Statement of Work

LIGHT VEHICLE RADIOGRAPHY SYSTEM

Jordan River-Crossing Site

Tender number: 14/2024

SECTION 1

Introduction to the SOW

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SOW for LIGHT VEHICLE RADIOGRAPHY SYSTEM Jordan River- Crossing Site

1. Introduction

This SOW (Statement of Work) constitute a Turn Key Project (TKP) the planning, construction, installation and maintenance of a complete facility designated for security and customs checks of light vehicles by means of radiography inspection.

1.1 Location

The facility shall be erected as part of the Jordan River-site.

1.2 Definitions

1.2.1 Client/Customer - The Client/Customer is Israel Tax Authority (I.T.A.)

1.2.2 Contractor – the company with whom the contract, for executing the project of light vehicle inspection site, is signed as result of this tender.

1.2.3 TP – Tender Publication

1.2.4 Site operator - The facility shall be operated by the I.T.A

1.2.5 Israel Police – Security issues of site operation shall be under the guidance of the Israeli Police.

1.2.6 IAA – Israel Airports Authority- Landlord of the Jordan River site.

1.2.7 CR/CTA – Client's Representative / Client’s Technical Advisor. Performance of the work as required by this SOW shall be supervised by the CR/ LAVID Engineering LTD.

1.3 Work Contents Highlights

1.3.1 The Client hereby orders, and the awarded company is obligated to supply the site, the design, the systems and the services as specified in this document and the Annexed documents.

1.3.2 The Contractor, following contract sign, will perform the required works in order to provide the Client with a fully operational site, as defined here and after and enclosed Annex.

1.3.3 The work contents highlights of this TKP include supply and implementation of:

1.3.3.1 Detailed site and systems design, Design review meetings

1.3.4 Civil works and building construction, including all infrastructures as specified in this s.o.w.

1.3.5 Verification acceptance test of the Radiography system

1.3.6 Factory Acceptance Tests for main systems (at the Factory site).

1.3.7 Systems manufacturing

1.3.8 Equipment transportation, release from ports, etc.

1.3.9 Installation of the Radiography system, defined traffic control systems, safety and security systems and all auxiliary subsystems

1.3.10 Acceptance Tests

1.3.11 Training sessions and Pilot

1.3.12 Final Acceptance Test

1.3.13 Service and Maintenance for 10 years – defined in the annex.

1.4 Document Description

This document defines the required scope of the work as follows:

1.4.1 Section 1 - Introduction

1.4.2 Section 2 - General provisions -

Description of project outlines and project procedures

1.4.3 Section 3 - Site Operational procedures

Description of the processes taking place in the site's designated environment, and how the Radiography system shall be integrated into them

1.4.4 Section 4 - Required main assemblies

Description of the site and its main components

1.4.5 Section 5 – The Radiography System:

Description of system's minimal requirements, testing procedures, and performance evaluation methods;

1.4.6 Section 6 – Technical Specifications

Systems design principles, guidelines and specifications.

1.5 Schedule

The schedule for implementation of the work as required by this SOW shall be not longer than **25 calendar months**. This time period shall cover all the stages of detailed planning needed, required export and import licenses, certifications, construction permit, complete execution of all construction works and radiographic system facilities including auxiliary systems as detailed in this SOW, and success in meeting the requirements of the Final Acceptance Test.

1.6 Mandatory Requirements

1.6.1 Bidder / Contractor Qualifications (defined in the contract)

1.6.1.1 Have proven experience e, either directly or with the aid of Sub-contractors, in delivery of a Turn Key Project (TKP) for a complete inspection site, including planning, construction, installation and maintenance of complete radiographic facility for vehicle checks utilizing high-energy X-Ray inspection.

In the event that a consortium of companies possesses the required accumulated experience, it will be clearly stated who is the main contractor. A copy of the written agreement between the members of the consortium must also be submitted with the proposal.

1.6.1.2 Have proven experience of at least five (5) years (2019-20*24*) in manufacture, supply and maintenance of an operational working system of the following scanning configuration (Conveyor): the emission and detector subsystems are stationary along a moving object, utilizing X-Ray emission subsystem with energy higher than 1 MeV.

1.6.1.3 Have the ability to provide comprehensive Service and Maintenance for the radiography system.

1.6.2 Radiography System Minimal Requirements

1.6.2.1 The radiography system and all auxiliary systems will comply with Israeli law and regulations.

1.6.2.2 The radiographic system will be able to scan and image an object, with dimension equal to one (1) vehicle, of total length of up to 6.5 [m], and to display the image of on the screen without any distortion or corner cut-off.

1.6.2.3 The System Minimum Performance, expressed in parameters defined in chapter 5 of this SOW, shall be:

1.6.2.4 Ultimate Penetration

1.6.2.4.1 The Ultimate Penetration will be at least 160 [mm] Stainless Steel, at least at three different locations (out of the 9 defined positions) at scan velocity of 12 [m/min].

1.6.2.4.2 The Ultimate Penetration will be at least 130 [mm] Stainless Steel at each of the 9 defined positions at scan velocity of 12 [m/min].

1.6.2.5 Resolution

1.6.2.5.1 Wire resolution, when measured at the middle of the object at height corresponding to the center of the beam (best position) will be, at least:

1.6.2.5.2 2.5% for 50 [mm] clutter (1.25 [mm] Stainless Steel wire behind 50 [mm] of Stainless Steel)

1.6.2.5.3 2.5% for 100 [mm] clutter (2.5 [mm] Stainless Steel wire behind 100 [mm] of Stainless Steel)

1.6.2.6 Contrast

1.6.2.6.1 The systems contrast shall be no more than 3% behind 50 [mm] Stainless Steel. The Radiography system manufacturer will declare the contrast quality of the system by using Hole-Type Image Quality Indicators (IQI) indicators in accordance with the guidelines of the ASTM standard E 1025 latest edition: “Standard Practice for Planning, Manufacture, and Material Grouping Classification of Hole-Type Image Quality Indicators (IQI) Used for Radiology.

1.6.2.7 Material Discrimination

Material Discrimination mode, differentiating between organic and inorganic material, shall be an integrate part of the system. It will be able to distinguish materials such as organic material and inorganic material and mark them by different colors.

The material discrimination application, designated to improve image analysis, will not significantly deteriorate the operational capabilities (for example: inspection times, penetration and resolution) of the Radiography system

1.6.2.8 Throughput

The Radiography system will be able to inspect at least 24 [vehicles/hour].

1.7 Acronyms and Abbreviations

AEDC	After Effective Date of Contract
CCTV	Closed Circuit Television
CDR	Critical Design Review
CQCS	Contractor’s Quality Control System
CR/CTA	Client's Representative /Client's Technical Advisor
DR	Design Review
DDR	Detailed Design Review
EC	Evaluating Committee
FCS	Facility Control System
FAT	Factory Acceptance Test
GOI	Government of Israel
IAA	Israel Airports Authority
IAW	Image Analyst Workstation
IDS	Intrusion Detection System
ITA	Israel Tax Authority
LP/LPR/ALPR	License Plate Recognition /Automatic License Plate Recognition
OCR	Optical Character Recognition
OM	Operation & Maintenance
PA	Public Address

PDR	Preliminary Design Review
QC	Quality Control
RCW	Re-Check Workstation
RCS	Radiography Control System
SAT	Site Acceptance Test
SDMS	Shipment Directing and Monitoring System
SO	System Operator
SOW	Statement Of Work
TCS	Traffic Control System
TKP	Turn Key Project
UPS	Uninterrupted Power Supply
WS	Workstation

List of Drawings: 143-07-01-01

See index attached