Chapter 13
Supporting Public Facilities, Services and Infrastructure

PERSONAL VISION STATEMENTS

"Each neighborhood [with] great educational opportunities, accessible to health care facilities, dedicated green space, increased presence of police."

"…a concept with integrated schools, police, utilities and public services."

GOALS	POLICIES FOR DECISION MAKERS
The City has state-of-the-art data and information resources and programs to support decision-making, facilities, services, and performance management across city departments.	• Invest in creating and maintaining data and information resources to maximize benefits and efficient use of taxpayer dollars.
Public safety departments meet best practices performance standards.	• Support a strategic plan for the police department, including technology, facilities, and vehicles, to make the police department state of the art.
	• Support fire department needs for upgraded equipment and training.
	• Continue to support community-based public safety programs.
Water and sewer service meets the long-term needs of the city.	• Support policies that ensure long-term security for drinking water supplies.
	• Support sewer service policies that resolve current problems, taking into account burdens on ratepayers.
Stormwater management and floodplain management systems incorporate best management practices.	• Continue the Flood Mitigation Program through property buyouts in repetitive flood areas.
	• Pursue development of a comprehensive watershed-management plan and encourage the use of best management practices for stormwater runoff treatment, including use of non-structural solutions where feasible.
	• Continue to support initiatives that aim to incorporate stormwater infrastructure design into a public amenity, such as a greenway.
City resilience is supported by effective measures to mitigate hazards presented by tornadoes, floods and other environmental hazards.	• Continue efforts to provide effective warning of floods and tornadoes, as well as neighborhood-based "safe rooms" in public facilities.
	• Continue to work with FEMA and others to both eliminate repetitive flood hazards and manage floodplain development.
City facilities are models of energy and resource efficiency and maintained for long-term use.	• Support investment in an asset management system for all city-owned facilities.
	• Where possible, meet new needs and demands by enhancement/expansion of existing facilities.
	• Use best practices for long-term, life-cycle energy and resource efficiency in improvements, renovations, or new facilities.
	• Continue to support a priority system and plan to fund all outstanding ADA deficiencies in public facilities.
Minimized city funding for operational and capital costs for city-owned cultural and entertainment facilities.	• Support continued emphasis on public-private operational agreements and fund-raising for cultural facilities owned by the city.
Solid waste is reduced at least 20 percent over 2011 levels by 2030.	• Support measures to reduce the amount of solid waste that goes to the landfill.
An effective and well-regarded public school system.	• Support public school improvement programs.
	• Support collaborative planning for excess school facility capacity and property disposition.

findings

DATA AND INFORMATION

The City lacks up-to-date inventories of its assets and data systems.

PUBLIC SAFETY

The Birmingham Police Department is close to full strength (840 officers) in terms of staff, but needs upgrades to technology and records management, facilities, and vehicles, as well as creation of a strategic plan.

There are four precincts for a large city.

Crime is down, particularly certain violent crimes like murder and robbery.

The police department includes a Community Services Division focused on community policing, including the schools.

The Birmingham Fire Department has 32 fire stations (one under construction as of early 2012).

Blight and vacancy, plus the prevalence of older and deteriorated housing, results in many fires.

Fire Department priorities include updated equipment, improved facilities, additional staff, and enhanced training.

HAZARD MITIGATION

The City of Birmingham participates in the hazard mitigation planning process led by the Jefferson County Emergency Management Agency.

Major hazards in the city are repetitive floods in the city's Village Creek and Valley Creek floodplains.

WATER AND SEWER SERVICE

The City depends on regional providers for drinking water and sewer service, the Birmingham Water Works Board (BWWB) and the Jefferson County Environmental Services Department (JCESD) respectively.

Drinking water supplies are expected to be plentiful for the next 75 years, but droughts are also expected to become more common.

Sewer improvements are underway, and Birmingham ratepayers will see sewer rates go up.

DRAINAGE AND STORMWATER MANAGEMENT

A plan for compliance with NPDES Phase II stormwater regulation has been developed.

Flood mitigation property buyouts have been undertaken as funds are available from the Corps of Engineers and FEMA (Federal Emergency Management Agency).

Guidelines for the design of stormwater facilities are available and enforced by the Planning, Engineering and Permitting Department.

CULTURAL FACILITIES

Birmingham has an excellent public library system with 19 branches and a central library, which includes an important rare books and manuscript collection. The system is also part of the Jefferson County Library Cooperative and is linked with the other library systems within the county.

The City owns a number of cultural institutions and venues, such as Sloss Furnace, the Botanical Garden, the Zoo, the Museum of Art, Arlington House, Boutwell Auditorium, and the Southern Museum of Flight.

RECYCLING AND SOLID WASTE

The City owns and operates two landfills and provides residential refuse collection twice a week, as well as curbside recycling for single-family houses.

The projected capacity of both landfills is more than 20 years.

PUBLIC WORKS

The Department of Public Works (DPW) is responsible for the maintenance of all city buildings and other facilities, grounds and landscapes, including the park system; cleaning of streets and drainage ditches; enforcement of quality of life ordinances; construction administration; demolition; construction of sidewalks, curbs and gutters; and solid waste operations, including collection and landfill.

DPW mows grass at over 3000 vacant lots.

The Equipment Management Department maintains all city vehicles as well as all the public works machinery.

findings (continued)

PUBLIC SCHOOLS

Public school enrollment has declined 50% in 30 years to a 2011/12 school year enrollment of 25,100 students, 10,000 fewer than in 2005.

Almost all schools are currently operating at less than capacity and eleven have occupancy ratios of 50% or less. Twelve school buildings are vacant.

A capital improvement program, based on a study that assumed 3% annual population growth, will result in capacity for 37,364 students, more than 10,000 above current enrollments.

School improvement programs are being implemented to improve academic outcomes, support professional development of teachers, and support parent involvement in the school system.

The Birmingham Education Foundation has been created to support public school improvement programs.

Because of the capital improvement program, the physical plant of the school system is improved, with many new facilities. Additional improvements are needed at some schools.

The school system owns facilities, dating predominantly from the 1950s-1990s, that it wishes to dispose of.

challenges

Obtaining resources for public safety facility, technology, equipment and training improvements.
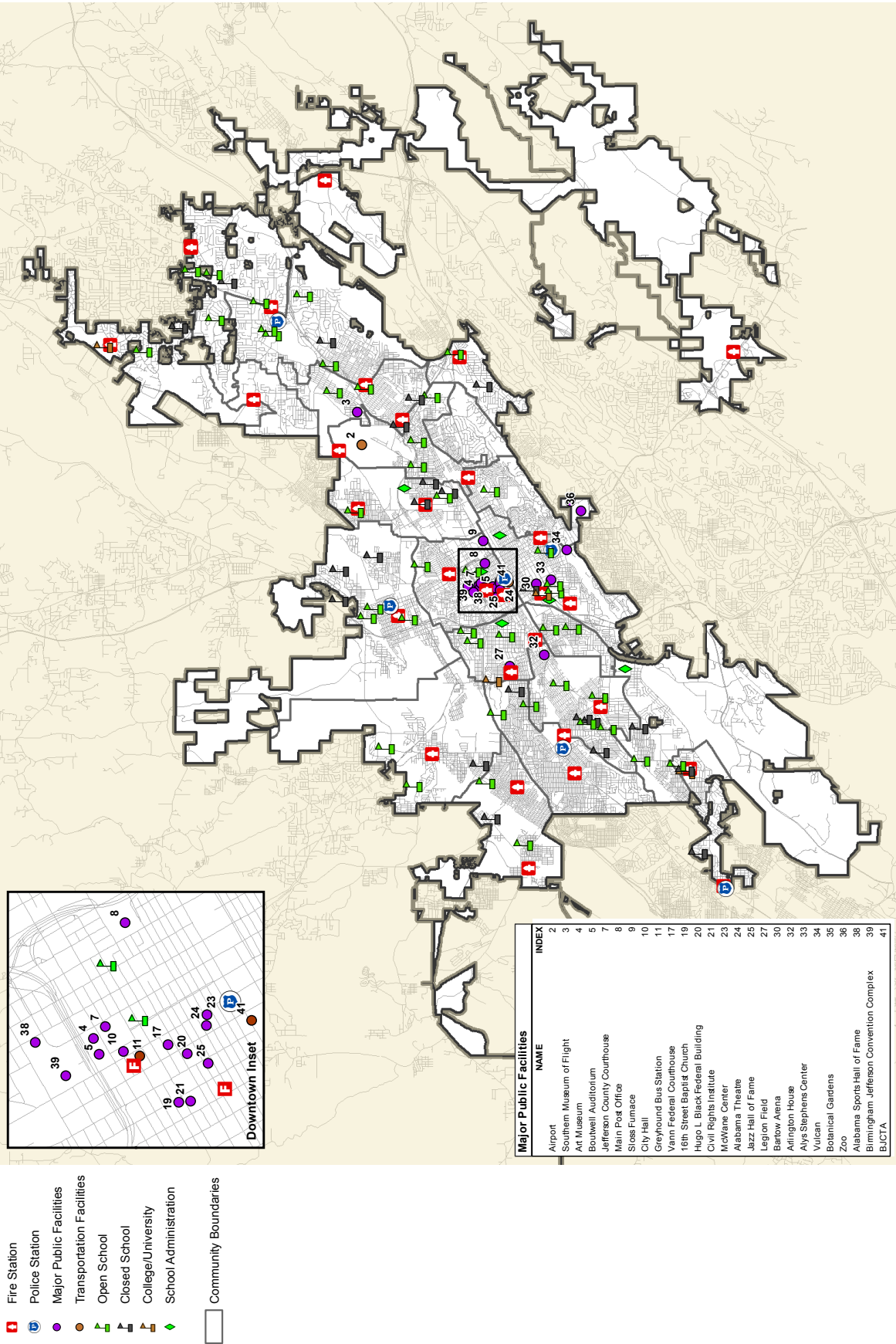
Improving the perceptions of public safety.

Ensuring long-term water and sewer service.

Establishing an asset management system that includes all city facilities.

Improving both the reality and perception of public school system performance.

FIGURE 13.1: PUBLICLY-OWNED FACILITIES

Legend

- Fire Station
- Police Station
- Major Public Facilities
- Transportation Facilities
- Open School
- Closed School
- College/University
- School Administration
- Community Boundaries

Downtown Inset

Major Public Facilities

NAME	INDEX
Airport	2
Southern Museum of Flight	3
Art Museum	4
Boutwell Auditorium	5
Jefferson County Courthouse	7
Main Post Office	8
Sloss Furnace	9
City Hall	10
Greyhound Bus Station	11
Vann Federal Courthouse	17
16th Street Baptist Church	19
Hugo L. Black Federal Building	20
Civil Rights Institute	21
McWane Center	23
Alabama Theatre	24
Jazz Hall of Fame	25
Legion Field	27
Bartow Arena	30
Arlington House	32
Alys Stephens Center	33
Vulcan	34
Botanical Gardens	35
Zoo	36
Alabama Sports Hall of Fame	38
Birmingham Jefferson Convention Complex	39
BJCTA	41

SOURCE: BIRMINGHAM GIS

A. What the Community Said

- Improvements to the public school system are needed,

- Crime and perception of crime are significant issues in many neighborhoods

- Street and sidewalk maintenance and repair is needed throughout the city.

- Localized flooding and poor drainage continue to be problematic in certain areas of the city.

- The prospect of increasing sewer rates is a concern to many citizens.

- The disposition and future use of vacant city-owned and school department-owned properties should be part of a planning process.

B. Recommendations

goal 1

The City has state-of-the-art data and information resources and programs to support decision-making, facilities, services, and performance management across city departments.

POLICIES
- Invest in creating and maintaining data and information resources to maximize benefits and efficient use of taxpayer dollars.

STRATEGIES

A. Enhance the City of Birmingham's information system for the public through website improvements, data inventory, an open data warehouse, and smartphone apps, and to support City performance management systems.

Actions

1. *Improve the City's website to offer more information and e-government services.*

   The City's website should be redesigned and maintained to provide a greater variety of information on programs, resources, departments, documents and forms. The current website, as of 2012, is inconsistent in the type and timeliness of information made available by various departments. The full Code of Ordinances should be available online—either on the city's website or through an online resource such as Municode (*www.municode.com*) as well as proposed ordinances. Although some forms are posted on the website, there are few opportunities to submit forms through the website for various city services. Studies and reports are not consistently posted. There is no comprehensive listing of departments, offices and contact information. Examples of effective municipal websites include Huntsville (*www.hsvcity.org*), Augusta, GA (*www.augustaga.gov*), Winston-Salem, NC (*www.cityofws.org*), and New Orleans (*www.nola.gov*).

2. *Inventory city data and work toward creation of a publicly-accessible online data warehouse.*

   Cities are increasingly providing open access to data to their citizens. For example, Washington, DC has created an award-winning public information system and data warehouse, called City DW, open to the public. The data warehouse includes raw data from multiple city government agencies supplied over 425 data feeds to online sites, citizens, and government agencies. The DC Data Catalog allows users to subscribe to real time data feeds of information ranging from public space permits and completed construction projects to juvenile crime data and government employee credit card transactions.

The Digital Public Square is a virtual town hall with public access to current government information along with avenues for involvement and collaboration through social networks. Citizens have created apps using the public data on topics such as parking meter locations and historic buildings. Residents have also created their own informational websites populated by City DW data feeds, such as *www.JDland.com*, a site dedicated to news and information in Southeast Washington.

3. Establish a performance management system for city departments and agencies.

Evidence-based decision-making is the foundation of the performance management systems used by mayors and city officials around the country to track performance against established goals. First developed by Baltimore as the CitiStat program, the key features of performance management are:

- Collection and analysis of data to spotlight problem areas and potential solutions.

- Development of quantifiable measures to assess policy performance and draw comparisons across similar circumstances or peer groups so that "best practices" can be identified and expanded.

- Public dissemination of data and metrics on policy results, so those outside government can hold public officials accountable for their performance.[1]

These systems can create a culture of measurement and accountability that can improve performance and lower costs. As an example, Augusta (GA) has created a "performance dashboard" with performance management results available on the city website. (*www.augustaga.gov/index.aspx?nid=165*)

4. Create a comprehensive property management system.

See Chapter 8, pp. 8.9–8.10.

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[1] *http://www.americanprogress.org/issues/2007/04/data_driven_policy.html*

goal 2
Public safety departments meet best practices performance standards.

POLICIES

- Support a strategic plan for the police department, including technology, facilities, and vehicles, to make the police department state-of-the-art.
- Support fire department needs for upgraded equipment and training.
- Continue to support community-based public safety programs.

STRATEGIES

A. Support the Birmingham Police Department planning, facility and equipment priority needs and enhanced collaboration with other agencies

Actions

1. Create and implement a long-term strategic plan for the Police Department and establish a five-year strategic planning cycle thereafter.

A long-term strategic planning process will provide the opportunity to integrate needs for staff, training, facilities and equipment into the City's overall 21st century plan for a thriving downtown and neighborhoods of choice. Like other City departments and partners, the Police Department needs data and analysis (a beat study and a manpower study) to understand how population changes have affected its responsibilities. However, it is very important that this understanding of changing conditions be an ongoing practice. Implementation of the strategic approach recommended in this comprehensive plan means that population projections based on past data (the typical approach to population forecasting) may not reflect changing trends. The Police Department strategic plan and other City plans and initiatives should be aligned. A five-year planning cycle after completion of a broader strategic plan will help the Police Department effectively communicate its needs to the community.

2. *Create a separate Downtown precinct, make improvements or replace precinct buildings and the downtown headquarters, locating any new facilities to anchor and contribute to revitalization goals.*

The East and South precincts have unfinished buildings, and the North precinct building needs rehabilitation. The new West Precinct Police Station, under construction in 2012, is located in the Five Points West commercial center, close to a library branch and CrossPlex. This model of locating new police facilities in the proposed Urban Village Districts will support the strategic neighborhood revitalization model and should be followed, if possible, in locating other precinct buildings. New precinct buildings should be designed to include community meeting space.

Similarly, the current police headquarters building has an unusable floor, inadequate technological systems to support a full laboratory, and insecure parking. A central downtown location and the design for a new police headquarters should be chosen strategically to provide additional synergy to downtown. Location of the headquarters' parking should be carefully studied so that it does not detract from the pedestrian-friendly character essential to downtown streets.

3. *Seek a solution for a new municipal jail and locate it appropriately.*

In poor condition, the municipal jail needs replacement, and solutions ranging from a regional facility to privatization have been suggested. Regionalization is unlikely until after the County resolves its financial problems. Privatization, usually promoted for fiscal and efficiency reasons, can have impacts that need to be weighed carefully.

4. *Implement a technology strategy so that police data can be collected and reported easily and quickly.*

Police departments need up to date technology to operate efficiently and analyze crime patterns, a proven strategy in New York City (CrimeStat) and other cities. Police officers in Birmingham have laptops, but, as of late 2011, they could not make direct reports to the department from their laptops. Some data was still being collected and organized by hand. Federal grants have been obtained for some upgrades to records management and computer aided dispatch is being installed in 2012.

5. *Continue and enhance community-based and collaborative programs and explore establishing a Cease Fire Program in Birmingham.*

In addition to civilian Crime Prevention Officers and Community Service Officers in the department that work with businesses and residents, the Birmingham Police Department has a Citizens Police Academy for citizen volunteers, works with a Weed and Seed Program in North Birmingham that started with federal funding, and sponsors mentoring, and other community based programs. "Neighborhood Watch" and "Neighborhood Night Out" programs, often in conjunction with neighborhood associations, have been valuable in many cities in building relationships and trust between the police department and neighborhoods.

The "Cease-Fire" model, which began in Boston and has spread to many cities, such as New Orleans and Chicago, has demonstrated success in radically reducing gun violence among young people.[2] The programs target with intense police pressure the relatively small group of people who are typically the source of the majority of violence, while at the same time offering assistance for those who want to stop using violence and guns to solve disputes.

6. *Organize relevant governmental systems/ services to garner support from other agencies to promote and support community policing efforts, such as more effective code enforcement, including ticketing/ citations for "quality of life" offenses.*

Crime data is one of the information sources of most interest to citizens who have access to data warehouses and it is essential for targeting policing. In addition, the comprehensive property information system recommended in in this plan should include information on crime and policing activity at specific addresses. The police and fire departments should also be included in planning projects—identifying locations, developing plans, and implementing the plans for Urban Village Districts, and Strategic Opportunity Neighborhoods.

2   *http://www.commonwealthmagazine.org/Voices/Conversation/2012/Summer/001-Hold-your-fire.aspx; http://ceasefirechicago.org/data-research*

7. Continue aggressive efforts to secure grants for needed improvements to the police and fire systems.

The Fire Department has been very successful in obtaining grants for improvements. The Police Department recently hired a grant writer in order to make sure that the department takes full advantage of grant opportunities.

B. Support needed improvements in Fire Department facilities, equipment and programs.

The Fire Department has 648 firefighters and 32 fire stations and provides hazardous-materials response and emergency medical services in the City of Birmingham. Emergency medical calls on average account for 75 percent to 80 percent of all calls, and firefighters are trained as emergency medical technicians. In 2006, 42 percent of fire incidents were determined to be intentionally set.

The department commissioned a study of station locations and coverage in 2002. The study concluded that although several stations could be combined because of overlapping service areas, the number of operating units should remain, because of the workload. The national standard for arrival of a fire or emergency medical team is four minutes. The study showed that units met that standard 85 percent of the time. Several areas were not served within four minutes. Because Birmingham has a number of locations within the city limits that extend in narrow "arms," effective fire protection requires many fire stations. Some communities, use inter-jurisdictional agreements to get needed services and coverage from nearby jurisdictions without investment in fixed public assets.

The study's recommendations included combining stations with overlapping service areas and building several new stations in areas at the city's edge, such as Oxmoor, where a new station was built in 2013.

Actions

1. Prepare and update Fire Department strategic plans on a five-year cycle to continue to ensure that the Fire Department has the stations, equipment, training and resources to respond to fire, hazards, and medical emergencies.

2. Update and expand the fire station study to identify facility needs in light of changing demographics, sources of fire danger, and the planning and land use strategy of the Comprehensive Plan.

The Fire Department should update its plans every five years to take account of changing conditions and needs. It is important to evaluate needs in terms of new planning approaches. For example, a more effective code enforcement and blight prevention program could reduce the number of fires in abandoned properties. At the same time, if Strategic Opportunity Areas and urban villages attract more population, their needs for fire and emergency services must be met.

3. Provide newer vehicles and apparatus to keep equipment up to date.

Combined ladder truck and pumper truck vehicles purchased since the 1990s have not held up over time as well as expected. A program to purchase new vehicles and approaches should be put in the Capital Improvement Plan.

4. Continue and expand training opportunities for Fire Department personnel.

goal 3

Water and sewer service that meets the long-term needs of the city.

POLICIES
- Support policies that ensure long-term security for drinking water supplies.
- Support sewer service policies that resolve current problems, taking into account burdens on ratepayers.

STRATEGIES

A. Work closely with water and sewer service providers to ensure adequate service to the city.

Actions

1. *Support efforts to add additional drinking water sources to the supply.*

   Assist the BWWB in obtaining right of way for the expansion of their transmission system within the city.

2. *Support continuation of the Replacement and Renewal Program to maintain the system.*

   The City should ask the BWWB to evaluate the fire water system and to improve the system in order to minimize the Fire Insurance rates.

3. *Support the efforts of Jefferson County Environmental Services in stabilizing the costs of operation and maintenance of the wastewater collection and treatment facilities as they work to meet the requirements of the Federal Consent Decree.*

B. Establish water-conservation programs.

Actions

1. *Identify potential water-conservation programs.*

   While Birmingham today appears to be relatively water-rich, establishing a culture of resource conservation and resource efficiency will be beneficial to the Birmingham area. Common water-conservation measures include plumbing retrofit programs, water use audits, and public information and education programs.

C. Prepare an annual report for public distribution on the water and sewer service as it affects the city.

Despite the existing websites and other materials prepared by the BWWB and the Jefferson County Department of Environmental Management, a brief annual infrastructure report from the City that also includes information on water and sewer service issues as they affect city residents would be valuable in raising public awareness of how these regional activities are affecting the city. This report could be integrated into an annual report on the progress of the City's capital improvement programs.

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goal 4

Stormwater-management and floodplain-management systems incorporate best management practices.

POLICIES

- Continue the Flood Mitigation Program through property buyouts in repetitive-flood areas.
- Pursue development of a comprehensive watershed-management plan and encourage the use of best management practices for stormwater runoff treatment, including use of non-structural solutions where feasible.
- Continue to support initiatives that aim to incorporate stormwater infrastructure design into an amenity, such as a greenway.

The purpose of a drainage system is to manage the quantity and quality of stormwater in areas that have been modified by development and construction. Where land is undeveloped, most precipitation is absorbed into the ground or is returned to the atmosphere through evapotranspiration by trees and other plants. Urban development can disrupt natural hydrological systems through clearing of vegetation; grading; soil compaction; the addition of impervious surfaces in the form of buildings, roads, and parking lots; and the use of drainage infrastructure such as gutters, storm sewers and hard-lined water channels. Water flows away from these surfaces, either directly, to natural waterways, or into engineered storm sewers or drainage ways that eventually convey the water to natural streams or lakes. These alterations of the land can increase the volume and velocity of stormwater runoff and increase erosion, causing flash floods, flooding and pollution in downstream bodies of water that receive the runoff, unless they are properly managed.

Stormwater management is designed to reduce both the volume and pollution impacts of stormwater. Increased impervious surfaces produce more storm water—heightening the potential for flooding—which then carries contaminants into natural waterways. Pollution from stormwater is called "nonpoint source pollution" because it does not come from a specific piped source, like a factory, but from stormwater flows that, for example,

pick up oil, gasoline and other pollutants on roadways as they move toward water bodies. Best management practices increasingly focus on re-introducing natural drainage systems and low-impact development into urban conditions when possible.

The US EPA is responsible for regulating the water quality of the navigable waters of the United States and has issued a General Permit under the National Pollution Discharge Elimination System (NPDES) to the Alabama Department of Environmental Management (ADEM) to regulate, permit and monitor discharges to the navigable water of the state. This is implemented in two programs. One is the point source discharges program which includes wastewater facilities. The second is the non-point source program which covers storm water systems, farm lands and industrial sites.

The City of Birmingham owns, operates and regulates the municipal storm sewer system (MS4) within the City. The City regulates the discharge of storm water into their MS4 and soil erosion under Ordinance 99-131. Jefferson County collects a stormwater fee with the property tax—$5 per residential property and $15 for each commercial property, and these fees are then sent to the city to help fund this program.

The City cannot have a regulation that is less or more restrictive than any provision of the Clean Water Act or the State of Alabama rules and regulations. As part of their responsibility, the City requires that for all developments the post-development storm water runoff rate be no more than pre-development runoff rate. The City also requires that all projects with land disturbing activities, regardless of size, submit erosion control best management plans as a part of the permitting process. The plans must be prepared in accordance to the Alabama Handbook for Erosion Control, Sediment Control and Storm water management of Construction Sites and Urban Areas.

As a supplement to ADEM's construction stormwater program, the city monitors construction sites, regardless of size, to help ensure these meet land-disturbance requirements. The city also monitors industrial sites for pollutants in the storm water runoff. For construction sites one acre or larger, ADEM requires the filing of a Notice of

Intent. The City requires a Construction Best Management Practices Plan (CBMPP) be prepared and that erosion prevention and sediment control provisions are included in all construction plans which include ground disturbance. The city also monitors industrial sites for pollutants in storm water runoff.

In the spring of 2013 EPA is scheduled to release new regulations governing Municipal Storm Sewer Systems (MS4). These new regulations will likely include new development performance standards, redevelopment performance standards, transportation requirements, and special provisions for the critical waters. As the standards become available the City of Birmingham can embrace these new regulations, and keep their system up to date with national standards.

STRATEGIES

A. Adopt strategies to reduce the amount and improve the quality of stormwater runoff entering the city drainage system.

Impervious surfaces on developed land—mainly rooftops and paving—shed stormwater at high rates, sending it into the stormwater system and, eventually, streams and rivers, where it increases pollution, erosion and turbidity if not managed properly.

Cities across the US have considered and adopted regulations, programs, and incentives to keep significant volumes of stormwater out of the stormwater system, thereby reducing the public cost of maintaining and addressing stormwater system problems. The construction and operation of municipal separate storm sewer systems is a costly federal and state requirement. However, when cities allow and encourage stormwater best management practices that retain water on site so that it either evaporates into the air (because it is taken up by trees and plants), slowly infiltrates back into the ground, or is used to irrigate landscapes, the communities benefit. There are many examples of the benefits of these practices, for example:

- Adding roadside bioswales, making roads narrower and designing smaller or porous parking lots with on-site runoff detention saves money by reducing the amount of pavement, curbs and gutters needed.

- Installing green roofs, disconnecting roof downspouts from impervious surfaces (driveways and streets), and incorporating bioretention areas to capture on-site run-off saves money by eliminating the need for costly runoff detention basins and pipe delivery systems.

- Designing more compact residential lots saves money by reducing site grading and building preparation costs, and can increase the number of lots available for sale.

- Preserving natural features in neighborhoods can increase the value and sale price of residential lots.

- Using existing trees and vegetation saves money by reducing landscaping costs and decreasing stormwater volumes.

- Low impact development improves community aesthetics, expands recreational opportunities, increases property values due to the desirability of lots and their proximity to open space. These properties also have increased marketing potential and faster sales for residential and commercial properties.

- Stream channel damage and pollutant loadings in downstream waters is lessened and the need for flood buy-out is reduced, again saving public costs and individual frustration and impact from recurrent flooding.

- Drinking water treatment costs are reduced, thereby costing water customers less for drinking water.

- Costs due to combined sewer overflows can also be reduced.

Actions

1. ***Revise regulations to consider incentives to promote best management practices and include default language that reflects a preference for natural drainage and natural channel design.***
   Stormwater best management practices should be incorporated into development regulations with applications in all general land use classification types. Short term improvements could include:

- Updating ordinances to promote post-development runoff hydrography that mimics pre-development hydrography and consider incentives to accomplish this goal for large projects. Current subdivision regulations stipulate that post-development runoff should be no more than pre-development runoff (Article 5.5.A).

- Consider incentives for stormwater detention/retention facilities to be designed to function as site amenities in addition to mitigation elements.

- For erosion and sediment control, increase staff monitoring and sampling to ensure that Best Management Practices are used in construction and industrial operations or require property owners to make reports when necessary and monitor through spot checks.

Incentives could include permit streamlining, abatement or reduction of the stormwater fee, or property tax abatements for a specified time period.

2. ***Require by ordinance that development and significant redevelopment comply with the City's NPDES Permit for run-off.***

3. ***Develop mechanisms, such as maintenance bonds, to ensure maintenance of detention ponds by developers and property owners.***
   The City already requires that developers/property owners maintain these ponds. Better enforcement mechanisms are needed. Examples can be found at water.epa.gov/polwaste/nps/stormwater.cfm.

4. ***Consider incentives to promote use of natural drainage systems, where feasible, to manage stormwater.***
   Cities across the nation have been searching for alternatives to traditional "hardscape" solutions to storm drainage problems. Communities are increasingly implementing best management practices for stormwater management that encourage preservation of natural drainage systems and, where preservation is not feasible, that encourage use of natural drainage and channel design to the extent possible. Current best management practices emphasize the many benefits of preserving natural drainage:

- Floodplains store water during big storms, reducing the velocity of the water and reducing downstream flooding.

- The natural floodplain buffer between developed areas and the stream mitigates nonpoint source pollution from the developed areas.

- Tree conservation, parks, greenways and recreational areas in the floodplain enhance the community.

Consider incentives to use methods that incorporate water-quality enhancement and public amenity with drainage improvements. Common approaches applied on a smaller scale include vegetated swales and the protection and enhancement of stream buffers. Others, as in Birmingham, include floodplain enhancement on a larger scale. Such approaches gain greater effectiveness when implemented alongside strategies that keep stormwater runoff out of storm sewers altogether. Use of pervious pavement and redirection of rooftop runoff to vegetated areas helps to reduce the amount of stormwater runoff entering the system.

5. Consider, through incentives or regulations, best management practices in limiting impervious surfaces.

Create incentives and provide public education to promote best practices in reducing impervious surfaces and enhancing on-site management and infiltration of stormwater, such as rain gardens, porous pavement, bioswales, and similar on-site actions.

6. Consider incentives to incorporate floodplain and natural drainage systems into greenways and similar open space amenities.

A well-designed urban amenity floodplain offers multiple benefits:

- Improvement of the drainage way's ability to treat stormwater runoff in addition to maintaining its capacity to hold and discharge water according to its design parameters.
- Reduction of channel erosion.
- Lower maintenance costs through good professional design and proper application of landscaping, trees, and plants throughout the floodplain.

- Development of linkages to other areas of the city along the floodplain with walking and/or bike paths.
- Development of conveniently situated passive recreational areas.
- Increase in natural habitat areas for birds and other wildlife.

7. Promote best management practices, in accordance with the City's NPDES permit, through development of a Stormwater Pollution Prevention Plan (SP3) for the operation and maintenance activities of all City Departments.

8. Consider creating a Stormwater Advisory Board to work with City departments to ensure best practices in all City activities relating to stormwater management.

B. Supplement existing stormwater-management regulations with incentives that promote best management practices which may include on-site management and infiltration of stormwater.

Stormwater-management ordinances and manuals, subdivision regulations and zoning should provide criteria, regulations and incentives for use of bio-retention areas (rain gardens, bio-swales, filtration strips, etc.) and similar practices in all types of development. All of these strategies call for creation of areas planted with native vegetation that allow for the collection and infiltration of stormwater, especially from rooftops and parking areas.

Actions

1. Use "Green Streets" approaches to stormwater management.

"Green Streets" include vegetated elements that intercept stormwater contaminated with gasoline and other chemicals for infiltration and mitigation. Such early interception of runoff reduces demands on stormwater sewers and helps the system return relatively clean water to the receiving streams. Green Streets can include planted bio-retention "bump outs" at corners and mid-block or wide vegetated areas between sidewalks and streets. Depending on the context, Green Street designs can be formal in business or commercial districts, and more informal in neighborhood settings.

STORMWATER TREE TRENCH

GREEN ROOF

FLOW-THROUGH PLANTER

STORMWATER BUMPOUT

RAIN GARDEN

RAIN BARREL

STORMWATER PLANTER

PERVIOUS PAVING

"Green Streets" can include vegetated areas in the public realm, and, together with other tools, make up "green infrastructure" for stormwater mitigation in urban conditions. (Source: www.phillywatersheds.org/what_were_doing/green_infrastructure/tools)

Green Streets programs are consistent with the Complete Streets policy endorsed by the Birmingham Planning Commission. City of Birmingham street and sidewalk capital improvement programs could incorporate the most up-to-date stormwater management design.

2. **Seek collaboration with UAB's sustainable engineering program in developing greener city standards.**

Faculty and students are engaged in studies that can contribute to enhancing city standards.

3. **Add City staff and equipment to handle the stormwater infrastructure maintenance and runoff monitoring in both construction and industrial operations.**

STORMWATER UTILITIES SUPPORT MANAGEMENT WITH DEDICATED FUNDING

Stormwater utilities have been established in cities and counties all over the country, including in Georgia, Florida, Oklahoma, Michigan, Kentucky, Ohio, Minnesota, Washington, Oregon, Colorado and Utah, to refine their stormwater-management programs. The purpose of a stormwater utility is to create a dedicated source of funding for maintenance and improvement of stormwater management. In Birmingham, Jefferson County currently collects flat fees ($5 per residential lot and $15 for commercial properties) with property tax. In a utility, however, the fee for stormwater impact is based on the amount of runoff that enters the public stormwater-management system—the use of the system by the property owner. This idea reflects the principle used for water and sewer service that customers should pay for service based on usage measured by their water meters. Stormwater utility fees are typically calculated based on the amount of impervious surface on a site, though some communities use gross parcel size for residential properties. Stormwater utilities provide an incentive for best management practices by offering credits against the stormwater fee to private property owners who reduce or eliminate runoff or improve the water quality of runoff.

In addition, stormwater utilities often offer exemptions for certain kinds of properties based on level of development, ownership, community use, and similar considerations. In the case of Birmingham, where some residential areas have very little public drainage infrastructure—typically lower-income neighborhoods—property owners should not be subject to a full fee if little service is available.

By establishing a stormwater utility, a community is creating a type of enterprise fund similar to the water and sewer funds, where the cost of maintenance and capital expenditures should be paid by the utility's revenues. This then frees up General Fund resources for government services and facilities that do not have the potential to generate revenue. Stormwater-utility revenues are used for a variety of purposes, including flood control, maintenance, water-quality treatment and management improvements, system planning, open space preservation, and regulation and enforcement. Most communities with stormwater utilities bill the fee with other utility bills or on the property tax bill. State courts have found that stormwater utility charges are true user fees for services and not taxes.

Establishment of a stormwater utility generally requires some years of planning, preparation and public education. Many manuals are now available to assist communities in crafting a utility appropriate to their conditions. Low initial rates can help property owners get used to the idea of paying a stormwater charge. It is essential to have a stormwater-management master plan as part of the establishment of a stormwater utility because the plan puts forward the program of specific programs and projects that need to be funded and then the rate structure will have to be adjusted so that, over time, these programs and projects are put into effect and supported by sufficient funding. The plan should demonstrate how it would promote those goals, comply with state and federal regulations, and be integrated with other plans and documents, including the Birmingham Comprehensive Plan, and provide for mitigation in the case of variances or exemptions from local stormwater regulations that are designed to promote the goals.

goal 5

City resilience is supported by effective measures to mitigate hazards presented by tornadoes, floods and other environmental hazards.

POLICIES
- Continue efforts to provide effective warning of flood and tornadoes, as well as neighborhood-based "safe rooms" in public facilities.
- Continue to work with FEMA and others to both eliminate repetitive flood hazards and manage floodplain development.

STRATEGIES

A. Create a plan for locating and funding public safe rooms around the city.

Actions
1. *Study and evaluate the availability and suitability of existing public safe rooms.*

2. *Develop a needs list based on the travel time from all areas to safe rooms.*

B. Continue to submit applications to the Federal Emergency Management Agency (FEMA) to participate in buyout programs as funds become available.

The City has purchased about 1,200 properties with repetitive flooding through FEMA and USACE programs. The City should be ready when funds become available in the future.

Actions
1. *Continue to maintain a list of properties that would benefit from the buyout program.*

2. *Prepare and submit applications to FEMA as funds are available.*

3. *Integrate these properties into open-space programs such as greenways, community land trusts, side-lot sales, community gardens and similar programs.*

C. Continue localized drainage projects.

There are repetitive flood areas that would benefit from localized drainage projects. These may include the upgrade of existing drainage structures, the addition of drainage facilities or providing detention facilities.

Actions
1. *Develop a list of areas that would benefit from minor drainage projects.*

2. *Develop a shovel ready project list of drainage improvement projects for construction should federal funds become available.*

goal 6

City facilities are models of energy and resource efficiency and maintained for long-term use.

POLICIES
- Support investment in an asset-management system for all city-owned facilities.
- Where possible, meet new needs and demands by enhancement/expansion of existing facilities.
- Use best practices for long-term, life-cycle energy and resource efficiency in improvements, renovations, or new facilities.
- Continue to support a priority system and plan to fund all outstanding ADA deficiencies in public facilities.

The physical systems and structures owned by the City represent a huge community investment. These are long-term assets purchased with public funds and should be designed, built, maintained and managed with life-cycle costs in mind. Birmingham has not updated the inventory and conditions of city property for some time. There is a significant maintenance and repair backlog, but no systematic way to prioritize many needs. When cities experience financial constraints, maintenance and repairs

tend to build up, creating a "culture of emergency," which ultimately results in higher costs. This problem is not unique to Birmingham, as news of bridges collapsing, water pipes bursting, and parks closing can be found in cities around the country.

In grappling with the consequences of postponed maintenance and capital improvements, many communities have instituted an asset-management system. Asset management involves taking care of City-owned physical systems and structures so that they deliver the desired level of service at the most reasonable cost. Asset-management systems are proven cost savers. For example, Pinellas County (FL) established an asset-management system and began implementing it incrementally. The initial cost, which included training for staff, was $700,000. After one year, the county recorded $6 million in documented/audited savings—nearly ten times what it paid for the system.

STRATEGIES

A. Acquire and implement a municipal asset management system.

A number of software systems are available to help governments keep track of the condition of their assets and support decision making about maintenance and replacement. These systems are connected to GIS (geographic information systems), so assets are mapped and their locations linked to a database containing information on when they were put in service, expected service life, condition, and how much annual maintenance is needed. Managers need this information in order to make the most cost-effective decisions while maximizing service and to drive decisions on whether and when to maintain, repair, or replace assets. While it requires an initial investment, training, and improved data systems, asset management ultimately saves money. An asset-management system can be built up incrementally, as assets are improved, built, or acquired and put into the system. The City of Birmingham Department of Public Works had an asset-inventory system in the past, but the software system failed. No municipal department at this time (2012) appears to keep such an inventory. New inventory software

has been acquired, but it has not been released for use and it is unclear if it is a full asset-management system connected to GIS.

Actions

1. *Make it a high priority to establish and begin implementing an asset-management system within the next three years.*

   The steps in establishing an asset-management system should include:

   - Identification of best practice examples of municipal asset management.

   - A report and presentation documenting the long-term costs and benefits of implementing asset-management system and funding.

   - A plan for training personnel after acquisition of the system, but before department-wide installation and implementation.

   Implementation of this kind of system over time will strengthen the foundation of quality of life. Comprehensive asset management systems not only assist in planning for capital improvements but very often result in savings of taxpayers' money.[3] The information from asset management systems can show how to save life-cycle costs and indicate when preventive maintenance can be more cost-effective than new capital investments.

2. *Determine specific and detailed asset management needs of each municipal department incrementally.*

   A complete asset-management system addresses the needs of all municipal departments including documented roadway, utility, vehicle, building and other conditions. Should funding be limited, however, most asset-management software allows municipalities to put a system in place incrementally. For example, Pinellas County, Florida, started with a basic system that included a maintenance-management system and asset tracking to generate city work orders. Later it added pavement and then will add bridges and utility tracking to its system.

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[3] U.S. General Accounting Office (GAO), *Water Infrastructure: Comprehensive Asset Management Has Potential to Help Utilities Better Identify Needs and Plan Future Investments*, March 2004. (*http://www. gao.gov/new. items/d04461. pdf*)

The Government Finance Officers Association recommends the following steps in creating a system for capital maintenance and replacement:[4]

- Develop and maintain a complete inventory of all capital assets in a database (including GIS), including information such as location, dimensions, condition, maintenance history, replacement cost, operating cost, and so on.

- Develop a policy for periodic evaluation of physical condition.

- Establish condition and functional performance standards.

- Develop financing policies for maintenance and replacement and consider earmarking fees or other revenue sources.

- Allocate sufficient funds in the capital program and the operating budget for routine maintenance, repair and replacement.

- Prepare an annual report on capital infrastructure including:
  > Condition ratings for the city
  > Condition ratings by asset class and other relevant factors
  > Indirect condition costs (for example, events like water main breaks that indicate condition)
  > Replacement life cycle by infrastructure type
  > Year-to-year changes in net infrastructure asset value
  > Actual expenditures and performance compared to budgeted expenditures and performance
  > Report trends in spending and accomplishments in the CIP.

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[4] GFOA, *Capital Maintenance and Replacement* (2007) (CEDCP), Recommended Practice Brief. *www.gfoa.org*.

B. Develop and showcase City facilities, buildings, and operations as models of resource efficiency by establishing a set of policies for facility operations, maintenance, renovation and new construction.

Actions

1. Re-use existing buildings before building new, if possible, and use recycled and locally-sourced content in municipal construction where practical.
Existing buildings contain "embodied energy" that has already been invested. Retrofitting existing buildings can be more energy-efficient than building new. However, some buildings will need to be replaced, and use of recycled materials and locally-sourced materials that do not require high transportation costs should be pursued in those cases.

An example of this approach can be found in the 2011 study of alternatives for the Birmingham Central Library by Robert A.M. Stern Architects. The Report concluded that the best solution to create a 21st century library was to keep the two existing buildings, reorganize the use of space, and upgrade systems for energy efficiency.

2. Design municipal buildings to maximize energy efficiency by attention to ventilation, windows, site orientation, use of trees on the south and west sides of buildings for shading, "green" roof construction where feasible, painting flat roofs white, and similar energy-efficient construction methods.
City projects should be subjected to a life cycle cost-benefit analysis that takes into account the long term operational and maintenance costs of new construction or rehabilitation. Although some design elements may cost more initially to construct, they save municipalities more money over time through lower heating and cooling costs. City buildings should strive to meet the highest resource-efficiency standards possible through application of benchmark systems such as LEED (Leadership in Energy and Environmental Design) or similar standards.

3. *Identify and implement water conservation measures for all public buildings and services, including re-use of non-potable water.*

Water conservation is a prudent practice that saves resources. It can be implemented through renovations and new building projects by the use of water-conserving fixtures and systems. Use of non-potable water where drinking water is not needed can save money over time as unnecessary water treatment is avoided.

4. *When repaving municipal parking areas, explore permeable surface construction.*

Where the underlying soils are suitable, permeable parking areas will reduce stormwater runoff. Strategies such as the use of permeable surfaces in parking spaces while retaining impervious circulation areas can be one way of balancing conditions to promote more natural drainage. Low-traffic areas, such as small parking areas in parks, could use gravel or other low-cost permeable surfaces.

5. *Implement a municipal procurement policy that minimizes use of toxic materials.*

Many communities have instituted procurement policies that require non-toxic materials, when available, for cleaning agents, construction materials and similar uses.

C. Continue funding to remedy existing ADA deficiencies in public buildings and ADA needs in new public construction, as well as PROWAG for public rights-of-way.

ADA compliance is a legal necessity as well as a moral imperative so that all citizens can participate in public life.

Actions

1. *Keep the City's ADA Transition Plan updated to document ADA compliance and deficiencies and request funding.*

Evidence of compliance is valuable in requesting federal and other funding for public projects.

2. *Establish a policy for using "universal design" criteria in the design of any new government buildings.*

Universal design is the next step beyond handicap-accessible or barrier-free design. It is predicated on the idea of designing spaces to be usable and attractive to everyone, without specialized elements specifically for disabled people. Principles of universal design include:[5]

- Equitable use
- Flexibility of use
- Simplicity and intuitive nature of design;
- Making information perceptible
- Building in tolerance for error
- Designing to reduce physical effort required
- Provision of sufficient space and size for approach and use.

3. *Complete outstanding ADA deficiencies identified in public buildings.*

Some funds should be allocated every year toward eliminating deficiencies.

4. *Continue to update ADA information available to the public and to private sector developers.*

Keep ADA accessibility updated on the City website and provide informational brochures or web-based information to guide the private sector (public and developers) about ADA standards, compliance, and permitting issues.

5. *Dedicate a small portion of ticket sales, rental fees, etc., received at public facilities to underwriting ADA needs at public buildings.*

Adding a small fee to facility use fees at City facilities such as CrossPlex to build up an ADA fund is a simple way to create a dedicated funding source for some improvements. If fees are raised, a public statement that the increment is dedicated to making all public facilities accessible to everyone can help mitigate the impact.

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[5] *www.design.ncsu.edu/cud/about_ud/udprinciplestext.htm* (The Center for Universal Design, North Carolina State University)

D. Develop a capital improvements program (CIP) with public criteria to prioritize needed capital improvements.

There is no central location of capital improvement needs except for the most recent capital improvement plan. When a new capital improvement plan is under development, the various lists of proposed projects are coordinated by PEP. Capital improvement needs identified by City departments and agencies gathered during the course of this planning project include:

- Roof and mechanical equipment replacement in many buildings across the city
- Police station improvements
- New police headquarters
- Rehabilitation or demolition and rebuilding of Boutwell Auditorium
- Local matching funds for the Intermodal Center Project
- Local matching funds for the initial Red Rock Trails System greenway projects
- Matching money for vehicle and pedestrian bridges in North Birmingham
- Matching money to build linear park along Village Creek
- Funds for sidewalks
- Matching money for $200,000 federal grant to relocate utilities on 16th Street
- New municipal jail or, at a minimum, new HVAC system
- Energy systems for Bill Harris Arena at Fair Park
- Sloss Furnaces visitor center new construction
- Upgrades at municipal court
- Citywide street resurfacing
- Landfill improvements and expansion
- Warming and teaching pool at Crossplex sports facility
- Commercial district redevelopment
- Fire station equipment including two pumper trucks
- Legion Field improvements including painting, roof repair, concession stands and parking lots
- Citywide street lighting improvements

- New road in Pratt City from Dugan Avenue to Sheridan Road for new residential development
- Street improvements on First Avenue South near Railroad Park
- Traffic signals
- Red Mountain Park entrance road
- Ensley Avenue infrastructure improvements along 20th Street to Warrior Road
- Infrastructure improvements on 12th Street from Lomb Avenue to Third Avenue West
- Improvements along 19th Street, Ensley from Bush Boulevard to Tuxedo Junction
- ADA pool lifts at all 17 city pools
- Industrial park infrastructure
- Renovation of Carver Theater/Alabama Jazz Hall of Fame
- Restoration of Lyric Theater, matching money for private fundraising
- Improvements to neighborhood streets, library, park and community center enhancements

Actions

1. Develop a capital planning process that meets best practices.

Capital Improvement Plans (CIP) play an essential role in implementation of a master plan. The Comprehensive Plan sets forth a vision for the City of Birmingham's future and a set of goals, strategies, and action steps to implement the strategies and achieve the goals. The plan focuses on policy and organizational initiatives to more effectively achieve the goals, and it identifies criteria for decision making and the kinds of projects that are preferred, given the goals of the plan. As the Comprehensive Plan is reviewed and revised over the years, and as Community Framework Plans are adopted as part of the plan, the Comprehensive Plan may come to include more specific project information. This will also depend on implementation of recommendations to make the city's financial policies, plans and operations more transparent. With the completion of the Birmingham Comprehensive Plan, reference to the Plan and the extent to which proposed capital improvements are consistent with the Plan and contribute to implementation should become part of the capital planning process.

In Birmingham, capital improvement information is presented in the form of an annual capital budget in which there are a number of general capital categories that continue for many years. Each year, the deputy directors in each department identify capital projects and equipment needs. The department director submits each department list to PEP, which then works with the Mayor's Office to determine priorities based on funding.

Best practices in capital improvement planning according to the Government Finance Officers Association include:[6]

- Identification of needs through a process that includes using projections, plans, and citizen input with attention to assets that require repair, maintenance or replacement; improvements needed to support redevelopment or growth; improvements that have revenue-generating potential or support economic development; and changes in community policies.

- Determination of the full extent of project costs including consideration of scope, timing, and appropriate methods of estimating costs and potential revenues; possible inflation impacts for multi-year projects; operating costs associated with a project and the sources of operating funding; estimate of all major cost components, including land acquisition, design, construction, contingency and post-construction; and evaluation and mitigation for non-financial impacts (such as environmental impacts).

- Priority-setting for capital requests by using criteria and a rating system based on policies, plans and studies; input from major stakeholders and the public; legal requirements and mandates; operating budget impacts; and analytical techniques, such as cost-benefit analysis.

- Development of financing strategies taking into account anticipated revenue and expenditure trends; cash flow projections; legal constraints; estimated funding amounts from all funding al-

ternatives; and the impact of financing strategy on debt ratios, taxpayers, ratepayers, and so on.

The complex process of setting priorities can be made more transparent by developing a set of criteria and a rating system. Criteria can include categories such as public health and safety; legal requirements; implementation of adopted plans; percentage of people served; benefit to economic development; resource efficiency; impact on operating budget; project life expectancy; availability of financing; public support; and so on.

The capital improvement budget should include the following information:[7]

- A definition of capital expenditure for that entity. For example, equipment, buildings, land or other goods expected to last at least 10 years or costing more than a defined amount.

- Summary information of capital projects by fund, category, etc.

- A schedule for completion of the project, including specific phases of a project, estimated funding requirements for the upcoming year(s), and planned timing for acquisition, design, and construction activities.

- Descriptions of the general scope of the project, including expected service and financial benefits to the jurisdiction.

- A description of any impact the project will have on the current or future operating budget.

- Estimated costs of the project, based on recent and accurate sources of information.

- Identified funding sources for all aspects of the project, specifically referencing any financing requirements for the upcoming fiscal year.

- Funding authority based either on total estimated project cost, or estimated project costs for the upcoming fiscal year. Consideration should be given

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[6] GFOA, "Best Practice: Preparing and Adopting Multi-Year Capital Planning (2006)," *www.gfoa.org*

[7] GFOA, "Best Practice: Incorporating a Capital Project Budget in the Budget Process (2007)," *www.gfoa.org*.

to carry-forward funding for projects previously authorized.

- Any analytical information deemed helpful for setting capital priorities (this can include any cost/benefit comparisons, and related capital projects).

GFOA also recommends making periodic reports on all ongoing capital projects available to decision makers and the public. The reports should include a comparison of actual expenditures to the original budget, level of project completion; and identification of any changes in scope, schedule, or anticipated completion time.

goal 7

Minimized City funding for operational and capital costs for City-owned cultural and entertainment facilities.

POLICIES
- Support continued emphasis on public-private operational agreements and fund-raising for cultural facilities owned by the City.

STRATEGIES

A. Evaluate the City's role and costs in ownership and operation of cultural, entertainment and similar facilities.

The City of Birmingham owns and contributes to the operating and capital costs of a number of cultural, entertainment and similar facilities that, in other cities would tend to be more independent of City funding. For example, at a minimum, museums today typically ask for a donation, if not a required fee, while still providing free access to groups like students or seniors. Birmingham's institutions and facilities are very important to the city's role as the cultural center of the region and, to a great extent of the State of Alabama. Some Birmingham institutions have public-private partnerships responsible for some or all of operating costs, and for raising money

for capital costs. These kinds of approaches may be possible for more of the city's institutions. Because there are many pressing needs for city resources, an evaluation of the City's financial role in supporting these institutions would be worthwhile.

Actions

1. *Commission a study to identify and evaluate City support for operating and capital costs, review models from other cities, propose criteria for City support, and make recommendations on the city role.*
   A study will help clarify the options and the best approaches in light of City needs, and the important role played by these institutions.

2. *Contract with the Cultural Alliance of Greater Birmingham to act as the City's Cultural Commission.*
   The Alliance can provide services to the City on a per task basis to support and attract arts and culture producers to live and work in the city.

goal 8

Solid waste is reduced at least 20 percent below 2011 levels by 2030.

POLICY
- Support measures to reduce the amount of solid waste that goes to the landfill.

STRATEGIES

A. Establish programs that consider providing incentives to reduce the solid waste stream.

Actions

1. *Expand the City's capacity to move toward the expansion of recycling.*
   Incentivizing residential recycling would be the most effective initiative to meet the goal. Birmingham's DPW already uses single-stream recycling, so that there is no need to separate the recyclables. This makes recycling easier and increases compliance.

2. *Provide appropriate equipment to the Department of Public Works for recycling.*

The DPW needs specialized trucks and equipment in order to provide the kind of recycling service needed to expand recycling.

3. *Allow composting on residential properties and create a municipal compost program.*

Composting ordinances have been adopted in many U.S. cities to allow and regulate small-scale compost operations to reduce solid waste in a way that is cost-effective, and encourages gardening by creating good soil.

Municipal compost programs require property owners to put garden waste (leaves, clippings, branches) into paper bags, which are then collected separately and taken to a municipal compost area where they are shredded and composted. This compost is typically made available to residents for free and is also used by the municipality for public landscaping needs.

4. *Establish practices in collaboration with multifamily and commercial property owners and businesses to reduce solid waste, including restaurant waste.*

The City government participates in the recycling program and can provide technical assistance to businesses in setting up their own internal systems for recycling.

5. *Continue capital programs to get maximum long-term use from the city's two landfills.*

The combined estimated life the landfills is 50 years at current levels of use. DPW is thinking ahead to acquire an additional 16-acre site. The current Solid Waste Master Plan will remain in effect until 2020.

B. Evaluate opportunities to cover the operational and capital needs of the solid-waste operation, while promoting recycling.

Many cities charge fees for trash and garbage collection and use the fee structure to promote recycling. For example, the first bag or barrel collected could be free. Fees could be raised gradually over a few years until most or all of the actual operating and capital costs of garbage collection are covered. In most cities, garbage and trash collection

is a weekly operation and twice-weekly collection is being phased out. Any changes in these services would have to be accompanied by strong public education and enforcement programs.

Actions

1. *Explore the possibility of weekly rather than twice-weekly trash and garbage collection.*

A cost-benefit analysis should be prepared.

2. *Explore an equitable system of charges for residential trash and garbage collection.*

The system should be evaluated to see how revenues compare with actual costs. In addition, the fee system could establish thresholds at which fees would increase (e.g., anything over one container would incur a higher fee). Fee systems should be carefully weighted against the potential for increased dumping if fees are assessed.

3. *Evaluate the educational and enforcement programs that would be needed to implement actions 1 and 2.*

4. *As current vehicles wear out and current employees retire, phase in more automated collection vehicles requiring less manpower.*

goal 9

An effective and well-regarded public school system.

POLICIES
- Support public school improvement programs.
- Support collaborative planning for excess school capacity and disposition of school property.

The City of Birmingham government does not control the public school system. However, it can exercise influence and actively seek collaboration with the system.

STRATEGIES

A. Support the academic improvement programs of the public school system and the Birmingham Education Foundation.

B. Explore opportunities to create "community schools" by using excess school building capacity for social service agencies and programs, adult education, fitness and other services for neighborhood children, youth and adults.

See the discussion of community schools in Chapter 7, p. 7.11.

C. Incorporate school system disposition of excess properties into community/neighborhood planning initiatives, if feasible.

The school system has excess property which it is trying to sell. The City's planning department and the school system should work together to identify if any of these properties has potential to become a neighborhood anchor with new uses.

D. Work with the school system to make existing and future school facilities accessible by pedestrians and bicyclists as well as motorized vehicles.

The school facilities capital plan is nearing completion, and decisions about where to locate school facilities were not made in the context of holistic and integrated planning for neighborhood development in the city. Some new schools are difficult or nearly impossible to access by pedestrians and bicyclists. As the city develops and implements its road and sidewalk improvement program, including a system of mode priority streets, connections to schools should be included.

C. Getting Started

ACTIONS	RESPONSIBLE PARTY
Fund preparation of a strategic plan for the Police Department and Fire Department.	Mayor's office; City Council; Police Department, Fire Department
Develop an incentive system and revise regulations as needed to enhance best management practices in stormwater management.	PEP
Fund and implement an asset-management system.	Mayor's office; Council; DPW; Finance Department; Information Management Services Department
Develop a more structured and transparent capital-planning program.	Mayor's office; PEP; Finance Department; Information Management Services Department