

Aerial imagery and remote sensing

Description

Aerial photography and photogrammetrics are used to begin the three-dimensional location data collection required for transportation projects. Flights are made in the Spring and Fall over specific corridors to routinely update MnDOT's records and to address the aerial photography needs of specific projects.

- Aerial Photography: Collection and processing of Aerial Vertical Digital Imagery to be used as a basis for detail design ground controlled post-processed aero-triangulation solutions for MnDOT transportation projects and local governmental units of Minnesota projects. This includes in-flight collection and processing of aerial image positions and orientation parameters.

Standards and specifications

May include the following:

- All work must be completed in accordance with the Procedural Based Specifications and Performance Based Specifications identified in the project-specific contract.
- Aerial Photography Specifications: MnDOT Surveying and Mapping Manual, Chapter 4: <https://www.dot.state.mn.us/surveying/pdf/sm-manual-2007.pdf>

Provided by Hennepin County

Information to be supplied by Hennepin County for a project may include the following:

- Project designation, location, and limits
- Flight plan and digital camera requirements
- Coordinate datum/projection/adjustment
- Special requirements

Typical services

Project deliverables may include the following:

- Calibration reports for aerial camera(s).
- Camera station parameters $((x, y, z)$ and (ω, ϕ, κ) for each image.
- Center of first and last image of each flight strip in latitude and longitude.
- Digital image files used to collect aerial imagery.
- Digital image file plots on photo base paper for airports.
- Photo Index digital file.
- Photo Index print or plot on photo base paper of each project.