

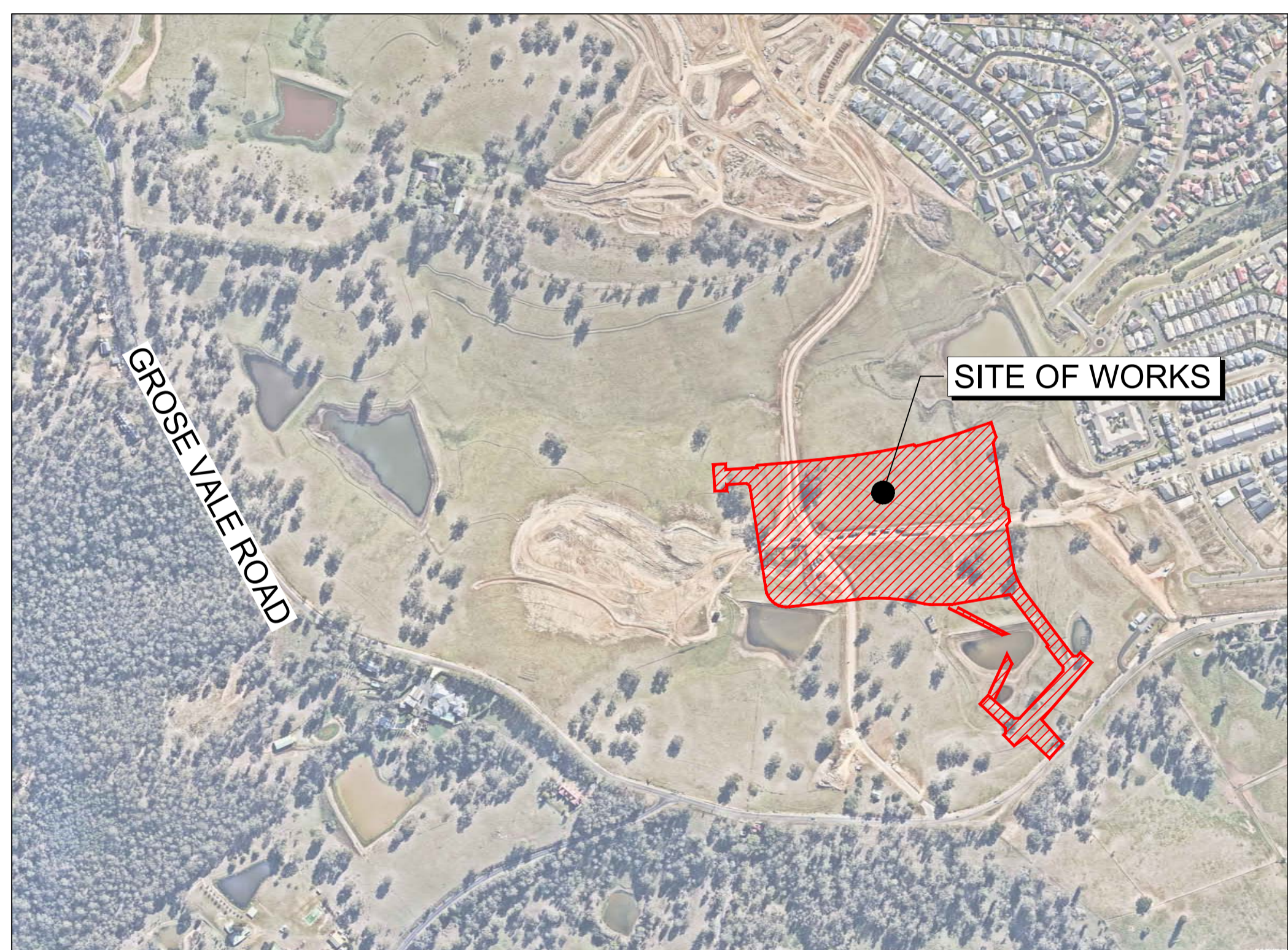
REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE PROPOSED CIVIL WORKS FOR SUBDIVISION WORKS CERTIFICATE (HAWKESBURY CITY COUNCIL - DA0498/18)

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

No works are to occur outside of the property boundary unless written approval from Hawkesbury Council has been received.



Survey By:
VINCE MORGAN SURVEYORS

REGISTERED SURVEYORS
 1/77 UNION ROAD PENRITH NSW 2750
 Ph. (02) 4721 5293

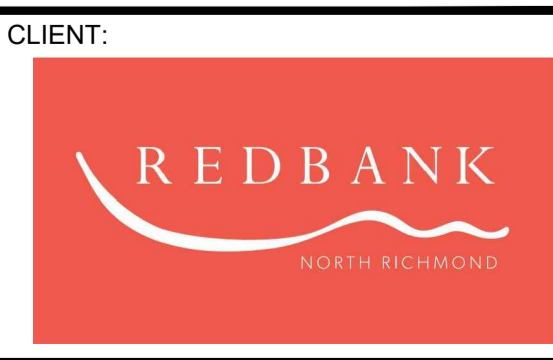
REF: NORTH RICHMOND - DETAIL SURVEY UPDATE 15 MARCH 2017 & 5th MAY 2017, 11 DEC 2019
 LOT LAYOUT PLAN OF SUBDIVISION REF: 22a-REDBANK-PRO-DP1266750-PLAN-DRAFT-201203

Plotted: 21 July 2021 1:54:14 PM File Name: \\jwp.local\dfs\ubbs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1000.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE	
D	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
C	ROAD 54 AMENDED	MP	VS	RO	RO	16/06/21
B	AMENDED EXTENT OF WORKS	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

J. WYNDHAM PRINCE
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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 COVER SHEET

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1000

PROJECT No: **110185-12**
 SHEET No: **CC1000**
 D

LEGEND table with columns: DESCRIPTION, PROPOSED, EXISTING, FUTURE. Includes symbols for KERB & GUTTER, ROLL KERB, SLOTTED KERB, GUIDE POSTS, etc.

COMPACTION SPECIFICATION

- 1) WITHIN FULL WIDTH OF ROAD CARRIAGEWAY PLUS 1.0m EITHER SIDE -
a) ALL SUBGRADE SHALL BE CARRIED UP IN HORIZONTAL LAYERS, OF NOT MORE THAN 300mm THICK LOOSE MEASUREMENT, IF REQUIRED, AND SHALL HAVE EACH LAYER COMPACTED TO A 100% STANDARD DRY DENSITY RATIO...
2) WITHIN FULL WIDTH OF ROAD FOOTPATH / VERGE EXCLUDING 1.0m BESIDE ROAD CARRIAGEWAY EITHER SIDE -
3) WITHIN LOTS -
4) EARTHWORKS AND SITE PREPARATION TO BE UNDERTAKEN IN ACCORDANCE WITH GEOTECHNICAL INVESTIGATION REPORT...
5) TOPSOIL
6) BATTERS

CIVIL PLAN INDEX

Table with columns: PLAN NO., PLAN NAME, REV. Lists various sheets like COVER SHEET, GENERAL NOTES, ROAD LONGITUDINAL SECTIONS SHEET 1-5, etc.

CIVIL PLAN INDEX

Table with columns: PLAN NO., PLAN NAME, REV. Lists sheets like DRAINAGE LONGITUDINAL SECTIONS SHEET 6-12, RETAINING WALL PLAN, etc.

GENERAL NOTES

- 1. ALL WORKS ARE TO BE IN ACCORDANCE WITH HAWKESBURY CITY COUNCIL'S DEVELOPMENT CONTROL PLAN 2009, APPENDIX E "CIVIL WORKS SPECIFICATIONS", PART I, II & III.
2. EXISTING SURVEY MARKS SHALL BE RETAINED AT ALL TIMES. WHERE RETENTION IS NOT POSSIBLE THE SUPERINTENDENT MUST BE NOTIFIED AND CONSENT RECEIVED PRIOR TO THEIR REMOVAL.
3. THE CONTRACTOR MUST OBTAIN CURRENT DIAL BEFORE YOU DIG UTILITIES PLAN BY DIALING PH 1100, LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION...
4. THE CONTRACTOR SHALL NOT ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE OWNERS...
5. THE CONTRACTOR SHALL MAINTAIN SERVICES AND ALL WEATHER ACCESS AT ALL TIMES TO ADJOINING PROPERTIES.
6. FILLING IS TO BE FROM A NOMINATED SOURCE, OF SOUND CLEAN MATERIAL, FREE FROM LARGE ROCK, STUMPS, CONTAMINATED MATTER, INDUSTRIAL AND BUILDING WASTE...
7. SITE FILL AREAS - THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
8. ALL SITE FILLING TO BE COMPACTED TO 98% STANDARD COMPACTION AND SHALL BE CONTROLLED BY A REGISTERED SOIL LABORATORY...
9. ALL SITE REGRADING AREAS SHALL BE GRADED AT A MINIMUM 1% TO THE ENGINEERS' REQUIREMENTS.
10. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED BY THE SUPERINTENDENT.
11. VEHICULAR CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER WHERE SHOWN.
12. PRAM CROSSINGS SHALL BE CONSTRUCTED IN KERB AND GUTTER IN ACCORDANCE WITH COUNCIL'S STANDARD DRAWING.
13. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING CONDITIONS.
14. DIMENSIONS OF ANY DETAIL SHALL NOT BE SCALED - DIMENSIONS, IF IN DOUBT, SHALL BE VERIFIED BY THE SUPERINTENDENT.
15. ALL CONSTRUCTION AND RESTORATION WORK ON COUNCIL'S ROAD AND FOOTPATH AREA ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED DRAWINGS AND COUNCIL'S STANDARD SPECIFICATIONS.
16. NO FILL MATERIAL IS TO BE IMPORTED TO THE SITE. EXISTING STOCKPILES AND MATERIAL WITHIN THE REDBANK SITE ARE TO BE USED FOR THE EARTHWORKS.

STORMWATER NOTES

- 1. STORMWATER DESIGN CRITERIA: AVERAGE RECURRENCE INTERVAL: 1:100 MAJOR SYSTEM, 1:5 MINOR SYSTEM
2. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (1998) AND AS/NZS 3500 3.2 (1998).
3. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
4. GRATES AND COVERS SHALL CONFORM TO AS 3996.
5. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
6. ALL DRAINAGE LINES THROUGH LOTS SHALL BE CONTAINED WITHIN THE FOLLOWING EASEMENTS:
a) 1.2m WIDE FOR PIPELINE < 225Ø TO BE CREATED.
b) 2.5m WIDE FOR PIPELINE ≥ 300Ø TO BE CREATED
c) STREET DRAINS - REFER TO COUNCIL'S DESIGN GUIDELINES SUBDIVISION DEVELOPMENTS.
7. DRAINAGE LINES UNDER ROADS SHALL BE BACKFILLED WITH NON-COHESIVE SAND AND HAVE 3m OF SUBSOIL DRAIN WRAPPED IN APPROVED FILTER SOCK, DISCHARGING INTO DOWN STREAM PITS. FOR PIPELINES GREATER THAN 525Ø, SUBSOIL DRAIN SHALL BE PROVIDED ON BOTH SIDES OF THE TRENCH.
8. ALL STORMWATER PIPES WITHIN ROADS TO BE REINFORCED CONCRETE PIPE (RRJ) CLASS 2 UNLESS OTHERWISE INDICATED.
9. ALL INTERALLOTMENT DRAINAGE LINES SHALL BE LAID AT A MINIMUM GRADE OF 1% UNLESS OTHERWISE INDICATED.
10. DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS.
11. STEP IRONS REQUIRED WHERE THE PIT EXCEEDS 1200 IN DEPTH. REFER TO COUNCIL DRAWING SD41
12. WHERE GRADES EXCEED 14.0%, BULKHEADS TO BE PROVIDED IN ACCORDANCE WITH SECTION 5.12 OF COUNCIL'S CIVIL WORKS SPECIFICATION PART 2 CONSTRUCTION.
13. SUBSOIL DRAIN TO BE RUN BOTH SIDE OF ROAD WITH CAPPED FLUSH POINTS AND CONNECTED TO NEAREST STORMWATER PIT.
14. ALL PIT GRATES TO HAVE LOCKING CLIP.
15. ALL STORMWATER PIPES WITHIN THE ROAD RESERVE AND OPEN SPACE TO BE INSTALLED TO H33 STANDARD IN ACCORDANCE WITH AS3725 - DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES.
16. BACKFILL OF ALL TRENCHES INCLUDING SEWER THAT IS WITHIN THE ZONE OF INFLUENCE OF THE PAVEMENT SHALL BE STABILISED SAND OR SUITABLE BACKFILL COMPACTED 98% STANDARD.

NOTE: UTILITIES SHOWN MAY NOT INCLUDE ALL SERVICES WITHIN THE LIMIT OF WORKS



J. WYNDHAM PRINCE CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS. PO Box 4366 PENRITH WESTFIELD NSW 2750

REDBANK NORTH RICHMOND logo

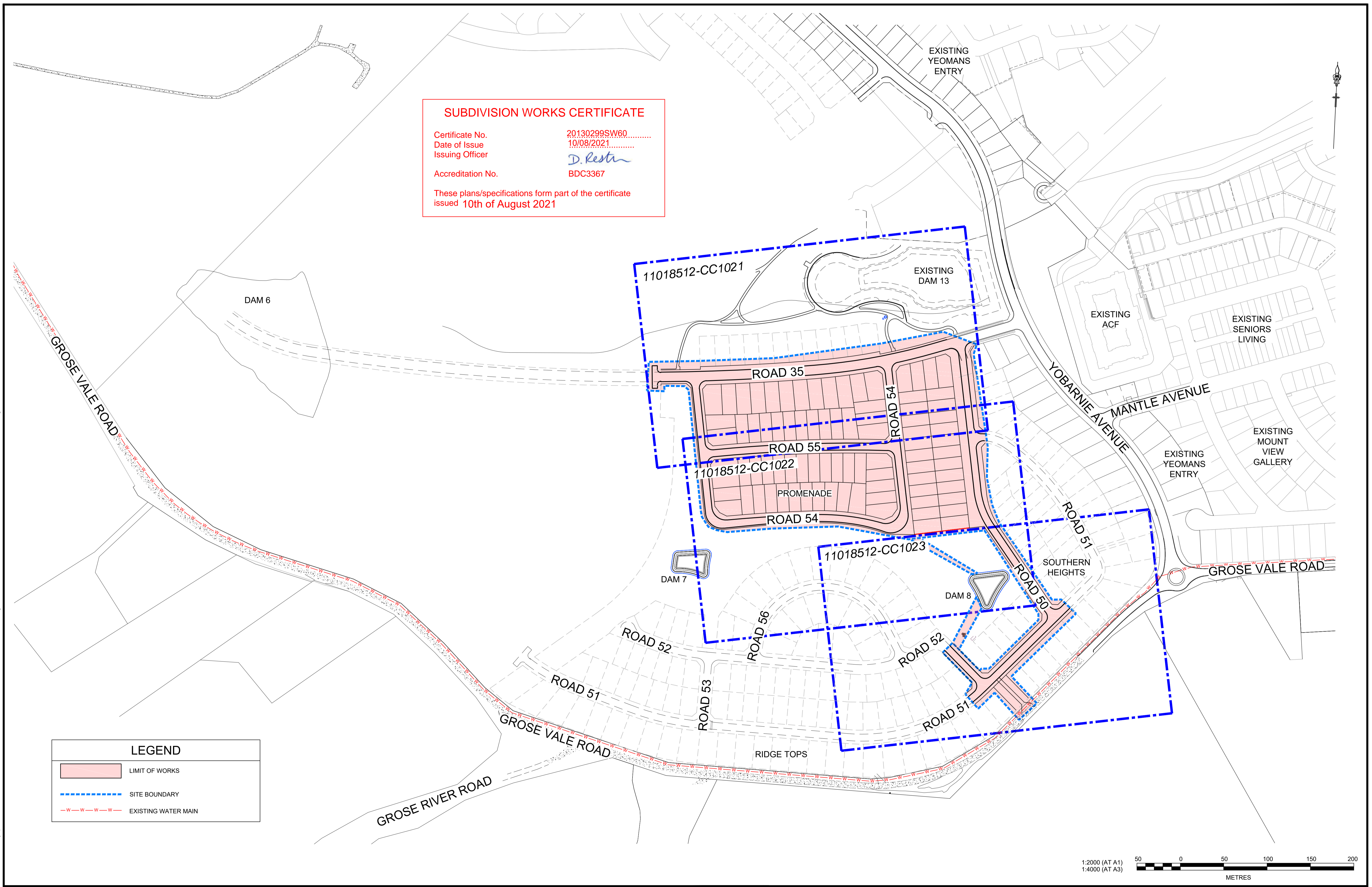
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE GENERAL NOTES, INDEX & LEGEND. PROJECT No: 110185-12 SHEET No: CC1001. PLAN No: 110185-12-CC1001

SUBDIVISION WORKS CERTIFICATE

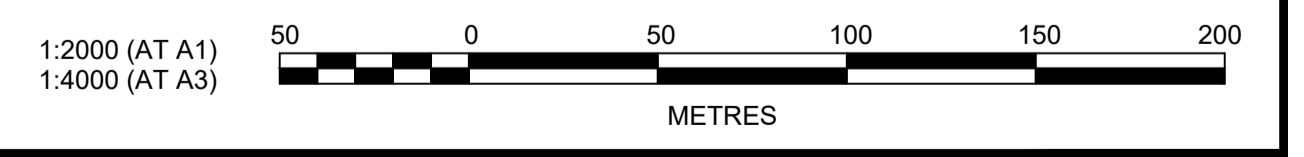
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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LEGEND

	LIMIT OF WORKS
	SITE BOUNDARY
	EXISTING WATER MAIN



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AMENDMENT	DES	DRN	CKD	APR	DATE
E	MP	VS	RO	MS	21/07/21
D	MP	MP	RO	RO	16/06/21
C	JET	JET	MP	RO	13/05/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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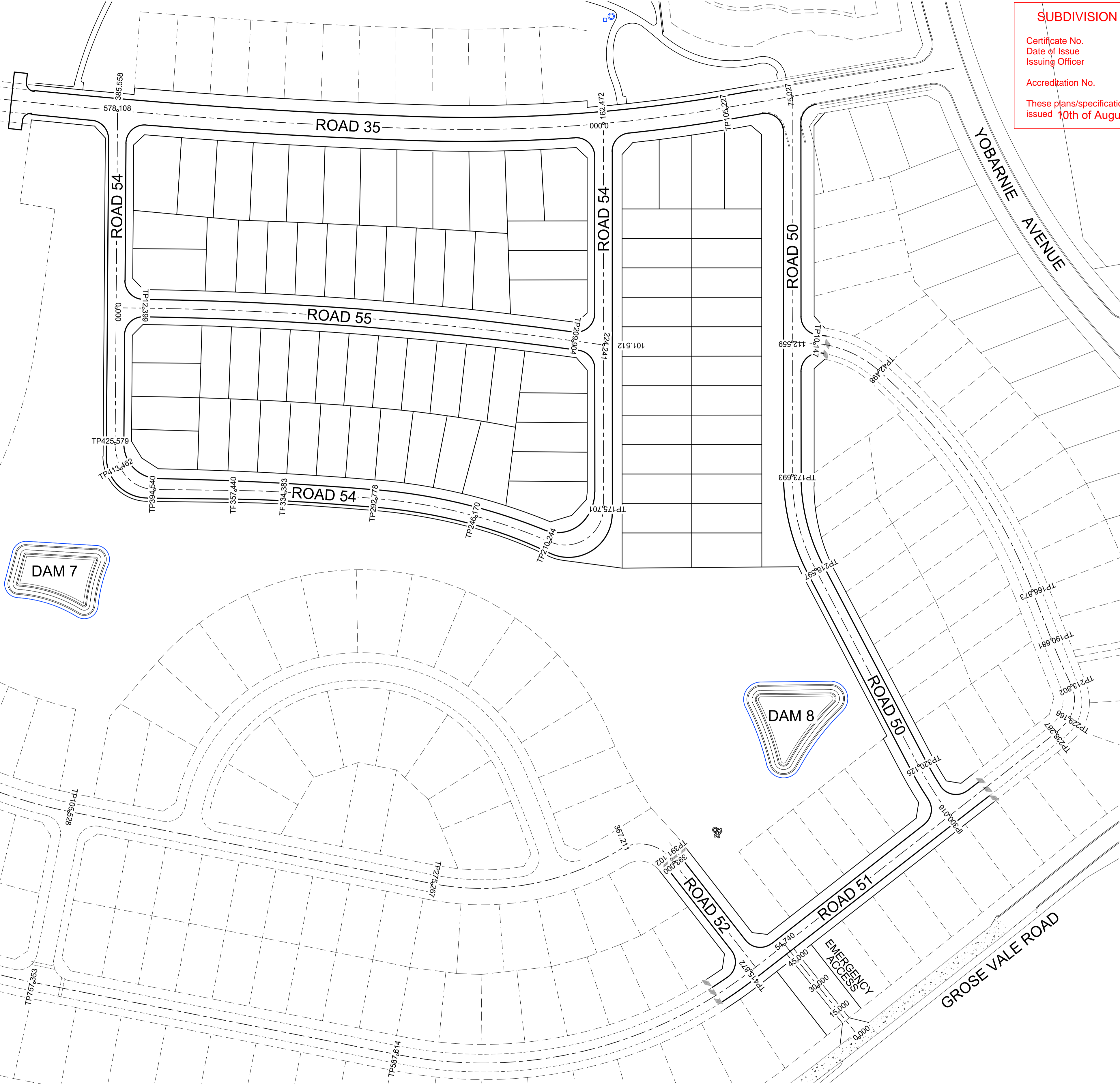
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 GENERAL LAYOUT PLAN

PROJECT No: 110185-12
 SHEET No: CC1002

PLAN No: 110185-12-CC1002

AMOUNT: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1002 E

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SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resta*
 Accreditation No. BDC3367

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ROAD 35					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286743.56	6281514.69	251°02'36.11"		
105.23	286644.04	6281490.5	251°02'36.11"		
133.85	286516.98	6281471.2		700	57.25
162.47	286389.2	6281464.14	255°43'44.35"		
204.63	286548.3	6281453.74		700	84.31
246.78	286506.45	6281448.32	262°37'46.91"		
316.17	286437.61	6281439.42		2500	138.78
385.56	286368.39	6281434.35	265°48'36.85"		
607.85	286146.1	6281418.06		2500	444.59
830.15	285924.44	6281441.36	275°59'58.56"		
879.9	285873.92	6281446.67		200	99.5
929.65	285832.05	6281475.45	304°30'11.90"		
932.32	285829.65	6281476.96	304°30'11.90"		

ROAD 50					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286672.61	6281490.31	170°46'34.49"		
173.69	286700.45	6281316.87	170°46'34.49"		
196.15	286704.12	6281296.26		-93	44.9
218.6	286717.86	6281277.95	143°06'41.88"		
320.13	286778.81	6281196.75	143°06'41.88"		
333.65	286786.95	6281185.9		-150	27.06
347.18	286796.91	6281176.69	132°46'38.06"		

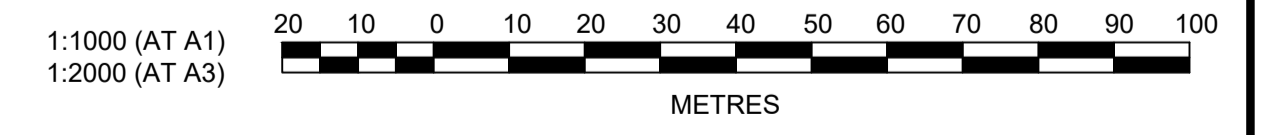
ROAD 51					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286690.65	6281379.21	85°03'11.17"		
10.15	286700.76	6281380.09	85°03'11.17"		
26.32	286717.46	6281381.53		50	32.35
42.5	286731.65	6281372.62	122°07'30.80"		
104.69	286785.35	6281338.9		260	124.37
166.87	286817.5	6281284.25	149°32'00.56"		
190.68	286829.57	6281263.73	149°32'00.56"		
202.24	286835.43	6281253.76		-300	23.12
213.8	286842.05	6281244.28	145°07'04.19"		
221.48	286846.84	6281237.4		15.5	15.36
229.17	286843.71	6281229.63	201°54'06.64"		
233.73	286841.99	6281225.35		25	9.12
236.29	286838.86	6281221.97			
300.02	286796.91	6281176.69			
415.87	286718.16	6281091.7	222°48'55.65"		
501.74	286655.93	6281024.53		200	171.74
587.61	286564.42	6281027.75	272°00'57.16"		
757.35	286394.79	6281033.72	272°00'57.16"		
799.33	286352.55	6281035.21		295	83.95
841.3	286312.44	6281048.49	288°19'12.69"		
904.05	286252.67	6281068.21	288°19'12.69"		
967.73	286191.49	6281088.54		300	127.37
1031.41	286143.93	6281132.34	312°38'42.83"		

ROAD 54					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286589.2	6281464.14	170°46'34.35"		
175.7	286617.37	6281290.71	170°46'34.35"		
192.97	286621.61	6281264.57		17.5	34.54
210.24	286595.9	6281270.92	283°52'14.85"		
228.21	286578.43	6281275.23		-260	35.93
245.17	286560.54	6281277.1			
269.47	286537.3	6281279.52		-260	46.61
292.78	286514	6281277.76			
313.58	286493.25	6281276.19		-1500	41.6
334.38	286472.56	6281274.05			
345.91	286461.09	6281272.87		-505.5	23.06
357.44	286449.69	6281271.16			
394.54	286412.99	6281265.66	261°28'48.84"		
404	286402.6	6281264.11		17.5	18.92
413.46	286396.35	6281272.54	323°25'56.21"		
419.52	286392.66	6281277.51		25	12.12
425.58	286391.72	6281283.61	351°12'08.99"		
578.11	286368.39	6281434.35	351°12'08.99"		

ROAD 55					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286382.21	6281345.04	81°33'33.09"		
12.4	286394.48	6281346.86	81°33'33.09"		
111.15	286492.29	6281361.37		1585	197.5
209.9	286591.14	6281363.62	88°41'55.38"		
224.24	286605.48	6281363.94	88°41'55.38"		

ROAD 52					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286299.45	6281145.64	133°40'40.93"		
8.5	286305.6	6281139.76	133°40'40.93"		
18.84	286313.2	6281132.51		-46.69	20.67
29.17	286323.17	6281129.21	108°19'12.68"		
44.35	286337.58	6281124.44	108°19'12.68"		
74.94	286366.82	6281114.76		-215	61.18
105.53	286397.6	6281113.67	92°00'57.16"		
275.27	286567.23	6281107.7	92°00'57.16"		
320.06	286514.2	6281106.05		-120	89.58
364.85	286549.79	6281136.73			
377.97	286661.98	6281147.23	49°14'40.82"		
391.1	286673.78	6281136.3	132°48'55.65"		
453.97	286719.9	6281093.57	132°48'55.65"		

EMERGENCY ACCESS			
CHAINAGE	EASTING	NORTHING	BEARING
0	286772.1	6281069.38	311°57'02.39"
54.74	286731.39	6281105.98	311°57'02.39"



AMENDMENT	DES	DRN	CKD	APR	DATE	
G	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
F	COUNCIL COMMENTS	MP	MP	RO	RO	16/06/21
E	ROAD 54 ALIGNMENT REVISED	JET	JET	MP	RO	08/06/21
D	COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21
C	CERTIFIER COMMENTS	JET	JET	MP	RO	26/04/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

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CLIENT: **REDBANK**
 NORTH RICHMOND

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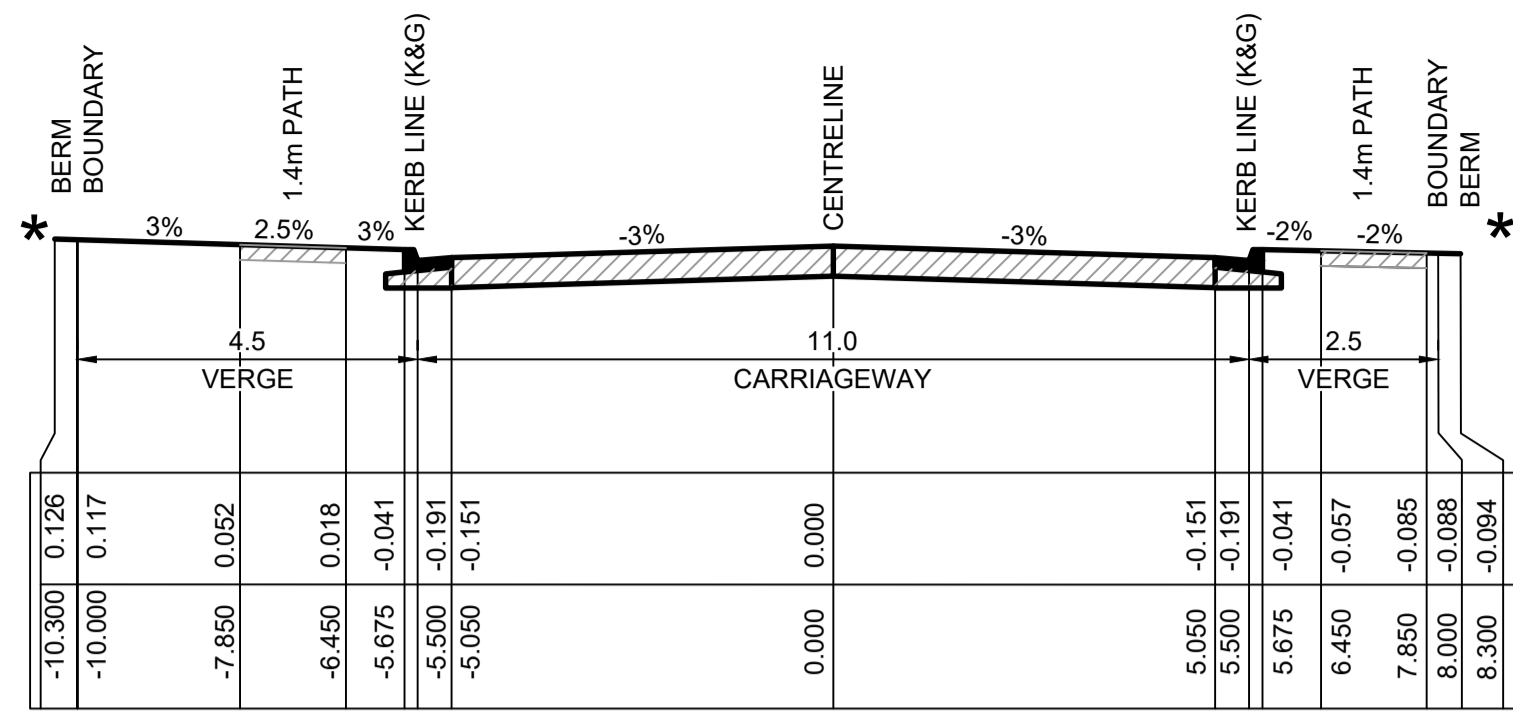
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ROAD SETOUT PLAN

PROJECT No: **110185-12**
 SHEET No: **CC1003**

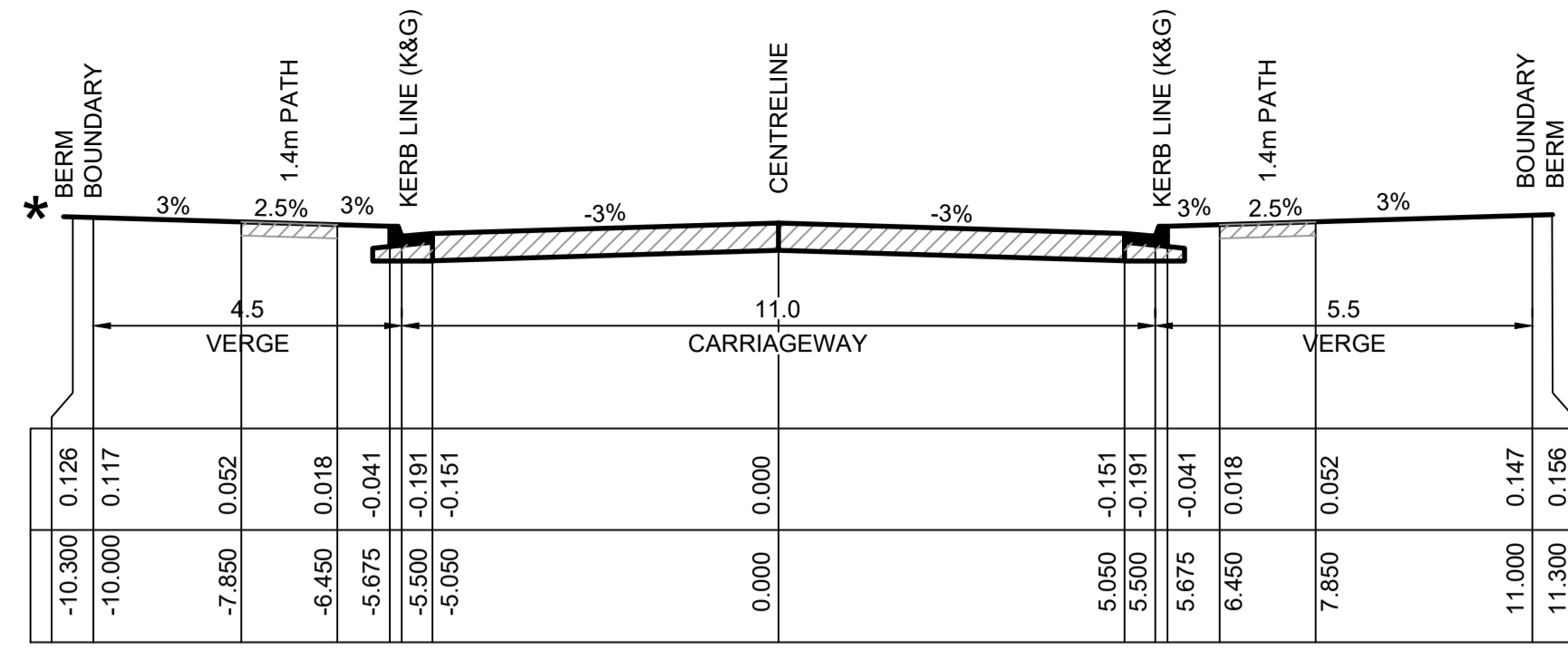
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: **110185-12-CC1003**

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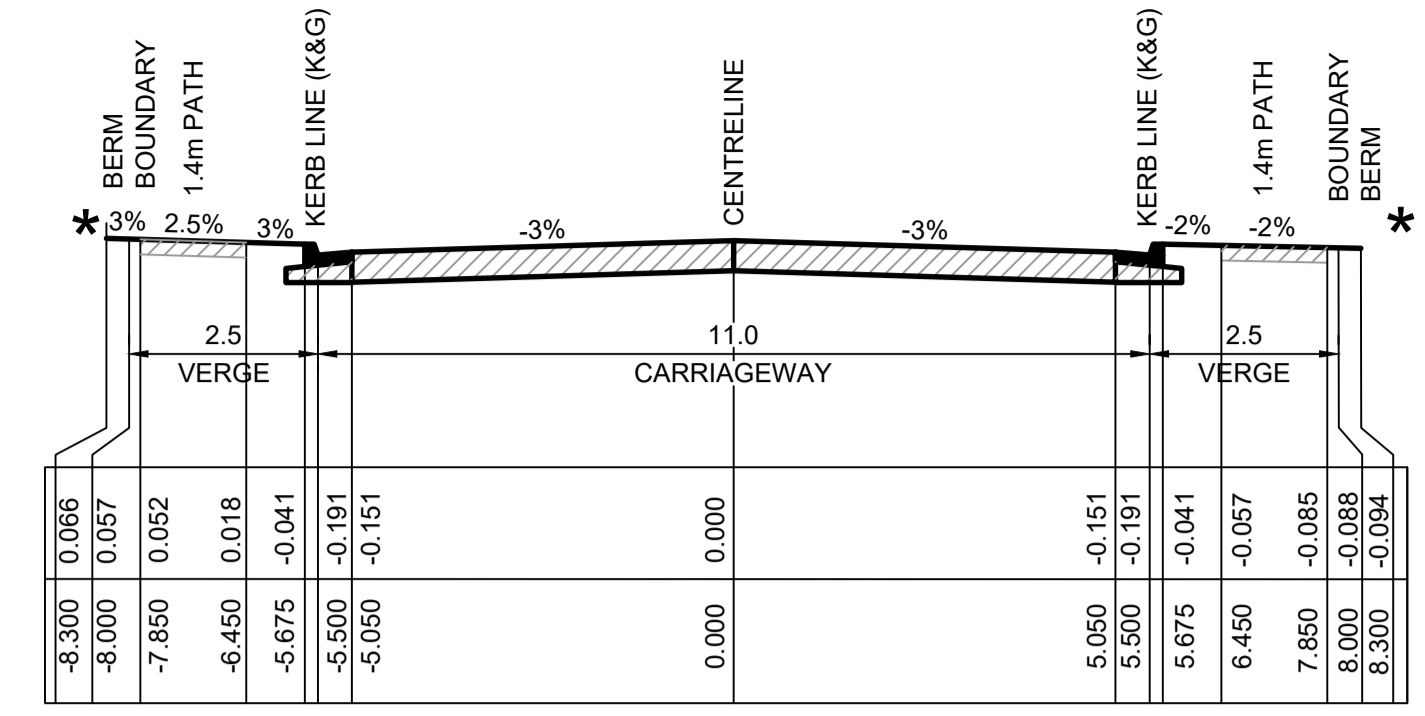
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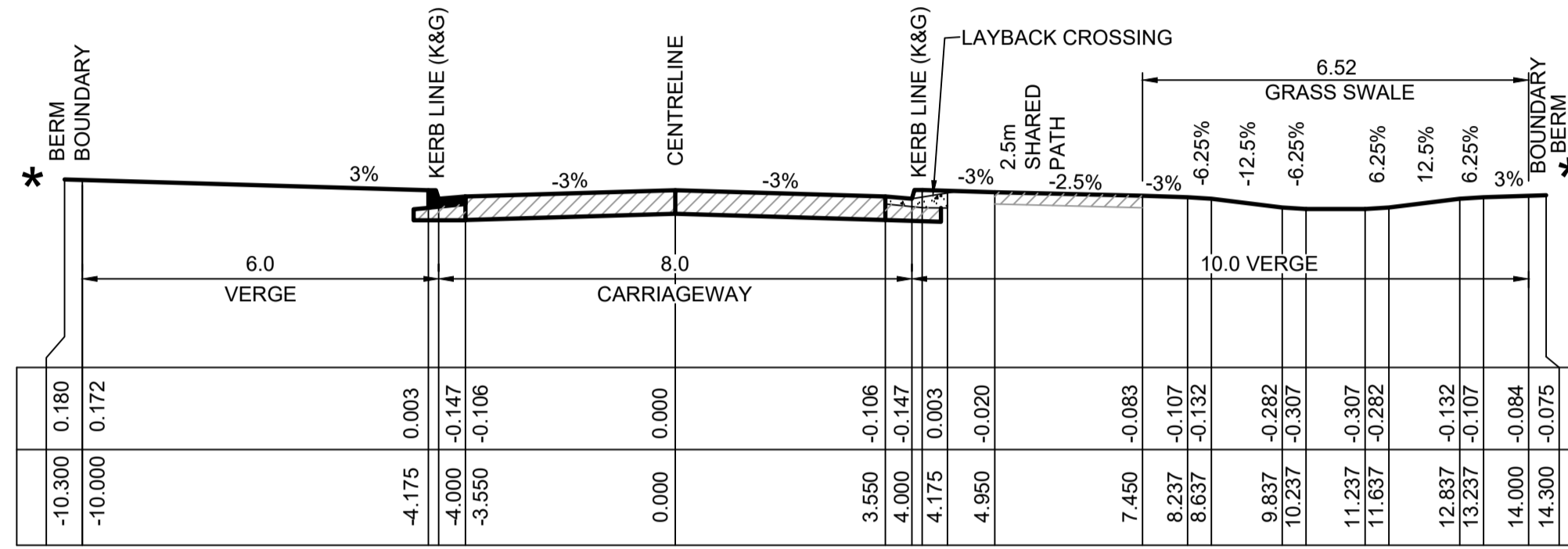
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(18m ROAD RESERVE)
SCALE 1:100 NATURAL



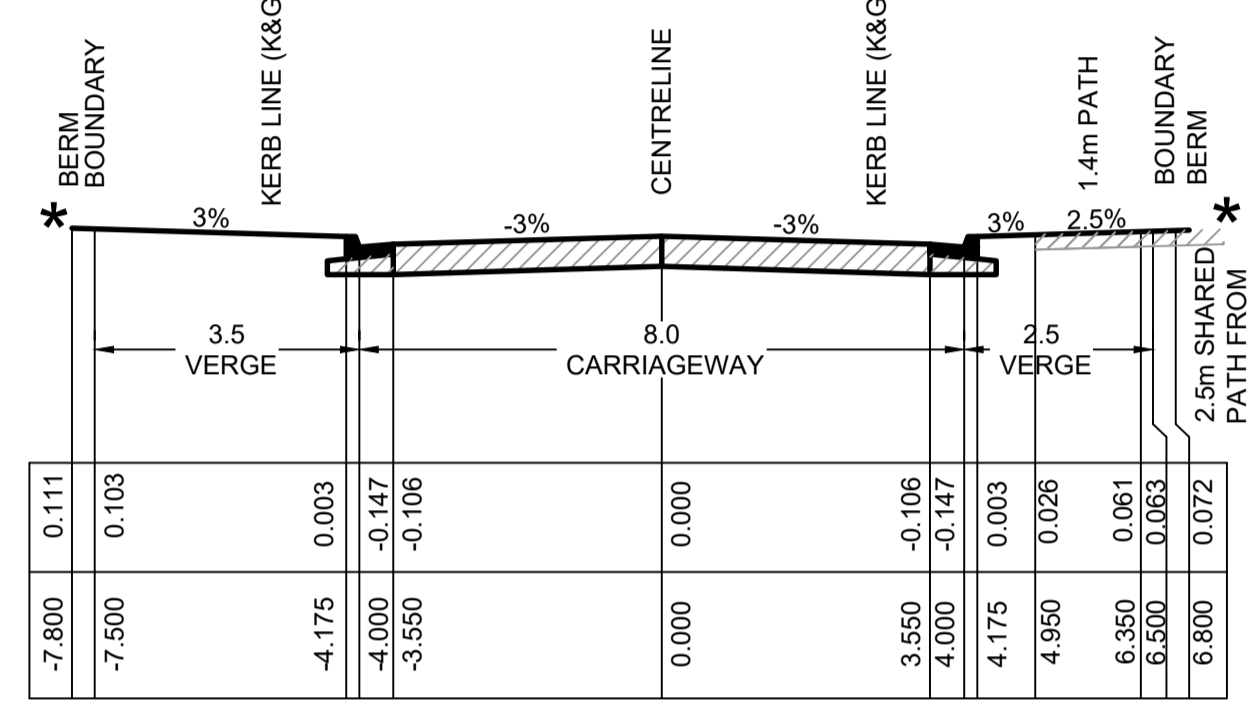
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ROAD No.35 (CH170.00 - CH379.00)
(21m ROAD RESERVE)
SCALE 1:100 NATURAL



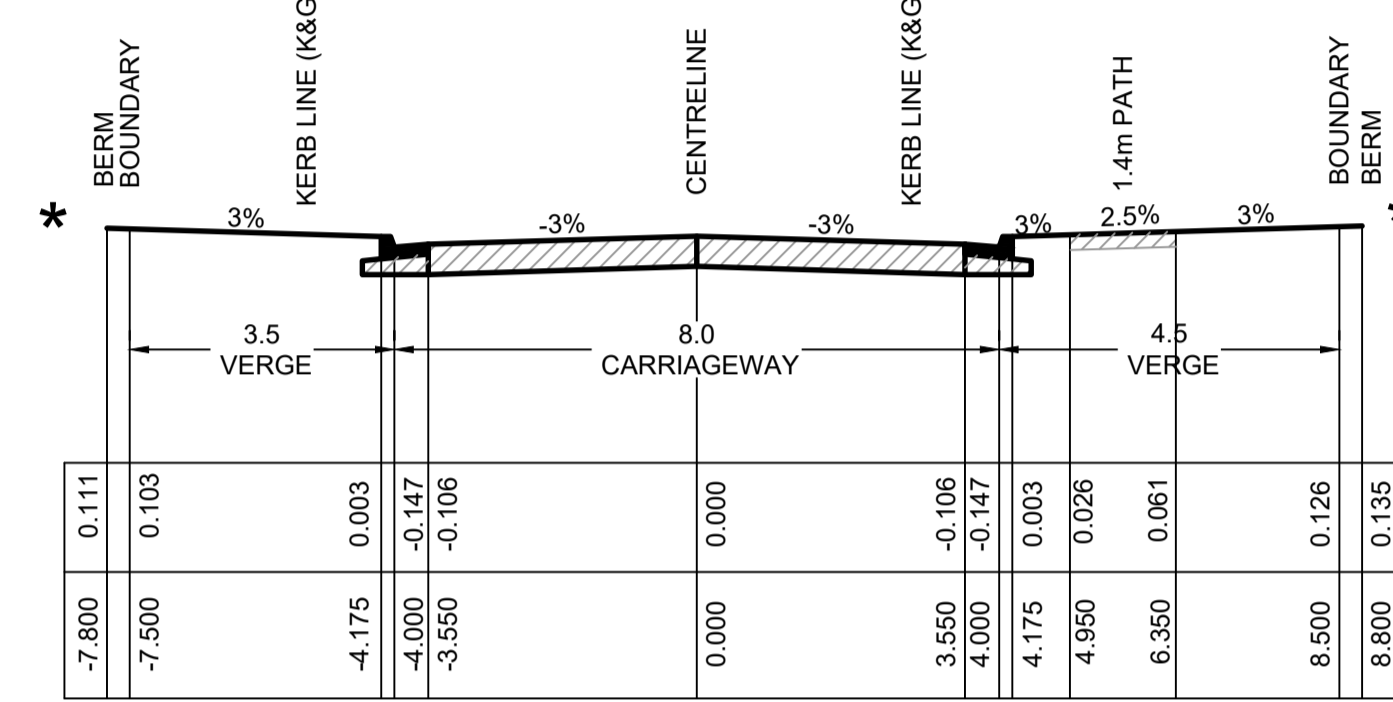
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(16m ROAD RESERVE)
SCALE 1:100 NATURAL



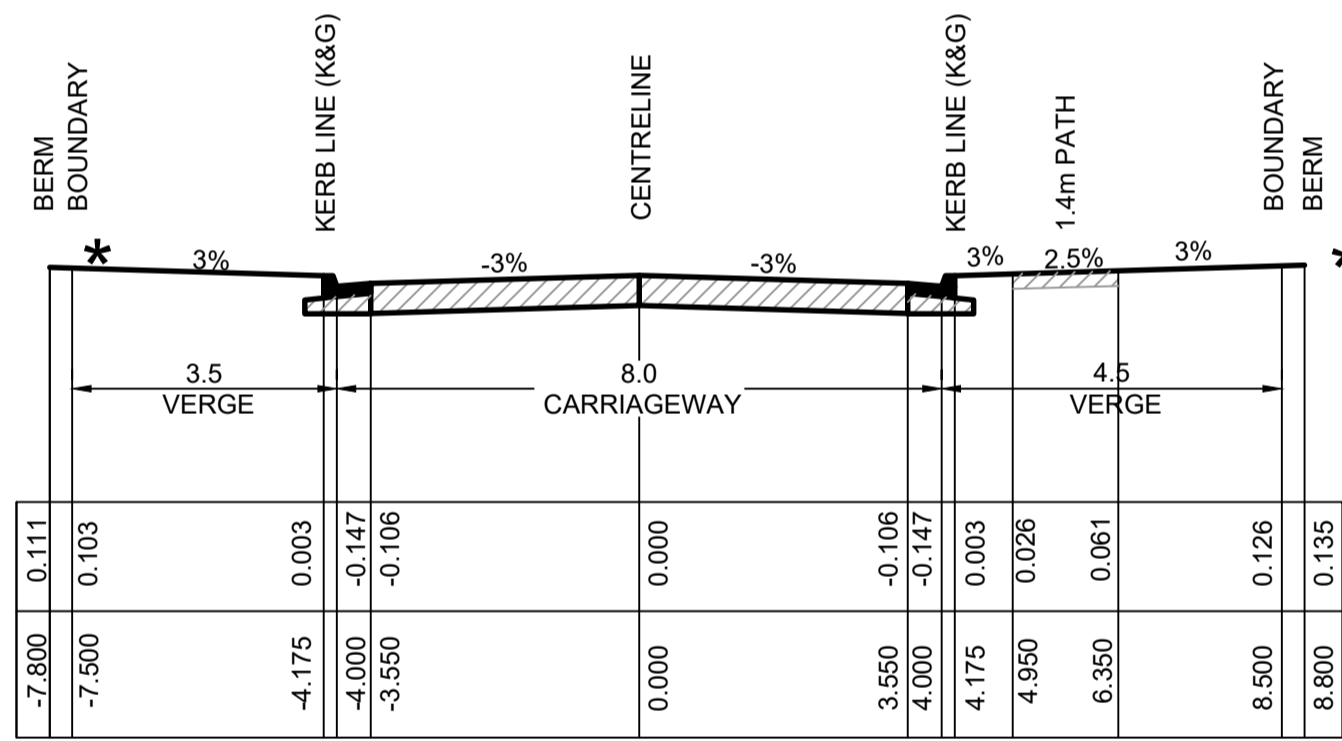
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(24m ROAD RESERVE)
SCALE 1:100 NATURAL



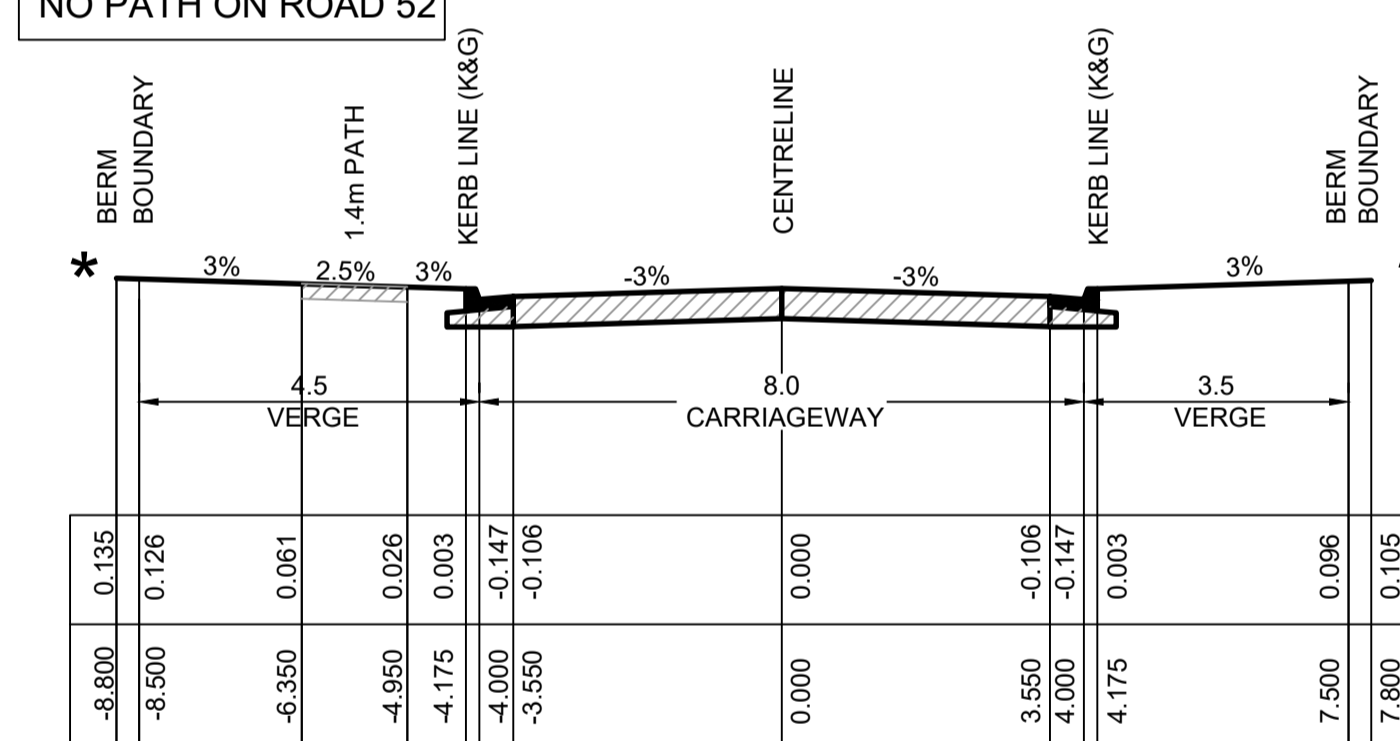
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ROAD No.50 (CH215.00 - 300.00)
(14m ROAD RESERVE)
SCALE 1:100 NATURAL



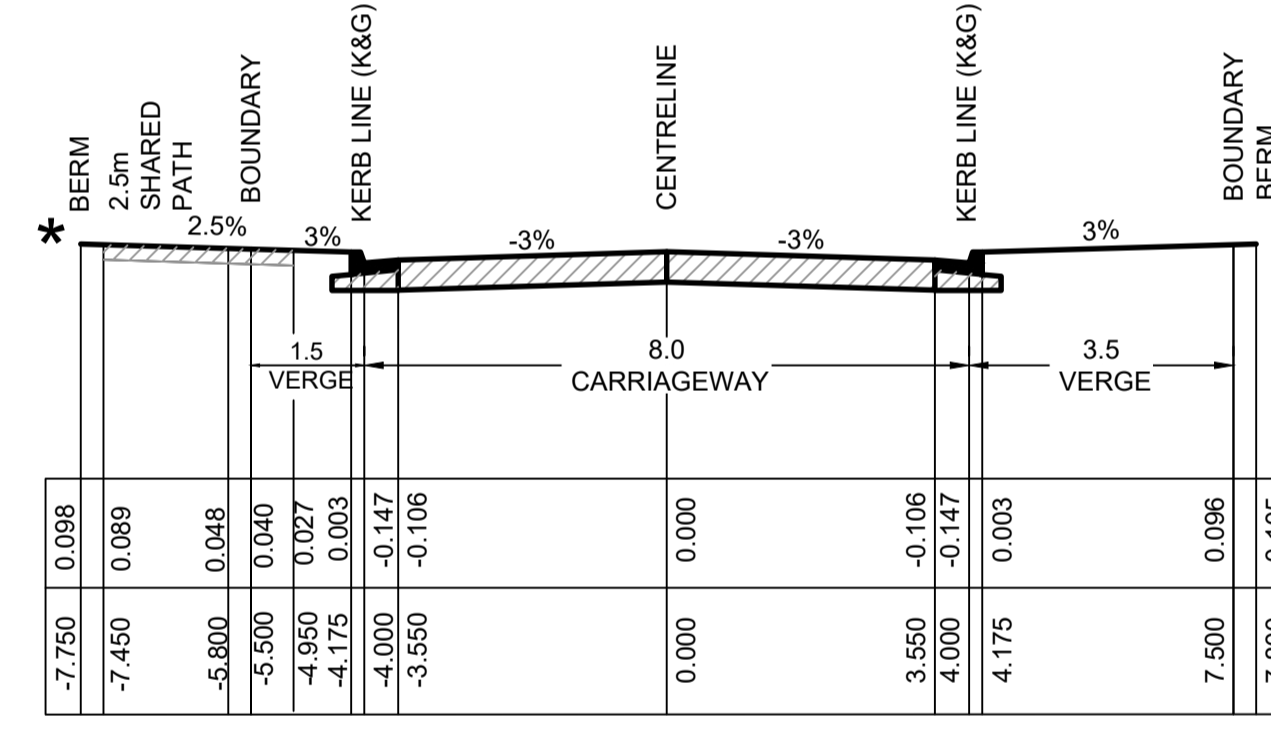
TYPICAL CROSS SECTION
ROAD No.50 (CH300.00 - END)
(16m ROAD RESERVE)
SCALE 1:100 NATURAL



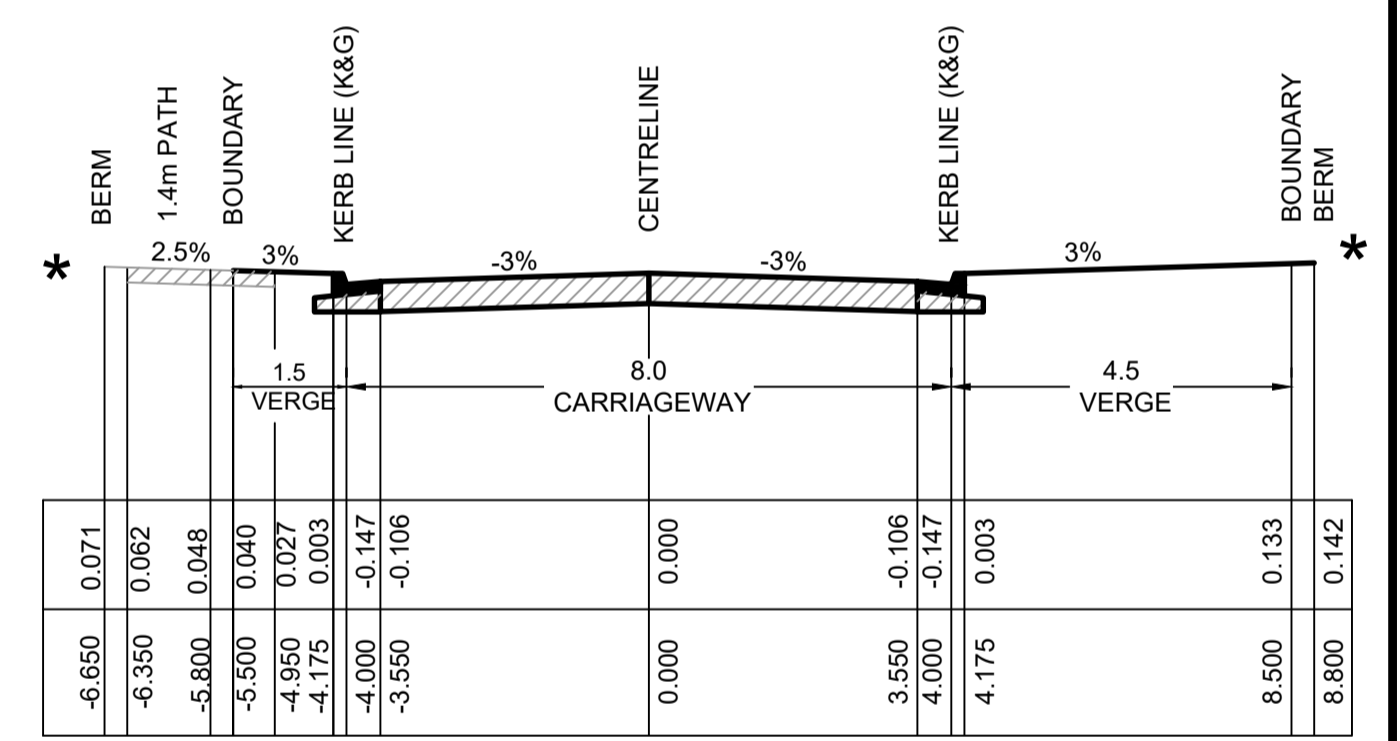
TYPICAL CROSS SECTION
ROAD No.51 (CH0 - CH15)
ROAD No.51 (CH280 - CH430)
(16m ROAD RESERVE)
SCALE 1:100 NATURAL



TYPICAL CROSS SECTION
ROAD No.52 & 55
ROAD No. 54 (START - CH168.958)
(16m ROAD RESERVE)
SCALE 1:100 NATURAL



TYPICAL CROSS SECTION
ROAD No.54 (CH370 - END)
(13m ROAD RESERVE)
SCALE 1:100 NATURAL

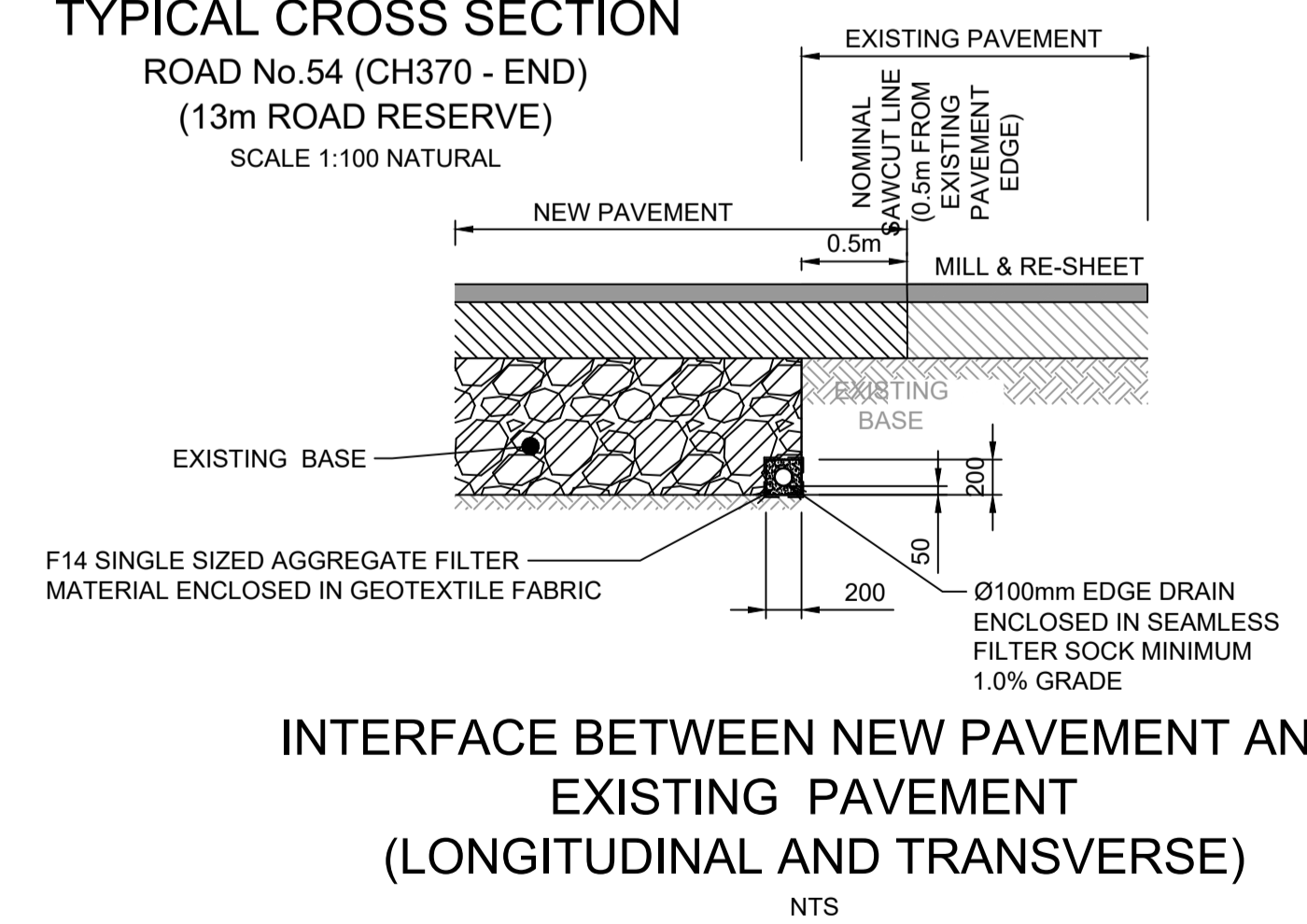


TYPICAL CROSS SECTION
ROAD No.54 (CH210.00 - CH370)
(14m ROAD RESERVE)
SCALE 1:100 NATURAL

PAVEMENT NOTES
(ROAD 35, 50 & 51)
2x10⁶ ESA (GEOTECHNICAL REPORT BY GEOTECHNIQUE, REF: 12261/31-AA-R1 DATED 4/12/2020)
1. 50mm WEARING COURSE AC10
2. ONE COAT HOT BITUMEN FLUSH SEAL
3. 150mm DGB 20 BASE COURSE
4. 250mm SUB-BASE COURSE

PAVEMENT NOTES
(ROAD 52, 54 & 55)
5x10⁶ ESA (GEOTECHNICAL REPORT BY GEOTECHNIQUE, REF: 12261/31-AA-R1 DATED 4/12/2020)
1. 50mm WEARING COURSE AC10
2. ONE COAT HOT BITUMEN FLUSH SEAL
3. 150mm DGB 20 BASE COURSE
4. 200mm SUB-BASE COURSE

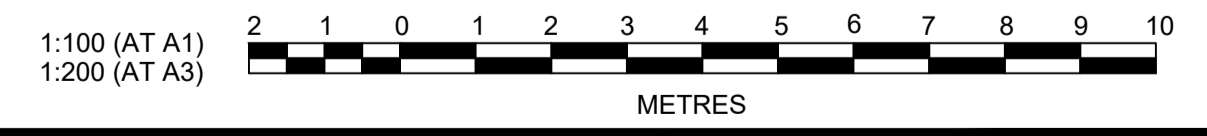
SUBDIVISION WORKS CERTIFICATE
Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer *D. Resta*
Accreditation No. BDC3367
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INTERFACE BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT (LONGITUDINAL AND TRANSVERSE)
NTS

*** REFER TO ENGINEERING PLANS FOR SITE REGRADING**

NOTE:
SUBSOIL DRAINAGE TO BE PROVIDED UNDER KERBS ON BOTH SIDES OF THE ROAD EXCEPT WHERE STREET DRAINAGE IS PRESENT. REFER TO HCC STANDARD DRAWING No.SD3



C	COUNCIL COMMENTS	MP	VS	RO	16/06/21	
B	CERTIFIER COMMENTS	JET	JET	MP	26/04/21	
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	13/01/21	
	AMENDMENT	DES	DRN	CKD	APR	DATE

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REDBANK
NORTH RICHMOND

ISSUE FOR CONSTRUCTION APPROVAL
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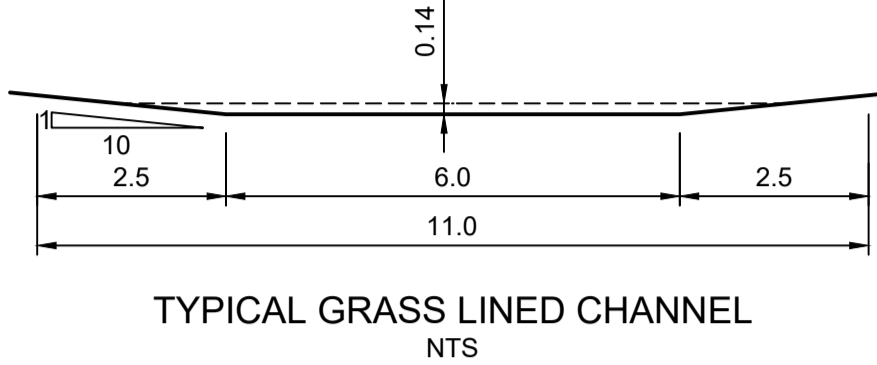
REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE ROAD TYPICAL SECTIONS
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1004

PROJECT No: **110185-12**
SHEET No: **CC1004**
C

MANNINGS CALCULATION FOR SURCHARGE PIT 14/13 (3x900x900 GSIP)

Q = 2.1m³/s
 n = 0.03 (SHORT GRASS)
 S = 6%
 DEPTH OF FLOW = 0.14m
 WIDTH OF FLOW = 8.85m
 FLOW VELOCITY = 1.98m/s

THEREFORE FLOW VELOCITY IS PERMISSIBLE FOR GRASS LINED CHANNEL

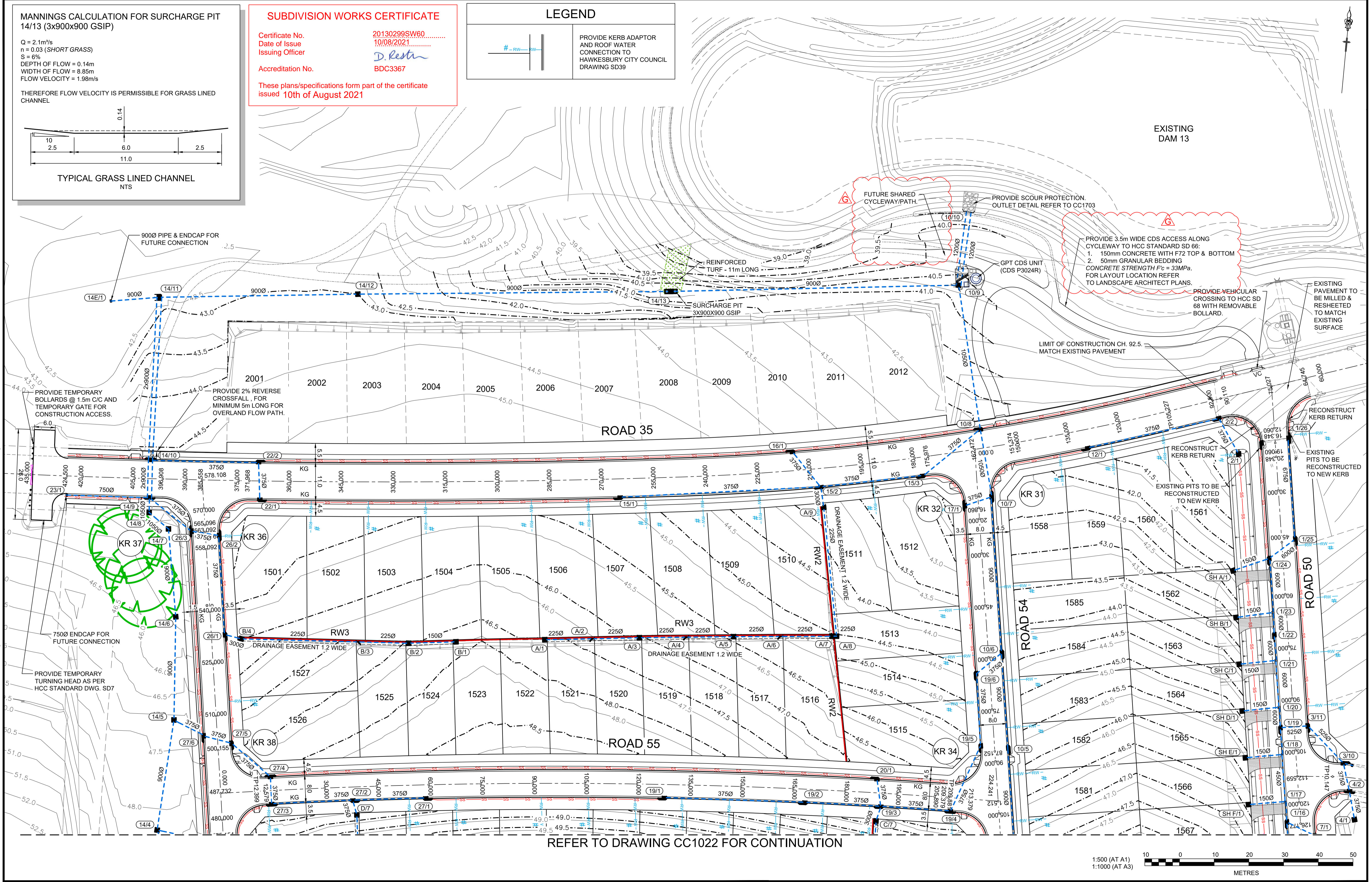
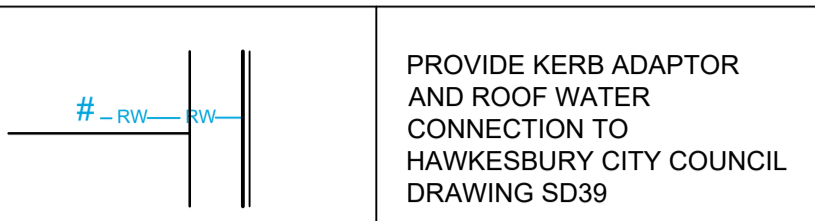


SUBDIVISION WORKS CERTIFICATE

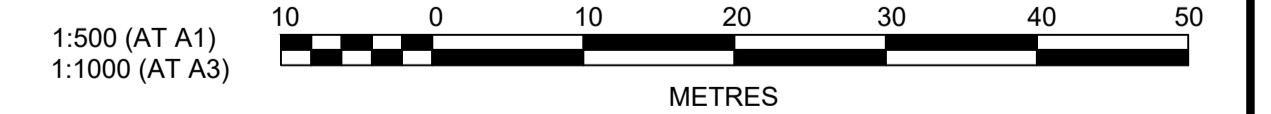
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restu*
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LEGEND



REFER TO DRAWING CC1022 FOR CONTINUATION



AMENDMENT	DES	DRN	CKD	APR	DATE
G	MP	MP	RO	RO	4/08/21
F	MP	MP	RO	RO	27/07/21
E	MP	VS	RO	MS	21/07/21
D	JET	JET	MP	RO	26/04/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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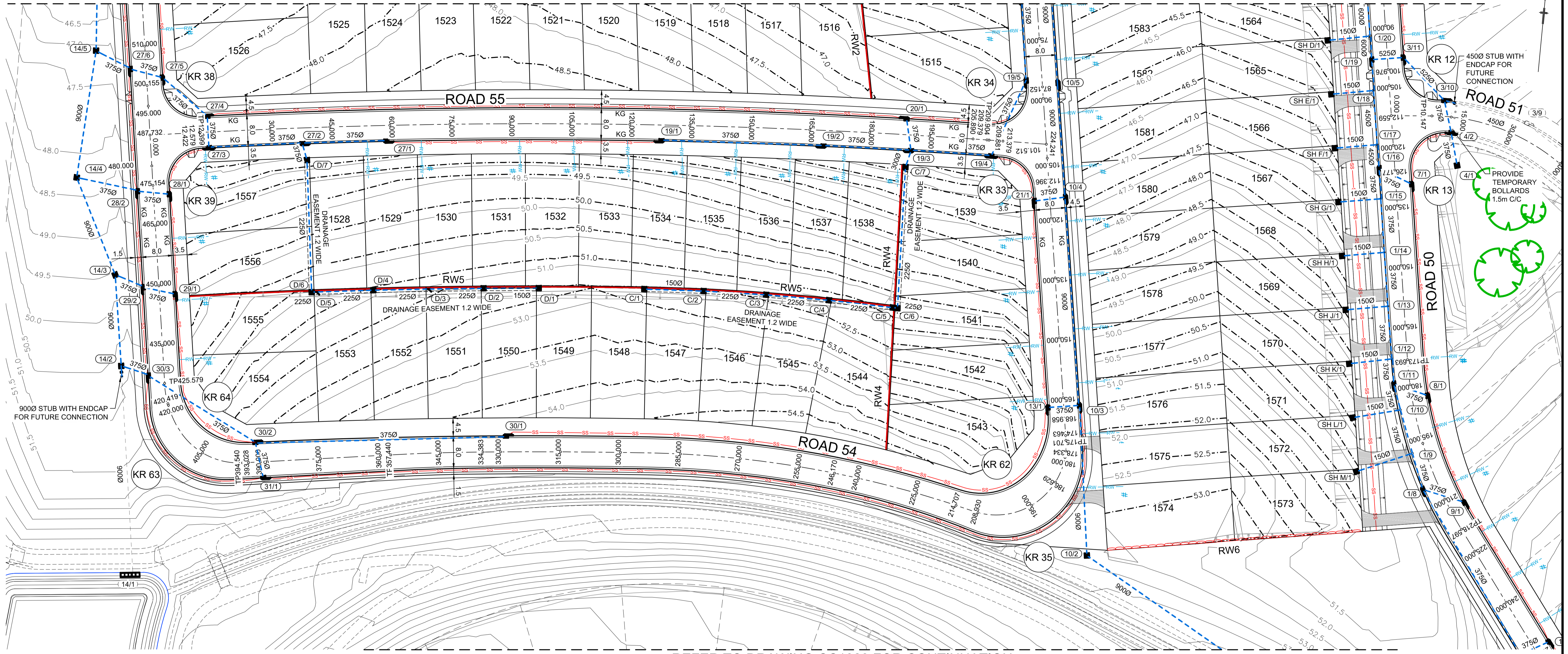
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ENGINEERING PLAN
 SHEET 1

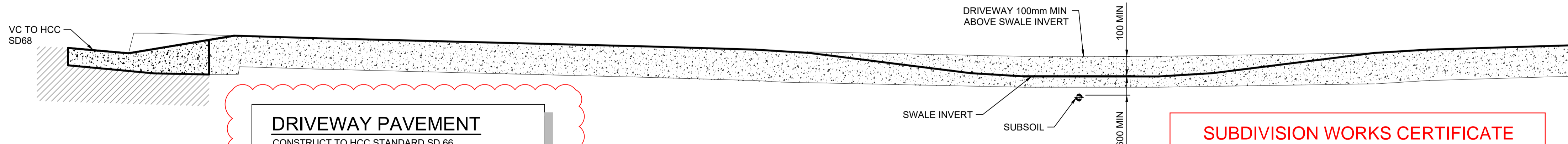
PROJECT No: 110185-12
 SHEET No: CC1021
 PLAN No: 110185-12-CC1021

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REFER TO DRAWING CC1021 FOR CONTINUATION



REFER TO DRAWING CC1023 FOR CONTINUATION



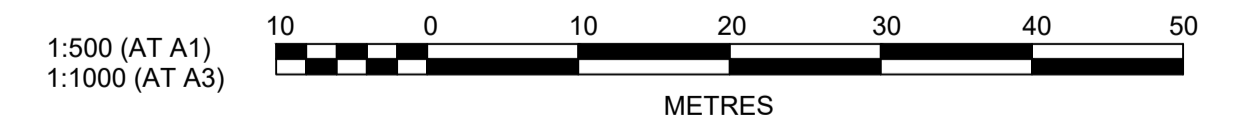
DRIVEWAY PAVEMENT
 CONSTRUCT TO HCC STANDARD SD 66
 1. 150mm CONCRETE WITH F72 TOP & BOTTOM
 2. 50mm GRANULAR BEDDING
 CONCRETE STRENGTH F_c = 33MPa

TYPICAL DRIVEWAY SECTION
 VEHICULAR CROSSING (VC)
 N.T.S

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#-RW-# PROVIDE KERB ADAPTOR AND ROOF WATER CONNECTION TO HAWKESBURY CITY COUNCIL DRAINAGE SD39



Plotted: 4 August, 2021 5:58:54 PM File Name: J:\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CCDC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1022.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
I	MP	MP	RO	RO	4/08/21
H	MP	MP	RO	RO	27/07/21
G	MP	VS	RO	MS	21/07/21
F	MP	VS	RO	RO	16/06/21
E	JET	JET	MP	RO	13/05/21
D	JET	JET	MP	RO	26/04/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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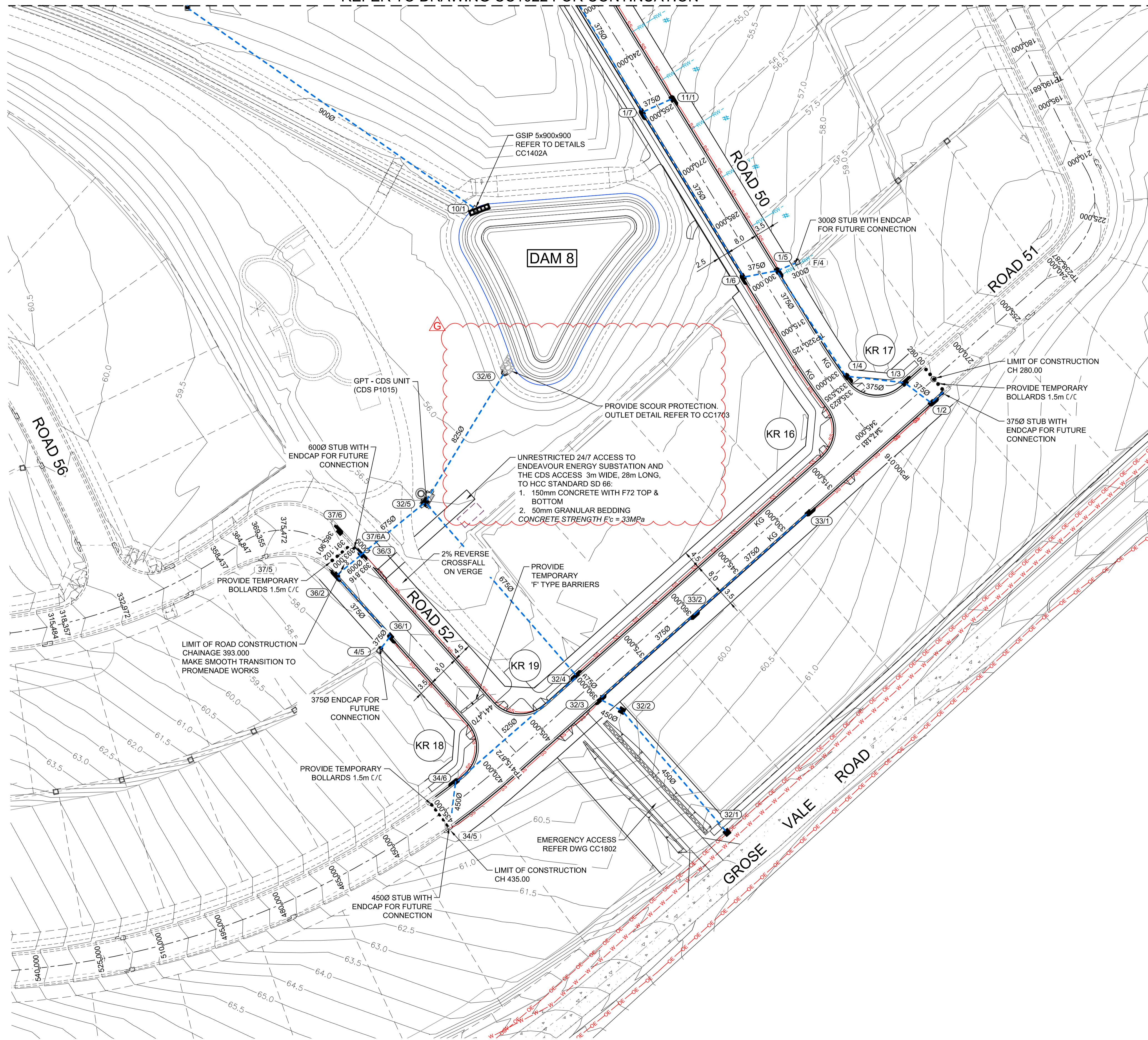
CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE
 ENGINEERING PLAN SHEET 2
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1022

PROJECT No: **110185-12**
 SHEET No: **CC1022**
 I

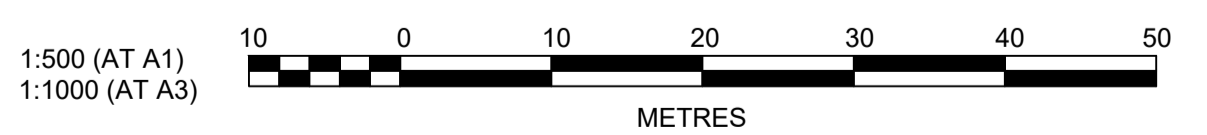
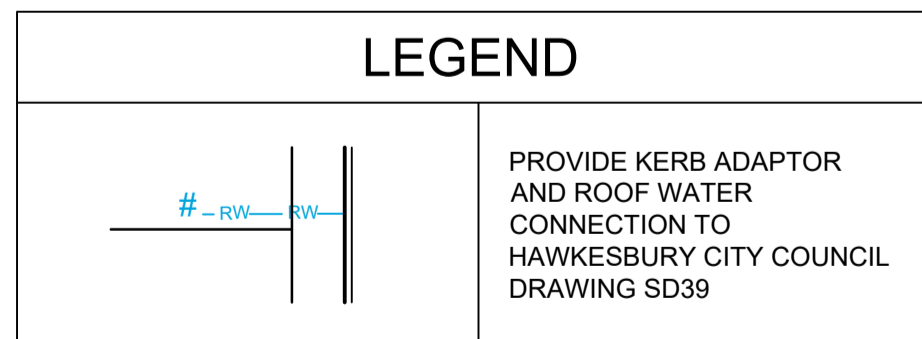
REFER TO DRAWING CC1022 FOR CONTINUATION



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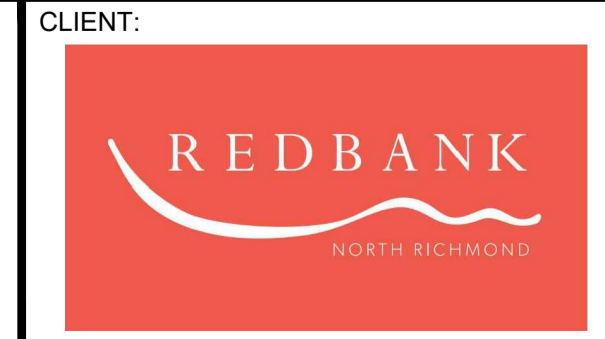


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AMENDMENT	DES	DRN	CKD	APR	DATE
G	MP	MP	RO	RO	4/08/21
F	MP	VS	RO	MS	21/07/21
E	JET	JET	MP	RO	13/05/21
D	JET	JET	MP	RO	26/04/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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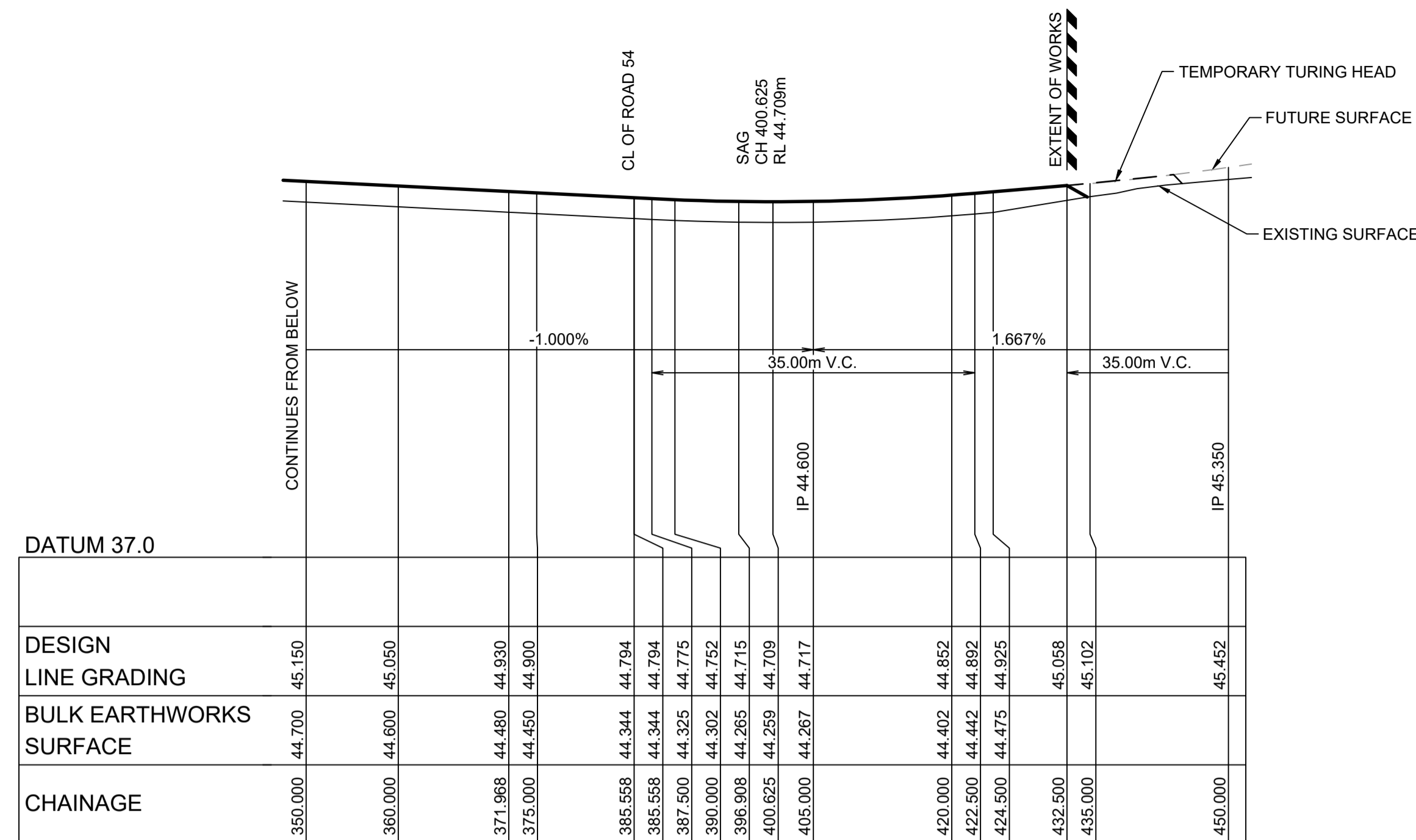
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ENGINEERING PLAN
 SHEET 3

PROJECT No: 110185-12
 SHEET No: CC1023
 PLAN No: 110185-12-CC1023

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: G

Plotted: 21 July 2021 2:08:24 PM File Name: \\jwp.local\dfs\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCIDCC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1101.dwg

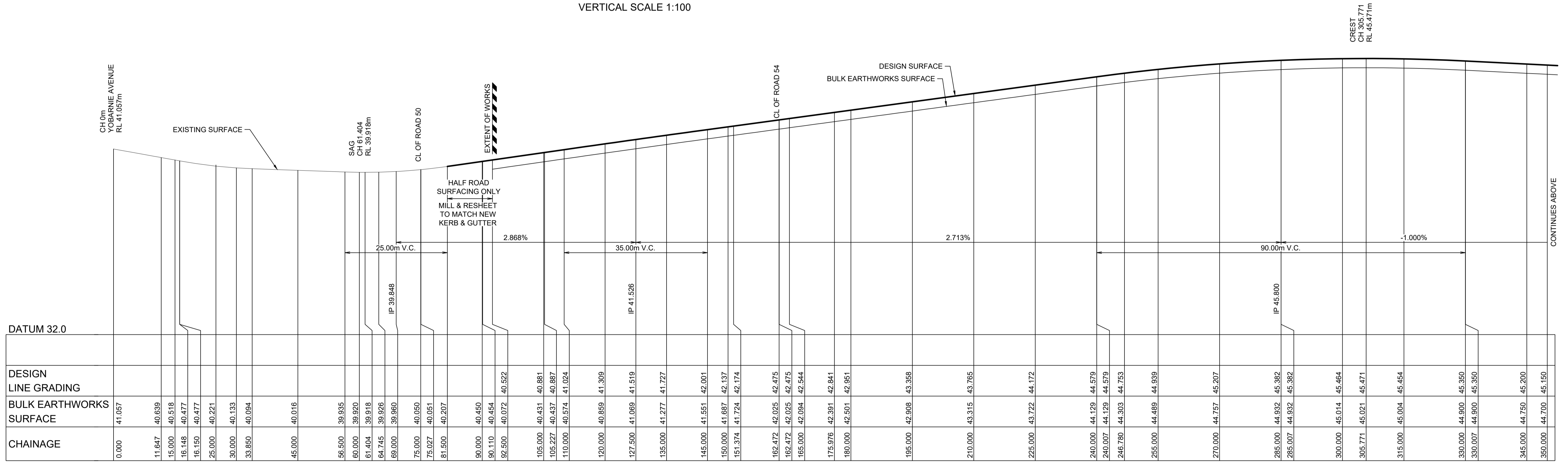


LONGITUDINAL SECTION ROAD 35
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100

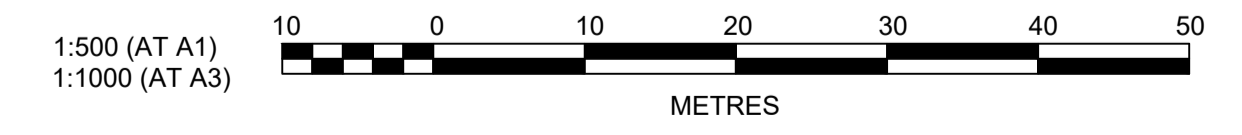
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LONGITUDINAL SECTION ROAD 35
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



NO.	DESCRIPTION	MP	VS	RO	MS	DATE
A	ISSUE FOR CLIENT REVIEW					13/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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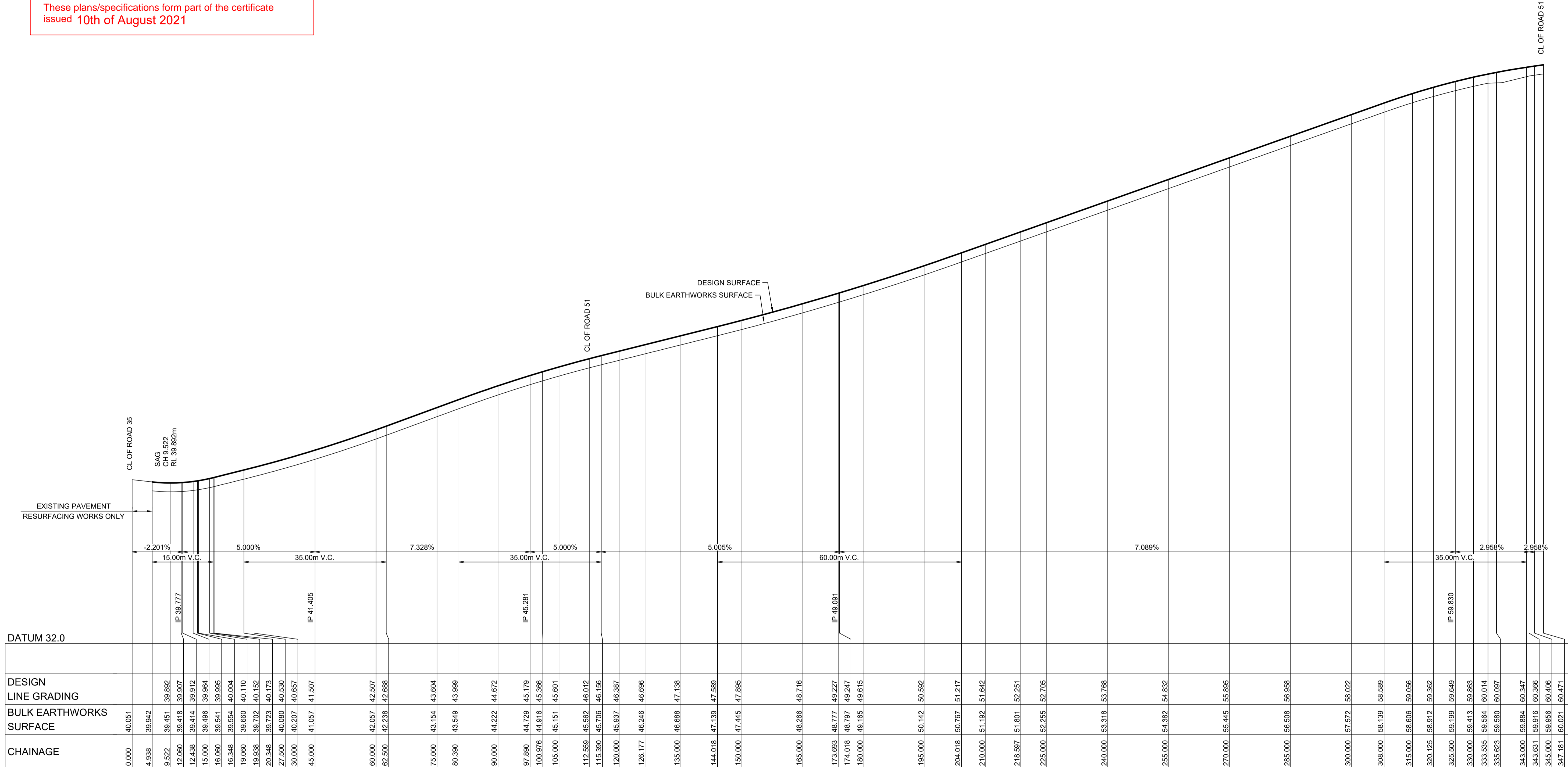
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 ROAD LONGITUDINAL SECTIONS
 SHEET 1
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1101

PROJECT No: **110185-12**
 SHEET No: **CC1101**
 A

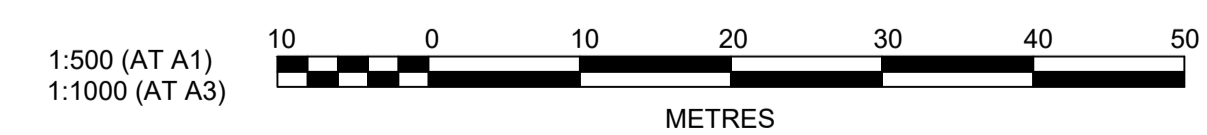
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LONGITUDINAL SECTION ROAD 50
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



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A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/07/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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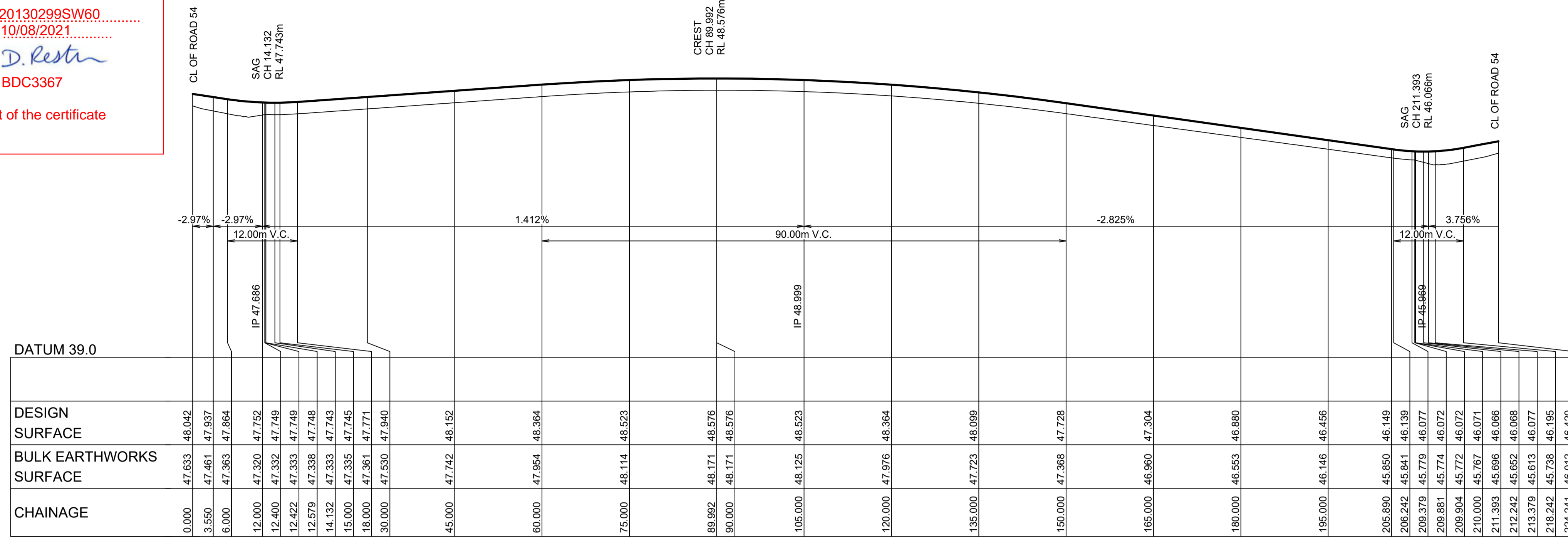
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ROAD LONGITUDINAL SECTIONS
 SHEET 2

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1102

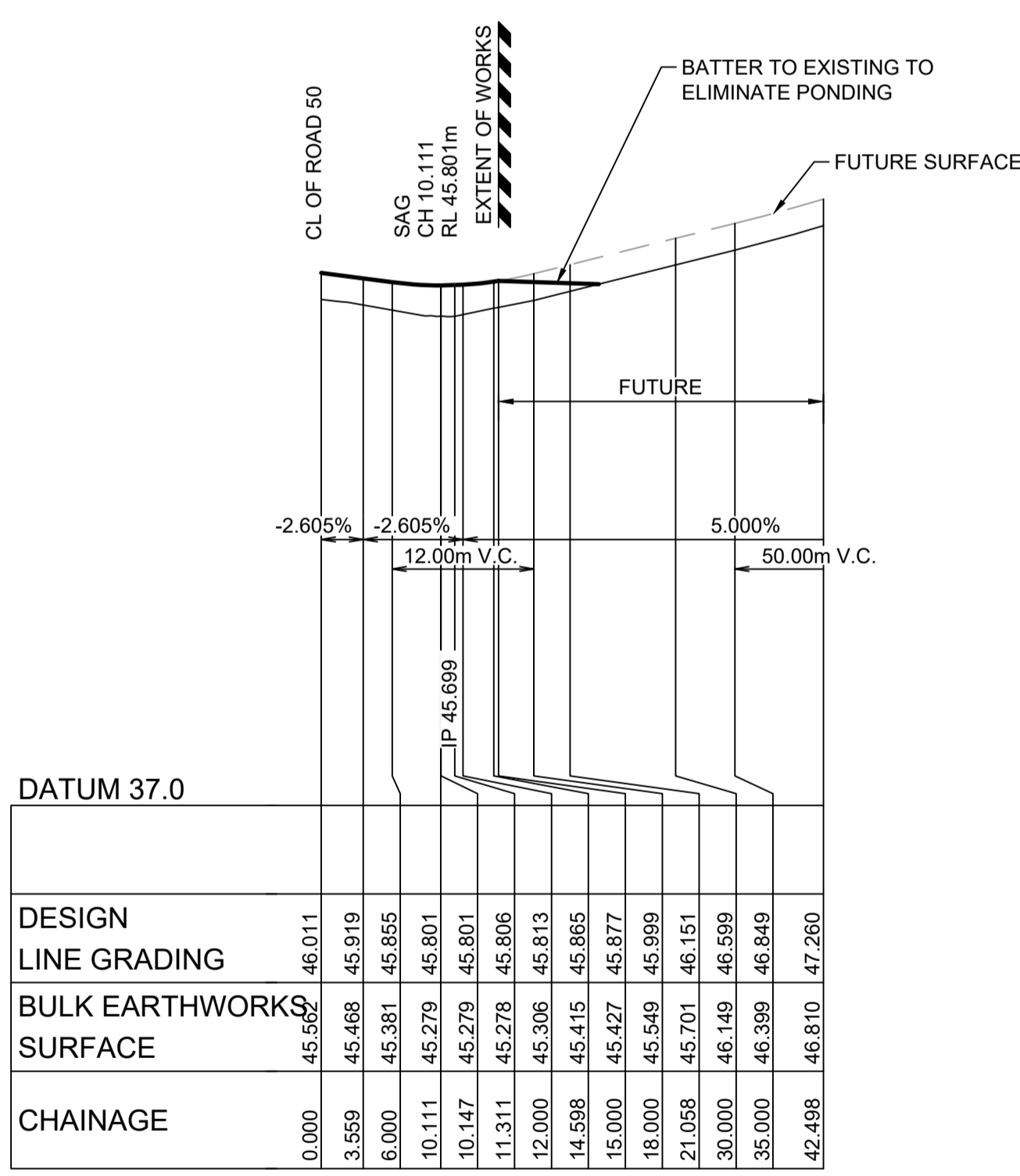
PROJECT No: **110185-12**
 SHEET No: **CC1102**

SUBDIVISION WORKS CERTIFICATE

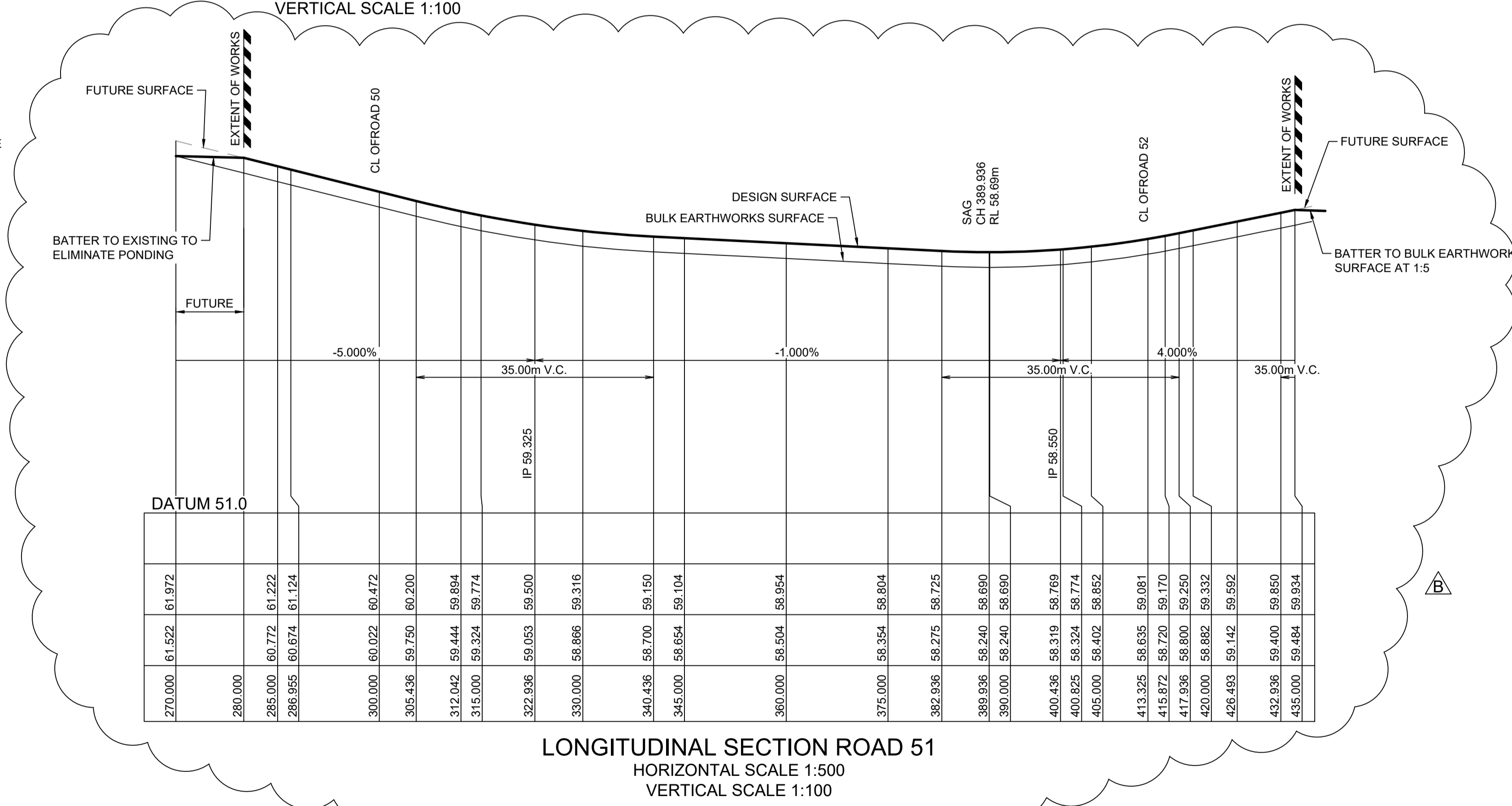
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
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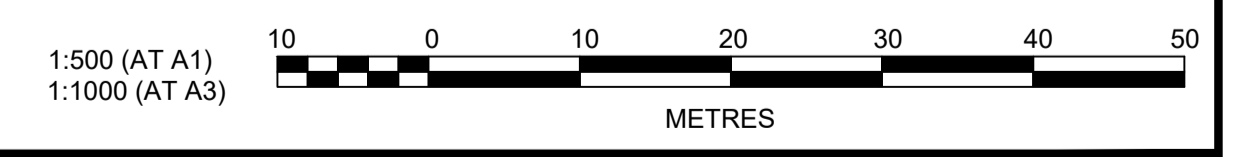
LONGITUDINAL SECTION ROAD 55
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



LONGITUDINAL SECTION ROAD 51
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



LONGITUDINAL SECTION ROAD 51
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100



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AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	VS	RO	MS	21/07/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE ROAD LONGITUDINAL SECTIONS SHEET 3

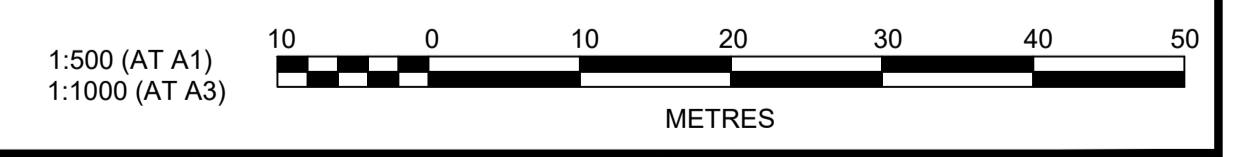
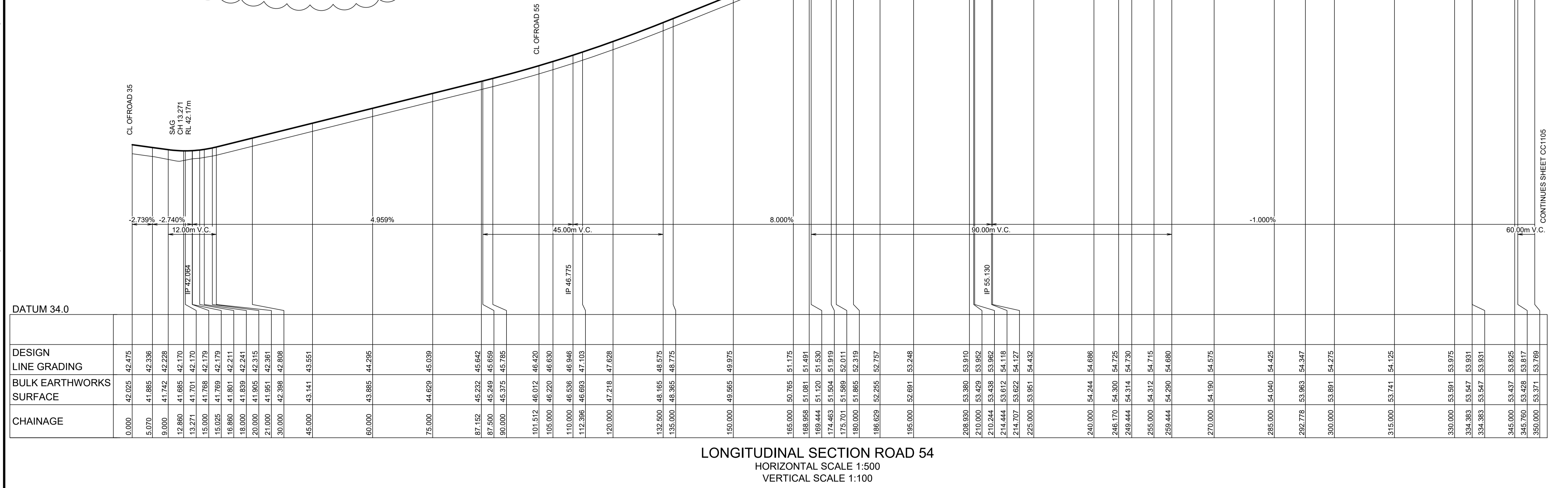
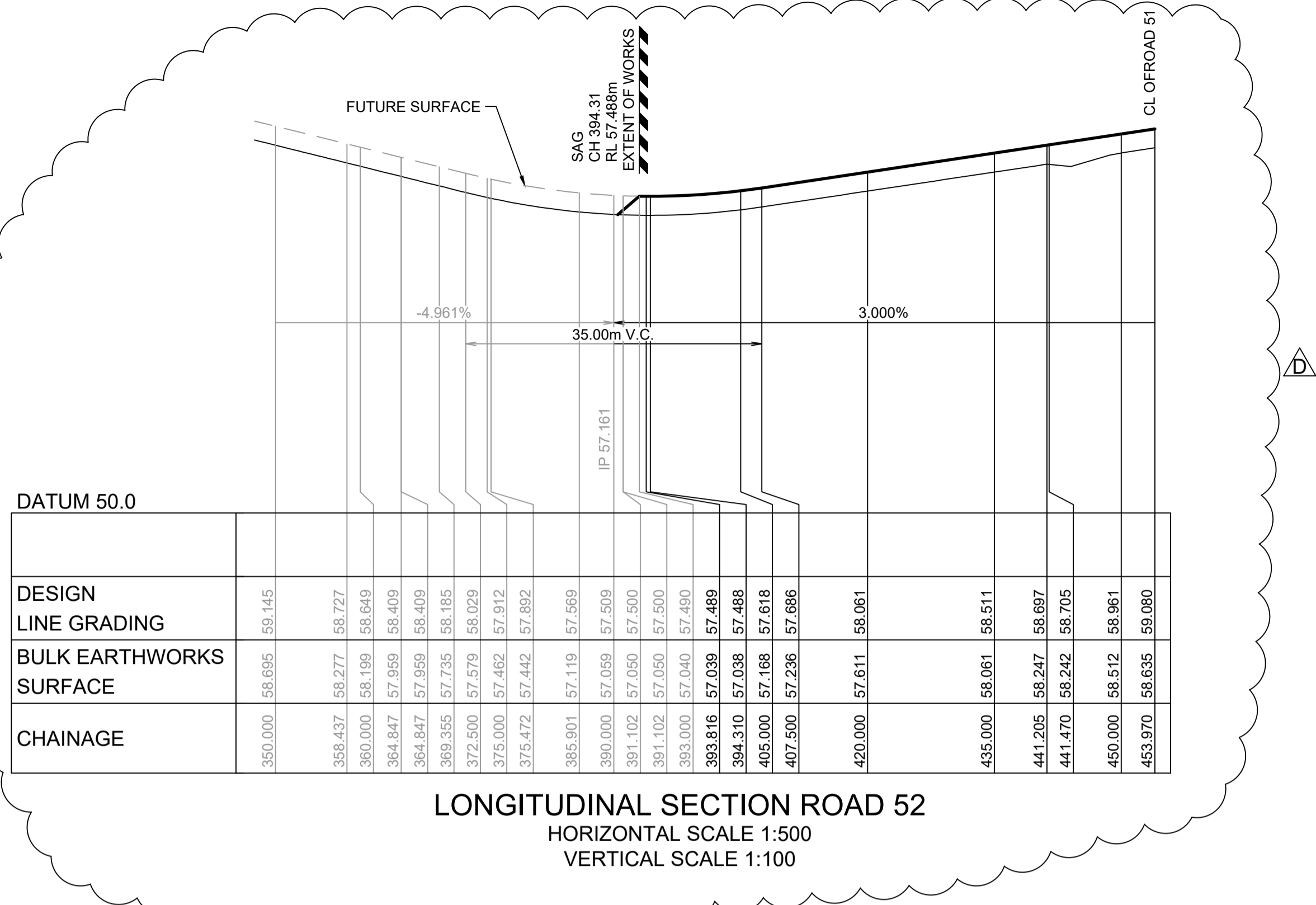
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PROJECT No: **110185-12**
 SHEET No: **CC1103**
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Plotted: 21 July 2021 2:10:19 PM File Name: \\jwp.local\ids\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1104.dwg

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AMENDMENT	DES	DRN	CKD	APR	DATE	
D	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
C	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 ROAD LONGITUDINAL SECTIONS
 SHEET 4

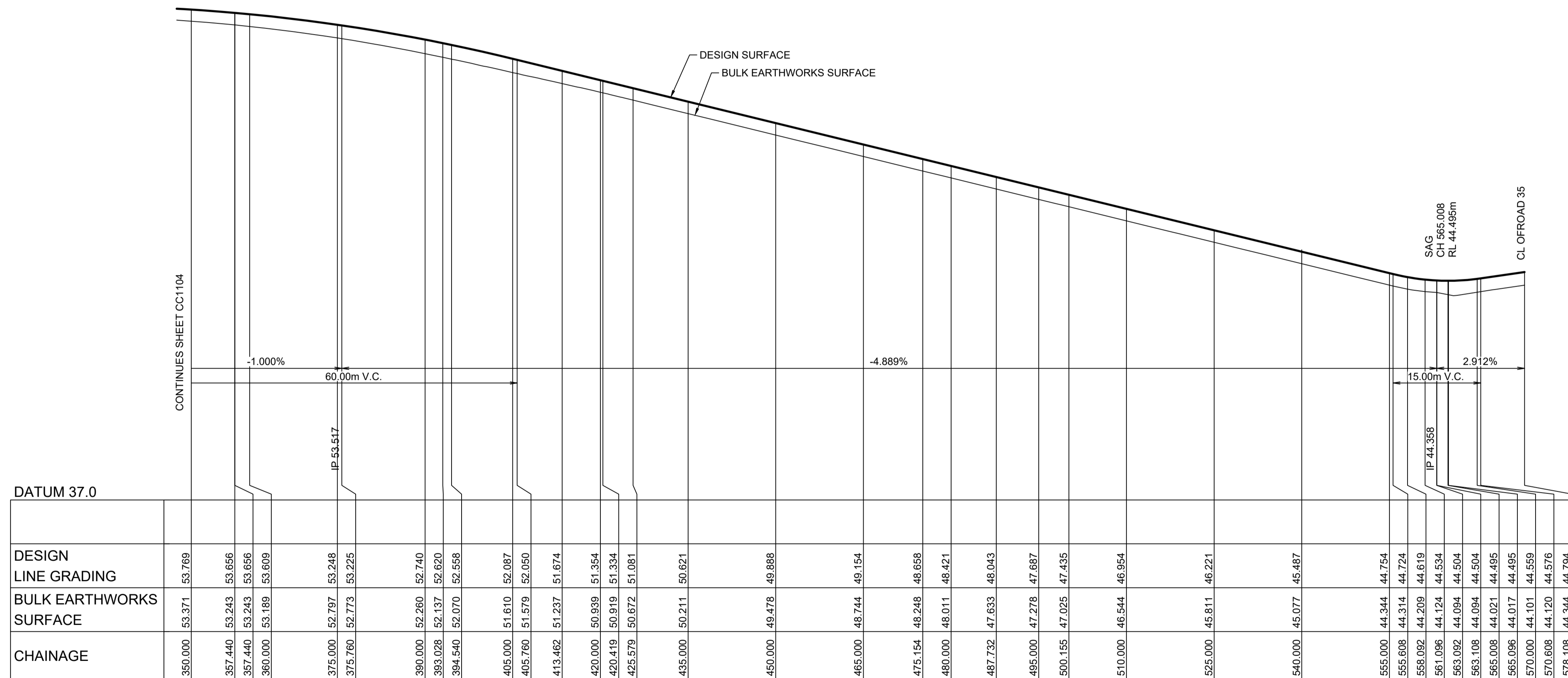
PROJECT No: **110185-12**
 SHEET No: **CC1104**
 PLAN No: **110185-12-CC1104**

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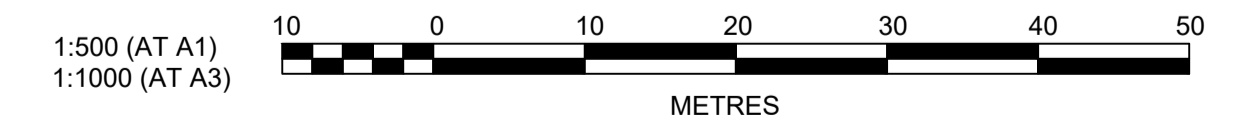
SUBDIVISION WORKS CERTIFICATE

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 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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LONGITUDINAL SECTION ROAD 54
 HORIZONTAL SCALE 1:500
 VERTICAL SCALE 1:100

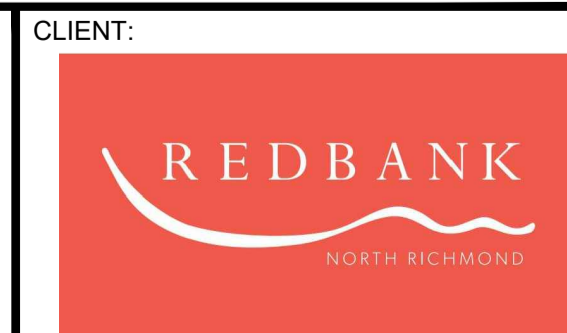


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AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	VS	RO	RO	16/06/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ROAD LONGITUDINAL SECTIONS
 SHEET 5

PROJECT No: 110185-12
 SHEET No: CC1105

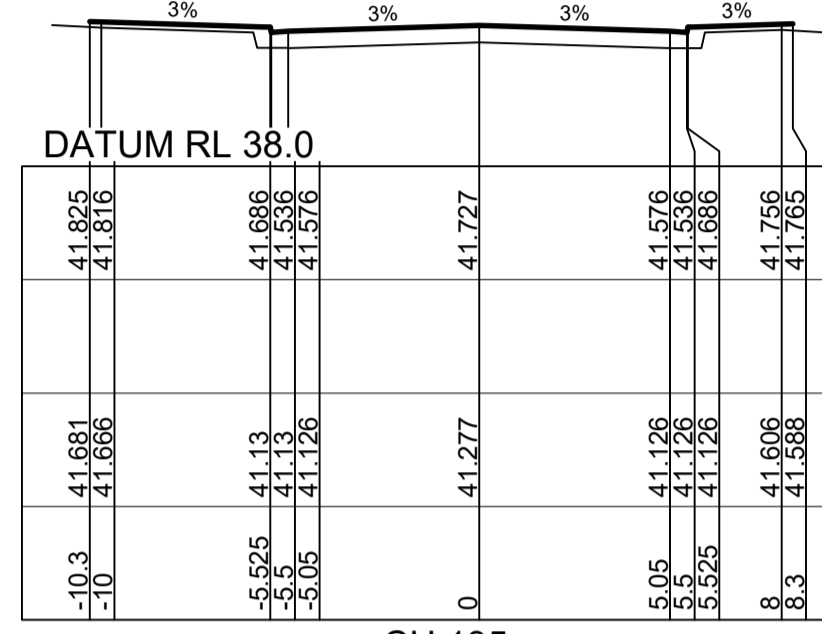
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1105

B

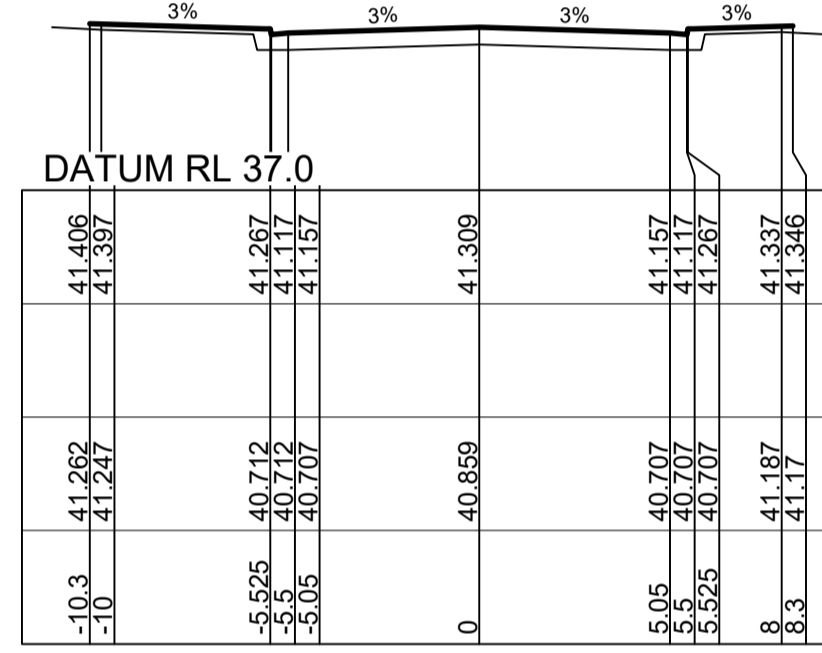
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
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 Issuing Officer *D. Reiter*
 Accreditation No. BDC3367

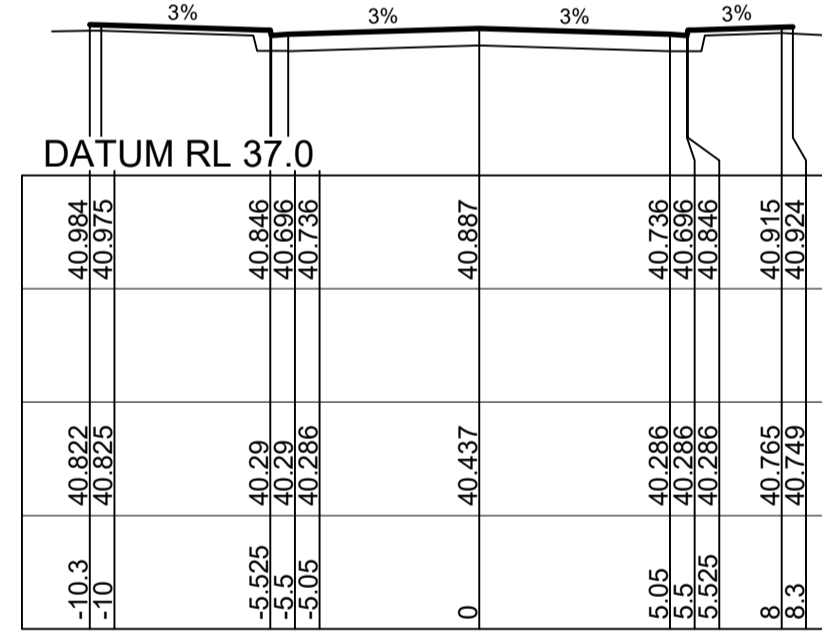
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CH 135



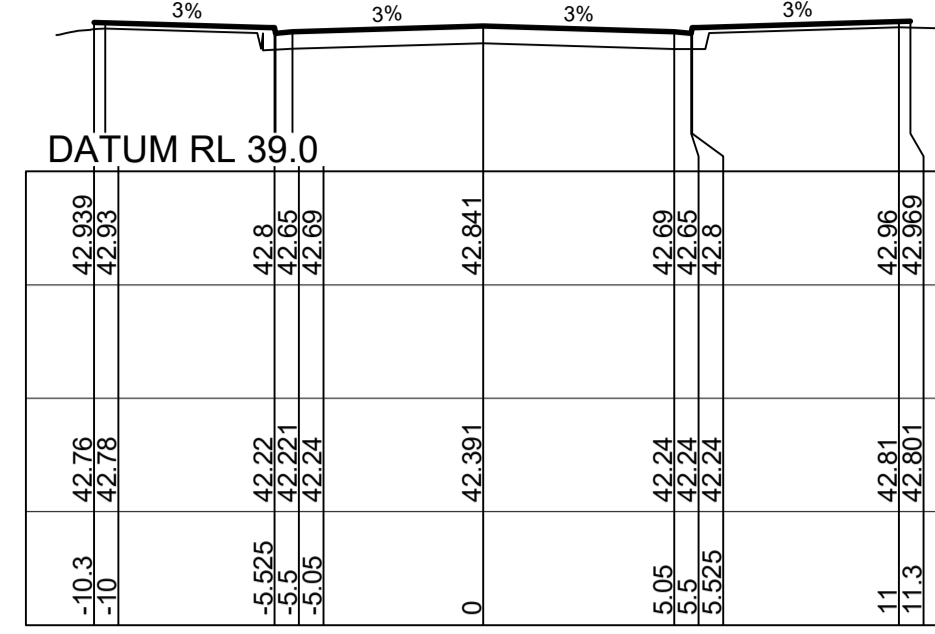
CH 120



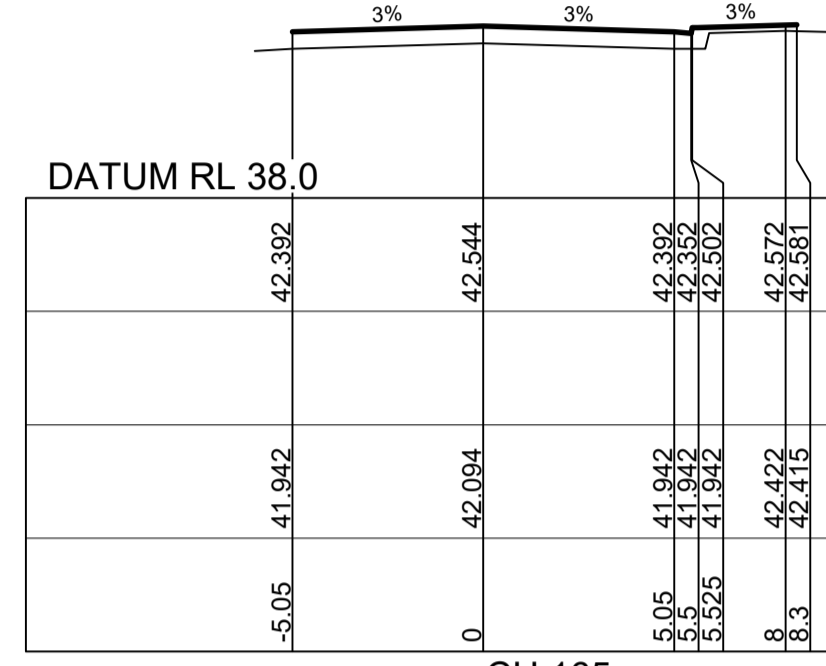
CH 105.227

DATUM RL 36.0	DATUM RL 36.0
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WAE	
EXISTING SURFACE LEVEL	
OFFSET	

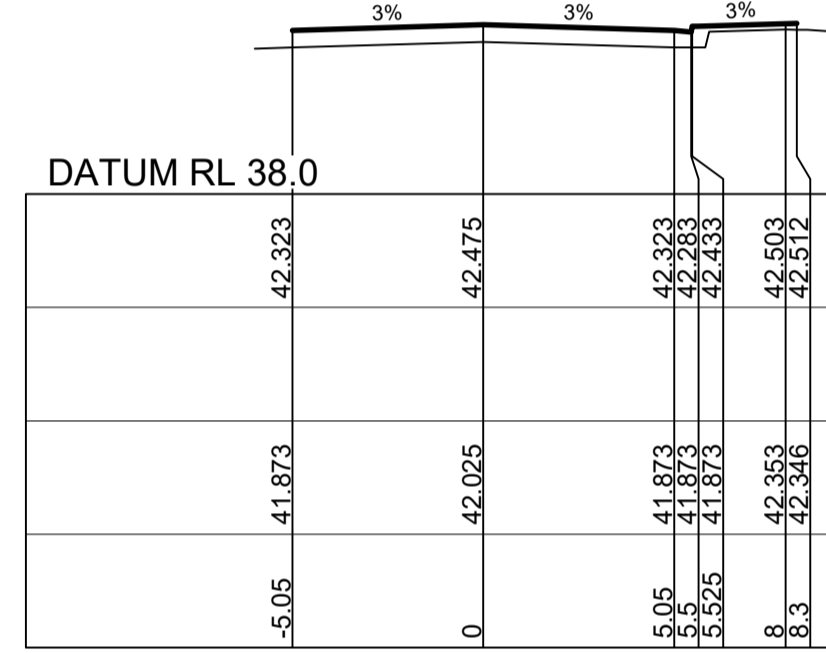
CH 92.5
ROAD 35



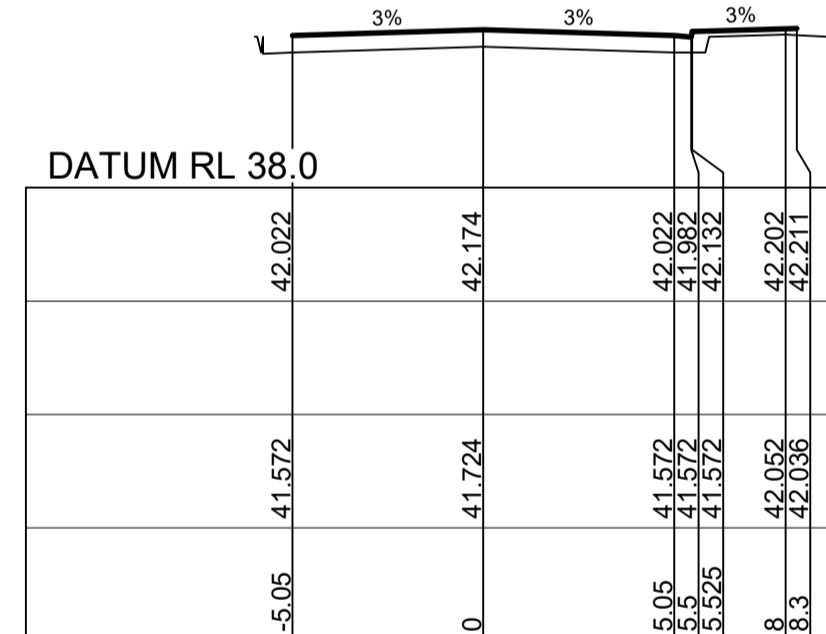
CH 175.976



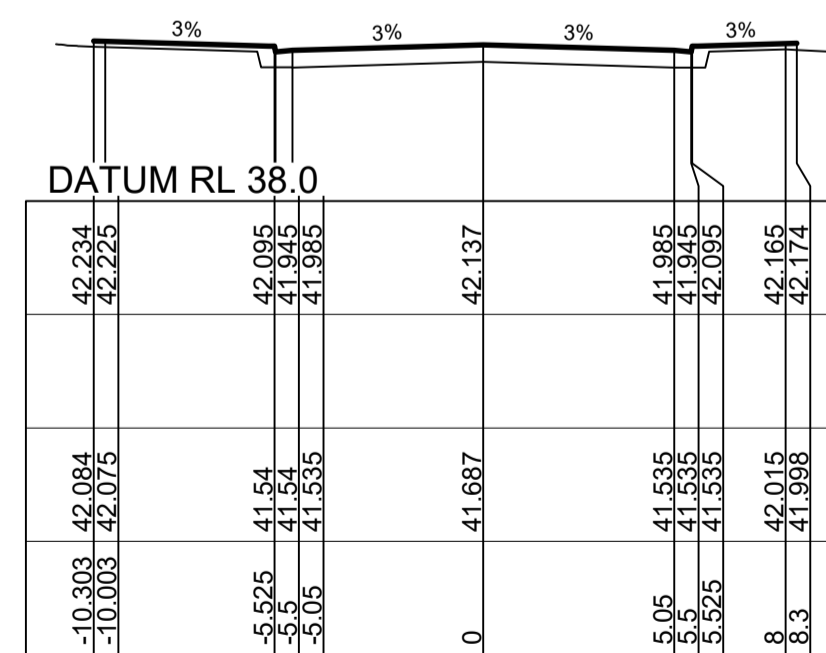
CH 165



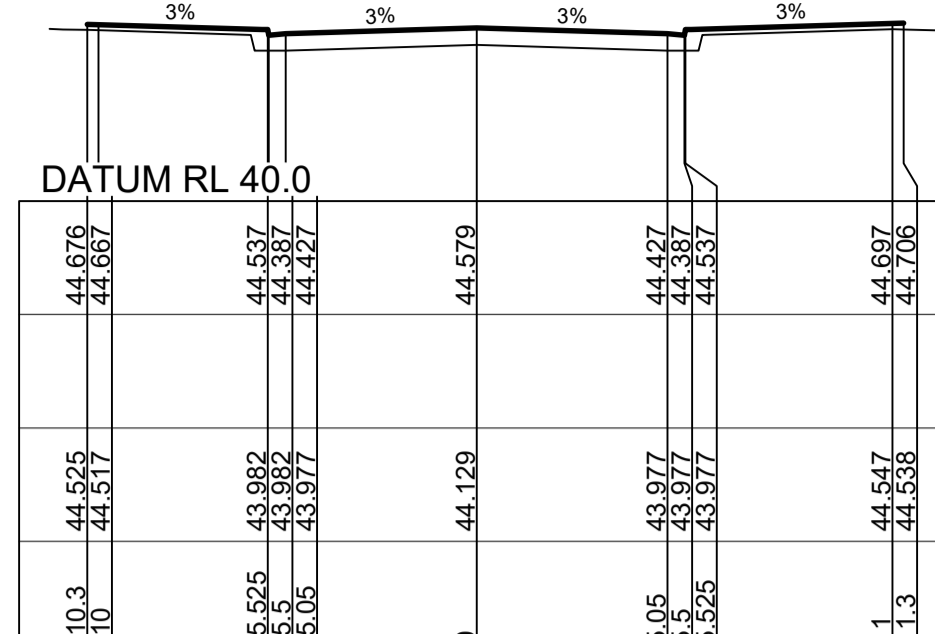
CH 162.472



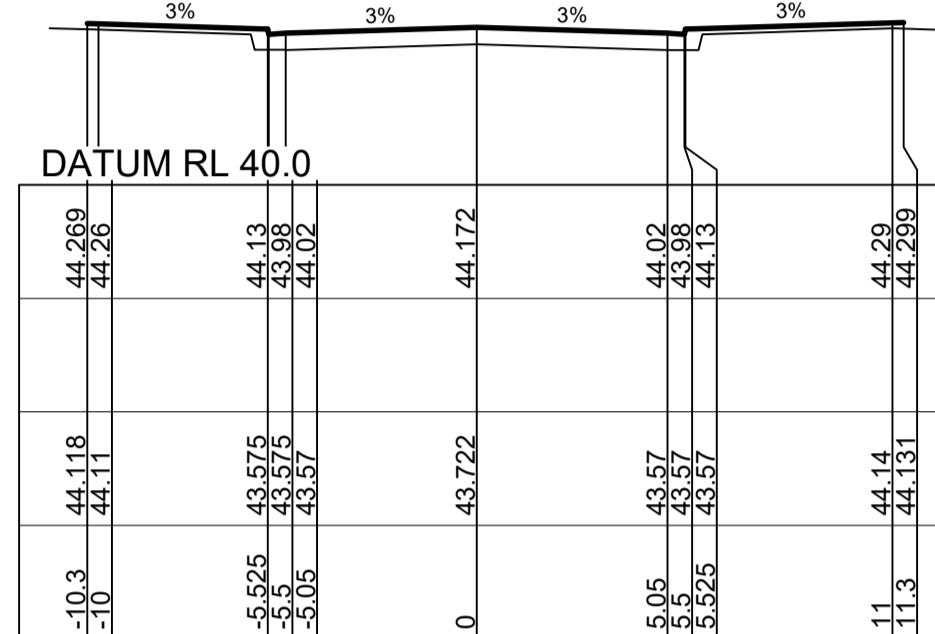
CH 151.374



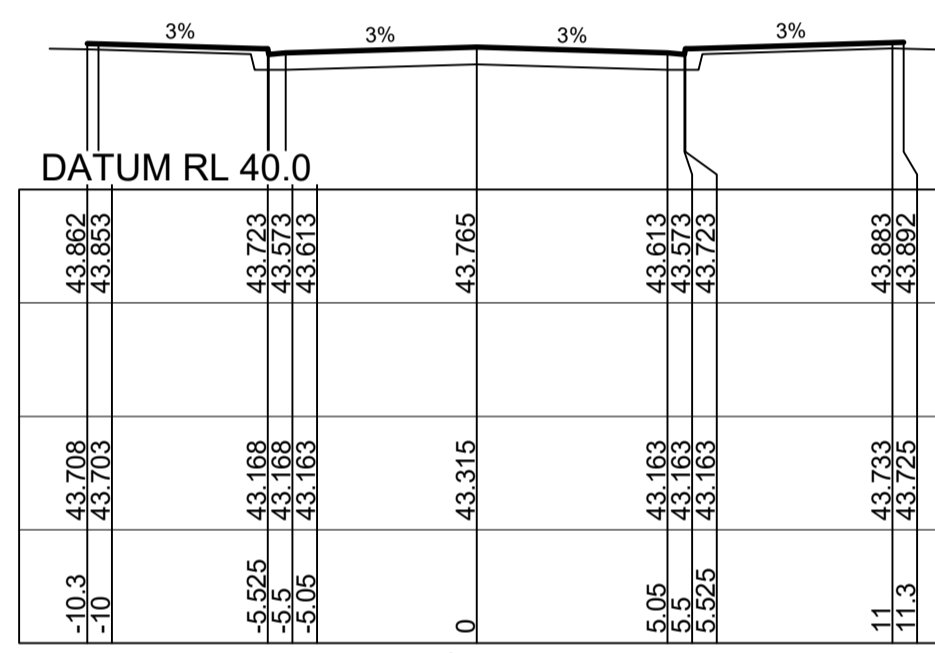
CH 150



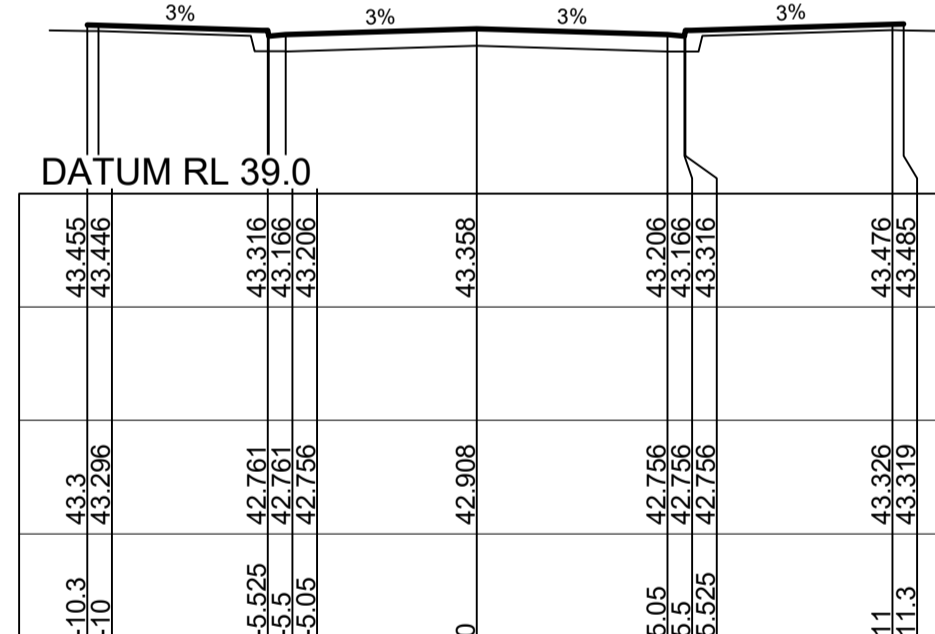
CH 240



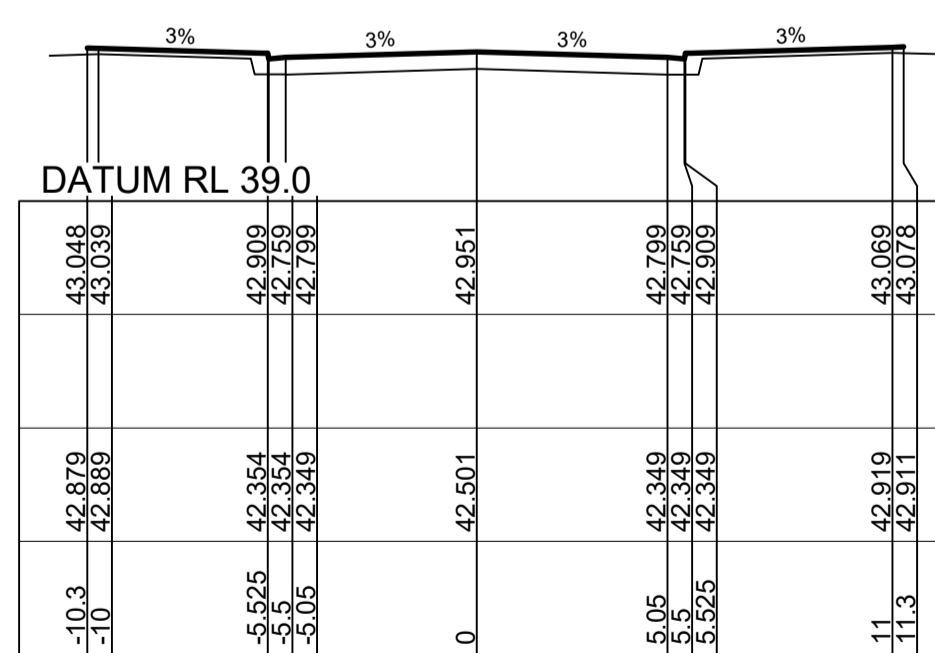
CH 225



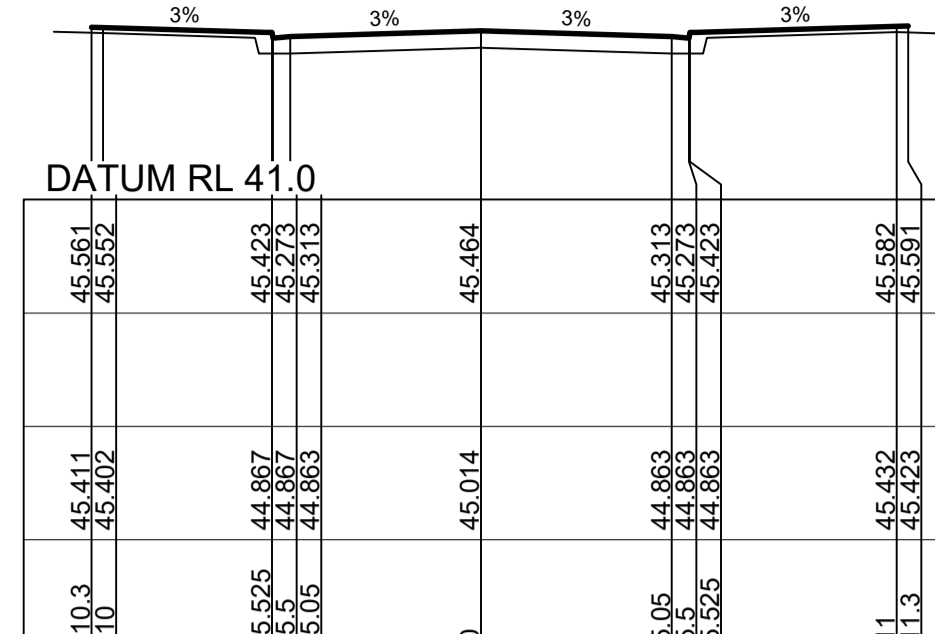
CH 210



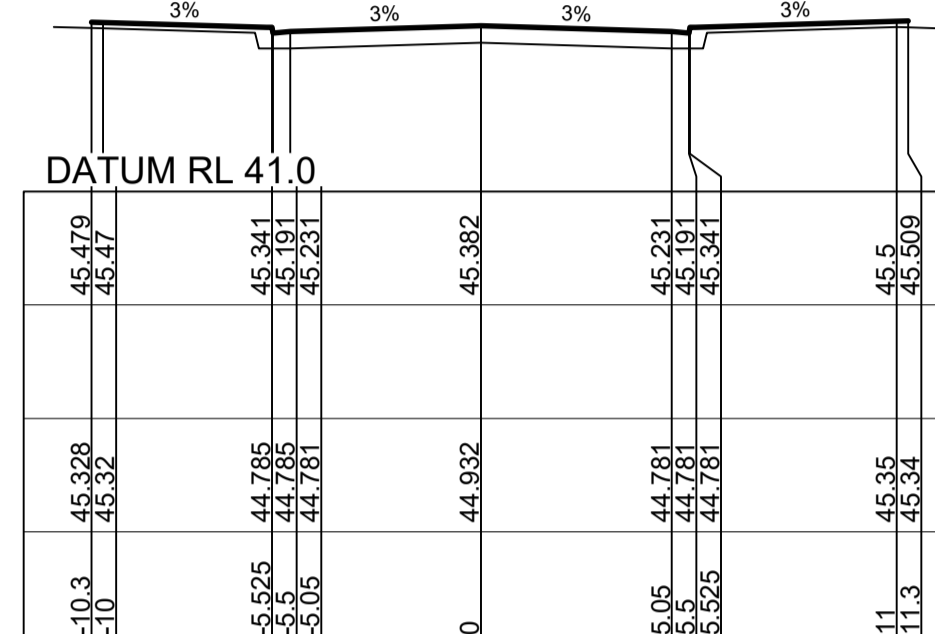
CH 195



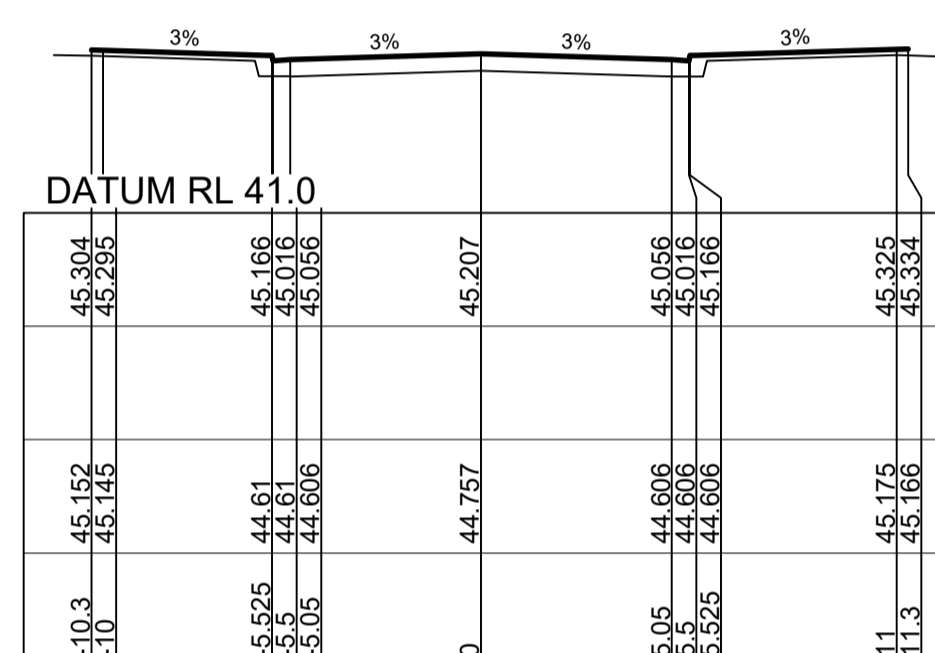
CH 180



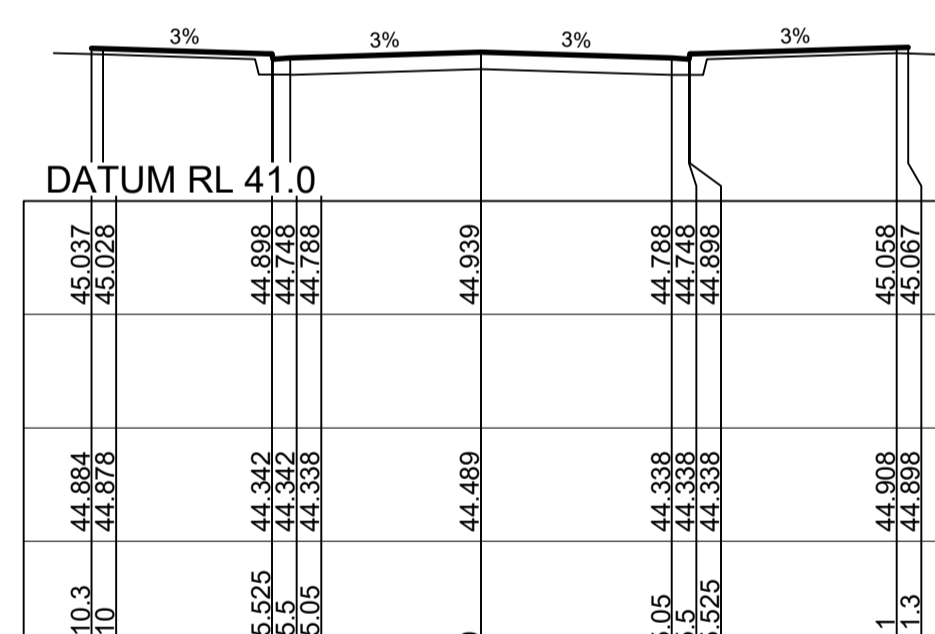
CH 300



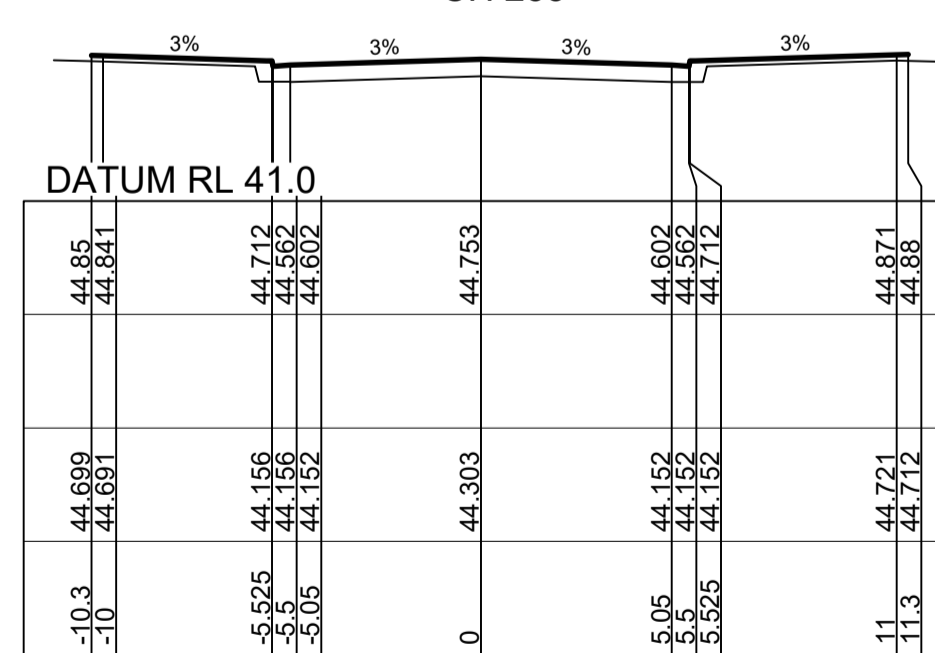
CH 285



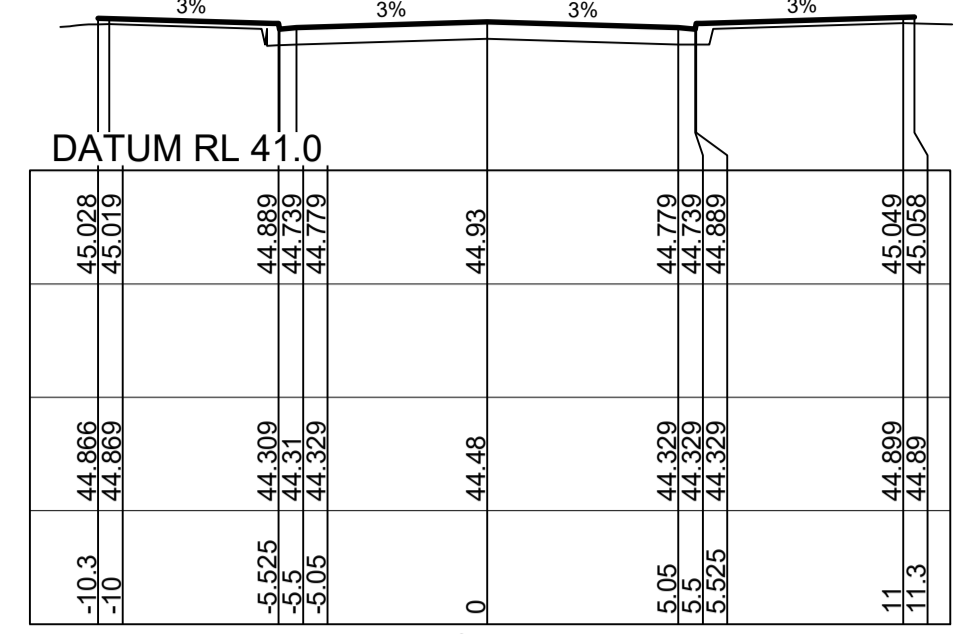
CH 270



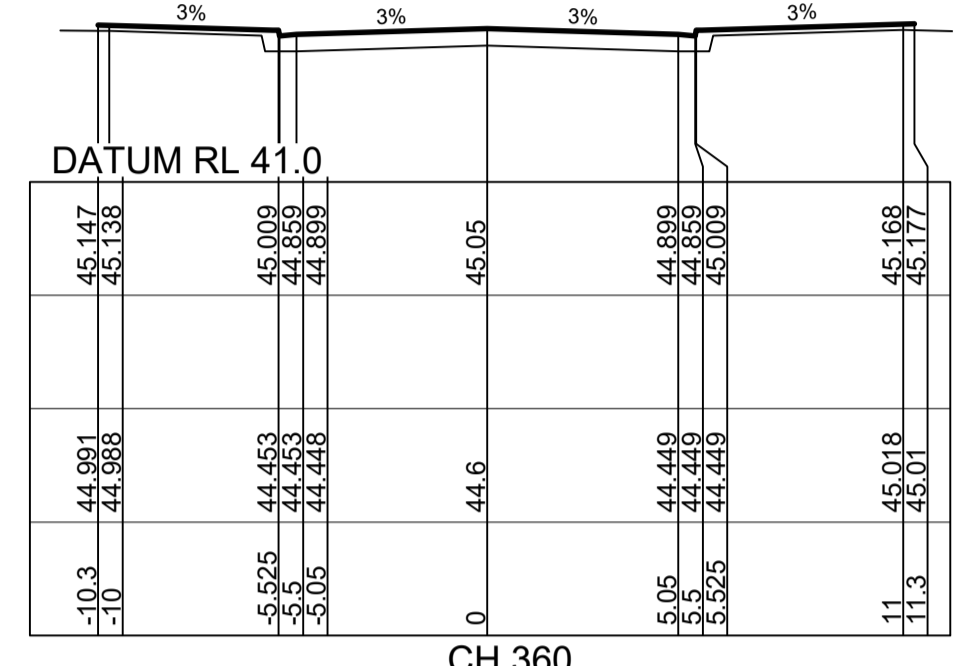
CH 255



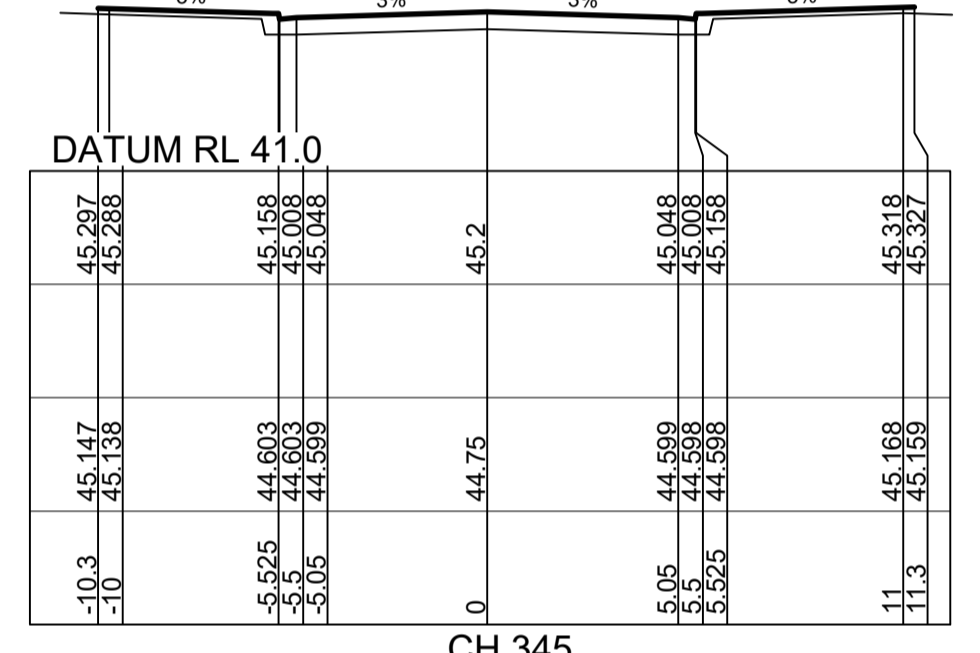
CH 246.78



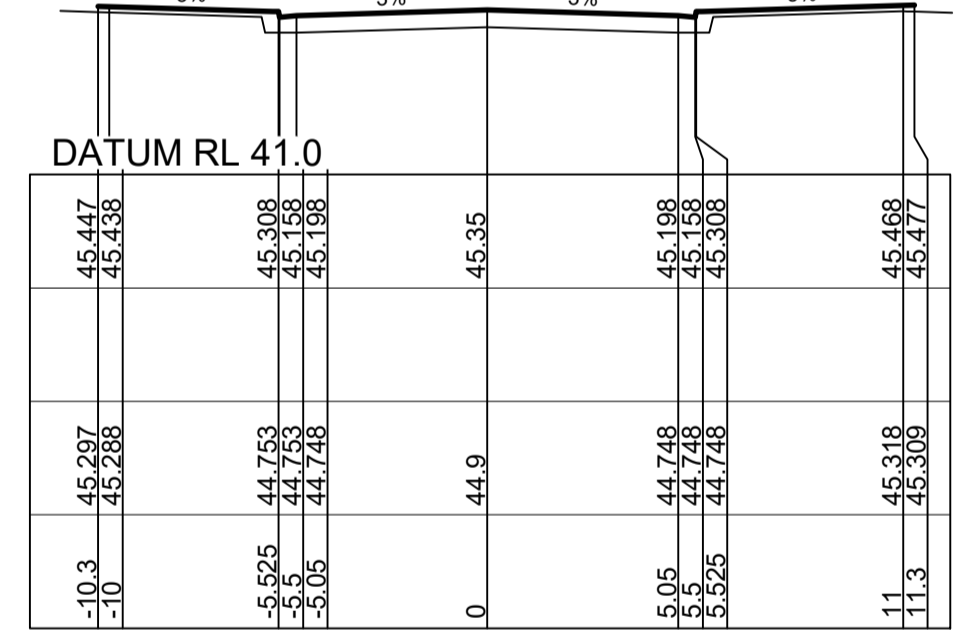
CH 371.968



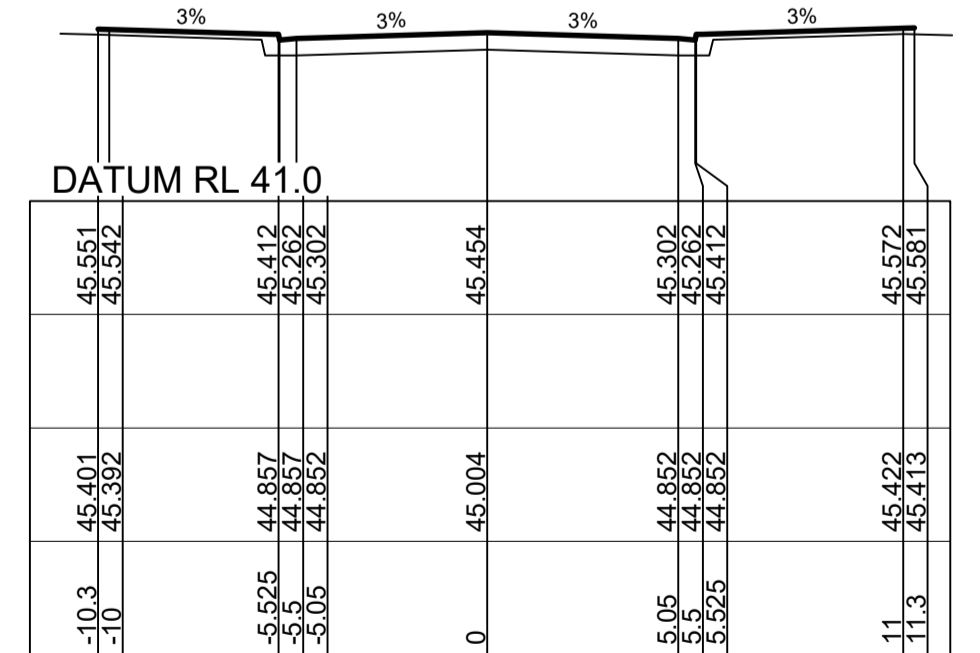
CH 360



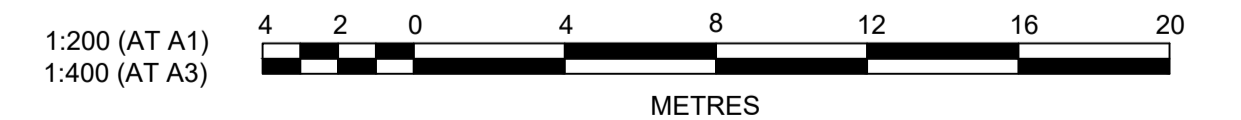
CH 345



CH 330



CH 315



Plotfile: 21 July 2021 2:11:47 PM File Name: \\jwp-local\drive\110185 - Redbank North Richmond Residential Precincts12 - Stage 1 DANCDC\CSOUTHERN HEIGHTS11-PROM110185-12-CC1201.dwg

MP	VS	RO	MS	13/07/21
DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:



STATUS:

**ISSUE FOR
CONSTRUCTION
APPROVAL**

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**REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
ROAD CROSS SECTIONS
SHEET 1**

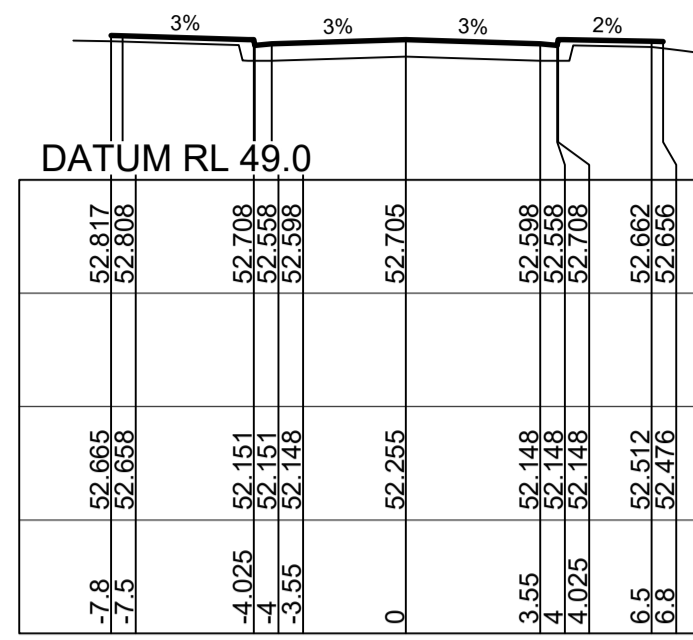
PROJECT No:
110185-12
SHEET No:
CC1201

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1201

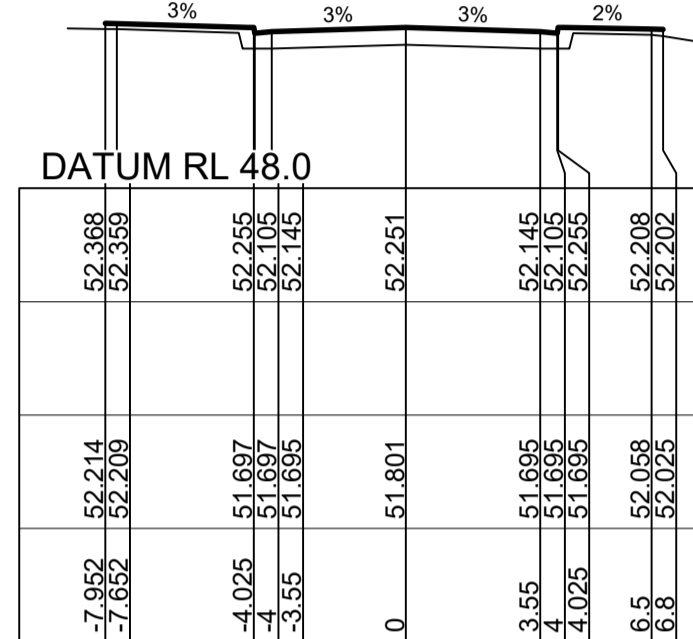
SUBDIVISION WORKS CERTIFICATE

Certificate No. **20130299SW60**
 Date of Issue **10/08/2021**
 Issuing Officer **D. Resta**
 Accreditation No. **BDC3367**

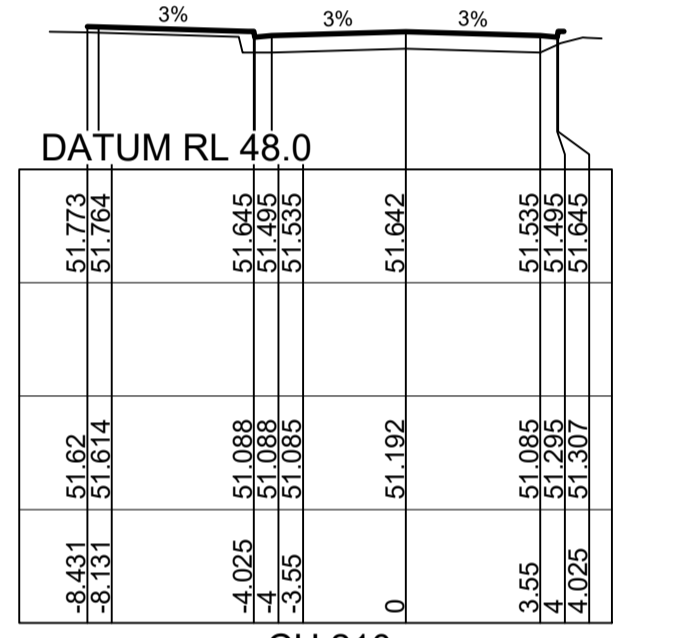
These plans/specifications form part of the certificate issued 10th of August 2021



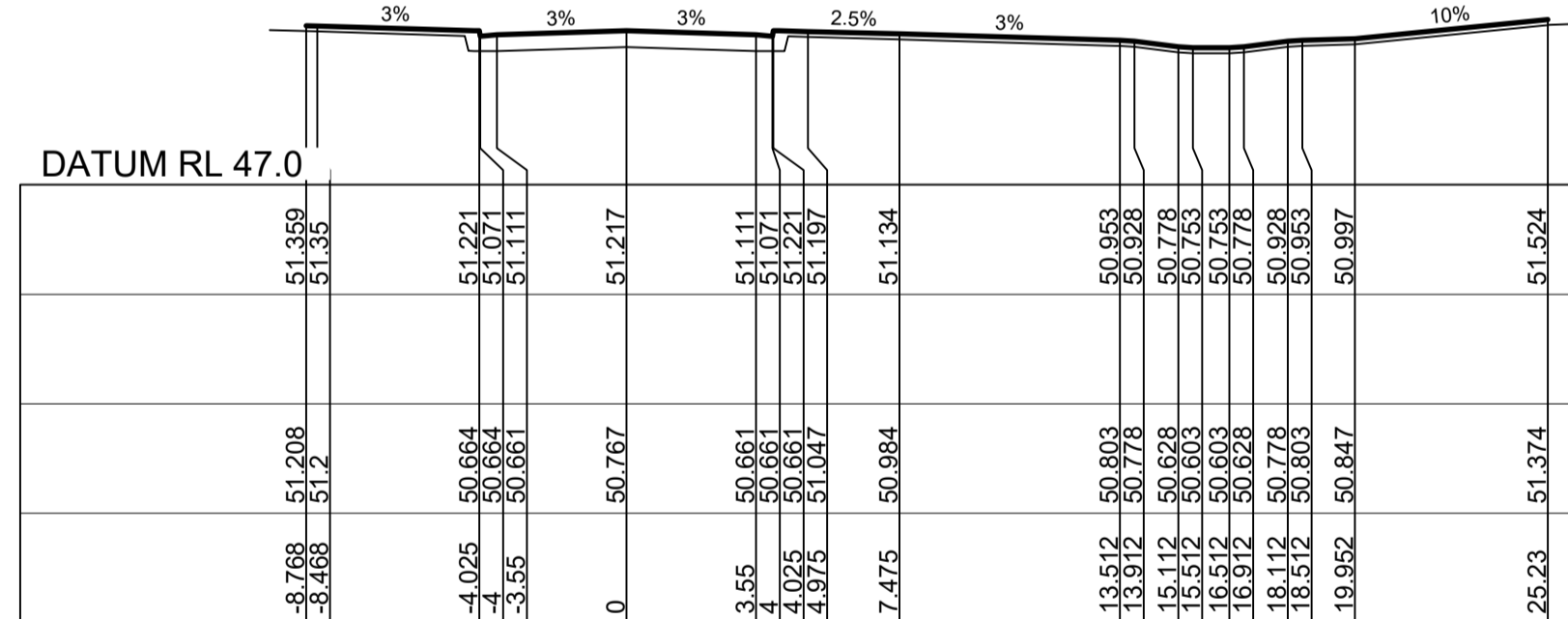
CH 225



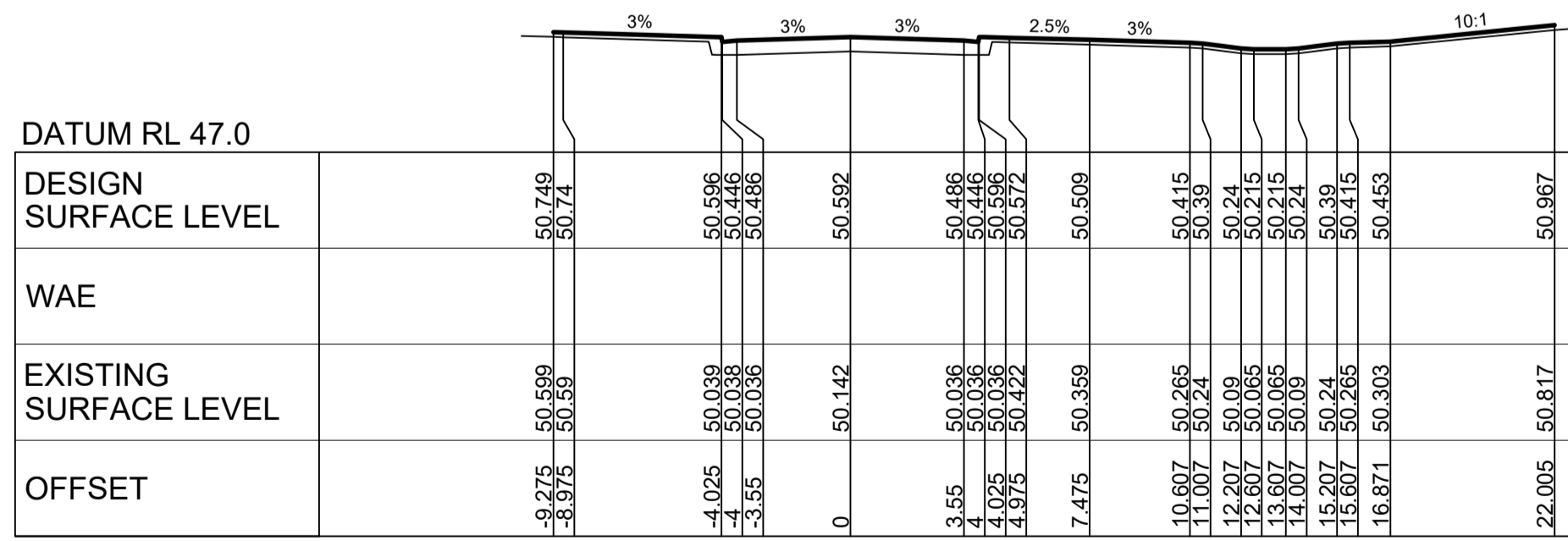
CH 218.597



CH 210

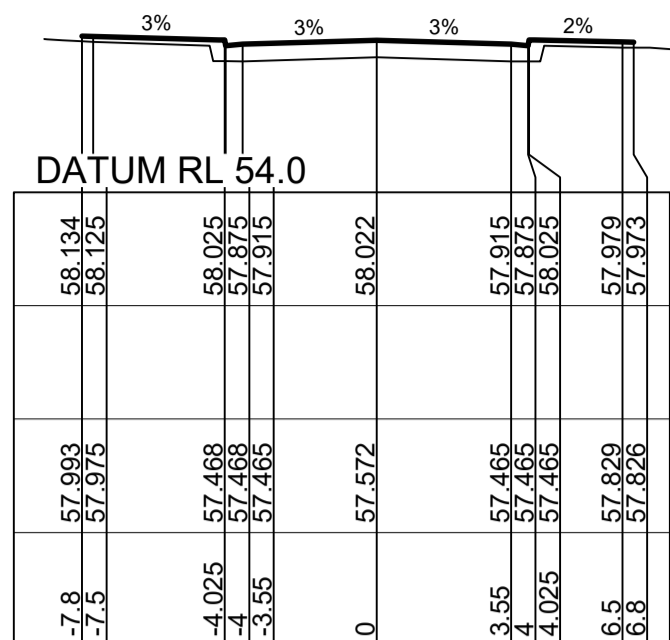


CH 204.018

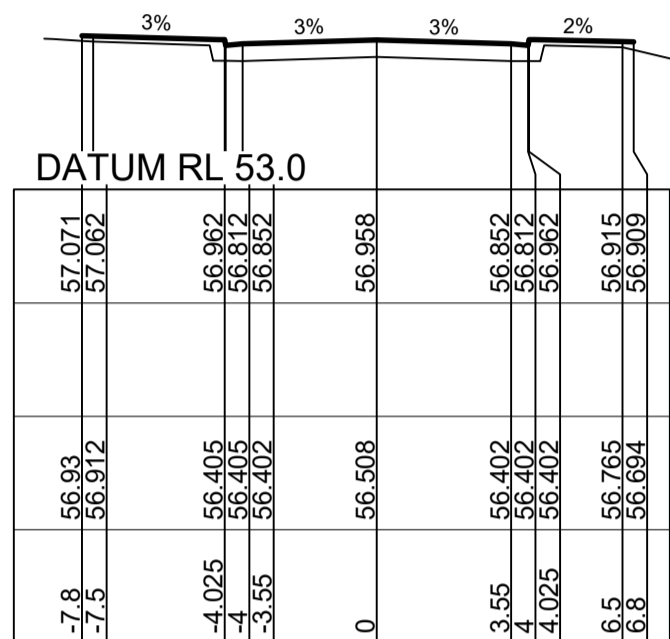


CH 195

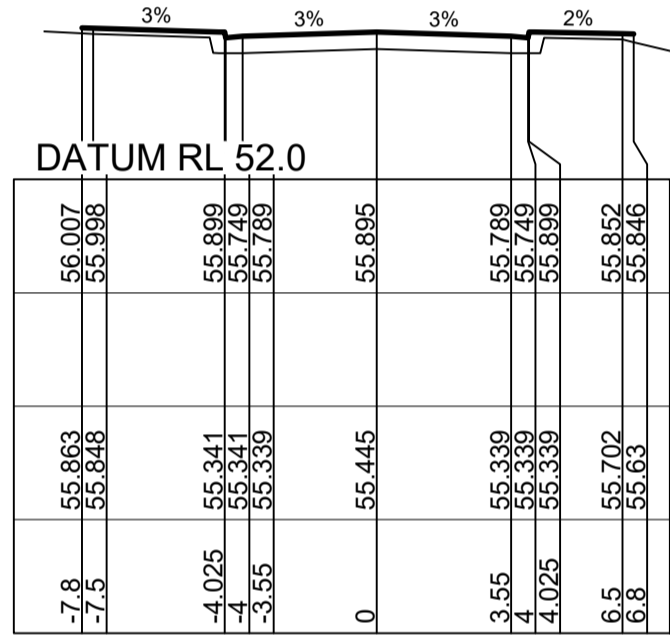
ROAD 50



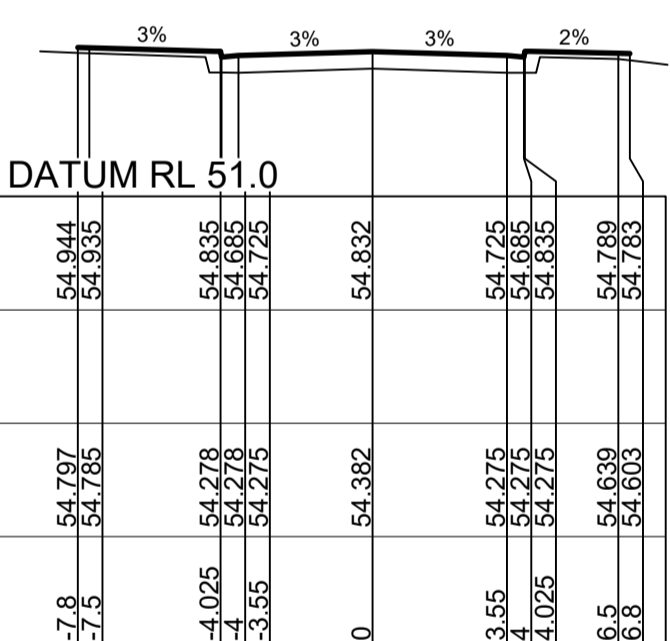
CH 300



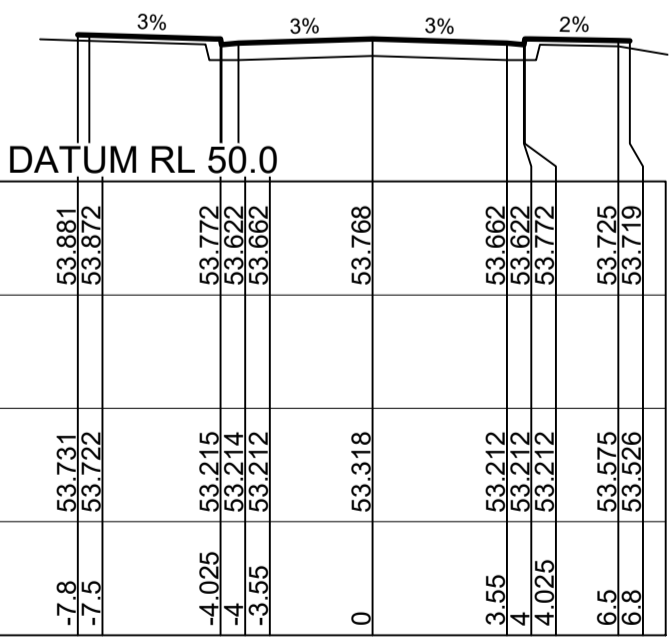
CH 285



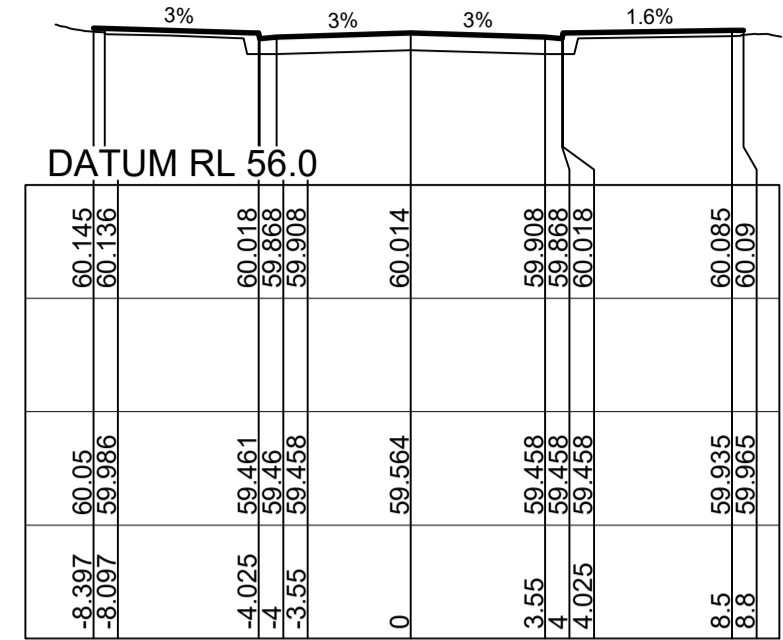
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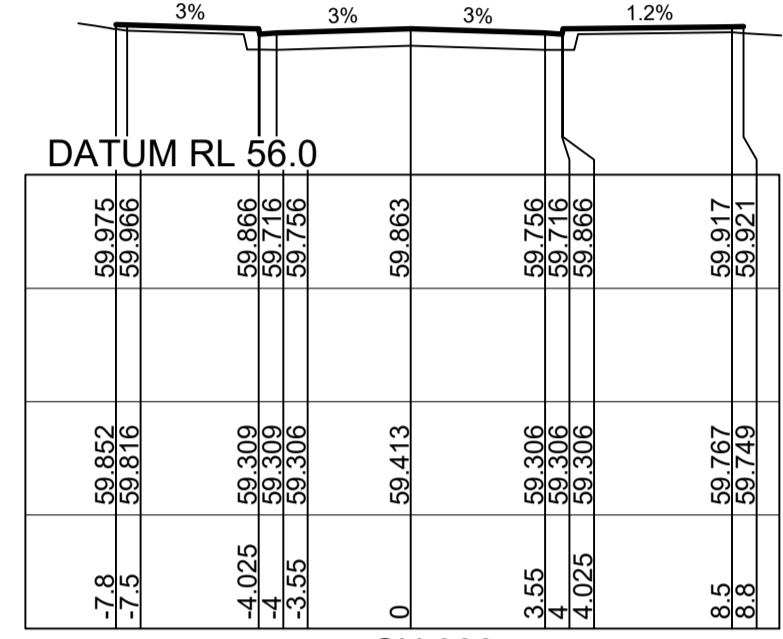
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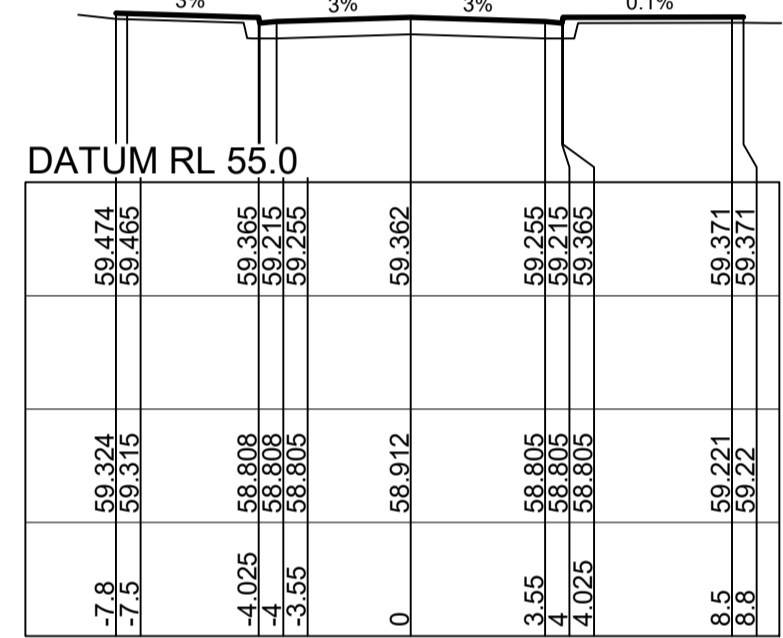
CH 240



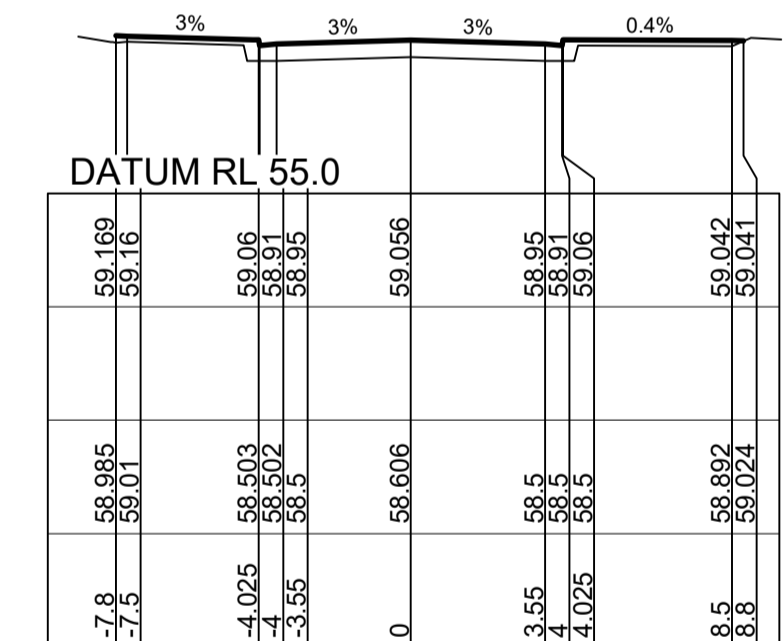
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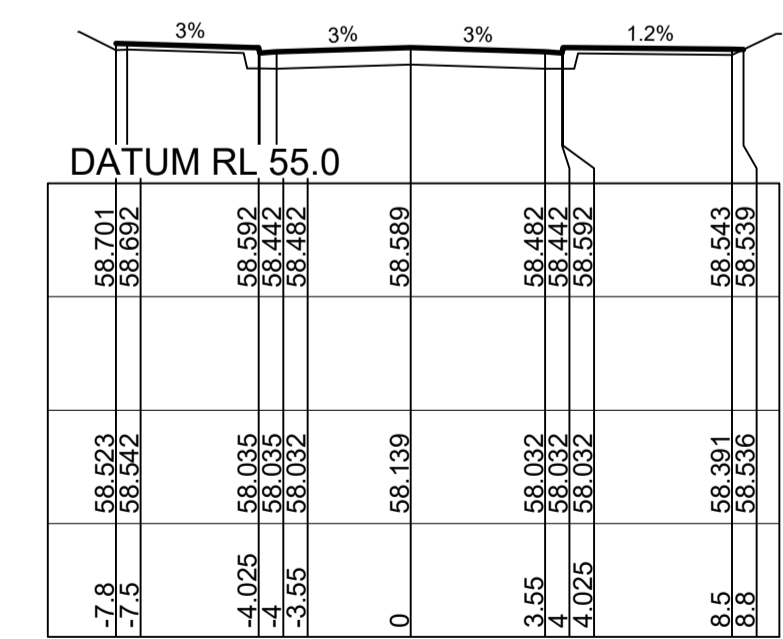
CH 330



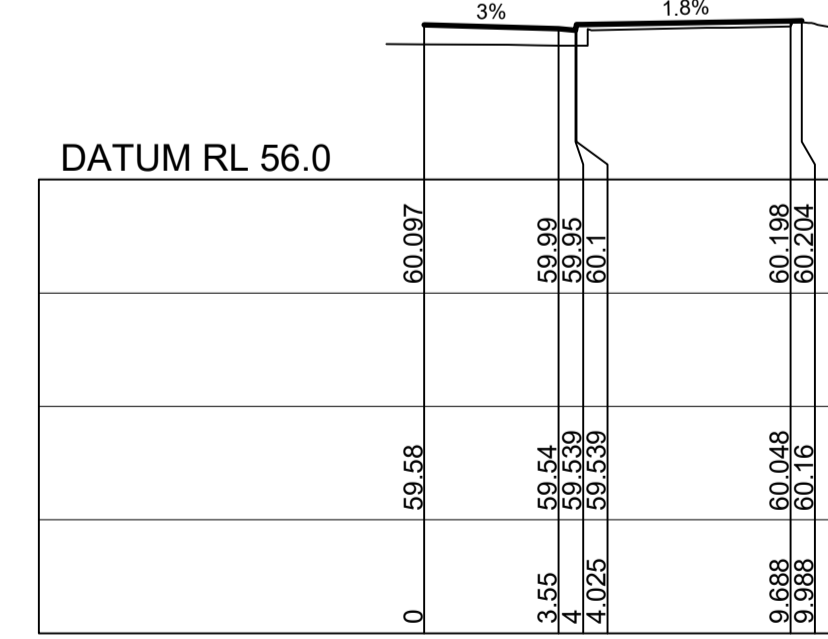
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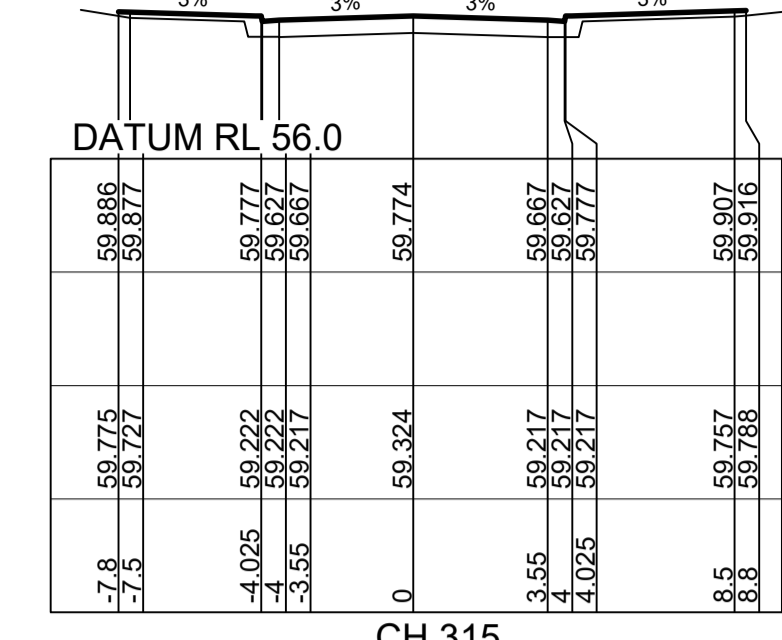
CH 315



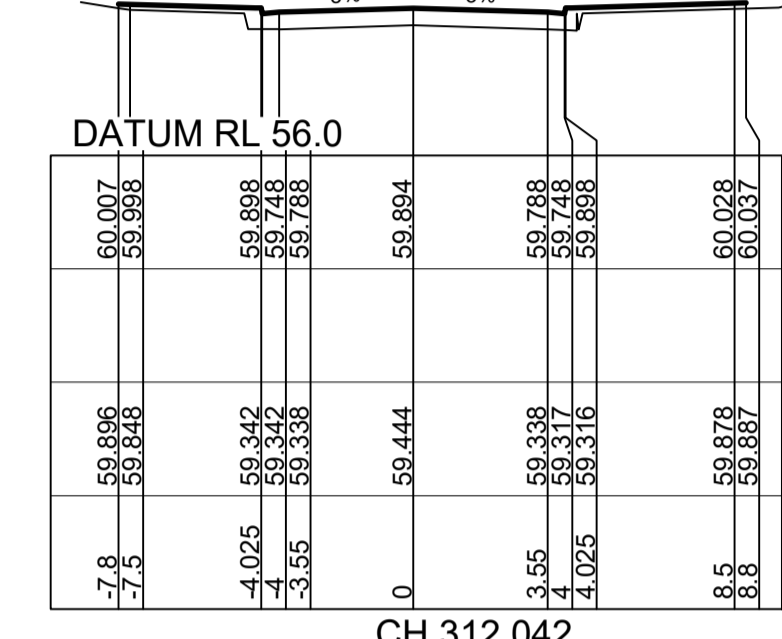
CH 308



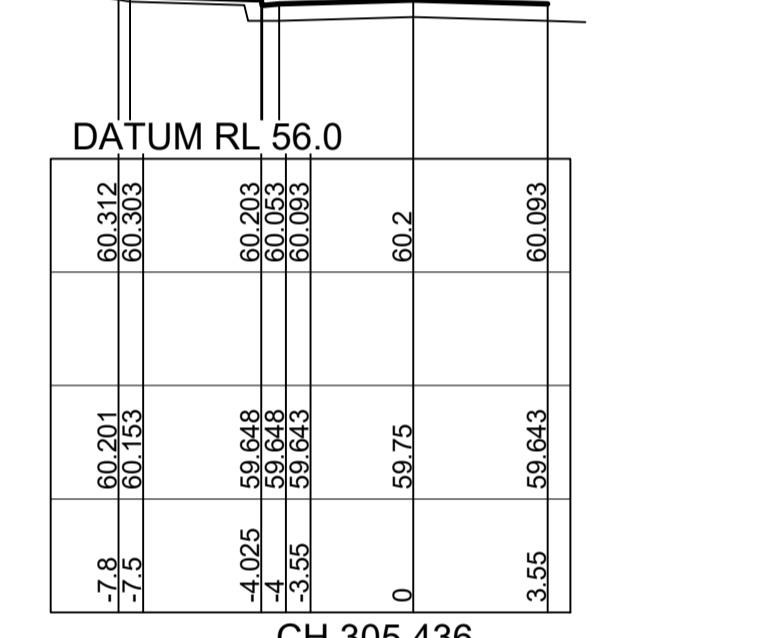
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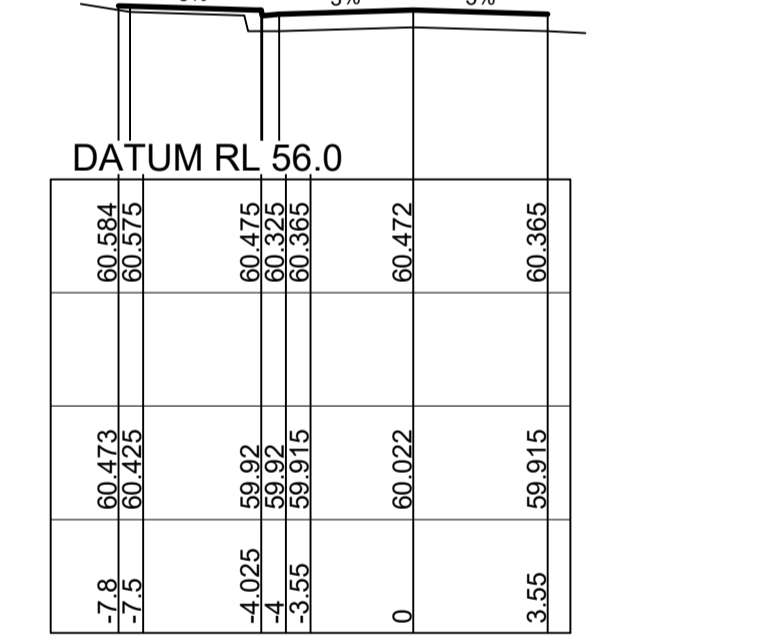
CH 315



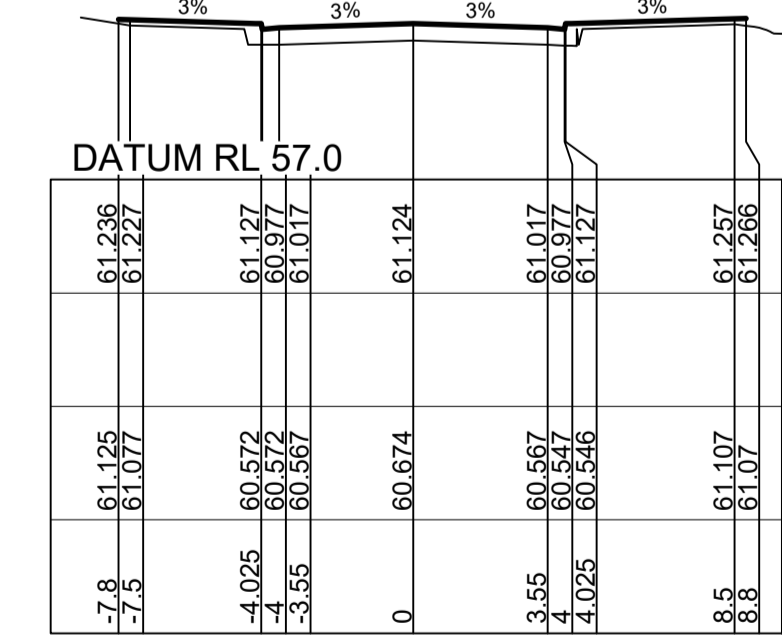
CH 312.042



CH 305.436

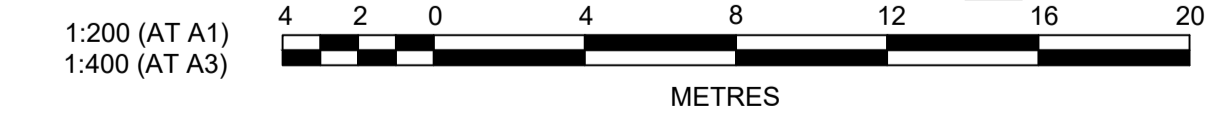


CH 300



CH 286.955

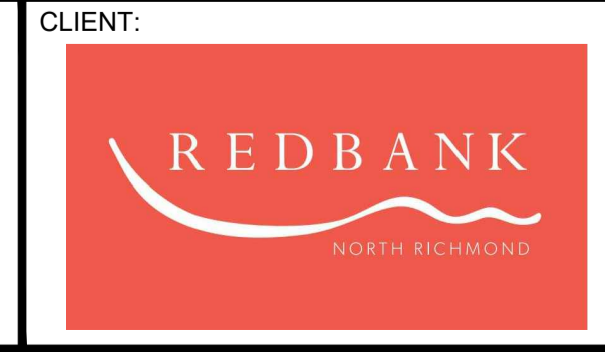
ROAD 51



AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	VS	RO	MS	21/07/21
A	MP	VS	RO	MS	13/01/21

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 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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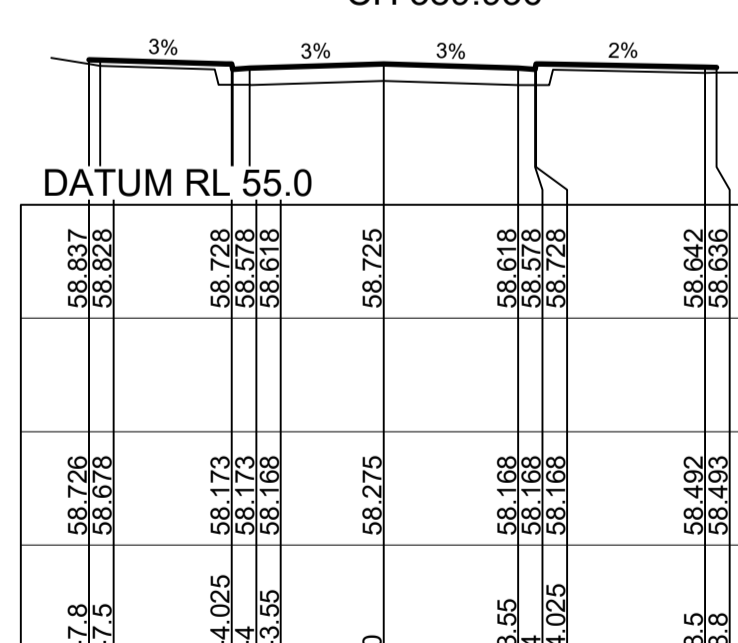
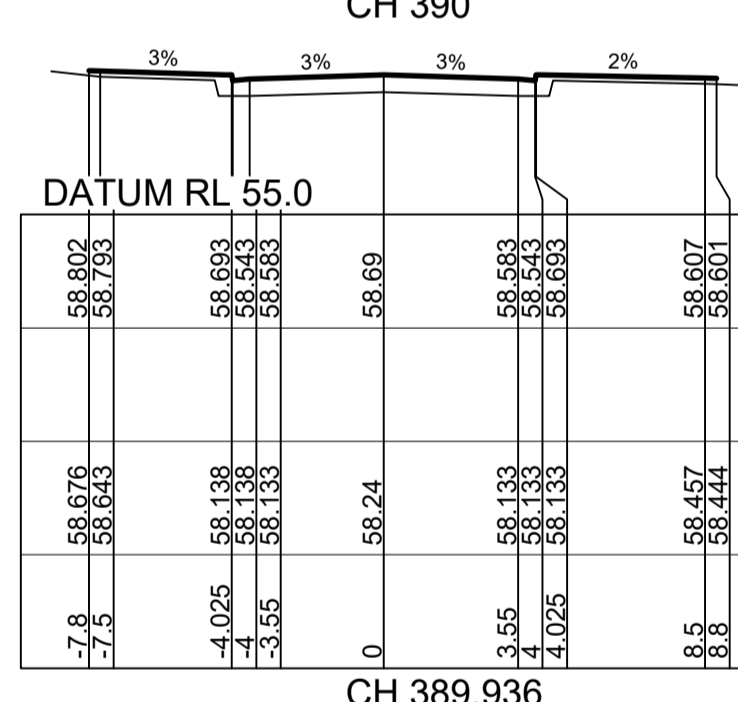
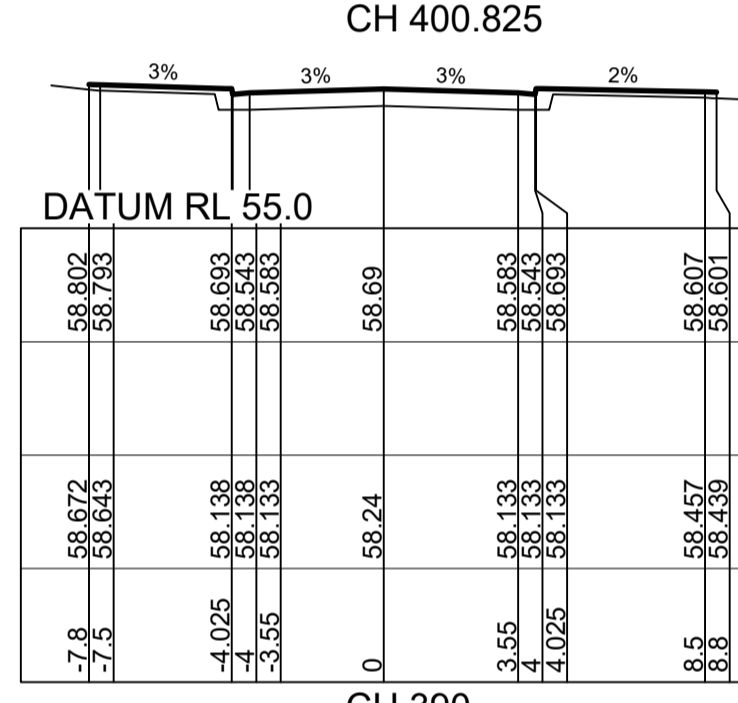
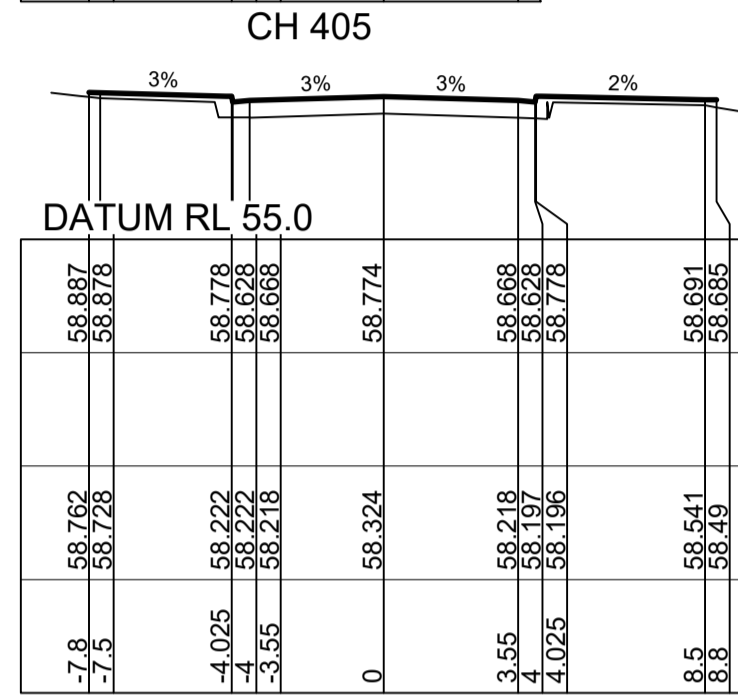
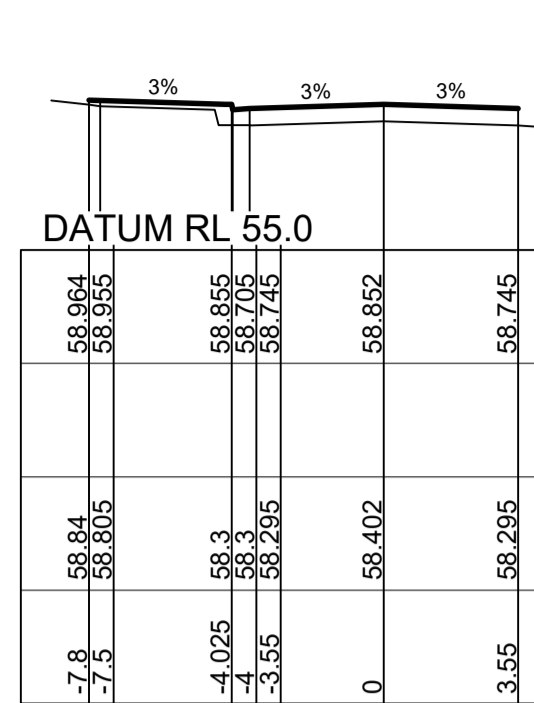
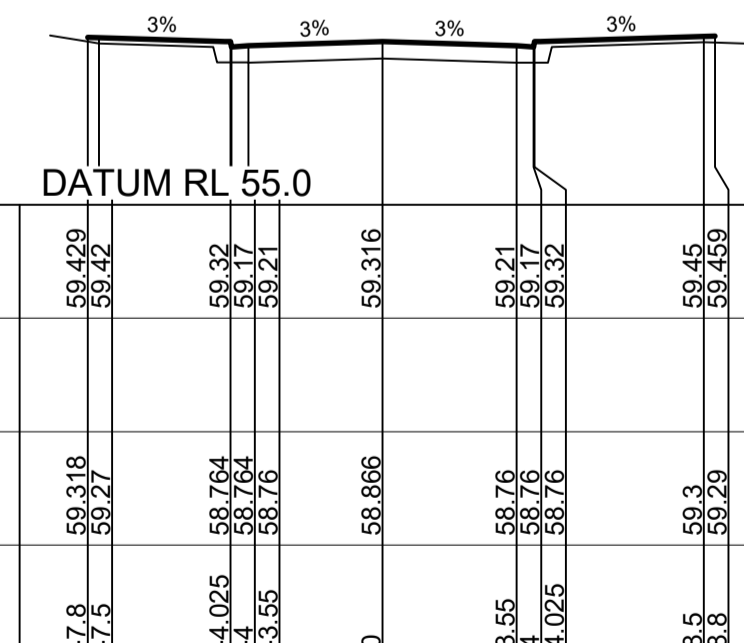
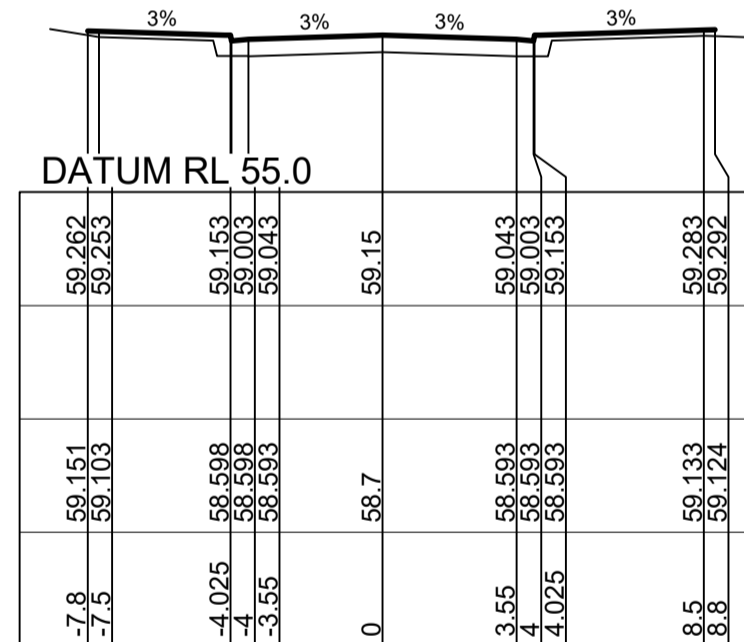
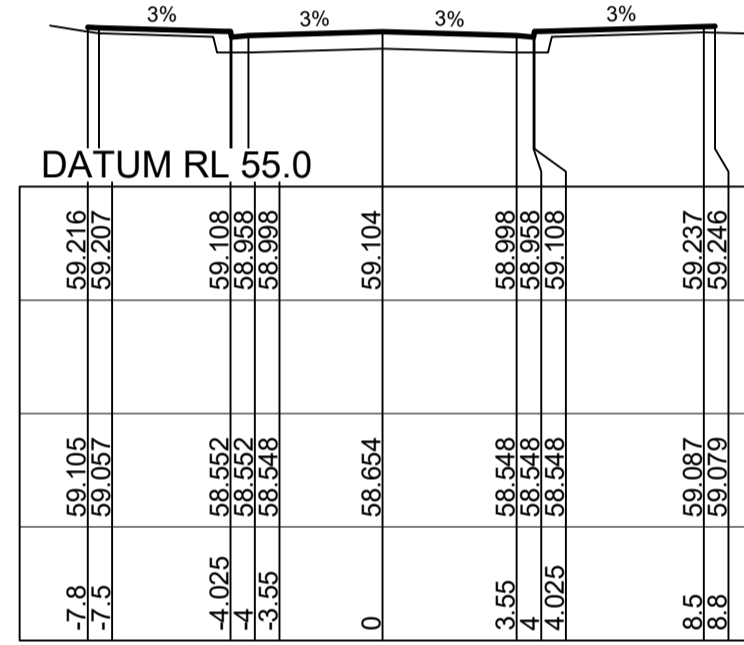
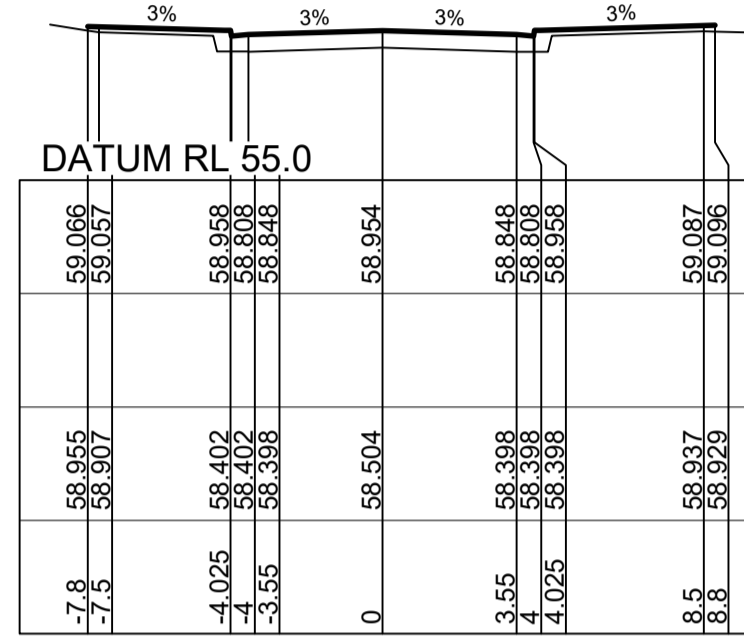
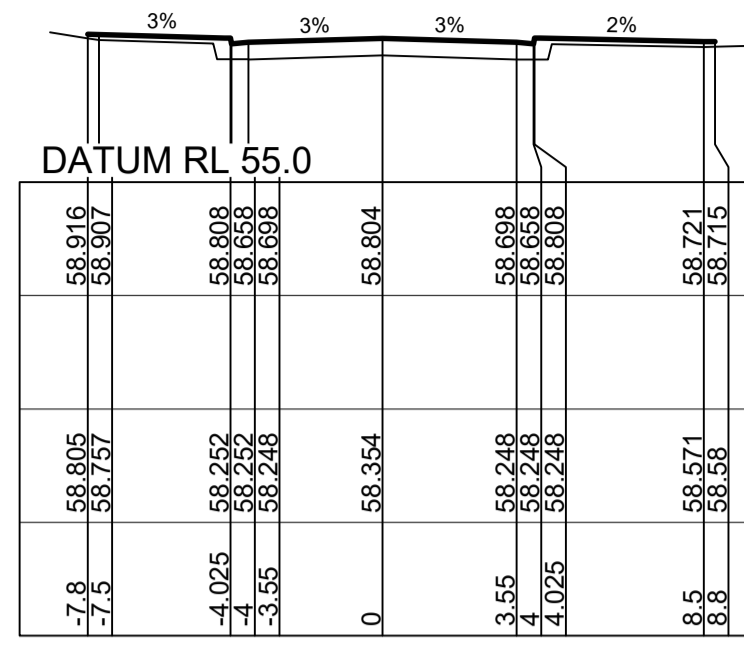
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 ROAD CROSS SECTIONS
 SHEET 4

PROJECT No: **110185-12**
 SHEET No: **CC1204**

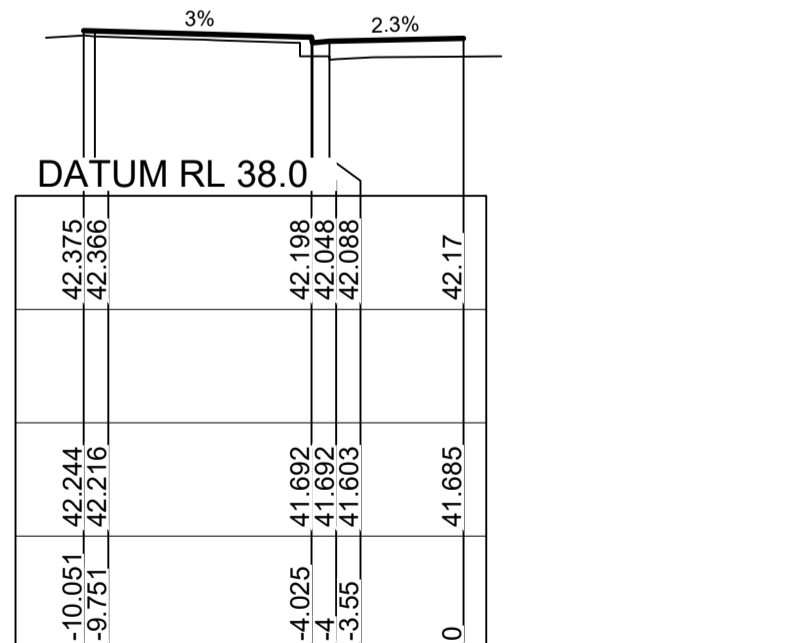
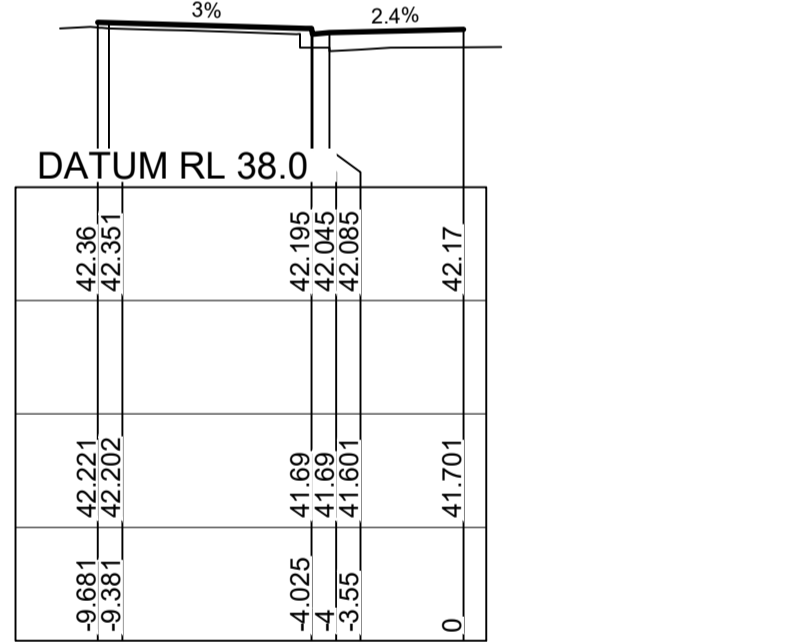
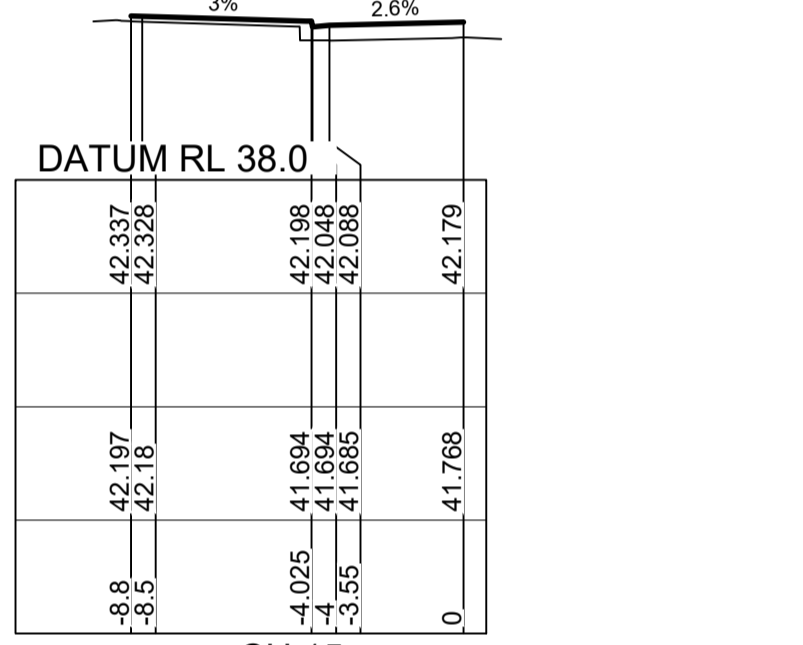
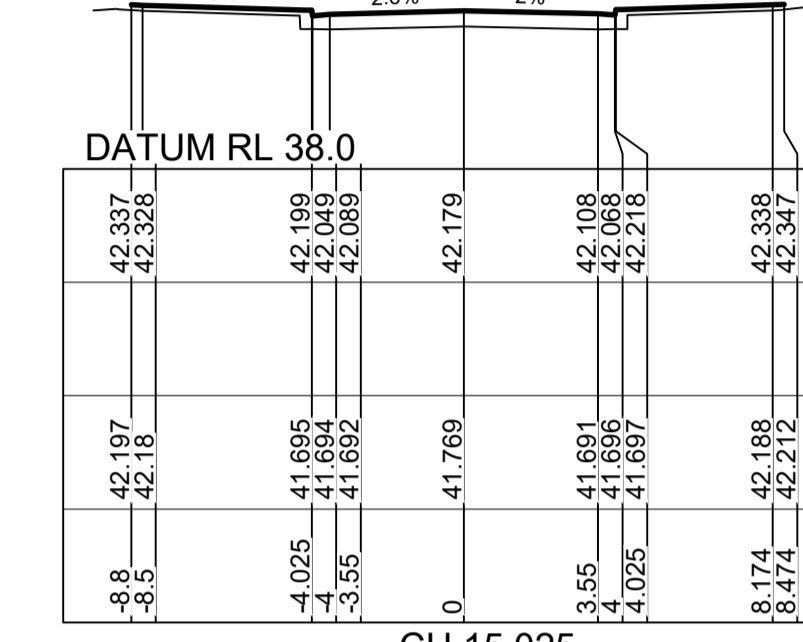
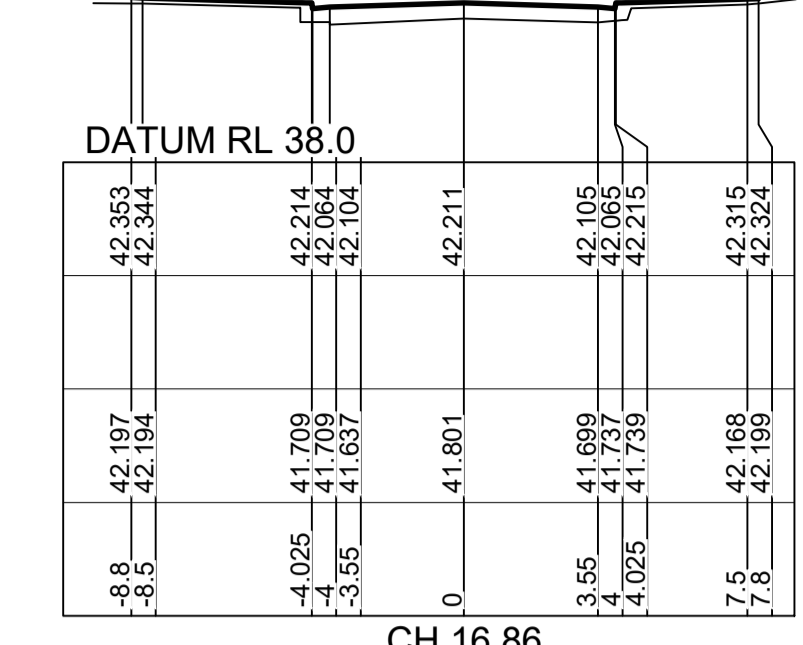
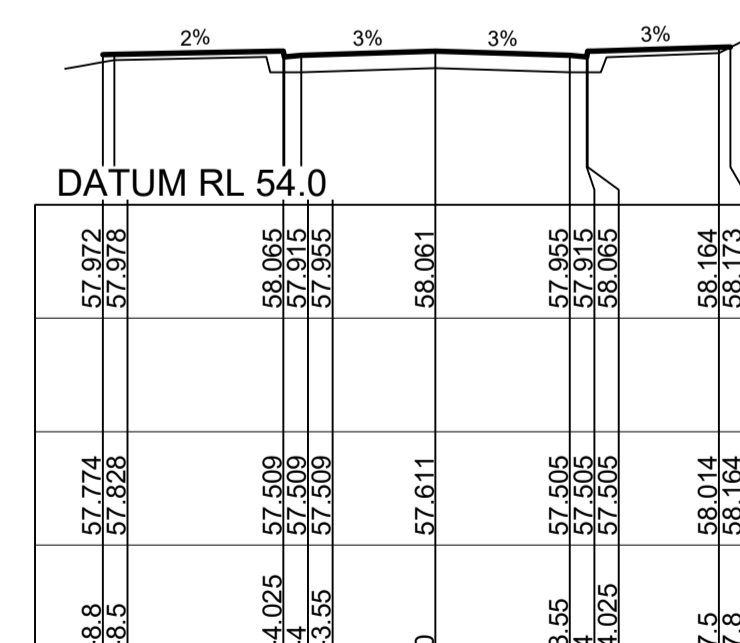
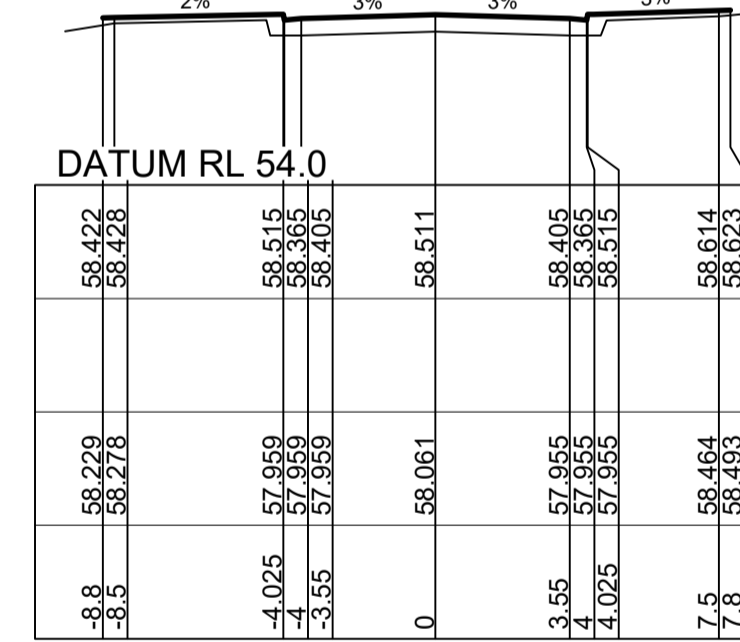
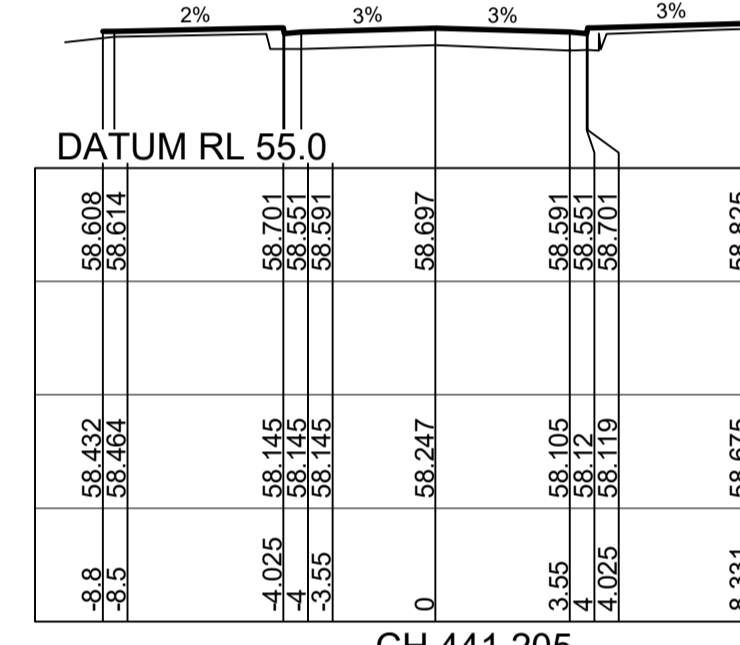
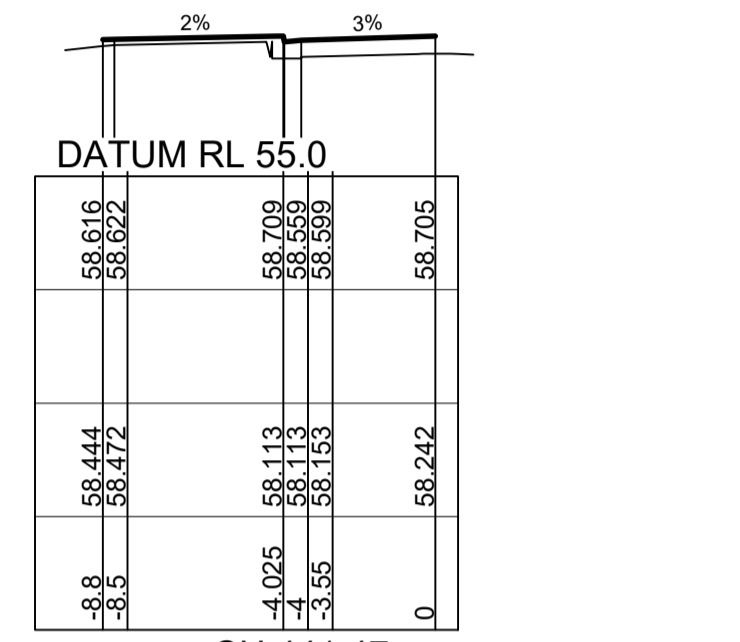
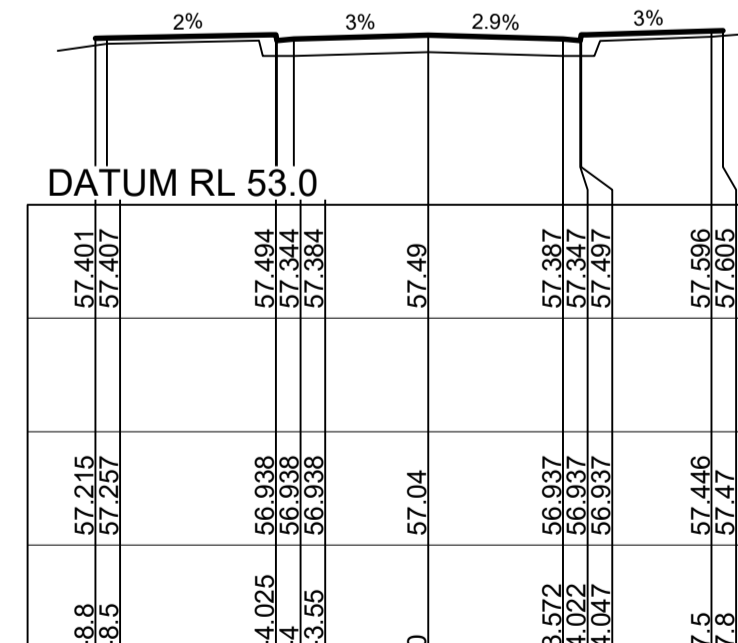
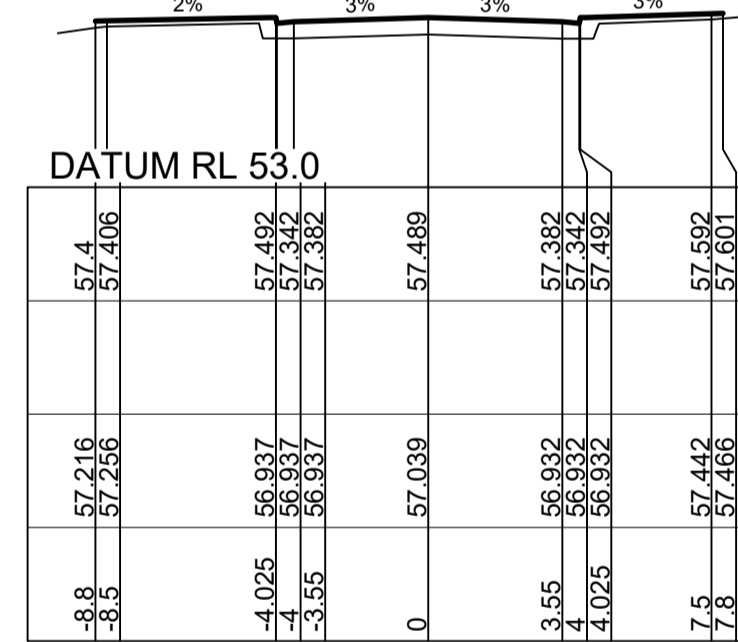
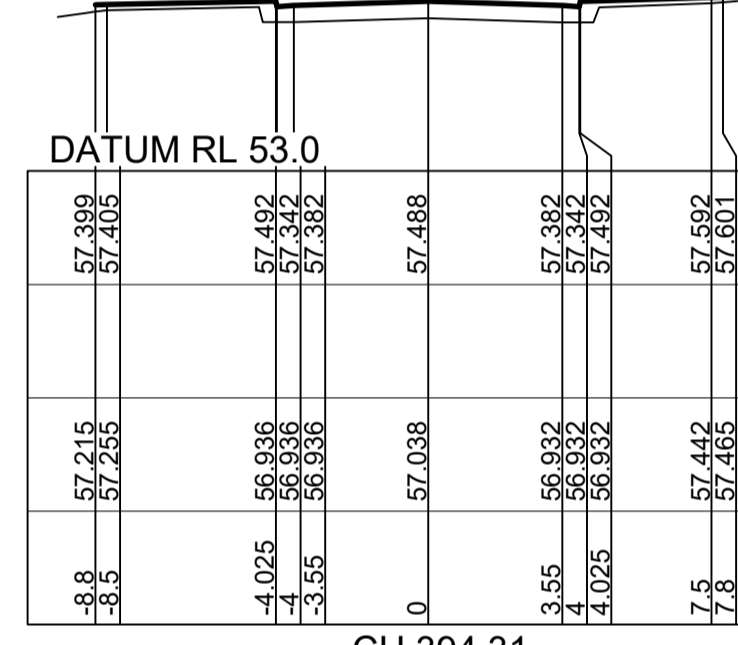
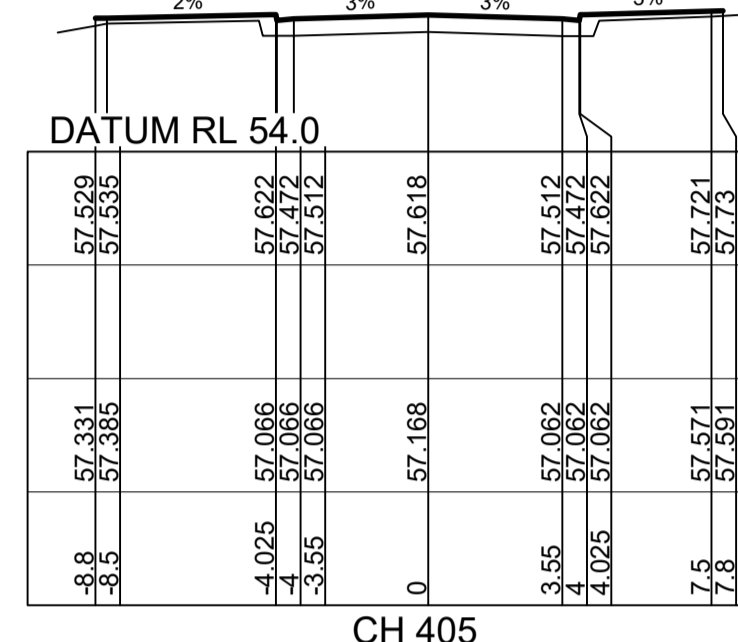
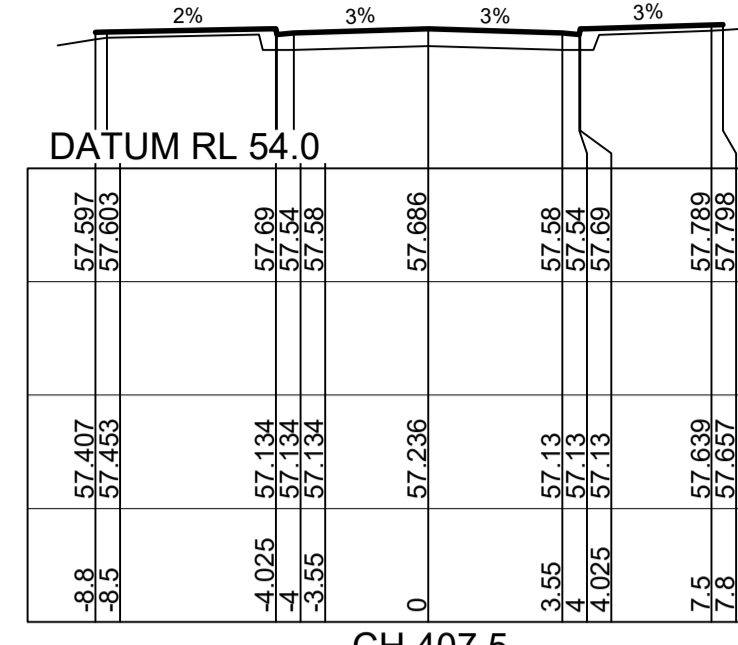
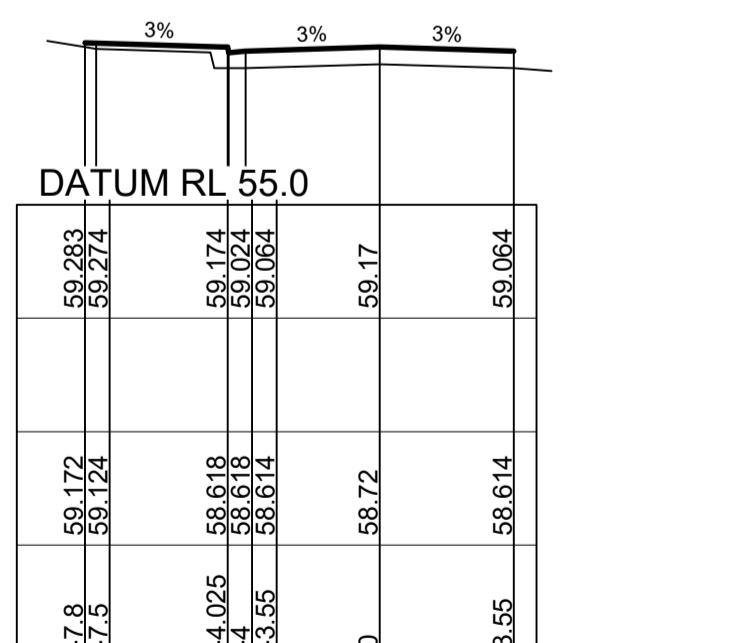
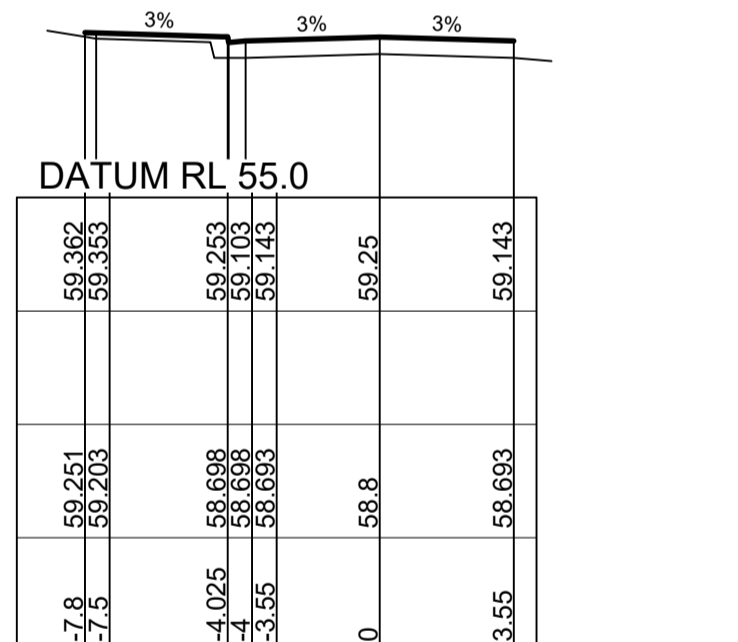
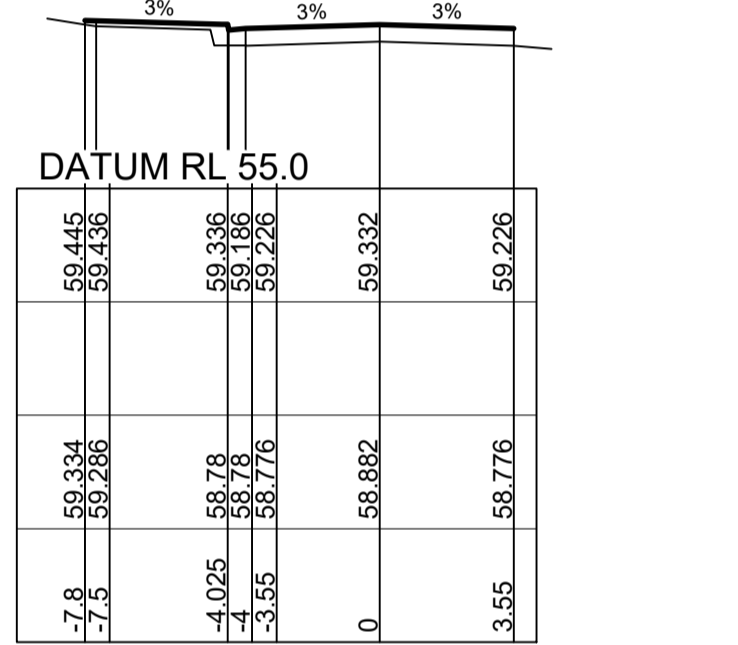
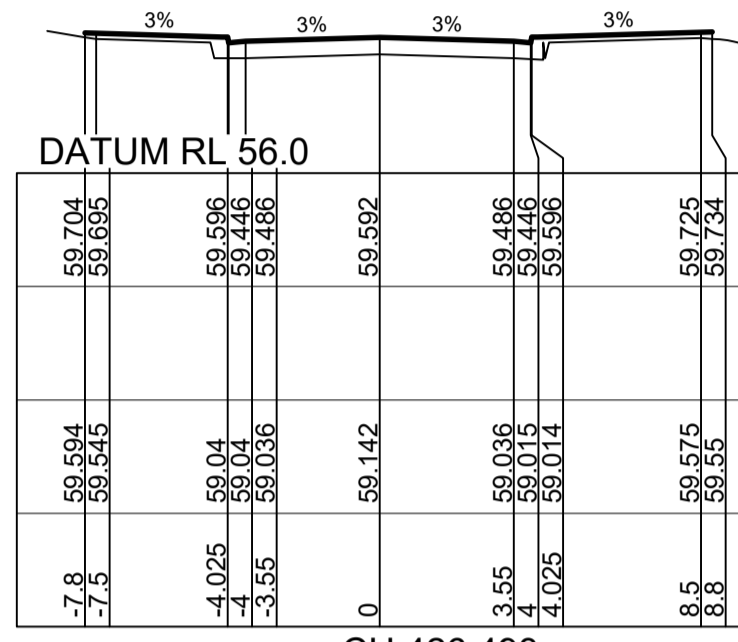
PLAN No: **110185-12-CC1204**

AZIMUTH: M.G.A.	DATUM: A.H.D.	ORIGIN:	B
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Plotfile: 21 July, 2021 2:14:18 PM File Name: \\jwp-local\ids\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCOC\SOUTHERN HEIGHTS\1-PROM110185-12-CC1205.dwg



SUBDIVISION WORKS CERTIFICATE
Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer D. Resta
Accreditation No. BDC3367
These plans/specifications form part of the certificate issued 10th of August 2021



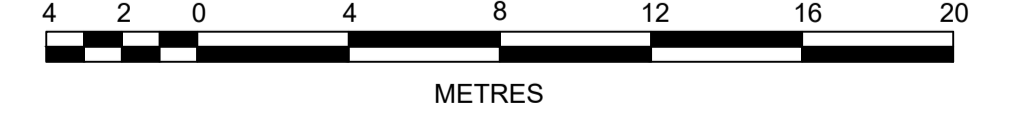
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59.542		59.217	-7.3
59.153		59.098	-4.025
59.043		59.074	-4
59.153		59.17	-3.55
59.15		59.16	0
59.043		58.986	3.55
59.043		58.76	4.025
59.233		59.3	8.5
59.233		59.23	8.8

ROAD 51

ROAD 52

ROAD 54

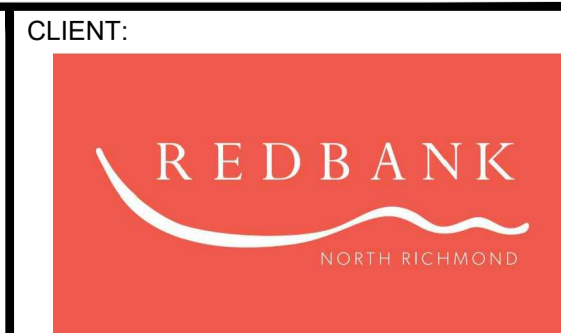
1:200 (AT A1)
1:400 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE	
C		MP	VS	RO	MS	21/07/21
B		MP	NM	RO	MS	28/01/21
A		MP	VS	RO	MS	13/01/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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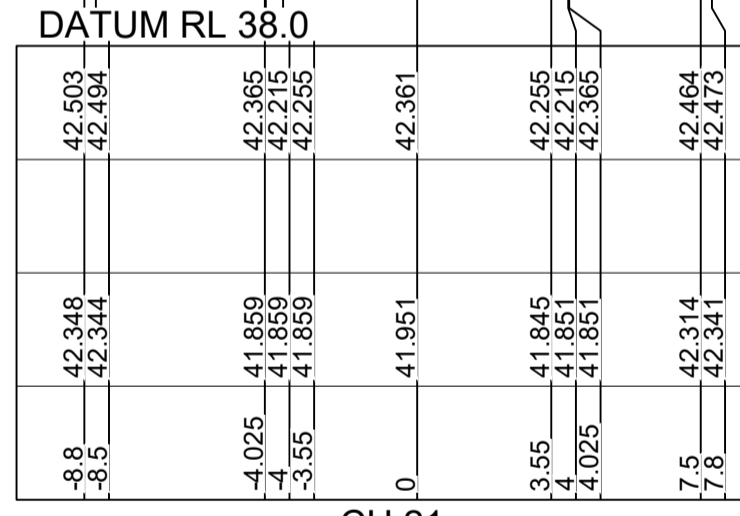
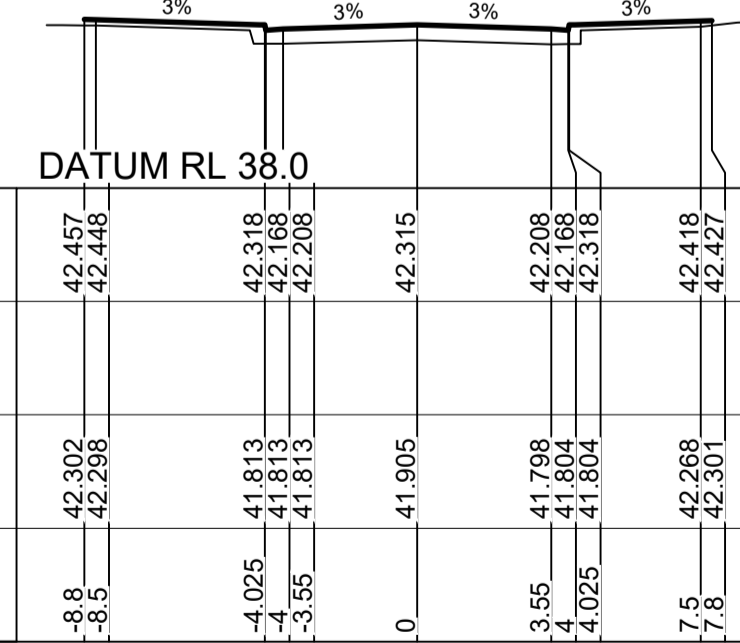
REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE ROAD CROSS SECTIONS SHEET 5

PROJECT No: **110185-12**
SHEET No: **CC1205**

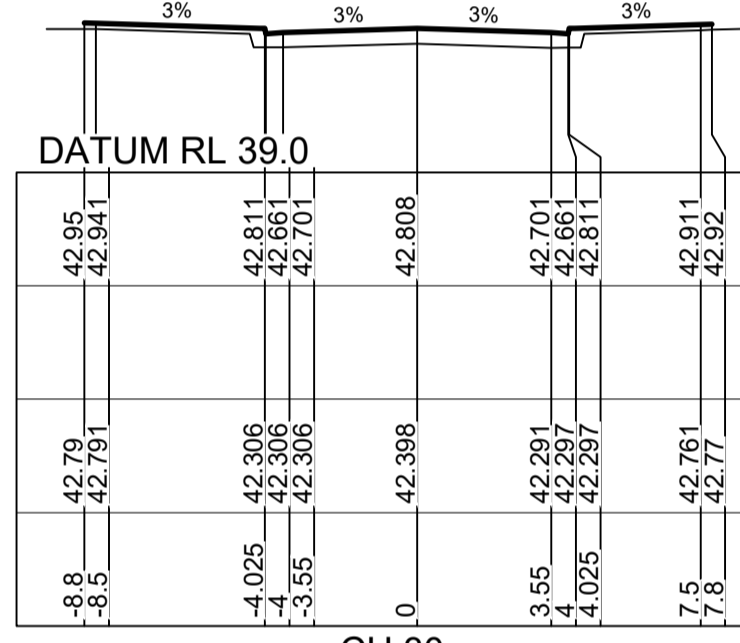
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: **110185-12-CC1205**

DESIGN SURFACE LEVEL	WAE	EXISTING SURFACE LEVEL	OFFSET
-8.8	42.348	42.302	-0.46
-8.5	42.344	42.298	-0.44
-4.025	41.859	41.813	-0.446
-4	41.859	41.813	-0.446
-3.55	41.859	41.813	-0.446
0	41.951	41.905	-0.446
3.55	41.845	41.798	-0.447
4	41.804	41.757	-0.447
4.025	41.851	41.804	-0.447
7.5	42.314	42.288	-0.446
7.8	42.341	42.317	-0.446

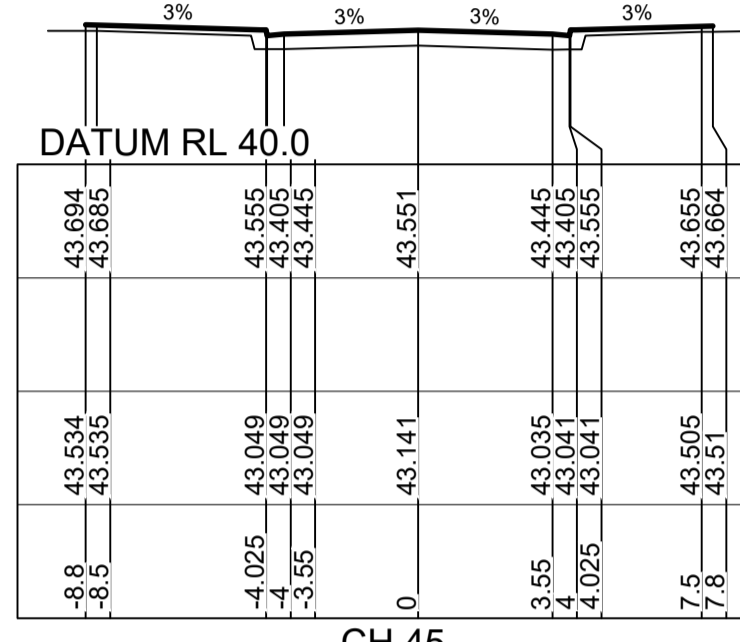
CH 20 ROAD 54



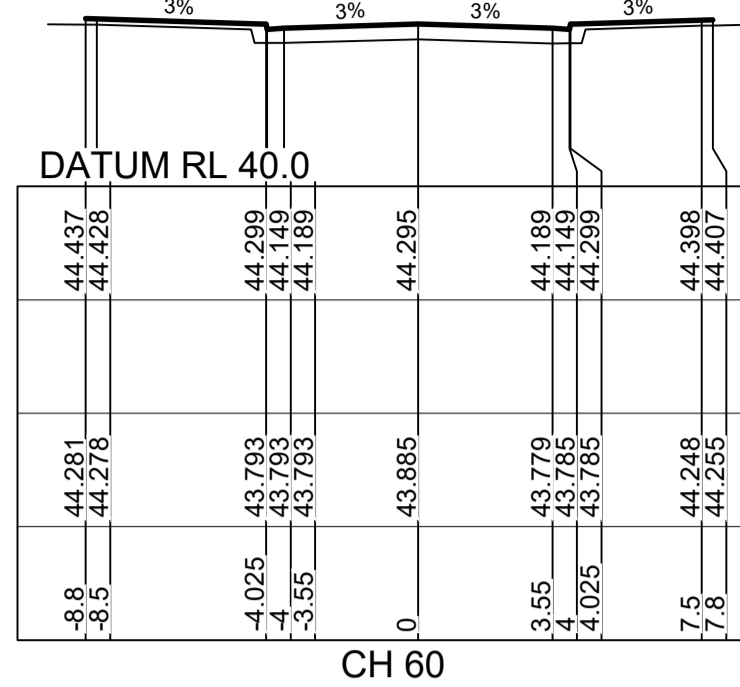
CH 21



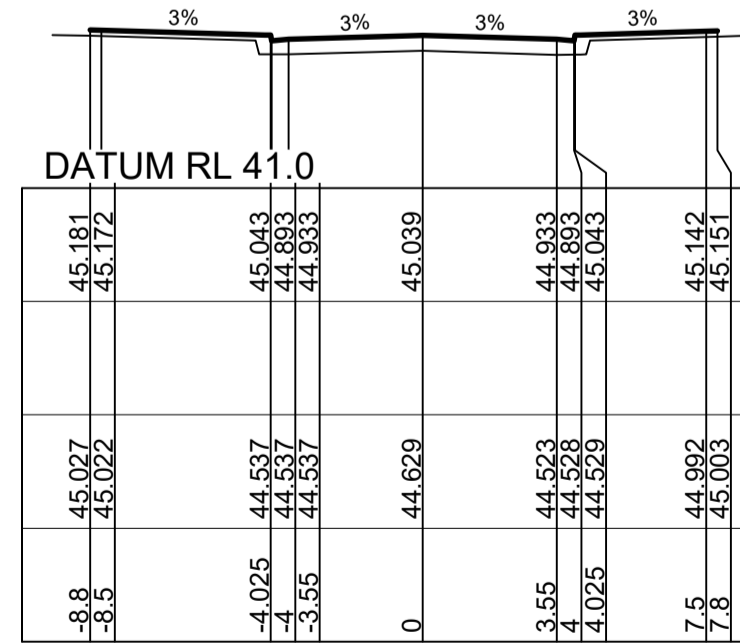
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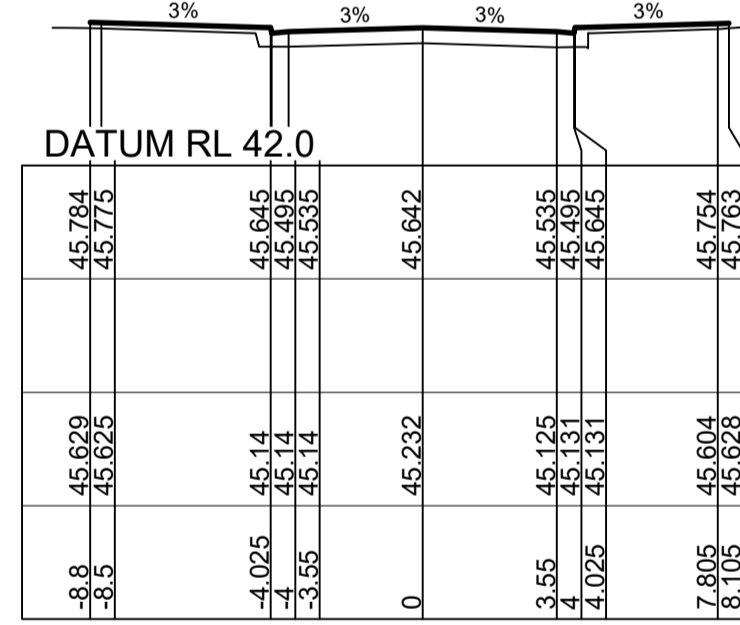
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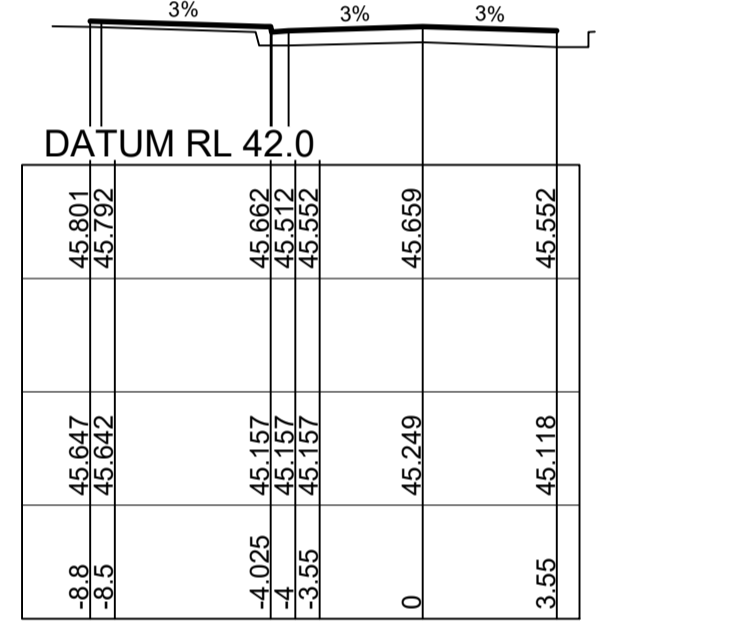
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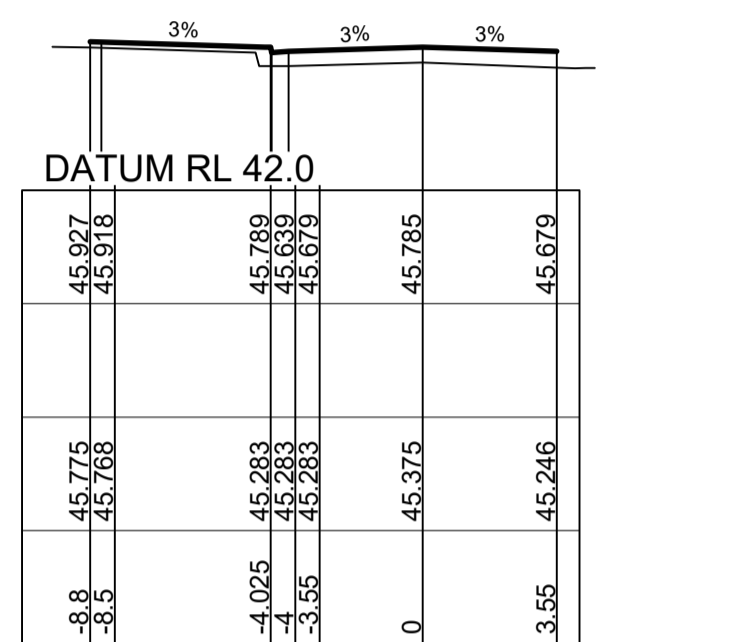
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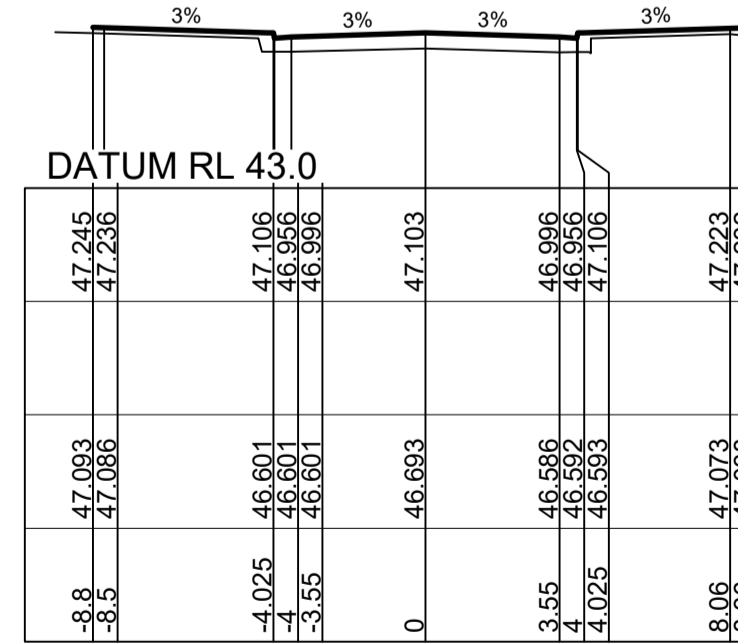
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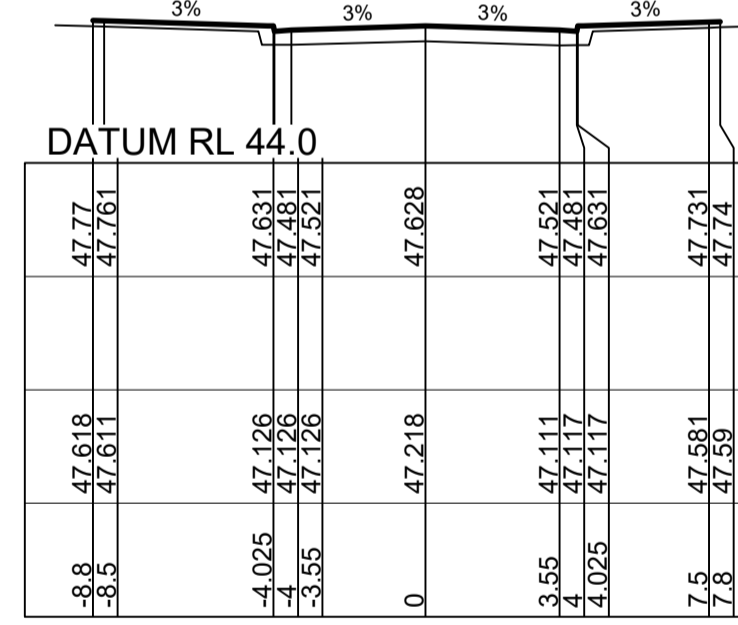
CH 90



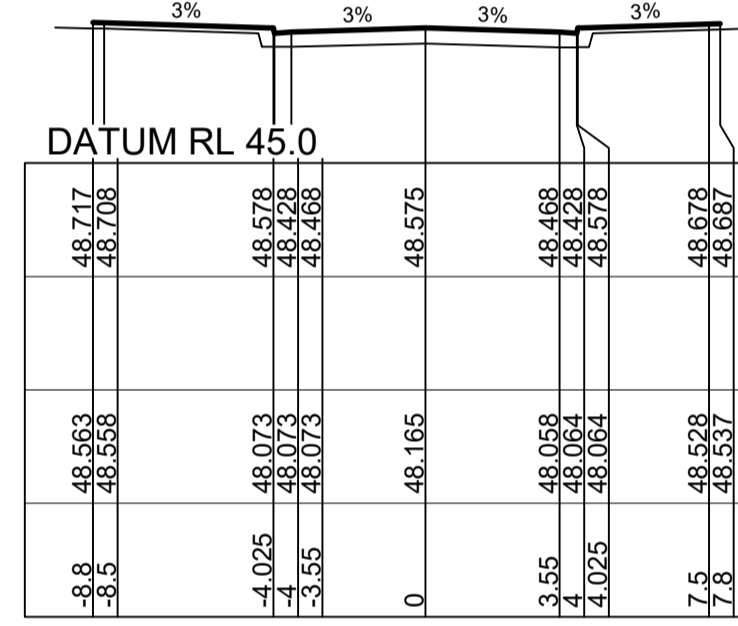
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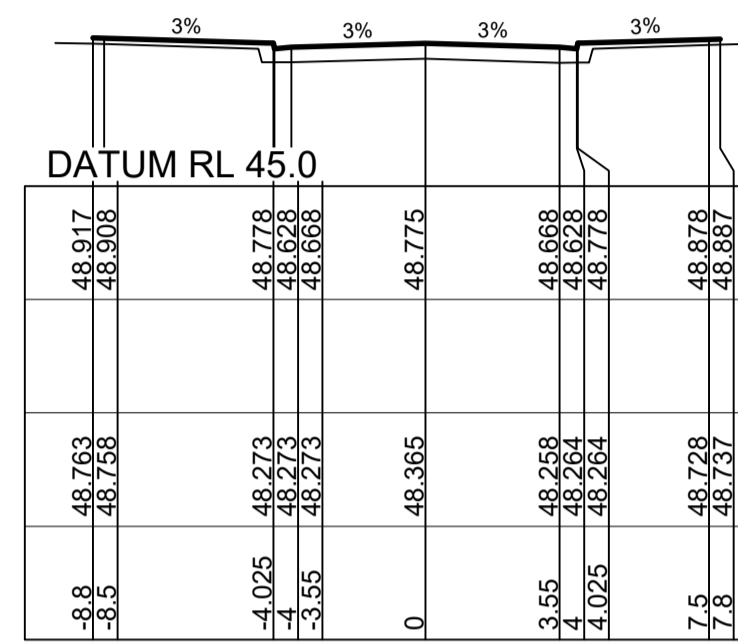
CH 112.396



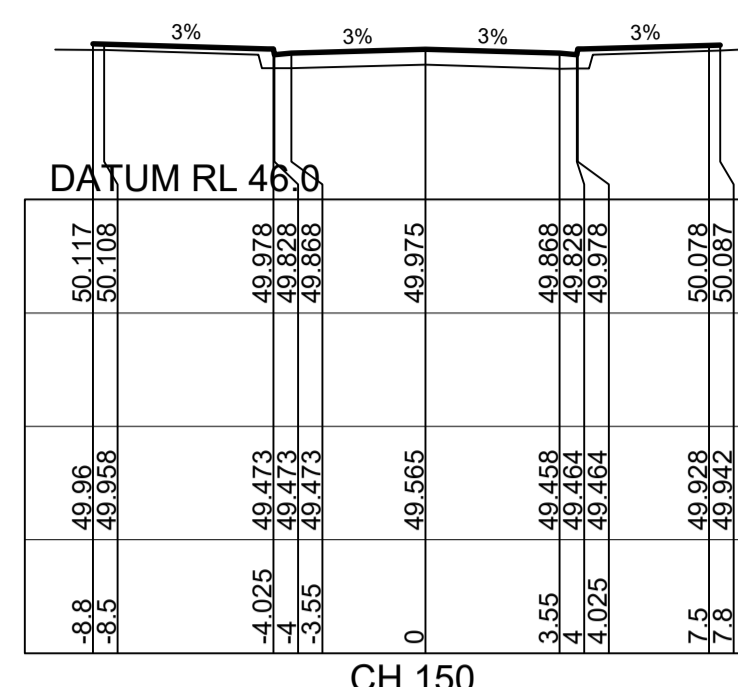
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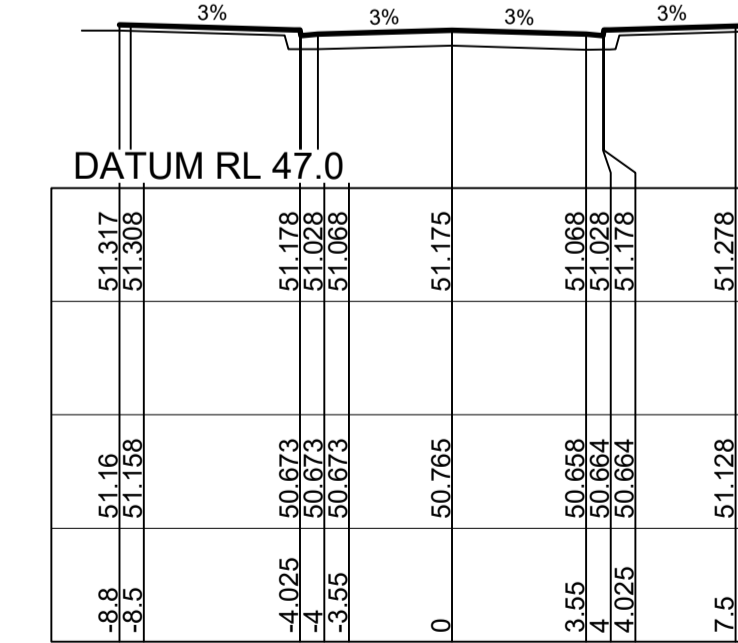
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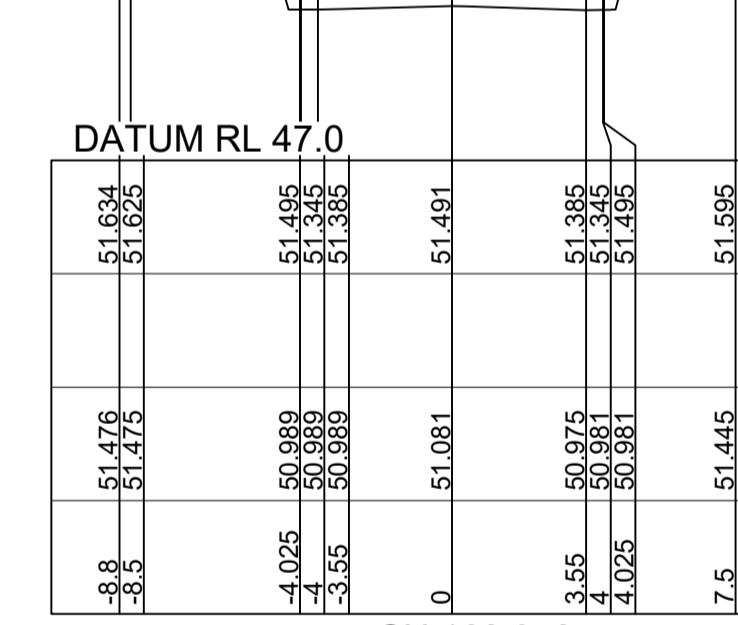
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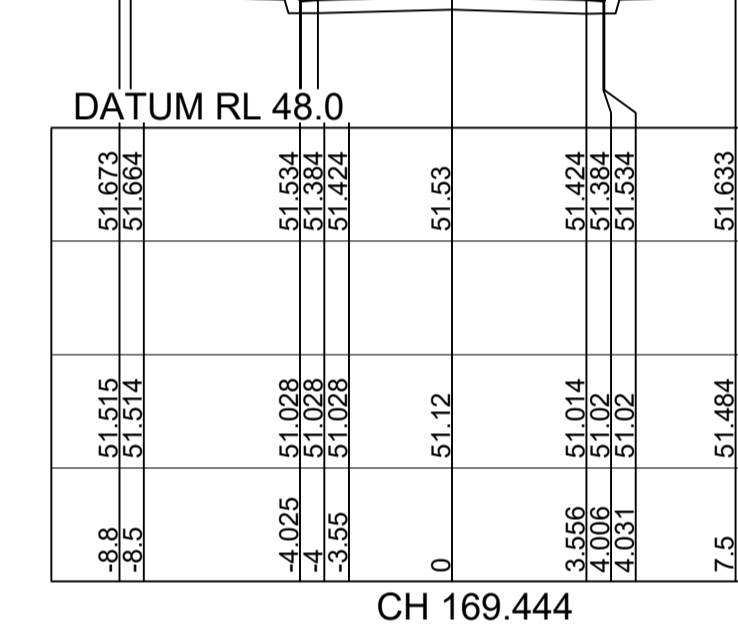
CH 150



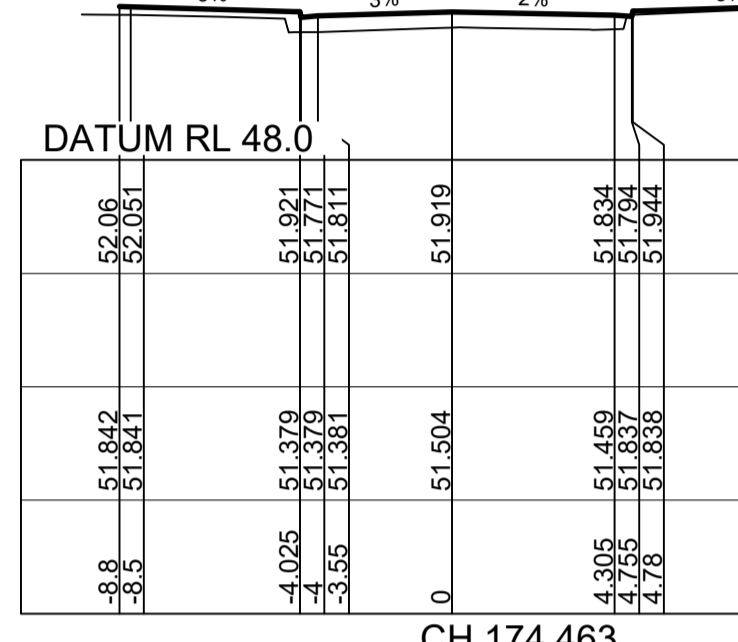
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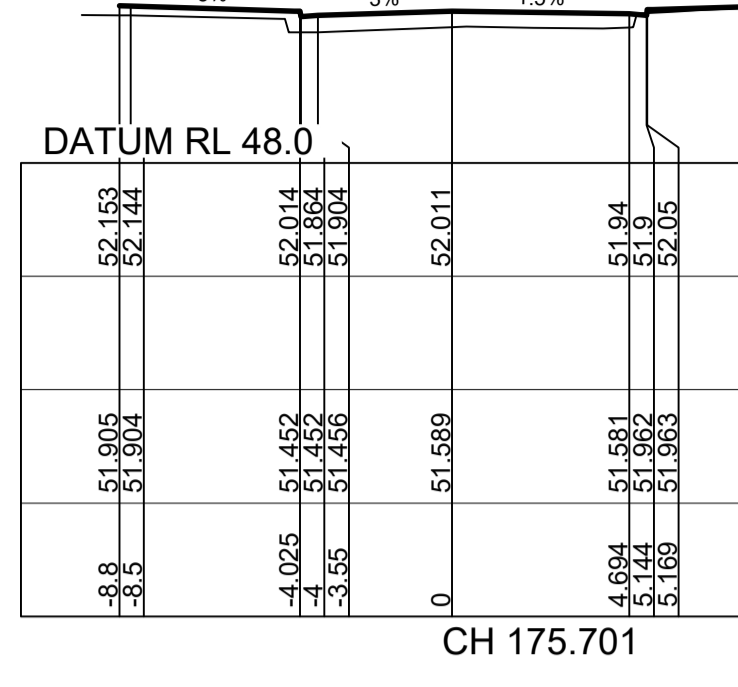
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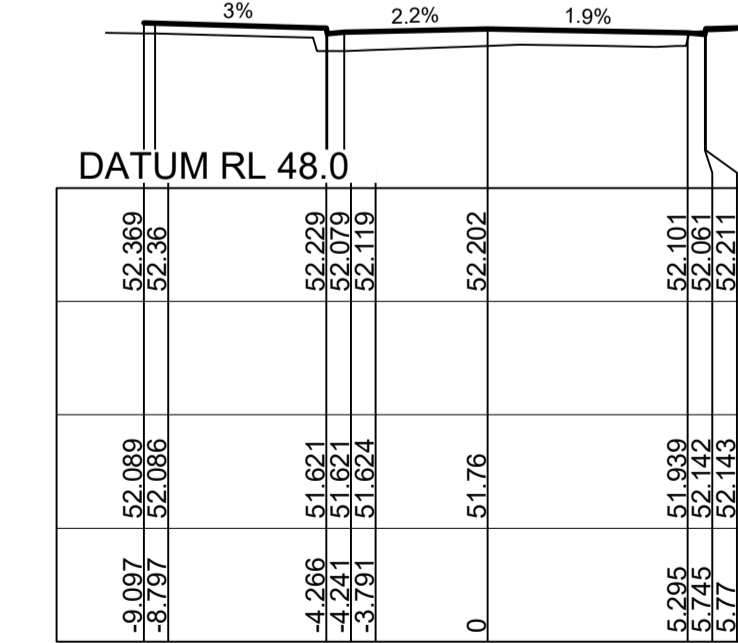
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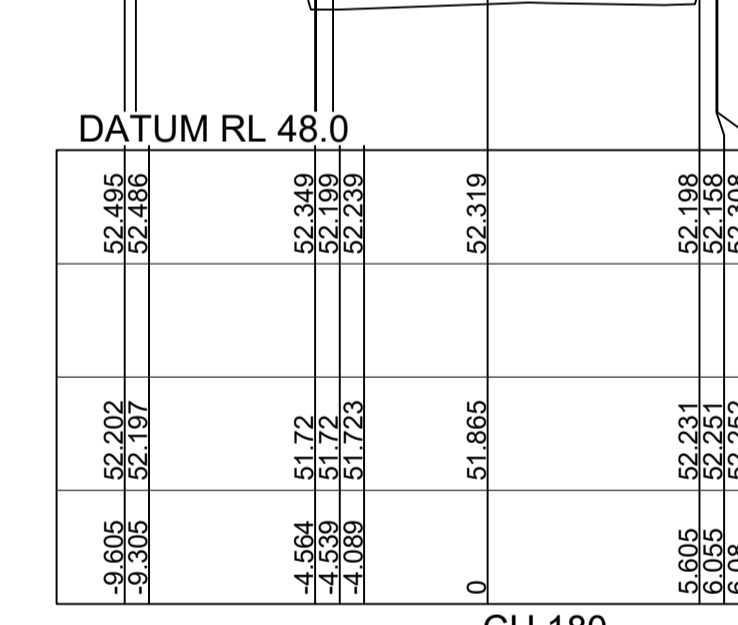
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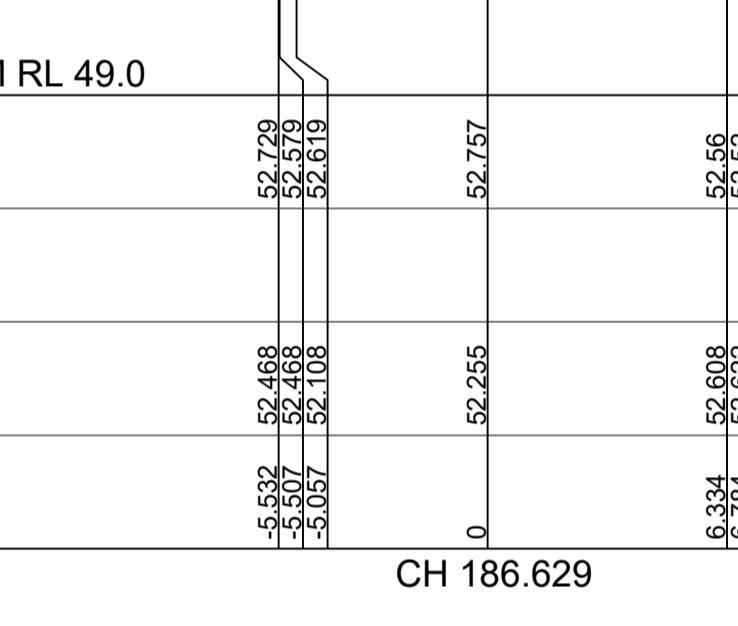
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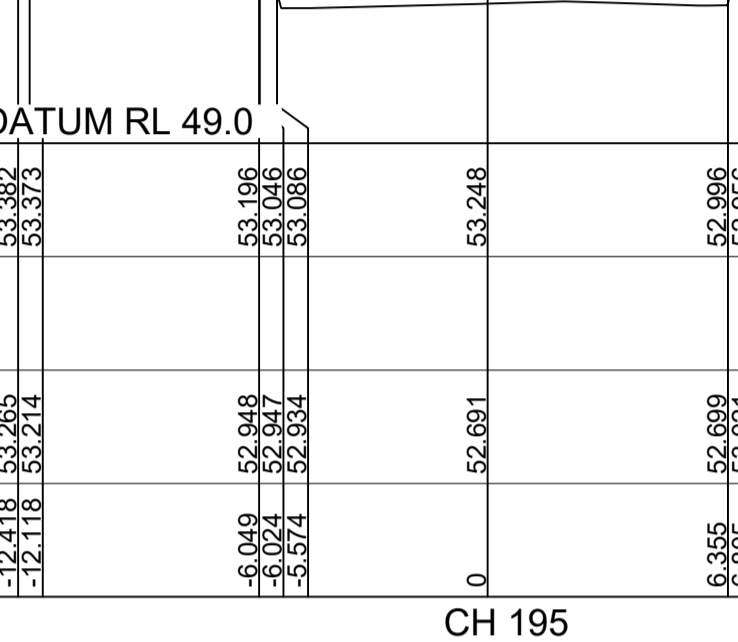
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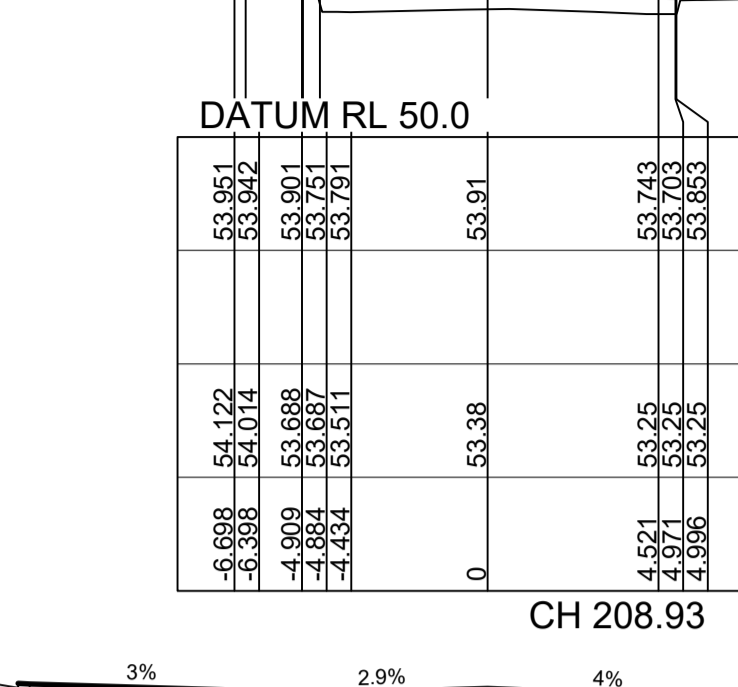
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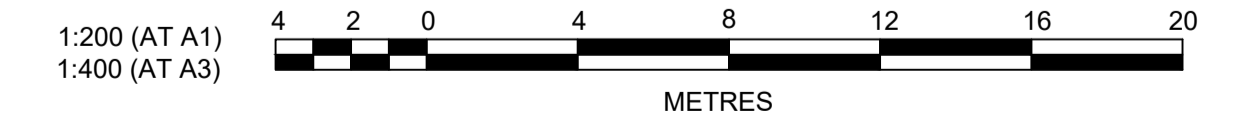
CH 186.629



CH 195



CH 208.93



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20190299SW60.....
Date of Issue 10/08/2021.....
Issuing Officer *D. Kest*

Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT:



STATUS:

ISSUE FOR CONSTRUCTION APPROVAL

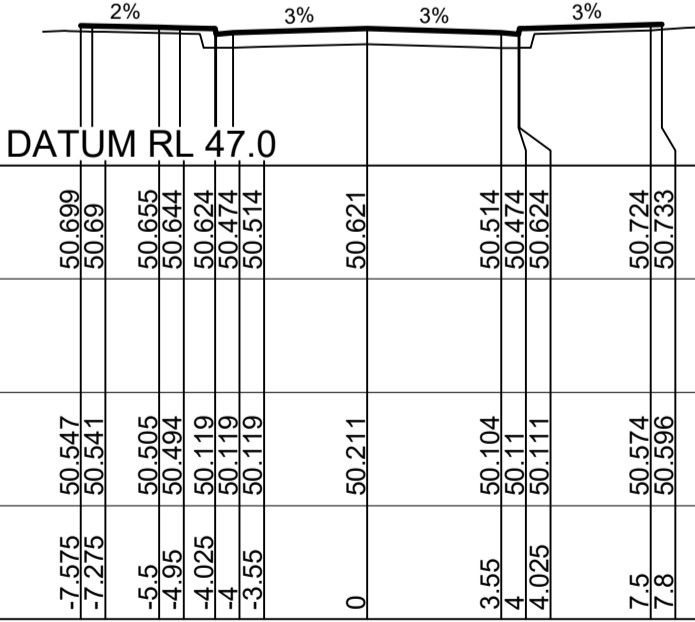
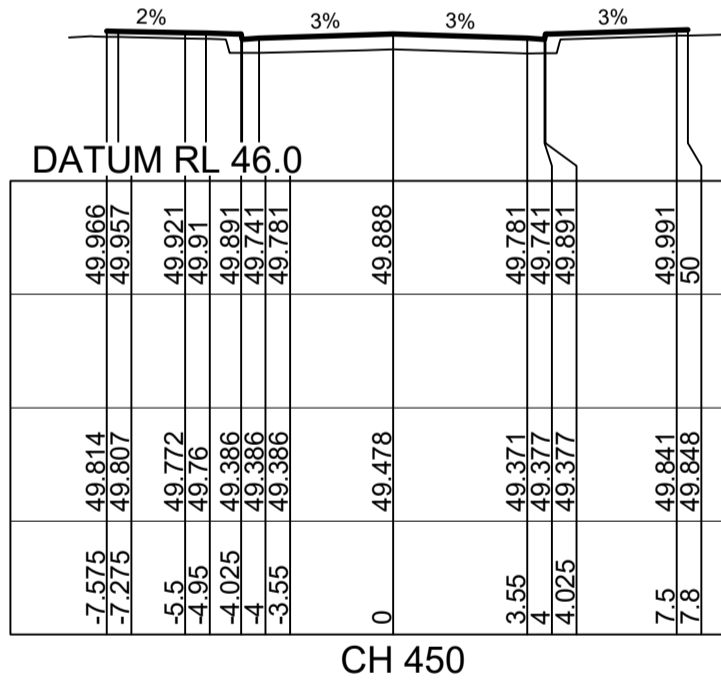
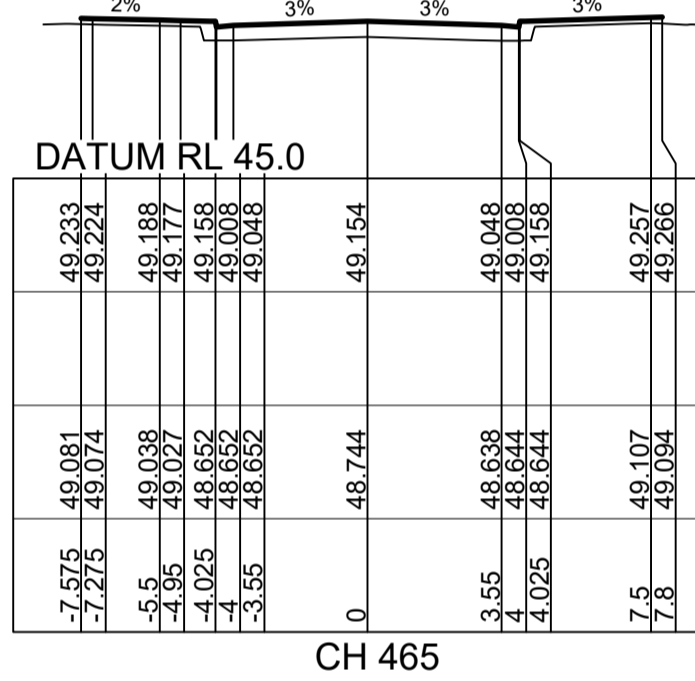
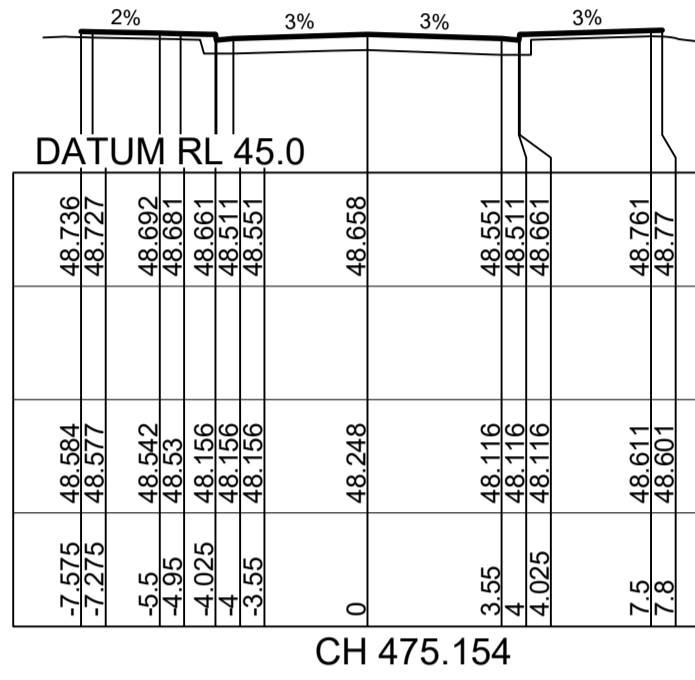
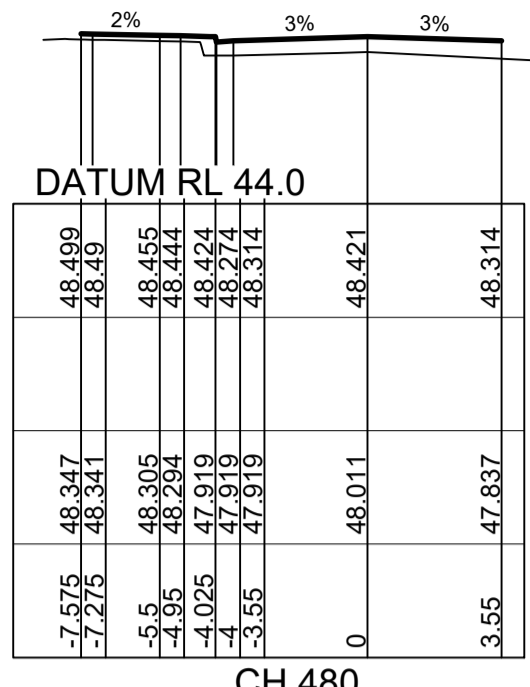
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
ROAD CROSS SECTIONS
SHEET 6

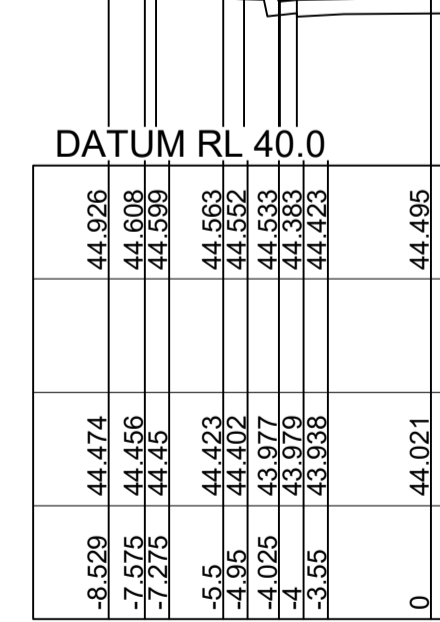
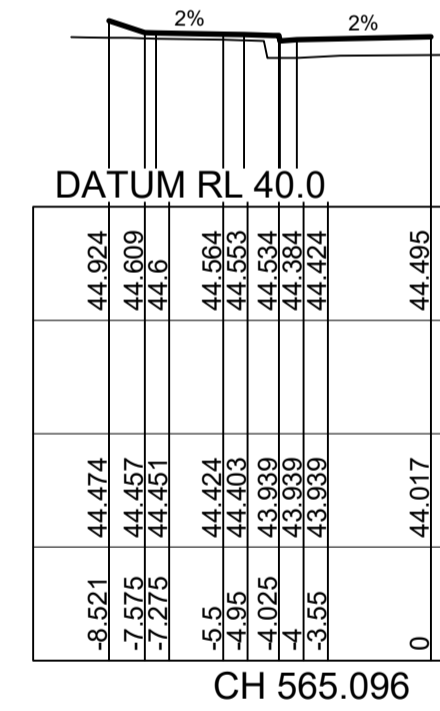
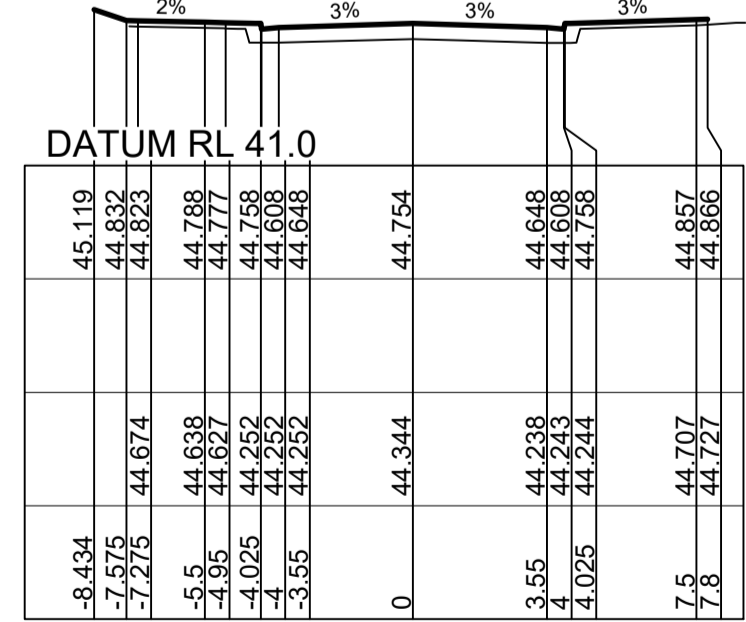
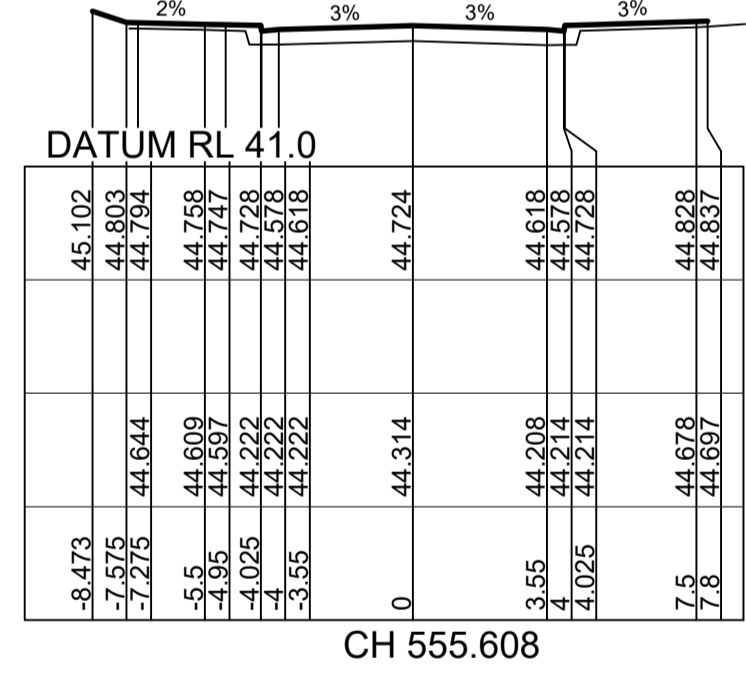
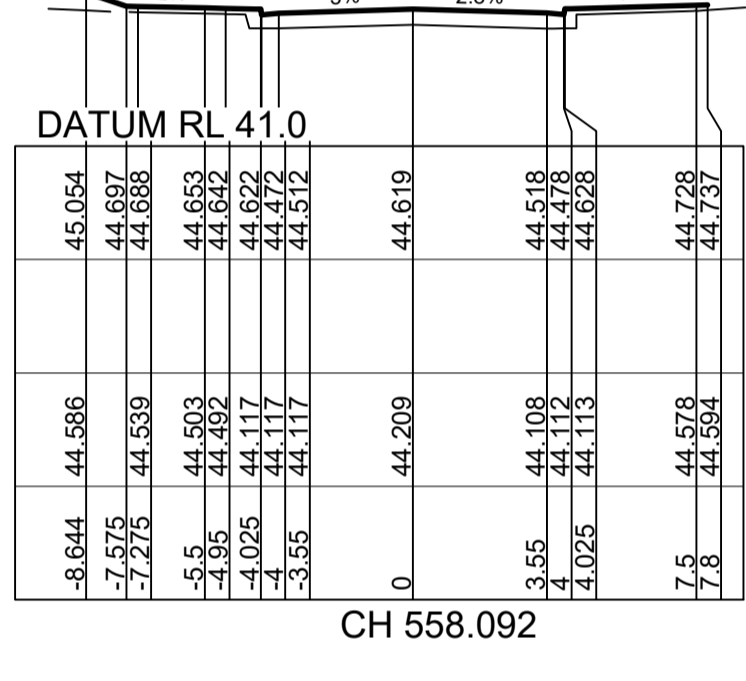
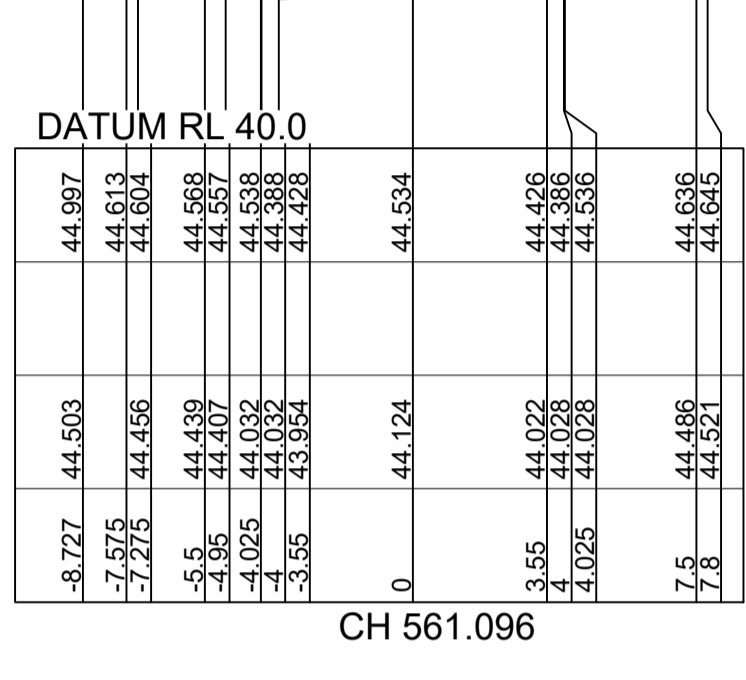
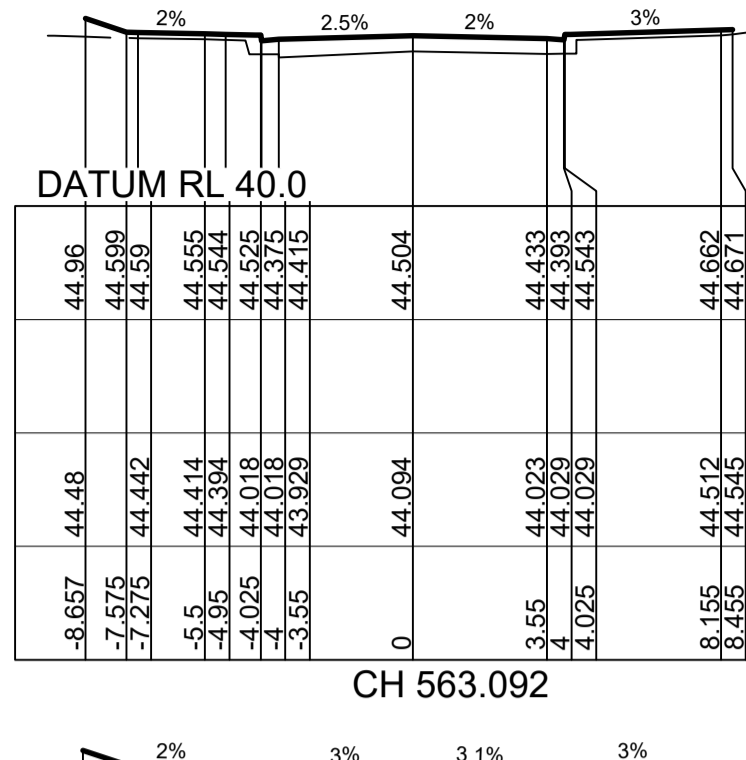
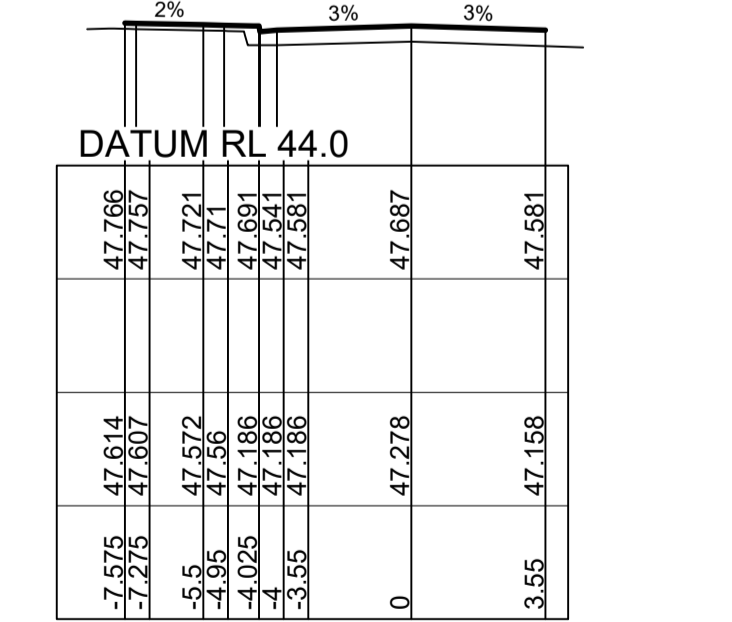
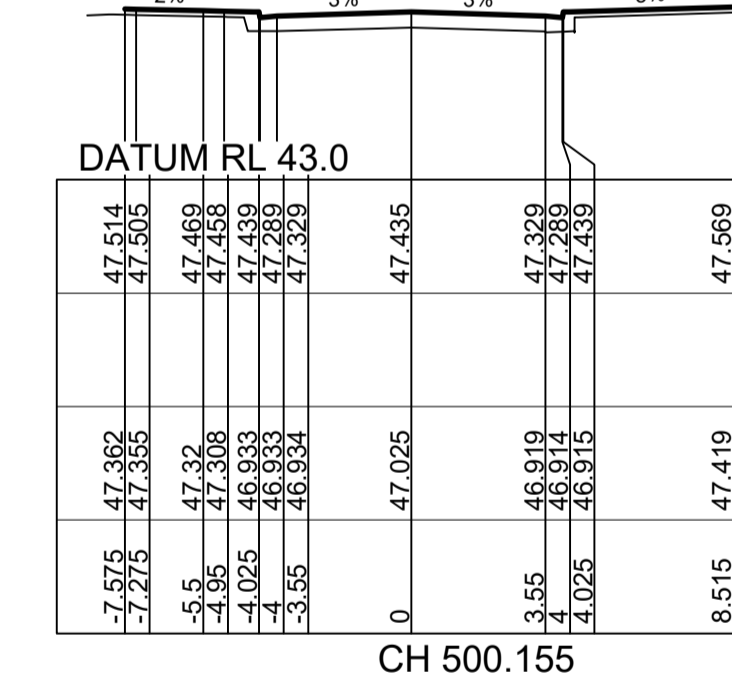
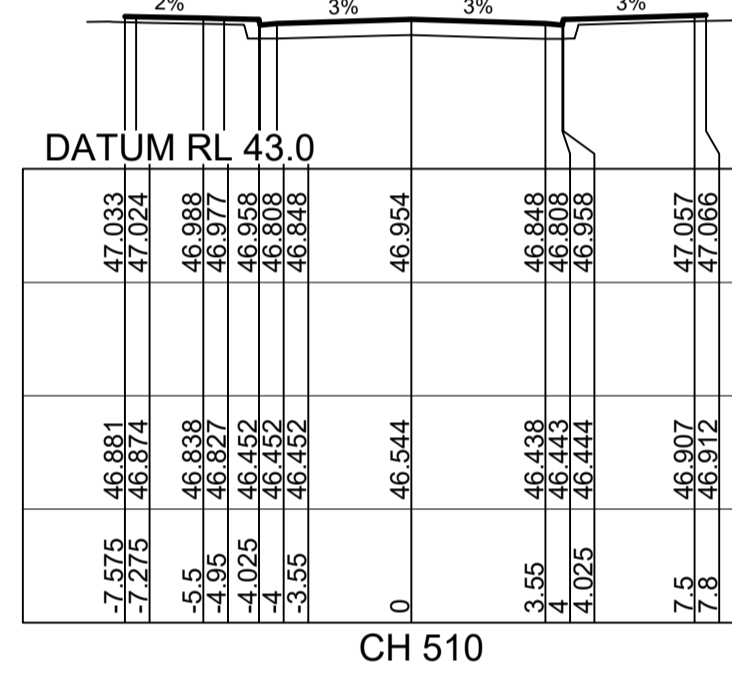
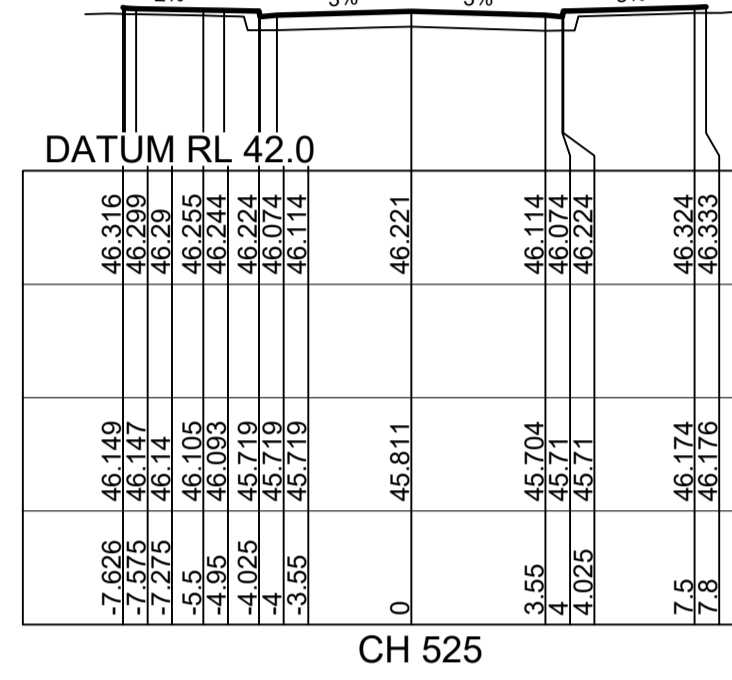
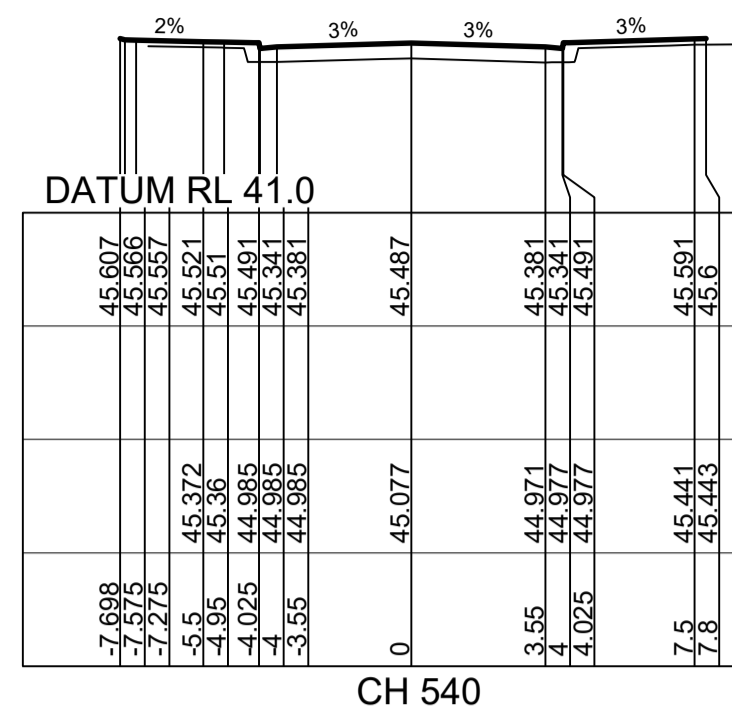
PROJECT No. 110185-12
SHEET No. CC1206

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1206

AMENDMENT	DES	DRN	CKD	APR	DATE	
B	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21



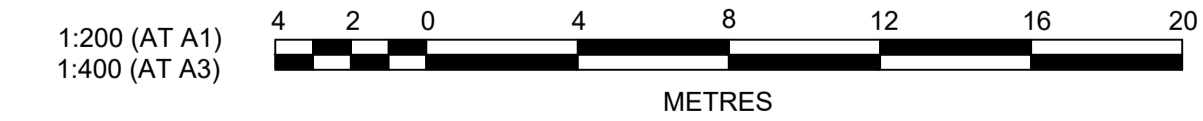
ROAD 54



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

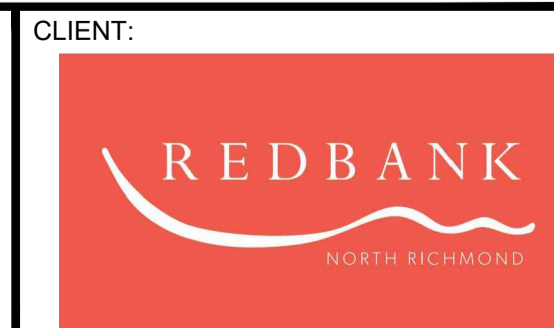
These plans/specifications form part of the certificate issued 10th of August 2021



B	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



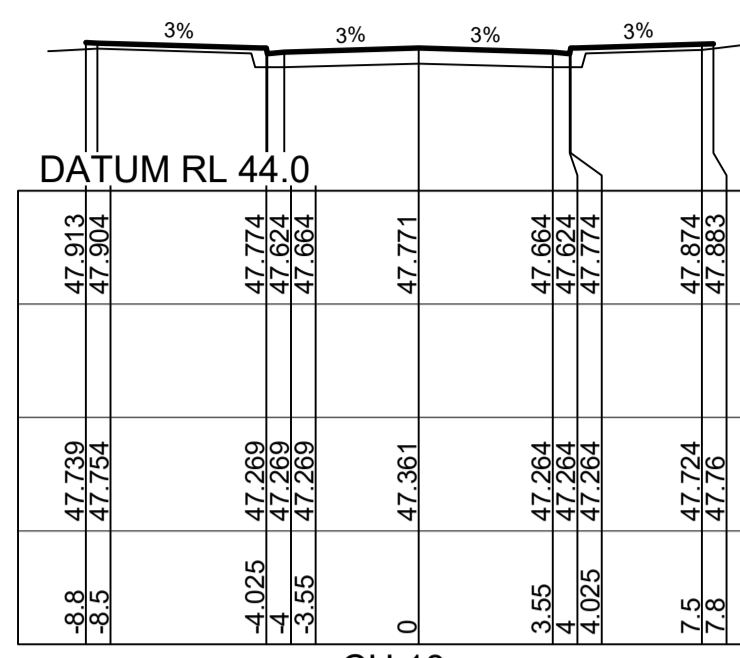
ISSUE FOR CONSTRUCTION APPROVAL
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE ROAD CROSS SECTIONS SHEET 8

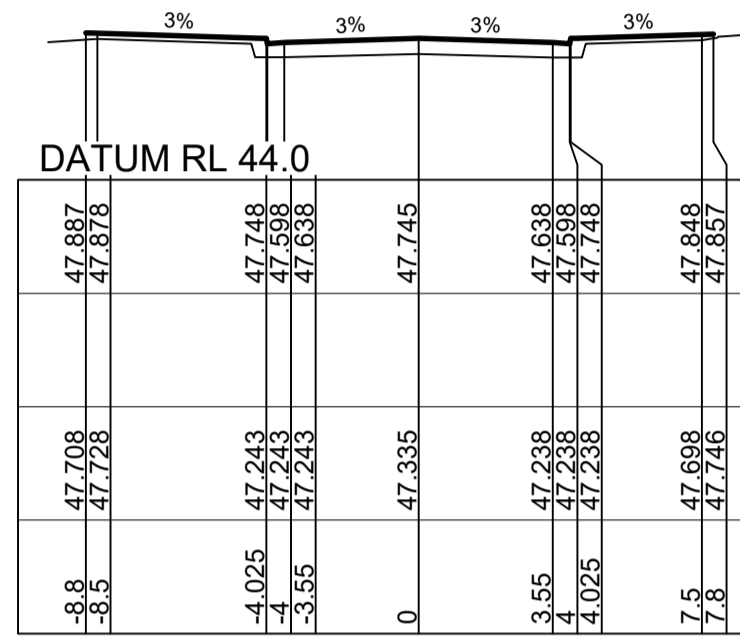
PROJECT No:
110185-12
 SHEET No:
CC1208

DESIGN SURFACE LEVEL	WAE	EXISTING SURFACE LEVEL	OFFSET
47.891		47.774	-8.8
47.882		47.752	-3.5
47.752		47.222	-4.025
47.692		47.204	-4
47.642		47.207	-3.55
47.749		47.333	0

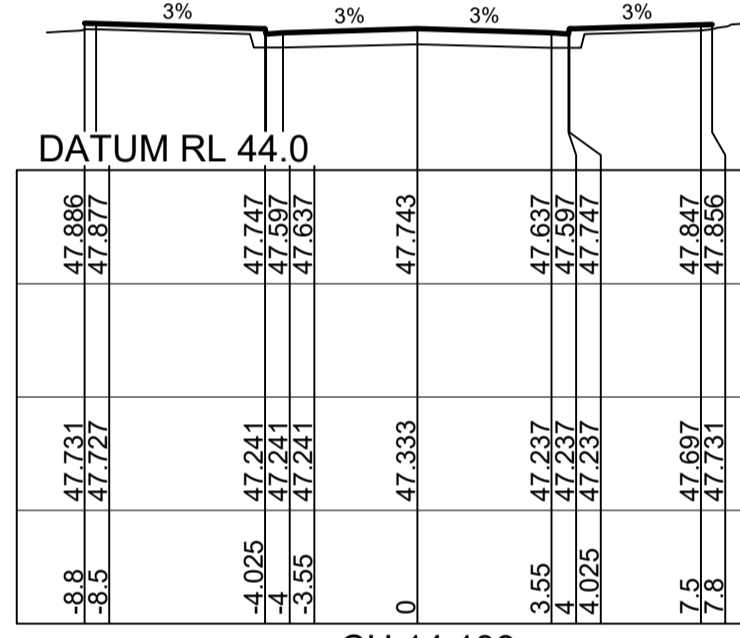
CH 12.422
ROAD 55



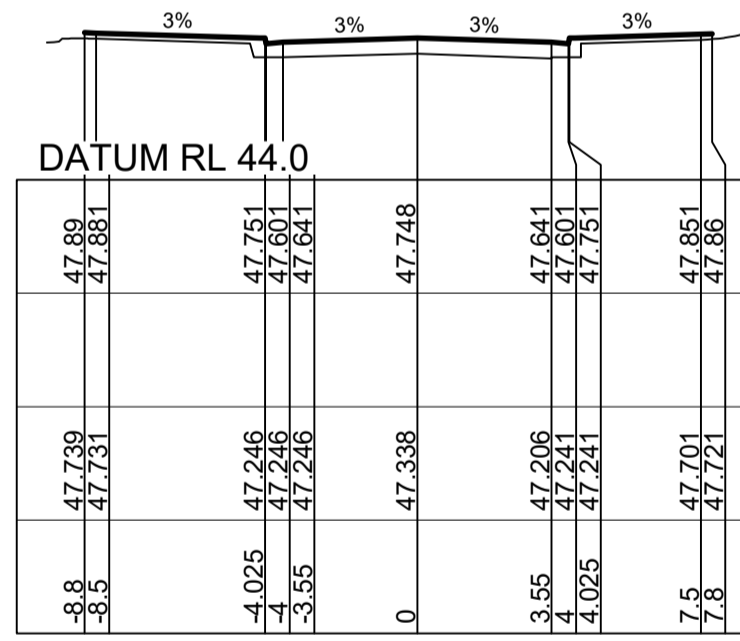
CH 18



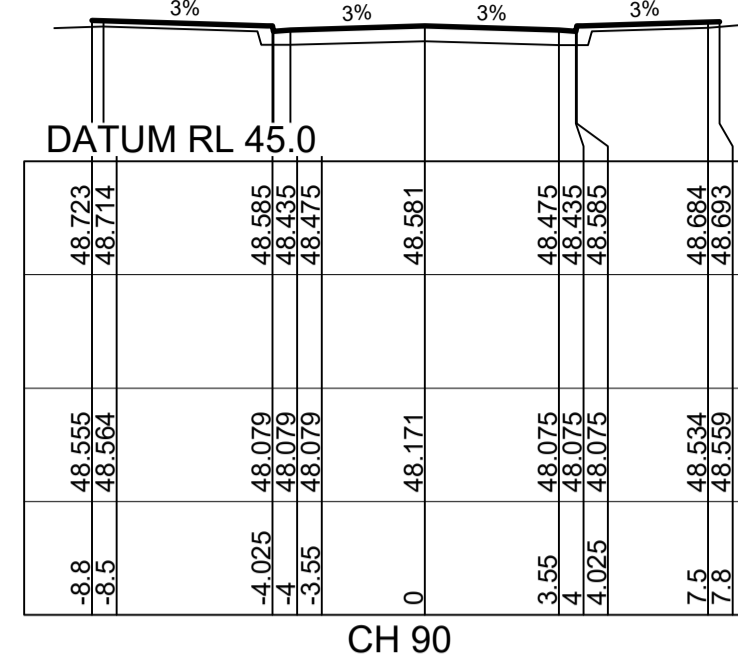
CH 15



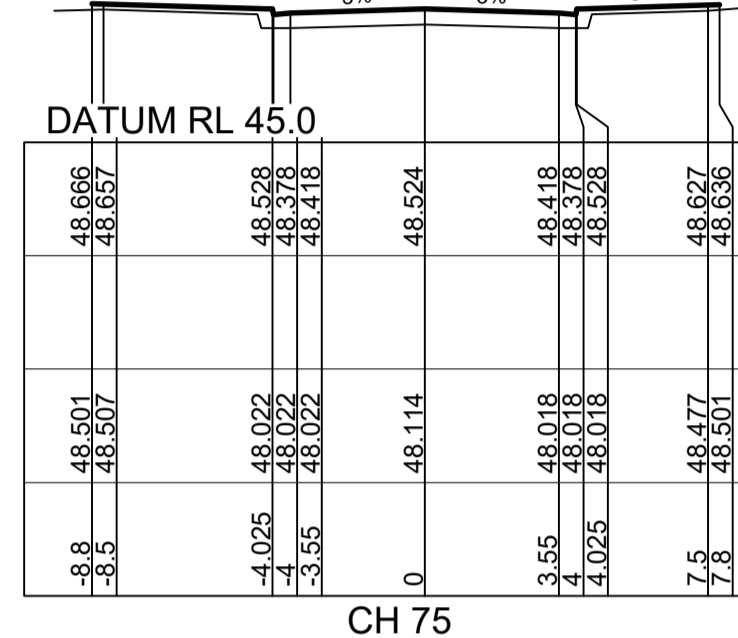
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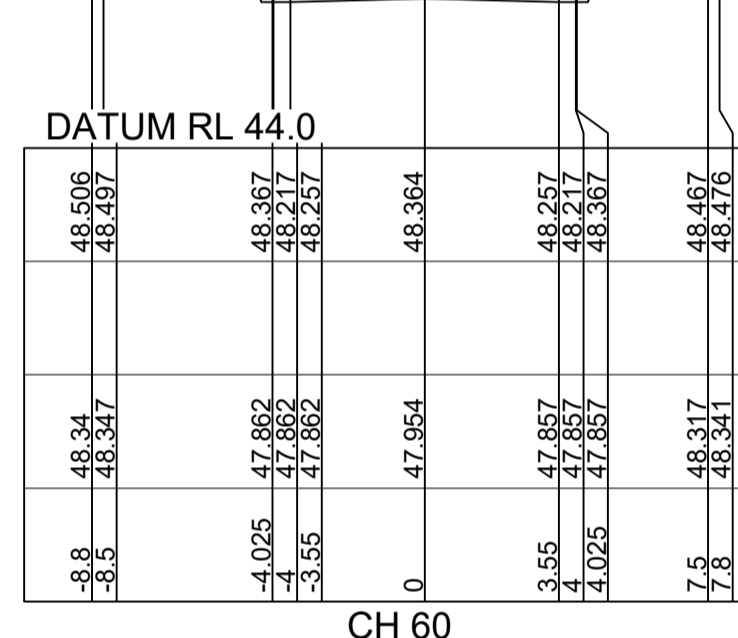
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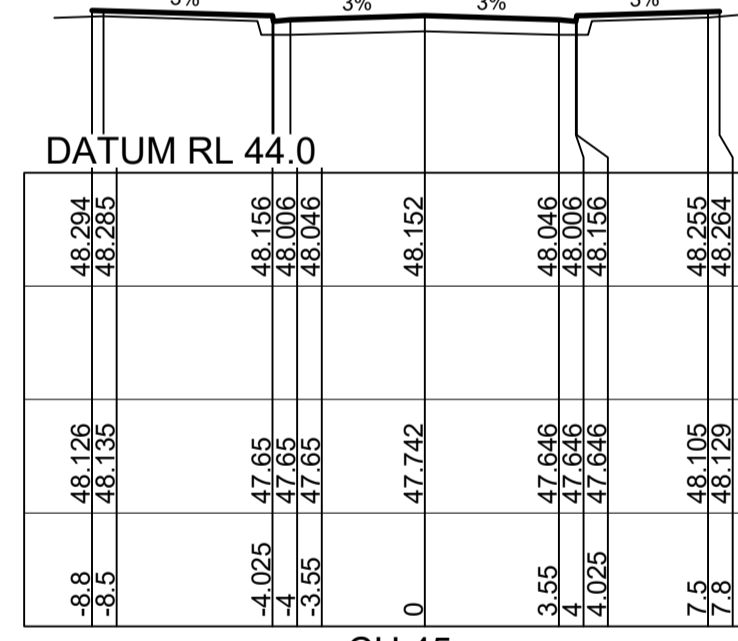
CH 90



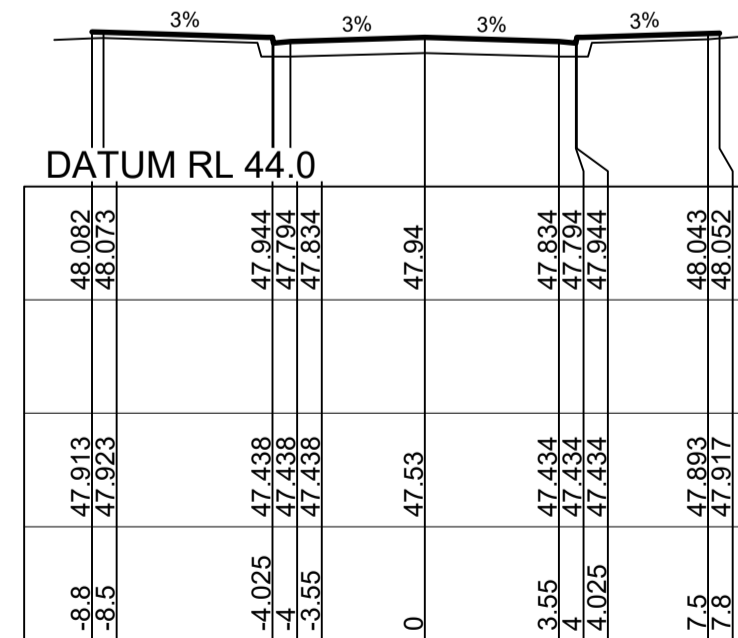
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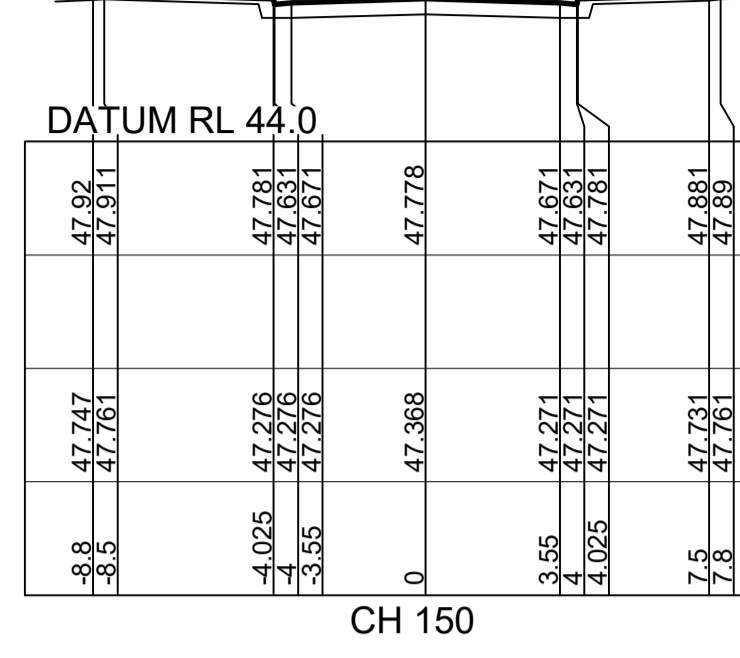
CH 60



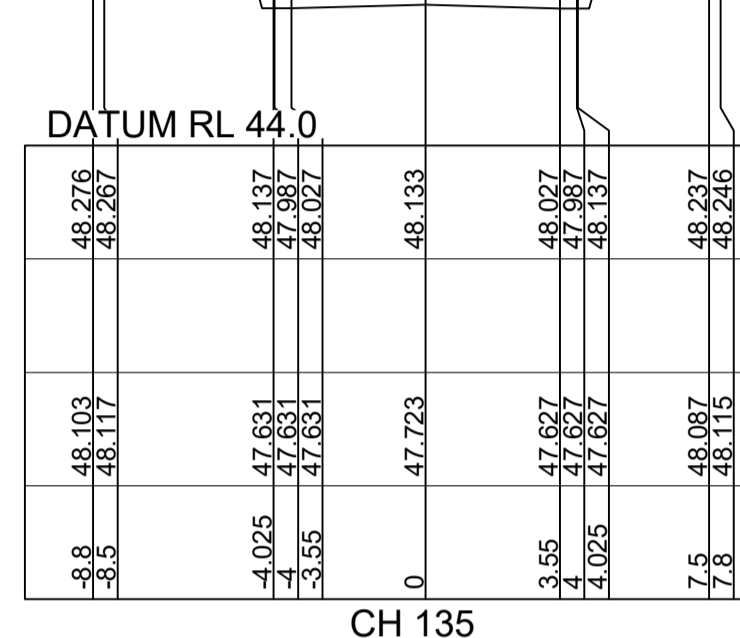
CH 45



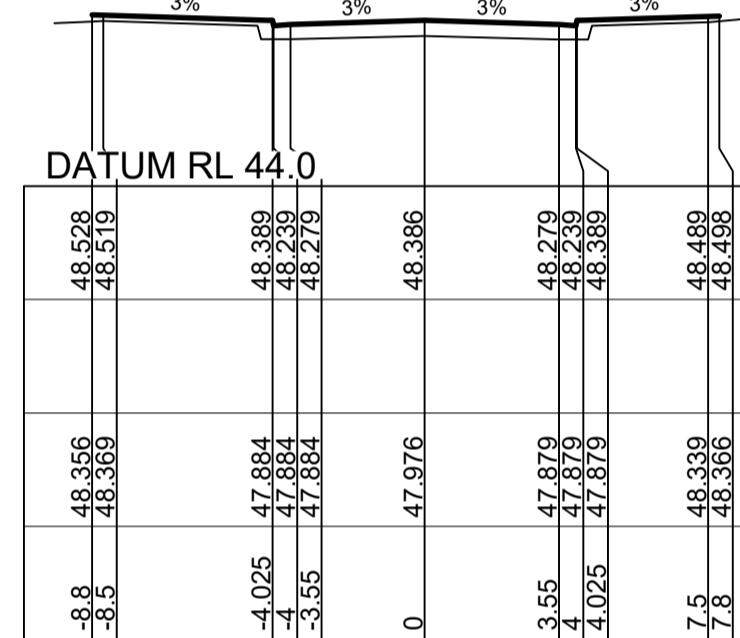
CH 30



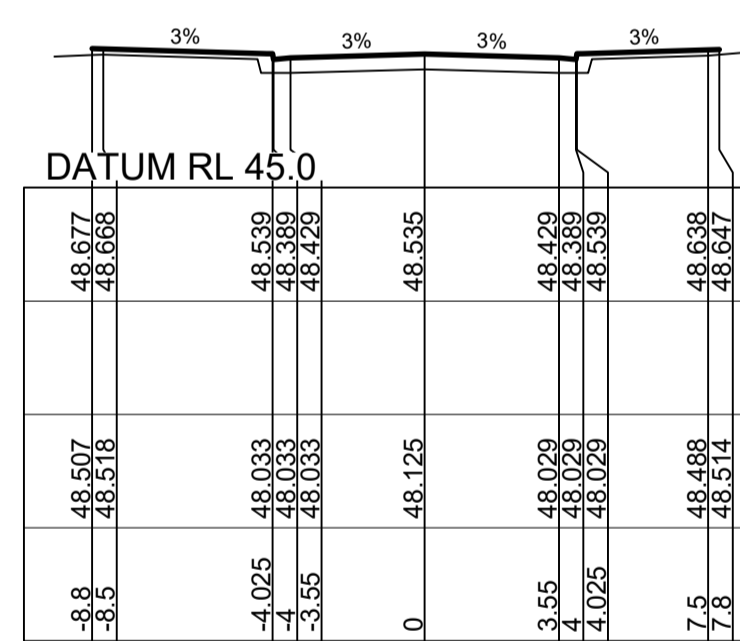
CH 150



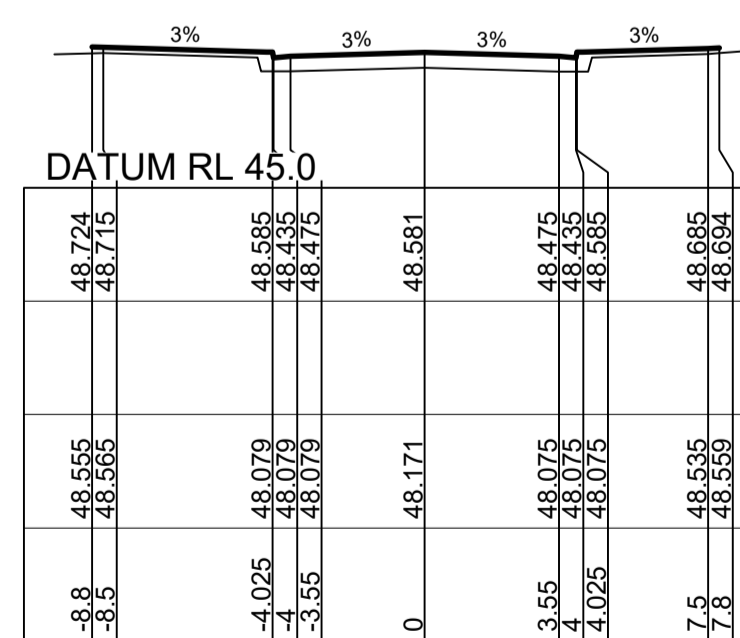
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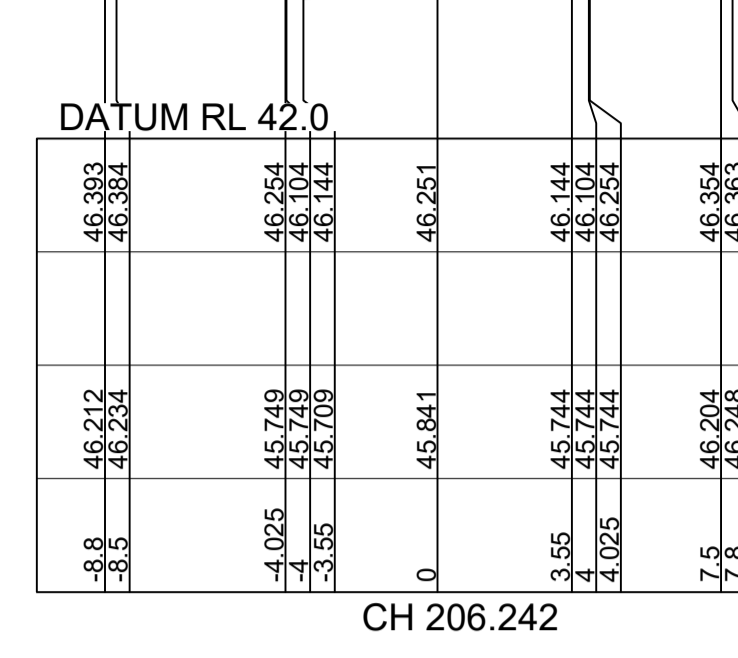
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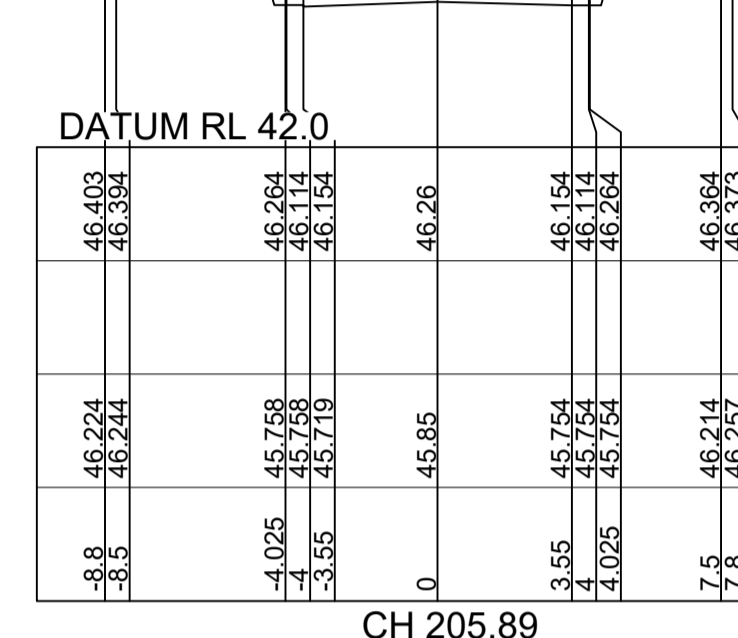
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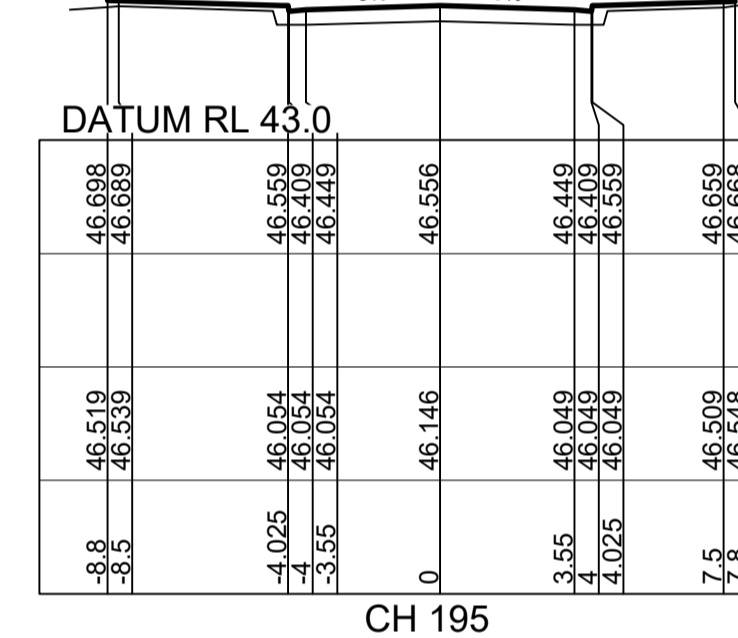
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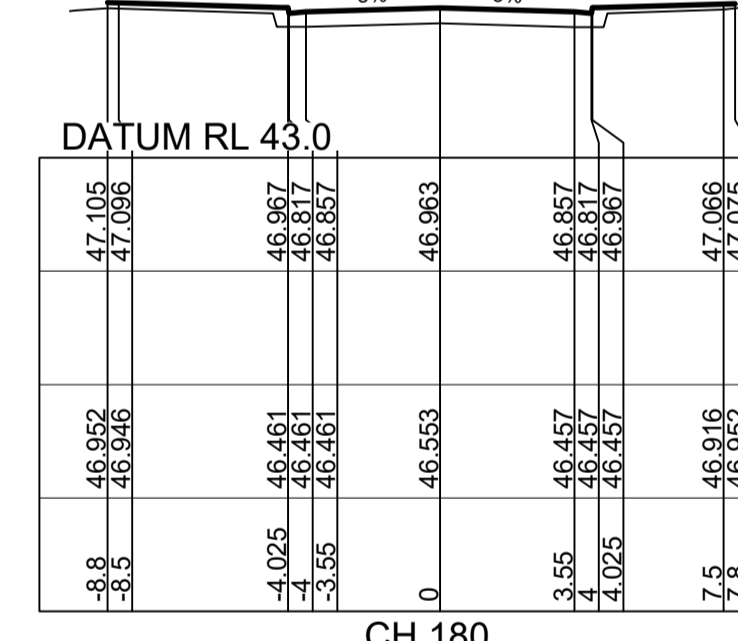
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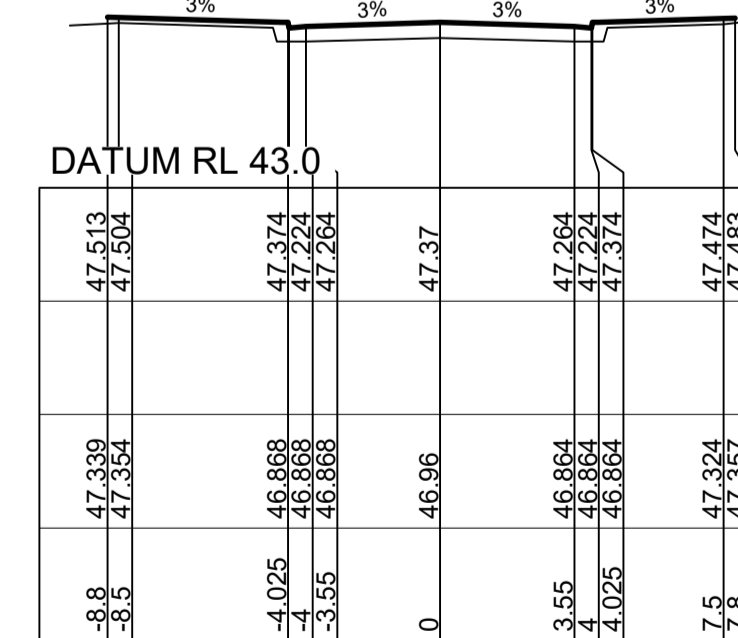
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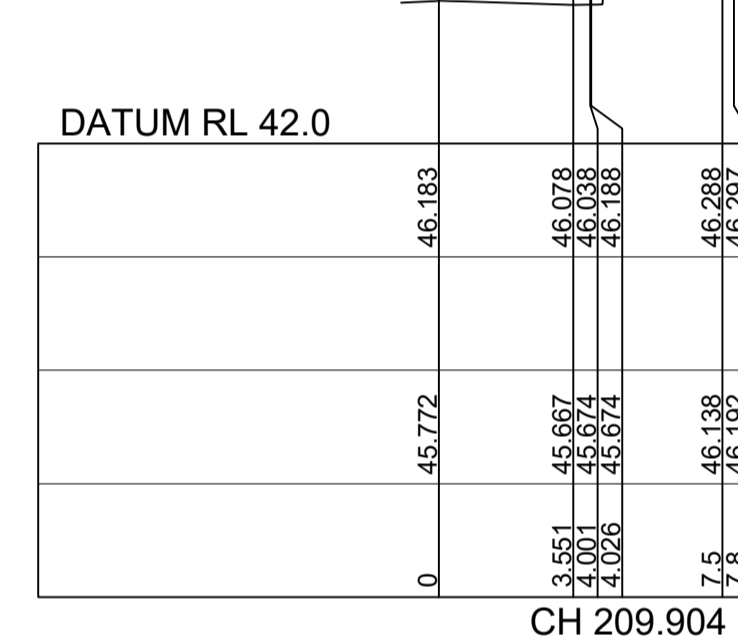
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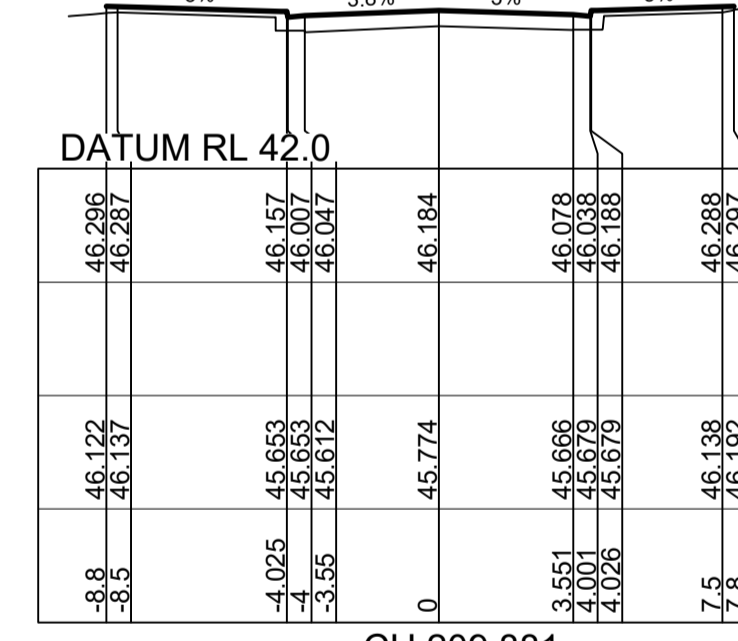
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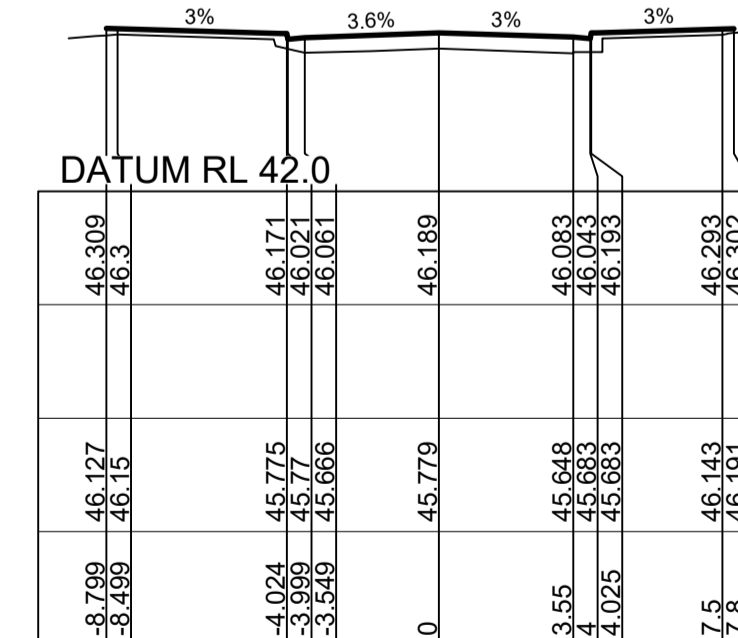
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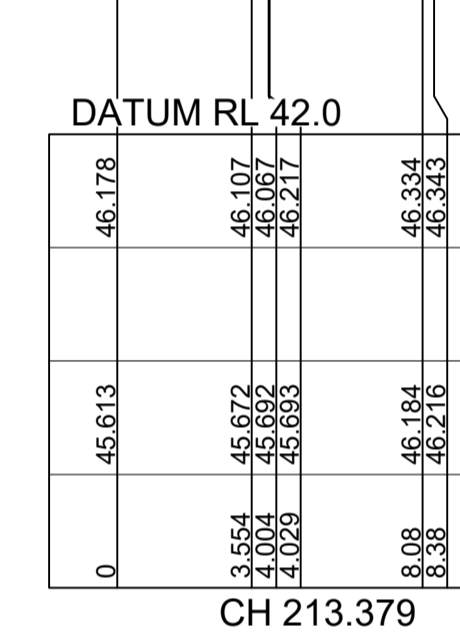
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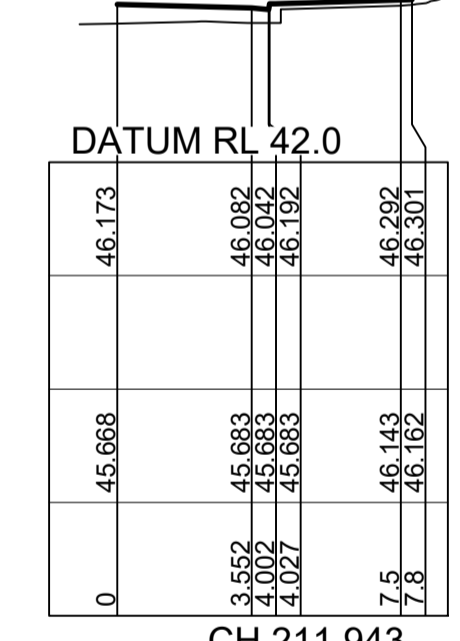
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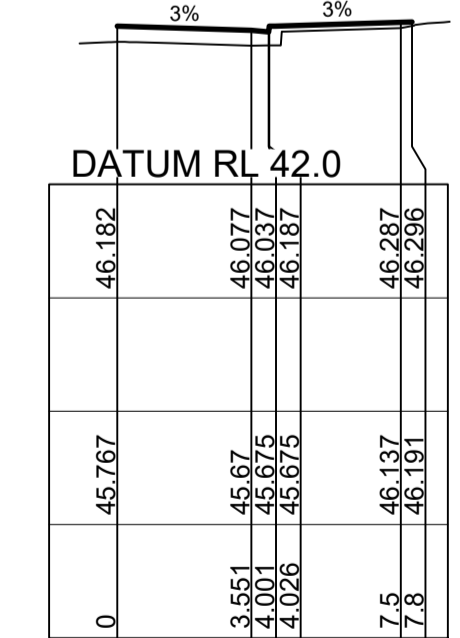
CH 209.379



CH 213.379



CH 211.943

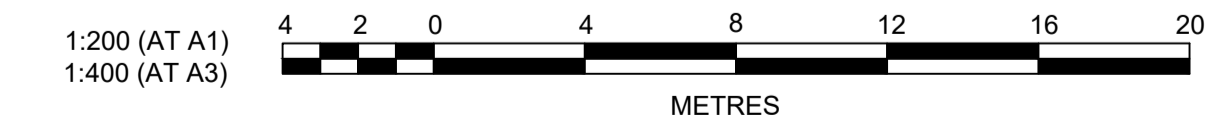


CH 210

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021



A	EXTRA SHEET ADDED	MP	VS	RO	RO	16/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

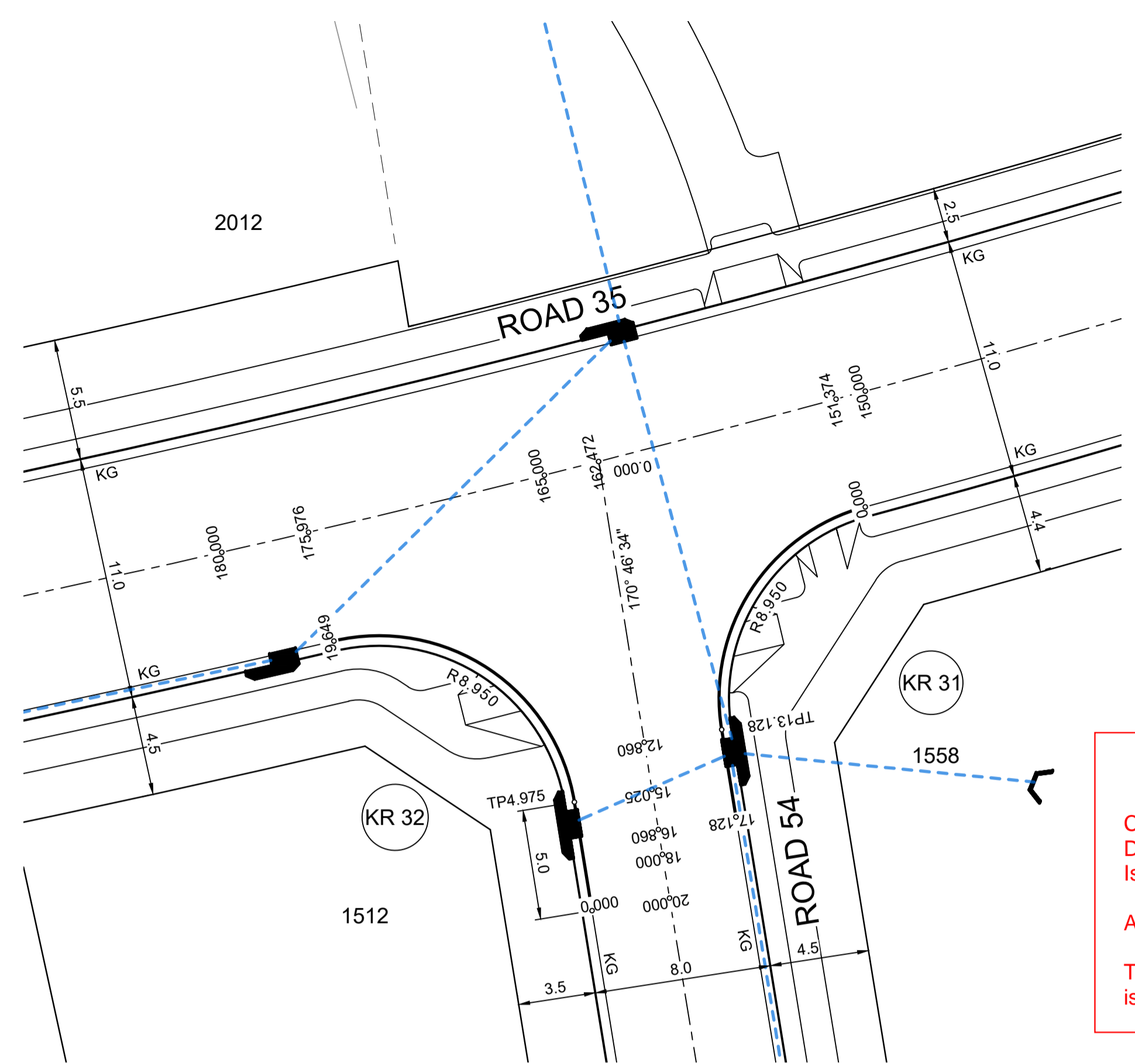
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE ROAD CROSS SECTIONS SHEET 9

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1209

PROJECT No: **110185-12**
 SHEET No: **CC1209**

Plotted: 21 July 2021 2:19:05 PM File Name: \\jwp.local\disc\lubs110185 - Redbank North Richmond Residential Precincts12 - Stage 1 DANCDCCSOUTHERN HEIGHTS1-PROM110185-12-CC1301.dwg



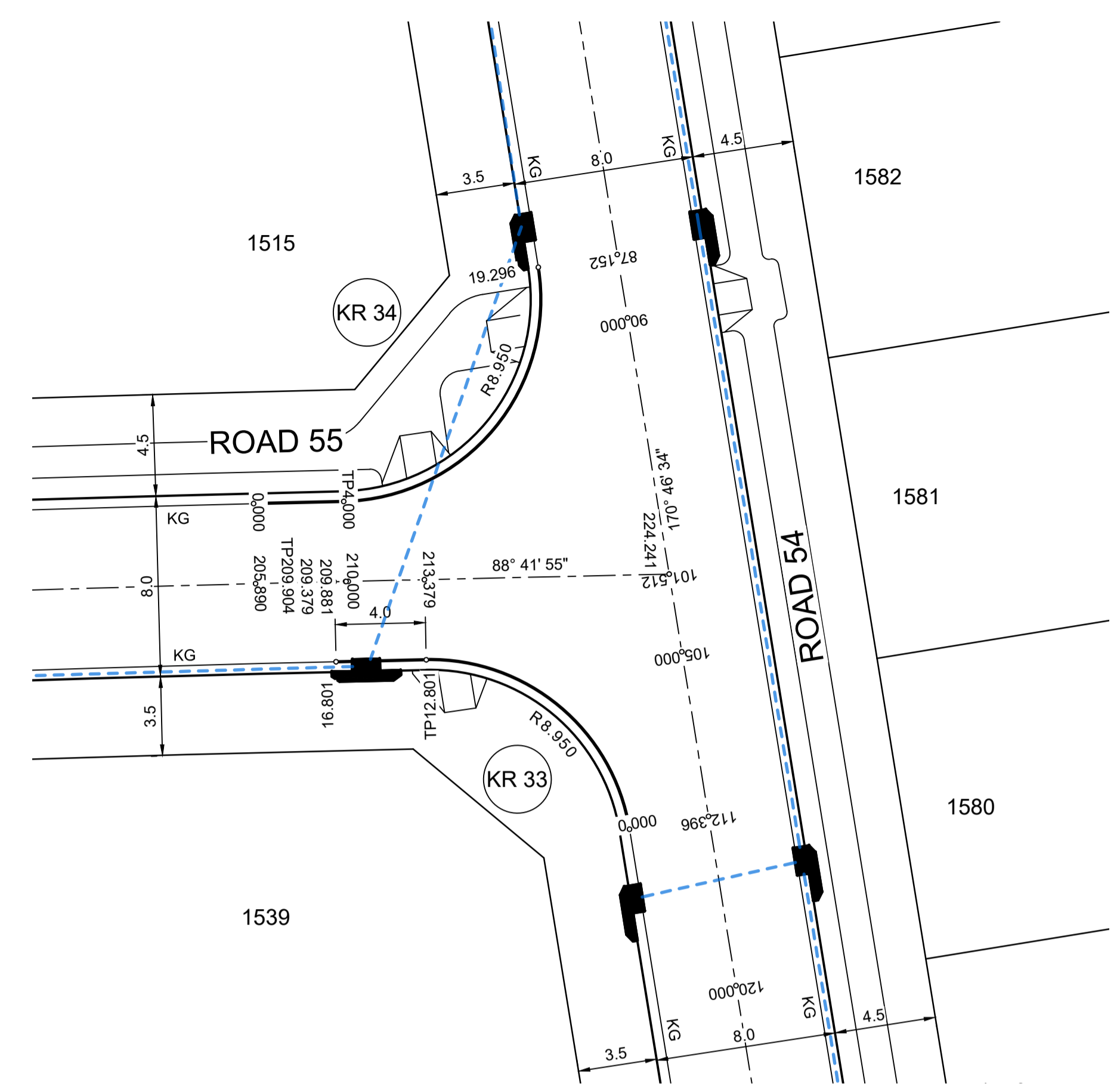
PLAN
SCALE 1:200

SUBDIVISION WORKS CERTIFICATE

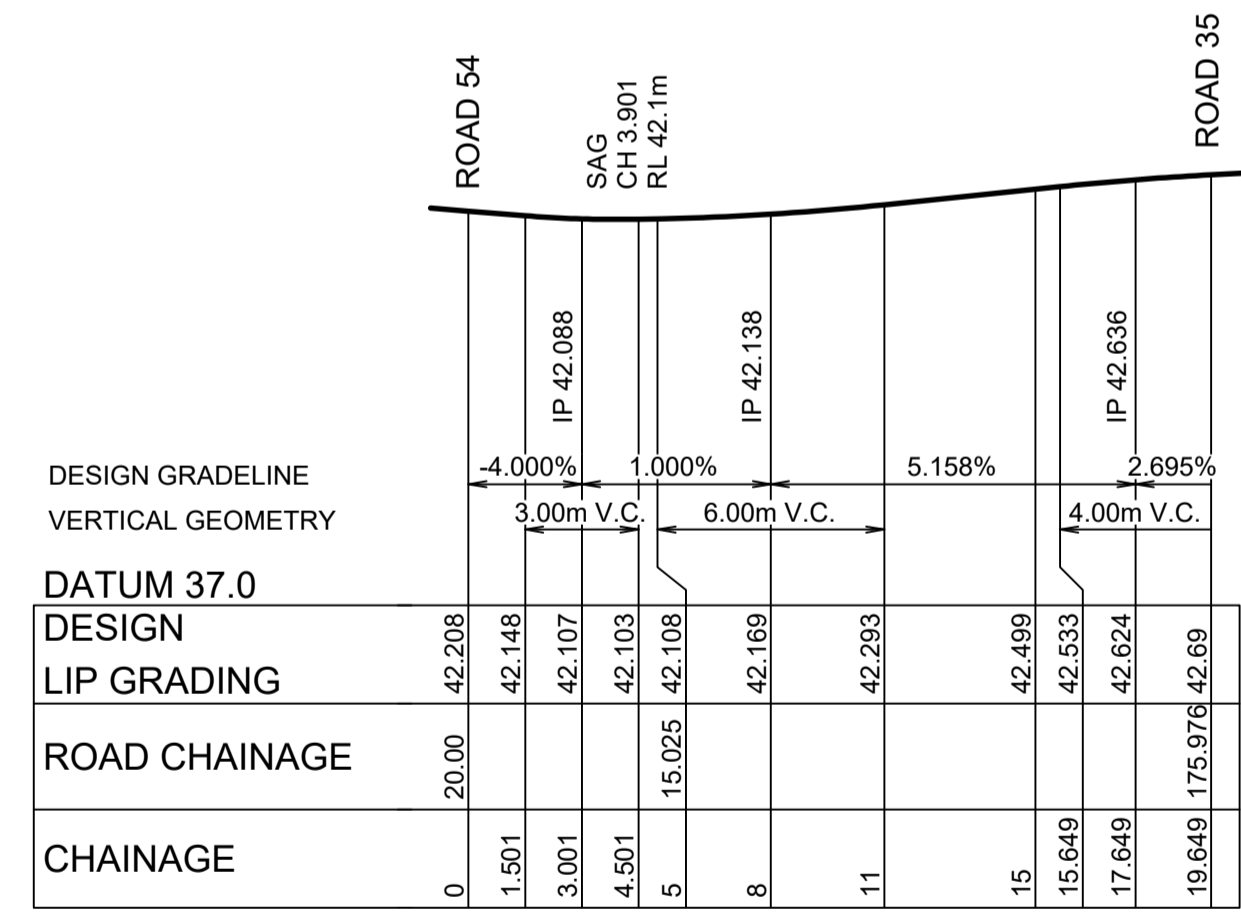
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

DESIGN LEVELS, RADII AND
 SETOUT ARE TO LIP OF GUTTER

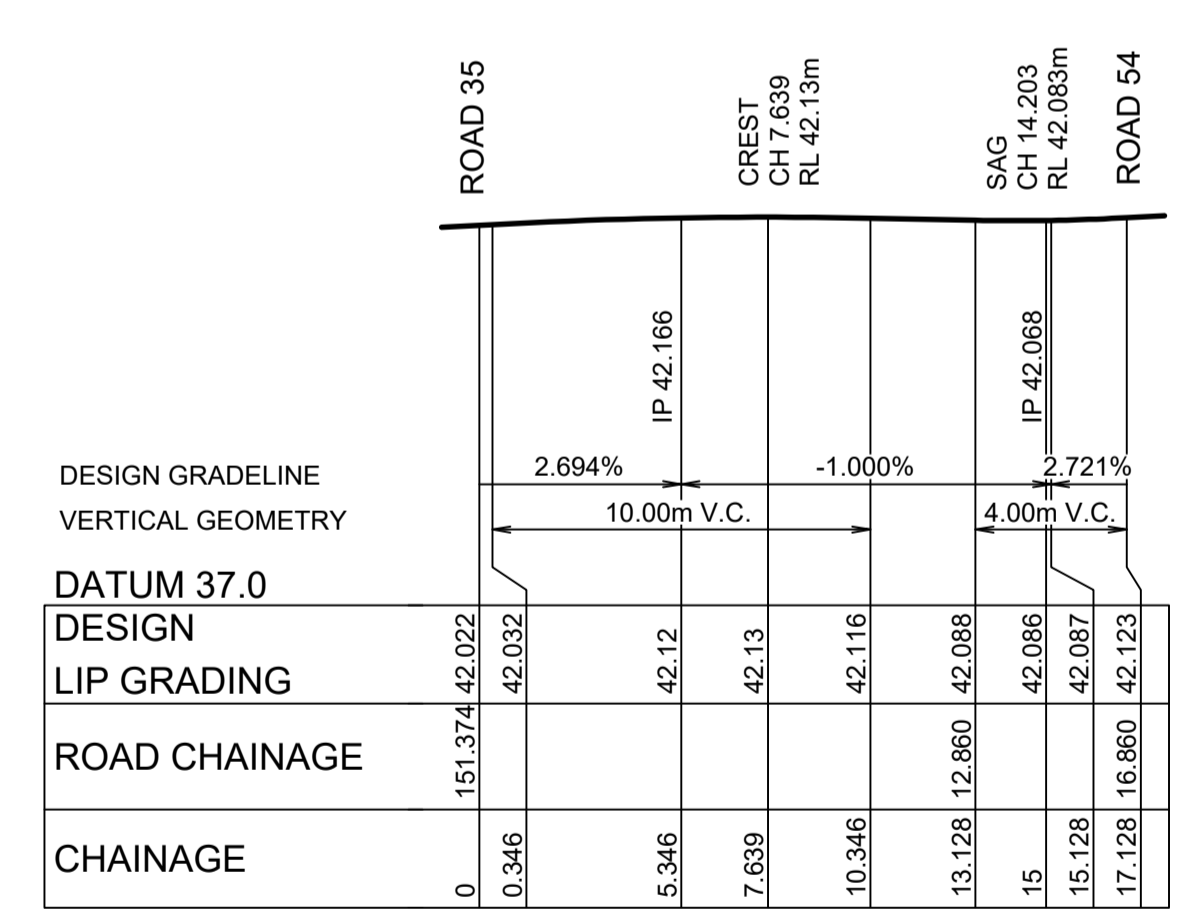


PLAN
SCALE 1:200



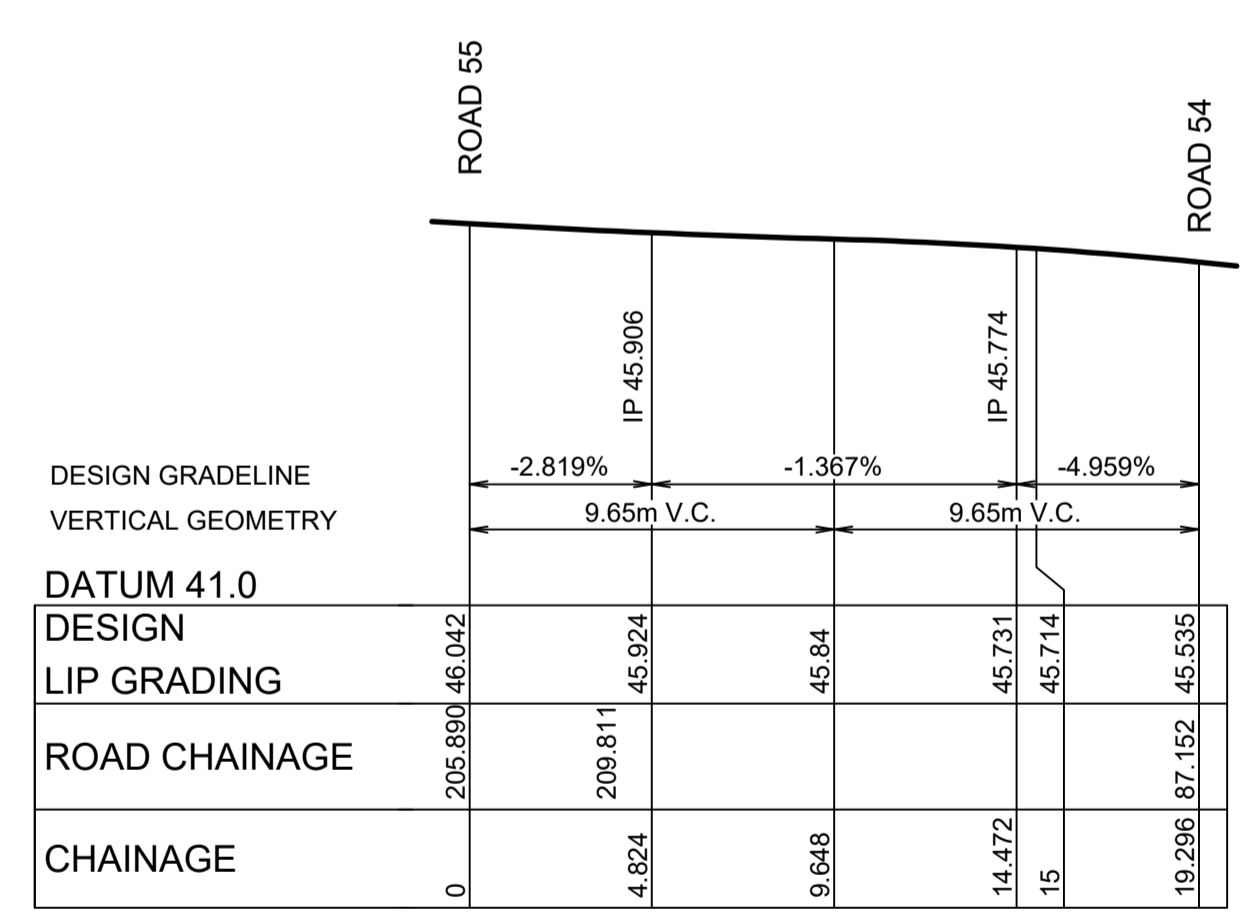
KR 32
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286588.91	6281443.83	350°46'34.35"		
4.97	286588.11	6281448.74	350°46'34.35"		
12.31	286586.57	6281458.2		-8.95	14.67
19.65	286577.24	6281456.02	256°50'03.54"		



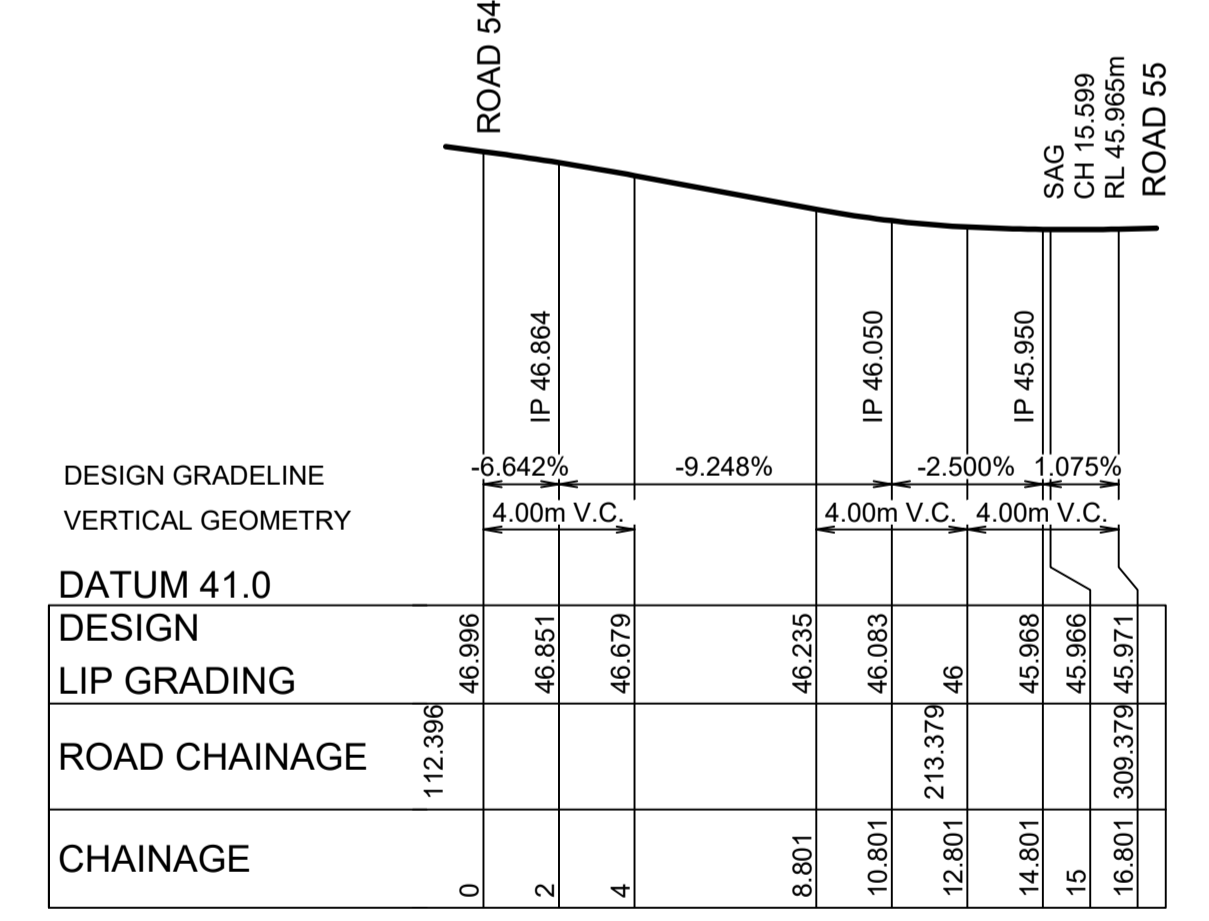
KR 31
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286601.26	6281462.09	254°49'13.98"		
6.56	286593.48	6281459.98		-8.95	13.13
13.13	286594.77	6281452.02			
17.13	286595.41	6281448.07	170°46'34.34"		



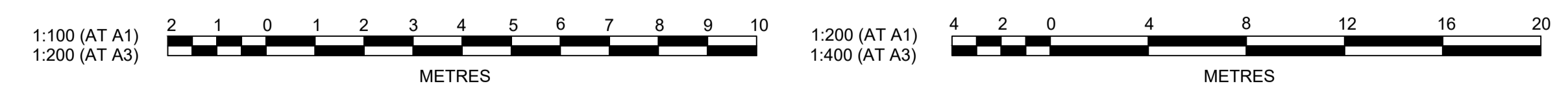
KR 34
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286587.04	6281367.07	88°37'32.74"		
4	286591.04	6281367.16			
11.65	286601.32	6281367.4		-8.95	15.3
19.3	286599.67	6281377.55	350°46'34.35"		



KR 33
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A. LENGTH
0	286603.72	6281352.63	350°46'34.35"		
6.4	286602.47	6281360.3		-8.95	12.8
12.8	286594.7	6281360.14			
16.8	286590.7	6281360.05	268°45'07.96"		



AMENDMENT	DES	DRN	CKD	APR	DATE
C					26/04/21
B					28/01/21
A					13/01/21

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

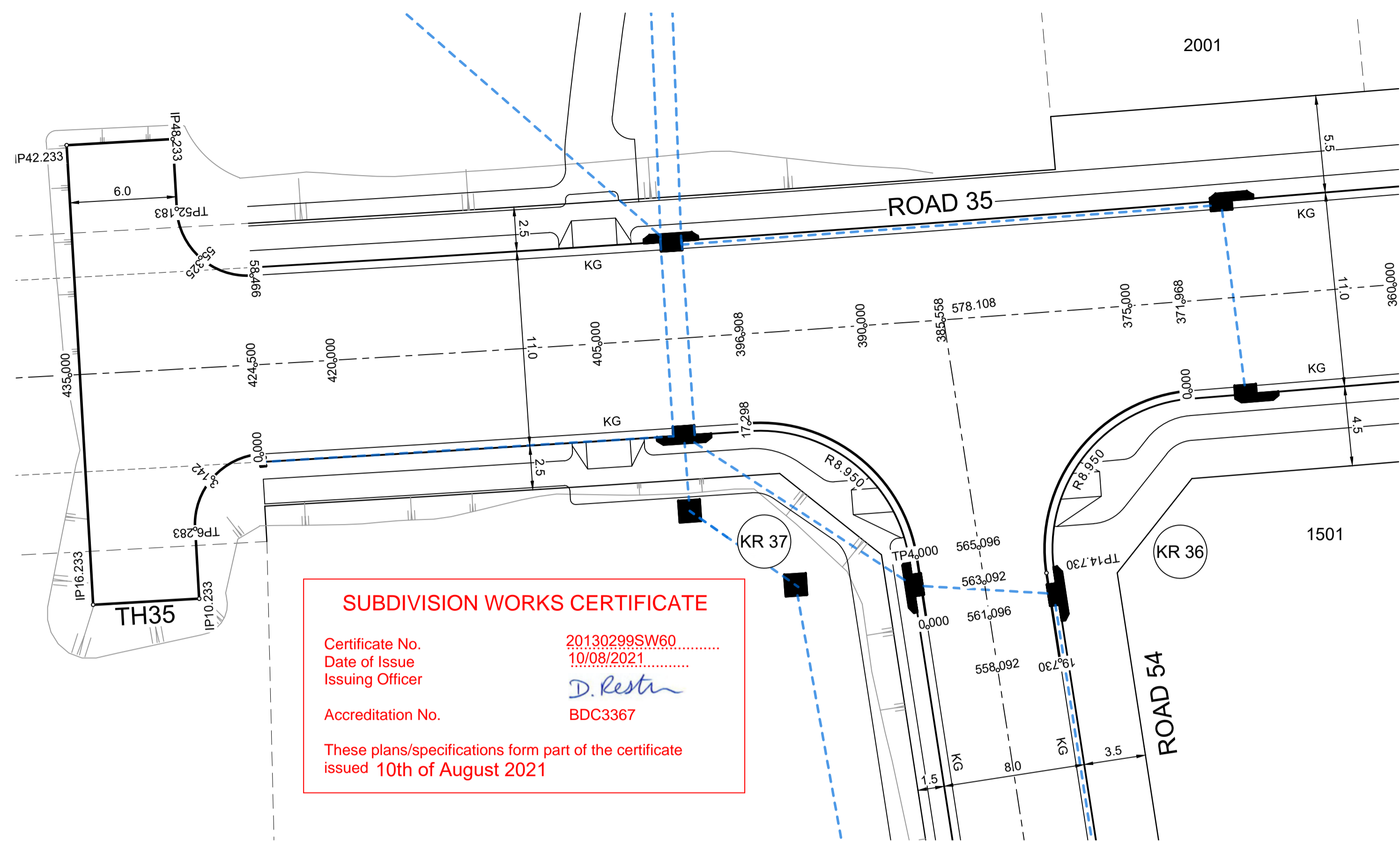
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE
KERB RETURN PLAN
SHEET 1

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1301

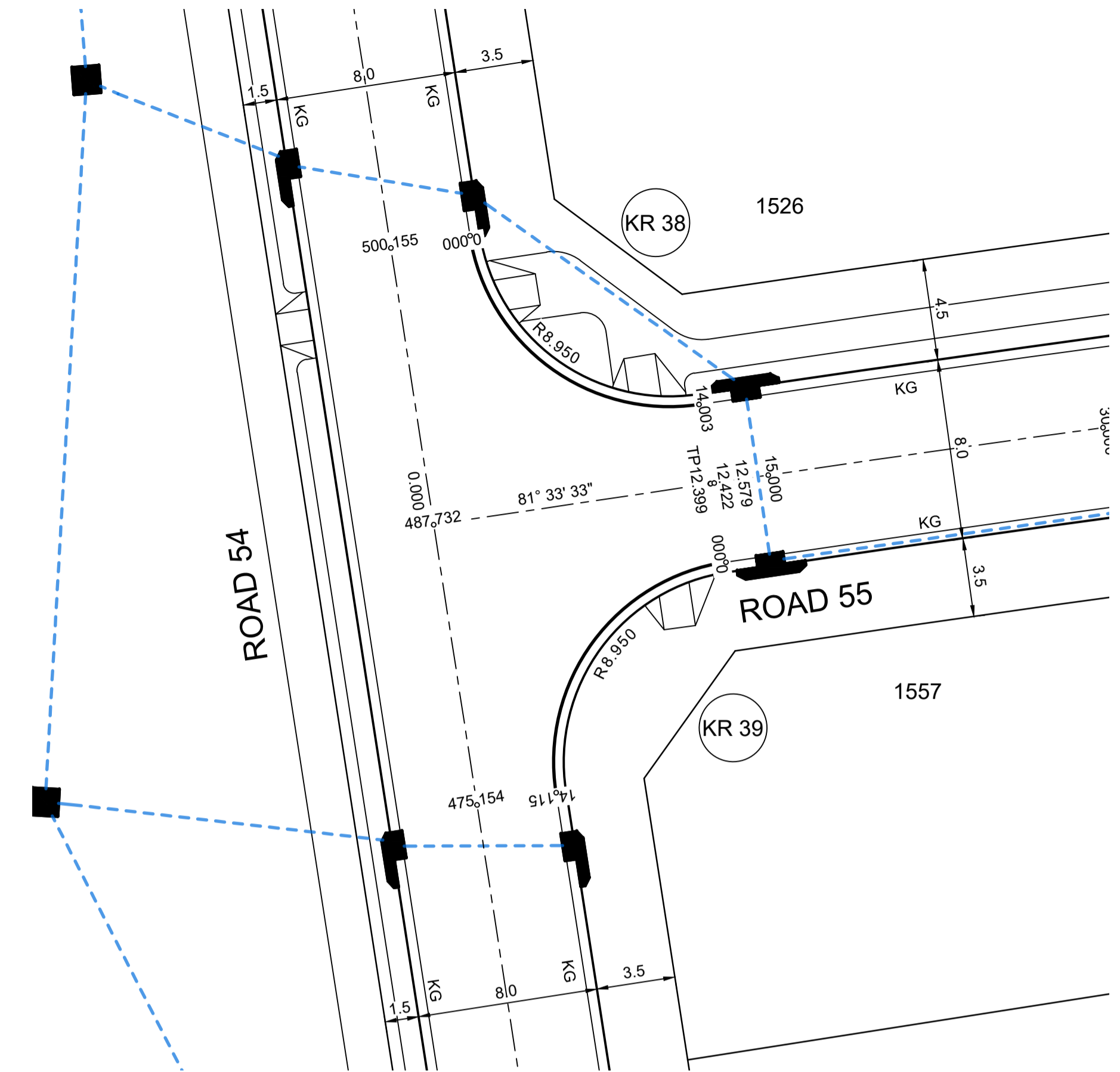
PROJECT No: **110185-12**
SHEET No: **CC1301**

Plotfile: 21 July, 2021 2:20:59 PM File Name: \\jwp.local\ids\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1302.dwg



PLAN
SCALE 1:200

DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER



PLAN
SCALE 1:200

ROAD 54		ROAD 35		ROAD 54	
SAG CH 2.447 RL 44.414m		SAG CH 15.965 RL 44.922m		SAG CH 15.965 RL 44.922m	
CREST CH 15.786 RL 44.57m		CREST CH 15.786 RL 44.57m		CREST CH 15.786 RL 44.57m	
DESIGN GRADELINE	-2.082%	DESIGN GRADELINE	-1.000%	DESIGN GRADELINE	4.889%
VERTICAL GEOMETRY	4.00m V.C.	VERTICAL GEOMETRY	6.00m V.C.	VERTICAL GEOMETRY	7.00m V.C.
DATUM 39.0		DATUM 39.0		DATUM 42.0	
DESIGN LIP GRADING	44.415	DESIGN LIP GRADING	44.736	DESIGN LIP GRADING	47.478
ROAD CHAINAGE	561.096	ROAD CHAINAGE	371.968	ROAD CHAINAGE	500.155
CHAINAGE	0	CHAINAGE	0	CHAINAGE	0

KR 37
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286367.48	6281416.99	351°12'08.99"		
4	286366.87	6281420.95	351°12'08.99"		
10.65	286365.62	6281429.07		-8.95	13.3
17.3	286357.41	6281428.51	266°04'13.36"		

ROAD 35		ROAD 54	
SAG CH 15.965 RL 44.922m		SAG CH 15.965 RL 44.922m	
CREST CH 15.786 RL 44.57m		CREST CH 15.786 RL 44.57m	
DESIGN GRADELINE	-1.000%	DESIGN GRADELINE	-2.692%
VERTICAL GEOMETRY	6.00m V.C.	VERTICAL GEOMETRY	4.00m V.C.
DATUM 39.0		DATUM 39.0	
DESIGN LIP GRADING	44.736	DESIGN LIP GRADING	44.433
ROAD CHAINAGE	371.968	ROAD CHAINAGE	563.092
CHAINAGE	0	CHAINAGE	14.73

KR 36
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286382.34	6281430.34	265°29'55.61"		
7.36	286372.72	6281429.59		-8.95	14.73
14.73	286374.2	6281420.05	171°12'09.00"		
19.73	286374.96	6281415.11	171°12'09.00"		

ROAD 54		ROAD 55	
SAG CH 15.965 RL 44.922m		SAG CH 15.965 RL 44.922m	
CREST CH 15.786 RL 44.57m		CREST CH 15.786 RL 44.57m	
DESIGN GRADELINE	4.889%	DESIGN GRADELINE	0.492%
VERTICAL GEOMETRY	7.00m V.C.	VERTICAL GEOMETRY	7.06m V.C.
DATUM 42.0		DATUM 43.0	
DESIGN LIP GRADING	47.478	DESIGN LIP GRADING	47.744
ROAD CHAINAGE	500.155	ROAD CHAINAGE	12.399
CHAINAGE	0	CHAINAGE	0

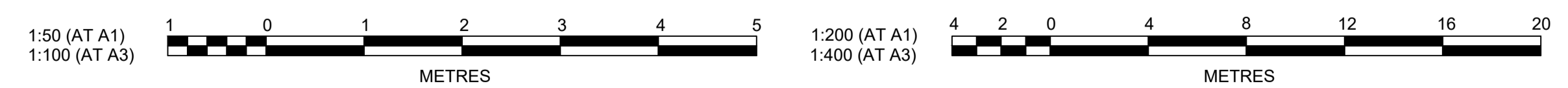
KR 38
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286383.82	6281357.86	171°12'09.00"		
7	286385.18	6281349.07		-8.95	14
14	286393.98	6281350.37	81°33'36.04"		

ROAD 55		ROAD 54	
SAG CH 15.965 RL 44.922m		SAG CH 15.965 RL 44.922m	
CREST CH 15.786 RL 44.57m		CREST CH 15.786 RL 44.57m	
DESIGN GRADELINE	0.492%	DESIGN GRADELINE	10.203%
VERTICAL GEOMETRY	7.06m V.C.	VERTICAL GEOMETRY	7.06m V.C.
DATUM 43.0		DATUM 43.0	
DESIGN LIP GRADING	47.744	DESIGN LIP GRADING	48.019
ROAD CHAINAGE	12.399	ROAD CHAINAGE	47.641
CHAINAGE	0	CHAINAGE	0

KR 39
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286395.18	6281343.37	261°33'56.50"		
7.06	286386.27	6281342.05		-8.95	14.12
14.12	286387.65	6281333.15	171°12'09.00"		



AMENDMENT	DES	DRN	CKD	APR	DATE	
D	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
C	CERTIFIER COMMENTS	JET	JET	MP	RO	26/04/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

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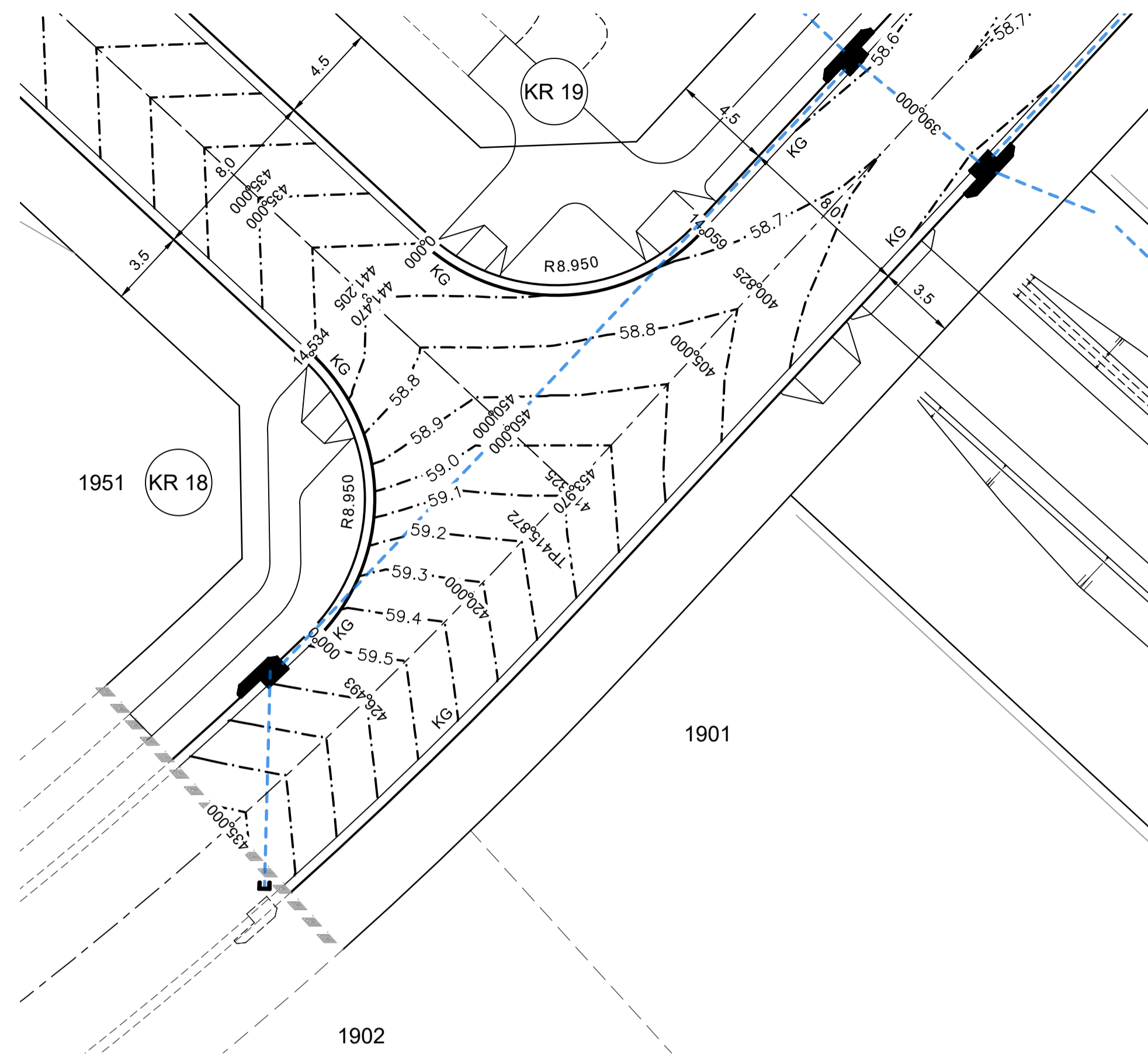
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE
KERB RETURN PLAN
SHEET 2

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1302

PROJECT No: **110185-12**
SHEET No: **CC1302**
D

Plotted: 21 July 2021 2:22:55 PM File Name: \\jwp.local\ids\lubs110185 - Redbank North Richmond Residential Precincts12 - Stage 1 DANCDCCSOUTHERN HEIGHTS1-PROM110185-12-CC1303.dwg

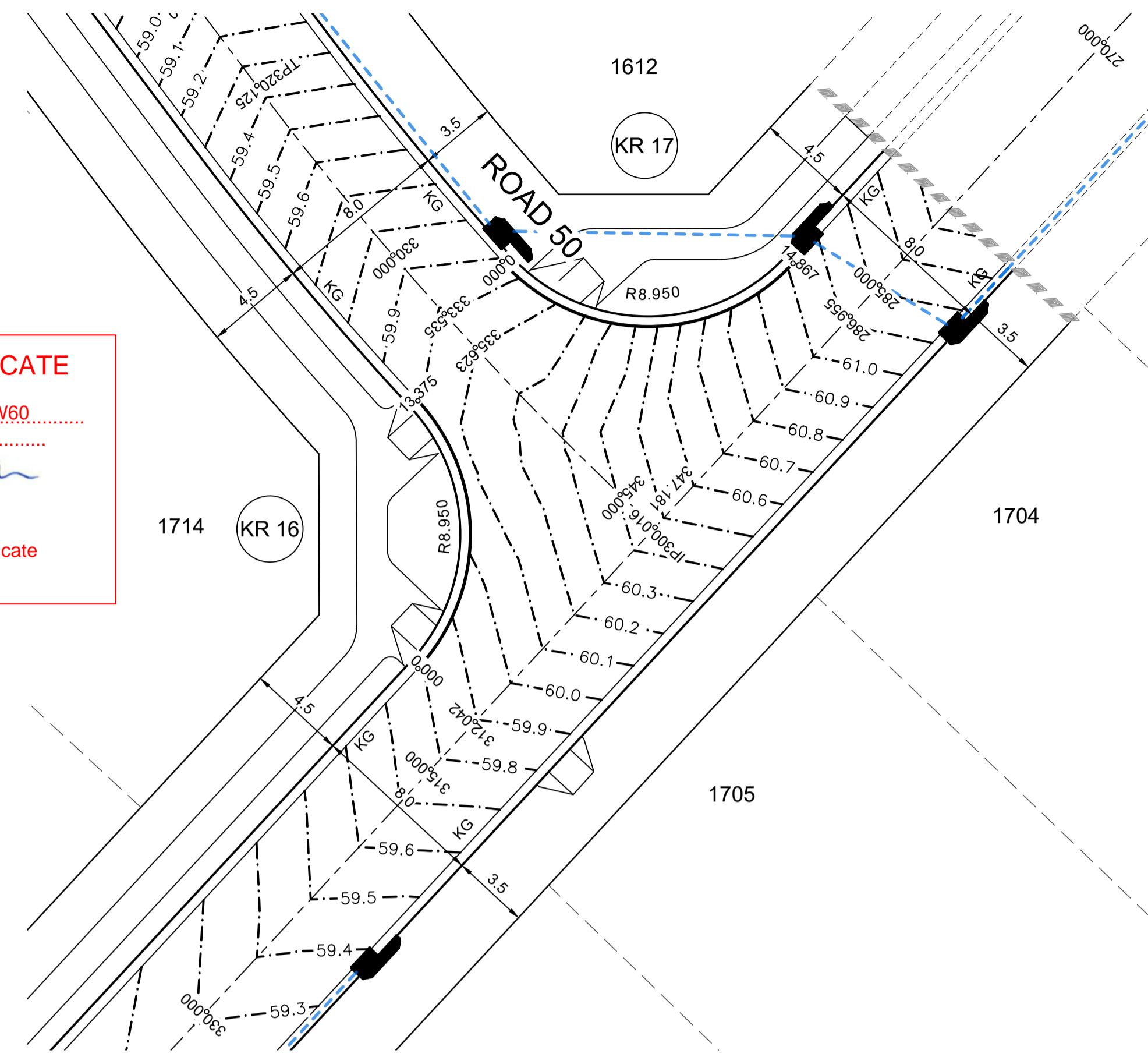


PLAN
SCALE 1:200

SUBDIVISION WORKS CERTIFICATE

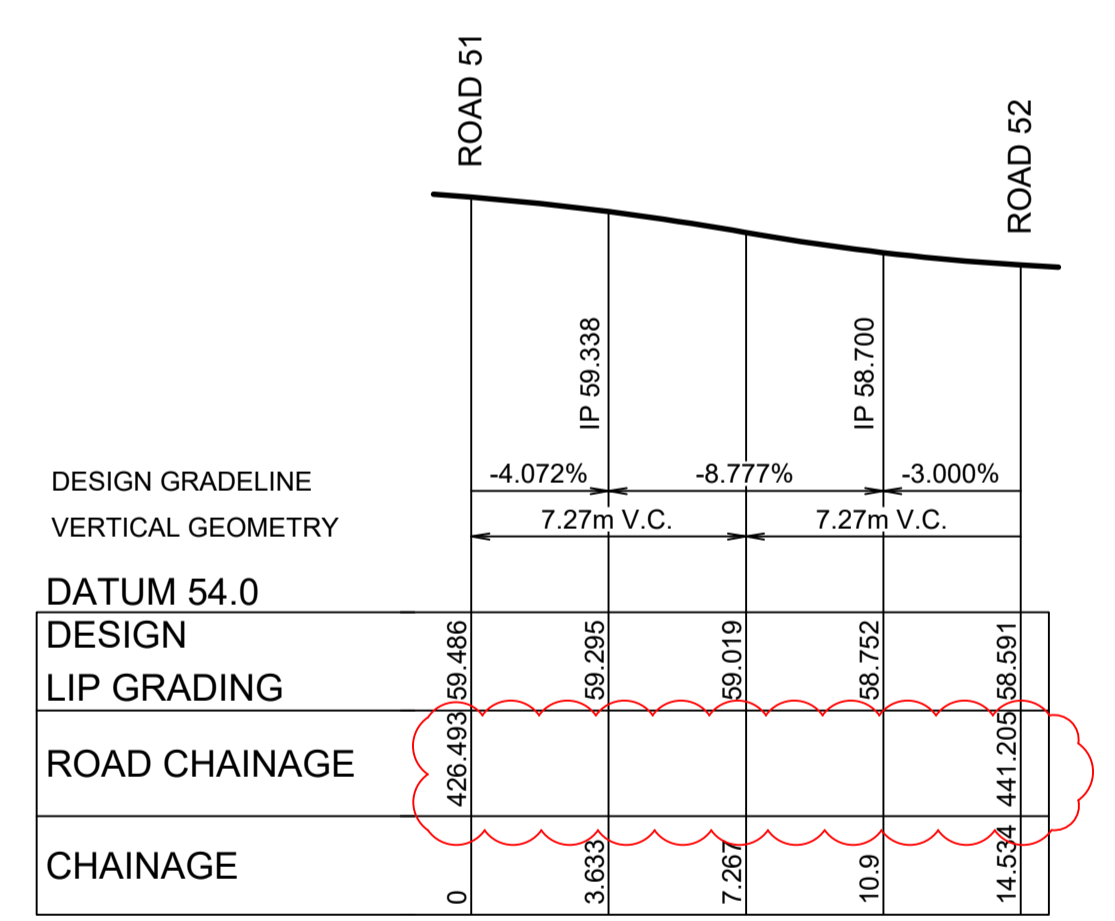
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate
 issued 10th of August 2021



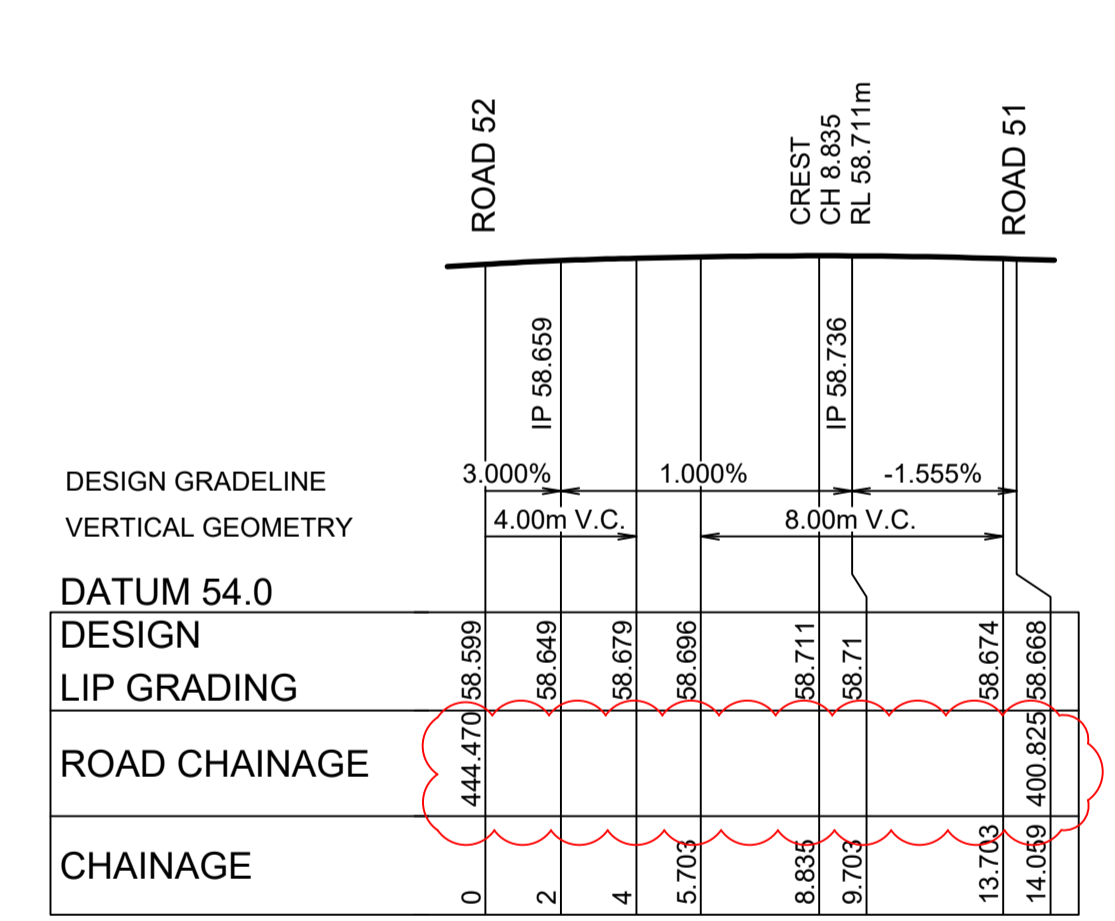
PLAN
SCALE 1:200

DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER



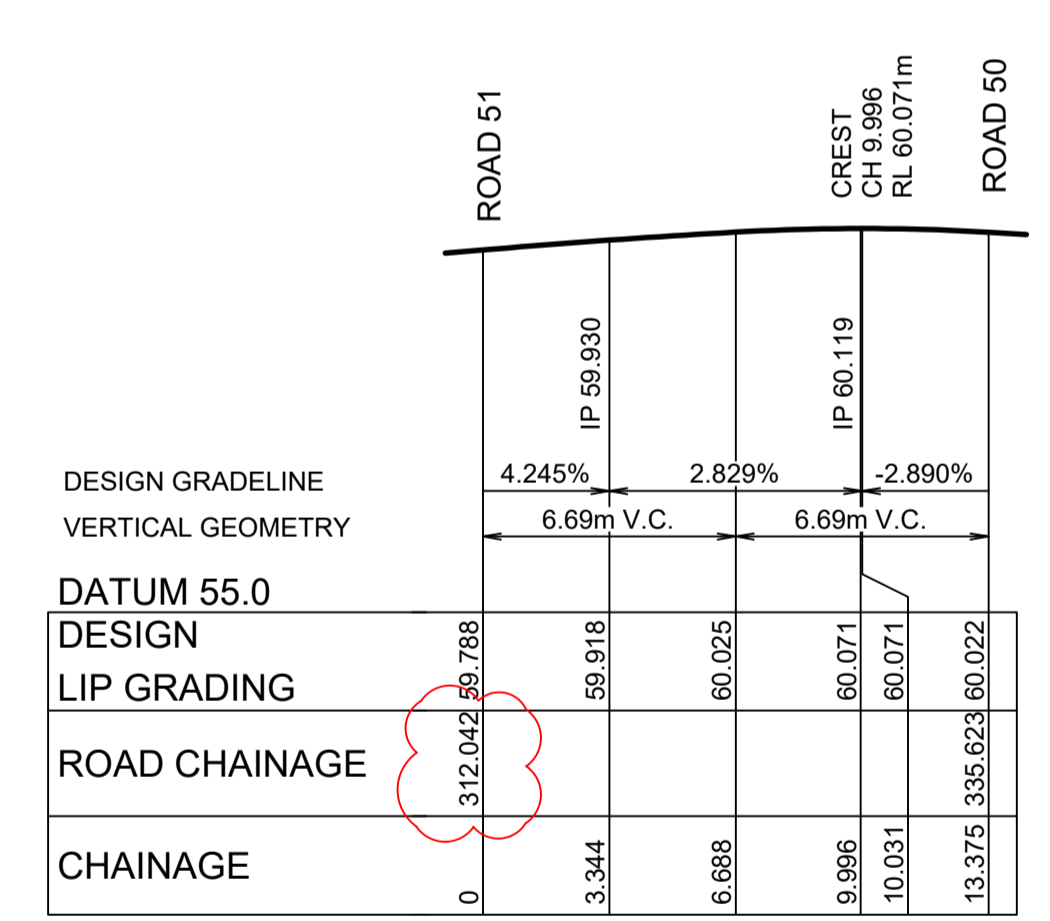
KR 18
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286708.27	6281086.65	45°51'29.48"	-8.95	14.53
7.27	286715.04	6281093.22			
14.53	286708.12	6281099.64	312°48'55.65"		



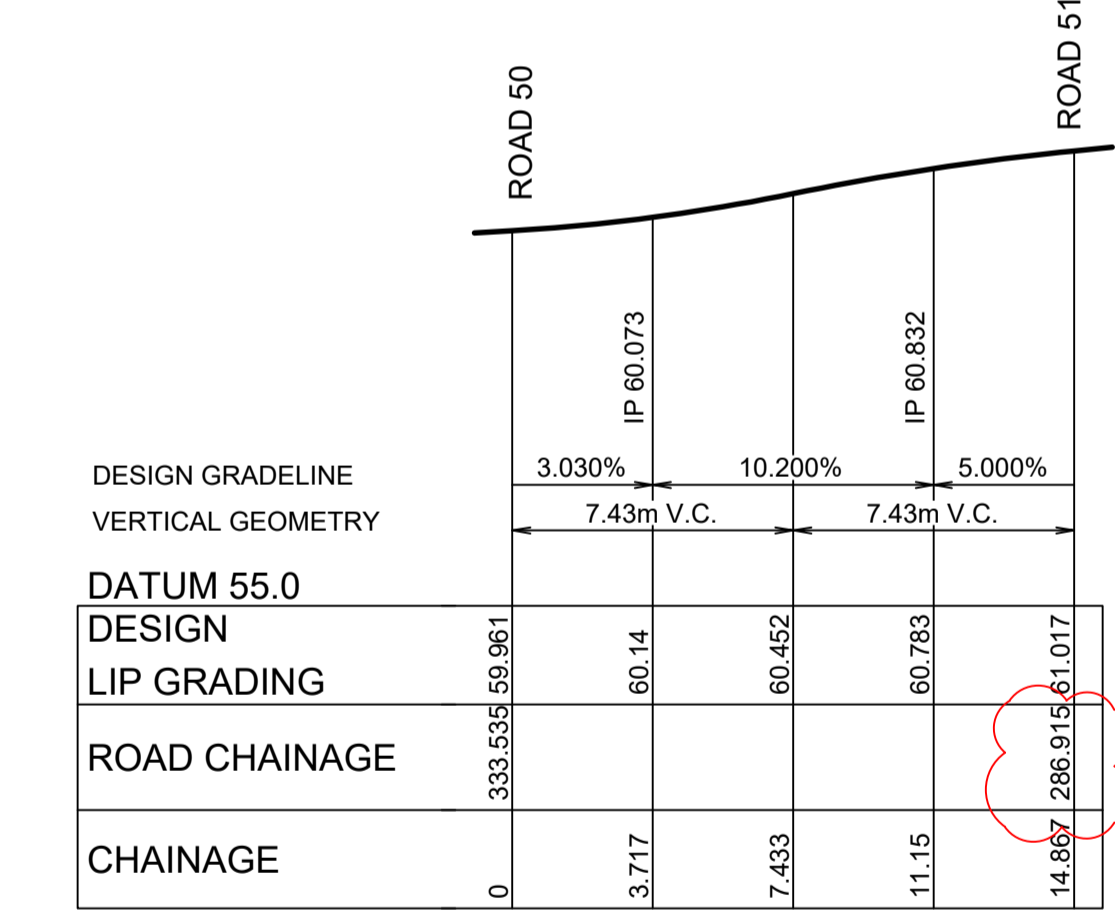
KR 19
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286713.14	6281104.67	132°48'55.65"	-8.95	14.06
7.03	286719.7	6281098.59			
14.06	286725.79	6281105.15	42°48'55.65"		



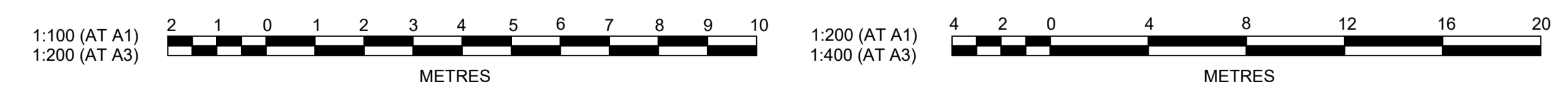
KR 16
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286786.13	6281170.28	42°48'55.65"	-8.95	13.38
6.69	286791.76	6281176.36			
13.38	286786.13	6281182.44	317°11'30.49"		



KR 17
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286789.96	6281188.77	137°59'22.21"	-8.95	14.87
7.43	286796.52	6281181.49			
14.87	286803.18	6281188.68	42°48'55.65"		



AMENDMENT	DES	DRN	CKD	APR	DATE
D	MP	VS	RO	MS	21/07/21
C	JET	JET	MP	RO	26/04/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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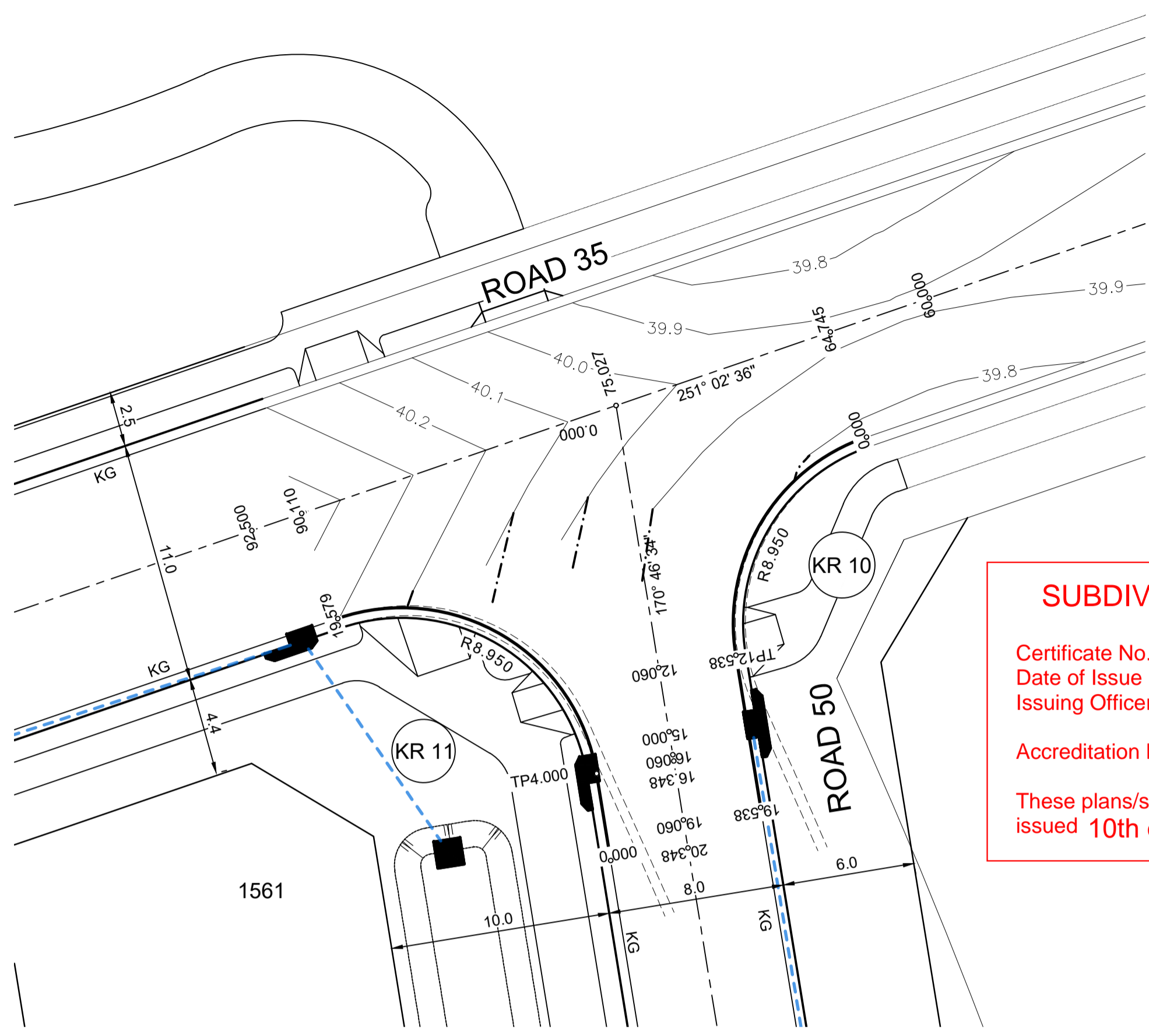
REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE
KERB RETURN PLAN
SHEET 3

PROJECT No: **110185-12**
SHEET No: **CC1303**

AMAZON: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1303

D

Plotted: 21 July 2021 2:24:45 PM File Name: \\jwp.local\ids\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1304.dwg



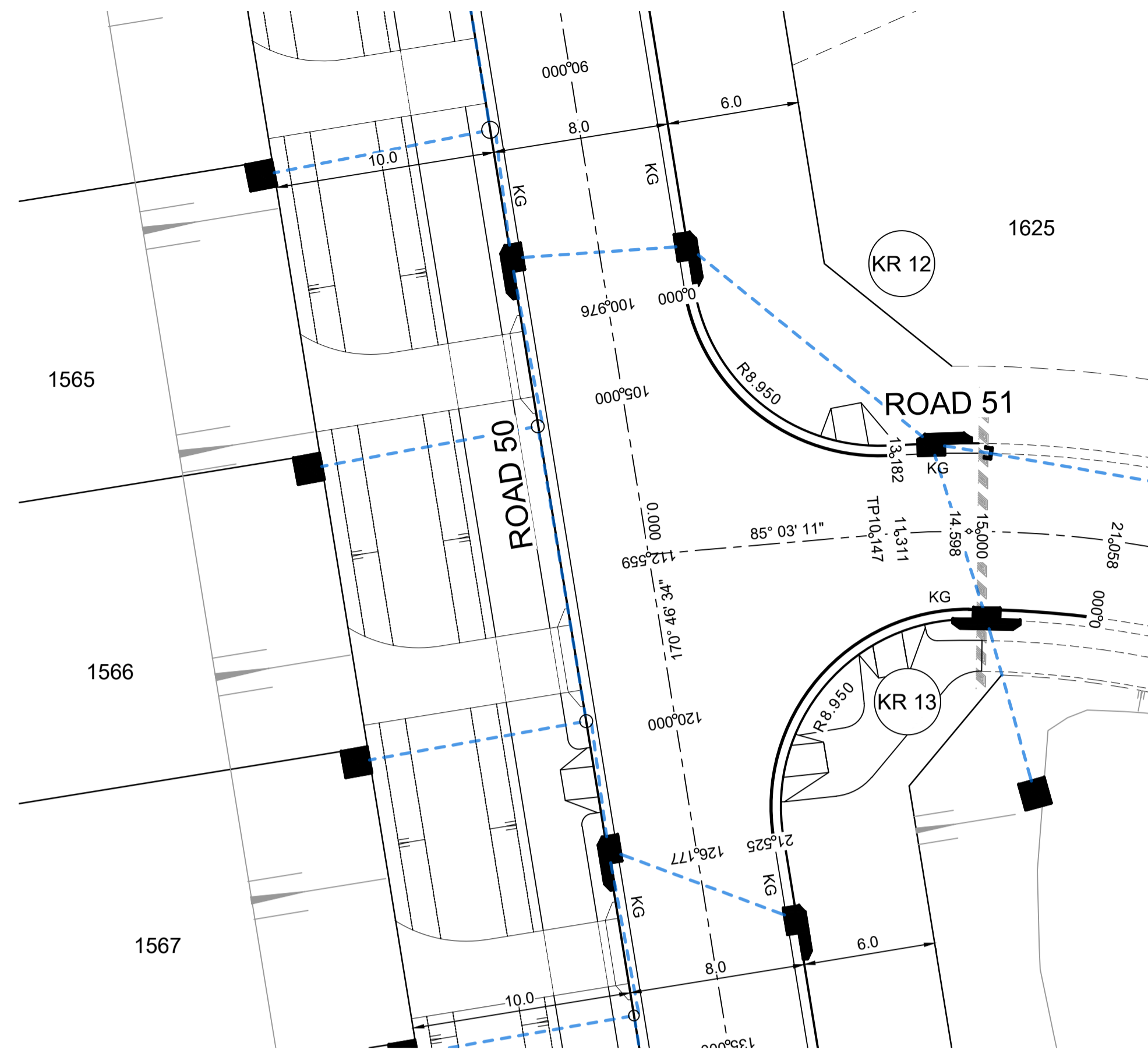
PLAN
SCALE 1:200

SUBDIVISION WORKS CERTIFICATE

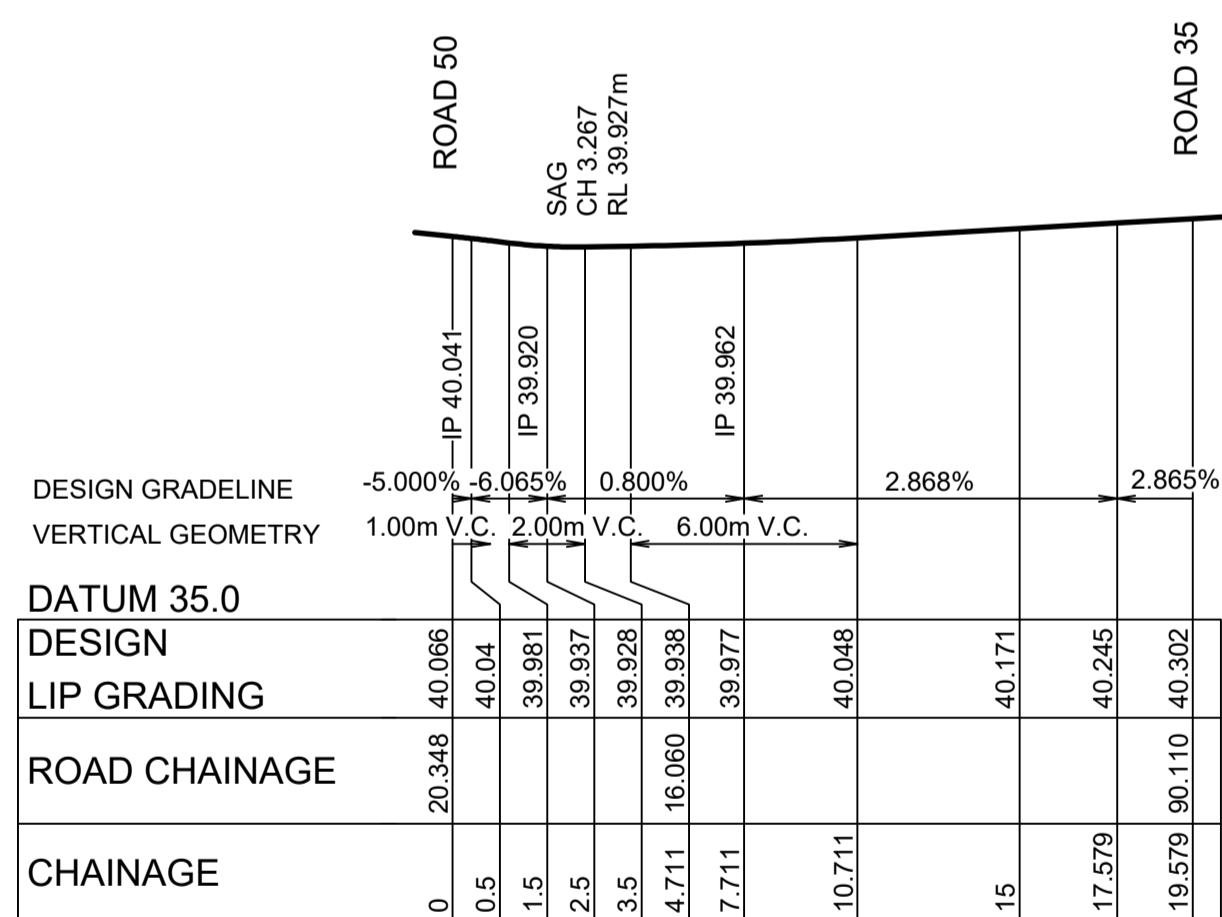
Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate
 issued 10th of August 2021

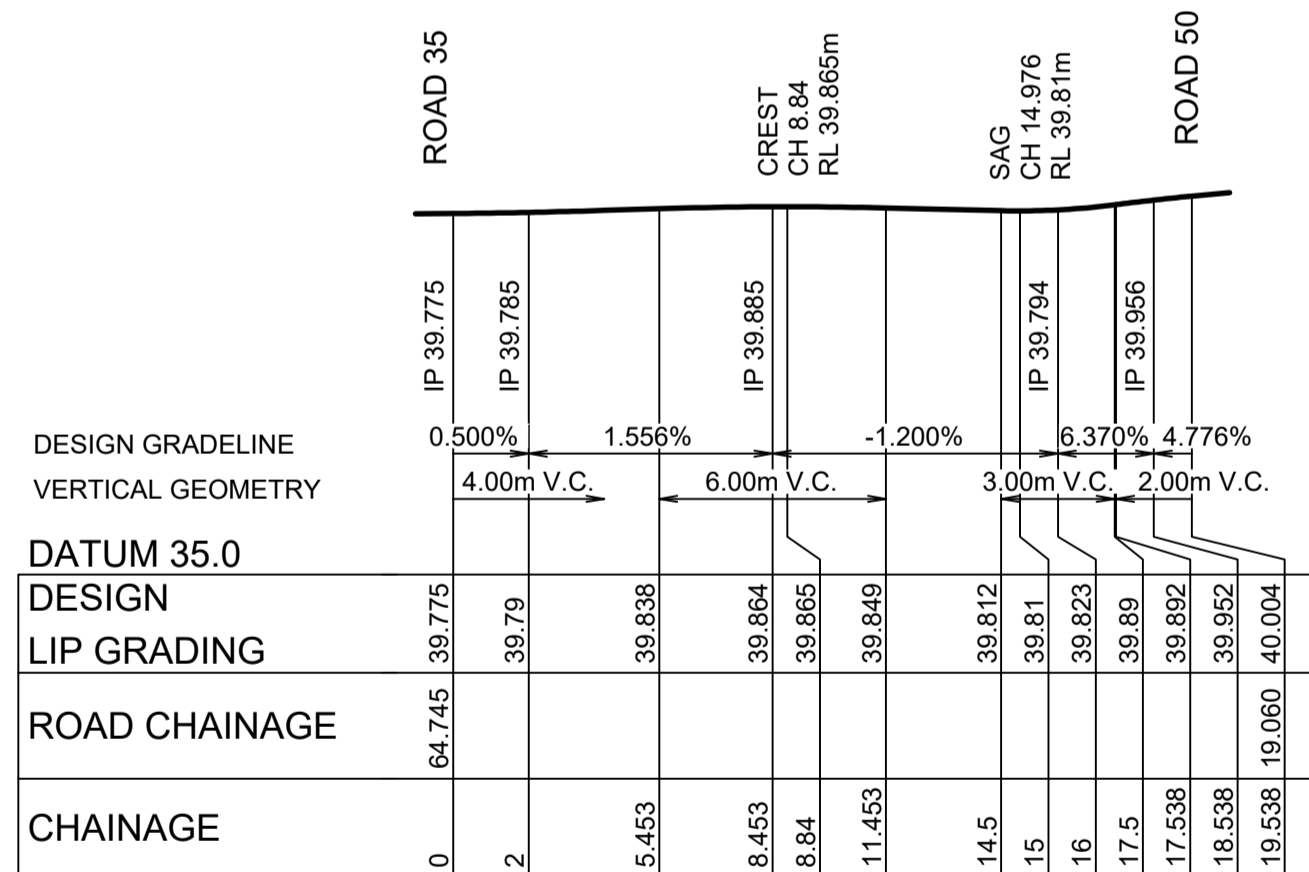
DESIGN LEVELS, RADII AND
 SETOUT ARE TO LIP OF GUTTER



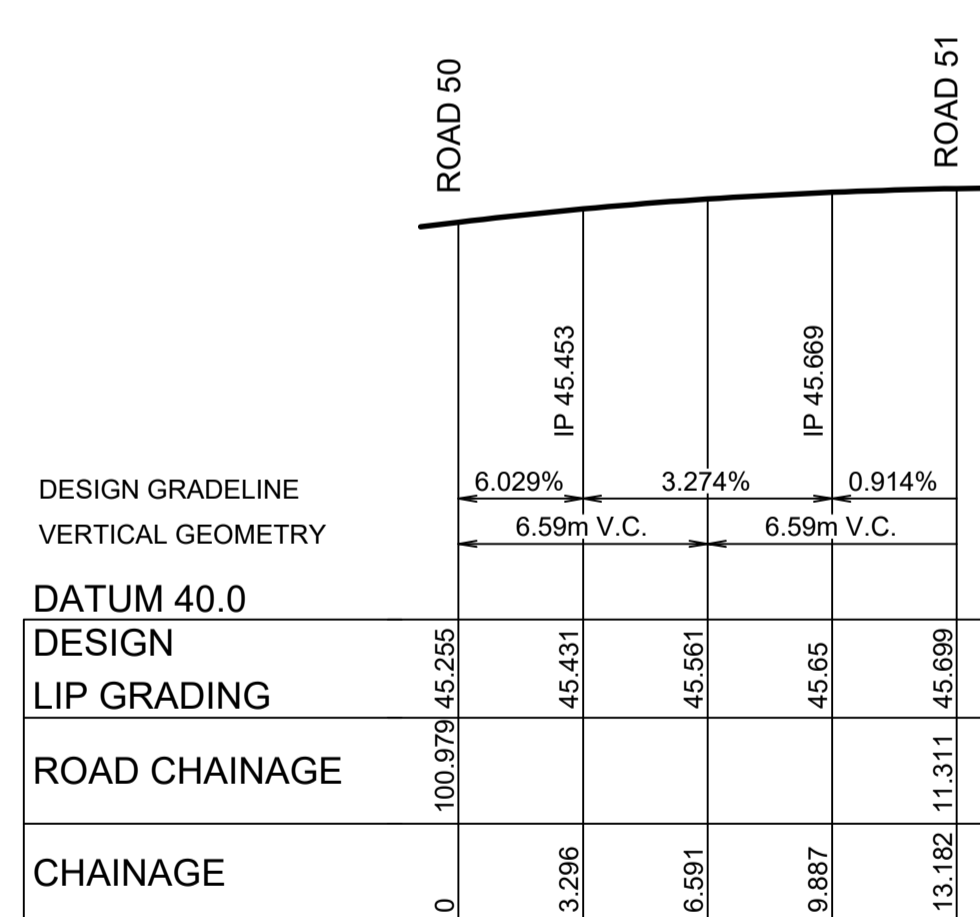
PLAN
SCALE 1:200



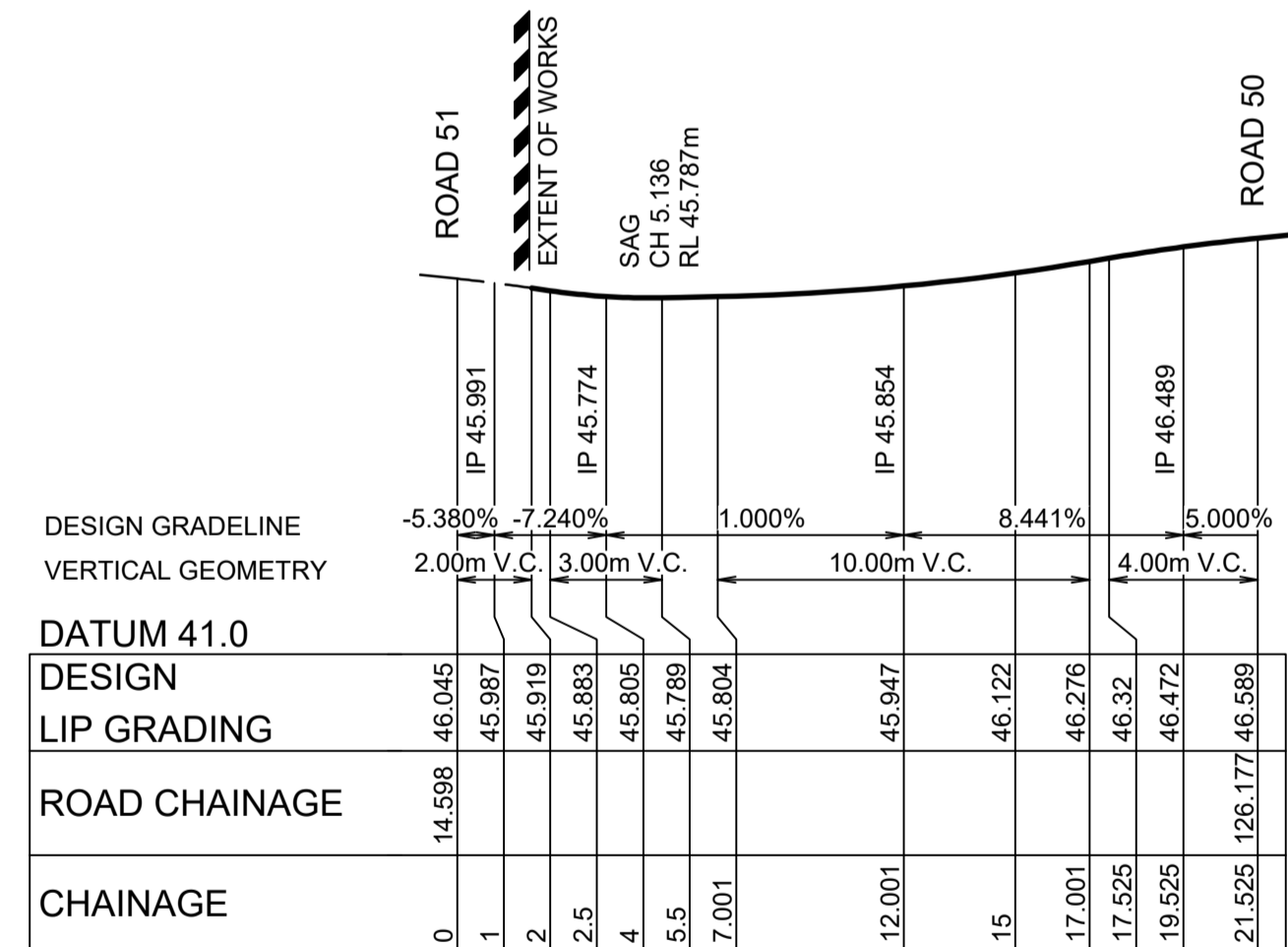
KR 11
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



KR 10
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



KR 12
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



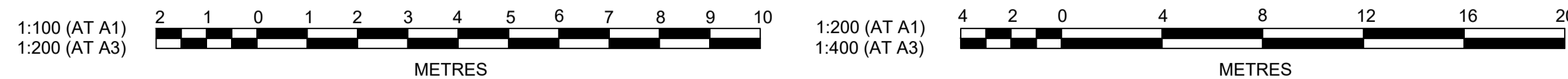
KR 13
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286672.36	6281469.66	350°46'34.49"		
4	286671.72	6281473.61	350°46'34.49"		
11.79	286670.02	6281484.09		-8.95	15.58
19.58	286659.98	6281480.64	251°02'36.11"		

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286683.97	6281488.88	251°02'36.11"		
6.27	286676.83	6281486.43		-8.95	12.54
12.54	286678.04	6281478.98	170°46'34.49"		
19.54	286679.17	6281472.07	170°46'34.49"		

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286692.3	6281391.21	170°46'34.49"		
6.59	286693.6	6281383.2		-8.95	13.18
13.18	286701.69	6281383.72	86°23'11.77"		

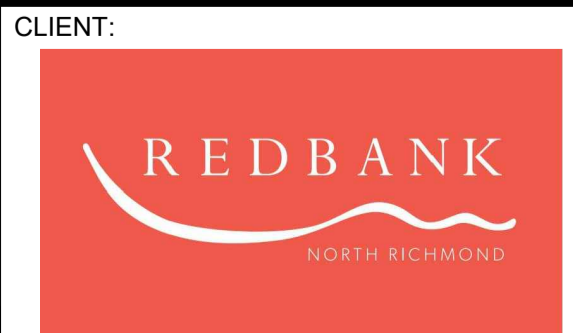
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286711.18	6281376.32	277°33'23.01"		
3	286708.2	6281376.71		-46.45	6
6	286705.19	6281376.72	270°09'13.37"		
13.76	286694.64	6281376.75		-8.95	15.52
21.52	286696.34	6281366.34	170°46'34.49"		



AMENDMENT	DES	DRN	CKD	APR	DATE
C					26/04/21
B					28/01/21
A					13/01/21

J. WYNDHAM PRINCE
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APPROVAL**

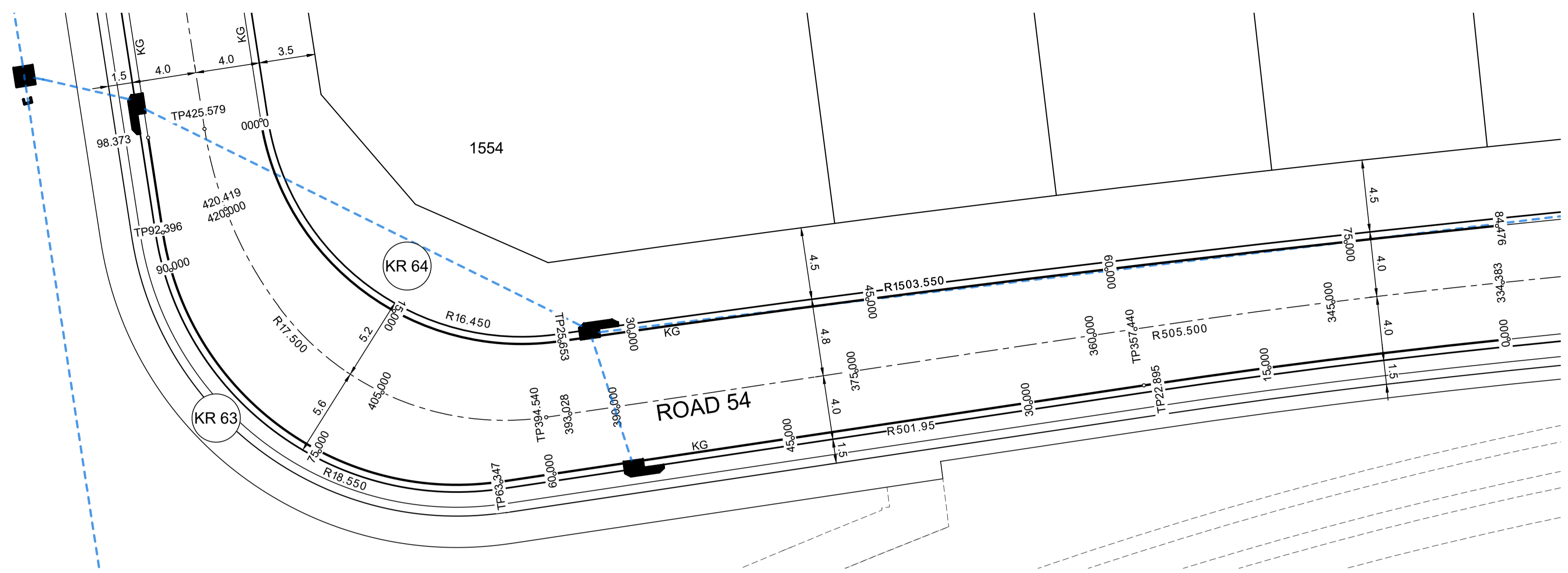
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**REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
KERB RETURN PLAN
SHEET 4**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1304

PROJECT No: **110185-12**
SHEET No: **CC1304**
C

Plotfile: 21 July 2021 2:26:38 PM File Name: \\jwp.local\ids\lubs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCID\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1305.dwg



DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER

PLAN
SCALE 1:200

ROAD 54 CHAINAGE	DESIGN GRADELINE	VERTICAL GEOMETRY	IP	ROAD 54 CHAINAGE
0	5.698%			0
15	5.696%			15
22.5		10.00m V.C.	IP 52.541	22.5
25.653				25.653
27.5				27.5
30				30
32.5				32.5
33.682				33.682
38.682		10.00m V.C.	IP 53.007	38.682
43.682				43.682
45				45
53.357				53.357
60				60
63.357				63.357
73.357		20.00m V.C.	IP 53.614	73.357
75				75
84.476	0.998%			84.476

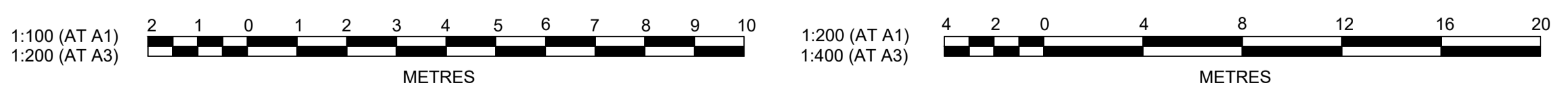
ROAD 54 CHAINAGE	DESIGN GRADELINE	VERTICAL GEOMETRY	IP	ROAD 54 CHAINAGE
0	-1.002%			0
10				10
15		30.00m V.C.	IP 53.574	15
22.895				22.895
25				25
30				30
40	-3.100%			40
45				45
60		40.00m V.C.	IP 52.489	60
63.347				63.347
75				75
80	-3.900%			80
88.373				88.373
90				90
92.396				92.396
93.373		10.00m V.C.	IP 51.187	93.373
98.373	-4.246%			98.373

KR 63
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

KR 64
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

KR 63						
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPRAL	A.LENGTH	
0	286472.92	6281270.52	264°05'37.08"			
11.45	286461.53	6281269.34		-501.95	22.9	
22.9	286450.21	6281267.65	261°28'48.84"			
63.35	286410.21	6281261.66	261°28'48.84"			
77.87	286391.95	6281259.92				
92.4	286389.13	6281277.18	351°12'08.99"	18.55	29.05	
98.37	286388.21	6281283.07	351°12'08.99"			

KR 64						
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPRAL	A.LENGTH	
0	286395.23	6281284.16	171°12'09.00"			
12.83	286397.72	6281268.08		-16.45	25.65	
25.65	286413.82	6281270.39	81°51'07.46"			
55.06	286442.93	6281274.56		1503.55	58.82	
84.48	286472.19	6281277.59	84°05'37.08"			



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

AMENDMENT	DES	DRN	CKD	APR	DATE	
F	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
E	ROAD 54 ALIGNMENT REVISED	JET	JET	MP	RO	08/06/21
D	COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21
C	CERTIFIER COMMENTS	JET	JET	MP	RO	26/04/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

J. WYNDHAM PRINCE
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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

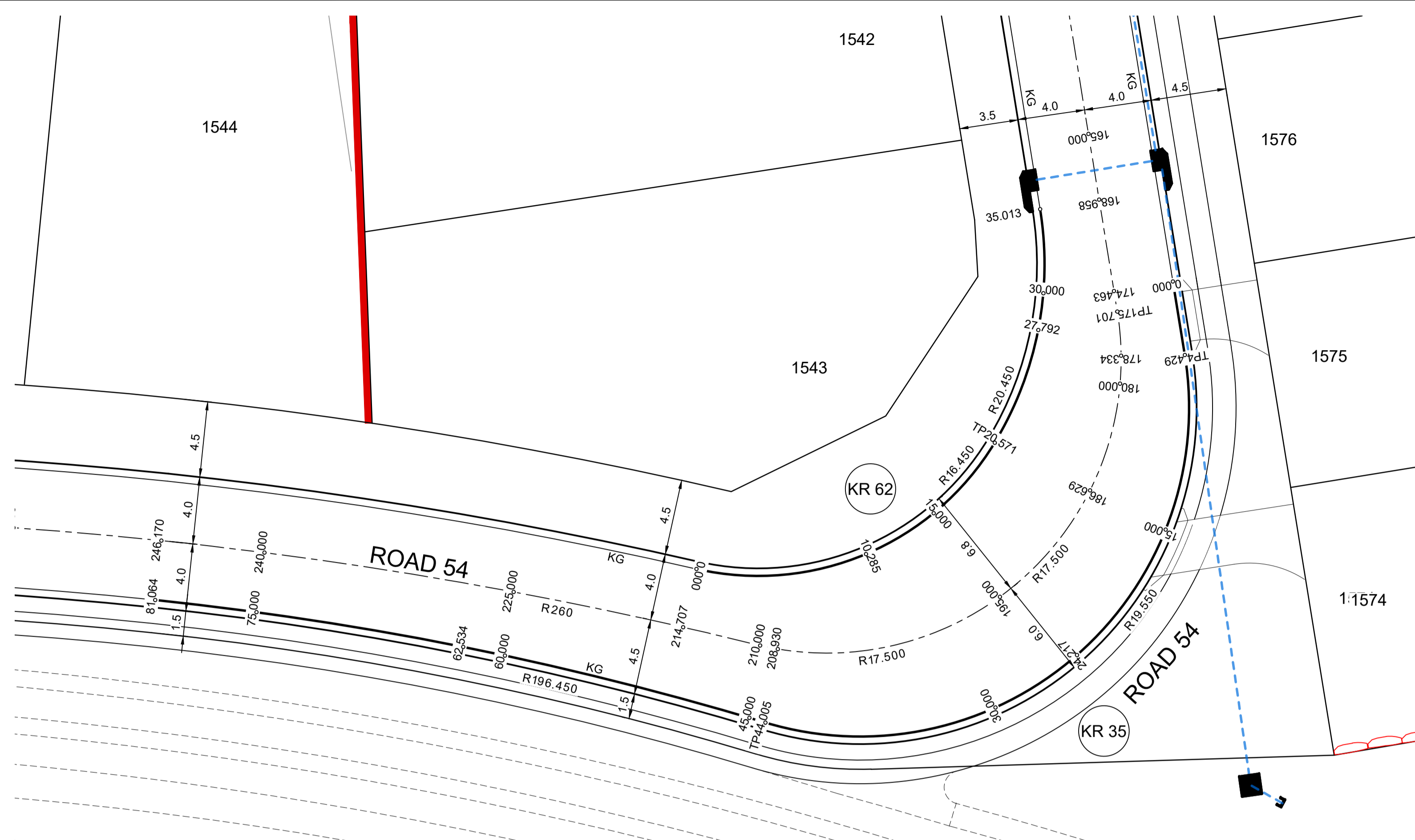
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 KERB RETURN PLAN
 SHEET 5

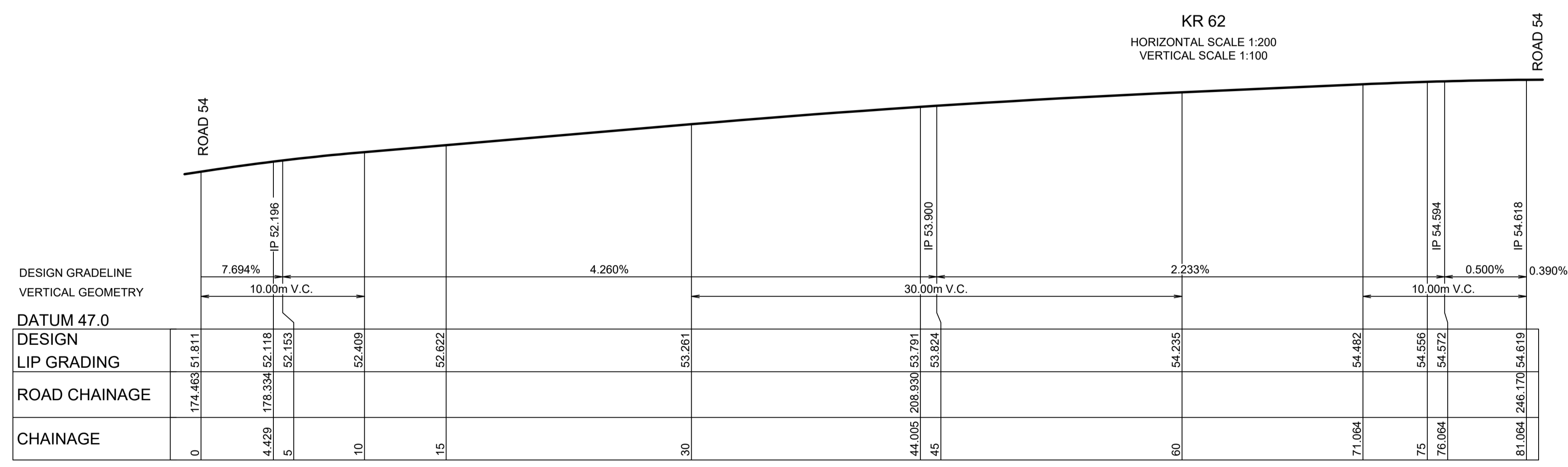
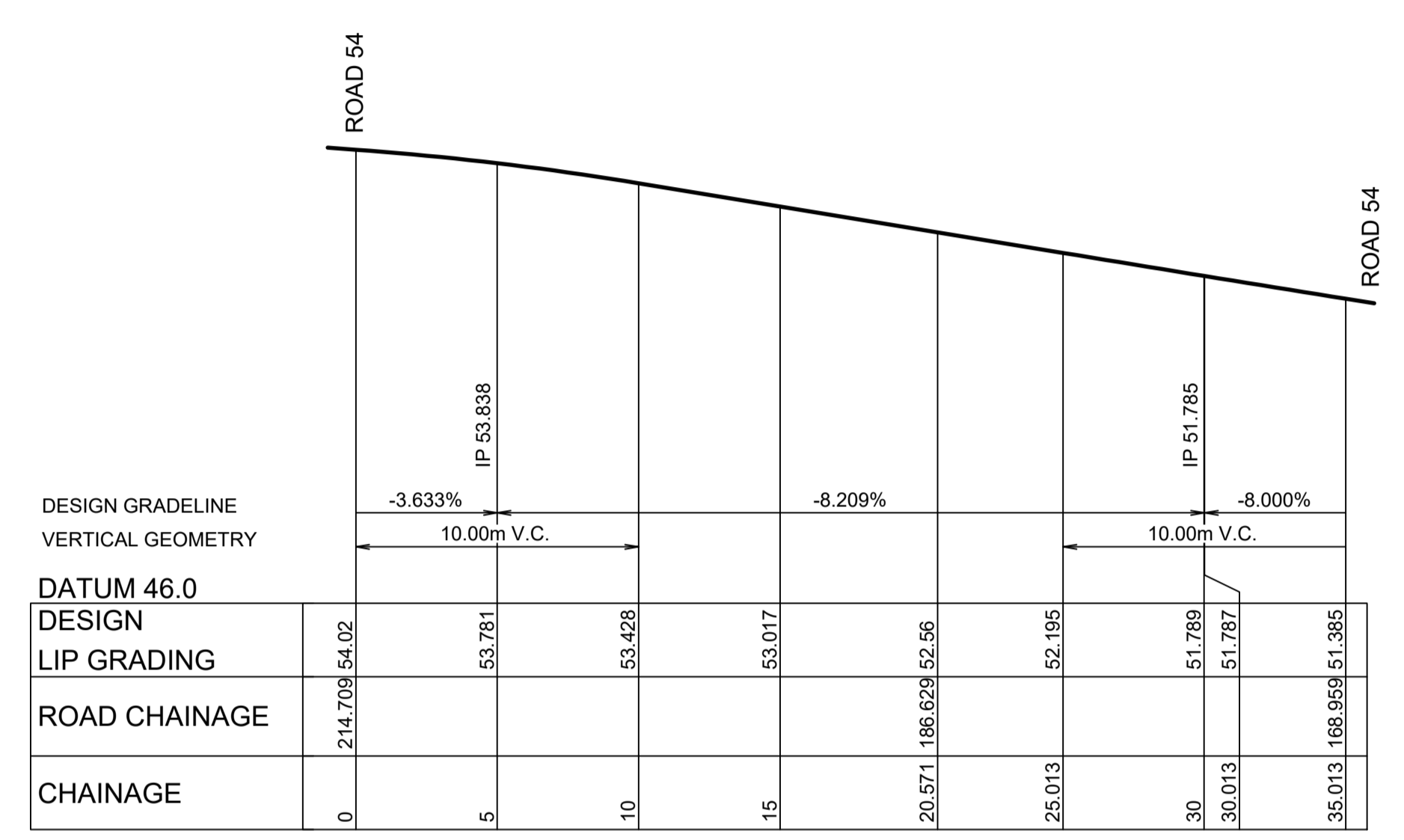
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1305

PROJECT No: 110185-12
 SHEET No: CC1305

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DESIGN LEVELS, RADII AND SETOUT ARE TO LIP OF GUTTER



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

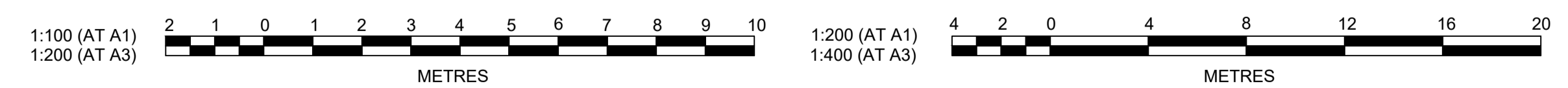
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KR 35

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286620.67	6281292.5	170°46'34.35"		
4.43	286621.38	6281288.13	170°46'34.35"		
24.22	286626.4	6281257.26		19.55	39.58
44	286596.45	6281266.28	286°45'43.95"		
62.53	286578.65	6281271.64		-196.45	37.06
81.06	286560.17	6281273.57	275°57'13.63"		

KR 62

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	286592.35	6281275.41	102°53'14.06"		
10.29	286603.92	6281272.76		-16.45	20.57
20.57	286610.08	6281282.91	31°14'19.87"		
27.79	286613.99	6281289.36		-20.45	14.44
35.01	286612.78	6281296.8	350°46'34.35"		



AMENDMENT	MP	VS	RO	RO	16/08/21
DES	DRN	CKD	APR	DATE	
A					
EXTRA SHEET ADDED					

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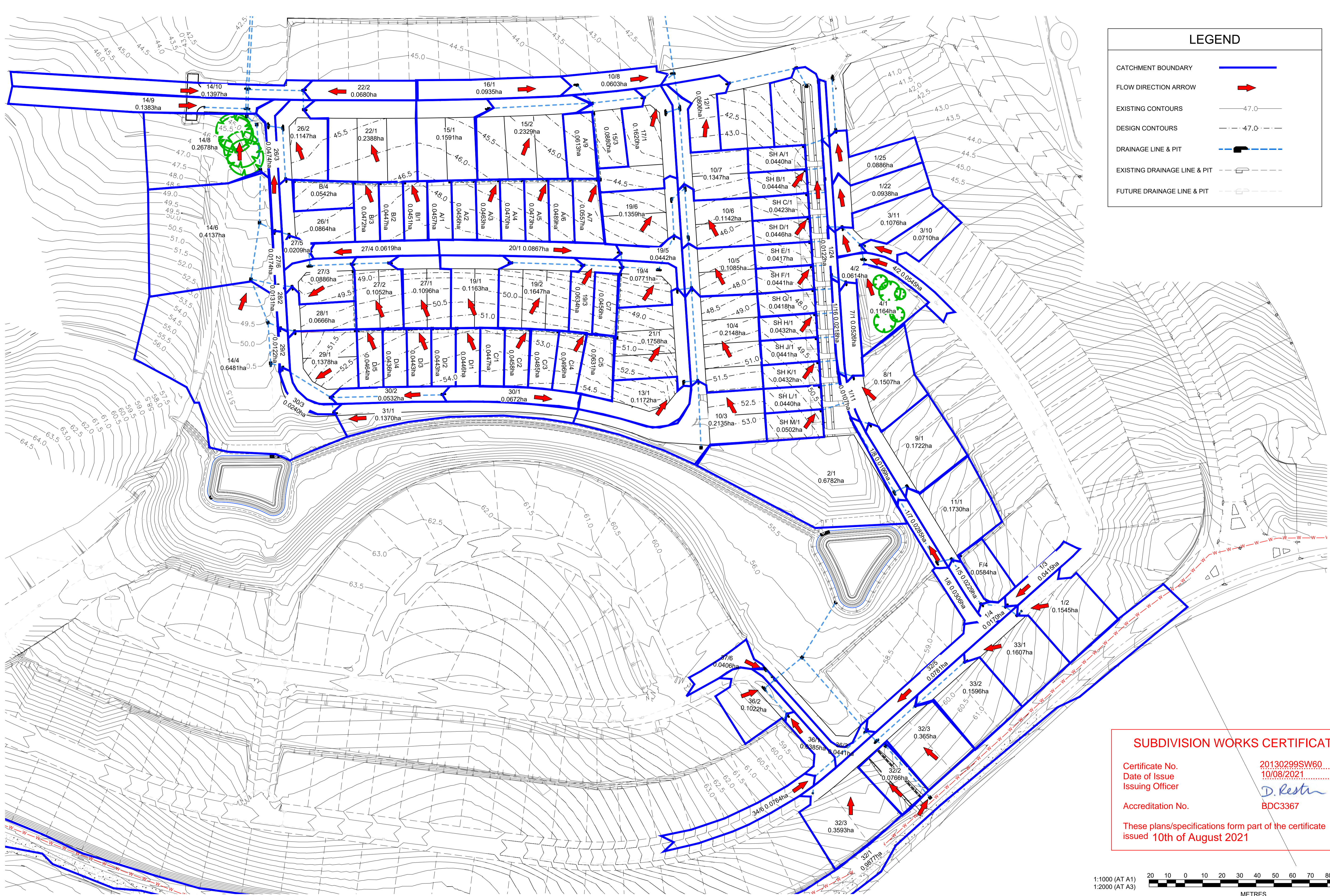
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 KERB RETURN PLAN
 SHEET 6

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1306

PROJECT No: **110185-12**
 SHEET No: **CC1306**

A

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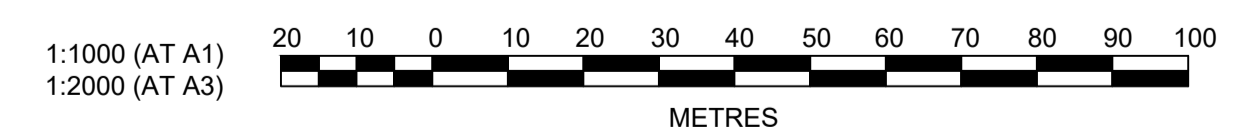
LEGEND

- CATCHMENT BOUNDARY —
- FLOW DIRECTION ARROW ➔
- EXISTING CONTOURS —
- DESIGN CONTOURS - - -
- DRAINAGE LINE & PIT —
- EXISTING DRAINAGE LINE & PIT - - -
- FUTURE DRAINAGE LINE & PIT - - -

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resta*
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AMENDMENT	DES	DRN	CKD	APR	DATE
D	MP	VS	RO	MS	21/07/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 CATCHMENT PLAN

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1400

PROJECT No: 110185-12
 SHEET No: CC1400
 D

Plotted: 21 July 2021 2:33:56 PM File Name: \\jwp.local\ids\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1402A.dwg

DAM OUTLET PIT DETAILS				
PIT NAME	GRATE LEVEL "A" (m)	INVERT LEVEL "B" (m)	PIT DEPTH "H" (m)	OUTLET PIPE SIZE (mm)
10/1	54.4	52.417	1.9830	Ø900

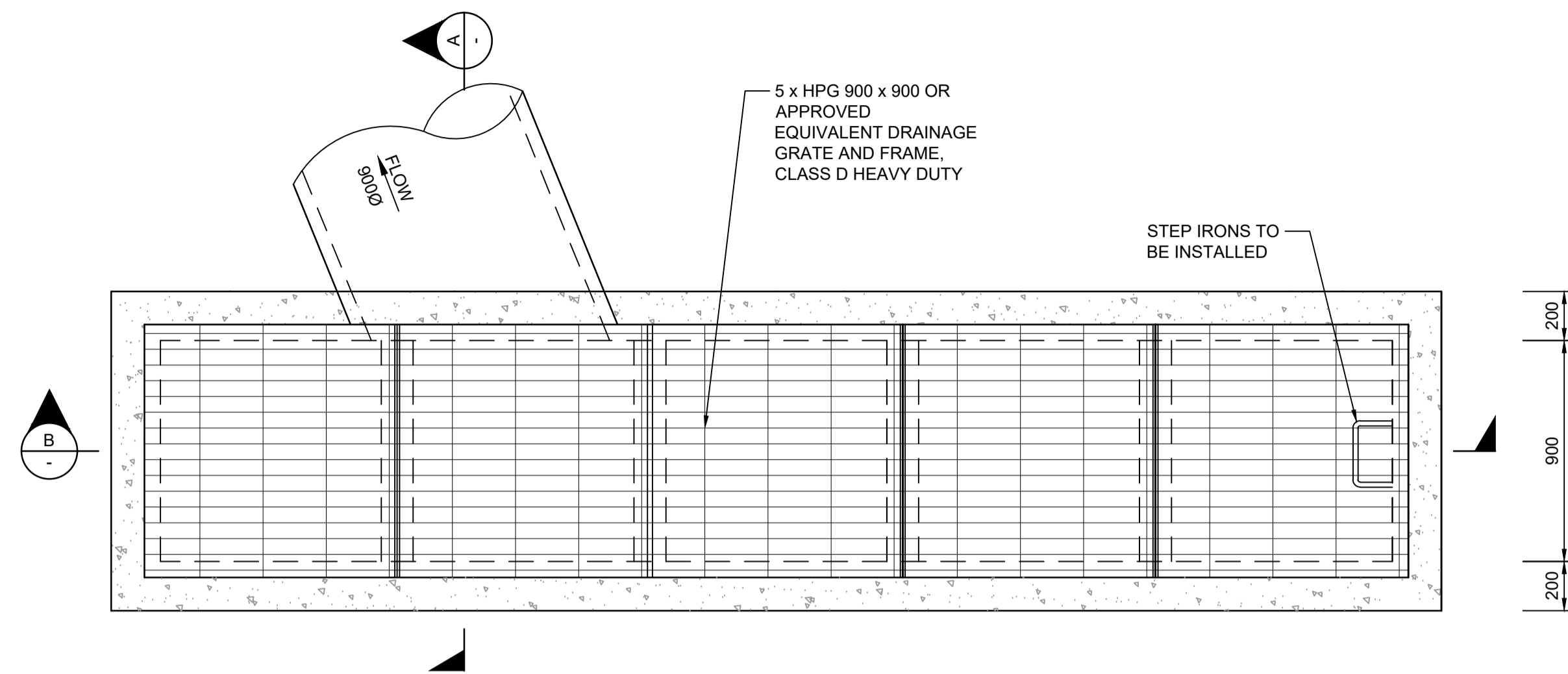
DAM 8 CALCULATIONS

CATCHMENT AREA = 7.3ha
 $Q_0 = 0.99\text{m}^3/\text{s}$
 $Q_2 = 1.37\text{m}^3/\text{s}$
 $Q_5 = 2.011\text{m}^3/\text{s}$
 $Q_{100} = 4.608\text{m}^3/\text{s}$

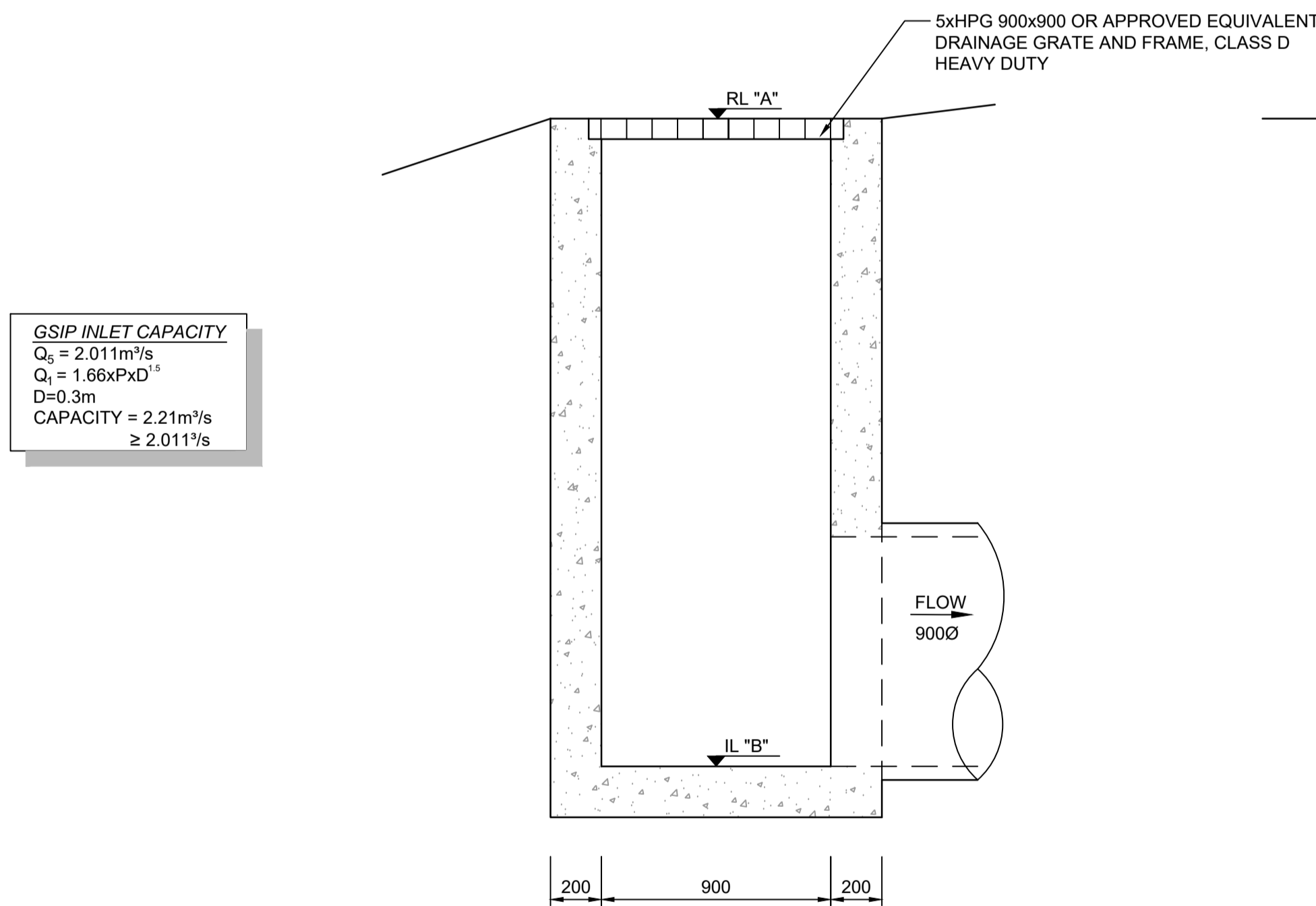
DAM 8 SPILLWAY CALCULATIONS

$Q_{100} - Q_5 = 2.597\text{m}^3/\text{s}$
 MANNINGS "n" GRASS = 0.035
 SPILLWAY LENGTH "L" = 32m
 DEPTH OF WATER "d" = 0.09m
 EMBANKMENT SLOPE 1:5 (20%)
 VELOCITY "v" = 0.5m/s

EMBANKMENT TO BE PROTECTED WITH REINFORCED TURF

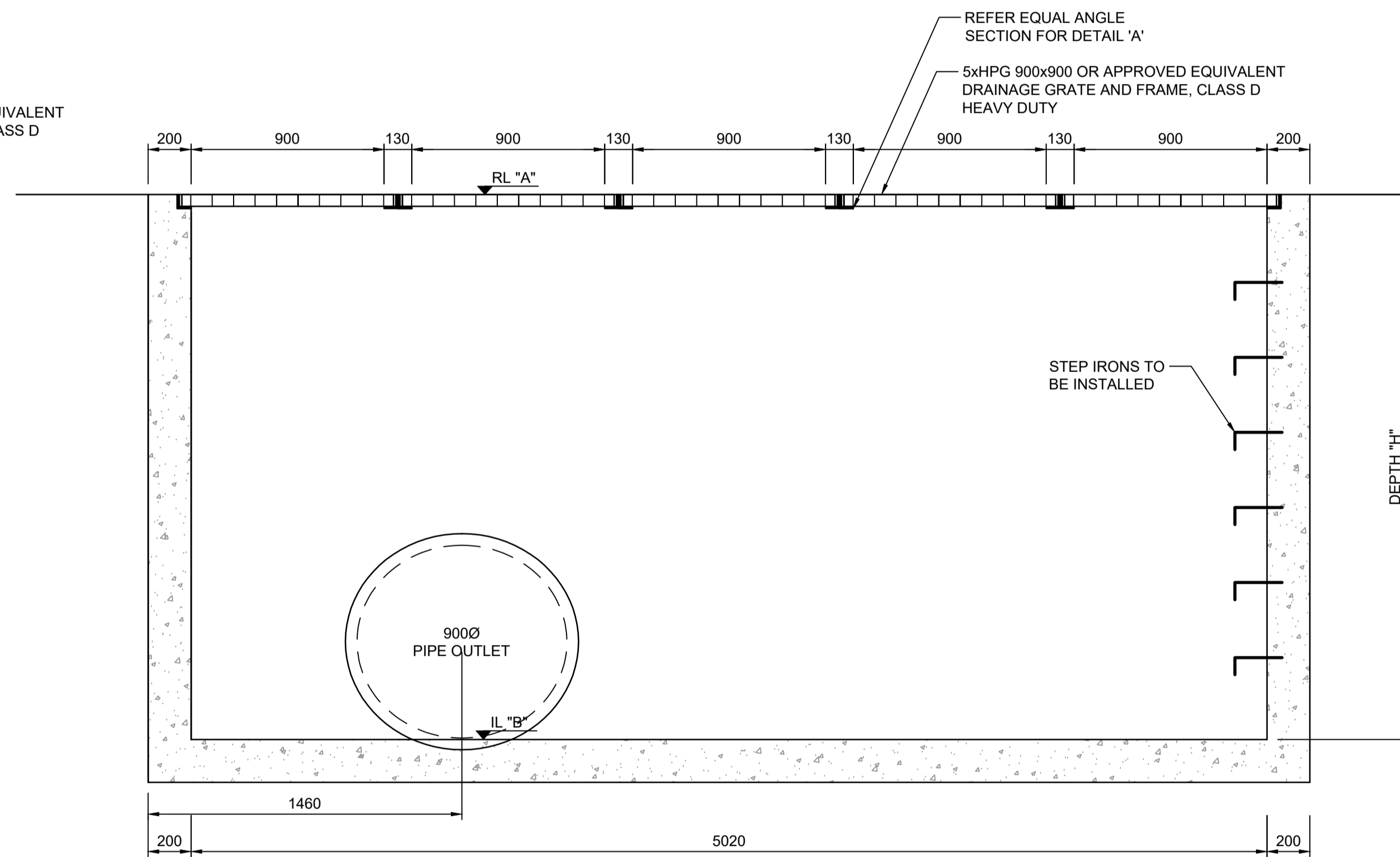


TYPICAL DAM OUTLET PIT DETAIL
 PLAN
 SCALE 1:20



GSP INLET CAPACITY
 $Q_5 = 2.011\text{m}^3/\text{s}$
 $Q_1 = 1.66\text{m}^3/\text{s}$
 D=0.3m
 CAPACITY = 2.21m³/s
 ≥ 2.011m³/s

SECTION A
 SCALE 1:20

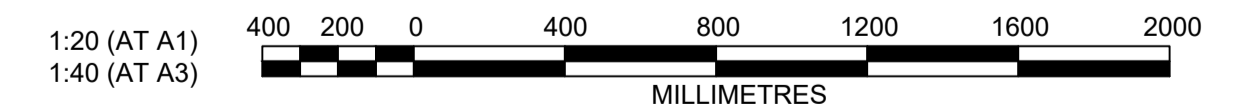


SECTION B
 SCALE 1:20

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NO.	DESCRIPTION	DATE
A	SHEET ADDED	21/07/21
	AMENDMENT	

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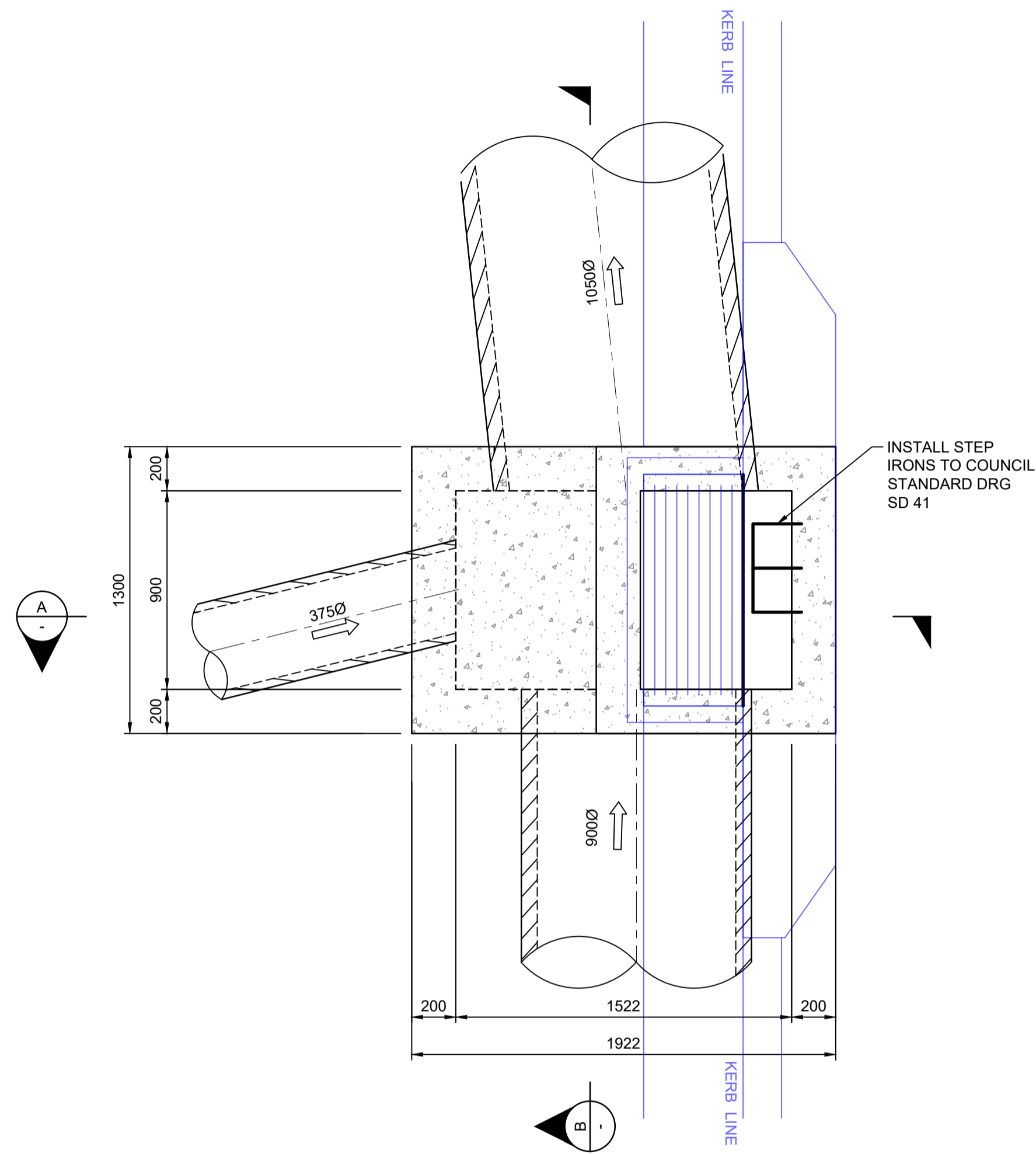
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 10/1 DETAILS

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1402A

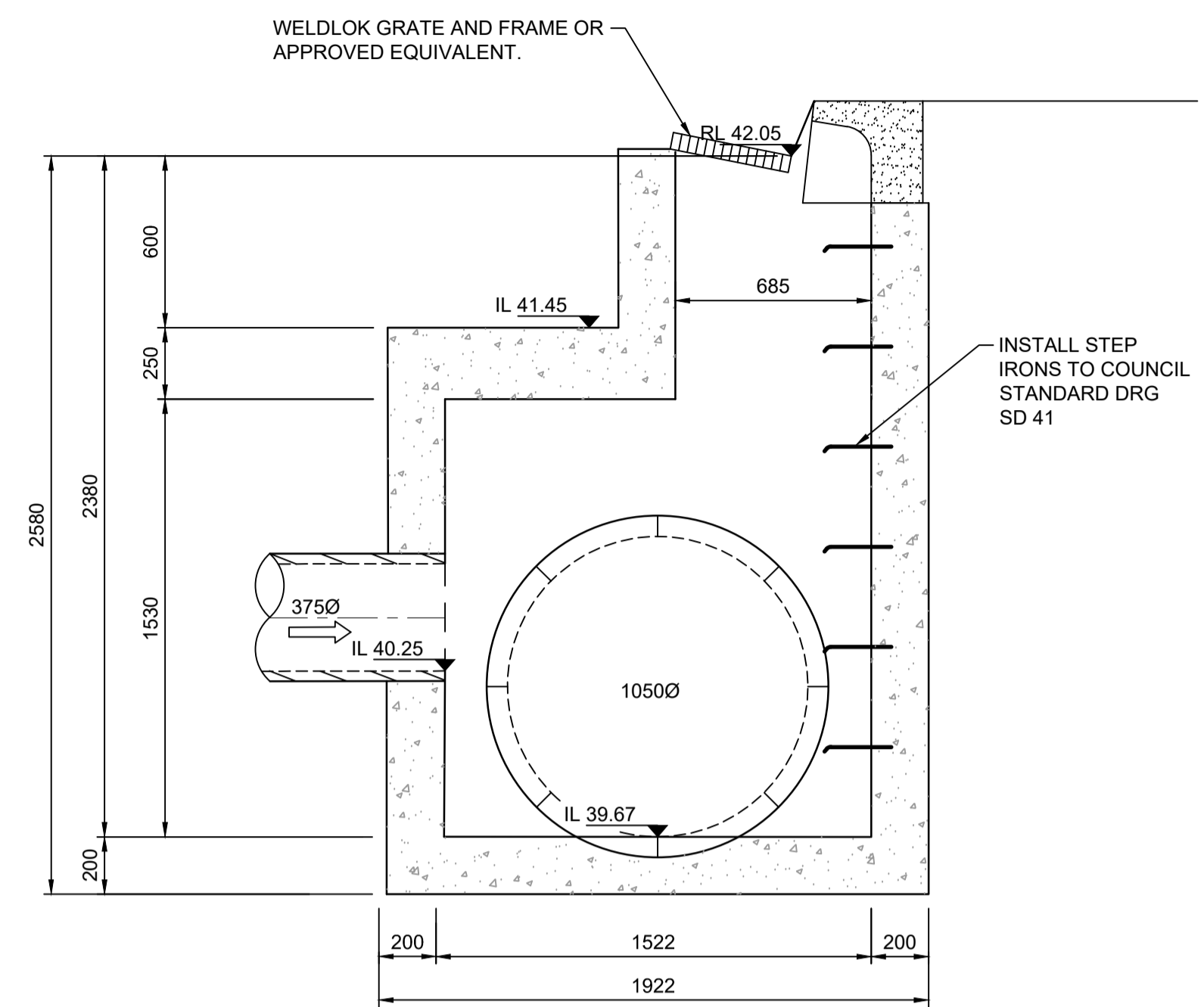
PROJECT No: 110185-12
 SHEET No: CC1402A

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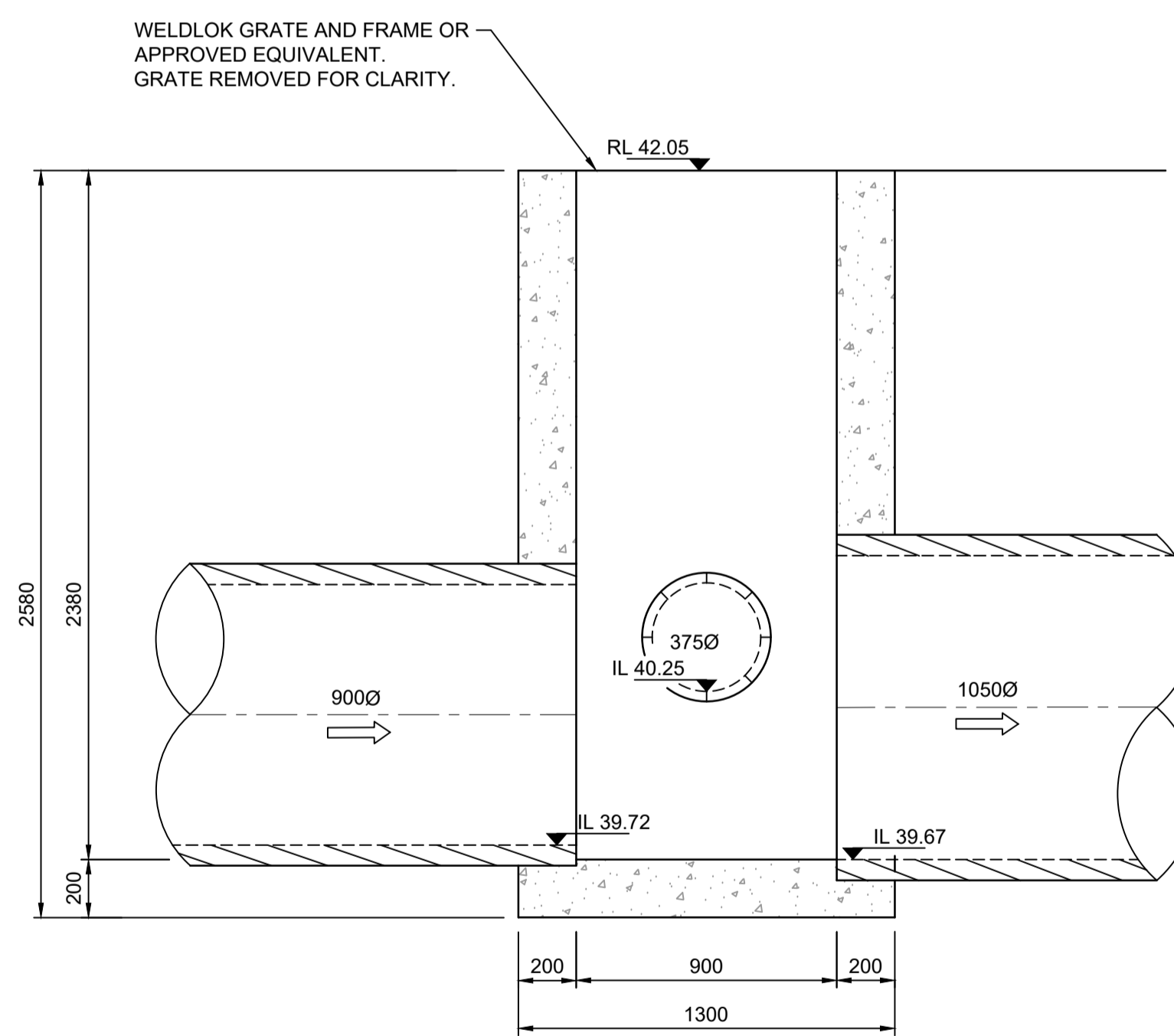


STRUCTURE 10/7
PLAN
 SCALE 1:20

**DETAILS SHOWN SUBJECT TO
 STRUCTURAL CERTIFICATION**



SECTION A
 SCALE 1:20

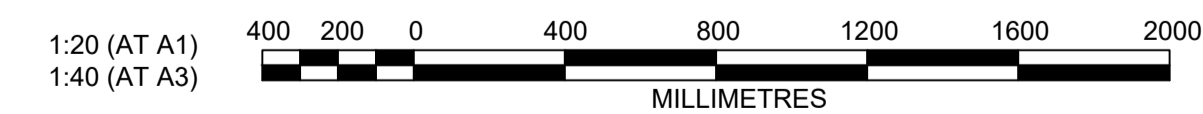


SECTION B
 SCALE 1:20

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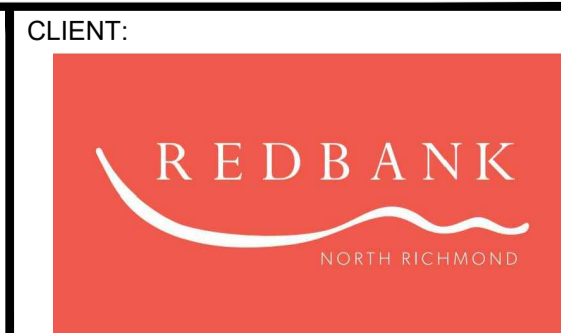
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A	MP	VS	RO	MS	13/01/21

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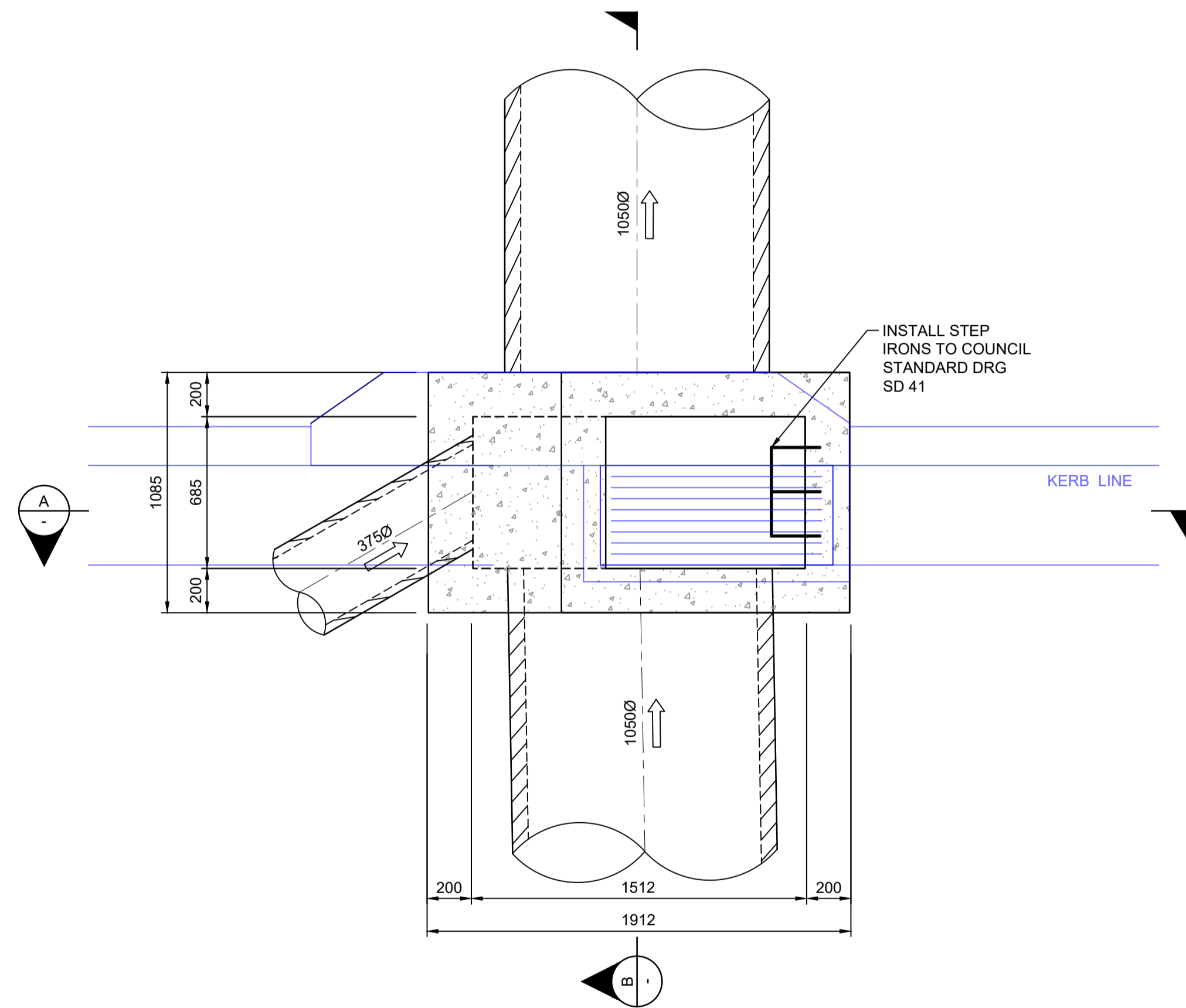
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 10/7 DETAILS

PROJECT No:
110185-12
 SHEET No:
CC1402

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1402

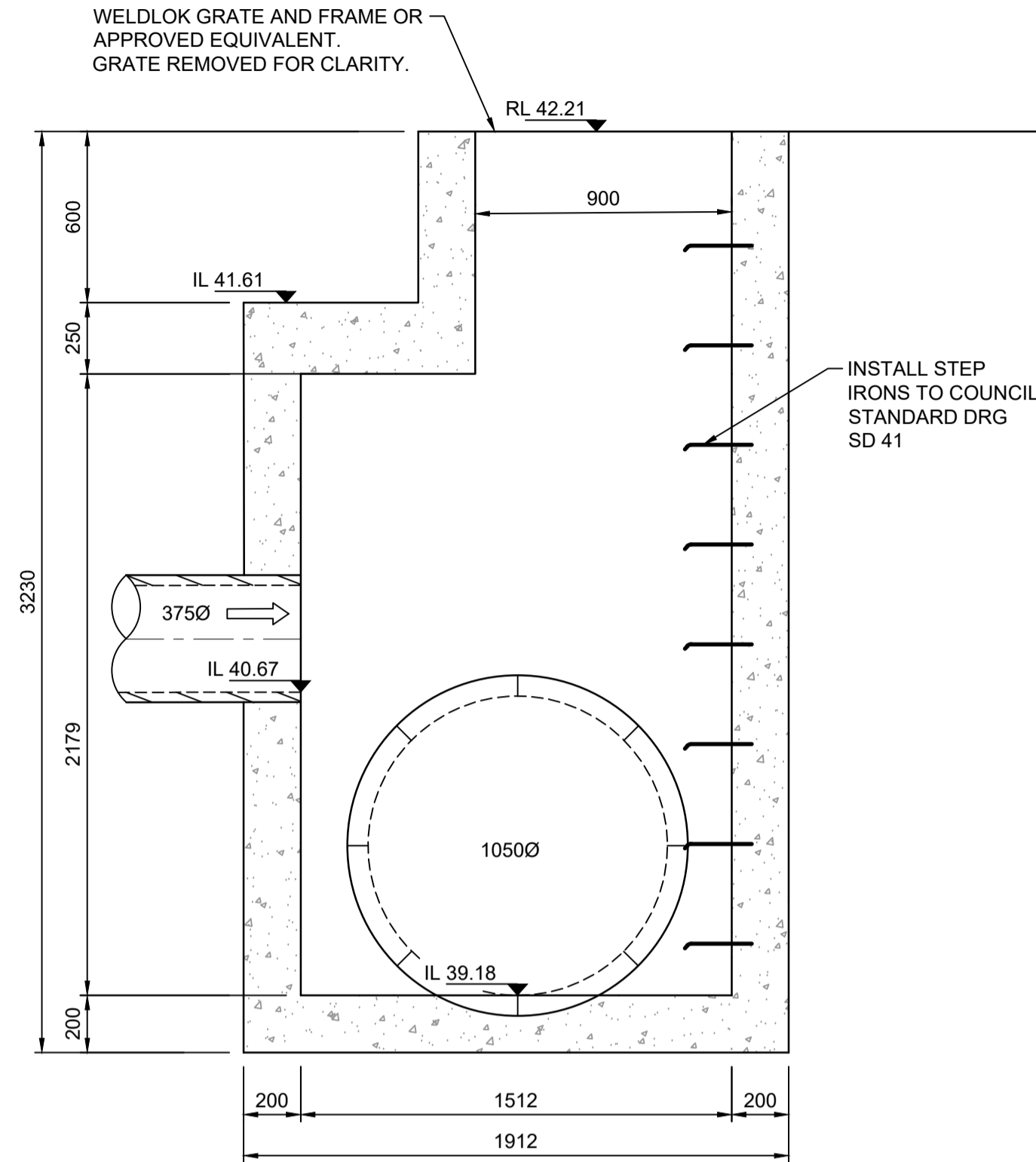
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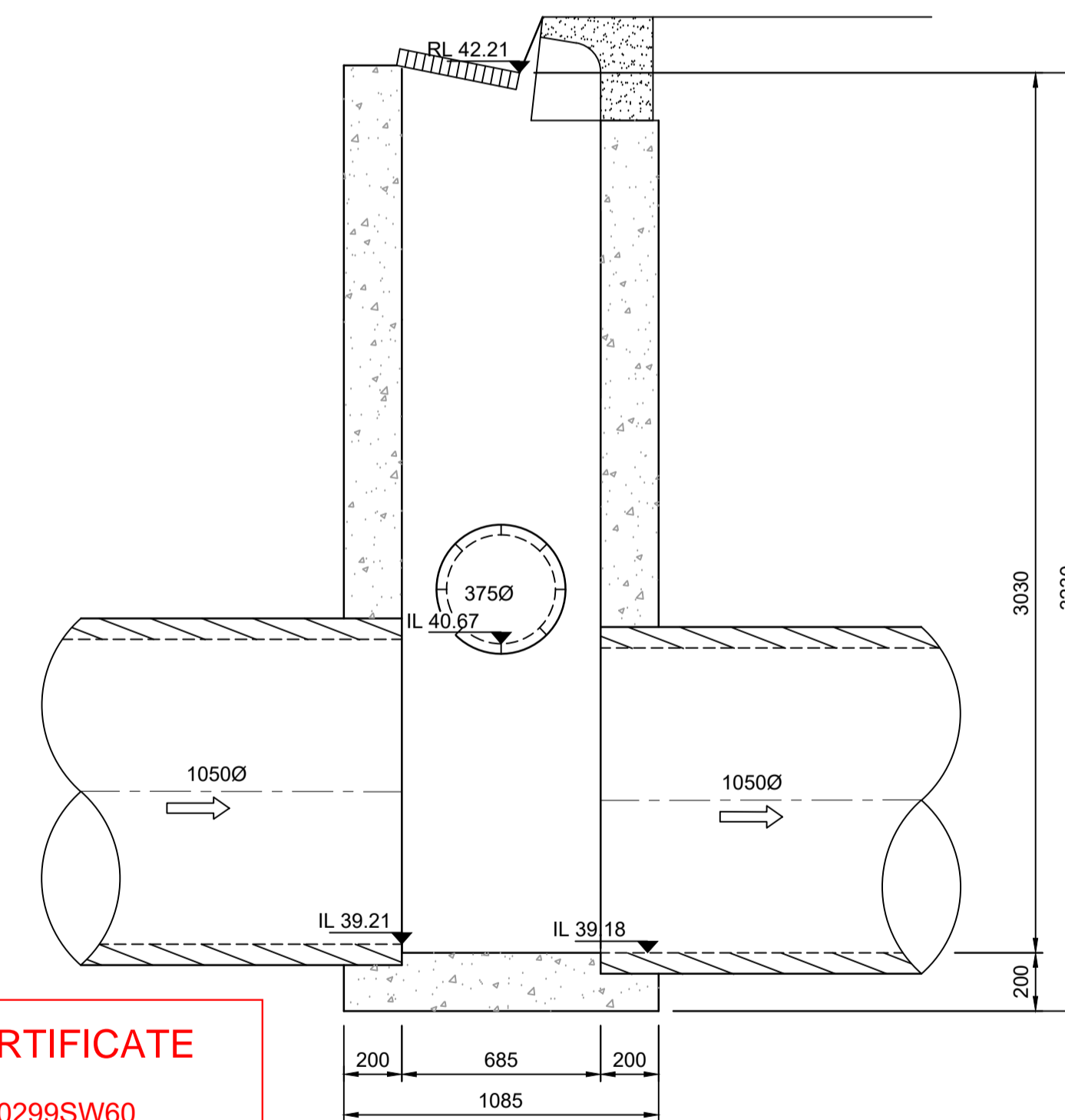


STRUCTURE 10/8
PLAN
SCALE 1:20

DETAILS SHOWN SUBJECT TO
STRUCTURAL CERTIFICATION



SECTION A
SCALE 1:20

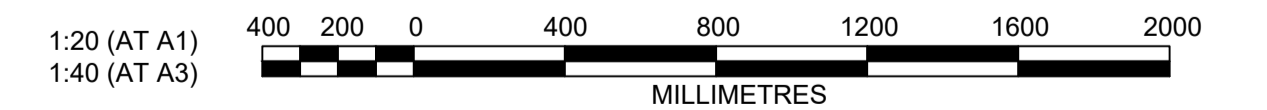


SECTION B
SCALE 1:20

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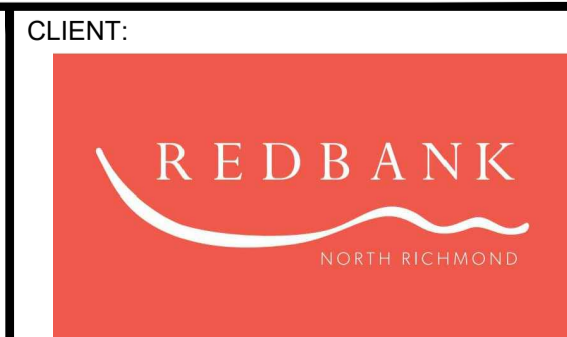
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AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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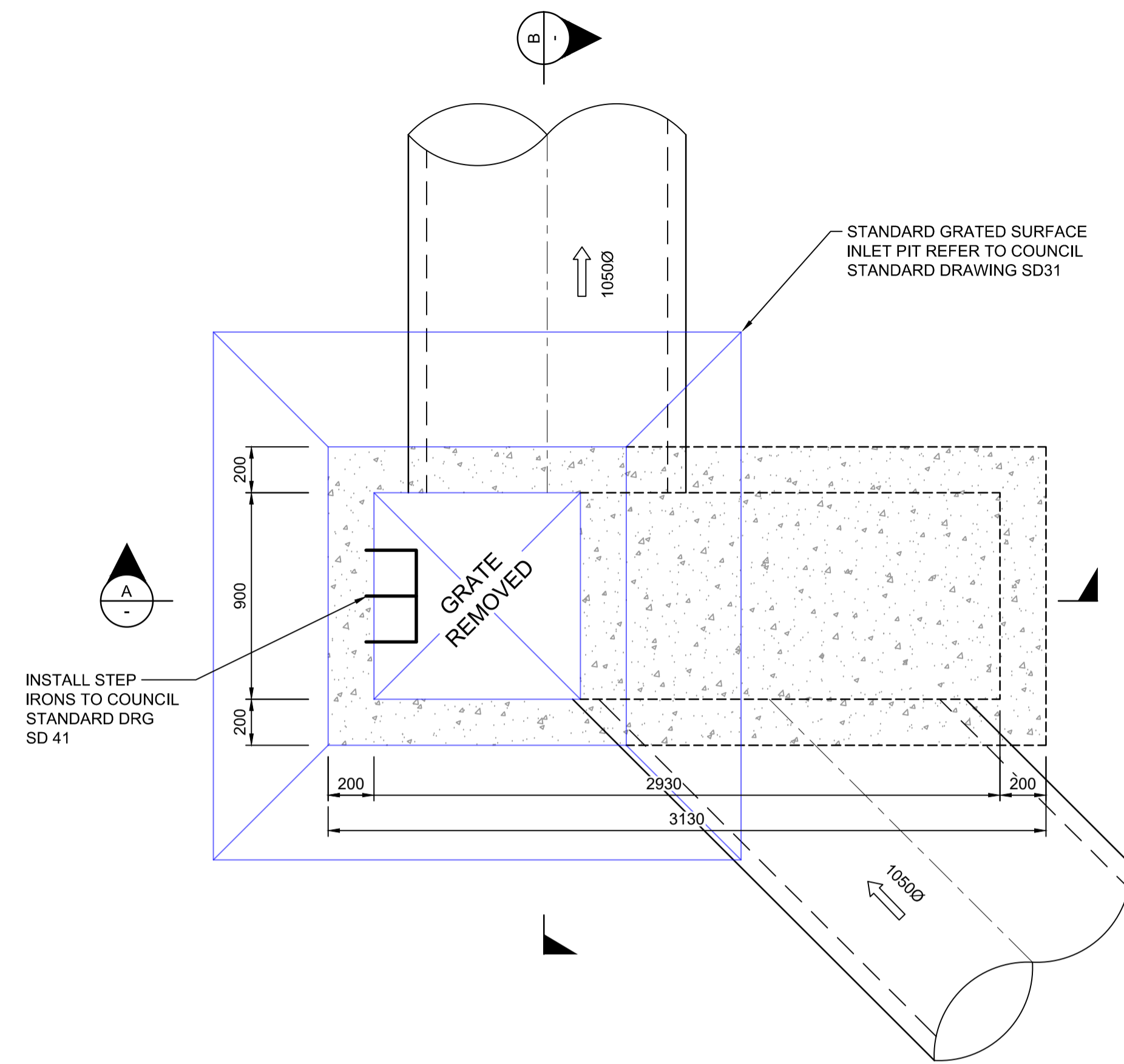
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SPECIAL PIT 10/8 DETAILS

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1403

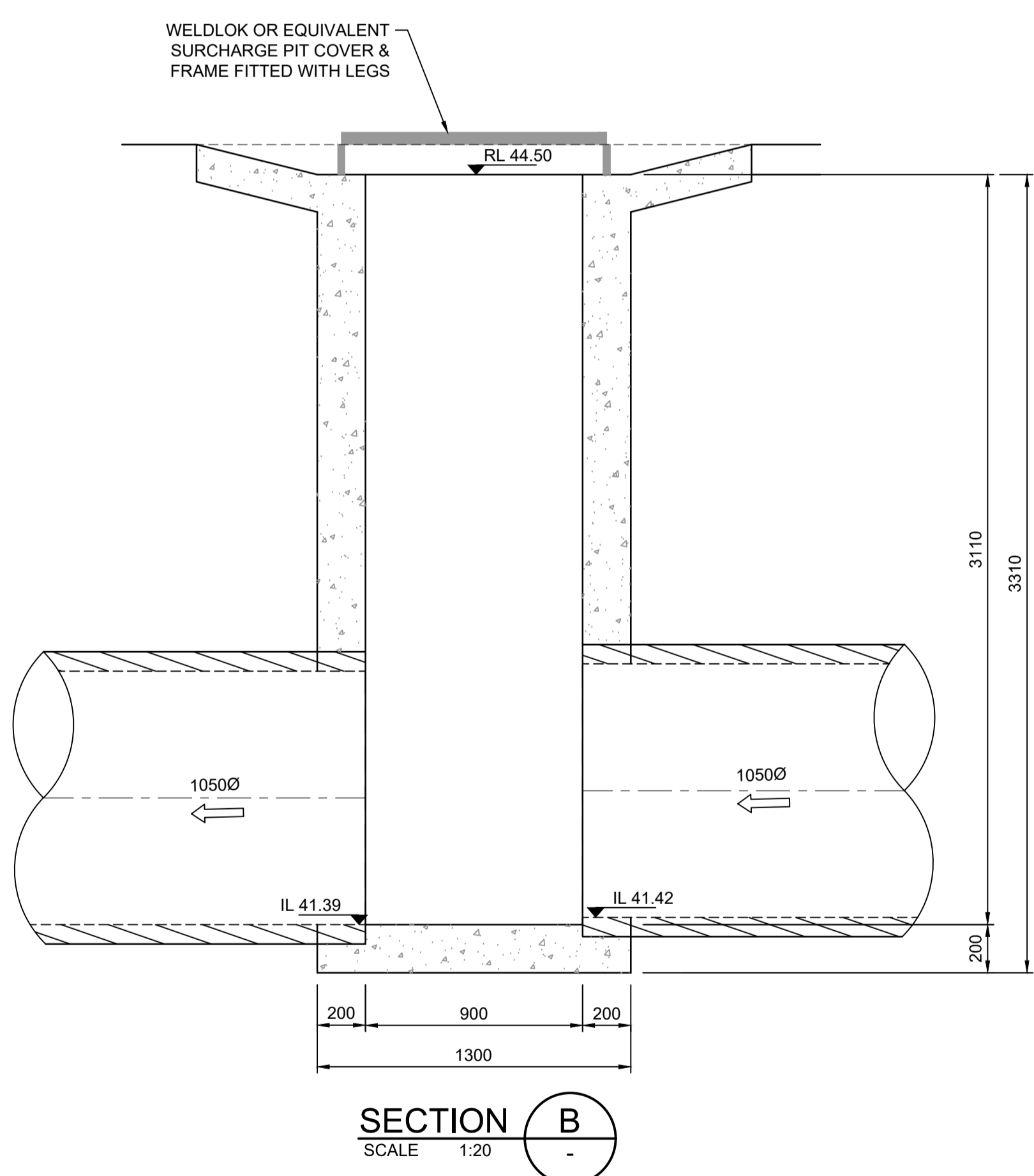
PROJECT No: 110185-12
SHEET No: CC1403

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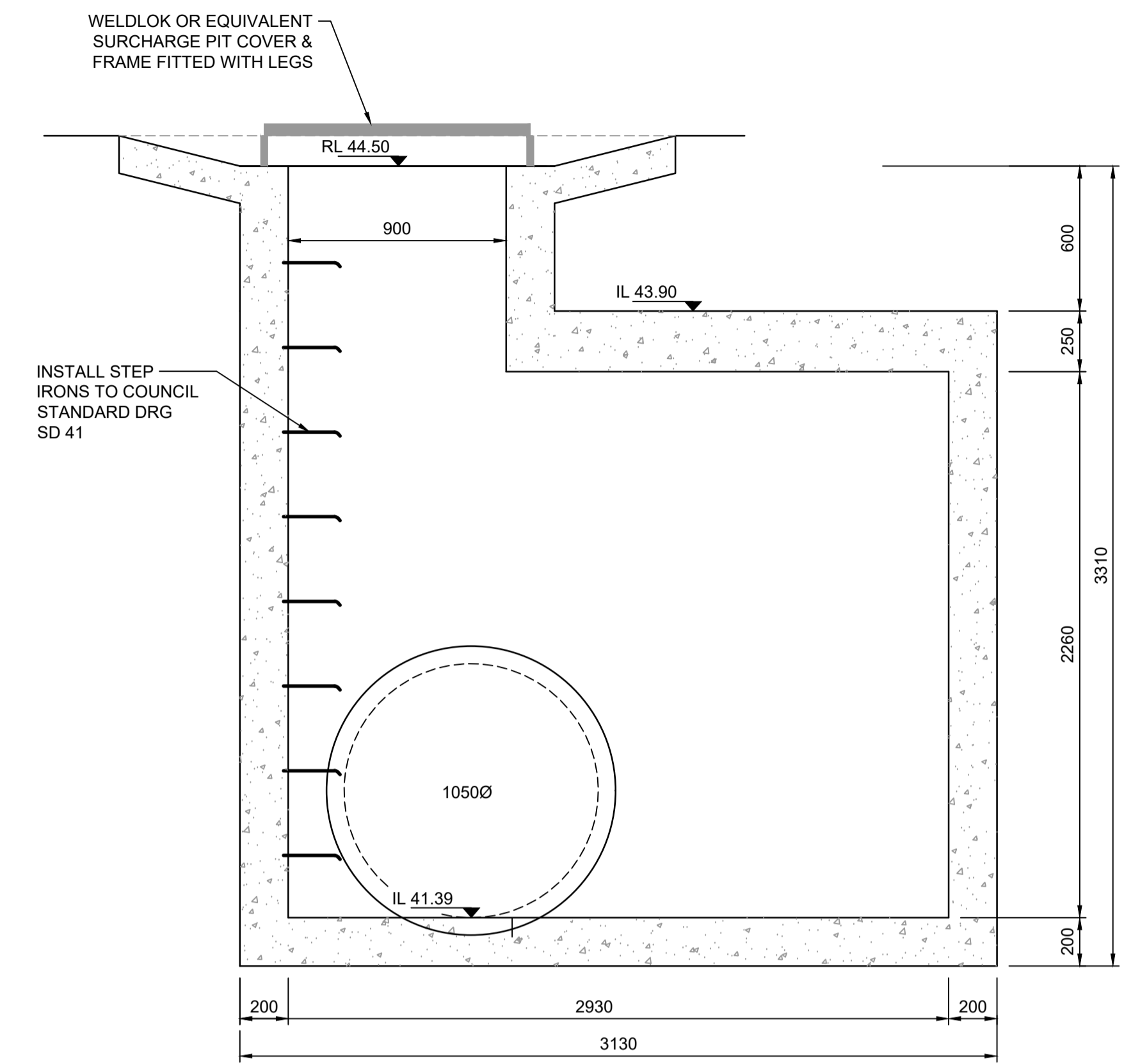


STRUCTURE 14/8
PLAN
 SCALE 1:20

**DETAILS SHOWN SUBJECT TO
 STRUCTURAL CERTIFICATION**



SECTION B
 SCALE 1:20

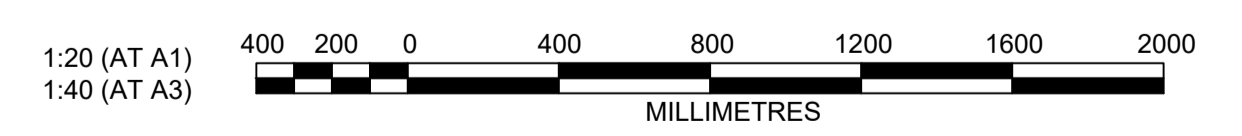


SECTION A
 SCALE 1:20

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 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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AMENDMENT	DES	DRN	CKD	APR	DATE
B					21/07/21
A					13/01/21

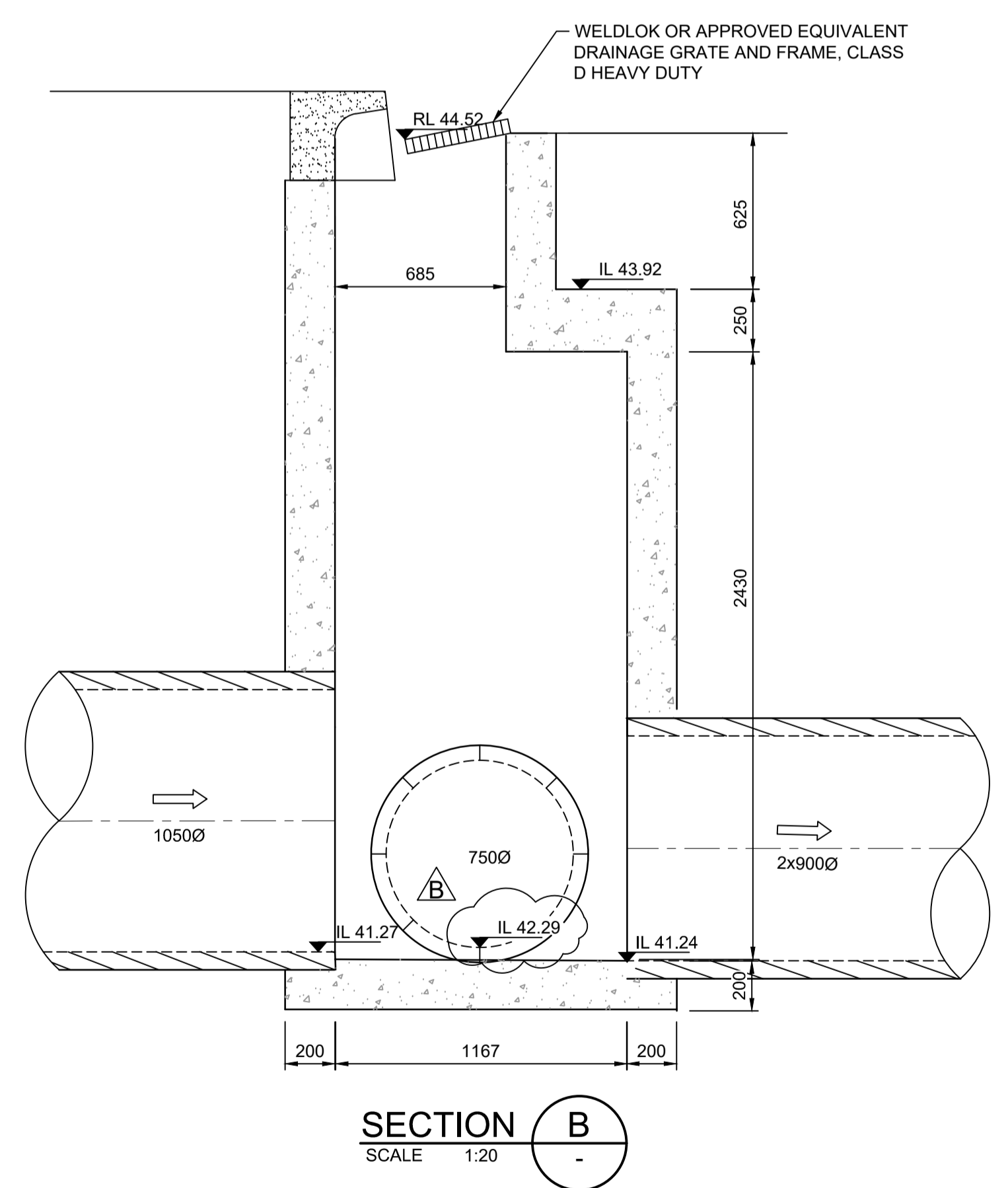
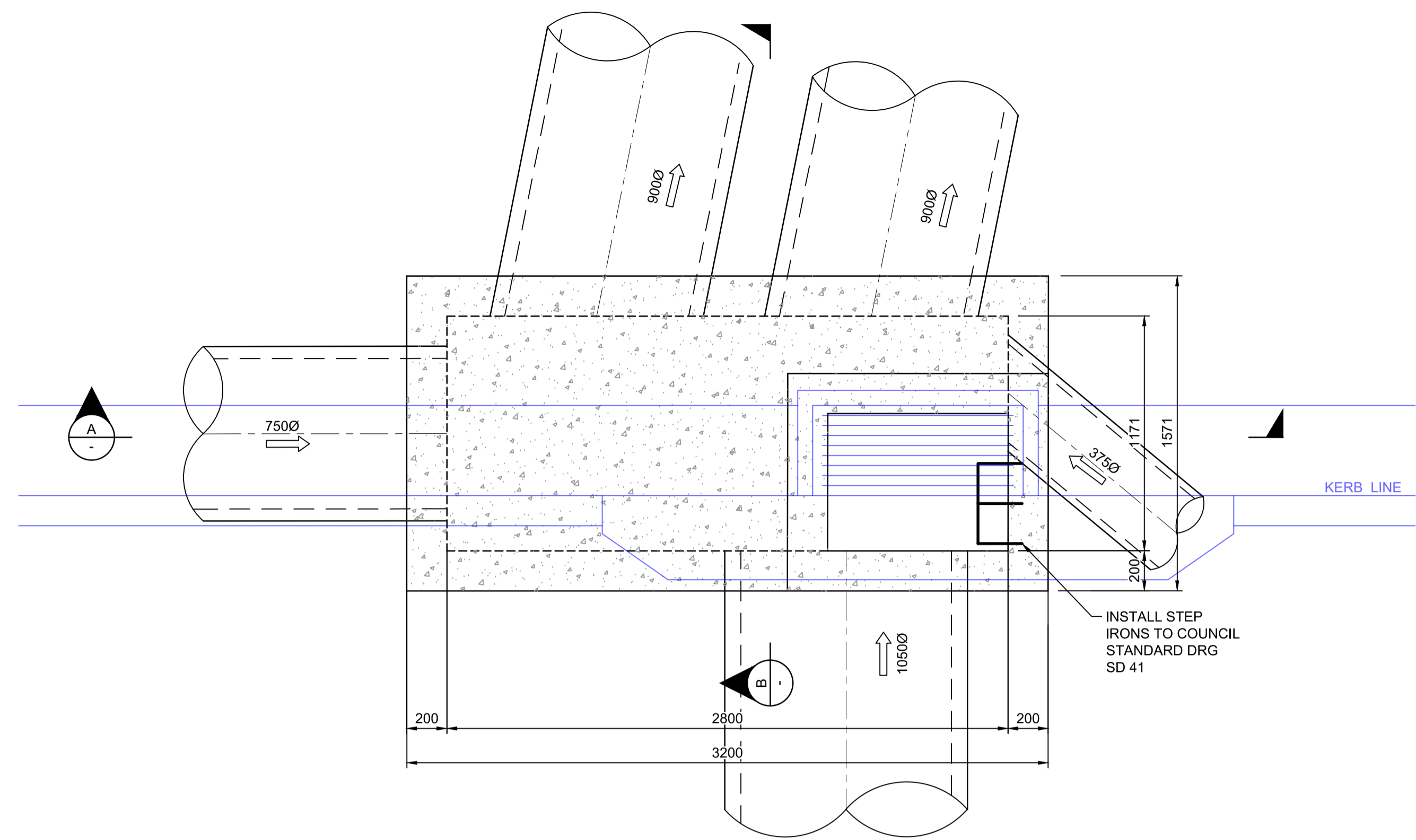
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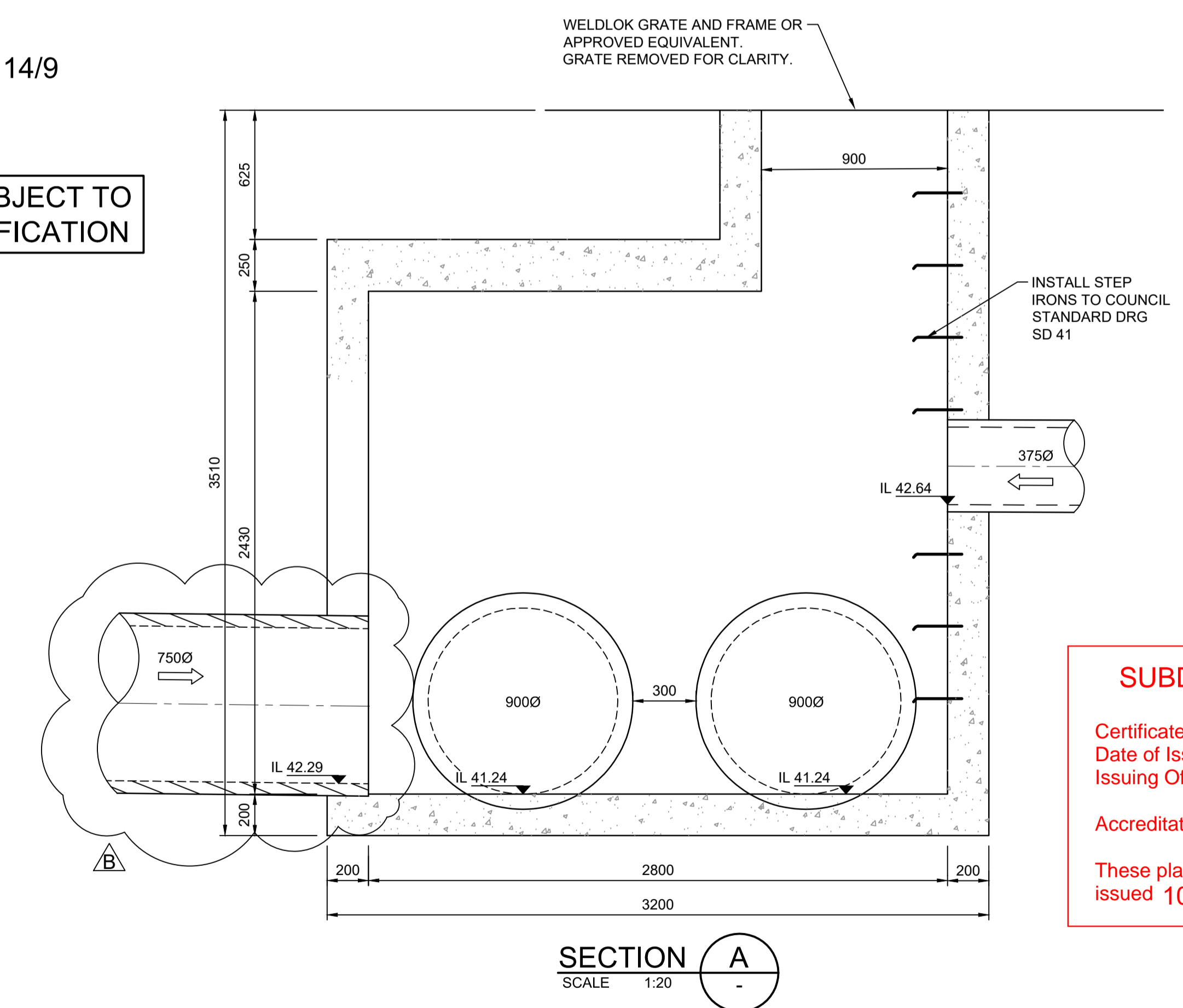
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 14/8 DETAILS
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1404

PROJECT No: **110185-12**
 SHEET No: **CC1404**
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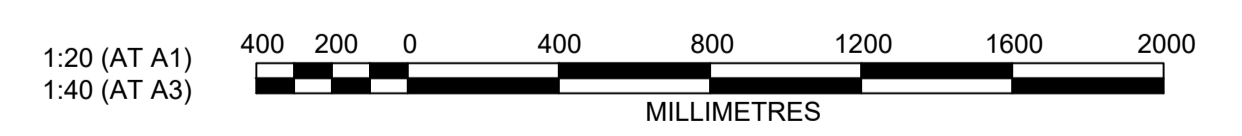
STRUCTURE 14/9
PLAN
SCALE 1:20

DETAILS SHOWN SUBJECT TO
STRUCTURAL CERTIFICATION



SECTION A
SCALE 1:20

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AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	JET	JET	MP	RO	26/05/21
A	MP	VS	RO	MS	13/01/21

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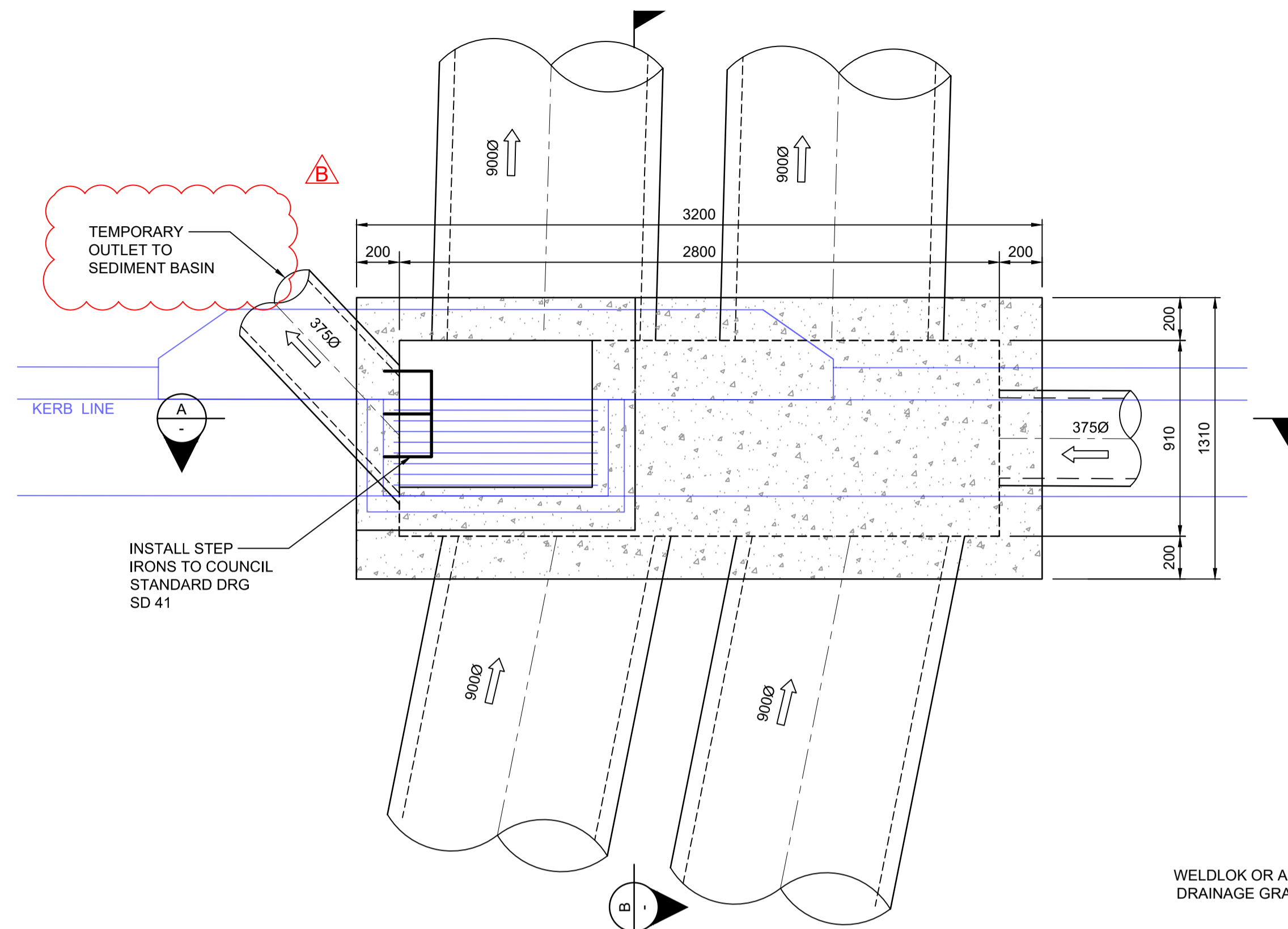
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 14/9 DETAILS

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1405

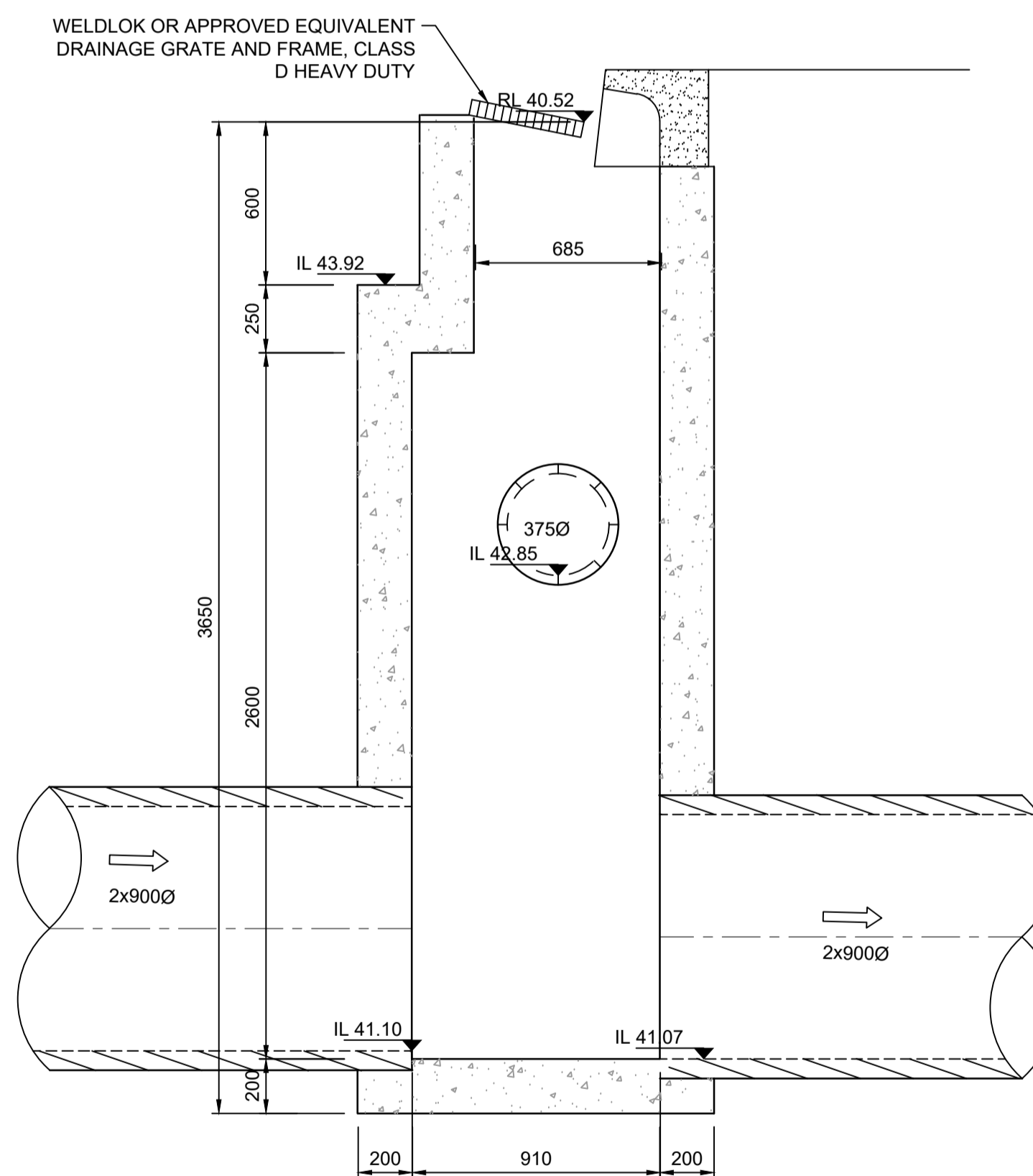
PROJECT No: **110185-12**
 SHEET No: **CC1405**

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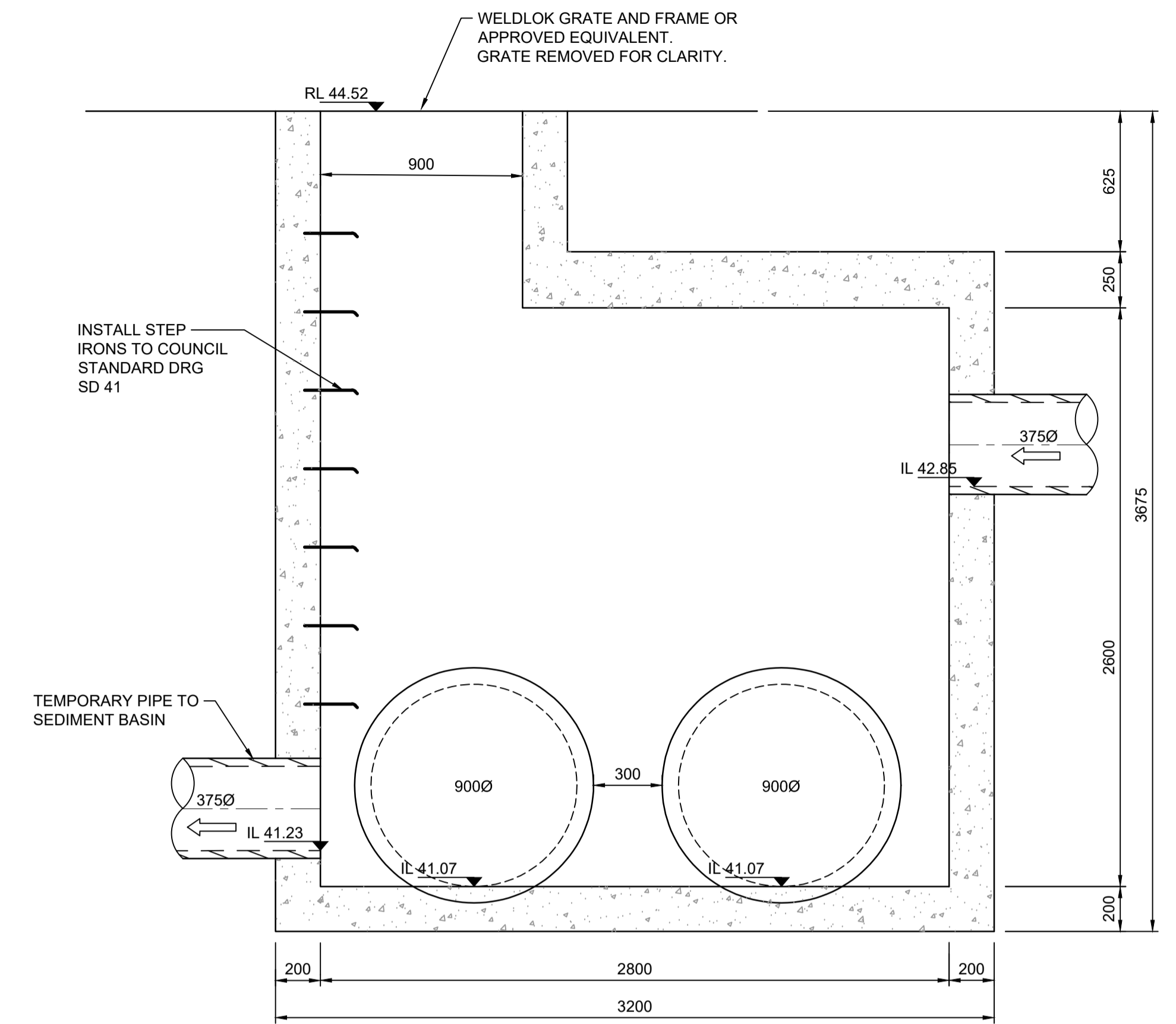


STRUCTURE 14/10
PLAN
 SCALE 1:20

DETAILS SHOWN SUBJECT TO
 STRUCTURAL CERTIFICATION



SECTION B
 SCALE 1:20

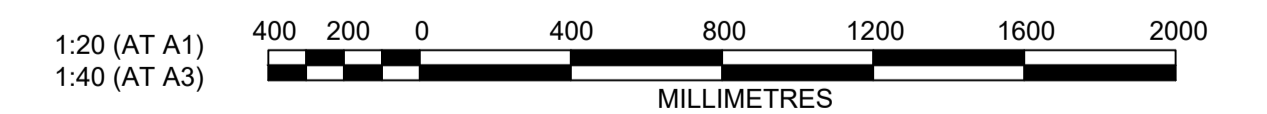


SECTION A
 SCALE 1:20

SUBDIVISION WORKS CERTIFICATE

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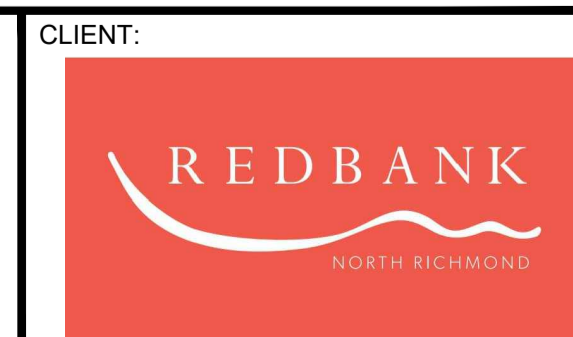
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AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	VS	RO	MS	21/07/21
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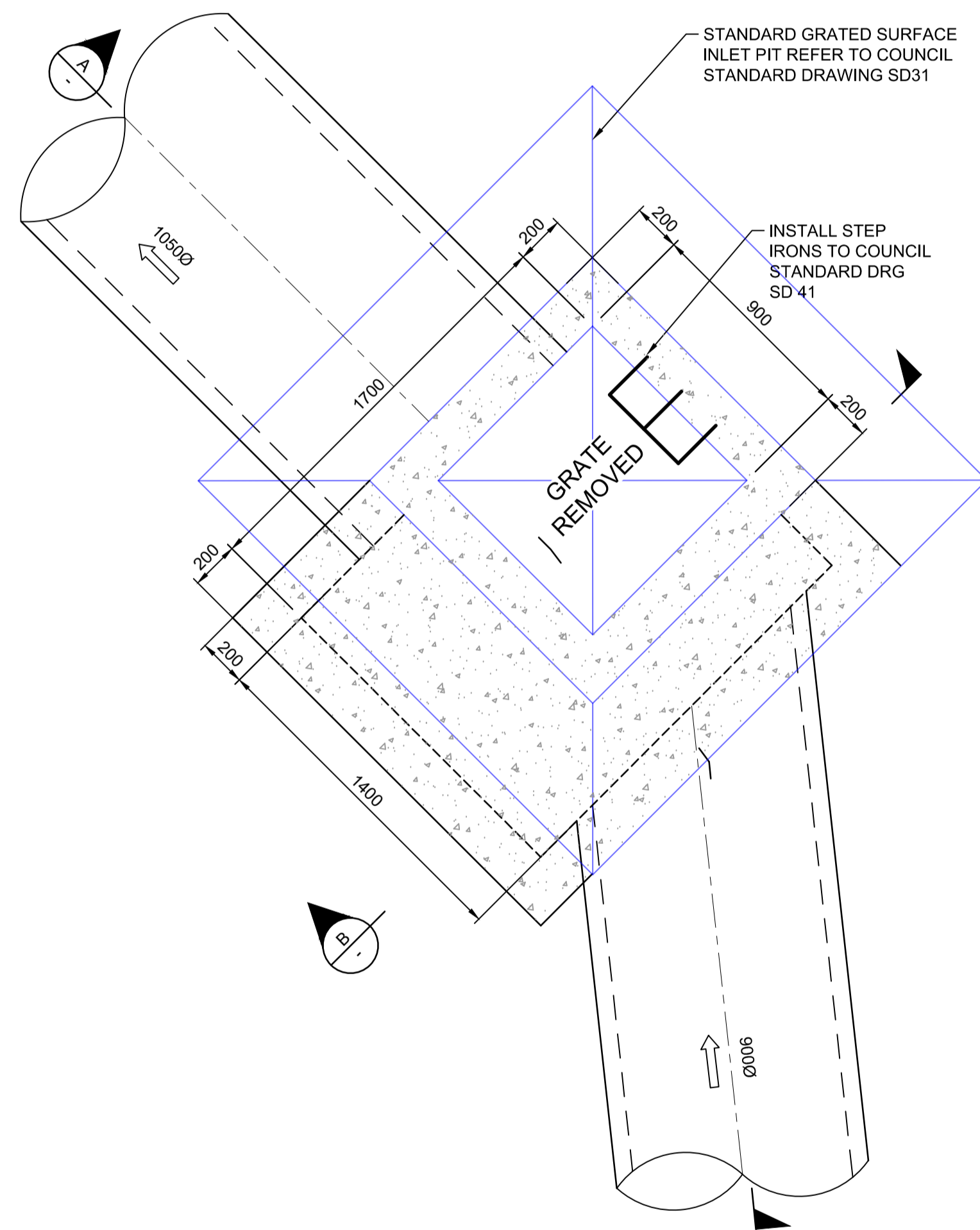
**REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 14/10 DETAILS**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1406

PROJECT No: 110185-12
 SHEET No: CC1406

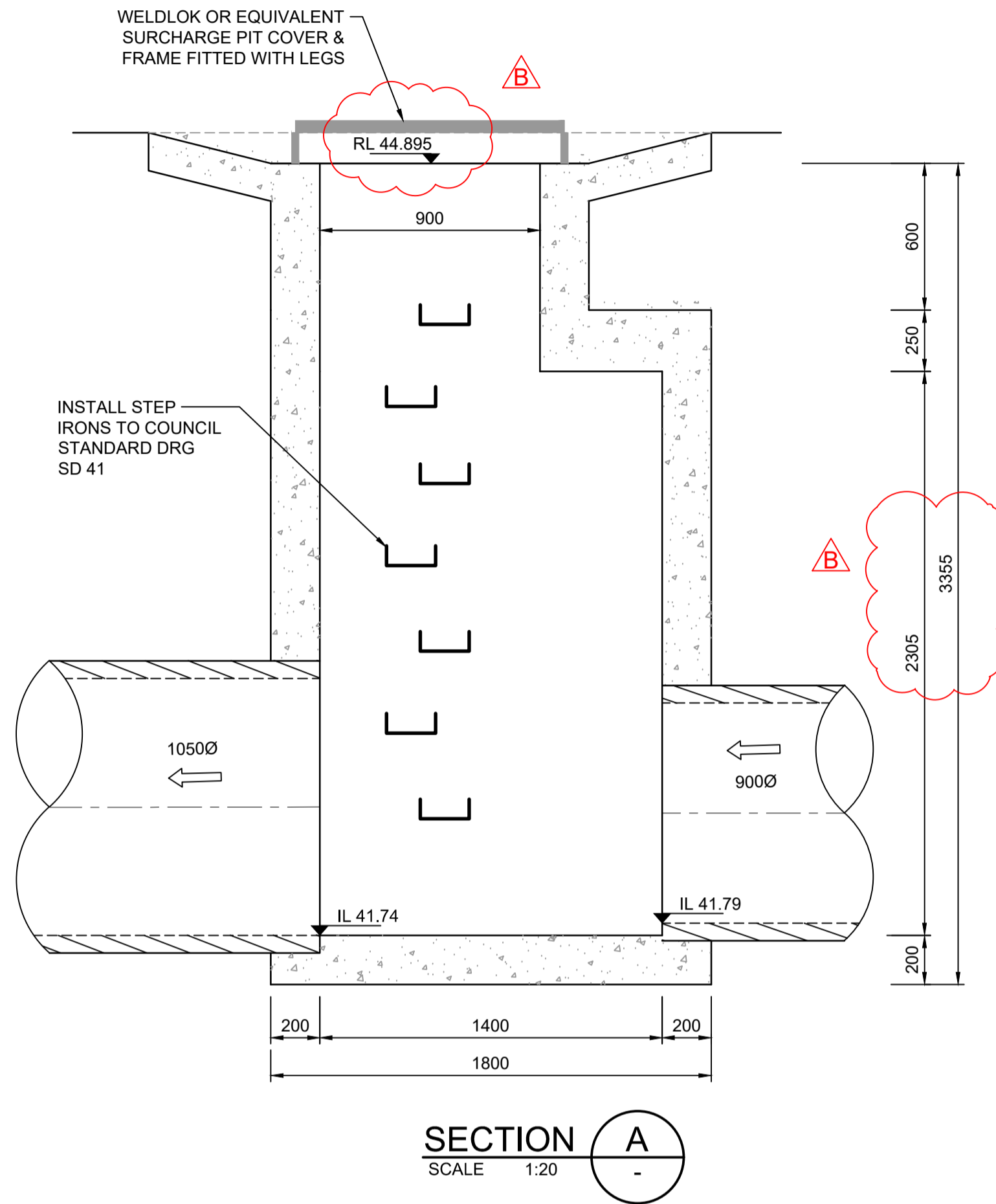
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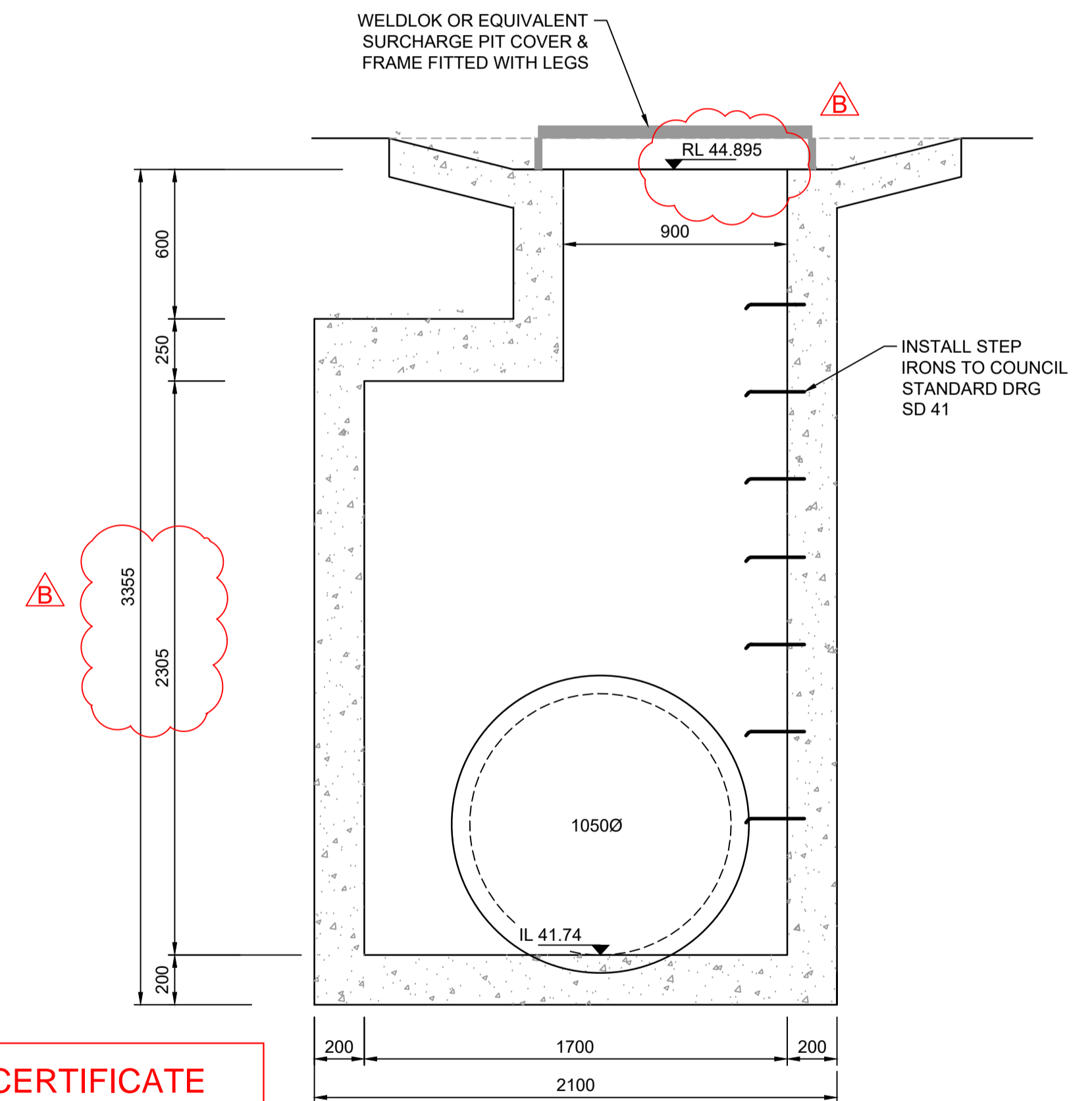


STRUCTURE 14/7
PLAN
 SCALE 1:20

DETAILS SHOWN SUBJECT TO
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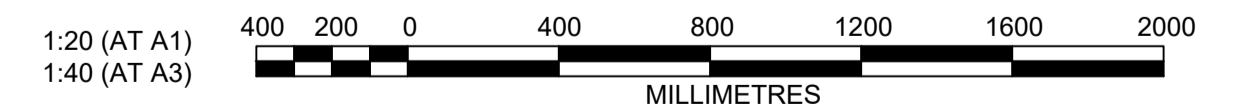


SECTION A
 SCALE 1:20



SECTION B
 SCALE 1:20

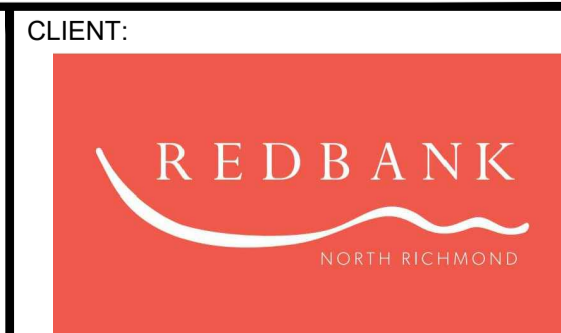
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 Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Resta*
 Accreditation No. BDC3367
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A	MP	VS	RO	MS	13/01/21

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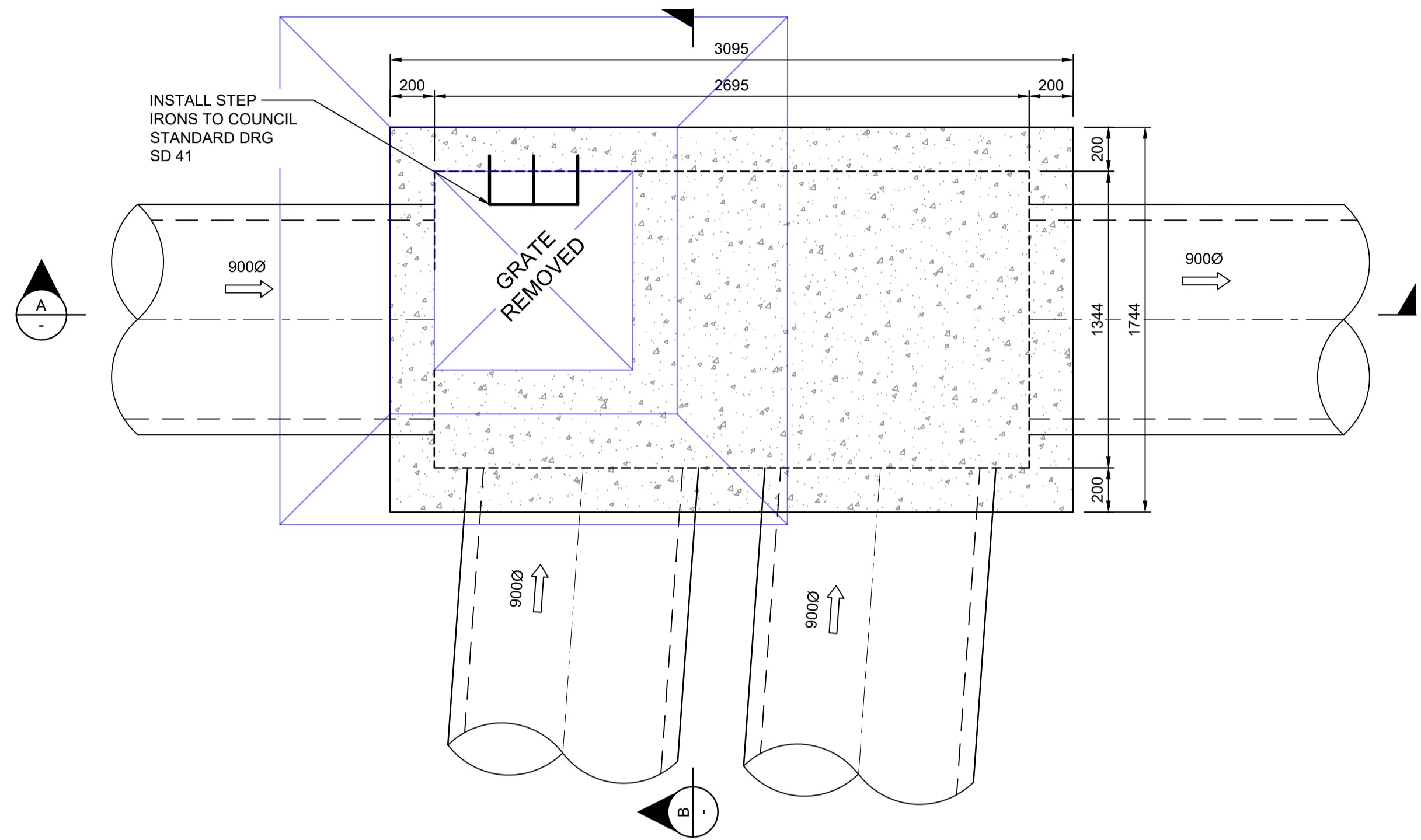
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 14/7 DETAILS

PROJECT No: 110185-12
 SHEET No: CC1407

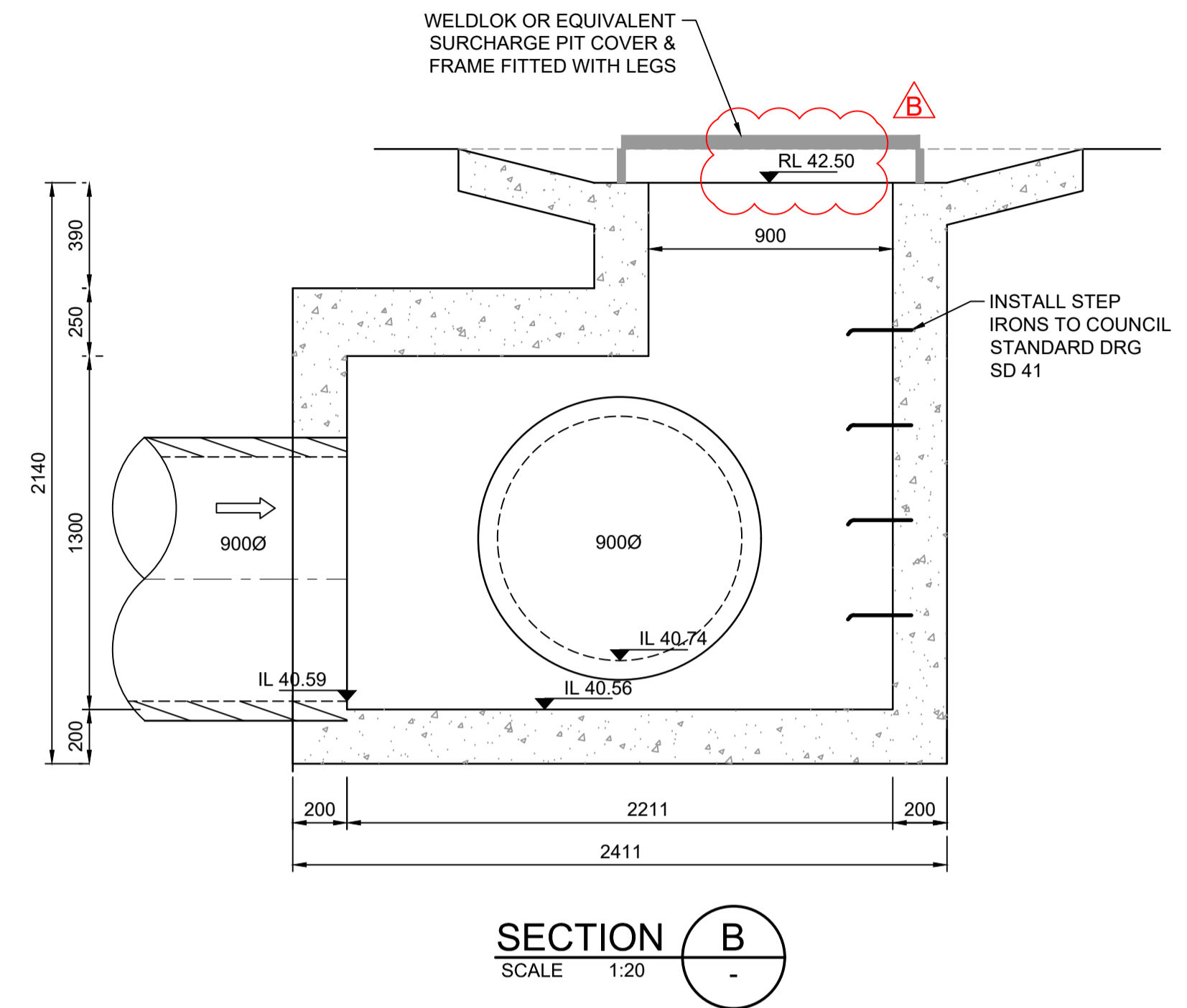
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1407 B

Plotted: 21 July 2021 2:37:45 PM File Name: \\jwp.local\ids\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1408.dwg

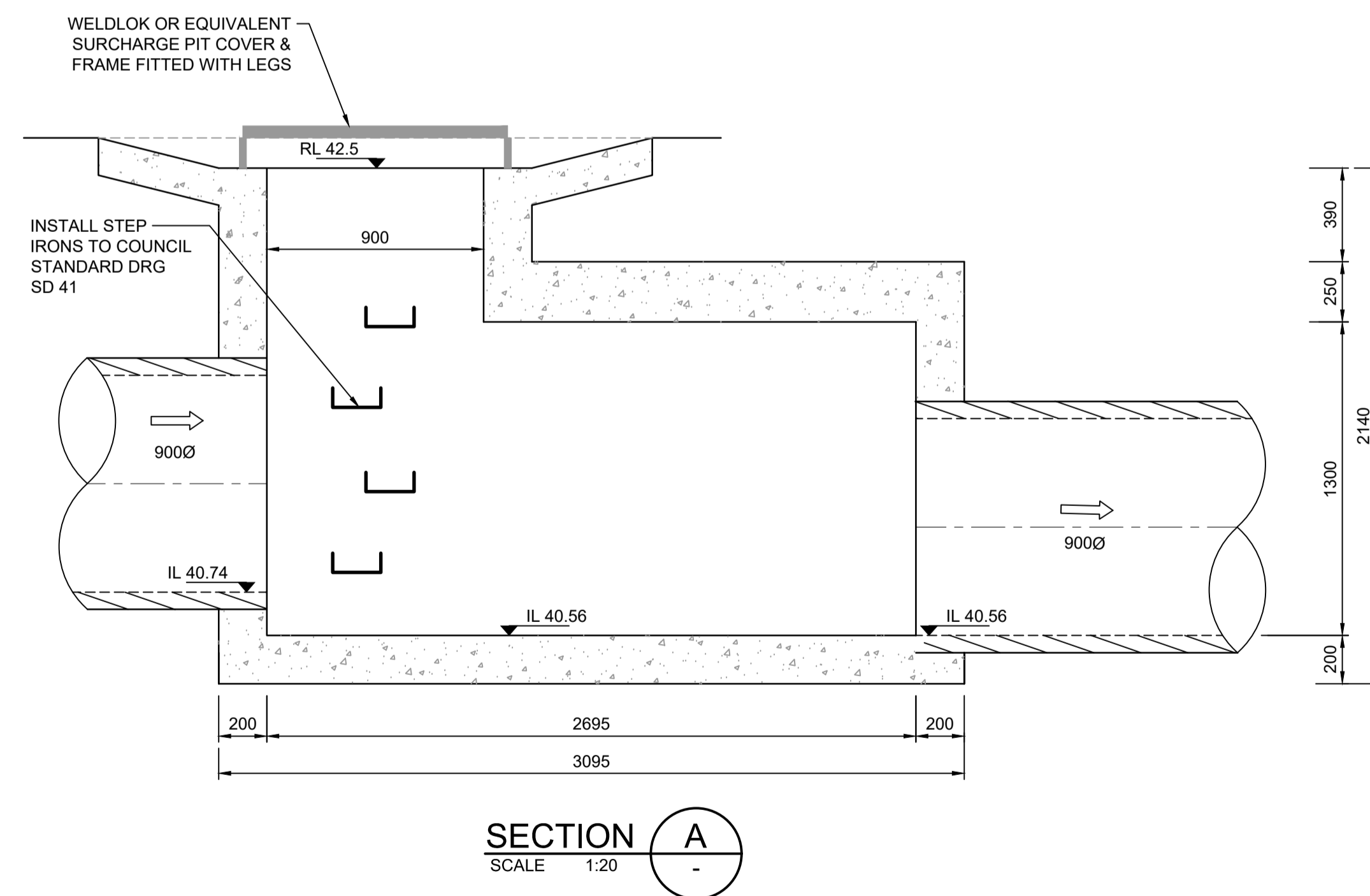


STRUCTURE 14/11
PLAN
 SCALE 1:20

**DETAILS SHOWN SUBJECT TO
 STRUCTURAL CERTIFICATION**

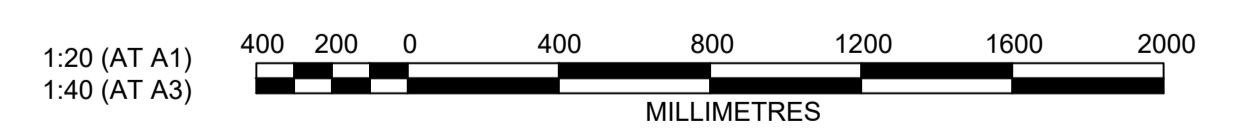


SECTION B
 SCALE 1:20



SECTION A
 SCALE 1:20

SUBDIVISION WORKS CERTIFICATE
 Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367
 These plans/specifications form part of the certificate issued 10th of August 2021



AMENDMENT	DES	DRN	CKD	APR	DATE	
B	LEVEL CHANGED	MP	VS	RO	MS	21/07/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

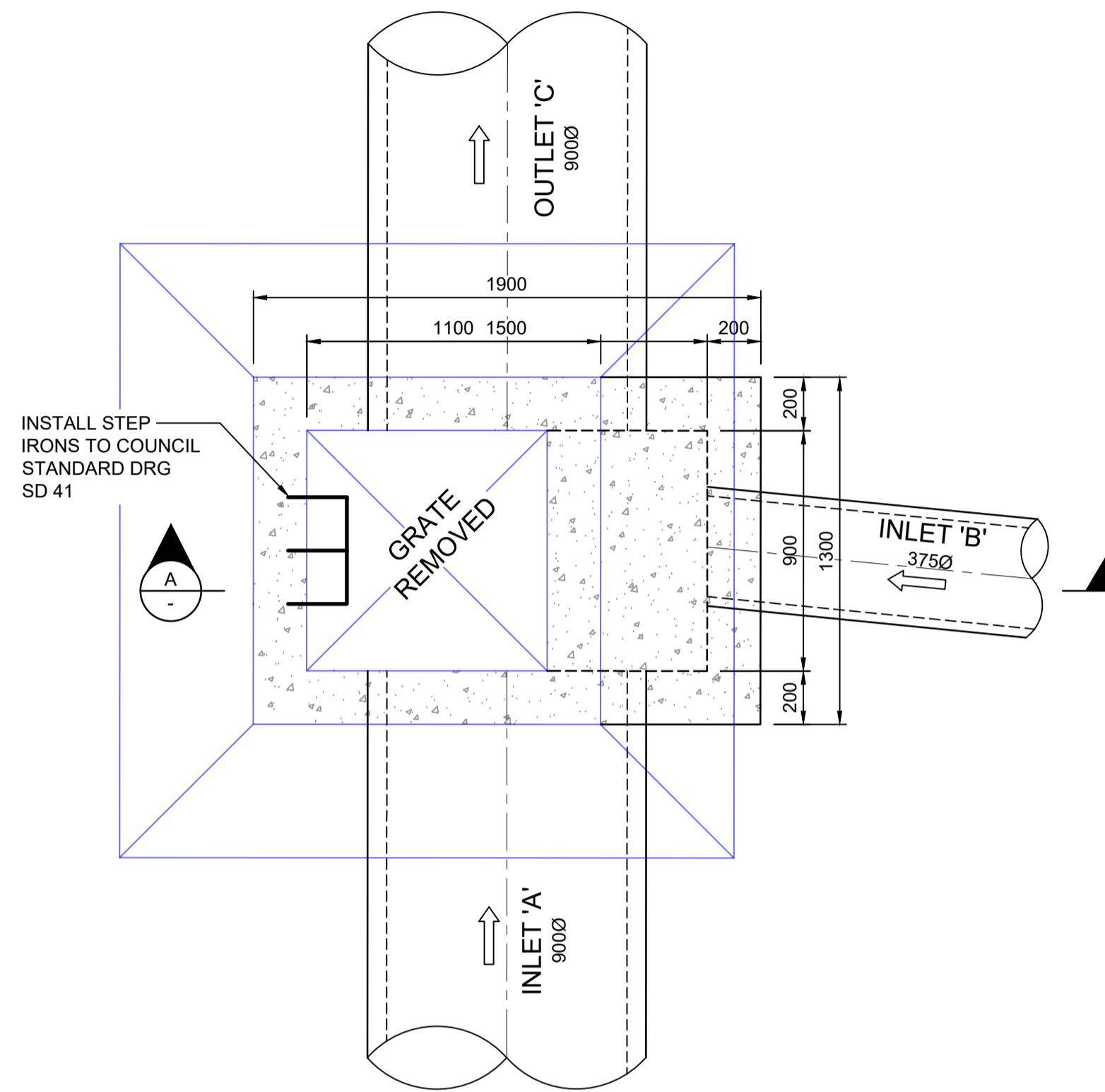
J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
 NORTH RICHMOND

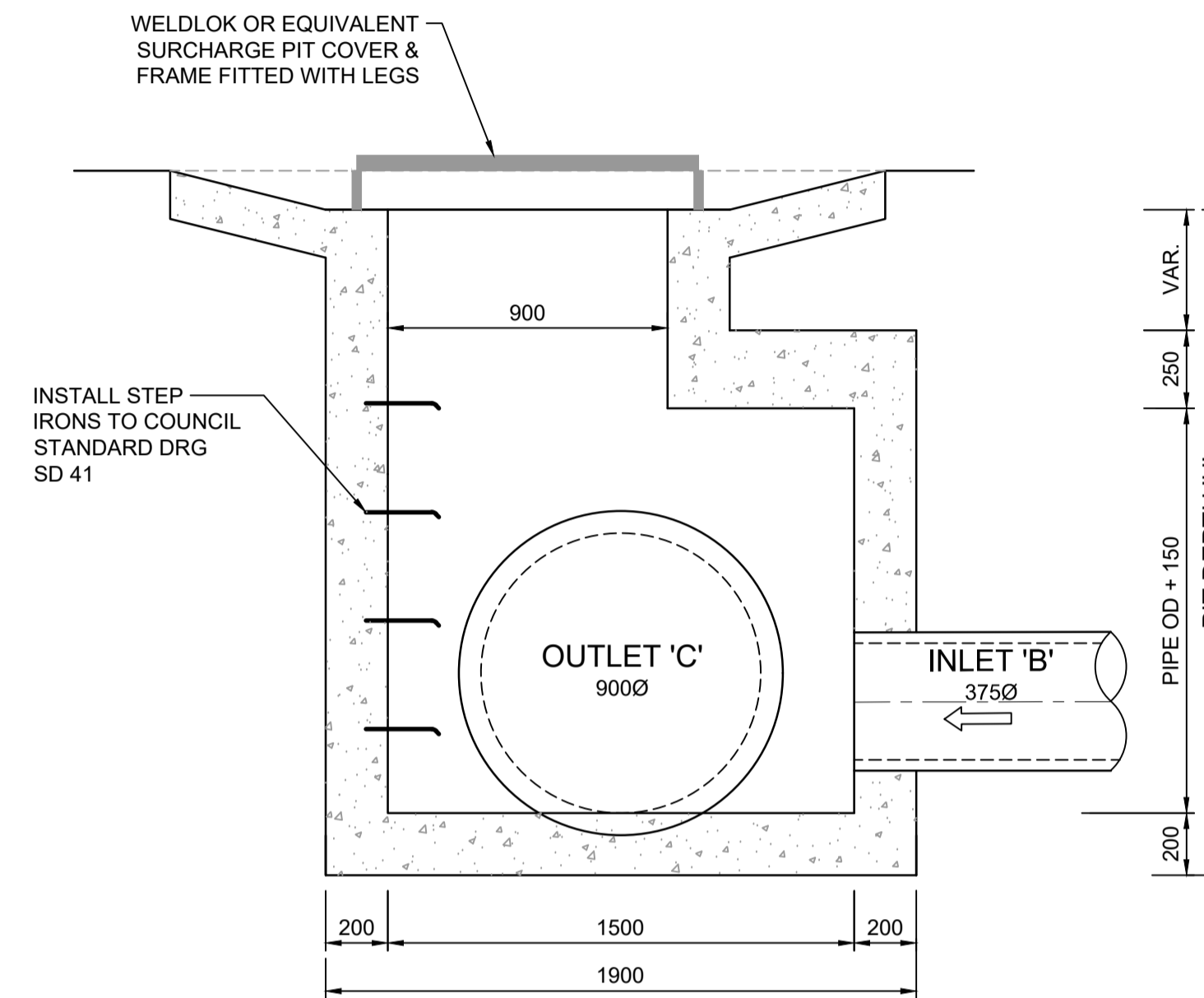
STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 SPECIAL PIT 14/11 DETAILS
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1408

PROJECT No: **110185-12**
 SHEET No: **CC1408**
 B



PLAN
SCALE 1:20



SECTION A
SCALE 1:20

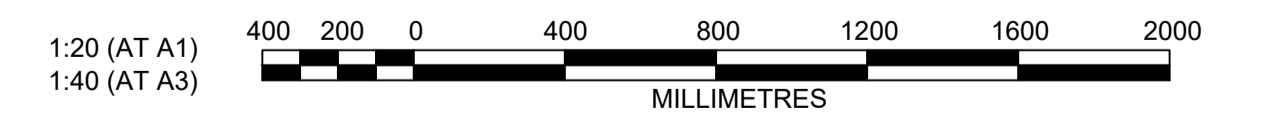
DRAINAGE PIT TABLE					
PIT No.	PIT GRATE LEVEL	PIPE INLET 'A' INVERT LEVEL	PIPE INLET 'B' INVERT LEVEL	PIPE OUTLET 'C' INVERT LEVEL	PIT DEPTH 'H'
14/2	50.944	48.667	49.078	48.637	2.31
14/3	49.916	47.629	48.039	47.599	2.32
14/4	48.578	46.333	46.908	46.303	2.27
14/5	47.008	44.538	45.509	44.508	2.50
14/6	45.684	42.928	---	42.898	2.79
14/12	43	39.99	---	39.96	3.04

DETAILS SHOWN SUBJECT TO
STRUCTURAL CERTIFICATION

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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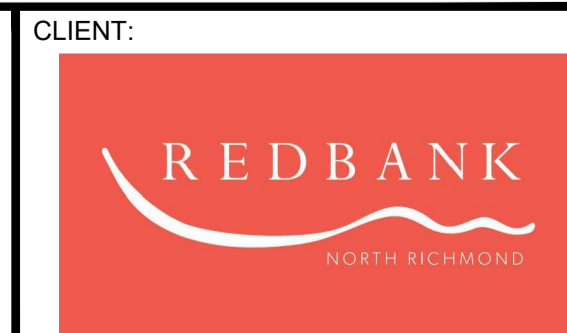


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REV	DESCRIPTION	DES	DRN	CKD	APR	DATE
B	DRAINAGE PIT TABLE AMENDED	MP	VS	RO	MS	21/07/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



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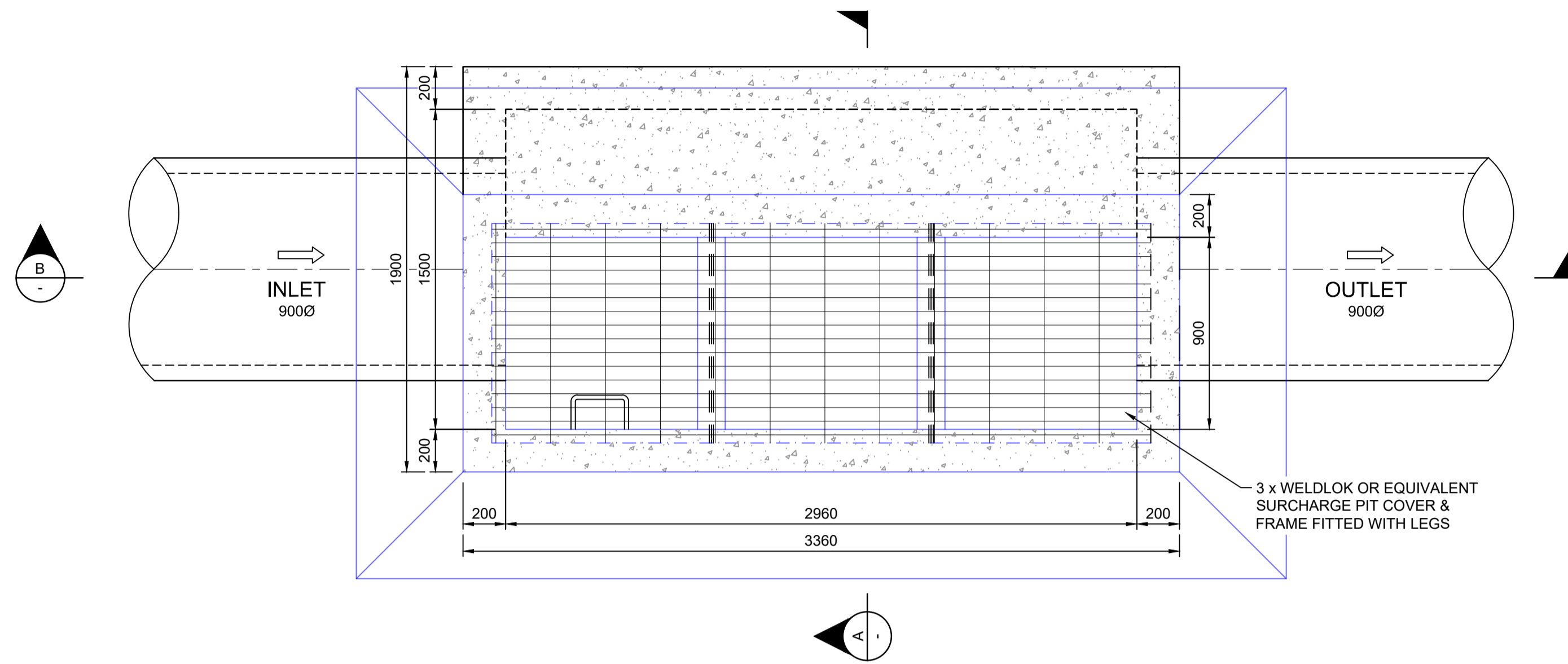
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SPECIAL PIT DETAILS

PROJECT No: 110185-12
SHEET No: CC1409

PLAN No: 110185-12-CC1409

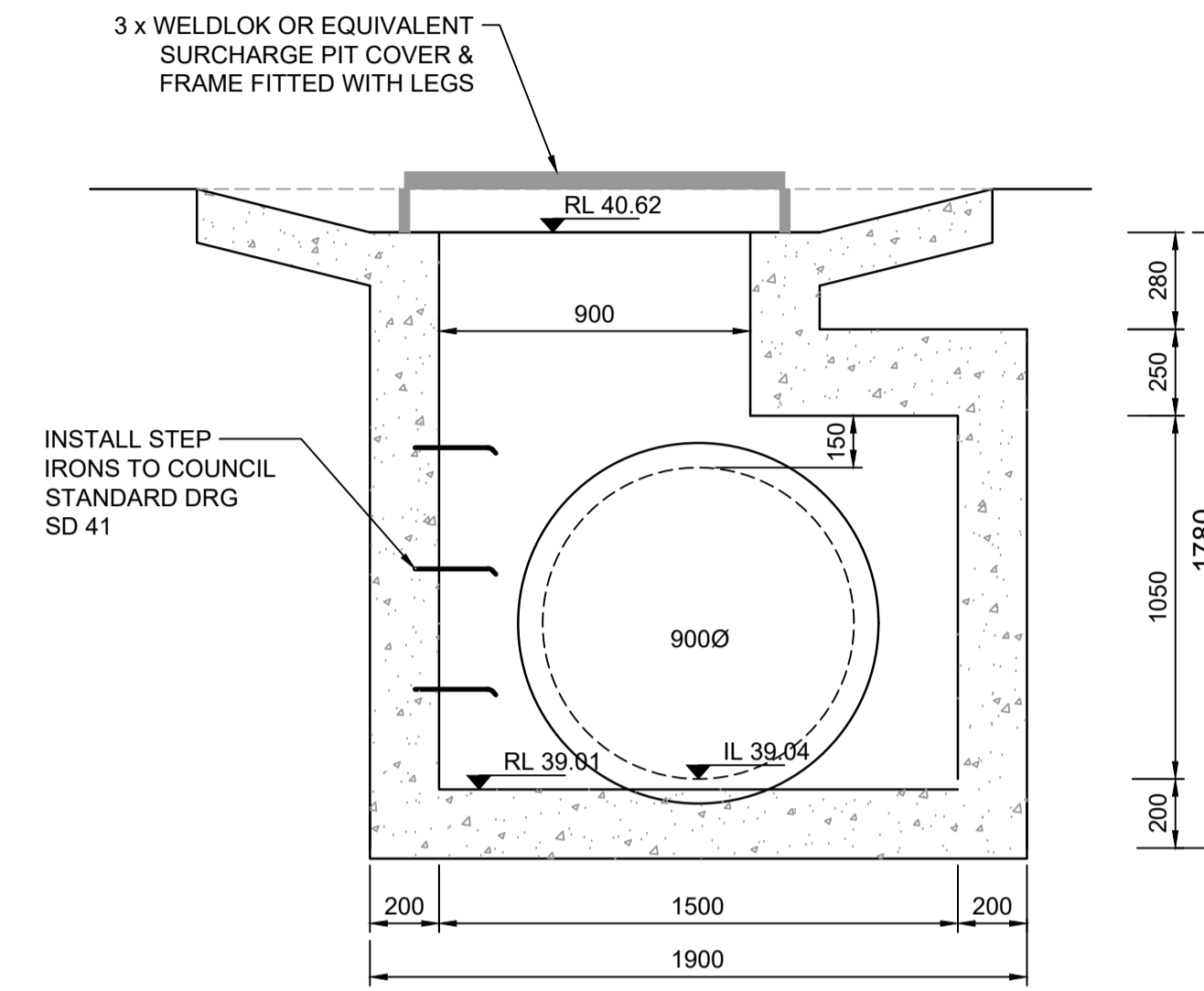
PROJECT No: 110185-12
SHEET No: CC1409

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: B

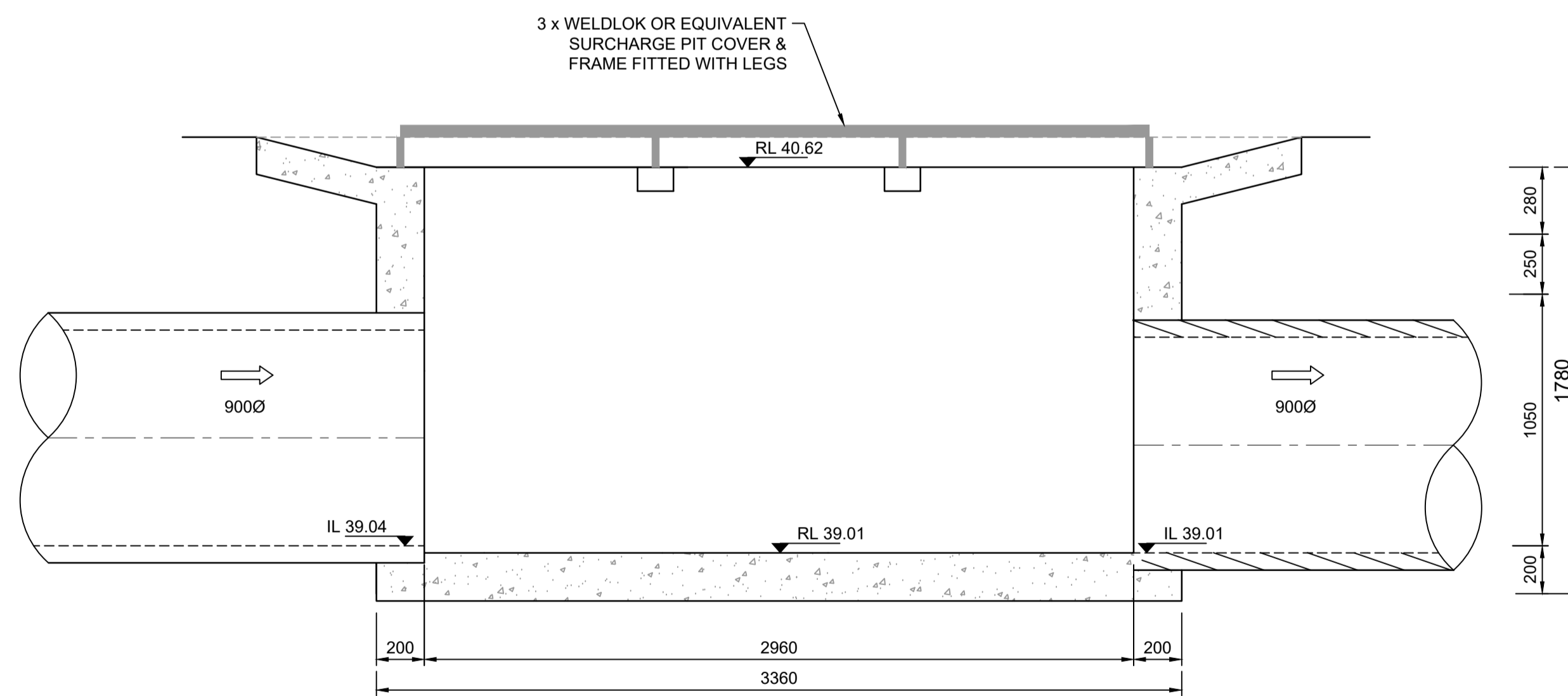


STRUCTURE 14/13
PLAN
SCALE 1:20

DETAILS SHOWN SUBJECT TO
STRUCTURAL CERTIFICATION



SECTION A
SCALE 1:20

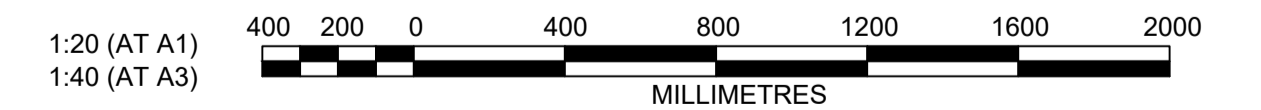


SECTION B
SCALE 1:20

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer *D. Restin*
Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

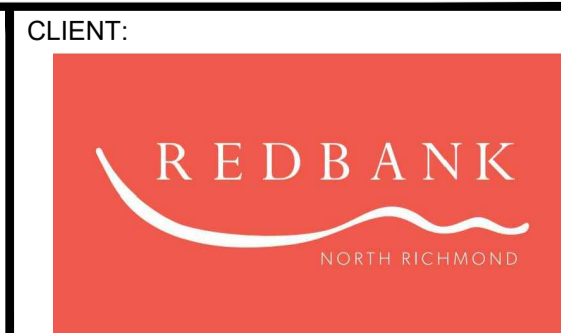


Plotfile: 21 July 2021 2:39:00 PM File Name: \\jwp.local\ids\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\CD\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1410.dwg

AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	VS	RO	MS	21/07/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SPECIAL PIT 14/13 DETAILS

PROJECT No: 110185-12
SHEET No: CC1410

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1410

B

Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer D. Rosta
Accreditation No. BDC3367

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DESIGN STORM 1:5yr ARI HYDROLOGIC RESULTS

Table with columns: PIT, NAME, PIT TYPE, CATCHMENT AREA, IMPERVIOUS PERCENTAGE, RUNOFF C, IMPERVIOUS TIME Tc, IMPERVIOUS INTENSITY I, PERVIOUS TIME Tc, PERVIOUS INTENSITY I, FULL AREA TIME Tc, FULL AREA INTENSITY I, CATCHMENT FLOW Qc, PARTIAL AREA TIME Tc, PARTIAL AREA INTENSITY I, CATCHMENT FLOW Qc, TOTAL CATCHMENT FLOW Qc, DIRECT FLOW Qd, APPROACH FLOW Qa, FLOODED DEPTH d, FLOODED WIDTH w, FLOODED (sq.m/s), ROAD GRADE, ROAD XFALL, CHOKE FACTOR, INLET FLOW Qg, BYPASS FLOW Qb, BYPASS PIT, COMMENTS.

Plotfile: 21 July 2021 2:39:57 PM File Name: \\jwp.local\dfs\jobs\110185 - Redbank North Richmond Residential Precincts12 - Stage 1 DANCDC\SOUTHERN HEIGHTS1-PROM110185-12-CC1411.dwg

Table with columns: D, C, B, A (AMENDMENTS TO DRAINAGE AND ROADS 51 & 52), MP, VS, RO, MS, DATE.



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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE DRAINAGE CALCULATIONS SHEET 1
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1411

PROJECT No: 110185-12
SHEET No: CC1411
D

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer D. Restin
Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

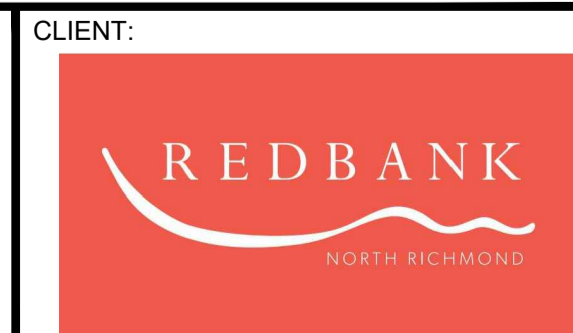
DESIGN STORM 1:5yr ARI HYDROLOGIC RESULTS

Table with 28 columns: PIT, NAME, PIT, CATCHMENT, IMPERVIOUS, RUNOFF, IMPERVIOUS, IMPERVIOUS, PERVIOUS, PERVIOUS, FULL AREA, FULL AREA, FULL AREA, PARTIAL AREA, PARTIAL AREA, PARTIAL AREA, TOTAL, DIRECT, APPROACH, FLOODED, FLOODED, FLOODED, ROAD, ROAD, CHOKE, INLET, BYPASS, BYPASS, COMMENTS. Rows include various stormwater management structures like sag pits, lined drains, and capped stubs.

Plotfile: 21 July, 2021 2:40:55 PM File Name: \\jwp.local\id\l\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCOC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1412.dwg

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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE DRAINAGE CALCULATIONS SHEET 2

PROJECT No: 110185-12 SHEET No: CC1412

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1412

Table with 6 columns: D, C, B, A, AMENDMENT, DATE. Rows include AMENDMENTS TO DRAINAGE AND ROADS 51 & 52, COUNCIL COMMENTS, ISSUE FOR CLIENT REVIEW.

D

DESIGN STORM 1:5yr ARI HYDRAULIC RESULTS

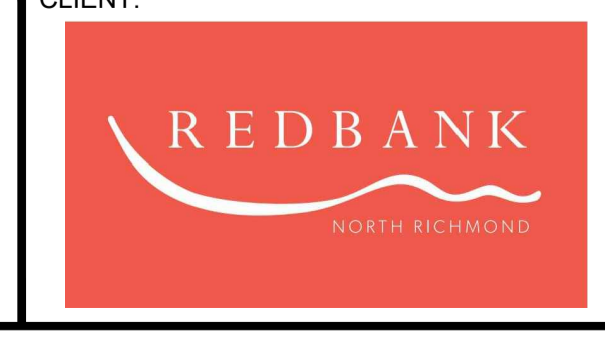
Table with columns: PIPE, PIPE, PIPE, PIPE, PIPE, PIPE, FULL AREA, FULL AREA, FULL AREA, FULL AREA, PART-AREA, PART-AREA, PART-AREA, DIRECT PIPE, PEAK, NET BYPASS, PIPE, FLOW, Q/Qcap, FULL PIPE, NORM. DEPTH, CRIT. DEPTH, U/S PIT, PIPE, PIPE, PIPE, U/S PIT, U/S PIT, PIPE, PIT LOSS, WSE LOSS, TOTAL, U/S PIT, U/S PIPE, D/S PIPE, HGL, MIN., U/S, COMMENTS

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20190299SW60 Date of Issue 10/08/2021 Issuing Officer D. Restu Accreditation No. BDC3367

Table with columns: E, D, C, B, A, AMENDMENT, DES, DRN, CKD, APR, DATE

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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE DRAINAGE CALCULATIONS SHEET 5

PROJECT No: 110185-12 SHEET No: CC1415 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1415

Plotfile: 21_July_2021_2:43:42 PM File Name: \\jwp-local\ids\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDCSOUTHERN HEIGHTS-1-PROM110185-12-CC1415.dwg

DESIGN STORM 1:5yr ARI HYDRAULIC RESULTS

PIPE	PIPE	PIPE	PIPE	PIPE	PIPE	FULL AREA	FULL AREA	FULL AREA	FULL AREA	PART-A AREA	PART-A AREA	PART-A AREA	PART-A AREA	DIRECT PIPE	PEAK	NET BYPASS	PIPE	FLOW	Q/Qcap	FULL PIPE	NORM. DEPTH	CRIT. DEPTH	U/S PIT	PIPE	PIPE	PIPE	U/S PIT	U/S PIT	PIPE	PIT LOSS	WSE LOSS	TOTAL	U/S PIT	U/S PIPE	D/S PIPE	HGL	MIN.	U/S	COMMENTS
NAME	TYPE	DIAMETER	LENGTH	SLOPE	AREA Af	TIME Tc	INTENSITY I	SUM CA	FLOW Qc	TIME Tc	INTENSITY I	SUM CA	FLOW Qc	FLOW Qp	FLOW Qrat	FLOW Qb	FLOW Q	CAP. Qcap	RATIO	VELOCITY	VELOCITY	VELOCITY	GRATE RL	U/S IL	D/S IL	D/S DROP	Ku	Kw	V'HEAD	(Ku.V'head)	(Kw.V'head)	PIPE LOSS	HGL	HGL	HGL	GRADE	COVER	FREEBOARD	
(-)	(-)	(mm)	(m)	(%)	(sq.m)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
D/5 to D/6	uPVC	225	1.2	3.94	0.04	10.53	98.1	0.179	48.7	5.53	126.4	0.15	53.9	0	53.9	0	53.9	115.9	0.47	1.36	2.86	1.49	51.709	50.813	50.766	0.766	0.2	0.09	0.02	0.02	0	51.057	51.038	50.874	13.7	0.67	0.65		
D/6 to D/7	uPVC	225	33	7.34	0.04	10.54	98.1	0.179	48.7	5.54	126.4	0.15	53.9	0	53.9	0	53.9	158.2	0.34	1.35	3.6	1.49	51.671	50	47.578	1.013	2.03	2.45	0.09	0.19	0.23	1.99	50.454	50.225	47.668	7.75	0.52	1.22	
D/7 to 27/2	RRJ2	375	4.24	2	0.11	10.69	97.5	0.179	48.4	5.69	125.1	0.15	53.3	0	53.3	0	53.3	268.5	0.2	0.48	1.89	1.12	48.229	46.565	46.48	0.064	1.16	2.77	0.01	0.01	0.03	0	47.634	47.601	47.597	0.08	1.2	0.6	
H/13 to 36/1	RRJ2	375	4.65	2.79	0.11	10.86	96.8	0.515	138.6	5.58	126	0.44	153.6	0	153.6	0	153.6	317.2	0.48	1.39	2.85	1.68	59.391	56.468	56.338	0.239	1.76	2.11	0.1	0.17	0.21	0.03	57.585	57.377	57.346	0.65	1.13	1.81	
SH A/1 to 1/24	uPVC	150	10.96	7.22	0.02	10	100.1	0.035	9.8	5	130.8	0.03	10.9	0	10.9	0	10.9	53.2	0.2	0.61	2.36	0.9	41.968	41.218	40.427	0.5	2	0.02	0.04	0.04	0.09	41.407	41.368	41.276	0.84	0.53	0.56		
SH B/1 to 1/23	uPVC	150	10.62	8.07	0.02	10	100.1	0.036	9.9	5	130.8	0.03	11	0	11	0	11	56.2	0.2	0.62	2.47	0.91	42.922	42.172	41.315	0.45	2	0.02	0.04	0.04	0.8	42.361	42.322	41.521	7.54	0.55	0.56		
SH C/1 to 1/21	uPVC	150	10.61	8.6	0.02	10	100.1	0.034	9.4	5	130.8	0.03	10.5	0	10.5	0	10.5	58.1	0.18	0.59	2.49	0.89	43.911	43.161	42.249	0.451	2	0.02	0.04	0.04	0.91	43.347	43.311	42.399	8.6	0.56	0.56		
SH D/1 to 1/20	uPVC	150	10.61	8.53	0.02	10	100.1	0.036	9.9	5	130.8	0.03	11	0	11	0	11	57.8	0.19	0.62	2.52	0.91	44.85	44.1	43.195	0.451	2	0.02	0.04	0.04	0.9	44.29	44.25	43.345	8.53	0.56	0.56		
SH E/1 to 1/18	uPVC	150	10.58	8.22	0.02	10	100.1	0.033	9.3	5	130.8	0.03	10.3	0	10.3	0	10.3	56.8	0.18	0.58	2.44	0.89	45.668	44.918	44.049	0.3	6.09	0.02	0.11	0.11	0.51	45.174	45.068	44.559	4.81	0.56	0.49		
SH F/1 to 1/17	uPVC	150	10.6	7.4	0.02	10	100.1	0.035	9.8	5	130.8	0.03	10.9	0	10.9	0	10.9	53.9	0.2	0.62	2.39	0.91	46.371	45.621	44.837	0.301	5.86	0.02	0.11	0.11	0.78	45.885	45.771	44.986	7.4	0.55	0.49		
SH G/1 to 1/15	uPVC	150	10.6	6.93	0.02	10	100.1	0.033	9.3	5	130.8	0.03	10.3	0	10.3	0	10.3	52.2	0.2	0.58	2.3	0.89	47.046	46.296	45.561	0.226	6.09	0.02	0.11	0.11	0.74	46.552	46.446	45.711	6.93	0.54	0.49		
SH H/1 to 1/14	uPVC	150	10.6	6.89	0.02	10	100.1	0.035	9.6	5	130.8	0.03	10.7	0	10.7	0	10.7	52	0.21	0.6	2.31	0.9	47.723	46.973	46.242	0.235	5.95	0.02	0.11	0.11	0.74	47.234	47.123	46.383	6.98	0.54	0.49		
SH J/1 to 1/13	uPVC	150	10.6	7.42	0.02	10	100.1	0.035	9.8	5	130.8	0.03	10.9	0	10.9	0	10.9	54	0.2	0.62	2.39	0.91	48.444	47.694	46.907	0.225	5.87	0.02	0.11	0.11	0.79	47.958	47.844	47.057	7.42	0.55	0.49		
SH K/1 to 1/12	uPVC	150	10.72	8.48	0.02	10	100.1	0.035	9.6	5	130.8	0.03	10.7	0	10.7	0	10.7	57.7	0.19	0.6	2.49	0.9	49.226	48.476	47.567	0.226	5.95	0.02	0.11	0.11	0.91	48.737	48.626	47.717	8.48	0.56	0.49		
SH L/1 to 1/10	uPVC	150	12.07	6.49	0.02	10	100.1	0.035	9.8	5	130.8	0.03	10.9	0	10.9	0	10.9	50.5	0.22	0.62	2.28	0.91	49.929	49.179	48.395	0.225	5.87	0.02	0.11	0.11	0.78	49.442	49.329	48.553	6.42	0.53	0.49		
SH M/1 to 1/9	uPVC	150	14.73	4.6	0.02	10	100.1	0.04	11.2	5	130.8	0.03	12.4	0	12.4	0	12.4	42.5	0.29	0.7	2.09	0.96	50.611	49.861	49.183	0.226	5.29	0.03	0.13	0.13	0.68	50.144	50.011	49.333	4.6	0.47	0.47		

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367
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Plotted: 21 July 2021 2:44:37 PM File Name: \\jwp.local\dfs\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1416.dwg

B	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
A	ISSUE FOR CLIENT REVIEW	MP	NA	MP	RO	26/04/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE CALCULATIONS
 SHEET 6
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1416

PROJECT No: 110185-12
 SHEET No: CC1416
 B

DESIGN STORM 1:100yr ARI HYDROLOGIC RESULTS

PIT	PIT	CATCHMENT	IMPERVIOUS	RUNOFF	IMPERVIOUS	IMPERVIOUS	PERVIOUS	PERVIOUS	FULL AREA	FULL AREA	FULL AREA	PARTIAL AREA	PARTIAL AREA	PARTIAL AREA	TOTAL	DIRECT	APPROACH	FLOODED	FLOODED	FLOODED	ROAD	ROAD	CHOKE	INLET	BYPASS	BYPASS	COMMENTS
NAME	TYPE	AREA	PERCENTAGE	C	TIME Tc	INTENSITY I	TIME Tc	INTENSITY I	TIME Tc	INTENSITY I	CATCHMENT FLOW Qc	TIME Tc	INTENSITY I	CATCHMENT FLOW Qc	CATCHMENT FLOW Qc	FLOW Qd	FLOW Qa	DEPTH d	WIDTH w	(vxd)	GRADE	XFALL	FACTOR	FLOW Qg	FLOW Qb	PIT	
(-)	(-)	(ha)	(%)	(-)	(min)	(mm/hr)	(min)	(mm/hr)	(min)	(mm/hr)	(L/s)	(min)	(mm/hr)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(%)	(%)	(-)	(L/s)	(L/s)	(-)	
C/1	IAD 450x450	0.045	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
C/2	IAD 450x450	0.046	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
C/3	IAD 450x450	0.048	70	0.95	5	219.1	10	167.3	10	167.3	21	5	219.1	24	24	0	24							24	0		
C/4	IAD 450x450	0.05	70	0.95	5	219.1	10	167.3	10	167.3	22	5	219.1	24	24	0	24							24	0		
C/5	IAD 900x900	0.063	70	0.95	5	219.1	10	167.3	10	167.3	28	5	219.1	31	31	0	31							31	0		
C/6	IAD 450x450	0	0						0	0	0	0	0	0	0	0	0							0	0		
C/7	IAD 600x900	0.046	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22				2.8			22	0		
D/1	IAD 450x450	0.045	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
D/2	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
D/3	SLOPE JUNCTION	0.044	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
D/4	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	21	21	0	21							21	0		
D/5	SLOPE JUNCTION	0.046	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	23	23	0	23							23	0		
D/6	IAD 900x900	0	0						0	0	0	0	0	0	0	0	0							0	0		
D/7	IAD 900x900	0	0						0	0	0	0	0	0	0	0	0				1.4			0	0		
H/13	IAD 900x900	0.068	70	0.95	5	219.1	10	167.3	10	167.3	30	5	219.1	33	33	0	33				3			33	0		
SH A/1	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	22	22	0	22							22	0		
SH B/1	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
SH C/1	IAD 450x450	0.042	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	21	21	0	21							21	0		
SH D/1	IAD 450x450	0.045	70	0.95	5	219.1	10	167.3	10	167.3	20	5	219.1	22	22	0	22							22	0		
SH E/1	IAD 450x450	0.042	70	0.95	5	219.1	10	167.3	10	167.3	18	5	219.1	21	21	0	21							21	0		
SH F/1	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	22	22	0	22							22	0		
SH G/1	IAD 450x450	0.042	70	0.95	5	219.1	10	167.3	10	167.3	18	5	219.1	21	21	0	21							21	0		
SH H/1	IAD 450x450	0.043	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	21	21	0	21							21	0		
SH J/1	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	22	22	0	22							22	0		
SH K/1	IAD 450x450	0.043	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	21	21	0	21							21	0		
SH L/1	IAD 450x450	0.044	70	0.95	5	219.1	10	167.3	10	167.3	19	5	219.1	22	22	0	22							22	0		
SH M/1	IAD 450x450	0.05	70	0.95	5	219.1	10	167.3	10	167.3	22	5	219.1	25	25	0	25							25	0		

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

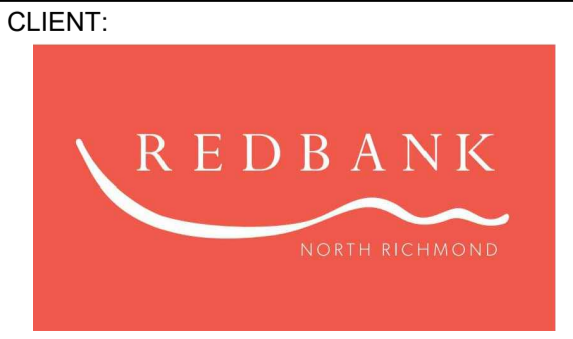
These plans/specifications form part of the certificate issued 10th of August 2021

Plotted: 21 July 2021 2:47:24 PM File Name: \\jwp.local\dfs\jobs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1419.dwg

B	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
A	ISSUE FOR CLIENT REVIEW	MP	NA	MP	RO	26/04/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE CALCULATIONS
 SHEET 9

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1419

PROJECT No: 110185-12
 SHEET No: CC1419

B

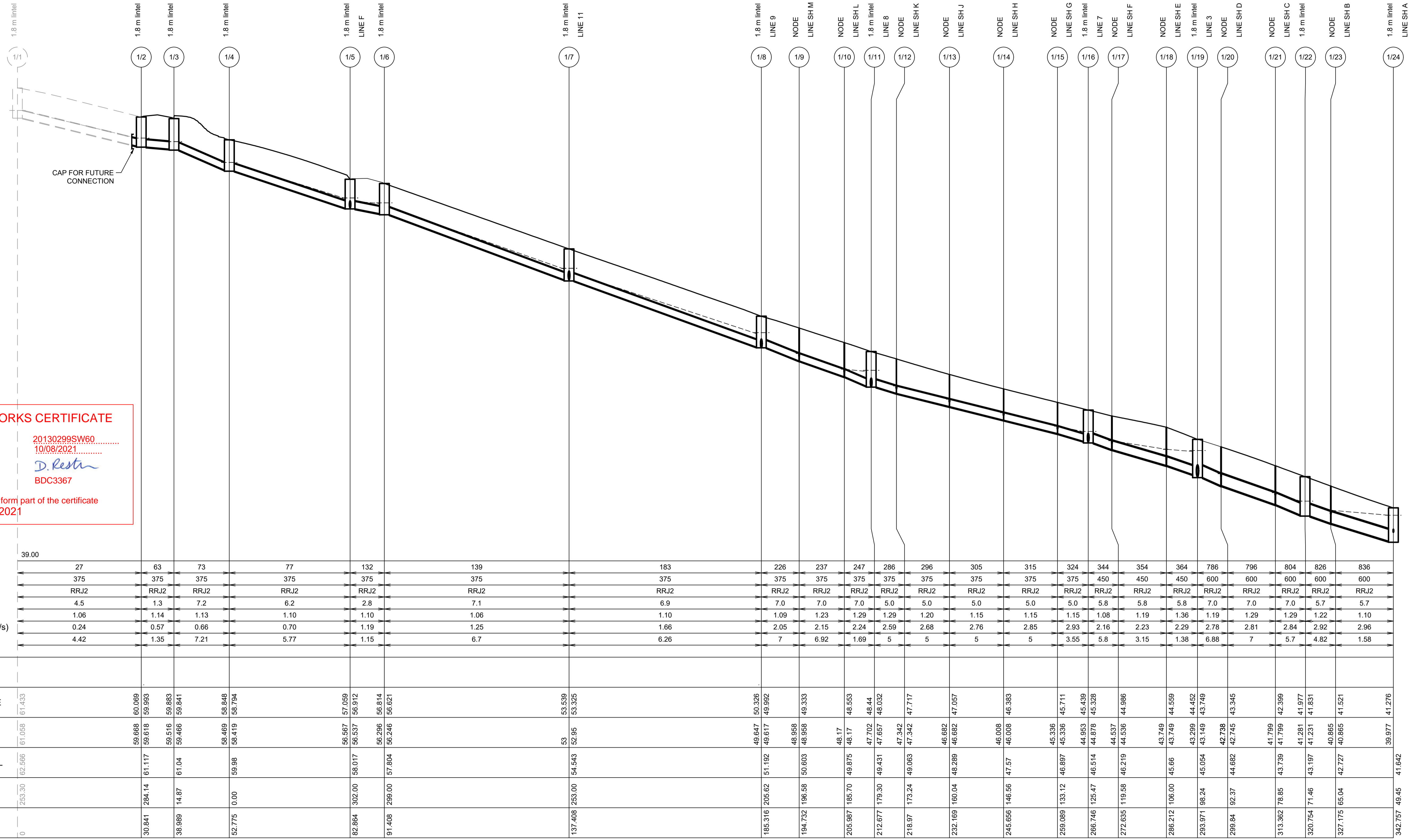
DESIGN STORM 1:100yr ARI HYDRAULIC RESULTS

PIPE	PIPE	PIPE	PIPE	PIPE	PIPE	FULL AREA	FULL AREA	FULL AREA	FULL AREA	PART-AREA	PART-AREA	PART-AREA	DIRECT PIPE	PEAK	NET BYPASS	PIPE	FLOW	Q/Qcap	FULL PIPE	NORM. DEPTH	CRIT. DEPTH	U/S PIT	PIPE	PIPE	PIPE	U/S PIT	U/S PIT	PIPE	PIT LOSS	WSE LOSS	TOTAL	U/S PIT	U/S PIPE	D/S PIPE	HGL	MIN.	U/S	COMMENTS	
NAME	TYPE	DIAMETER	LENGTH	SLOPE	AREA AF	TIME Tc	INTENSITY	SUM CA	FLOW Qc	TIME Tc	INTENSITY	SUM CA	FLOW Qc	FLOW Qp	FLOW Qrat	FLOW Qb	FLOW Q	CAP. Qcap	RATIO	VELOCITY	VELOCITY	VELOCITY	GRATE RL	U/S IL	D/S IL	D/S DROP	Ku	Kw	V'HEAD	(Ku.V'head)	(Kw.V'head)	PIPE LOSS	HGL	HGL	HGL	GRADE	COVER	FREEBOARD	
(-)	(-)	(mm)	(m)	(%)	(sq.m)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
1/1 to 1/2	RRJ2	375	30.84	4.51	0.11	10	167.3	0.107	49.7	5	219.1	0.09	55.3	0	55.3	-16.8	38.6	403.4	0.1	0.35	2.3	1.01	62.566	61.058	59.668	0.05	4.5		0.01	0.03	0.03	1.27	61.461	61.433	60.163	4.12	1.06	1.11	
1/2 to 1/3	RRJ2	375	8.15	1.25	0.11	10.22	165.9	0.254	116.9	5.22	215.9	0.22	130	0	130	-34.8	95.2	212.5	0.45	0.86	1.87	1.36	61.117	59.618	59.516	0.05	4.5		0.04	0.17	0.17	0.06	60.163	59.993	59.936	0.7	1.14	0.95	
1/3 to 1/4	RRJ2	375	13.79	7.23	0.11	10.3	165.4	0.293	134.7	5.3	214.9	0.25	149.6	0	149.6	-38.9	110.7	511.1	0.22	1	3.69	1.45	61.04	59.466	58.469	0.051	1.85	2.3	0.05	0.09	0.12	0.92	59.959	59.841	58.923	6.66	1.13	1.08	
1/4 to 1/5	RRJ2	375	30.09	6.15	0.11	10.36	165	0.309	141.8	5.36	214.1	0.26	157.2	0	157.2	-37.3	119.9	471.4	0.25	1.09	3.56	1.5	59.98	58.419	56.567	0.03	2.15	2.51	0.06	0.13	0.15	1.25	58.945	58.794	57.547	4.14	1.1	1.04	
1/5 to 1/6	RRJ2	375	8.54	2.83	0.11	10.5	164.1	0.526	240	5.5	212.1	0.45	266	0	266	-37.6	228.4	319.7	0.71	2.07	3.14	2.17	58.017	56.537	56.296	0.05	1.54	1.66	0.22	0.34	0.36	0.12	57.574	57.212	57.089	1.44	1.1	0.44	
1/6 to 1/7	RRJ2	375	46	7.06	0.11	10.54	163.8	0.556	252.9	5.54	211.5	0.48	280	0	280	-40.6	239.4	504.8	0.47	2.17	4.51	2.25	57.804	56.246	53	0.05	1.95	2.18	0.24	0.47	0.52	2.84	57.144	56.621	53.777	6.18	1.06	0.66	
1/7 to 1/8	RRJ2	375	47.91	6.89	0.11	10.71	162.8	0.747	337.7	5.5	212.1	0.64	374.1	0	374.1	-68.6	305.4	498.9	0.61	2.77	4.74	2.8	54.543	52.95	49.647	0.031	1.16	1.32	0.39	0.45	0.51	2.13	53.839	53.325	51.192	4.45	1.1	0.7	
1/8 to 1/9	RRJ2	375	9.42	7	0.11	10.88	161.7	0.929	417.4	5.66	209.9	0.79	462.2	0	462.2	-100.6	361.7	502.7	0.72	3.27	4.95	3.29	51.192	49.617	48.958	0	0.97	1.17	0.55	0.53	0.64	0.34	51.18	50.537	50.196	3.62	1.09	0.01	
1/9 to 1/10	RRJ2	375	11.26	7	0.11	10.91	161.5	0.977	438.3	5.69	209.4	0.83	485.4	0	485.4	-100.6	384.8	502.7	0.77	3.48	5.01	3.49	50.603	48.958	48.17	0	0		0	0	0.46	50.196	50.196	49.734	4.1	1.23	0.41		
1/10 to 1/11	RRJ2	375	6.69	7	0.11	10.95	161.2	1.019	456.4	5.73	208.9	0.87	505.3	0	505.3	-100.6	404.7	502.7	0.8	3.66	5.06	3.67	49.875	48.17	47.702	0.046	0		0	0	0.3	49.734	49.734	49.431	4.54	1.29	0.14		
1/11 to 1/12	RRJ2	375	6.29	5	0.11	10.97	161.1	1.172	524.6	5.75	208.6	1	581.9	0	581.9	-264.2	317.7	424.9	0.75	2.88	4.22	2.9	49.431	47.657	47.342	0	1.13	1.28	0.42	0.48	0.54	0.19	48.572	48.032	47.843	2.99	1.29	0.86	
1/12 to 1/13	RRJ2	375	13.2	5	0.11	11	160.9	1.213	542.4	5.78	208.2	1.04	601.6	0	601.6	-264.2	337.4	424.9	0.79	3.05	4.27	3.07	49.063	47.342	46.682	0	0		0	0	0.42	47.843	47.843	47.427	3.15	1.2	1.22		
1/13 to 1/14	RRJ2	375	13.49	5	0.11	11.05	160.6	1.255	560	5.83	207.5	1.08	620.6	0	620.6	-264.2	356.4	424.9	0.84	3.23	4.31	3.24	48.289	46.682	46.008	0	0		0	0	0.47	47.427	47.427	46.953	3.52	1.15	0.86		
1/14 to 1/15	RRJ2	375	13.43	5	0.11	11.1	160.3	1.296	577.1	5.88	206.8	1.11	639	0	639	-264.2	374.8	424.9	0.88	3.39	4.34	3.4	47.57	46.008	45.336	0	0		0	0	0.52	46.953	46.953	46.43	3.89	1.15	0.62		
1/15 to 1/16	RRJ2	375	7.66	5	0.11	11.15	159.9	1.336	593.5	5.93	206.1	1.15	656.7	0	656.7	-264.2	392.5	424.9	0.92	3.55	4.36	3.56	46.897	45.336	44.953	0.075	0		0	0	0.33	46.43	46.43	46.104	4.27	1.15	0.47		
1/16 to 1/17	RRJ2	450	5.89	5.8	0.16	11.18	159.8	1.407	624.2	5.96	205.7	1.21	690.8	0	690.8	-154.7	536.1	744.2	0.72	3.37	5.09	3.39	46.514	44.878	44.537	0	0.9	0.97	0.58	0.52	0.56	0.18	46.145	45.581	45.404	3.01	1.08	0.37	
1/17 to 1/18	RRJ2	450	13.58	5.8	0.16	11.2	159.6	1.448	642.3	5.98	205.4	1.25	710.9	0	710.9	-154.7	566.2	744.2	0.75	3.5	5.13	3.51	46.219	44.536	43.749	0	0		0	0	0.44	45.404	45.404	44.964	3.24	1.19	0.82		
1/18 to 1/19	RRJ2	450	7.76	5.8	0.16	11.25	159.4	1.488	658.7	6.03	204.8	1.28	729	0	729	-154.7	574.3	744.2	0.77	3.61	5.16	3.63	45.66	43.749	43.299	0.15	0		0	0	0.27	44.964	44.964	44.696	3.45	1.36	0.7		
1/19 to 1/20	RRJ2	600	5.87	7	0.28	11.27	159.2	3.217	1422.6	5.88	206.8	2.74	1572.2	0	1572.2	-562.7	1009.4	1760.7	0.57	3.57	6.44	3.6	45.054	43.149	42.738	-0.007	1.46	1.61	0.65	0.95	1.05	0.4	44.796	43.749	43.345	6.88	1.19	0.26	
1/20 to 1/21	RRJ2	600	13.52	7	0.28	11.29	159.1	3.259	1440.5	5.89	206.6	2.77	1591.8	0	1591.8	-562.7	1029.1	1760.6	0.58	3.64	6.47	3.67	44.682	42.745	41.799	0	0		0	0.62	43.345	43.345	42.723	4.6	1.29	1.34			
1/21 to 1/22	RRJ2	600	7.39	7	0.28	11.32	158.9	3.3	1456.2	5.85	207.1	2.8	1608.3	0	1608.3	-562.7	1045.5	1760.6	0.59	3.7	6.49	3.73	43.739	41.799	41.281	0.05	0		0	0	0.18	42.723	42.723	42.54	2.47	1.29	1.02		
1/22 to 1/23	RRJ2	600	6.42	5.7	0.28	11.34	158.8	3.389	1494.4	6.12	204	2.91	1651.2	0	1651.2	-556.5	1094.7	1588.8	0.69	3.87	6.06	3.9	43.197	41.231	40.865	0	0.38		0.29	0.29	0.17	42.54	42.253	42.079	2.71	1.22	0.66		
1/23 to 1/24	RRJ2	600	15.58	5.7	0.28	11.36	158.6	3.431	1511.9	6.13	203.8	2.95	1670.9	0	1670.9	-556.5	1114.5	1588.8	0.7	3.94	6.08	3.96	42.727	40.865	39.977	0.05	0		0	0.44	42.079	42.079	41.642	2.8	1.1	0.65			
1/24 to 1/25	RRJ2	600	9.52	4.41	0.28	11.4	158.4	3.484	1532.8	6.18	203.4	3	1694.2	0	1694.2	-837.5	856.7	1397.9	0.61	3.03	5.19	3.1	41.642	39.927	39.507	0.076	0.9		0.47	0.42	0.42	0.16	41.632	41.211	41.053	1.66	1.09	0.01	
1/25 to 1/26	RRJ2	675	28.9	4.32	0.36	11.43	158.2	3.568	1567.8	6.21	203.1	3.07	1733.9	0	1733.9	-694	1039.8	1893.8	0.55	2.91	5.41	3.02	41.317	39.432	38.183	0	1.8	1.95	0.43	0.78	0.84	0.38	41.115	40.276	39.9	1.3	1.1	0.2	
2/1 to 2/2	RRJ2	375	12.04	3.13	0.11	10	167.3	0.644	299.5	5	219.1	0.45	274.5	0	299.5	0	299.5	336	0.89	2.71	3.44	2.74	39.929	38.949	38.573	1.242	4.5		0	0	0	40	40	40	0	0.59	-0.07		
3/6 to 3/7	RRJ2	375	21.87	9.73	0.11	10.49	164.2	1.039	474	5.34	214.4	0.89	528.8	0	528.8	-78.7	450.2	592.8	0.76	4.08	5.9	4.08	51.346	49.86	47.731	0.076	1	1.16	0.77	0.76	0.88	1.11	51.336	50.451	49.342	5.07	1.1	0.01	
3/7 to 3/8	RRJ2	450	11.83	5.03	0.16	10.55	163.8	1.156	525.8	5.4	213.5	0.99	586.1	0	586.1	-172.8	413.4	692.8	0.6	2.6	4.55	2.66	49.342	47.656	47.062	0.03	1.5	1.59	0.34	0.52	0.55	0.21	48.99	48.441	48.23	1.79	1.17		

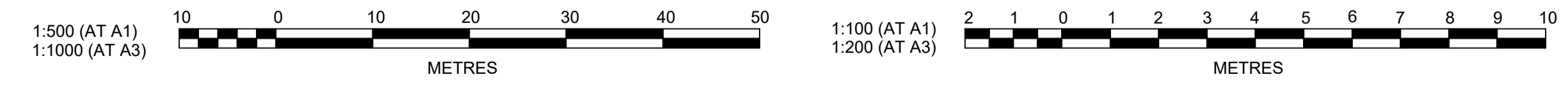
DESIGN STORM 1:100yr ARI HYDRAULIC RESULTS

PIPE	PIPE	PIPE	PIPE	PIPE	PIPE	FULL AREA	FULL AREA	FULL AREA	FULL AREA	PART-A REA	PART-A REA	PART-A REA	PART-A REA	DIRECT PIPE	PEAK	NET BYPASS	PIPE	FLOW	Q/Qcap	FULL PIPE	NORM. DEPTH	CRIT. DEPTH	U/S PIT	PIPE	PIPE	PIPE	U/S PIT	U/S PIT	PIPE	PIT LOSS	WSE LOSS	TOTAL	U/S PIT	U/S PIPE	D/S PIPE	HGL	MIN.	U/S	COMMENTS
NAME	TYPE	DIAMETER	LENGTH	SLOPE	AREA Af	TIME Tc	INTENSITY I	SUM CA	FLOW Qc	TIME Tc	INTENSITY I	SUM CA	FLOW Qc	FLOW Qp	FLOW Qrat	FLOW Qb	FLOW Qc	CAP. Qcap	RATIO	VELOCITY	VELOCITY	VELOCITY	GRATE RL	U/S IL	D/S IL	D/S DROP	Ku	Kw	V'HEAD	(Ku.V'head)	(Kw.V'head)	PIPE LOSS	HGL	HGL	HGL	GRADE	COVER	FREEBOARD	
(-)	(-)	(mm)	(m)	(%)	(sq.m)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
19/1 to 19/2	RRJ2	375	40.51	2.33	0.11	10	167.3	0.111	51.4	5	219.1	0.09	57.2	0	57.2	-20.9	36.2	289.8	0.13	0.33	1.79	0.99	48.089	46.681	45.739	0.05	4.5	0.01	0.02	0.02	0.51	47.081	47.056	46.549	1.25	1.03	1.01		
19/2 to 19/3	RRJ2	375	21.91	2.69	0.11	10.38	164.9	0.267	122.3	5.38	213.8	0.23	135.8	0	135.8	-47.6	88.2	311.8	0.28	0.8	2.43	1.33	47.055	45.689	45.099	0.05	2.09	2.11	0.03	0.07	0.05	46.55	46.481	46.434	0.22	0.97	0.51		
19/3 to 19/4	RRJ2	375	20.08	2.27	0.11	10.72	162.7	0.692	312.8	5.53	211.7	0.59	348.2	0	348.2	-144.1	204.2	286	0.71	1.85	2.81	2	46.434	45.049	44.594	0.051	1.51	1.59	0.17	0.26	0.28	0.23	46.434	46.157	45.925	1.15	0.99	0	
19/4 to 19/5	RRJ2	375	20.65	3.17	0.11	10.84	162	0.765	344.3	5.65	210	0.66	382.7	0	382.7	-185.7	196.9	338.2	0.58	1.78	3.18	1.95	45.925	44.544	43.89	0.051	1.78	2.08	0.16	0.29	0.34	0.22	45.924	45.586	45.365	1.07	1.04	0	
19/5 to 19/6	RRJ2	375	21.03	4.76	0.11	10.94	161.3	0.807	361.7	5.75	208.5	0.69	401.2	0	401.2	-104.9	296.3	414.6	0.71	2.68	4.08	2.72	45.414	43.844	42.839	0.051	1.31	1.45	0.37	0.48	0.53	0.51	45.413	44.882	44.371	2.43	1.1	0	
19/6 to 10/6	RRJ2	375	9.77	3.04	0.11	11.03	160.7	0.936	418.1	5.84	207.3	0.81	463.9	0	463.9	-295.9	168	331.4	0.51	1.52	3.01	1.77	44.371	42.789	42.492	0.525	1.55	1.72	0.12	0.18	0.2	0.08	44.371	44.168	44.092	0.78	1.19	0	
20/1 to 19/3	RRJ2	375	8.15	1.25	0.11	10	167.3	0.082	38.3	5	219.1	0.07	42.6	0	42.6	-11.6	31.1	212.5	0.15	0.28	1.37	0.95	46.479	45.118	45.016	-0.033	4.5	0	0.02	0.02	0	46.454	46.346	46.434	0.03	1.01	0.02		
21/1 to 10/4	RRJ2	375	8.01	1.25	0.11	10	167.3	0.167	77.6	5	219.1	0.14	86.4	0	86.4	-46.1	40.2	212.5	0.19	0.36	1.48	1.03	47.165	45.71	45.61	0.677	4.5	0.01	0.03	0.03	0	47.165	47.135	47.131	0.04	1.1	0		
22/1 to 22/2	RRJ2	375	11.01	1.25	0.11	10	167.3	0.227	105.5	5	219.1	0.19	117.4	0	117.4	-48	69.4	212.5	0.33	0.63	1.72	1.22	44.771	43.331	43.193	0.031	4.5	0.02	0.09	0.09	0.01	44.488	44.397	44.382	0.13	1.09	0.28		
22/2 to 14/10	RRJ2	375	31.14	1	0.11	10.11	166.6	0.292	134.9	5.11	217.6	0.25	149.9	0	149.9	-57.1	92.8	190	0.49	0.84	1.71	1.35	44.764	43.163	42.852	1.785	1.59	1.91	0.04	0.06	0.07	0.07	44.394	44.325	44.251	0.24	1.22	0.37	
23/1 to 14/9	RRJ2	750	23.93	1.23	0.44	10	167.3	1.418	659.1	5	219.1	1.21	733.4	0	733.4	0	733.4	1339.7	0.55	1.66	3.1	2.19	44.733	41.58	41.285	0.051	2	0.14	0.28	0.28	0.09	44.731	44.45	44.361	0.37	2.34	0		
26/1 to 26/2	RRJ2	375	28.61	4.62	0.11	10.45	164.5	0.264	120.5	5.33	214.4	0.22	133.9	0	133.9	27.6	161.5	408.4	0.4	1.46	3.48	1.73	45.672	44.311	42.99	0.051	4.5	0.11	0.49	0.49	0.3	45.177	44.686	44.388	1.04	0.89	0.49		
26/2 to 26/3	RRJ2	375	8.18	1.43	0.11	10.58	163.6	0.373	169.4	5.47	212.5	0.32	188.3	0	188.3	-154	34.3	227.1	0.15	0.31	1.48	0.98	44.388	42.94	42.823	0.031	1.67	2.01	0	0.01	0.01	0	44.387	44.377	44.375	0.03	1.1	0	
26/3 to 14/9	RRJ2	375	15.46	1.01	0.11	10.68	163	0.418	189.2	5.46	212.6	0.36	212.4	0	212.4	-174.8	37.7	191.4	0.2	0.34	1.35	1.01	44.376	42.793	42.636	1.402	1.22	1.36	0.01	0.01	0.01	0.01	44.375	44.367	44.361	0.04	1.35	0	
27/1 to 27/2	RRJ2	375	21	1.12	0.11	10	167.3	0.104	48.4	5	219.1	0.09	53.9	0	53.9	-19.2	34.7	201.3	0.17	0.31	1.36	0.98	48.203	46.682	46.447	0.031	4.5	0.01	0.02	0.02	0.02	0.01	47.922	47.899	47.892	0.03	1.11	0.28	
27/2 to 27/3	RRJ2	375	23.4	1.01	0.11	10.63	163.3	0.416	188.8	5.44	212.9	0.36	210	0	210	-59.1	150.9	191	0.79	1.37	1.92	1.67	47.906	46.417	46.181	0.031	1.57	1.71	0.09	0.15	0.16	0.15	47.906	47.744	47.597	0.63	1.08	0	
27/3 to 27/4	RRJ2	375	8	1	0.11	10.83	162	0.5	225.2	5.54	211.5	0.43	250	0	250	-124.4	125.6	190	0.66	1.14	1.84	1.53	47.597	46.151	46.071	0.031	1.59	1.96	0.07	0.1	0.13	0.03	47.527	47.398	47.363	0.44	1.11	0.07	
27/4 to 27/5	RRJ2	375	14.73	1.8	0.11	10.9	161.5	0.559	250.9	5.61	210.5	0.48	278.6	0	278.6	-154.8	123.8	254.9	0.49	1.12	2.29	1.52	47.597	46.041	45.775	0.031	1.52	1.57	0.06	0.1	0.1	0.06	47.366	47.266	47.203	0.42	1.23	0.23	
27/5 to 27/6	RRJ2	375	8.41	1.25	0.11	11.01	160.9	0.579	258.7	5.72	209	0.49	286.7	0	286.7	-206	80.6	212.5	0.38	0.73	1.79	1.28	47.203	45.745	45.64	0.031	4.5	0.03	0.12	0.12	0.02	47.202	47.08	47.064	0.18	1.09	0		
27/6 to 14/5	RRJ2	375	9.7	1.05	0.11	11.09	160.4	0.595	265.3	5.8	207.9	0.51	293.5	0	293.5	-201.2	92.3	194.3	0.47	0.84	1.74	1.35	47.076	45.61	45.509	1.001	0.94	1.07	0.04	0.03	0.04	0.02	47.069	47.031	47.008	0.24	1.08	0.01	
28/1 to 28/2	RRJ2	375	8.09	1	0.11	10	167.3	0.063	29.4	5	219.1	0.05	32.7	0	32.7	8.5	41.3	190.1	0.22	0.37	1.37	1.03	48.63	47.174	47.093	0.031	4.5	0.01	0.03	0.03	0.03	0	48.54	48.508	48.504	0.05	1.1	0.09	
28/2 to 14/4	RRJ2	375	15.52	1	0.11	10.1	166.7	0.076	35.1	5.1	217.7	0.06	38.9	0	38.9	28.7	67.7	190.1	0.36	0.61	1.58	1.21	48.571	47.063	46.908	0.605	1.16	1.21	0.02	0.02	0.02	0.02	48.505	48.482	48.462	0.13	1.25	0.07	
29/1 to 29/2	RRJ2	375	8.3	2.03	0.11	10	167.3	0.131	60.8	5	219.1	0.11	67.7	0	67.7	-18.5	49.2	270.8	0.18	0.45	1.86	1.09	49.854	48.39	48.222	0.03	4.5	0.01	0.05	0.05	0.01	49.753	49.707	49.701	0.07	1.1	0.1		
29/2 to 14/3	RRJ2	375	7.66	1.99	0.11	10.07	166.9	0.142	66	5.07	218	0.12	73.3	0	73.3	26.3	99.7	268	0.37	0.9	2.25	1.39	49.746	48.192	48.039	0.441	1.3	1.37	0.04	0.05	0.06	0.02	49.704	49.647	49.626	0.28	1.29	0.04	
30/1 to 30/2	RRJ2	375	62.69	2.31	0.11	10	167.3	0.064	29.7	5	219.1	0.05	33	0	33	-8.9	24.1	288.8	0.08	0.22	1.58	0.88	53.852	52.348	50.9	0.05	4.5	0	0.01	0.01	1.43	52.734	52.723	51.293	2.28	1.07	1.12		
30/2 to 30/3	RRJ2	375	31.51	5.3	0.11	10.66	163.1	0.245	110.8	5.66	209.9	0.21	123.1	0	123.1	-30.6	92.4	437.4	0.21	0.84	3.14	1.35	52.484	50.85	49.918	0.031	1.9	2.43	0.04	0.07	0.09	0.4	51.312	51.225	50.829	1.26	1.04	1.17	
30/3 to 14/2	RRJ2	375	7.17	1	0.11	10.83	162	0.267	120.3	5.83	207.5	0.23	133.2	0	133.2	-81.3	51.9	190	0.27	0.47	1.47	1.11	50.829	49.15	49.078	0.442	0.6	0.7	0.01	0.01	0.01	0.01	50.826	50.818	50.813	0.07	1.42	0	
31/1 to 30/2	RRJ2	375	9.14	2.29	0.11	10	167.3	0.13	60.5	5	219.1	0.11	67.3	0	67.3	-22.4	44.9	287.7	0.16	0.41	1.89	1.06	52.585	51.11	50.9	0.05	4.5	0.01	0.04	0.04	0.19	51.233	51.485	51.293	2.1	1.13	1.06		
32/1 to 32/2	RRJ2	450	38.29	8.72	0.16	10	167.3	0.938	436.1	5	219.1	0.89	542.4	0	542.4	-274.9	267.5	912.5	0.29	1.68	4.98	1.95	62.934	60.785	57.446	0.05	4.5	0.14	0.65	0.65	2.54	61.884	61.235	59.73	6.62	1.05	1.05		
32/2 to 32/3	RRJ2	450	5.83	5.3	0.16	10.13	166.5	1.01	467.4	5.13	217.3	0.95	575.2	0	575.2	-238.7	336.4	711.1	0.47	2.12	4.41	2.26	58.925	57.396	57.087	0.226	1.34	1.52	0.23	0.31	0.35	0.07	58.74	58.394	58.325	1.19	0.94	0.18	
32/3 to 32/4	RRJ2	675	8.02	2	0.36	10.62	163.4	1.656	751.5	5.15	217	1.49	896.9	0	896.9	-364.5	532.4	1288.4	0.41	1.49	3.43	2.03	58.543	56.862	56.702	0.05	1.79	1.89	0.11	0.2	0.21	0.03	58.335	58.122	58.095	0.34	1		

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LINE 1



C	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
 CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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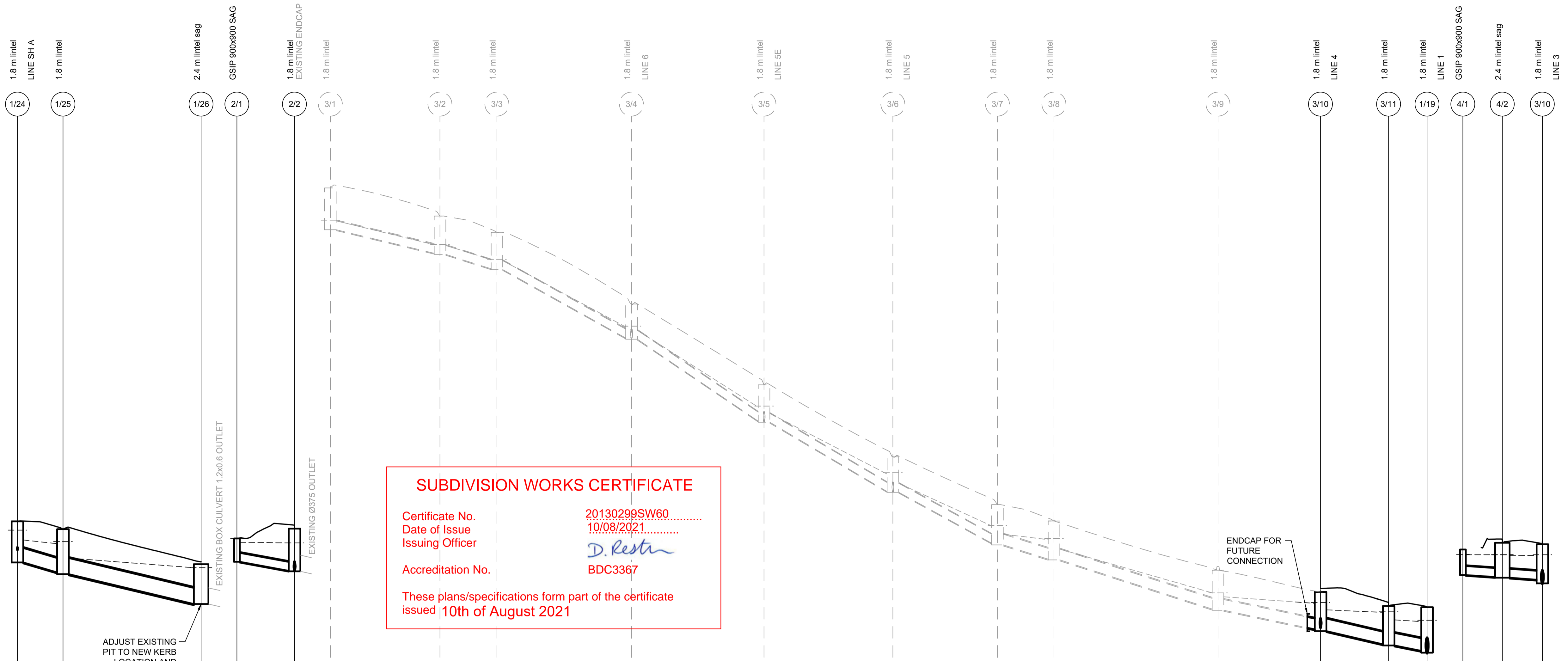
STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
 THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

**REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 1**

PROJECT No: **110185-12**
 SHEET No: **CC1423**
 PLAN No: **110185-12-CC1423**

C

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SUBDIVISION WORKS CERTIFICATE

Certificate No. **20130299SW60**
 Date of Issue **10/08/2021**
 Issuing Officer *D. Restra*
 Accreditation No. **BDC3367**

These plans/specifications form part of the certificate issued **10th of August 2021**

DATUM (m)	34.00			33.00			41.00												39.00		
PEAK FLOW (L/s)	847	867	151	37	66	75	138	202	264	293	322	349	401	425	26	39					
PIPE SIZE (mm)	600	675	375	375	375	375	375	375	375	450	450	450	525	525	375	375					
PIPE CLASS	RRJ2	RRJ3	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2					
PIPE GRADE (%)	4.4	4.3	3.1	4.3	5.0	10.2	12.4	10.7	9.7	5.0	6.0	3.7	3.9	2.8	1.0	1.0					
PIPE COVER MINIMUM	1.09	1.10	0.59	1.38	1.18	1.14	1.07	1.15	1.10	1.17	1.05	1.10	1.23	1.14	0.77	1.12					
FULL PIPE VELOCITY (m/s)	3.00	2.42	1.37	0.34	0.60	0.68	1.25	1.83	2.39	1.84	2.03	2.20	1.85	1.97	0.23	0.36					
HGL GRADE (%)	1.62	1.4	0.24	4.36	4.91	9.87	11.6	9.41	8.14	1.92	5.33	1.28	0.74	0.83	0.02	0.04					

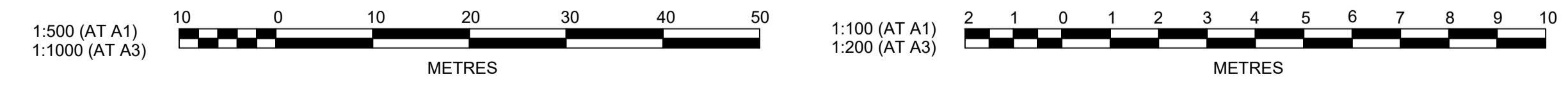
WAE	381.178 15.40 39.851 39.703			0			0												0																												
HYDRAULIC GRADE LINE	41.276	40.863	40.709	61.218	60.218	60.185	59.6	59.209	59.179	59.554	56.313	56.776	56.638	52.838	53.42	52.786	49.89	50.624	50.235	47.731	48.454	48.106	47.062	47.879	47.032	47.482	44.972	45.652	44.922	45.487	44.125	45.213	44.941	43.099	44.835	44.519	43.224	44.452	43.749	45.247	44.996	44.314	45.245	45.216	45.213	44.941	
INVERT LEVEL	39.977	39.927	39.507	60.943	59.86	59.81	59.209	58.985	58.985	58.985	56.313	56.263	52.838	52.786	49.89	49.86	47.731	47.656	47.062	47.032	44.972	44.922	44.125	44.05	43.099	43.449	43.449	44.519	44.519	44.519	44.519	44.519	43.224	43.149	43.149	43.149	44.996	44.996	44.314	44.284	44.284	44.284	44.284				
DESIGN SURFACE LEVEL	41.642	41.317	40.34	62.592	61.414	60.734	60.734	60.734	60.734	57.738	56.313	55.738	52.838	52.786	51.346	51.346	49.342	48.342	47.062	47.032	46.6	44.922	44.922	44.125	44.05	43.099	43.449	43.449	44.519	44.519	44.519	44.519	44.519	43.224	43.149	43.149	43.149	44.996	44.996	44.314	44.284	44.284	44.284	44.284			
ROAD CHAINAGE	49.45	44.29	15.40	0.00	190.00	181.17	181.17	181.17	181.17	152.80	152.80	152.80	152.80	152.80	124.62	124.62	75.00	75.00	66.29	66.29	33.00	33.00	13.18	13.18	13.18	13.18	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01	99.01
PIPE CHAINAGE	342.757	352.28	381.178	0	22.938	34.851	34.851	34.851	34.851	63.005	63.005	63.005	63.005	63.005	90.739	90.739	117.699	117.699	117.699	117.699	165.719	165.719	207.175	207.175	207.175	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	221.42	

LINE 1

LINE 2

LINE 3

LINE 4



AMENDMENT	DES	DRN	CKD	APR	DATE	
D	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
C	DRAINAGE REVISED	JET	JET	MP	RO	23/03/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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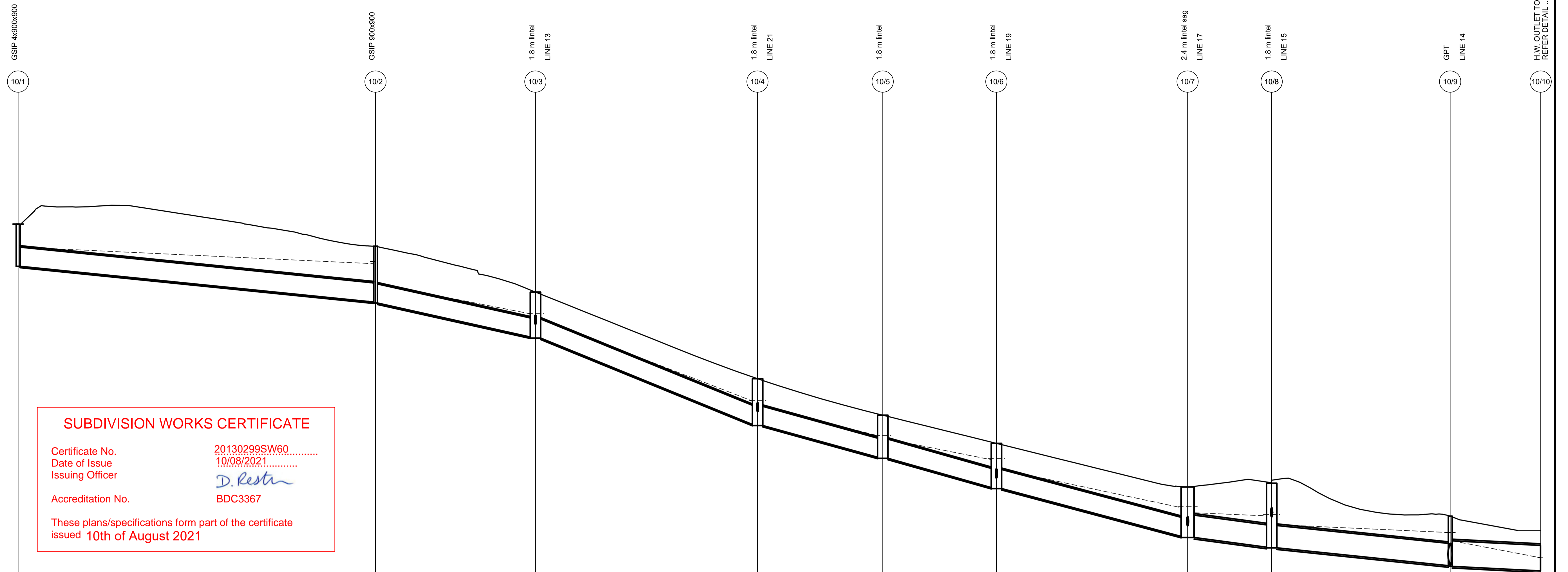
**REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 2**

PROJECT No: **110185-12**
 SHEET No: **CC1424**

PLAN No: **110185-12-CC1424**

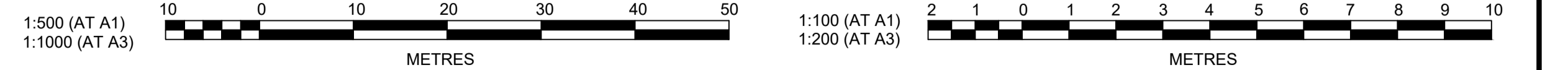
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DATUM (m)	46.00																										
PEAK FLOW (L/s)	2011		2011		2089		2179		2210		2467		2538		2775		4426										
PIPE SIZE (mm)	900		900		900		900		900		900		1050		1050		(2x)1200										
PIPE CLASS	RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2										
PIPE GRADE (%)	2.0		4.2		7.8		5.1		5.1		5.0		2.3		2.0		1.0										
PIPE COVER MINIMUM	1.00		1.25		1.10		1.04		1.00		1.10		1.27		1.02		1.0										
FULL PIPE VELOCITY (m/s)	3.16		3.16		3.28		3.43		3.47		3.88		2.93		3.21		1.96										
HGL GRADE (%)	0.93		3.73		7.39		4.68		3.61		4		0.74		0.88		3.74										
WAE																											
HYDRAULIC GRADE LINE	53.317		52.538	51.587		50.185	49.941		44.084	44.29		43.325	42.867		41.071	40.831		40.686	40.272		39.903	39.513		38.1	38.089	38.717	
INVERT LEVEL	52.417		50.737	50.687		49.091	49.041		44.983	44.933		43.44	43.39		42.017	41.967		39.72	39.67		39.212	39.162		38.543	38.313	38.1	
DESIGN SURFACE LEVEL	54.4		53.359	50.687		51.203	49.041		47.131	45.417		44.092	42.867		42.046	42.216		42.216	42.216		42.216	42.216		40.673	38.313	39.299	38.717
ROAD CHAINAGE						167.20			115.00			85.59			14.20				160.00								
PIPE CHAINAGE	0		84.001			121.57			173.767			203.177			229.882				294.571								357.769

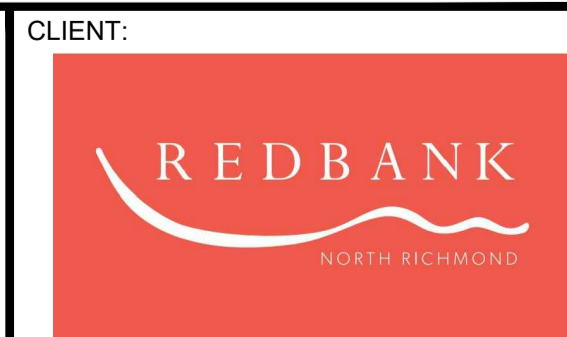
LINE 10



C	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS				
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21	
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21	
	AMENDMENT	DES	DRN	CKD	APR	DATE	

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
DRAINAGE LONGITUDINAL SECTIONS
SHEET 3

PROJECT No: **110185-12**
SHEET No: **CC1425**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1425

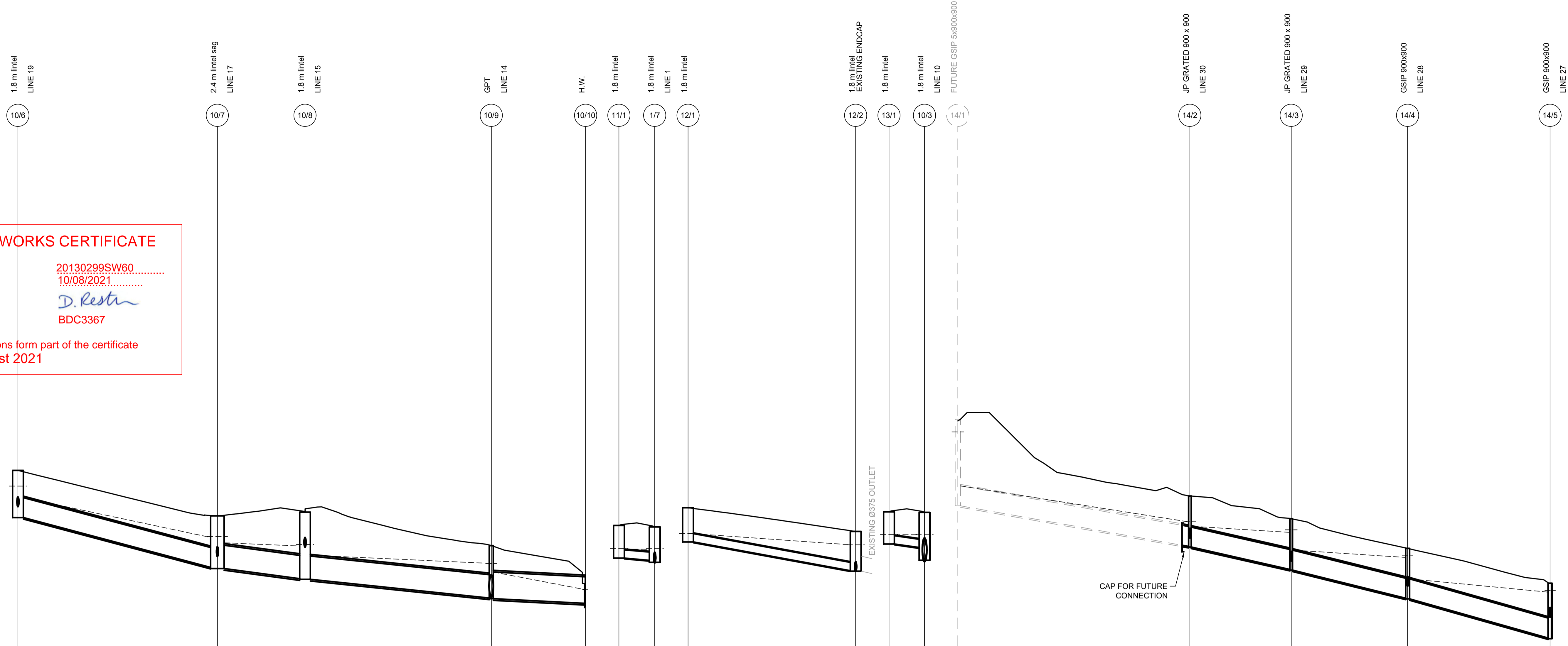
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Plotted: 21 July, 2021 2:52:53 PM File Name: \\jwp.local\id\l\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1426.dwg

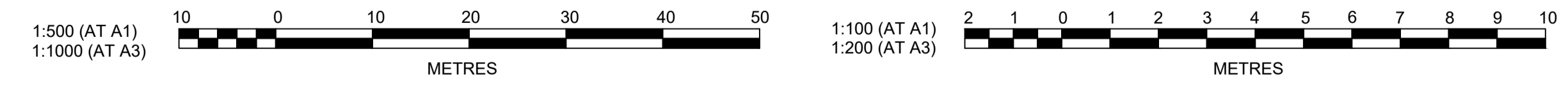
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021



LINE	10	11	12	13	14
DATUM (m)	35.00		48.00	34.00	43.00
PEAK FLOW (L/s)	2467	2538	2775	4424	
PIPE SIZE (mm)	900	1050	1050	(2x)1200	
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	
PIPE GRADE (%)	5.0	2.3	2.0	1.0	
PIPE COVER MINIMUM	1.10	1.27	1.26	1.10	
FULL PIPE VELOCITY (m/s)	3.88	2.93	3.21	1.96	
HGL GRADE (%)	4	0.74	0.88	3.74	
WAE					
HYDRAULIC GRADE LINE	43.325	41.071	40.686	38.717	46.607
INVERT LEVEL	42.017	39.72	39.212	38.573	46.333
DESIGN SURFACE LEVEL	44.092	42.046	42.216	40.34	46.578
ROAD CHAINAGE	58.88	14.20	160.00	167.20	101.34
PIPE CHAINAGE	230.041	274.981	294.72	336.684	357.948



AMENDMENT	DES	DRN	CKD	APR	DATE
D	MP	VS	RO	MS	21/07/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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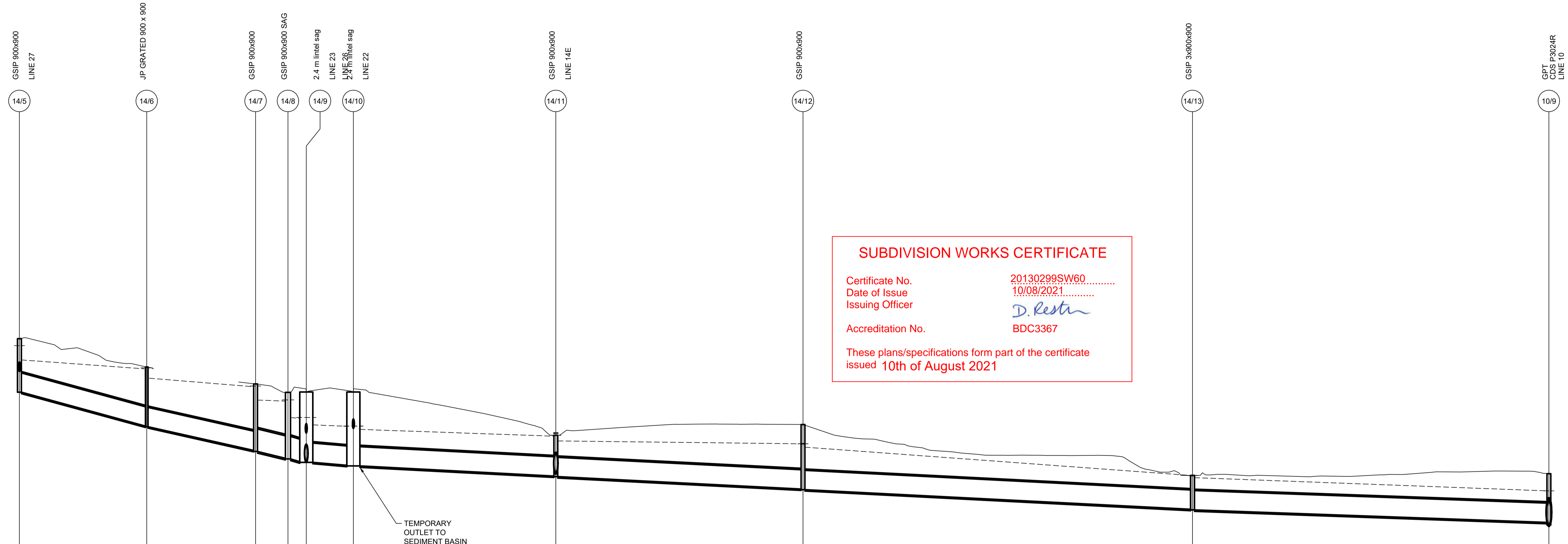
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 4

PROJECT No: 110185-12
 SHEET No: CC1426
 PLAN No: 110185-12-CC1426

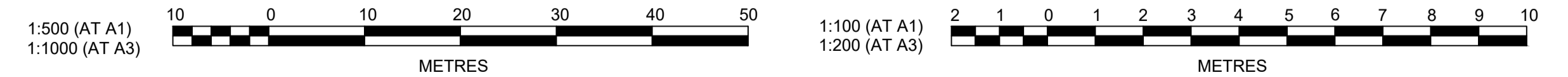
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DATUM (m)	33.00																			
PEAK FLOW (L/s)	2324		2457		2456		2614		3116		3212		3699		2363		1689			
PIPE SIZE (mm)	900		900		1050		1050		(2x)900		(2x)900		900		900		900			
PIPE CLASS	RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ3		RRJ3			
PIPE GRADE (%)	5.3		4.4		4.2		3.0		1.2		1.0		1.0		1.0		0.7			
PIPE COVER MINIMUM	1.53		1.79		1.93		1.98		2.39		0.93		0.97		0.59		0.64			
FULL PIPE VELOCITY (m/s)	3.65		3.86		2.84		3.02		2.45		2.52		5.81		3.71		2.66			
HGL GRADE (%)	1.4		1.57		0.69		0.78		0.63		0.67		0.23		1.45		0.74			
WAE																				
HYDRAULIC GRADE LINE	46.607	46.015	45.589	45.161	44.763	44.143	44.091	43.324	43.291	42.985	42.915	42.772	42.456	42.234	42.1	41.941	40.623	40.52	39.903	39.513
INVERT LEVEL	44.538	44.508	42.928	42.898	41.79	41.74	41.423	41.393	41.265	41.235	41.097	41.067	40.595	40.566	39.99	39.96	39.044	39.014	38.432	38.313
DESIGN SURFACE LEVEL	47.008	47.008	45.684	45.684	44.885	44.885	44.5	44.5	44.517	44.517	44.517	44.517	42.5	42.5	43	43	40.623	40.623	40.702	40.702
ROAD CHAINAGE			539.20	539.20	564.59	564.59	400.59	400.59	400.82	400.82	400.83	400.83	256.605	256.605			248.92	248.92	400.335	400.335
PIPE CHAINAGE	133.432	133.432	163.133	163.133	186.536	186.536	196.096	196.096	200.393	200.393	211.363	211.363	256.605	256.605	316.277	316.277	407.177	407.177	490.335	490.335

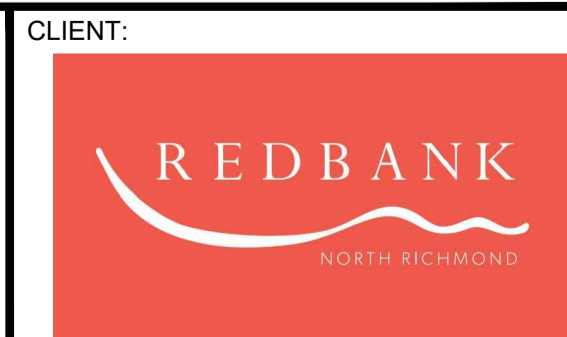
LINE 14



AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
DRAINAGE LONGITUDINAL SECTIONS
SHEET 5

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1427

PROJECT No: 110185-12
SHEET No: CC1427

Plotfile: 21 July, 2021 2:54:41 PM File Name: \\jwp.local\id\sub\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1428.dwg

14E/1 CAPPED STUB
 14/11 GSIP 900x900 LINE 14
 15/1 1.8 m lintel
 15/2 1.8 m lintel LINE 16 LINE A
 15/3 1.8 m lintel
 10/8 1.8 m lintel LINE 10
 16/1 1.8 m lintel
 15/2 1.8 m lintel LINE 15
 17/1 2.4 m lintel sag
 10/7 2.4 m lintel sag LINE 10
 19/1 1.8 m lintel
 19/2 1.8 m lintel
 19/3 1.8 m lintel LINE 20 LINE C
 19/4 2.4 m lintel sag
 19/5 1.8 m lintel
 19/6 1.8 m lintel
 10/6 1.8 m lintel LINE 10
 20/1 1.8 m lintel
 19/3 1.8 m lintel LINE 19
 21/1 1.8 m lintel
 10/4 1.8 m lintel LINE 10

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367

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DATUM (m) 35.00
 PEAK FLOW (L/s) 500
 PIPE SIZE (mm) 900
 PIPE CLASS RRJ2
 PIPE GRADE (%) 1.0
 PIPE COVER MINIMUM 0.65
 FULL PIPE VELOCITY (m/s) 0.79
 HGL GRADE (%) 0.06

WAE	LINE 14E		LINE 15				LINE 16		LINE 17		LINE 19				LINE 20		LINE 21	
HYDRAULIC GRADE LINE	42.465	42.466	43.737	42.683	42.343	41.988	41.941	41.575	40.686	40.91	37.00	35.00	38.00	45.667	45.424	40.00	40.00	
INVERT LEVEL	40.892	40.745	43.382	41.998	41.968	41.23	41.941	41.575	40.686	40.91	43.708	42.263	42.685	45.739	46.109	46.479	45.118	
DESIGN SURFACE LEVEL	42.5	42.5	44.941	43.511	43.511	42.713	41.2	41.575	42.216	42.216	43.708	42.263	42.685	47.055	46.064	46.434	45.111	
ROAD CHAINAGE			285.25	207.61	43.511	42.713	41.2	41.575	108.857	160.00	215.00	168.61	188.61	190.58	46.434	45.925	44.715	
PIPE CHAINAGE	0	13.722	0	57.973	207.61	87.478	178.33	108.857	0	8.262	40.507	168.61	188.61	62.417	190.58	103.15	19.30	
				57.973	207.61	87.478	178.33	108.857	0	8.262	40.507	168.61	188.61	62.417	190.58	103.15	19.30	

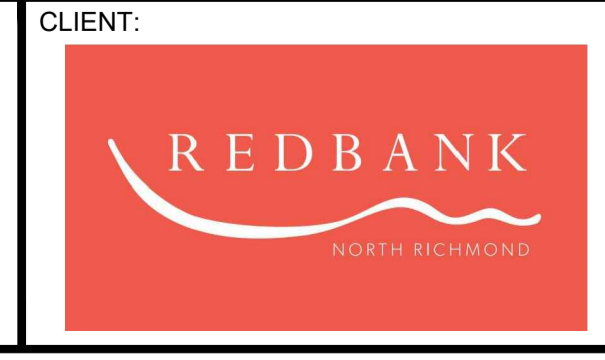


AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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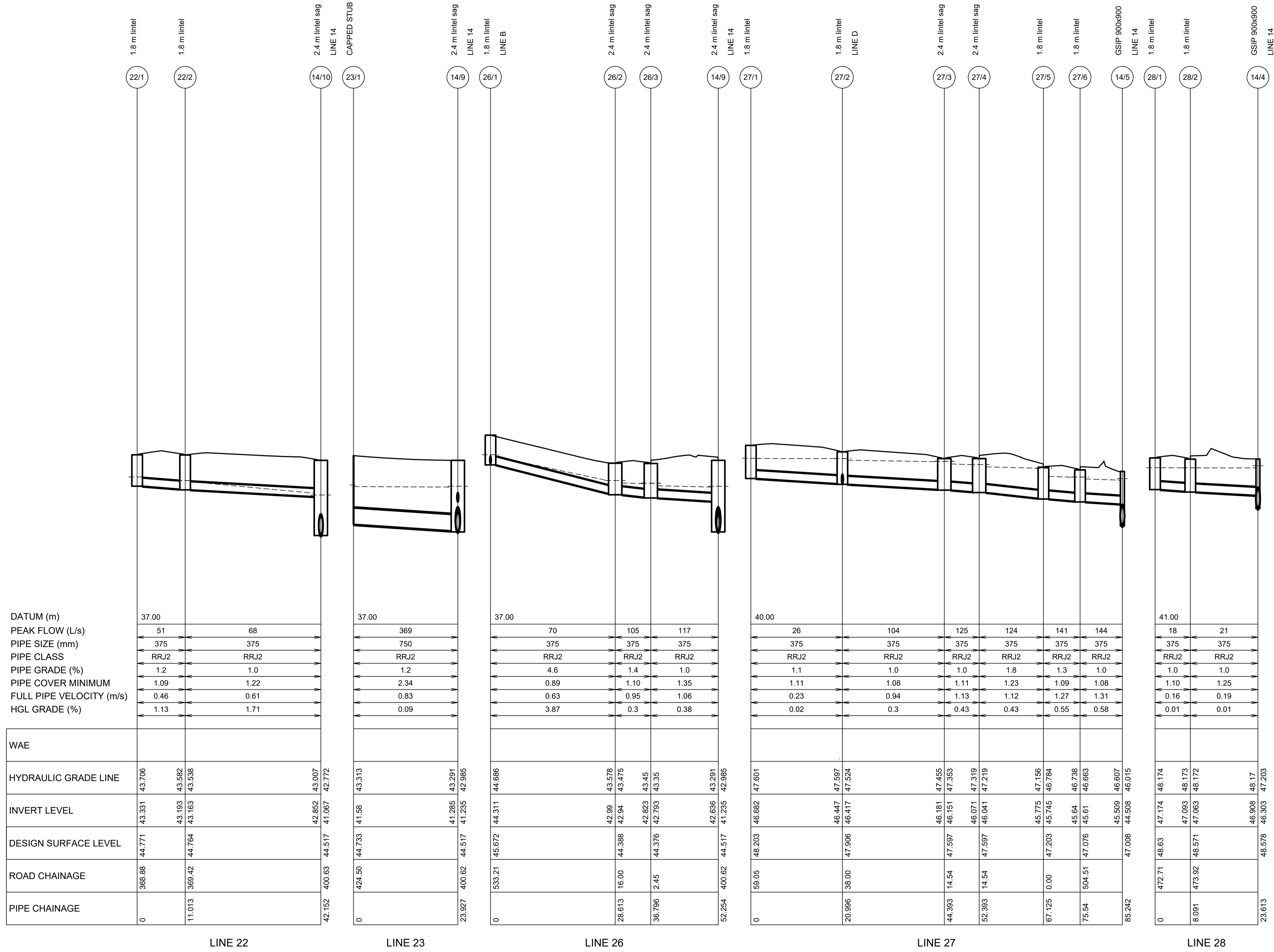
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
DRAINAGE LONGITUDINAL SECTIONS
SHEET 6

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1428

PROJECT No: 110185-12
SHEET No: CC1428

C

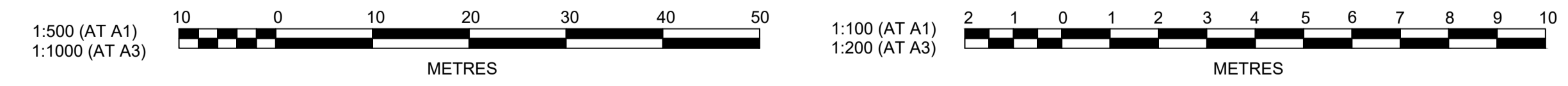
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AMENDMENT	DES	DRN	CKD	APR	DATE
E	MP	VS	RO	MS	21/07/21
D	MP	VS	RO	RO	16/06/21
C	MP	VS	MP	RO	26/05/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 7

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1429

PROJECT No: 110185-12
 SHEET No: CC1429

Plotfile: 21 July 2021 2:56:32 PM File Name: \\jwp.local\ids\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCDC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1430.dwg

1.8 m lintel
29/1
1.8 m lintel
29/2
JP GRATED 900 x 900
LINE 14
14/3
1.8 m lintel
30/1

1.8 m lintel
30/2
LINE 31

1.8 m lintel
30/3
JP GRATED 900 x 900
LINE 14
14/2
1.8 m lintel
31/1
1.8 m lintel
30/2
LINE 30
32/1
GSIP 900x900 SAG

GSIP 900x900 SAG
32/2
2.4 m lintel sag
LINE 33
32/3
2.4 m lintel sag
LINE 34
32/4

GPT
LINE 36
32/5

H.W.
32/6
1.8 m lintel
33/1

1.8 m lintel
33/2

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Date of Issue 10/08/2021
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DATUM (m)
PEAK FLOW (L/s)
PIPE SIZE (mm)
PIPE CLASS
PIPE GRADE (%)
PIPE COVER MINIMUM
FULL PIPE VELOCITY (m/s)
HGL GRADE (%)

WAE

HYDRAULIC GRADE LINE
INVERT LEVEL
DESIGN SURFACE LEVEL
ROAD CHAINAGE
PIPE CHAINAGE

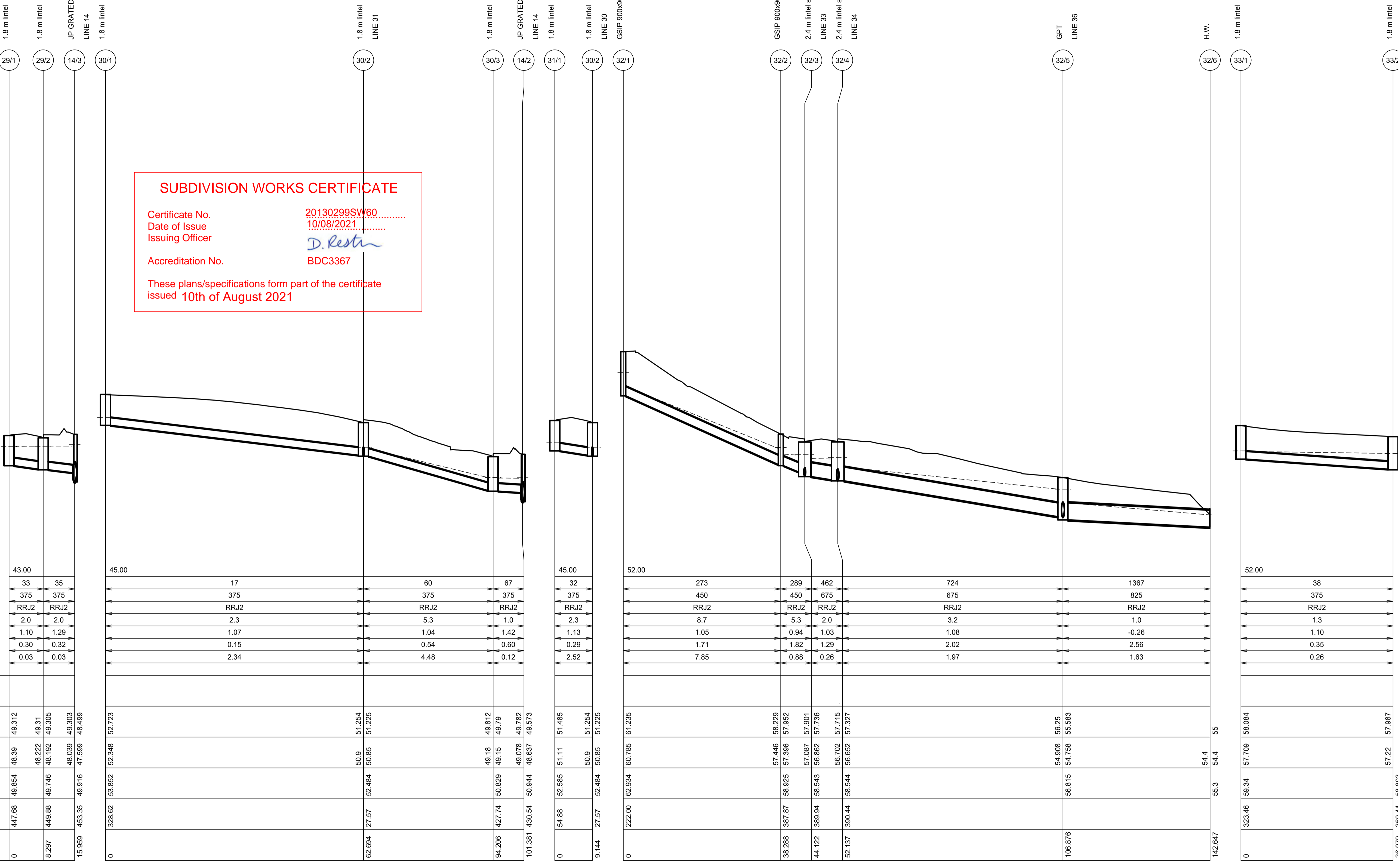
LINE 29

LINE 30

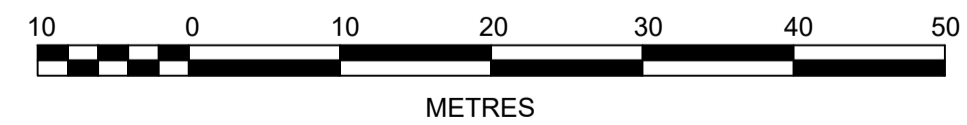
LINE 31

LINE 32

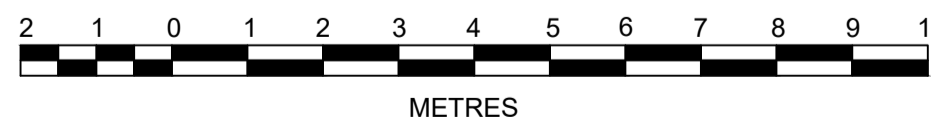
LINE 33



1:500 (AT A1)
1:1000 (AT A3)



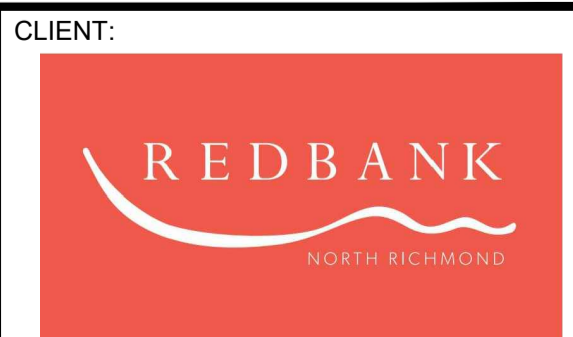
1:100 (AT A1)
1:200 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE	
E	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
D	COUNCIL COMMENTS	MP	VS	RO	RO	16/06/21
C	DRAINAGE REVISED	JET	JET	MP	RO	23/03/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

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SOUTHERN HEIGHTS - PROMENADE
DRAINAGE LONGITUDINAL SECTIONS
SHEET 8

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1430

PROJECT No: 110185-12
SHEET No: CC1430

Plotted: 21 July 2021 2:57:22 PM File Name: \\jwp.local\ids\subs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DANCID\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1431.dwg

1.8 m lintel
33/2

2.4 m lintel sag
LINE 32
32/3

FUTURE 1.8 m lintel
34/5

1.8 m lintel
34/6

2.4 m lintel sag
LINE 32
32/4

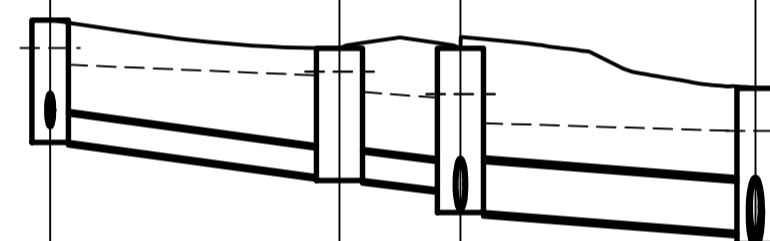
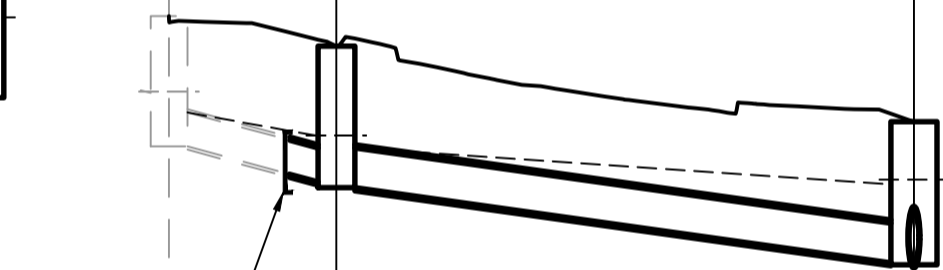
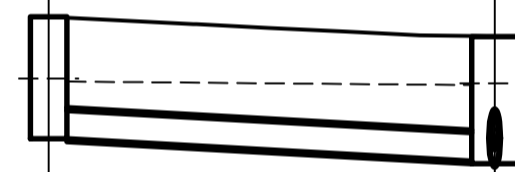
1.8 m lintel
LINE H
36/1

2.4 m lintel sag
36/2

2.4 m lintel sag
LINE 37
36/3

GPT
LINE 32
32/5

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 Certificate No. 20130299SW60
 Date of Issue 10/08/2021
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1.8 m lintel
37/1

1.8 m lintel
LINE 39
37/2

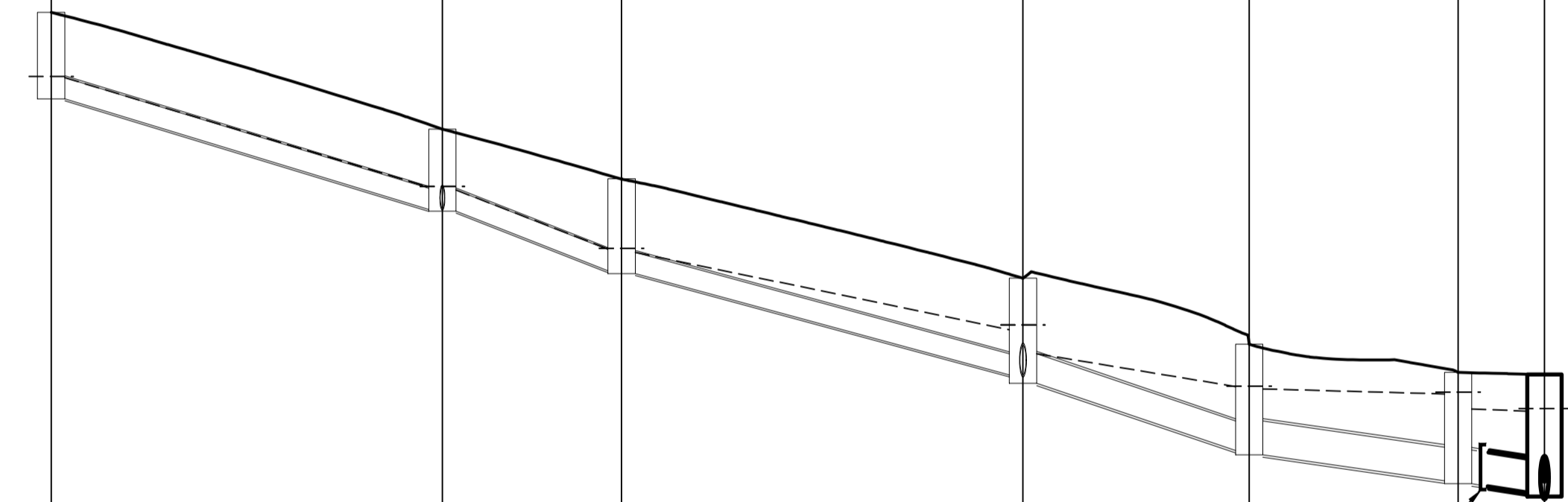
1.8 m lintel
37/3

1.8 m lintel
LINE 38
37/4

1.8 m lintel
37/5

1.8 m lintel
37/6

2.4 m lintel sag
LINE 36
36/3



DATUM (m)	52.00
PEAK FLOW (L/s)	76
PIPE SIZE (mm)	375
PIPE CLASS	RRJ2
PIPE GRADE (%)	1.0
PIPE COVER MINIMUM	1.19
FULL PIPE VELOCITY (m/s)	0.68
HGL GRADE (%)	0.16

ENDCAP FOR FUTURE CONNECTION

ENDCAP FOR FUTURE CONNECTION

WAE	
HYDRAULIC GRADE LINE	57.997 57.946 56.895 57.901 56.862 57.736
INVERT LEVEL	57.22 57.19 56.895 57.901 56.862 57.736
DESIGN SURFACE LEVEL	56.803 56.803 56.543 56.543
ROAD CHAINAGE	360.44 360.44 389.94 389.94
PIPE CHAINAGE	366.979 366.979 389.94 389.94

LINE 33

LINE 34

LINE 36

LINE 37

DATUM (m)	54.00
PEAK FLOW (L/s)	236 253
PIPE SIZE (mm)	450 525
PIPE CLASS	RRJ2 RRJ2
PIPE GRADE (%)	4.2 2.6
PIPE COVER MINIMUM	1.17 1.10
FULL PIPE VELOCITY (m/s)	1.48 1.17
HGL GRADE (%)	2.82 1.26

WAE	
HYDRAULIC GRADE LINE	58.291 58.924 58.216 58.666 57.746 58.354 57.671 58.196 56.678 57.715 56.652 57.327
INVERT LEVEL	58.291 58.924 58.216 58.666 57.746 58.354 57.671 58.196 56.678 57.715 56.652 57.327
DESIGN SURFACE LEVEL	59.939 59.939 59.542 59.542 56.544 56.544
ROAD CHAINAGE	1436.56 1436.56 177.142 177.142 390.44 390.44
PIPE CHAINAGE	166.071 166.071 177.142 177.142 390.44 390.44

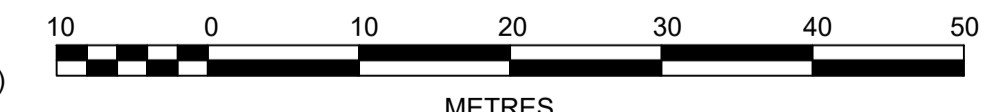
DATUM (m)	50.00
PEAK FLOW (L/s)	163 186 661
PIPE SIZE (mm)	375 375 675
PIPE CLASS	RRJ2 RRJ2 RRJ2
PIPE GRADE (%)	2.4 1.6 1.3
PIPE COVER MINIMUM	1.16 1.41 1.20
FULL PIPE VELOCITY (m/s)	1.47 1.69 1.85
HGL GRADE (%)	0.73 0.96 0.53

WAE	
HYDRAULIC GRADE LINE	57.125 56.1 56.646 56.985 55.596 56.765 55.471 56.689 55.171 56.352 54.908 56.25 54.758 55.583
INVERT LEVEL	57.125 56.1 56.646 56.985 55.596 56.765 55.471 56.689 55.171 56.352 54.908 56.25 54.758 55.583
DESIGN SURFACE LEVEL	57.717 57.717 57.341 57.341 57.341 57.341 56.544 56.544
ROAD CHAINAGE	413.45 413.45 0.00 0.00 394.31 394.31 46.641
PIPE CHAINAGE	413.45 413.45 0.00 0.00 394.31 394.31 46.641

DATUM (m)	53.00
PEAK FLOW (L/s)	34 84 102 442 460 468
PIPE SIZE (mm)	375 375 375 525 600 600
PIPE CLASS	RRJ2 RRJ2 RRJ2 RRJ2 RRJ2 RRJ2
PIPE GRADE (%)	5.7 6.7 5.1 6.0 2.5 2.0
PIPE COVER MINIMUM	1.06 0.98 1.22 1.39 1.21 1.33
FULL PIPE VELOCITY (m/s)	0.31 0.76 0.93 2.04 1.63 1.65
HGL GRADE (%)	5.59 6.57 3.85 2.9 0.48 0.49

WAE	
HYDRAULIC GRADE LINE	62.609 62.234 60.27 60.667 59.182 59.57 57.333 58.135 55.988 57.126 55.913 57.083 55.449 56.594 55.399 56.726 55.246 56.689 55.171 56.352
INVERT LEVEL	62.234 62.234 60.27 60.667 59.182 59.57 57.333 58.135 55.988 57.126 55.913 57.083 55.449 56.594 55.399 56.726 55.246 56.689 55.171 56.352
DESIGN SURFACE LEVEL	63.769 63.769 61.695 61.695 60.814 60.814 59.048 59.048 57.877 57.877 57.877 57.877 56.544 56.544
ROAD CHAINAGE	285.00 285.00 299.00 299.00 314.40 314.40 349.00 349.00 18.22 18.22 29.41 29.41 394.31 394.31
PIPE CHAINAGE	285.00 285.00 299.00 299.00 314.40 314.40 349.00 349.00 18.22 18.22 29.41 29.41 394.31 394.31

1:500 (AT A1)
1:1000 (AT A3)



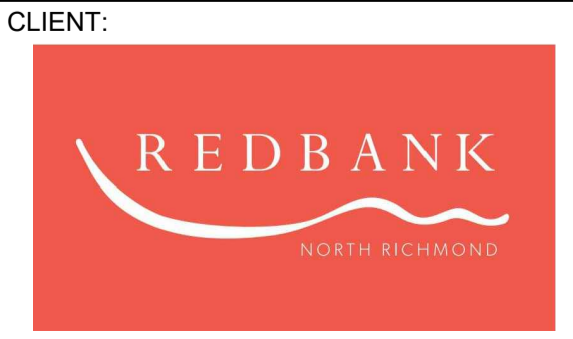
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1:200 (AT A3)



AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
DRAINAGE LONGITUDINAL SECTIONS
SHEET 9

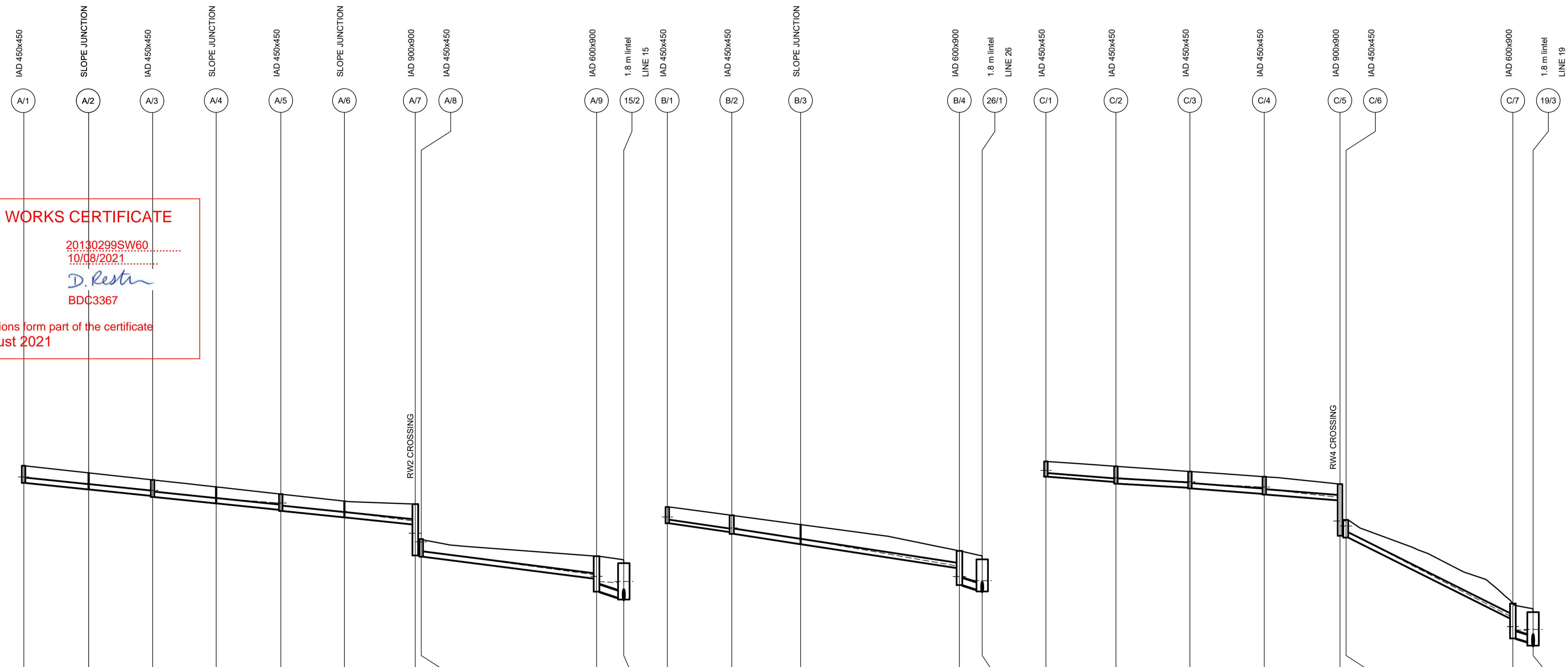
PROJECT No: 110185-12
SHEET No: CC1431
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1431

Plotted: 21 July 2021 2:58:17 PM File Name: \\jwp.local\isubbs\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1432.dwg

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resta*
 Accreditation No. BDC3367

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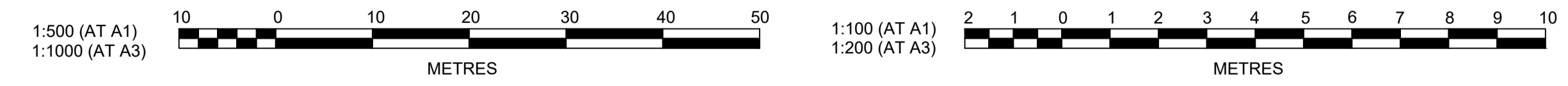


DATUM (m)	38.00									
PEAK FLOW (L/s)	11	22	34	45	56	68	81	81		94
PIPE SIZE (mm)	225	225	225	225	225	225	225	225	300	300
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2	RRJ2
PIPE GRADE (%)	2.0	2.0	2.0	2.0	2.0	2.0	2.5	4.5		
PIPE COVER MINIMUM	0.48	0.45	0.47	0.45	0.46	0.49	0.42	1.16		
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.84	1.13	1.41	1.70	2.03	1.33		
HGL GRADE (%)	1.98	1.95	1.9	1.54	1.78	2.47	1.9	2.66	0.81	

DATUM (m)	40.00				
PEAK FLOW (L/s)	11	22	33	46	
PIPE SIZE (mm)	150	225	225	300	
PIPE CLASS	uPVC	uPVC	uPVC	RRJ2	
PIPE GRADE (%)	2.7	3.0	3.0	4.0	
PIPE COVER MINIMUM	0.53	0.54	0.52	1.10	
FULL PIPE VELOCITY (m/s)	0.63	0.55	0.84	0.65	
HGL GRADE (%)	2.57	2.95	3.4	2.29	

DATUM (m)	43.00									
PEAK FLOW (L/s)	11	22	34	45	60	60	71			
PIPE SIZE (mm)	150	225	225	225	225	225	300			
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2			
PIPE GRADE (%)	1.5	1.1	1.5	1.5	2.0	9.7	3.5			
PIPE COVER MINIMUM	0.49	0.47	0.49	0.47	0.45	0.43	1.06			
FULL PIPE VELOCITY (m/s)	0.62	0.56	0.85	1.14	1.52	1.52	1.00			
HGL GRADE (%)	1.34	0.9	1.06	2.09	1.07	10.09	0.46			

LINE A
LINE B
LINE C



AMENDMENT	DES	DRN	CKD	APR	DATE
B					28/01/21
A					13/01/21

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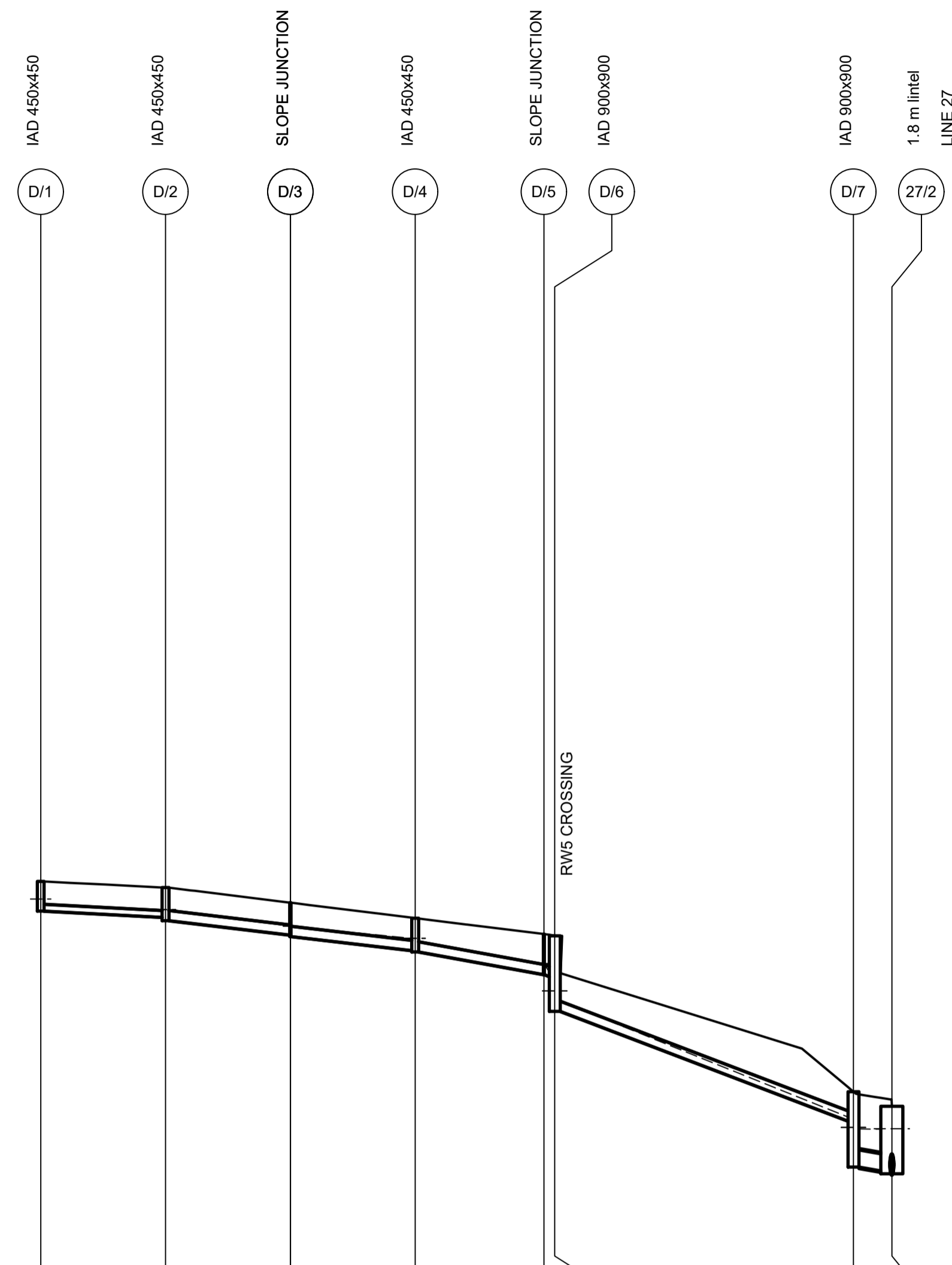
CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE DRAINAGE LONGITUDINAL SECTIONS SHEET 10
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1432

PROJECT No: **110185-12**
 SHEET No: **CC1432**
 B

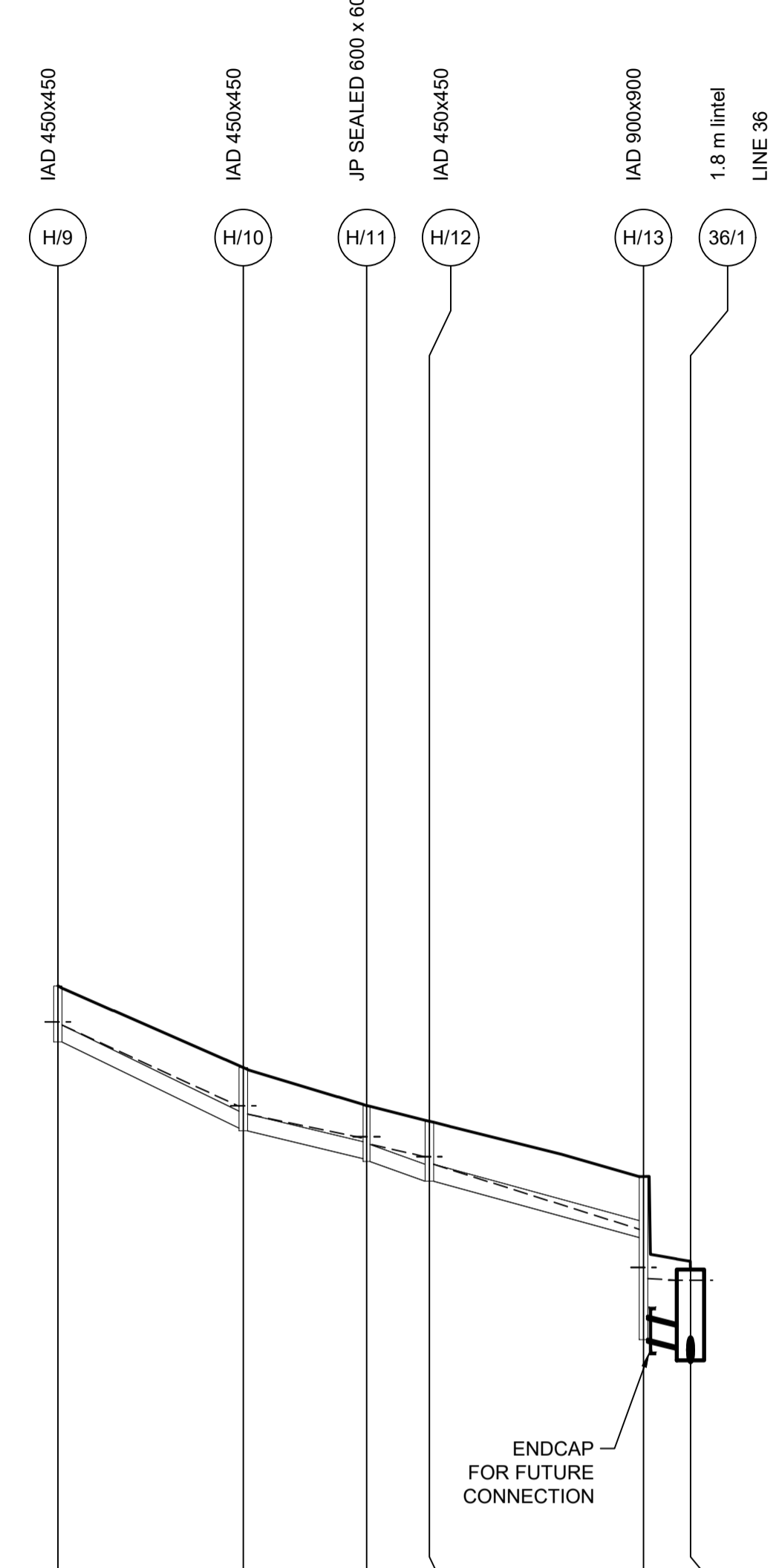
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DATUM (m)	43.00						
PEAK FLOW (L/s)	11	22	32	43	54	54	53
PIPE SIZE (mm)	150	225	225	225	225	225	375
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.0	2.3	2.3	3.5	3.5	7.3	2.0
PIPE COVER MINIMUM	0.50	0.49	0.50	0.51	0.67	0.52	1.20
FULL PIPE VELOCITY (m/s)	0.62	0.55	0.82	1.08	1.36	1.35	0.48
HGL GRADE (%)	0.84	2.47	1.92	3.39	13.7	7.75	0.08

WAE							
HYDRAULIC GRADE LINE	52.365	52.249	51.886	51.614	51.057	47.668	47.326
INVERT LEVEL	52.215	52.077	51.684	51.343	50.813	47.578	47.406
DESIGN SURFACE LEVEL	52.872	52.734	52.402	52.061	51.709	48.229	46.48
ROAD CHAINAGE							
PIPE CHAINAGE	0	13.789	27.579	41.368	55.583	89.781	94.02

LINE D



DATUM (m)	51.00				
PEAK FLOW (L/s)	110	124	124	138	154
PIPE SIZE (mm)	300	300	300	300	375
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	9.3	4.5	6.3	5.3	3.1
PIPE COVER MINIMUM	0.66	0.66	0.68	0.75	1.12
FULL PIPE VELOCITY (m/s)	1.56	1.76	1.75	1.95	1.39
HGL GRADE (%)	8.75	3.88	3.9	6.07	0.65

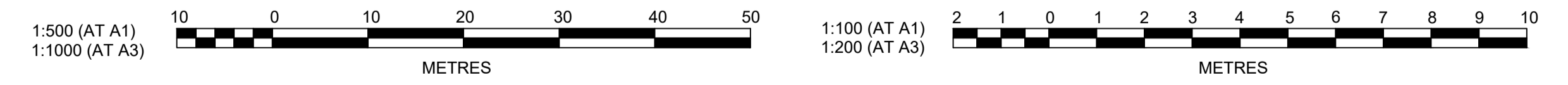
WAE					
HYDRAULIC GRADE LINE	61.847	60.626	60.063	58.435	57.529
INVERT LEVEL	61.772	60.188	59.645	56.488	56.338
DESIGN SURFACE LEVEL	62.77	61.315	60.639	59.375	57.717
ROAD CHAINAGE					
PIPE CHAINAGE	117.108	133.632	144.603	169.271	173.46

LINE H

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021



C	AMENDMENTS TO DRAINAGE AND ROADS 51 & 52	MP	VS	RO	MS	21/07/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

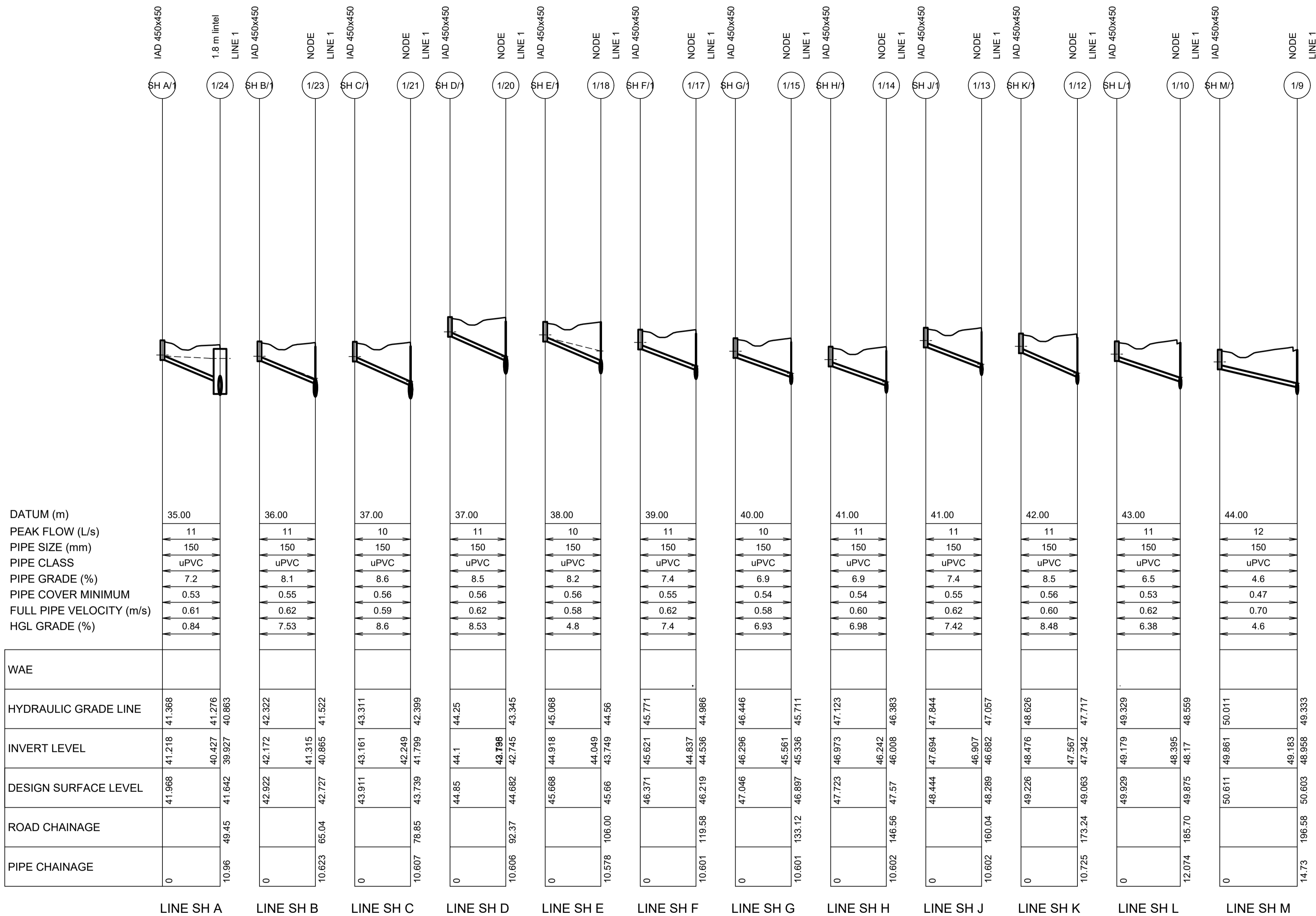
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REDBANK, NORTH RICHMOND SOUTHERN HEIGHTS - PROMENADE DRAINAGE LONGITUDINAL SECTIONS SHEET 11

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1433

PROJECT No: **110185-12**
 SHEET No: **CC1433**

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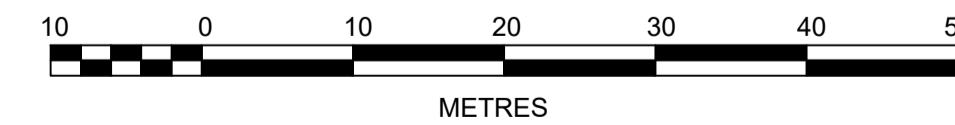
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resta*

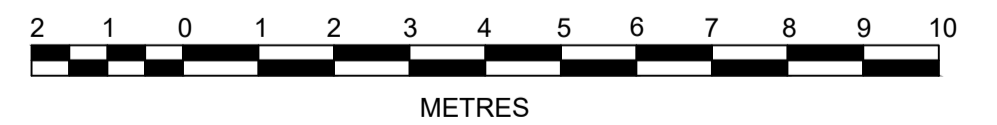
Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

1:500 (AT A1)
1:1000 (AT A3)



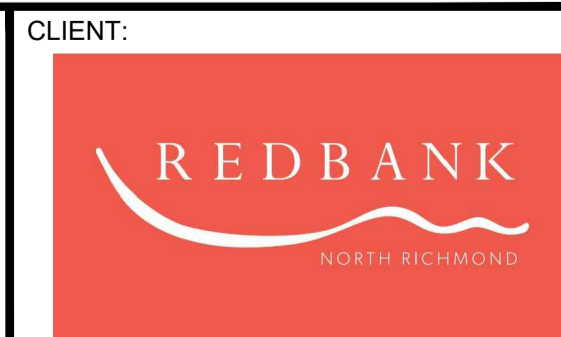
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AMENDMENT	DES	DRN	CKD	APR	DATE
C	MP	VS	RO	MS	21/07/21
B	MP	NM	RO	MS	28/01/21
A	MP	NM	RO	MS	28/01/21

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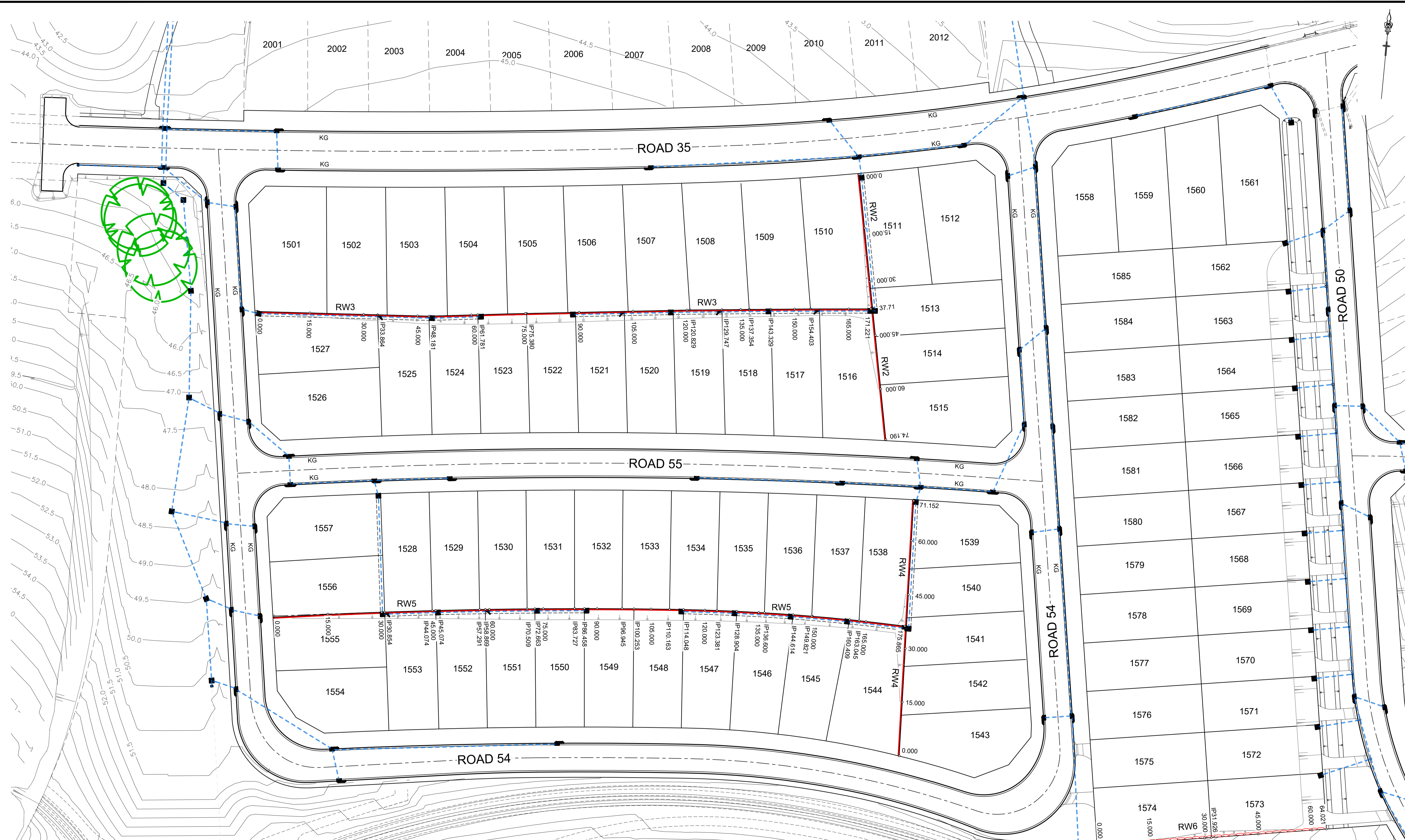
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 DRAINAGE LONGITUDINAL SECTIONS
 SHEET 12

PROJECT No: 110185-12
 SHEET No: CC1434

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1434

C

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Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resta*
 Accreditation No. BDC2367

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B	COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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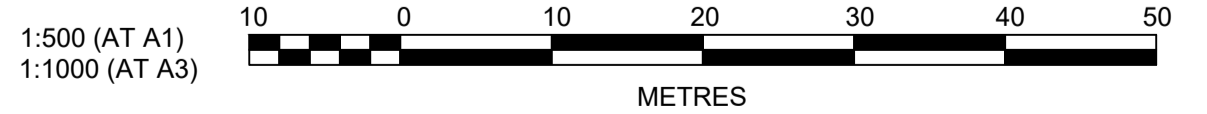
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 RETAINING WALL PLAN

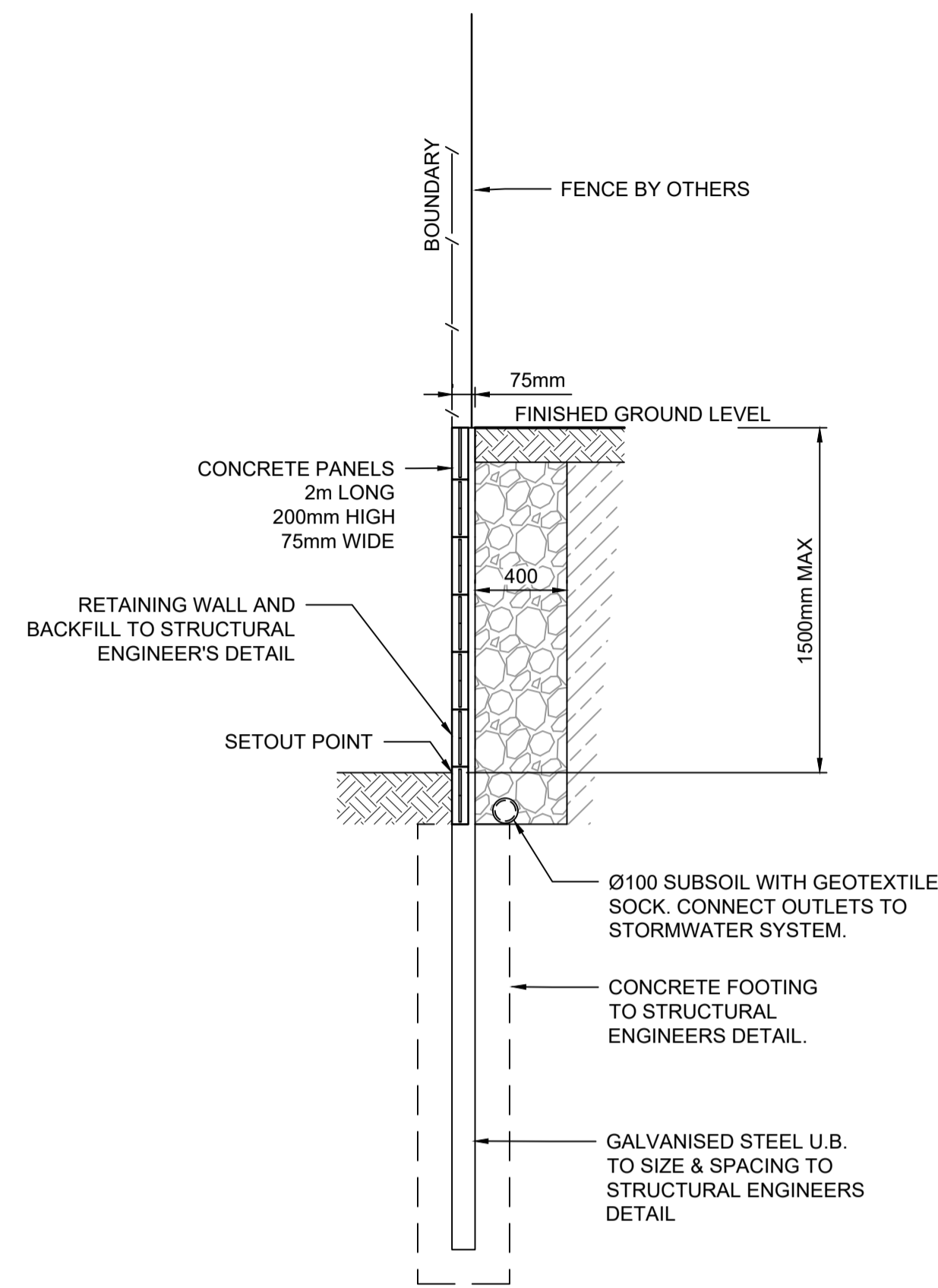
PROJECT No: 110185-12
 SHEET No: CC1500

PLAN No: 110185-12-CC1500

PROJECT No:	110185-12
SHEET No:	CC1500
PLAN No:	110185-12-CC1500

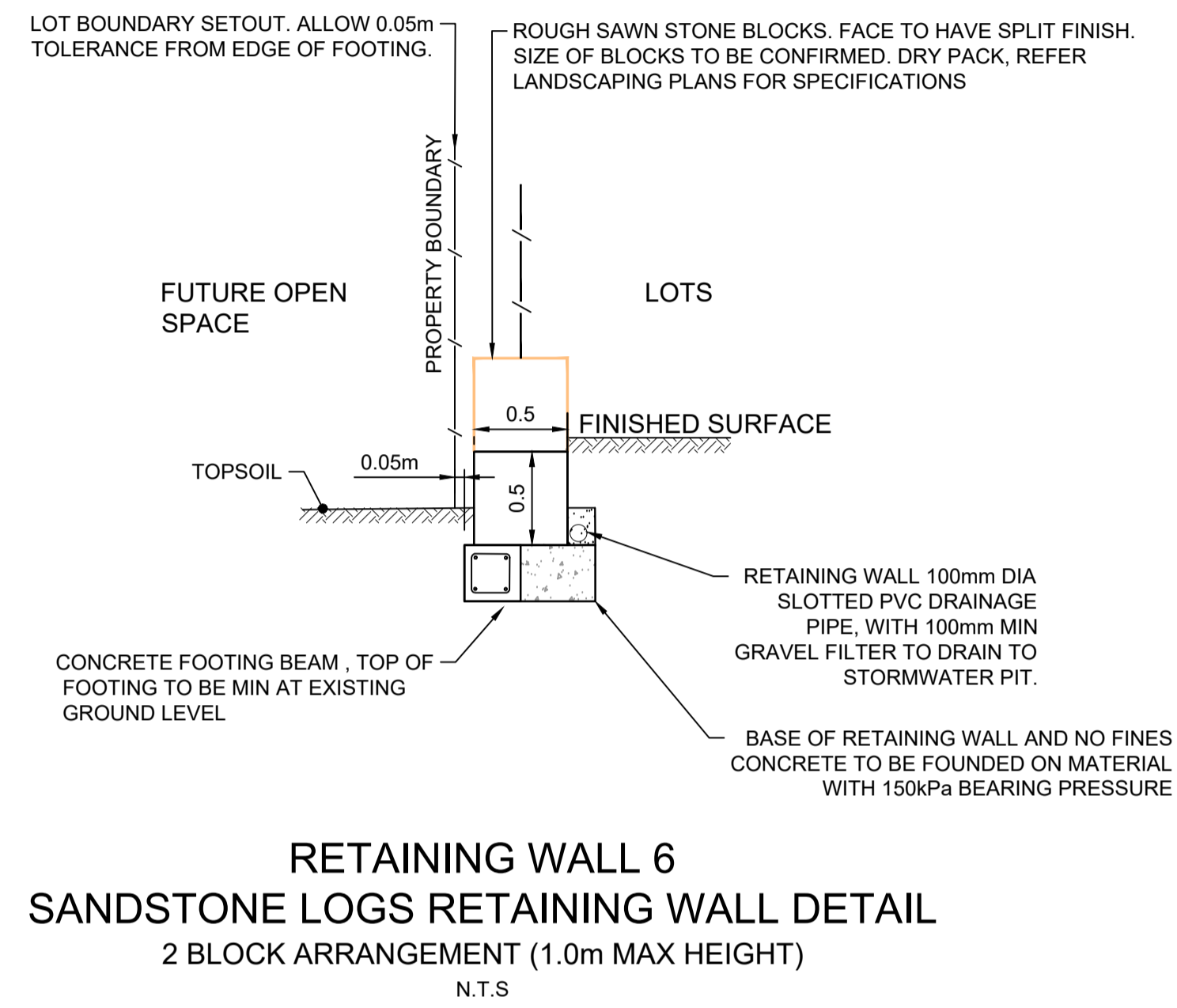


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RETAINING WALL STANDARD DETAIL
 CONCRETE I-BEAM
 FOR RW2, RW3, RW4 AND RW5
 SCALE 1:25

NOTE:
 I BEAMS INCLUDE BRACKETS FOR FENCES
 TO BE INSTALLED



RETAINING WALL 6
SANDSTONE LOGS RETAINING WALL DETAIL
 2 BLOCK ARRANGEMENT (1.0m MAX HEIGHT)
 N.T.S

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

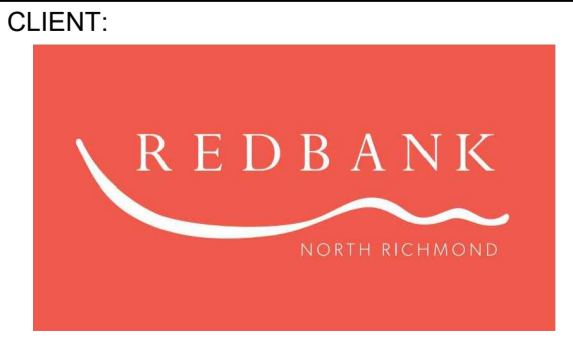
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 issued 10th of August 2021

SUBJECT TO
 STRUCTURAL DESIGN
 AND CERTIFICATION



NO.	DESCRIPTION	MP	VS	RO	MS	13/07/21
A	ISSUE FOR CLIENT REVIEW					
	AMENDMENT	DES	DRN	CKD	APR	DATE

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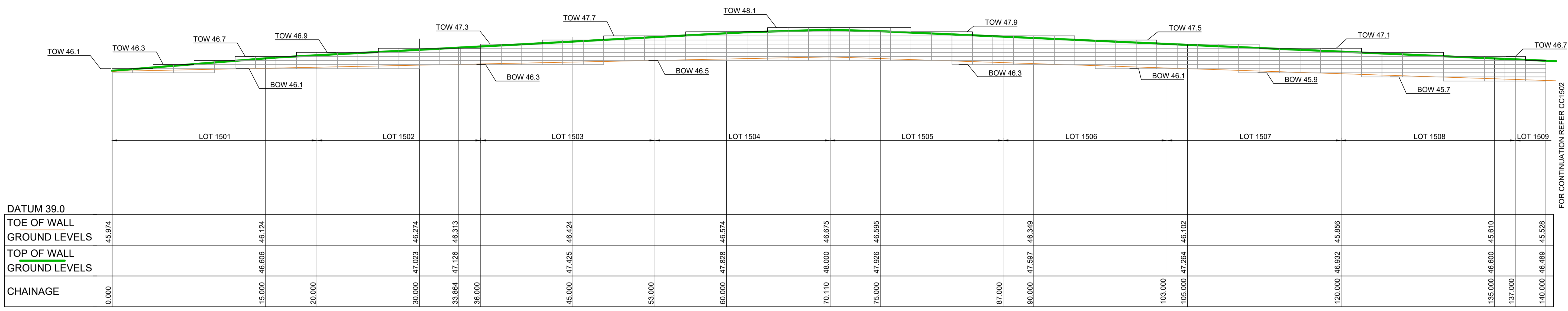


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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 RETAINING WALL DETAILS
 AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1501

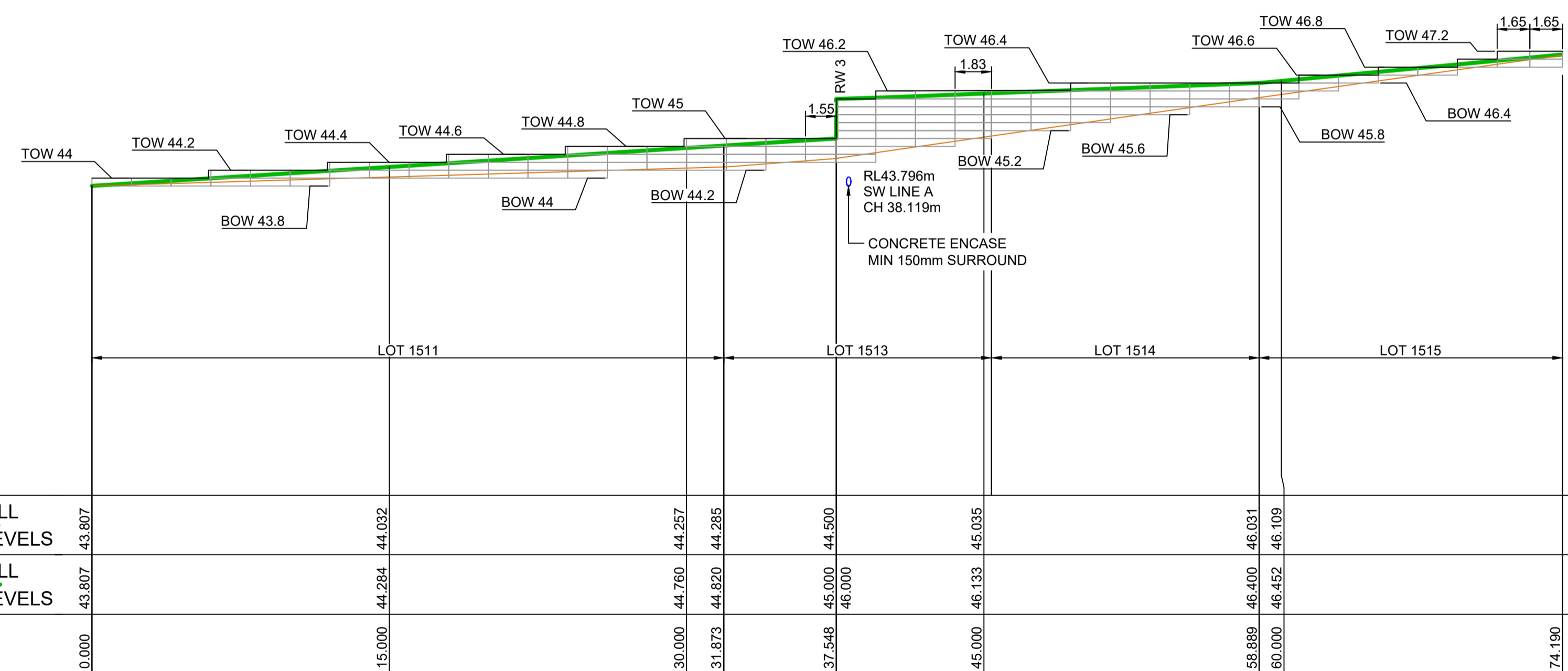
PROJECT No: 110185-12
 SHEET No: CC1501
 A

RETAINING WALL PROFILES SHOWN ARE INDICATIVE ONLY.
REFER TO DESIGN & CONSTRUCT CONTRACT BY OTHERS.
SUBJECT TO SEPARATE STRUCTURAL PLANS & CERTIFICATIONS



LONGITUDINAL SECTION RW3
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

FOR CONTINUATION REFER CC1502



LONGITUDINAL SECTION RW2
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

SUBJECT TO
STRUCTURAL DESIGN
AND CERTIFICATION

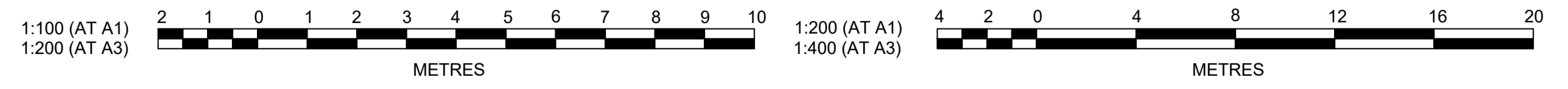
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer *D. Restin*
Accreditation No. BDC3367

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LEGEND

CONCRETE I-BEAM RETAINING WALL



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AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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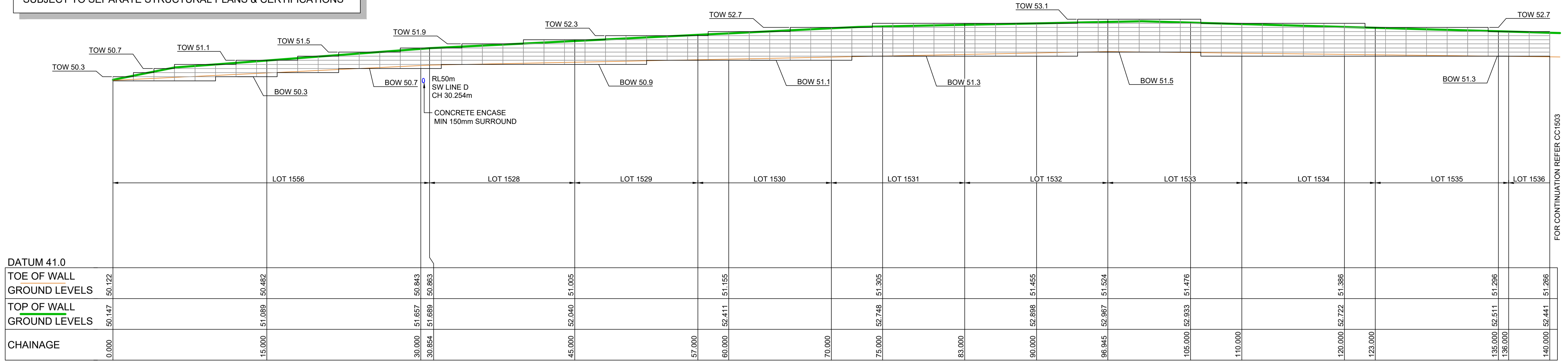
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
RETAINING WALL LONGITUDINAL SECTIONS
SHEET 1

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1511

PROJECT No: 110185-12
SHEET No: CC1511

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SUBJECT TO SEPARATE STRUCTURAL PLANS & CERTIFICATIONS



FOR CONTINUATION REFER CC1503

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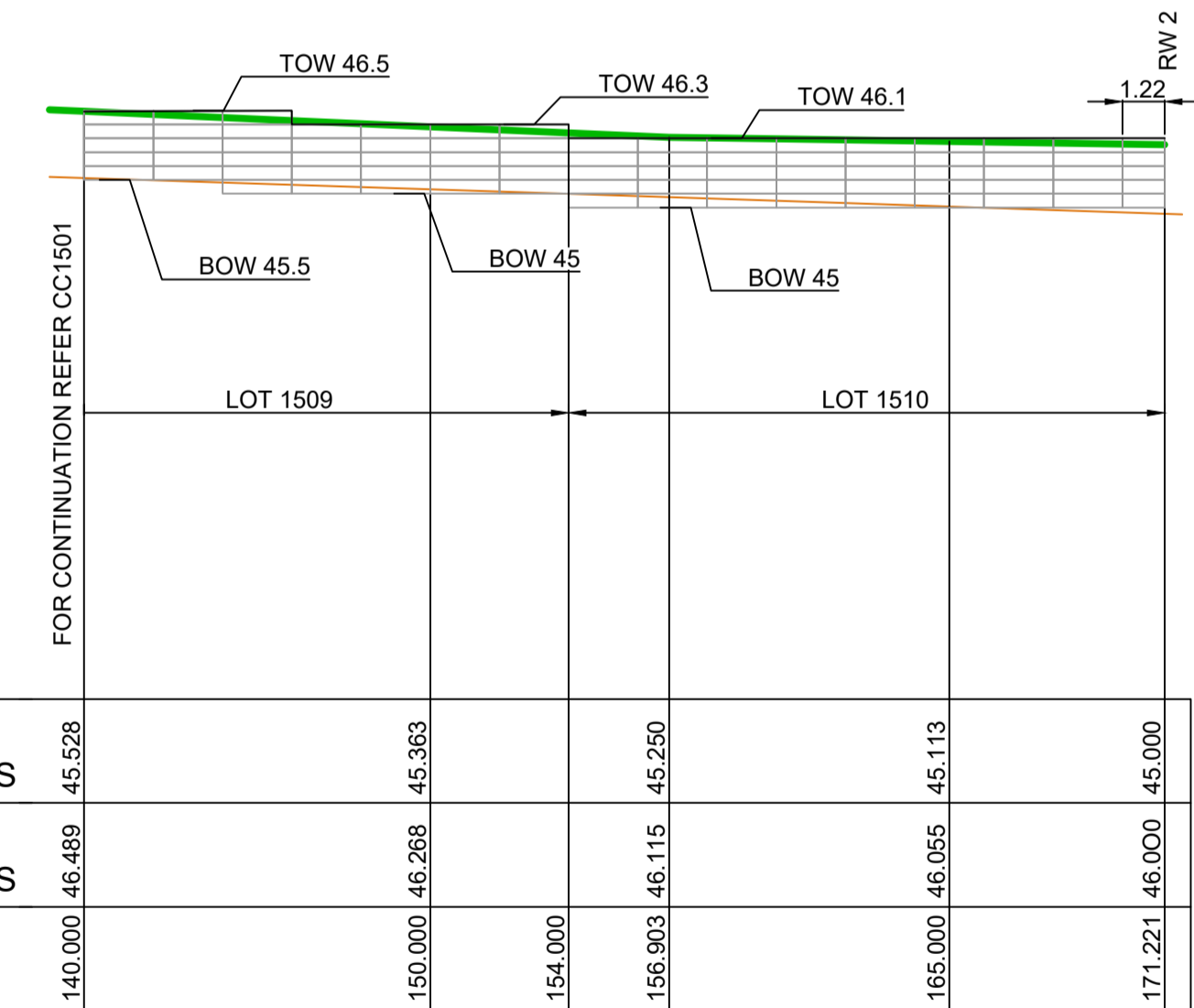
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LONGITUDINAL SECTION RW5
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

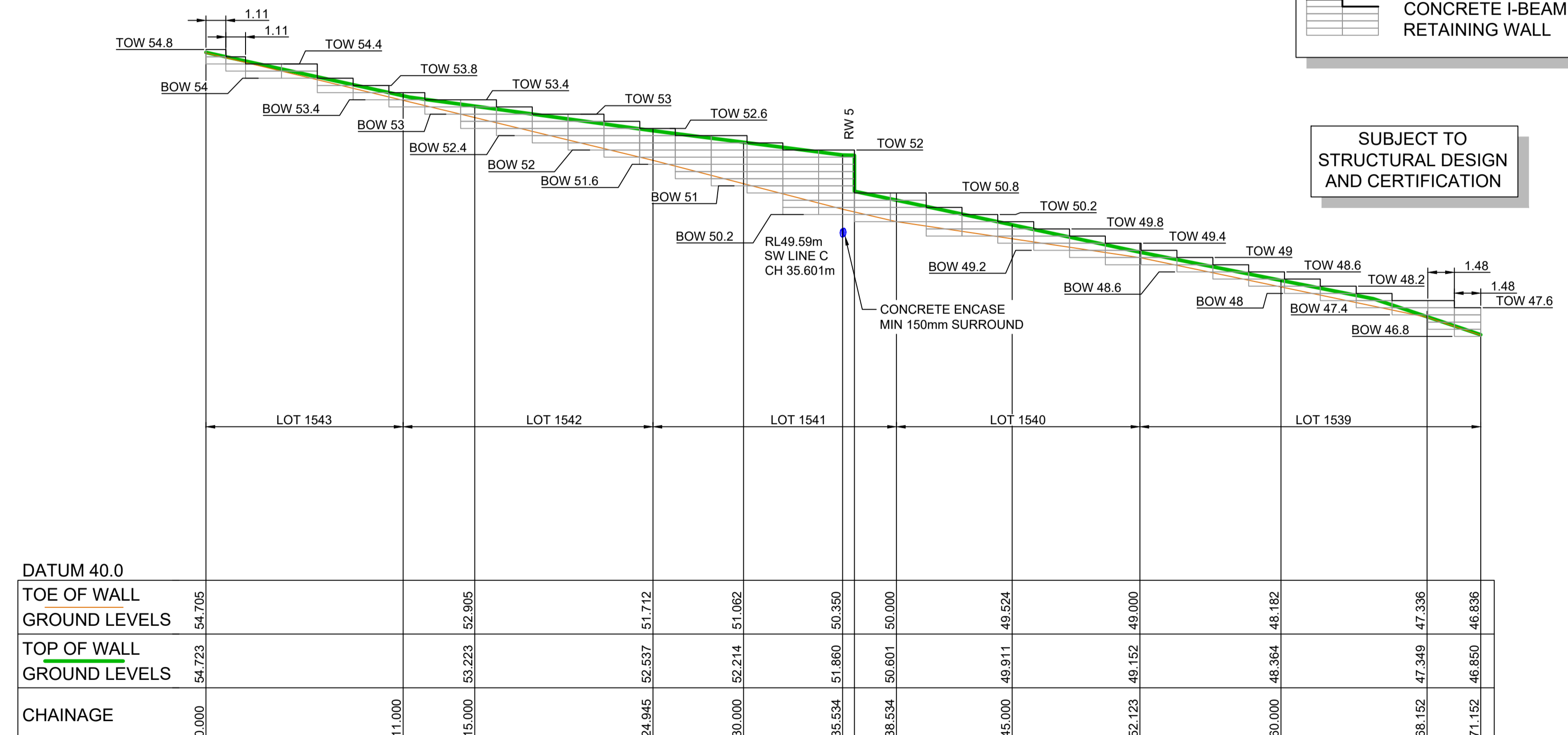
LEGEND

CONCRETE I-BEAM RETAINING WALL

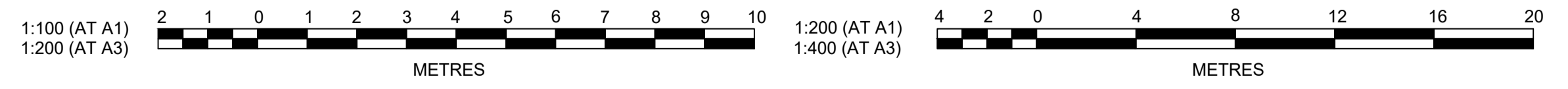
SUBJECT TO STRUCTURAL DESIGN AND CERTIFICATION



LONGITUDINAL SECTION RW3
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



LONGITUDINAL SECTION RW4
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



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AMENDMENT	DES	DRN	CKD	APR	DATE
B	MP	NM	RO	MS	28/07/21
A	MP	VS	RO	MS	13/07/21

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CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

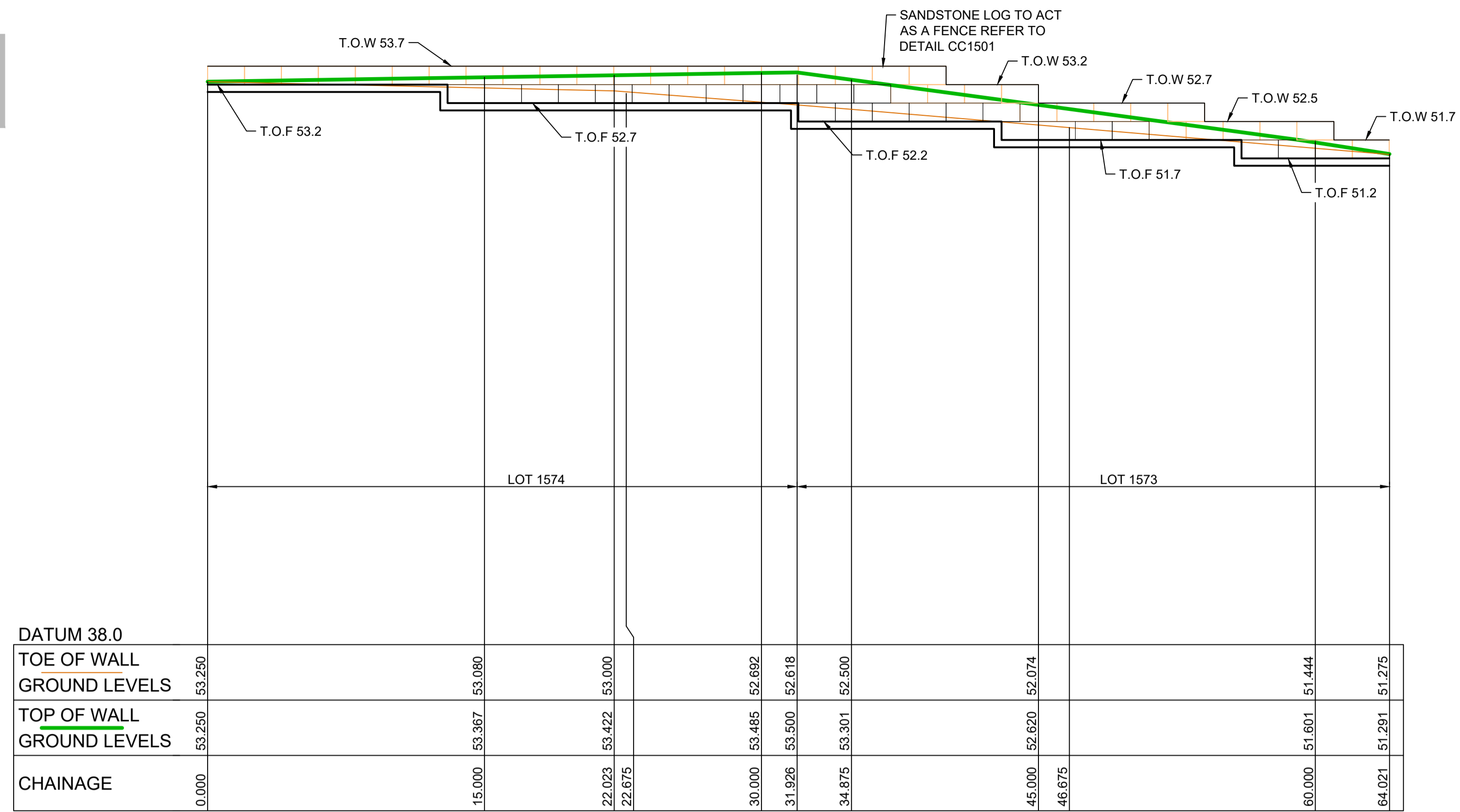
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
RETAINING WALL LONGITUDINAL SECTIONS
SHEET 2

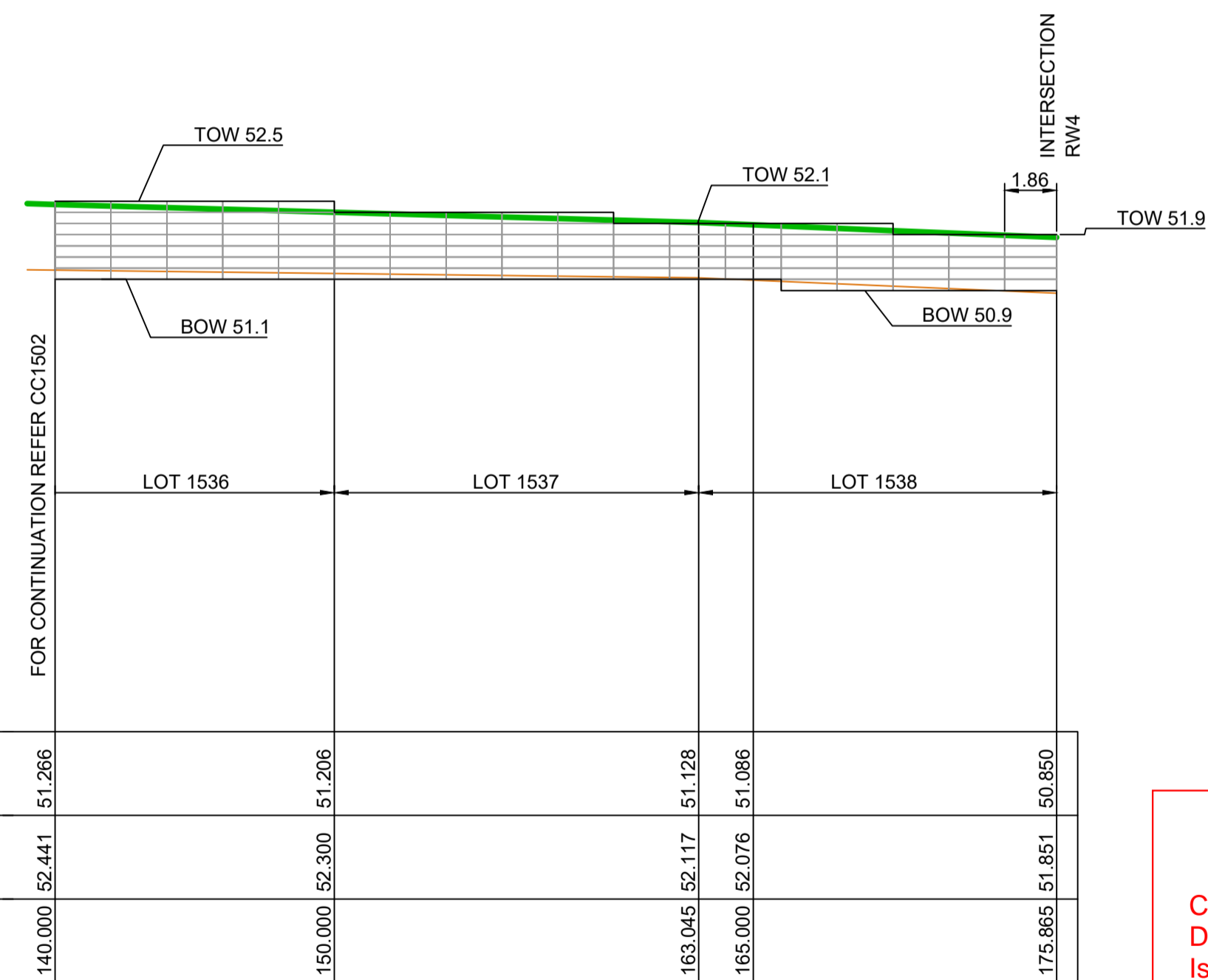
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1512

PROJECT No: 110185-12
SHEET No: CC1512

RETAINING WALL PROFILES SHOWN ARE INDICATIVE ONLY.
REFER TO DESIGN & CONSTRUCT CONTRACT BY OTHERS.
SUBJECT TO SEPARATE STRUCTURAL PLANS & CERTIFICATIONS



LONGITUDINAL SECTION RW6
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



LONGITUDINAL SECTION RW5
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100

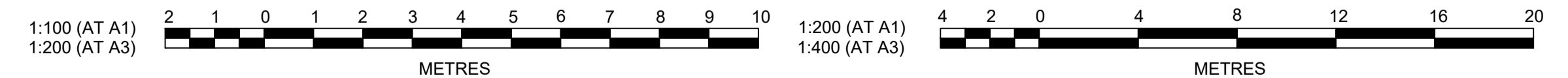
SUBJECT TO
STRUCTURAL DESIGN
AND CERTIFICATION

LEGEND	
	CONCRETE I-BEAM RETAINING WALL
	SANDSTONE LOG RETAINING WALL

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer *D. Restu*
Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

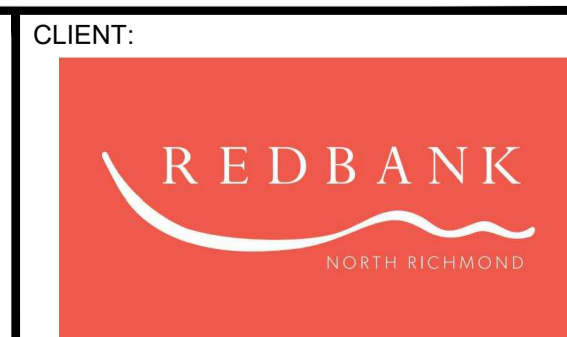


Plotfile: 21 July 2021 3:05:25 PM File Name: \\jwp.local\id\sub\110185 - Redbank North Richmond Residential Precincts\12 - Stage 1 DA\DC\CC\SOUTHERN HEIGHTS\1-PROM\110185-12-CC1513.dwg

REV	DESCRIPTION	DES	DRN	CKD	APR	DATE
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
RETAINING WALL LONGITUDINAL SECTIONS
SHEET 3

PROJECT No: 110185-12
SHEET No: CC1513

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1513

SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004".
- TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.
- ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
- ALL TAIL-OUT DRAINS SHALL BE COUCH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.
- VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.
- ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.
- DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.
- ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
- ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
- THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.
- CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" (THE BLUE BOOK).
- ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.
- THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

- NOTE:**
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE A GROUND COVER MORE THAN 70%, USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.
- WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-
 - INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 6-8.
 - CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.
 - CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.
 - PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S) AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.
 - PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.
 - CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4
 - STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED
 - CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.
 - UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS
 - GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
 - REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.
 - CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE
 - EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-
 - 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m
 - 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m
 - 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m
 - 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m
 - 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m
 - 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m

SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

- PROTECTION FROM EROSION FORCES SHALL BE UNDERTAKEN ON ALL LANDS. GROUND COVER TO BE IN PLACE WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY ANY CONCENTRATED FLOWS.
- TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.
- WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO SCHEDULE WORKS SUCH THAT LAND DISTURBANCE ACTIVITIES ARE COMPLETED IN LESS THAN 6 MONTHS. REVEGETATION WORKS MUST BE CARRIED OUT AS STIPULATED IN THE RELEVANT COUNCIL GUIDELINES / SPECIFICATIONS SUCH THAT A SATISFACTORY GROUND COVER IS PROVIDED TO AT LEAST 60% OF THE DISTURBED AREA WITHIN 10 DAYS AND AT LEAST 70% OF THE DISTURBED AREA WITHIN A FURTHER 60 DAYS.
- SEDIMENT FENCES (SD) 6-8 SHALL:-
 - BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.
 - HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m. AND A STORAGE DEPTH OF AT LEAST 0.6m.
 - PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr Tc DISCHARGE.
- STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.
- DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.
- STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.
- THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-
 - BE CONSTRUCTED WHERE SHOWN ON THE PLANS.
 - BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)
 - HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.
- STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-
 - LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING
 - THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE
 - THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.
- SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.
- WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.
- ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

- SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
- IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.
- FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

- ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELINER.
- SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
- PROVIDE STRIP OF TURF (COUCH OR BUFFALO VARIETY) WITHIN ROAD VERGE BEHIND KERB + 1m WIDE AROUND ALL SURFACE INLET PITS

SITE INSPECTION AND MAINTENANCE:

- A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON AN INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER:-
 - AT LEAST WEEKLY
 - IMMEDIATELY BEFORE SITE CLOSURE
 - IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.

THE SELF AUDIT SHALL INCLUDE:-

 - RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED
 - RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'
 - RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE
 - RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
 - FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.
- IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-
 - 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION. TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.
 - ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHS

THE RESPONSIBLE PERSON SHALL ENSURE THAT:-

 - THIS PLAN IS BEING IMPLEMENTED CORRECTLY
 - REPAIRS ARE BEING UNDERTAKEN AS REQUIRED
 - ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.
- WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT
- PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED, ESPECIALLY THAT:-
 - NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.
 - AREAS OF EROSION ARE REPAIRED (eg LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE
 - BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)
- SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.
- RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.
- EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.
- ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-
 - RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.
 - DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED
 - SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.
- ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECT TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.
- WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(S) SHALL BE:-
 - TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)
 - DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.
- LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
Date of Issue 10/08/2021.....
Issuing Officer *D. Restin*

Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

Plotfile: 21 July, 2021 3:06:00 PM File Name: \\jwp.local\dfs\ubbs110185 - Redbank North Richmond Residential Precincts12 - Stage 1 DANCDC\CSOUTHERN HEIGHTS1-PROM110185-12-CC1700.dwg

REV	DATE	BY	CHKD	APPV	DESCRIPTION
B	26/04/21	JET	JET	MP	CERTIFIER COMMENTS
A	13/01/21	MP	VS	RO	ISSUE FOR CLIENT REVIEW
		DES	DRN	CKD	AMENDMENT

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SOIL & WATER MANAGEMENT NOTES

PROJECT No:

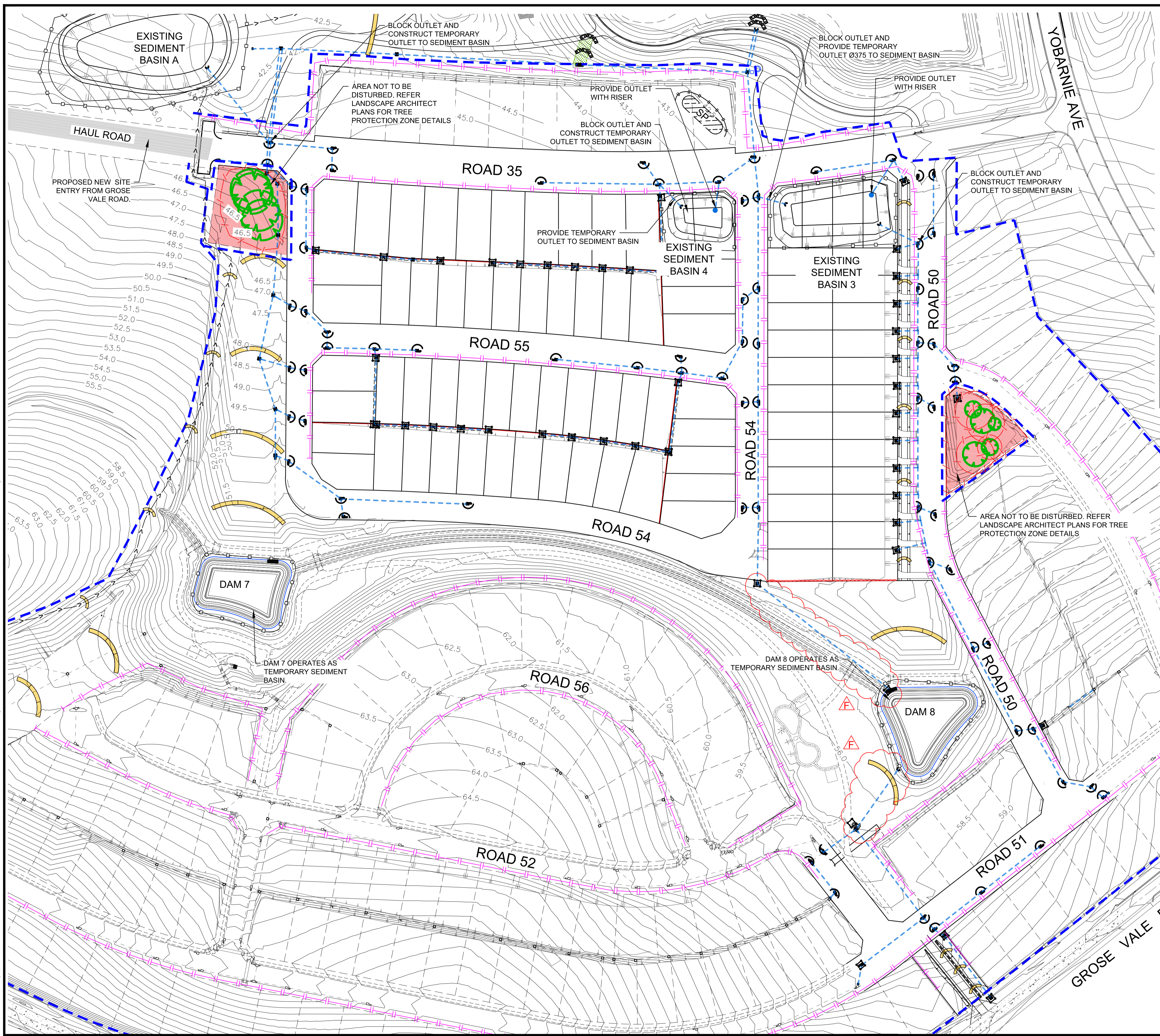
110185-12

SHEET No:

CC1700

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1700 B

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SEDIMENT BASIN DETAILS

SEDIMENT BASIN A
 INVERT RL 40.5
 TOP RL 44.0
 STORAGE VOLUME = 2,850m³
 TEMPORARY 43m LONG Ø900 PIPELINE FROM PIT 14/10
 (MIN. 1% SLOPE) OUTLET IL 40.8

SEDIMENT BASIN 3
 INVERT RL 38.0
 TOP RL 40.8
 STORAGE VOLUME = 2,500m³
 TEMPORARY 17m LONG Ø375 PIPELINE INLET FROM PIT 10/7
 (MIN. 1.2% SLOPE) OUTLET IL 40.0
 TEMPORARY 22m LONG Ø375 PIPELINE INLET FROM PIT 1/24
 (MIN. 1.9% SLOPE) OUTLET IL 39.5
 TEMPORARY 9m LONG Ø375 PIPELINE OUTLET WITH RISER
 TO PIT 2/2 (MIN. 8.7% SLOPE) OUTLET IL 38.573
 RISER RL 40.7

SEDIMENT BASIN 4
 INVERT RL 40.0
 TOP RL 42.5
 STORAGE VOLUME = 7,96m³
 TEMPORARY 17m LONG Ø375 PIPELINE INLET FROM PIT 15/2
 (MIN. 2.7% SLOPE) OUTLET IL 41.5
 TEMPORARY 9m LONG Ø375 PIPELINE OUTLET WITH RISER
 TO PIT 15/3 (MIN. 8.8% SLOPE) OUTLET IL 41.25
 RISER RL 42.4

SUBDIVISION WORKS CERTIFICATE

20130299SM\60
 10/08/2021

D. Lester
 BDC3367

Certificate No.
 Date of Issue
 Issuing Officer
 Accreditation No.

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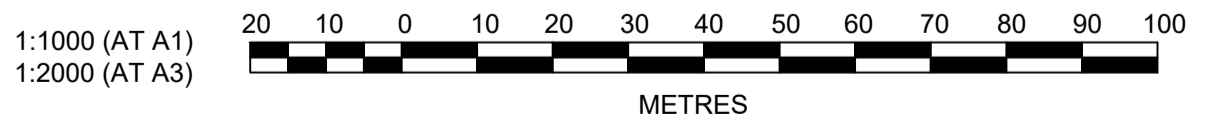
SEDIMENT BASIN VOLUME CALCULATIONS

SEDIMENT BASIN	TOTAL AREA OF CATCHMENT (ha)	DISTURBED AREA OF CATCHMENT (ha)	SETTLING ZONE VOLUME (m ³)	SEDIMENT STORAGE = 50% SETTLING ZONE VOLUME (m ³)	SEDIMENT BASIN VOLUME REQUIRED (m ³)	SEDIMENT BASIN VOLUME PROVIDED
BASIN A	11.054	11.054	1,630	815	2,445	2,851
BASIN 3	11.36	11.36	1,676	838	2,513	2,500
BASIN 4	3.29	3.29	485	243	728	780

- ### NOTES:
1. MAINTAIN ATF AS INSTALLED WITH BULK EARTHWORKS.
 2. MAINTAIN SEDIMENT FENCE.
 3. MAINTAIN SEDIMENT BASINS.
 4. MAINTAIN PROTECTIVE FENCING TO SEDIMENT BASINS AND AROUND THE TREES TO BE RETAINED.
 5. DAM 7 AND DAM 8 AND OPERATES AS SEDIMENT BASINS.

LEGEND

- GEOTEXTILE INLET FILTER
- FILTER ROLLS
- STRAW BALE FILTER
- SEDIMENT FENCE
- STRAW BALE BARRIER
- TREES TO BE RETAINED AND PROTECTED BY ATF TO PERIMETER AS PER LANDSCAPE DETAILS
- ATF FENCE
- PROTECTIVE FENCE TO SEDIMENT BASIN AND UNDISTURBED LAND
- UNDISTURBED AREA
- POSSIBLE STOCKPILE LOCATION



AMENDMENT	DES	DRN	CKD	APR	DATE
F	MP	VS	RO	MS	21/07/21
E	MP	VS	RO	RO	16/06/21
D	JET	JET	MP	RO	26/04/21
C	JET	JET	MP	RO	23/03/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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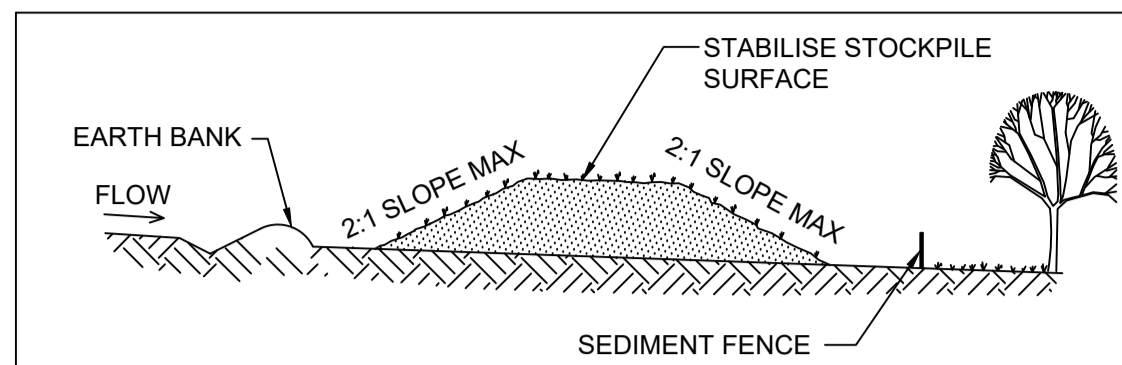
REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SOIL & WATER MANAGEMENT PLAN

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1701

PROJECT No: **110185-12**
 SHEET No: **CC1701**

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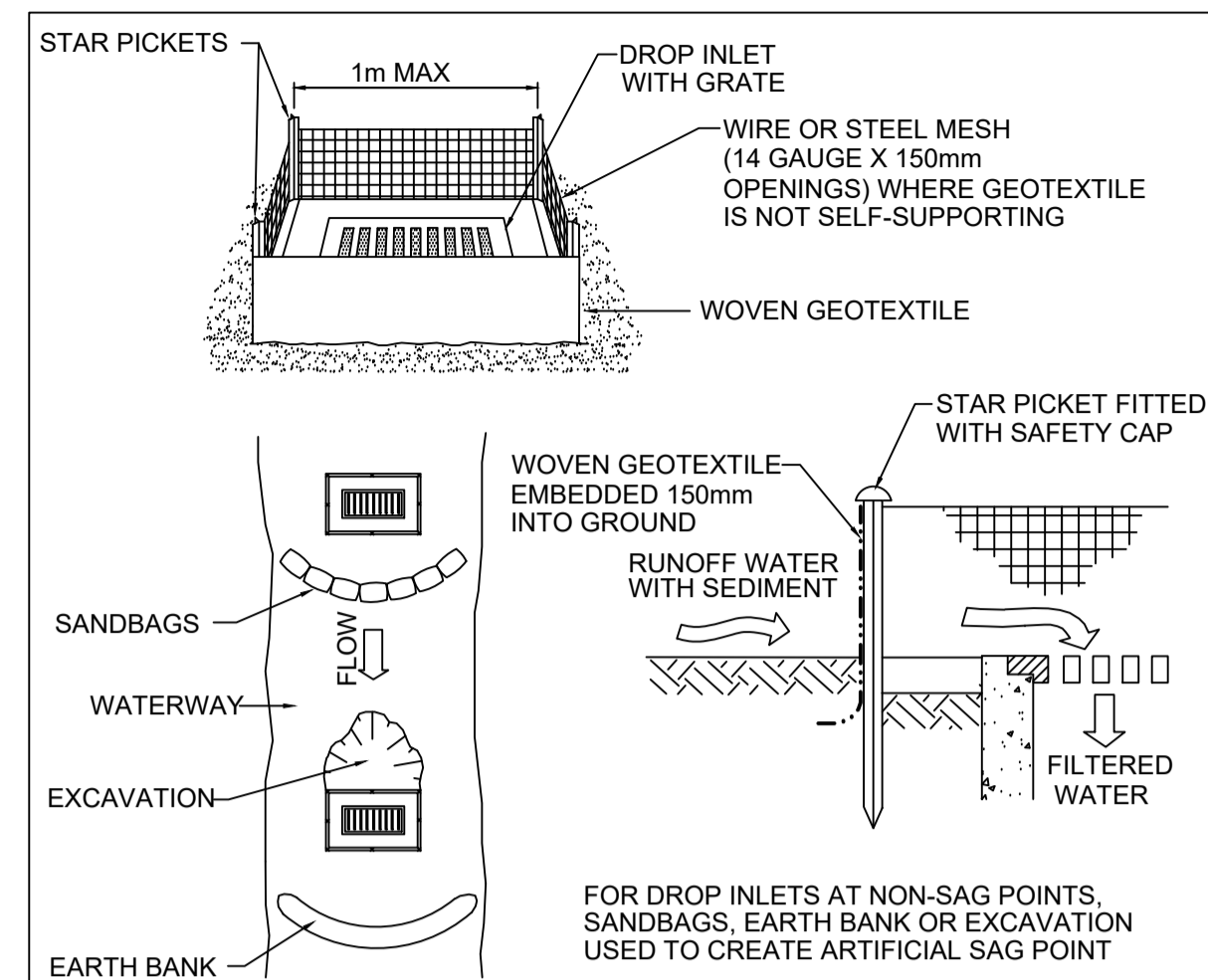
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CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10 EQUALS 60% GROUND COVER.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

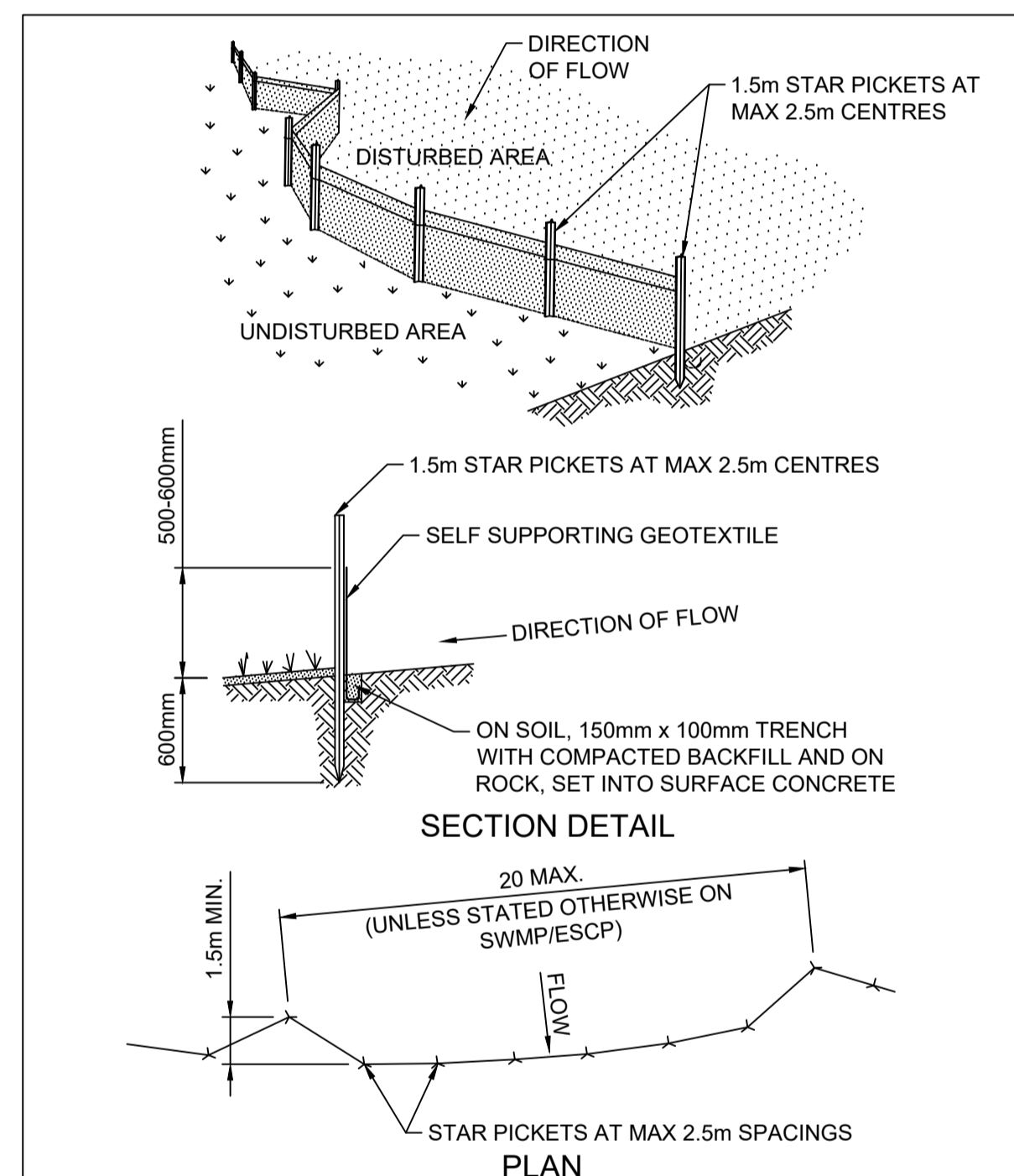
STOCKPILE SD4-1
N.T.S.



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOTEXTILE. REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

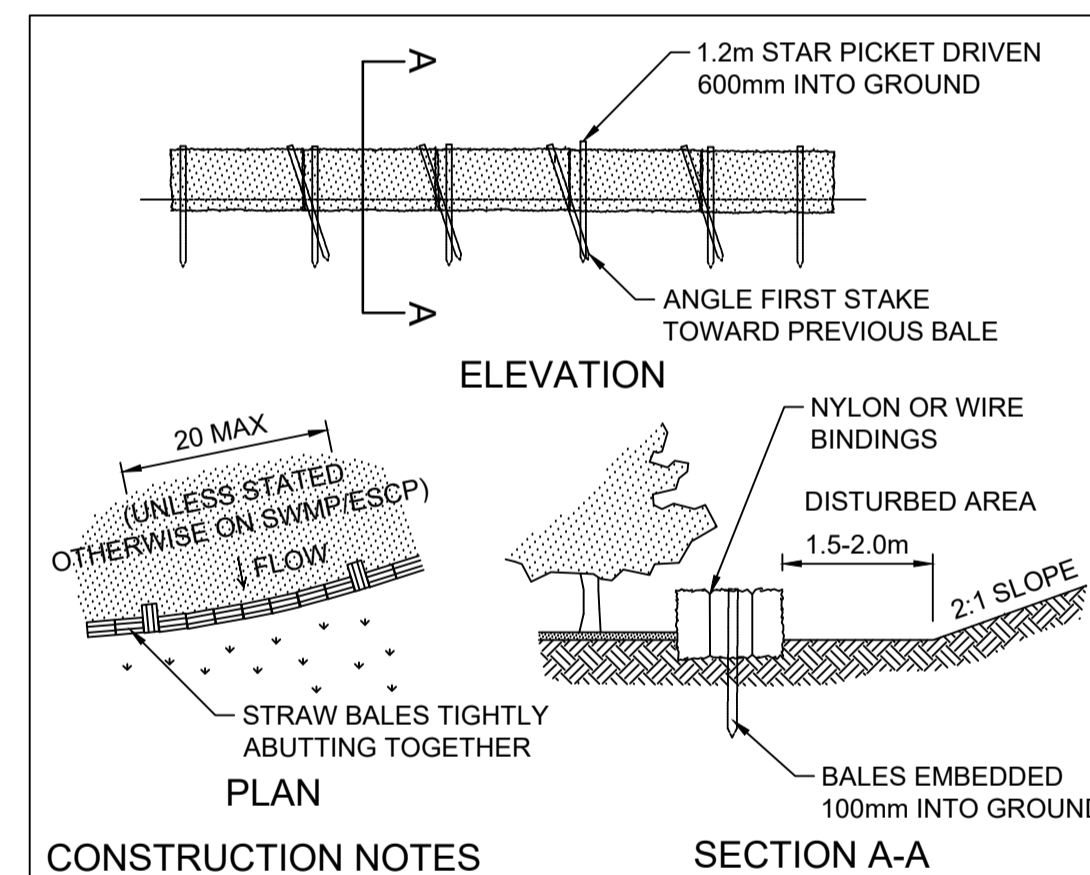
GEOTEXTILE INLET FILTER SD6-12
N.T.S.



CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

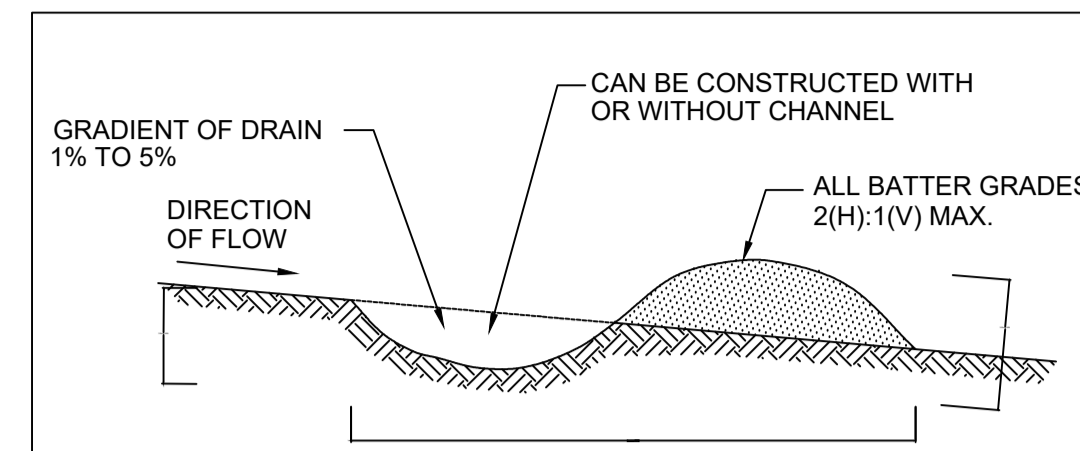
SEDIMENT FENCE SD6-8
SCALE: N.T.S.



CONSTRUCTION NOTES

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1m TO 2m DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.

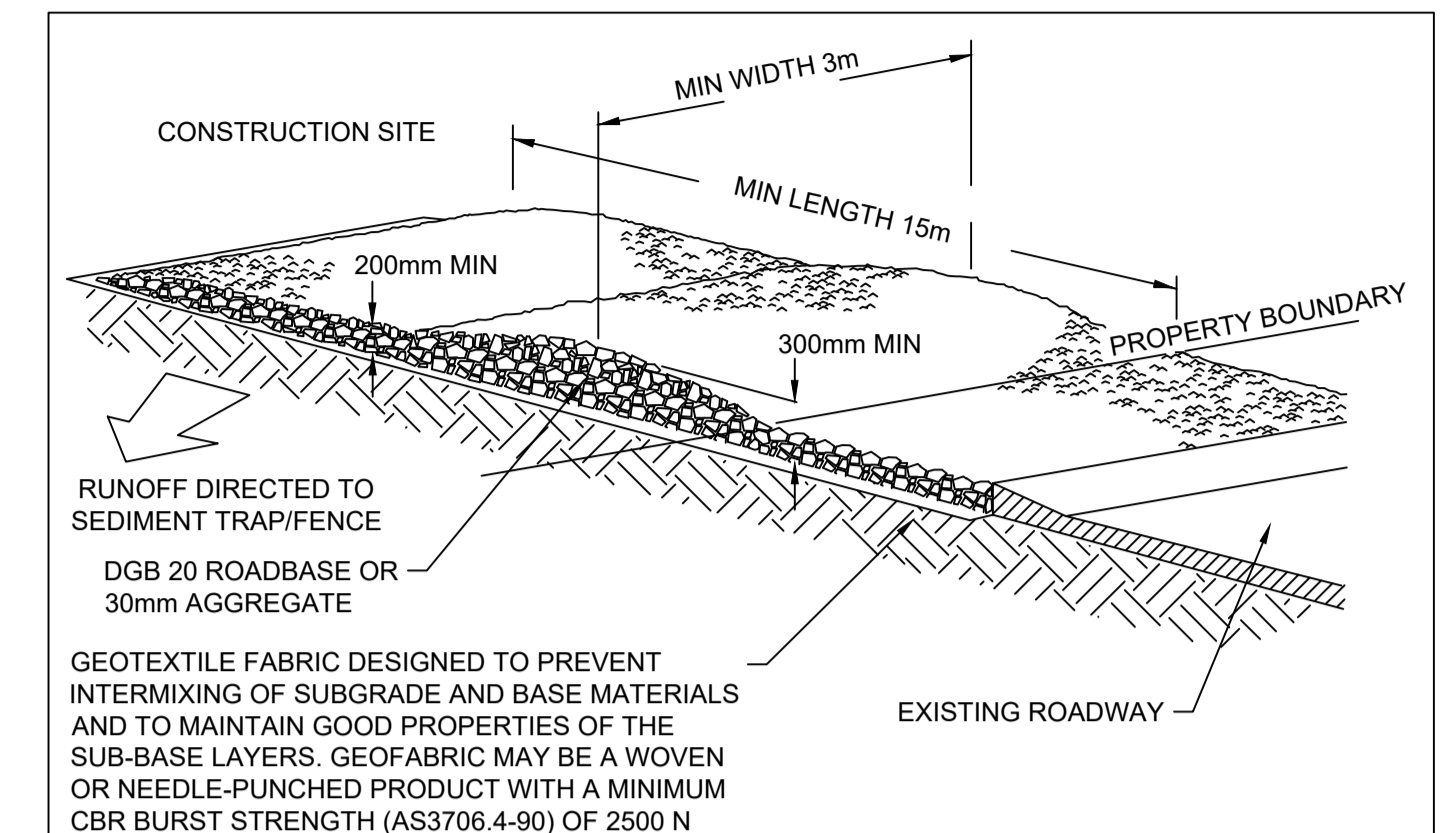
STRAW BALE FILTER SD6-7
SCALE N.T.S.



CONSTRUCTION NOTES

1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION OR LINE WITH GEOTEXTILE.

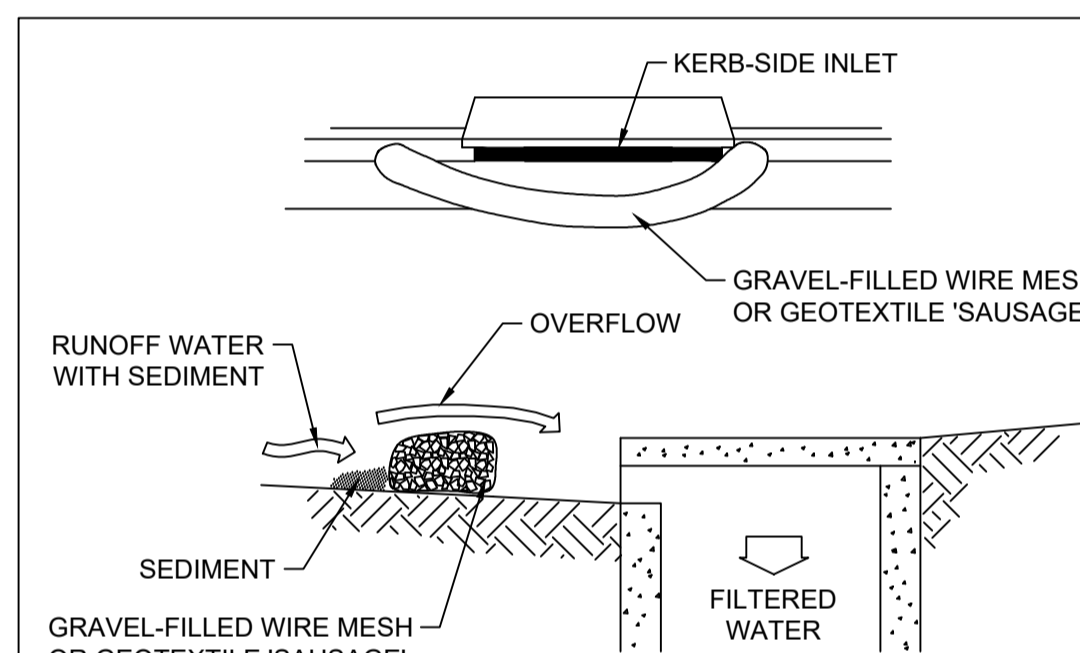
EARTH BANK (LOW FLOW) SD5-5
N.T.S.



CONSTRUCTION NOTES

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15m LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS SD6-14
N.T.S.



NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

CONSTRUCTION NOTES

1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm-50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BY-PASSING THE FILTER.
6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

MESH & GRAVEL INLET FILTER SD6-11
SCALE N.T.S.

SUBDIVISION WORKS CERTIFICATE

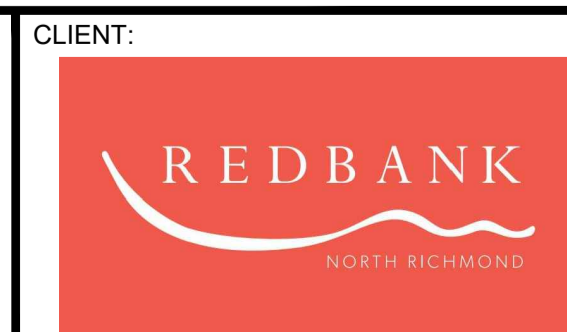
Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer D. Rosta
Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	RO	16/08/21			
	AMENDMENT	DES	DRN	CKD	APR	DATE			

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au



STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SOIL & WATER MANAGEMENT DETAILS

PROJECT No: 110185-12
SHEET No: CC1702
PLAN No: 110185-12-CC1702

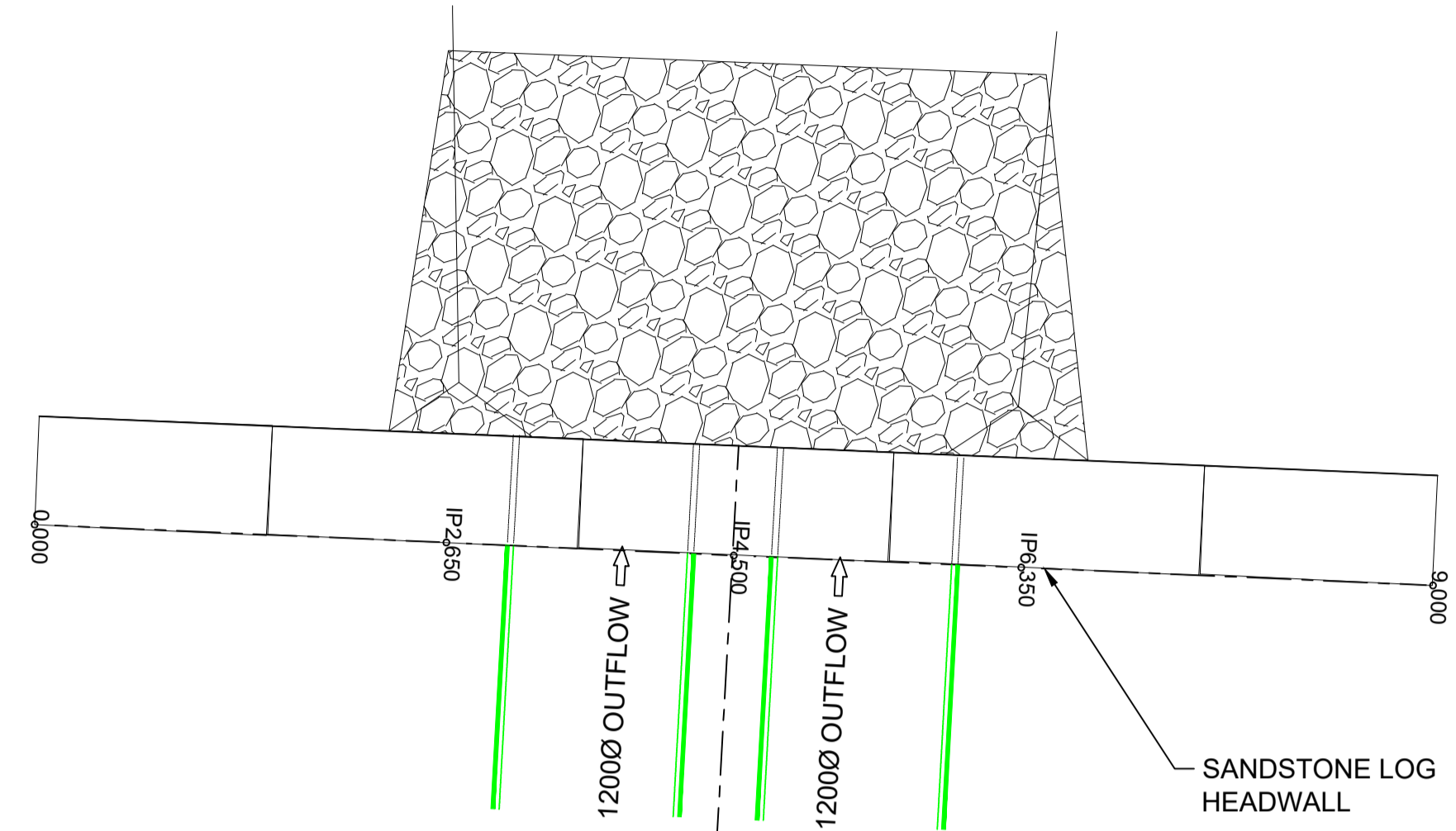
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: A

NOTES

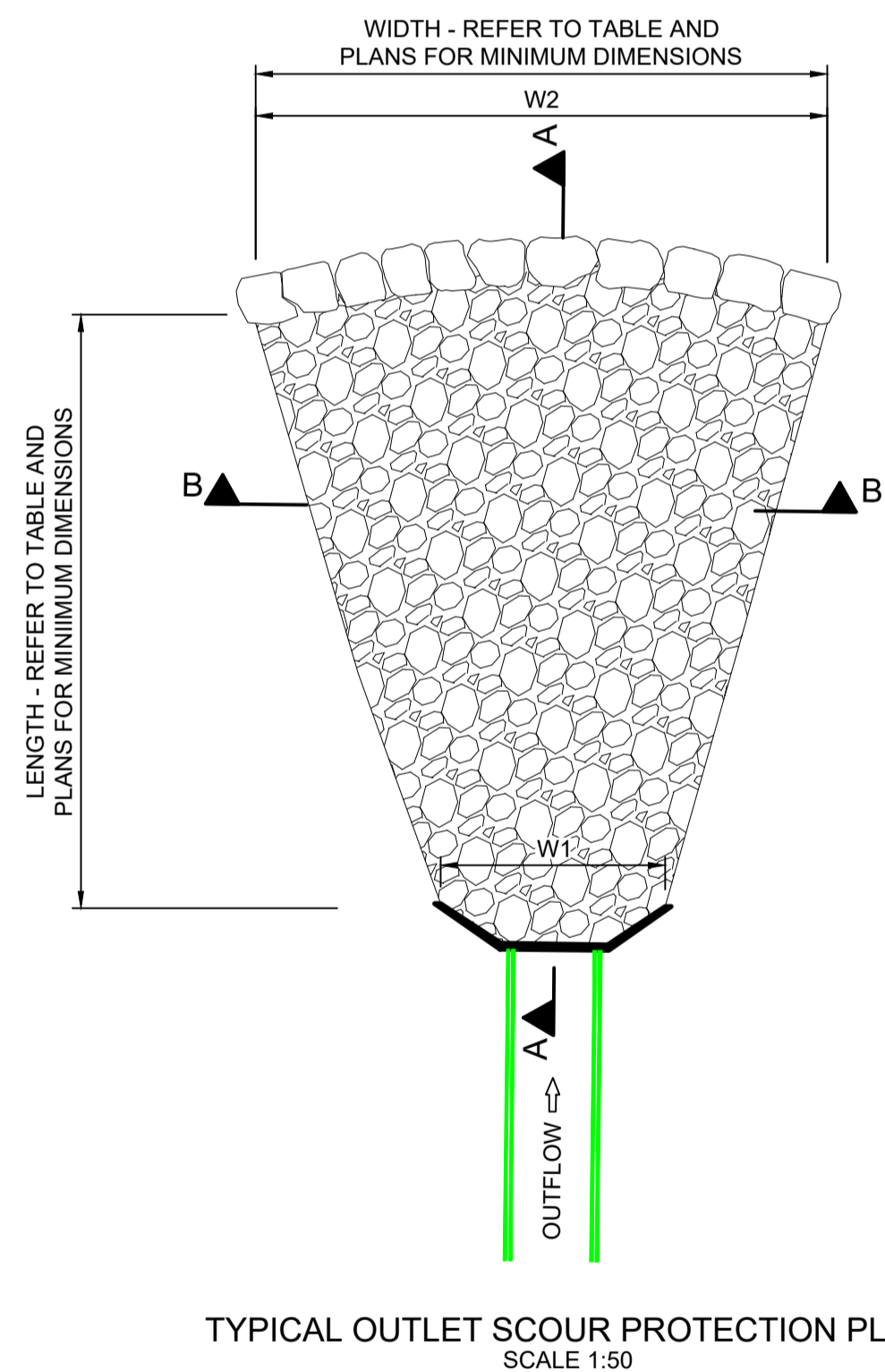
- DESIGN BASED ON FLOW VELOCITIES FROM 12D DRAINAGE OUTPUTS FOR 5 YEAR ARI STORM EVENT
- RIP-RAP SCOUR PROTECTION DIMENSIONS CALCULATED FROM "ROCK SIZING FOR PIPE OUTLETS - STORMWATER MANAGEMENT PRACTICES" BY CATCHMENTS AND CREEKS, VERSION 2 DATED NOVEMBER 2014
- ROCK HEADWALL ARRANGEMENT SHOWN ON PLANS, PRECAST CONCRETE OUTLET ARRANGEMENT CAN BE ADOPTED, HOWEVER RIP-RAP LENGTH SHALL COMMENCE AT THE END OF THE PRECAST CONCRETE APRON SLAB
- ALL RIP-RAP TO CONSIST OF ANGULAR DURABLE QUARRY ROCK PLACED OVER A LAYER OF ANGULAR COBBLES (D50=500mm)
- RIP-RAP IS TO BE PLACED BY HAND AND PACKED INTO PLACE WITH A CROW-BAR TO ENSURE UNIFORM FIT WITH MINIMUM VOIDS

SUBDIVISION WORKS CERTIFICATE

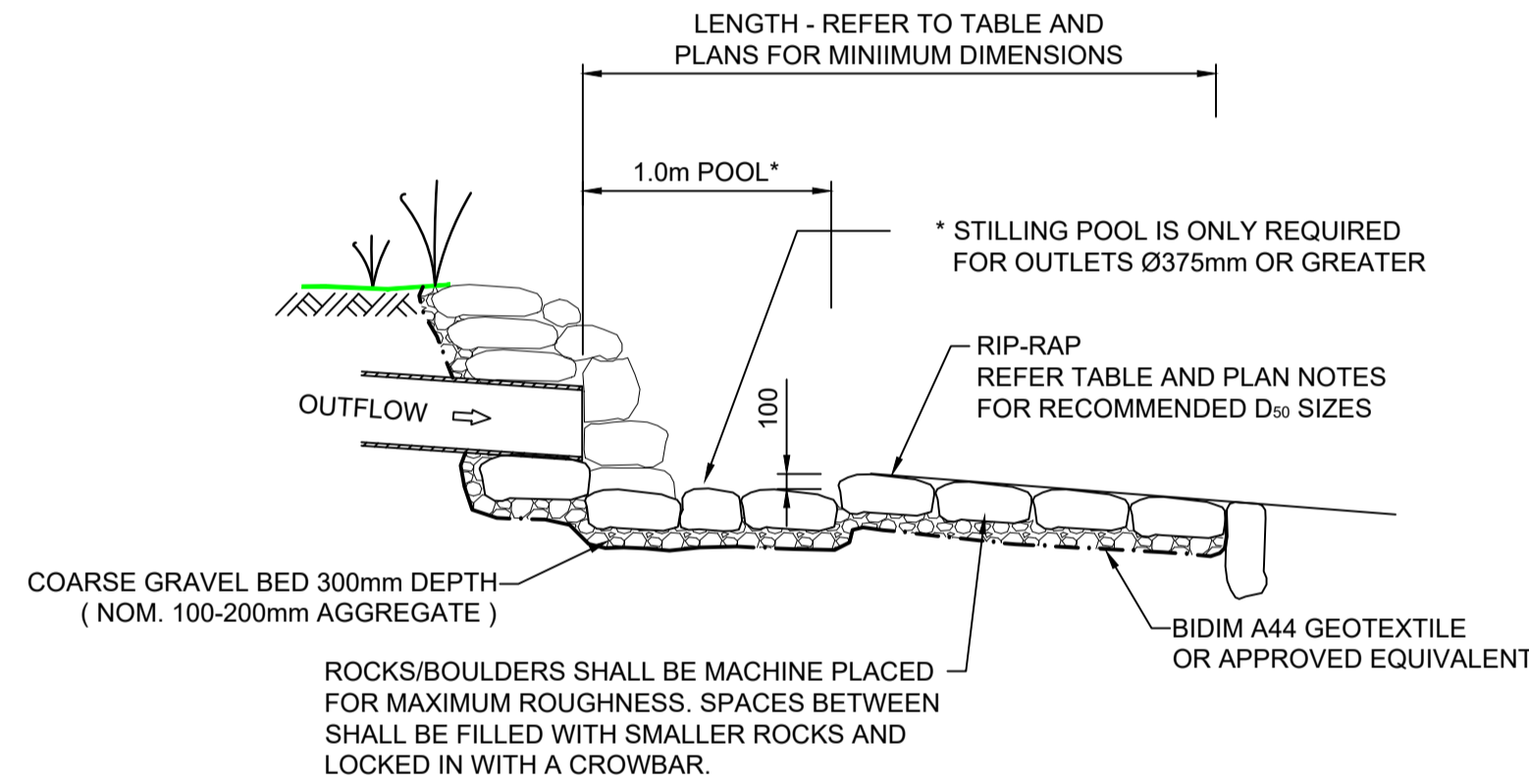
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 Date of Issue 10/08/2021.....
 Issuing Officer *D. Resta*
 Accreditation No. BDC3367
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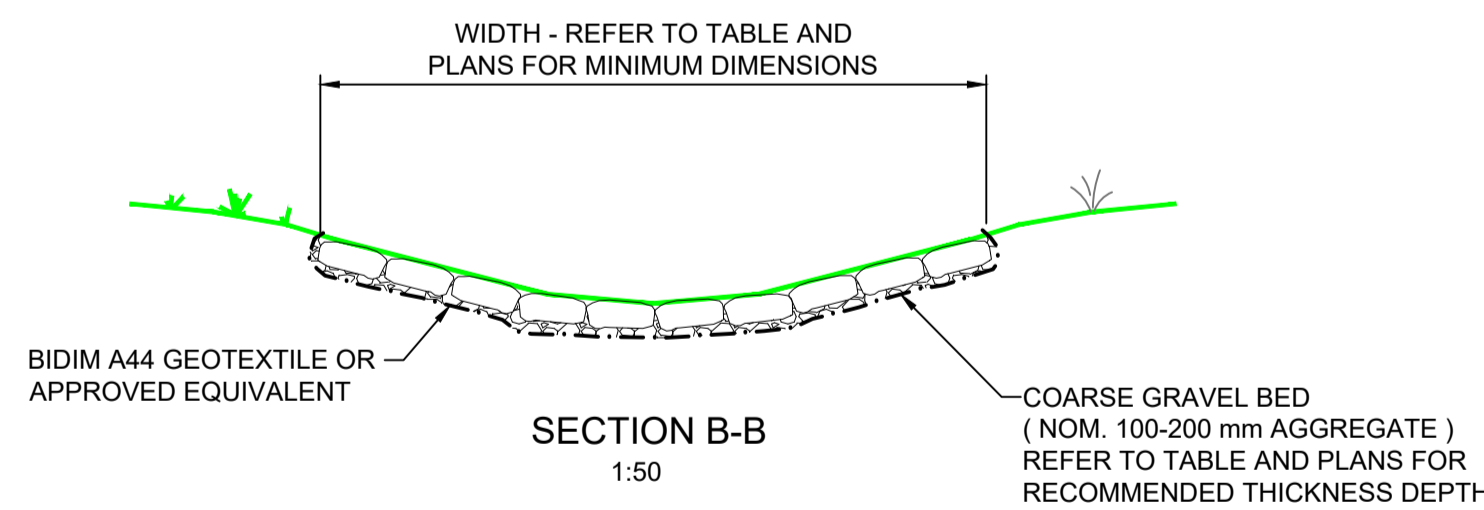
**HEADWALL 10/10
PLAN
SCALE 1:50**



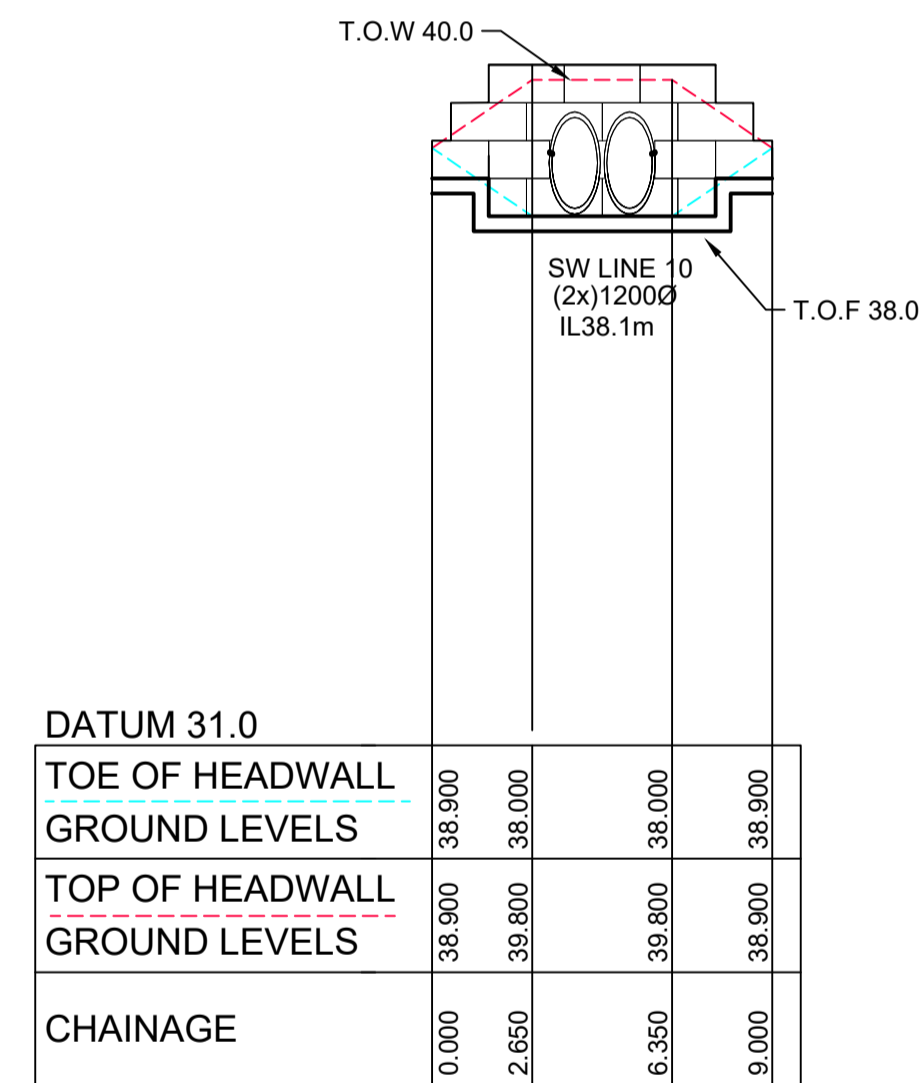
**TYPICAL OUTLET SCOUR PROTECTION PLAN
SCALE 1:50**



**TYPICAL OUTLET DETAIL SECTION A-A
1:50**



**SECTION B-B
1:50**

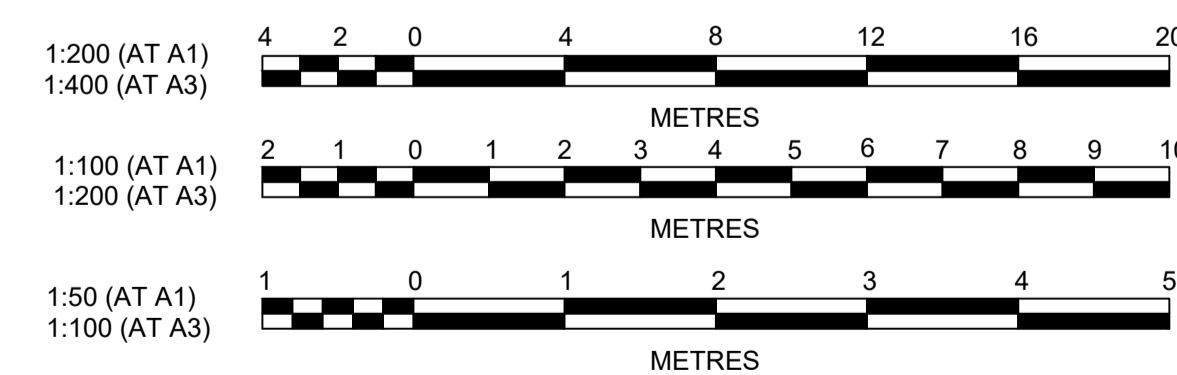


**HEADWALL 10/10
LONGITUDINAL SECTION
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100**

HEADWALL 10/10 SETOUT			
CHAINAGE	EASTING	NORTHING	BEARING
0	286576.52	6281532.18	92°29'33.46"
2.65	286579.17	6281532.06	
4.5	286581.01	6281531.98	
6.35	286582.86	6281531.9	
9	286585.51	6281531.78	92°29'33.46"

DATUM 31.0				
TOE OF HEADWALL	GROUND LEVELS	TOP OF HEADWALL	GROUND LEVELS	CHAINAGE
38.900	38.000	38.900	38.000	0.000
38.900	38.000	38.900	38.000	2.650
38.900	38.000	38.900	38.000	6.350
38.900	38.000	38.900	38.000	9.000

Outlet	Culvert Diameter (mm)	No Off.	Velocity (m/s)	Design Velocity (m/s)	Mean Rock Size (d ₅₀ mm)	Apron Length L (mm)	Apron Width W ₁ (mm)	Apron Width W ₂ (mm)	Bed Thickness T (mm)
10/10	1200	2	3.84	4	500	5000	3600	4200	900
32/6	825	1	2.56	2.75	200	2500	1500	1900	360

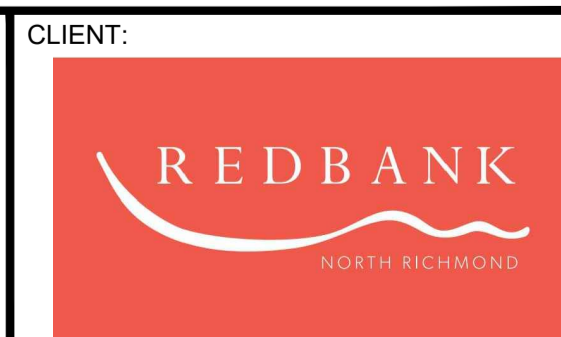


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NO.	REVISION	DATE	BY	CHECKED	APPROVED

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

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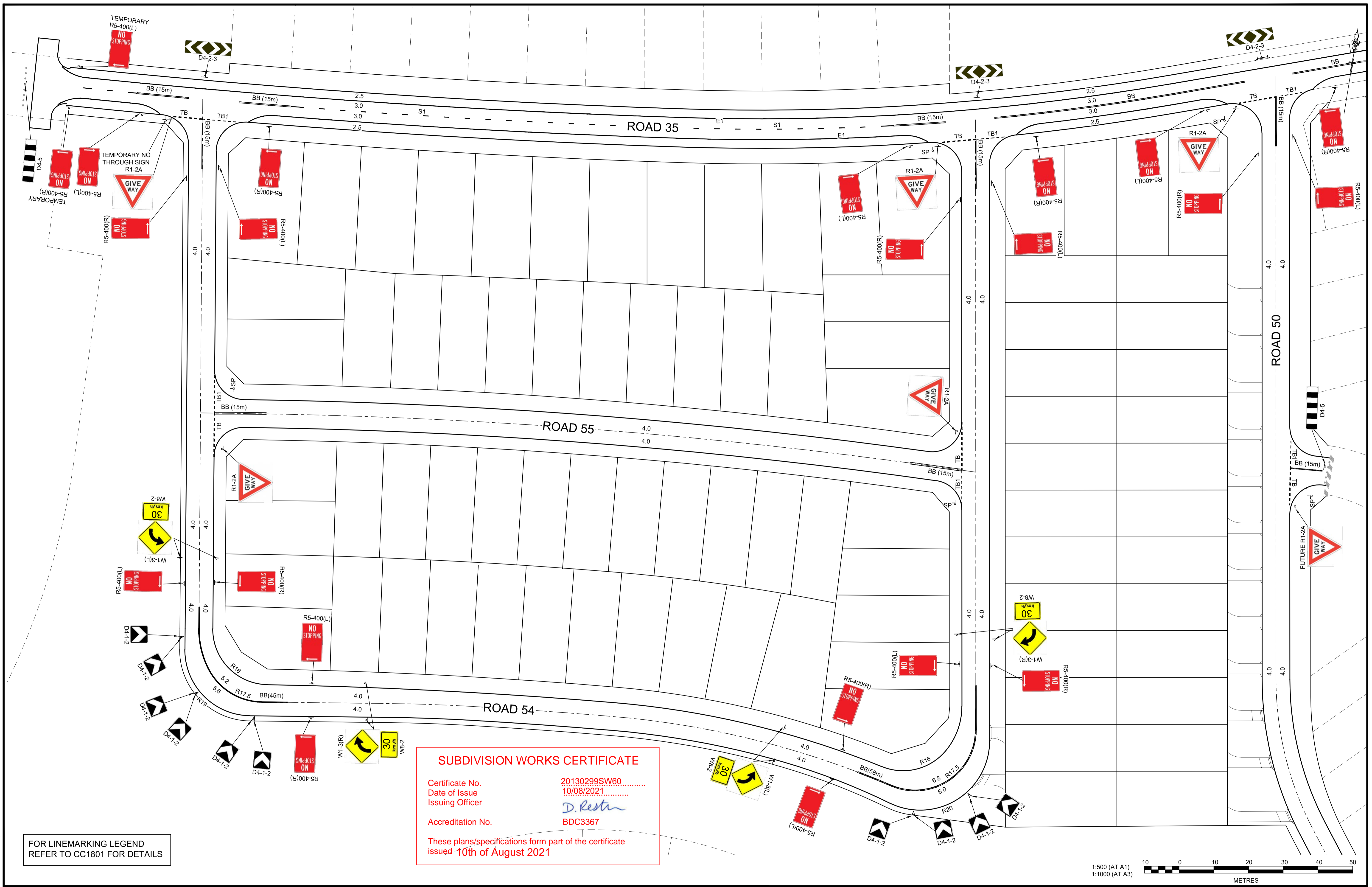
STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**
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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
10/10 & 32/6 OUTLET SCOUR PROTECTION DETAILS
HEADWALL 10/10

PROJECT No: **110185-12**
SHEET No: **CC1703**
PLAN No: 110185-12-CC1703

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1703

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Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restar*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate
 issued 10th of August 2021

FOR LINEMARKING LEGEND
REFER TO CC1801 FOR DETAILS

1:500 (AT A1)
 1:1000 (AT A3)

METRES

AMENDMENT	DES	DRN	CKD	APR	DATE
G	MP	NA	RO	RO	23/06/21
F	MP	JT	RO	RO	18/06/21
E	JET	JET	MP	RO	08/06/21
D	JET	JET	MP	RO	21/05/21
C	JET	JET	MP	RO	13/05/21
B	MP	NM	RO	MS	28/01/21
A	MP	VS	RO	MS	13/01/21

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REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 SIGNAGE AND LINE MARKING PLAN
 SHEET 1

PROJECT No: 110185-12
 SHEET No: CC1800
 PLAN No: 110185-12-CC1800

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1800 G

PAVEMENT MARKING SCHEDULE

CODE	USE	STYLE	COLOUR & TYPE
BB	Barrier line where sight is restricted in both directions or approach to median island		Reflectorised white type 'YY' pavement markers bi-directional reflective yellow
TB	Give way line (Used with Signs)		Reflectorised white
TB1	Give way line (Used on right side of side)		Reflectorised white
S1	Dividing (separation) line in 2 lane road		Reflectorised white
E1	left hand Edge Line on general purpose road		Reflectorised white

NOTES

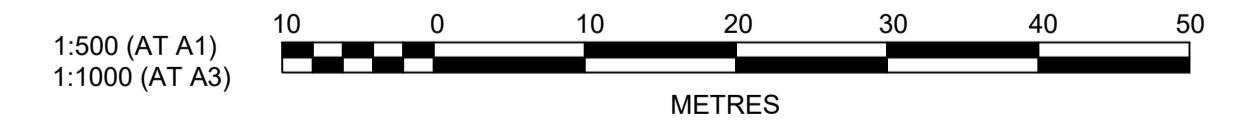
- ALL PAVEMENT MARKINGS, CHEVRONS AND REFLECTORS ARE TO BE IN ACCORDANCE WITH AUSTRROADS GUIDE TO TRAFFIC MANAGEMENT PART 6 AND AUSTRALIAN STANDARDS, AS1742-9, AS1743 AND RMS DELINEATION MANUAL.
- ALL SIGNS TO BE IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD, AS 1743 - ROAD SIGNS AND COUNCIL'S SPECIFICATION UNLESS OTHERWISE SHOWN.
- ROAD SIGNS ARE SIZE 'B', UNLESS OTHERWISE SHOWN. LOCATE OUTSIDE OF CLEAR ZONES.
- ALL NEW PAVEMENT MARKINGS ARE TO BE INSTALLED IN WHITE, REFLECTIVE, THERMOPLASTIC PAINT.
- KERBSIDE LANE WIDTHS INCLUDE THE WIDTH OF THE GUTTER.
- RE-MARK EXISTING PAVEMENT MARKINGS AS DIRECTED BY THE COUNCIL'S ENGINEER.
- PAVEMENT MARKINGS THAT FORM NO PART OF THE FINAL WORKS ARE TO BE REMOVED BY SAND BLASTING OR OTHER METHOD AS APPROVED BY THE PROJECT MANAGER.
- ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE SHOWN.



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 Date of Issue 10/08/2021
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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AMENDMENT	DES	DRN	CKD	APR	DATE	
D	COUNCIL COMMENTS	MP	NA	RO	RO	16/06/21
C	COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21
B	ISSUE FOR CLIENT REVIEW	MP	NM	RO	MS	28/01/21
A	ISSUE FOR CLIENT REVIEW	MP	VS	RO	MS	13/01/21

J. WYNDHAM PRINCE
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CLIENT: **REDBANK**
 NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

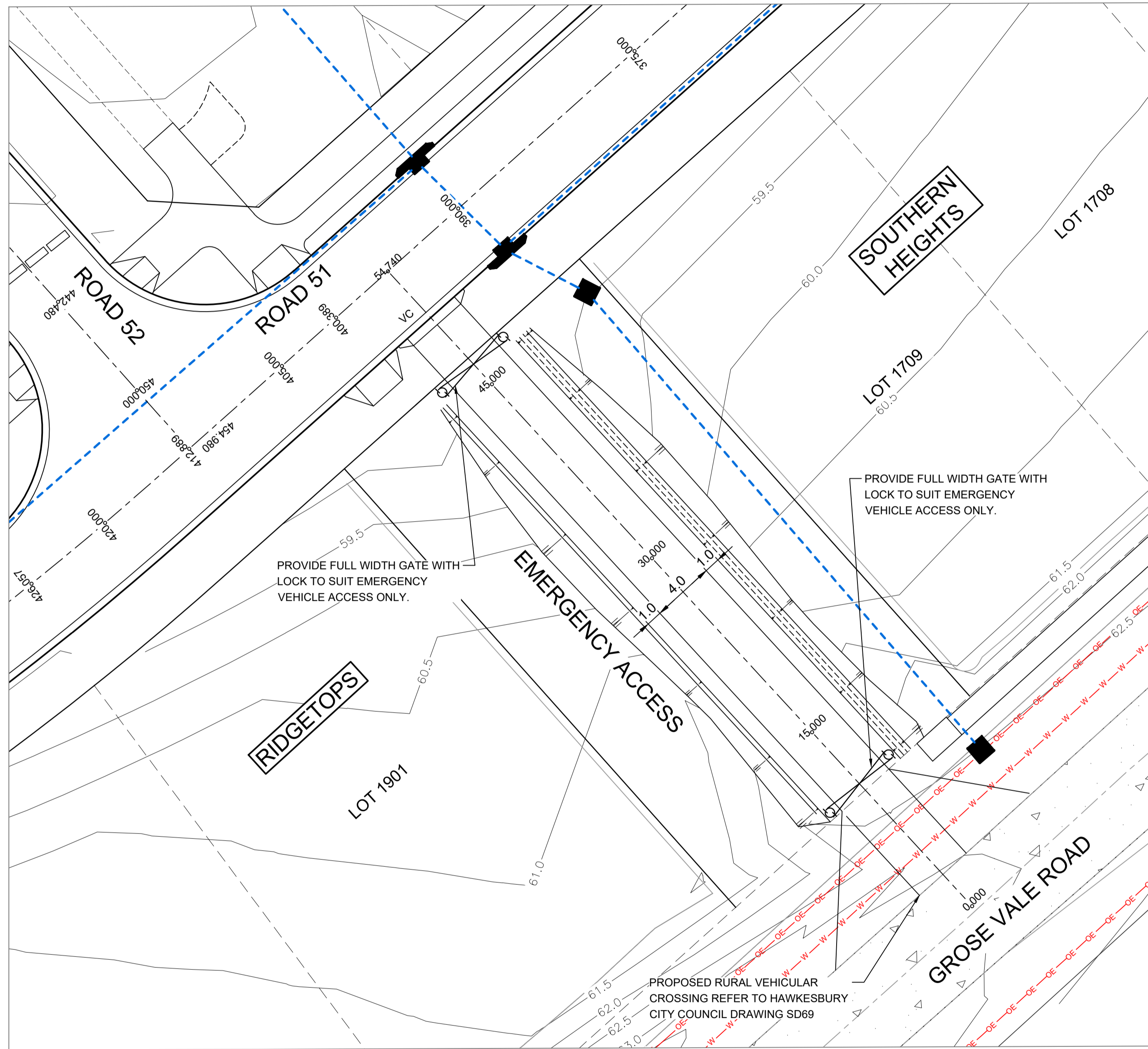
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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SIGNAGE AND LINE MARKING PLAN
 SHEET 2

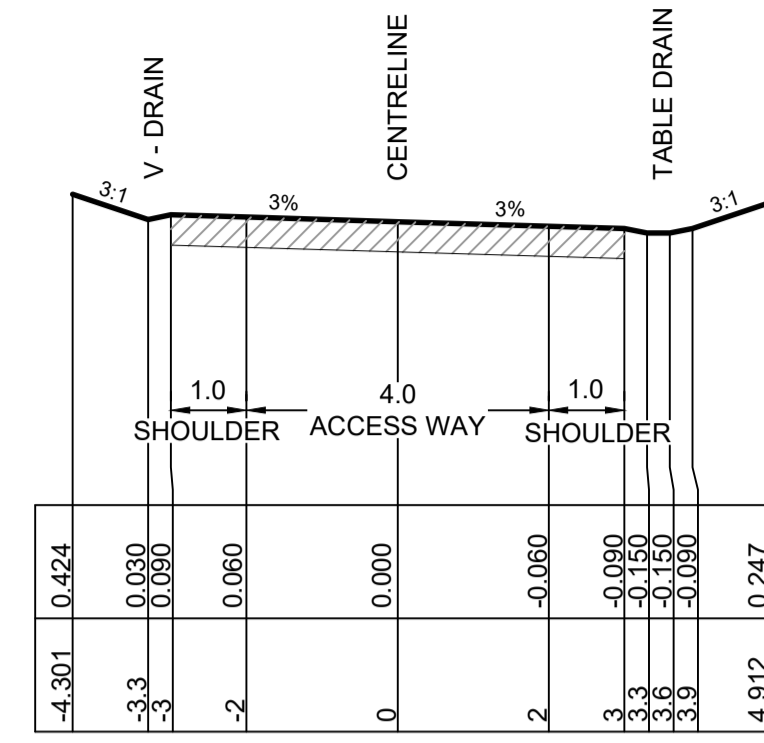
AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1801

PROJECT No: 110185-12
 SHEET No: CC1801

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EMERGENCY ACCESS PLAN
SCALE 1:200



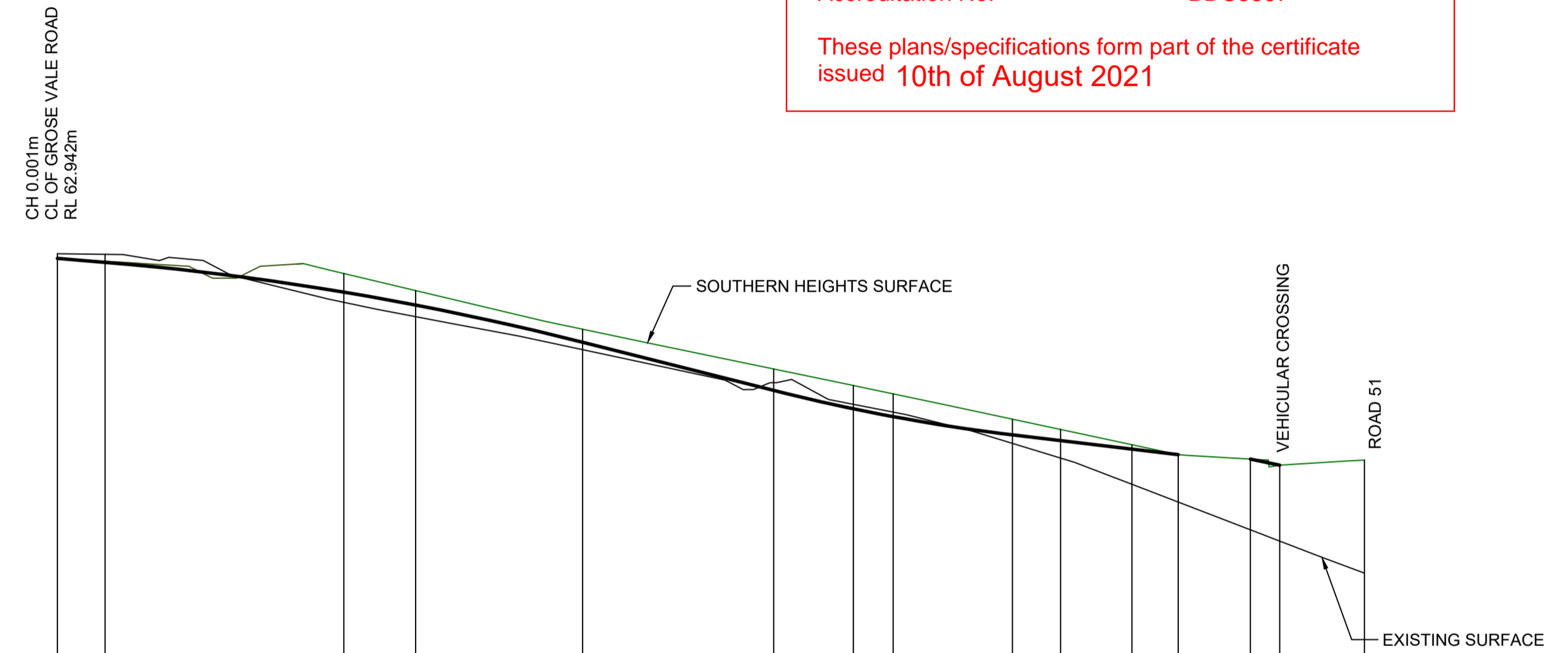
TYPICAL CROSS SECTION
EMERGENCY ACCESS
SCALE 1:100 NATURAL

- PAVEMENT NOTES**
(EMERGENCY ACCESS)
1. 50mm WEARING COURSE AC10
 2. ONE COAT HOT BITUMEN FLUSH SEAL
 3. 150mm DGB 20 BASE COURSE
 4. 200mm SUB-BASE COURSE

SUBDIVISION WORKS CERTIFICATE

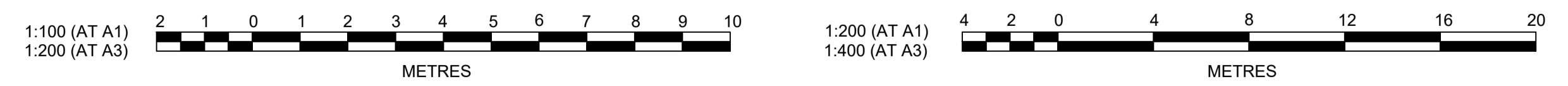
Certificate No. 20130299SW60
Date of Issue 10/08/2021
Issuing Officer *D. Rosta*
Accreditation No. BDC3367

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DATUM 49.0	
DESIGN LINE GRADING	62.945, 62.862, 62.238, 61.968, 61.189, 60.180, 59.797, 59.632, 59.250, 59.129, 58.950, 58.833, 58.743, 58.615, 58.723
SH DESIGN SURFACE	
EXISTING SURFACE	63.042, 63.031, 62.026, 61.724, 61.034, 60.341, 59.890, 59.728, 59.071, 58.766, 58.215, 57.843, 57.261, 57.025, 56.355
CHAINAGE	0.000, 2.000, 12.000, 15.000, 22.000, 30.000, 33.330, 35.000, 40.000, 42.011, 45.000, 46.939, 49.964, 51.189, 54.740

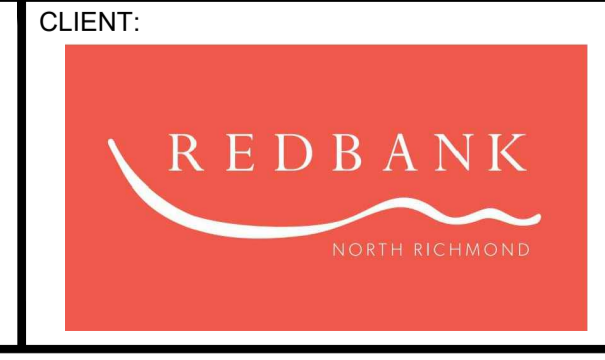
LONGITUDINAL SECTION EMERGENCY ACCESS
HORIZONTAL SCALE 1:200
VERTICAL SCALE 1:100



AMENDMENT	DES	DRN	CKD	APR	DATE	
C	COUNCIL COMMENTS	MP	NA	RO	RO	16/05/21
B	COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21
A	CERTIFIER COMMENTS	JET	JET	MP	RO	26/04/21

J. WYNDHAM PRINCE
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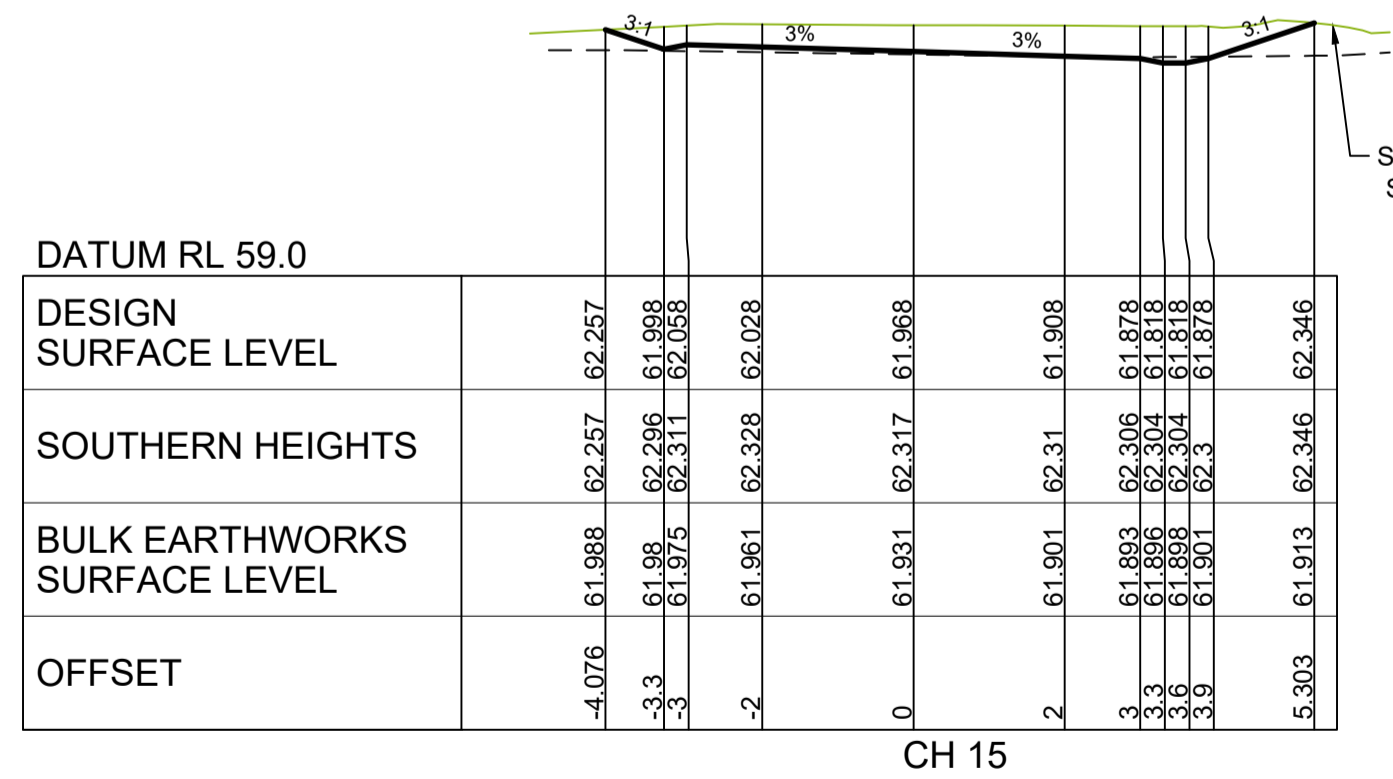
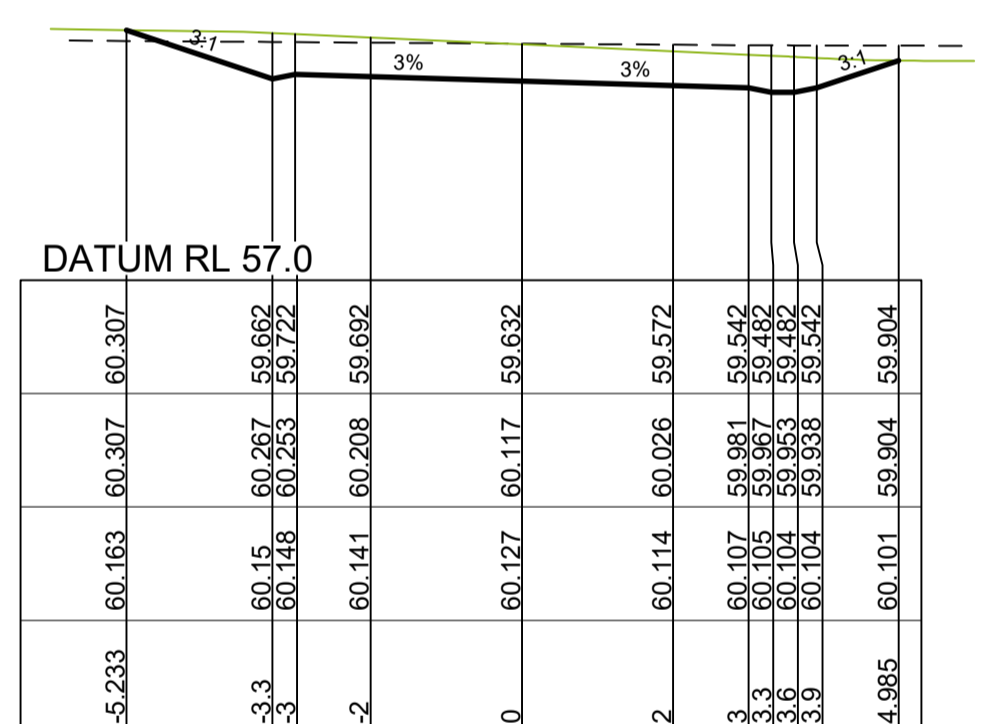
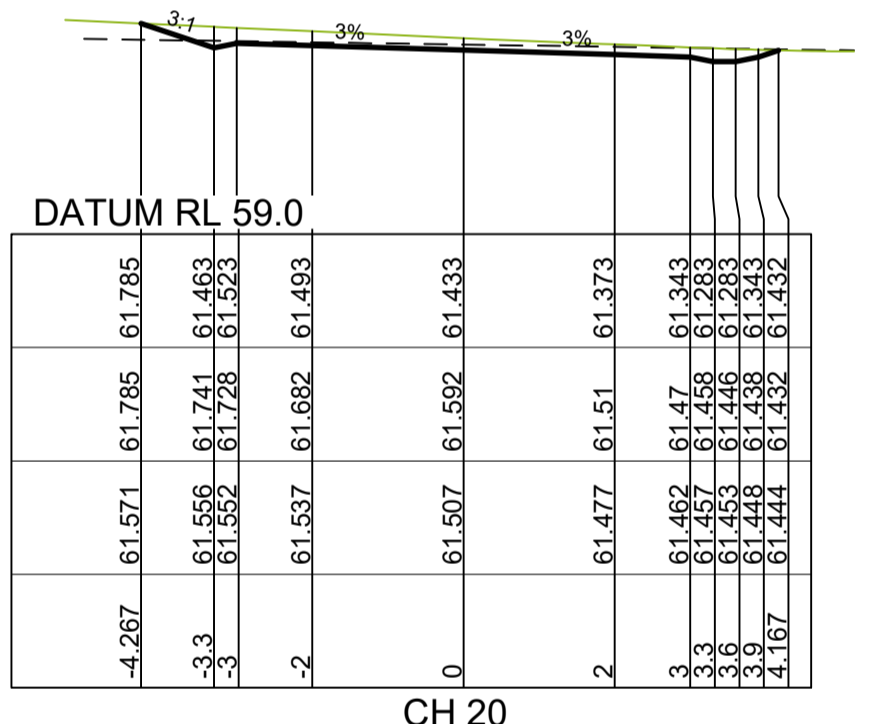
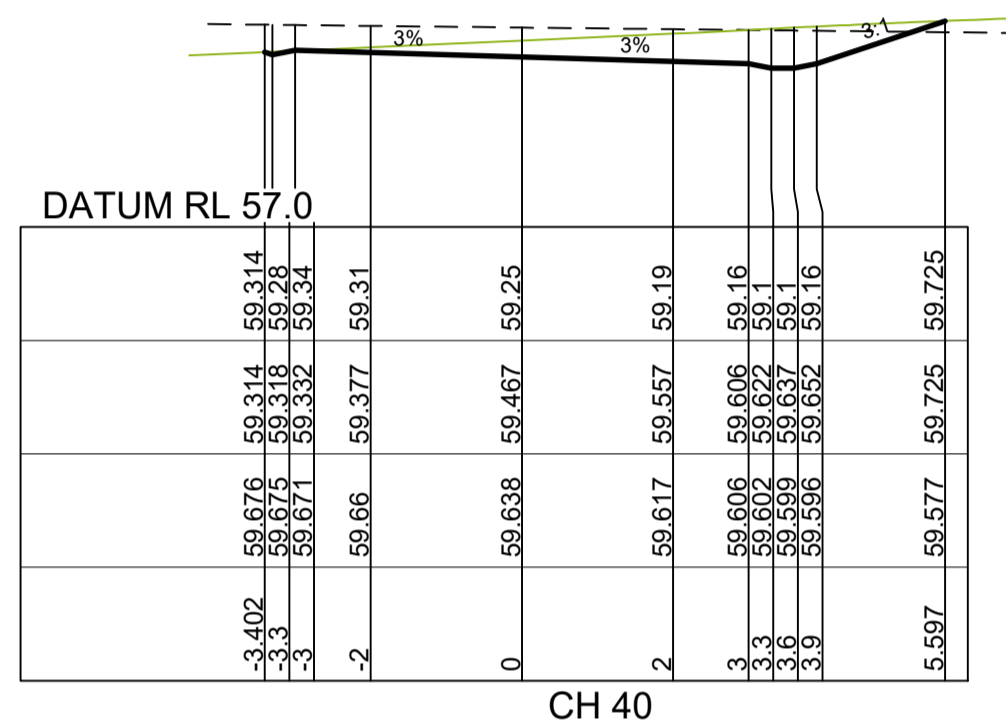
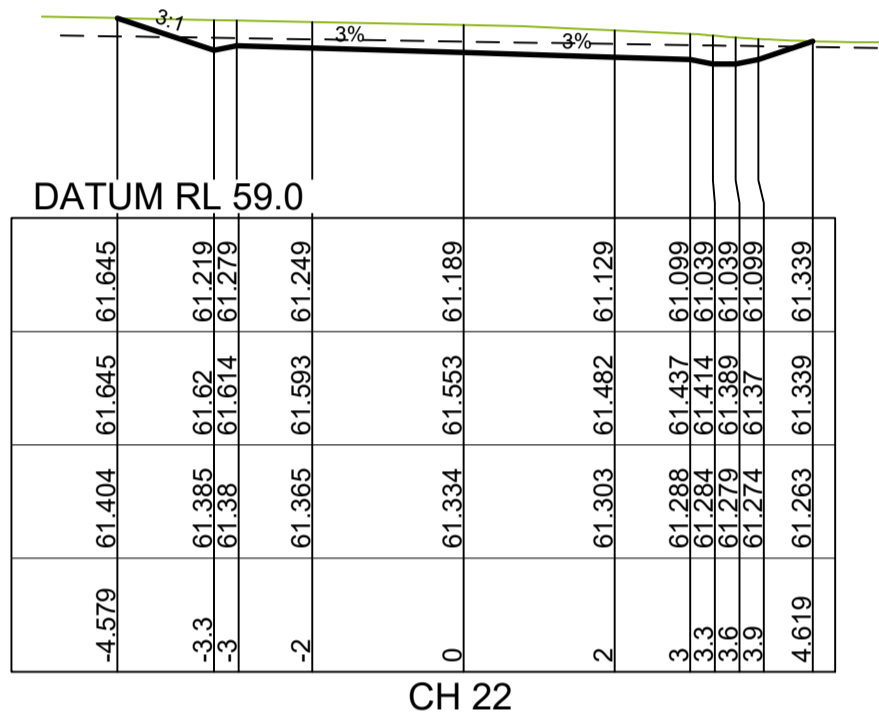
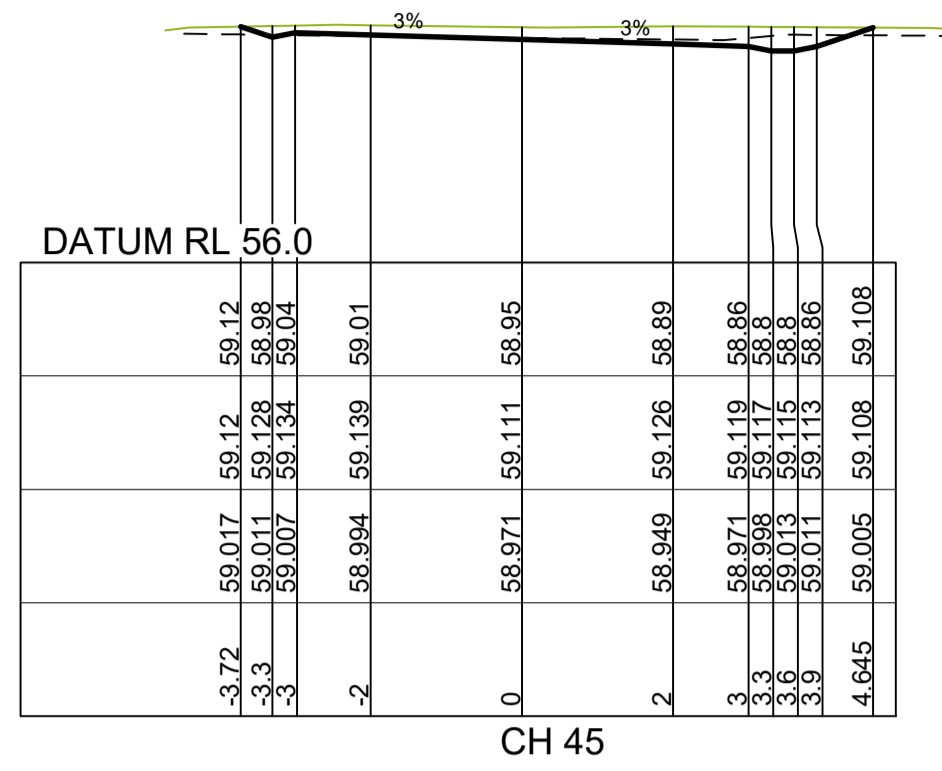
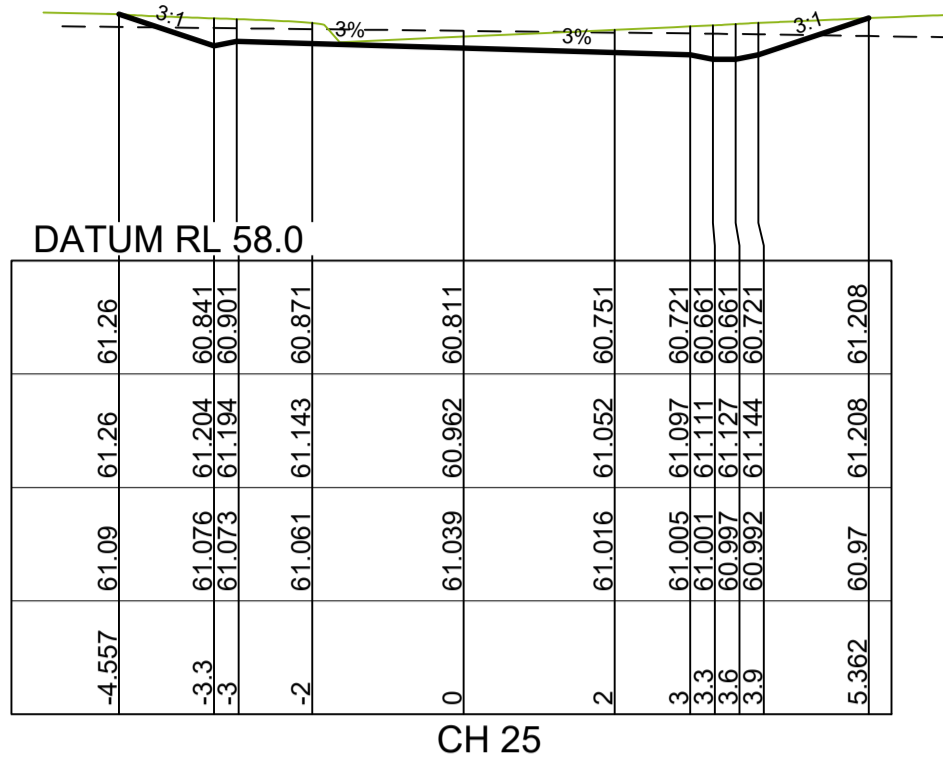
STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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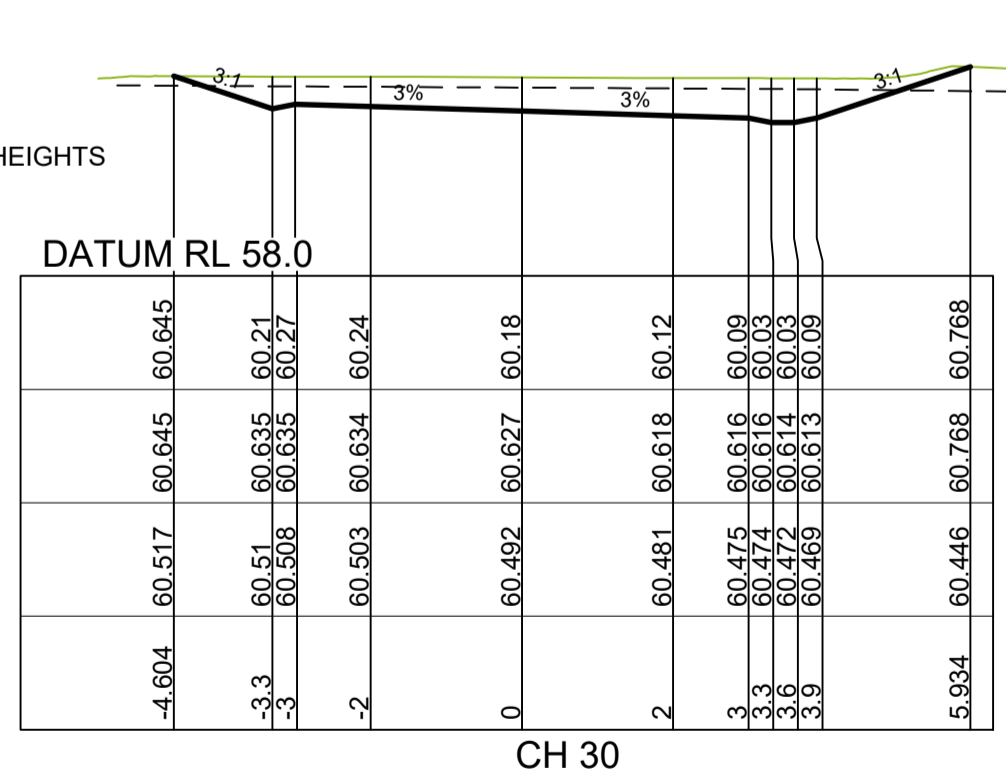
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
EMERGENCY ACCESS PLAN, TYPICAL CROSS SECTION AND LONGITUDINAL SECTION

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1802

PROJECT No: **110185-12**
SHEET No: **CC1802**



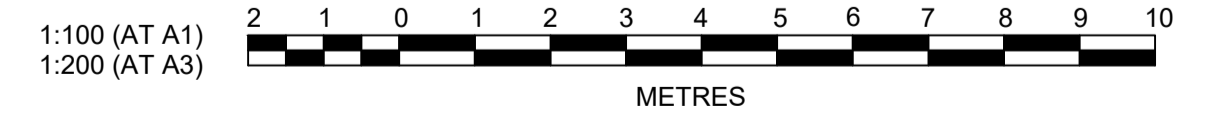
SOUTHERN HEIGHTS SURFACE



SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021



A	CERTIFIER COMMENTS	JET	JET	MP	RO	26/04/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS

PO Box 4366 PENRITH WESTFIELD NSW 2750
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STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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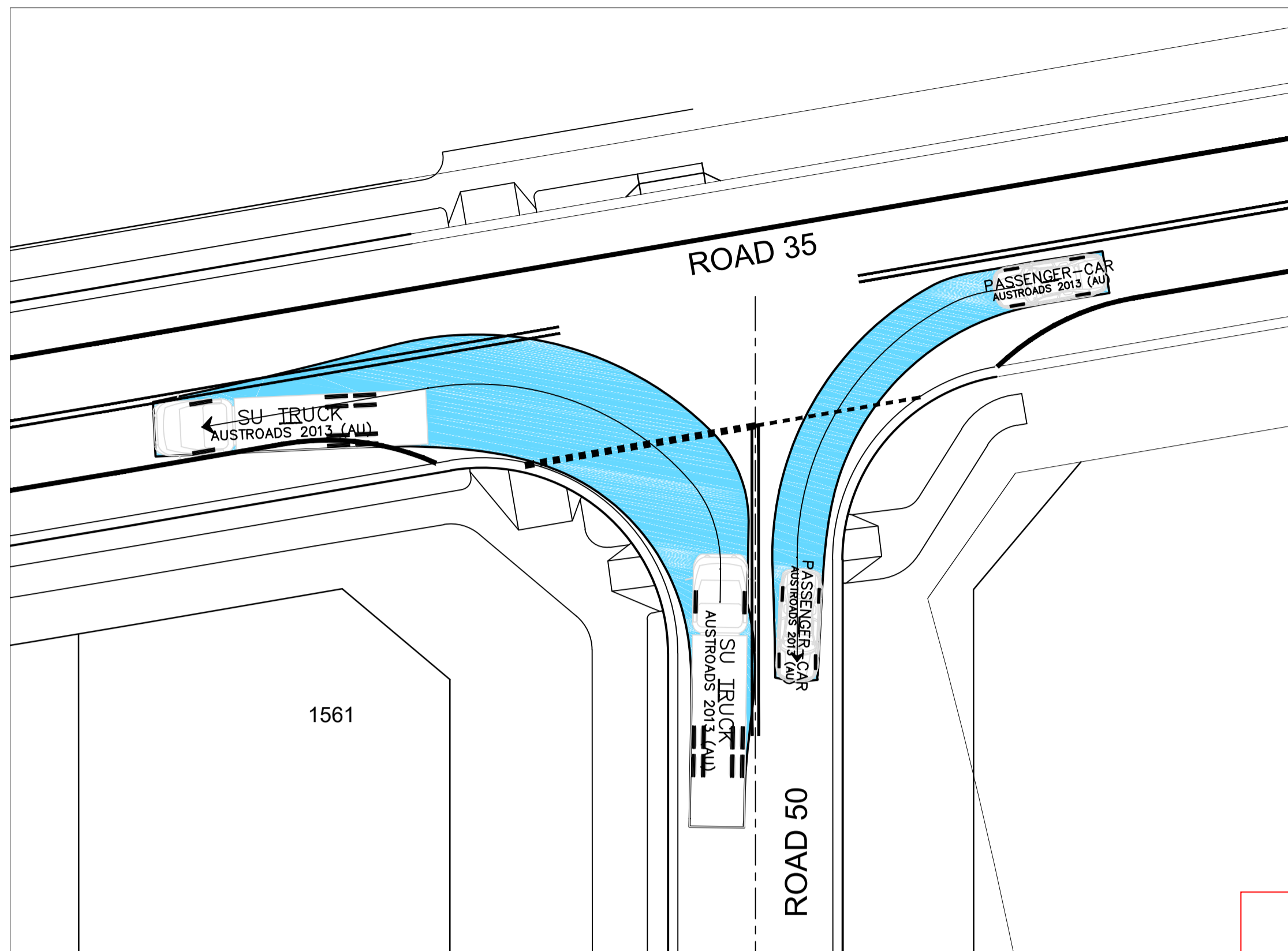
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
EMERGENCY ACCESS CROSS SECTION

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1803

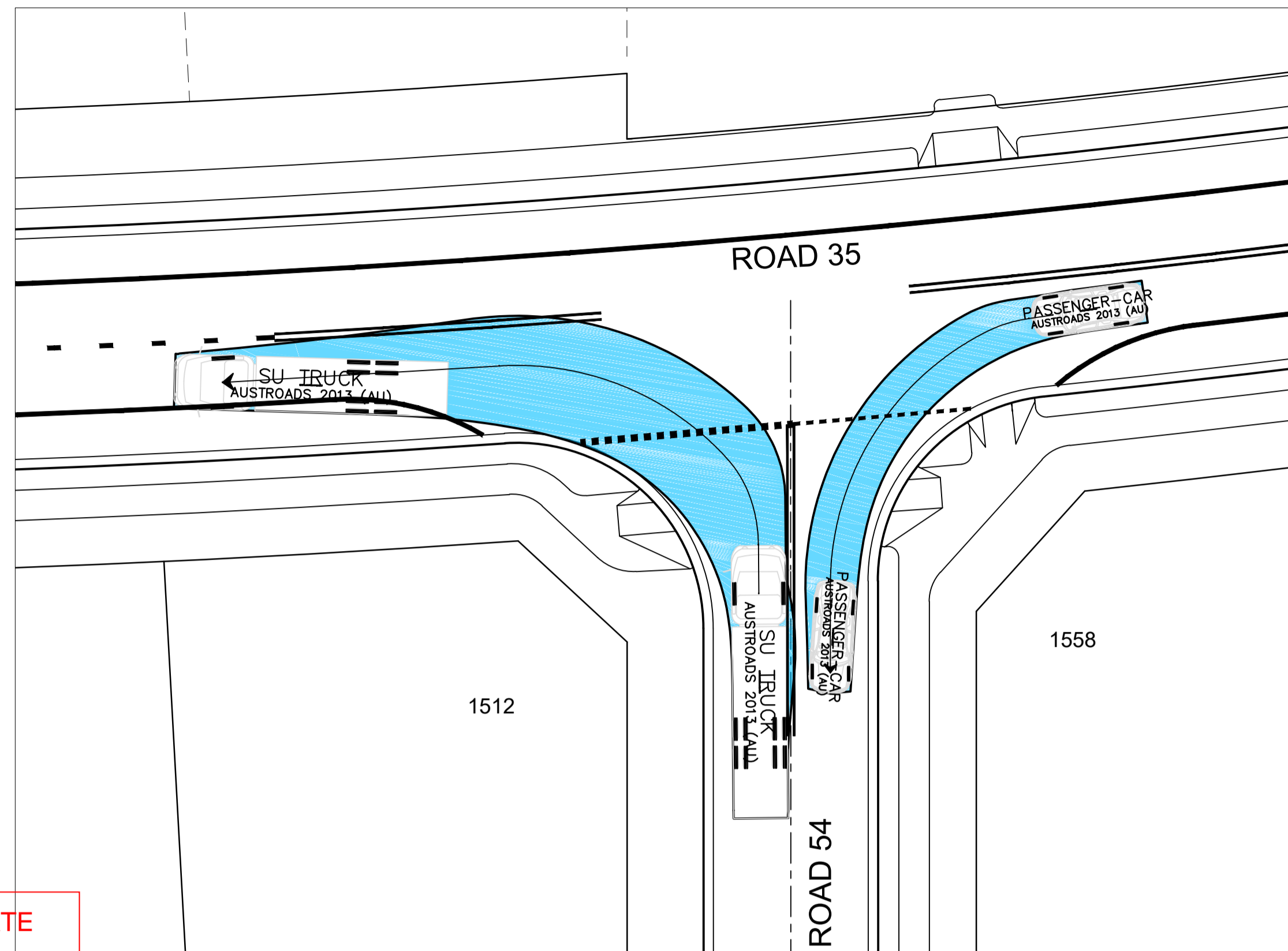
PROJECT No: **110185-12**
SHEET No: **CC1803**

A

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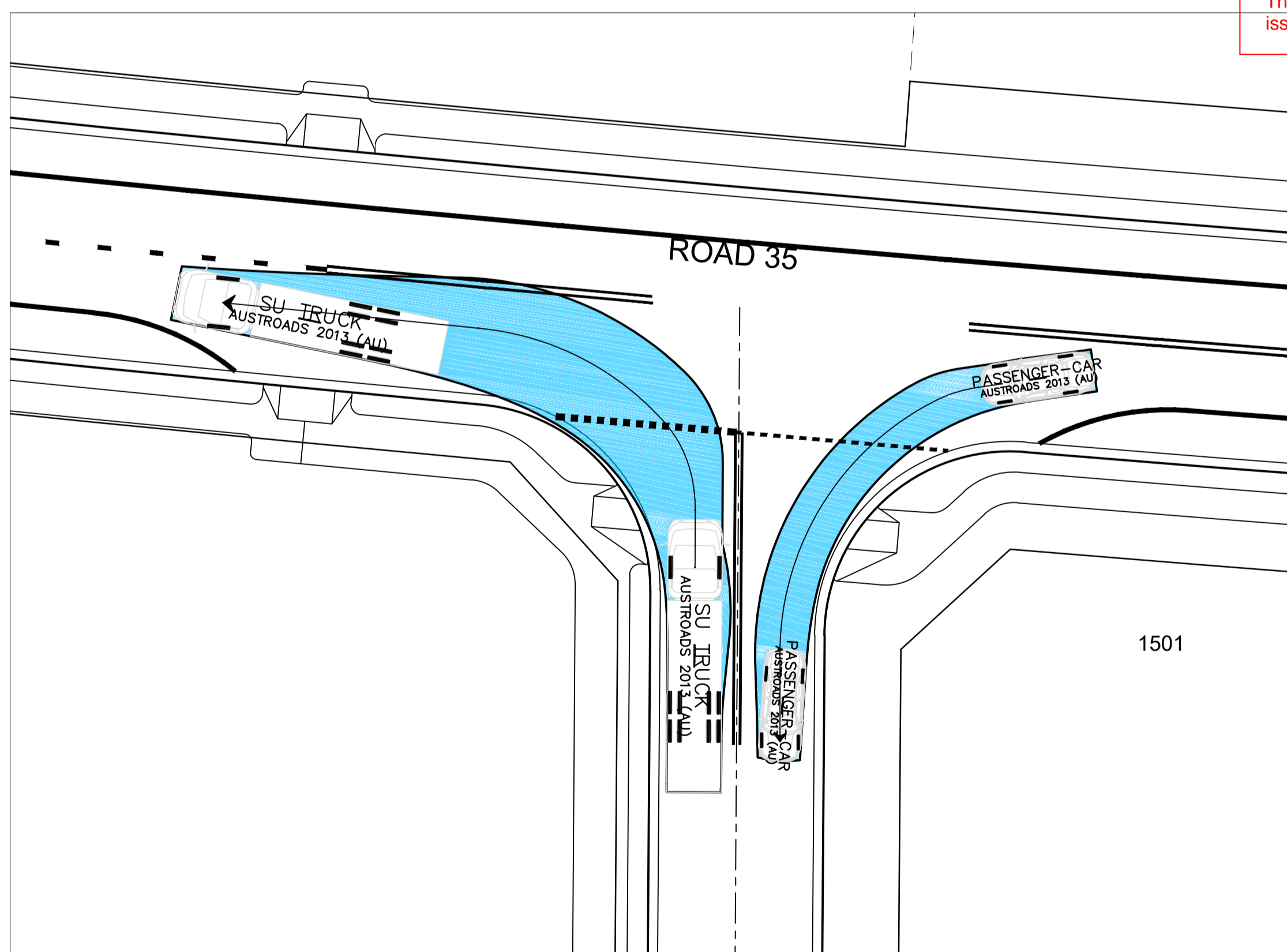


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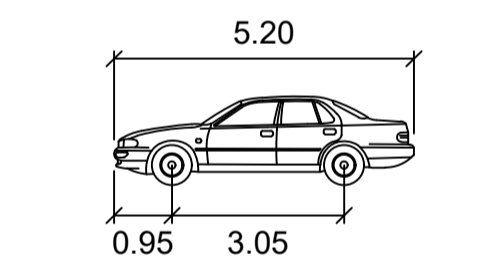
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate
 issued 10th of August 2021

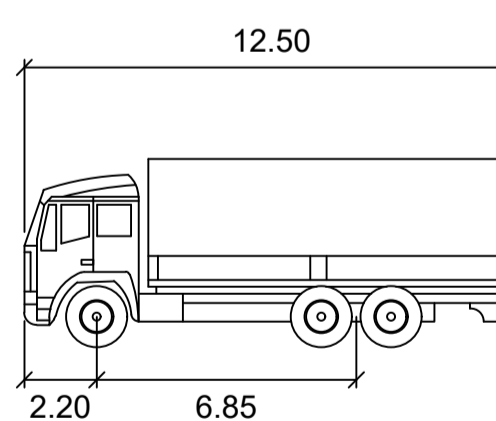


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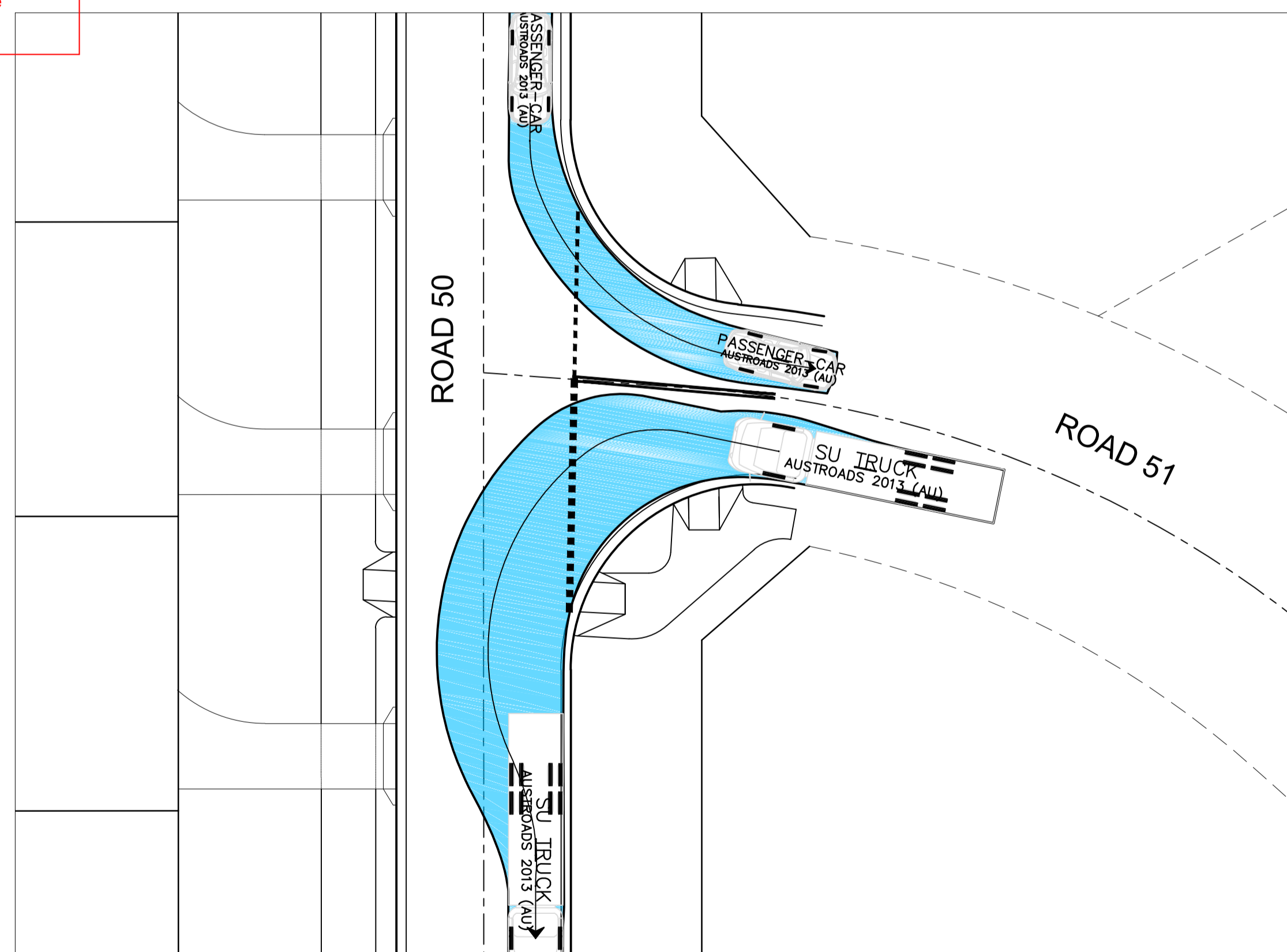
PASSENGER-CAR

meters
 Width : 1.94
 Track : 1.84
 Lock to Lock Time : 6.0
 Steering Angle : 33.6

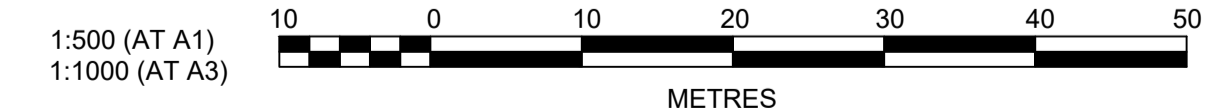


SU TRUCK

meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6



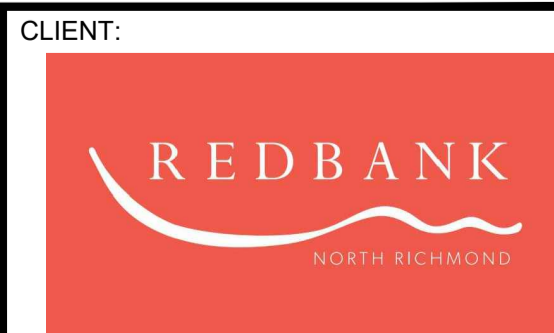
PLAN
SCALE 1:500



AMENDMENT	DES	DRN	CKD	APR	DATE
B	JET	JET	MP	RO	08/06/21
A	JET	JET	MP	RO	13/05/21

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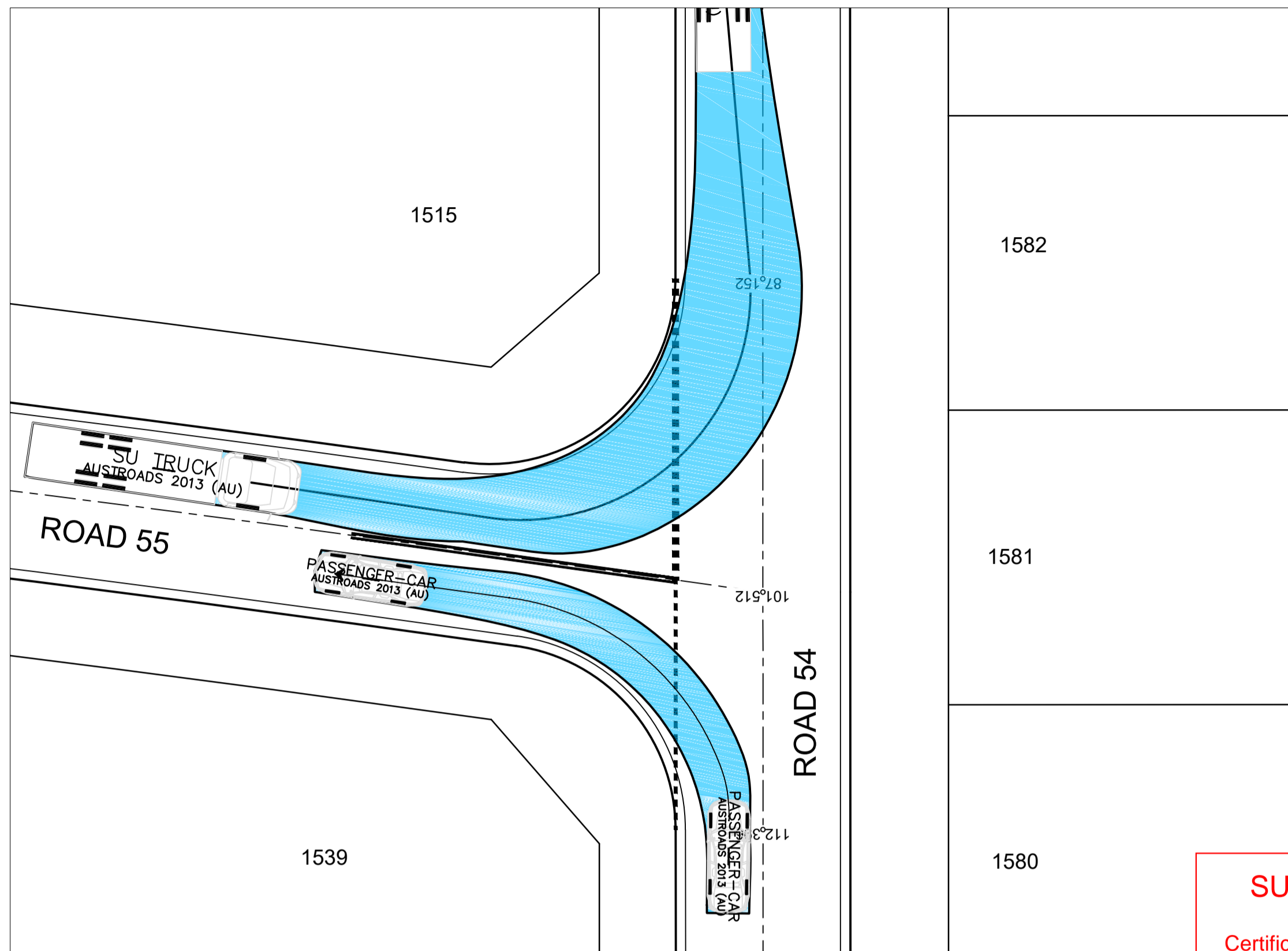
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**REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SWEEP PATH PLAN
SHEET 1**

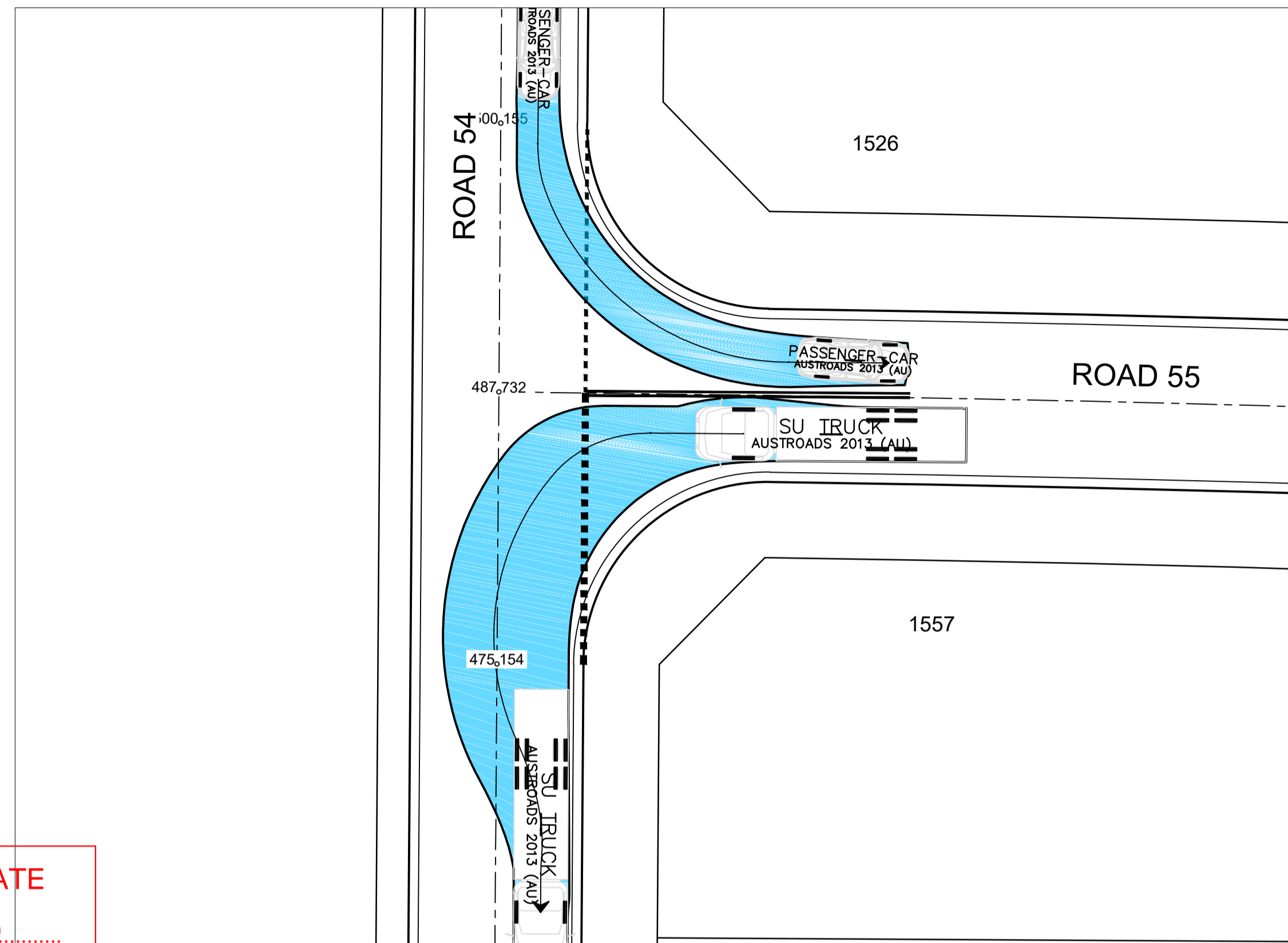
PROJECT No: **110185-12**
SHEET No: **CC1900**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1900 **B**

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PLAN
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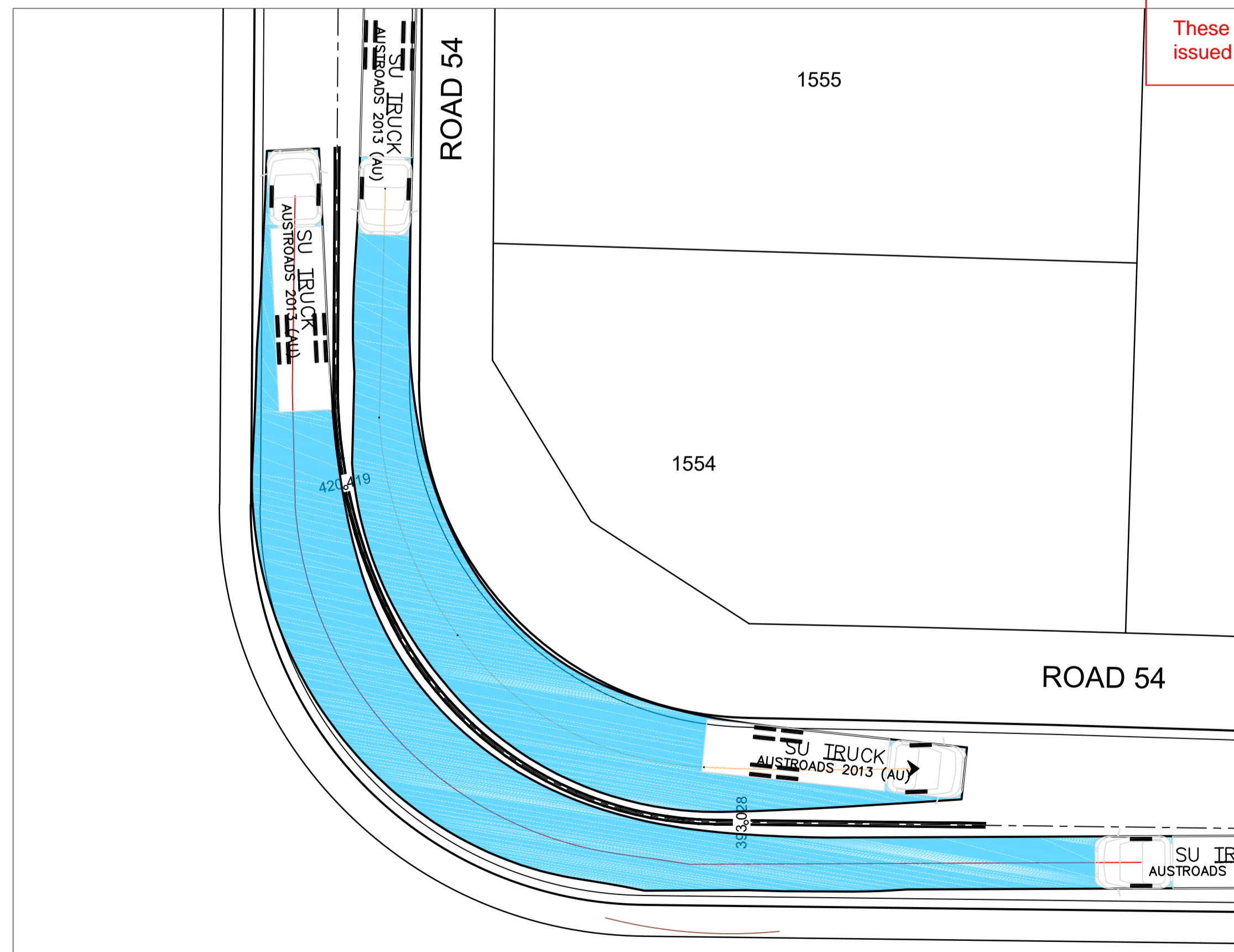


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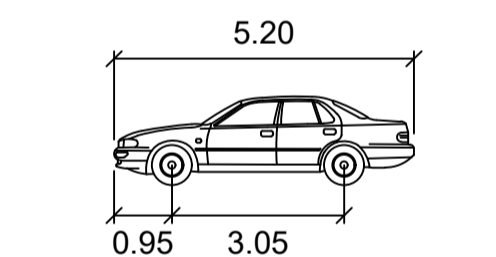
SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Restu*
 Accreditation No. BDC3367

These plans/specifications form part of the certificate issued 10th of August 2021

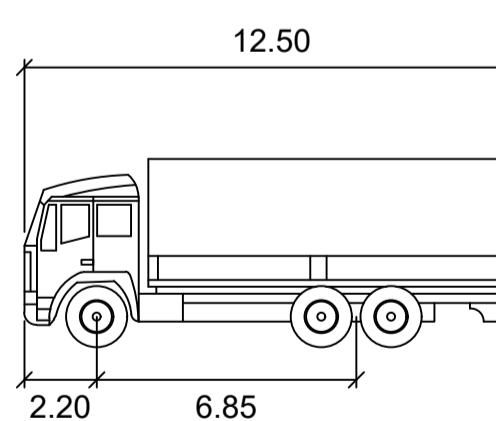


PLAN
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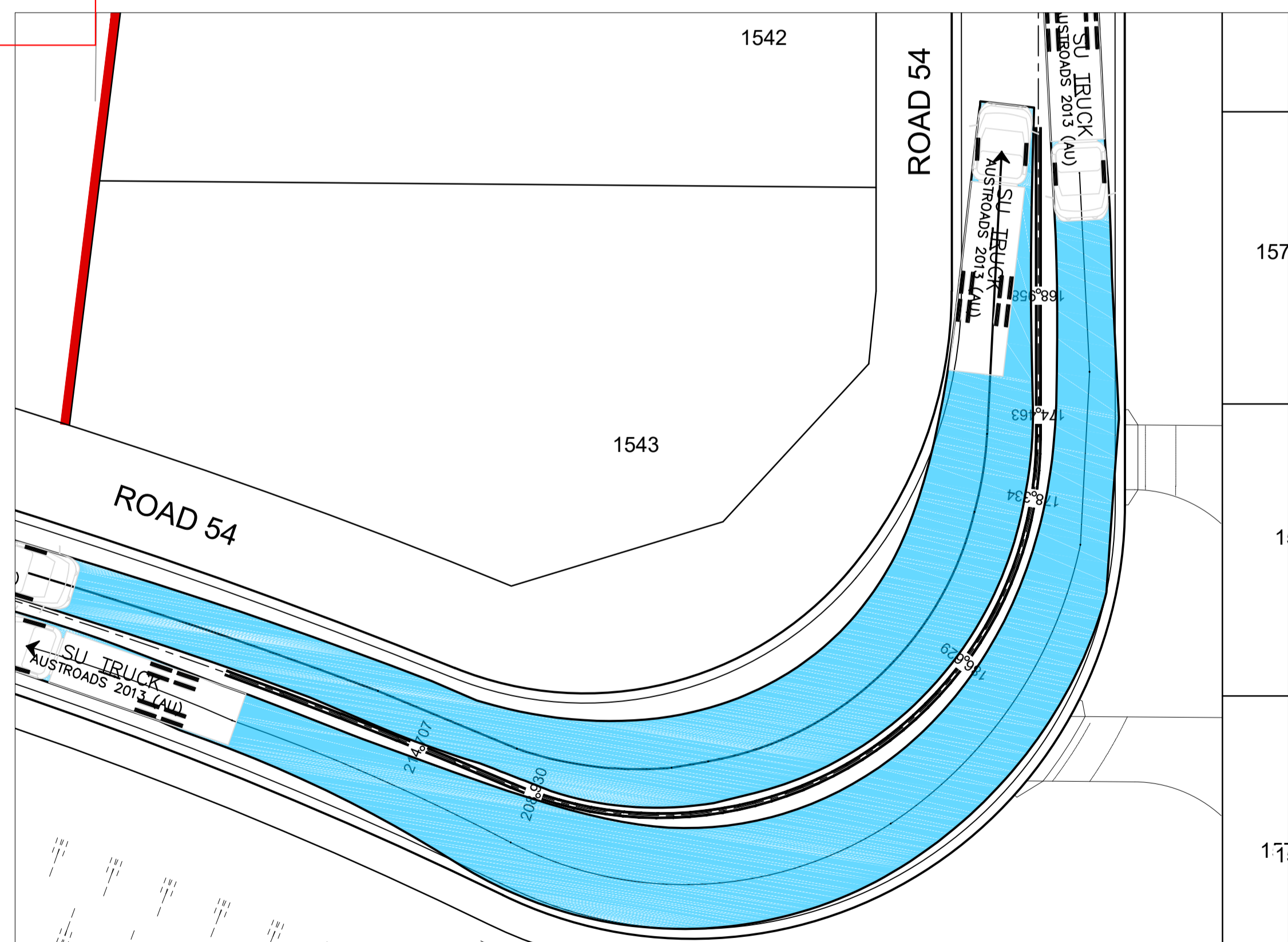
PASSENGER-CAR

Width : 1.94 meters
 Track : 1.84
 Lock to Lock Time : 6.0
 Steering Angle : 33.6

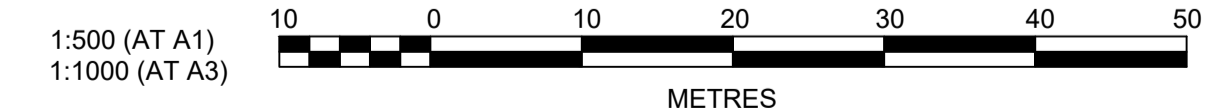


SU TRUCK

Width : 2.50 meters
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 36.6



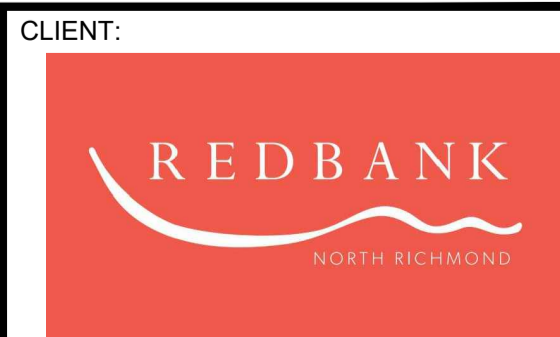
PLAN
SCALE 1:500



AMENDMENT	DES	DRN	CKD	APR	DATE
B	JET	JET	MP	RO	08/06/21
A	JET	JET	MP	RO	13/05/21

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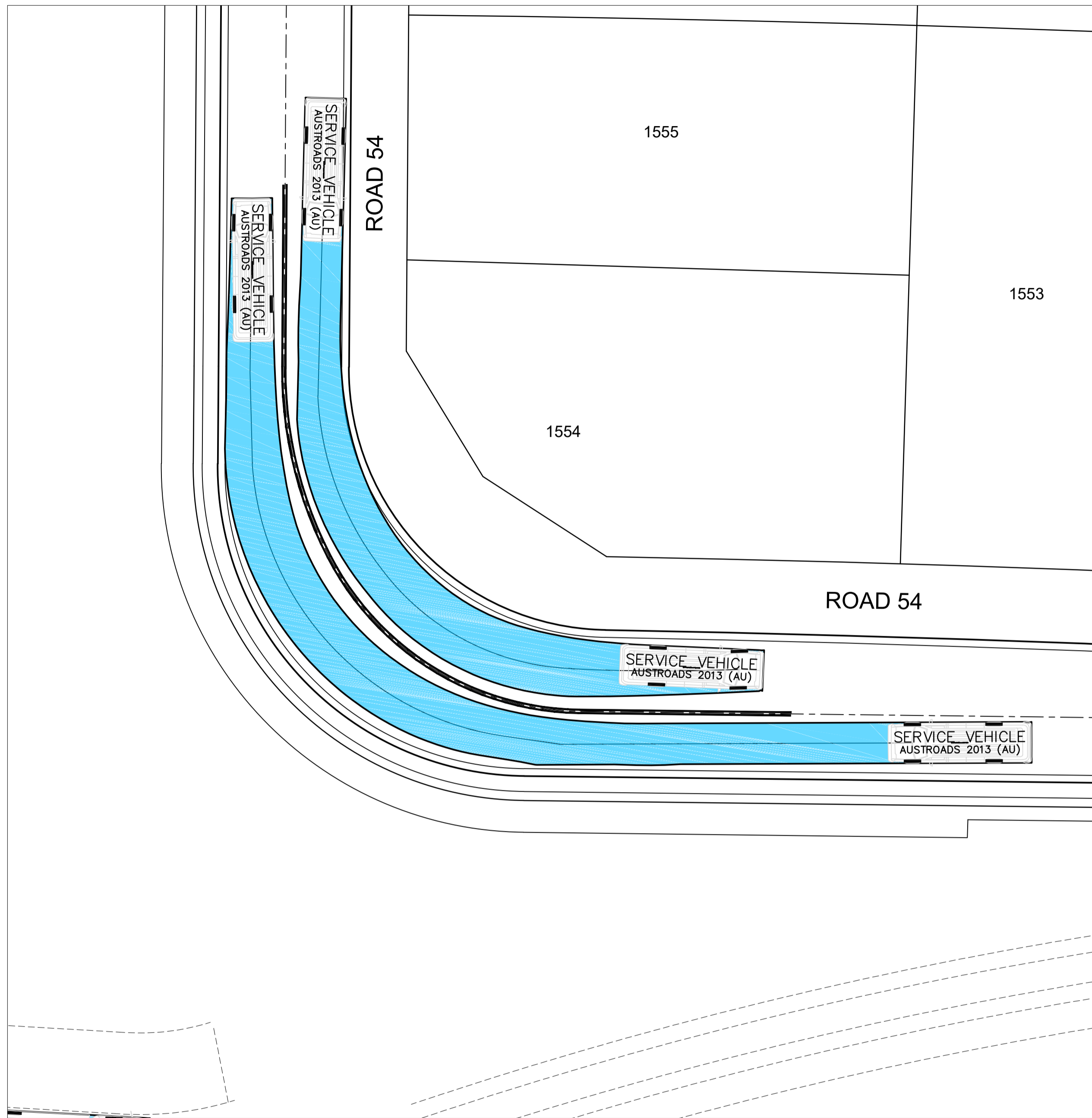
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**REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
SWEEP PATH PLAN
SHEET 2**

PROJECT No: **110185-12**
SHEET No: **CC1901**

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1901

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PLAN
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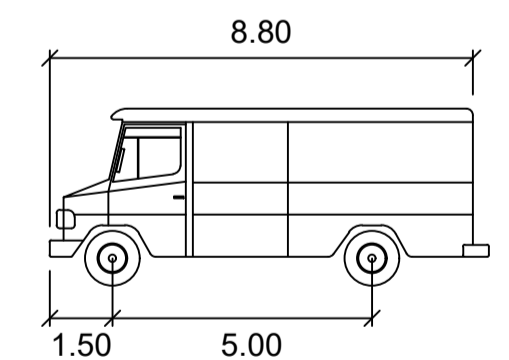


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SUBDIVISION WORKS CERTIFICATE

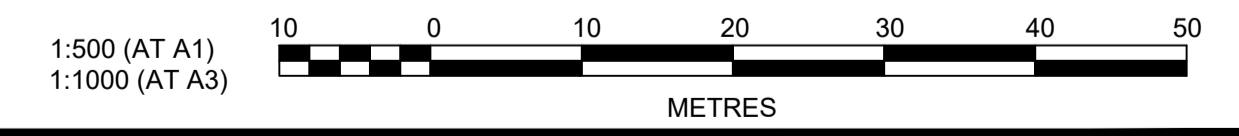
Certificate No. 20130299SW60.....
 Date of Issue 10/08/2021.....
 Issuing Officer *D. Restin*
 Accreditation No. BDC3367

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 issued 10th of August 2021



SERVICE VEHICLE

meters
 Width : 2.50
 Track : 2.50
 Lock to Lock Time : 6.0
 Steering Angle : 38.7



AMENDMENT	DES	DRN	CKD	APR	DATE
C	JET	JET	MP	RO	08/06/21
B	JET	JET	MP	RO	21/05/21
A	JET	JET	MP	RO	13/05/21

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 P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: **REDBANK**
NORTH RICHMOND

STATUS: **ISSUE FOR CONSTRUCTION APPROVAL**

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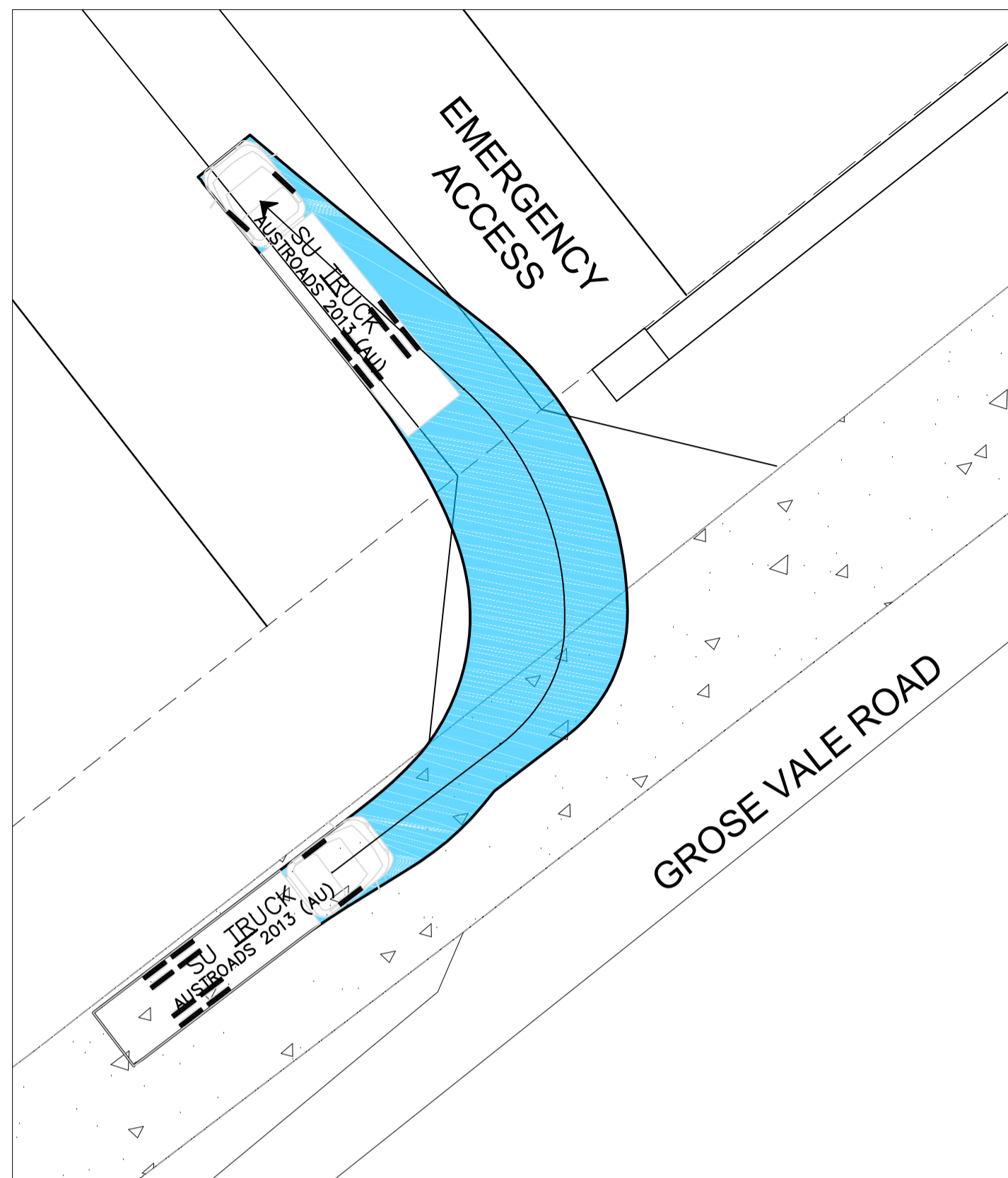
REDBANK, NORTH RICHMOND
SOUTHERN HEIGHTS - PROMENADE
 SWEEP PATH PLAN
 SHEET 3

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1902

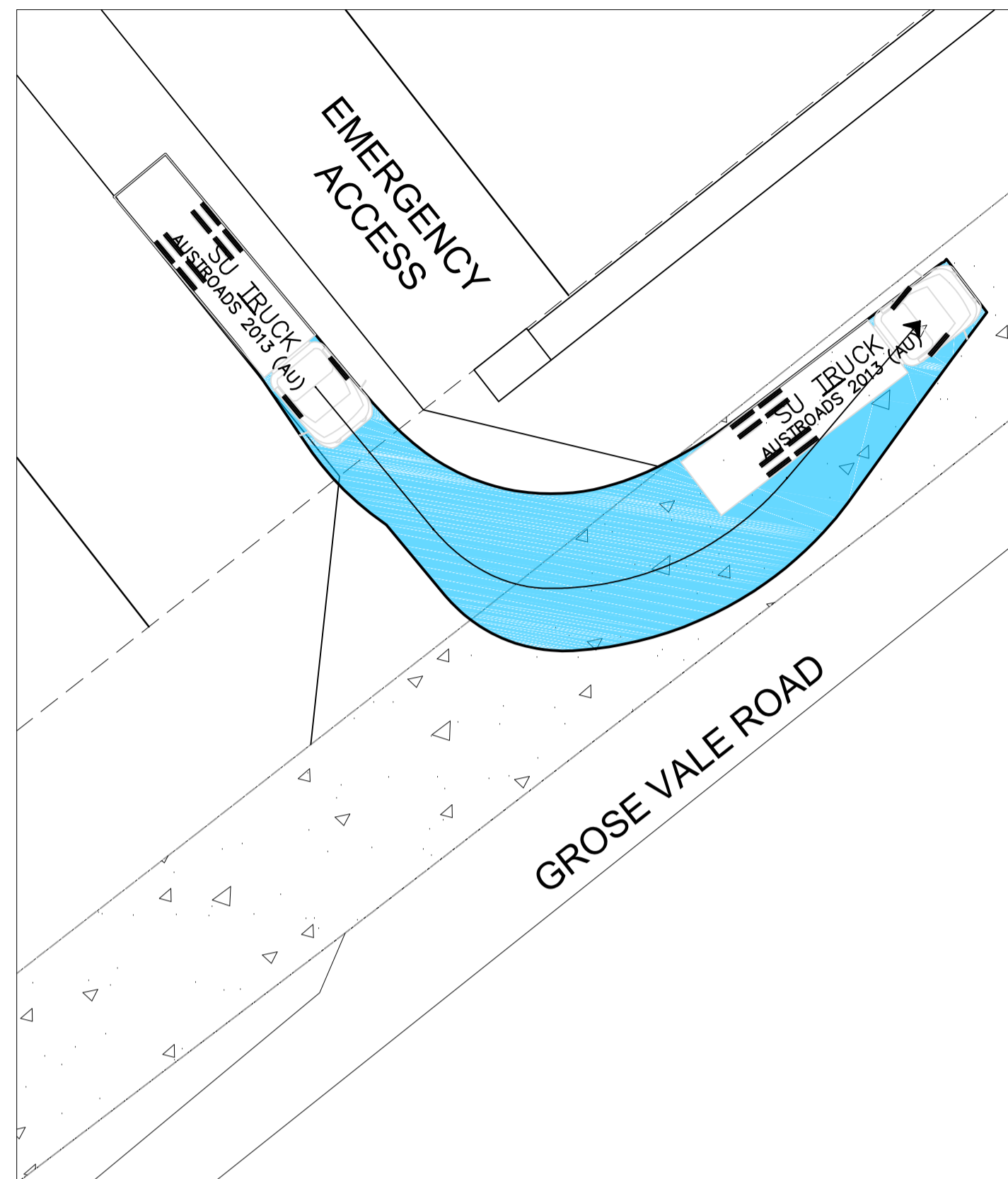
PROJECT No:
110185-12
 SHEET No:
CC1902

C

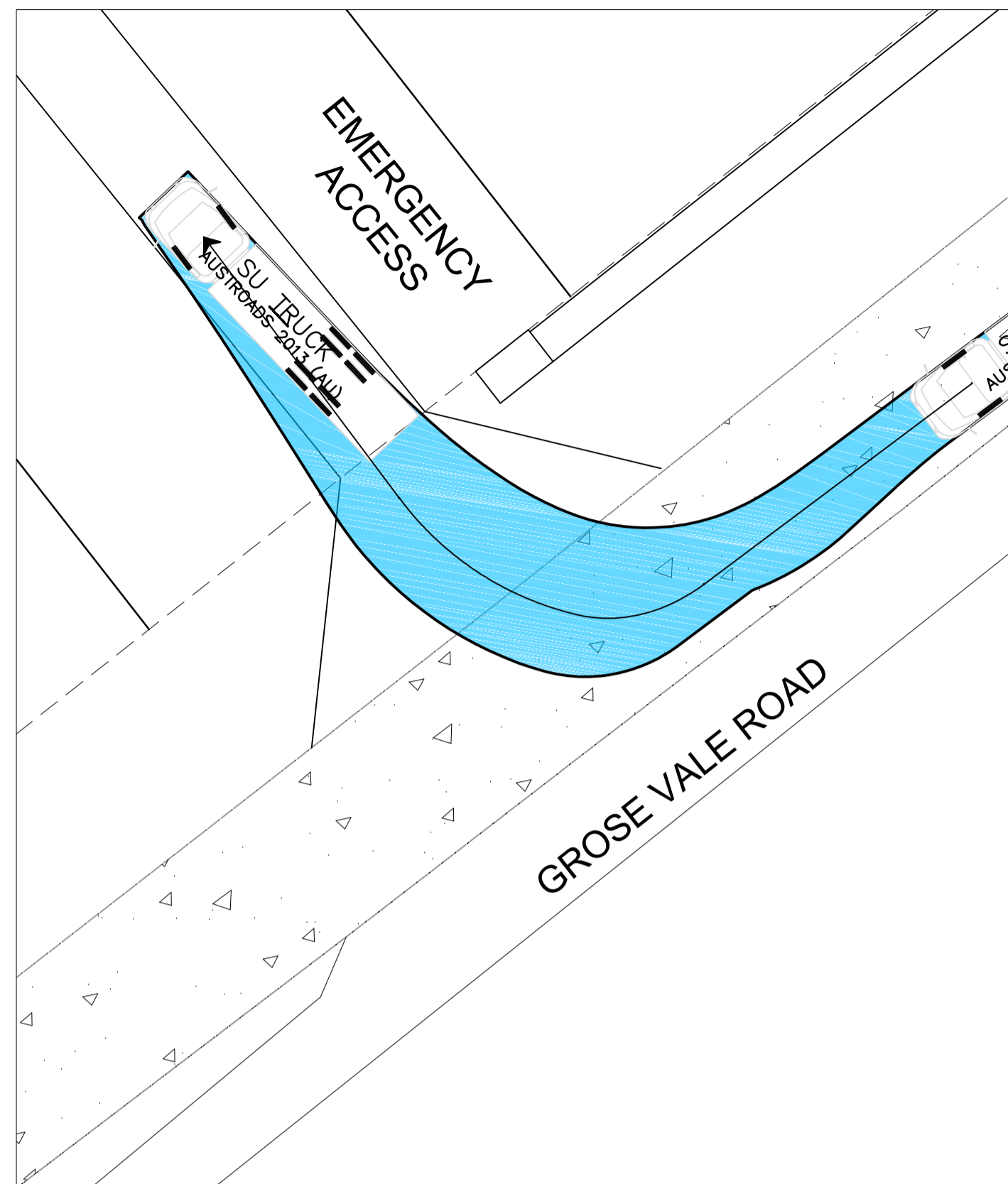
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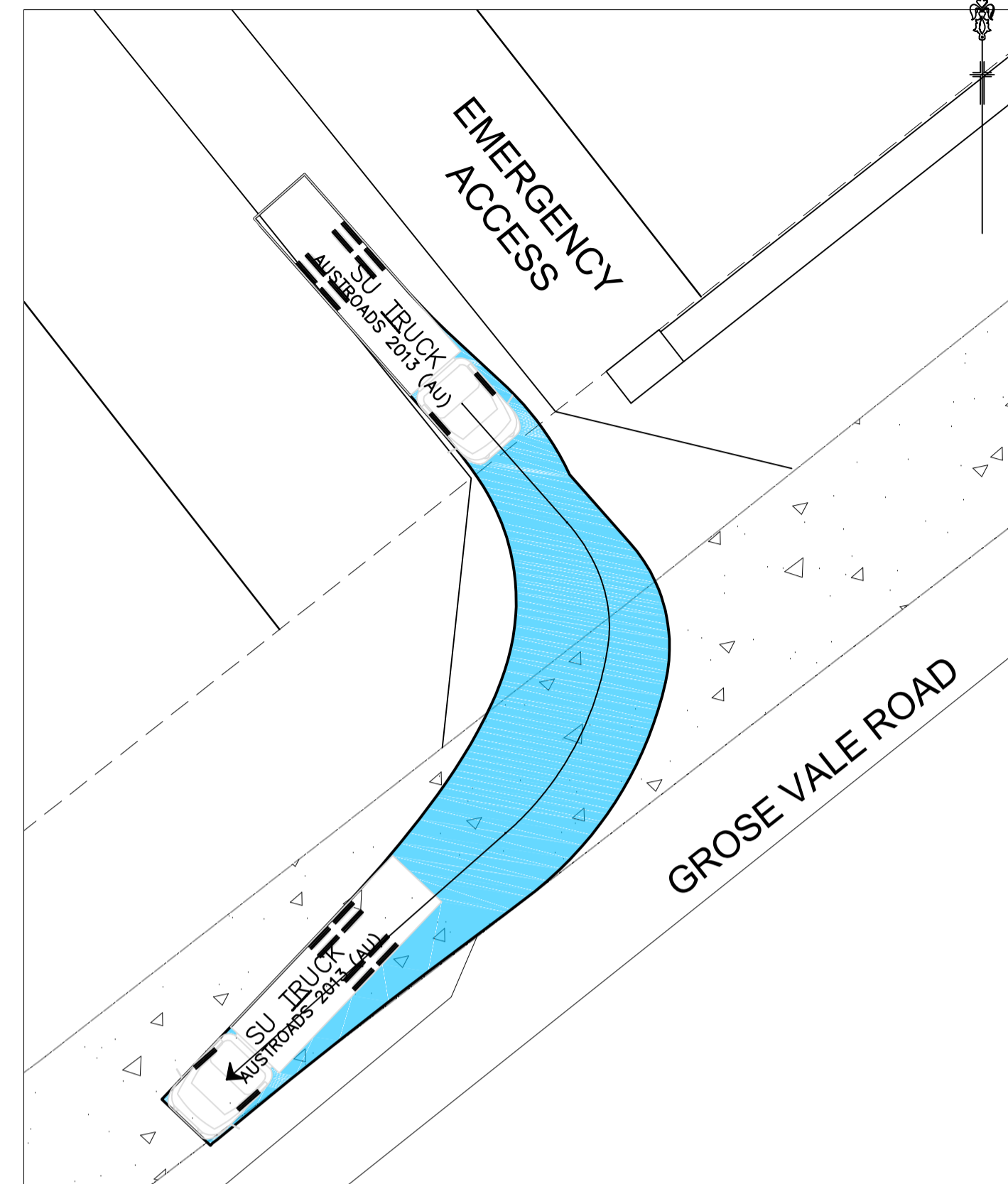
PLAN
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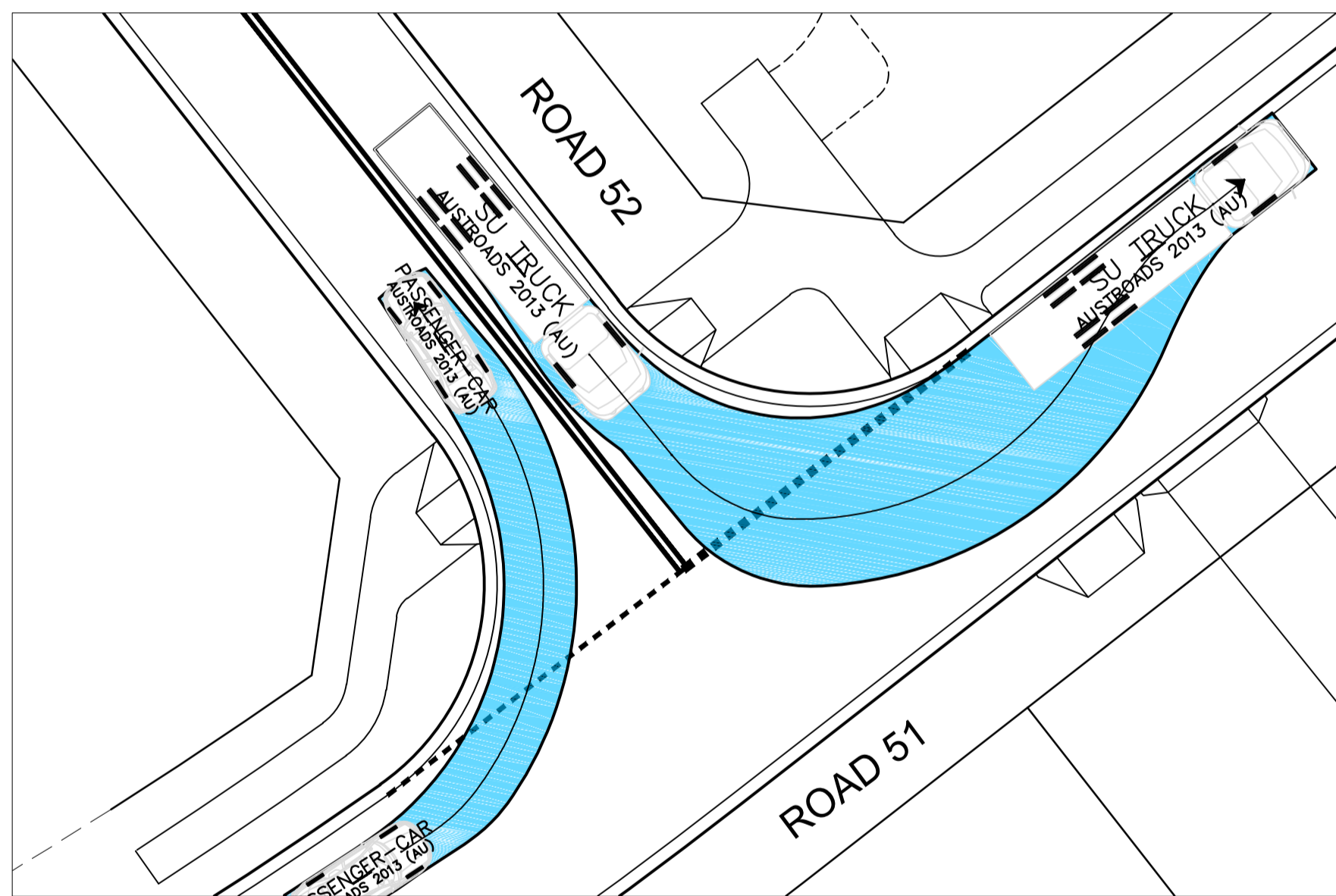
PLAN
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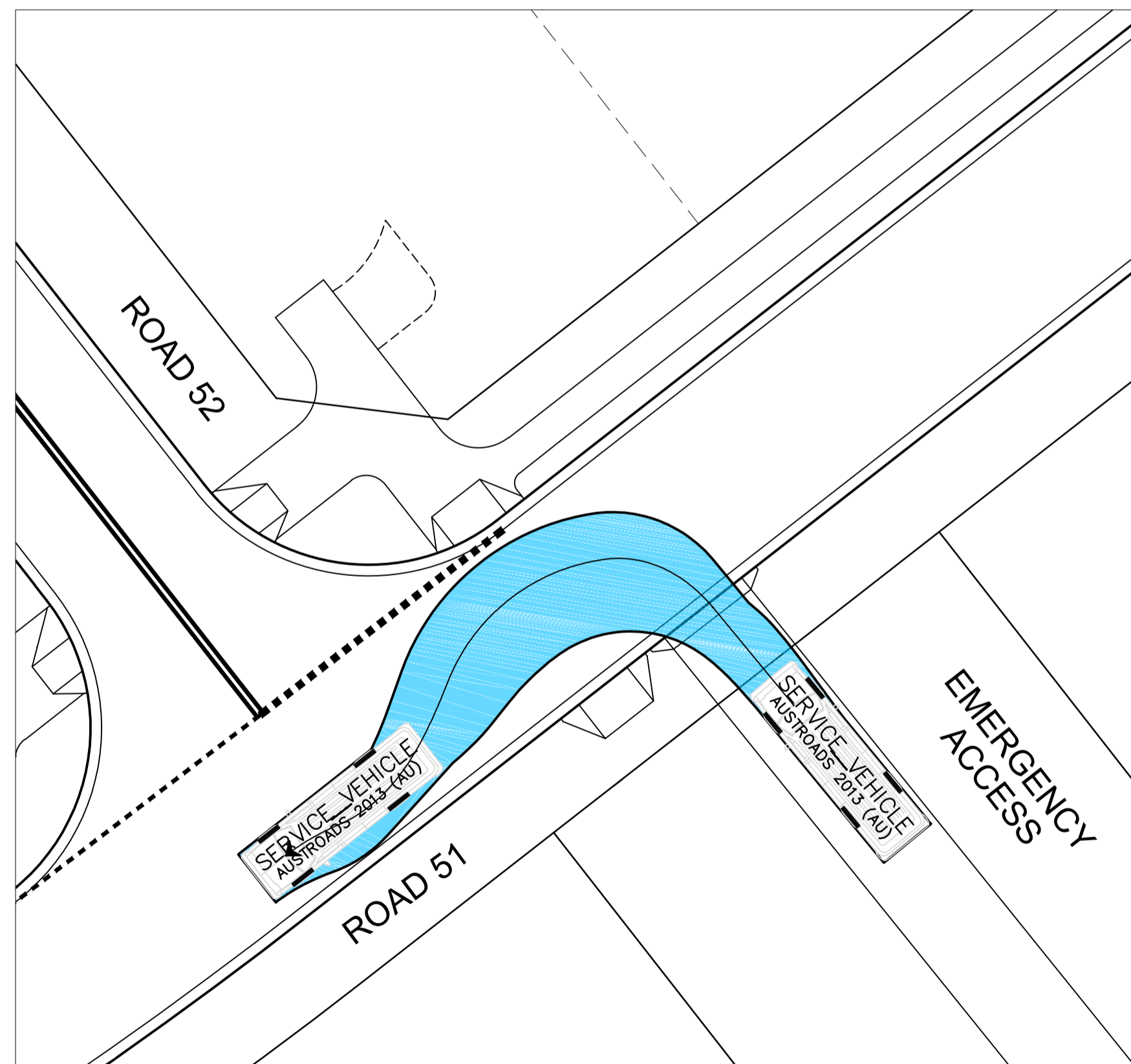
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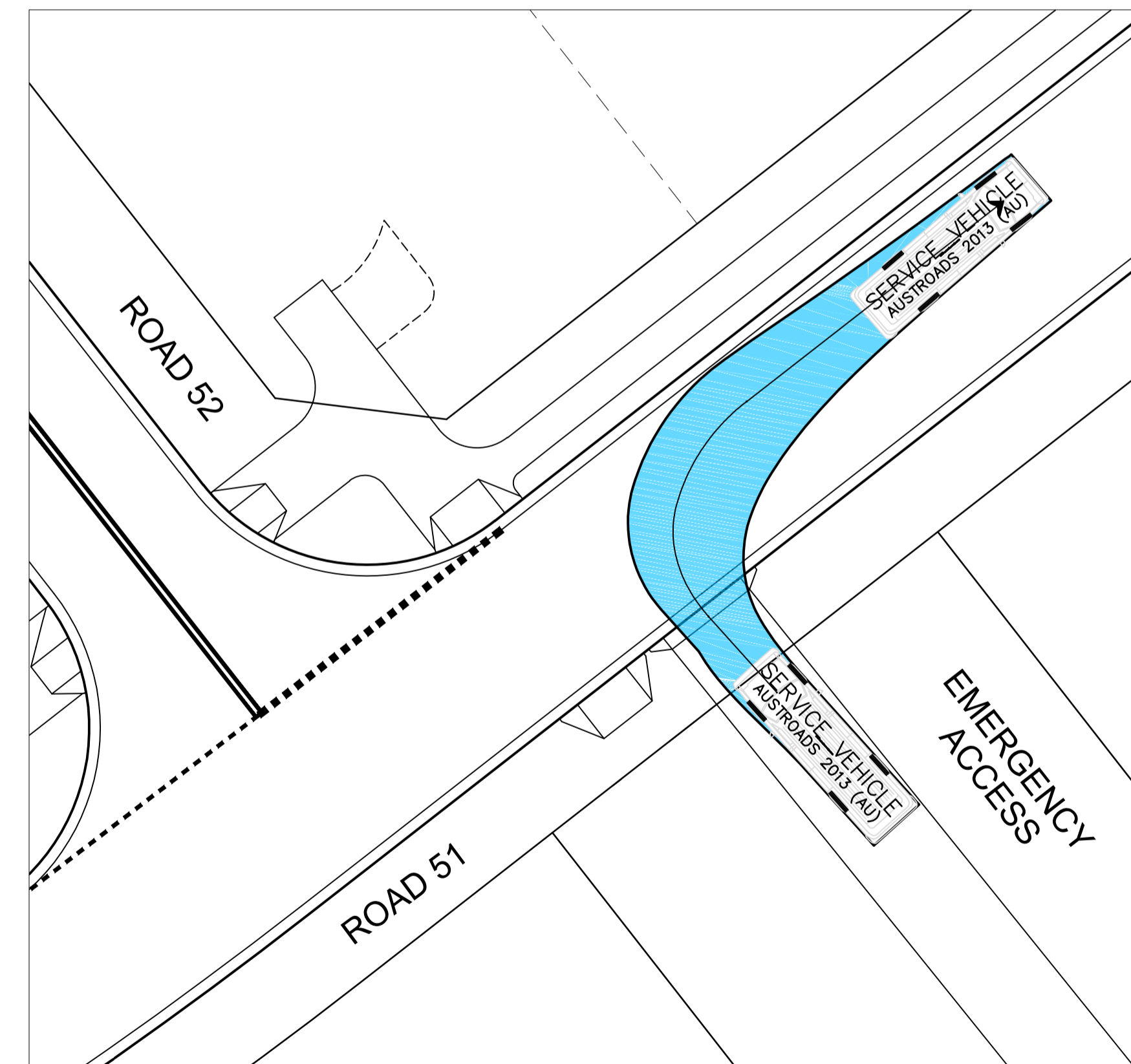
PLAN
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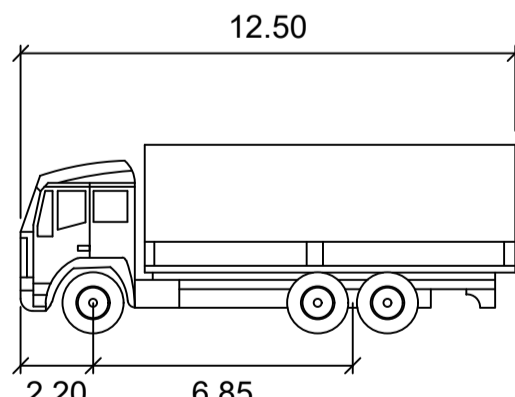
PLAN
SCALE 1:500



PLAN
SCALE 1:500

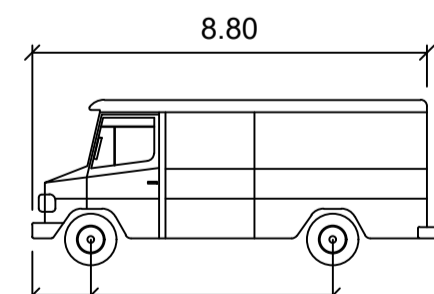


PLAN
SCALE 1:500



SU TRUCK

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.6



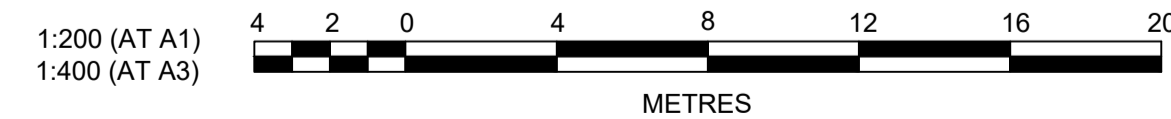
SERVICE VEHICLE

Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

SUBDIVISION WORKS CERTIFICATE

Certificate No. 20130299SW60
 Date of Issue 10/08/2021
 Issuing Officer *D. Resti*
 Accreditation No. BDC3367

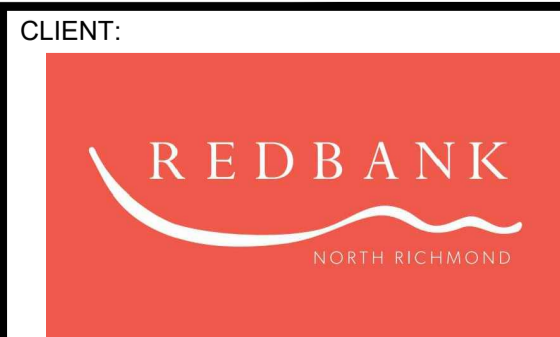
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AMENDMENT	DES	DRN	CKD	APR	DATE
C SWEPT PATH REVISED	JET	JET	MP	RO	08/06/21
B COUNCIL COMMENTS	JET	JET	MP	RO	21/05/21
A COUNCIL COMMENTS	JET	JET	MP	RO	13/05/21

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REDBANK, NORTH RICHMOND
 SOUTHERN HEIGHTS - PROMENADE
 SWEPT PATH PLAN
 SHEET 4

PROJECT No: 110185-12
 SHEET No: CC1903

AZIMUTH: M.G.A. DATUM: A.H.D. ORIGIN: PLAN No: 110185-12-CC1903