

City of Avondale Estates Storm Water Utility Consulting and Engineering Services MS4 Inventory Map Presentation

Corporate Environmental Risk Management

21 April 2010



C.E.R.M. Key Personnel Present

- Shawn Askew, Project Manager
- Pratima Poudyal, EIT, Project GIS Lead
- Wayne Powers, RLS, C.E.R.M. Surveying & Mapping Manager
- Marcus Reese, Founding Principal



Presentation Outline

- Explanation of MS4 Work
- Our Approach
- Operations/Timeline
- Final Deliverables



Explanation of MS4 Work

- Municipal Separate Storm Sewer System (MS4)
 - An inventory of a city's storm water infrastructure
 - Mapping & inspecting headwalls, catch basins, grated inlets, detention ponds, etc.
 - Determines how storm water enters and exits the system



Explanation of MS4 Work (continued)

■ Regulatory Drivers

- **Federal:** National Pollutant Discharge Elimination System (NPDES) permitting requirements
- **State:** Environmental Protection Division (EPD); Metro North Georgia Water Planning District's Watershed Management Plan requirements (2003 & 2008)
- **County:** DeKalb County Stormwater Management Utility Ordinance (December 2003)
- **City:** Avondale Estates storm water ordinance (November 2005)



Explanation of MS4 Work (continued)

■ Benefits of an MS4 inventory

- Starting point for finding maintenance needs, setting repair schedules, etc.
- Part of a good asset management program
- Can aid in creating models of storm water flow, development, flood control, etc.
- Illicit discharge detection and elimination
- Pollution prevention and good housekeeping



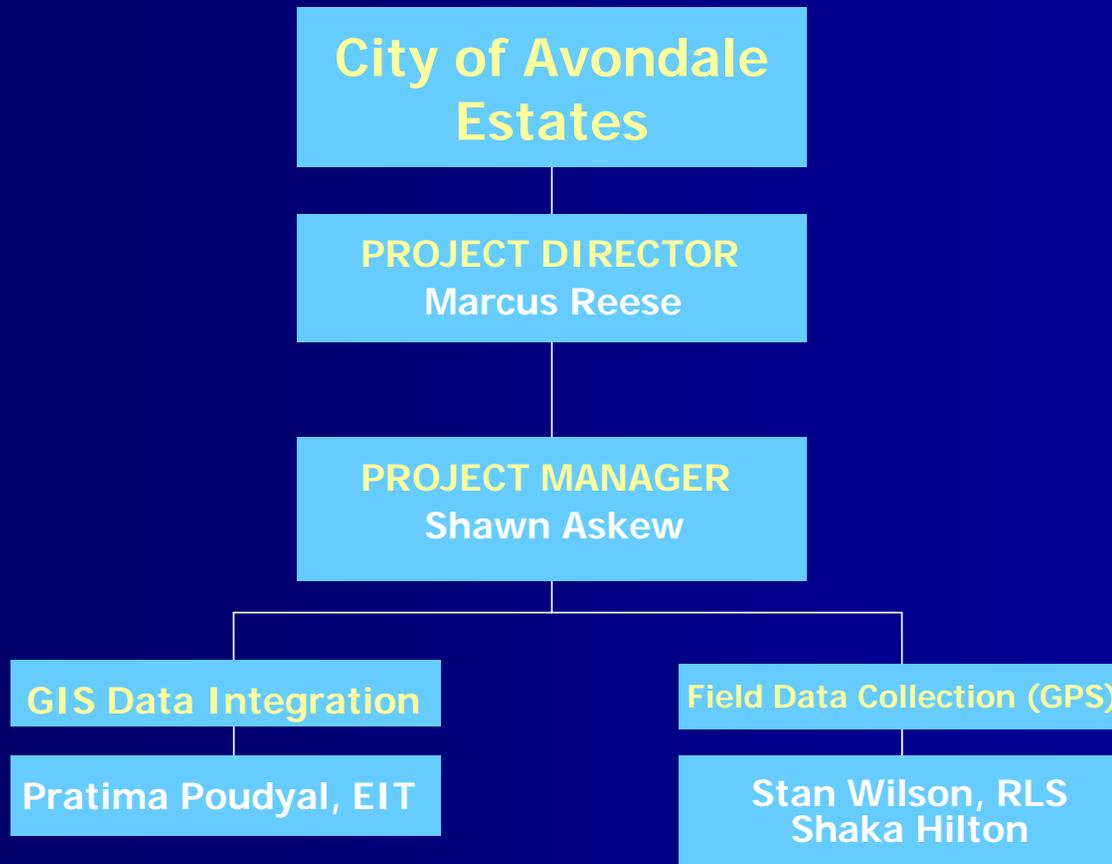
Our Approach

- Kick-Off Meeting
- Office Data Processing
- Field Data Collection
- Quality Assurance/Quality Control



Our Approach (continued)

C.E.R.M. Key Personnel Organizational Chart



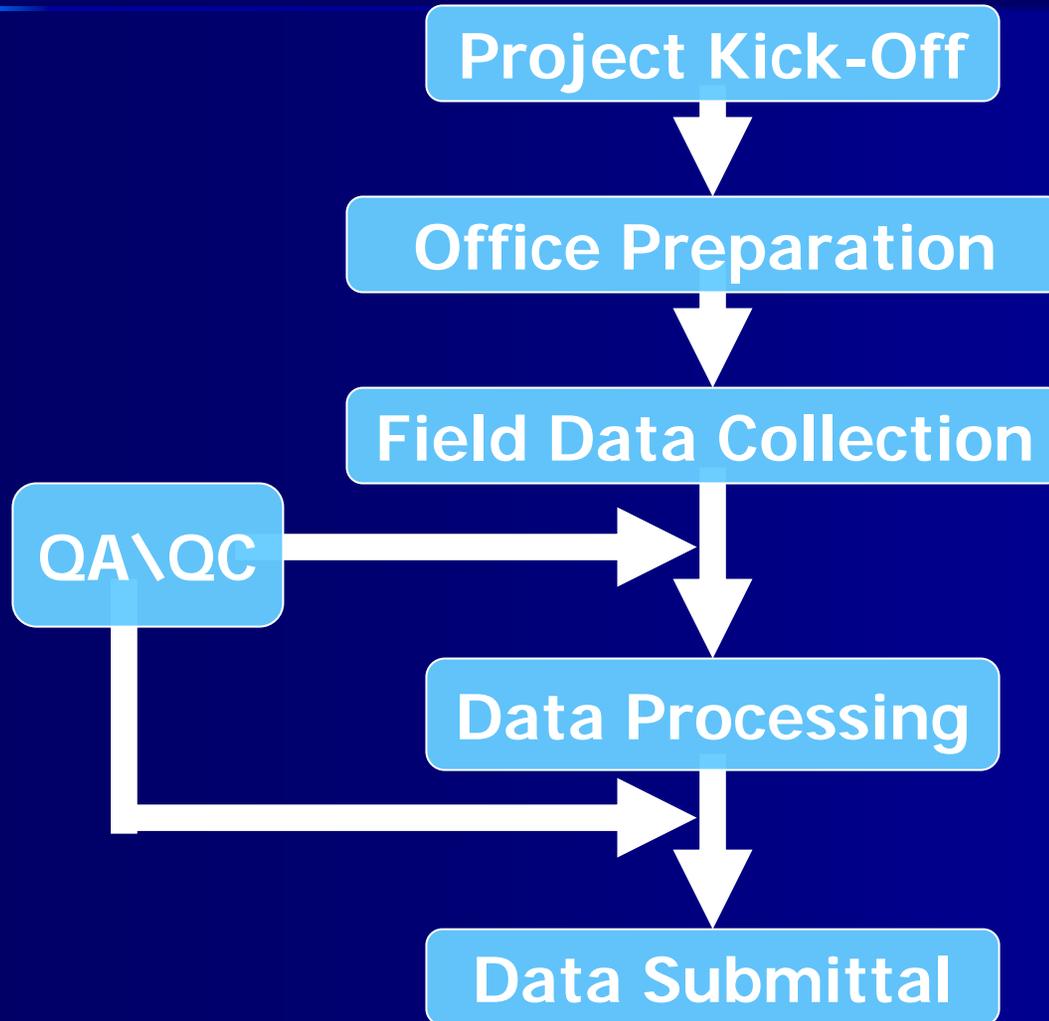
Our Approach (continued)

C.E.R.M. Key Personnel

- **Shawn Askew, Project Manager** – 8 years experience in SSES & MS4 work; managed Clarkston & Lithonia MS4s; GSWCC Level 1A certified
- **Pratima Poudyal, EIT, GIS Data Integration Lead** – Former university lecturer; GIS lead for Clarkston, Lithonia, and DeKalb County QA/QC MS4s
- **Stan Wilson, RLS, Field Data Collection Lead** – 20 years surveying experience; GSWCC Level 2 certified
- **Shaka Hilton, Field Data Collector** – Former DeKalb Roads & Drainage technician; GSWCC Level 1B certified



Our Approach (continued)



Our Approach (continued)

■ Kick-Off Meeting

- Held 20 October 2009 in City Hall
- Agreed on project schedule, modes of communication, and public notification
- Agreed on formats & final deliverables
- Gathered any existing City data on Avondale Estates' MS4
- Finalized "Do Not Shoot" letter



Our Approach (continued)



■ Office Data Processing (Pratima)

- Prepared GPS handhelds to collect data according to DeKalb County *data dictionary*
- Composed a Safety Implementation Plan
- Daily download of data from handhelds into ESRI ArcGIS
- Processed the data into a GIS map of Avondale Estates
- Attached photos of the structures to their electronic data



Our Approach (continued)

■ Field Data Collection (Shaka)

- One-man field crews were deployed
- Crews carried Leica GS20 GPS handhelds to collect X & Y coordinates & attributes (structure type, materials, flow direction, etc.)
- Structure condition (Full of debris? Broken?) was noted for maintenance purposes; Condition 1, 2, & 3 and Good
- Crews digitally photographed each structure



Our Approach (continued)

- **Quality Assurance/Quality Control (QA/QC) (Shawn, Pratima, & Stan)**
 - Informal daily QA/QC of the incoming data
 - 10% of all inventoried structures - chosen randomly - were rechecked for accuracy at end of field data collection
 - X and Y coordinates (to within 1 meter (~3 feet)), structure types, materials, and conditions were all checked
 - Omissions/revisions pointed out by the City Dept. of Public Works were field verified



Operations/Timeline

Kickoff meeting	20 October 2009
Start of primary field operations	27 October 2009
End of primary field operations	27 January 2010
QA/QC/City revisions	February & March 2010
End of data reduction/QC	10 March 2010
Final report delivered to City	16 March 2010



Final Deliverables



- C.E.R.M. produced three (3) printed maps of the City's MS4 system

- 426 structures, 12 ponds, and 412 connecting pipes were inventoried

- Avondale Estates' MS4 data was shared with DeKalb County



C · E · R · M

Final Deliverables (continued)



- C.E.R.M. found **only one (1) "Condition 1"** (highest problem alert) structure in the City; a catch basin with no cover at 180 Oak Street

- Structures: 14 "Condition 2" (medium), 8 "Condition 3" (low), 390 "Good"

- Conveyances: 4 "Condition 2" (medium), 1 "Condition 3" (low), 407 "Good"



Clients/Experience

C.E.R.M. Business Groups

- Environmental Management
- Engineering and Design
- Surveying and Mapping
- Remediation and Contracting



Clients/Experience (continued)

Partial Client List

❑ Municipal and City Governments

- ✓ City of Atlanta
- ✓ City of Mobile, Ala.
- ✓ City of Prichard, Ala.
- ✓ DeKalb County, Ga.
- ✓ Fulton County, Ga.
- ✓ Jefferson County, Ala.

❑ Real Estate Organizations

- ✓ Atlantic Station
- ✓ Citizen's Trust Bank
- ✓ Capmark Finance
- ✓ Mobile Housing Authority
- ✓ Word of Faith Church

❑ Law Firms

- ✓ Breedlove & Lassiter
- ✓ Akin, Gump, Strauss, Hauer & Feld
- ✓ Powell, Goldstein
- ✓ Stites & Harbison
- ✓ Sadler & Sullivan

❑ Federal Agencies

- ✓ U.S. Army Corps of Engineers
- ✓ Federal Aviation Administration
- ✓ Federal Transit Administration
- ✓ Federal Emergency Management Agency

❑ Transportation Organizations

- ✓ Alabama State Port Authority
- ✓ Alabama Department of Transportation
- ✓ Birmingham Airport Authority
- ✓ Georgia Department of Transportation
- ✓ Hartsfield-Jackson Atlanta International Airport
- ✓ MARTA

❑ Corporate Interests

- ✓ Honda USA
- ✓ Hyundai Corporation
- ✓ Home Depot
- ✓ Coca Cola Enterprises
- ✓ Southern Company
- ✓ Delta Airlines



Clients/Experience (continued)

Awards and Recognition

**2008 Lou Walker Legacy Award by
the Georgia Black Chamber of
Commerce (Given to Mr. Albert G.
Edwards, Managing Director)**

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**2007 Alabama MBEC Service/
Engineering Firm of the Year**

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**2006 Georgia Small Business of
Excellence Award**

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**2006 Georgia Statewide Minority
Business Enterprise Center
Minority Service Firm of the Year**



Clients/Experience (continued)

Client Quotes and Comments

"C.E.R.M. acts with my best interest in mind when handling projects."

John H. Ross, General Counsel,
C.W. Matthews Construction Co.

"C.E.R.M.'s staff is technically competent and knowledgeable."

Donald Willis, Acquisition
Manager, City of Atlanta
Department of Aviation

"The staff was very professional and knowledgeable.....C.E.R.M. developed a plan to meet the County's goals and objectives and carried the plan through efficiently to the completion of the job."

Willie D. Greene, Assistant Director,
DeKalb County Public Works, Roads
& Drainage Division

"I so appreciate you and the team at C.E.R.M. I have not and will never forget what a wonderful job you all have done."

The Honorable Tonya Peterson,
Mayor, Lithonia, Ga.



Any questions?



Thank you very much.

