Fountain Heights
16th Street Corridor Study and Streetscape Plan
April 2010

Prepared By
The Regional Planning Commission of Greater Birmingham
For
The Fountain Heights Neighborhood Association and The City of Birmingham
DISCLAIMER

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The Residents of Fountain Heights
The Business Owners of Fountain Heights
The Fountain Heights Neighborhood Association
The City of Birmingham

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In January 2000, the City of Birmingham completed a Neighborhood Improvement Plan for the Fountain Heights Neighborhood. The Fountain Heights Neighborhood and the City of Birmingham seek to further evolve the Neighborhood Improvement Plan by specifically studying the 16th Street Corridor. The Fountain Heights Neighborhood and the City of Birmingham received assistance from the Regional Planning Commission of Greater Birmingham through the Metropolitan Planning Organization's Building Communities Program to complete a corridor study and a conceptual streetscape plan. The Building Communities Program offered by the Regional Planning Commission of Greater Birmingham awarded the Fountain Heights Neighborhood Association an 80/20 Grant, where the total project was $63,747 and the 20% local match paid by the Fountain Heights Neighborhood Association was $12,749.

This study will examine the 16th Street North Corridor and offer context sensitive design solutions for various alternatives along the Corridor in the Fountain Heights Neighborhood. The 16th Street Corridor Study and Conceptual Streetscape Plan are intended to be consistent with and reinforce the City of Birmingham's current planning documents, including the Fountain Heights Neighborhood Improvement Plan completed in January 2000. The 16th Street Corridor Plan responds to the much anticipated future north bound interchange at Interstate 65 and 16th Street North and offers strategies to mitigate the increased traffic volume in the existing residential neighborhood of Fountain Heights.
**Neighborhood Context**

The study area for the 16th Street Corridor Project is located in the north section of the Fountain Heights Neighborhood. This section of the Fountain Heights Neighborhood is located adjacent to downtown Birmingham residing along the crest of Flint Ridge which provides picturesque views of downtown Birmingham. The Fountain Heights residential areas are predominately located east of Interstate 65, north of 11th Avenue North and along the 16th Street Corridor. The Fountain Heights Neighborhood has many amenities, including the Fountain Heights Park and future Community Center, the historic Oak Hill Cemetery, two small corner stores and its beautiful historic architecture and rich history.
Historical Perspectives

The Fountain Heights Neighborhood is a historic neighborhood in Birmingham’s Northside Community. The Neighborhood is approximately 750 acres and is located north of the Birmingham City Center. The Neighborhood was physically divided by the construction of the Interstate system in the 1960s. The Fountain Heights Neighborhood is physically separated from the Smithfield and Enon Ridge neighborhoods to the west by Interstate 65 and from downtown Birmingham to the south by Interstate 20/59.
FOUNTAIN HEIGHTS
CITY OF BIRMINGHAM
APRIL 2010

16TH STREET CORRIDOR AND
STREETScape PLAN

03 VISUAL
CHARACTER
Infill Opportunities

The Fountain Heights Neighborhood has an abundance of vacant lots that could allow for redevelopment opportunities. Twenty-five infill houses were constructed on vacant sites throughout the neighborhood in 2008 by the Housing Authority of Birmingham. These infill houses illustrate a successful example of single family residential infill housing in the Fountain Heights Neighborhood. The Fountain Heights Neighborhood could further expand on the single family residential and commercial opportunities within the community.
The existing street plan for the corridor has a 60’ cartway with four 12’ drive lanes and a 12’ continuous center turn lane. The existing 16th Street Corridor bisects two historic Birmingham neighborhoods and creates a physical barrier in the community. The existing sidewalk is four feet wide with a four feet wide parkway that provides a small grass buffer between the automobile traffic and the pedestrian sidewalk. The existing street plan for the 16th Street Corridor contains no bike lanes, street trees, on-street parking or crosswalks.
The 16th Street Corridor is an existing five lane urban street that connects downtown Birmingham to the Fountain Heights Neighborhood. The 16th Street Corridor serves as a major traffic route for motorists who are exiting or accessing Interstate 65 or who are traveling to or from neighborhoods north and south of Fountain Heights. The existing 16th Street Corridor was widened to a five lane roadway in the early 1970s as part of a federal improvement project and can accommodate a substantial increase in traffic volume.
Traffic Count Study

The traffic count study utilized eight locations along the 16th Street Corridor, including the Interstate 65 ramps, 11th Avenue North and other points along the corridor. The peak hourly flow of traffic is less than 7,200 vehicles a day. The 16th Street corridor’s capacity is 28,500 vehicles a day at this location. The 16th Street Corridor daily traffic volumes are below capacity for this five lane section of roadway. The ALDOT proposed full Interstate 65 interchange would double the volume but still be below the capacity of this roadway. Please refer to the appendix for the complete traffic count study and modeling.
Plan Purpose

The 16th Street Corridor Plan was initiated by the Fountain Heights Neighborhood Association to plan and build transportation improvements that would improve the safety and visual quality of the street to support the community revitalization within the fountain heights neighborhood. The Plan is to be consistent with the Neighborhood Improvement Plan that was adopted in 2000. Also, the Plan responds to the much anticipated future north bound interchange at Interstate 65 and 16th Street North. The community desires the future interchange and expects this plan be implemented to respond to the future increases in traffic along the 16th street corridor.

The challenge for this project was to overcome the problems that developed when the street was in decline: speeding cars, unsafe pedestrian crossings conditions, the lack of handicap ramps at curbs, landscaping, street trees and the poor visual quality of the street and sidewalk.

The community wanted a Plan that would result in physical changes along the corridor. This Plan Document describes the recommended improvements to the existing street and sidewalk along 16th Street North, including the type and location of safe pedestrian crossings, improvements to slow traffic, type and location of new street trees, ways to improve transit access, and ways to make the street look better through landscaping, street furniture, signage, and public art.

Public Involvement

The following describes the “visioning” and public participation process undertaken for the development of the plan, including the input of residents and other stakeholders, which forms the basis of the 16th Street Corridor Study. The public process that informed the planning for the corridor study used a variety of methods to inform and educate the residents of fountain heights and solicit their input into the planning process. Members of the community were given an opportunity to participate through a series of community meetings. During these meetings, citizen input was collected through visioning and brainstorming sessions, a visual preference survey, and a likes and dislikes analysis. The public involvement process helps planners to prepare a vision and set goals for the neighborhood that address resident’s desires for their future – a vision that the community will embrace and compel citizens to remain engaged and see the plan through to implementation.
Corridor Goals and Priorities

- Create a better walking environment and safer pedestrian crossings along the corridor
- Slow traffic along the street and minimize traffic impacts on surrounding neighborhood streets
- Add more trees, plants and community gathering areas along the street
- Make the street a safe, clean and well-lit place that supports the community
- Reflect and enhance the community’s identity and cultural heritage
- Incorporate art and color into the streetscape elements
- Enhance the corridor through landscape beautification, improved signage and pedestrian street lighting
- Improve safety for vehicular traffic that addresses the dangerous left turns, speeds, and pedestrian conflicts
- Property along the corridor needs better maintenance
- Improve the retaining walls along the corridor to include consistent color scheme, to include public art and murals
- Replace the Fountain Heights neighborhood sign with a higher quality sign
- Improve parkway landscape buffer between sidewalk and roadway
- Improve the intersection for vehicles and pedestrian at 15th Avenue North and 11th Avenue North, to include better pedestrian crosswalks, improved traffic signals, better lighting to provide a safer and aesthetically pleasing environment
- Embrace the future economic development opportunities for infill housing and neighborhood commercial uses along the corridor
- Provide a vibrant streetscape along the corridor with consistent landscaping and lighting that improves the pedestrian environment and provides for safe vehicular travel throughout the corridor
Residents were asked to participate in a visual preference survey, to obtain from their perspectives, a visual vocabulary of the type of improvements desired, as well as, those conditions that may not necessarily be favored. Images were shown reflecting a variety of categories: including different types of roadways, medians, sidewalks, bike lanes, crosswalks, transit stops, traffic signals, lighting, sitting areas and landscaping. Participants responded to the slides by indicating which conditions are desired and those that are not. The visual preference survey is located below with the contributing comments.

**What is a Visual Preference Survey?**
The Visual Preference Survey is a tool for residents to give input on the planning and design process for the 16th Street Corridor in the Fountain Heights Neighborhood.

**Visual Preference Survey Results**

**Roadway - Most Preferred**
- Landscaped Tree Lined Parkway with Sidewalks and Bike Lanes
- Two Lane Roadway with either landscape median or turn lane
- Parking on the Street
- Street Trees
- Designated Bike Lane

**Roadway - Least Preferred**
- Four Lane Roadway with Grass Median or Continuous Turn Lane
- No Sidewalks
- No Bike Lanes
- Dangerous Crosswalks or No Crosswalks
- Four Lanes of Roadway
- No Parking
- No Street Trees or Pedestrian Parkway

**Medians - Most Preferred**
- Wide Landscaped Median
- Flowers, Shrubs and Street Trees In Median
- Ground Cover or Mulch In Median
- Tree Lined Sidewalks and Bike Lanes
- Curb or Valley Gutter Median

**Medians - Least Preferred**
- Concrete Median or Stripped Median
- No Landscaping
- No Street Trees
- No Sidewalks
- No Bike Lanes

**Past Present**
During last month’s meeting we showed a series of photos in several categories.

The residents rated the photos from 1 to 5, one being not appropriate and 5 being the most appropriate for the 16th Street Corridor.

The following photos illustrate the resident’s future desires of what the 16th Street Corridor could become.

**Visual Preference Survey Results**
Visual Preference Survey Results
Sidewalks - Most Preferred

- Large Wide Sidewalks for Everyone
- Wheel Chair Accessible
- Landscaping and/or Trees Separating Sidewalk from Roadway
- Provides Nice Buffer between Roadway and Pedestrian Sidewalk
- Tree Line Sidewalk with Grass Parkway
- Easy to Maintain Parkway

Visual Preference Survey Results
Sidewalks - Least Preferred

- Narrow Sidewalks
- Not Wheel Chair Accessible
- To Narrow for Children/Moms/Strollers
- None or Very Little Separation of Sidewalk from Roadway
- No Landscaping
- No Street Trees
- Dangerous

Visual Preference Survey Results
Bike Lanes - Most Preferred

- Designated Bike Lanes and Pedestrian Sidewalks
- Wide Bike Lanes and Wide Sidewalks
- Color Coded Bike Lanes
- Pedestrians and Bike Lanes Separated from One Another
- Bike Lane separated from Vehicular Roadway with Separate Signals and Signs
- Large Landscaped Parkway Separating Pedestrian/Cyclist from Vehicular Roadway
- Landscape Buffer between Pedestrian and Vehicular Roadway

Visual Preference Survey Results
Bike Lanes - Least Preferred

- No Bike Lanes
- Small Rough Shoulder for Cyclist
- Cyclist using Pedestrian Sidewalks for Cycling
- Cycling in Wrong Direction
- No Landscaping or Buffers between Vehicular Roadway and Cycling
- Dangerous

Visual Preference Survey Results
Crosswalks - Most Preferred

- Safe Pedestrian Crosswalks with Designated Pedestrian Islands in the Median
- Color Coded or White Striped Crosswalks
- Signs Illustrating Pedestrian Crossing
- Landscaped Median
- Sidewalks with Landscape Parkway

Visual Preference Survey Results
Crosswalks - Least Preferred

- No Pedestrian Crosswalks or Dangerous Striped Crossing
- Four Lane Roadway with No Pedestrian Island
- No Landscaping or Pedestrian Buffers
- Dangerous

Visual Preference Survey Results
Transit Stops - Most Preferred

- Safe and Visible Transit Stop
- Enclosed with Glass for Shelter from the Weather with Great Visibility
- Provides Shade and a Place to Sit
- Sidewalks with Landscaping
- The Transit Stop on the Right has a designated Bus Bulb Out with Large Pedestrian Path
- Safe and Secure

Visual Preference Survey Results
Transit Stops - Least Preferred

- No Bus Stop
- No Place to Sit
- No Shade or Shelter from the Weather
- No Sidewalks
- No Bike Lanes
- Dangerous
Visual Preference Survey Results
Traffic Signals - Most Preferred
- Well-Lighted and Visible Traffic Signals
- Provides Lighting over Crosswalks
- Traffic Signals are Highly Visible
- Street Signs and Pedestrian Crosswalk Highlighted
- Safe and Secure

Visual Preference Survey Results
Traffic Signals - Least Preferred
- No Pedestrian Crosswalk
- Not Well-Lighted
- Poor Pedestrian Environment
- Traffic Signals are Not Very Visible

Visual Preference Survey Results
Lighting - Most Preferred
- Well-Lighted Pedestrian Sidewalk
- Pedestrian Scale Street Lights
- Modern or Traditional Aesthetic to Street Light
- Wide Sidewalk with Landscape Parkway and Safe Pedestrian Crosswalks

Visual Preference Survey Results
Lighting - Least Preferred
- No Pedestrian Scale
- Lights Too Bright or Not Bright Enough
- Sidewalks too Narrow

Visual Preference Survey Results
Benches - Most Preferred
- Sitting Areas in Landscaped Areas under Shade Trees
- Bench Material is not too hot to sit on
- Safe and Secure Seating
- Bench with Possible Arm Rails to Prevent Sleeping on Bench
- Wide Pedestrian Sidewalks with Seating Areas
- Long Lasting and Strong Durability

Visual Preference Survey Results
Benches - Least Preferred
- No Shade for Sitting Areas
- Bench Material May be too Hot to Sit On
- No Landscaping or Shade Trees
- Poor Quality and Lack of Durability

Visual Preference Survey Results
Landscaping - Most Preferred
- Highly Landscaped Pedestrian Walkway
- Colorful Hillsides with Native Grasses and Perennials to Help Control Erosion
- Bio-swale to Collect Stormwater along Pedestrian Parkway
- Native Plants in Bio-swale to Assist in Filtering of Run-off
- Street Trees and/or Landscaping along Sidewalks
- Provides Buffer between Pedestrian and Vehicular Roadway

Visual Preference Survey Results
Landscaping - Least Preferred
- Very Little or No Buffer between Pedestrian and Vehicular Roadway
- Hard to Maintain and Narrow Parkway is Not a Good Environment for Plants to Thrive
- No Street Trees or Shade Provided
- No Buffer between Pedestrian and Vehicular Roadway
Corridor Analysis Zones

Legend:
- Interstate
- 16th Street Corridor
- Local Streets
- Northern Gateway Interstate 65 Access
- Community Zone Neighborhood Access
- Southern Gateway Central Business District Access

Corridor Overview

Fountain Heights
City of Birmingham
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Corridor Plan Overview

16th Street Corridor and Streetscape Plan

Fountain Heights
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April 2010

Corridor Plan
**Northern Gateway Concept**

The Northern Gateway will provide a welcoming and aesthetically pleasing entry into the Fountain Heights Neighborhood and downtown Birmingham. The plan recommends establishing a gateway park and bus stop bulb-out on the southbound lane of 16th Street. The landscaped park will provide a beautiful entry into the neighborhood, with a new neighborhood sign, ample landscaping, lighting and pedestrian amenities. The pedestrian amenities include a sheltered transit stop, benches, and sidewalks. The northern gateway will establish the streetscape identity along the corridor and southward into the community.
The Northern Gateway Park will define the entry into the Fountain Heights Neighborhood. The landscaped park will provide a beautiful entry into the neighborhood, with a new neighborhood sign, ample landscaping, lighting and pedestrian amenities. The pedestrian amenities include a sheltered transit stop, benches, and sidewalks. Upon completion of the Interstate 65 full interchange, the plan recommends removing the 16th Court North connection to 16th Street North and enlarging the gateway park to remove this dangerous intersection. The Gateway Park will also include a meandering sidewalk connecting 17th Street North to the transit stop on 16th Street North. The northern gateway Park will establish the streetscape identity along the corridor and southward into the community.
The recommended streetscape improvements at the 15th Avenue North intersection include, marked pedestrian crosswalks, pedestrian signalization, replacing the span wire with a mast arm, improving the landscaping along the parkway to include native and drought tolerant plants, the tree lined raised median and improved sidewalks. This intersection has the opportunity to be redeveloped to be the neighborhood commercial center in the community with a small grocery store, infill residential housing and restoration of older housing along the corridor.
**Southern Gateway Concept**

The Streetscape improvements at the southern gateway will define the entry into the Fountain Heights Neighborhood from the central business district. The recommended improvements include improving the intersection at 11th Avenue North with improved pedestrian signalization, marked crosswalks, replacing the span wire with mast arms, sidewalk improvements, improved lighting, and additional landscaping. The southern gateway has the opportunity for future development south of 11th Avenue North to add future commercial and residential development adjacent to the central business district.
STREETSCAPE IMPROVEMENTS

TRANSPORTATION

The project team explored and analyzed options for slowing traffic speeds and improving the pedestrian environment. The conceptual plan proposes to replace the continuous center turn lane with a raised landscaped median and have a four-lane cross-section with two lanes each for north-bound and south-bound travel with the exception of a left turn retained at the major intersections. The 16th Street Corridor Plan reflects the “pedestrian first” approach to the proposed streetscape design. The slower traffic will increase the pedestrian safety and comfort, while the lane configuration and intersection controls will allow for streetscape amenities to further enhance the pedestrian environment.

· Narrowing the Travel Lanes: Studies have shown that drivers tend to travel more slowly on narrow streets. The travel lanes have been reduced from 12’ to 11’ to facilitate the calming of traffic along the corridor. Treatments such as street trees, raised landscaped medians with non-mountable curbs, and ornamental lighting can also make the street appear narrower and help slow traffic along the corridor.

· Traffic Signals: Replace the existing span wire at the intersections of 15th Avenue North and at 11th Avenue North with a mast arm with underground conduit, pedestrian signalization and ornamental lighting.

· Crosswalks: Improve the crosswalks at the intersection of 15th Avenue North and 11th Avenue North with a marked crosswalk with ADA accessible ramps, traffic and pedestrian signalization, and street lighting. Marked crosswalks guide pedestrians and alert drivers to a crossing location. Crosswalks can be marked in paint or a longer lasting plastic or epoxy material embedded with reflective glass beads.

· Sidewalks: Replace the existing sidewalks so they are ADA accessible, continuous, and provide a safe pedestrian environment on both sides of the 16th Street Corridor with a 5’ wide walkway.

STREET LIGHTING

Ornamental lighting will be added to the 16th Street Corridor to increase the light on the street and enhance pedestrian safety. In addition, the lighting will help create a unique identity and consistent image for the street and will mark the entries to the neighborhood. The plan recommends placing ornamental lighting along the parkway and at all major intersections. Light levels need to be bright enough to address concerns over safety and visibility but not so bright that the light is overwhelming and uncomfortable for the neighborhood. Lighting must provide adequate roadway lighting while also lighting pedestrian areas sufficiently. The plan encourages the use of dark sky light fixtures to limit the light pollution of our night skies. Decorative street lights and poles are a prominent and costly component of a streetscape. Care should be taken in selecting a fixture that have an appearance which is compatible with the overall aesthetic of the neighborhood and provide sufficient light levels.
Streetscape Improvements

Landscape Architecture

Landscape will play a central role in defining the character of the proposed streetscape. The landscape features for the corridor should include sustainable stormwater features and climate-appropriate plants that require little or no irrigation and minimal maintenance. The landscaping should enhance the natural site elements through the thoughtful selection of flower and leaf color, textures, plant forms and plant masses.

- Landscaped Median with Street Trees: Replace the existing continuous left turn lane with a raised landscaped median with street trees and native vegetation. The raised median should have a 10’ non-mountable curb to prevent automobiles from crossing over into the median. The recommended and community supported median tree is a single stemmed crape myrtle, Lagerstroemia indica. Provide left turn lanes at designated intersections along the Corridor. Encourage the use of bioswales and stormwater management practices to help capture stormwater runoff for hydrating the landscape and to prevent erosion. See the appendix for further information on bioswales.

- Parkway Improvements: The landscape planting strip will provide a visual and physical buffer between the pedestrian and the vehicular travel lane. The planting strip between the sidewalk and the curb is four feet wide and should be planted with native grasses and flowering shrubs with a maximum height of three feet to protect sight distances and pedestrian safety. Parkway street trees can be planted along the corridor at specific nodes to include the northern gateway, the southern gateway and at the intersection of 15th Avenue North and 16th Street North. Moveable Planters may be used at the northern gateway and the 15th Avenue North Intersection.

- Parkway Benches, Receptacles and other furnishings: Street furnishings, such as benches, trash receptacles, street lights, and bicycle racks should be selected from the same family of products to provide a unified design element in the streetscape. Consideration should also be given to long-term maintenance and how they hold up over time, use and exposure to the elements. The use of street furnishings should be utilized to allow for pedestrian activity and refuge at the northern gateway and at the intersection of 15th Avenue North and 16th Street North.

Public Art

Public art can include all things that are visually meaningful and that are accessible to the public. It can take many forms, including murals, freestanding sculptures, landscape treatments, and artist designed functional elements such as lighting, paving, and street furniture. It can be permanent or temporary, a single installation or part of an on-going process enhanced over time. Art can reflect a community’s past, present and future.

The Fountain Heights Neighborhood Association will work with the local arts community to implement public art along the corridor. There are many concrete retaining walls along the street that will benefit from colorful murals that will beautify the streetscape and provide a consistent artistic aesthetic. The plan would like to also encourage beautifying the Birmingham Water Works’ water tower on 18th Street North with public art to reinforce the consistent theme along the corridor.
**Street Tree Recommendations**

- *Lagerstroemia Indica*
  - Crape Myrtle

- *Pistacia Chinensis*
  - Chinese Pistache

- *Cercis Canadensis*
  - Eastern Redbud

**Plant Palette Recommendations**

- *Juniperus Horizontalis*
  - Blue Rug Juniper

- *Trachelospermum Jasminoides*
  - Confederate Jasmine

- *Lilium Lancifolium*
  - Tiger Lily

- *Rosa Noatraum*
  - Carpet Rose

- *Narcissus Jonquilla*
  - Wild Jonquil, Daffodil

- *Rhaphiolepis Indica*
  - Indian Hawthorn
Plan Implementation

Implementation will require commitment to a disciplined long-term investment in the community. The streetscape project is not intended simply as a beautification effort and it is also not presented as a “silver bullet” to resolve all the community needs for Fountain Heights. The Neighborhood and the City of Birmingham should consider and assure that strategies are in place to address both long-term maintenance of the streetscape and have community support prior to committing to implementation of the streetscape project.

Implementation of the proposed, conceptual streetscape plan will depend on several prerequisites and milestones, which are outlined below according to estimated time lines:

- Upon adoption of the 16th Street Corridor Study and Conceptual Streetscape Plan by the City Council of Birmingham and the Fountain Heights Neighborhood Association, which is expected in Spring 2010, detailed construction plans will need to be prepared. This conceptual plan will provide the framework for the detailed construction plans. The City of Birmingham should work with Birmingham MPO to seek funding and budgeting of design funds in the City of Birmingham and the Birmingham MPO’s 2010-2011 fiscal year, and preparation of construction plans could take place beginning in mid to late 2010.

- After completion of construction plans and submittal of an adjusted budget, actual construction will also depend on available funding. The Birmingham MPO and the City of Birmingham will work together in obtaining federal, state and local funds in the implementation of this plan.

- In conjunction with the streetscape improvements, the City of Birmingham Public Works Department must complete any utility improvements prior to undertaking the streetscape improvements in order to avoid impacting the new streetscape elements for underground utility construction. Also, prior to construction, a set of plans will be delivered to Alabama Power Company requesting the burial of the electrical distribution lines along the corridor.

Cost Estimates

Preliminary cost estimates for designing and building the recommended public right of way improvements for the 16th Street Corridor are approximately:

- $250,000.00 for Design and Engineering Plans for the corridor
- $2,750,000.00 for Constructing the Streetscape Improvements and Northern Gateway Park

These cost estimates reflect an opinion of probable costs based on the conceptual design. An accurate and revised cost estimate will be prepared when the design and engineering plans are completed.
Phasing

Through the public involvement activities conducted as part of the planning process, the neighborhood voiced a preference to build all the recommended improvements along the 3/4 mile corridor at the same time.

Future Development on 16th Street North

New development and redevelopment on the corridor will be required to make improvements to the adjacent right of way that conform with the recommended improvements in this plan as well as the Fountain Heights Neighborhood Improvement Plan adopted in 2000. These will include but not limited to:

- Rebuild or repair sidewalks that do not meet city standards.

- Plant street trees and landscaping that conform to the plan’s recommendations for tree and landscaping type, size and location and that are approved by the city’s urban forester.

- Provide parkway improvements that include, street lighting, parkway benches, trash receptacles and public art that are consistent with and conform to both plan’s recommendations.

Next Steps

The implementation process for the 16th Street Corridor Study and Conceptual Streetscape Plan will include the following steps:

- Present the 16th Street Corridor Study and Conceptual Streetscape Plan to the City of Birmingham Planning Commission and City Council for adoption, by resolution, as the guiding document for public right-of-way improvements along 16th Street North.

- Continue to work with the Birmingham MPO and the Regional Planning Commission of Greater Birmingham through the implementation phase of the project.

- Work with the Fountain Heights Neighborhood Association to plan and schedule construction in a manner that minimizes impacts on the residents of Fountain Heights.

- Continue working with the Alabama School of Fine Arts and the Birmingham Museum of Art to define art projects, identify funding sources, write and support grant applications for public art and facilitate installation of art along the corridor.

- Seek and secure funding for the design, engineering and construction of the 16th Street Corridor Study and Conceptual Streetscape Plan recommended improvements.
Resolution

Whereas, the Fountain Heights Neighborhood Association has been presented the 16th Street Corridor Study and Conceptual Streetscape Plan for its consideration; and

Whereas, the 16th Street Corridor Study and Conceptual Streetscape Plan was developed in close coordination with the Fountain Heights Neighborhood Association to insure community input and involvement in the planning process; and

Whereas, the recommendations of the public right of way improvements reflected in the 16th Street Corridor Study and Conceptual Streetscape Plan will help guide and promote development of the corridor in an orderly, logical and efficient manner, serving to preserve the integrity of the Fountain Heights Neighborhood and protect the neighborhood against incompatible activities; and

Whereas, it is recognized that the adoption and implementation of the 16th Street Corridor Study and Conceptual Streetscape Plan recommendations and public right of way improvements outlined in the plan are compatible with the 2000 Fountain Heights Neighborhood Improvement Plan and with the purpose of both plans leading to the revitalization of the Fountain Heights Neighborhood; and

Whereas, the Fountain Heights Neighborhood Association recognizes the 16th Street Corridor Study and Conceptual Streetscape Plan responds to the anticipated future interchange reconfiguration at Interstate 65 and 16th Street North and offers solutions to preserve the residential character of the Fountain Heights Neighborhood; and

Whereas, the 16th Street Corridor Study and Conceptual Streetscape Plan will serve as a beneficial guide to the Alabama Department of Transportation, the City of Birmingham, The Birmingham MPO and the Fountain Heights Neighborhood Association regarding capital improvement decisions. Now therefore

BE IT RESOLVED by the Fountain Heights Neighborhood Association that said Neighborhood Association does hereby approve and fully support the 16th Street Corridor Study and Conceptual Streetscape Plan, dated April 8th, 2010.

BE IT FURTHER RESOLVED that the public right of way improvements outlined in said 16th Street Corridor Study and Conceptual Streetscape Plan be recommended for favorable consideration and implementation by appropriate City, State, Federal and Private agencies.

I, Doris Powell, President of the Fountain Heights Neighborhood Association, do hereby certify that the above is a true and correct copy of a resolution adopted by the Fountain Heights Neighborhood Association at its meeting held on April 8th, 2010.
Proposed Corridor Alternative

One of the alternatives discussed during the public planning process was narrowing the 16th Street Corridor to a two-lane section with a tree-lined median. The proposed alternative would also accommodate five foot wide bike lanes in both directions, a larger parkway with proposed bioswales curb extensions, and some areas of on-street parking near the 15th Avenue North intersection. The above street section illustrates this proposed alternative. The following page on bioswales describes their use, benefits and methods of implementation along the streetscape. During the course of the public meetings this proposed alternative was dismissed due to the residents of Fountain Heights concern over traffic congestion during peak hours, downtown events, and with the future expansion of the full interchange at Interstate 65 and 16th Street North. The preferred alternative of the four-lane roadway with an new tree-line median was chosen and is illustrated throughout this plan.
**Stormwater Management and Bioswales**

A bioswale is a vegetated depression that treats stormwater run-off from nearby surfaces such as roads and rooftops. Slowing the water enables some of it to infiltrate into the ground, and it also allows solids (dirt and pollution) to settle out of the water that does not infiltrate. Through infiltration and settling of solids, a bioswale helps improve the quality of stormwater before it enters nearby streams and ground water sources.

**What is Stormwater?**

Stormwater is precipitation that runs off impervious surfaces such as roads, rooftops, and sidewalks. This stormwater has the potential to carry pollutants such as oil, dirt, fertilizers, and pesticides. Most stormwater is collected by pipes and discharged to the nearest streams.

**Filtration and Treatment**

By moving stormwater through the bioswale slowly, pollutants are able to settle out of the water. Vegetation also acts as a filter to remove pollutants.

**Infiltration**

Some of the treated stormwater infiltrates into the ground, helping reduce the volume of water discharged into the city's stormwater system.

**Discharge**

Some of the treated stormwater is discharged into the existing inlets of the city's stormwater system.

**Inlets**

Water from the street will flow into the bioswale to provide water to the native vegetation and allow for bioretention to occur.

**Bioswales Examples**

- **This arterial street utilizes a vegetated swale to accept stormwater from the street.**
- **This green street also uses sidewalks made from pervious concrete.**
- **An example of a street retrofitted with a green gutter along the existing asphalt shoulder.**
- **An example of a stormwater curb extension that reduced project costs by leaving the existing street curb in place.**
- **This green street retrofit is designed with a narrow curb extension that captures runoff from an existing crowned street.**

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**Fountain Heights**

City of Birmingham

April 2010

**16th Street Corridor and Streetscape Plan**

**A2 Bioswale Concepts**
**Traffic Counts Analysis**

Traffic counts were taken at eight key locations for a 24 hour period during the work week in the middle of June 2009. The traffic counts were conducted by the University of Alabama at Birmingham. The eight tables below are the summary tables from this data source. Please refer to Page 07 for the traffic count location map.

### Traffic Count Location # 1

**Count Summary on I-65 Southbound Ramp**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB Total</td>
<td>SB Total</td>
<td>SB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>5429</td>
<td>427</td>
</tr>
<tr>
<td>% Trucks</td>
<td>8.0%</td>
<td>6.8%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.88</td>
<td>0.87</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:15 - 8:15</td>
<td>4:00 - 5:00</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 2

**Count Summary on I-65 Northbound Ramp**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB Total</td>
<td>NB Total</td>
<td>NB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>3781</td>
<td>218</td>
</tr>
<tr>
<td>% Trucks</td>
<td>5.9%</td>
<td>9.2%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.77</td>
<td>0.80</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:15 - 8:15</td>
<td>4:00 - 5:00</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 3

**Count Summary west of I-65 on 16th Street North**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB Total</td>
<td>WB Total</td>
<td>EB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>9890</td>
<td>3702</td>
</tr>
<tr>
<td>% Trucks</td>
<td>9.7%</td>
<td>10.5%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.87</td>
<td>0.98</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:00 - 8:00</td>
<td>4:30 - 5:30</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 4

**Count Summary east of I-65 on 16th Street North**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB Total</td>
<td>WB Total</td>
<td>EB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>7198</td>
<td>5445</td>
</tr>
<tr>
<td>% Trucks</td>
<td>5.7%</td>
<td>6.6%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.94</td>
<td>0.87</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:15 - 8:15</td>
<td>4:30 - 5:30</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 5

**Count Summary on 15th Avenue North at 16th Street**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB Total</td>
<td>SB Total</td>
<td>NB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>1341</td>
<td>690</td>
</tr>
<tr>
<td>% Trucks</td>
<td>2.7%</td>
<td>2.5%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.73</td>
<td>0.81</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:30 - 8:30</td>
<td>5:00 - 6:00</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 6

**Count Summary on 16th Street North between 12th St and 11th Ct.**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB Total</td>
<td>WB Total</td>
<td>EB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>4372</td>
<td>502</td>
</tr>
<tr>
<td>% Trucks</td>
<td>8.2%</td>
<td>10.5%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.79</td>
<td>0.90</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:30 - 8:30</td>
<td>4:30 - 5:30</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 7

**Count Summary on 11th Avenue North east of 17th Street**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB Total</td>
<td>WB Total</td>
<td>EB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>5314</td>
<td>492</td>
</tr>
<tr>
<td>% Trucks</td>
<td>4.8%</td>
<td>4.9%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.90</td>
<td>0.97</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:30 - 8:30</td>
<td>4:30 - 5:30</td>
</tr>
</tbody>
</table>

### Traffic Count Location # 8

**Count Summary on 11th Avenue west of 17th Street**

<table>
<thead>
<tr>
<th>24 Hour Total</th>
<th>AM Peak</th>
<th>PM Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>EB Total</td>
<td>WB Total</td>
<td>EB Total</td>
</tr>
<tr>
<td>Volume</td>
<td>3813</td>
<td>282</td>
</tr>
<tr>
<td>% Trucks</td>
<td>6.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>PHF</td>
<td>0.76</td>
<td>0.86</td>
</tr>
<tr>
<td>Peak Hour</td>
<td>7:30 - 8:30</td>
<td>4:30 - 5:30</td>
</tr>
</tbody>
</table>
Traffic Modeling

Traffic models were conducted using CUBE illustrating the Interstate 65 and 16th Street North interchange in 2035. The models show the existing condition of a half interchange with southbound traffic only and a full interchange with north and southbound traffic. The model shows that the anticipated traffic volume in 2035 increases from approximately 7,200 vehicles a day in 2010 to approximately 11,600 vehicles per day if the interchange stays in its current configuration. However, if the interchange becomes a full north-south interchange, the traffic volume would increase to an approximately 15,400 vehicles per day, still below the current capacity of the roadway.