



STATE OF MISSISSIPPI
PHIL BRYANT
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
GARY C. RIKARD, EXECUTIVE DIRECTOR

June 21, 2016

Gregg Worley
Chief, Air Analysis and Support Branch
US EPA Region 4
61 Forsyth St., SW
Atlanta, GA 30303-8960

Dear Mr. Worley,

Please find enclosed the 2017 Annual Monitoring Network Plan for the Mississippi Department of Environmental Quality. The 2017 Annual Monitoring Network Plan was posted on the MDEQ website from May 9 through June 10 where public comments were requested. No comments were received. If additional information is needed, please call me at 601-961-5790.

Sincerely,

A handwritten signature in blue ink that reads "Michael Jordan".

Michael Jordan
Chief, Air Monitoring Section

cc: Daniel Garver (w/encl)
Todd Rinck (w/encl)



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

2017 Annual Monitoring Network Plan for Mississippi

The MDEQ Air Division is receiving comments on the 2017 Annual Monitoring Network Plan until June 10, 2016.

MDEQ did not receive any public comments about the 2017 Annual Monitoring Network Plan.

Please address comments to:
Michael_Jordan@deq.state.ms.us



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

Monitoring Network Plan - 2017



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I. Background:

Federal Regulations (40 CFR 58.10) require that State and Local Agencies operating ambient air quality monitoring networks shall review their air quality monitoring networks on an annual basis. Any needed modifications to the network should be identified. A detailed monitoring network description should also be included. In addition, the plan should be available for public comment. MDEQ's plan is available on the MDEQ website at <http://www.deq.state.ms.us>.

The annual network review specified in *40 CFR 58.10* contains the following elements that apply to each monitoring site:

- The AQS site identification number.
- The location, including street address and geographical coordinates.
- The sampling and analysis method(s) for each measured parameter.
- The operating schedules for each monitor.
- Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
- The monitoring objective and spatial scale of representativeness for each monitor as defined in appendix D of part 58.
- The identification of any sites that are suitable and sites that are not suitable for comparison against the annual PM_{2.5} and Ozone NAAQS as described in part 58.30.
- The MSA, CBSA, CSA or other area represented by the monitor.
- The annual monitoring network plans and or periodic network assessments are subject to Regional approval according to part 58.14.

II. Overview:

In the State of Mississippi the Mississippi Department of Environmental Quality is the only agency operating an ambient air quality network. There are no local agencies. In Mississippi, as in other State agencies, network monitors are operated for a variety of monitoring objectives. These objectives include determining if an area of the State meets the NAAQS, for public information such as EPA's AirNow data mapping web site, Air Quality Index reporting for public information, background data collection, spatial considerations and special projects. The AQI forecast is currently reported for the Jackson Metro area, Biloxi/Gulfport area and DeSoto County area on the MDEQ web site at <http://www.deq.state.ms.us> under AQI. In addition, hourly ozone, PM continuous, NO₂, SO₂, and CO data is reported to the EPA Airnow site.

All site data is suitable for NAAQS comparisons per appendices A, C, D, and E. MDEQ's Quality Management Plan is current with an approval date of 4/23/09 while the Criteria Pollutants QAPP is dated 10/1/06. MDEQ is currently working to update the QAPP and will periodically update EPA on the status.

40 CFR 58 has set minimum monitoring requirements for the pollutants that are to be compared with the NAAQS. These minimum requirements are based on population, the level of monitored pollutants and MSA as defined in the latest US Census information. The tables below and the discussion on the following pages summarize this information.

Mississippi MSA	Pop 2010 Census
Memphis	1,316,100
Jackson	539,057
Hattiesburg	142,842
Gulfport – Biloxi	248,820
Pascagoula	162,246

Mississippi CSA	Pop 2010 Census
Jackson-Yazoo	567,122
Gulfport-Biloxi-Pascagoula	411,066

III. Site Discussion:

Mississippi's air quality monitoring network has been reviewed based on the historic monitoring data, air quality monitoring regulations, data representation based on spatial considerations, special data needs and changes needed based on the monitoring regulations. The items used in the evaluation were the AQS database, the 40 CFR parts 53 and 58 documents, census data and maps. All monitors operated by MDEQ are SLAMS.

MDEQ is planning to upgrade the PM_{2.5} network from sequential FRMs to continuous FEMs. MDEQ has established a timetable of 1-2 years for the entire upgrade and will notify EPA when all new monitors are operational. The following section describes the purposes and any changes related to each site in the ambient monitoring network in the State of Mississippi based on our review of existing monitoring efforts.

1. *Memphis MSA:*

- **Hernando** (DeSoto Co. 28.033.0002) – A FRM PM_{2.5} sampler is designated as a transport sampler and therefore is a required sampler. A collocated FRM PM_{2.5} sampler, a continuous PM_{2.5} sampler, and an ozone monitor are required and operated at this site. MDEQ has a monitoring agreement with Memphis, TN, and AR to meet Appendix D requirements section 2, e. A copy is attached and is on file at Region 4.
- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4 meters above ground level and 69 meters, southwest, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site. MDEQ will replace the shelter at the Hernando site and no trees or obstacles will impact the new building. The replacement monitoring shelter's sample inlet will be about 4.5 meters above ground level and 75 meters, southwest, from the nearest road. The new latitude is 34.49.14.25 and the longitude is 89.59.16. See Google photo for reference.
- **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.

2. Jackson MSA:

Jackson NCore (Hinds Co. 28.049.0020) – The NCore site contains a full complement of instruments, including meteorological. The parameters currently include Ozone, Sulfur Dioxide, Carbon Monoxide, Nitric Oxides as NO_y, FRM PM_{2.5} manual, FEM PM_{2.5} continuous, PM_{10-2.5}, Speciated PM_{2.5}, wind speed, wind direction, ambient temperature and relative humidity. The NCore site is the location for MDEQ's urban PM₁₀ sampling, as well as urban lead sampling. However, MDEQ will no longer monitor for lead after June 30, 2016.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4.5 meters above ground level and 40 meters, east, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
- **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.
- **Jackson Metro** (Hinds Co. 28.049.0021) – A FRM PM_{2.5} sampler, a continuous PM_{2.5} sampler and an ozone monitor is required and operated in this MSA.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4.5 meters above ground level and 247 meters, northeast, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.
- **PM₁₀ Sampling** – PM₁₀ sampling for the Jackson metro area is based on the sampling requirements for population in Appendix D. The PM₁₀ samplers, both regular and collocated FRMs, are located at the Jackson NCore site.

3. Hattiesburg MSA:

- **Hattiesburg** (Forrest Co. 28.035.0004) – A FRM PM_{2.5} sampler, a collocated FRM PM_{2.5} sampler and a continuous PM_{2.5} sampler is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4 meters above ground level and 14 meters, northwest, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.

4. *Gulfport-Biloxi MSA:*

- **Gulfport** (Harrison Co. 28.047.0008) – A FRM PM_{2.5} sampler, a continuous PM_{2.5} sampler and an ozone monitor is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4.5 meters above ground level and 45 meters, east, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.
- **Waveland** (Hancock Co. 28.045.0003) – A FRM PM_{2.5} sampler, an ozone monitor and a met tower is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 5.5 meters above ground level and 24 meters, northwest, from the nearest road. The Live oak that was a concern has been removed and no other trees or obstacles impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.

5. *Pascagoula MSA:*

- **Pascagoula** (Jackson Co. 28.059.0006) – An ozone monitor, NO_x monitor, SO₂ monitor and a FRM PM_{2.5} sampler is operated at this site. The NO_x analyzer was designated as a RA-40 site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4.5 meters above ground level and 43 meters, northwest, from the nearest road. The Pine tree limbs that were within the dripline of the monitor inlet have been trimmed. No other trees or obstacles impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.

6. *Non- MSA Sites:*

- **Grenada** (Grenada Co. 28.043.0001) – A FRM PM_{2.5} sampler is operated at this site as a background monitor for PM_{2.5} as required by regulations.
 - **Site Approval Status:** Site and monitor meet all design criteria for the monitoring network. The sample inlet is about 2 meters above ground level and 50 meters, southeast, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.

- **Meridian** (Lauderdale Co. 28.075.0003) – An ozone analyzer is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4.5 meters above ground level and 22 meters, west, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.
- **Tupelo** (Lee Co. 28.081.0005) – An ozone analyzer is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4 meters above ground level and 14.5 meters, south, from the nearest road. There are no trees or obstacles that would impact the siting criteria for this site.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.
- **Cleveland** (Bolivar Co. 28.011.0001) - An ozone analyzer is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The sample inlet is about 4 meters above ground level and 29 meters, south, from the nearest road. The River birch tree has been removed. The tree to the west of the monitoring shelter is 26 meters, and the dripline is approximately 15 meters away from the probe inlet. During the 2015 TSA, there was concern that the tree may impede the wind flow arc. However, during a conversation with the EPA on May 3, it was determined this tree is not an obstacle and no further action is necessary.
 - **Sampling train:** The probe tubing is FEP and the fittings are PFA. The stainless steel fitting at the funnel has been drilled and the FEP tubing pushed through the fitting and extends into the funnel.

IV. NCore Tables:

NCore Site Table

AQS ID	MSA	Site Name	County	City	Latitude	Longitude	Street Address	Elevation (meters)	Site start date	Location Setting
28-049-0020	Jackson	Jackson NCore	Hinds	Jackson	32.19.45	90.10.58	232 E Woodrow Wilson	93	7/01/2013	Urban and city center

NCore Parameter Table

Parameter	Monitoring Objective	Measurement Scale	Designation	Type	Method	Schedule	Comment
CO	Pop. Exp.	Neighborhood	NCORE	Continuous Analyzer	Non-Dispersive IR	Jan-Dec	
NO_y	Pop. Exp.	Neighborhood /Urban	NCORE	Continuous Analyzer	Chemiluminescence	Jan-Dec	
O₃	Pop. Exp.	Neighborhood /Urban	NCORE	Continuous Analyzer	UV Photometry	Jan-Dec	
SO₂	Pop. Exp.	Neighborhood	NCORE	Continuous Analyzer	UV fluorescence	Jan-Dec	
FRM PM_{2.5}	Pop. Exp	Neighborhood	NCORE	Manual Reference Sampler(3 Day)	Gravimetric Analysis	Jan-Dec	
FEM PM_{2.5}	Pop. Exp	Neighborhood	NCORE	Continuous Analyzer	Gravimetric	Jan-Dec	TEOM
PM_{2.5} Speciation	Pop. Exp	Neighborhood	NCORE	Manual Sampler (3 Day)	Multiple Methods	Jan-Dec	
PM coarse	Pop. Exp	Neighborhood	NCORE	Manual Sampler (3 Day)	Difference by Gravimetric Analysis	Jan-Dec	
Meteorological	--	--	NCORE	--	Wind speed, direction, ambient temperature, humidity	Jan-Dec	
Lead	Pop. Exp	Urban	NCORE	Manual sampler (6 Day)	Manual Method via PM 10	Jan-Dec	Required for the metro area 500,000+
PM₁₀	Pop. Exp	Urban	SLAMS	Manual Reference Sampler(6 Day)	Gravimetric Analysis	Jan-Dec	Required for the metro area 500,000+, non NCore
Radiation	Pop. Exp	Urban	Rad Net	Continuous / manual		Jan-Dec	Non NCore

V. Network Tables:

NETWORK DESIGN TABLES MISSISSIPPI

PM₁₀

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule	Comment
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Urban	1	Y	Manual (6 Day)	126	Jan-Dec	At NCore Site

PM_{2.5}

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule
Hernando	DeSoto	Memphis	28-033-0002	Transport	Urban	1	Y	Manual (3 Day) Continuous	145 SEQ 702 TEOM	Jan-Dec Jan-Dec
Hattiesburg	Forrest	Hattiesburg	28-035-0004	Pop. Exp.	Neighborhood	1	Y	Manual (3 Day) Continuous	145 SEQ 702 TEOM	Jan-Dec Jan-Dec
Grenada	Grenada	N/A	28-043-0001	Background	Neighborhood	1	N	Manual (3 Day)	145 SEQ	Jan-Dec
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Neighborhood	0	N	Manual (3 Day)	145 SEQ	Jan-Dec
Gulfport	Harrison	Gulf/Biloxi	28-047-0008	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	145 SEQ 702 TEOM	Jan-Dec Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	N	Manual (3 Day)	145 SEQ	Jan-Dec
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	145 SEQ 702 TEOM	Jan-Dec Jan-Dec
Jackson	Hinds	Jackson	28-049-0021	Pop. Exp.	Neighborhood	1	N	Manual (3 Day) Continuous	145 SEQ 702 TEOM	Jan-Dec Jan-Dec

Comments: All manual samplers are FRM and classified as SLAMS. The continuous samplers are non FEM.

SO₂

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	Continuous	600	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	Continuous	060	Jan-Dec

Comments: All monitors are classified as SLAMS

NO_x/NO_y

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood /Urban	1	Continuous	599	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	Continuous	200	Jan-Dec

Comments: All monitors are classified as SLAMS

CO

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	Continuous	055	Jan-Dec

OZONE

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Type	Method	Schedule
Cleveland	Bolivar	N/A	28-011-0001	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Gulfport	Harrison	Gulf/Biloxi	28-047-0008	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Hernando	DeSoto	Memphis	28-033-0002	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson	Hinds	Jackson	28-049-0021	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Urban	1	Continuous	UV Absorp	Jan - Dec
Meridian	Lauderdale	N/A	28-075-0003	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Urban	1	Continuous	UV Absorp	Mar - Oct
Tupelo	Lee	N/A	28-081-0005	Pop. Exp.	Urban	0	Continuous	UV Absorp	Mar - Oct

Comments: All monitors are classified as SLAMS

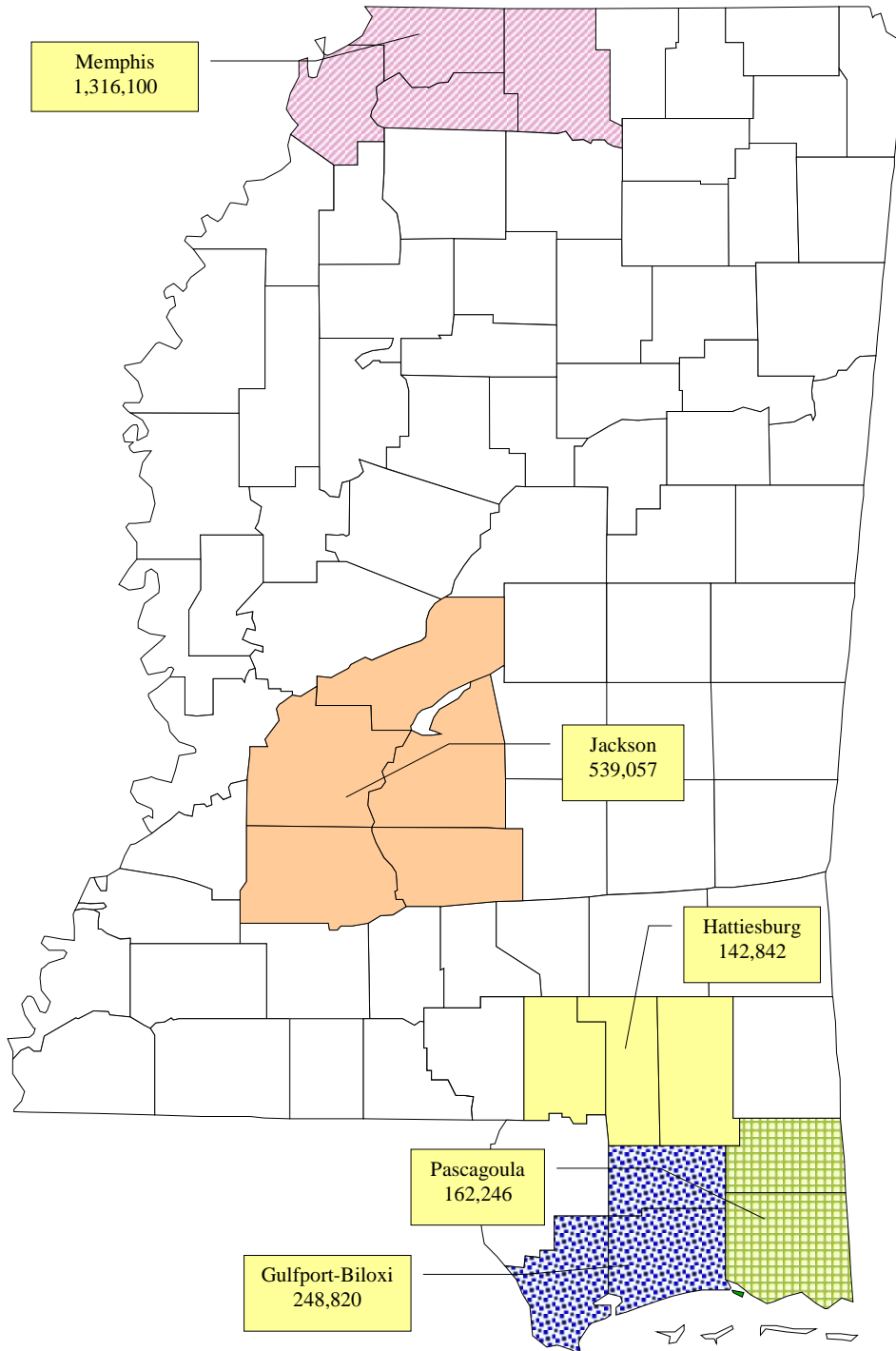
LEAD

Location	County	MSA	AQS ID	Monitoring Objective	Measurement Scale	MSA Min Required	Collocated	Type	Method	Schedule	Comment
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Urban	1	Y	Manual (6 Day)	809	Jan-Dec	At NCore Site

Site Location Coordinates

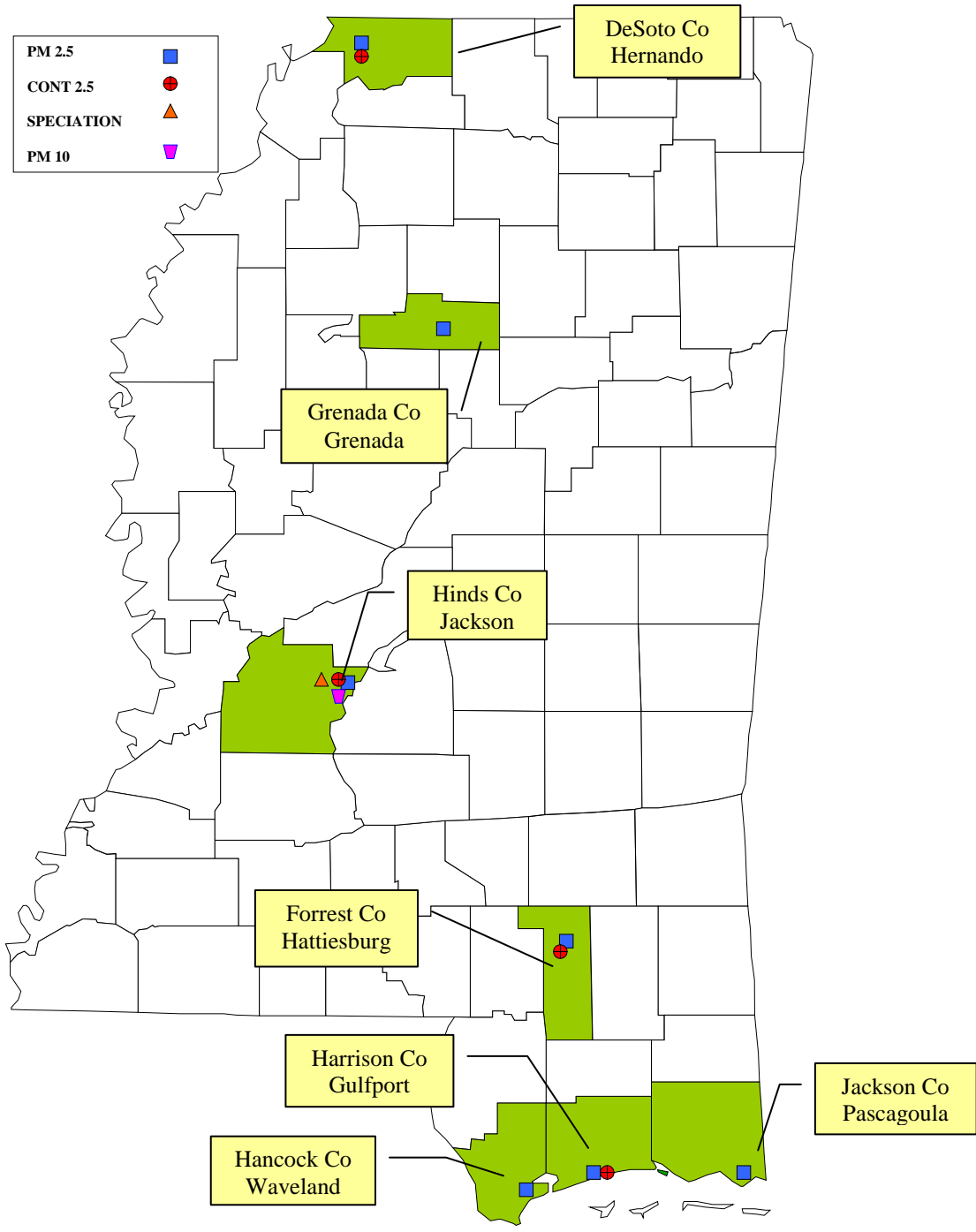
#	SITE ID	LAT	LONG	NAME	COUNTY	ADDRESS
1	28-011-0001	33 44 45	90 43 23	CLEVELAND	BOLIVAR	213 North Bayou Ave.
2	28-033-0002	34 49 14	89 59 16	HERNANDO	DESOTO	5 East South St.
3	28-035-0004	31 19 26	89 17 32	HATTIESBURG	FORREST	101 Ferguson St.
4	28-043-0001	33 50 4	89 47 34	GRENADA	GRENADA	Hwy 332 at Grenada Airport
5	28-045-0003	30 18 4	89 23 45	WAVELAND	HANCOCK	400 Baltic St.
6	28-047-0008	30 23 24	89 2 59	GULFPORT YC	HARRISON	47 Maples Dr.
7	28-049-0021	32 19 14	90 10 50	HINDS CC	HINDS	3925 Sunset Dr.
8	28-049-0020	32 19 45	90 10 58	JACKSON NCore	HINDS	232 E Woodrow Wilson
9	28-059-0006	30 22 41	88 32 2	PASCAGOULA	JACKSON	Hospital Rd. and Vega St.
10	28-075-0003	32 21 52	88 43 53	MERIDIAN	LAUDERDALE	Hwy 19 and 53rd Ave.
11	28-081-0005	34 15 54	88 45 58	TUPELO	LEE	West Jackson at Tupelo Airport

MSA MAP:

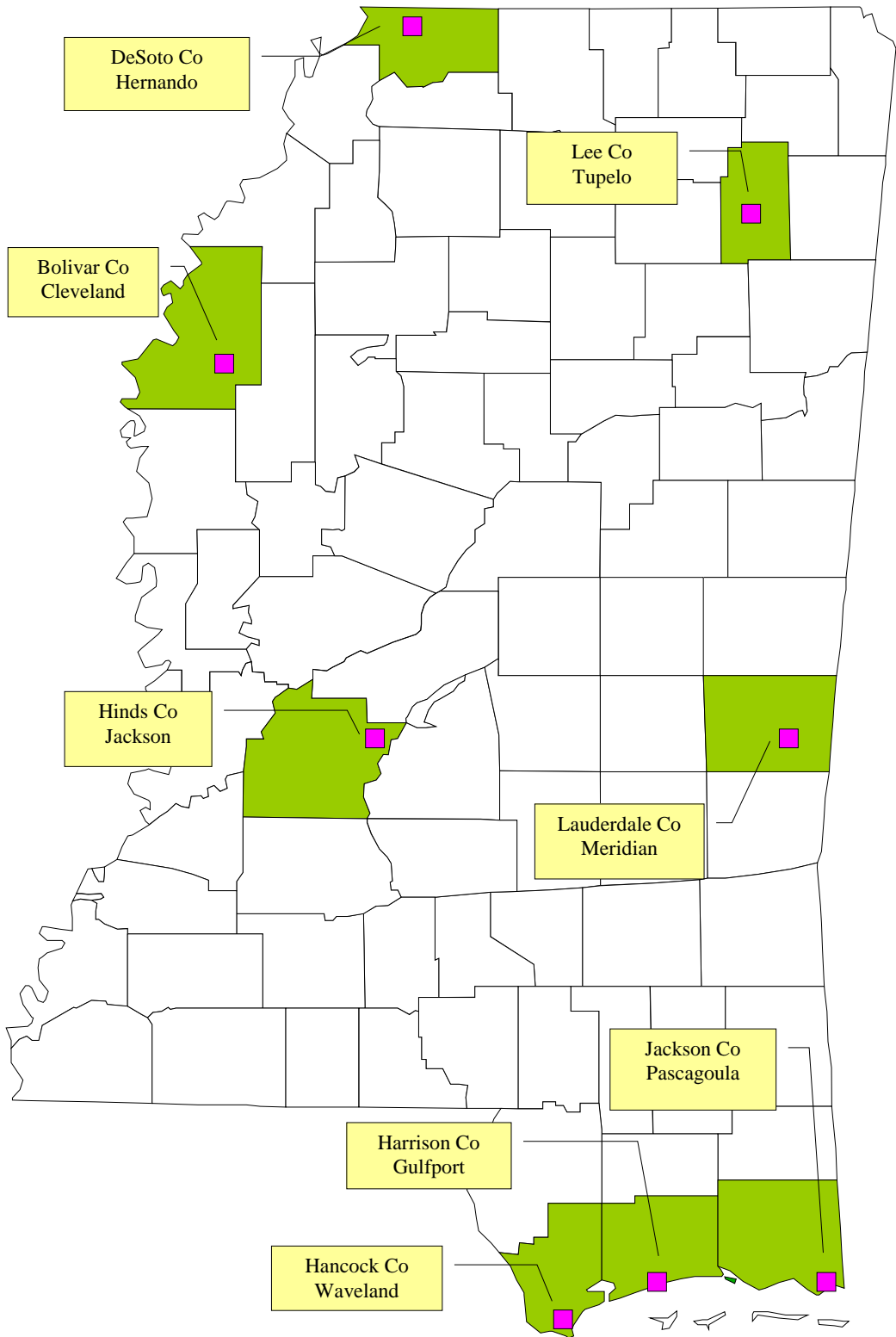


MISSISSIPPI MSA AREAS

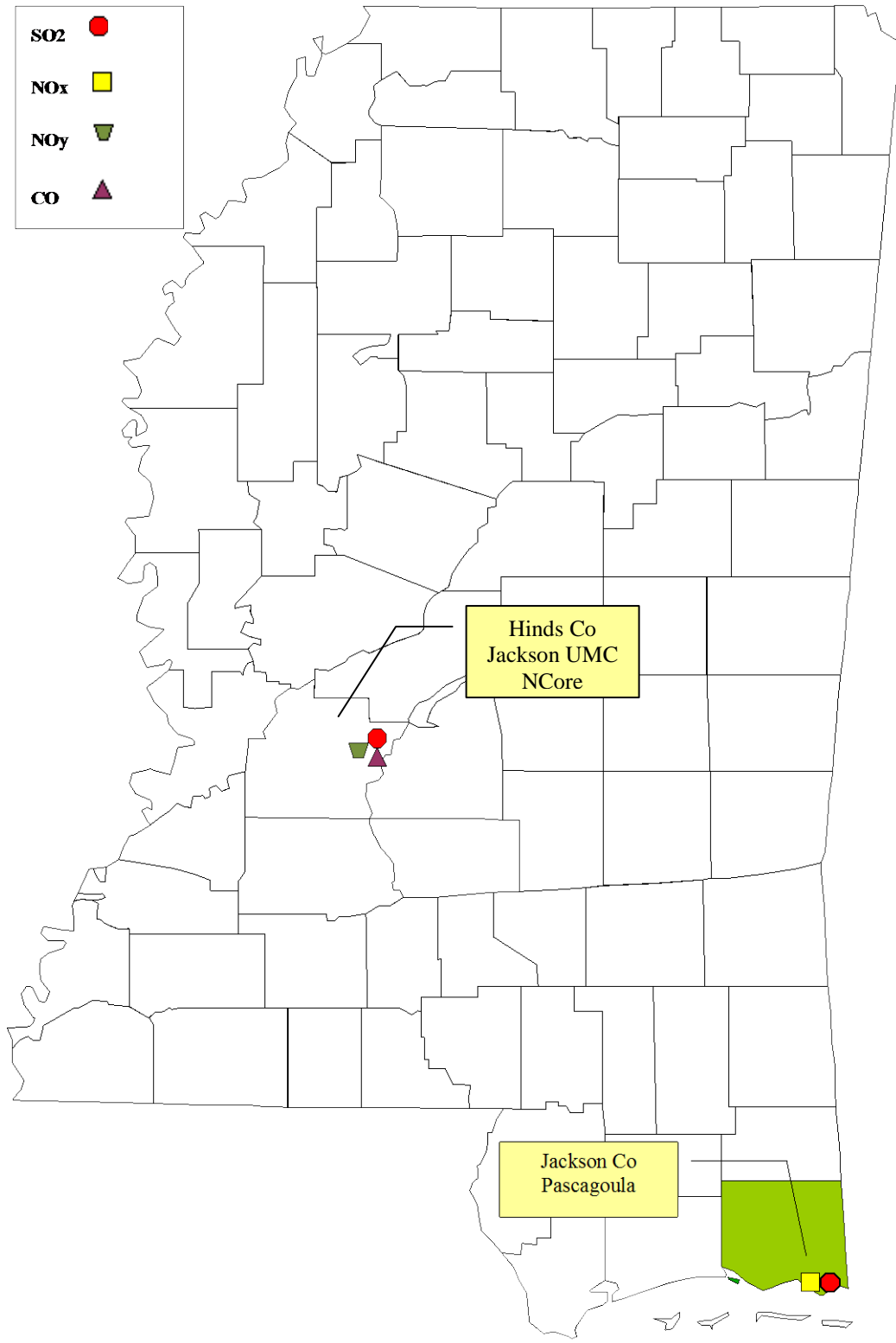
- MEMPHIS – DeSoto, Tunica, Marshall, Tate
- JACKSON – Hinds, Rankin, Copiah, Simpson, Madison
- HATTIESBURG – Lamar, Forrest, Perry
- GULFPORT-BILOXI – Hancock, Harrison, Stone
- PASCAGOULA – Jackson, George



MDEQ PARTICULATE SITES – 2016



MDEQ OZONE SITES - 2016



MDEQ SO2 / NOx/ NOy/ CO SITES - 2016

Appendix I
Site Maps and Photos



Cleveland - N



Cleveland - E



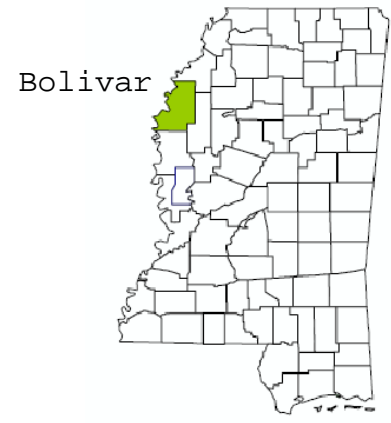
Cleveland - S



Cleveland - W



Cleveland 28-011-0001

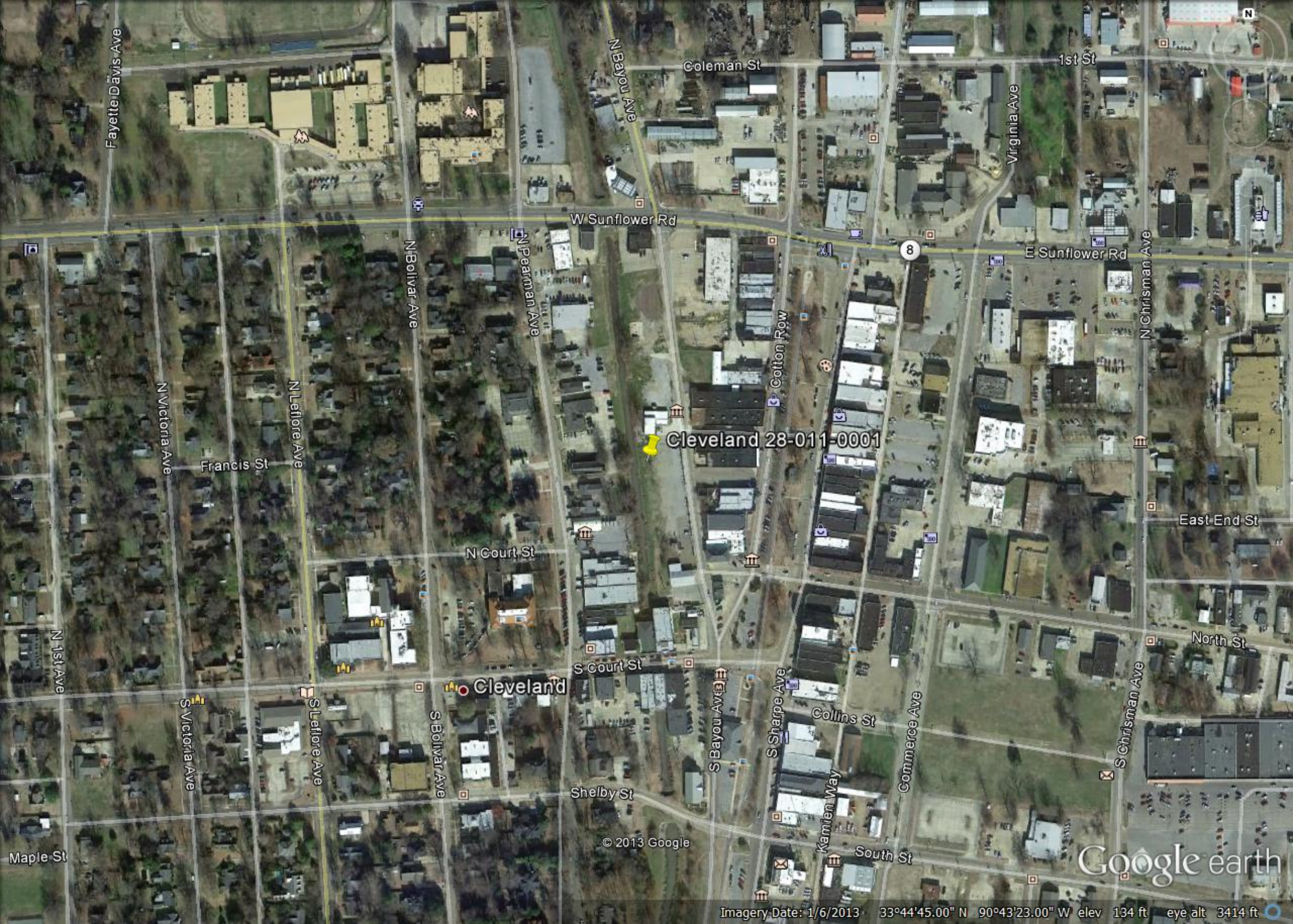


Delta State Golf Course

Delta State University

Cleveland
28-011-0001

61 278



Fayette Davis Ave

Coleman St

1st St

N Bayou Ave

Virginia Ave

W Sunflower Rd

E Sunflower Rd

N Bolivar Ave

N Pearman Ave

Cotton Row

N Chrisman Ave

N Victoria Ave

N Leflore Ave

Francis St

Cleveland 28-011-0001

East End St

N Court St

N 1st Ave

North St

S Court St

Cleveland

S Victoria Ave

S Leflore Ave

S Bolivar Ave

S Bayou Ave

S Sharpe Ave

Collins St

Commerce Ave

S Chrisman Ave

Shelby St

Kamien Way

South St

© 2013 Google

Google earth

Imagery Date: 1/6/2013 33°44'45.00" N 90°43'23.00" W elev 134 ft eye alt 3414 ft



Grenada - N



Grenada - E



Grenada - S



Grenada - W



Grenada 28-043-0001



Grenada

LIVE TRAFFIC

MAP

SATELLITE



55 7

Grenada 28-043-0001

GRENADA MUNICIPAL AIRPORT



Geeslin Corner

Memphis Junction

2000ft
500m

mapquest



Grenada 28-043-0001

Boone Airport Rd

333

Mississippi 333 Scenic Loop

Old Hwy 7

332

Google earth



Hernando - N



Hernando - E



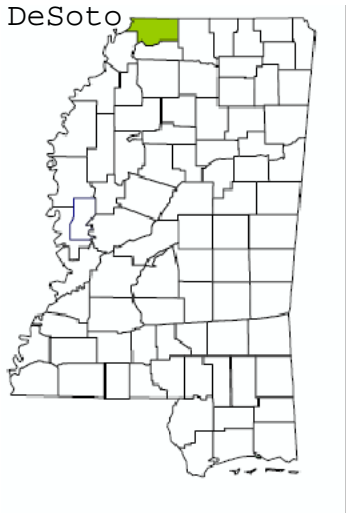
Hernando - S

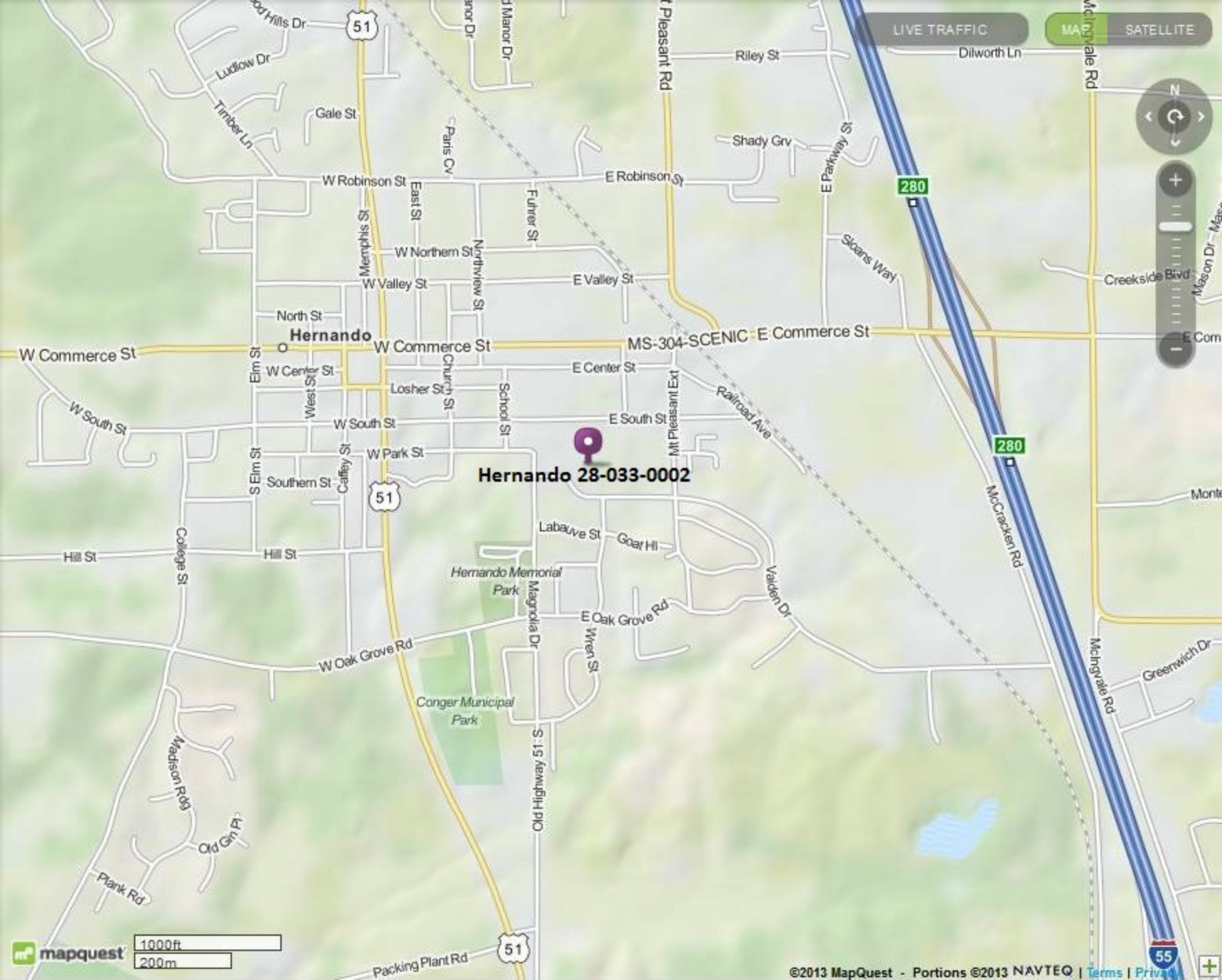


Hernando - W



Hernando 28-033-0002





LIVE TRAFFIC

MA

SATELLITE

51

280

280

Hernando

Hernando 28-033-0002

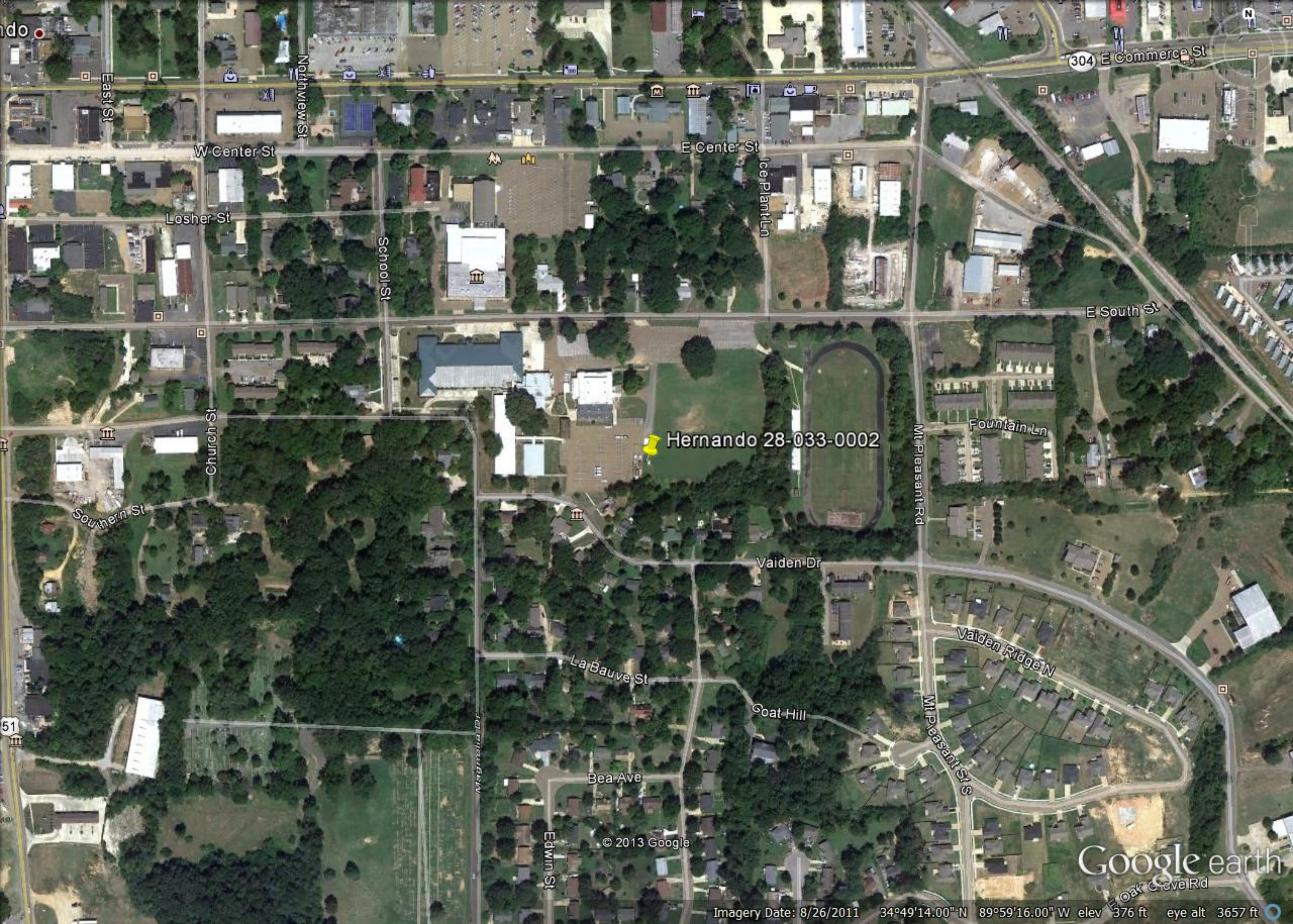
51

55

mapquest

1000ft

200m



Hernando 28-033-0002

© 2013 Google

Google earth

Imagery Date: 8/26/2011 34°49'14.00" N 89°59'16.00" W elev 376 ft eye alt 3657 ft

4/2014



Hernando Site

Replacement Shelter



Existing Monitoring Shelter





Tupelo - N



Tupelo - E



Tupelo - S



Tupelo - W



Tupelo 28-081-0005



Lee

LIVE TRAFFIC

MAP

SATELLITE



N Coley Rd

TUPELO REGIONAL AIRPORT

Tupelo 28-081-0005

Lemons Dr

W Jackson St Ext

Gun Club Rd

Winchester Ck

Mahogany Dr

Holly Hill Dr

Beechnut St

Elderberry St

Birch St

Spruce St

Sycamore St

Rosewood Dr

Bay Cir

Evergreen St

Redbud Ln

Poplarville St

Robindale Dr

W Jackson St

Natchez Trace Pky

Arlington Dr

Alpine St

Albany St

Leighton Dr

Patterson Dr

W Bristow Dr

Vassar Dr

James Dr

Crabapple Dr

Lana Ln

Holmes St

N Lone St

Ruth St

Rhenda St

S Joann St

Danny St

N Thomas St

Winfield Dr

Hillfield Cv

Park Gate Dr

W Main St

Woods St

Narney Dr

Torrey St

S Foster St

Air Park Rd

Old Runway Rd

Orville Wright St

Wilbur Wright St

Convention D

278 6

mapquest

1000ft
200m



W Jackson St Street Extended

Mahogany Dr

Sourwood Dr

Persimmon Dr

Huckleberry Trail

Bay Cir

Beechnut St

Redbud Ln

Hickory Dr

Evergreen St

Elderberry St

Holly Hill Dr

Poplarville St

W Jackson St

Lemons Dr

Coley Rd

A Park Rd

Tupelo 28-081-0005

© 2013 Google

Google earth

Imagery Date: 10/28/2012 34°15'56.88" N 88°45'50.19" W elev 342 ft eye alt 5372 ft



Meridian - N



Meridian - E



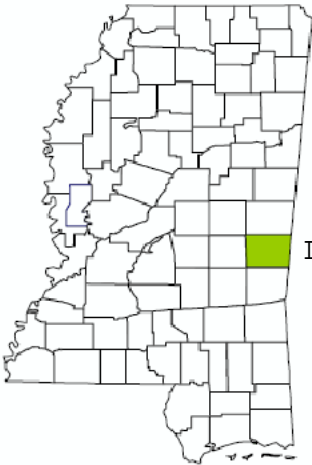
Meridian - S



Meridian - W



Meridian 28-075-0003



Lauderdale

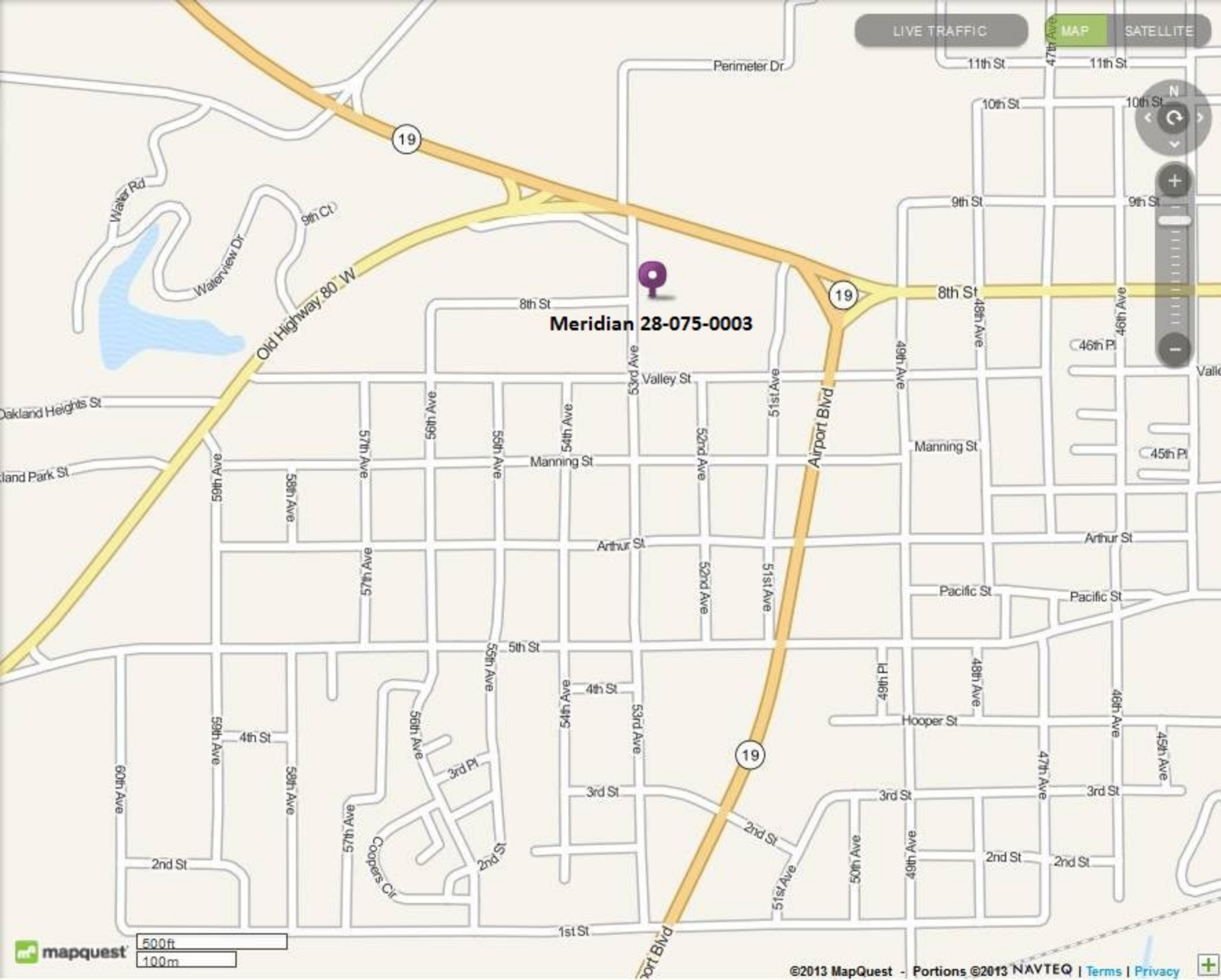
LIVE TRAFFIC

MAP

SATELLITE



Meridian 28-075-0003



mapquest

500ft
100m





Meridian 28-075-0003

Old Hwy 80 W

Hwy 19 N

40th St

9th St

8th St

Vally St

Valley St

48th Ave

49th Ave

51st Ave

Manning St

52nd Ave

53rd Ave

54th Ave

55th Ave

56th Ave

© 2013 Google

Google earth

Imagery Date: 10/16/2011 32°21'51.31" N 88°43'50.66" W elev 360 ft eye alt 3049 ft



Jackson NCore - N



Jackson NCore - E



Jackson NCore - S

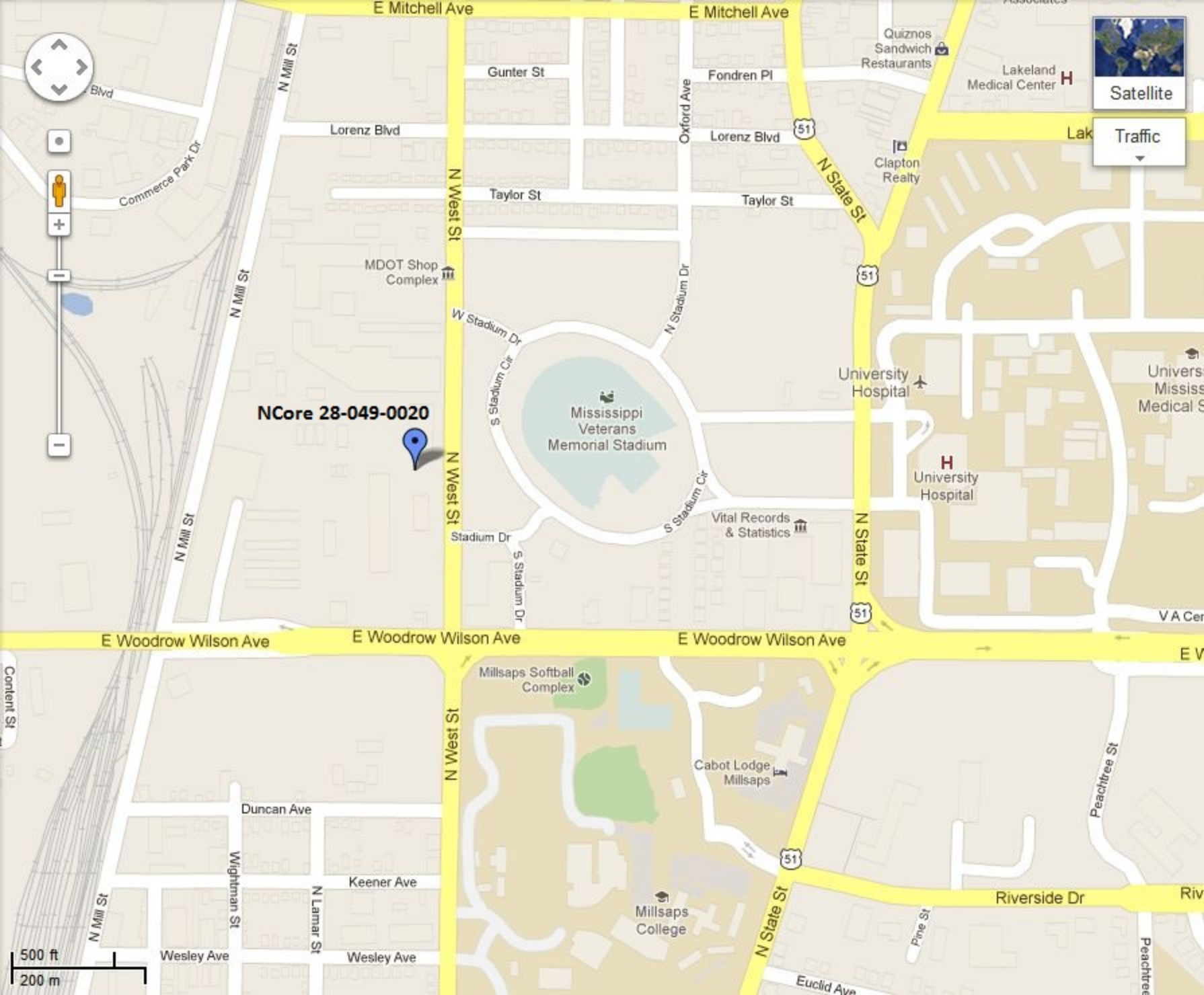


Jackson NCore - W



Jackson NCore 28-049-0020





NCore 28-049-0020



Mississippi Veterans Memorial Stadium

University Hospital

Millsaps College





NCore 28-049-0020

W Woodrow Wilson Ave

Service St

E Woodrow Wilson Ave

N West St

N Mill St

Stadium Dr

S Stadium Dr

S Stadium Ct

N Stadium Dr

E Stadium Dr

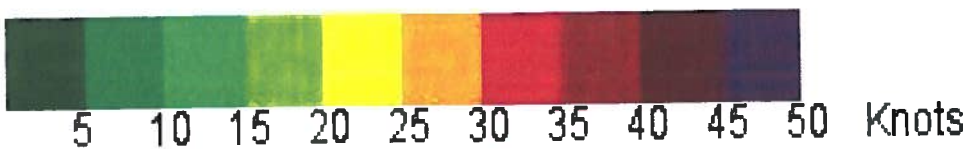
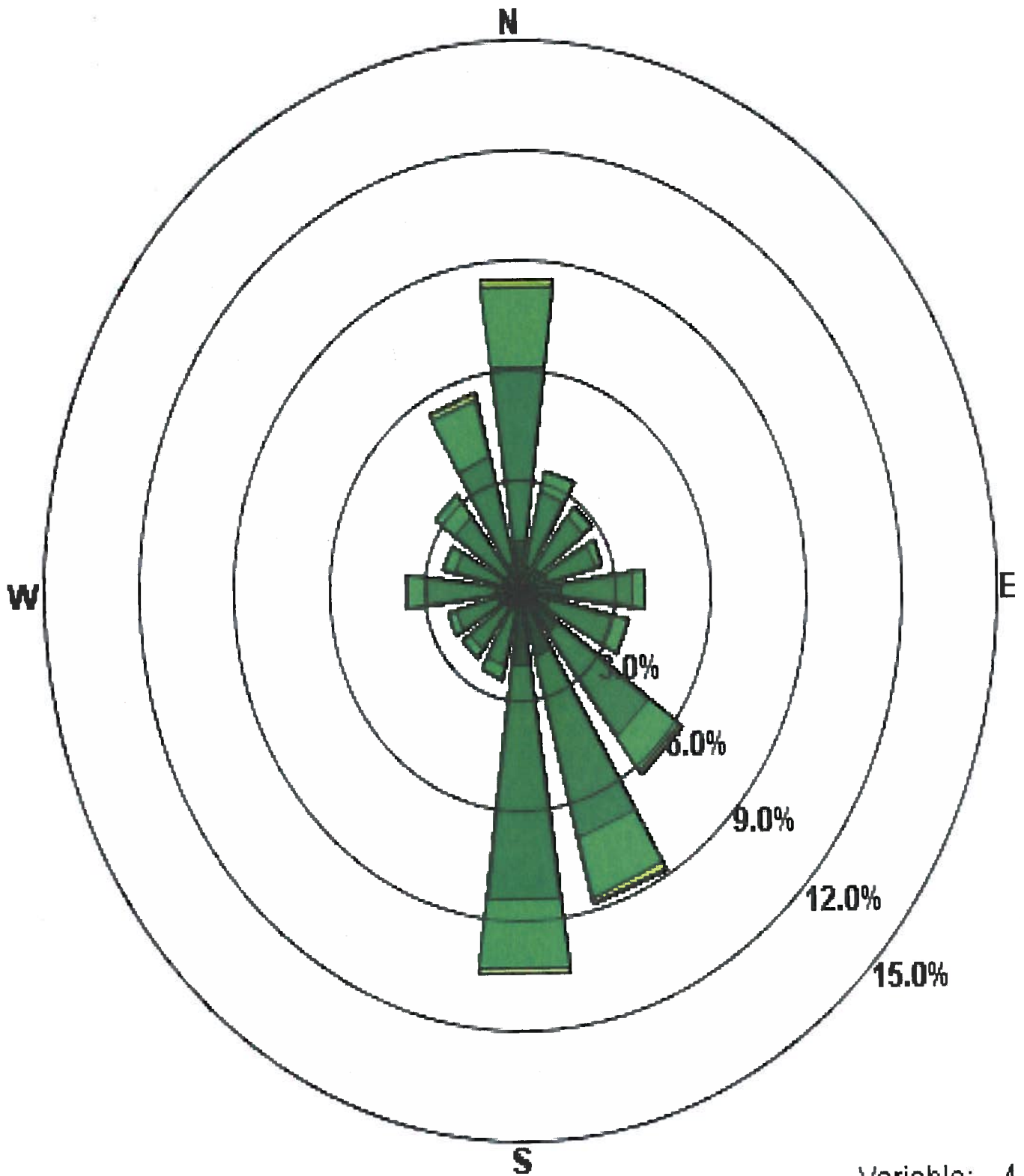
© 2013 Google

Google earth

Imagery Date: 12/20/2012 32°19'44.80" N 90°10'57.80" W elev 337 ft eye alt 3618 ft

JACKSON/ALLEN C. TH

30-year summary: 1980 - 2009



Variable: 4.4%
Calm: 21.5%
Mean: 5.6 KT



Hinds CC - N



Hinds CC - E



Hinds CC - S

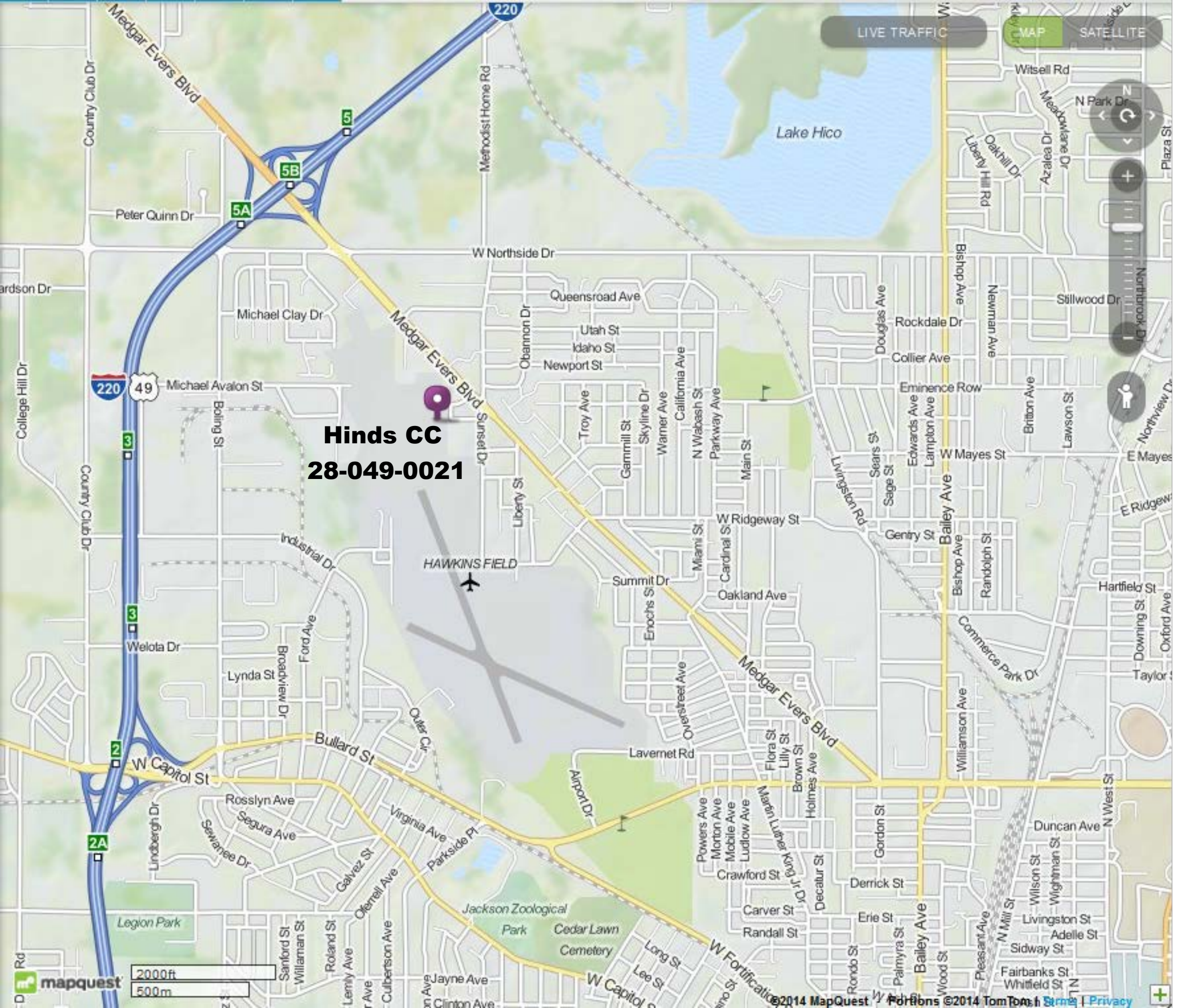


Hinds CC - W



Hinds CC 28-049-0021





Hinds CC
28-049-0021



Hinds CC 28-049-0021 Coleman Ave

Obannon Dr

Skyline Dr

Skyview Dr

Medgar Evers Blvd

Sunset Dr

Ivanhoe Ave

Liberty St

© 2015 Google

Google earth

Kimball Ave

1992

Imagery Date: 4/9/2014 32°20'46.15" N 90°13'26.20" W elev 369 ft eye alt 2348 ft



Gulfport - N



Gulfport - E



Gulfport - S



Gulfport - W



Gulfport 28-047-0008



LIVE TRAFFIC

MAP

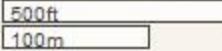
SATELLITE

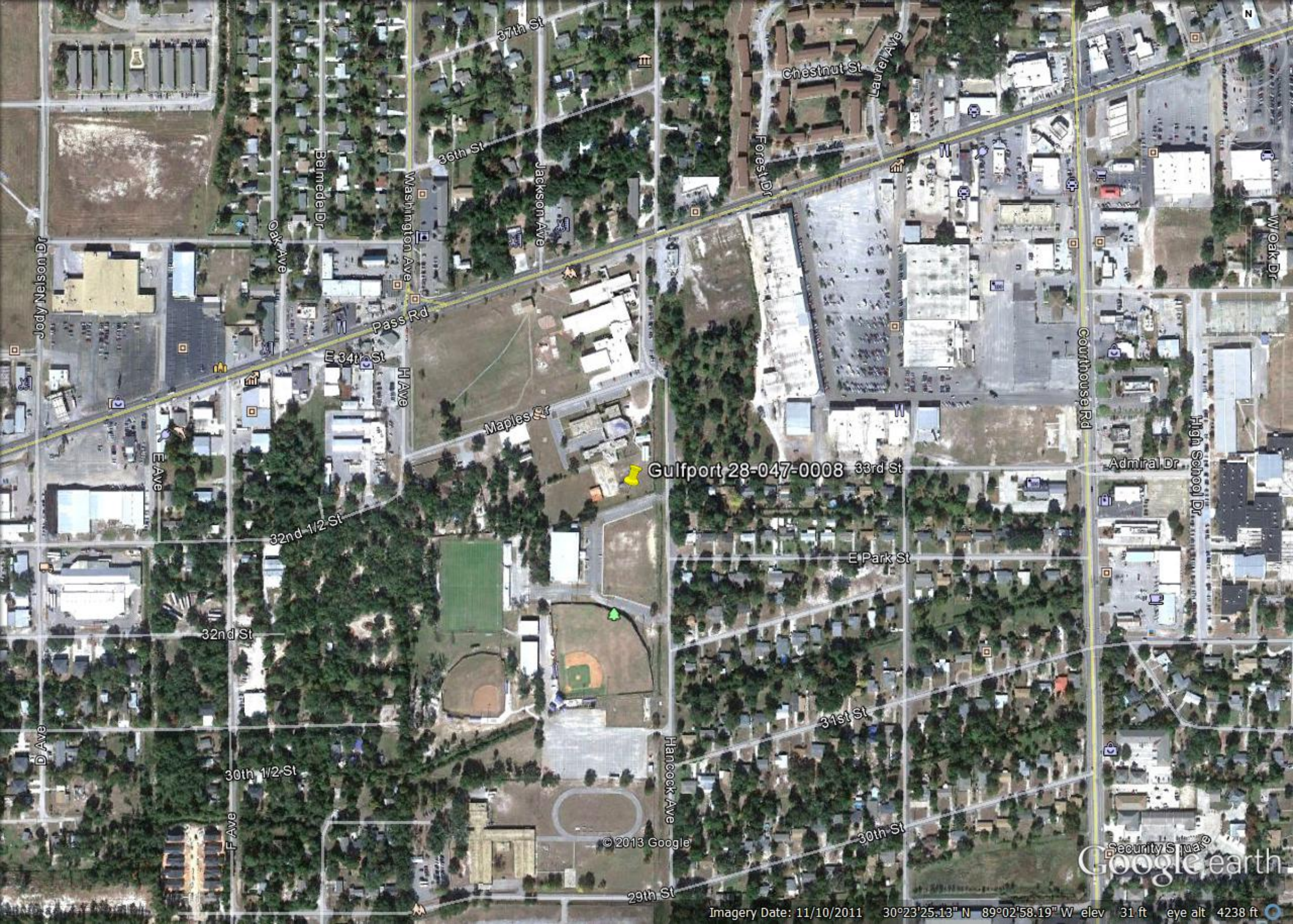


Gulfport 28-047-0008



mapquest





Jody Nelson Dr

Oak Ave

Bermede Dr

37th St

36th St

Washington Ave

Jackson Ave

Chestnut St

Laurel Ave

Forest Dr

Pass Rd

E 34th St

H Ave

Maples Dr

Gulfport 28-047-0008

33rd St

32nd 1/2 St

Admiral Dr

High School Dr

E Park St

32nd St

D Ave

30th 1/2 St

F Ave

Hancock Ave

31st St

30th St

29th St

W Oak Dr

Courthouse Rd

© 2013 Google

Security S...
Google earth



Waveland - N



Waveland - E



Waveland - S



Waveland - W



Waveland 28-045-0003

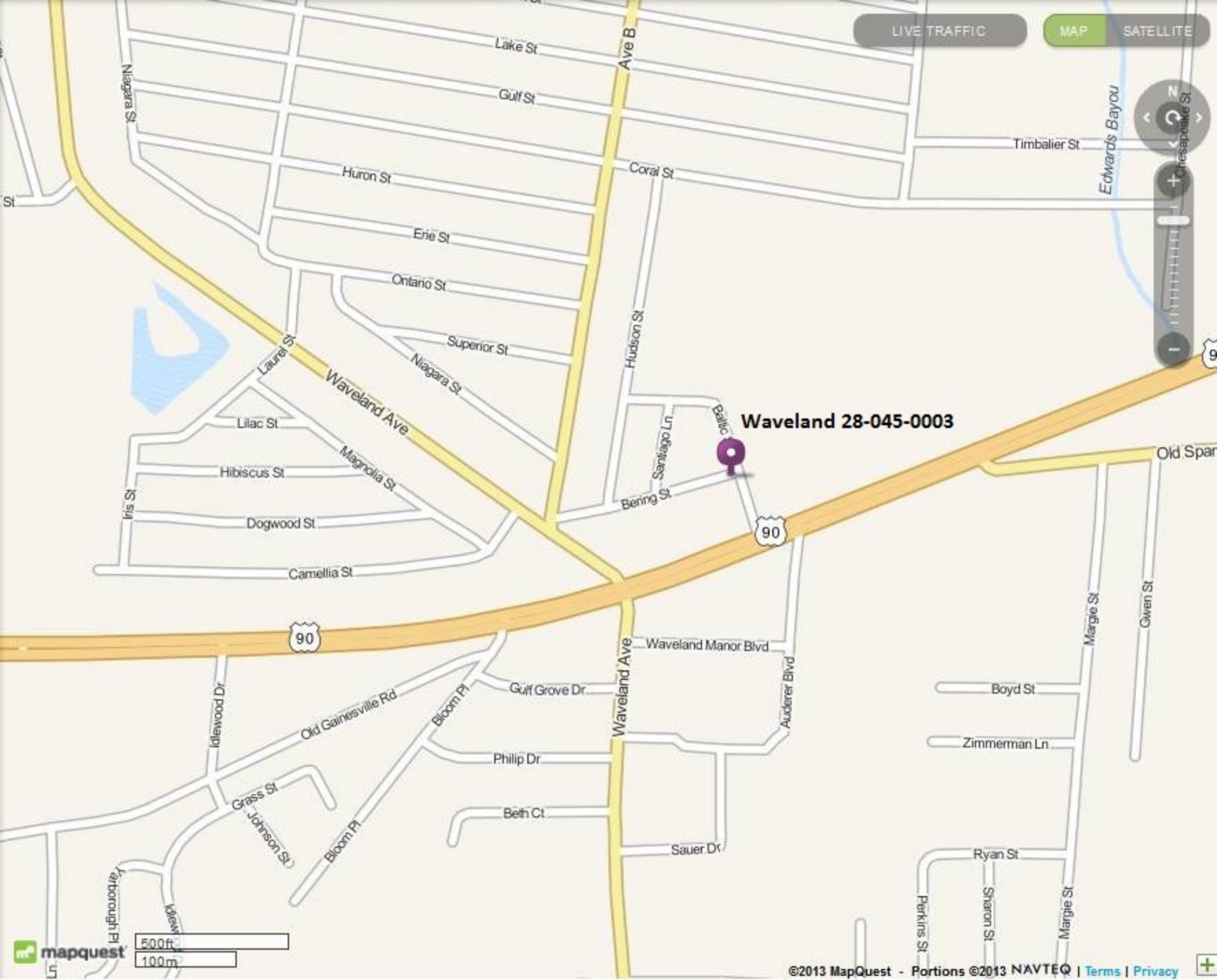


Hancock

LIVE TRAFFIC

MAP

SATELLITE



Waveland 28-045-0003

90

90

mapquest

500ft
100m

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Waveland 28-045-0003

Chesapeake St

90

Google earth

© 2013 Google

Imagery Date: 10/29/2012 30°18'00.19" N 89°23'48.53" W elev 15 ft eye alt 4704 ft

D Ave

Huron St

Coral St

Erie St

Ontario St

Niagara St

Superior St

B Ave

Hudson St

Laurel St

Lilac St

Magnolia St

Hibiscus St

Dogwood St

Camellia St

Ave B

Waveland Kin Rd

Bering St

Santiago Ln

Baltic

Old Gainsville Rd

Lower Bay Rd

Wilcox Blvd

Auderer Blvd

East

Zimmerman St

Philip Dr

Beth Ct

Waveland Ave

Sauer Dr

Monroe St

Ryan St

Perkins St

Sharon St

Margie St

Gwen Ave

Idlewood Dr

Johnson St

Grass St



Pascagoula - N



Pascagoula - E



Pascagoula - S



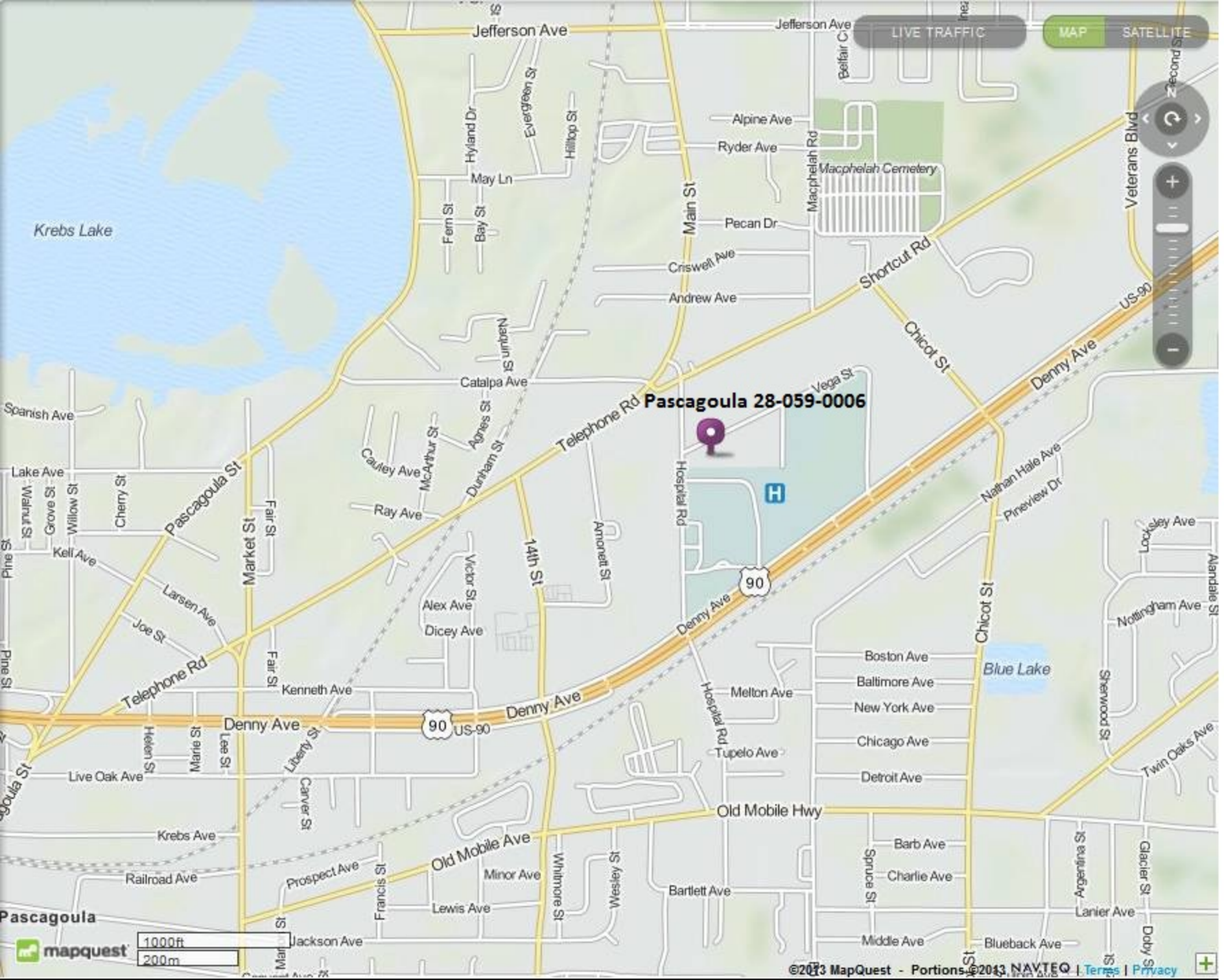
Pascagoula - W



Pascagoula 28-059-0006



Jackson



LIVE TRAFFIC

MAP

SATELLITE

Krebs Lake

Pascagoula 28-059-0006

90

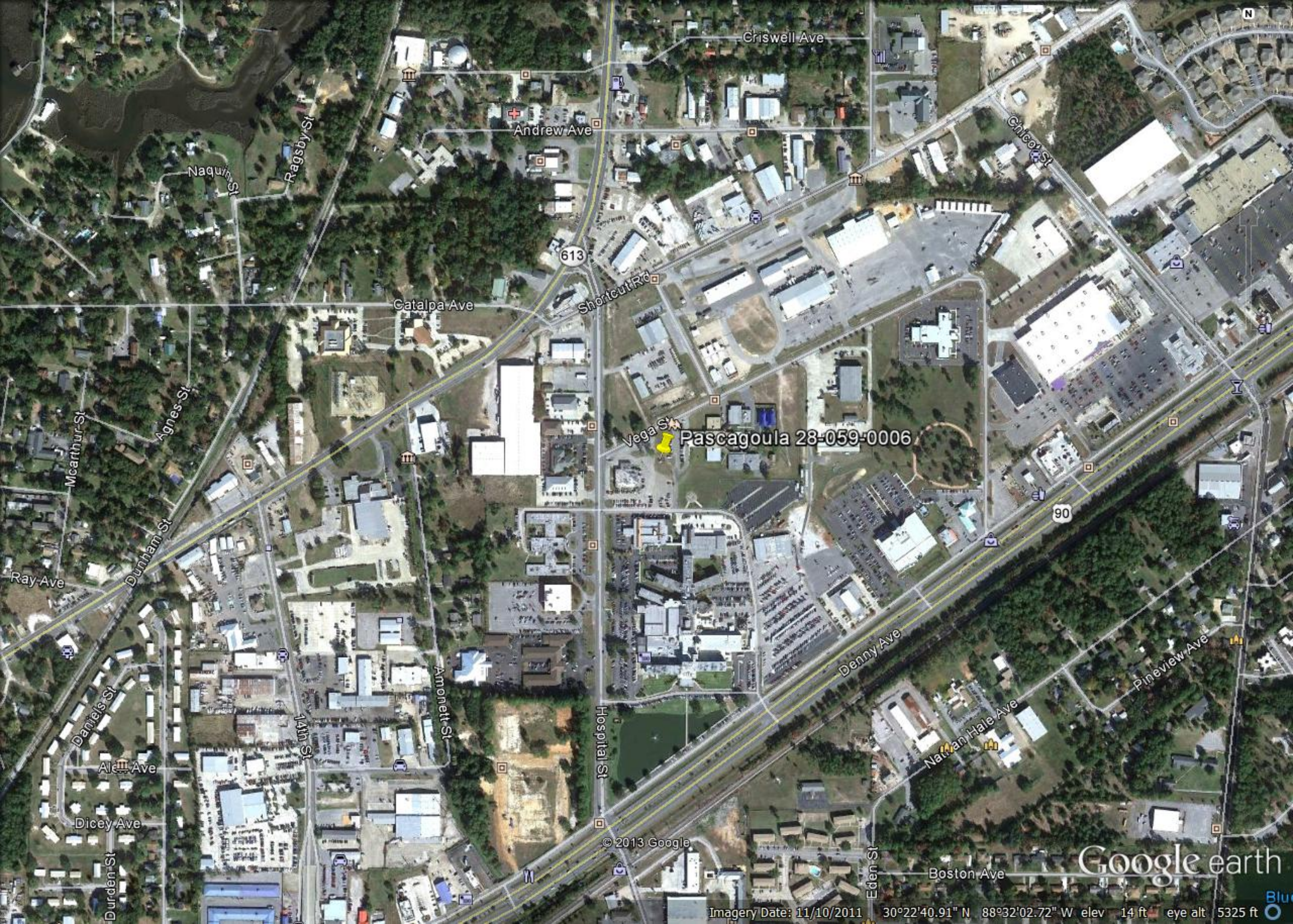
90

Blue Lake

mapquest

1000ft
200m

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Criswell Ave

Andrew Ave

Naquia St

Ragsby St

613

Catalpa Ave

Shortcut Rd

Chico St

Vega St

Pascagoula 28-059-0006

90

Mcarthur St

Agnes St

Dunham St

Ray Ave

Daniels St

Alc Ave

Dacey Ave

Durden St

14th St

Amonett St

Hospital St

Denny Ave

Nathan Hale Ave

Pineview Ave

Boston Ave

Eden St

© 2013 Google

Google earth

Imagery Date: 11/10/2011 30°22'40.91" N 88°32'02.72" W elev 14 ft eye alt 5325 ft



Hattiesburg – N



Hattiesburg – E



Hattiesburg - S



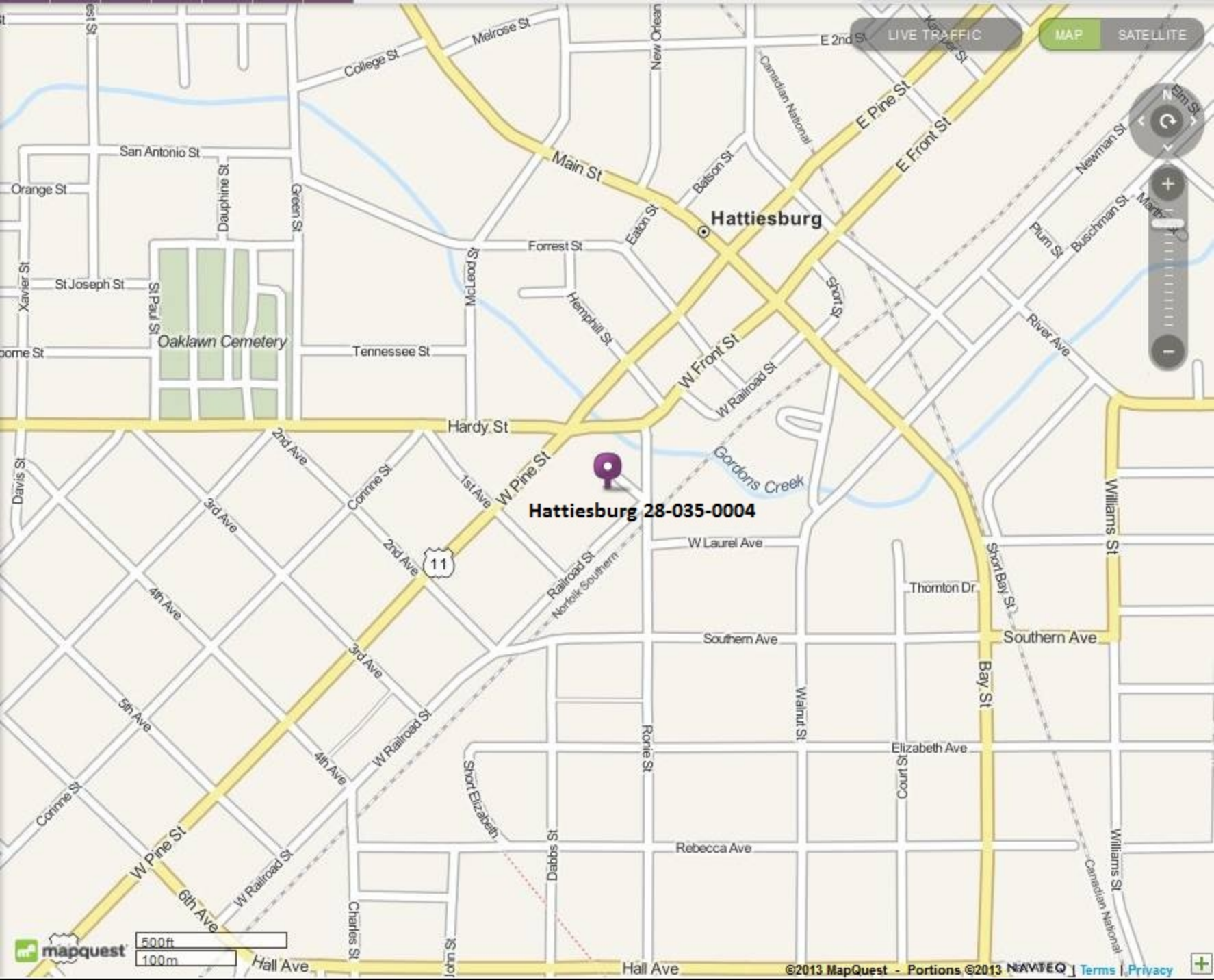
Hattiesburg – W



Hattiesburg 28-035-0004



Forrest



LIVE TRAFFIC

MAP

SATELLITE

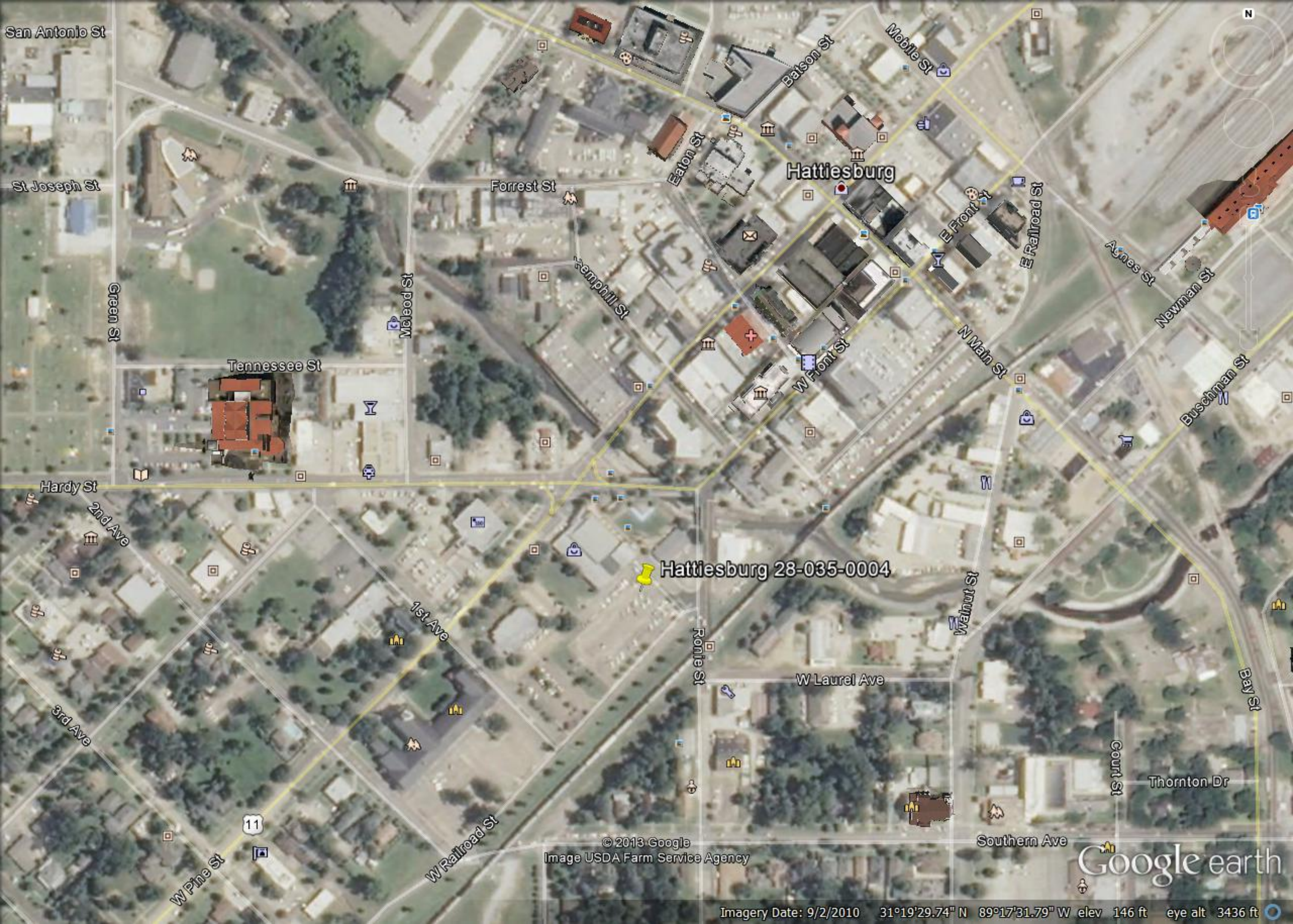
Hattiesburg

Hattiesburg 28-035-0004

mapquest

500ft
100m

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Hattiesburg 28-035-0004

© 2013 Google
Image USDA Farm Service Agency

Google earth

Imagery Date: 9/2/2010 31°19'29.74" N 89°17'31.79" W elev 146 ft eye alt 3436 ft

Appendix II

Regional Monitoring Agreement



SHELBY COUNTY HEALTH DEPARTMENT



MARK H. LUTTRELL, JR.
MAYOR

ALISA R. HAUSHALTER, DNP, RN
DIRECTOR

HELEN MORROW, MD, MPA
HEALTH OFFICER

Public Health
Prevent. Promote. Protect.

March 28, 2016

Mr. Robert Brawner, Environmental Fellow
Tennessee Department of Environment and Conservation
Air Pollution Control Division
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Ave., 15th Floor
Nashville, TN 37243-1531

Mr. Jason Stephens, Environmental Manager
Tennessee Department of Environment and Conservation
Air Pollution Control Division
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Ave., 15th Floor
Nashville, TN 37243-1531

Mr. Dallas Baker, P.E., BCEE, Air Director
Mississippi Department of Environmental Quality
Office of Pollution Control, Air Division
P.O. Box 2261
Jackson, MS 39201

Mr. Stuart Spencer, Chief of the Air Division
Arkansas Department of Environmental Quality
5301 Northshore Dr.
North Little Rock, AR 72118-5317

Dear All,

In accordance with the provisions of the Memorandum of Agreement (MOA) signed in May and June of 2008 between the Shelby County Health Department (SCHD), Mississippi Department of Environmental Quality (MDEQ) and the Arkansas Department of Environmental Quality (ADEQ), this letter serves as a notification that no changes have been made in our current network. Although we have not had any changes in the current plan, there will be modifications in the following year. We will be requesting to discontinue the CO monitor at the Alabama Station (47-157-0024), to shut down the PM 10 and collocated monitors at the Gas Service Center (47-157-0016), and to relocate the PM 2.5 monitor off the roof of Guthrie Clinic (47-157-0047) to the Alabama Station. These requests will be submitted and the changes will have to be approved by the EPA in the upcoming Network Plan.

Mission

To promote, protect and improve the health and environment of all Shelby County residents.

814 Jefferson Avenue ♦ Memphis, Tennessee 38105
(901) 222-9000

RECEIVED
APR - 4 2016
Dept. of Environmental Quality

If your agencies do not have current changes to the Network or may be contemplating changes in the near future, please notify the respective agencies of your intentions.

If you have any questions, please call me at (901) 222-9599.

Sincerely,

A handwritten signature in blue ink that reads "Robert Rogers". The signature is written in a cursive style with a large, prominent "R" at the beginning.

Robert Rogers, P.E. / Technical Manager
Pollution Control
Shelby County Health Department

**MEMORANDUM OF AGREEMENT
ON AIR QUALITY MONITORING FOR CRITERIA
POLLUTANTS FOR
THE MEMPHIS, TN- MS- AR
METROPOLITAN STATISTICAL AREA (MSA)**

Participating Agencies:

Shelby County Health Department (SCHD)
Air Pollution Control Program

Mississippi Department of Environmental Quality (MDEQ)
Office of Pollution Control, Air Division

Arkansas Department of Environmental Quality (ADEQ)

PURPOSE / OBJECTIVE / GOALS

The purpose of this Memorandum of Agreement (MOA) is to inform the entities of the Memphis, Tennessee-Mississippi-Arkansas Metropolitan Statistical Area of monitoring network changes. The MOA between SCHD, MDEQ, and ADEQ is to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less (PM 10), particles of an aerodynamic diameter of 2.5 micrometers and less (PM 2.5), and ozone; as well as other criteria pollutants air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will formalize and reaffirm the collective agreement in order to provide adequate criteria pollutant monitoring for the Memphis, TN-MS-AR MSA as required by 40 CFR 58 Appendix D, Section 2, (e).

PM 2.5 MSA monitoring network include:

<u>County</u>	<u>Federal Referenced Method PM 2.5</u>	<u>Continuous PM 2.5</u>	<u>Speciation PM 2.5</u>	<u>Co located PM 2.5</u>
Shelby County, TN SCHD	2	1	1	1
Crittenden County, AR ADEQ	1	1		
DeSoto County, MS MDEQ	1	1		1

Criteria Air Pollutant MSA monitoring network include:

<u>County</u>	<u>PM 10</u>	<u>O₃</u>	<u>NO_x/NO/NO₂</u>	<u>CO</u>	<u>SO₂</u>
Shelby County, TN SCHD	2	3	1 (includes 1 at the Near Road Station)	3 (includes 1 trace at NCORE and 1 trace at the Near Road Station)	1 (trace at NCORE)
Crittenden County, AR ADEQ		1	1		
DeSoto County, MS MDEQ		1			

RESPONSIBILITIES / ACTIONS

Each of the parties to this Agreement is responsible for ensuring that its obligations under the MOA are met. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected agency shall inform the other affected agencies via telephone or email of any monitoring changes occurring within its jurisdiction of the MSA at its earliest convenience, after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disasters, or any occurrences that result in an extended (greater than one quarter) or permanent change in the monitoring network.

LIMITATIONS

- All commitments made in this MOA are subject to the availability of appropriated funds and each agency's budget priorities. Nothing in this MOA obligates SCHD, MDEQ, or ADEQ to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.
- This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements that will be affected in writing by representatives of the parties.
- This MOA does not create any right or benefit enforceable by law or equity against SCHD, MDEQ, or ADEQ, their officers or employees, or any other person. This MOA does not apply to any entity outside SCHD, MDEQ, or ADEQ.
- No proprietary information or intellectual property is anticipated to arise out of this MOA.

TERMINATION

This Memorandum of Agreement may be revised upon the mutual consent of SCHD, MDEQ and ADEQ. Each party reserves the right to terminate this MOA. A thirty (30) day written notice must be given prior to the date of termination.