

Scope of Works

Trailer Swap Facility - Infrastructure

SafeGates Project

21/06/2024 TCH0000C0001-0000-GN-SOW-0001



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1. INTRODUCTION



1.1 **Project Introduction**

The construction of multiple state-of-the-art Trailer Swap Facilities (the Facility) at the Israel-Gaza border aims to streamline and secure the import of humanitarian aid into Gaza, facilitating the daily transit of 144 flatbed trucks carrying essential supplies. This project addresses the critical need for robust infrastructure to ensure timely and secure aid distribution amid the ongoing humanitarian crisis. By enhancing efficiency and safety in aid delivery, it not only tackles immediate logistical challenges but also lays the groundwork for sustained support and stability in the region.

Equipped with military-grade, remotely operated, and automated systems, the Facility will ensure high levels of security and operational efficiency. State-of-the-art security scanners, Xray machines, and LiDAR systems will thoroughly inspect each truck, detecting unauthorized or dangerous items and mitigating security risks. Real-time radio frequency tracking will monitor truck movements, ensuring transparency and accountability throughout the transportation process. This technological integration will build trust among stakeholders and create a safer working environment by minimizing manual inspections and reducing security breaches. Additionally, the Project will foster collaboration between Israeli and Palestinian authorities, promoting a more coordinated and effective humanitarian response and contributing to longterm stability in the region.

1.2 **Process Description**

SafeGates is a fit-for-purpose solution designed to unblock the flow of food and medicine into Gaza while maintaining the highest levels of security. This military-grade system, developed by the Principal, uses highly accurate 3D scanning technology, offering a level of detail and safety beyond human inspection. The remote monitoring and automation ensure a seamless and secure process for humanitarian aid delivery.

The process begins when an approved driver approaches the Facility at the swap-out zone with a loaded trailer. The truck's movements are recorded by a remote-control room, and the system conducts a full 3D scan of the truck and trailer. Once authorized, the entry gate opens, and the driver moves into the secure zone, leaves the truck running, and exits to the Israeli side. This allows a Gaza-side driver to enter, take control of the truck, and move through to Gaza. The trailer is detached and distributed by NGOs and Gazan citizens. Upon return, the truck and empty trailer are rescanned to ensure they match the initial 3D images and RFID tags, preventing discrepancies.

Each Facility will be designed to process up to 144 flatbed trucks per day, with the system designed for rapid deployment across multiple gates. The entire process from Israel's all-clear

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signal to full operational capacity across three gates takes approximately three weeks, ensuring transparency and reliability in humanitarian aid distribution.

The location of the Project is shown in Figure 1 below.



Figure 1: Map of the Gaza Strip showing crossing points

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1.3 Separable Portions

The Contractor's Activities are split into Two (2) Separable Portions (SPs).

 Table 1: Separable Portions

Separable Portion No.	Separable Portion	SOW Section
SP1	Israeli Side	5.4
SP2	Gazan Side	5.5

1.4 **Description of the Works**

The Principal requires the design and construction of three (3) Trailer Swap Facilities at separate locations along the Israeli-Gaza border (West Erez, Karni and Kerem Shalom - TBC).

This Scope of Work (SOW) document outlines the Principal's requirements in relation to the design and construction of the infrastructure component of these facilities.

The below summarise the key Project Objectives:

- (a) Must be delivered on an expedited schedule (refer Section 5.2);
- (b) Must be a turn-key solution, reliable and easy to maintain.

1.5 Interpretation

Unless this SOW specifically provides that the Principal is responsible for a particular action or requirement, the Contractor is responsible for satisfying all requirements set out in this SOW and the Contract.

A reference to an Israeli Standard, legislative or other standard or code in this SOW (and not to all Quality Standards) does not limit the Contractor's obligations.

Obligations not expressly mentioned in this SOW, but which are necessary for the completion of the Works in accordance with the Contract, are the responsibility of the Contractor.

Except as otherwise expressly provided in this SOW, the Contractor must provide all labour, plant, equipment, materials, and services necessary to carry out and complete the Works under the Contract.



2. DEFINITIONS AND ABBREVIATIONS

2.1 **Definitions**

Defined capitalised terms used in this this SOW have the same meaning as specified in the General Conditions, unless specifically set out in Table 1 below:

Term	Definition		
Contractor	Contractor responsible for completing the Works in accordance with this Scope of Work		
Cycle	A complete Cycle for a single truck as detailed in the Process Description (includes inbound scanning, inbound driver swap, trailer swap, outbound driver swap and outbound scanning)		
Facility	Trailer Swap Facility on the Israeli-Gaza border utilising the SafeGates solution.		
Principal	The Principal refers to the organization that commissions and oversees the Project, holding contractual authority, and providing necessary approvals, guidance, and resources to ensure the Project's successful completion		
SafeGates	A fit-for-purpose solution developed by the Principal, designed to unblock the flow of food and medicine into Gaza while maintaining the highest levels of security		
Works	The Works encompass all activities, materials, labour, and services required to complete Scope of Work contained herein.		

Table 1: List of Definitions

2.2 Abbreviations

Abbreviations used in this SOW have the following meaning:

Abbreviation	Meaning
AC	Air Conditioner
CCTV	Closed Circuit Television
COGAT	Coordinator of Government Activities in the Territories
CTP	Contractor to Provide
DB	Distribution Board
EMP	Emergency Management Plan
GPO's	General Purpose Outlets (electrical)
IDF	Israeli Defence Force
IS	Israeli Standards
ISO	International Standard Organisation
QA	Quality Assurance
QMP	Quality Management Plan
SOW	Scope of Work
TQ	Technical Query
UPS	Uninterrupted Power Supply

Table 2:List of Abbreviations

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SITE LOCATION AND ACCESS 3.

The following three (3) Facility locations are preliminary and subject to change.

3.1 West Erez

The West Erez Facility will be located in the vicinity of the West Erez Crossing Point which is an existing border crossing between Israel and Gaza, primarily used for the transit of people and goods under strict security regulations to ensure safe and regulated passage.

A map showing the approximate locations of the crossing points into Gaza can be found in Figure 2 which is provided for illustrative purposes only.

For reference, Table 3 below shows the coordinates of the location of the site.

Table 3: West Erez Crossing Location	
Location	Coordinates
Latitude	31.558361°
Longitude	34.543639°



Figure 2: West Erez Crossing Map

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3.2 Karni

The Karni Facility will be located in the vicinity of the Karni Crossing Point which is an existing border crossing between Israel and Gaza, primarily used for the transit of people and goods under strict security regulations to ensure safe and regulated passage.

A map showing the approximate locations of the crossing points into Gaza can be found in Figure 3 which is provided for illustrative purposes only.

For reference, Table 4 below shows the coordinates of the location of the site.

Table 4: Karni Crossing Location		
Location	Coordinates	
Latitude	31.482417°	
Longitude	34.489056°	



Figure 3: Karni Crossing Map



3.3 **Kerem Shalom**

...

The Kerem Shalom Facility will be located in the vicinity of the Kerem Shalom Crossing Point which is an existing border crossing between Israel and Gaza, primarily used for the transit of people and goods under strict security regulations to ensure safe and regulated passage.

A map showing the approximate locations of the crossing points into Gaza can be found in Figure 4 which is provided for illustrative purposes only.

For reference, Table 5 below shows the coordinates of the location of the site.

Location	Coordinates
Latitude	31.219278°
Longitude	34.272028°



Figure 4: Kerem Shalom Crossing Map



4. **PRELIMINARIES**

4.1 **Project Documentation**

The Principal will review the Contractor documents in accordance with the Review Procedures.

Detailed design stages are the following % complete as required under the Contract:

- (a) Rev A (85%) for Principal review and acceptance;
- (b) Rev 0 (100%) Issued for Construction (IFC).

4.2 Management, Supervision and Labour

The Contractor's project management personnel are to be approved by the Principal in writing prior to their mobilisation to Site. The Contractor Personnel must be suitably qualified and experienced for their nominated role.

4.3 **Transport**

The Contractor shall provide:

- (a) Transport to the Work Front of all Contractor's equipment, plant and materials and sundries and any other items required to perform the Works;
- (b) All aspects of transport including the necessary plans, scheduling, cost, quality, and resourcing for the Works;
- (c) Transportation to and from the work front of its personnel.

4.4 Survey

Survey control will be established by the Contractor within the cleared area at each site and will be maintained for the duration of the Works. This control will be a fixed, semi-permanent monument type.

Principal to provide clear set out points for the camp, quantity to be confirmed on site by the Contractor as well as set out for the spray field and sprinklers within.

Principal to provide as built surveys as required.



4.5 Site Establishment

The Principal in collaboration with **sector** will provide a secured area for the Contractor to establish their facilities at the work front, including Site facilities, storage of plant, equipment and materials for the duration of the Works.

All temporary facilities must be supplied and installed in accordance with any relevant local shire regulations.

4.5.1 Working Hours

All site works are restricted to daylight hours. The specific working hours will be from 30 minutes after sunrise to 30 minutes before sunset. These hours will vary seasonally and will be adjusted accordingly. Any work outside of these hours is strictly prohibited unless prior written approval is obtained from the Principal.

4.5.2 Contractor Site Facilities Establishment

The Contractor must supply, transport, unload, install, commission, maintain and clean their Site office, crib room(s) and toilet facilities for the duration of the Works and include desk space in temp office facility for Principals' team.

4.5.3 Site First Aid Equipment/Requirements

The Contractor must provide first aid facilities and services (including but not limited to first aid kits) for use for the duration of the Works in accordance with the Israeli Ministry of Labor and Social Affairs.

4.6 **Construction Power**

The Contractor must provide all temporary power requirements for the Works, including:

- (a) Temporary generators;
- (b) Connection and disconnection;
- (c) Maintenance and servicing; and
- (d) Refuelling of the temporary facilities



4.7 **Construction Communication**

The Contractor must provide all construction communications for the Work Front, including but not limited to:

- (a) All light vehicles and mobile equipment have two-way vehicle UHF radios;
- (b) the Contractor's representative to always be in possession of a portable UHF (Principal supplied); and

4.8 **Temporary Facilities**

The Contractor must allow for the design, provision, maintenance, servicing, and removal of all temporary facilities required for the proper and timely execution of the Works.

The Principal will consult with the Contractor and make available to the Contractor enough area for laydown, administration and maintenance required to complete the Works.

The Contractor must complete to the Principal's satisfaction:

- (a) All activities required for the establishment and rehabilitation of all temporary facilities;
- (b) Provide all temporary services including, water, power, lighting, and communications; and
- (c) Remove all temporary services upon completion of the Works.

4.9 **Concrete Supply**

The Contractor shall:

- (a) Arrange for the supply of concrete to complete the Works (in compliance with the Israeli Standards); and
- (b) Prior to mobilisation to Site, provide the Principal with equipment records and licenses for any mobile batching plants or any other similar equipment.

4.10 Waste Management

The Contractor must remove all construction waste generated during the Works.

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5. SCOPE OF WORK

5.1 **Overview**

The Contractor must undertake all activities required to design and construct the Truck Swap Facility, except as noted in the exclusions contained within Section 7.

The Scope has been separated into two (2) Separable Portions as per Section 1.3, namely Israeli Side (SP 1) and Gazan Side (SP 2).

The Israel Side scope represents the bulk of the Works as the supporting infrastructure will be located Israel Side wherever possible and connected to the Gazan side as required (e.g. diesel storage, diesel-generation, power, communications, potable and waste-water storage).

5.2 Key Dates

Following are the overall Project key dates. Refer schedule for more information.

Date
Contractor Mobilised to Site (CMS)
15 days after CMS
20 days after CMS
23 days after CMS

5.3 Design Basis

The Contractor must design the Works on the following basis:

- (a) Each facility shall be designed for a five (5) year design life;
- (b) Each facility shall be designed to accommodate 144 vehicle Cycles daily (6 per hour);
- (c) Vehicles shall be based on Israel Ministry of Transport Flat Bed Truck (WB-15.5);
- (d) Flat-bed trucks transporting 20 eur-pallets;
- (e) Eur-pallets (1200mm x 800mm) loaded to a maximum capacity of 1.5 tons with a maximum loading height of 2200mm
- (f) Flat-bed trucks will not be maintained in the Facility;
- (g) Facility will operate 24 hours per day with no allowance for downtime
- (h) Optimal truck Cycle time through inbound and outbound:

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- (i) Scanning stations = 5 minutes each
- (ii) Security lock (driver swap) = 5 minutes each
- (i) Gazan tractor fleet and drivers is separate to the Israeli side tractor fleet and drivers
- (j) Tractor drivers must remain inside cab in the trailer swap zone. Trailer disconnection and connection will be operated by NGO's.



TRACTOR WIDTH	2.55m
TRAILER WIDTH	2.55m
TRACTOR TRACK	2.55m
TRAILER TRACK	2.55m
LOCK TO LOCK TIME	6.0s
STEERING ANGLE	20.9°
ARTICULATING ANGLI	E 58.0°

Figure 5: Israel Ministry of Transport Flat Bed Truck (WB-15.5)



5.4 Scope Requirements (Israel)

The Contractor must provide all necessary design and construction services, materials, equipment, and labour required to complete the following scope on the Israeli side of the border as indicated in Figure 6 below.



Figure 6: Israeli Separable Portion (SP 1)

5.4.1 Earthworks

- (a) Clearing: Remove all vegetation, debris, and obstacles from the construction area to prepare for site development.
- (b) Compacting: Utilize heavy machinery to compact the soil to required densities to ensure a stable foundation compacted to 95% modified maximum dry density (MMDD) with a bearing capacity not less than 110 kPa;

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- (c) Backfilling: Place and compact backfill materials in layers to achieve specified elevations and support structures.
- (d) Pavement and Seal: Apply a suitable sealant (e.g. dust lock, cement stabilised sand, bitumen, etc.) to the compacted surface to ensure a durable surface able to withstand heavy loads, prevent rutting and cracking, and provide a smooth and safe driving experience for trucks. The design solution shall prevent excessive wear and tear and infiltration based on the Design Basis in Section 5.3 and minimise the perception of permanence of the Facility.
- (e) Drainage: The grading of final surfaces must be drained to ensure no ponding of stormwater. Consideration must be given to stormwater drainage in the area enclosed by Hesco barriers.
- (f) Waste Material: All unsuitable and surplus material from the Works are to be stockpiled by the Contractor at an approved location to be directed by the Principal, no further than one (1) kilometre from the Facility.

5.4.2 Security Barrier(s) (Existing)

- (a) The Contractor must demolish the specified section(s) of the existing security barrier(s) with precision, ensuring minimal disruption to the surrounding area and adherence to safety protocols.
- (b) Barriers are typically high steel fences topped with barbed wire or concrete walls that penetrate deep into the ground as a barrier for tunnels. Where concrete walls require demolition, they shall be cut no more than 500mm below the surface to retain as much of the below surface barrier as possible.
- (c) Following the demolition, the Contractor is responsible for preparing the site and seamlessly integrating the new fencing with the remaining structure. This includes securing all necessary permits, disposing of debris, and ensuring the new installation meets all security and structural requirements.
- (d) The final product must provide a continuous, secure barrier that aligns with the existing fence in both function and appearance.

5.4.3 Security Barrier – Hesco (New)

Supply and install **and an example and an example an example and an example and an example and an example and an example an example an example an example an example and an example an example and an example and example an ex**

- (a) Materials: Utilize (e.g., sand, gravel).
- (b) Concertina Wire: Supply triple strand concertina wire and all necessary mounting hardware.



- (c) Location: Position barriers to the extent detailed on TCH0000-GN-0000-DLP-0005. Install the concertina wire along the top of the **second second secon**
- (d) Site Preparation: Clear the designated area of debris and level the ground as needed to ensure stable installation.
- (e) Construction: Ensure proper assembly and filling of **Construction** according to manufacturer specifications and industry best practices. Securely attach concertina wire on top of the barriers, ensuring it is taut and properly anchored.

5.4.4 Security Fencing (New)

- (a) Fencing Installation: Supply and install high-security fencing to the extent detailed on TCH0000-GN-0000-DLP-0005.
- (b) Material: Use durable, tamper-resistant materials for the fencing in accordance with the relevant **standards**.
- (c) Additional Features: Install anti-climb measures

5.4.5 Automatic & Manual Vehicle Gates

- (a) Automatic Gates: Supply and install anti-ram and anti-ballistic automatic sliding vehicle gates at main entry points (Gate 2, 3, 5 and 6) for trucks and other vehicles, ensuring robust mechanisms for frequent use. Gates shall have a 4m clear opening (min) and be rated for a WB-15.5 flat-bed truck (Refer Section 5.3) travelling up to 50 mph (80 kph).
- (b) Manual Gates (Facility): Supply and install manual vehicle gates (Gate 1 and 7) in accordance with the relevant standards.
- (c) Manual Gates (Bypass): Supply and install manual vehicle gates built into existing fence line as required to permit vehicles travelling along patrol road to bypass the Facility. Gates shall be in accordance with the relevant standards.
- (d) Location: Position all vehicle gates to the extent detailed on TCH0000-GN-0000-DLP-0005.

5.4.6 Security Pedestrian Gates / Turnstiles

- (a) Turnstiles Installation: Supply and install security turnstiles at pedestrian entry points to control and monitor individual access.
- (b) Pedestrian Gates: Supply and install pedestrian gates with access control systems for authorized personnel.



(c) Location: Position all pedestrian gates and turnstiles to the extent detailed on TCH0000-GN-0000-DLP-0005.

5.4.7 Logistics and Security Hub (Zone 1)

(a) Office Construction

Supply and install administrative offices equipped with necessary furniture, communication systems, and security features.

The Contractor must supply, load, transport, unload, install and commission one fully functioning office.

(b) Ablution Facilities

Supply and construct modern ablution blocks with adequate sanitary fixtures, ensuring proper plumbing and ventilation.

The Contractor must supply, load, transport, unload, install and commission one male/ female toilet block at the Facility including all associated equipment and services.

The Ablution blocks must be spaced appropriately within the Facility footprint.

(c) Potable Water and Wastewater Storage (Israel)

Water Storage Tanks: Supply and install tanks for potable water storage to supply the facility with clean drinking water.

Wastewater Systems: Supply and install wastewater storage and treatment systems to handle sewage and other waste produced on-site.

Location: Locate office, ablutions and water infrastructure in the appropriate zone as indicated on TCH0000-GN-0000-DLP-0005.

5.4.8 Back-up Diesel Generator & Fuel Storage (Israel)

- (a) Generator Installation: Supply and install a back-up diesel generator to provide emergency power during outages.
- (b) Fuel Storage: Supply and install secure fuel storage facilities compliant with safety and environmental regulations.
- (c) Testing and Maintenance (by others): Generator shall be able to maintain fuel storage to ensure readiness in emergencies.

Location: Locate back-up diesel generator and fuel storage in the appropriate zone as indicated on TCH0000-GN-0000-DLP-0005.



5.4.9 Electrical Power Connection to Grid

- (a) Grid Connection: Connect the transfer station to the national power grid, ensuring reliable and continuous power supply.
- (b) Power Distribution: Set up an internal power distribution network to supply electricity to all parts of the facility (see below for more detail).
- (c) Backup Integration: Ensure seamless integration of the backup generator with the grid connection to provide uninterrupted power.

The Contractor must supply, install, test and commission the complete electrical distribution system for the Facility including the following:

- (a) Detailed electrical engineering of all site infrastructure to ensure a consistent network;
- (b) Distribution Boards;
- (c) Electrical interconnection of each complexed facility (Refer Figure 7 below);
- (d) Modular units and facilities, internal and external lighting, power outlets and associated cabling;
- (e) Provision of electrical safety equipment;
- (f) All Works must be carried out in accordance with the relevant Israeli Standards;

Power Distribution



Figure 7: Schematic showing electrical interconnection of each complexed facility

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5.4.10 Lighting (Israel)

- (a) The Contractor must supply, load, transport, unload, install and commission the site's flood lighting and area lighting for the Facility to enable 24-hours per day operation as per requirements.
- (b) The Contractor must supply and install light fitting, electrical cable and connect to a local Distribution Board (DB)
- (c) Lighting shall be co-located with CCTV cameras as required.

5.5 **Scope Requirements (Gaza)**

The Contractor must provide all necessary design and construction services, materials, equipment, and labour required to complete the following scope on the Gazan side of the border as indicated in Figure 8 below.



Figure 8: Gazan Separable Portion (SP 2) Trailer Swap Facility - Infrastructure

5.5.1 Earthworks



- (a) Clearing: Remove all vegetation, debris, and obstacles from the construction area to prepare for site development.
- (b) Compacting: Utilize heavy machinery to compact the soil to required densities to ensure a stable foundation compacted to 95% modified maximum dry density (MMDD) with a bearing capacity not less than 110 kPa;
- (c) Backfilling: Place and compact backfill materials in layers to achieve specified elevations and support structures.
- (d) Pavement and Seal: Design and construct a suitable sealant (e.g. dust lock, cement stabilised sand, bitumen, etc.) to the compacted surface to ensure a durable surface able to withstand heavy loads, prevent rutting and cracking, and provide a smooth and safe driving experience for trucks. The design solution shall prevent excessive wear and tear and infiltration based on the Design Basis in Section 5.3 and minimise the perception of permanence of the Facility.
- (e) Drainage: The grading of final surfaces must be drained to ensure no ponding of stormwater. Consideration must be given to stormwater drainage in the area enclosed by
- (f) Waste Material: All unsuitable and surplus material from the Works are to be stockpiled by the Contractor at an approved location to be directed by the Principal, no further than one (1) kilometre from the Facility.

5.5.2 Blast Barriers – Outbound Non-Compliance Inspection Area

Supply and install **and the second second second** as a blast barrier in the outbound inspection area where non-compliant vehicles will be parked and inspected to neutralise the risk.

- (a) Construction: Blast barriers shall be constructed using Hesco Barriers (MIL 7 Unit) to provide protection from potential explosions
- (b) Materials: Utilize **Constant and Second Second**, including all necessary fill materials (e.g., sand, gravel).
- (c) Location: Position barriers to the extent detailed on TCH0000-GN-0000-DLP-0005.
- (d) Site Preparation: Clear the designated area of debris and level the ground as needed to ensure stable installation.
- (e) Construction: Ensure proper assembly and filling of according to manufacturer specifications and industry best practices. Manual Vehicle Gates (Gaza)
- (f) Manual Gates: Supply and install manual vehicle gates (Gate 4 and Gate 8) failure accordance with the relevant standards.



(g) Additional Features: Gates 4 and 8 as shown on TCH0000-GN-0000-DLP-0005 shall be anti-ballistic.

5.5.3 Security Pedestrian Gate (Gaza)

- (a) Pedestrian Gates: Supply and install pedestrian gates with access control systems for authorized personnel.
- (b) Location: Position all pedestrian gates and turnstiles to the extent detailed on TCH0000-GN-0000-DLP-0005

5.5.4 Security Station and Ablutions (Gaza – Zone 4)

(a) Security Station: Install Security Station equipped with necessary furniture, communication systems, and security features.

The Contractor must supply, load, transport, unload, install and commission one fully functioning Security Station. Ablution Facilities: Construct modern ablution blocks with adequate sanitary fixtures, ensuring proper plumbing and ventilation.

The Contractor must supply, load, transport, unload, install and commission one male/ female toilet block at the Facility including all associated equipment and services.

- (b) Plumbing: The Contractor must supply, install, test and commission the complete plumbing distribution system to an interface point at the Gaza-Israeli border
- (c) Location: Locate security station and ablutions in the appropriate zone as indicated on TCH0000-GN-0000-DLP-0005

5.5.5 Secondary Security Scanning Station and Dog Kennel (Gaza – Zone 5)

(a) Security Station: Install Security Station equipped with necessary furniture, communication systems, and security features.

The Contractor must supply, load, transport, unload, install and commission one fully functioning Security Station

- (b) Dog Kennel: The Contractor must supply and install a dog kennel for the trained security dogs required for the secondary security station
- (c) Location: Locate security station and dog kennel in the appropriate zone as indicated on TCH0000-GN-0000-DLP-0005



5.5.6 Lighting (Gaza)

- (a) The Contractor must supply, load, transport, unload, install and commission the site's flood lighting and area lighting for the Facility to enable 24-hours per day operation as per requirements.
- (b) The Contractor must supply and install light fitting, electrical cable and connect to a local Distribution Board.
- (c) Lighting shall be co-located with CCTV cameras as required.

5.6 **Principal Supplied Assets**

The Principal shall supply the following primary equipment outlined in Table 6.

Table 6: Principal Supplied Equipment - Facility

ID	Туре	Quantity
1	Data Control Centre	3
2	Remote Operations Hub	3
3	LiDAR	30
4	Radar	6
5	Stereo Camera	6
6	X-Ray Scanner	6
7	CCTV/Facial Recognition Cameras	48
8	Personnel RFID Tags	300
9	Vehicle and trailer RFID Tags	450
10	Vehicle and trailer telemetry and tracking	450
11	PLC Controller	3
12	Digital I/O Cards	6
13	Gate Actuator	12
14	Gate Proxy Switches	48
15	Gate Magnet Latches	12
16	Misc Electrical Components	-



6. TESTING AND COMMISSIONING

Testing and commissioning of the Works conducted by the Contractor is to be carried out in accordance with the Principal approved ITP.

The Contractor must provide all Contractor's Equipment, Personnel and other items necessary to perform the testing and commissioning of the buildings and services and make available to the Principal:

- (a) the provision of traceability of all test certificates, quality control, testing equipment and qualified testing personnel;
- (b) testing and pre-commissioning of the complexed units, facilities and all associated services to an external connection point prior to installation; and
- (c) full testing and commissioning of the complete Site post installation.

7. WORKS EXCLUDED

The provision of the following items, activities, materials, or equipment are excluded from this SOW:

- 1. Security System Development Trailer Swap Facility
 - (a) Design, installation and fitout:
 - (i) Gate control system with remote ops and onboard vehicle interlocks
 - (ii) Integrated scanning system LiDAR, radar, camera and x-ray
 - (iii) Remote control system for Automatic Gate operation
 - (iv) CCTV system with high-resolution cameras strategically placed to cover all entry and exit points, monitoring all activities 24/7 with real-time recording and playback capabilities
 - (v) Walk-through metal detector to screen individuals for prohibited items with high sensitivity, multi-zone detection, alarm system, and minimal disruption to traffic flow.
 - (vi) Remote operating console
- 2. Security System Development Vehicles
 - (a) Design, installation and fitout
 - (i) Near-field RFID, V2x and immobilization technology on Tractors
 - (ii) Near-field RFID technology on Trailers



- (iii) Tracking technology on Tractors and Trailers
- 3. Private security services
 - (a) Private security detail will be engaged to provide continuous security and protection for the Facility site and assets throughout the duration of the Works

8. **DEMOBILISATION**

The Contractor is responsible for the removal of all temporary construction facilities following Practical Completion and Handover.

The Contractor is responsible for the demobilisation of all Contractor owned assets, infrastructure, and above ground services upon completion of the hire period.

9. BATTERY LIMITS

The following battery limits apply to the Works:

- (a) Overall battery limits as shown on TCH0000-GN-0000-DLP-0005 with Separable Portion (SP 1 and SP 2) battery limits as indicated in Figures 6 and 8;
- (b) Site access roads; and
- (c) Unloading of the Principal Supplied Items;

10. QUALITY

10.1 Technical Query

All TQ's regarding design or construction must be forwarded to the Principal using the appropriate form, available from the Principal on request.

Modifications to the proposed Works must not be undertaken unless a signed variation is issued.

10.2 Inspection Test Plan

Construction Works must be carried out using methods outlined in ITP's prepared for the elements of the Works.

The Contractor must carry out all testing as required within the ITP plan, which are to be carried out to current IS and Principal's Standards.



The Contractor must prepare and submit a copy of the Contractor's ITP templates for approval as part of the Contractor's QMP.

The Contractor is responsible for completing all inspections, notifying the Principal of hold points and witness points for approval and record keeping for the Works, as required by the Contractors QMP and in accordance with this Contract.

The Contractor must submit, at least weekly to the Principal, in hardcopy format copies, all ITP sheets for approval and signoff. ITP's must be accompanied by:

- (a) copies of any test results relating to the portion of the Works; and
- (b) a signed surveyor or Certificate of conformity (COC) to confirm 'as constructed' record relating to the portion of the Works.

10.3 **Quality of Workmanship**

All Personnel must have the necessary skills, experience, qualification, and supervision for the role they are engaged for, to enable a sufficient quality of workmanship.

10.4 **Quality of Materials and Products**

All materials, products and supplies used by the Contractor must comply with the following requirements:

- (a) Be fit for purpose with consideration to the use and environment of the Project;
- (b) Be of commercial/industrial grade;
- (c) Align to good industry practice; and
- (d) Meet all standards and legislation.

11. CODES AND STANDARDS

All Works must conform to the requirements of the latest applicable Israeli Standards, IS or, where such do not exist, the ISO or other standards approved by the Principal, including those listed in this SOW and Principal's Standards.

11.1 **Statutory Requirements**

The Contractor must comply with all Legislation applicable to the Works including the following:

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Table 7: Statutory Requirements

Title
Planning and Building Law, 1965
Water Law, 1959
Clean Air Law, 2008
Protection of the Coastal Environment Law, 2004
Building Maintenance Regulations, 1988
Electricity Law, 1996
Safety at Work Ordinance, 1970
Hazardous Substances Law, 1993
Public Health Ordinance, 1940
National Outline Plan for the Disposal of Waste (Tamam 16)
Noise Abatement Regulations, 1992
Firefighting and Fire Safety Services Law, 1959
Israel Standard 1001 - Fire Safety in Buildings
Equal Rights for Persons with Disabilities Law, 1998
Traffic Regulations, 1961
National Outline Plan for Transportation (Tama 42)
Planning and Building Law, 1965

11.2 Israeli Codes, Standards and Guidelines

Table 8: Israeli Standards References			
Doc. Number	Title		
IS 163	General Design Guidelines		
IS 151	Road and Pavement Design		
IS 1205	Stormwater Drainage Systems		
IS 400	Environmental Protection in Design		
IS 1225	Structural Load Requirements		
IS 123	Earthquake-Resistant Design		
IS 413	Design Provisions for Earthquake Resistance of Structures		
IS 421	Concrete Design and Construction		
IS 445	Steel Structures		
IS 1225	Loads for the Design of Buildings		
IS 61439	Low-Voltage Switchgear and Control gear Assemblies		
IS 1710	Electrical Installations in Buildings		
IS 900	Electrical Safety		

As a minimum, the Contractor must comply with the requirements of the following standards:

Trailer Swap Facility - Infrastructure



Doc. Number	Title
IS 1801	Security Systems
IS 556	Fire Safety in Buildings
IS 618	Lighting for Outdoor Areas
IS 268	Hazardous Materials Handling

Trailer Swap Facility - Infrastructure

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12. PROJECT MANAGEMENT AND SERVICES

12.1 **Project Management (Optional Scope)**

The Principal shall advise the Contractor in writing whether the optional scope detailed in this section 12.1 shall proceed. The Contractor must not commence the optional scope without receiving written approval from the Principal.

12.1.1 Construction Management Plan

The Contractor must develop a 'Construction Management Plan' (CMP) in accordance with the Contract.

12.1.2 Organisation and Key Personnel

The Contractor must:

- a. Establish a dedicated and experienced management team to manage and execute the Contractor's activities summarised in Section 12.1.3 below;
- b. Prepare an organisation chart which:
 - i. demonstrates lines of reporting and areas of responsibility;
 - ii. identifies communication lines with the Principal; and
 - iii. highlights Key Personnel, including their roles and responsibilities.
- c. Continuity of Personnel is imperative to the Project's success. Accordingly, the Contractor must effectively manage the risk of organisational change. The Contractor's risk register must identify this risk, rank the likelihood appropriately given the Project duration and crew size, and implement mitigation measures to minimise impact.

The Contractor's Project Manager is the key point of contact for Site related activities and must liaise with the Principal's relevant Package Manager.

12.1.3 Project Scopes of Work

The following are not comprehensive Scopes of Work but rather a high-level overview to assist Contractor's understanding of the optional project management scope.

12.1.3.1 SOW-0001: Trailer Swap Facility – Infrastructure (this SOW)

This SOW (TCH0000C0001-0000-GN-SOW-0001)

12.1.3.2 SOW-0002: Trailer Swap Facility - Security System Development (by others)

Document: TCH0000C0001-0000-GN-SOW-0002 (Part A)

Trailer Swap Facility - Infrastructure

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Design

- (a) Gate control system with remote ops and onboard vehicle interlocks
- (b) Integrated scanning system LiDAR, radar, camera and x-ray
- (c) Remote control system for Automatic Gate operation

Installation & Fitout

- (d) Control system with onboard vehicle interlocks
- (e) Security scanning systems
- (f) Ongoing refinement of fusion model
- (g) Remote operating console (location TBC)

12.1.3.3 SOW-0002: Vehicle - Security System Development (by others)

Document: TCH0000C0001-0000-GN-SOW-0002 (Part B)

Design

- (a) Near-field RFID, V2x and immobilization technology on Tractors
- (b) Near-field RFID technology on Trailers
- (c) Tracking technology on Tractors and Trailers

Installation & Fitout (SP 2)

(d) Fitout, installation, and commissioning of the above

Appendix 1: Concept Design Layouts

Please refer to the below referenced documents:

Document ID	Title	Revision	Revision Date	Action Type
TCH0000-GN-0000-DLP-0005	Trailer Swap Facility SafeGates System – General Arrangement (Concept)	A	17/06/2024	For Information
TCH0000-GN-0000-DLP-0006	Trailer Swap Facility SafeGates System – System Flow Path	A	17/06/2024	For Information
TCH0000-GN-0000-DAL-0001	Trailer Swap Facility SafeGates System – Paving Plan	A	17/06/2024	For Information