

2009 Aerial Mapping and Survey Control

SCDOT contracted with **Independent Mapping Consultants (IMC)** to perform the aerially mapping of the I-126, I-26, I-20 corridor during the **Year (2009)**.

Summary of the aerial mapping and ground control point specifications

1. **1000' wide corridor outside of the pavement surfaces mapped at 1"=300' using fixed wing aircraft.**
 - a. Horizontal and vertical accuracy $\pm 0.5'$.
 - b. 1' contour intervals to meet the National Map Accuracy Standards (NMAS).
2. **Paved areas of I-26 and I-126 mapped at 1"=50' using low altitude helicopter.**
 - a. Horizontal and vertical accuracy $\pm 0.05'$.
3. **I-20 paved surface mapped at 1"=300'.**
 - a. Horizontal and vertical accuracy $\pm 0.5'$.
 - b. **1' contour intervals** to meet the National Map Accuracy Standards (NMAS).
 - c. The pavement surfaces, medians, and ramps of I-20 were mapped at 1"=300'
4. **Davis and Floyd** performed the placement and surveying of the **(575) ground control chevrons** for the **1"=50' low altitude mapping** (see images below).
 - a. A **Leica DNA 03 Digital Level** and a **Leica System 1200 GPS** were used to survey the Horizontal location and elevation of each ground control chevron.
 - b. **(9) Geodetic Monuments** were used as the primary GPS control check points and Benchmarks.



5. **Cornerstone Surveying & Engineering** performed the selection and surveying of the **(106) ground control points (panels or photo ID points)** for the **1"=300' aerial mapping**.
 - a. **RTK/VRS GPS** was used to collect the horizontal location and vertical elevation of each ground control point.
 - b. **RTK/VRS GPS** can produce horizontal and vertical (elevation) **accuracies of $\pm 0.1'$** .
6. **(2009) ground control points** established on **NAD83(2007) horizontal datum** and **NAVD88 vertical datum**.