

## Airport Enhancement Program Detailed Engineering Design – Scope Document Briefing

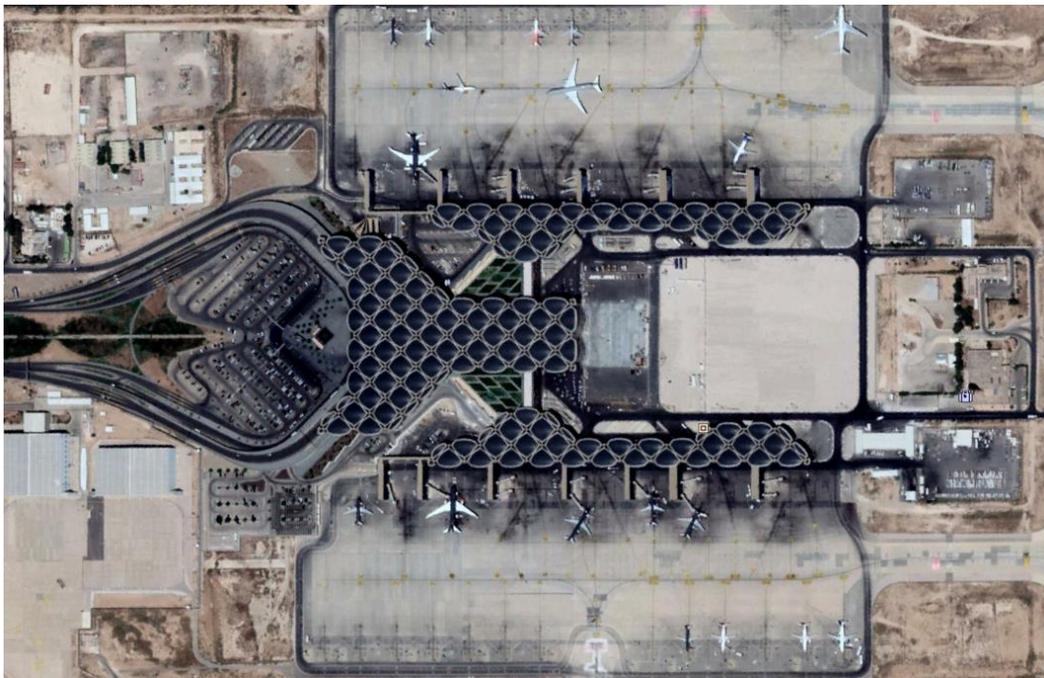
### 1. General

Airport International Group “**Client**” is seeking to procure the services of a qualified engineering firm “**Consultant**” to provide Design and supervision of Airport Enhancement Program “**Services**” for the Queen Alia International Airport “**QAIA**” Passenger Terminal Building and airside facilities in compliance with the applicable Jordanian and International standards to insure maintaining an Level of Service (Optimum) as defined in IATA ADRM 12<sup>th</sup> edition.

### 2. Airport Background information

#### 2.1. Passenger Terminal Building Background Information

Queen Alia International Airport features a passenger terminal building of 165,000 m<sup>2</sup> designed by the architectural firm Foster + Partners and opened in 2013.



The central processor comprises the following resources:

- ◆ On third floor
  - ◆ 64 check-in counters and 11 self- service kiosks. Royal Jordanian counters are in the south part and represent approximately half of the counters of this area (hall A). Some check-in desks are dedicated to Business flights, drop-off and US & Canada flights. All other desks are common use check-in desks. The other resources, located in the north part are dedicated to other airlines and Royal Jordanian domestic flights to Aqaba.
  - ◆ 19 emigration counters including 1 fast track counter and 1 counter for crew. 4 other e-gates complete the existing capacity at emigration.
  - ◆ 12 security check lanes according to the below configuration
    - ◆ 9 dedicated to normal passengers
    - ◆ 1 dedicated for staff access
    - ◆ 1 dedicated to fast track, Diplomats, flight marshallers and aircraft crew.
    - ◆ 1 dedicated to RJ Business Class Passengers
  - ◆ The central area after the security check is used for Duty Free, Food & Beverage, Specialty Retail and lounges (on the mezzanine).
- ◆ On second floor
  - ◆ An area dedicated to immigration.
    - ◆ 30 counters are dedicated to Jordanians and VISA exempted / VISA holders passengers including
      - ◆ Part of which are dedicated to fast track, diplomats and crew
      - ◆ 2 Visa purchase area at the piers, each include 6 visa purchase counters and 4 immigration counters
  - ◆ 4 desks for fast-track immigration, 4 immigration e-gates.
  - ◆ A transfer area with 2 x-ray screening machines per pier
- ◆ On first floor (ground floor)
  - ◆ A baggage claim hall with 4 carousels of 45 meters, 2 carousels of 82 meters and BHS make-up and break down area, duty-free and commercial facilities

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- ◆ 2 lanes of customs control
  - ◆ 1 welcome hall with some retail shops (car rental, telecom services, F&B, ...etc.)
  - ◆ Information desks
  - ◆ Toilets and smoking room
  - ◆ Level 5 luggage inspection room
- ◆ Two linking bridges connect the main processor to two piers. These piers were completed in 2016 by an extension of each of the piers which were built during PTO (Partial Terminal Opening) Phase. The piers feature boarding lounges and gates on the third floor, arrival corridors on the second floor and remote boarding lounges at the first floor.
- ◆ The baggage handling system extension was completed in 2021, located at the East of the existing processor in a 10.000 m<sup>2</sup> area in order to improve the performance of the departures and transfer bags processes with the main objective of achieving additional capacity (XXX bag/hours) redundancy ( double sorters) and upgrading the screening of the bags to EDS Standard 3.

### 2.2. Airside Movement Area Background Information

At Queen Alia International Airport Movement area consist of the following :

A- Two Parallel Independent Runways:

1. runway 08R/26L 3,660 meters long and 61 meters wide
2. runway 08L/26R, 3,664 meters long and 61 meters wide

Runways 26L, 08L and 26R are equipped with ILS category II. Runways whereas runways 08R is not equipped with any approach lighting system.

B- Taxiways System as follows :

1. 2 Taxiways (South Taxiway "ALPHA", North Taxiway "HOTEL") Parallel to the South and North RWYs
2. 2 Intersections Taxiways ( GOLF, FOXTROT)
3. 4 High Speed Exits (CHARLIE , DELTA,KILO & LIMA)
4. 2 Low Speed Exits (MIKE, BRAVO)
5. 3 TWYs as South Apron Entrances ECHO, SIEERA & TANGO

6. 2 TWYs as North Apron Entrances NOVEMBER & JULITE

C- Aprons System as follows :

1. 4 AIG Aprons(North Apron , South Apron, Cargo Apron & Hotel Apron)
2. 2 Royal Pavilion Apron including 2 Apron Entrances & Exits ZULU & YANKEE
3. 2 Joramco maintenance Aprons
4. 1 Jordan Aviation Apron



### 3. Bidders Qualifications

#### 3.1. Experience:

- Relevant Experience: The design office should have a demonstrated history of successfully designing large-scale airport projects in live environment, including terminals and airside facilities.
- Operational Airport Experience: Experience in working with operational airports, with a deep understanding of the complexities and challenges involved in such environments.
- High-Value Projects: Successful completion of similar projects with a value of at least \$100 million, indicating the ability to manage large-scale initiatives.

### 3.2. Technical Expertise:

- Airport Design Standards: In-depth knowledge of airport design standards, regulations, and codes (e.g., ICAO, FAA, local regulations and IATA ADRM).
- Proficiency in Design Software: Expertise in relevant design software such as AutoCAD, Revit, Structural analysis software ,MEP systems design software
- Understanding of Airport Operations: Comprehensive understanding of airport operations, including passenger flow and baggage handling systems. Multidisciplinary Engineering Skills: Proficiency in engineering required for project with similar complexities and size, which includes but not limited to:
  - Architectural
  - Interior design
  - Civil and Structural
  - MEP
  - Fire safety and egress
  - ELV
  - IT systems
  - Special Airport Systems (SAS)
  - Signage and way finding
  - Infrastructure and Pavement
  - Airside Planning
  - Cost Estimation
  - Scheduling
  - Sustainability and Carbon Life Cycle Assessment...

To meet local regulatory requirements and ensure the necessary expertise in local regulations and standards, the Consultant is required to collaborate with a qualified local design office (Class 1A). This local design office should have experience in similar design projects and in working with local contractors, suppliers, and regulatory bodies.

The qualifications of the local design office must be included in the technical proposal.

### 3.3. Financial Capability:

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- Financial Resources: Adequate financial resources to undertake a project of this magnitude, ensuring stability throughout the project lifecycle.
- Insurance: The Consultant must demonstrate the ability to secure the necessary insurance coverage, including providing evidence of a valid Professional Indemnity insurance policy with a coverage amount exceeding \$10 million, ensuring financial protection against potential risks.

#### **5. Sustainability Focus (Considered Advantageous):**

- Sustainable Design Expertise: Experience in designing sustainable airport facilities, with a focus on energy efficiency, environmental impact reduction, achieving green building certifications and proven experience in conducting Carbon Life Cycle Assessments

#### **6. Innovation and technology :**

- Innovative Design Solutions: Proven ability to incorporate innovative design solutions and technologies that enhance the functionality and efficiency of airport facilities.

### **3.1 Enhancement Program Components**

Foster and Partners “**F+P**” completed the Terminal Enhancement Program Initial Studies, with the objective to propose different alternatives to optimize the utilization of the existing terminal processing facilities and increase its capacity by introducing additional resources and refurbishments.

In addition, the Client has recently updated the airport Master Plan with the support of ADP ingenierie, which focuses on the high-level airport developments, mainly for the airside facilities.

The studies were only limited to conceptual layouts for space planning purposes, and high-level airside planning which outlines the proposed development, refurbishment, and extensions of the Enhancement Program Components, summarized in the table below:

Level	No	Project	Area	Description
L03	1	Check In Area and Domestic Departures Process Enhancement	4000 m2	Addition of check in counters (conventional and self-service kiosks , self-bag drop off counters with the associated BHS connection and integration with the existing system
L03, Basement	2	Departures Passport Control and Security Screening Process Enhancement	4200 m2	Rearrangement of the area by creating an offices mezzanine area and the addition of conventional passport counters, automatic border control gates and cabin baggage screening machines
L02	3	International Transit Process Enhancement	4000 m2	Rearrangement of the existing transit area to accommodate additional screening machines and transit counters
L03	4	Departures Level Main Building Commercial Area Extension	6200 m2 existing area 4900 m2 extension	Construction of a new 4900 m2 commercial enclosure on the existing BHS area roof with refurbishment of the existing 6200 m2 commercial area
L02	5	Arrivals Passport Control	1760 m2	Addition of new conventional passport control counters and automatic border control gates
L01, L02	6	New Apron Walk Stands Departure and Arrival Lounges	6000 m2	Rearrangement of an existing area offices and back of house to accommodate new boarding lounges
	7	Baggage Reclaim Area Extension	3700 m2 existing area 4600 m2 extension	construction of 2 extensions to accommodate 2 wide body aircraft and 2 narrow body aircraft carousels Relocation and elongation of baggage carousel,. Assessing the need for additional inject belts and integration with the existing system
L03, L02, L01	8	Departures Public Hall, Building Security and Arrival Public Hall Enhancement	11,000 m2	Extension of the public departures and arrivals hall by closing the existing structural voids and extending the main building façade and the construction of new offices level and rearrangement of the customs and commercial areas

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Level	No	Project	Area	Description
<b>Airside</b>	9	MARS Contact Stand N32 & SFLB		Construction of a contact stand including fixed link loading bridge, MEP works and special airport systems
	10	Code E Contact Stand N36 ELB and TWY N Modification	8200 m2 New Aprons 36000 m2 TWY modification	Construction of a contact stand including apron extension with the associated ancillary works, fixed link loading bridge, MEP works and special airport systems
	11	New Aprons Between the Piers and Apron Walk Stands and New Entry Taxiway	65000 m2	New apron and entry taxiway with the associated ancillary services which includes without limitation fuel hydrant system, lighting high masts, service roads, marking, passenger boarding bridges, apron-walk stand
	12	MARS Contact Stand S36 SFLB	7900 m2	Construction of a contact stand including apron extension with the associated ancillary works, fixed link loading bridge, MEP works and special airport systems
	13	Code E Contact Stand S40 & ELB and TWY S Modification	10500 m2 new aprons 36000 m2 TWY modification	Construction of a contact stand including apron extension with the associated ancillary works, fixed link loading bridge, MEP works and special airport systems
	14	Contact Stand N02 Upgrade to code E	3000 m2 new apron and GSE road	Apron extension and GSE service road extension with modifications to the apron ancillary systems
	15	North West New Aprons (Phase 1)	49000 m2 new aprons	Construction of remote stands with the associated ancillary services which includes without limitation fuel hydrant system, lighting high masts, service roads,

*Note 1: The information mentioned in the table above are indicative, with the sole purpose of providing the bidder with a degree of understanding to the volume of the enhancement projects*

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Traffic SOG 2024 Base Case		8.8 MPAX	9.7 MPAX	10.8 MPAX	11.8 MPAX	12.6 MPAX	13.3 MPAX	13.8 MPAX	14.4 MPAX	15.0 MPAX	15.6 MPAX	16.1 MPAX	16.7 MPAX	17.3 MPAX	17.9 MPAX	18.5 MPAX	19.1 MPAX
Level	No	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	0	Terminal Enhancement and Airside Development DED															
	0'	Supervision															
L03	1		1.8	2.1	2.7												
L03, Basement	2				2.4	2.3	4.0										
L02	3		2.5				2.4										
L03	4			10.7	1.1												
L02	5			0.7													
L01, L02	6					5.6	5.6										
	7			3.6	3.6			7.2									
L03, L02, L01	8					5.7	5.8	0.9									
	9				4.9												
	10				1.9	8.8											
Airside	11					14.8	4.2										
	12						6.3										
	13						5.7	3.7									
	14											0.2					
	15											8.2					
New Terminal	16														8.2		
	Annual Total	0.0	4.3	17.1	16.6	37.3	34.1	11.8	0.0	0.0	0.0	8.4	0.0	0.0	8.2	0.0	0.0
	Cumulative CAPEX	0.0	4.3	21.4	38.0	75.3	109.4	121.1	121.1	121.1	121.1	129.5	129.5	129.5	137.7	137.7	137.7

## 4. Scope of Services

- **Stage 1: Data Collection and Technical Feasibility**
- **Stage 2: Development of the Detailed Engineering Design , cost estimation and Tender/s Package Documents Preparation**
- **Stage 3: Support During the Tendering Process**
- **Stage 4: Construction Supervision and design support during the implantation of the works**

The scope of service will be divided into 2 main work packages

- 1- Terminal enhancement work package
- 2- Airside enhancement work package

The Consultant should prepare his proposal for each package separately, where each work package should be performed in the following stages mentioned in the below section.