



MISSISSIPPI DEPARTMENT OF
ENVIRONMENTAL QUALITY

MONITORING NETWORK PLAN 2019

The MDEQ Air Division is receiving comments on the 2019 monitoring plan until June 30th 2018. Address comments to:

MJordan@mdeq.ms.gov



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I. Background:

Federal Regulations (40 CFR 58.10) require that State and Local Agencies operating an ambient air quality monitoring network shall review their air quality monitoring network 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 shall be available for public comment. MDEQ's Monitoring Network Plan is available on the MDEQ website at <http://www.deq.state.ms.us>.

The Monitoring Network review that is 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 <https://www.mdeq.ms.gov/air/air-quality-forecast/>. 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 08/13/14, while the Criteria Pollutants QAPP is dated 10/01/06. MDEQ has submitted an updated QAPP to EPA for review.

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 has installed eight FEM PM_{2.5} continuous monitors at sites across the state. MDEQ will report this data to AQS with no exclusion beginning January 01, 2019. 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) – MDEQ will discontinue the FRM PM_{2.5} and Collocated FRM PM_{2.5} monitor at this site. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site that is designated as a transport monitor and therefore is a required monitor. In addition, an ozone monitor is 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 of this agreement is attached (see Appendix II) and is on file at EPA Region 4.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone sample inlet is approximately 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.
- **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:

1. **Jackson NCore** (Hinds Co. 28.049.0020) – The NCore site contains a full complement of instruments, including meteorological. The monitoring parameters currently include Ozone, Sulfur Dioxide, Carbon Monoxide, Nitric Oxides as NO_y, manual FRM PM_{2.5}, continuous FEM PM_{2.5}, continuous FEM PM₁₀, FEM PM_{10-2.5}, speciated PM_{2.5}, wind speed, wind direction, ambient temperature, and relative humidity. The FEM PM_{2.5} continuous monitor will operate as the primary PM_{2.5} monitor while the FRM PM_{2.5} will operate 1/3 days.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone, carbon monoxide and sulfur dioxide sample inlet is approximately 4.5 meters above ground level. The nitric oxide sample inlet is approximately 8 meters above ground level. The continuous FEM PM_{2.5}, FEM PM₁₀, FEM PM_{10-2.5}, and speciated PM_{2.5} sample inlet is approximately 4 meters above ground level. Each sample inlet is approximately 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.

2. **Jackson Metro** (Hinds Co. 28.049.0021) – MDEQ will discontinue the FRM PM_{2.5} monitor. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site. This monitor will continue to operate at this site. In addition, 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 ozone sample inlet is approximately 4.5 meters above ground level, while the continuous PM_{2.5} is approximately 4.2 meters above ground level. Both the ozone and continuous PM_{2.5} monitors are approximately 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.

3. Hattiesburg MSA:

1. **Hattiesburg** (Forrest Co. 28.035.0004) – MDEQ will discontinue the FRM PM_{2.5} monitor. The collocated FRM PM_{2.5} monitor will continue to operate on a 1/6 day schedule to meet MDEQ's collocated requirements. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site. This monitor will continue to operate as the primary PM_{2.5} monitor at this site.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The continuous FEM PM_{2.5} sample inlet is approximately 3.5 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:

1. **Gulfport** (Harrison Co. 28.047.0008) – MDEQ will discontinue the FRM PM_{2.5} monitor. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site. This monitor will continue to operate at this site. In addition, an ozone monitor is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone sample inlet is approximately 4.5 meters above ground level, while the continuous PM_{2.5} is approximately 4.2 meters above ground level. Both the ozone and continuous PM_{2.5} monitors are approximately 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.
2. **Waveland** (Hancock Co. 28.045.0003) – MDEQ will discontinue the FRM PM_{2.5} monitor. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site. This monitor will continue to operate at this site. In addition, an ozone monitor is operated at this site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone sample inlet is approximately 5.5 meters above ground level while the continuous PM_{2.5} is approximately 5.2 meters above ground level. Both the ozone and continuous PM_{2.5} monitors are approximately 24 meters, northwest, from the nearest road.
 - **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:

1. **Pascagoula** (Jackson Co. 28.059.0006) – MDEQ will discontinue the FRM PM_{2.5} monitor. In 2017, MDEQ installed a continuous FEM PM_{2.5} monitor at this site. This monitor will continue to operate at this site. In addition, an ozone, NO_x, and SO₂ monitor is operated at this site. The NO_x analyzer is designated as a RA-40 site.
 - **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone, SO₂, and NO_x sample inlet is approximately 4.5 meters above ground level, while the continuous FEM PM_{2.5} inlet is approximately 4.2 meters above ground level. The ozone, SO₂, NO_x, and continuous FEM PM_{2.5} monitor inlet is approximately 43 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.

6. Non- MSA Sites:

1. **Grenada** (Grenada Co. 28.043.0001) – MDEQ is asking permission, from EPA, to discontinue the FRM PM_{2.5} monitor and shut down this site on December 31, 2018. The FRM PM_{2.5} is the only monitor at this site. The site is close to an airplane hangar that is used to paint airplanes. As noted in the last TSA, the site should be relocated because of paint particles being exhausted in the direction of the FRM PM_{2.5}. MDEQ will use the Cleveland site, 28.011.0002, as the new background site to meet the requirements of 40 CFR Part 58, Appendix D, Section 4.7.3. The annual mean and 24 hour design values from 2011 through 2017, for the Grenada site, are below the 85% NAAQS. See the table below.

Grenada 2.5 NAAQS Information

Annual Mean Design value. Standard 12 ug/m ³	Years	Design Value	Percent of NAAQS
	2011-13	9.3	77.5
	2012-14	9.0	75.0
	2013-15	8.1	67.5
	2014-15	7.5	62.5
	2015-17	7.2	60.0
24 Hour Design Value. Standard 35 ug/m ³	Years	Design Value	Percent of NAAQS
	2011-13	20.0	57.1
	2012-14	19.7	56.4
	2013-15	18.0	51.4
	2014-15	16.6	47.4
	2015-17	14.3	40.9

2. **Meridian** (Lauderdale Co. 28.075.0003) – An ozone monitor is operated at this site.
 - **Site Approval Status:** Site and monitor meet all design criteria for the monitoring network. The ozone sample inlet is approximately 4.5 meters above ground level and approximately 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.

3. **Tupelo** (Lee Co. 28.081.0005) – An ozone monitor is operated at this site.

- **Site Approval Status:** Site and monitor meet all design criteria for the monitoring network. The ozone sample inlet is approximately 4 meters above ground level and approximately 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.

4. **Cleveland** (Bolivar Co. 28.011.0002) – MDEQ received approval from EPA to relocate the Cleveland site to Delta State University. The physical address for Delta State University is Highway 8 West, Cleveland, MS 38733 and the GPS coordinates are latitude 33° 45' 3.02°N and longitude 90° 44' 3.03°W. The new site location is approximately 0.72 miles northwest of the previous site (28.011.0001). The new AQS number for the new Cleveland site (Delta State) is 28.011.0002. In 2018, MDEQ installed a continuous FEM PM_{2.5} monitor at this site as a background monitor for PM_{2.5} as required by regulations. In addition, an ozone monitor will be operated at this site.

- **Site Approval Status:** Site and monitors meet all design criteria for the monitoring network. The ozone sample inlet is approximately 4.5 meters above ground level, while the continuous FEM PM_{2.5} is approximately 4.2 meters above ground level. Both the ozone and continuous FEM PM_{2.5} are approximately 71.7 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.

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 Monitor	Non-Dispersive IR	Jan-Dec	
NO _y	Pop. Exp.	Neighborhood /Urban	NCore	Continuous Monitor	Chemiluminescence	Jan-Dec	
O ₃	Pop. Exp.	Neighborhood /Urban	NCore	Continuous Monitor	UV Photometry	Jan-Dec	
SO ₂	Pop. Exp.	Neighborhood	NCore	Continuous Monitor	UV fluorescence	Jan-Dec	
FRM PM _{2.5}	Pop. Exp	Neighborhood	NCore	Manual Reference Monitor (3 Day)	Gravimetric Analysis	Jan-Dec	
FEM PM _{2.5}	Pop. Exp	Neighborhood	NCore	Continuous Monitor	Broadband Spectroscopy	Jan-Dec	T640x
PM _{2.5} Speciation	Pop. Exp	Neighborhood	NCore	Manual Monitor (3 Day)	Multiple Methods	Jan-Dec	
PM coarse	Pop. Exp	Neighborhood	NCore	Continuous Monitor	Difference by Broadband Spectroscopy	Jan-Dec	T640x
Meteorological	--	--	NCore	--	Wind speed, direction, ambient temperature, humidity	Jan-Dec	
Radiation	Pop. Exp	Urban	Rad Net	Continuous / Manual Monitor		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	No	Continuous	239	Jan-Dec	T640x

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	No	Continuous	236 T640	Jan-Dec
Hattiesburg	Forrest	Hattiesburg	28-035-0004	Pop. Exp.	Neighborhood	1	Yes	Manual (1/6 day) collocated Continuous	145 SEQ 236 T640	Jan-Dec Jan-Dec
Waveland	Hancock	Gulf/Biloxi	28-045-0003	Pop. Exp.	Neighborhood	0	No	Continuous	236 T640	Jan-Dec
Gulfport	Harrison	Gulf/Biloxi	28-047-0008	Pop. Exp.	Neighborhood	1	No	Continuous	236 T640	Jan-Dec
Pascagoula	Jackson	Pascagoula	28-059-0006	Pop. Exp.	Neighborhood	0	No	Continuous	236 T640	Jan-Dec
Jackson NCore	Hinds	Jackson	28-049-0020	Pop. Exp.	Neighborhood	1	No	Manual (3 Day) Continuous (primary) PM10-2.5	145 SEQ 238 T640x 240 T640x	Jan-Dec Jan-Dec Jan-Dec
Jackson	Hinds	Jackson	28-049-0021	Pop. Exp.	Neighborhood	1	No	Continuous	236 T640	Jan-Dec
Cleveland	Bolivar	N/A	28-011-0002	Background	Neighborhood	1	No	Continuous	236 T640	Jan-Dec

Comments: All manual monitors are FRM and classified as SLAMS. The continuous FEM monitors will be primary.

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	28-011-0002	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

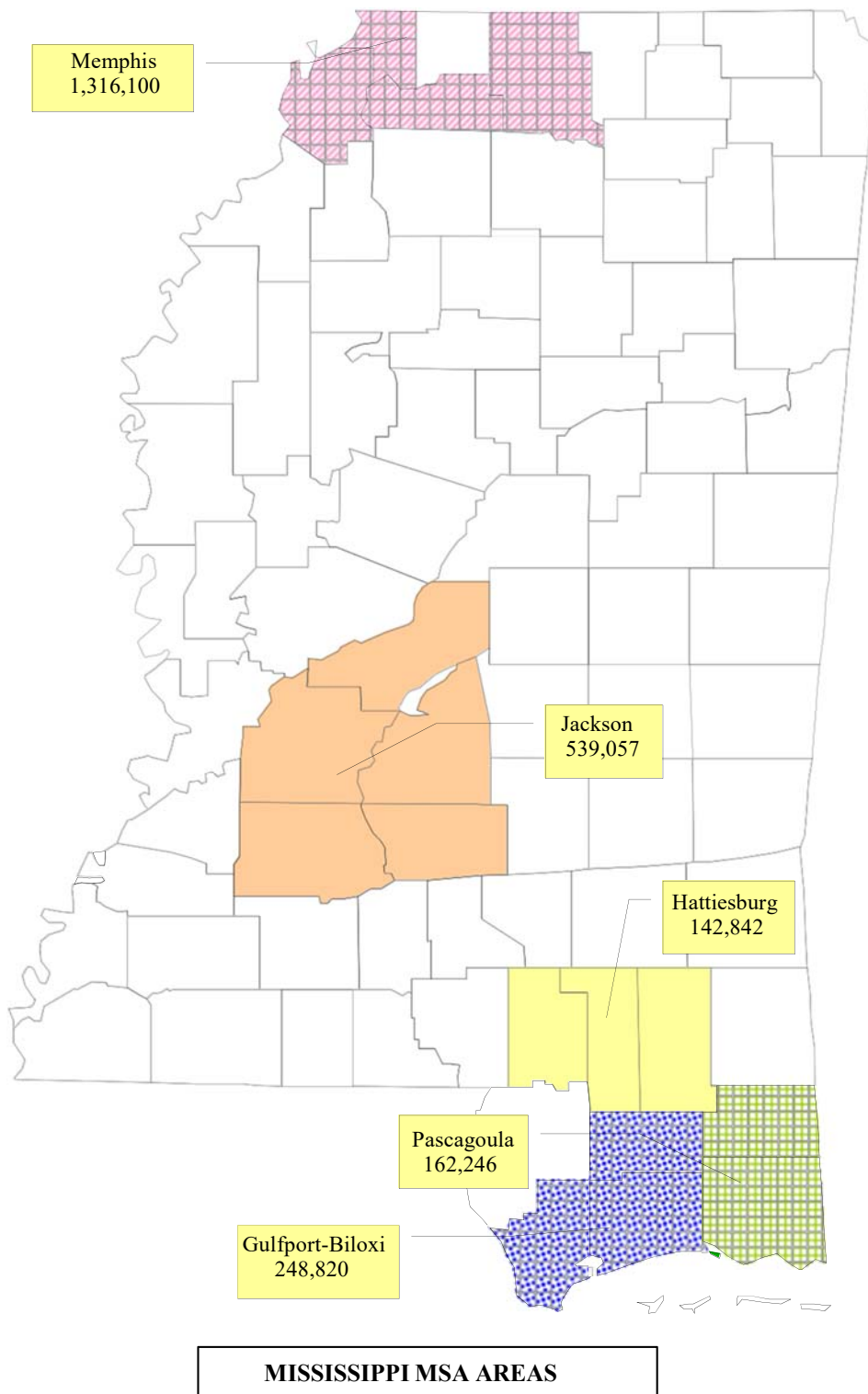
Comments: All monitors are classified as SLAM

Site Location Coordinates

#	SITE ID	LAT		LONG			NAME	COUNTY	ADDRESS
1	28-011-0002	33	45	3	90	44	3 CLEVELAND	BOLIVAR	HWY 8 Cleveland (Delta State)
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	28-045-0003	30	18	4	89	23	45 WAVELAND	HANCOCK	400 Baltic St.
5	28-047-0008	30	23	24	89	2	59 GULFPORT YC	HARRISON	47 Maples Dr.
6	28-049-0021	32	19	14	90	10	50 HINDS CC	HINDS	3925 Sunset Dr.
7	28-049-0020	32	19	45	90	10	58 JACKSON NCORE	HINDS	232 E Woodrow Wilson
8	28-059-0006	30	22	41	88	32	2 PASCAGOULA	JACKSON	Hospital Rd. and Vega St.
9	28-075-0003	32	21	52	88	43	53 MERIDIAN	LAUDERDALE	Hwy 19 and 53rd Ave.
10	28-081-0005	34	15	54	88	45	58 TUPELO	LEE	West Jackson at Tupelo Airport

Appendix I

MSA and Pollutant Maps

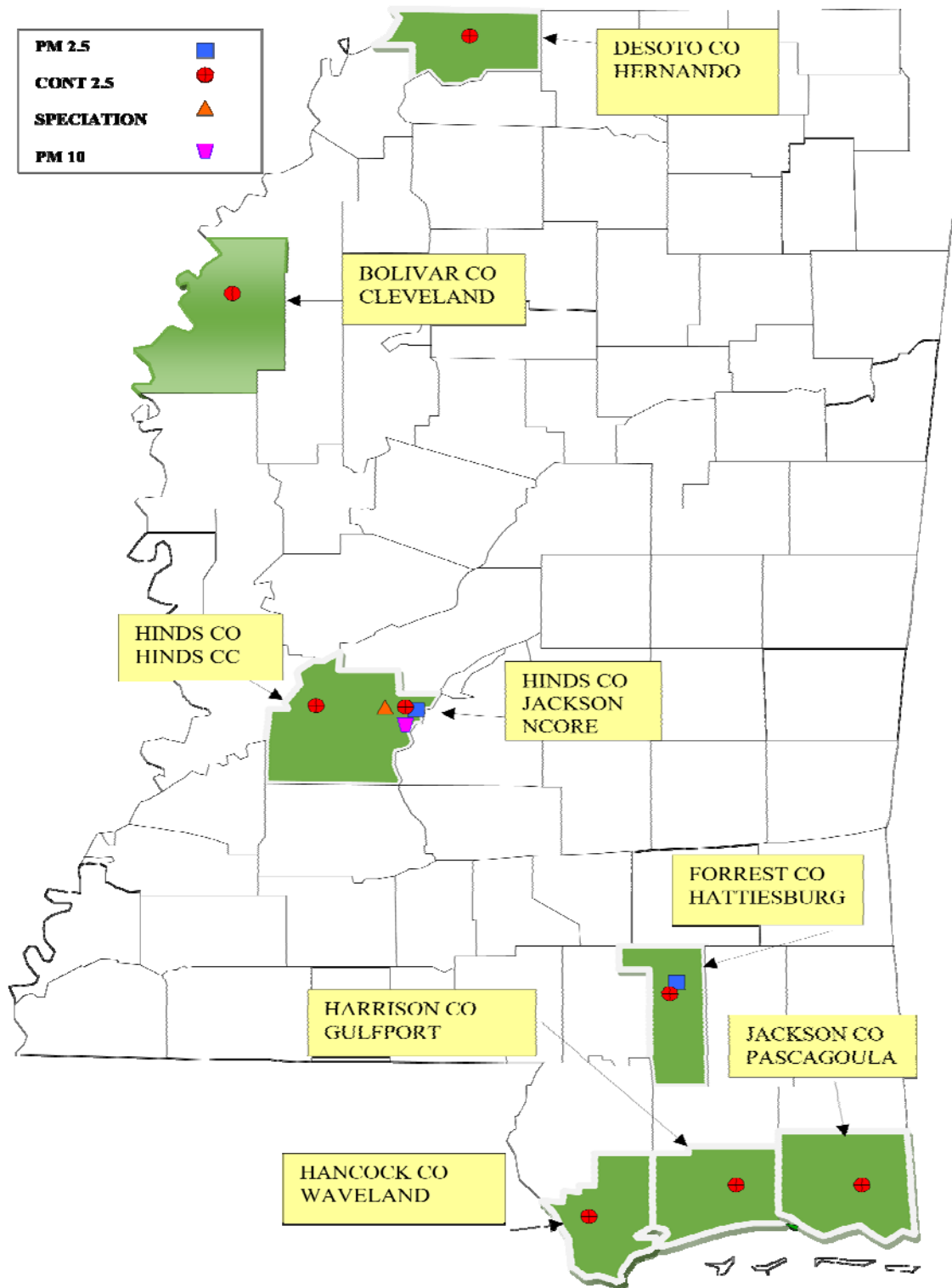
MSA MAP:

MEMPHIS – DeSoto, Tunica, Marshall, Tate

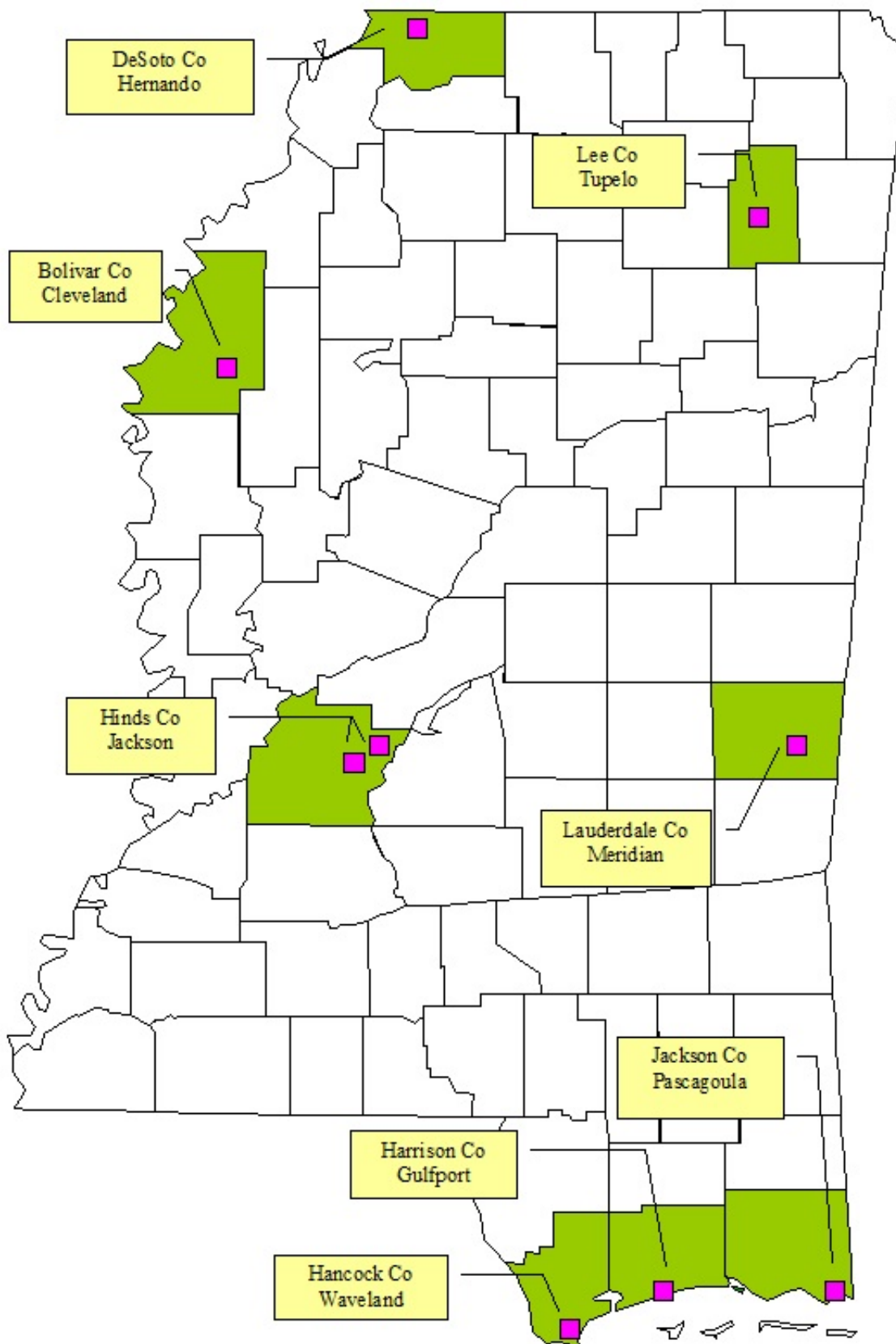
JACKSON – Hinds, Rankin, Copiah, Simpson, Madison

HATTIESBURG – Lamar, Forrest, Perry GULFPORT-BILOXI – Hancock, Harrison,

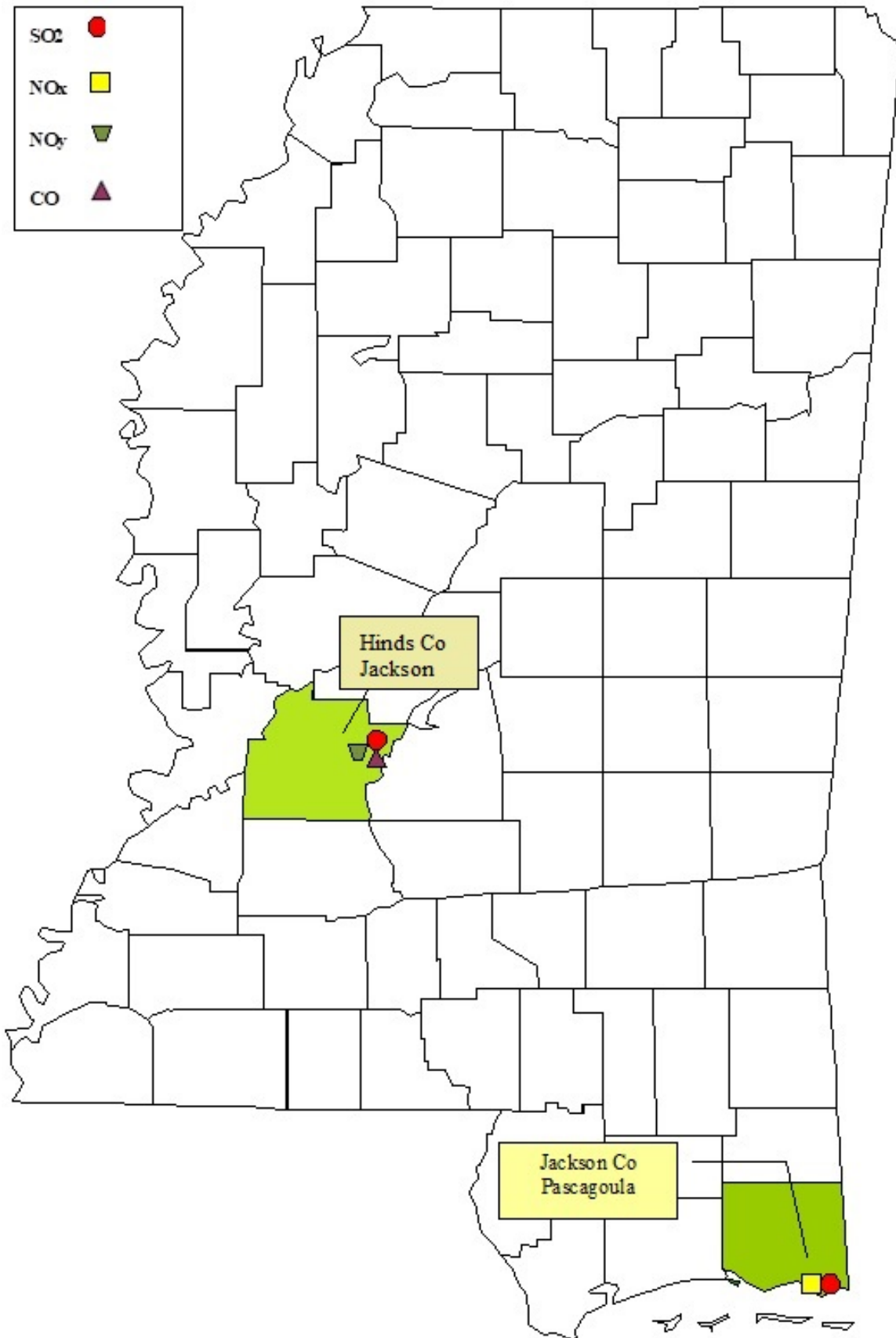
Stone PASCAGOULA – Jackson, George



MDEQ PARTICULATE SITES-2019



MDEQ Ozone Sites - 2019



**MDEQ SO₂ / NO_x / NO_y / CO
SITES - 2019**

Appendix II

Site Maps and Photos



Cleveland - N



Cleveland - S



Cleveland - W



Cleveland - E



Cleveland 28-011-0002





Hernando - N



Hernando - E



Hernando - S



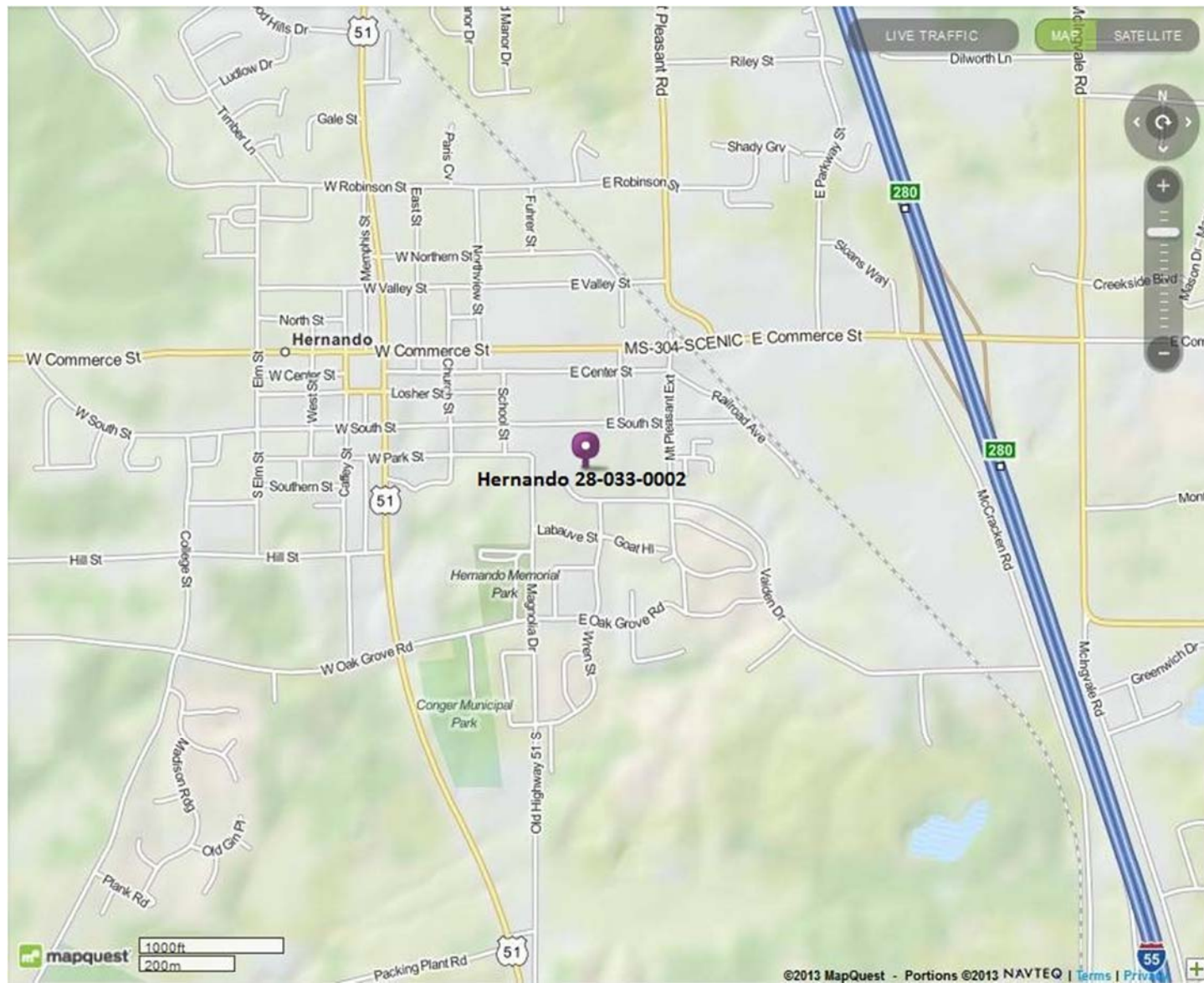
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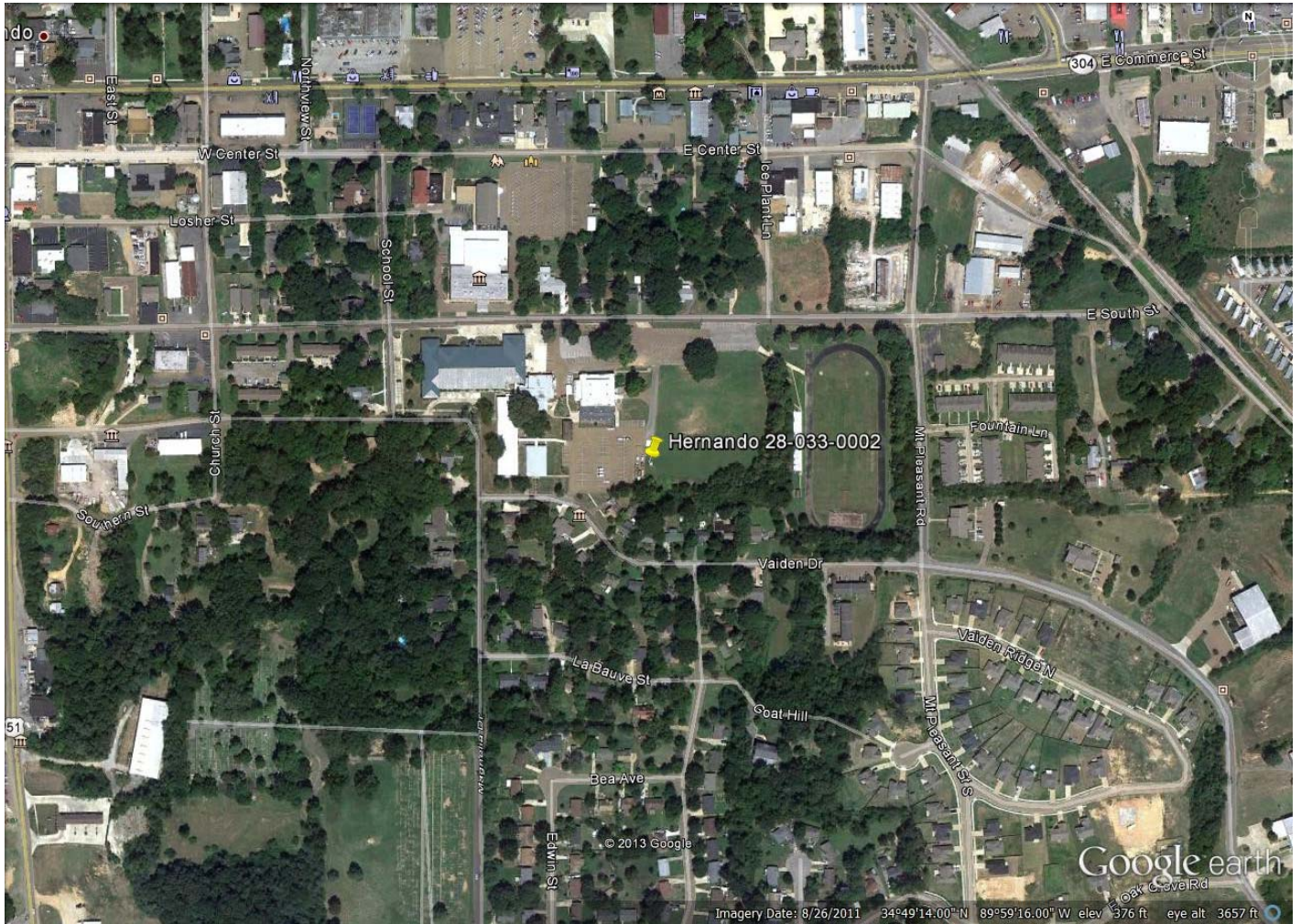


Hernando 28-033-0002

Desoto









Tupelo - N



Tupelo - E



Tupelo - S



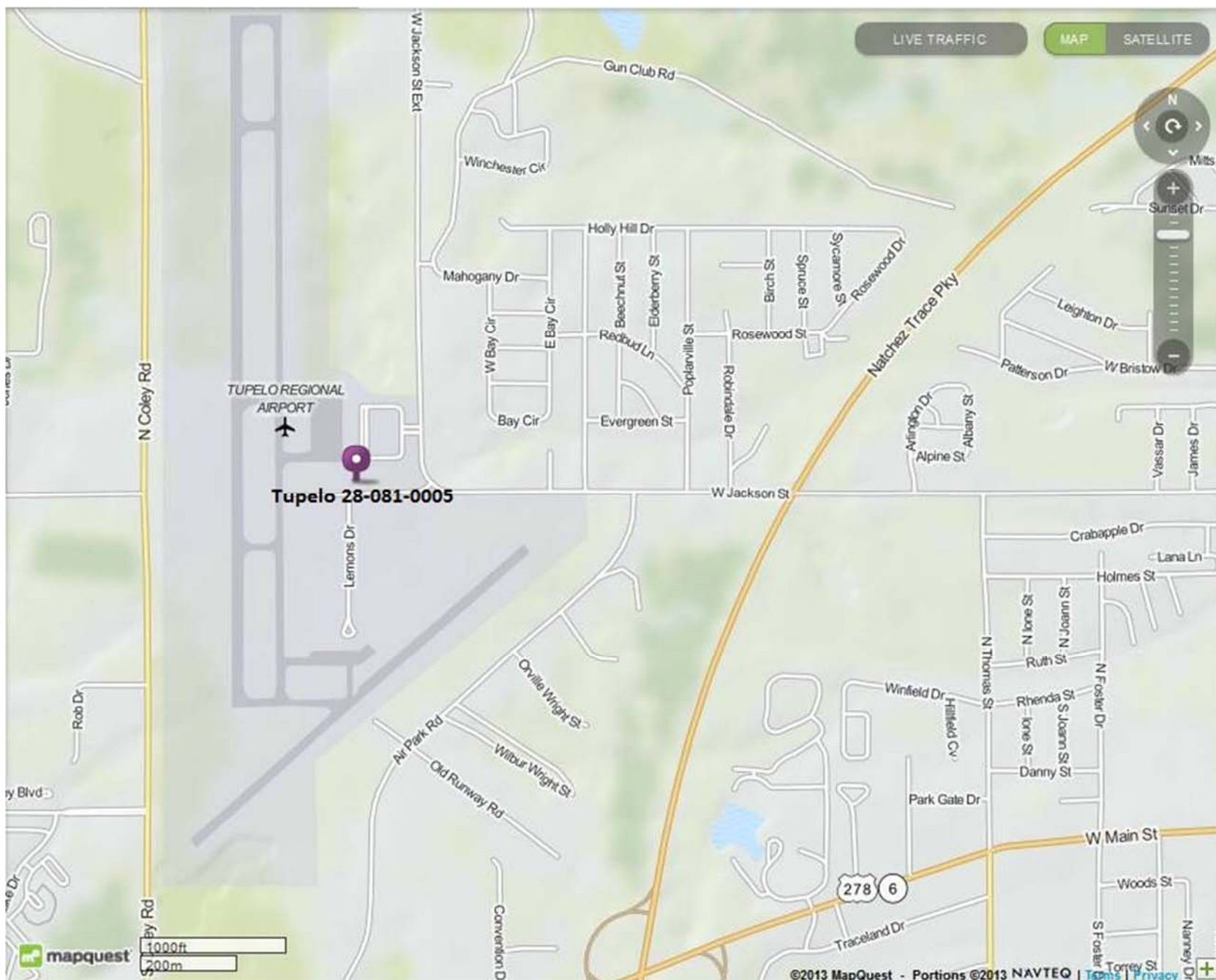
Tupelo - W



Tupelo 28-081-0005

Lee









E

Meridian - N

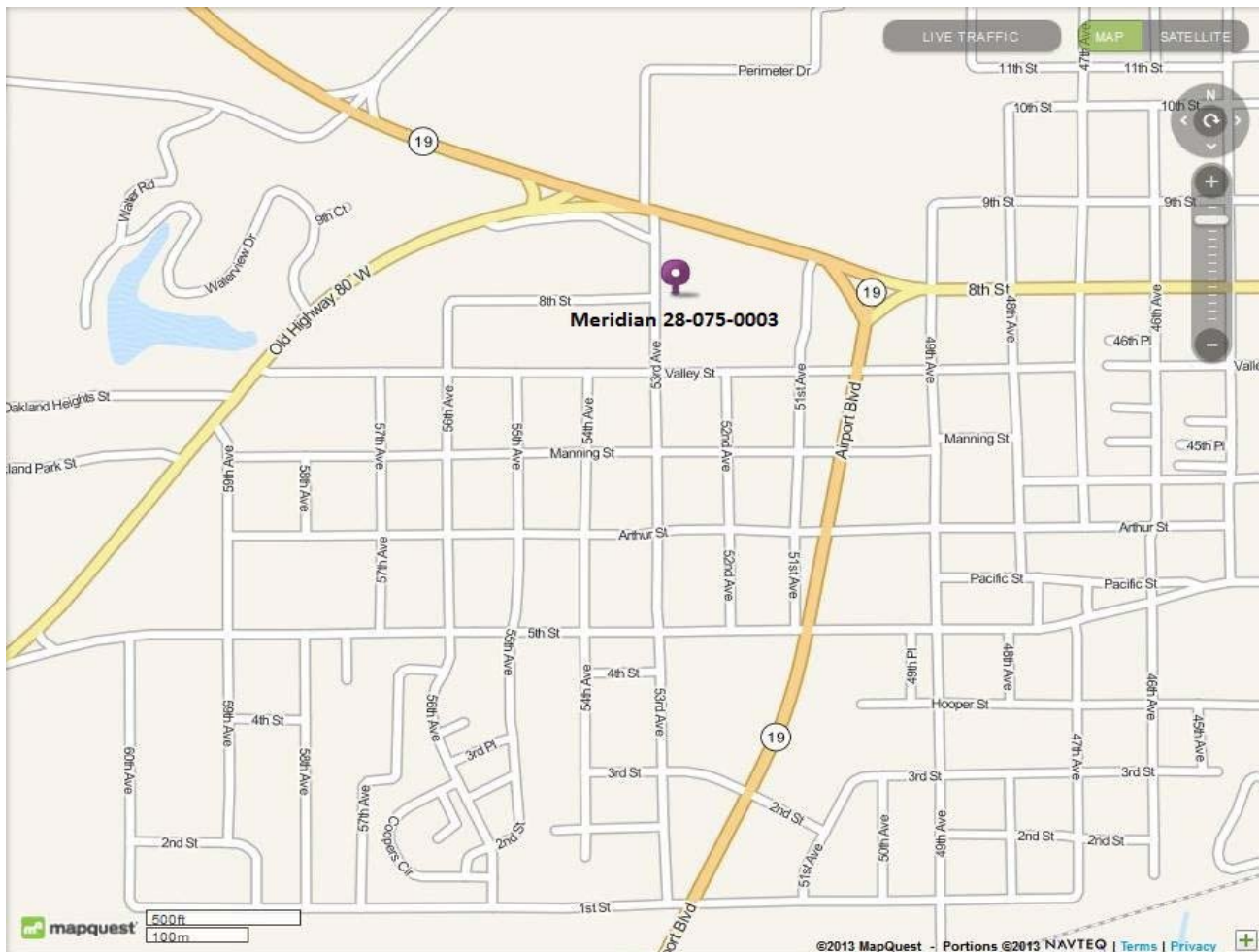
Meridian -
Meridian - S

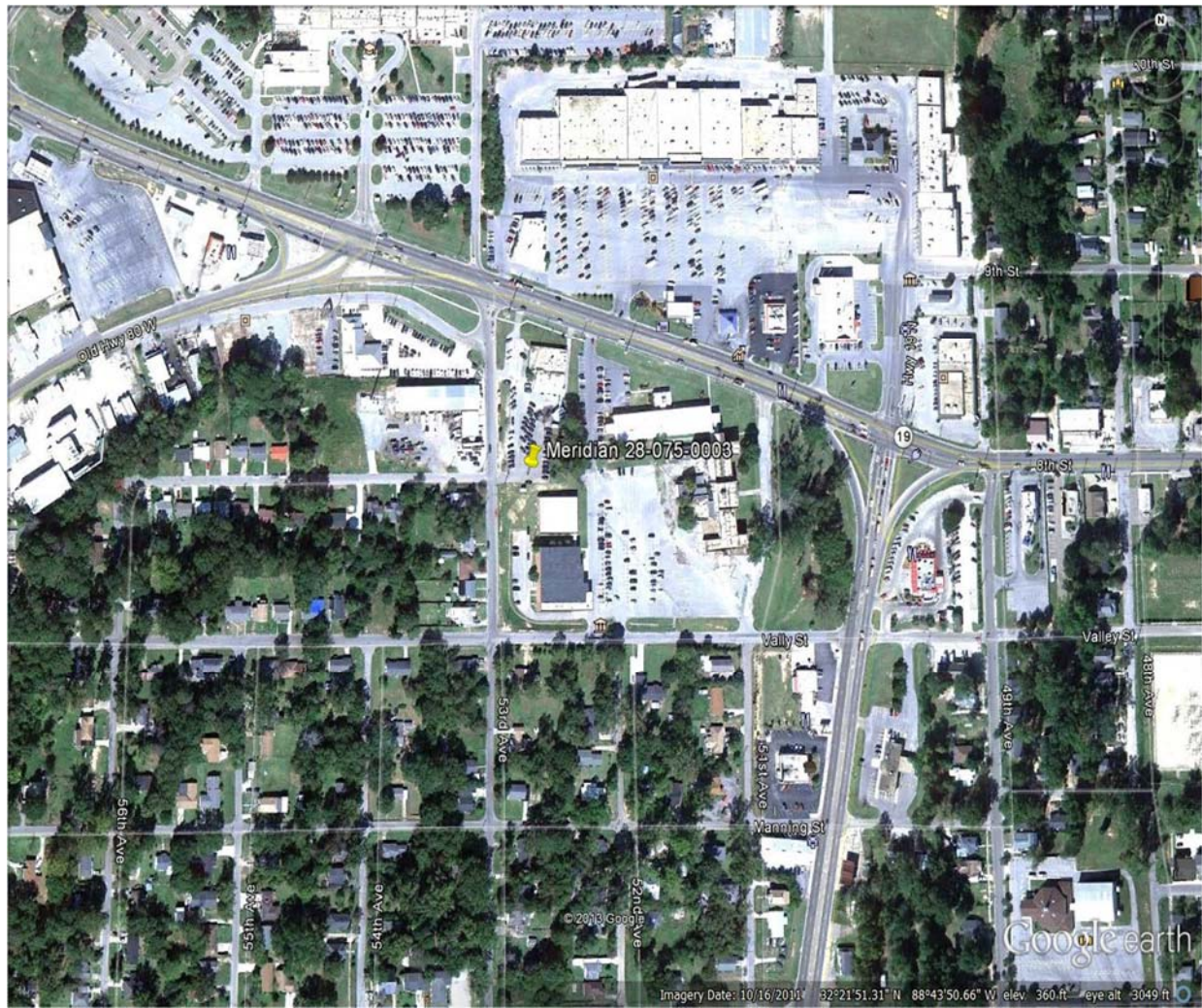
Meridian - W



Meridian 28-075-0003









Jackson NCore - N



Jackson NCore – E



Jackson NCore – S



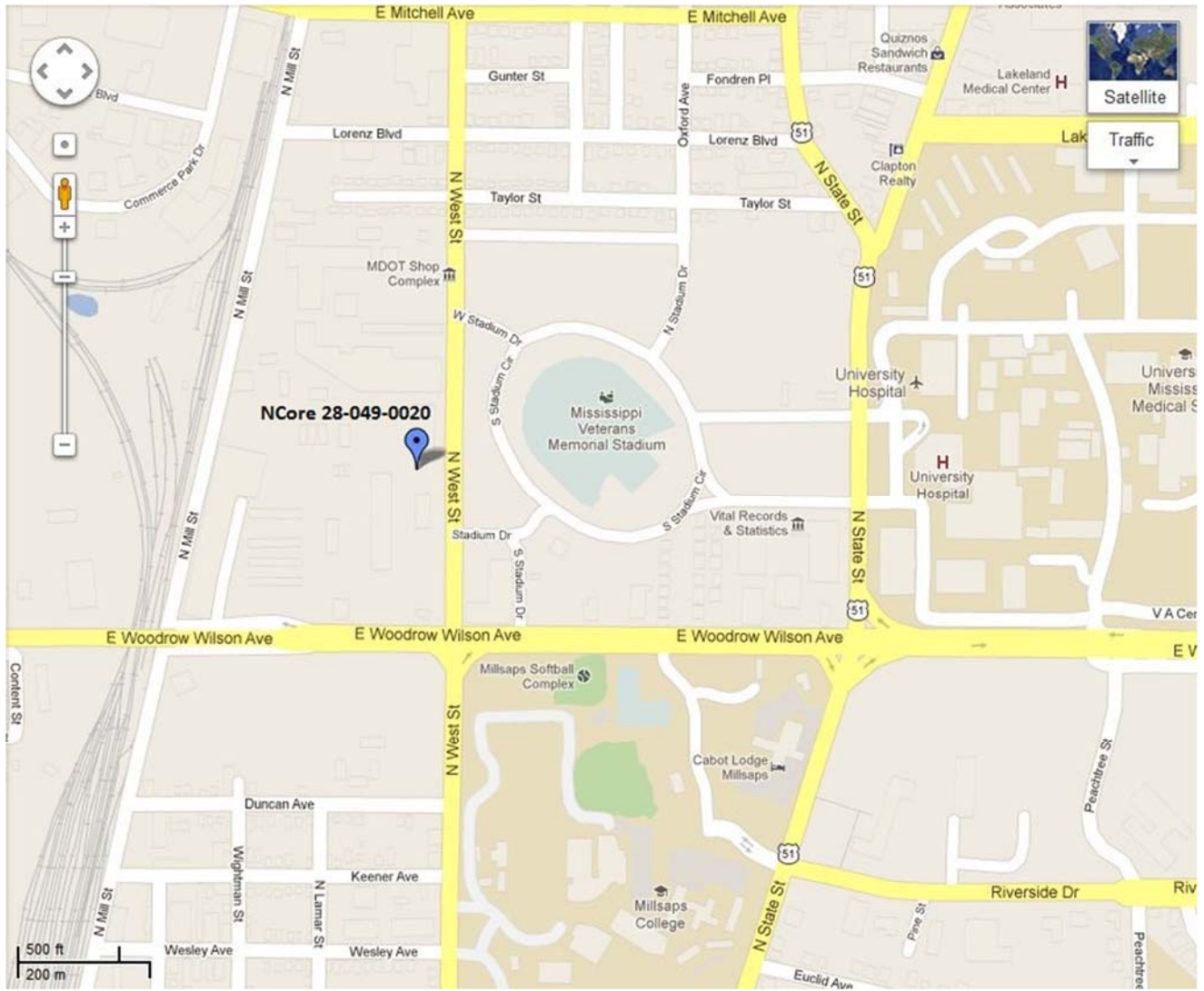
Jackson NCore – W

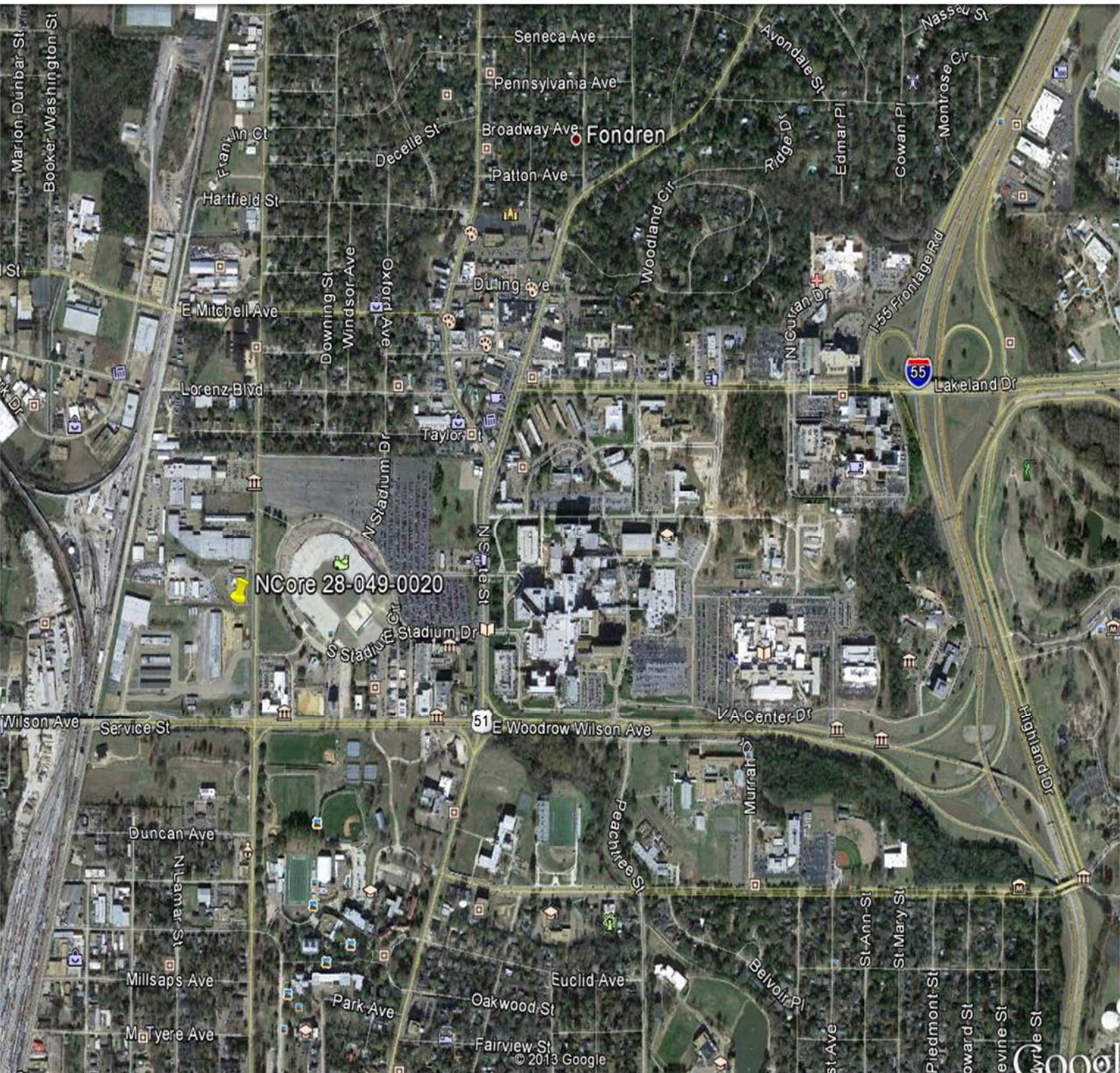


Jackson NCore 28-049-0020

Hinds









Hinds CC - N



Hinds CC - E



Hinds CC - S



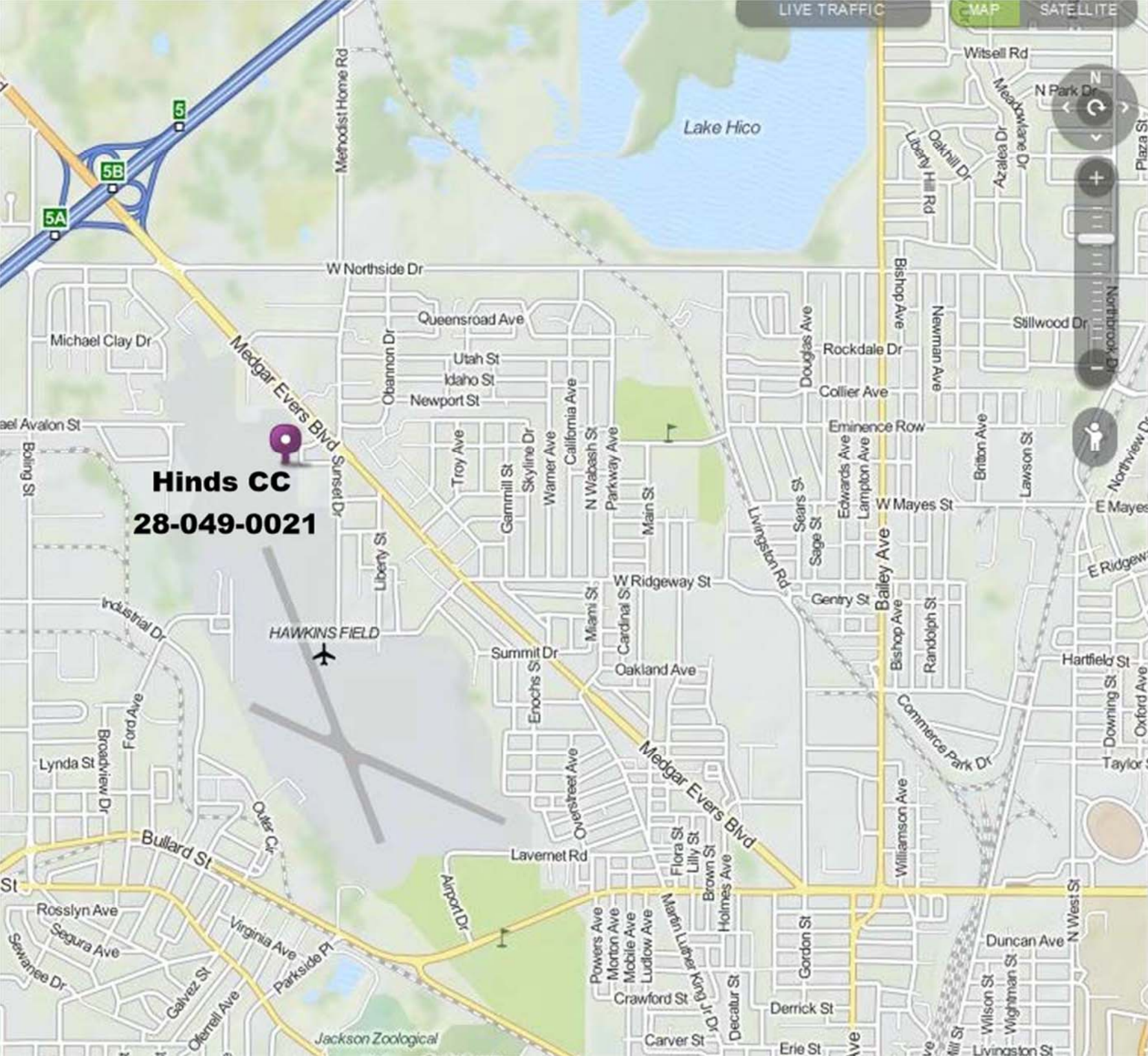
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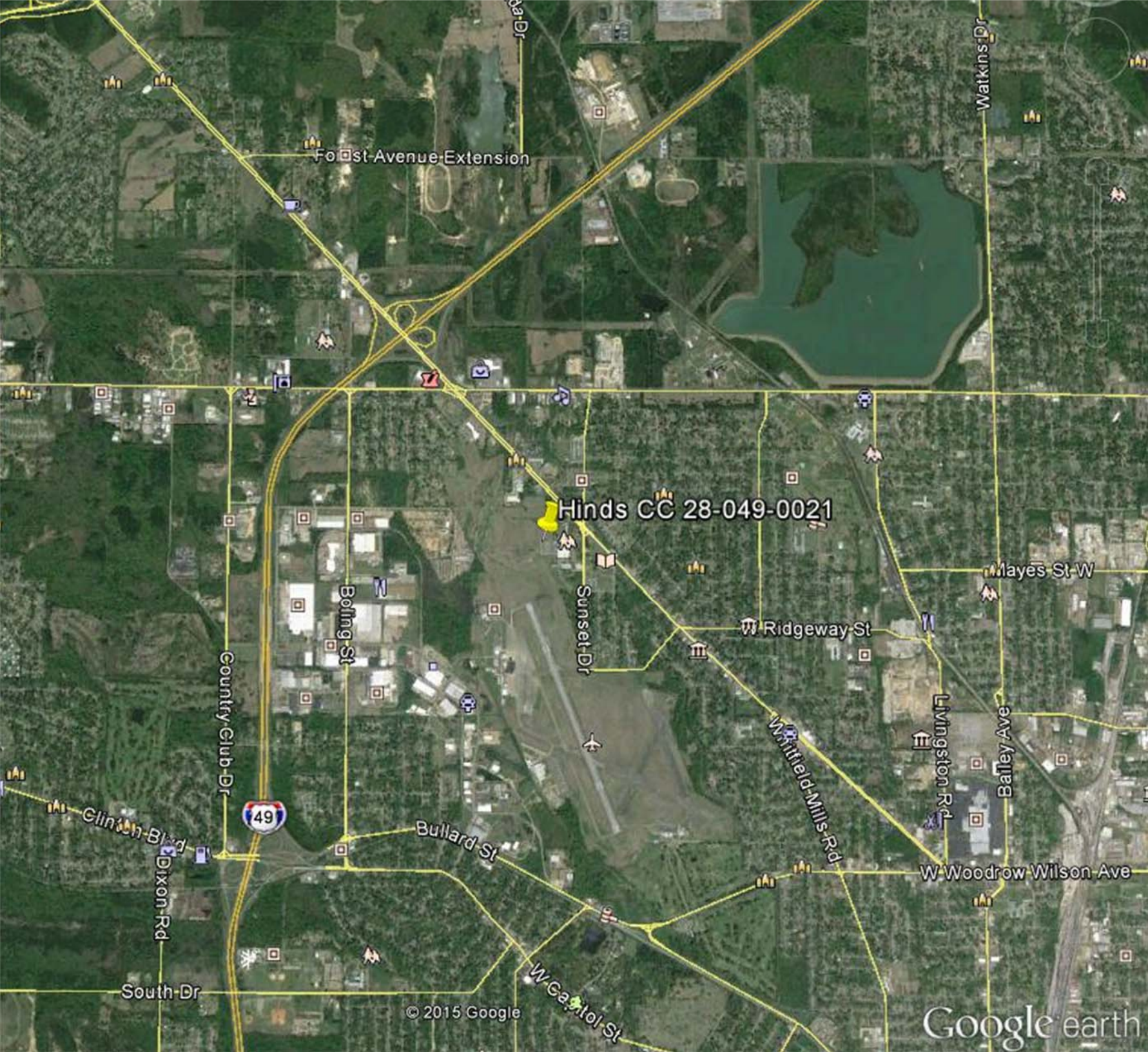
Hinds CC 28-049-0021

Hinds





Hinds CC
28-049-0021



Forest Avenue Extension

Hinds CC 28-049-0021

Watkins Dr

Mayes St W

Ridgeway St

Livingston Rd

Bailey Ave

W Woodrow Wilson Ave

Whitfield Mills Rd

Bullard St

W Capitol St

Country Club Dr

Boling St

Sunset Dr

49

Clinton Blvd

Dixon Rd

South Dr

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Google earth



Gulfport - N



Gulfport - E



Gulfport - S



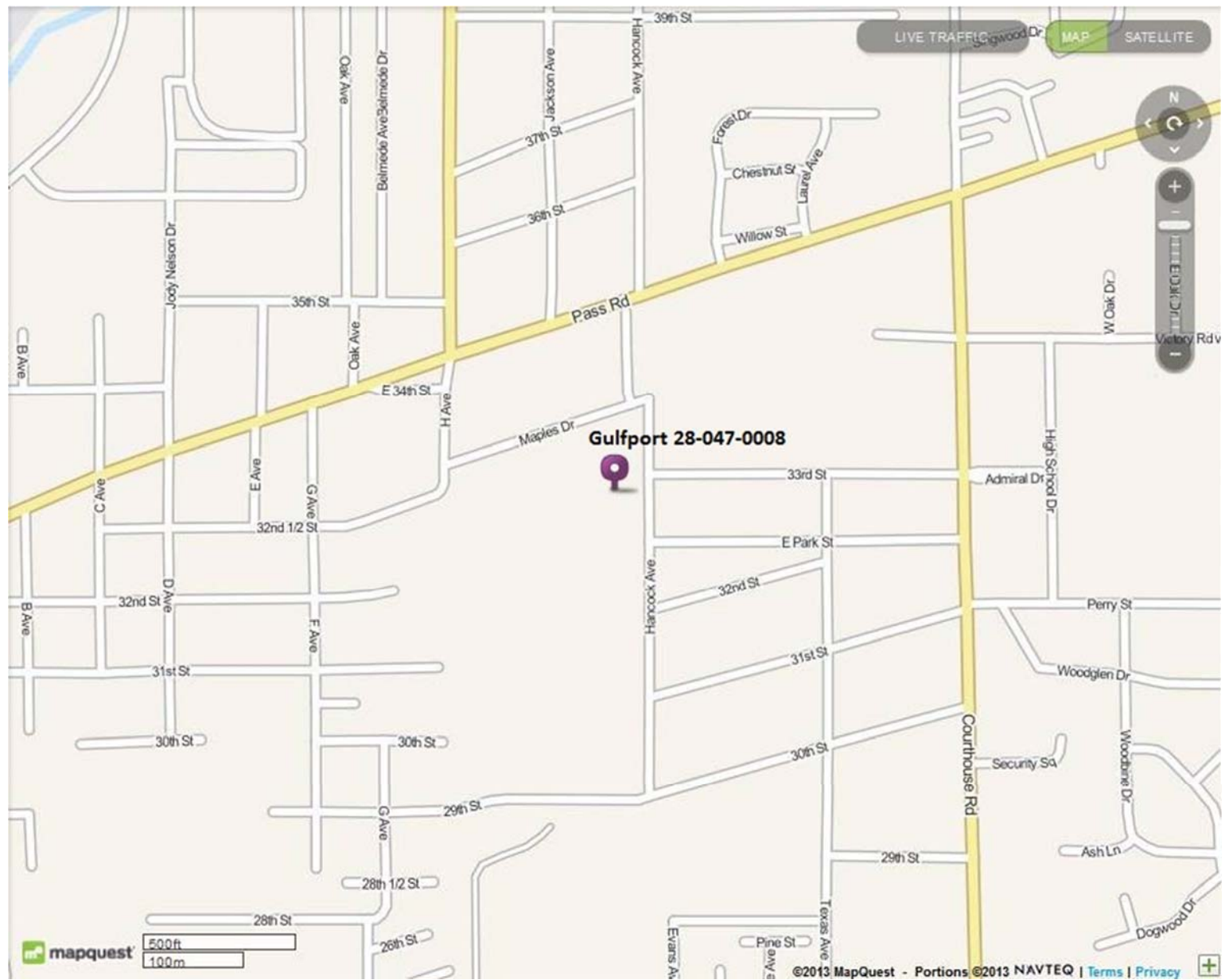
Gulfport - W

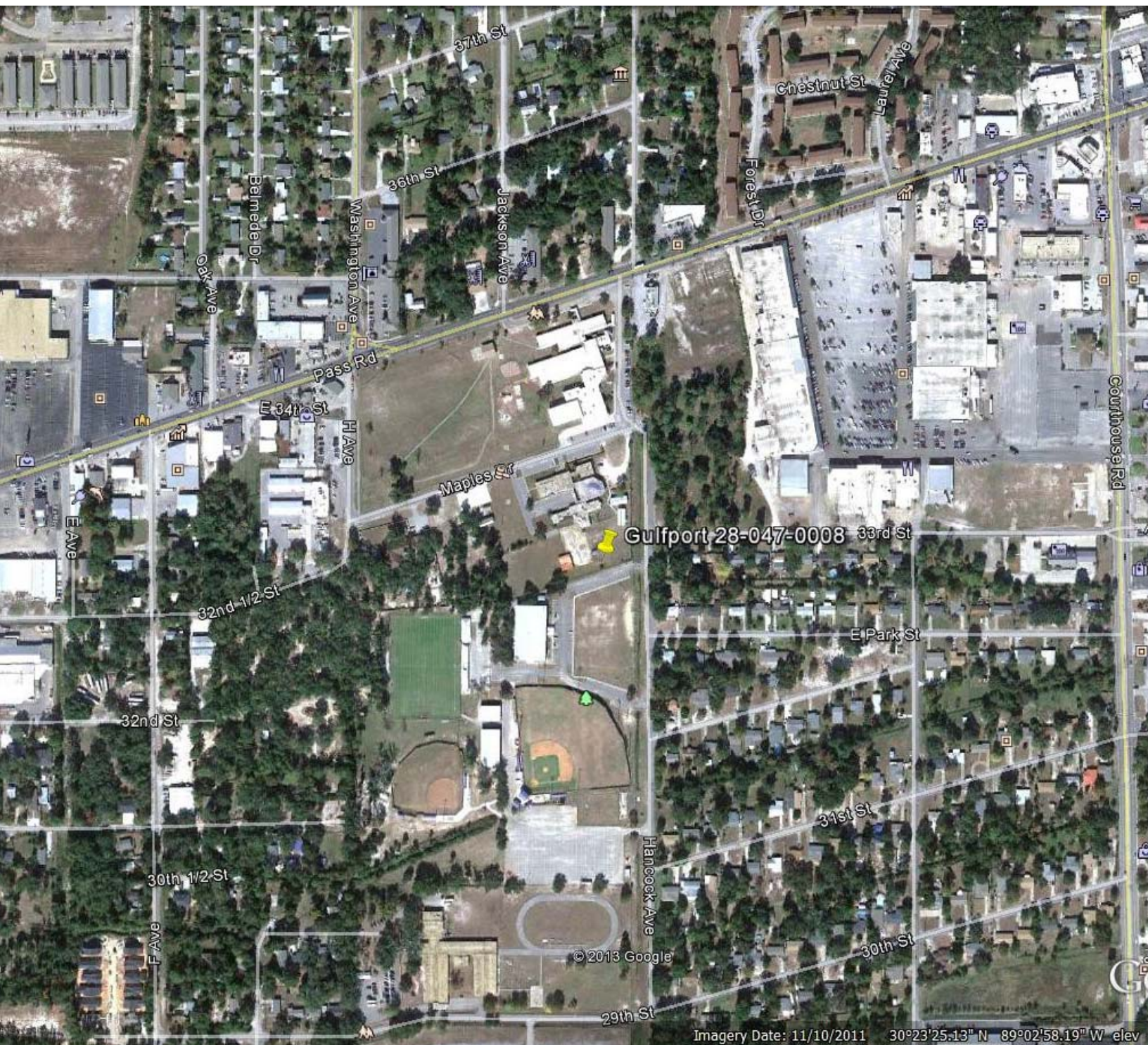


Gulfport 28-047-0008

Harrison









Waveland - N



Waveland - E



Waveland - S

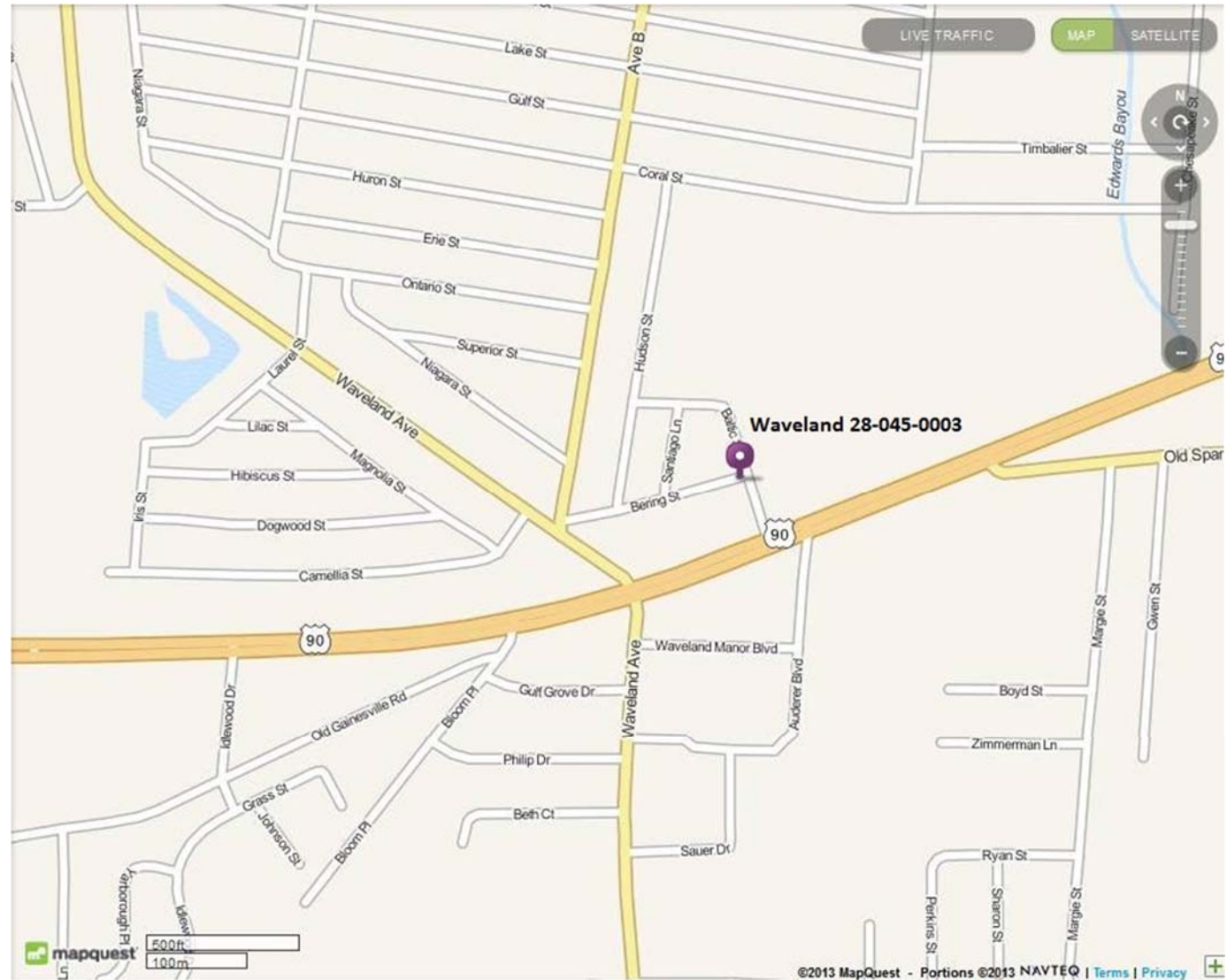


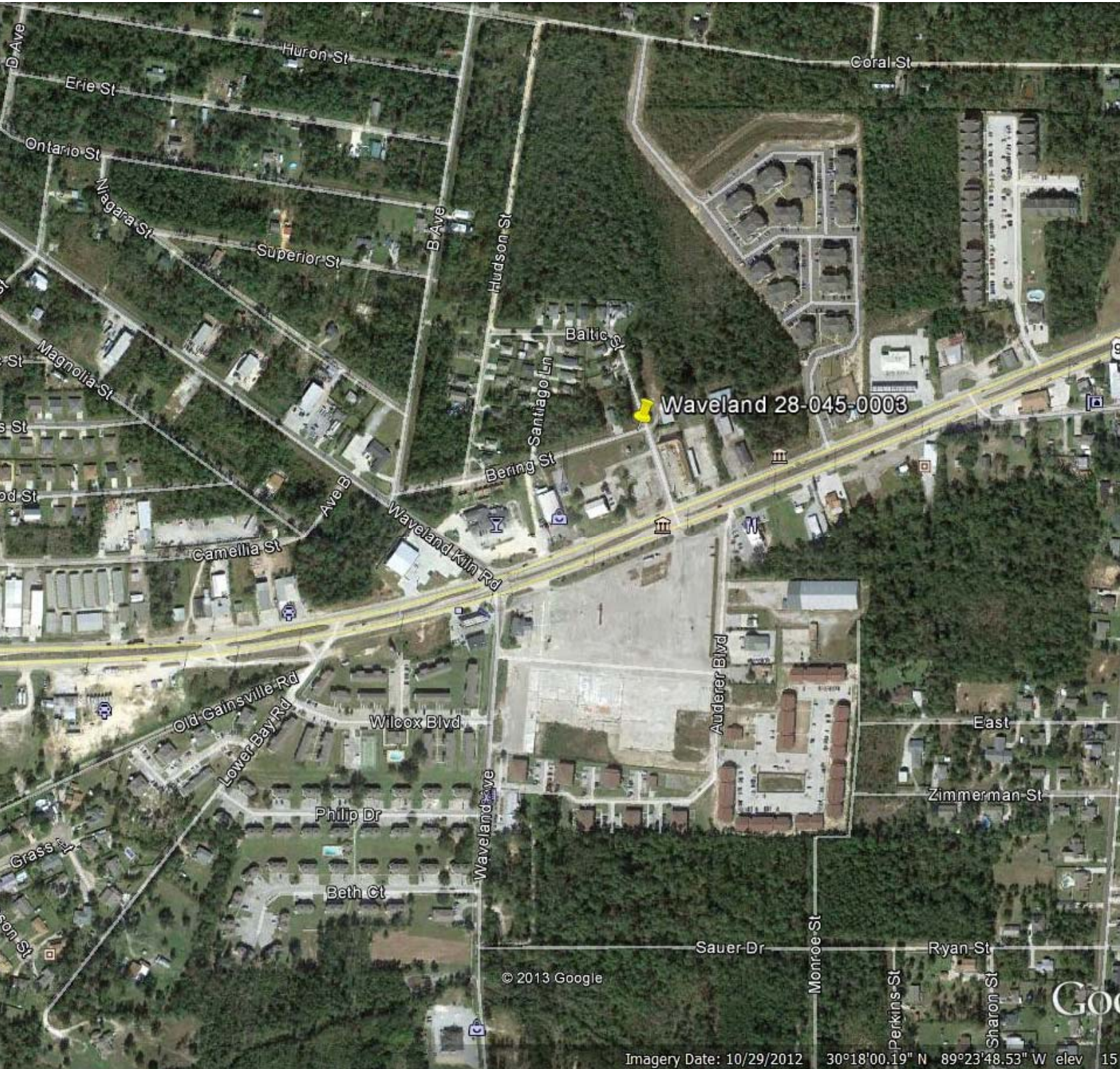
Waveland - W



Waveland 28-045-0003









Pascagoula - N



Pascagoula - E



Pascagoula - S

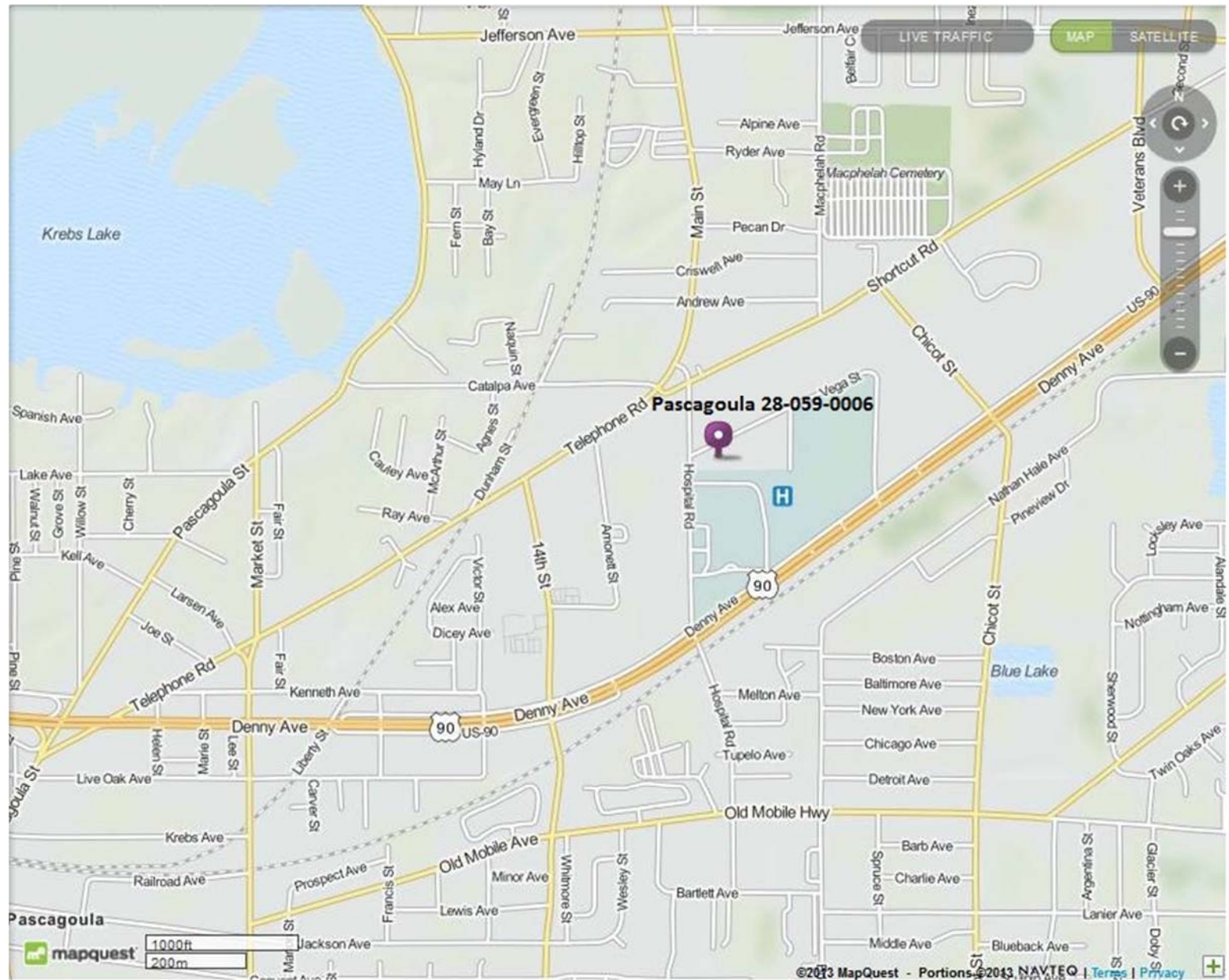


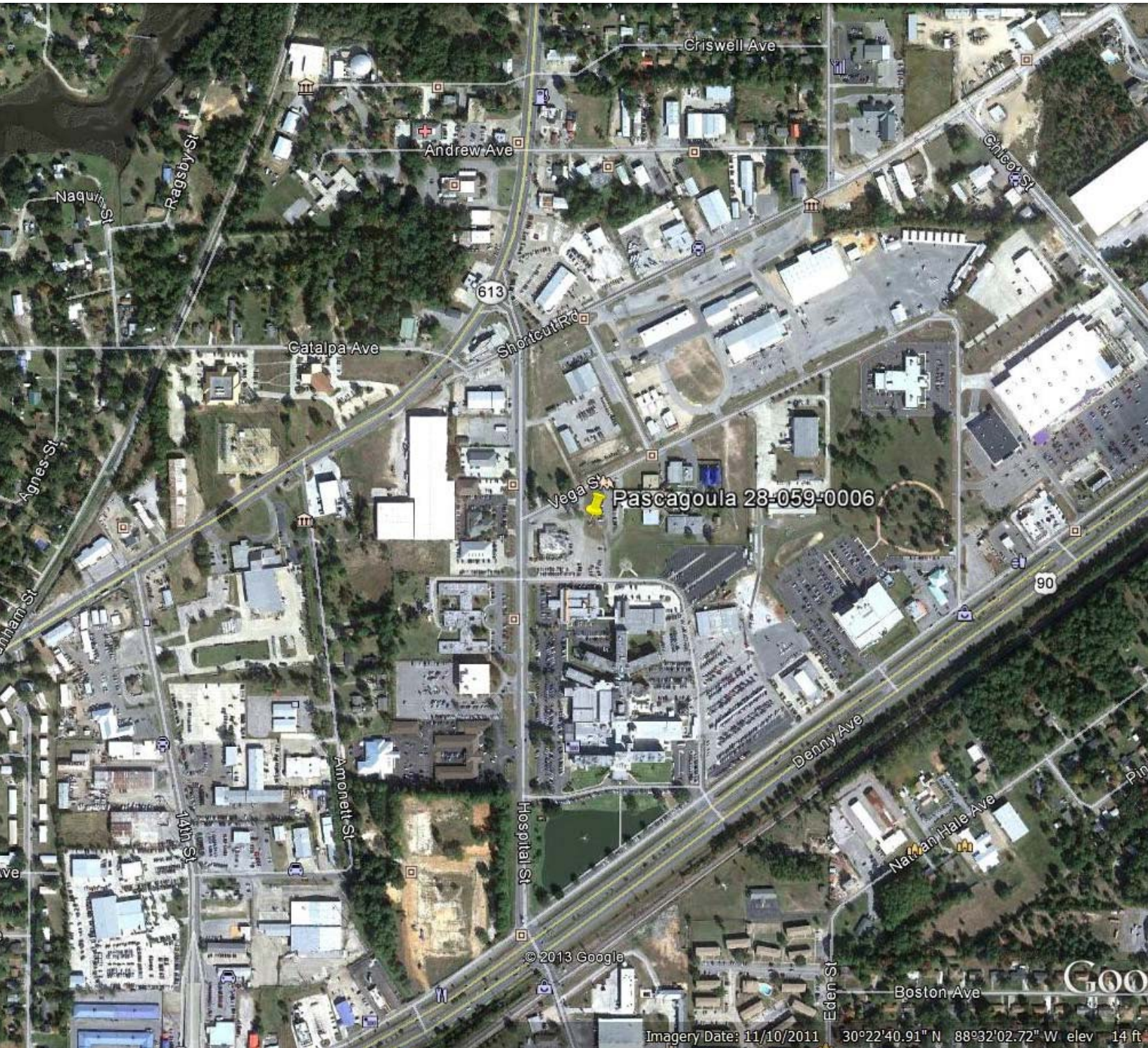
Pascagoula - W



Pascagoula 28-059-0006









Hattiesburg – N



Hattiesburg – E



Hattiesburg - S



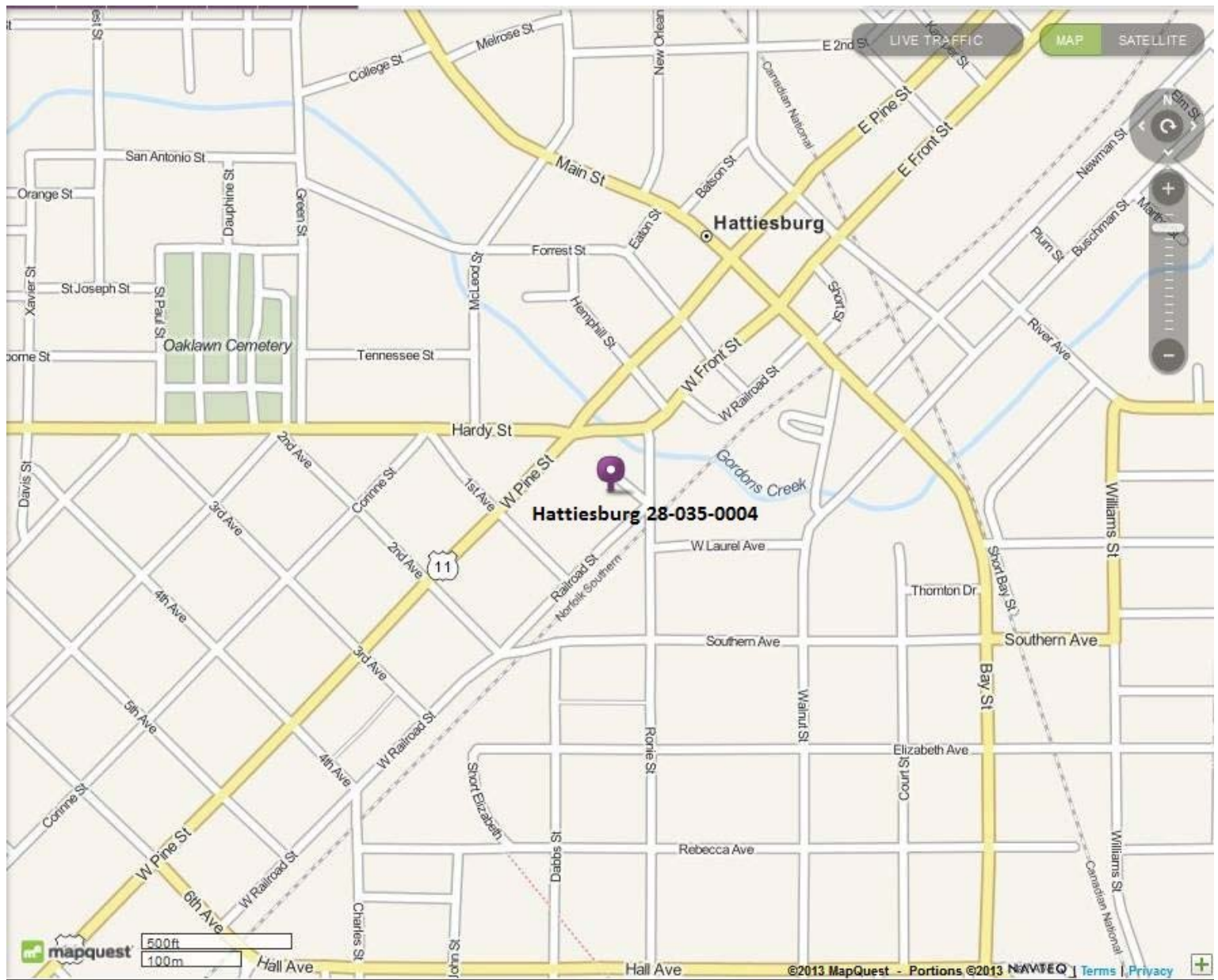
Hattiesburg – W

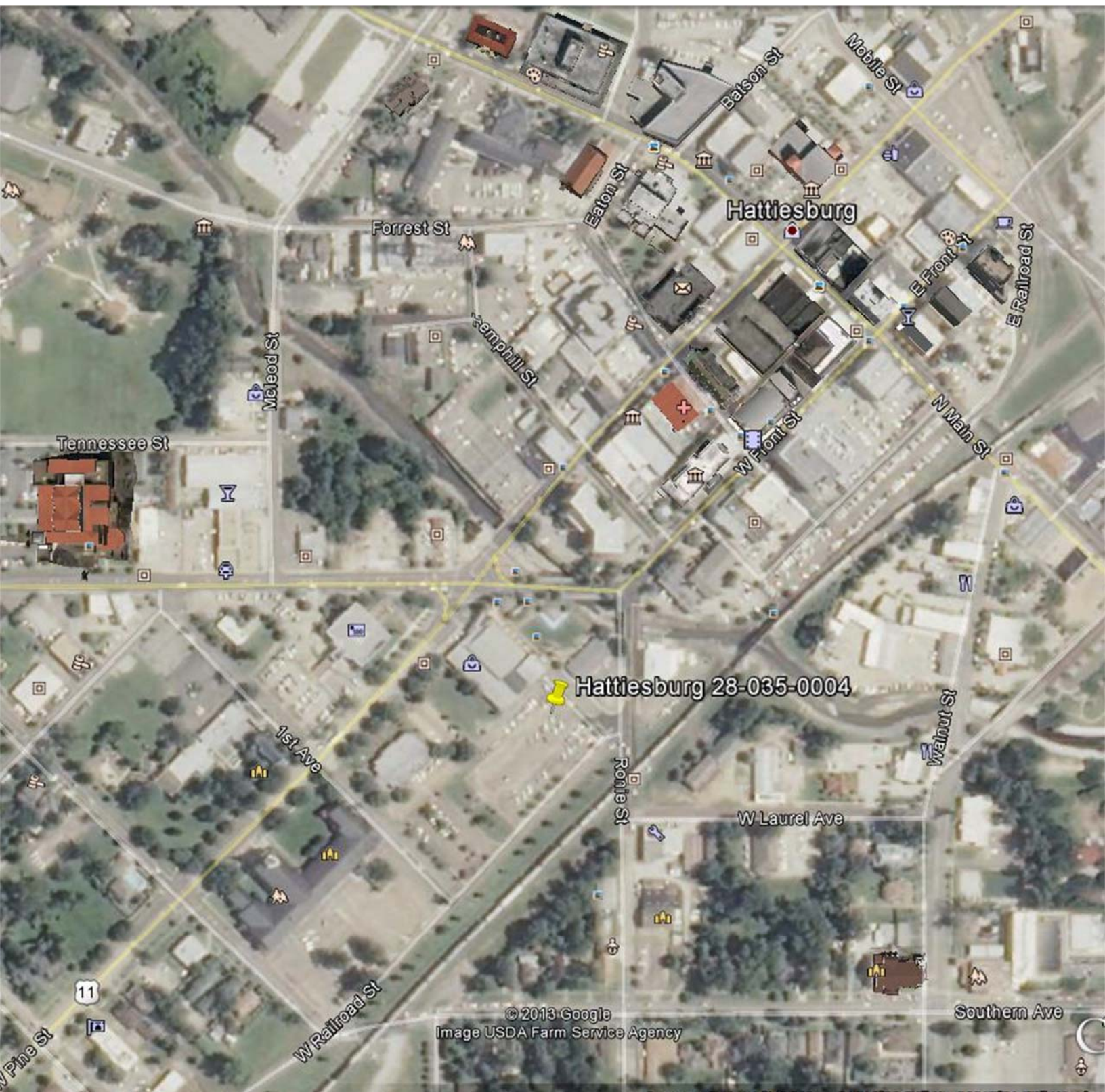


Hattiesburg 28-035-0004



Forrest





Appendix III

Regional Monitoring Agreement

Regional Monitoring Agreement



MARK H. LUTTRELL, JR.
MAYOR

ALISA R. HAUSHALTER, DNP, RN, PHNA-BC
DIRECTOR

HELEN MORROW, MD, MPA
HEALTH OFFICER



Public Health
Prevent. Promote. Protect.

SHELBY COUNTY HEALTH DEPARTMENT

April 3rd, 2018

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. Chad LaFontaine, 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

RECEIVED
APR 13 2018
Dept. of Environmental Quality

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. A copy of this agreement will be included in Shelby County's current year's annual network plan.

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,

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

Mission

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

814 Jefferson Avenue ♦ Memphis, TN 38105 ♦ 901 222-9000 ♦ www.shelbytnhealth.com

**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	3 (includes 1 at the Near Road Station)	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>PM₁₀</u>	<u>O₃</u>	<u>NO_x/NO/NO₂</u>	<u>CO</u>	<u>SO₂</u>
Shelby County, TN SCHD	2 (includes low volume PM ₁₀ at NCore)	3	1 (includes 1 at the Near Road Station)	2 (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.

Appendix IV

Equipment List

MDEQ 2018 EQUIPMENT LIST

Inventory Number	Item	Manufacturer	Type	Serial Number	Condition	Purchase Date
OZONE						
89588	OZONE	API	400E	160	Poor	06/01/03
89589	OZONE	API	400E	159	Poor	06/01/03
90740	OZONE	API	400E	1098	Fair	09/01/06
90741	OZONE	API	400E	1099	Fair	09/01/06
90742	OZONE	API	400E	1100	Fair	09/01/06
90743	OZONE	API	400E	1101	Fair	09/01/06
91211	OZONE	API	400E	1563	Fair	12/31/07
91212	OZONE	API	400E	1098	Fair	09/01/06
92174	OZONE	API	T400	131	Good	06/14/11
92175	OZONE	API	T400	132	Good	06/14/11
93180	OZONE	API	T400	1858	Good	06/17/15
93181	OZONE	API	T400	1857	Good	06/17/15
93182	OZONE	API	T400	1856	Good	06/17/15
93493	OZONE	API	T400	3304	Good	06/16/17
93494	OZONE	API	T400	3305	Good	06/16/17
93495	OZONE	API	T400	3306	Good	06/16/17
SO2						
90923	SO2	API	100E	68	Poor	06/01/07
92019	SO2	API	100EU	128	Good	06/15/10
93620	SO2	API	T100U	279	Good	07/12/17
93621	SO2	API	T100U	280	Good	07/12/17
NOy/NO2/NOx/NO						
-	NOx	API	200E	093	Poor	-
90598	NOx	API	200E	52	Poor	02/01/06
92020	NOx	API	200E	3523	Poor	06/15/10
92990	NOx	API	T200	1655	Fair	10/31/14
93194	NOy	API	T200U	235	Good	10/21/15
CO						
93615	CO ANALYZER	API	T300U	379	Good	06/22/17

MDEQ 2018 EQUIPMENT LIST

Inventory Number	Item	Manufacturer	Type	Serial Number	Condition	Purchase Date
PARTICULATE SAMPLERS						
91053	SEQUENTIAL AIR	Thermo	2025	2025B220010708	Fair	09/14/07
91054	SEQUENTIAL AIR	Thermo	2025	2025B220020708	Fair	09/14/07
91055	SEQUENTIAL AIR	Thermo	2025	2025B220030708	Fair	09/14/07
91056	SEQUENTIAL AIR	Thermo	2025	2025B220040708	Fair	09/14/07
91057	SEQUENTIAL AIR	Thermo	2025	2025B220050708	Fair	09/14/07
91142	SEQUENTIAL AIR	Thermo	2025	2025B22026	Fair	11/14/07
91143	SEQUENTIAL AIR	Thermo	2025	2025B2202679	Fair	11/14/07
91144	SEQUENTIAL AIR	Thermo	2025	2025B220270709	Fair	11/14/07
91624	PORTABLE BETA	EBAM	-	H10709	Good	12/12/08
91625	PORTABLE BETA	EBAM	-	H10710	Good	12/12/08
91700	PORTABLE	BGI	-	292	Good	02/13/09
91701	PORTABLE	BGI	-	293	Good	02/13/09
91702	PORTABLE	BGI	-	290	Good	02/13/09
91703	PORTABLE	BGI	-	291	Good	02/13/09
91794	SEQUENTIAL AIR	Thermo	2025	2025B225390905	Good	06/12/09
92085	PARTICULATE	Thermo	TEOM	1405A211301010	Good	12/14/10
92143	SEQUENTIAL AIR	Thermo	2025	2025B227831104	Good	04/15/11
92144	SEQUENTIAL AIR	R&P	2025	2025B227481104	Good	04/15/11
93390	CONTINUOUS	API	T640	105	Good	01/20/17
93391	CONTINUOUS	API	T640	111	Good	01/20/17
93392	CONTINUOUS	API	T640	107	Good	01/20/17
93393	CONTINUOUS	API	T640	108	Good	01/20/17
93394	CONTINUOUS	API	T640	110	Good	01/20/17
93395	CONTINUOUS	API	T640	109	Good	01/20/17
93396	CONTINUOUS	API	T640	106	Good	01/20/17
93397	CONTINUOUS	API	T640	104	Good	01/20/17
93676	CONTINUOUS PARTICULATE	API	T640X	286	Good	12/11/17

MDEQ 2018 EQUIPMENT LIST

Inventory Number	Item	Manufacturer	Type	Serial Number	Condition	Purchase Date
FLOW DEVICES						
86620	FLOW METER	BIOS	DC-Lite	1018	Poor	12/01/98
86647	FLOW METER	FTS Dwyer	475 Mark II	981017	Poor	01/01/99
86833	FLOW METER	FTS Dwyer	475 Mark II	990203	Poor	04/01/99
89815	FLOW METER	BIOS	DCL-MH	101481	Poor	12/01/03
91596	FLOW METER	BIOS	220-H	114705	Good	08/14/08
91790	FLOW METER	BGI	Deltacal	781	Good	06/12/09
92105	FLOW METER	BIOS	220-L	120907	Good	03/15/11
92220	FLOW METER	BGI	Deltacal	1052	Good	09/15/11
93370	FLOW METER	BIOS	220-H	151292	Good	09/27/16
93371	FLOW METER	BIOS	220-L	146603	Good	09/27/16
93652	FLOW METER	BGI	Tetracal	156675	Good	10/24/17
93674	FLOW METER	BGI	Deltacal	158052	Good	01/09/18
-	FLOW METER	BGI	Tetracal	600	Good	10/31/09
-	FLOW METER	BGI	Tetracal	603	Good	10/31/09
DATA LOGGERS						
91050	DATA LOGGER	ESC	8832	A2059	Good	09/14/07
91051	DATA LOGGER	ESC	8832	A2058	Good	09/14/07
91134	DATA LOGGER	ESC	8832	A2020	Good	11/14/07
91135	DATA LOGGER	ESC	8832	A2021	Good	11/14/07
91136	DATA LOGGER	ESC	8832	A2040	Good	11/14/07
91137	DATA LOGGER	ESC	8832	A2041	Good	11/14/07
91788	DATA LOGGER	ESC	8832	A3222K	Good	06/12/09
91789	DATA LOGGER	ESC	8832	A3223K	Good	-
92942	DATA LOGGER	ESC	8832	A4838K	Good	-
92943	DATA LOGGER	ESC	8832	A4837K	Good	-
92944	DATA LOGGER	ESC	8832	A4836K	Good	-
92945	DATA LOGGER	ESC	8832	A4839K	Good	-
92949	DATA LOGGER	ESC	8832	4838	Good	-

MDEQ 2018 EQUIPMENT LIST

Inventory Number	Item	Manufacturer	Type	Serial Number	Condition	Purchase Date
CALIBRATORS						
88441	CALIBRATOR	API	700	740	Fair	07/01/01
90599	CALIBRATOR	API	700	1278	Fair	02/01/06
92084	CALIBRATOR	API	T700U	55	Good	-
92234	CALIBRATOR	Envionics	6103	5115	Fair	10/21/11
92430	CALIBRATOR	Envionics	6103	5418	Fair	08/17/12
92431	CALIBRATOR	Envionics	6103	5416	Fair	08/17/12
92432	CALIBRATOR	Envionics	6103	5420	Fair	08/17/12
92433	CALIBRATOR	Envionics	6103	5417	Fair	08/17/12
92434	CALIBRATOR	Envionics	6103	5419	Fair	08/17/12
92849	CALIBRATOR	API	T700U	167	Good	-
92850	CALIBRATOR	API	T700	814	Good	-
93385	CALIBRATOR	API	T703U	122	Good	12/27/17
93386	CALIBRATOR	API	T703U	123	Good	12/27/17
93387	CALIBRATOR	API	T703U	3010	Good	12/30/16
93490	CALIBRATOR	API	T703U	180	Good	06/17/17
93491	CALIBRATOR	API	T703U	181	Good	06/17/17
93492	CALIBRATOR	API	T703U	182	Good	06/17/17
93656	CALIBRATOR	API	T703U	190	Good	11/17/17
93675	CALIBRATOR	API	T703U	194	Good	12/05/17
93677	CALIBRATOR	API	T700	3732	Good	01/08/18
ZERO AIR UNITS						
No Inv #	ZERO AIR UNIT	API	701	1365	Fair	-
No Inv #	ZERO AIR UNIT	API	702	1875	Fair	-
83371	ZERO AIR UNIT	Sabio	2020	5930537	Fair	05/01/93
84933	ZERO AIR UNIT	API	701	82	Fair	08/01/95
89694	ZERO AIR UNIT	Sabio	2020	2440703	Fair	08/01/03
91623	ZERO AIR UNIT	API	701-H	2839	Good	12/12/08
92435	ZERO AIR UNIT	Sabio	2020	-	Good	08/17/12
92436	ZERO AIR UNIT	Sabio	2020	-	Good	08/17/12
92437	ZERO AIR UNIT	Sabio	2020	-	Good	08/17/12
92486	ZERO AIR UNIT	Sabio	2020	-	Good	08/17/12
92487	ZERO AIR UNIT	Sabio	2020	-	Good	08/17/12
93388	ZERO AIR UNIT	API	701H	1653	Good	01/20/17
93389	ZERO AIR UNIT	API	701H	1654	Good	01/20/17

