

DATE: 23 Jun 2017



**U.S. AIR FORCE  
31<sup>ST</sup> FIGHTER WING  
31<sup>ST</sup> CES/CEOER  
AVIANO AIR BASE, ITALY**



**TECHNICAL SPECIFICATIONS  
ASHE 171053  
SUSTAIN PAVEMENTS AND MARKINGS AT TOWER LOOP  
TAXIWAY, AREA F  
AVIANO AB, ITALY**

## 1. SCOPE OF WORK.

The Contractor shall provide all management, tools, supplies, equipment, transportation and qualified personnel necessary to provide bituminous sealing of existing asphalt-to-asphalt cracks and paint all taxiway striping and signs inside security fence of Tower Loop in area F.

All construction activities must be closely coordinated with Airfield Management. The Contractor shall completely follow all specifications stated in Master Tech Specs - Section 02761- Pavement Markings.

The paint color shall be black, white reflective or yellow reflective as specified. The contractor shall ensure that the surface is clean, dry and free of loose material before applying sealant and paint to guarantee 100% adherence. Contractor shall take special care to remove any loose debris or peeling paint when applying over previously coated areas. Contractor shall provide guidelines and templates as necessary to control paint application. Contractor shall ensure that the maximum drying time requirements of the paint specifications will be strictly enforced, to prevent undue softening of bitumen, and pickup, displacement or discoloration by tires of traffic. At no time the contractor shall change the design of any of the lines, crossings, signs or parking lots, all changes will need to be approved by the Contracting Officer before the contractor can proceed. Contractor shall give this office a minimum 10 day notification for any eventual disruption in base services due to painting activities.

Code Criteria:

- UFC 3-260-01 Airfield and Heliport Planning and Design
  - IPRF 01-G-002-05-01 Airfield Marking Handbook
  - AFI 32-1042 Standards for Marking Airfields
  - ETL 04-2 Standard Airfield Pavement Marking Schemes
  - Master Technical Specification – Section 02761 – Pavement Markings
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- a. The Contractor, in coordination with PM and the Airfield Manager, shall provide a detailed work schedule to be approved by Contracting Office after contract award.
  - b. The Contractor shall provide, with the bid quotation, technical data sheets for:
    - Crack sealant and related procedure of application in reference to Para 4.a;
    - Reflective yellow paint;
    - Reflective white paint;
    - Non-Reflective black paint.
  - c. The site shall be left clean and free of debris at all times and debris collected on a specific spot which shall be disposed the end of every workday.
  - d. If requested by the Contractor, GVT will provide a storage area to be identified before construction commencement. No flammable products will be allowed in temporary storage area. The area will be under Contractor responsibility and it will be fenced, secured and identified with proper sign, company name and POC phone number.
  - e. Contractor shall provide means to protect new painted horizontal lines and signs across the area, no traffic or military activities interruption is allowed.
  - f. The work will be performed into a restricted area therefore the Contractor will be escorted during the entire work execution time and going in and out of the area. Contractor shall organize the work to minimize the entrances or exits of personnel from/to the area.
  - g. At the end of each working day the contractor will provide an electronic daily work progress report to the Project Manager showing quantity of work performed.

## 2. WORK LOCATION

Area F, Tower Loop: see Attach. # 1 – Work Location, for reference.

## 3. WORK SITE CONDITIONS

- a. The Contractor will provide electric generator and water tanks if necessary. The Contractor shall not alter characteristics and shall observe conservation practices at all times.
- b. Authorized work hours and days. Performance of work shall be from Monday through Friday excluding holidays from 08.00 to 17.00 hours. Work during holidays may be requested by the Contractor with a minimum of 10 days advance notice, however the Contracting Officer has the right to deny such request if reasons requiring holiday work are not valid or for security or other necessities.
- c. Portable toilet facilities will be available in the area for Contractor use. The Contractor shall use facilities in a manner to maintain their state of cleanliness and hygiene.
- d. The Contractor shall not use base refuse containers to discard debris. All cleaning debris, paint removal and construction debris in general shall be disposed by the Contractor off base at authorized sites according to category of debris/refuse in strict observance of all national laws, decrees and local regulations in force.
- e. The Contractor shall be responsible for ensuring all personnel engaged in the performance of this contract observe all national laws concerning safety. At all times the Contractor will assure all personnel are wearing the correct safety equipment when performing their work, such as hard hats, steel toe boots, gloves, reflective gear and any other equipment deemed necessary to perform their work in the safest way. The Contractor shall also assure all personnel comply with Italian laws DM. 81/08. A copy of the Piano Operativo di Sicurezza (POS) will be provided to 31FW/SE (Mr. Nicola Pezzetta, ph. 0434-308526) after contract award.
- f. Worksite conditions in restricted areas: this project will be performed in a restricted area requiring controlled entry/exit and escort at all times and this shall be considered during development of the work schedule.

The government will not be held liable for unproductive time and other related costs due to delays in access/exit to/from the restricted areas or unannounced and immediate suspension of work due to military operations and/or exercises or safety reasons.

The government will only negotiate an equitable extension of the performance period based on documented delays and unannounced suspensions of work.

Contractor is responsible for providing the work schedule a min of 30 days prior work commencement in order, for the PM, to prepare the escort request letter. During work execution, if contractor does not show up to the base within 30 minutes from the beginning of escort requested time, the escort will be cancelled and contractor will not be able to access the construction site that day. Delays due to contractor being late or failing to properly coordinate obtaining an escort will not be reason for contract extension.

#### 4. WORK DESCRIPTION:

Each item of the schedule is inclusive of furnishing and installation of materials and equipment, transportation to dump, and storage of demolished and/or removed materials, in accordance with contracting officer's instructions and all finishing work required to make each item complete in a workmanlike manner.

All the quantities that are indicated or successively added are estimates. Therefore the government shall not be held responsible for the accuracy of the estimated quantities. The contract requires a completed project on a lump sum basis. It is therefore the responsibility of the contractor to calculate, foresee and perform all quantities and work necessary even if it not mentioned in the specifications but included in the drawings or manifestly necessary to deliver a complete project based on its overall scope.

Contractor shall paint new continuous pavement marking lines in non-reflective black and reflective yellow and white colors that shall match the existing lines as they currently show in the airfield pavement. At some locations, any pavement markings in the airfield may be slightly modified at the request of the Airfield Manager or Project Manager.

The colors shall be reflective yellow. Black color will also be used but will not be reflective. The colors shall match the existing colors on the pavement and be the correct thickness, length, and width as per the instructions specified ETL 04-2.

The contractor shall paint all lines, shapes, areas, numbers, letters, and any other markings on the pavement in the area of work. If any markings in the pavement include numbers and/or letters, the contractor shall paint the numbers shown on the pavement to complete the project in a workmanlike manner.

The contractor shall follow all specifications for paint application per ETL 04-2. Contractor shall conduct a paint thickness test and provide results to the Project Manager prior of any new paint type or color application on the airfield pavement.

Contractor will estimate the work considering that no areas can be closed during work performance however there will be limited operations in the area.

The area of work may require time to be assessed, by Security personnel, due to applicable security and safety procedures.

##### a. CRACKS SEALING:

**Preparation works:** Contractor shall seal asphalt cracks utilizing commercial sealing machine to widen crack provide and apply bituminous sealant.

**Seal works:** Contractor shall seal all asphalt cracks greater than 15 cm in length. Contractor shall utilize a pavement cutter capable of accurately following random cracks in asphalt surfaces. Cutter must have depth control gauge allowing for maximum depth of cut of 2 inches. A trained person shall operate the cutter. All cracks must be cleaned prior to sealing. Clean of cracks shall

include use of a crack vacuum. A trained person shall operate the vacuum and ensure that all debris is removed from cracks prior to sealing. Contractor shall not apply a self-leveling fuel resistant sealant High quality type having a minimum of 10-years of life span (indicated on the technical data sheets). The Crack sealing on the areas to be paint shall be performed before to start painting. The item includes the load, transportation and disposal in an authorized dump of proven material, all burden included to provide a work performed in work-man-like manner.

Estimated quantities:

1) Asphalt to Asphalt Crack Sealing with Bituminous Sealant ml. 2,000.00

**b. NON REFLECTIVE PAINT:**

**Preparation works:** Contractor shall clean/wash/prepare all surfaces prior to painting as needed. Contractor shall remove all dirt, loose old paint particles, grease, oil, and other foreign substances from all surfaces which are to be painted using proper equipment.

**Paint works:** Contractor shall paint existing horizontal black lines with NON reflective black paint. The paint will be suitable for concrete and asphalt surfaces, high adherence and high resistance to abrasion, wear, environmental agents, fuels and oils including chemical/superficial crumbling (sgretolamento) resistance to bituminous surfaces. The coat of paint shall be homogenous, uniform and of a constant layer, edges in general must be clean, clear and straight without any over-spraying (sbavatura).

The lines width shall be the same as the existing black ones and in any case as specified by ETL 04-2. Paint will be lead components free, solvent based type:

- “Spartitraffico non Rifrangente Nero” serie 8510.0099 for the non-reflective black;

The type of paint shall be from Colorificio Sammarinese or equivalent approved.

The work includes any item required to give the job in a workmanlike manner and in accordance with regulatory requirements.

Estimated quantities:

1) Paint existing black Continuous/Broken Lines: ml. 2,400.00;

**c. REFLECTIVE PAINTING:**

**Preparation works:** Contractor shall clean/wash/prepare all surfaces prior to painting as needed. Contractor shall remove all dirt, loose old paint particles, grease, oil, and other foreign substances from all surfaces which are to be painted using proper equipment.

**Paint works:**

**a.** Contractor shall paint existing yellow horizontal road central and lateral lines with reflective paint yellow.

**b.** Contractor shall paint existing white horizontal lines, “STOP” and “CHECK FOD” and other signs with reflective white paint.

The paint will be suitable for concrete and asphalt surfaces, high adherence, high resistance to abrasion, wear, environmental agents, fuels and oils including chemical / superficial crumbling (sgretolamento) resistance to bituminous surfaces. Each coat of paint shall be homogenous, uniform and of a constant layer, edges in general must be clean, clear and straight without any over-spraying (sbavatura).

The lines and signs width will be strictly the same as the existing ones and IAW ETL 04-2.  
The paint for central and lateral lines of taxiway and parking aprons will be lead components free, type:

- YELLOW Paint with retroreflective glass beads as specified on ETL 04-2.

The paint for “STOP CHECK FOD” and stop front lines will be lead components free, type:

- “Spartitraffico Rifrangente Bianco serie 8530.0050” for white, Colorificio Sammarinese or equivalent approved.

Work includes any item required to give the job in a workmanlike manner and in accordance with regulatory requirements.

White paint shall be conform to UNI EN 1436 and ANAS specifications:

- Luminance factor / fattore di luminanza B: = > 60
- Night visibility / visibilita` notturna Rl wet conditions = > 30
- Daily visibility / riflessione luce giorno Qd; = > 200
- Resistance to slip / coefficiente di attrito: = > 45 SRT white
- Drying time / tempo di essicazione: 15’-20’ with air temperature 10° – 40° Celsius.
- Specific weight Kg/lt: = >1.700
- % Bioxide of titanium / biossido di titanio: = >14 %
- % Glass beads / micro-sfere di vetro: 30-33% white
- Reflective index / indice rifrazione microsfe: 1.51

Estimated quantities:

|  |              |
|--|--------------|
| 1) Paint Existing YELLOW Continuous/Broken Central and Lateral Lines | ml. 8,000.00 |
| 2) Paint Existing WHITE “Stop” and “Check FOD” Lettering             | ea. 2        |
| 3) Paint Existing WHITE Stop Front Line (1.0 mt wide)                | ml. 25.00    |
| 4) Paint Existing WHITE Continuous Line (0.15 mt. wide)              | ml. 10.00    |

## **5. WARRANTY**

For this project is requested a period of warranty of 2 years against construction or product or installation defects.

## **6. ATTACHMENTS**

Attach. # 1 – Work Location;

Attach. # 2 – UFC 3-260-01 Airfield and Heliport Planning and Design;

Attach. # 3 – IPRF 01-G-002-05-01 Airfield Marking Handbook;

Attach. # 4 – AFI 32-1042 Standards for Marking Airfields;

Attach. # 5 – ETL 04-2 Standard Airfield Pavement Marking Schemes;

Attach. # 6 – Master Technical Specification – Section 02761 – Pavement Markings.