

Mound Bayou, Mississippi  
Green Infrastructure  
Plan and  
Management Manual

**Mound Bayou, Mississippi**

# **Green Infrastructure Plan and Management Manual**

## **Components of the Plan**

Project Overview

Demographics and Location Map

History

Photographic Tour of the City

Site Inventory Maps

Community Forestry Plan

Master Plant Materials List

Value of Benefits Derived from Trees

Design and Sustainability Recommendations

- Town Center
- Historic and Public Spaces
- Schools
- Churches and Other Non-Profits
- Welcome Areas

Sustainable Materials Recommended on Each Site

Sustainable Practices Recommended

Funding Sources and Community Resources

Tree Maintenance Agreement

Educational Flyer for Citizens

## About This Green Infrastructure Plan

Many communities, both rural and urban are faced with decreasing budgets but increasing needs to enhance their communities in sustainable ways. This project is a “Green Infrastructure Plan” for the City of Mound Bayou, Mississippi. The objectives of the plan are multi-faceted, including creating quality green spaces for tree planting, developing green sites in a way that trees and other landscapes can perform environmental services to the citizens. Services such as improved quality of life, water and air quality, enhancement of property values, increase in commercial opportunities and job increases, while creating interactive spaces that all citizens can use for enjoyment and to improve their health, lives and social environment. Important aspects of the community that were integrated into the plan included important features of history, churches, human activities and land uses.

This plan was developed by a team that included local citizens, local elected officials, the Mississippi Urban Forest Council, an Urban Forestry student and a Landscape Architect student as project assistants.

Project Developer: Donna Yowell, Executive Director  
Mississippi Urban Forest Council  
164 Trace Cove Drive, Madison, MS 39110  
(601)- 672-0755 or [dyowell@aol.com](mailto:dyowell@aol.com)  
[www.msurbanforest.com](http://www.msurbanforest.com)

Landscape Architect: Brad Alexander, SASLA  
(601) 454-4374

Urban Forester: John Formsby. Student,  
Urban and Community Forest Specialist  
Mississippi Registered Forester #2515  
Cell/Work # 901-626-5623

The Mississippi Urban and Community Forestry Management Manual, 2<sup>nd</sup> Edition\*, was one of the tools used for the written portion of the plan and customized by Donna Yowell and a urban forester to address both the needs and opportunities for Mound Bayou, MS.



Funding and support for this project was made in part by The Mississippi Forestry Commission, The USDA Forest Service and the Southern Group of State Foresters.

\*The manual was developed by the Mississippi State University Forest and Wildlife Research Center, in cooperation with the Mississippi Forestry Commission, the Mississippi Department of Environmental Quality, and the U.S. Forest Service. Funding for this project was provided by the Mississippi Forestry Commission. Grado, S.C., S.S. Strong, M.K. Measells. 2008. Mississippi Urban and Community Forestry Management Manual, Second Edition. Forest and Wildlife Research Center, Publication FO 375, Mississippi State University.

# Minutes Form Local Planning Session

Minutes for 11/18/2010

10:45a.m. Arrival – Set-up

11:00a.m. Begin Meeting/Introductions

11:15a.m. Presentation/Explanation of Green Infrastructure Planning

11:30a.m. Open floor to input – request examples of green spaces, old buildings, etc. in need of “Greening.” Ideas offered incl.:

1. Restore existing, install new & beautify sidewalks.
2. In general, plant more trees, strategically placed.
3. Outdoor art exhibit/kiosk installed in a green space highlighting local talent, i.e. artists/musicians (Lester Cain, King Biscuit etc.).
4. Install planters & benches in green spaces & along sidewalks & downtown, historical buildings.
5. Upgrade existing parks, i.e. City Hall Park, to encourage use.
6. Plant town entrances of old & new bypasses.
7. Install more historical markers.
8. Install kiosk w/ map highlight historical info. – not as necessary if welcome center is completed.
9. New “Welcome” signs w/ lighting (solar) & town motto or a historical accomplishment.
10. Install banners along main thoroughfare.
11. Community garden in an unused green space.
12. Garden w/ path, benches, lighting, etc. in green space next to old bank/new welcome center.
13. Identify “champion” trees.
14. Install a monument to local heroes, i.e. I.T. Montgomery, Benjamin Green, etc.
15. “Green” St. Gabriel Mercy Center.
16. Install more lighting (solar) on roads, along sidewalks & in existing & proposed new gardens/parks.
17. “Green” cemeteries.
18. Turn unused green space into a playground & exercise park.
19. Promote recycling.

1:00p.m. Break for lunch.

1:30p.m. Continuation of program. Hand out & explain utilization of Volunteer Time Sheets. Schedule next meetings.

4:00p.m. Close meeting, collect time sheets.

# Minutes Form Local Planning Session

Minutes for 12/2/2010

10:45a.m. Arrival – Set-up

11:00a.m. Early lunch.

11:15a.m. Begin Meeting/Introductions

11:30a.m. Presentation/Allow committee to view rough draft makeovers.

11:45a.m. Open floor to input/suggestions for improvements to rough drafts & any new ideas thought of after 1<sup>st</sup> meeting. Ideas offered incl.:

1. Include Little Mound Bayou – Mayor to provide contact name & # for Greenville Levy Board.
2. Include water treatment storage area.
3. Add lighting to rough draft of old RR track area (green space running through center of town).
4. Include apartment building area (will eventually be torn down & made into dorms).
5. Add signs & more entrances to City Hall Park to encourage utilization of same.
6. Enlist local artist to design proposed “Welcome” signs (x4). Mayor to contact.
7. Install more historical markers.
8. Selected sites for community garden, small orchard and Farmers’ Market.
9. Include old hospital.
10. Include cemeteries.
11. Include Montgomery House – recently purchased by City & to be renovated & turned into a B&B.
12. Include public schools.
13. Include current walking trail.
14. Highlight “Septemberfest.”
15. Utilize local historian, Henry Ward – LaToya Lee to contact.
16. Determine current tree canopy/inventory – to be completed by Jason Gordon. American Forest Canopy Program.
17. Obtain aerial photos of community for Brad to work w/.

12:30p.m. Mr. Henry Ward was contacted & arrived to offer input. LaToya Lee to obtain detailed information.

1:00p.m. Close formal meeting, collect time sheets.

1:10p.m. Tour Mound Bayou w/ Brad Alexander (Architect), Mayor & City Clerk to obtain more photos.

4:00p.m. Close meeting, collect time sheets.

## Local Team

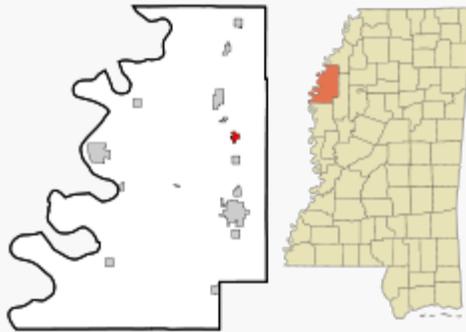
1. LaToya Lee – St. Gabriel Mercy Center, staff member – [latoyal@stgabrielmc.org](mailto:latoyal@stgabrielmc.org)
2. Amos Pates - Historian
3. Ms. Banner- citizen and business owner
4. Larry Mitchell- Public works
5. Colton Bennett- citizen
6. Jason Gordon – MSU Extension Service – [jgordon@ext.msstate.edu](mailto:jgordon@ext.msstate.edu)
7. Geri Adams – Office of Congressman Bennie Thompson
8. Matthew Cleveland – Public Works Director
9. Sabrina Morton – City clerk
10. Mayor Kennedy Johnson
11. Shelton Woodley- alderman

# Mound Bayou, Ms – Facts & Statistics

## Mound Bayou, Mississippi

— [City](#) —

[Nickname\(s\)](#): Jewel of the Delta



Location of Mound Bayou in the State of Mississippi

Coordinates: [33°52'50"N 90°43'41"W](#)  
[33.88056°N 90.72806°W](#)  
Coordinates: [33°52'50"N 90°43'41"W](#)  
[33.88056°N 90.72806°W](#)

[Country](#) [United States](#)

[State](#) [Mississippi](#)

[County](#) [Bolivar](#)

**Founded** July 12, 1887

**[Incorporated](#)** February 23, 1898

**-City status** May 12, 1972

### Government

**- [Mayor](#)** Kennedy Johnson

### [Area](#)

**- Total** 0.9 sq mi (2.3 km<sup>2</sup>)

**- Land** 0.9 sq mi (2.3 km<sup>2</sup>)

**- Water** 0 sq mi (0 km<sup>2</sup>)

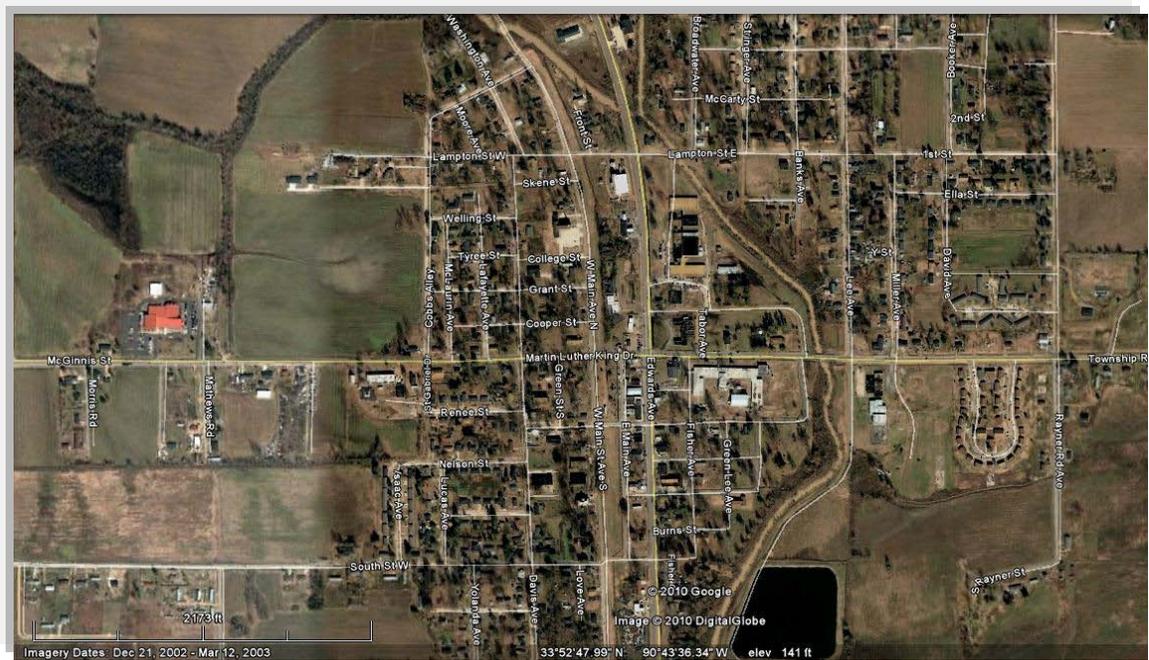
**[Elevation](#)** 144 ft (44 m)

### **Population** (2000)

**- Total** 2,102

**- [Density](#)** 2,395.1/sq mi (922.3/km<sup>2</sup>)

<u><a href="#">Time zone</a></u>	<u><a href="#">CST (UTC-6)</a></u>
- Summer ( <u><a href="#">DST</a></u> )	<u><a href="#">CDT (UTC-5)</a></u>
<u><a href="#">ZIP code</a></u>	38762
<u><a href="#">Area code(s)</a></u>	<u><a href="#">662</a></u>
<u><a href="#">FIPS code</a></u>	28-49320
<u><a href="#">GNIS feature ID</a></u>	0673895



**Mound Bayou** is a city in [Bolivar County, Mississippi, United States](#). The population was 2,102 at the 2000 census. It is notable for having been founded as an independent black community in 1887 by former slaves led by [Isaiah Montgomery](#). By percentage, its 98.4 percent [African-American majority population](#) is one of the largest of any community in the United States. The current mayor is Kennedy V. "Kent" Johnson.

**Geography**

Mound Bayou is located at [33°52'50"N 90°43'41"W](#)[33.88056°N 90.72806°W](#) (33.880632, -90.727966)<sup>[1]</sup>.

According to the [United States Census Bureau](#), the city has a total area of 0.9 square miles (2.3 km<sup>2</sup>). 0.9 square miles (2.3 km<sup>2</sup>) of it is land and none of it is covered by water.

**Demographics**

As of the [census](#)<sup>[2]</sup> of 2000, there were 2,102 people, 687 households, and 504 families residing in the city. The [population density](#) was 2,395.1 people per square mile (922.3/km<sup>2</sup>). There were 723 housing units at an average density of 823.8/sq mi

(317.2/km<sup>2</sup>). The racial makeup of the city was 0.81% [White](#), 98.43% [African American](#), 0.05% [Native American](#), 0.24% [Asian](#), 0.05% from [other races](#), and 0.43% from two or more races. [Hispanic](#) or [Latino](#) of any race were 0.38% of the population.

There were 687 households out of which 38.4% had children under the age of 18 living with them, 24.7% were [married couples](#) living together, 43.7% had a female householder with no husband present, and 26.5% were non-families. 24.7% of all households were made up of individuals and 9.8% had someone living alone who was 65 years of age or older. The average household size was 3.06 and the average family size was 3.66.

In the city the population was spread out with 34.7% under the age of 18, 12.9% from 18 to 24, 23.5% from 25 to 44, 19.1% from 45 to 64, and 9.8% who were 65 years of age or older. The median age was 27 years. For every 100 females there were 78.3 males. For every 100 females age 18 and over, there were 67.6 males.

The median income for a household in the city was \$17,972, and the median income for a family was \$19,770. Males had a median income of \$21,700 versus \$18,988 for females. The [per capita income](#) for the city was \$8,227. About 41.9% of families and 45.6% of the population were below the [poverty line](#), including 58.5% of those under age 18 and 34.5% of those aged 65 or over.

## **Mound Bayou is the first slave founded town in Mississippi and the oldest black city in the United States.**



Tracing history of the former slaves of the area can be an interesting journey. This journey may take you to Mound Bayou which was founded in 1887 by Isaiah T. Montgomery and his cousin, Benjamin T. Green. These two men were both former slaves of Joseph Emory Davis. The community is situated halfway between Vicksburg, Mississippi and Memphis, Tennessee off of Highway 61. It is the oldest bastion of Black municipal government in the South. The community is also the oldest black city in the United States.

These two men had a dream of creating a U.S. Negro Town even before the Civil War. They wanted it to serve as a sanctuary for African-American families and culture.

Named after nearby Mississippian mounds, Mound Bayou was founded by Black settlers in conjunction with the Yazoo & Mississippi Valley Railroad, which was laying track

through the area. Its founders were trying to escape post-Reconstruction violence and repression in the South by establishing their own community. Today, this essentially agricultural area remains 99.6% Black, the largest such municipality in the country.

Stop in for a visit, look at the historical buildings, see how the community functions and listen to the stories of the people that live here. It will be a nice stop on your vacation in Mississippi. Provided By: Pastor Darryl Johnson

## History

Mound Bayou traces its origin to people from the community of [Davis Bend](#), Mississippi. The latter was started in the 1820s by the planter [Joseph E. Davis](#), who intended to create a model slave community on his plantation. Davis was influenced by the utopian ideas of [Robert Owen](#). He encouraged self-leadership in the slave community, provided a higher standard of nutrition and health and dental care, and allowed slaves to become merchants.

In the aftermath of the [American Civil War](#), Davis Bend became an autonomous free community when Davis sold his property to former slave [Benjamin Montgomery](#), who had run a store and been a prominent leader at Davis Bend. The prolonged agricultural depression, falling cotton prices and white hostility in the region contributed to the economic failure of Davis Bend.

[Isaiah T. Montgomery](#) led the founding of Mound Bayou in 1887 in wilderness in northwest Mississippi. The bottomlands of the Delta were a relatively undeveloped frontier, and blacks had a chance to clear land and acquire ownership in such frontier areas. By 1900 two-thirds of the owners of land in the bottomlands were black farmers. With high debt and continuing agricultural problems, most of them lost their land and by 1920 were sharecroppers. As cotton prices fell, the town suffered a severe economic decline in the 1920s and 1930s.

Shortly after a fire destroyed much of the business district, Mound Bayou began to revive in 1942 after the opening of the [Taborian Hospital](#) by the [International Order of Twelve Knights and Daughters of Tabor](#), a fraternal organization. For more than two decades, under its Chief Grand Mentor, [Perry M. Smith](#), the hospital provided low-cost health care to thousands of blacks in the Mississippi Delta. The chief surgeon was Dr. [T.R.M. Howard](#) who eventually became one of the wealthiest blacks in the state. Howard owned a plantation of more than one thousand acres (4 km<sup>2</sup>), home-construction firm, small zoo and built the first swimming pool for blacks in Mississippi.

In 1952, [Medgar Evers](#) moved to Mound Bayou to sell insurance for Howard's Magnolia Mutual Life Insurance Company. Howard also introduced Evers to civil rights through his [Regional Council of Negro Leadership](#) which organized a boycott against service stations which refused to provide restrooms for blacks. The RNCL's annual rallies in Mound Bayou between 1952 and 1955 drew crowds of ten thousand or more. During the trial of [Emmett Till](#)'s alleged killers, black reporters and witnesses stayed in Howard's Mound Bayou home, and Howard gave them an armed escort to the court house in Sumner.

## Education

The City of Mound Bayou is served by the [Mound Bayou Public School District](#). The district has two schools with a total enrollment of approximately 650 students.

## Cultural References

The 1994 film "Letters from Mound Bayou" directed by Betsy Cox, depicted the return of midwife Sister Mary Stella Simpson to Mound Bayou.

## Notable people

- [Medgar Evers](#)
- [Larry J. Gary](#)
- [Katie Hall](#)
- [Fannie Lou Hamer](#)
- [T.R.M. Howard](#)
- [Mel Reynolds](#)
- [Thomas Moore Sr.](#)
- [Sister Mary Stella Simpson](#), midwife and health care advocate

## Source

- Hermann, Janet (1981). *The Pursuit of a Dream*. New York: OUP.
- Beito, David and Linda (2009). *Black Maverick: T.R.M. Howard's Fight for Civil Rights and Economic Power*. Urbana: University of Illinois Press.  
[ISBN 9780252034206](#).

## References

1. <sup>^</sup> ["US Gazetteer files: 2000 and 1990"](#). [United States Census Bureau](#). 2005-05-03. <http://www.census.gov/geo/www/gazetteer/gazette.html>. Retrieved 2008-01-31.
2. <sup>^</sup> ["American FactFinder"](#). [United States Census Bureau](#). <http://factfinder.census.gov>. Retrieved 2008-01-31.
3. <sup>^</sup> <http://www.langstonarts.org/2006%20Festival/LHAAFF%20Program%20Screen.pdf>

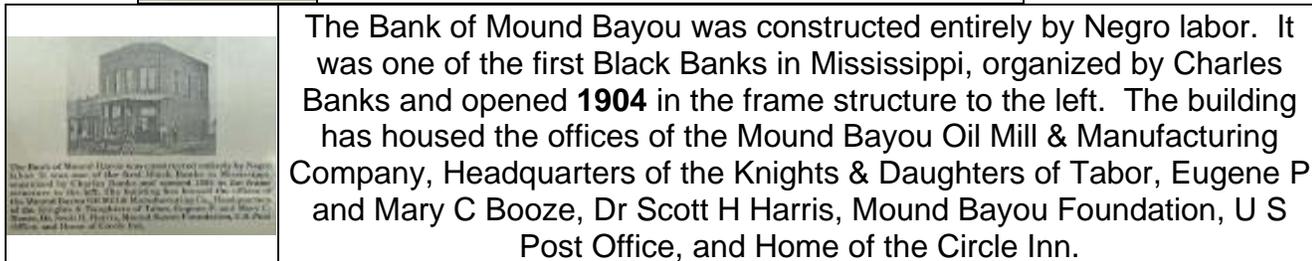
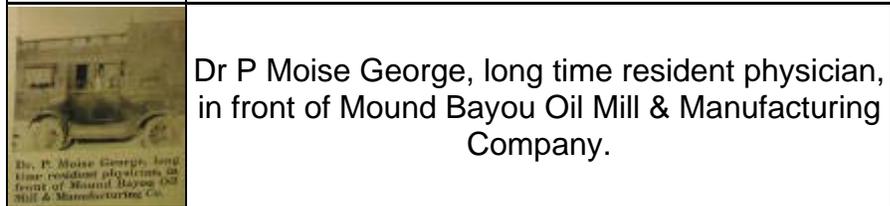
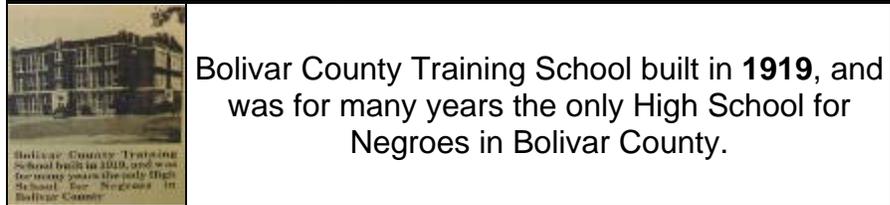
## External links

- [Mound Bayou History and Information from Malcolm Shabazz City High School](#)
- [City of Mound Bayou, Mississippi Official Website](#)

# Photographic history of Mound Bayou, MS

## “The Jewel of the Delta”

### DOWNTOWN MOUND BAYOU



## HISTORIC HOMES IN MOUND BAYOU

 <p style="font-size: small;">Home of Eugene P and Mary C Booze, Mary was National Republican Committeewoman for many years, and daughter of I T Montgomery, a co-founder of Mound Bayou.</p>	<p>Mary was National Republican Committeewoman for many years, and daughter of I T Montgomery, a co-founder of Mound Bayou.</p>	 <p style="font-size: small;">Fred and Miriah Miller Home, built in 1914 and burned 1996. Fred was the Third General President of the Alpha Phi Alpha Fraternity and his wife Miriah was a daughter of B T Green, a co-founder of Mound Bayou.</p>	<p>Built in <b>1914</b> and burned <b>1996</b>. Fred was the Third General President of the Alpha Phi Alpha Fraternity and his wife Miriah was a daughter of B T Green, a co-founder of Mound Bayou.</p>	
<p style="text-align: center;"><b>Eugene P and Mary C Booze Home</b></p>		<p style="text-align: center;"><b>Fred and Miriah Miller Home</b></p>		

## CHURCHES IN MOUND BAYOU

 	 	 
<p style="text-align: center;"><b>BETHEL AFRICAN METHODIST EPISCOPAL CHURCH</b></p>	<p style="text-align: center;"><b>BEAUTIFUL NEW HOPE M B CHURCH</b></p>	<p style="text-align: center;"><b>NEW SALEM BAPTIST CHURCH</b></p>



# Mound Bayou Tree Ordinance

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## CITY OF MOUND BAYOU, MISSISSIPPI TREE ORDINANCE

Be it ordained by the Mayor and Board of Aldermen of the City of Mound Bayou Mississippi.

### ***Section 1. Definitions***

**Street Trees:** "Street Trees" are herein defined as trees, shrubs, and all other woody vegetation on land lying between property lines on either side of all streets, avenues, or road ways within the city.

**Park Trees:** "Park Trees" are herein defined as trees, shrubs, bushes and all other woody vegetation in public parks having individual names, and all areas owned by the city, or to which the public has free access as a park.

### ***Section 2. Creation and Establishment of a City Tree Board.***

There is hereby created and established a City Tree Board for the City of Mound Bayou, Mississippi, which shall consist of five members, citizens of this city, who shall be appointed by the mayor with the approval of the Board of Aldermen.

### ***Section 3. Term of Office***

The term of the five persons to be appointed by the mayor shall be four years except that the term of two of the members appointed to the first board shall be for only two years and the term of two members of the first board shall be for only one year with each member of the board thereafter terms expiring in one year staggering terms.

### ***Section 4. Compensation***

Members of the board shall serve without compensation.

### ***Section 5. Duties and Responsibilities***

It shall be the responsibility of the board to study, investigate, council and develop and/or update annually, and administer a written plan for the care, preservation, pruning, planting, replacing, removal or disposition of trees and shrubs in parks, along streets and in other public areas. Such plan will be presented annually to the City Board of Aldermen and upon their acceptance and approval shall constitute the official comprehensive city tree plan for the City of Mound Bayou, Mississippi.

The board, when requested by the City Board of Aldermen shall consider, investigate, make finding, report and recommend upon any special matter of question coming within the scope of its work.

### ***Section 6. Operation***

The board shall choose its own officers, make its own rules and regulations and keep a journal of its proceedings. A majority of the members shall be a quorum for the transaction of business.

### ***Section 7. Street Tree Species to be Planted***

The following list constitutes the official Street Tree Species for the City of Mound Bayou, Mississippi. No species other than those included in this list may be planted as Street Trees without written permission of the City Tree Board.

<b>Small Trees</b>	<b>Medium Trees</b>	<b>Large Trees</b>
Apricot	Green Ash	Kentucky Coffee tree
Flowering Crabapple (sp)	Hackberry	Silver Maple
Golden Rain Tree	Honey locust (thorn less)	Sugar Maple
Hawthorne (sp)	Linden or Basswood (sp)	Bur Oak
Bradford Pear	Red Mulberry (male fruitless)	Sycamore
Redbud	English Oak	London plantree Sycamore
Soapberry	Red Oak	Cottonwood (Male Cotton less)
Jap Lilac Tree	Japanese Pagoda Tree	
Flowering Peach	Pecan Tree	
Purple leaf Plum	River Birch	
Serviceberry	Osage orange (Thorn less Male)	
	Persimmon	
	White Poplar	
	Sassafras	

***Section 8. Spacing***

The spacing of Street Trees will be in accordance with the three species size classes listed in section 7 of this ordinance, and no person shall plan any trees closer together than the following: Small Trees, 30 feet; Medium Trees, 40 feet; and Large Trees, 50 feet; except in special plantings designed or approved by a landscape architect.

***Section 9. Distance from Curb and Sidewalk***

The distance trees may be planted from curbs or curb lines and sidewalks will be in accordance with the three species size classes listed in section 7 of this ordinance, and no trees may be planted closer to any curb or sidewalk than the following: Small Trees, 2 feet; Medium Trees, 3 feet; and Large Trees, 4 feet.

***Section 10. Distance from Street Corners and Fireplugs***

No Street Tree shall be planted closer than 35 feet of any street corner, measured from the point of nearest intersecting curbs or curb lines. No Street Tree shall be planted closer than 10 feet of any fireplug.

***Section 11. Utilities***

No Street Trees other than those species listed as Small Trees in section 7 of this ordinance may be planted under or within 10 lateral feet of any overhead utility wire, or over or within 5 lateral feet of any underground water line, sewer line, transmission line or other utility.

***Section 12. Public Tree Care***

The city shall have the right to plant, prune, maintain and remove trees, plants and shrubs within the lines of all streets, alleys, avenues, lanes, squares and public grounds, as may be

**Section 17. Interference with City Tree Board**

It shall be unlawful for any person to prevent, delay or interfere with the City Tree Board, or any of its agents, while engaging in and about the planting, cultivating, mulching, pruning, spraying, or removing of any Street Trees, Park Trees, or trees on private grounds, as authorized in this ordinance.

**Section 18. Arborists License and Bond**

It shall be unlawful for any person or firm to engage in the business or occupation of pruning, treating, or removing street or park trees within the City without first applying for and procuring a license. The license fee shall be \$25 annually in advance; provided, however that no license shall be required of any public service company or City employee doing such work in the pursuit of their public service endeavors. Before any license shall be issued, each applicant shall first file evidence of possession of liability insurance in the minimum amount of \$50,000 for bodily injury and \$100,000 property damage indemnifying the City or any person injured or damaged resulting from the pursuit of such endeavors as herein described.

**Section 19. Review by City Commission**

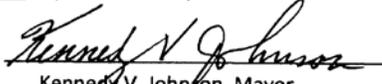
The City shall have the right to review the conduct, acts and decisions of the City Tree Board. Any person may appeal from any ruling or order of the City Tree Board to the Board of Aldermen who may hear the matter and make a final decision.

**Section 20. Penalty**

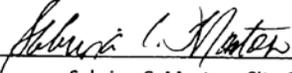
Any person violating any provision of this ordinance shall be, upon conviction or a plea of guilty, subject to a fine not to exceed \$500.00.

The above and forgoing Ordinance having previously been reduced to writing, a motion was made by Alderman Spann and a second by Alderman Woodley to approve and adopt the Ordinance and no request having been made by the Mayor or any member of the Board of Aldermen that said Ordinance be read by the City Clerk before a vote was taken. Said Ordinance was adopted by the Board of Aldermen with results being as follows:

Ordained, Adopted, and approved this the 8<sup>th</sup> day of December, 2009.

  
Kennedy V. Johnson, Mayor

ATTEST:

  
Sabrina C. Morton, City Clerk

# Community Forestry Plan for Mound Bayou

## Chapter 1 Guidelines for Sustainable Community Forest Management

### 1. Conducting a Community Resource Inventory.

Every community possesses an array of resources and qualities that give it unique character and sense of pride. These resources are vital to the well-being and long-term success of the community and must be protected. Communities desiring to embark on a resource-based planning process, with an ultimate goal of sustainable development, are well-advised to conduct an inventory of the community's resources.

Mound Bayou in partnership with the Mississippi Urban Forest Council (MUFC) held planning sessions with the community leaders and local citizens. The sessions provided an opportunity to inventory and develop a list of amenities to include in the plan. These not only included the natural aspects of community planning but also included the social and economic inventories and assessments such as natural resources, historic resources, people resources, churches, parks, schools, public lands, public buildings, business opportunities, community festivals and activities and other amenities. Also a list of amenities desired by citizens to enhance the community was developed based on both need and opportunity. The list below includes some of the amenities suggested for revitalization and to be included in a "Green infrastructure" plan.

- Restore existing, install new & beautify sidewalks.
- In general, plant more trees, strategically placed.
- Outdoor art exhibit/kiosk installed in a green space highlighting local talent, i.e. artists/musicians (Lester Cain, King Biscuit etc.).
- Install planters & benches in green spaces & along sidewalks & downtown, historical buildings.
- Upgrade existing parks, i.e. City Hall Park, to encourage use.
- Plant town entrances of old & new bypasses.
- Install more historical markers.
- Install kiosk w/ map highlight historical info. – not as necessary if welcome center is completed.
- New "Welcome" signs w/ lighting (solar) & town motto or a historical accomplishment.
- Install banners along main thoroughfare.
- Community garden in an unused green space.
- Garden w/ path, benches, lighting, etc. in green space next to old bank/new welcome center.
- Identify "champion" trees.
- Install a monument to local heroes, i.e. I.T. Montgomery, Benjamin Green, etc.
- "Green" St. Gabriel Mercy Center.
- Install more lighting (solar) on roads, along sidewalks & in existing & proposed new gardens/parks.
- "Green" cemeteries.
- Turn unused green space into a playground & exercise park.
- Promote recycling.

- Include Little Mound Bayou – Mayor to provide contact name & # for Greenville Levy Board.
- Include water treatment storage area.
- Add lighting to rough draft of old RR track area (green space running through center of town).
- Include apartment building area (will eventually be torn down & made into dorms).
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- Include Montgomery House – recently purchased by City & to be renovated & turned into a B&B.
- Include public schools.
- Include current walking trail.
- Highlight “Septemberfest.”
- Utilize local historian, Henry Ward – LaToya Lee to contact.
- Determine current tree canopy/inventory – to be completed by Jason Gordon. American Forest Canopy Program.

Our approach in Mound Bayou, Ms included Community Resource Inventory (CRI) consists of three separate resource inventories: natural, social, and economic. These inventories, taken separately or as a whole, provide the information needed for a community to make informed and rational decisions about land use. Conducting a CRI requires a 6-step process:

1. Assemble a small working group of knowledgeable citizens. This group should acknowledge the responsibility of other civic boards and commissions for the creation and maintenance of the inventories.
2. Determine the study area of the inventory. The inventory process is fundamentally the same, no matter the scale (e.g., site, town, watershed, or region.) The best scale for a community to use is that which best suits its needs.
3. Review existing documents that were previously completed by the community. These documents may include conservation and development plans, resource inventories, and special studies or plans. Work of adjacent jurisdictions and/or the help of a regional planning agency may also be helpful.
4. Assemble maps and information from local and state sources. Maps are available from a variety of different sources. When assembling the maps, caution should be taken to *not* get overwhelmed by details. Remember to gather only that information which will help the community make better land use decisions.
5. Write a draft report. The report should include both a map and sources, along with a narrative that describes that map and how it may or may not be used.
6. Publicize and solicit information to both the town’s boards and commissions and to citizens. Use all available resources to publicize the importance of this information to the community. Solicit input from citizens and incorporate constructive and improved information into the inventory. Information from the CRI can be incorporated into nearly all planning decisions that affect the community, from open space to economic development. If the CRI information is

to be effective, commissions assigned the responsibility for the inventory must keep it up to-date. The inventory should be revisited to ensure that the most current information available is provided to the community's decision makers.

#### Natural Resource-Based Planning

When community planning and decision-making revolve around natural resources,

a thorough and correct natural resource inventory is essential. The inventory should first be conducted at the landscape-level by an interdisciplinary team comprised of individuals from natural resource professions, civic, federal, state and local governments, concerned community organizations and nonprofit organizations. The inventory should include a woodland survey and resource assessment and should produce a Comprehensive Landscape Resource Map, containing all pertinent survey and assessment information. Following the inventory, communities can begin developing an open space plan that is sensitive to the area's unique sense of place and its natural resources. Open space can best be categorized by the functions that it achieves.

Six functional types of open space include:

1. natural resource protection areas, (e.g., animal and vegetative habitat, streambelt corridors, and rock ridges);
2. outdoor recreation; active, (e.g., parks, playgrounds, beaches, and trails); and passive, (e.g., plazas, sitting areas, arboretums);
3. resource management, (e.g., forests, fisheries, and farmland);
1. protection of public health and safety (e.g., floodplains, wetlands, in unbuildable areas, or

areas with limitations for development);

2. areas that shape community character or design (e.g., buffer strips, front, back, and side yards, urban plazas, greenways, open space dedications);
3. historic or archeological sites (e.g., battlegrounds, historic structures and their grounds, historic districts, town greens).

No matter what the intended function for open space, it is important that a community possess a unifying game plan to address new development with a directive, rather than reactive approach. The desires and needs of the community regarding any new development should be communicated clearly and frequently so that irreversible, harmful mistakes are not made. After the open space plan has been developed, a more thorough plan of conservation and development can be created. This plan consists of designating areas of no new development, limited development, and suitable future development. Examples of areas not to be developed include existing developments, committed open spaces, and regulated wetland areas. These areas can be permanently protected through conservation easements. Areas with limited development include those with little net buildable area or those with large lots. These areas can be designed with conservation in mind, making shorter, narrower roads and creating new open space. Areas suitable for future development are those areas considered "growth areas" by communities (e.g., shopping centers, new subdivisions). Whenever possible, areas of limited or new development should be viewed in a regional perspective and possibly linked to form greenways. Additionally,

any new developments or alterations to existing developments should incorporate native natural vegetation and trees.

### **Question 1. What do you have?**

#### **Step A. Assess the tree resource.**

An assessment of tree resources is advisable for the city of Mound Bayou, Mississippi. The assessment will provide the basic information necessary for making management decisions and provides a baseline against which change can be measured. Ideally, this assessment should include all tree resources within the planning area of the municipality. Tree resource assessments are based on various inventory methods, most of which require some type of survey. **Table 1 and 2 located in Appendix C** are examples of such surveys and show the benefits of street and park trees.

- For the city of Mound Bayou the most efficient sample survey method would use the iStreets platform and would be carried out by registered forester familiar with the software. A simple random sample of street segments should be generated using ESRI ArcMap computer software and not exceed a 6% sample size. This will give a solid estimate of the benefits received from street trees, while minimizing costs and encroachment onto private property. A more complete sample of the town could be performed, but will be more costly and require permission from private landowners. This type of survey would show a more complete representation of the forest as a whole. Again, the sample inventory should not exceed 6% of the total\*.
- Due to growth of mature trees moderate sidewalk repair is needed.

- A more aggressive pruning regime for protection of utility lines is highly advised.
- Any further hazard pruning would require evaluation during summer/growing season.
- The Town of Mount Bayou has a canopy cover of 7.4%\*\*. Out of the total land area of 576 acres, approximately 43 acres are forested. Target canopy cover for an area is 40%\*\*\*.

\*The exact figure would be determined by a registered forester

\*\*Using 2001 USGS Land Cover data

\*\*\*Source: *Green Infrastructure*, Benedict and McMahon, 2006

#### **Step B. Review tree management practices.**

Understanding the status of the urban or community forest requires knowing how it has been previously managed. Some information that should be collected on past and current management methods and actions includes:

1. municipal tree care cycles, practices, including planting, maintenance, and removal,
2. existing ordinances, and level of enforcement practiced (i.e., numbers of violations, permits and citations issued, penalties and fines collected),
3. planning regulations and guidelines pertaining to trees, and numbers of tree-related permits granted, modified, or denied, and
4. activities of municipal departments and public utilities that impact trees. The purpose of reviewing past and current tree management practices is to identify all

activities affecting trees in the community, especially those falling under municipal control. For instance, seemingly unrelated ordinances and planning regulations may directly or indirectly impact forest resources and, therefore, must be taken into account.

**Question 2. What do you want (i.e., goal setting)?**

**Step C. Identify Needs.**

Once information on the status of tree resources and tree management is in hand, a community can assess its urban forestry needs. Urban and community forestry needs can be grouped into three broad categories, with some needs falling into more than one category.

**Biological needs** (i.e., related to the tree resource itself):

1. increase species and age diversity to provide long-term forest stability,
2. provide sufficient tree planting to keep pace with urban growth and offset tree removal,
3. increase proportion of large-stature trees in the forest for greater canopy effects, and guarantee proper compatibility between trees and planting sites to reduce sidewalk damage and conflicts with overhead utilities that lead to premature tree removal.

**Management needs** (i.e., needs of those involved with the short and long-term care and maintenance of the urban forest):

1. develop adequate long-term planning to guarantee the sustainability of the urban forest,
2. optimize the use of limited financial and personnel resources,
3. increase training and education for tree program employees to ensure high quality tree care, and
4. coordinate tree-related activities of municipal departments. **Community needs** (i.e., those that relate to how the public perceives and interacts with the urban forest and the local urban forest management program):

5. increase public awareness of values and benefits associated with trees,
6. promote better private tree care through better public understanding of the biological needs of trees,
7. foster community support for the urban forest management program, and promote conservation of the urban forest by focusing public attention on all tree age classes, not just large heritage trees.

Although the needs listed above are common in many communities, specific needs of each community will vary, and may include others not noted here.

**List of Community Forestry Needs for Mound Bayou, Mississippi**

**Maintenance and Training Needs:**

- Would require moderate sidewalk repair
- Utility Pruning (High Need)
- Any further hazard pruning would require evaluation during summer/growing season

**Other Needs:**

- Community tree planting programs, education and involvement would be beneficial
- Increased green infrastructure, such as; recycling, bio-swales, rain gardens, green materials and home vegetable and flower gardens.

**Step D. Establish Goals and Recommendations.**

With information on resources and needs collected, goals to address local urban forestry needs can be set and a management strategy formed. To establish realistic goals, it is important to consider limitations posed by the level of community support, economic realities, and environmental constraints. Limitations on resources may make immediate addressing of all identified needs impractical and, in this case, it will be

necessary to prioritize goals. Community involvement and support are critical in the establishment of goals since most urban and community forestry ordinances rely heavily upon voluntary compliance by the public, and compliance will only occur if the public supports the goals set. Involving the public in the goal-setting process allows them to reflect on the values of their community as well as educate themselves on how urban forest management affects their community. Since goals are tangible ends that the management strategy seeks to achieve, it is important to set goals which are quantifiable, so that progress toward achieving these goals can be monitored. Typical tree program goals, as well as corresponding ordinance provisions for each goal, consistent with good urban forest management are discussed in detail in Appendix B.

### **Question 3. How do you get what you want?**

#### **Step E. Select tools and formulate the management strategy.**

This step develops a management strategy addressing specific goals. It is important to remember there are many approaches that can be used to address each goal and the pros and cons of each approach should be considered. Feasibility, practicality, legality and economics should be considered in selecting appropriate management tools.

Some typical tools include:

1. public education programs,
2. assistance and incentive programs,
3. voluntary planting programs,
4. mitigation guidelines,
5. planning regulations and guidelines, including the general plan and specific plans, and
6. ordinances.

Community involvement and support continues to be important in this phase of the process; if management approaches and tools are unacceptable to the community, they are unlikely to succeed. Your assessment of current and past management practices should provide ideas about the effectiveness of various methods used in your community and public input and

comment should be sought for any new approaches being contemplated or developed. The role of an ordinance becomes apparent at this stage, when it may become necessary to establish new positions, require development and implementation of a community forest master plan, mandate a program of public education, or outlaw destructive practices. Any provisions placed in ordinances should be directly related to the goals your community has established for its community forest, and all ordinances should include all of the essential components previously listed.

#### **Step F. Implement the management strategy.**

No matter how ideal a plan may appear on paper, it cannot achieve its goals until it is implemented. Implementation of the management strategy requires several steps, which may differ between communities and include:

1. passing an ordinance,
2. budgeting necessary funds,
3. hiring a municipal forester or arborist,
4. appointing a citizen tree advisory board,
5. formulating a master tree management plan, and
6. developing public education programs.

The above steps need not require funding if a volunteer tree board can be formed and ordinances are in place. The city of Pass Christian, MS implemented their management strategy without funding and saved many trees. It is often useful to map out an implementation schedule to accomplish the steps involved in your community's management strategy. The schedule should show the steps involved and the time frame within which they should be completed. Additionally, progress checks in the form of required progress reports to the city council or county board of supervisors should be built into the schedule to make certain that delays or problems are detected and addressed. Maintaining a high profile for the management program during

implementation will help foster public interest and maintain the commitment of local government.

**Question 4. Are you getting what you want?**

**Step G. Evaluate and revise.**

Monitoring of your implemented management strategy is essential to make certain that progress is being made and standards are being met. Evaluation provides feedback on the effectiveness of the strategy, provides opportunities to reassess the needs and goals of the community and allows readjustments and changes to goals before a crisis develops.

**Question 1. What do you have?**

**Step A. Assess the tree resource.**

In December 2010, a sample tree inventory was undertaken to ecologically and environmentally assess one city block of Mound Bayou's street tree resources (see **Table 2 in Appendix C**). The aim of the sample inventory was to provide a quick estimation of street tree species, diversity, ecological and environmental benefits. A more complete survey is highly advised and is discussed at length in Step A.

**Step B. Review tree management practices.**

Data collected during the sample inventory facilitates assessment of structural components and management practices (i.e., canopy coverage, conditions, distribution, pruning needs) as well as other conflicts associated with public safety for Mound Bayou's street trees. This assessment can be categorized by ward and zone type to show where management is needed most to improve street tree health and sustainability and to show how investing in a management program has provided benefits through maintenance of street trees.

**Management Manual**

**Question 2. What do you want (i.e., goal-setting)?**

**Step C. Identify Needs.**

Calculations of overall canopy cover, condition of street trees, street tree distribution by land use and pruning and maintenance needs aided the city in an assessment of overall management needs. Canopy cover is the driving force behind an urban forest's ability to produce benefits in the community. As canopy cover increases, so also do the benefits afforded by increased leaf area (e.g., greater rainfall interception, shade, cooling, CO<sub>2</sub> reduction, pollutant uptake, aesthetics). Residents pay the city to manage street trees for the benefit of the community and to realize the maximum return on this investment, a city should strive to maintain present canopy cover in a way that promotes annual increases. Mound Bayou's citywide canopy coverage was found to be ≈7.4%. The recommended canopy cover of an area is 40% (*Green Infrastructure*, Benedict and McMahon, 2006). Increasing canopy cover now can be a tremendous investment in the future health of the urban forest, especially canopy cover. Unfortunately, budget constraints of municipal tree programs often dictate the length of pruning cycles and maintenance regimes rather than the needs of the urban forest and its constituent components. In fact, many cities do not have a programmed pruning plan, but maintain trees under "request" and "crisis" mode, finding them further and further behind every year. Programmed pruning, under a reasonable timeline, can improve public safety by eliminating conflicts, reducing costs by improving program efficiency and increasing benefits by improving tree health and condition. Any short-

term dollar savings realized by cities deferring pruning only do so at the expense of lost tree value.

Recommendations for Mound Bayou:

**Maintenance/Training Needs:**

- Moderate sidewalk repair advised, avoid cutting into trees
- Utility pruning advised (High Need)
- Any further hazard pruning would require evaluation during summer/growing season

**Other Needs:**

- Community tree planting programs, education, and involvement would be beneficial
- 8. Increased green infrastructure, such as; recycling programs, bio-swales, rain gardens, green materials, and home vegetable and flower gardens.

**Step D. Establish Goals.**

Mound Bayou established a tree board on December 1, 2009 and outlined some wants and desires for its urban forest management program on December 8, 2009, when the City Council passed its first tree ordinance.

**Guidelines for Effective Urban and Community Forest Management**

The city's first tree board, along with a professional urban forester should provide oversight and guidance in establishing a community forestry program and influence decision-makers to pass the second tree-related ordinance. This ordinance could provide for a broader spectrum of professional expertise on the board (i.e., an arborist, a landscape architect, a horticulturist) and more community involvement by

expanding the board to seven members. Part of the work of the board is securing much needed funding through grants.

**Question 3. How do you get what you want?**

**Steps E and F. Select Tools, Formulate and Implement the Management Strategy.**

With respect to street trees, the city of Mound Bayou could plan goals and objectives by outlining what any city would be proud to achieve: "Main Goal – protect existing trees and increase tree cover in the city." City street trees and trees within public facilities are to be maintained in a healthy, vigorous condition to provide numerous benefits including shade, wind barriers, improved air quality, and visual relief. The city's comprehensive urban tree management plan selected tools such as ecologically and horticulturally sound pest and disease control; a high standard of pruning; proper planting and establishment methods; and a timely response to complaints and safety concerns to implement their management strategy. In other words, the city sought to maintain a functional municipal forest that is both healthy and safe, with street tree populations that yield numerous benefits without compromising environmental quality or the well-being of the citizens who live, work, and play there. Ultimately, Mound Bayou should "get what it wants" by accomplishing their objectives of maintaining mature trees, tree planting, establishing a tree nursery, supplying trees to residents, maintaining young trees and improving tree ordinances. These ordinances can apply to any city wanting to protect, maintain and restore its trees and are, in fact, a good set of objectives and goals for which to strive.

#### **Question 4. Are you getting what you want?**

##### **Step G. Evaluate and Revise.**

Although street tree inventories can and do occur as a precursor to new community forest management plans, they can also be helpful in evaluating and revising management plans already in place. As discussed above, Hattiesburg used this tool to evaluate their own management plan and will, no doubt, use it to make any necessary revisions for the future. As part of the natural resource based plan or overall urban forest management strategy, municipal officials, committees, tree boards and commissions and other affiliated parties must determine and carefully examine any codes, regulations, ordinances, or laws that may affect, however remotely, the plan or strategy. Any and all codes, regulations, ordinances or laws must then be addressed and the plan or strategy altered, prior to approving or initiating any activities. Some examples of codes, regulations, ordinances or laws that may be in place in Mississippi communities include:

1. subdivision ordinances, (exercise power in subdivision design, including physical layout, street standards, utility service, and open space);
2. zoning regulations, (control land use by dividing the land into different use districts and setting standards for development, including parcel use, lot size, density, street and property line setbacks, and structure size);
3. building codes, (dictate to what standards structures must adhere, including fire resistance, capacity, size and height, and appearance);

4. vegetation ordinances, (address undesirable plants, municipal trees, and arborist certification and licensing);
5. tree protection ordinances, (protect existing trees and other vegetation during development and regulate tree removal by establishing definitions, procedures, penalties and appeals necessary for enforcement);
6. special tree, species, and ecosystem regulations and laws, (often require specific guidelines for their maintenance and protection);
7. landscape ordinances, (require submission and approval of landscape plans, tree location plans, or new tree planting for new developments or development rehabilitation); screening ordinances, (set standards for structural and/or vegetation screening on lot peripheries and vegetated islands within the lot); and
8. energy conservation regulations, (reduce wind speed, mitigate urban heat islands, and reduce overall energy use and waste).

Although not all of the above codes, regulations, ordinances or laws will be in effect in or applicable to, all communities or situations, many will apply and can affect plans or strategies. Communities should take steps to ensure that the review of all future development includes checking the plan against their Community Forest Management Strategy. Careful examination and attention to detail can help avoid potential conflicts of interest and ensure plan success. The Mound Bayou Tree Ordinance was reviewed and recommendations were made to be included in this plan.

Mound Bayou's Tree Ordinance  
Recommendations:

### **City of Mound Bayou Tree Ordinance Revision and Addition Suggestions**

#### **Revisions:**

- Refine Master Tree List of species

#### **Additions:**

- Add Section "Authority, Intent, and Purpose" of Tree Board for public awareness of intentions
- Expand by adding sections to include forester/arborist duties and authority
- Form a solid Community Tree Plan along with a registered forester and include for implementation
- Review adding Section "Enforcement, Penalties, and Appeals"
- Require Permits for certain tree/shrub work? If so, add Section "Permits"
- Protection for public trees and tree abuse?
- Yearly review

**Air and water quality** remain two of the most critical issues in sustainable environmental planning. Concern over the effects of carbon accumulation in the environment and the potential for long-term climate change have prompted many municipalities to increase their enforcement of urban forestry and landscape ordinances. "Green Laws," as they are commonly called have taken on a new significance at both the state and local level, as communities strive to maintain and improve the quality of life for their residents and visitors.

Standardizing and strengthening these types of guidelines has the obvious potential to enhance the aesthetics and economic property value of an area but may also generate additional economic returns in the form of lower maintenance costs and improved public health.

Along with tree ordinances, Green Laws may be crafted in the form of landscape laws and other codes or regulations designed to address land usage, development and post construction issues. While they are developed with similar purposes and expected outcomes in mind, agencies responsible for each level of responsibility may vary considerably depending upon a community's size and funding capability. Some of the most comprehensive examples and strategies for implementing rural Green Laws can be found at the Louisiana State University Web site at [www.greenlaws.lsu](http://www.greenlaws.lsu).

#### **Chapter 2: Guidelines for Conserving Wooded Areas**

##### **Conserving Wooded Areas**

##### **Best Management Practices (BMPs) to Conserve**

##### **Wooded Areas at the Landscape Level**

Conservation of wooded areas should be an essential part of any land development project.

Conserving and incorporating trees into existing neighborhoods, new developments, and the watershed can lead to more livable communities that retain the integrity and benefits of natural resources and are ultimately more sustainable. Community planners can more easily conserve wooded areas by adopting and following a step-by-step land-use approach that consists of defining goals, conducting an inventory and assessing resources, creating a

conservation plan and identifying and selecting land protection options.

### Define Goals

Goals to conserve wooded areas across the landscape should include:

- protection and/or restoration of ecological integrity and functions,
- protection and promotion of connectivity and continuity of wooded areas across the landscape and political boundaries,
- establishment or creation of networks of forest communities as open space,
- definition of neighborhood and community boundaries,
- concealment of unsightly or incompatible land-use practices, and
- protection of wildlife habitat and corridors.

### Inventory and Assessment of the Resource

A landscape-level resource inventory that includes a woodland survey, resource assessment and produces a Comprehensive Landscape Resource Map should be conducted. The woodland survey and resource assessment consists of:

- delineating tree stands,
- identifying and classifying wooded areas by type and condition,
- assessing ecological functions as well as conservation values of wooded areas within the jurisdiction and adjacent jurisdictions,
- identifying, classifying, and assessing
- other natural resources (i.e., wetlands, farmlands, areas occupied by rare plant and animal species, and projected green spaces), and
- identifying watershed, drainage, topography, soil types, existing infrastructures, and areas of

significant historical and cultural values. Following the woodland survey and resource assessment, a Comprehensive Landscape Resource Map, containing all pertinent survey and assessment information, can be created.

### Creating a Conservation Plan

A conservation plan, based on the resource inventory and assessment data and Comprehensive Landscape Resource Map should be created by:

- identifying and locating wooded areas,
- identifying and locating sites for main transportation systems and utility infrastructure,
- selecting wooded areas to conserve, including:
  - larger tracts or remnant wooded areas,
  - wooded areas that have potential to be connected to others,
  - wooded areas with significant ecological functions and conservation values,
  - wooded areas occupied by rare plant and animal species,
  - areas with reforestation and restoration potential.
- identifying developable areas.

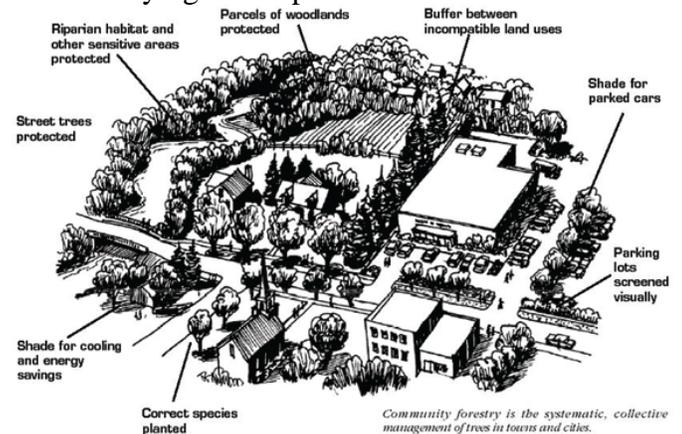


Figure 3-1. Examples of methods to

incorporate trees into existing neighborhoods, new developments, and watersheds. Source: Fazio 2003.

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Once all of the above areas have been identified and recorded on the Comprehensive Landscape Resource Map, the map should be entered in a Geographic Information System (GIS) and shared with other local and regional units of government, developers, builders, and private organizations to promote continuity and connectivity of wooded areas across the landscape and enhance coordination and partnerships among all stakeholders. Developers and builders should also be included in this process and be informed of conservation goals and wooded areas set aside for conservation.

### **Identify and Select Land Protection Strategies**

Following the development of a Comprehensive Landscape Resource Map and identification of wooded areas to conserve, appropriate land-protection options should be selected. Options available to local and regional units of government include use of zoning and subdivision ordinances and consideration of other conservation and protection options.

When drafting ordinances to promote conservation of wooded areas:

- gather input from developers, builders, and citizen organizations,
- integrate conservation values in zoning codes and policies,
- identify developable subdivisions and conservation zoning districts in the comprehensive plans,
- determine the type of development to be allowed using information

contained in the Comprehensive Landscape Resource Map,

- promote flexible subdivision ordinances that encourage variable lot sizes and configurations, street width and setbacks according to traffic, utility types and easements and creative development plans,
- draft local woodland and tree-protection ordinances for both public and private property,
- provide incentives to reduce impervious surfaces (including reduced road width, setbacks, parking lots or provision of additional lots, tax incentives and public recognition or awards),
- promote the use of joint utility easements and trenches for underground utilities and rights of way for overhead lines,
- create a local natural resource advisory board to foster participation of community organizations including citizens, nonprofit organizations, developers, builders, and contractors,
- create conservation overlay districts in the jurisdiction using comprehensive plans and zoning ordinances and determine urban growth boundaries for infrastructure (i.e., new water and sewer lines),
- provide incentives to promote or mandate implementation of conservation designs such as conservation zoning designs, open space designs, conservation subdivision designs, and cluster development designs.

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### **Guidelines for Conserving Wooded Areas**

- set up conservation standards based on sound protection options of wooded areas (e.g., promotion of the conservation of 50 to 70% of wooded

- areas in residential zoning districts as natural wooded open space),
- promote new and flexible approaches to conservation (e.g., dedicate 15 acres of land for park, playground, and public open space for every 1,000 residents or prohibit development on wooded areas of 10 acres or larger) and
  - provide a management strategy to maintain and enhance the quality of protected wooded areas (the strategy should have an education component for the public and include frequent assessments of tree and forest health, fire hazards, and wood utilization). Other conservation and land protection options that have been developed to assist landowner and local units of government include:
    - conservation easements,
    - land-retirement programs,
    - property tax-relief programs,
    - restoration cost-share programs,
    - registry programs,
    - land transfers,
    - deed restrictions,
    - mutual covenants,
    - management agreements,
    - land donations,
    - land sales to conservation buyers,
    - land exchanges, and
    - transfer of development rights.

### BMP's to Conserve Wooded Areas at the Subdivision Level

#### **Define goals**

Goals to consider in land development should include:

- conservation of green corridors,
- conservation of wooded areas as natural open space or a conservancy area, and
- protection of individual trees.

#### **Inventory and Assessment of the Resource**

Resource inventory and assessment at the subdivision level should follow the same steps as those conducted at the landscape level but at the smaller scale of the subdivision. Generally, the resource inventory and assessment for a subdivision is accomplished in three steps:

- evaluate existing resource information (obtained from larger scale resource inventory and assessments, including any local zone and tree preservation ordinances),
- conduct site review and survey trees (including identification and location of wooded areas and other natural resources, and delineation of potential wooded areas to protect). The site review and tree survey is conducted by:
  - obtaining aerial photography (available through tax assessor),
  - incorporating remote sensing data,
  - identifying and locating wooded areas and other land types, and
  - delineating potential wooded areas to protect, such as:
    - wooded areas protected or identified by local, state, and federal laws, policies, and/or regulations (i.e., wetlands, greenways, and natural areas),
    - wooded flood plains, wooded stream corridors, steep wooded slopes, and buffer zones, and
    - remnant tracts of wooded areas at least one acre in size with healthy trees.
- create a Comprehensive Landscape Resource Map for the subdivision that will be used as the basic tool from which all decisions related to the development will be made.

Figure 3-2. A comprehensive Landscape Resource Map of a subdivision such as this example from North Oaks, Minnesota shows location of wooded areas, individual trees, water bodies, proposed developable sites, and conservancy areas. Source: Minnesota DNR 2000.

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### **Guidelines for Conserving Wooded Areas**

#### **Create a Wooded Area Protection Plan**

Using the subdivision Comprehensive Landscape Resource Map, develop a protection plan which includes:

- selection and delineation of wooded areas to protect, considering the following steps:
  - record location of wooded areas to be protected based on the goals and information provided on the resource map,
  - record all areas likely to be adversely impacted during construction,
  - record areas that can be used for reforestation and/or restoration, and
  - locate and delineate developable and buildable sites, and
- submission of development plan for approval which should be collectively reviewed by the developer and the county, city, or township planner.

#### **Select a Protection Method**

Once the development plan is approved, the developer and/or builder should select the protection method that consists of several steps:

- determine the protected root zone, which is:
  - off limits to all construction activities, and
  - should be determined and protected prior to construction.

- mark the protected root zone,
- determine the grading area and method,
- define reforestation plan and method (should select suitable tree species planting design to meet intended goals), and
- record trees to be transplanted to other locations.

#### **Monitor and Evaluate the Conservation Plan**

If a conservation plan is to succeed, participation and commitment of all parties involved in the development project is essential. Plan monitoring and evaluation should include:

- education of those involved regarding goals and tree protection measures,
- site inspection which includes frequent visits to the site to check for violations of tree protection plans, and
- financial penalties for violations (may be monetary or replacement of trees).

#### **BMPs to Protect Trees at the Lot Level: New Construction, Remodeling, and Redevelopment**

##### **Recommended Practices**

Proactive planning and use of appropriate approaches and tools can guarantee greater protection and conservation of wooded areas and trees during construction. To achieve protection goals, the following steps should be taken:

- Define goals, including:
  - protection of wooded areas and trees from construction damage,
  - compliance with zoning regulations, conservation easements, and

- maintenance and enhancement of community aesthetics and property values.
- Inventory and assess trees by:
  - obtaining or drawing a boundary map of the lot,
  - recording the location of all trees and wooded areas,
  - conducting a tree survey and health assessment, including:
    - tree species and age class, and
    - health condition (i.e., trunk form, crown form, and overall condition), and
  - recording tree survey and health assessment information on the Comprehensive Landscape Resource Map.
- Select trees or groups of trees to protect, using these criteria:
  - select trees or groups of trees as needed to comply with any local tree preservation ordinances,
  - select trees and wooded areas found within conservation easements or covenants,
  - select trees that are suitable to the site conditions (e.g., native species and trees with desirable growth characteristics),
  - select trees that provide direct benefits (e.g., wildlife habitat, shade, windbreak, screening, privacy, etc.),
- select trees that are connected to other trees (e.g., groups or lines of trees) on adjoining property to achieve connectivity,
- pay particular attention to younger trees that may have greater tolerance for site disturbance during construction,
- identify protected trees with colored ribbon, and
- record location of tree and species name on the Comprehensive Landscape Resource Map.
- Select building sites and construction zones and identify other areas such as setbacks, easements, and areas dedicated to conservation.
- Create a tree protection plan by determining and delineating the protected root zone.
- Select and implement tree protection method, and
- Monitor and evaluate by:
  - visiting the building site to check for any disturbance or violation of the tree protection plan,
  - calling for a tree survival and replacement plan to be extended from two to five years following construction,
  - imposing financial penalties, and
  - making referrals to other clients for builders or contractors who do an exceptional job of protecting trees during construction.

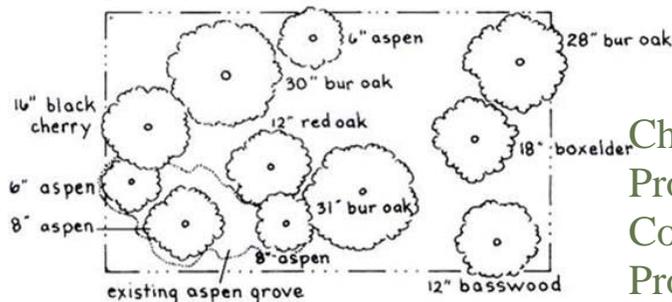


Figure 3-3. A resource map at the individual lot level shows the location of the wooded area and individual trees, species composition, and diameter of trees at breast height.

### Chapter 3: Guidelines for Protecting Urban and Community Streams

#### Protecting Urban and Community Streams

Areas containing community streams must be given special consideration

because development in these areas can have a profound impact on stream hydrology, morphology, water quality and biodiversity. Because development is often a gradual process spanning decades and wide regions of the landscape, stream protection strategies must address the comprehensive protection of stream quality throughout the entire development process. A local urban stream protection strategy has six primary components roughly corresponding to each stage of a normal development cycle from zoning, planning, site design, construction, stabilization, to final occupancy. These components are watershed-based zoning or land use planning, protection of sensitive areas, establishment of buffer networks, reduction of impervious cover in site design, limitations on erosion during construction, quantity and quality treatment of storm-water runoff and maintenance of stream protection measures.

### **Watershed-based Zoning or Land Use Planning**

To a large extent, the future quality of a stream is determined by community land use decisions. Therefore, careful consideration must be given to these streams during the zoning planning process.

The underlying premise of watershed-based zoning holds that impervious cover, not population density, is a superior measure of growth impact. Based upon the variable of impervious cover, it is possible to classify and manage streams within a community using the sequence of steps involved in watershed-based zoning below.

Step 1. Conduct a comprehensive physical, chemical, and biological

stream inventory to assess the current quality of the community streams.

Step 2. Refine/verify impervious cover/stream quality relationships and identify sensitive stream systems.

Step 3. Measure and map existing and future impervious cover at the sub-watershed level and, if possible, project future impervious cover growth based on the build-out of existing zoning.

Step 4. Designate sub-watersheds into one of three stream quality categories (sensitive, degrading, non-supporting), based on growth patterns and attainable stream quality under existing environmental conditions and the ultimate level of impervious cover.

Step 5. Modify the existing master plan to meet sub-watershed targets and assure that future growth and impervious cover is compatible with the designated stream classification for each sub-watershed.

Step 6. Adopt specific stream protection strategies for each sub-watershed (including, but not limited to, watershed or site limits on impervious cover, BMP selection criteria, stream buffers, land acquisition or other protection measures).

Step 7. Incorporate any management priorities that may arise from larger watershed planning efforts (e.g., at the scale of watershed, sub-basin, or basin).

Step 8. Implement long-term monitoring and enforcement programs to provide management feedback and assess whether the stream management strategies are achieving stream quality goals set for each sub-watershed. Specific examples of stream protection strategies from watershed-based zoning.

### **Protection of Sensitive Areas**

Sensitive areas such as wetlands, flood plains, steep slopes, critical habitats,

shorelines and mature forests can and should be protected through the development, adoption and enforcement of ordinances that prevent development in these areas. Ordinances should describe how each area will be delineated onsite and what protective measures will be taken during all stages of any development process.

Additionally, it is a good idea to establish a set of performance criteria to protect these areas.

#### Establishment of Buffer Networks

There are a number of reasons for creating urban riparian forests or urban stream buffers. In both residential and commercial areas, runoff can contain fertilizers, herbicides, pesticides and other pollutants that can be filtered out by plant roots and broken down by microorganisms and ultimately help add and maintain biodiversity in the urban and community environment.

#### **Benefits of Urban and Community Riparian**

##### **Forests and Stream Buffers**

The buffer's primary value is physical protection of the stream channel from future disturbance or encroachment. A network of buffers acts as a right-of-way for a stream and functions as an integral part of the stream ecosystem but also provides many additional benefits. Benefits are amplified when the streamside management zone is kept in a forested condition. One of the most important benefits of urban and community streamside buffers is their potential ability to remove harmful pollutants from urban storm-water runoff. On the basis of performance data from related vegetative systems, it is possible to estimate the pollutant removal capacity of an urban riparian or

stream buffer. A three zone buffer system like the one described below has the potential to achieve the following pollutant removal rates:

- sediment – 75%,
- total nitrogen – 40%,
- total phosphorus – 50%,
- trace metals – 60 to 70%, and
- hydrocarbons – 75%.

The ability of a particular buffer to remove pollutants, however, depends on many site specific factors. In the case of storm-water runoff treatment, stream buffer use should be restricted to those conditions where site-specific factors assure reliable pollutant removal.

#### **Performance Criteria for Stream Buffers**

Planning, design and maintenance of buffers largely affects the ability of a buffer to realize its many benefits.

Examples of practical performance criteria are listed below to govern buffer size, management, crossings and storm-water treatment. The 10 example criteria include:

##### 1. Minimum total buffer width–

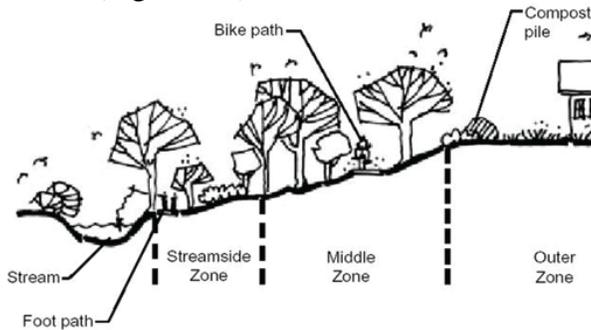
According to a national survey, urban stream buffer sizes range from 20 to 200 ft. in width, with a median of 100 ft. In general, a minimum base width of at least 100 ft. (e.g., 3 to 5 mature trees wide on each side of the channel) is recommended for adequate stream protection.

##### 2. Three-zone buffer system–Riparian or stream buffers are typically broken up into three zones; the Undisturbed Forest or Streamside Zone (Zone 1).

Three zone urban buffer system.

Source: MDEQ 1994 . The Managed Forest or Middle Zone (Zone 2) and the Runoff Control or Outer Zone (Zone 3), each of which performs a different function, has a different width,

vegetative target, and management scheme (Figure 4-1)



Prescriptions are usually based on climatic zone, soil types, soil drainage characteristics, and available and desired tree and shrub species. As an example, on a poorly drained site in the South, recommendations may call for:

- Zone 1—river birch and black willow for bank stabilization,
- Zone 2—cherrybark oak and loblolly pine as filtering mechanisms, and
- Zone 3—maidencane and gray dogwood for grass and shrub runoff control. For prescriptions on various soil types and drainage capacities and planting recommendations for urban riparian forests in the South see Appendix C.

3. Pre-development vegetative target—Generally, the vegetative target should be based on the natural vegetative community present in the floodplain, as determined from reference riparian zones.

4. Buffer expansion and contraction—The average width of Zone 2 can be expanded to include:

- the full extent of the 100-year floodplain,
- all undeveloped steep slopes (greater than 25%),
- four additional feet of buffer for each 1% increment of slope above 5%, and

- any adjacent delineated wetlands or critical habitats.

The buffer can also be contracted to accommodate unusual or historical development patterns, shallow lots, stream crossings, or storm-water ponds.

5. Buffer delineation – Three key decisions must be made when delineating buffer boundaries.

- At what mapping scale will streams be defined? The traditional scale is the bluelines present on the United States Geological Service (USGS) 7.5 minute quadrangle maps 1:24,000 (1in=2,000 ft.).
- Where does the stream begin and the buffer end? Generally, the stream origin is the point where an intermittent stream forms a distinct channel.
- From what point should the inner edge of the buffer be measured? Inner edge can be measured from the centerline of small first- or second-order streams and from the top of each stream bank for third and higher order streams.

6. Buffer crossings – Provisions must be made for linear forms of development that must cross the stream or buffer such as roads, bridges, fairways, underground utilities, enclosed storm drains, or outfall channels. Performance criteria such as crossing width, crossing angle, crossing frequency and crossing elevation should be used to minimize impact to the continuity of the buffer network and fish passage.

7. Storm-water runoff – Buffers can be an important component of the storm-water treatment system at a development site. This role is discussed later in the Section “Treatment of Storm-water Runoff.”

8. Buffers during plan review and construction – During each stage of the development process, limits and uses of stream buffer systems should be well-defined.

9. Buffer education and enforcement – Creating high buffer visibility and encouraging greater buffer awareness and stewardship among adjacent residents will help protect the integrity of a buffer system. Steps that will aid in increasing visibility and awareness include:

- marking buffer boundaries with permanent signs that describe allowable uses,
- educating buffer owners about benefits and uses of buffers with pamphlets, stream-walks, and meetings with homeowners associations,
- ensuring that new owners are fully informed about buffer limits/uses when property is sold or transferred,
- engaging residents in a buffer stewardship program that includes reforestation and backyard “buffer-scaping” programs, and
- conducting annual buffer-walks to check on encroachment.

10. Buffer flexibility–Incorporating several simple measures into buffer ordinances, such as maintaining buffers in private ownership, buffer averaging and density compensation, variances and conservation easements will help alleviate concerns that buffer requirements could represent an uncompensated taking of private property.

#### **Ordinances for Stream Buffers**

To better utilize stream buffers as specific planning tools to protect stream quality and aquatic habitat, ordinances

specifying the size and management of the stream buffer should be drafted. The model ordinance provided in Appendix C includes 10 sections that provide suggested language or technical guidance to create the most effective stream buffer zones possible. While much of the model is based on Baltimore County, Maryland’s regulations for the water quality, stream, wetland and floodplain protection, additional features and language have been added in certain sections to enhance the protective functions of the proposed stream buffer. The language in the sample model ordinance is only intended to provide suggestions for possible wording of a community’s own buffer regulation; it is not meant to be adopted word-for-word. Local situations and concerns will dictate what modifications of the ordinance language will be required. In areas with coastal and estuarine habitats, location- and vegetation specific language should be added. Coastal and estuarine areas will also want to address important offshore features such as shellfish beds and migratory bird nesting areas that are influenced by nutrient and pollutant runoff. Additionally, regions may adjust buffer width sizes according to rain fall amounts or other climatic variables. Finally, political situations within a community may also influence the final choice of buffer width standards, making flexibility in stream buffer zone establishment very important.

While the wording of buffer regulations is flexible, several features were determined to be integral in developing the most effective ordinance possible:

- The establishment of a minimum stream buffer width. A width of at least 100 feet is recommended to

recognize all the benefits that the stream buffer can provide.

- The creation of a three-zone buffer system with the functions, widths, vegetative targets, and management schemes for each zone explained in detail.
- Language that creates the ability to expand the buffer to include the
  - 100-year floodplain, steep slopes and any adjacent delineated wetlands or critical habitats.
  - A thorough explanation of the limits and uses of the stream buffer system and requirements expected for any development plan during the entire development process—from initial plan review through construction.
  - A system to permanently mark the buffer, both physically on-site, and in the land records, should be enacted.
  - A designated management system for the buffer, detailing permitted and restricted uses within the buffer and an educational program that guarantees future residents know about the buffer.
- Any waivers or variances which may be granted regarding the buffer should be explained in detail to avoid legal challenges.
- Maintenance guidelines and enforcement procedures for buffer violations should be included. A strong buffer ordinance is only the first step to preserving stream buffers. Communities will also need an effective buffer program that includes the stream buffer performance criteria previously discussed to manage buffers and enforce buffer regulations. Additionally, during the construction phase, communities must make sure that the clearing and grading permit is well integrated with the forest buffer application. Following construction, programs educating citizens about the importance of the buffer and how to manage it, can help preserve the buffer's integrity.

# Master Plant List for Mound Bayou

(All Native to the U.S. except common fig (*Ficus carica*))

## Trees:

### Large (> 60ft):

southern magnolia ( <i>Magnolia grandiflora</i> )	yellow poplar ( <i>Liriodendron tulipifera</i> )
swamp chestnut oak ( <i>Quercus michauxii</i> )	baldcypress ( <i>Taxodium distichum</i> )
white oak ( <i>Quercus alba</i> )	pondcypress ( <i>Taxodium</i>
bur oak ( <i>Quercus macrocarpa</i> )	<i>ascendens</i> / <i>Taxodium nutans</i> )
	Kentucky coffeetree ( <i>Gymnocladus dioica</i> )

### Medium (30-60 ft):

overcup oak ( <i>Quercus lyrata</i> )	nuttall oak ( <i>Quercus nuttallii</i> )
shumard oak ( <i>Quercus shumardii</i> )	American holly ( <i>Ilex opaca</i> )
green ash ( <i>Fraxinus pennsylvanica</i> )	river birch ( <i>Betula nigra</i> )
winged elm ( <i>Ulmus alata</i> )	red maple ( <i>Acer rubrum</i> )
Freeman maple ( <i>Acer x freemanii</i> )	black gum ( <i>Nyssa sylvatica</i> )
southern catalpa ( <i>Catalpa bignonioides</i> )	eastern redcedar ( <i>Juniperus virginiana</i> )

### Small (< 30 ft):

eastern hophornbeam ( <i>Ostrya virginiana</i> )	eastern redbud ( <i>Cercis canadensis</i> )
flowering dogwood ( <i>Cornus florida</i> )	red buckeye ( <i>Aesculus pavia</i> )
yaupon holly ( <i>Ilex vomitoria</i> )	sweetbay magnolia ( <i>Magnolia virginiana</i> )
alternate-leaf dogwood ( <i>Cornus alternifolia</i> )	fringetree ( <i>Chionanthus virginicus</i> )
possumhaw ( <i>Ilex decidua</i> )	American smoketree ( <i>Cotinus obovatus</i> )
musclewood ( <i>Carpinus caroliniana</i> )	

## Shrubs:

arrowwood viburnum ( <i>Viburnum dentatum</i> )	American beautyberry ( <i>Callicarpa</i>
bottlebrush buckeye ( <i>Aesculus parviflora</i> )	<i>americana</i> )
summersweet clethera ( <i>Clethera alnifolia</i> )	Virginia sweetspire ( <i>Itea virginica</i> )

**Shade tolerant shrubs:** see Small trees

## Flowering:

### Trees:

eastern redbud ( <i>Cercis canadensis</i> )	flowering dogwood ( <i>Cornus florida</i> )
red buckeye ( <i>Aesculus pavia</i> )	red maple ( <i>Acer rubrum</i> )
southern magnolia ( <i>Magnolia grandiflora</i> )	yellow poplar ( <i>Liriodendron tulipifera</i> )
fringetree ( <i>Chionanthus virginicus</i> )	

### Shrubs:

Virginia sweetspire ( <i>Itea virginica</i> )	summersweet clethera ( <i>Clethera alnifolia</i> )
bottlebrush buckeye ( <i>Aesculus parviflora</i> )	

**Wet sites:**

**Trees:**

baldcypress (*Taxodium distichum*)                      black gum (*Nyssa sylvatica*)  
green ash (*Fraxinus pennsylvanica*)                      river birch (*Betula nigra*)  
swamp chestnut oak (*Quercus michauxii*)                      overcup oak (*Quercus lyrata*)  
pondcypress (*Taxodium ascendens/Taxodium nutans*)

**Shrubs:**

buttonbush (*Cephalanthus occidentalis*)                      Virginia sweetspire (*Itea virginica*)

**Good Fall Color:**

**Trees:**

red maple (*Acer rubrum*)                      Freeman maple (*Acer x freemanii*)  
black gum (*Nyssa sylvatica*)                      American smoketree (*Cotinus obovatus*)

**Shrubs:**

Virginia sweetspire (*Itea virginica*)                      summersweet clethera (*Clethera alnifolia*)

**Good for Wildlife:**

**Trees:**

oaks (*Quercus* spp.)                      American holly (*Ilex opaca*)  
black gum (*Nyssa sylvatica*)                      possumhaw (*Ilex decidua*)  
eastern hophornbeam (*Ostrya virginiana*)                      red maple (*Acer rubrum*)  
Kentucky coffeetree (*Gymnocladus dioicus*)                      green ash (*Fraxinus pennsylvanica*)

**Shrubs:**

buttonbush (*Cephalanthus occidentalis*)                      American beautyberry (*Callicarpa  
americana*)  
arrowwood viburnum (*Viburnum dentatum*)

**Orchard:**

**Trees:**

plum (*Prunus americana*)                      black cherry (*Prunus serotina*)  
common pawpaw (*Asimina triloba*)                      black walnut (*Juglans nigra*)

**Shrubs:**

common fig (*Ficus carica*)                      blueberry (*Vaccinium* spp.)  
thornless blackberry (*Rubus* spp. var. *inermis*)  
American hazelnut (*Corylus americana*)

Every community forestry plan needs to incorporate storm resistant plants including trees. The MS Delta areas can benefit from trees resistant to wind as well as ice. For reference see the enclosed publications for storm resistant plants from MS State University and the storm preparedness CD.

**Storm resistant** – For ice: bald cypress, black gum, black walnut, eastern red cedar, white oak

**Storm resistant** – For wind: bald cypress, eastern hophorn beam, winged elm, yaupon holly

## **Benefits Derived From Trees**

### **Appendix 1 and 2**

Table 1: Initial benefits from tree planting of greenway park in Mound Bayou, MS., December 2010.

<b>Common Name</b>	<b>Species</b>	<b>Initial Benefits</b>	<b>Property Value Increase</b>	<b>Storm Water Intercepted (Gallons)</b>	<b>Atmospheric Carbon Removed (Lbs)</b>
Compton oak	<i>Quercus lyrata</i>	\$18.00	\$12.00	300	36
Eastern redbud	<i>Cercis canadensis</i>	\$6.00	\$4.00	100	16
Bottlebrush buckeye	<i>Aesculus parviflora</i>	\$2.00	\$2.00	140	16
Red buckeye	<i>Aesculus pavia</i>	\$18.00	\$12.00	420	48
		\$44.00	\$30.00	960	116
<i>Totals</i>					

Table 2: Benefits from street trees along a block of Martin Luther King Jr. Drive in Mound Bayou, MS., December 2010.

<b>Common Name</b>	<b>Species</b>	<b>Benefits/Year</b>	<b>Property Value Increase this Year</b>	<b>Storm Water Intercepted/Year (Gallons)</b>	<b>Atmospheric Carbon Removed/Year (Lbs)</b>
Water oak	<i>Quercus nigra</i>	\$139.00	\$87.00	3630	547
Willow oak	<i>Quercus phellos</i>	\$216.00	\$108.00	9156	1013
Southern catalpa	<i>Catalpa bignonioides</i>	\$137.00	\$66.00	3877	1073
Willow oak	<i>Quercus phellos</i>	\$256.00	\$115.00	12663	1179
sycamore	<i>Platanus occidentalis</i>	\$242.00	\$74.00	11574	923
sycamore	<i>Platanus occidentalis</i>	\$142.00	\$69.00	4259	560
Green ash	<i>Fraxinus pennsylvatica</i>	\$118.00	\$63.00	3004	463
sweetgum	<i>Liquidambar styraciflua</i>	\$173.00	\$103.00	6334	629
<i>Totals</i>		\$1,423.00	\$685.00	54497	6387

# **Design and Sustainability Recommendations**

**Town Center**

**Historic and Public Buildings**

**Schools**

**Churches and Other Non-profits**

**Welcome Areas**

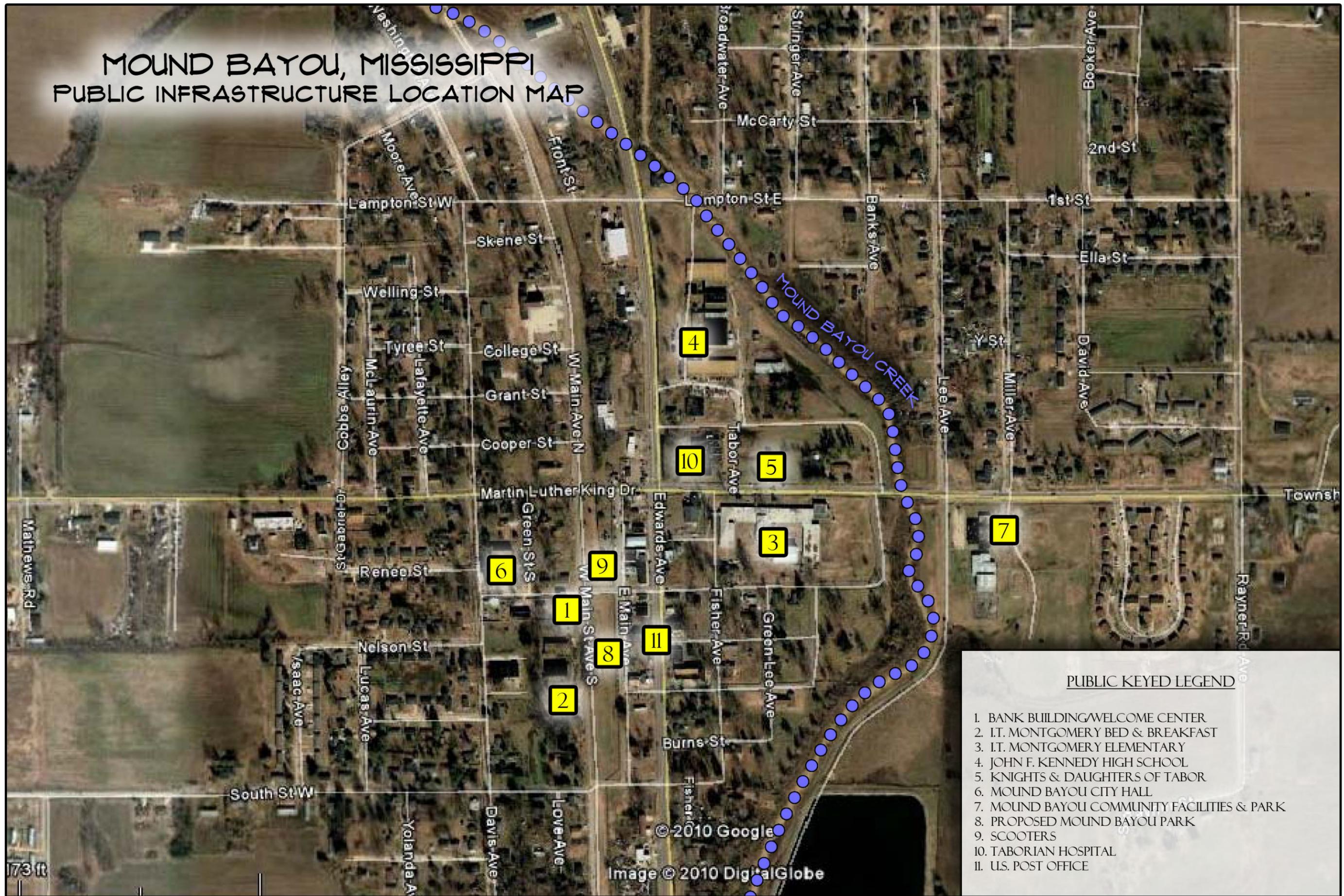
# MOUND BAYOU, MISSISSIPPI CHURCH LOCATION MAP



- CHURCH KEYED LEGEND**
1. BETHEL A.M.E CHURCH
  2. FIRST BAPTIST CHURCH OF MOUND BAYOU
  3. FIRST CHRISTIAN CHURCH OF MOUND BAYOU
  4. MT. OLIVE MISSIONARY BAPTIST CHURCH
  5. NEW SALEM BAPTIST CHURCH
  6. ST. GABRIEL MERCY CENTER
  7. WESLEY UNITED METHODIST CHURCH



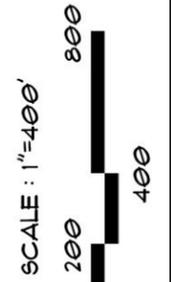
# MOUND BAYOU, MISSISSIPPI PUBLIC INFRASTRUCTURE LOCATION MAP



- PUBLIC KEYED LEGEND**
1. BANK BUILDING/WELCOME CENTER
  2. I.T. MONTGOMERY BED & BREAKFAST
  3. I.T. MONTGOMERY ELEMENTARY
  4. JOHN F. KENNEDY HIGH SCHOOL
  5. KNIGHTS & DAUGHTERS OF TABOR
  6. MOUND BAYOU CITY HALL
  7. MOUND BAYOU COMMUNITY FACILITIES & PARK
  8. PROPOSED MOUND BAYOU PARK
  9. SCOOTERS
  10. TABORIAN HOSPITAL
  11. U.S. POST OFFICE



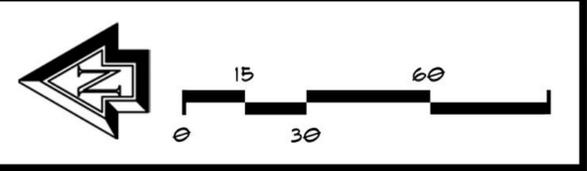
**PUBLIC INFRASTRUCTURE LOCATION MAP**  
12.21.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

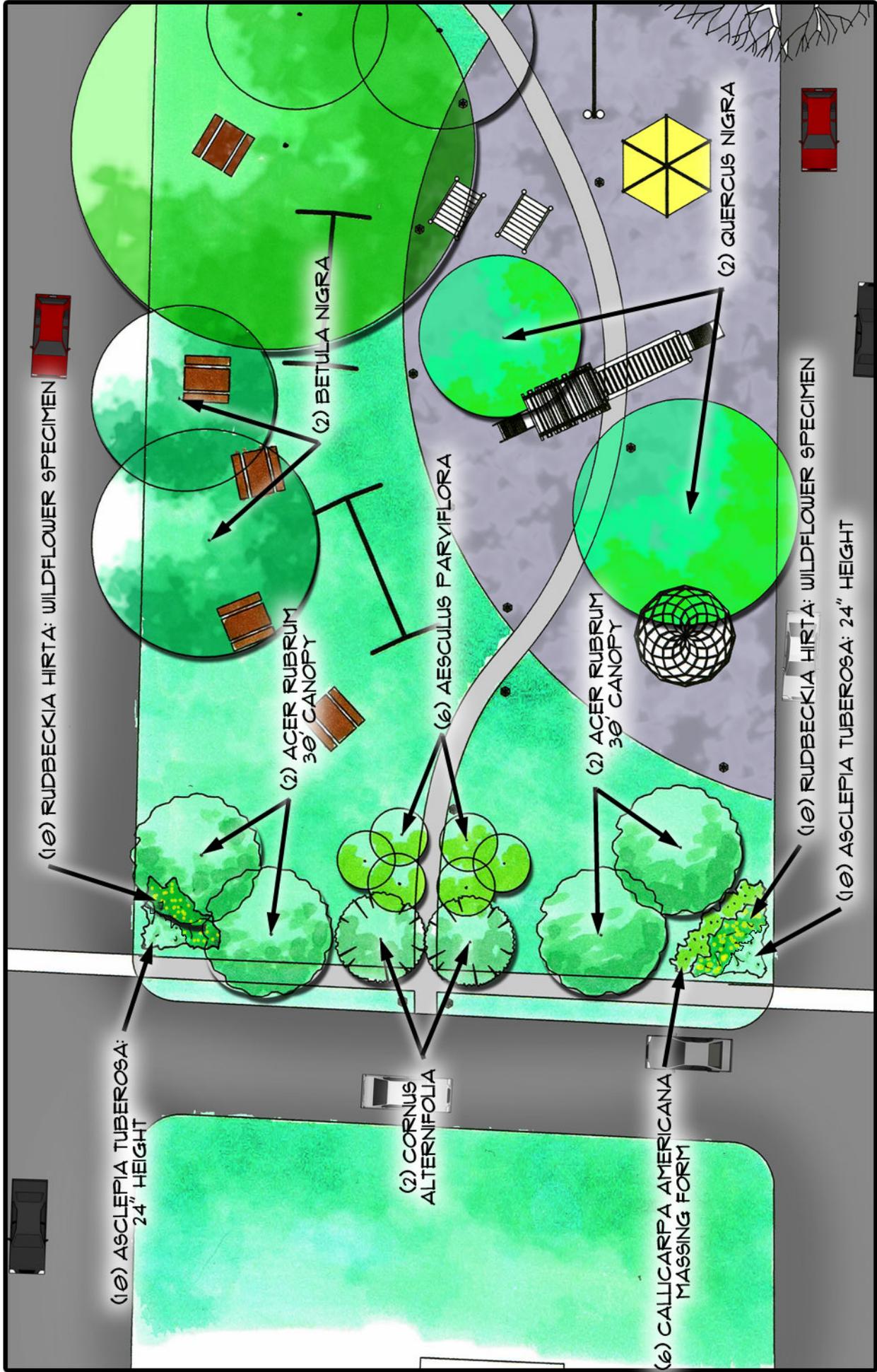


# "GREENING THE JEWEL OF THE DELTA" A GREEN INFRASTRUCTURE MASTER PLAN

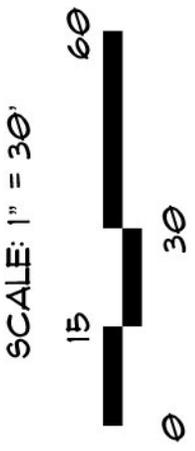


PROJECT PROVIDED BY THE MISSISSIPPI URBAN FOREST COUNCIL & FUNDED IN PART BY THE MISSISSIPPI FORESTRY COMMISSION AND THE USDA FOREST SERVICE





SHEET #:  
1



MOUND BAYOU PARK  
12.8.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

MISSISSIPPI URBAN FOREST COUNCIL

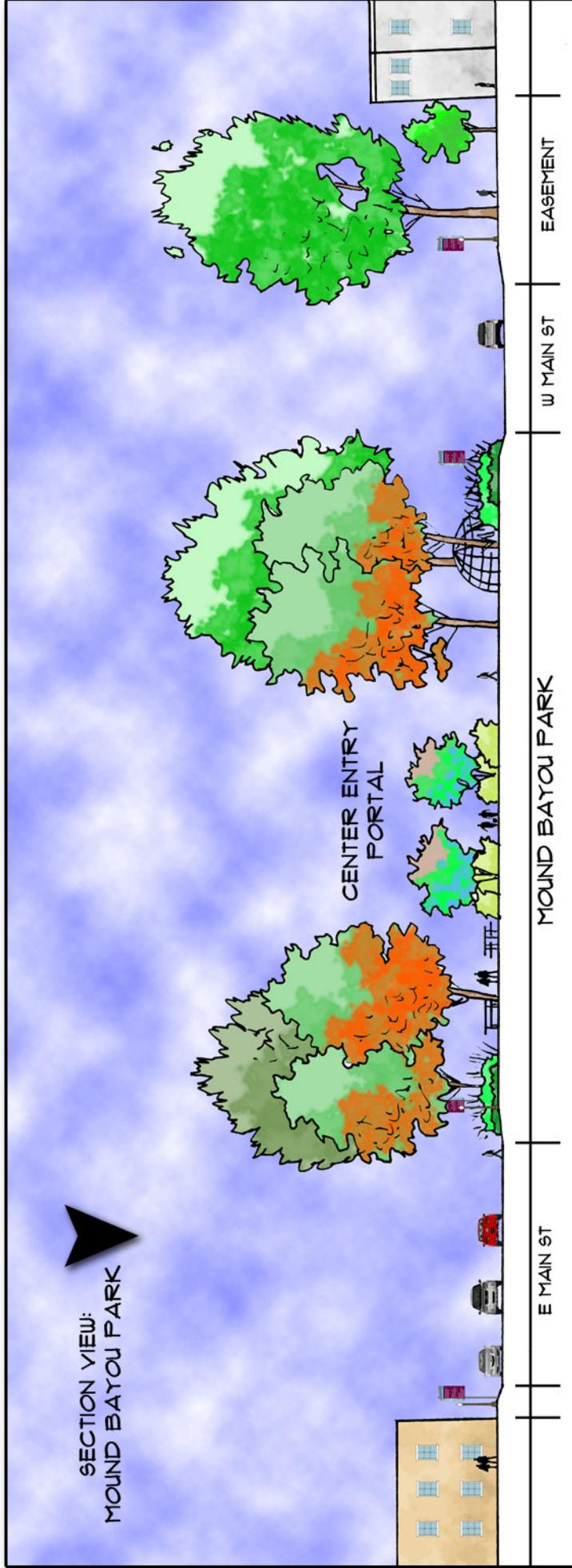
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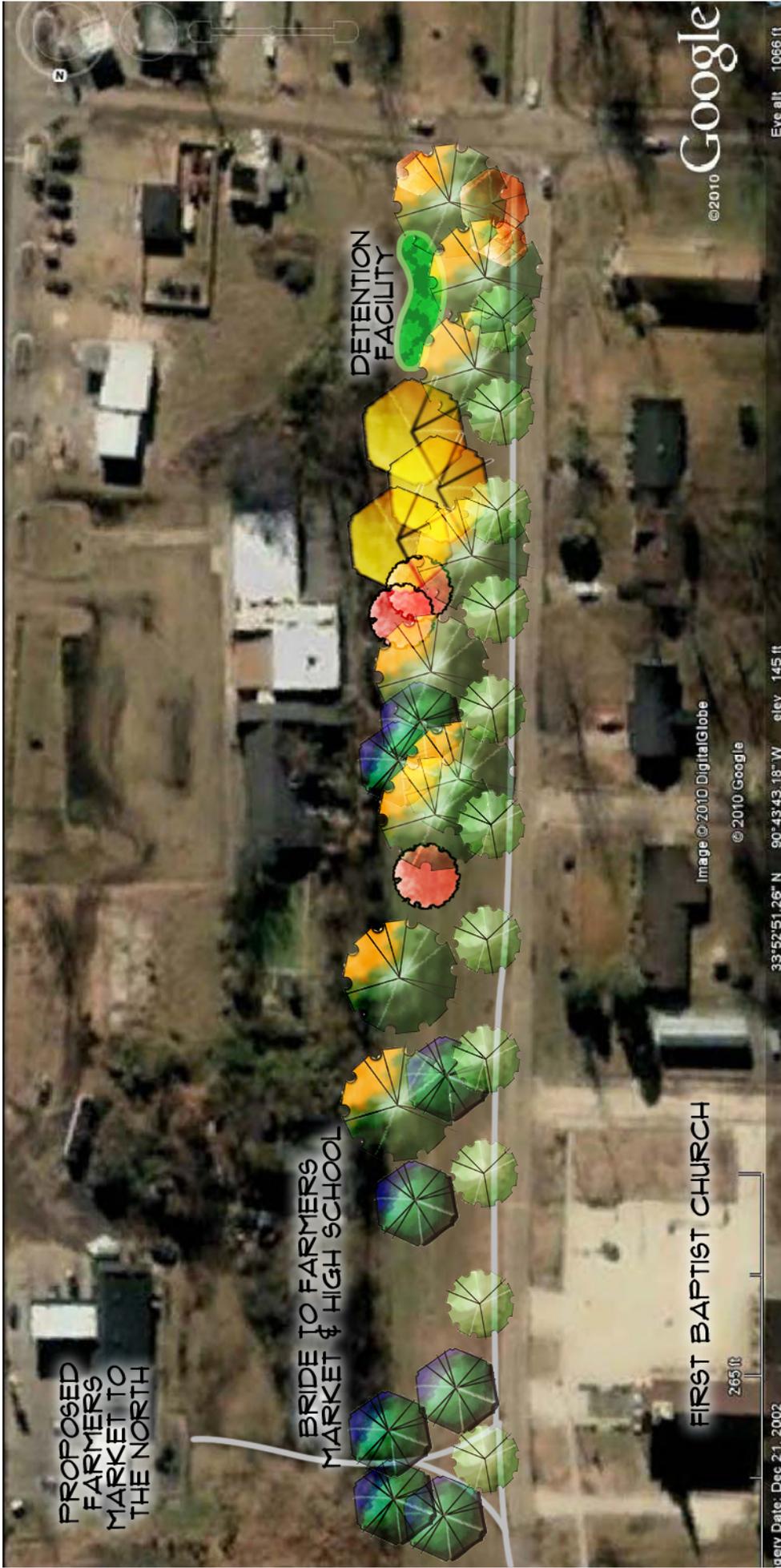
PLAN VIEW:  
MOUND BAYOU PARK



SECTION CUT LINE  
SHOWN IN RED

SECTION VIEW:  
MOUND BAYOU PARK



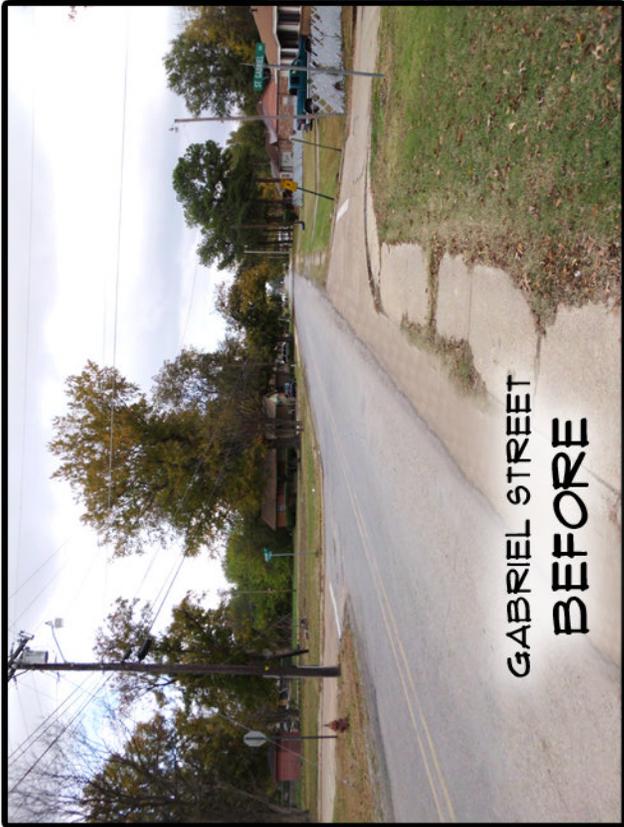




CITY HALL  
**BEFORE**



CITY HALL STREET FRONT  
**AFTER**



GABRIEL STREET  
**BEFORE**



GABRIEL STREET  
**AFTER**

PROPOSITIONS

- STREET TREES
- PEDESTRIAN SIDEWALK
- RENOVATIONS
- ADDITIONAL VEGETATION

MISSISSIPPI URBAN FOREST COUNCIL

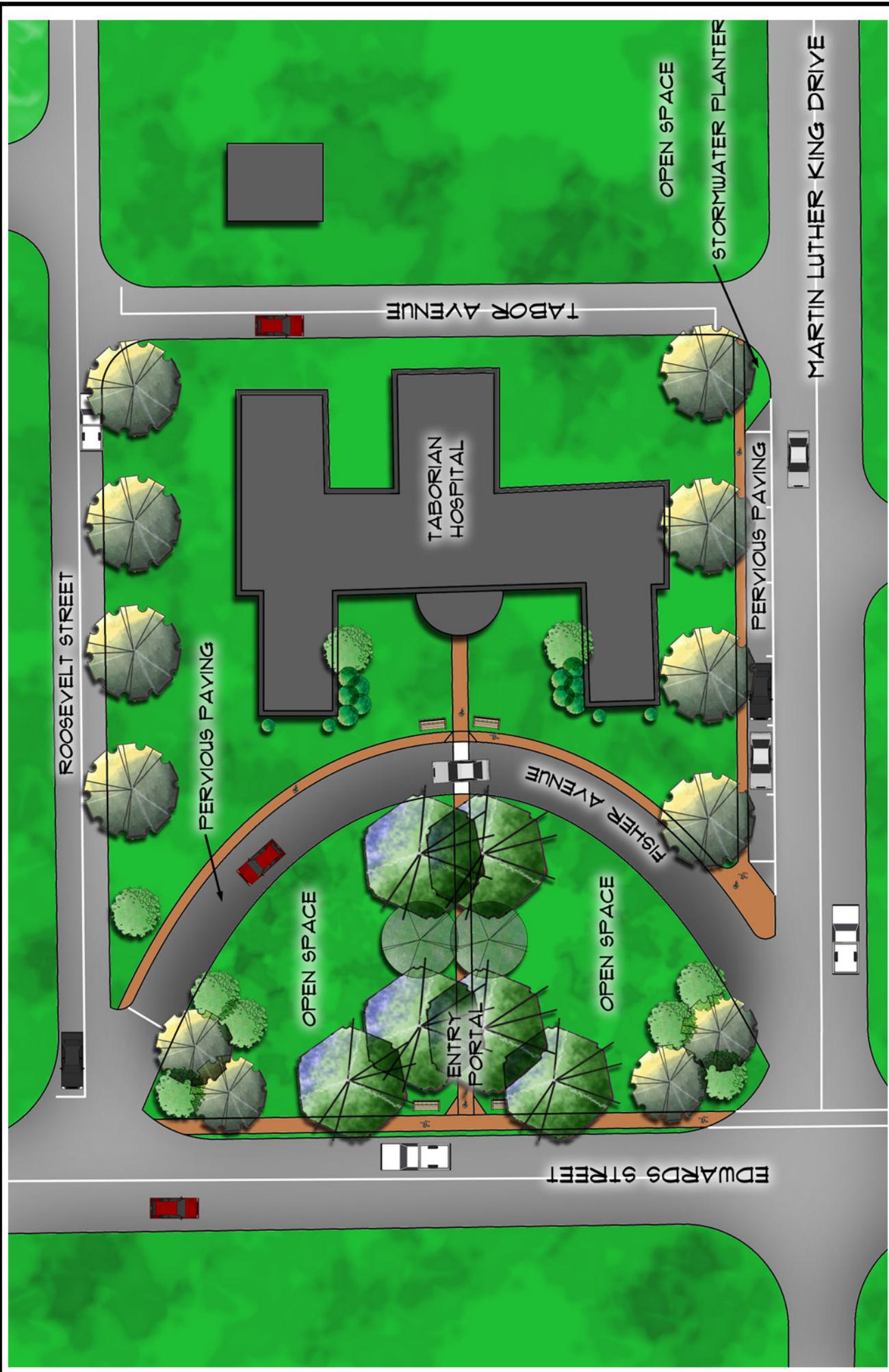


[www.msurbanforest.com](http://www.msurbanforest.com)

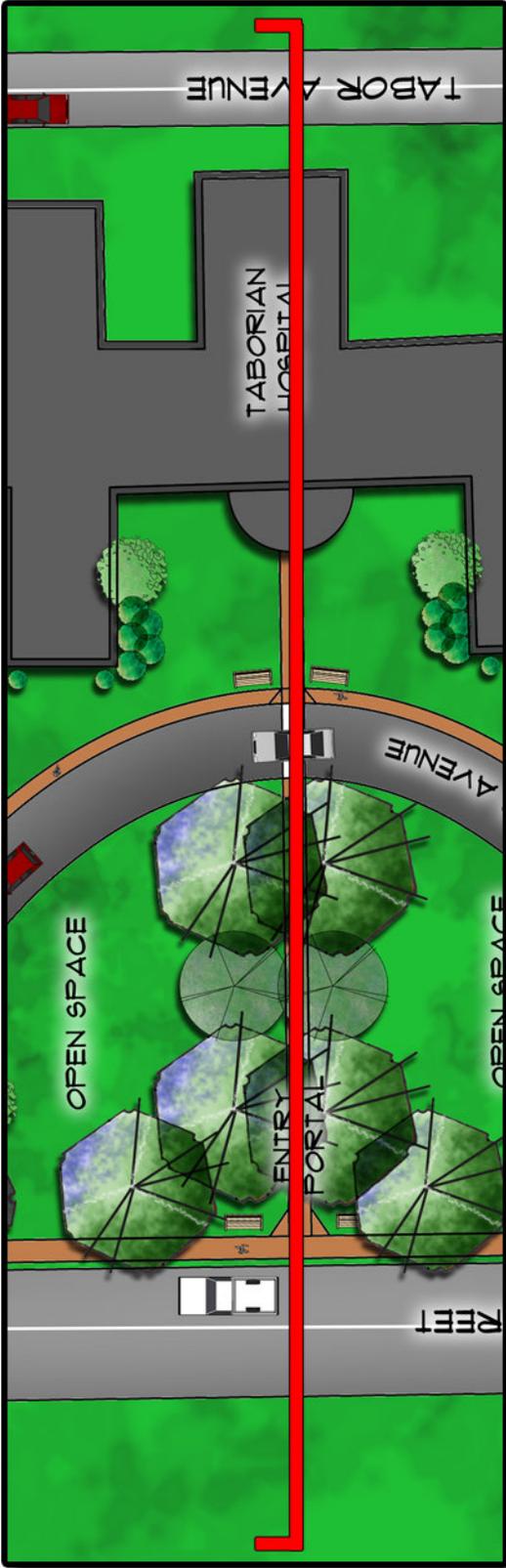
**VIRTUAL MAKEOVER**  
**GABRIEL STREET**  
 12.15.2010  
 MOUND BAYOU, MISSISSIPPI  
 601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1

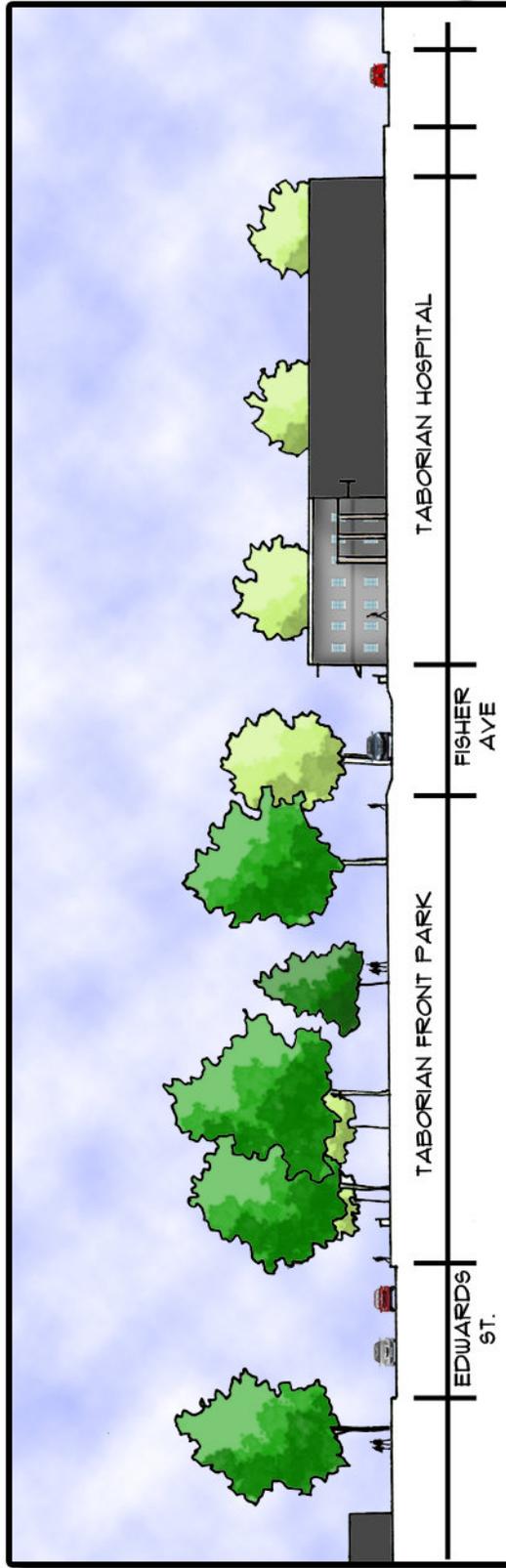


PLAN VIEW:  
TABORIAN HOSPITAL

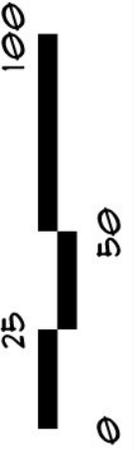


SECTION CUT LINE  
SHOWN IN RED

SECTION VIEW:  
TABORIAN HOSPITAL



SCALE: 1" = 50'



SHEET #:  
5

TABORIAN HOSPITAL RENOVATION  
12.10.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

PROPOSED DORMATORIES

W MAIN STREET S

CONNECTION TO PROPOSED  
CENTRAL PARK

STORMWATER FLOWTHROUGH PLANTER/  
ALSO SLOWS TRAFFIC FOR SAFETY NEAR  
CROSSWALK

FOUNDATION PLANTING TO BE  
DECIDED PER OWNERS REQUEST

I. T. MONTGOMERY  
BED & BREAKFAST

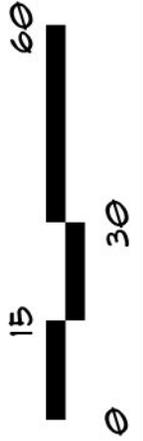
MISSISSIPPI URBAN FOREST COUNCIL



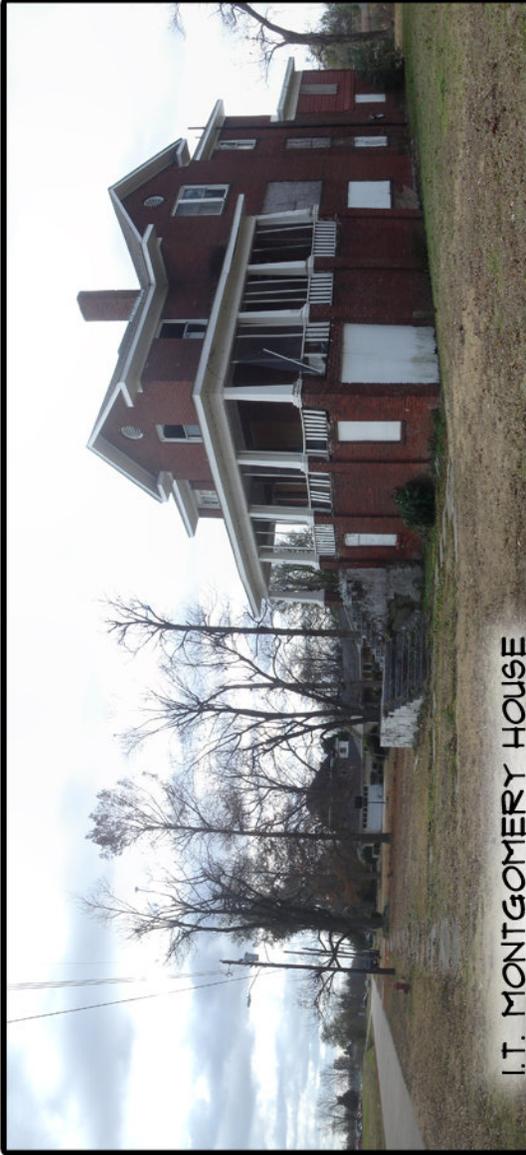
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I. T. MONTGOMERY HOUSE  
 PROPOSED BED & BREAKFAST  
 12.18.2010  
 MOUND BAYOU, MISSISSIPPI  
 601-856-1660

SCALE : 1"=30'



SHEET #:  
1



I.T. MONTGOMERY HOUSE  
**BEFORE**



I.T. MONTGOMERY HOUSE  
**AFTER**

PROPOSITIONS

- STREET TREES
- PEDESTRIAN SIDEWALKS
- ADDITIONAL FOUNDATION PLANTINGS
- ORNAMENTAL TREE ENTRANCE
- OUTDOOR SEATING
- HOUSING RENOVATIONS

(SEE MASTER PLAN)

MISSISSIPPI URBAN FOREST COUNCIL



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**VIRTUAL MAKEOVER**  
**I.T. MONTGOMERY HOUSE**

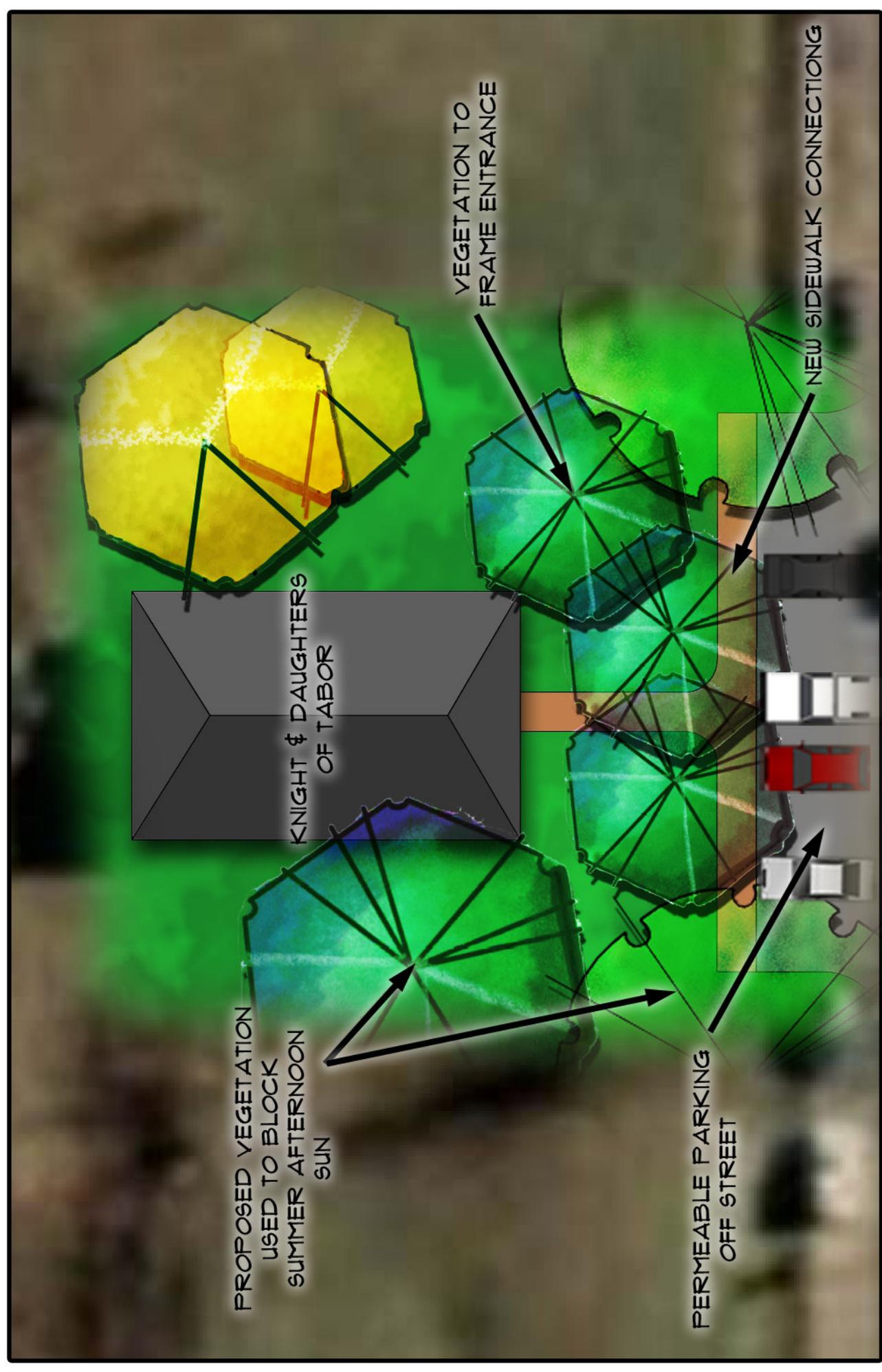
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MOUND BAYOU, MISSISSIPPI

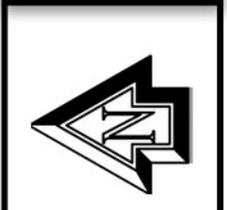
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PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1



KNIGHTS & DAUGHTERS  
OF TAVOR  
12.14.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660



SCALE: 1" = 20'  
0 20 40

SHEET #:  
1

MISSISSIPPI URBAN FOREST COUNCIL

www.msurbanforest.com



**BEFORE**



**AFTER**



MISSISSIPPI URBAN FOREST COUNCIL



[www.msurbanforest.com](http://www.msurbanforest.com)

**VIRTUAL MAKEOVER  
COMMUNITY FACILITIES & PARK**

12.9.2010

MOUND BAYOU, MISSISSIPPI

601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
5

STREETSIDE VISUAL  
**BEFORE**



STREETSIDE VISUAL  
**AFTER**



MISSISSIPPI URBAN FOREST COUNCIL



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**VIRTUAL MAKEOVER  
COMMUNITY FACILITIES & PARK**  
12.9.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
4

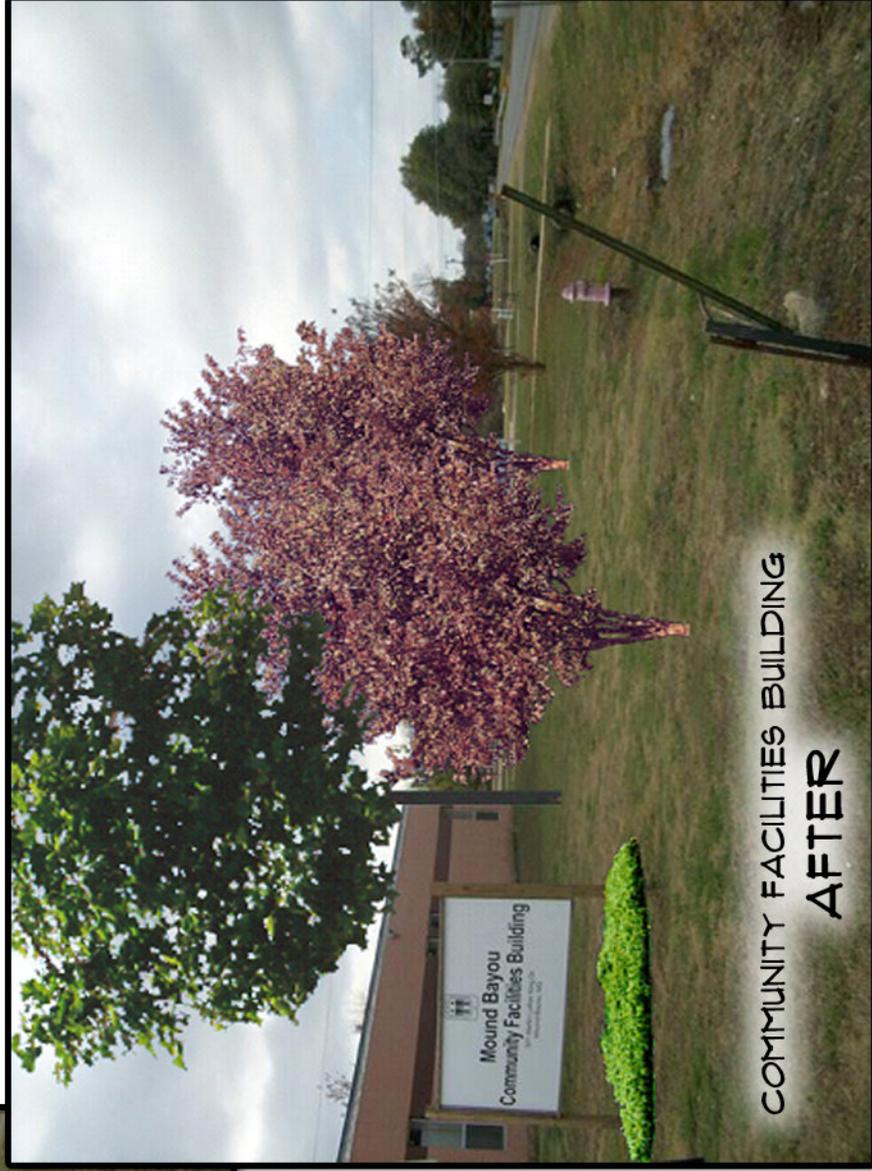
COMMUNITY FACILITIES BUILDING  
**BEFORE**



PROPOSITIONS

- SIGN IMPROVEMENTS
- ORNAMENTAL TREES
- SHADE TREES
- PEDESTRIAN SIDEWALKS
- ADDITIONAL FOUNDATION PLANTING

(SEE MASTER PLAN)



MISSISSIPPI URBAN FOREST COUNCIL

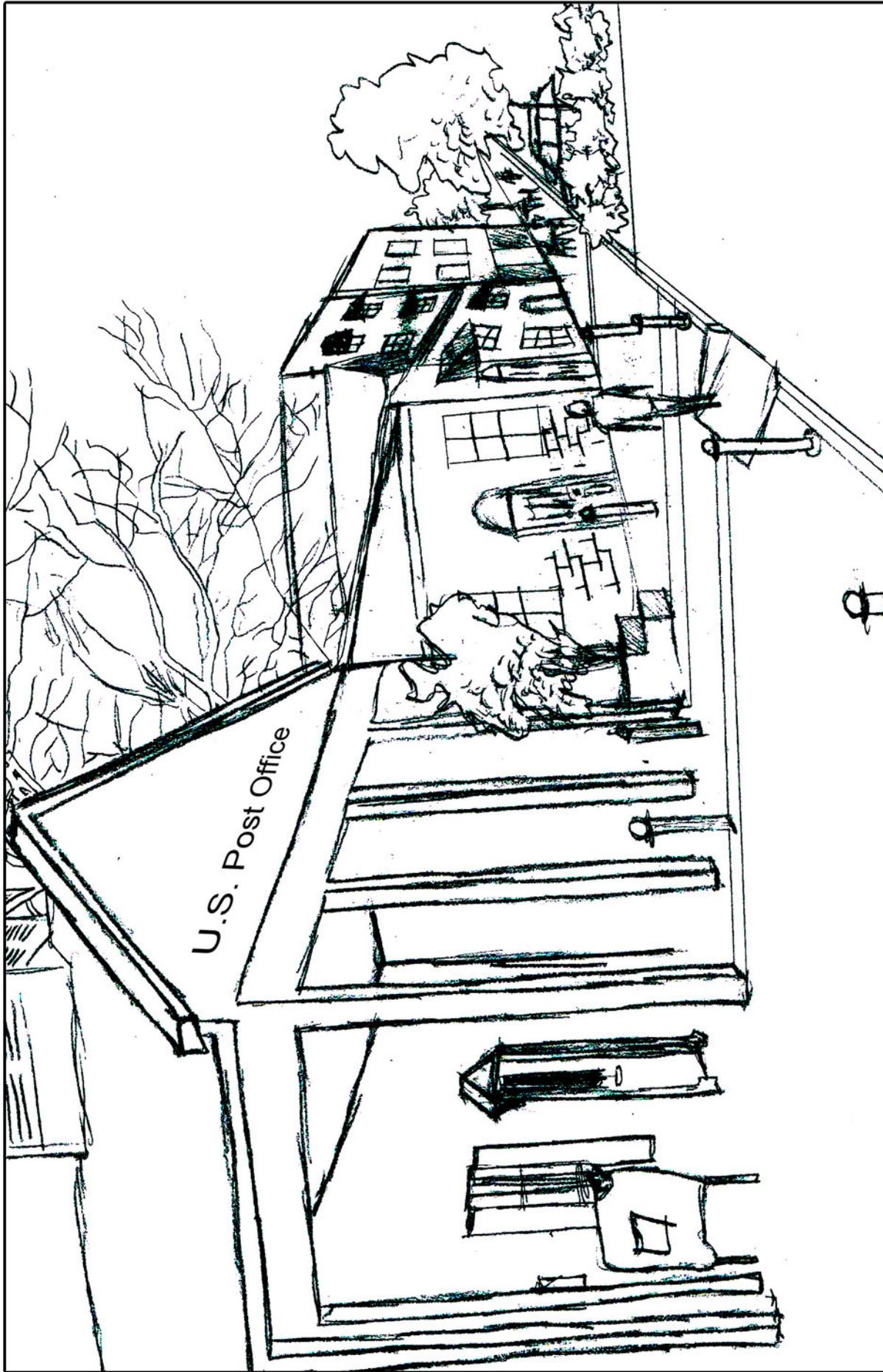


[www.msurbanforest.com](http://www.msurbanforest.com)

**VIRTUAL MAKEOVER**  
**COMMUNITY FACILITIES BUILDING**  
12.9.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

PERSPECTIVES NOT TO SCALE

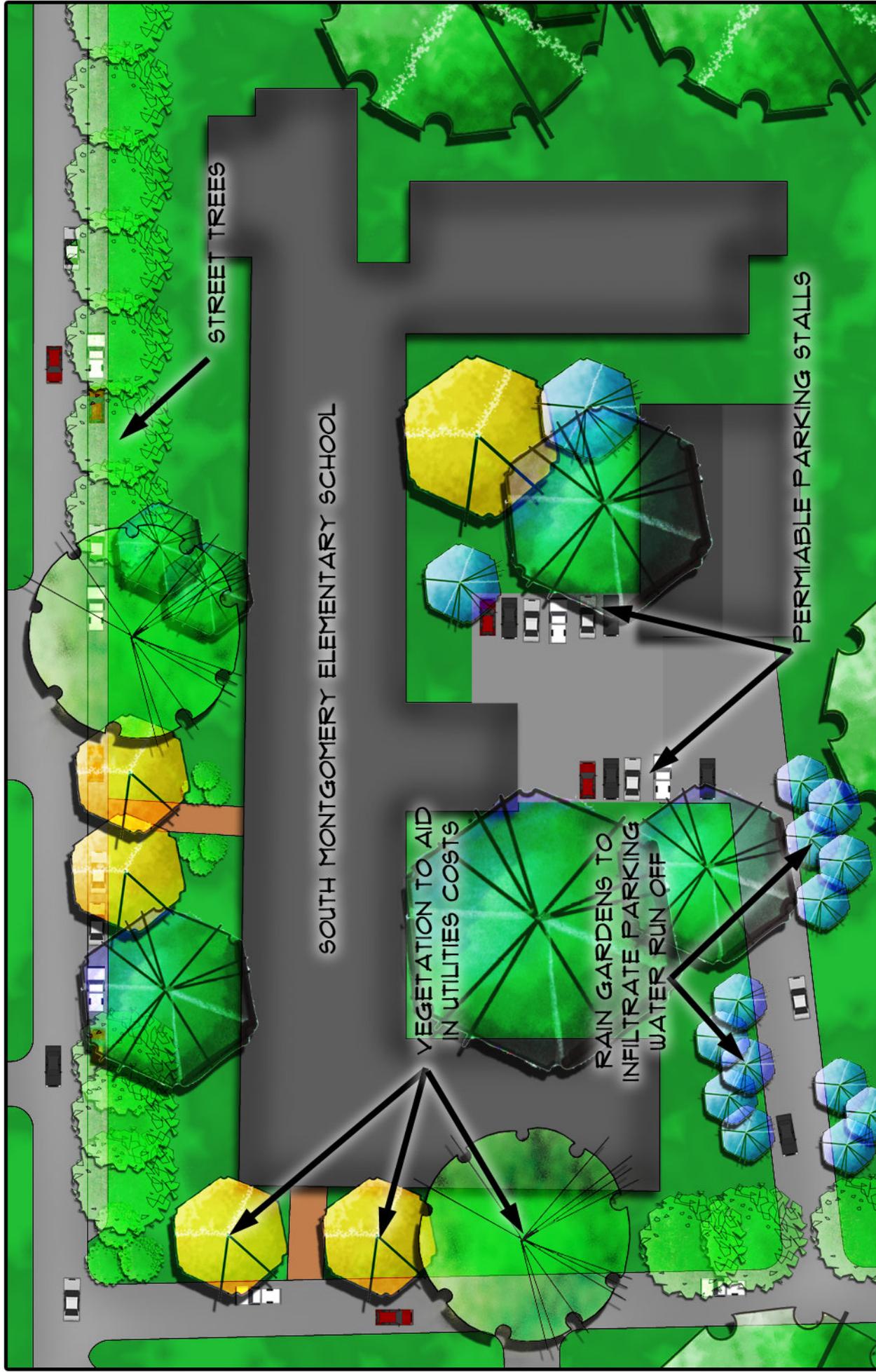
MAKEOVER #:  
3



SHEET #:  
1

MOUND BAYOU POST OFFICE  
& DOWNTOWN PROPOSED  
ARTIST RENDERING

MOUND BAYOU POST OFFICE  
12.17.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660





JFK HIGH SCHOOL  
**BEFORE**

PROPOSITIONS:

- SOLAR LED TRAFFIC BOLLARDS
- REMOVE CONCRETE BLOCKS
- PEDESTRIAN SIDEWALKS

- ADDED TREES AND FOUNDATION VEGETATION
- OUTDOOR SEATING FOR SOCIAL INTERACTION
- OUTDOOR LIGHTING & NEW PAVING



JFK HIGH SCHOOL  
**AFTER**

MISSISSIPPI URBAN FOREST COUNCIL



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**VIRTUAL MAKEOVER**  
**JFK HIGH SCHOOL FRONT**

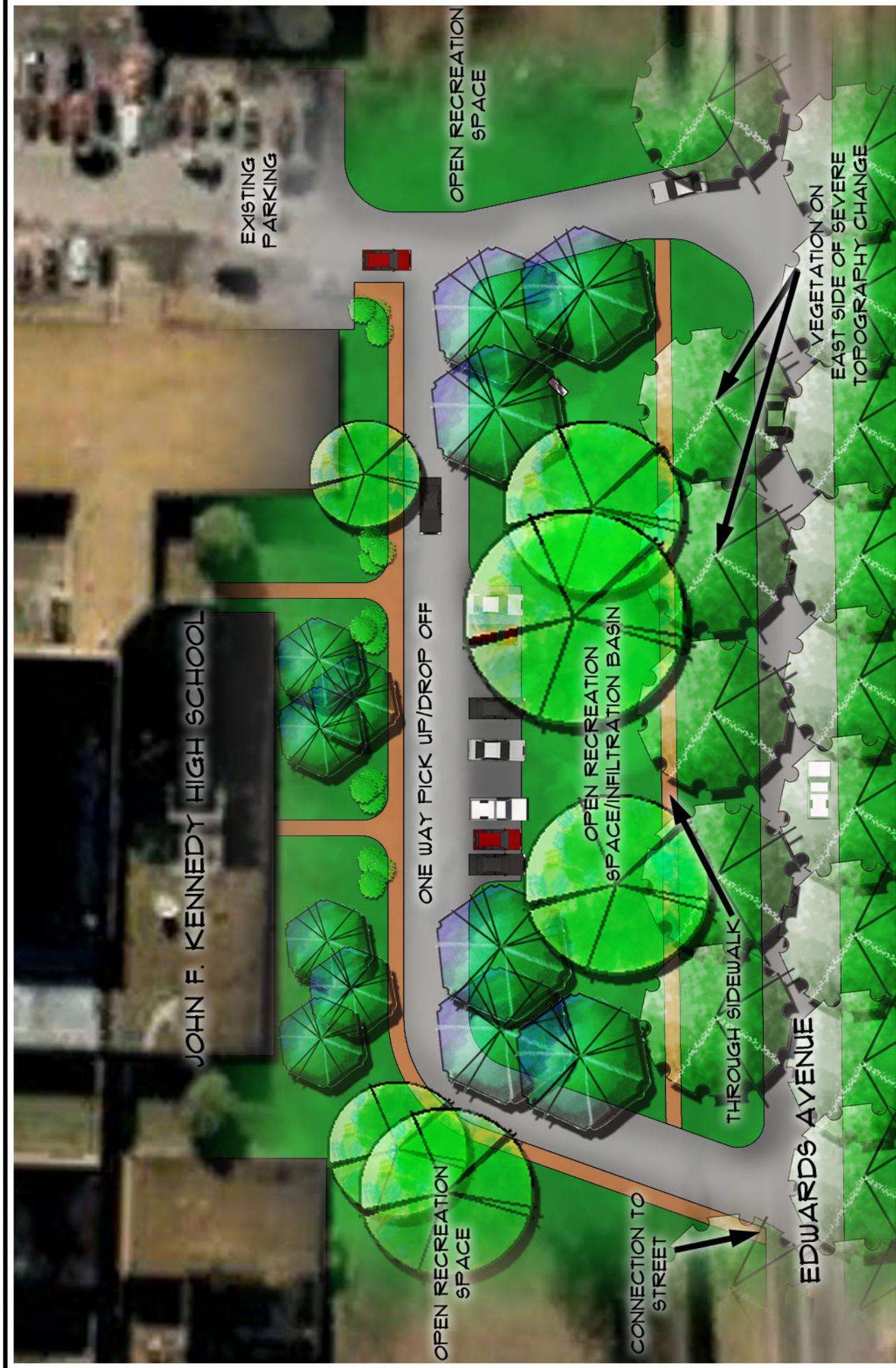
12.12.2010

MOUND BAYOU, MISSISSIPPI

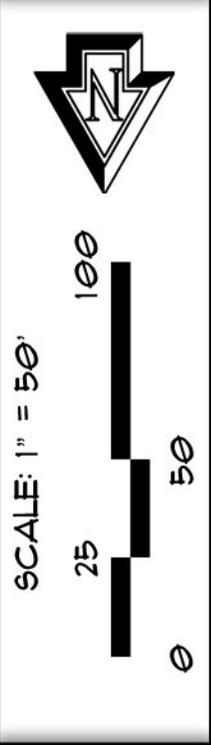
601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1



SHEET #:  
1



JFK HIGH SCHOOL  
12.13.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

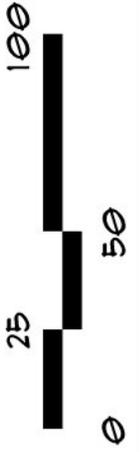
MISSISSIPPI URBAN FOREST COUNCIL

www.msurbanforest.com



Image © 2010 DigitalGlobe  
 32°52'54.58" N 90°43'45.73" W Elev. 144'

SCALE: 1" = 50'





FIRST BAPTIST CHURCH  
MOUND BAYOU  
**BEFORE**



FIRST BAPTIST CHURCH  
MOUND BAYOU  
**AFTER**

PROPOSITIONS

- RAIN GARDENS
- PEDESTRIAN SIDEWALKS
- ADDITIONAL VEGETATION
- FRONT WATER FEATURE

(SEE MASTER PLAN)



MISSISSIPPI URBAN FOREST COUNCIL

[www.msurbanforest.com](http://www.msurbanforest.com)

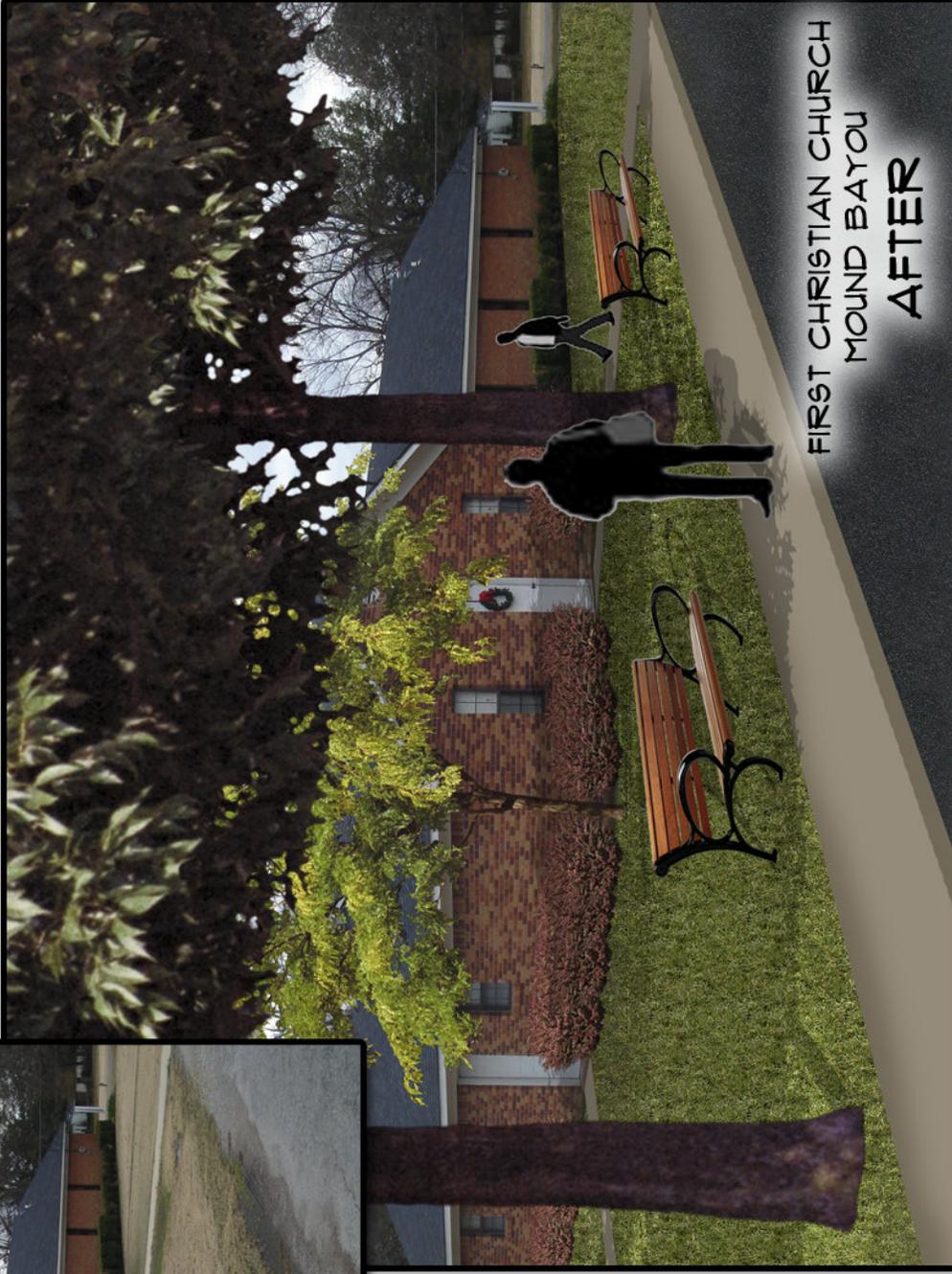
**VIRTUAL MAKEOVER**  
**FIRST BAPTIST MOUND BAYOU**  
 12.10.2010  
 MOUND BAYOU, MISSISSIPPI  
 601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1



FIRST CHRISTIAN CHURCH  
MOUND BAYOU  
**BEFORE**



FIRST CHRISTIAN CHURCH  
MOUND BAYOU  
**AFTER**

MISSISSIPPI URBAN FOREST COUNCIL



[www.msurbanforest.com](http://www.msurbanforest.com)

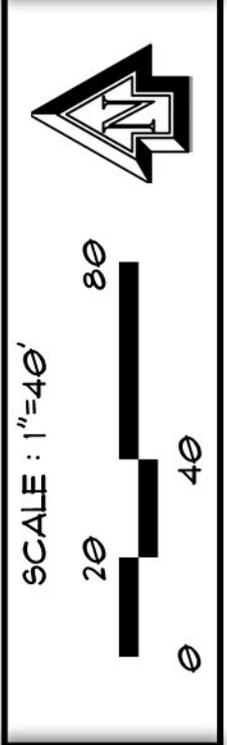
**VIRTUAL MAKEOVER**  
**FIRST CHRISTIAN CHURCH**  
12.10.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1



SHEET #:  
1



NEW SALEM BAPTIST CHURCH  
12.19.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

MISSISSIPPI URBAN FOREST COUNCIL  
  
[www.msurbanforest.com](http://www.msurbanforest.com)



NEW SALEM BAPTIST CHURCH  
BEFORE

- PROPOSITIONS:**
- WOODEN FENCE
  - LETTERING FOR CHURCH FRONT
  - BOLLARDS FOR TRAFFIC CONTROL
  - ADDED TREES AND FOUNDATION VEGETATION
  - OUTDOOR SEATING FOR SOCIAL INTERACTION
  - OUTDOOR LIGHTING & NEW PAVING



NEW SALEM BAPTIST CHURCH  
AFTER



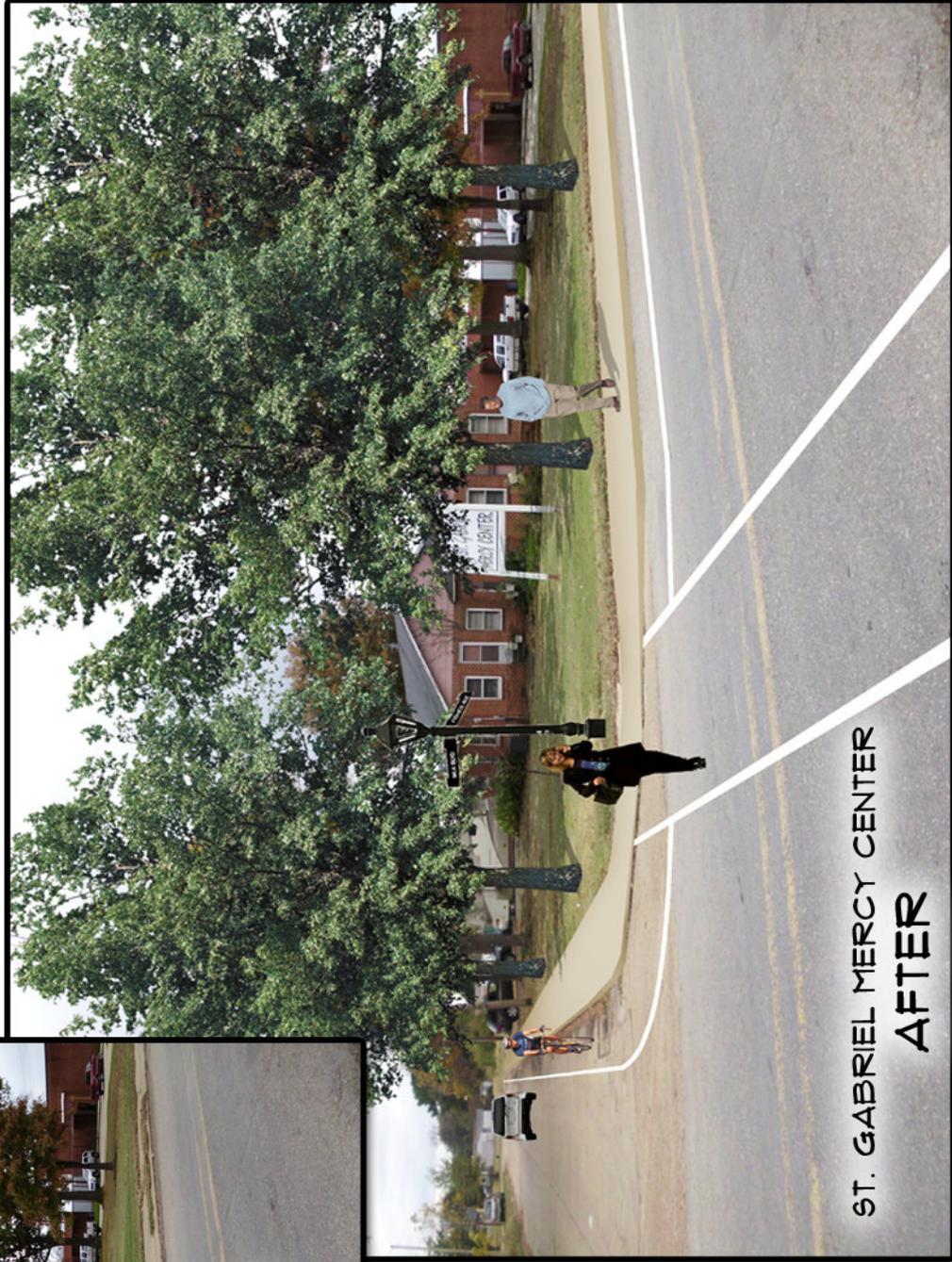
ST. GABRIEL MERCY CENTER  
**BEFORE**

**MAKEDOVER ABSTRACT**

St. Gabriel Mercy Center is a wonderful testament to the kindness and giving nature of the Mound Bayou community. The street corner before was lacking in compliance with the Americans with Disabilities Act. The main change to the urban corner was a resurfacing of existing sidewalks. In addition to the sidewalk connectivity we are suggesting an addition of bicycle lane striping to encourage bike use throughout the city. The existing roadways are more than sufficient to give a bike lane while maintaining vehicular circulation efficiency. Quercus nigra (Water Oak) trees have been added to the street corner to frame the Mercy Center and give a strong first impression to pedestrians.

PROPOSITIONS:

- STREET LIGHTS
- PEDESTRIAN SIDEWALK & CROSSWALK
- STREET TREES
- NEW STREET SIGNS & LIGHTING



ST. GABRIEL MERCY CENTER  
**AFTER**

MISSISSIPPI URBAN FOREST COUNCIL

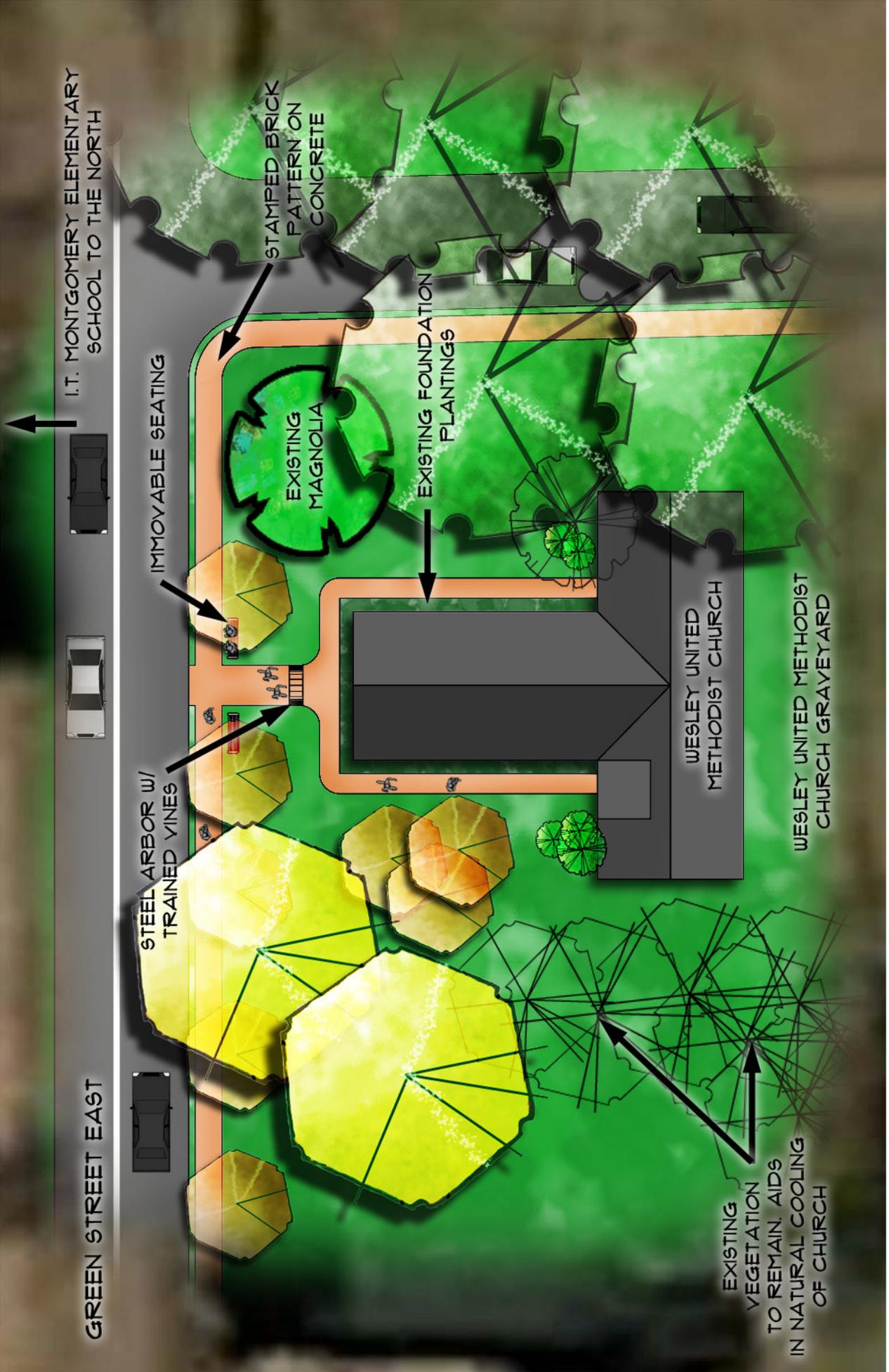


[www.msurbanforest.com](http://www.msurbanforest.com)

**VIRTUAL MAKEOVER**  
**ST. GABRIEL MERCY CENTER**  
 12.9.2010  
 MOUND BAYOU, MISSISSIPPI  
 601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1



I.T. MONTGOMERY ELEMENTARY SCHOOL TO THE NORTH

GREEN STREET EAST

STEEL ARBOR W/  
TRAINED VINES

IMMOVABLE SEATING

STAMPED BRICK  
PATTERN ON  
CONCRETE

EXISTING  
MAGNOLIA

EXISTING FOUNDATION  
PLANTINGS

WESLEY UNITED  
METHODIST CHURCH

WESLEY UNITED METHODIST  
CHURCH GRAVEYARD

EXISTING  
VEGETATION  
TO REMAIN. AIDS  
IN NATURAL COOLING  
OF CHURCH

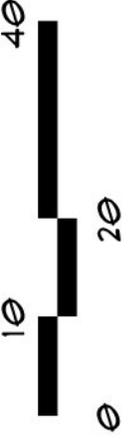
MISSISSIPPI URBAN FOREST COUNCIL



www.msurbanforest.com

WESLEY UNITED METHODIST  
12.14.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

SCALE: 1" = 20'



SHEET #:  
1



WESLEY UNITED METHODIST  
**BEFORE**



WESLEY UNITED METHODIST  
**AFTER**

PROPOSITIONS

- STREET TREES
- SHADE TREES
- PEDESTRIAN SIDEWALKS
- ADDITIONAL VEGETATION
- OUTDOOR SEATING

(SEE MASTER PLAN)

MISSISSIPPI URBAN FOREST COUNCIL



[www.msurbanforest.com](http://www.msurbanforest.com)

**VIRTUAL MAKEOVER**  
**WESLEY UNITED METHODIST**  
 12.21.2010  
 MOUND BAYOU, MISSISSIPPI  
 601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
1

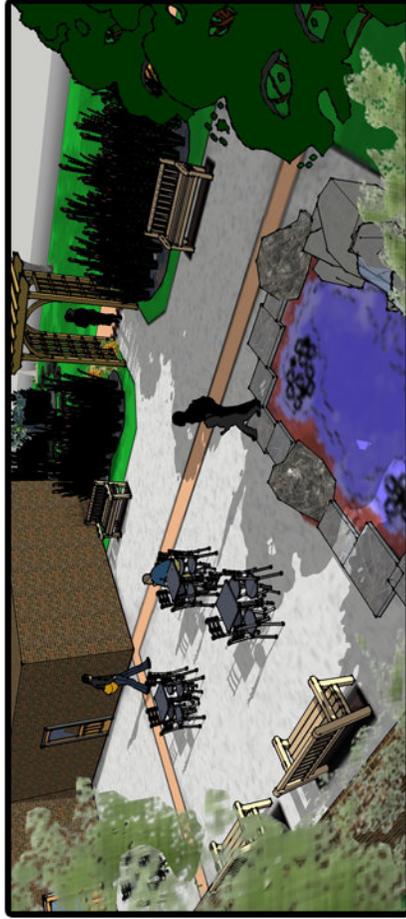




1. MODEL OF THE PROPOSED WETLAND ON THE FRONT SIDE OF THE RENOVATED WELCOME CENTER



2. AERIAL RENDERING OF PROPOSED PLAZA PARK BEHIND THE WELCOME CENTER



3. PROPOSED WATER FEATURE AT THE SOUTH EAST CORNER OF THE WELCOME CENTER PLAZA



3. VIEW AS ONE ENTERS THE PLAZA FROM THE NORTH SIDE OF THE STREET FROM GREEN STREET



**"BANK BUILDING" CORNER  
BEFORE**

**MAKEDOVER ABSTRACT**

Located directly across from the proposed Mound Bayou City Park this beautiful structure is begging to be celebrated. This street corner provides us with plenty of room to ensure safety of pedestrians and children walking along these sidewalks. The Montgomery House is located along this line of historical structures. The existing "Bank Building" is in the process of being renovated and converted into a new welcome center for city guests. The vegetation used here is predominantly to enforce the strong lines created by the architecture and street patterns as well as to frame pedestrian views down the strip.



**"BANK BUILDING" CORNER  
AFTER**



**VIRTUAL MAKEOVER  
"BANK BUILDING" CORNER**  
12.9.2010  
MOUND BAYOU, MISSISSIPPI  
601-856-1660

PERSPECTIVES NOT TO SCALE

MAKEOVER #:  
2

# Sustainable Materials

Each design plan includes sustainable and recycled products. Each plan has a listing of site specific recommended materials. See site plans for these recommendations.

## Sustainable Practices

### Recycling

Recycling is a useful way to improve the community and individual lives while saving money. The City should add a variety of recycling projects to community activities. Citizens should be a very involved part of these programs, even taking the lead in these efforts. For example:

1. Host a citizens recycling day to recycle toxins such as paint, anti-freeze, batteries, oil, pesticides, gas and other toxic substances.
2. We recommend that the city develop a community yard debris, recycle day to encourage citizens to remove debris from their property, including old appliances, cars other large debris.
3. Vegetative debris should be mulched and used for landscaping.
4. A compost Center could be establish at public works center.
5. Book recycling could take place in a public building to provide free reading material to children and other citizens.
6. Establish a recycling center for glass, aluminum, plastic, paper and other material.
7. Use old concrete to build patios and walkways.
8. Establish Citizen's litter pick up days.

## Irrigation from Storm Water Detention/Retention Basins in Town Center

The Town Center on the north side has issues with drainage. This area would be perfect for community vegetable areas using irrigation from a developed storm water holding area. This area would also be adjacent to a local Farmer Market. Citizens could sell their produce or produce made from the local produce. On the southern end of Town Center will be a future Fruit Orchard. (See design)

## Storm Water Detention/Retention on Little Mound Bayou for flood and erosion control

County and local engineers should study the water patterns along Little Mound Bayou and develop a progressive (green) storm water plan to prevent downstream flooding and provide better erosion control.

## Bio-swales

Idea areas for bio-swales include areas in need of flood and erosion control.

## Rain Gardens

This practice is good for homeowner as well as public places.

## Native Plant Species

Planting native species reduces the need for chemicals and water, decrease maintenance time providing a much more sustainable landscape.

## Organic Local Produce Production

This practice could provide a source of locally grown organic produce that will improve citizen's health and provide a means of obtaining income from selling of produce and produce related products. For a list of recommended fruit and nut species for this region see: <http://msucares.com/pubs/publications/p0966.pdf>

## Bio Fuels Usage for City Hall

A new practice is the use of vegetation to generate energy for utilities for small public spaces, such as city hall. Small systems are available for this use. For more information:

[http://www.cleanenergystates.org/Publications/NREL\\_Biomass\\_Gasification\\_Mkt\\_Assessment\\_46190.pdf](http://www.cleanenergystates.org/Publications/NREL_Biomass_Gasification_Mkt_Assessment_46190.pdf)

## Wind and Ice Resistant Plant Material

Planting with storm resistant, native varieties has the added benefit of providing wind buffers to protect homes and reduce energy consumption. This also protects utilities and structures during storm events.

## Impervious surfaces

While Mound Bayou has a lot of pervious areas, we do suggest that future parking lots consider using impervious spaces.

## Low Landscape maintenance

Using native varieties, less grassed areas, decreases maintenance.

## Greenways

Mound Bayou has several existing greenways. One is town center and along Little Mound Bayou. We recommend that you connect these greenways for multiple benefits such as wildlife habitat, storm water management and recreation purposes. Further design and planning should include these practices.

## Forest Canopy

Mound Bayou's target should be to obtain 40% tree canopy to provide the maximum benefit from shade, water, air and other benefits.

## Ordinance Development

Future plans should include a variety of city policies including storm water, development, yard maintenance, improved tree ordinance and others.

## Local Citizen's Teams and Resources

In this day of limited resources most communities find it necessary to rely on citizens to become a key part of the improvement strategy for their communities. After all, it's the citizen that truly benefit from the improvements. We strongly suggest in order for this plan to become reality for Mound Bayou, that citizen groups are formed (maybe even church groups) to help address these issues and activities. There are multiple recommendations in this plan and even if they are tackled one at time, eventually the "Jewel of the Delta" will truly become a "Jewel."

# Grants & Financial Assistance

## Delta Regional Authority (DRA)

The DRA is designed to remedy severe and chronic economic distress by stimulating economic development and fostering partnerships that will have a positive impact on the region's economy. The DRA will help economically distressed communities to leverage other federal and state programs which are focused on basic infrastructure development and transportation improvements, business development and job training services. For more information: <http://www.dra.gov/> or (662) 624-8400

## Local Government Environmental Assistance Network

Provides assistance on environmental management, planning, funding, and regulatory information for local government elected and appointed officials, managers, and staff. For more information: [www.lgean.org](http://www.lgean.org) or (877) 865-4326

## Alternative fuel incentives

Offers funding and financial incentives for organizations interested in converting vehicles to alternative fuels. For more information: <http://www.nrel.gov/> or (303) 275-4090

## Farm Services Agency (FSA)/USDA

The Farm Loan Program helps producers manage credit needs. The FSA makes and guarantees loans and provides credit counseling and supervision to farmers who are temporarily unable to obtain private and/or commercial credit. Loans are also available for sponsored projects for youths ages 10-20. For more information: <http://www.fsa.usda.gov/FSA> or (202) 720-4034

## US Department of Energy

The Clean Cities Program seeks to advance US economic, environmental and energy security by supporting local decisions to adopt practices that contribute to reduced petroleum consumption in the transportation sector. Funding and tax incentives are available to participants. Participants also receive market and technology analysis, tools and information, technical assistance, partnerships and alliance, training and events. No match or cost sharing requirements and no limitations on the number of applications submitted by an individual. For more information: <http://www1.eere.energy.gov/cleancities/> or Mike Scarpino (412) 386-4726

## US Environmental Protection Agency

The Brownfields/Smart Growth Projects encourages redevelopment and helps link redevelopment with open space preservation. Proposals will be considered for community involvement activities associated with smart growth redevelopment of infill. For more information: <http://www.epa.gov/brownfields/> or (202) 566-2757

## Water Environmental Federation

This non-profit technical and educational organization works toward the preservation and enhancement of the global water environment; provides publications, resources, and leadership training. For more information: [www.wef.org](http://www.wef.org) or (800) 666-0206.

## Resource Conservation and Development/USDA

Having a multitude of free publications on everything from community to home environmental health to clean water and healthy trees, this is a wonderful first stop for help with many of your questions regarding agriculture, crops, planting and many other aspects of managing natural resources. For more information: <http://msrce.org/> or (601) 833-5539

## Alliance for Community Trees (ACT)

ACT offers grant opportunities and training scholarships to nonprofit organizations. Funding and program guidelines vary from year to year. Generally, grant opportunities support community-based efforts to engage volunteers, youth, or other members of the public in direct action to support and grow community forests. Most grants are restricted to ACT Member Organizations. For more information: <http://actrees.org/site/resources/funding/date/> or (301) 277-0040

#### Mississippi Center for Nonprofits

The Mississippi Center for Nonprofits is the state's only nonprofit center. Their mission is to strengthen the capacity of nonprofits to serve the people and communities of Mississippi. For the thousands of nonprofit organizations across the state, the Center is the primary source of management training, technical information, advice, answers, coaching and connection to vital resources. The Center has many training programs on Non-profit topics including: board governance, fundraising, grant writing, legal compliance and financial management. For more information: <http://msnonprofits.org/> or (601) 968-0061

#### Foundation for the Mid-South

The Foundation for the Mid South partners and invests in efforts that enable communities—their leadership, residents, and institutions—to increase their knowledge and skills to create solutions that effectively address their unique needs and challenges. Grants are offered in the areas of Community Development, Education, Health & Wellness and Wealth Building. For more information: <http://www.fndmidsouth.org/home.php> or (601) 355-8167

#### The Mississippi Department of Environmental Quality – (MDEQ)

The MDEQ invites universities, school districts, private organizations, nonprofits, private businesses and local governments in Mississippi to submit applications for the Mississippi Diesel Emission Reduction Grant Program. The goal of this funding opportunity is to reduce diesel emissions from buses, medium-duty or heavy-duty trucks, marine engines, locomotives, non-road engines and equipment used in construction, handling of cargo, agriculture, mining or energy production in Mississippi. The application package and information are available for download on the website. All applications must be received by MDEQ by 5:00 P.M. on January 31, 2011. For more information: [www.deq.state.ms.us/dieselgrants](http://www.deq.state.ms.us/dieselgrants) or (601) 961-5577

#### Environmental Protection Agency – (EPA)

EPA's National Clean Diesel Funding Assistance Program is soliciting proposals nationwide for projects. For more information: [www.epa.gov/cleandiesel/](http://www.epa.gov/cleandiesel/) or (877) 623-2322

#### US Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) – Agricultural Conservation Center

Provide grants and agreements for development and transfer of technology to NRCS offices nationwide. For more information: <http://www.whmi.nrcs.usda.gov> or (601) 607-3131

#### Society for Nonprofit Organizations (SNPO)

SNPO has grants available in the following categories: Animals & Wildlife; Arts & Culture; Business & Finance; Children, Youth & Families; Democracy & Government; Disabilities; Education; General; Health; Literacy; Music; Regional. For information on these grants: <http://www.snpo.org/index.php> or (734) 451-3582

#### The TREE Fund

The TREE Fund is currently the leading non-governmental source of funding for research and education programs in the field of arboriculture (the science of cultivating and managing trees in a landscape). Our mission is to identify and fund projects and programs which advance knowledge in the field of arboriculture and urban forestry to benefit people, trees and the environment. The foundation has distributed more than \$6 million to date, in the form of scholarships and research grants to students and professionals in the industry. For more information: <http://www.treefund.org/default.htm> or (630) 369-8382

#### Tree Link – Log on-Branch Out

Your Urban and Community Forestry programs deserve support. This short tutorial and introduction to the world of fund raising is intended to help you secure part of the vast amount of grant money given away each year by private foundations, corporate grant makers and government sources. The information here is intended to help you begin thinking about the many fund raising possibilities available to your Urban and Community Forestry or environmental organization, as well as some important general issues to consider about your organization in terms of beginning to raise funds. The following information provides you with an overview of important aspects of fund raising and grant writing, combined with links to sites offering a wealth of online resources. For more information: <http://www.treelink.org/grants/> or (801) 971-7101

#### Home Depot – Building Healthy Communities Grant Program

The Home Depot understands that volunteering to improve the physical health of your neighborhood by planting trees, developing green spaces and updating school facilities and community centers creates a healthier, more stable community where families can thrive. They recognize that committed and motivated neighbors accomplish an enormous amount of important work in communities across the country. That's why they support these efforts by lending a hand or a hammer... or a shovel... or flats of perennials. The Home Depot Foundation is currently undergoing a strategic planning process and our 2011 grant programs and cycle dates are temporarily on hold. Please check the website in early spring for the Eligibility Test and 2011 grant cycle schedule.

<http://corporate.homedepot.com/wps/portal/Grants>

#### Mississippi Department of Transportation – (MDOT)

MDOT is committed to coordinated planning and the collaborative allocation of local, state and federal resources to develop, implement and sustain transportation programs and projects. The Public Transit Division has as its' primary responsibility the development and administration of general public and specialized transportation program grants and contracts. These programs include service delivery, technical assistance, and training components. The Division administers U.S. Department of Transportation funds on behalf of the Federal Transit Administration (FTA) for rural and small urban areas of the state. For more information: <http://www.gomdot.com/Home/Home.aspx>

## Tree Planting Grant Program Tree Maintenance Agreement Mound Bayou, Mississippi

This Tree Maintenance Agreement between the Mississippi Urban Forest Council and the Grantee certifies that customary and reasonable tree care and maintenance will be performed for three (3) years for trees planted under the terms of the contract. Minimum Standards for care are those criteria, instructions, and examples contained in the Forestry Handbook, Second Edition, Karl Wenger, Editor, for the Society of American Foresters, Sections 8 and 16, 1984, John Wiley and Sons, New York, New York; Tree Maintenance Guidelines (IC-4108-1 MDNR) and Tree Maintenance Checklist (IC-4108-1A MDNR). Tree maintenance includes, but is not limited to, planting, security to prevent theft, watering, fertilizing, pruning, trimming, mulching staking, and removing and replacing dead or dying trees. All aspects of the project will be overseen by a certified arborist or landscape professional meeting all the requirements associated with reforestation and management of each site. All projects will include professional arborists and landscapers.

Project recipient shall take reasonable and expected measure to provide the needed additional water required during the trees early life.

Even with careful planting, newly planted trees go through a period of shock. During this period, trees are much less effective at taking up water, and thus require much more water than established trees. Deep watering to a depth of 12 inches or more is recommended.

Many factors can influence your watering frequency, including rainfall, tree species, soil type and quality.

In addition to watering, please follow these tree maintenance guidelines as well.

1. The mulch should not be piled up against the tree trunk. Keep grass and weeds out of the mulch.
2. Do not cultivate or otherwise disturb soil under the tree (e.g. do not plant flowers under trees in the tree root zone).
3. Keep lawn mowers and string trimmers away from the tree to avoid wounding the trunk.
4. Never fertilize stressed trees. Fertilize only with a slow release formula, if at all.
5. Do not use herbicides that may leach into the soil around the tree (e.g. some "weed and feeds.")
6. Inspect the tree often to head off problems early.

Upon completion of the tree planting, a list and photographs of trees planted under this project must be submitted as outlined in the MOU.

Failure to comply with this requirement may result in the cancellation of the current grant and disqualification from future grants.

---

I certify that, according to the above, my organization will comply with tree maintenance requirements and other listed agreements.

Kennedy Y Johnson  
City Representative Name - PLEASE PRINT

Kennedy Y Johnson  
City Representative Signature

12.23.2010  
Date

Mississippi Urban Forest Council  
Donna Yowell  
601-672-0755, 601-856-1660, or dyowell@aol.com



***Did YOU know that  
30 trees along the  
streets in Mound Bayou  
provide over \$3,000  
worth of benefits to you  
every year? Just imagine  
what the rest of the trees,  
if planted, could do for  
you and your  
community.....***

**What trees do for YOU:**

- Trees provide shade and transpiration that moderate temperature which can reduce energy costs and save you money.
- Trees remove particular matter from the air helping you breathe easier.
- Trees increase property values. Properly landscaped homes can sell for 7 to 15% more than homes without landscaping.
- Trees provide habitat for wildlife which can make your house a home for songbirds.
- Properly placed street trees can calm traffic and make your neighborhood safer.

***“Trees make a world of difference.”***

John Rosenow, CEO Arbor Day

**24 Trees planted in Mound Bayou Town Center absorb 960 gallons of storm water each year, increase property values and help clean the air.**

*Thirty trees along the streets in Mound Bayou were assessed using i-Tree Streets. Data collected on each tree included: species, condition, and DBH. The trees used for the study were randomly selected by the forester on-site during the field work.*

***Why***

**Trees are Important to Mound Bayou and to You**



**The Mississippi Urban Forest Council  
&  
The City of Mound Bayou**



*This project was made possible through funding from the Mississippi Forestry Commission, USDA Forest Service, and the Southern Group of State Foresters*



The Mississippi Urban Forest Council developed the Comprehensive Green Infrastructure Plan and accompanying educational tools for the City of Mound Bayou, MS. For more information on this plan and how MUFC can help “Green” your community contact us at:

164 Trace Cove Drive  
Madison, Mississippi 39110  
Donna Yowell  
(601) 672-0755

[www.msurbanforest.com](http://www.msurbanforest.com)

## Trees Provide Measurable Benefits



While trees provide shade and screening and are useful in the landscape, they also provide ecological functions that can be translated into economic value:

- ★ Removal of air pollutants
- ★ Decreased energy costs (e.g., shading and cooling effects of trees)
- ★ Enhanced storm water mitigation
- ★ Carbon storage and sequestration
- ★ Increased property value

**i-Tree** is a suite of software developed by the US Forest Service that provides urban forest managers and advocates with tools to quantify ecosystem services and benefit values of community trees at multiple scales.

**i-Tree** shows the significance of community trees in terms of pollution mitigation, storm water run-off reduction, carbon sequestration and storage.

**i-Tree** is used for tree management, strategic planning, and community awareness.

**i-Tree** version 3.0 offers two primary urban forest assessment applications: **i-Tree Eco**, previously known as **UFOR** and **i-Tree Streets**, previously known as **STRATUM**.

**i-Tree** Vue (Beta) allows you to make use of available national land cover data maps to assess your community's land cover, including tree canopy, and some of the ecosystem services provided by it.

## Mound Bayou's Tree Canopy Cover Percent is

7.4%



The Mississippi Urban Forest Council, a non-profit citizen conservation organization that focuses on mobilizing people to improve the environment by planting and caring for trees suggests that communities establish the following tree canopy cover goals:

- 40% tree canopy citywide
- 50% tree canopy in suburban residential
- 25% tree canopy in community residential
- 10-15% tree canopy in the community core

## To help Mound Bayou, increase its tree canopy,



### PLANT TREES

Part of this project included a comprehensive community-wide Green Infrastructure plan for the City of Mound Bayou. This plan, if implemented, will substantially improve the quality of life for all citizens in the community as well as enhancing economic opportunities.

“The best time to plant a tree is twenty years ago, the second best time is today.”

## How to Plant a Tree:

**Step 1:** Assess your grow space. Look up, down, and around. Make sure you have enough room for the tree to grow.

**Step 2:** Select a tree that will grow in Mound Bayou's climate and will fit your grow space.

**Step 3:** Measure the depth and width of the root ball. Dig the planting hole slightly shallower than the depth of the root ball and at least 3 times the width of the root ball.

**Step 4:** Place the tree in the center of the planting hole with the topmost root of the root ball slightly higher than the finished landscape grade. Straighten the tree in the planting hole.

**Step 5:** Begin to fill in the planting hole with native soil. Water in the backfill as you fill the planting hole. When the backfill process is complete, the top 1–2 inches of the root ball will be above grade.

**Step 6:** Water the tree immediately after planting with 5 gallons of water per caliper inch.

**Step 7:** Continue to water the tree daily for 1 month; every other day for 3 months; weekly until established. Mulch

