

# Specification: SAAO Cape Town Remote Operations Room

## Control Room - Room 13

### Requirement for General Building Construction Services

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## 1 Introduction

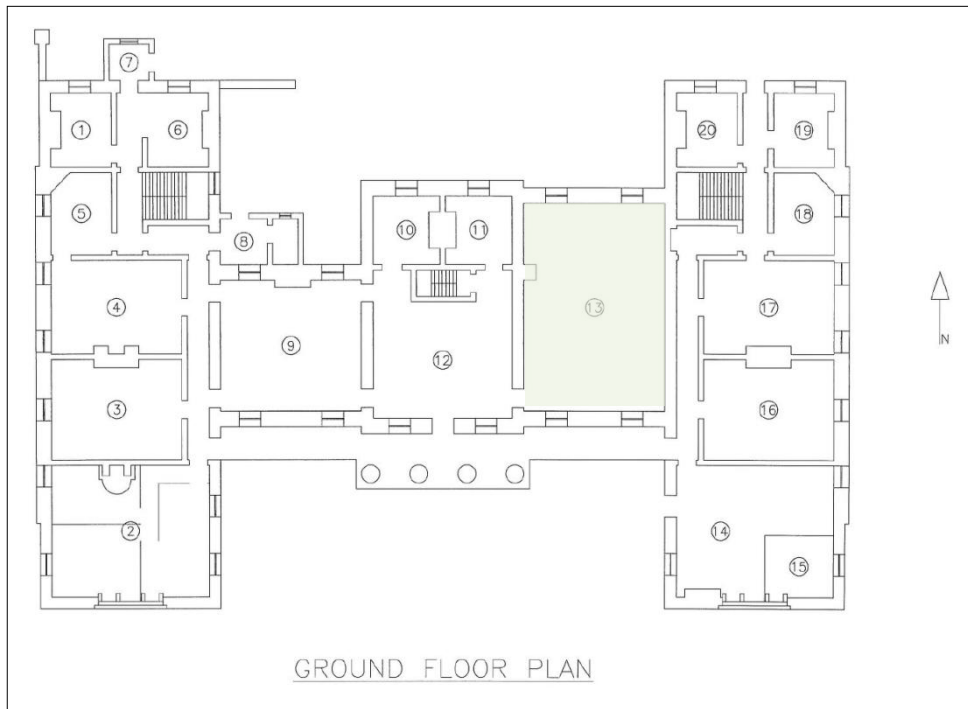
The requirement for General Building Construction Services supports the objective of the Library Upgrade and Remote Operations Centre projects. The work is to be performed at the South African Astronomical Observatory site in Observatory, Cape Town.

The work will require interaction with key stakeholders, including the South African Heritage Resources Agency (SAHRA), the architect, and the project manager. Proven track record in delivering workmanship of a high-quality standard, on time and within budget, are key success factors.

The sections that follow describe the building layout with marked-up floor plans for orientation, as well as the scope of work outlining the contractor deliverables and schedule requirements.

## 1.1 Building layout

The floor plan of the existing building, the section of interest shaded green.



**Figure 1: SAOA Main building, Ground floor plan;  
Room 13 is shaded green.**

Notes to the drawing

- The proposed sections of interest detailed in the table below.

Room	Ref on plan	Room dimensions
Remote Operations Room	13	L 11 x W 7 x H 5

Source: Drawing Number RO 01-75001 Rev 01,  
JGP Consulting Engineers, 30 January 2013

## 2 Scope of Works

The work is broken up into three contracts:

- 1) Contract 1 – General Construction and Shopfitting (including specialist work, such as floor finish, ceiling projection screen, ambient lighting)
- 2) Contract 2 – Electrical Installation to support IT (by others – to be tendered separately)
- 3) Contract 3 – IT Installation (by others – to be tendered separately)

You are invited to submit a quote for Contract 1, with a time allowance for the integration of Contracts 2 & 3 (by others); there is no 'attendance' or markup on these two external contracts.

## 3 Additional information

### 3.1 General notes

#### 3.1.1 Heritage considerations

- The SAAO is a declared National Heritage Site, and subject to the rules, conditions, and penalties stipulated in the Act. The work is being undertaken in terms of the SAHRA Permit dated 24 June 2019, case ID 13554 (attached).

#### 3.1.2 Health & Safety protocols

- Display OH&S general warning sign on the door, appropriate PPE, including high-viz vests, overalls, protective footwear, dust masks, goggles, welding gloves, apron and mask must be supplied and worn.
- Safety file on site.
- First Aid kit and trained First Aid Officer.
- All work on and off site is to comply with OH&S regulations, and any scaffolding erected on the site scaffolding is to be certified fit for use by a competent person. The employer, or his agents, reserves the right to eject from the property any person not wearing, or using, appropriate PPE, or close the site for an indeterminate period should the contractor not adhere to safe working practices.

#### 3.1.3 Building site requirements

- Access to the works is to be restricted to engaged personnel only: listed key personnel from SAAO and SAHRA; the Heritage Consultant (Sarah Winter); the structural engineer (Icon Engineers); the architects.
- Proper hessian with plastic backing drop sheets to be laid from door to Room 13 to external access point, lifted at the end of each day, cleaned, and replaced the next day before the resumption of work.
- Existing doorways along the access route to have corner protectors during the entire building process. No powered equipment to be left plugged in whilst unattended, and all powered equipment (including lighting) to be removed from site at the end of each working day.
- SAAO will provide House 4 parking garage as a temporary lockable store in close proximity.
- A minimum of 2 no. tested and compliant fire extinguishers to be kept on site at all times.
- Staff to take their breaks either in the site area or outside at the construction entrance, but to ensure no disturbance to other staff in the building.

## 3.2 Eligibility

In order to validate your quotation, please also provide the following:

- 1) Proof of current BBC registration;
- 2) A list of heritage sites you have worked on.
- 3) Construction Industry Development Board (CIDB) registration. Minimum registration is a level 2GB or 2SG.

## 3.3 Award of Contract

- Please note that price is not the only criteria - selection will be based on a combination of price, heritage experience, availability, exclusions and conditions of quote.
- Award will be determined by involved SAAO management and the architect.

# 4 Building contracts

## 4.1 Contract 01 - Manufacturing, Construction, and Installation of Remote Operations Centre

All as per the architects' drawings provided:

- 1901-01.01\_g.a. plan\_rev a
- 1901-02.01\_g.a. elevations & sections\_rev a
- 1901-05.01\_cceilings, lighting & electrical layout\_rev a
- 1901-07.01\_details\_rev a

Note: Where possible, components are to be manufactured off site, and dry-fitted to check for fit, before fixing in place.

**Phase 1:** Assembly of basic floating floor structure to enable Electrical first fix and IT first fix. Main Contractor to assist with queries of Electrical & IT Contractors (under separate contract) and do all possible to facilitate their work.

**Phase 2:** Assembly and erection of basic suspended ceiling to enable Electrical and IT first fix. First fix of ambient lighting. Main Contractor to assist with queries of Electrical & IT Contractors (under separate contract) and do all possible to facilitate their work.

**Phase 3:** Assembly/construction of balance of floor, tower, enclosure, suspended ceiling, all in readiness for second fix of IT and Electrical in support. First fix of ambient lighting (by Main Contractor's Subcontractor).

**Phase 4:** Obtain pricing for the floor finish (including installation) and, on the approval of the architect, award the subcontract. This process to be commenced at the completion of Phase 2 to ensure no delay with manufacturing and installation. Final fix of ambient lighting. *Glass wall and door is procured under separate contract.*

**Phase 5:** Finish the floor, by Main Contractor's subcontractors. *Glass wall and door is installed under separate contract.*

**Phase 6:** Once the above is completed, make good, request a defects list from the architect, remedy and, on sign-off by the architect, hand over to the client (for final fix by IT and Electrical).

### Specific notes:

- Liability for damages
  - The contractor will be liable for any damage inflicted on any part of the room, building, complex, or property, and will be required to restore it to its original condition, at the approval of a representative of SAHRA and the Architect.
- Work times
  - Noisy work, such as grinding and cutting, is to be restricted to certain times of the day (8h00 – 10h15, 11h15 – 13h00, 13h30 – 16h00).
  - Construction times are 8h00 – 16h30, Mondays - Fridays (no work is permissible outside of these hours).
  - Work on public holidays by arrangement with the project manager.
  - Work on site is to be kept to a minimum.
- Disposal of waste
  - All waste is to be bagged on the day and removed. Verification of legal disposal will be required by the Architect / All waste is to be loaded into the skip provided by the client, and the skip to be kept covered at all times to contain items from being blown out in wind (see the attached plan for location).
- Construction Requirements
  - No penetrations or fixings into any existing fabric of the building is allowed, except with the express permission of the Heritage Consultant.
  - The existing walls of the room to be protected with plastic sheeting up to a height of 1.5m, all round. This sheeting to be affixed with tape, and only to be removed once the work is completed.
  - All fittings, where possible, to be pre-manufactured off site and assembled on site - no bulk cutting.
- Services
  - Power and water will be provided by the client.
  - Toilet facilities available (see the floor plan for location of Room 8).
- Security checks
  - All bags and vehicles will be searched on exit.
- Contract duration
  - A total contract period of 60 working days (of which it is anticipated 15 will be on site) will be allowed for this work - a penalty of R450/day for late completion will apply.

#### 4.1.1 Payment (on instruction by the architect, only)

- 20% (excluding Provisional Sum amounts) on completion of Phase 1 and 2;
- 40% (excluding Provisional Sum amounts) on completion of Phase 3;
- Release of payment for subcontractors as per agreed payment schedule during Phase 4;
- 10% (excluding Provisional Sum amounts) on completion of Phase 5;
- Release of retention on subcontractors will be as per the schedule agreed with them and the architect at time of awarding the subcontract, and on the approval of the architect;
- 20% on completion of Phase 6;
- 10% of the Contract Value (including Provisional Sum amounts) to be held back for a period of 90 calendar days for Latent Defects;
- Balance, on sign off by the architect, once the Latent Defects have been attended to.

4.2 **Contract 02 - Electrical Installation to support IT**

Excluded from this call for quotes.

4.3 **Contract 03 - IT Installation**

Excluded from this call for quotes.

**Contract 01 - Quotation submission form (please complete and sign)**

Timeframe (working days: Phases 1 - 6)	
Quoted price	
Provisional Sum - Floor Finish	R20,000.00
Provisional Sum - Ceiling Projection Screen	R15,000.00
Prime Cost Item – Light Fittings	R35,000.00
Prime Cost Item – Sundry Items	R15,000.00
Mark up on Provisional Sums for attendance	
VAT @15%	
Total (valid for 30 days from date of submission)	
Day Rates (excl. VAT):	
P & G (extension of time)	
Carpenter	
Finishing Plasterer	
Electrician	
Painter	
Conditions	
Signed (bidder)..... Date .....	



## 5 Delivery

Delivery is in accordance with the Scope of Works set out in (2) above, to be agreed with the project manager. The **provisional** schedule as follows, *assuming the building start date is Monday, 1 June 2020.*

Activity	Duration (Working days)	Start	Finish
Project start	0 days	Mon 01/06/20	Mon 01/06/20
<b>Phase 1:</b> Floor	7 days	Mon 01/06/20	Tue 09/06/20
<b>Phase 2:</b> Ceiling	8 days	Wed 10/06/20	Mon 22/06/20
<i>Electrical &amp; IT First fix</i>	<i>10 days</i>	Tue 23/06/20	Mon 06/07/20
<b>Phase 3:</b> Finish floor + ceiling	20 days	Tue 07/07/20	Mon 03/08/20
<i>Electrical &amp; IT Second fix</i>	<i>10 days</i>	Tue 04/08/20	Tue 18/08/20
<b>Phase 4:</b> Procurement floor (excl Glass)	20 days	Tue 07/07/20	Mon 03/08/20
<b>Phase 5:</b> Floor sub contract (excl Glass)	15 days	Tue 04/08/20	Tue 25/08/20
<b>Phase 6:</b> Handover	10 days	Thu 27/08/20	Wed 09/09/20
<i>Electrical &amp; IT Final fix</i>	<i>5 days</i>	Thu 10/09/20	Wed 16/09/20
Start operations	0 days	Wed 16/09/20	Wed 16/09/20
Latent Defects (90 cal days)	60 days	Thu 17/09/20	Wed 09/12/20
Project finish	0 days	Wed 09/12/20	Wed 09/12/20