

QUESTIONS and ANSWERS – Batch 1

Tender Ref No	ORTIA7282/2023/RFP
Tender Description	Replacement of Navigational Aids Fibre Optic Cable within a Period of 12 Months at O R Tambo International Airport

IMPORTANT: Tenderers are required to acknowledge this Q&A in their tender submission in the table for RECORD OF ADDENDA TO TENDER DOCUMENTS

FOLLOWING ARE QUESTIONS RAISED BY BIDDERS AND ACSA's RESPONSE ACCORDINGLY:

Q1. Overall schematic of the entire premises including GPS coordinates as well as the location of all the termination points for the substations, towers, and Kentucky rooms as well as what would need to be terminated.

Answer: Layout has been provided together with coordinates of termination points. The layout cannot be used as an as-built because it has not been updated.

Q2. Horizontal Directional Drilling (HDD), for road/runway/taxiway crossings

A Drilling distance of 9x 60m wide = 540m is specified in the BOQ, could you please specify the distances for

- normal soil HDD
- Intermediate rock HDD
- Hard rock HDD

Rock drilling requires more powerful drilling equipment that is a lot more expensive than soil HDD.

Answer: All taxiway crossing will be hard rock at a minimum depth of 1m. All excavations apart from taxiway crossing will be done on soft soil.

Q3. There is no allowance in the BOQ for Radar Scanning of the routes to identify existing utilities, are we to include this as part of the civils trenching pricing or will ACSA provide a new line item in the BOQ.

Answer: refer to item 3.1 on the BOQ.

Q4. Could you please provide Co-ordinates of the termination points as show in the network layout diagram on page 57 of C10.ECC3, so we can gauge the extent of the works required and have an understanding of the requirements, any documentation showing the existing fibre routes would be highly beneficial.

Answer: refer to table 1 below.

Q5a. The network diagram shows various routes of 24core, 8Core and 4 Core between termination locations, the BOQ only indicates the supply of 24core cable. Can you please confirm that 24core cable will be used in all instances, also confirm if 2 x 24core cables are to be installed to all termination points, to provide redundancy. This will affect the number of patch panels needed at each location.

Answer: refer to table 1 below.

Q5b. If 2 x 24core cables are required to each termination point, can they run in the same duct/trench or do you require diverse routing with 2 trenches that need to be installed with different routes ?

Answer: 2x24 core to be installed in 5-way duct on a separate sub-duct's.

Q6. Is there sufficient space to accommodate a new 110mm sleeve/duct on the existing cable tray in the Apron link Tunnel or does a new metal cable tray need to be installed? If a new cable tray needs to be installed what would the distance be?

Answer: There is sufficient capacity within the existing racks, no sleeves required in the tunnel.

Q7. Section C3.1.2 **Overview of the Work** refers to the Removal of the existing fibre cables. Can you confirm that this a requirement as there is no line item in the BOQ for this work.

Answer: The old fibre to be kept intact.

Q8. The RFP make no mention of where the fibre patch panels will be housed. As ACSA runs critical systems, we would recommend new rack enclosure for all locations, as not to interfere with any existing systems. Do any of the Rack enclosures need to be waterproof or water resistant?

Answer: refer to table 1 below.

Q9. The network diagram refers to 41 locations, this requires 82x 24 port Patch Panels per cable, or 82x 48 port patch panels if 2x 24 core cables are used, the BOQ states a quantity of 14x 24 port and 12x 12 port patch panel, please clarify.

Answer: refer to table 1 below.

Q10. Please state the length of patch cords required, Item 2.8 of the BOQ only states Fibre optic patch cord x1.

Answer: It is expected that the contractor will make the necessary determination based on experience.

Q11. The BOQ does not include any items for ISP (Inside Plant) works, as the fibre cable will enter into some type of structure and then need to be reticulated to the patch panel enclosures location, as the network involves data centres, Towers and other structures this can comprise of significant works. All Tower heights are needed to ascertain if specialized duct fibre cable must be used. Can ACSA confirm if new cable trays need to be installed in the towers other structure, or is there sufficient space on existing trays?

Answer: The tower is 30m high, the existing cable trays will be sufficient to cater for the required fibre cable and there is also sufficient space to accommodate two 24 core patch panels.

Q12. No specifications are provided for the dome joints in 2.7 of the BOQ, there are a wide variety of joints

Answer: There are various manufactures of dome joints, it is expected that the bidder will provide the most robust dome joint suitable for the environment.

Q13. Would a National Diploma (NQF 6) in Electrical/Civil/Mechanical engineering qualify for 10 points?

Site Manager	Project Management Diploma or Higher.	10 (max)
	Project Management Certificate	6 (min)
	• Neither of the above	0 (zero)

Answer: There are institutions that offer project management diploma and with a project management certification bidders will score the required minimum point.

Q14. Coordinates of all nodes that need to be connected. a Kml file would be advantageous.

Answer: We do not have the coordinates in a Kml format.

Q15. The tender talks about removing old cables. Please identify the locations of these cables.

Answer: Old cables will remain intact and they should not be removed.

Q16. Will new cable use the ducts that old cables were using ?

Answer: New cables ducts and sleeves are required.

Q17. Is there any special requirements to reinforce ducts running under the runways ?

Answer: There are no special requirements for reinforcement, for as long as the drilling depth is 1m or more.

Q18. Can we have a schematic showing where old cable needs to be replaced, new cables need to be installed and runway crossing. Require distances between nodes as well.

Answer: The current as built drawing have not been updated to reflect the existing cable route. Coordinates have been provided in table 1 below.

Q19. How big is the onsite storage area to store material for this project ?

Answer: A 25x25m camp site will be provided for the contractors site establishment.

Q20. Regarding 2.1, could you kindly elaborate on the specific qualifications sought for the splicing technician role?

Answer: Criteria is based on Experience of Splicing Technician

Q21 Furthermore, number 4 of the evaluation criteria, we would appreciate guidance on the type of proof required and the preferred format for presentation.

Answer: Provide data sheet / specification/ brochure etc

Q22. Is this a completely new route to existing ?

Answer: Yes

Q23. Must Safety File be provided at time of tender ?

Answer: No - the Safety File will only be required from the successful bidder after award.

Q24. Does ACSA require armoured cables ?

Answer: No - cables must be rodent proof.

Q25. How far from the runway are we allowed to work?

Answer: 105m from runway centre line.

Q26. Does Fibre capacity need to be extended to cater for future requirements?

Answer: No – The requirements in the bid document is sufficient.

Q27. Please confirm your Power Budget for the equipment.(dBm)

Answer: 20dBm

Q28. 24f Fibre Cable must be terminated on 24f Patch Panels at each Sub, Hub, Tower, and Server room.

Answer: See table 1 below

Q29. Spare fibres to be Patched through in Cabinets in a ring topology ?

Answer: Yes

Q30. Subduct to be installed and fibre to be installed by floating method

Answer: Subduct to be installed and ACSA would not prescribe the method of installation.

Q31. Riser cable to be installed between Tower and Server Room.

Answer: A link is required between the ATNS equipment room located on the ground floor and the air traffic control tower 30m high.

Q32. As per discussion with Engineer, please provide accurate pin locations and high-level site plan. (This is of utmost importance.)

Answer: See table 1 below.

Q33. No existing infrastructure to be used with exception of the duct entries into the building and existing trays where feasible.

Answer: Correct, the only exception will be on the entry to the substation.

Q34. Scanning to be done to locate existing services.

Answer: A provisional sum has been allocated for this task.

Q35. Fibre specification request 60 000 bend cycles, we have 7000 without any attenuation change. The fibre will be in a duct and lying completely still. Bend cycle is only applicable for moving fibre i.e.: in scenarios like connected onto continuous moving equipment and patch leads. Will the 7000 cycles suffice?

Answer: 7000 cycles will be acceptable.

Q36. Should subcontractors be used, what will their Public Liability Insurance amount to? (R20 Million?)

Answer: See section C1.4 of the contract.

Q37. In C3.2.4 under heading Employers Design-Secondary Element, in the drawing, there is indicated that there are 2 X24F on most of the routes. Must this be taken into consideration for the Tender and Must this be quoted accordingly?

Answer: The drawing was provided for illustrative purposes, please see table one below for route considerations.

Q38. Please specify Micro Duct Size Required (7way or 12Way) all vendors to quote on same standard Specified by ACSA.

Answer: 7 way micro duct to be installed inside 110m sleeve.

Q39. ACSA to provide GPS coordinates of facilities to be connected Including central core facilities.

- a. LT Room
- b. AGL Room
- c. ILS Room
- d. ILS Towers – All 20+ Towers

Answer: See table 1

Q40. Height of ATNS tower.

Answer: 30m

Q41. ACSA Advised that no existing routes should be used. Should the New route follow next to existing or completely new Proposed Solution.

(Eg. Existing Route is running under the runways. should new route follow the perimeter wall - more details required from ACSA.

Answer: A complete, new route is required and it is assumed that it will run parallel to the existing one.

Q42. Coordinate of the various termination points.

Answer: Provided under table 1

Q43. Testing equipment that will be acceptable.

Answer: OTDR testing will be required.

Q44. where the trenching will be happening, is it hard soil, rock or considered dolomitic area?

Answer. Soft soil around the grass area and hard rock underneath the taxiways

Q45. Staff transporting is acceptable inside the airport and if we would be allowed to setup camp inside the airport for ease of movement for large equipment.

Answer. A vehicle permit will be required, and the vehicle should not be more than five years old. The driver of the vehicle must also pass the requirement of airside vehicle operators permit.

TABLE 1

Termination Point	GPS Coordinates
21R ILS Localiser shelter – 12 Core Patch Panel Termination Point	-26.151179344813418, 28.23351209081269
03L Substation – 24 Core Patch Panel Termination Point	-26.14772191875304, 28.231344866089728
03L ILS Glide Path – 12 Core Patch Panel Termination Point	-26.142800450658246, 28.23418561059361
New Complex Substation -24 Core Patch Panel Termination Point	-26.132776164179102, 28.23259966706334
Tunnel Rack Mounted fibre linking new complex substation	-26.132756900006846, 28.235346249210615
21R Substation - 12 Core Patch Panel Termination Point	-26.106039242155973, 28.24421899671511
03L ILS Localiser - 12 Core Patch Panel Termination Point	-26.10438213201236, 28.24789898735264
21R ILS Glide Path - 12 Core Patch Panel Termination Point	-26.11486873831991, 28.24535625336263
15/33 Substation - 24 Core Patch Panel Termination Point	-26.138360987014632, 28.241491567316523
New OPS Substation -24 Core Patch Panel Termination Point	-26.137946826252787, 28.249978076644613
ATNS Building - 12 Core Patch Panel Termination Point	-26.13691141796771, 28.250246297527017
21L Substation - 24 Core Patch Panel Termination Point	-26.135803761689704, 28.254478823362827
03L ILS Localiser - 12 Core Patch Panel Termination Point	-26.13247591382438, 28.25756872815716
21L ILS Glide Path - 12 Core Patch Panel Termination Point	-26.13784569374291, 28.257751118327047
03R ILS Glide Path - 12 Core Patch Panel Termination Point	-26.162716833521177, 28.250047814079778
21L ILS Glide Path - 12 Core Patch Panel Termination Point	-26.16782041952358, 28.246619951038895
03R Substation - 24 Core Patch Panel Termination Point	-26.16297201813824, 28.246029865065154

End