

Health, Poverty and Place in Accra, Ghana: Mapping Neighborhoods

GREGORY M. VERUTES¹, MAGDALENA BENZA FIOCCO²,
JOHN R. WEEKS², and LLOYD L. COULTER²

¹Stanford University, Woods Institute for the Environment, 371 Serra Mall, Stanford, CA, 94305, USA

²San Diego State University, Department of Geography, 5500 Campanile Dr.,
San Diego, CA, 92182-4493, USA

A major goal of this project was the collection of survey data to depict women's health and housing characteristics throughout the city. The second wave of the Women's Health Survey of Accra (WHS-II) required locating and re-interviewing 3,200 women who had previously been interviewed in 2003. However, in the initial interview only names and addresses had been recorded. Accra does not have a systematic set of street names and addresses.

Our task was to create a detailed street map so that interviewers would be able to locate the respondents. This neighborhood map (a portion of which is shown here) became an important tool for interviewers in the field, providing references to identifiable landmarks that provided orientation and allowed the location of sampled dwellings.

SOURCE INFORMATION

- Ghana Statistical Service (GSS) defined the enumeration areas (EAs).
- Ghana Land and Surveys Office provided all the vector layers including points of interest, hydrology, roads and street names.
- Digital Globe provided the QuickBird multispectral imagery data which was acquired 12 April 2002.
- The project team collected Women's Health Study (WHS-II) results and the GPS points of health facilities.

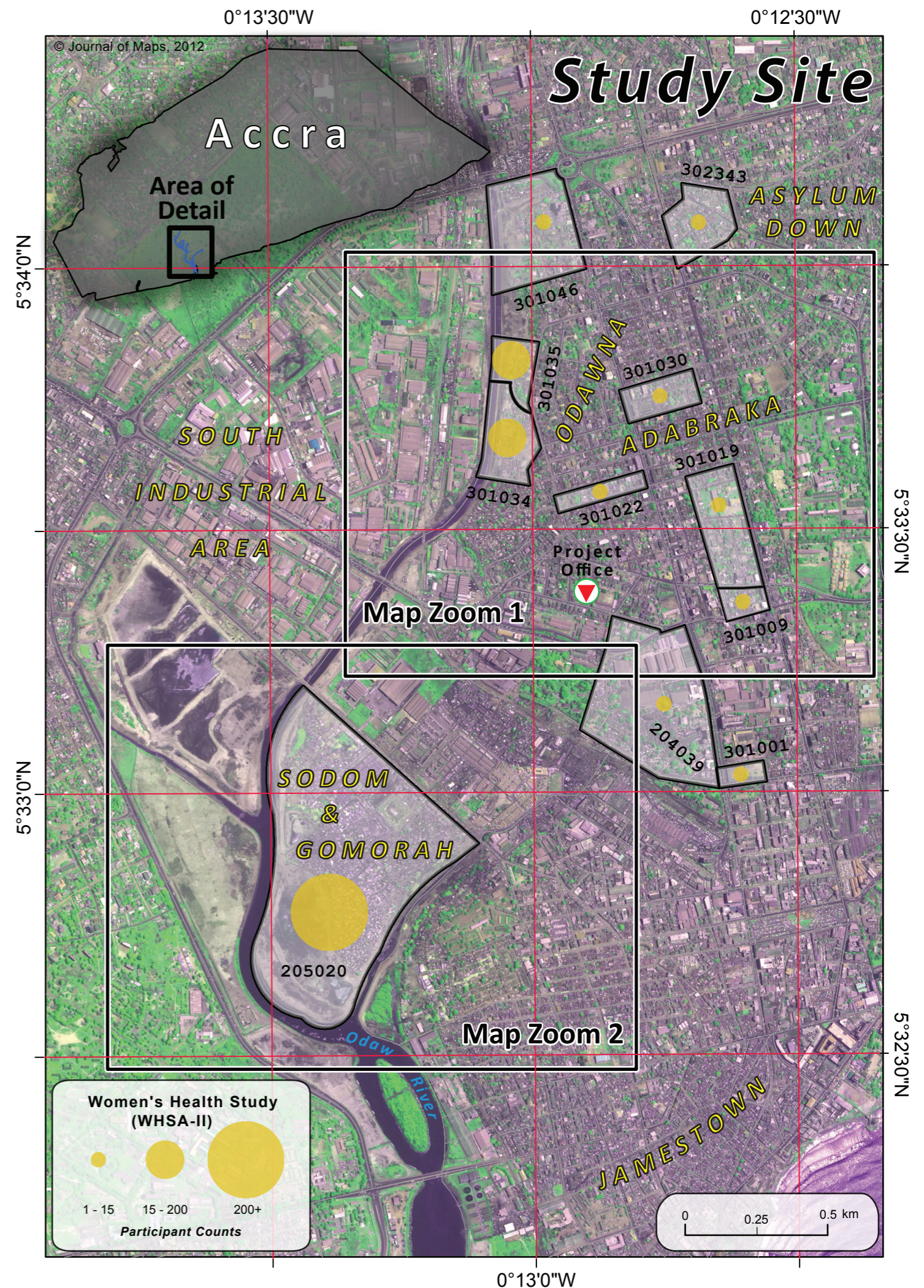
PROJECTION, SPHEROID AND GRID INFORMATION

- All maps were created using the WGS84 datum and then projected into Transverse Mercator (UTM 30N).
- All vector layers from the Ghana Land and Surveys Office were created using the Accra Geographic Coordinate System datum and "War Office" spheroid. A coordinate system transformation from Accra Datum to WGS84 was applied to all map layers to establish a common referencing system.

DATA ACCURACY

The accuracy of data used for these maps was varied, but reliable.

- The location of points of interest and labels were highly accurate and verified using Google Maps and GPS data.
- The 2002 QuickBird imagery was not orthorectified, but instead provided with rough georeferencing based upon satellite position and viewing direction. It is likely that the vector data was more positionally accurate than the imagery causing a slight misalignment between the vector and raster overlay.

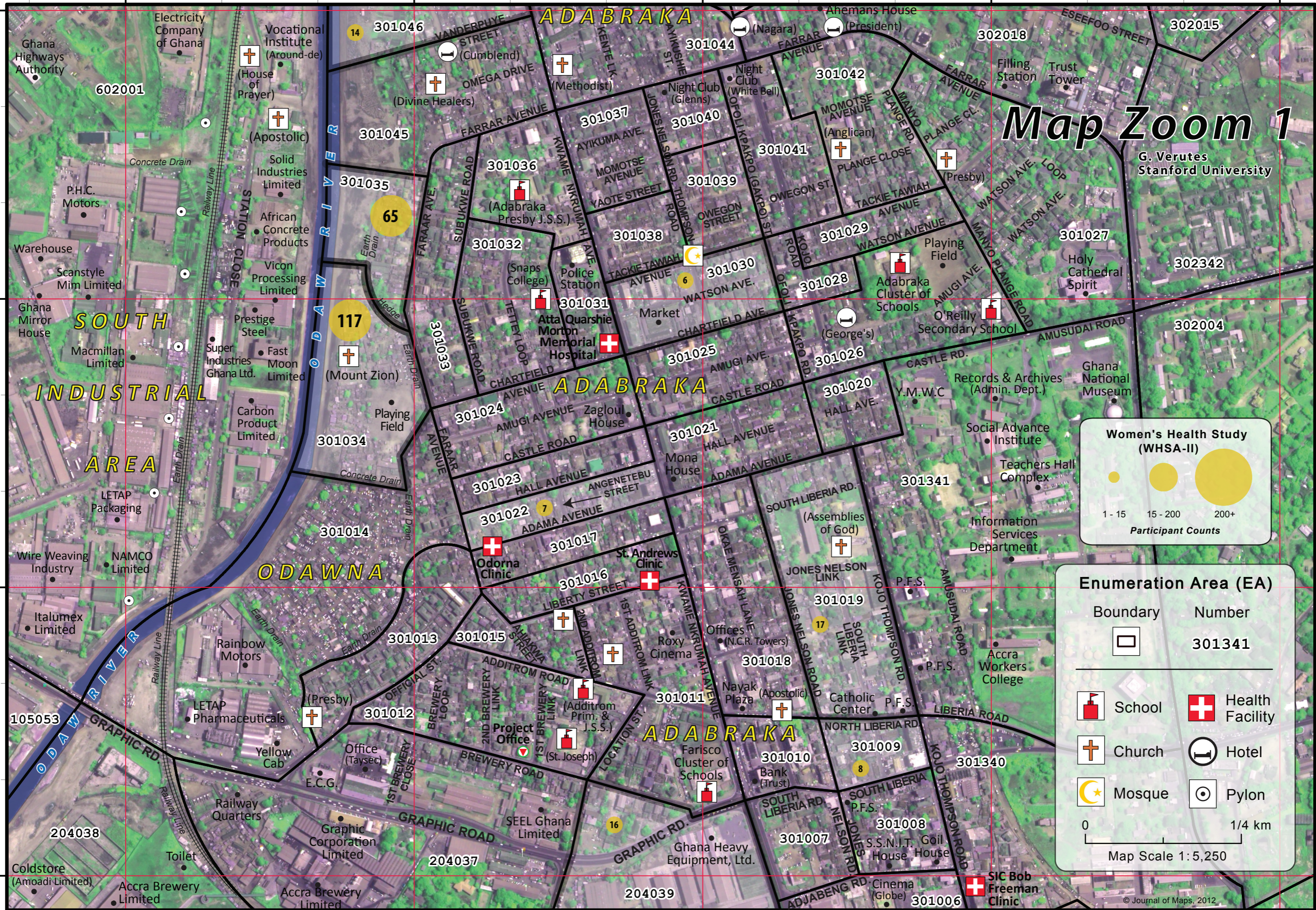


5°34'0"N

0°13'15"W

0°12'45"W

0°12'15"W



5°33'45"N

5°33'30"N

0°13'0"W

0°12'30"W

5°33'15"N

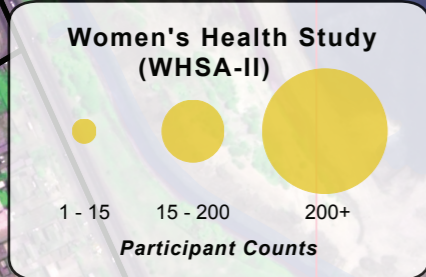
0°13'45"W

0°13'15"W

5°33'15"N

Map Zoom 2

G. Verutes
Stanford University



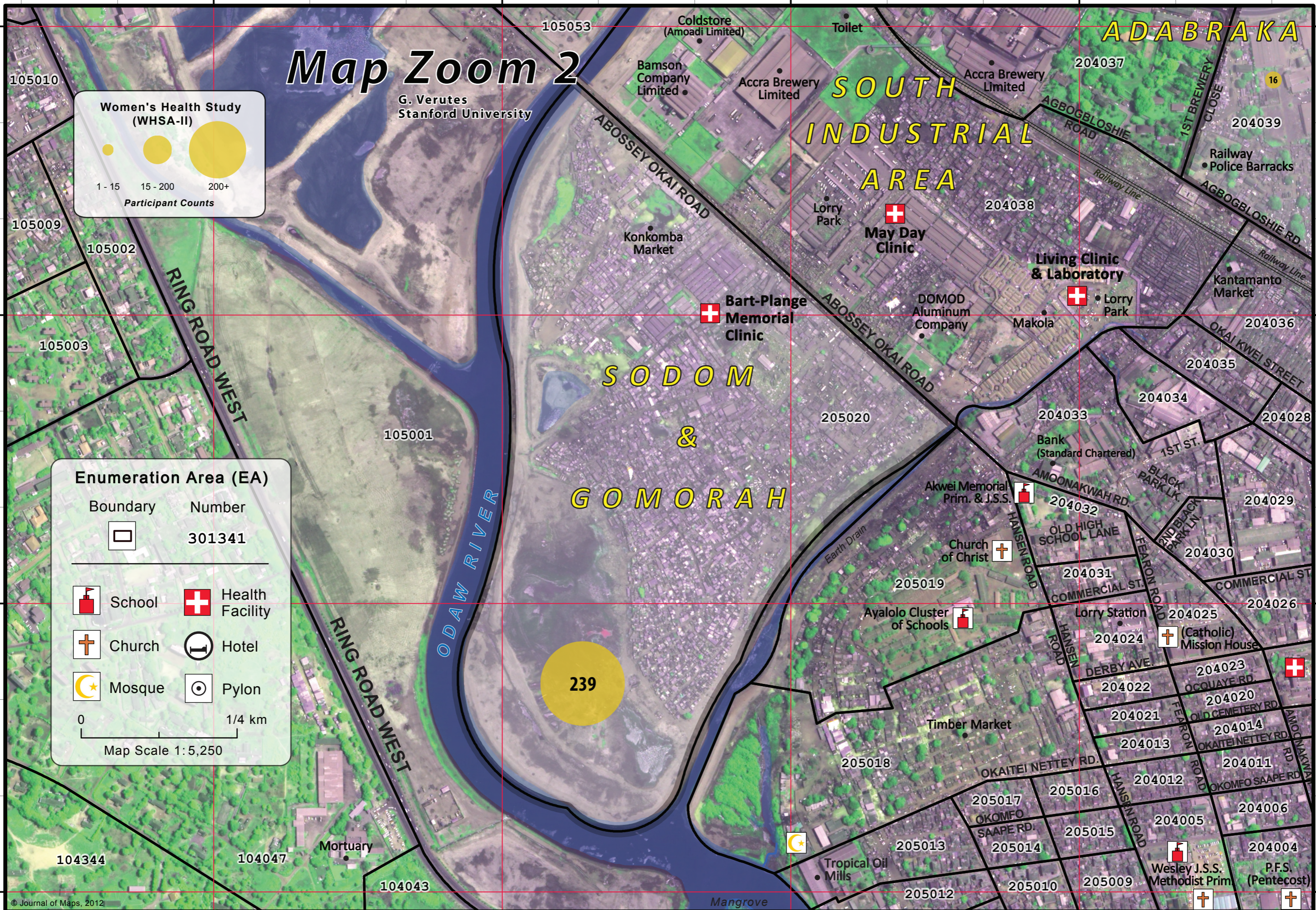
Enumeration Area (EA)

Boundary	Number
	301341

	School		Health Facility
	Church		Hotel
	Mosque		Pylon

0 1/4 km

Map Scale 1:5,250



5°33'0"N

5°32'30"N

0°13'30"W

0°13'0"W

5°32'45"N