

C2.2 Pricing Schedules:

TABLE 1 – CIVIL ENGINEERING SERVICES				
Estimated Cost of Works (Excl. Vat)			R 108 499 781	
PHASE 1 SERVICES				
Normal Stages of Services as per ECSA	Unit	Offered Fee (Excl. VAT)		
Work Stage 1 - Inception	Lump Sum	R		
Work Stage 2 - Concept and Viability	Lump Sum	R		
TOTAL PHASE 1		R		
PHASE 2 SERVICES				
Joint Monitoring Services	Unit	Quantity (Hours)	Rate (Ex. Vat)	Offered Fee (Excl. VAT)
Documentation & Procurement	Hours	480		
Contract Management Services	Hours	1080		
Construction Monitoring Services	Hours	1080		
Handover & Close Out	Hours	480		
TOTAL PHASE 2				R
SUB - TOTAL 1 (Add Totals for Phase 1 & 2)				R
Total Disbursements Amount – 10% of Sub-total 1			10%	R
SUB TOTAL 2 (Add Sub-Total 1 & Disbursements)				R
Additional Services	Unit			Amount (Excl. VAT)
Building Information Modelling (BIM)	Lump Sum			R
Level 3 Construction Monitoring for 24 months	Lump Sum			R
Environmental Assessment Practitioner (EAP)	Provisional Sum			R 2 000 000.00
Environmental Control Officer (ECO)	Provisional Sum			R 1 200 000.00
Aviation Specialist	Provisional Sum			R 2 000 000.00
SUB TOTAL 3 (Add Sub-Total 2 & Total of Additional Services)				R
CONTINGENCIES - 5% OF SUB-TOTAL 3			5%	R
TOTAL OFFERED FEE EXCL. VAT (Add Sub-Total 3 & Contingencies)				R
VAT 15% (OF TOTAL OFFERED FEE)				R
TOTAL OFFERED PROFESSIONAL FEE INCL. VAT - Carry to FORM OF OFFER				R

TABLE 2 – STRUCTURAL ENGINEERING SERVICES				
Estimated Cost of Works (Excl. Vat)			R 246 590 411	
PHASE 1 SERVICES				
Normal Stages of Services as per ECSA	Unit	Offered Fee (Excl. VAT)		
Work Stage 1 - Inception	Sum			
Work Stage 2 - Concept and Viability	Sum			
TOTAL PHASE 1		R		
PHASE 2 SERVICES				
Joint Monitoring Services	Unit	Quantity (Hours)	Rate (Ex. Vat)	Offered Fee (Excl. VAT)
Documentation & Procurement	Hours	480		
Contract Management Services	Hours	1080		
Construction Monitoring Services	Hours	1080		
Handover & Close Out	Hours	480		
TOTAL PHASE 2				R
SUB - TOTAL 1 (Add Totals for Phase 1 & 2)				R
Total Disbursements Amount – 5% of Sub-total 1			5%	R
SUB TOTAL 2 (Add Sub-Total 1 & Disbursements)				R
Additional Services	Unit			Amount (Excl. VAT)
Building Information Modelling (BIM)	Lump Sum			R
Level 3 Construction Monitoring for 24 months	Lump Sum			R
Surveys (Geohydrological / Hydrological)	Provisional Sum			R 2 000 000.00
Environmental Control Officer (ECO)	Provisional Sum			R 1 200 000.00
Façade Engineer / Specialist	Provisional Sum			R 2 000 000.00
SUB TOTAL 3 (Add Sub-Total 2 & Total of Additional Services)				R
CONTINGENCIES - 5% OF SUB-TOTAL 3			5%	R
TOTAL OFFERED FEE EXCL. VAT (Add Sub-Total 3 & Contingencies)				R
VAT 15% (OF TOTAL OFFERED FEE)				R
TOTAL OFFERED PROFESSIONAL FEE INCL. VAT - Carry to FORM OF OFFER				R

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Normal Stages of Services as per ECSA	Unit	Offered Fee (Excl. VAT)		
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PHASE 2 SERVICES				
Joint Monitoring Services	Unit	Quantity (Hours)	Rate (Ex. Vat)	Offered Fee (Excl. VAT)
Documentation & Procurement	Hours	480		
Contract Management Services	Hours	1080		
Construction Monitoring Services	Hours	1080		
Handover & Close Out	Hours	480		
TOTAL PHASE 2				R
SUB - TOTAL 1 (Add Totals for Phase 1 & 2)				R
Total Disbursements Amount – 5% of Sub-total 1			5%	R
SUB TOTAL 2 (Add Sub-Total 1 & Disbursements)				R
Additional Services	Unit			Amount (Excl. VAT)
Building Information Modelling (BIM)	Lump Sum			R
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SUB TOTAL 3 (Add Sub-Total 2 & Total of Additional Services)				R
CONTINGENCIES - 5% OF SUB-TOTAL 3			5%	R
TOTAL OFFERED FEE EXCL. VAT (Add Sub-Total 3 & Contingencies)				R
VAT 15% (OF TOTAL OFFERED FEE)				R
TOTAL OFFERED PROFESSIONAL FEE INCL. VAT - Carry to FORM OF OFFER				R

PART C3: SCOPE OF WORK:

1. Employers Objective

The objective of Airports Company South Africa (ACSA) is to undertake development of its airports in alignments with ACSA's Core Strategy to "Develop Airports" and strategic land use plans in order to:

- Create value to our shareholders (improving aeronautical and non-aeronautical revenue).
- Increase our reputation (As a provider of world class airport facilities).
- Increase Traffic (Through the provision of timeous new capacity and facilities).
- Diversify our business portfolio.
- Reduce environmental impact.

The above strategic goal provides a high-level context in broad terms around the development purpose and importance, outlining any relevant industry trends and challenges / or opportunities. The provision of new capacity at ACSA's Cape Town International Airport (CTIA) will thus enhance the airport's efficiency, support increasing air traffic demand, and contribute to the economic sustainability of the company. The airport's strategic economic position within the Western Cape region will be solidified whilst the National Developmental Agenda is supported.

CTIA has, in line with its approved Master Plan, commenced with planning for future infrastructure expansion. One of the key elements to its expansion is increased airside capacity driven by LOS Requirements, increasing air traffic and aircraft operators. Increased runway and apron capacity is integral to CTIA's ability to increase its offering to airlines for peak time slots. In line with the Airport Master Plan, the terminals will expand in an easterly direction towards the current runway, displacing existing apron parking bays. This necessitates the development of CTIA's Apron through provision of new aircraft stands to replace those that will be displaced as well as to cater for future growth, as well as implementation of interventions at the International Terminal building to increase capacity to key terminal sub-systems.

The Apron development must be completed within the shortest reasonable time, with the sole aim of increasing CTIA's apron capacity through provision of the required 3 Code F contact stands, 2 new Code E remote apron stands, the widening of Alpha Taxiway for Code F aircraft movement and provision of new ULD and GSE area as per the scope. The International Terminal's capacity interventions must be implemented with the aim of increasing processing capacity of the critical terminal sub-systems at Immigration, Emigration, Security Central Search Point and Departure Holding Lounge (Bussing Gates and Contact Stands Boarding gates).

Both the Apron and International Terminal's capacity developments will be implemented as a single project due to the intrinsic interface of the planned infrastructure interventions as highlighted below in the project scope of work. Therefore, a team of multi-disciplinary consultants will be appointed from the market through a procurement process, and will work together to implement the International Terminal and Apron Development project.

2. Scope of Work

2.1. Project Background

2.1.1. International Terminal Upgrade

The International Terminal at CTIA was last expanded in 2009 as part of a larger terminal complex development, undertaken to accommodate increased passenger demand for the 2010 FIFA World Cup. At that time, the terminal was expanded to process approximately 15 million annual passengers (15 MAP).

Traffic levels are recovering post-Covid 19 pandemic and CTIA processed over 10 million passengers in the FY 2022/23, which included growing numbers of international and regional travellers. This recovery necessitates further terminal development to address capacity shortfalls, particularly at critical passenger processing areas, particularly at the international terminal.

The ITU has been activated to address these capacity shortfalls, particularly focusing on addressing bottlenecks and capacity limitations within terminal processes at Immigration, Emigration, International Departure Lounges, International Departure Boarding Gates and International Departure Bussing Gates.

The Project Brief stipulates that the project will serve as an interim solution to ensure capacity provision and operational efficiency within the current permission period FY2024 - 2028 until the activation of the future terminal expansion (i.e. the Terminal 2 development) is initiated, of which construction is estimated to commence in Q1 2029.

2.1.2. Apron Development

Currently Cape Town International Airport (CTIA) does not have Code F apron stands. Airlines have expressed a demand requesting Code F passenger aircraft be brought to CTIA. The existing CTIA Airport infrastructure does not meet the operational needs of these aircraft types thereby impacting growth potential. With growing demand and the interest from new International Airlines, the Airport Management (AM) team is faced with a high volume of requests to facilitate Airlines passengers through the contact stands.

Currently, CTIA has 40 apron stands of which 10% is (reserved) for redundancy and therefore the available number of aircraft stands for operational purposes are 36 apron stands. This excludes the Delta (Cargo) apron as commercial aircraft are not parked on these stands. The current apron capacity can be categorised to 5 Code E apron stands, 15 Code C apron stands and the balance can multi-configured into 10 Code E or 20 Code C apron stands.

It should however be noted that CTIA has not reached the declared capacity of 40 Apron Parking Bays nor the 80% capacity following the COVID-19 pandemic. This means, the challenge is not the availability of parking bays but rather the convenience and Level of Service of Airlines and Passengers to be facilitated through a Airbridge and Contact Stand. The development must be completed within the shortest possible time, with the sole aim of increasing CTIA's apron capacity through provision of the required Code F contact stands, 2 new Code E remote apron stands, widening of Alpha Taxiway for Code F aircraft movement and provision of new ULD and GSE area as per the scope.

2.2. Scope of Work: International Terminal Upgrade

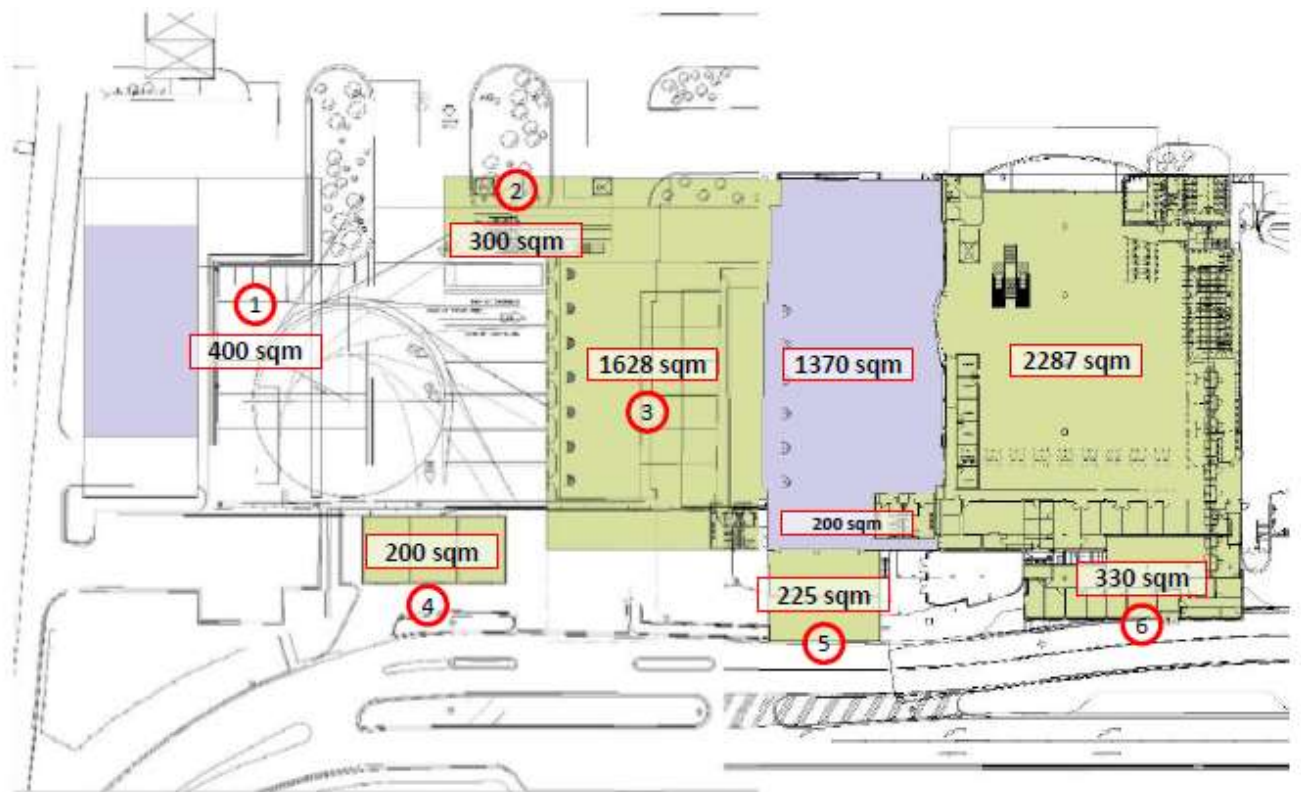
ACSA's Integrated Airport Planning (IAP) Division has produced concept layouts plans that stipulates the demand related specifications, spatial provisions, sizing of circulation, queuing and operational elements for passengers. The concept layout were produced to scale and are to be considered as the initiation point in the design process for expansion of the terminal areas in scope.

The concept layouts serves as a foundational design framework for the project's development, emphasizing efficiency and functionality within the International Terminal. Each layout has been developed to a level adequate to an FEL3A output to accommodate passenger flow, operational demands, stakeholder requirements and ensuring that all spatial provisions align with the anticipated needs of the facility. By integrating key elements such as queuing areas, circulation paths, and operational zones, these layouts aim to optimize both user experience and operational performance.

2.2.1. Concept Design Layouts

2.2.1.1. Terminal 1 (T1) Ground Floor Plan:

The extension of the ground floor of the Terminal 1 building, will focus primarily on the expansion of the Bravo Bussing gates and associated bussing lanes.



The numbering below refers to the numbering on the above floor plan:

1. The bussing gate circulation and the bus parking area must be optimised to facilitate the transfer of passengers between the terminal and remotely parked aircraft. The area is currently oversized and underutilized, therefore, due consideration may be given to expanding the GSE area with racking, as well as spatial allocation for a VVIP Facility.

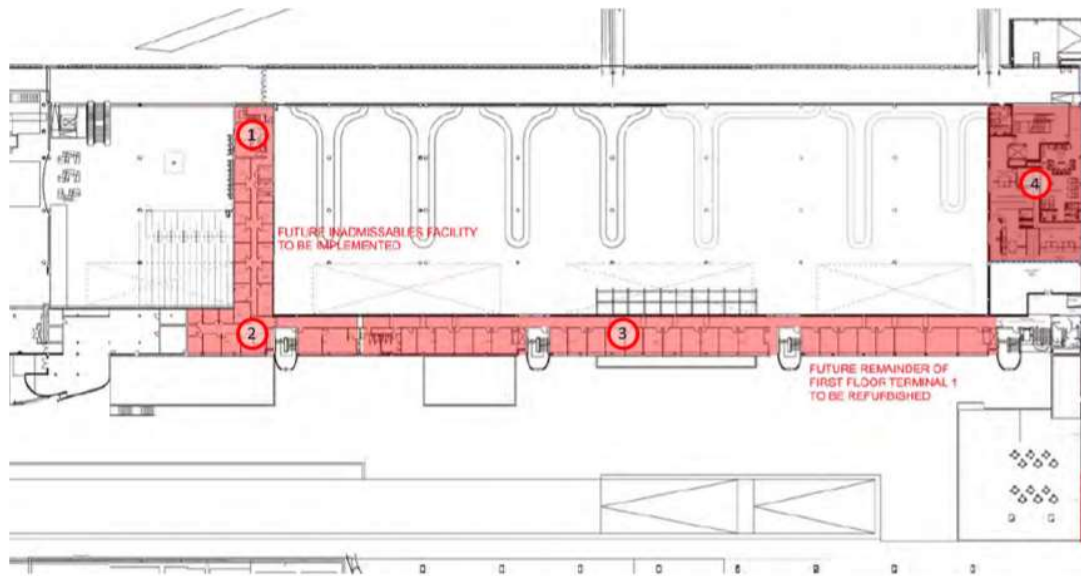
2. The current vertical circulation core at the existing Bussing Gate Terminal (which includes a lift, escalators, and stairs) will be repositioned, expanded and optimised to enhance passenger flow. The orientation and placement of these elements may be adjusted to ensure that passenger movement is streamlined with the direction of travel and landing on the ground floor.
3. The existing bussing hall / lounge will be expanded to allow for additional seating and queuing areas along with infrastructure linked to improving passenger experience in this area. This includes the provision of commercial spaces as well as ablutions and any other passenger related areas that are identified during design development.

The existing Passenger Reconciliation room is also to be reconsidered for relocation in order to improve the passenger flow from the first floor.

The expanded area is to be designed to allow for optimal use and flexible use with the adjacent immigration hall. It is envisaged that this will include the use of sliding folding doors, removable partitioning (with storage / stack away areas), furniture and adaptable installations.

4. The existing goods off-loading area is to be redesigned to accommodate for delivery vehicles, and storage areas both prior to screening and after.
5. The existing bonded store and loading area are to be further expanded and optimised to allow for efficient operations. Additional space is required to allow for a second screening machine to provide redundancy. Back of house space inclusive of staff areas are to be added.
6. The existing immigration hall is to be further expanded to make provision for additional counters, e-gates and associated back of house areas. An isolation facility is required to be installed, the expansion of this area entails the relocation of the existing ablutions, escalator, and offices to allow for the repositioning of the counters and e-gates to align with the passenger flow. Allowances have been made for the refurbishment of the existing immigration hall, Bussing gates and associated bussing lanes.

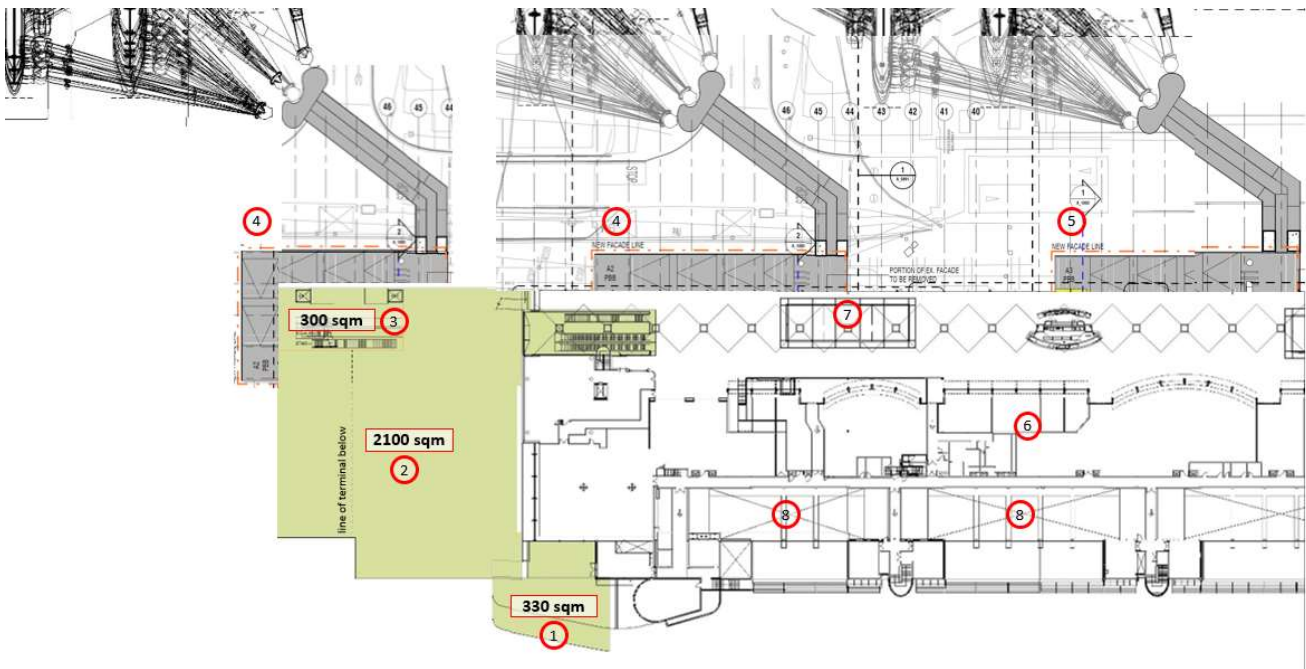
2.2.1.2. T1 Mezzanine Level



The expansion, refurbishment of the following areas located on the mezzanine level within T1 are also included within the scope of the project:

1. Airside Inadmissible Area: The current area is not fit for purpose and is in sever need of expansion to accommodate operational needs and the ability to humanely accommodate passengers for different reasons and with various risk profiles.
2. Airside Support offices: Similarly additional office space is required to support the emigration area as well as the expanded inadmissible area.
3. Relocated Airside Transit Facility: The relocation of the transit facility is necessitated by the need to expand the area but also by its current location within the T2 footprint. It is recommended that this works be done in conjunction with the expansion of the airside facilities noted above given the close proximity of the areas and the opportunity to complete this works early.
4. Landside Airline Offices: The landside offices are predominantly in use by 3rd Part Stakeholders i.e. Airline Offices, Ground Handlers, SITA. The area is in disrepair and is to be refurbished given its close proximity to the works noted above.

2.2.1.3. T1 First Floor (Northern Expansion)

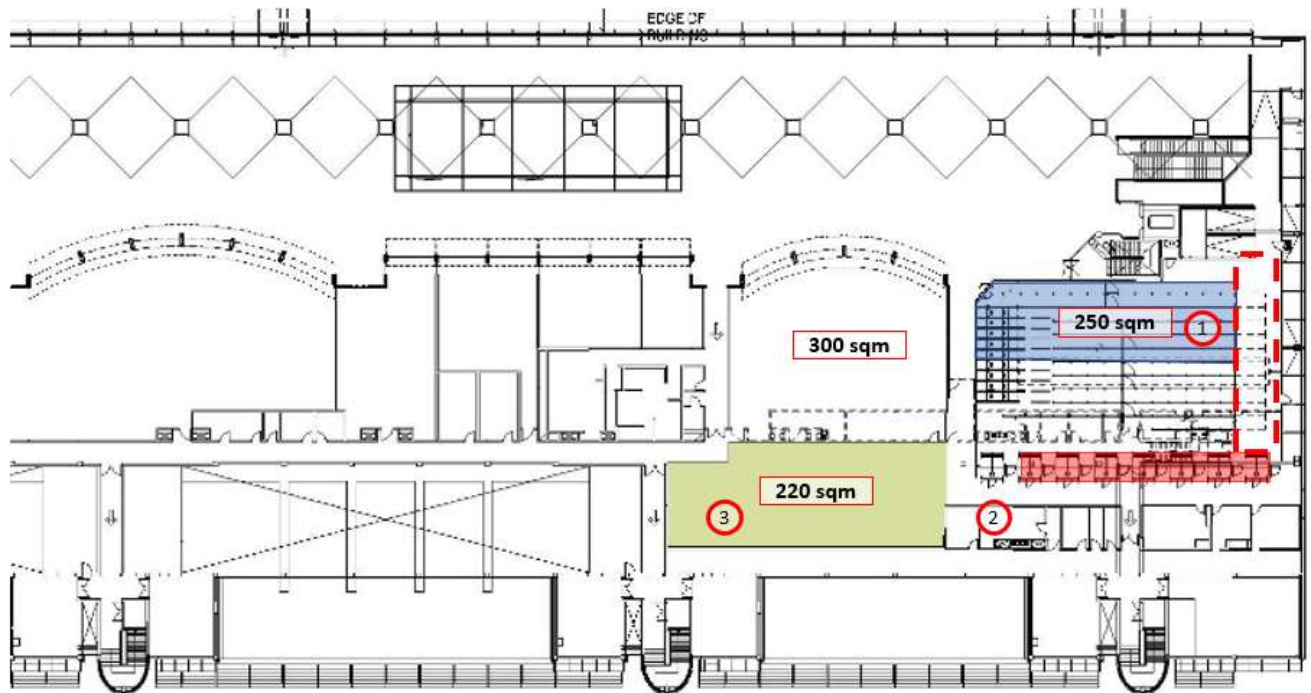


The extension of the first floor of the Terminal 1, will focus primarily on the expansion of the Departures Holding Lounge:

1. As per the ground floor, this area is to be further expanded to allow for efficient delivery to the retail and commercial offerings in the Departure Areas.
2. The holding lounge will be further expanded in order to provide additional contact gates to facilitate boarding operations. It is critical that the area be optimised for seating areas (seating for at least 160-200 passengers), flexible boarding processes inclusive of self-boarding allowances and queuing. Space within this area is also to be allocated to additional premium lounge space which would then lead to larger areas as an extension of the mezzanine above.
3. As per the ground floor, this area is identified as the new vertical circulation core. This is to include the removal of the existing core or repurposing of the existing lift for access to the mezzanine level. The expansion of the international departures terminal will include a new circulation core providing access to a flat slab above, repurposed as a viewing deck. This addition will enhance passenger experience by offering panoramic views of the runway and surrounding airport activity. It serves as a unique attraction for travelers and visitors, fostering a sense of connection to the aviation environment.
4. The holding lounge will be further expanded in order to provide additional boarding gates (A1 and A2) to facilitate operations to the newly developed (3x) MARS contact stands.
5. The A3 gate is to be relocated to align with the expanded A3 Code F Stand. It is envisaged that the fixed portion of the bridges will be an extension of the current terminal footprint.
6. Where feasible additional premium lounge space may be provided for on the mezzanine level.

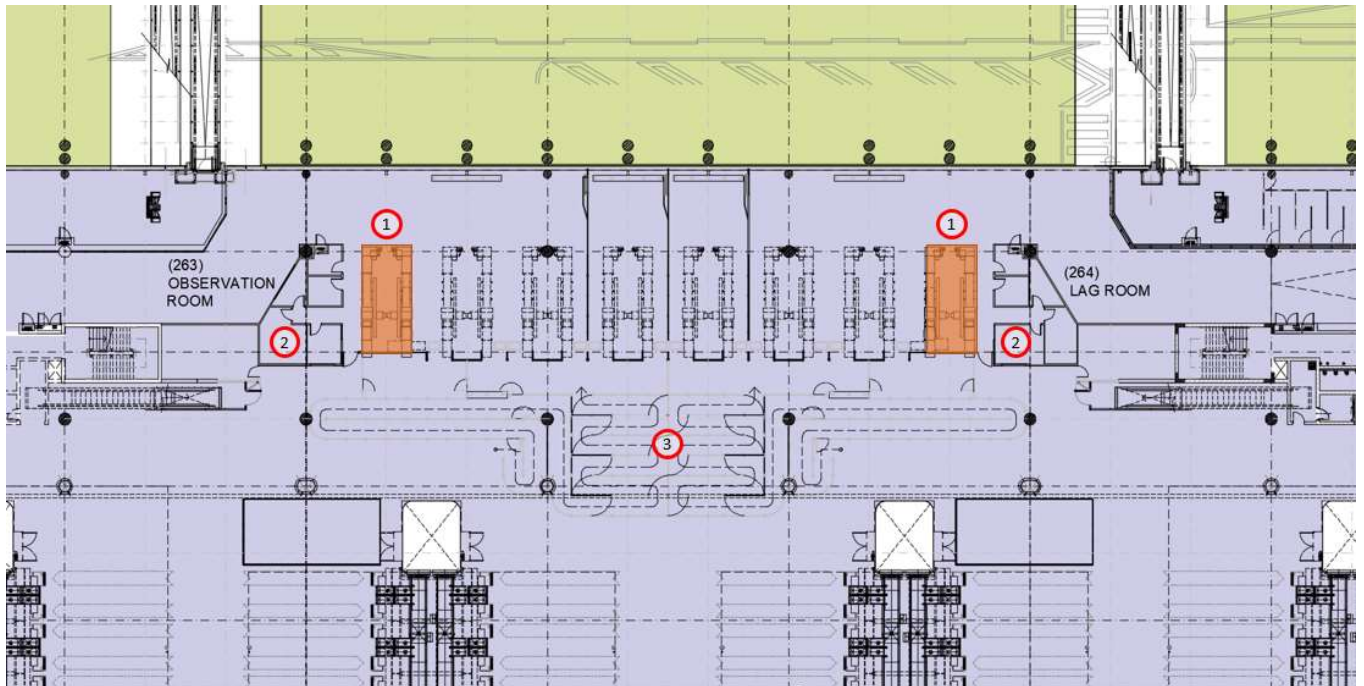
7. The commercial areas are to be reconfigured to make provision for additional boarding lounge space, queuing area and boarding space.
8. The clerestory / double volume spaces as seen above from the Baggage Claim Hall are to be lifted to allow for the installation of slabs to expand the T1 footprint. This expansion will allow for the future expansion of the T1 circulation footprint in later phases.

2.2.1.4. T1 First Floor (Emigration Expansion)



1. The existing emigration area will be reconfigured and expanded to allow for further queuing.
2. Additional Traditional Counters and additional e-gates will be installed as an extension to the facilities in the current location.
3. The existing duty free is to be reconfigured to allow for an expanded walkthrough duty free area.
4. Other optimisation that may assist in alleviating congestion within the departure area will be considered for inclusion during design development.

2.2.1.5. Central Terminal Building (CTB)- Central Search Point (CSP)



Numbering below as per above drawing:

1. 4 additional security screening points are to be added to the existing configuration.
2. The back of house areas are to be optimised to allow for more efficient use and to allow for 2 mixed use ablution facilities that is accessible to passengers in the emigration que.
3. The queuing system area is to be redesigned and reconfigured the queuing system at the airport terminal's customer service points for improved efficiency.
4. Other optimisation that may assist in alleviating congestion within the check-in area will be considered for inclusion during design development.

2.2.1.6. Airside Operational Offices and Facilities



The above areas is located directly outside the Baggage Makeup Hall and was previously identified as the possible location for the installation of Airside Office accommodation. Whilst the location of the facility will still require confirmation the area will be for the use by ACSA Airside Operations and will comprise of:

- Managers Offices

- Open Plan Offices
- Reception Area
- Boardroom
- Ablutions
- Kitchen & locker Facilities

It is to be noted that the area is to be constructed to be temporary offices that whilst suitable for long terms use may be easily installed and relocated if necessary in the future. The area is currently under review as a possible area for expansion of the baggage hall. Should this area be deemed to be unavailable an alternate site is to be identified in consultation with the ACSA Ops team on other locations.

2.2.1.7. Other Critical Scope Requirements

A) Security Requirements: Expansion of the Terminal building

Further to the requirements highlighted in section 2.2.1.5, the new security screening equipment will be informed by a network-wide study / procurement that is currently underway. For the purposes of design, should the above-mentioned study not be complete by the time final design decisions for the ITU are required, the appointed design team should design lanes guided by the following philosophy:

- It is envisaged that 4 additional machines will be required for goods screening, staff points, international arrivals and additional machine at the CSP.
- Design for a full body scanner to be shared between two lanes - Team to research spatial sizing.
- Screening technology should enable the screening of laptops in bags (i.e. CTX machine).
- The lanes must be elongated to allow for multiple divest and reclaim positions.
- Automatic tray return is preferred, as this will assist in increased throughput, reduction in staff tray handling and the ability to increase passenger focus.
- A repacking area at the search point must be provided. This will allow passengers to sort out their hold luggage and (possibly) put back their shoes.
- A storeroom for lost property/ prohibited items is to be included.
- A space for firearm handling counter area is to be included.
- An office for the supervisor and staff area is to be included in close proximity to the CSP.
- Remote screening is viewed as the best solution as it minimizes disruptions and there is less noise. A remote screening must therefore be identified for the possibility of remote screening. Screening positions at the lanes must however be designed for. The security study will verify which option is ultimately selected for the group
- Security e-gates are required and will do the reading of the 2D bar code machines. Security gates with queue management and queuing maze system is preferable. (Breaking down of old ablution facilities

near the current central search Point (CSP), is a proposed solution to accommodate more space for queuing)

- The screening facility and must be able to facilitate the goods receiving for restaurants & lounges.
- A Control room/CCTV room is to be added within the terminal complex



Figure 1

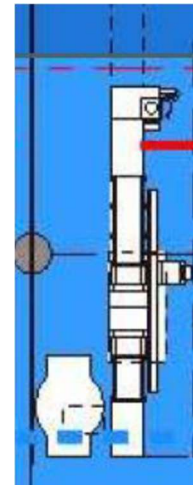


Figure 2

Figure 1&2: Security Queuing Maze, E-gates and Security lane proposed design. The images above illustrates a preferred lane design with a full body scanner, CTX machine, queuing management and security e-gates

- Hold Baggage Screening (HBS) Requirement
 - Provision of Reconciliation Room,
 - Provision of different Screening levels i.e. separation of level 2 and level 3 screening.
 - Provision of secure location for screened baggage.
- Surveillance
 - The NASP section 6.12.2, CCTV applications states that “Areas of special importance requiring CCTV installations shall include but are not restricted to, all passenger, baggage and cargo handling areas at airports or regulated agent facilities, and access points. CCTV systems installed shall include a time lapse recording capability. All CCTV recording must be retained for a minimum of 30 days under normal operations, in cases where CCTV coverage is the subject of an investigation; the recordings must be retained until such times as approval for their release is given in writing by the Airport Security Manager.
 - Airport operators shall deploy CCTV system in monitoring of passenger screening points. In addition to meeting security objectives, CCTV coverage of passenger screening points can facilitate the operational analysis of passenger throughput and possible enhancements, in particular adjustments to staffing levels, to reduce the length of queues”.

It is necessary to obtain any additional security standards from the ACSA Enterprise Security Department to maintain the integrity of the local security programme yet allow sufficient flexibility to achieve a balance between the needs of aviation security, safety, operational requirements and passenger facilitation.

B) IT Requirements

IT requirements are to be finalized with the ACSA IT Department. The scope must include an IT scoping study to flesh out the full extent of IT requirements. At a macro level the design team must consider the following IT scope requirements for inclusion:

- Bag Drop & Self-Service Kiosk's
- Boarding e-gates
- FIDS
- IT server rooms & switch rooms
- Telecom, PABX & PA server rooms
- IT Backbone for tenants
- Current and Future Provision of WorkCentre and Data Centres
- 3rd Party IT Requirements
- Temporary Enabling IT infrastructure

Please note that installation, positioning, connecting to services, commissioning and training required needs to be factored into the overall project program. Additionally, ACSA is attempting to standardize and optimise its IT installations across the network; the procurement of equipment for one project therefore has implications on the rest of the network.

It is to be noted that IT Requirements may be further clarified as aspects relating to IT that enable business operational requirements and are to be further detail in the design development phase. This key aspect must be included in the scope of the IT Engineer/ Electrical Engineering Design Team.

C) Commercial Requirements

The extent of space requirements for retail, food & beverage, storage areas provisions, pop up shops etc. including locations are to be finalized with the ACSA Commercial Department during Detail scoping by the appointed Consultants Team.

The extent of space requirements for commercial lounge offerings are to be finalized with the CIAM Infrastructure Property Development (IPD) business unit. The consultant team is to include lease diagrams as per SAPOA requirements for all lettable areas.

D) Enterprise Asset Management (EAM) Requirements

The team is to ensure sufficient capacity of the electrical, mechanical and other services to cater for the projected demand. Logical location of all installations is required to ensure accessibility during maintenance, these installations will not hinder future terminal expansion and will not obstruct passenger circulation. Minimum design standards /guidelines are provided in Section 10. Furthermore, the team is required to consider the entire life cycle of the installations in making design decisions. This entails the consolidation and replacement of all existing infrastructure as necessary to ensure replacement of plant and equipment that is deemed to be at end of life.

Other requirements will be issued to the Consultants and are to be reviewed in consultation with ACSA as part of the ongoing project development.

E) Sustainability Requirements

Sustainability is engrained in all aspects of ACSA's business. The Sustainability requirements and the objective of delivering an energy efficient building for the project are listed within the IAM Requirements.

Whilst it is envisaged that a Green Building Certification will not be feasible, all works are required to ensure that where possible, specifications allow for ease of integration with larger future developments (Terminal 2 Development) where a 4-star rating will be achieved. The pursuit of the GBCSA ratings and energy efficient design is required due to the following:

- It is a key requirement in line with ACSA strategy to achieve ACI carbon accreditation and the targets entailed within the Carbon Neutrality Roadmap.
- The development of sustainable development is further supported as a key driver of ACSA Environment, Social, and Governance (ESG) objectives.
- The National Energy Act 34 of 2008 requires that all government and publicly owned buildings must have an Energy Performance Certificate by December 2025. This requirement is to be noted as included within the project scope.

F) Design Development

During design development, the professional team must ensure that all proposed spatial additions incorporate flexibility, particularly regarding the superstructure, to accommodate spaces that may be repurposed for other uses in the long term. The positioning of cores, structural elements, and infrastructure that may be difficult to relocate must be executed thoughtfully to ensure future adaptability. This rationale must be extended to the shape of all roofs to allow sufficient space for maintenance and future expansion of plant and equipment.

The proposed concept layouts address the complex interplay of various operational requirements, stakeholder inputs, circulation patterns, queuing zones, and essential service areas. These iterative design resolution aim to create an intuitive flow that enhances user experience while optimizing operational workflows. As the concept layouts are developed to the detail design up to scope freeze, the designs will undergo further refinement to ensure they meet all technical specifications and align with the overarching project goals.

Continuous collaboration with relevant project stakeholders will be essential in finalizing these layouts, paving the way for a successful execution that meets the evolving demands of the terminal network to enhance overall efficiency within the terminal.

G) Building Legibility

It is of overriding importance that the building supports the primary passenger flows and is not in opposition to normal passenger behavior. Therefore, the building should be easily read by occupants and avoid confusion. This will support some of the primary design considerations listed above such as commercial opportunities as well as efficient operations. Moreover, it will arguably reduce the needs for excessive placement of directional signage or operational intervention. They should furthermore support a natural flow of passengers.

H) Technical Considerations

It shall be expected of the architectural team to provide adequate and applicable spatial and technical provision, co-ordination and design input for the following technical installations where required by other design consultants or contractors during the design process at large:

- Reticulation for all electrical/electronic/telecom/data equipment required in the envisaged final development
- Public Address systems
- CCTV and Antennas
- Building Management System (BMS)
- Signage
- Access control
- Any other systems & installations that arise in the design process

In all of these it shall be expected of the professional team to be innovative in providing a spatial and structural concept that will enhance the installation, maintenance and adaptation of technical systems. In the case of mechanical installations, the placing of plant and equipment should be such that all maintenance and repair/replacement can be carried out outside any public areas. Sufficient provision must be made for accessibility to such plant/service areas, especially in the case of vertical circulation being required for the movement of equipment or materials.

Where applicable, spatial provision has been made in the concepts prepared by ACSA for some of these installations. In these instances, the professional team should maintain the integrity of location and sizing of functional zones in the final design and co-ordinate the provision of interfaces with relevant user clients and/or contractors. Such specific cases where ACSA will provide the design specifications to enable the team to integrate and coordinate the procurement and installation of the following:

- FIDS (flight information display systems).
- Signage (fixed and variable)
- Commercial Enablement for e.g. Pop-Up Stores and Electronic Advertising

- All signage should conform to updated ACSA signage specification documents. Directional, statutory and informational signage will have priority preference above all other signage elements in terms of locations, placement and sizing. This requirement includes any FIDS installations.

I) Roof Design

To a large extent the roof design will be informed by other considerations following from vertical design and the mixture of adjacent constructed areas. Nevertheless, the following additional aspects will have to be considered by the team in designing roof structures:

- Life cycle considerations, especially ongoing maintenance/cleaning and general durability.
- Architectural considerations such as the creation of volumes of space that supports the general atmosphere and functioning of the terminal.
- The placement of plant on roof level or within roof structure is not precluded, which in turn will inform roof design relating to future servicing, replacement, and accessibility.

J) Statutory Regulations

In all design aspects, the building design should comply with all relevant and applicable local or national building regulations. Contractors must comply with health and safety regulations to ensure a safe working environment. This includes obtaining the necessary permits and licenses, implementing safety protocols, providing personal protective equipment (PPE), and conducting regular safety inspections.

K) Ablution Facilities

Provision for ablution facilities in all areas should be made according to the design passenger flows and building population and the requirements of SABS 0400. Based on the outcome(s) during design development iterations, these figures will of course have to be continually revisited.

Ablutions will have to be provided in at least in the following public areas:

- Bravo Bussing Area
- Immigration Hall
- Emigration Area
- Central Search Point
- Airside / Landside Staff Facilities

Over and above these requirements, separate staff ablutions may be required following the considerations on separation of public and staff flows outlined below.

L) Finishes

All finishes are to follow a quality standard similar to that achieved in the terminal. The normal considerations related to life cycle costing (e.g. durability, design life etc.) will apply. The finishes of the new and old facilities must integrate. The design team must optimise for re-use of existing finishes which are good and replace what cannot reasonably be kept. The terminal must read as one continuous and seamless experience.

M) Theming

All finishes are to follow a quality standard similar to that achieved in the existing terminal. The normal considerations related to life cycle costing (e.g. durability, design life etc.) will apply. The finishes of the new and old facilities must integrate. The design team must optimise for re-use of existing finishes which are good and replace what cannot reasonably be kept. The terminal must read as one continuous and seamless experience.

N) Requirements for Disabled Passengers and Aged

Design for disabled persons and the aged is to be in accordance with SABS 0400, the provisions recommended by the Societies for the Disabled and/or the Blind, the ACI Handbook on Airports & Persons with Disabilities, IATA ARDM, White Paper on the Rights of Persons with Disabilities and any other relevant design guideline.

The relevant local organizations such as the SA Disability Alliance are to be consulted through the design process to ensure best practice related to the provision of facilities with a universal design in mind. In consultation with the SA Disability Alliance, the installation of Induction Loop Systems in all applicable areas is to be considered for consideration within the scope of the project.

O) Furniture and Fittings

The design, procurement, installation and fitting of all furniture and equipment are deemed to be part of the project scope. This is to include but not limited to:

- **Terminal Seating:**
 - o Benches
 - o Chairs (with and without armrests)
 - o Sofas and lounges
 - o Waiting area seating
 - o Priority seating for elderly and disabled passengers
- **Information Desks and Counters:**
 - o Airport information desks
 - o Ticketing counters
 - o Check-in counters
 - o Baggage drop-off counters
 - o Customs and immigration counters
- **Wayfinding and Signage:**
 - o Directional signage
 - o Information boards

- o Gate signage
- o Flight information display systems (FIDS)
- **Workstations:**
 - o Check-in desks
 - o Passport control desks
 - o Security screening areas
 - o Retail and Commercial Spaces:
- **Enabling Infrastructure or First Fit for:**
 - o Retail kiosks and shops
 - o Duty-free stores
 - o Food and beverage outlets
 - o Cafes and restaurants
 - o ATMs and currency exchange counters
 - o Associated Information and Communication Technology (ICT):
- Charging stations
- Internet and Wi-Fi access points
- Digital displays and advertising screens
- Ablutions:
 - o All required fittings e.g. sinks and mirrors, hand dryers or paper towel dispensers, luggage storage areas / lockers:
- Miscellaneous:
 - o Waste bins and recycling containers
 - o Planters and greenery with irrigation
 - o Artwork and decorations
 - o Flooring and carpets
 - o Lighting fixtures (functional and ambiance)

Safety, durability, and comfort should be prioritized when selecting furniture and fittings for the airport terminal. It is essential to comply with applicable regulations and accessibility guidelines to ensure a smooth and inclusive passenger experience.

All furniture and fittings will be informed by the commercial study and will include a variety of options that is not homogenous but are harmonious. Comfort, aesthetics, flexibility durability and ease of expansion must be of consideration. The seating must compliment the terminal design from a sizing as well as theming point of view.

P) Separation of Staff and Public Flows

Separate entrances, facilities and workplaces for staff should be provided away from public areas to improve security, operational flows and availability of other facilities to the general public and/or passengers. This includes the provision of locker rooms/ staff area, rest rooms and the like, should these be indicated by user clients as specific needs.

Due consideration in the design development must be given to the separation of passenger processing areas, operational routes (trolleys, cleaning, staff movement etc.) and adequate flexible queuing systems etc.

Q) Advertising

Airport advertising represents a significant revenue stream to ACSA. The professional team shall make every effort to maximise the potential future revenue from advertising within the redeveloped terminal building complex. In ascertaining the potential sizes, numbers and locations of advertising positions, the team shall closely interact with the ACSA Commercial Division. The design team must identify areas for integrated advertising screens with the ACSA Commercial Division.

Despite the objective of maximum exposure to these commercial opportunities, no advertising (in whatever form, location, quantity or size) will be accepted by ACSA if it negatively impacts on any other directional or statutory signage, or if it detracts from the general quality of space, or if it negatively affects the general architectural theme or corporate branding.

2.2.1.8. Design Development Criteria & Parameters

A) Design Traffic

In preparation for the Permission Application (2024-28) a capacity and demand analysis was conducted in 2022 for all airports including CTIA based on an independent traffic forecast prepared by Mott Macdonald. The analysis indicated that certain Terminal processors are close to saturation and that other processors will saturate in the short to medium term similar to the situation in 2016/17. Budget provision was therefore made to enable the commencement of the Terminal Expansion in the 2025 FY.

The updated forecast, completed in 2022, will form the basis for planning and design considerations. The international terminal complex processed 2.64 million annual passengers in 2023. The forecast annual volume of two-way traffic for FY 2029 amounts to 11.4 million passengers for both domestic and international and 16 million annual passengers in 2039.

The macro development strategy for the International Terminal essentially consists of 3 phases. In phase 1 processors that will saturate in the short term despite operational interventions will be addressed via this

Project. Phase 2 will see the construction of a structural shell over the current T2 footprint to enable future capacity expansion in later phases through another project. This phase will also include the provision of certain processors that are close to saturation at the time. Phase 3 will entail the fitout and provision of the remainder processors in line with traffic demand as and when appropriate.

B) Typical Peak Hour Passengers

By the year 2039 the international traffic sector is expected to experience a peak hour arrivals flow of approximately 1720 passengers and a peak hour departures flow of 1694 passenger per direction. The airport is also estimated to have an international-to-international transfer peak of 139 passengers.

ACSA have prepared a schedule of basic facility requirements (see below section 2.2.1.8 C) that is informed by these peak hours. The professional team shall use only these peak hour levels for the purpose of any other relevant facility sizing exercise.

These peak hour flows should be distinguished from the total peak population, because not all passengers spend the full peak hour in the terminal building. Furthermore, passengers also attract other flows (e.g. meeters/greeters and staff) which contribute to the total peak population of the building. This peak number of persons present at a single moment in time would inform certain sizing decisions during the design process: e.g. fire design, air conditioning, ablution etc.

C) Basic Facility Requirements

Due consideration must be given to key aspects within the decision-making process, these being:

- Affordability
- Capacity Spans and Unbalanced Capacity
- Maintenance Cycles
- Development Lead Times
- Strategic Requirements

It is to be noted that the required peak demand is currently 1800 peak hour passengers (i.e. one additional Code F/large wide body operation in the peak, the airports current international peak is 950 1165 passengers). Following from this target, the related annual and peak hour volumes drive the sizing, expenditure and ultimately the capacity of this facility. The schedule below has been developed in line with the IATA Level of Service (LOS) concept and best practice frameworks for sizing passenger terminal sub-systems. The additional spatial provision will allow for the terminal facility to operate at an 'Optimum' service level and to provide sufficient space to accommodate all the necessary functions in a comfortable environment, avoiding over - or under-providing.

It should be noted that these figures represent the minimum requirements. In terms of spatial provision, the areas indicated on the concept sketches will in some cases be larger than the minimum requirement, because such areas will contain other elements not considered in the calculation for minimum requirements. When determining (during the design process) whether the correct spatial provision have been allowed for, it is important to exclude all unused space and only include space that is effectively available to the passenger

or terminal user. The values in the updated table of the key terminal facility requirements below represent the total terminal requirement for 1800 peak passenger facility contained in the ITU development:

SUBSYSTEM	UPDATED REQUIREMENT	MAX CAPACITY (PEAK HOUR PASSENGERS)
IMMIGRATION	(14+6)33	1835
EMIGRATION	(14+4)16	1800
ARRIVALS DUTY FREE COMMERCIAL	400m ²	1800
CENTRAL SEARCH POINT	(12)16	2000 - 2400

As an extension to the exercise above, a full subsystem analysis was undertaken. The table below is a discussion of the capacity balance required and its associated initiatives. It also broadly conceptualizes the rationale behind the conceptual phasing adopted.

Subsystem	Analysis and Intervention
Immigration	The airport currently has 14 units, 6 e-gates. An additional 4 “traditional” gates/control points + total 19 e-gates will be accommodated for spatially. It is anticipated that electronic passport and biometric control systems will be implemented in the medium term.
Departure Holding Lounge	International departure lounge equivalent peak hour passenger capacity is 1800. The international lounge extension project will add further capacity, roughly 530 peak hour passengers. No additional holding lounge capacity is therefore included in the initial phase of the T2 development.
Emigration	14 units are required to process a peak of 1800 departure passengers. The airport currently has 14 units and 4 e-gates. An additional 2 “traditional” gates/control points + total 9 e-gates will be accommodated for spatially. It is anticipated that electronic passport and biometric control systems will be implemented in the medium term.
Security	16 traditional security lanes will be required to process 1800 international departure peak. Taking account of a concurrent peak of approx. 700 domestic passengers, the total central security requirement is 16 traditional lanes. 12 (including a staff lane) units currently exist at the airport. An additional 4 screening machines will be included in the scope.

2.2.1.9. Factors to be considered during Concept Design Development

Factors to be included during design development will include at minimum an approach which aims to:

- Undertake design development with the aim of ensuring that approval is obtained from ACSA of the design that meets the requirements of the project scope.
- Cost Benefit analysis is undertaken as part of design development to ensure that approved design achieves financial viability to support investment decision.
- Conduct specialist and compliance studies and surveys to test viability of the design.
- Inclusion of construction management and phasing approaches to mitigate impact to airport operations while achieving approved project delivery plan.
- Ensure ACSA and Airport Stakeholders consultation are undertaken as part of socializing project reactivation and project deliverables.

- Incorporation of the Operational Readiness and Training (ORAT) process into the design and asset handover process.

2.2.1.10. Construction Phasing Approach

Consultants are to produce a Construction Phasing Methodology / Approach as part of Stage 2 work. The construction phasing approach will be based on the following guiding factors:

- Ensuring the airport terminal and apron areas remain operational.
- Avoiding any permanent loss to available capacity where feasible.
- Bringing capacity increases available as soon as possible.
- Cost effective project phasing.

All phasing steps will be preceded by applicable site enablement. The professional team shall assess these phasing variables and provide ACSA with a detail proposal to facilitate expedient and cost-effective construction phasing as well as occupational phasing of the aircraft stands and facilitate a relocation strategy that will minimise disruption to airport operations. For this purpose, cognizance shall be taken of the following factors.

- Site access
- Site enablement
- Security during construction
- Safety during construction
- Technical construction issues
- Construction deliveries
- Construction removals
- Construction yards

As per the resourcing plan for this project, a Construction Specialist will be appointed through the Project Manager. The role of the Construction Specialist will be to produce comprehensive construction phasing methodology that will take into consideration the above site constraints, but also ensure that the delivery of the project is cost effective.

2.2.1.11. Construction Management Approach

The Consultants team is to develop as part of Stage 2, the best solution to allow for ease of implementation of the proposed expansion. It is envisaged that sectional completion will be allowed for within the delivery stream to allow for the handover of completed sections as soon as is reasonably possible for activation of services and capitalization of infrastructure. This is also critical to ensure that infrastructure may be included within the Regulated Asset Base as soon as possible within the current permission period.

A) Factors to be considered during phased construction include:

- **Noise**

During demolition and construction works ACSA will implement time restrictions on excessively noisy works that may have an impact on ACSA operations. (Between 7am and 5pm on weekdays and 7am to 2pm on Saturdays). It is anticipated that demolition and construction work will be subject to these restrictions which will form part of the requirements contained in the tender document. Specifications will also dictate that acoustic barriers are installed within internal hoardings adjacent to operational areas.

- **Dust Control**

The contractor will be instructed to take adequate precautions during demolition and construction works to ensure that ACSA operations are not adversely affected. Stipulations will be incorporated in the tender document as follows:

- Internal Hoardings: The contractor will be instructed to ensure that construction areas are sealed off from operational areas by means of dust-free fabrics, etc. installed in conjunction with hoardings.
- External works: The contractor will be required to ensure that dust control procedures are followed at all times (by means of wetting down dusty areas) given the high winds that are often experienced at CTIA.
- Traffic Management: Delivery of materials and the safe movement of construction vehicles will be controlled by means of a traffic management plan to alleviate any congestion or interference with the public delivery roads for enter/exit.
- Stormwater management and pollution controls: Polluted water from concrete wash and mud from the construction site is to be managed so that it does not enter the storm water drainage system.

B) Site Specific Documentation:

Contractors will submit specific documentation and phasing of construction related activities related to the site establishment, which may include:

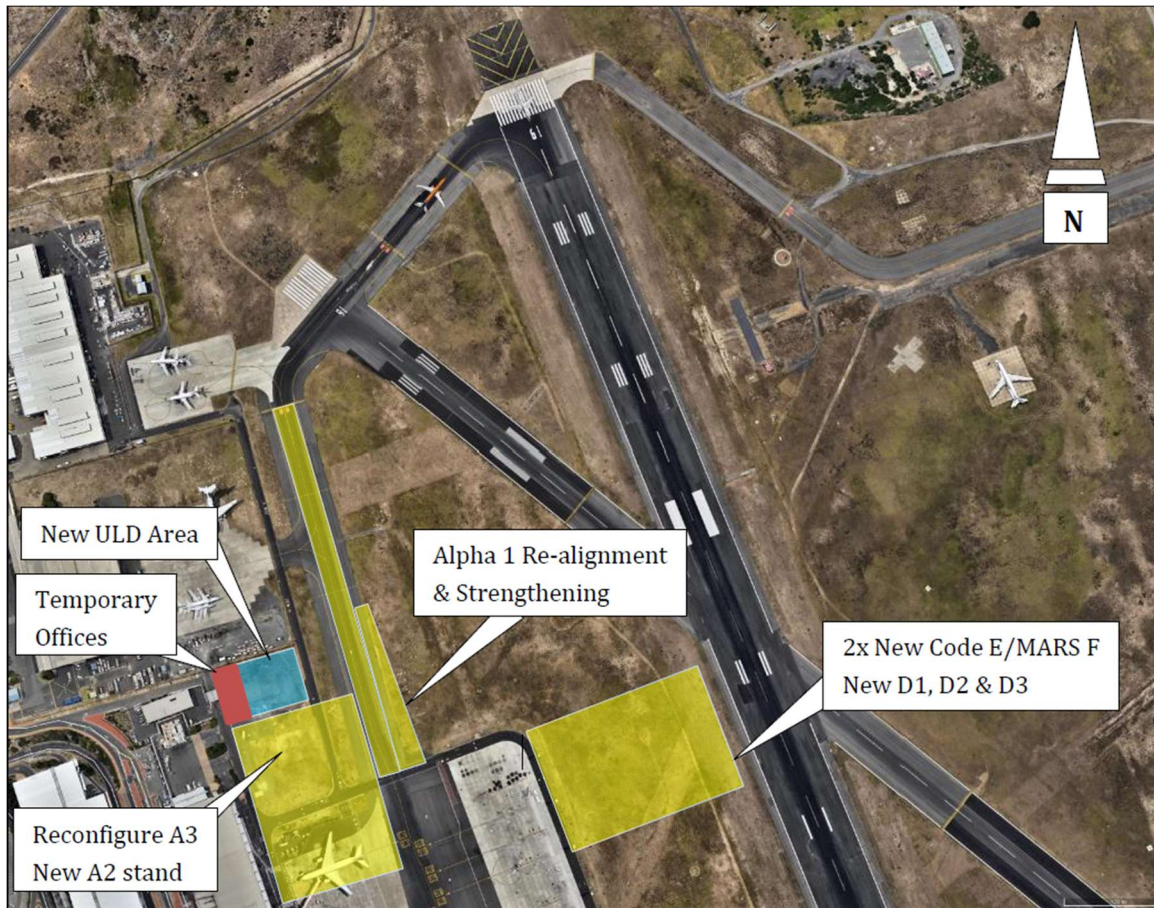
- Site Plans and Layouts: Detailed site plans showing the proposed layout, access points, utilities, and other relevant information
- Traffic Management Plan: If the site establishment impacts public roads or traffic, a traffic management plan may be required to ensure the safe flow of vehicles and pedestrians. Specific Actions relating to the disruption of the Terminal Accessibility during the realignment of the ring road will be required

Without limiting any of the scope requirements, the project execution team should ensure compliance with the standards and regulations laid down by the Occupational Health & Safety Act and the Construction Regulations.

2.3. Scope of Work: Apron Development Phase 1B

The below scope of work for the Apron Development Phase 1B was developed during pre-Covid 19 period by a multi-disciplinary Team of Consultants that was appointed by ACSA. The project had progressed up to completion of Stage 3 Report, which was approved by ACSA. Due to the impact of Covid-19 on ACSA's business, the project never progressed beyond Stage 3. ACSA is re-activating the project and the project scope for implantation is as follows:

- a) The reconfiguration of the existing A3 contact stand to a Code F stand (MARS configuration).
- b) Provision of a new A2 Code F contact stand (MARS configuration)
- c) Both the A3 & A2 stands to also allow for Code C aircraft e.g. B737
- d) Provision of 2 new remote Code E stands next to the northern Bravo Apron Stands with appurtenant enablement works.
- e) The area north of the new A2 stand to be configured for utilisation as a ULD & GSE area.
- f) Widening of Alpha Taxiway to allow for Code F aircraft movement.
- g) One additional new Code F contact stands (A1) – MARS configuration.
- h) Operational Readiness and Airport Transfer (ORAT) which will include:
 - Smooth transition of the infrastructure from construction to operation.
 - Simulation of Operations: Conduct simulated operations to test apron functionality, including aircraft movements, lighting systems, and CNS systems, ADS and equipment
 - IT and Communication Systems: Thorough verification of the installation and functionality of critical information technology systems essential for runway operations. This includes ensuring the readiness of systems such as runway lighting, navigational aids, and communication equipment to support safe and efficient aircraft movements
 - Security Infrastructure: Rigorous assessment and integration of security systems specific to runway operations. This involves verifying the functionality of perimeter security measures, access control systems for restricted areas, and surveillance systems to ensure compliance with aviation security regulations
 - Operational Procedures and Protocols: Development and validation of operational procedures and protocols tailored to runway operations. This includes establishing clear protocols for runway inspections, airfield maintenance, and emergency response to enhance safety and operational efficiency
 - Training Programs: Implementation of comprehensive training programs for air traffic controllers, ground crew, and other personnel involved in runway operations. These programs cover aspects such as runway safety procedures, runway incursion prevention, and communication protocols to ensure staff readiness and competence
 - Ensure the project achieves operational excellence while upholding stringent IATA, ICAO standards and CAA requirements thereby facilitating safe and efficient aircraft movements.
 - Location of the areas of scope are indicated below, and new contact Stand A3 will be included adjacent to the new A2 stand location:



2.4. Project Scope Interface Management:

The Apron Development scope stated above will in terms of design and construction, interface with the International Terminal Upgrade (ITU) project. The ITU projects scope entails the extension of the international lounge which includes the construction of the passenger boarding gates for the new Code F contact stands (A1, A2 and the reconfigured of the existing A3 contact stand).

The design and construction of the boarding gates under the ITU project and the new Code F contact stands on the Alpha apron under the A1B project will require extensive interface management both at design and construction stage. This will require that the appointed project Consultant Teams produce a detailed interface management plan for both design and construction work, which will be approved by ACSA. The interface management plan will include input from ACSA Operations Team and Stakeholders for inclusion of interface management input between construction and apron / terminal operations.

3. SCOPE OF SERVICE

3.1. STRUCTURAL ENGINEER

3.1.1. NORMAL SERVICES – PHASE 1

The Professional Structural Engineers will be required to perform in full the Standard/Normal (Stage 1 and 2) and Additional Structural Engineering services in accordance with the latest gazetted Guideline Scope of Services and Recommended Guideline Tariff of Fees in respect of services rendered by Persons registered in terms of the Engineering Council of South Africa Professions Act 2000 (Act No. 46 of 2000). The standard and additional services to be performed for the Structural Engineering services shall be priced accordingly as per the pricing instruction.

The execution of the normal and additional scope of service for the Structural Engineering services shall be delivered as described in the Scope of Service document and to include but not be limited to the following:

- Building Structural Grid rationalisation
- Concrete, steel, masonry and timber structural designs
- Loads design for slabs, beams, columns, foundations (Vertical, Lateral, Wind, Seismic, etc)
- Structural Foundation designs (Piles, etc)
- Roof concept design (New and existing alterations)
- Review of existing As-Built drawings and confirm accuracy thereof
- Structural design for other installations (Suspended pipes / ducts, solar panels, etc)
- Produce a Façade and Curtain Wall Specification (Wall curtain glazing, Wall cladding, etc) with applicable drawings for pricing by a Design & Build Façade Contractor.
- Basement design and constructability, if applicable
- Geohydrological and Hydrological Survey scoping and management
- Constructability of additional new floors
- Demolitions assessment and production of demolition drawings
- Temporary and permanent construction Hoarding design and specification (including for site camps if required)
- Temporary / Enablement structures, tunnels design
- Permanent Hoarding design and specification
- Temporary walls, foundations design
- Existing structural modifications
- Inclusion of Green Building and sustainability interventions
- Local Authority approvals and occupancy certification.

Refer to the Extent of Services (section 4) for the description of additional services to be carried out by the Structural Engineering services as part of the appointment on this project.

3.1.2. JOINT MONITORING SERVICES – PHASE 2

3.1.2.1. DOCUMENTATION & PROCUREMENT

Once ACSA has made the investment decision, the procurement process for Contractors required to undertake the Design and Build will be required. The procurement will be a multiple-procurement process that the

Structural Engineer will need to undertake along with the other Consultants appointed on the project. The Structural Engineer will thus be responsible for the following deliverables under the Documentation & Procurement scope of service:

- Deliver full normal/ standard Structural Engineering services for Documentation & Procurement (Stage 4) as per the Engineering Council of South Africa Scope of Service guidelines.
- Undertake multiple procurement processes for Contractors (including OEM's, direct contractors, etc) required on the project
- Participate in putting together a comprehensive Tender Document for the Design & Build Contractor in compliance with ACSA Procurement Procedures and Policies.
- Participate in the evaluation of tender documents (RFP / RFQ) received from Bidders,
- Produce reports on the specific areas of evaluation that they are required to undertake.
- Sign non-disclosure agreements for participation in the evaluation of tender documents.

3.1.2.2. CONTRACT MANAGEMENT

Once ACSA has appointed the Design & Build contractor, as part of the Phase 2 of contracted services, the Structural Engineer will be required to undertake the following deliverables in fulfilment of the Contract Management Services during the Design & Build contract period:

- Facilitate the handover of the site to the contractor.
- Review and approval of site surveys, studies and investigations that are proposed and required to be undertaken by the Design & Building Contractor,
- Undertake full site supervision,
- Review specifications, standards drawings and pertinent site information,
- Undertake full contract management and contract administration,
- Project Financial administration and reporting,
- Risk Management and Reporting,
- Review the Stage Gate Reports prior to Client approval and provide review feedback to Contractor/s.
- Construction Monitoring and Management,
- Detail review and approval of proposed Design & Build Contractors programme,
- Undertake Quality Inspections,
- Directly receive and review all contractual correspondences between Design & Build Contractor and ACSA and issue responses to all correspondences on behalf of the Client,
- Review and approve all contract variations in consultation with the Client
- Compile project reports as stated on section 17 (Project Reporting Requirements)
- Establish and co-ordinate the formal and informal communication structure and procedures for the construction process.
- Review materials samples and specifications on behalf of Client and advise on materials / specification selection.
- Liaise with Local Authorities on behalf of Client
- Monitor, review, approve and certify monthly progress payments.
- Monitor, review and approve the preparation of the Contract Programme by the contractor.
- Review and adjudicate circumstances and entitlements that may arise from any changes required to the Contract Programme.
- Manage the review and approval of all necessary shop details and product propriety information by the design consultants.
- Regularly conduct and record the necessary site meetings
- Prepare monthly project progress reports including submission to the client.

- Co-ordinate and monitor all necessary testing and commissioning by consultants and contractors.
- Co-ordinate, monitor and provide input to the Contractor's Practical Completion Lists on behalf of the Client.

3.1.2.3. CONSTRUCTION MONITORING SERVICES:

Once ACSA has appointed the Design & Build contractor, as part of the Phase 2 of contracted services, the Structural Engineer will be required to undertake the following deliverables in fulfilment of the Construction Monitoring Services during the design & build contract period:

- Facilitate the handover of the site to the contractor.
- Review and approval of site surveys, studies and investigations that are proposed and required to be undertaken by the Design & Building Contractor,
- Undertake full site supervision,
- Review specifications, standards drawings and pertinent site information,
- Undertake full contract management and contract administration,
- Project Financial administration and reporting,
- Risk Management and Reporting,
- Review the Stage Gate Reports prior to Client approval and provide review feedback to Contractor/s.
- Construction Monitoring and Management,
- Detail review and approval of proposed Design & Build Contractors programme,
- Undertake Quality Management,
- Liaise with Local Authorities on behalf of Client
- Provide input on behalf of the Client on all Safety Cases (OHS and Aviation Safety) to be submitted to Airport Authorities by Contractors.
- Directly receive and review all contractual correspondences between Design & Build Contractor and ACSA and issue responses to all correspondences on behalf of the Client,
- Review and approve all contract variations in consultation with the Client
- Compile project reports as stated on section 17 (Project Reporting Requirements)
- Establish and co-ordinate the formal and informal communication structure and procedures for the construction process.
- Monitor, review, approve and certify monthly progress payments.
- Monitor, review and approve the preparation of the Contract Programme by the contractor.
- Review and adjudicate circumstances and entitlements that may arise from any changes required to the Contract Programme.
- Manage the review and approval of all necessary shop details and product propriety information by the design consultants.
- Regularly conduct and record the necessary site meetings
- Prepare monthly project progress reports including submission to the client.
- Co-ordinate and monitor all necessary testing and commissioning by consultants and contractors.
- Co-ordinate, monitor and provide input to the Contractor's Practical Completion Lists on behalf of the Client.
- Review and approve construction and operations interface and construction phasing plans on behalf of the Client.

3.1.2.4. HANDOVER & CLOSE OUT

- Review all handover documents issued by Contractor to ensure compliance with Clients Handover Requirements.
- Review all defects lists and provide additional input on behalf of the Client.
- Participate in ORAT processes to ensure compliance with Client ORAT requirements
- Manage, co-ordinate and expedite the preparation by the design consultants of all as-built drawings and design documentation.
- Review all operating and maintenance manuals as well as all warranties and guarantees received from Contractor's and Suppliers for completeness.
- Manage and expedite the procurement of all statutory compliance certificates and documentation.
- Co-ordinate, monitor and manage the rectification of defects during the Defects Liability Period.
- Manage, co-ordinate and expedite the preparation and agreement of the final account by the cost consultants with the relevant contractors.
- Co-ordinate, monitor and issue the Final Completion Defects list and Certificate of Final Completion.
- Prepare and present Project Closeout Report.

3.2. CIVIL ENGINEER

3.2.1. NORMAL SERVICES - PHASE 1

The Professional Civil Engineer will be required to perform in full the Standard and Additional Structural Engineering services in accordance with the latest gazetted Guideline Scope of Services and Recommended Guideline Tariff of Fees in respect of services rendered by Persons registered in terms of the Engineering Council of South Africa Professions Act 2000 (Act No. 46 of 2000). The standard and additional services to be performed for the Structural Engineering services shall be priced accordingly as per the pricing instruction.

The execution of the normal and additional scope of service for the Civil Engineering services shall be delivered as described in the Normal Scope of Service document and to include but not be limited to the following:

- Review of existing As-Built drawings and confirm accuracy thereof.
- Parking bays design and Ground Service Equipment (GSE) Docking/ parking areas designs.
- Stormwater Drainage design (Permanent & Temporary).
- Fire and Domestic Water Supply design (Permanent & Temporary).
- Booster Pumps designs and specifications.
- Sewerage Disposal design (Permanent & Temporary).
- Underground Services Ducting & Cable ways (Permanent & Temporary).
- Civil Wet services and integration.
- Additional Services and Specialist services and per scope of service.
- Environmental Management and Compliance Services.
- Review of scope and identification of environmental triggers through EAP.
- Engage with Environmental Authority for issuing of letter of EIA / BA exemption.
- Undertake scoping of environmental compliances required for the project, including WULA and the application process for WUL.
- Waste Management processing and applicable licenses.

- Environmental Compliance Officer activities during construction, including compilation of monthly environmental compliance reports during construction to be issued to the Environmental Authority.
- Inclusion of Green Building and sustainability interventions.

Refer to the Extent of Services (section 4) for the description of additional services to be carried out by the Civil Engineer as part of the appointment on this project.

3.2.2. JOINT MONITORING SERVICES

3.2.2.1. DOCUMENTATION & PROCUREMENT

Once ACSA has made the investment decision, the procurement process for Contractors required to undertake the Design and Build will be required. The procurement will be a multiple-procurement process that the Civil Engineer will need to undertake along with the other Consultants appointed on the project. The Civil Engineer will thus be responsible for the following deliverables under the Documentation & Procurement scope of service:

- Deliver full normal/ standard Civil Engineering services for Documentation & Procurement (Stage 4) as per the Engineering Council of South Africa Scope of Service guidelines.
- Undertake multiple procurement processes for Contractors (including OEM's, direct contractors, etc) required on the project
- Participate in putting together a comprehensive Tender Document for the Design & Build Contractor in compliance with ACSA Procurement Procedures and Policies.
- Participate in the evaluation of tender documents (RFP / RFQ) received from Bidders,
- Produce reports on the specific areas of evaluation that they are required to undertake.
- Sign non-disclosure agreements for participation in the evaluation of tender documents.

3.2.2.2. CONTRACT MANAGEMENT

Once ACSA has appointed the Design & Build contractor, as part of the Phase 2 of contracted services, the Civil Engineer will be required to undertake the following deliverables in fulfilment of the Contract Management Services during the Design & Build contract period:

- Facilitate the handover of the site to the contractor.
- Review and approval of site surveys, studies and investigations that are proposed and required to be undertaken by the Design & Building Contractor,
- Undertake full site supervision,
- Review specifications, standards drawings and pertinent site information,
- Undertake full contract management and contract administration,
- Project Financial administration and reporting,
- Risk Management and Reporting,
- Review the Stage Gate Reports prior to Client approval and provide review feedback to Contractor/s.
- Construction Monitoring and Management,
- Detail review and approval of proposed Design & Build Contractors programme,
- Undertake Quality Inspections,
- Directly receive and review all contractual correspondences between Design & Build Contractor and ACSA and issue responses to all correspondences on behalf of the Client,
- Review and approve all contract variations in consultation with the Client
- Compile project reports as stated on section 17 (Project Reporting Requirements)
- Establish and co-ordinate the formal and informal communication structure and procedures for the construction process.

- Review materials samples and specifications on behalf of Client and advise on materials / specification selection.
- Liaise with Local Authorities on behalf of Client
- Monitor, review, approve and certify monthly progress payments.
- Monitor, review and approve the preparation of the Contract Programme by the contractor.
- Review and adjudicate circumstances and entitlements that may arise from any changes required to the Contract Programme.
- Manage the review and approval of all necessary shop details and product propriety information by the design consultants.
- Regularly conduct and record the necessary site meetings
- Prepare monthly project progress reports including submission to the client.
- Co-ordinate and monitor all necessary testing and commissioning by consultants and contractors.
- Co-ordinate, monitor and provide input to the Contractor's Practical Completion Lists on behalf of the Client.

3.2.2.3. CONSTRUCTION MONITORING SERVICES:

Once ACSA has appointed the Design & Build contractor, as part of the Phase 2 of contracted services, the Civil Engineer will be required to undertake the following deliverables in fulfilment of the Construction Monitoring Services during the design & build contract period:

- Facilitate the handover of the site to the contractor.
- Review and approval of site surveys, studies and investigations that are proposed and required to be undertaken by the Design & Building Contractor,
- Undertake full site supervision,
- Review specifications, standards drawings and pertinent site information,
- Undertake full contract management and contract administration,
- Project Financial administration and reporting,
- Risk Management and Reporting,
- Review the Stage Gate Reports prior to Client approval and provide review feedback to Contractor/s.
- Construction Monitoring and Management,
- Detail review and approval of proposed Design & Build Contractors programme,
- Undertake Quality Management,
- Liaise with Local Authorities on behalf of Client
- Provide input on behalf of the Client on all Safety Cases (OHS and Aviation Safety) to be submitted to Airport Authorities by Contractors.
- Directly receive and review all contractual correspondences between Design & Build Contractor and ACSA and issue responses to all correspondences on behalf of the Client,
- Review and approve all contract variations in consultation with the Client
- Compile project reports as stated on section 17 (Project Reporting Requirements)
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- Monitor, review and approve the preparation of the Contract Programme by the contractor.
- Review and adjudicate circumstances and entitlements that may arise from any changes required to the Contract Programme.

- Manage the review and approval of all necessary shop details and product propriety information by the design consultants.
- Regularly conduct and record the necessary site meetings
- Prepare monthly project progress reports including submission to the client.
- Co-ordinate and monitor all necessary testing and commissioning by consultants and contractors.
- Co-ordinate, monitor and provide input to the Contractor's Practical Completion Lists on behalf of the Client.
- Review and approve construction and operations interface and construction phasing plans on behalf of the Client.

3.2.2.4. HANDOVER & CLOSE OUT

- Review all handover documents issued by Contractor to ensure compliance with Clients Handover Requirements.
- Review all defects lists and provide additional input on behalf of the Client.
- Participate in ORAT processes to ensure compliance with Client ORAT requirements
- Manage, co-ordinate and expedite the preparation by the design consultants of all as-built drawings and design documentation.
- Review all operating and maintenance manuals as well as all warranties and guarantees received from Contractor's and Suppliers for completeness.
- Manage and expedite the procurement of all statutory compliance certificates and documentation.
- Co-ordinate, monitor and manage the rectification of defects during the Defects Liability Period.
- Manage, co-ordinate and expedite the preparation and agreement of the final account by the cost consultants with the relevant contractors.
- Co-ordinate, monitor and issue the Final Completion Defects list and Certificate of Final Completion.
- Prepare and present Project Closeout Report.

4. EXTENT OF SERVICES: APPLICABLE TO ALL SERVICES DISCIPLINES

The extent of services required to be undertaken by the Service Providers can be summarized as, but not limited to, the following:

- Implementation of projects in accordance with the FIDPM with particular focus on the planning, preparation, appropriate procurement, construction, monitoring, quality control, cost control, risk identification, risk management and control, co-ordination, and reporting.
- Provide high-quality technical support and advice to facilitate the initiation, planning, preparation, design, procurement, construction, and contract management, monitoring and reporting on the identified infrastructure projects.
- Ensure that all Stage Gate reports are prepared and finalised to highest standards in line with requirements of FIDPM End of Stage Deliverables. All Stage Gate reports are to be signed off by a Professional Registered Architect in terms of IDoW for registered professionals.
- Provide continuous monitoring and reporting on the implementation of project work against baselines and where necessary the formulation of interventions, in consultation with stakeholders, to minimize / eradicate obstacles, delays, cost overruns and schedule slippage. Ensuring that the Contractors and

Sub- contractor's technical proposals and drawings confirm with the design and specification requirements.

- Providing all necessary contract administration to monitor the various Contractors/ Sub- contractors diligently and timeously in the execution of the contract works, and in the event of problems being experienced, immediately notify the Clients representatives as the case may be, so that action may be taken.
- The project will entail the relocation within the Terminal of ACSA Operations and 3rd party Coordination to a temporary facility and back to their final location. This movement and the processing of their operations and associated office space, furniture, equipment is a key output and is deemed to be included in the scope of works for the consultant team.
- Visiting the works of relevant Contractors and Suppliers to ensure satisfactory quality control and correct utilization of materials in the fabrication process.
- Whilst relevant to the Project Manager and the Quantity Surveyor services, all service provider must note that they are expected to provide updates and revisions to the budget (or provide support in line with their respective discipline) in parallel to design development throughout the course of the project i.e., as part of all applicable FIDPM Stage reports. ACSA will require the costs to be presented in a format that will aid decision making where separate BOQ's will be required for different building zones and or levels for the proposed development.
- The demolition of the existing infrastructure is a key aspect of the Project. All aspects of the ACSA impairment and retirement procedure is to be included in the scope of the project and is deemed to be a part of the consultant team scope of works. The scope includes the requirement of identifying the assets that are to be demolished and identified for write off. High value assets that are to be disposed are to be identified and included in the BOQ for the Demolition Contractor. The consultant team will play a key role in ensuring the collection of a recoverable amount for an asset's fair value less costs of disposal and its value in use.
- Ad Hoc Administrative duties required for a project such as this at a live operational national key point for e.g. the review and preparation of Permit Applications for the consultant team and contractor prior to submission to ACSA for consideration.
- Design Development Optioneering.
- Airport and terminal theming proposal for approval by ACSA.
- Production of SAPOA Lease Diagrams for tenant spaces.
- Construction Sequencing & Notification of Works (NOW) for Approval.
- ACSA Operational Areas and Back of House Areas & 3rd Party 'Tenant' Fitout Management / Coordination.
- Design and conceptualization of Temporary Enablement Works.
- Produce physical Building Model based on Stage 3 approved design.
- Full Building Information Modelling services and drawings for handover to Employer at Stage 6. The standard BIM requirements are BIM Level 3 (OpenBIM), with Level of Development that enables LOD 300 & 350 to enable services clash detection. Handover of the BIM drawings will be required as part of As-Built drawings handover and the confirmation of As-Built drawing accuracy at handover stage.
- Full 3D Renders and 2D CAD Services.
- In the event of additional Scope: Preparation of Documentation for consideration of Scope Change Requests for use of cost Contingency.

4.1. ADDITIONAL SERVICES

4.1.1. STRUCTURAL ENGINEER

The additional services under Structural Engineering services are as follows and to be priced accordingly:

4.1.1.1. Building Information Modelling (BIM) Services.

BIM Level 3 (OpenBIM), with Level of Development that enables LOD 300 & 350 to enable services clash detection. Handover of the BIM drawings will be required as part of As-Built drawings handover and the confirmation of As-Built drawing accuracy at handover stage.

4.1.1.2. Level 3 Full Time Construction Monitoring.

A Professional Structural Engineering Resource with minimum 10 years structural engineering work experience and professionally registered as a Professional Engineer or Professional Technologist will be required to be appointed for the Full Time Construction Monitoring services as follows:

- Maintain a full-time presence on site to constantly review samples of materials and work procedures, for conformity to contract documentation, provide design/ technical clarifications and review completed work prior to covering up, or on completion, as appropriate.
- Provide regular (daily, weekly, monthly) site progress reports with pertinent evidence (photos, etc) of site progress and report on all delayed work.
- Assist with the preparation of as-built records and drawings to the extent required in the agreement with the client.

4.1.1.3. Geotechnical Survey - Provided as a provisional sum in pricing table.

A Geotechnical Survey will be required to be undertaken by the Geotech Specialist which will be appointed through the Structural Engineer. The Structural Engineer will assess and put together the scope of service and extent of the service for the Geotechnical survey including required laboratory tests. A provisional sum has been included in the pricing of the Structural Engineer's services and an RFQ process of obtaining 3 quotations from suitably qualified Geotechnical Survey Service providers will be undertaken through the Structural Engineer and appointed as a sub-contractor / sub-consultant to the Structural Engineering service provider. The Structural Engineer will coordinate with the QS, PM and Civil Engineer to put together scope, facilitate the delivery of the service, assess and approve survey outcomes and present same to the Employer at completion.

4.1.1.4. Hydrological and Geohydrological Survey

The Structural Engineer will be required to assess and scope the will be requirement for the Hydrological and / or Geohydrological survey for the project. A provisional sum has been included in the pricing of the Structural Engineer's services and an RFQ process of obtaining 3 quotations from suitably qualified Geotechnical Survey Service providers will be undertaken through the Structural Engineer and appointed as a sub-contractor / sub-consultant to the Structural Engineering service provider. The Structural Engineer will coordinate with the QS, PM and Civil Engineer to put together scope, facilitate the delivery of the service, assess and approve survey outcomes and present same to the Employer at completion.

4.1.2. CIVIL ENGINEER

The additional services under Civil Engineering services are as follows and to be priced accordingly:

4.1.2.1. Building Information Modelling (BIM) Services.

BIM Level 3 (OpenBIM), with Level of Development that enables LOD 300 & 350 to enable services clash detection. Handover of the BIM drawings will be required as part of As-Built drawings handover and the confirmation of As-Built drawing accuracy at handover stage.

4.1.2.2. Environmental Assessment Practitioner (EAP) and the Environmental Control Officer (ECO) Services:

- Appointment of a Professionally registered and suitably qualified EAP (minimum 10 years' experience) to assist ACSA with verification of environmental studies and licenses (e.g. WUL) required for the project in terms of analysis of applicable environmental triggers. Where environmental studies are not required, the EAP must liaise with the Environmental Authority and obtain letter of exemption for the project.
- Where environmental studies are required, the EAP to proceed with scoping the studies and / or licenses and obtaining necessary approvals from the Environmental Authority on behalf of ACSA.
- Compile and provide environmental management plan for the project, including pricing of the plan for inclusion in project budget estimates, Stage 1 & 2 reports and BOQ's.
- Monitoring of implementation of environmental management plans during construction
- Provision of standard ECO (minimum 10 years' experience) services during construction period as per the standard scope of service for ECO activities during construction, where required by the Employer. ECO shall be agreed with the Client prior to appointment based on the project environmental compliance requirements.

4.1.2.3. Level 3 Full Time Construction Monitoring.

A Professional (Pr. Eng or Pr. Tech) Civil Engineering Resource with minimum 10 years civil engineering work experience and professionally registered as a Professional Engineer or Professional Technologist will be required to be appointed for the Full Time Construction Monitoring services as follows:

- Maintain a full-time presence on site to constantly review samples of materials and work procedures, for conformity to contract documentation, provide design/ technical clarifications and review completed work prior to covering up, or on completion, as appropriate.
- Provide regular construction progress reports (written and visual reports) to the Employer which will include approved tests, completed works, progress delays, Earned Value analysis of progress, programme risks and review / support Contractor's progress claims.
- Assist with the preparation of as-built records and drawings to the extent required in the agreement with the client.

The appointed Civil Engineering Service Provider will be required to submit minimum of 3 VC's of suitably qualified Resident Engineers, with pre-requisite experience (similar type projects) as set out above and submit such CV's for selection by Employer of a suitably qualified Resident Engineer to be appointed.

4.1.2.4. Traffic Impact Assessment (TIA) - Provided as a provisional sum in pricing table.

- The requirement for a TIA will be assessed subsequent to appointment where required, the Civil Engineer shall undertake services for Traffic Impact Assessment directly or through a registered and suitably qualified third party service provider. Scope of the survey shall be agreed with the Client prior to execution based on the merits of the requirements. A provisional sum has been included in the pricing of the Civil Engineer's services and an RFQ process of obtaining 3 quotations from suitably qualified Geotechnical Survey Service providers will be undertaken through the Structural Engineer and appointed as a sub-contractor / sub-consultant to the Civil Engineering service provider. The Civil Engineer will coordinate with the PM and QS to put together scope, facilitate the delivery of the service, assess and approve survey outcomes and present same to the Employer at completion.

4.1.2.5. Topographical and GPR Survey – Provided as a provisional in pricing table.

The requirement for a Topographical and GPR Surveys will be assessed subsequent to appointment where found to be required. The Civil Engineer shall undertake the services for Topographical and GPR Surveys directly or through a registered and suitably qualified third party service provider. Scope of the surveys shall be agreed with the Client prior to execution based on the merits of the requirements. A provisional sum has been included in the pricing of the Civil Engineer's services and an RFQ process of obtaining 3 quotations from suitably qualified Service Providers will be undertaken through the Civil Engineer and appointed as a sub-contractor / sub-consultant to the Civil Engineering service provider. The Civil Engineer will coordinate with the PM and QS to put together scope, facilitate the delivery of the service, assess and approve survey outcomes and present same to the Employer at completion.

5. Planning and Programming

A program for delivery of the project is required and must be updated at intervals not exceeding 4 weeks. The Service Provider must also provide input for the other programs as required.

High level estimated duration to achieve completion of each project milestone is as follows:

Activity	Target Completion date	Notes
Appointment of Consultants	2 December 2025	This is the estimated date when the contract agreement will be signed between the Employer and Service Provider. Estimated, subject to tender responsiveness and procurement processes.
Stage 1 – Inception Report	2 March 2026	Submission date of completed Inception Report by the Consultants for ACSA approval
Stage 2 – Concept Design Report	25 June 2026	Concept design development (Stage 2) sign off by Employer
Employers Investment Decision / Capex Approval	27 July 2026	Process for Employer to apply for Investment Capex
Procurement Documentation	31 August 2026	Compilation of Employer's Requirements / scope and Design & Build pricing documents
Appointment of Design & Build Contractor	2 November 2026	Tender documentation & Main Contractor procurement process
Design & Build – completion date		
International Terminal Upgrade	27 June 2028	Includes Enablement Works / Decanting, and Phasing of Works to allow for Sectional Completion

Apron Development	4 August 2028	
Handover and ORAT		
International Terminal Upgrade	31 July 2028	ORAT & Handover documentation
Apron Development	7 September 2028	
Close Out / Final Completion		
International Terminal Upgrade	23 July 2029	12 months defects liability period, Final Completion and Close out Report
Apron Development	30 September 2028	

The above dates are indicative, high level and based on a level 3 programme but should be used to inform assumptions of the tenderers proposed pricing / work plan / Resourcing / programme AND project delivery approach / methodology.

Once appointed, the Service Providers will be required to produce a detailed project delivery programme (level 4 / 5) on MS Project scheduling software which includes production of Gantt Charts, resource pooling, critical path analysis, Earned Value Analysis, Timescale Data and Reporting, etc.

6. Key Personnel / Resourcing

The proposed structure and composition of the project team i.e., key staff members functions and proposed technical support staff in the format of a project specific organisational chart must be submitted upon appointment. The roles and responsibilities of each key staff member/expert must be set out with job descriptions. The service provider must be adequately resourced in order to deliver the project to the satisfaction of the Employer.

Should it become necessary to replace any of the key personnel listed during this contract, they may only be replaced by individuals with similar or better qualifications and experience, who satisfies the minimum requirements and can be replaced only with prior written approval of the Employer. Where such replacement delays project delivery, the Service Provider will be liable for any applicable delay damages in terms of the contract. The risk of any assigned resource replacement rests with the Service Provider, including applicable costs. The Employer will not be liable for any costs arising from the Service Providers change of assigned project resource/s, whether arising out of resignation / termination / incapacitation.

While the bid requirements are for one visible Lead Key Person resource, we expect that the Key Person resource will be supported by a full team, as per the tenderers Project Resource Organogram, to make sure that project objectives are met and timeous delivery is not compromised.

7. Cooperation with other Service Providers

In addition to the appointment of the Service Provider, ACSA may also appoint other consultants for delivery of the project. The appointed service provider will be required to Liaise with other appointed professional

service providers on design, time control and budgetary aspects of the project and reporting on progress and selection of various materials and components on the project. Full cooperation with other appointed service providers is required in the interest of professional and expeditious delivery of the project.

8. Use of Reasonable Skill and Care

The service provider is required to provide all aspects of the service with all reasonable care, diligence and skill in accordance with generally accepted professional techniques and standards and ensure that all legal and statutory requirements are met, and that all legal processes are adhered to and that no aspect of the project contravenes any legal processes and requirements.

The Bidders' attention is drawn to the fact that the proposed infrastructure is to be built at an operational airport with substantial aspects of the works to be done on the Airside / Restricted airport areas. The safety of persons, public and property is of paramount importance, closely followed by the minimization of disruption and inconvenience to passengers. The service provide is to at all times adhere to ACSA Occupational Health and Safety and AVSEC procedures and policies. No leniency will be granted for breach of policies.

9. Employer's right to recover costs

The Employer reserves the right to recover, by way of a deduction from any amount due to the Service Provider, any costs which the Employer incurs arising out of non-performance /negligence of the Service Provider. Although the project documents may be scrutinised by the ACSA departmental specialists, this shall in no way relieve the Service Provider of their professional responsibility for the proper, diligent and prompt execution of duties. In the event of professional default or negligence, ACSA reserves the right to claim compensation or damages, including pursuing blacklisting of the Service Provider. ACSA shall also be entitled to have any documentation or calculations verified by other experts. In the event of any errors being proven therein, the Service Provider will be held liable for costs resulting thereon.

10. Quality Management

As per the Contract Agreement, within 2 weeks after appointment date, the Service Provider will be required to submit a quality policy statement and quality plan for acceptance by Employer. The Quality Plan is required for providing the service as per the Scope.

11. Applicable Standards

The service provider shall ensure cognisance of, and adherence to all applicable national standards and codes, quality standards, design standards, statutory and audit compliance are taken into consideration in the execution of its work in the design and compilation of specifications for this project.

Projects will be managed in accordance with the ACSA Project Management Manual, Procedures, Policies and Processes and other relevant governance prescripts. All CAD data must adhere to the standards and requirements set out in the ACSA CAD Standard Reference Manual.

Timeous submission is required of all necessary plans and drawings to the relevant Authorities and expedite the necessary approvals and permission to proceed, including any negotiations in this regard.

The Service Provider shall ensure that cognisance of all National and International standards is taken in the execution of his/her own work and that of his/her sub-consultants in the design and compilation of specifications for this project. International Standards should only be used where no South African national standards exist, or where it is the norm to use or refer to international standards. All designs shall be in accordance with all applicable bylaws and building regulations. Aviation design compliance standards (ICAO) and ACSA policy and procedures shall be always adhered to.

Projects will be managed in accordance with the, FIDPM, ACSA Project Management Manual and ACSA Policies & Procedures.

12. Non-Disclosure

The NEC PSC Agreement between ACSA and the Services Providers stipulates that the Service Provider may publicise the service ONLY with the Employer's prior written agreement. Therefore, all information including design information, annexures and other supporting documentation regarding the project may not be shared by the Service Provider with 3rd parties without prior written consent of ACSA Procurement and ACSA Legal. All parties and companies involved in this project will be required to sign a non-disclosure at appointment. As part of internal information dissemination, additional non-disclosures from relevant ACSA Divisions shall be signed off by consultants during execution of the project.

13. Copyright

Copyright pertaining to all drawings and documentation for this project must be ceded to ACSA at completion of each project stage.

14. Indemnity and Liability Insurances

Refer to Annexure 1 for ACSA's Insurance requirements. Additional Insurance and Profession Indemnity cover in line with ACSA's Requirements will be requested as and when the bidders are allocated scope of works for pricing of specific projects after they have been appointed. The insurance requirements must remain valid and in place until Final Completion of the project.

15. Access to Buildings

Access to public areas is not restricted, however, personal airport access permits are required (with background criminal checks verification) for access to restricted areas. The service provider will be required to apply for such personal access permits prior to commencement of project. All resources must always wear a personal access permit when on site, including personal protective equipment and visibility clothing.

All resources are required to return expired permits or valid permits to ACSA at the completion of the project or termination of service or change of resources. Failure to maintain a record of the issue of permits and return of permit will lead to the implementation of penalties / and or fines at the discretion of ACSA.

16. Project Meetings

The proposed development represents a major development that is complex and with a large stakeholder base, both within ACSA and externally. Attendance is required for regular meetings, including (but not limited to) progress, design, technical coordination, cost review, risk review, project board and project management meetings which will be scheduled during the life of the projects appointed for.

All reports relevant to the projects, including but not limited to the design reports, monthly progress reports, ad-hoc reports and close out report will be submitted on set project calendar dates or as and when required by the Employer. It is envisaged that during the Project Implantation the following meetings and attendance (but not limited to) will be required:

- Management Meetings: During the implementation of this project the service provider may be expected to attend fortnightly Project Board management meetings and progress meetings with the Employer.
- Project Board Meetings
- Design Development Meetings
- Cost, Claims and Risk Review Meetings.
- Project and Airport Stakeholder meetings (Monthly and adhoc).
- ACSA Cross Functional Team Meetings.
- The service provider shall be required to attend design development and technical review meetings with the design team and designated representatives of the Employer. These meetings will be structured to gain final approval of the Employer for all design aspects of this work.
- Site/Technical Meetings
- During the Contract Administration and Inspection stage of this project, the service provider shall attend all site meetings with the Employer and contractor present.
- Ad-hoc Meetings: The service provide will be expected to attend ad hoc meetings from time to time, with the Employer, Stakeholder Groups, affected 3rd Party Stakeholders (Local Airport users such as Airlines, Ground Handlers, Retailers, Government Agencies), Airline Industry Committee Working and Steering committees or service or other authorities, to address specific issues as and when the need arises.
- General: The service provider shall be represented at all meetings by the lead-built environment professional or a senior member of staff (with the approval of the ACSA PM).

17. Project Reporting Requirements

Aside from the Stage Gate Reports required in terms of this appointment (Inception, Concept Design and Cost Report), the Service Provider may be required to prepare, or contribute to, ad hoc reports on specific aspects of any project work.

The appointed Project Manager shall lead in the compilation of a monthly Project Progress Report, Project Board Report, Risk Report, Delay Tracker Report and Cost Report for overall project performance indicator. The monthly reports shall contain a cost report indicating expenditure in respect of both the Service Provider's appointment and the various specialists, together with the forecast spend for the financial year.

The Bidder shall also make allowance for writing other adhoc reports in the pricing schedule.

18. Format of Communication

All communications must be in writing by means of letters and e-mails only. Design documentation, drawings, etc. must be in hard copy and electronic format. No sharing of project information to ACSA shall be done through We-Transfer, Smartsheet, Monday.com, etc. All consultants are to ensure that the flow of information is done on ACSA Approved Platforms i.e. Microsoft Projects, One Drive, Office 365 etc.

All information storage is to be limited to approved file hosting services/ cloud storage solutions such as One Drive, Microsoft Teams and Microsoft 365.

All information relating to design and documentation created is the sole proprietorship of ACSA.

All information/ documentation/ reports/ layouts etc. are to be made available in ANY format prescribed by ACSA including editable formats such as CAD (inclusive of AutoCAD and Revit).

- No document / drawing file names are to be longer than 25 characters incl. of spaces and hyphens.
- File names must not contain the following characters: & " ? < > # {} % ~ / \.
- All final reports must be supplemented with a MS PowerPoint presentation summarising the main components of each report.

19. As Built Documents

All Consultants appointed on the project shall be required to verify accuracy of as-built information issued directly to them by ACSA. At the completion of each project Stage, the Service Provider will be required to provide written and signed off confirmation that the As-Built drawing information submitted to ACSA is a true reflection of what is built on site for the particular project.

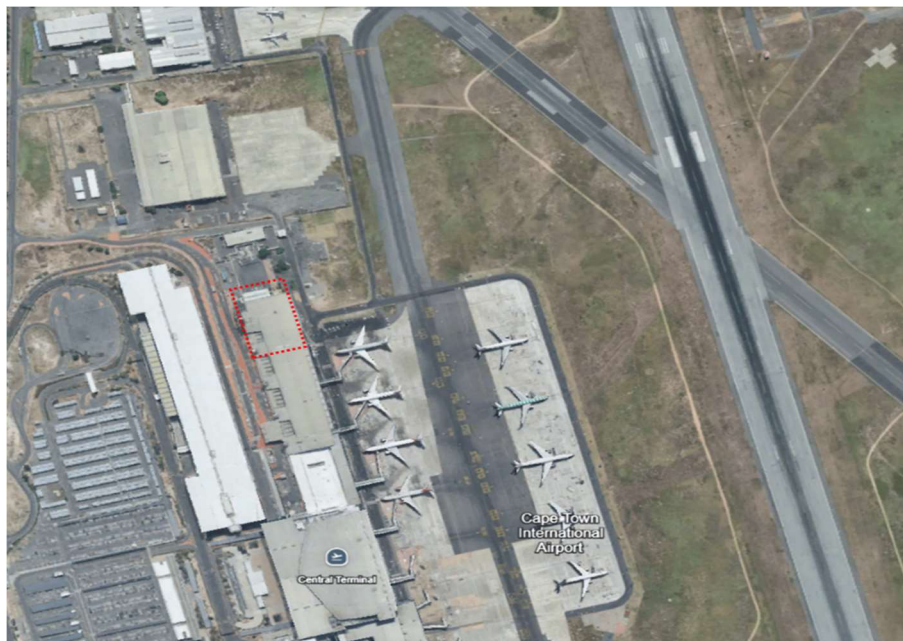
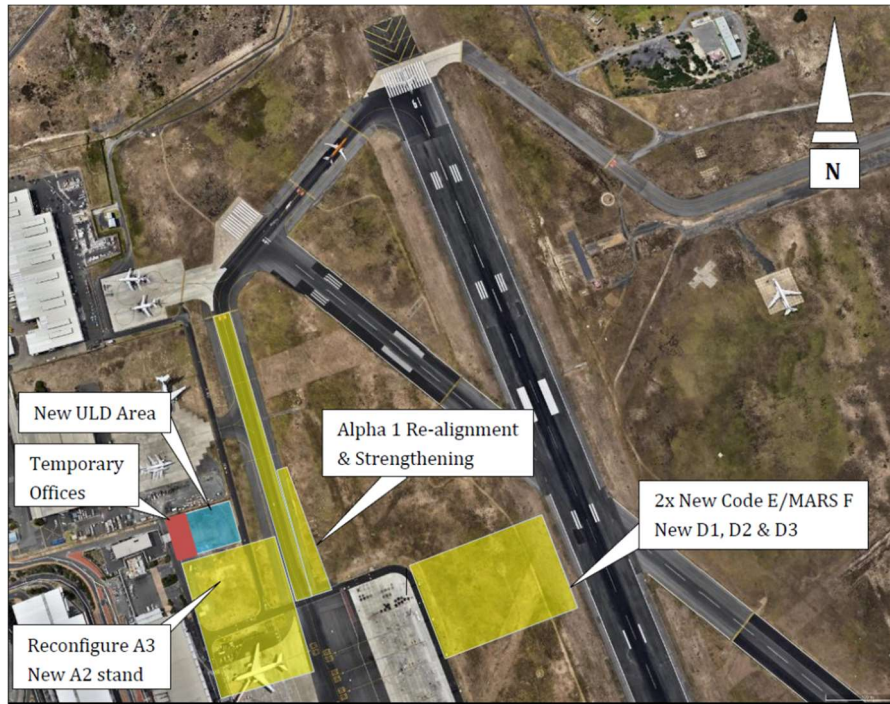
20. Annexures

20.1. ACSA Insurance Schedule

20.2. ACSA CAD Standard

Part C4.1: Site Information

The site of the works is Cape Town International Airport. The works will be carried out on Airside (Alpha and Bravo Apron) and on the Restricted Areas of the existing International Terminal Building (Terminal 1). The Consultant is reminded that this is a National Key Point and as such must adhere to all airport's rules and regulations regarding Aviation Security, Aviation Safety, Occupational Health and Safety, Environmental, Airport Rescue and Fire Fighting Services and stringent Access Control. The Terminal 1 building is located on northern side Central Terminal Building and the Apron where the apron development work will occur is on the northern side of Alpha Apron (Near Alpha 3 contact stand) and also on Bravo Apron (Bravo 1). Refer to below photo.



Part C5: Annexures

Annexure	Description	Comments
Annexure C5.1	ACSA Generic Occupational Health and Safety Specifications	
Annexure C5.2	Occupational Health and Safety Mandatary Agreement	
Annexure C5.3	ACSA Baseline Hazard Identification Risk Assessment (HIRA)	
Annexure C5.4	Environmental Terms and Conditions to Commence Work	
Annexure C5.5	POPI Act Agreement	
Annexure C5.6	ACSA Insurance Clauses	Attached separately

Annexure C5.1: ACSA Generic Occupational Health and Safety Specifications

Project: Construction of Ground Support Equipment Workshops at Cape Town International Airport

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INTRODUCTION

In terms of the Construction Regulation 5(1) b the client, is required to compile a Health & Safety specification for any intended project and provide such specification to any prospective contractor and designers. The contractor, on appointment shall submit a Health & Safety plan which shall address the requirements of this specification.

This specification objective is to ensure that the contractor(s) entering into a contract with ACSA achieve an acceptable level of OH&S performance. This document forms an integral part of Project Information and the contract. Principle and other contractors should make it part of any contract that they may have with their contractors and /or suppliers.

Compliance with this document does not absolve the client from complying with minimum legal requirements and the client remains responsible for the health & safety of his employees and those of his mandatories. ACSA reserves the right to audit, monitor and where necessary regulate the site work activities of any principle contractor or appointed subcontractor as per Construction Regulation 5(1) (o) and section 5 of this document.

1. SCOPE

This Specification is intended for all ACSA Service Providers.

2. DEFINITIONS

The definitions as listed in the OHS Act and Construction Regulations 84 of 7 February 2014 shall apply. Therefore all references to the old Construction Regulations will change to the new Construction Regulations.

Client: means any person for whom construction work is being performed.

Principal Contractor: means an employer appointed by the client to perform construction work

Contractor: means an employer who performs construction work;

Construction work: means any work in connection with,

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition.
to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

Competent person: means a person who,

- a) has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the

National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and

- b) is familiar with the Act and with the applicable regulations made under the Act;

Designer: means

- a) competent person who
 - (a) prepares a design;
 - (b) checks and approves a design; or
 - (c) arranges for any person at work under his or her control to prepare a design
 - (d) including an employee of that person where he/she is the employer or
 - (e) designs temporary work, including its components,
- b) an architect or engineer contributing to, or having overall responsibility for a design;
- c) a building services engineer designing details for fixed plant;
- d) a surveyor specifying articles or drawing up specifications;
- e) A Contractor carrying out design work as part of a design and building project; or
- f) an interior designer, shop-fitter or landscape architect;

Fall prevention equipment: means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guardrails, screens, barricades, anchorages or similar equipment;

Fall arrest equipment: means equipment used to arrest a person in a fall, including personal equipment such as body harness, lanyards, deceleration devices, lifelines or similar equipment.

Hazard: means a source of or exposure to danger

Hazard identification: means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed

Risk assessment: means the process contemplated in paragraph 10 of the specifications.

Excavation work: means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

Ergonomics: means the application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimise human well-being and overall system performance;

3. NOTIFICATION OF CONSTRUCTION

(Construction Regulation 4)

The Principal Contractor who intends to carry out any construction work must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

- (a) include excavation work;
- (b) include working at a height where there is risk of falling;
- (c) include the demolition of a structure; or
- (d) Include the use of explosives to perform construction work.

4. DUTIES OF THE PRINCIPAL CONTRACTOR AND CONTRACTOR

(Construction Regulation 7)

The Principal Contractor must:

- (a) Provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications. The plan must be applied from the date of commencement of and for the

- duration of the construction work and which must be reviewed and updated by the Principal Contractor as work progresses;
- (b) Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and this specification, which must be made available on request to an inspector, the client, the client's agent or Contractor; and
 - (c) On appointing any other Contractor, in order to ensure compliance with the provisions of the Act—
 - i. Provide contractors who are tendering to perform construction work for the Principal Contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;
 - ii. Ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
 - iii. Ensure that no contractor is appointed to perform construction work unless the Principal Contractor is reasonably satisfied that the contractor that he/she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
 - iv. Ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
 - v. Appoint each contractor in writing for the part of the project on the construction site;
 - vi. Take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
 - vii. Ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the Contractor and Principal Contractor, but at least once every 30 days;
 - viii. Stop any contractor from executing construction work which is not in accordance with the client's health and safety specifications and the Principal Contractor's health and safety plan or which poses a threat to the health and safety of persons;
 - ix. Where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely; and
 - x. Discuss and negotiate with the contractor the contents of the health and safety plan and must thereafter finally approve that plan for implementation;
 - (d) Ensure that a copy of his or her health and safety plan, as well as the contractor's health and safety plan is available on request to an employee, an Inspector, a Contractor, the Client or the Client's Agent;
 - (e) Hand over a consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
 - (f) In addition to the documentation required in the health and safety file, include and make available a comprehensive and updated list of all the Contractors on site accountable to the Principal Contractor, the agreements between the parties and the type of work being done; and
 - (g) Ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

The Principal Contractor must take reasonable steps to ensure co-operation between all contractors appointed by the Principal Contractor to enable each of those contractors to comply with this specification.

No contractor may allow or permit any employee or visitor to enter the site, unless that employee or visitor has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry and must ensure all have the necessary personal protective equipment.

The Contractor must prior to performing any construction work:

- (a) Provide and demonstrate to the Principal Contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification. The aforementioned plan must be applied from

- the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- (b) Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and this specification, and which must be made available on request to an Inspector, the Client, the Client's Agent or the Principal Contractor;
 - (c) Before appointing another contractor to perform construction work, be reasonably satisfied that the contractor that he/she intends to appoint has the necessary competencies and resources to perform the construction work safely;
 - (d) Co-operate with the Principal Contractor as far as is necessary ensuring all comply with the provisions of the Act; and
 - (e) As far as is reasonably practicable, promptly provide the contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where the contractor appoints another contractor to perform construction work, the duties determined in **section 5** of this document applies to the contractor as if he/she were the Principal Contractor.

A Contractor must at all times keep records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

5. MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

(Construction Regulation 8)

The Principal Contractor must in writing appoint one full-time competent person as the Construction Manager with the duty of managing all the construction work on a single site, including the duty of ensuring Occupational Health and Safety compliance, and in the absence of the Construction Manager an alternate must be appointed by the Principal Contractor.

The Principal Contractor must upon having considered the size of the project, in writing appoint one or more assistant Construction Managers for different sections thereof: Provided that the designation of any such person does not relieve the Construction Manager of any personal accountability for failing in his or her management duties in terms of this regulation.

No Construction Manager appointed under paragraph 6 above may manage any construction work on or in any construction site other than the site in respect of which he/she has been appointed.

A Contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a full-time or part-time construction health and safety officer in writing to assist in the control of all health and safety related aspects on the site.

No Contractor may appoint a Construction Health and Safety Officer to assist in the control of health and safety related aspects on the site unless he/she is reasonably satisfied that the construction health and safety officer that he/she intends to appoint has necessary competencies and resources to assist the Principal Contractor

A Construction Manager must in writing appoint Construction Supervisors responsible for construction activities and ensuring Occupational Health and Safety compliance on the construction site.

A Contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the Construction Supervisor contemplated in **paragraph 6** above, and every such employee has, to the extent clearly defined by the Principal Contractor in the letter of appointment, the same duties as the Construction Supervisor: Provided that the designation of any such employee does not relieve the Construction Supervisor of any personal accountability for failing in his or her supervisory duties in terms of this section in the specification..

No Construction Supervisor appointed under paragraph 6 above may supervise any construction work on or in any construction site other than the site in respect of which he/she has been appointed:

Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed Construction Supervisor may supervise more than one site.

**6. REGISTRATION WITH THE WORKMEN'S
COMPENSATION OR LICENSED INSURER**

The Principal Contractor(s) must ensure that ACSA is provided with a valid letter of good standing, including a registration number with the Compensation for Occupational Injury and Diseases Fund or an alternative scheme approved in writing by the Commissioner to the COID Fund, at least 10 days prior commencement of construction work. It must remain the Principal Contractor's responsibility to furnish ACSA with a valid letter of good standing or keep a copy available for perusal by a Client, Client Representatives or any other person authorised thereto.

7. MANDATORY AGREEMENT

A duly signed mandatory form also referred to as 'OHS Act section 37.2' must be obtained from ACSA Safety Department. It must be signed and returned to ACSA by the Principal Contractor at least 10 days prior to commencement of construction work. The Principal Contractor must ensure that all its contractors

have completed a similar document and a proof of such signed documents is submitted to ACSA for reference purposes.

8. ASSIGNED PERSON IN TERMS OF OCCUPATIONAL HEALTH & SAFETY ACT OF 1993 & APPLICABLE REGULATIONS

A written letter of appointment must be forwarded to ACSA duly signed by responsible persons at least 3 days prior commencement of construction work for the following duties: **(Further appointments could become necessary as the project progresses and as per the requirements of OHS Act 85/1993)**

- (a) Person assigned duties in terms of the 16.2 appointees of the Act
- (b) Construction Manager CR8(1)
- (c) Assistant Construction Manager CR8(2) - *where applicable*
- (d) Full-time or part-time Construction Safety Officer CR8(5)
- (e) Construction Supervisor CR8(7))
- (f) Assistant Construction Supervisor CR8(8) - *where applicable*
- (g) Risk Assessor CR9(1)
- (h) Fall Protection Developer/Planner CR10(1) - *where applicable*
- (i) Temporary Works Designer CR11(1) - *where applicable*
- (j) Temporary Works Supervisor CR11(2) - *where applicable*
- (k) Excavation Supervisor CR13(1)a) - *where applicable*
- (l) Demolition Work Supervisor and Controller CR14(1) - *where applicable*
- (m) Scaffolding Supervisor CR16(1) - *where applicable*
- (n) Scaffolding Team leader CR16(1) - *where applicable*
- (o) Scaffolding Inspector CR16(1) - *where applicable*
- (p) Scaffolding Erector CR16(1) - *where applicable*
- (q) Suspended Platforms Supervisor CR17(1) - *where applicable*
- (r) Rope Access Supervisor CR18(1)a) - *where applicable*
- (s) Rope Access Fall Protection Plan Developed (R18(2)b) - *where applicable*
- (t) Material Hoist Inspector CR19(8)a) - *where applicable*
- (u) Bulk Mixing Plant Supervisor CR20(1) - *where applicable*
- (v) Explosive Actuated Fastening Device Operator CR21(2)b) - *where applicable*
- (w) Explosive Actuated Fastening Device Controller CR21(2)g(i) - *where applicable*
- (x) Construction Vehicles and Mobile Plant Operator CR23(1)d(i) - *where applicable*
- (y) Temporary Electrical Installations Controller CR24(c) - *where applicable*
- (z) Portable Electrical Equipment Supervisor CR24(d) - *where applicable*
- (aa) Fire Equipment Inspector CR29(h) - *where applicable*
- (bb) First Aider GSR3(4) -- *where applicable*
- (cc) Stacking Supervisor (CR28(a)) (GSR2(a))
- (dd) Competent Person in Confined Space Entry GSR5(1) - *where applicable*
- (ee) Gas Cutting/Welding Supervisor (GSR9(a) - *where applicable*
- (ff) Ladder Supervisor and Inspector (GSR13(a) - *where applicable*
- (gg) Lifting Machine Inspector (DMR18(7) - *where applicable*
- (hh) Lifting Tackle Inspector (DMR18(10)e) - *where applicable*
- (ii) Lifting Machine Supervisor (DMR18(11) - *where applicable*
- (jj) Supervisor of Machinery (GMR1) - *where applicable*
- (kk) Safety Representatives (OHS Act Sec.17 - *where applicable*
- (ll) Hazardous Chemical Substances Controller/Co-ordinator HCSR10 - *where applicable*
- (mm) Incident Investigator (GAR9(2))
- (nn) Blasting Supervisor (Supervision Of Explosives Workplace ER12) - *where applicable*

9. HEALTH AND SAFETY DOCUMENTATION

The Principal Contractor must provide and demonstrate to ACSA a suitable, sufficiently documented and coherent site specific health and safety plan, based on ACSA's documented health and safety

specifications. The health and safety plan must include but not limited to the following during tendering process, before commencement of construction work and during construction:

Principal Contractor's Health & Safety Policy

The Principal Contractor must provide a health & safety policy signed by the Chief Executive Officer (CEO) which outlines Principal Contractor's commitment towards health and safety

Health and Safety Organogram

The Principal Contractor must provide a health & safety organogram which outlines related appointments in terms of the OHS Act and applicable Regulations. Contact numbers should also be provided for easy reference.

10. RISK ASSESSMENT

(Construction Regulation 9)

A Contractor must, before the commencement of any construction work and during such construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site, and must include—

- (a) the identification of the risks and hazards to which persons may be exposed to;
- (b) an analysis and evaluation of the risks and hazards identified based on a documented method;
- (c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- (d) a monitoring plan; and
- (e) a review plan.

A Contractor must ensure that:

- (f) as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment
- (g) that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and or control measures before

any work commences, and thereafter at the times determined in the risk assessment monitoring and review plan of the relevant site

- (h) Principal Contractor must ensure that all Contractors are informed regarding any hazard that is stipulated in the risk assessment before any work commences, and thereafter at the times that may be determined in the risk assessment monitoring and review plan of the relevant site
- (i) consult with the health and safety committee or, if no health and safety committee exists, with a representative trade union or representative group of employees, on the monitoring and review of the risk assessments of the relevant site
- (j) copies of the risk assessments of the relevant site are available on site for inspection by an inspector, the client, the client's agent, any Principal Contractor, any employee, a representative trade union, a health and safety representative or any member of the health and safety committee
- (k) review the relevant risk assessment—
 - i. where changes are effected to the design and or construction that result in a change to the risk profile; or
 - ii. when an incident has occurred.

11. FALL PROTECTION PLAN

(Construction Regulation 10)

A Contractor must

- (a) designate a competent person to be responsible for the preparation of a fall protection plan;
- (b) ensure that the fall protection plan contemplated above is implemented, amended where and when necessary and maintained as required; and
- (c) take steps to ensure continued adherence to the fall protection plan.

The Fall Protection Plan must include

- (a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- (b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- (c) a programme for the training of employees working from a fall risk position and the records thereof;
- (d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- (e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A Contractor must ensure that:

- (a) **The Construction Manager** appointed under **Construction Regulation 8(1)** is in possession of the most recently updated version of the fall protection plan.
- (b) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- (c) no person is required to work in a fall risk position, unless such work is performed safely as contemplated in above;
- (d) fall prevention and fall arrest equipment are
 - i. approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
 - ii. securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
- (e) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

Where roof work is being performed on a construction site, the Contractor must ensure that, in addition to the requirements set out above, it is indicated in the fall protection plan that:

- (a) the roof work has been properly planned;
- (b) the roof erectors are competent to carry out the work;
- (c) no employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee;
- (d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads;

- (e) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
- (f) suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.

Principal Contractor / Contractor - Competency Assessment

(Construction Regulation 7)

The Principal Contractor must be reasonably satisfied that the sub-contractors he intends to appoint also have the necessary competencies and resources to safely conduct the work they will be appointed for. This must be established at tender stage and before appointments are made. In order to ensure this, the Principal Contractor must demonstrate to the Client that it has a suitable and sufficiently.

12. ADMINISTRATIVE CONTROLS AND THE OCCUPATIONAL HEALTH & SAFETY FILE

(Construction Regulation 7)

The Occupational Health and Safety File

The Principal Contractor will keep an Occupational Health and Safety File on site containing the following documents (where applicable) as a minimum:

- Accident/Incident Register. (Annexure 1 of the General Admin Regulations)
- Health and safety Representatives Inspections Register.
- Construction Vehicles & Mobile Plant Inspection.
- Daily Inspection of Vehicles.
- Plant and other Equipment by the Operator/Driver/User.
- Demolition Inspection Register.
- Electrical Installations, Equipment & Appliances. (including Portable Electrical Tools)
- Excavations Inspection.
- Explosive Powered Tool Inspection/Maintenance/Issue/Returns Register. (incl. cartridges & nails)
- Fall Protection Inspection Register.
- First Aid Box Contents.
- Fire Equipment Inspection & Maintenance.
- False work Inspections.
- Hazardous Chemical Substances Record.
- Ladder Inspections.
- Lifting Equipment Register.
- Machinery Safety Inspection Register. (incl. machine guards, lockouts etc.)
- Scaffolding Inspections.
- Stacking & Storage Inspection.
- Inspection of Structures.
- Inspection of Pressure Equipment.
- Welding Equipment Inspections.
- All other applicable records.
- An equipment inventory register, detailing all major items of equipment such as Construction Vehicles and Mobile Plant etc...

If any work is to be performed on Airside. The contractor must perform such work must provide ACSA with an airside safety plan.

On completion of the project or on completion of the contractors work each contractor must surrender the completed OHS file to the Principal Contractor for consolidation into one "Master File". **A Principal Contractor must** hand over a consolidated health and safety file to ACSA upon completion of the construction work and must, in addition to the documentation referred to in **paragraph 5** of this document include a record of all drawings, designs, materials used and other similar information

concerning the completed structure. (These records will then be archived by ACSA for future reference purposes)

13. HEALTH AND SAFETY REPRESENTATIVES

The Principal Contractor must ensure that Health and Safety Representative(s) is/are elected and delegated in writing and necessary training has been provided by a competent person where there are more than 20 employees at the workplace. A proof of training certificate must be provided to ACSA. Health and Safety Representatives must conduct monthly inspections by completing a checklist developed by the Principal Contractor. Safety defects noted must be recorded and reported to the supervisor for remedial action. Health and Safety Representative Inspection findings must be made available to ACSA for reference for audits purposes.

Health and Safety Representatives and their reports must form part of the safety committee which must meet on a monthly bases.

The Principal Contractor must hold health and safety committee meetings on site. Minutes of such meetings and action taken by management must be kept on file and made available to ACSA for reference purposes. Members of the committee must receive proper training and a proof of such training must be made available.

The Committee must consider, at least, the Following Agenda:

- Opening & Welcome
- Present/ Apologies/ Absent
- Minutes of previous Meeting
- Matters Arising from the previous Minutes
- OH&S Reps Reports
- Incident Reports & Investigations
- Incident /Injury Statistics
- Other Matters
- Endorsement of Registers and other statutory documents by a representative of the Principal Contractor
- Close/Next Meeting

The Principal Contractor must ensure that ACSA Safety Department is invited to such meetings. These meetings do not substitute for Principal Contractor's Site meetings.

14. HEALTH & SAFETY TRAINING

Environmental Health and Safety Induction

The Principal Contractor must conduct an induction training session prior commencement of construction work. An attendance register must be kept in the Principal Contractor's health and safety file. For any construction work to be conducted on the Airside, Airside Induction training (AIT) must be attended by all persons entering who are to enter Airside and a course fee determined by ACSA must be paid by the Principal Contractor. A security permit to access airside must be issued on production of proof of attendance.

Induction Conducted by the Principal Contractor and Competent Person

A manual /copy of such training must be provided to ACSA for reference purposes. As determined by the risk assessment. The Principal Contractor must ensure that all employees under his/her control are trained by a competent person and a proof of such training is kept on file for reference.

Toolbox Talks

The Principal Contractor must ensure that employees attend a formal Toolbox Talk to be held at least once a week. Toolbox Talks must cover a wide variety of topics related to health and safety. An attendance register must be completed by employees who attended such talks. The register must indicate the topic covered presenter, date and signatures of employees attended. Records for Toolbox Talks must be kept in a health and safety file and be made available to ACSA for perusal.

First Aid Training

The Principal Contractor must appoint competent First Aider(s) in writing where more than 10 employees are employed. A letter of appointment must be kept on file for reference made available to ACSA Safety.

Duly designated First Aider(s) must have attended training at an accredited institution prior commencement of construction work and a proof of certificate be submitted to ACSA for reference. The Principal Contractor must ensure that the first aid box(s) is/are controlled by qualified First Aider(s) and kept fully stocked with necessary first aid contents related to the hazards and risks identified. A first aid box(s) must be accessible and location of such box(s) is clearly displayed on site.

15. FIRE PREVENTION AND PROTECTION

The Principal Contractor must ensure that adequate fire equipment is provided in strategic places (that is, where there is a mobile distribution board, flammable liquids, pressure equipment, confined spaces, hot work). The Principal Contractor must ensure that such equipment is inspected by a competent person on a monthly basis and such inspections are recorded on a register. The Principal Contractor must ensure that all fire equipment is serviceable and person(s) have been professionally trained on how to use the equipment. A proof of such training must be provided prior commencement of construction work.

16. EMERGENCY PREPAREDNESS

The Principal Contractor must provide ACSA with an emergency plan and procedure which will include, but not limited to emergencies such as fire, bomb threat, civil unrest, medical treatment, environmental incidents, accidents to employees and other persons other than their employees. Emergency procedure must be communicated to employees and a proof of such training must be kept on file for reference. A list of emergency contact numbers must be conspicuously displayed on site for ease reference. An evacuation plan must be displayed in strategic places.

In case of medical and/or fire emergency contact ACSA Fire & Rescue Services:

(021) 937 1200

The Principal Contractor must provide ACSA Safety with a full record of any incidents which may occur on site.

17. INCIDENTS/ACCIDENTS REPORTING AND INVESTIGATION

The Principal Contractor must ensure that all incidents/accidents (this includes near miss, first aid cases and section 24 cases) are reported by employees immediately to the Construction Manager for further investigation and remedial action. The Principal Contractor must ensure that all OHS Act section 24 incidents/accidents are reported to the Department of Labour immediately and preliminary investigation is conducted by a competent person within seven days. If construction work will be finished within 3 days after occurrence, an investigation must be conducted before such construction work is completed. Proof of such investigation must be submitted to ACSA immediately or within 24 hours after investigation.

18. PERSONAL PROTECTIVE CLOTHING/EQUIPMENT

The Principal Contractor must ensure that personal protective equipment or clothing needs analysis is conducted and incorporated into the risk assessment. Records must be provided by the Principal Contractor prior to the commencement of construction work. The Principal Contractor must ensure that SABS approved personal protective equipment or clothing is provided to personnel. The Principal Contractor must ensure that no personnel are allowed to work on site without necessary personal protective equipment or clothing. The Principal Contractor must ensure that PPE or Clothing is kept in good working order and clearly stipulate procedures to be followed when PPE or Clothing is lost or stolen, worn or damaged. ACSA will remove any person from the construction site who is working without necessary personal protective equipment and/or clothing. Worn or tattered personal protective clothing will not be permitted on airport premises.

19. FALL PROTECTION (WORKING IN ELEVATED POSITIONS)

(Construction Regulation 10)

A pre-emptive Risk Assessment will be required for any work to be carried out above two metres from the ground or any floor level and will be classified as "Work in Elevated Positions".

As far as is practicable, any person working in an elevated position will work from a platform, ladder or other device that is at least as safe as if he/she is working at ground level and whilst working in this position be wearing and using a full body harness that will be worn to prevent the person falling from the platform, ladder or other device utilised.

This safety harness will be, as far as is possible, secured to a point away from the edge over which the person might fall and the double lanyard must be of such a length that the person will not be able to move over the edge.

In addition, any platform, slab, deck or surface forming an edge over which a person may fall must be fitted with guard rails at two different heights as prescribed in SABS 085' Code of Practice for the Design, Erection, Use and Inspection of Access Scaffolding

Workers working in elevated positions must be trained to do this safely and without risk. Proof of training must be maintained on the contractors site safety file. Medical certificates of fitness for all employees

working in elevated positions must be available on site. This must be issued by an Occupational Health Practitioner.

Where work on roofs is carried out, the Risk Assessment must take into account the possibility of persons falling through fragile material, skylights, soffits and openings in the roof, steel support work trusses and purlins so designed as to support the roof structure.

The Risk Assessments shall place specific emphasis on the placing and handling of roofing materials such as Inverted Box Rib Sheeting (IBR sheeting) or similar materials, (including contingency safety measures), which when exposed to windy conditions represents a serious safety hazard.

20. RISK ASSESSMENT FOR CONSTRUCTION WORK

(Construction Regulation 9)

Every Contractor performing Construction work shall, before the commencement of any construction work and during such work, have a Risk Assessment performed by a competent person, appointed in writing, and the Risk Assessment shall form part of the OH&S Plan.

Each activity must define individual tasks associated with that identified activity. These and all associated hazards must be identified and listed in the risk assessment. This ensures that critical tasks and associated hazards are not missed.

The Risk Assessment must include:

- The identification of the risks and hazards to which persons may be exposed to
- The analysis and evaluation of the risks and hazards identified
- A documented plan and applicable safe work procedures (SWP) to mitigate, reduce or control the risks and hazards that have been identified
- A monitoring plan and
- A review plan

A Contractor must ensure that:

- As far as is reasonably practicable ergonomic related hazards are analysed, evaluated and addressed.
- All employees under his/her control are informed, instructed and trained by a competent person regarding any hazards.
- A Principal Contractor must ensure all Contractors are informed regarding any hazard as stipulated in the risk assessment before any work commences.
- Consult with health and safety committee on monitoring and review risk assessment on site.
- Ensure a copy of risk assessments is available for inspection.
- Review relevant risk assessments where changes are affected to the design or construction that result in a change to the risk profile or when an incident occurred.

N.B. A risk assessment will be performed for all unplanned work and submitted to ACSA for approval prior to work commencing.

21. STRUCTURES

(Construction Regulation 11)

The Contractor will ensure that in terms of Construction Regulation 11 the following is adhered to:

- That the structure on/in which works are to be performed has been inspected by a certified structural engineer declaring the structure to be safe for construction/demolition/renovations work processes.
- Steps are taken to ensure that no structure becomes unstable or poses a threat of collapse due to demolition and construction work being performed on it, or in the vicinity of it.
- No structure is overloaded to the extent where it becomes unsafe; if uncertainty arises then the structural engineer is to be consulted.
- He/she has received from the designer the following information:
- Information on known or anticipated hazards relating to the construction/demolition work and the relevant information required for the safe execution of the construction/demolition work.
- A geo-scientific report (where applicable).
- The loading the structure is designed to bear.
- The methods and sequence of the construction/demolition process.
- All drawings pertaining to the design are on site and available for inspection.

The structural engineer shall carry out inspections at appropriate and sufficient intervals of the construction work involving the design of the relevant structure to ensure compliance with the design and record the results of these inspections in writing.

22. TEMPORARY WORK

(Construction Regulation 12)

Temporary work must be carried out under the supervision of a competent person designated in writing.

Temporary works structures must be so designed, erected, supported, braced and maintained such that it will be able to support any vertical or lateral loads that may be applied.

No load is to be imposed onto the structure that the structure is not designed to carry.

Temporary works must be erected in accordance with the structural design drawings for that temporary works and, if there is any uncertainty, the designer must be consulted before proceeding with the erection/use of the temporary works.

All design drawings pertaining to the temporary works must be kept available on site.

All equipment used in the erection of temporary works must be checked by a competent person before use.

The foundation or base upon which temporary works is erected must be able to bear the weight and keep the structure stable.

Employees erecting temporary works must be trained in the safe work procedures for the erection, moving and dismantling of temporary works.

Safe access/egress (and emergency escape) must be provided for workers.

A competent person must inspect temporary works structures that have been erected before, during and after pouring of concrete or the placing of any other load and thereafter daily until the temporary works is stripped.

The results of all inspections must be recorded in a register kept on site.

The temporary works must be left in place until the concrete has reached sufficient strength to bear its own weight plus any additional weight that may be imposed upon it and not until the designated competent person has authorised its stripping in writing.

Any damaged temporary works must be repaired/rectified immediately Deck panels must be secured against displacement.

The contractor must ensure that no employee is exposed, or required to work on slippery and dangerous surfaces.

Person's health must be protected when use is made of solvents, oils or other similar substances.

Ensuring that the OEL (Occupational Exposure Limit) for any substances that they may be exposed to does not exceed the legal limits and that the necessary PPE is used.

23. EXCAVATIONS

(Construction Regulation 13)

The Principal Contractor must ensure excavation work is conducted under supervision of a competent person who has been appointed in writing. A letter of appointment must be provided to ACSA Safety prior commencement of work. A risk assessment outlining safe work procedures to be adhered to if excavation is more than 1.0m deep must be provided to ACSA prior commencement of work. The Principal Contractor must ensure that no person works in an excavation which is not adequately braced or shored. The Principal Contractor must ensure that every excavation including bracing and shoring are inspected daily prior each shift starts and such records are kept on site for reference.

The Principal Contractor must ensure that all precautionary measure as stipulated for confined spaces as stated in the General Safety Regulation of OHS Act 85/1993 are complied with when entering any excavation. The Principal Contractor must ensure that warning signs are conspicuously displayed where excavation work involves the use of explosives and a method statement developed by a competent person is provided to ACSA prior commencement.

The Principal Contractor must ensure that safe and convenient means of access is provided to every excavation when required. Such access must not be further than 6m from the point where any worker within the excavation is working.

The Principal Contractor must communicate, train and enforce safe work procedures pertaining to excavation work to his/her employees.

24. DEMOLITION WORK

(Construction Regulation 13)

The Principal Contractor must ensure that a detailed structural engineering survey is conducted by a competent person and a method statement on the procedure to be followed is provided to ACSA Safety.

The Principal Contractor must ensure that demolition work is conducted under the supervision of a competent person appointed in writing.

The Principal Contractor must ensure that safety precautionary measures stipulated in Asbestos Regulations is adhered to if demolition work involves asbestos material and that asbestos work is conducted under the supervision of a registered Asbestos Principal Contractor.

25. SCAFFOLDING

(Construction Regulation 16)

Access Scaffolding must be erected, used, and maintained safely in accordance with Construction Regulation 16 and SA Bureau of Standards Code of Practice, SANS 10085/1 entitled, "The Design, Erection, and Use & Inspection of Access Scaffolding.

Detailed consideration must be given to all scaffolding to ensure that it is properly planned to meet the working requirements, designed to carry the necessary loadings and maintained in a sound condition. It must also be ensured that there is sufficient material available to erect the scaffolding properly.

Scaffolding may only be erected, altered or dismantled by a person who has the appropriate training and experience in this type of work or under the supervision of such a person

Specific attention must be given to the appointment of Scaffolding Inspectors and Scaffolding Erectors who shall not be the same person. The continuous inspection of scaffolding structures must be recorded on the applicable Scaffold register.

Tagging/Signs reflecting the status of the scaffold must be always used and fixed to the structure. (Safe to use / Scaffold not Safe)

On completion of the erection, the Supplier will inspect the structure and will ensure it is in sound working order and complies with all statutory regulations. The Supplier will then issue a Handover Certificate, Drawings, design, and specifications shall be signed by a registered professional engineer.

An inspection of the completed scaffold shall also be inspected by the registered professional engineer for approval prior to use. Should any additional load i.e., a hoist or advertising banners be added to the scaffold at a later stage, the professional engineer must approve the modification.

26. SUSPENDED PLATFORMS

(Construction Regulation 17)

The Contractor to design, erect, use and maintain suspended platforms in accordance with the requirements of Construction Regulation 17.

27. EXPLOSIVE ACTUATED FASTENING DEVICES

(Construction Regulation 21)

Every Explosive Powered Tools (EPT) must be:

- Provided with a guard around the muzzle to confine flying fragments or particles
- A firing mechanism that will prevent the EPT from firing unless it is pushed against the surface and at a right angle (where the EPT is fitted with an intermediate piston between the charge and the nail this requirement is waived)
 - The Contractor or user must ensure that:
 - Only the correct type of cartridge is used (product specific)
 - The EPT is cleaned and inspected daily before use by an appointed competent person who maintains a register with the findings of his inspection and the details of cleaning, service and repairs
 - The safety devices are in good working order before the EPT is used
 - When the EPT is not being used it is stored in an unloaded condition together with the cartridges in a safe/secure place inaccessible to unauthorised persons
 - A warning notice is displayed at the point where the EPT is in use
 - The issue and return of cartridges must be controlled by maintaining the issue/returns register signed by both issuer and user and empty cartridge cases must be returned with unspent cartridges.
 - Users/operators of the EPT have received the necessary training and have been authorised as being competent to use/operate the EPT
 - Users/operators must wear the prescribed PPE whilst using/operating the tool

28. CRANES

(Construction Regulation 22)

A Crane permit must be obtained from ACSA and submitted before erection of crane.

A contractor must, in addition to compliance with the Driven Machinery Regulations, 1988 ensure that where tower cranes are used—

(a) they are designed and erected under the supervision of a competent person;

- (b) a relevant risk assessment and method statement are developed and applied;
- (c) the effects of wind forces on the crane are taken into consideration and that a wind speed device is fitted that provides the operator with an audible warning when the wind speed exceeds the design engineer's specification;
- (d) the bases for the tower cranes and tracks for rail-mounted tower cranes are firm, level and secured;
- (e) the tower crane operators are competent to carry out the work safely; and
- (f) the tower crane operators have a medical certificate of fitness to work in such an environment, issued by an occupational health practitioner in the form of Annexure 3.

29. LIFTING EQUIPMENT, TACKLE, MATERIAL HOIST AND CRANES

The Principal Contractor must ensure that all lifting equipment and tackle are inspected before use and a monthly register is completed by a competent person. Proof of such inspections must be recorded and kept on file for reference. The Principal Contractor must ensure that a safe working load is conspicuously displayed on lifting equipment and tackle and service certificate is provided prior commencement of work. The Principal Contractor must ensure operators are properly trained on how to

operate the above-mentioned equipment and a proof of competency is provided prior commencement of work.

The Principal Contractor must provide information on procedures to be followed in the case of:

- (a) Malfunctioning of equipment; and
- (b) Discovery of a suspected defect in the equipment

The Principal Contractor must ensure that safety measures stipulated in Driven Machinery Regulation and Construction Regulation with regard to above equipment are adhered to at all times.

30. CONSTRUCTION VEHICLES & MOBILE PLANT

(Construction Regulation 13)

Construction Vehicles and Mobile Plant may be inspected by ACSA prior to being allowed on a project site and suppliers of hired vehicles, plant and equipment will be required to comply with this specification as well as the OHS Act and Regulations.

Construction Vehicles and Mobile Plant (CV & MP) to be:

- of acceptable design and construction
- maintained in good working order
- used in accordance with their design and intention for which they were designed
- Operated/driven by trained, licensed competent and authorised operators/drivers. No unauthorised persons to be allowed to drive or operate CV & MP
- Operators and drivers of CV & MP must be in possession of a valid medical certificate declaring the operator/driver physically and psychologically fit to operate or drive CV & MP.
- fitted with adequate signalling devices to make movement safe including reversing
- excavations and other openings must be provided with sufficient barriers to prevent CV & MP from falling into same
- Provided with roll-over protection, appropriate seat fitted which shall be used during CV & MP operations.
- inspected daily before start-up by the driver/operator/user and the findings recorded in a register/logbook.
- CV & MP to be fitted with two head and two taillights whilst operating under poor visibility conditions, in addition they shall be equipped with 'hazard warning' lights, which must be used whenever the CV & MP is on site.
- No loose tools, material etc. is allowed in the driver/operators compartment/cabin nor in the compartment in which any other persons are transported
- CV & MP used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported
- Operators to be issued with Personal Protective Equipment as required and identified by the Risk Assessments
- Only licensed and road worthy vehicles will be allowed on the public roads

No person may ride on a CV & MP except in a safe place provided by the manufacturer for this purpose. The construction site must be organized to facilitate the movement of CV & MP so that pedestrians and other vehicles are not endangered. Traffic routes are to be suitable, sufficient in number and adequately demarcated.

CV & MP left unattended after hours adjacent to roads and areas where there is traffic movement must be fitted with lights reflectors or barricades to prevent moving traffic coming into contact with the parked CV & MP.

In addition, CV & MP left unattended after hours must be parked with all buckets, booms etc. fully lowered, the emergency brakes engaged and, where necessary, the wheels chocked, the transmission in neutral and the motor switched off and the ignition key removed and stored safely.

Workers employed adjacent to, or on public roads must wear reflective safety vests.

All CV & MP inspection records must be kept in the OH&S File.

31. ELECTRICAL INSTALLATIONS AND MACHINERY ON CONSTRUCTION SITES

(Construction Regulation 24)

The Principal Contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that—

- (a) before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- (b) all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- (c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- (d) all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- (e) all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

The Principal Contractor must ensure that prior notice is given to ACSA Electrical Department of any work involving electrical installation. A lock-out certificate must be issued to the relevant Principal Contractor. The Principal Contractor must ensure that a lock-out procedure is adhered to by his/her employees whenever required. The Principal Contractor must ensure that safety measures stipulated in the Electrical Installation Regulations, Machinery Regulations, General Machinery Regulations and Construction Regulations are adhered to at all times.

32. USE AND TEMPORARY STORAGE OF FLAMMABLE LIQUIDS ON CONSTRUCTION SITES

(Construction Regulation 25)

The Principal Contractor to ensure that:

- No person is required or permitted to work in a place where there is the danger of fire or an explosion due to flammable vapours being present.
- No flammable substance is used or applied e.g. in spray painting, unless in a room or cabinet or other enclosure specially designed and constructed for that purpose, unless due to imposed controls that the ventilation provided is sufficient to ensure that the Lower Explosive Limit and Lower Fire Limit are not exceeded. Furthermore, that the risk assessments are reviewed to ensure that all the related hazards have been addressed and that adequate P.P.E. is provided.
- The workplace is effectively ventilated. Where this cannot be achieved:
- Employees must wear suitable respiratory equipment
- No smoking or other sources of ignition is allowed into the area
- The area is conspicuously demarcated as "flammable materials"
- Flammables stored on a construction site are stored in a well-ventilated, reasonably fire-resistant container approved by the local Fire Department, cage or room that is kept locked with access control measures in place and sufficient firefighting equipment installed and fire prevention methods practised e.g. proper housekeeping
- Flammables stored in a permanent flammables store are stored so that no fire or explosion is caused i.e.: stored in a locked well-ventilated reasonably fire-

resistant container, cage or room conspicuously demarcated as "Flammable Store -No Smoking or Naked Lights"

- Adequate and suitable firefighting equipment installed around the flammables store and marked with the prescribed signs
- All electrical switches and fittings to be of a flameproof design, or where necessary, intrinsically safe.
- Any work done with tools in a flammables store or work areas to be of a non-sparking nature
- No Class A combustibles such as paper, cardboard, wood, plastic, straw etc. to be stored together with Flammables
- The flammable store to be designed and constructed so that in the event of spillage of liquids in the store, it will contain the full quantity + 10% of the amount liquid stored.
- Where the use of Bulk Storage facilities is contemplated, the contractor must ensure compliance to the local Authority bylaws.
- A sign indicating the capacity of the store to be displayed on the door
- Containers (including empty containers) to be kept closed to prevent fumes/vapours from escaping and accumulating in low lying areas
- Metal containers to be bonded to earth whilst decanting to prevent build-up of static electricity
- Welding and other flammable gases to be stored and segregated as to type of gas and empty and full cylinders
- All permanently installed storage facilities to comply with SANS 10089.

33. HOUSEKEEPING AND GENERAL SAFEGUARDING ON CONSTRUCTION SITES

(Construction Regulation 27)

The Principal Contractor must ensure that suitable housekeeping is continuously implemented on each construction site, including—

- (a) the proper storage of materials and equipment;
- (b) the removal of scrap, waste and debris at appropriate intervals;
- (c) ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- (d) ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- (e) ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
- (f) ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

The Principal Contractor must ensure that safety precautionary measures stipulated in Environmental Regulations for Workplaces and Construction Regulations and Construction Environmental Specification are adhered to at all times.

34. STACKING AND STORAGE ON CONSTRUCTION SITES

(Construction Regulation 28)

The Principal Contractor must ensure contractor must ensure that:

- (a) a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- (b) adequate storage areas are provided;
- (c) there are demarcated storage areas; and
- (d) storage areas are kept neat and under control a competent person is appointed in writing with a duty of supervising all stacking and storage on a construction work or site. A proof of such appointment must

be provided prior commencement of construction work. The Principal Contractor must ensure that stacking is conducted under supervision and good housekeeping is maintained at all times.

35. FIRE PRECAUTIONS ON CONSTRUCTION SITES

(Construction Regulation 29)

The Principal Contractor must ensure that:

- (a) all appropriate measures are taken to avoid the risk of fire;
- (b) sufficient and suitable storage is provided for flammable liquids, solids and gases;
- (c) smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- (d) in confined spaces and other places in which flammable gases, vapours or dust can cause danger—
 - (i) only suitably protected electrical installations and equipment, including portable lights, are used;
 - (ii) there are no flames or similar means of ignition;
 - (iii) there are conspicuous notices prohibiting smoking;
 - (iv) oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
 - (v) adequate ventilation is provided;
- (e) combustible materials do not accumulate on the construction site;
- (f) welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- (g) suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- (h) the fire equipment contemplated in paragraph (g) is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- (i) a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- (j) where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- (k) the means of escape is kept clear at all times;
- (l) there is an effective evacuation plan providing for all—
 - (i) persons to be evacuated speedily without panic;
 - (ii) persons to be accounted for; and
 - (iii) plant and processes to be shut down; and
- (m) a siren is installed and sounded in the event of a fire.

36. CONSTRUCTION EMPLOYEES' FACILITIES

(Construction Regulation 30)

A Contractor must provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

- (a) Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- (b) at least one sanitary facility for each sex and for every 30 workers;
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

A Contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

37. LADDERS

The Principal Contractor must ensure that all ladders are numbered, inspected before use and monthly inspections are recorded in a register. The Principal Contractor must ensure that a competent person who carries the above inspections is appointed in writing.

38. PRESSURE EQUIPMENT

The Principal Contractor must ensure that pressure equipment is identified, numbered and entered in a register. Furthermore he/she must ensure that inspections are carried out and certificates of testing are available and kept on file as per the Regulations.

39. EMPLOYEES EXPOSED TO EXCESSIVE NOISE

The Principal Contractor must ensure that all employees exposed to excessive noise, equal or above 85 dB(A), have undergone a baseline audiometric test prior commencement of construction work and SABS approved ear protection is provided and worn at all times.

40. PUBLIC SAFETY AND SECURITY

The Principal Contractor must ensure that notices and signs are conspicuously displayed at the entrance and along the perimeter fence indicating "No Unauthorized Entry", "Visitors to report to office", "helmet and safety shoes" etc.

Health and safety signage must be well maintained throughout the project. This must entail cleaning, inspection and replacement of missing or damaged signage.

Furthermore, the Principal Contractor must ensure that:

- a) Nets, canopies, fans etc. are provided to protect the public passing or entering the site
- b) A security guard is provided where necessary and provided with a way of communication and an access control measures or register is in place
- c) All visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site.

41. NIGHT WORK

The Principal Contractor must ensure that necessary arrangements have been made with ACSA before conducting any night work and that there is adequate lighting for any work to be conducted and failure to do so will result in work being stopped.

42. HOT WORK

The Principal Contractor must ensure that ACSA Fire & Rescue Department is notified of any hot work to be conducted during construction work. A hot work permit accompanied with a gas free certificate must be issued to the relevant Principal Contractor by ACSA Fire & Rescue Department when satisfied that the area is safe and that the Principal Contractor understands the procedure. The Principal Contractor must ensure that a hot work procedure is adhered to at all times by his/her employees.

43. HIRED PLANT AND MACHINERY

The Principal Contractor must ensure that any hired plant and/or machinery brought to site is inspected by a competent person before use and records confirming that it is safe for use are provided prior usage of such equipment. Such plant or machinery complies at all times with the requirements of the Occupational Health & Safety Act.

The Principal Contractor must ensure that hired operators receive induction prior commencement of work and that said hired operators have proof of competency.

The Principal Contractor must provide information on procedures to be followed in the case of:

- (a) Malfunctioning of equipment; and
- (b) Discovery of a suspected defect in the equipment

44. ROAD CONSTRUCTION WORK

The Principal Contractor must ensure that construction work conducted on the public road all necessary caution signage, cones, flag man etc. are provided as stipulated in the Road Traffic Ordinance is adhered to. The caution signage to be conspicuously displayed to warn the drivers of any construction work ahead must be provided at least at 75 m away from the cones; flag man; actual construction work etc.

45. EDGE PROTECTION AND PENETRATION

The Principal Contractor must ensure that all exposed edges and floor openings are guarded and demarcated at all times until permanent protection has been erected. Guardrails used for edge protection must be 500mm and 900mm apart (double railing) above the platform/ floor surface.

The Principal Contractors fall protection plan must include the procedure to be followed regarding the management of edge protection and penetration.

46. BATCH PLANTS

Should a batch plant be used, it must conform to the requirements as set out on Construction Regulation (February 2014) of OHS Act 85/93. These must include but not limited to appointment of a competent person to operate and supervise batch plant operations.

47. CONFINED SPACE ENTRY

The Principal Contractor must ensure that all necessary health and safety provisions prescribed in the General Safety Regulations are complied with when entering confined spaces.

48. LIQUOR, DRUGS, DANGEROUS WEAPONS, FIREARMS

The Principal Contractor must ensure that no person is allowed on site that appears to be under the influence of intoxicating liquor or drugs.

The Principal Contractor must encourage his/her workforce to disclose the medication that poses a health and safety threat towards his/her fellow employees. No person must be allowed to enter the site and work

if the side effects of such medication do constitute a threat to the health or safety of the person concerned or others at such workplace.

No dangerous weapons or firearms allowed on the construction site.

49. INTERNAL/EXTERNAL AUDITS

The Principal Contractor must conduct monthly safety, health and environment audits and such records must be kept on site. The Principal Contractor must ensure that corrective measures are taken to ensure compliance.

ACSA must conduct monthly audits and defects noted must be reported to the relevant Principal Contractor for remedial action. Inspections must be conducted by ACSA and non-conformances noted must be recorded and provided to the relevant Principal Contractor for remedial action. ACSA must stop any Principal Contractor from executing any construction work which is not in accordance with the health and safety plan.

The Principal Contractor must ensure that all necessary documents stipulated in this document are kept on the health and safety file and made available when requested.

50. PENALTIES

Penalties will be imposed by ACSA on Principal Contractors who are found to be infringing these specifications, legislation and safety plans.

The Principal Contractor will be advised in writing of the nature of the infringement and the amount therefor. The Principal Contractor must determine how to recover the fine from the relevant employee and/or sub-contractor. The Principal Contractor must also take the necessary steps (e.g. training) to prevent a recurrence of the infringement and must advise ACSA accordingly. The Principal Contractor is also advised that the imposition of penalties does not replace any legal proceedings.

Penalties will be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by the ACSA SHE Representative, and will be final. In

addition to the penalties, the Principal Contractor must be required to make good any damage caused as a result of the infringement at his/her own expense.

The preliminary list below outlines typical infringements against which ACSA may raise penalties; however, this list must not be construed as final:

- Failure to keep a copy of OHSACT on site.
- Failure to maintain an up-to-date letter of good standing with the Compensation Commissioner / FEM.
- Working on site without attending Safety Induction Training.
- Failure to conduct Safety Induction for personnel and visitors on site.
- Failure to issue and wear Personal Protective Clothing and Equipment.
- Failure to fully stock first aid box in accordance to the risks identified.
- Failure to disclose or report first aid cases and /or minor/major/fatalities as prescribed by the OHSACT.
- Failure to adhere to written safe work procedure as stipulated in the Hazard Identification and Risk Assessment and safety plan.
- Failure to maintain records and registers as per the OHS Act of 1993 and its regulations.
- Failure to conduct audits and inspections as required by legislation.
- Keeping un-serviced fire equipment on site.
- Failure to make use of ablution facilities.
- Failure to remove personnel on site who appears to be under the influence of intoxicating liquor or drugs.
- Failure to close out previously raised non-conformances.
- Failure to make and update legislative appointments.
- Failure to adhere to the OHS Act of 1993 and its regulations.

I, _____ (name & surname) of

_____ (company) Upon receipt of this specification, agree and acknowledge ACSA's right to impose penalties should I or any of my employees or contractors fail to comply with these conditions.

Signed: _____

On this date: _____ (dd/mm/yyyy)

At: _____ (Airport Name)

Annexure C5.2: OCCUPATIONAL HEALTH AND SAFETY MANDATARY AGREEMENT

AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH & SAFETY ACT (ACT 85 OF 1993), AS AMENDED & CONSTRUCTION REGULATION 5.1(k)

OBJECTIVES

To assist Airport Company South Africa (ACSA) in order to comply with the requirements of:

1. The Occupational Health & Safety (Act 85 of 1993), as amended and its regulations and
2. The Compensation for Occupational Injuries & Diseases Act (Act 130 of 1993) also known as the (COID Act).
3. Construction Regulations 2014

To this end an Agreement must be concluded before any contractor/ subcontracted work may commence

The parties to this Agreement are:

Name of Organisation: AIRPORTS COMPANY SOUTH AFRICA "ACSA"
Physical Address: Airport Company South Africa Western Precinct, Aviation Park, O.R. Tambo International Airport, 1 Jones Road, Kempton Park, Gauteng, South Africa, 1632 P O Box 75480, Gardenview, Gauteng, South Africa, 2047

Hereinafter referred to as "Client"

Name of organisation:
Physical Address

Hereinafter referred to as "the Mandatary/ Principal Contractor"

MANDATARY'S MAIN SCOPE OF WORK

1. Definitions

- 1.1 "Mandatary" is defined as an agent, a principal contractor or a contractor for work, or service provider appointed by the Client to execute a scope of work on its behalf, but WITHOUT

DEROGATING FROM HIS/HER STATUS IN HIS/HER RIGHT AS AN EMPLOYER or user of the plant.

1.2 "Client" refers to ACSA;

1.3 "Parties" means ACSA and the Contractor, and "Party" shall mean either one of them, as the context indicates;

1.4 "Services" means the services provided by the Contractor or Stakeholder to ACSA;

1.5 "Stakeholder" refers to companies conducting business at ACSA premises or within close proximity where there is an interface with ACSA operations;

1.6 "The OHS Act" refers to Occupational Health and Safety Act 85 of 1993, as amended;

"The COIDA Act" refers to Compensation for Occupational Injuries and Diseases Act 61 of 1997, as amended; and

1.7 "SHE" means Safety, Health and Environment.

GENERAL INFORMATION FORMING PART OF THIS AGREEMENT

- a) The Occupational Health & Safety Act comprises of SECTION 1-50 and all unrepealed REGULATIONS promulgated in terms of the former Machinery and Occupational Safety Act No.6 of 1983 as amended as well as other REGULATIONS which may be promulgated in terms of the Act and other relevant Acts pertaining to the job in hand.
- b) Section 37 of the Occupational Health & Safety Act potentially punishes Employers for unlawful acts or omissions of Mandatories where a Written Agreement between the parties

- has not been concluded containing arrangements and procedures to ensure compliance with the said Act BY THE MANDATORY.
- c) All documents attached or refer to in the above Agreement form an integral part of the Agreement.
 - d) To perform in terms of this agreement Mandatories must be familiar and conversant with the relevant provisions of the Occupational Health & Safety Act 85 of 1993 (OHS Act) and applicable Regulations.
 - e) Mandatories who utilise the services of other contractors must conclude a similar Written Agreement with those companies.
 - f) Be advised that this Agreement places the onus on the Mandatory to contact the CLIENT in the event of inability to perform as per this Agreement.
 - g) This Agreement shall be binding for all work the Mandatory undertakes for the Client and remains in force for the duration of the contracted period as per Main Contract signed by both parties.
 - h) The contractor shall submit all necessary documentation as per SHE File Index to the Client seven days prior to starting with any work,.

THE UNDERTAKING

The Mandatory undertakes to comply with:

2. REPORTING

The Mandatory and/or his / her designated person shall report to the Client prior to commencing any work at the airports as well as when the activities change from the original scope of work.

3. WARRANTY OF COMPLIANCE

- 3.1 In terms of this agreement the Mandatory warrants that he / she agrees to the arrangements and procedures as prescribed by the Client and as provided for in terms of Section 37(2) of the OHS Act for the purposes of compliance with the Act.
- 3.2 The Mandatory further warrants that he / she and / or his / her employees undertake to maintain such compliance with the OHS Act. Without derogating from the generality of the above, or from the provisions of the said agreement, the Mandatory shall ensure that the clauses as hereunder described are at all times adhered to by himself / herself and his / her employees.
- 3.3 The Mandatory hereby undertakes to ensure that the health and safety of any other person on the premises is not endangered by the conduct of his / her activities and that of his / her employees.

4. SHE Risk Management

- 4.1 The Mandatory shall ensure that a baseline risk assessment is performed by a competent person before commencement of any work in the Client's premises. A baseline risk assessment document will include identification of hazards and risk, analysis and evaluation of the risks and hazards identified, a documented plan and safe work procedures to mitigate, reduce or control the risks identified, and a monitoring and review plan of the risks and hazards.
- 4.2 The Mandatory shall review the risk registers as and when the scope of work changes and keep the latest version on the SHE File.

5. MEDICAL EMERGENCY RESPONSE

The Mandatory shall submit a detailed emergency response procedure to the Client OHS Department as part of the SHE File prior to start of work. The procedure shall stipulate how the Mandatory intends to attend to medical emergencies. In the sites where the Client has onsite clinic services, the medical staff can provide first line response and stabilise the patient however the Mandatory shall then activate its own

medical response procedure and transport the patient to the medical facilities for further medical attention.

6. APPOINTMENTS AND TRAINING

- 6.1 The Mandatary shall appoint competent persons as per Section 16(2) of the OHS Act. Any such appointed person shall be trained on any occupational health and safety matter and the OHS Act provisions pertinent to the work that is to be performed under his / her responsibility. Copies of any appointments and certificates made by the Mandatary shall immediately be provided to the Client.
- 6.2 The Mandatary shall at the beginning of the project or activities where there are 5 people and more people working appoint a full time dedicated Health and Safety resource whom will be dedicated to the project to ensure that Safety, Health and Environmental Requirements are met at all times. The allocated resource shall be based where the project is undertaken for the duration of the project or scope of work execution. The resource shall be trained and qualified on Occupational Health and Safety matters and the OHS Act provisions pertinent to the work that is to be carried out.
- 6.3 The Mandatary shall further ensure that all his / her employees are trained on the health and safety aspects relating to the work and that they understand the hazards associated with such work being carried out on the airports. Without derogating from the foregoing, the Mandatary shall, in particular, ensure that all his / her users or operators of any materials, machinery or equipment are properly trained in the use of such materials, machinery or equipment.
- 6.4 Notwithstanding the provisions of the above, the Mandatary shall ensure that he / she, his / her appointed responsible persons and his / her employees are at all times familiar with the provisions of the OHS Act, and that they comply with the provisions of the Act.
- 6.5 The Mandatary shall at all material times be responsible for all costs associated with the performance of its own obligations and compliance with the terms of this Agreement, unless otherwise expressly agreed by the Parties in writing.

7. SUPERVISION, DISCIPLINE AND REPORTING

- 7.1 The Mandatary shall ensure that all work performed on the Clients premises is done under strict supervision and that no unsafe or unhealthy work practices are permitted. Discipline regarding health and safety matters shall be strictly enforced against any of his / her employees regarding non-compliance by such employee with any health and safety matters.
- 7.2 The Mandatary shall further ensure that his / her employees report to him / her all unsafe or unhealthy work situations immediately after they become aware of the same and that he / she in turn immediately reports these to the Client within 48 hours with the action taken to mitigate the risk.
- 7.3 Where the hazard or risk identified is the responsibility of the Client to action, the Mandatary shall notify the Client OHS and Safety Department within 24 hours of becoming aware of the hazard or risk for prompt action to mitigate.

8. COOPERATION

- 8.1 The Mandatary and his/her employees shall provide full co-operation and information if and when the Client or his / her representative enquires into occupational health and safety issues concerning the Mandatary. It is hereby recorded that the Client and his / her representative shall at all times be entitled to make such an inquiry.
- 8.2 Without derogating from the generality of the above, the Mandatary and his / her responsible persons shall make available to the Client and his / her representative, on request, all and any

checklists and inspection registers required to be kept by him / her in respect of any of his / her materials, machinery or equipment and facilities.

9. WORK PROCEDURES

- 9.1 The Mandatary shall, after having established the dangers associated with the work performed, develop and implement mitigation measures to minimize or eliminate such dangers for the purpose of ensuring a healthy and safe working environment.
- 9.2 The Mandatary shall then ensure that his / her responsible persons and employees are familiar with such mitigation measures. This includes the lock out tag out processes relating to the use of machinery.
- 9.3 The Mandatary shall implement any other safe work practices as prescribed by the Employer and shall ensure that his / her responsible persons and employees are made conversant with and adhere to such safe work practices.
- 9.4 The Mandatary shall ensure that work for which a permit is required by the Employer or any statute is not performed by his / her employees prior to the obtaining of such a permit.

10. HEALTH AND SAFETY MEETINGS

- 10.1 OHS Act requires that Health and Safety Committees be established in case where employee count exceeds 20 onsite, however due to the duration and the nature of the scope of work executed by the contractors and stakeholders enforces that regardless of employees at the airports. The Mandatary shall establish his / her own health and safety committee(s) and ensure that his / her employees, being the committee members, hold health and safety representatives to attend the Employer's health and safety committee meetings on monthly basis or quarterly whichever is applicable as per contractor requirement.
- 10.2 The Mandatary Section 16(2) appointed and SHE resource shall attend the Client SHE meetings as per the schedule communicated. In cases where the Mandatary delegated resources are not able to attend the meeting, an apology shall be submitted to the Client OHS Manager 24 hours before the meeting. An alternative representative shall be deployed to attend the meeting on the half of the Mandatary.
- 10.3 The Mandatary appointed Section 16(2) and SHE resource shall not skip more than three SHE Committee meetings a year.

11. COMPENSATION REGISTRATION/INSURANCE

- 11.1 The Mandatary warrants that all their employees and/or their contractor's employees if any are covered in terms of the COID Act, which shall remain in force whilst any such employees are present on the Client's premises. A letter is required prior commencing any work on site confirming that the Principal contractor or contractor or stakeholder is in good standing with the Compensation Fund or Licensed Insurer.
- 11.2 The Mandatary warrants that they are in possession of the following insurance cover, which cover shall remain in force whilst they and /or their employees are present on the Client's

premises, or which shall remain in force for that duration of their contractual relationship with the Client, whichever period is the longest.

11.3 The Mandatary shall provide the Client with Public Liability Insurance Cover as required by the Main Contract

11.4 Any other Insurance cover that will adequately makes provision for any possible losses and/or claims arising from their and /or their Subcontractors and/or their respective employee's acts and/or omissions on the Client's premises.

11.5 The Mandatary shall send updated Letter of Good Standing to the Client as and when the Mandatary receives it to ensure that the most valid version is available.

12. MEDICAL EXAMINATIONS

12.1 The Mandatary shall ensure that all his / her employees undergo routine medical examinations and that they are medically fit for the purposes of the work they are to perform.

12.2 Copies of such medical fitness certificates shall be made available to Client as part of the SHE file for review to ensure that they have been conducted by a reputable Occupational Health Practitioner registered with Health Professions Council of South Africa (HPCSA) as a doctor and specialist Occupational Medical Practitioner. Any other additional medical assessment shall be conducted in line with risk exposures.

12.3 Standard (Basic) medical tests shall constitute the following assessments as minimum:

- Individual's history of general and previous occupational health
- Comprehensive physical examination for evaluation of systemic function
- Blood Pressure Measurement
- Weight, Height and Body Mass Index
- Urine screening
- Drug screening
- Audio screening
- Lung Function Test
- Keystone eye test
- Work at Height Questionnaire
- Muscular skeletal questionnaire

13. INCIDENT REPORTING AND INVESTIGATION

13.1 All Safety, Health and Environmental Incidents shall be reported to the Client OHS and Safety Department within two hours from the time of occurrence via a phone call, sms or email or before end of shift. This shall be followed by a formal report in a form of a preliminary report within forty eight (48) hours.

13.2 All incidents referred to in Section 24 of the OHS Act shall be reported by the Mandatary to the Department of Labour and copies of such reporting to be sent to the Client. The Mandatary

shall further provide with copies of any written documentation and medical reports relating to any incident.

13.3 The Client retains an interest in the reporting of any incident as described above as well as in any formal investigation and/or inquiry conducted in terms of section 32 of the OHS-Act into such incident.

13.4 The Client reserves a right to hold its own investigation into any incident where it deems it is not satisfied with the incident investigation or where the severity of the incident is fatal or damage beyond a value of R1 million and above.

14. SUBCONTRACTORS

14.1 The Mandatary shall notify the Client of any subcontractor he / she may wish to source to perform work on his / her behalf on the Client premises. It is hereby recorded that all the terms and provisions contained in this clause shall be equally binding upon the subcontractor prior to the subcontractor commencing with the work. Without derogating from the generality of this paragraph:

14.2 The Mandatary shall ensure that the sub-contractor meets all the requirements and is competent for the scope of work contracted for. This includes that approval of the SHE file, SHE Plans associated with the work.

15. SECURITY AND ACCESS

The Mandatary shall request and familiarise its employees with the Client security rules which is not included in this agreement.

16. FIRE PRECAUTIONS AND FACILITIES

16.1 The Mandatary shall ensure that all his / her employees are familiar with fire precautions at the site(s), which includes fire-alarm signals and emergency exits, and that such precautions are adhered to.

16.2 This includes participating on planned and unplanned emergency drills organised the Client.

17. FACILITIES

The Mandatary shall have a program to upkeep and maintain the facilities leased out to it by the Client as stipulated on lease agreement.

18. HYGIENE AND CLEANLINESS

The Mandatary shall ensure that the work site, ablution, offices and surround area is at all times maintained to the reasonably practicable level of hygiene and cleanliness. In this regard, no loose materials shall be left lying about unnecessarily and the work site shall be cleared of waste material regularly and on completion of the work.

19. INTOXICATION AND SUBSTANCE ABUSE

19.1 Entry to the airside is subjected to Aviation Safety Requirements in line with Client Substance Abuse Policy. No intoxicating substance of any form shall be allowed on site where airside or land side. Any person suspected of being intoxicated shall not be allowed on the site.

Any person required to take medication shall notify the relevant responsible person thereof, as well as the potential side effects of the medication.

- 19.2 The Client reserves a right to do substance abuse testing and main entry points for the Mandatory employees.
- 19.3 Intoxication limits shall be adhered to as stipulated on Client Substance Abuse Policy.
- 19.4 Records of substance abuse testing shall be filed on the SHE File and made available to the Employer on request.

20. PERSONAL PROTECTIVE EQUIPMENT

- 20.1 The Mandatory shall ensure that his / her responsible persons and employees are provided with adequate personal protective equipment (PPE) for the work they may perform and in accordance with the requirements of General Safety Regulation 2 (1) of the OHS Act. The Mandatory shall further ensure that his / her responsible persons and employees wear the PPE issued to them at all times.
- 20.2 The Mandatory shall monitor compliance to PPE of his/her own employees at all times, The Client can at its discretion conduct random PPE compliance inspections and these can be recorded officially on the Client non-conformance reporting tool.
- 20.3 The Mandatory shall keep records PPE Control cards of each employee those shall be kept on SHE File.

21. PLANT, MACHINERY AND EQUIPMENT

- 21.1 The Mandatory shall ensure that all the plant, machinery, equipment and/or vehicles he / she may wish to utilize on the Client premises is/are at all times of sound order and fit for the purpose for which it/they is/are attended to, and that it/they complies/comply with the requirements of Section 10 of the OHS Act.
- 21.2 Where the Mandatory's equipment interfaces to the Client's equipment's, a joint risk assessment shall be conducted by the Mandatory and the Client OHS department in order for the risks to be mitigated prior to the use of such equipment's. It is the responsibility of the Mandatory to notify the Client OHS department of such equipment's and machinery.
- 21.3 In accordance with the provisions of Section 10(4) of the OHS Act, the Mandatory hereby assumes the liability for taking the necessary steps to ensure that any article or substance that it erects or installs at the sites, or manufactures, sells or supplies to or for the Client, complies with all the prescribed requirements and will be safe and without risks to health and safety when properly used.

22. USAGE OF THE CLIENT'S EQUIPMENT

- 22.1 The Mandatory hereby acknowledge that his / her employees are not permitted to use any materials, machinery or equipment of the Employer unless the prior written consent of the Client has been obtained, in which case the Mandatory shall ensure that only those persons authorized to make use of same, have access thereto.
- 22.2 The Client shall ensure that it isolates and apply LOTO on any equipment's and machinery where there is an unexpected start up or flow of energy. The Mandatory has a

responsibility to apply its own LOTO procedures before starting with work and post the use of the equipment and machinery.

23. PERMIT MANAGEMENT

23.1 The Mandatary shall ensure that work for which the issuing of permit to work is required shall not be performed prior to the obtaining of a duly completed approved permit by the Client or relevant Authority.

23.2 In the context of the Client, the following activities are regarded as high risk activities and a permit to work shall be obtained prior to starting with the activities at any site:

- Cold Works Permit
- Hot Work Permit
- Confined Space Entry Permit
- Work At Heights Permit

24. TRANSPORTATION

24.1 The Mandatary shall ensure that all road vehicles used on the sites are in a roadworthy condition and are licensed and insured. All drivers shall have relevant and valid driving licenses and vehicle shall carry passengers unless it is specifically designed to do so. All drivers shall adhere to the speed limits and road signs on the premises at all times.

24.2 No employees on premises permitted in back of LDV (bakkie) and in front of LDV each driver and passenger must have a separate seat belt.

24.3 In the event that any hazardous substances are to be transported on the premises, the Mandatary shall ensure that the requirements of the Hazardous Substances Act 15 of 1973 are complied with fully all times.

25. CLARIFICATION

In the event that the Mandatary requires clarification of any of the terms or provisions of this agreement, he / she should contact the Client OHS Department.

26. DURATION OF AGREEMENT

This agreement shall remain in force for the duration of the work to be performed by the Mandatary and/or while any of the Mandatary's employees are present on the Client site.

27. NON COMPLIANCE WITH THE AGREEMENT

If Mandatary fails to comply with any provisions of this agreement, the Client shall be entitled to give the Fourteen (14) days' notice in writing to remedy such non-compliance and if the Mandatary fails to comply with such notice, then the Client shall forthwith be entitled but not obliged, without prejudice to any other rights or remedies which the Mandatary may have in law,

- ❖ Apply penalties as stipulated on the matrix below; or
- ❖ to claim immediate performance and/or payment of such obligations.
- ❖ Should Mandatary continue to breach the contract on three occasions for the same deviation, then the Client is authorised to suspend the main contract without complying with the condition stated in clause above.

28. INDEMNITY

The Mandatary hereby indemnifies the Client against any liability, loss, claims or proceedings whatsoever, whether arising in Common Law or by Statute; consequent personal injuries or the death of any person whomsoever (including claims by employees of the Mandatary and their dependents); or consequent loss of or damage to any moveable or immoveable property arising out of or caused by or in

connection with the execution of the Mandatary's contract with the Client, unless such liabilities, losses, claims or proceedings whatsoever are attributable to the Client's faults. The Mandatary or his/her employees is liable to prove without reasonable doubt that the loss is due to the Client's fault or negligence.

COMPLIANCE WITH THE OCCUPATIONAL HEALTH & SAFETY ACT 85 OF 1993

The Mandatary undertakes to ensure that they and/or their subcontractors if any and/or their respective employees will at all times comply with the following conditions:

- a) All work performed by the Mandatary on the Client's premises must be performed under the close supervision of the Mandatary's employees who are to be trained to understand the hazards associated with any work that the Mandatary performs on the Client's premises.
- b) The Mandatary shall be assigned the responsibility in terms of Section 16(1) of the OHS Act 85 of 1993, if the Mandatary assigns any duty in terms of Section 16(2), a copy of such written assignment shall immediately be forwarded to the Client.
- c) The Mandatary shall ensure that he/she familiarise himself/herself with the requirements of the OHS Act 85 of 1993 and that s/he and his/her employees and any of his subcontractors comply with the requirements.

29. FURTHER UNDERTAKING

Only a duly authorised representative appointed in terms of Section 16.2 of the OHS Act is eligible to sign this agreement on behalf of the Mandatary. The signing power of this representative must be designated

in writing by the Chief Executive Officer of the Mandatary. A copy of this letter must be made available to the Client.

ACCEPTANCE BY MANDATARY

In terms of section 37(2) of the Occupational Health & Safety Act 85 of 1993 and section 5.1(k) of the Construction Regulations 2014,

Ia duly authorised 16.2 Appointee acting for and on behalf of(company name) undertake to ensure that the requirements and the provision of the OHS Act 85 of 1993 and its regulations are complied with.

Mandatary – WCA/ Federated Employers Mutual No.....

Expiry date

SIGNATURE ON BEHALF OF MANDATARY
(Warrant his authority to sign)

DATE

Witnesses:

1. _____

2. _____

SIGNATURE ON BEHALF OF THE CLIENT
AIRPORT COMPANY SOUTH AFRICA

DATE

Witnesses:

3. _____

4. _____

Annexure C5.3: ACSA Baseline Hazard identification risk assessment (HIRA)

Baseline Risk Assessment	
Project Name	Construction of Ground Support Equipment Workshops at Cape Town International Airport
Document Number: HIRA 1	Revision Number: 001

1. Risk assessment of the Project

Risk Severity Definition	Description: Consequences (can lead to)...	Examples of what to look out for...
Category A Catastrophic	One or more multiple deaths and complete loss or destruction of equipment	A major accident
Category B Hazardous	Serious injuries or minor equipment damage	Large reduction in safety margins, a reduction in the ability of the operators cannot be relied upon to perform their tasks accurately or completely
Category C Major	Minor injuries or minor equipment damage	A significant reduction in safety margins, a reduction in the ability of the operators to cope with adverse operating conditions as a result of conditions impairing their efficiency.
Category D Minor	Incidents	Operating limitations are breached. Procedures are not used correctly.
Category E Negligible	Negligible or inconvenience	Few consequences, No safety consequences. Nuisance

2. Generic Hazard Assessment of the Project

Likelihood Probability	Description	Examples of what to look out for...
Category 1	Extremely Improbable (Rare)	Almost inconceivable that the event shall occur
Category 2	Improbable (Seldom)	Very unlikely that the event shall occur. It is not known that it has ever occurred before
Category 3	Remote (Unlikely)	Unlikely but could possibly occur. Has occurred rarely.
Category 4	Occasional	Likely to occur sometimes. Has occurred infrequently.
Category 5	Frequent	Likely to occur many times or regularly. Has occurred frequently or regularly

		Catas-trophic	Hazardous	Major	Minor	Negligible
		A	B	C	D	E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely Improbable	1	1A	1B	1C	1D	1E

Required to Complete a Generic Hazard Assessment of the Project

Generic Hazard	Specific component of Hazard	Hazard related consequence	Existing defences to control risk	Safety Risk Index
Site establishment	Delivering of containers and materials; increased vehicle movements and location of services	Operational disruptions, incidents and service disruptions	Site plan location requires prior approval, services to be identified by ACSA representatives and drivers to be competent and vigilant of other road users. Vehicle inspections are to be conducted daily	2D
Site Access	Access is to be controlled and movement of vehicles and staff are to be monitored to reduce impact on operations	Injuries to Airport users, traffic build up, operational delays, vehicle incidents	Site is to be access controlled. All visitors to site are to report to the site office. Entrance to site camp is to be kept clean, swept after truck deliveries to minimize impact to operations.	2D
Persons on airside	Accidents and injuries	Injury to persons/Fatality	All staff wishing to work on the Airside are to go for Airside induction training. These staff members are to have valid Permits with them at all times. Personal protective equipment required for Airside includes but is not limited to high visibility jackets (as per the procedure, hearing protection, safety shoes & hard hats (if required). An airside safety plan must be submitted before commencement of work.	3A

Vehicles on airside	Accidents and injuries	Damage to aircraft/vehicles/property/persons	All vehicles operating on the Airside are to be fitted with a strobe light, appropriate signage in the form of a prefix, have the necessary vehicle permit in place, to be fitted with a fire extinguisher and is to be serviceable. Vehicles are to be checked by Airside Safety prior to be granted Airside access	4A
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Driving on airside	Incidents	Damage to aircraft/ vehicles/propert y/ persons	Airside induction is required for all persons entering the Airside. For persons wishing to drive on the Airside Service Road an AVOP 2 permit is required. Where work is to be conducted on the Airfield, then contractors are required to be under escorts or have undergone Radio Licence training and be in the possession of an AVOP 3 permit. The speed limit on the Apron Service Roads is 30km/h, 15km/h at the back of stand and 60km/h on the Perimeter Road. During period of Low Visibility (LVP) will be effected and no vehicular movements are allowed on the Airfield. Low visibility procedures will be in place	4A
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Driving on runways and taxiways without permission	Incursion (include definition)	Collision with aircraft/property damage or fatality/ies	Runway and taxiway markings are indicated as per ICAO Annex 14. Permission is required from Air Traffic Control when crossing runways and taxiways. Signage indicating movement areas are painted on the ground or by means of illuminated signage boxes. Only persons in possession of a valid Airside Vehicle Operators Permit with the necessary radio licence (Partac training) will be permitted to drive in restricted areas. Vehicles under escort must follow at reasonable distance.	3A
Noise	Health Risks	Noise induced hearing loss	Baseline and annual audiograms are to be conducted. Contractors are to implement a hearing conservation programme and issue staff with hearing protection and provide the necessary training in this regard. Contractors to identify noisy operations in passenger areas and are to conduct noise generating operations at off peak times where possible or if unavoidable with ACSA's Project Leaders written permission.	3B
Jet blast	Potential injuries and property	Damage to vehicles/property/persons	Signage warning against jetblast is installed at high-risk areas. Risks associated with jetblast are covered during Airside Induction Training. Caution to be taken around aircraft when the anti-collision lights are activated in the Apron bays. 75 meter clearance behind aircraft to be observed to prevent jetblast. Contractors to be aware of aircraft movements	4C

Perimeter fence breach	Security risk	National Key Point Violation	Access and egress points are strictly enforced. Contractors are only to use the entry points as provided by the ACSA Project Leader. No materials are to be stored within 3meter of the perimeter fence.	3B
Crane operations	Height of crane	Flight path obstruction/collision with aircraft	30 meter height restriction procedure – refer to Airfield Operation Department for further information	2A
Weather	Adverse weather conditions	Damage to aircraft/vehicles/equipment	Weather warnings are issued by the Airside Safety Department as and when required. All equipment on the Airside is to be secured	4A
Construction works	Foreign Object Debris (FOD)	Ingestion into aircraft engine	Airside induction is required for all staff working on the Airside, FOD bins are to be used for any FOD found lying on the ground. All waste to be secured to prevent it from becoming airborne (refer to Environmental Terms and Conditions)	4B
Construction works	Working at Height	Injury /fatality	Fall protection plan to be devised by the contractors in line with the Construction Regulations 2014. Rescue plans are to be included	3A
Construction works	Storage of hazardous chemicals substances	Contamination/fire/ injury to persons/ environmental impact	ACSA's Environmental terms and conditions are to be adhered to. All relevant legislation and bylaws are to be adhered to. All necessary permits are to be applied for by the contractor such as transport permits, possession permits and flammable certificates. ACSA Environment and Fire and Rescue to be notified where a spill occurs.	4B
Construction works	Waste	Attracts rodents and birds which leads to bird strikes and adds to FOD	Waste management to be implemented in line with ACSA's Environmental Terms and Conditions	4B

Construction works	Spillages (fuels/oils/hydraulics/chemicals/human waste)	Contamination/Pollution/injury to persons/adverse health effects	ACSA's Environmental terms and conditions and applicable legislative controls are to be adhered to. ACSA Environment and Fire and Rescue to be notified where a spill occurs	4B
Construction works	Dust	Damage to aircraft/injury to persons/adverse health effects/	Dust suppression measures are to be implemented and PPE used where required	4A
Construction works/ Trenching	Damage to underground services. Interruption of critical services	Electrocution, loss of critical services, damage to property, major injuries, aircraft diversions	Consult as-built plans. Scan area before trenching. Trenching to be done under competent supervision.	4A
Delivery of materials	Falling materials or stones or sand	Vehicle/pedestrian accidents	Materials are to be delivered within specified time frames, flagman to be utilised during deliveries, load limitations to be observed, netting is to be used, contractors to clean road after deliveries	4E
Lack of signage – warning signs	Injuries and accidents	Injuries and accidents	Contractors to install sufficient demarcations around construction sites along with the necessary warning signs and beacon lights (refer to Construction Regulations and Traffic Act) No signs are to be removed without prior permission and notification. Temporary way finding signage is required if signage has been disturbed	2D
Road crossing Central Boulevard	Not using the tunnel for crossing	Vehicle and pedestrian accidents	Contractor staff are to cross the Boulevard via the North or South tunnels	4B
Waste management	Environmental impact	Illegal dumping	Temporary laydown areas to be identified and no illegal dumping is permitted.	3C

Trolleys	Damaging trolleys through misuse	Injuries and property damage	Contractors to provide their own trolleys. ACSA's trolleys are for passenger use only	5D
Golf carts	Misuse of golf carts	Injuries and property damage	Contractor staff to be aware of golf cart movements on the Landside. Golf cart use for airport users only and not for contractor use for transporting materials. Golf cart operate in predetermined routes – contractors to be aware thereof	3D
Fire equipment	Use and abuse of fire equipment	Injuries and property damage	Fire equipment is only to be used during emergencies. Contractors to provide their own fire equipment. No materials to be stored in ACSA fire cabinets. Emergency exits are to be kept clear at all times	2B
Unattended bags	Security risk	injuries/fatality to Airport users/stakeholders/ACSA employees. Bomb threat-damage to property, vehicle. Operational disruptions	Contractors are not permitted to leave bags unattended as they will be removed and will be handed to SAPS	5C
Speed limits	Car accidents	Injuries and vehicle damage	Speed limits on the Central Boulevard and Elevated Road are 40km/h, exiting the road networks is 50km/h, Tower Road is 50km/h and Freight Road is 50km/h. Speed humps are installed along Tower Road and Freight Road to reduce speeding	3C
Deliveries	Elevated Road	Disrupt traffic flow and passenger movements	No trucks allowed, deliveries to be done via North or South Delivery Yards, delivery notes are required and delivery times are to be specified.	2C
Overhead works	Falling items	Injuries, vehicles, property damage	Fall protection plan required as per the Construction Regulations 2014.	5C

General housekeeping	Damage to escalators	Injuries, property damages	Escalators are not to be used to transport heavy items in the Parkade	4C
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Annexure 5.4: Environmental Terms and Conditions to Commence Work (EMS 048)

The following Environmental Terms and Conditions shall be strictly adhered to by all contractors when conducting works for Airports Company South Africa SOC Limited. The Company shall audit contractor

activities, products and services on an ad hoc basis to ensure compliance to these environmental conditions. Any pollution clean-up costs shall be borne by the contractor.

ISSUE	REQUIREMENT
Environmental Policy	Environmental Policy shall be communicated, comprehended and implemented by all appointed contractor staff (refer to Environmental Management Policy T010 001P).
Stormwater, Soil and Groundwater Pollution	- No solid or liquid material may be permitted to contaminate or potentially contaminate stormwater, soil or groundwater resources. - Any pollution that risks contamination of these resources must be cleaned-up immediately. Spills must be reported to the Company immediately. Contractors shall supply their own suitable clean-up materials where required. - Washing, maintenance and refuelling of equipment shall only be allowed in designated service areas on Company property. It is the contractor's responsibility to determine the location of these areas. - No leaking equipment or vehicles shall be permitted on the airport.
Air Pollution	- Dust: Dust resulting from work activities that could cause a nuisance to employees or the public shall be kept to a minimum. - Odours and emissions: All practical measures shall be taken to reduce unpleasant odours and emissions generated from work related activities. - Fires: No open fires shall be permitted on site.
Noise Pollution	- All reasonable measures shall be taken to minimise noise generated on site as a result of work operations. - The Contractor shall comply with the applicable regulations with regard to noise.
Waste Management	- Waste shall be separated as general or hazardous waste. - General and hazardous waste shall be disposed of appropriately at a permitted landfill site should recycling or re-use of waste not be feasible. - Under no circumstances shall solid or liquid waste be dumped, buried or burnt. - Contractors shall always maintain a tidy, litter free environment in their work area. - Contractors must keep on file: - The name of the contracting waste company - Waste disposal site used - Monthly reports on quantities – separated into general, hazardous and recycled - Maintained file of all Waste Manifest Documents and Certificates of Safe Disposal - Copy of waste permit for disposal site This information must be available during audits and inspections.
Handling & Storage of Hazardous Chemical Substances (HCS)	- All HCS shall be clearly labelled, stored and handled in accordance to Materials Safety Data Sheets. - Materials Safety Data Sheets shall be stored with all HCS. - All spillages of HCS must be cleaned-up immediately and disposed of as hazardous waste. (HCS spillages must be reported to the Company immediately). - All contractors shall be adequately informed with regards to the handling and storage of hazardous substances. - Contractors shall comply with all relevant national, regional and local legislation with regard to the transport, storage, use and disposal of hazardous substances.
Water and Energy Consumption	The Company promotes the conservation of water and energy resources. The contractor shall identify and manage those work activities that may result in water and energy wastage.
Training & Awareness	The conditions outlined in this permit shall be communicated to all contractors and their employees prior to commencing works at the airport.

Penalties

Penalties shall be imposed by the Company on Contractors who are found to be infringing these requirements and/or legislation. The Contractor shall be advised in writing of the nature of the infringement and the amount of the penalty. The Contractor shall take the necessary steps (e.g.

training/remediation) to prevent a recurrence of the infringement and shall advise the Company accordingly.

The Contractor is also advised that the imposition of penalties does not replace any legal proceedings, the Council, authorities, land owners and/or members of the public may institute against the Contractor.

Penalties shall be between R200 and R20 000, depending upon the severity of the infringement. The decision on how much to impose will be made by Environmental Management Representative in consultation with the Airport Manager or his/her designate and will be final. In addition to the penalty, the Contractor shall be required to make good any damage caused as a result of the infringement at his/her own expense.

I, _____ (name & surname) of _____ (company)

agree to the above conditions and acknowledge Airports Company South Africa SOC Limited's right to impose penalties should I or any of my employees or sub-contractors fail to comply with these conditions.

Signed: _____ on this date: _____ (dd/mm/yyyy)

at: _____ (airport name).

ANNEXURE C5.5: POPIA AGREEMENT

CONFIDENTIALITY AND DATA PROTECTION

Save as provided in this clause (*Confidentiality and Data Protection*), each Party shall, and shall procure that its Affiliate and their respective officers, directors, employees, agents, auditors and advisors shall, treat as confidential all information relating to the other Party or its Affiliates thereof or relating to their respective businesses that is of a confidential nature and which is obtained by that Party in terms of, or arising from the implementation of this Agreement, which may become known to it by virtue of being a Party, and shall not reveal, disclose or authorise the disclosure of any such information to any third party or use such information for its own purpose or for any purposes other than those related to the implementation of this Agreement.

The obligations of confidentiality in this clause shall not apply in respect of the disclosure or use of such information in the following circumstances:

- in respect of any information which is previously known by such Party (other than as a result of any breach or default by any Party or other person of any agreement by which such Confidential Information was obtained by such Party);
- in respect of any information which is in the public domain (other than as a result of any breach or default by either Party);
- any disclosure to either Party's professional advisors, executive staff, board of directors or similar governing body who (i) such Party believes have a need to know such information, and (ii) are notified of

the confidential nature of such information and are bound by a general duty of confidentiality in respect thereof materially similar to that set out herein;
any disclosure required by law or by any court of competent jurisdiction or by any regulatory authority or by the rules or regulations of any stock exchange;
any disclosure made by a Party made in accordance with that Party's pursuit of any legal remedy;
any disclosure by a Party to its shareholders or members pursuant to any reporting obligations that Party may have to its shareholders or members, provided that each such shareholder or member is notified of the confidential nature of such information and is bound by a general duty of confidentiality in respect thereof materially similar to that set out herein;
In the event that a Party is required to disclose confidential information as contemplated in this clause, such Party will:
advise any Party/ies in respect of whom such information relates (the "**Relevant Party/ies**") in writing prior to disclosure, if possible;
take such steps to limit the disclosure to the minimum extent required to satisfy such requirement and to the extent that it lawfully and reasonably can;
afford the Relevant Party/ies a reasonable opportunity, if possible, to intervene in the proceedings;
comply with the Relevant Party/ies' reasonable requests as to the manner and terms of such disclosure; and
notify the Relevant Party/ies of the recipient of, and the form and extent of, any such disclosure or announcement immediately after it was made.
Either Party may, by notice in writing, be entitled to demand the prompt return of the whole or any part of any confidential information supplied by it to the other Party, and each Party hereby undertakes to comply promptly with any such demand.
In line with the provisions of Protection of Personal Information Act, No 4 of 2013 (POPIA), particularly section 20 and 21, the service provider (referred to as Operator in POPIA) shall observe the following

principles when processing personal information on behalf of the Company (referred to as Responsible Party in POPIA):

- the Service Provider shall only act on the Company's documented instructions, unless required by law to act without such instructions;
- the Service Provider shall ensure that its representatives processing the information are subject to a duty of confidence;
- the Service Provider shall take appropriate measures to ensure the security of processing. The Service Provider shall ensure and hereby warrants that they have minimum IT and or physical security safeguard to protect personal information;
- the Service Provider shall notify the Company immediately where there are reasonable grounds to believe that the personal information of a data subject has been accessed or acquired by any unauthorised person;
- the Service Provider shall only engage a sub-operator with the Company's prior authorisation and under a written contract;
- the Service Provider shall take appropriate measures to help the Company respond to requests from data subjects to exercise their rights;
- taking into account the nature of processing and the information available, the Service Provider shall assist the Company in meeting its POPIA obligations in relation to the security of processing, the notification of personal information breaches and data protection impact assessments;
- the Service Provider shall delete or return all personal information to the Company (at the Company's choice) at the end of the contract, and the service provider shall also delete existing personal information unless the law requires its storage; and
- the Service Provider shall submit to audits and inspections. The Service Provider shall also give the Company whatever information it needs to ensure that the Parties meet their Section 20(1) obligations.

1. SIGNATURES

FOR AIRPORTS COMPANY SOUTH AFRICA

THUS DONE AND SIGNED AT _____ ON THIS _____ DAY OF _____ 2025.

FOR SERVICE PROVIDER

THUS DONE AND SIGNED AT _____ ON THIS _____ DAY OF _____ 2025.

AUTHORIZED SIGNATORY _____

ANNEXURE 1: ACSA INSURANCE SCHEDULE

INSURANCE CLAUSES FOR AIRSIDE CONSTRUCTION CONTRACTS WHERE THE AWARDED CONTRACT VALUE DOES NOT EXCEED R150 MILLION, AND THE CONSTRUCTION PERIOD DOES NOT EXCEED 36 MONTHS, AND THE DEFECTS LIABILITY PERIOD DOES NOT EXCEED 24 MONTHS

Each Party shall be responsible for effecting and maintaining the relevant insurances as specified below and to the extent relevant to the Contract.

1. Insurance Effected By The Employer (Principle Controlled Insurance ("PCI"))

1.1 Notwithstanding anything elsewhere contained in this Contract and without limiting the obligations, liabilities or responsibilities of the Contractor in anyway whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the **Employer** shall effect and maintain for the duration of the construction and maintenance periods of the Contract - as appropriate in the joint names of the Employer, the Contractor and where relevant Sub-Contractors the following insurances which are subject to the terms, limits, exceptions and conditions of the Policy:

a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability

Section 1 Of The Policy – Contract Works

Contract Works Insurance for the full value of the Works to provide cover against accidental physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works all being the subject matter of this Contract including to the extent provided for in the policy whilst in transit or temporarily stored at any premises en route to or from the Site (other than where this is a continuation of Marine Transit) within the territorial limits of the policy.

This insurance may specifically exclude any cost necessary to replace or rectify any of the property insured, which is in a defective condition due to defect in design, plan specification, material or workmanship.

This insurance contains the following limitations and warranties ;

Open Trench Limitation

In respect of loss or damage to open trenches and pipes, conduits or cables laid therein, caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of open trenches at any one time to 2,500 meters.

Exposed Layer Works (applicable to works involving paving, roadways, bulk earthworks and runways and taxiways.

In respect of loss or damage to Exposed Layer Works relating to paving, roadways and runways (including taxiways) caused directly or indirectly by rain, inundation or flood, Insurers liability shall be limited in respect of the aggregate length of Exposed Layer Works at any one time to 2,500 meters.

Section II of the Policy – Contractors Public Liability

Public Liability Insurance which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of **R100,000,000** in respect of any one occurrence or series of occurrences consequent on or attributable to one source or original cause.

Section III of the Policy – Removal Of Lateral Support Liability

Removal Of Lateral Support Liability which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising out of or in connection with shock or vibration or the removal or weakening of or interference with support to property in the vicinity of the Contract Site and arising out of or in connection with the Insured Contract (but not in respect of tunneling works) and occurring during the Period of Insurance.

The Limit of Indemnity being limited to R50,000,000 attributable to one source or original cause

b. Contract Works SASRIA – Providing physical loss of or damage to the Works, Temporary Works and materials intended for incorporation in the Works as covered by the underlying Contract Works policy as noted in (a) above due to perils as covered in terms of the SASRIA Contract Works wording as issued by SASRIA SOC.

The Contract Works SASRIA cover excludes consequential or indirect loss or damage of any kind or description whatsoever.

The SASRIA Contract Works policy is limited to **R500,000,000 (Incl VAT)** in the aggregate during the policy period of insurance.

The Contract Works SASRIA policy wording can be obtained from the SASRIA website <http://www.sasria.co.za/> which notes the covers and policy exclusions.

c) Aviation Liability Insurance which provides indemnity against legal liability in the event of accidental death of or injury to persons and/or loss of or damage to property (other than the Works the subject matter of this Contract) arising from the execution of the Contract with a limit of indemnity of **R2,000,000,000** in respect of any one occurrence or series of occurrences consequent on or to one source or original cause.

This insurance is in respect of liability relating to aircrafts.

d) Design & Construct Professional Indemnity Insurance which provides indemnity against legal liability to pay compensation as a result of any actual or alleged negligent act, error or omission in the performance of the Professional Duties of the insured and arising from the execution of this project. The limit of indemnity under this insurance shall be ***R25,000,000 in the aggregate during the annual policy period of insurance that ACSA effect such cover during the policy period from 1 April to 31 March during each policy period of insurance.**

****The limits of indemnity applies to all ACSA contracts as a whole and does not apply specifically to this contract. The aggregate limit could be exhausted by claims under other ACSA contracts and there is no***

CAD DELIVERY SPECIFICATION AND GUIDELINE – REV0

guarantee that this insurance cover will provide sufficient cover to this specific contract should the aggregate limit be exhausted.

The Policy only covers the rectification of the works and excludes all consequential losses. Professional Duties do not include:

- a) Labour and construction work which would normally be the responsibility of the building or engineering contractor.
- b) Supervision of the construction works usually undertaken by a building or engineering contractor.

1. 2 The **Contractor** shall familiarise itself fully with the details of such insurance effected by the Employer. The Contractor shall comply to all the terms and conditions of the Employer arranged policies and the Contractor shall be deemed to be fully aware of all the conditions, limits, limitations, exclusions/exceptions and deductibles that are contained in the Employer arranged policies. Copies of the Employer arranged policies are obtainable on request from the Employer and if the Contractor is of the opinion that additional insurance is required, such shall be for the Contractors account.

1.3 The Employer shall pay the premium in connection with the insurances effected by the Employer. The Employer is entitled to all return premiums, dividends, discounts, or adjustments in connection with the insurances effected by the Employer.

1.4 The Contractor shall not include any premium charges for this insurance except to the extent, which he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor.

In the event that the Contractor purchases any insurances in addition to those indicated above, the premium and taxes, duties, etc. shall be borne entirely by the contractor.

1.5 Any further clarification of the scope of cover provided by the Policies arranged by the Employer should be obtained from the Employer.

1.6 The Contractor and/or any other party who obtains indemnity under the policies effected under 1.1 shall become liable for the deductibles (first amount payable) which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or cause giving rise to loss or damage or indemnifiable liability. The deductibles applicable to the policies effected under 1.1 are as follows:

a) Contract Works/Contractors Public Liability/ Removal Of Lateral Support Liability

Unless stated otherwise in the Policy Extensions the Deductibles shall be as follows which will apply in respect of each and every occurrence or series of occurrences arising out of or in connection with any one event giving rise to loss or damage:

Section 1 Of The Policy – Contract Works

In respect of all loss or damage **R150,000** but increased to **R250,000** in respect of loss or damage arising out of or in connection with testing and commissioning.

Section 2 Of The Policy – Contractors Public Liability

R75,000 each and every claim in respect of Property Damage.

Section 3 Of The Policy – Removal Of Lateral Support Liability

R75,000 each and every claim.

b) Contract Works SASRIA

In respect of theft as a result of the SASRIA perils insured - **R25,000** each and every occurrence .

c) Aviation Liability Insurance ;

In respect of each and every loss or damage or injury – **R300 000**.

d) Design & Construct Professional Indemnity Insurance

a) In respect of contracts under R50 million at award – **R5,000,000**.

b) In respect of contracts over R50 million at award – **R10,000,000**

1.7 In the event of any occurrence which is likely to give rise to a claim under the insurance arranged by the Employer, the Contractor shall:

a) In addition to any statutory requirement or other requirements contained in the Contract immediately notify the Employer and the Employer's Insurance Brokers by telephone, mobile phone or email giving the circumstances, nature and an estimate of the loss or damage or liability. The Contractor must also complete the Claim Advice Form (Appendix "A").

The following persons/insurers must be advised immediately on the occurrence of a claim on site or even a possibility of a claim arising due to an incident occurring on site:

Airports Company South Africa :

Nokulunga Masiza

Tel: +27 (0)11 723 1400

M: +27 (0)79 512 0532

Nokulunga.Masiza@airports.co.za

Buhle Mnguni

D: +27 (0)11 723 1400

M: +27 (0)74 535 9075

Buhle.Mnguni@airports.co.za

b) Preserve damage and make it available for inspection by a representative of the Insurers.

c) Wherever possible, photographs of damage should be taken.

d) Inform the police authorities promptly in the event of loss or damage by theft, burglary or any malicious persons(s) for the purpose of recovering any property so lost, discovering the guilty person or persons, and having him, her or them duly prosecuted.

e) Advise the Insurers of any other insurance(s) which may cover the same loss, damage or injury, or any part thereof.

- f) Give to the Insurers every assistance to enable the Insurers to settle or resist any claim against the Insured, or institute any proceedings;
- g) On completion the Claims Advice Form, the form must be sent to the Employers Insurance Brokers for further action (the original may be emailed to the Employers Insurance Broker). (Please do not remove the Claims Advice Form out of this document. Rather photocopy the form and send the copy to the Employers Insurance Brokers).
- h) The Employer and the employers Insurance brokers / Insurers or their appointed loss adjusters shall have the right to make all and any enquiry's on the Site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall cooperate in carrying out such enquiry's.
- i) The Contractor, Project Managers and Consultants must allow free access to Insurers' assessors for the purpose of investigating and assessing the loss or damage.
- j) The Contractor must not proceed with the making good any off the loss without the prior authorisation of the Insurers.**
- k) The Contractor must keep separate records of the costs involved in making good any loss or damage and these records should be available at all times for inspection by Insurers. Such records should include inter alia the entire cost of labour, materials, transport and equipment.
- l) Where required by the Employer, negotiate the settlement of claims with the Insurer or their appointed loss adjusters through the Employer's Insurance Brokers and shall obtain the Employer's approval of such settlement.
- m) Once the amount of a claim is agreed by the Insurers and the Contractor, an "Agreement of Loss" form must be signed by the Contractor and if required this shall be counter signed by the Employer or the Project Managers.
- n) The proceeds of such claim will, if required by the Employer, be paid net of any Deductible applicable under the policy by the Insurers to the Employer who on receipt thereof will arrange for payment to be made in terms of the Conditions of Contract. In the event that it is agreed by the Employer that such claims payment be made directly to the Contractor, the Contractor shall arrange for the Employer to endorse the "Agreement of Loss" to this effect.

2. Insurance Effected by the Contractor.

In addition to Clause 1.1 in respect of the insurances effected by the Employer the following Insurances to be effected by the Contractor:

2.1 Without limiting the Contractor's obligations, responsibilities and liabilities, the Contractor and Sub-contractor shall maintain at the Contractor's and Subcontractor's expense and where applicable provide as a minimum the following insurances:

a) **Insurance of Construction Plant and Equipment** (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.

The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

b) **Contractor's Common Law Liability/ Worker's Compensation Insurance**

The Contractor shall take out and maintain employer's liability insurance with a limit of indemnity of not less than **R20,000,000** and/or workmen's compensation insurance covering personal injury to or death of the employees of the Contractor engaged in connection with the Works to the minimum value required by applicable law.

The Contractor shall procure that its Subcontractors take out and maintain similar insurance in respect of its Subcontractor's personnel performing the Works.

In the event that a claim is made against the Employer in connection with such insurance, the Contractor shall indemnify and hold harmless the Employer against any such claim.

The Employer shall be named as additional insured and a waiver of subrogation shall be provided to the Employer.

c) **Motor Vehicle Liability Insurance** comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability indemnity with a limit of indemnity of not less than **R5 000 000** for all owned, non-owned, leased and hired vehicles.

d) **Insurance For Buy-Down Cover Of Employer's Deductibles**

Should the Contractor believe that the Employer effected Contract Works, Public Liability and Design & Construct Professional Indemnity deductibles as noted in Clause 1.6 (a),(c) and (d) be considered to be unacceptable to the Contractor, then the Contractor must obtain Buy Down cover for these deductibles to a deductible considered by the Contractor as being acceptable in respect of the works being undertaken.

e) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Contract Site the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by endorsement to the relevant Policies of Insurance.

Such insurance shall name Employer as an additional insured, and shall be primary to any insurance maintained by the Employer.

f) **Public Liability** insurances in excess of the Employers Public Liability insurances as stated

under clause 1.1(a).

g) **Aviation Liability** insurances in excess of the Employers Aviation Liability insurances as stated under clause 1.1(c).

h) **Contractor's Professional Indemnity Insurance** in excess of the Employers Design & Construct Professional Indemnity insurances as stated under clause 1.1(d) and if applicable to cover the deductible that applies to the Employer effected insurance.

i) **Marine Cargo Insurance (If Applicable)**

Cover : Imports of cargo, equipment, goods, plant, machinery and materials (**"Insured Property"**) to the site where the Permanent Works will be constructed.

Sum Insured: Not less than the value of the largest single cargo shipment, conveyance or the value in storage, whichever is the greater (CIF plus 10%).

Marine / Air Cargo Insurance covering the Insured Property against all risks of physical loss or damage while in transit by land, sea or air from country of origin anywhere in the world to the site where the Permanent Works will be constructed including loading, or vice versa, from the commencement of the time the insured items are loaded prior leaving the warehouse or factory for shipment to the said site.

The insured parties are the Employer, the Contractor and its Subcontractors, and all their personnel involved in the execution of any Works on the construction site.

j) **Miscellaneous Insurance**

Other insurance as is customary, desirable or necessary to comply with applicable Laws in the Country.

2.2 The insurances to be provided by the Contractor and his Sub-contractor shall be effected with Insurers and on terms approved by the Employer (which approval shall not be unreasonably withheld) and shall be maintained in force for the duration required (including any period of maintenance/defects liability period). The Contractor shall within twenty eight (28) days of commencement of the contract produce to the Employer the relevant Policy or Policies of Insurance.

2.3 In the event that the Contractor or his Sub-contractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the Employer in writing of such cancellation or restriction and shall advise what action the Contractor or his Sub-contractor will take to remedy such action.

If the Contractor fails to effect and keep in force the insurances referred to then the Employer may effect and keep in force any such insurances and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.

2.4 Sub-Contractors.

The Contractor shall:

a) ensure that all potential and appointed Sub-contractors are aware of the whole contents of these Insurance Clauses, and

b) enforce the compliance by sub contract agreement between the Contractor and Sub-Contractor and where applicable that the Sub Contractor effect similar insurance relating

to the insurances required to be effected by the Contractor under Clause 2 (Contractor effected insurances).

APPENDIX A

CONTRACTORS CLAIMS ADVICE FORM - FOR ACSA INSURED CONTRACTS UNDER THE ANNUAL POLICY

Send to : Airports Company South Africa

E-Mail The Following People :

Nokulunga.Masiza@airports.co.za

Buhle.Mnguni@airports.co.za

*
.....
.....
.....
.....
.....

* (Please provide name of contracting company, site address, telephone numbers and e-mail address).

RE :ACSA CONTRACTORS : CAR/PL/PI : CLAIM

Date of loss : _____

Reported to site agent by : _____ Date : _____

Reported to Insurance Broker by : _____ Date : _____

Locality of Incident _____

How did the loss occur (cause) ? _____

Details and nature of loss or damage to Contract Works _____

Details of other property damaged _____

Names and address of witnesses _____

Estimated cost of repairs (Separate records of all costs must be kept) R_____

Person whom assessor should contact _____

Telephone/Mobile Numbers Of Contact Person _____

Email Address of Contact Person _____

ANNEXURE 2: ACSA CAD STANDARD

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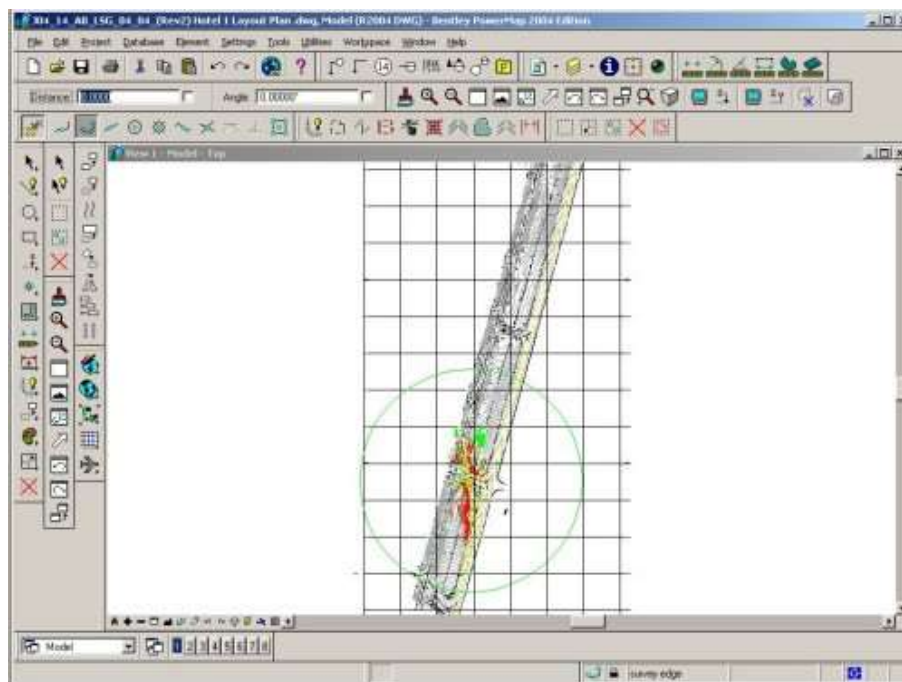
1. BACKGROUND

As part of its drive to be a world class airport authority the Airports Company of South Africa (ACSA) has developed and implemented an enterprise-wide Geographic Information System (GIS) as part of its numerous IT management systems.

The major source of spatial data for the ACSA GIS is the many Computer Aided Design (CAD) drawings produced for planning, design and construction purposes during the expansion and re-development of infrastructure on and around the airport by various consultants and contractors.

This CAD drafting specification is intended to simplify the CAD-to-GIS conversion process by specifying a number of good practices and protocols to be followed by consultants submitting CAD drawings to ACSA. These good practises and protocols are in line with industry and international best practice.

The specification is not intended to be inflexible and completely prescriptive, but rather to be a set of overall principles and guidelines that CAD personnel can apply to their production processes. These changes in methodology should generally be fairly minor and should be incorporated into the design and drafting process without much difficulty.



2. SUMMARY OF MAIN REQUIREMENTS

During setting up of CAD model for design		Detail
1	Draft CAD <i>models</i> in 'model space' or 'viewport view' and compile CAD final <i>drawing layouts</i> with frames in CAD 'paper space' or 'layout view'. No frames to be drawn in model space.	3.1
2	Draft CAD plan <i>models</i> in the correct geographically coordinated location. If this is not possible, as a minimum, <i>drawing layouts</i> should include a labelled coordinate grid or reference points to allow for geo-referencing.	3.2
3	Layer structure used must split features into logical and airport specific layers as recommended in this document. See full list in 3.2. In addition hatching, text and tables must be on different layers to the drawing elements.	3.3
4	All polygon features to be properly closed shapes and all line features to join at a point with no gap or overlaps. Hatched areas to include polygon boundary line.	3.4
5	If symbols are used to indicate point type features, e.g. valves, joints, poles etc. these must be on separate layers. If possible, a point must be placed on the corresponding main layer indicating the exact position or centre of these features.	3.5
6	Lines joining at these point type features must not stop at the start and end of symbols, but must continue to meet at the point in the centre of the feature. In addition, lines passing through multiple points should be separate line segments starting and ending at each point, irrespective if they are all in a continuous straight line.	3.5
7	All text to be on a single layer as far as possible. Any text associated with a feature to be placed as close to the feature as possible. E.g. stormwater pipe diameters as close as possible to the line representing the stormwater pipe – avoid using arrows or lead lines as much as possible	3.6
During compiling <i>drawing layouts</i> in 'paper space' / 'layout view'		Detail
8	All <i>drawing layouts</i> to be contained with a neat and appropriate drawing frame.	4.1
9	Frame to include an ACSA logo and the ACSA project name.	4.1
10	Frame to include a logical drawing number complete with a revision number.	4.1
11	Frame to include a date.	4.1
12	Frame to include full details of consultant – Logo, name, address, telephone number.	4.1
13	Frame to note details of applicable coordinate system and other survey info.	4.1
14	Frame to indicate status of drawing e.g. For information, For tender purposes, For construction, As-Built.	4.1
15	Frame to include the name of the CAD drawing that contains the model	4.1
Submission to ACSA		Detail
16	Drawings to be submitted to ACSA at the end of each stage of design and construction cycle E.g. Planning and architectural design complete, engineering design complete, construction complete with as-built corrections.	5.1
17	Submission must be made per project on a single or set of CDs or DVDs.	5.1
18	PDF 'electronic hard copy' of every drawing to be submitted. Size of PDF not to exceed 500kB. Filename of 'electronic hard copy' to be the Consultants drawing number plus the revision number. Egg. P0921-ACSA-PIER-001_REV0.pdf	5.2
19	ACSA Drawing Submission Form to be completed and submitted with drawings. See 5.2 for pro-forma. To be submitted as Microsoft Excel as far as possible.	5.3
20	CDs/DVDs labels to include airport name, project name, project stage, consultant name, submission date, total number of disks in set and number of each disk within set as a minimum. Labels to appear directly on the media and not on the media cover.	5.4
21	CAD drawings to be submitted in an approved CAD file format. Approved formats include .dxf, .dwg, .dgn. CAD drawings to be submitted without reference files. Reference files to be merged into the master drawing and clipped as required.	5.5

3. DETAIL – SETTING UP OF THE CAD MODEL

3.1. Models and drawing layouts

Most modern CAD packages employ the concept of '*model space*' in which a CAD model is set up and '*paper or layout space*' in which views of this model are extracted, framed and set up as individual drawings. The drawing below illustrates this. Setting up drawings in this manner is efficient as many drawings can be contained with a single CAD file.

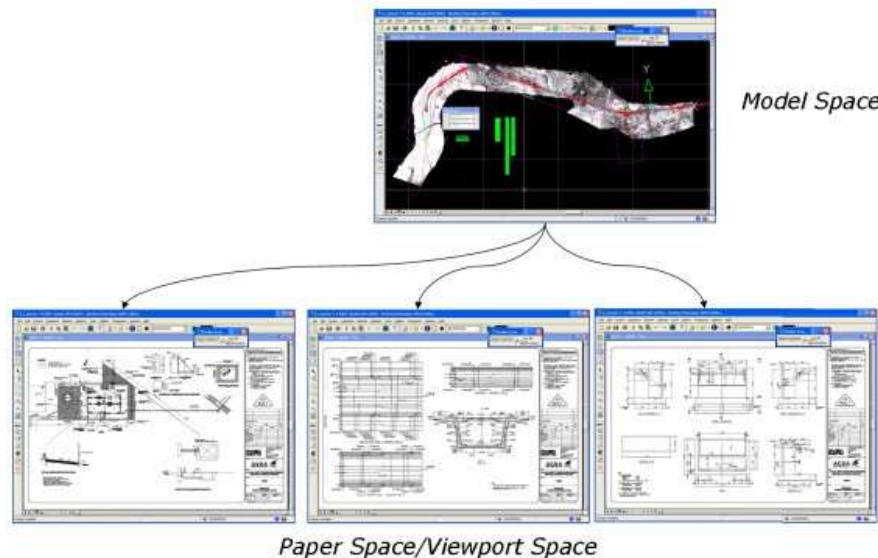


Figure 1 – Layout showing model and paper/viewport space

NOTE: - If CAD detailing is done directly in paper/viewport space, the data is often not visible to GIS software, which vastly complicates the inclusion of data into the ACSA GIS. It is therefore imperative that CAD models or designs are detailed in model space as per the recommendation above.

The terminology above differs from one CAD package to another and the manner in which they operate may differ somewhat, but the general concepts remain the same. The notes below refer to the two main CAD packages used in South Africa.

AutoCAD DWG - Is made up of two parts: Model space and Paper space. The Model space is where you draw your design. The paper space is where you reference in your drawing border and create what are called "view ports". A view port punches a hole in the paper space, to look through to the design in the model space. Each viewport you create can zoom into a part, or whole, of the design at different scales. A DWG can only have one model space but can have multiple Paper spaces.

Microstation (DGN) - May consist of multiple spaces or "models" as Bentley terms them. A DGN consists of at least one model – the Default Model. The file may contain any number of additional models, but unlike AutoCAD these do not only have to be Paperspace, they may be either Design Models or Sheet Models. Draw your design in the Model Space. The Sheet Model is where you reference in your drawing border and self reference in the model, to create your layout or plot. A DGN can have multiple models and multiple Sheets.

3.2. Models in correct geographic space / coordinate grid

It is a requirement that all CAD drawings in plan are detailed in the correct geographic space such that a coordinate point on the drawing must correspond to its actual coordinate point on the ground. It is common for coordinates on older drawings to be adjusted by having a constant value subtracted from the actual coordinate. Modern CAD packages can handle the larger values of the actual coordinates and thus the practise of removing the constant should be discouraged.

In addition, it is vital that all drawings set up in *paper or viewport space* note the applicable coordinate reference systems, datums and other relevant survey information.

If, for some reason, the drawing cannot be drawn in the correct geographic space, as a bare minimum, a labelled coordinate grid should be provided over each drawing to allow the drawing to be geo-referenced into the correct position.

Even if the drawing is in the correct geographic space it is good practise to include this grid. The figure below illustrates this.

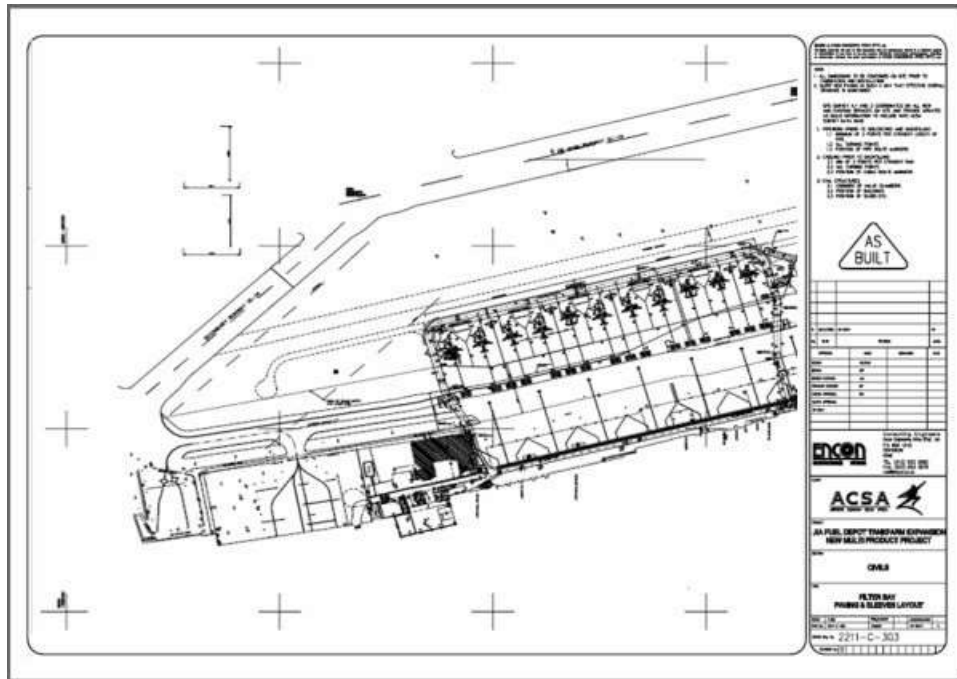


Figure 2 – Drawing showing coordinate grid

3.3. Logical layer structure

The layer list below is the required breakdown of layers to be used for CAD detailing by consultants working on ACSA projects. The list is mainly relevant to plan drawings, as these will largely contain information that will be added to the ACSA GIS. Adopting these layers during CAD detailing will assist ACSA in populating their GIS with this information as efficiently as possible.

The list is not exhaustive and must be added to as required to accommodate any content on the drawing that is not included in the list.

Layers used must be logical and must contain only single type of feature or a set of features that can be logically grouped. *E.g. All stormwater pipes and culverts must be on a single layer; electrical cables must be on a separate layer etc.*

Hatching, text and tables must be included on separate layers. There are two suggested ways in doing this.

- Placing hatching, text and tables pertaining to a specific drawing layer on their own individual layers. *E.g. Drawing layer=Airside_surfaces; Hatching layer=Airside_surfaces_hatch; Text layer=Airside_surfaces_text etc.*
- Placing all hatching, text and tables each on a single layer *E.g. Hatching layer= Hatch_All, Text layer=Text_All etc.*

Table 1 - ACSA Layer List for Plan Drawings

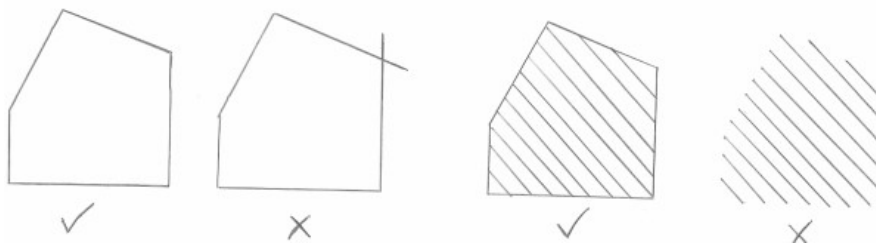
Access_points	Lighting
Airside_surfaces	Networkcomcables
Airside_surface_markings	Noise_contours
Buildings	Obstacle_surfaces
Cadastral	Obstacles
Control_cables	Parking
Conveyors	Retaining_walls
Ducts	Roads_bridges
Electrical_cables	Road_markings
Electrical_substations	Security_cables
Fences_Walls	Servitudes
Flood_lines	Sewer_pipes
Floor_plans	Sewer_tanks
Fuel_lines	Signs
Fuel_tanks	Survey_control_points
Landuse	Stormwater_pipes_culverts
Landside_surfaces	Water_main_pipes
Lifts	Water_tanks

3.4. Clean polygon and line features

Area or polygon features such as erven boundaries; building footprints etc. must be clean polygons and must be properly closed off.

If hatching is to be used to demarcate an area this should include a polygon feature enclosing the hatching and should not only be the hatching itself.

Examples of these are shown in the sketches below.

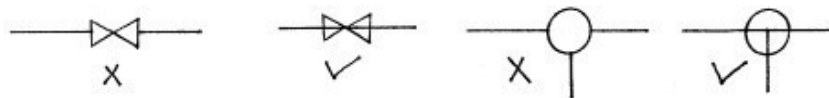


3.5. Points, point symbols and lines at point symbols

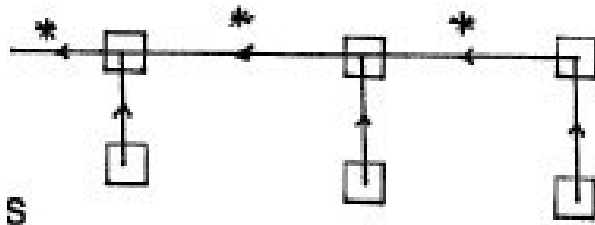
CAD operators and designers can continue using their own standard symbols for features such as poles, manholes, signs etc, as these are not imported into the GIS. However, it is beneficial if a point is placed at the centre or origin of the symbol. This point is imported into the GIS and used as the origin for a symbol placed by the GIS. If a feature falls on a line e.g. a manhole on a pipe, a valve on a pipe, a pole on a cable etc, it is important that the point lies exactly on the line as shown in the figure below.



As far as possible, single lines should be used to denote linear features such as pipes, kerb lines etc. Lines should be continuous i.e. they should meet at the centre of a manhole and not stop at the perimeter as illustrated below.



Where possible, separate lines shall be drawn between features such as valves, tees, crosses, manholes etc even if these features are on a straight line. This is illustrated below.



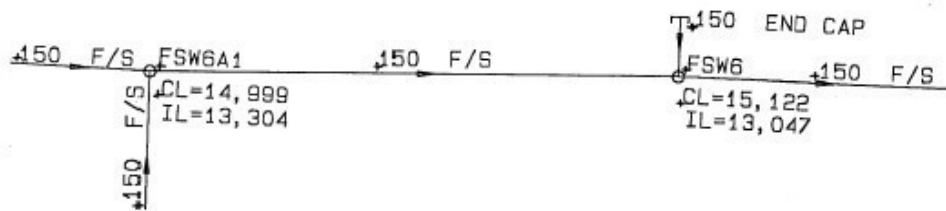
3.6. Text on layers and text in tables

Typically text information extends to items such as manhole numbers; manhole levels; valve types; pipe diameters; cable types; road centreline levels, finishing details etc.

Any text placed on a CAD drawing should be placed as close as possible to the object to which it refers. The practise of placing text at some distance from the object and using arrows to indicate the object should be avoided as far as possible. This practise will assist the GIS conversion processes by easing the population of the GIS attribute database with the text on the CAD drawing.

Should text consist of more than one line, it should be input as a single text entity with line breaks rather than multiple text entries and thus should only have single placement point.

The figure below illustrates good practise when placing layers on a water main CAD drawing.



If tables are used to place text on a drawing these must be well referenced to the features to which they refer.

4. DETAIL – SETTING UP OF DRAWINGS

4.1. Example of a compliant drawing and drawing frame

The figures below show the correct way to set up a drawing and shows the minimum details that should be included.

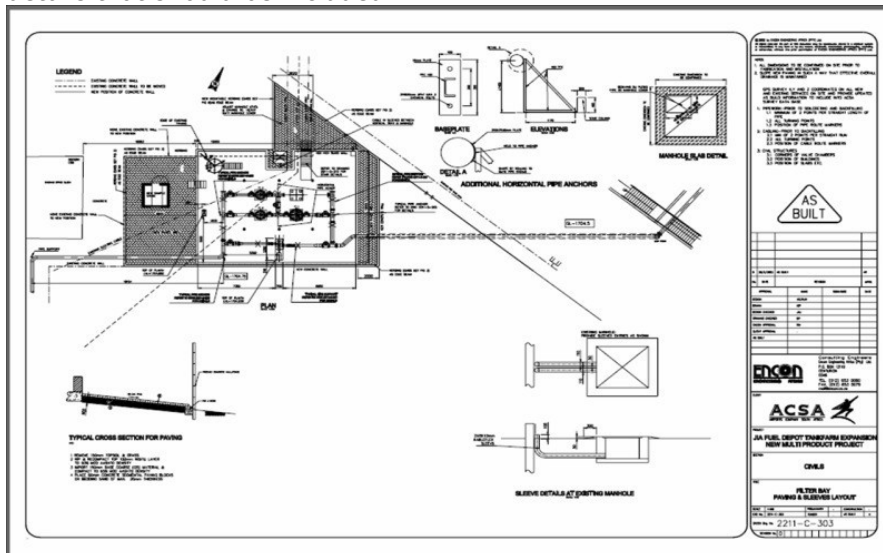


Figure 3 – Drawing correctly set up with frame and details

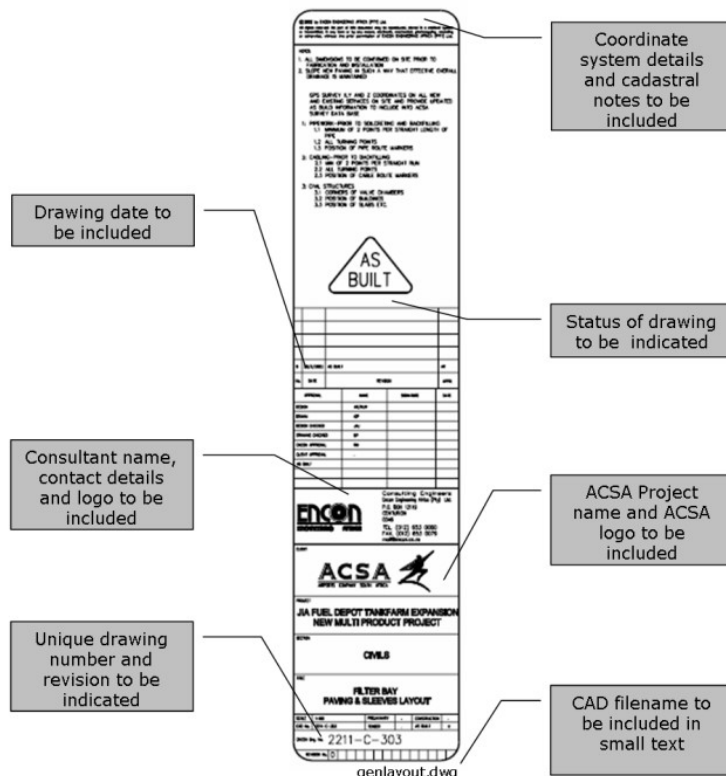
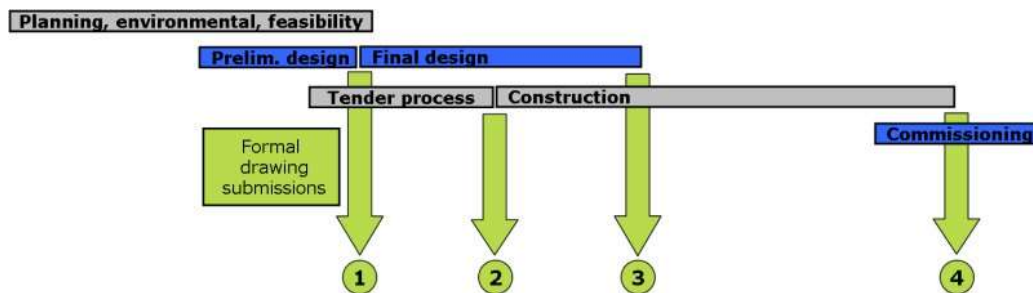


Figure 4 – Minimum requirement for details on drawing frame

5. DETAIL – SUBMISSION TO ACSA

5.1. Design cycle and submission of drawings

It is essential that CAD drawings be submitted to ACSA correctly and formally. These submissions must be done at logical points in the development of an ACSA project and must be submitted in logical batches, identified by the ACSA project name. The project process below illustrates typical drawing submission point, but this may vary due to the nature of different projects.



1. Final planning, feasibility and preliminary design drawings to be submitted.
2. Set of tender drawings to be submitted.
3. Final design drawings to be submitted. Can be submitted in logical batches per phase of the project completed. Revisions of design drawings to be submitted during the course of design and construction period to be submitted as required.
4. Final 'As built' drawings to be submitted. *These are the most valuable submission to ACSA and all projects must be concluded with a formal submission of these 'As built' drawings.*

Any drawings sent to ACSA staff informally during the course of a project, usually by email and with special relevance to preliminary drawings used for discussion shall not be considered as a formal submission. Final versions of these drawings must be included in one of the above formal project CAD drawing submissions to ACSA.

All formal submissions must be made per project on a single set of CD's or DVD. See 5.4 for example CD/DVD Label.

5.2. PDF 'electronic hard copy'

Each submission must include a PDF 'electronic hard copy' of each drawing set up in paper or viewport space.

Naming of the PDF 'electronic hard copies' shall be the drawing no and the revision number. *E.g. C0920-ACSA-NORTH PIER-001_REV0.pdf*

The 'electronic hard copies' must be printed as close to full size as possible, but with to a minimum paper size of A3. At the same time file sizes of the PDFs are not to exceed 500kB as far as possible. PDF printer resolutions must be set to ensure that this file size is not exceeded.

Most modern CAD packages have built in PDF printers but should this not be the case these can be obtained freely off the internet at the following sources.

Adobe Acrobat PDF Printer – www.adobe.com Cute PDF Printer – www.cutepdf.com

5.3. Submission form

A submission form must accompany any batch of drawings submitted to ACSA. A pro-forma of the submission form is show below. The standard for the submission for is in Microsoft Excel if at all possible.

ACSA CAD DRAWING SUBMISSION FORM		
AIRPORT:- PROJECT	OR Tambo International Airport Echo	
NAME:- SUBMITTED	Apron Extension	
BY:- CONTACT NO:-	ENCON Engineers 011	
CONTACT NAME:-	– 555 5555	
SUBMISSION STATUS:	Joe Soap Final Design	
PDF Filename	CAD file name	Drawing Title
C0920-NORTH PIER-001_REV0.pdf	genlayout.dwg	Northern elevation of pier
C0920-NORTH PIER-002_REV0.pdf	genlayout.dwg	Drainage details on second floor
C0920-NORTH PIER-003_REV0.pdf	genlayout.dwg	Reinforcing of roof
C0920-NORTH PIER-004_REV0.pdf	genlayout.dwg	Layout of air-bridges
C0920-NORTH PIER-005_REV0.pdf	mainmodel.dwg	Window and door schedule
C0920-NORTH PIER-006_REV0.pdf	mainmodel.dwg	Eastern layout
C0920-NORTH PIER-007_REV0.pdf	mainmodel.dwg	Western layout
Etc.		

5.4. CD/DVD Submission labelling

The mock-up below shows the minimum labelling on CDs/DVDs submitted to ACSA.



5.5. CAD drawing formats and reference files

All CAD drawings submitted must be in an approved CAD format. This extends to the following formats:

- AutoCAD – DWG extension
- Bentley Microstation – DGN extension
- Drawing Exchange format – DXF extension

CAD drawings that make use of reference files referenced into the CAD model from different files (E.g. Contour lines may be referenced into a road design drawing from different survey model contained a different file.) must be merged into the model before submission. *Final CAD files submitted must be self contained and should not contain references to any file of any type.*

If the aforementioned reference files are large (E.g. the abovementioned contour lines may extend over an entire metropole or province), these must be clipped to the extent required for the drawing in question, in order to reduce the file size of the file to be submitted