Elevation QC Report

Project: Dekalb Co., Georgia **Contractor:** Kucera International, Inc.

Data Delivery Date: 2/24/2011 **Date Data Reviewed:** 3/7/2011

Reviewer: Leslie Lansbery **Total Square Miles Reviewed:** 327.4

Elevation Type: LIDAR **Format:** LAS **Grid Spacing:** 5 ft. **Tile size:** 309 x 395 ft.

Projection: SPCS **Zone:** GA (1002) West **Datum:** NAD83 **Units:** Feet

Licensing: Public Domain **Metadata:** Project Level

Materials Received:

metadata
LAS (bare earth LAS, classified LAS, classified LAS_new, first return LAS, unclassified LAS)
GMG
ERDAS Images
TIN's
Dekalb hydro breaklines

Vertical Accuracy Test Performed: Yes **Test Point Source:** Contractor **RMSE:** 5.7 cm

Vertical Accuracy Test Notes:

Vertical accuracy reported by the contractor is 5.7cm RMSEz. There is no reason to dispute the claimed accuracy.

QC Review Summary:

REVIEW PROCESS USED and EXTENT OF AREA are ATTACHED:

RESULTS OF REVIEW ARE:

Converted LAS files to Global Mapper Grid and reviewed in Global Mapper.

Seams were found throughout the project, but do not affect the elevation.

Several bridges were removed throughout the project. Some of the bridges were not completely removed and had to have further work, while others needed removed completely. There are several imaged areas in which there was an excessive amount of roadway removed than seemed necessary.

All materials received, a footprint shapefile, the area extent, and ERDAS Imagine images in the native projection and resolution are included in the shipment to EROS.

11-2-2010

LiDAR Quality Control (QC) Review Process

Preparation:

-Metadata reviewed to determine data projection, datum, format, etc.
-If ARRA contract, check for raw .LAS files, classified .LAS files, breaklines, blind control points, and DEM in Image or Grid format
-Open data in Global Mapper

Vertical accuracy testing:

-If ARRA contract, use Vertical Accuracy Test Worksheet to perform RMSE on 20 blind point positions provided by contractor

Inspection and Correction of data:

-Minimum and maximum elevations in dataset; correct if in error
-Appropriate hydro flattening as specified in V12 Lidar Specification (For ARRA/GPSC Data)
-Data void areas
-Data spikes
-Tile edge seam lines
-Non-bare earth surface artifacts (structures, bridges, vegetation, etc.)
-Elevation errors - raised/lowered areas/tiles
-Other surface treatment anomalies
-Check DRGs for correct elevations and horizontal positioning (if test points not available)
-Create footprint (project boundary) shape file and establish square miles

During Inspection, identify data errors and create "error" file folder:

-Capture geo-referenced JPG or TIFF image(s) of identified errors
-Copy to Error file

During Inspection, level elevations and remove artifacts (these two steps not done for ARRA data):

-Level smoothing to remove non-bare earth surface artifacts (structures, bridges, vegetation, etc.)
-Level data spikes where possible

Export image files and create project Elevation QC Review Report:

-Export ERDAS Imagine image files in native projection and resolution
-If ARRA, Copy Vertical Accuracy Test Worksheet into QC Report
-Place QC Review Process and Project Area Extent into QC Report
-If rejected, attach sample geo-referenced JPG or TIFF error images with an explanation of reason
-If rejected, restart QC process when replacement data is received
-Provide completed Elevation QC Review Report to Elevation Supervisor for final viewing
-Add QC Report, footprint, Imagine image(s), and Error file to original data file for final shipment to EROS

Dekalb Co. GA Area Extent