



**ASTRAL CONSTRUCTORS (PVT.) LTD.
KING SALMAN BIN ABDULLAZIZ AL SAUD HOSPITAL, ISLAMABAD,
PAKISTAN
HOSPITAL AND ALLIED BUILDINGS – TENDER QUERIES**

CIVIL:

1. The structural drawings indicate 4000 psi concrete for columns and 3000 psi for beams and slabs, whereas another drawing specifies 6000 psi for columns and 4000 psi for beams and slabs. Kindly clarify the correct concrete strengths to be adopted.
2. The concrete specifications mention both Ordinary Portland Cement (OPC) and Sulphate Resistant Cement (SRC). Kindly specify which type of cement shall be used for each structural element.
3. In the Hospital Building BOQ, Bill No. 1.1, Item No. 1.1.9, only the fabrication of steel is mentioned. Kindly clarify whether the Contractor is required to supply the steel material or whether it will be provided by the Employer.
4. In the Hospital Building BOQ, Bill No. 1.2, Item No. 1.2.13, kindly specify the type, grade, and finish of the granite, or alternatively provide the base rate to be considered for pricing.
5. In the Hospital Building BOQ, Bill No. 1.2, Item No. 1.2.21, kindly provide the relevant detailed drawing.
6. In the Hospital Building BOQ, Bill No. 1.2, Item No. 1.2.42, kindly provide the detailed drawing and specifications for the expansion joint.
7. In the Hospital Building BOQ, Bill No. 1.2, Item No. 1.2.37, the BOQ specifies 1-inch thick XPS board for roof insulation, whereas the drawings indicate 4-inch thick XPS board. Kindly clarify which requirement shall govern.
8. In the Hospital Building BOQ, Bill No. 1.2, Item No. 1.2.38, kindly specify the size, thickness, and fixing details of the mechanically fixed travertine stone.
9. In the Utility Building BOQ, Bill No. 1.2, Item No. 1.2.29, kindly provide the detailed drawing and specifications for the skylight.
10. In the Mosque BOQ, Bill No. 1.2, Item No. 1.1.28, kindly provide the specifications for the prayer carpet, including material, quality, thickness, and manufacturer (if applicable).
11. In the Mosque BOQ, Bill No. 1.2, Item No. 1.1.29, kindly provide the detailed drawings and specifications for the solid wooden Minbar (pulpit).
12. In the Mosque BOQ, Bill No. 1.2, Item No. 1.1.30, kindly review the unit of measurement and quantity, as the BOQ indicates only 1 sq.ft., which appears to be incorrect.
13. The BOQ for the Admin Block has not been included in the tender documents. Kindly provide the complete BOQ.
14. Kindly provide the list of approved manufacturers/vendors for all major materials and equipment specified under the Contract.
15. Kindly provide the approved manufacturers/vendors for the fire-rated roller shutter.
16. Kindly clarify the applicability and basis of the 5% Provincial Sales Tax (PST) mentioned in the tender documents.

ELECTRICAL:

Hospital Building

17. Kindly provide comprehensive specifications for all electrical and low current systems.



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18. With reference to the BOQ of all buildings, kindly confirm the series of switches and sockets to be adopted.
19. With reference to the BOQ for DB panels, kindly confirm whether the panels are required to be type tested, as the relevant specifications are not provided.
20. With reference to the BOQ for cable trays, kindly confirm whether covers are required and, if so, kindly confirm the gauge of the same.
21. Kindly provide sketches of the earthing system, or alternatively confirm the depth of boring to be adopted.
22. With reference to the BOQ for transformers (3000 kVA dry type transformers), kindly confirm the winding metal of the same, or confirm whether aluminium winding may be quoted.
23. With reference to the BOQ for CCTV, kindly confirm the size of the LCD.
24. With reference to the BOQ for cable trunking, kindly confirm the material of the same (i.e. MS or GI).
25. With reference to BOQ Item No. 3.1, GI conduits are required as per the BOQ, whereas HDG GI pipe is shown on the drawings. Kindly clarify and confirm whether pricing may be based on the BOQ.
26. With reference to the Hospital Building BOQ, Item No. 3.26, one (1) No. 1500 kVA transformer is mentioned, whereas one (1) No. 1250 kVA transformer is shown on the power riser (Drawing No. KS-H-E-76). Kindly confirm.
27. With reference to Drawing No. KS-H-E-76, four (4) Nos. MSB-1 to MSB-4 are shown, however the same are not included in the BOQ. Kindly clarify.
28. With reference to BOQ Section 10, Item No. 10.1, three (3) Nos. 3500 kVA DG sets are mentioned, whereas four (4) Nos. 3500 kVA DG sets are shown on the power riser. Kindly confirm.
29. With reference to BOQ Section 3, Item No. 3.13, ninety-eight (98) Nos. DB panels are mentioned, whereas only sixty-five (65) Nos. DB panels have been identified on the SLDs (Drawing Nos. KS-H-E-77/2 to KS-H-E-77/12). Kindly provide the BOQ with the DB designations.
30. With reference to BOQ Item No. 3.12, the SLDs for the following MCCs and AHUs are missing. Kindly provide the same:
 - a. MCC HVAC-1 and MCC HVAC-2
 - b. MCC Pumps
 - c. AHU control panels
 - d. MCC pressurisation fans
 - e. MCC exhaust fans
 - f. MCC boiler
 - g. SMPB for mechanical equipment
 - h. Water transfer pump control panel
 - i. Booster pump control panel
 - j. EMCC - Fire pump
 - k. RTU-1 T1 and RTU-1 T2

Utility Building

31. With reference to Drawing No. UB-E-10, five (5) Nos. 3000 kVA transformers and one (1) No. each of 3000 kVA, 2500 kVA and 2000 kVA DG sets are shown, whereas the



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transformers and gensets are listed under the Hospital Building BOQ only, in which three (3) Nos. 3500 kVA DG sets are listed. Kindly confirm whether these items fall within the Contractor's scope and whether they are existing. Kindly clarify.

32. With reference to BOQ Item No. 2.5, GI sheet cable tray is listed, whereas MS cable tray with cover is shown on Drawing No. UB-E-35. Kindly confirm.
33. With reference to the Fire Alarm BOQ, Item No. 3.3, 3C x 2.5 mm² cable is listed, whereas 2C x 2.5 mm² and 3 x 1C x 4 mm² cables are shown on the fire alarm layout (Drawing No. UB-E-41-A). Kindly confirm.
34. With reference to the PA System BOQ, Item No. 5.5, 2C x 1.5 mm² shielded FR cable is mentioned, whereas 2C x 2.5 mm² FR cable is shown on the PA riser (Drawing No. UB-E-41-B). Kindly confirm.

Mosque

35. With reference to BOQ Item No. 3.9, the wattage of the chandelier is not stated. Kindly provide the same.
36. With reference to the BOQ for DB-LP-GF and DB-LP-1F, the components listed in the BOQ differ from those shown on the SLD. Kindly clarify:
 - a. 20 A and 40 A ELCBs are shown on the incoming on SLD Drawing No. KSH-M-E-21.
 - b. The said ELCBs are not included in the BOQ.
37. With reference to BOQ Section 5 (PA System), 2C x 1.5 mm² cable is mentioned, whereas 2C x 2.5 mm² flexible speaker cable is shown on Drawing No. KSH-M-E-22. Kindly confirm.
38. With reference to BOQ Section 6 (CCTV System), CAT-6 cable is mentioned, whereas CAT-6A is shown on riser Drawing No. KSH-M-E-22. Kindly confirm.
39. With reference to the same item, 2 x 50 mm² bare copper conductor is listed, whereas 70 mm² and 120 mm² bare copper conductors are shown on Drawing No. KSH-M-E-18. Kindly confirm.

Doctors' Apartment

40. With reference to Items No. 6.2 and 6.8, 3C x 1.5 mm² FR cable from DB to FACP and 2C x 1.5 mm² FR cable are listed for fire alarm point wiring, whereas 3C x 2.5 mm² FR cable is mentioned in the Hospital Building BOQ. Kindly confirm.
41. With reference to the LT switchgear BOQ (Items No. 3.8, 3.9 and 3.10), the components of SMPB-1F, SMPB-2F and SMPB-3F differ between SLD Drawing No. KSH-DA-E-39 and the BOQ. Kindly confirm whether the BOQ or the SLD shall govern.
42. With reference to MPB-GF, the components shown on the SLD differ from those listed in the BOQ as set out below. Kindly confirm whether the BOQ or the SLD shall govern:
 - a. Incoming: 500 A TP MCCB as per the SLD, against 630 A TP MCCB as per the BOQ.
 - b. Outgoing as per the BOQ: 6 Nos. 100 A TP MCCB, 8 Nos. 32 A TP MCCB and 1 No. 40 A TP MCCB.
 - c. Outgoing as per the SLD: 7 Nos. 32 A TP MCCB, 4 Nos. 125 A TP MCCB and 1 No. 20 A DP MCB.



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43. With reference to DB-LP-1-GF, the 20 A and 40 A 4P ELCBs are not included in the BOQ components, whereas the same are shown on the SLD. Kindly confirm.
44. The following cable sizes are shown on the SLD but are not included in the BOQ. Kindly confirm:
- a. 4C x 35 mm² Cu/XLPE/LSZH/SWA/LSZH + 1C x 25 mm² ECC
 - b. 2C x 10 mm² Cu/XLPE/LSZH/SWA/LSZH + 1C x 10 mm² ECC
45. DB-LP-IT Room is shown on the SLD but is not listed in the BOQ. Kindly clarify.
46. As per the fire alarm riser, 2C x 2.5 mm² FR cable is listed, whereas 3C x 1.5 mm² and 2C x 1.5 mm² cables are listed with lengths under Fire Alarm BOQ Items No. 6.2 and 6.8. Kindly clarify.

Bachelor Accommodation

47. With reference to the CCTV BOQ, Item No. 7.4, one (1) No. 8-channel NVR is listed, whereas thirty-six (36) Nos. cameras are listed under Item No. 7.3. Kindly confirm whether the specified NVR is intended to cater for all thirty-six (36) cameras.
48. With reference to the BOQ for MPB-GF, the components listed in the BOQ do not match those shown on the SLD. Kindly confirm whether the BOQ or the SLD shall govern.
49. With reference to fire alarm riser Drawing No. BH-E-41-A, 3 x 1C x 4 mm² and 2C x 2.5 mm² FR cables are shown, whereas neither size is included in Fire Alarm BOQ Section 5, which lists 3C x 1.5 mm² cable. Kindly confirm.

External Infrastructure

50. With reference to Item No. 6.2.5, LED cylindrical, watertight and flood lights are listed without wattage. Kindly confirm the wattage for all three types.
51. Kindly provide the SLD for DB-LP.

MECHANICAL, PLUMBING & FIRE FIGHTING SERVICES:

Hospital Building – Plumbing

52. With reference to BOQ Items No. 2.25 to 2.29 (Pumps & Hot Water Generator), kindly provide the schedule.
53. With reference to BOQ Item No. 2.30 (RO Plant), kindly provide the schedule and drawing.

Hospital Building – HVAC

54. With reference to BOQ Item No. 4.7 (CRAC Units), kindly provide the schedule.
55. With reference to BOQ Item No. 4.8 (Water Cooled Screw Type Water Chiller), kindly provide the schedule.
56. With reference to BOQ Item No. 4.9 (Cooling Tower), kindly provide the schedule.
57. With reference to BOQ Item No. 4.10 (Venturi Valves), kindly provide complete details.
58. With reference to BOQ Item No. 4.11 (VAVs), kindly provide the schedule.
59. With reference to BOQ Item No. 4.12 (Heat Exchanger), kindly provide the schedule.
60. With reference to BOQ Item No. 4.13 (AHUs & MAHUs), kindly provide the schedule.
61. With reference to BOQ Item No. 4.14 (FCUs), kindly provide the schedule.



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62. With reference to BOQ Item No. 4.15 (Steam Humidifier), kindly provide the schedule.
63. With reference to BOQ Item No. 4.16 (Electrical Duct Heater), kindly provide the schedule.
64. With reference to BOQ Item No. 4.17 (Sound Attenuators), kindly provide the schedule.
65. With reference to BOQ Items No. 4.18 to 4.19 (Centrifugal Water Pump), kindly provide the schedule.
66. With reference to BOQ Item No. 4.20 (Air Separator), kindly provide the schedule.
67. With reference to BOQ Item No. 4.21 (Expansion Tank), kindly provide the schedule.
68. With reference to BOQ Item No. 4.23 (HEPA Filters), kindly provide the sizes.
69. With reference to BOQ Item No. 2.28 (Hot Water Generator), kindly provide the schedule.
70. With reference to BOQ Item No. 4.25 (Pipe Insulation), kindly confirm the insulation type and thickness (NBR, EPDM, XLPE or glass wool).
71. With reference to BOQ Item No. 4.29 (BMS / Auto Control System), kindly provide the schematic drawing for controls.
72. With reference to BOQ Items No. 4.32 to 4.37 (Ventilation & Smoke Extraction Fans), kindly provide the schedule, together with the following:
 - a. The BOQ states that all fans are dual speed. Kindly provide VFD details including kW rating and IP rating, and confirm whether VFD wiring falls within the mechanical scope or the electrical scope.
 - b. Kindly provide the CO sensor details for the smoke extraction fans.
 - c. Kindly confirm whether a CFD analysis report is required.
 - d. The BOQ states that sound attenuators are required for each fan. Kindly provide the sound attenuator schedule and confirm that sound attenuators shall be included in the BOQ as a separate item.

Hospital Building – Fire Fighting

73. With reference to BOQ Item No. 5.2 (MS Piping), grooved UL listed fittings and standard SCH-40 plain MS fittings are required. Kindly confirm.
74. With reference to BOQ Item No. 5.10 (ZCV), a PRV is required. Kindly confirm.
75. With reference to BOQ Item No. 5.13 (Fire Pump), kindly provide the schedule.
76. With reference to BOQ Item No. 5.15 (Pre-Action Fire System), kindly provide the detailed drawing with room dimensions, including room height.
77. With reference to BOQ Item No. 5.16 (FM-200), kindly provide the detailed drawing with room dimensions, including room height.
78. With reference to BOQ Item No. 5.17 (Underground Water Tanks), kindly provide the tank size.

Allied Buildings – HVAC

79. With reference to BOQ Item No. 4.1 (Sweep Fans), only the fan diameter is stated in the BOQ. Kindly confirm the fan CFM.
80. With reference to BOQ Item No. 4.5 (Drain Piping), the BOQ specifies 5 mm thickness for pipe insulation, whereas the available thickness starts from 12 mm. Kindly confirm.



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81. Kindly confirm whether cladding is required on chilled water piping and ducting. Kindly clarify.
82. With reference to BOQ Item No. 4.2 (Rockwool Insulation for Ducts), kindly confirm the correct thickness.
83. Kindly clarify whether the support system is hot dip galvanised or normal galvanised, and kindly confirm whether engineered supports or standard supports are to be considered.

Allied Buildings – Fire Fighting

84. With reference to the Admin Building BOQ, Item No. 5.8 (FM-200), kindly provide the detailed drawing with room dimensions, including room height.
85. With reference to the Doctors' Apartment BOQ, Item No. 5.9 (FM-200), kindly provide the detailed drawing with room dimensions, including room height.
86. With reference to the Bachelor Hostel BOQ, Item No. 5.9 (FM-200), kindly provide the detailed drawing with room dimensions, including room height.

Allied Buildings – Plumbing

87. With reference to BOQ Item No. 2.24 (Underground Water Tank & Accessories), kindly provide the tank size and complete details.
88. Kindly confirm whether the VFDs and control panels required for the pumps fall within the mechanical scope or the electrical scope. Kindly clarify.

Additional

89. Kindly clarify the mechanical, fire fighting and plumbing scope of works for the Utility Building.
90. Kindly clarify the mechanical, fire fighting and plumbing scope of works for the Infrastructure works.
91. Kindly provide the schedules and drawings for the medical gases equipment.
92. Kindly provide the list of approved manufacturers for all mechanical, plumbing and fire fighting services, for all buildings.
93. Approved manufacturer list required for HVAC & Plumbing
94. For lifts, please provide a complete schedule including Ceiling Height, Type of finish required, and ceiling requirements and any additional features required
95. Equipment schedule required for: HVAC, Plumbing
96. For BMS (Building Management System) Integration matrix required, clearly identify the required control and monitoring points
97. For Hospital Information Management System (HIMS), please provide the complete design diagram. Submit all system requirements to be installed
98. Please provide the schedule of lights.
99. Complete SLD (Single Line Diagram) is not provided in the drawing.
Approved manufacturer required for Pneumatic Tube System & HIMS (Hospital Information Management System)