

# LOT 395 MARMION AVENUE YANCHEP - ISSUED FOR INFORMATION



LOCALITY PLAN  
1:2000

## KCTT

### DRAWING NUMBER

KC01008.012-C000  
KC01008.012-C100  
KC01008.012-C110  
KC01008.012-C300  
KC01008.012-C325  
KC01008.012-C350  
KC01008.012-C900  
KC01008.012-C900  
KC01008.012-C900  
KC01008.012-C900

### DRAWING LIST

COVER SHEET  
EARTHWORKS AND RETAINING WALL PLAN  
RETAINING WALL PLAN  
ROAD LAYOUT PLAN  
SIGNAGE AND LINEMARKING PLAN  
STORMWATER DRAINAGE PLAN  
STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 1 OF 4  
STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 2 OF 4  
STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 3 OF 4  
STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 4 OF 4

APRIL 2024

REV A - ISSUED FOR INFORMATION



KC Traffic and Transport Pty Ltd  
ABN 35 148 970 727  
Unit 7 No 110 Erindale Road, Balcatta WA 6021  
Phone: 08 9240 6560  
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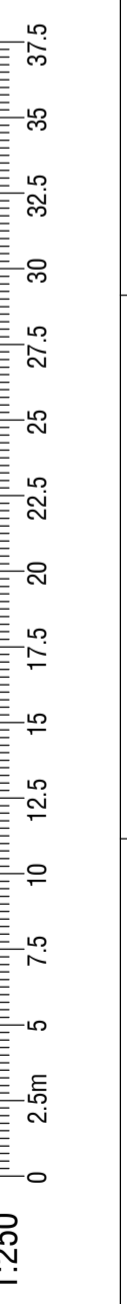


**LEGEND**

- PROPOSED RETAINING WALL
- EXISTING ROAD CENTRE LINE
- - - EXISTING ROAD EDGE
- EXISTING ROAD
- PROPOSED KERB



VOLUMES		
CUT	FILL	BALANCE
x	x	x



WARNING

BEWARE OF UNDERGROUND SERVICES

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DIAL 1100

BEFORE YOU DIG

**EARTHWORKS PLAN**  
SCALE 1:250

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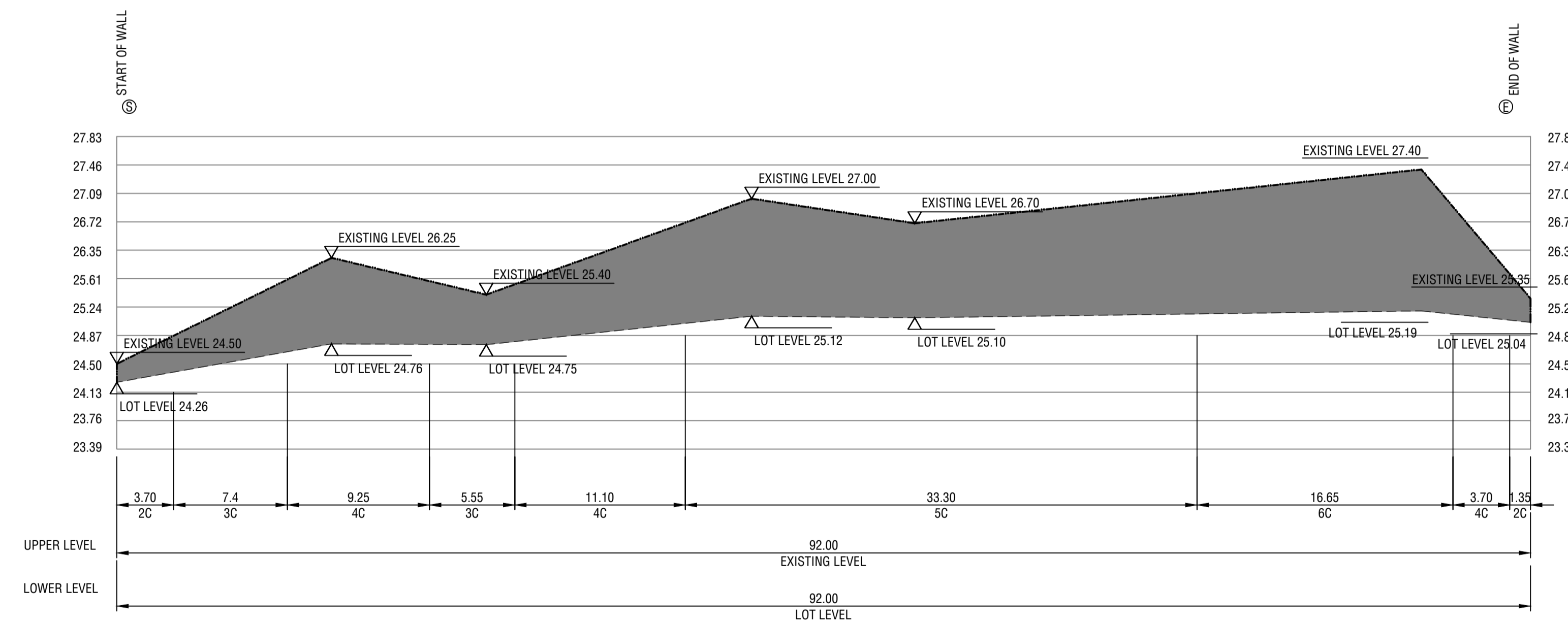
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">A</td> <td style="width: 10%;">08/04/24</td> <td style="width: 10%; text-align: center;">CK</td> <td style="width: 10%; text-align: center;">CK</td> <td style="width: 60%; text-align: center;">ISSUED FOR INFORMATION</td> </tr> <tr> <td style="font-size: x-small;">REV No.</td> <td style="font-size: x-small;">DATE</td> <td style="font-size: x-small;">DRAFTING CHECK</td> <td style="font-size: x-small;">DESIGN REVIEW</td> <td style="font-size: x-small;">REV'D P.MGR</td> </tr> <tr> <td style="font-size: x-small;">APP'D P.DIR</td> <td colspan="4" style="font-size: x-small;">AMENDMENT</td> </tr> </table>	A	08/04/24	CK	CK	ISSUED FOR INFORMATION	REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;"> </td> <td style="width: 10%;"> </td> <td style="width: 10%; text-align: center;"> </td> <td style="width: 10%; text-align: center;"> </td> <td style="width: 60%;"> </td> </tr> <tr> <td style="font-size: x-small;">REV No.</td> <td style="font-size: x-small;">DATE</td> <td style="font-size: x-small;">DRAFTING CHECK</td> <td style="font-size: x-small;">DESIGN REVIEW</td> <td style="font-size: x-small;">REV'D P.MGR</td> </tr> <tr> <td style="font-size: x-small;">APP'D P.DIR</td> <td colspan="4" style="font-size: x-small;">AMENDMENT</td> </tr> </table>						REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT				<p style="font-size: x-small; margin-top: 5px;">Part of &gt; Premise</p>	<p style="font-size: x-small; margin-top: 5px;">KC Traffic and Transport Pty Ltd ABN 35 148 970 727 7/110 Erindale Road, Balclutha WA 6021 Phone: 08 9240 6569 Website: www.kctt.com.au</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4" style="font-weight: bold;">CLIENT</td> </tr> <tr> <td colspan="4">FRP</td> </tr> <tr> <td colspan="4" style="font-weight: bold;">PROJECT</td> </tr> <tr> <td colspan="4">LOT 395 MARMION AVENUE YANCHEP</td> </tr> <tr> <td style="font-size: x-small;">DRAFTER</td> <td style="font-size: x-small;">DRAFTING CHECK</td> <td style="font-size: x-small;">REVIEWED</td> <td style="font-size: x-small;">APPROVED</td> </tr> <tr> <td>D.CENGAJ</td> <td>C.KLEYWEG</td> <td>PROJECT MANAGER</td> <td>PROJECT DIRECTOR</td> </tr> <tr> <td style="font-size: x-small;">DESIGNED</td> <td style="font-size: x-small;">DESIGN REVIEW</td> <td colspan="2"></td> </tr> <tr> <td>F.BOROVIC</td> <td>C.KLEYWEG</td> <td colspan="2"></td> </tr> </table>	CLIENT				FRP				PROJECT				LOT 395 MARMION AVENUE YANCHEP				DRAFTER	DRAFTING CHECK	REVIEWED	APPROVED	D.CENGAJ	C.KLEYWEG	PROJECT MANAGER	PROJECT DIRECTOR	DESIGNED	DESIGN REVIEW			F.BOROVIC	C.KLEYWEG			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="5" style="font-weight: bold;">TITLE</td> </tr> <tr> <td colspan="5">LOT 395 MARMION AVENUE YANCHEP</td> </tr> <tr> <td colspan="5" style="font-weight: bold;">EARTHWORKS PLAN</td> </tr> <tr> <td style="font-size: x-small;">SHEET</td> <td style="font-size: x-small;">DATUM</td> <td style="font-size: x-small;">WAPC No. 162413</td> <td style="font-size: x-small;">PROJECT No.</td> <td style="font-size: x-small;">DRAWING No.</td> </tr> <tr> <td>A1</td> <td>PCG94</td> <td>SCALE AS SHOWN</td> <td>KC01804.000</td> <td>C100</td> </tr> <tr> <td colspan="3"></td> <td style="font-size: x-small;">REVISION</td> <td style="font-size: x-small;">A</td> </tr> </table>	TITLE					LOT 395 MARMION AVENUE YANCHEP					EARTHWORKS PLAN					SHEET	DATUM	WAPC No. 162413	PROJECT No.	DRAWING No.	A1	PCG94	SCALE AS SHOWN	KC01804.000	C100				REVISION	A
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**NOTES**

1. DRAWING SHALL BE READ IN CONJUNCTION WITH THE CONTRACT DRAWINGS AND SPECIFICATION.
2. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SHOWN.
3. SOIL STABILISATION TO BE AS DIRECTED BY SUPERINTENDENT.
4. DUST CONTROL TO BE THE RESPONSIBILITY OF CONTRACTOR.
5. DRAWING SHALL BE READ IN CONJUNCTION WITH THE CONTRACT DRAWINGS AND SPECIFICATION.
6. THE CONTRACTOR SHALL ENSURE THAT ALL INTERCONNECTING WALL COURSES MATCH.
7. RETAINING WALL LONGITUDINAL SECTION DIRECTION IS VIEWED FROM LOW SIDE OF WALL.
8. SHADING FOR RETAINED FILL IS FOR INFORMATION ONLY. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF THE AREA TO BE RETAINED.
9. REFER DRG KC01217.010-C950-C953 FOR RETAINING WALL DETAILS.



**RETAINING WALL 1**

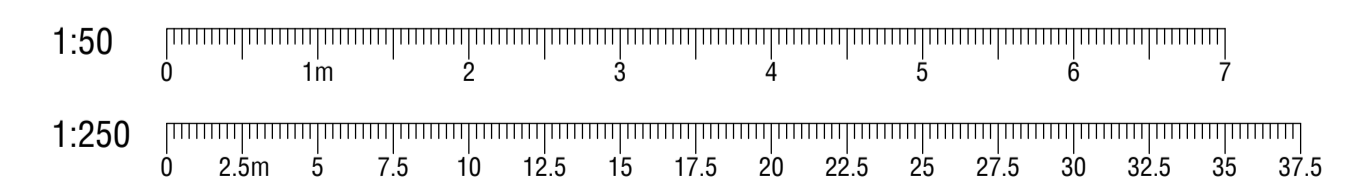
Horizontal scale 1:250  
Vertical scale 1:50

**WARNING**  
IF WORKING IN THE VICINITY OF EXISTING OVERHEAD DISTRIBUTION OR TRANSMISSION LINES CONTRACTOR TO COMPLY WITH "WORKSAFE" CLEARANCES DURING CONSTRUCTION

**WARNING**  
**Beware of Underground Services**  
The location of underground cables are approximate only and their exact position should be checked on site. No guarantee is given that all existing cables and services are shown. Locate all underground cables and services before commencement of work. Refer to Worksafe Regulation 3.21.

**DIAL 1100**  
BEFORE YOU DIG

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CLIENT FRP			
PROJECT LOT 395 MARMION AVENUE YANCHEP			
DRAFTER D.CENGAJ	DRAFTING CHECK C.KLEYWEG	REVIEWED PROJECT MANAGER	APPROVED PROJECT DIRECTOR
DESIGNED F.BOROVIC	DESIGN REVIEW C. KLEYWEG		






TITLE <b>LOT 395 MARMION AVENUE YANCHEP RETAINING WALL PLAN</b>				
SHEET PC694	DATUM SCALE AS SHOWN	WAPC No. 162413	PROJECT No. KC01804.000	DRAWING No. C110
				REVISION A



**NOTES:**

1. THE CONTRACTOR SHALL PROTECT ALL EXISTING KERBS, ROAD PAVEMENTS AND EXISTING INFRASTRUCTURE SERVICES AT THE PROPOSED CONNECTIONS TO EXISTING ROADS.
2. IT IS RECOMMENDED THE CONTRACTOR UNDERTAKES A ROAD DILAPIDATION SURVEY AND REPORT PRIOR TO THE COMMENCEMENT OF WORKS AND PROVIDES A COPY OF THIS TO THE SUPERINTENDENT AND THE CITY OF SWAN.

**LEGEND**

-  STAGE BOUNDARY
-  EXISTING ROAD CENTRE LINE
-  EXISTING ROAD EDGE
-  PAVEMENT TYPE 1
-  FOOTPATH - 100mm THICK N32 CONCRETE TO CITY OF SWAN STANDARDS

FOOTPATH AREAS	
ROAD	100mm
ROAD 1	108.0 m2

PAVEMENT AREAS	
ROAD	AREA
ROAD 1	267.5 m2

KERB LENGTHS	
SEMI MOUNTABLE KERB (SMK)	142.1m
MOUNTABLE KERB (MK)	17.2m

MARMION AVENUE

CONCRETE ISLAND

PAVEMENT TYPE 1

PAVEMENT TYPE 1

395

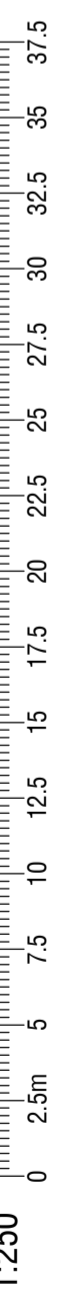
**ROAD LAYOUT PLAN**

SCALE 1:250

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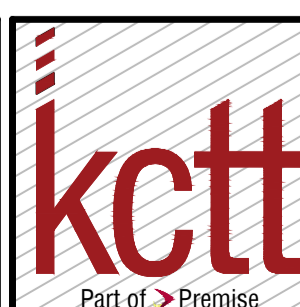
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DESIGNED	F.BOROVIC	DESIGN REVIEW	C.KLEYWEG		

TITLE				
LOT 395 MARMION AVENUE YANCHEP ROAD LAYOUT PLAN				
SHEET	DATUM	WAPC No. 162413	PROJECT No.	DRAWING No.
A1	PCG94	SCALE AS SHOWN	KC01804.000	C300
				REVISION
				A





**NOTES:**

- 1.1. FIT ALL PROPOSED LINEMARKINGS TO EXISTING ONES AT THEIR MEETING POINTS.
- 1.2. ANY EXISTING LINEMARKINGS THAT INTERFERE WITH THE PROPOSED AND IS NOT THE CONTINUANCE OF THE PROPOSED TO BE REMOVED.

**LEGEND**

- PROPOSED ROAD EDGE
- PROPOSED UNBROKEN LANE OR EDGE LINE
- EXISTING UNBROKEN LANE OR EDGE LINE
- PROPOSED CONTINUITY LINE
- PROPOSED GIVE WAY LINE
- EXISTING SIGN
- PROPOSED SIGN
- PROPOSED STRAIGHT ARROW
- PROPOSED STRAIGHT & TURN RIGHT ARROW
- PROPOSED STRAIGHT & TURN LEFT ARROW
- PROPOSED TURN LEFT & RIGHT ARROW
- PROPOSED TURN LEFT ARROW
- PROPOSED TURN RIGHT ARROW

MARMION AVENUE

INSTALL 21.9m UNBROKEN LANE LINE  
 INSTALL 12m GUIDE LINE  
 INSTALL 9.3m UNBROKEN LANE LINE

INSTALL 1x LEFT TURN ARROW  
 INSTALL 9.5m GIVE WAY LINE  
 INSTALL 30.1m EDGE LINE

INSTALL 71.0m EDGE LINE  
 INSTALL 98.8m EDGE LINE  
 INSTALL 2x STRAIGHT ARROW ON 48m SPACING

INSTALL 2x STRAIGHT ARROW ON 35m SPACING

INSTALL 1x STRAIGHT & TURN RIGHT ARROW  
 INSTALL 126.0m UNBROKEN SEPARATION LINE

INSTALL 1x STRAIGHT & TURN LEFT ARROW  
 INSTALL 1x TURN LEFT & RIGHT ARROW

395

**ROAD LAYOUT PLAN**

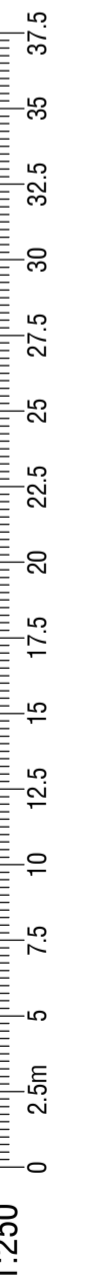
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DESIGNED F.BOROVIC	DESIGN REVIEW C.KLEYWEG		

TITLE LOT 395 MARMION AVENUE YANCHEP ROAD LAYOUT PLAN					
SHEET A1	DATUM PCG94	WAPC No. 162413 SCALE AS SHOWN	PROJECT No. KC01804.000	DRAWING No. C325	REVISION A





### NOTES

1. GENERAL
  - 1.1. LEVELS ARE REDUCED FROM A.H.D.
  - 1.2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL KC01008.000 DRAWINGS AND THE SPECIFICATION.
  - 1.3. THE CONTRACTOR SHALL LIMIT THE MOVEMENT OF EQUIPMENT AND MANPOWER TO THE MINIMUM AREA NECESSARY AND PROTECT ALL VEGETATION ON SITE.
  - 1.4. ALL PIPES CROSSING WITH LESS THAN 300mm CLEARANCE REQUIRE CONCRETE ENCASING LOCALLY.
  - 1.5. ALL DRAINAGE PIPES AND STRUCTURES SHALL COMPLY WITH THE SPECIFICATION OF THE CITY OF SWAN.
  - 1.6. ALL PIPES SIZE SHOWN ARE IN MILLIMETRES, DISTANCES AND LEVELS ARE SHOWN IN METRES.
  - 1.7. EXISTING SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE ALL EXISTING SERVICES WITHIN THE SITE, PRIOR TO COMMENCING WORKS. WHERE PROPOSED WORKS CLASH WITH EXISTING THE CONTRACTOR SHALL SUPPLY LEVELS TO THE SUPERINTENDENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUPPORT OF ALL EXISTING SERVICES. WHERE SERVICES CROSS, THE UPPER SERVICE SHALL BE PROVIDED WITH A SUITABLE SUPPORT AS REQUIRED, BY THE RELEVANT SERVICE AUTHORITY MANUAL.
  - 1.8. THE CONTRACTOR SHALL NOT SCALE OFF OF THESE DRAWINGS. WHERE A DISCREPANCY EXISTS BETWEEN THE MODEL, THE DRAWINGS, THE BOQ, THE SPECIFICATION OR ANY OTHER DOCUMENT OR INSTRUCTION, THE CONTRACTOR SHALL BRING THIS / THESE DISCREPANCIES TO THE IMMEDIATE ATTENTION OF THE SUPERINTENDENT. SCALING QUANTITIES FROM THESE DRAWINGS IS NOT AN ACCEPTABLE METHOD OF CALCULATING QUANTITIES.
2. DRAINAGE
  - 2.1. DRAINAGE PIPE SHALL BE CLASS 2 UNLESS OTHERWISE NOTED.
  - 2.2. ALL TRENCHING, PIPE BEDDING AND BACKFILLING SHALL BE IN ACCORDANCE WITH AS3725.
  - 2.3. ALL MANHOLES AND ENTRY PITS SHALL BE LOCATED AS SHOWN IRRESPECTIVE OF PIPE LENGTHS SHOWN ON THE DRAWINGS.
  - 2.4. THE MANHOLE AND ENTRY PIT LIDS SHALL BE SET TO SUIT THE VERGE SLOPE, NOMINALLY 2% UPWARDS FROM THE TOP OF BACK OF KERB.
  - 2.5. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCY OR CLASH WITH OTHER SERVICES TO THE SUPERINTENDENT.
  - 2.6. ALL DRAINAGE PIPE CONNECTIONS TO BE CLOSED JOINTED WITH RUBBER RINGS.
  - 2.7. FOR TEMPORARY CAPS ON RCP, BRICK UP AT END OF PIPE WITHIN PIT.
  - 2.8. ALL DRAINAGE PIT LIDS AND GRATES LOCATED WITHIN A ROAD RESERVE AREA SHALL BE CLASS D (TRAFFICABLE).
  - 2.9. PIPE DISTANCES ARE MEASURED BETWEEN PIT CENTRES (U.N.O.).
  - 2.10. THE LOCATION OF ALL MANHOLES / PITS SHALL BE POSITIONED AS SHOWN IN THE DRAWING AND THE STATED POSITION ON THE SCALE DRAWING IS TO TAKE PRECEDENCE OVER ANY STATED PIPE LENGTHS.
  - 2.11. AS CONSTRUCTED DRAWINGS SHALL BE PROVIDED TO THE SUPERINTENDENT UPON COMPLETION OF THE WORKS, CLEARLY INDICATING DIMENSIONS, DEPTHS AND TYPES OF THE RECENTLY INSTALLED PIPE WORK AND STRUCTURES.

MARMION AVENUE



### LEGEND

- PROPOSED KERBING
- PROPOSED DRAINAGE
- LOT 51 DRAINAGE, REFER NOTE 2.12.
- DRAINAGE FENCE
- SUBSOIL DRAINAGE
- EXISTING DRAINAGE
- TRAPPED DENOTES TRAPPED MANHOLE  
PIT NUMBER, TYPE (CHAINAGE)
- CSEP COMBINED SIDE ENTRY
- PROPOSED DRAINAGE MANHOLE
- PROPOSED GULLY GRATED PIT
- U/S 25.00 UPSTREAM INVERT LEVEL  
300 (4) / 16.5 PIPE DIA (PIPE CLASS) / GRADE  
16.5 LENGTH  
D/S 24.00 DOWNSTREAM INVERT LEVEL
- LIMIT OF WORKS BOUNDARY
- 9.0 EXISTING CONTOUR LEVEL (0.2m INTERVAL)

CATCHMENT AREA	
PIT No.	PAVEMENT AREA [m <sup>2</sup> ]
1	200
2	206
3	205
4	200
5	200
6	205
7	202
8	94
9	203
10	200
11	200
12	100
13	176
14	165

DRAINAGE PLAN  
SCALE 1:250

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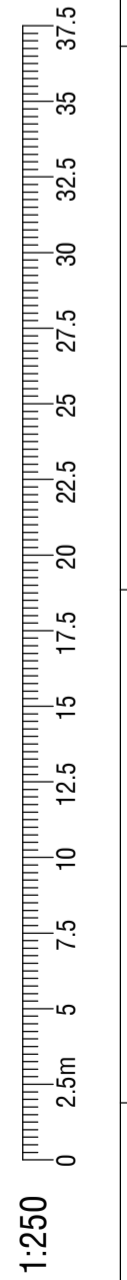
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TITLE <b>LOT 395 MARMION AVENUE YANCHEP STORMWATER DRAINAGE PLAN</b>					
SHEET A1	DATUM PCG94	WAPC No. 162413 SCALE AS SHOWN	PROJECT No. KC01804.000	DRAWING No. C350	REVISION A

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**NOTES**

FOR ALL NOTES REFER TO DRAWING KC01217.200 - C953

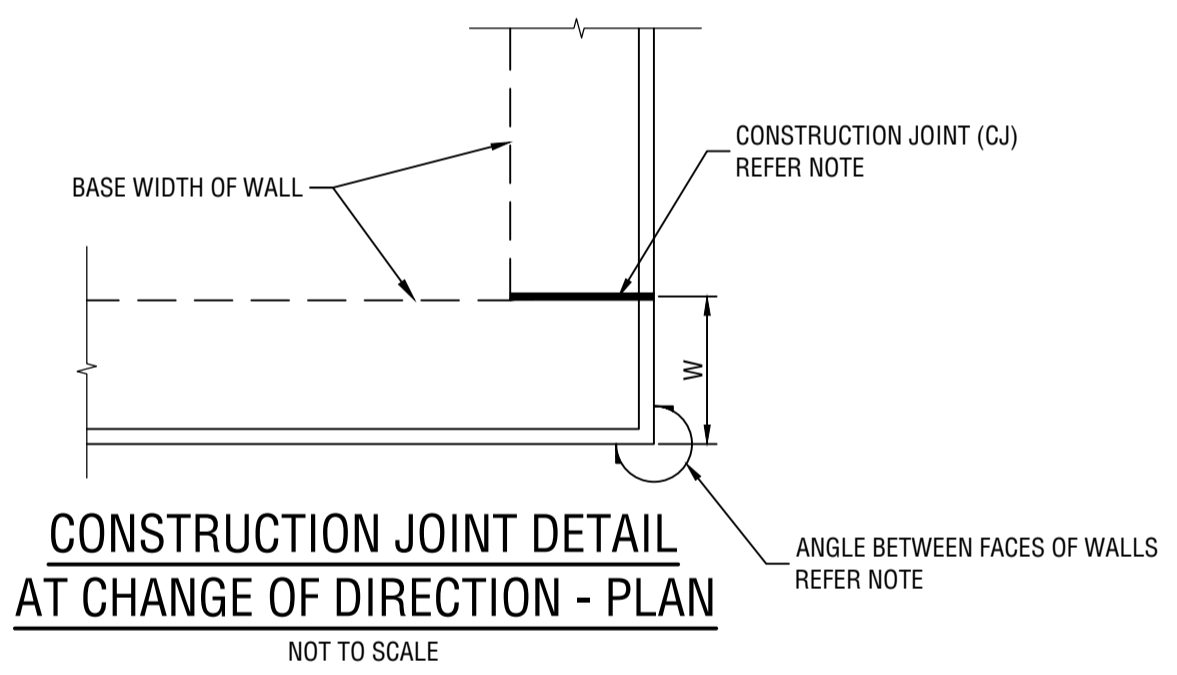
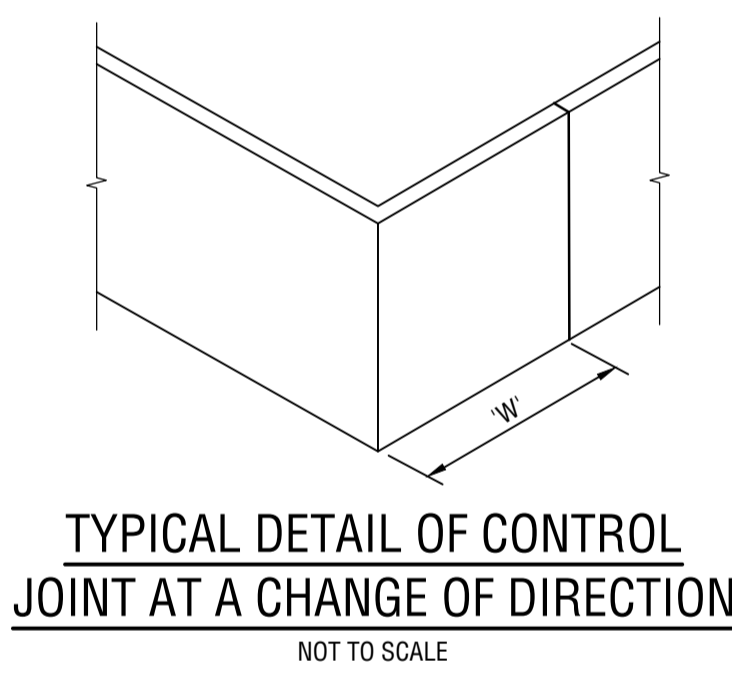
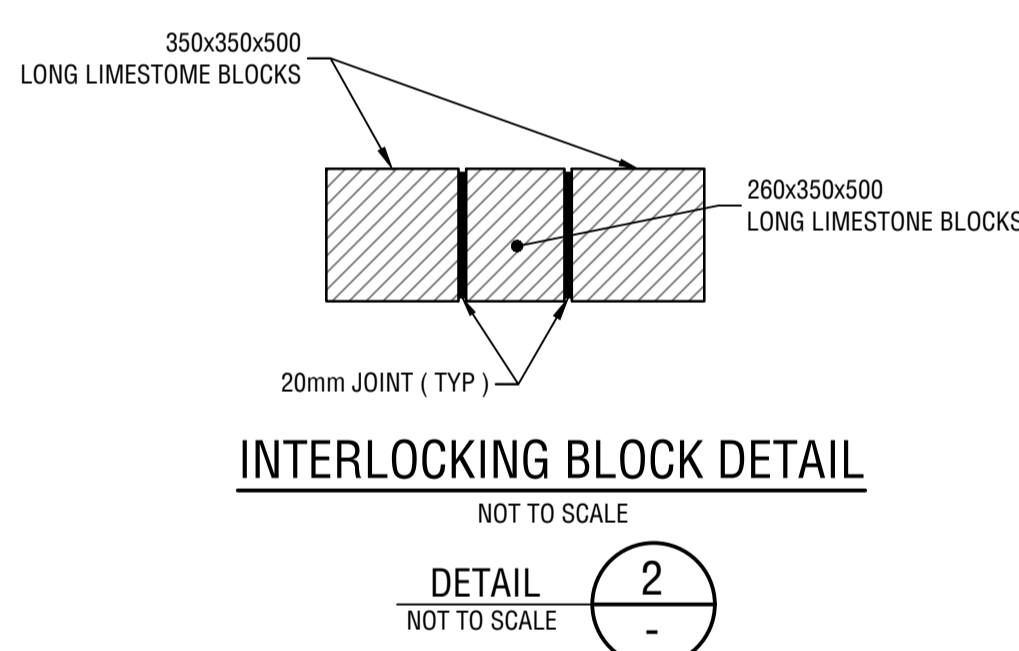
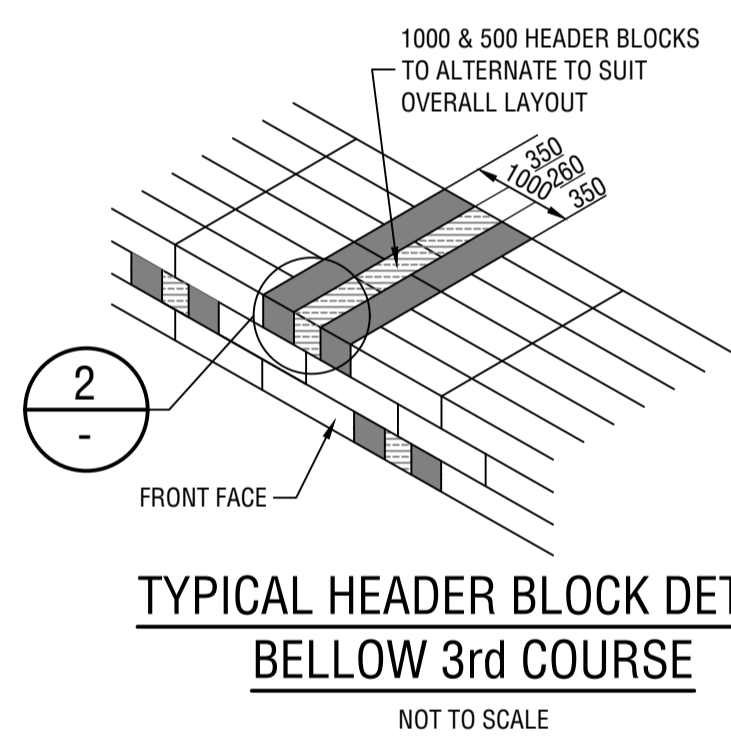
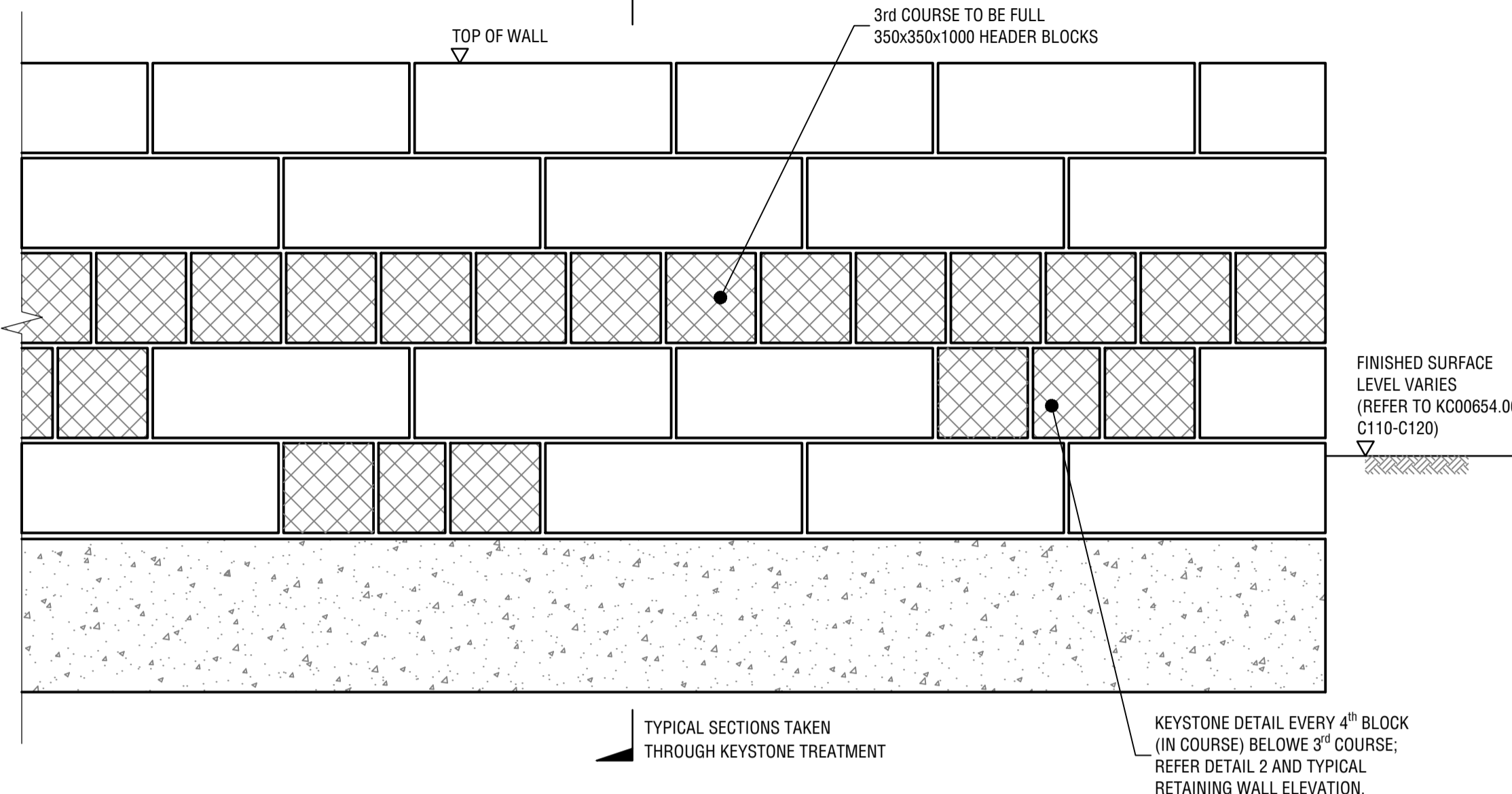
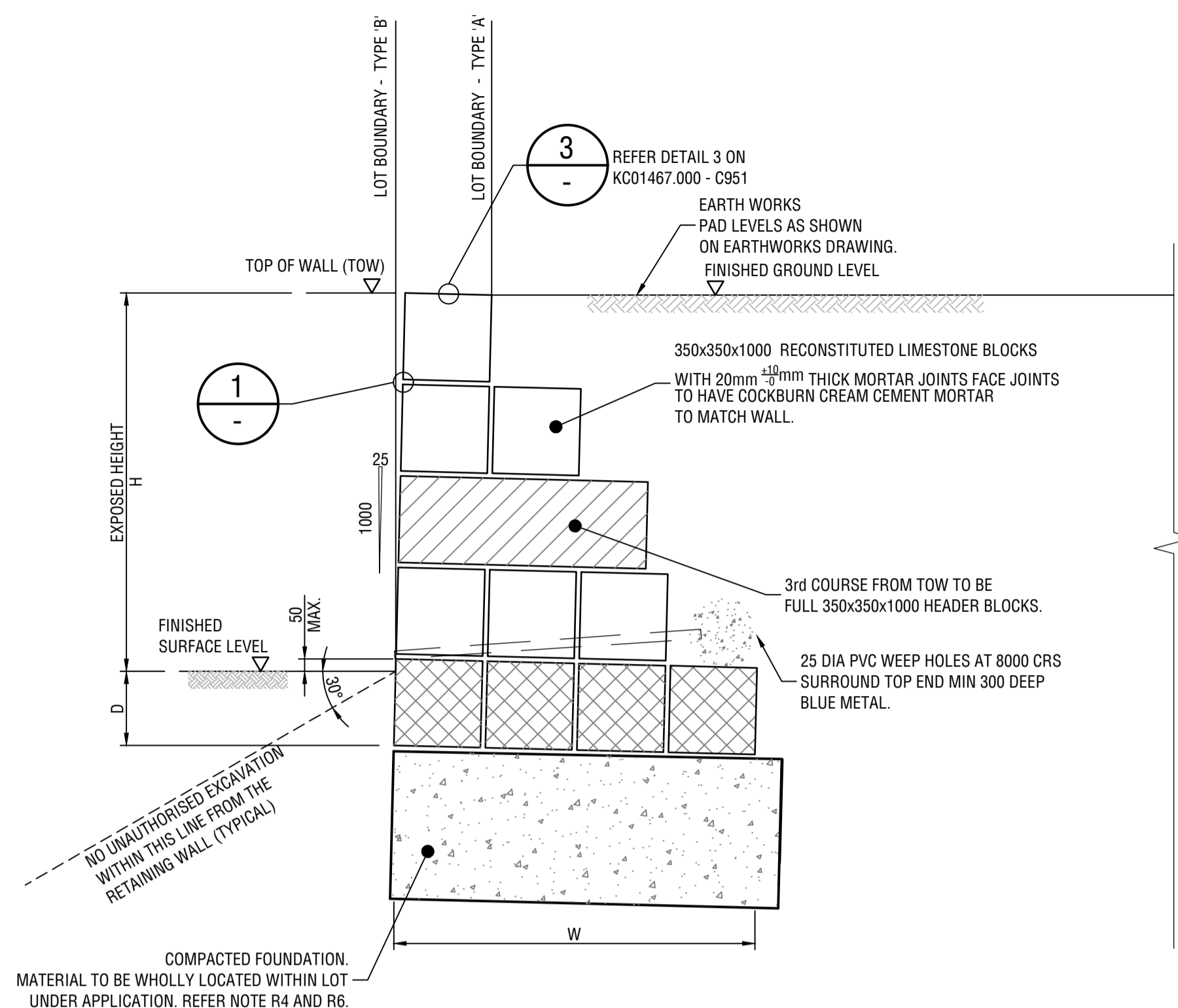
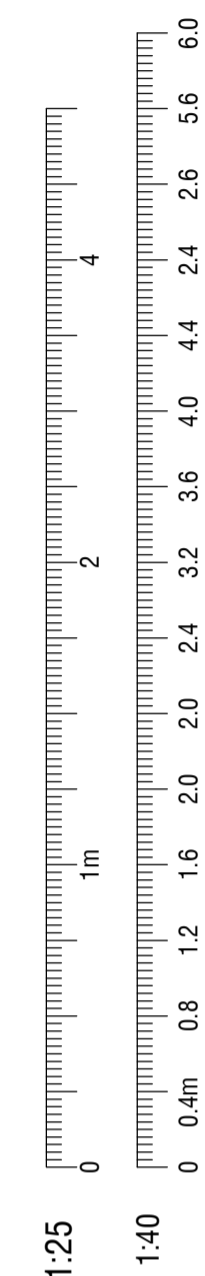
**BACKFILL COMPACTION TABLE \***

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150 TO 450	8
450 TO 750	10
750 TO 1050	11
1050 TO 1350	12
1350 TO 1650	13
1650 TO 1950	13
1950 TO 2250	14
2250 TO 2550	14
2550 TO 2850	15

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**RETAINING WALL DIMENSIONS**

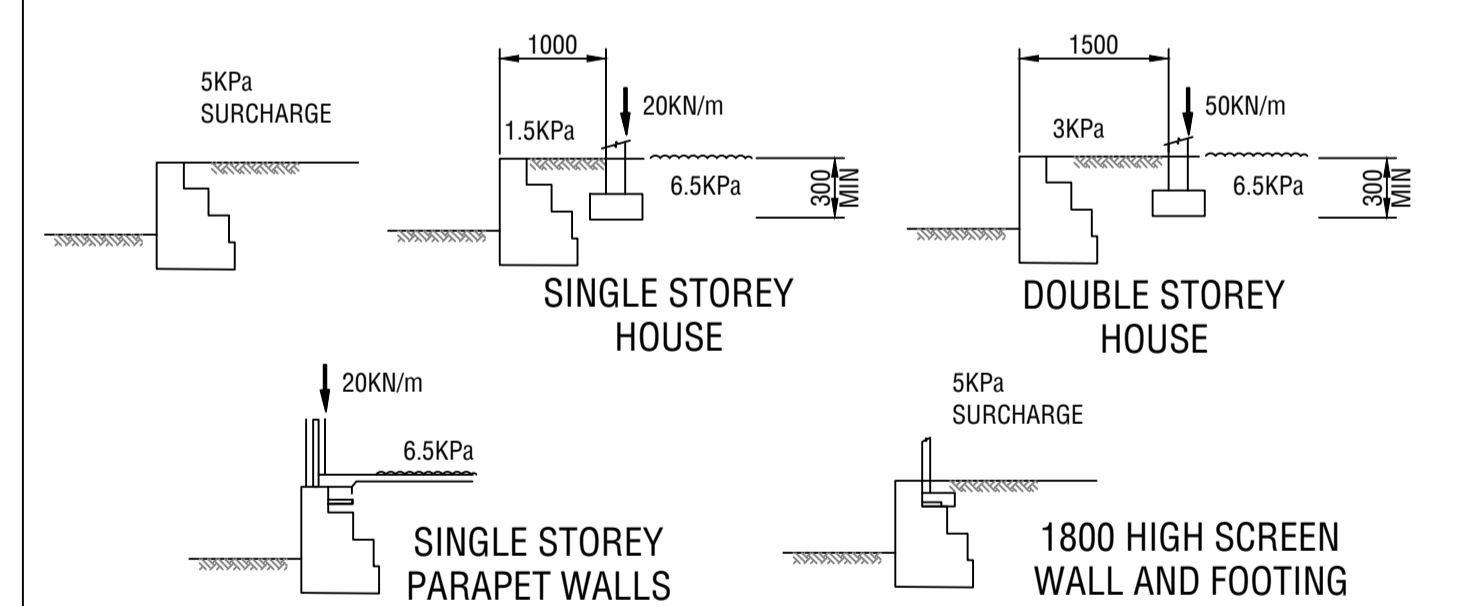
TOTAL No. COURSES	H (EXPOSED)	D (MIN)	W (MIN)
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4	791 - 1160	300	1000
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8	2271 - 2640	300	2200
9	2641 - 3010	300	2570
10	3011 - 3380	300	2940
11	3381 - 3750	300	2940
12	3751 - 4120	300	3310



**DANGER**  
DO NOT WALK ON OR NEAR THE RETAINING WALLS. YOU DO SO AT YOUR OWN RISK. RISK OF SERIOUS INJURY MAY OCCUR FOR WHICH THE OWNER, DEVELOPERS AND CONTRACTORS WILL NOT ACCEPT LIABILITY.

**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
DIAL 1100 BEFORE YOU DIG

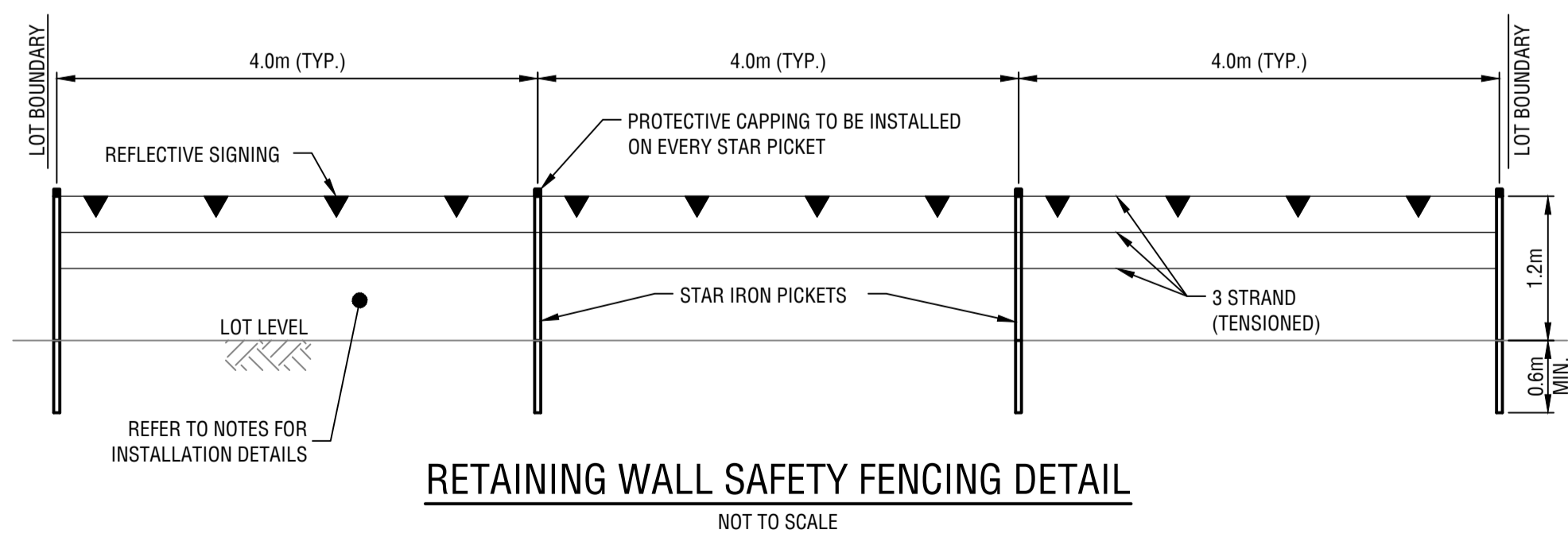
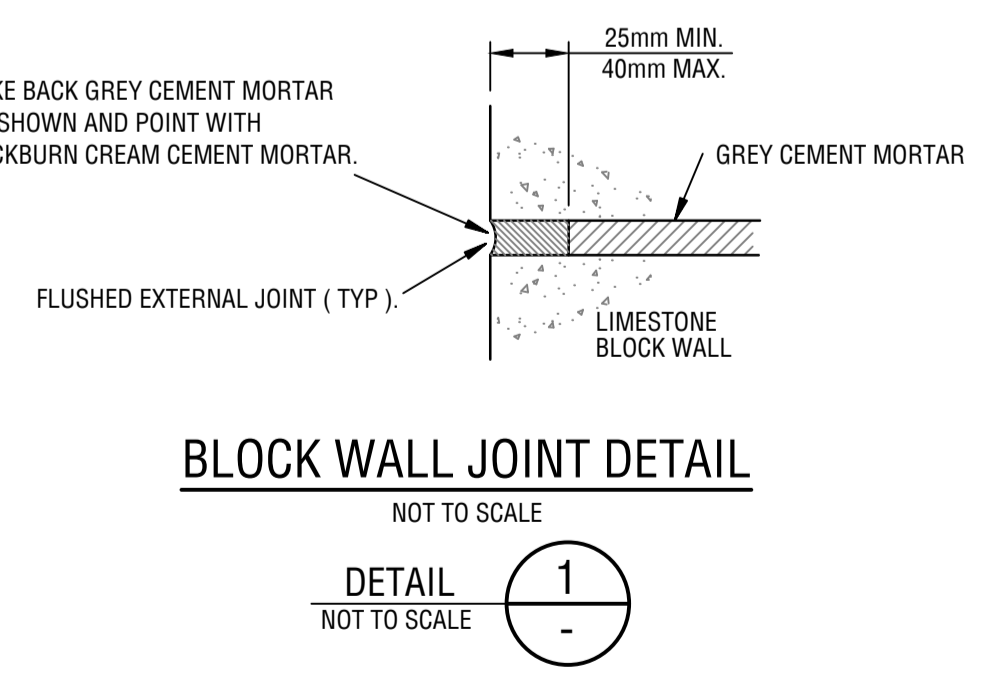
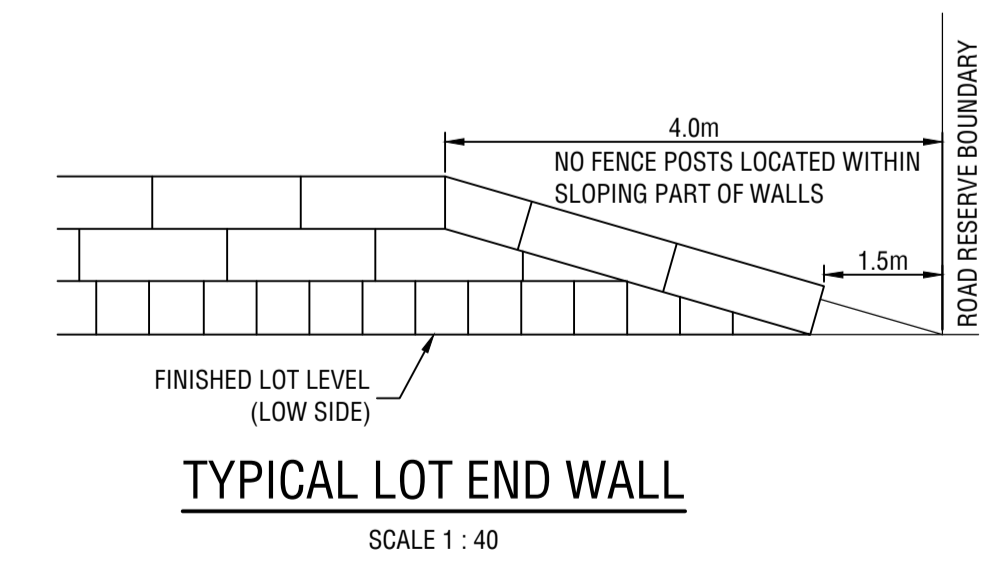
THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS IT HAS BEEN CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. I/WE CERTIFY THAT THE WALLS SHOWN HAVE BEEN DESIGNED TO SUPPORT EFFECTIVE HEIGHT H PLUS THE LOAD CASES SHOWN BELOW.



FOR OTHER LOAD CASES, CERTIFICATION MUST BE OBTAINED FROM AN INDEPENDENT PRACTICING STRUCTURAL ENGINEER. BLOCKS MAY NOT BE ADDED TO THE TOP OF RETAINING WALLS AND GROUND LEVELS MAY NOT BE ALTERED IN THE VICINITY OF THE WALLS FOLLOWING THEIR COMPLETION WITHOUT THE APPROVAL OF AN INDEPENDENT PRACTICING STRUCTURAL ENGINEER. FENCES AND WALLS MAY NOT BE ADDED TO THE TOP OF RETAINING WALLS WITHOUT CERTIFICATION FROM AN INDEPENDENT PRACTICING STRUCTURAL ENGINEER, TO ENSURE AMONGST OTHER THINGS THAT THE LOADING CAUSED BY THE FENCE OR WALL IS SATISFACTORILY TRANSMITTED TO THE RETAINING WALL WITHOUT COMPROMISING THE INTEGRITY OF THE RETAINING WALL.

CERTIFIED NER ENGINEER \_\_\_\_\_ COMPANY \_\_\_\_\_ DATE \_\_\_\_\_

**FOR INFORMATION ONLY**  
NOT TO BE USED FOR CONSTRUCTION PURPOSES



<p>Rev. No. DATE DRAFTING CHECK DESIGN REVIEW REV'D P.MGR APP'D P.DIR AMENDMENT</p> <p>A 08/04/24 CK CK ISSUED FOR INFORMATION</p>		<p>Rev. No. DATE DRAFTING CHECK DESIGN REVIEW REV'D P.MGR APP'D P.DIR AMENDMENT</p>		<p><b>kctt</b> Part of &gt; Premise</p> <p>KC Traffic and Transport Pty Ltd ABN 35 148 970 727 7/110 Erindale Road, Balakatta WA 6021 Phone: 08 9240 8590 Website: www.kctt.com.au</p>		<p>CLIENT FRP PROJECT LOT 395 MARMION AVENUE YANCHEP</p> <p>DRAFTER F.BOROVIC DRAFTING CHECK C.KLEYWEG REVIEWED PROJECT MANAGER APPROVED PROJECT DIRECTOR</p> <p>DESIGNED F.BOROVIC DESIGN REVIEW C.KLEYWEG</p>		<p>TITLE LOT 395 MARMION AVENUE YANCHEP STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 1 OF 4</p> <p>SHEET A1 DATUM PCG94 SCALE WAPC No. 162413 PROJECT No. KC01804.000 DRAWING No. C950 REVISION A</p>	
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**NOTES**

FOR ALL NOTES REFER TO DRAWING KC01217.200 - C953

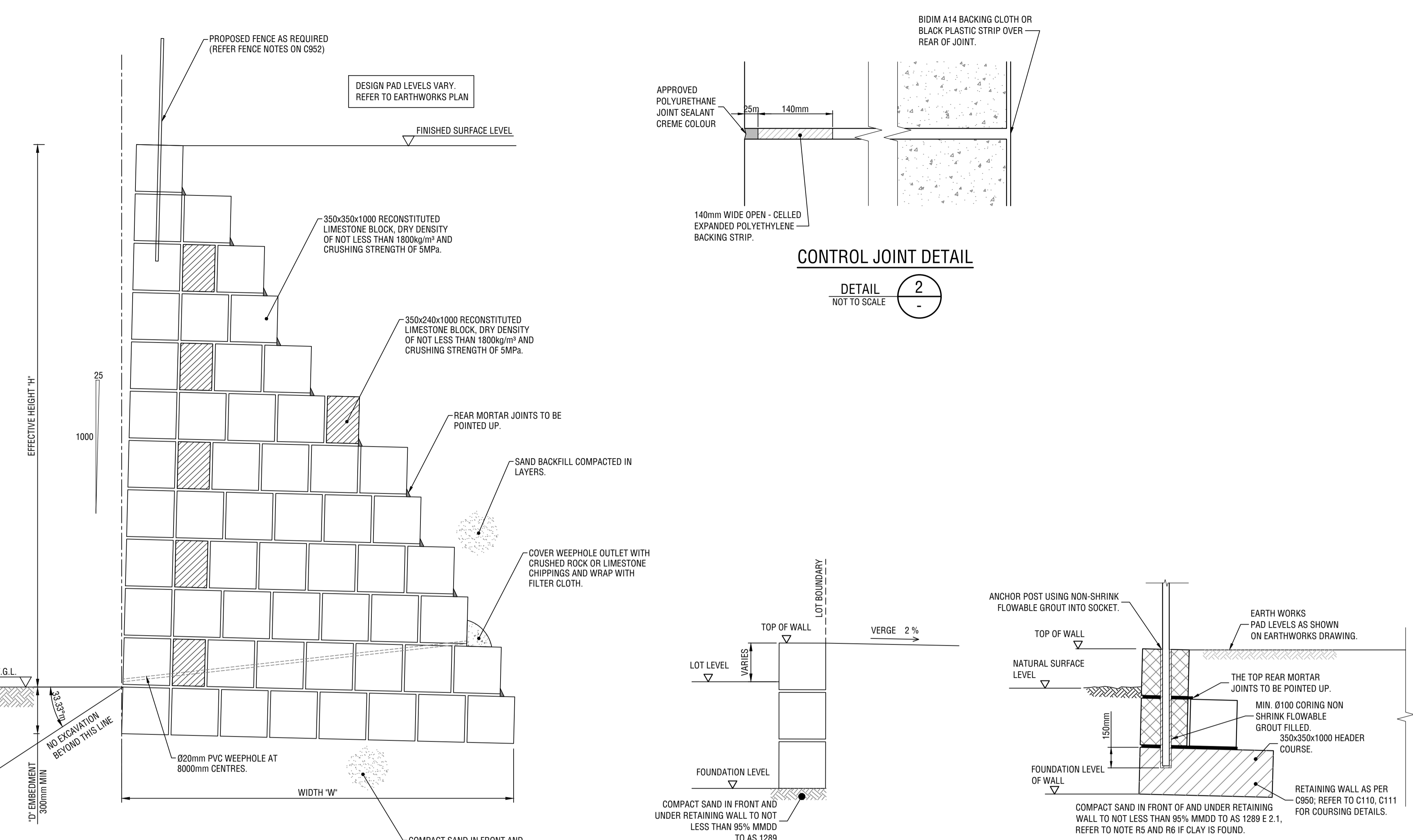
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**CONTROL JOINT DETAIL**

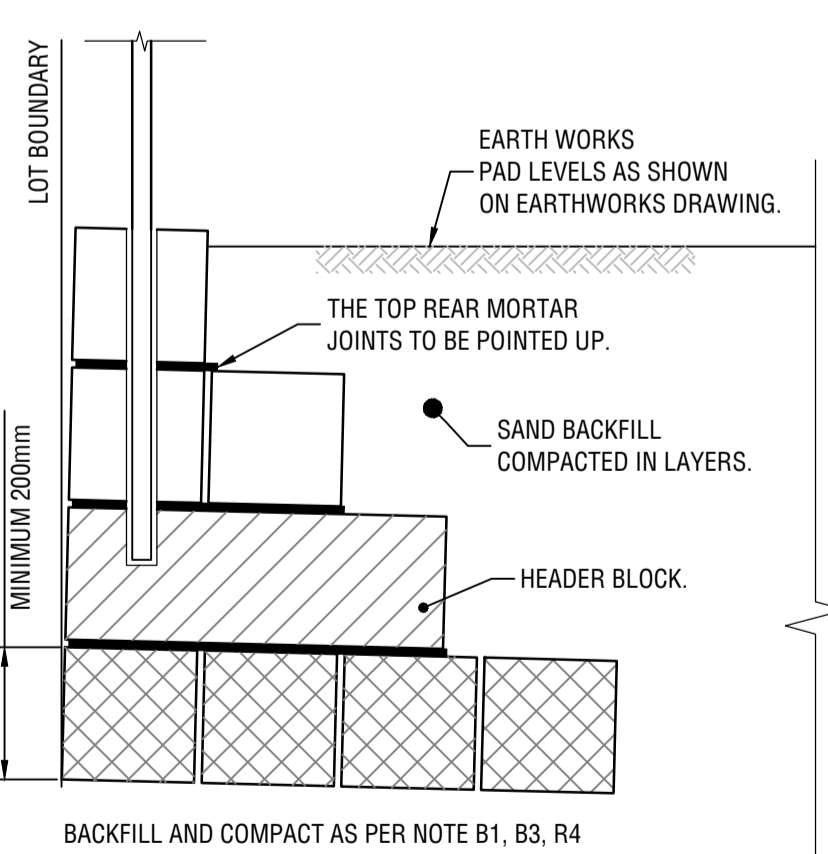
DETAIL 2 NOT TO SCALE

**TYPICAL FENCE POST CORING DETAIL**

DETAIL 3 NOT TO SCALE

**TYPICAL SECTION THROUGH RETAINING WALL (2)**

**RETAINING WALL - TYPICAL SECTION 1 COURSE EXPOSED (WHERE NOMINATED ONLY)**



**ONE COURSE EXPOSED HIGH WALL FOR CORED FENCING**

3 COURSE REQUIREMENT FOR FENCE POST CORED. SCALE 1:25

**TWO COURSE EXPOSED HIGH WALL FOR CORED FENCING**

3 COURSE REQUIREMENT FOR FENCE POST CORED. SCALE 1:25

**THREE COURSE WALL PROFILE FOR CORED FENCING**

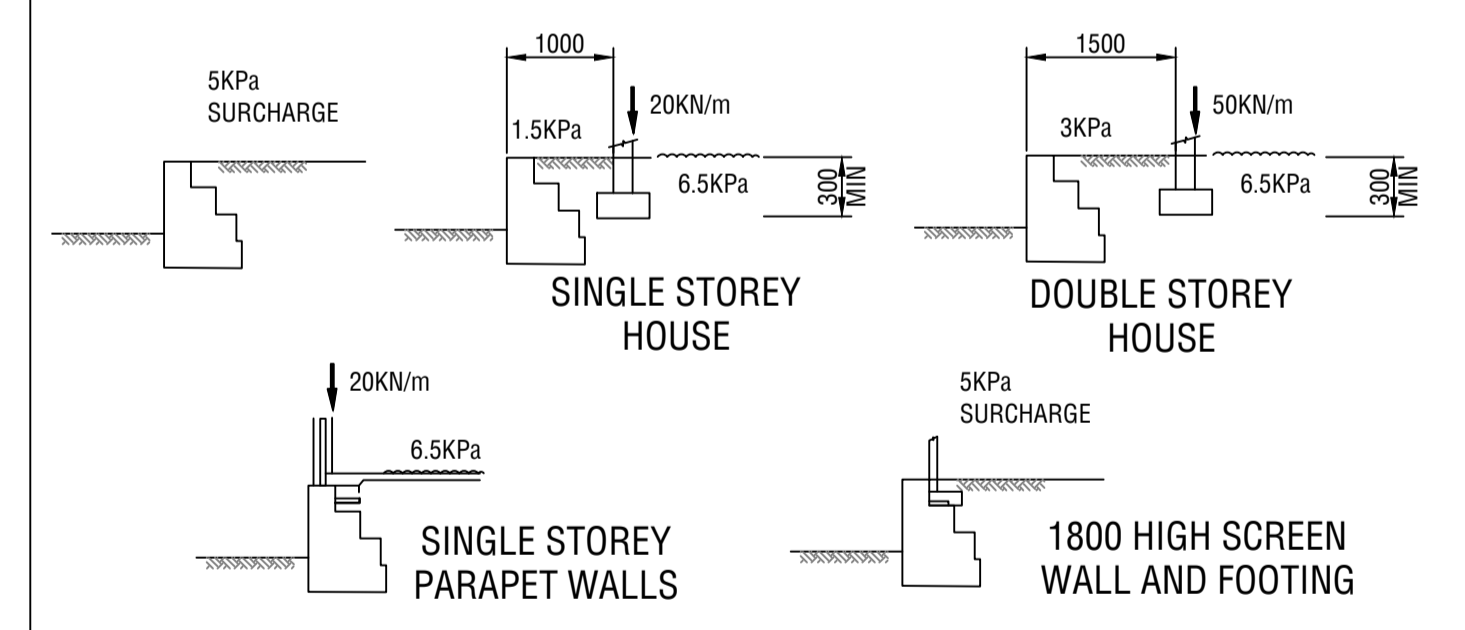
SCALE 1:25

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**WARNING**  
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The location of underground cables are approximate only and their exact position should be checked on site. No guarantee is given that all existing cables and services are shown. Locate all underground cables and services before commencement of work. Refer to Worksafe Regulation 3.2.1.

**DIAL 1100**  
BEFORE YOU DIG

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CERTIFIED NER ENGINEER COMPANY DATE

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<p><b>CLIENT</b> FRP</p> <p><b>PROJECT</b> LOT 395 MARMION AVENUE YANCHEP</p>				<p><b>TITLE</b> LOT 395 MARMION AVENUE YANCHEP STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 1 OF 4</p>																													
<p><b>DRAFTER</b> F.BOROVIC</p> <p><b>DESIGNED</b> F.BOROVIC</p>		<p><b>DRAFTING CHECK</b> C.KLEYWEG</p> <p><b>DESIGN REVIEW</b> C.KLEYWEG</p>		<p><b>REVIEWED</b> PROJECT MANAGER</p>		<p><b>APPROVED</b> PROJECT DIRECTOR</p>																											
<p><b>REVISION</b></p> <table border="1"> <tr><th>REV No.</th><th>DATE</th><th>DRAFTING CHECK</th><th>DESIGN REVIEW</th><th>REV'D P.MGR</th><th>APP'D P.DIR</th><th>AMENDMENT</th></tr> <tr><td>A</td><td>08/04/24</td><td>CK</td><td>CK</td><td></td><td></td><td>ISSUED FOR INFORMATION</td></tr> </table>		REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT	A	08/04/24	CK	CK			ISSUED FOR INFORMATION	<p><b>REVISION</b></p> <table border="1"> <tr><th>REV No.</th><th>DATE</th><th>DRAFTING CHECK</th><th>DESIGN REVIEW</th><th>REV'D P.MGR</th><th>APP'D P.DIR</th><th>AMENDMENT</th></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>		REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT								<p><b>SCALE</b> WAPC No. 162413</p> <p><b>PROJECT No.</b> KC01804.000</p> <p><b>DRAWING No.</b> C951</p> <p><b>REVISION</b> A</p>	
REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT																											
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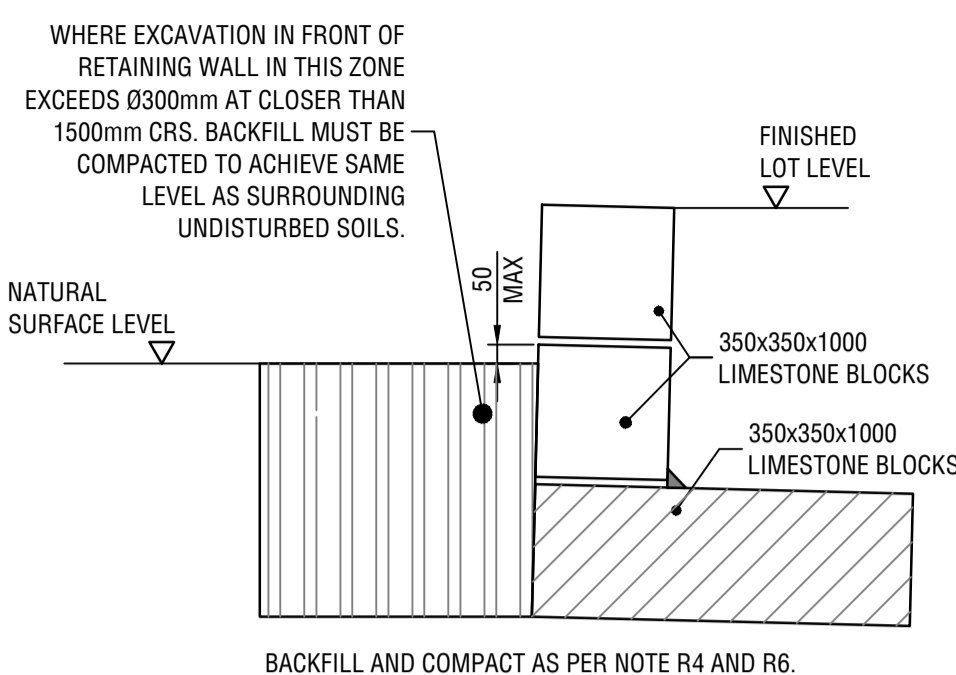


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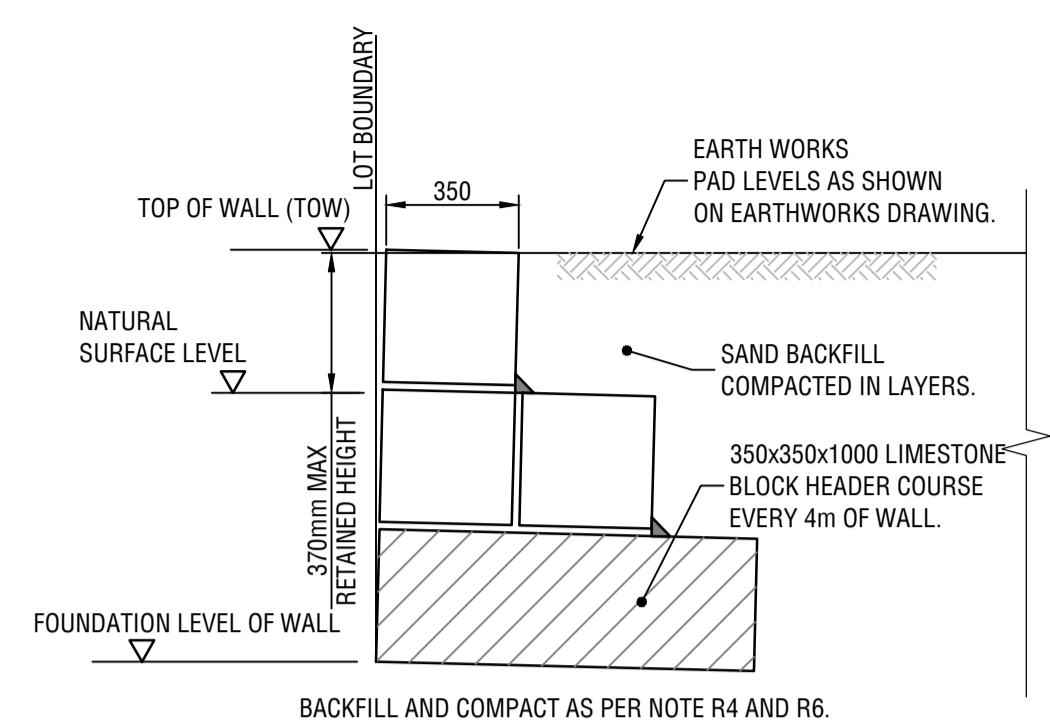
KC Traffic and Transport Pty Ltd  
ABN 35 148 970 727  
7/110 Erindale Road, Balakatta WA 6021  
Phone: 08 9240 8590  
Website: www.kctt.com.au

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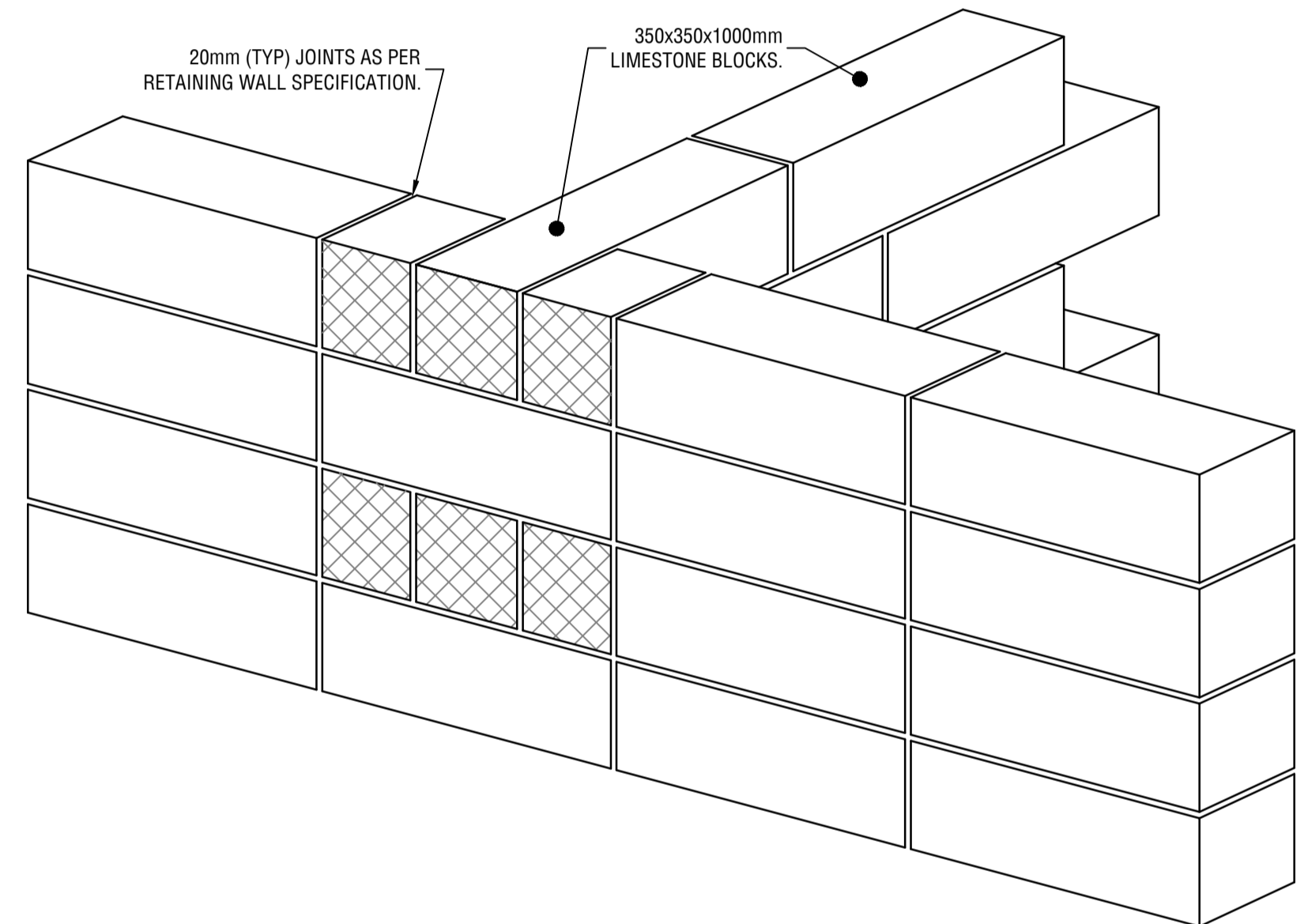
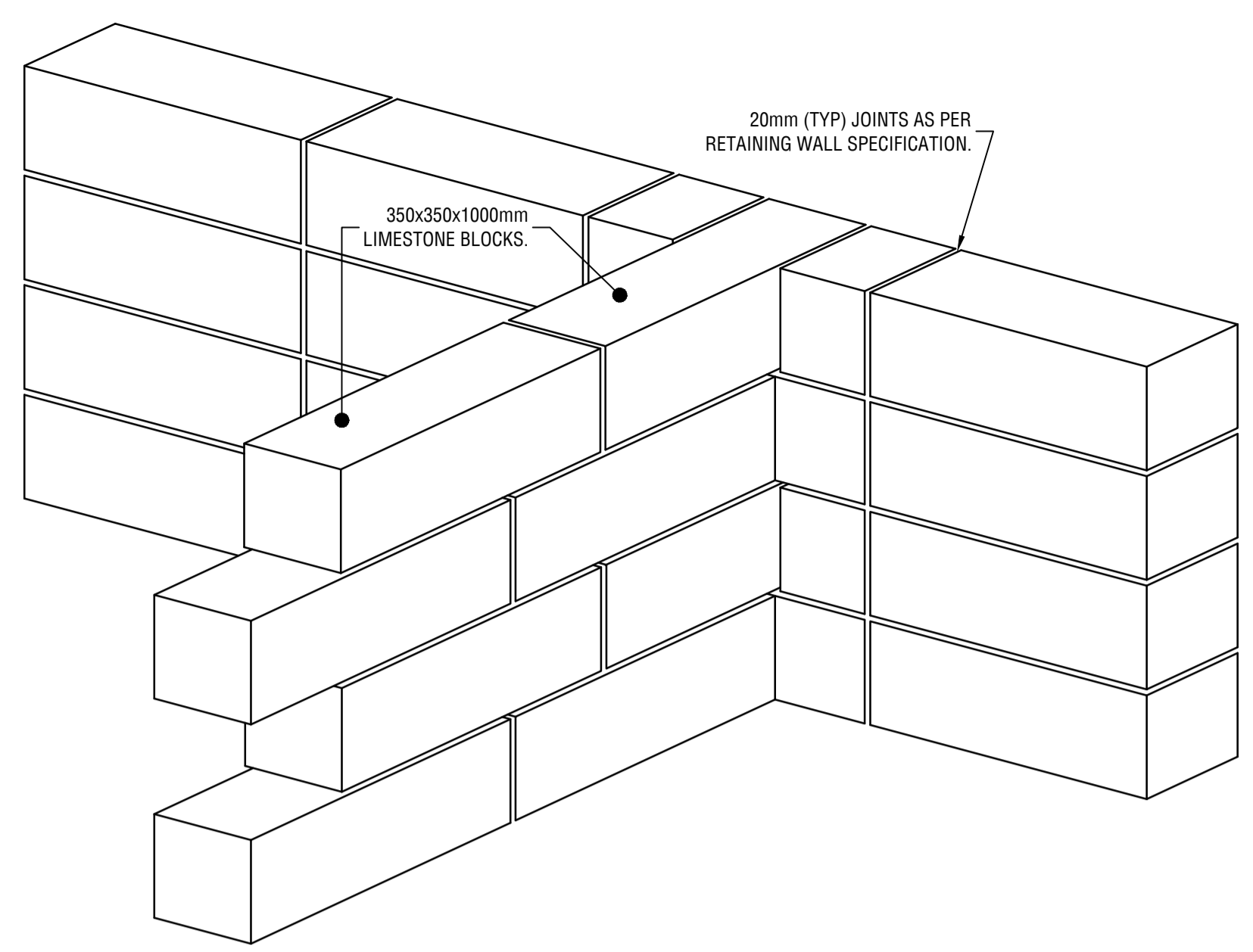




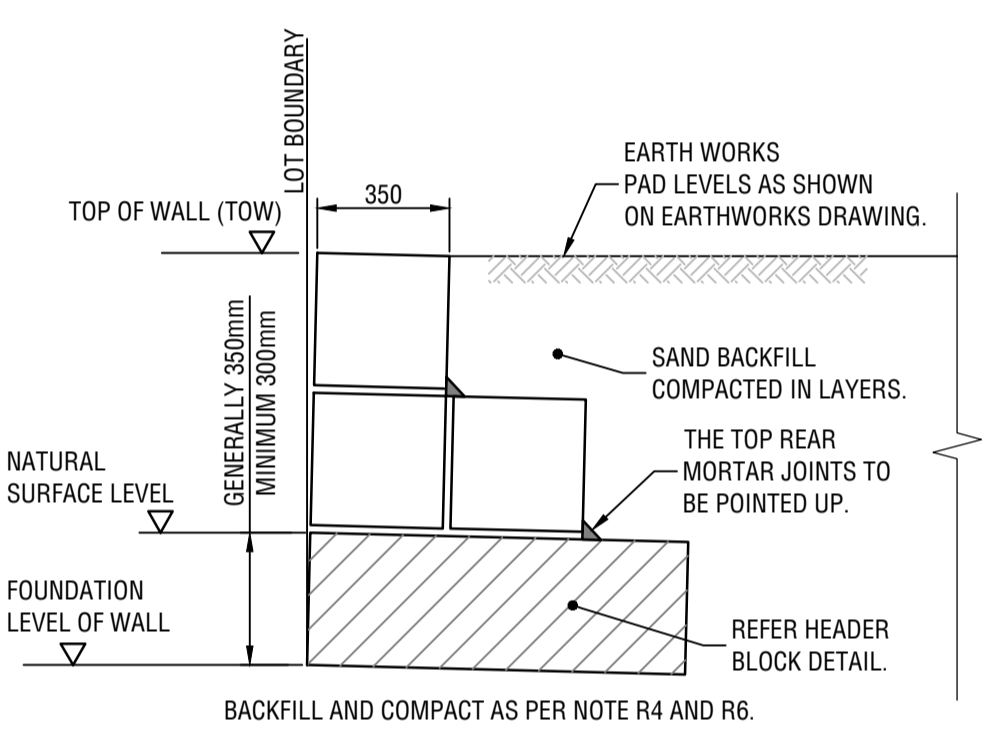
**EXCAVATION IN FRONT OF RETAINING WALL**  
SCALE 1 : 25



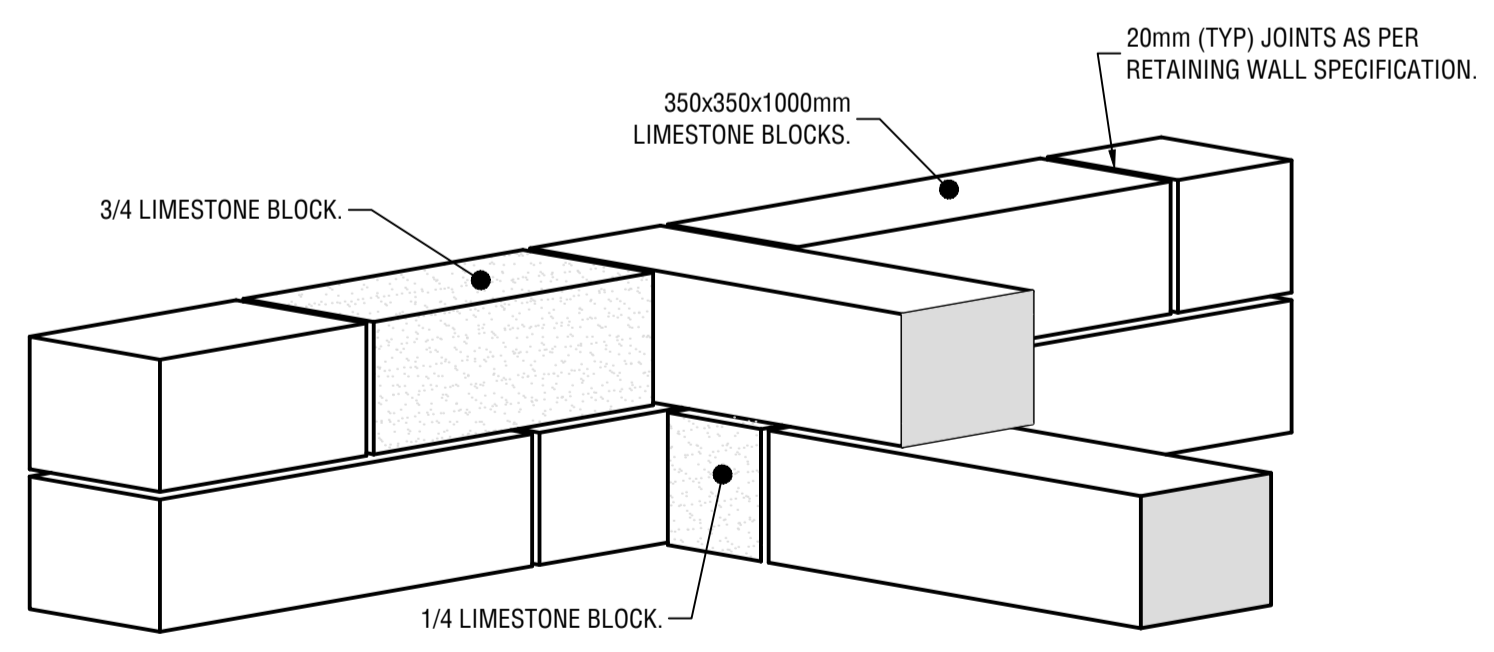
**ONE COURSE EXPOSED WALL PROFILE**  
(370 MAX. RETAINED HEIGHT)  
SCALE 1 : 25



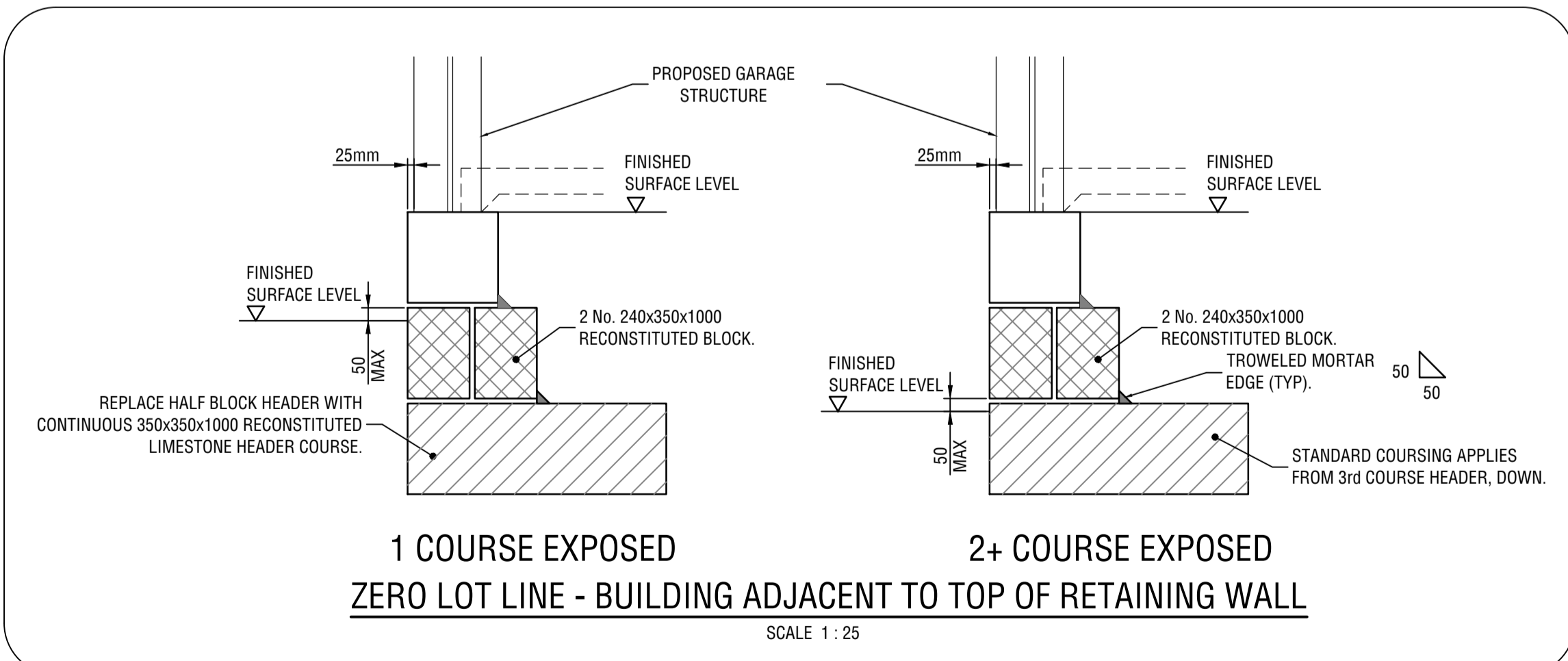
**RETAINING WALL INTERLOCK DETAIL**  
NOT TO SCALE



**TWO COURSE EXPOSED WALL PROFILE**  
(890 MAX. RETAINED HEIGHT)  
SCALE 1 : 25



**TYPICAL EDGE OF PLANTER BOX INTERLOCK DETAIL**  
NOT TO SCALE



**1 COURSE EXPOSED**  
**2+ COURSE EXPOSED**  
**ZERO LOT LINE - BUILDING ADJACENT TO TOP OF RETAINING WALL**  
SCALE 1 : 25

**NOTES**

FOR ALL NOTES REFER TO DRAWING KC01217.200 - C953

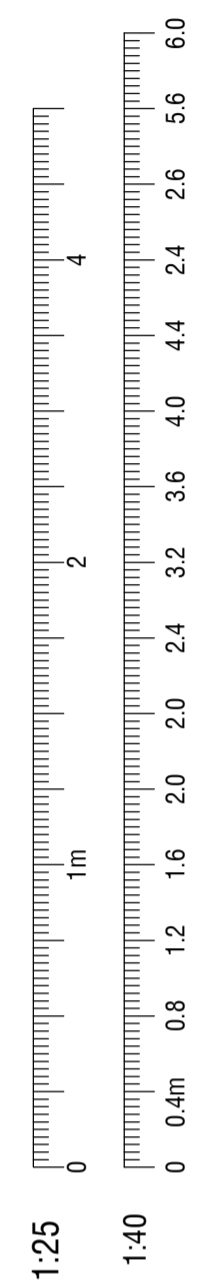
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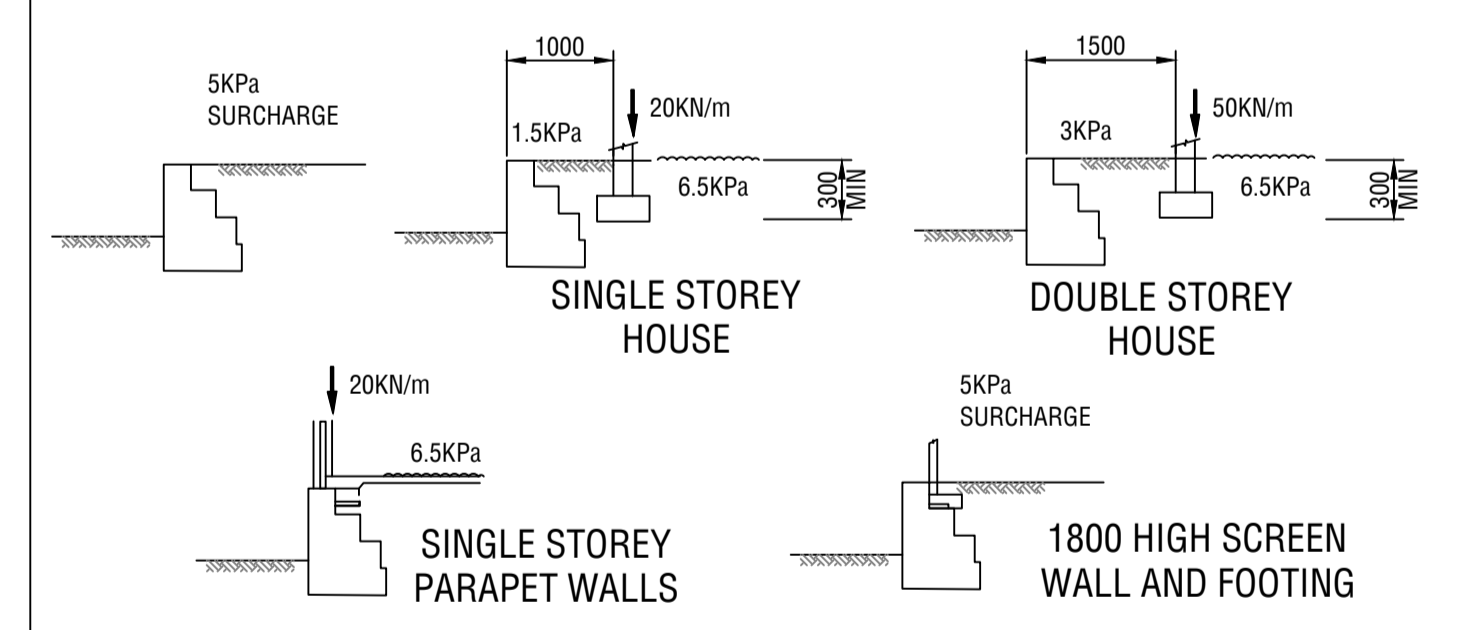


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KC Traffic and Transport Pty Ltd  
ABN 35 148 970 727  
7/110 Erindale Road, Balakatta WA 6021  
Phone: 08 9240 6560  
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CLIENT	FRP
PROJECT	LOT 395 MARMION AVENUE YANCHEP
DRAFTER	F.BOROVIC
DESIGNED	F.BOROVIC
DRAFTING CHECK	C.KLEYWEG
DESIGN REVIEW	C.KLEYWEG
REVIEWED PROJECT MANAGER	
APPROVED PROJECT DIRECTOR	

TITLE				
LOT 395 MARMION AVENUE YANCHEP STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 3 OF 4				
SHEET A1	DATUM PCG94	WAPC No. 162413	PROJECT No. KC01804.000	DRAWING No. C952
SCALE				A



# RETAINING WALL NOTES

## GENERAL NOTES:

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE OTHER RELEVANT CONTRACT DRAWINGS AND SPECIFICATIONS.
- G2. ALL WORK SHALL COMPLY WITH THE LATEST AUSTRALIAN STANDARDS AND ADDENDUMS. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G3. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MATERIALS FOR CONSTRUCTION SUCH THAT NO DEFECTS ARE INCURRED PRIOR TO CONSTRUCTION ACTIVITIES.
- G4. DO NOT SCALE DRAWINGS, ALL DIMENSIONS TO BE CHECKED ON SITE.
- G5. THE CONTRACTOR SHALL KEEP A COPY OF THE DRAWINGS ON SITE DURING THE CONSTRUCTION PERIODS.
- G6. THE CONTRACTOR SHALL OBTAIN 'DIAL BEFORE YOU DIG' SERVICE INFORMATION ON THE AREA AFFECTED BY THE WORKS PRIOR TO ANY CONSTRUCTION.
- G7. LEVELS ARE RELATIVE TO AHD.
- G8. THE CONTRACTOR SHALL REINSTATE ALL PUBLIC OR PRIVATE PROPERTY THAT HAS BEEN AFFECTED BY THE WORKS TO AN ORIGINAL OR SUPERIOR CONDITION OF ITS ORIGINAL STATE.

## RETAINING WALL DESIGN NOTES:

RW1. RETAINING WALLS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS4678 EARTH-RETAINING STRUCTURES AND ULTIMATE LOAD DESIGN AND PARTIAL LOAD FACTORS CONSISTENT WITH AS1170.1. DESIGN ALSO ACCOUNTS FOR THE FOLLOWING PARAMETERS:

- STRUCTURE CLASSIFICATION = A
- DESIGN LIFE = 25YRS
- EARTHQUAKE CATEGORY = 1

## RETAINING WALL DESIGN LOADS

- RD1. THE DESIGN WIND CRITERIA AS1170.2-2011 IS AS FOLLOWS:
  - REGION = PERTH METROPOLITAN REGION A1
  - BASIC WIND SPEED  $V_{90}$  = 148 KPH
  - TERRAIN CATEGORY 1
  - TOPOGRAPHIC MULTIPLIER  $M_t$  = 1.1
- RD2. RETAINING WALLS TYPE 'A' AND 'B' HAVE BEEN DESIGNED FOR THE FOLLOWING CONDITIONS:
  1. 5KPa SURCHARGE PLUS WIND LOAD ON FENCE REGION A1
  2. 4 KPa CONSTRUCTION SURCHARGE WITH A 10KN POINT LOAD 1M FROM WALL. WIND LOAD ON THE WALL SHEETING DURING CONSTRUCTION HAS NOT BEEN TAKEN INTO ACCOUNT. WALL SHEETING SHALL NOT BE PLACED UNTIL AFTER BACKFILLING TO THE RETAINING WALL & COMPACTION OF BACKFILL HAS OCCURRED.
  3. ALL RETAINING WALLS FOR THIS PROJECT ARE TO BE TYPE 'B' WALLS. THESE RETAINING WALLS HAVE ALSO BEEN DESIGNED FOR ADDITIONAL LOADS ARISING FROM SINGLE OR DOUBLE STOREY DWELLING FOOTINGS ADJACENT TO THE WALL. THESE LOAD CASES ARE ILLUSTRATED IN THIS DRAWING.

## DESIGN PARAMETERS:

RETAINED SOIL: NOTE, THIS INFORMATION SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER.

- D1. BACKFILL MATERIAL IS TO BE IMPORT PERTH SAND, MEDIUM DENSE. THE USE OF ALTERNATIVE BACKFILL MATERIALS WILL REQUIRE THE APPROVAL FROM THE SUPERINTENDENT.
- D2. EFFECTIVE SOIL FRICTION ANGLE = 34 degrees
- D3. DENSITY OF BACKFILL MATERIAL = 18 kN/m<sup>3</sup>
- D4. SOIL BEARING CAPACITY = 150 KPa. IF AN ALLOWABLE BEARING PRESSURE OVER 150 KPa IS REQUIRED, SEPARATE TESTING AND VERIFICATION WILL BE NECESSARY.

OTHER:

- D5. ANY IMPORTED STRUCTURAL FILL TO SUPPORT FOOTINGS SHALL COMPLY WITH THE REQUIREMENTS IN NOTE B3.
- D6. FOOTINGS SHALL BE TAKEN DOWN TO THE DEPTHS INDICATED IN KC00654.000-C950-C952 BELOW UNDISTURBED GROUND LEVEL.

## BACKFILLING NOTES:

- B1. STABILIZED IMPORT FILL SHALL CONSIST OF EARTH WORKING SAND (CLEAN AND POROUS); FREE FROM CLAY AND ORGANIC MATERIAL; BOUND WITH 5% CEMENT (PORTLAND CEMENT OR APPROVED EQUIVALENT BY SUPERINTENDENT) PERCENTAGE BASED ON VOLUME.
- B2. STRUCTURAL IMPORT FILL SHALL HAVE A PLASTICITY INDEX LESS THAN 5%.
- B3. IN ALL CASES, THE BACKFILL AND COMPACTION SHALL BE SELECTED SUCH THAT, ONCE COMPACTED, THE STANDARD OF COMPACTION CAN BE MEASURED USING A STANDARD PERTH PENETROMETER. MIN 95% MMD FOR COHESIVE SOILS AND 70% MIN DENSITY INDEX FOR COHESION-LESS SOILS.
- B4. BACKFILLING BEHIND THE RETAINING WALLS IS NOT PERMITTED UNTIL 4 DAYS AFTER THE WALLS HAVE BEEN BUILT.
- B5. COMPACTION OF BACKFILL SHALL BE DONE USING A STEEL PLATE COMPACTOR TO ACHIEVE THE COMPACTION REQUIREMENTS STATED IN NOTE B3.
- B6. TESTING OF COMPACTED BACKFILL SHALL BE CARRIED OUT BY A NATA REGISTERED LABORATORY AT THE RATE OF ONE TEST PER 200 CUBIC METRES PLACED RANDOMLY THROUGHOUT THE LENGTH AND DEPTH.

## DRAINAGE:

- D1. SUBSOIL DRAINAGE PIPE MATERIAL AND GEOFABRIC MATERIAL SHALL COMPLY WITH THE CONTRACT SPECIFICATION DOCUMENTS FOR THIS PROJECT.
- D2. METAL BEDDING FOR THE SUBSOIL DETAIL SHALL COMPLY WITH THE CONTRACT SPECIFICATION DOCUMENTS AND BE APPROVED BY THE SUPERINTENDENT PRIOR TO INSTALLATION.

## ANTI-GRAFFITI REQUIREMENTS:

- A1. RETAINING WALLS TO BE ANTI-GRAFFITI COATED (NON-SACRIFICIAL).
- A2. AS-CONSTRUCTED OF ANTI-GRAFFITI COATING SHALL BE PROVIDED TO THE SUPERINTENDENT.
- A3. CLEANING SPECIFICATION SHALL BE PROVIDED PRIOR TO THE APPLICATION OF THE ANTI-GRAFFITI COATING.

## LIMESTONE RETAINING WALL NOTES:

- R1. REMOVE ALL DEBRIS FROM EXISTING SOIL AND USE ONLY CLEAN SAND FILL REFER TO NOTE D1 FOR SUITABLE BACKFILL MATERIAL AND R4 FOR FOUNDATION COMPACTION.
- R2. RUBBLE SHALL NOT BE USED TO FILL Voids OR FOR USE AS MATERIAL FOR CONSTRUCTION WITHOUT THE WRITTEN APPROVAL FROM THE SUPERINTENDENT.
- R3. NO HEAVY CONSTRUCTION OR COMPACTION EQUIPMENT SHALL BE ALLOWED OR OPERATED WITHIN HEIGHT 'H' FROM THE REAR OF WALL OR 1000mm (WHICHEVER IS GREATER), UNLESS THE LOADS ARE COMPLIANT WITH NOTE R2.
- R4. COMPACTION OF SOIL UNDERNEATH FOUNDATIONS BLOCKS SHALL BE 95% MAX MOD DRY DENSITY (COHESIVE SOILS) THROUGH A MINIMUM DEPTH OF 600mm; PLACED IN LAYERS OF 300mm. FLOOR LOADINGS UP TO 120 KPa AND ISOLATED PAD OR STRIP FOOTING LOADINGS UP TO 100 KPa SHALL BE 98% MAX MOD DRY DENSITY (COHESIVE SOILS).
- R5. IF CLAY OR SUB-SOIL CONDITION OTHER THAN SAND IS ENCOUNTERED IN THE LOCATION IN WHICH FOUNDATION BLOCKS / FOOTINGS ARE TO BE PLACED; THE CONTRACTOR SHALL REFER TO NOTE R6 AND DETAIL KC00654.000-C952.
- R6. WHERE CLAYEY MATERIAL IS FOUND IN THE PROPOSED LOCATION FOR FOUNDATION / FOOTING PLACEMENT, THE CONTRACTOR SHALL EXCAVATE 600MM AND REPLACE THE CLAYEY MATERIAL WITH 5% STABILIZED IMPORT FILLAS PER NOTE B1.
- R7. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE COMPACTION WILL NOT HAVE ADVERSE EFFECT OF THE RETAINING WALLS.
- R8. A LICENSED SURVEYOR SHALL BE USED BY THE CONTRACTOR TO SETOUT ALL WORKS ASSOCIATED WITH RETAINING WALL CONSTRUCTION.
- R9. ALL BLOCKS FOR RETAINING WALLS SHALL BE RECONSTITUTED LIMESTONE BLOCKS WITH A MINIMUM DRY DENSITY OF 1.8t/m<sup>3</sup>. THE STANDARD BLOCK SIZE SHALL BE 350mmX350mmX1000mm (WxHxL) WITH A MINIMUM COMPRESSIVE STRENGTH OF 5MPa.
- R10. ALL BLOCKS SHALL BE SOLID, WHOLE CUT OR SAW CUT.
- R11. ALL VISIBLE LIMESTONE BLOCKS (INCLUDING THE FRONT, TOP AND REAR) SHALL BE OF CRÈME COLOUR, HIDDEN STONES SHALL BE GREY OR CRÈME IN COLOUR. VISIBLE LIMESTONE BLOCKS SHALL BE POINTED WITH CREME COLOURED MORTAR AS SHOWN IN DETAIL1 IN KC00654.000-C950.
- R12. THE CONTRACTOR SHALL PLACE INTERLOCKING KEYSTONES THROUGHOUT THE WALLS AS SHOWN IN KC00654.000-C950.
- R13. MORTAR MIX TO BE 1:1:6. CEMENT:LIME:SAND FOR BOTH TYPE A AND B WALLS. ALL LIMESTONE BLOCKS SHALL BE FULLY CEMENTED IN PLACE IN ACCORDANCE WITH THE DETAILS SHOWN IN KC00654.000-C950.
- R14. ALL BED AND PERPENDICULAR JOINTS ARE TO BE FULLY MORTARED INCLUDING CREAM MORTAR TO FOOTING BLOCKS AND BACK OF THE TOP COURSE.
- R15. CONTROL JOINTS (CJ) SHALL BE CONSTRUCTED WITHIN THE RETAINING WALL WHEN THE ANGLE BETWEEN FACES OF TWO WALLS EXCEEDS 180 degrees. THE CJ IS TO BE LOCATED ON ONE SIDE OF THE CHANGE OF DIRECTION, AT A DISTANCE AWAY FROM THE DIRECTION OF CHANGE EQUAL TO THE WIDTH OF THE WALL AND SHALL BE 20mm WIDE. SUITABLE FILLING MATERIALS AS PER NOTE R17.
- R16. FILLING MATERIALS FOR CJ SHALL BE 250mm DIA. FOAM CLOSED CELL BACKING ROD COVERED WITH A 25mm DEEP MASTIC OF COLOUR TO MATCH WALL MORTAR OR A POLYSTYRENE SHEETING OR EXPANDED POLYTHRYENE COVERED WITH A 25mm DEEP MASTIC COLOUR TO MATCH WALL MORTAR. DRAPE A 1000mm WIDE STRIP OF BIDIUM FILTER CLOTH OVER THE REAR OF THE JOINTS FOR THE FULL HEIGHT OF THE WALL.
- R17. THE CONTROL JOINTS SHALL PROPERLY FORMED IN A STRAIGHT WALL AT 20m CENTERS MAX, AT CORNER LOCATIONS AS PER CORNER CONTROL JOINT DETAIL AS SHOWN KC00654.000-C950, AND AT SIGNIFICANT CHANGES IN WALL HEIGHT (> 700mm STEP), REQUIREMENT FOR A CONTROL JOINT SHALL BE DETERMINED ON SITE IN EACH CASE. THE CONTRACTOR SHALL FORM THE VERTICAL JOINT TO BE FORMED THROUGH THE FULL HEIGHT AND WIDTH OF THE WALL. NO BRIDGING ACROSS THE FORMED JOINT IS PERMITTED. PROVIDE BACKING STRIP AND SEAL AS PER CONTROL JOINT DETAIL AND REMAINDER OF JOINT TO BE CLEAR.
- R18. ALL WALLS EXCEEDING A STRAIGHT LENGTH OF 20m SHALL HAVE CONTROL JOINTS SPACED AT DISTANCES NO GREATER THAN 20m.
- R19. FENCE POSTS TO BE LOCATED MIN 1000mm FROM A CJ. IF A POST IS REQUIRED WITHIN 1000mm OF A CJ, INSTALL POST TO BOTH SIDES OF A CJ WITHIN 350mm.
- R20. ALL LOOSE MATERIAL IS TO BE REMOVED FROM THE BLOCKS AND WETTED DOWN PRIOR TO BEDDING IN MORTAR.
- R21. THE MAX VOID RATIO IS TO BE 20%.
- R22. ALL DIMENSIONS ARE SHOWN AS WIDTH X HEIGHT X DEPTH (LENGTH).
- R23. THE CONTRACTOR SHALL INFORM THE SUPERINTENDENT UPON COMPLETION OF THE CONSTRUCTION AND BACKFILL. WRITTEN CERTIFICATION SHALL VERIFY THE COMPLETED WORKS HAVE BEEN CARRIED OUT IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.
- R24. UPON COMPLETION OF THE RETAINING WALLS AND LOT LEVELLING, FENCING SHALL BE ERECTED. IN AREAS WHERE THE EXPOSED WALL HEIGHT EXCEEDS 900mm, AND NO OTHER FENCING IS PRESCRIBED, SAFETY FENCING SHALL BE PLACED IN ACCORDANCE WITH KC00654.000-C950.
- R25. IN AREAS WHERE THE WALL HEIGHT EXCEEDS 900mm, 'WARNING' SIGNS SHALL BE INSTALLED WITH WORDING AS PER EXAMPLE BELOW. THE CONTRACTOR SHALL INSTALL ONE SIGN PER FIVE LOTS WITH BLACK LETTERING ON A YELLOW BACKGROUND.

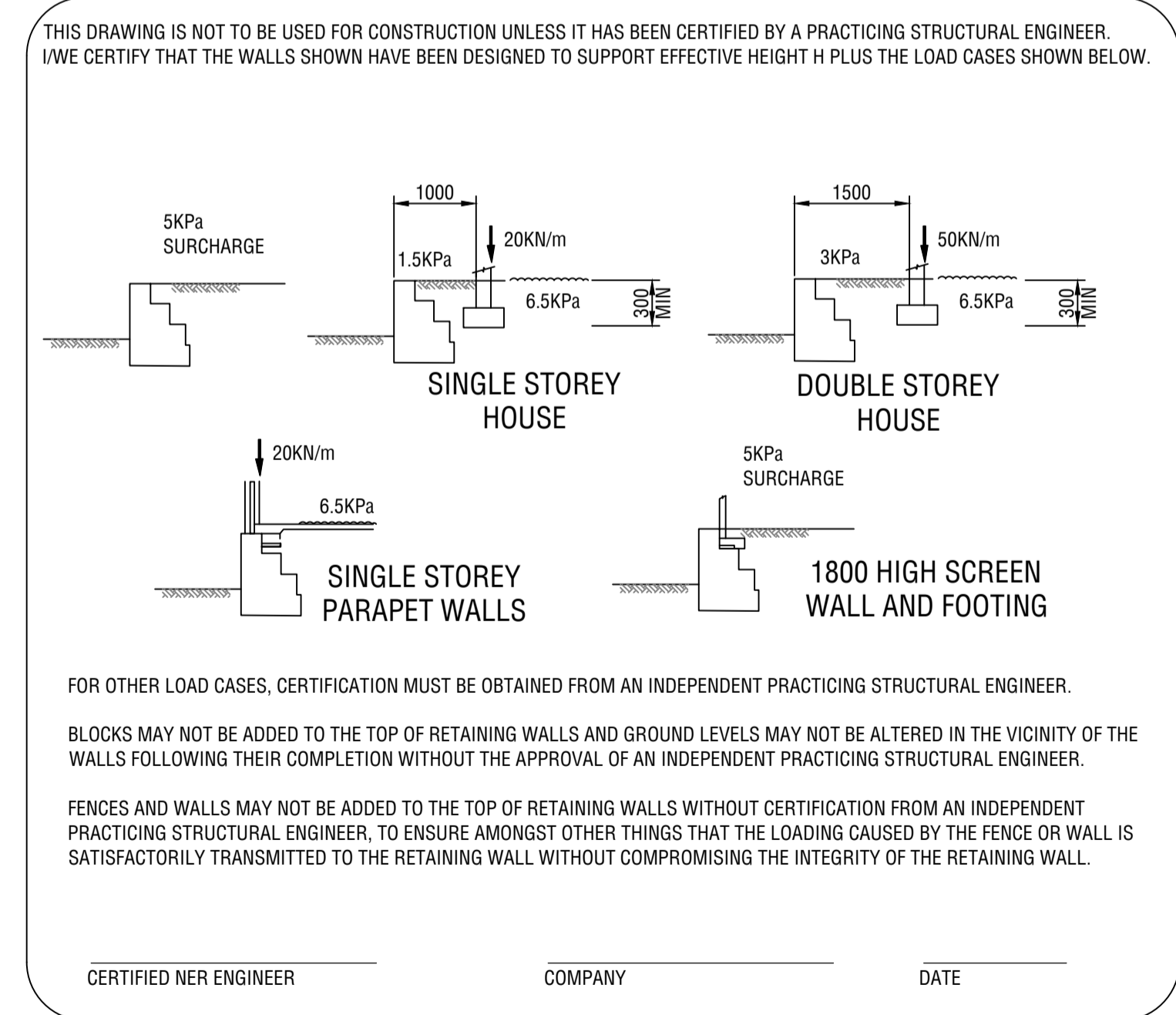
**DANGER**  
DO NOT WALK ON OR NEAR THE RETAINING WALLS.  
YOU DO SO AT YOUR OWN RISK.  
RISK OF SERIOUS INJURY MAY OCCUR FOR WHICH  
THE OWNER, DEVELOPERS AND CONTRACTORS  
WILL NOT ACCEPT LIABILITY.

## NOTES:

1. TYPE 'A' WALLS ARE THOSE WHERE THE LOT BOUNDARY IS ON REAR OF THE TOP OF THE BLOCK ( AS SHOWN ).
2. TYPE 'B' WALLS ARE THOSE THAT ARE CONTAINED WHOLLY WITHIN THE LOT.

## FENCE NOTES:

1. FENCE FOOTINGS INTEGRAL WITH WALL
2. 1.8m HIGH FENCE FIXED TO POSTS AND PIERS TO MANUFACTURERS SPECIFICATION.



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A	08/04/24	CK	CK			ISSUED FOR INFORMATION

REV No.	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT

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CLIENT <b>FRP</b>			
PROJECT <b>LOT 395 MARMION AVENUE YANCHEP</b>			
DRAFTER F.BOROVIC	DRAFTING CHECK C.KLEYWEG	REVIEWED PROJECT MANAGER	APPROVED PROJECT DIRECTOR
DESIGNED F.BOROVIC	DESIGN REVIEW C.KLEYWEG		

TITLE <b>LOT 395 MARMION AVENUE YANCHEP STANDARD DETAILS, LIMESTONE RETAINING WALL SHEET 4 OF 4</b>				
SHEET <b>A1</b>	DATUM PCG94	WAPC No. 162413 SCALE	PROJECT No. <b>KC01804.000</b>	DRAWING No. <b>C953</b>
				REVISION <b>A</b>