

710 EAST SAN AUGUSTINE STREET

DEER PARK, TEXAS 77536

Minutes

of

A WORKSHOP MEETING OF THE CITY COUNCIL OF THE CITY OF DEER PARK, TEXAS HELD AT CITY HALL, 710 EAST SAN AUGUSTINE STREET, DEER PARK, TEXAS ON OCTOBER 20, 2020 BEGINNING AT 6:30 P.M., WITH THE FOLLOWING MEMBERS PRESENT:

JERRY MOUTON, JR.
SHERRY GARRISON
TJ HAIGHT
TOMMY GINN
BILL PATTERSON
RON MARTIN
RAE SINOR

MAYOR
COUNCILWOMAN
COUNCILMAN
COUNCILMAN
COUNCILMAN
COUNCILMAN
COUNCILWOMAN

OTHER CITY OFFICIALS PRESENT:

JAMES STOKES
GARY JACKSON
SHANNON BENNETT
JIM FOX

CITY MANAGER
ASSISTANT CITY MANAGER
CITY SECRETARY
CITY ATTORNEY

1. MEETING CALLED TO ORDER – Mayor Mouton called the workshop to order at 6:30 p.m.
2. COMMENTS FROM AUDIENCE – No comments received.
3. DISCUSSION OF ISSUES RELATING TO AN ORDINANCE ESTABLISHING A “NO PARKING ZONE” ALONG PORTIONS OF ACADEMY STREET – City Manager James Stokes advised Council of the parking issues on Academy Street brought forth by a citizen complaint. Police Staff and Public Works Staff investigated the complaint and spoke to neighbors in that particular area of Academy Street. It was concluded that signage is to be placed at the citizen’s side of the street only and an ordinance will be formally adopted to amend the traffic regulations. (Exhibit A1)

Councilwoman Garrison asked, “Is this on the left hand side or the right hand side?”

City Manager James Stokes responded, “If you are coming from the north, it is on the right hand side. If you are coming from College Park Elementary, which is from the west, it would be the on the left hand side.”

Councilwoman Garrison asked, "Is the "No Parking" signage going to be on both sides of the street?"

Mr. Stokes responded, "No. Only on that citizen's side of the street. Part of the concern was that a fire truck or emergency vehicle couldn't get through the neighborhood if needed. This will allow to free up one side of the street."

Councilwoman Garrison asked, "Are the neighbors happy?"

Mr. Stokes responded, "From what I remember from the survey, the neighbors just didn't want it on their side of the street."

Police Chief Grigg commented, "You are not able to get a fire truck or ambulance through there if vehicles are parked on both sides."

4. DISCUSSION OF ISSUES RELATING TO ENTERING INTO A MEMORANDUM OF UNDERSTANDING WITH AIROBOTICS – City Manager James Stokes introduced Tim Culp, Vice President of Community Relations with Airobotic's who gave an overview of an automated drone service. Mr. Culp advised Council of the services Airobotics could provide the City to include aerial data captured by the drone to address any needs that may improve operations. The drone can be used as a tool to perform data collection of water leak detection, drainage ditch assessments, emergency incidents and street inspections which can benefit the City. Videos were presented for Council that showed the Governor of Texas' support of Airobotics and another video that displayed the concept and regulations of the drone. Mr. Culp emphasized that the drones will not be flown over residential areas, but will be strictly flown over open space that is City property and commercial areas. (Exhibit B1-B8)

Airobotics General Manager Jeff Bricker advised Council of more details pertaining to the operations of the drone and how the data recorded from the drone will be distributed to the department that handles that particular area that would be needing assessment.

Councilwoman Garrison asked, "How often will these test runs be done without the City being charged?"

Mr. Culp responded, "We plan on having this completed by the end of October."

Mr. Culp ended the discussion by suggesting that if any Councilmember would like to join the launch of the drone once the Memorandum of Understanding is approved, they are welcomed to do so and can also join the upcoming drone launch at Vopak Terminal as well.

5. DISCUSSION OF ISSUES RELATING TO THE 2020 NATIONAL CYBERSECURITY AWARENESS MONTH PRESENTATION – Information Technology (I.T.) Director James Lewis gave an overview of the theme for this years National Cybersecurity Awareness Month as "OWN IT. SECURE IT. PROTECT IT." Mr. Lewis advised Council that each individual plays a role in online safety and stressed the importance of proactive steps to enhance cybersecurity at home and in the workplace. A short informational video was presented to Council.

6. DISCUSSION OF ISSUES RELATING TO AN ORDINANCE AMENDING THE FEE SCHEDULE FOR WATER AND SEWER DEPOSITS – City Manager James Stokes gave an overview of the issues pertaining to a local apartment complex that became delinquent with the water bill, paid the water bill and shortly thereafter became delinquent again. This issue was interfering with tenants usage of City utilities. In the process of that situation, it was discovered that the deposit amount that the City charges had not been reviewed or increased in many years. Recommendations in moving forward in an effort to protect the City is to stabilize the inconsistencies of the deposit requirements for residential customers, multifamily residential customers (e.g., apartments) commercial customers and to apply a consistent standards are as follows:

Section 106-2 (a)(1)

Water and sewer deposits for residential customers \$125.00
Additional deposit for delinquent customer \$25.00

Section 106-2 (b)(2)

Water and sewer deposits for multifamily residential customers, per residential unit \$125.00
Based on usage, additional fees may be assessed by Utility Manager

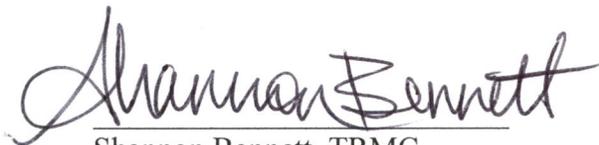
Section 106-2 (c)

Water and sewer deposits for commercial customers \$125.00
Based on usage, additional fees may be assessed by Utility Manager

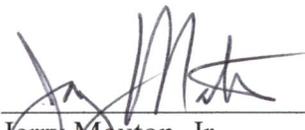
7. ADJOURN – Mayor Mouton adjourned the workshop meeting at 7:11 p.m.

ATTEST:

APPROVED:



Shannon Bennett, TRMC
City Secretary

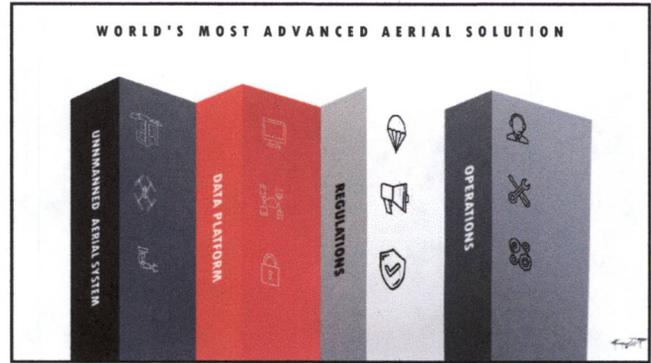
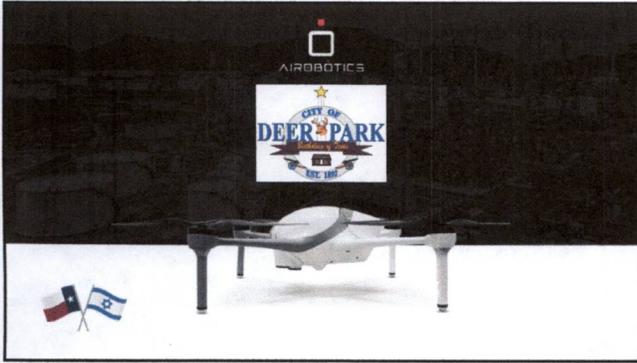


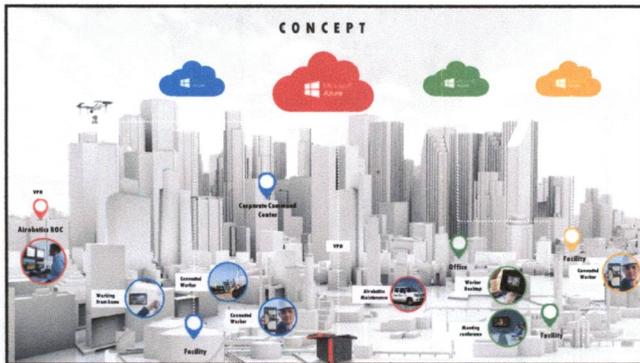
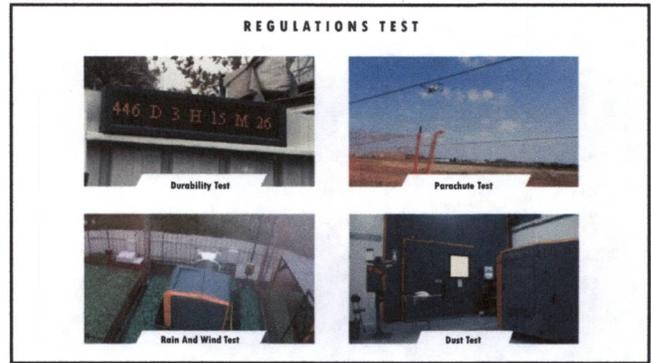
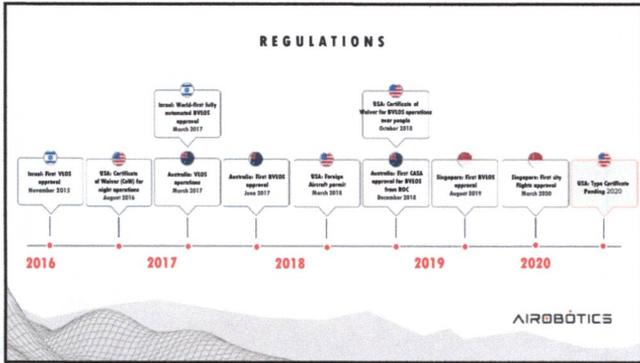
Jerry Mouton, Jr.
Mayor

PROJECT NO.:
3903-20



● No Parking Signs





SOLUTION BENEFITS

- Increase Operational Efficiency**
Complete Automated End-to-End Solution
- Reduce Operational Risk**
Remote Data Capturing and Real-Time Insights
- Increase Productivity**
Optimized Scheduling and Accessible Data Collaboration
- Increase Asset Efficiency**
Real-Time Data Driven Decision Making

AIROBOTICS

WORLD'S MOST ADVANCED AERIAL SOLUTION

Appendix

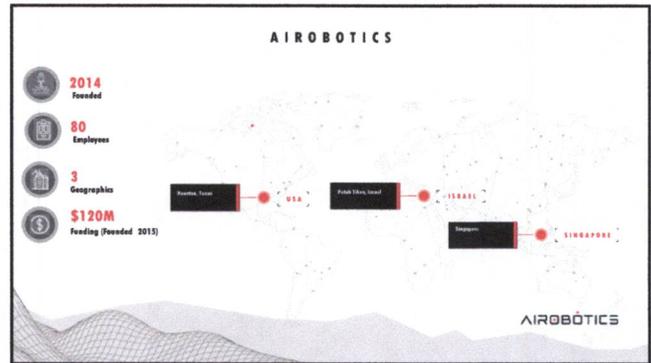
- [Airobotics History](#)
- [Solution Plans](#)
- [Operational Radius](#)
- [UAS Specification](#)
- [Risk Models and Regulations](#)
- [ROI](#)

AIROBOTICS

SOLUTION PLANS

| Service Membership | Service Plan |
|---|---|
| Step 1 • Vendor Approval Step 2 • Site Survey / Mission Planning Step 3 • Webapp Implementation Step 4 • Facility 2D & 3D Mapping Step 5 • Monthly Mission Scheduling | Step 1 • Vendor Approval Step 2 • Site Survey / Mission Planning Step 3 • Webapp Implementation Step 4 (Optional) • Facility/Asset 2D & 3D Mapping Step 5 • On-demand Individual Missions |

AIROBOTICS



OPTIMUS SPECIFICATIONS



Dimensions
 | 171mm (edge-to-edge)
 | 150mm (to motor/motor)

Payload Capacity
 | 1.2kg

Payload Type
 | Payload module

Flight Time
 | Up to 45 minutes

Battery
 | Removable module

Communication Range
 | Up to 1000m (line of sight or as defined in field with additional module)

Speed
 | 10 m/s

NAVIGATION & CONTROL

Flight Control
 | Automated, preplanned routes

Aerial Sensors
 | Acceleration, gyroscope, compass, barometer

Positioning
 | RTK, GPS

Landing
 | Automatic

WIRELESS COMMUNICATION

Transmitters
 | Configurable switch, UTM enabled

Data Security
 | Configurable encryption level

Transmitted Data
 | Flight instructions, live sensor stream, flight diagnostics

SAFETY

Signal Lights
 | Red and green LED indicators

Emergency
 | Redundant parachute system with auto-deploy

Failback Procedures
 | Gentle wing return home emergency landing

ENVIRONMENTAL

Water & Dust
 | IP4X

Wind Endurance
 | Up to 20 km/h

Altitude
 | 2000m

Operating Temperature
 | 0 - 30°C

AIRBASE & MAST SPECIFICATIONS



Dimensions
 | 2.6 x 2.1 M x 2.2 H m

ELECTRICAL

Plug Requirement
 | 300 V, 220 V, 110V AC, 50 & 60 Hz, supports all options

Emergency Power System
 | N/A

PAYLOAD & BATTERY SWAPPING

Swapping Mechanism
 | Automatic, optical arm

Storage Capacity
 | 8 batteries & 10 batteries

SAFETY

Emergency Features
 | Circuit breaker, digital shutdown features

Alarm System
 | Signal lights & sirens

Lighting Protection
 | EMI/RFI shielding materials

ENVIRONMENTAL

Water & Dust
 | IP4X

Operating Temperature
 | 0 - 30°C

Internal Climate
 | Active temperature & humidity control

TRION PAYLOAD

INDUSTRY LEADING EO/IR



Communications
 | 802.11a/b/g/n

Size
 | 200mm x 100mm

Weight
 | <100g

High contrast IR
 | 15.3° FOV @ 15.3° FOV

Day camera
 | 15.3° FOV @ 15.3° FOV

Video output
 | H.264

Resolution
 | 8192lines height @ 1080lines width @ 1080p

Field of regard
 | Max Coverage: 340° x 176° x 90° w/ 110°

Power
 | 12-24V, Average 1.4W, Max 1.2W

Temperature
 | -20°C to +55°C

Flight sensors
 | IMU (6-DOF), 640x480 pixels, 30/60 Hz

Telemetry
 | 1000 Hz

Day camera
 | Signal system IR

Video transfer
 | Bal-to

| Target | Sensor Type | Detection | Recognition | Identification |
|--------|-------------|-----------|-------------|----------------|
| Person | EO at 2" | 4100m | 2970m | 1300m |
| Person | IR at 15.3" | 1176m | 297m | 196m |
| Person | EO at 2" | 1580m | 4310m | 2970m |
| Person | IR at 15.3" | 2753m | 918m | 497m |

OPTIMUS VIEX UAV

| Parameter | Operational Environments | Technical Environments |
|--|--|------------------------|
| Model | Optimus VIEX | Optimus VIEX |
| Dimensions (W x H) (inch) | 21.89" (55.71" w/ 250" P&P) 240 | 22.43" (56.92") |
| Weight including battery & payload (lb. /kg) | 22.43 (10.2) | 22.43 (10.2) |
| Max takeoff weight (2000W) (lb. /kg) | 22.43 (10.2) | 22.43 (10.2) |
| Max Payload weight (lb. /kg) | 2.20 (1.0) | 2.20 (1.0) |
| Max flight speed (km/h) (mi/h) | 33.33 (21) | 37.45 (23.3) |
| Max wind speed (km/h) (mi/h) | 30 | 30 |
| Max wind speed (ground/air) (km/h) | | |
| Stability | at rate of 0.0029 in/hr (0.1 mm/hr) 800 will return home | 800 |
| Max altitude (m) | ASL - Per regulation | 425 - 3000 |
| Max range (km) (mi) | VLOS - limited to LOS 0.31 (0.2) | 4.33 (2.7) |
| Max mission flight time (Hours) | 40 | 50 |
| Max climb rate (ft/min) (m/s) | 6.26 (2) | 16.69 (5) |
| Max descent rate (ft/min) (m/s) | 4.26 (2) | 7.64 (2) |
| Descent speed with parachute (ft/min) (m/s) | 574.11 (16.3) | 574.11 (16.3) |
| Operational Temperature (°F) (°C) | 32 - 122 (0-50) | 32 - 122 (0-50) |

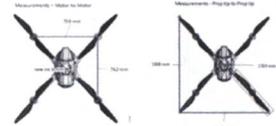


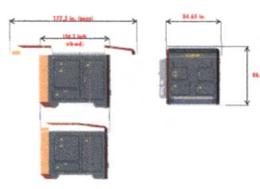
Figure 1: Optimus VIEX UAS External Dimensions

AIRROBOTICS

CONFIDENTIAL - PROPRIETARY BUSINESS INFORMATION OF AIRROBOTICS

OPTIMUS V1EX BASE STATION

| Parameter | Requirement |
|--|--|
| Dimensions (W * H * D) (inch [cm]) | 84.63" (2154.33) * 75.82" (1926.41) (D1) * 24.61" (625) * 239" |
| Weight (lb. [kg]) | - 2257 (1023) not including air conditioning unit |
| Electrical | <ul style="list-style-type: none"> Power: 20 (500) 1.8kV 220-230VAC / 170-277 (VAC) 1.1kV 200-208VAC / 160-180 (VAC) 22 (kV) 100 (lb. [kg]-capacity) IP65 / 68 (lb. [kg]-capacity) 2Phase * 3 (3 wires) |
| Operational Temperature (°F [°C]) | 22 - 122 (0-50) |
| Surface | <ul style="list-style-type: none"> Blue surface (concrete / Asphalt / Light Resistant) 22" 12.4" (31.5) (D1) * 14" (35.5) |
| Sealing | IP54 |
| Number of available battery storage in kit | 10 |
| Number of available payload space within kit | 9 |
| Day/Night activation (hr) | 24 (24hr)/night |



AIRBOTICS

CONFIDENTIAL - PROPRIETARY BUSINESS INFORMATION OF AIRBOTICS

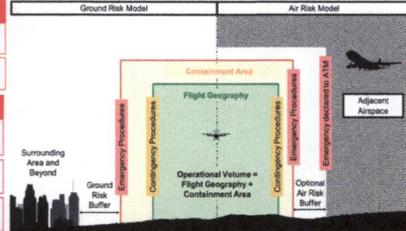
GROUND & AIR RISKS MODELS

Operation in control

- Normal Ops
- Standard Procedures

Operation out of control (Hazard)

- Emergency situation (recovered state)
- Emergency Procedures
- Emergency Response Plan



CONFIDENTIAL - PROPRIETARY BUSINESS INFORMATION OF AIRBOTICS

PATH TO OUR VISION

ROC Operations

Onsite Pilot BVLOS

Pilot VLOS

Multi UAVs Operations

1 Pilot per UAV

Flights Over CBD

High Population Density

Low Population Density

Not Over People

All Airspaces (UTM)

Certain Airspace

No Visual Observer (VO)

VO Beyond LOS

Visual Observer VLOS

CONFIDENTIAL - PROPRIETARY BUSINESS INFORMATION OF AIRBOTICS

GLOBAL DRONE REGULATIONS: CURRENT STATE

- No official and approved regulations for certifying UAVs.
- In some countries there are regulations for approving limited flights of UAVs (USA - Part 107, Australia - Part 101, Singapore AC QAS-1/2, etc.).
- The existing regulatory framework normally refers to three categories of UAV operations, based on the level of risk these operations pose to people and property:



UNMANNED

Operational flight without a pilot on board. The operator is not directly controlling the aircraft.



REMEDIATED

Operational flight with a pilot on board. The aircraft is controlled by a remote pilot in command (RPIC) who is directly controlling the aircraft.



REMEDIATED

Operational flight with a pilot on board. The aircraft is controlled by a remote pilot in command (RPIC) who is directly controlling the aircraft.

AIRBOTICS

CONFIDENTIAL - PROPRIETARY BUSINESS INFORMATION OF AIRBOTICS

AIROBOTICS REGULATORY APPROACH

- Airrobotics' Regulation Team has tackled the existing regulatory challenges by forming a unique regulatory approach
- Helixtic Approach:** Total Flight Safety Approach that ensures flight safety from both technical (Airworthiness) and operational aspects.

Airworthiness

UAS (Remanned Aerial System) design and substantiation in accordance with known and acceptable aeronautical standards to ensure UAS reliability and safety (e.g., SAE ARP4761 and NATO STANAG 4703).

Flight Safety

Operational

Airrobotics' CoreOps (Concept of Operations) provides comprehensive risk mitigation to enable unmanned BVLOS (Beyond Visual Line of Sight) flights: SOBA (Specific Operations Risk Assessment) by JARVIS.

- Constructive Approach:** Pro-active approach, close collaboration with the authorities, internal development of standards which might serve as basis for the final regulation.
- Our main focus in the next 24 to 36 months will be on the airworthiness aspects of the system, in a gradual plan, leading up to approvals for our UAS in multiple population scenarios.

AIROBOTICS

INDUSTRIAL FACILITIES BENEFITS AND ROI

Increase Operational Efficiency

- Reduce direct cost
- Reduce indirect cost
- Improve productivity and FTE

Increase Asset Efficiency

- Reduce asset shut down length
- Improve asset utilization (Predictive & Condition)

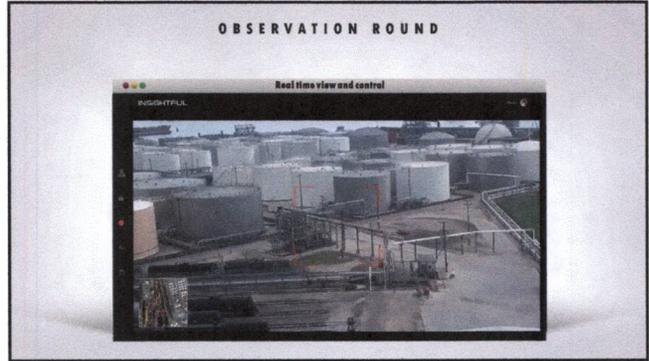
Reduce Financial Risk

- Reduce safety incidents risk
- Reduce security incidents risk
- Reduce health incidents risk
- Reduce environmental incidents risk
- Reduce schedule deviations risk
- Reduce production risk

$$\frac{\text{Benefits} - \text{Benefits Cost}}{\text{Benefits Cost}} \times 100 = \text{ROI}$$

AIROBOTICS





Outline

- Pillars
 - UAS
 - Data Platform
 - Regs
 - Ops
- Solutions
 - Remote Monitoring
 - Mapping and Survey
 - Emissions Detection
- Asset Inspections
- Insightful
- Solutions Plans
- ROI
- Airobotics History
 - Experience

AIROBOTICS