



PAKISTAN AIRPORTS AUTHORITY

CONSULTANCY SERVICES FOR

**PLANNING, DESIGN AND CONSTRUCTION SUPERVISION FOR
THE NEW DEPARTURE LEVEL BRIDGE, EXTENSION OF
CONCOURSES AND ALLIED WORKS AT ALLAMA IQBAL
INTERNATIONAL AIRPORT (AIIAP), LAHORE**

Expression of Interest Document

SEPTEMBER



INSTRUCTIONS TO APPLICANTS

1. Scope of Services

- 1.1. The Pakistan Airports Authority (hereinafter referred to as "the Employer") intends to engage consultancy services for the assignment namely "Consulting Services for Planning, Design and Construction Supervision for the New Departure Level Bridge, Extension of Concourses and Allied Works at Allama Iqbal International Airport (AllAP), Lahore."
- 1.2. The Consultant shall provide comprehensive consultancy services for Planning, Design, Procurement Support and Construction Supervision for the New Departure Level Bridge, Extension of Concourses and Allied Works at Allama Iqbal International Airport (AllAP), Lahore, including but not limited to the following:
 - 1.2.1. Project Planning & Feasibility: Review existing airport infrastructure, traffic conditions, passenger handling capacity and ongoing/related projects; undertake feasibility and viability studies, assessment of alternatives, cost-benefit analysis, traffic forecasts and recommend the most technically, economically and operationally viable solution. The feasibility and options assessment shall specifically evaluate the alignment, geometric and operational compatibility of the proposed new Departure Level Bridge and Passenger Movement Bridge with (a) the newly extended Passenger Terminal Building (Domestic side, west/left) and (b) the proposed future terminal expansion (International side, east/right), in line with the configuration indicated in PAA's layout drawing, including Lane-1 and Lane-2 connections.
 - 1.2.2. Surveys & Investigations: Carry out all necessary site surveys, traffic surveys/counts, investigations and geotechnical investigations, including soil exploration, testing, bearing capacity, settlement analysis, groundwater assessment and recommendations for foundations/ground improvement. Utility detection and mapping surveys (including GPR scanning and/or trial pitting/potholing as necessary) for all existing storm water drainage, sewerage, water supply, electrical (HT/LT) and communication/IT utilities within and adjacent to the footprint of the new bridge, its foundations/piers and the proposed pedestrian connector structures, cross-verified against as-built records held by PAA/CAA and the respective utility-owning agencies.
 - 1.2.3. Traffic & Landside Planning: Undertake traffic impact and capacity analysis, queue and delay assessment, Level of Service (LOS) analysis and develop solutions to improve traffic circulation and accommodate projected demand, while considering VIP access, parking and other landside interfaces, direct connection from lower ground car park levels to the concourse to avoid pedestrian crossing at on-grade pick-up lanes and to ensure efficient passenger movement system between parking, concourses and terminal facilities.

- 1.2.4. Architectural & Engineering Design: Develop conceptual, preliminary and detailed designs for the new departure level bridge, extension of associated concourse areas and allied infrastructure, including architectural, structural, civil, MEP, drainage, utilities, fire protection, accessibility, landscaping, traffic management, wayfinding and security-related requirements. Accordingly, spaces to be proposed for passenger and commercial amenities including but not limited to dedicated washrooms, Food & Beverages, Airline Services, Banking & ATMs, Hotel and Vehicle Registration kiosks, Tourism Information Desks etc. Design of the steel-structure pedestrian bridge connections with canopy roofing shown in the layout, linking the new Departure Level Bridge/Passenger Movement Bridge to (a) the extended Domestic terminal on the left and (b) the proposed future International expansion on the right, including architectural continuity/wayfinding with the existing and expanded terminal, canopy glazing/cladding and roof drainage, accessibility (ramps/lifts) and smoke management/fire-life-safety design appropriate to a covered pedestrian walkway over an active apron/roadway.
- 1.2.5. Structural & Infrastructure Design: Design new bridge structures and extension of concourses, foundations, decks, piers, transoms, expansion joints, barriers and other structural components, including assessment/reinforcement of existing structures and foundations where required, considering applicable loading, seismic, wind, dynamic, durability, serviceability and safety requirements. Preferably steel structure for the concourse extended weather protected area having Aluminum clad steel roof with skylights. Structural steel design of the pedestrian connector bridges and canopy (framing, connections, bearings and expansion/movement joints to accommodate differential movement between the new bridge, the existing terminal structure and the future international expansion), corrosion protection and fire-rating of structural steel, and seismic/wind design of the canopy structure.
- 1.2.6. Integration with Existing & Planned Facilities: Ensure seamless integration of the proposed works with the existing airport infrastructure, Passenger Terminal Building expansion and other ongoing/planned developments, including assessment of alternative arrangements for the existing departure bridge, concourse and drop-off facilities. Structural and architectural tie-in with the two specific adjoining developments shown in the layout — the completed Domestic terminal extension (left) and the proposed future International expansion (right) — including design of interim/temporary closure details and future-proofed structural interfaces (e.g., stub connections, embedded plates, expansion provisions) on the International side to permit connection when that expansion is subsequently built.
- 1.2.7. BIM Implementation: Develop and maintain a coordinated BIM model (LOD 400/500) covering architectural, structural, MEP, traffic/wayfinding and other relevant disciplines, including 4D/5D coordination, clash detection, asset tagging and preparation of an as-built BIM model for future operation and facility management. Provide BIM-related training/capacity building to designated personnel of the Procuring Agency.
- 1.2.8. Project Approval & Procurement Support: Prepare/update PC-I, engineering estimates, rate analysis, quantity take-offs, technical specifications, construction/IFC drawings, prequalification documents,

- bidding documents and other procurement-related documentation, and provide assistance during prequalification and bidding/evaluation processes.
- 1.2.9. Construction Supervision & Project Management: Act as the Engineer in accordance with the applicable FIDIC provisions and provide comprehensive construction supervision/project management services through an appropriately staffed resident team, ensuring compliance with approved designs, drawings, specifications, quality standards, construction schedules and contractual requirements. Supervision of utility protection/relocation works and coordination with utility-owning agencies and with the ongoing/parallel terminal-expansion contractor(s) to avoid work-front conflicts and maintain uninterrupted airport operations, passenger flow and life-safety systems during construction.
 - 1.2.10. Contract Administration & Financial Management: Administer the works contract, review Contractor's submissions, shop drawings, work programmes and procurement schedules; certify IPCs and final payments; evaluate variations and claims; assist in resolution of contractual issues/disputes; maintain project records and prepare cost/progress reports and relevant Planning Commission documentation.
 - 1.2.11. Quality, Safety & Environmental Management: Establish and monitor QA/QC procedures, inspect works and materials, review testing and commissioning, monitor Contractor's HSE arrangements and ensure implementation of appropriate safety, environmental and operational requirements, particularly considering that the works are within an operational airport environment. Review of temporary works and erection method statements for the structural steel pedestrian bridge/canopy, and safety monitoring of utility diversion works and any works within live airside/landside operational zones.
 - 1.2.12. Field Design Support Services (FDSS): Provide design support during construction, including finalization/issuance of IFC drawings, review of Contractor's shop/working drawings, clarification of design issues, review of proposed design revisions/material substitutions, and timely resolution of design discrepancies, omissions or unforeseen site conditions. Field design support specific to tie-in works at the interfaces with the existing terminal, the Domestic extension and (when triggered) the future International expansion, and to resolution of design issues arising from utility diversions encountered during construction.
 - 1.2.13. Utility Identification, Impact Assessment & Relocation Design: Identify all existing storm water drainage, sewerage, water supply, electrical (HT/LT) and communication/IT utilities within and adjacent to the project footprint; assess the impact of the new bridge foundations, piers, connector structures and canopy on such utilities; prepare protection-in-place measures where relocation is not warranted and detailed relocation/diversion design (including temporary and permanent diversions) where required; prepare cases to obtain No-Objection Certificates (NOCs) and approvals from the concerned utility-owning entities (including relevant PAA services, the water & sewerage agency, the power distribution company, and telecom/communication operators); and supervise utility protection/relocation works during construction, coordinating temporary diversions so as to maintain uninterrupted airport operations throughout

1.2.14. Post-Construction & Close-Out Services: During the Defects Notification Period, undertake periodic inspections and supervision of remedial works; facilitate handing/taking-over, prepare final project documentation, as-built drawings and BIM as-built model, maintenance schedules/manuals, PC-IV/other close-out documentation and assist the Procuring Agency in project close-out and audit observations