

Appendix 3

Scheme Plan and Engineering Plans



MEMORANDUM OF EASEMENTS			
PURPOSE	BURDENED LAND	SHOWN	BENEFITTED LAND
RIGHT OF WAY RIGHT TO CONVEY ELECTRICITY, TELECOMMUNI- CATIONS, GAS & WATER RIGHT TO DRAIN WATER	LOT 301 HEREON	A	LOTS 26-28 HEREON
RIGHT OF WAY RIGHT TO CONVEY ELECTRICITY, TELECOMMUNI- CATIONS, GAS & WATER RIGHT TO DRAIN WATER	LOT 302 HEREON	B	LOT 59 - 66 HEREON
RIGHT TO DRAIN WATER	LOT 62 HEREON	D	LOTS 59-61, 63-66, 69-72 & LOT 302 HEREON
	LOT 49 HEREON	E	LOTS 59-66, 69-72 & 302 HEREON

MEMORANDUM OF EASEMENTS IN GROSS			
PURPOSE	GRANTOR	SHOWN	GRANTEE
RIGHT TO CONVEY ELECTRICITY, TELECOMMUNI-	LOT 95 HEREON	C	NORTHPOWER

AMALGAMATION CONDITION			
THAT LOT 301 BE HELD IN THREE UNDIVIDED ONE THIRD SHARES BY THE OWNERS OF LOTS 26 TO 28 AND NEW RECORDS OF TITLE BE ISSUED IN ACCORDANCE HERewith			
PURSUANT TO SEC. 220(1)(b)(iv) RESOURCE MANAGEMENT ACT 1991. (SEE LINZ REQUEST.....)			
THAT LOT 302 BE HELD IN EIGHT UNDIVIDED ONE EIGHTH SHARES BY THE OWNERS OF LOTS 59 TO 66 AND NEW RECORDS OF TITLE BE ISSUED IN ACCORDANCE HERewith			
PURSUANT TO SEC. 220(1)(b)(iv) RESOURCE MANAGEMENT ACT 1991. (SEE LINZ REQUEST.....)			

EXISTING EASEMENTS TO BE EXTINGUISHED			
PURPOSE	BURDENED LAND	SHOWN	CREATED BY
RIGHT TO CONVEY WATER	SECTION 1 SO 65970	B SO 50428	

MEMORANDUM OF EASEMENTS IN GROSS			
PURPOSE	BURDENED LAND	SHOWN	GRANTEE
RIGHT TO CONVEY WATER	LOT 79 HEREON	F	WDC
	LOT 80 HEREON	G	
	LOT 81 HEREON	H	
	LOT 82 HEREON	I	
	LOT 83 HEREON	J	
	LOT 84 HEREON	K	
	LOT 85 HEREON	L	
	LOT 86 HEREON	M	
	LOT 87 HEREON	N	
	LOT 88 HEREON	O	
	LOT 89 HEREON	P	
	LOT 90 HEREON	Q	
	LOT 91 HEREON	R	
	LOT 92 HEREON	S	
LOT 93 HEREON	T		
LOT 94 HEREON	U		



NOTE:

- ALL AREAS AND DIMENSIONS SUBJECT TO FINAL SURVEY AND APPROVAL FROM THE WHANGAREI DISTRICT COUNCIL
- LEGAL DESCRIPTION: SEC 1 SO 65970 (RT. NA78D/985) ML. & AL. MORTIMER, G.J. LOVELL (RT. NA61A/47) DEED OF EASEMENT HER MAJESTY THE QUEEN
- TOTAL AREA: 6.8755 ha.
- ZONE: LIVING 1
- AERIAL PHOTO SUBJECT TO DISTORTION
- CONTOURS SHOWN ARE DERIVED FROM SURVEY.
- ALL LEVELS ARE IN TERMS OF ONE TREE POINT

CONTOURS SHOWN ARE EXISTING GROUND 0.50m INTERVAL

Size	A3	Scale	1:1500	Date	NOVEMBER 2021		
No.	Amendment	Init.	Date	Designed	CN		09/11/21
10	PARKING BAYS & TREES ADDED	CN	15/11/21	Drawn	CN		21/08/21
11	PARKING BAYS ADDED, ROAD C CL SHIFTED	JMC	22/11/21	Checked			
12	LOT 94/95 BOUNDARY ADJUSTMENT	CN	24/11/21	Approved			

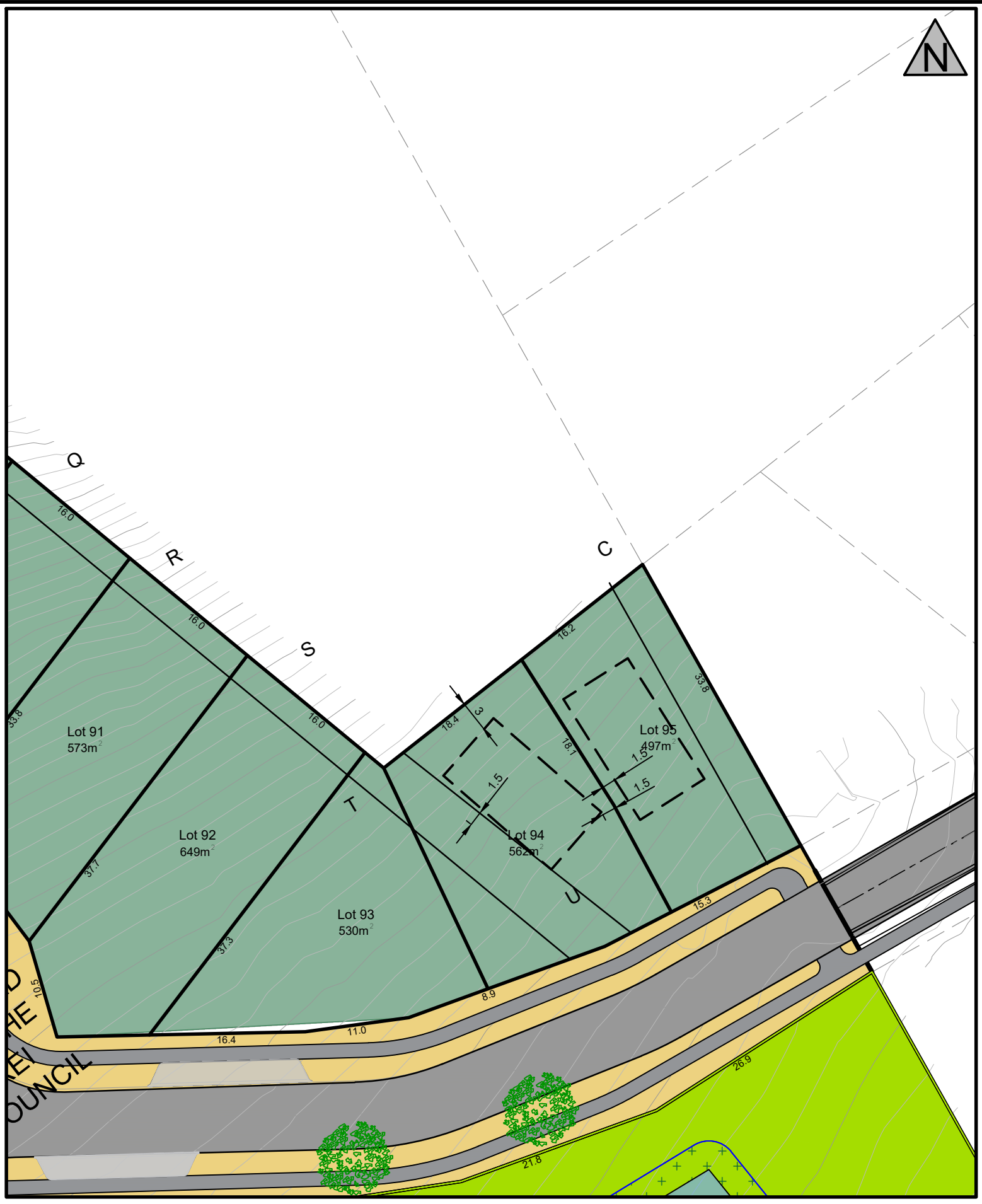
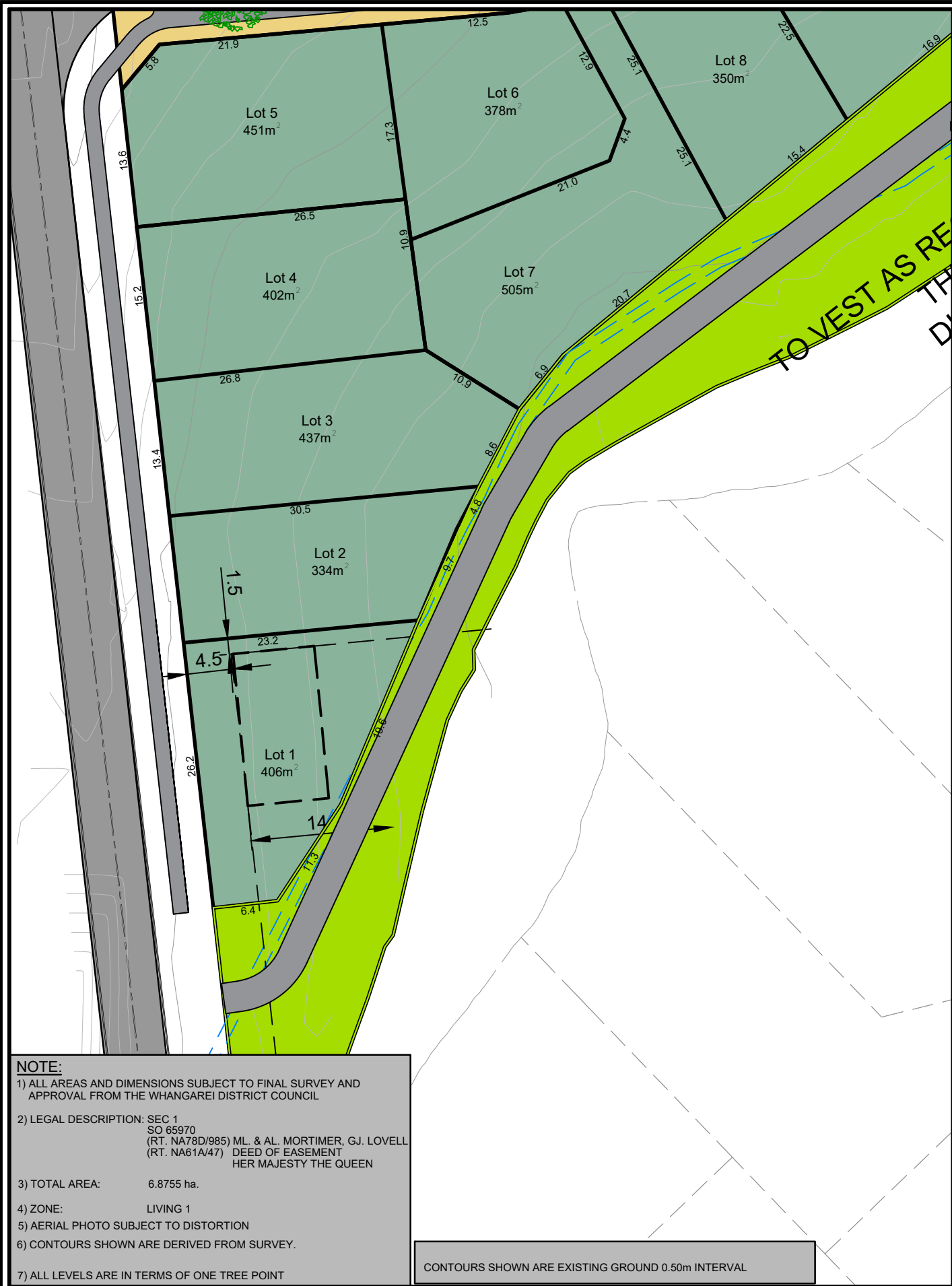
CONCEPT SCHEME PLAN
SECTION 1 SO 65970
 47 DIP ROAD, KAMO, WHANGAREI
 Prepared for: ONOKE HEIGHTS LIMITED



Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: One Tree Point Datum 1964	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-PL-102	12

S:\2020\202531_PLANNING\1_SCHM PLAN\20-253-01-PL-100-REV.DWG



NOTE:

- 1) ALL AREAS AND DIMENSIONS SUBJECT TO FINAL SURVEY AND APPROVAL FROM THE WHANGAREI DISTRICT COUNCIL
- 2) LEGAL DESCRIPTION: SEC 1
SO 65970
(RT. NA78D/985) ML. & AL. MORTIMER, G.J. LOVELL
(RT. NA61A/47) DEED OF EASEMENT
HER MAJESTY THE QUEEN
- 3) TOTAL AREA: 6.8755 ha.
- 4) ZONE: LIVING 1
- 5) AERIAL PHOTO SUBJECT TO DISTORTION
- 6) CONTOURS SHOWN ARE DERIVED FROM SURVEY.
- 7) ALL LEVELS ARE IN TERMS OF ONE TREE POINT

CONTOURS SHOWN ARE EXISTING GROUND 0.50m INTERVAL

Size	A3	Scale	1:500	Date	NOVEMBER 2021		
No.	Amendment	Init.	Date	Designed	CN	09/11/21	
1	ISSUED FOR INFORMATION	CN	09/11/21	Drawn	CN	09/11/21	
2	LOT 94/95 UPDATED	CN	24/11/21	Checked			
3				Approved			

BUILDING ENVELOPE DETAIL
SECTION 1 SO 65970
 47 DIP ROAD, KAMO, WHANGAREI
 Prepared for: ONOKE HEIGHTS LIMITED



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Datum: Circuit: Mt Eden 2000	
Height: One Tree Point Datum 1964	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-PL-103	2

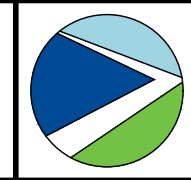
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Legend	
Major Contour (2.0m)	
Minor Contour (0.5m)	

Size	A3	Scale	1:1500	Date	September 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	09/09/21	Drawn	JMC		
2	Lifted Cul De Sac Head, Updated Volumes	JMC	11/10/21	Checked	CN		
3				Approved			

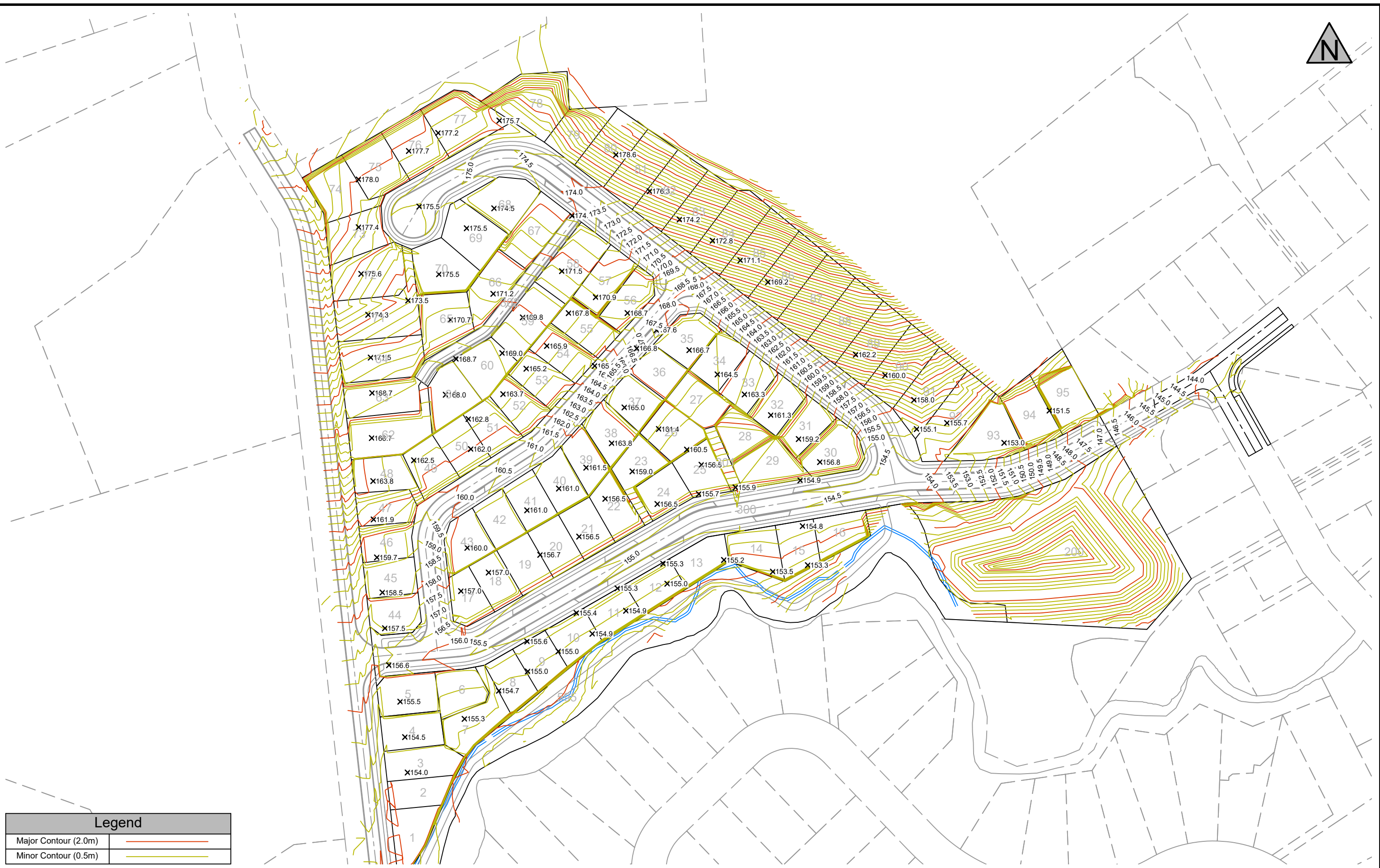
Resource Consent Plan
Existing Contours
 47 Dip Road, Kamo, Whangarei
 Prepared for: Onoke Heights Limited



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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-200	2

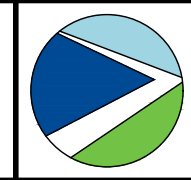
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Legend	
Major Contour (2.0m)	
Minor Contour (0.5m)	

Size	A3	Scale	1:1500	Date	September 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	09/09/21	Drawn	JMC		
2	Lifted Cul De Sac Head, Updated Volumes	JMC	11/10/21	Checked	CN		
3				Approved			

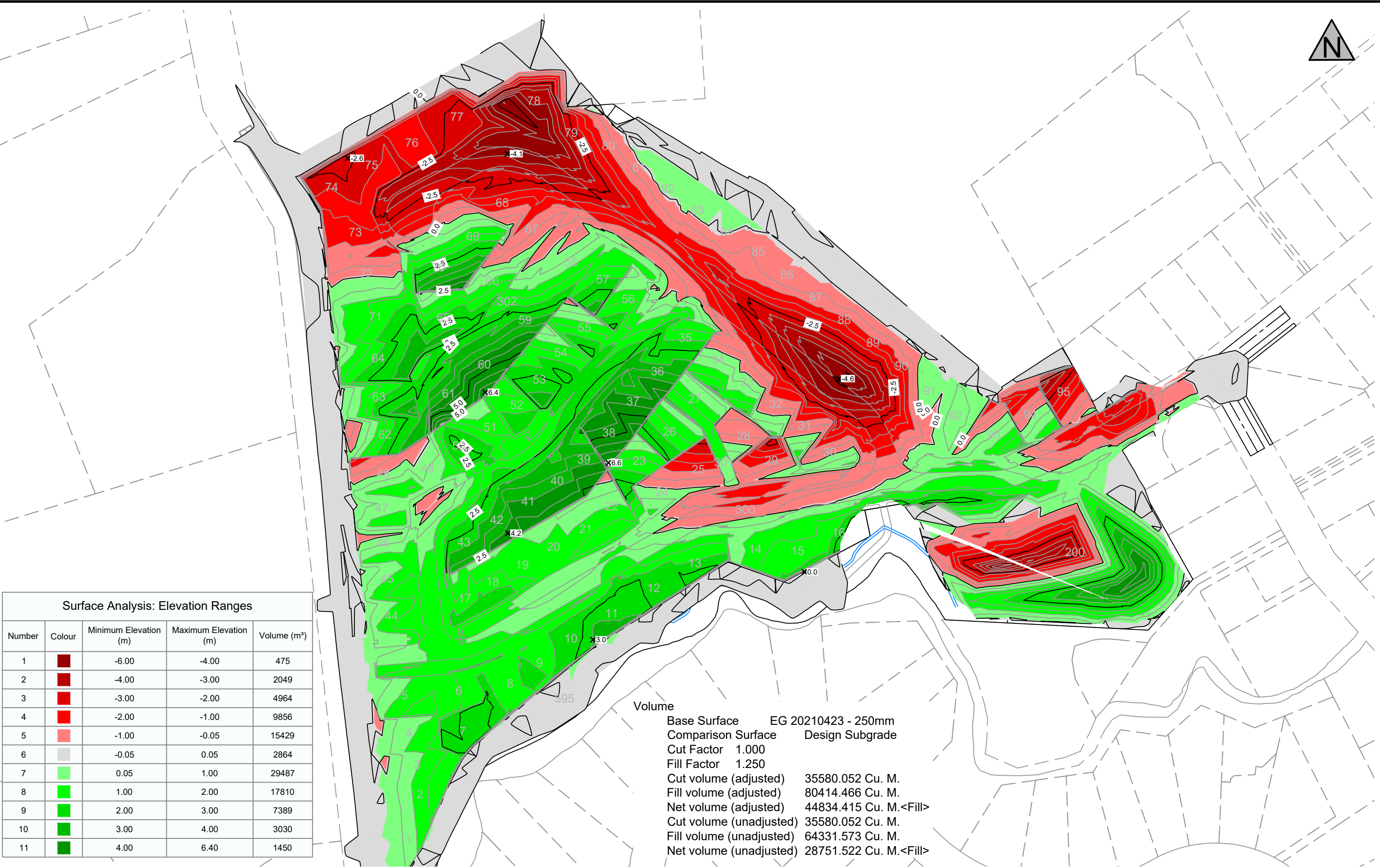
Resource Consent Plan
Design Contours
 47 Dip Road, Kamo, Whangarei
 Prepared for: Onoke Heights Limited



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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
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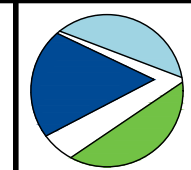
Surface Analysis: Elevation Ranges

Number	Colour	Minimum Elevation (m)	Maximum Elevation (m)	Volume (m³)
1	Dark Red	-6.00	-4.00	475
2	Red	-4.00	-3.00	2049
3	Red	-3.00	-2.00	4964
4	Red	-2.00	-1.00	9856
5	Light Red	-1.00	-0.05	15429
6	Light Green	-0.05	0.05	2864
7	Light Green	0.05	1.00	29487
8	Light Green	1.00	2.00	17810
9	Light Green	2.00	3.00	7389
10	Light Green	3.00	4.00	3030
11	Dark Green	4.00	6.40	1450

Volume
 Base Surface EG 20210423 - 250mm
 Comparison Surface Design Subgrade
 Cut Factor 1.000
 Fill Factor 1.250
 Cut volume (adjusted) 35580.052 Cu. M.
 Fill volume (adjusted) 80414.466 Cu. M.
 Net volume (adjusted) 44834.415 Cu. M.<Fill>
 Cut volume (unadjusted) 35580.052 Cu. M.
 Fill volume (unadjusted) 64331.573 Cu. M.
 Net volume (unadjusted) 28751.522 Cu. M.<Fill>

Size	A3	Scale	1:1500	Date	September 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	09/09/21	Drawn	JMC		
2	Lifted Cul De Sac Head, Updated Volumes	JMC	11/10/21	Checked	CN		
3				Approved			

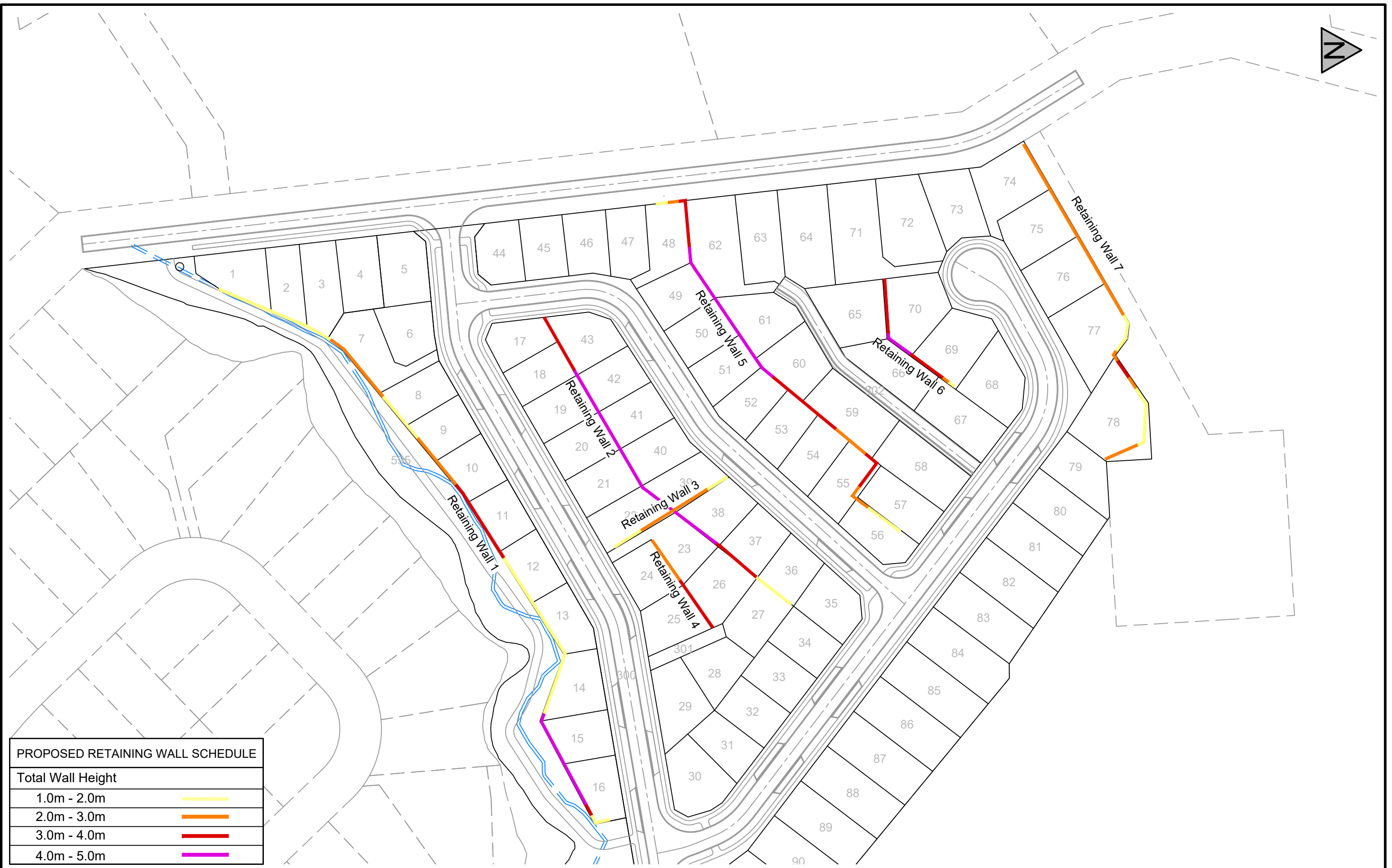
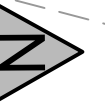
Resource Consent Plan
 Cutoff Volume
 47 Dip Road, Kamo, Whangarei
 Prepared for: Onoke Heights Limited



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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
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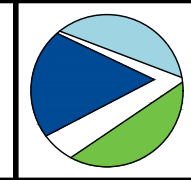
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PROPOSED RETAINING WALL SCHEDULE	
Total Wall Height	
1.0m - 2.0m	
2.0m - 3.0m	
3.0m - 4.0m	
4.0m - 5.0m	

Size	A3	Scale	1:1250	Date	September 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	09/09/21	Drawn	JMC		
2	Lifted Cul De Sac Head, Updated Volumes	JMC	11/10/21	Checked	CN		
3	Upated Retaining Wall Schedule	JMC	19/10/21	Approved			

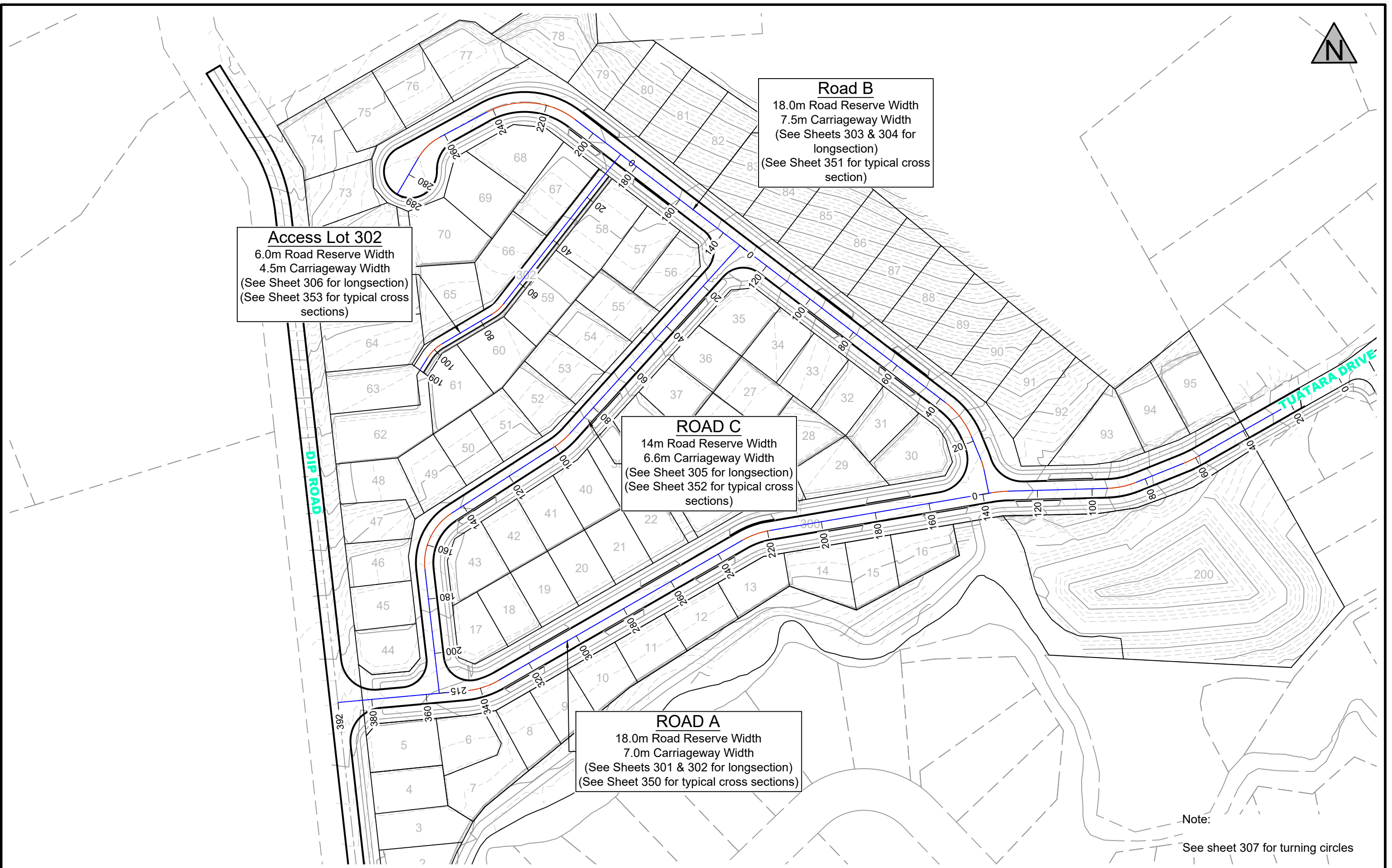
Resource Consent Plan
Retaining Wall Scheme
 47 Dip Road, Kamo, Whangarei
 Prepared for: Onoke Heights Limited



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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-203	2

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Access Lot 302
 6.0m Road Reserve Width
 4.5m Carriageway Width
 (See Sheet 306 for longsection)
 (See Sheet 353 for typical cross sections)

Road B
 18.0m Road Reserve Width
 7.5m Carriageway Width
 (See Sheets 303 & 304 for longsection)
 (See Sheet 351 for typical cross section)

ROAD C
 14m Road Reserve Width
 6.6m Carriageway Width
 (See Sheet 305 for longsection)
 (See Sheet 352 for typical cross sections)

ROAD A
 18.0m Road Reserve Width
 7.0m Carriageway Width
 (See Sheets 301 & 302 for longsection)
 (See Sheet 350 for typical cross sections)

Note:
 See sheet 307 for turning circles

Size	A3	Scale	1:1250	Date	November 2021		
No.	Amendment	Init.	Date	Designed	Drawn	Checked	Approved
1	Issued For Resource Consent	JMC	15/11/21	Drawn			
2				Checked			
3				Approved			

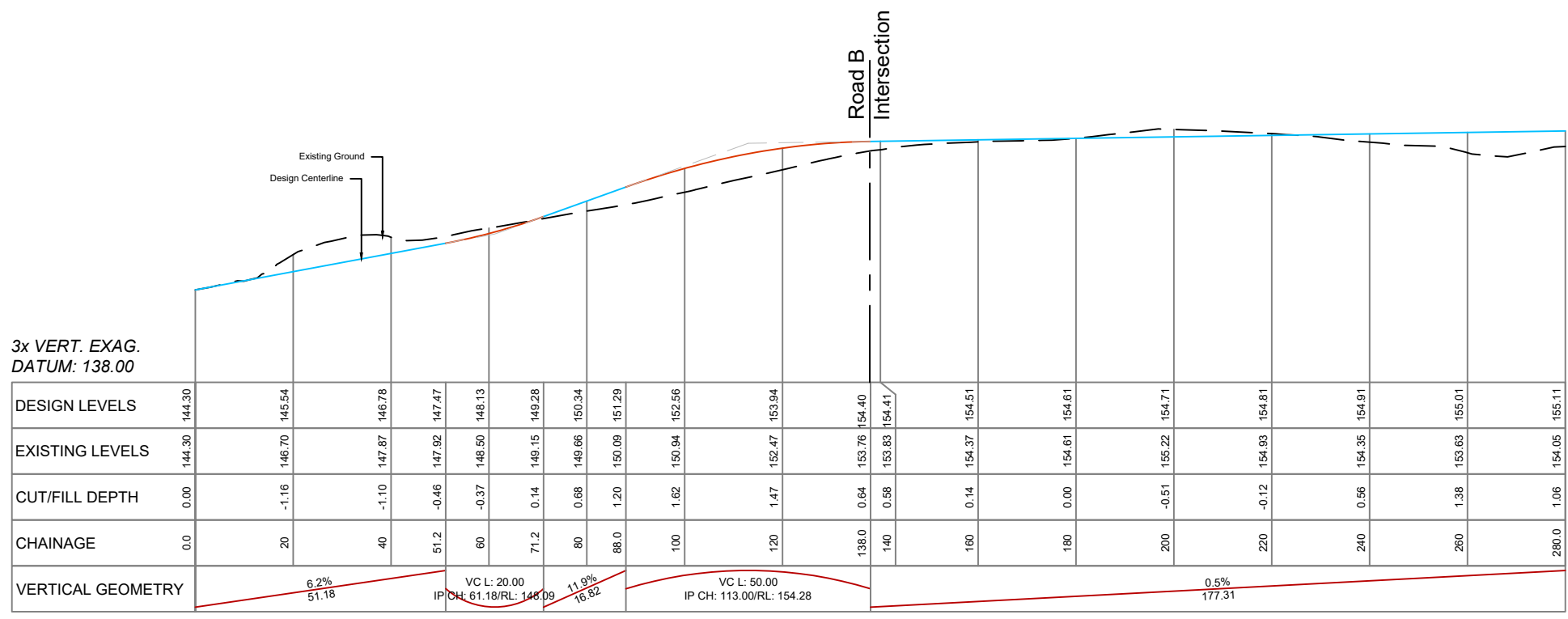
Resource Consent Plan
Roading Overview
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



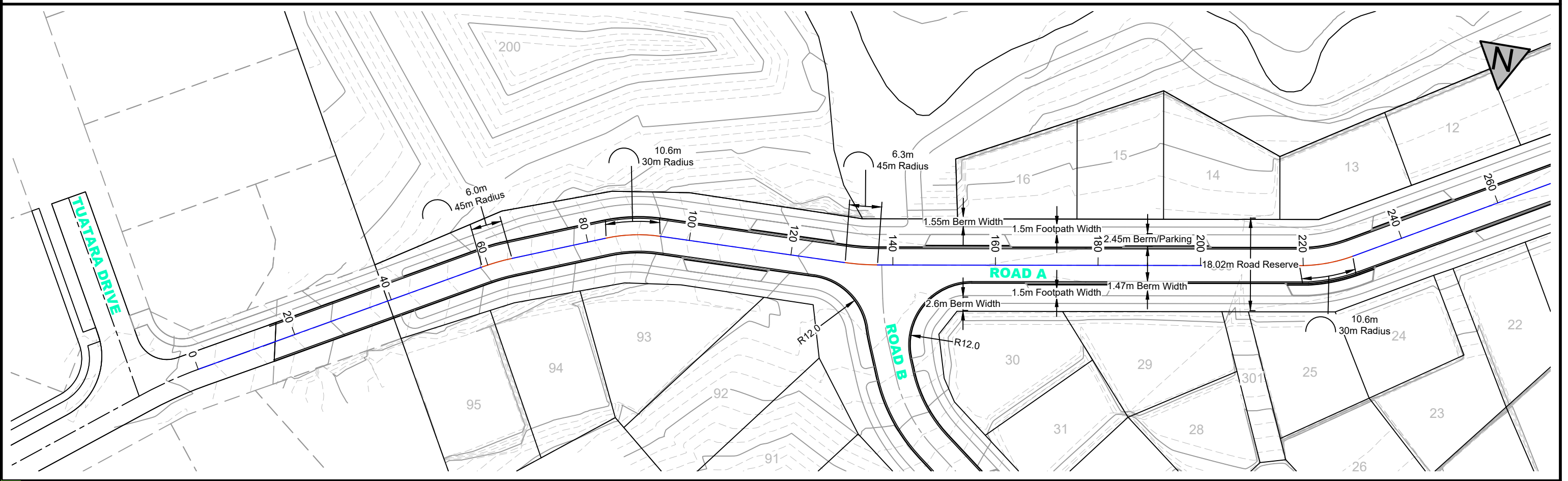
Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
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Datum: Circuit: Mt Eden 2000		Height: Moturiki Datum 1953	
Resource Consent Number:			
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BW Ref.	Stg.	Purp. Dwg. #	Revision:
20253-01-EN-300			1

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ROAD A LONG SECTION



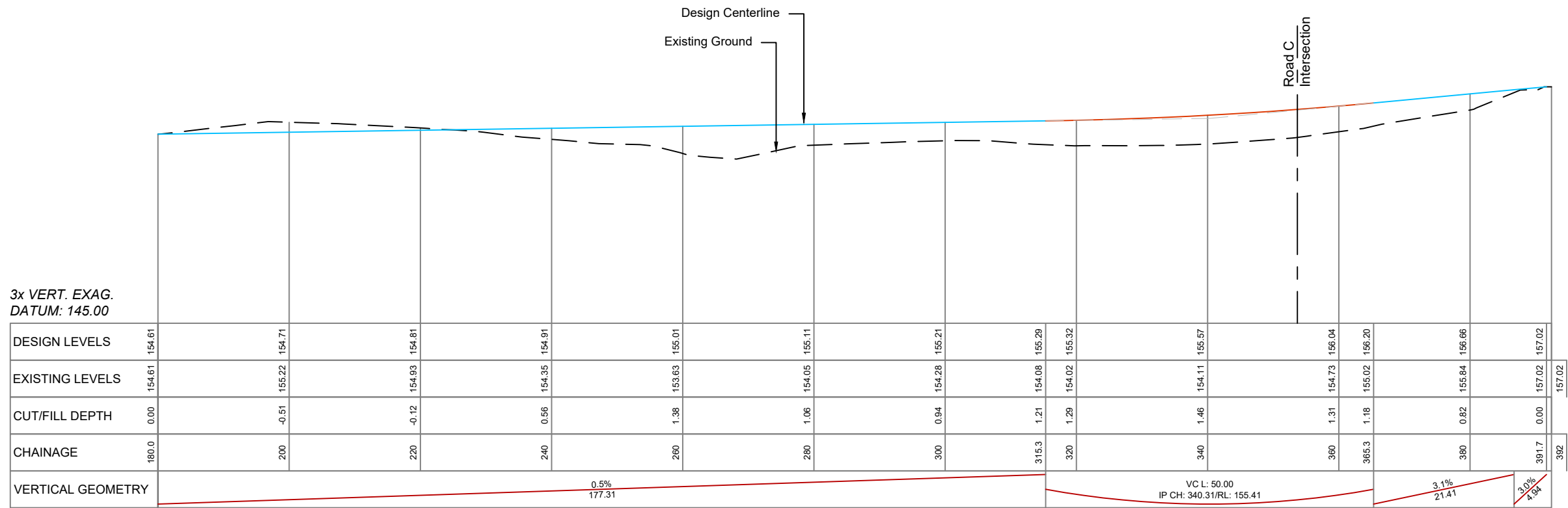
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No.	Amendment	Init.	Date	Designed			
1	Issued For Resource Consent	JMC	15/11/21	Drawn			
2				Checked			
3				Approved			

Resource Consent Plan
Road A Longsection CH 0.00 - 280.00
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

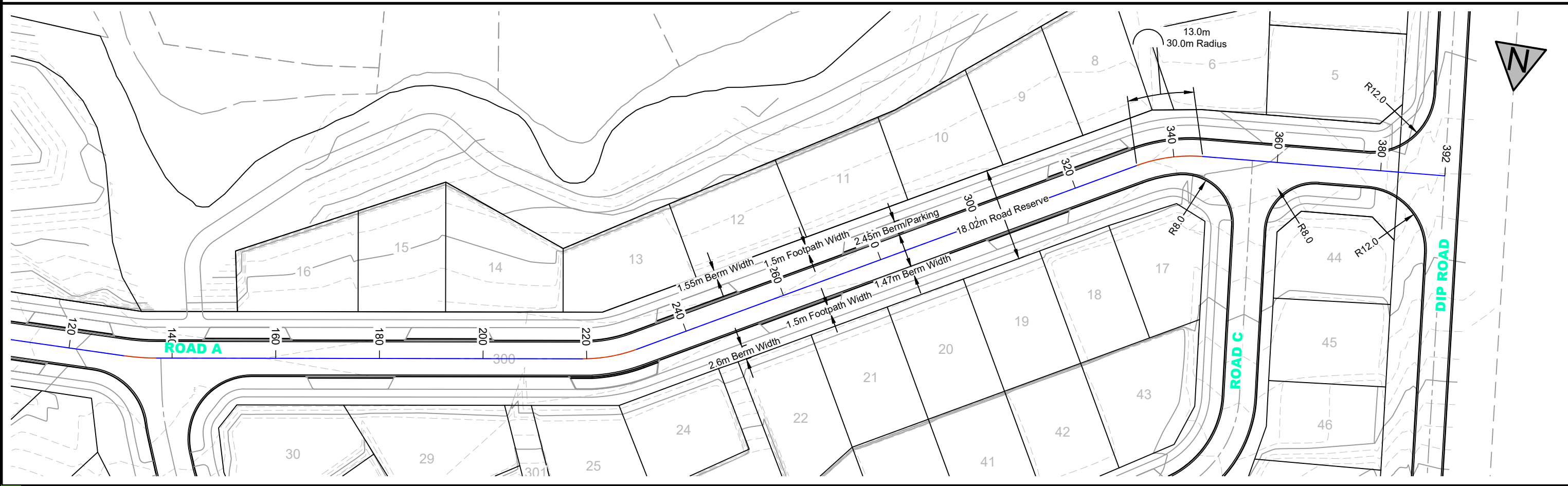


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Datum: Circuit: Mt Eden 2000		Height: Moturiki Datum 1953	
Resource Consent Number:			
BW Ref.	Stg.	Purp. Dwg. #	Revision:
20253-01-EN-301			1




ROAD A LONG SECTION



Size	A3	Scale	1:750	Date	November 2021
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2				Checked	
3				Approved	

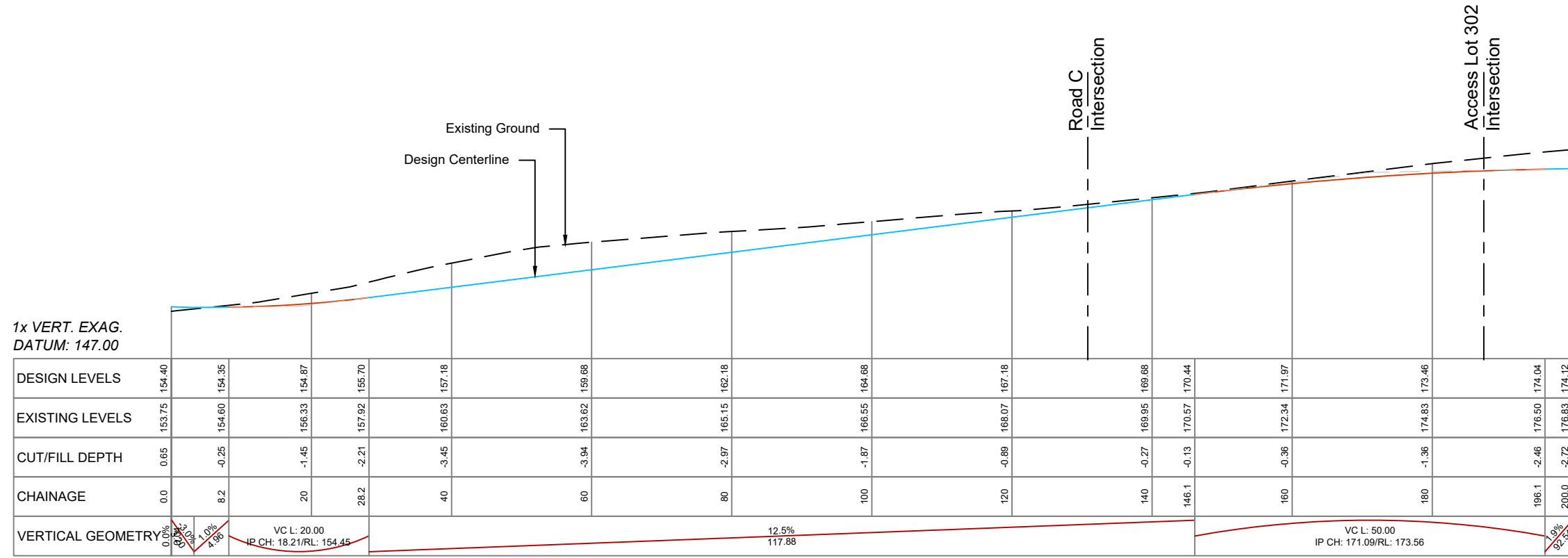
Resource Consent Plan
 Road A Longsection CH 180.00 - 392.00
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



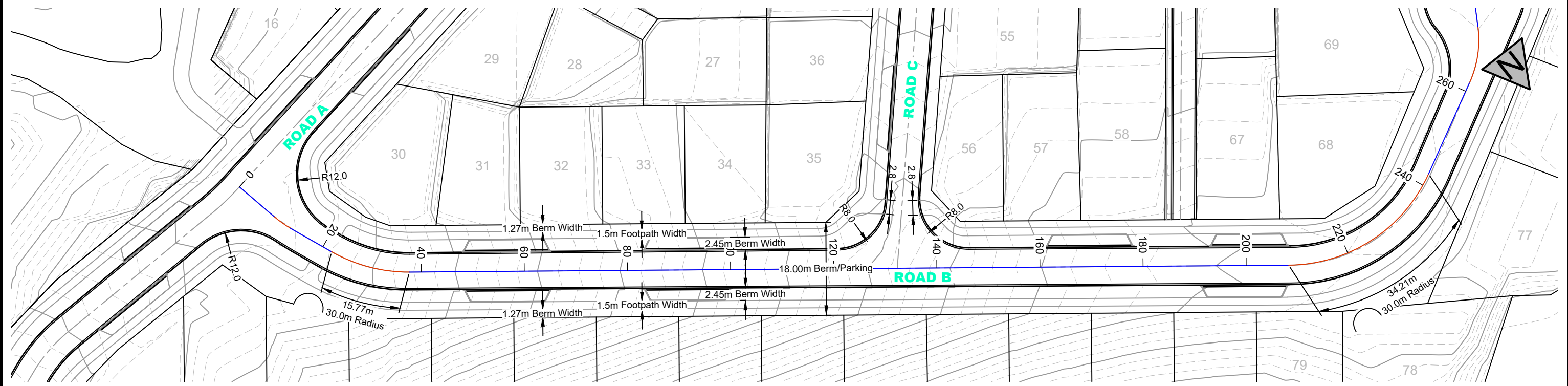
Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000 Height: Moturiki Datum 1953			
Resource Consent Number:			
BW Ref.	Stg.	Purp.	Dwg. #
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ROAD B LONG SECTION



Size	A3	Scale	1:750	Date	November 2021
No.	Amendment	Init.	Date	Designed	
1	Issued For Resource Consent	JMC	15/11/21	Drawn	
2				Checked	
3				Approved	

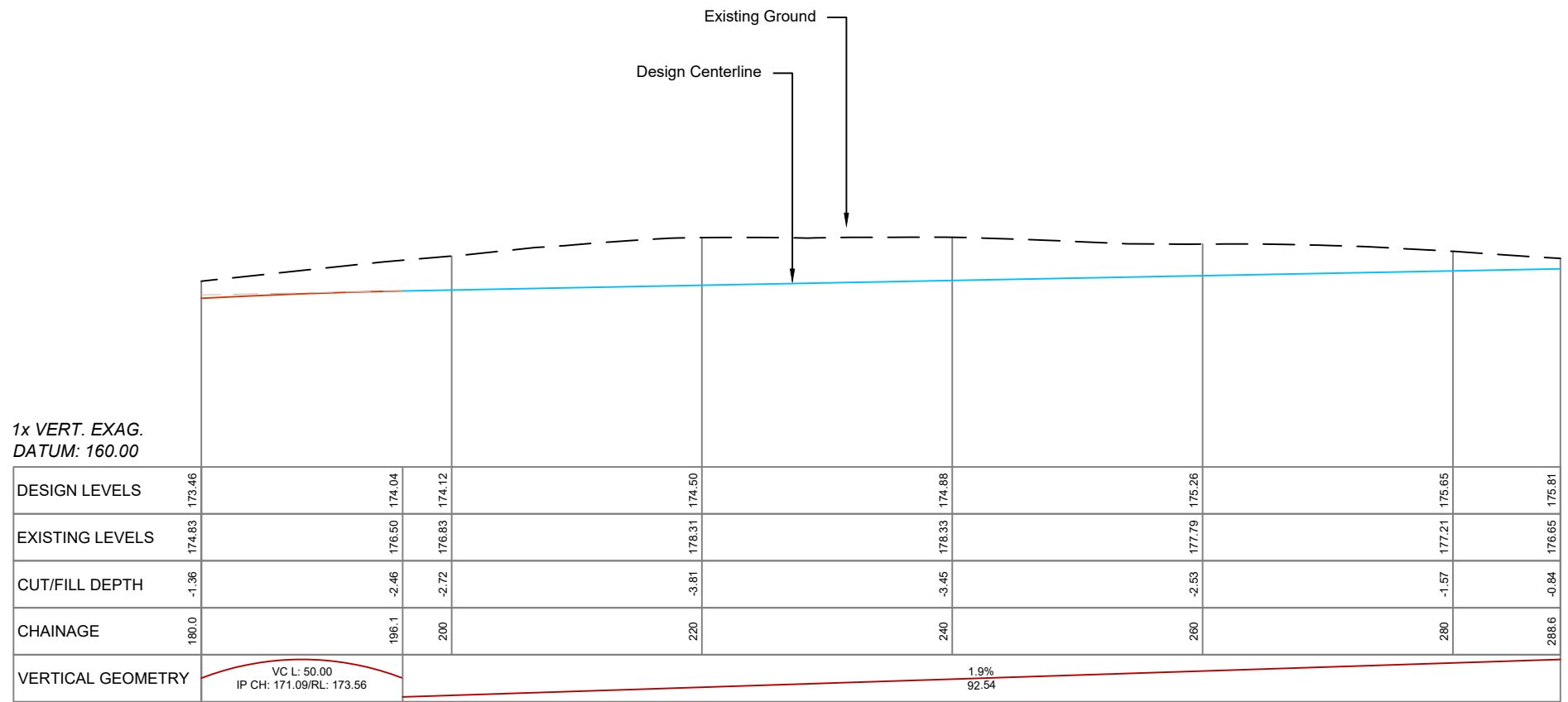
Resource Consent Plan
Road B Longsection CH 0.00 - 200.00
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



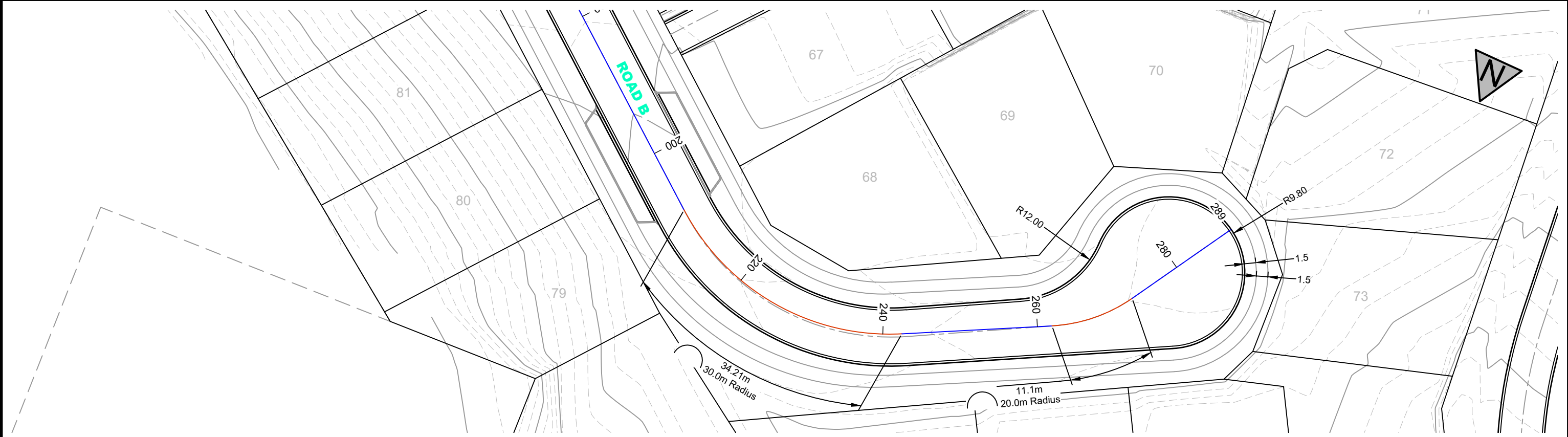
Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000		Height: Moturiki Datum 1953	
Resource Consent Number:			
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BW Ref.	Stg.	Purp.	Dwg. #
20253-01-EN-303			1

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ROAD B LONG SECTION



Size	A3	Scale	1:500	Date	November 2021		
No.	Amendment	Init.	Date	Designed	Checked	Approved	
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2				Checked			
3				Approved			

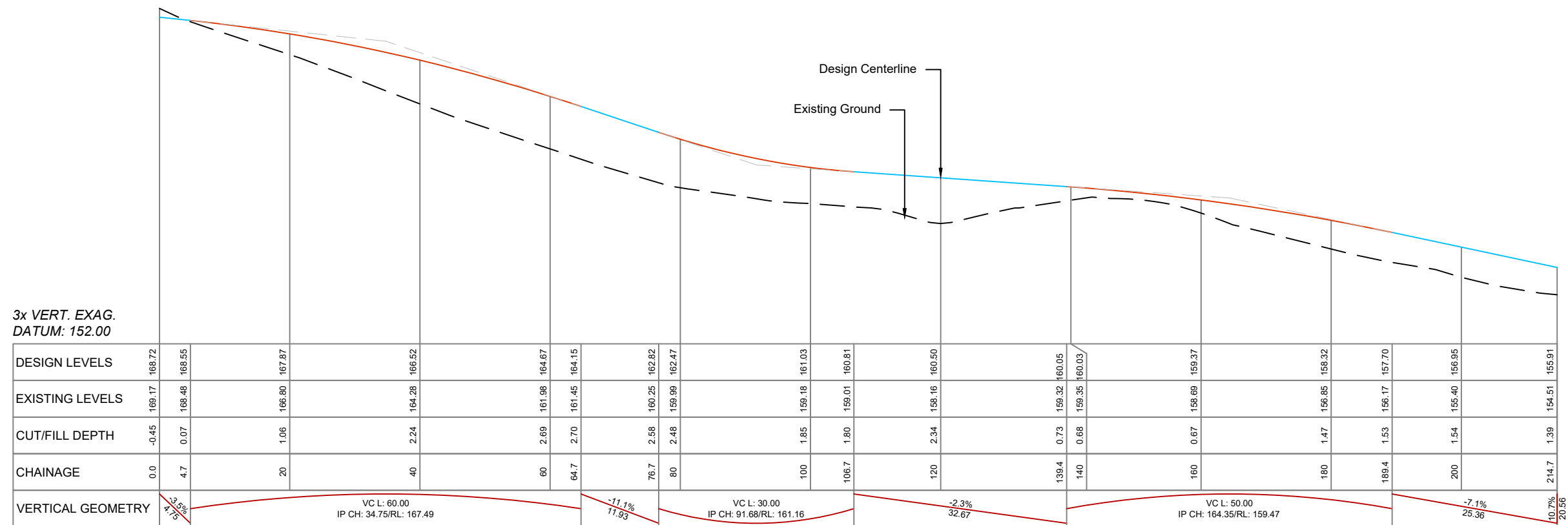
Resource Consent Plan
Road B Longsection - CH 120.0 - 289.0
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



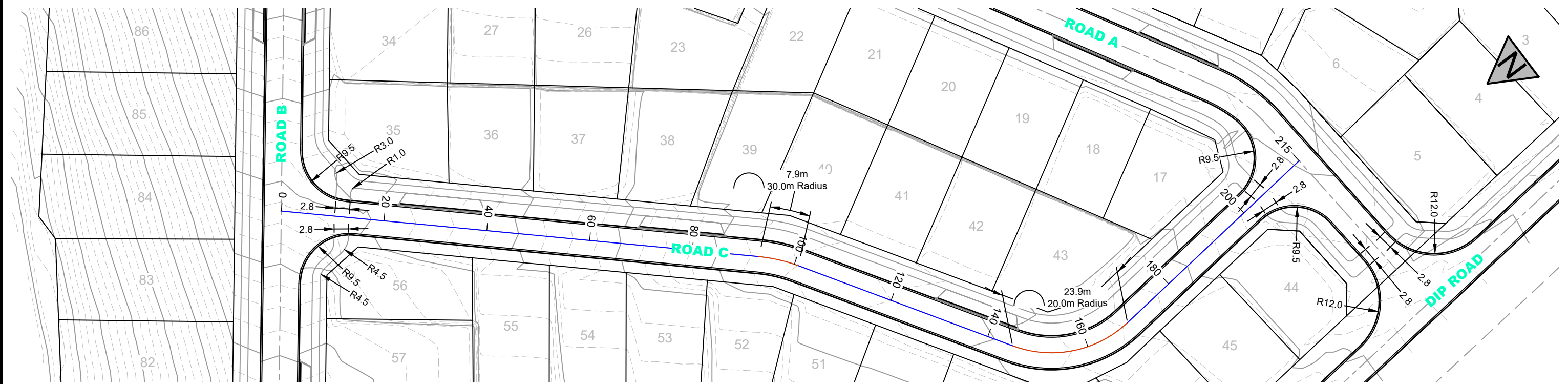
Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-304	1

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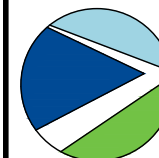


ROAD C LONG SECTION



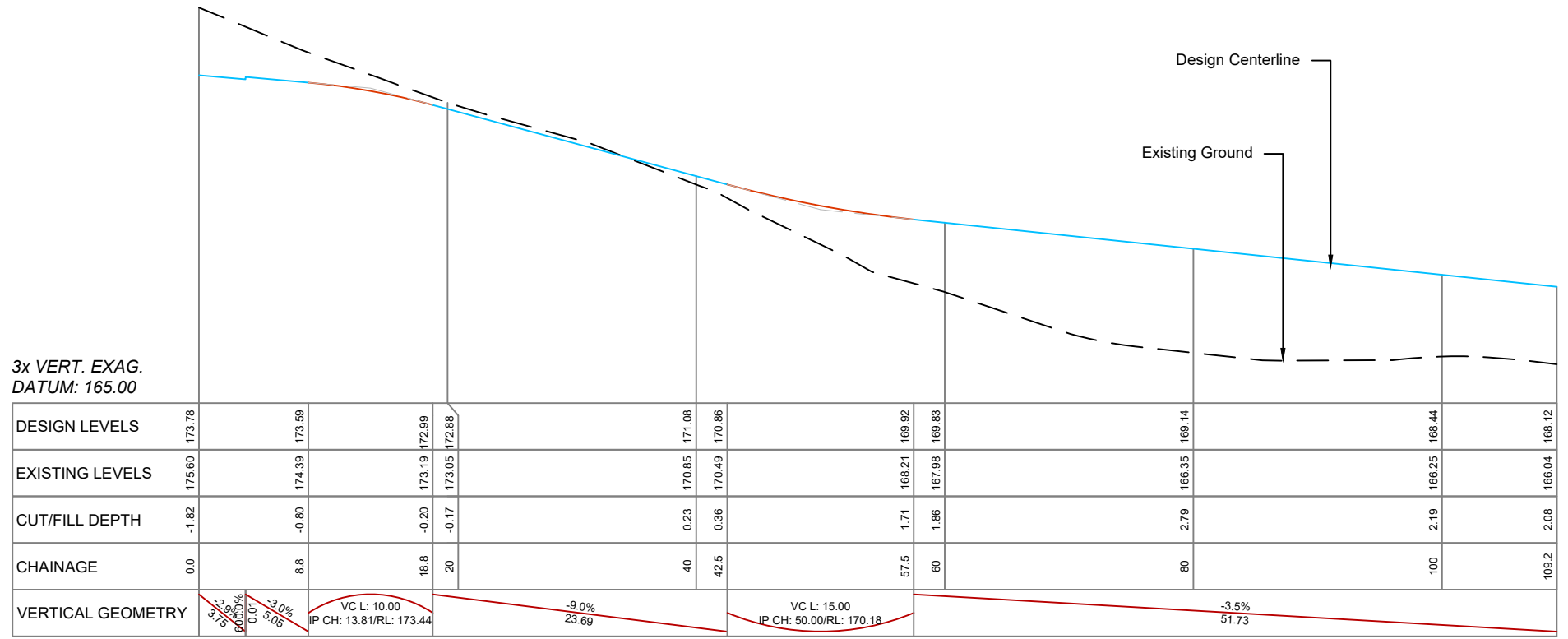
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No.	Amendment	Init.	Date	Designed	Drawn	Checked	Approved
1	Issued For Resource Consent	JMC	15/11/21	Drawn			
2				Checked			
3				Approved			

Resource Consent Plan
Road C Longsection
47 Dip Road, Kamo, Whangarei
Prepared for: CC Developments

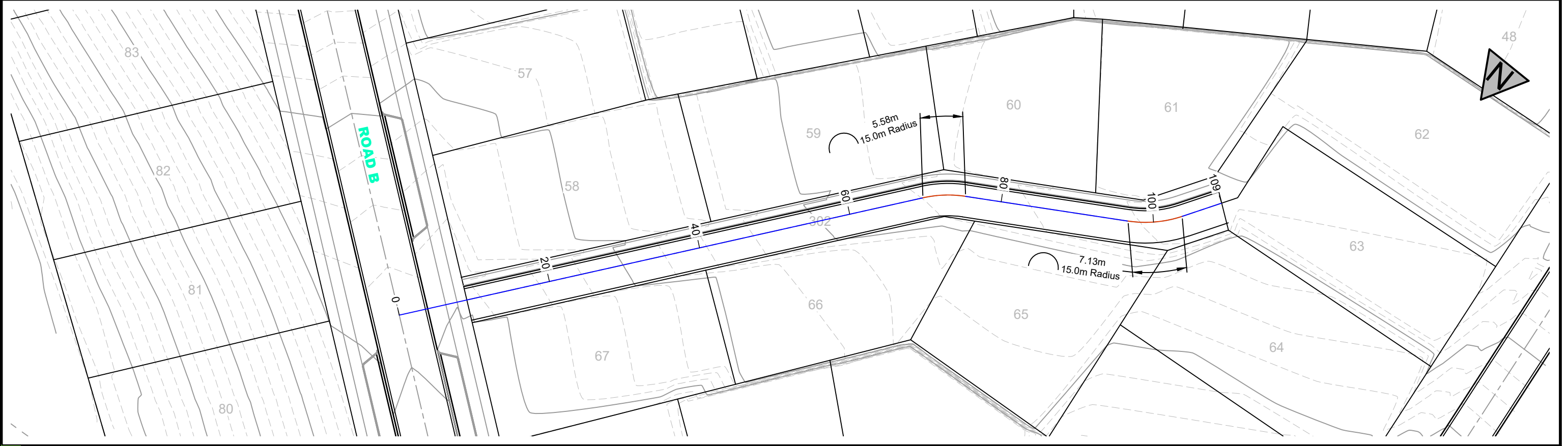


**Blue Wallace
Surveyors Ltd.**
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Hamilton Central, HAMILTON.
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Datum: Circuit: Mt Eden 2000 Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-305	1



ACCESS LOT 302 LONG SECTION



Size	A3	Scale	1:500	Date	November 2021
No.	Amendment	Init.	Date	Designed	
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2				Checked	
3				Approved	

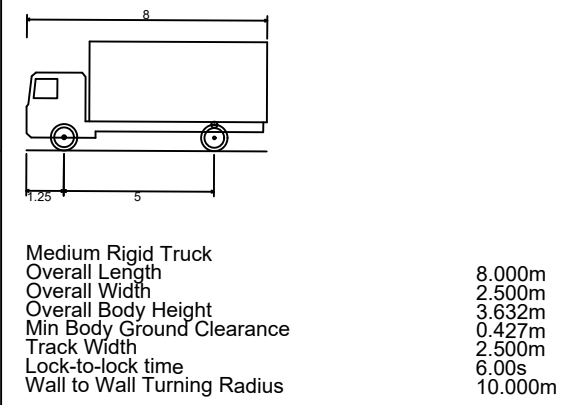
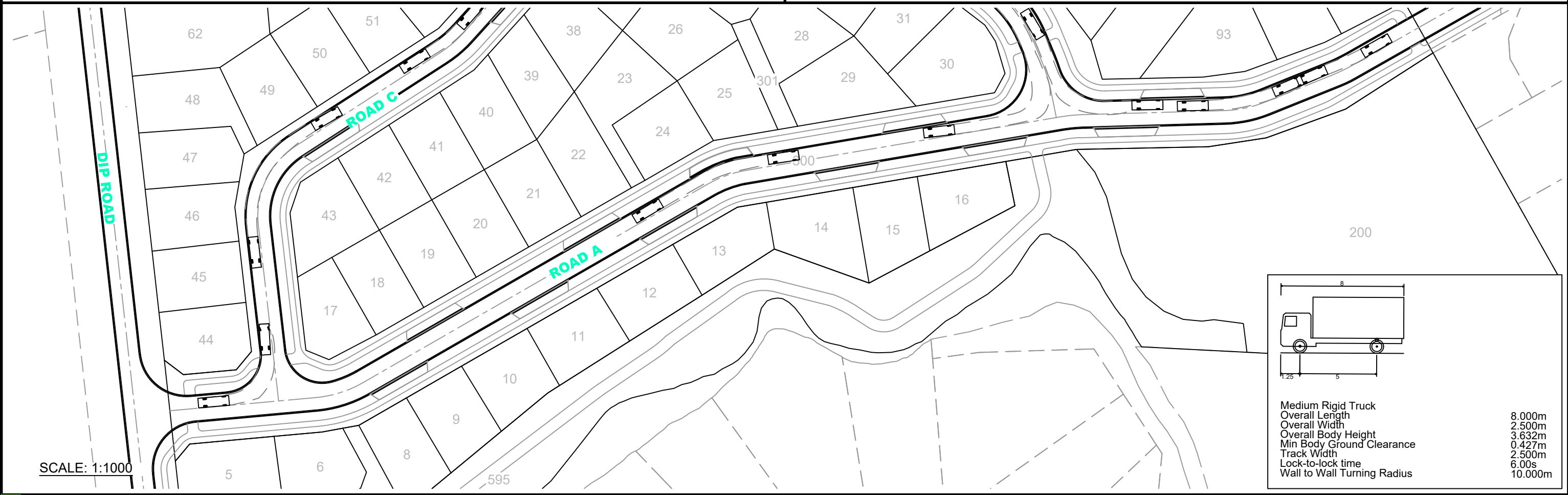
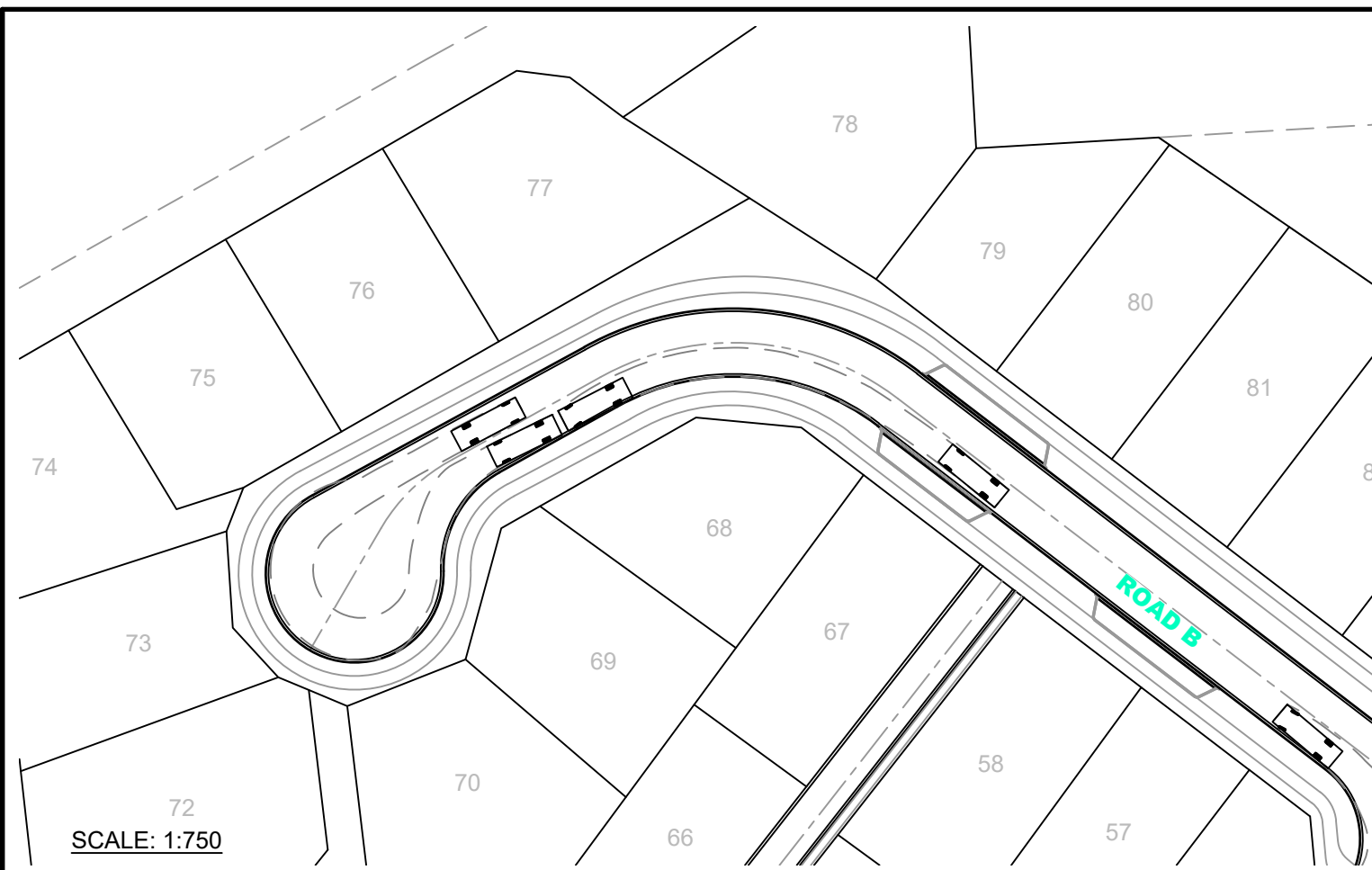
Resource Consent Plan
Access Lot 302 Longsection
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
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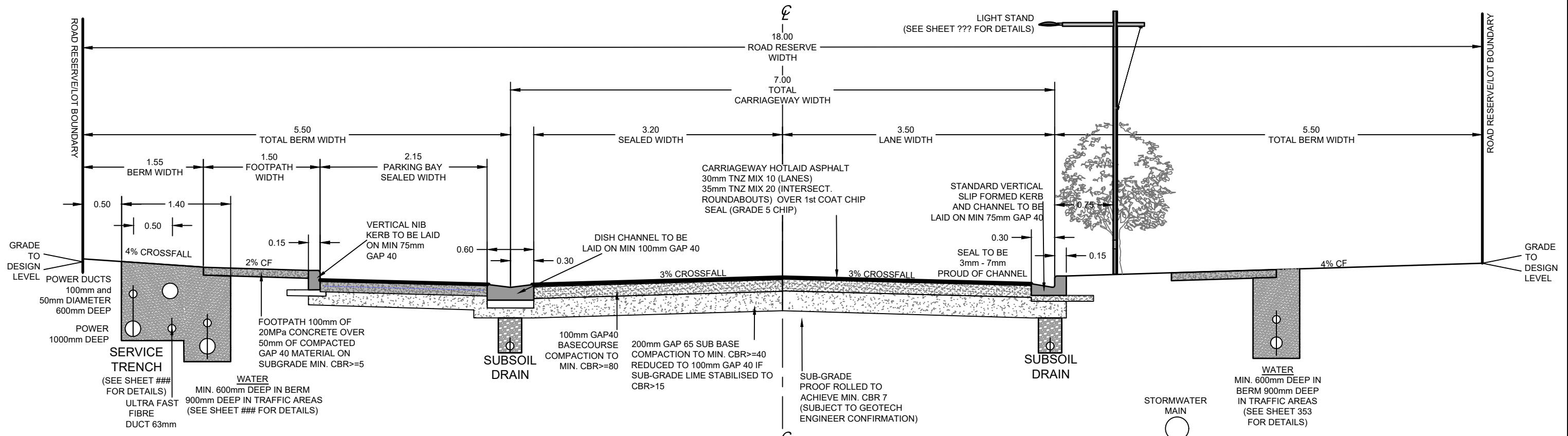
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No.	Amendment	Init.	Date	Designed	
1	Issued For Resource Consent	JMC	15/11/21	Drawn	
2				Checked	
3				Approved	

Resource Consent Plan
 Vehicle Tracking Curves
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

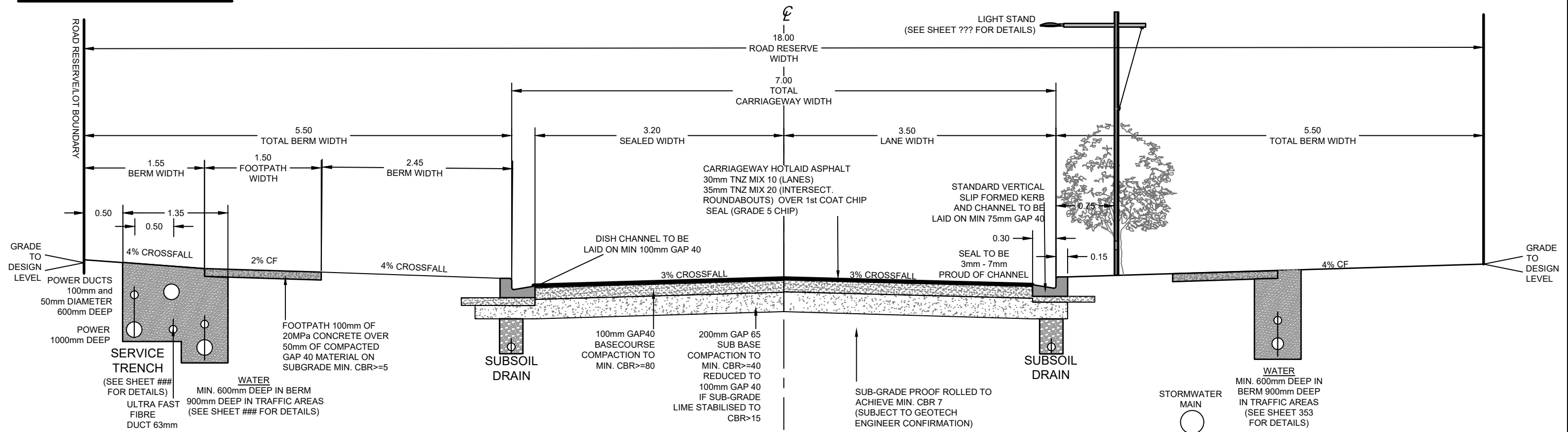
Blue Wallace Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000 Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Revision:
20253-01-EN-307	1

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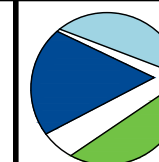
ROAD A - 18m WIDE - ROAD WITH PARKING BAY



ROAD A - 18m WIDE - NO PARKING

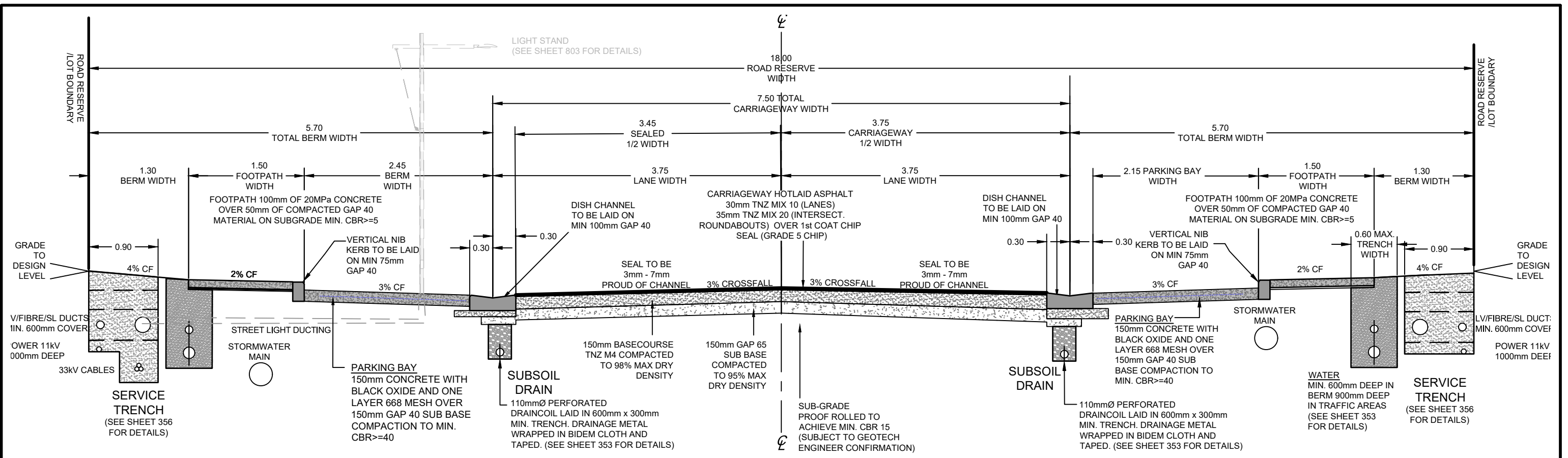
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No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

Resource Consent Plan
 Road A Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

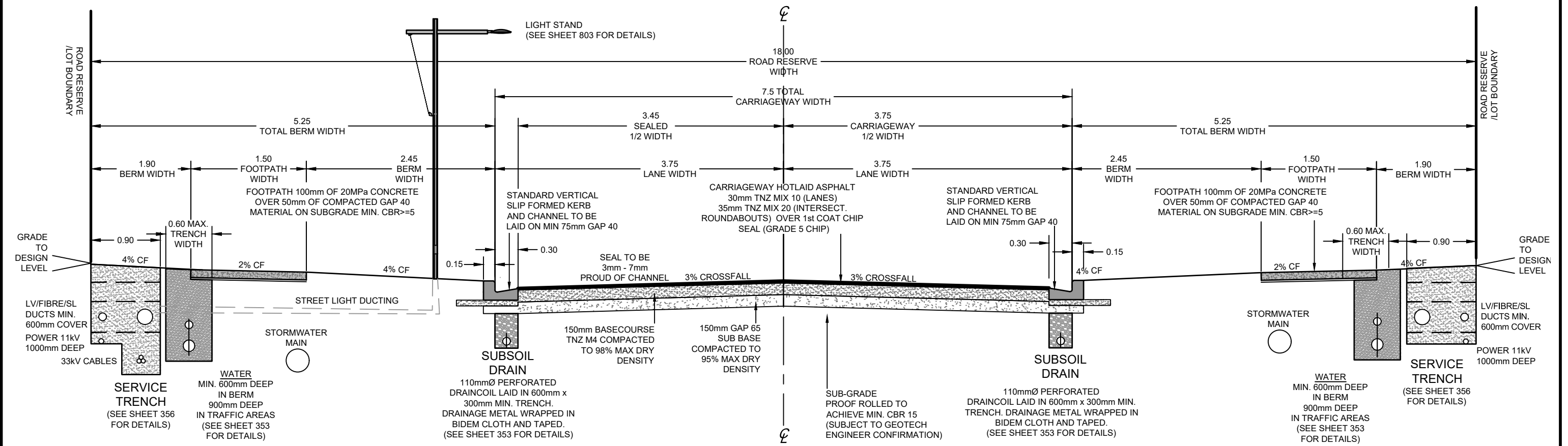


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 Phone (07) 839 7799, Fax (07) 839 4455

Datum:	Circuit: Mt Eden 2000		
Height:	Moturiki Datum 1953		
Resource Consent Number:		
BW Ref.	Stg.	Purp.	Dwg. #
20253-01-RC-350			1



18m WIDE - ROAD B WITH PARKING BAYS



18m WIDE - ROAD B

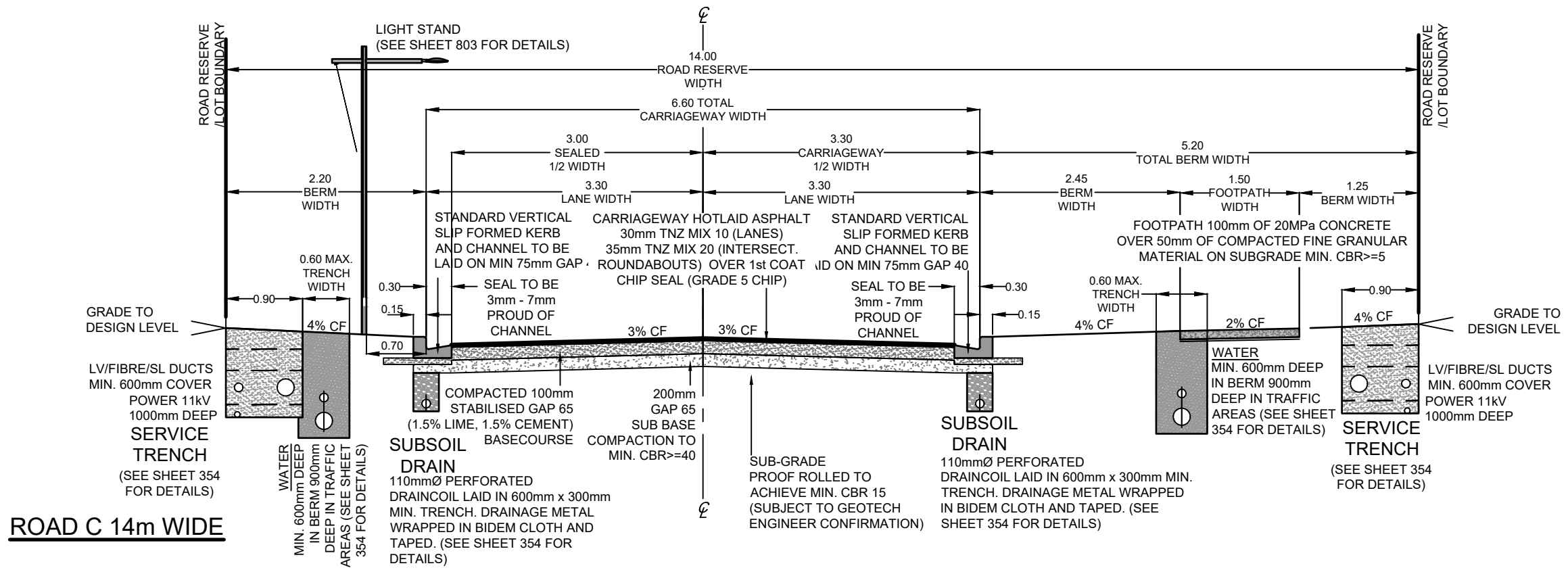
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No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

Resource Consent Plan
Road B Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

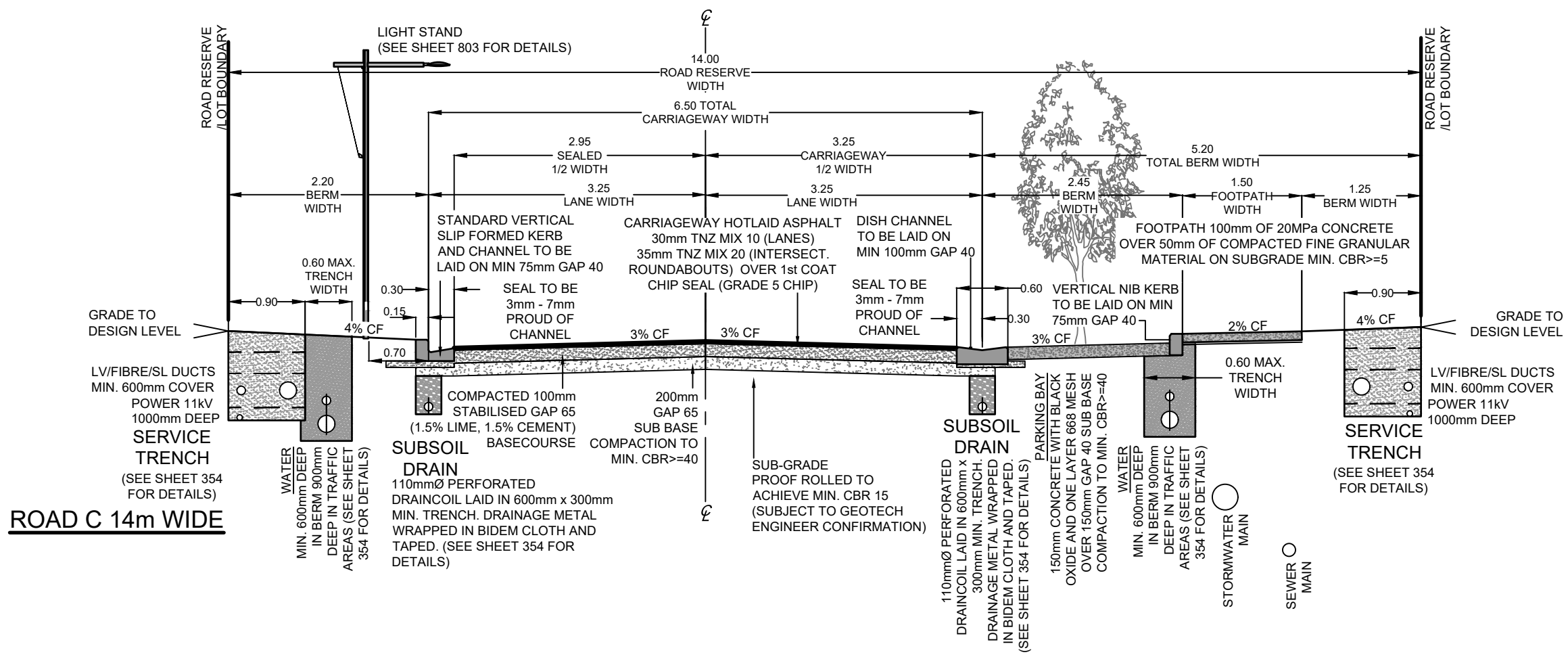


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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-351	1



ROAD C 14m WIDE



ROAD C 14m WIDE

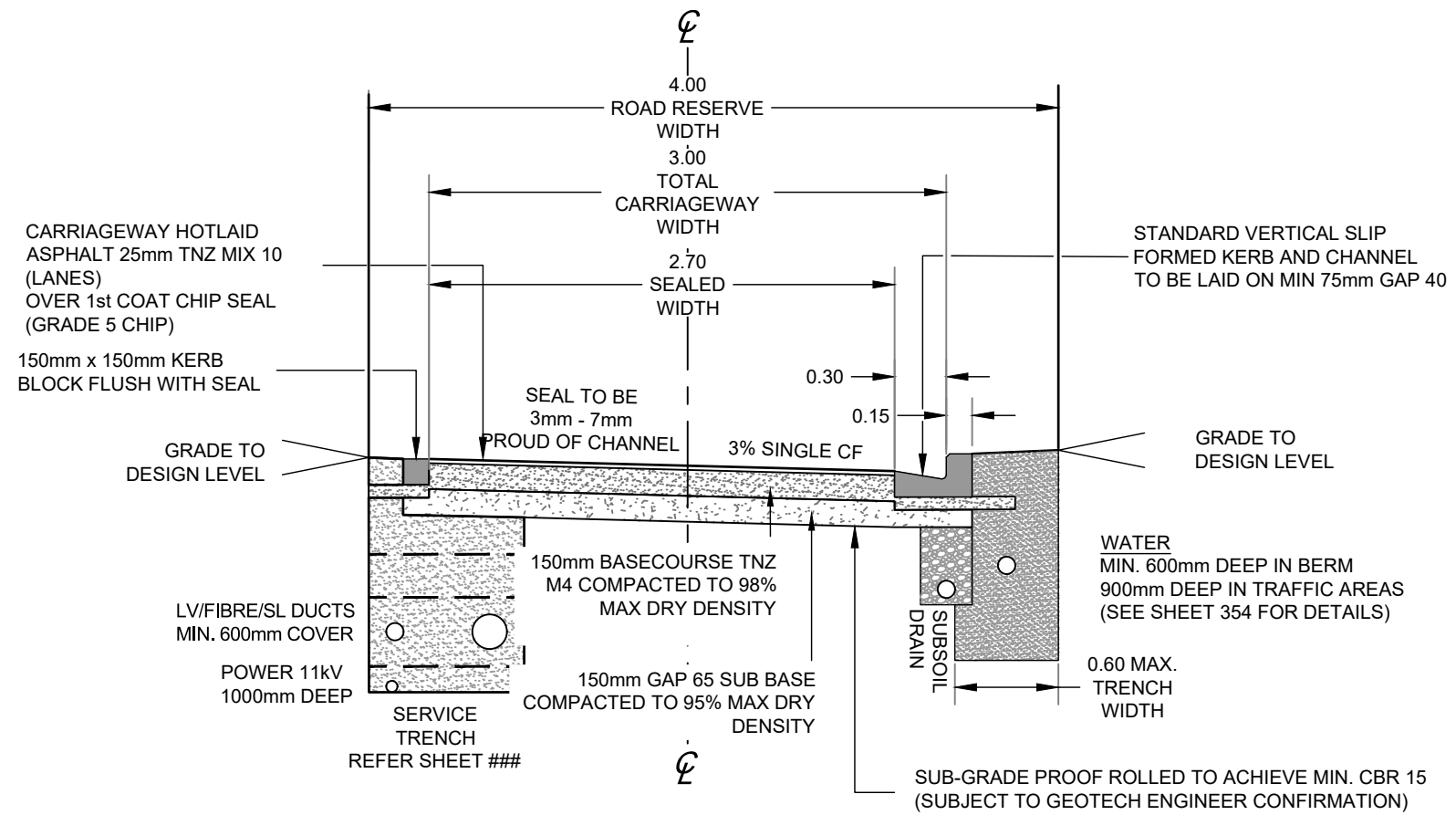
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No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

Resource Consent Plan
Road C Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

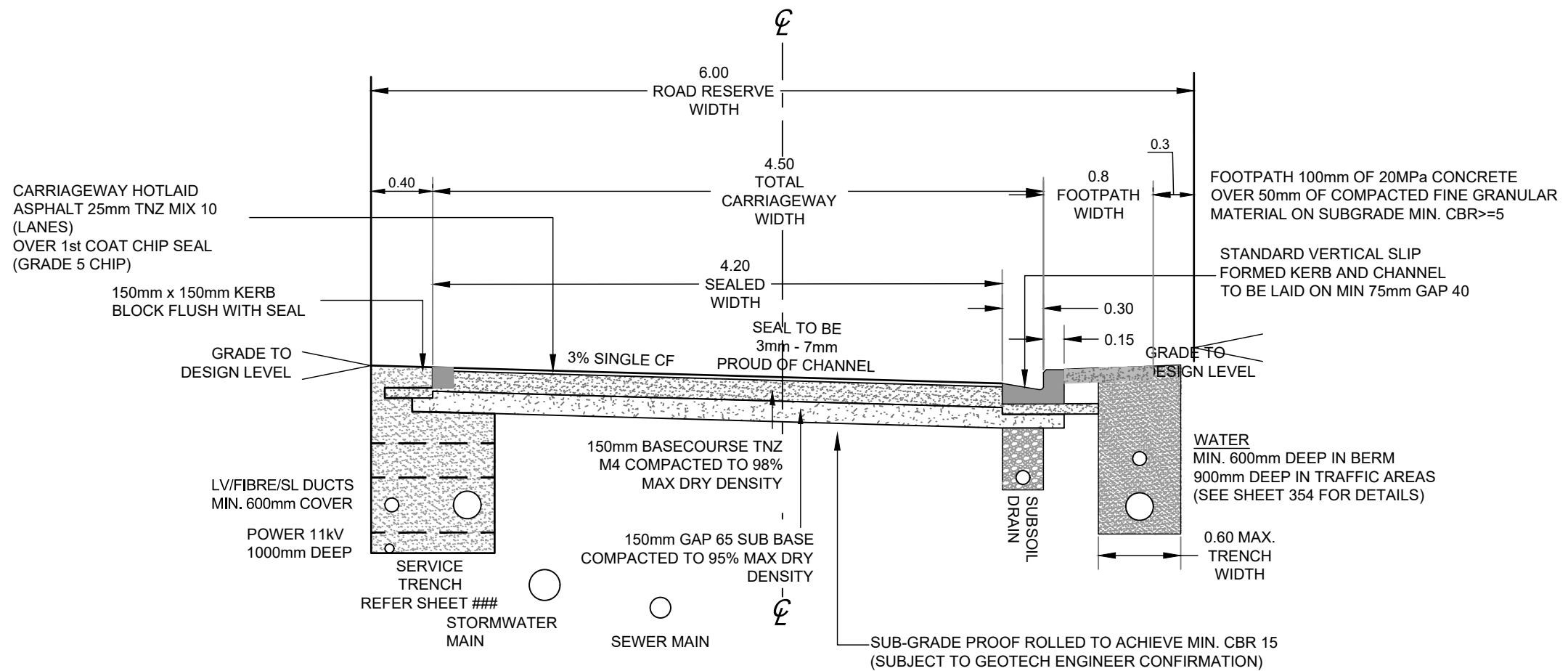


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 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000			
Height: Moturiki Datum 1953			
Resource Consent Number:			
BW Ref.	Stg.	Purp.	Dwg. #
			20253-01-RC-352
Revision:			1



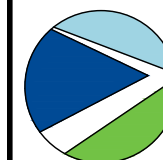
R.O.W. - 4.0m WIDE



R.O.W. - 6.0m WIDE

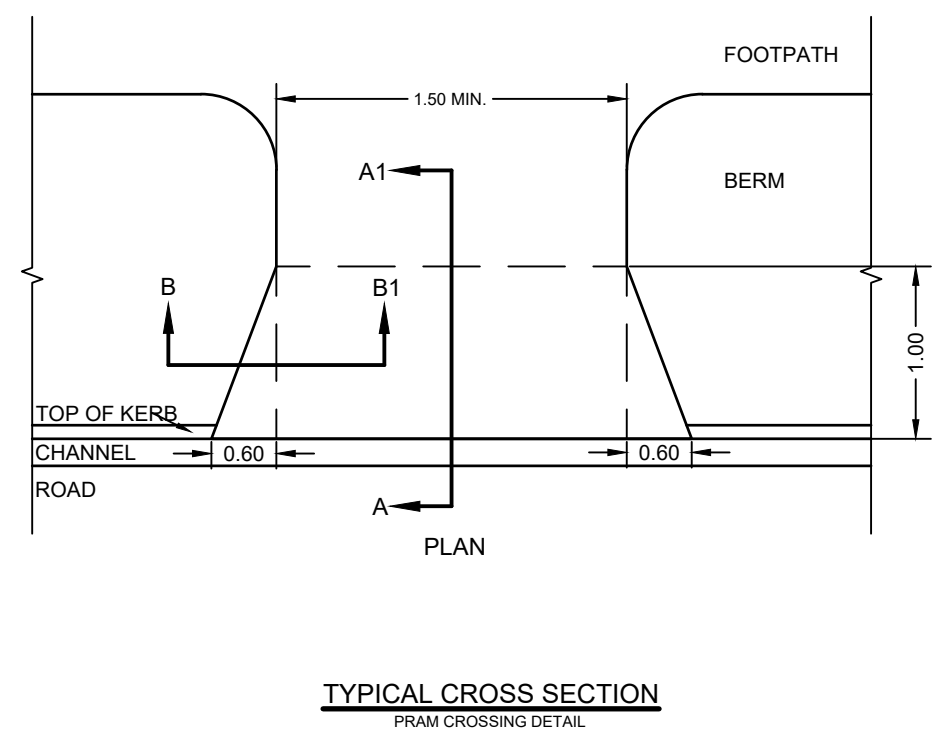
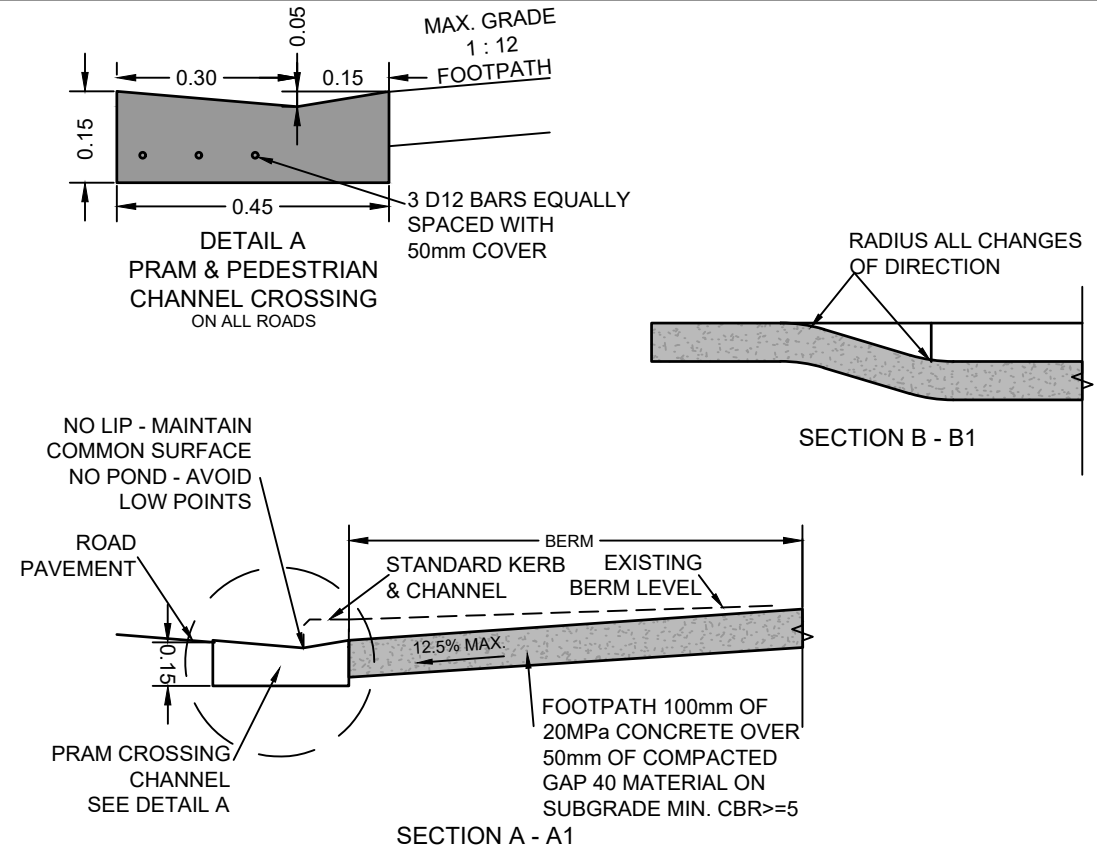
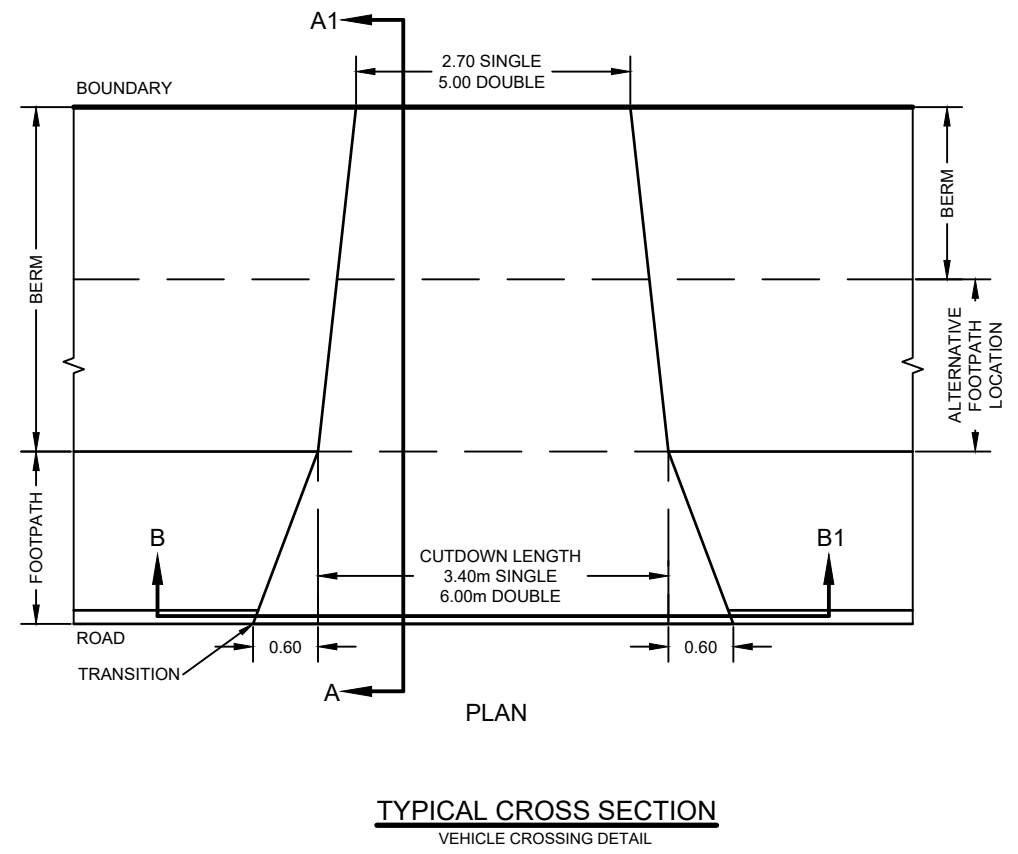
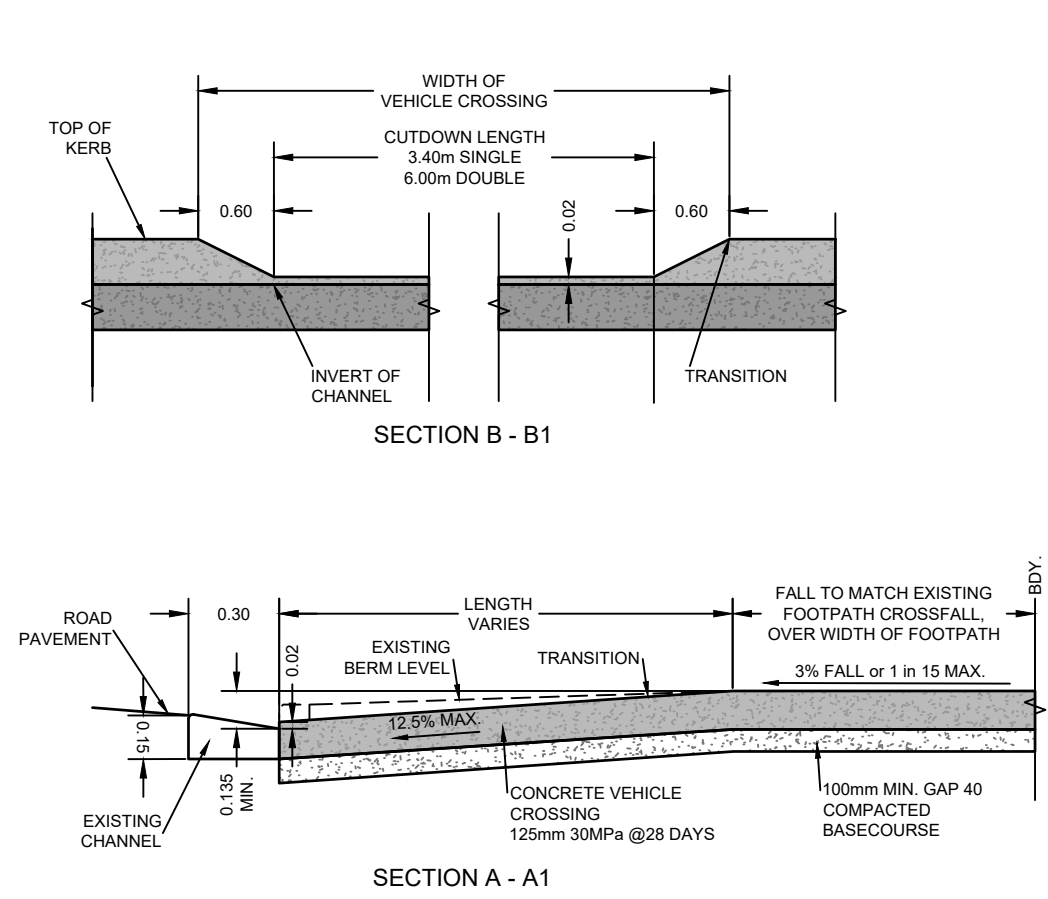
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No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

Resource Consent Plan
 Road A Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



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Datum: Circuit: Mt Eden 2000 Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-353	1



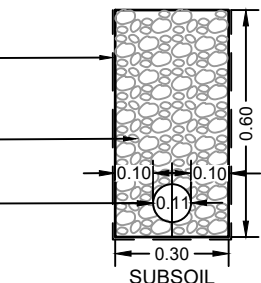
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No.	Amendment	Init.	Date	Designed	JMC	
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC	
2				Checked	CN	
3				Approved		

Resource Consent Plan
 Road A Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

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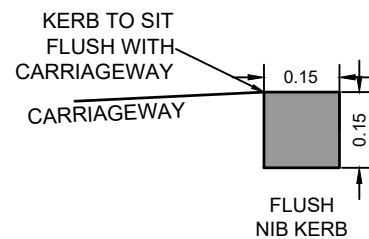
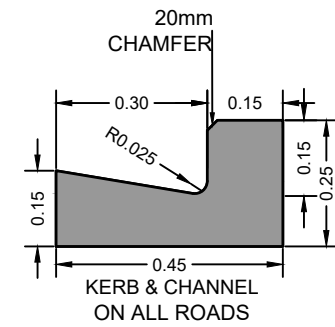
Datum:	Circuit: Mt Eden 2000
	Height: Moturiki Datum 1953
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-354	1

BOUNDARIES OF TRENCH TO BE LINED WITH FILTER FABRIC (BIDIM A14) WITH 200mm OVERLAP
 BACKFILL TRENCH WITH 20/7 'PAGES' DRAINAGE METAL
 110mmØ PERFORATED DRAINCOIL, NOVAFLOW OR EQUIVALENT TO BE 450mm BELOW SUBGRADE & 700mm MIN. BELOW TOP OF KERB

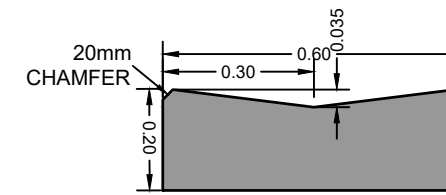


SUBSOIL DRAIN
 (refer WDC - EES, Sec. 3.4.15.2)
 (refer WDC - EES, Sheet 14)
 SUBSOIL DRAINS TO BE CONSTRUCTED AFTER STABILISATION OF SUBGRADE

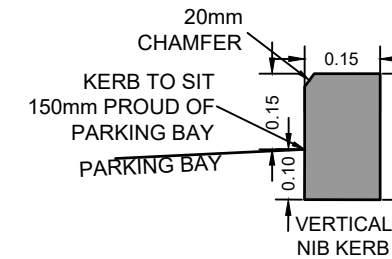
RESIDENTIAL ROAD SUB SOIL DRAIN DETAIL



ON HIGH SIDE OF SINGLE CROSSFALL ACCESSWAYS

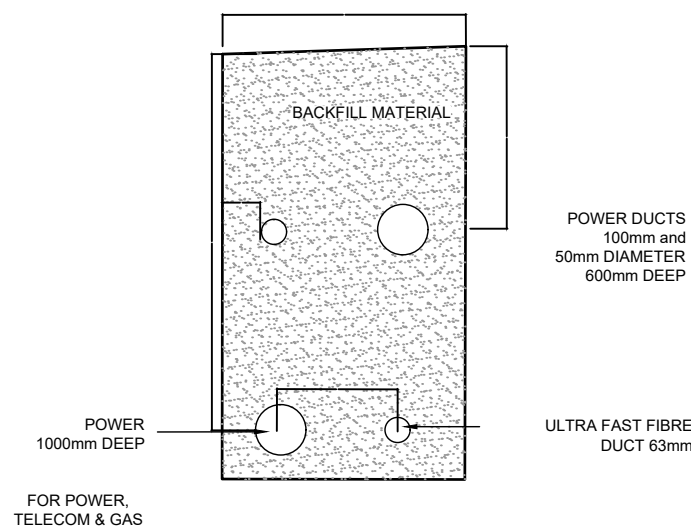


DISH CHANNEL AT FRONT OF PARKING BAYS

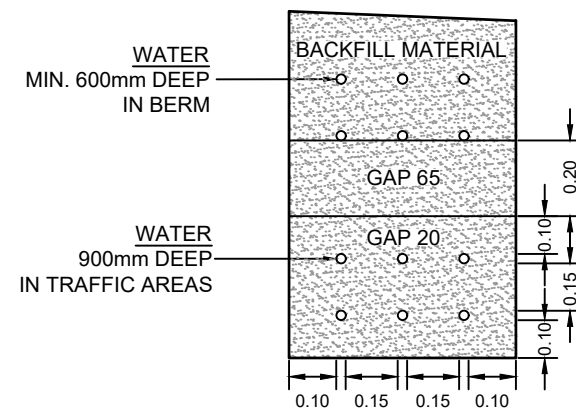


AT REAR OF PARKING BAYS BASED ON STANDARD KERB & CHANNEL WITHOUT CHANNEL

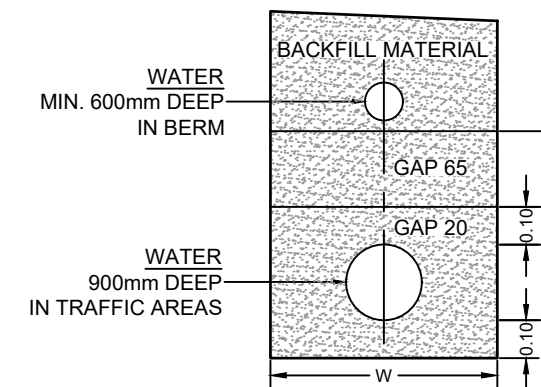
RESIDENTIAL ROAD KERB DETAIL DIAGRAMS



RESIDENTIAL ROAD UNDERGROUND SERVICES



SERVICE TRENCH FOR WATER IN PRIVATE ROADS



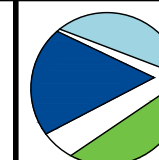
SERVICE TRENCH FOR WATER IN PUBLIC ROADS

W	TYPE OF PIPE
D + 400	PE

RESIDENTIAL ROAD WATER RETICULATION

Size	A3	Scale	1:60	Date	November 2021
No.	Amendment	Init.	Date	Designed	JMC
1	Issued For Resource Consent	JMC	17/11/21	Drawn	JMC
2				Checked	CN
3				Approved	

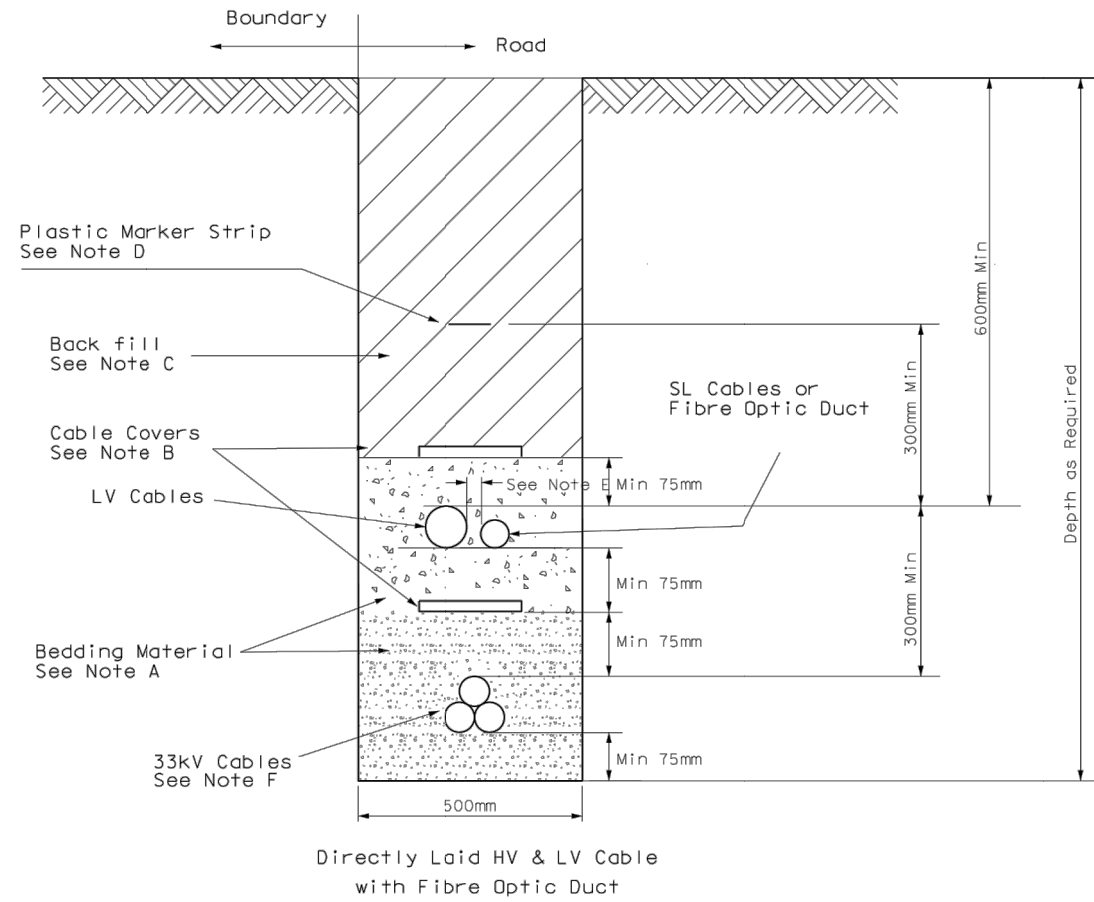
Resource Consent Plan
 Road A Typical Cross Section
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



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Datum:	Circuit: Mt Eden 2000
	Height: Moturiki Datum 1953
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-RC-355	1

Power Cabling Only

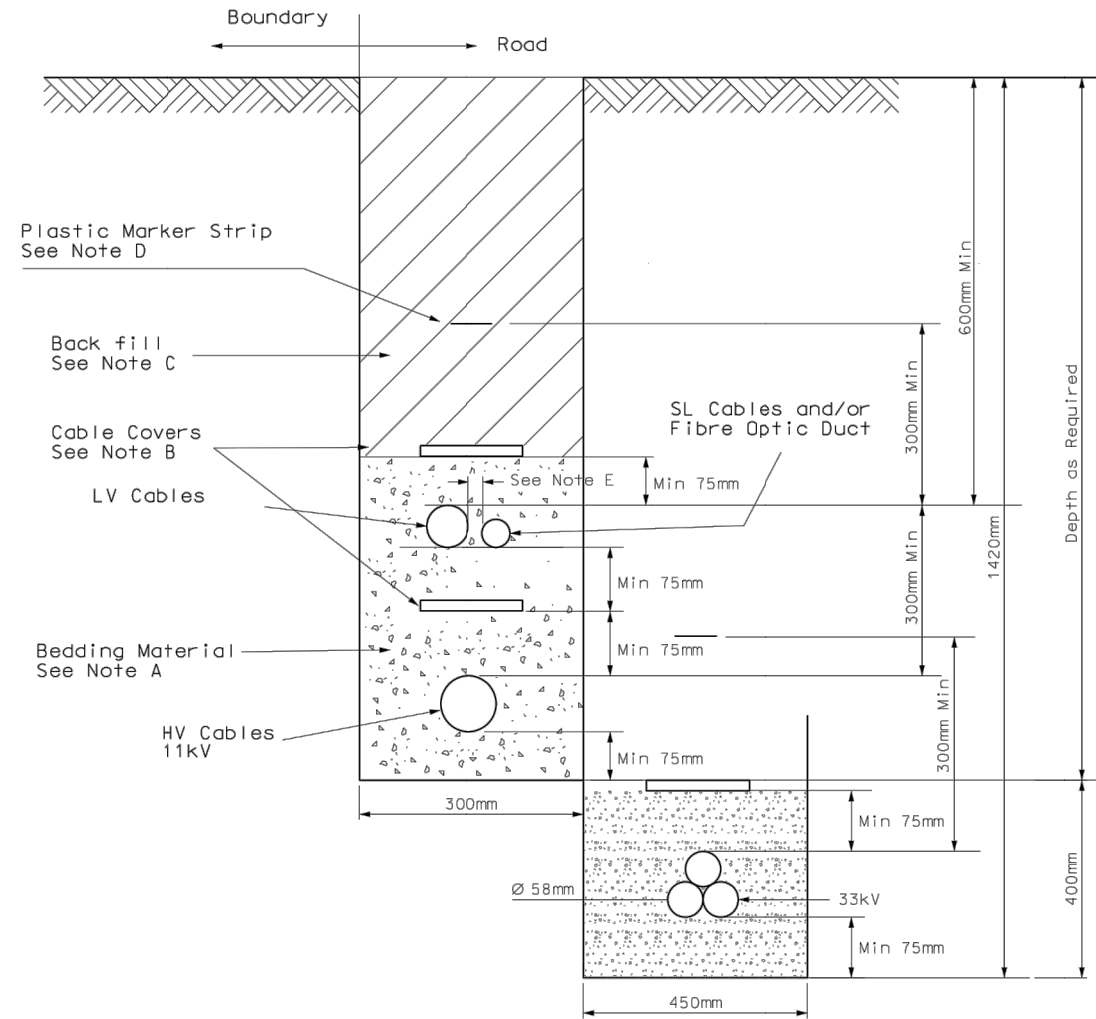


Directly Laid HV & LV Cable with Fibre Optic Duct

NOTES:

- A. Bedding material either sand or 'clean' soil. Thermal backfill to be used for 33kV Cable (Pap 7)
- B. Covers to comply with AS/NZS 3000:2007 3.11.3 and 3.11.4 and AS4702-2000 and shall be located 75mm above cables and ducts. Cable covers shall be at least 150mm in width and overlap at least 40mm each side of the cable.
- C. Back Fill, generally use fill from trench but ensure no large stones or sharp objects are placed back in the trench.
- D. Marker strip to comply with AS/NZS 3000:2007 3.11.4.5 and be 100mm wide, coloured orange, with words 'Electrical Cable Below'.
- E. Where practical provide some separation (75mm or greater) between direct laid LV and SL cable / fibre optic duct.
- F. HV 11kV Cable to be minimum 450mm from boundary (refer ENS 3.3.85 and 2F173s1)

Power Cabling Only



Directly Laid HV & LV Cable with Fibre Optic Duct

NOTES:

- A. Bedding material either sand or 'clean' soil. Thermal backfill to be used for 33kV Cable (Pap 7)
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- D. Marker strip to comply with AS/NZS 3000:2007 3.11.4.5 and be 100mm wide, coloured orange, with words 'Electrical Cable Below'.
- E. Where practical provide some separation (75mm or greater) between direct laid LV and SL cable / fibre optic duct.
- F. HV 11kV Cable to be minimum 450mm from boundary (refer ENS 3.3.85 and 2F173s1)

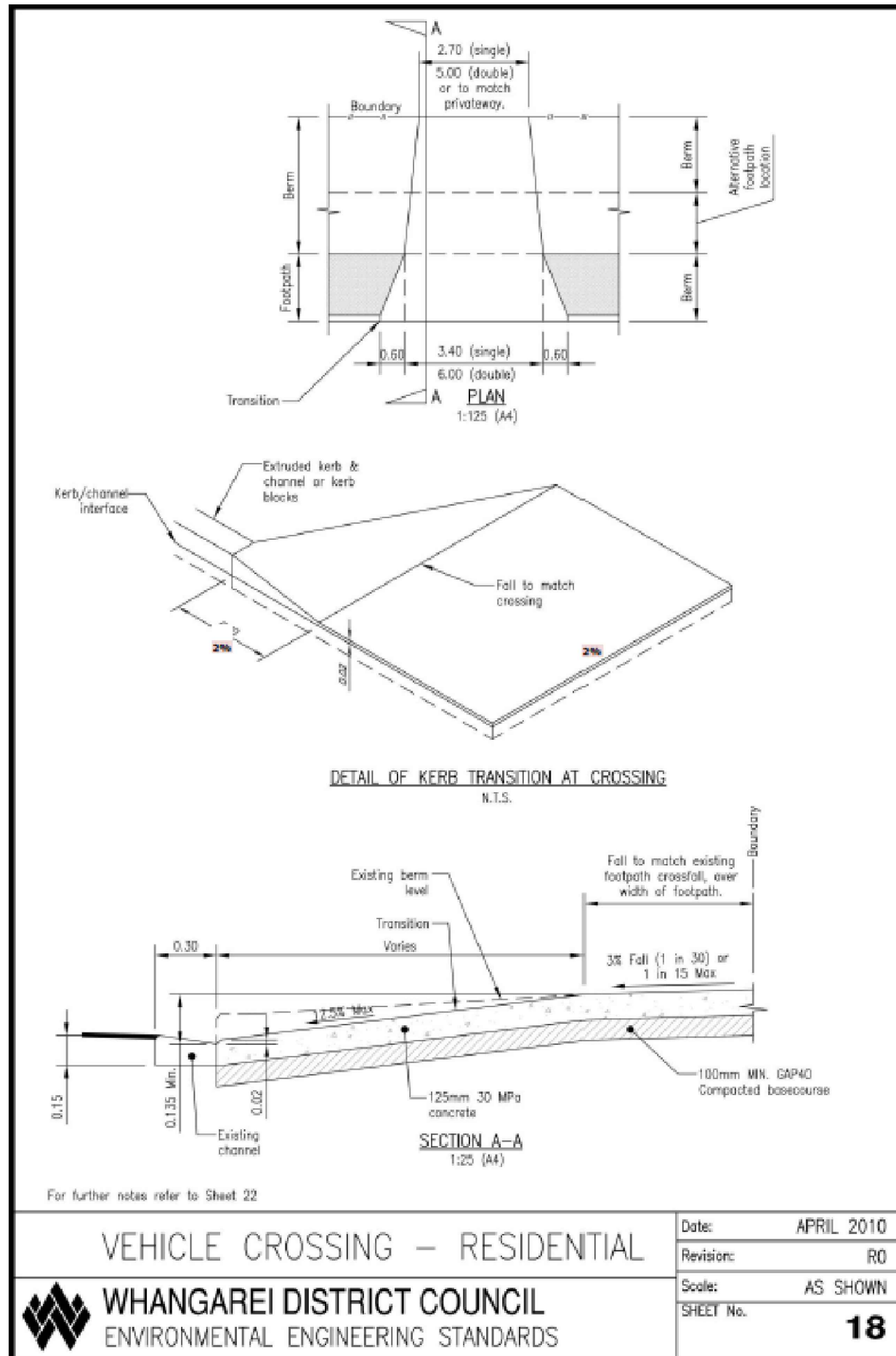
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	A.1	Initial Design	CP			33kV Trench Profile Three Mile Bush Rd	Checked		Date	
A.2	Remove Telecom	CP			Approved			Date		
						Issue	A.2	Date		
						Plan Number				2F 375s2
						Scale	NTS	Sheet size	A4	

Head Office
28 Mt Pleasant Road
Private Bag 9018
Telephone 0-9-430 1803
Facsimile 0-9-430 1804
http://www.northpower.co.nz

	Rev	Amendments	By	Checked	Date	Title	Drawn	C. Parkes	Date	4/10/19
	A.1	Initial Design	CP			33/11kV Trench Profile Three Mile Bush Rd	Checked		Date	
A.2	Remove Telecom	CP			Approved			Date		
						Issue	A.2	Date		
						Plan Number				2F 375s1
						Scale	NTS	Sheet size	A4	

Head Office
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Private Bag 9018
Telephone 0-9-430 1803
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http://www.northpower.co.nz

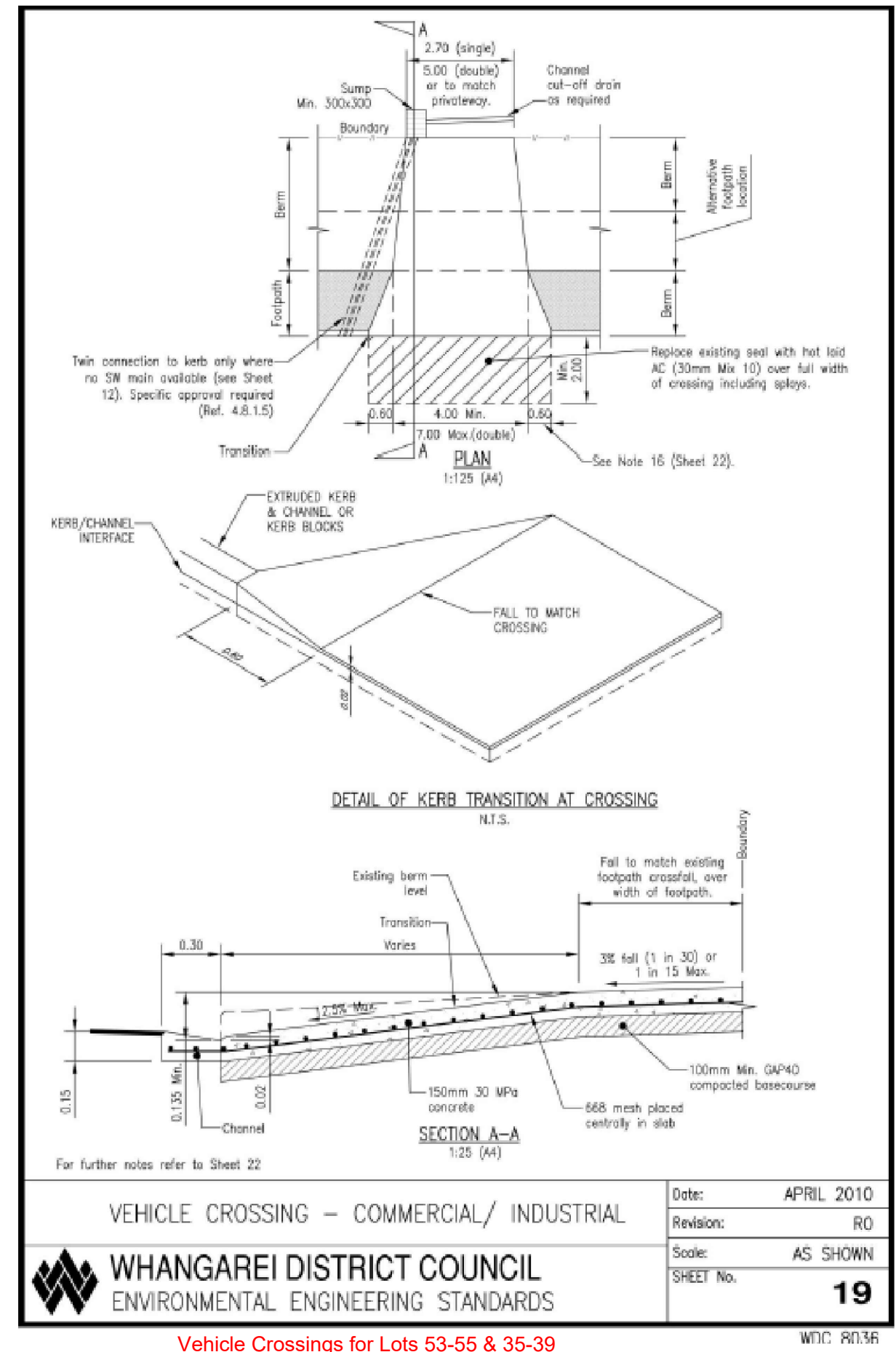
Sheet 18 Vehicle Crossing - Residential



Vehicle Crossings for Lots 9 & 10, 21, 33, 45 & 46, & 200.

WDC 80/36

Sheet 19 Vehicle Crossing - Commercial/Industrial



Vehicle Crossings for Lots 53-55 & 35-39

WDC 80/36

Sheet 22 Vehicle Crossing Notes

RESIDENTIAL, COMMERCIAL AND INDUSTRIAL CROSSINGS

- All concrete to be 30 MPa strength at 28 days.
- Crossings to be constructed to match existing footpath and channel levels and be graded to give sufficient clearance to the underside of all vehicles.
- The alternative channel crossing detailed on Sheet 20 may only be used with specific approval. It is for use only where thick overlay of existing seal precludes the standard option.
- If no footpath, allowance shall be made for such with a 3% crossfall to the kerb.
- Kerb transitions to be constructed of similar materials to the adjacent kerb or cast in situ concrete. See Sheet 12 for details.
- Where the footpath or adjacent property level is below the channel level, ramp the crossing up from the channel to control surface water while maintaining vehicle clearance. A freeboard of 200mm above the channel is required to contain stormwater within the road.
- Gradient of crossing not to exceed 12.5% (1 in 8).
- Crossings for all private ways shall be commercial grade to Sheet 19.
- Edges of footpath and back of channel to be saw cut.
- All crossings require council inspection prior to pouring concrete.
- If the edge of the crossing is within 1m of a crack or joint in an existing footpath then that section of footpath shall be replaced.
- Commercial and industrial channels to be reinforced with an extension of the 668 mesh.
- Where a street pump is located within the proposed crossing, the pump shall be relocated to the side of the crossing and reconnected to the council storm water system.
- Refer to Sheet 16 for vehicle crossing over a drainage swale.
- Stormwater kerb connections generally not permitted. (See Section 4.8.1.5).
- Splay width may need to be increased in some circumstances to accommodate an 11.5m rigid truck.
- For commercial crossings provide a 2m strip of hot laid AC over full width including splays.

RURAL CROSSINGS

- Pipes are to be RCRRJ Class "4" (formally Class "2").
- Pipes are to be adequate for the upstream catchment, but not less than 300mm dia or the downstream culvert and shall be constructed to the correct line and level to maintain drainage paths.
- Provide concrete or stonework headwalls and/or concrete aprons. Pipe ends are to extend beyond the edge of the crossing a distance that allows the gradient to invert to be no steeper than 1:3H.
- Gateways shall be located to allow vehicle parking clear of the road shoulder.
- Minimum sight distance requirements for entrance crossings are to comply with Sheet 14.
- All crossings adjoining sealed public roads are to be sealed or concrete, to the property boundary.
- Concrete access ways shall start at least 0.5m outside of the existing edge of seal or 0.5m outside of the carriageway width required by the standard whichever is the further.
- Concrete entrance crossings are to be 125mm of 30MPa concrete for light vehicle access. Heavy vehicle crossings shall be 150mm thick of 30MPa concrete reinforced with 665 mesh unless specifically designed.
- Unsealed crossings shall comprise not less than 125mm GAP 6S and 75mm GAP40 or 200mm GAP 40 (compacted depth).
- For application of Type 2 crossing refer to Section 3.4.10.3.
- Where local widening is required (Types 2 and 3) the tapers shall be sealed.

VEHICLE CROSSING NOTES
(FOR RESIDENTIAL, COMMERCIAL, INDUSTRIAL AND RURAL USE)

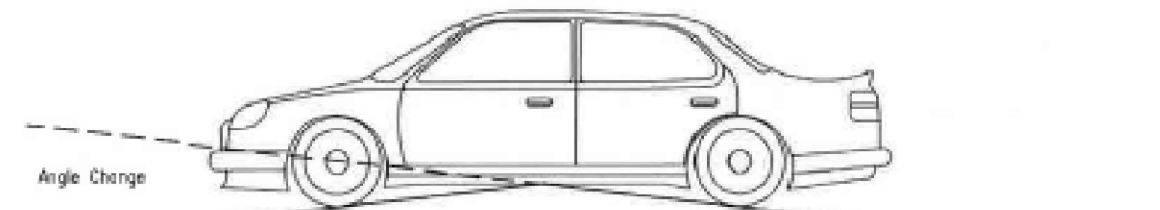
Date: APRIL 2010
Revision: R0
Scale: AS SHOWN
SHEET No. **22**



WHANGAREI DISTRICT COUNCIL
ENVIRONMENTAL ENGINEERING STANDARDS

WDC 8036

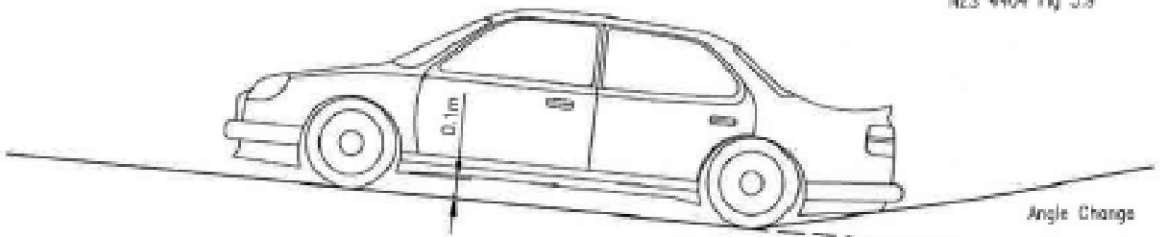
Sheet 23 Vehicle Crossing – Max Graded Profiles For Urban/Rural



BREAKOVER ANGLE

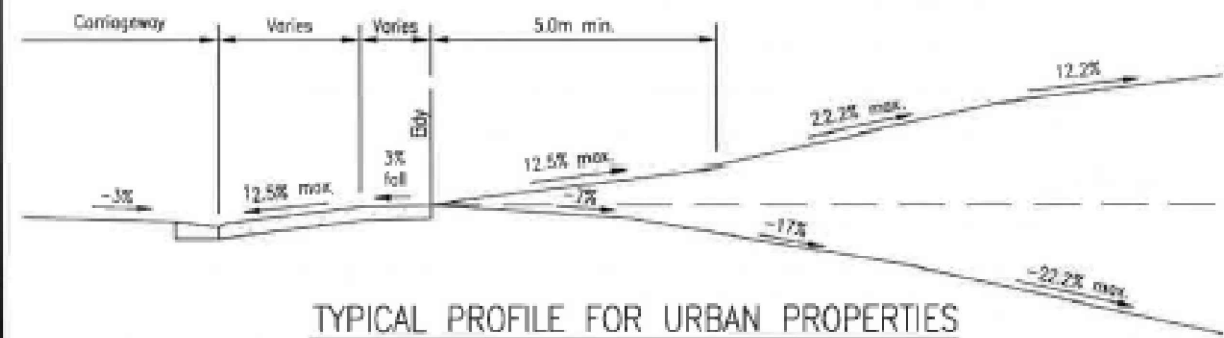
Maximum change of grade 10% (algebraic)
(5.7 degrees)

Refer also to
NZS 4404 Fig 3.9



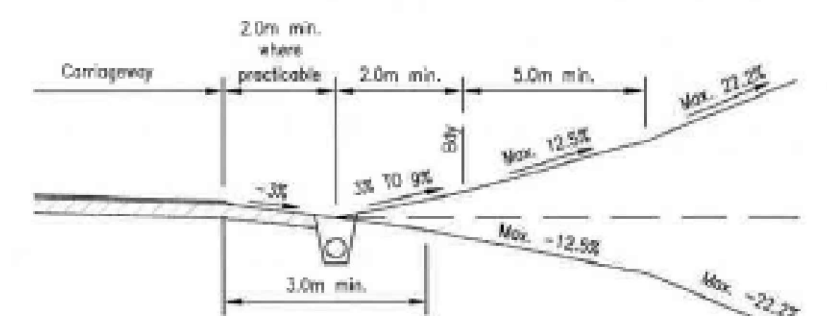
DEPARTURE ANGLE

Maximum change of grade 17% (algebraic)
(9.65 degrees)



TYPICAL PROFILE FOR URBAN PROPERTIES

NTS



TYPICAL PROFILE FOR RURAL PROPERTIES

NTS

NOTES:

- Maximum grade changes to occur at not less than 2.0m intervals.
- Based on 90 percentile car as at 1990 with minimum ground clearance of 100mm.

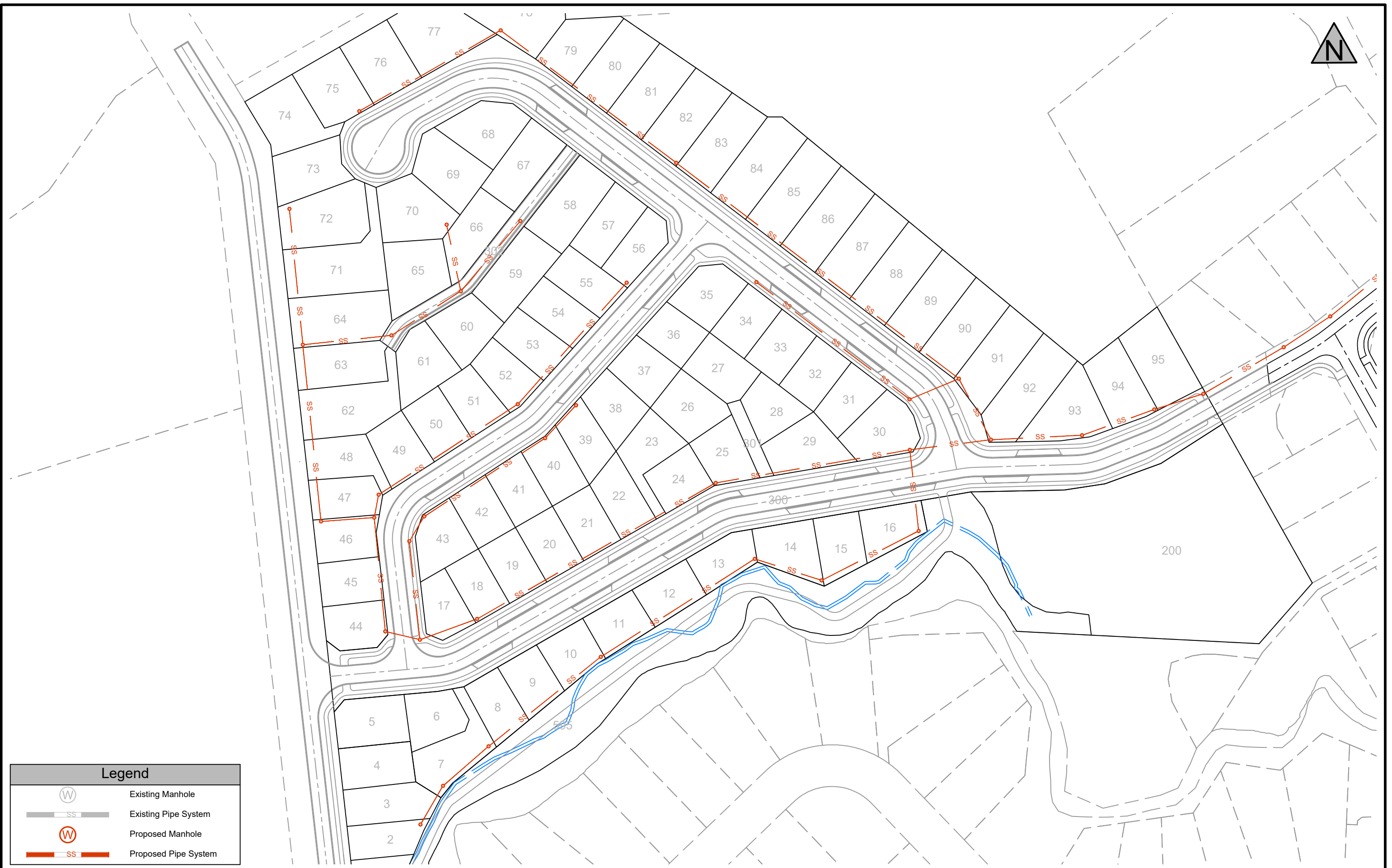
VEHICLE CROSSING –
MAXIMUM GRADED PROFILES FOR URBAN/ RURAL PROPERTIES

Date: APRIL 2010
Revision: R0
Scale: NTS
SHEET No. **23**







WHANGAREI DISTRICT COUNCIL
ENVIRONMENTAL ENGINEERING STANDARDS

WDC 8036

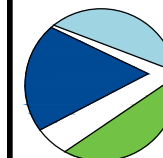


Legend

-  Existing Manhole
-  Existing Pipe System
-  Proposed Manhole
-  Proposed Pipe System

Size	A3	Scale	1:1250	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

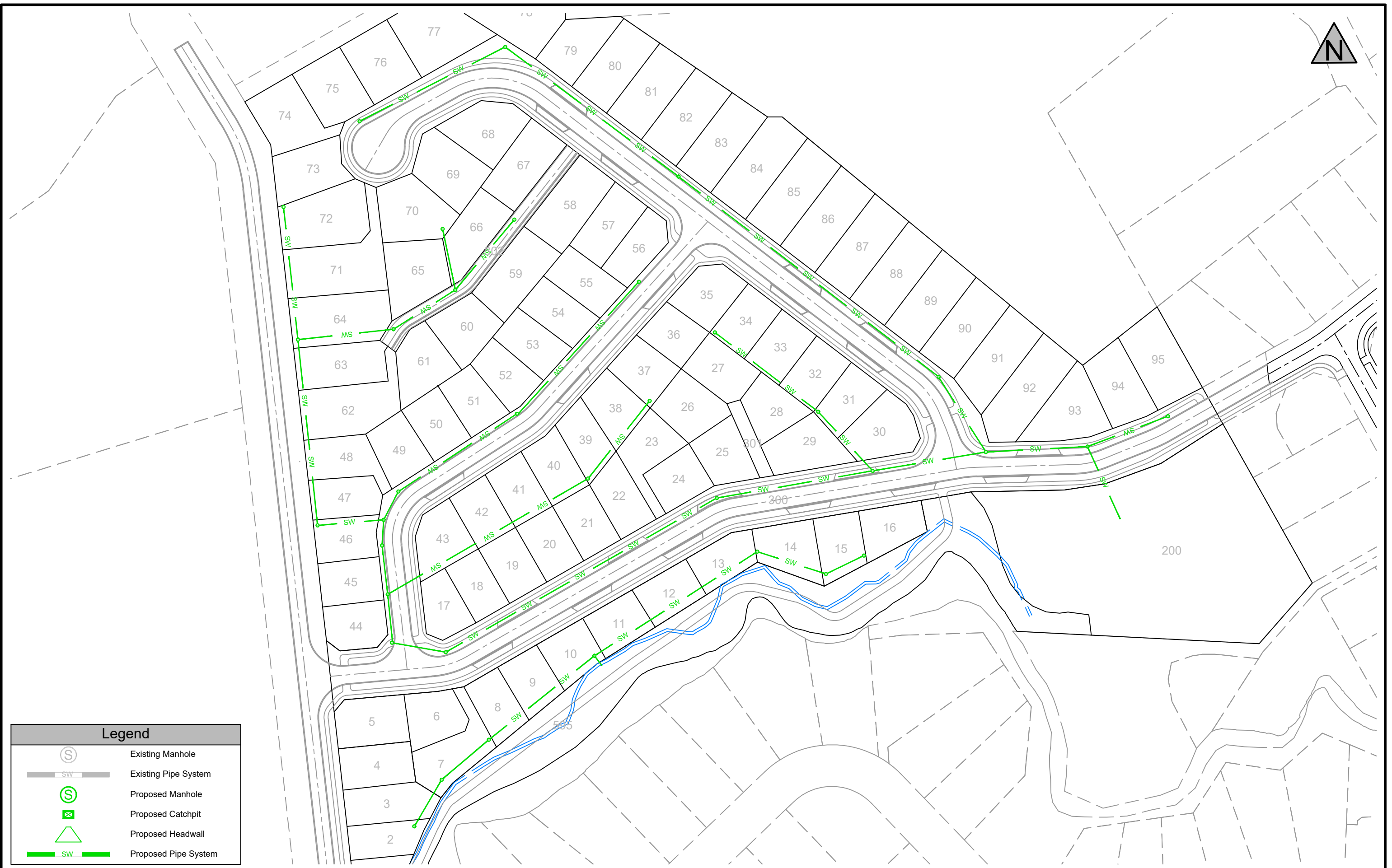
Resource Consent
Sanitary Sewer Overview
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



Blue Wallace
Surveyors Ltd.
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 Hamilton Central, HAMILTON.
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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-400	1

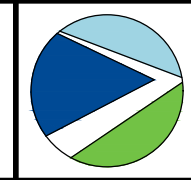
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Legend	
	Existing Manhole
	Existing Pipe System
	Proposed Manhole
	Proposed Catchpit
	Proposed Headwall
	Proposed Pipe System

Size	A3	Scale	1:1250	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

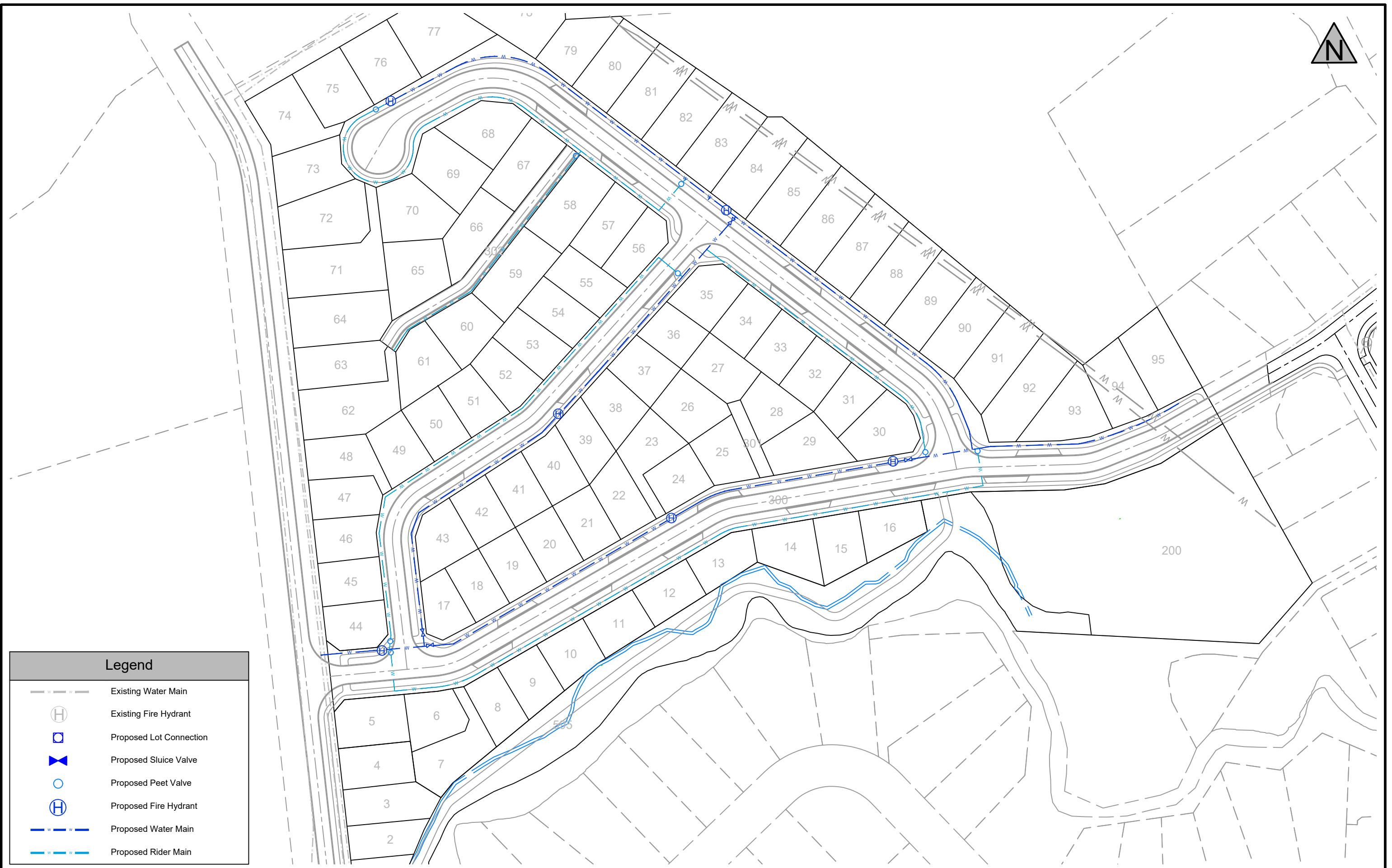
Resource Consent
Storm water Overview
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments











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 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-500	1

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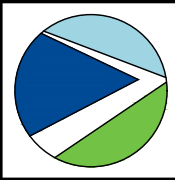


Legend

-  Existing Water Main
-  Existing Fire Hydrant
-  Proposed Lot Connection
-  Proposed Sluice Valve
-  Proposed Peet Valve
-  Proposed Fire Hydrant
-  Proposed Water Main
-  Proposed Rider Main

Size	A3	Scale	1:1250	Date	November 2021	
No.	Amendment	Init.	Date	Designed	JMC	
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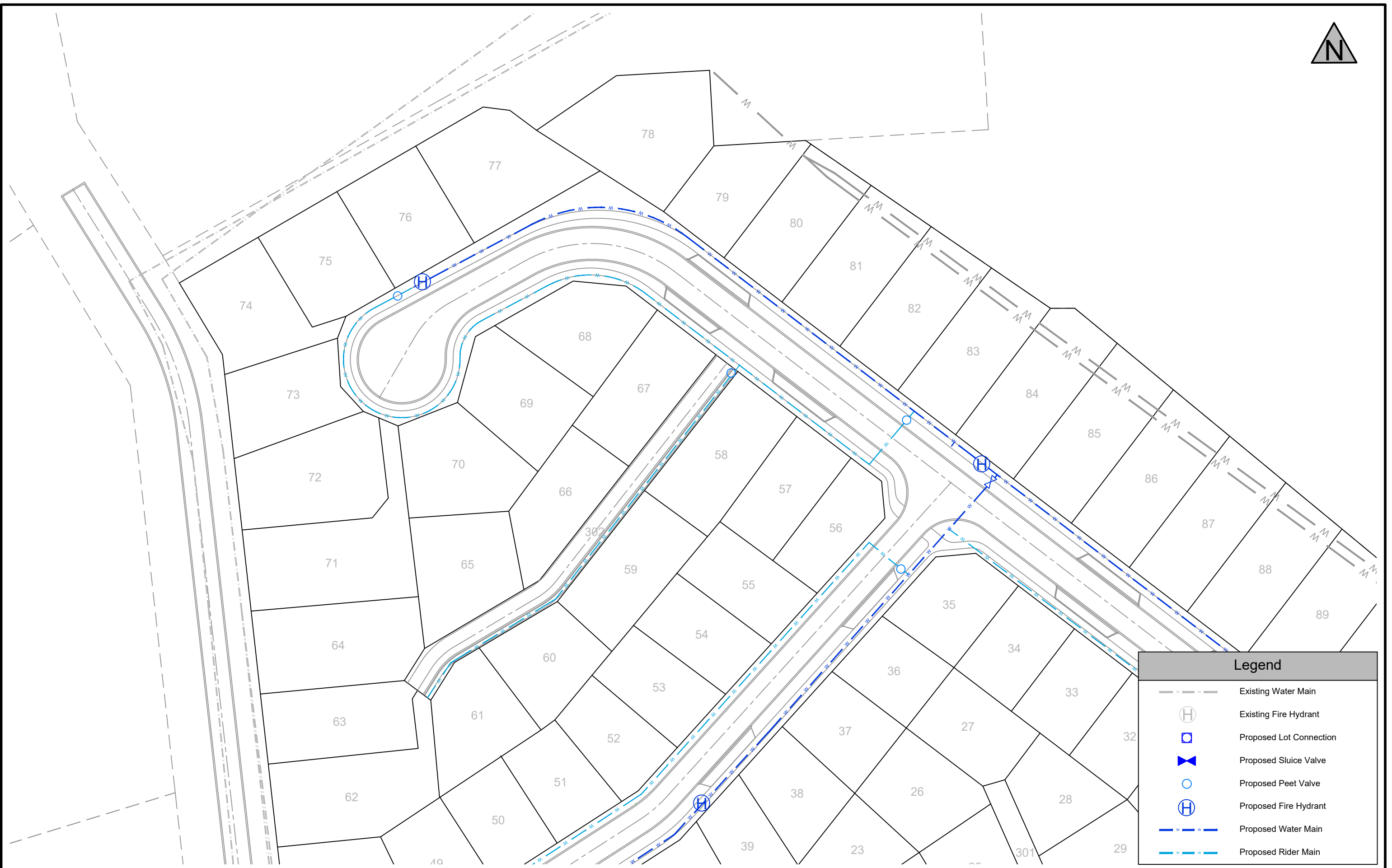
Resource Consent
Water Reticulation Overview
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments



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Surveyors Ltd.
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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-600	DRAFT

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Legend	
	Existing Water Main
	Existing Fire Hydrant
	Proposed Lot Connection
	Proposed Sluice Valve
	Proposed Peet Valve
	Proposed Fire Hydrant
	Proposed Water Main
	Proposed Rider Main

Size	A3	Scale	1:750	Date	November 2021	
No.	Amendment	Init.	Date	Designed	JMC	
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC	
2				Checked	CN	
3				Approved		

Resource Consent
Water Reticulation Overview
 47 Dip Road, Kamo, Whangarei
 Prepared for: CC Developments

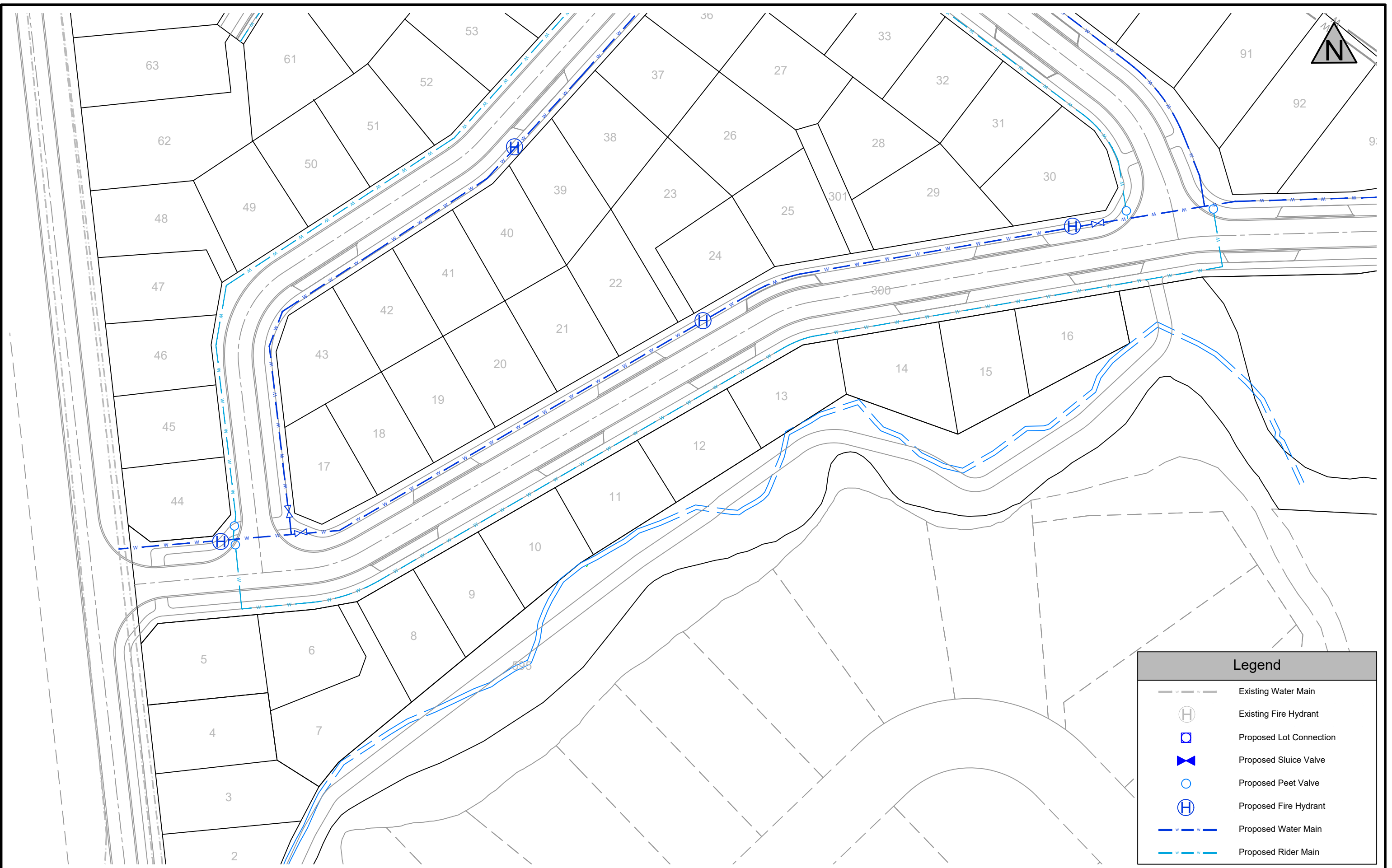


Blue Wallace
Surveyors Ltd.
 25 Harwood Street, P O Box 38,
 Hamilton Central, HAMILTON.
 Phone (07) 839 7799, Fax (07) 839 4455

Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
.....	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-601	DRAFT

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Legend	
	Existing Water Main
	Existing Fire Hydrant
	Proposed Lot Connection
	Proposed Sluice Valve
	Proposed Peet Valve
	Proposed Fire Hydrant
	Proposed Water Main
	Proposed Rider Main

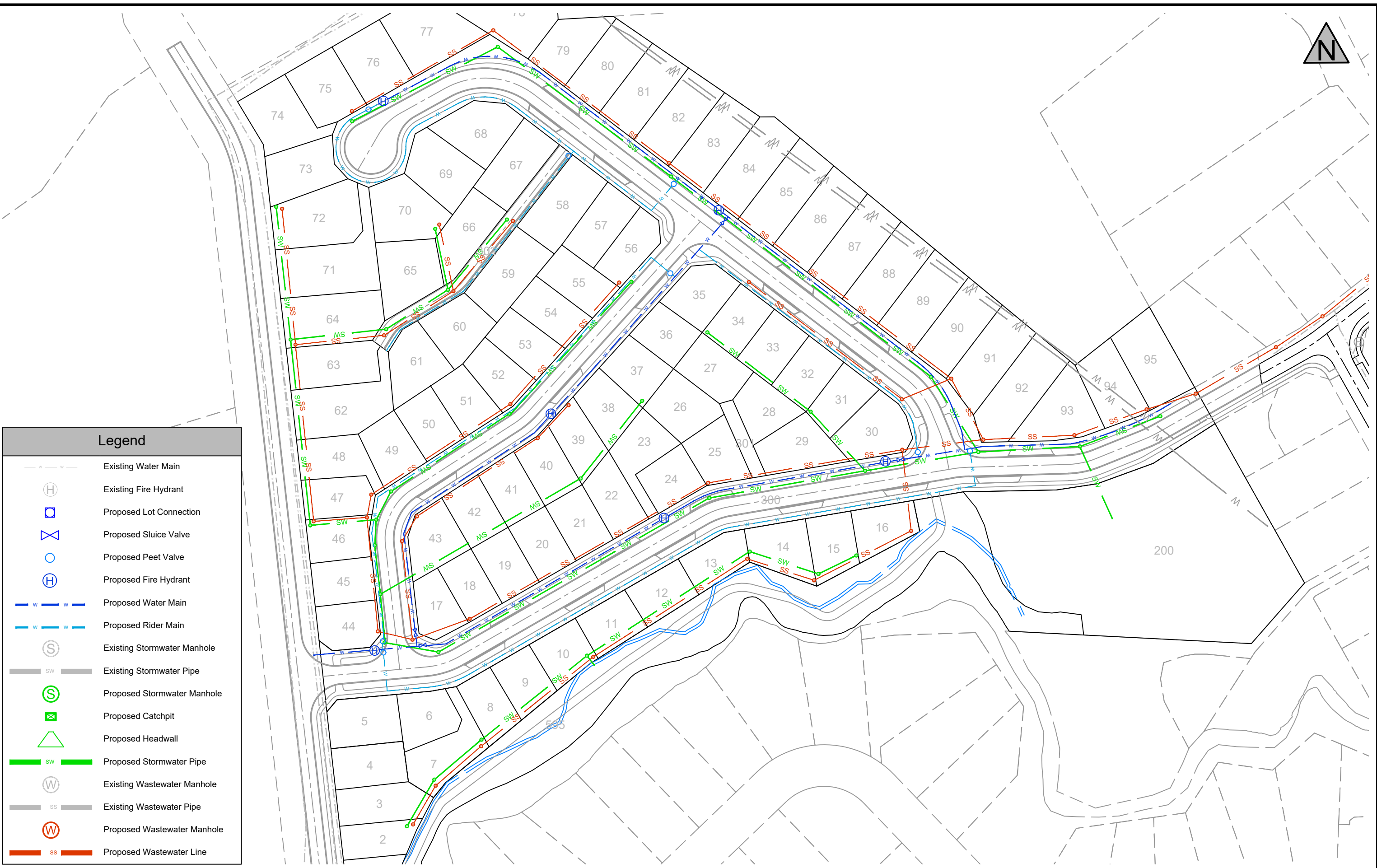
Size	A3	Scale	1:750	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC		
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Height: Moturiki Datum 1953	
Resource Consent Number:	
.....	
BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-602	DRAFT



Legend

- Existing Water Main
- Existing Fire Hydrant
- Proposed Lot Connection
- Proposed Sluice Valve
- Proposed Peet Valve
- Proposed Fire Hydrant
- Proposed Water Main
- Proposed Rider Main
- Existing Stormwater Manhole
- Existing Stormwater Pipe
- Proposed Stormwater Manhole
- Proposed Catchpit
- Proposed Headwall
- Proposed Stormwater Pipe
- Existing Wastewater Manhole
- Existing Wastewater Pipe
- Proposed Wastewater Manhole
- Proposed Wastewater Line

Size	A3	Scale	1:1250	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

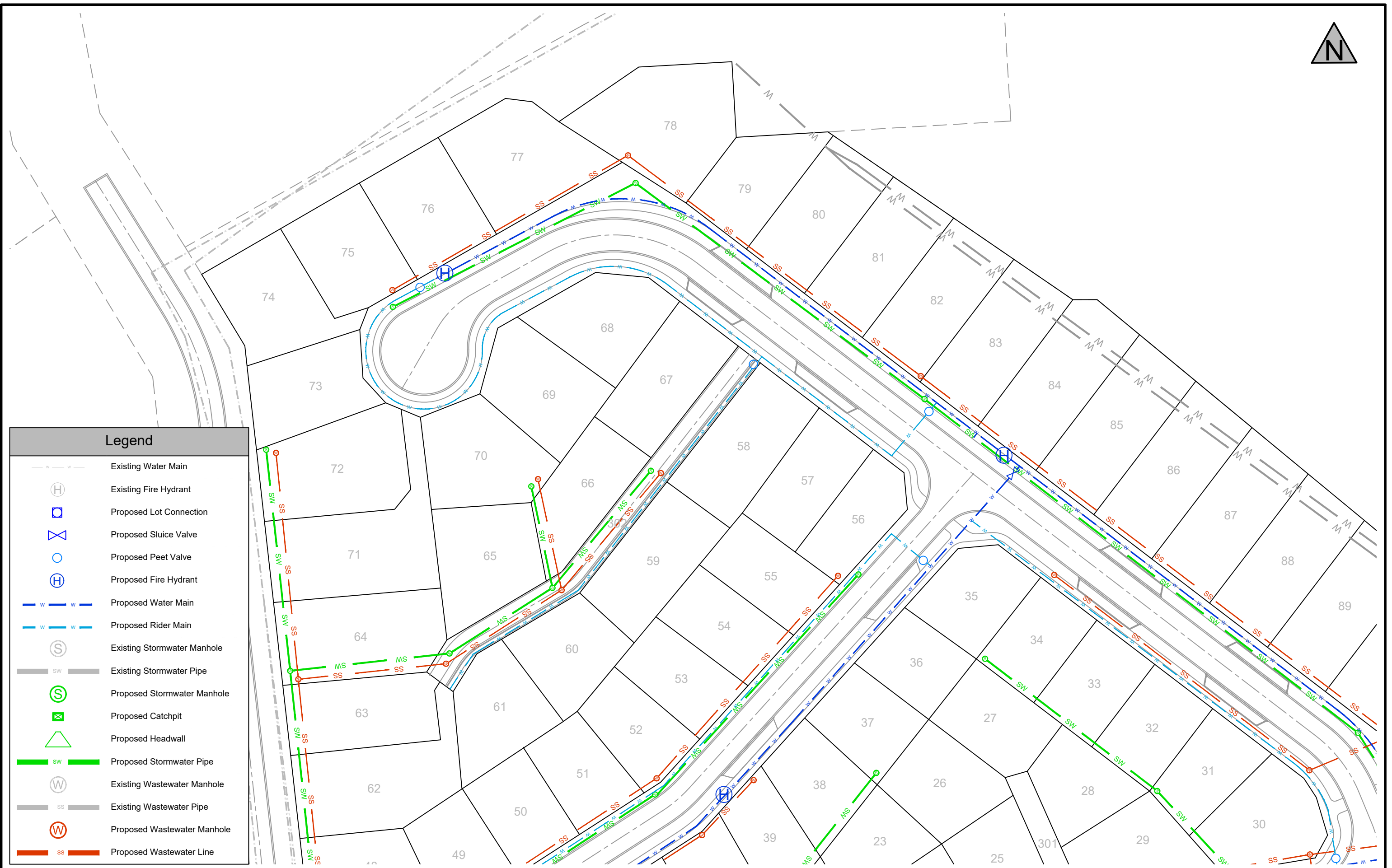
Resource Consent
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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-700	DRAFT

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Legend

- Existing Water Main
- Existing Fire Hydrant
- Proposed Lot Connection
- Proposed Sluice Valve
- Proposed Peet Valve
- Proposed Fire Hydrant
- Proposed Water Main
- Proposed Rider Main
- Existing Stormwater Manhole
- Existing Stormwater Pipe
- Proposed Stormwater Manhole
- Proposed Catchpit
- Proposed Headwall
- Proposed Stormwater Pipe
- Existing Wastewater Manhole
- Existing Wastewater Pipe
- Proposed Wastewater Manhole
- Proposed Wastewater Line

Size	A3	Scale	1:750	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
1	Issued For Resource Consent	JMC	10/05/21	Drawn	JMC		
2				Checked	CN		
3				Approved			

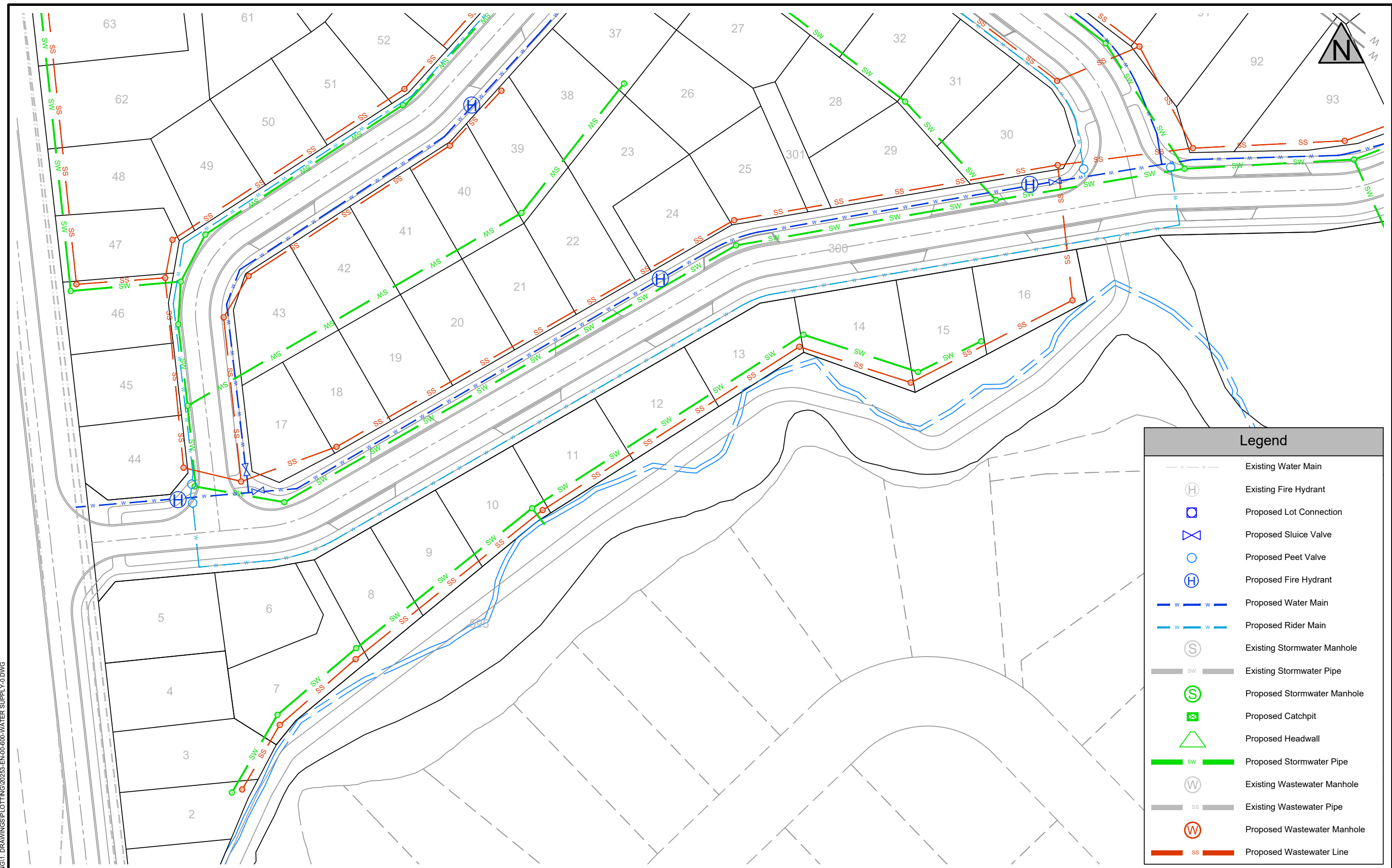
Resource Consent
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Datum: Circuit: Mt Eden 2000	
Height: Moturiki Datum 1953	
Resource Consent Number:	
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-701	DRAFT

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Legend	
	Existing Water Main
	Existing Fire Hydrant
	Proposed Lot Connection
	Proposed Sluice Valve
	Proposed Peet Valve
	Proposed Fire Hydrant
	Proposed Water Main
	Proposed Rider Main
	Existing Stormwater Manhole
	Existing Stormwater Pipe
	Proposed Stormwater Manhole
	Proposed Catchpit
	Proposed Headwall
	Proposed Stormwater Pipe
	Existing Wastewater Manhole
	Existing Wastewater Pipe
	Proposed Wastewater Manhole
	Proposed Wastewater Line

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Size	A3	Scale	1:750	Date	November 2021		
No.	Amendment	Init.	Date	Designed	JMC		
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BW Ref.	Stg. Purp. Dwg. # Revision:
20253-01-EN-702	DRAFT