ArcGIS® Drone2Map™ Advanced

Project Summary

Project Name	CornTest11-15-23
Processed On	11/28/23, 04:52 PM
Camera Model	DJI M3M-MS
Images	271 out of 271 images calibrated
Project Area	2.380 km2 / 237.978 ha / 0.919 sq. mi. / 588.037 acres
Ground Resolution	0.107 (US ft)
Processing Time	56m:22s

Adjust Images

Summary

Number of Tie Points	1,377,468
Number of Solution Points	374,966
RMSE of Reprojection Error / Sigma Naught (Pixel)	0.317 / 0.412
Initial Processing Time	54m:30s

Processing Options

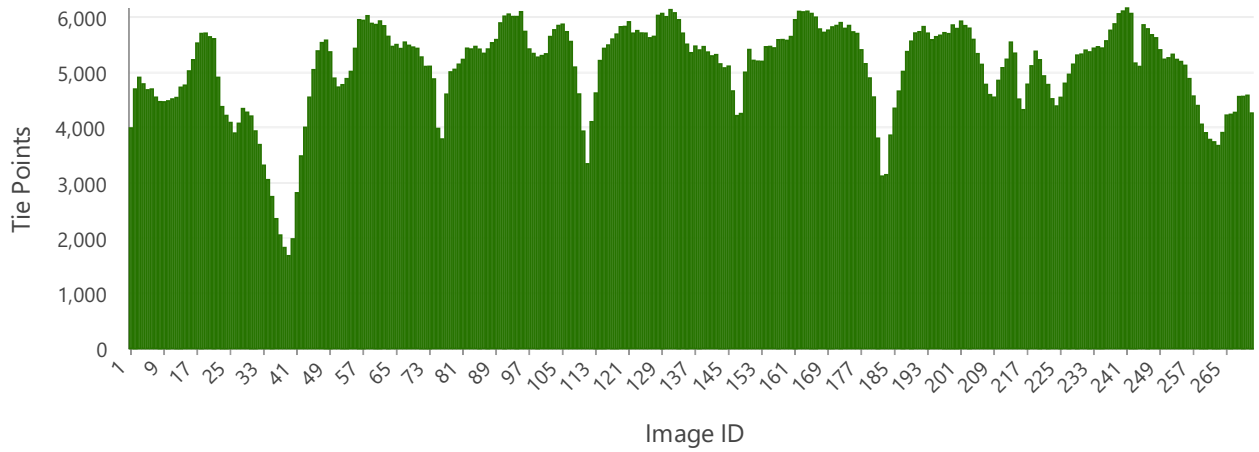
Initial Image Scale	1/8 (Eighth image size)
Refine Adjustment Scale	1 (Original image size)
Matching Neighborhood	Small (Optimized)

Internal Camera Parameters

DJI M3M-MS 4.7mm 2592x1944
1581F5FKD235A00D6DZ6

Focal Length	Principal Point X	Principal Point Y	K1	K2	K3	P1	P2
4.679	0.065	0.004	-1.144e-004	1.680e-005	-1.502e-006	2.983e-004	-2.854e-004

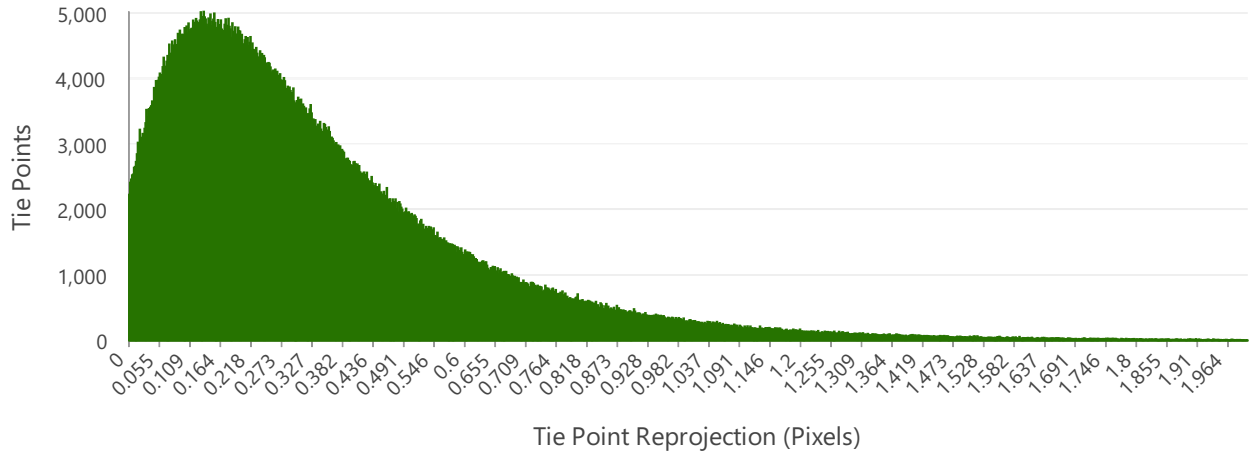
Tie Points Per Image



Min	1,672
Max	6,144
Median	5,332
Mean	5,082
Total	1,377,468

The total number of tie points that were detected in each image during the Adjust Images step. Images with low tie point counts may indicate problematic areas, such as areas with poor image quality, insufficient image overlap, or homogenous image textures.

Tie Point Reprojection Error



Min	0.000
Max	2.000
Median	0.273
Mean	0.346
RMSE	0.317

The distribution of the tie point reprojection errors across all adjusted images. The root mean square error (RMSE) of the reprojection error can be used to assess the overall quality of the Adjust Images processing step. Generally, an RMSE value closer to zero indicates a higher quality adjustment.

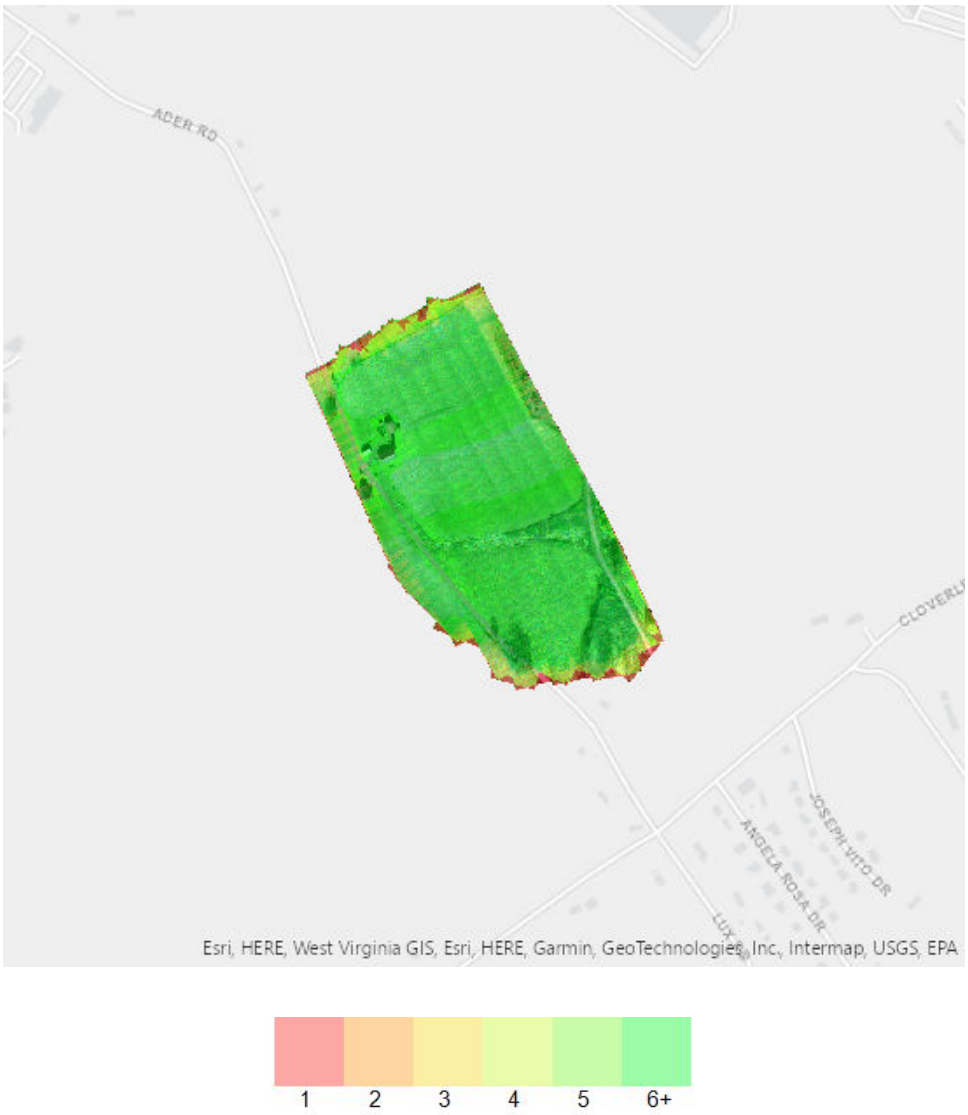
Standard Deviation of Exterior Orientation

	X (US ft)	Y (US ft)	Z (US ft)	Omega (degrees)	Phi (degrees)	Kappa (degrees)
Min	0.000	0.000	0.000	0.000	0.001	0.000
Max	0.000	0.000	0.000	0.001	0.001	0.002

Adjusted Image Positions

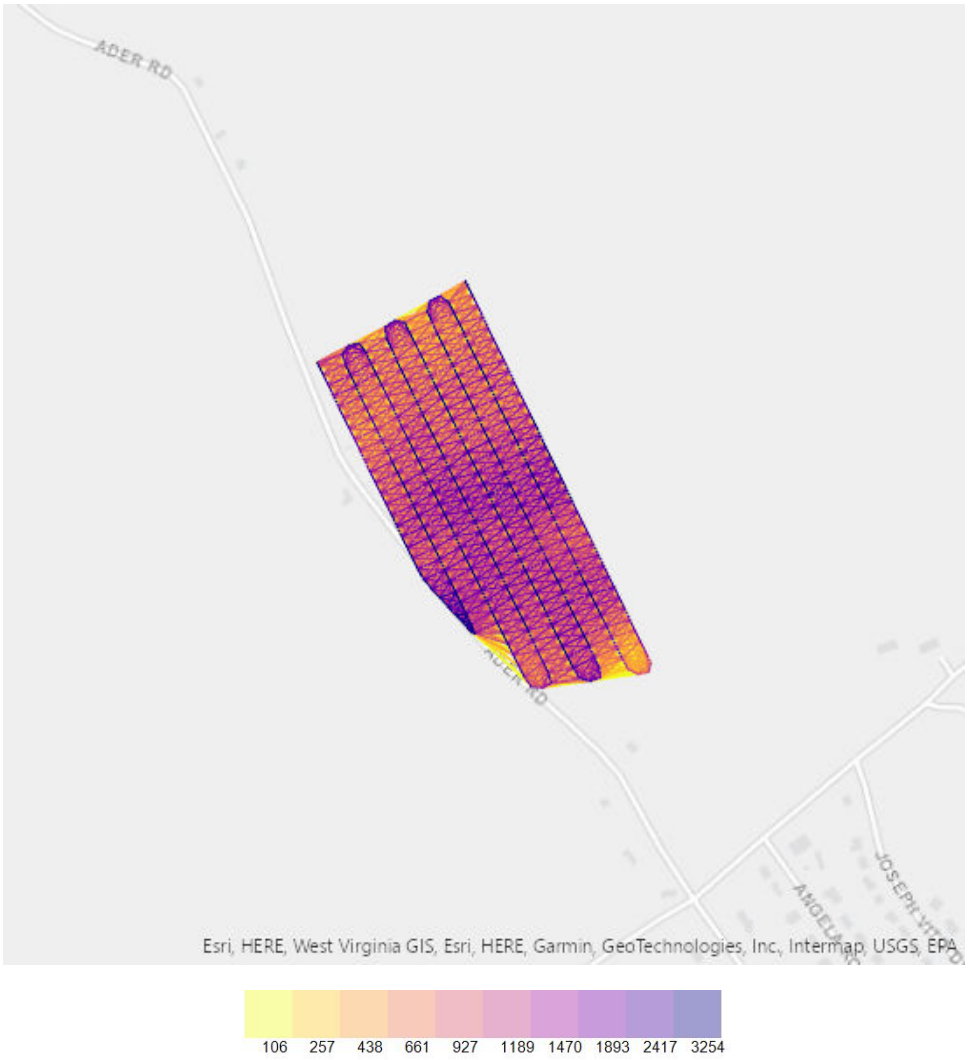
The initial image locations (blue points) and their adjusted positions (green points) after processing.

Image Overlap



The amount of overlap between image projections after processing. Areas with high overlap produce the most accurate results. Avoid placing control points in areas of low overlap, as this could affect their accuracy.

Cross Matches



The adjusted image positions with links showing the number of tie points between matched images after the Adjust Images processing step. Darker links indicate a higher number of tie points between the images. Images with a greater number of links generally produce more accurate results.

Solution Points

2 Images	174,199
3 Images	74,914
4 Images	41,262
5 Images	25,113
6 Images	16,109
7 Images	11,386
8 Images	8,655
9 Images	6,326
10 Images	4,704
11 Images	3,390
12 Images	2,529
13 Images	1,873
14 Images	1,369
15 Images	990
16 Images	710
17 Images	473
18 Images	290
19 Images	260
20 Images	203
21 Images	137
22 Images	59
23 Images	14
24 Images	1

The frequency of solution points per image observations. Solution points with a higher number of image observations generally produce more accurate results.

Project Settings

System Information

Hardware	CPU: 13th Gen Intel(R) Core(TM) i9-13950HX RAM: 64GB GPU: NVIDIA RTX 4000 Ada Generation Laptop GPU (Driver: 31.0.15.3758)
Operating System	Microsoft Windows 11 Pro, 64-bit
ArcGIS Drone2Map Version	2023.1.1

Coordinate Information

Image Coordinate System	GCS_ITRF_2008/VCS:ITRF 2008
Project Coordinate System	NAD_1983_2011_StatePlane_Pennsylvania_South_FIPS_3702_Ft_US/VCS:Unknown height system (US survey feet)

Project Resolution

Project Resolution	Automatic 1 x GSD (0.107 US ft)

2D Product

Summary

Processing time for Orthomosaic	01m:09s

Processing Options

Create Orthomosaic	Yes
Create Digital Surface Model	No
Create Digital Terrain Model	No
Color Balance	Yes

3D Product

Processing Options

Create Point Cloud	No
Merge LAS Tiles	No
Create DSM Textured Mesh	No
Create 3D Textured Mesh	No
Enhance Textured Mesh	No