Rambla Pocitos 11/10/2024

Reporte de procesamiento
15 October 2024

Survey Data

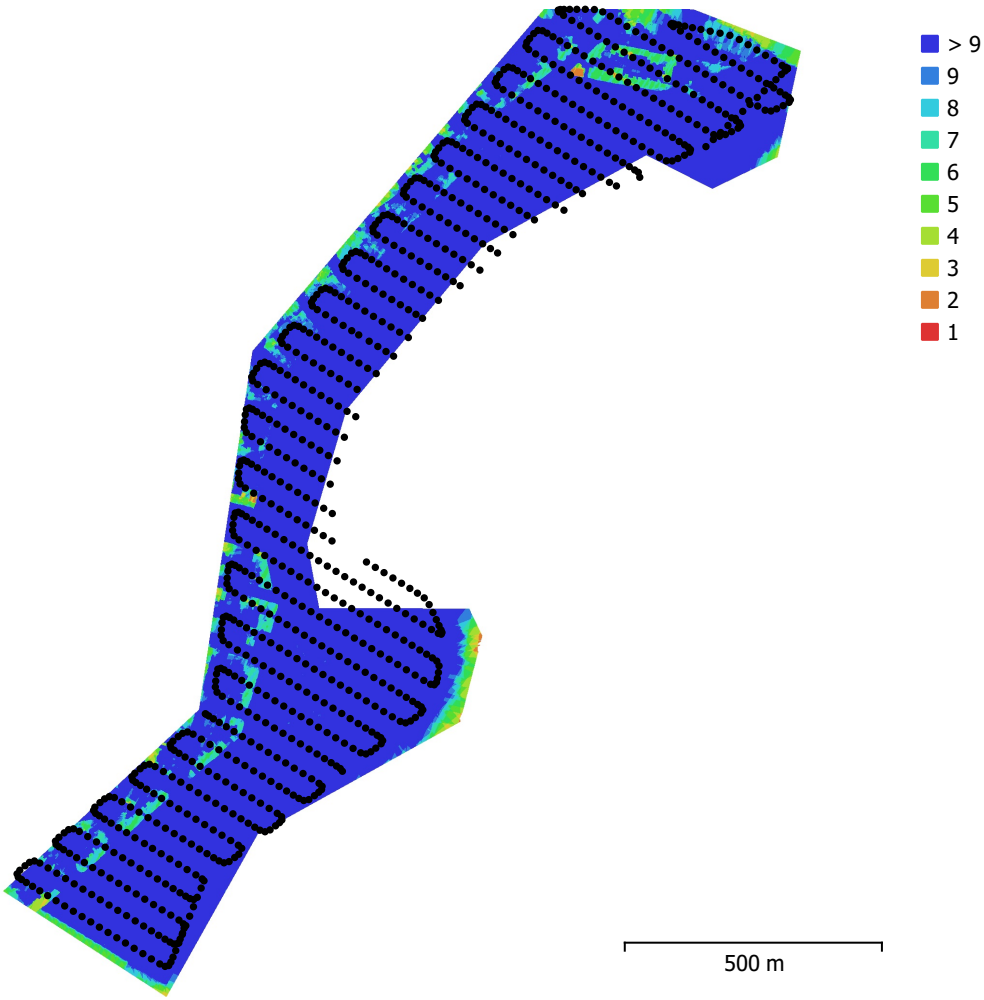

Fig. 1. Camera locations and image overlap.

Number of images:	1,077	Camera stations:	969
Flying altitude:	95.9 m	Tie points:	710,380
Ground resolution:	2.33 cm/pix	Projections:	3,416,770
Coverage area:	0.69 km²	Reprojection error:	0.839 pix

Camera Model	Resolution	Focal Length	Pixel Size	Precalibrated
M3E (12.29mm)	5280 x 3956	12.29 mm	3.36 x 3.36 µm	Yes

Table 1. Cameras.

Camera Calibration

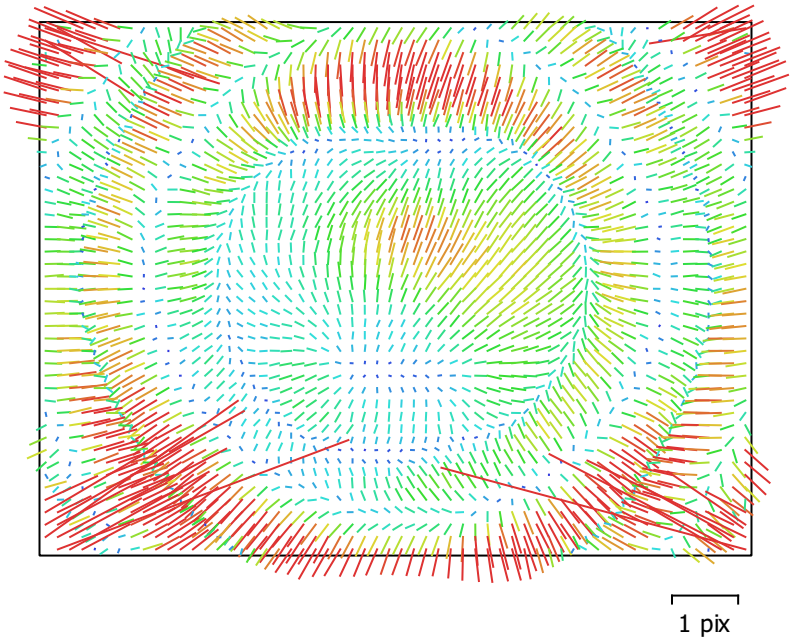

Fig. 2. Image residuals for M3E (12.29mm).

M3E (12.29mm)

1077 images, precalibrated

Type	Resolution	Focal Length	Pixel Size
Frame	**5280 x 3956**	**12.29 mm**	**3.36 x 3.36 µm**

	Value	Error	F	Cx	Cy	B1	B2	K1	K2	K3	K4	P1	P2
F	**3698.62**	0.021	1.00	-0.01	0.03	-0.13	-0.05	-0.29	0.21	-0.17	0.14	0.00	-0.04
Cx	**23.827**	0.008		1.00	0.02	-0.03	-0.08	0.00	0.00	-0.00	0.01	0.53	0.04
Cy	**-63.2594**	0.0073			1.00	0.04	-0.04	0.03	-0.03	0.04	-0.05	0.02	0.62
B1	**-0.0471606**	0.0031				1.00	0.05	0.02	-0.03	0.02	-0.02	-0.04	0.03
B2	**-0.0399854**	0.0029					1.00	-0.00	0.00	-0.00	0.01	-0.09	-0.01
K1	**-0.0872813**	2e-05						1.00	-0.97	0.92	-0.87	-0.00	0.03
K2	**-0.0839679**	8.3e-05							1.00	-0.99	0.96	0.00	-0.04
K3	**0.126793**	0.00014								1.00	-0.99	-0.00	0.05
K4	**-0.0818227**	7.6e-05									1.00	0.00	-0.06
P1	**1.61028e-05**	4.3e-07										1.00	0.02
P2	**-0.000200336**	4.1e-07											1.00

Table 2. Calibration coefficients and correlation matrix.

Camera Locations

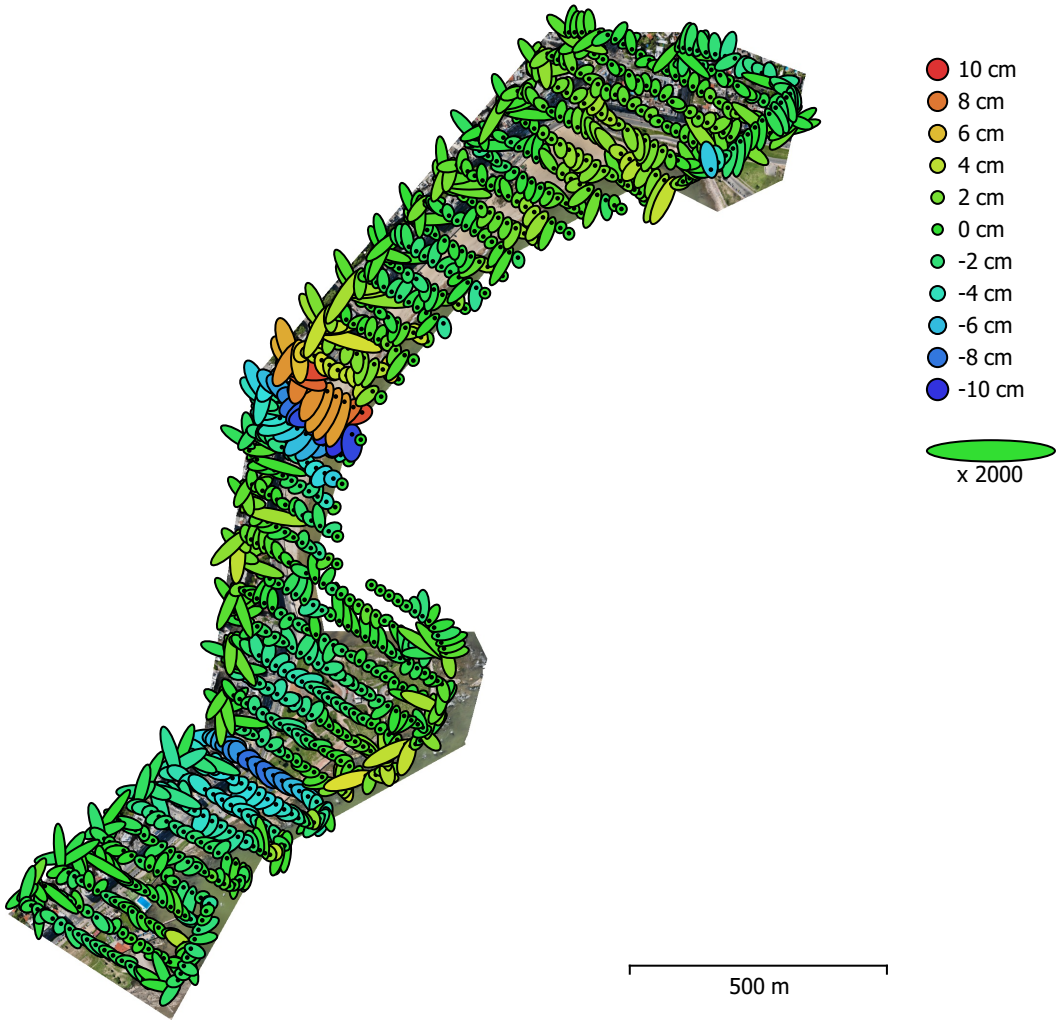

Fig. 3. Camera locations and error estimates.
Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated camera locations are marked with a black dot.

X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total error (cm)
1.17198	1.25018	2.42362	1.71362	2.96823

Table 3. Average camera location error.
X - Easting, Y - Northing, Z - Altitude.

Ground Control Points

Fig. 4. GCP locations and error estimates.
Z error is represented by ellipse color. X,Y errors are represented by ellipse shape.
Estimated GCP locations are marked with a dot or crossing.

Count	X error (cm)	Y error (cm)	Z error (cm)	XY error (cm)	Total (cm)
13	0.999948	0.870394	1.87269	1.3257	2.29444

Table 4. Control points RMSE.
X - Easting, Y - Northing, Z - Altitude.

Label	X error (cm)	Y error (cm)	Z error (cm)	Total (cm)	Image (pix)
1	1.18245	-0.374424	1.9387	2.3015	1.056 (14)
2	-1.27853	0.187517	0.850524	1.54699	1.701 (4)
3	-0.885688	0.836448	3.11951	3.34894	1.334 (14)
4	-0.909888	0.984469	3.04678	3.32866	1.542 (16)
5	0.151612	0.400638	3.32042	3.34794	1.755 (12)
6	0.685932	1.1831	1.11738	1.766	1.121 (8)
7	0.416465	0.368596	0.785671	0.962593	1.085 (10)
8	1.47493	-0.762805	0.646902	1.78207	1.198 (8)
9	0.00947604	0.477975	-1.56477	1.63617	1.266 (9)
10	0.539791	-0.37843	-1.40034	1.54775	0.735 (15)
11	-1.46112	2.03786	-0.901495	2.66466	1.194 (14)
12	1.67877	-0.441075	-1.88236	2.56048	0.840 (17)
13	-0.51627	-1.00369	-0.139878	1.13732	0.889 (4)
Total	**0.999948**	**0.870394**	**1.87269**	**2.29444**	**1.226**

Table 5. Control points.

X - Easting, Y - Northing, Z - Altitude.

Digital Elevation Model

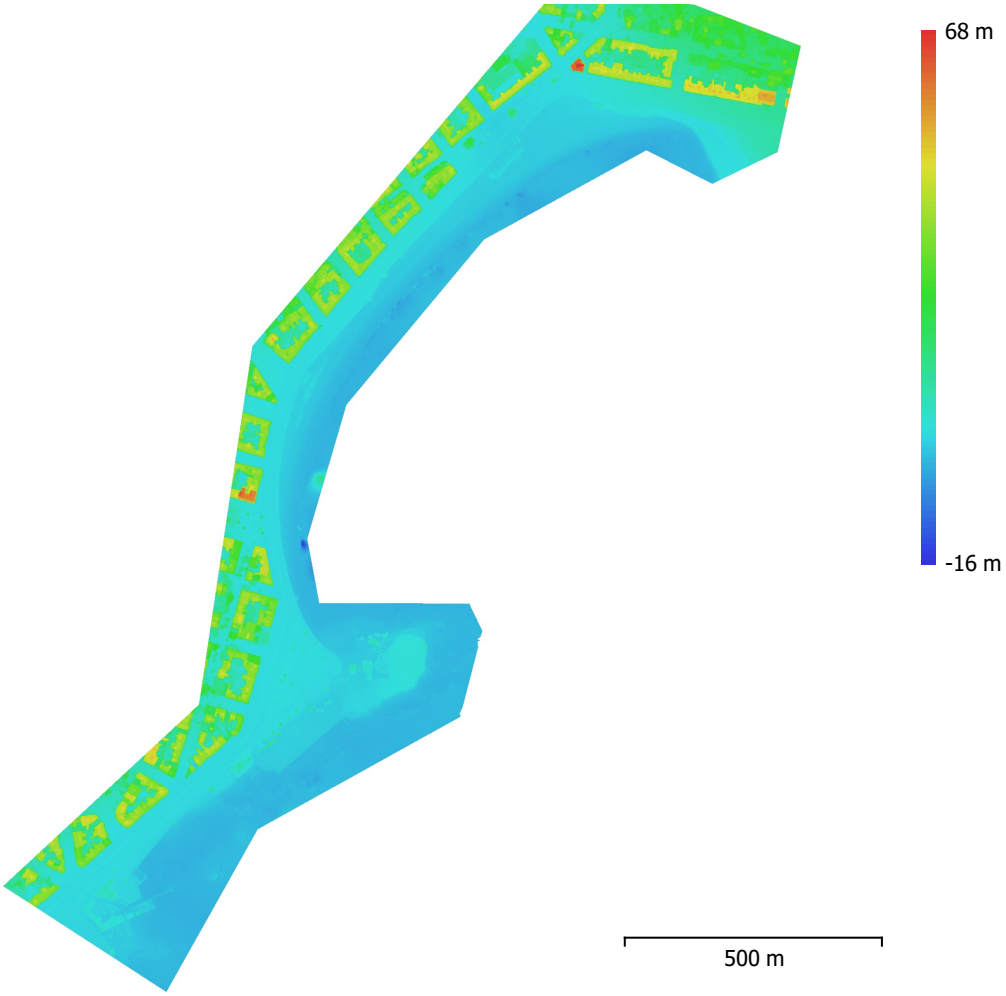

Fig. 5. Reconstructed digital elevation model.

Resolution:	4.65 cm/pix
Point density:	462 points/m²

Processing Parameters

General	
Cameras	1077
Aligned cameras	969
Markers	13
Shapes	
Polygon	1
Coordinate system	WGS 84 / UTM zone 21S EGM08
Rotation angles	Yaw, Pitch, Roll
Tie Points	
Points	710,380 of 789,101
RMS reprojection error	0.20891 (0.839488 pix)
Max reprojection error	3.83808 (55.0175 pix)
Mean key point size	3.41509 pix
Point colors	3 bands, uint8
Key points	No
Average tie point multiplicity	4.92924
Alignment parameters	
Accuracy	High
Generic preselection	Yes
Reference preselection	Source
Key point limit	40,000
Key point limit per Mpx	1,000
Tie point limit	4,000
Exclude stationary tie points	Yes
Guided image matching	No
Adaptive camera model fitting	Yes
Matching time	34 minutes 50 seconds
Matching memory usage	3.77 GB
Alignment time	8 minutes 49 seconds
Alignment memory usage	504.28 MB
Optimization parameters	
Parameters	b1, b2, cx, cy, k1-k4, p1, p2
Adaptive camera model fitting	Yes
Optimization time	11 seconds
Date created	2024:10:14 08:22:05
Software version	2.1.0.17532
File size	78.01 MB
Depth Maps	
Count	964
Depth maps generation parameters	
Quality	High
Filtering mode	Aggressive
Max neighbors	16
Processing time	8 hours 47 minutes
Memory usage	6.77 GB
Date created	2024:10:14 22:41:29
Software version	2.1.0.17532
File size	5.20 GB
Point Cloud	
Points	487,109,232

Point attributes	
Color	3 bands, uint8
Normal	
Confidence	1 - 33
Point classes	
Created (never classified)	487,109,232
Depth maps generation parameters	
Quality	High
Filtering mode	Aggressive
Max neighbors	16
Processing time	8 hours 47 minutes
Memory usage	6.77 GB
Point cloud generation parameters	
Processing time	1 hours 24 minutes
Memory usage	8.34 GB
Date created	2024:10:15 00:06:29
Software version	2.1.0.17532
File size	6.88 GB
DEM	
Size	34,883 x 43,022
Coordinate system	WGS 84 / UTM zone 21S EGM08
Reconstruction parameters	
Source data	Point cloud
Interpolation	Enabled
Processing time	8 minutes 46 seconds
Memory usage	316.40 MB
Date created	2024:10:15 09:54:32
Software version	2.1.0.17532
File size	2.30 GB
Orthomosaic	
Size	69,766 x 86,044
Coordinate system	WGS 84 / UTM zone 21S EGM08
Colors	3 bands, uint8
Reconstruction parameters	
Blending mode	Mosaic
Surface	DEM
Enable hole filling	Yes
Enable ghosting filter	No
Processing time	38 minutes 37 seconds
Memory usage	2.15 GB
Date created	2024:10:15 10:43:18
Software version	2.1.0.17532
File size	21.81 GB
System	
Software name	Agisoft Metashape Professional
Software version	2.1.0 build 17532
OS	Windows 64 bit
RAM	63.93 GB
CPU	Intel(R) Core(TM) i7-9700F CPU @ 3.00GHz
GPU(s)	Intel(R) FPGA Emulation Device Radeon(TM) RX 460 Graphics (Baffin) Radeon(TM) RX 460 Graphics (Baffin)