUBLE HAMMERED PINE BARK MULCH, 2" DEPTH

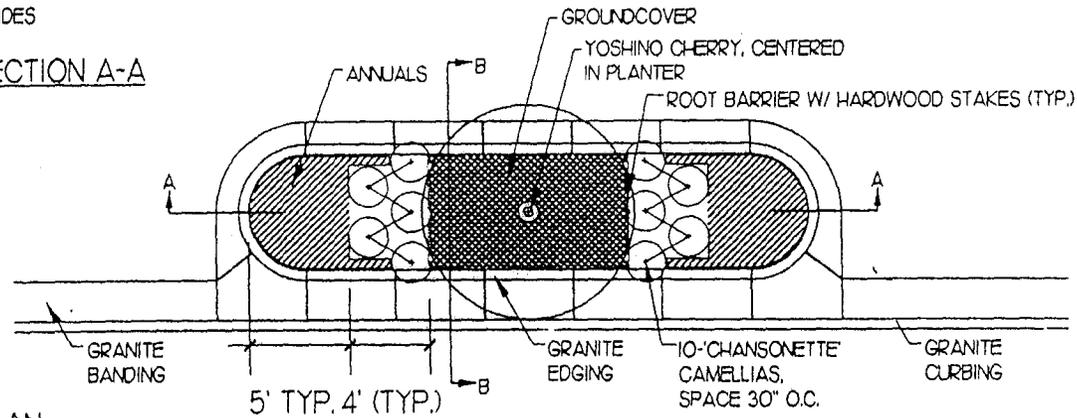
BACK FILL PLANTER W/ PLANTING MIX AS PER CITY SPECS.

SEE INSET 'A'

9' (TYP.)

POLYPROPYLENE ROOT BARRIER, STABILIZE W/ (3) 1"X2" HARDWOOD STAKES AT ALTERNATE SIDES

SECTION A-A



PLAN

NOTES:

1. THE LARGE AND SMALL ORNAMENTAL PLANTERS SHALL BE EDGED AND BANDED WITH GRANITE AS SHOWN.
2. THE PLANTER EDGING SHALL HAVE A THERMAL FINISH ON THE TOP AND OUTSIDE EDGES, WITH A STANDARD BLUNT FINISH ON THE OUTSIDE CORNER. THE INTERIOR EDGE OF THE PLANTERS SHALL HAVE A SAWN EDGE.
3. EXPANSION JOINTS SHALL BE OF A MATERIAL THAT ALLOWS FOR CONTRACTION AND EXPANSION OF MATERIALS AND ALSO MATCHES THE COLOR OF THE SURROUNDING MATERIALS.
4. THE PLANTERS SHALL BE IRRIGATED WITH DRIP IRRIGATION AND SHALL BE ON A SEPARATE VALVE FROM THE STREET TREES. WITHIN A BLOCK A SINGLE VALVE SHALL CONTROL ALL ORNAMENTAL MATERIALS.
5. THERE MUST BE A CONTINUOUS DRAINAGE SYSTEM THROUGH ALL PLANTING AREAS. THAT DRAINAGE SYSTEM MUST HAVE POSITIVE FLOW FOR THE LENGTH OF THE BLOCK AND DRAIN INTO THE STORM SEWER SYSTEM.
6. GROUND COVER AND ANNUAL SELECTION SHALL BE COORDINATED WITH THE CITY OF CHARLOTTE, LANDSCAPE MANAGEMENT DIVISION.
7. SEE CITY LANDSCAPE STANDARDS FOR BED PREPARATION, PLANT AND PLANTING MIX SPECIFICATIONS.

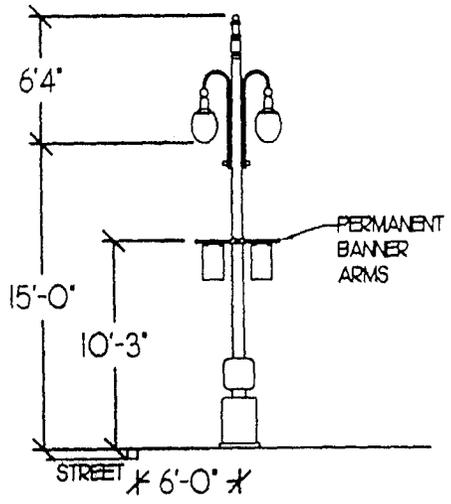
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REVISIONS		
NO.	DATE	DESCRIPTION

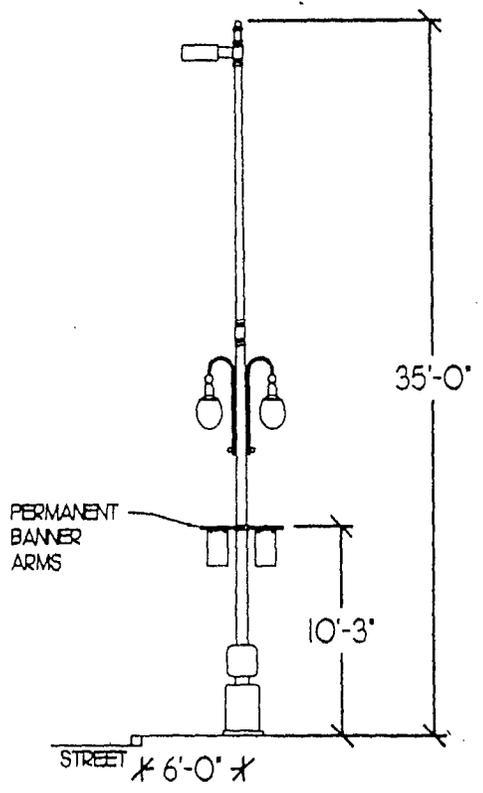
CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETSCAPE STANDARDS  
LARGE ORNAMENTAL PLANTER

STD. NO.	REV.



ELEVATION  
PEDESTRIAN FIXTURE



ELEVATION  
PEDESTRIAN FIXTURE  
WITH SHOEBOX FIXTURE

NOTES:

1. PEDESTRIAN AND SHOEBOX FIXTURES SHALL MATCH THE EXISTING IN DESIGN COLOR FINISH AND SPACING.
2. FINISH SHALL BE POWDER COAT TO MATCH THE DURON CUSTOM MIX OF: 3 GAL. #12-40013 DURACLAD, WOODLAND GREEN, 2 GAL. #10-41614 HOUSE & TRIM, CHARLESTON GREEN, 1 GAL. #1252313 DURACLAD IMPERIAL BLUE, 93 OZ. #27-11117 OR EQUAL.
3. PEDESTRIAN FIXTURES SHALL BE DOUBLE GOLBE 175-WATT MERCURY HALIDE.
4. BANNER ARMS SHALL BE PERMANENTLY INSTALLED AS PER EXISTING POLES. THE POLES CLOSEST TO THE INTERSECTIONS WITH THE PEDESTRIAN SIGNALS SHALL NOT HAVE BANNER ARMS.
5. MAST ARMS SHALL BE AS PER EXISTING MAST ARMS.
6. CONTACT DUKE POWER FOR MODEL NUMBER SPECIFICATIONS AND MANUFACTURER.

REVISIONS

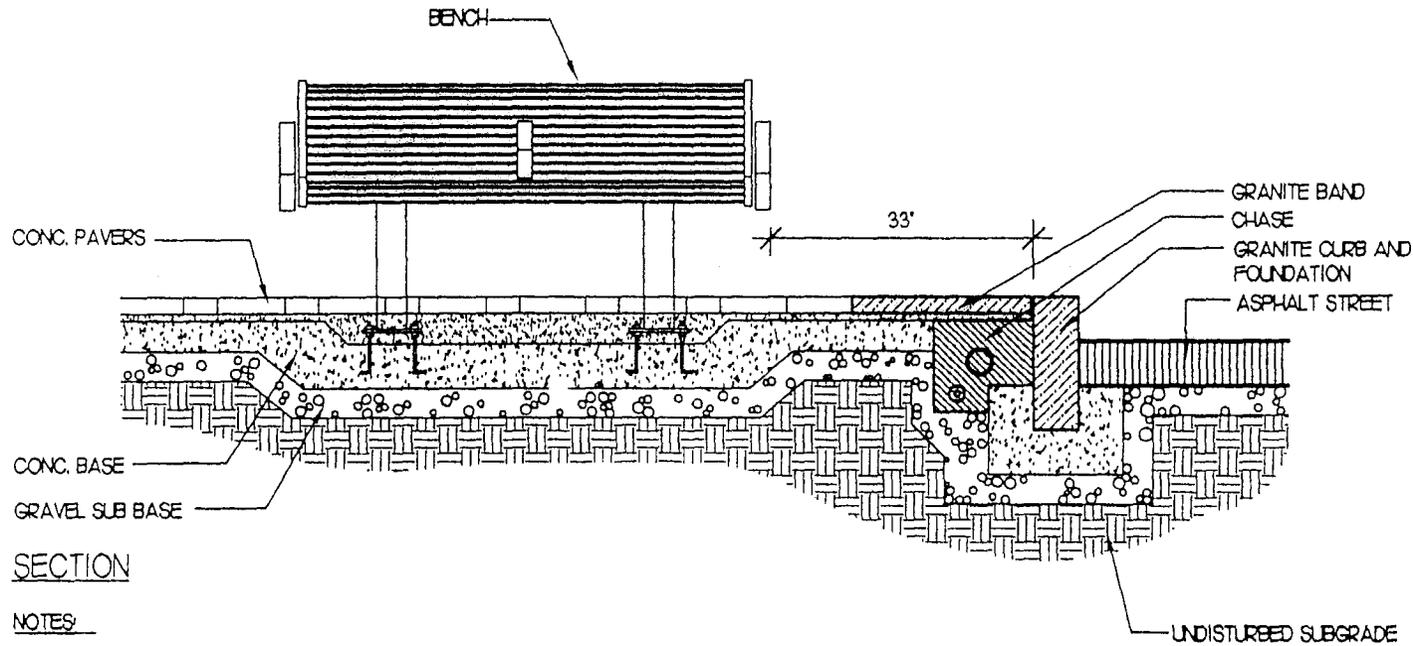
NO.	DATE	DESCRIPTION

APPROVED DATE \_\_\_\_\_

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETScape STANDARDS  
LIGHTING

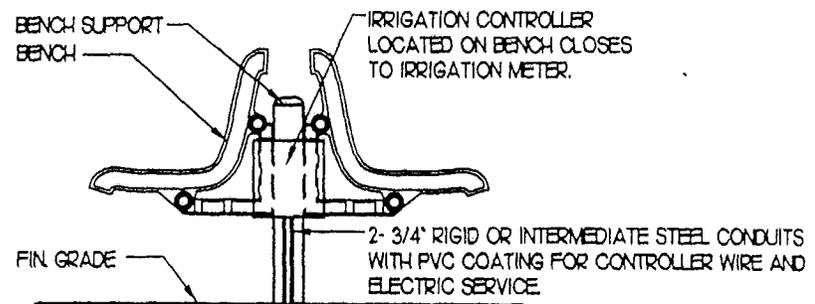
STD. NO.	REV.



SECTION

NOTES

1. BENCH FRAMES ARE TO BE POWDER COATED TO MATCH THE DURON CUSTOM MIX OF 3 GAL. #12-40013 DURACLAD WOODLAND GREEN, 2 GAL. #10-41614 HOUSE & TRIM, CHARLESTON GREEN, 1 GAL. #1252313 DURACLAD IMPERIAL BLUE, 93 OZ. #27-11117 COLORANT.
2. WOODEN BENCH SLATS ARE TO BE PAINTED TO MATCH THE EXISTING COLOR.
3. SUPPORT POSTS MUST NOT EXTEND ABOVE THE BENCH BACK AND SHALL BE INSET 1'-3" FROM THE OUTSIDE EDGE OF THE BENCH TO THE CENTERLINE OF THE POST.
4. MANUFACTURER:  
URBAN ACCESSORIES  
P.O. BOX 310, 20004 144TH AVE, NE, WOODINVILLE, WA 98072 (425) 487.0488  
OR APPROVED EQUAL



SECTION

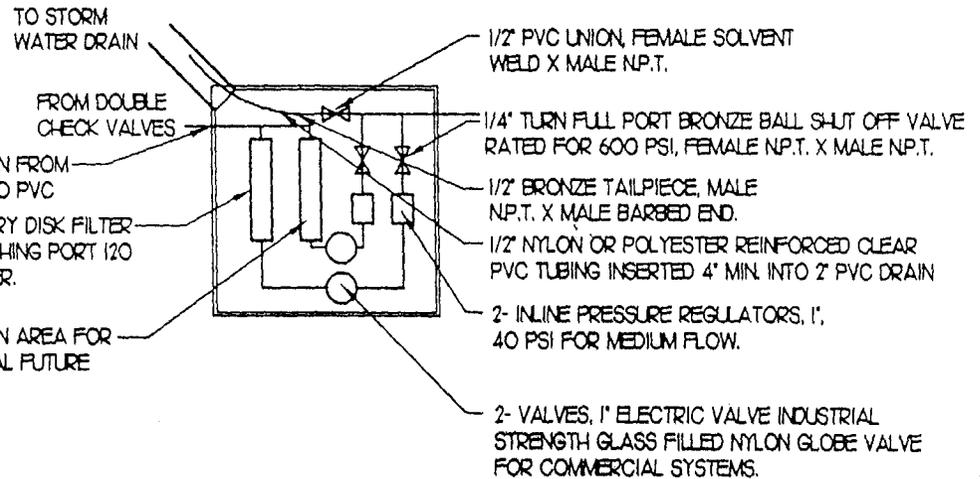
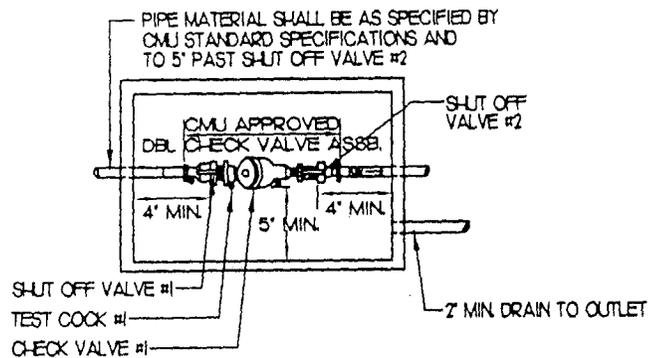
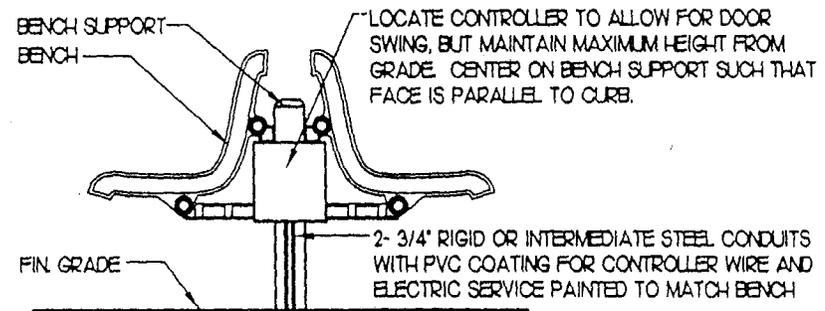
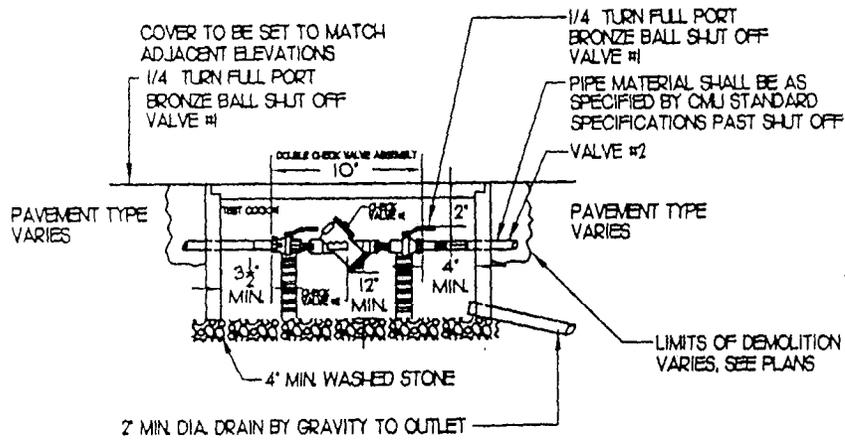
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REVISIONS		
NO.	DATE	DESCRIPTION

**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

**TRYON STREET MALL STREETScape STANDARDS  
BENCH**

STD. NO.	REV.



**NOTES**

1. EACH BLOCK FACE SHALL HAVE A SEPARATE DOUBLE CHECK VALVE. THAT DOUBLE CHECK VALVE, ACCOMPANYING METER AND CONTROLLER SHALL BE POSITIONED TO BE ABLE TO IRRIGATE THE ENTIRE BLOCK.
2. STREET TREES AND LARGE AND SMALL ORNAMENTAL PLANTER SHALL EACH BE ON A SEPARATE VALVE WITHIN A BLOCK FACE.
3. THE IRRIGATION CONTROLLERS SHALL BE LOCATED ON THE BENCH SUPPORT OF THE NEAREST BENCH.

**REVISIONS**

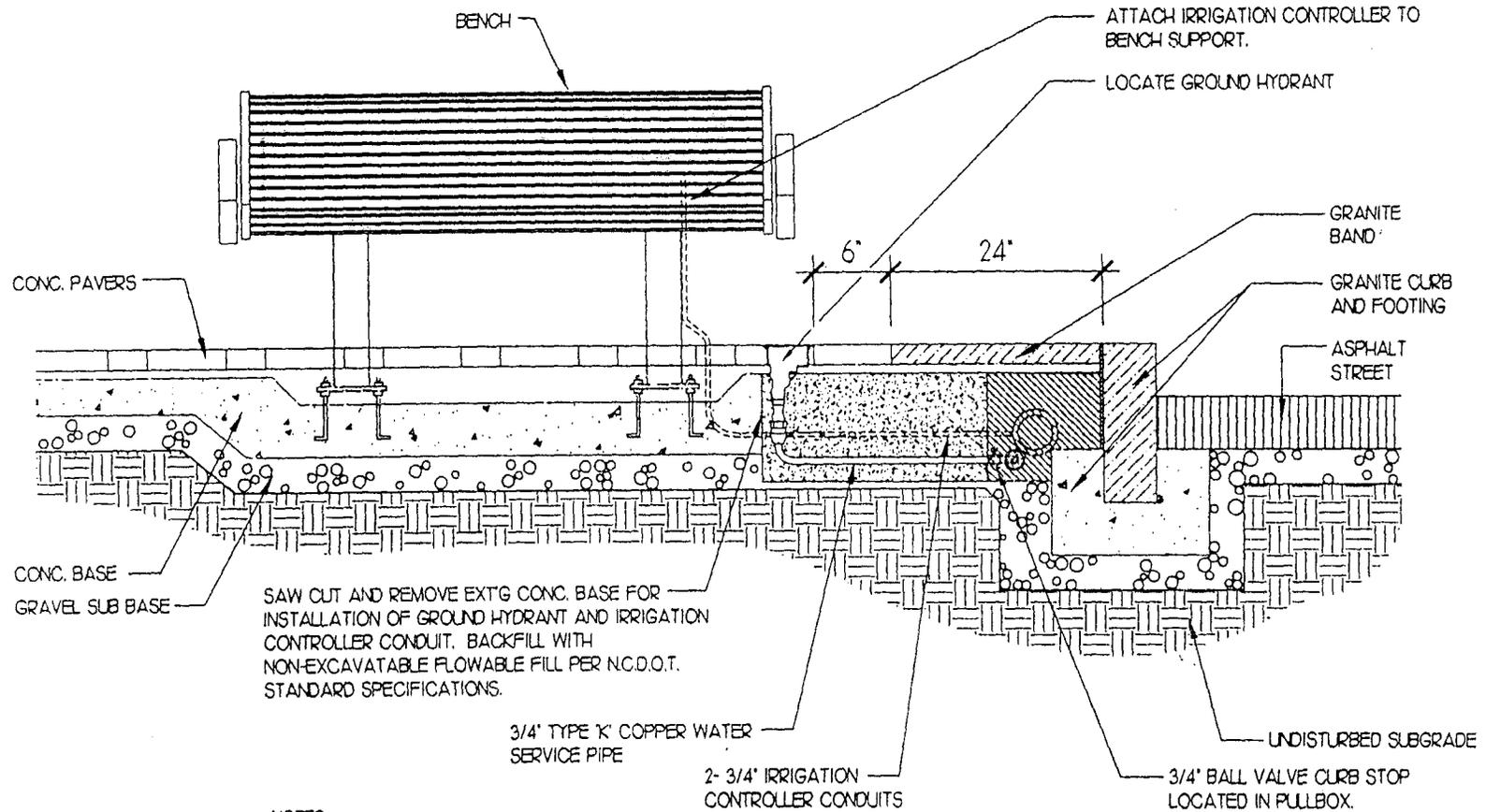
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APPROVED DATE \_\_\_\_\_

**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

**TRYON STREET MALL STREETScape STANDARDS  
IRRIGATION**

STD. NO.	REV.



SAW CUT AND REMOVE EXT'G CONC. BASE FOR INSTALLATION OF GROUND HYDRANT AND IRRIGATION CONTROLLER CONDUIT. BACKFILL WITH NON-EXCAVATABLE FLOWABLE FILL PER N.C.D.O.T. STANDARD SPECIFICATIONS.

**NOTES:**

1. POTABLE WATER IS SUPPLIED FOR FESTIVALS AND CLEANING EFFORTS AT TWO LOCATIONS PER BLOCK FACE IN GROUND HYDRANTS. THERE SHALL BE ONE BACKFLOW PREVENTER PER BLOCK AREA THAT WILL SUPPLY WATER TO FOUR GROUND HYDRANTS, TWO PER BLOCK FACE.
2. BACKFLOW PREVENTERS FOR THE POTABLE WATER ARE LOCATED IN EITHER BUS SHELTERS OR KIOSKS.
3. THE PIPES TO AND FROM THE BACKFLOW PREVENTER SHALL BE HEATED WITH HEAT TAPE TO PREVENT FREEZING. THERE SHALL BE ONE BACKFLOW PREVENTER PER BLOCK AREA THAT WILL SUPPLY WATER TO FOUR GROUND HYDRANTS, TWO PER BLOCK FACE.

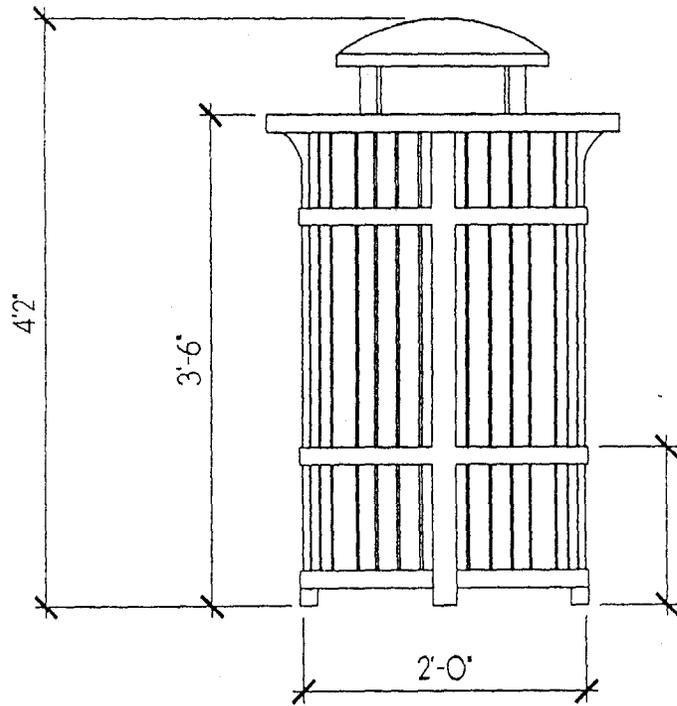
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NO.	DATE	DESCRIPTION

APPROVED DATE \_\_\_\_\_

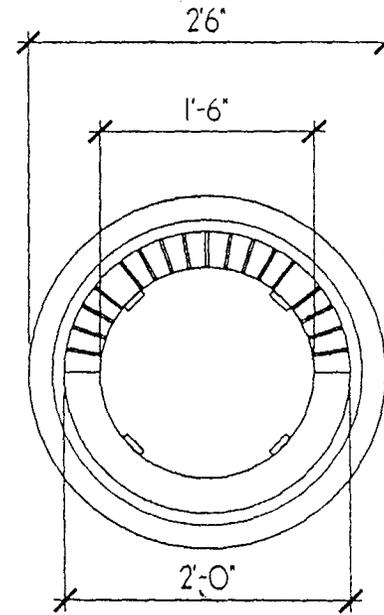
CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TRYON STREET MALL STREETScape STANDARDS  
POTABLE WATER

STD. NO.	REV.



THIS IS A CUSTOM  
EXTENSION OF A  
STANDARD DESIGN



ELEVATION

PLAN

**NOTES:**

1. TRASH RECEPTACLE SHALL BE A STEEL 32-GALLON RECEPTACLE WITH DOMED LID, A PLASTIC LINER, AND A SIDE DOOR ACCESS FOR REMOVAL OF LINER.
2. FINISH SHALL BE POWDER COATED DARK GREEN TO MATCH DURON CUSTOM MIX OF: 3 GAL. #12-40013 DURACLAD, WOODLAND GREEN, 2 GAL. #10-41614 HOUSE & TRIM, CHARLESTON GREEN, 1 GAL. #1252313 DURACLAD IMPERIAL BLUE, 93 OZ. #27-11117 COLORANT.
3. MANUFACTURER:  
KEYSTONE RIDGE DESIGNS, INC.  
P.O. BOX 2008, 670 MERCER RD., BUTLER, PA 16003  
(800) 284.8208  
MODEL: HI-32ED W/ ASH LID  
OR APPROVED EQUAL

REVISIONS

NO.	DATE	DESCRIPTION

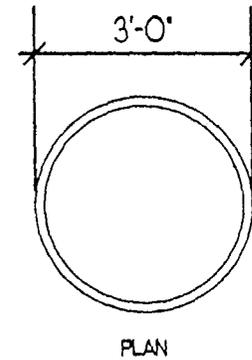
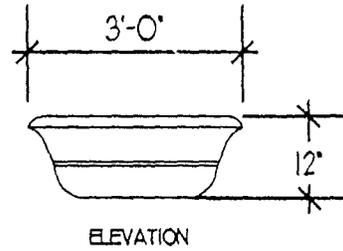
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CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

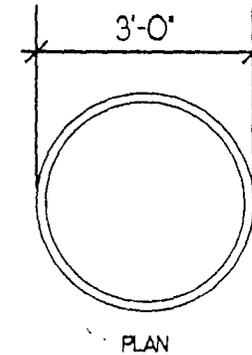
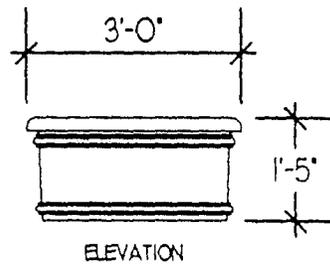
TRYON STREET MALL STREETScape STANDARDS  
TRASH RECEPTACLES

STD. NO.	REV.

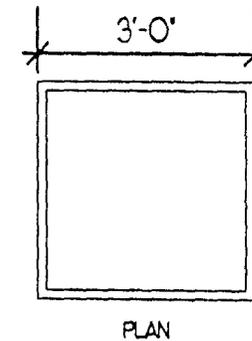
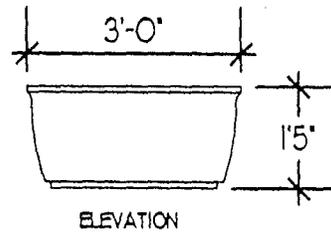
OPTION A - ROUND



OPTION B - ROUND



OPTION C - SQUARE



NOTES

1. FLOWERPOTS SHALL BE OF THE SAME DIMENSIONS AND DESIGN AS SHOWN.
2. MATERIALS FOR PLANTERS SHALL BE CAST STONE OR A MATERIAL THAT CAN BE FINISHED TO APPEAR LIKE A PAINTED SURFACE. PLASTIC PLANTERS ARE NOT ALLOWED.
3. IF IT IS A CAST STONE PRODUCT THE COLOR SHALL BE A NATURAL STONE COLOR OR A TERRACOTTA COLOR. IF THE PLANTER IS PAINTED OR HAS A PAINTED SURFACE APPEARANCE THE COLOR SHALL MATCH THE MALL GREEN (DURON CUSTOM MIX OF 3 GAL #12-40013 DURA CLAD, WOODLAND GREEN, 2 GAL #10-41614 HOUSE E TRIM, CHARLESTON GREEN, 1 GAL #1252313 DURA CLAD IMPERIAL BLUE, 93 OZ #27-11117 COLORANT) OR APPROVED EQUAL.
4. MANUFACTURER:

DURA ART STONE (ALL OPTIONS)  
 6835 SOUTH LAKE PARKWAY, MORROW, GA 30260 (800)232.0332  
 OPTION A - MODEL: RIBBED, RB  
 OPTION B - MODEL: MEDITERRANEAN, X ROUND  
 OPTION C - BILTMORE, BLS SQUARE  
 OR APPROVED EQUAL

REVISIONS

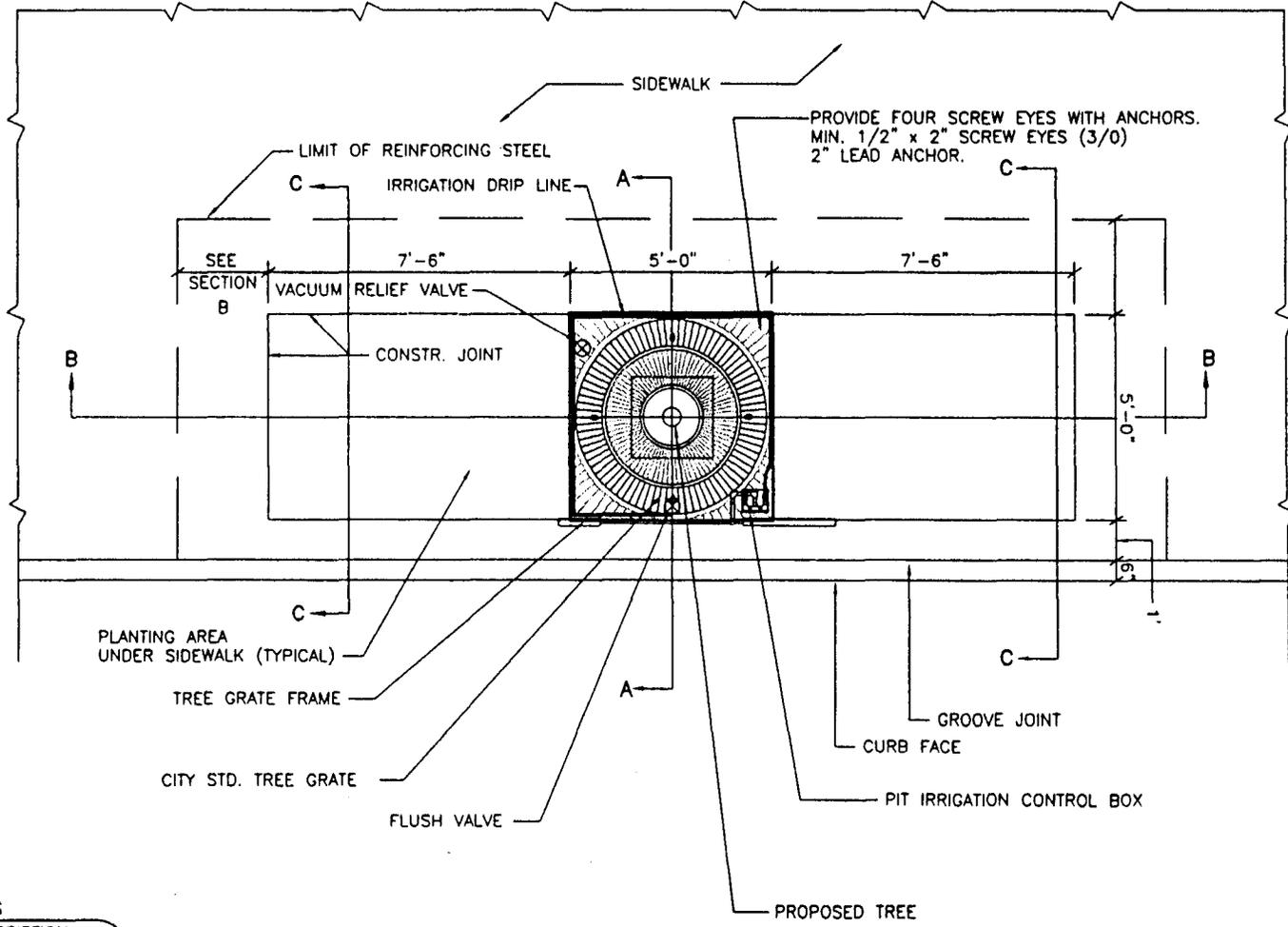
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APPROVED DATE \_\_\_\_\_

**CHARLOTTE - MECKLENBURG  
 LAND DEVELOPMENT  
 STANDARDS**

**TRYON STREET MALL STREETSCAPE STANDARDS  
 FLOWERPOTS**

STD. NO.	REV.



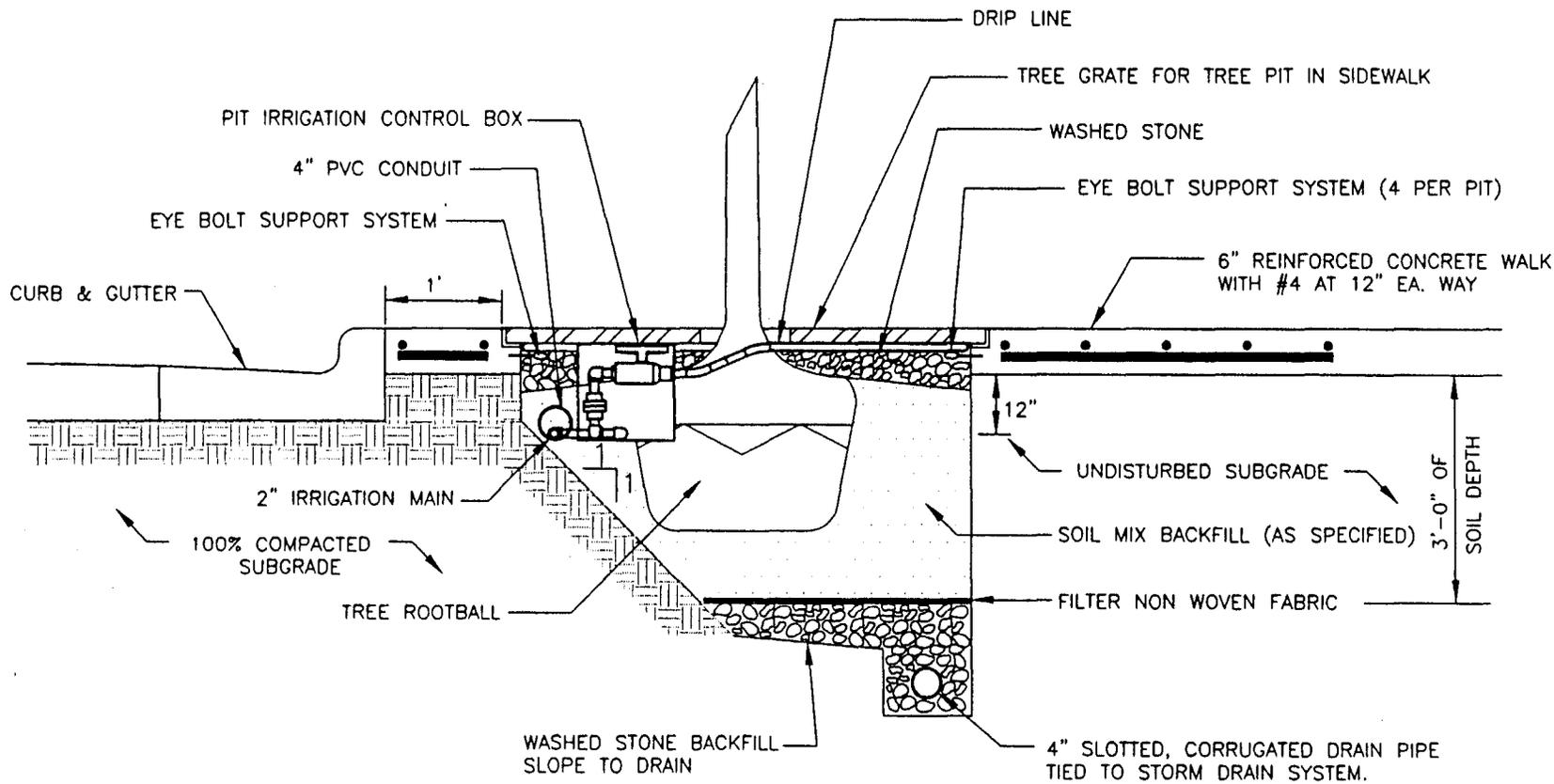
REVISIONS		
NO.	DATE	DESCRIPTION
1	1/99	SECTION C

APPROVED DATE \_\_\_\_\_

**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

**TREE PIT WITH  
GRATE IN SIDEWALK (PLAN)**

STD. NO.	REV.
40.03	



SECTION A

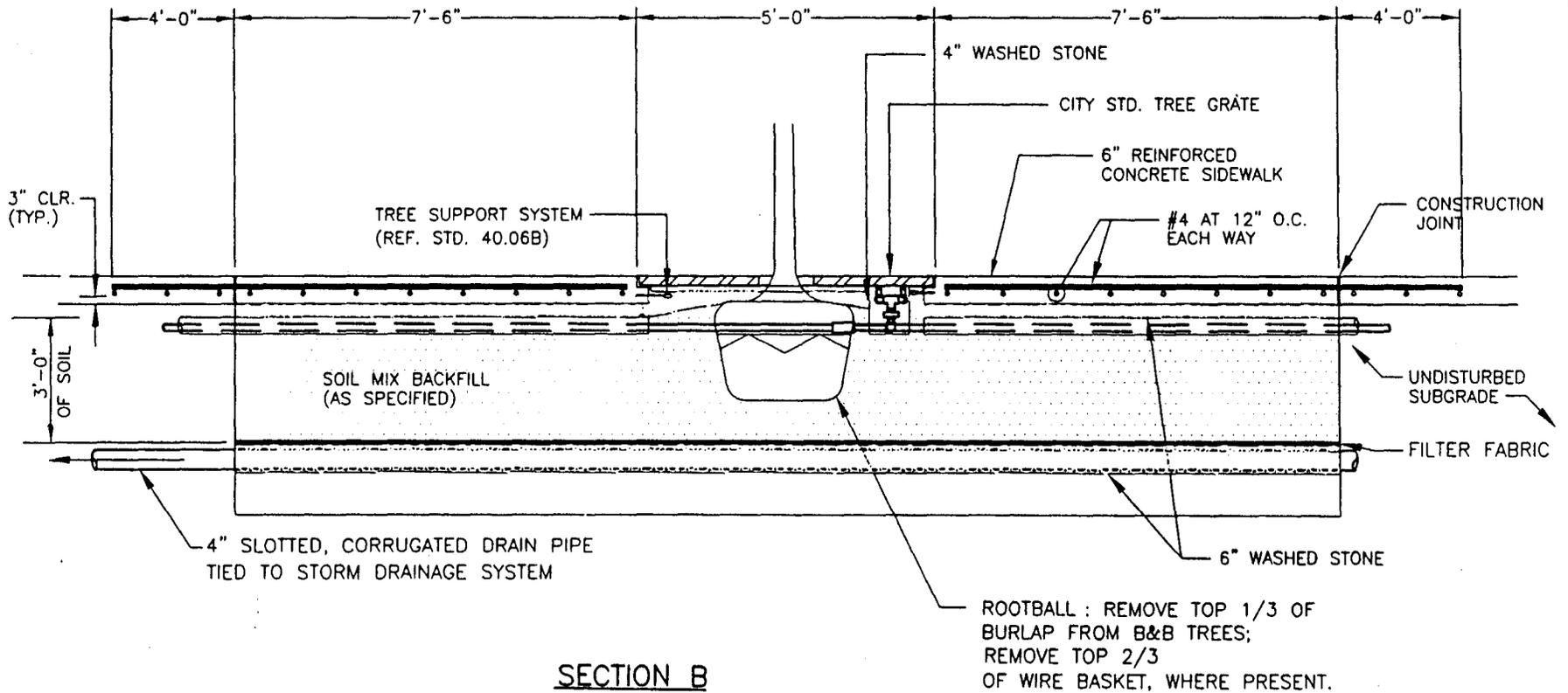
REVISIONS		
NO.	DATE	DESCRIPTION
1	12/98	Detail Section A
2	12/98	Revised Detail Dwg.
		Section A

APPROVED DATE \_\_\_\_\_

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TREE PIT WITH  
GRATE IN SIDEWALK (SECTION)

STD. NO.	REV.
40.03A	



**SECTION B**

REVISIONS

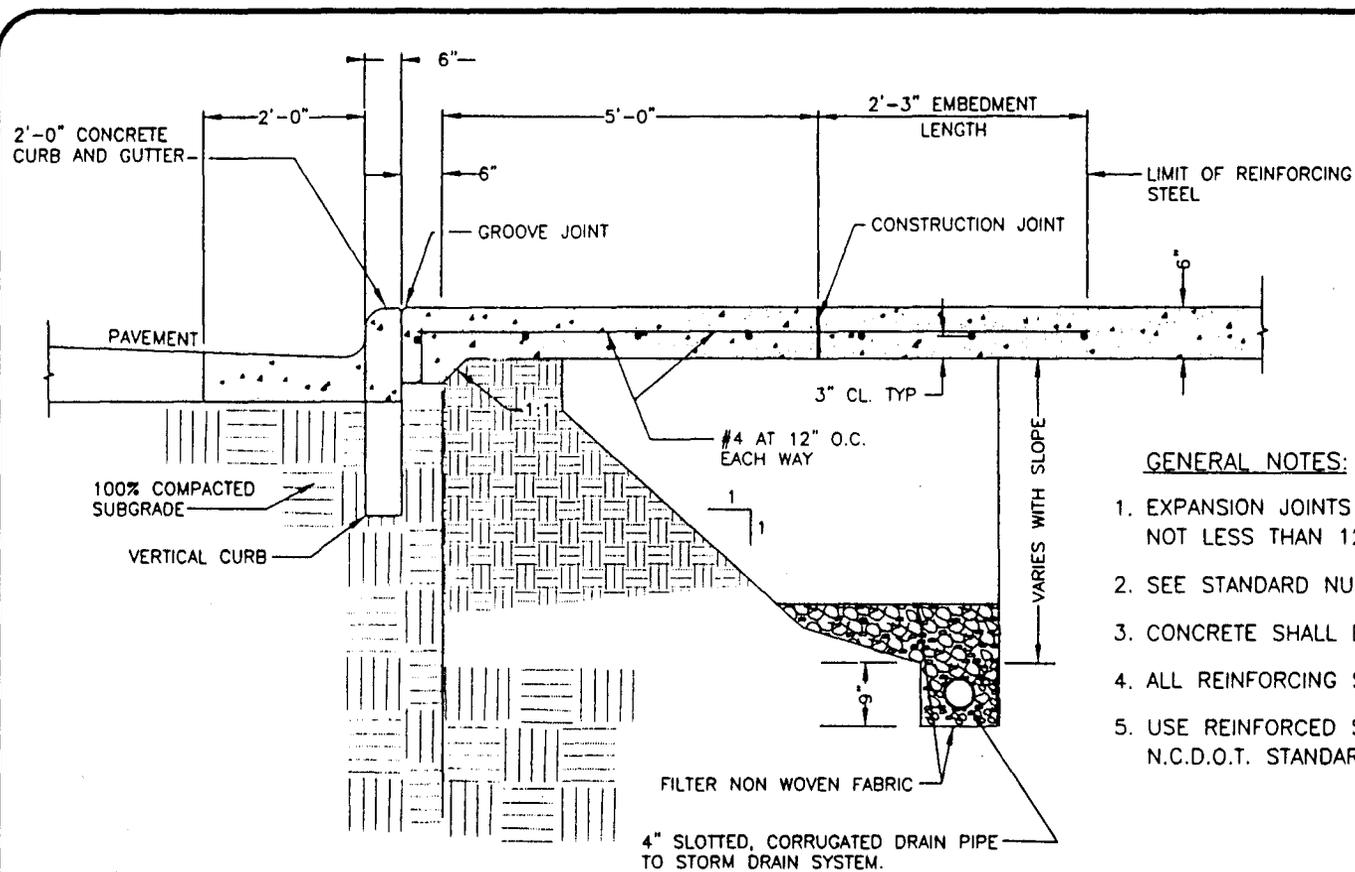
NO.	DATE	DESCRIPTION
1	12/98	SECTION "B"

APPROVED DATE \_\_\_\_\_

**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

**TREE PIT WITH  
GRATE IN SIDEWALK (SECTION)**

STD. NO.	REV.
40.03B	



GENERAL NOTES:

1. EXPANSION JOINTS ARE PERMITTED AT 40' MIN. SPACING AND NOT LESS THAN 12'-6" FROM CENTER OF TREE GRATE.
2. SEE STANDARD NUMBER 10.22 FOR DETAIL OF GROOVE JOINT.
3. CONCRETE SHALL BE 3600 PSI. IN 28 DAYS.
4. ALL REINFORCING STEEL SHALL BE GRADE 60.
5. USE REINFORCED STEEL BAR SUPPORTS IN COMPLIANCE WITH N.C.D.O.T. STANDARD SPECIFICATION 970-4.

SECTION C

NOTE

A DRAINAGE SYSTEM IS REQUIRED AS SHOWN FOR ALL IRRIGATED PLANTING AREAS LOCATED ADJACENT TO STREET.

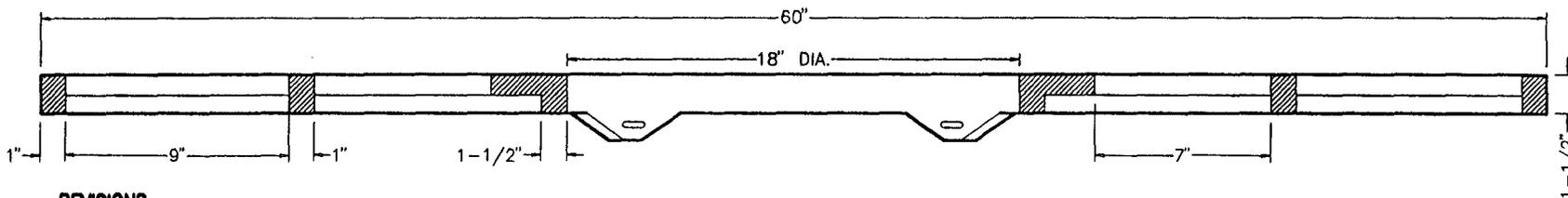
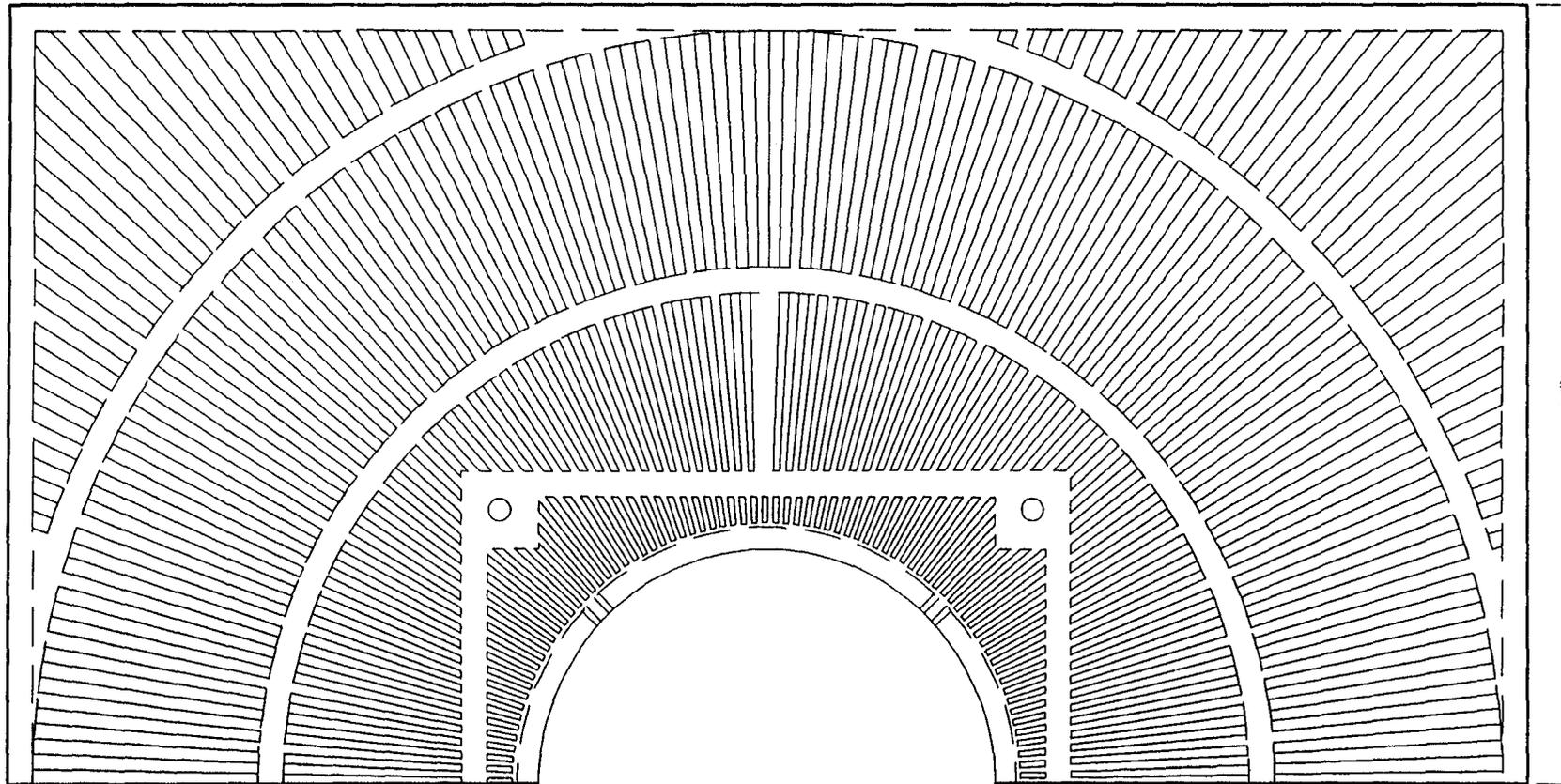
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REVISIONS		
NO.	DATE	DESCRIPTION
1	12/98	DETAIL TO SECTION C

CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS

TREE PIT WITH GRATE  
IN SIDEWALK (SECTION)

STD. NO.	REV.
40.03C	



**REVISIONS**

NO.	DATE	DESCRIPTION
	10/85	MODIFIED GRATE STYLE AND DIMENSIONS

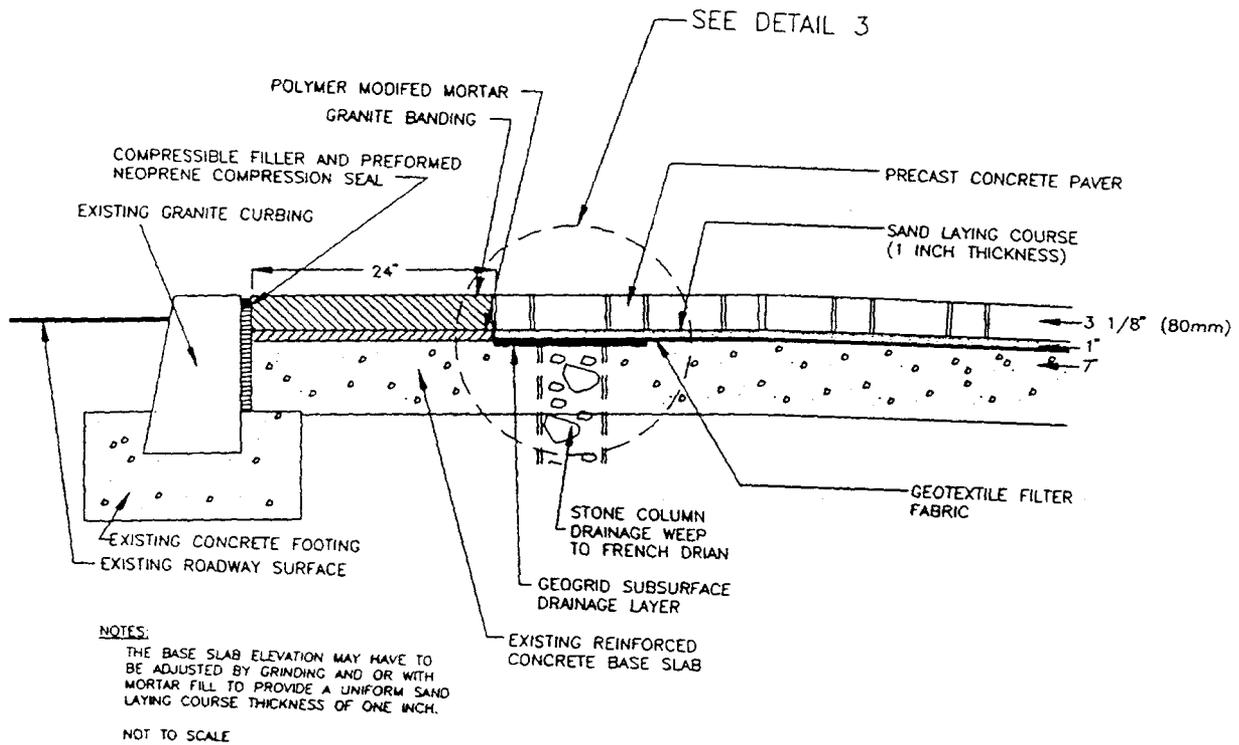
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APPROVED DATE 10-23-95

**CHARLOTTE - MECKLENBURG  
LAND DEVELOPMENT  
STANDARDS**

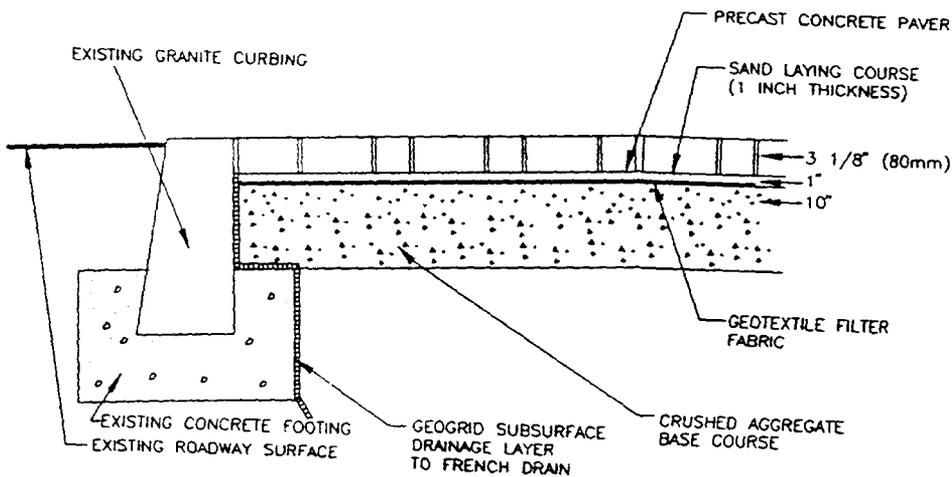
**TYPICAL TREE GRATE FOR  
TREE PIT IN SIDEWALK**

STD. NO.	REV.
40 071	



**SECTION B-B**

TYPICAL DRIVEWAY SECTION  
WITH CONCRETE SUBSLAB BASE

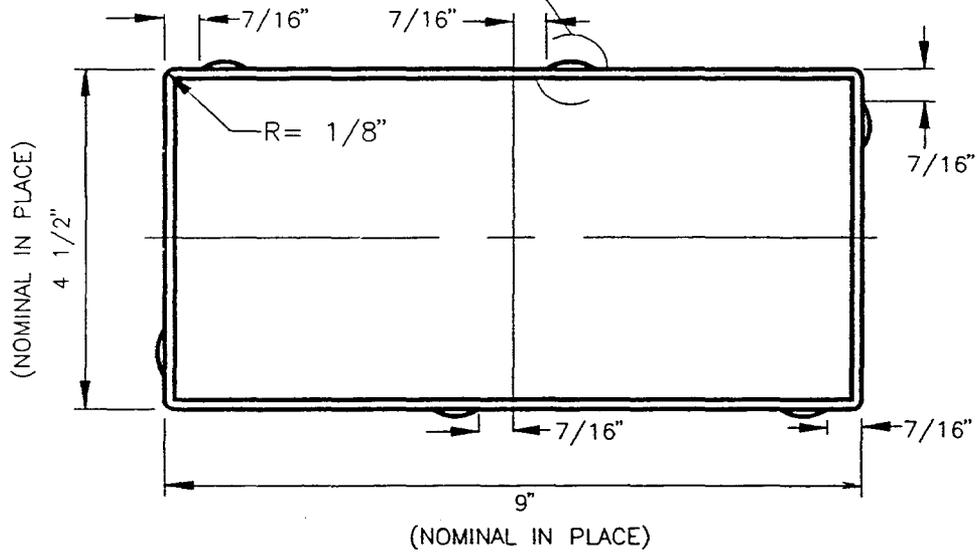
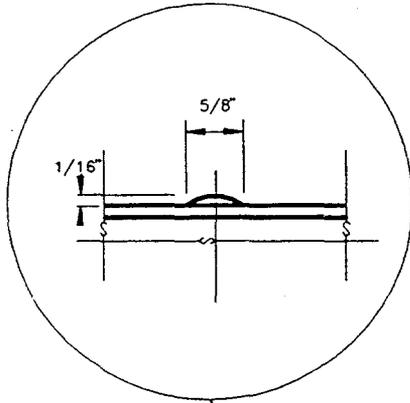
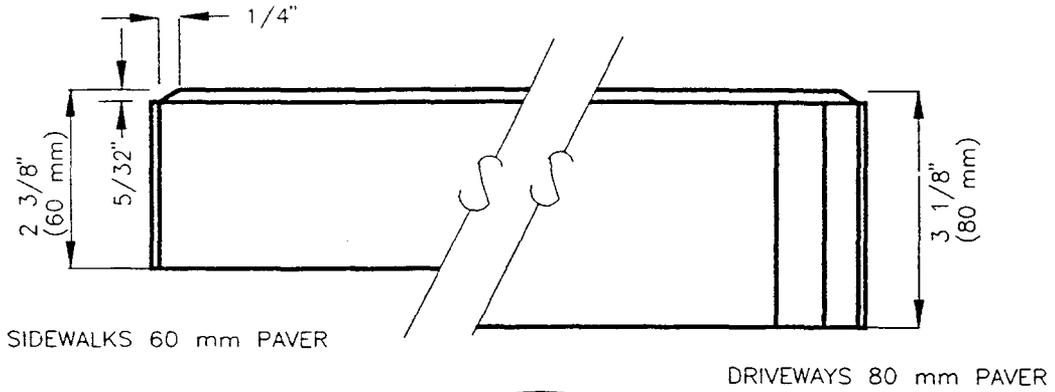


**SECTION B-B**

TYPICAL DRIVEWAY SECTION  
WITH AGGREGATE BASE

# PAVER SYSTEM FOR UPTOWN SIDEWALKS

7-1-90



PRECAST CONCRETE PAVERS

PAVER SYSTEM FOR  
UPTOWN SIDEWALKS

## TYPICAL DESIGN CONSIDERATIONS

Each project site has special conditions which must be considered in planning for a modular precast concrete paver system. Vehicular traffic, underground structures, required tree wells which extend under the sidewalks, surface or subsurface drainage conditions and site amenities may all necessitate some modification to the basic design presented in this document. Site specific changes must be done with an understanding of the design parameters of a paver system. If a single component of this paver system does not function properly, the success of the entire system may be impacted. The components of this paver system include the subbase, base course, sand laying course (for precast concrete pavers) or setting bed (for the granite banding on the Tryon Street Mall), paver units and joints between paver units.

### Subbase

The subbase consists of well-compacted soil or crushed aggregate as specified herein. The subbase provides primary support for traffic. It must be constructed similar to a roadway subbase.

### Base Course

The base course should consist of crushed aggregate which should be used as a roadway base in the Charlotte area. The compaction requirements for a aggregate base course must not be compromised. Some sites may have an existing concrete base course which is structurally sound. Concrete or crushed aggregate may be used as a base course if drainage is provided for the paver system. Drainage will require the use of a series of weeps and/or continuous drainage structures such as prefabricated drain products.

### Sand Laying Course

The sand specified for the leveling course is a manufactured sand sized to allow compaction and effective drainage. Surface water which penetrates through paver joints must be quickly removed from the sand leveling course. The amount of fines passing the No. 200 sieve is limited so that the laying course will drain to the subsurface drainage system. Poor drainage may reduce the strength of the base or subbase as well as cause efflorescence, typically a chalky white precipitant on the surface of the pavers which has been transported to the paver surface by evaporating water.

The sand laying course does not bond the paver units to the base course. The vertical movement associated with freezing and thawing is accommodated by this system design as long as drainage is provided. An unbonded, flexible system is the preferred design.

### Setting Bed

Granite band pieces used on the Tryon Street Mall require a cementitious setting bed in lieu of a laying course to provide uniform support necessary to support traffic. The setting bed bonds the granite band to the concrete base course. The addition of a polymer modifier to the cementitious setting bed materials makes the material more durable during inclement weather conditions.

### Precast Concrete Pavers

The precast concrete pavers units specified are dense, high strength units with low absorptive qualities. The dimensions and herringbone pattern of the pavers have been selected to maximize interlock and aid the ability of the paver system to withstand vehicular traffic. The nominal 4½" x 9" paver size reflects the nominal 18" x 18" design module established in the original design of the Tryon Street Mall and minimizes the necessity for cutting pavers. This paver size will be used consistently throughout the Uptown Area where concrete pavers are required for public sidewalks.

ECK WITH  
ETROMONT  
MATERIALS  
FOR

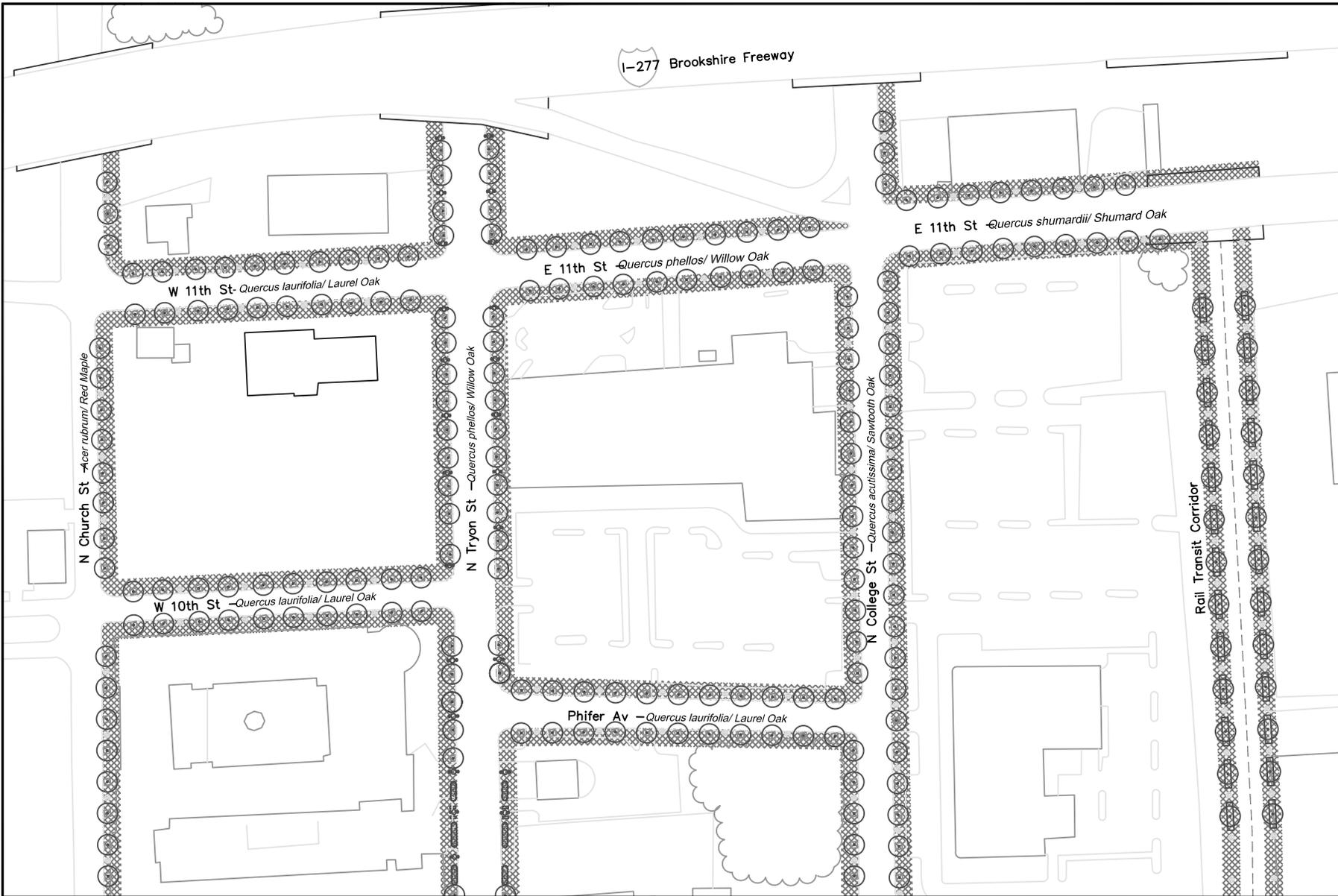
#### "TRYON STREET MALL PAVER BLEND"

The color of pavers for public sidewalks is a three-color blend which creates a dark rose, mottled pavement surface. The color is described in more detail in the specifications.

Edge restraint for the paver units is a critical part of the paver system design. The paver units must be held in place laterally by placing pavers tight against an immovable edge such as a curb, building structure or tree grate frame.

### Paver Unit Joints

The joints between paver units are to be tight and filled with manufactured sand fines as specified. Fines in the joints minimize the amount of surface water allowed to pass into the paver system and aid in the interlocking of the paver units. The surface of the paver system should slope at a minimum of 2% to further reduce penetration of surface water runoff.



### Core Uptown Streetscape Plan

#### LEGEND - Uptown Area Streetscape

- Street Tree in Grate
- Street Tree in Planting Strip
- Pedestrian Light Pole
- Concrete Pavers

#### LEGEND - Tryon Street

- Street Tree in Tree Planter
- Small Ornamental Planter
- Large Ornamental Planter
- Pedestrian Light Pole
- Bench
- Concrete Pavers

#### LEGEND - Rail Transit Corridor

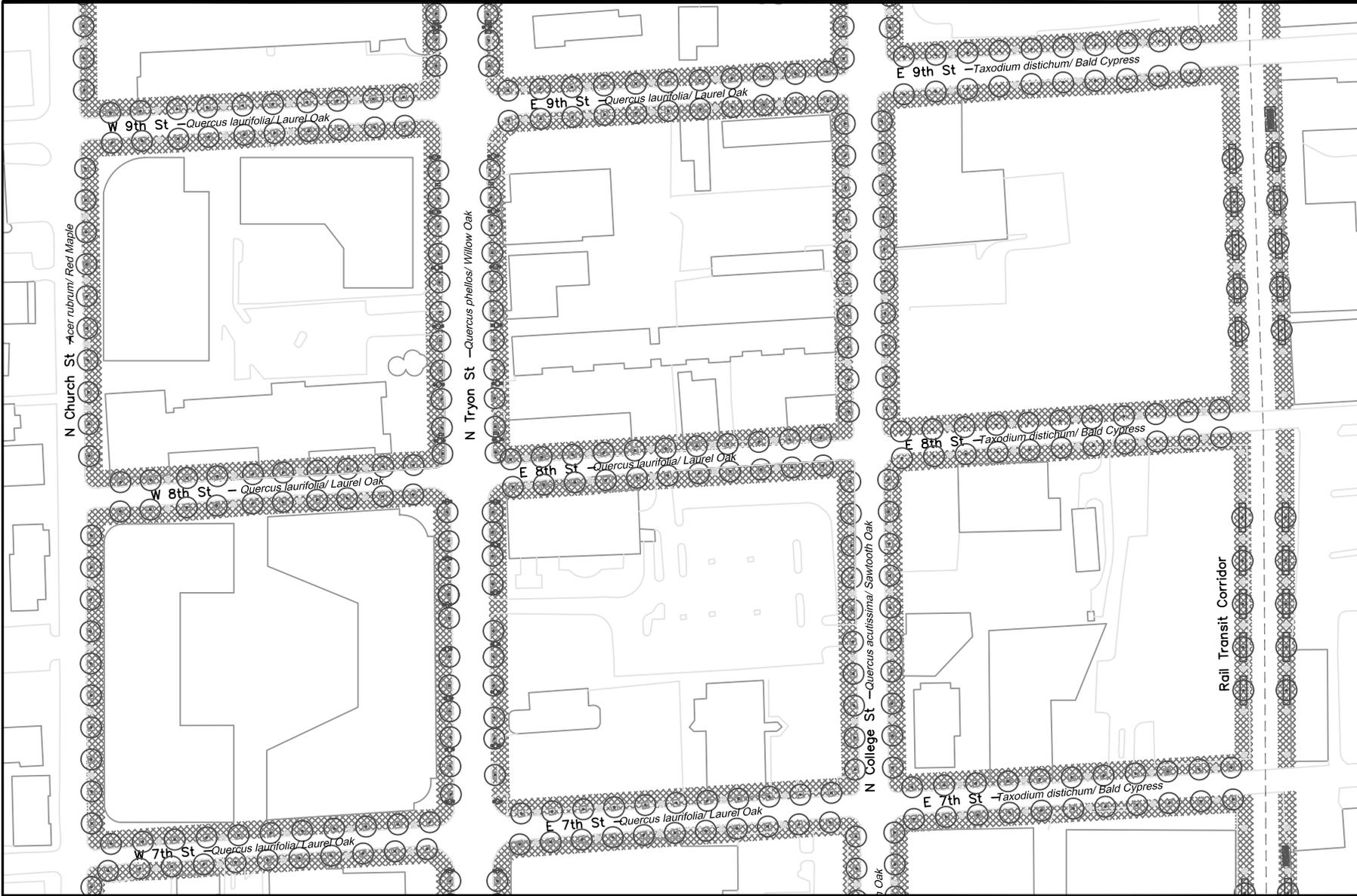
- Street Tree in Tree Planter or Planting Strip
- Pedestrian Light Pole
- Concrete Pavers
- Trolley Line
- Trolley Station

**NOTE:**  
 - All building locations are approximate  
 - The Streetscape Elements shown portray relative location and quantity rather than specific location.



See Sheet 2

See Sheet 1



See Sheet 3

### Core Uptown Streetscape Plan

#### LEGEND - Uptown Area Streetscape

-  Street Tree in Grate
-  Street Tree in Planting Strip
-  Pedestrian Light Pole
-  Concrete Pavers

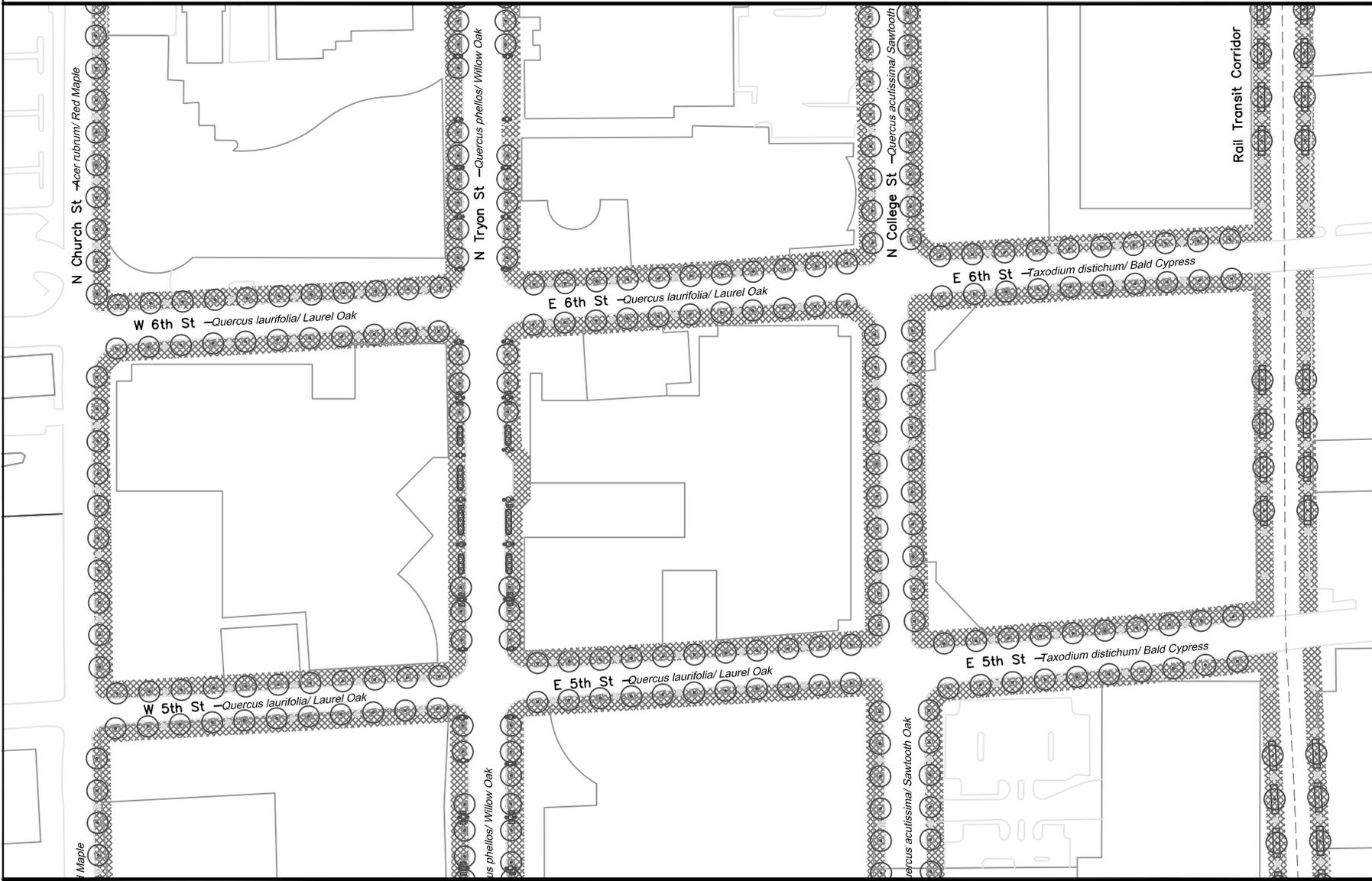
#### LEGEND - Tryon Street

-  Street Tree in Tree Planter
-  Small Ornamental Planter
-  Large Ornamental Planter
-  Pedestrian Light Pole
-  Bench
-  Concrete Pavers

#### LEGEND - Rail Transit Corridor

-  Street Tree in Tree Planter or Planting Strip
-  Pedestrian Light Pole
-  Concrete Pavers
-  Trolley Line
-  Trolley Station

See Sheet 2



See Sheet 4

### Core Uptown Streetscape Plan

#### LEGEND - Uptown Area Streetscape

- Street Tree in Grate
- Street Tree in Planting Strip
- Pedestrian Light Pole
- Concrete Pavers

#### LEGEND - Tryon Street

- Street Tree in Tree Planter
- Small Ornamental Planter
- Large Ornamental Planter
- Pedestrian Light Pole
- Bench
- Concrete Pavers

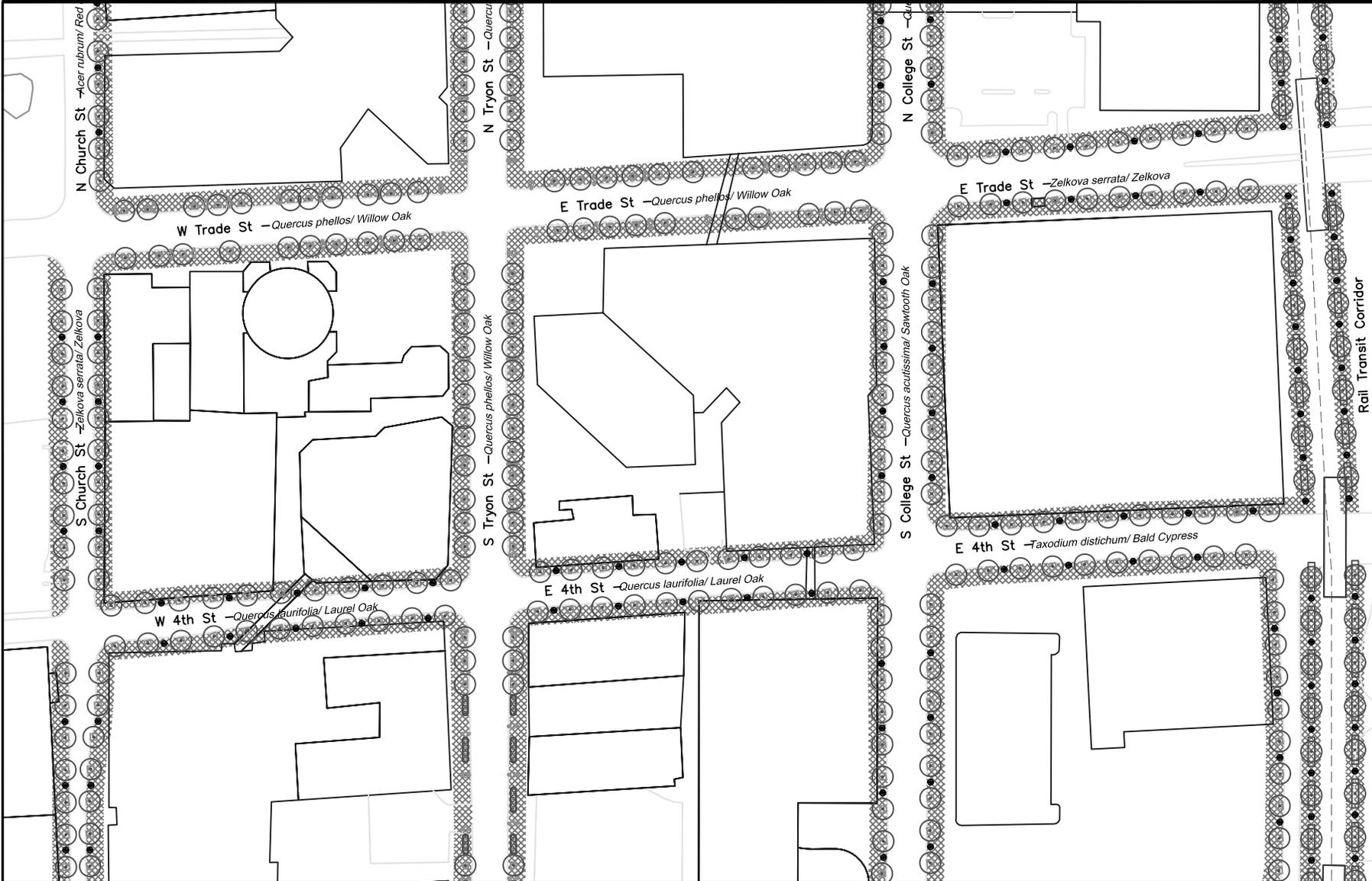
#### LEGEND - Rail Transit Corridor

- Street Tree in Tree Planter or Planting Strip
- Pedestrian Light Pole
- Concrete Pavers
- Trolley Line
- Trolley Station

**NOTE:**  
 - All building locations are approximate  
 - The Streetscape Elements shown portray relative location and quantity rather than specific location.



See Sheet 3



See Sheet 5

### Core Uptown Streetscape Plan

LEGEND - Uptown Area Streetscape

- Street Tree in Grate
- Street Tree in Planting Strip
- Pedestrian Light Pole
- Concrete Pavers

LEGEND - Tryon Street

- Street Tree in Tree Planter
- Small Ornamental Planter
- Large Ornamental Planter
- Pedestrian Light Pole
- Bench
- Concrete Pavers

LEGEND - Rail Transit Corridor

- Street Tree in Tree Planter or Planting Strip
- Pedestrian Light Pole
- Concrete Pavers
- Trolley Line
- Trolley Station

See Sheet 4



See Sheet 6

### Core Uptown Streetscape Plan

#### LEGEND - Uptown Area Streetscape

- Street Tree in Grate
- Street Tree in Planting Strip
- Pedestrian Light Pole
- Concrete Pavers

#### LEGEND - Tryon Street

- Street Tree in Tree Planter
- Small Ornamental Planter
- Large Ornamental Planter
- Pedestrian Light Pole
- Bench
- Concrete Pavers

#### LEGEND - Rail Transit Corridor

- Street Tree in Tree Planter or Planting Strip
- Pedestrian Light Pole
- Concrete Pavers
- Trolley Line
- Trolley Station

**NOTE:**  
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NORTH

See Sheet 5

### Core Uptown Streetscape Plan

#### LEGEND - Uptown Area Streetscape

-  Street Tree in Grate
-  Street Tree in Planting Strip
-  Pedestrian Light Pole
-  Concrete Pavers

#### LEGEND - Tryon Street

-  Street Tree in Tree Planter
-  Small Ornamental Planter
-  Large Ornamental Planter
-  Pedestrian Light Pole
-  Bench
-  Concrete Pavers

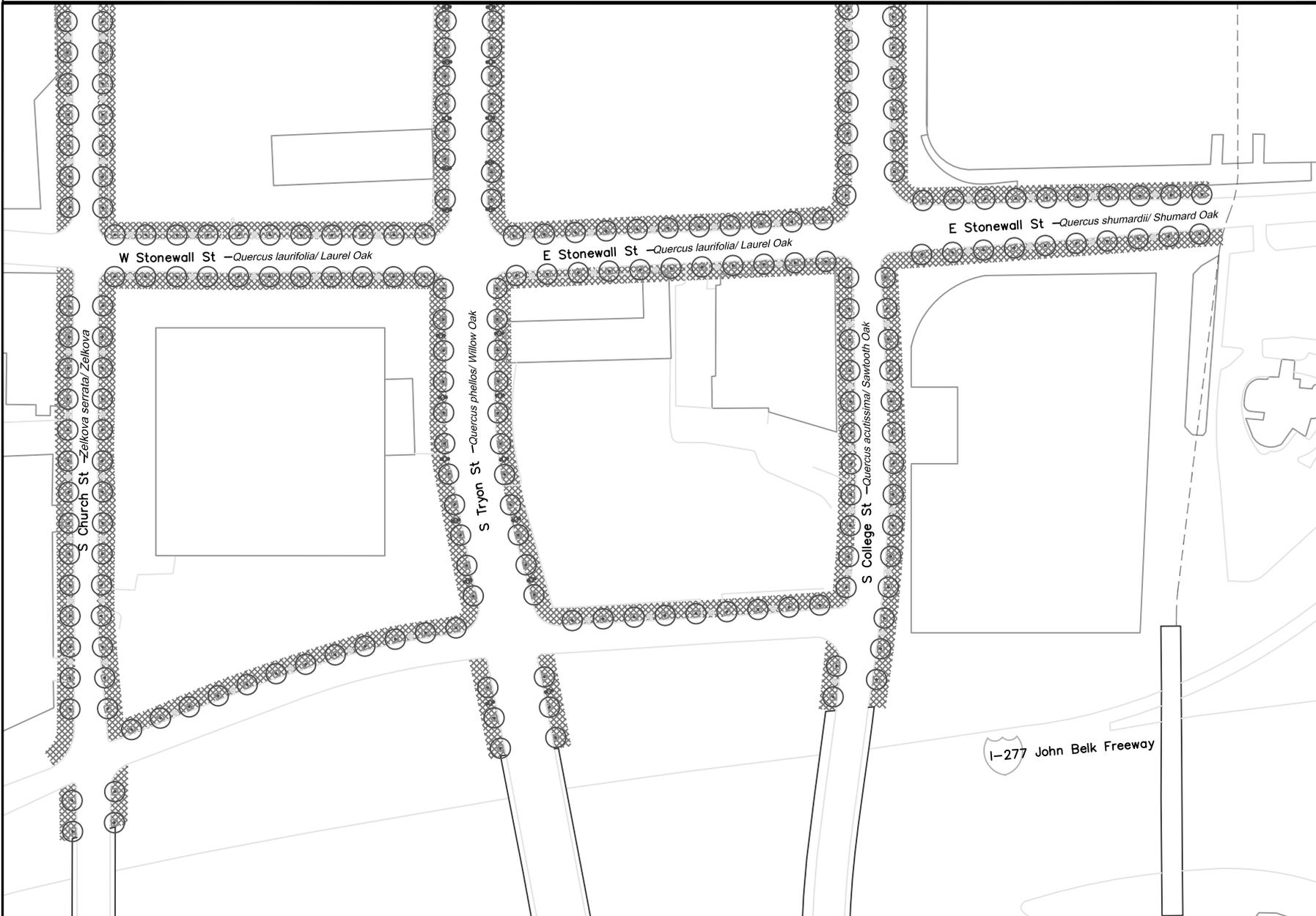
#### LEGEND - Rail Transit Corridor

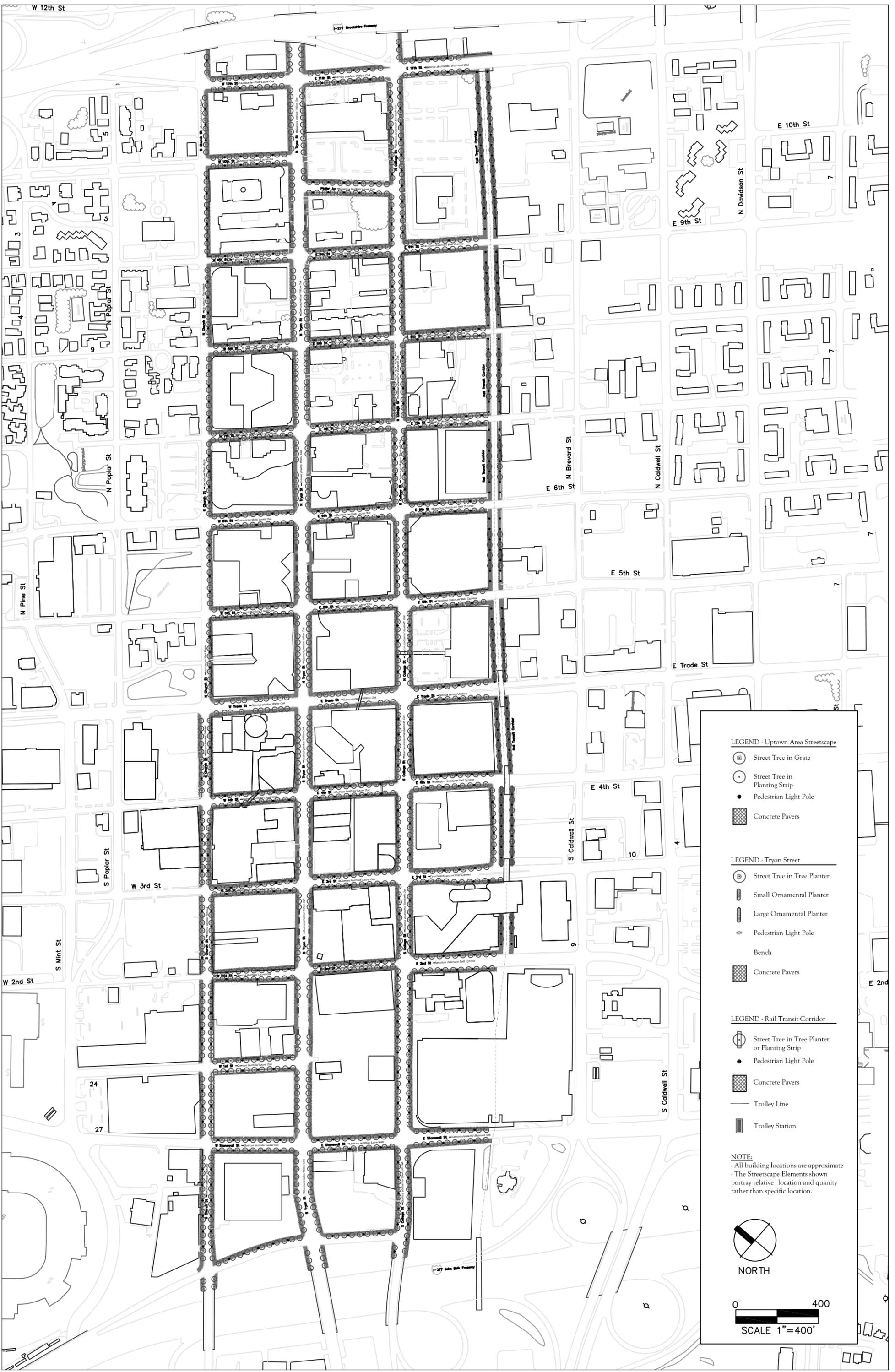
-  Street Tree in Tree Planter or Planting Strip
-  Pedestrian Light Pole
-  Concrete Pavers
-  Trolley Line
-  Trolley Station

**NOTE:**  
 - All building locations are approximate  
 - The Streetscape Elements shown portray relative location and quantity rather than specific location.



NORTH





**LEGEND - Uptown Area Streetscape**

- Street Tree in Grate
- Street Tree in Planting Strip
- Pedestrian Light Pole
- Concrete Pavers

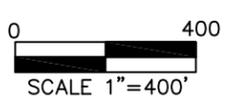
**LEGEND - Tryon Street**

- Street Tree in Tree Planter
- Small Ornamental Planter
- Large Ornamental Planter
- Pedestrian Light Pole
- Bench
- Concrete Pavers

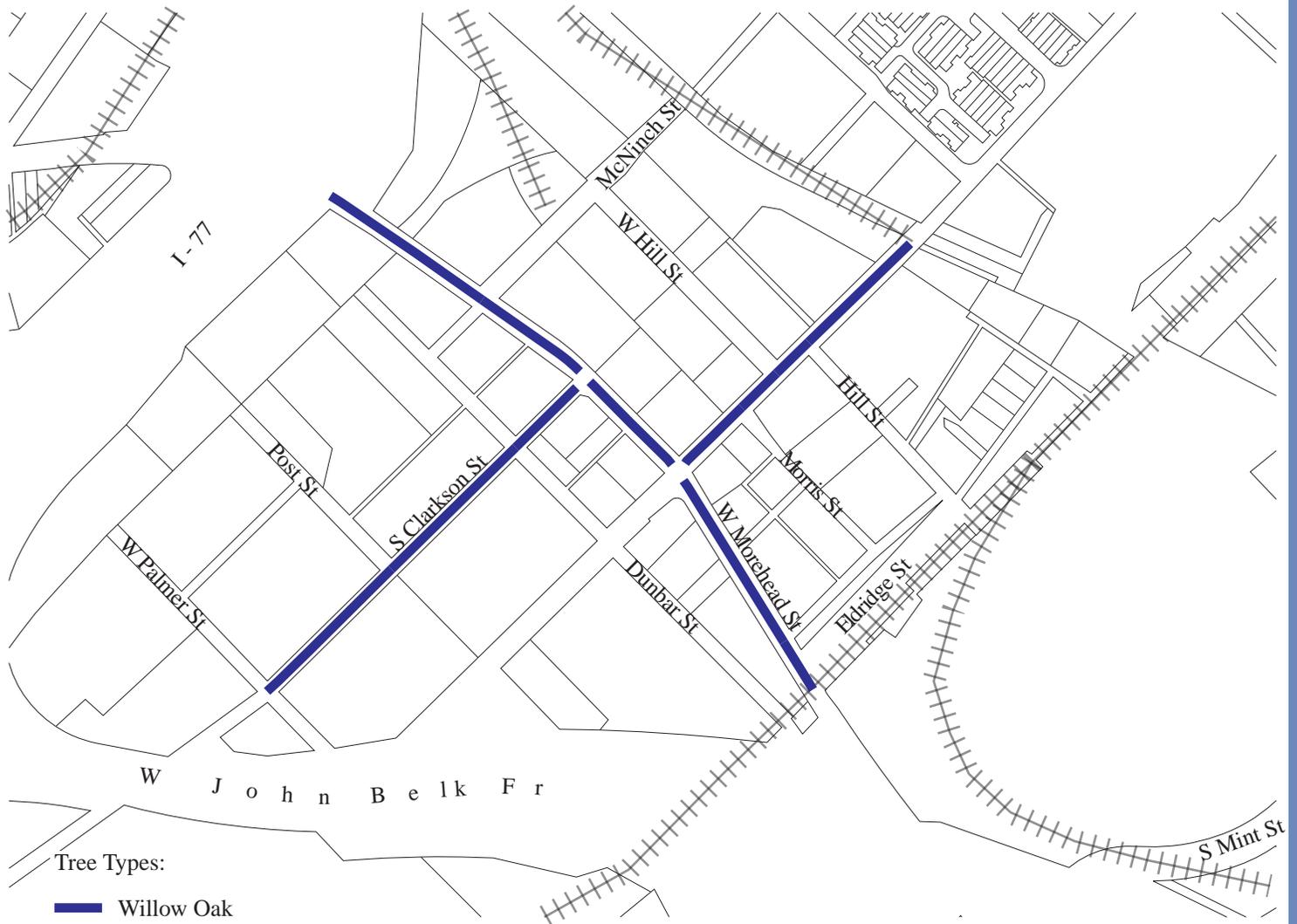
**LEGEND - Rail Transit Corridor**

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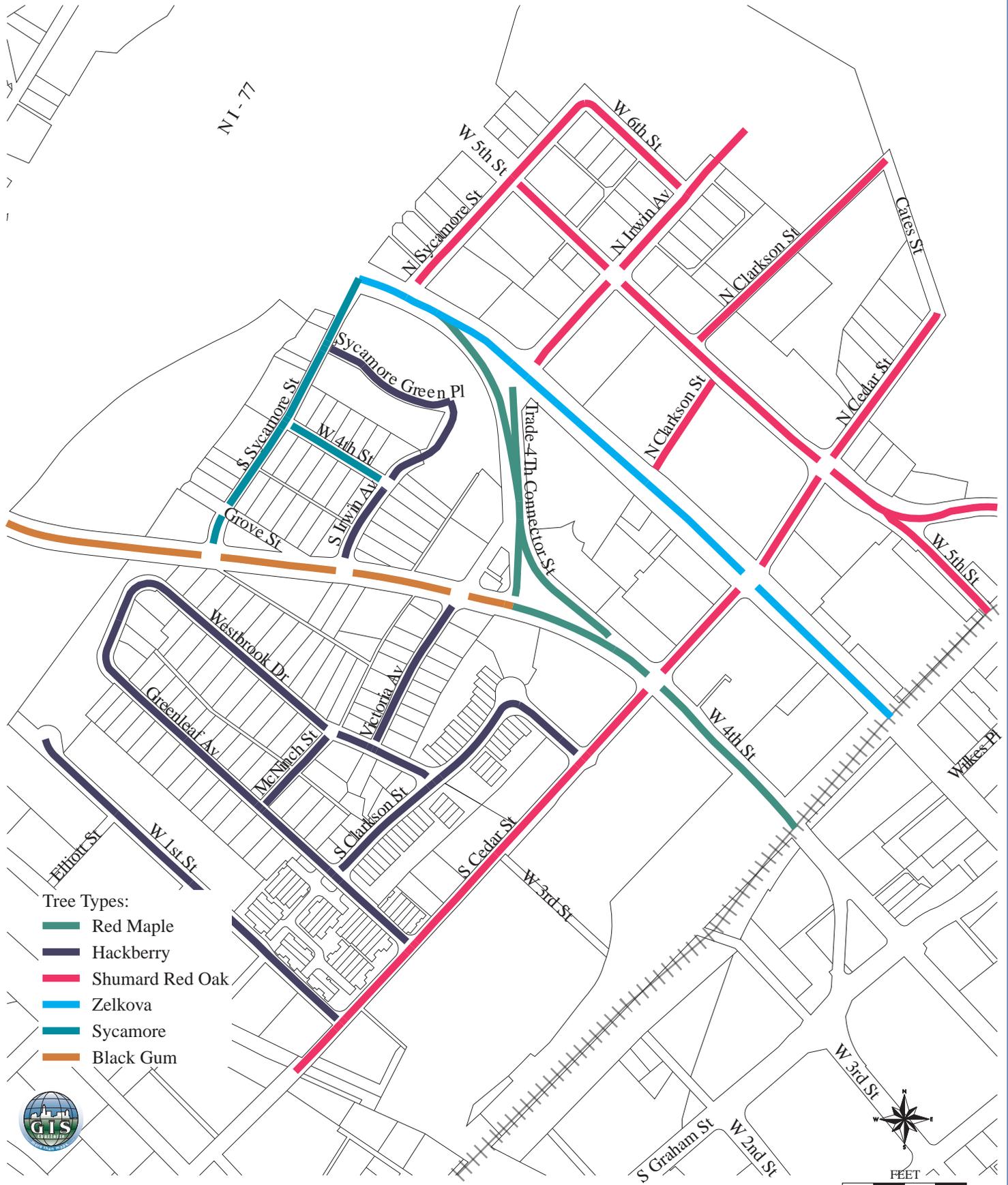


# West Morehead Tree Types

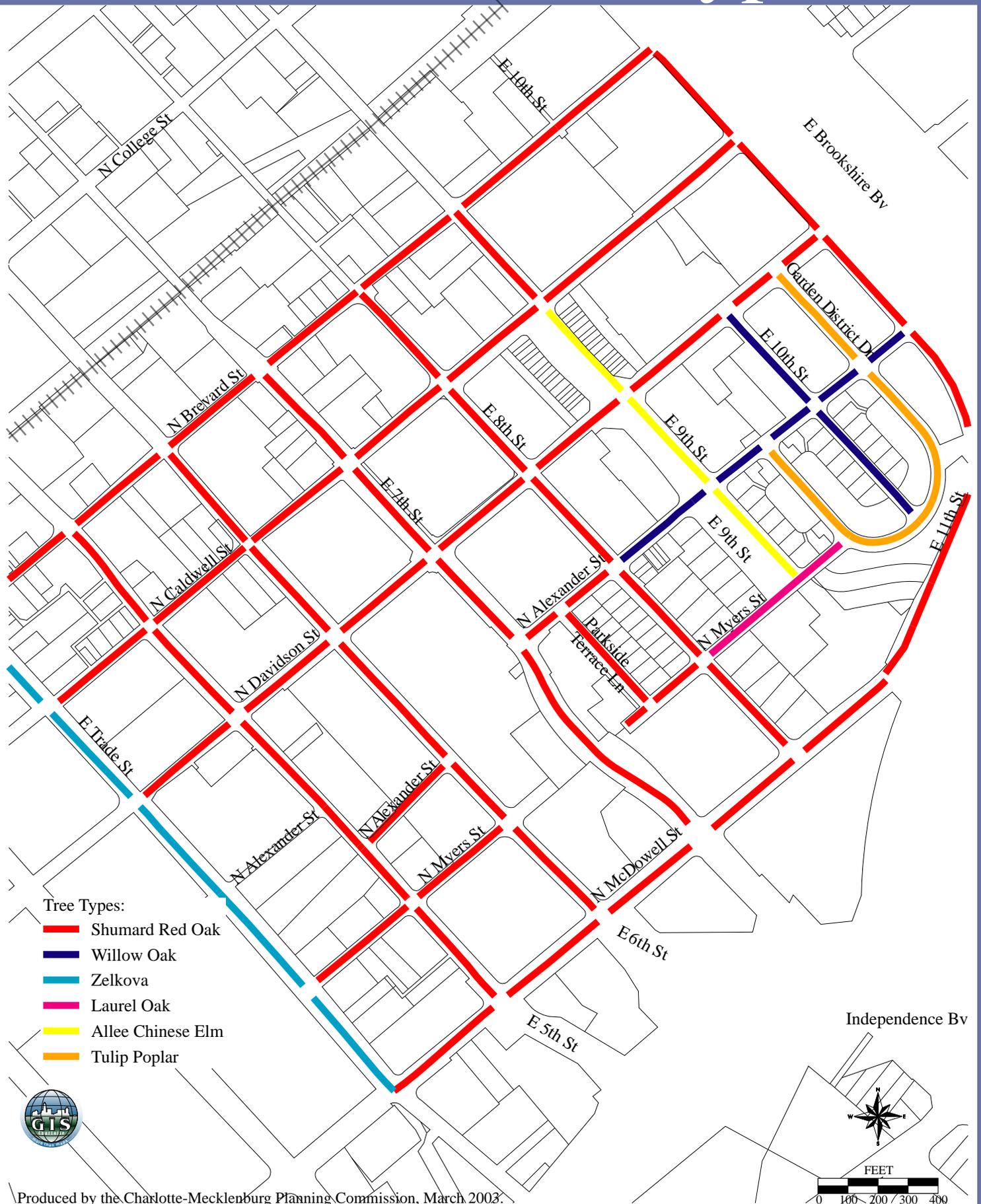




# Third Ward Tree Types



# First Ward Tree Types



# Urban Core Tree Types

## Tree Types:

- █ Red Maple
- █ Red Maple (Red Sunset)
- █ Shumard Red Oak
- █ Zelkova
- █ Laurel Oak
- █ Bald Cypress
- █ Sawtooth Oak
- █ Hop Hornbeam
- █ Willow Oak

