



Growth, prosperity, community.

#1906146: EC: TS
GPC Reference: RR2023/009/01

28 November 2023

Kingfisher Bay Resort & Village
Primary Thoroughfare Body Corporate
David Hay
PMB 1
URANGAN QLD 4655

Email: david_hay@kingfisherbay.com

Dear Mr Hay

REFERRAL AGENCY RESPONSE - RR2023/009/01
(GIVEN UNDER S56 PLANNING ACT 2016)

1 Application Details

The development application was referred to the Gladstone Ports Corporation Limited under section 54 of the *Planning Act 2016* on 10 October 2023.

Application Number:	RR2023/009/01
Applicant Name:	Kingfisher Bay Resort & Village Primary Thoroughfare Body Corporate
Applicant Contact Details:	Kingfisher Bay Resort & Village Primary Thoroughfare Body Corporate David Hay PMB 1 URANGAN QLD 4655 Email: david_hay@kingfisherbay.com
Approval Sought (Port Limits):	OPW – Operational works that is tidal works within the limits of a Port – GPC as the Referral Agency
Details of Proposed Development:	Operational works that is maintenance works on existing jetty and pontoon structure that is on land below the high-water mark and within the limits of a port under the Transport Infrastructure Act.
Location Street Address:	Ferry Ramp and Jetty at Kingfisher Bay Resort, K'gari
Location Real Property Description:	Lot 88 CP901875
Land Owner:	Department of Resources Kingfisher Bay Resort & Village Primary Thoroughfare Body Corporate
Priority Port Overlay	N/a

2 Description Of Proposed Development

Remediation of the stair platform, replacement of the barge ramp breasting piles and some repairs to elements of the timber jetty structure.

3 Referral Triggers

This development application was referred to the Gladstone Ports Corporation Limited under the following provisions of the *Planning Regulation 2017*:

Schedule 10, Part 13, Division 3, Table 1

- a. Prescribed assessable development within limits of a port; and
- b. On land below high-water mark and within the limits of a port under the *Transport Infrastructure Act 1994*

4 Details of Referral Response

This development application has been assessed against port authority functions under the *Transport Infrastructure Act 1994*, Chapter 8, Part 3 as required in Schedule 10, Part 13, Division 3, Table 1, Item 4 of the *Planning Regulation*.

The Gladstone Ports Corporation Limited requests the Assessment Manager, under section 56(3) of the *Planning Act 2016* to give the following advice stated in Attachment 1.

For further information please contact Trudi Smith, Planning Specialist on 07 4976 1314 or via email planning@gpcl.com.au.

Yours sincerely



Craig Haymes
Chief Executive Officer

Cc: Assessment Manager

Enc. Attachment 1: Referral Agency Advice

Attachment 1: Referral Agency Advice

PART 1: REFERRAL AGENCY ADVICE

In general the development proposal is in compliance with the requirements of Gladstone Ports Corporation Limited (GPC). This development approval is subject to each the following conditions which are stated by GPC, the Referral Agency.

Part 1a: Approval sought under *Planning Act 2016* – Operational works that is tidal works on Strategic Port land tidal area

General

1. Unless otherwise stated, all conditions must be complied with and completed prior to the commencement of the development.
2. Where additional “approval” is required under these conditions by the Referral Agency (Gladstone Ports Corporation Limited) for drawings or documentation the Applicant must submit for review, amend to the satisfaction of, and obtain written approval from the Referral Agency.

Furthermore, the Referral Agency will require no less than 10 business days, unless otherwise conditioned by the Referral Agency, to initially assess the drawings or documentation provided prior to the commencement of the works. Should further information be required for assessment, the Referral Agency will require a further 5 business days to complete the information request assessment and response.

3. The development must be a designed and constructed to mitigate potential adverse impacts to port functions, services and facilities, and to maintain safe navigable access within Port Limits.

Engineering

4. The tidal works must be undertaken generally in accordance with the approved plans.
5. Upon completion of the works, the Applicant must supply the Referral Agency with RPEQ certified “As Constructed” plans in both hard copy (2 of) and electronic (CAD format) which illustrate all infrastructure and services installed on, under or over Port limits associated with the activity unless otherwise approved in writing by the Referral Agency.
6. The Applicant must inform the Referral Agency of completion of works within Port Limits within 14 days of practical completion and certify that the site is fit for purpose.
7. Prior to works commencing, the proponent must submit to the Referral Agency for review, details of proposed mitigation measure/s to reduce skyglow from all external lighting associated with the development.
8. Any site lighting used during construction / operation should not negatively impact on the visibility of Navigational Aids utilised for the primary shipping channels within Port Limits nor illuminate a landward glare beyond the site boundary. Lighting must be reviewed during construction and use of the development with respect to navigation. Where an issue is identified or a validated complaint received, the Applicant must immediately rectify to the satisfaction of the Referral Agency.
9. Any material which is deposited (not authorised under this approval) or any debris which

falls or is deposited within Port Limits during the construction of the approved development shall be removed by the applicant at their cost and expense prior to the commencement of the use of approved structure.

Upon completion of construction, the applicant shall provide the Referral Agency with written confirmation that the waterway is clear of foreign materials not authorised under this approval.

10. If, as a result of the works, or other cause attributable to the Applicant, any bank or tidal structure within Port Limits is displaced (excluding approved works), the Applicant at its cost and expense shall restore the bank or structure to its former condition and take such other action as is necessary to ensure the stability of the bank or structure to the satisfaction of the Regional Harbour Master.
11. Prior to works within Port Limits commencing, the Applicant or their contractor must supply to the Referral Agency for approval an Emergency Management Plan for the works within Port Limits for all potential incidents e.g. contaminant spill, riverine flood, adverse weather etc.

Environment

12. Prior to construction works commencing on site, a Construction Environmental Management Plan (CEMP) specific to these works, must be submitted to the Referral Agency (the Referral Agency) for approval.

The construction must be undertaken in accordance with the approved CEMP that ensures:

- a. environmental risks, including but not limited to, noise, odour, lighting, dust, are identified, managed and continually assessed in relation to the construction activity ;
- b. that staff are trained and aware of their obligations under the EMP, including a copy of the management plan and development approval available on site at all times;
- c. that reviews of environmental performance are undertaken at least annually; and
- d. any amendments to the EMP are to be submitted to the Referral Agency for review and approval.

Note: the Referral Agency has a guideline for the development of environmental management plans that may be utilised in meeting the requirements of this condition.

Incident Notification

13. At all times, Gladstone Ports Corporation Environmental Hotline (07) 4976 1617 is to be notified of the occurrence of any:
 - a) Release / spill of contaminants (e.g. fuels / chemicals / sewerage) of any amount to water, and
 - b) Any environmental complaints received by the holder of this approval.
14. Environmental incident notification must be included in any Management Plans for the works within Port Limits.

Referral Agency Advice Notes

- a. Where the Applicant is required to submit further documentation to the Referral Agency, this is to be directed to the Planning section at planning@gpcl.com.au, including reference to the allocated referral response number.
- b. All development should proceed in accordance with the duty of care guidelines under the *Aboriginal Cultural Heritage Act 2003*. Penalties may apply where duty of care under that Act has been breached.
- c. The *Environmental Protection Act 1994* states that a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm. Environmental harm includes environmental nuisance. In this regard persons and entities, involved in the civil, earthworks, construction, and operational phases of this development, are to adhere to their 'general environmental duty' to minimise the risk of causing environmental harm.

KINGFISHER BAY RESORT JETTY STAIRS PLATFORM REMEDIAION WORKS



KEY PLAN
NOT TO SCALE

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287869 - DRG - 0501	BARGE RAMP PILES - GENERAL ARRANGEMENT
287869 - DRG - 0502	BARGE RAMP PILES - DETAILS AND NOTES

GPC Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:23 am, 30/11/2023

ISSUED FOR CONSTRUCTION

<p>Scales</p> <p>Approved by: KAITLIN LANGDON <i>K Langdon</i> RPEQ No. 18825</p>	<table border="1"> <tr> <td>3</td> <td>18.05.23</td> <td>ME</td> <td>TM</td> <td>KL</td> </tr> <tr> <td>2</td> <td>09.05.23</td> <td>FM</td> <td>TM</td> <td>KL</td> </tr> <tr> <td>1</td> <td>24.03.23</td> <td>IP</td> <td></td> <td>KL</td> </tr> <tr> <td>Issue</td> <td>Date</td> <td>By</td> <td>Chkd</td> <td>Appd</td> </tr> </table>	3	18.05.23	ME	TM	KL	2	09.05.23	FM	TM	KL	1	24.03.23	IP		KL	Issue	Date	By	Chkd	Appd	<p>Client PACIFIC MARINE GROUP PTY. LTD.</p> <p>Job Title KINGFISHER BAY RESORT JETTY</p> <p>PACIFIC MARINE GROUP AUSTRALIA</p>	<p>ARUP</p> <p>Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3223 9000 www.arup.com</p> <p>Member Firm Arup Pty Ltd ABN 18 000 966 165</p>	<p>Drawing Title COVER PAGE AND DRAWING INDEX</p> <p>Drawing Status DETAILED DESIGN</p> <p>Job No 287869</p> <p>Drawing No 0001</p> <p>Issue 3</p>
3	18.05.23	ME	TM	KL																				
2	09.05.23	FM	TM	KL																				
1	24.03.23	IP		KL																				
Issue	Date	By	Chkd	Appd																				

GENERAL NOTES

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS, REPORTS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT. NOTES BELOW DO NOT COVER THE FULL REQUIREMENTS.
- G2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A SAFE AND STABLE CONDITION AND ENSURING NO PART SHALL BE OVER-STRESSED DURING CONSTRUCTION ACTIVITIES.
- G3. THESE DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS IN METRES UNLESS NOTED OTHERWISE.
- G4. WHILST EVERY CARE HAS BEEN TAKEN IN DEVELOPING THE DESIGN AND AVOIDING CLASHES. THE CONTRACTOR SHALL SURVEY THE EXISTING STRUCTURE TO CONFIRM ALL DIMENSIONS AND CHECK FOR CLASHES WITH THE EXISTING STRUCTURE PRIOR TO THE COMMENCEMENT OF WORKS.
- G5. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.
- G6. ANY DISCREPANCIES DISCOVERED DURING CONSTRUCTION ACTIVITIES BETWEEN THE EXISTING STRUCTURE AND THE DRAWINGS SHALL BE REPORTED TO THE DESIGN ENGINEER FOR FURTHER ADVICE.
- G7. TRADE NAMES HAVE BEEN USED FOR PARTICULAR PRODUCT REQUIREMENTS BUT EQUIVALENT PRODUCTS MAY BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
- G8. ALL PROPRIETARY PRODUCTS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
- G9. ABBREVIATIONS

APPROX.	APPROXIMATE
CFW	CONTINUOUS FILLET WELD
DIA	DIAMETER
FPBW	FULL PENETRATION BUTT WELD
MAX	MAXIMUM
NO.	NUMBER
SS	STAINLESS STEEL
THK	THICK
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE

DESIGN CRITERIA

- DC1. REFER TO ARUP BASIS OF DESIGN REPORT (287869-RPT-001) FOR FULL DETAILS.
- DC2. THE DESIGN LIFE FOR NEW ELEMENTS IS 25 YEARS.
- DC3. VESSEL DATA:
 - A. STAIRS PLATFORM DESIGN VESSEL = 21m CRUISE VESSEL (QUICK CAT II AND AMAROO). MAX DISPLACEMENT = 30T
 - B. STAIRS PLATFORM BERTHING VELOCITY = 0.4m/s
 - C. BARGE RAMP DESIGN VESSEL = MV FRASER DAWN, FRASER VENTURE MV AND KINGFISHER BARGE. MAX DISPLACEMENT = 187T
 - D. BARGE RAMP BERTHING VELOCITY = 0.3m/s
 - E. EXTREME METEOCEAN CONDITIONS: WIND = 53m/s, Hs = 3.1m, TP = 8s

DC4. TIDAL LEVELS:

TIDAL PLANE	WATER LEVEL (m)
HIGHEST ASTRONOMICAL TIDE (HAT)	4.64
MEAN HIGH WATER SPRING (MHWS)	3.79
MEAN HIGH WATER NEAP (MHWN)	3.04
AUSTRALIAN HEIGHT DATUM (AHD)	2.068
MEAN SEA LEVEL (MSL)	2.31
MEAN LOW WATER NEAP (MLWN)	1.53
MEAN LOW WATER SPRING (MLWS)	0.78
LOWEST ASTRONOMICAL TIDE (LAT)	0

- NOTES:
- 1. ANY SOUNDINGS OR LEVELS SHOWN IN THE DRAWINGS ARE REDUCED TO LAT.
 - 2. ALL ELEVATIONS ARE POSITIVE UPWARDS.

DEMOLITION / CONSTRUCTION / ERECTION

- DE1: THE ALUMINIUM STAIRS AND PLATFORMS ARE REQUIRED TO BE REMOVED PRIOR TO THE DEMOLITION OF THE SUBSTRUCTURES AND BE INSTALLED ON THE NEW SUBSTRUCTURE AT THE END ON THE CONSTRUCTION;
- DE2: EXISTING TIMBER SUB STRUCTURAL ELEMENTS SHALL BE DEMOLISHED WITH CAUTION. THE CONTRACTOR SHALL MINIMISE THE IMPACT ON THE EXISTING PIER HEAD STRUCTURE AND ENVIRONMENT.
- DE3: THE EXISTING TIMBER PILES THAT ARE IDENTIFIED TO BE DEMOLISHED SHALL BE CUT TO THE SEABED LEVEL.
- C1: THE ALUMINIUM STAIR AND PLATFORMS SHALL BE STORED WITH CAUTION, CONTRACTOR SHALL ENSURE NO DAMAGE TO THE STRUCTURE. ALUMINIUM STAIR PLATFORMS SHALL BE CLEANED TO REMOVE ALL MARINE GROWTH AND INSPECTED BY THE DESIGNER PRIOR TO THE RE-INSTALLATION TO CONFIRM IF ANY REMEDIATION WORKS ARE REQUIRED.
- E1. STEELWORK AND OTHER STRUCTURAL ELEMENTS SHALL BE ERECTED IN A LOGICAL SEQUENTIAL MANNER WORKING FROM STABLE BRACED POINTS UNTIL THE STRUCTURE IS COMPLETE.
- E2. THE CONTRACTOR SHALL TAKE CARE NOT TO OVERLOAD STRUCTURAL COMPONENTS BY STACKING OR STORING MATERIALS IN EXCESS OF THE WEIGHT CARRIED BY THOSE COMPONENTS IN THE COMPLETE STRUCTURE.
- E3. SUITABLE LIFTING BRACKETS, SLINGS, SPREADER BEAMS, ETC. SHALL BE PROVIDED FOR LIFTING OF MAJOR COMPONENTS.
- E4. ITEMS MARKED FOR DISPOSAL SHALL BE REMOVED FROM SITE AND DISPOSED OF.

STRUCTURAL STEELWORK

- S1. ALL WORKMANSHIP, TOLERANCES & MATERIALS SHALL COMPLY WITH AS4100 AND MRTS78 UNLESS NOTED OTHERWISE
- S2. U.N.O ALL MATERIAL SHALL BE:
 - GRADE 350LO HOT ROLLED OPEN SECTIONS COMPLYING WITH AS3679.1
 - GRADE 350LO RHS & SHS COMPLYING WITH AS1163
 - GRADE 350LO CHS COMPLYING WITH AS1163
 - GRADE 350LO STEEL PLATE COMPLYING WITH AS3678
- S3. WELDING SHALL BE CATEGORY SP TO COMPLY WITH AS/NZS 1554.1.
- S4. BOLTING: ALL BOLTS TO BE STAINLESS STEEL BOLTS, NUTS AND WASHERS AND GRADE 316 A4-70 U.N.O. ALL STAINLESS STEEL BOLTS, NUTS OR WASHERS IN CONTACT WITH CARBON STEEL OR ALUMINIUM STEEL SHALL HAVE A HIGH DENSITY NYLON SLEEVE MINIMUM 2mm THICKNESS TO PROVIDE ELECTRICAL ISOLATION.
- S5. ALL STAINLESS STEEL SHALL BE GRADE 316L.
- S6. THE ENDS OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH MIN 8mm THICK END PLATES AND 6mm FILLET WELDS U.N.O.
- S7. AT LEAST THREE WEEKS PRIOR TO THE COMMENCEMENT OF FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE DESIGN ENGINEER FOR REVIEW.
- S8. ALL CONTACT SURFACES BETWEEN CARBON STEEL AND ALUMINIUM SHALL HAVE A HIGH DENSITY NYLON SLEEVE MINIMUM 2mm THICKNESS TO PROVIDE ELECTRICAL ISOLATION.
- S9. PROTECTIVE COATING SHALL BE APPLIED TO ALL CARBON STEELWORK U.N.O AND SHALL BE MINIMUM 600 MICRON DRY FILM THICKNESS AND AS PER MRTS88.

PILING

- P1. AVAILABLE GEOTECHNICAL INVESTIGATION IS PROVIDED IN THE GROUND INVESTIGATION FACTUAL REPORT (287869-GEO-003).
- P2. ALL PILING TO COMPLY WITH AS 2159 AND MRTS66 UNLESS NOTED OTHERWISE.
- P3. THE PLAN SET-OUT DIMENSIONS ARE AT PILE CUT OFF LEVEL. ALLOWABLE VARIATION FROM VERTICAL IS 20mm PER LINEAR METRE OF THE PILE LENGTH (2 PERCENT).
- P4. THE MAXIMUM PERMISSIBLE DEVIATION AT CUT OFF LEVEL OF THE CENTRE OF EACH COMPLETED PILE FROM THE CORRECT CENTRE POINT IS:
 - STEEL PILES +/- 75mm IN ANY DIRECTION
 - TIMBER FENDER PILES +/-50mm IN ANY DIRECTION
 - TIMBER REPLACEMENT PILES +/-50mm IN ANY DIRECTION
 - ALLOWABLE TOLERANCE IN CUT OFF LEVEL STEEL PILES 5MM ALL TIMBER PILES 10mm.
- P5. PILES SHALL BE DRIVEN IN AN ORDER AND IN SUCH MANNER THAT NO DAMAGE IS SUSTAINED BY PREVIOUSLY DRIVEN PILES OR STRUCTURE.
- P6. PILE CAPACITY IS ASSESSED CONSIDERING SCOUR, ADOPTING A GEOTECHNICAL REDUCTION FACTOR OF 0.4.
- P7. THE PILE DESIGN ASSUMES MAXIMUM SCOUR ALLOWANCE AS PER THE ARUP BASIS OF DESIGN REPORT (287869-RPT-001).
- P8. REFER TO THE ARUP DESIGN REPORT (287869-RPT-004) FOR DETAILS OF THE INTERPRETED GEOTECHNICAL CONDITIONS, DESIGN ASSUMPTIONS AND CRITERIA.
- P9. THE AS CONSTRUCTED DESIGN STEEL PILE TOE ELEVATIONS SHALL BE CONFIRMED BY THE GEOTECHNICAL ASSESSOR. THE GEOTECHNICAL ASSESSOR SHALL PREPARE A DETAILED LOG OF THE STRATA ENCOUNTERED AND ANY STRENGTH TESTING UNDERTAKEN TO CONFIRM THE GEOTECHNICAL DESIGN PARAMETERS.
- P10. THE STEEL PILES SHALL BE A MINIMUM THICKNESS AS NOMINATED AS NOMINATED ON THE DRAWINGS. THE CONTRACTOR SHALL CONFIRM THAT THE PILE THICKNESS IS ADEQUATE FOR THE CONSTRUCTION METHODS PROPOSED.
- P11. CONTRACTOR IS TO UNDERTAKE PILE DRIVEABILITY ANALYSIS AND PILING HAMMER SELECTION SUCH THAT PILES ARE ABLE TO BE DRIVEN TO TARGET DESIGN LEVELS WITHOUT EXCEEDING PILE DRIVING STRESSES IN ACCORDANCE WITH AS2159.
- P12. VIBRATORY HAMMERS CAN BE USED TO DRIVE PILES UP TO 5m DEPTH BELOW SEABED TO POSITION THE PILES. BELOW 5m DEPTH A POWER HAMMER SHALL BE USED. PILES SHALL BE DRIVEN TO THE TOE LEVELS AND ULTIMATE CALCULATED CAPACITIES SHOWN ON THE DRAWINGS. THE ULTIMATE PILE CAPACITY SHALL BE VERIFIED BASED ON ACCEPTANCE BLOW COUNT CRITERIA DEVELOPED FROM PILE DRIVABILITY ANALYSIS.

TIMBER

- T1. ALL TIMBER DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS1720.
- T2. ALL SAWN TIMBER SHOULD BE HARDWOOD DURABILITY CLASS I OR II AND MUST BE A MINIMUM GRADE OF F17 (EXCEPT FOR TIMBER PILES NOTED OTHERWISE).
- T3. ALL NEW TIMBER SECTIONS SHOULD ENSURE THAT HOLES ARE DRILLED IN LOCATIONS TO ALIGN WITH EXISTING TIMBER ELEMENTS TO WHICH THEY ARE CONNECTING TO.
- T4. THE TOP HORIZONTAL SURFACES OF TIMBER ELEMENTS SHALL BE COATED IN A SUITABLE HEAVY DUTY TIMBER PRESERVATIVE OIL.
- T5. TIMBER SECTION WIDTH AND THICKNESS SHALL BE WITHIN +/- 5MM (OF THE SPECIFIED SECTIONS).
- T6. REMOVAL OF EXISTING TIMBER ELEMENTS (FOR ACCESS OR REPLACEMENT) SHALL BE CARRIED OUT BY AN APPROPRIATE METHOD (DEVELOPED BY THE CONTRACTOR) SO AS TO ENSURE NO ELEMENTS ON THE STRUCTURE ARE OVERSTRESSED.

TIMBER PILES

- TP1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS2159.
- TP2. ALL TIMBER PILES SHALL BE GRADE F27 IN ACCORDANCE WITH AS3818.3.
- TP3. TIMBER TO BE TREATED WITH MINIMUM H6 IN ACCORDANCE WITH AS/NZS1604.1. TIMBER PILES ARE TO BE INSPECTED PRIOR TO INSTALLATION. HANDLING DURING INSTALLATION SHALL ENSURE INTEGRITY OF THE THE H6 DURABILITY TREATMENT. IMMEDIATELY FOLLOWING THE CUTTING OF PILES TO FINISH LEVEL (IF REQUIRED) THE ENDS SHALL BE TREATED WITH COPPER NAPHTHENATE IN ACCORDANCE WITH THE SUPPLIER RECOMMENDATIONS OR AN APPROVED EQUIVALENT END TREATMENT.
- TP4. PREBORING OF DRIVEN TIMBER PILES SHALL NOT BE UNDERTAKEN WITHOUT PRIOR CONSULTATION WITH THE DESIGNER.
- TP5. THE ENDS OF ALL TIMBER PILES SHALL BE COATED WITH AN APPROVED CRYSTALLINE WAX EMULSION AND END-PLATED IMMEDIATELY FOLLOWING CUTTING AND MILLING IN ACCORDANCE WITH MRTS87.
- TP6. REFER TO ARUP TECHNICAL SPECIFICATION (287869-SPC-002) FOR ADDITIONAL TIMBER REQUIREMENTS.

FENDER CHAINS

- F1. FENDER PILE CHAINS TO BE 19MM NOM. STUD LINK STEEL CHAIN WITH MATCHING COUPLERS AND SHACKLES.
- F2. EXACT CHAIN LENGTH TO BE DETERMINED BY THE CONTRACTOR ON SITE.
- F3. ALL CHAINS, FIXINGS AND SHACKLES TO BE HOT-DIP GALVANISED AS PER AS/NZS 2312.
- F4. SHACKLE AND CHAIN PRODUCTS SELECTED BY THE CONTRACTOR SHALL HAVE APPROPRIATE DIMENSIONS TO ENSURE THAT THEY ARE COMPATIBLE, FIT AND CAN BE CONNECTED AS INTENDED IN THE DRAWINGS.



Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

3	09.05.23	FM	TM	KL
2	31.03.23	IP		KL
1	24.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
KINGFISHER BAY RESORT JETTY

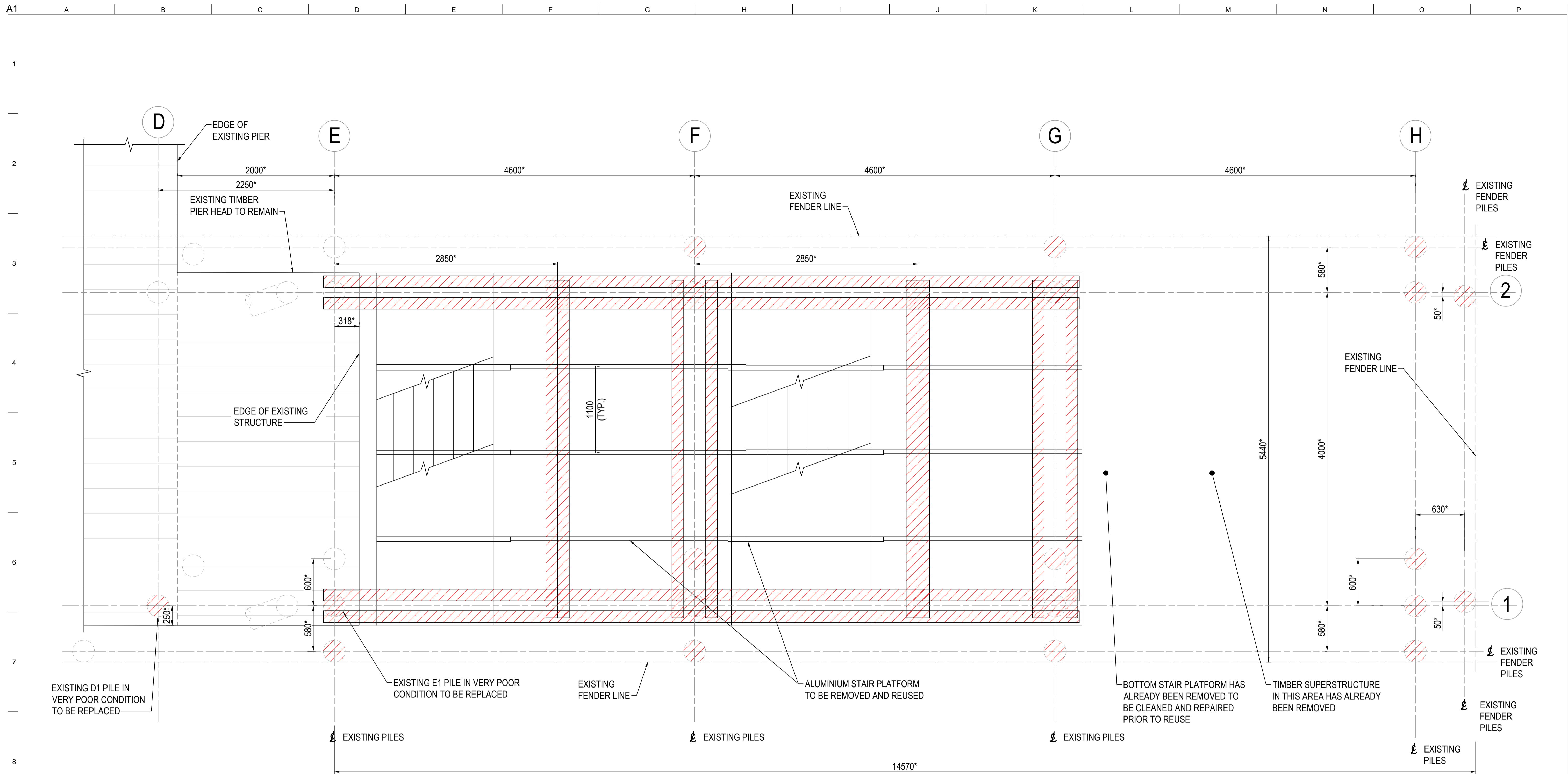


Drawing Title
GENERAL NOTES AND LEGEND

Drawing Status
DETAILED DESIGN

Job No: **287869** Drawing No: **0005** Issue: **3**

ISSUED FOR CONSTRUCTION



PLAN
SCALE 1:25

LEGEND

- TIMBER PILES TO BE CUT TO SEABED LEVEL TO MINIMISE DISTURBANCE OF GROUND CONDITIONS FOR NEW PILES.
- TIMBER SUBSTRUCTURE TO BE DEMOLISHED.

NOTES:

1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
2. ALUMINIUM STAIR PLATFORM TO BE CAREFULLY REMOVED AND SAFELY STORED FOR RE-USE. ALUMINIUM STAIR PLATFORM SHALL BE CAREFULLY INSPECTED FOR ANY DAMAGE BEFORE RE-USE. REPAIRS MIGHT BE REQUIRED.
3. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

GPC Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:23 am, 30/11/2023

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

2	09.05.23	FM	TM	KL
1	31.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
KINGFISHER BAY RESORT JETTY

ARUP

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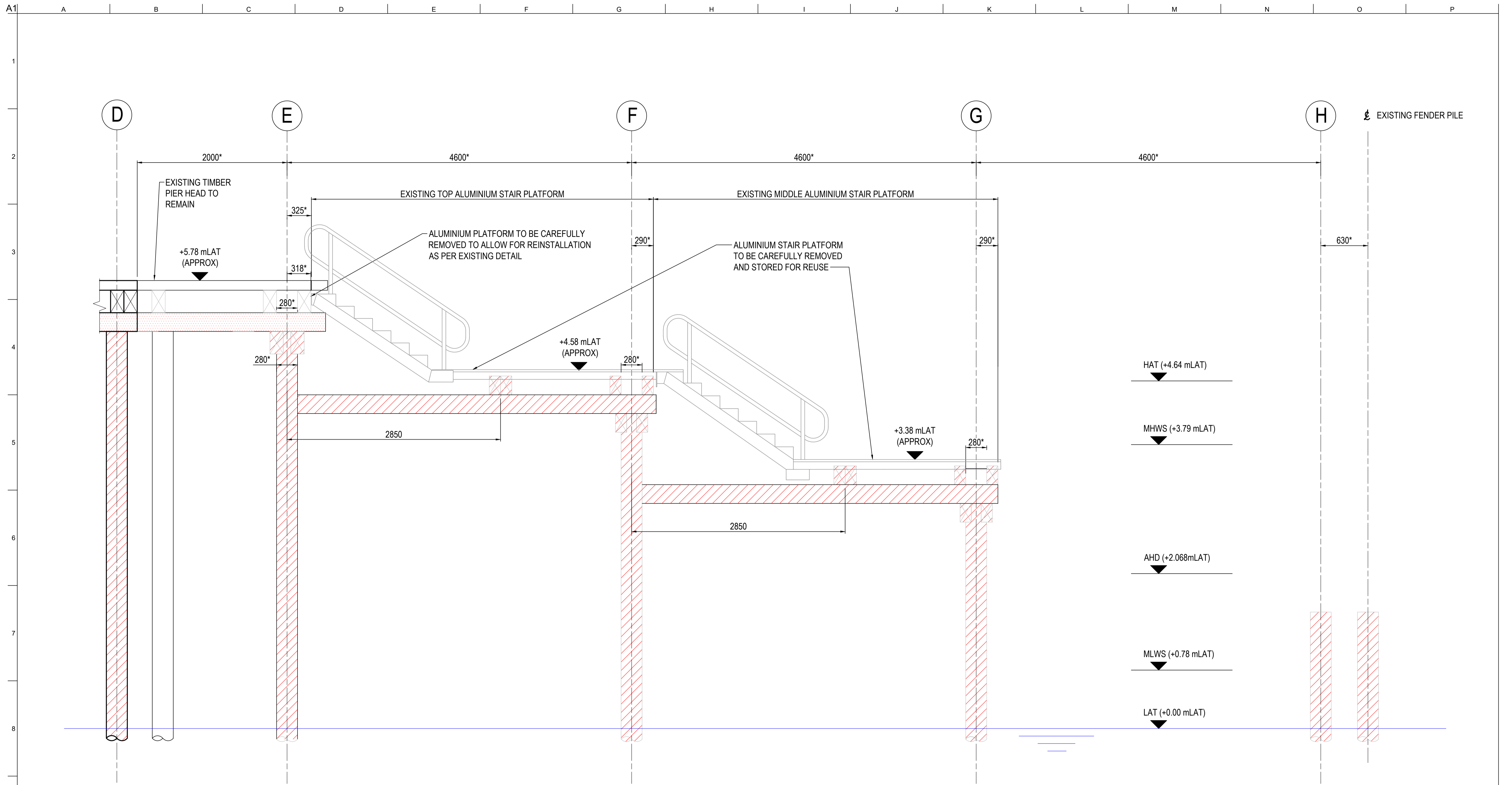
Drawing Title
DEMOLITION PLAN

Drawing Status
DETAILED DESIGN

Job No
287869

Drawing No
0121

Issue
2



ELEVATION
SCALE 1:25

- LEGEND**
- TIMBER PILES TO BE DEMOLISHED AND CUT TO SEABED LEVEL
 - TIMBER SUBSTRUCTURE TO BE DEMOLISHED
 - TIMBER HEADSTOCK TO BE REPLACED, REFER DETAIL ON DRG No. 287869-DRG-0403

- NOTES:**
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 2. ALUMINIUM STAIR PLATFORM TO BE CAREFULLY REMOVED AND SAFELY STORED FOR RE-USE. ALUMINIUM STAIR PLATFORM SHALL BE CAREFULLY INSPECTED FOR ANY DAMAGE BEFORE RE-USE. REPAIRS MIGHT BE REQUIRED.
 3. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

GPC Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:24 am, 30/11/2023

ISSUED FOR CONSTRUCTION

<p>Scales</p> <p>Approved by: KAITLIN LANGDON <i>K Langdon</i> RPEQ No. 18825</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>2</td> <td>09.05.23</td> <td>FM</td> <td>TM</td> <td>KL</td> </tr> <tr> <td>1</td> <td>31.03.23</td> <td>IP</td> <td></td> <td>KL</td> </tr> <tr> <td>Issue</td> <td>Date</td> <td>By</td> <td>Chkd</td> <td>Appd</td> </tr> </table>	2	09.05.23	FM	TM	KL	1	31.03.23	IP		KL	Issue	Date	By	Chkd	Appd	<p>Client PACIFIC MARINE GROUP PTY. LTD.</p> <p>Job Title KINGFISHER BAY RESORT JETTY</p> <p>PACIFIC MARINE GROUP AUSTRALIA</p>	<p>ARUP</p> <p>Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3223 9000 www.arup.com</p> <p>CONSULT AUSTRALIA Member Firm Arup Pty Ltd ABN 18 000 966 165</p>	<p>Drawing Title DEMOLITION SECTION</p> <p>Drawing Status DETAILED DESIGN</p> <p>Job No 287869</p> <p>Drawing No 0122</p> <p>Issue 2</p>
2	09.05.23	FM	TM	KL															
1	31.03.23	IP		KL															
Issue	Date	By	Chkd	Appd															

CAUTION:
UNPROTECTED EDGE ON STAIRS.
LOWER PLATFORMS CAN BE
SUBMERGED AND SUBJECT TO WAVES.

WARNING SIGN INSTALLED
ON PIER HEAD

600 WIDE 40 THK ALUMINIUM
GRATING PANEL TO MATCH
EXISTING ALUMINIUM

CHECKER PLATE COVER
PLATE OVER GAP BETWEEN
EXISTING TIMBER DECK
AND NEW STRUCTURE
REFER DRG 0162 FOR
DETAILS

EXISTING TOP ALUMINIUM STAIR PLATFORM
TO BE REINSTATED

EXISTING MIDDLE ALUMINIUM STAIR PLATFORM
TO BE REINSTATED

EXISTING BOTTOM ALUMINIUM STAIR PLATFORM
TO BE REPAIRED, MODIFIED AND REINSTATED

EXISTING FENDER LINE TO BE MAINTAINED

FENDER PILES

2
S2

S1

1

FENDER PILES

EXISTING LIGHT POST AT DECK
LEVEL TO BE RELOCATED TO
FACILITATE REPAIR WORKS

350 NOM DIA TIMBER
FENDER PILE

RE-INSTALLED
ALUMINIUM STAIR
PLATFORM (TYP)

EXISTING PILES TYP (TO
BE CUT AT SEABED)

FENDER LINE (TO ALIGN WITH
EXISTING FENDER LINE)

EDGE OF PLATFORM TO BE LOCALLY TRIMMED
BACK TO PROVIDE MINIMUM 130 CLEAR
DISTANCE TO BACK OF FENDER PILE (TYP.).

EXISTING PIER

NEW HEADSTOCK

EXISTING PIER

NEW HEADSTOCK

EXISTING PIER

NEW HEADSTOCK

EXISTING PIER

NEW HEADSTOCK

PLAN
SCALE 1:25

NOTES:
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.



ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

3	18.05.23	ME	TM	KL
2	09.05.23	FM	TM	KL
1	31.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
KINGFISHER BAY RESORT JETTY



ARUP

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Tel: +61(0)7 3223 9000
www.arup.com



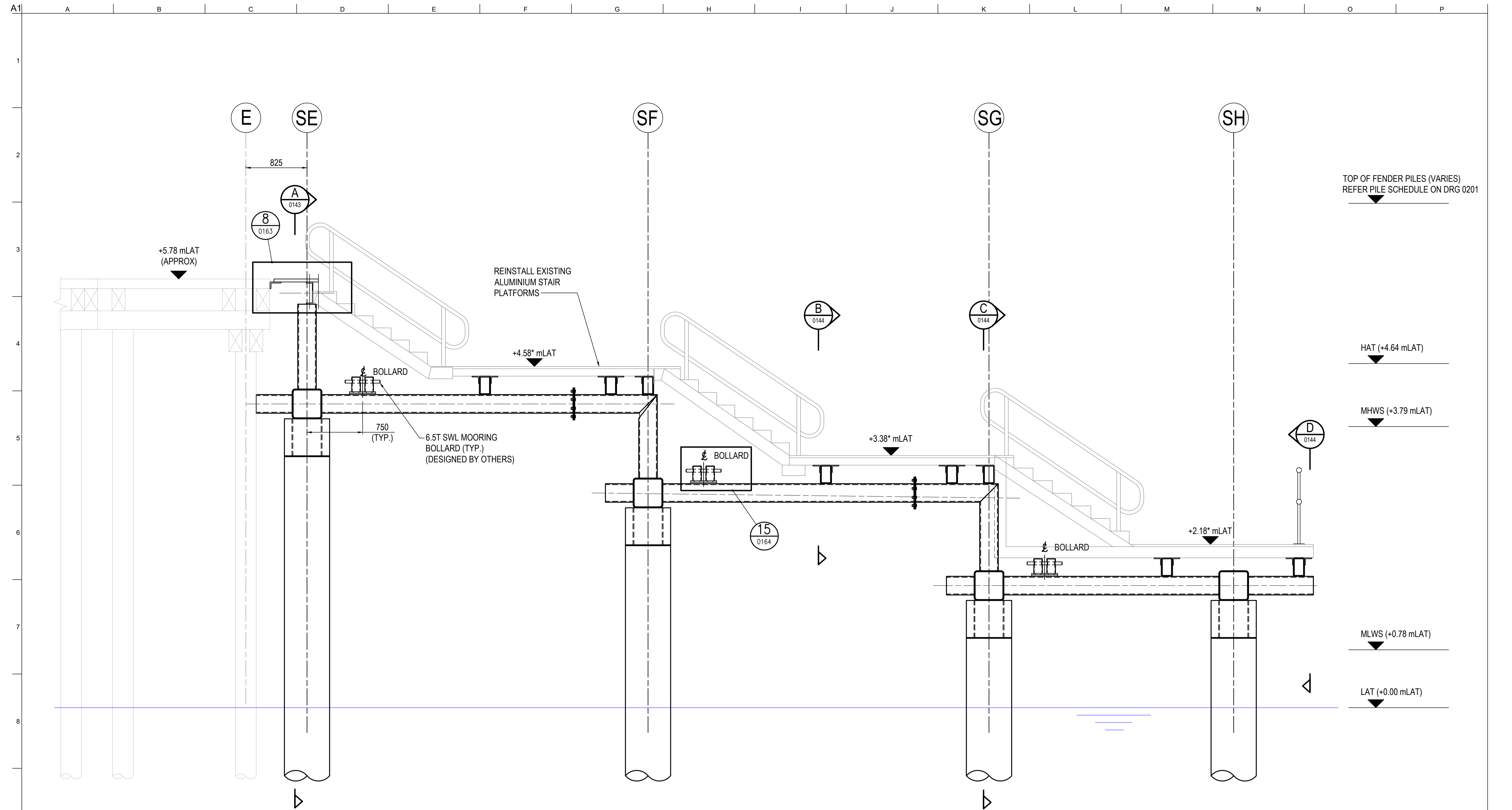
Drawing Title
STAIR REMEDIATION
GENERAL ARRANGEMENT
SHEET 1

Drawing Status
DETAILED DESIGN

Job No
287869

Drawing No
0141

Issue
2



ELEVATION
SCALE 1:25
FRONT FENDER PILES OMITTED FOR CLARITY

- NOTES:
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 2. THE THREE ALUMINIUM STAIR AND PLATFORM STRUCTURES TO BE CLEAN AND INSTALLED TO NEW SUBSTRUCTURE.
 3. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

GPC Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:24 am, 30/11/2023

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

3	18.05.23	ME	TM	KL
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1	31.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
KINGFISHER BAY RESORT JETTY

PACIFIC MARINE GROUP AUSTRALIA

ARUP

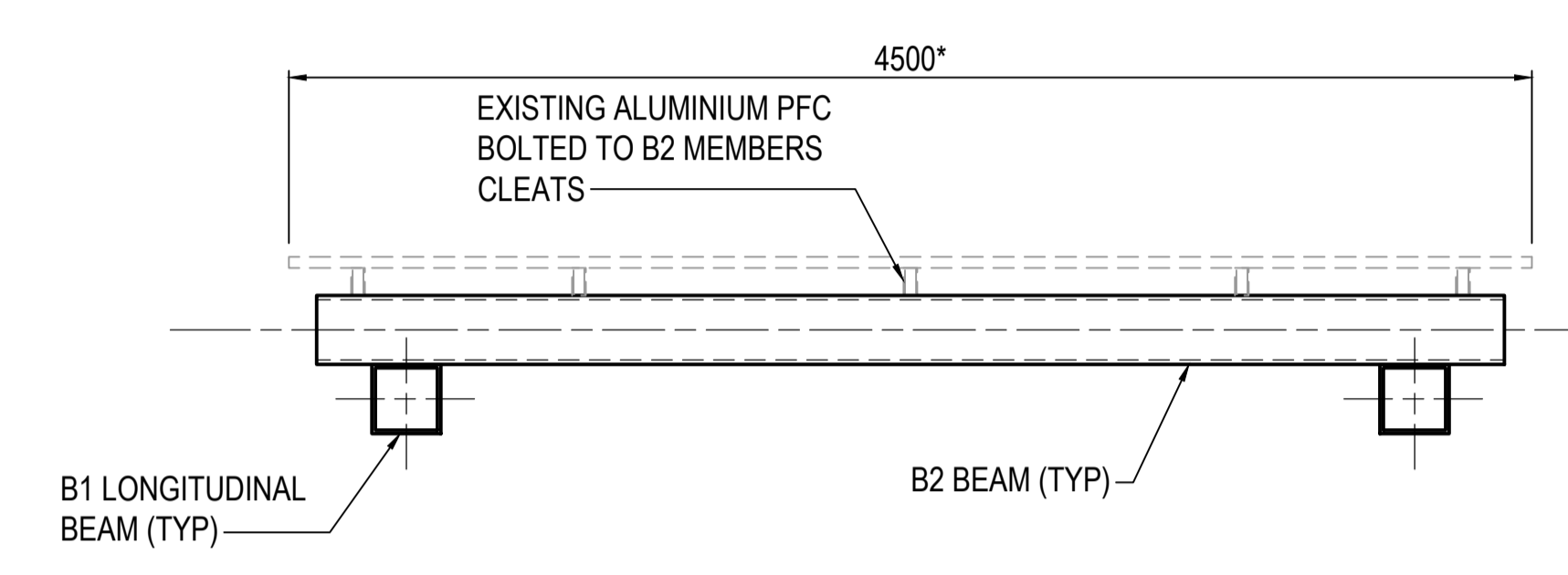
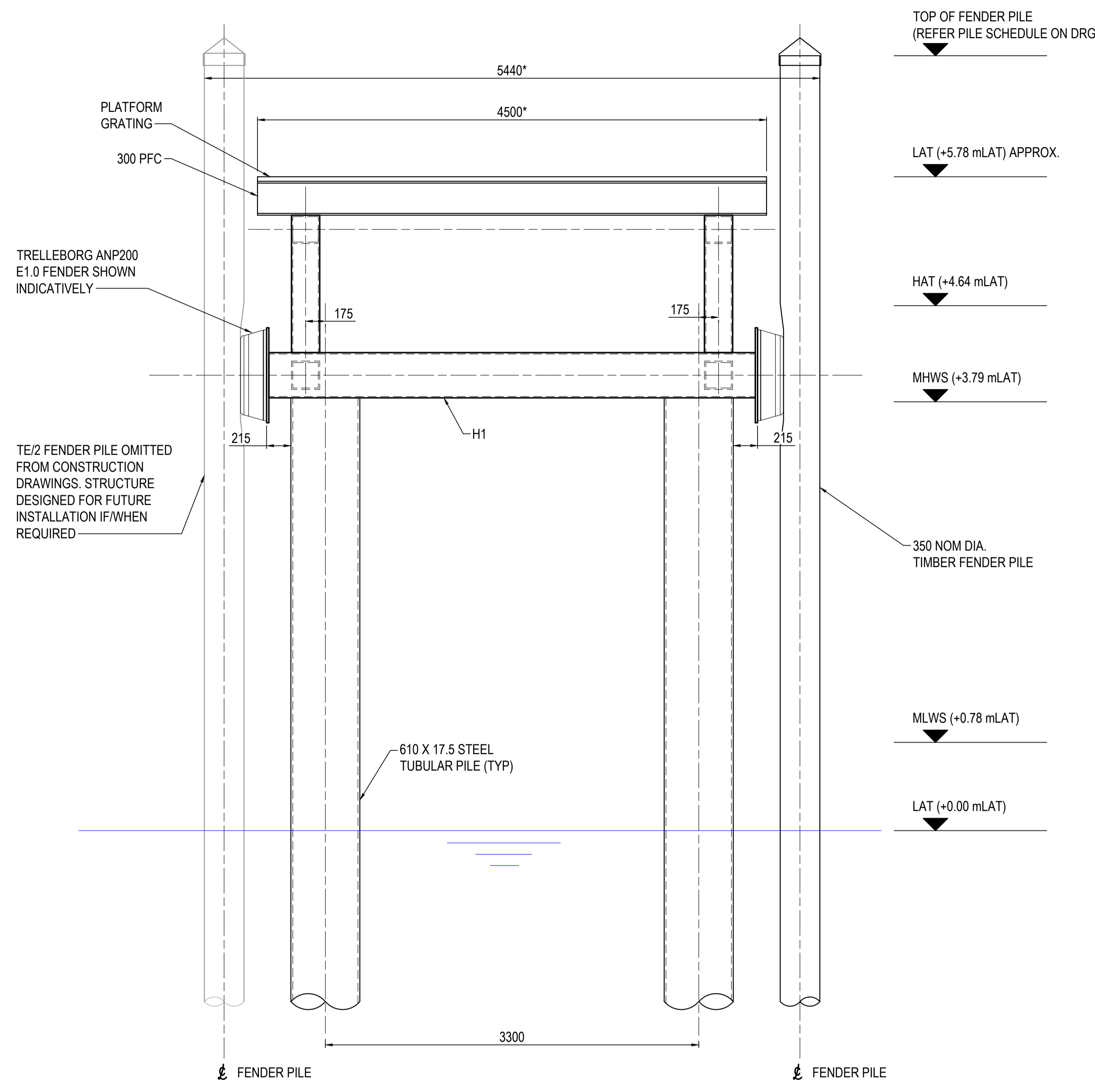
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Tel: +61(0)7 3223 9000
www.arup.com

CONSULT AUSTRALIA
Member Firm
Arup Pty Ltd
ABN 18 000 966 165

Drawing Title
**STAIR REMEDIATION
GENERAL ARRANGEMENT
SHEET 2**

Drawing Status
DETAILED DESIGN

Job No: **287869** Drawing No: **0142** Issue: **2**



SECTION **B**
0141
TYPICAL SECTION THROUGH STAIR PLATFORM

GPC Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:24 am, 30/11/2023

SECTION **A**
1:25
0141

NOTES:
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.

ISSUED FOR CONSTRUCTION

Issue	Date	By	Chkd	Appd
3	18.05.23	ME	TM	KL
2	09.05.23	FM	TM	KL
1	31.03.23	IP		KL

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
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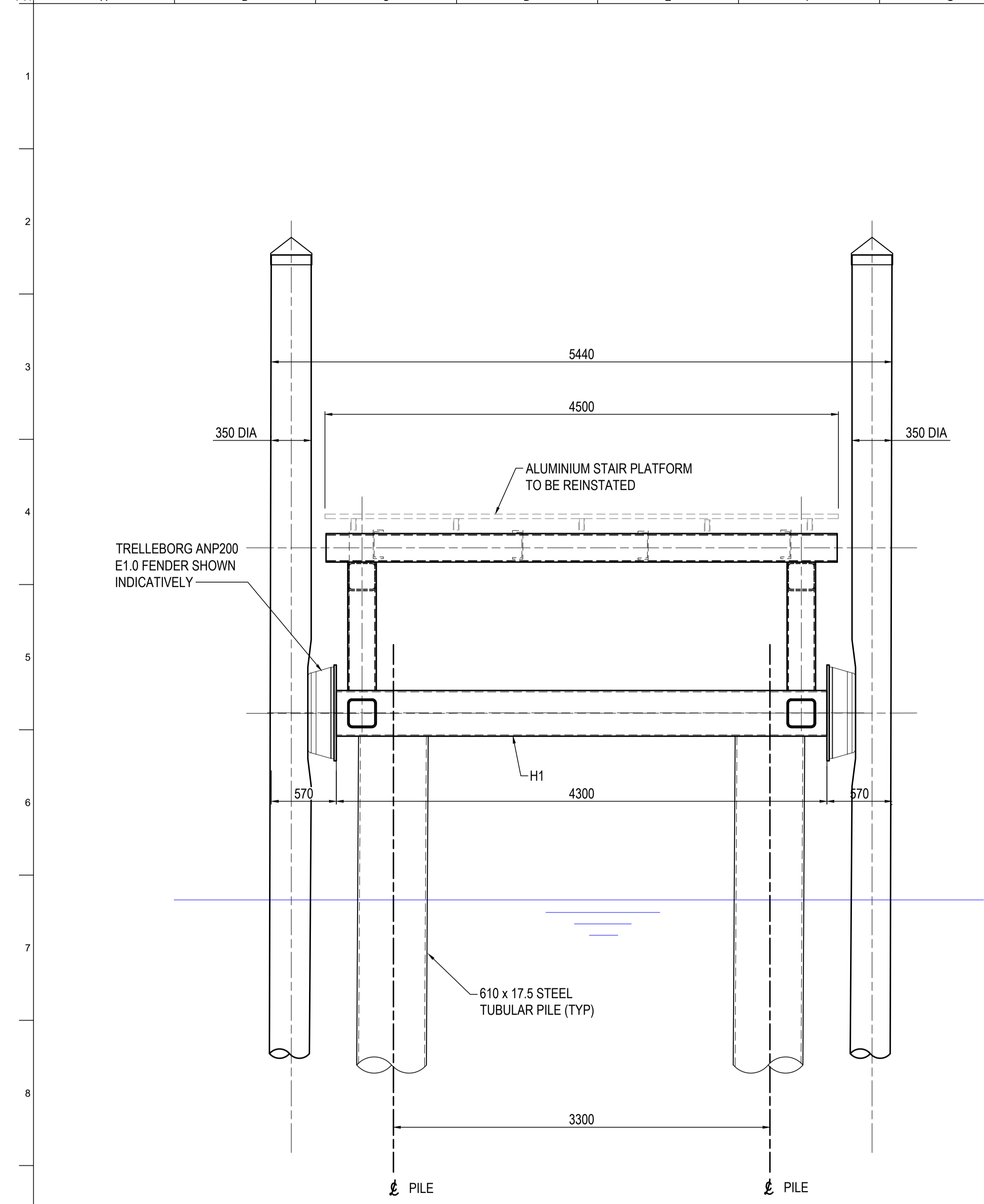
Drawing Title
STAIR REMEDIATION TYPICAL SECTIONS SHEET 1

Drawing Status
DETAILED DESIGN

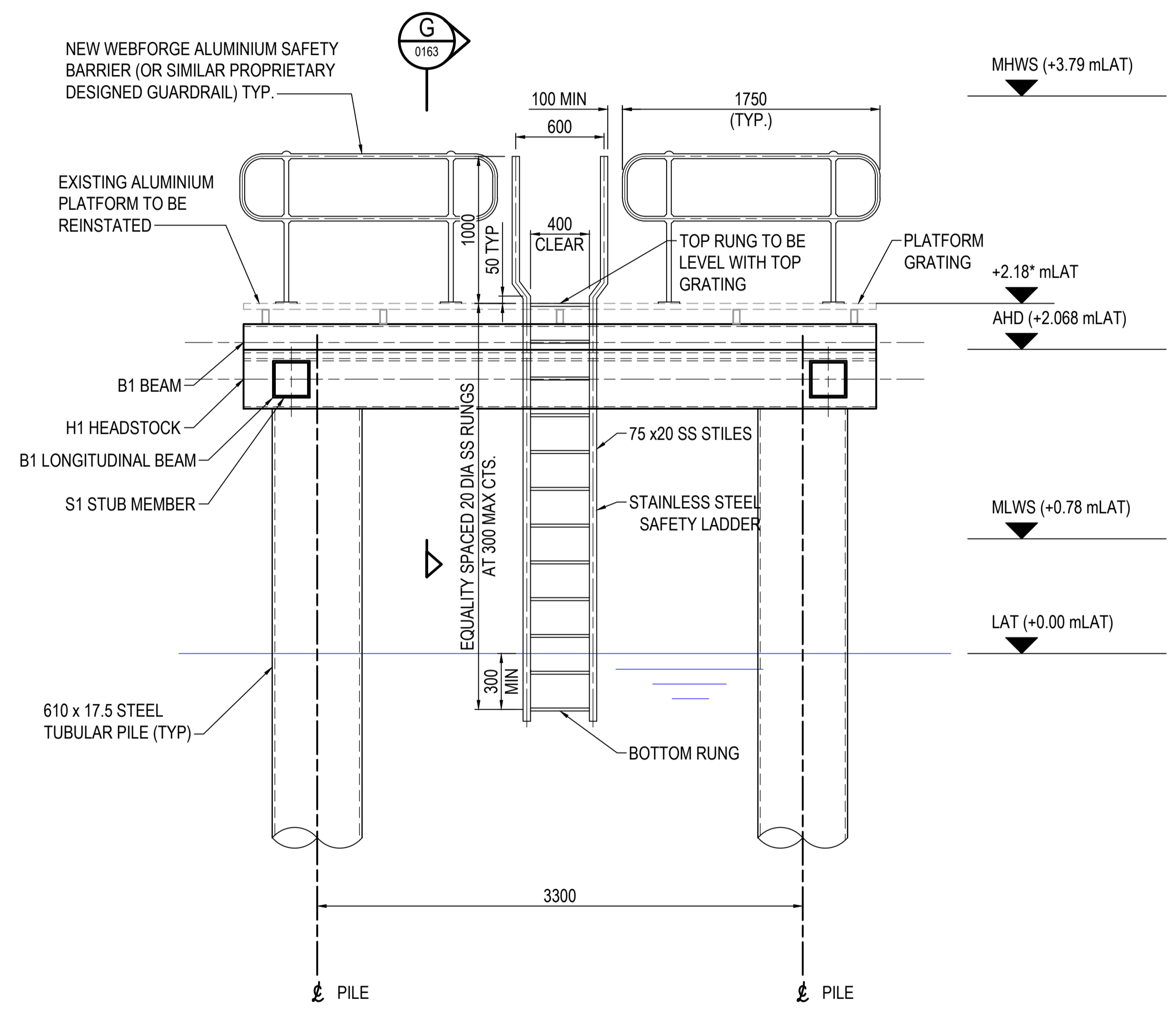
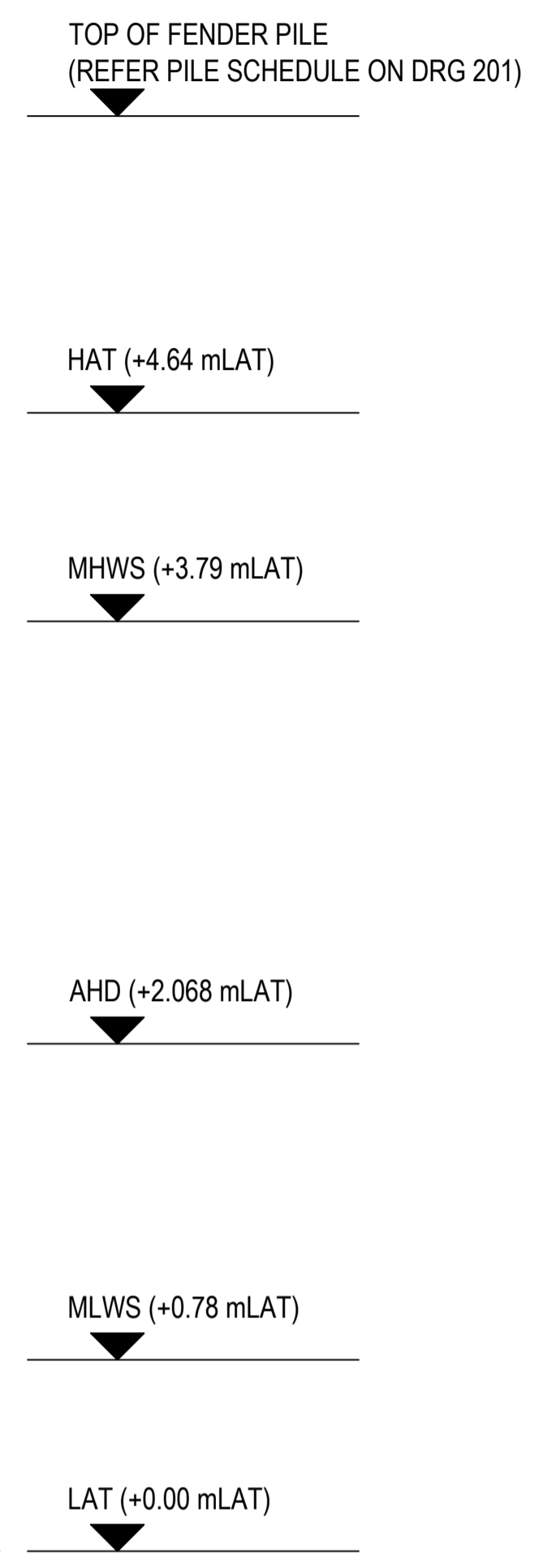
Job No
287869

Drawing No
0143

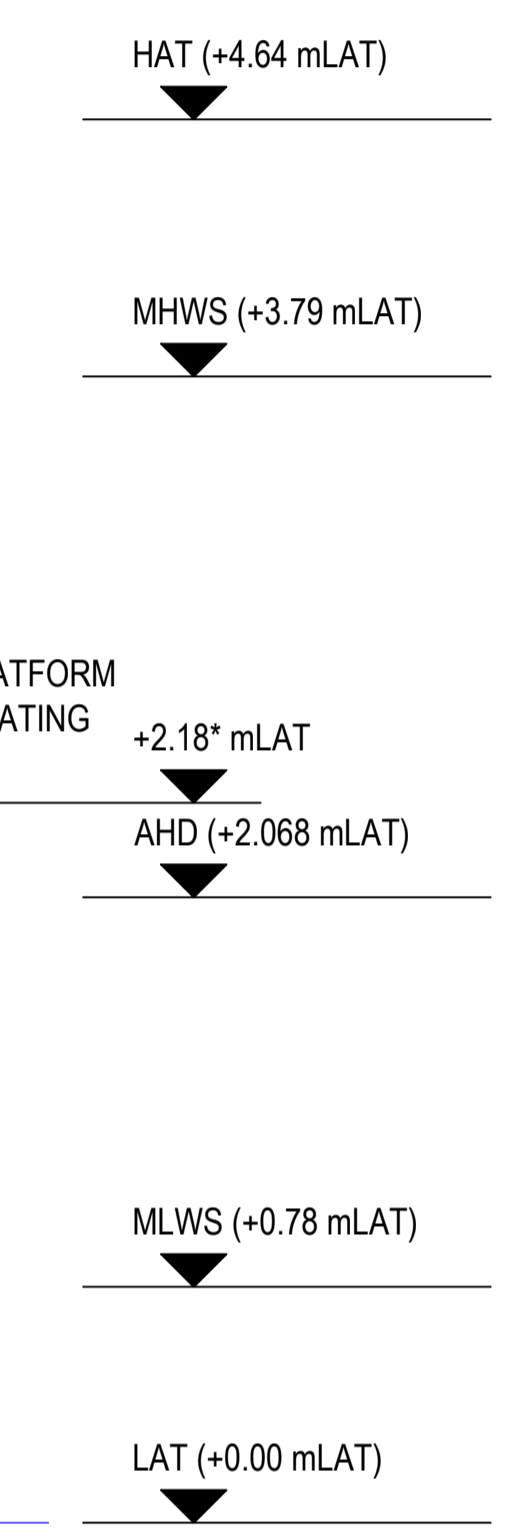
Issue
2



SECTION C
1:25
0141



SECTION D
1:25
0141



NOTES:
1. REFER TO DRAWING 005 FOR GENERAL NOTES.
2. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

GPC Gladstone Ports Corporation
APPROVED
Name: Trudi Smith
Date: 7:24 am, 30/11/2023

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

3	18.05.23	ME	TM	KL
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Client
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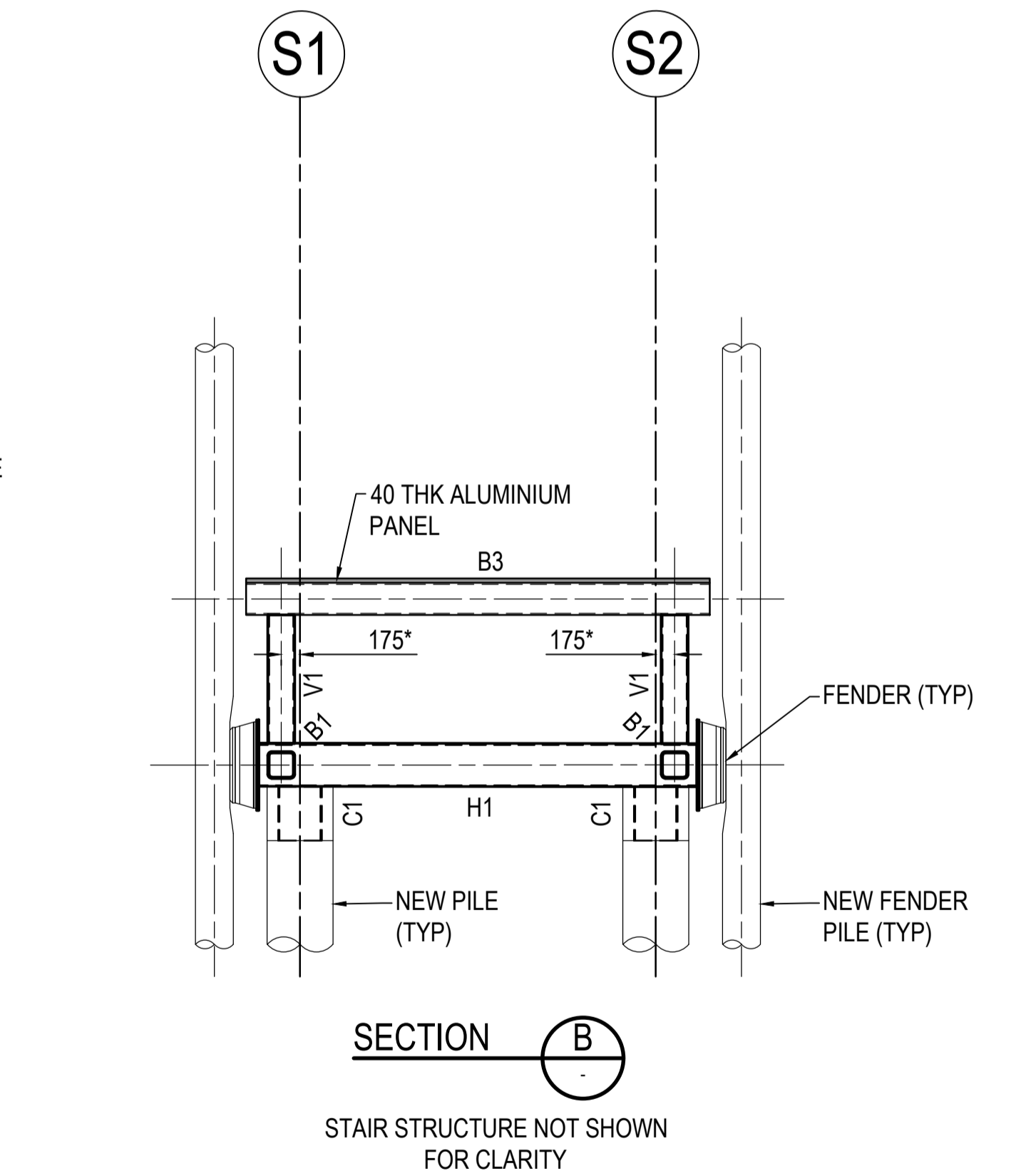
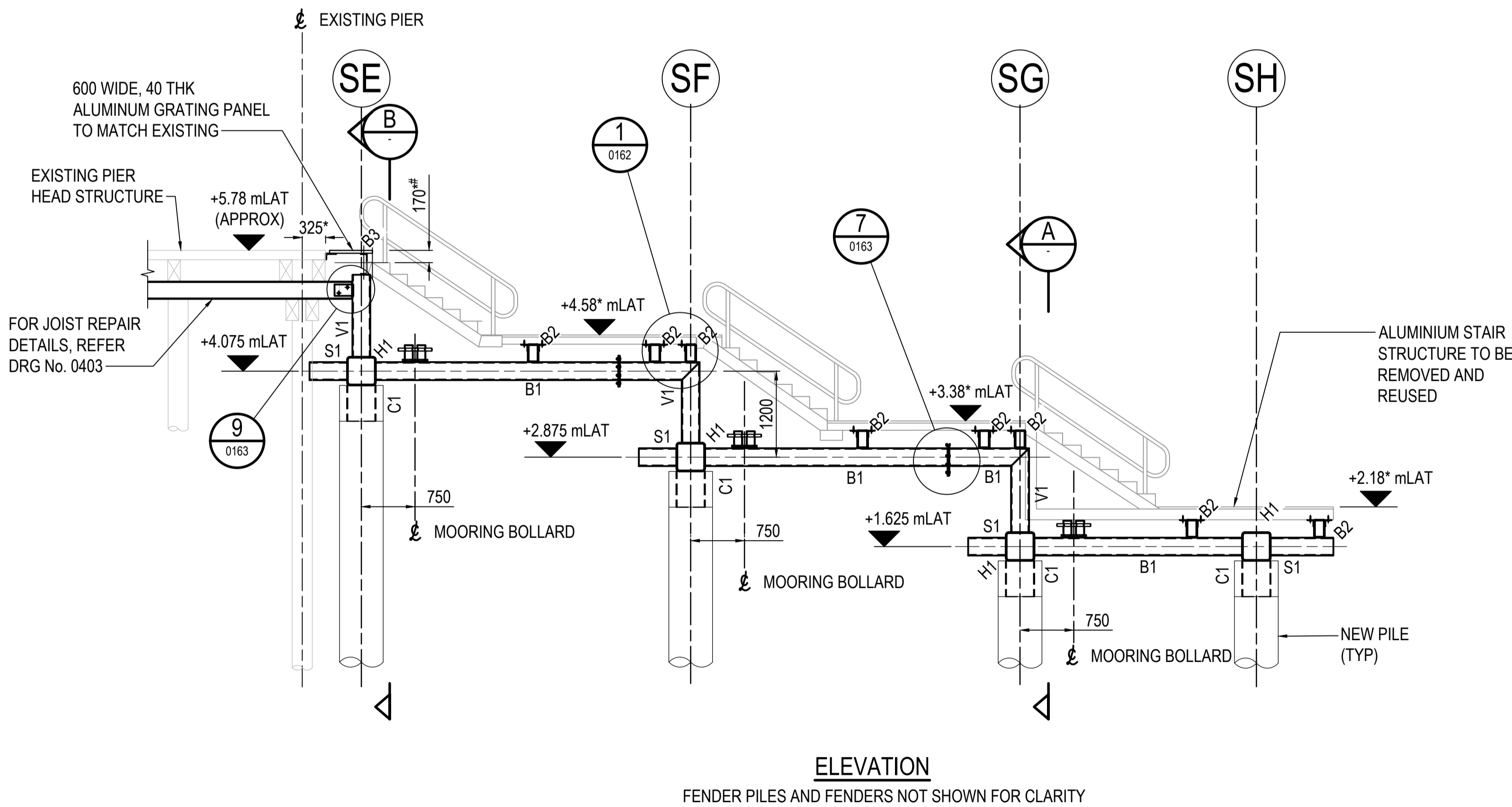
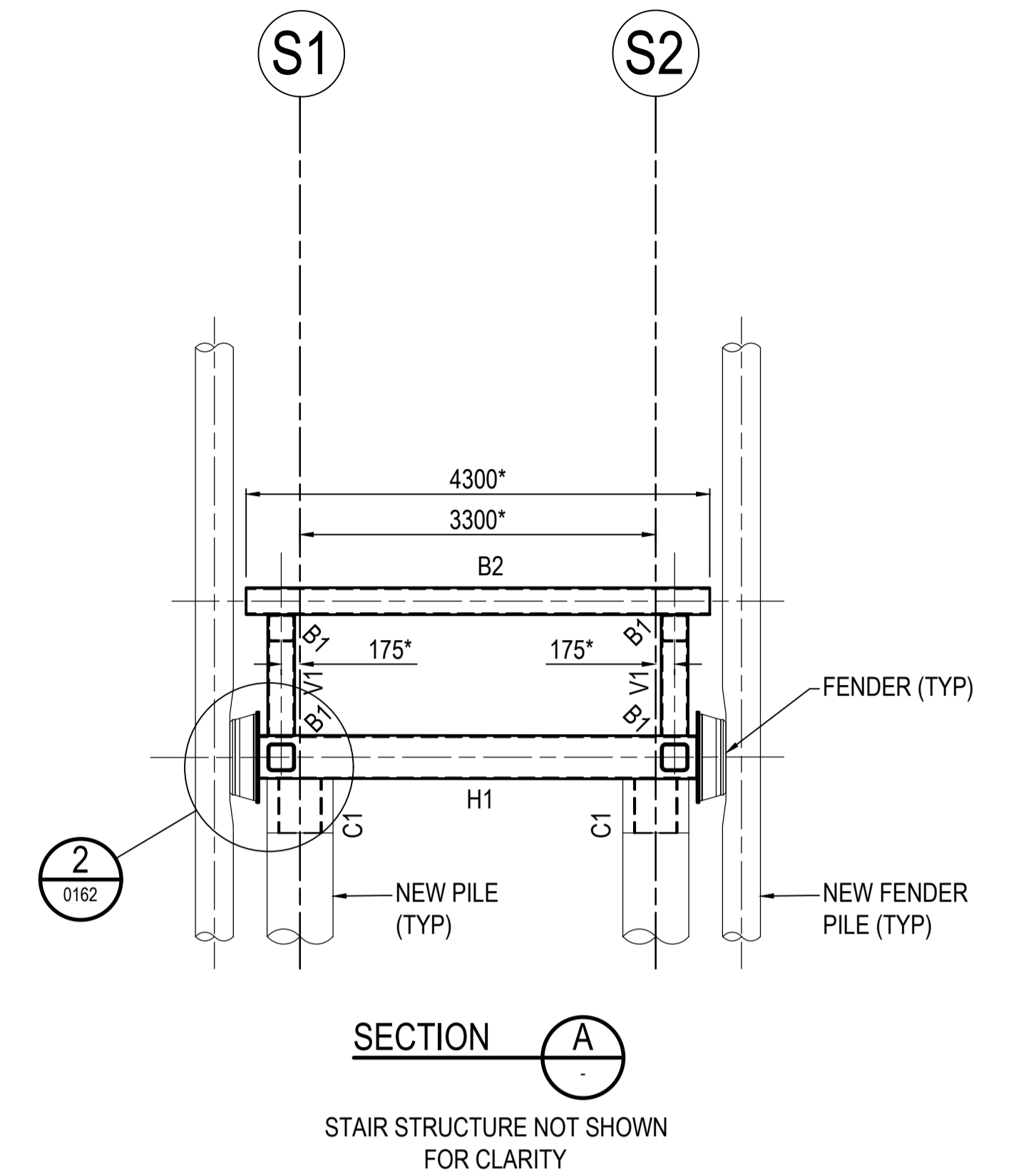
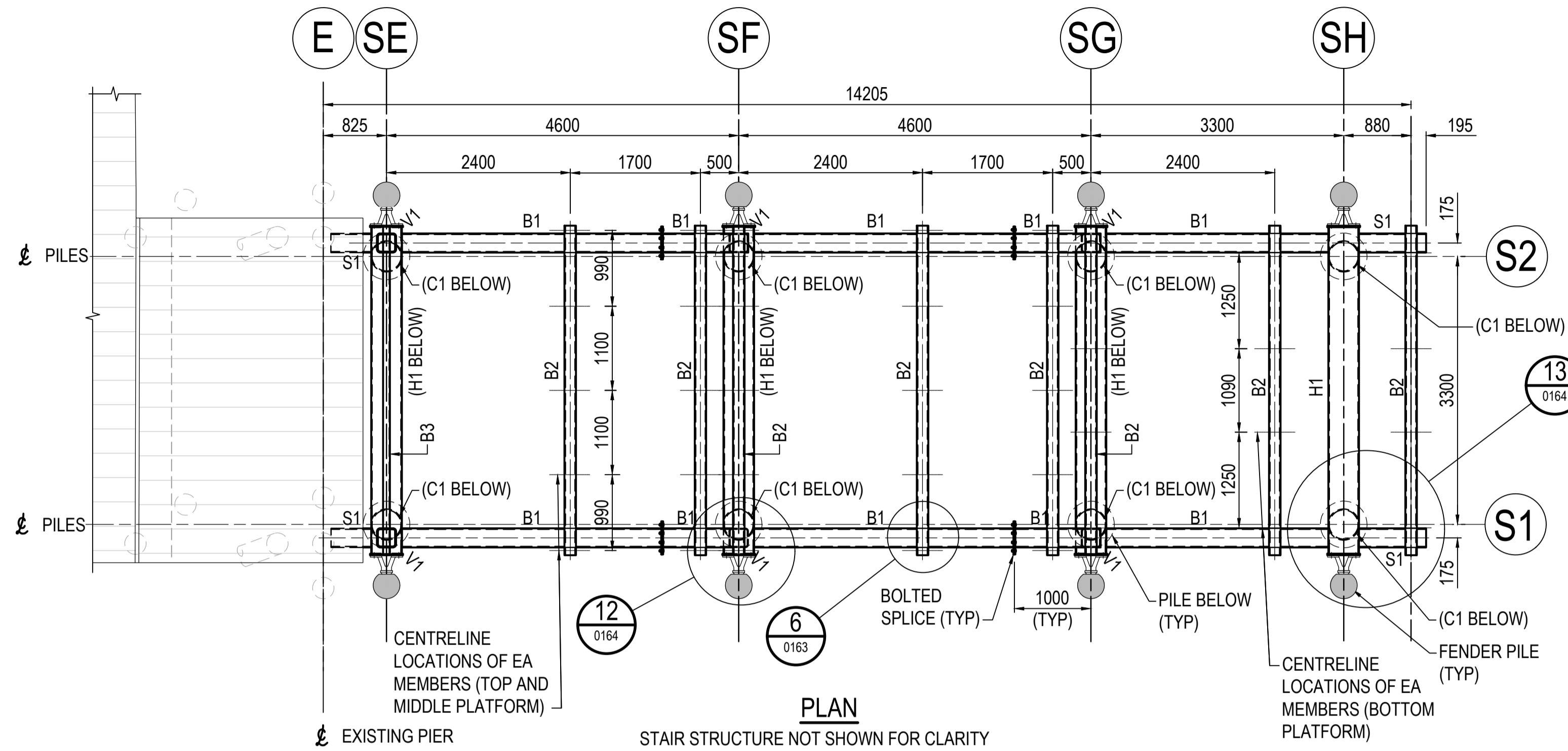
Drawing Title
STAIR REMEDIATION TYPICAL SECTION SHEET 2

Drawing Status
DETAILED DESIGN

Job No
287869

Drawing No
0144

Issue
2



STEEL MEMBER SCHEDULE		
MARK	SIZE	COMMENT
H1	400x400x12.5 RHS	HEADSTOCK
V1	250x12.5 SHS	VERTICAL MEMBER
B1	250x12.5 SHS	LONGITUDINAL BEAM
B2	250x150x12.5 RHS	TRANSVERSE BEAM / END TRANSVERSE BEAM
B3	300 PFC	TRANSVERSE BEAM
C1	406x12.7 CHS	PILE SPUD
S1	250x12.5 SHS	STUB MEMBER

- NOTES:
- REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 - # STAIR DIMENSION TO MATCH EXISTING PLATFORM STAIR RISER DIMENSION, TO ACHIEVE CONSISTENT FLIGHT OF STAIRS.
 - DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

Design Model Version

3	18.05.23	ME	TM	KL
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Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.



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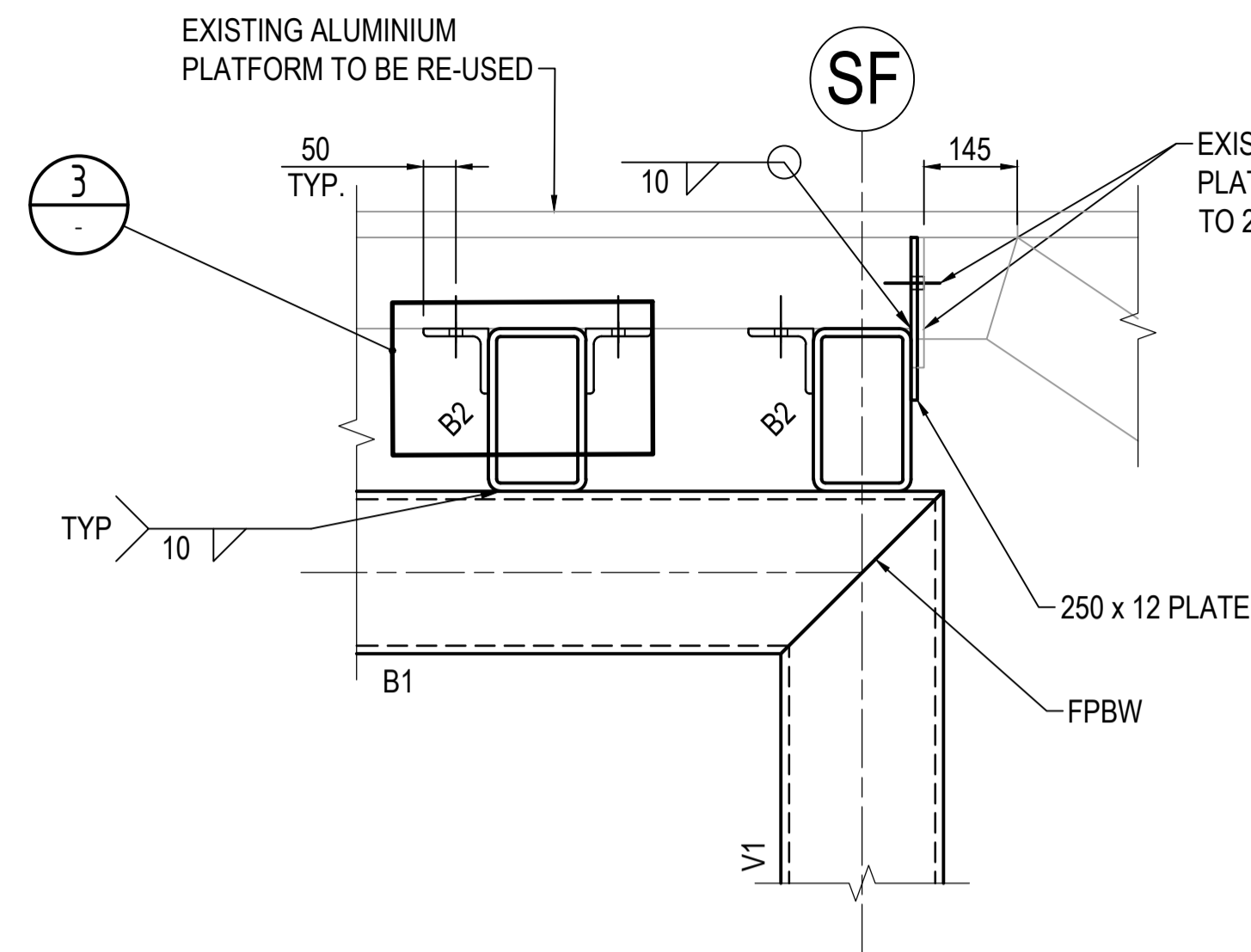
Drawing Title
STEELWORK ARRANGEMENT

Drawing Status
DETAILED DESIGN

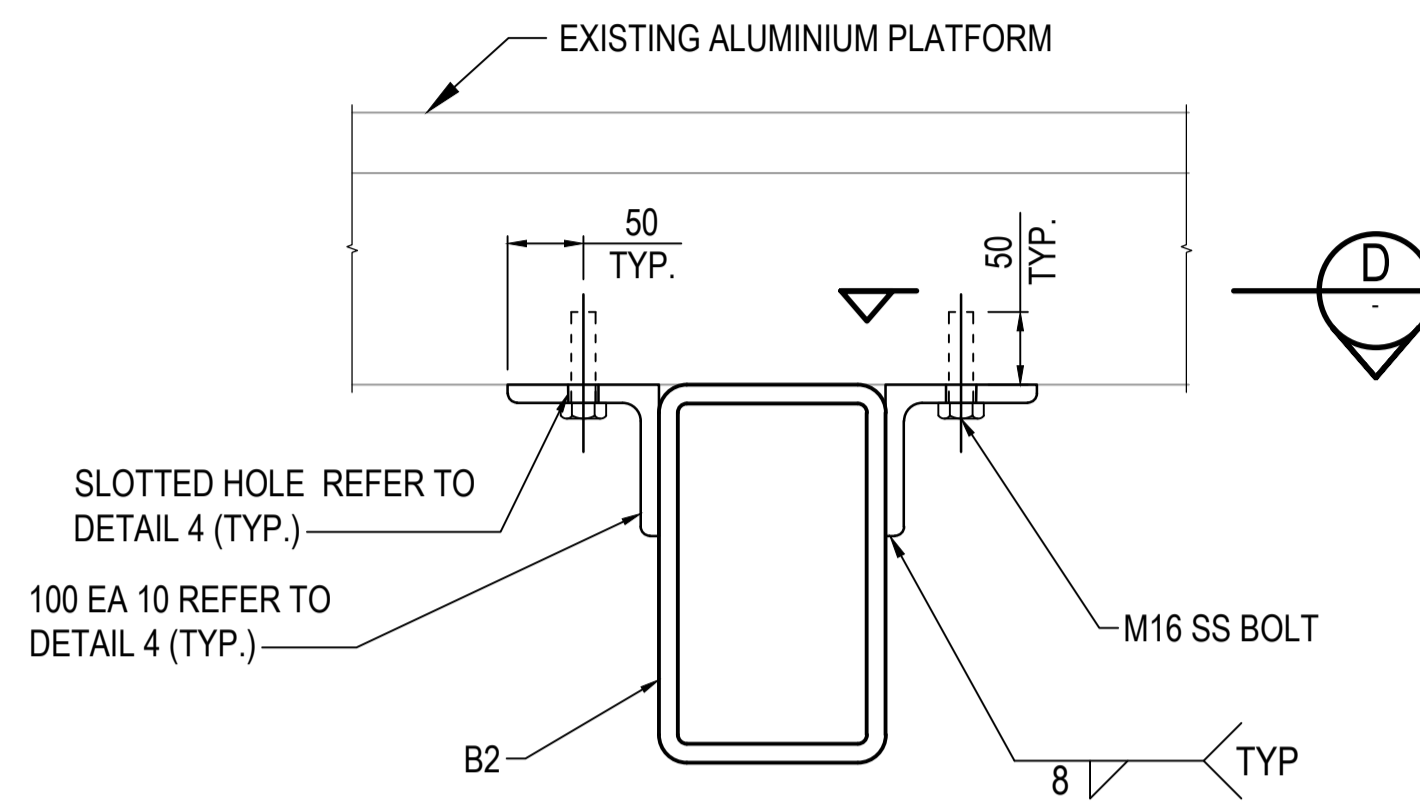
Job No
287869

Drawing No
0161

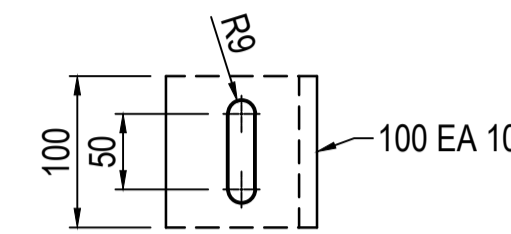
Issue
2



DETAIL 1
1:10

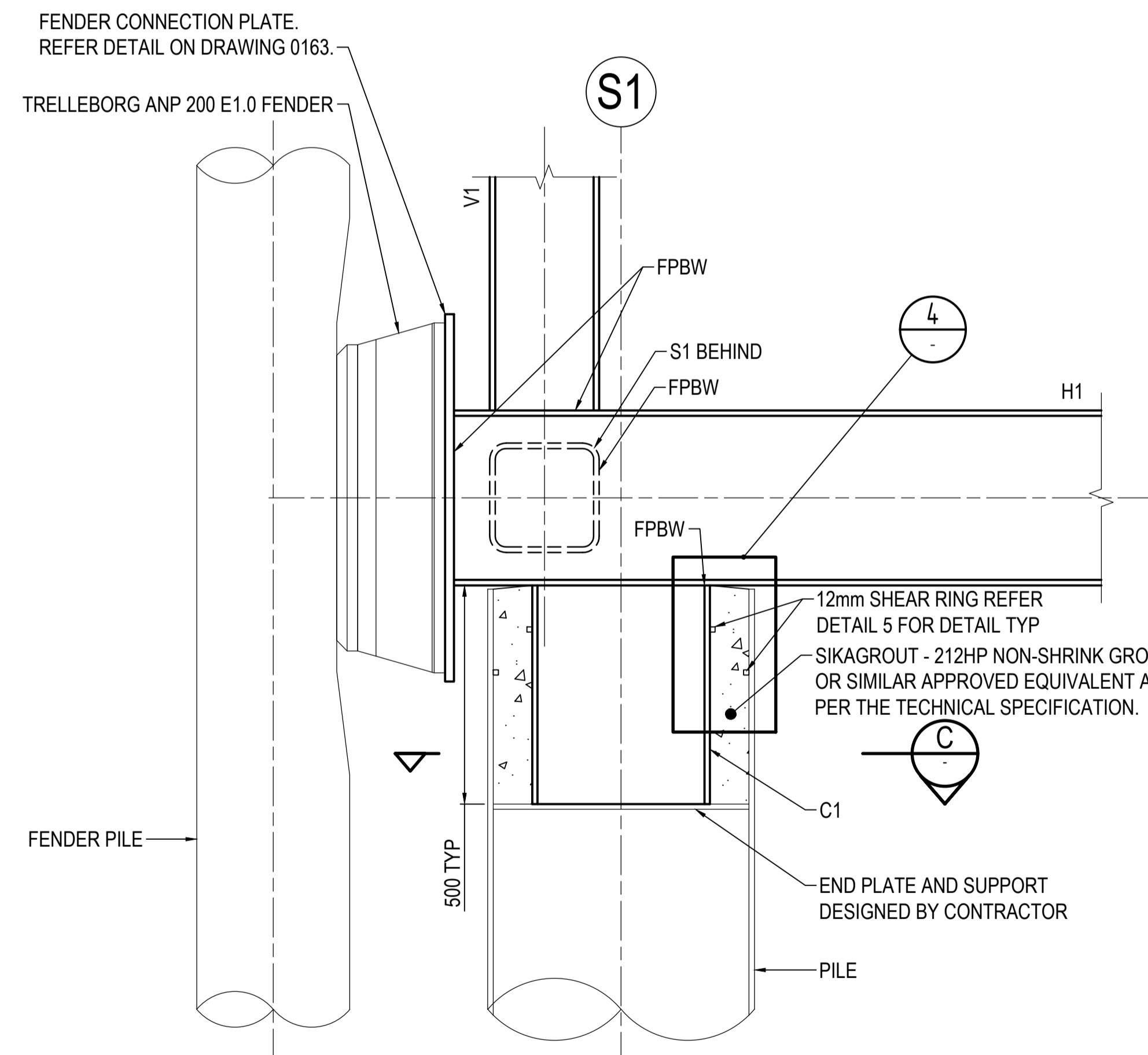


DETAIL 3
1:5

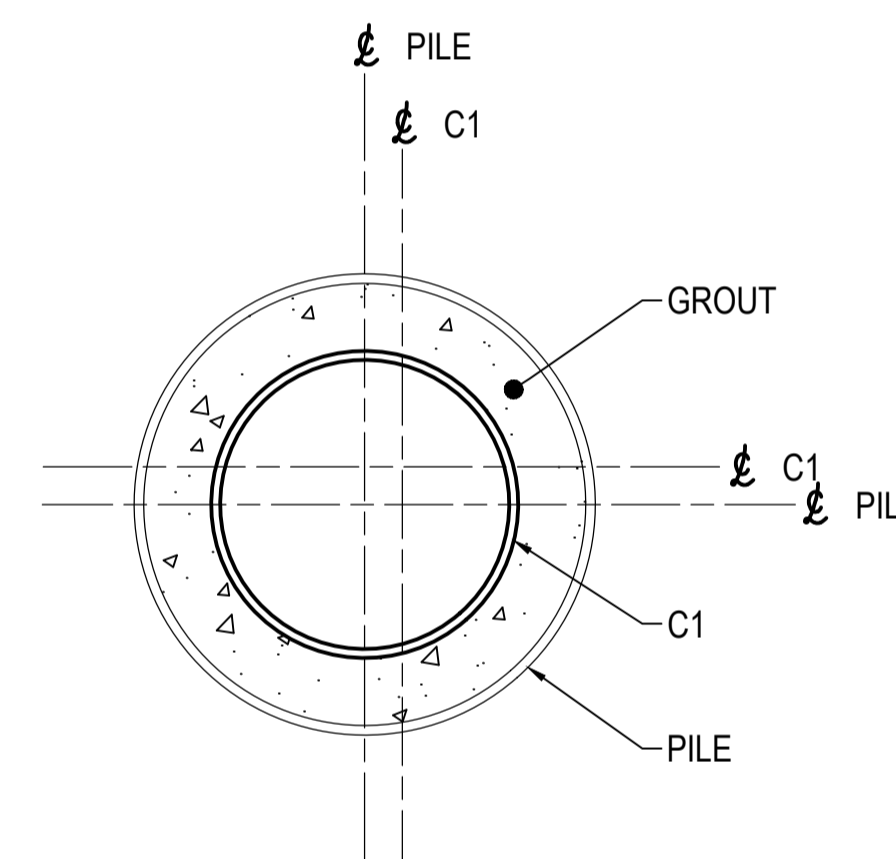


TYPICAL SLOTTED HOLE PLAN VIEW

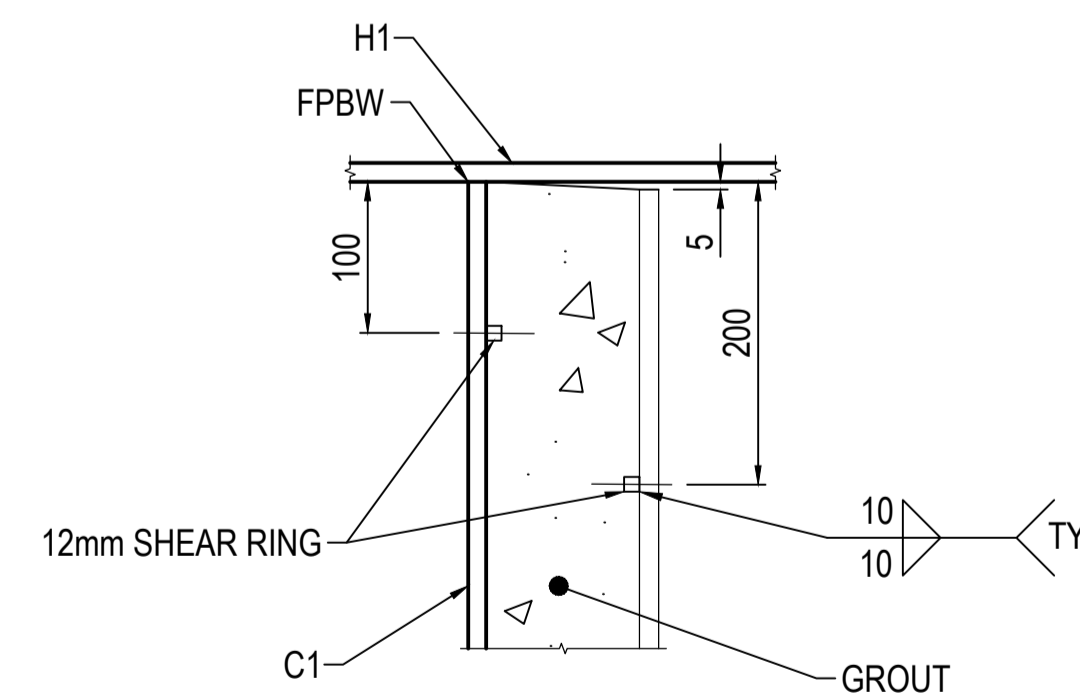
SECTION D
1:5



DETAIL 2
1:10



SECTION C
1:10



DETAIL 4
1:5

NOTES:
 1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 2. REFER TO DRAWING 287869-DRG-0161 FOR MEMBER SIZES.

ISSUED FOR CONSTRUCTION

Scales

Approved by:
 KAITLIN LANGDON

 RPEQ No. 18825

Design Model Version

4	18.05.23	ME	TM	KL

3	09.05.23	FM	TM	KL
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1	31.03.23	CM		KL
Issue	Date	By	Chkd	Appd

Client: PACIFIC MARINE GROUP PTY. LTD.
 Job Title: KINGFISHER BAY RESORT JETTY



ARUP

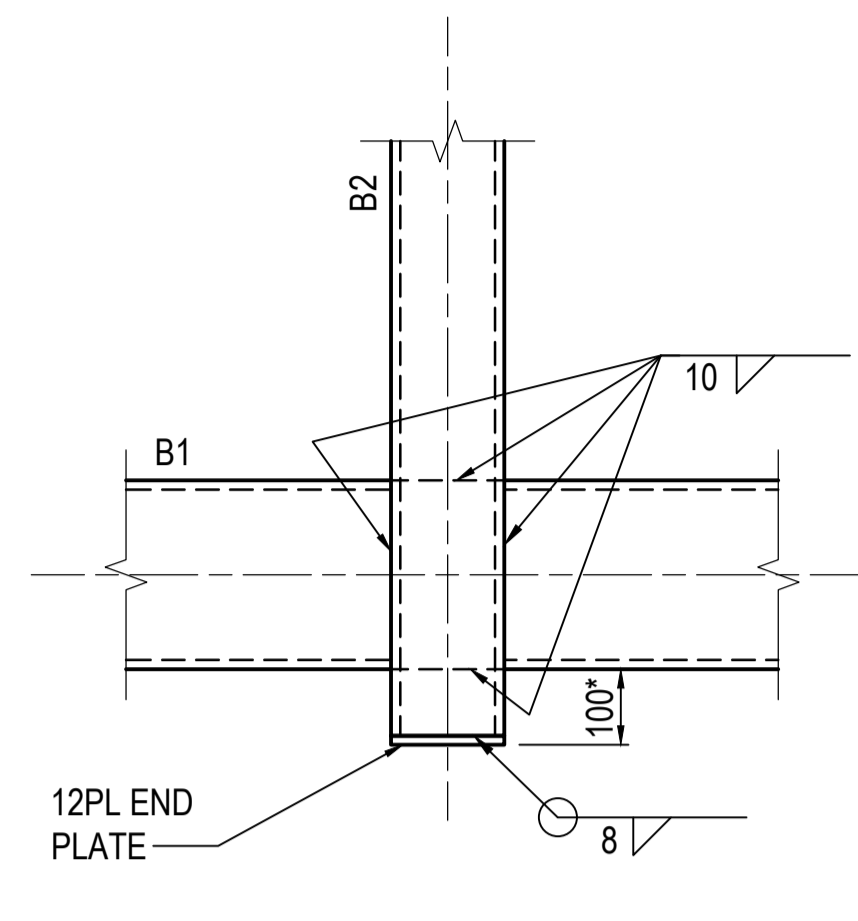
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 Brisbane, QLD, 4000
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Drawing Title
STEELWORK DETAILS SHEET 1

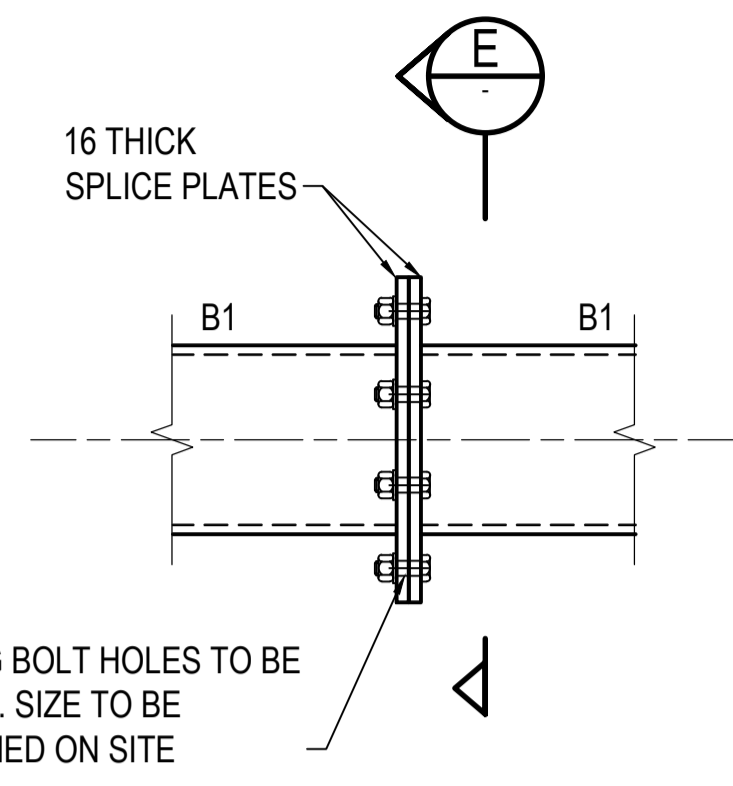
Drawing Status
DETAILED DESIGN

Job No: **287869**
 Drawing No: **0162**
 Issue: **3**



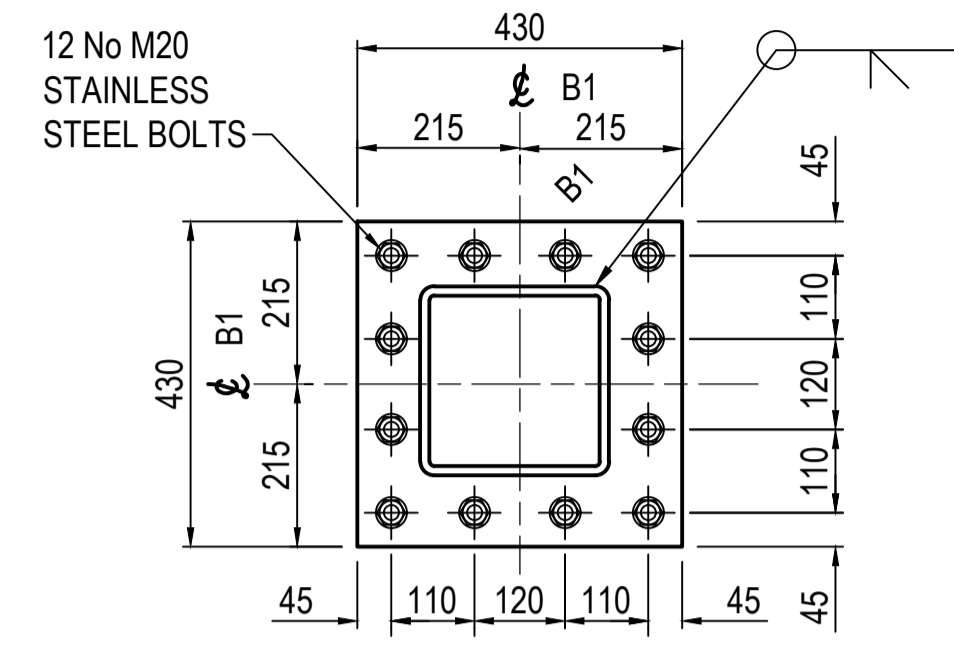
DETAIL 6
1:10
0161

LONGITUDINAL TO TRANSVERSE BEAM

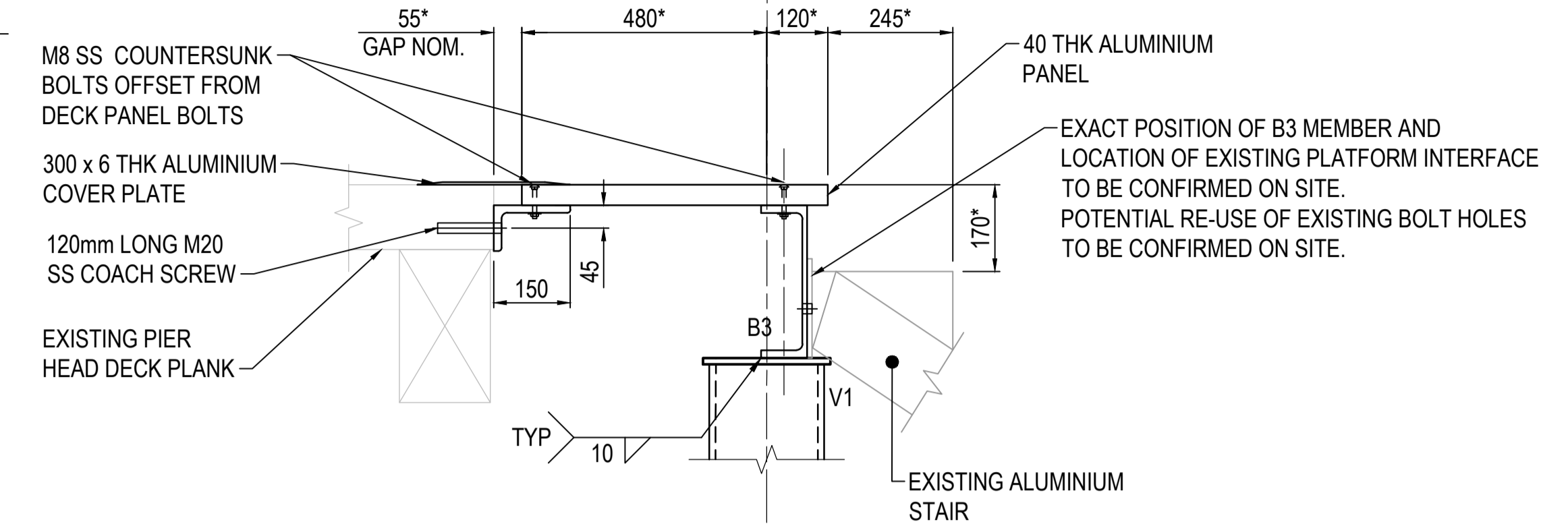


DETAIL 7
1:10
0161

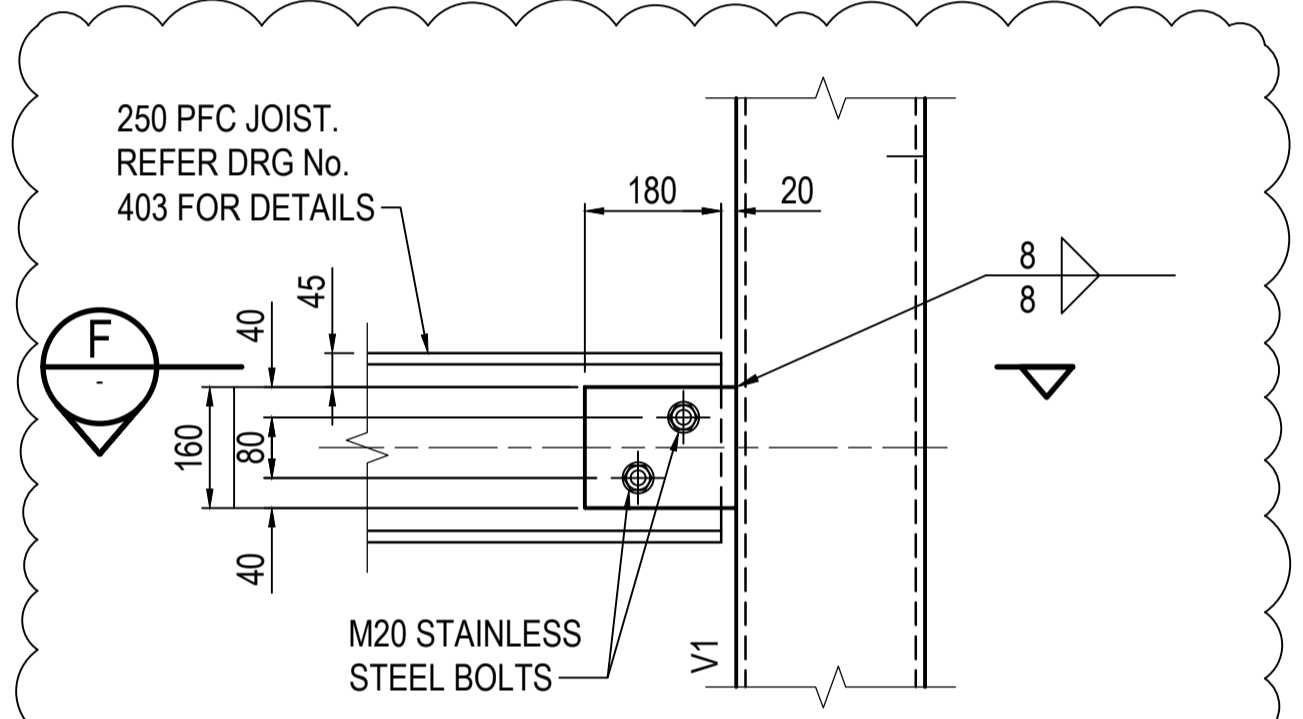
BOLTED SPLICE



SECTION E
1:10

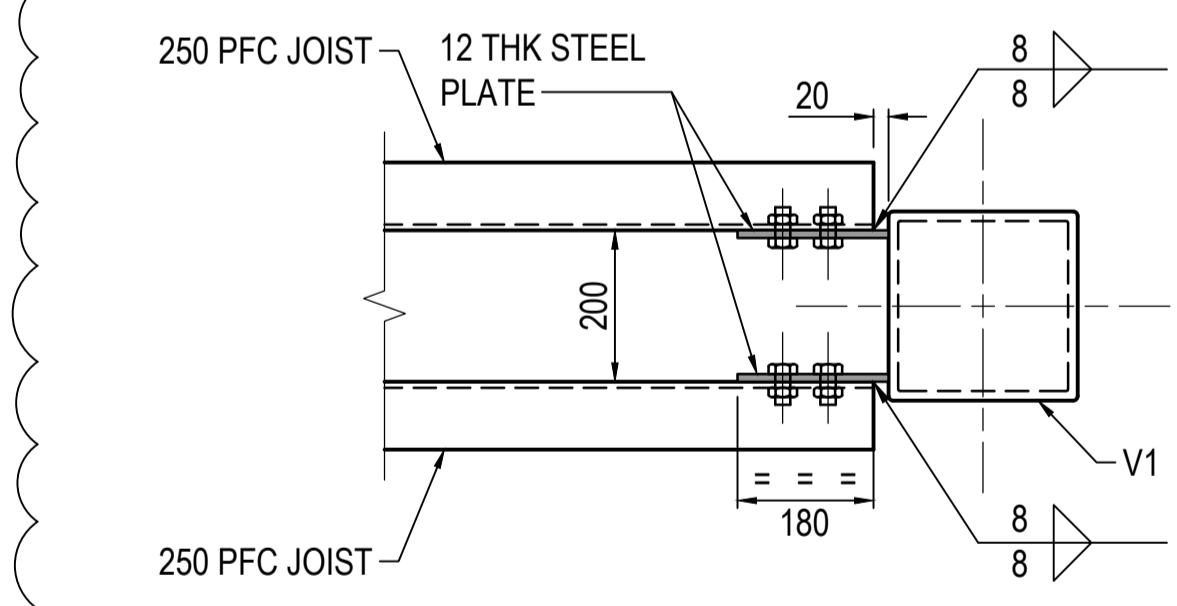


DETAIL 8
1:10
0142



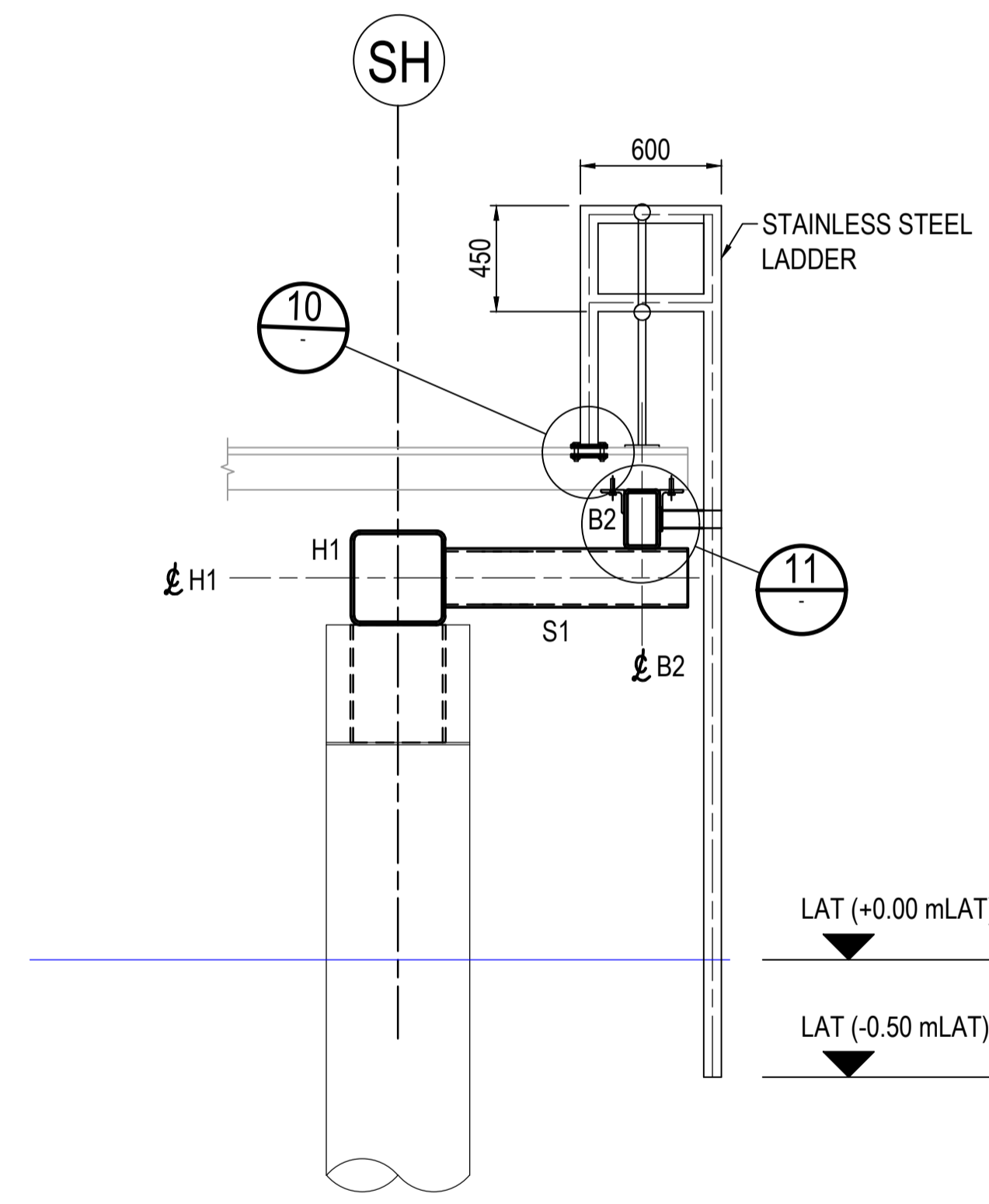
DETAIL 9
1:10
0161 0403

PFC JOIST TO COLUMN CONNECTION DETAIL



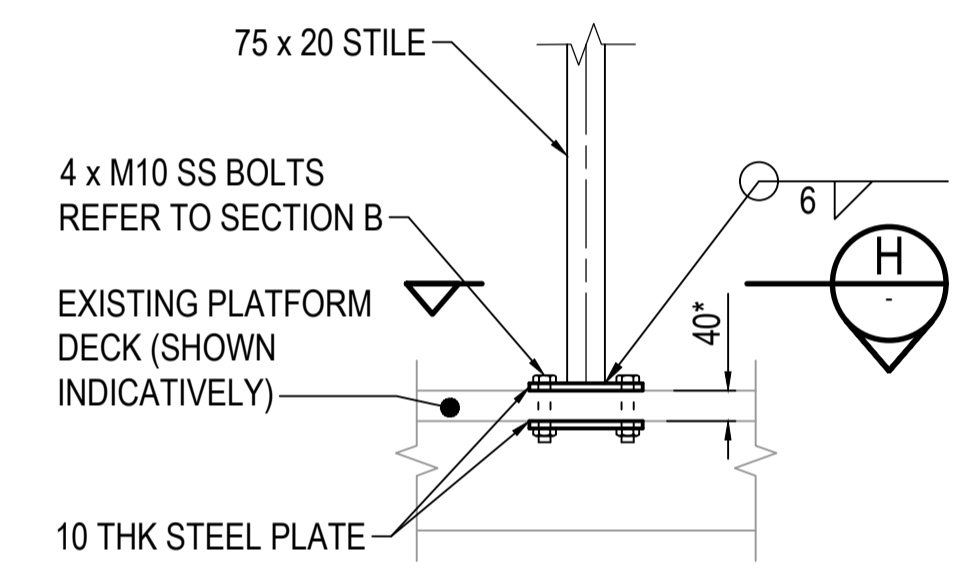
SECTION F
1:10

PFC JOIST TO COLUMN PLAN CONNECTION DETAIL

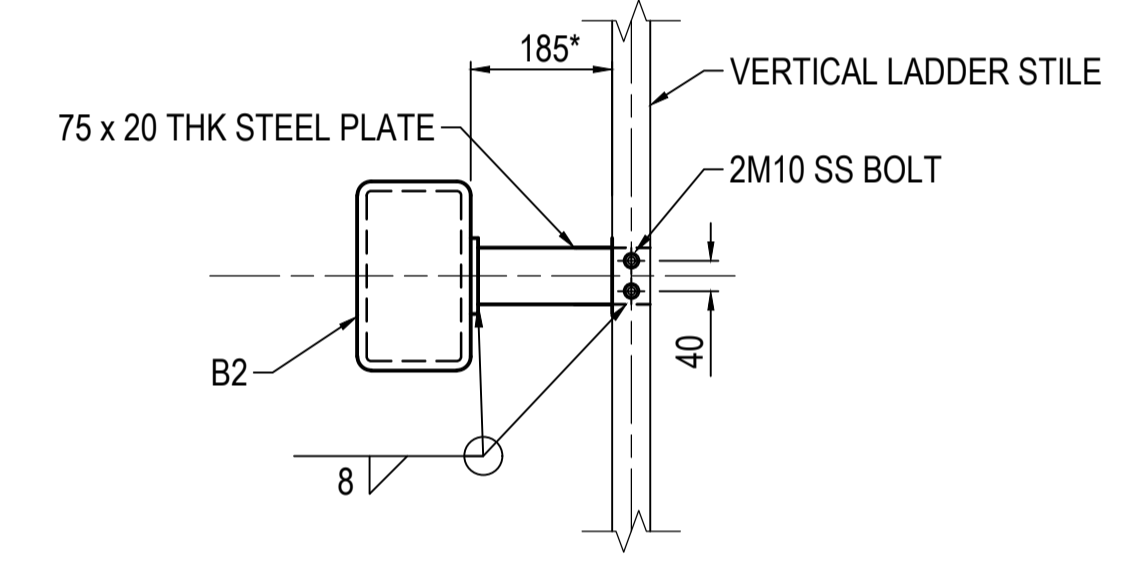


SECTION G
1:25
0144

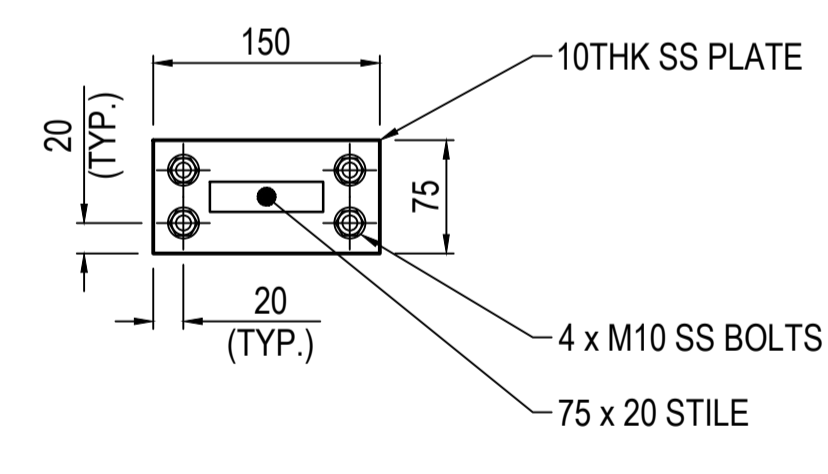
PIER END ELEVATION



DETAIL 10
1:10



DETAIL 11
1:10



SECTION H
1:5

- NOTES:**
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 2. REFER TO DRAWING 287869-DRG-0161 FOR MEMBER SIZES.
 3. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
Langdon
RPEQ No. 18825

Gladstone Ports Corporation

APPROVED

Name: Trudi Smith
Date: 7:25 am, 30/11/2023

3	18.05.23	ME	TM	KL
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Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
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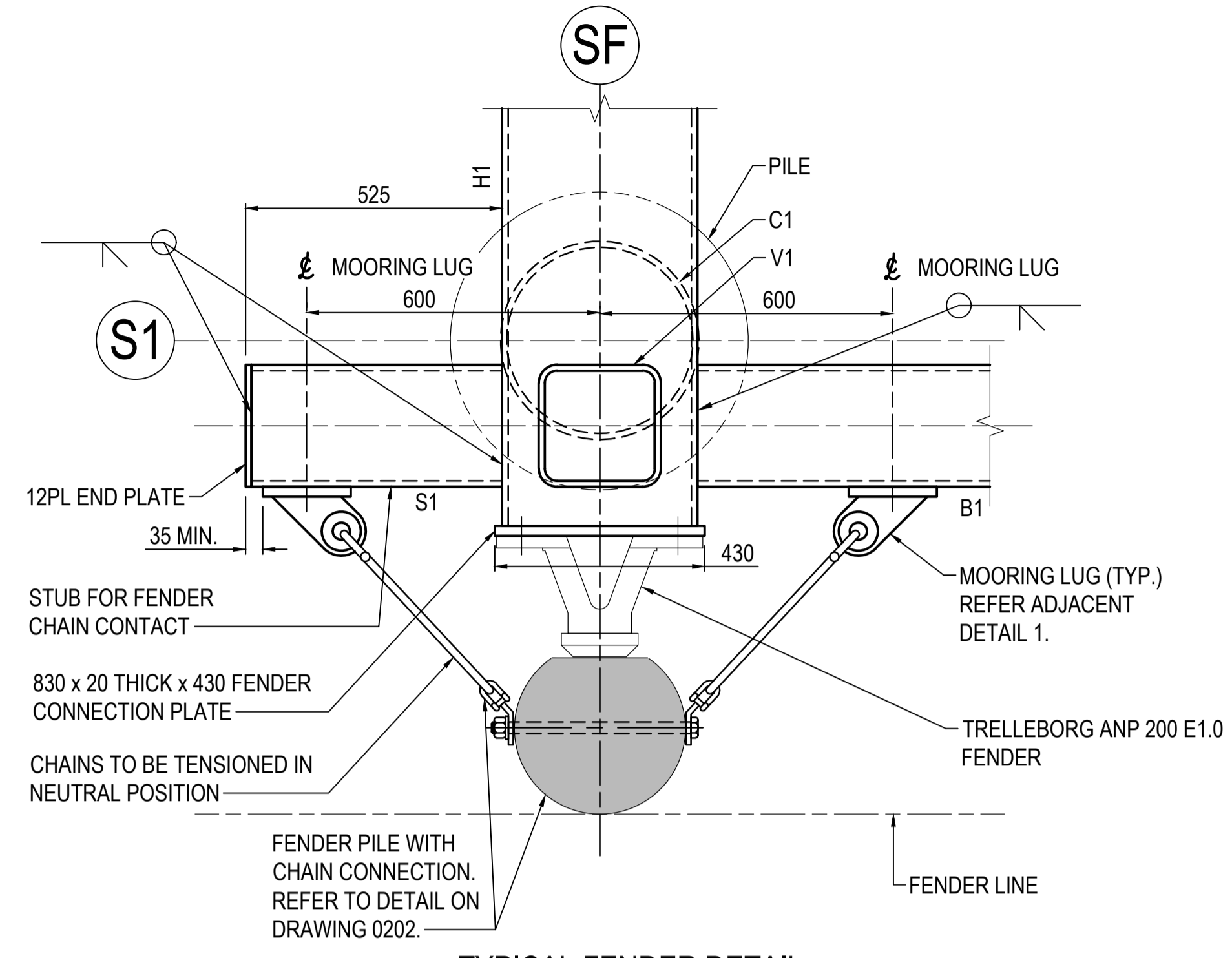
Drawing Title
STEELWORK DETAILS SHEET 2

Drawing Status
DETAILED DESIGN

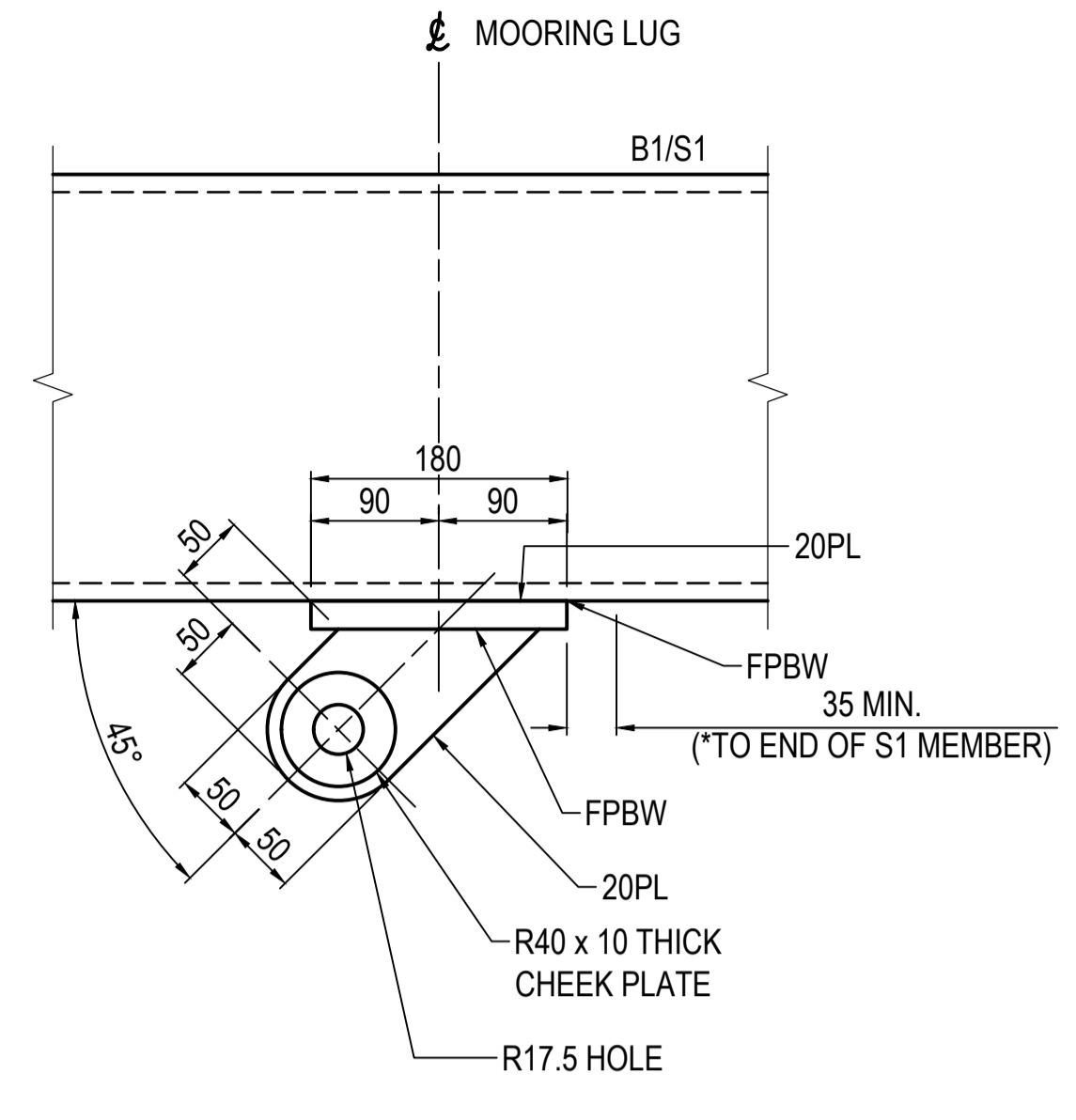
Job No
287869

Drawing No
0163

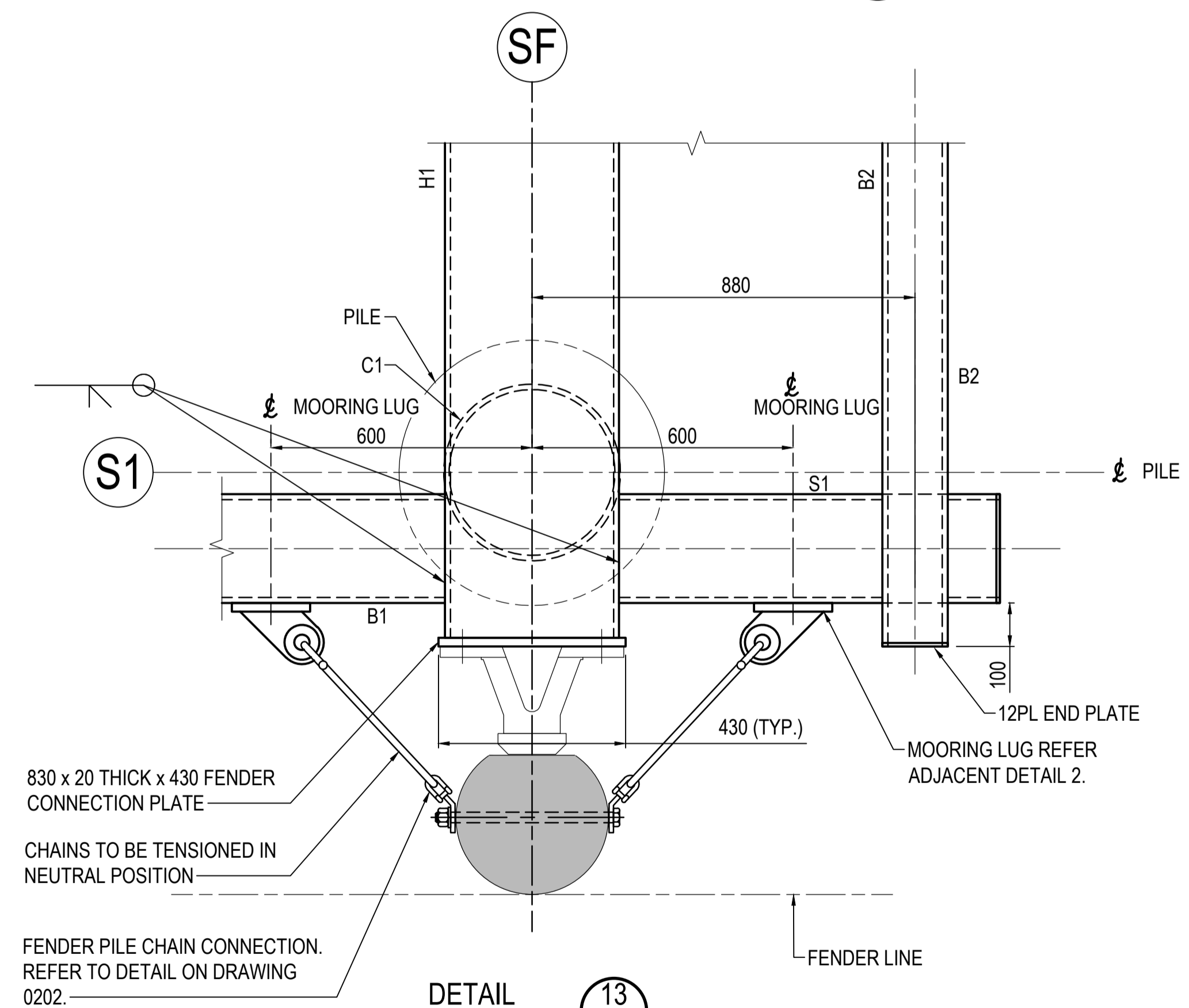
Issue
2



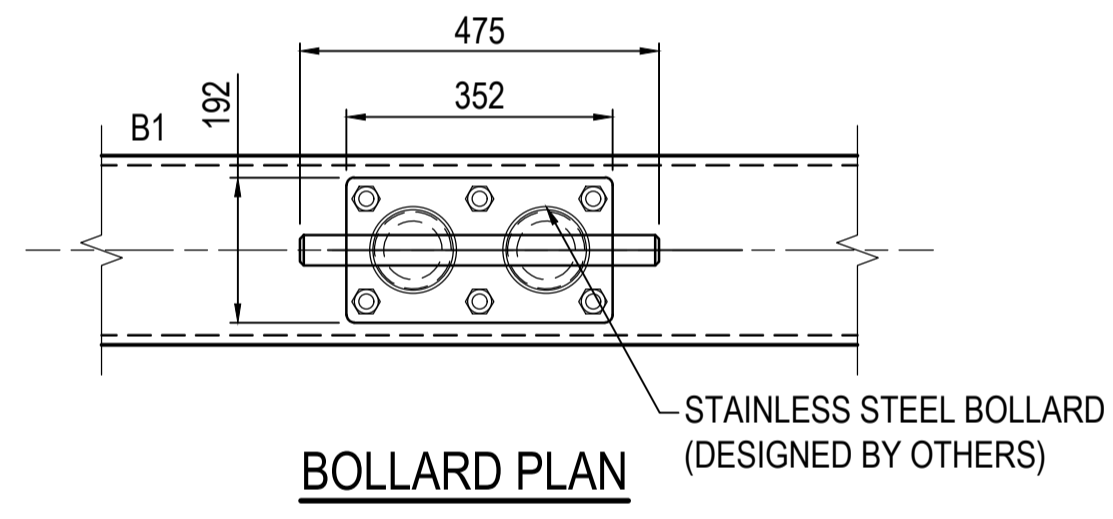
TYPICAL FENDER DETAIL
DETAIL 12
 SCALE 1:10
 0161



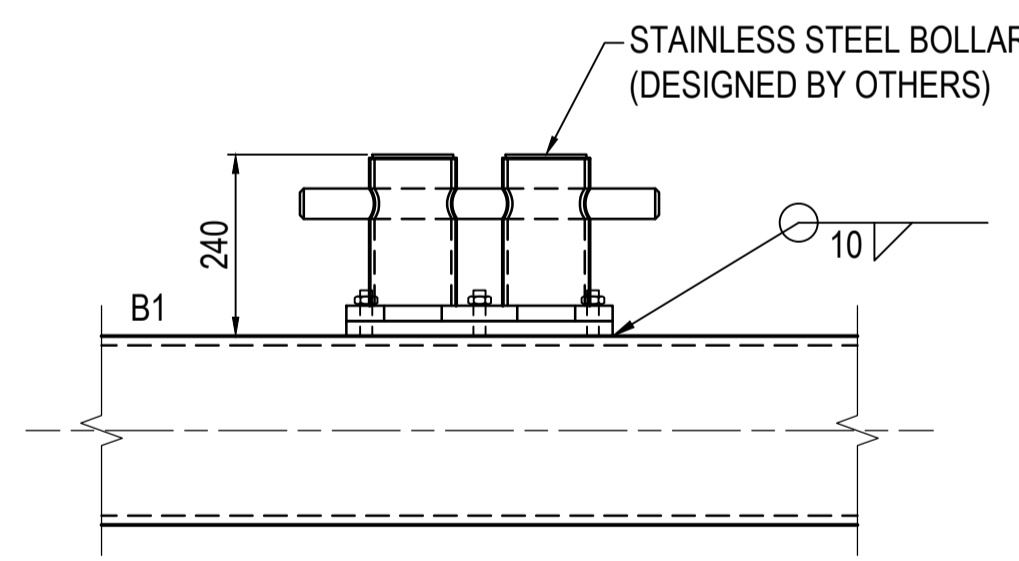
MOORING LUG DETAIL 1
 SCALE 1:5



DETAIL 13
 SCALE 1:10
 0161



BOLLARD PLAN
 SCALE 1:5



BOLLARD ELEVATION
 SCALE 1:5
DETAIL 14
 SCALE 1:10
 0161

NOTES:
 1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.
 2. REFER TO DRAWING 287869-DRG-0161 FOR MEMBER SIZES.

ISSUED FOR CONSTRUCTION

Scales

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 KAITLIN LANGDON

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 Name: Trudi Smith
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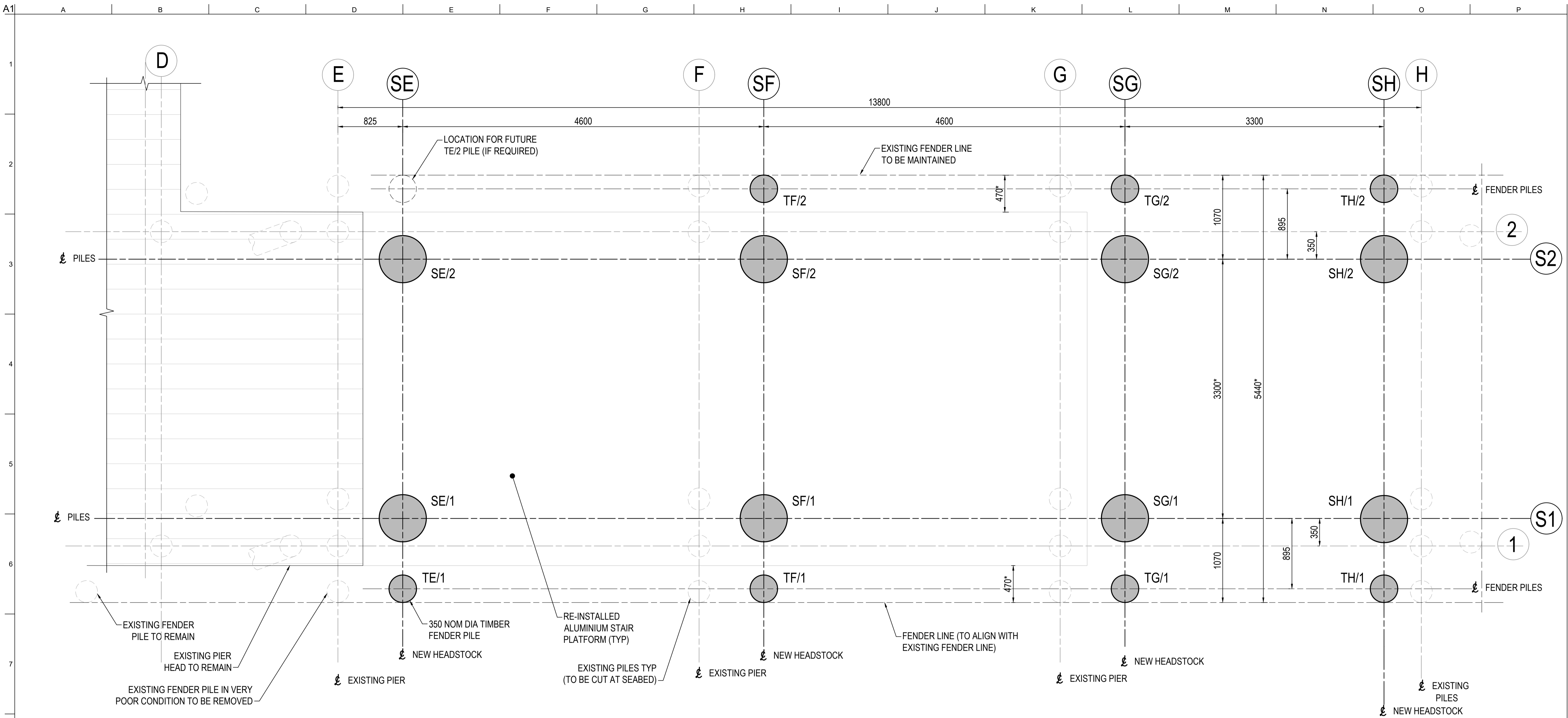
Drawing Title
STEELWORK DETAILS SHEET 3

Drawing Status
DETAILED DESIGN

Job No
287869

Drawing No
0164

Issue
2



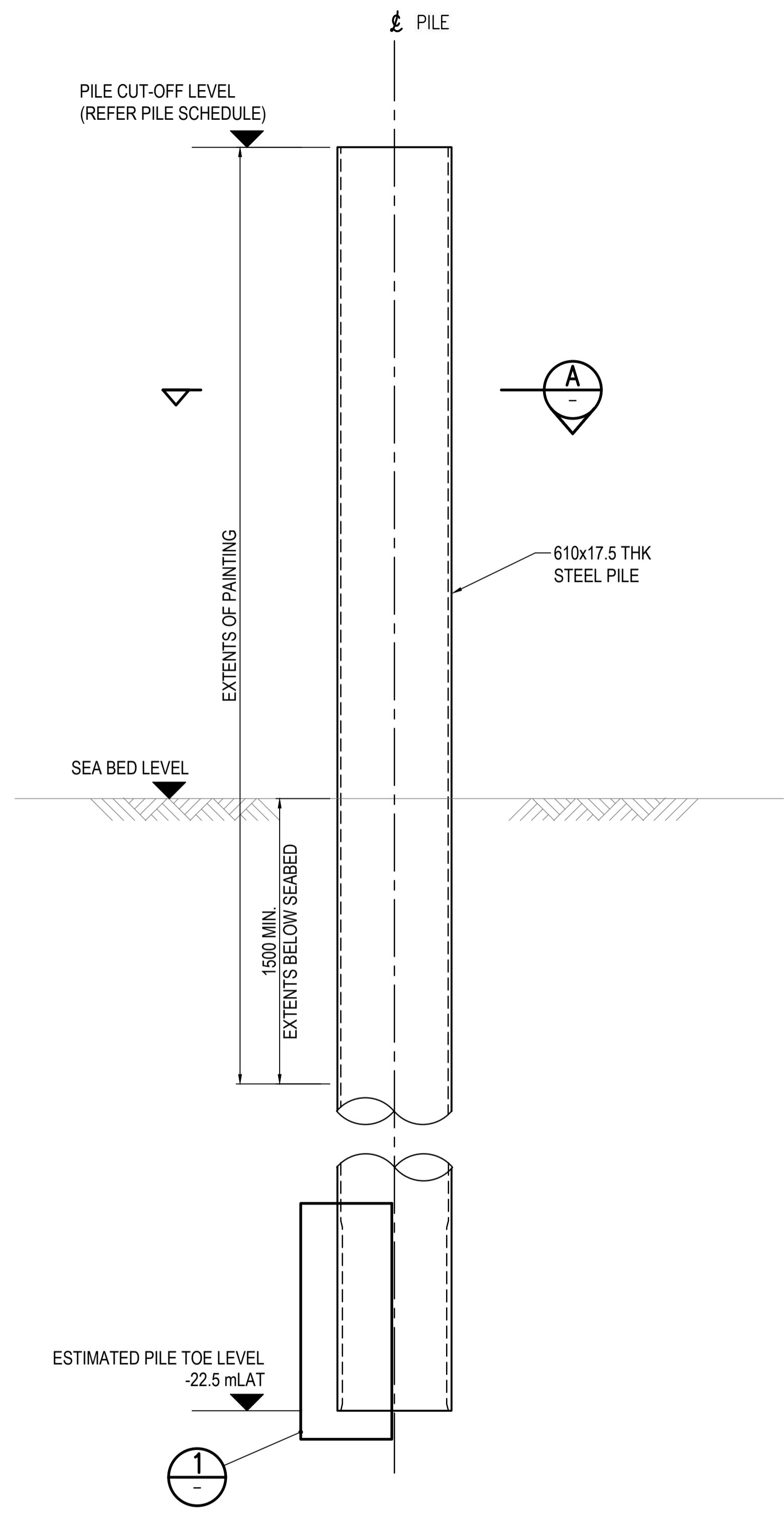
PILE No.	PILE TYPE	PILE SIZE (mm)	DESIGN PILE CUT OFF LEVEL (mLAT)	DESIGN PILE TOE LEVEL (mLAT)	INDICATIVE EXISTING SEABED LEVEL (mLAT)	CENTRELINE OF FENDER (mLAT)	ULTIMATE STRUCTURAL LOAD		ULTIMATE GEOTECHNICAL CAPACITY	
							LATERAL LOAD (kN)	AXIAL LOAD (kN TENSION)	LATERAL LOAD (kN)	AXIAL LOAD (kN)
SE/1, SE/2	STEEL TUBULAR PILE	610 X 17.5THK	3.915	-22.5	-4	N/A	*	400	*	1000
SF/1, SF/2	STEEL TUBULAR PILE	610 X 17.5THK	2.715	-22.5		N/A	*	400	*	1000
SG/1, SG/2	STEEL TUBULAR PILE	610 X 17.5THK	1.435	-22.5		N/A	*	400	*	1000
SH/1, SH/2	STEEL TUBULAR PILE	610 X 17.5THK	1.435	-22.5		N/A	*	400	*	1000
TE/1	TIMBER PILE	350 DIA	6.85	-11		4.05	*	0	*	0
TF/1, TF/2	TIMBER PILE	350 DIA	5.85	-11		2.85	*	0	*	0
TG/1, TG/2	TIMBER PILE	350 DIA	5.85	-11		1.62	*	0	*	0
TH/1, TH/2	TIMBER PILE	350 DIA	5.85	-11		1.62	*	0	*	0

* REFER TO THE DESIGN REPORT (287869-RPT-004) FOR INFORMATION ON THE LATERAL PILE LOADS

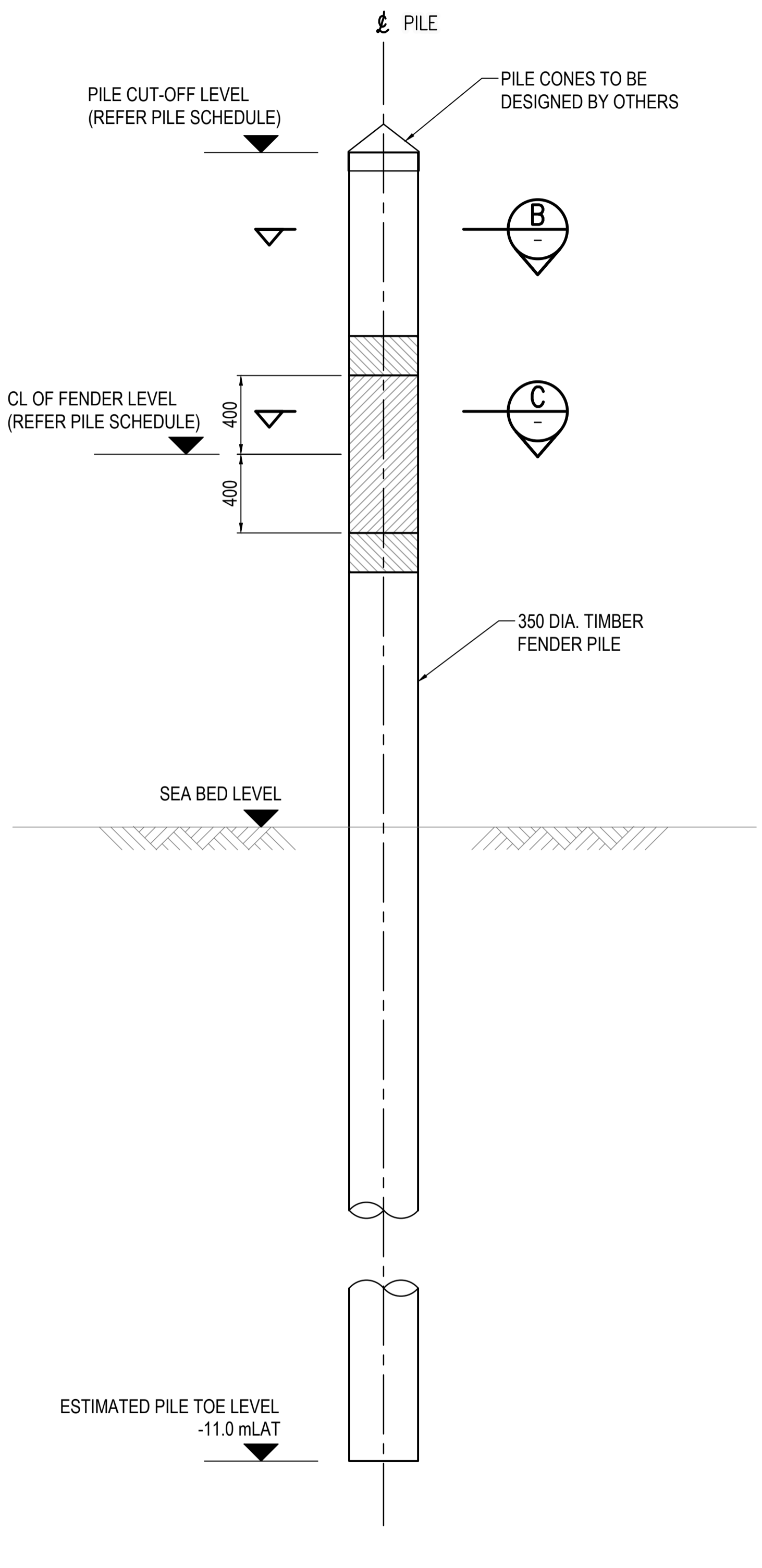
NOTES:
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 2. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

ISSUED FOR CONSTRUCTION

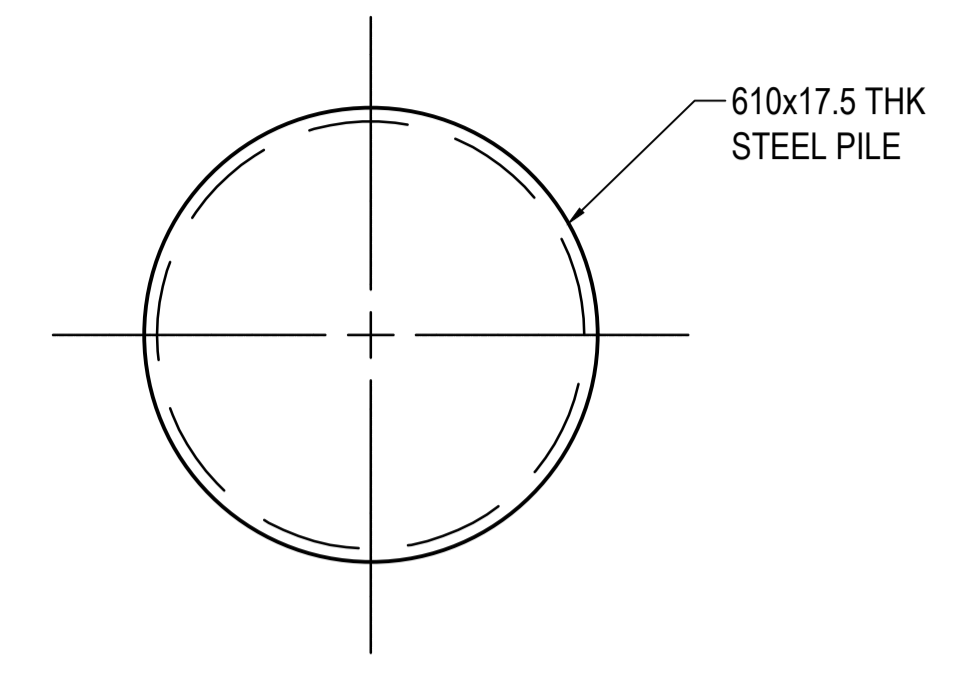
Scales Do not scale	Approved by: KAITLIN LANGDON RPEQ No. 18825	 APPROVED Name: Trudi Smith Date: 7:25 am, 30/11/2023	<table border="1"> <tr><td>3</td><td>18.05.23</td><td>ME</td><td>TM</td><td>KL</td></tr> <tr><td>2</td><td>09.05.23</td><td>FM</td><td>TM/RN</td><td>KL</td></tr> <tr><td>1</td><td>31.03.23</td><td>IP</td><td></td><td>KL</td></tr> <tr><td>Issue</td><td>Date</td><td>By</td><td>Chkd</td><td>Appd</td></tr> </table>	3	18.05.23	ME	TM	KL	2	09.05.23	FM	TM/RN	KL	1	31.03.23	IP		KL	Issue	Date	By	Chkd	Appd	Client PACIFIC MARINE GROUP PTY. LTD. 	Job Title KINGFISHER BAY RESORT JETTY	 Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3223 9000 www.arup.com	 Member Firm Arup Pty Ltd AIN 18 000 966 165	Drawing Title PILE ARRANGEMENT Drawing Status DETAILED DESIGN Job No 287869 Drawing No 0201 Issue 3
3	18.05.23	ME	TM	KL																								
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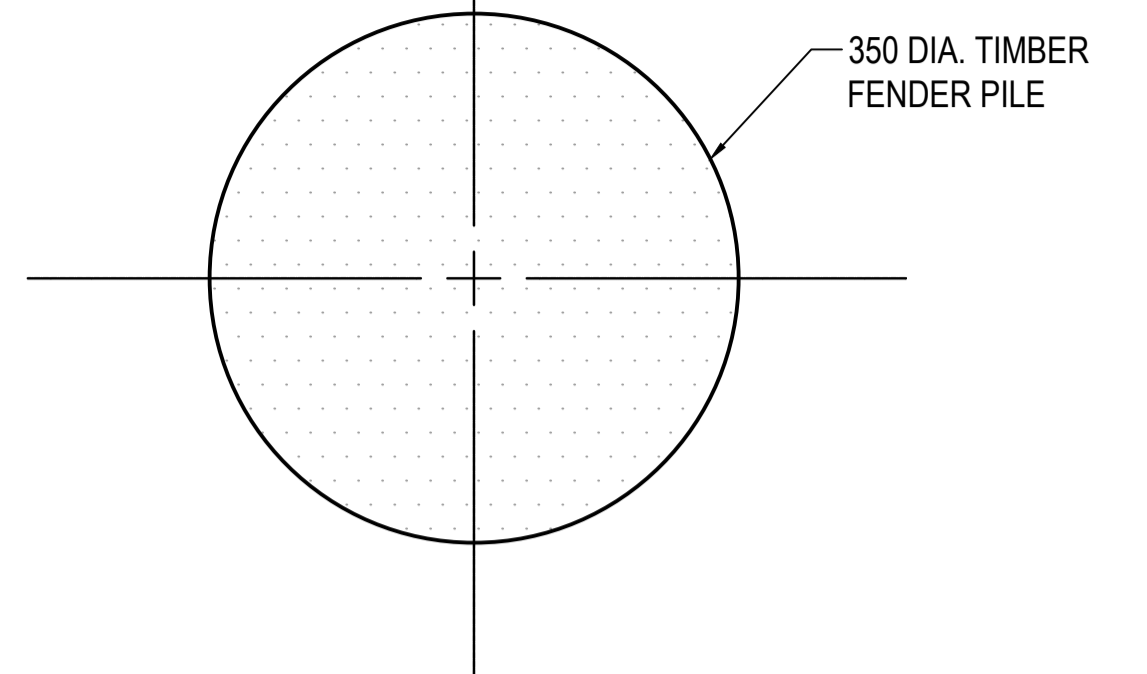
TYPICAL STRUCTURAL PILE
SCALE 1:20



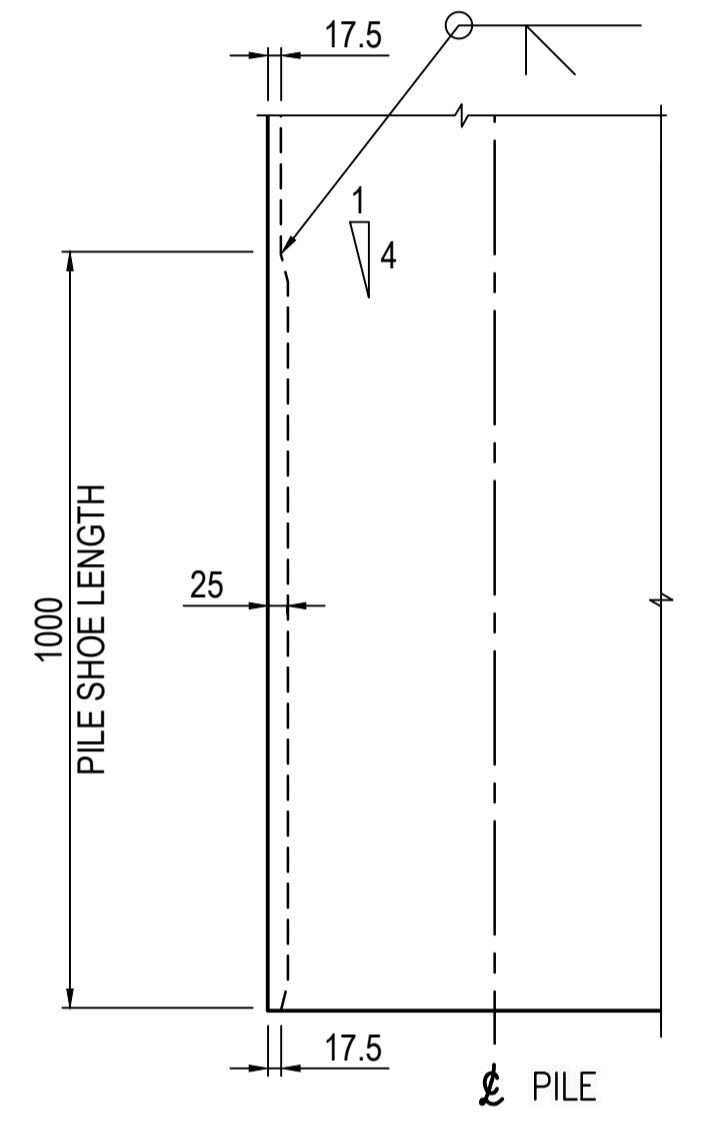
TYPICAL FENDER PILE
SCALE 1:20



SECTION A
SCALE 1:10

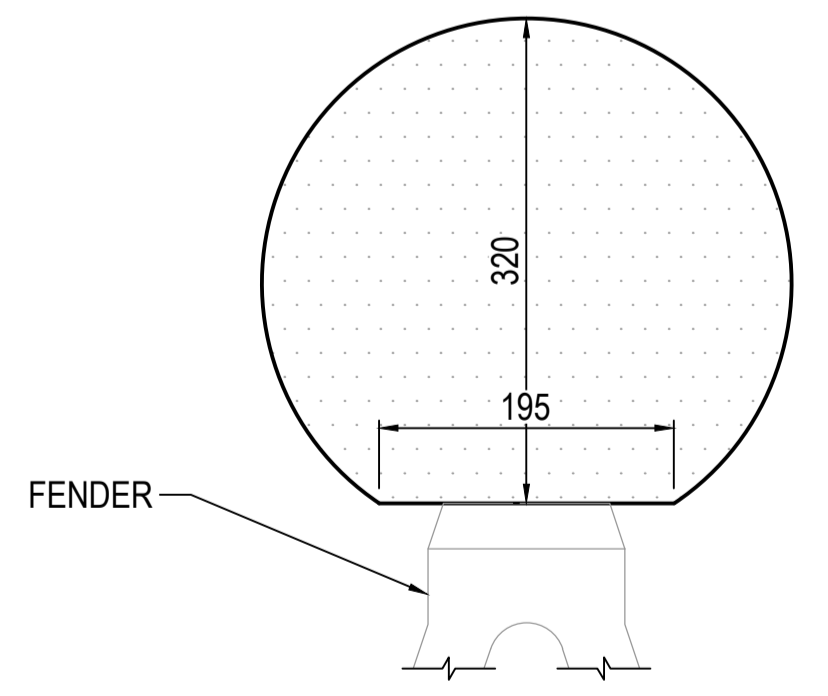
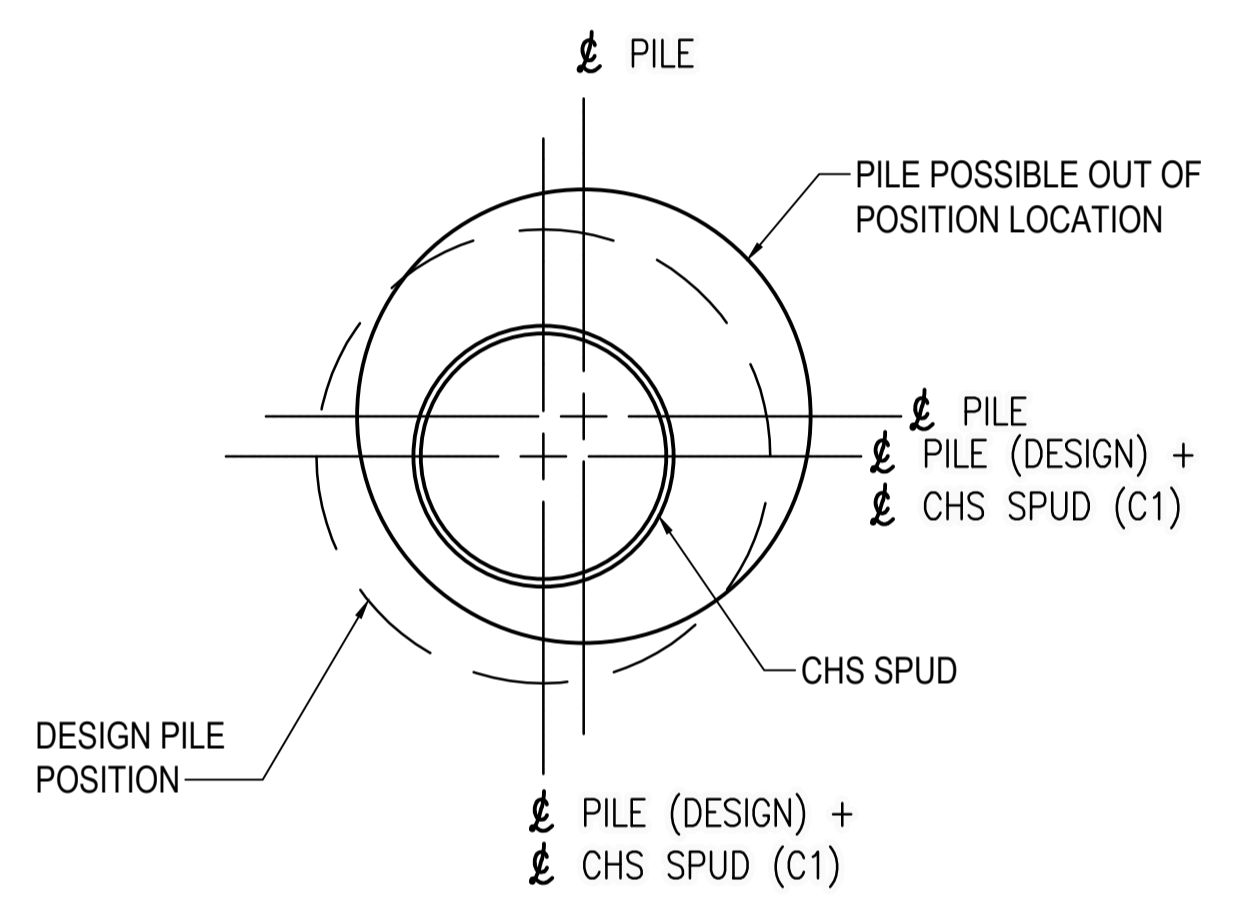


SECTION B
SCALE 1:5



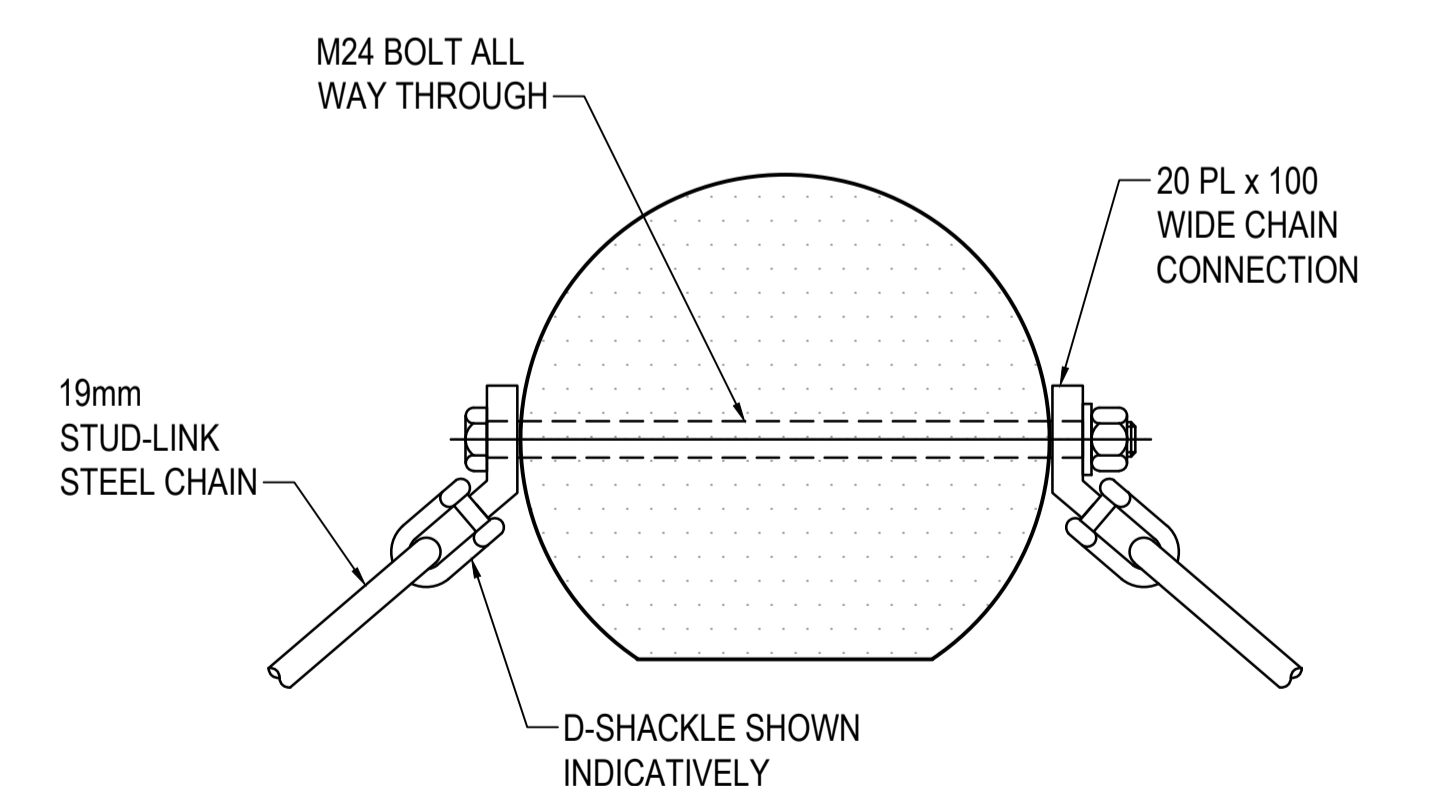
PILE SHOE DETAIL 1
SCALE 1:10

NOTE: THE CONTRACTOR SHALL CONFIRM THAT THE PILE AND SHOE THICKNESS ARE ADEQUATE FOR THE CONSTRUCTION METHODS PROPOSED. STIFFENING BAND / DRIVING SHOE SHOWN ON THE DRAWINGS IS INDICATIVE ONLY AND TO BE CONFIRMED BY THE CONTRACTOR



SECTION C
SCALE 1:5

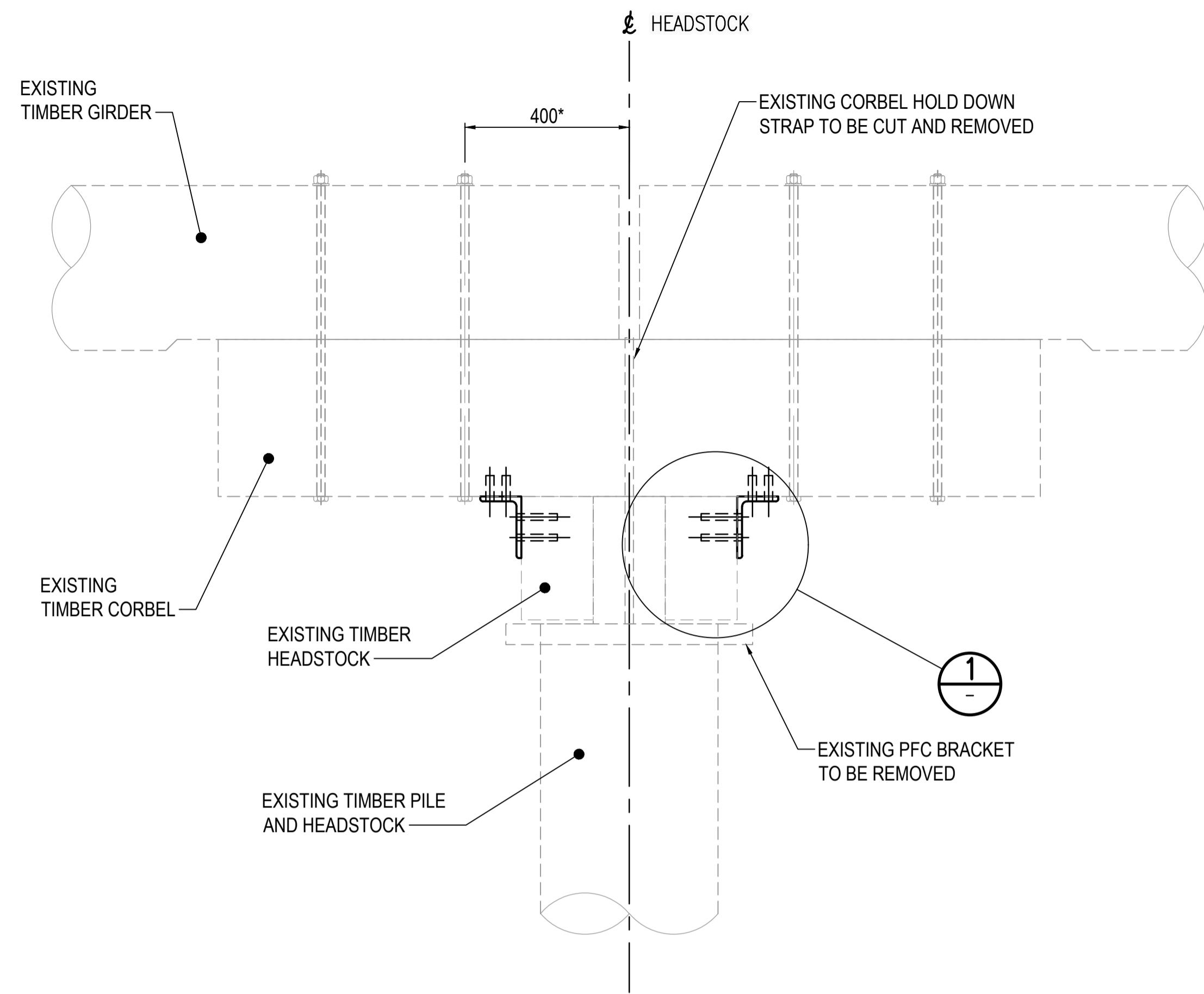
FENDER PILE CHAMFER PLAN



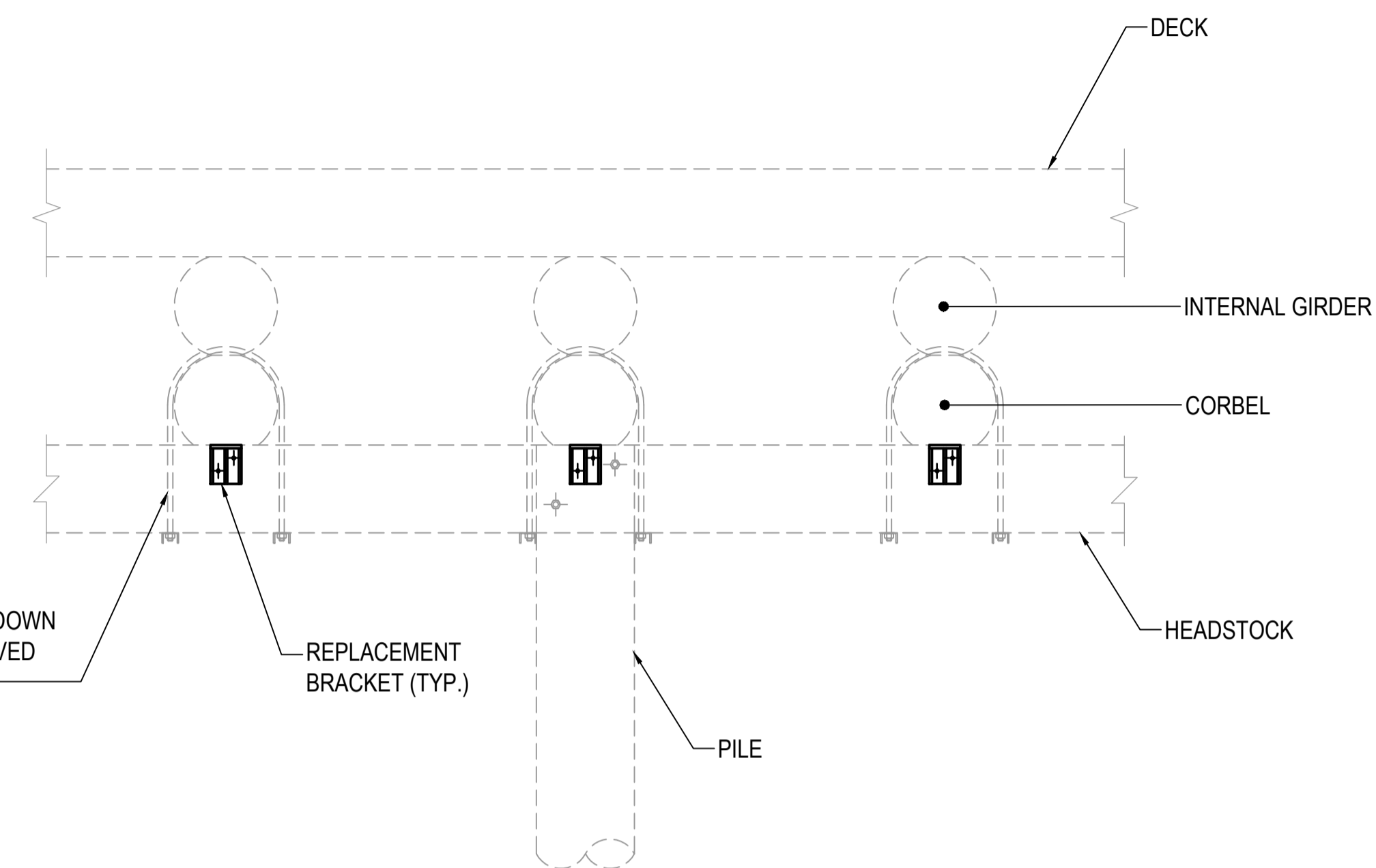
FENDER PILE CHAIN CONNECTION DETAIL
SCALE 1:5

ISSUED FOR CONSTRUCTION

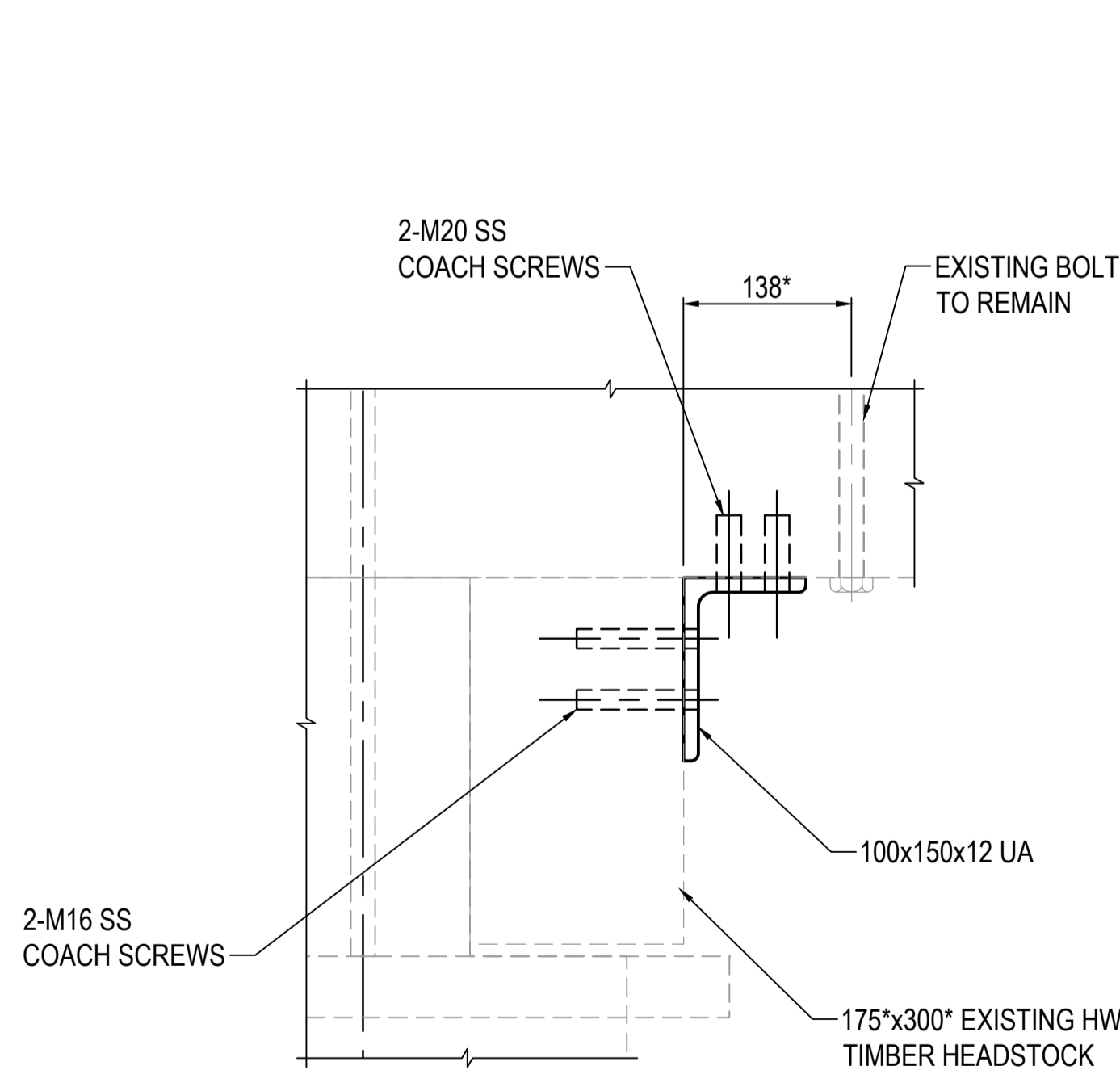
<p>Scales</p>	<p>Approved by: KAITLIN LANGDON</p> <p>RPEQ No. 18825</p>	<p>Name: Trudi Smith Date: 7:25 am, 30/11/2023</p>	<p>2 09.05.23 FM TM KL</p>	<p>Client PACIFIC MARINE GROUP PTY. LTD.</p>	<p>Job Title KINGFISHER BAY RESORT JETTY</p>	<p>Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3923 9000 www.arup.com</p>	<p>Member Firm Arup Pty Ltd ABN 18 000 966 165</p>	<p>Drawing Title PILE DETAILS</p>
			<p>1 31.03.23 IP KL</p>					
<p>Design Model Version</p>			<p>Issue Date By Chkd Appd</p>					<p>Job No 287869</p>
								<p>Drawing No 0202</p>
								<p>Issue 2</p>



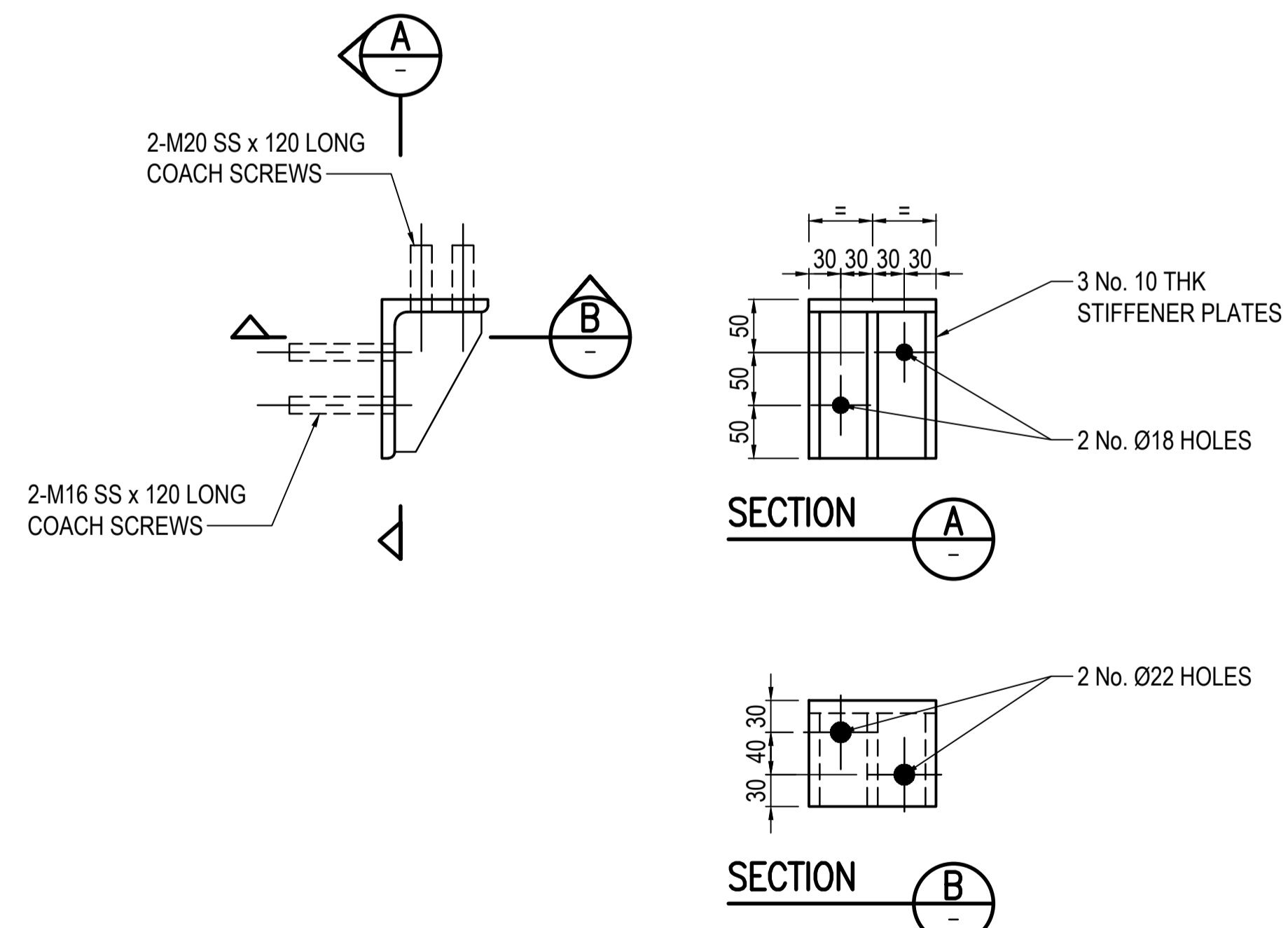
CORBEL TIE DOWN REPAIR ELEVATION
SCALE 1:10



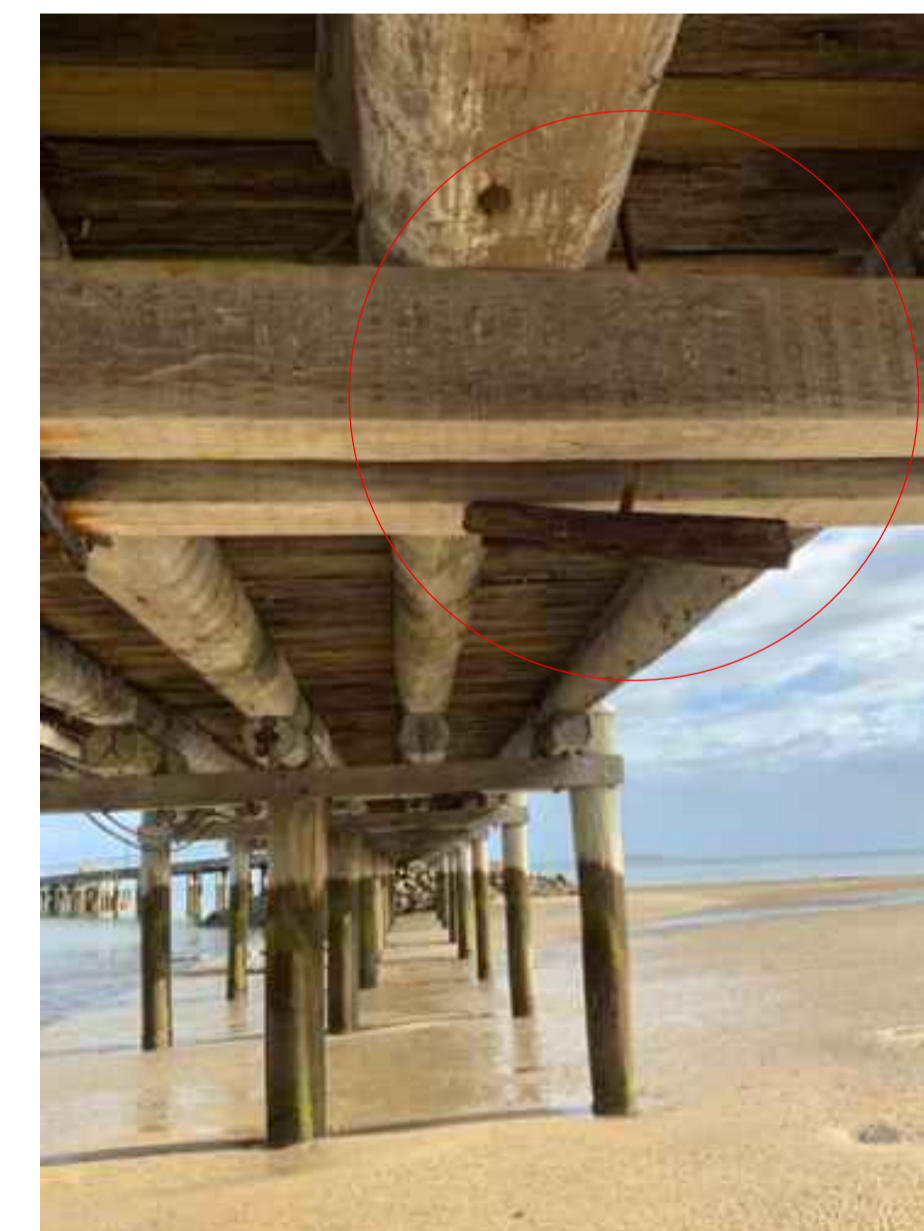
KEY PLAN
NOT TO SCALE



DETAIL 1
SCALE 1:5



BRACKET DETAILS
SCALE 1:5
2 No. REQUIRED PER CORBEL



DEFECT PHOTO

NOTES:
1. FOR GENERAL NOTES REFER TO DRG 0005.
2. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

GPC Gladstone Ports Corporation
APPROVED
Name: Trudi Smith
Date: 7:25 am, 30/11/2023

2	09.05.23	FM	TM	KL
1	24.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.



Job Title
KINGFISHER BAY RESORT JETTY

ARUP

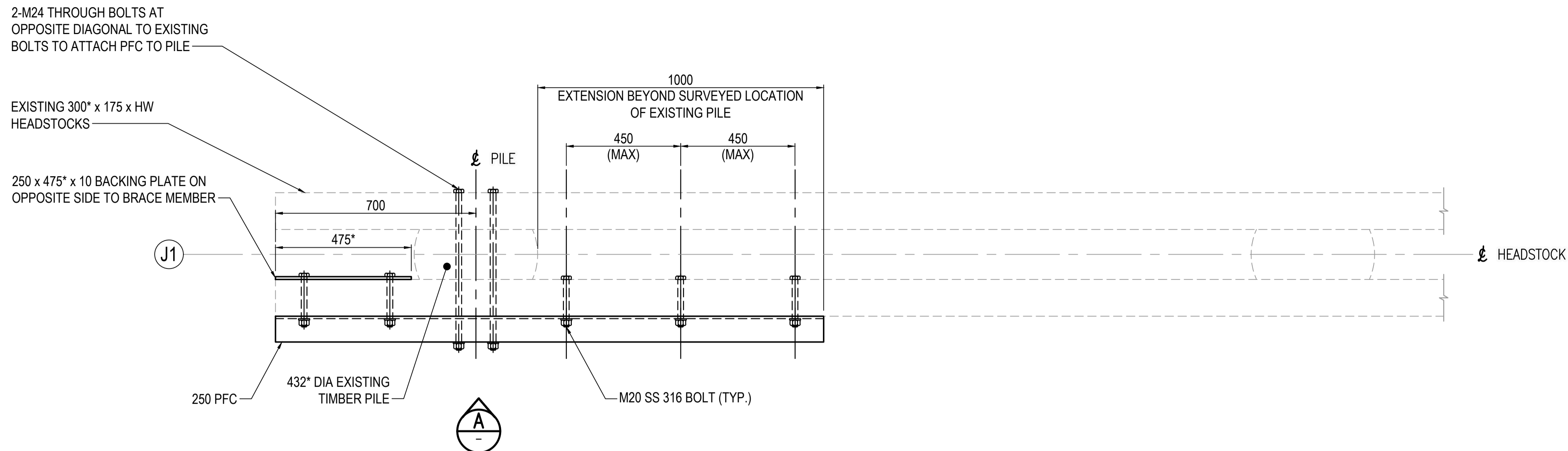
Arup, 108 Wickham Street, Fortitude Valley
Brisbane, QLD, 4000
Tel: +61 (0)7 3023 9000
www.arup.com

CONSULT AUSTRALIA
Member Firm
Arup Pty Ltd
ABN 18 000 966 165

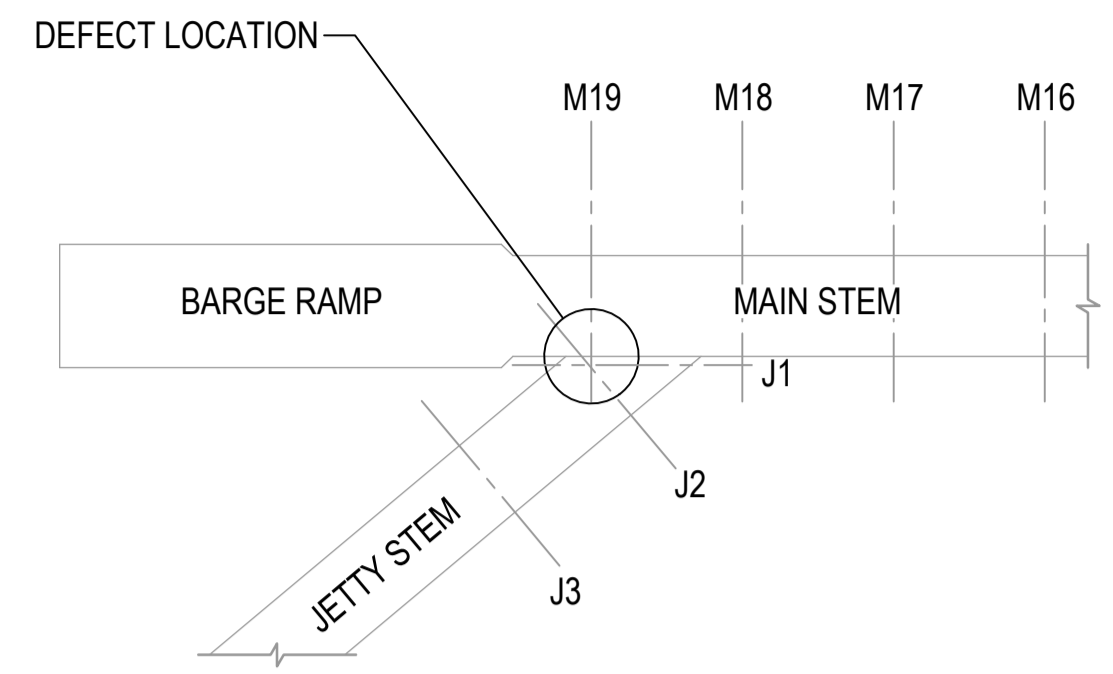
Drawing Title
JETTY REPAIR DETAILS SHEET 1

Drawing Status
DETAILED DESIGN

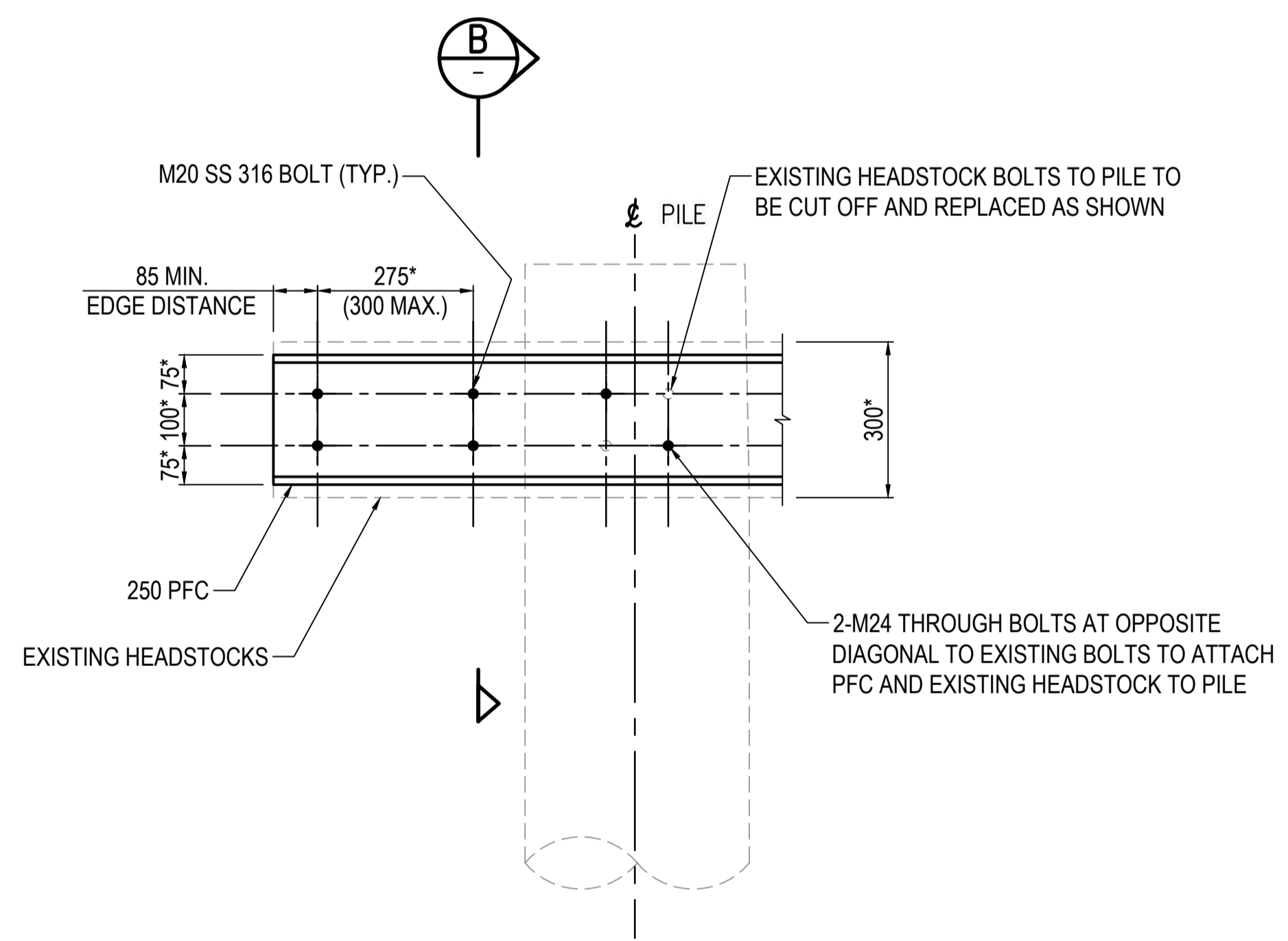
Job No: **287869**
Drawing No: **0401**
Issue: **2**



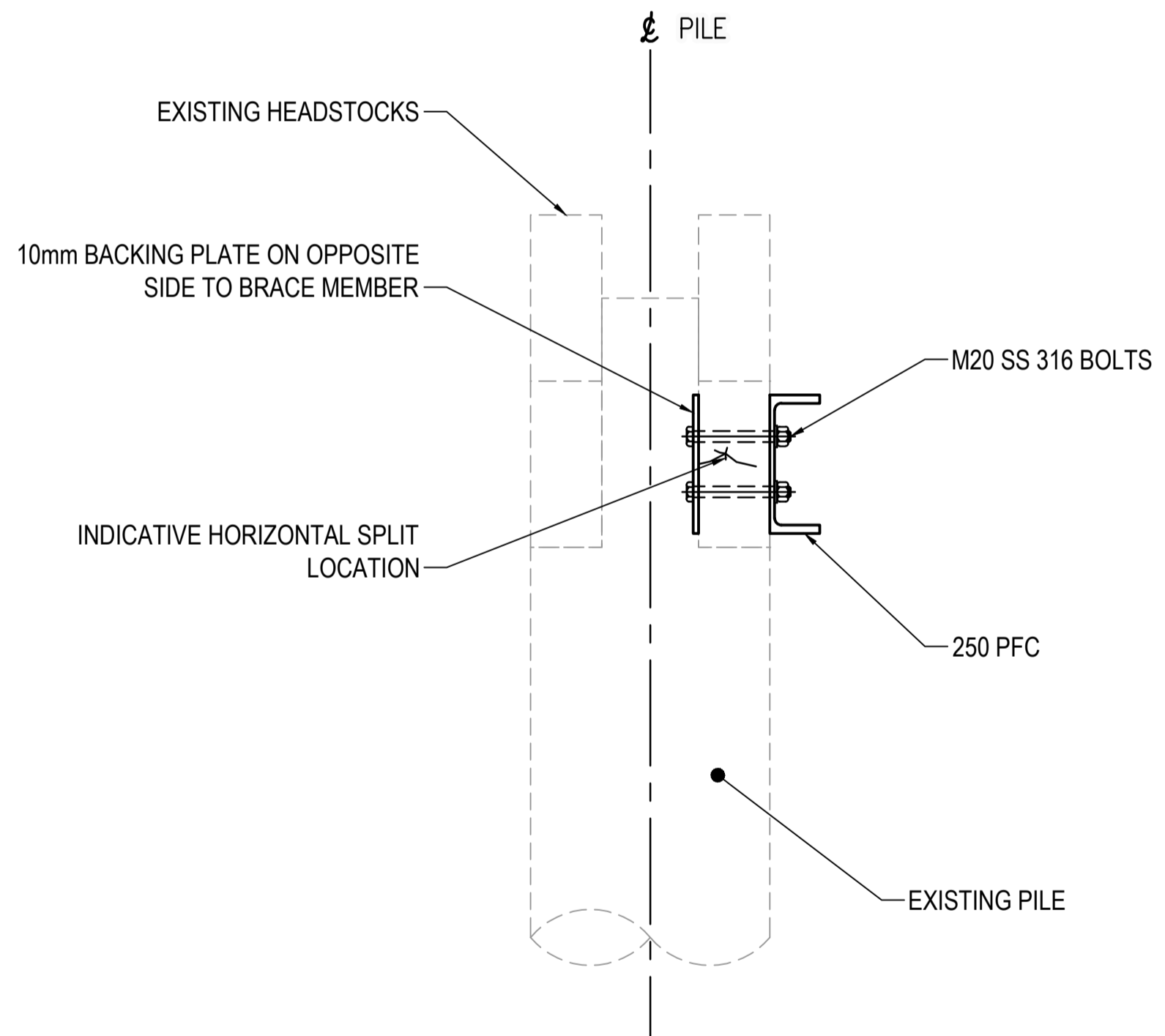
**HEADSTOCK J1 HORIZONTAL SPLIT REPAIR
PLAN**
SCALE 1:10



KEY PLAN
NOT TO SCALE



VIEW
SCALE 1:10
END DETAIL








SECTION
SCALE 1:10

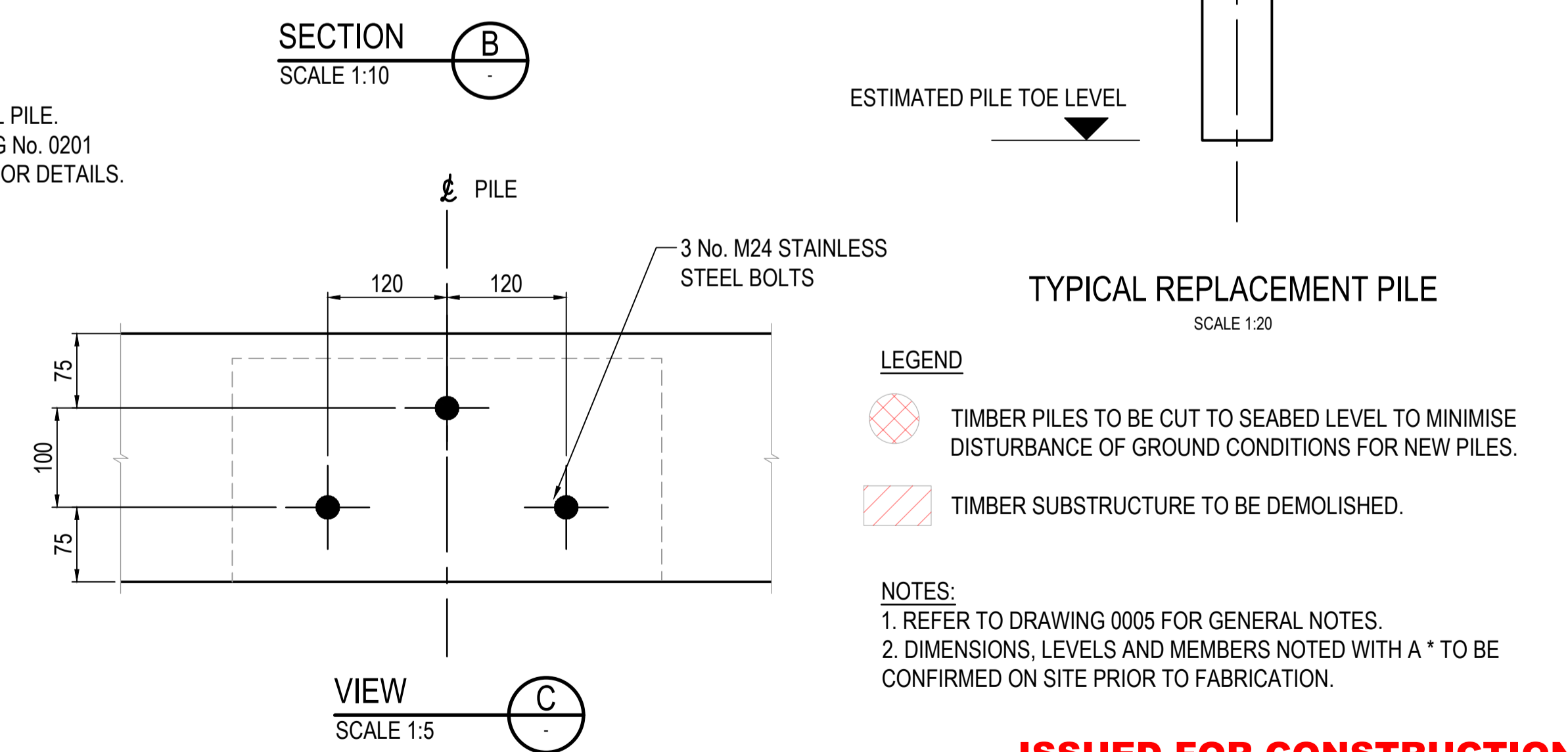
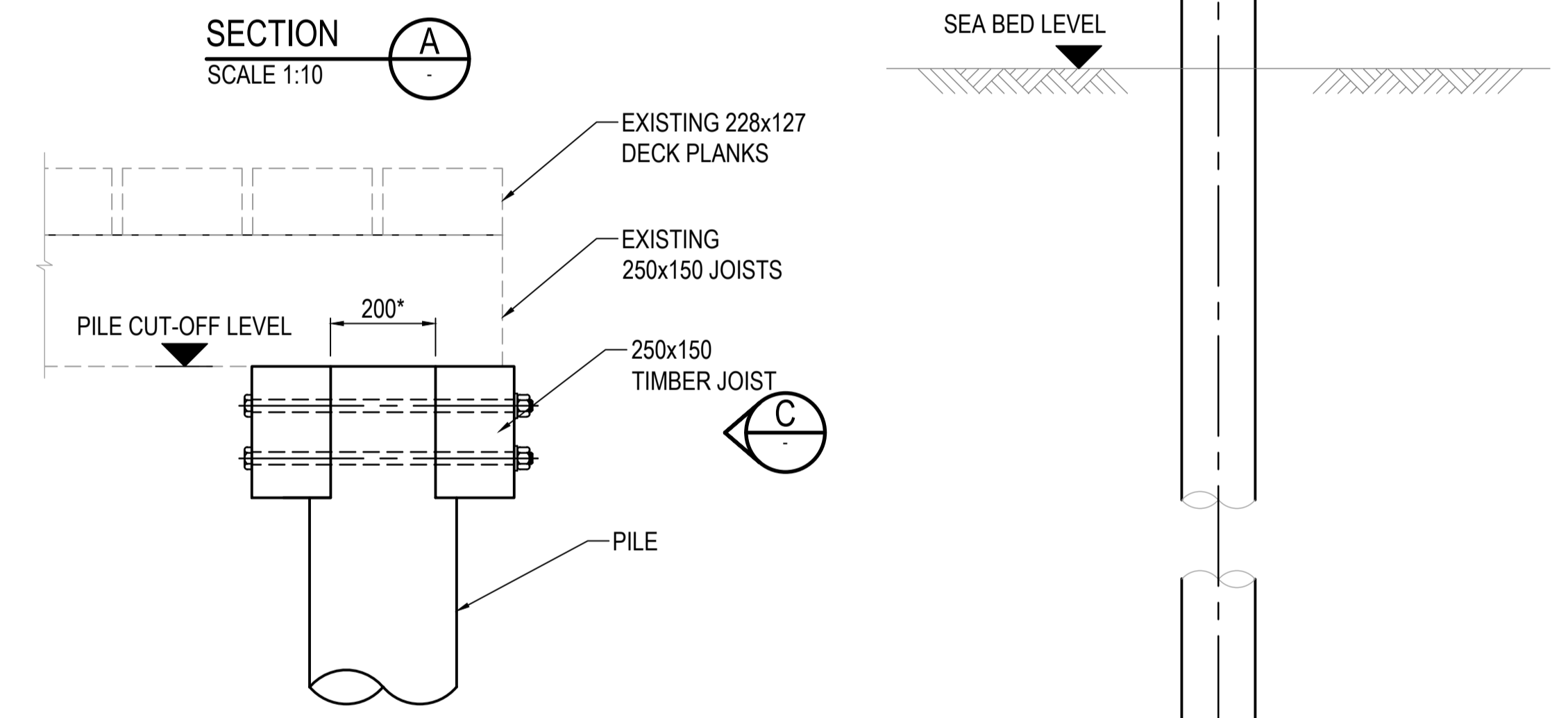
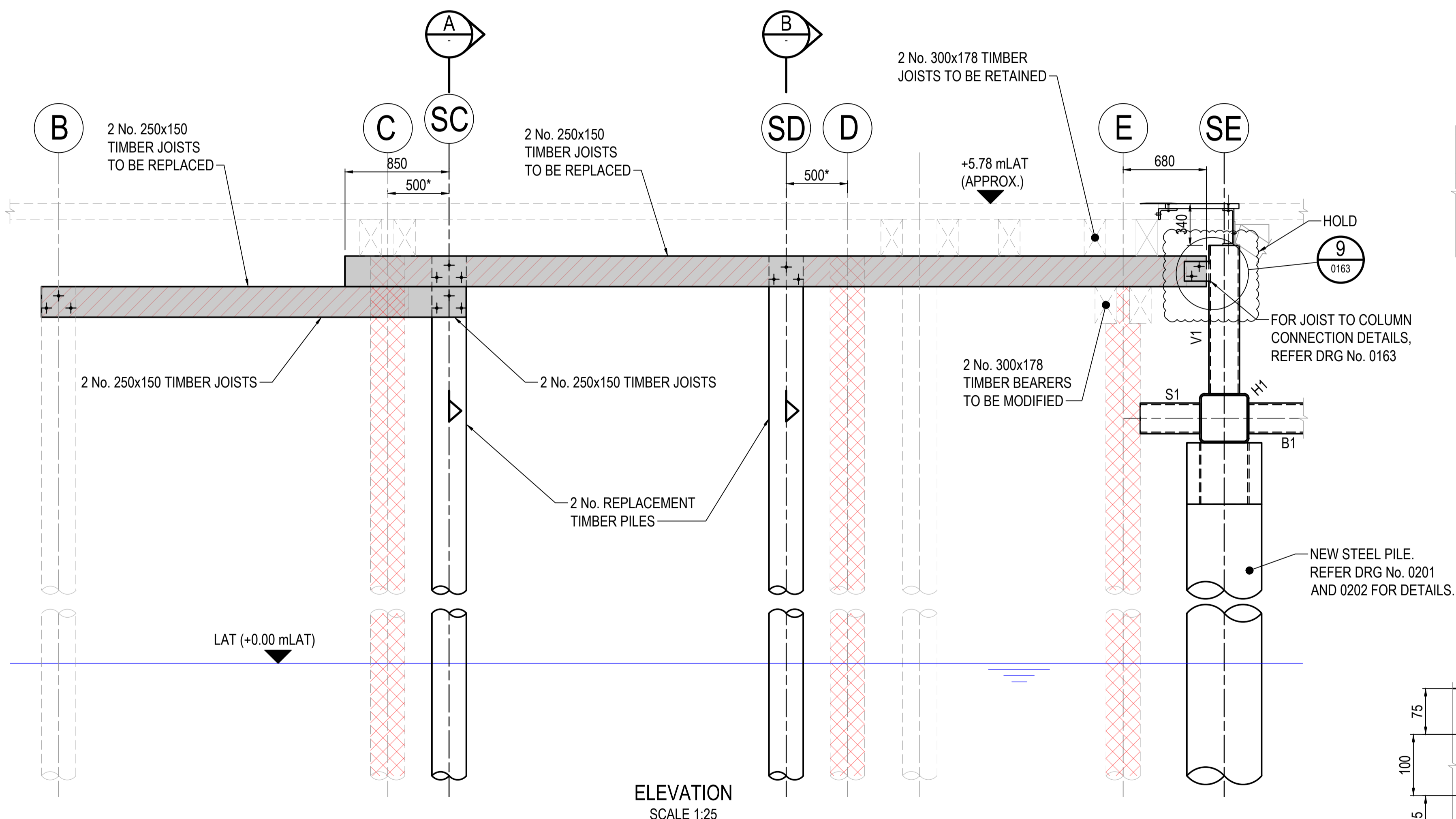
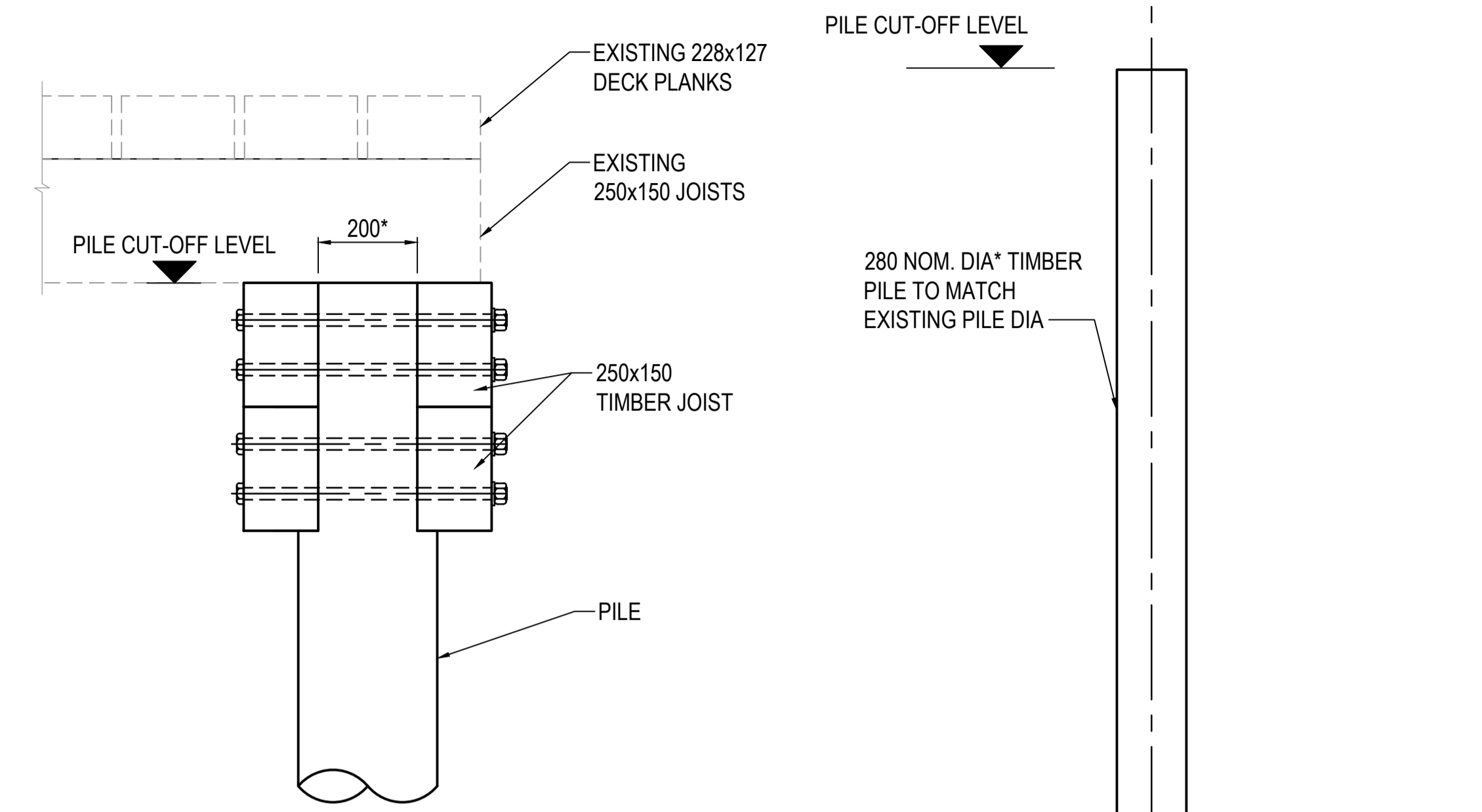
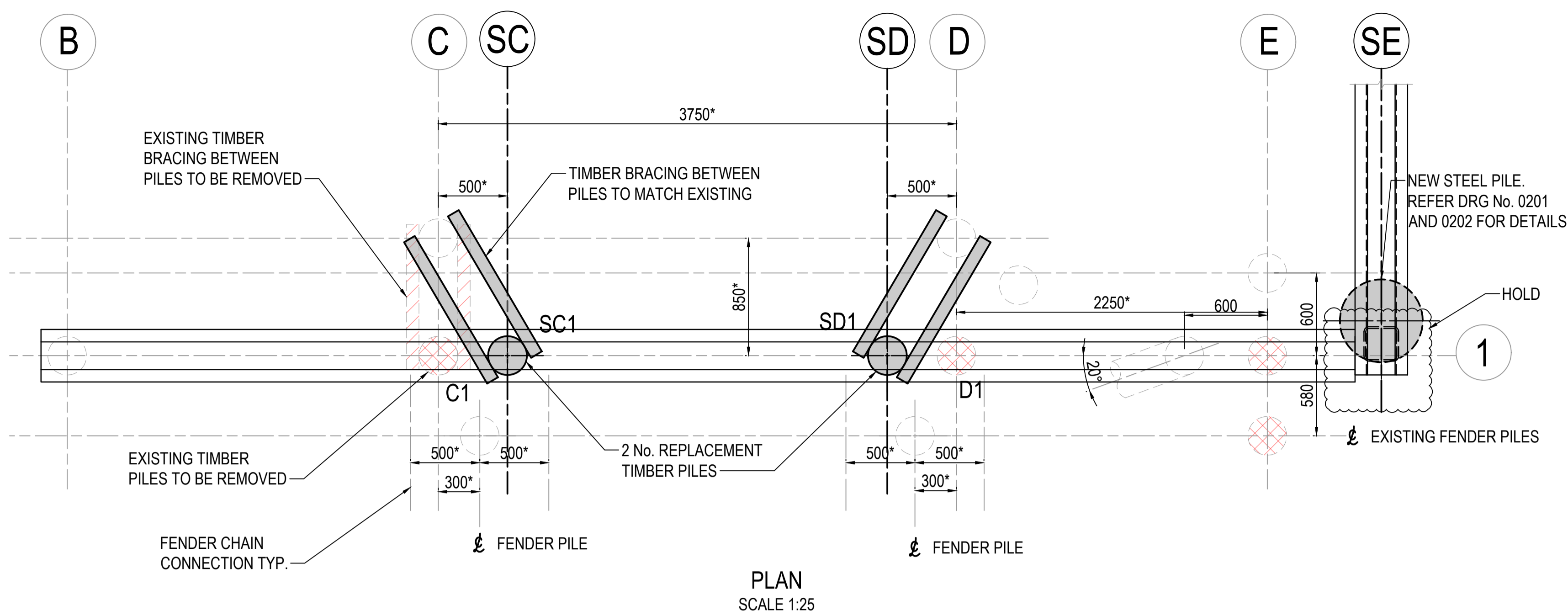


DEFECT PHOTO

NOTES:
1. FOR GENERAL NOTES REFER TO DRG 0005.
2. DIMENSIONS, LEVELS AND MEMBERS NOTED WITH A * TO BE CONFIRMED ON SITE PRIOR TO FABRICATION.

ISSUED FOR CONSTRUCTION

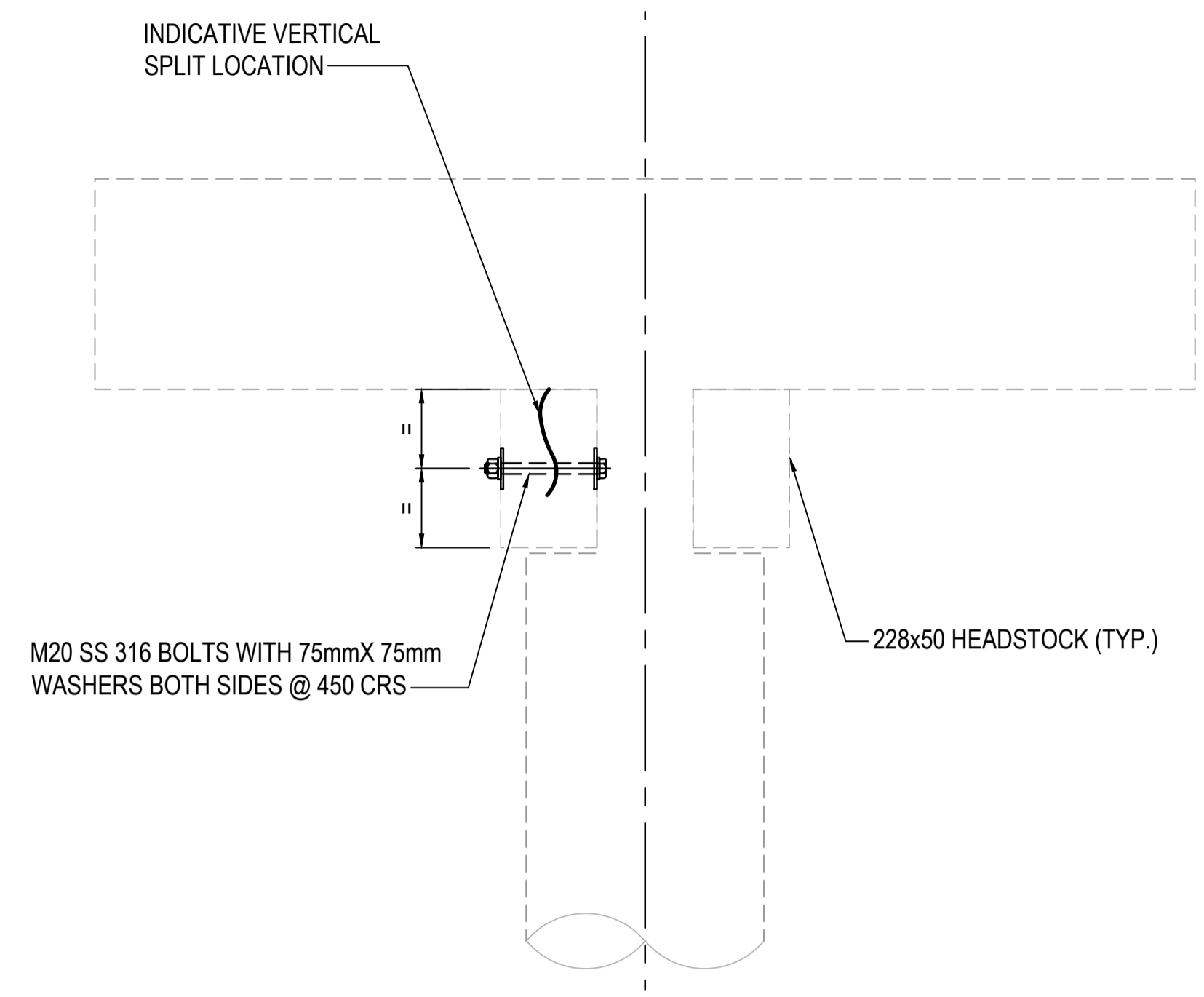
<p>Scales</p>	<p>Approved by: KAITLIN LANGDON</p>  <p>RPEQ No. 18825</p>	 <p>Name: Trudi Smith Date: 7:26 am, 30/11/2023</p>	<table border="1"> <tr> <th>Issue</th> <th>Date</th> <th>By</th> <th>Chkd</th> <th>Appd</th> </tr> <tr> <td>2</td> <td>09.05.23</td> <td>FM</td> <td>TM</td> <td>KL</td> </tr> <tr> <td>1</td> <td>24.03.23</td> <td>IP</td> <td></td> <td>KL</td> </tr> </table>	Issue	Date	By	Chkd	Appd	2	09.05.23	FM	TM	KL	1	24.03.23	IP		KL	<p>Client PACIFIC MARINE GROUP PTY. LTD.</p> 	<p>Job Title KINGFISHER BAY RESORT JETTY</p>	 <p>Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3923 9000 www.arup.com</p>	 <p>Member Firm Arup Pty Ltd ABN 18 000 966 165</p>	<p>Drawing Title JETTY REPAIR DETAILS SHEET 2</p> <p>Drawing Status DETAILED DESIGN</p> <p>Job No 287869</p> <p>Drawing No 0402</p> <p>Issue 2</p>
Issue	Date	By	Chkd	Appd																			
2	09.05.23	FM	TM	KL																			
1	24.03.23	IP		KL																			



PILE No.	PILE TYPE	PILE SIZE (mm)	DESIGN PILE CUT OFF LEVEL (mLAT)	DESIGN PILE TOE LEVEL (mLAT)	INDICATIVE EXISTING SEABED LEVEL (mLAT)
SC1, SD1	TIMBER PILE	280 DIA	5.353	-17.5	-4

ISSUED FOR CONSTRUCTION

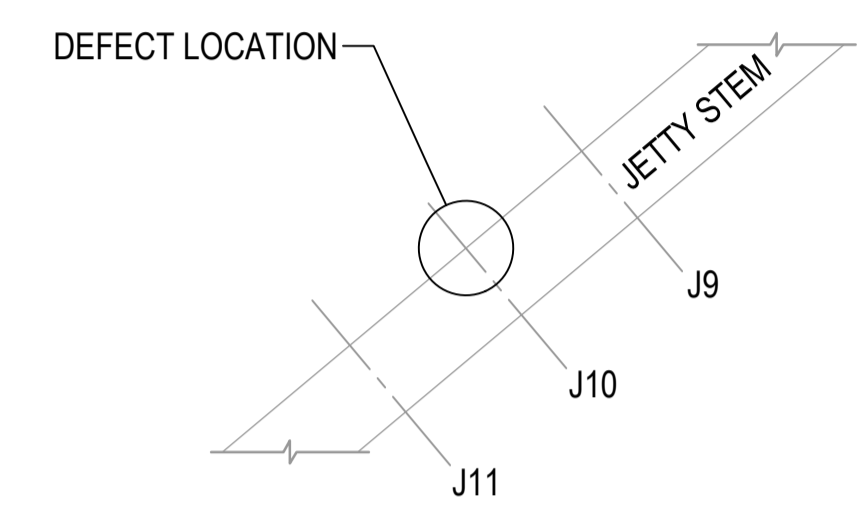
Scales Approved by: KAITLIN LANGDON RPEQ No. 18825	 APPROVED Name: Trudi Smith Date: 7:26 am, 30/11/2023	3 18.05.23 ME TM KL 2 09.05.23 FM TM KL 1 06.04.23 IP KL	Client PACIFIC MARINE GROUP PTY. LTD. 	Job Title KINGFISHER BAY RESORT JETTY Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3023 9000 www.arup.com	Drawing Title JETTY REPAIR DETAILS SHEET 3 Drawing Status DETAILED DESIGN Job No 287869 Drawing No 0403 Issue 2
		Do not scale	Member Firm Arup Pty Ltd AIN 18 000 966 165		



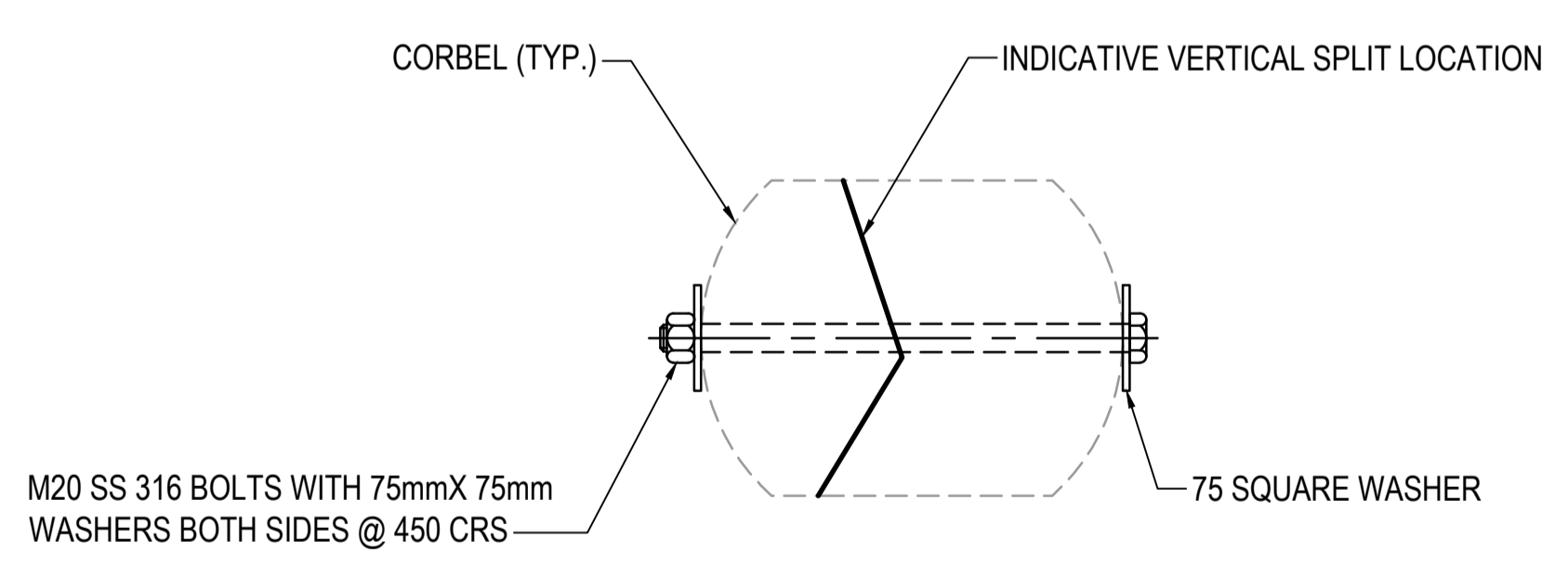
HEADSTOCK J10 VERTICAL SPLIT REPAIR
ELEVATION
SCALE 1:5



DEFECT PHOTO



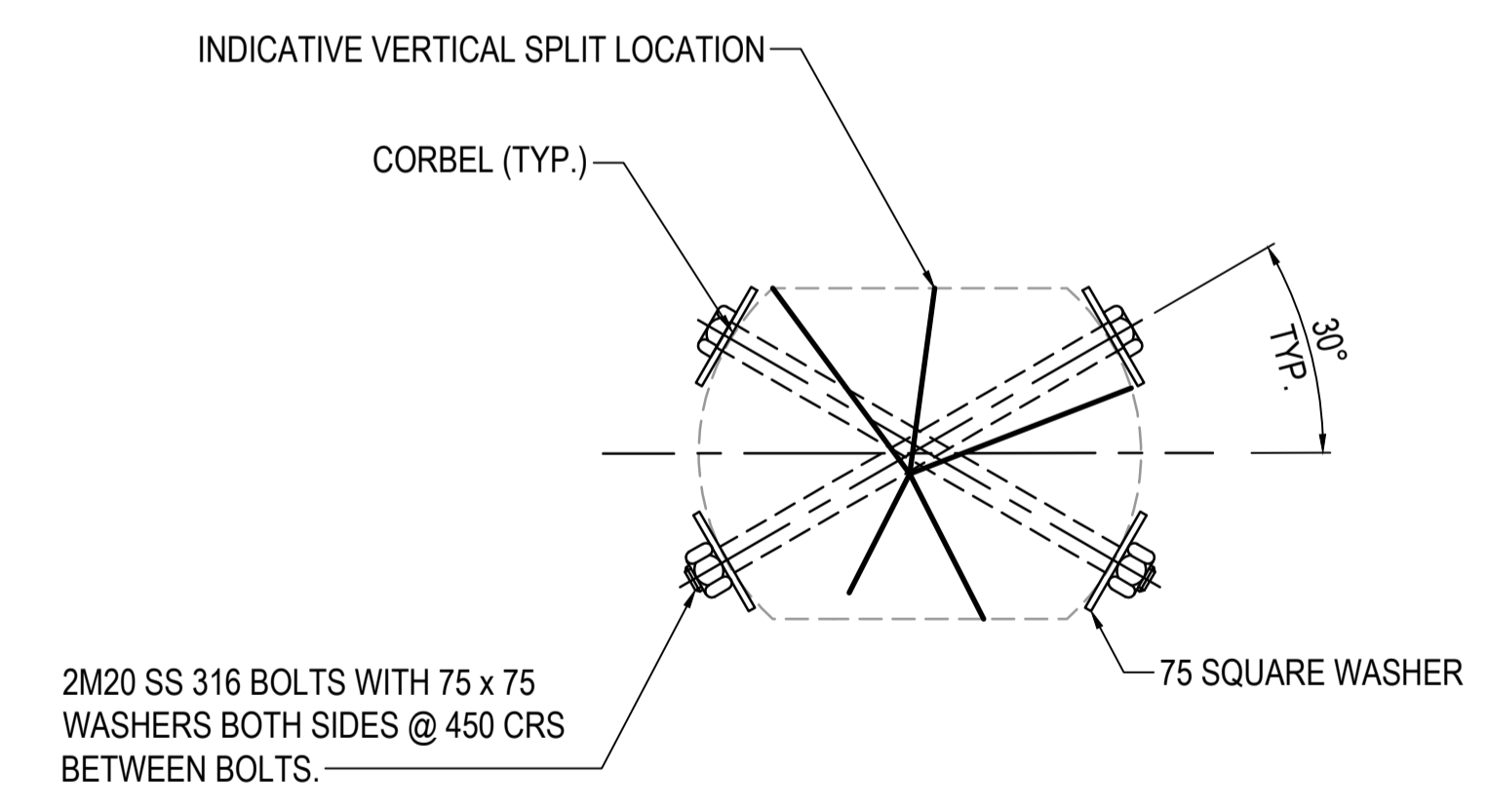
KEY PLAN
NOT TO SCALE



CORBEL VERTICAL SPLIT REPAIR (TYP.)
ELEVATION
SCALE 1:5



DEFECT PHOTO



CORBEL MULTI-DIRECTION SPLIT REPAIR (TYP.)
ELEVATION
SCALE 1:5

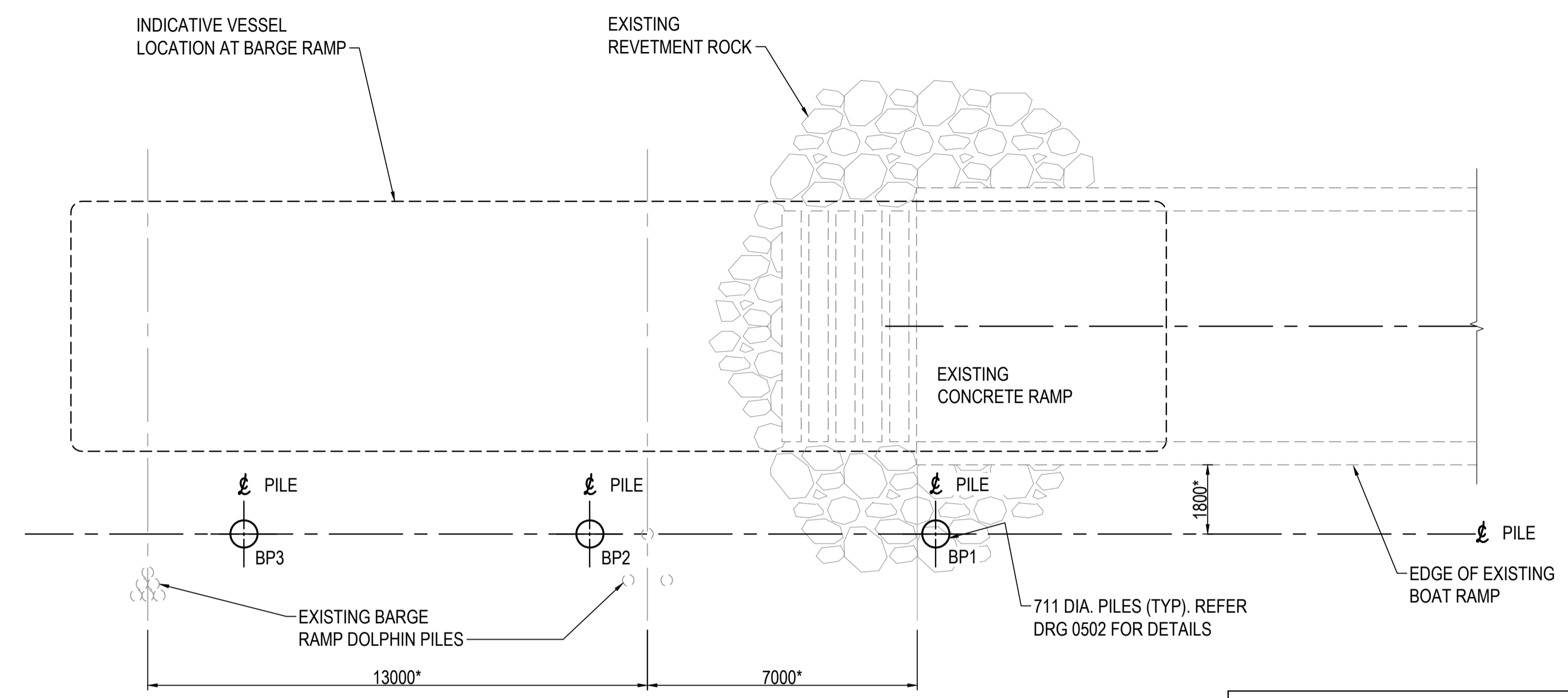


DEFECT PHOTO

NOTES:
1. REFER TO DRAWING 287869-DRG-005 FOR GENERAL NOTES.

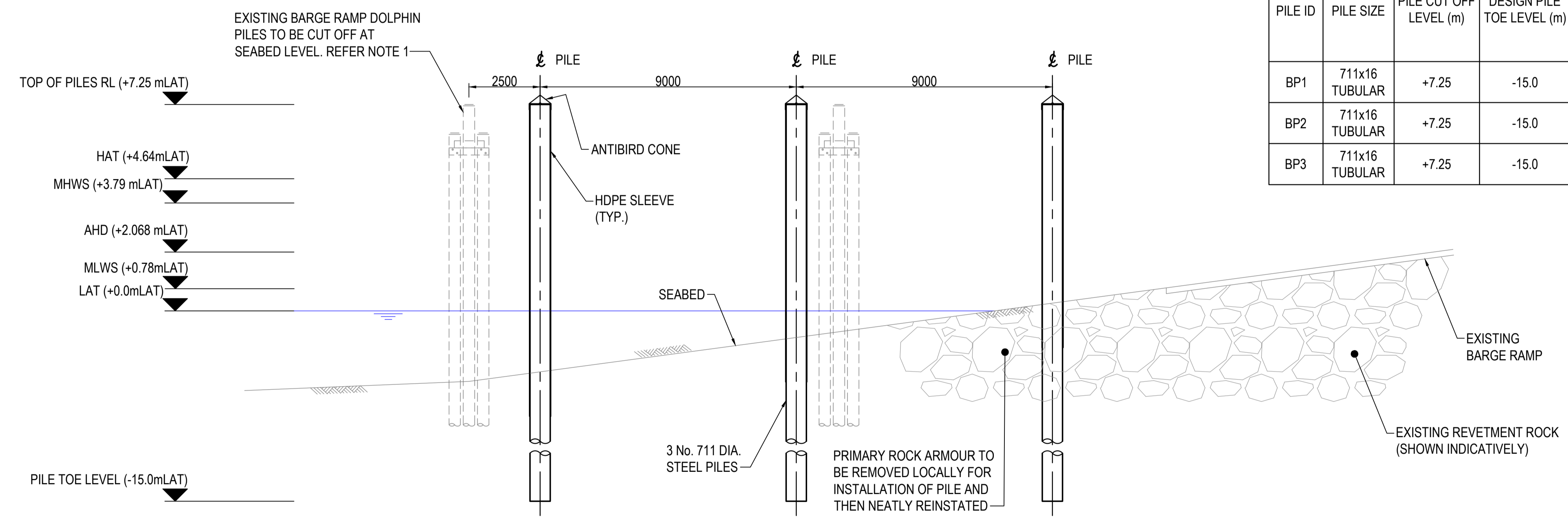
ISSUED FOR CONSTRUCTION

Scales	Approved by: KAITLIN LANGDON RPEQ No. 18825	 APPROVED Name: Trudi Smith Date: 7:26 am, 30/11/2023	Issue Date By Chkd Appd 2 09.05.23 FM TM KL 1 06.04.23 IP KL	Client PACIFIC MARINE GROUP PTY. LTD. 	Job Title KINGFISHER BAY RESORT JETTY	 Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3223 9000 www.arup.com	 Member Firm Arup Pty Ltd ABN 18 000 966 165	Drawing Title JETTY REPAIR DETAILS SHEET 4 Drawing Status DETAILED DESIGN Job No 287869 Drawing No 0404 Issue 2
			Do not scale	© Arup				



PLAN
1:100

PILE ID	PILE SIZE	PILE CUT OFF LEVEL (m)	DESIGN PILE TOE LEVEL (m)	INDICATIVE EXISTING SEA BED LEVEL (m LAT)	ULTIMATE STRUCTURAL LOAD		ULTIMATE GEOTECHNICAL CAPACITY	
					LATERAL LOAD (kN)	AXIAL LOAD (kN)	LATERAL LOAD (kN)	AXIAL LOAD (kN)
BP1	711x16 TUBULAR	+7.25	-15.0	+0.2*	56 kN	-	144 kN	-
BP2	711x16 TUBULAR	+7.25	-15.0	-1.0*	56 kN	-	144 kN	-
BP3	711x16 TUBULAR	+7.25	-15.0	-2.0*	56 kN	-	144 kN	-

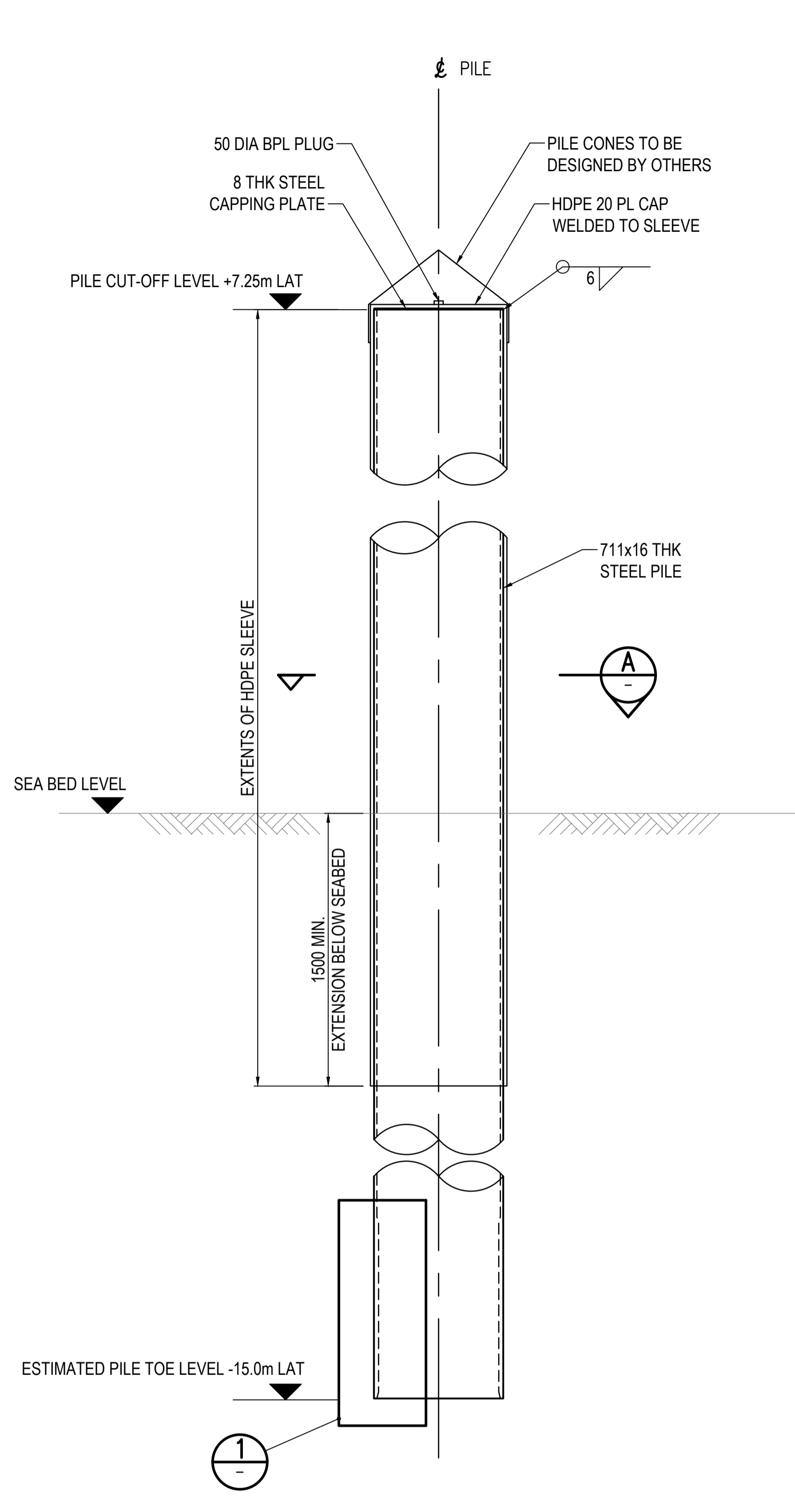


ELEVATION
1:100

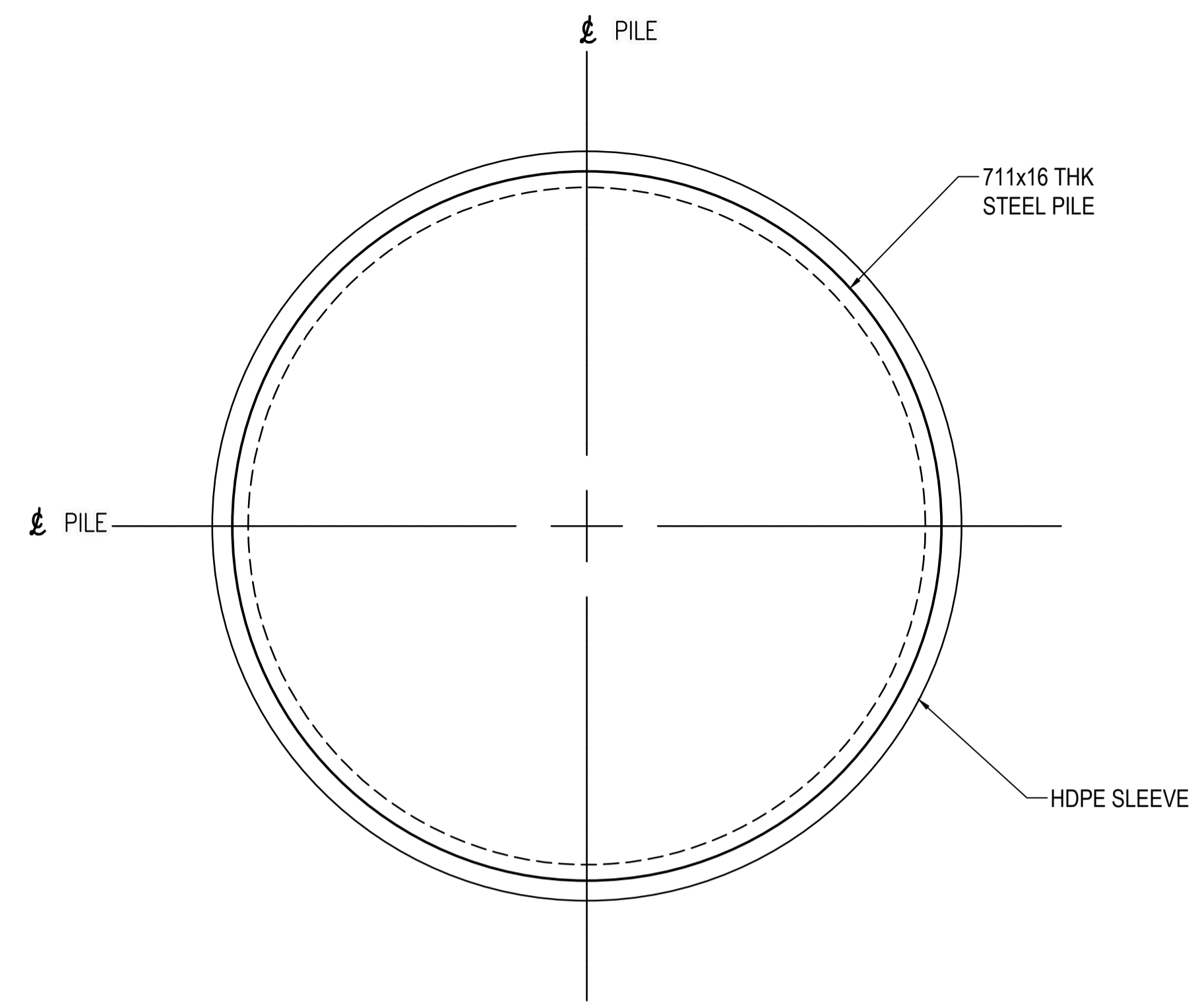
- NOTES:
- FOR GENERAL NOTES REFER TO DRG 0005.
 - PILE TO HAVE HDPE TO 1.5m BELOW SEABED LEVEL.
 - EXISTING TIMBER PILES TO BE CUT OFF AT SEABED LEVEL.

ISSUED FOR CONSTRUCTION

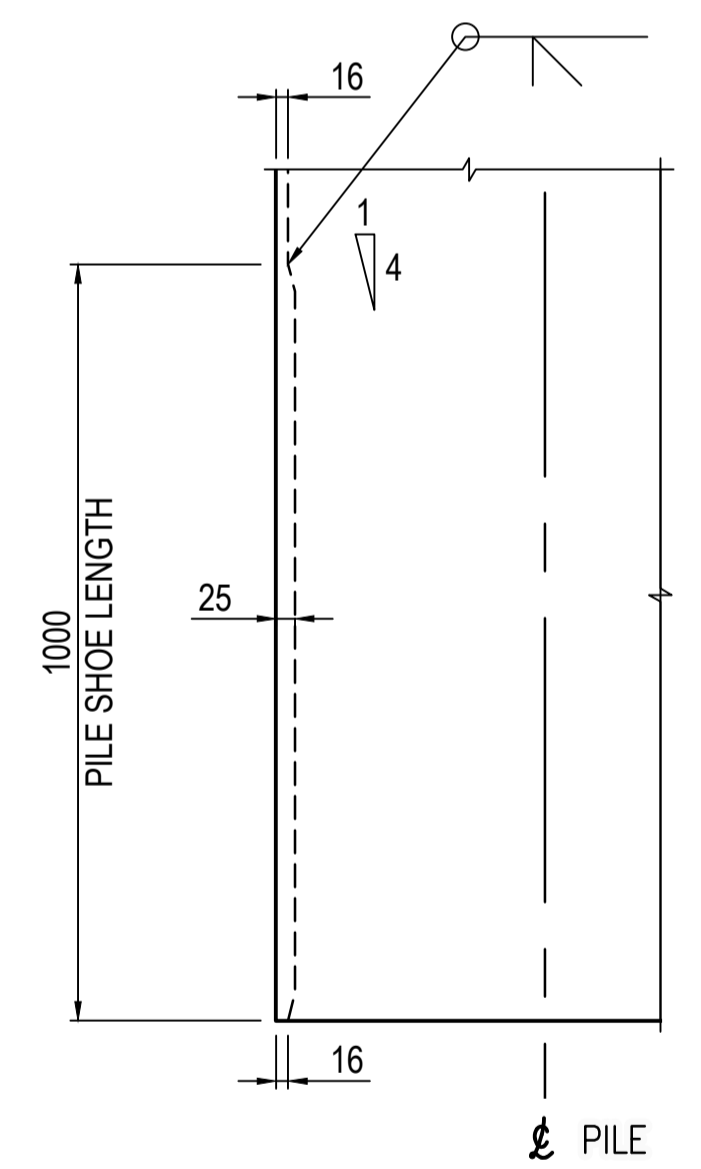
<p>Scales</p>	<p>Approved by: KAITLIN LANGDON</p> <p>RPEQ No. 18825</p>	<p>APPROVED</p> <p>Name: Trudi Smith Date: 7:26 am, 30/11/2023</p>	<table border="1"> <tr> <th>Issue</th> <th>Date</th> <th>By</th> <th>Chkd</th> <th>Appd</th> </tr> <tr> <td>2</td> <td>09.05.23</td> <td>FM</td> <td>TM</td> <td>KL</td> </tr> <tr> <td>1</td> <td>24.03.23</td> <td>IP</td> <td></td> <td>KL</td> </tr> </table>	Issue	Date	By	Chkd	Appd	2	09.05.23	FM	TM	KL	1	24.03.23	IP		KL	<p>Client PACIFIC MARINE GROUP PTY. LTD.</p>	<p>Job Title KINGFISHER BAY RESORT JETTY</p>	<p>Arup, 108 Wickham Street, Fortitude Valley Brisbane, QLD, 4000 Tel: +61(0)7 3923 6000 www.arup.com</p>	<p>Member Firm Arup Pty Ltd ABN 18 000 966 165</p>	<p>Drawing Title BARGE RAMP PILES GENERAL ARRANGEMENT</p> <p>Drawing Status DETAILED DESIGN</p> <p>Job No 287869</p> <p>Drawing No 0501</p> <p>Issue 2</p>
Issue	Date	By	Chkd	Appd																			
2	09.05.23	FM	TM	KL																			
1	24.03.23	IP		KL																			



TYPICAL STRUCTURAL PILE
SCALE 1:20



SECTION A
SCALE 1:5



DETAIL 1
SCALE 1:10
PILE SHOE

NOTE: THE CONTRACTOR SHALL CONFIRM THAT THE PILE AND SHOE THICKNESS ARE ADEQUATE FOR THE CONSTRUCTION METHODS PROPOSED. STIFFENING BAND / DRIVING SHOE SHOWN ON THE DRAWINGS IS INDICATIVELY ONLY AND TO BE CONFIRMED BY THE CONTRACTOR.

NOTES:
1. FOR GENERAL NOTES REFER TO DRG 0005.

ISSUED FOR CONSTRUCTION

Scales

Approved by:
KAITLIN LANGDON
K Langdon
RPEQ No. 18825

GPC Gladstone Ports Corporation
APPROVED
Name: Trudi Smith
Date: 7:26 am, 30/11/2023

2	09.05.23	FM	TM	KL
1	24.03.23	IP		KL
Issue	Date	By	Chkd	Appd

Client
PACIFIC MARINE GROUP PTY. LTD.

Job Title
KINGFISHER BAY RESORT JETTY

ARUP
Arup, 108 Wickham Street, Fortitude Valley
Brisbane, QLD, 4000
Tel: +61(0)7 3023 9000
www.arup.com

CONSULT AUSTRALIA
Member Firm
Arup Pty Ltd
ABN 18 000 966 165

Drawing Title
**BARGE RAMP PILES
DETAILS AND NOTES**

Drawing Status
DETAILED DESIGN

Job No
287869

Drawing No
0502

Issue
2