ENGINEERING REQUIREMENTS FOR 2020 ADELAIDE 500 TEMPORARY STRUCTURES

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1) EVENT OVERVIEW

The Adelaide 500 motor race (the Event), staged by the South Australian Tourism Commission (SATC), is South Australia's largest annual ticketed sporting event that provides a vibrant mix of attractions appealing to a diverse audience.

A key component of the safe and successful running of the Event is the supply, construction, certification, and eventual dismantle and removal from site of temporary structures, which thousands of patrons utilise and enjoy over the Event.

2) GENERAL CONDITIONS

The purpose of this document is to communicate to the 'Occupant' the requirements for all temporary structures erected on site for the Event. The Occupant is any person (or company) who erects or has effective control of a structure at the Adelaide 500 site.

All temporary structures erected on site must comply with the requirements of the *ABCB Temporary Structures 2015 Standard*, *The Building Code of Australia* and all other relevant Australian Standards.

SATC (SATC) has engaged an Engineering Project Manager, iEDM, to manage the site on its behalf. The Occupant must provide access to iEDM personnel, or any person delegated by iEDM, to inspect any temporary structure as required.

The Occupant shall provide iEDM and/or SATC with engineering documentation (as described in this document) to demonstrate that its temporary structure is compliant with the *ABCB Temporary Structures 2015 Standard*, The *Building Code of Australia* and all relevant Australian Standards. The Occupant remains responsible for ensuring that their temporary structure complies with these standards and is structurally stable and safe for the entire time the structure is erect. At no point in time will SATC or iEDM, or any third party engaged by

SATC or iEDM, take responsibility for the structural stability of the structure installed or controlled by the Occupant.

3) GENERAL REQUIREMENTS FOR ALL TEMPORARY STRUCTURES

The following are general requirements the Occupant must adhere to:

- Placement and positioning of all temporary structures is at the absolute discretion of iEDM/SATC;
- The Occupant is responsible for ensuring that adequate fire safety equipment is charged and maintained to AS1851.1. If required, this equipment may need to be inspected by iEDM Management or Emergency Services personnel;
- Ballast used must be in the form of solid weights or pegs (if approved) and not in the form of water filled drums or barriers. Water filled drums or barriers used as ballast will be rejected by iEDM;
- Ground spiking is not permitted, unless prior approval is granted by iEDM;
- Structures are not to be tied down using ropes and knots. Rated straps (with an adequate capacity) must be used for tying structures down; and
- All equipment used on site must be in good condition and not suffering from excessive wear and tear.

4) WORK, HEALTH, SAFETY AND ENVIRONMENT

As the Engineering Project Manager, iEDM is also the site's Principal Contractor (PC), responsible for the work health and safety management on site. The site works consist of both "Construction Works" and "Event Works".

Construction Works: includes erection and dismantling of structures and marquees, installing temporary flooring, scaffolding, electrical work, working above 2m and use of forklifts or any other mobile plant. Workers conducting "Construction Works" must complete an iEDM Construction Induction and hold a Construction Industry General Induction (White) Card.

Event Works: includes erection of up to 6mx3m "pop up" tent, corflute signage, merchandise or catering fit out, manual loading at ground level. Workers conducting "Event Works" must complete a site-specific Short Term Works Induction.

The Occupant should contact the Safety Manager if it has any questions about the types of works it is undertaking. The Occupant must contact the Safety Manager to be inducted. The inductions are available in an online format or onsite by request to the Safety Manager.

All workers must obey the site rules that are communicated in the induction and wear appropriate personal protective equipment when performing their site works.

NOTE: The requirement for Construction Industry General Induction Cards is a legislative requirement and is different from state to state. It is the Occupant's responsibility to ensure any staff requiring such accreditation has obtained it.

If you have any questions relating to **Work, Health, Safety and Environment** please contact:

David Wilde
Adelaide 500 - Safety Manager
davidw@iedm.com.au
0421 206 124

5) STRUCTURAL REQUIREMENTS

The engineering documentation which must be submitted to iEDM/SATC depends on the size and type of the temporary structure to be installed. Four different categories of temporary structure have been identified. The Occupant is to identify the category which best describes their temporary structure in order to determine the engineering documentation to be provided. If the Occupant is in any doubt regarding which type of structure is to be installed, please contact iEDM. The four categories of structures and the requirements for each category type are summarised in *Table 1*.

As a minimum the Occupant shall satisfy the requirements outlined in *Table 1* (including notes) within the timeframes specified. The Occupant must allow iEDM a minimum of 14 days to review pre-mobilisation documentation prior to mobilisation. Mobilisation on site will not be permitted until iEDM is satisfied that all required pre-mobilisation documentation has been provided to a satisfactory standard.

If you have any questions relating to **Structural Engineering requirements or certification**, please contact:

Flavio Miranda
Project Engineer
Adelaide 500 - Engineering Compliance
flaviom@iedm.com.au
0413 956 622

Table 1 – Structure Types and Requirements

Structure Reference	TYPE A	TYPE B	TYPE C *Note 1*	TYPE D *Note 1*
EXAMPLES	• Structures with a floor plan up to 9 sqm. (i.e. pop up tents, small inflatable structures, small stages) • Proprietary Structures (ie Modified Trucks, Modified Containers) • Umbrellas	• Structures with Floor plan up to 36 sqm (i.e. (Marquees, Tents, shade structures)	• Structures with Floor plan between 36 and 500 sqm (i.e. Marquees, Tents, Shade Structures, Grandstands, Corporate Platforms) • Temporary Fencing • All Superscreens • Large Inflatable Structures	• Structures with Floor plan 500 sqm or greater (i.e. Marquees, Tents, Shade Structures, Grandstands, Corporate Platforms)
Fourteen (14) days prior to site mobilisation				
PRE-MOBILISATION REQUIREMENTS	Details and type of structure to be used (name, size, type, and if available photos/drawings)	Details and type of structure to be used (name, size, type, and if available photos/drawings)	Details and type of structure to be used (name, size, type, and if available photos/drawings)	Details and type of structure to be used (name, size, type, and if available photos/drawings)
	Work Health and Safety Documentation as required by the Event's Work Health and Safety Documentation	Work Health and Safety Documentation as required by the Event's Work Health and Safety Documentation	Work Health and Safety Documentation as required by the Event's Work Health and Safety Documentation	Work Health and Safety Documentation as required by the Event's Work Health and Safety Documentation
			Provide site specific engineering drawings for each structure	Provide site specific engineering drawings for each structure
			Provide site specific engineering calculations for each structure	Provide site specific engineering calculations for each structure
			Provide an engineering design certificate for each structure, issued by an independent CPEng *Note 2*	Provide an engineering design certificate for each structure, issued by an independent CPEng *Note 2*
Prior to Event: *Prior to 1pm Wednesday 19 February 2020*				
PRE-EVENT REQUIREMENTS	Provide the manufacturer's engineering documentation *Note 3* OR The Structure must comply with the 'hire and rental industry association – Temporary Structure/Marquee Weighing Guide' *Note 4* OR Provide an engineering inspection certificate for each structure, issued by an independent CPEng. *Note 5*	The Structure must comply with the 'hire and rental industry association – Temporary Structure/Marquee Weighing Guide' *Note 4* OR Provide an engineering inspection certificate for each structure, issued by an independent CPEng. *Note 5*	Provide an engineering inspection certificate for each structure, issued by an independent Engineer. *Note 5*	Provide an engineering inspection certificate for each structure, issued by an independent Engineer. *Note 5*
				Provide an Occupancy Permit (Building Compliance

				Certification) from a Qualified Building Surveyor.

Note 1: For categories labelled with this note, the Occupant shall engage an independent structural engineer, who is a certified practicing engineer (CPENG) to be responsible for the structural design and the installation certification. Note that separate engineers may be used for design and installation certification.

Additionally, if applicable, safe for trade occupation handover certificates for the structure may be required prior to entry by other trades. iEDM will provide direction when safe for trade occupation certificates are required.

Note 2: A template of the engineering design certificate is attached to this document and must be completed in full. If the Occupant requests any amended details on the certificate, then these changes must be discussed and agreed with iEDM prior to submission. If insufficient room is available on the template, please provide additional information as an attachment to the template.

Note 3: The manufacturer's engineering documentation must show how the structure is to be assembled, any required hold down ballast and the maximum design wind speed (in 3 second windgust m/s) and if it complies with the relevant Australian Standards. If the documentation does not satisfy the required relevant Australian Standards, then another of the requirements listed within this same cell of the table must be satisfied.

Note 4: The guide is available at https://www.hireandrental.com.au/resources/information-sheets.

Note 5: A template of the engineering inspection certificate is attached to this document and must be completed in full. If the Occupant requests any amended details on the certificate, then these changes must be discussed and agreed with iEDM prior to submission. If insufficient room is available on the template, please provide additional information as an attachment to the template.

6) NON COMPLIANCE

Any Occupant found with a non-compliant temporary structure, will be directed by iEDM/SATC to rectify the defect, or to dismantle the structure and remove from the Event precinct.

iEDM/SATC has the right to reject and remove from site any temporary structure for failing to meet the requirements detailed herein.

At the discretion of iEDM, any structure which is non-compliant with this policy may be placed on the Vulnerable Structures Register, and at the discretion of iEDM, a direction may be given to the Occupant to immediately deflate or dismantle the structure at any point in time.

Any cost, whether rectification to a structure, complete removal of a structure, deflation or dismantle of a structure, will be solely at the cost of the Occupant, regardless of who undertakes this work.

7) MONITORING STRUCTURAL STABILITY

The Occupant is to be aware of the design wind speed of their structure(s). The Occupant must:

- maintain constant supervision of the structure during the event;
- vigilantly review forecast windspeeds by BOM; and
- observe site wind conditions in order to be ready at short notice to deflate or dismantle the structure should the structure be unsafe for occupation.

Any cost, whether rectification to a structure, complete removal of a structural, deflation or dismantle of a structure, will be solely at the cost of the Occupant, regardless of who undertakes this work.

8) DEFINITIONS

Occupant: any person (or company) who erects or has effective control of a structure at the Adelaide 500 site.

SATC: is the South Australian Tourism Commission, the promoter of the Event and Principal in regards to works.

iEDM: is the Engineering Project Manager, and also the site Principal Contractor appointed by SATC.

The Event Period: is defined as the period between 12.00AM Thursday 20 February 2020 and 12:00PM Sunday 23 February 2020 unless notified otherwise by iEDM/SATC.

Site: is defined as areas of the Adelaide Parklands that are under the care and control of the SATC.

PPE: is Personnel Protective Equipment.

Certified Practicing Engineer (CPEng): is a Certified Practicing Engineer who is practicing in their field of expertise and registered as CPEng with Engineers Australia. In reference to this policy, the Engineer must be a Structural Engineer.

Occupancy Permits: are documents that signify that a building surveyor is satisfied and has approved a Temporary Structure as being suitable for occupation under applicable South Australian regulations.

Vulnerable Structures: are structures which do not comply with the requirements of the ABCB Temporary Structures 2015 standard. These structures will need to be monitored during the Event to ensure they do not fail under high wind speeds.

STRUCTURAL ENGINEERING *DESIGN* CERTIFICATE	
Project	2020 Adelaide 500 Event
Project Location	Adelaide Parklands Circuit, South Australia

FACILITY DETAILS:

Facility Name(s)	
Facility Number(s) (as provided by iEDM)	
Description of facility and footprint (plan) area	

STRUCTURAL DOCUMENTS:

Structural engineering drawing(s) (including revision number)	
Structural engineering calculation(s) (including revision number)	

RELEVANT STANDARDS:

(a)	The relevant version of the BCA:	2016
(b)	The relevant clauses of the Building Code of Australia (BCA) as follows:	Section B
(c)	The relevant Australian Standards as follows (Including number & year):	• AS 1170.0-2002 • AS 1170.1-2002 • AS 1170.2-2011 • AS 1170.4-2007 • Temporary Structures Standard 2015 • Any other relevant nominated standard – Engineer to list:

DESIGN PARAMETERS ARE AS FOLLOWS:

(d)	Importance level =	
(e)	Design (V_{des}) Wind Speed (m/s) =	
(f)	Minimum allowable geotechnical bearing pressure (kPa) =	
(g)	Design live load (for floor) (kPa) =	
(h)	Any other relevant design parameters (please state and advise parameter):	

COMPLIANCE:

Structural Engineer's Full Name	
Company Name	
Company Address	
Professional Insurance Details (Insurer, Value, Policy Ref. #)	
Phone	
Email	
Tertiary Qualification	
CPEng Registration Number	

I _____ [*Engineer's full name*] hereby certify that I am the structural engineer responsible for the design and documentation of the facility/s described above, and that that the design has been carried out in accordance with the requirements of the Australian Standards listed above and the BCA.

Signature: …… Date……

STRUCTURAL ENGINEERING *INSPECTION* CERTIFICATE	
Project	2020 Adelaide 500 Event
Project Location	Adelaide Parklands Circuit, South Australia

FACILITY DETAILS:

Facility Name(s)	
Facility Number(s) (as provided by iEDM)	
Description of facility and footprint (plan) area	

STRUCTURAL DOCUMENTS:

Structural engineering drawing(s) (including revision number)	
Structural engineering calculation(s) (including revision number)	

DESIGN PARAMETERS:

(a)	Design parameters as stated on the structural drawing/calculations have been achieved=	Y/N
(f)	Minimum Geotechnical allowable bearing pressure verified as being (kPa) =	
(h)	Any other relevant design parameters as stated on the documents that need to be achieved (please state and advise parameter):	

COMPLIANCE:

Structural Engineer's Full Name	
Company Name	
Company Address	
Professional Insurance Details (Insurer, Value, Policy Ref. #)	
Phone	
Email	
Tertiary Qualification	
CPEng Registration Number	

I _____ [*Engineer's full name*] have inspected the facility described above and certify that the facility has been installed in accordance with the structural documents listed above and that all of the required design parameters have been achieved on site.

Signature: …… Date……