Construction Management Plan

M9779 2nd Bradfield Entry Sign

Prepared by: Jericho Francisco

Reviewed / Approved by:

Date:

OUTDOOR FABRICATIONS
CERTIFICATE: SCA-143 CC3
EXPIRES: 18th JUNE 2025

AMENDMENT CONTROL:

Issue	Date	Description	Issued To	Issued By
1	28.03.25	Issue for Comment	Bradfield Dev't Authority	OF

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1. EXECUTIVE SUMMARY

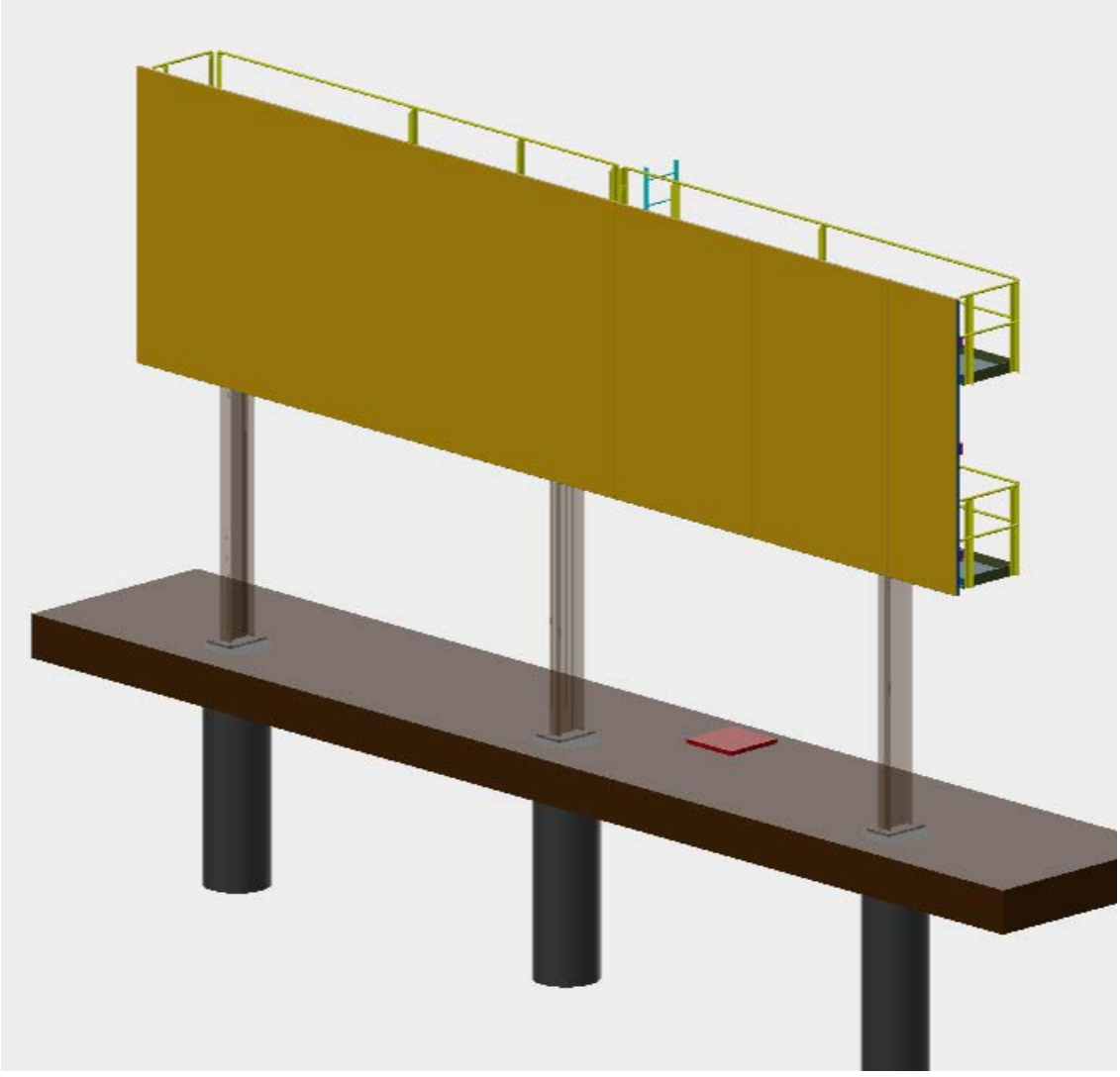
On behalf of, and with input from Bradfield Development Authority (BDA), Outdoor Fabrications (OF) has prepared this Construction Management Plan (CMP) to ensure that the 2nd Bradfield Temporary Entrance Sign is successfully delivered and installed, and is executed under a clear framework that optimizes the efficiency as well as ensuring the safety of all parties involved.

The CMP acts as the control document for program delivery. It is a live document, and will be updated as required.

2. PROJECT OVERVIEW

The proposed V sign structure is located at Badgerys Creek Road, Bringelly 2556. The site is controlled and operated by Bradfield Development Authority.

BDA has engaged Outdoor Fabrications to undertake the fabrication and installation of the new Static entrance signage. The scope includes design, structural steel fabrication, civil works and installation.



3. THE SITE MANAGEMENT PLAN

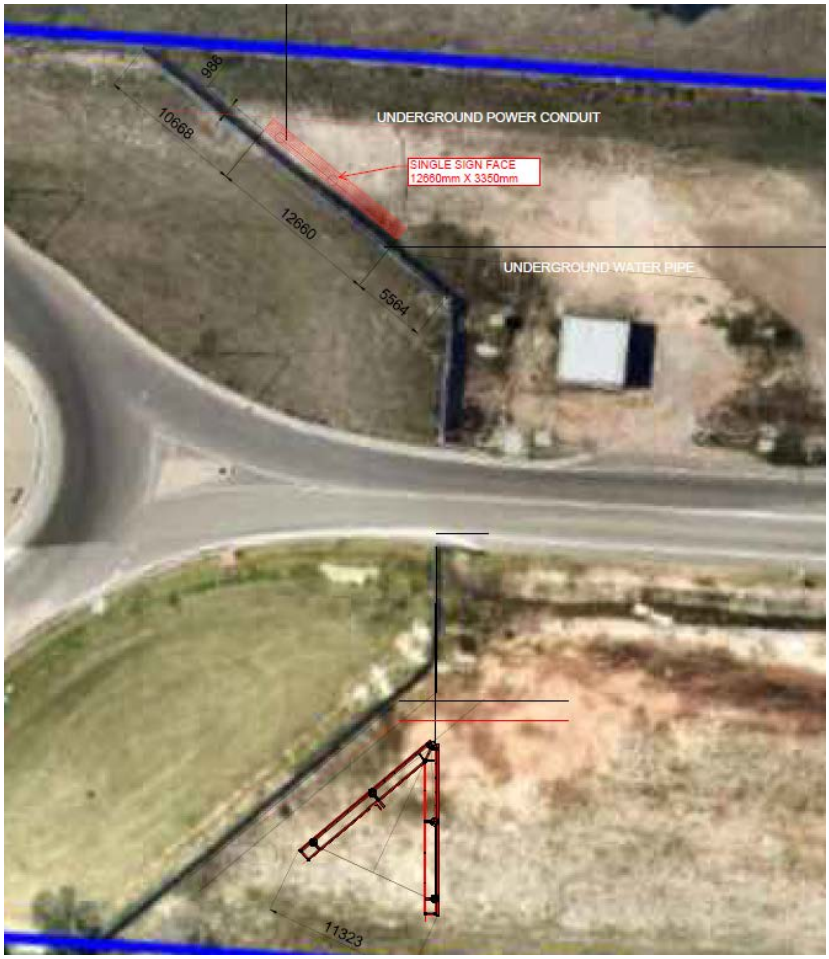
The SMP covers the following areas of the project:

- Site access and establishment;
- Installation methodology and sequence;
- Environmental management (Noise, waste, spills, dangerous goods)
- Traffic and pedestrian management;
- Council requirements

All tasks undertaken in relation to the project whether they be physical construction activities, office duties or procedural tasks are to be undertaken in accordance with the following:

- Suppliers and contractors shall provide assurance of the quality of all goods, materials and services to be provided; and
- All materials and works are to be undertaken to the manufacturer's specification or industry standards.

Management measures described in the CMP are to be implemented prior to the commencement of any works. These management measures are to be maintained throughout the works. A copy of the SMP will be kept on site at all time.



4. WORK, HEALTH AND SAFETY MANAGEMENT

A site-specific WHS (Work Health and Safety) Management Plan will be crafted and continuously upheld throughout the entirety of the project. This comprehensive plan is designed to adhere to all pertinent legislative requirements, ensuring that every aspect of health and safety is meticulously addressed and managed. It serves as a guiding framework to proactively identify, assess, and control potential risks and hazards in the workplace environment.

Furthermore, a project-specific SWMS (Safe Work Method Statement) will be intricately developed to outline detailed protocols and procedures tailored to each specific task and activity involved in the project. This document will comprehensively detail the steps to be taken to mitigate risks associated with each phase of work, ensuring that all team members are well-informed and equipped to maintain a safe working environment. By integrating these meticulously prepared management tools into our project framework, we prioritize the well-being of our workforce and other stakeholders and uphold our commitment to delivering projects safely, efficiently, and in compliance with regulatory standards.

Part C of the plan details Outdoor Fabrications WHS Plan.

5. ENVIRONMENTAL MANAGEMENT

The following specific environmental management principles will be implemented on site with environmental performance to be monitored throughout the project:

5.1 Environmental and Safety Risk Assessment

In the CMP, environmental and safety risk assessment plays an essential role in ensuring project success and compliance with regulatory standards. This process involves systematically identifying potential hazards such as soil contamination, noise pollution, and workplace accidents. By assessing the likelihood and severity of these risks, construction teams can implement proactive measures to mitigate them effectively.

Integrating environmental risk assessment addresses concerns such as waste management practices, water usage, and ecological impacts, promoting sustainable construction practices. Simultaneously, safety risk assessment focuses on hazards like falls, equipment failures, and hazardous material handling to safeguard workers and the surrounding community. By embedding these assessments into construction management plans, we can prioritize environmental stewardship, enhance worker safety, and uphold their commitment to responsible construction practices.

5.2 Noise Management

In our CMP, we prioritize effective noise management in accordance with the Interim Construction Noise Guidelines (Department of Environment and Climate Change, 2009). From the outset, we conduct thorough noise assessments to identify potential sources of disturbance, such as equipment operation and demolition activities. By using quieter equipment, implementing noise barriers, and scheduling noisy tasks carefully, we aim to minimize disruptions to nearby communities and ensure compliance with local regulations.

Through proactive approach we aim to not only mitigates environmental impacts but also strengthens relationships with the communities where we work. By integrating these practices into our construction management plan, we demonstrate our commitment to responsible and

sustainable construction practices while prioritizing the well-being of both our team and the surrounding environment.

Noisy activities with potential impact to the environment will be monitored. All works will be done in approved work periods. Potentially noisy activities are as follows:

- Use of power tools and hand tools
  - Electric drill hammer
  - Rattle gun
  - Grinder
  - Hammer
- Use of Low-noise plant and equipment with quality mufflers installed

5.3 Waste Management

Waste management is a crucial component of our construction management plan, adhering to established guidelines and best practices. We begin by conducting thorough assessments to identify types and volumes of waste generated during construction activities. By implementing strategies such as waste segregation, recycling, and proper disposal techniques, we aim to minimize the environmental footprint of our projects and comply with regulatory requirements.

Throughout the project lifecycle, we maintain a waste management system that includes regular monitoring and reporting to ensure efficient handling of materials. Our commitment extends to promoting sustainable practices by reducing waste generation and maximizing resource recovery wherever possible. By integrating comprehensive waste management strategies into our construction management plan, we demonstrate our dedication to environmental stewardship and responsible construction practices, benefiting both our projects and the communities we serve.

5.4 Flora and Fauna Management

Flora and fauna management holds an essential role within our construction management plan, emphasizing the preservation and safeguarding of local biodiversity. Right from the project's outset, we will conduct visual inspections for any flora or fauna that are in the exclusion zone (work place) and may be affected by our activities. Guided by stringent environmental regulations and best practices, we implement proactive measures such as preserving habitats, relocating sensitive species, and initiating reforestation efforts to minimize ecological disruption.

Our dedication extends to fostering sustainable practices that enhance biodiversity and bolster ecological resilience within the project area. By embedding flora and fauna management into our construction management plan, we highlight our commitment to environmental stewardship and responsible development, ensuring that our projects positively contribute to natural habitats and communities alike.

5.5 Public Property Protection

All vehicles accessing the site will strictly adhere to the designated route outlined in the Traffic Management section. Coordination of vehicular movements will be closely monitored and communicated with site personnel, particularly during peak access and egress periods.

These evaluations ensure alignment with preferred methodologies and sequencing of developments, guaranteeing continuous safety for the public throughout all project phases. This proactive approach underscores our commitment to maintaining a harmonious and secure environment during project execution.

6. WORKING HOURS

Any work activity or activity associated with the proposed work that requires the use of any tools (including hand tools) or any power operated plant and machinery that creates noise on or adjacent to the Site shall only be performed within the hours permitted by BDA.

Timing for works will be coordinated with the client and other subcontractors.

WORKING HRS: The site working hours are:

- Monday 7AM to 5PM
- Tuesday 7AM to 5PM
- Wednesday 7AM to 5PM
- Thursday 7AM to 5PM
- Friday 7AM to 5PM

7. SITE ESTABLISHMENT

The following site establishment activities will be carried out:

- Exclusion zone for the excavation, concreting, lifting and installation works.
- Site establishment will be completed prior to commencement of any works on site.
- Photographic documentation of site conditions to be completed prior to commencement of any works on site.
- The crane will be positioned as shown on the site layout.
- The site area will be required for the duration of the project.

8. TRAFFIC MANAGEMENT

The works will be executed within the green area and will not affect traffic. As such, there will be no need for Traffic Management to do the works on site.

9. INSTALLATION METHODOLOGY

The scope of this project is to install a new V shaped static sign on a vacant piece of land.

All design, fabrication and assembly will be done in Outdoor Fabrications workshop in Arndell Park, NSW.

All site work will be performed by Outdoor Fabrications inducted installers and subcontractors.

All site work will be performed by inducted Outdoor Fabrications installers and contractors. At the beginning of each shift the site foreman will conduct a Toolbox meeting to discuss site safety, advise who on site is the designated first aid officer, what to do in an emergency and the emergency assembly point. He will then run through the work to be done that shift and assure all personnel have minimum PPE requirements. All present will sign the toolbox talk attendance form. PPE's required are:

- Hard hat
- Safety eye wear (where applicable)
- Long sleeve reflective shirt

- Long trousers with double reflective hoops
- Lace up safety boots
- Hearing protection (where applicable)

A site risk assessment will be covered in the daily Pre Start and signed by all present at the start of each shift.

Before each works is commenced, OF will conduct a dilapidation photo documentation to record all existing damages to the surroundings of the work place.

Civil Works will be as follows:

- Prior any works, OF will conduct a Dial Before You Dig (DBYD) enquiry to make sure that there will be no adverse effect existing services that may be present in the area.
- Further to the DBYD, OF will engage a 3rd party company that does services scanning to determine exact locations of existing utilities on site prior any excavation. Should a conflict be found, it will be marked and reported to the client for further investigation and appropriate actions. Potholing will be conducted as necessary.
- The earth works equipment will be positioned on the grass.
- Site measurement will be conducted again to assure exact positioning of concrete foundation.
- Excavation of required footings. Spoils will be left on site.
- Reinforcement bars and hold down bolts to be installed.
- Engineering inspections to be conducted prior to concrete pouring
- Concrete placement using concrete pump
- Concrete test samples will be collected with a 7-days, 14-days and 28-days curing durations.
- Documentations on civil works will be prepared and submitted to the client as part of the close-out process.

Installation works will be as follows:

- All deliveries will be done by OF
- Lifting of fabricated steel frames and other structures will be done by OF. EWP (as necessary) and a crane will be positioned inside the lot.
- The steel structure will be installed following the sequence below:
    - Lifting and installation of support structure. These are assemblies that will be installed on the anchor bolts.
- Lifting and installation of sign frames on to completed support structure
- Installation of Static Skins.
- Alignment will be assured using digital laser levels.
- Notification will be provided to BDA prior demobilisation.
- Once all works are completed, OF to demobilize from site.
- Documentations on structural works will be prepared and submitted to the client as part of the close-out process.
- Should any new damages be reported, it will be documented and rectified.

10. CLIENT REQUIREMENTS

A site specific WHS Management Plan will be established and will be maintained throughout the project that satisfies the relevant legislative requirements.

11. PROJECT DIRECTORY

For the execution of this project, the following contact persons from Outdoor Fabrications will be nominated:

Job role	Name	Contact No.	Email
Director	Derek Bayliss	0411 250 052	derek@outdoorfabrication.com.au
Operations Manager	Kevin Gomez	0419 269 417	kevin@outdoorfabrication.com.au
Project Manager	Jericho Francisco	0433 933 600	jericho@outdoorfabrication.com.au
WHS Manager	Tanya Chesworth	0408 167 799	admin3@outdoorfabrication.com.au

Contact information of client and other stake holders

Company	Name	Contact No.	Email
BDA	Amanda Ying	9228 5498	Amanda.ying@bda.nsw.gov.au
BDA	Dom Weir	0403 956 959	Dom.weir@bda.nsw.gov.au
BDA	Kathleen Cooke		procurement@bda.nsw.gov.au

12. LIFT PLAN

Customer Bradfield Development Authority
Job Specifics Lifting of signage assemblies
Location Bradfield city entrance 2nd sign
Utilised Crane/s Kato KRM 13T

Safety Notes:

- Crane capacities are as per 17%% Load Chart
- Authorised persons in lift area only. Lift zone to be established
- Lifting gear to be checked and tagged for correct capacity and safe use prior to lift
- Chains and slings to be protected at sharp edges
- All crane operations and rigging to conducted by ticketed personnel
- Two nominated rigger/dogman in charge of lifts
- Correct communications to be established two ways/visual/whistles
- Correct positioning of outriggers on suitable ground and ample packing under pads
- Risk assessment to be completed by all involved. Any changes to lift study to be made and noted prior to lift

Weights Supplied By: Outdoor Fabrications Pty Ltd upon completion of assembly and installation

Lift Study Plan By: Kevin Gomez

Reviewed By:

LIFT DESCRIPTION	Lifting of signage assemblies
CRANE DATA	
Make	Kato KRM 13T
Type	All Terrain
Model	KRM13T
Boom length	20m
Counter weight	na
Operating radius	7m
Load Weight	500kg
Excess lift Capacity %	17%
COMPUTATION	
Net crane capacity	500kg
Load orientation	Front and side
Swing orientation relative to crane	side
Wind Speed	30kph
Total lift weight	
WEIGHT OF LOAD (INCL DUAL LIFT FACTOR IF APPLICABLE)	500kg
WEIGHT OF HOOK BLOCK	included
WEIGHT OF RIGGING TACKLE	included
WEIGHT OF ADDITIONAL ITEMS	
TOTAL WEIGHT =	500kg

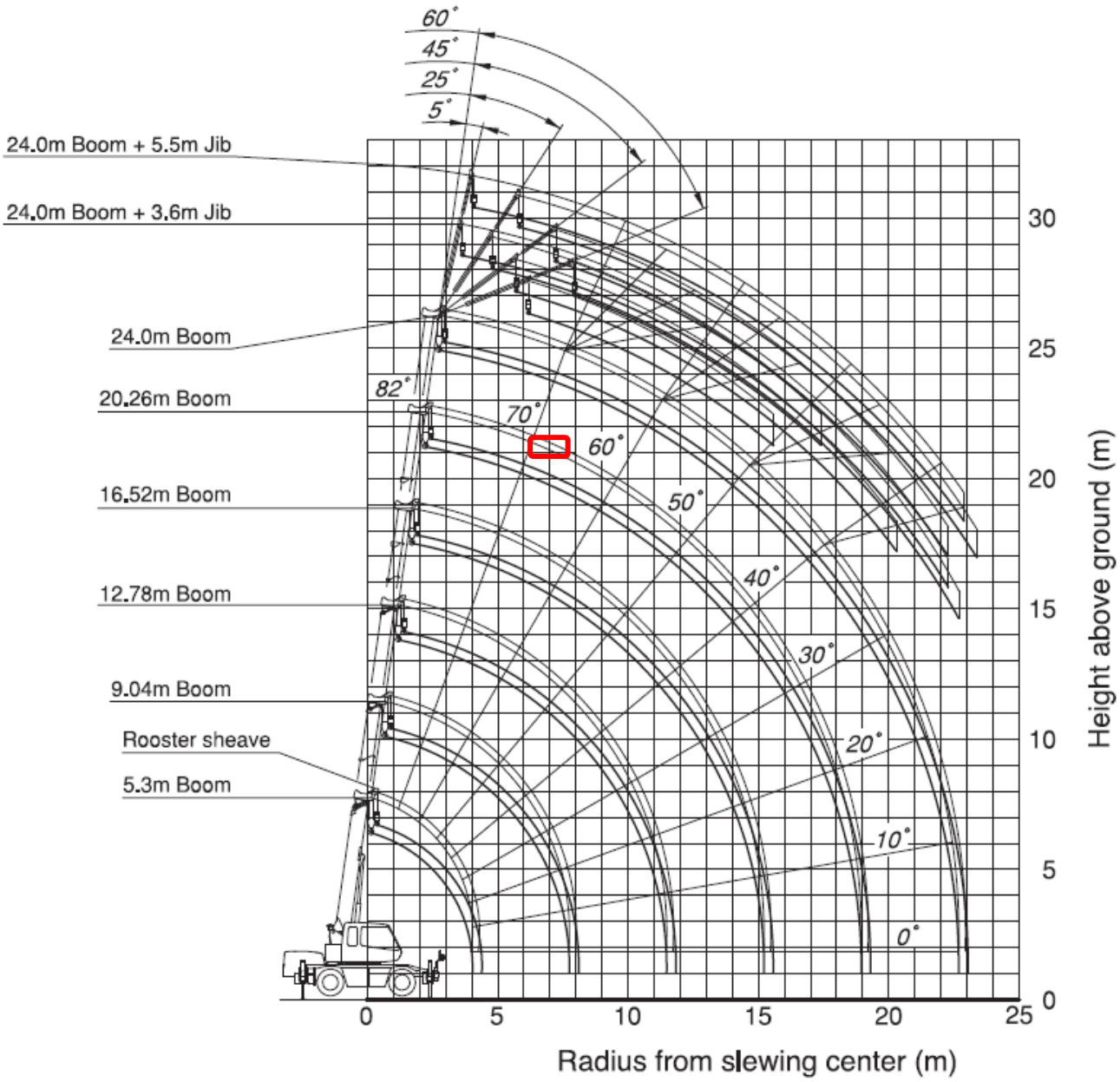
LIFT METHODOLOGY

- 13T crane to set up in exclusion zone
- Outriggers to be placed on 900 x 900 mm timber pads as needed
- Use of 2-way radio as method of communication with whistle system used as back up communication.
- OF will supply ticketed dogman for rigging and de-rigging
- All personnel in vicinity of crane slew area to cease work whilst crane performs lift.
- A boom length of 20m
- A maximum load of 500kg
- The crane at these settings will be 17% of its full lifting capacity.
- All workers will wear required PPE requirements.

5.3m — 24.0m Boom

Working radius (m)	(4.75m) Outriggers fully extended (360° full range)						(4.3m) Outriggers intermediately extended (over side)						(3.7m) Outriggers intermediately extended (over side)						(2.7m) Outriggers intermediately extended (over side)					
	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom	5.3m Boom	9.04m Boom	12.78m Boom	16.52m Boom	20.26m Boom	24.0m Boom
1.5	13.00	6.00	6.00				13.00	6.00	6.00				12.00	6.00	6.00				12.00	6.00	6.00			
1.7	13.00	6.00	6.00				13.00	6.00	6.00				12.00	6.00	6.00				12.00	6.00	6.00			
2.0	12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00			12.00	6.00	6.00	5.00		
2.5	10.00	6.00	6.00	5.00			10.00	6.00	6.00	5.00			10.00	6.00	6.00	5.00			8.50	6.00	6.00	5.00		
3.0	8.20	6.00	6.00	5.00	4.70		8.20	6.00	6.00	5.00	4.70		8.20	6.00	6.00	5.00	4.70		6.00	6.00	6.00	5.00	4.70	
3.5	7.00	6.00	6.00	5.00	4.70	3.20	7.00	6.00	6.00	5.00	4.70	3.20	7.00	6.00	6.00	5.00	4.70	3.20	4.70	4.70	4.60	4.50	4.40	3.20
4.0	6.10	6.00	6.00	5.00	4.70	3.20	6.10	6.00	6.00	5.00	4.70	3.20	6.10	6.00	6.00	5.00	4.70	3.20	3.70	3.70	3.70	3.70	3.70	3.20
4.5		5.50	5.40	5.00	4.50	3.20		5.50	5.40	5.00	4.50	3.20		5.10	5.10	5.00	4.50	3.20		3.00	3.00	3.10	3.10	3.00
5.0		5.00	4.90	4.60	4.05	3.20		5.00	4.90	4.60	4.05	3.20		4.40	4.40	4.50	4.05	3.20		2.40	2.40	2.60	2.70	2.70
5.5		4.50	4.40	4.20	3.70	3.20		4.50	4.40	4.20	3.70	3.20		3.80	3.70	3.90	3.70	3.20		2.00	2.00	2.20	2.30	2.30
6.0		4.10	4.00	3.80	3.40	3.00		4.10	4.00	3.80	3.40	3.00		3.20	3.20	3.40	3.40	3.00		1.70	1.70	1.85	2.00	2.05
6.5		3.70	3.65	3.50	3.15	2.80		3.65	3.60	3.50	3.15	2.80		2.80	2.75	2.95	3.05	2.75		1.40	1.40	1.60	1.70	1.75
7.0		3.35	3.30	3.20	2.90	2.60		3.20	3.15	3.20	2.90	2.60		2.40	2.35	2.55	2.70	2.50		1.20	1.20	1.40	1.50	1.55
8.0		2.70 (7.7m)	2.90	2.70	2.50	2.25		2.65 (7.7m)	2.45	2.60	2.50	2.25		1.95 (7.7m)	1.80	2.00	2.10	2.15		0.90 (7.7m)	0.85	1.05	1.15	1.20
9.0			2.25	2.30	2.20	1.95			1.90	2.10	2.20	1.95			1.40	1.60	1.70	1.75			0.60	0.80	0.90	0.95
10.0			1.80	2.05	1.95	1.75			1.50	1.70	1.85	1.75			1.05	1.25	1.35	1.45			0.35	0.55	0.65	0.75
11.0			1.45	1.70	1.75	1.55			1.20	1.40	1.55	1.55			0.80	1.00	1.10	1.20				0.40	0.50	0.60
12.0			1.35 (11.4m)	1.40	1.50	1.40			1.10 (11.4m)	1.15	1.30	1.35			0.70 (11.4m)	0.80	0.90	1.00				0.25	0.35	0.45
13.0				1.15	1.30	1.25				0.95	1.10	1.15				0.65	0.75	0.85					0.20	0.30
14.0				0.95	1.10	1.15				0.80	0.90	1.00				0.50	0.60	0.70						0.20
15.0				0.80	0.90	1.00				0.65	0.75	0.85				0.40	0.50	0.55						
16.0					0.79	0.85					0.65	0.70					0.40	0.45						
17.0					0.68	0.74					0.55	0.60					0.30	0.35						
18.0					0.58	0.64					0.45	0.50						0.30						
19.0					0.51 (16.8m)	0.55					0.35 (16.8m)	0.40												
20.0						0.47						0.35												
21.0						0.41						0.30												
22.0						0.36						0.25												
22.5						0.32																		
Critical boom angle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	23°	36°	—	—	19°	32°	44°	50°
Standard hook	for 13 ton						for 13 ton						for 13 ton						for 13 ton					
Hook mass	90kg						90kg						90kg						90kg					
Parts of line	8	4	4	4	4	4	8	4	4	4	4	4	8	4	4	4	4	4	8	4	4	4	4	4

(Unit : Metric ton)



Note:
1. This diagram does not include deflection of boom and jib.
2. The outriggers are fully extended (360° full range).

Working Configuration

Explanation on this page

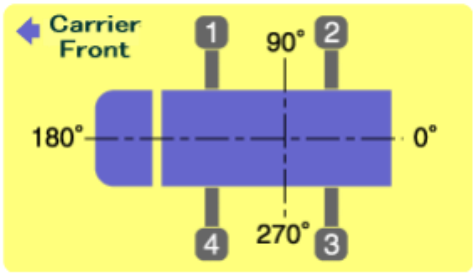
(GR-130E-2-00101 6 SECTION BOOM)

Boom Length(m)	20.1	Counterweight (t)	fixed	Swing Angle	Max_Reaction	Lifting Load (t)	0.5
Jib state (m)	stow	O/R Spread (m)	4.7/1-4	Working Radius (m)	7.0		
Jib Tilt Angle (°)	---	Hook Block (t lifting)	Including in Load	Boom Angle (°)	69.0		

Outrigger Jack Reaction Force

(unit :t)

Swing Angle	1	2	3	4				
129	5.1	3.8	2.5	3.3				
43	3.4	5.3	3.6	2.3				
310	2.3	3.5	5.3	3.5				
220	3.5	2.5	3.6	5.0				



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Change Condition | Change Model | Save Result | Readout Result | Clear PDF

[Notes]

1. As to the information we supply in this page on the outrigger jack reaction force, please note that the given value is a calculated value when the outriggers are set on a firm and level surface. It is not an actually measured one. Therefore, we can not guarantee the calculated value to be in conformity with that of your actual machine.
2. As to the data supplied in this page on the outrigger jack reaction force, please note that neither vibration nor shock which may be produced during crane operation is taken into consideration. When setting the outriggers, therefore, be sure to use blocks or steel plates of sufficient strength and size below the outrigger floats.