

BREVARD STREETSCAPE



SHAPING THE ENVIRONMENT • REALIZING THE POSSIBILITIES



*Brevard*  
North Carolina





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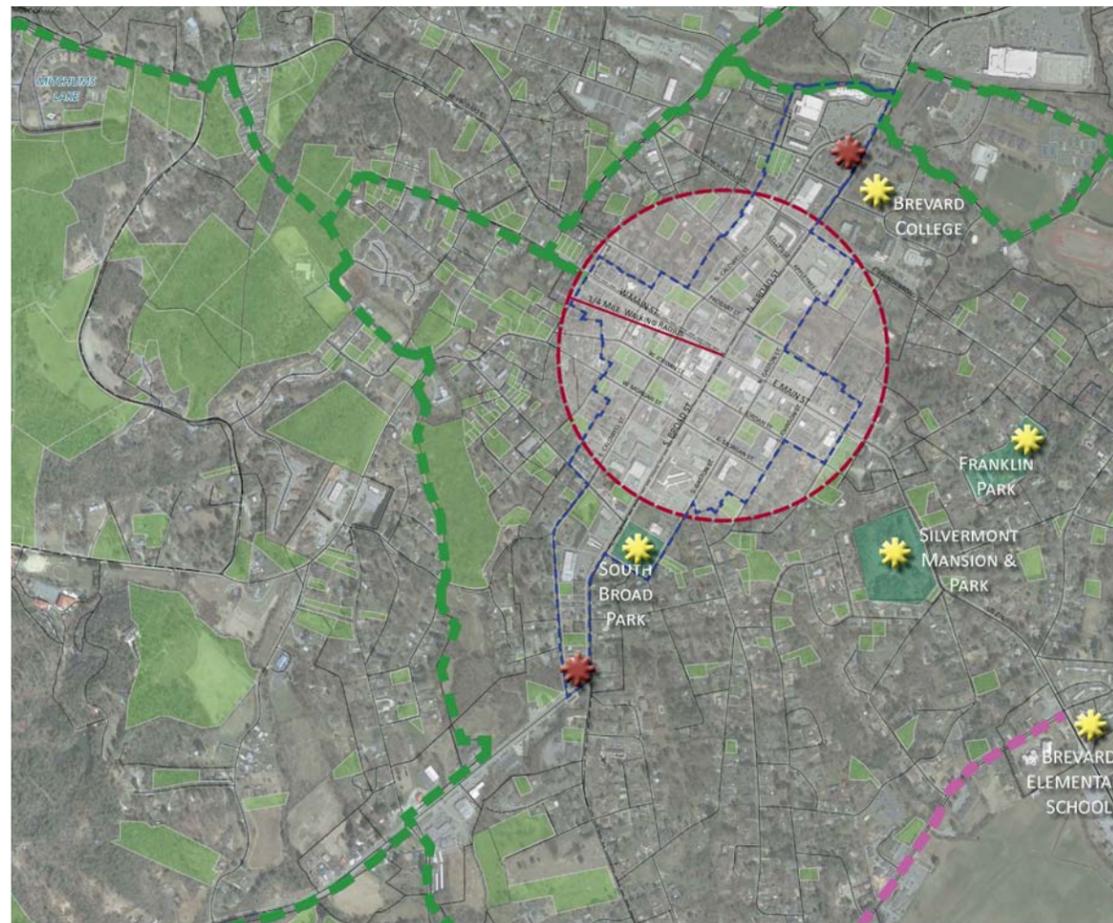
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# INTRODUCTION

The City of Brevard is a cultural hub nestled in the Blue Ridge Mountains in the heart of Transylvania County. Brevard is located at the base of the city's Bracken Property, dotted with waterfalls and surrounded on the Northwest by Pisgah National Forest. The City contains a vibrant downtown retail district that includes specialty shops, fine dining, art galleries, and other small businesses. Brevard celebrates its cultural diversity with several annual festivals and bike races such as the Assault on the Carolinas, The White Squirrel Festival, the Fourth of July Celebration and Halloweenfest. The Brevard Music Center is one of the country's premier summer music training programs and is a significant asset to the region. These natural amenities, historic landmarks and cultural assets are what makes Brevard unique and can be expanded in order to enhance the identity, brand and economic development prospects of the City.

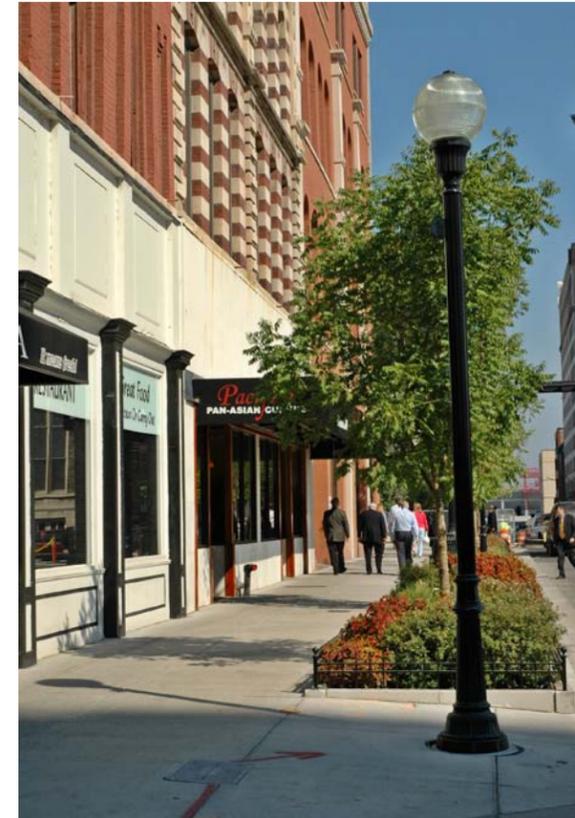
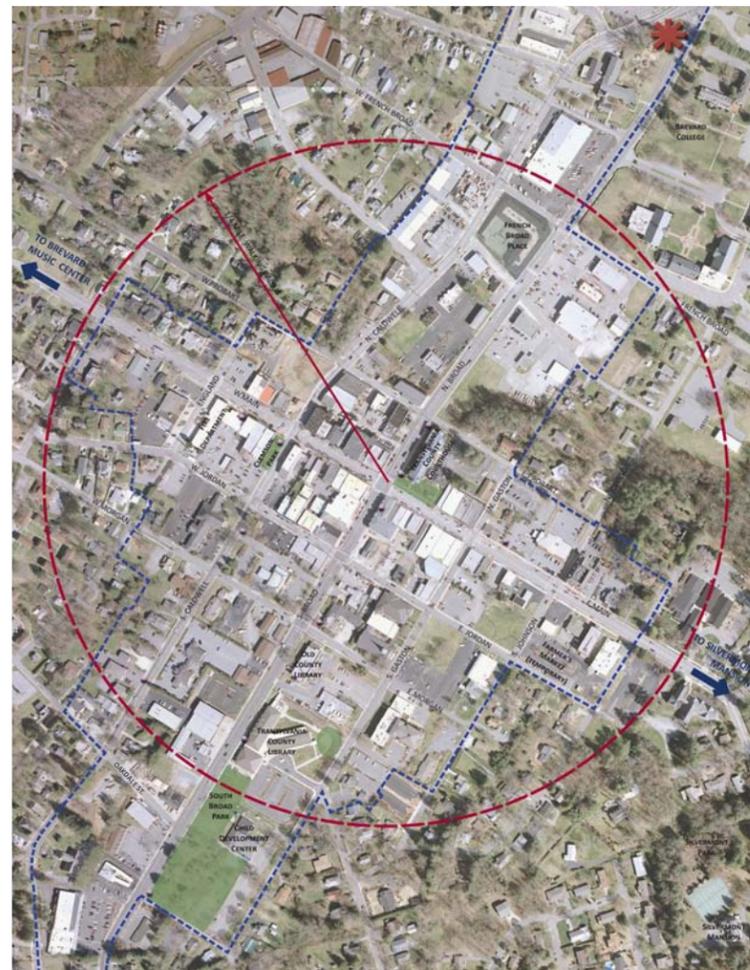
The City can capitalize on its natural and cultural assets to develop future assets such as vibrant new public spaces, pocket parks, and a streetscape infrastructure. These new assets will support the vital activity that occurs in the City throughout the year while supporting opportunities for economic growth.



# PURPOSE OF STREETScape STUDY

The purpose of this study is to provide recommendations for the updating and implementation of the City of Brevard's previously adopted Downtown Master Plan that capitalize on the City's unique character while ensuring functionality for citizens and visitors. The Implementation Plan includes an assessment of the existing streetscape concepts, recommendations for a proposed streetscape prototype along Main Street and Broad Street, an outline for phasing priorities, a general cost estimate for a prototypical block and other general recommendations for the creation of a more vibrant downtown.

The key to developing a sound streetscape infrastructure is to create a balance between maintaining the historic charm of the downtown and providing a design standard that meets the needs of today's citizens and visitors. The heart of the city is located within a 1/4 mile radius. The current streetscape promotes vehicular travel. The pedestrian experience along these corridors is disjointed. Defining a uniformed and more pedestrian friendly streetscape will assist in establishing a more inviting and safer place to walk, bike, shop and visit.



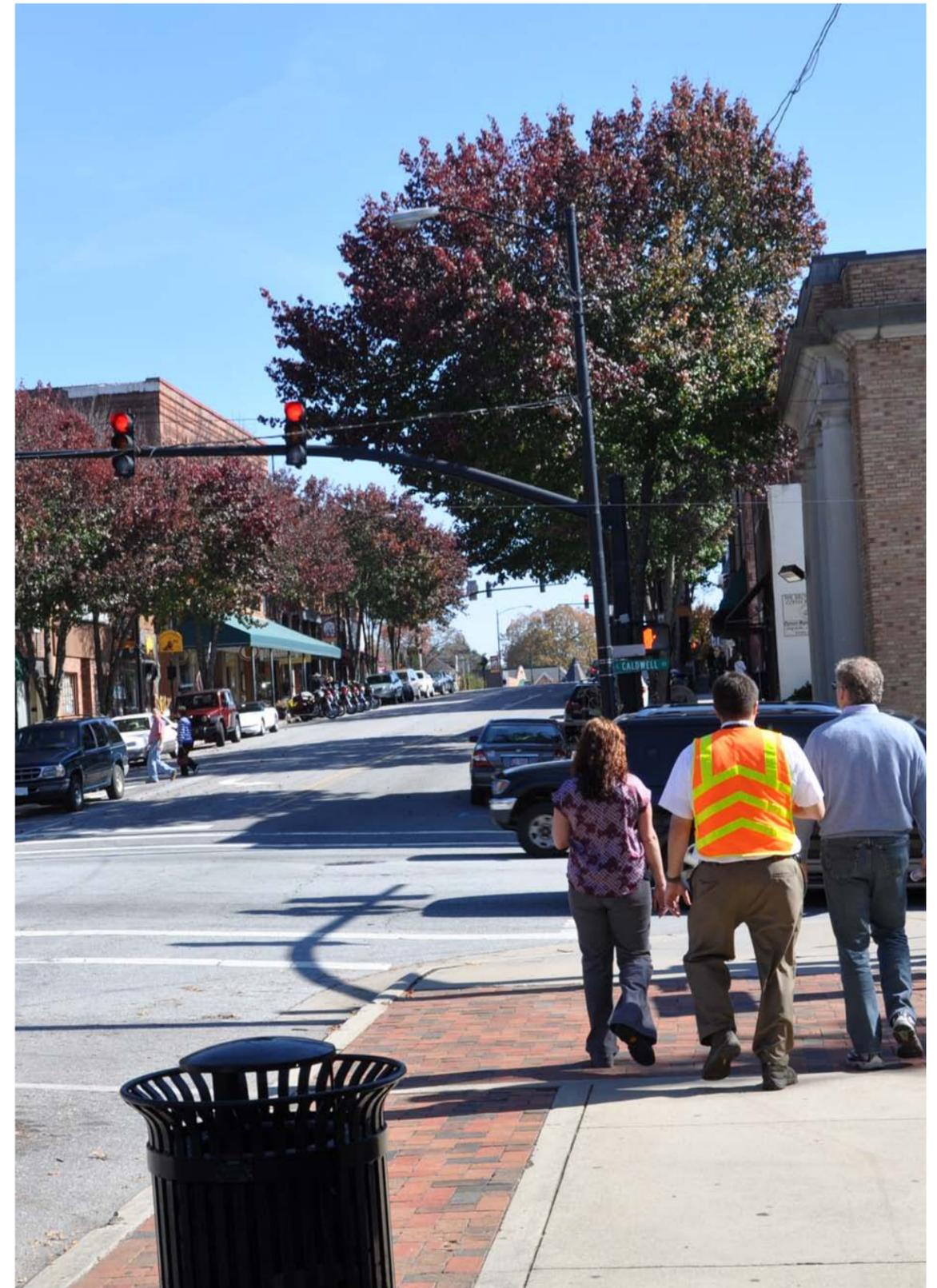
# THE STREETScape PLANNING PROCESS

## ACKNOWLEDGEMENT OF PREVIOUS STUDIES

The City has conducted several comprehensive downtown development and master planning studies in the recent past. The City has been very successful in following the parameters of these guidelines in order to shape its current development. ColeJenest & Stone has reviewed applicable concepts from the Brevard Downtown Master Plan, completed on May 19, 2003 by Melrose & Associates which also made recommendations for restructuring some of the traffic patterns along Broad Street and Caldwell Street, the Gateway and Corridors Master Plan (completed by the Gateways, Corridors & Downtown Advisory Committee, on March 2009) and the Brevard Streetscape Way finding Plan (completed by Bizzell Design, Inc. on June 4, 2007). We are not attempting to re-evaluate any of these comprehensive studies. These studies run parallel to our work and have provided guidelines as we move forward in making streetscape recommendations.

## EXPERIENCING THE DOWNTOWN BREVARD STREETS

The design team met with the City of Brevard's Planning staff and walked the limits of the site as indicated by the Downtown Brevard Conceptual Master Plan. The existing streets were observed, photographed and an inventory of the existing streetscape conditions was documented. During this site visit, a streetscape block, that was installed in 2005 along Main Street, was observed, photographed, and evaluated as well.



## ENGAGING BREVARD'S LEADERS AND CITIZENS

A half-day meeting with representatives of the City and a half-day meeting with the community were conducted to discuss our findings and solicit input on elements of the existing streetscape and priorities/phasing recommendations for future street improvements. The meetings included Brevard City Council, Brevard Planning staff and Planning Board, Brevard Public Services & Buildings and Grounds, the State (North Carolina) Department of Transportation, Heart of Brevard, the Chamber of Commerce and other department representatives and community members as identified by the City of Brevard.

Individual meetings were also conducted with City Council members at the beginning of the study. A follow-up meeting was conducted midway through the Implementation study process to update Brevard City Council on the direction of the streetscape study and solicit input.

The following items were discussed during these meetings:

### TRAFFIC/PARKING ISSUES:

- Commercial Loading occurs throughout the day in the middle of the street which interferes with turning movements at the lights, backing up traffic, and interfering with emergency responders.
- Existing traffic patterns are prohibiting the access that fire trucks need to respond to emergency calls
- Several shop owners believe parking is an issue and close by, convenient parking is essential to their business' success.

### STREETScape:

- On Main Street, some merchants have attempted to enhance the existing streetscape on their own by adding signage, plants, and decorative elements
- The existing lighting does not provide adequate security or visibility
- Many existing trees along Main Street are struggling and should be removed
- The portion of West Main Street past Caldwell Street is often a forgotten area of the business district along Main Street
- Providing a gateway to downtown Brevard at the intersection of North Broad Street and Caldwell Street is critical to identifying the entrance to the community
- There needs to be more recognizable signage to assist in identifying existing public parking
- Alleys should be considered an opportunity that can be utilized for small gathering spaces



# ENGAGING BREVARD'S LEADERS AND CITIZENS (CONTINUED)

## STREETSCAPE (CONTINUED):

- More direct physical connection between the City and Brevard College would enhance the physical, cultural and economic importance of the College within the Community
- Bump-outs for the Main Street streetscape are a viable option in order to increase the amount of sidewalk space in highly traveled pedestrian locations
- Broad Street should be a tree-lined boulevard which will provide an aesthetically appealing corridor into the downtown area

## OPEN SPACE:

- A large civic open space within the City of Brevard is needed
- A water feature in the City could be a very engaging element to include within a park

## TOWN ATTRACTIONS/PLANNING:

- There is not enough area designated for active recreation in the City limits.
- Open space can be used as an economic catalyst for the City
- Improvements to West Main Street should be a priority as they will be a catalyst for future development
- The City should define an identity and successfully brand itself to help provide a more desirable tourist destination
- A Welcome Center would be a good way to develop an identifiable location for tourists and new or potential residents to go for information
- A City-owned Farmer's Market is an important consideration
- The City should keep historic amenities such as the Transylvania County Courthouse to preserve the character of downtown and provide services that draw residents into the City

## UTILITIES:

- Access to utilities such as water and electricity in the streetscape is a problem during festivals and special events
- Overhead utilities should be buried where possible to clean up the streetscape



# STREETSCAPE ANALYSIS

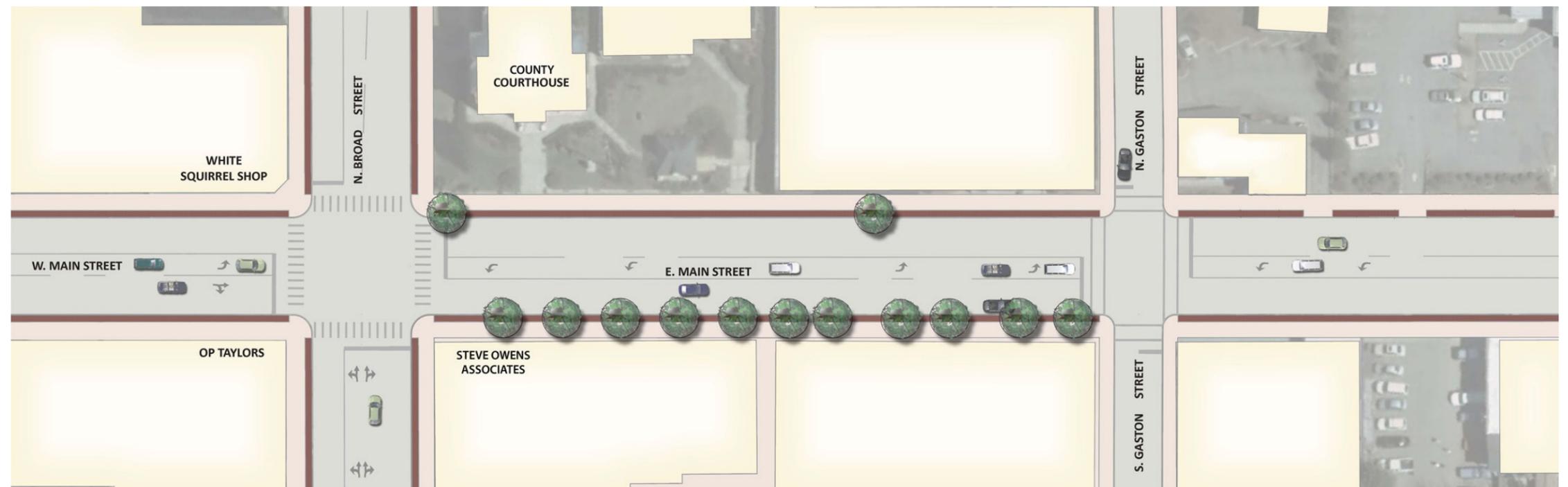
## EXISTING STREETSCAPE ALONG MAIN STREET

Main Street is the east/west arterial through the City of Brevard. This street has vibrant retail activity that overflows onto the existing walkways. Several festivals are set up along Main Street throughout the year, with the intersection of Main Street and Broad Street acting as the city center for such gatherings.

Main Street currently has 2 lanes of travel with a central turning lane and a lane of parallel parking on each side. The central turning lane is currently used for loading during all hours of the day.



CONTEXT MAP - DOWNTOWN



EXISTING CONDITIONS: MAIN ST. - ENLARGEMENT AREA

# ISSUES AND CHALLENGES ON MAIN STREET

## ISSUES AND CHALLENGES ON MAIN STREET

- Sidewalk widths are currently narrow and vary from 6' to 8' which hinders pedestrian movement along the street
- There is a degradation of the vitality of the existing trees along Main Street. Several existing trees have died and remaining trees have been improperly pruned or are in poor health.
- Varieties of existing trees along Main Street include a mix of Mountain Ash, Kwanzan Cherry and Bradford Pear
- There are no existing pedestrian lights installed on Main Street
- Aging sidewalks and infrastructure currently exist along the street
- There is a lack of consistency in streetscape elements with an eclectic array of street furniture and planters
- Several merchants have decorative planters out in the streetscape. At times, there are additional signs and booths of sale items that clutter the sidewalk
- Service and commercial loading is an issue for merchants along Main Street. Loading currently occurs in the central turning lane of the street and slows down traffic movement as it occurs.
- The Fire Department has difficulty addressing emergency calls. Currently cars in the turning lane have issues turning when delivery trucks stop in the middle of the lane for loading and unloading, which blocks the Fire Department's path of travel.
- ADA ramps have been installed at angles allowing for movement directly into oncoming traffic rather than safe crossing to the other side of the intersection



# DEMONSTRATION BLOCK ON MAIN STREET

## DEMONSTRATION BLOCK ALONG MAIN STREET

A “demonstration block” to pilot the plan for the streetscape along East Main Street from Gaston Street to Johnson Street was installed based on the principles of the 2003 Conceptual Master Plan evaluation. This demonstration block provided an excellent study of elements of the streetscape that are successful in addition to issues that are not currently working in the streetscape design.

### ISSUES AND CHALLENGES OF EXISTING DEMONSTRATION BLOCK ON MAIN STREET

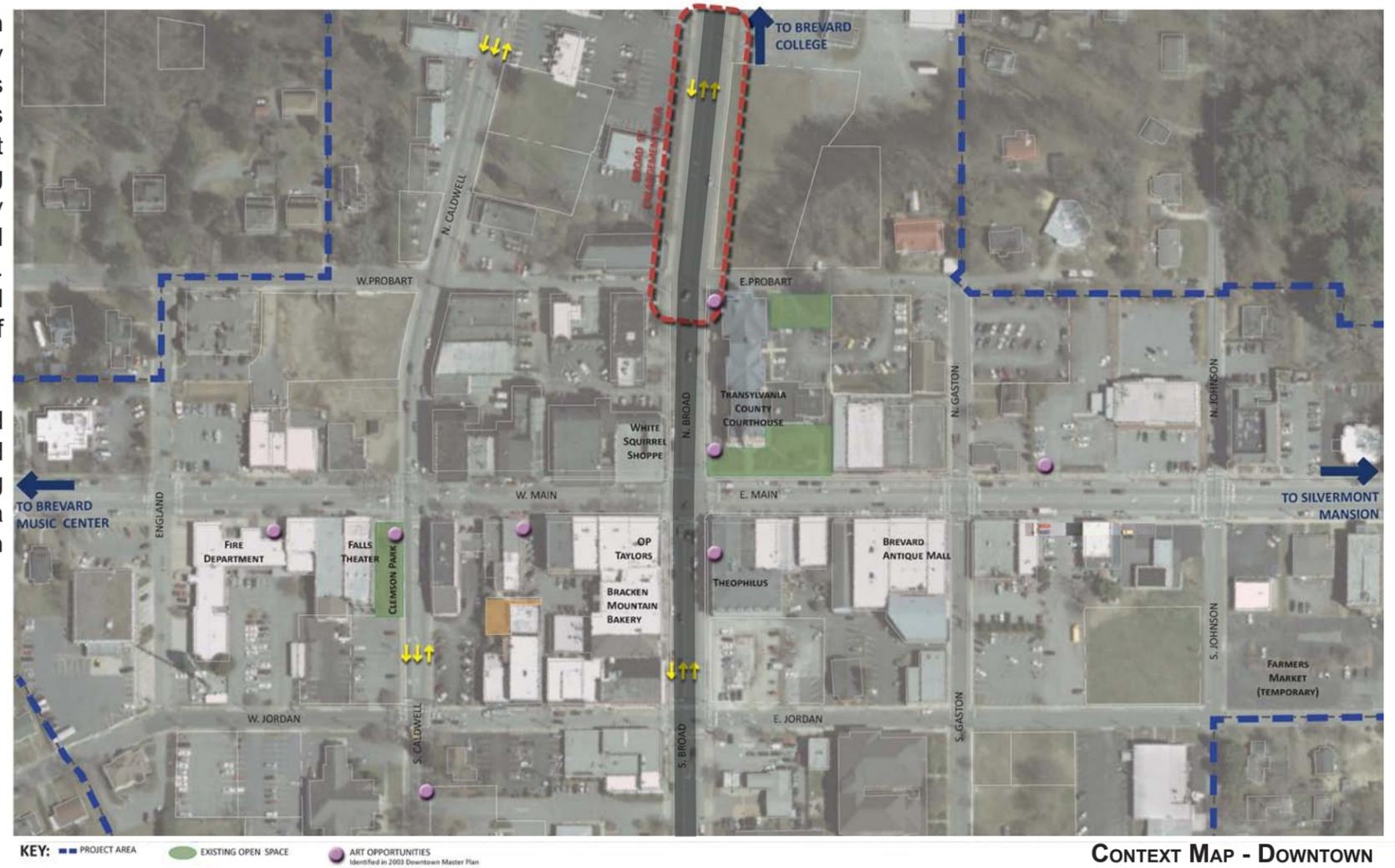
- Materials selected for the test block are reflective of those currently used on Main Street and consistent with the character of the existing streetscape
- Site furnishings including benches and trash receptacles are reflective of the character of the existing streetscape
- The existing streetscape does not account for areas where utility access has been requested to allow for water and electricity access during major events
- 4” Granite curbs surrounding tree pits are a tripping hazard. There is no additional pedestrian refuge onto the sidewalk from parallel parking spaces adjacent to tree pit locations
- The concrete scoring pattern is not consistent with the existing scoring pattern located on Main Street
- Electrical outlets are mounted on wood posts within the tree planters
- Red Maple trees selected are not the best choice for a street tree application. Red Maples have a shorter life span than other potential species in more urban conditions. Other considerations for choosing different tree species would be that Red Maple species have weak wood, invasive roots, less upright branching character, not hardy enough and grow at a medium rate.
- According to the construction documents, trees were planted in the planting strip with the Cornell University structural soil mix. Although this is an appropriate mix for urban conditions, bricks may settle or heave over time.
- Bump outs at street intersections are not currently provided. Pedestrians must cross the entire width of the street.



# EXISTING STREETScape ALONG BROAD STREET

Broad Street runs north and south through Brevard, connecting the city from US Highway 64 and US Highway 276 to the North. This corridor is the first impression most visitors have as they enter the city. The development of an aesthetically appealing landscape along Broad Street from the northern entry of the city has been identified as a high priority by several public officials and members of the community. The improvement of this street has the potential to act as a catalyst for infill development of retail and office space.

The cross section currently provided for Broad Street has four lanes of travel: two north and one south, with a continuous central turning lane. The cross section generally averages a total of 55' of pavement from curb to curb, with a total right-of-way width of 65'.



## ISSUES AND CHALLENGES ON BROAD STREET

- Traffic in this location often moves at high rates of speed.
- There is no consistent pattern of street trees.
- Crossing locations for pedestrians are inadequate and unsafe.
- There are currently existing overhead utilities along the corridor.
- The existing street right-of-way cross-section is narrow and it is challenging to fit all of the desired travel lanes and parallel parking on both sides of the street.



# RECOMMENDATIONS

## RECOMMENDATION ON MAIN STREET

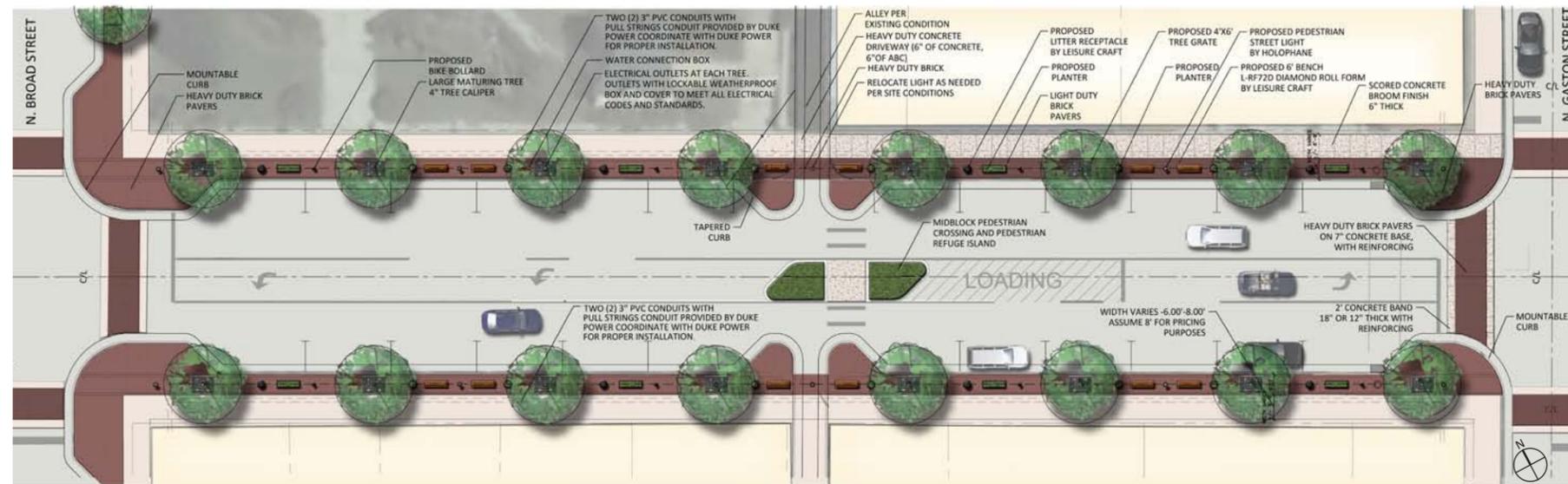
Based on the input received from the City and Public during the review process the findings of the existing streetscape were evaluated and the following recommendations have been provided for the streetscape installation on Main Street:

- Two options for the streetscape were identified. The first option incorporates trees in tree grates within a 5' brick strip that is adjacent to the on-street parking lane. The second option locates trees in landscaped islands between parallel parking spaces. At its annual retreat in February 2012, City Council selected the second option as the City's preferred alternative. However, Council directed Staff to evaluate the implications of the resultant loss of on-street parking and to present Council with options for replacing lost on-street parking by expanding public, off-street parking.
- Bump-outs at the corners of intersections are an effective refuge for pedestrians at street crossings. These bump-outs should be detailed as mountable curbs that allow for the turning radius of fire trucks and large service vehicles to be accommodated. Street crossings should be further identified with brick pavers to better delineate pedestrian crossings at intersections.
- Existing utilities have been buried for the two blocks of Main Street from Caldwell Street to Gaston Street. These utilities should continue to be buried as additional implementation of the revised streetscape continues within the city limits along Main Street (Location of underground utilities on Main Street should be verified).
- Access to water and electricity should be provided for merchants as needed during business hours and should be available during festival events.
- The selection of standard site furnishings including benches, pedestrian scale lighting, trash receptacles, bicycle parking, and planters will provide continuity along the street.
- In addition to selecting one of the two streetscape options a more detailed analysis is listed below:
  - Installing trees in grates should be considered to avoid the tripping hazard of the four inch curbs
  - The selection of a single tree variety for Main Street that will withstand the elements of the urban environment and is more columnar in shape is recommended.

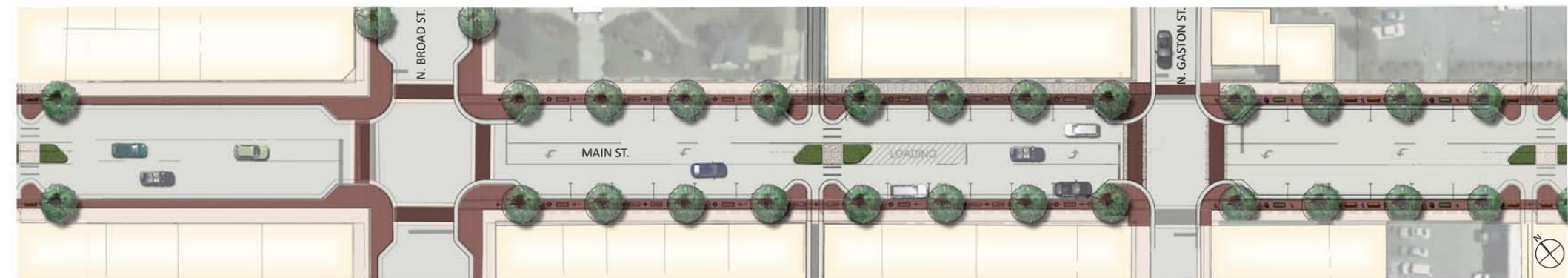


# MAIN STREET OPTION 1

In Option 1, trees are located in 4' x 6' metal grates, in a regular pattern within a 5' brick paving area. There is reinforced concrete slab which is suspended over the tree root zone located directly under the 5' brick paving area in order to provide the trees with additional room to grow successfully. Providing tree grates rather than 4" granite curbs allows for additional room for patrons to navigate from the on-street parking and circulate easily around the base of the trees. However, more trees per block will be installed than Option 2, compared to the existing conditions. Four on-street parking spaces will be lost with the proposed streetscape configuration.



ENLARGEMENT

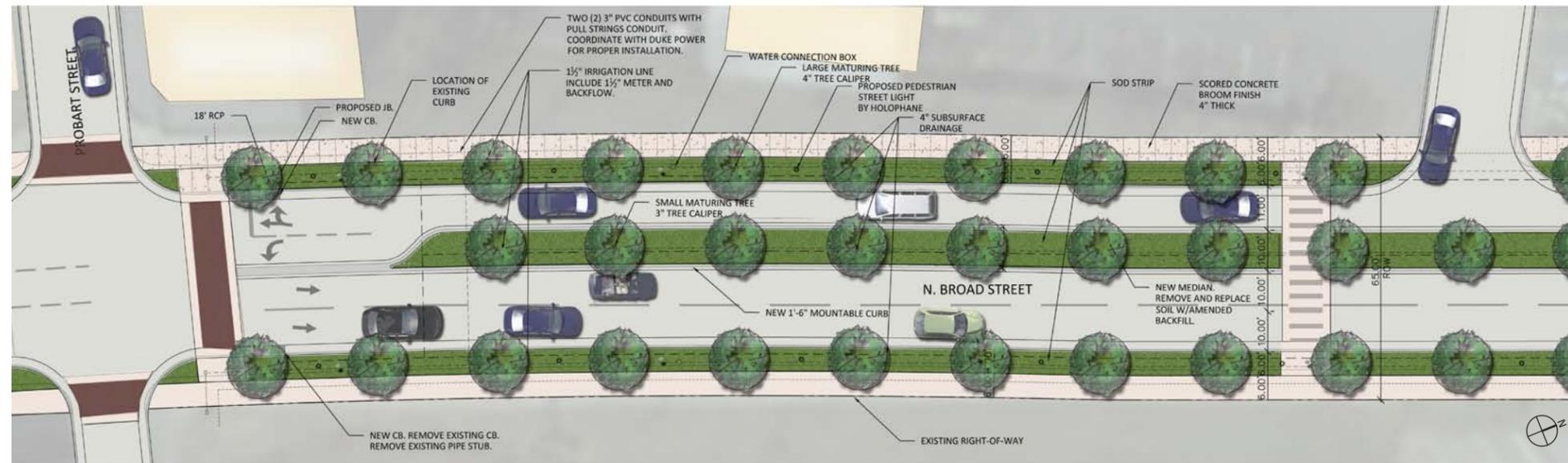


CONTINUOUS STREETScape



# RECOMMENDATIONS ON NORTH BROAD STREET

In keeping with the NC DOT's Complete Street Planning and Design Guidelines, the following recommendations have been provided: Transform Broad Street into a tree-lined avenue with a median down the center of the street that will provide cross turning access at intersections. This median will act as both a refuge for pedestrians crossing and provide a more prominent entry into downtown Brevard. The consistent street tree pattern and central median will provide additional relief for the expanse of asphalt that currently exists. In narrow locations where there is limited room for a median, a raised section of brick paving is recommended as a separation for opposing lanes of travel as well as pedestrian refuge.



**ENLARGEMENT**



**CONTINUOUS STREETSCAPE**

# RECOMMENDATIONS ON SOUTH BROAD STREET

A major consideration for the streetscape design for South Broad Street was the importance of a usable sidewalk and viable planting strip with street trees, as well as maintaining the existing on-street parking. Therefore, we proposed narrowing the current street section to assist with traffic calming and to gain space for a 5' sidewalk and 6' planting strip on both sides of the street within the existing right-of-way. The existing traffic pattern would remain the same with two lanes traveling north and one lane traveling south.



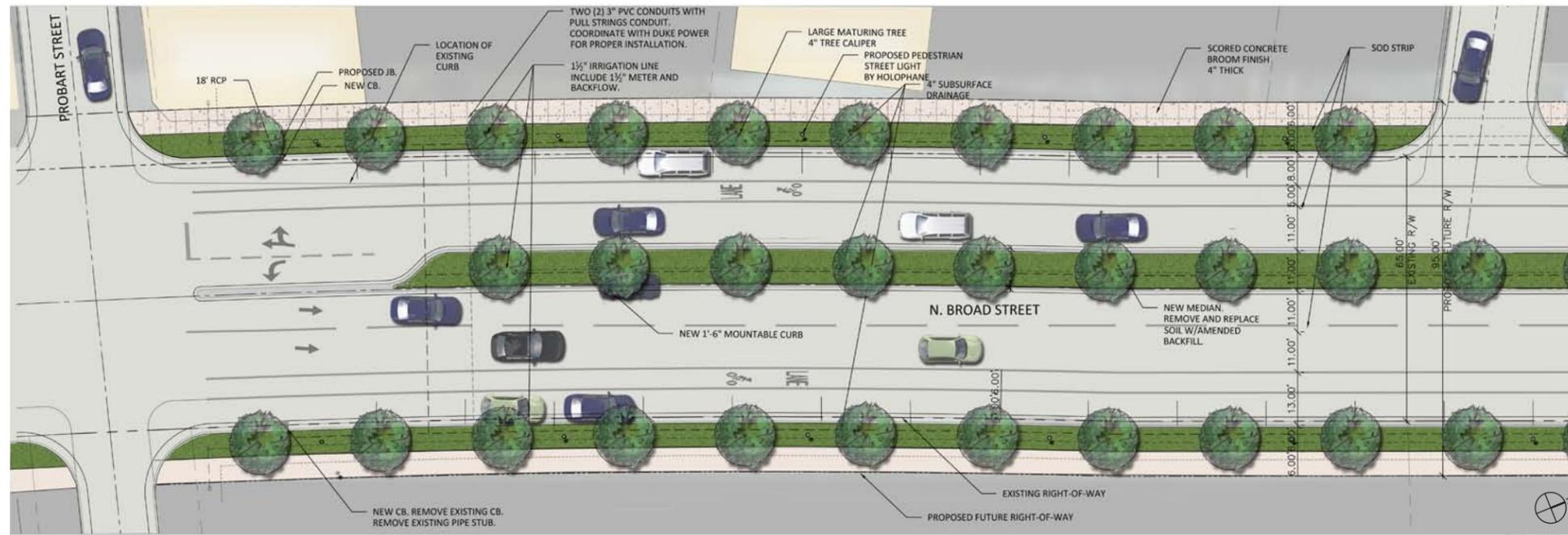
**ENLARGEMENT**



**CONTINUOUS STREETScape**

# RECOMMENDATIONS ON NORTH BROAD STREET - COMPLETE STREET

As development occurs, it is recommended that the city adopt a Future "Complete Street" cross section for Broad Street and add specific requirements to the development ordinance regarding additional right-of-way, setbacks, sidewalks and planting upgrades. The complete street would include sidewalks, bike lanes and on-street parking adjacent to the existing road right-of-way. This provides patrons with parking in close proximity to future shops and as a traffic calming feature. The future right-of-way would be approximately 95 feet.



## COST ESTIMATES

To assist the City in developing their streetscape budgets, three street prototypes were developed, two options for Main Street and one for North Broad Street based on our findings and discussions with the City and community. A cost estimate was then prepared for each which included paving details, landscape, streetscape amenities and utilities. Reference the Streetscape Pricing Exhibits on pages 20-22. The total estimated cost for each prototypical street was divided by the length of the street and presented below as a cost/linear foot. The prototypical street is a one block section including both sides of the street.

The estimate was prepared without the benefit of a survey or utility maps, therefore the estimate may not be completely applicable based on the actual field conditions of the block being considered for improvements. In order to compare “apples to apples” some general assumptions were made:

1. Existing storm drainage is present on all blocks and the proposed storm structures and subsurface drainage can tie into the system. Installing a new system is not included in the estimate.
2. The existing storm drainage system is adequately sized. Upgrading the system is not included in the estimate.
3. Burying the existing above ground power lines in a duct bank or relocating the existing power lines is not included in the estimate.

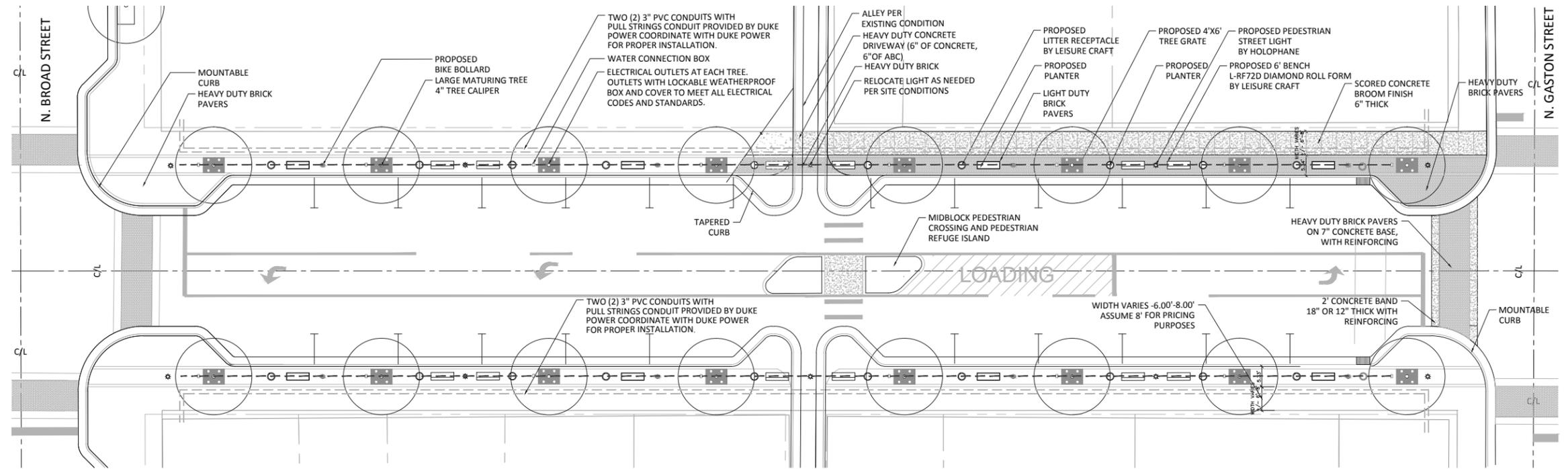
Therefore, it is recommend that prior to finalizing a streetscape budget for any Capital Improvement Project, the existing storm drainage system, power lines and other utilities be verified, and the cost estimate be adjusted accordingly. The schematic estimate listed below is based on 2012 costs. The City should also factor in inflation and market conditions when estimating future projects.

MAIN STREET- OPTION 1: \$ 1300/lf

MAIN STREET- OPTION 2: \$ 1040/lf

BROAD STREET : \$ 695/lf

# COST ANALYSIS: MAIN STREET OPTION 1



MAIN STREET STREETScape- OPTION 1 (370 LF)



CITY OF BREVARD STREETScape - PRICING EXHIBIT  
CITY OF BREVARD

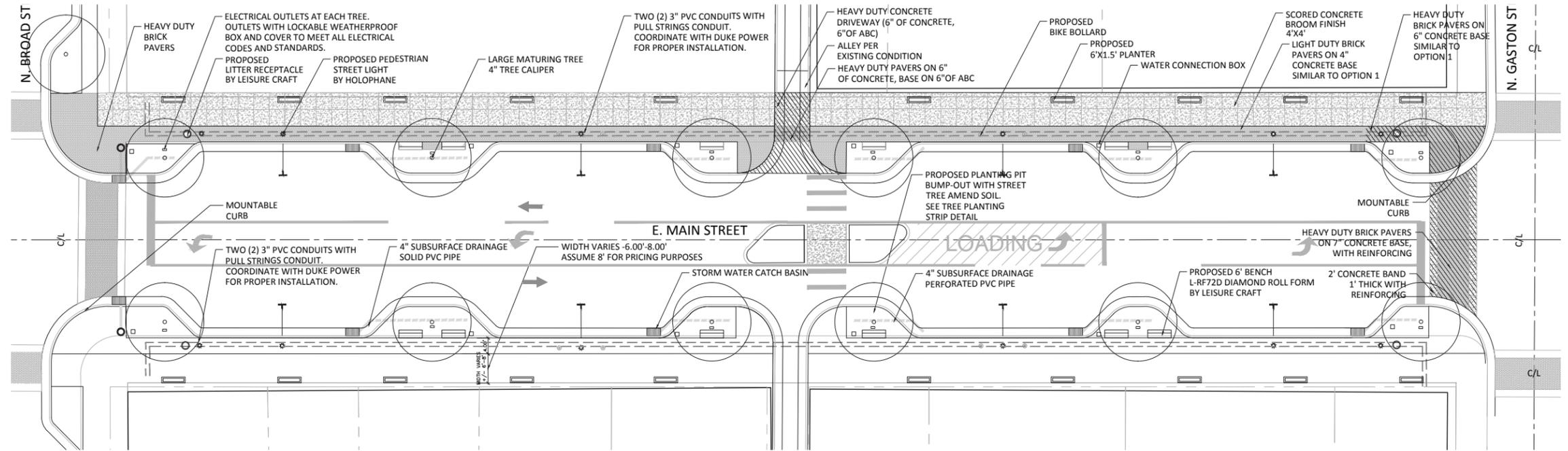
MAIN STREET - OPTION 1

Project No. 4104 Issued 01.17.12

SCALE: 1"=10'



# COST ANALYSIS: MAIN STREET OPTION 2



MAIN STREET STREETScape OPTION 2 - 370 LF (CURB TO CURB)

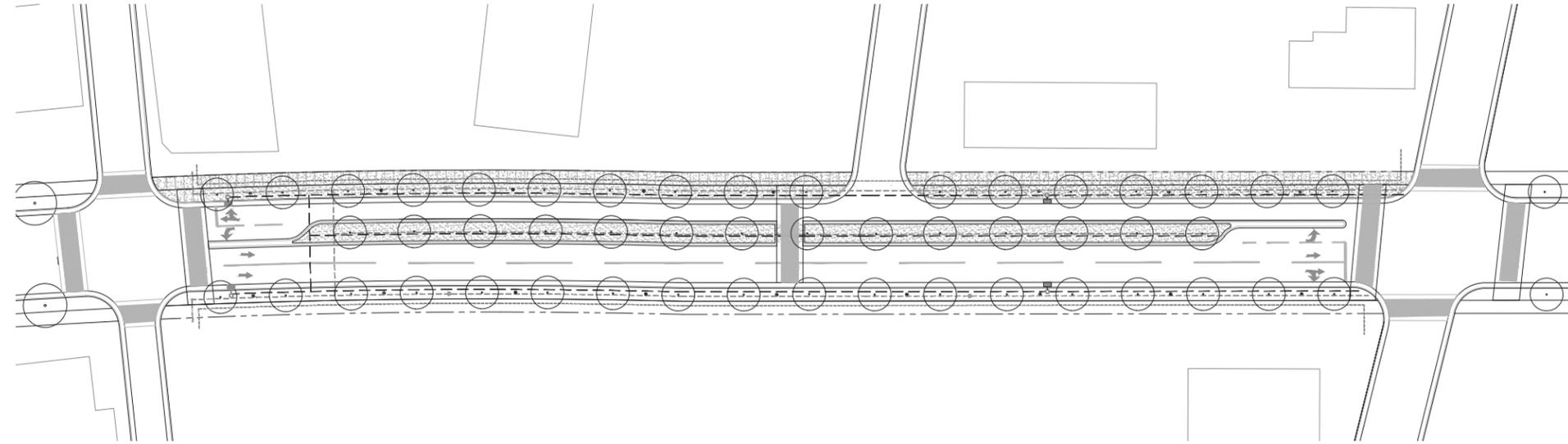


CITY OF BREVARD STREETScape - PRICING EXHIBIT  
CITY OF BREVARD

MAIN STREET - OPTION 2

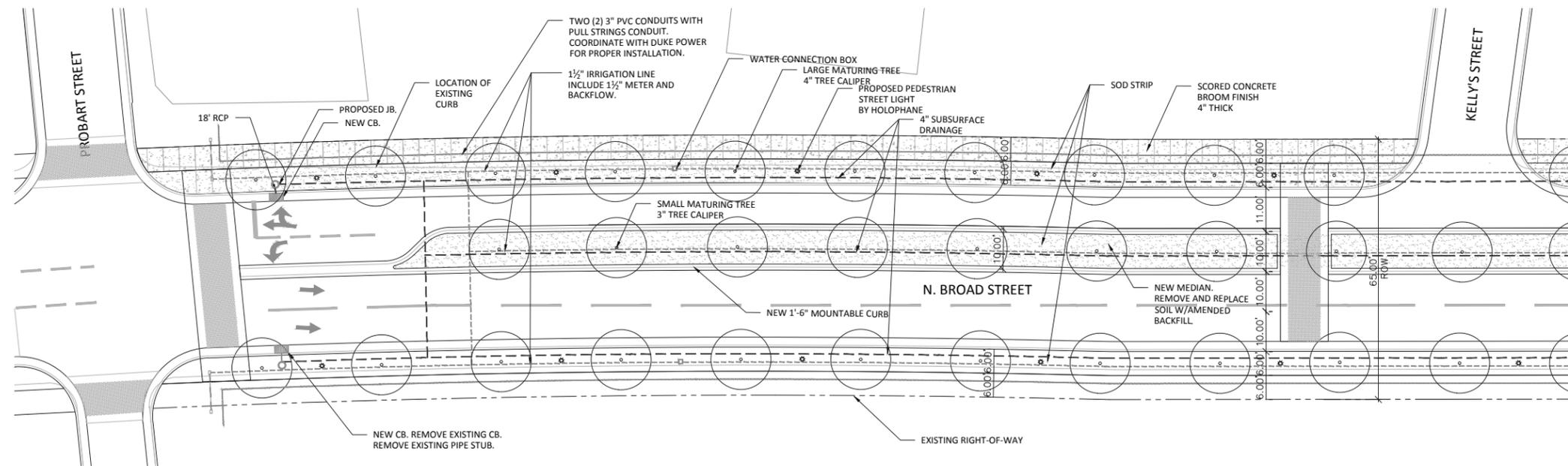
Project No. 4104 Issued 02.02.12 SCALE: 1"=10'

# COST ANALYSIS: NORTH BROAD STREET



PROPOSED BROAD STREET STREETScape - 570 LF (CURB TO CURB)

SCALE: 1"=40'



PROPOSED BROAD STREET STREETScape - ENLARGEMENT

SCALE: 1"=20'



# PHASING PLAN

Based upon findings and recommendations from the City and community the plan depicts phasing priorities for the future streetscape improvements for the streets in Brevard. The phasing priorities are:

- PHASE 1:** North Broad Street from Main Street to French Broad Street
- PHASE 2:** Main Street from North Caldwell Street to South Gaston Street, and South Broad Street from Main Street to Jordan Street
- PHASE 3:** North Broad Street from French Broad Street to Caldwell Street
- PHASE 4:** West Main Street from Caldwell Street to England Street and East Main Street from North Gaston Street to Johnson Street
- PHASE 5:** West Main Street from England Street to Oaklawn Avenue and East Main Street from South Johnson Street to North Rice Street
- PHASE 6:** South Broad Street from Jordan Street to Varsity Street

Additional study of each phase, such as economies of scale, may suggest improving street sections in a sequential and continuous manner. These considerations will need to be evaluated after cost estimates have been reviewed by the City in order to more appropriately prioritize the future implementation of the streetscape.



## ADDITIONAL RECOMMENDATIONS: PUBLIC SPACE

The design team looked at public amenities available for the citizens and visitors to downtown of Brevard and determined that there is a need for a significant public space. There are several existing pocket parks and opportunities to gather such as Walker Park, the gazebo located adjacent to the Courthouse on East Main Street and Clemson Park. All of these spaces are welcoming but do not reach the scale or have the flexibility that a dynamic downtown civic public space would provide.

Successful public spaces are lively places where the many functions of community life take place, and where people feel ownership and connectedness. Parks are all too often overlooked or taken for granted as opportunities for cities, towns and regions to enhance the value of their unique and irreplaceable resources, which set them apart as places where people love to live. Investing in a park as a community asset is an important economic development strategy that will help the City of Brevard stay competitive.

The principal goal in developing a downtown park is to create a place that attracts a wide variety of people and experiences that make them return again and again. By combining different activities within the park, the activities build on each other to create a vibrant destination. To create a park as a destination, planners must engage the community around the park and other stakeholders in a process that excites City leaders about the untapped potential of the future open space. When residents and civic partners are engaged to develop ideas they can work collaboratively to realize this potential.

Residents, community groups, and Brevard College all must envision this park as a vibrant destination that will become the heart and soul of their City. They need to create a place where citizens and visitors can find daily inspiration in the culture and history of their community. Public open space desires were identified during the public forum conducted on December 8, 2011. The elements below are referenced as potential park elements:

### PARK ELEMENTS

- Stage structure
- Large hardscape area for activities and gatherings
- Farmer's Market
- Interactive water feature
- Large open space for recreational activities
- Outdoor exhibition spaces

### PARK LOCATION

- Central location in the heart of the city
- Active street edge along a main corridor through the City - preferably along Broad Street or Main Street
- Easily accessible to all ages and abilities



# ADDITIONAL RECOMMENDATIONS

## PARKING STUDY

At this time insufficient parking does not appear to be an issue in downtown Brevard during regular daily activities. However, available parking does not appear to be visible to active users and needs to be better identified in order for existing parking areas to be utilized within the downtown area.

Based on the input of several City officials and participants during the public process it is recommended that an evaluation of the current parking and loading issues in downtown needs to be conducted and documented. This study should include the following parameters:

- Inventory of existing parking spaces
- Existing and future parking needs
- Review of existing signage that has been installed to date
- Identification of specific parcels that may be utilized as parking in the future
- Existing loading conflicts
- Options and recommendations for loading zones (at curb, center of street or off site)
- Enforcement of loading zones.

## BIKE PLAN STUDY

Bicycling is an important part of the culture that the City of Brevard should continue to embrace. At one point Broad Street was proposed to be an arterial for bicycle travel through the city. The existing narrow cross-section for Broad Street does not allow for the location of bike lanes at this time. Further study is needed in order to provide the city with a comprehensive bike plan that addresses a network of bicycle circulation allowing for complete access and fully accommodating this mode of transportation.

