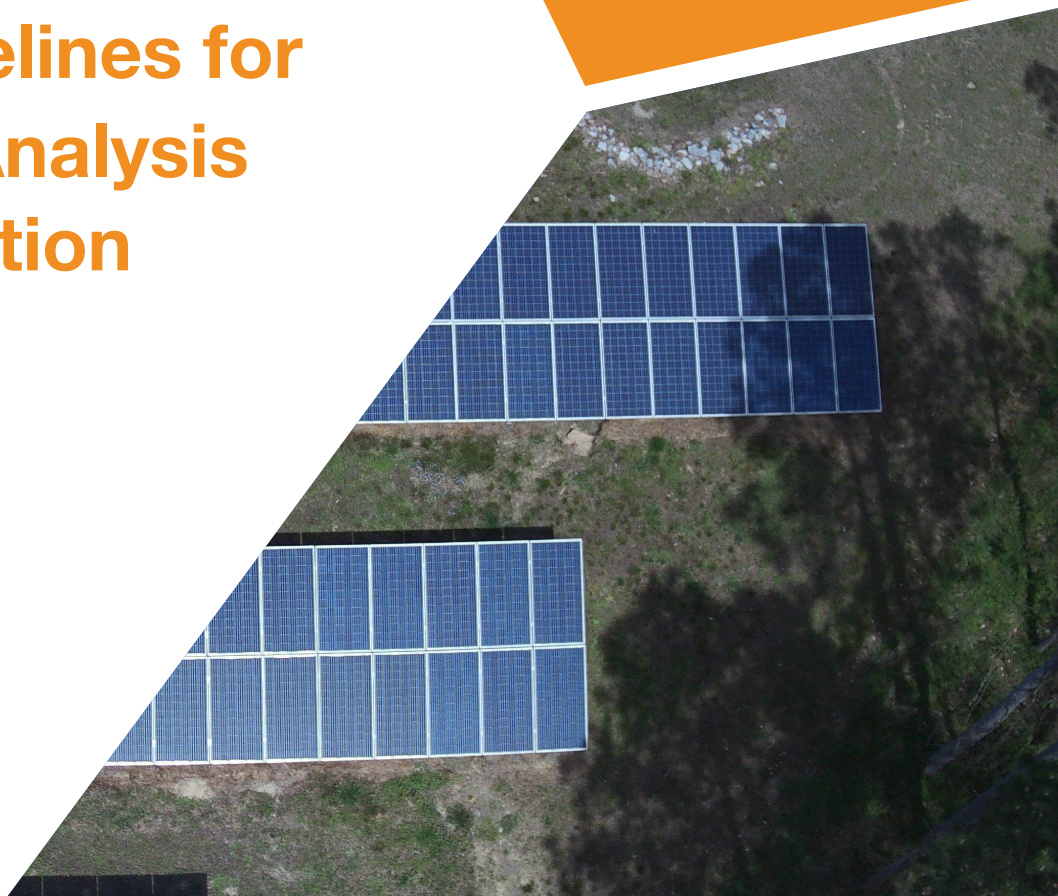
RAPTOR MAPS™

Flight Guidelines for Shading Analysis Inspection



Flight Guidelines

Note: *Before you begin, confirm that trees have sufficient foliage for image capture and analysis.*

MAPPING FLIGHT

Ground Sample Distance (GSD):
2 cm/pxr (0.8 in/px)
Appox. altitude 91.4 m (300 ft.) AGL

Gimbal Pitch:
Nadir (straight down)
-90 degrees from horizon

Overlap:
80% front overlap, 80% side overlap

Flight Area:
The flight path should cover the entire site including neighboring tree line with a grid flight pattern.

UAS REQUIREMENTS

Drone:
Obliques captured with multi-copter UAS with gimbal mounted camera (e.g. DJI Phantom 4 Pro).

High-Resolution Camera:
5472×3648 pixel (20 MP) resolution minimum
e.g. Phantom 4 Pro camera, Zenmuse X4S.

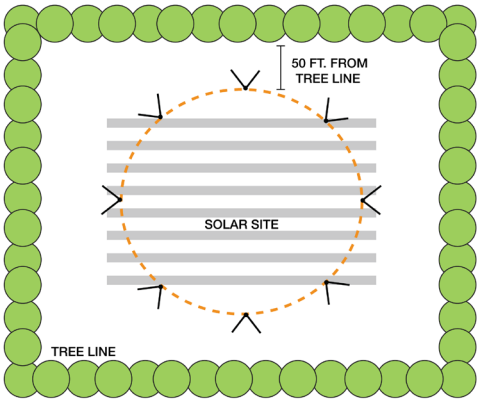
ORBITAL FLIGHT

Altitude:
Approx. 250 ft. above the tree-line.

Gimbal Pitch:
Approx. 30 degrees facing toward the tree line and away from the center of the site (no horizon or sky should be visible in images).

Overlap:
50-70% side overlap

Flight Area:
Flight should be flown in a circle around entire perimeter of array and 50 ft inward from the bordering obstructions.



OUTWARD OBLIQUE FLIGHT

Altitude:
Approx. 100 ft. above the tree-line

Gimbal Pitch:
-15.0 to -45.0 degrees from horizon

Overlap:
No overlap

Flight Area:
Flight should be flown above the center of the solar site, with 8 images taken in the 8 cardinal directions.