SANDY SPRINGS
GEORGIA

CITY COUNCIL AGENDA ITEM

TO: Mayor & City Council **DATE:** April 21, 2010

FROM: John McDonough, City Manager

AGENDA ITEM: Quarterly Updates on the Capital Improvement Program and other Major Public Works Programs

MEETING DATE: For Submission onto the May 4, 2010 City Council Work Session Meeting Agenda

BACKGROUND INFORMATION: (Attach additional pages if necessary)

See attached:

Memorandum
Presentation

APPROVAL BY CITY MANAGER: _____ *APPROVED*

_____ *NOT APPROVED*

PLACED ON AGENDA FOR: 5/4/2010

CITY ATTORNEY APPROVAL REQUIRED: (✓) *YES* ( ) *NO*

CITY ATTORNEY APPROVAL: _____

REMARKS:

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TO: John McDonough, City Manager

FROM: Thomas Black, Public Works Director

DATE: April 20, 2010, for Submission onto the Agenda of the May 4, 2010, City Council Work Session

ITEM: Quarterly Updates on the Capital Improvement Program and other Major Public Works Programs

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Public Works Department's Recommendation:

Public Works staff will present a quarterly update on the CIP-T and other major public works programs as requested by the City Manager.

Background:

The CIP-T and major public works programs have been approved by the Mayor and City Council.

Discussion:

This presentation is a quarterly update for the Mayor and City Council.

Alternatives:

N/A

Financial Impact:

The CIP-T and other major public works programs are operating within the approved budgets.

Attachment:

Presentation

Public Works

7840 Roswell Road, Building 500 • Sandy Springs, Georgia 30350 • 770.730.5600 • 770.206.2578 fax • www.sandyspringsga.org

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Public Works Major Programs
FY2011 Initial Budget Recommendations

May 4, 2010

Public Works Department

FY2011 Initial Recommendations Summary

- All programs are scalable. The initial recommendations include options for prioritization and adjustment by the Mayor and City Council. Details follow this summary.
- Pave On - $5.5 Million – resurfacing and reconstruction
- Capital Sidewalks – candidate list - $6.8 Million
- CIP-T - $5.2 Million – 6 projects
- Stormwater Maintenance and Permitting - $1.5 – 4.2 Million
- TMC/Fiber - $500 k
- Intersection Improvements - $750 k
- Bridge Maintenance - $1.5 Million
- Totals - $21.8 - $24.4 Million (FY2010 - $19 Million)

FY2011 Operation Pave On Initial Recommendations

- Requesting $5.5 Million
  - IMS recommended
  - Controls future backlog
- Resurfacing Streets Approx $3 Million
- Reconstruction Streets Approx $2 Million
  - LARP funding unlikely beyond 2010
- Introduce Intermediate Program ($500k if approved)
  - Surface treatments
  - Crack sealing
  - Extra Patching Funding

FY2011 Capital Sidewalk Program Initial Recommendations

- Continue effort on Sidewalk Master Plan -- gap fill and network extensions
- Evaluate unfunded scored projects from FY10 and new candidate sites as identified
  - Citizen requested
  - Council member identified
  - Staff recommended
- Currently 24 candidate projects
  - Design
  - Design/Bid/Construct
  - Design/Build

FY2011 CIP-T Initial Recommendations

- FY11 Budget Request - $ 5,200,000
  - *$2,600,000 T-0031 Roswell Road bridge Widening Construction*
  - $1,500,000 Morgan Falls Road(including Ball Park Entrance) Design/Construction
  - $250,000 Concept Design - Cliftwood/Carpenter at Roswell Road Intersection
  - $750,000 T-0002 Abernathy Linear Park Phase 3
  - $500,000 Spalding Drive at Mt. Vernon Road Intersection
  - $50,000 Access Management Study (Glenridge to Abernathy)
    - (Note: Projects above are not in priority order)
- 7 Other Potential Projects

FY2011 Stormwater Program Initial Recommendations

- Major Policy Decisions Needed
  - Proactive vs Reactive
  - Funding sources (Stormwater utility?)

- Major Areas of Effort
  - Permit Activities
  - Capital Projects
  - Floodplain
  - Detention Pond Inspections
  - Infrastructure Inspections
  - Outfall Screening

FY2011 TMC Program Initial Recommendations

- Total Request - $500 k

- Additional fiber - $150 k
- Construction to install fiber - $200 k
- TMC Maintenance contract - $40 k
- PCID TMC Support – TBD
- Dunwoody TMC Support - TBD

FY2011 Intersection Improvements Program Initial Recommendations

- Construction - $750 k
  - 95 intersections currently in the Intersection Improvement program
- Potential Projects - Designs and Construction
  - Brandon Mill at Riverside/Dalrymple
  - Mount Vernon from Glenridge to Barfield
  - Roswell Rd at Dalrymple Rd
  - Roswell Rd at Windsor Pkwy
  - Powers Ferry between Northside and New Northside
  - Riverside Dr at Heards Ferry
  - Roswell Rd at Vernon Woods Dr

FY2011 Bridge Maintenance Program Initial Recommendations

- Overall Bridge Maintenance - $1.5 Million
- Windsor Parkway Culvert – Nancy Creek Trib - $1.0 Million
- Continue Maintenance Program at $250k
  - Monitor substructure condition
  - Place rip-rap where needed
  - Concrete repairs
  - Monitor deck conditions and repair joints as recommended
- Pedestrian Bridges $250 k

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Pavement Management Program Update

May 4, 2010

Public Works Department
Field Services Division

INCORPORATED 2005

FY10 Resurfacing/Reconstruction Program

- FY10 Budget - $5,825,000
- FY 2010 Capital Paving Phase I Resurfacing - $2.3M complete
- Base FY 2010 Capital Paving Reconstruction - $1.3M complete

Current Projects

- 2009-2 LARP
  - Blount Construction
  - Construction begins 4/20-2010
  - Scheduled to work 30 days
- 2010 Capital Paving Phase II
  - CW Matthews Contracting
  - Construction begins 5/3/2010
  - Schedule is 30 days

Approved 2009-2 LARP Streets

Road	Beginning Point	Ending Point
Mabry Road	Spalding Drive	Glenridge Drive
Hightower Trail	Roswell Road	Dunwoody Place
Kenbrook Drive	London Drive	NW End
Wing Street	Hightower Trail	North End
Auden Trail	Spalding Drive	NW End
Rivertrail Court	Brandon Hall Drive	NE End
Towergate Place	Hightower Trail	End
Scott Valley Road	Colebridge Road	Burdett Drive
West Northway Lane	High Point Road	East End

2010 Capital Paving Phase II

- Ison Road
- Long Island Way
- Spalding Stables - Subdivision streets
  - Coley Oaks Ct
  - Stables Ct
  - Stables Dr
- Powers Ferry Road- from Northside Drive to City Limits
- Windsor Parkway- from Peachtree-Dunwoody Road to City Limits
- Hammond Drive- from Mt. Vernon Parkway to Sandy Springs Circle
- Northland Drive – Windsor Parkway to GA 400 Bridge

2011 Operation Pave On

- Requesting $5.5Million
  - IMS recommended
  - Controls future backlog
- Resurfacing Streets Approx $3Million
- Reconstruction Streets Approx $2Million
  - LARP funding unlikely beyond 2010
- Introduce Intermediate Program ($500k if approved)
  - Surface treatments
  - Crack sealing

Pave On Program Costs to Date Through FY09

Budget Year 2007-08				
Project		Total Contract	Miles	Cost/Mile
Capital Paving	Phase I	$ 3,637,190.87	18	$ 202,066.16
	Phase II	$ 965,387.46	7	$ 137,912.49
LARP 05-06 (GDOT-$411k)		$ 1,168,381.00	7	$ 166,911.57
LARP 07 (GDOT-$305k)		$ 924,005.45	4	$ 231,001.36
Total Budget Year 2007-08		$ 6,694,964.78	36	$ 185,971.24
Budget Year 2008-09				
Project		Cost	Miles	Cost/Mile
Capital Paving	Phase I	$ 4,285,293.70	15	$ 285,686.25
	Phase II	$ 2,246,274.10	9	$ 249,586.01
LARP 2008 (GDOT - $229k)		$ 843,299.00	4	$ 210,824.75
Total Budget Year 2008-09		$ 7,374,866.80	28	$ 263,388.10
Total Program Thru FY09		$ 14,069,831.58	64	$ 219,841.12
GDOT Contributions - FY05-$194k, FY06-$217k, FY07-$305k, FY08-$228k				
GDOT Total Contributions to date = $944k				

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Bridge Maintenance Program Update

May 4, 2010

Public Works Department
Field Services Division

FY10 Bridge Program Storm Update

- 2010 Budget
  - $250,000

- Debris Removal
  - Base contract $11,650 additions $7,155
  - Work started 2-4-10
  - 28 Locations (bridges and culverts) 100% complete
  - Additional locations identified by Stormwater Division 100% Complete

Upcoming Maintenance Projects

- Project 1 – potential pedestrian access/bridges
  - Windsor Parkway over Nancy Creek – bid in May
  - Estimated cost $200,000 to $240,000
- Project 2 – out to bid in April, award in May
  - Kingsport Drive over Long Island Creek
    - Pile Encasement and Rip Rap for Scour
  - Riverside Drive over Chattahoochee Tributary
    - Repair guardrail
  - Windsor Parkway over Nancy Creek
    - Rip Rap for scour

2011 Bridge Maintenance Program Projections

- Windsor Parkway Culvert – Nancy Creek Trib - $1.0 M
- Continue Maintenance Program at $250 k
  - Monitor substructure condition
  - Place rip-rap where needed
  - Concrete repairs
  - Monitor deck conditions and repair joints as recommended
  - Construct Pedestrian Bridges - $250k
    - Dunwoody Club

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Stormwater Permitting Program Update

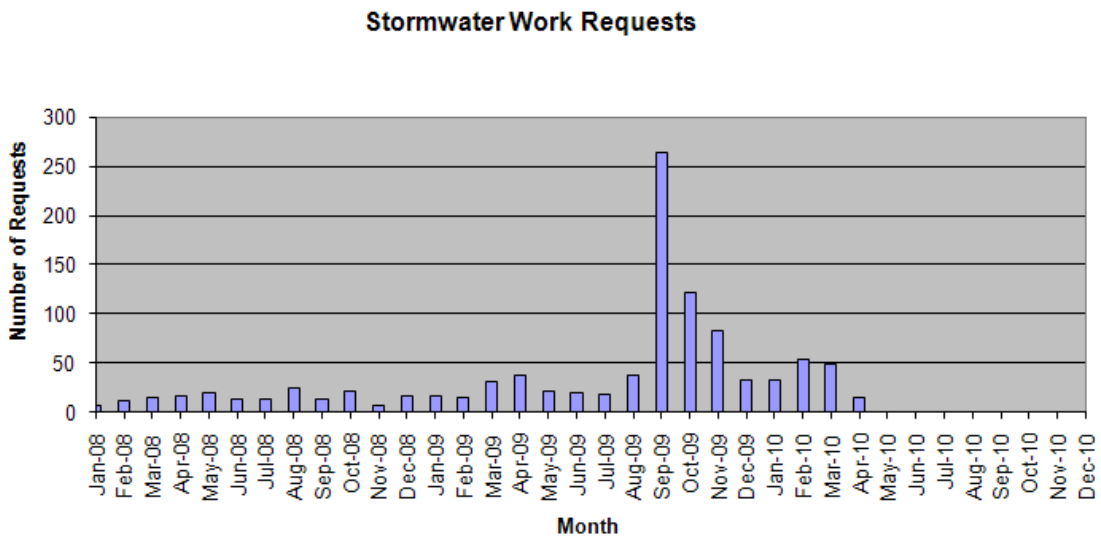
May 4, 2010

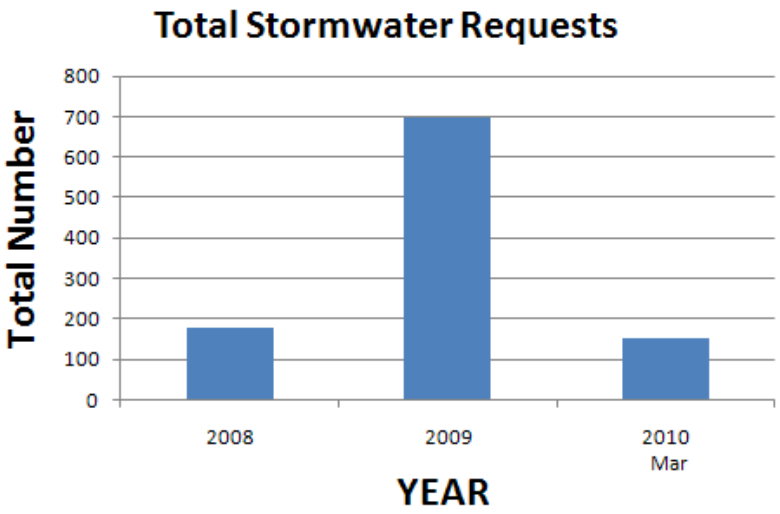
Public Works Department
Stormwater Division

Stormwater Focus 2011

- Capital Projects
  - Reduce backlog
  - Prioritize projects from inventory
- Floodplain
  - FEMA mapping
  - Hazard Mitigation Grant Program
- Detention Pond Inspections
  - 1,193 public and private ponds
  - Inspections and enforcement
- Infrastructure Inspections
  - 6,284 city plus 4,467 residential structures
  - Inspections
  - Work Requests
- Outfall Screening
  - 1,391 Outfalls
  - Inspections and enforcement
- Permit Activities

Drainage Requests

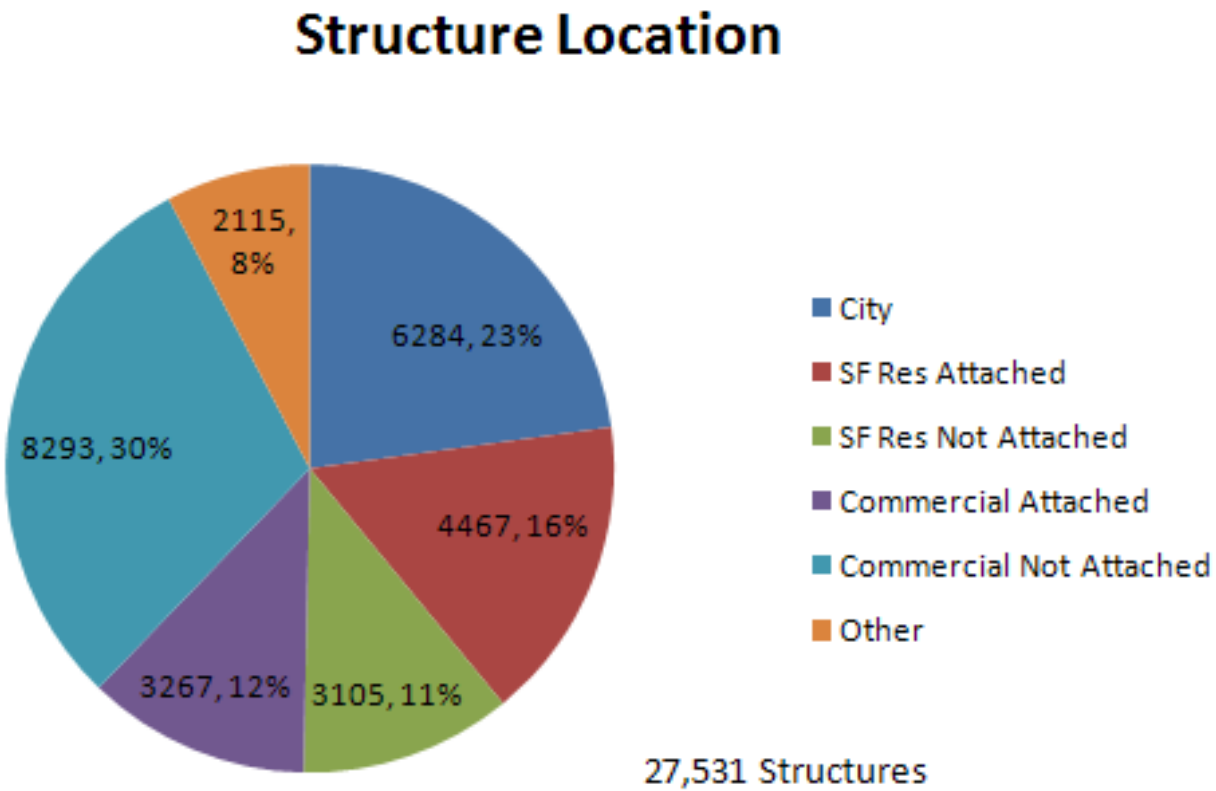




Operating system issues

- Public – Private determinations
- Private extensions
- Response Time
- Detention Ponds
  - Enforcement
  - Assistance
  - Water Quality retrofits
- Ditches and Streams
- Curb and Gutter (Field Services)
  - Filled gutter
  - Cosmetic
  - Driveways
  - Granite curb

Different locations of structures



27,531 Structures

Public and Private Inventory

	City ROW			Residential Attached			Other		
Condition	Structures	Pipes (Number)	Pipe (Miles)	Structures	Pipes (Number)	Pipe (Miles)	Structures	Pipes (Number)	Pipe (Miles)
Excellect	231	178	2.62	191	216	3.04	1,024	1,072	13.17
Very Good	1,354	1,134	16.09	644	735	11.83	3,805	3,255	45.70
Good	2,786	2,552	33.83	1,481	1,934	31.64	6,535	5,712	91.52
Fair	1,680	631	9.26	1,759	685	11.20	4,172	1,691	26.23
Poor	183	93	1.32	264	115	2.01	497	204	2.44
Repair	50	37	0.58	128	41	0.73	227	617	7.73
Sum	6,284	4,625	63.69	4,467	3,726	60.46	16,260	12,551	186.79

Public and Private Inventory

	City ROW			Residential Attached			Other			
Condition	Structures	Pipes	Sub-Total	Structures	Pipes	Sub-Total	Structures	Pipes	Sub-Total	Total
Excellect	$1,827,251	$5,059,095	$6,886,346	$1,181,003	$6,130,849	$7,311,852	$8,690,502	$28,262,445	$36,952,947	$51,151,145
Very Good	$10,366,752	$32,994,223	$43,360,975	$4,014,503	$23,816,346	$27,830,849	$31,164,005	$93,903,692	$125,067,697	$196,259,521
Good	$20,938,501	$70,578,293	$91,516,794	$8,745,502	$64,401,987	$73,147,489	$48,616,759	$191,947,569	$240,564,328	$405,228,611
Fair	$12,355,772	$19,490,543	$31,846,315	$4,572,515	$22,954,574	$27,527,089	$37,857,842	$56,315,340	$94,173,182	$153,546,586
Poor	$1,273,750	$2,968,841	$4,242,591	$752,750	$4,137,734	$4,890,484	$4,068,500	$5,318,397	$9,386,897	$18,519,972
Repair	$311,001	$1,248,717	$1,559,718	$651,250	$1,511,122	$2,162,372	$1,829,251	$16,593,610	$18,422,861	$22,144,951
Sum	$47,073,027	$132,339,712	$179,412,739	$19,917,523	$122,952,612	$142,870,135	$132,226,859	$392,341,053	$524,567,912	$846,850,786

Inventory – Public and Private

Condition	City ROW	Residential Attached	Other	Total
Excellent	$6,886,346	$7,311,852	$36,952,947	$51,151,145
Very Good	$43,360,975	$27,830,849	$125,067,697	$196,259,521
Good	$91,516,794	$73,147,489	$240,564,328	$405,228,611
Fair	$31,846,315	$27,527,089	$94,173,182	$153,546,586
Poor	$4,242,591	$4,890,484	$9,386,897	$18,519,972
Repair	$1,559,718	$2,162,372	$18,422,861	$22,144,951
Sum	$179,412,739	$142,870,135	$524,567,912	$846,850,786

Inventory – Public and Potential Public

Condition	City ROW	Residential Attached	Total
Excellent	$6,886,346	$7,311,852	$14,198,198
Very Good	$43,360,975	$27,830,849	$71,191,824
Good	$91,516,794	$73,147,489	$164,664,283
Fair	$31,846,315	$27,527,089	$59,373,404
Poor	$4,242,591	$4,890,484	$9,133,075
Repair	$1,559,718	$2,162,372	$3,722,090
Sum	$179,412,739	$142,870,135	$322,282,874

Planning Reactive Budget – Potential Public

Condition	Sum	2011	2012	2013	2014	2015	2016	2017	2018-2035
Repair	$3,722,090	$1,861,045	$1,861,045						
Poor	$9,133,075			$1,826,615	$1,826,615	$1,826,615	$1,826,615	$1,826,615	
Fair	$59,373,404								$3,298,522

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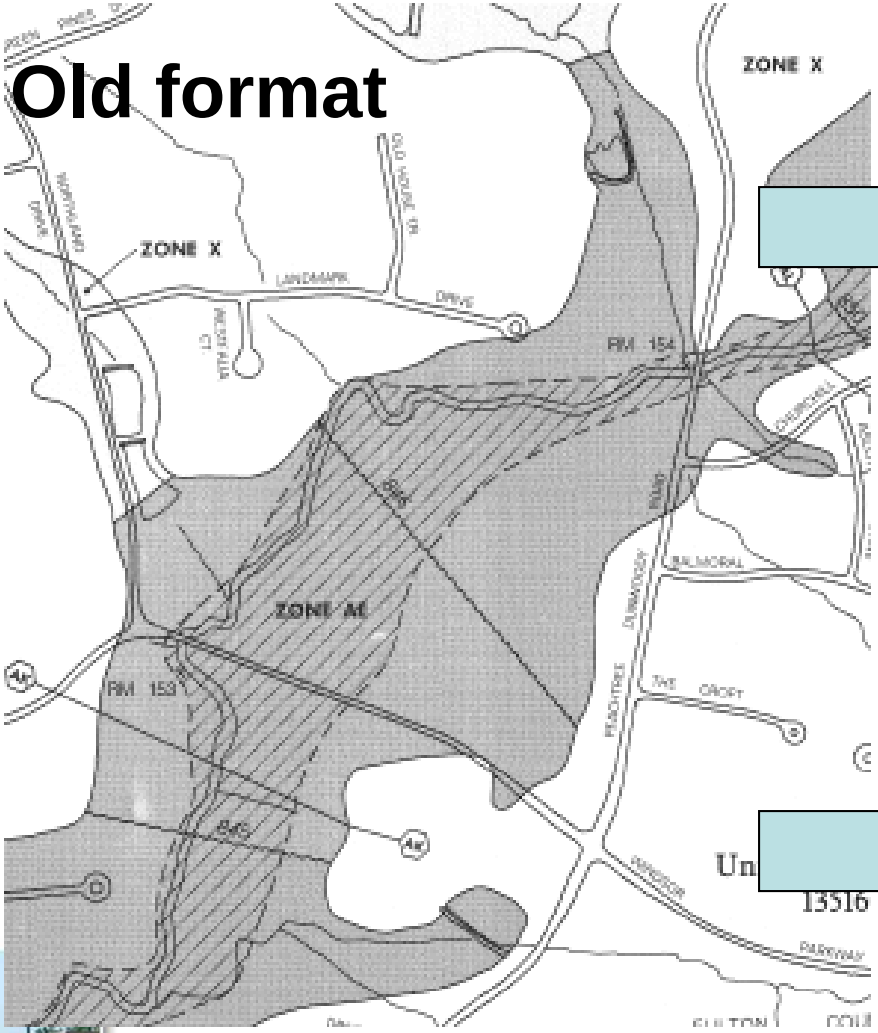
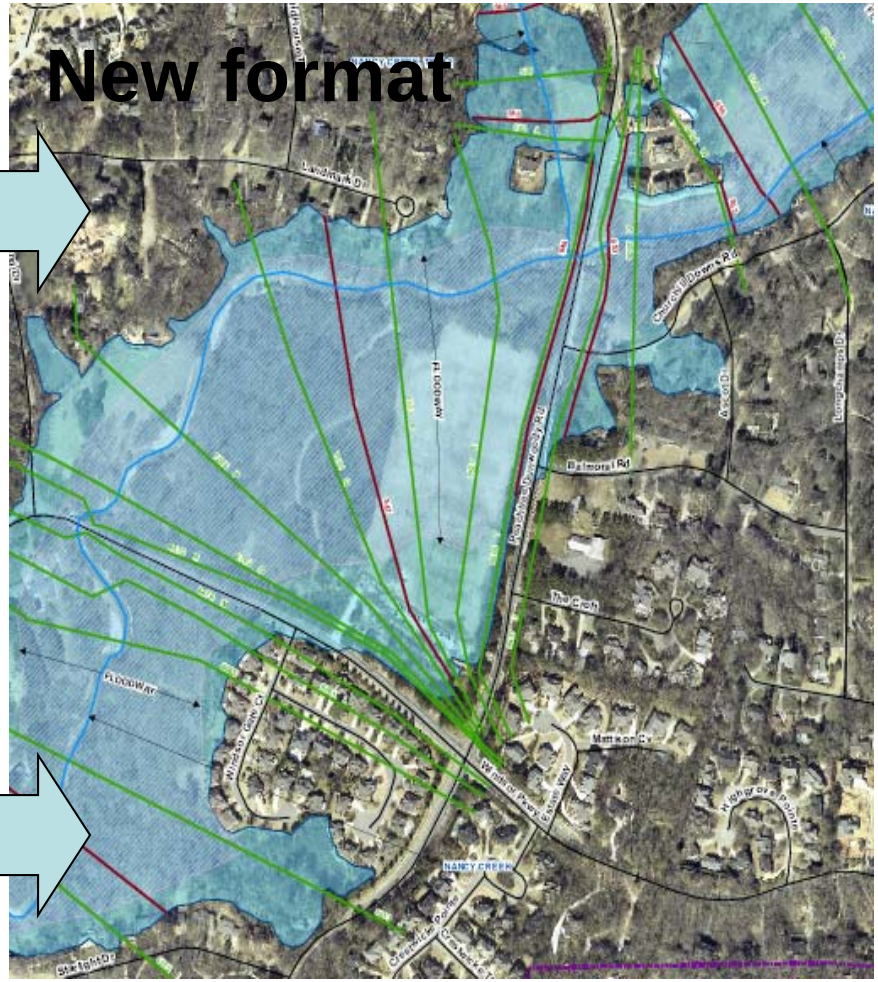
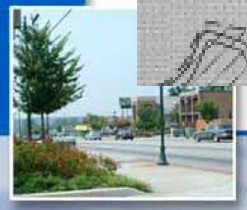
Current Data + New Models = Better Maps







Floodplain Issues

- New preliminary FEMA maps expected September 2010
  - MAPS kickoff meeting held 4/15/10
  - Public Involvement
- 579 properties in floodplain
  - Assistance policy
    - Flood Insurance
    - Hazard Mitigation Grant Program
    - Flood proofing assistance
    - Enlarge system
      - Potential downstream impacts

WIP Project Summary

WIP Study	Projects on City Property	Cost	Projects with Benefit/ Cost over 5	Cost
Nancy Creek	1	$763,000	8	$3,106,000
Long Island Creek	1	$252,000	3	$1,181,000
Fecal Coliform	1	$311,000	2	$438,000
Total	3	$1,326,000	13	$4,725,000

- 1,193 detention ponds
- 260 miles of ditches and streams

Stormwater Budget FY2011

Budget Item	Reactive	Proactive
Service Request identified	$1,500,000	
Inventory Identified		$3,200,000
Detention Pond		$200,000
Stream Restoration		$400,000
Channel Maintenance out of ROW		$100,000
Floodplain Properties		$300,000
HMGP Administration	Cash Flow	
IDDI - Stream Walks		$50,000
Sum	$1,500,000	$4,250,000

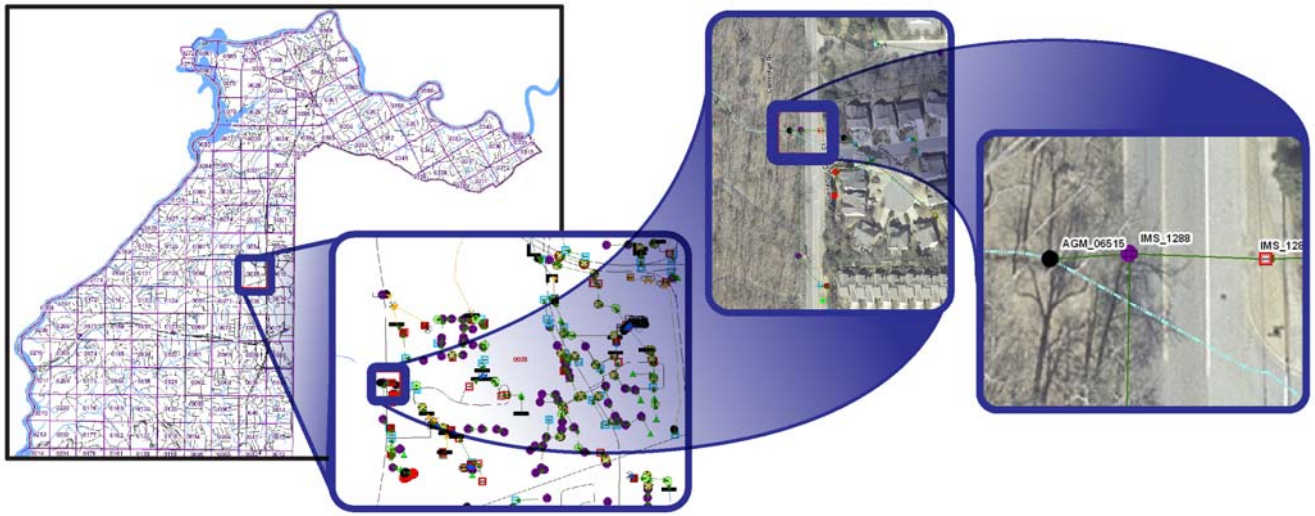
Stormwater Budget FY 2010

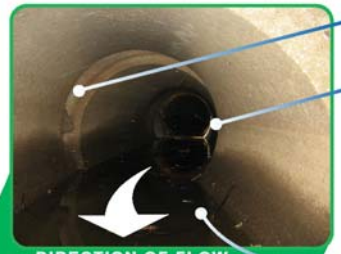
	Budget	Contract
Floodplain Mapping	$ 151,777	$123,390
Watershed Improvement Planning	$ 174,000	$174,000
Inventory and Assessment	$ 500,000	$500,000
Water Quality Monitoring	$ 11,000	$ 3,570
FEMA HMGP Application		$ 56,000
Total Contracts	$ 836,777	$856,960
Above original Budget		$ 20,183

Flood September 2009 Response

- 327 Stormwater work requests
  - Compares to 266 in prior 12 months
- 96 New stormwater projects
  - There were 88 on list before storm
- 128 Debris work requests
  - 120 Tons of Debris removed
- 98 Homes reported as flooding
- 3 Road closures bridges/culvert failure
  - Peachtree Dunwoody Bridge - $1,009,000 Fed. Highway Admin
  - Riverside Drive Bridge – $900,000 Federal Highway Admin
  - Glenn Errol Road Culvert - $157,400 FEMA

STORMWATER INVENTORY

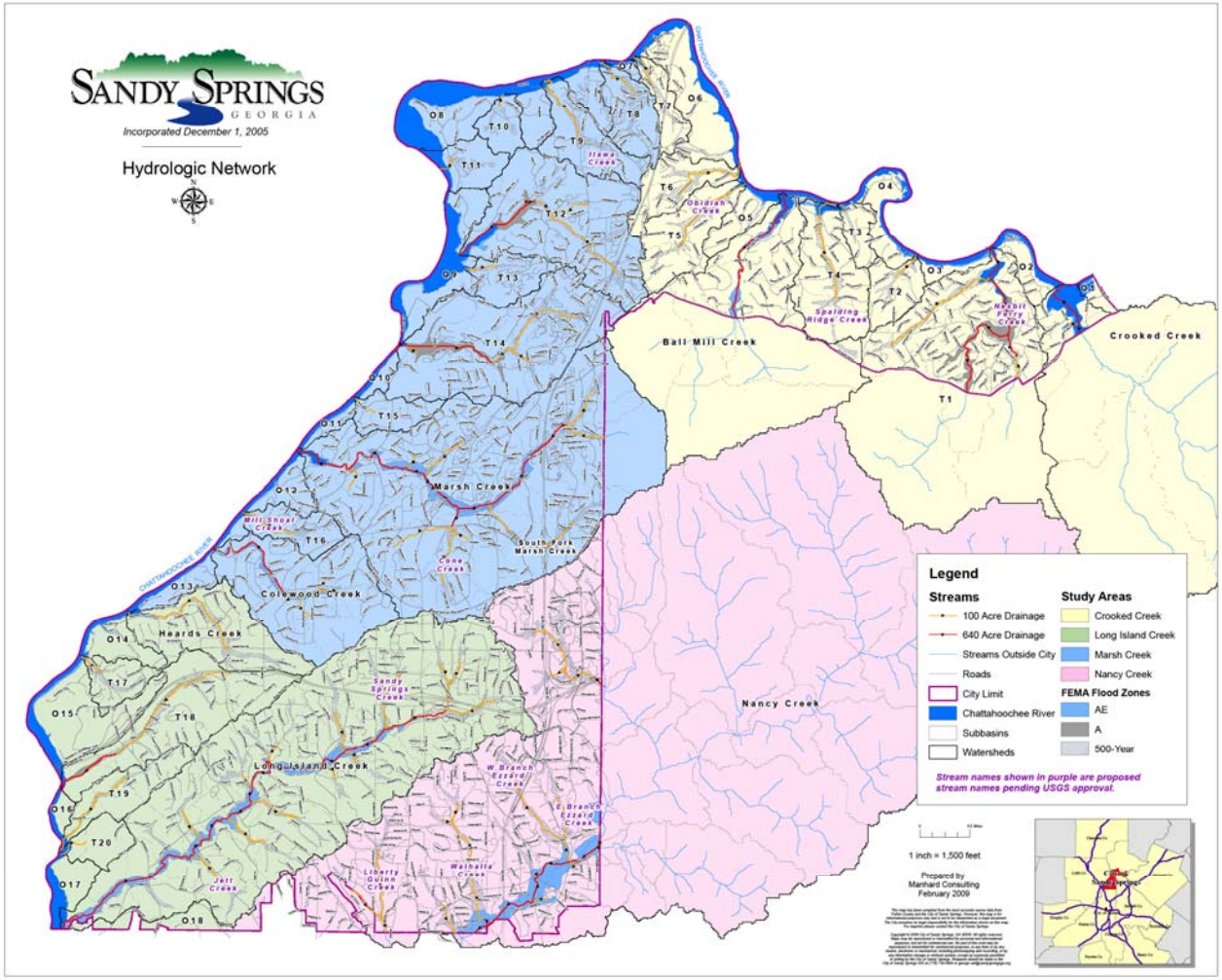




Inventory is Online

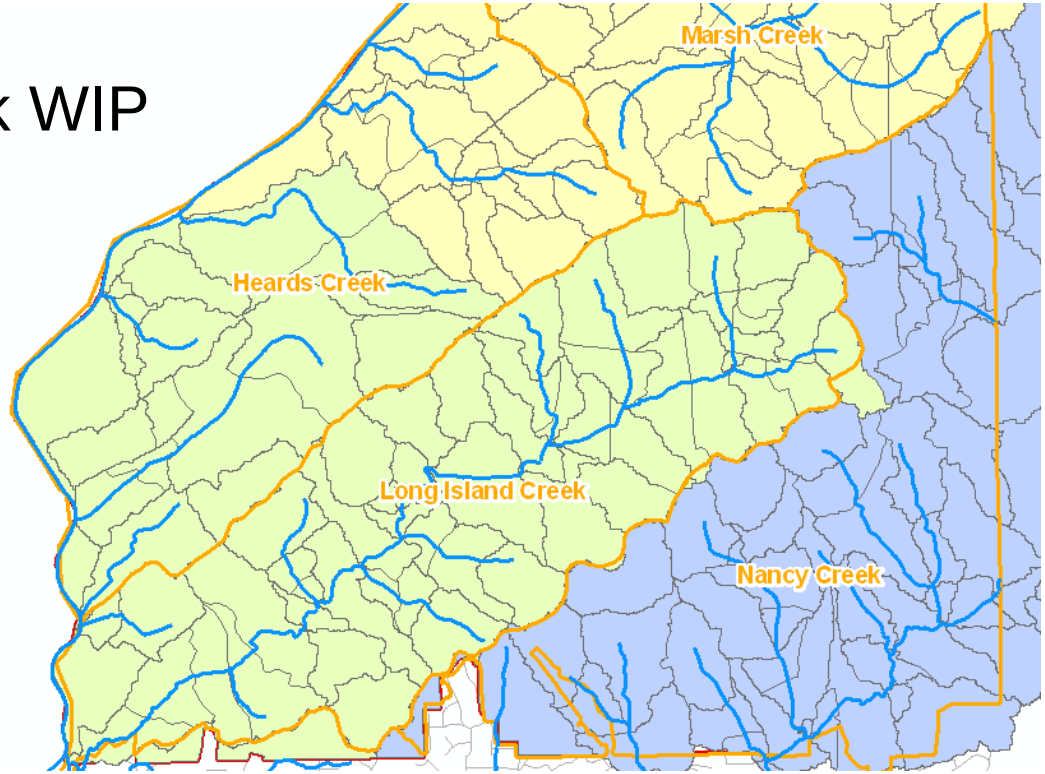
http://mngd-web-ga01/GeoCityCOSS/WebPages/Map/MapViewer.aspx

Basin Map


SANDY SPRINGS
GEORGIA
Incorporated December 1, 2005
Hydrologic Network
Ball Mill Creek
Crooked Creek
Marsh Creek
South Fork Marsh Creek
Cone Creek
Colewood Creek
Heards Creek
Sandy Springs Creek
Long Island Creek
W Branch Ezzard Creek
E Branch Ezzard Creek
Nancy Creek
Liberty Gulch Creek
Walhalla Creek
Jett Creek
Mill Shoal Creek
Spalding Ridge Creek
Obsidian Creek
Ilawa Creek
Newbill Ferry Creek
CHATTAHOOCHEE RIVER
Legend
Streams
100 Acre Drainage
640 Acre Drainage
Streams Outside City
Roads
City Limit
Chattahoochee River
Subbasins
Watersheds
Study Areas
Crooked Creek
Long Island Creek
Marsh Creek
Nancy Creek
FEMA Flood Zones
AE
A
500-Year
Stream names shown in purple are proposed stream names pending USGS approval.
1 inch = 1,500 feet
Prepared by
Manhard Consulting
February 2009

Watershed Improvement Plan (WIP)

- Evaluate existing study from June 2001
- Update Capital Improvement Projects from the old study
- New Nancy Creek WIP
- New Long Island Creek WIP
- Fecal Coliform WIP



Stormwater Permit Activities

- 2009 MS4 Annual Report
  - Submitted 1/29/10
  - EPD Comments 4/7/10
  - Response due 4/30/10
- Map and Inventory completed
- Brochure printed and distributed
- Several Public Involvement
  - World Water Monitoring Day
  - USGS Stream Gages
- Pond Inspections – 21 completed
- Outfall sampling – 41 completed
- Marker Program - 306 markers

STORM WATER & you

RECAP:

HOW CAN I PROTECT BUFFER ZONES AND STREAM HEALTH ON MY PROPERTY?

- Never mow to the edge of a stream or lake; let the buffer develop naturally.
- Plant appropriate native vegetation and cuttings in the buffer zone.
- Don't dump anything in a stream, including grass clippings and other yard waste. Try home composting instead.
- Keep the water body clean by removing trash.
- Leave natural woody debris in a stream. It provides habitat and food for aquatic communities.
- Use pesticides and fertilizers sparingly in your yard and not at all in the buffer.
- Keep septic systems in good working order to prevent contaminated runoff.
- Don't change the course of a stream or try to use rocks or other materials to stop stream bank erosion yourself. You can do more harm than good.

INCREASED PROPERTY VALUE

HOW DOES MAINTAINING OR IMPROVING A STREAM INCREASE PROPERTY VALUE?

Studies have shown that:

The appraisal value of houses with natural streams is three times higher than those with channelized streams.

The closer a property is to a natural area, the higher the value.

Sixty percent of suburban residents enjoy wildlife viewing and are willing to pay a higher price for properties that are attractive to wildlife.

WHO IS RESPONSIBLE FOR WHAT?

Every stream has two components: the water flowing in it and the land beneath and around it.

Private individuals own the land that forms the stream channel on their property. However, because it is considered a "public good," the water in the stream is owned by the State of Georgia, or all of us! This means that property owners can use the water, but not in ways that infringe on the rights of others.

What many property owners may not realize is that "using" water properly also depends on what they do on their land. If, for example, a landowner decides to armor the stream bank, culvert the stream in a pipe, remove natural bed materials or fill in a ravine, these land alterations can negatively affect:

- How the stream water flows;
- What the water contains;
- Erosion rates downstream;
- The value of the property that was "protected" or "improved"; and
- Whether the stream's inhabitants are healthy, or can even exist.

The landowner is ultimately responsible for any resulting changes downstream.

CONTACTS & REFERENCES

These are great places to start learning more!

RAIN GARDEN & RAIN COLLECTOR INFO:
http://www.lowimpactdevelopment.org/raingarden_design/links.htm

http://www.lowimpactdevelopment.org/raingarden_design/downloads/BuildRainGarden.pdf

STREAM BUFFER STEWARDSHIP:
http://www.cwp.org/Resource_Library/Restoration_and_Watershed_Stewardship/residential.html#factsheets

http://www.cobbwcd.org/images/rewg_guide_06.pdf

LAND DISTURBANCE PERMITS/ CODES & ORDINANCES:
http://www.sandysprings.ga.org
(Community Development)

Always secure proper permits prior to beginning your project.

PLEASE PICK UP THAT DOG POOP!

WHAT SHOULD YOU DO WITH THE WASTE YOU PICK UP?
There is no perfect answer, but here are a couple options:

1. Flush it down the toilet.
2. Put it in a plastic bag and throw it in the garbage can (just make sure the bag doesn't have any holes and it is tied tightly.)

WHY SHOULD YOU PICK IT UP?
Pet waste left behind may be washed into waterways by rain. As the waste decays, it uses oxygen, releases excess nutrients that encourage weed and algae growth and, sometimes, carries disease-causing organisms, that make water unsafe for swimming or drinking.

SANDY SPRINGS GEORGIA

Introduction to
Stream Buffer Management

What Can You Do to Care for Stream Buffers?

City of Sandy Springs
7840 Roswell Road, Building 300
Sandy Springs, GA 30350

770.730.5600

ANSWERING CALLS 24 HOURS A DAY, SEVEN DAYS A WEEK

WWW.SANDYSPRINGSGA.GOV

Key Issues

- FEMA Disaster Public Aid projects submitted 11/20/09
  - Continued repairs and invoicing
- FEMA Hazard Mitigation Grant Program
  - Presentation to City Council on 11/17/09
  - Follow up with City Council on 12/15/09
  - 6 Substantial Damaged homes submitted to FEMA 2/19/10
  - 15 Pre-applications homes submitted to GEMA 1/19/10
- Floodplain Mapping
  - Submitted to FEMA 4/9/10
  - Kickoff meeting held 4/14/10
  - Public Education
- Annual Report Submitted to Georgia EPD
  - Response due 4/30/10

Municipal Separate Storm Sewer System

Inventory and Visual Assessment

Draft April 26, 2010

Introduction

The City of Sandy Springs became the second largest City in metro Atlanta upon incorporation in December 2005. The City covers 37 square miles north of the City of Atlanta and now has a population of 99,771. Since incorporation, the City has implemented a variety of new programs and processes, both stormwater and non-stormwater related including three major contracts covering drainage system inventory, floodplain studies, and watershed improvement plans. On September 20, 2006, the City received coverage from the Georgia Environmental Protection Division under the National Pollutant Discharge Elimination System (NPDES) Phase II Municipal Separate Storm Sewer System (MS4) permit program to cover the City's stormwater conveyance system. This action was a requirement in taking over certain permit activities from Fulton County.

Stormwater Services Program includes the execution of tasks associated with the implementation of the NPDES MS4 Phase II Storm Water Discharge Permit for the City of Sandy Springs, Georgia. The City's Stormwater Services Program must address six minimum control measures in the NPDES permit.

1. Pollution Prevention/ Good Housekeeping for Municipal Operations
2. Illicit Discharge Detection and Elimination
3. Construction Site Stormwater Runoff Control
4. Post-Construction Stormwater Management in New Development and Redevelopment
5. Public Education and Outreach on Stormwater Impacts
6. Public Involvement/ Participation

In addition, the program must address additional requirements from the Metropolitan North Georgia Water Planning District (MNGWPD). The District requirements cover drinking water, sanitary sewer, and stormwater systems. The City must implement the District's Long-term Wastewater Management Plan, Water Supply and Water Conservation Management plan and Watershed Management Plan.

The program is implemented by partnership with the Departments of Community Relations, Community Development, and Public Works. Community Development addresses most of the requirements in Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management in New Development and Redevelopment.

The Phase II permit requires that the City perform 23 tasks under the six minimum criteria and there are 62 tasks that the city must perform to meet District requirements. The City has met and in most cases exceeded their requirements.

Inventory and Visual Assessment Project

To better understand the work load and the costs associated with maintaining the storm sewer system, the City Council decided to perform an inventory and visual assessment of the system. The inventory would not only help City Council with their budgeting process, but would meet the permit requirements for system mapping and inventory. A Notice To Proceed was issue to ARCADIS INC. on December 17, 2008 for a two phase project that was completed March 31, 2010 for a total cost of $905,774. The

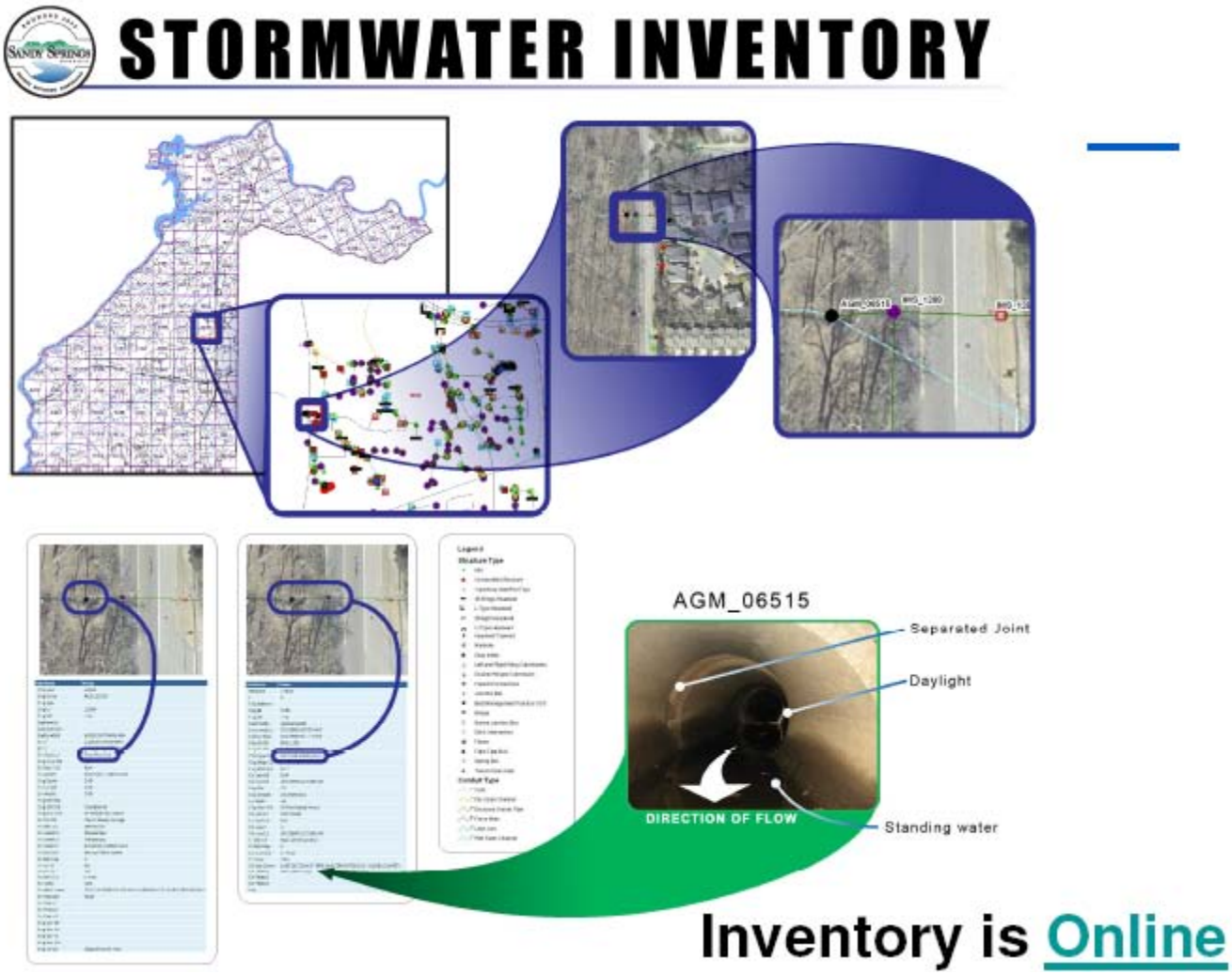


Figure 1 – Online Inventory

entire system, both public and private was mapped. While our stormwater permit only requires that we map our outfalls and our public drainage system, the City of Sandy Springs knows that the public drainage system and the private drainage system are connected and if part of the system fails then the entire system fails. In addition a map of the entire system will help us quickly track down potential sources of illicit discharge. We also obtained a visual assessment of the system and it is all recorded in a GIS system and a Computerize Management Maintenance System (CMMS).

The principals of asset management was incorporated into this contract to provide condition and performance assessment, capital projects, and the data needed to prioritize the capital projects.

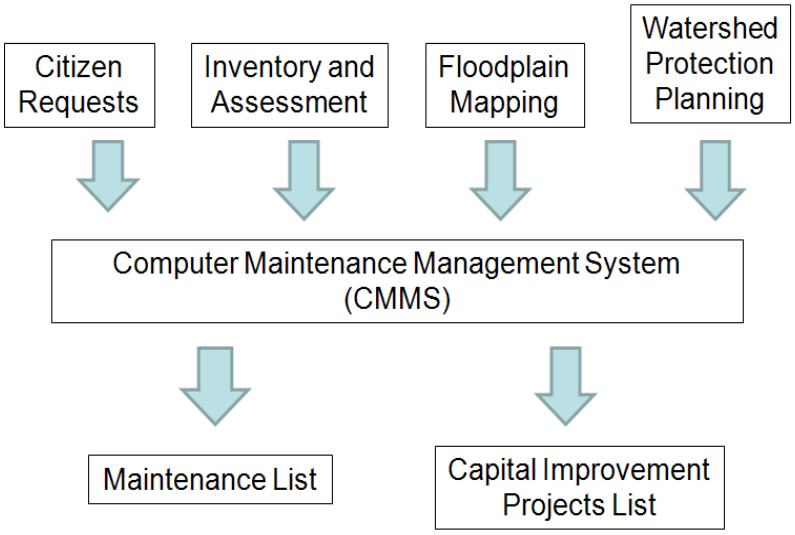


Figure 1: Process Flow

The inventory includes several attributes including location, size, type, construction date, and material. A visual assessment of the system was also required to determine how badly the system needed to be cleaned and the visual structural condition of the pipe or structure with an estimated repair cost. The contractor was also required to identify illicit discharges into the system. This information was used to develop a prioritized maintenance list and capital project lists. Pictures were taken of assets that were in poor condition or needed repair. A pole camera was used to take pictures inside pipes. This pole camera takes quality pictures of problems in pipes using flood lights and focal zoom features. Using the CMMS system, the information from each of the projects is tied to an individual asset for use in developing defensible budgets, prioritizing activities, and tracking maintenance and construction projects.

Summary of Results

The inventory can be thought of a lines (conveyances) and intersections (nodes). The there are a total of 31,651 conveyances and 31,652 nodes. The conveyances are broken down into pipes and channels. The nodes are broken down into structures and non-structural intersections. There are 20,553 pipes and 27,531 structures. Figure 1 shows the breakdown of the conveyance types. The pipes can then be broken up in to groups based on location. The location provides some insight into who is responsible for the maintenance of the pipes. Pipes located inside the City road right of way are the city's responsibility to maintain. Pipes in single family residential subdivision that are attached to the pipes in the road may be the responsibility of the City to maintain. This responsibility is determined in consultation with the City Attorney and is based on several factors including plats, notes on the plats, maintenance agreements and covenants. Figure 2 shows where the difference pipes are located. Approximately 22% of the pipes are located in the right of way and another 18% are in single family residential subdivision and are attached to the road system. The City may have responsibility for as much as 40% of the system. It is important to note that 45% of the system is located on commercial properties. While the city is not responsible for ownership, the system is interconnected and a failure in one part of the system will probably affect the rest of the system.

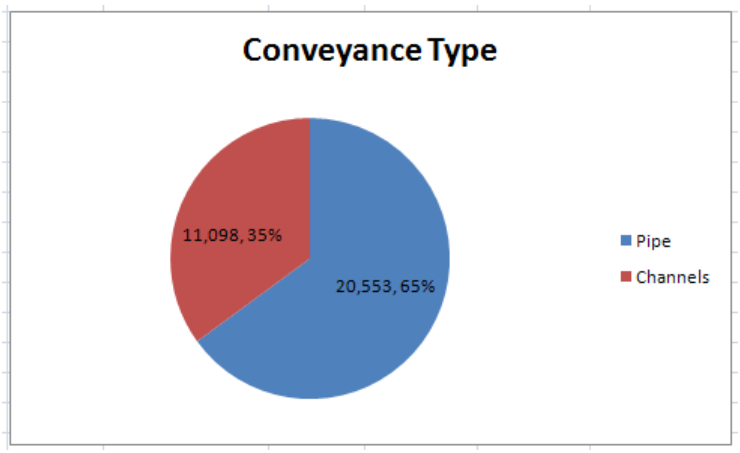


Figure 1 – Conveyance Type

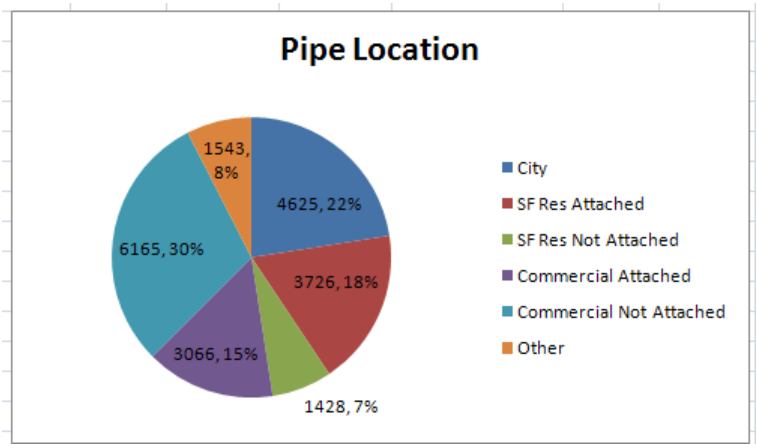


Figure 2 – Pipe Location

Figure 3 shows that 79% of the node types are structures that require maintenance. Figure 3 gives a breakdown of the different node types into catch basins, headwalls and other large classifications. Plain ends were included as structures even though there is not a physical structure to maintain, because often maintenance is required around the inlet or outlet of the pipe and the maintenance action may be the construction of a headwall.

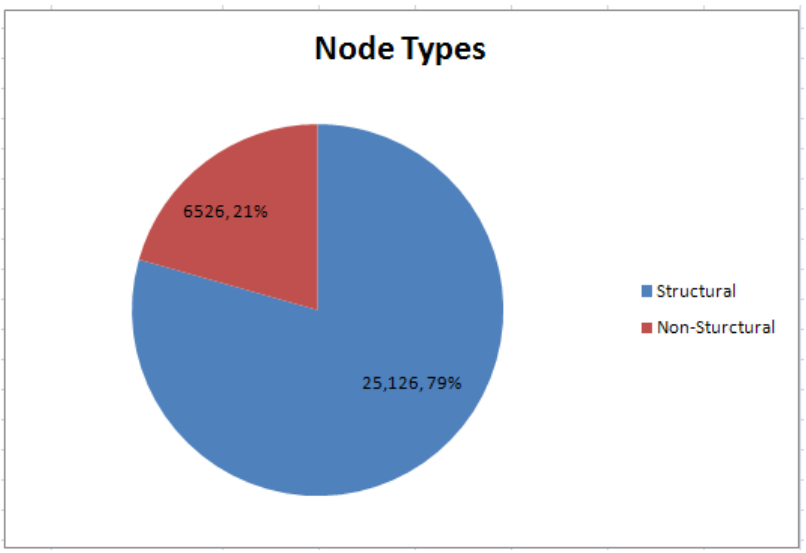


Figure 3 – Node Types

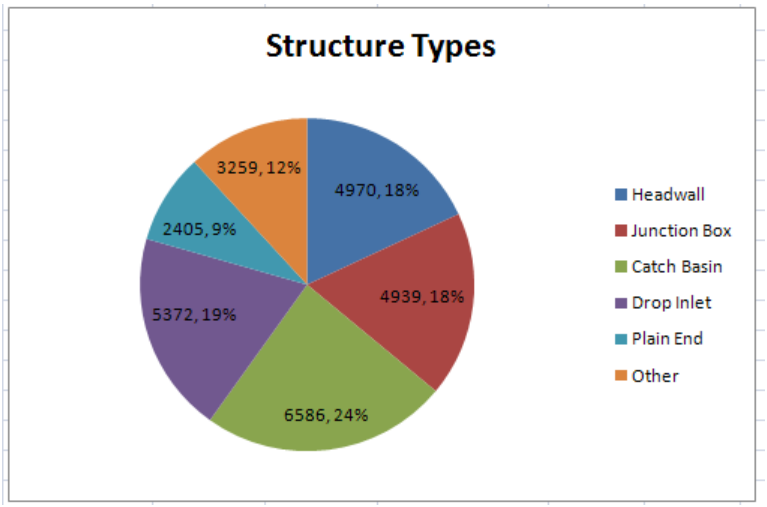


Figure 4 – Structure Types

Just as location indicates the maintenance responsibility of the pipes, location also indicates maintenance responsibility of the structures. Figure 5 shows 23% of the system is in the road right of way and is the responsibility of the City to maintain. Another 16% is located in the single family residential subdivision and is attached to the road system. The City is potentially responsible for 39% of the structures. Figure 6 shows the entire

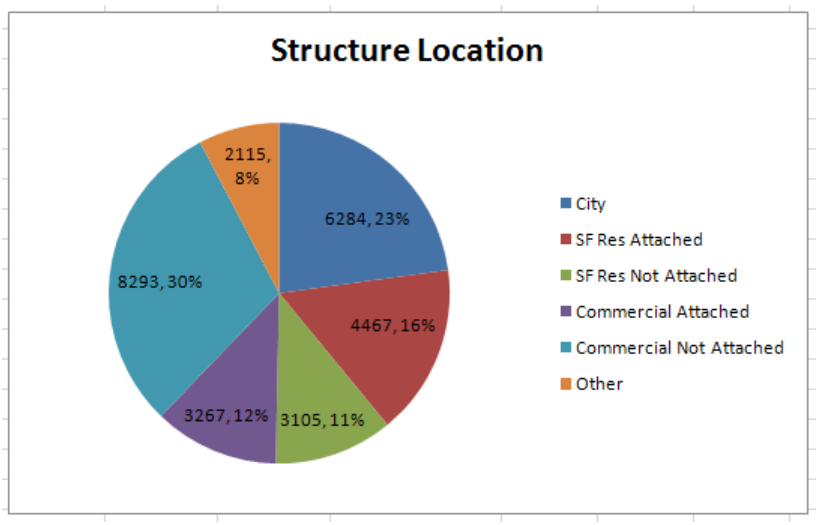


Figure 5 – Structure Location

The condition of the pipes and the structures can help determine the budgets that are required. Figures 6 and 7 show the condition of the pipes and structures that are in the City ROW and are locate in single family residential subdivisions a are attached to the roads. While the overall condition of the system is in fair or better condition, 3% of the conduits and 4% of the structures are in poor or in need of repair condition.

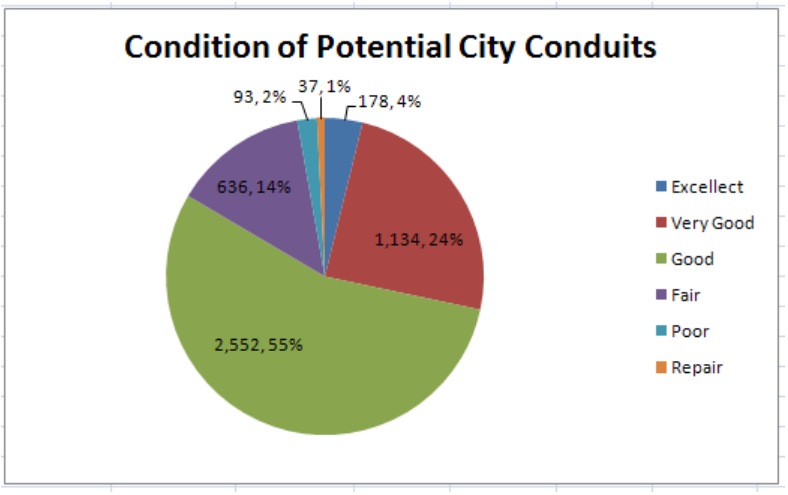


Figure 6 – Condition of Potential City Conduits

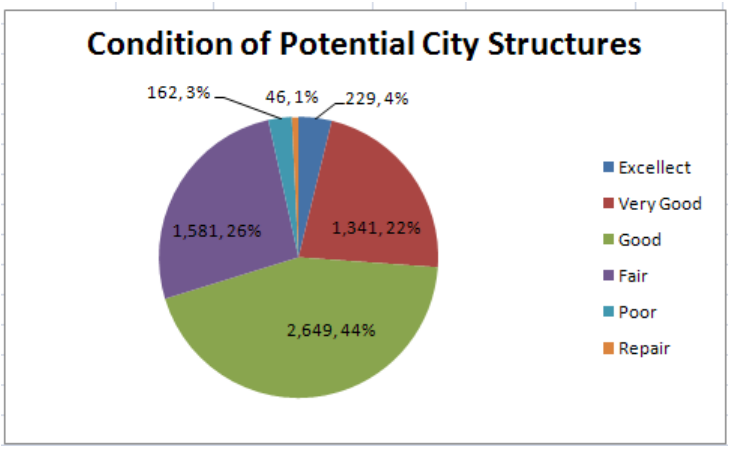


Figure 7 – Condition of Potential City Structures

Table 1 shows the estimated replacement cost of the entire system, public and private. Tables 2 and 3 below provide the estimated replacement cost of the potential City system to help establish budgets. Table 1 shows that the entire public-private system has a replacement value of $847 million. The potential City system has a replacement value of $322 million. Using the replacement costs in Table 2 below, a budget can be developed. If the system in condition "repair" was expected to be replaced during the next two years, then the "poor" condition system would be replaced during the next 5 years, and then the "fair" condition would be replaced over the following 10 years, the budget shown in table 3 could be expected. No escalation in construction costs or inflation is shown in the tables. A budget of $1.9 million per year is estimated to provide funding to respond in a reactive manner. It is important to note that the City currently has a backlog of stormwater projects that is estimated to cost $2.4 million to correct. Based on the entire value of the system, it is recommended that the City spend approximately $3 million a year.

	City ROW			Residential Attached			Other			
Condition	Structures	Pipes	Sub-Total	Structures	Pipes	Sub-Total	Structures	Pipes	Sub-Total	Total
Excellect	$1,827,251	$5,059,095	$6,886,346	$1,181,003	$6,130,849	$7,311,852	$8,690,502	$28,262,445	$36,952,947	$51,151,145
Very Good	$10,366,752	$32,994,223	$43,360,975	$4,014,503	$23,816,346	$27,830,849	$31,164,005	$93,903,692	$125,067,697	$196,259,521
Good	$20,938,501	$70,578,293	$91,516,794	$8,745,502	$64,401,987	$73,147,489	$48,616,759	$191,947,569	$240,564,328	$405,228,611
Fair	$12,355,772	$19,490,543	$31,846,315	$4,572,515	$22,954,574	$27,527,089	$37,857,842	$56,315,340	$94,173,182	$153,546,586
Poor	$1,273,750	$2,968,841	$4,242,591	$752,750	$4,137,734	$4,890,484	$4,068,500	$5,318,397	$9,386,897	$18,519,972
Repair	$311,001	$1,248,717	$1,559,718	$651,250	$1,511,122	$2,162,372	$1,829,251	$16,593,610	$18,422,861	$22,144,951
Sum	$47,073,027	$132,339,712	$179,412,739	$19,917,523	$122,952,612	$142,870,135	$132,226,859	$392,341,053	$524,567,912	$846,850,786

Table 1 – Estimated Replacement Costs for the Public and Private System

Potential Public System - Total conduits and Structures			
Condition	City ROW	Residential Attached	Total
Excellent	$6,886,346	$7,311,852	$14,198,198
Very Good	$43,360,975	$27,830,849	$71,191,824
Good	$91,516,794	$73,147,489	$164,664,283
Fair	$31,846,315	$27,527,089	$59,373,404
Poor	$4,242,591	$4,890,484	$9,133,075
Repair	$1,559,718	$2,162,372	$3,722,090
Sum	$179,412,739	$142,870,135	$322,282,874

Table 2 – Estimated Replacement costs for the Potential City System

	Sum	2011	2012	2013	2014	2015	2016	2017	2018-2035
Repair	$3,722,090	$1,861,045	$1,861,045						
Poor	$9,133,075			$1,826,615	$1,826,615	$1,826,615	$1,826,615	$1,826,615	
Fair	$59,373,404								$3,298,522

Table 3 – Planning level budget based on condition of system

The benefits of having the system inventoried and assessed extend beyond just the efficiencies in customer response. The inventory helps to plan budgets and plan maintenance work. One additional benefit was seen during a financial audit that the City had last year. The GASB 34 requirements require that all assets are evaluated and put on the accounting records. Since we knew the type of components, size, age, and material, we could estimate the cost of the installation of the system and depreciate the system to today's dollars, which was exactly what the accountants needed.

System Inspections

One of the permit requirements is that 20% the system be inspected every year. This means that 20% (994) of the structures in the City ROW and potentially 20% (988) of the structures located in single family subdivision attached to the roadway must be inspected each year. That is a total inspection requirement of 1982 structures a year that must be inspected. This will required considerable time to implement and document for the annual report to the State.

Detention Basins

In addition to the system information above, additional information was collected on 1,193 detention basins as part of the inventory. As with the inventory, location provides an indication of the ownership. Figure 8 shows the location of the ponds. While 7 ponds have been determined to be the maintenance

responsibility of the City there is a potential that another 377 ponds may be the maintenance responsibility of the City. Two of the ponds that the City is responsible for do require maintenance. One required a design to repair since the concrete wall used to hold the water back had been undermined. This one is estimated to cost $160,000 to repair. A second City pond also requires a design to repair since the concrete retaining wall was also undermined. The repair of this pond is estimated to cost $200,000. As a part of these repairs, under our Permit with the State, we are required to see if the detention pond can be retrofitted to improve water quality. It is anticipated that the City should anticipate at least one pond retrofit a year with an average estimated cost of $100,000.

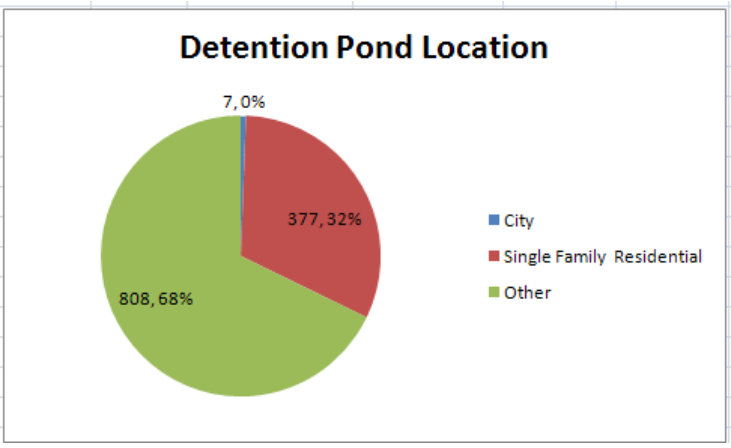


Figure 8 – Location of Detention Ponds

Another permit requirement that should be noted is that the city must inspect public and private ponds. In calendar year 2010 the requirement is that 10% (119) of the ponds be inspected and starting in 2011, 20% (240) of the ponds must be inspected each year. The effort will require the inspection of the facility, determination of ownership, notification to the owner, and potential enforcement to require maintenance of the pond. This is a large effort that has the potential of requiring owners to make expensive repairs to their ponds.

Ditches and streams

Ditches and streams outside the right of way are considered private and the maintenance responsibility of the property owner. The City has approximately 260 miles of streams and ditches in the City. The City had 3 watershed improvement studies done and 24 stream restoration projects were identified in Long Island for a total cost of $14,148.000. In Nancy Creek 14 stream restoration projects were identified for a total cost of $8,673,000. In the remainder of the City, the projects identified in a previous study were reviewed and 7 historic stream restoration projects were identified with a total cost of $7,509,000. There are numerous permitting issues and land owner considerations with stream restoration projects, however, the reduction in channel erosion, improvement in property protection and personal safety are high. No stream restoration projects were identified on City owner property, but the City might consider stream restoration on city owned land if the opportunity presents itself.

Summary

The City of Sandy Springs performed an inventory of the entire public and private drainage system and a visual assessment of the system. The inventory is used to respond to citizen service requests, track maintenance activities, investigate illicit discharges, and develop budgets. Having the information readily available on-line has already improved resident response. In addition, by tracking the maintenance activities in the CMMS system, information can be provided to the Georgia Environmental

Protection Division on work performed as required in the City's annual report. The inventory provides the ability to coordinate with other public works divisions to help insure that projects work together. The inventory also provides needed information to respond to emergency calls, night or day, to speed the response by knowing what materials are needed and where the system is located. No other agency in the state has the inventory of the complete system as the City of Sandy Springs. The inventory provides the resources needed for budgeting, tracking activities, and investigating requests in an efficient and effective manner.

SANDY SPRINGS
GEORGIA

Stormwater Maintenance Program Update

May 4, 2010

Public Works Department
Stormwater Division

INCORPORATED 2005

Stormwater Maintenance Budget Update

- FY10 Budget - $ 1,787,000 ($500,000 plus carryover)
  - $ 950,000 Committed
  - $ 230,000 Construction
  - $ 837,000 Available
  - $ 50,000 Bids Received/Pending Purchase Order
  - $ 600,000 Design complete/Ready to Bid
- FEMA
  - 45 Stormwater Projects Approved ($677,000 total)
  - $520,000 FEMA payment to City
  - 20 Projects to Complete
  - 18 Months to complete remainder (March, 2011)
- FY11 Budget Request - $ 1,000,000 – pending policy decisions

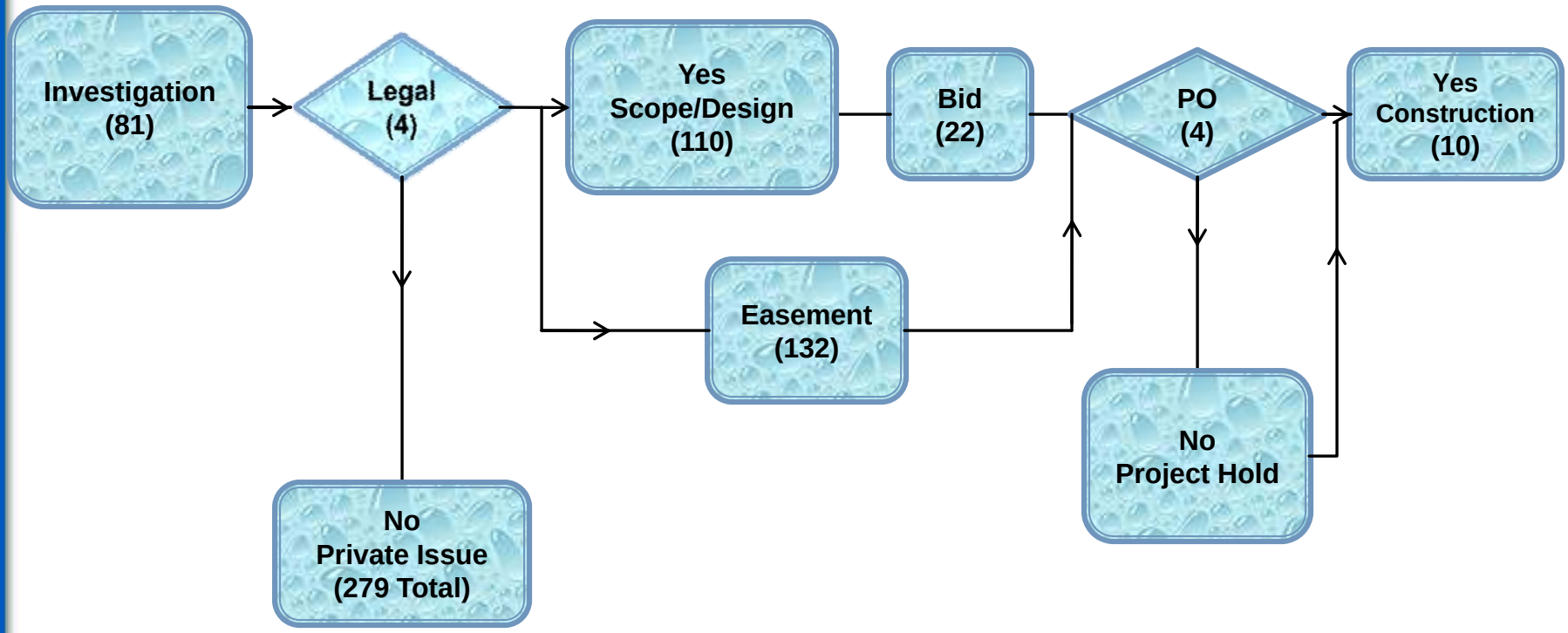
Stormwater Maintenance Program

- Standby Contractors 2010
  - Contracts finalized in February with 3 firms (may need more)
  - Contracts set with pre-determined fixed unit costs
  - Work protected with “floating” $75k performance bonds
- Project Development
  - Identification/legal
  - Design/Scope preparation
  - Easements
  - Cost estimate and award of project (PO)
  - Construction

Stormwater Work Requests
(Processed since 1/1/2008)

- Completed Work Requests -132
- Active Work Requests - 213
- Private Issues – 279

Stormwater Maintenance Project Flow Chart (Active Projects)



SANDY SPRINGS
GEORGIA

Traffic Management and Fiber Optic FY 10 Program Update

May 4, 2010

Public Works Department
Traffic Services Division

INCORPORATED 2005

Traffic Management and Fiber Optic Program FY2011 Needs

- Additional fiber - $150 k
  - Northside Dr,
  - Johnson Ferry Rd,
  - Abernathy Rd, (conduit paid for already)
  - Riverside Dr, (Span already exist)
  - New Northside Dr (working with GDOT)
- Need contracts to install fiber - $200 k estimate
- Make ready work (utilities) $750K Ga Power only
  - Working with GDOT to bypass make ready work

2011 Needs continued

- Maintenance contract - $40 k
  - Need to continue maintenance contract with Protronix, INC and with Genesis Group.
    - Updates equipment in TMC as needed
    - Updates Fiber Master Plan
- PCID - TBD
  - Propose to PCID and the City of Dunwoody to bring in their signals and cameras to our TMC
    - Assist in paying for maintenance
    - Additional equipment needed

SANDY SPRINGS
GEORGIA

Intersection Improvement Program Update

May 4, 2010

Public Works Department

Traffic Services Division

INCORPORATED 2005

Project Funding FY ‘10 and ‘11

- FY10 Budget - $500,000
  - $30,000 for mast arms
  - $20,000 for fiber splicing
  - $450,000 encumbered for Control Specialist for construction, survey and design work.
- Other items being funded from this budget:
  - Overhead street name signs
- FY ‘11 Asking for $500,000 to continue with construction projects
  - 95 intersection currently in the Intersection Improvement program

FY10 Intersection Improvements: Construction

- T-7110 Spalding Dr at Pitts Rd (80%)
  - Assisted utilities with traffic control
  - Curb construction complete, new pole installed, mill and inlay completed
  - Awaiting striping and loop cutting
- T-7116 Dunwoody Place at Roberts Drive (70%)
  - Striping to provide better storage on Roberts completed 2009
  - Cabinet upgraded 2009
  - Utility locates done
  - Mast arm foundations located and installed
  - Illuminated overhead street name signs installed
  - Pedestrian and signal facilities installed
  - Partial completion of ADA ramps
  - Power tap for new signals within next two weeks
- T-7129 Roswell Road at Ison Rd – Pitts Rd (50%)
  - Utility locates done
  - Mast arm installed and poured bore shots are complete
  - ADA facilities installed; intersection re-allignment complete

Intersection Design

- Intersection design locations to be added for construction as part of the FY11 program
- Cost estimates received, task order issued 2/9/10
  - T-7167 Riverside Dr @ I-285
- Additional projects as funding allows
  - Northridge and Roberts (design)
  - Spalding and Mt Vernon (design)
  - Spalding and Jett Ferry (design)
  - Roswell Rd and Dalrymple (design)

LED Installation - EECBG

- Energy Efficiency and Conservation Block Grant $420,000 grant
- All incandescent signal indications to be replaced with LED
- All school zone beacons to be changed to solar LED
- Over 1,800 Incandescent indications to replace
- 20 School zone beacons to replace
- Met with DOE about solar powered radar signs

Intersection Improvement Program FY2011 Needs

- 95 intersections currently in program
- Projects under consideration
  - Intersection Studies
    - Glenridge Conn at Johnson Ferry
    - Abernathy Rd at Brandon Mill
    - Peachtree Dunwoody Rd at Johnson Ferry
    - Roswell Rd at Hightower Trl
  - Surveys
    - Roswell Rd at Dalrymple Rd
    - Roswell Rd at Windsor Pkwy
    - Powers Ferry at Heards Dr
    - Riverside Dr at Heards Ferry Rd
    - Roswell Rd at Vernon Woods Dr

Intersection Improvement Program FY2011 Needs Continued

- Projects Under Consideration Continued
  - Designs and Construction
    - Mount Vernon from Glenridge to Barfield
    - Roswell Rd at Dalrymple Rd
    - Roswell Rd at Windsor Pkwy
    - Powers Ferry between Northside and New Northside
    - Riverside Dr at Heards Ferry
    - Roswell Rd at Vernon Woods Dr
    - Brandon Mill/Riverside/Dalrymple

Intersection Improvement Program

Fiscal Years 2011 and 2012 Recommendations

Intersection Improvement Program

Overview

There are over 1,300 intersections in the City. A majority of these are in neighborhoods. Many of the intersections on arterials are within the limits of a capital project. 120 of these intersections are controlled by stop and go traffic signals, while an additional 40 are supplemented with a warning beacon of some sort.

The purpose of the program is to improve safety and efficiency of the City's intersections through operational and safety improvements. The program aims to provide short term solutions to relieve bottlenecks and improve traffic flow. The initial projects in the program will review critical intersections based on comprehensive studies and plans, historical data, staff opinion, and community request. As the program progresses, the City will review the remaining intersections on roadways classified at arterials or higher, and finally local streets. Intersection program includes both short-range and long-range projects.

The purpose of this document is to show the process that was followed to select the recommended FY11 and FY12 intersection improvement projects; to show the scoring methodology and results; and to provide recommendations for the top intersections and projects to be considered for improvement and implementation.

Completed Projects in FY '08 '09 and '10

This program has been funded for two years, and has been well received. Operational and safety benefits have been realized through the funding of this program. The projects accomplished are listed below.

T-7101 Roswell Road at Johnson Ferry Road

- Revised intersection striping such that westbound lanes provide a shared through-left lane and a shared through-right lane
- Revised eastbound signal indications to restrict right turns when westbound traffic is being served
- Install blank-out right turn restriction sign for eastbound traffic to restrict right turns when westbound traffic is being served
- Upgrade existing pedestrian signal indications to Countdown LED
- Upgrade existing pedestrian buttons and other signal facilities to ADA standards
- Relocate pedestrian pole on the northwest corner to a more accessible location

T-7102 Glenridge Connector at Johnson Ferry Road

- Revised intersection striping to provide two southbound left turn lanes
- Revised southbound signal indications and video detection to accommodate new lane assignments
- Revised advance signage to reflect new lane assignments

- Install illuminated overhead street name signs
- Upgrade remaining vehicular signal indications to LED
- Upgrade pedestrian signal indications to Countdown LED
- Upgrade pedestrian buttons and other signal facilities to ADA standards

T-7103 Glenridge Dr at Johnson Ferry Rd - Glenairy Dr

- Upgrade the traffic signal cabinet and relocate farther from the roadway
- Install overhead street name signs
- Reconstruct the signal span and upgrade vehicular signal to include back plates and LED's with the signal heads
- Install crosswalks for three of the intersection legs as shown in the figure above
- Install Countdown LED pedestrian signal indications, and other pedestrian facilities to conform to ADA standards
- Relocate back guys that have been installed in the sidewalk
- Mill and resurface the intersection
- Remove vegetation and structures that obscure sight lines along Glenridge Drive
- Collected survey and designed necessary improvements for a second phase

T-7104 Spalding Dr at Dalrymple Rd and Trowbridge Rd

- Install pedestrian facilities on the east and north legs of the intersection
- Upgrade and relocate the traffic signal cabinet
- Provide an exclusive left turn signal phase for eastbound drivers turning north onto Trowbridge Road
- Install blank-out left turn restriction signs for northbound and southbound traffic to reinforce the existing turn restrictions by time of day
- Install overhead street name signs
- Replace the pole in the southwest corner
- Install new signal heads with LED indications and back plates

T-7105 Peachtree-Dunwoody Road at Windsor Parkway

- Upgrade the traffic signal cabinet
- Install overhead street name signs
- Reconstruct the signal span and upgrade vehicular signal to include back plates and LED's with the signal heads
- Collected survey and designed necessary improvements for a second phase

T-7108 Peachtree-Dunwoody Road at Mt Vernon Hwy

- Design necessary improvements for a second phase

T-7109 Glenridge Drive at Mabry Road

- Red areas will be reconstructed to raised areas, along with any necessary sidewalk reconstruction
- Splitter islands, ADA ramps, and crosswalks will be provided for all four approaches to the intersection

- Revise the grading and landscaping in the center island to improve visibility and safety at the intersection
- Resurface and rehabilitate the pavement in the immediate vicinity of the intersection

T-7110 Spalding Dr at Pitts Rd

- Increase the radius on the west corner in order to improve bus and truck turning
- Install pedestrian ramps and crosswalk

T-7111 Mt Vernon Hwy at Dupree Rd and Powers Ferry Rd

- Construct raised islands on the northeast and southwest corners
- Install pedestrian ramps and crosswalks
- Construct sidewalk within 100 feet of the ADA ramps on the northwest and southeast corners
- Connect the sidewalk on the southwest corner to the ADA ramp
- Relocate and upgrade the traffic signal cabinet
- Install new signal heads with LED indications and back plates
- Install countdown LED pedestrian signal indications and push buttons
- Install overhead street name signs

T-7113 Mount Vernon Highway from Glenridge to Barfield

- Collected survey

T-7114 Dunwoody Place at Hightower Trail

- Install blank-out left turn restriction signs for northbound traffic to reinforce the existing turn restrictions by time of day
- Remove split phase operation to allow Hightower Trail and the office complex to be served by the traffic signal at the same time; install “Left Turn Must Yield on Green Ball” signs for both approaches.
- Provide crosswalks across Dunwoody Place
- Upgrade pedestrian indications to countdown LED, and all push buttons to ADA
- Upgrade traffic signal cabinet

T-7115 Dunwoody Place at Hope Road and River North Drive

- Add a fourth pedestrian crossing to the intersection. Provide crosswalks across Dunwoody Place
- Upgrade all pedestrian signal indications to countdown LED
- Install and reconstruct ADA ramps
- Install a properly sized base under the traffic signal cabinet
- Upgrade pedestrian indications to countdown LED, and all push buttons to ADA
- Upgrade traffic signal cabinet

T-7116 Dunwoody Place at Roberts Drive

- Improve lane transitions on Roberts Drive
- Eliminate side street conflicts
- Install pedestrian facilities

T-7117 Riverside Dr @ River Valley Rd

- Extend the River Valley Road sidewalk project
- Provide signalized pedestrian facilities
- Install mast arms and upgrade traffic signal to current standards

T-7118 Roswell Rd @ Cliftwood-Carpenter

- Install exclusive southbound left turn phase
- Upgrade pedestrian heads to countdown LED
- Install ADA ramps, and refresh crosswalks
- Replace the signal cabinet (needed battery backup)
- Overhead street name signs
- Close gas station driveway that aligns with Carpenter Drive

T-7125 Northridge Rd at Somerset Ct
T-7162 Northridge Rd at Dunwoody Pl
T-7163 Northridge Rd at Roberts Dr

- Collected survey and designed necessary improvements

T-7128 Dalrymple Road @ Roswell Road

- Restripe the roadway between Roswell Road and North Springs High School in order to provide a three-lane section with a center turn lane for the entire length

T-7129 Roswell Rd at Ison Rd and Pitts Rd

- Upgrade traffic signal to accommodate new school construction
- Provide additional lanes to accommodate new school construction

T-7133 Roswell Road @ Sandy Springs Circle

- Revise traffic signal to improve eastbound flow allowing the same number of cars to turn left in less time, allowing for more green time for Roswell Road
- Upgrade detection and signal to current standards

T-7141 Northland at High Point

- Conducted traffic study and developed recommendations
- Considered both intersections

T-7144 Lake Forrest Dr at Long Island Dr

- Conducted traffic study and developed recommendations

T-7145 Lake Forrest Dr at Mt Paran Rd

- Conducted traffic study and developed recommendations

T-7147 Mt Paran Rd at Jett Rd

- Conducted traffic study and developed recommendations

T-7148 Mt Paran Rd at Long Island Dr

- Conducted traffic study and developed recommendations

T-7149 Mt Paran Rd at Powers Ferry Rd

- Conducted traffic study and developed recommendations
- Considered the intersection of Powers Ferry Rd and Dudley Lane as part of the concept

T-7155 Spalding Drive at Nesbit Ferry Rd

- Clear vegetation on the corners to improve intersection sight lines
- Modify the traffic signal operations for late-night service

T-7156 Windsor Pkwy at Northland Dr

- Collected survey

T-7157 Northside Dr at Harris Trl and Davis Dr

- Collected survey

T-7158 Hammond Drive at Glenridge Drive

- Restripe the roadway to provide two westbound left turn lanes
- Construct new span, install new heads with LED indications and back plates
- Upgrade the traffic signal cabinet

T-7167 Riverside Dr at I-285 westbound ramps

- Collected survey and designed necessary improvements

Dalrymple Rd from Roswell Rd to the North Springs High School driveway

- Restripe the roadway in order to provide a three-lane section with one through lane in each direction and left turn lanes throughout the entire length
- To provide a cost savings benefit to the City, this improvement was done concurrently with the resurfacing program, so it was accomplished at no additional cost

Hammond Drive from Peachtree-Dunwoody Rd to the DeKalb County line

- Restripe the roadway in order to provide smoother transitions by allowing through drivers to remain in their lanes and requiring left turners to merge instead
- To provide a cost savings benefit to the City, this improvement was done concurrently with the resurfacing program, so it was accomplished at no additional cost

Mount Vernon Hwy from North Park Place to the DeKalb County line

- Restripe the roadway in order to provide smoother transitions
- To provide and extend left turn lane facilities
- To provide a cost savings benefit to the City, this improvement was done concurrently with the resurfacing program, so it was accomplished at no additional cost

Mount Vernon Hwy at Abernathy Rd – Perimeter Center West

- Eliminate the second eastbound left turn lane which is no longer needed, allowing drivers to turn left permissively after the green arrow has served
- To provide a cost savings benefit to the City, as the striping portion of this improvement was done concurrently with the resurfacing program, so it was accomplished at no additional cost
- The signal modification portion was done with parts recycled from recent PCID upgrade projects and existing wires, and the work was done with maintenance forces, so it was accomplished at no additional cost

Peachtree-Dunwoody Rd at Hollis Cobb Cir – Medical Center MARTA Station

- Eliminate side street left turn phases that were no longer warranted to allow more green time on the main street
- To provide a cost savings benefit to the City, this improvement was done concurrently with the capital project, so it was accomplished at no additional cost

Energy Efficiency and Conservation Block Grants

- Convert all traffic signal incandescent indications to LED indications
- Convert all school zone beacons to solar power
- Grant obtained through the United States Department of Energy.

Program Development Process

The first step in the process of developing the Intersection Improvement Program is for staff to assemble a committee to provide input in the shaping process and to ensure broad input. The committee reviews critical intersections from a pool of approximately 100 based on comprehensive studies and plans, historical data, staff opinion, and community request. These intersections are narrowed down and approved to move forward to receive additional review and get scored.

The scoring is based on five primary objective criteria: Volume/Demand, Safety, Operation, Constructability, and Affordability. How the score is determined for each of these criteria is discussed in more detail in the scoring section of this document. The committee is reassembled to review, rescore, and validate the project scoring.

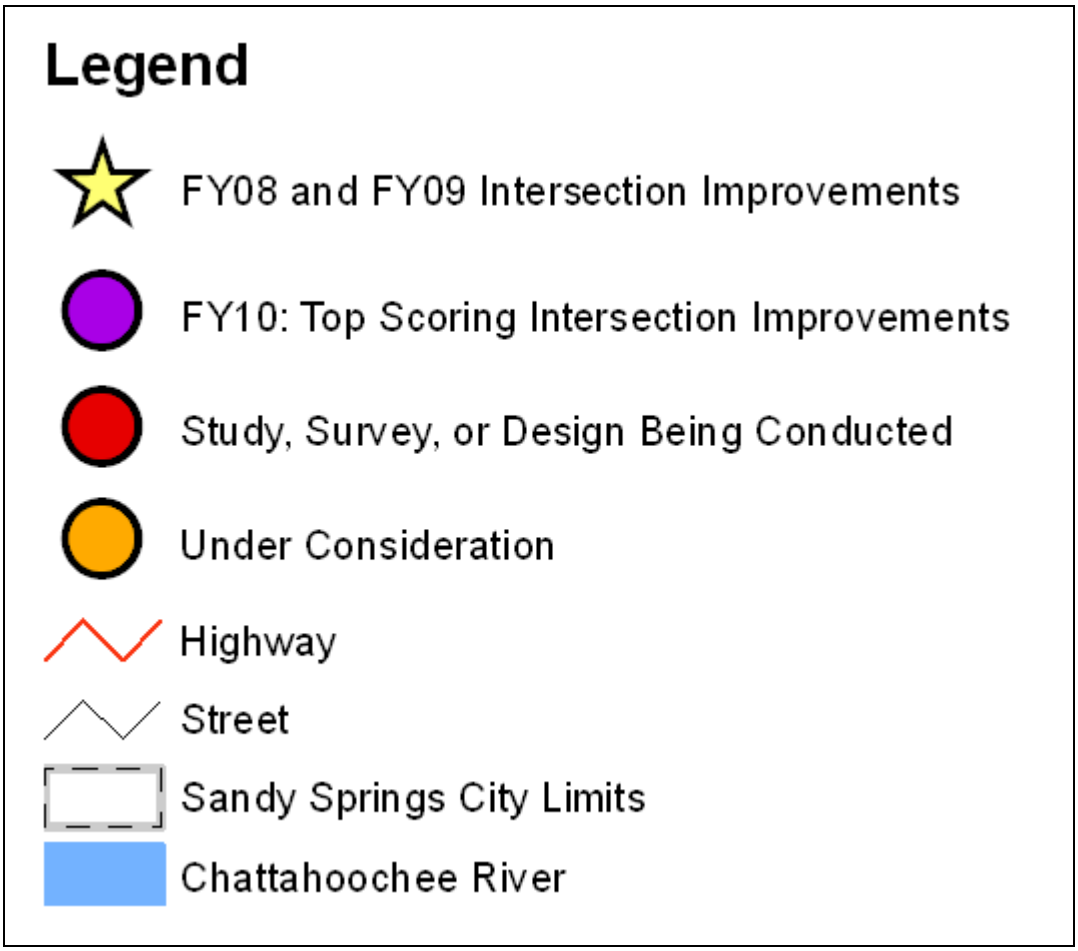
Once the technical recommendation is complete, it is presented to the City Manager for approval. The program is then implemented at the direction of the City Manager. The City Manager has the discretion to remove or reprioritize projects in the program, and to suggest additional inputs into the program. Additions will need to be reviewed and scored by the staff committee.

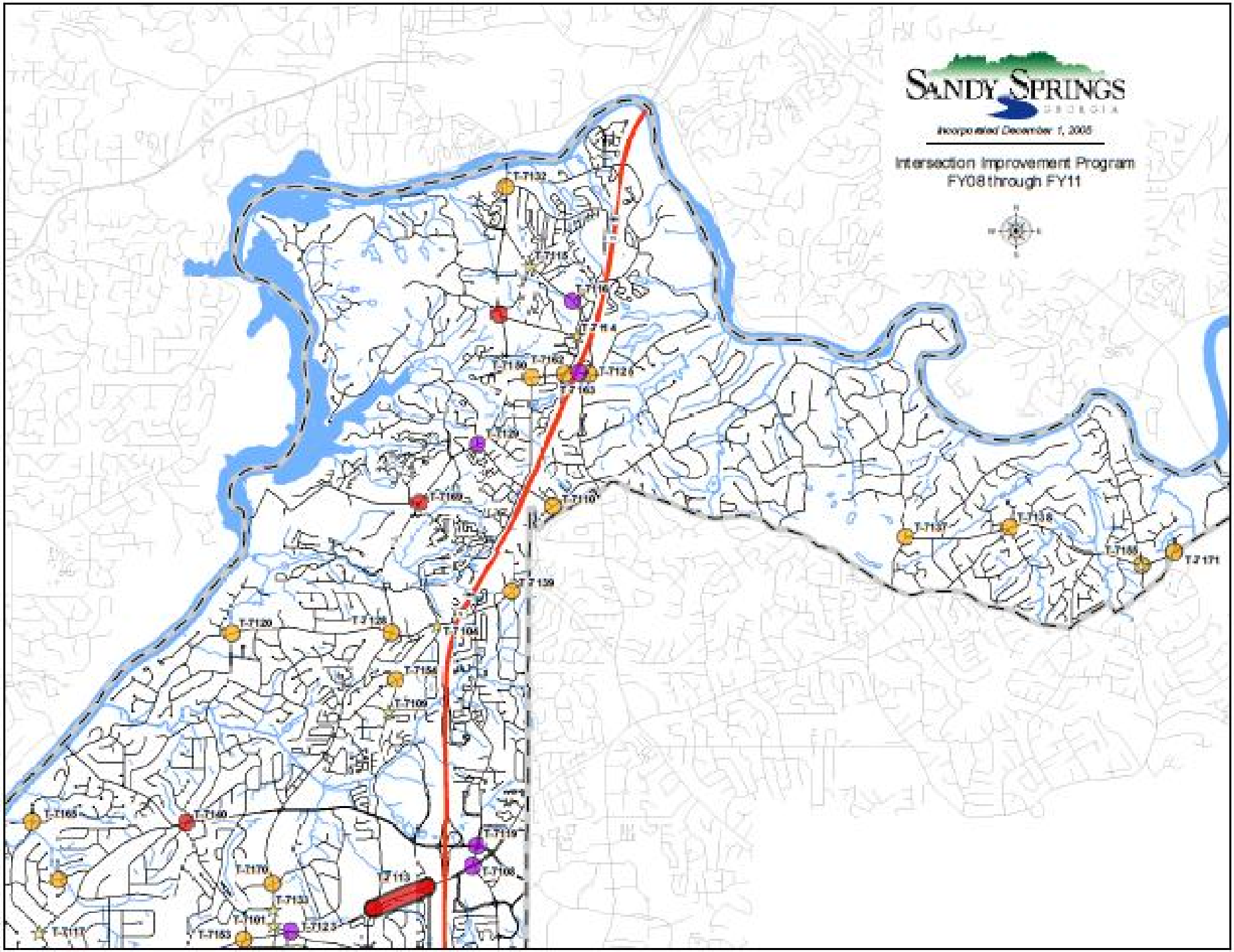
Individual projects may be phased based upon need for survey and project objectives that can be accomplished without major construction. For projects that do not require extensive pre-engineering, scopes will be developed for each individual project based upon field visits and input from multiple sources and disciplines. Survey and design may be completed for a project in one fiscal year, and constructed in a later year. If right of way or easements need to be acquired, the construction schedule for the projects will be impacted.

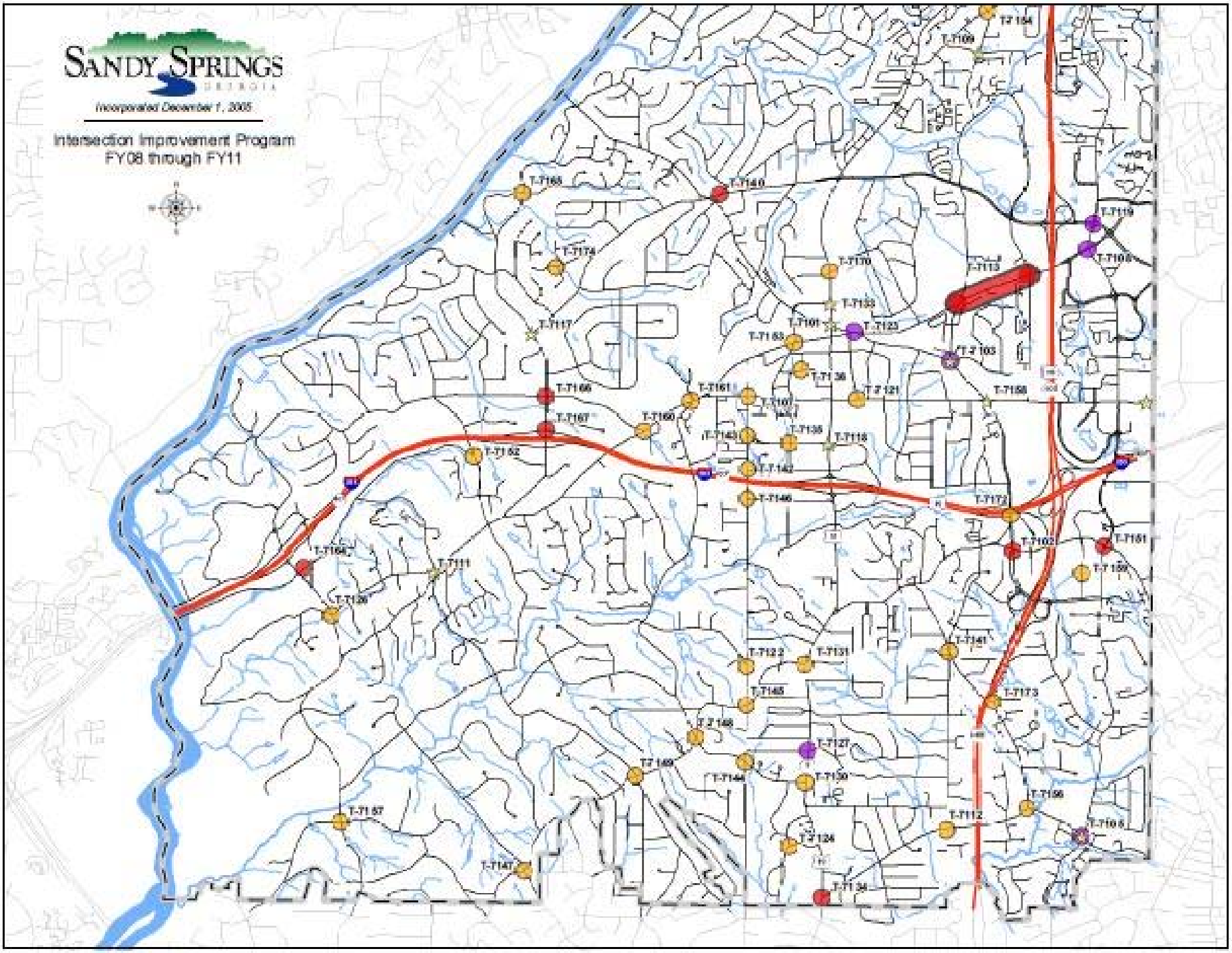
Project Selection

The first step in the process is for staff to assemble a committee to provide input in the shaping process and to ensure broad input. The committee reviews critical intersections from a pool of approximately 100 based on comprehensive studies and plans, historical data, staff opinion, and community request. These intersections are narrowed down and approved to move forward to receive additional review and get scored.

The maps on the next two pages identify the projects that were selected by committee. The FY08 and FY09 projects are completed and are marked with the star. The top scoring projects for FY10 are marked with the purple circles. The remaining projects under consideration are marked with the orange circles. The projects added for study and review are marked with the red circles. The legend for those maps is below.




SANDY SPRINGS
GEORGIA
Incorporated December 1, 2005
Intersection Improvement Program
FY08 through FY11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GEORGIA
Incorporated December 1, 2005
Intersection Improvement Program
FY08 through FY11

Project Scoring

This portion of the document includes the results of the scoring for the FY10 program. The committee for project selection is reassembled to review, rescore, and validate the project scoring. Individual projects may not get full funding in FY10, but instead receive funding for survey and/or design. It has not yet been determined if this program funding is to be used for right of way and easement acquisition.

The scoring was based on five primary criteria: Volume/Demand, Safety, Operation, Constructability, and Affordability. How the score was determined for each of these criteria is discussed in more detail below.

Volume/Demand: Volumes were collected and the higher the demand at the intersection, the more points it received.

Less than 4,000 vpd: 1 point
4,000 to 5,999 vpd: 2 points
6,000 to 9,999 vpd: 3 points
10,000 to 14,999 vpd: 4 points
15,000 or more: 5 points

Safety: Crash data (January 2008 through December 2008) for was reviewed along with other safety and liability issues. Crash severity was evaluated, and divided into high and low severity. High severity crashes include events most likely to cause injury and high property damage such as angle crashes and head-on crashes. Low severity crashes include events with a low incidence of injury and typically only include property damage, such as rear-end crashes. Each of the following was considered and the points were added together to result in a score that could range from zero to five.

1 to 4 high severity crashes: 1 point
5 or more high severity crashes: 1 more point
5 or more low severity crashes: 1 point
Other factors: 1 to 2 points

Operation: This is based upon a measured or estimated level of service for the intersection during its peak hour of operation. Levels of service can be calculated at signalized and stop controlled intersections based upon the delay experienced by drivers. The worse the level of service, the higher the score was assigned.

LOS A: 1 point
LOS B: 2 points
LOS C: 3 points
LOS D: 4 points
LOS E or worse: 5 points

Constructability: This criteria measures the ease of construction. This includes many factors such as grading, utility relocation (overhead and underground), whether the project could be considered an operational fix or a quick fix, etc. Examples of how these points were assigned are below:

Major grading: 1 point
Significant grading: 2 points
Moderate to low grading, significant utility relocation: 3 points
Little to no grading or moderate utility relocation: 4 points
Quick fix; minor utility relocation: 5 points

Affordability: Taken in consideration with the scale of the annual budget for this project, points were awarded based upon the potential or realized cost of the project. The more affordable the project, the higher the score it receives. One to five points are available in this category. Right of way and easements were also considered with affordability. If significant right of way or right of way from multiple parcels will likely be needed, fewer points were awarded. If the work could be completed within the existing right of way, more points were awarded.

Other Factors: Points are also available for other factors as determined by the committee. For the FY10 scoring, only coordination with the city's capital improvement program or other major programs was considered. One to five points were added to projects that would tie to and extend other projects. One to five points were subtracted from projects that were already in CIP or in consideration for LCI funds.

SANDY SPRINGS
GEORGIA

Capital Sidewalk Program FY2010 Update

May 4, 2010

Public Works Department
CM/PM Division

FY08/09 Program Actions – Active Projects

SITE	BUDGET	STATUS
Lake Forest Elementary Design	$160,000	Complete
Ridgeview Middle Design	$148,000	Complete/add for Bridge Connection
Spalding Elementary Design	$113,780	Complete
Lake Forest Elementary	$750,000	Construction
Ridgeview Middle, Phase 1 FY10	$281,436 +$380,000	Awarding Construction

FY10 Sidewalk Program - Groupings

Spalding Elementary Construction -- Bidding, $500,000

- FY 10-1: Work Complete 11/12/09, Tople, $31,500
  - -6010-12: Roberts – Spalding to Dunwoody Line
- FY 10-2: Design underway, $170,700
  - T-6010-1: North Springs High School
  - T-6010-2: Ison Elementary
  - T-6010-3: Mt Vernon Highway at the Library
  - T-6010-4: Abernathy at the Tennis Center
  - T-6010-5: Hammond Dr – Mt Vernon Hwy to Lake Forrest

FY10 Sidewalk Program - Groupings

- FY 10-3: Design underway, $191,800
  - T-6010-6: Glenridge – Hammond to Johnson Ferry
  - T-6010-9:Glenridge – Mt Vernon Hwy to Abernathy
  - T-6010-14:Spalding – Mt Vernon Hwy to Nesbitt Ferry
- FY 10-4: Design underway, $178,080
  - T-6010-7: Glenridge – Roswell Road to Northland Drive
  - T-6010-10: Mount Paran – Long Island to Powers Ferry
  - T-6010-11: Long Island – Roswell Rd to Mount Paran
  - T-6010-13: Glenridge – Royervista to Highpoint Plus

FY10 Sidewalk Program - Groupings

- FY 10-5: Design Contract – Later this FY or next FY
  - T-6010-8: River Valley – Amberidge to Abernathy
- CDBG Sidewalks Design: $408,195

SANDY SPRINGS
GEORGIA

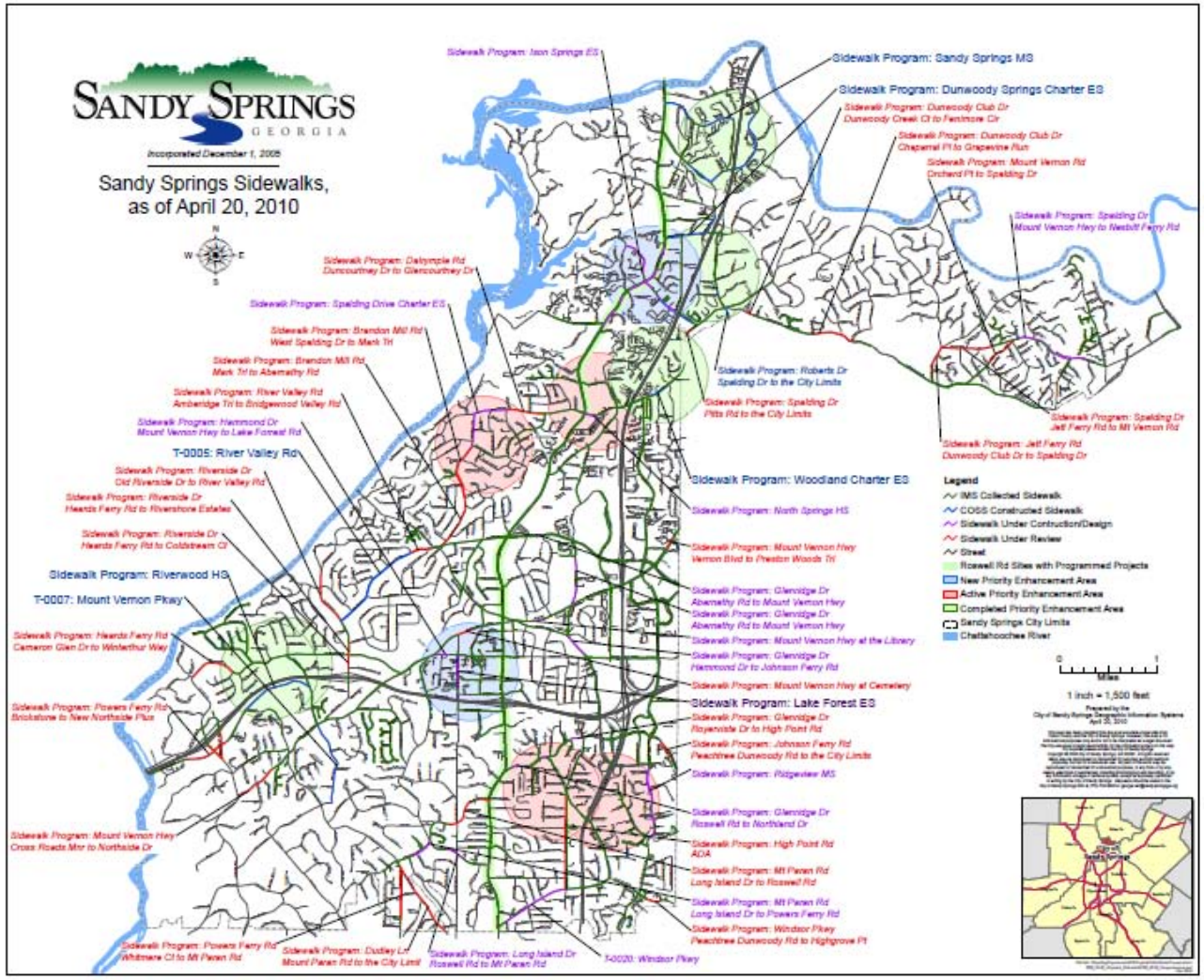
Capital Sidewalk Program FY2011

May 4, 2010

Public Works Department
CM/PM Division

INCORPORATED 2005

Sidewalk Program Projects



FY2011 Capital Sidewalk Program

- Continue effort on Sidewalk Master Plan -- gap fill and network extensions

- Evaluate unfunded scored projects from FY2010 and new candidate sites as identified
  - Citizen requested
  - Council member identified
  - Staff recommended

FY2011 Capital Sidewalk Program Candidate List

SITE	COST (design/cons/total)	SCORE
Mt. Vernon Hwy – Vernon Blvd to Preston Woods Trl	25,000/180,000	205,000
Johnson Ferry Rd – Pchtree-Dnwdy to City Limits	31,000/150,000	181,000
Mt. Paran Rd – Long Island Dr to Roswell Rd	80,000/290,000	370,000
Windsor Parkway – Pchtree-Dnwdy to Highgrove	42,000/210,000	252,000
Powers Ferry Rd – Whitmere to Mt.Paran	80,000/280,000	360,000
Mt. Vernon Hwy – Cross Roads to Northside Dr	65,000/250,000	315,000
Powers Ferry – Brickstone to New Northside plus	110,000/340,000	450,000

FY2011 Capital Sidewalk Program Candidate List

SITE	COST (design/cons/total)	SCORE
Riverside Dr – Old Riverside to River Valley Rd	80,000/350,000	430,000
Riverside Dr – River Valley Rd to Heards Ferry Rd	50,000/200,000	250,000
or		
Riverside Dr – Rivershore Est to Heards Ferry Rd	20,000/80,000	100,000
Riverside – Heards Ferry to Coldstream Ct	20,000/80,000	100,000
River Valley Rd – Amberidge to Bridgewood Valley	FY 10/160,000	198,000
Brandon Mill – West Spalding to Mark Trl	120,000/not estimated	120,000
Brandon Mill – Mark Trl to Abernathy	100,000/not estimated	120,000

FY2011 Capital Sidewalk Program Candidate List

SITE	COST (design/cons/total)	SCORE
Dalrymple – Duncourtney to Glencourtney	90,000/275,000	365,000
Mt. Vernon Rd – Orchard Pt to Spalding	65,000/250,000	315,000
Mt. Vernon Hwy @ Cemetery	60,000/not estimated	60,000
Jett Ferry – Dunwoody Club to Spalding	50,000/240,000	290,000
Spalding – Pitts Rd. To City Limit	35,000/125,000	160,000
Dunwoody Club – Spalding to Ball Mill	100,000/580,000	680,000
Spalding – Jett Ferry to Mt. Vernon	100,000/400,000	500,000

FY2011 Capital Sidewalk Program Candidate List

SITE	COST (design/cons/total)	SCORE
▪ Dudley Lane	120,000/400,000	520,000
▪ Highpoint ADA Upgrades	30,000/100,000	130,000
▪ Heards Ferry – Cameron Glen to Winterthur	80,000/300,000	380,000
Total All Projects Under Consideration		$6,813,000

SANDY SPRINGS
GEORGIA

CAPITAL IMPROVEMENT PROGRAM-TRANSPORTATION (CIP-T)

QUARTERLY PROJECT UPDATES

CITY COUNCIL MEETING
May 4, 2010

Capital Improvement Program Update Summary – Complete - 6

- T-0003 – Roswell Road at Dunwoody Place Intersection
- T-0004 – Roswell Road at Northridge Intersection
- T-0005 – River Valley Road Sidewalks
- T-0007 – Mt. Vernon Parkway Sidewalks
- T-0016 – Dunwoody Club at Spalding Intersection
- T-0029 – Island Ford Trail

Capital Improvement Program Update Summary – Under or Near Construction - 10

- T-0001 – Johnson Ferry/Abernathy Widening
- T-0002 – Abernathy Greenway Phase 1
- T-0006 – Sandy Springs Circle Ped Imp – Phase 1
- T-0008 – Roswell Rd Streetscape (Cliftwood-Hammond)
- T-0009 – Roswell Rd and Johnson Ferry Pedestrian Link
- T-0020 – Windsor Parkway Sidewalks
- T-0025 – Dunwoody Place Improvements Phase 1
- T-0026 – Peachtree Dunwoody Improvements Phase 1
- T-0028 – Hammond Interchange
- T-0032 – Peachtree Dunwoody Streetscape(PCID)

Capital Improvement Program Update Summary – Designs - 6

- T-0010 – Johnson Ferry/Sandy Springs Circle Intersection
- T-0011 – Johnson Ferry/Glenridge Corridor Improvements
- T-0012 – Roswell Road Streetscape (Johnson Ferry north to Abernathy)
- T-0013 – Roswell Road ATMS
- T-0019 – Roswell Road Streetscapes Phase 1
- T-0031 – Roswell Road at I-285 Bridge Widening

Capital Improvement Program Update Summary –Concepts - 3

- T-0014/15 – Sandy Springs Circle Phase 2/3 Design
- T-0023 – I-285 Underpass – Sandy Springs Circle Extension
- T-0024 – Hammond Widening

Capital Improvement Program Update Summary – On Hold - 2

- T-0021 – Peachtree Dunwoody at Lake Hearn
- T-0027 – Jett Road Bridge

SANDY SPRINGS
GEORGIA

CAPITAL IMPROVEMENT PROGRAM-TRANSPORTATION (CIP-T)
May 2010 UPDATE

INDIVIDUAL PROJECT SHEETS FOR REFERENCE

T-0001 JOHNSON FERRY - ABERNATHY WIDENING

- **Status**:
  - GDOT Awarded to CW Matthews – March 2009
  - GDOT including streetscape (brick strips) in bid document
- **Schedule**:
  - Construction 2009 – 2012 – completion date June 30, 2012
  - Utility relocation underway
  - Initial clearing and grubbing complete
  - Stormwater and street construction underway
- **Recommendation:**
  - Continue to support GDOT
  - Evaluate lighting and signal equipment upgrades in future FYs

T-0002 GREENWAY - ABERNATHY ROAD SECTION

- **Status**:
  - Primary acquisitions complete
  - Working potential Wright Road/166 Abernathy Road acquisition
- **Schedule**:
  - Phase 1 construction plans – nearing completion
  - Award construction contract for Phase 1 – FY 2010 (assuming we can coordinate approval with GDOT and GDOT contractor)
  - Phase 2 construction plans – underway
  - Award construction contract for Phase 2 – FY 2011 utilizing Transportation Enhancement Grant (assuming we can coordinate approval with GDOT and GDOT contractor)
- **Recommendation:**
  - Continue with Phase 1 and Phase 2 construction plans

T-0006 SANDY SPRINGS CIR AND HAMMOND DR PEDESTRIAN ENHANCEMENTS (PHASE I)

- **Status:**
  - Bids received
  - Federal stimulus funding received for construction
  - Federal money reprogrammed for right-of-way acquisition requiring a local match ($101,380)
  - Temporary state route process for project corridor completed
- **Schedule:**
  - GDOT/ARC reviewing bids and City is awaiting NTP
- **Recommendation:**
  - Continue as planned
  - Construction should start soon

T-0008 ROSWELL ROAD STREETSCAPE (CLIFTWOOD TO HAMMOND)

- **Status:**
  - Working design, right-of-way and utility issues
  - Attempting reprogramming of federal funds to right-of-way from construction (match required)
  - Use SSRI funds first for construction
  - Supplement with City if needed
- **Schedule:**
  - Preparing for bid and award in FY 2010 depending on funding
- **Recommendation:**
  - Reprogram federal funds
  - Complete acquisition
  - Bid and construct

T-0009 ROSWELL ROAD AND JOHNSON FERRY PEDESTRIAN LINK

- **Status:**
  - Being designed with T-0011 (Johnson Ferry – Glenridge)
  - Designing the Johnson Ferry portion as standalone streetscape/sidewalk project from Sandy Springs Circle to Abernathy Road
- **Schedule:**
  - Land disturbance permit approved
  - Bids received and staff is reviewing for compliance
- **Recommendation:**
  - Award construction contract after City Council approval
  - Execute this improvement in Phase 1 utilizing funds from SSRI
  - Construction to start soon

T-0010 JOHNSON FERRY ROAD AT SANDY SPRINGS CIRCLE INTERSECTION IMPROVEMENT

- **Status:**
  - Being designed with T-0011 (Johnson Ferry – Glenridge)
  - Designing the intersection improvement ahead of remainder
- **Schedule:**
  - Detailed design is underway
  - Environmental is underway
- **Recommendation:**
  - Continue design consultant activities as part of T-0011
  - Execute this improvement in Phase 1

T-0011 JOHNSON FERRY–GLENRIDGE – EARMARK

- **Status:**
  - Concept design underway
  - Looking at phased implementation options
- **Schedule:**
  - Reviewing new concepts
  - Environmental assessment work has begun
- **Recommendation:**
  - Continue design consultant activities
  - After concept, finalize funding estimates and sources
  - After concept approval, can execute as funds allow
  - Initiate right-of-way acquisition

T-0012 ROSWELL ROAD STREETSCAPE (JOHNSON FERRY TO ABERNATHY)

- **Status:**
  - Design underway
  - TE funds programmed
  - Need to evaluate right-of-way options
- **Schedule:**
  - ROW plans approved by GDOT and NTP for acquisition has been received
- **Recommendation:**
  - Continue with design and ROW

T-0013 ROSWELL ROAD ADVANCED TRAFFIC MANAGEMENT SYSTEM (ATMS)

- **Status:**
  - Concept complete
  - Detailed design underway with all cities
- **Schedule:**
  - Complete design
  - Award construction in late FY2010
- **Recommendation:**
  - Continue project execution with GDOT and other Cities
  - Proceed with design consultant activities
  - Finalize funding estimates and sources

T-0014/15 SANDY SPRINGS CIRCLE PEDESTRIAN ENHANCEMENTS (PHASE II/III)

- **Status:**
  - RFP for design services to be advertised in FY2010
  - Project was approved for consideration of construction funding - ($1.8M)
- **Schedule:**
  - Consultant selection in progress
- **Recommendation:**
  - Move forward with concept design

D112005003OMI

T-0019 ROSWELL ROAD STREETSCAPE (I-285 TO ATLANTA CITY LIMITS)

- **Status:**
  - Project broken into 3 Phases
- **Schedule:**
  - Phase I construction FY 2010 – being reprogrammed out
    - Field surveying complete
    - Concept meeting held with GDOT
  - Phase II construction FY 2011
  - Phase III construction FY 2012
- **Recommendation:**
  - Execute Phase I for design in FY 2010
  - Follow with Phase 1 construction as soon as GDOT allows
  - Submit Phase II and III for LCI funding when available

T-0020 WINDSOR PARKWAY SIDEWALKS (ROSWELL TO HIGH POINT)

- **Status:**
  - Construction underway – CMES is contractor
- **Schedule:**
  - Construction due to be complete fall 2010
- **Recommendation:**
  - Continue with FY 2010 execution

D112005003OMI

T-0021 PEACHTREE DUNWOODY RD AT LAKE HEARN INTERSECTION IMPROVEMENT

- **Status:**
  - Concept design complete with Arcadis via PCID
  - No programmed City funds at this time
  - Construction programmed in TIP for FY 2011
- **Schedule:**
  - Concept report submitted and approved
- **Recommendation:**
  - Remain on hold
  - Continue coordination as needed with PCID and GDOT
  - Investigating possible moving funding

T-0023 I-285 UNDERPASS – SANDY SPRINGS CIRCLE

- **Status:**
  - Concept design underway
- **Schedule:**
  - Developing concepts with Arcadis
  - Next public meeting on hold
  - Concept report to be scheduled
- **Recommendation:**
  - Work with existing funding and I-285 study
  - After concept, finalize funding estimates and sources

T-0024 HAMMOND WIDENING (ROSWELL TO GLENRIDGE)

- **Status:**
  - Scope is from Roswell Road to Barfield
  - PCID funded intersection study complete
  - Gresham Smith finished database and is developing concept alternatives
  - Project received $500,000 Earmark and a GDOT project number
- **Schedule:**
  - Continue concept design
  - Next public meeting Winter of 2010
- **Recommendation:**
  - Move forward with concepts (discuss funding with PCID)
  - After concept, finalize funding estimates and sources

T-0025 DUNWOODY PLACE IMPROVEMENTS

- **Status:**
  - Phase 1 design complete
  - Phase 1 Project funded in FY 2010 budget process
- **Schedule:**
  - Land disturbance permit approved
  - Right of way acquisition underway
  - Construction in late FY 2010 or early FY 2011
- **Recommendation:**
  - Move forward with design and then construction of Phase 1 in FY 2010

T-0026 PEACHTREE-DUNWOODY RD IMPROVEMENTS (ABERNATHY TO SPALDING)

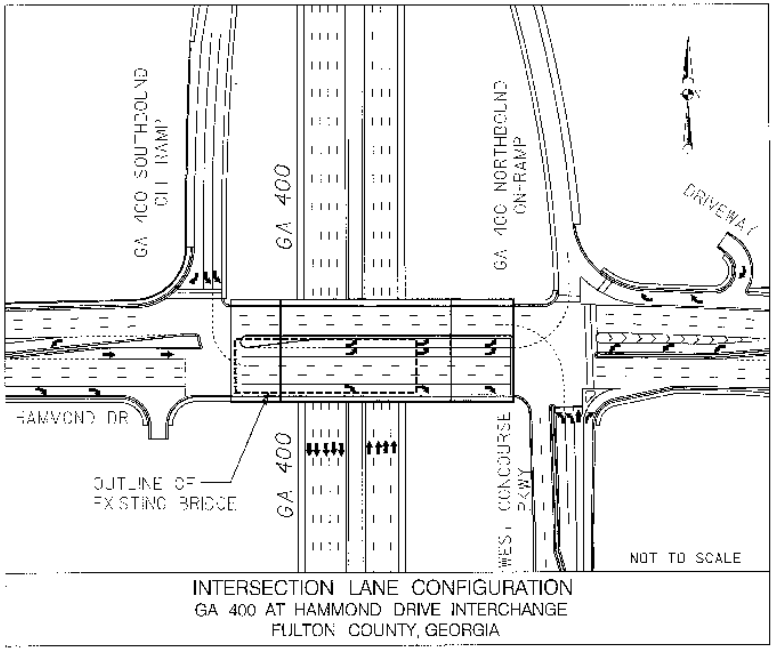
- **Status:**
  - Phase 1 design complete
  - Project funded in FY 2010 budget process
- **Schedule:**
  - Land disturbance permit approved
  - Stream buffer variance application has been submitted
  - Right of way acquisition is underway
  - Construction in late FY 2010 or early FY 2011
- **Recommendation:**
  - Move forward with design and then construction of Phase 1 in FY 2010

T-0027 JETT ROAD BRIDGE UPGRADE AT LONG ISLAND CREEK

- **Status**:
  - GDOT design activities on hold
  - GDOT re-evaluating bridge program and funding
- **Schedule:**
  - ROW and CST Long Range
- **Recommendation:**
  - Execute bridge repair under bridge repair program
  - Continue to work with GDOT as funds allow

T-0028 HAMMOND INTERCHANGE

- **Status:**
  - Contract awarded to C.W. Matthews
- **Schedule:**
  - Construction underway
  - Estimate two year construction period (2011)
- **Recommendation:**
  - Continue to support GDOT and PCID



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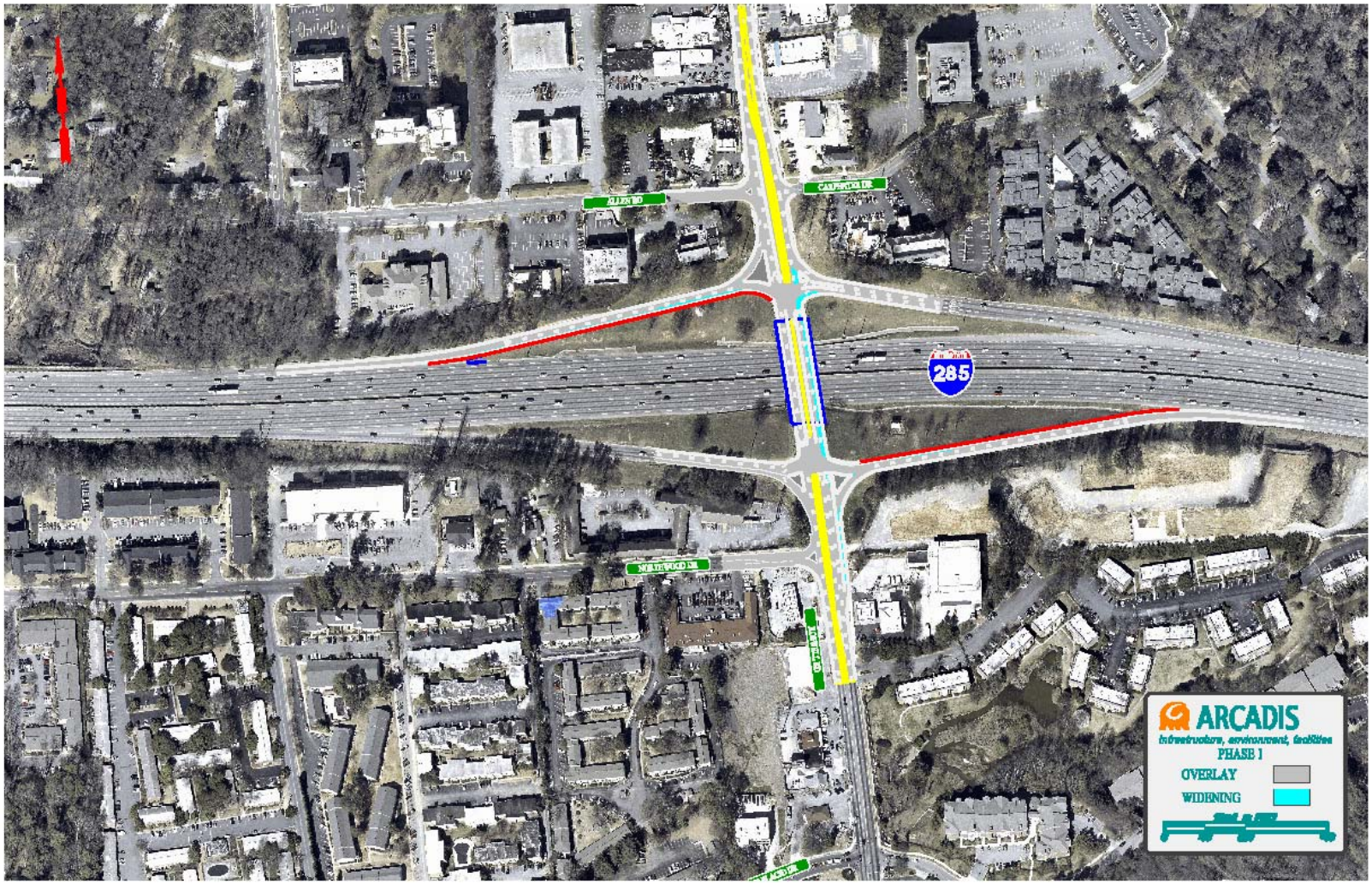
T-0029 ISLAND FORD TRAIL EXTENSION

- **Status:**
  - Complete
- **Schedule:**
  - Hold ribbon cutting in early spring 2010

T-0031 Roswell Road Bridge Modifications

- **Status:**
  - Concept report under review by GDOT
  - Public information meeting held January 26, 2010 at City Hall
- **Schedule:**
  - Pushing for a fall letting with GDOT
- **Recommendation:**
  - Continue to pursue one lane widening project
  - Incorporate realignment of the intersection of Carpenter and Cliftwood into a phase 2 element of the project

T-0031 Roswell Road Bridge Modifications (continued)



T-0032 Peachtree Dunwoody Streetscape (I-285 North to Abernathy)

- **Status:**
  - Stimulus funded project
  - Design and construction being executed by PCID
- **Schedule:**
  - Awaiting GDOT approval to start construction
- **Recommendation:**
  - Support construction activities

SANDY SPRINGS
GEORGIA

Capital Improvement Program (CIP-T)
FY2011 Budget Request

May 4, 2010

Public Works Department
Transportation Planning Division

CIP-T Budget Update FY 2010

- FY10 Budget - $ 3,550,000
  - $ 1,300,000 T-0026 Peachtree Dunwoody Road Improvements
  - $ 1,000,000 T-0025 Dunwoody Place Improvements
  - $ 750,000 T-0002 Abernathy Linear Park Phase 1
  - $ 250,000 T-0012 Roswell Road Streetscape Construction Match
  - $ 250,000 T-0019A Roswell Road Streetscape Phase 1 Design

CIP-T Budget Request FY 2011

- FY11 Budget Request - $ 6,900,000
  - *$2,600,000 T-0031 Roswell Road bridge Widening Construction*
  - $1,500,000 Morgan Falls Road concept Design/Construction
  - $250,000 Design - Cliftwood/Carpenter at Roswell Road
  - $750,000 T-0002 Abernathy Linear Park Phase 3
  - $500,000 Spalding Drive at Mt. Vernon Road Intersection
  - $50,000 Access Management Study (Glenridge to Abernathy)
    - (Note: Projects above are not in priority order)

CIP-T Other Potential Projects

- Spalding Drive at Jett Ferry Round-a-bout Design and Construction – $600,000
- T-0008 Roswell Road Streetscape from Cliftwood to Hammond Utility Relocations – $1,400,000+
- T-0017 Riverside Drive Sidewalks – $1,300,000
- Glenridge at Roswell Road Intersection Improvement Concept Design – $200,000

CIP- T Other Potential Projects (Continued)

- Chattahoochee Bridge Bike/Pedestrian Bridge Study (City of Roswell Earmark) – $360,000
- Downtown Sandy Springs LCI Update – $100,000
- Riverside Drive Ramp Improvements and Signal Interconnect – $1,200,000

SANDY SPRINGS
GEORGIA

Operations and Maintenance Update

May 4, 2010

Public Works Department
Field and Traffic Services Divisions

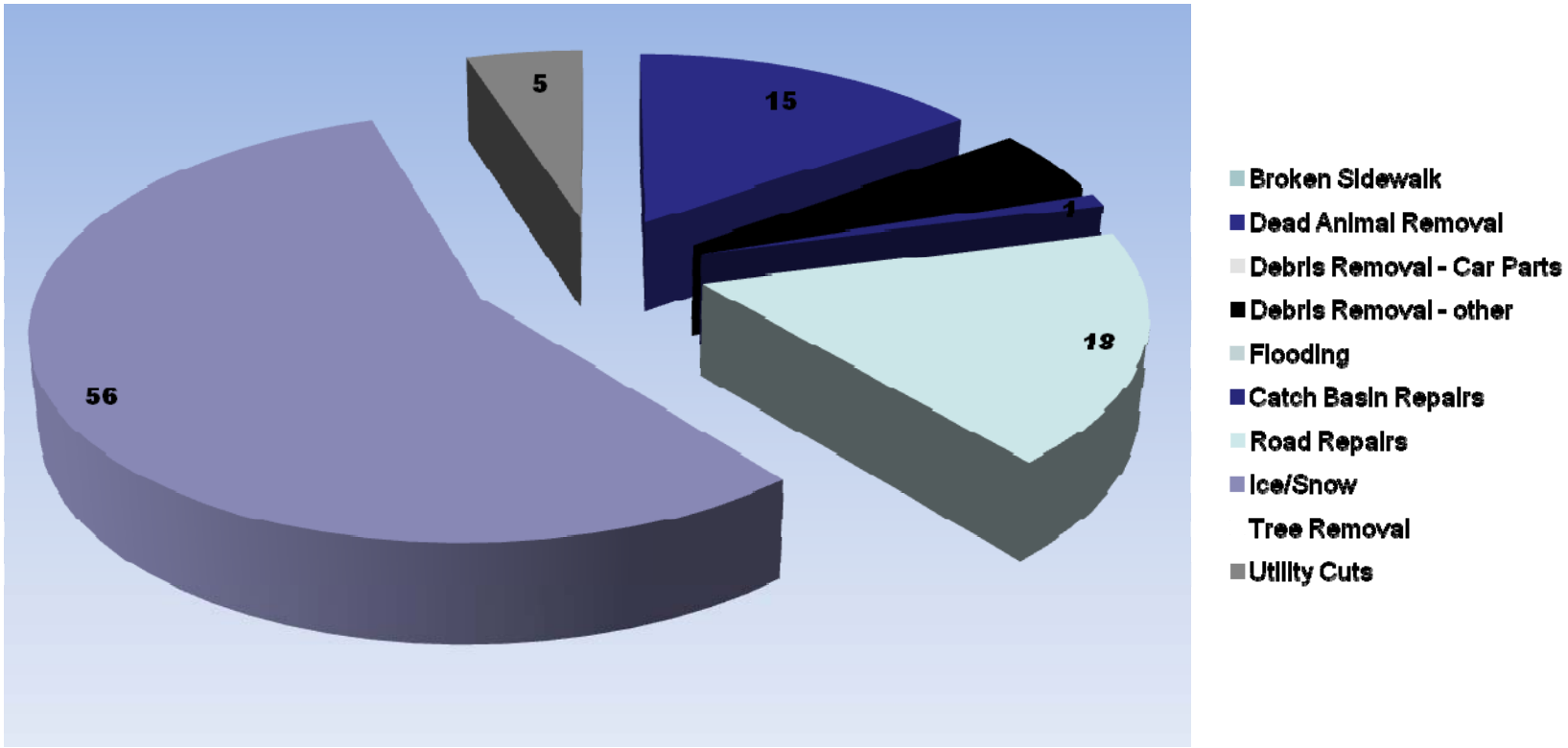
March 2010 Performance Metrics

- Traffic Services
  - Priority 1-Urgent work orders (7) 100% completed within 24 hours
  - Priority 2-Important work orders (6) 100% completed within 72 hours
  - Priority 3- Standard work orders (211) 97% completed in 10 business days
- Field Services
  - Priority 1-Urgent work orders (9)100% completed within 24 hours
  - Priority 2-Important work orders (8)100% completed within 72 hours
  - Priority 3- Standard work orders (185) 98% completed in 10 business days

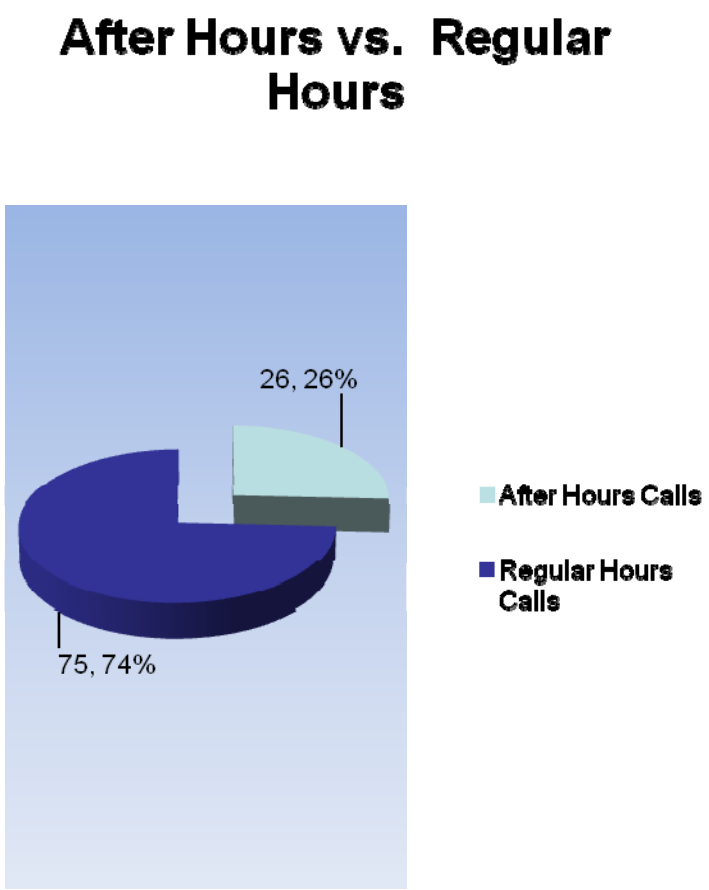
March Operations and Routine Maintenance

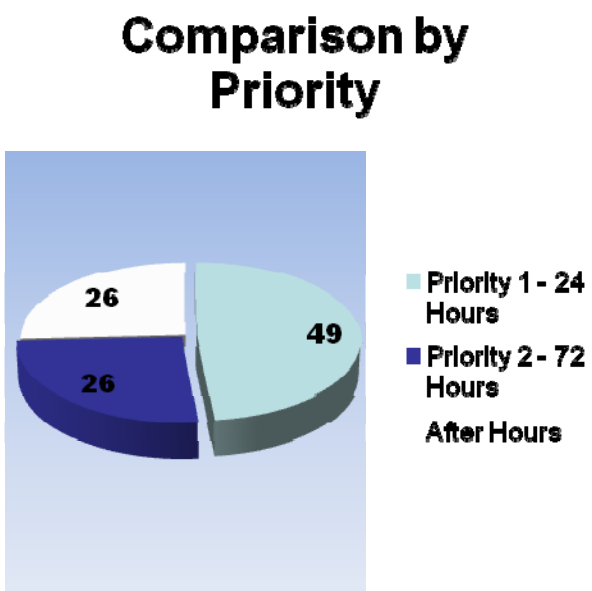
- Emergency Calls – 29
  - Includes after hours and emergencies
- Work Orders Completed -341
  - Field Services – 204
  - Traffic Services – 233
- Routine Maintenance
  - Mowing – Miles – 40 centerline miles – Primary routes only
  - Street Sweeping –Miles (Cycle started March 1, 2010) – 260 curbline miles
  - Traffic Signal Bulbs Changed –work orders- 52
  - Traffic Sign Tasks –work orders- 71

Emergency Work Orders for Field Services For 2010

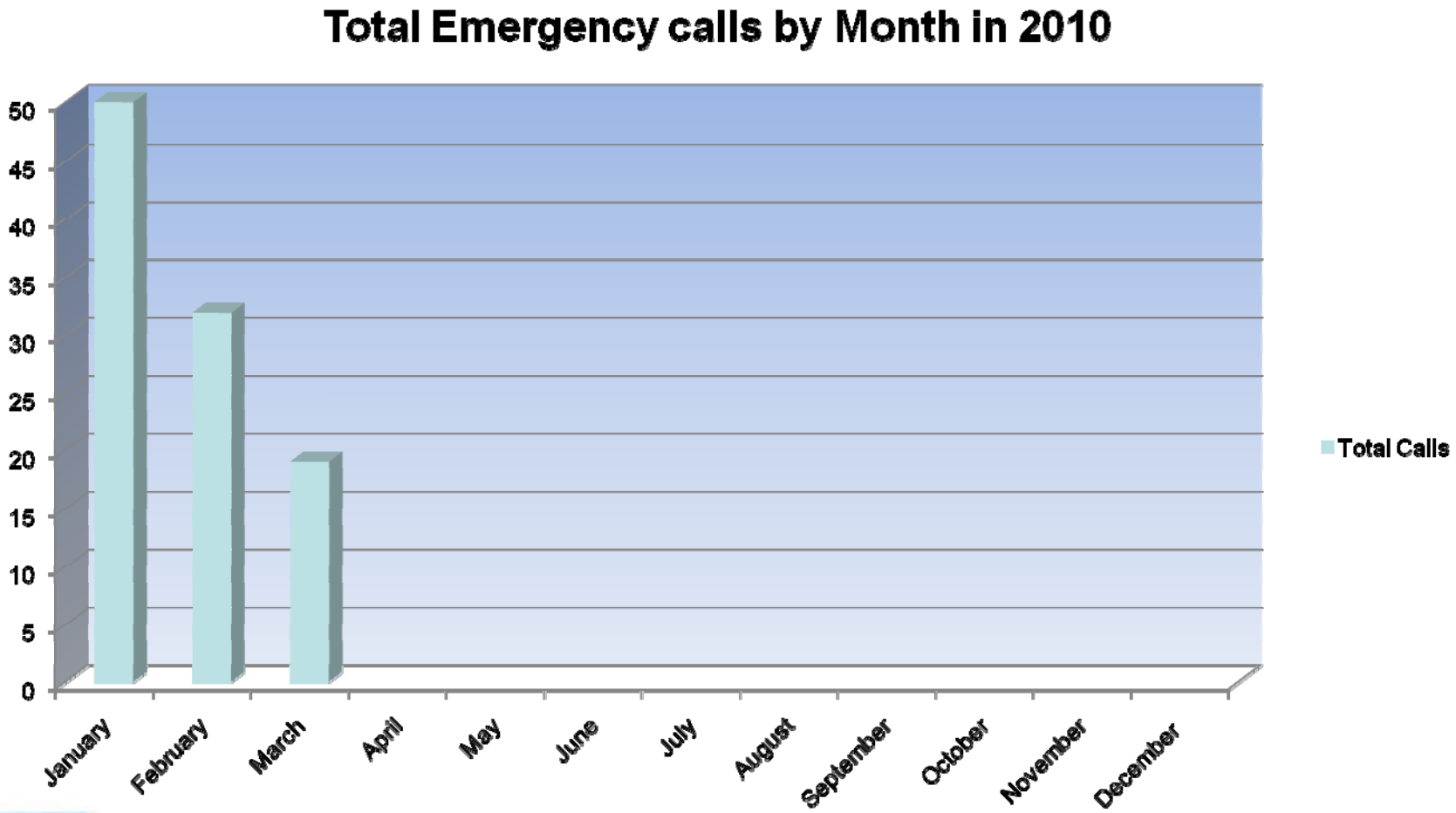


Field Services Emergency Work Order Comparison for 2010

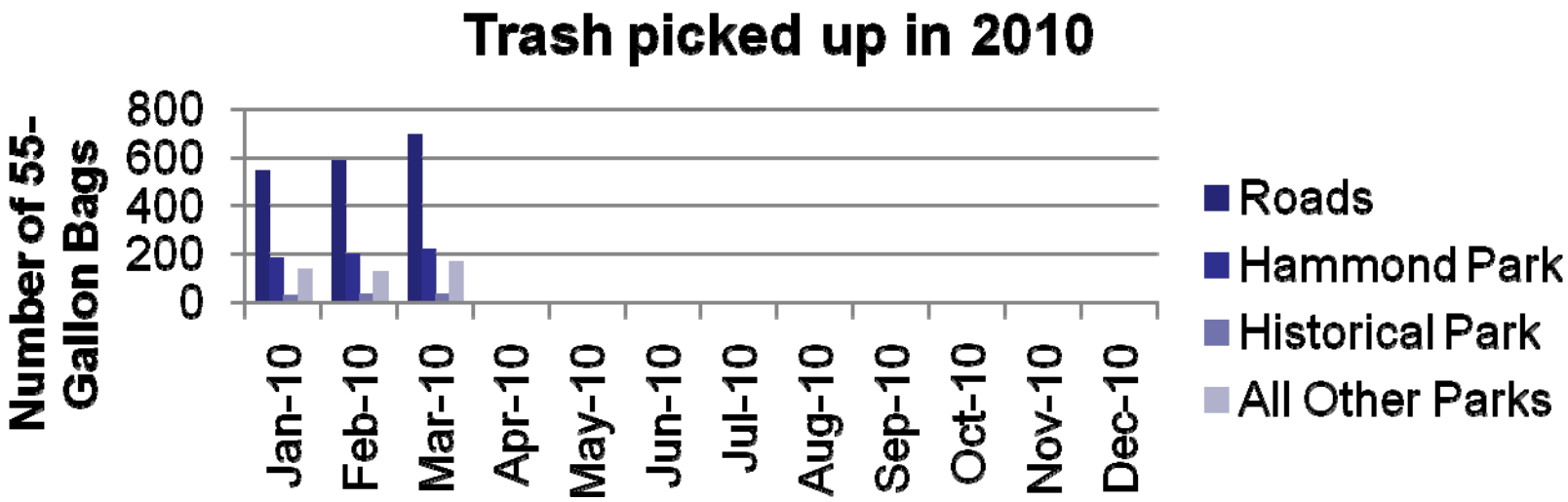




Monthly Emergency Work Orders Comparison



Litter Pickup



Area	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	July-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Roads	548	589	697									
Hammond	184	200	221									
Historical	33	36	36									
Other Parks	137	129	171									