



COOK ISLAND
INVESTMENT
CORPORATION



ARUTANGA HARBOUR PHASE 2



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ISSUED FOR TENDER
NOT FOR CONSTRUCTION

PROJECT NO.	SHEET	REVISION
713345	S00	0

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Distribution Details

COOK ISLAND INVESTMENT CORPORATION

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Document Details

Document Number	Rev	Document Title
713345-S00	0	COVER SHEET
713345-SN1	0	STANDARD NOTES SHEET 1
713345-SN2	0	STANDARD NOTES SHEET 2
713345-S01	0	PROPOSED SITE PLAN
713345-S02	0	WALL ELEVATIONS
713345-S03	0	WALL SECTIONS SHEET 1
713345-S04	0	WALL SECTIONS SHEET 2
713345-S05	0	SECTIONS AND DETAILS SHEET 1
713345-S06	0	SECTIONS AND DETAILS SHEET 2
713345-S07	0	PLAN OF NEW DECK SLAB AND RETAINING WALL DETAILS

GENERAL										DIMENSIONS																														
<div>1. THE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE DESIGN FEATURES REPORT AND SPECIFICATION, AND WITH ARCHITECTURAL SERVICES, CIVIL AND OTHER PROJECT DRAWINGS. ANY DISCREPENCIES SHALL BE REFERRED TO THE ENGINEER FOR RESOLUTION.</div> <div>2. THE PRESENCE, LOCATION AND DETAILS OF NIBS, PLINTHS, RECESSES, REBATES, PENETRATIONS, SLEEVES, CHASES, DUCTS, CAST-IN FIXINGS, INSERTS, BRACKETS, FLASHINGS, DAMP-PROOFING AND WATERPROOFING etc ARE NOT NECESSARILY SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL, SERVICES, CIVIL, AND OTHER PROJECT DRAWINGS AND SPECIFICATIONS FOR THESE ITEMS.</div> <div>3. THE LOCATION, SIZE AND DETAILS OF ALL NIBS, PLINTHS, RECESSES, REBATES, PENETRATIONS etc IN STRUCTURAL MEMBERS, MUST BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION UNLESS SHOWN ON THE STRUCTURAL DRAWINGS. THESE ITEMS SHALL BE CAST-IN, FORMED, OR SHOP FABRICATED AND SHALL NOT BE CUT OR CORED ON SITE, UNLESS NOTED OTHERWISE OR APPROVED BY THE ENGINEER.</div> <div>4. SUBSTITUTION FOR OR AMENDMENT OF DETAILS SHOWN OR MATERIALS SPECIFIED SHALL NOT BE CARRIED OUT WITHOUT APPROVAL OF THE ENGINEER.</div> <div>5. UNLESS OTHERWISE SPECIFIED OR DETAILED ON THE DRAWINGS, THESE NOTES AND DETAILS SHALL APPLY. INCLUSION OF THIS SN SERIES OF SHEETS IN THIS CONTRACT DOES NOT IMPLY THAT ALL DETAILS APPLY.</div> <div>6. ANY DISCREPANCIES IN THESE DRAWINGS AND/OR SPECIFICATION OR WITH ARCHITECTURAL OR OTHER TRADES DRAWINGS AND/OR SPECIFICATION SHALL BE REFERRED TO THE ENGINEER/ARCHITECT FOR CLARIFICATION PRIOR TO COMMENCING THAT SECTION OF WORK.</div> <div>7. THE CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF COMPONENTS FOR LIFTING AND ERECTION, AND FOR PROPPING AND PROVIDING LATERAL RESTRAINT DURING CONSTRUCTION, UNTIL ALL STEEL IS FULLY IN PLACE AND ALL CONCRETE UP TO THAT LEVEL IS ADEQUATELY CURED TO CARRY THE CONSTRUCTION LOADS.</div> <div>8. REFER TO THE DESIGN FEATURES REPORT AND BUILDING CONSENT FOR REQUIRED INSPECTIONS.</div>										<div>1. ALL DIMENSIONS ARE IN MILLIMETRES, EXCEPT LEVELS AND COORDINATES WHICH ARE IN METRES.</div> <div>2. DO NOT SCALE THE DRAWINGS.</div> <div>3. ALL DIMENSIONS TO EXISTING WORK SHALL BE VERIFIED BY SITE MEASUREMENT PRIOR TO FABRICATION UNLESS NOTED OTHERWISE</div> <div>4. DIMENSIONS ARE AS FOLLOWS:<div>(a) FOR UB & UC SECTIONS: TO CENTRE LINE</div><div>(b) FOR CHANNELS AND ANGLES: TO BACK</div><div>(c) FOR CLEATS: TO ONE SIDE</div></div>																														
ABBREVIATIONS										SITE AND EARTHWORKS																														
<div>1. GENERAL ABBREVIATIONS</div> <div><div>ALTALTERNATING</div><div>APPROXAPPROXIMATE</div><div>ADDNLADDITIONAL</div><div>BLKGBLOCKING</div><div>BSBOTH SIDES</div><div>C/CCENTRE TO CENTRE</div><div>CJCONSTRUCTION JOINT</div><div>CLCENTRE LINE</div><div>COLCOLUMN</div><div>CONCCONCRETE</div><div>CONNCONNECTION</div><div>CONTCONTINUOUS</div><div>COSCHECK ON SITE</div><div>CRSCENTRES</div><div>C/WCOMPLETE WITH</div><div>dBOLT OR BAR DIAMETER</div><div>D'DEPTH</div><div>DETDDETAIL</div><div>DIA, ØDIAMETER</div><div>DIAGDIAGONAL</div><div>DIMDIMENSION</div><div>DOSDETERMINE ON SITE</div><div>DPDOWN PIPE</div><div>DPCDAMP PROOF COURSE</div><div>DPMDAMP PROOF MEMBRANE</div><div>DWGDRAWING</div><div>EFEACH FACE</div><div>ELEV ELEVATION</div><div>EXOUT OF</div><div>EXTGEXISTING</div><div>FDNFOUNDATION</div><div>FF FAR FACE</div><div>FFLFINISHED FLOOR LEVEL</div><div>FIGFIGURE</div><div>FLGFLANGE</div><div>FRRFIRE RESISTANCE RATING</div><div>FS FAR SIDE</div><div>GLGROUND LEVEL</div><div>HD BOLTHOLDING DOWN BOLT</div><div>GALVHOT DIPPED GALVANISED</div><div>HORIZHORIZONTAL</div><div>IDINSIDE DIAMETER</div><div>IJISOLATION JOINT</div><div>ILINVERT LEVEL</div><div>IPINTERSECTION POINT</div><div>LG LONG</div><div>MAXMAXIMUM</div><div>MINMINIMUM</div><div>(N)NEW</div><div>N/ANOT APPLICABLE</div><div>NBNOMINAL BORE</div><div>NDTNON DESTRUCTIVE TESTING</div><div>NFNEAR FACE</div><div>NOMNOMINAL</div><div>NSNEAR SIDE</div><div>NTSNOT TO SCALE</div><div>O/AOVERALL</div><div>O/HOVERHEAD</div><div>ODOUTSIDE DIAMETER</div><div>OPPOPOSITE</div><div>PCPRECAST CONCRETE</div><div>PCDPITCH CIRCLE DIAMETER</div><div>PSCPRESTRESSED CONCRETE</div><div>RADRADIUS</div><div>RCREINFORCED CONCRETE</div><div>REFREFER, REFERENCE</div><div>RLREDUCED LEVEL</div><div>SIMSIMILAR</div></div> <div><div>SJSAWCUT JOINT</div><div>SQSQUARE</div><div>SSSTAINLESS STEEL</div><div>SSLSTRUCTURAL SLAB LEVEL</div><div>STDSTANDARD</div><div>STAGSTAGGER</div><div>SYMSYMMETRICAL</div><div>tTONNES</div><div>THKTHICK</div><div>TOCTOP OF CONCRETE</div><div>TOFTOP OF FOUNDATION</div><div>TOGTOP OF GRATING</div><div>TORCTOP OF ROUGH CONCRETE</div><div>TRMTRIMMER</div><div>TYP TYPICAL</div><div>UNO UNLESS NOTED OTHERWISE</div><div>U/SUNDERSIDE</div><div>VERTVERTICAL</div><div>WWIDTH</div></div> <div>2. REINFORCED CONCRETE ABBREVIATIONS</div> <div><div>BBOTTOM</div><div>BbBOTTOM BARS, BOTTOM LAYER</div><div>BtBOTTOM BARS, TOP LAYER</div><div>CARCOVER ALL ROUND</div><div>CVRCOVER</div><div>EFEACH FACE</div><div>EW EACH WAY</div><div>LARLAP AT RANDOM</div><div>REBARREINFORCING BARS</div><div>REINF'REINFORCEMENT</div><div>STRP(S)STIRRUP(S)</div><div>STR(S)STARTER(S)</div><div>TTOP</div><div>TtTOP BARS, TOP LAYER</div><div>TbTOP BARS, BOTTOM LAYER</div><div>RPLAIN ROUND REINF' BARS</div><div>HRGRADE 300</div><div>DDEFORMED REINF' BARS</div><div>HDGRADE 300</div><div>HDGRADE 500</div><div>RBDEFORMED REID BAR</div><div>RBGRADE 500</div></div> <div>3. STRUCTURAL STEEL ABBREVIATIONS</div> <div><div>BTTEE CUT FROM UB</div><div>CHSCIRCULAR HOLLOW SECTION</div><div>CTTEE CUT FROM UC</div><div>DHSPURLIN / GIRT</div><div>EAEQUAL ANGLE</div><div>FLFLAT PLATE</div><div>gGAUGE</div><div>MSMILD STEEL</div><div>PFCPARALLEL FLANGE CHANNEL</div><div>PLPLATE</div><div>RHSRECTANGULAR HOLLOW SECTION</div><div>SHSSQUARE HOLLOW SECTION</div><div>TFTAPER FLANGE BEAM</div><div>TFTAPER FLANGE CHANNEL</div><div>UAUNEQUAL ANGLE</div><div>UBUNIVERSAL BEAM</div><div>UCUNIVERSAL COLUMN</div><div>JLDOUBLE ANGLE BACK TO BACK</div></div> <div><div>STIFFSTIFFENER</div><div>TOPTOP OF PURLINS</div><div>TOSTOP OF STEEL</div></div> <div><div>FPBWFULL PENETRATION BUTT WELD</div><div>FWFILLET WELD</div><div>FWARFILLET WELD ALL AROUND</div></div>										<div>1. ALL VEGETATION, TURF, AND ORGANIC TOP SOIL SHALL BE STRIPPED FROM THE BUILDING PLATFORM AREA AND EXTEND A MINIMUM OF 600mm IN PLAN BEYOND THE EDGE OF THE FOUNDATIONS AND COMPLY WITH FIGURE 3.1 OF NZS3604:2011 WITH REGARD TO RELATIONSHIP OF SLOPING GROUND SURFACE. THE DEPTH OF TOPSOIL STRIPPING SHALL BE SUFFICIENT TO REMOVE ALL ORGANIC MATERIAL, TURF, AND PLANT ROOTS GREATER THAN 20mm DIAMETER.</div> <div>2. EARTH FILL SHALL MEET THE REQUIREMENTS OF NZS4431:2022 - Code of practice for earth fill for residential development.</div> <div>3. FILL PLACEMENT:<div>a. THE AREA ON WHICH FILL IS TO BE PLACED SHALL BE STRIPPED OF ALL VEGETATION, TOPSOIL, AND MATERIAL DEEMED UNSUITABLE.</div><div>b. THE EXPOSED SUBGRADE SHALL BE PROOF ROLLED, WHERE POSSIBLE, TO PROVIDE A LEVEL AND FIRM PLATFORM ON WHICH TO PLACE THE FILL.</div><div>c. REFER TO THE GEOTECHNICAL ENGINEER'S REPORT FOR THE SPECIFICATION OF GEOTEXTILE FABRICS, IF ANY, AS WELL AS SPECIFICATIONS FOR LAP LENGTHS, TERMINATION AT ENDS AND THE LIKE.</div><div>d. SUITABLE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING 200mm THICK (PRIOR TO COMPACTION).</div><div>e. APPROPRIATE COMPACTION EQUIPMENT SHALL BE USED TO ACHIEVE THE SPICIFIED COMPACTION CRITERIA, AN ULTIMATE GEOTECHNICAL BEARING CAPACITY OF 300 kPa IN ACCORDANCE WITH NZS3604:2011 UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER. IN THE CASE OF ANY DISCREPANCIES THE GEOTECHNICAL ENGINEERS SPECIFICATION SHALL TAKE PRECEDENCE.</div><div>f. FILL MATERIAL SHALL BE COMPACTED TO ACHIEVE 95% OF THE MATERIALS MAXIMUM DRY DENSITY IN ACCORDANCE WITH NZS4431:2022.</div><div>g. FILL OVER 600mm DEPTH SHALL BE TESTED AND APPROVED BY A SUITABLY QUALIFIED CHARTERED PROFESSIONAL ENGINEER (UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT). CONFIRM WITH ENGINEER FOR SOIL TESTING / CERTIFICATION REQUIREMENTS TO ORIGINAL GROUND AND COMPACTED FILL PRIOR TO COMMENCING EXCAVATION.</div></div>																														
FOUNDATIONS										FIRE RESISTANCE RATING (FRR)																														
<div>1. REFER TO THE GEOTECHNICAL REPORT BY FOR THE SITE.</div> <div>2. ALL SERVICES SHALL BE IDENTIFIED AND CLEARLY MARKED BY THE CONTRACTOR PRIOR TO ANY EXCAVATION OR GROUND DISTURBANCE OCCURRING.</div> <div>3. ANY SOFT SPOTS AT FORMATION LEVEL ARE TO BE DUG OUT AND REPLACED WITH WELL-COMPACTED HARDFILL.</div> <div>4. THE TOP SURFACE OF ALL HARDFILL TO RECEIVE A DPM IS TO BE CHOKED WITH SAND.</div> <div>5. WHERE REQUIRED PLACE 40mm SITE CONCRETE UNDER FOUNDATIONS, UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT.</div>										<div>1. ALL FLOORS, COLUMNS AND BEAMS TO HAVE FRR=60min. RATING.</div> <div>2. FOR REINFORCED CONCRETE MEMBERS MAIN BAR REINFORCING MINIMUM CONCRETE COVERS FOR FIRE (DURABILITY MAY REQUIRE LARGER COVERS) ARE:<table><thead><tr><th></th><th>REBAR</th><th>PRESTRESSING</th></tr></thead><tbody><tr><td>SIMPLY SUPPORTED BEAMS</td><td>25</td><td>40</td></tr><tr><td>CONTINUOUS BEAMS (1 END)</td><td>15</td><td>30</td></tr><tr><td>RIBBED FLOOR SLABS</td><td>25</td><td>40</td></tr><tr><td>FLAT FLOOR SLABS</td><td>20</td><td>30</td></tr><tr><td>COLUMNS</td><td>45</td><td>50</td></tr><tr><td>WALLS (1300 MIN. THICK)</td><td>40</td><td>-</td></tr></tbody></table></div> <div>3. ALL STEEL MEMBERS SUPPORTING FLOORS OR FLOOR MEMBERS SHALL HAVE AN APPROVED COATING (INTUMESCENT PAINT, FIBRE INSULATION OR EQUIVALENT) TO PROVIDE THE "FRR" RATING ABOVE AT LT (LIMITING TEMPERATURE) OF 500°C FOR BEAMS AND 350°C FOR COLUMNS. THE PAINT SHALL BE COMPATIBLE WITH DURABILITY AND AESTHETIC REQUIREMENTS, REFER TO THE SPECIFICATION.</div> <div>4. ALL STEEL MEMBERS (COLUMNS, BEAMS AND TRUSSES) SUPPORTING THE ROOF, ARE NOT REQUIRED TO BE FIRE RATED.</div>											REBAR	PRESTRESSING	SIMPLY SUPPORTED BEAMS	25	40	CONTINUOUS BEAMS (1 END)	15	30	RIBBED FLOOR SLABS	25	40	FLAT FLOOR SLABS	20	30	COLUMNS	45	50	WALLS (1300 MIN. THICK)	40	-
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COOK ISLAND INVESTMENT CORPORATION

STANDARD NOTES

SHEET 1

H:\DUD\713345 Arutanga Harbour Phase 2\320 Drawings\3_Drawing\713345-SN1.dwg, Plotted By TOLEDO Monica at 6/08/2024 8:42:40 am

CONCRETE

1. ALL STRUCTURAL CONCRETE WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH NZS 3109:2017 AND NZS 3101:2006.
2. ALL STRUCTURAL CONCRETE SHALL BE NORMAL GRADE TO NZS 3104 UNLESS NOTED OTHERWISE. STRENGTHS SHALL BE AS FOLLOWS UNO:
- RETAINING WALLS
CAST INSITU CONCRETE HARDSTAND AND GROUND BEAMS
PRE-CAST ITEMS

- 40 MPa
- 40 MPa
- 40 MPa
3. SURFACE FINISHES SHALL BE TO NZS 3114, TYPICALLY AS FOLLOWS UNLESS NOTED OTHERWISE. REFER ALSO TO THE SPECIFICATION;
- BURIED FOUNDATIONS
CONCRETE EXPOSED TO VIEW
TOP OF HARDSTAND

- F1 / U1
- F4 / U3
- F4 / U5
4. ALL CONCRETE SHALL BE FULLY CURED IN ACCORDANCE WITH NZS 3109. SPRAY-ON MEMBRANES SHALL BE COMPATIBLE WITH FINISHES.
5. REINFORCEMENT SHALL BE TO AS/NZS 4671:2019 Steel for the reinforcement of concrete.
6. REINFORCING NOMENCLATURE:
- HD - DEFORMED BAR GRADE 500E
HR - PLAIN BAR GRADE 500E
RB - REIDBAR GRADE 500E
7. REINFORCING NOTATION:
- TYPE OF BAR
BAR DIAMETER

D16-250 T&B

BAR LOCATION
BAR SPACING
8. NO REINFORCING IS TO BE WELDED WITHOUT THE WRITTEN AUTHORITY OF THE ENGINEER. THE WELDING OF REINFORCING IS TO BE IN ACCORDANCE WITH AS/NZS 1554.3.
9. NO REINFORCING SHALL BE RE-BENT ON SITE UNLESS SHOWN ON THE DRAWINGS, AND WHERE RE-BENT SHALL ONLY BE RE-BENT ONCE.
10. LAP OR SPLICE LENGTHS:

SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH NZS 3101 AND FOR F'c SHOWN SHALL BE A MINIMUM OF:

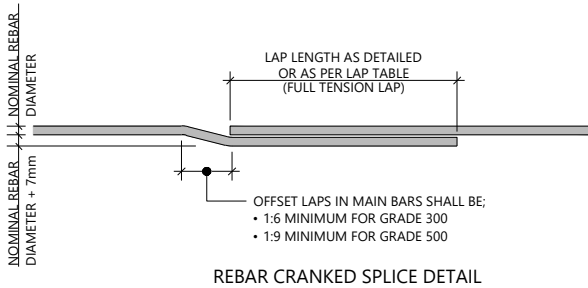
NOTE:
IF LAP LENGTHS ARE NOT SPECIFICALLY STATED ON THE DRAWINGS, THE FOLLOWING SHALL BE USED:

DEFORMED BAR LAP LENGTHS (mm)						
GRADE 500	10	12	16	20	25	32
TOP BAR FACTOR = 1.3	520	625	830	1040	1300	1665
BAR FACTOR = 1	400	480	640	800	1000	1270

- TOP BAR FACTOR IS 1.0 FOR ALL VERTICAL BARS AND FOR HORIZONTAL BARS WITH LESS THAN 300mm OF FRESH CONCRETE CAST BENEATH THE BAR (TYPICALLY BOTTOM BARS OF CAPPING AND ANCHOR BEAM, HARDSTAND REINFORCEMENT AND BERTHING PANELS)
- TOP BAR FACTOR IS 1.3 FOR ALL HORIZONTAL BARS WITH MORE THAN 300mm OF FRESH CONCRETE CAST BENEATH THE BAR (TYPICALLY TOP OF CAPPING AND ANCHOR BEAM)
- ROUND BARS SHALL NOT BE LAPPED
- LAP LOCATIONS SHALL BE STAGGERED U.N.O.
- FOR NON-CONTACT LAPS, LARGER LENGTHS WILL BE REQUIRED. CONTACT THE ENGINEER FOR DETAILS.

11. CRANKS AND SPLICES:

CRANKED BARS SHALL BE DIMENSIONED AS FOLLOWS;



REBAR CRANKED SPLICE DETAIL

CONCRETE

12. SINGLE LINE REINFORCING BARS:
- SINGLE LINE REINFORCING IN PLANS ARE AN INDICATION OF BAR SHAPES. REFER BELOW FOR SYMBOLOGY;
- (a)

DENOTES IN-LINE LAP

(b)

DENOTES STD VERT HOOK

(c)

DENOTES STD VERT COG

or

BEND AND STANDARD LEG
13. MESH LAPS:
- (a) MINIMUM LAPS SHALL BE AS SHOWN BELOW, OR AS REQUIRED BY THE MANUFACTURER.

(b) NO MORE THAN THREE SHEETS AT ANY POINT.
- 240 OVERALL LAP

150 PITCH

20 OVERHANG

50

150 PITCH

200 CODE REQUIREMENT (1 SQUARE + 50mm)

SIDE LAP

350 OVERALL LAP

150 PITCH

75 OVERHANG

50

150 PITCH

200 CODE REQUIREMENT (1 SQUARE + 50mm)

END LAP
- REINFORCING MESH LAPPING DETAILS
14. RE-ENTRANT CORNERS:
- ALL RE-ENTRANT CORNERS SHALL HAVE DIAGONAL TRIM BARS OF 2-HD12, 1200 LONG.
-
15. COVER TO REINFORCEMENT:
- COVER SHALL BE AS NOTED BELOW UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- | CONCRETE COVERS | | |
|--|---|----|
| ENVIRONMENT | CONCRETE COMPRESSIVE STRENGTH f'c (MPa) | |
| | 40 | 75 |
| SURFACES CAST AGAINST AND EXPOSED TO EARTH | | |
| SURFACES CAST AGAINST DPM ON EARTH | | 50 |
| EXTERIOR ENVIRONMENT WITHIN 500m OF HIGH TIDE MARK | | 40 |
| OTHER EXTERIOR ENVIRONMENT | | 30 |
| SURFACES EXPOSED TO EARTH (NON-AGGRESSIVE OR PROTECTED BY DPM) | | 30 |
- NOTE:
CONCRETE COVERS ARE THE MINIMUM DISTANCE TO ANY REINFORCING STEEL, INCLUDING STIRRUPS AND TIES.
16. REINFORCEMENT DETAILS:
- (a) QT (QUENCHED AND TEMPERED), STEEL SHALL NOT BE USED WHERE BENDING OR HEATING OF BARS IS REQUIRED, (BARS WITH HOOKS OR SPLICE OFFSETS, GALVANISING, WELDING, THREADING, ETC).

(b) LINKS, TIES, STIRRUPS, AND U BARS SHALL BE BENT GENERALLY AROUND PINS OF THE SAME DIAMETER AS THE BARS THEY ARE TO ENCLOSE WITH A MINIMUM DIAMETER OF BENDS AS PER REINFORCING BENDING DETAILS.

(c) ALL TIES AND LINKS SHALL FIT CLOSELY AROUND MAIN BARS.

(d) THE FIRST STIRRUPS SHALL BE PLACED NOT FURTHER THAN HALF THE TIE SPACING FROM FACE OF SUPPORT.

(e) DETAILS OF BAR BENDS AND COG LENGTHS SHALL BE AS SHOWN.
-
- STANDARD COG (90° ANCHORAGE)
-
- STANDARD STIRRUP/TIE HOOK (135° ANCHORAGE)
-
- STANDARD HOOK (180° ANCHORAGE)
- | BAR SIZE | MAIN STEEL | STIRRUPS AND TIES |
|----------|------------|-------------------|
| 6 | 30 | 22 |
| 10 | 50 | 32 |
| 12 | 60 | 40 |
| 16 | 80 | 60 |
| 20 | 100 | 70 |
| 25 | 150 | - |
| 32 | 195 | - |
| 40 | 240 | - |
- MINIMUM FORMER PIN DIAMETERS "D" FOR BENDING REINFORCING BARS
- REINFORCING BENDING DETAILS
- CONCRETE
17. BARS TERMINATED WITH COGS AND HOOKS SHALL BE EMBEDDED AS DEEP AS POSSIBLE INTO THE CONCRETE ELEMENT (MAINTAINING COVERS ETC), AND AS DETAILED ON THE DRAWINGS. REFER BELOW FOR MINIMUM ANCHORAGE DEPTHS.
- | MINIMUM COG & HOOK ANCHORAGE LENGTH TABLE | | | | | | | | |
|---|-------------------|----------|-----------|-----|-----|-----|-----|-----|
| CONCRETE GRADE | REINFORCING GRADE | COG TYPE | BAR SIZES | | | | | |
| | | | 10 | 12 | 16 | 20 | 25 | 32 |
| | 500E | 1 | 190 | 230 | 310 | 380 | 480 | 610 |
| | | 2 | 140 | 160 | 220 | 270 | 340 | 430 |
- TYPE 1: STANDARD COG
TYPE 2: STANDARD COG WITH $\alpha_1 = 0.7$, SIDE COVER NORMAL TO THE PLANE OF THE COG $\geq 60\text{mm}$, AND COVER ON THE TAIL EXTENSION OF 90 COG $\geq 40\text{mm}$
18. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER. CONSTRUCTION JOINTS SHALL BE PREPARED BY RETARDING THE INTERFACE SURFACE THEN WATER BLASTING TO PRODUCE A SURFACE WHICH IS CLEAN, FREE OF LAITANCE AND INTENTIONALLY ROUGHENED TO A FULL AMPLITUDE OF NOT LESS THAN 5mm.

19. SAWCUTS TO BE 5mm WIDE AND EXTEND TO A THIRD DEPTH OF SLAB. SAW CUTTING TO TAKE PLACE NO LATER THAN 24 HOURS U.N.O.
- DESIGN CRITERIA
- BERTHING LOADING EFFECTS ON THE WHARF HAVE BEEN DERIVED FOR THE FOLLOWING CONDITIONS:
- | CRITERIA | SMALL POWERED BOATS |
|---------------------------|---------------------|
| VESSEL TYPE | GENERAL CARGO |
| DEAD WEIGHT (DWT) | 430 t |
| DISPLACEMENT TONNAGE | 650 t |
| LENGTH OVERALL (LOA) | 40 |
| MAXIMUM BEAM (B) | 8 |
| DRAFT (D) | 3.5 |
| MAXIMUM BERTHING ANGLE | 15 deg. |
| MAXIMUM BERTHING VELOCITY | 0.3m/s |
| WATER CUSHION EFFECT Cc | 1 |
| SOFTENING EFFECT Cs | 1 |
| BLOCK COEFFICIENT Cb | 0.8 |
- | REV | AMENDMENTS | DES | DRN | CHK | APP | DATE |
|-----|------------|-----|-----|-----|-----|------------|
| 0 | FOR TENDER | JT | MMT | GA | GA | 05.08.2024 |
- | SURVEYED | DATE |
|------------|------------|
| J.TABORGA | 29.05.2024 |
| DRAWN | DATE |
| M.TOLED0 | 29.05.2024 |
| CHECKED | DATE |
| G.ANDERSON | 31.05.2024 |
| APPROVED | DATE |
| G.ANDERSON | 31.05.2024 |
-
-
- | PROJECT TITLE | ARUTANGA HARBOUR PHASE 2 |
|---------------|---------------------------|
| SHEET TITLE | STANDARD NOTES
SHEET 2 |
- | ISSUED FOR TENDER
NOT FOR CONSTRUCTION | | |
|---|--------------|----------|
| SCALE (A1 ORIGINAL) | NOT TO SCALE | |
| PROJECT No. | SHEET | REVISION |
| 713345 | SN2 | 0 |
- Verify all dimensions on site before commencing work. Prioritise figured dimensions over scaling. Refer all discrepancies to Egis. This document and the copyright in this document remain the property of Egis New Zealand Limited. The contents of this document may not be reproduced either in whole or in part by any means whatsoever without the prior written consent of Egis New Zealand Limited.
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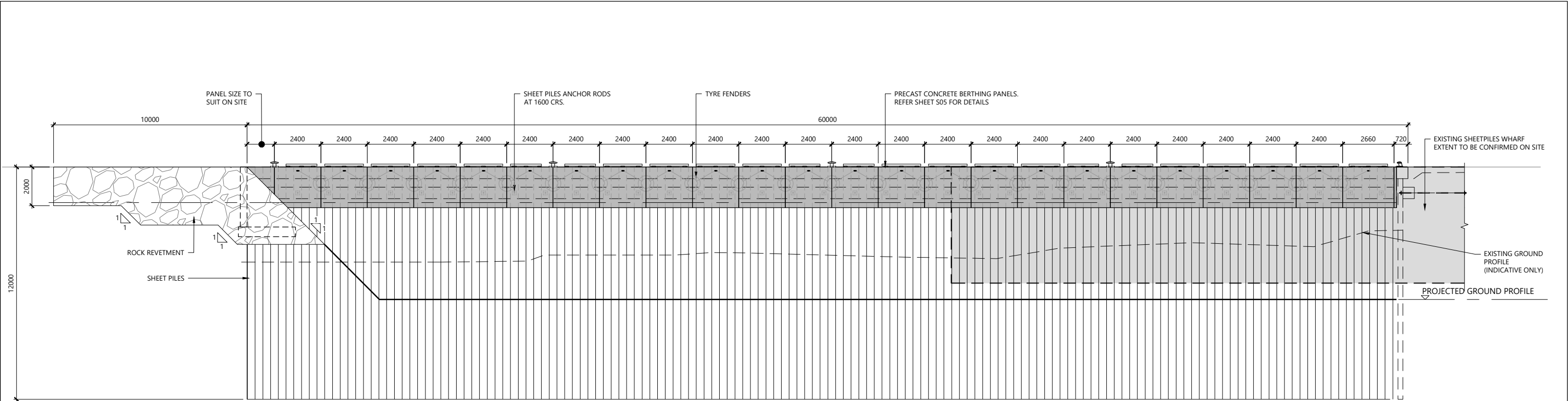


- ARUTANGA HARBOUR

SURVEYED	DATE
DESIGNED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024

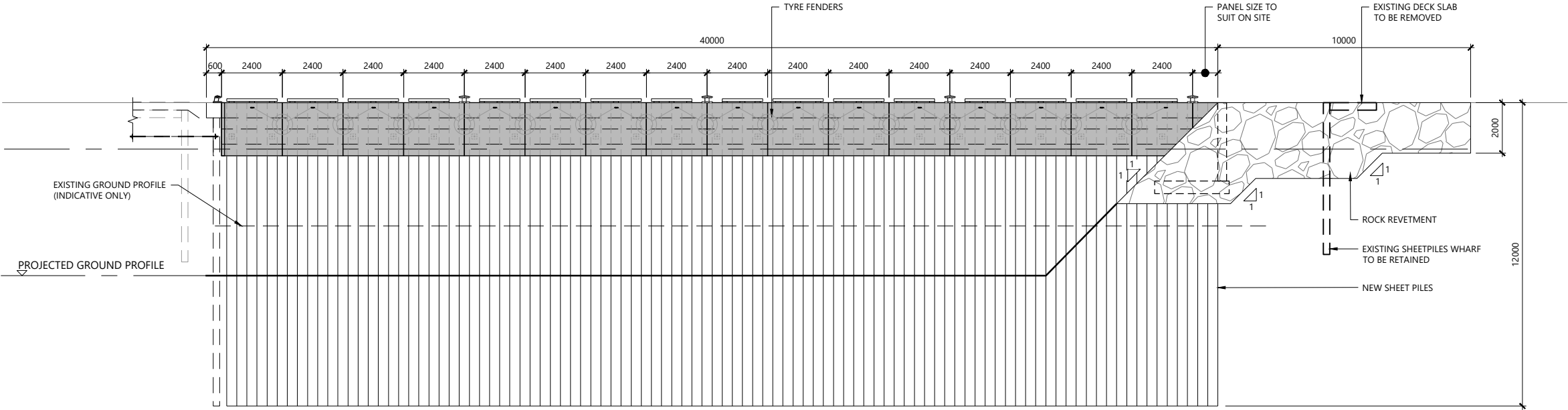


ISSUED FOR TENDER NOT FOR CONSTRUCTION		
SCALE (A1 ORIGINAL)	1:250	(A3) 1:500
PROJECT No.	SHEET	REVISION
713345	S01	0



NORTH SEAWALL ELEVATION

1:100 @ A1
1:200 @ A3



EAST SEAWALL ELEVATION

1:100 @ A1
1:200 @ A3

REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
DESIGNED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024

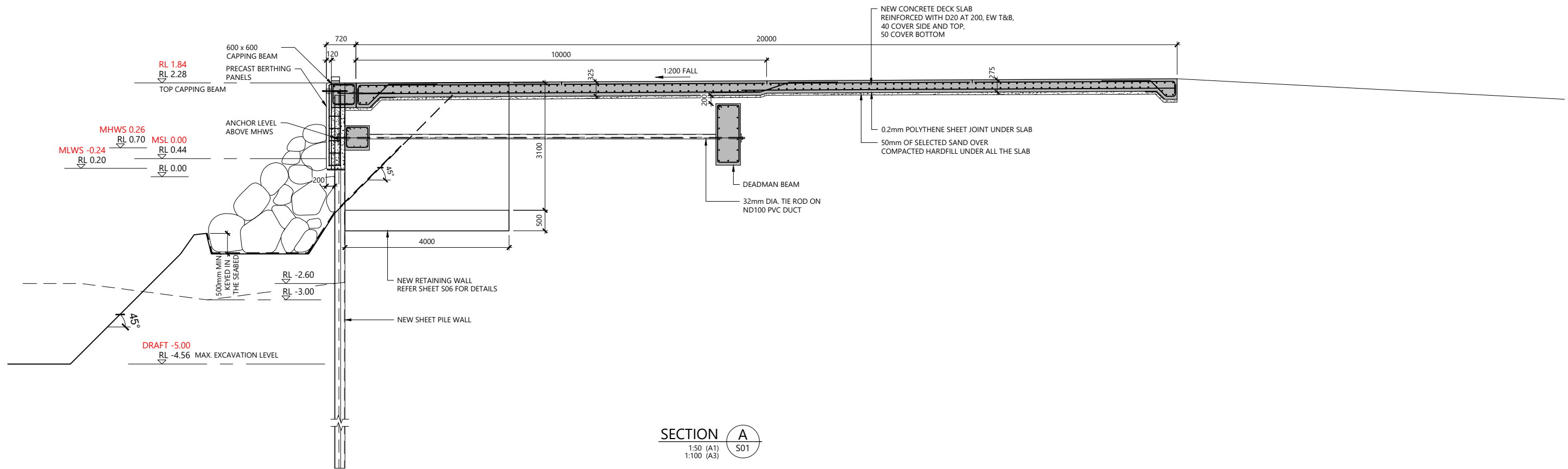


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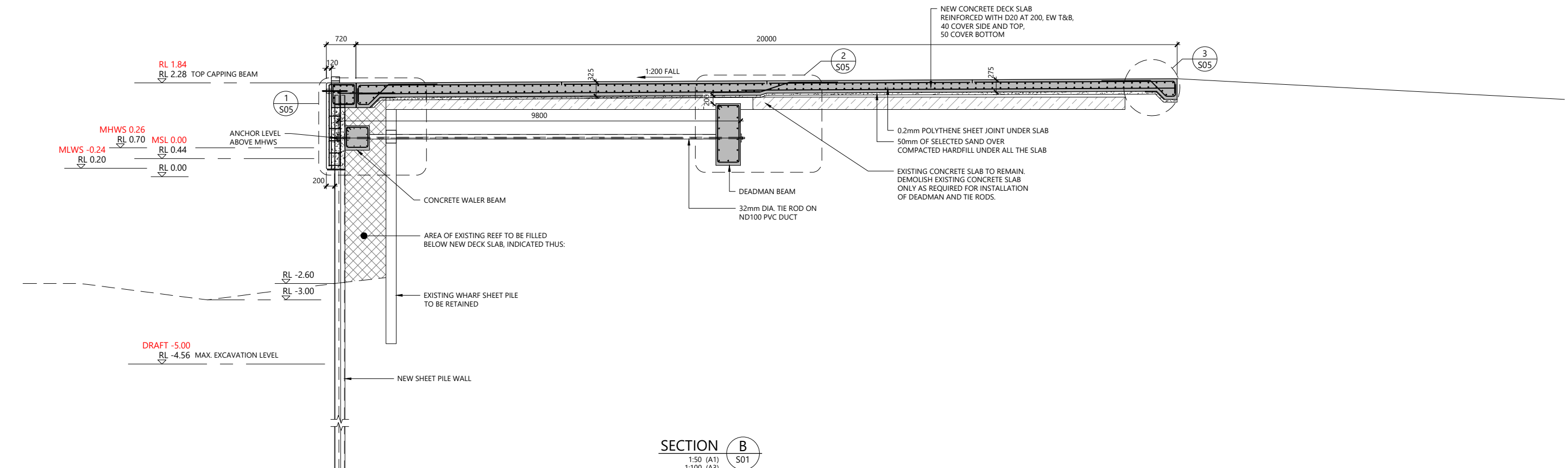


PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	WALL ELEVATIONS

ISSUED FOR TENDER NOT FOR CONSTRUCTION		
SCALE (A1 ORIGINAL)	SCALE AS NOTED	
PROJECT No.	SHEET	REVISION
713345	S02	0



SECTION A
1:50 (A1)
1:100 (A3)
S01



SECTION B
1:50 (A1)
1:100 (A3)
S01

REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
DESIGNED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024

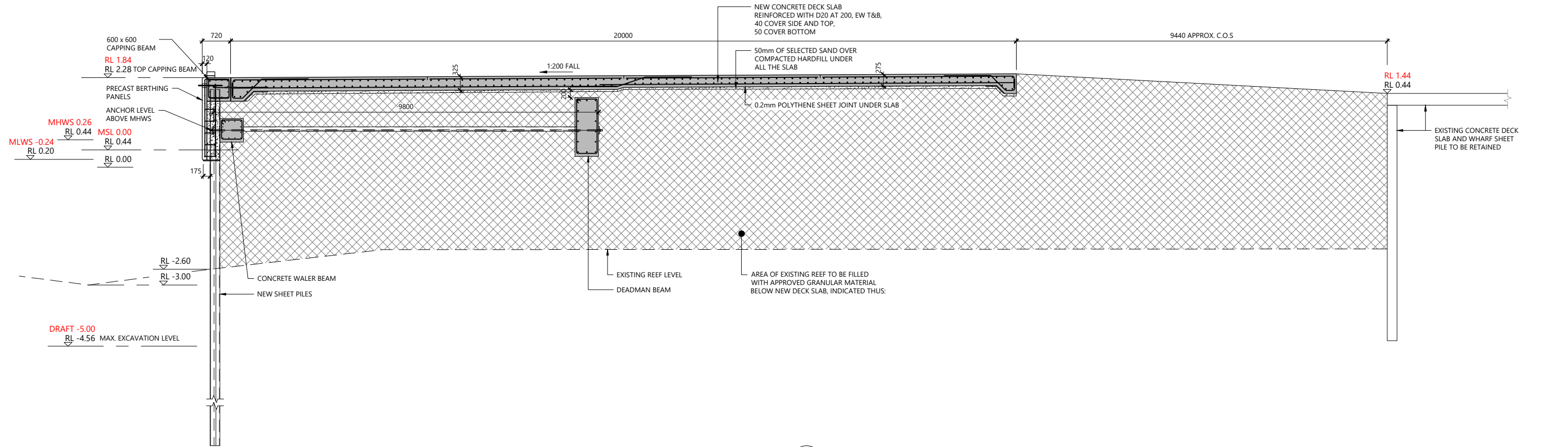


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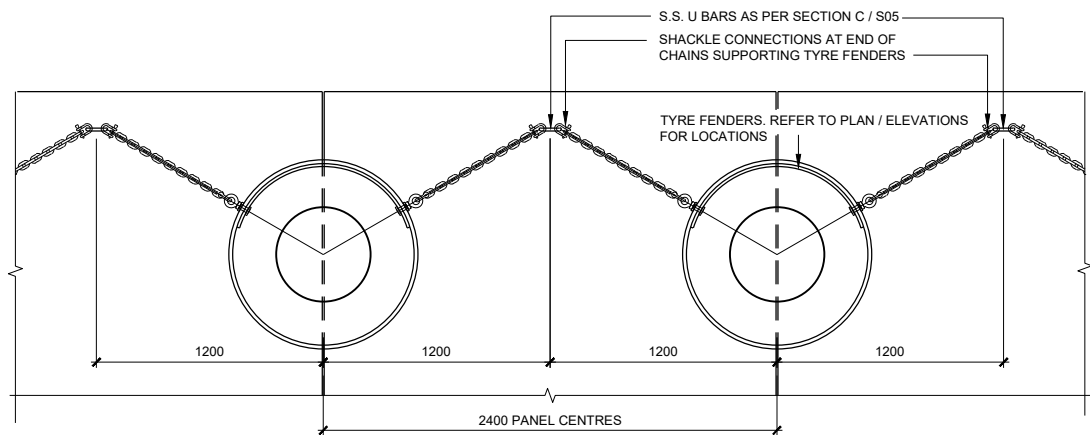


PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	WALL SECTIONS SHEET 1

ISSUED FOR TENDER NOT FOR CONSTRUCTION		
SCALE (A1 ORIGINAL)	SCALE AS NOTED	
PROJECT No.	SHEET	REVISION
713345	S03	0

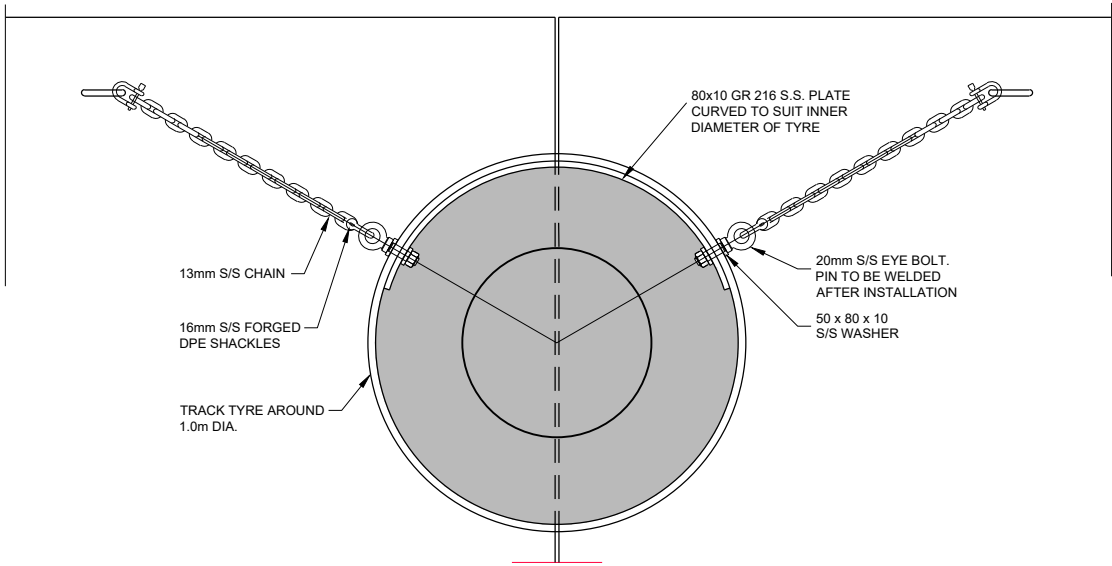


SECTION C
1:50 (A1)
1:100 (A3)



TYPICAL TYRE FENDER DETAILS

1:20 @ A1
1:40 @ A3



TYRE FENDER CONNECTION DETAIL

1:10 @ A1
1:20 @ A3

REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024



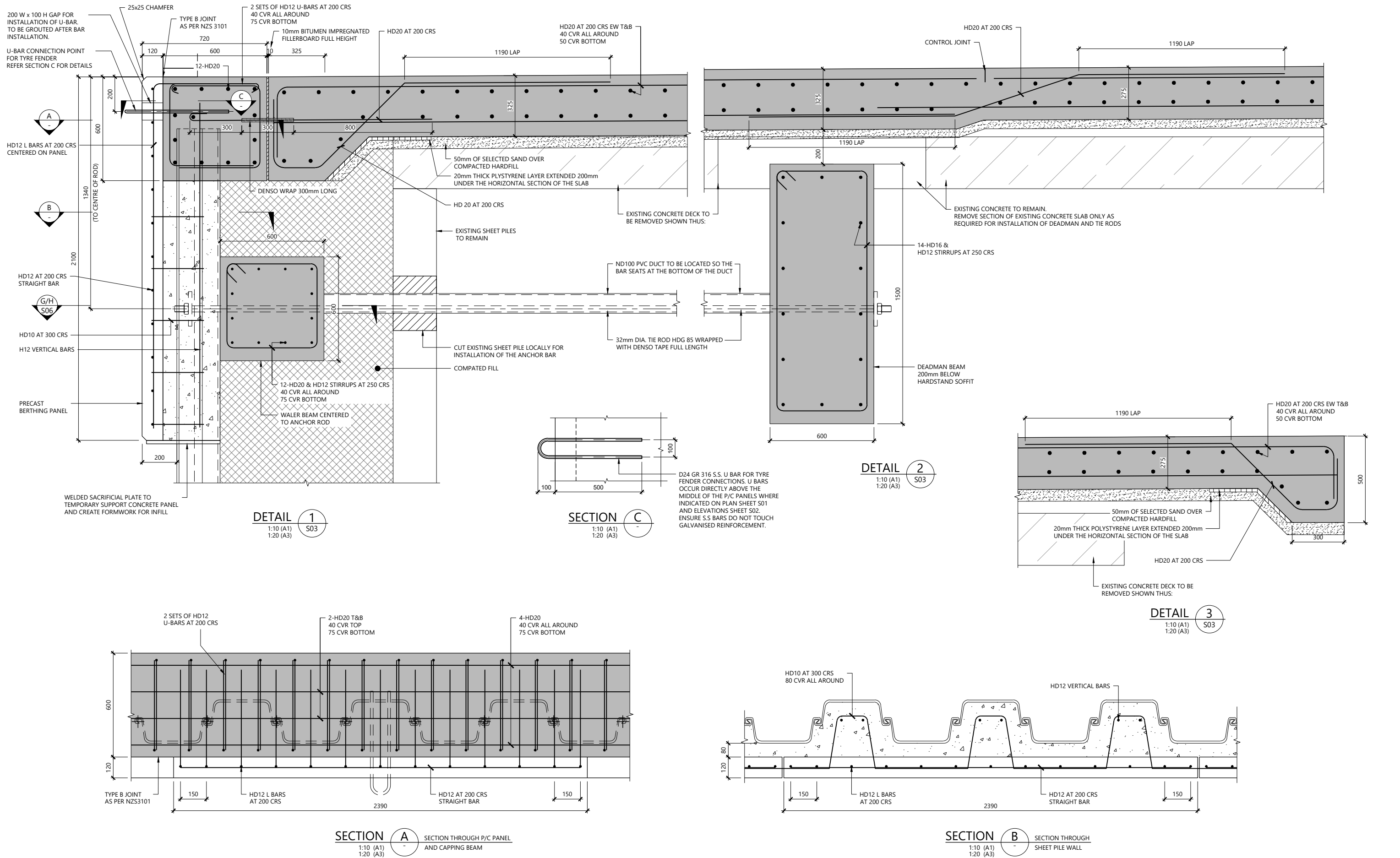
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PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	WALL SECTIONS SHEET 2

ISSUED FOR TENDER
NOT FOR CONSTRUCTION

SCALE (A1 ORIGINAL)	SCALE AS NOTED
PROJECT No.	SHEET
713345	S04
	REVISION
	0



REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024



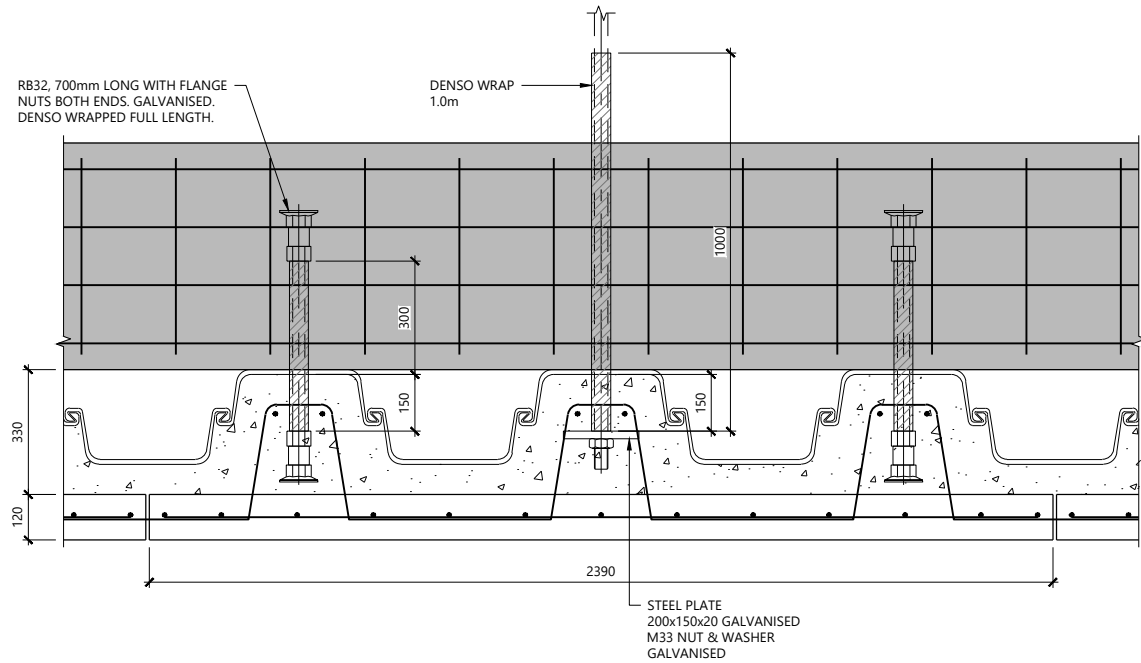
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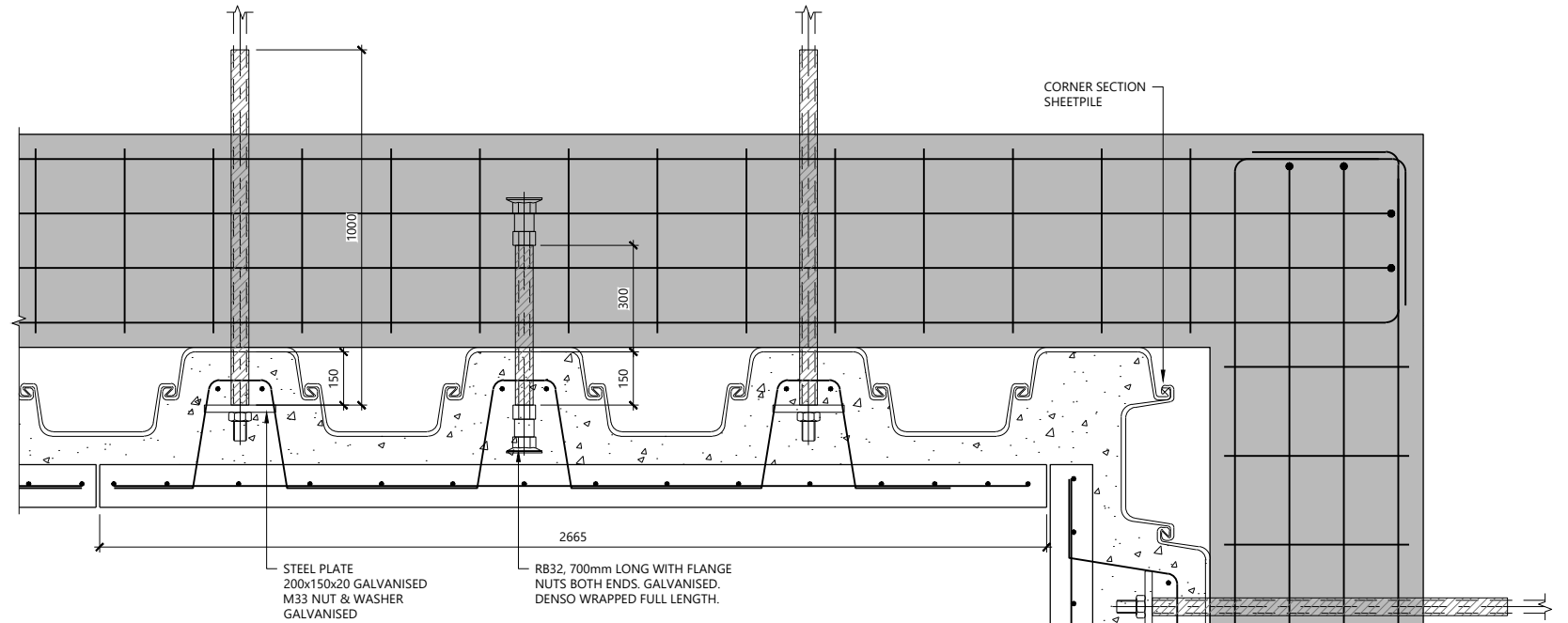
PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	SECTIONS AND DETAILS SHEET 1

ISSUED FOR TENDER
NOT FOR CONSTRUCTION

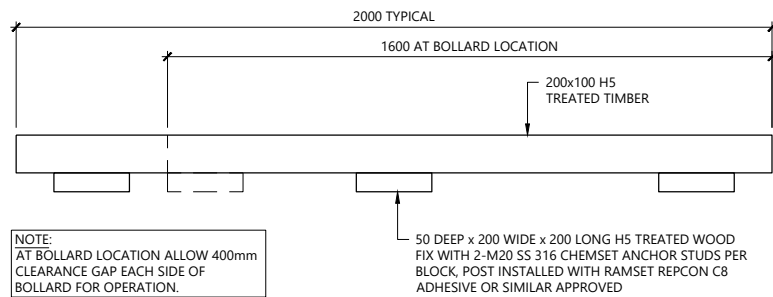
SCALE (A1 ORIGINAL)	SCALE AS NOTED
PROJECT No.	SHEET
713345	S05
REVISION	0



SECTION G
1:10 (A1)
1:20 (A3)
SECTION THROUGH
S05 WALER BEAM



SECTION H
1:10 (A1)
1:20 (A3)
WALER BEAM
S05 CORNER DETAIL



TIMBER KERBING DETAIL
1:10 @ A1
1:20 @ A3

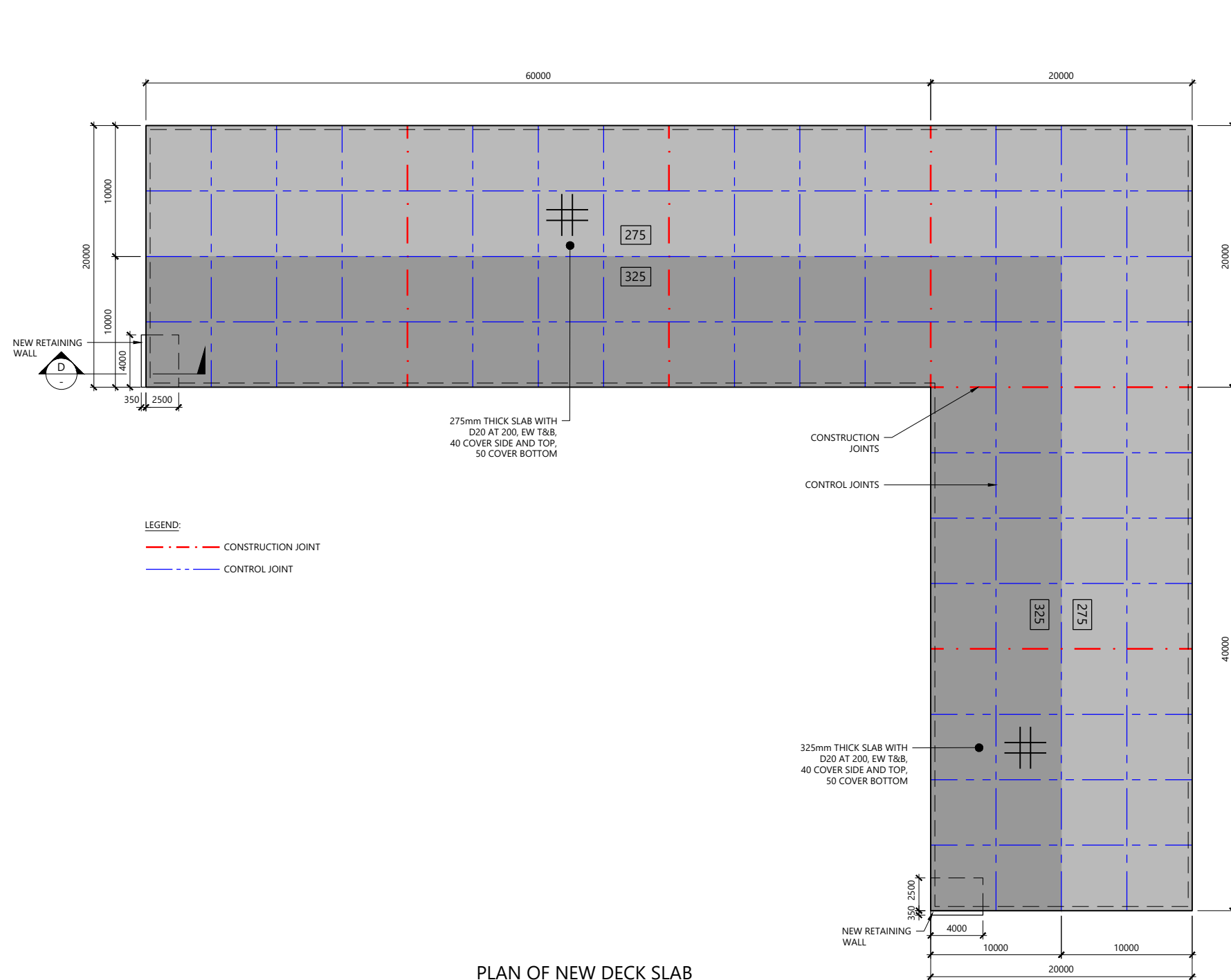
REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024



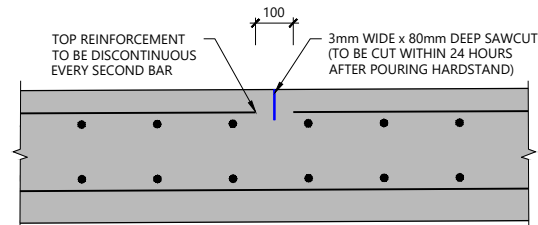
PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	SECTIONS AND DETAILS SHEET 2

ISSUED FOR TENDER NOT FOR CONSTRUCTION		
SCALE (A1 ORIGINAL)	SCALE AS NOTED	
PROJECT No.	SHEET	REVISION
713345	S06	0



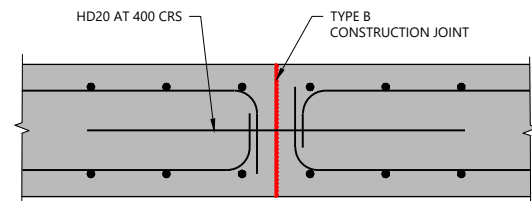
PLAN OF NEW DECK SLAB

1:200 @ A1
1:400 @ A3



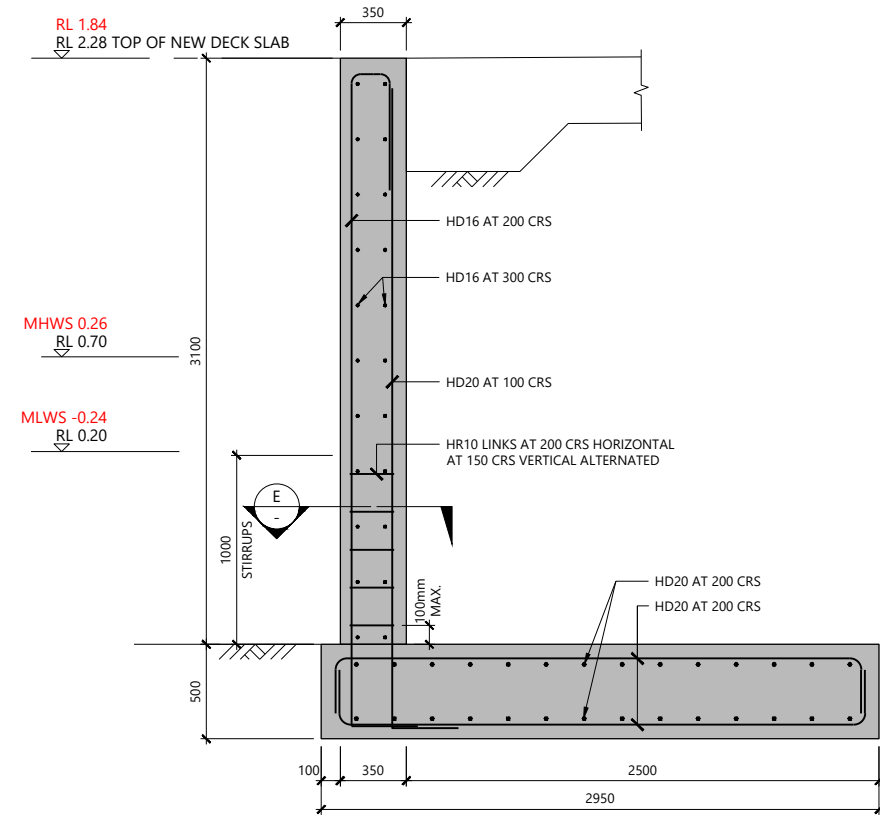
CONTROL JOINT DETAIL

1:10 @ A1
1:20 @ A3

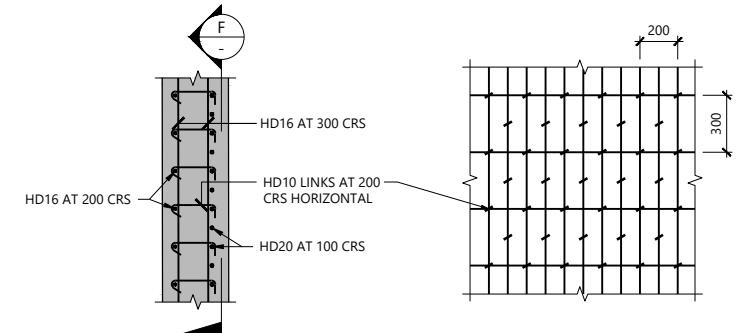


CONSTRUCTION JOINT DETAIL

1:10 @ A1
1:20 @ A3



SECTION D
1:20 (A1)
1:40 (A3)



SECTION E
1:20 (A1)
1:40 (A3)

SECTION F
1:20 (A1)
1:40 (A3)

ALTERNATED
LINKS DETAIL

REV	AMENDMENTS	DES	DRN	CHK	APP	DATE
0	FOR TENDER	JT	MMT	GA	GA	05.08.2024

SURVEYED	DATE
DESIGNED	DATE
J.TABORGA	29.05.2024
DRAWN	DATE
M.TOLED0	29.05.2024
CHECKED	DATE
G.ANDERSON	31.05.2024
APPROVED	DATE
G.ANDERSON	31.05.2024



PROJECT TITLE	ARUTANGA HARBOUR PHASE 2
SHEET TITLE	PLAN OF NEW DECK SLAB AND RETAINING WALL DETAILS

ISSUED FOR TENDER NOT FOR CONSTRUCTION		
SCALE (A1 ORIGINAL)	SCALE AS NOTED	
PROJECT No.	SHEET	REVISION
713345	S07	0