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DRONE SURVEY PROJECT DOCUMENT

Project Title

Drone Data Acquisition for Photogrammetry Survey – Industrial Facility, Barbados

1. General Information

- **Project Type:** UAV Survey / Data Acquisition
- **Category:** Industrial Survey
- **Location:** Barbados
- **Project Mode:** Field Execution Only (No Processing Included)
- **Status:** Open

2. Project Description

This project involves drone-based aerial data acquisition at an industrial facility. The objective is to capture high-resolution aerial imagery suitable for photogrammetry processing, enabling the generation of orthophotos, 3D models/meshes, and point clouds.

The contractor's scope is strictly limited to the **data acquisition phase**, while all post-processing and data generation activities will be handled internally by the client. Therefore, the accuracy, completeness, and consistency of the captured data are critical for successful downstream processing.

The contractor shall perform mission planning, aerial survey execution, and georeferencing using Ground Control Points (GCPs). All captured data must meet photogrammetry-grade standards and be suitable for high-quality reconstruction.

The survey shall include two flight methodologies: an orthogonal flight for orthophoto generation and a double-grid flight for 3D modeling. Both missions must maintain high overlap and consistent coverage across the entire project area.

The contractor must also ensure compliance with industrial safety standards and site-specific operational protocols during execution.

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3. Scope of Work

The contractor shall be responsible for:

- Mission planning and flight preparation
- Mobilization of UAV and technical team
- Aerial data acquisition using defined flight parameters
- Establishment of Ground Control Points (GCPs)
- Georeferencing of captured dataset
- Ensuring complete and consistent coverage
- Delivery of raw survey data

Note: Data processing, modeling, and analysis are not part of the contractor's scope.

4. Technical Requirements

- High-resolution UAV suitable for photogrammetry
- LiDAR capability preferred (or equivalent system)
- Minimum **8 Ground Control Points (GCPs)**
- Accurate georeferencing of all captured data
- Capability to operate in industrial environments
- Compliance with safety and operational requirements

5. Flight Methodology

5.1 Orthogonal Flight (Orthophoto)

- Gimbal Pitch: -90°
- Minimum Overlap: 80%
- Maximum Altitude: 90 meters

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5.2 Double Grid Flight (3D Model / Mesh)

- Gimbal Pitch: -45°
- Minimum Overlap: 80%
- Maximum Altitude: 90 meters

5.3 Optimization

Contractors may propose improved flight parameters to enhance data quality, subject to technical justification.

6. Ground Control Points (GCPs)

- Minimum 8 GCPs must be established
- Clearly visible in imagery
- Accurate coordinate capture required
- GCP report must be submitted with deliverables

7. Deliverables

The contractor shall submit:

- Complete raw aerial imagery dataset
- Flight logs and mission data
- Georeferenced GCP report
- Metadata and camera information (if applicable)

All data must be **complete, accurate, and ready for photogrammetry processing**.

8. Schedule

- Proposed Execution Window: **20 April – 24 April**
- Subject to:

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- Site access approval
- Weather conditions
- Operational constraints
- Permit availability

9. Data Quality Requirements

- Minimum 80% overlap must be maintained
- Images must be sharp, clear, and blur-free
- No missing coverage or gaps
- Consistent exposure and alignment
- Data must support generation of:
  - Orthophoto
  - 3D Model / Mesh
  - Point Cloud

10. Project Boundary

- KML/KMZ file will be shared separately
- Contractor must plan survey accordingly

11. Area & Accuracy

- Survey area: To be confirmed
- Accuracy: Standard photogrammetry-grade accuracy
- Any updates will be communicated

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TERMS & CONDITIONS

12. Scope Limitation

The contractor's responsibility is strictly limited to drone survey execution and raw data acquisition. No post-processing or modeling is included.

13. Data Quality Responsibility

The contractor shall ensure that all captured data meets photogrammetry standards. Data not suitable for processing may be rejected.

14. Flight Compliance

All flight operations must adhere to defined parameters. Any deviation must be justified and approved.

15. GCP Compliance

The contractor must establish and record a minimum of 8 accurate GCPs. Incorrect GCP data may result in rejection.

16. Data Acceptance & Rejection

The client reserves the right to validate all submitted data. Incomplete, inaccurate, or poor-quality datasets may be rejected or returned for correction.

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17. Payment Terms

- Payment will be released only for approved data
- Rejected datasets will not be considered for payment
- Partial or incomplete submissions will not be accepted

18. Work Execution Conditions

Execution is subject to site access, weather conditions, plant operations, and necessary approvals.

19. Safety Compliance

The contractor must follow all industrial safety protocols and ensure use of required PPE.

20. Data Confidentiality

All data is confidential and must not be shared or reused without written permission.

21. Ownership

All deliverables shall be the sole property of the client.

22. Timeline Compliance

The contractor must adhere to the agreed project schedule and execution window.

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23. Liability

The contractor is responsible for safe execution and any damages caused due to negligence.

24. Eligibility Criteria

- Experience in UAV survey / photogrammetry
- Experience in industrial environments preferred
- Access to professional UAV systems
- Skilled and certified operators
- Capability to execute international projects