



Delivery Lot Summary Report: Delivery Lot 5

April 30, 2015

USGS Contract: G10PC00025

USGS Task Order: G13PD00816

Task Order Name: Sandy Supplemental NCR (VA-MD-DC) QL2 Lidar Task Order

Contractor: Photo Science, A Quantum Spatial Company

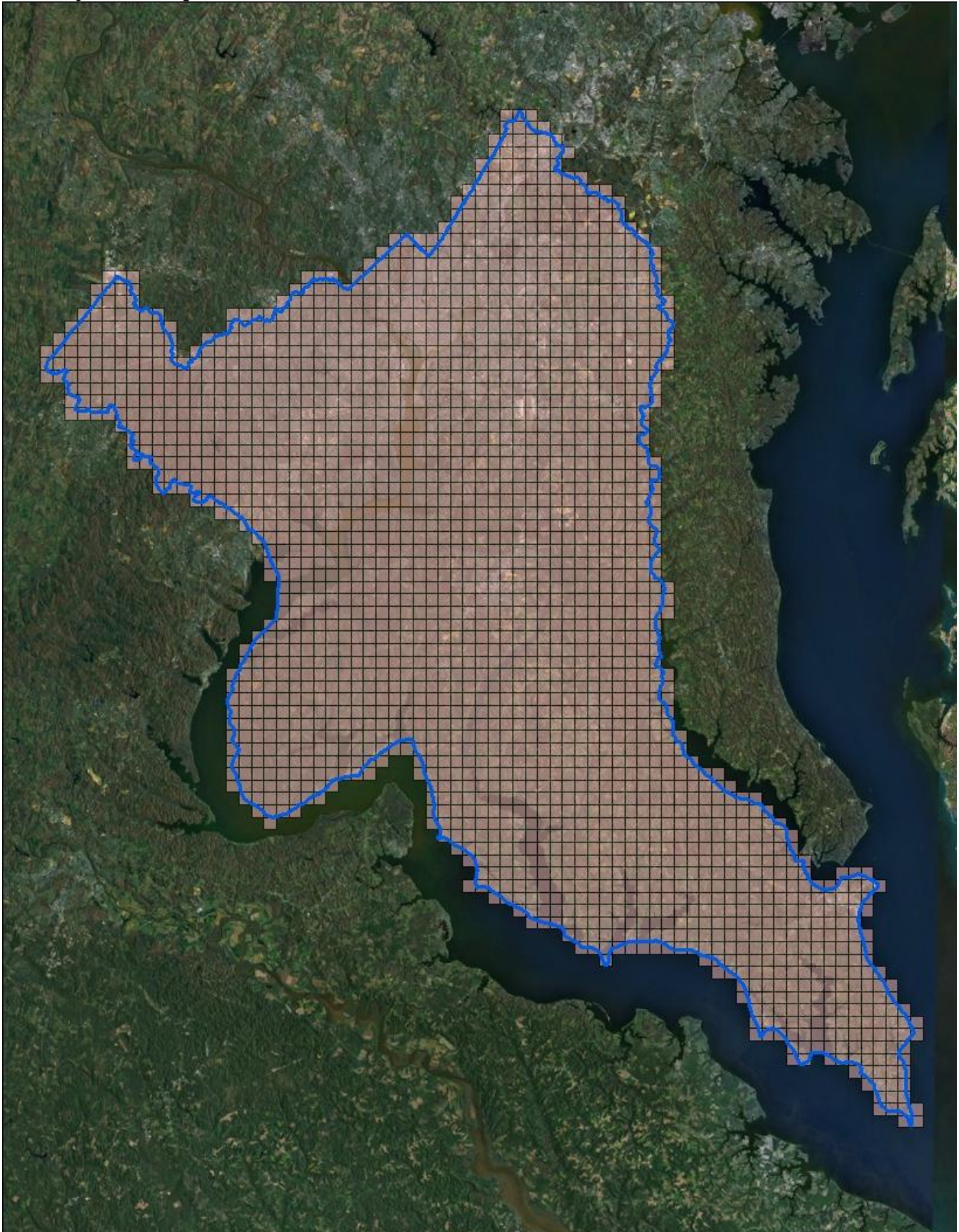
The following is a summary description of the deliverables and other pertinent information that comprise the shipment of Delivery Lot 5 to USGS on April 30, 2015.

Sandy Supplemental NCR (VA-MD-DC) AOI Delivery Lot Map:



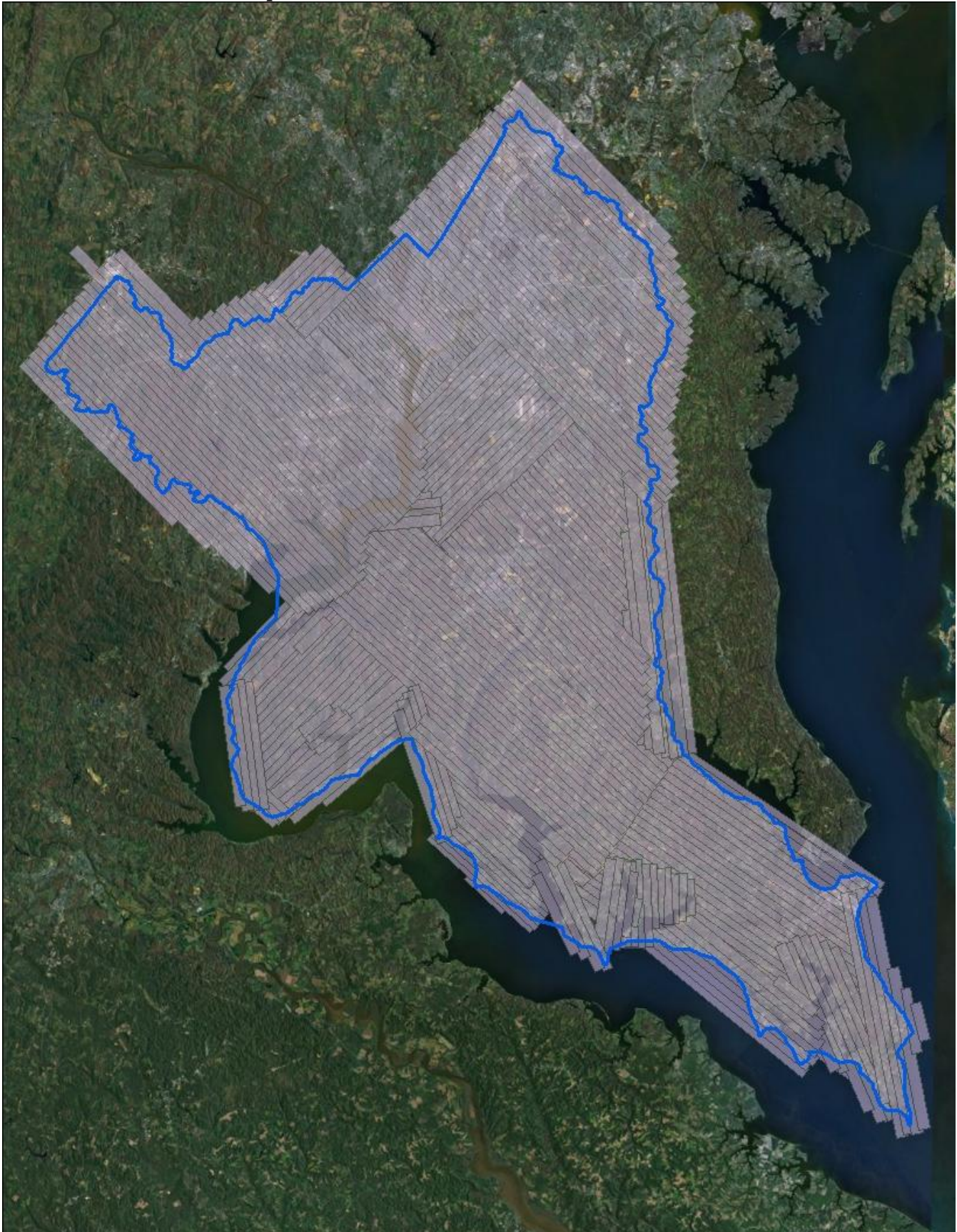


Delivery Lot 5 Map:

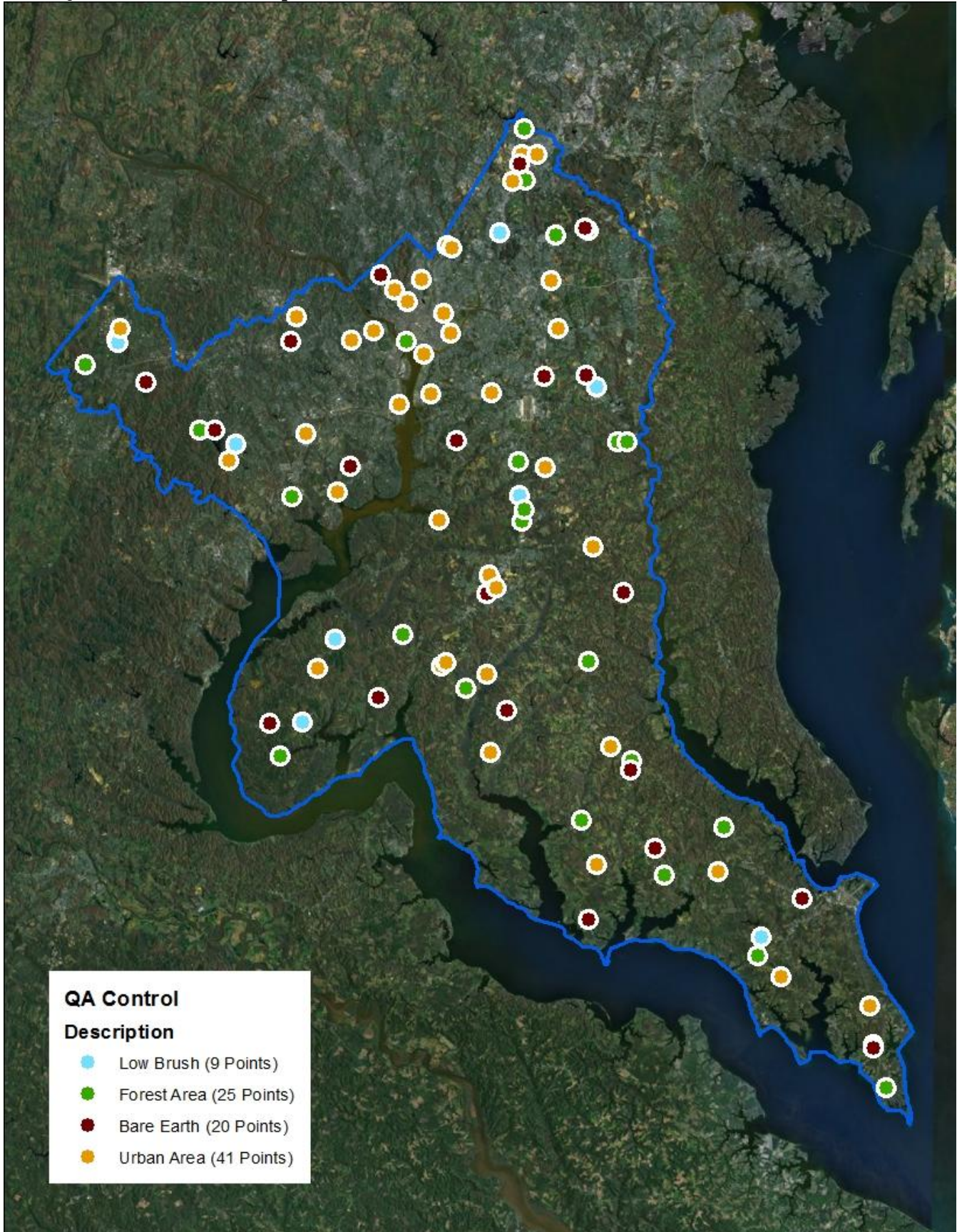




Lot 5 Raw Point Cloud Map:



Lot 5 QA Control Points Map:



**Task Order Spatial Reference System:**

- Horizontal: UTM Zone 18 North, NAD83, Meters
- Vertical: NAVD88, GEOID12a, Meters

Deliverables Summary:

1. C.1.d.(i) Raw Point Cloud Data (calibrated and control adjusted): Included
 - LAS v1.2 Point Record Format 1
 - Total Number of Swath Files: 321
 - Total File Size: 1027 GB (1,102,817,373,440 bytes)
 - Individual Swath Outline Shape File
2. C.1.d.(ii) Classified Point Cloud: Included
 - LAS v1.2, Point Record Format 1 including File Source ID w/assigned value of 65,535
 - Classification Schema:
 - (01) Code 1 – Processed, but unclassified
 - (02) Code 2 – Bare-earth ground
 - (03) Code 7 – Noise
 - (04) Code 9 – Water
 - (05) Code 10 – Ignored Ground (Breakline Proximity)
 - (06) Code 17 – Overlap Default
 - (07) Code 18 – Overlap Ground
 - (08) Code 25 – Overlap Water
 - Total Number of Tiles: 2,283
 - Tile Dimensions: 1,500m x 1,500m
 - Total File Size: 796 GB (854,797,635,584 bytes)
 - Delivery Lot 5 Tile Shape Files (Lot 5 Boundary & Lot 5 Individual Tiles)
3. C.1.d.(iii) Bare Earth Surface (Raster DEM): Included
 - Format: ERDAS .IMG
 - Resolution: 1 meter grid cell size
 - Hydro Conditioning: Hydro Flattened
 - Total Number of Tiles: 2,283
 - Tile Dimensions: 1,500m x 1,500m (same used for Classified Point Cloud)
 - Total File Size: 19 GB (20,433,154,048 bytes)
4. C.1.d.(iv) Control:
 - Delivery Lot 5 QA Control Check Point Location Shape File Extract: Included
 - Deliver Lot 5 QA Control Check Point Published Values Extract .xls file: Included
5. C.1.d.(v) LiDAR Intensity Image: Included
 - Format: Grayscale, 8-bit, GeoTiff
 - Resolution: 1 meter grid cell size
 - Total Number of Tiles: 2,283
 - Tile Dimensions: 1,500m x 1,500m (same used for Classified Point Cloud)
 - Total File Size: 6.8 GB (7,350,018,048 bytes)



- 6. C.1.d.(vi) Breaklines: Included
 - Format: ESRI Shapefile (.shp)
 - Coverage: Lot 5 Continuous, Non-Tiled
 - Total File Size: 12.3 MB (12,931,072 bytes)
- 7. C.1.d.(vii) Metadata: Included
 - Format: FGDC compliant, XML
 - File Types: Project, Lift, Tiled deliverable product group (classified .las, DEM, & Intensity)
- 8. C.1.d.(viii) Project Report:
 - Delivery Lot Summary Report: Lot 5 Included
 - Overall Project Report: To Be Delivered upon final acceptance.
- 9. Lot 5 QA & Accuracy Reporting
 - FOCUS Report: Included
 - Lot 5 Provisional FVA/SVA/CVA Testing Results: .xls file Included
 - LAS Analysis (Excel File): Included
 - Raster Analysis (Excel File): Included

Lot 5 Provisional Accuracy Reporting:

- Number of QA Check Points falling within Delivery Lot 5 by Tested Land Cover Type:
 - Bare Earth (BE): 20
 - Forested (FO): 25
 - Low Brush (SW): 9
 - Urban (UA): 41
- Testing:

Raw FVA

	Count	Minimum	Maximum	St. Dev	RMSE	95%	95th	Mean	Median	Skew
RAW FVA	20	-0.100	0.128	0.061	0.061	0.119	-	0.01	0.00	0.48

FVA, SVA, CVA

	Count	Minimum	Maximum	St. Dev	RMSE	95%	95th	Mean	Median	Skew
SVA	75	-1.068	0.178	0.136	0.138	-	0.088	-0.03	-0.01	-6.13
CVA	95	-1.068	0.178	0.124	0.125	-	0.091	-0.02	-0.01	-6.42
Bare Earth (FVA)	20	-0.114	0.124	0.060	0.059	0.115	-	0.00	-0.01	0.35
Tall Weeds	0	-	-	-	-	-	-	-	-	-
Brush Lands	9	-0.105	0.048	0.051	0.051	-	0.033	-0.02	0.00	-0.99
Forested	25	-1.068	0.178	0.231	0.229	-	0.136	-0.04	0.00	-3.94
Urban Areas	41	-0.101	0.088	0.041	0.045	-	0.057	-0.02	-0.02	0.27
Sawgrass	0	-	-	-	-	-	-	-	-	-
Swamp / Wetland	0	-	-	-	-	-	-	-	-	-
LIDAR Calibration	0	-	-	-	-	-	-	-	-	-



Delivery Lot Notes/Comments:

Delivery Lot 5 also includes recent agreement between USGS and Quantum Spatial on the population of the file source ID for classified tiled .las file using a numeric value of "65,535". All task order classified .las tiles file source ID will be populated with this numeric value.

Please note, the P56 area, requested to be flattened, have not been completed for this initial delivery, but will be flattened as requested for the final delivered LOT6 dataset.