NOTES

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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

TE AUTE ROAD
GILPIN ROAD
ELLIOT CRESCENT
UPHAM STREET
MIDDLE ROAD
COLLECTOR ROAD CR01
COLLECTOR ROAD CR02
ACCESS ROAD AR01
ACCESS ROAD AR02
ACCESS ROAD AR03
ACCESS ROAD AR04
ACCESS ROAD AR05
ACCESS ROAD AR06
ACCESS ROAD AR07
ACCESS ROAD AR08
ACCESS ROAD AR09
ACCESS ROAD AR10
ACCESS ROAD AR11
STAGE 1
STAGE 2A
STAGE 2B
STAGE 3
STAGE 4
STAGE 5
STAGE 6A
STAGE 6B
STAGE 7A
STAGE 7B
STAGE 8
STAGE 9
STAGE 10
STAGE 11A
STAGE 11B
REFER SHEETS 2751, 2756, 2761
REFER SHEETS 2752, 2757, 2762
REFER SHEET 2766
REFER SHEETS 2753, 2758, 2763
REFER SHEETS 2754, 2759, 2764
REFER SHEETS 2755, 2760, 2765

SCALEBAR (m) 0 30 60 150
SCALE | 1:3000 @A3 | 1:1500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

SIGHT DISTANCE LAYOUT PLAN

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:3000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2750-RD	

Plot Date: 12:27:57 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN DWG

WOODS
EST.1970

NOTES

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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

STAGE 3

STAGE 8

STAGE 7A

197 198 199 196 200 195 201 194 202 203 193 204 213 214 212 215 211 216 210 217 209 218 207 206 1003 258 257 256 255 261 262

ACCESS ROAD AR09

ACCESS ROAD AR10

ROAD AR01

TE AUTE ROAD

COLLECTOR ROAD CR01

TE AUTE RD - CR01 INTERSECTION
SSID =122m
GRADE=0.3%
DESIGN SPEED=60Km/hr

CR01 - AR06 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR01 - AR09 INTERSECTION LEFT
SSID =96m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR01 - AR09 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR01 - AR09 INTERSECTION
SSID =52m
GRADE=0.4%
DESIGN SPEED=30Km/hr

AR01 - AR10 INTERSECTION
SSID =42m
GRADE=0.4%
DESIGN SPEED=30Km/hr

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				CHECKED	LZM/BLO
				APPROVED	BF

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CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

SAFE INTERSECTION SIGHT DISTANCE - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2751-RD
REV	2

Plot Date: 12:27:58 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

TE AUTE RD - CR01 INTERSECTION
SSID =123m
GRADE=0.3%
DESIGN SPEED=60Km/hr

AR06 - AR07 INTERSECTION
SSID =76m
GRADE=-0.42%
DESIGN SPEED=40Km/hr

AR07 - AR08 INTERSECTION
SSID =73m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR06 - AR08 INTERSECTION
SSID =73m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR07 - AR08 INTERSECTION
SSID =73m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR06 - AR08 INTERSECTION
SSID =73m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR06 - AR11 INTERSECTION
SSID =73m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR06 - AR11 INTERSECTION
SSID =73m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR07 - AR06 INTERSECTION
SSID =41m

STAGE 7A
STAGE 7B
STAGE 9
STAGE 6A
STAGE 6B

ACCESS ROAD AR07
ACCESS ROAD AR06
ACCESS ROAD AR08
ACCESS ROAD AR11
COLLECTOR ROAD CR01
TE AUTE ROAD

3007
3005
3004
3001
2000
1005

NOTES

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LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

SAFE INTERSECTION SIGHT DISTANCE - SHEET 2

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2752-RD
REV	2

Plot Date: 12:27:59 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

NOTES

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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

WOODS EST.1970

ACCESS ROAD AR10

ACCESS ROAD AR01

ROAD AR01

STAGE 4

STAGE 3

STAGE 2B

STAGE 6A

ACCESS ROAD AR02

MIDDLE ROAD

COLLECTOR RO

AR01 - AR10 INTERSECTION
SSID =42m
GRADE=0.4%
DESIGN SPEED=30Km/hr

AR01 - AR02 INTERSECTION
SSID =73m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 - AR02 INTERSECTION
SSID =73m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 - AR01 INTERSECTION
SSID =73m
GRADE=0.94%
DESIGN SPEED=40Km/hr

AR01 - AR01 INTERSECTION
SSID =73m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 - AR02 INTERSECTION
SSID =73m
GRADE=0.4%
DESIGN SPEED=40Km/hr

MIDDLE RD - CR 01 INTERSECTION
SSID =122m
GRADE=0.5%
DESIGN SPEED=60Km/hr

AR07 - AR08 INTERSECTION
SSID =73m
GRADE=0.55%

08 INTERSECTION
5%
EED=40Km/hr

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:00 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

SAFE INTERSECTION SIGHT DISTANCE - SHEET 3

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2753-RD
REV	2

NOTES

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LEGEND:

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- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

CR01 - AR03 INTERSECTION
SSID =96m
GRADE=0.5%
DESIGN SPEED=50Km/hr

CR01 - AR01 INTERSECTION
SSID =97m
GRADE=0.5%
DESIGN SPEED=50Km/hr

AR07 - AR06 INTERSECTION
SSID =73m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR07 - AR06 INTERSECTION
SSID =41m
GRADE=0.4%
DESIGN SPEED=25Km/hr

CR02 - AR05 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR01 - AR03 INTERSECTION
SSID =96m
GRADE=0.5%
DESIGN SPEED=50Km/hr

MIDDLE RD - CR 01 INTERSECTION
SSID =122m
GRADE=0.5%
DESIGN SPEED=60Km/hr

CR01 - AR01 INTERSECTION
SSID =97m
GRADE=0.75%
DESIGN SPEED=50Km/hr

MIDDLE RD - CR 01 INTERSECTION
SSID =123m
GRADE=0.5%
DESIGN SPEED=60Km/hr

ACCESS ROAD AR02
COLLECTOR ROAD CR01
ACCESS ROAD AR07
ACCESS ROAD AR03
ACCESS ROAD AR01
COLLECTOR ROAD CR02
MIDDLE ROAD
STAGE 2B
STAGE 5
STAGE 11B
STAGE 6A
1006
3003
1002

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

SAFE INTERSECTION SIGHT DISTANCE - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2754-RD
REV	2

Plot Date: 12:28:00 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

CR02 - AR05 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR05 - AR07 INTERSECTION
SSID =73m
GRADE=0.4%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR05

AR05 - AR07 INTERSECTION
SSID =73m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR02 - AR05 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 - AR01 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR01 - AR03 INTERSECTION
SSID =73m
GRADE=0.48%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR01

AR01 - AR03 INTERSECTION
SSID =42m
GRADE=0.48%
DESIGN SPEED=25Km/hr

CR02 - AR01 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 - AR04 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

MIDDLE RD - AR04 INTERSECTION
SSID =122m
GRADE=0.9%
DESIGN SPEED=60Km/hr

ACCESS ROAD AR04
STAGE 10

CR02 - AR04 INTERSECTION
SSID =97m
GRADE=0.4%
DESIGN SPEED=50Km/hr

MIDDLE RD - AR04 INTERSECTION
SSID =124m
GRADE=0.9%
DESIGN SPEED=60Km/hr

MIDDLE ROAD

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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:01 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

SAFE INTERSECTION SIGHT DISTANCE - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2755-RD	



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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

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MIDDLE ROAD PROJECT

APPROACH SIGHT DISTANCE - SHEET 1

		REV
STATUS	ISSUED FOR CONSENT	2
SCALE	1:1000 @ A3	
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2756-RD	

Plot Date: 12:28:01 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

CR01 CROSS WALK 4 LEFT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

AR06 INTERSECTION LEFT
ASD =39.5m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 3 RIGHT
ASD =39.5m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 3 LEFT
ASD =39.5m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR07 INTERSECTION LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR08 INTERSECTION RIGHT
ASD =20.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR08 INTERSECTION LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 2 LEFT
ASD =39.5m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 2 RIGHT
ASD =39.5m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 3 LEFT
ASD =39.4m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 2 LEFT
ASD =39.4m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 1 RIGHT
ASD =39.5m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 1 LEFT
ASD =39.5m
GRADE=0.55%
DESIGN SPEED=40Km/hr

AR11 INTERSECTION
ASD =39.5m
GRADE=0.43%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 3 RIGHT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01 CROSS WALK 3 LEFT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

AR07 CROSS WALK 3 RIGHT
ASD =39.4m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 2 RIGHT
ASD =39.4m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR06 INTERSECTION RIGHT
ASD =20.6m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 1 LEFT
ASD =20.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

STAGE 7A
STAGE 7B
STAGE 9
STAGE 6A
STAGE 6B

ACCESS ROAD AR07
ACCESS ROAD AR06
ACCESS ROAD AR08
ACCESS ROAD AR11
COLLECTOR ROAD CR01
TE AUTE ROAD

3007
3005
3004
3010

NOTES

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5. PRAM CROSSINGS TO BE CONSTRUCTED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS.
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7. ALL LINE MARKING & ROAD SIGNAGE IS TO BE CONSTRUCTED AS PER NEW ZEALAND TRANSPORT AGENCY MANUAL OF SIGNS & MARKINGS.

LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

APPROACH SIGHT DISTANCE - SHEET 2

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2757-RD
REV	2

Plot Date: 12:28:02 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

NOTES

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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

AR01 CROSS WALK 6 RIGHT
ASD =39.4m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 4 RIGHT
ASD =26.3m
GRADE=0.94%
DESIGN SPEED=30Km/hr

AR10 INTERSECTION
ASD =39.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 6 LEFT
ASD =39.4m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 4 LEFT
ASD =26.3m
GRADE=0.94%
DESIGN SPEED=30Km/hr

AR01 CROSS WALK 5 RIGHT
ASD =39.4m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 5 LEFT
ASD =39.4m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 INTERSECTION 3 LEFT
ASD =39.4m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 3 RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR02 INTERSECTION RIGHT
ASD =20.6m
GRADE=0.41%
DESIGN SPEED=25Km/hr

AR01 CROSS WALK 3 LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 3 RIGHT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01 CROSS WALK 3 LEFT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

AR02 INTERSECTION LEFT
ASD =39.5m
GRADE=0.41%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 3 RIGHT
ASD =39.4m
GRADE=0.62%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 2 LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 2 RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR10
ACCESS ROAD AR01
ACCESS ROAD AR02
MIDDLE ROAD
STAGE 4
STAGE 3
STAGE 6A
COLLECTOR RO

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:02 pm,30 September 2026, NEDV

File: C:\12DSYNERGYDATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

APPROACH SIGHT DISTANCE - SHEET 3

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2758-RD

REV 2

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS. ANY AMBIGUITY BETWEEN THESE DRAWINGS & THE STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

AR06 INTERSECTION RIGHT
ASD =20.6m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 1 LEFT
ASD =20.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 1 RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR02 INTERSECTION
ASD =20.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

CR02 CROSS WALK 3 LEFT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 3 RIGHT
ASD =52.4m

CR01 2 INTERSECTION
ASD =26.3m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01 1 INTERSECTION
ASD =26.3m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01-AR01 INTERSECTION 2 RIGHT
ASD =39.4m
GRADE=0.65%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 2 RIGHT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01 CROSS WALK 2 LEFT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

AR03 INTERSECTION RIGHT
ASD =39.5m
GRADE=0.52%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 2 LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 2 RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

MIDDLE RD - CR01 INTERSECTION
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01 CROSS WALK 1 RIGHT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01 CROSS WALK 1 LEFT
ASD =54.6m
GRADE=0.75%
DESIGN SPEED=50Km/hr

CR01-AR01 INTERSECTION 1 RIGHT
ASD =39.5m
GRADE=0.48%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR07
ACCESS ROAD AR03
ACCESS ROAD AR01
ACCESS ROAD AR02
COLLECTOR ROAD CR01
COLLECTOR ROAD CR02
MIDDLE ROAD
STAGE 11B
STAGE 5
STAGE 2A

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:03 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				APPROVED	BF

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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

APPROACH SIGHT DISTANCE - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2759-RD
REV	2

CR02 CROSS WALK 3 LEFT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR07 INTERSECTION RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR05 CROSS WALK 1 RIGHT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR02 CROSS WALK 3 RIGHT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR03 INTERSECTION LEFT
ASD =40.0m
GRADE=0.52%
DESIGN SPEED=40Km/hr

STAGE 1

AR05 CROSS WALK 1 LEFT
ASD =39.5m
GRADE=0.4%
DESIGN SPEED=40Km/hr
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 1 RIGHT
ASD =39.5m
GRADE=0.48%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR05

ACCESS ROAD AR01

CR02-AR01 INTERSECTION LEFT
ASD =40.0m
GRADE=0.48%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 1 LEFT
ASD =20.6m
GRADE=0.48%
DESIGN SPEED=25Km/hr

CR02 CROSS WALK 2 LEFT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 2 RIGHT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 1 RIGHT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 1 LEFT
ASD =52.4m
GRADE=0.4%
DESIGN SPEED=50Km/hr

ACCESS ROAD AR04

STAGE 10

MIDDLE RD - AR04 INTERSECTION LEFT
ASD =40.0m
GRADE=0.5%
DESIGN SPEED=40Km/hr

MIDDLE RD - AR04 INTERSECTION RIGHT
ASD =38.9m
GRADE=1.73%
DESIGN SPEED=40Km/hr

MIDDLE ROAD

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LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

APPROACH SIGHT DISTANCE - SHEET 5

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2760-RD
REV	2

Plot Date: 12:28:04 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

STREET TREES PROPOSED THROUGH THIS AREA WILL HAVE 2m CLEARANCE BETWEEN CANOPY AND GROUND LEVEL AND WILL NOT IMPACT THE TE AUTE CROSS WALK RIGHT SIGHT LINE

TE AUTE CROSS WALK RIGHT
HALF CSD =122.2m
GRADE=0.3%
DESIGN SPEED=60Km/hr

AR09 CROSS WALK LEFT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR09 CROSS WALK RIGHT
CSD =55.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

TE AUTE CROSS WALK LEFT
HALF CSD =122.2m
GRADE=0.3%
DESIGN SPEED=60Km/hr

TE AUTE - CR01 CROSS WALK RIGHT
HALF CSD =122.2m
GRADE=0.3%
DESIGN SPEED=60Km/hr

CR01 CROSS WALK 4 LEFT
CSD =84m
GRADE=2.8%
DESIGN SPEED=30Km/hr

CR01 CROSS WALK 4 RIGHT
CSD =84m
GRADE=2.8%
DESIGN SPEED=30Km/hr

CR01 INTERSECTION 3
HALF CSD =43.8m
GRADE=2.8%
DESIGN SPEED=30Km/hr

AR09 INTERSECTION RIGHT
CSD =91.2m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR09 INTERSECTION LEFT
CSD =91.2m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 4 LEFT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

STAGE 3
STAGE 8
STAGE 7A

TE AUTE ROAD
ACCESS ROAD AR09
ACCESS ROAD AR10
ACCESS ROAD AR01
COLLECTOR ROAD CR01

198 196 214 211 216 210 217 209 218 219 258 257 256 261 262 1003

NOTES

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LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1

Plot Date: 12:28:04 pm,30 September 2026, NEDV

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

CROSSING SIGHT DISTANCE - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2761-RD
REV	2

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

TE AUTE - CR01 CROSS WALK LEFT
HALF CSD =122.2m
GRADE=0.3%
DESIGN SPEED=60Km/hr

AR06 INTERSECTION LEFT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR07 INTERSECTION LEFT
CSD =56.7m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR06 CROSS WALK 3 LEFT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR06 CROSS WALK 3 RIGHT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR08 INTERSECTION LEFT
CSD =55.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR08 INTERSECTION RIGHT
CSD =55.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 3 RIGHT
CSD =53.8m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR02 INTERSECT
CS
GRA
DESIGN SPEED

CR01 CROSS WALK 3 LEFT
CSD =83.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01 CROSS WALK 3 RIGHT
CSD =83.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

AR06 CROSS WALK 2 LEFT
CSD =55.6m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR06 CROSS WALK 2 RIGHT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 3 LEFT
CSD =56.7m
GRADE=0.62%
DESIGN SPEED=25Km/hr

AR06 CROSS WALK 1 RIGHT
CSD =55.6m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR06 INTERSECTION RIGHT
CSD =54.4m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR06 CROSS WALK 1 LEFT
CSD =55.6m
GRADE=0.55%
DESIGN SPEED=25Km/hr

AR11 INTERSECTION
CSD =88.9m
GRADE=0.43%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 1 LEFT
CSD =54.1m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 2 RIGHT
CSD =88.9m

STAGE 7A
STAGE 7B
STAGE 9
STAGE 6A

ACCESS ROAD AR07
ACCESS ROAD AR06
ACCESS ROAD AR08
ACCESS ROAD AR11
TE AUTE ROAD
COLLECTOR ROAD CR01

NOTES

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LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:05 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

CROSSING SIGHT DISTANCE - SHEET 2

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2762-RD

REV 2

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS. ANY AMBIGUITY BETWEEN THESE DRAWINGS & THE STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
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LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

ACCESSWAY - MIDDLE RD RIGHT
CSD =172.2m
GRADE=0.5%
DESIGN SPEED=60Km/hr

ACCESSWAY - MIDDLE RD LEFT
CSD =172.2m
GRADE=0.5%
DESIGN SPEED=60Km/hr

AR10 INTERSECTION
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CW RIGHT
CSD =65.3m
GRADE=0.94%
DESIGN SPEED=30Km/hr

AR01 CROSS WALK 4 LEFT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 4 RIGHT
CSD =55.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR01 CW LEFT
CSD =65.3m
GRADE=0.94%
DESIGN SPEED=30Km/hr

AR02 INTERSECTION LEFT
CSD =55.6m
GRADE=0.41%
DESIGN SPEED=25Km/hr

AR01 CROSS WALK 5 RIGHT
CSD =55.6m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR01 INTERSECTION 3
CSD =88.9m
GRADE=0.58%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 3 RIGHT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 3 LEFT
CSD =83.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01 CROSS WALK 3 RIGHT
CSD =83.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

AR01 CROSS WALK 5 LEFT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 3 LEFT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 2 LEFT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR02 INTERSECTION RIGHT
CSD =55.6m
GRADE=0.41%
DESIGN SPEED=25Km/hr

AR01 CROSS WALK 2 RIGHT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR01 INTERSECTION 3 RIGHT
CSD =96.3m
GRADE=0.52%

R07 CROSS WALK 3 RIGHT
SD =53.8m
RADE=0.4%
ESIGN SPEED=25Km/hr

ACCESS ROAD AR01
ACCESS ROAD AR02
ACCESS ROAD AR10
MIDDLE ROAD
COLLECTOR RO
STAGE 4
STAGE 3
STAGE 6A

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:06 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

CROSSING SIGHT DISTANCE - SHEET 3

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2763-RD
REV	2

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS. ANY AMBIGUITY BETWEEN THESE DRAWINGS & THE STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL KERB & CHANNEL / NIB TO BE SLIP-FORM, 25MPA FIBRE REINFORCED.
3. ALL SUMPS TO BE SEMI-RECESSED 800X500 WITH 1.2M LINTEL UNLESS SPECIFIED OTHERWISE.
4. FOOTPATHS TO BE CONSTRUCTED AS PER THE TYPICAL CROSS SECTIONS.
5. PRAM CROSSINGS TO BE CONSTRUCTED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS.
6. VEHICLE CROSSINGS SHOWN ON THIS PLAN ARE FOR PLANNING PURPOSES ONLY & WILL NOT BE CONSTRUCTED UNLESS OTHERWISE NOTED.
7. ALL LINE MARKING & ROAD SIGNAGE IS TO BE CONSTRUCTED AS PER NEW ZEALAND TRANSPORT AGENCY MANUAL OF SIGNS & MARKINGS.

LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

GRADE=0.41%
DESIGN SPEED=25Km/hr

ACCESS ROAD AR02

AR01 CROSS WALK 2 RIGHT
CSD =88.9m
GRADE=0.42%
DESIGN SPEED=40Km/hr

AR01 INTERSECTION 3 RIGHT
CSD =96.3m
GRADE=0.52%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 1 RIGHT
CSD =85.4m
GRADE=0.75%
DESIGN SPEED=30Km/hr

MIDDLE RD RIGHT
CSD =176.4m
GRADE=0.5%
DESIGN SPEED=60Km/hr

CR01 INTERSECTION 2
CSD =82.4m
GRADE=0.75%
DESIGN SPEED=40Km/hr

CR01 INTERSECTION 1
CSD =82.4m
GRADE=0.75%
DESIGN SPEED=40Km/hr

AR03 INTERSECTION LEFT
CSD =88.9m
GRADE=0.52%
DESIGN SPEED=40Km/hr

CR01 CROSS WALK 2 RIGHT
CSD =84.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

SS WALK 2 RIGHT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

N RIGHT
D =54.4m
DE=0.55%
=25Km/hr

AR07 CROSS WALK 2 LEFT
CSD =54.9m
GRADE=0.4%
DESIGN SPEED=25Km/hr

CR02 INTERSECTION
CSD =61.8m
GRADE=0.4%
DESIGN SPEED=30Km/hr

COLLECTOR ROAD CR01

AR11 INTERSECTION
CSD =88.9m
GRADE=0.43%
DESIGN SPEED=40Km/hr

AR07 CROSS WALK 1 LEFT
CSD =54.1m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR07 CROSS WALK 1 RIGHT
CSD =54.9m
GRADE=0.4%
DESIGN SPEED=25Km/hr

CR01 CROSS WALK 2 LEFT
CSD =84.7m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01 CROSS WALK 1 LEFT
CSD =85.4m
GRADE=0.75%
DESIGN SPEED=30Km/hr

AR01 INTERSECTION 1 LEFT
CSD =88.9m
GRADE=0.48%
DESIGN SPEED=40Km/hr

MIDDLE RD - CR01 INTERSECTION 1
HALF CSD =43.8m
GRADE=0.75%
DESIGN SPEED=30Km/hr

CR01 - MIDDLE RD LEFT
CSD =177.8m
GRADE=0.5%
DESIGN SPEED=60Km/hr

STAGE 11B
STAGE 5
STAGE 2A

ACCESS ROAD AR07
COLLECTOR ROAD CR02
ACCESS ROAD AR03
ACCESS ROAD AR01
MIDDLE ROAD

AR07 INTERSECTION RIGHT
CSD =90.7m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR02 CROSS WALK 3 LEFT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:06 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
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				APPROVED	BF

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MIDDLE ROAD PROJECT

CROSSING SIGHT DISTANCE - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2764-RD
REV	2

AR07 INTERSECTION RIGHT
CSD =90.7m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR05 RIGHT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR05 INTERSECTION
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

CR02 CROSS WALK 3 LEFT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 3 RIGHT
CSD =72.9m
GRADE=0.4%
DESIGN SPEED=25Km/hr

AR05 LEFT
CSD =88.9m
GRADE=0.4%
DESIGN SPEED=40Km/hr

AR01 CROSS WALK 1 LEFT
CSD =88.9m
GRADE=0.48%
DESIGN SPEED=40Km/hr

AR03 INTERSECTION RIGHT
CSD =91.7m
GRADE=0.52%
DESIGN SPEED=40Km/hr

CR02 CROSS WALK 2 LEFT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR01 INTERSECTION 2 RIGHT
CSD =55.6m
GRADE=0.48%
DESIGN SPEED=25Km/hr

AR01 CROSS WALK 1 RIGHT
CSD =55.6m
GRADE=0.48%
DESIGN SPEED=25Km/hr

AR 04 - MIDDLE RD RIGHT
CSD =177.8m
GRADE=0.5%
DESIGN SPEED=60Km/hr

CR02 CROSS WALK 2 RIGHT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

CR02 CROSS WALK 1 RIGHT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR04 - MIDDLE RD LEFT
CSD =177.8m
GRADE=0.5%
DESIGN SPEED=60Km/hr

CR02 CROSS WALK 1 LEFT
CSD =145.8m
GRADE=0.4%
DESIGN SPEED=50Km/hr

AR04 INTERSECTION LEFT
CSD =88.9m
GRADE=0.5%
DESIGN SPEED=40Km/hr

AR04 INTERSECTION RIGHT
CSD =88.9m
GRADE=1.73%
DESIGN SPEED=40Km/hr

ACCESS ROAD AR05
ACCESS ROAD AR01
ACCESS ROAD AR04
STAGE 10
MIDDLE ROAD

NOTES

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2. ALL KERB & CHANNEL / NIB TO BE SLIP-FORM, 25MPA FIBRE REINFORCED.
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5. PRAM CROSSINGS TO BE CONSTRUCTED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS.
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LEGEND:

SITE BOUNDARY
PROPOSED ASPHALT PAVING
PROPOSED BERM
PROPOSED FOOTPATH

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				APPROVED	BF

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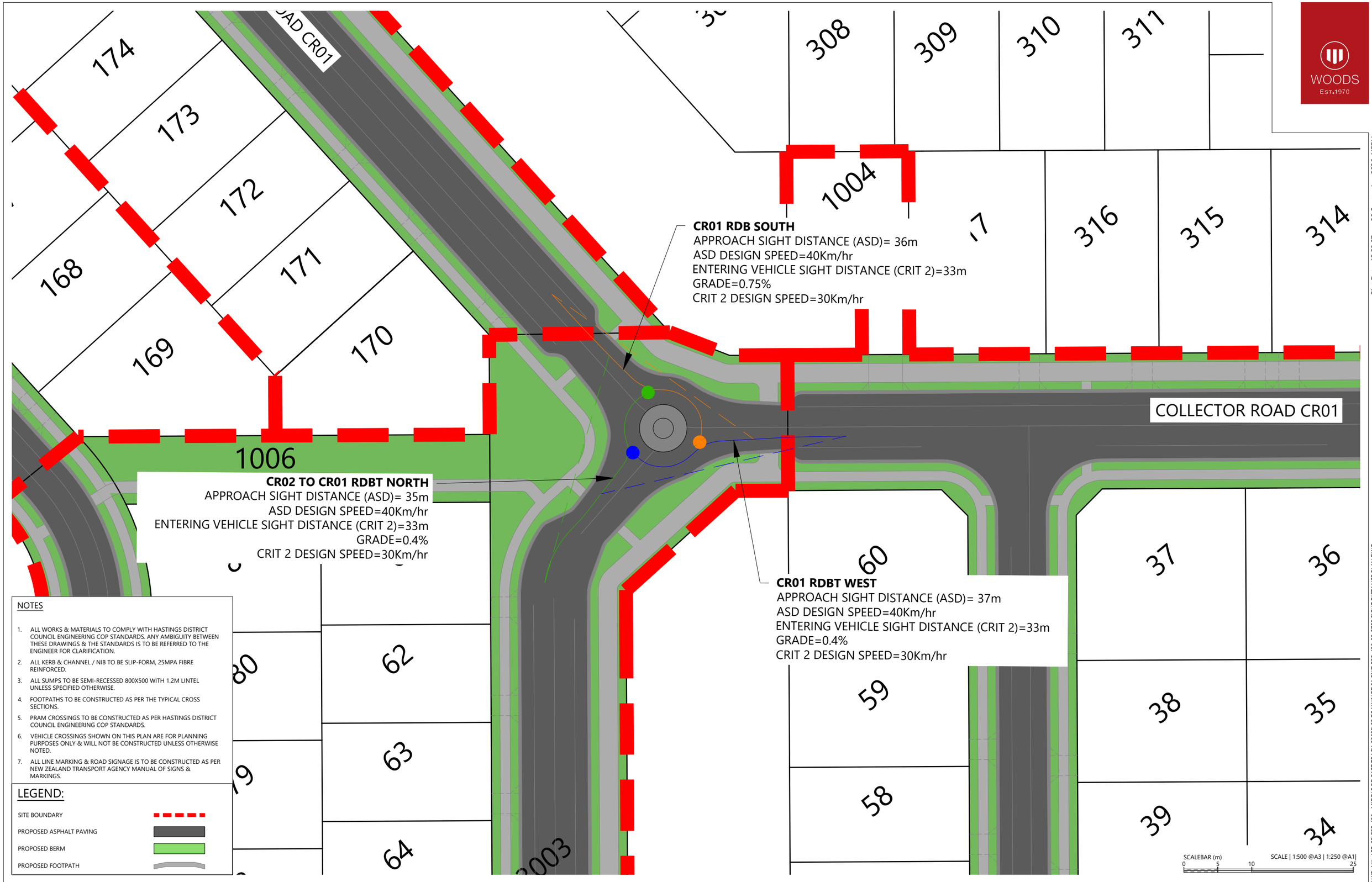
MIDDLE ROAD PROJECT

CROSSING SIGHT DISTANCE - SHEET 5

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2765-RD
REV	2

Plot Date: 12:28:07 pm,30 September 2026, NEDV

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NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS. ANY AMBIGUITY BETWEEN THESE DRAWINGS & THE STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
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7. ALL LINE MARKING & ROAD SIGNAGE IS TO BE CONSTRUCTED AS PER NEW ZEALAND TRANSPORT AGENCY MANUAL OF SIGNS & MARKINGS.

LEGEND:

- SITE BOUNDARY
- PROPOSED ASPHALT PAVING
- PROPOSED BERM
- PROPOSED FOOTPATH

REVISION DETAILS		INT	DATE
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026

SURVEYED	
DESIGNED	GP
DRAWN	GP
CHECKED	LZM/BLO
APPROVED	BF

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MIDDLE ROAD PROJECT

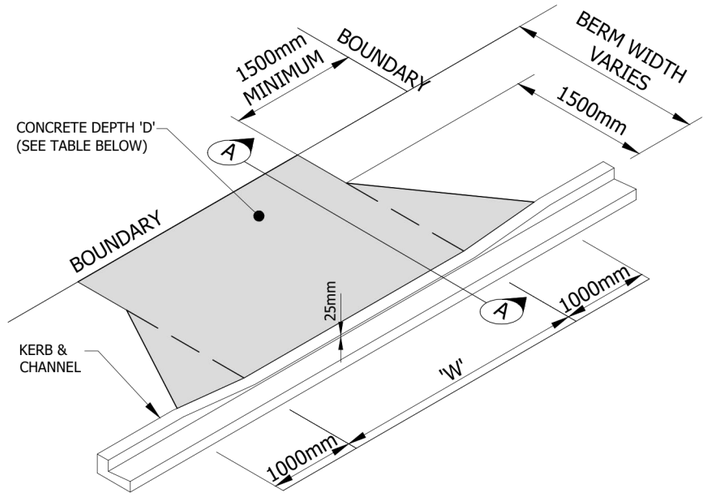
COLLECTOR ROAD CR01 AND COLLECTOR ROAD CR02 ROUNDABOUT SIGHT DISTANCE PLAN

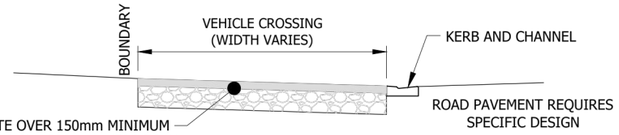
STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-2766-RD
REV	2

Plot Date: 12:28:07 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2750 SIGHT DISTANCE PLAN.DWG

TRIM Reference :





100-150mm THICK 30MPa CONCRETE OVER 150mm MINIMUM THICK M4 BASECOURSE COMPACTED IN 150mm LAYERS TO AN APPROPRIATE CLEGG READING INDICATED IN TABLE BELOW

SECTION A-A

Property Description		Min. Width 'W'	Max. Width 'W'	Concrete Depth 'D'	Mesh Reinforcing	Basecourse Thickness	Target Clegg Reading
Residential	1-2 Dwellings	3m	4.8m	100mm	No	150mm	25
	3-4 Dwellings	4m	4.8m	125mm	No	150mm	25
	5+ Dwellings	6m	6m	150mm	1 Layer 665	200mm	35
Light Commercial (not requiring specific design).		4m	6m	150mm	1 Layer 665	200mm	35
Industrial (not requiring specific design).		6m	9m	150mm	1 Layer 665	200mm	35

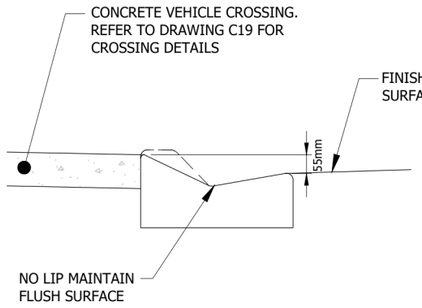
NOTES:
1. DEPTH OF BASECOURSE WILL DEPEND ON SUBGRADE STRENGTH. THE DEPTHS SHOWN ASSUME A SUBGRADE CBR > 5%. BASECOURSE IS TO BE COMPACTED TO 95% STANDARD COMPACTION.
2. FOR SUBGRADE STRENGTH BELOW CBR 5% SPECIFIC DESIGNS ARE REQUIRED.
3. CONCRETE STRENGTH TO BE A MINIMUM OF 30MPA AT 28 DAYS.
4. WHERE MOUNTABLE KERBS ARE PRESENT THERE IS TO BE NO CUT DOWN AND THE VEHICLE CROSSING WILL TIE INTO THE TOP OF KERB LEVEL.
5. REFER TO DRAWING C19A FOR DETAILS OF KERB AND CHANNEL PROFILE ADJACENT TO SHARED CYCLEWAY AND FOOTPATH.

HASTINGS DISTRICT COUNCIL

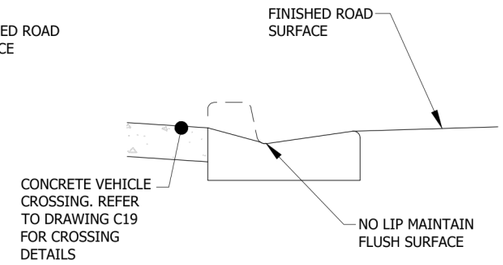
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HASTINGS DISTRICT COUNCIL	NOT TO SCALE
MINIMUM STANDARDS FOR VEHICLE CROSSINGS ONTO URBAN ROADS	C19
	NOV 2018

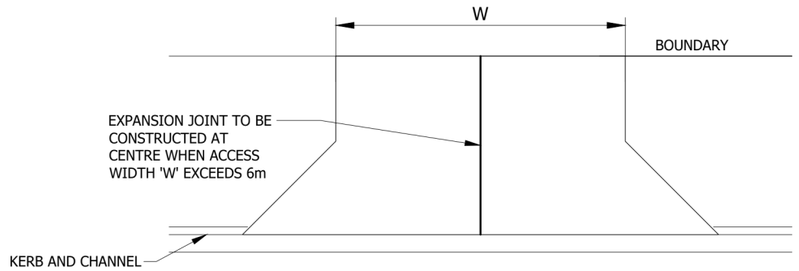
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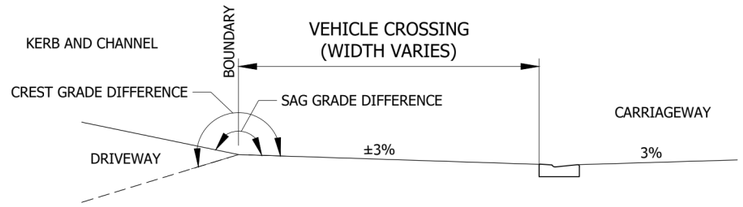
MOUNTABLE KERB AND CHANNEL PROFILE AT DRIVEWAYS ADJACENT TO CYCLEWAY



NON-MOUNTABLE KERB AND CHANNEL PROFILE AT DRIVEWAYS ADJACENT TO CYCLEWAYS



EXPANSION JOINT



MAXIMUM GRADE DIFFERENCES FOR URBAN VEHICLE CROSSINGS

NOTES:
1. MAXIMUM CREST GRADE DIFFERENCE IS 10%
2. MAXIMUM SAG GRADE DIFFERENCE IS 17%

HASTINGS DISTRICT COUNCIL

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HASTINGS DISTRICT COUNCIL	NOT TO SCALE
MINIMUM STANDARDS FOR VEHICLE CROSSINGS - TYPICAL SECTIONS	C19A
	NOV 2018

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	HASTINGSDC
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	
				CHECKED	LZM/BLO
				APPROVED	BF

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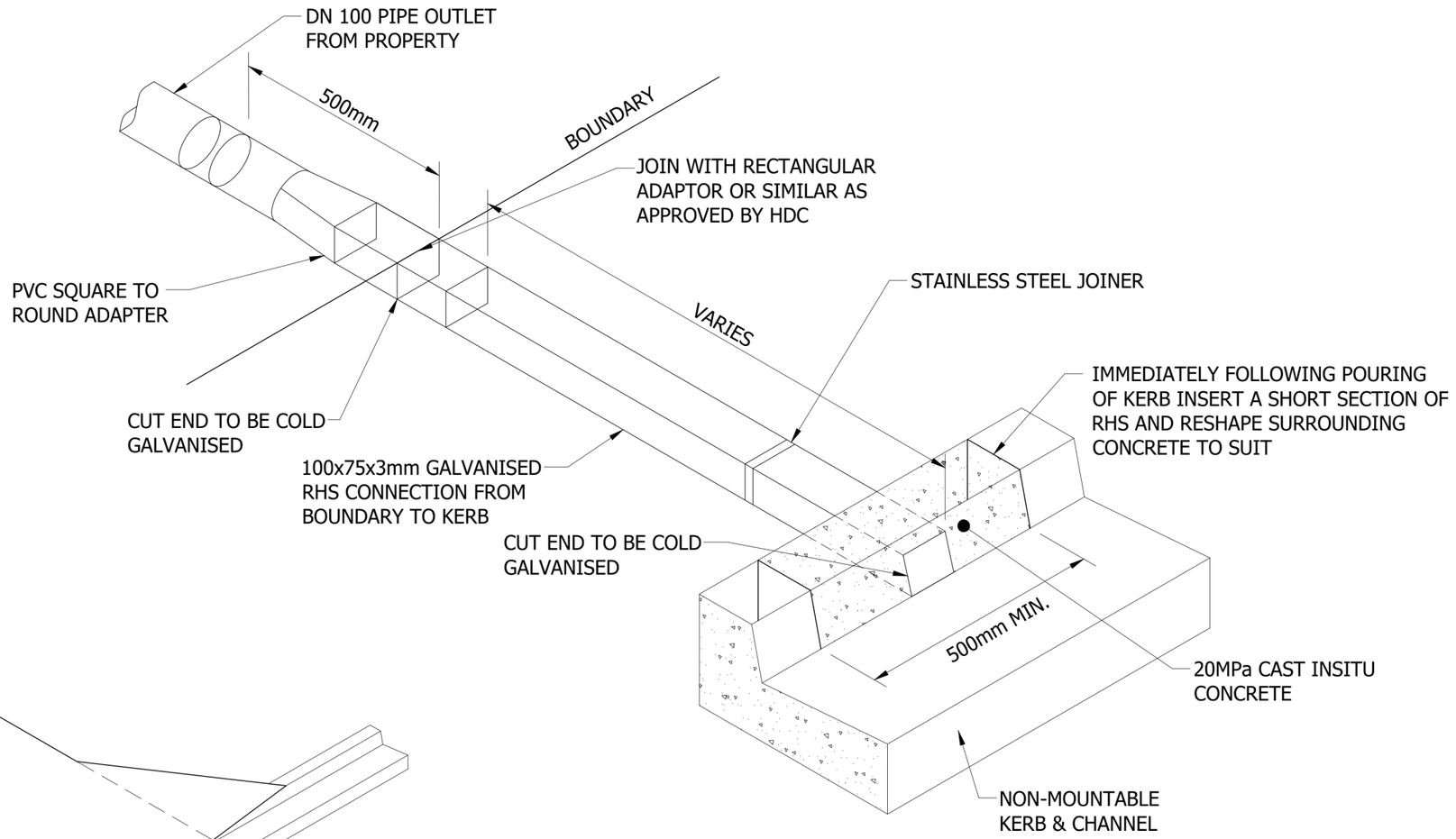
MIDDLE ROAD PROJECT

ROAD DETAILS
HDC ENG COP - C19 & C19A

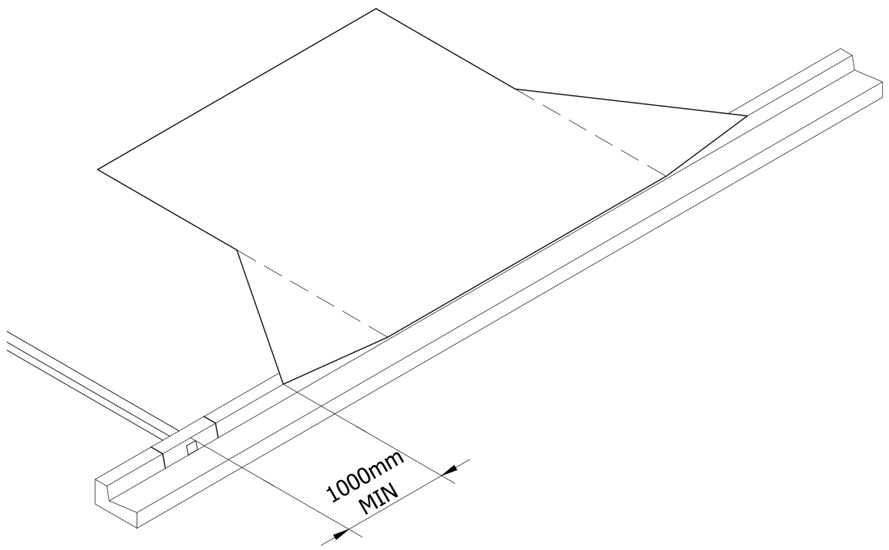
STATUS	ISSUED FOR CONSENT	REV
SCALE	N.T.S	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2800-RD	

Plot Date: 12:28:08 pm,30 September 2026, NEDV

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STORMWATER DISCHARGE DETAIL
FROM PROPERTY BOUNDARY TO KERB



STORMWATER DISCHARGE TO KERB AT
VEHICLE CROSSING - ISOMETRIC VIEW

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	STORMWATER PROPERTY DISCHARGE TO KERB	WS 105
		DEC 2018

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	HASTINGSDC
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	
				CHECKED	LZM/BLO
				APPROVED	BF

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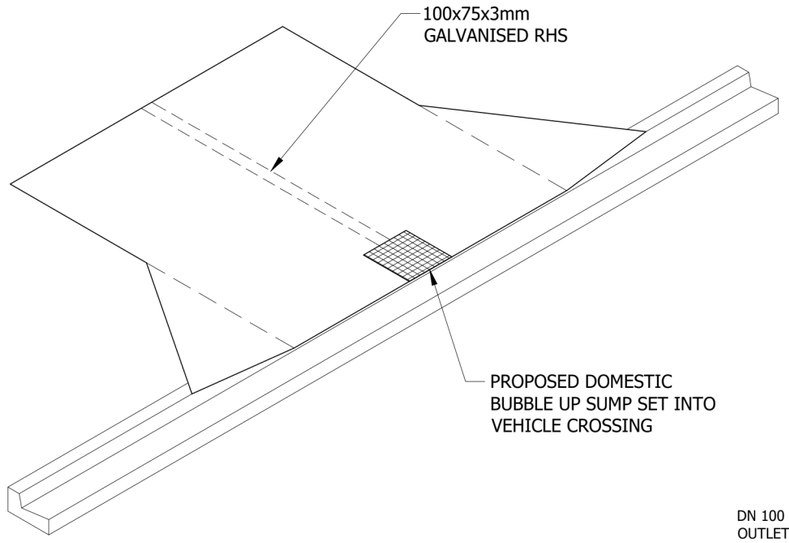
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MIDDLE ROAD PROJECT

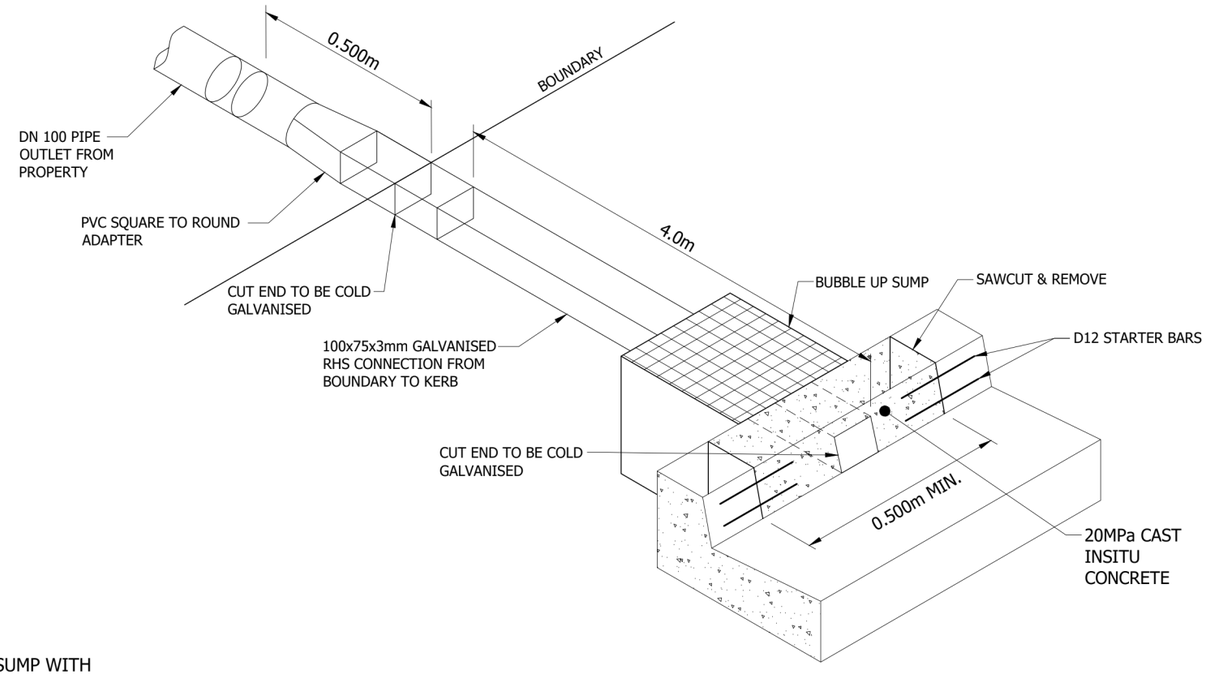
ROAD DETAILS
HDC ENG COP - WS 105

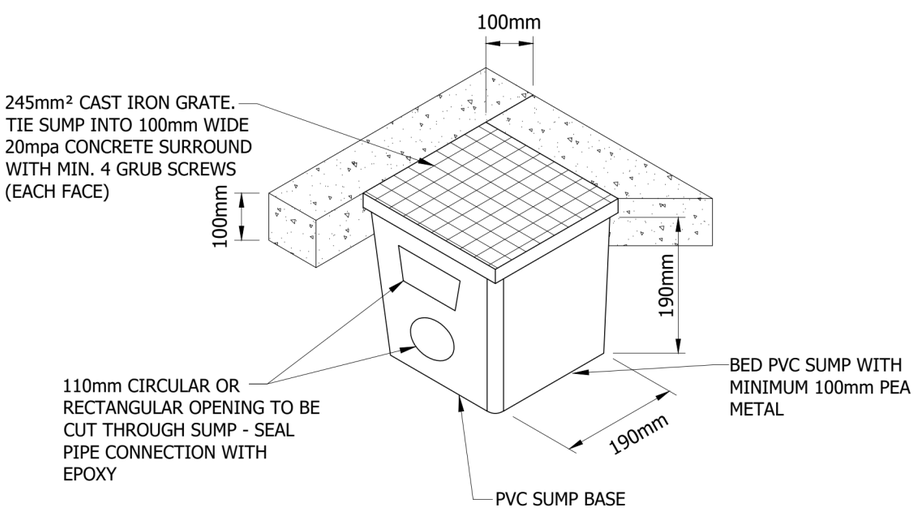
STATUS	ISSUED FOR CONSENT	REV
SCALE	N.T.S	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2801-RD	

Plot Date: 12:28:11 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2800-RD_ROAD DETAILS.DWG



DOMESTIC BUBBLE UP SUMP AT VEHICLE CROSSING





DOMESTIC BUBBLE UP SUMP

GENERAL NOTE:
THIS DETAIL IS ONLY TO BE USED WHERE DISCHARGE TO KERB BEYOND VEHICLE CROSSING IS NOT PRACTICAL

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HASTINGS DISTRICT COUNCIL	NOT TO SCALE
DOMESTIC PROPERTY DISCHARGE BUBBLE UP SUMP	WS 106
	DEC 2018

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	HASTINGSDC
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

ROAD DETAILS
HDC ENG COP - WS 105

STATUS	ISSUED FOR CONSENT	REV	2
SCALE	N.T.S		
COUNCIL	HASTINGS DISTRICT		
DWG NO	P25-496-00-2802-RD		

Plot Date: 12:28:14 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-2800-RD_ROAD DETAILS.DWG

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS. ANY AMBIGUITY BETWEEN THESE DRAWINGS & THE STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL KERB & CHANNEL / NIB TO BE SLIP-FORM, 25MPA FIBRE REINFORCED.
3. ALL SUMPS TO BE SEMI-RECESSED 800X500 WITH 1.2M LINTEL UNLESS SPECIFIED OTHERWISE.
4. FOOTPATHS TO BE CONSTRUCTED AS PER THE TYPICAL CROSS SECTIONS.
5. PRAM CROSSINGS TO BE CONSTRUCTED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP STANDARDS AND RTS 14.
6. VEHICLE CROSSINGS SHOWN ON THIS PLAN ARE FOR PLANNING PURPOSES ONLY & WILL NOT BE CONSTRUCTED UNLESS OTHERWISE NOTED.
7. ALL LINE MARKING & ROAD SIGNAGE IS TO BE CONSTRUCTED AS PER NEW ZEALAND TRANSPORT AGENCY MANUAL OF SIGNS & MARKINGS.

LEGEND:

SITE BOUNDARY



PEDESTRIAN BRIDGE CONCEPT IMAGE

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

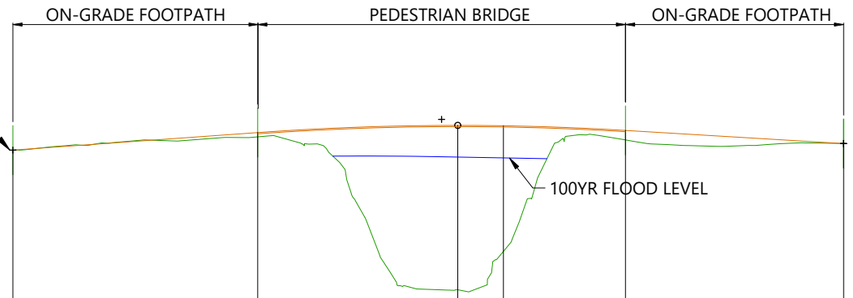
PEDESTRIAN BRIDGE LOCATION PLAN

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:3000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2850-RD	

Plot Date: 12:28:17 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_2260\00 DRAWINGS\01 ENG\P25-496-00-2850 PEDESTRIAN BRIDGE PLAN.DWG

DETAILED DESIGN OF BRIDGE SUBJECT TO EA/BC AND CONSULTATION WITH HDC



HORIZONTAL CURVE LENGTH (m)														
VERTICAL GEOMETRY K VALUE / GRADE (%)		3.58%			K: 2.28				-3%		-4.81%			
VERTICAL GRADE / CURVE LENGTH (m)		9.98 m			VC 15 m				8.89 m		0 m			
DATUM R.L. = 0.00														
CUT / FILL DEPTH	0.00		0.09		3.35		2.56		0.19		0.00			
CL DESIGN LEVELS	11.54		11.90		12.05		12.04		11.94		11.68			
EXISTING SURFACE	11.54		11.81		8.70		9.48		11.75		11.68			
CHAINAGE	0.00		9.98		18.14		20.00		24.98		33.87			

INDICATIVE PEDESTRIAN BRIDGE LONG SECTION

HORZ 1:250 VERT 1:125

SCALEBAR (m)
HOR. 0 2.5 5.0 12.5
VERT. 1.25 2.5 6.25
SCALE | 1:250 @A3 | 1:125 @A1|
SCALE | 1:125 @A3 | 1:62.5 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
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MIDDLE ROAD PROJECT

PEDESTRIAN BRIDGE - LONG SECTION

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:250 V 1:125 @A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-2851-RD	

Plot Date: 12:28:18 pm,30 September 2026, NEDV
File C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_2260\02 DRAWINGS\01 ENG\P25-496-00-2850 PEDESTRIAN BRIDGE PLAN.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
- PROPOSED STORMWATER KERB OUTLET
- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
- PROPOSED LOW FLOW CHANNEL INVERT

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

TE AUTE ROAD
TE AUTE RD BRIDGE
HEREHERE STREAM
ELLIOT CRESCENT
UPHAM STREET
MIDDLE ROAD
EXISTING GILPIN DRAIN
STORMWATER TREATMENT BASIN FOR IONA DEVELOPMENT
COLLECTOR ROAD CR01
COLLECTOR ROAD CR02
ACCESS ROAD AR01
ACCESS ROAD AR02
ACCESS ROAD AR03
ACCESS ROAD AR04
ACCESS ROAD AR06
ACCESS ROAD AR07
ACCESS ROAD AR08
ACCESS ROAD AR09
ACCESS ROAD AR10
ACCESS ROAD AR11
STAGE 1
STAGE 2A
STAGE 2B
STAGE 3
STAGE 4
STAGE 5
STAGE 6A
STAGE 6B
STAGE 7A
STAGE 7B
STAGE 8
STAGE 9
STAGE 10
STAGE 11A
STAGE 11B
REFER SHEET 3001
REFER SHEET 3002
REFER SHEET 3003
REFER SHEET 3004
REFER SHEET 3005

SCALEBAR (m) 0 30 60 150
SCALE | 1:3000 @A3 | 1:1500 @A1|

Plot Date: 12:28:18 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED OVERALL STORMWATER PLAN

STATUS	ISSUED FOR CONSENT
SCALE	1:3000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3000-DR
REV	2

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
- PROPOSED STORMWATER KERB OUTLET
- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
- PROPOSED LOW FLOW CHANNEL INVERT

NOTES

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NORTHERN BASIN OUTLET. REFER TO DRAWING SERIES 3800-DR FOR FURTHER DETAILS.

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

PROPOSED GPT. REFER DWG 3810 FOR DETAILS

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

PROPOSED GPT. REFER DWG 3810 FOR DETAILS

STAGE 3

STAGE 8

STAGE 7A

Area B DP 609275

Plot Date: 12:28:20 pm,30 September 2026, NEDV

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER PLAN - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3001-DR
REV	2

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

WOODS
EST.1970

STAGE 7A
STAGE 7B
STAGE 9
STAGE 6A
STAGE 6B
STAGE 11A

ACCESS ROAD AR06
ACCESS ROAD AR07
ACCESS ROAD AR08
ACCESS ROAD AR11
COLLECTOR ROAD CR01
TE AUTE ROAD

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS
PROPOSED GPT. REFER DWG 3810 FOR DETAILS
PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

SCRUFFY DOME MANHOLE, 675mmØ PIPE AND OUTLET TO ASSIST IN MANAGING 9 FLOWS IN A 100-YEAR EVENT

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m)
- PROPOSED STORMWATER LINE AND PIT
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
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- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
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NOTES

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SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER PLAN - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3002-DR	

Plot Date: 12:28:21 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
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LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
- PROPOSED STORMWATER KERB OUTLET
- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
- PROPOSED LOW FLOW CHANNEL INVERT

WOODS EST.1970

STAGE 4

STAGE 3

STAGE 2B

STAGE 6A

ACCESS ROAD AR01

ACCESS ROAD AR02

ACCESS ROAD AR10

MIDDLE ROAD

600mmØ

450mmØ

375mmØ

300mmØ

825mmØ

900mmØ

750mmØ

675mmØ

525mmØ

225mmØ

PROPOSED GPT. REFER DWG 3810 FOR DETAILS

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

EXISTING STORMWATER SUMP TO BE UPGRADED TO A MEGAPIT AT MIDDLE ROAD LOW POINT

EXISTING STORMWATER LINE TO BE RE-ALIGNED

COLLECTOR RD

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:22 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER PLAN - SHEET 3

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3003-DR
REV	2

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
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STAGE 6A
STAGE 11B
STAGE 5
STAGE 2B
STAGE 2A
COLLECTOR ROAD CR01
ACCESS ROAD AR02
ACCESS ROAD AR07
ACCESS ROAD AR03
ACCESS ROAD AR01
COLLECTOR ROAD CR02
MIDDLE ROAD
PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS
PROPOSED GPT. REFER DWG 3810 FOR DETAILS
TWIN 1mx1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR CULVERT DETAILS.
1004
1006
1002
3003

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m)
- PROPOSED STORMWATER LINE AND PIT
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
- PROPOSED STORMWATER KERB OUTLET
- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
- PROPOSED LOW FLOW CHANNEL INVERT

SCALEBAR (m) 0 10 20 50
SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
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				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER PLAN - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3004-DR
REV	2

Plot Date: 12:28:23 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

WOODS
EST.1970

NOTES

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LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- EXISTING STORMWATER
- EXISTING STORMWATER LINE AND PIT TO BE REMOVED/ABANDONED
- PROPOSED STORMWATER KERB OUTLET
- PROPOSED BUBBLE UP SUMP
- PROPOSED STORMWATER LATERAL CONNECTION
- PROPOSED TOP/BOTTOM OF SLOPE
- PROPOSED LOW FLOW CHANNEL INVERT

STAGE 1

STAGE 10

ACCESS ROAD AR05

ACCESS ROAD AR01

ACCESS ROAD AR04

PROPOSED GPT. REFER DWG 3810 FOR DETAILS

PROPOSED RIPRAP. REFER DWG 3860 FOR DETAILS

TWIN 1mx1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR CULVERT DETAILS.

SOUTHERN BASIN OUTLET. REFER TO DRAWING SERIES 3800-DR FOR FURTHER DETAILS.

Area E DP 603088

MIDDLE ROAD

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:28:24 pm,30 September 2026, NEDV

File: C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3000 PROPOSED STORMWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

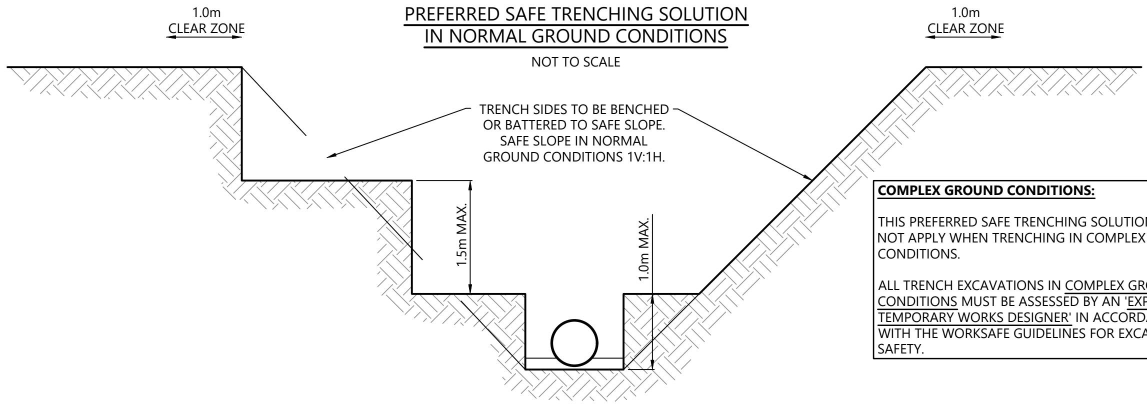
BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER PLAN - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3005-DR	



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



PIPE DIAMETER		375Ø		375Ø		375Ø		300Ø		300Ø	
PIPE TYPE		RCRRJ CLASS 4		RCRRJ CLASS 4		RCRRJ CLASS 4		UPVC SN16		UPVC SN16	
PIPE GRADE		0.40%		0.40%		0.40%		0.40%		0.40%	
DATUM RL=	-7.00										
DEPTH TO INVERT	2.18 1.68		1.62 1.57		1.65 1.60		1.65 1.59		1.52 1.47		1.30
INVERT LEVEL	6.80 7.31		7.40 7.45		7.62 7.67		7.99 8.05 8.06 8.08		8.34 8.39 8.4		8.46
MANHOLE LID LEVEL	8.98		9.02		9.27		9.64		9.86		9.75
HYDRAULIC PARAMETERS		Q 100.6 l/s Qcap 110.9 l/s V 1.14 m/s		Q 101.3 l/s Qcap 110.9 l/s V 1.14 m/s		Q 64.3 l/s Qcap 110.9 l/s V 1.04 m/s		Q 46.2 l/s Qcap 61.2 l/s V 0.95 m/s		Q 46.3 l/s Qcap 61.2 l/s V 0.95 m/s	
CHAINAGE/ LENGTH	-108.89	22.99	-85.9	42.7	-43.2	80.26	37.06 39.51 42.72	71.99	109.06 111.55	15.74	124.79

01



PIPE DIAMETER		450Ø		375Ø		300Ø		300Ø	
PIPE TYPE		RCRRJ CLASS 4		RCRRJ CLASS 4		UPVC SN16		UPVC SN16	
PIPE GRADE		0.40%		0.40%		0.40%		0.40%	
DATUM RL=	-5.00								
DEPTH TO INVERT	1.73 1.71		1.47 1.42		1.41 1.36		1.34 1.29		1.33
INVERT LEVEL	7.74 7.76		7.80 7.85		8.06 8.11		8.20 8.25		8.34
MANHOLE LID LEVEL	9.47		9.27		9.47		9.54		9.66
HYDRAULIC PARAMETERS		Q 114.9 l/s Qcap 180.4 l/s V 1.20 m/s		Q 73.4 l/s Qcap 110.9 l/s V 1.07 m/s		Q 31.7 l/s Qcap 61.2 l/s V 0.87 m/s		Q 31.8 l/s Qcap 61.2 l/s V 0.87 m/s	
CHAINAGE/ LENGTH	0	9.05	9.05	51.76	60.82	23.18	84	21.32	105.32

02

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	SURVEYED	
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DESIGNED	GP
				DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

WOODS EST.1970
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AUCKLAND 1023
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WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

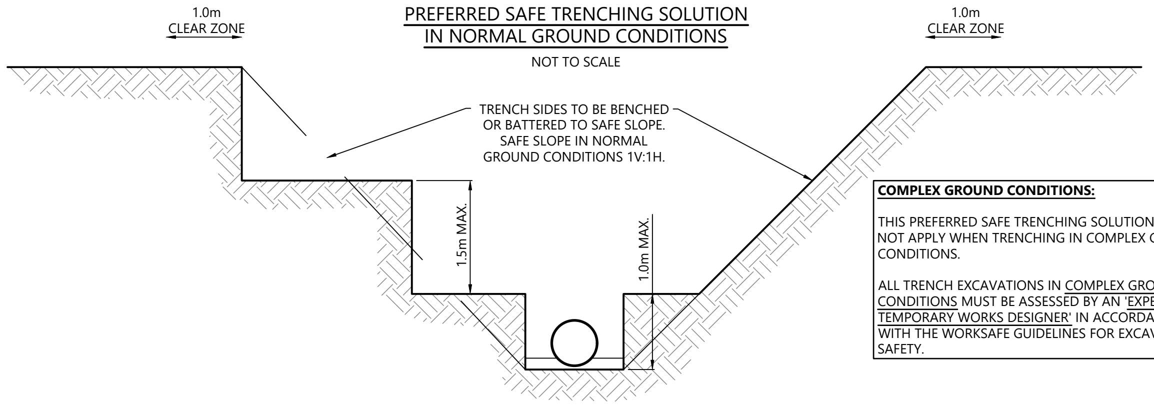
PROPOSED STORMWATER LONGSECTION - SHEET 1

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3500-DR	

Plot Date: 12:28:25 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

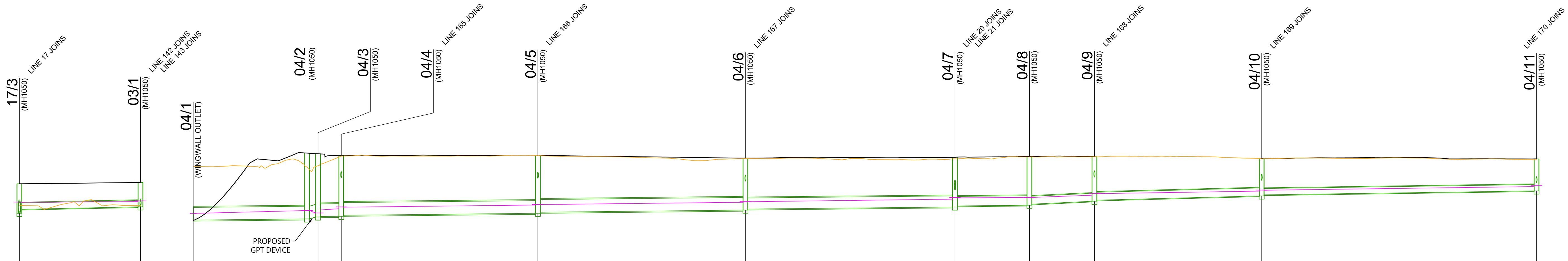
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
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STORMWATER NOTES

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3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
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		17/3 – 03/1	
PIPE DIAMETER		300Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=		-5.00	
DEPTH TO INVERT	1.40	1.20 … 1.15	
INVERT LEVEL	8.22	8.41 … 8.53	
MANHOLE LID LEVEL		9.62	9.68
HYDRAULIC PARAMETERS		Q 36.8 l/s Qcap 61.2 l/s V 0.90 m/s	
CHAINAGE/ LENGTH		0 / 28.7	28.7

03

		04/1 – 04/2	04/2 – 04/3	04/3 – 04/4	04/4 – 04/5	04/5 – 04/6	04/6 – 04/7	04/7 – 04/8	04/8 – 04/9	04/9 – 04/10	04/10 – 04/11	
PIPE DIAMETER		600Ø	600Ø	600Ø	600Ø	600Ø	525Ø	450Ø	375Ø	375Ø	300Ø	
PIPE TYPE		RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	UPVC SN16	
PIPE GRADE		0.20%	3.58%	0.22%	0.20%	0.21%	0.20%	0.20%	0.90%	0.51%	0.29%	
DATUM RL=		-7.00										
DEPTH TO INVERT	0.60	0.60 … 3.12	3.12 … 2.99	2.97 … 2.89	2.84 … 2.74	2.69 … 2.46	2.41 … 2.35	2.30 … 2.30	2.25 … 2.11	2.06 … 1.76	1.71 … 1.51	
INVERT LEVEL	5.90	5.90 … 5.95	5.95 … 6.05	6.07 … 6.08	6.13 … 6.22	6.27 … 6.37	6.42 … 6.52	6.57 … 6.60	6.65 … 6.79	6.84 … 7.04	7.09 … 7.28	
MANHOLE LID LEVEL		6.50	9.07	9.04	8.97	8.96	8.83	8.87	8.91	8.90	8.81	8.79
HYDRAULIC PARAMETERS		Q 236.5 l/s Qcap 275.9 l/s V 1.09 m/s	Q 236.6 l/s Qcap 1161.5 l/s V 3.22 m/s	Q 236.8 l/s Qcap 285.7 l/s V 1.13 m/s	Q 212.2 l/s Qcap 274.7 l/s V 1.07 m/s	Q 195.0 l/s Qcap 274.7 l/s V 1.05 m/s	Q 169.8 l/s Qcap 192.4 l/s V 1.00 m/s	Q 98.7 l/s Qcap 127.6 l/s V 0.89 m/s	Q 99.2 l/s Qcap 110.9 l/s V 1.14 m/s	Q 73.9 l/s Qcap 110.9 l/s V 1.07 m/s	Q 49.3 l/s Qcap 61.2 l/s V 0.96 m/s	
CHAINAGE/ LENGTH		0 / 26.97	26.97 / 2.6	29.57 / 5.51	35.08 / 46.58	81.66 / 49.2	130.86 / 49.66	180.52 / 17.65	198.17 / 15.41	213.58 / 39.63	253.21 / 65.14	318.35

04

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

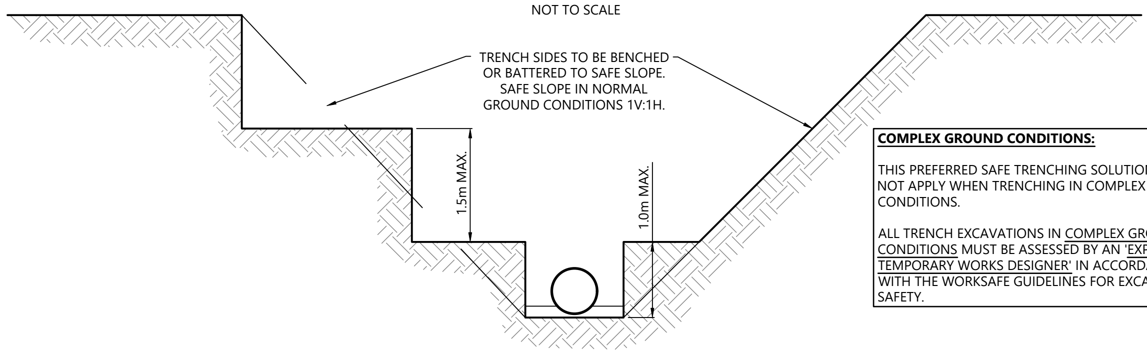
PROPOSED STORMWATER LONGSECTION - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3501-DR	

Plot Date: 12:28:26 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

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ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

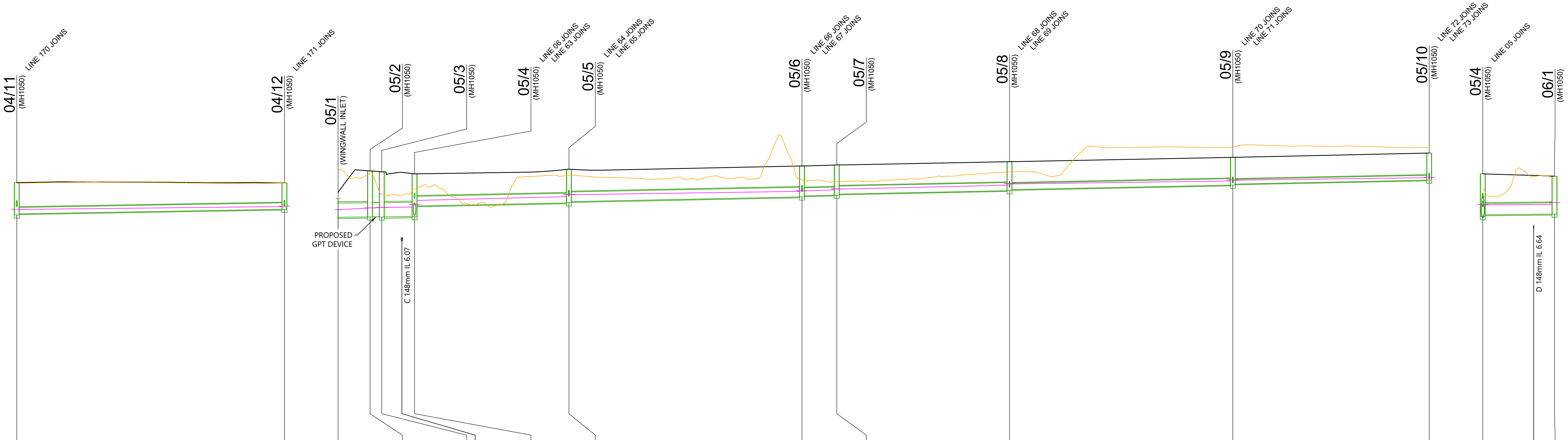
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STORMWATER NOTES

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WOODS Est.1970



DATUM RL= -6.00

Line	Pipe diameter	Pipe type	Pipe grade	Depth to invert	Invert level	Manhole lid level	Hydraulic parameters	Chainage/ Length
04	300Ø	UPVC SN16	0.34%	1.51 / 1.46 … 1.23	7.28 / 7.33 … 7.54	8.79 … 8.78	Q 23.6 l/s, Qcap 61.2 l/s, V 0.81 m/s	318.35; 62.43; 380.78
05	675Ø	RCRRJ CLASS 4	0.20%	1.15 / 0.66 … 2.15	6.69 / 7.17 … 7.19	7.83	Q 314.9 l/s, Qcap 358.0 l/s, V 1.17 m/s	0; 7.46
05	675Ø	GPT	0.01%	2.15 … 2.11	7.19 … 7.19	9.34	Q 315.0 l/s, Qcap 0.0 l/s, V 0.88 m/s	7.46; 2.74
05				2.11	7.19	9.30		10.2
05	675Ø	RCRRJ CLASS 4	0.23%	2.11 … 1.99	7.2 … 7.20		Q 315.5 l/s, Qcap 379.7 l/s, V 1.23 m/s	14.9; 7.65
05	450Ø	RCRRJ CLASS 4	0.40%	1.50 … 1.58	7.70 … 7.84	9.20	Q 136.2 l/s, Qcap 180.4 l/s, V 1.25 m/s	17.84; 36.01
05	450Ø	RCRRJ CLASS 4	0.40%	1.52 … 1.45	7.90 … 8.12	9.42	Q 115.1 l/s, Qcap 180.4 l/s, V 1.20 m/s	53.85; 54.35
05	375Ø	RCRRJ CLASS 4	0.40%	1.40 … 1.41	8.17 … 8.20	9.57	Q 88.6 l/s, Qcap 110.9 l/s, V 1.12 m/s	108.2; 8.12
05	375Ø	RCRRJ CLASS 4	0.40%	1.36 … 1.35	8.25 … 8.41	9.61	Q 89.2 l/s, Qcap 110.9 l/s, V 1.12 m/s	116.32; 40.3
05	300Ø	UPVC SN16	0.40%	1.30 … 1.30	8.46 … 8.67	9.77	Q 45.7 l/s, Qcap 61.2 l/s, V 0.95 m/s	156.62; 52.08
05	225Ø	UPVC SN16	0.40%	1.25 … 1.26	8.72 … 8.91	9.97 … 10.17	Q 14.4 l/s, Qcap 28.4 l/s, V 0.72 m/s	208.7; 45.8; 254.5
06	525Ø	RCRRJ CLASS 4	0.21%	1.99 / 1.91 … 1.77	7.20 / 7.28 … 7.31 / 7.32	9.20 … 9.09	Q 169.4 l/s, Qcap 198.8 l/s, V 1.03 m/s	-16.72; 16.72; -4.86; 0

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
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				DRAWN	GP
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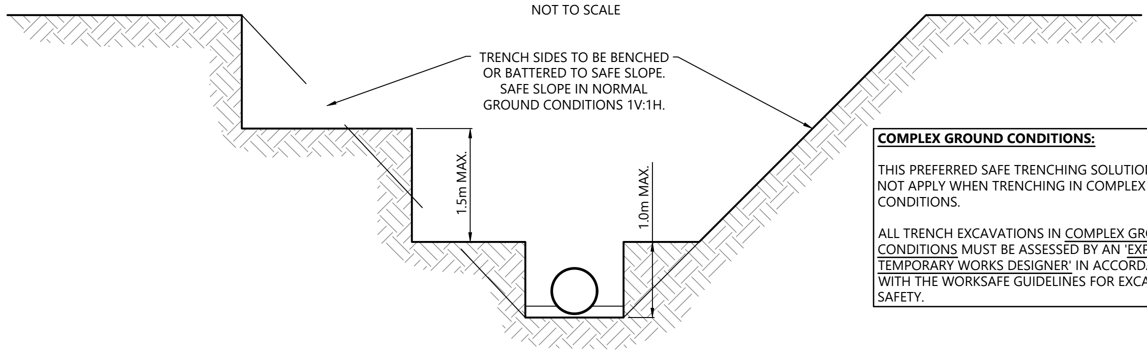
CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 3

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3502-DR	

Plot Date: 12:28:26 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG



PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE

COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

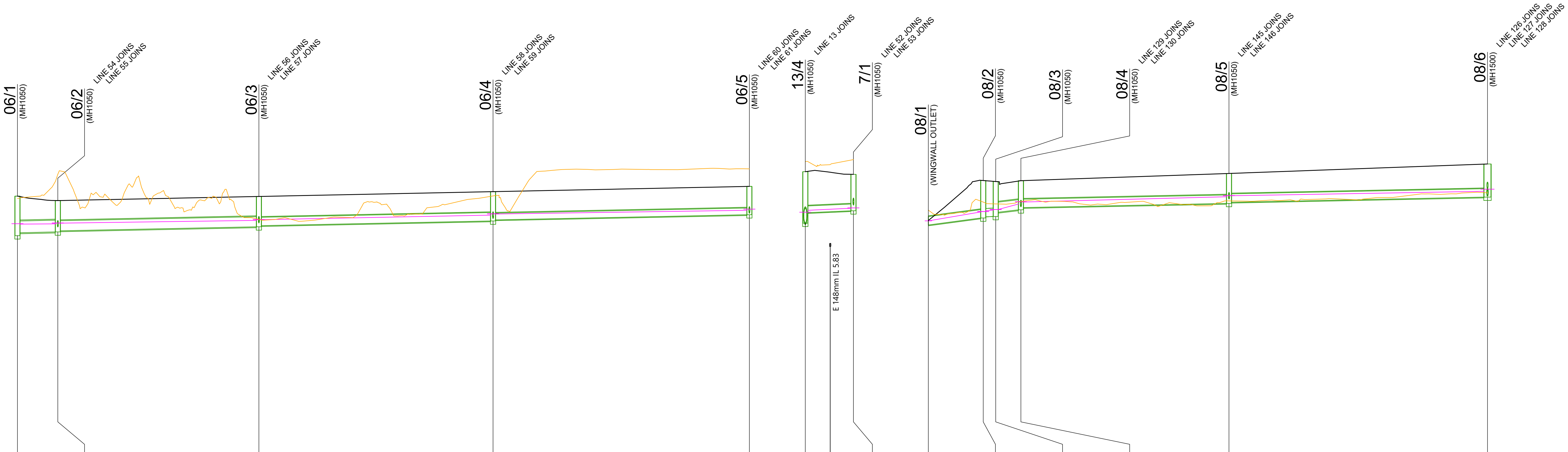
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
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4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
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- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



06

DATUM RL= -5.00

	06/1 – 06/2	06/2 – 06/3	06/3 – 06/4	06/4 – 06/5
PIPE DIAMETER	525Ø	450Ø	375Ø	300Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	UPVC SN16
PIPE GRADE	0.40%	0.40%	0.40%	0.40%
DEPTH TO INVERT	1.77 / 1.64 … 1.40	1.35 … 1.35	1.30 … 1.31	1.26 … 1.27
INVERT LEVEL	7.32 / 7.45 … 7.49	7.54 … 7.72	7.77 … 7.98	8.03 … 8.26
MANHOLE LID LEVEL	9.09	8.89	9.07	9.29 … 9.52
HYDRAULIC PARAMETERS	Q 169.6 l/s Qcap 272.1 l/s V 1.33 m/s	Q 130.1 l/s Qcap 180.4 l/s V 1.23 m/s	Q 92.0 l/s Qcap 110.9 l/s V 1.12 m/s	Q 47.4 l/s Qcap 61.2 l/s V 0.96 m/s
CHAINAGE/ LENGTH	0 / 9.03	9.03 / 44.94	53.97 / 52.34	106.32 / 57.3 / 163.62

7

DATUM RL= -6.00

	13/4 – 7/1
PIPE DIAMETER	300Ø
PIPE TYPE	UPVC SN16
PIPE GRADE	0.79%
DEPTH TO INVERT	2.30 / 1.83 … 1.63
INVERT LEVEL	6.88 / 7.35 … 7.39 … 7.43
MANHOLE LID LEVEL	9.18 … 9.06
HYDRAULIC PARAMETERS	Q 22.6 l/s Qcap 86.1 l/s V 1.03 m/s
CHAINAGE/ LENGTH	-43.53 / -37.96 / 10.76 / -32.77

08

DATUM RL= -5.00

	08/1 – 08/2	08/2 – 08/3	08/3 – 08/4	08/4 – 08/5	08/5 – 08/6
PIPE DIAMETER	375Ø	375Ø	375Ø	375Ø	375Ø
PIPE TYPE	RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	2.55%	0.64%	1.94%	0.40%	0.40%
DEPTH TO INVERT	0.37 / 0.37 … 1.67	1.62 … 1.56	1.37 … 1.30	1.20 … 1.34	1.29 … 1.48
INVERT LEVEL	7.80 / 7.80 … 8.11	8.16 … 8.18	8.37 … 8.48	8.58 … 8.76	8.81 … 9.05
MANHOLE LID LEVEL	8.17	9.79	9.74	9.78	10.10 … 10.52
HYDRAULIC PARAMETERS	Q 136.0 l/s Qcap 281.2 l/s V 2.52 m/s	Q 136.0 l/s Qcap 140.4 l/s V 1.45 m/s	Q 136.2 l/s Qcap 253 l/s V 2.96 m/s	Q 107.5 l/s Qcap 110.9 l/s V 1.14 m/s	Q 91.2 l/s Qcap 110.9 l/s V 1.12 m/s
CHAINAGE/ LENGTH	0 / 12.27	12.27 / 2.79	15.06 / 5.64	20.7 / 46.51	67.21 / 57.78 / 124.99

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
				SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

WOODS EST.1970
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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

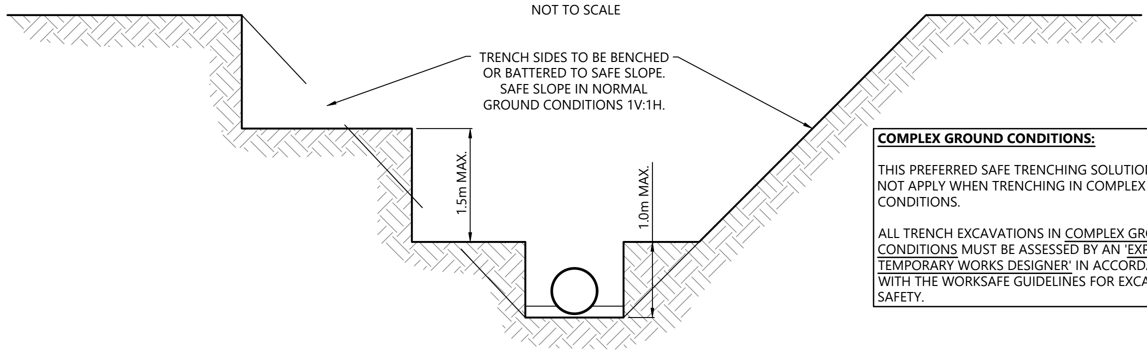
PROPOSED STORMWATER LONGSECTION - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	H 1:1000 V 1:200 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3503-DR
REV	2

Plot Date: 12:28:27 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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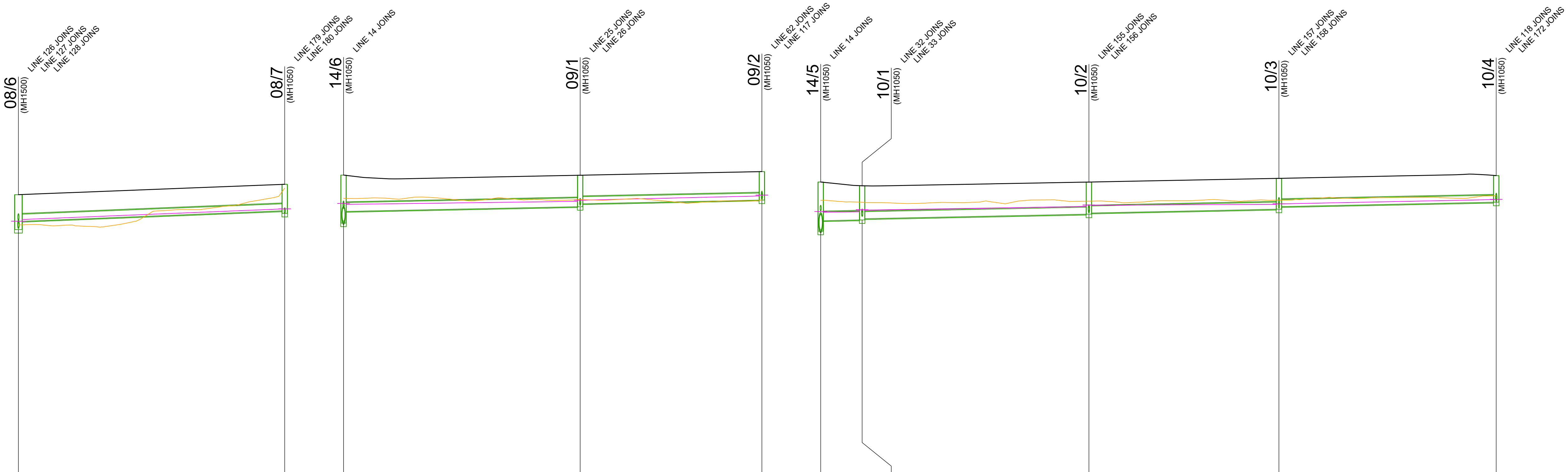
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08

	08/6	Pipe 08/6–08/7	08/7
PIPE DIAMETER		300Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.78%	
DATUM RL=	-4.00		
DEPTH TO INVERT	1.48 / 1.13		1.13 / 1.24
INVERT LEVEL	9.05 / 9.39		9.84 / 9.73
MANHOLE LID LEVEL	10.52		10.96
HYDRAULIC PARAMETERS		Q 11.8 l/s Qcap 85.6 l/s V 0.85 m/s	
CHAINAGE/ LENGTH	124.99	56.59	181.59

09

	14/6	Pipe 14/6–09/1	09/1	Pipe 09/1–09/2	09/2
PIPE DIAMETER		375Ø		300Ø	
PIPE TYPE		RCRRJ CLASS 4		UPVC SN16	
PIPE GRADE		0.40%		0.40%	
DATUM RL=	-6.00				
DEPTH TO INVERT	2.04 / 1.54		1.34 / 1.21		1.21
INVERT LEVEL	7.32 / 7.81		8.01 / 8.14		8.29
MANHOLE LID LEVEL	9.36		9.35		9.50
HYDRAULIC PARAMETERS		Q 75.1 l/s Qcap 110.9 l/s V 1.08 m/s		Q 39.6 l/s Qcap 61.2 l/s V 0.92 m/s	
CHAINAGE/ LENGTH	0	50.3	50.3	38.61	88.91

10

	14/5	Pipe 14/5–10/1	10/1	Pipe 10/1–10/2	10/2	Pipe 10/2–10/3	10/3	Pipe 10/3–10/4	10/4
PIPE DIAMETER		375Ø		300Ø		300Ø		300Ø	
PIPE TYPE		RCRRJ CLASS 4		UPVC SN16		UPVC SN16		UPVC SN16	
PIPE GRADE		0.40%		0.40%		0.40%		0.40%	
DATUM RL=	-6.00								
DEPTH TO INVERT	2.09 / 1.64		1.45 / 1.40		1.36 / 1.31		1.31 / 1.20		1.13
INVERT LEVEL	6.97 / 7.42		7.45 / 7.50		7.70 / 7.75		7.91 / 8.02		8.20
MANHOLE LID LEVEL	9.06		8.90		9.06		9.22		9.33
HYDRAULIC PARAMETERS		Q 94.8 l/s Qcap 110.9 l/s V 1.13 m/s		Q 54.8 l/s Qcap 61.2 l/s V 0.98 m/s		Q 33.0 l/s Qcap 61.2 l/s V 0.88 m/s		Q 18.5 l/s Qcap 61.2 l/s V 0.76 m/s	
CHAINAGE/ LENGTH	0	8.81	8.81	48.19	57	40.39	97.39	46.18	143.57

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	SURVEYED	
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DESIGNED	GP
				DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

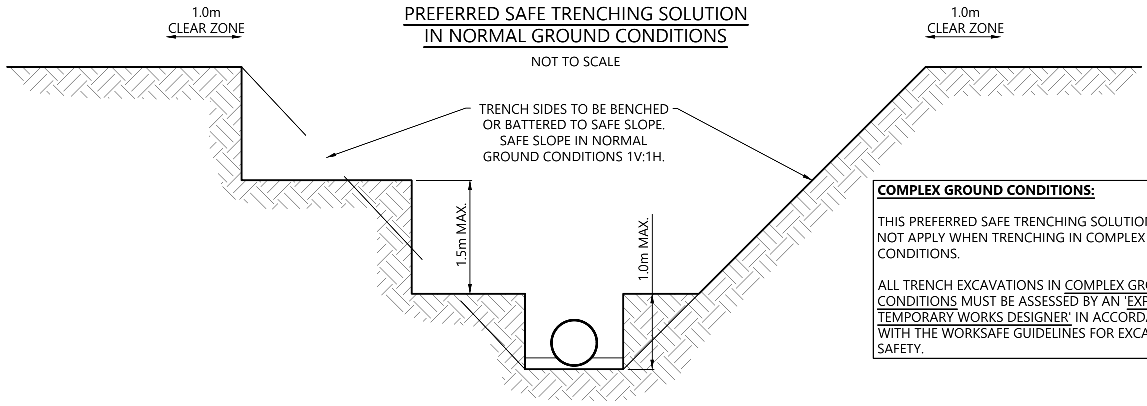
PROPOSED STORMWATER LONGSECTION - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3504-DR	

Plot Date: 12:28:28 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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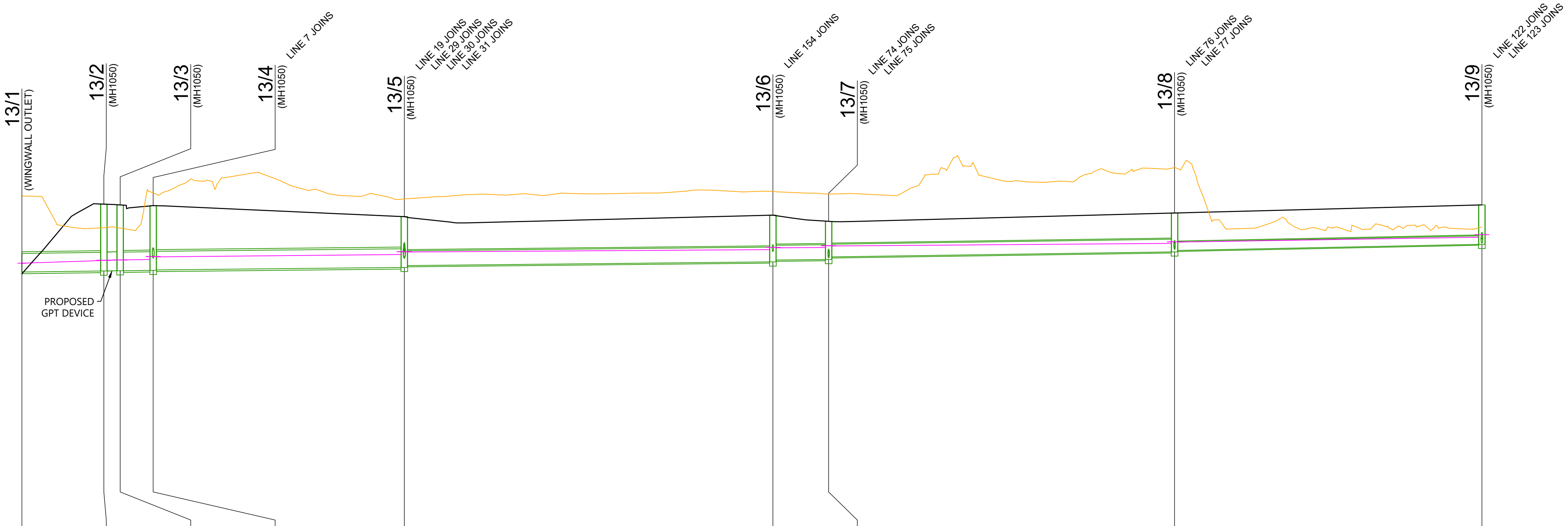
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		13/1–13/2	13/2–13/3	13/3–13/4	13/4–13/5	13/5–13/6	13/6–13/7	13/7–13/8	13/8–13/9	
PIPE DIAMETER		675Ø	675Ø	675Ø	675Ø	525Ø	525Ø	450Ø	300Ø	
PIPE TYPE		RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	UPVC SN16	
PIPE GRADE		0.25%	0.30%	0.25%	0.20%	0.20%	0.20%	0.29%	0.40%	
DATUM RL=		-5.00								
DEPTH TO INVERT	0.66	0.66 / 2.38	2.38 / 2.34	2.34 / 2.30	2.29 / 1.81	1.74 / 1.66	1.60 / 1.36	1.26 / 1.38	1.33 / 1.40	
INVERT LEVEL	6.82	6.82 / 6.86	6.86 / 6.87	6.87 / 6.88	6.90 / 6.98	7.05 / 7.18	7.25 / 7.27	7.36 / 7.54	7.59 / 7.80	
MANHOLE LID LEVEL		7.48	9.23	9.21	9.18	8.79	8.84	8.62	8.92	9.21
HYDRAULIC PARAMETERS		Q 311.5 l/s Qcap 403.2 l/s V 1.29 m/s	Q 311.7 l/s Qcap 462.7 l/s V 1.39 m/s	Q 312.0 l/s Qcap 398.2 l/s V 1.28 m/s	Q 291.6 l/s Qcap 357.1 l/s V 1.16 m/s	Q 166.9 l/s Qcap 192.4 l/s V 1.00 m/s	Q 163.0 l/s Qcap 192.4 l/s V 1.00 m/s	Q 110.1 l/s Qcap 153.6 l/s V 1.05 m/s	Q 58.7 l/s Qcap 61.2 l/s V 0.99 m/s	
CHAINAGE/ LENGTH		-71.55 / 14.57	-56.99 / 2.89	-54.09 / 5.87	-48.22 / 44.62	-3.6 / 65.49	61.89 / 9.9	71.79 / 61.47	133.26 / 54.6	187.86

13

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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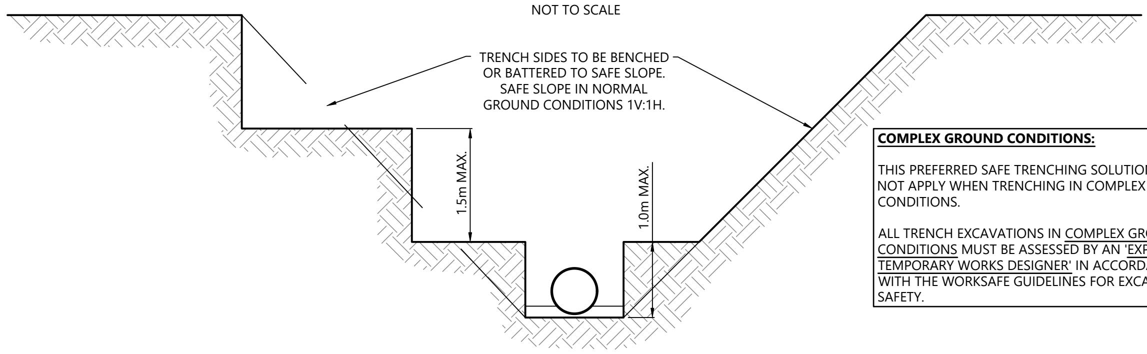
CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 6

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3505-DR	

Plot Date: 12:28:28 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG



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- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

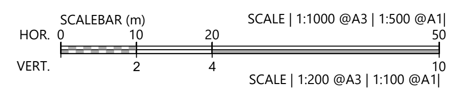
WOODS
EST.1970



	14/1–14/2	14/2–14/3	14/3–14/4	14/4–14/5	14/5–14/6	14/6–14/7	14/7–14/8	14/8–14/9	14/9–14/10	15/1–15/2	15/2–15/3
PIPE DIAMETER	825Ø	750Ø	750Ø	750Ø	675Ø	600Ø	600Ø	450Ø	300Ø	600Ø	600Ø
PIPE TYPE	RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	UPVC SN16	RCRRJ CLASS 4	GPT
PIPE GRADE	0.24%	2.44%	0.67%	0.30%	0.40%	0.40%	0.40%	0.40%	0.40%	0.22%	3.86%
DATUM RL=	-6.00									-8.00	
DEPTH TO INVERT	0.81 0.81 … 2.40	2.40 … 2.22	2.22 … 2.18	2.11 … 2.09	2.04 … 2.04	1.97 … 1.76	1.71 … 1.73	1.61 … 1.66	1.32 … 1.35	0.60 0.60 … 1.84	1.85 1.85 … 1.71
INVERT LEVEL	6.65 6.65 … 6.68	6.68 … 6.78	6.78 … 6.80	6.87 … 6.96 … 6.97	7.02 … 7.32	7.39 … 7.4 … 7.45	7.50 … 7.74 7.74	7.86 … 8.13 8.14	8.48 … 8.62	7.70 7.70 … 7.72	7.71 7.71 … 7.80
MANHOLE LID LEVEL	7.45	9.08	9.00	8.98	9.06	9.36	9.20	9.47	9.80 … 9.97	8.30	9.56 … 9.51
HYDRAULIC PARAMETERS	Q 657.4 l/s Qcap 659.2 l/s V 1.47 m/s	Q 657.8 l/s Qcap 1738.3 l/s V 3.66 m/s	Q 658.3 l/s Qcap 847.4 l/s V 2.24 m/s	Q 511.2 l/s Qcap 567.6 l/s V 1.53 m/s	Q 402.9 l/s Qcap 505.0 l/s V 1.63 m/s	Q 291.2 l/s Qcap 388.5 l/s V 1.51 m/s	Q 249.9 l/s Qcap 388.5 l/s V 1.46 m/s	Q 107.5 l/s Qcap 180.4 l/s V 1.18 m/s	Q 39.2 l/s Qcap 61.2 l/s V 0.92 m/s	Q 264.1 l/s Qcap 287.1 l/s V 1.15 m/s	Q 264.2 l/s Qcap 1207.6 l/s V 3.42 m/s
CHAINAGE/ LENGTH	0 / 14.03	14.03 / 3.9	17.93 / 4.16	22.09 / 33.85 / 52.88	55.94 / 73.9	129.84 / 132.84 / 14.65	144.48 / 62.14 / 204.17	206.62 / 70.2 / 272.81	276.83 / 35.97 / 312.79	-29.51 / 10.3	-19.21 / 2.33 / -16.88

14

15



REVISION DETAILS		INT	DATE
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026

SURVEYED	
DESIGNED	GP
DRAWN	GP
CHECKED	LZM/BLO
APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

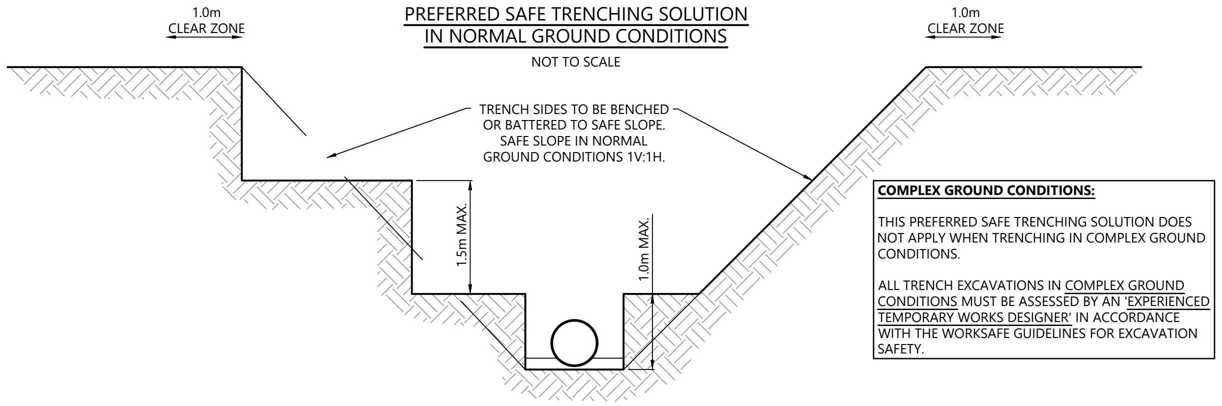
CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 7

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3506-DR	

Plot Date: 12:28:29 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

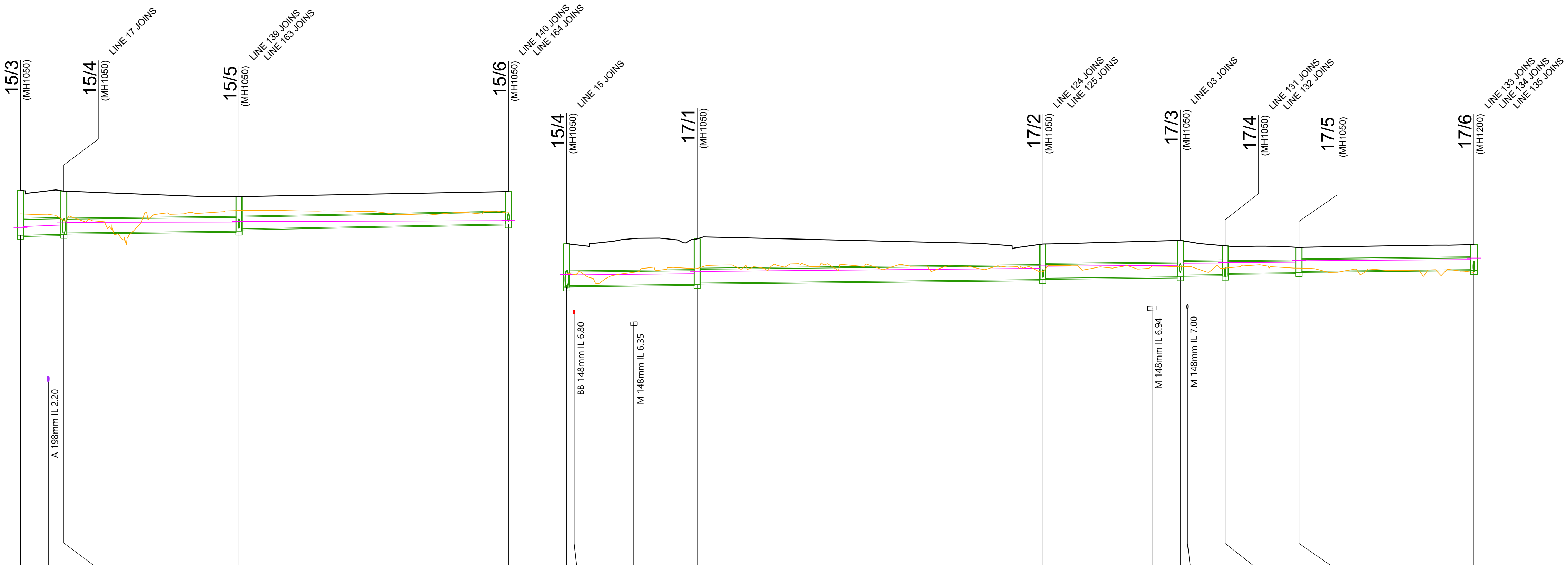
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



PIPE DIAMETER	600Ø	525Ø	450Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.40%	0.20%	0.36%
DATUM RL=	-8.00		
DEPTH TO INVERT	1.71 1.72 1.66	1.60 1.32	1.24 1.24
INVERT LEVEL	7.80 7.80 7.82 7.83	7.89 7.95	8.04 8.23
MANHOLE LID LEVEL	9.51	9.49	9.28 9.47
HYDRAULIC PARAMETERS	Q 264.5 l/s Qcap 391.1 l/s V 1.49 m/s	Q 84.2 l/s Qcap 192.4 l/s V 0.86 m/s	Q 29.2 l/s Qcap 172.2 l/s V 0.81 m/s
CHAINAGE/ LENGTH	-16.88 -11.56 8.31	-8.58 33.58	25.01 51.66 76.67

15

PIPE DIAMETER	525Ø	525Ø	525Ø	525Ø	450Ø	450Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
DATUM RL=	-6.00					
DEPTH TO INVERT	1.66 1.61 1.75	1.69 1.36	1.31 1.40	1.33 1.11	1.16 1.06 0.97	0.92 0.96 1.00
INVERT LEVEL	7.83 7.88 7.88 7.91 7.93	7.98 8.12	8.17 8.21 8.22	8.28 8.29 8.30	8.24 8.35 8.38	8.43 8.50 8.46
MANHOLE LID LEVEL	9.49	9.68	9.48	9.62	9.41	9.35 9.46
HYDRAULIC PARAMETERS	Q 181.6 l/s Qcap 192.4 l/s V 1.01 m/s	Q 183.6 l/s Qcap 192.4 l/s V 1.01 m/s	Q 173.4 l/s Qcap 192.4 l/s V 1.01 m/s	Q 137.0 l/s Qcap 192.4 l/s V 0.96 m/s	Q 112.6 l/s Qcap 127.6 l/s V 0.90 m/s	Q 113.2 l/s Qcap 127.6 l/s V 0.91 m/s
CHAINAGE/ LENGTH	-71.55 -70.13 25.0[illegible] -58.[illegible]	-46.55 66.27	19.72 26.36 40.66	46.08 47.44 8.62	54.69 14.15	68.84 33.53 102.37

17

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 8

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3507-DR	

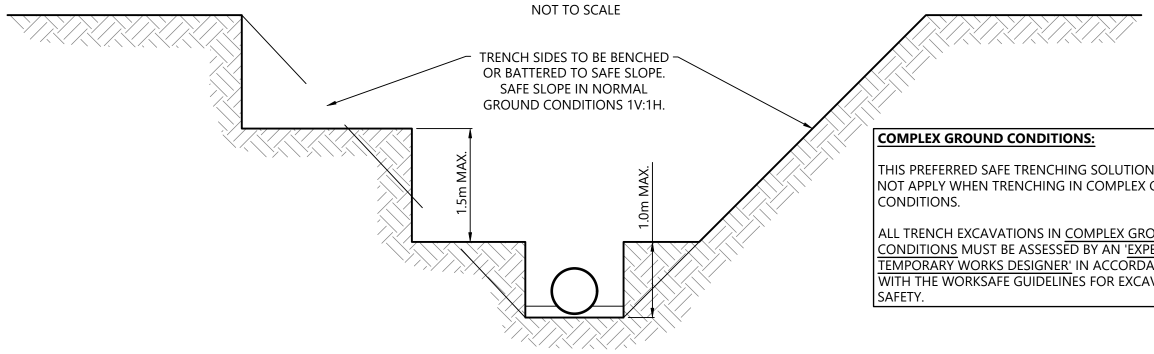
WOODS Est.1970

Plot Date: 12:28:30 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

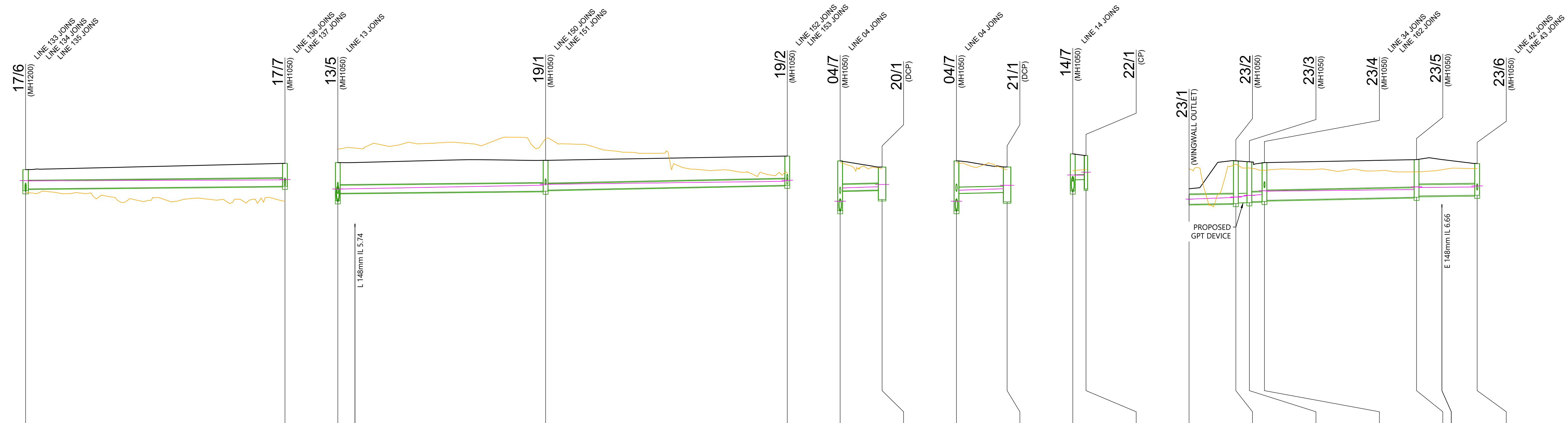
1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
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4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
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WOODS EST.1970



17

	17/6 – 17/7
PIPE DIAMETER	375Ø
PIPE TYPE	RCRRJ CLASS 4
PIPE GRADE	0.20%
DATUM RL=	-5.00
DEPTH TO INVERT	0.96 1.00 0.91 … 1.08
INVERT LEVEL	8.50 8.46 8.55 … 8.67
MANHOLE LID LEVEL	9.46 … 9.75
HYDRAULIC PARAMETERS	Q 49.1 l/s, Qcap 78.4 l/s, V 0.75 m/s
CHAINAGE/ LENGTH	102.37 … 61.32 … 163.69

19

	13/5 – 19/1	19/1 – 19/2
PIPE DIAMETER	375Ø	300Ø
PIPE TYPE	RCRRJ CLASS 4	UPVC SN16
PIPE GRADE	0.20%	0.40%
DATUM RL=	-6.00	
DEPTH TO INVERT	1.81 1.45 … 1.46	1.41 … 1.38
INVERT LEVEL	6.98 7.34 7.35 … 7.44	7.49 … 7.72
MANHOLE LID LEVEL	8.79	8.90 … 9.10
HYDRAULIC PARAMETERS	Q 75.8 l/s, Qcap 78.4 l/s, V 0.81 m/s	Q 43.7 l/s, Qcap 61.2 l/s, V 0.94 m/s
CHAINAGE/ LENGTH	-19.55 -15.49 … 49.14	29.59 … 57.14 … 86.73

20

	04/7 – 20/1
PIPE DIAMETER	300Ø
PIPE TYPE	UPVC SN16
PIPE GRADE	0.40%
DATUM RL=	-6.00
DEPTH TO INVERT	2.35 1.42 … 1.09 1.54
INVERT LEVEL	6.52 7.45 … 7.49 7.04
MANHOLE LID LEVEL	8.87 … 8.58
HYDRAULIC PARAMETERS	Q 32.9 l/s, Qcap 61.2 l/s, V 0.88 m/s
CHAINAGE/ LENGTH	0 … 9.92 … 9.92

21

	04/7 – 21/1
PIPE DIAMETER	300Ø
PIPE TYPE	UPVC SN16
PIPE GRADE	0.40%
DATUM RL=	-6.00
DEPTH TO INVERT	2.35 1.54 … 1.20 1.65
INVERT LEVEL	6.52 7.33 … 7.38 6.93
MANHOLE LID LEVEL	8.87 … 8.58
HYDRAULIC PARAMETERS	Q 38.7 l/s, Qcap 56.4 l/s, V 0.91 m/s
CHAINAGE/ LENGTH	0 … 11.97 … 11.97

22

	14/7 – 22/1
PIPE DIAMETER	225Ø
PIPE TYPE	UPVC SN16
PIPE GRADE	0.40%
DATUM RL=	-6.00
DEPTH TO INVERT	1.76 1.22 … 1.13 1.58
INVERT LEVEL	7.45 7.98 … 7.99 7.54
MANHOLE LID LEVEL	9.20 … 9.13
HYDRAULIC PARAMETERS	Q 21.4 l/s, Qcap 28.4 l/s, V 0.78 m/s
CHAINAGE/ LENGTH	0 … 3.14 … 3.14

23

	23/1 – 23/2	23/2 – 23/3	23/3 – 23/4	23/4 – 23/5	23/5 – 23/6
PIPE DIAMETER	450Ø	450Ø	450Ø	450Ø	450Ø
PIPE TYPE	RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.30%	0.40%	0.40%	0.40%	0.40%
DATUM RL=	-6.00				
DEPTH TO INVERT	0.45 0.45 … 2.02	1.99 … 1.94	1.89 … 1.83	1.78 … 1.78	1.72 … 1.50
INVERT LEVEL	6.82 6.82 … 6.85	6.88 … 6.89	6.94 … 6.96	7.01 … 7.15	7.21 7.23 … 7.24
MANHOLE LID LEVEL	7.27	8.87	8.83	8.79	8.93 … 8.75
HYDRAULIC PARAMETERS	Q 178.2 l/s, Qcap 212.1 l/s, V 1.49 m/s	Q 178.3 l/s, Qcap 180.4 l/s, V 1.29 m/s	Q 178.4 l/s, Qcap 180.4 l/s, V 1.29 m/s	Q 151.0 l/s, Qcap 180.4 l/s, V 1.27 m/s	Q 151.3 l/s, Qcap 180.4 l/s, V 1.01 m/s
CHAINAGE/ LENGTH	-50.56 … 11.06	-39.5 … 3.2	-36.3 … 3.56	-32.74 … 35.96	3.23 9.23 … 14.33 … 17.56

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	SURVEYED	
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DESIGNED	GP
				DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 9

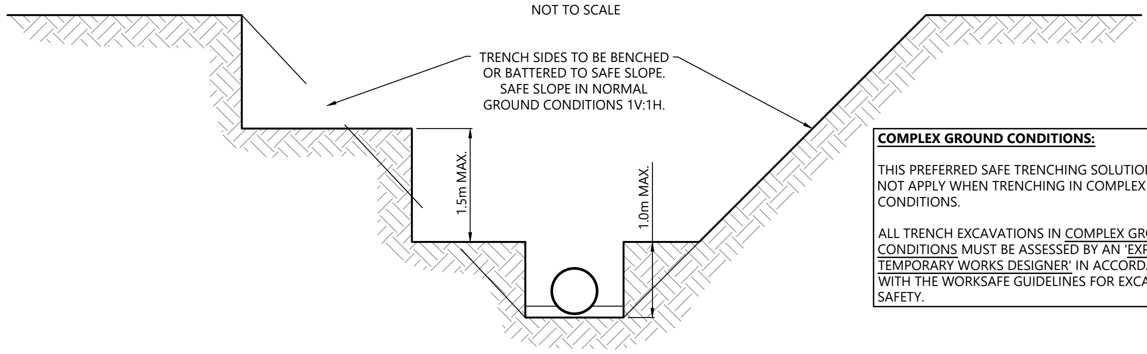
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3508-DR	

Plot Date: 12:28:30 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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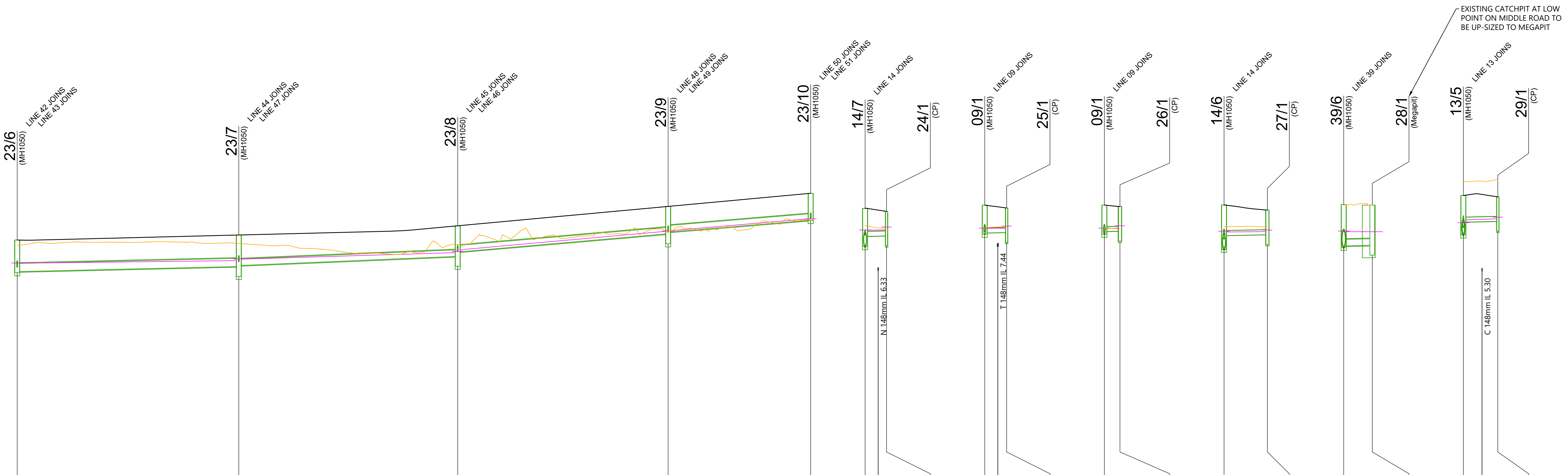
SAFE TRENCHING NOTES:

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4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



23

	23/6		23/7		23/8		23/9		23/10
PIPE DIAMETER		375Ø		300Ø		300Ø		300Ø	
PIPE TYPE		RCRRJ CLASS 4		UPVC SN16		UPVC SN16		UPVC SN16	
PIPE GRADE		0.45%		0.83%		1.70%		1.61%	
DATUM RL=	-5.00								
DEPTH TO INVERT	1.50 1.45		1.45 1.90 1.40		1.41 1.86 1.19		1.26 1.71 1.17		1.25
INVERT LEVEL	7.24 7.29		7.53 7.08 7.58		7.99 7.54 8.20		9.02 8.57 9.12		9.65
MANHOLE LID LEVEL	8.75		8.97		9.40		10.29		10.89
HYDRAULIC PARAMETERS		Q 93.7 l/s Qcap 118.0 l/s V 1.18 m/s		Q 50.7 l/s Qcap 87.9 l/s V 1.29 m/s		Q 25.3 l/s Qcap 126.1 l/s V 1.39 m/s		Q 9.2 l/s Qcap 122.9 l/s V 1.02 m/s	
CHAINAGE/ LENGTH	17.56	50.93	68.49	50.32	118.8	48.36	167.16	32.76	199.92

24

	14/7		24/1
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=	-6.00		
DEPTH TO INVERT	1.76 1.29		1.13 1.58
INVERT LEVEL	7.45 7.91	7.93	7.93 7.48
MANHOLE LID LEVEL	9.20		9.06
HYDRAULIC PARAMETERS		Q 22.6 l/s Qcap 28.4 l/s V 0.79 m/s	
CHAINAGE/ LENGTH	0	3.01 4.94	4.94

25

	09/1		25/1
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=	-6.00		
DEPTH TO INVERT	1.34 1.28		1.13 1.58
INVERT LEVEL	8.01 8.07	8.08	8.09 7.64
MANHOLE LID LEVEL	9.35		9.22
HYDRAULIC PARAMETERS		Q 17.5 l/s Qcap 28.4 l/s V 0.75 m/s	
CHAINAGE/ LENGTH	0	3.01 5.04	5.04

26

	09/1		26/1
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=	-6.00		
DEPTH TO INVERT	1.34 1.21		1.14 1.59
INVERT LEVEL	8.01 8.14		8.15 7.70
MANHOLE LID LEVEL	9.35		9.29
HYDRAULIC PARAMETERS		Q 18.3 l/s Qcap 28.4 l/s V 0.76 m/s	
CHAINAGE/ LENGTH	0	3.59	3.59

27

	14/6		27/1
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=	-6.00		
DEPTH TO INVERT	2.04 1.41		1.13 1.58
INVERT LEVEL	7.32 7.95		7.99 7.54
MANHOLE LID LEVEL	9.36		9.12
HYDRAULIC PARAMETERS		Q 17.9 l/s Qcap 28.4 l/s V 0.76 m/s	
CHAINAGE/ LENGTH	0	9.96	9.96

28

	39/6		28/1
PIPE DIAMETER		300Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.38%	
DATUM RL=	-5.00		
DEPTH TO INVERT	1.96 1.90		1.85 2.30
INVERT LEVEL	8.41 8.47		8.50 8.05
MANHOLE LID LEVEL	10.37		10.35
HYDRAULIC PARAMETERS		Q 0.0 l/s Qcap 59.7 l/s V 0.00 m/s	
CHAINAGE/ LENGTH	0	6.57	6.57

29

	13/5		29/1
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		0.40%	
DATUM RL=	-7.00		
DEPTH TO INVERT	1.81 1.22		1.13 1.58
INVERT LEVEL	6.98 7.57	7.59	7.60 7.15
MANHOLE LID LEVEL	8.79		8.73
HYDRAULIC PARAMETERS		Q 15.2 l/s Qcap 28.4 l/s V 0.73 m/s	
CHAINAGE/ LENGTH	0	4.29 7.92	7.92

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

WOODS Est.1970
BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

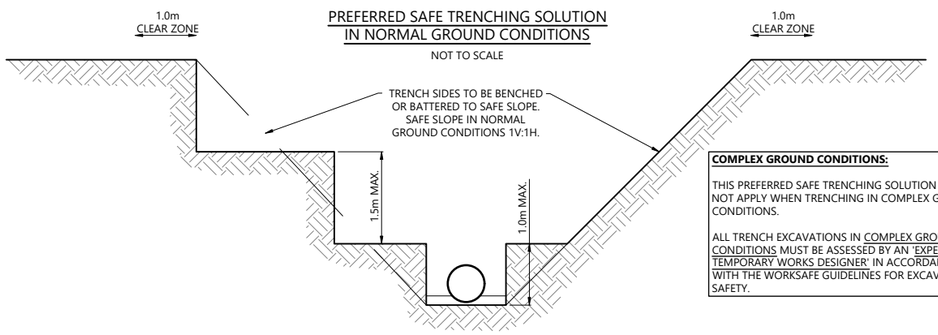
PROPOSED STORMWATER LONGSECTION - SHEET 10

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3509-DR	

Plot Date: 12:28:31 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

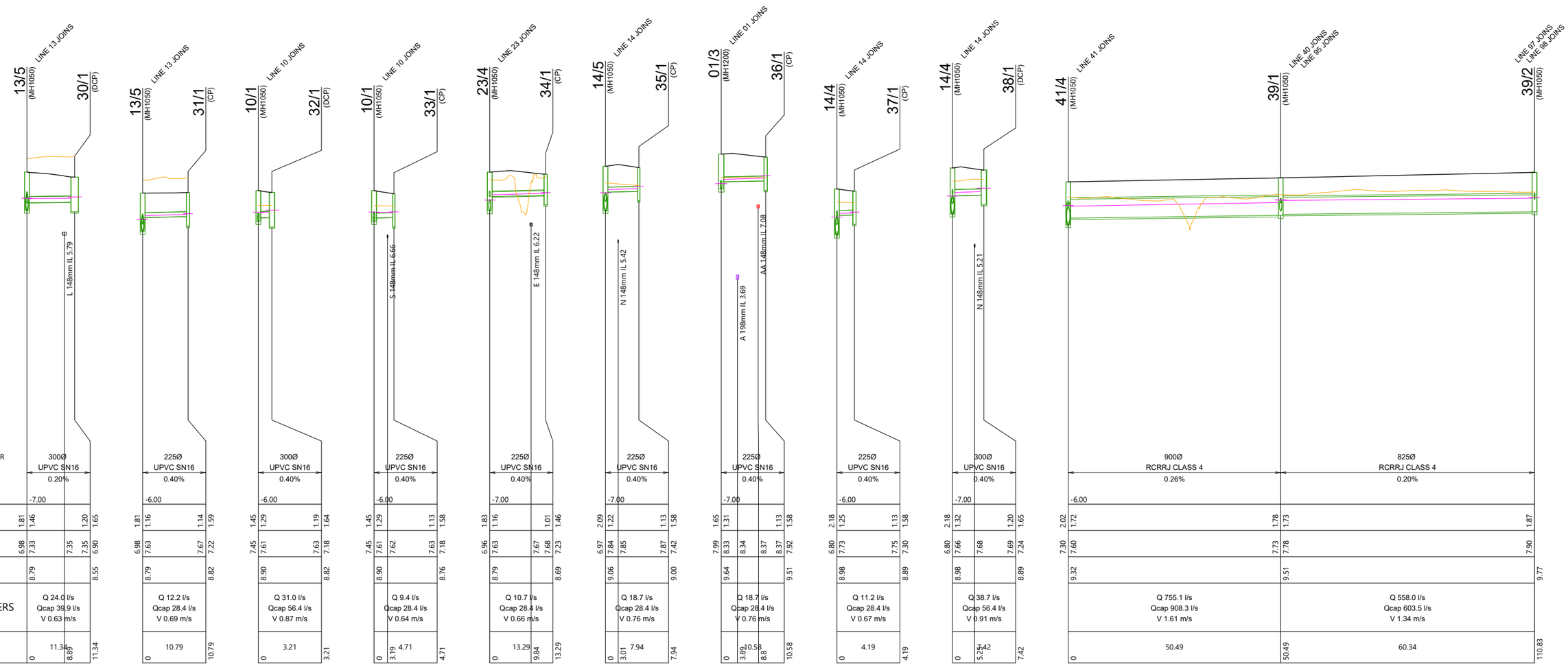
1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

WOODS
EST.1970



SCALEBAR (m) HOR. 0 10 20 50 VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

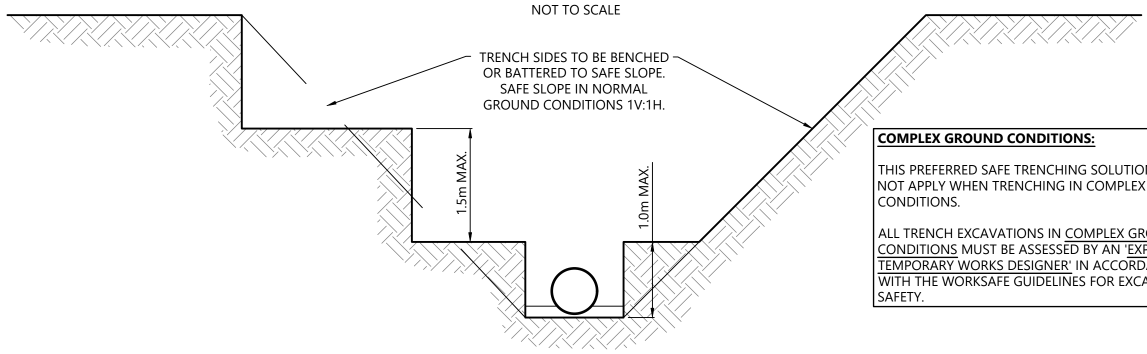
MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 11

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3510-DR	

Plot Date: 12:28:32 pm,30 September 2026, NEDV

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COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

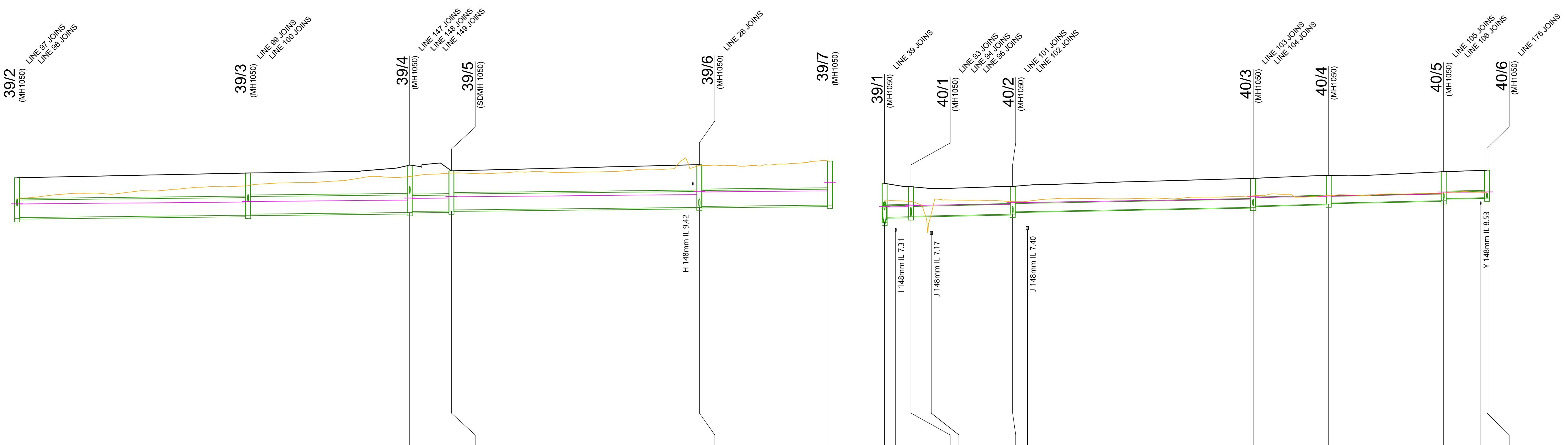
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



DATUM RL= -5.00

	39/2 – 39/3	39/3 – 39/4	39/4 – 39/5	39/5 – 39/6	39/6 – 39/7
PIPE DIAMETER	825Ø	825Ø	750Ø	750Ø	750Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.20%	0.20%	0.20%	0.20%	0.20%
DEPTH TO INVERT	1.87 / 1.82 … 1.93	1.88 … 2.18	2.13 … 1.84	1.79 … 1.96	1.91 … 2.02
INVERT LEVEL	7.90 / 7.95 … 8.06	8.11 … 8.18	8.23 … 8.25	8.30 … 8.41 / 8.41	8.46 … 8.52
MANHOLE LID LEVEL	9.77	9.99	10.36	10.09	10.37 … 10.54
HYDRAULIC PARAMETERS	Q 518.7 l/s Qcap 603.5 l/s V 1.33 m/s	Q 498.4 l/s Qcap 603.5 l/s V 1.32 m/s	Q 448.8 l/s Qcap 463.5 l/s V 1.26 m/s	Q 444.1 l/s Qcap 466.6 l/s V 1.27 m/s	Q 444.6 l/s Qcap 464.4 l/s V 1.26 m/s
CHAINAGE/ LENGTH	110.83 / 52.86	163.69 / 36.97	200.66 / 9.55	210.21 / 56.73 / 265.48	266.94 / 29.88 / 296.82

39

DATUM RL= -5.00

	39/1 – 40/1	40/1 – 40/2	40/2 – 40/3	40/3 – 40/4	40/4 – 40/5	40/5 – 40/6
PIPE DIAMETER	525Ø	450Ø	375Ø	375Ø	300Ø	300Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	UPVC SN16	UPVC SN16
PIPE GRADE	0.35%	0.40%	0.37%	0.50%	0.40%	0.36%
DEPTH TO INVERT	1.78 / 1.55 … 1.38	1.35 … 1.27	1.16 … 1.33	1.26 … 1.32	1.27 … 1.33	1.22 … 1.26 / 1.28
INVERT LEVEL	7.73 / 7.97 / 7.97 … 7.99	8.01 / 8.03 … 8.10	8.22 / 8.23 … 8.42	8.48 … 8.57	8.62 … 8.72	8.83 / 8.86 / 8.86 / 8.84
MANHOLE LID LEVEL	9.51	9.36	9.37	9.75	9.88	10.05 … 10.12
HYDRAULIC PARAMETERS	Q 173.2 l/s Qcap 254.7 l/s V 1.26 m/s	Q 134.4 l/s Qcap 180.4 l/s V 1.24 m/s	Q 99.9 l/s Qcap 106.4 l/s V 1.10 m/s	Q 59.2 l/s Qcap 124.2 l/s V 1.11 m/s	Q 59.5 l/s Qcap 61.2 l/s V 0.99 m/s	Q 26.0 l/s Qcap 58.2 l/s V 0.80 m/s
CHAINAGE/ LENGTH	0 / 2.55 / 6.03	6.03 / 10.67 / 23.28	29.31 / 32.68 / 55.04	84.34 / 17.28	101.62 / 26.3	127.92 / 9.92 / 136.45 / 137.84

40

SCALEBAR (m) HOR. 0 10 20 50 SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026

SURVEYED	
DESIGNED	GP
DRAWN	GP
CHECKED	LZM/BLO
APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

WOODS EST.1970

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 12

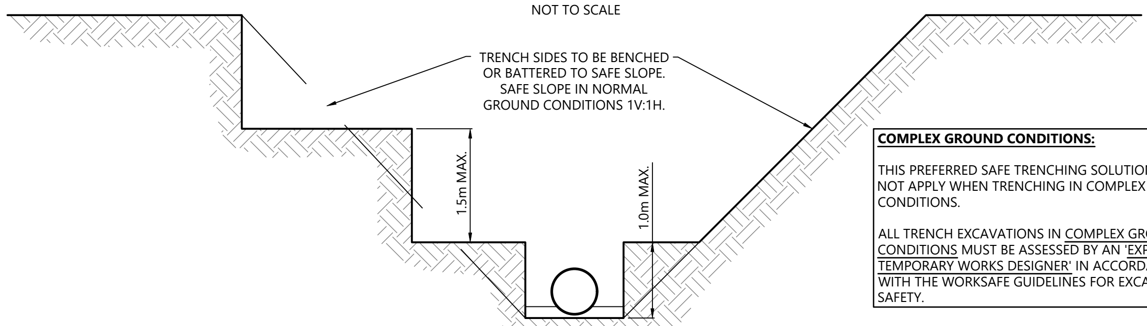
STATUS	ISSUED FOR CONSENT
SCALE	H 1:1000 V 1:200 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3511-DR
REV	2

Plot Date: 12:28:32 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

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4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
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8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



40

PIPE DIAMETER	300Ø
PIPE TYPE	UPVC SN16
PIPE GRADE	0.40%
DATUM RL=	-5.00
DEPTH TO INVERT	1.26 / 1.28 1.24 … 1.32
INVERT LEVEL	8.86 / 8.84 8.88 … 9.01
MANHOLE LID LEVEL	10.12 … 10.33
HYDRAULIC PARAMETERS	Q 13.5 l/s Qcap 61.2 l/s V 0.69 m/s
CHAINAGE/ LENGTH	137.84 … 33.29 … 171.13

41 (DATUM RL= -6.00)

PIPE DIAMETER	1050Ø	1050Ø	1050Ø	750Ø	675Ø	675Ø
PIPE TYPE	RCRRJ CLASS 4	GPT	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.20%	0.01%	0.37%	0.20%	0.20%	0.20%
DEPTH TO INVERT	1.05 / 1.05 … 2.06	2.06 … 2.00	2.00 / 2.00 … 2.02	1.97 … 1.90	1.85 … 1.70	1.65 … 1.46
INVERT LEVEL	7.25 / 7.25 … 7.28	7.28 … 7.28	7.28 / 7.29 … 7.30	7.35 … 7.37	7.42 … 7.47	7.52 … 7.60
MANHOLE LID LEVEL	8.30	9.33	9.28	9.32	9.27	9.17
HYDRAULIC PARAMETERS	Q 1056.7 l/s Qcap 1221.2 l/s V 1.59 m/s	Q 1057.0 l/s Qcap 0.0 l/s V 1.22 m/s	Q 1057.7 l/s Qcap 1647.3 l/s V 2.03 m/s	Q 288.0 l/s Qcap 463.4 l/s V 1.17 m/s	Q 281.9 l/s Qcap 357.1 l/s V 1.15 m/s	Q 269.3 l/s Qcap 357.1 l/s V 1.14 m/s
CHAINAGE/ LENGTH	-61.23 … 13.91	-47.33 … 2.79	-44.54 / -40.48 … 5.87	-38.67 … 11.67	-27 … 24.86	-2.14 … 36.86

PIPE DIAMETER	600Ø	600Ø	450Ø	450Ø	375Ø
PIPE TYPE	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4	RCRRJ CLASS 4
PIPE GRADE	0.20%	0.20%	0.40%	0.40%	0.40%
DEPTH TO INVERT	1.41 … 1.41	1.36 … 1.48	1.30 … 1.36	1.28 … 1.35	1.29 … 1.35
INVERT LEVEL	7.65 … 7.68	7.73 … 7.79	7.97 … 8.19	8.27 … 8.47	8.53 … 8.73
MANHOLE LID LEVEL	9.06	9.09	9.27	9.55	9.82 … 10.08
HYDRAULIC PARAMETERS	Q 220.0 l/s Qcap 274.7 l/s V 1.08 m/s	Q 221.2 l/s Qcap 274.7 l/s V 1.08 m/s	Q 170.1 l/s Qcap 180.3 l/s V 1.29 m/s	Q 127.9 l/s Qcap 180.8 l/s V 1.23 m/s	Q 85.5 l/s Qcap 111.2 l/s V 1.11 m/s
CHAINAGE/ LENGTH	34.72 … 14.14	48.86 … 29.6	78.46 … 53.32	131.78 … 49.81	181.59 … 49.53 … 231.12

SCALEBAR (m) HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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+64 9 308 9229
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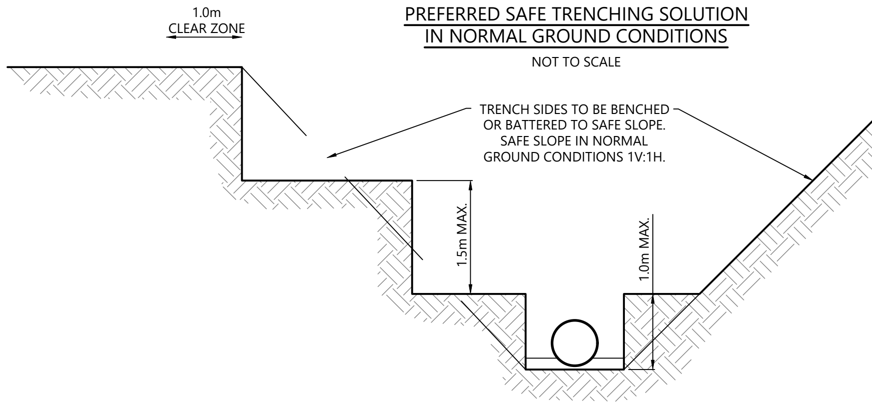
CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 13

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3512-DR	

Plot Date: 12:28:33 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

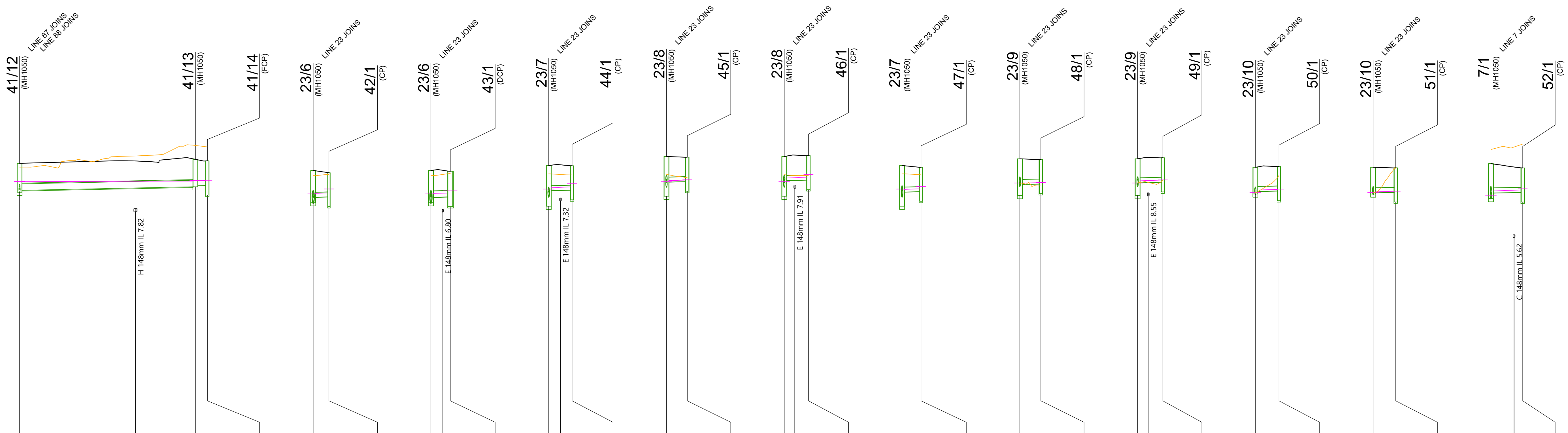
- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
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Plot Date: 12:28:33 pm,30 September 2026, NEDV



Longsection	Pipe diameter / Pipe type / Pipe grade	Datum RL=	Depth to invert	Invert level	Manhole lid level	Hydraulic parameters	Chainage/ length
41	300Ø UPVC SN16 0.40%; 225Ø UPVC SN16 0.40%	-5.00	1.35, 1.26, 1.28, 1.23, 1.15, 1.60	8.73, 8.82, 8.93, 8.99, 9.04, 9.05, 8.60	10.08, 10.27, 10.19	Q 25.4 l/s Qcap 61.2 l/s V 0.82 m/s; Q 5.9 l/s Qcap 30.5 l/s V 0.56 m/s	231.12, 41.06, 258.18, 272.17, 2.8, 274.98
42	225Ø UPVC SN16 0.40%	-6.00	1.50, 1.25, 1.13, 1.58	7.24, 7.50, 7.51, 7.06	8.75, 8.64	Q 27.3 l/s Qcap 28.4 l/s V 0.81 m/s	0, 3.69, 3.69
43	300Ø UPVC SN16 0.40%	-6.00	1.50, 1.25, 1.19, 1.64	7.24, 7.49, 7.51, 7.51, 7.06	8.75, 8.71	Q 31.1 l/s Qcap 56.4 l/s V 0.87 m/s	0, 2.78, 4.52, 4.52
44	225Ø UPVC SN16 0.40%	-6.00	1.45, 1.90, 1.17, 1.14, 1.59	7.53, 7.08, 7.81, 7.82, 7.83, 7.38	8.97, 8.96	Q 24.5 l/s Qcap 28.4 l/s V 0.80 m/s	0, 2.74, 5.46, 5.46
45	225Ø UPVC SN16 0.40%	-6.00	1.41, 1.86, 1.19, 1.14, 1.59	7.99, 7.54, 8.21, 8.23, 7.78	9.40, 9.37	Q 6.2 l/s Qcap 28.4 l/s V 0.57 m/s	0, 4.86, 4.86
46	225Ø UPVC SN16 0.40%	-6.00	1.41, 1.86, 1.12, 1.14, 1.59	7.99, 7.54, 8.28, 8.29, 8.30, 7.85	9.40, 9.44	Q 19.4 l/s Qcap 28.4 l/s V 0.77 m/s	0, 2.45, 5.65, 5.65
47	225Ø UPVC SN16 0.40%	-6.00	1.45, 1.90, 1.23, 1.14, 1.59	7.53, 7.08, 7.74, 7.76, 7.31	8.97, 8.89	Q 19.0 l/s Qcap 28.4 l/s V 0.76 m/s	0, 4.43, 4.43
48	225Ø UPVC SN16 0.40%	-5.00	1.26, 1.71, 1.19, 1.14, 1.59	9.02, 8.57, 9.10, 9.12, 8.67	10.29, 10.26	Q 4.2 l/s Qcap 28.4 l/s V 0.51 m/s	0, 4.91, 4.91
49	225Ø UPVC SN16 0.41%	-5.00	1.26, 1.71, 1.12, 1.14, 1.59	9.02, 8.57, 9.17, 9.18, 9.20, 8.75	10.29, 10.34	Q 11.9 l/s Qcap 28.9 l/s V 0.69 m/s	0, 2.47, 5.89, 5.89
50	225Ø UPVC SN16 0.40%	-4.00	1.25, 1.13, 1.14, 1.59	9.65, 9.77, 9.79, 9.34	10.89, 10.93	Q 6.5 l/s Qcap 28.4 l/s V 0.58 m/s	0, 5.5, 5.5
51	225Ø UPVC SN16 0.40%	-4.00	1.25, 1.19, 1.14, 1.59	9.65, 9.71, 9.73, 9.28	10.89, 10.87	Q 2.7 l/s Qcap 28.4 l/s V 0.45 m/s	0, 5.27, 5.27
52	225Ø UPVC SN16 0.40%	-6.00	1.63, 1.37, 1.14, 1.59	7.43, 7.69, 7.72, 7.72, 7.27	9.06, 8.87	Q 14.1 l/s Qcap 30.5 l/s V 0.71 m/s	0, 5.4, 7.42, 7.42

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	SURVEYED	
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DESIGNED	GP
				DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

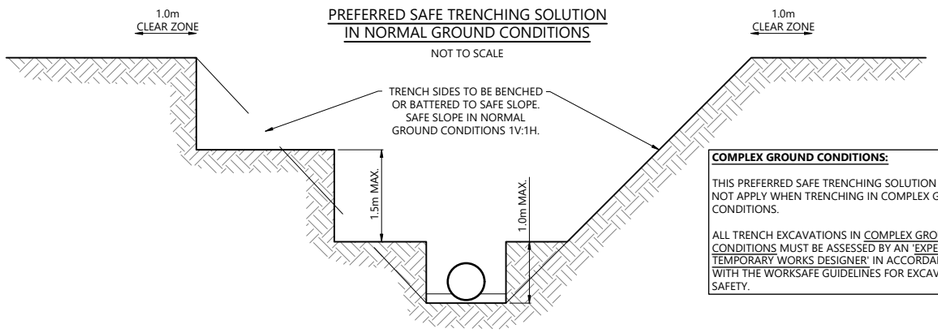
PROPOSED STORMWATER LONGSECTION - SHEET 14

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3513-DR	

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PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

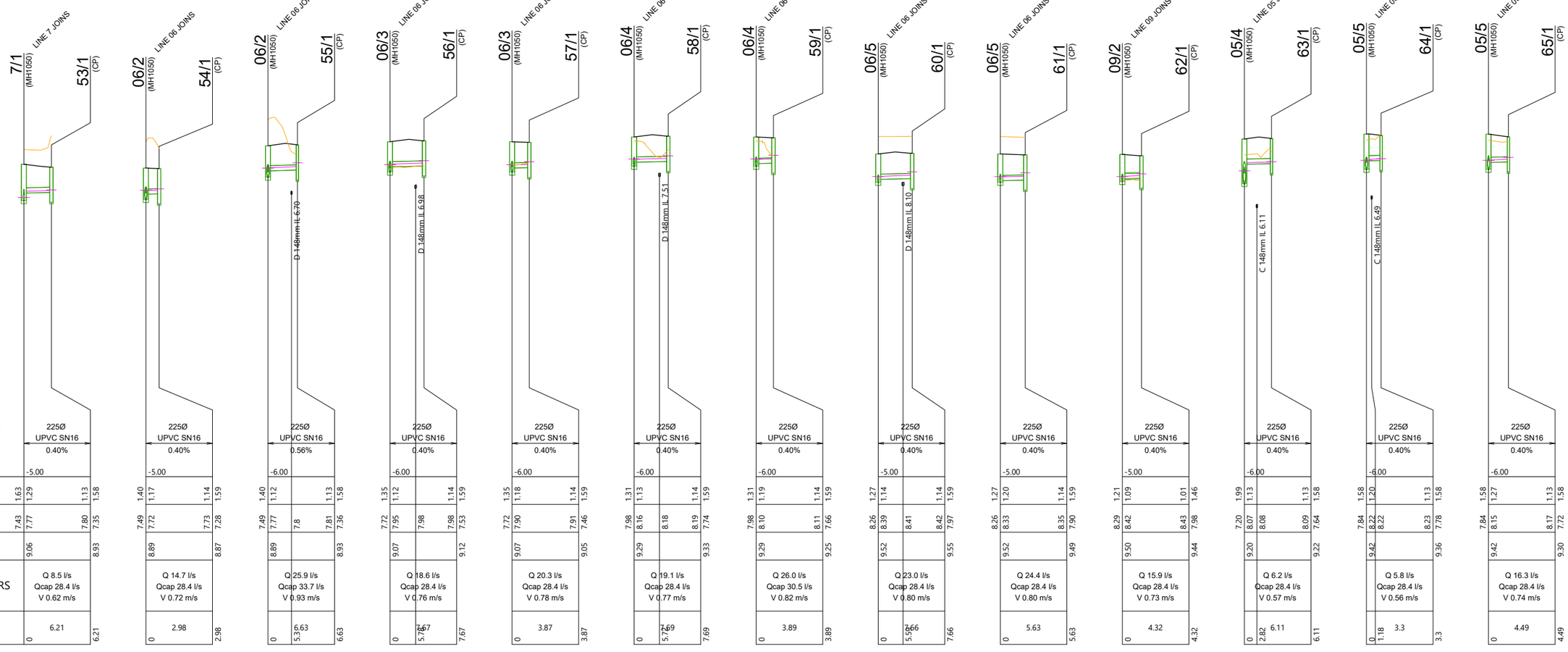
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3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

WOODS
EST.1970



SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 15

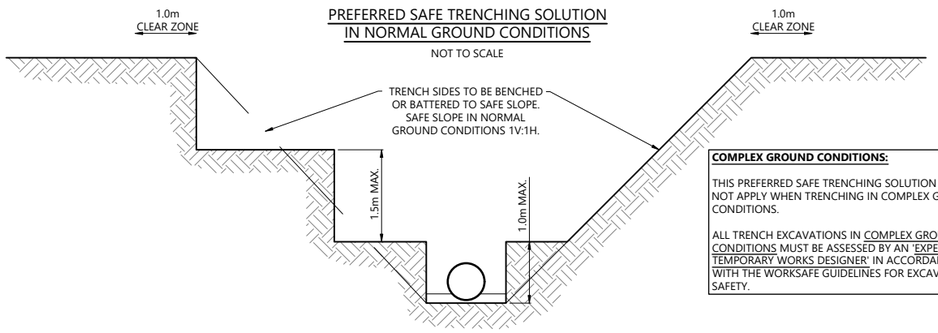
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3514-DR	

Plot Date: 12:28:34 pm,30 September 2026, NEDV

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PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

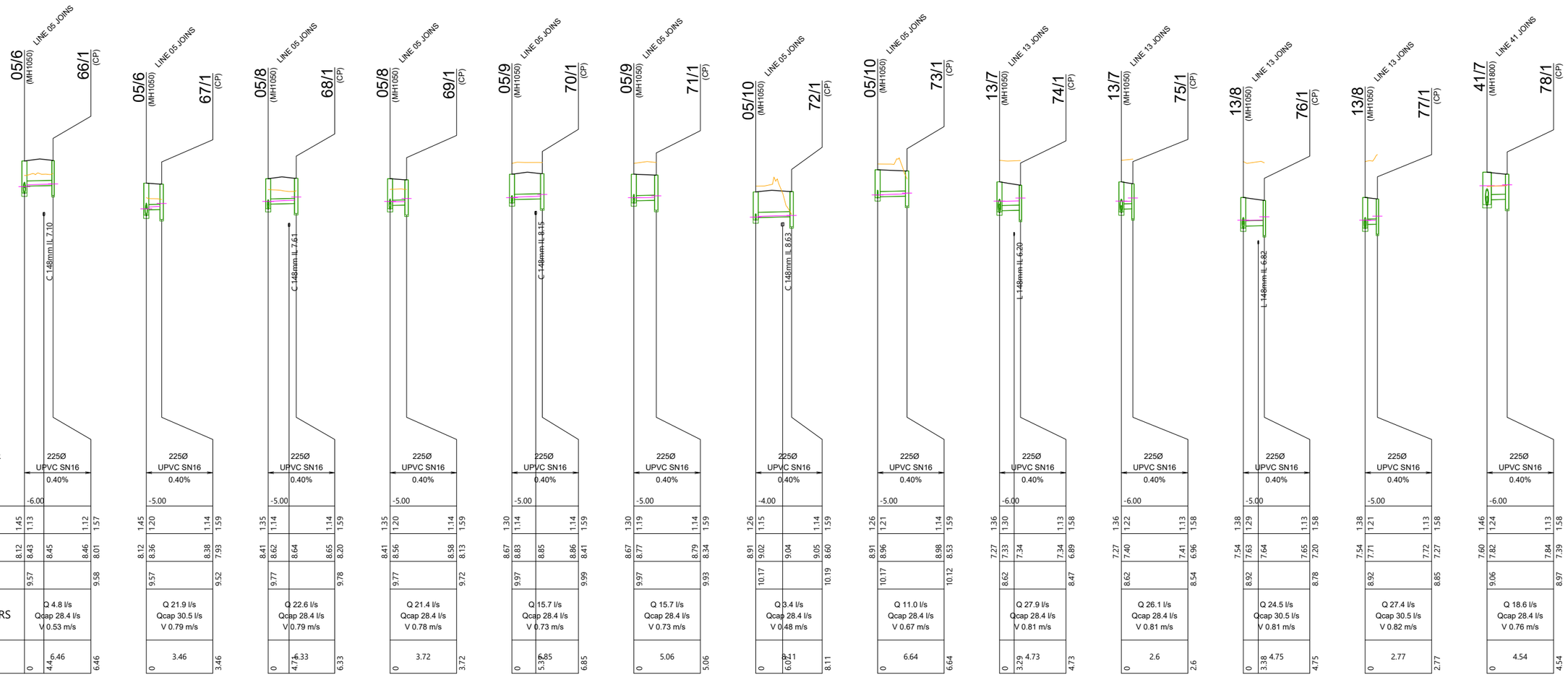
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
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  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
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HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 16

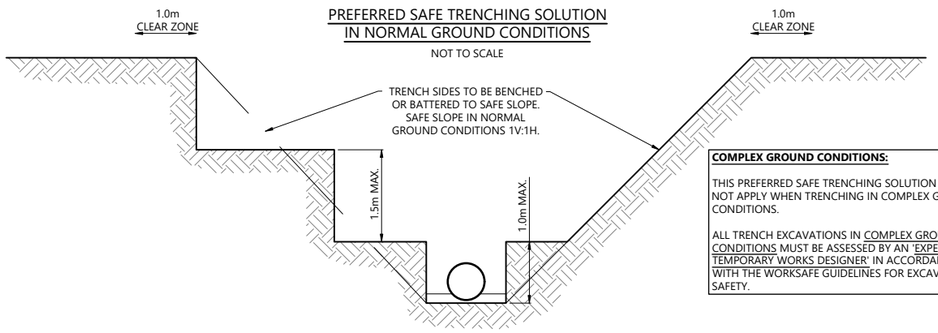
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3515-DR	

Plot Date: 12:28:35 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

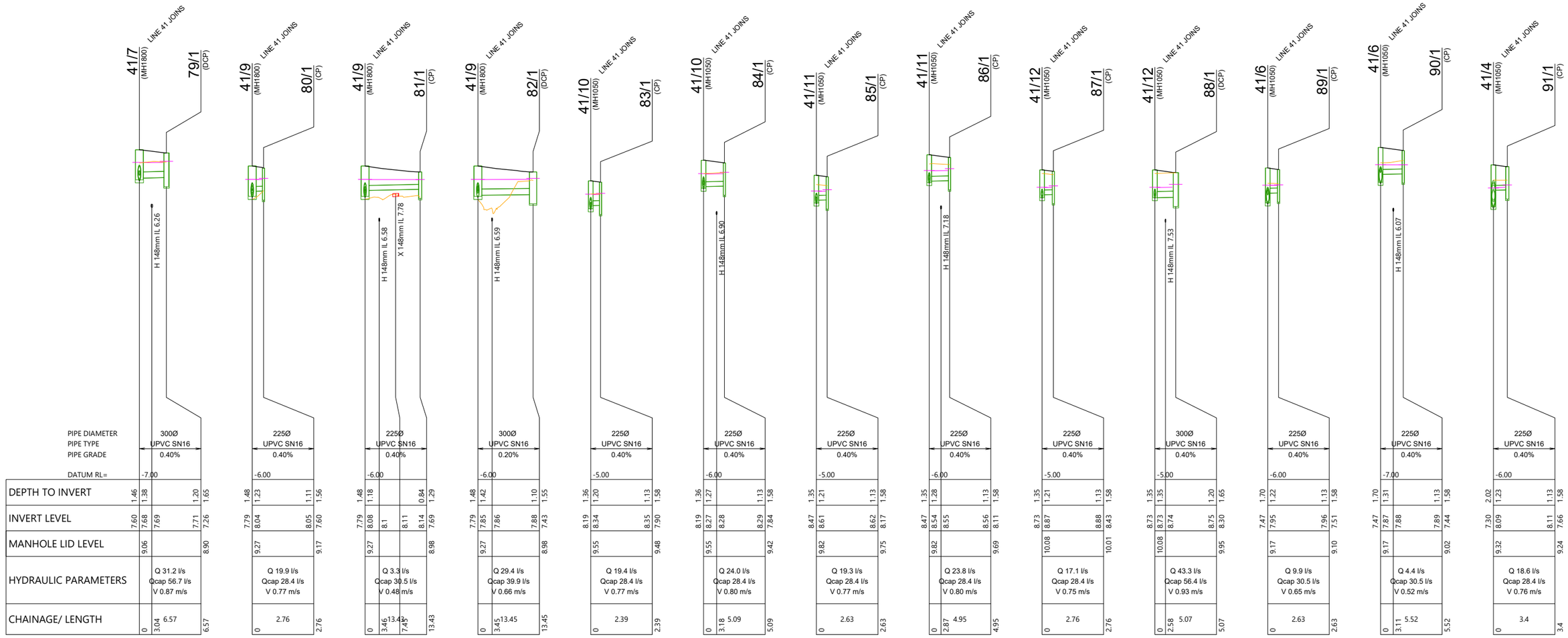
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
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  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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+64 9 308 9229
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MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 17

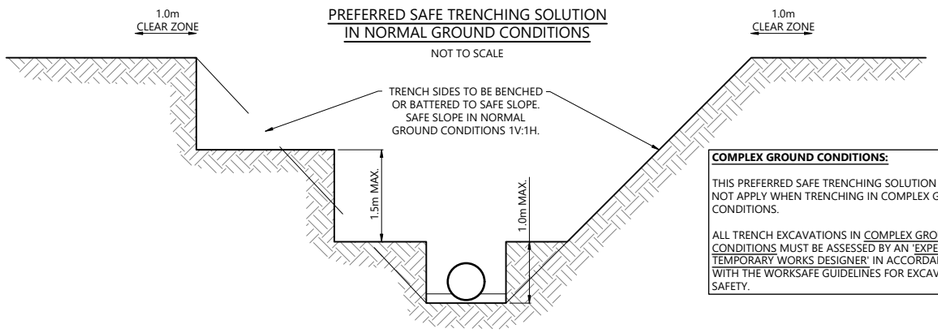
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3516-DR	

Plot Date: 12:28:35 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

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SAFE TRENCHING NOTES:

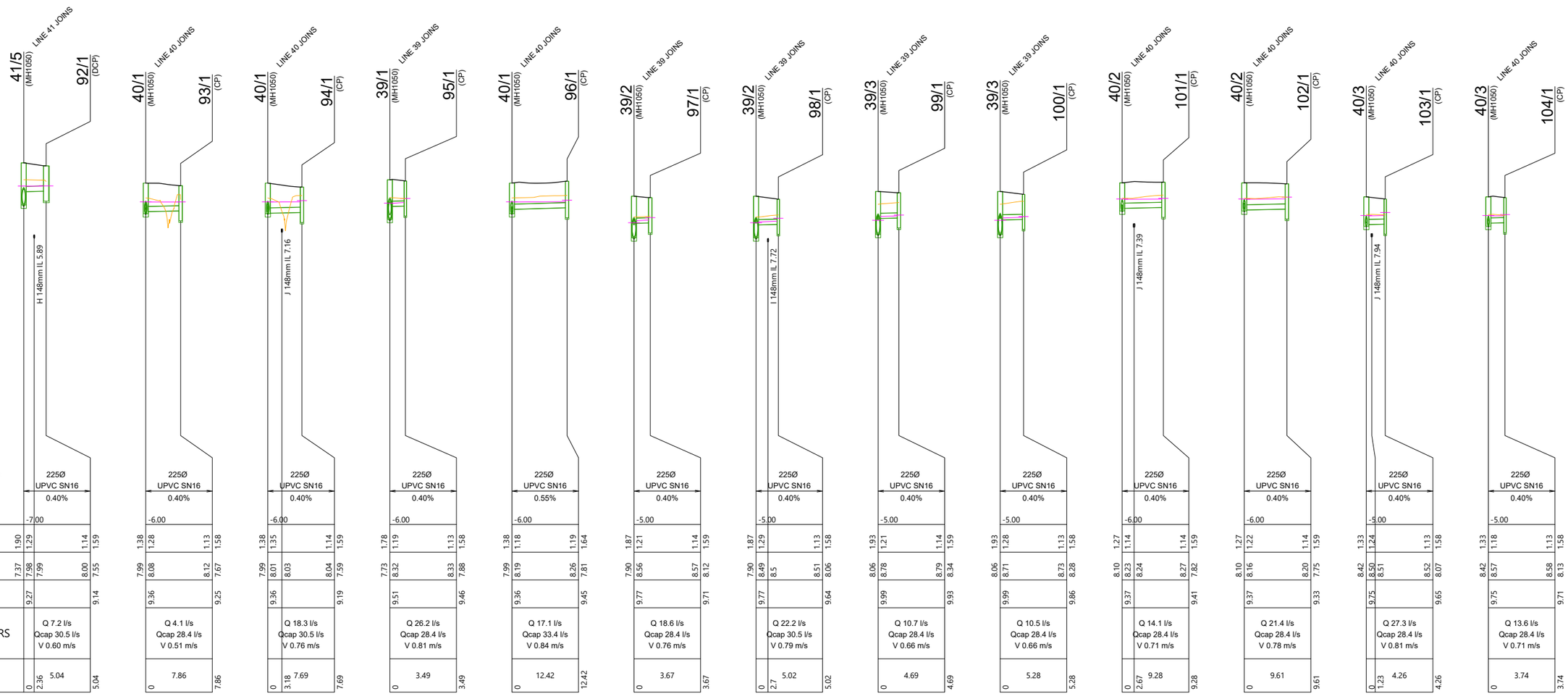
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WOODS
EST.1970



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HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 18

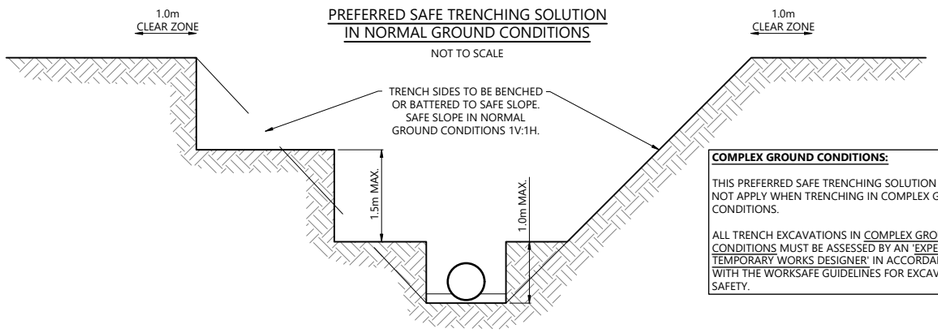
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3517-DR	

Plot Date: 12:28:36 pm,30 September 2026, NEDV

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PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

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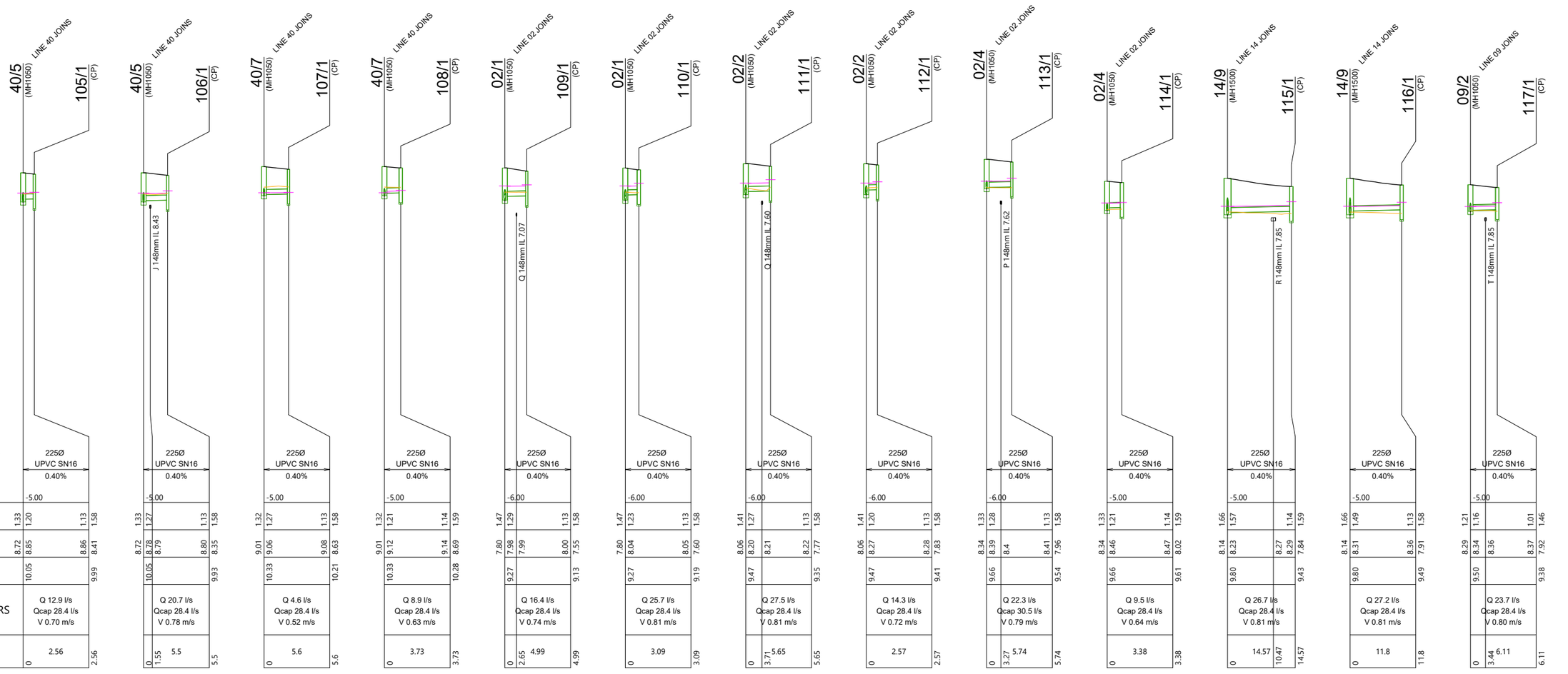
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
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1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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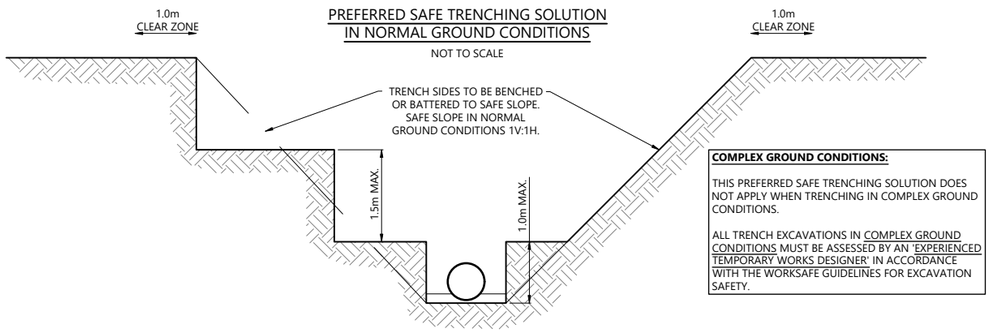
MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 19

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3518-DR	

Plot Date: 12:28:37 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG



PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE

COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

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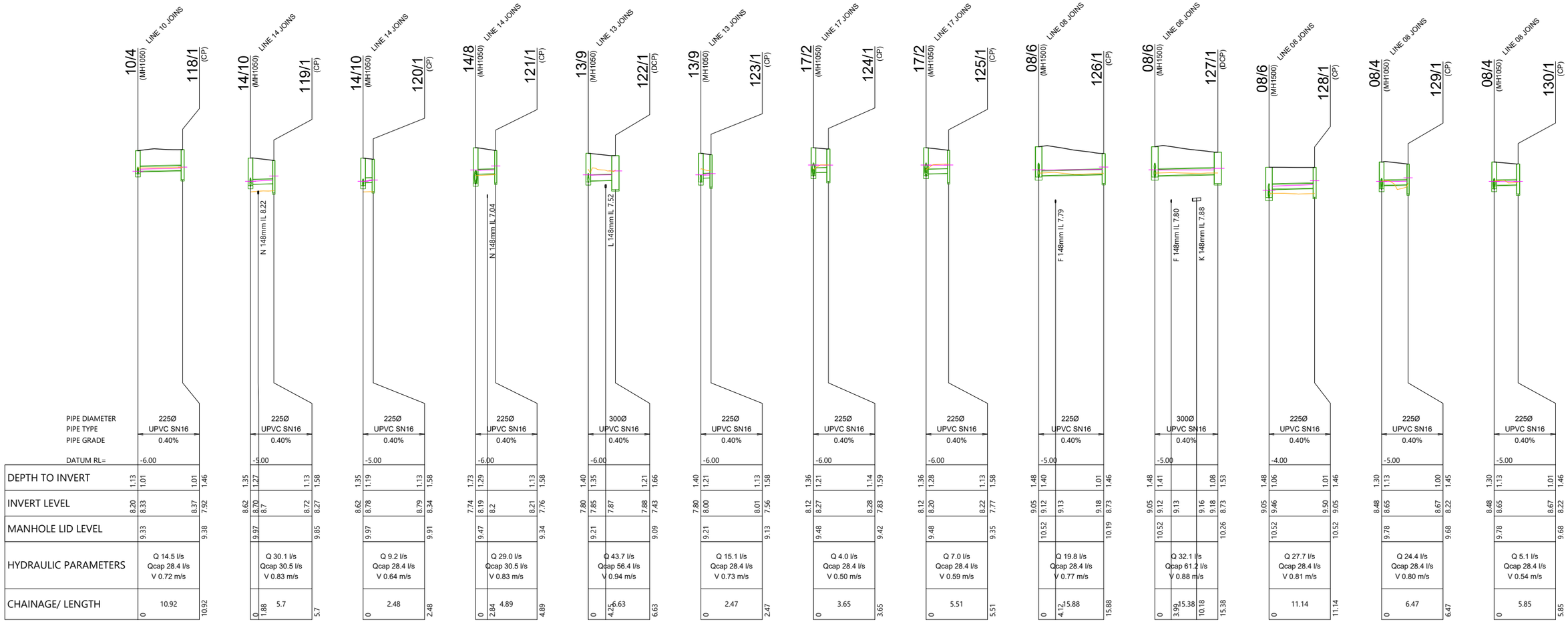
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WOODS
EST.1970



SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 20

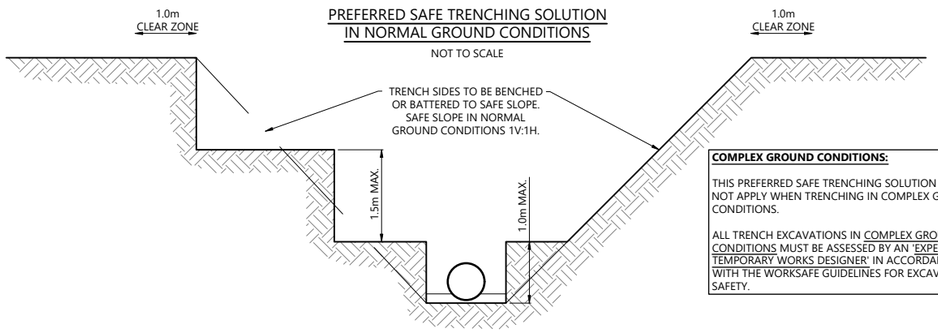
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3519-DR	

Plot Date: 12:28:37 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



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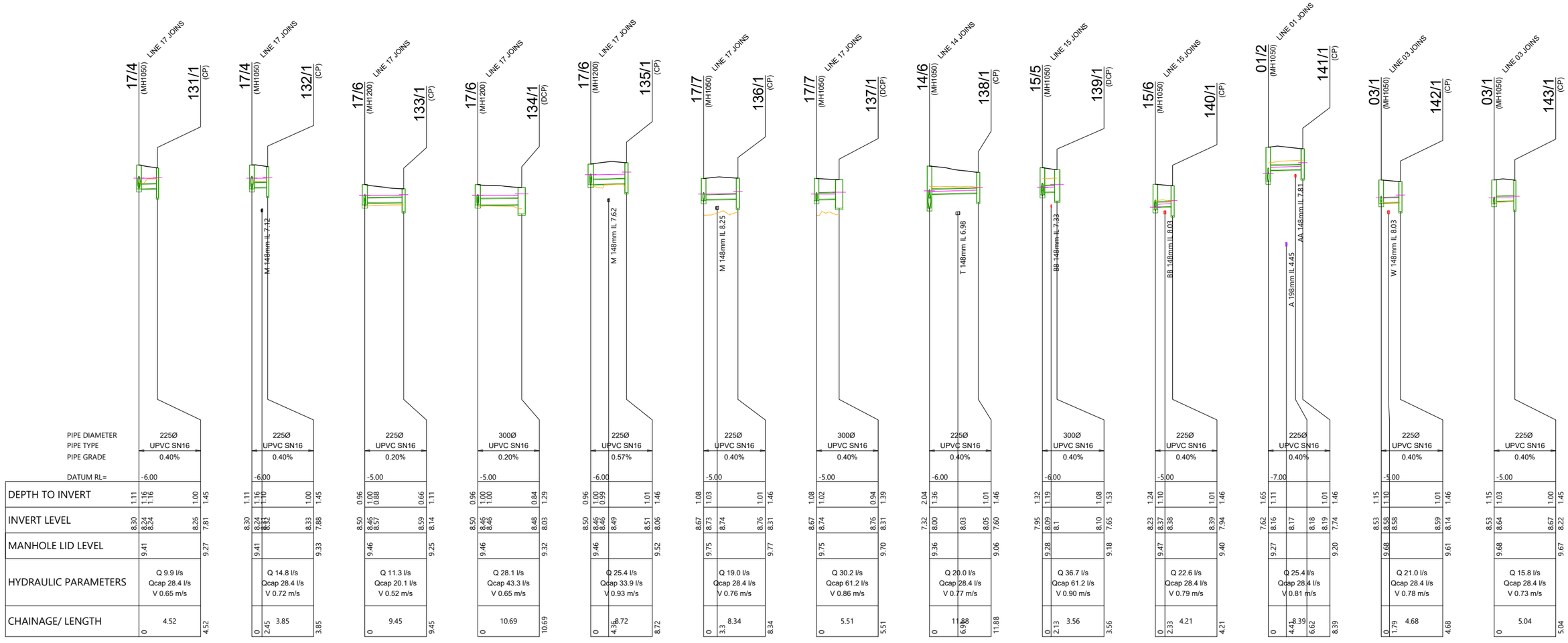
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 21

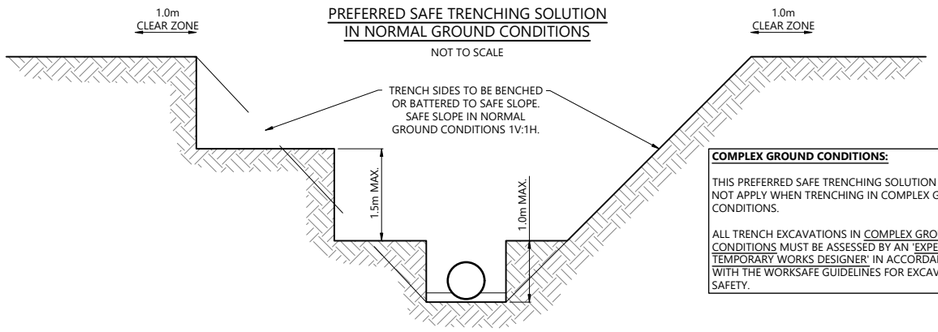
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3520-DR	

Plot Date: 12:28:38 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

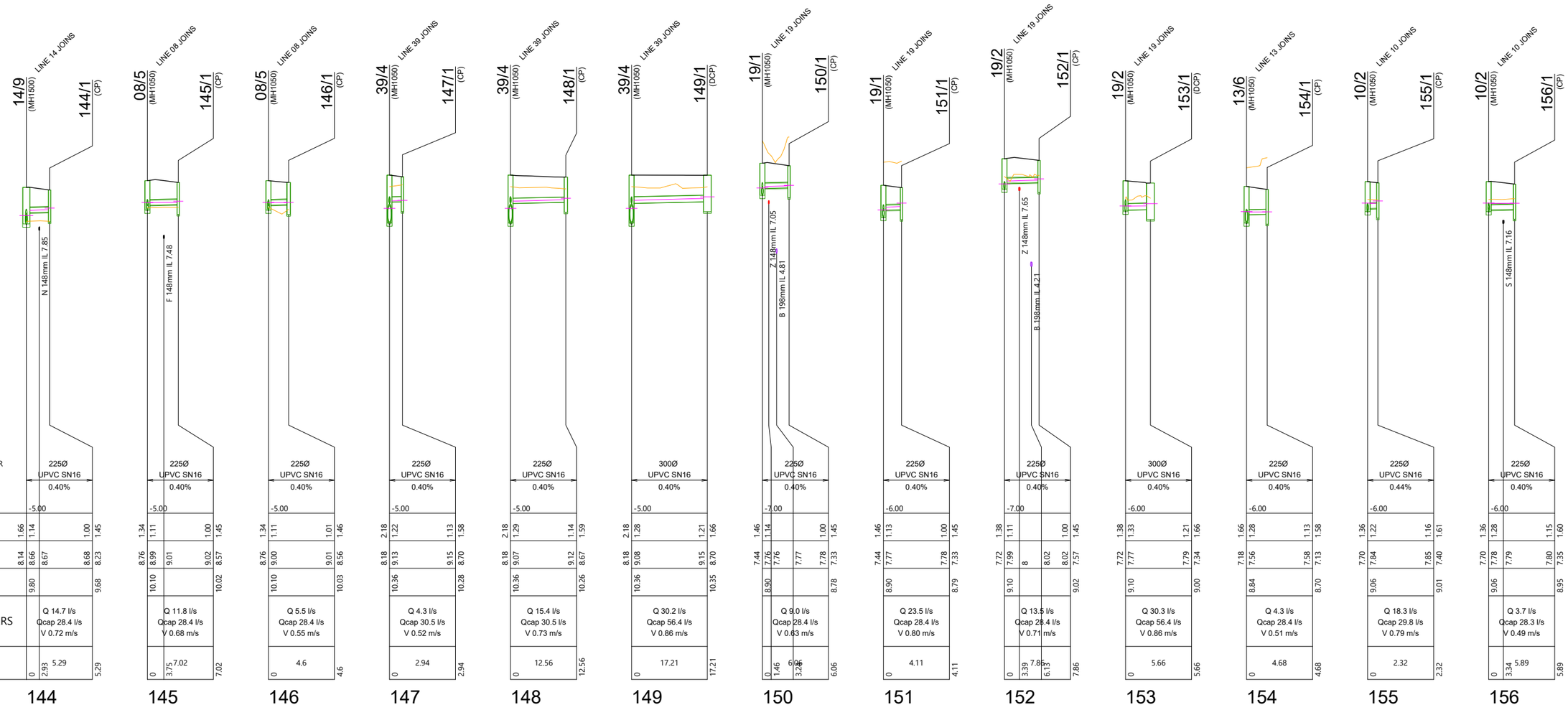
1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
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3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

STORMWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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WOODS
EST.1970



SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 22

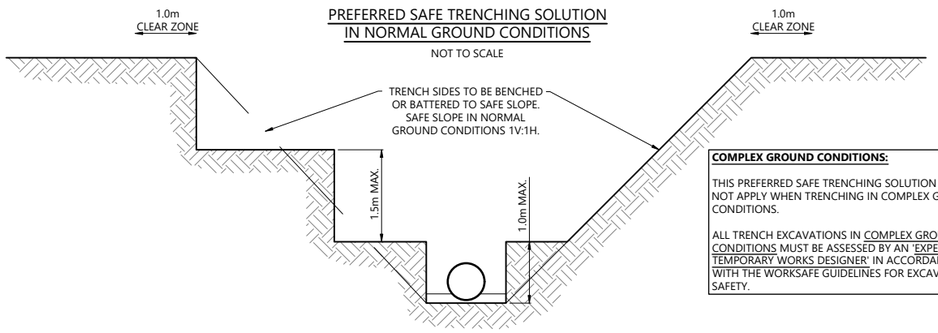
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3521-DR	

Plot Date: 12:28:39 pm,30 September 2026, NEDV

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PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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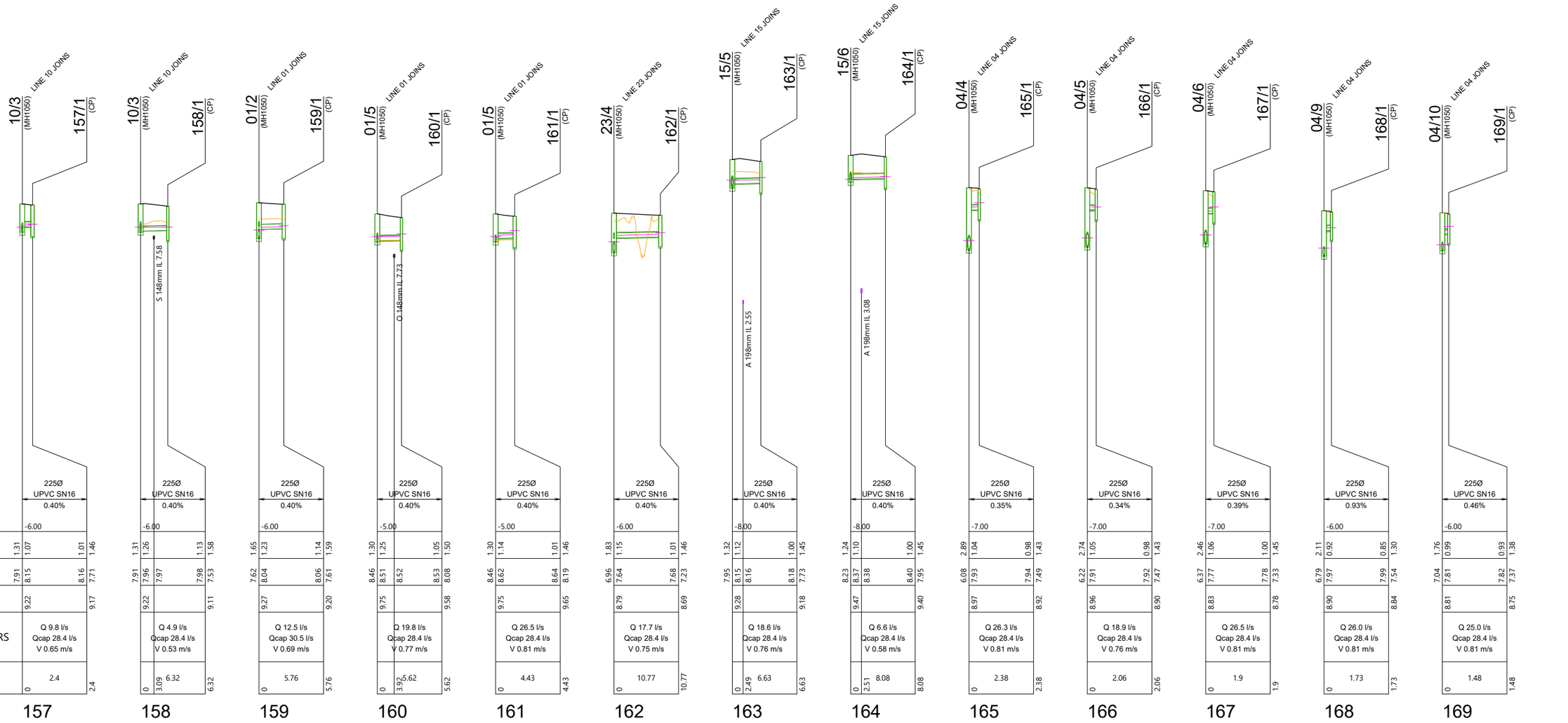
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				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 23

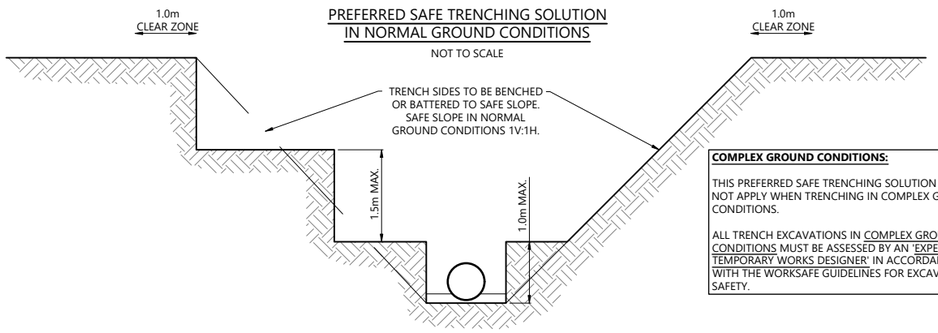
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3522-DR	

Plot Date: 12:28:39 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\00 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



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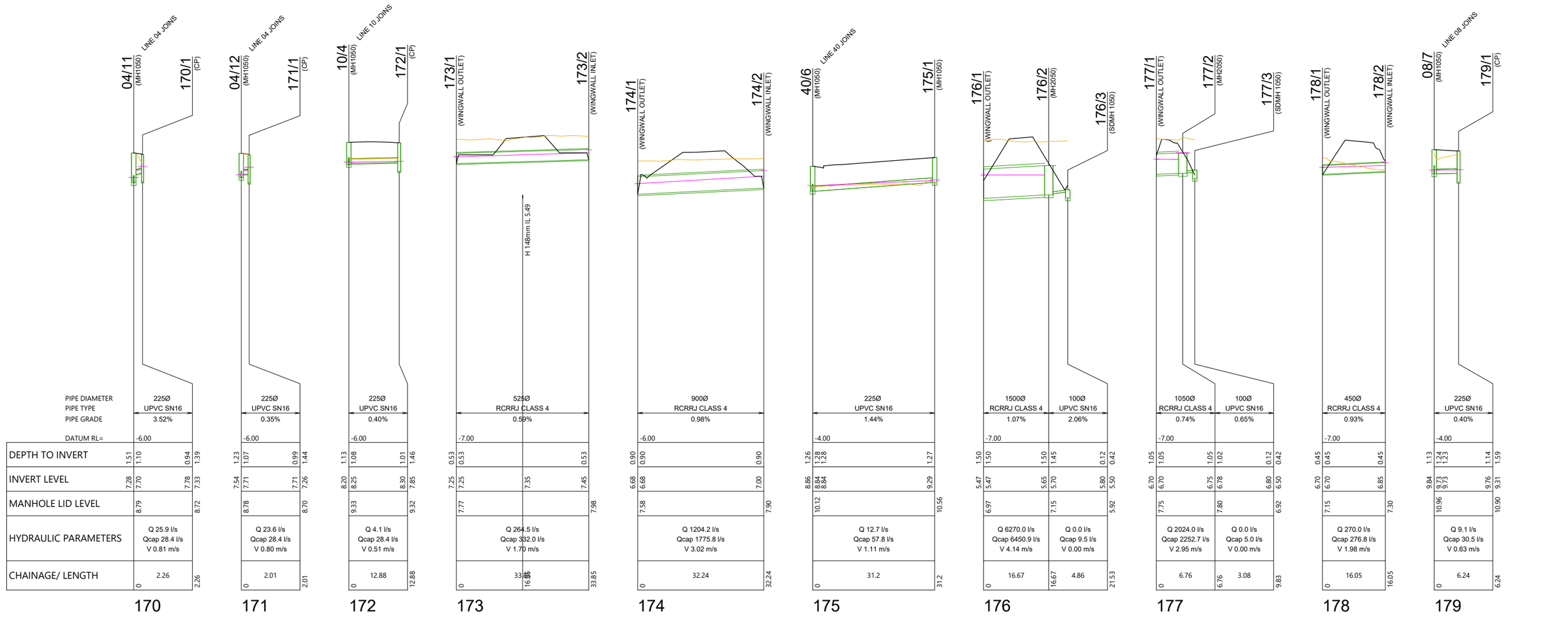
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SCALEBAR (m) HOR. 0 10 20 50 VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
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1	ISSUED FOR COUNCIL COMMENT	GP	26/08/2026
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026

SURVEYED	
DESIGNED	GP
DRAWN	GP
CHECKED	LZM/BLO
APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 24

STATUS	ISSUED FOR CONSENT
SCALE	H 1:1000 V 1:200 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3523-DR
REV	2

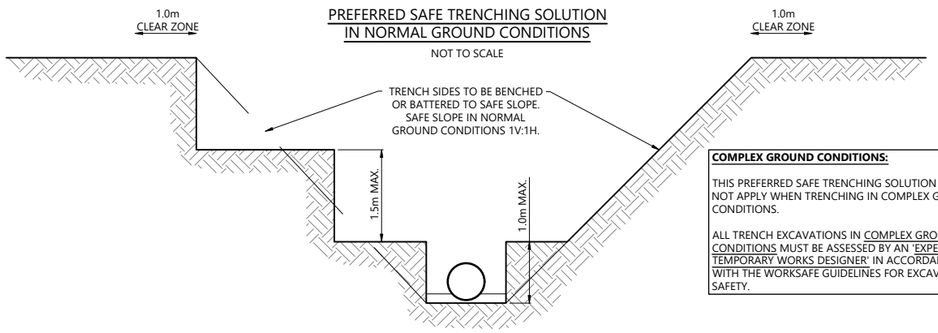
WOODS EST.1970

Plot Date: 12:28:40 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3500 STORMWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



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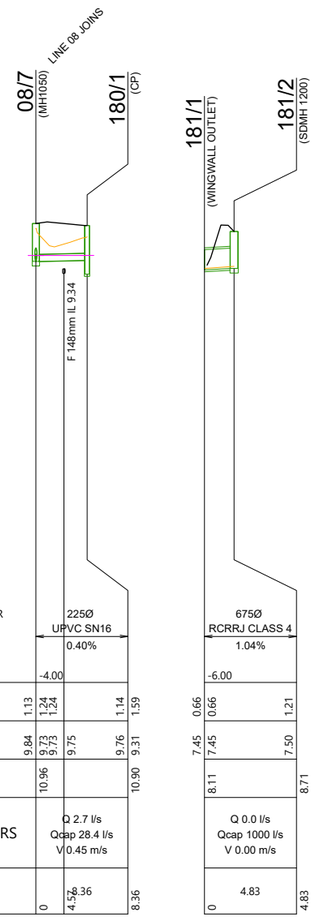
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PIPE DIAMETER	225Ø		675Ø
PIPE TYPE	UPVC SN16		RCRRJ CLASS 4
PIPE GRADE	0.40%		1.04%
DATUM RL=	-4.00		-6.00
DEPTH TO INVERT	1.13 / 1.24 / 1.24	1.14 / 1.59	0.66 / 0.66	1.21
INVERT LEVEL	9.84 / 9.73 / 9.73	9.75	9.76 / 9.31	7.45 / 7.45	7.50
MANHOLE LID LEVEL	10.96	10.90	8.11	8.71
HYDRAULIC PARAMETERS	Q 2.7 l/s Qcap 28.4 l/s V 0.45 m/s		Q 0.0 l/s Qcap 1000 l/s V 0.00 m/s	
CHAINAGE/ LENGTH	0 / 4.57	8.36	4.83	0 / 4.83

180 181

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED STORMWATER LONGSECTION - SHEET 25

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3524-DR	

Plot Date: 12:28:40 pm,30 September 2026, NEDV

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NOTES

1. STORMWATER CATCHMENTS TO BE CONFIRMED PENDING STORMWATER MODELLING

LEGEND

PROPOSED STORMWATER LINE AND PIT 3/1

PROPOSED SUMP

CATCHMENT A

CATCHMENT B

CATCHMENT C

CATCHMENT D

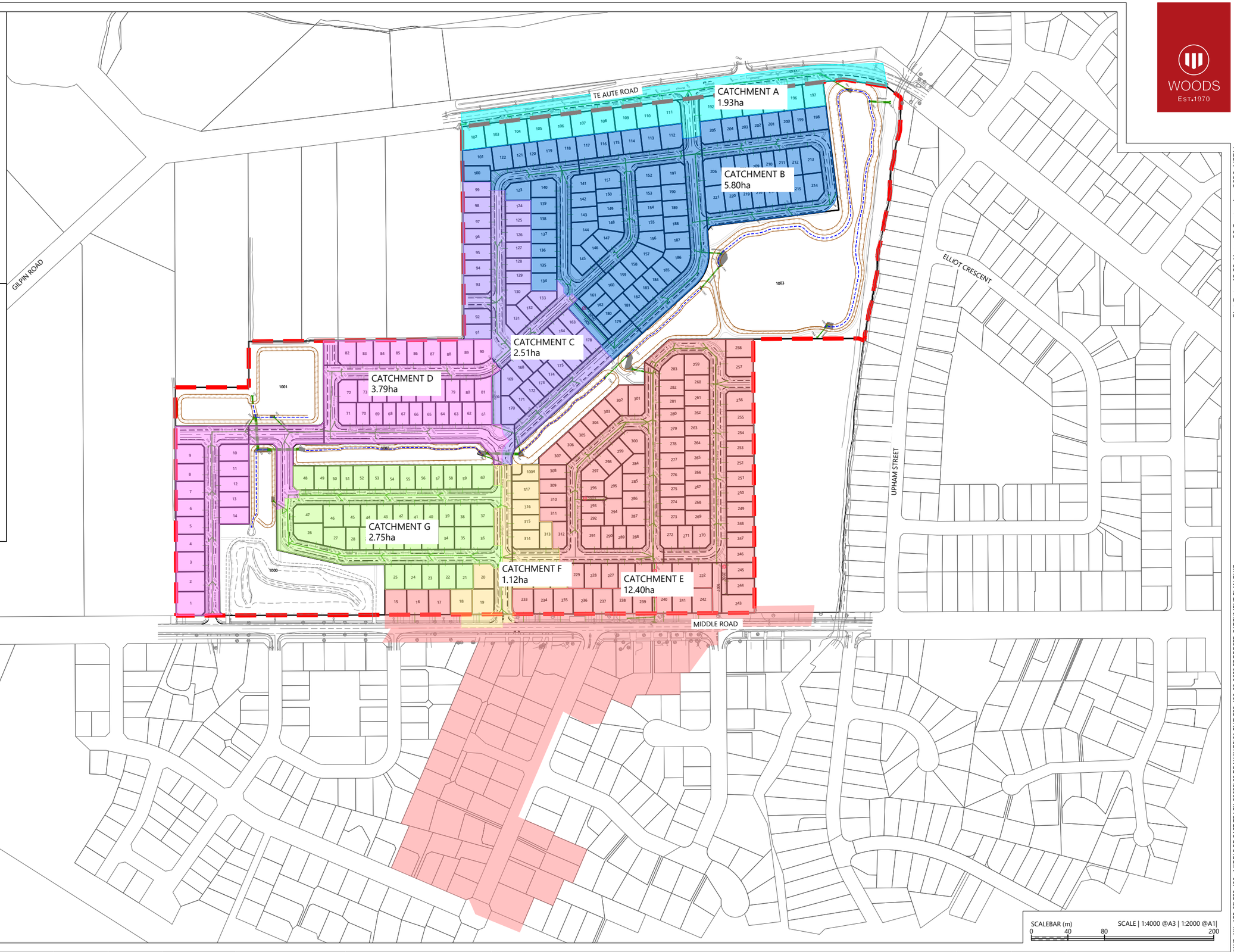
CATCHMENT E

CATCHMENT F

CATCHMENT G

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CDL LAND NEW ZEALAND LIMITED

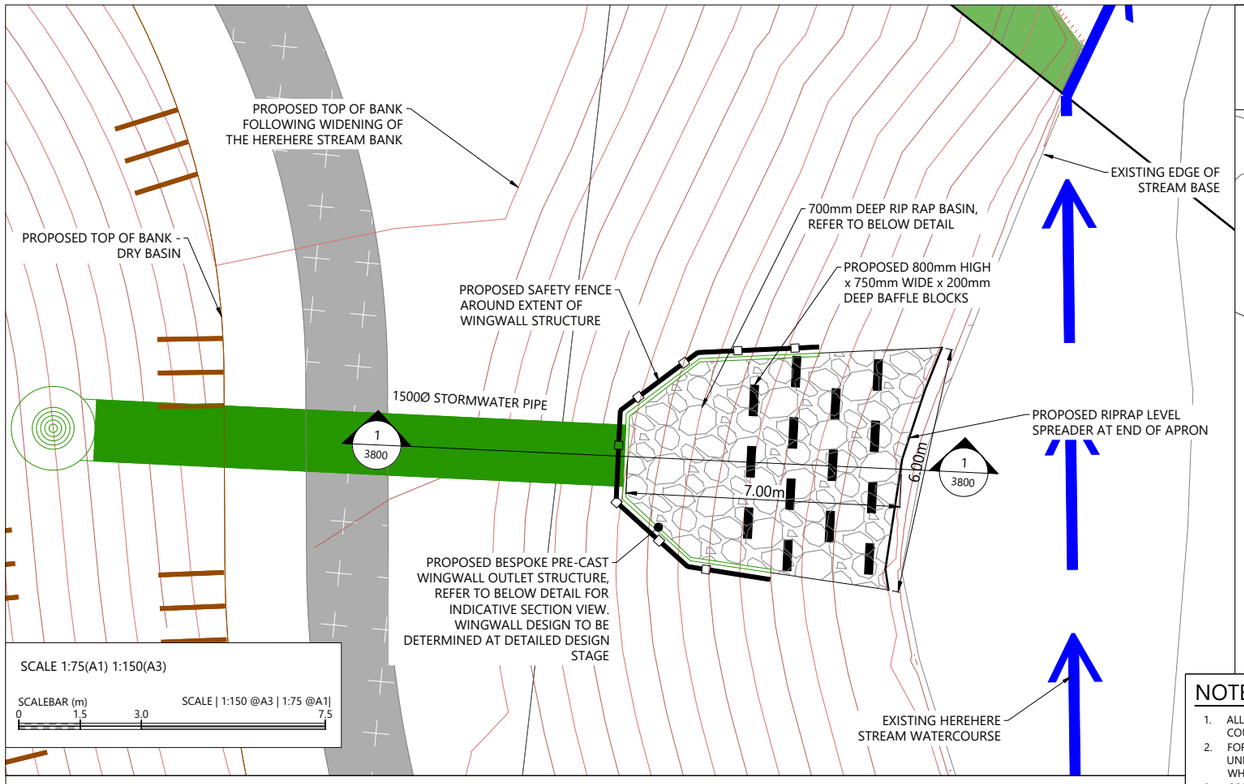
MIDDLE ROAD PROJECT

STORMWATER 5 YEAR CATCHMENT PLAN

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:4000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3600-DR	

Plot Date: 12:28:41 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3600 PROPOSED CATCHMENT PLAN.DWG



LOCATION PLAN

SCALE 1:2500(A1) 1:5000(A3)

SCALEBAR (m) 0 50 100 250

SCALE | 1:5000 @A3 | 1:2500 @A1|

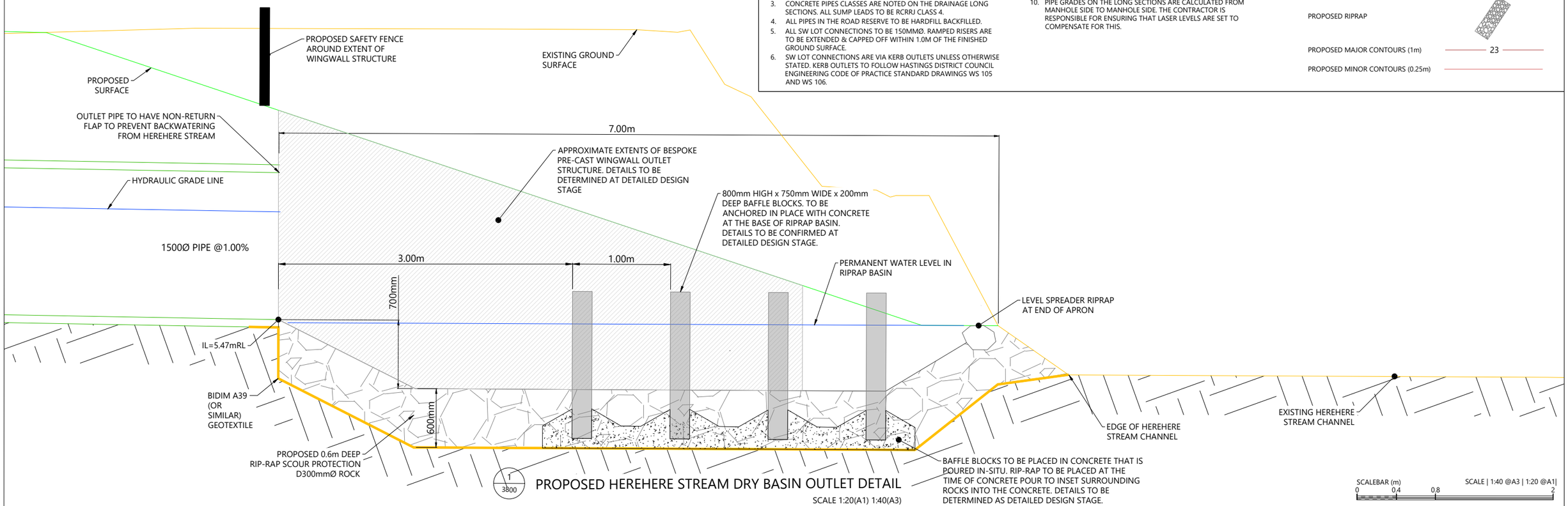


NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
7. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
8. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE AND PIT (3/1)
- PROPOSED RIPRAP
- PROPOSED MAJOR CONTOURS (1m) (23)
- PROPOSED MINOR CONTOURS (0.25m)



REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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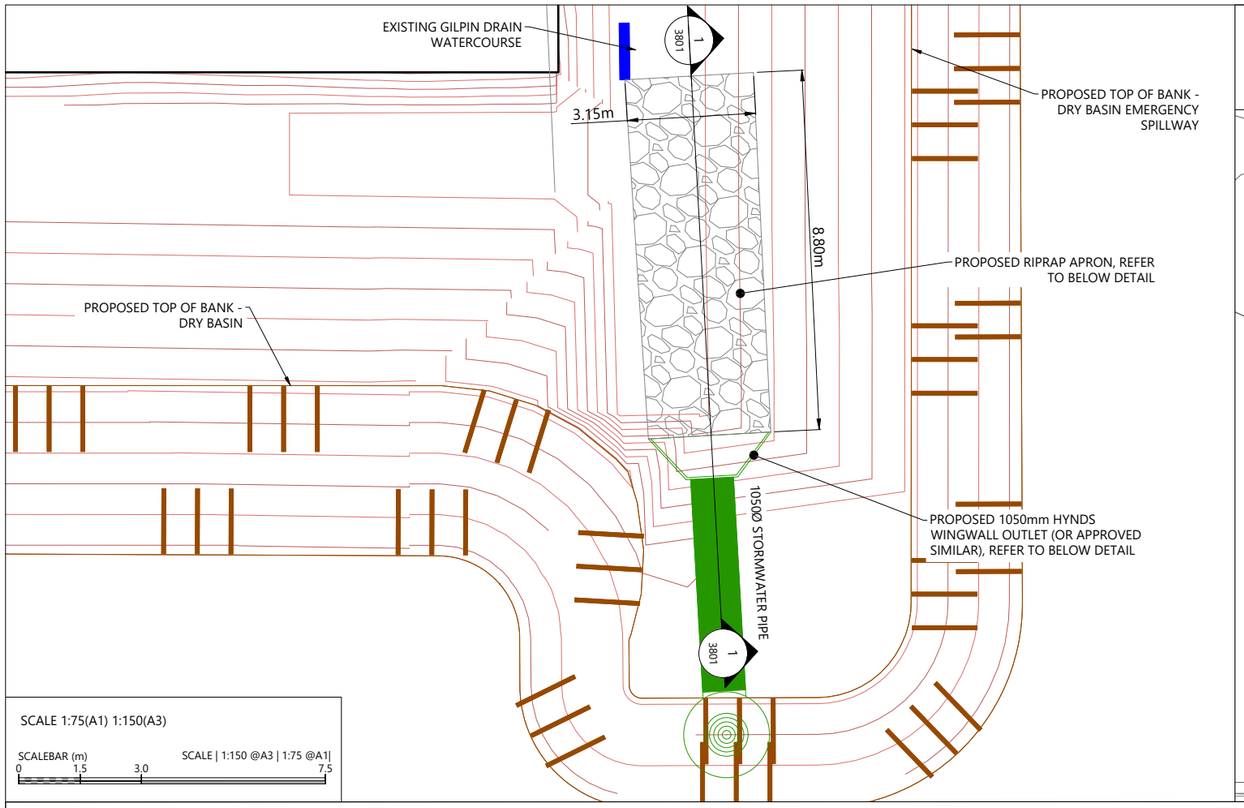
MIDDLE ROAD PROJECT

HEREHERE STREAM STORMWATER OUTLET DETAIL

STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3800-DR	

Plot Date: 12:28:43 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3800 STORMWATER DETAILS.DWG



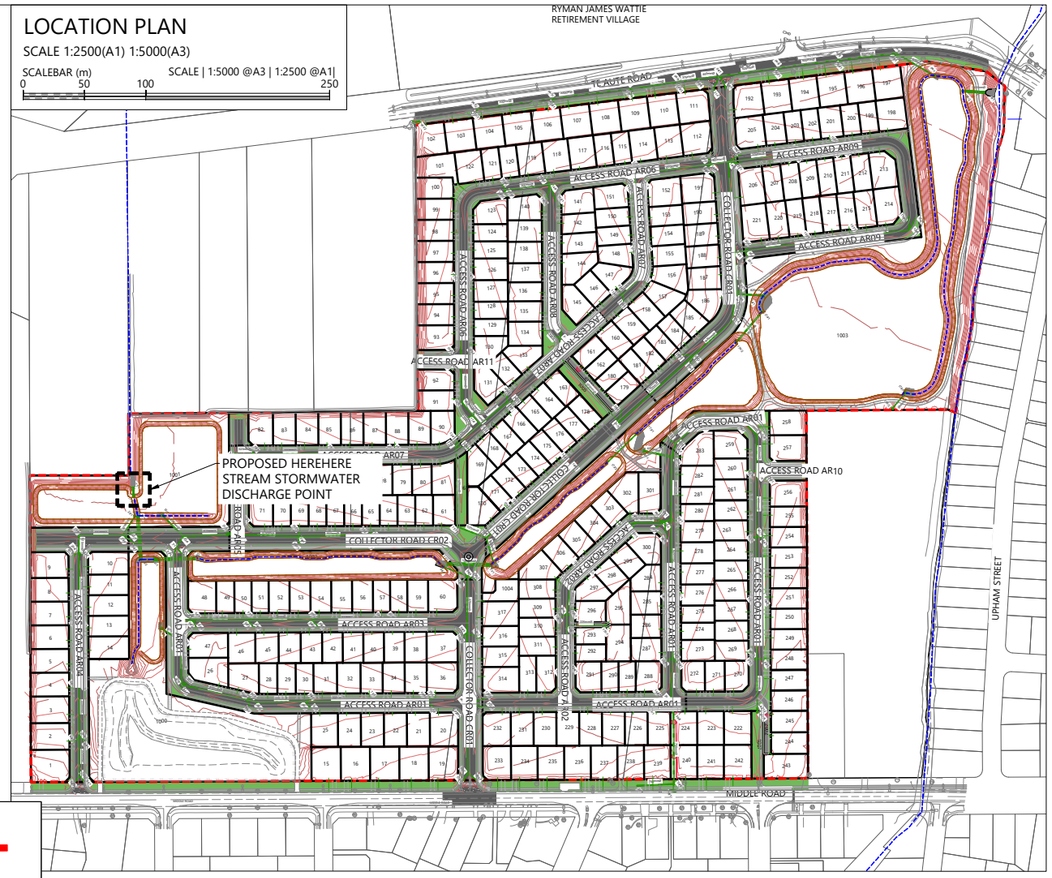
SCALE 1:75(A1) 1:150(A3)

SCALEBAR (m) 0 1.5 3.0 7.5 SCALE | 1:150 @A3 | 1:75 @A1|

LOCATION PLAN

SCALE 1:2500(A1) 1:5000(A3)

SCALEBAR (m) 0 50 100 250 SCALE | 1:5000 @A3 | 1:2500 @A1|

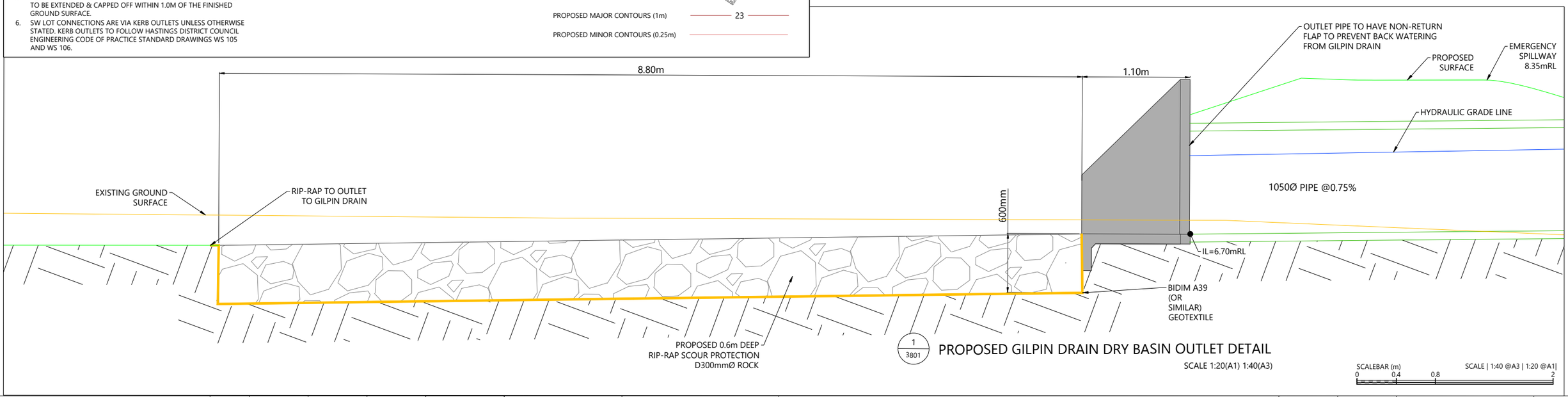


NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. CONCRETE PIPES CLASSES ARE NOTED ON THE DRAINAGE LONG SECTIONS. ALL SUMP LEADS TO BE RCRRJ CLASS 4.
4. ALL PIPES IN THE ROAD RESERVE TO BE HARDFILL BACKFILLED.
5. ALL SW LOT CONNECTIONS TO BE 150MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF WITHIN 1.0M OF THE FINISHED GROUND SURFACE.
6. SW LOT CONNECTIONS ARE VIA KERB OUTLETS UNLESS OTHERWISE STATED. KERB OUTLETS TO FOLLOW HASTINGS DISTRICT COUNCIL ENGINEERING CODE OF PRACTICE STANDARD DRAWINGS WS 105 AND WS 106.
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9. ALL MANHOLE LIDS IN CYCLEWAYS AND SHARED PATHS MUST HAVE A CYCLIST FRIENDLY COVER.
10. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

LEGEND

- SITE BOUNDARY
- PROPOSED STORMWATER LINE AND PIT 3/1
- PROPOSED RIPRAP
- PROPOSED MAJOR CONTOURS (1m) 23
- PROPOSED MINOR CONTOURS (0.25m)



1 / 3801 PROPOSED GILPIN DRAIN DRY BASIN OUTLET DETAIL

SCALE 1:20(A1) 1:40(A3)

SCALEBAR (m) 0 0.4 0.8 2 SCALE | 1:40 @A3 | 1:20 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

GILPIN DRAIN STORMWATER OUTLET DETAIL

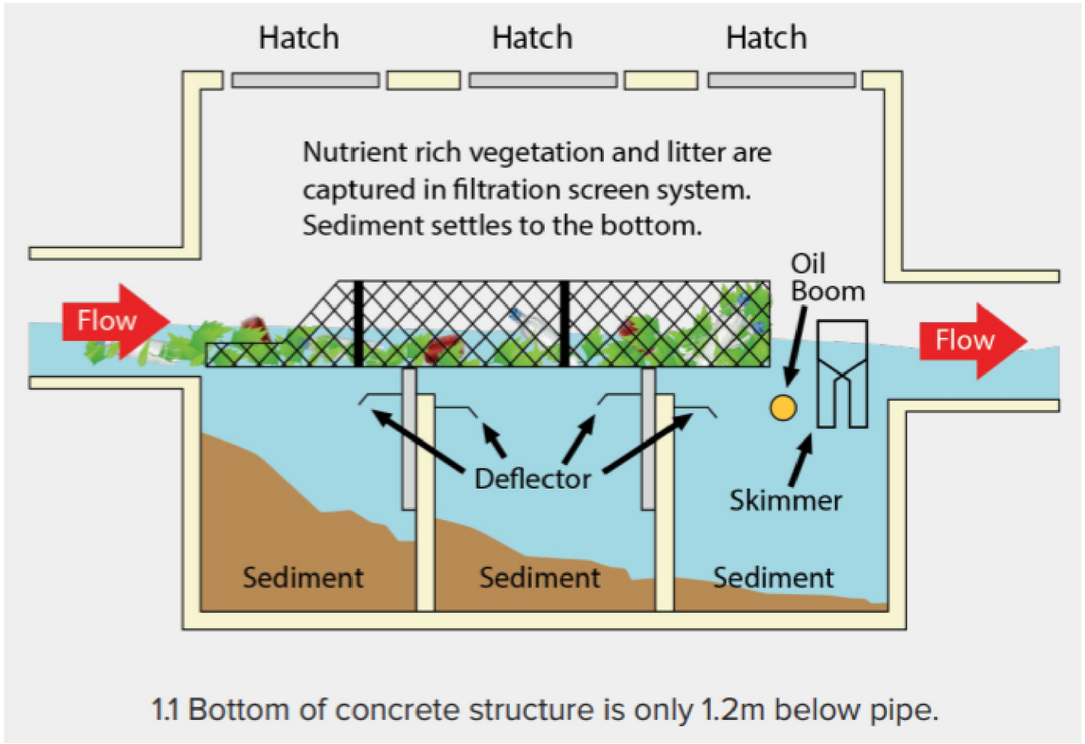
STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3801-DR	

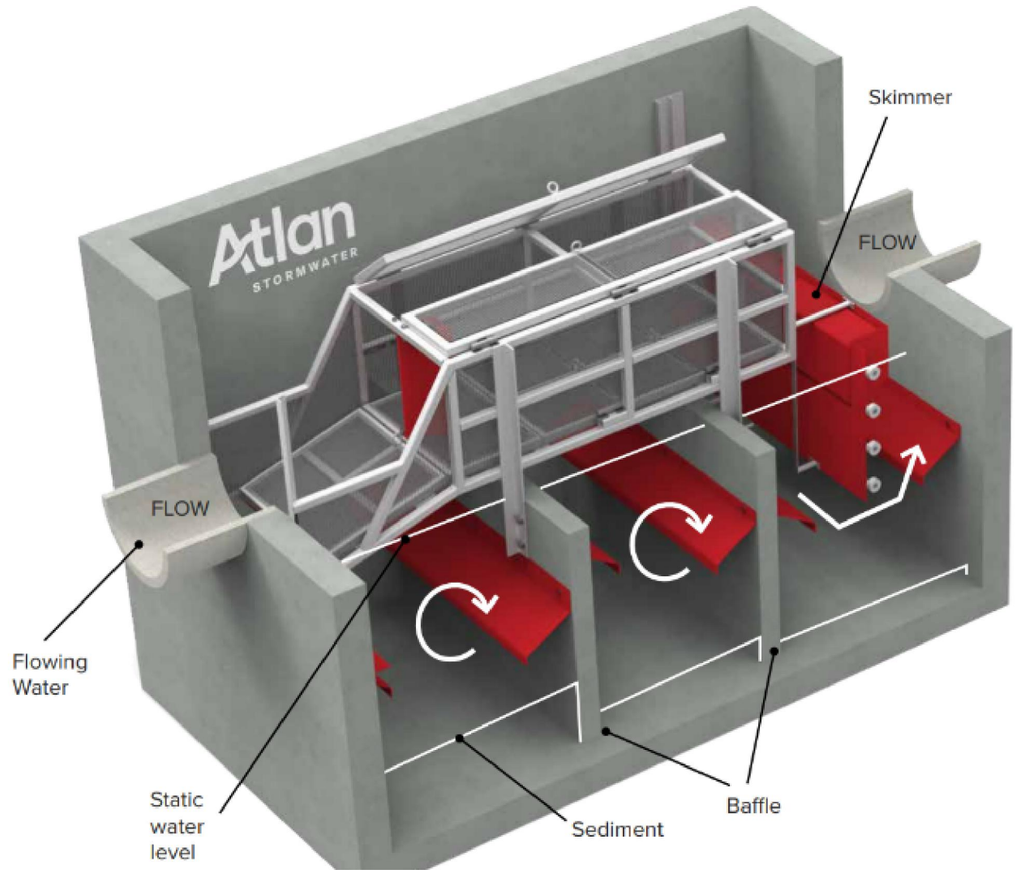
WOODS EST.1970

Plot Date: 12:28:47 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3800 STORMWATER DETAILS.DWG

GPT DETAILS SUMMARY					
GPT NAME	INCOMING PIPE SIZE	TREATMENT FLOW (1/3 2-YEAR ARI)	BYPASS FLOW (5-YEAR ARI)	INCOMING FLOW VELOCITY	GPT SIZE
LINE 04	600mmØ	55.3	236.4 l/s	1.09 m/s	SBB-4-8
LINE 05	675mmØ	73.7	315.5 l/s	1.17 m/s	SBB-4-8
LINE 08	375mmØ	31.2	133.3 l/s	2.40 m/s	SBB-3-6
LINE 13	675mmØ	75.4	322.7 l/s	1.21 m/s	SBB-4-8
LINE 14	750mmØ	153.9	658.3 l/s	1.57 m/s	SBB-5-10
LINE 15	600mmØ	61.8	264.5 l/s	1.12 m/s	SBB-4-8
LINE 23	450mmØ	39.1	167.4 l/s	1.49 m/s	SBB-4-8
LINE 41	1050mmØ	282.9	1057.8 l/s	1.59 m/s	SBB-6-12





REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

STORMWATER GPT DETAILS

STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3810-DR	

Plot Date: 12:28:51 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3800 STORMWATER DETAILS.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

WOODS
EST.1970

TE AUTE RD

GILPIN DRAIN

HEREHERE STREAM

REFER SHEET 3851

REFER SHEET 3852

REFER SHEET 3853

REFER SHEET 3854

REFER SHEET 3855

REFER SHEET 3856

REFER SHEET 3857

MIDDLE RD

MIDDLE RD CULVERT

SCALEBAR (m) 0 30 60 150

SCALE | 1:3000 @A3 | 1:1500 @A1|

Plot Date: 12:28:52 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
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NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

OVERALL DRY BASIN LAYOUT PLAN

STATUS	ISSUED FOR CONSENT
SCALE	1:3000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3850-DR

REV 2

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

2m WIDE STAFF MAINTENANCE ACCESS TO GILPIN DRAIN AND OUTLET STRUCTURE

EMERGENCY SPILLWAY LOCATION

1001

BASIN OUTLET. REFER TO DRAWING 3801-DR FOR DETAILS

SCRUFFY DOME OUTLET. REFER TO DRAWING 3862-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

TWIN 1m X 1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR DETAILS

82

72

71

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3851-DR
REV	2

Plot Date: 12:28:54 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

TWIN 1m X 1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

TWIN 1m X 1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

EXISTING IONA POND OUTLET STRUCTURE

1002

48 49 50 51 52 53 54 55

47 46 45 44 43

26 27 28 29 30

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:500 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3852-DR	

Plot Date: 12:28:55 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

LOW-FLOW CONVEYANCE CHANNEL

TWIN 1m X 1m BOX CULVERTS. REFER TO DRAWING 3870-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

Plot Date: 12:28:56 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 3

STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3853-DR
REV	2

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

PIPE CULVERT CONNECTION BETWEEN LOW-FLOW CHANNELS. REFER TO STORMWATER LONGSECTIONS FOR DETAILS

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

SCALEBAR (m) 0 5 10 25 — SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3854-DR
REV	2

Plot Date: 12:28:57 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

PIPE CULVERT CONNECTION BETWEEN LOW-FLOW CHANNELS. REFER TO STORMWATER LONGSECTIONS FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

1003

UPSTREAM EMERGENCY SPILLWAY LOCATION AT 8.35mRL

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

PIPE CULVERT CONNECTION FROM EXISTING BAKE DRAIN IN NEIGHBOURING LOT TO PROPOSED LOW-FLOW CHANNEL. REFER TO STORMWATER LONGSECTIONS FOR DETAILS

258

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 5

STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3855-DR
REV	2

Plot Date: 12:28:58 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (1m) — 23
- PROPOSED STORMWATER LINE AND PIT — 3/1
- PROPOSED SUMP
- PROPOSED STORMWATER WINGWALL OUTLET
- PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

219 218 217 216 215 214

LOW-FLOW CONVEYANCE CHANNEL

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

PIPE CULVERT CONNECTION BETWEEN LOW-FLOW CHANNELS. REFER TO STORMWATER LONGSECTIONS FOR DETAILS

1003

LOW-FLOW CONVEYANCE CHANNEL

UPSTREAM EMERGENCY SPILLWAY LOCATION AT 8.35mRL

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
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MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 6

STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3856-DR
REV	2

Plot Date: 12:28:59 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG

LEGEND

STAGE BOUNDARIES

PROPOSED MAJOR CONTOURS (1m) — 23

PROPOSED STORMWATER LINE AND PIT — 3/1

PROPOSED SUMP

PROPOSED STORMWATER WINGWALL OUTLET

PROPOSED ROCK RIPRAP

NOTES

1. DETAILED DESIGN OF DRY BASINS TO BE UNDERTAKEN AT ENGINEERING PLAN APPROVAL STAGE.
2. REFER APPENDIX D OF STORMWATER MANAGEMENT PLAN FOR PRELIMINARY DRY BASIN DESIGN DETAILS.
3. REFER TO DRAWING SERIES P25-496-00-1300-EW AND P25-496-00-1340-EW FOR EARTHWORKS SECTIONS.
4. REFER LANDSCAPE DESIGN FOR PLANTING DETAILS.

ROCK RIP RAP. REFER TO DRAWING 3860-DR FOR DETAILS

SCRUFFY DOME OUTLET. REFER TO DRAWING 3862-DR FOR DETAILS

BASIN OUTLET. REFER TO DRAWING 3800-DR FOR DETAILS

LOW-FLOW CONVEYANCE CHANNEL

EMERGENCY SPILLWAY LOCATION

LOW-FLOW CONVEYANCE CHANNEL

SCALEBAR (m) 0 5 10 25

SCALE | 1:500 @A3 | 1:250 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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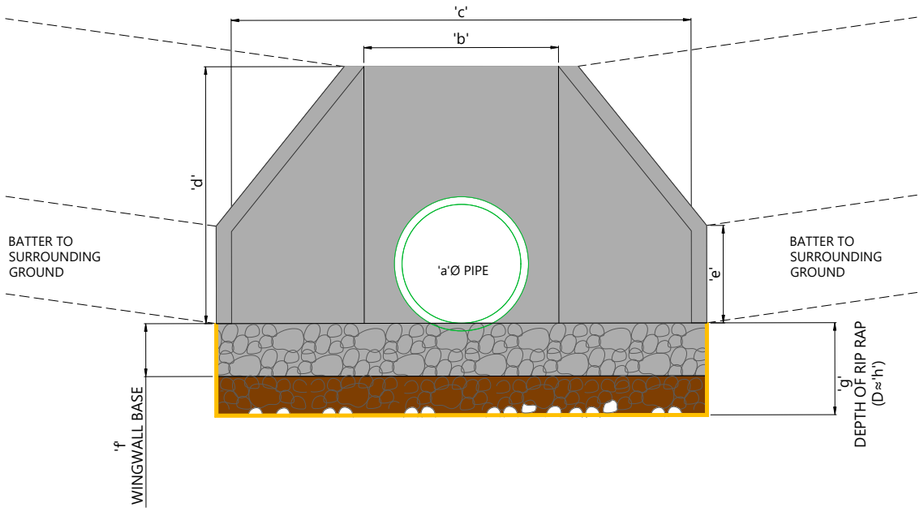
MIDDLE ROAD PROJECT

DRY BASIN LAYOUT PLAN - SHEET 7

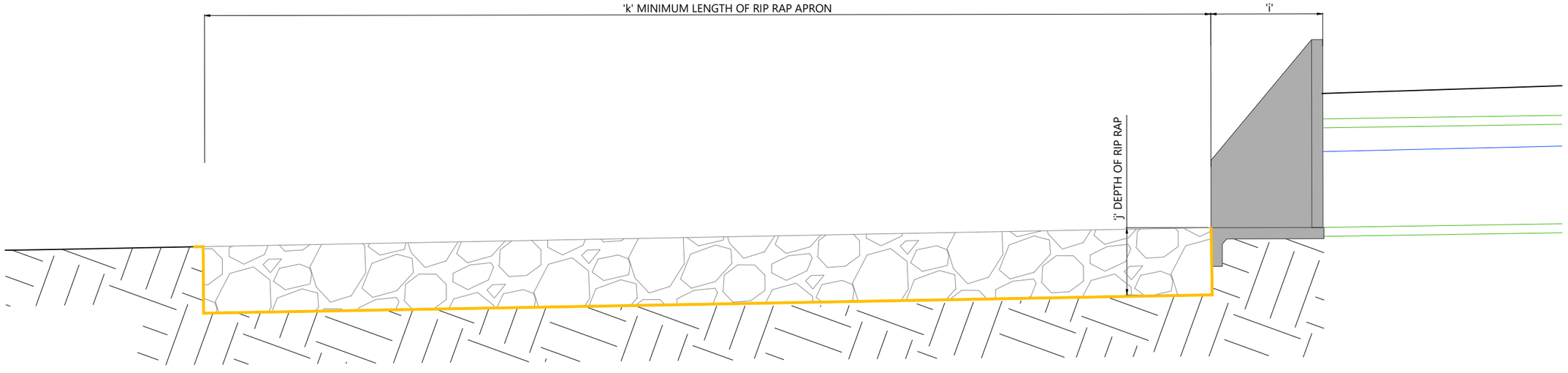
STATUS	ISSUED FOR CONSENT
SCALE	1:500 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-3857-DR
REV	2

Plot Date: 12:29:00 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG



WINGWALL DETAILS SUMMARY												
WINGWALL NAME	INCOMING PIPE GRADE	a Ø PIPE	b	c	d	e	f	g	h	i	j	k
04/1	0.20%	DN600	0.81	2.5	1	0.39	0.25	0.3	0.15	0.75	1.8	2.8
05/1	0.20%	DN675	1.27	3	1.68	0.6	0.35	0.3	0.15	1	2	3
08/1	2.28%	DN375	0.81	2.5	1	0.39	0.25	0.4	0.2	0.75	1.2	4.6
13/1	0.22%	DN675	1.27	3	1.68	0.6	0.35	0.3	0.15	1	2.1	3.3
14/1	0.20%	DN750	1.27	3	1.68	0.6	0.35	0.3	0.15	1	2.3	4.1
15/1	0.20%	DN600	0.81	2.5	1	0.39	0.25	0.3	0.15	0.75	1.8	2.8
23/1	0.55%	DN450	0.81	2.5	1	0.39	0.25	0.3	0.15	0.75	1.4	3.2
41/1	0.20%	DN1050	1.27	3	1.68	0.6	0.35	0.4	0.2	1	3.2	5.3
173/1	0.59%	DN525	0.81	2.5	1	0.39	0.25	0.3	0.15	0.75	1.6	3.9
174/1	0.98%	DN900	1.27	3	1.68	0.6	0.35	0.6	0.3	1	2.7	9
178/1	0.93%	DN450	0.81	2.5	1	0.39	0.25	0.3	0.15	0.75	1.4	3.8



SCALEBAR (m) 0 0.4 0.8 2

SCALE | 1:40 @A3 | 1:20 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
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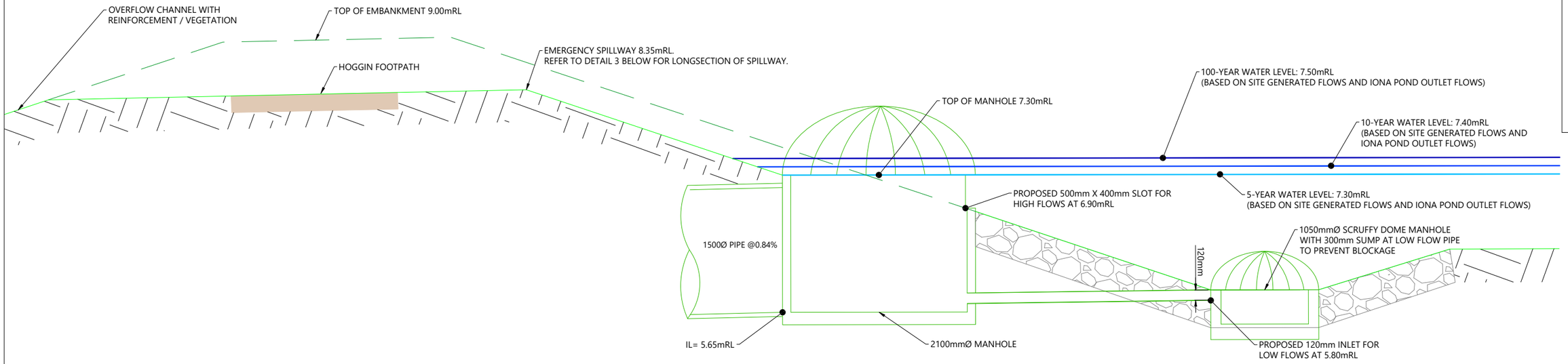
CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

WINGWALL OUTLET DETAILS

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:40 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3860-DR	

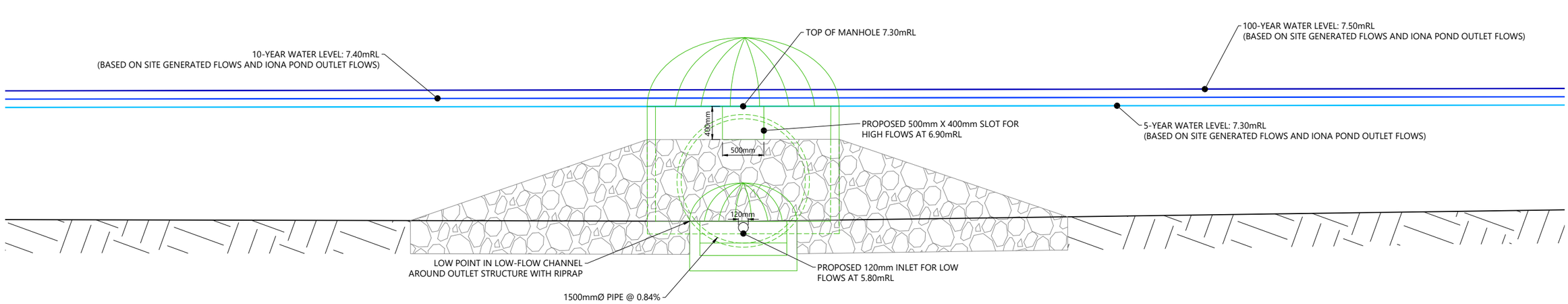
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File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG



01 - OUTLET STRUCTURE 176/2 SECTION 1

SCALE 1:50 @ A3

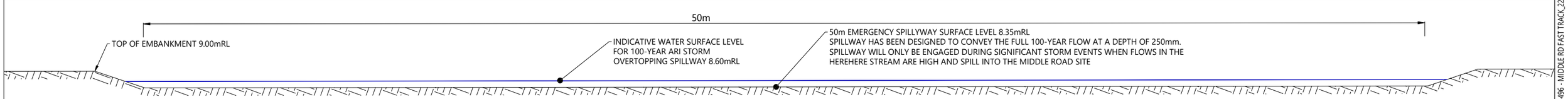
SCALEBAR (m) 0 0.5 1 2.5 — SCALE | 1:50 @A3 | 1:25 @A1|



02 - OUTLET STRUCTURE 176/2 SECTION 2

SCALE 1:50 @ A3

SCALEBAR (m) 0 0.5 1 2.5 — SCALE | 1:50 @A3 | 1:25 @A1|



03 - NORTHERN DRY BASIN EMERGENCY SPILLWAY SECTION

SCALE 1:100 @ A3

SCALEBAR (m) 0 1.5 3.0 7.5 — SCALE | 1:150 @A3 | 1:75 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

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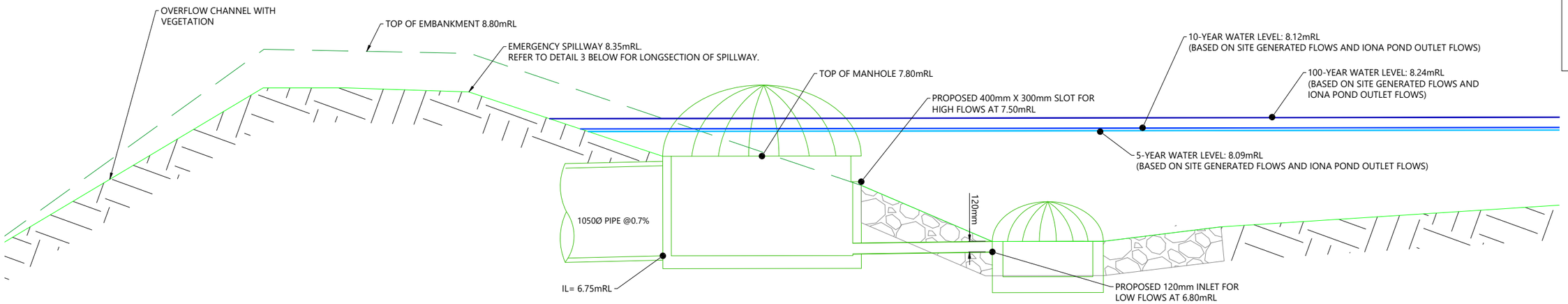
MIDDLE ROAD PROJECT

NORTHERN DRY BASIN STORMWATER OUTLET 176/2 DETAILS

STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3861-DR	

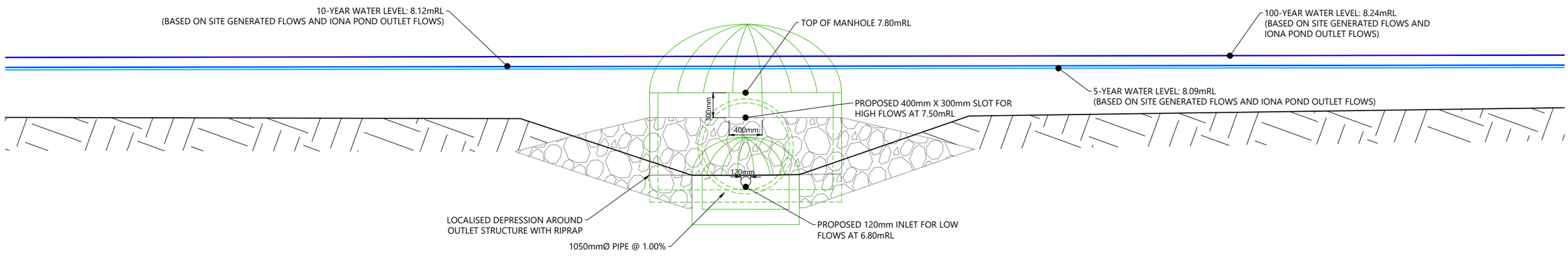
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File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG



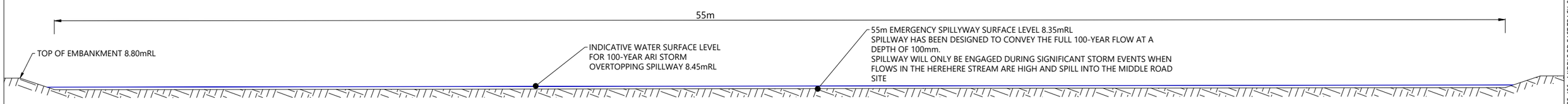
01 - OUTLET STRUCTURE 177/2 SECTION 1
SCALE 1:50 @ A3

SCALEBAR (m) 0 0.5 1 2.5 SCALE | 1:50 @A3 | 1:25 @A1|



02 - OUTLET STRUCTURE 177/2 SECTION 2
SCALE 1:50 @ A3

SCALEBAR (m) 0 0.5 1 2.5 SCALE | 1:50 @A3 | 1:25 @A1|



03 - SOUTHERN DRY BASIN EMERGENCY SPILLWAY SECTION
SCALE 1:100 @ A3

SCALEBAR (m) 0 1.5 3.0 7.5 SCALE | 1:150 @A3 | 1:75 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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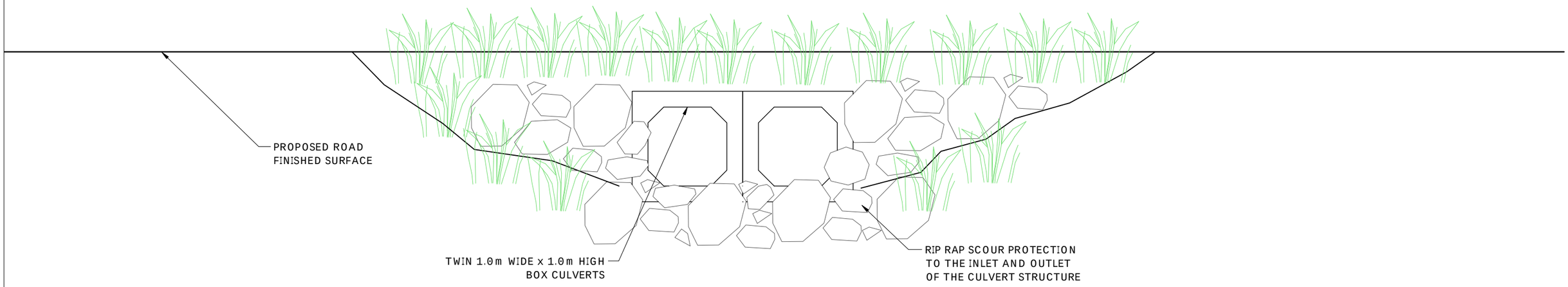
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MIDDLE ROAD PROJECT

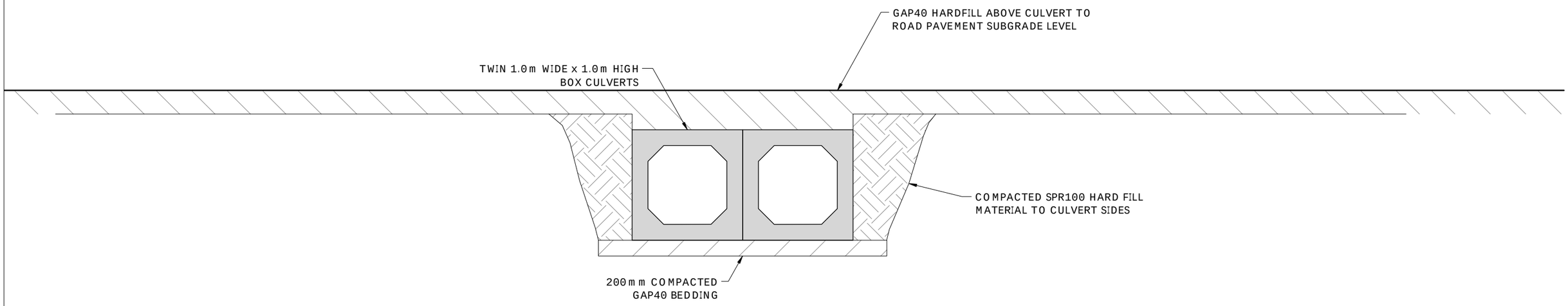
SOUTHERN DRY BASIN STORMWATER OUTLET 177/2 DETAILS

STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3862-DR	

Plot Date: 12:29:05 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3850 DRY BASIN LAYOUT PLAN.DWG



TYPICAL CULVERT CROSSING DETAIL



TYPICAL CULVERT CROSSING SECTION

SCALEBAR (m) 0 0.5 1 2.5

SCALE | 1:50 @A3 | 1:25 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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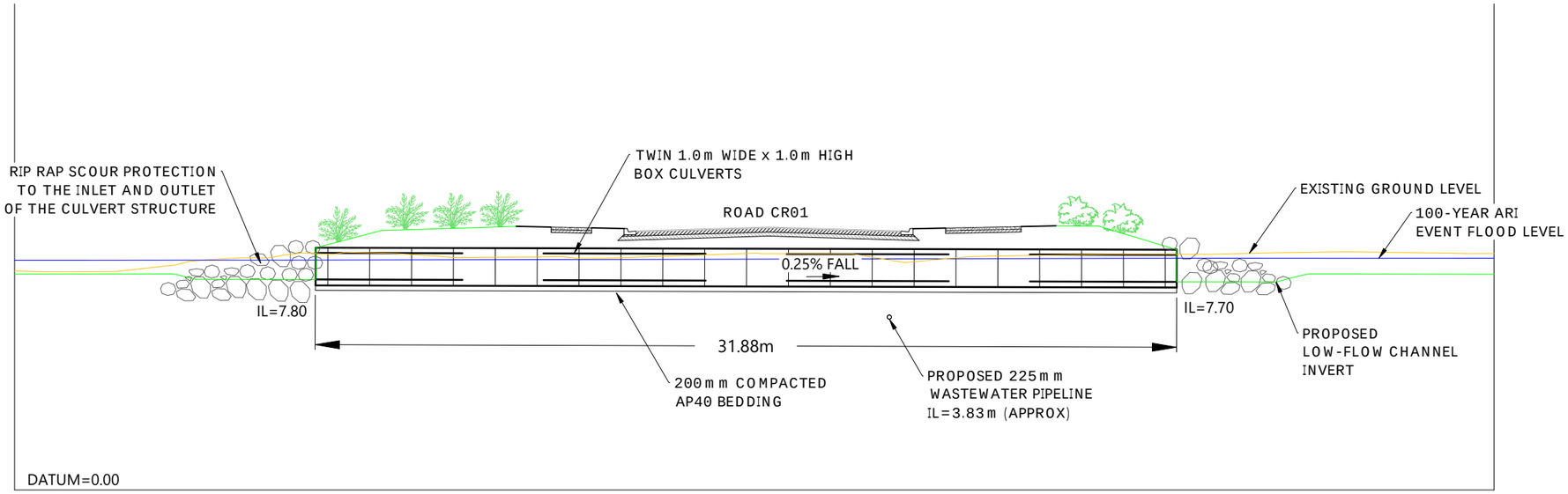
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MIDDLE ROAD PROJECT

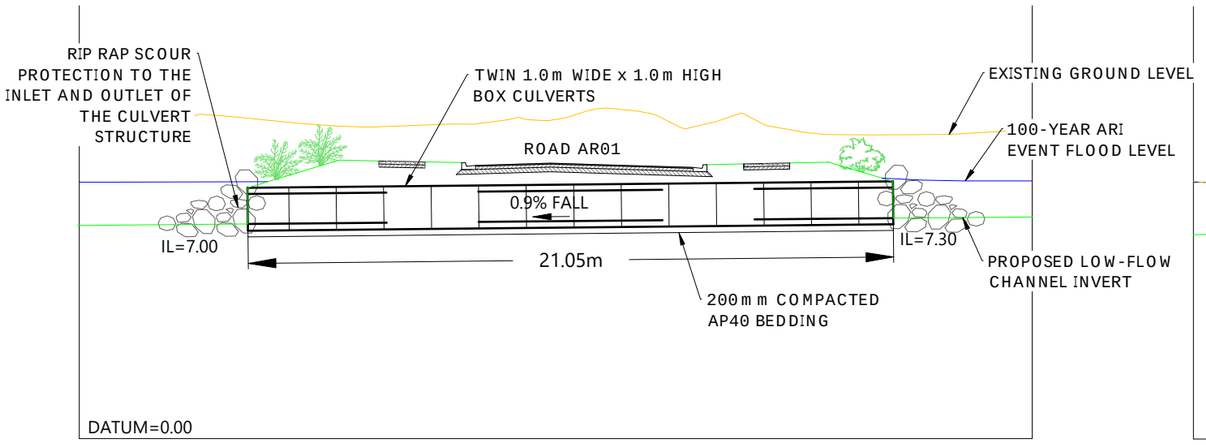
TYPICAL CULVERT CROSSING DETAIL

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:50 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3870-DR	

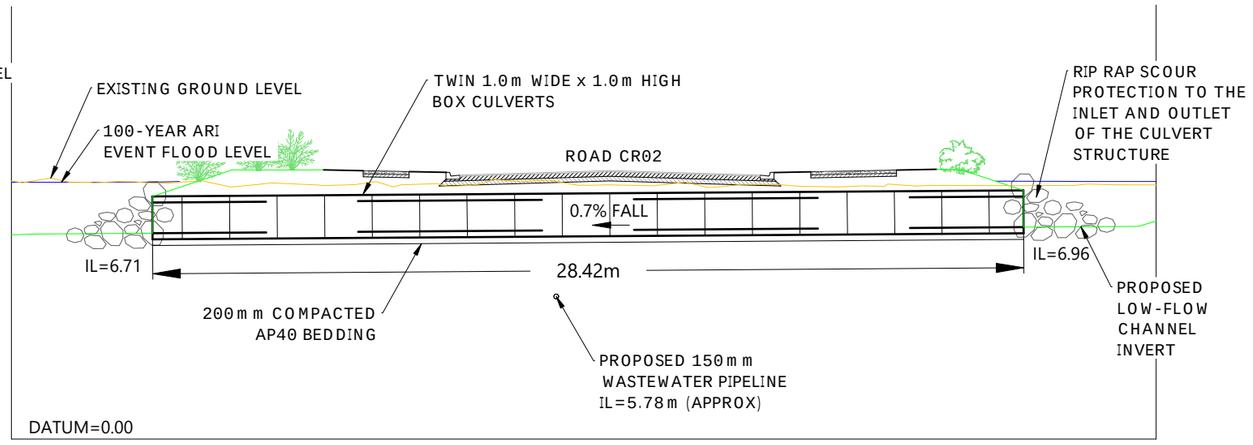
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CULVERT 1 (ROAD CR01) LONG SECTION



CULVERT 2 (ROAD AR01) LONG SECTION



CULVERT 3 (ROAD CR02) LONG SECTION

SCALEBAR (m) 0 0.5 1 2.5

SCALE | 1:50 @A3 | 1:25 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	LZM
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

CULVERT LONG SECTIONS

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:50 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3871-DR	

Plot Date: 12:29:08 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3870 CULVERT DETAILS.DWG

NOTES

1. REFER DRAWINGS 3901-3909 FOR OVERLAND FLOW PATH CROSS SECTIONS.
2. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
3. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.

LEGEND

- SITE BOUNDARY
- PROPOSED OVERLAND FLOW PATH
- PROPOSED MAJOR CONTOURS (1m) — 23
- CATCHMENT 1 - SITE AREA DISCHARGING TO DRY POND
- CATCHMENT 2 - SITE AREA DISCHARGING TO DRY POND
- CATCHMENT 3 - SITE AREA DISCHARGING TO DRY POND
- CATCHMENT 4 - SITE AREA DISCHARGING TO DRY POND
- CATCHMENT 5 - SITE AREA DISCHARGING TO DRY POND
- CATCHMENT 6 - SITE RESERVE AREA DISCHARGING TO DRY POND
- CATCHMENT 7 - SITE RESERVE AREA DISCHARGING TO DRY POND
- CATCHMENT 8 - SITE RESERVE AREA DISCHARGING TO DRY POND
- CATCHMENT 9 - SITE RESERVE AREA DISCHARGING TO DRY POND
- CATCHMENT 10 - SITE AREA DISCHARGING TO TE AUTE ROAD
- CATCHMENT 10 - SITE AREA SHEETFLOWING TO FARM DRAIN ON BOUNDARY
- CATCHMENT 11 - SITE AREA SHEETFLOWING TO FARM DRAIN ON BOUNDARY
- CATCHMENT 12 - SITE AREA SHEETFLOWING TO HEREHERE STREAM
- CATCHMENT 13 - MIDDLE ROAD AREA DISCHARGING TO DRY POND VIA THE SITE
- 100-YEAR ARI FLOOD SURFACE

RYMAN JAMES WATTIE RETIREMENT VILLAGE

TE AUTE ROAD

TE AUTE RD

CATCHMENT 10 1.072Ha

CATCHMENT 1 5.460Ha

CATCHMENT 10 0.231Ha

CATCHMENT 12 0.321Ha

CATCHMENT 6 3.943Ha

CATCHMENT 9 1.025Ha

CATCHMENT 2 4.212Ha

CATCHMENT 4 1.438Ha

CATCHMENT 11 0.167Ha

CATCHMENT 7 0.515Ha

CATCHMENT 3 4.907Ha

CATCHMENT 8 1.607Ha

CATCHMENT 5 5.427Ha

CATCHMENT 5 8.372Ha

ACCESS ROAD AR01

ACCESS ROAD AR02

ACCESS ROAD AR03

ACCESS ROAD AR04

ACCESS ROAD AR05

ACCESS ROAD AR06

ACCESS ROAD AR07

ACCESS ROAD AR08

ACCESS ROAD AR09

ACCESS ROAD AR10

ACCESS ROAD AR11

COLLECTOR ROAD CR01

COLLECTOR ROAD CR02

MIDDLE RD

MIDDLE ROAD

UPHAM STREET

LUCKNOW SCHOOL

SCALEBAR (m) 0 30 60 150

SCALE | 1:3000 @A3 | 1:1500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	LZM
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

OVERLAND FLOW PATH
POST-DEVELOPMENT PLAN

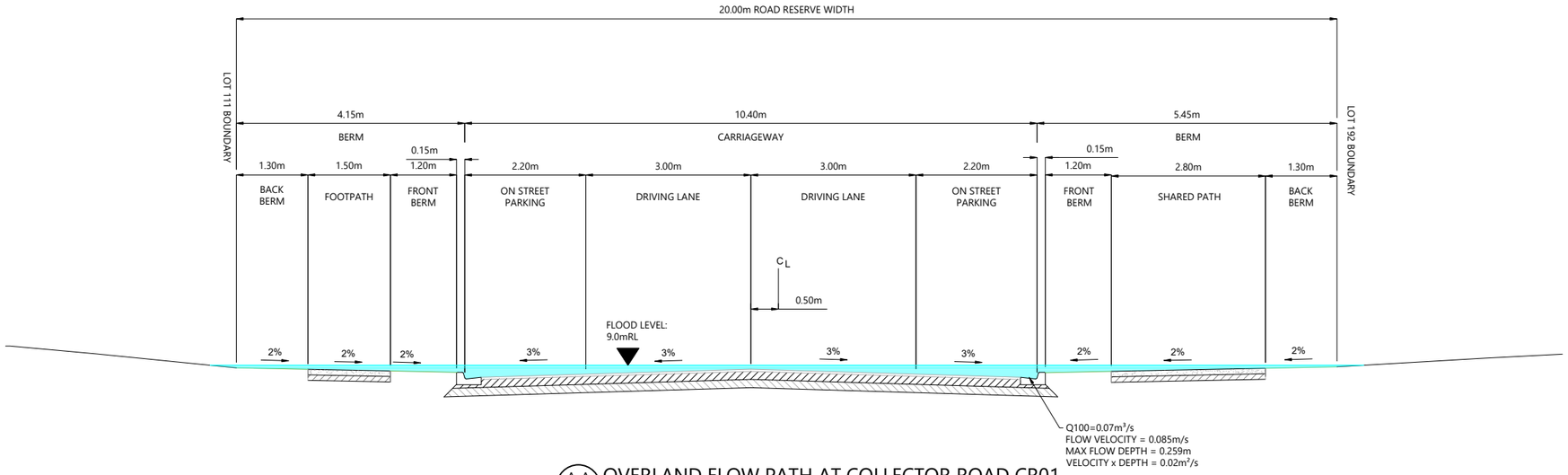
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COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3900-DR	

Plot Date: 12:29:09 pm,30 September 2026, NEDV

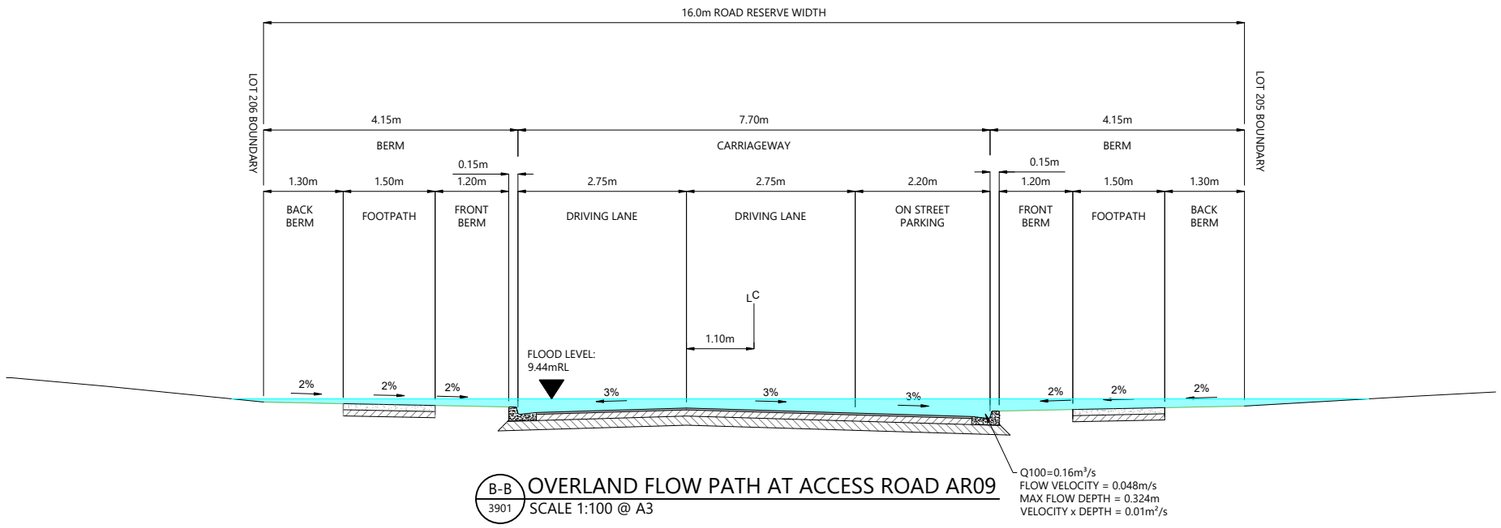
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



A-A 3901 OVERLAND FLOW PATH AT COLLECTOR ROAD CR01
SCALE 1:100 @ A3



B-B 3901 OVERLAND FLOW PATH AT ACCESS ROAD AR09
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

OVERLAND FLOW SECTION - SHEET 1

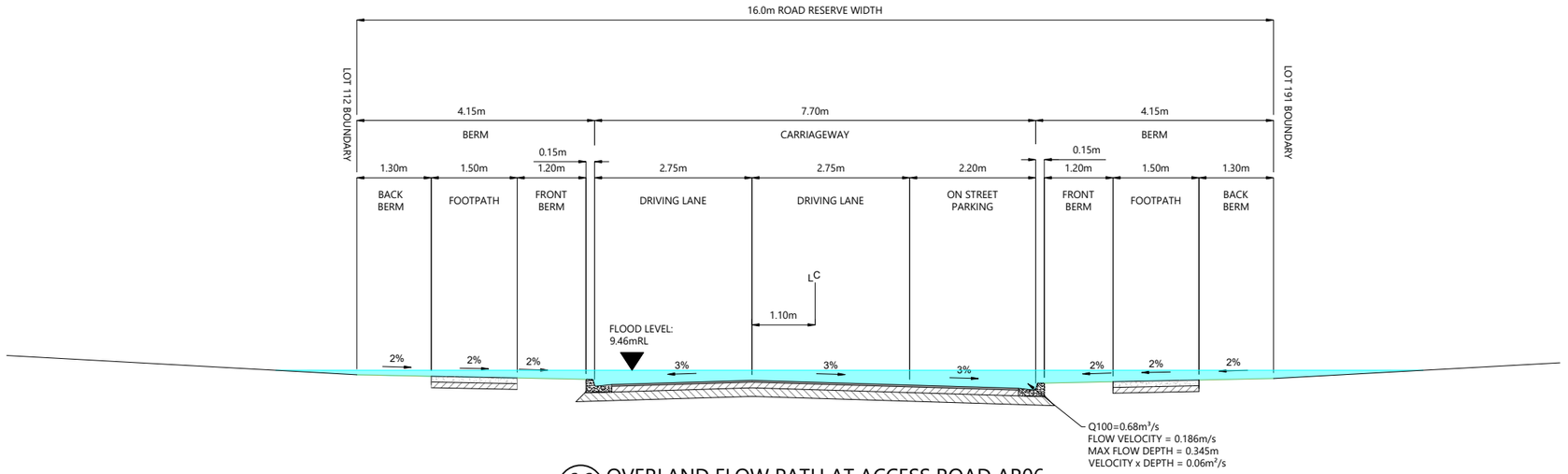
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SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3901-DR	

Plot Date: 401:43 pm,30 September 2026, LOUISZS

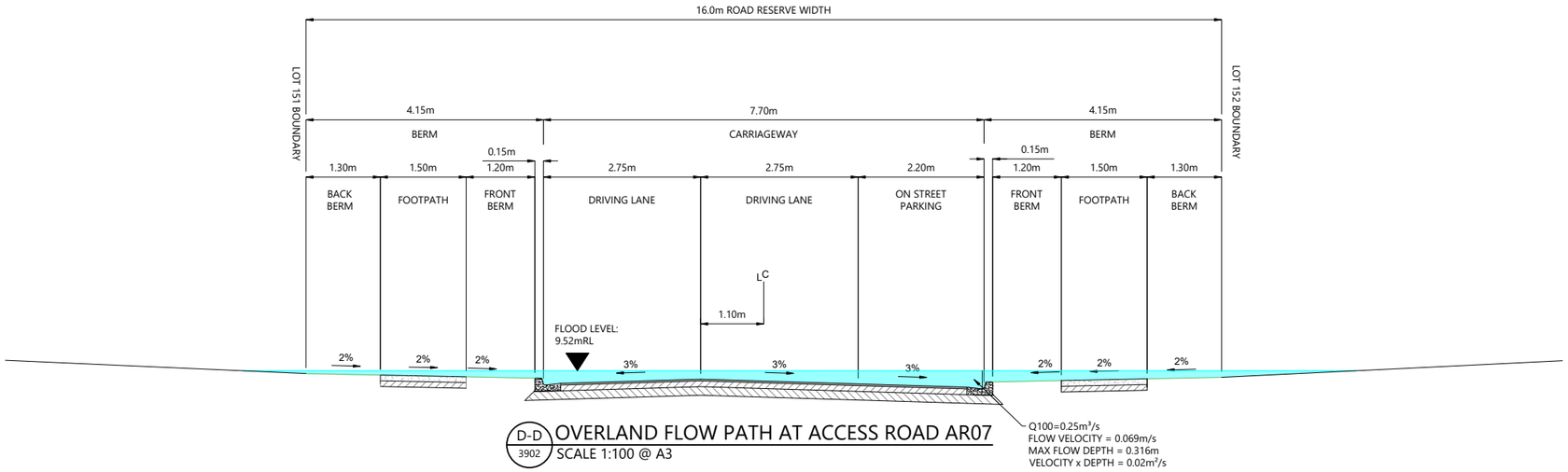
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3900 OVERLAND FLOW PATH - POST DEVELOPMENT PLAN.DWG

NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



C-C 3902 OVERLAND FLOW PATH AT ACCESS ROAD AR06
SCALE 1:100 @ A3



D-D 3902 OVERLAND FLOW PATH AT ACCESS ROAD AR07
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

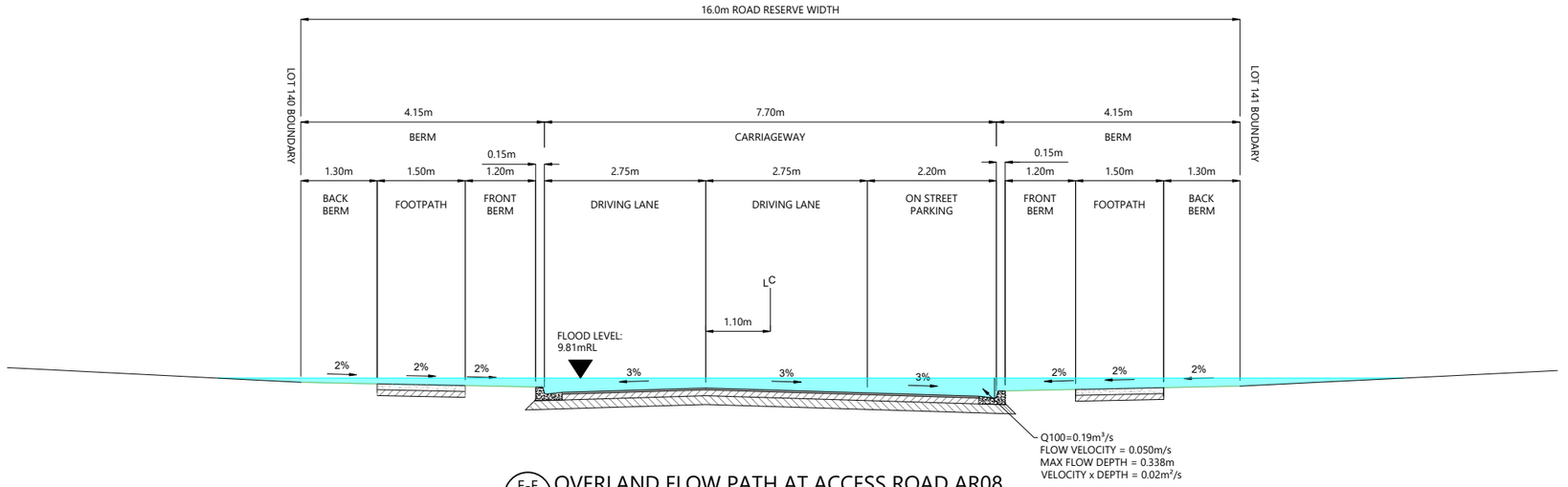
OVERLAND FLOW SECTIONS - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3902-DR	

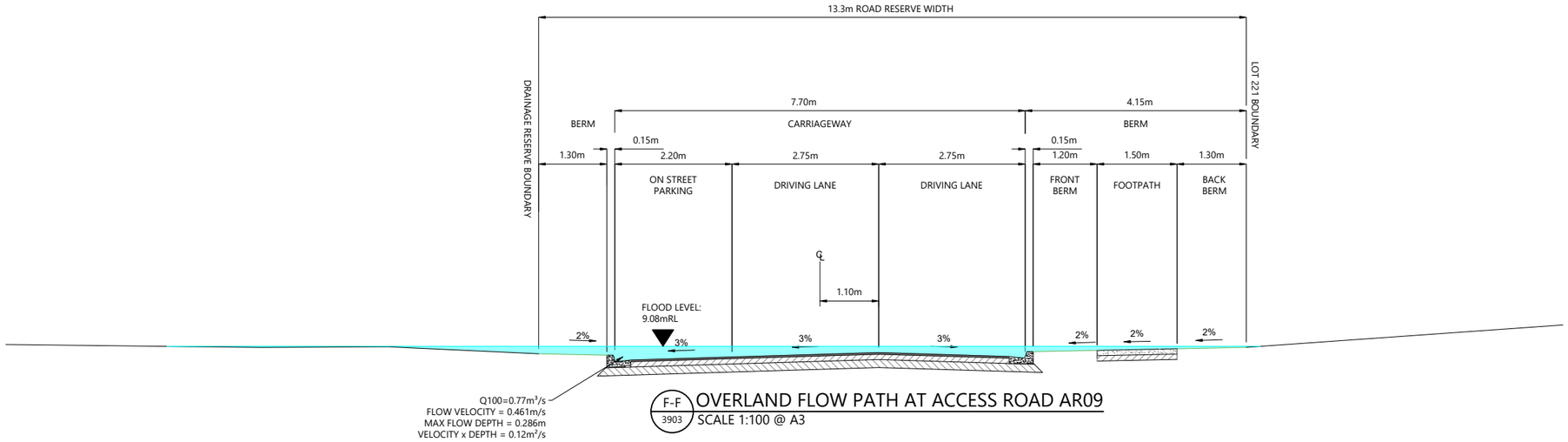
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File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3900 OVERLAND FLOW PATH - POST DEVELOPMENT PLAN.DWG

NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



E-E / 3903 OVERLAND FLOW PATH AT ACCESS ROAD AR08
SCALE 1:100 @ A3



F-F / 3903 OVERLAND FLOW PATH AT ACCESS ROAD AR09
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

OVERLAND FLOW SECTIONS - SHEET 3

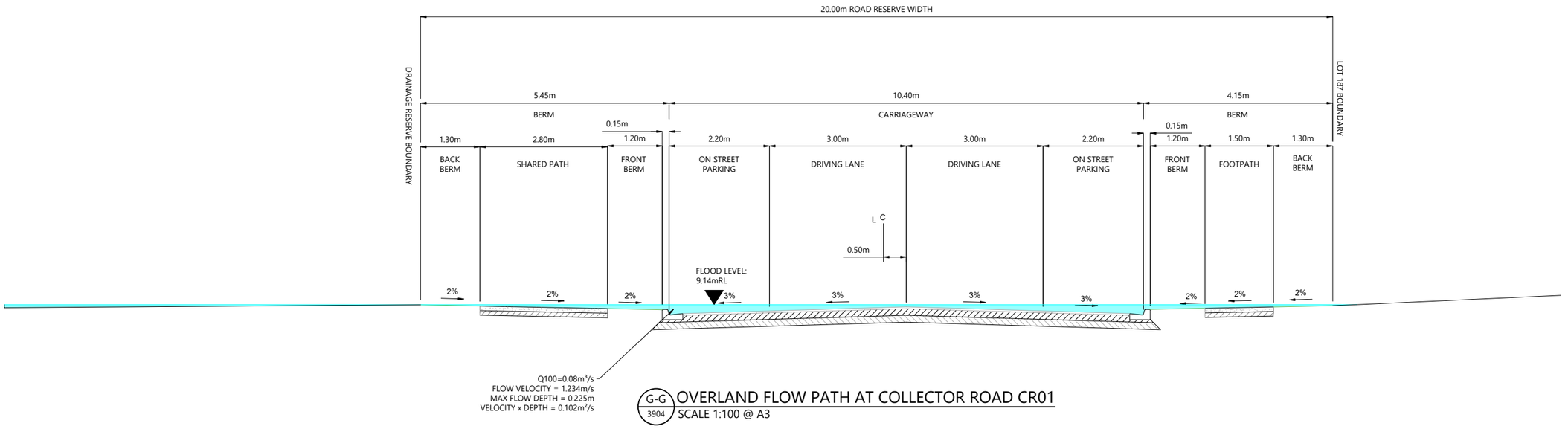
STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3903-DR	

Plot Date: 4:01:44 pm,30 September 2026, LOUISZS

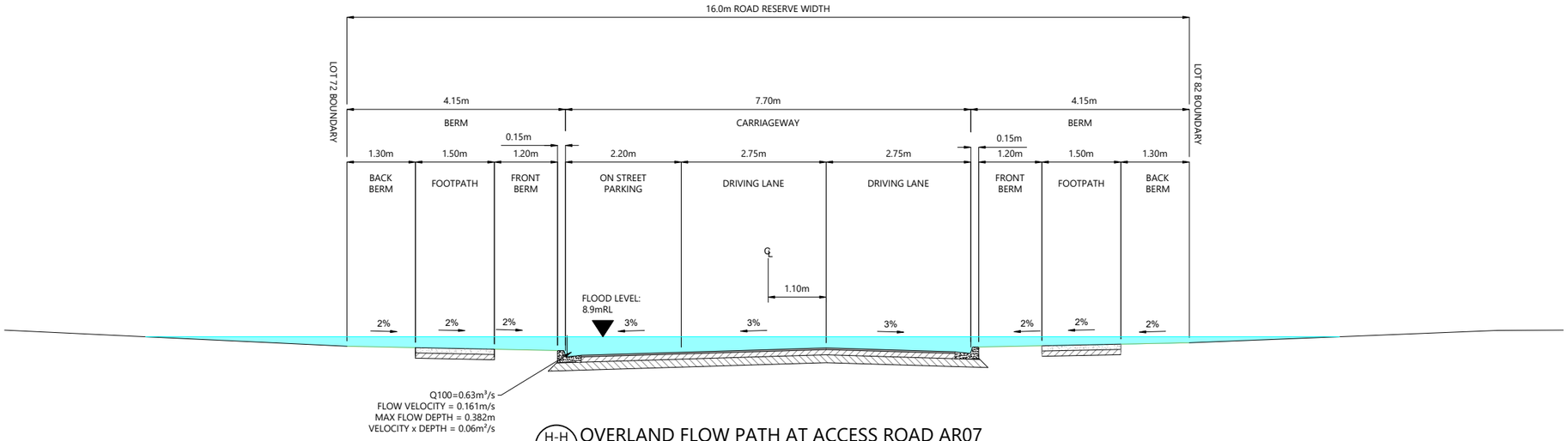
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-3900 OVERLAND FLOW PATH - POST DEVELOPMENT PLAN.DWG

NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



G-G / 3904 OVERLAND FLOW PATH AT COLLECTOR ROAD CR01
SCALE 1:100 @ A3



H-H / 3904 OVERLAND FLOW PATH AT ACCESS ROAD AR07
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

OVERLAND FLOW SECTIONS - SHEET 4

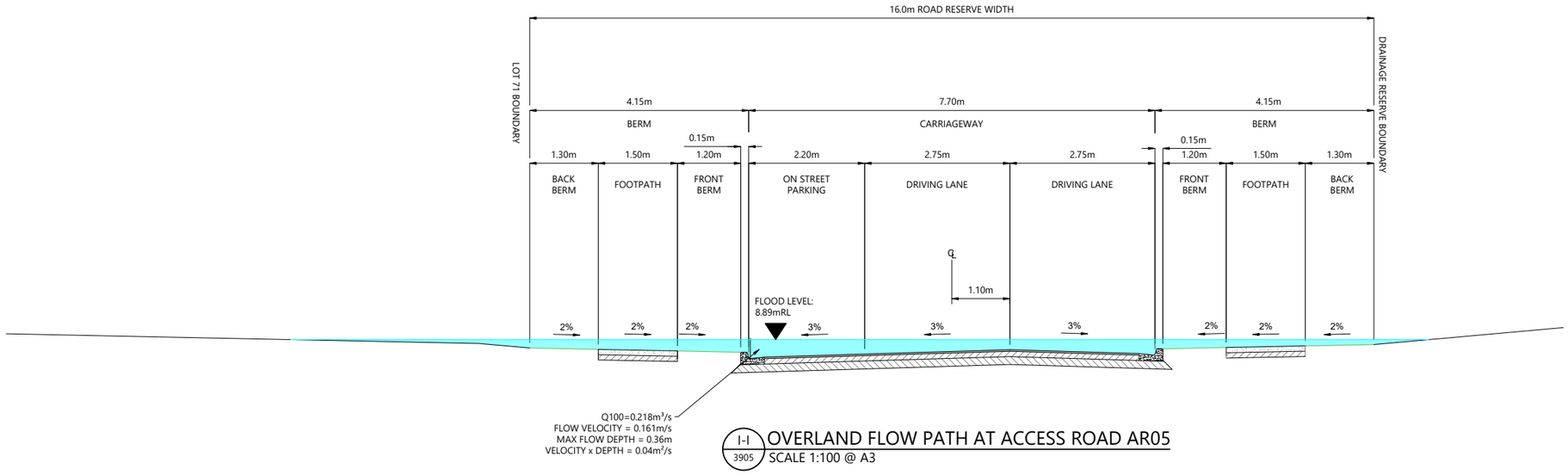
STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3904-DR	

Plot Date: 4:01:46 pm,30 September 2026, LOUISZS

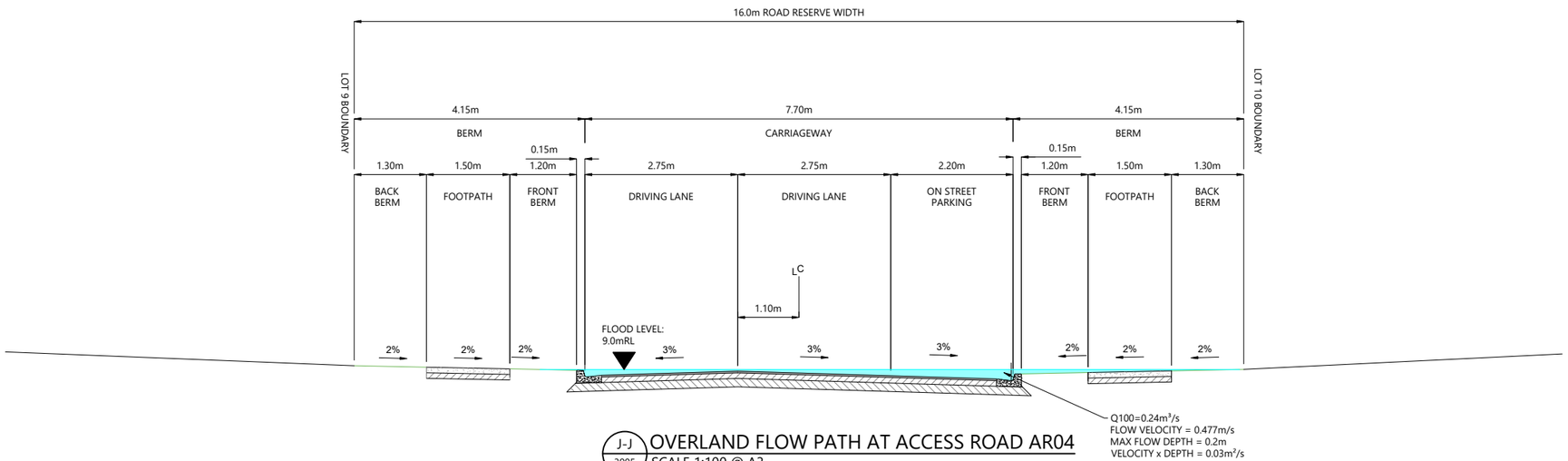
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



I-I 3905 OVERLAND FLOW PATH AT ACCESS ROAD AR05
SCALE 1:100 @ A3



J-J 3905 OVERLAND FLOW PATH AT ACCESS ROAD AR04
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

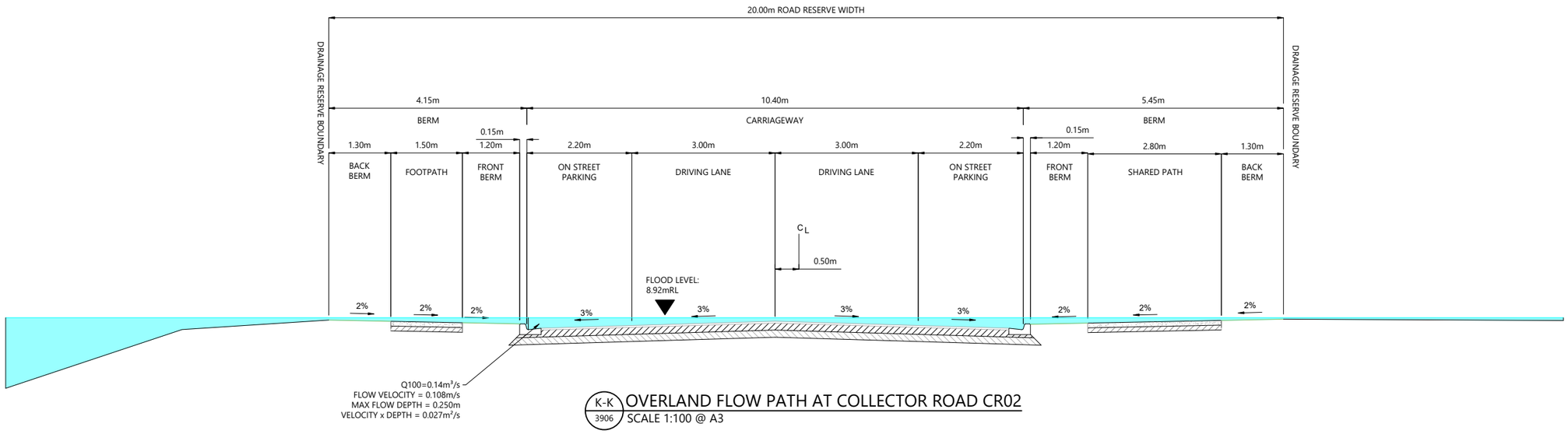
OVERLAND FLOW SECTIONS - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3905-DR	

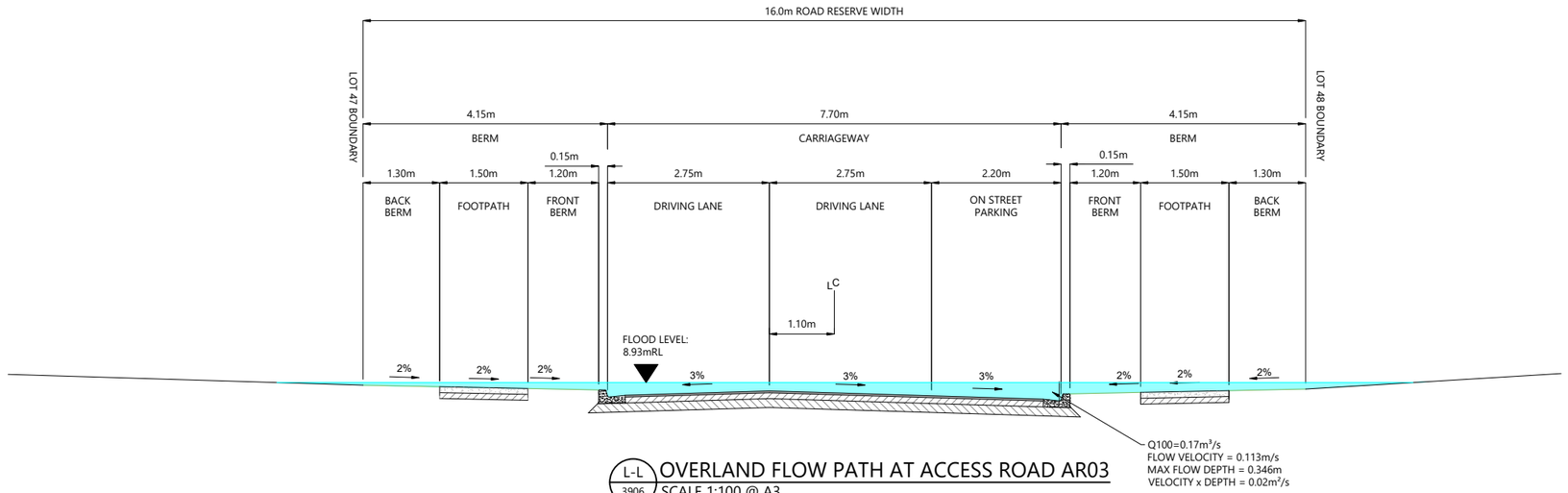
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



K-K 3906 OVERLAND FLOW PATH AT COLLECTOR ROAD CR02
SCALE 1:100 @ A3



L-L 3906 OVERLAND FLOW PATH AT ACCESS ROAD AR03
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

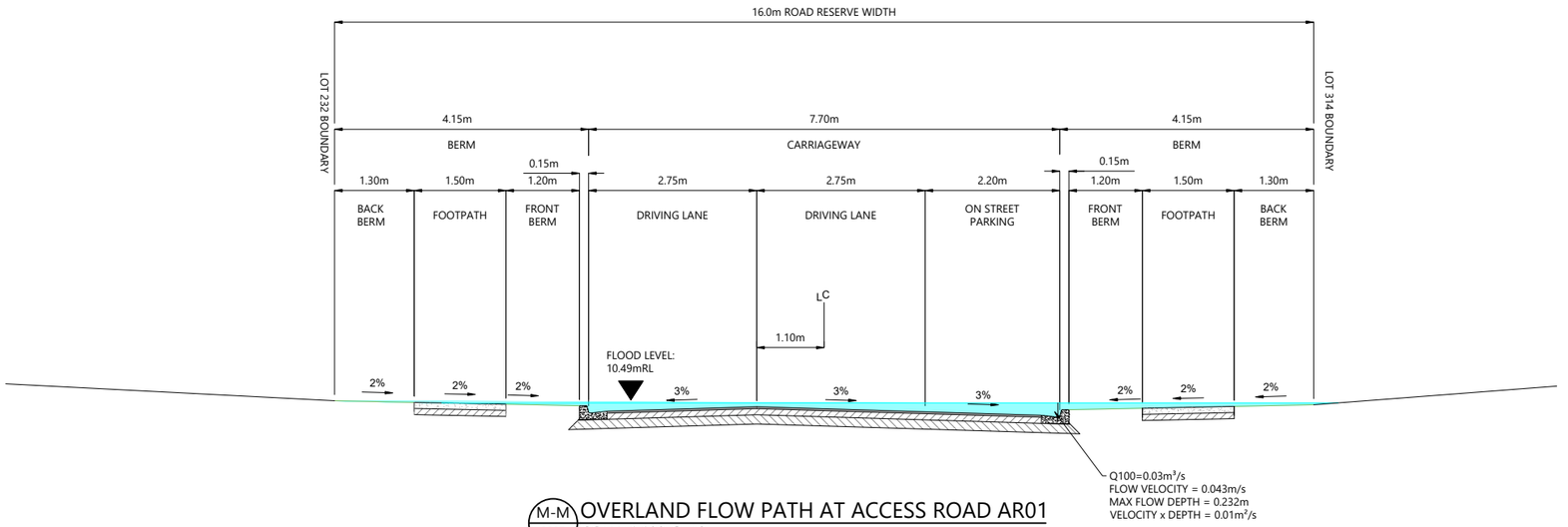
OVERLAND FLOW SECTIONS - SHEET 6

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3906-DR	

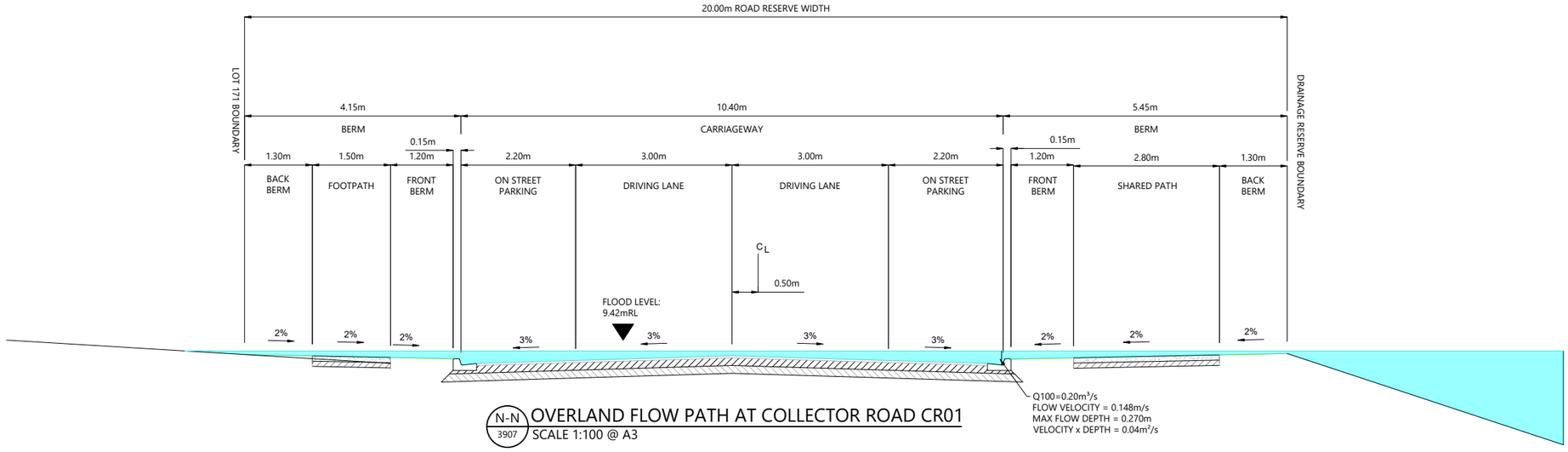
Plot Date: 4:01:48 pm,30 September 2026, LOUISZS
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



M-M 3907 OVERLAND FLOW PATH AT ACCESS ROAD AR01
SCALE 1:100 @ A3



N-N 3907 OVERLAND FLOW PATH AT COLLECTOR ROAD CR01
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

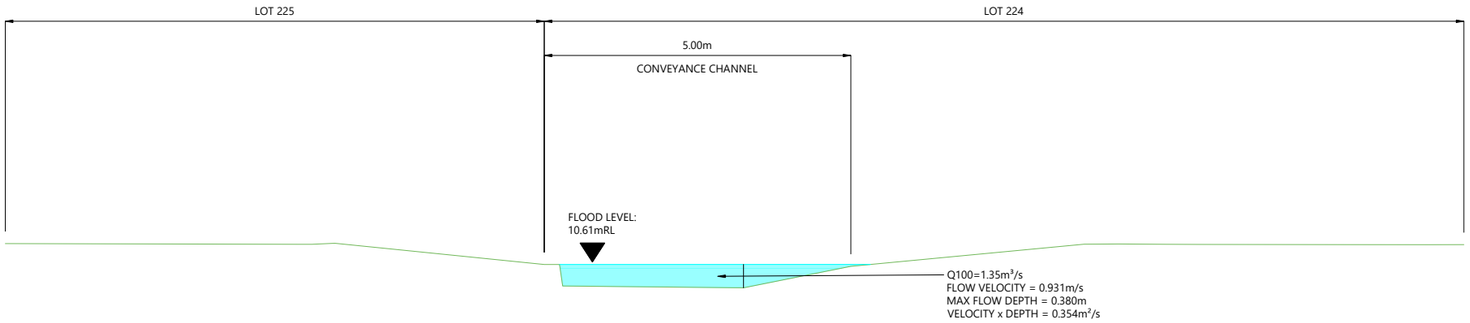
OVERLAND FLOW SECTIONS - SHEET 7

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3907-DR	

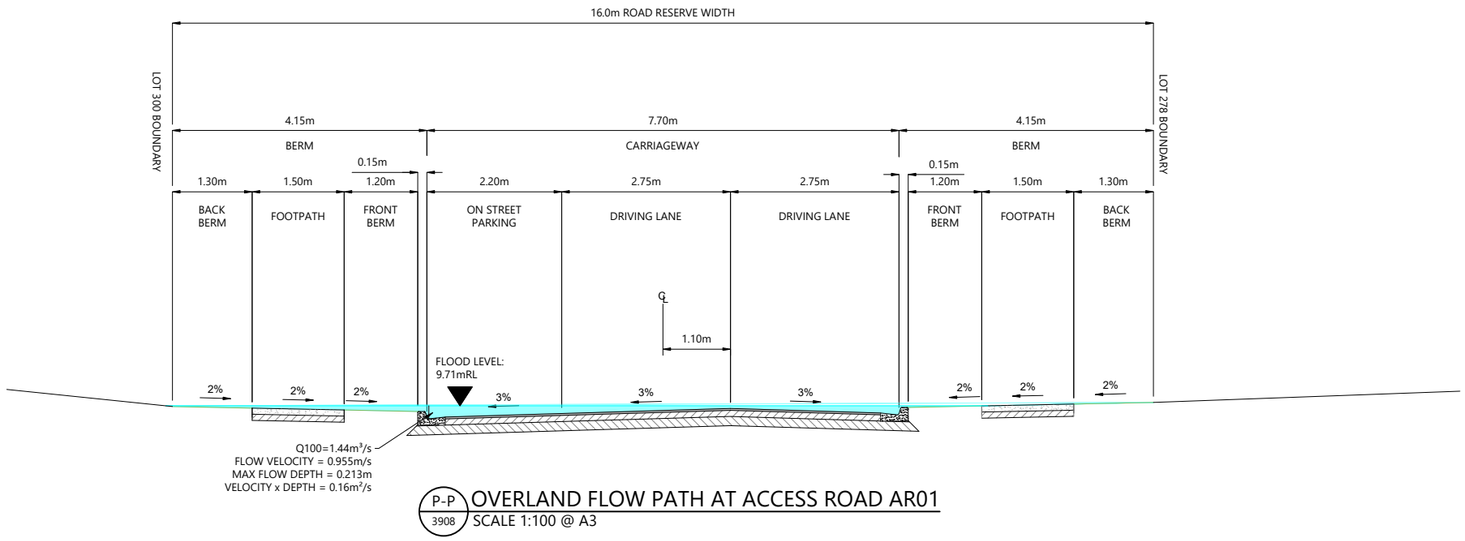
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



O-O / 3908 OVERLAND FLOW PATH AT CONVEYANCE CHANNEL BETWEEN LOTS 239/225 AND 240/224
SCALE 1:100 @ A3



P-P / 3908 OVERLAND FLOW PATH AT ACCESS ROAD AR01
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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MIDDLE ROAD PROJECT

OVERLAND FLOW SECTIONS - SHEET 8

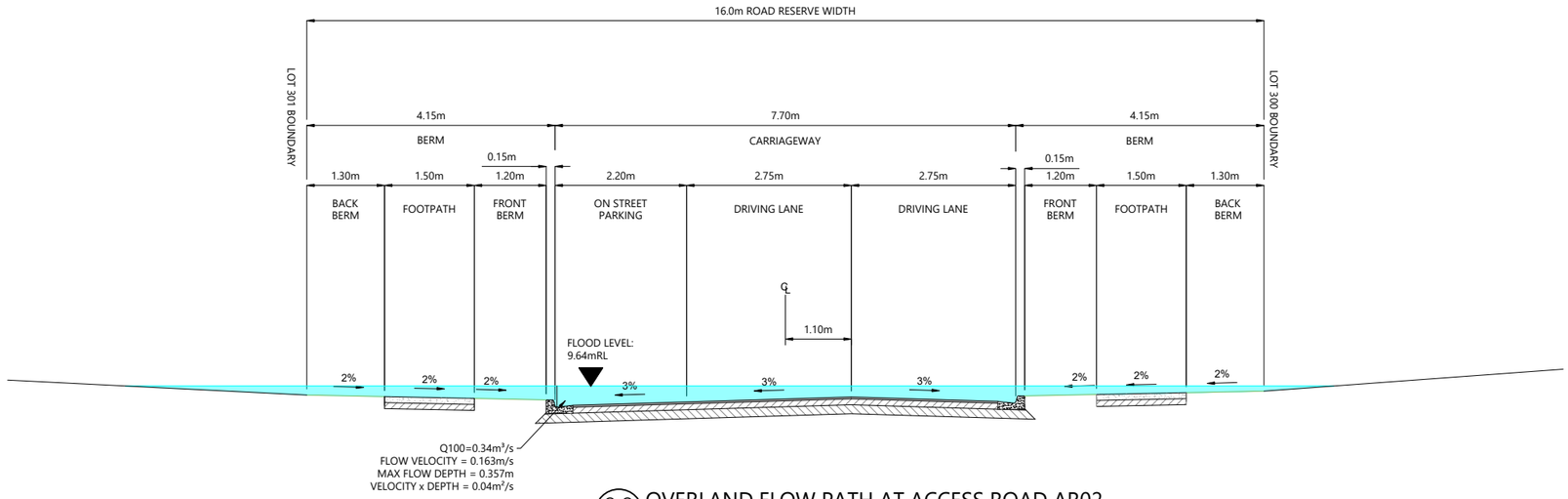
STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3908-DR	

Plot Date: 4:01:50 pm,30 September 2026, LOUISZS

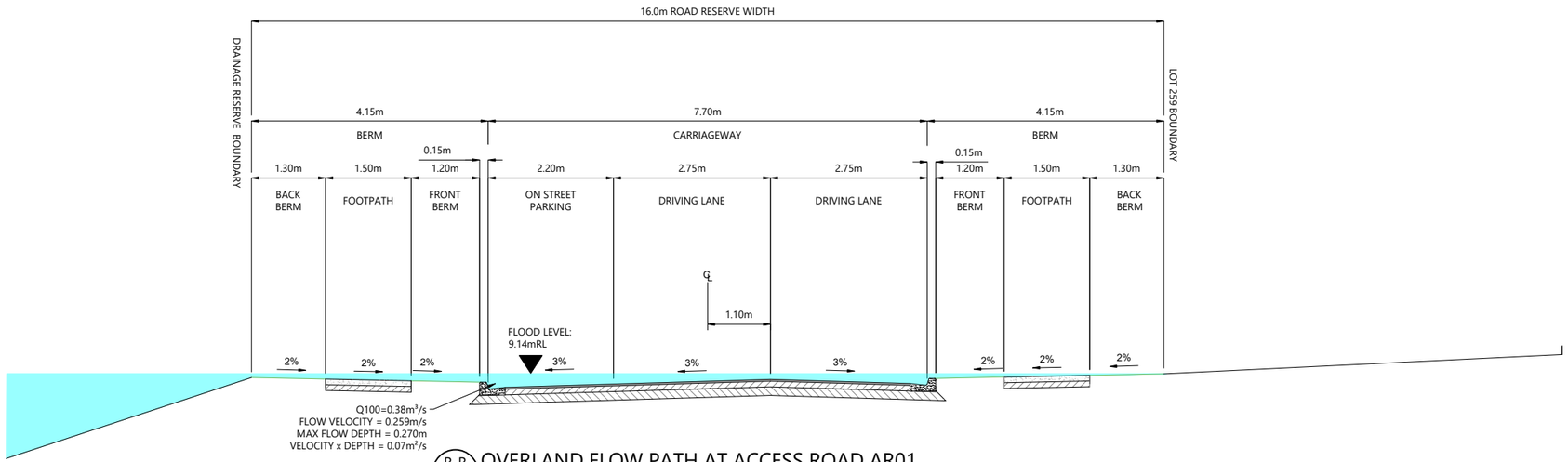
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NOTES

1. OVERLAND FLOWS, DEPTHS AND VELOCITIES HAVE BEEN EXTRACTED FROM HEC-RAS 2D MODEL.
2. ALL ROADS CALCULATED TO HAVE A d x V LESS THAN 0.4m²/S AT KERB INVERT.



Q-Q 3909 OVERLAND FLOW PATH AT ACCESS ROAD AR02
SCALE 1:100 @ A3



R-R 3909 OVERLAND FLOW PATH AT ACCESS ROAD AR01
SCALE 1:100 @ A3

SCALEBAR (m) 0 1 2 5
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	GP
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
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MIDDLE ROAD PROJECT

OVERLAND FLOW SECTIONS - SHEET 9

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:100 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-3909-DR	

Plot Date: 4:01:51 pm,30 September 2026, LOUISZS
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LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN
- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER
- PROPOSED PUMPSTATION OVERFLOW

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
8. ALL MANHOLE LIDS IN THE CYCLEWAY SHOULD HAVE A CYCLIST FRIENDLY COVER.
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

TE AUTE ROAD

STAGE 9

STAGE 8

STAGE 7B

STAGE 6B

STAGE 7A

STAGE 3

STAGE 11A

STAGE 11B

STAGE 5

STAGE 6A

STAGE 10

STAGE 1

STAGE 2A

STAGE 2B

STAGE 4

ELLIOT CRESCENT

UPHAM STREET

MIDDLE ROAD

REFER SHEET 4001

REFER SHEET 4002

REFER SHEET 4003

REFER SHEET 4004

REFER SHEET 4005

SCALEBAR (m) 0 30 60 150

SCALE | 1:3000 @A3 | 1:1500 @A1

Plot Date: 12:29:15 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED OVERALL WASTEWATER PLAN - OVERALL PLAN

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:3000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4000-DR	

NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
8. ALL MANHOLE LIDS IN THE CYCLEWAY SHOULD HAVE A CYCLIST FRIENDLY COVER.
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN
- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER
- PROPOSED PUMPSTATION OVERFLOW

WOODS EST.1970

TE AUTE ROAD

STAGE 3

STAGE 8

STAGE 7A

1003

LPS LINES TO DISCHARGE TO GRAVITY NETWORK AT MANHOLE U/01

150mmØ

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:29:16 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK, 22600\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

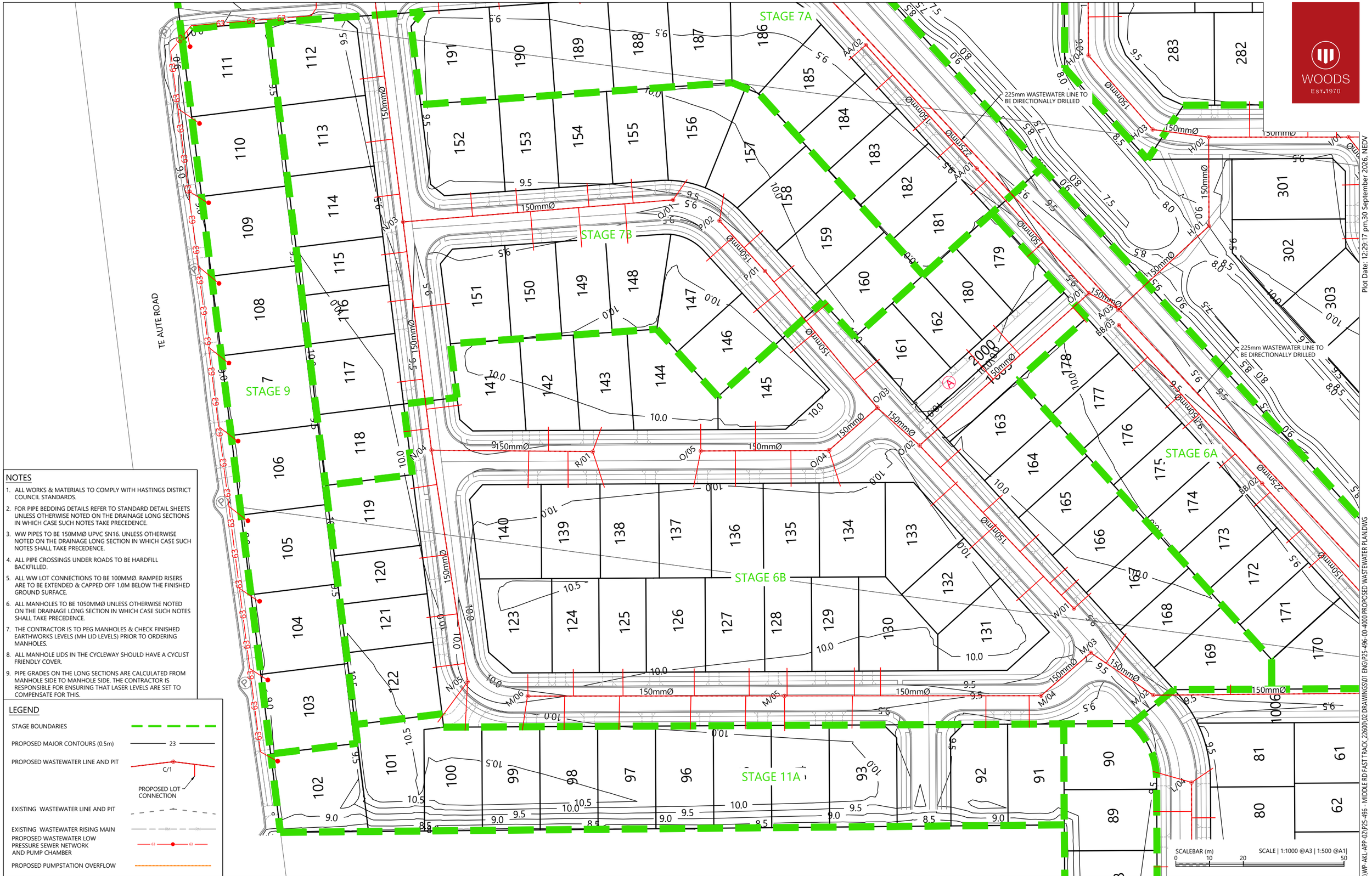
BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PLAN - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4001-DR
REV	2



NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
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9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN — 150mmØ
- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER — 63 — 63
- PROPOSED PUMPSTATION OVERFLOW

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PLAN - SHEET 2

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4002-DR
REV	2

Plot Date: 12:29:17 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

NOTES

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- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN
- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER
- PROPOSED PUMPSTATION OVERFLOW

WOODS EST.1970

STAGE 4

STAGE 3

STAGE 6A

STAGE 2B

MIDDLE ROAD

EX MH 6813RM

225mm WASTEWATER LINE TO BE DIRECTIONALLY DRILLED

225mm WASTEWATER LINE TO BE DIRECTIONALLY DRILLED

MIDDLE ROAD WASTEWATER BREADALBANE PUMP STATION

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:29:17 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

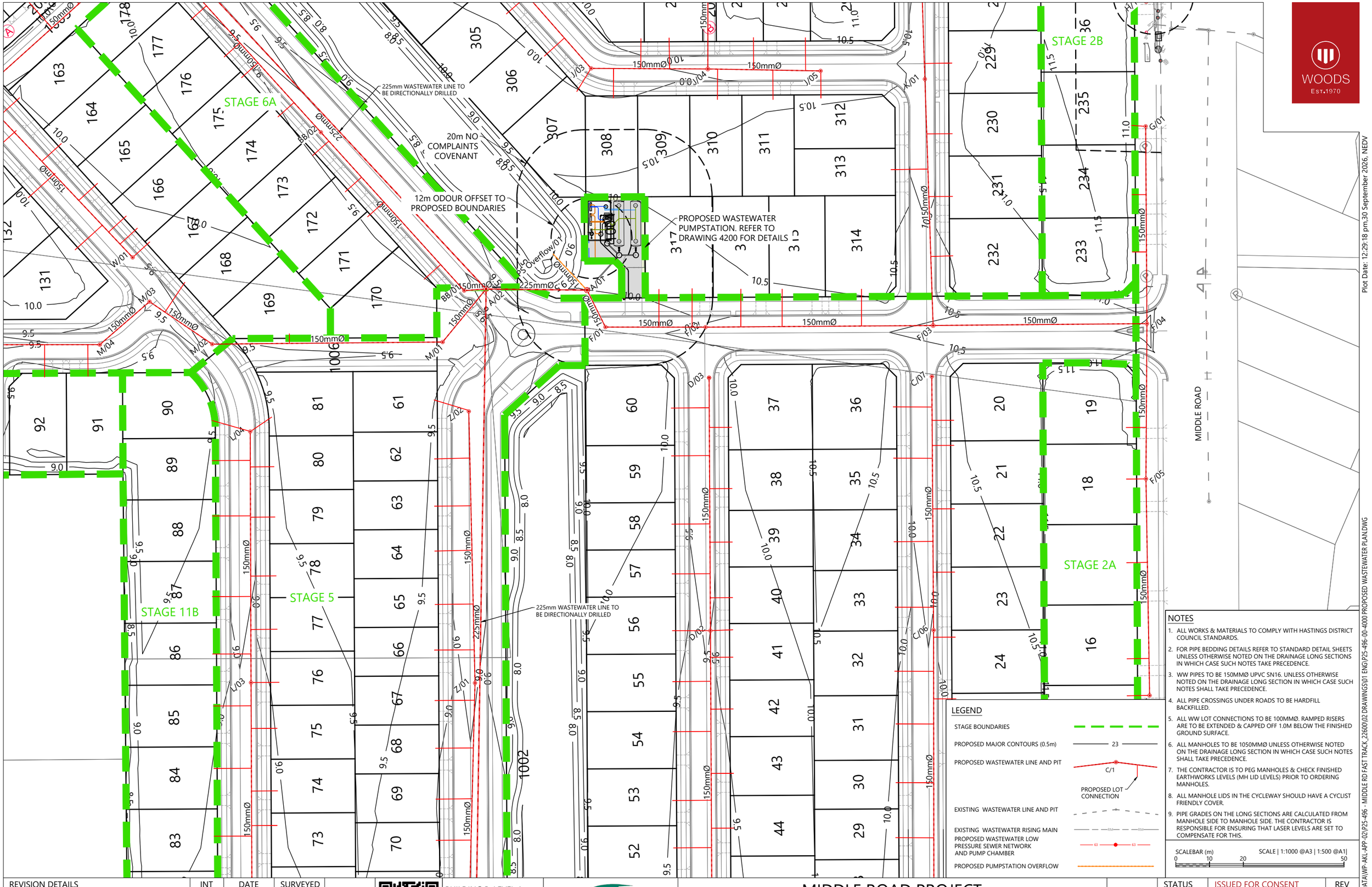
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PLAN - SHEET 3

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4003-DR	



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- PROPOSED MAJOR CONTOURS (0.5m) — 23
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- EXISTING WASTEWATER LINE AND PIT
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- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER
- PROPOSED PUMPSTATION OVERFLOW

SCALEBAR (m) 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PLAN - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4004-DR
REV	2

Plot Date: 12:29:18 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

WOODS
EST.1970

LEGEND

- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN
- PROPOSED WASTEWATER LOW PRESSURE SEWER NETWORK AND PUMP CHAMBER
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SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:29:19 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_226000\02 DRAWINGS\01 ENG\P25-496-00-4000 PROPOSED WASTEWATER PLAN.DWG

REVISION DETAILS		INT	DATE	SURVEYED	
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				CHECKED	LZM/BLO
				APPROVED	BF

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NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PLAN - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:1000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4005-DR	

LOT 307

LOT 308

LOT 309

LOT 310

LOT 317

LOT 316

CONTROL HARDSTAND

1.8m HIGH TIMBER FENCE ON PS BOUNDARY WITH RESIDENTIAL PROPERTIES

20m REVERSE SENSITIVITY OFFSET

1.8m POOL FENCE ON DRAINAGE RESERVE SIDE TO ALLOW FOR SECURITY OVERLOOK

1.0m LANDSCAPING STRIP BETWEEN DRIVEWAY AND FENCE

PUMPING STATION BOUNDARY (LOT 1004)

OVERFLOW WING WALL WITH WASTOP FLAP VALVE

STORAGE TANKS PROVIDE FOR 165m3 STORAGE TOTAL

POOL FENCE TYPE GATE TO ACCESS PS AREA

DRIVEWAY TO PROVIDE OFFSTREET STOPPING AREA BEFORE OPENING GATE

12m OFFSET FROM ODOUR VENT

PROPOSED INCOMING GRAVITY WASTEWATER DRAINAGE DN225 UPVC @ 1.00%

PROPOSED RISING MAIN

RM

LINK PILLAR

WATER CONNECTION/ RPZ

COMMERICAL VEHICLE CROSSING TO PS LOT

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
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SCALEBAR (m) 0 2.5 5.0 12.5

SCALE | 1:250 @A3 | 1:125 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PUMPING STATION PLAN OVERALL LAYOUT

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:250 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4200-DR	

Plot Date: 12:29:20 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4200 PROPOSED WASTEWATER PUMPING STATION PLANS.DWG

LOT 307

LOT 308

LOT 309

LOT 317

WATER CABINET

STORAGE TANK WASHER DISTRIBUTION CHAMBER/MANIFOLD

1.8m HIGH TIMBER FENCE ON PS BOUNDARY WITH RESIDENTIAL PROPERTIES

CONTROL HARDSTAND

CONTROL BOARD/ CABINET

WET WELL WASHER LINE

VALVE CHAMBER

AFJ

AFJ

GV

1.8m POOL FENCE ON DRAINAGE RESERVE SIDE TO ALLOW FOR SECURITY OVERLOOK

BYPASS LINE

DRIVEWAY / MANOUVERING AREA

KGV

WET WELL WWMH PS1/1 2500mmØ

AFJ

ODOUR FAN

DN100 CHAMBER DRAIN

DN225 UPVC INCOMING LINE @ 1.00% GRADE

AFJ

RISING MAIN

METER CHAMBER

OVERFLOW PIPELINE BETWEEN WET WELL AND INLET CHAMBER

DRIP DRAIN

GV

CARBON FILTER

CAMLOCK

PUMPING STATION BOUNDARY (LOT 1004)

VENT POLE

STORAGE TANK 1 PROVIDE FOR 82.5m3 (165m3 TOTAL)

STORAGE TANK 2 PROVIDE FOR 82.5m3 (165m3 TOTAL)

INLET CHAMBER WWMH PS1/2 1500mmØ

AFJ

AFJ

WWMH PS1/3 1500mmØ

WWMH PS2/1 1500mmØ

PROPOSED 125mmOD PE100 RISING MAIN

POOL FENCE TYPE GATE TO ACCESS PS AREA

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARIES
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- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
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SCALEBAR (m) 0 1 2 5

SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	BP	26/08/2026	DESIGNED	BP/ER
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8 NUGENT ST, GRAFTON,
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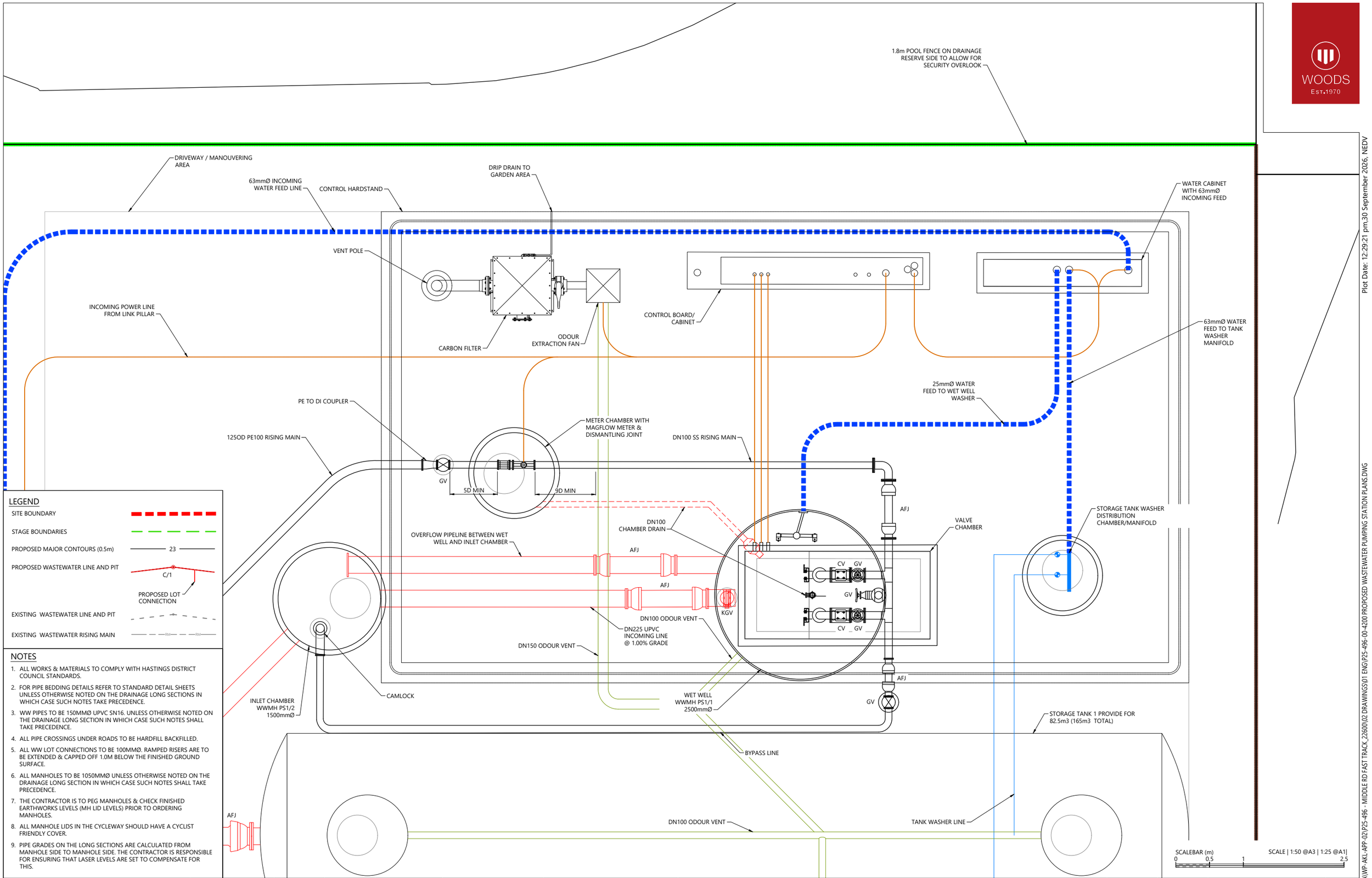
MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PUMPING STATION PLAN SITE LAYOUT

STATUS	ISSUED FOR CONSENT
SCALE	1:100 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4201-DR
REV	2

Plot Date: 12:29:20 pm,30 September 2026, NEDV

File C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_226000\02 DRAWINGS\01 ENG\P25-496-00-4200 PROPOSED WASTEWATER PUMPING STATION PLANS.DWG



LEGEND

- SITE BOUNDARY
- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1 — PROPOSED LOT CONNECTION
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN — RM — RM

NOTES

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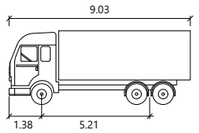
MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PUMPING STATION PLAN
CONTROL HARDSTAND LAYOUT

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:50 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4202-DR	

Plot Date: 12:29:21 pm,30 September 2026, NEDV

File C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4200 PROPOSED WASTEWATER PUMPING STATION PLANS.DWG



WC Vacuum Tanker

meters

Truck Width	: 2.49	Trailer Width	: WD2
Truck Track	: 2.49	Trailer Track	: TR2
Lock to Lock Time	: 6.0	Articulating Angle	: AA
Steering Angle	: 47.0		

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
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3.96m

RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM RM

SCALEBAR (m) 0 2.5 5.0 12.5

SCALE | 1:250 @A3 | 1:125 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
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				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER PUMPING STATION PLAN SERVICE VEHICLE TRACKING

		REV
STATUS	ISSUED FOR CONSENT	2
SCALE	1:250 @ A3	
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4220-DR	

Plot Date: 12:29:22 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4200 PROPOSED WASTEWATER PUMPING STATION PLANS.DWG

METER CHAMBER

VALVE CHAMBER

WET WELL

INLET CHAMBER

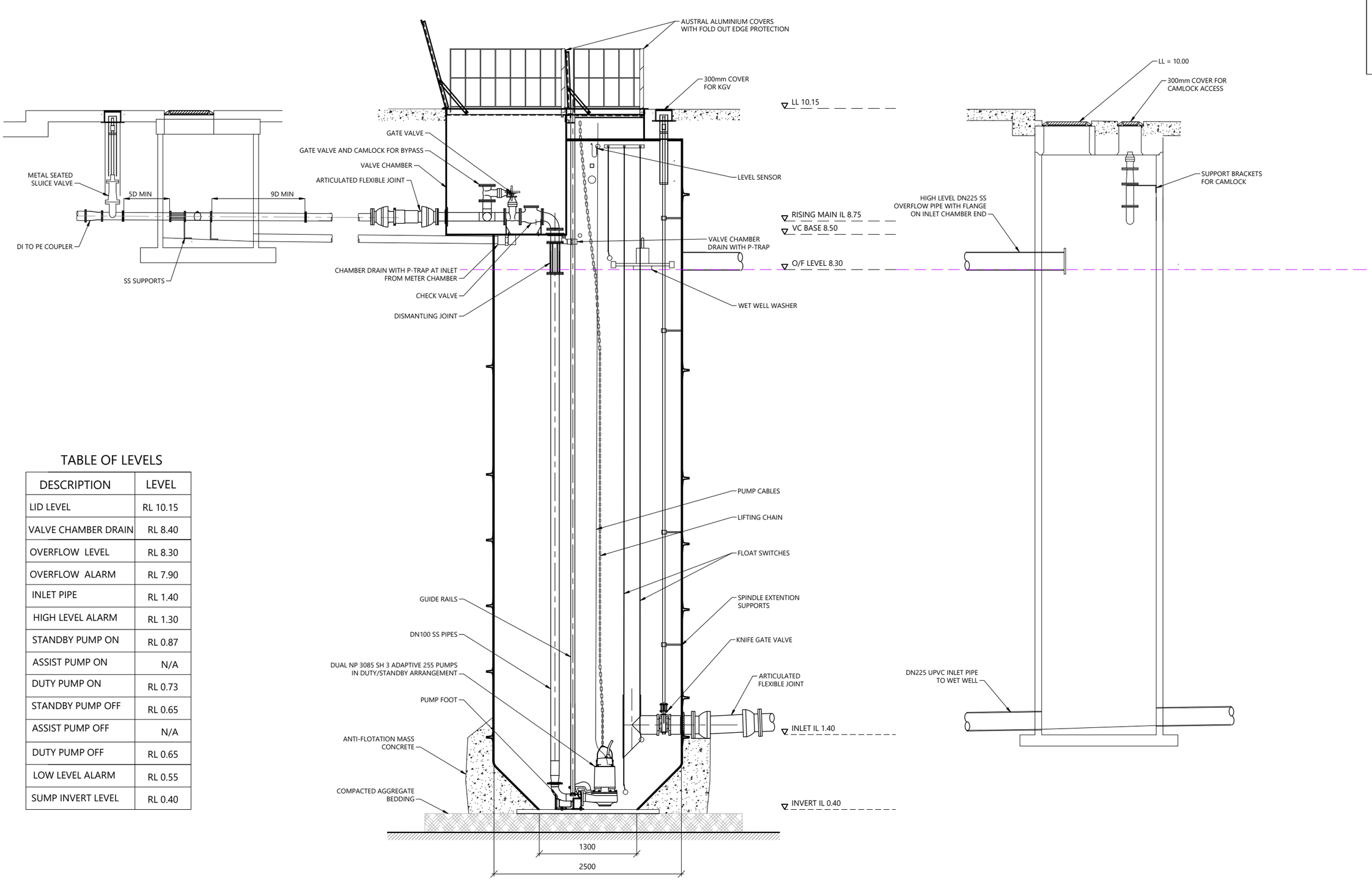


TABLE OF LEVELS

DESCRIPTION	LEVEL
LID LEVEL	RL 10.15
VALVE CHAMBER DRAIN	RL 8.40
OVERFLOW LEVEL	RL 8.30
OVERFLOW ALARM	RL 7.90
INLET PIPE	RL 1.40
HIGH LEVEL ALARM	RL 1.30
STANDBY PUMP ON	RL 0.87
ASSIST PUMP ON	N/A
DUTY PUMP ON	RL 0.73
STANDBY PUMP OFF	RL 0.65
ASSIST PUMP OFF	N/A
DUTY PUMP OFF	RL 0.65
LOW LEVEL ALARM	RL 0.55
SUMP INVERT LEVEL	RL 0.40

REVISION DETAILS		INT	DATE	SURVEYED	WOODS
1	ISSUED FOR COUNCIL COMMENT	BP	26/08/2026	DESIGNED	BP/ER
2	ISSUED FOR FT SUBSTANTIVE CONSENT	BP	02/10/2026	DRAWN	BP/JJ
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

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MIDDLE ROAD PROJECT

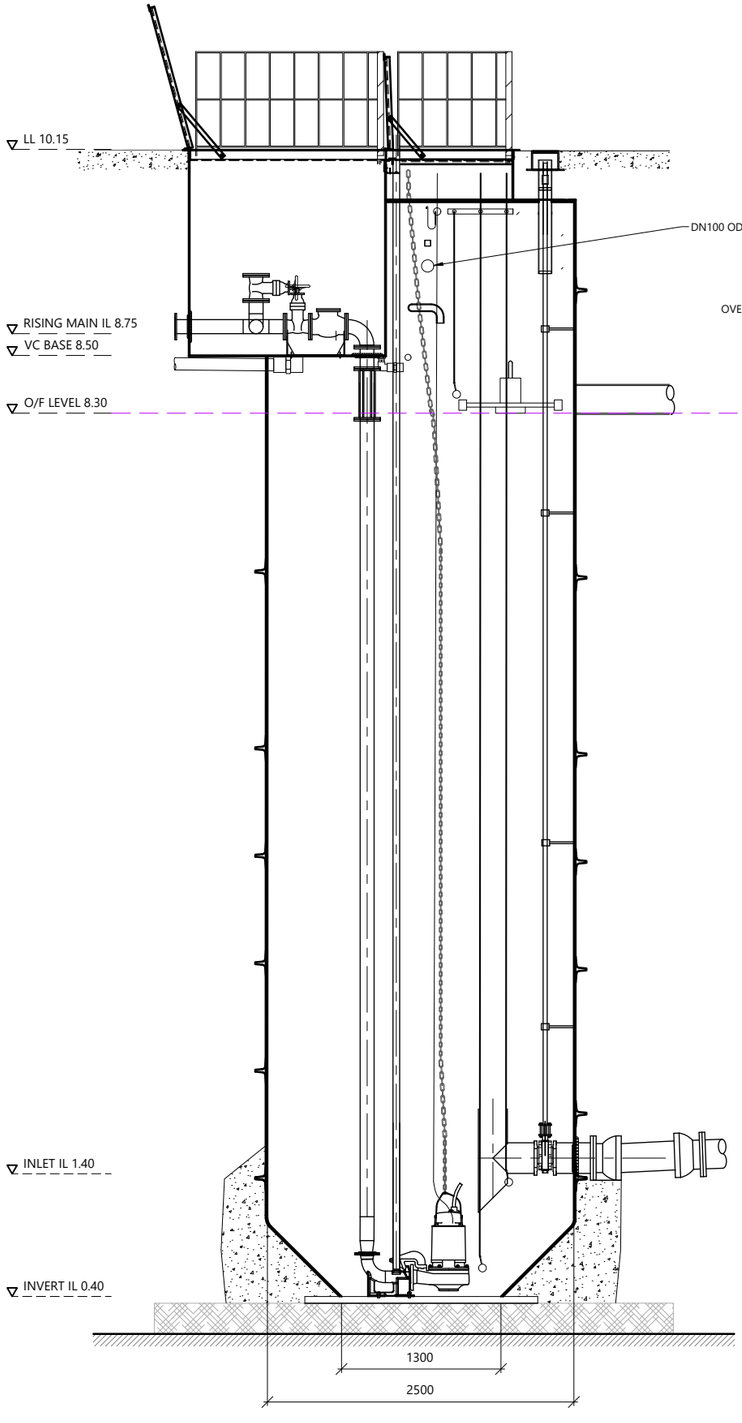
WASTEWATER PUMPING STATION
PUMP STATION DISCHARGE SCHEMATIC

STATUS	ISSUED FOR CONSENT
SCALE	1:50 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4250-DR
REV	2

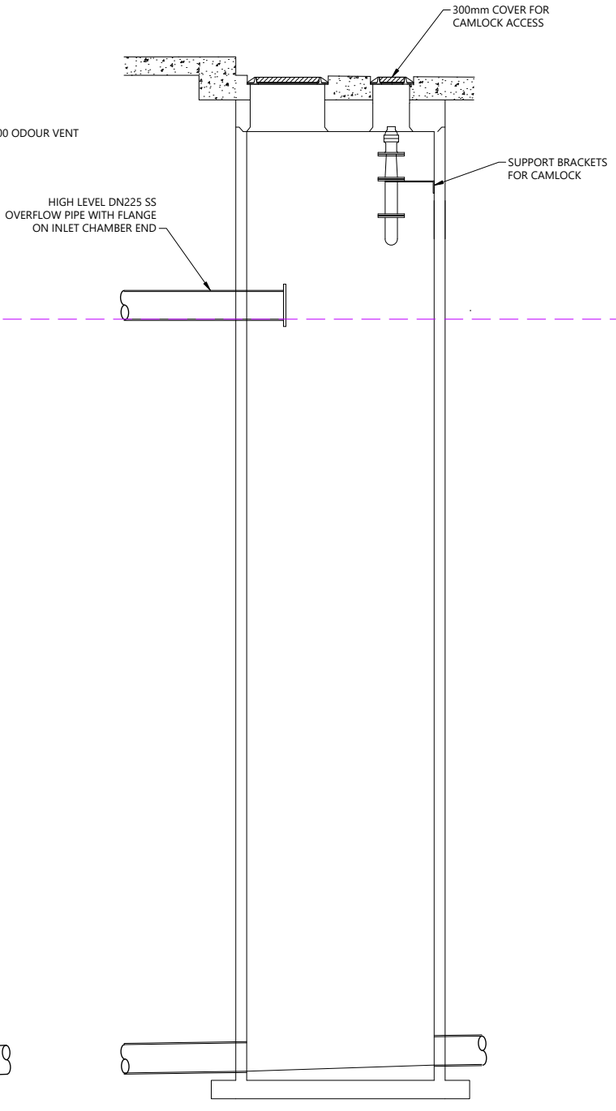
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VALVE CHAMBER

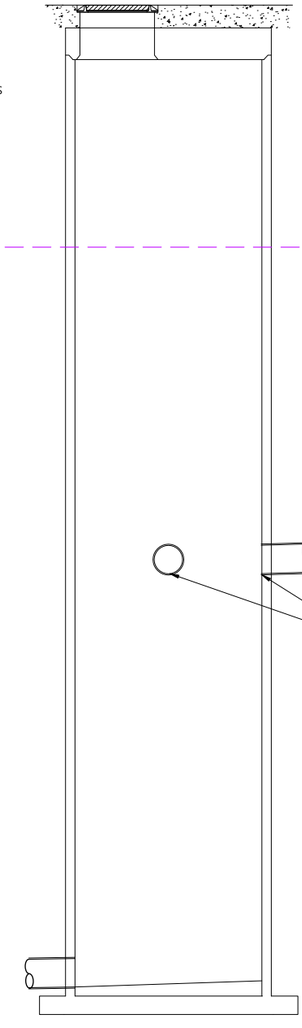
WET WELL



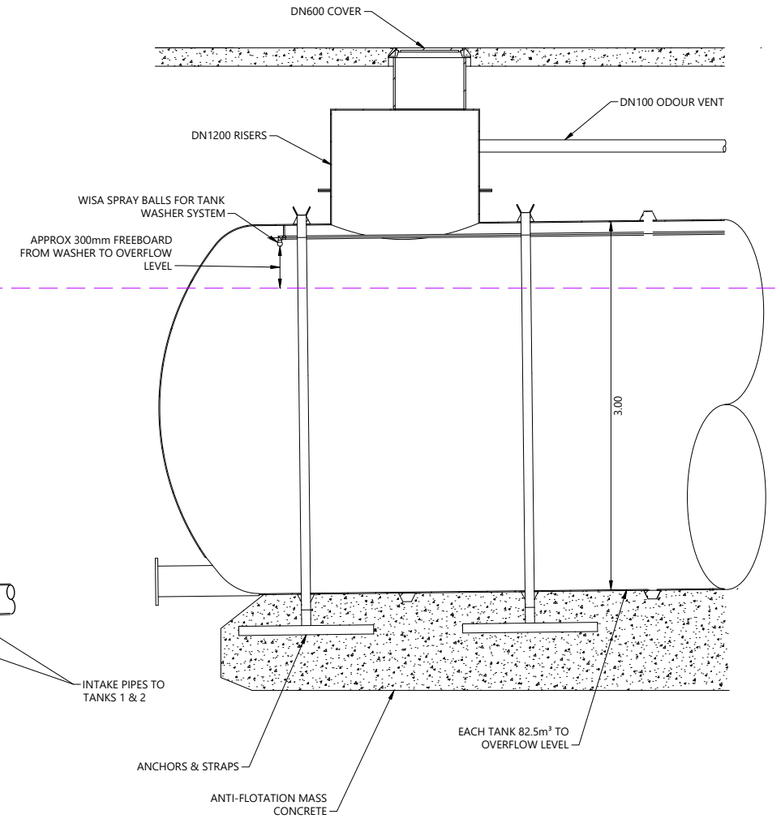
INLET CHAMBER
(WWMH PS1/2)



WWMH PS1/3



TANK 1



REVISION DETAILS		INT	DATE	SURVEYED	WOODS
1	ISSUED FOR COUNCIL COMMENT	BP	26/08/2026	DESIGNED	BP/ER
2	ISSUED FOR FT SUBSTANTIVE CONSENT	BP	02/10/2026	DRAWN	BP/JJ
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229

WOODS.CO.NZ

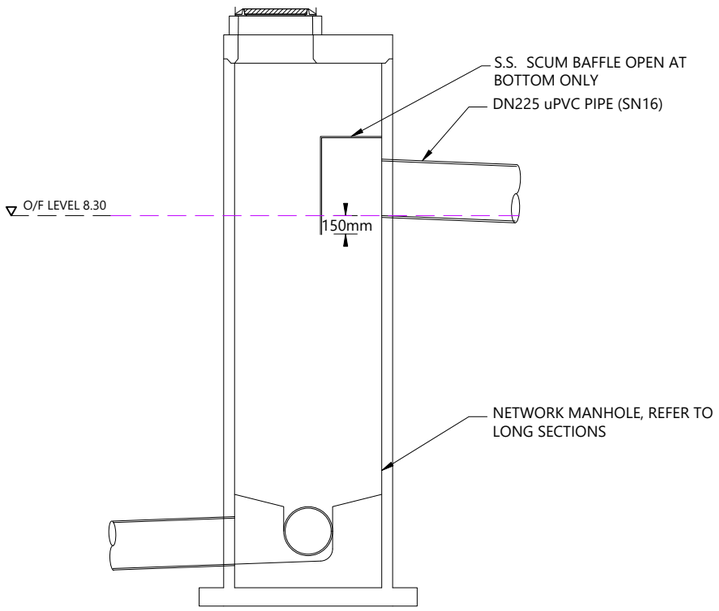
CDL LAND
NEW ZEALAND LIMITED

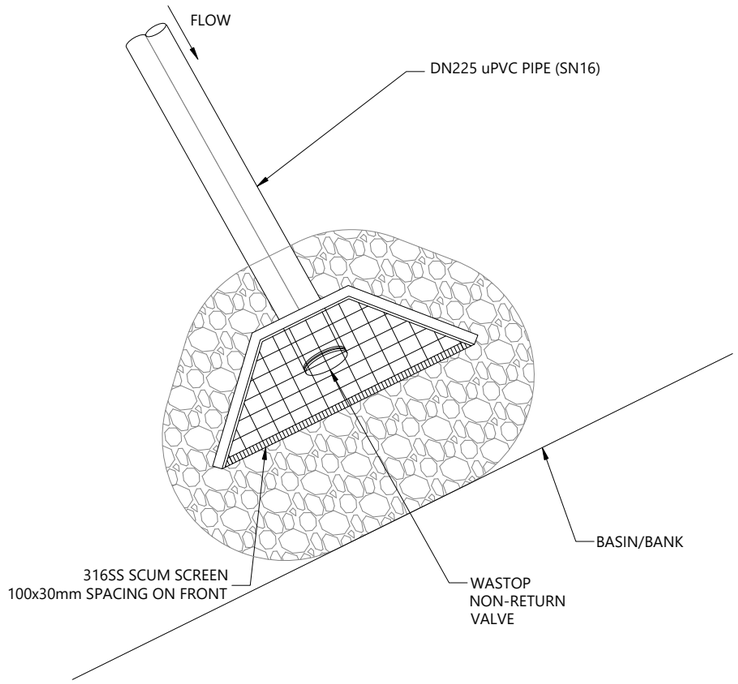
MIDDLE ROAD PROJECT

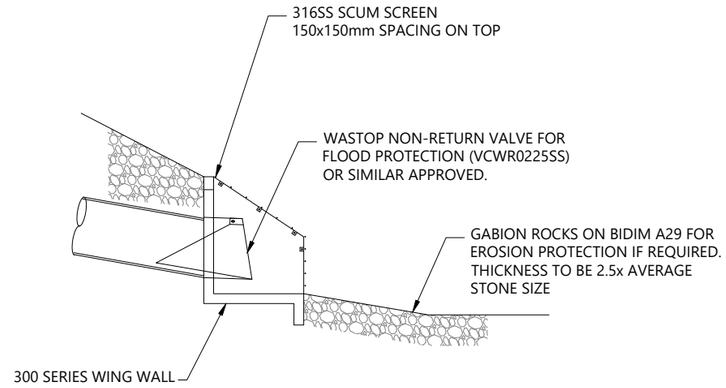
WASTEWATER PUMPING STATION
PUMP STATION STORAGE SCHEMATIC

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:50 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4251-DR	

Plot Date: 12:29:23 pm,30 September 2026, NEDV
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OVERFLOW WING WALL SECTION

NOTES:

1. MH TO HDC STANDARDS
2. ALL BENCHING TO BE 50 MPa CONCRETE
3. ALL REINFORCING TO BE 500 MPa
4. ALL NUTS, BOLTS, PLATES, ANGLES, WASHERS TO BE 316 SS.
5. ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH HDC ENGINEERING STANDARDS & SEWAGE PUMP STATION STANDARD.

REVISION DETAILS		INT	DATE	SURVEYED	WOODS
1	ISSUED FOR COUNCIL COMMENT	BP	26/08/2026	DESIGNED	BP/ER
2	ISSUED FOR FT SUBSTANTIVE CONSENT	BP	02/10/2026	DRAWN	BP/JJ
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

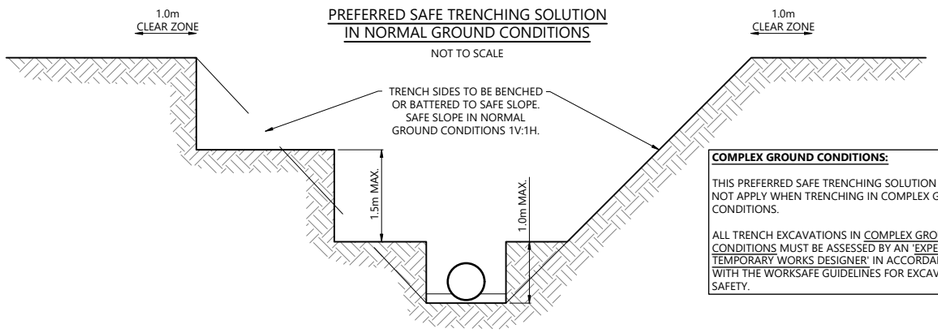
WASTEWATER PUMPING STATION
ENGINEERED OVERFLOW POINT DETAILS

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:50 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4258-DR	

Plot Date: 12:29:23 pm,30 September 2026, NEDV
File C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4250 PROPOSED WASTEWATER PUMPING STATION SECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

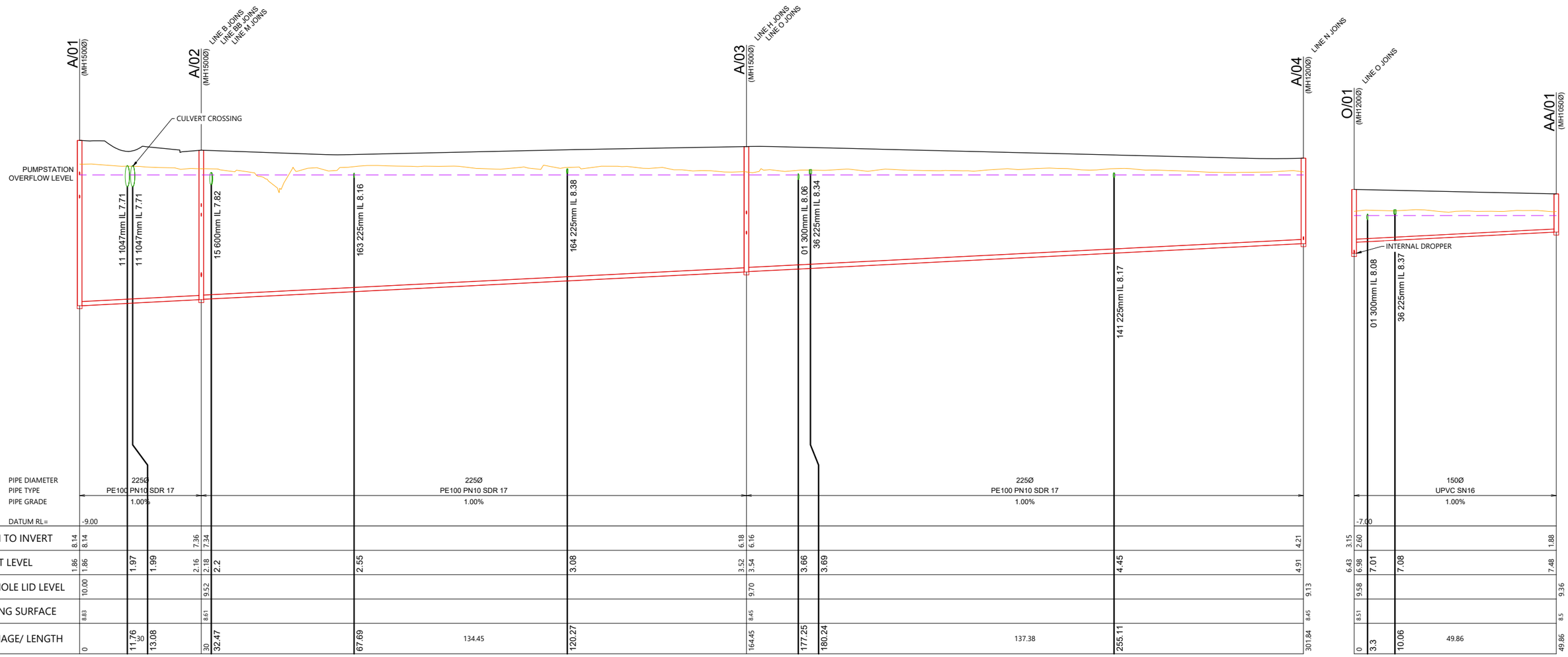
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
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WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
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3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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A

AA

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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8 NUGENT ST, GRAFTON,
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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 1

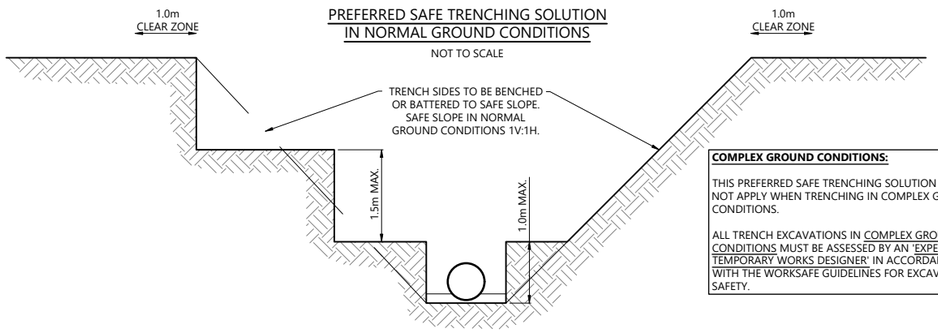
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4500-DR	

Plot Date: 12:29:24 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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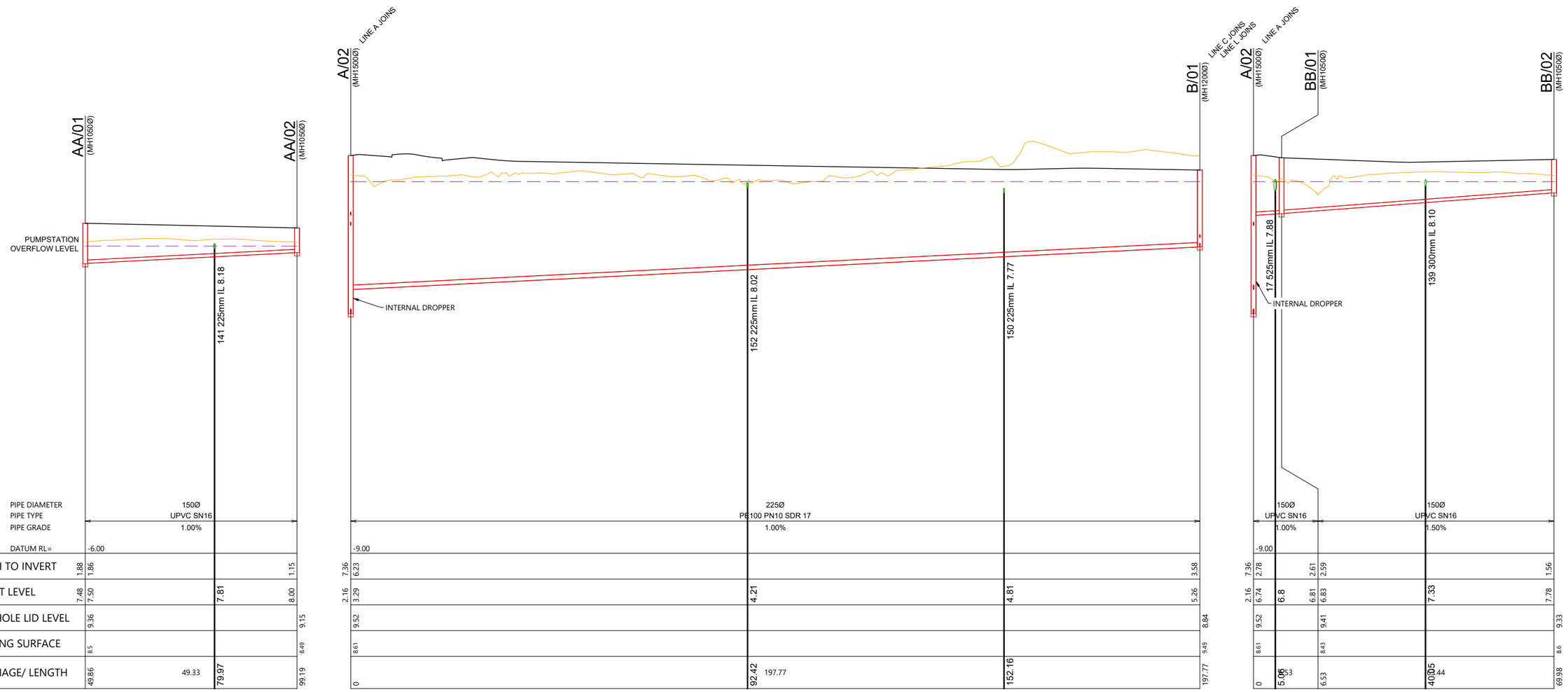
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WASTEWATER NOTES

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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
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MIDDLE ROAD PROJECT

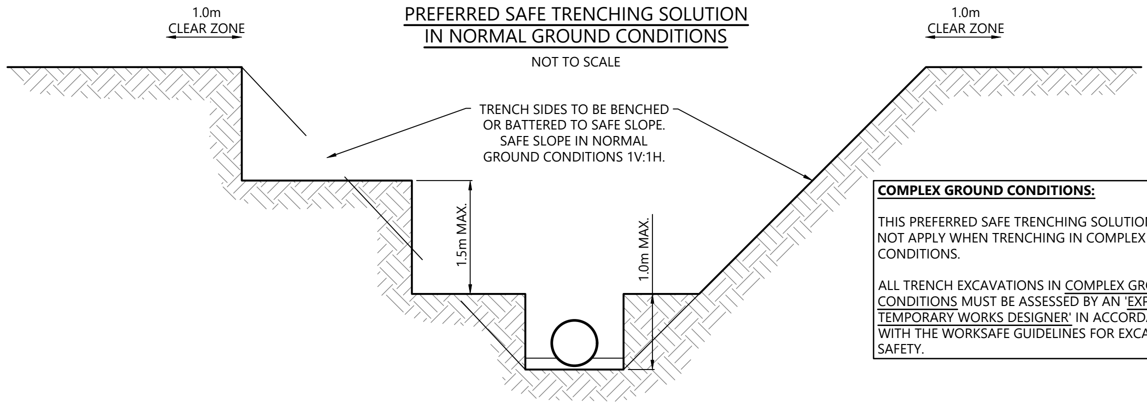
PROPOSED WASTEWATER LONGSECTION - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4501-DR	

WOODS EST.1970

Plot Date: 12:29:25 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG



COMPLEX GROUND CONDITIONS:

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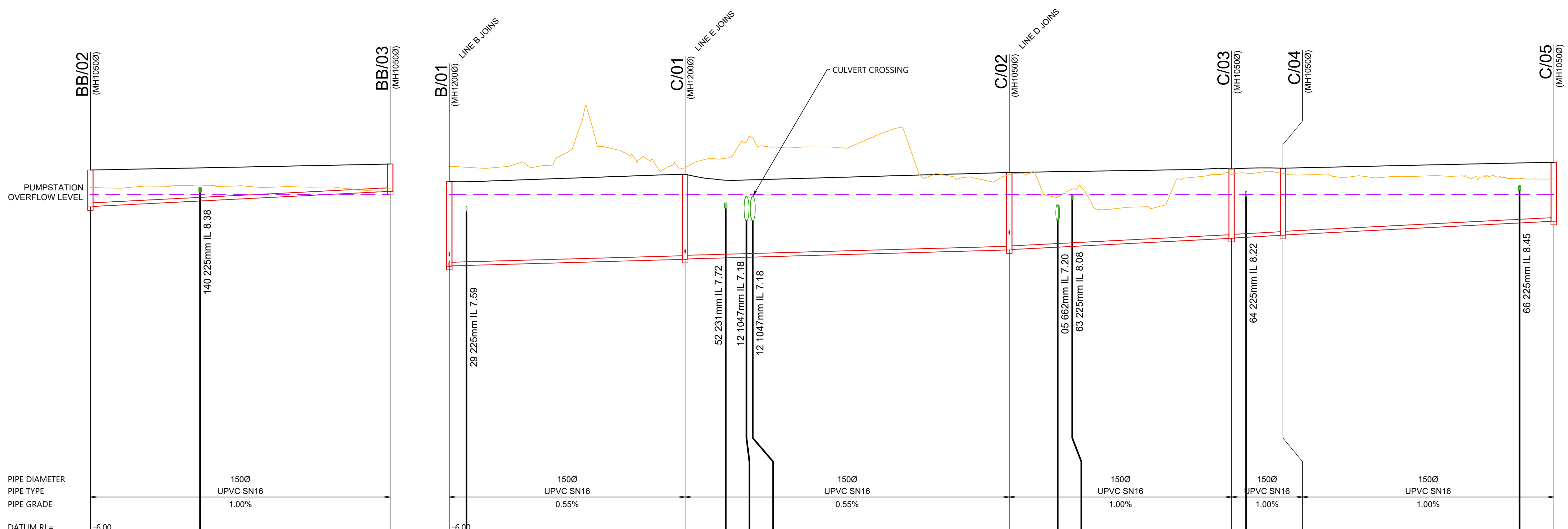
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BB

PIPE DIAMETER 150Ø, PIPE TYPE UPVC SN16, PIPE GRADE 1.00%

DATUM RL= -6.00

Position	DEPTH TO INVERT	INVERT LEVEL	MANHOLE LID LEVEL	EXISTING SURFACE	CHAINAGE/ LENGTH
BB/02	1.56 / 1.54	7.78 / 7.80	9.33	8.6	69.98
Connection		8.03			93.17
Length					63.44
BB/03	1.16	8.43	9.59	8.55	133.42

C

DATUM RL= -6.00

Segment	PIPE DIAMETER	PIPE TYPE	PIPE GRADE
B/01 – C/01	150Ø	UPVC SN16	0.55%
C/01 – C/02	150Ø	UPVC SN16	0.55%
C/02 – C/03	150Ø	UPVC SN16	1.00%
C/03 – C/04	150Ø	UPVC SN16	1.00%
C/04 – C/05	150Ø	UPVC SN16	1.00%

Position	DEPTH TO INVERT	INVERT LEVEL	MANHOLE LID LEVEL	EXISTING SURFACE	CHAINAGE/ LENGTH
B/01	3.58 / 3.56	5.26 / 5.28	8.84	9.49	0
Connection		5.3			3.65
Length					49.9
C/01	3.59 / 3.57	5.56 / 5.58	9.15	9.43	49.9
Connection		5.62			58.5
Connection		5.65			62.88
Connection		5.66			64.2
Length					68.59
C/02	3.28 / 3.26	5.96 / 5.98	9.23	9.14	118.49
Connection		6.07			128.74
Connection		6.11			131.82
Length					47.04
C/03	2.94 / 2.92	6.45 / 6.47	9.38	9.14	165.53
Connection		6.49			168.59
Length					10.86
C/04	2.84 / 2.82	6.57 / 6.59	9.41	9.2	176.39
Length					57.31
Connection		7.1			226.46
C/05	2.48	7.17	9.65	8.96	233.7

SCALEBAR (m) HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	SURVEYED	
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				DRAWN	KV
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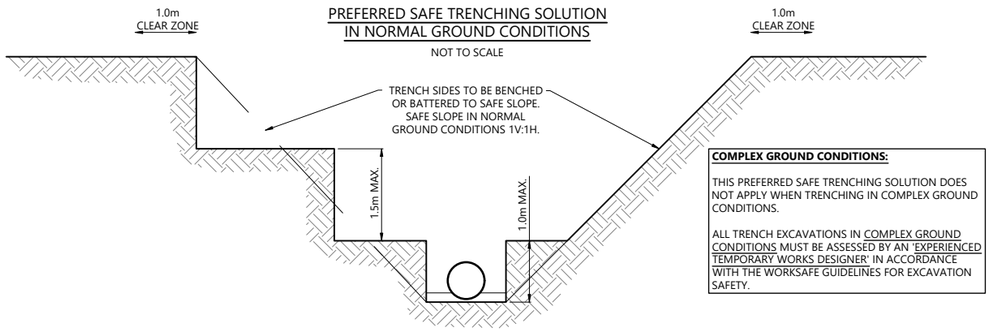
MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 3

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4502-DR	

WOODS EST.1970

Plot Date: 12:29:26 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG



COMPLEX GROUND CONDITIONS:

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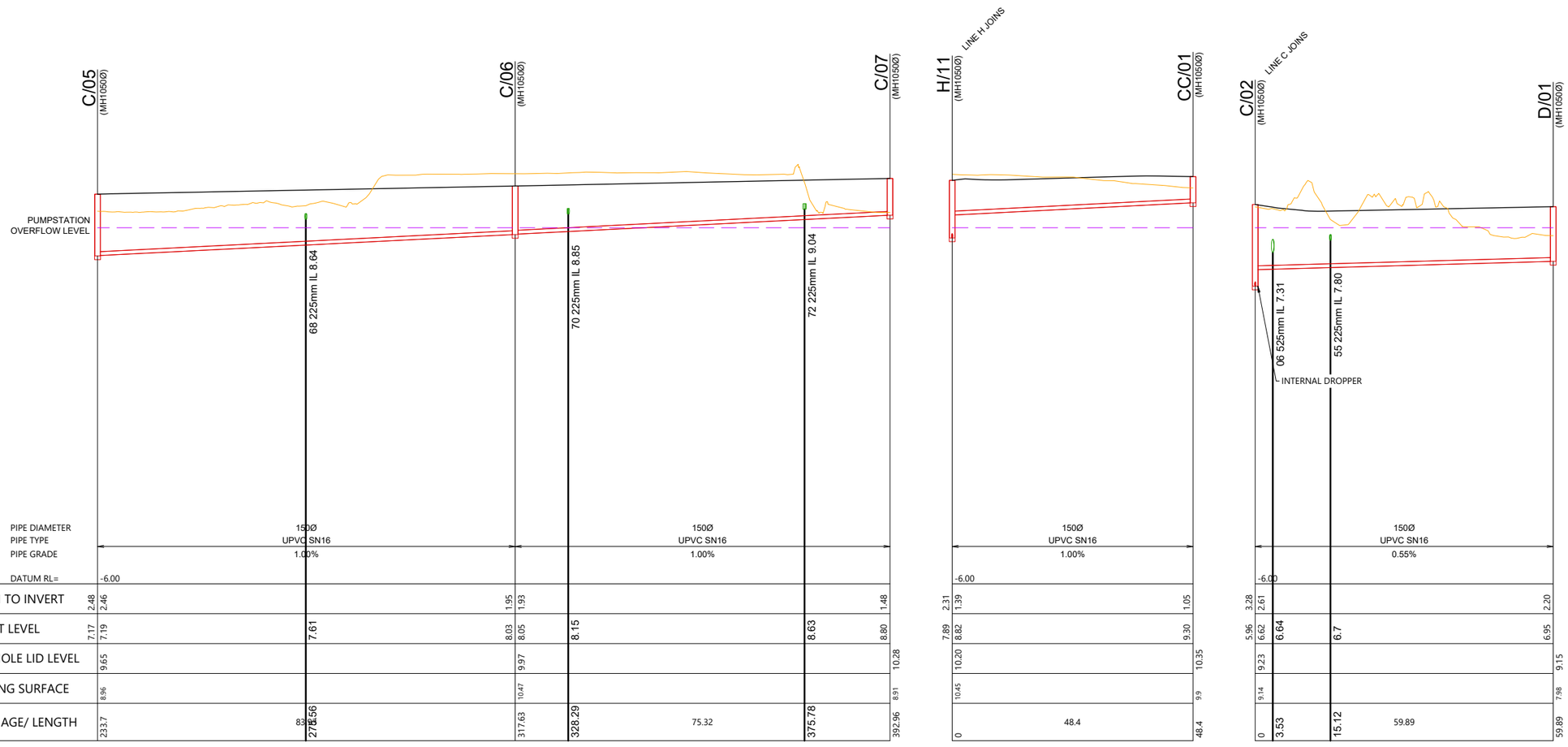
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1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
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- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 4

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4503-DR	

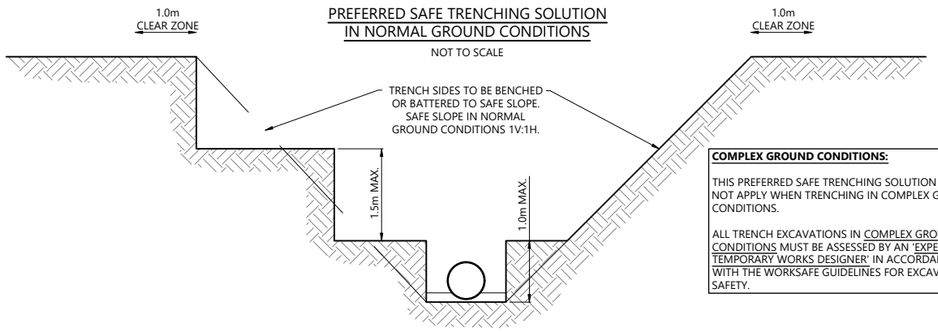
WOODS Est.1970

Plot Date: 12:29:27 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

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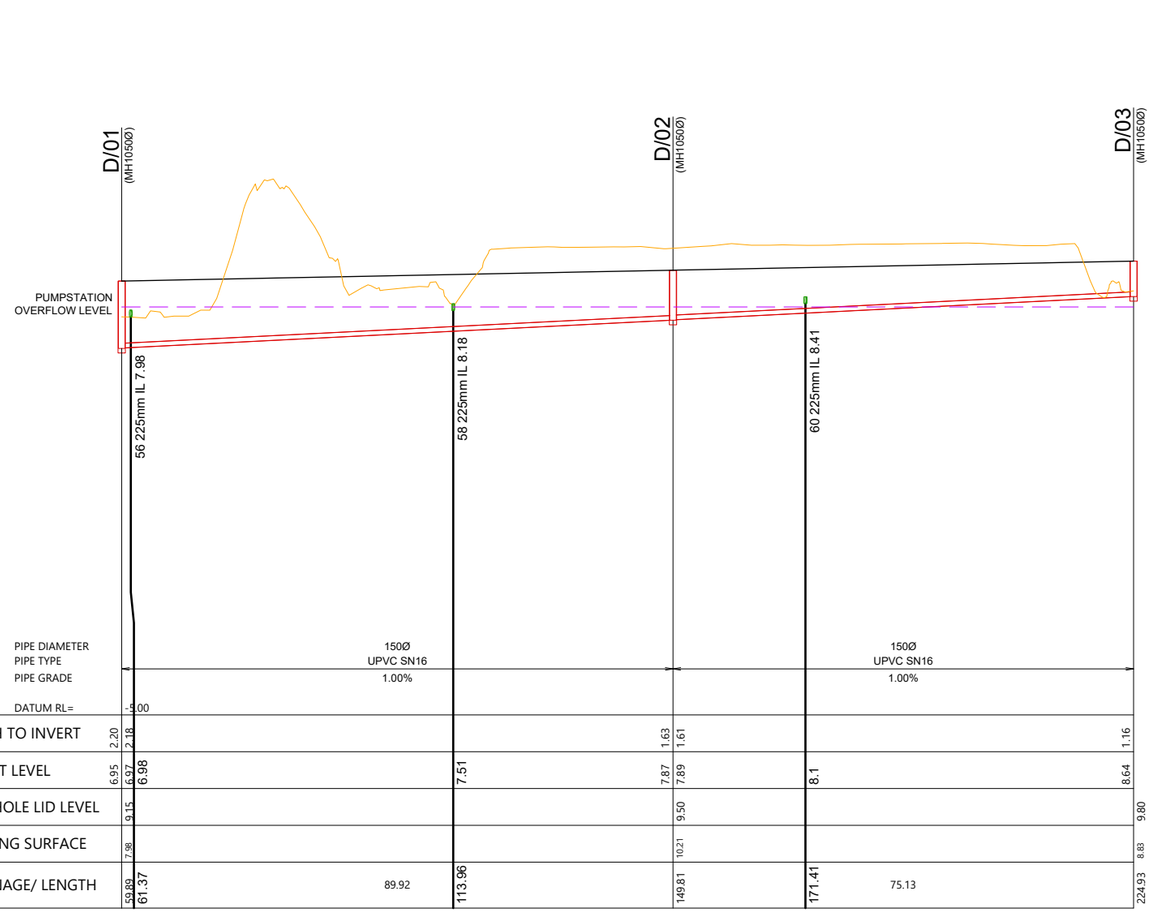
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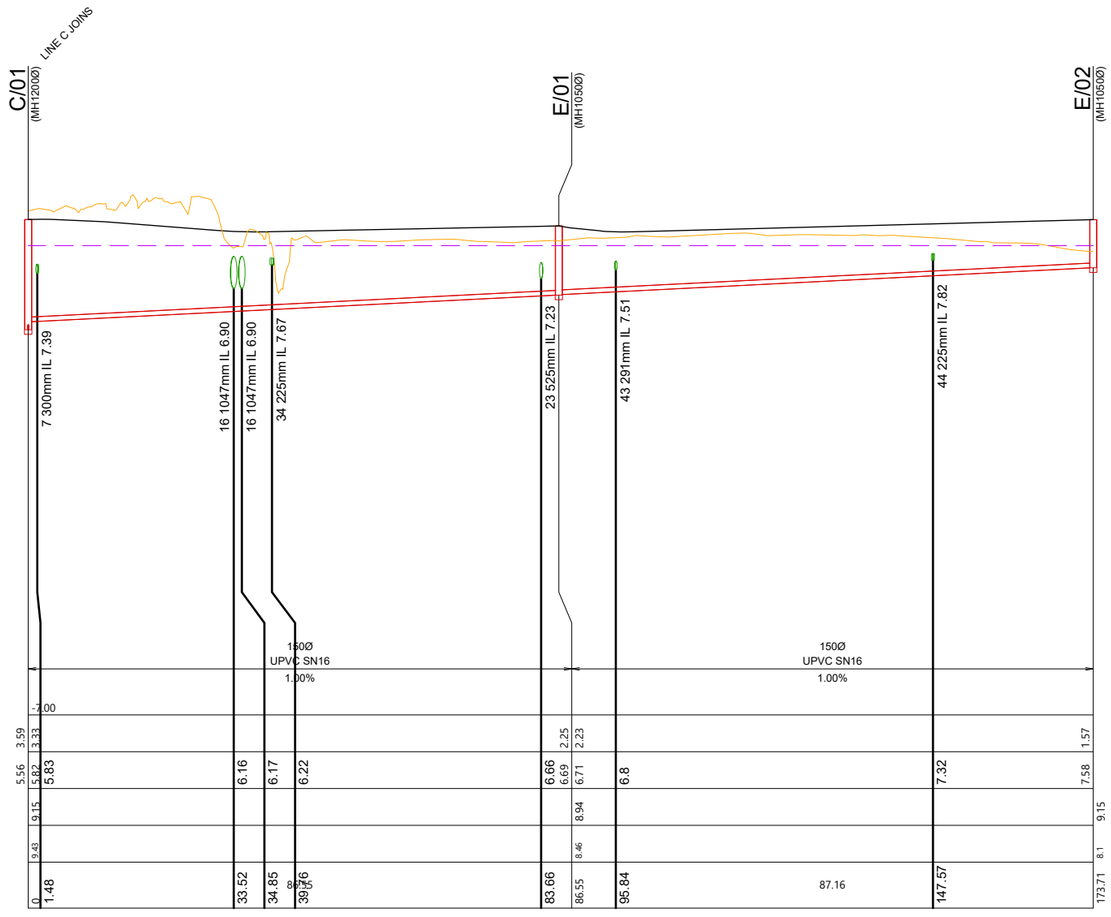
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D



E

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 5

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4504-DR	

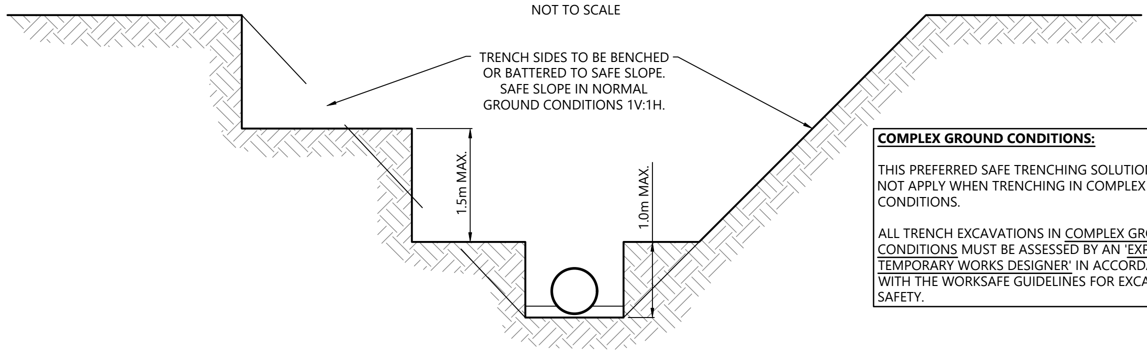
WOODS EST.1970

Plot Date: 12:29:27 pm,30 September 2026, NEDV

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PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

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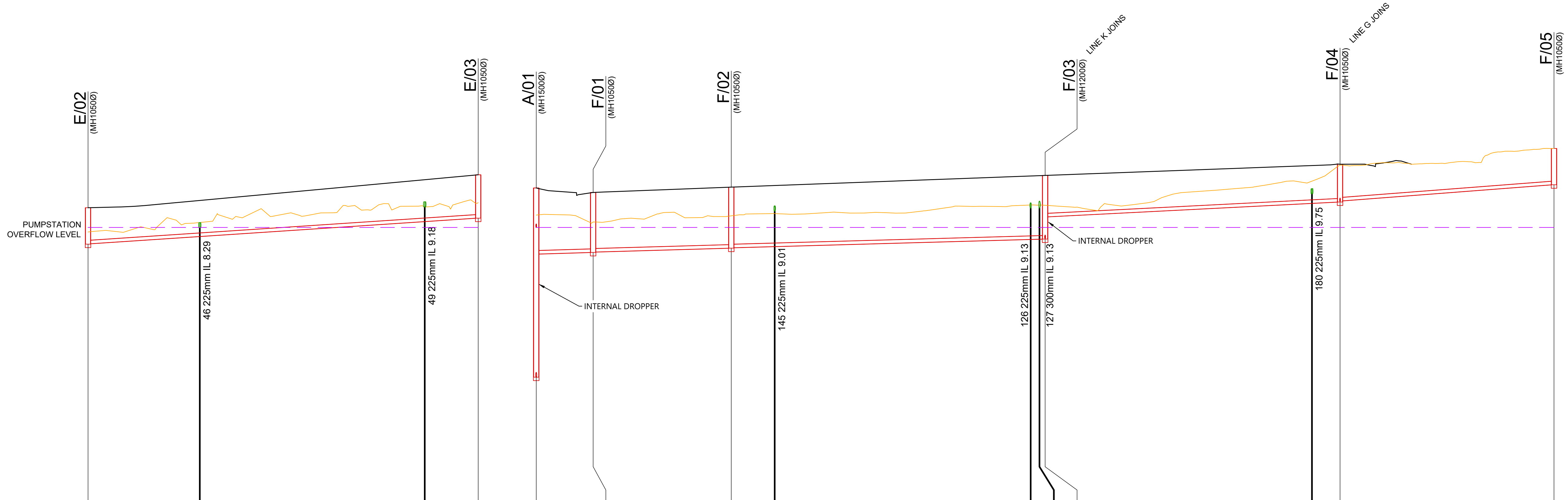
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WOODS Est.1970

Plot Date: 12:29:29 pm,30 September 2026, NEDV



E

	E/02	197.8		246.27	E/03
PIPE DIAMETER			150Ø		
PIPE TYPE			UPVC SN16		
PIPE GRADE			1.31%		
DATUM RL=	-6.00				
DEPTH TO INVERT	1.57 / 1.55				1.87
INVERT LEVEL	7.58 / 7.60	7.91		8.55	8.70
MANHOLE LID LEVEL	9.15				10.57
EXISTING SURFACE	8.1				9.37
CHAINAGE/ LENGTH	173.71	197.8	84.08	246.27	257.79

F

	A/01		F/01		F/02	51.38		106.54	108.44	F/03		167.16	F/04		F/05
PIPE DIAMETER		150Ø		150Ø			150Ø				150Ø			150Ø	
PIPE TYPE		UPVC SN16		UPVC SN16			UPVC SN16				UPVC SN16			UPVC SN16	
PIPE GRADE		0.55%		0.55%			0.55%				1.00%			1.50%	
DATUM RL=	-6.00														
DEPTH TO INVERT	2.84 / 8.14 / 2.84		2.58 / 2.56		2.63 / 2.61					2.74 / 1.78			1.63 / 1.58		1.56
INVERT LEVEL	7.16 / 1.86 / 7.16		7.22 / 7.24		7.41 / 7.43	7.48		7.79	7.8 / 7.80	8.76		9.34	9.39 / 9.45		10.14
MANHOLE LID LEVEL	10.00		9.81		10.04					10.54			11.02		11.70
EXISTING SURFACE	8.83		8.54		8.8					9.25			10.98		11.7
CHAINAGE/ LENGTH	0	12.27	12.27	29.77	42.03	51.38	67.62	106.54	108.44	109.66	63.56	167.16	173.21	46.1	219.32

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

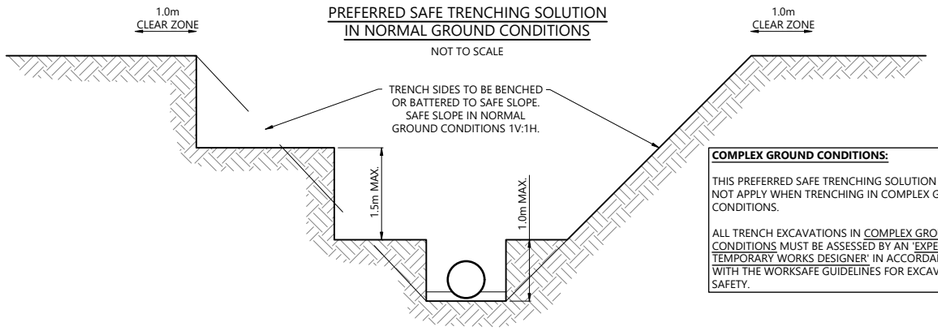
PROPOSED WASTEWATER LONGSECTION - SHEET 6

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4505-DR	

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

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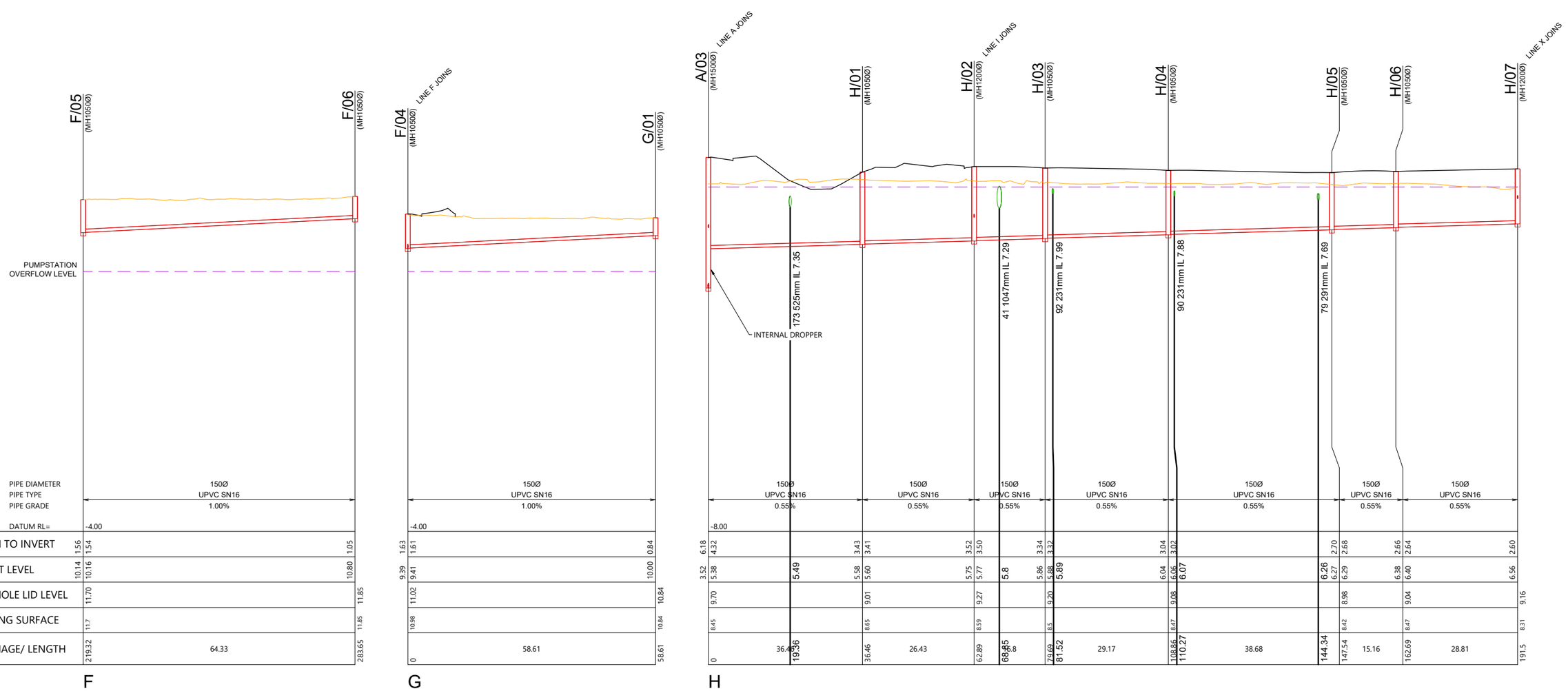
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F G H

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HOR. 0 10 20 50
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				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 7

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4506-DR	

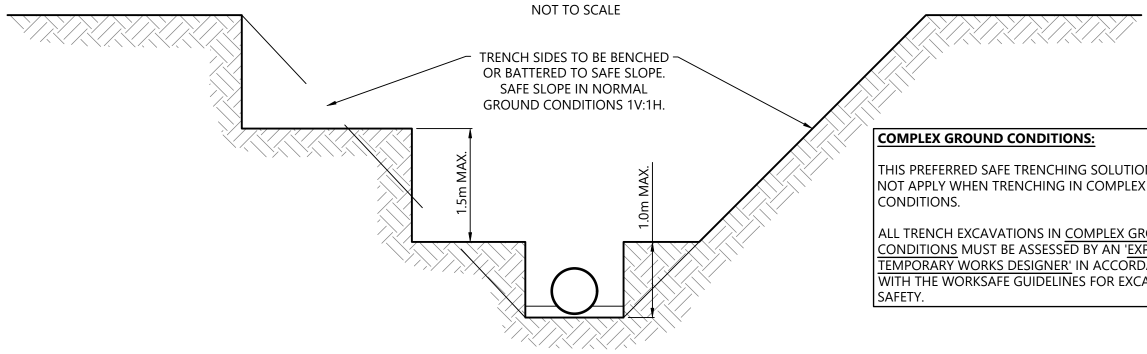
WOODS EST.1970

Plot Date: 12:29:29 pm,30 September 2026, NEDV

File: C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_226000\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



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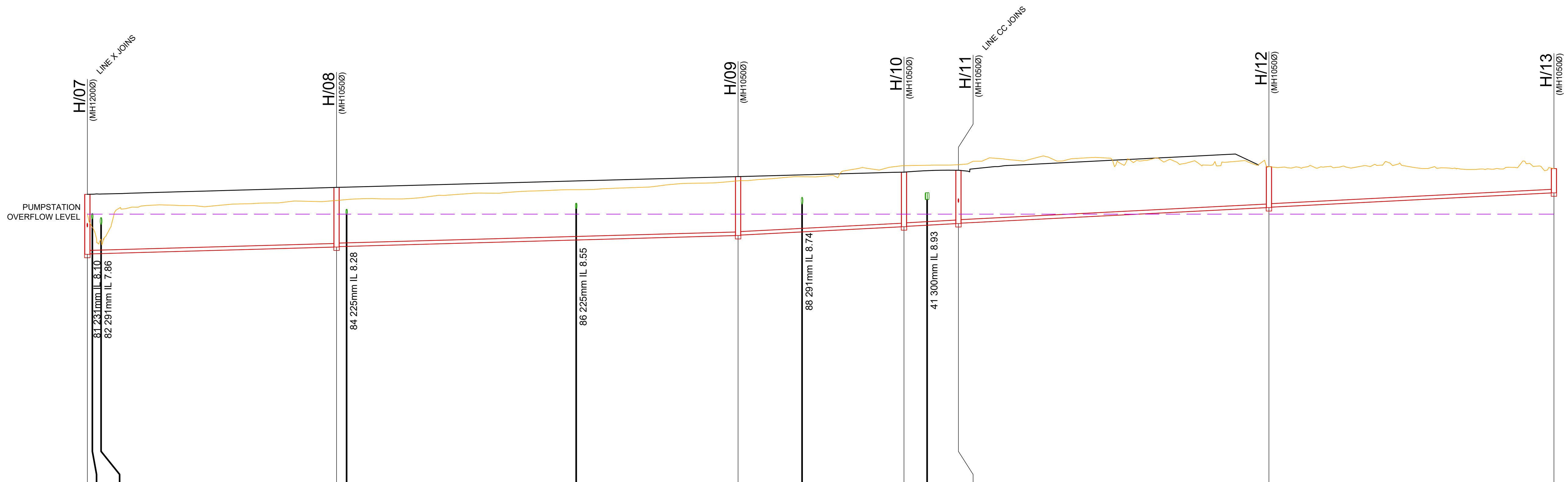
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5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
8. ALL MANHOLE LIDS IN THE CYCLEWAY SHOULD HAVE A CYCLIST FRIENDLY COVER.
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

WOODS EST.1970



DATUM RL= -6.00

	H/07	81	82	H/07–H/08	H/08	84	H/08–H/09	86	H/09	88	H/09–H/10	H/10	41	H/10–H/11	H/11	H/11–H/12	H/12	H/12–H/13	H/13
PIPE DIAMETER				150Ø			150Ø				150Ø			150Ø		150Ø		150Ø	
PIPE TYPE				UPVC SN16			UPVC SN16				UPVC SN16			UPVC SN16		UPVC SN16		UPVC SN16	
PIPE GRADE				0.55%			0.55%				1.00%			1.00%		1.00%		1.00%	
DEPTH TO INVERT	2.60 / 2.58				2.59 / 2.57				2.56 / 2.54			2.37 / 2.35			2.31 / 2.29		1.78 / 1.76		1.05
INVERT LEVEL	6.56 / 6.58	6.58	6.59		6.87 / 6.89	6.9		7.18	7.37 / 7.39	7.53		7.75 / 7.77	7.82		7.89 / 7.91		8.59 / 8.61		9.22
MANHOLE LID LEVEL	9.16				9.46				9.93			10.12			10.20		10.36		10.28
EXISTING SURFACE	8.31				8.89				9.75			10.41			10.45		10.36		10.28
CHAINAGE/ LENGTH	191.5	192.59	194.48	54.11	245.61	247.81	87.21	297.66	332.82	346.71	36.03	368.85	373.87	1.82	380.67	67.44	448.11	61.89	509.99

H

SCALEBAR (m)
HOR. 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 8

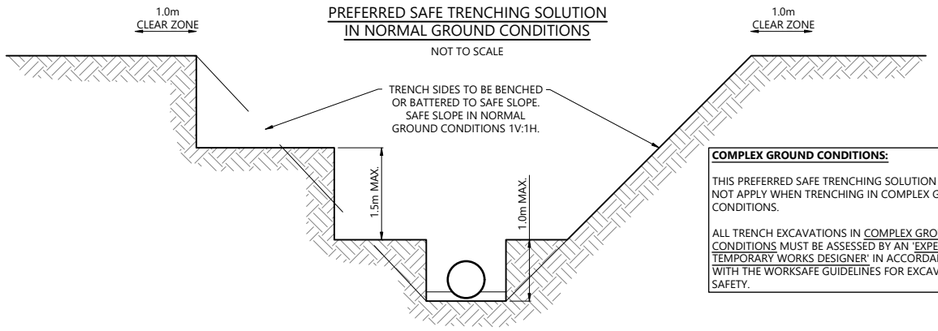
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4507-DR	

Plot Date: 12:29:30 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

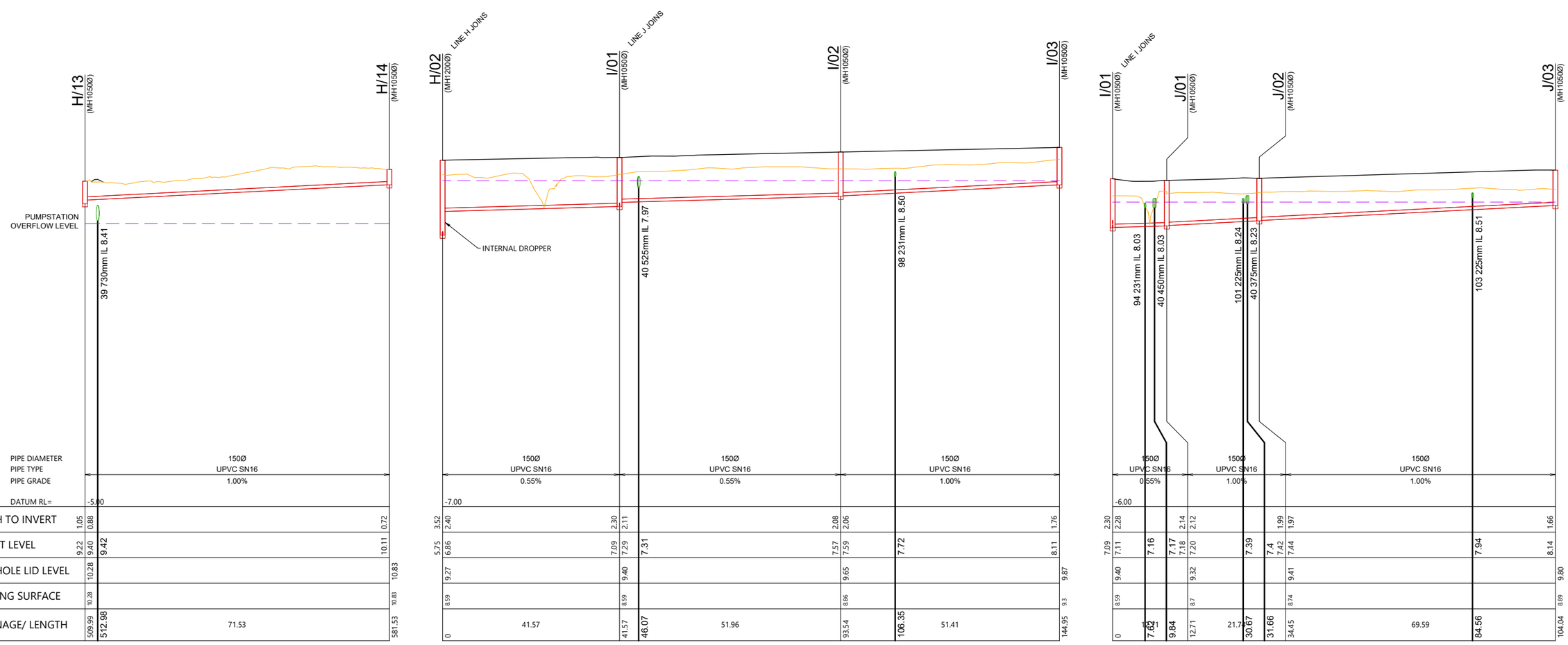
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

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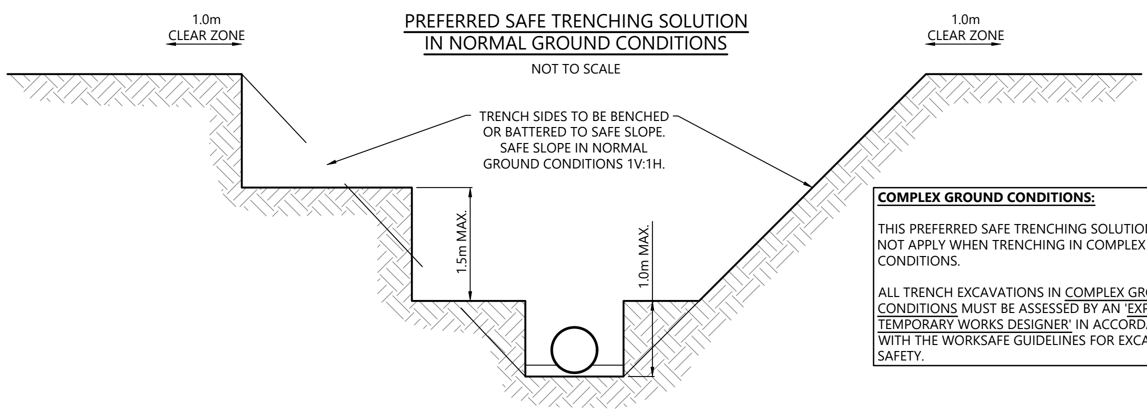
MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 9

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4508-DR	

Plot Date: 12:29:31 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

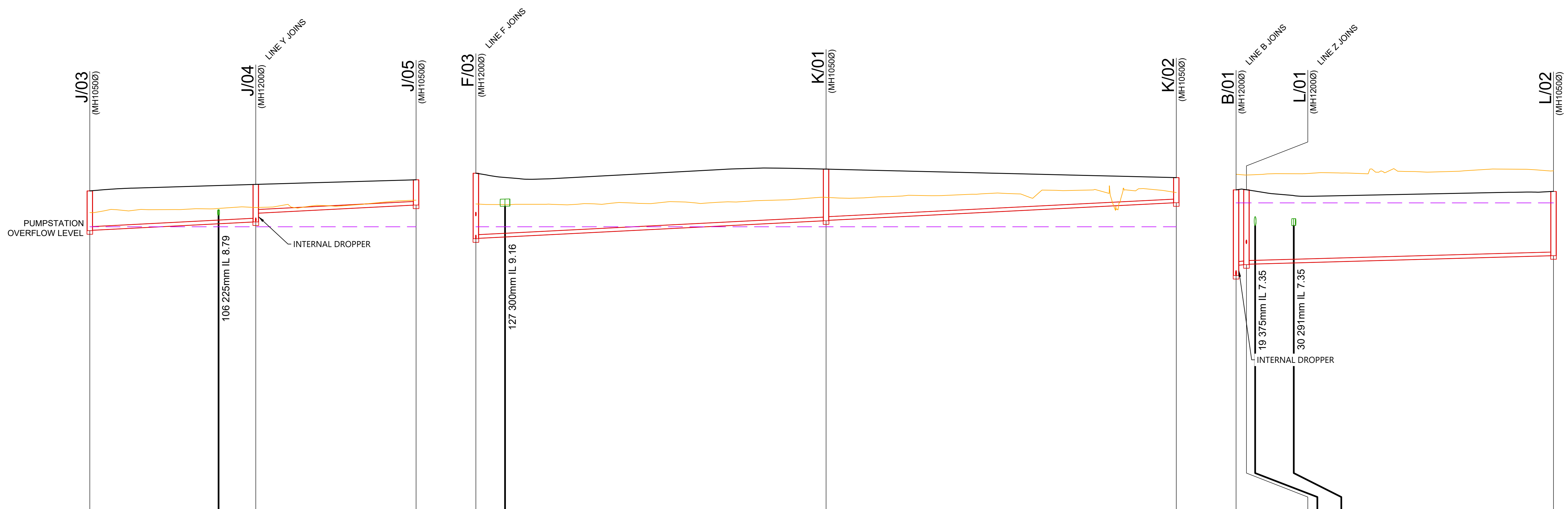
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
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  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
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9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.



J — DATUM RL= -6.00

	J/03		Lateral	J/04		J/05
PIPE DIAMETER		150Ø			150Ø	
PIPE TYPE		UPVC SN16			UPVC SN16	
PIPE GRADE		1.00%			1.00%	
DEPTH TO INVERT	1.66 / 1.64			1.57 / 1.20		1.06
INVERT LEVEL	8.14 / 8.16		8.43	8.50 / 8.87		9.21
MANHOLE LID LEVEL	9.80			10.07		10.26
EXISTING SURFACE	8.89			9.11		9.41
CHAINAGE/ LENGTH	104.04	34.7	130.96	138.74	33.51	172.25

K — DATUM RL= -6.00

	F/03	Lateral		K/01		K/02
PIPE DIAMETER			150Ø		150Ø	
PIPE TYPE			UPVC SN16		UPVC SN16	
PIPE GRADE			1.00%		1.00%	
DEPTH TO INVERT	2.74 / 2.72			2.16 / 2.14		1.05
INVERT LEVEL	7.80 / 7.82	7.88		8.55 / 8.57		9.30
MANHOLE LID LEVEL	10.54			10.71		10.36
EXISTING SURFACE	9.25			9.53		9.73
CHAINAGE/ LENGTH	0	6.1	73.22	73.22	73.22	146.43

L — DATUM RL= -7.00

	B/01		L/01	Lateral	Lateral		L/02
PIPE DIAMETER		150Ø				150Ø	
PIPE TYPE		UPVC SN16				UPVC SN16	
PIPE GRADE		1.00%				0.55%	
DEPTH TO INVERT	3.58 / 3.15		3.13 / 3.11				2.69
INVERT LEVEL	5.26 / 5.70		5.72 / 5.74	5.74	5.79		6.09
MANHOLE LID LEVEL	8.84		8.85				8.78
EXISTING SURFACE	9.49		9.46				9.64
CHAINAGE/ LENGTH	-2.16	2.16	0	1.82	9.9	64.2	64.2

SCALEBAR (m) — HOR. 0, 10, 20, 50 — SCALE | 1:1000 @A3 | 1:500 @A1|
VERT. 2, 4, 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

WOODS EST.1970

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 10

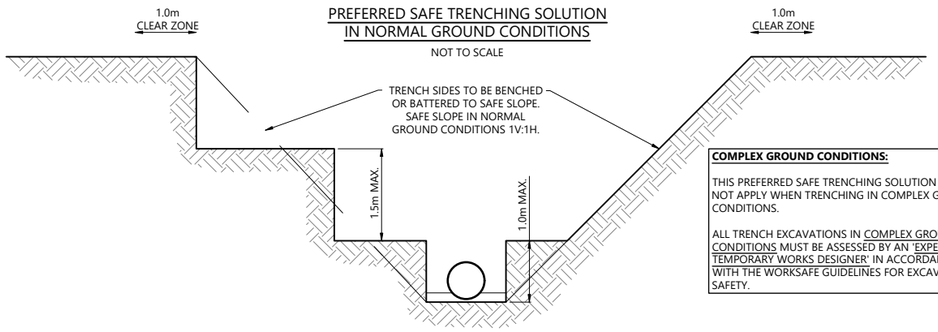
STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4509-DR	

Plot Date: 12:29:32 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

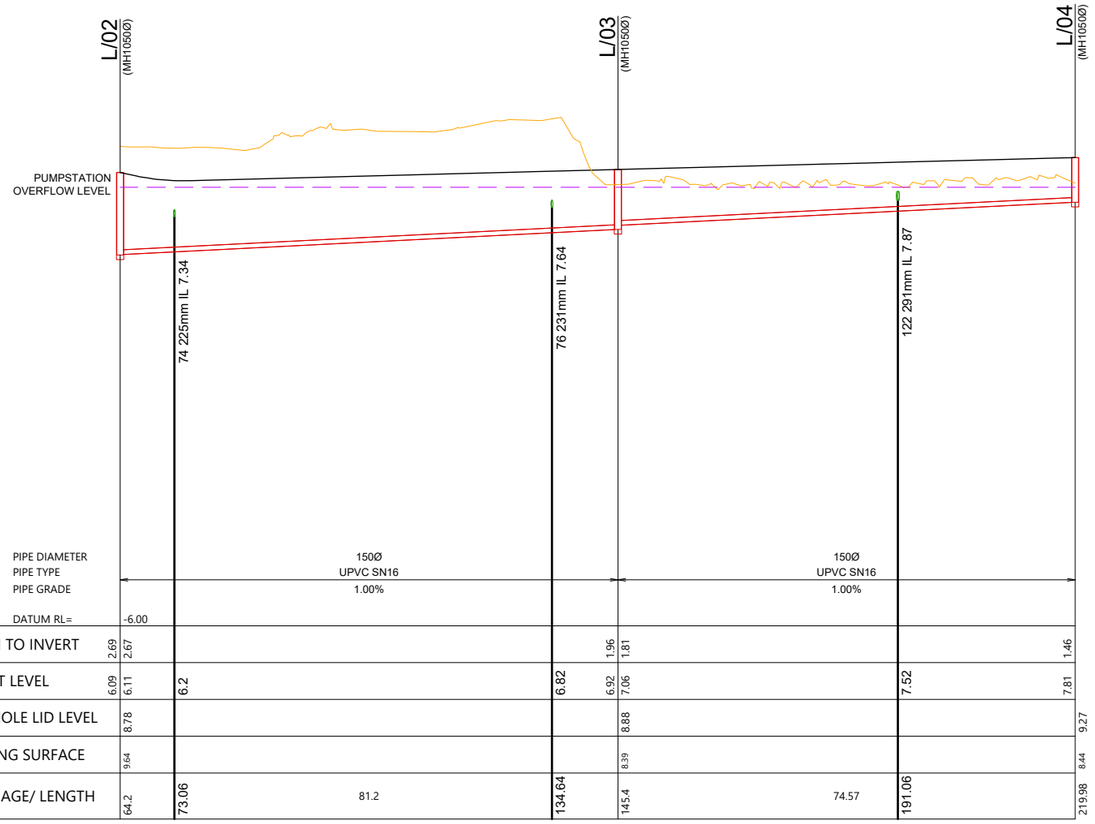
SAFE TRENCHING NOTES:

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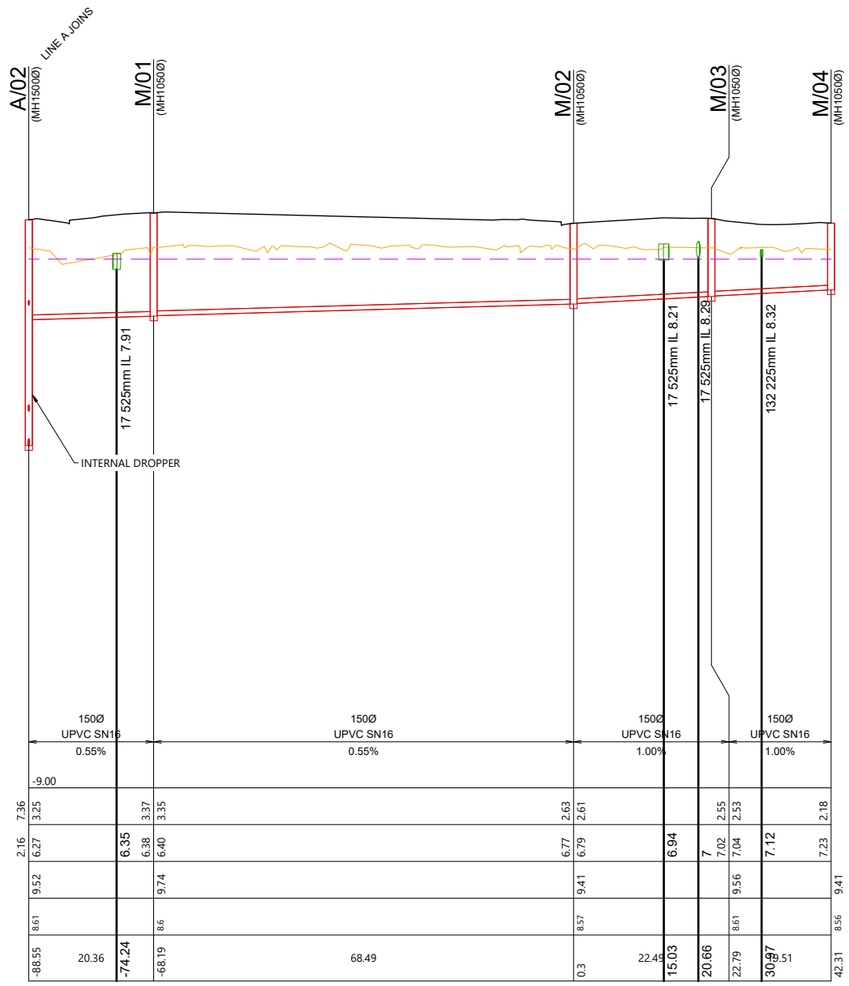
WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
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PIPE DIAMETER		150Ø	150Ø	
PIPE TYPE		UPVC SN16	UPVC SN16	
PIPE GRADE		1.00%	1.00%	
DATUM RL=	-6.00			
DEPTH TO INVERT	2.69 / 2.67		1.96 / 1.81	1.46
INVERT LEVEL	6.09 / 6.11	6.2	6.82 / 6.92 / 7.06	7.52 / 7.81
MANHOLE LID LEVEL	8.78		8.88	9.27
EXISTING SURFACE	9.64		8.39	8.44
CHAINAGE/ LENGTH	64.2	73.06 / 81.2	134.64 / 145.4 / 74.57	191.06 / 219.98

L



PIPE DIAMETER		150Ø	150Ø	150Ø	150Ø	150Ø
PIPE TYPE		UPVC SN16	UPVC SN16	UPVC SN16	UPVC SN16	UPVC SN16
PIPE GRADE		0.55%	0.55%	1.00%		1.00%
DATUM RL=	-9.00					
DEPTH TO INVERT	7.36 / 3.25		3.37 / 3.35	2.63 / 2.61	2.55 / 2.53	2.18
INVERT LEVEL	2.16 / 6.27	6.35 / 6.38	6.40	6.77 / 6.79	6.94 / 7.02 / 7.04	7.12 / 7.23
MANHOLE LID LEVEL	9.52		9.74	9.41	9.56	9.41
EXISTING SURFACE	8.61		8.6	8.57	8.61	8.56
CHAINAGE/ LENGTH	-88.55 / 20.36	-74.24	-68.19 / 68.49	0.3 / 22.49	15.03 / 20.66	22.79 / 30.87 / 9.51	42.31

M

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 11

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4510-DR	

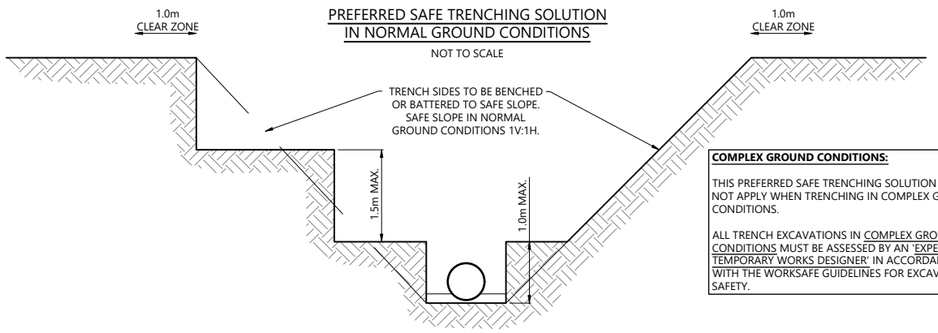
WOODS Est.1970

Plot Date: 12:29:32 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

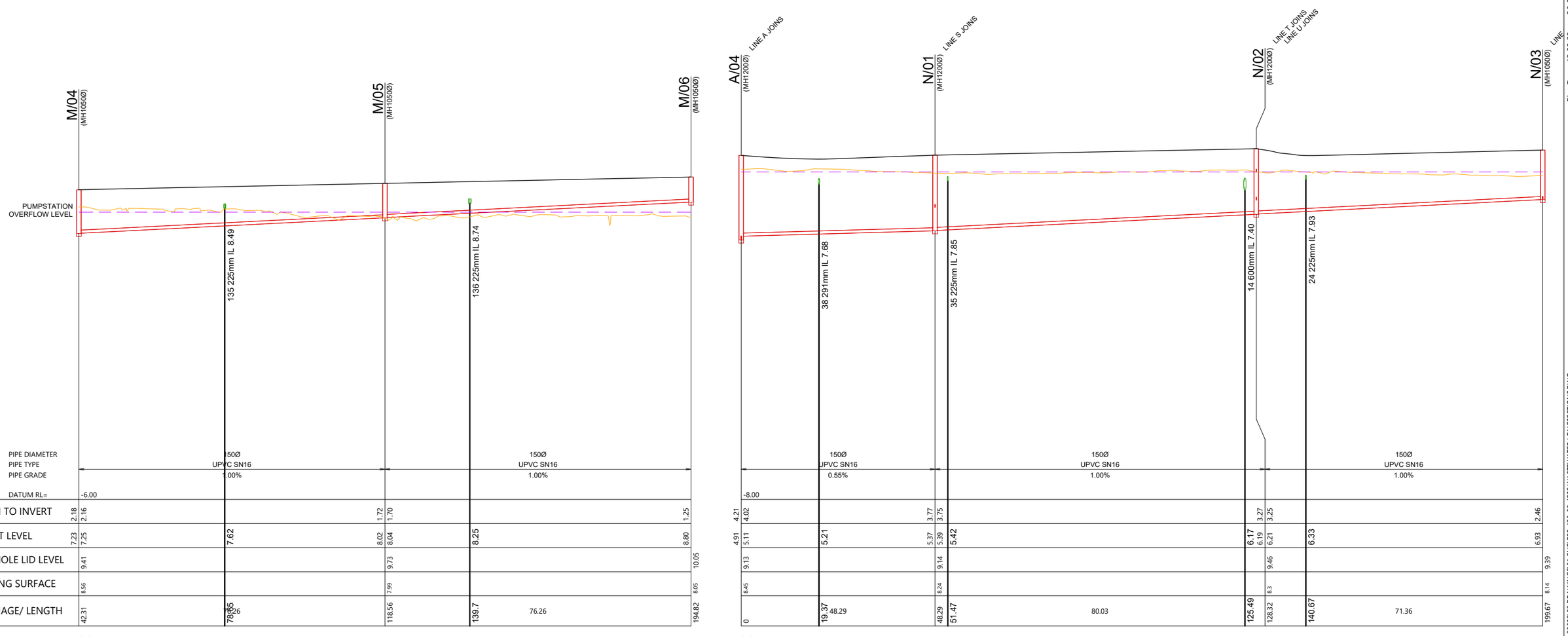
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- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
8. ALL MANHOLE LIDS IN THE CYCLEWAY SHOULD HAVE A CYCLIST FRIENDLY COVER.
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

WOODS
EST.1970



	M/04 (MH1050Ø)		M/05 (MH1050Ø)		M/06 (MH1050Ø)
PIPE DIAMETER		150Ø		150Ø	
PIPE TYPE		UPVC SN16		UPVC SN16	
PIPE GRADE		1.00%		1.00%	
DATUM RL=	-6.00				
DEPTH TO INVERT	2.18 / 2.16		1.72 / 1.70		1.25
INVERT LEVEL	7.23 / 7.25	7.62	8.02 / 8.04	8.25	8.80
MANHOLE LID LEVEL	9.41		9.73		10.05
EXISTING SURFACE	8.56		7.99		8.05
CHAINAGE/ LENGTH	42.31	78.55 / 36.26	118.56	139.7 / 76.26	194.82

M

	A/04 (MH1200Ø)		N/01 (MH1200Ø)		N/02 (MH1200Ø)		N/03 (MH1050Ø)
PIPE DIAMETER		150Ø		150Ø		150Ø	
PIPE TYPE		UPVC SN16		UPVC SN16		UPVC SN16	
PIPE GRADE		0.55%		1.00%		1.00%	
DATUM RL=	-8.00						
DEPTH TO INVERT	4.21 / 4.02		3.77 / 3.75		3.27 / 3.25		2.46
INVERT LEVEL	4.91 / 5.11	5.21	5.37 / 5.39	5.42	6.17 / 6.19 / 6.21	6.33	6.93
MANHOLE LID LEVEL	9.13		9.14		9.46		9.39
EXISTING SURFACE	8.45		8.24		8.3		8.14
CHAINAGE/ LENGTH	0	19.37 / 48.29	48.29	51.47 / 80.03	125.49 / 128.32	140.67 / 71.36	199.67

N

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 12

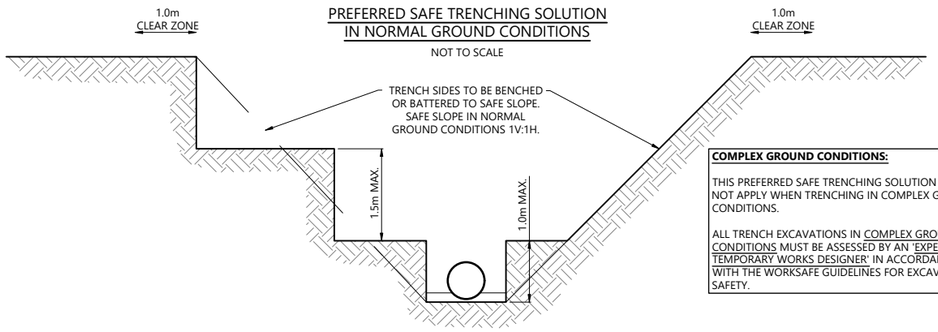
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4511-DR	

Plot Date: 12:29:33 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

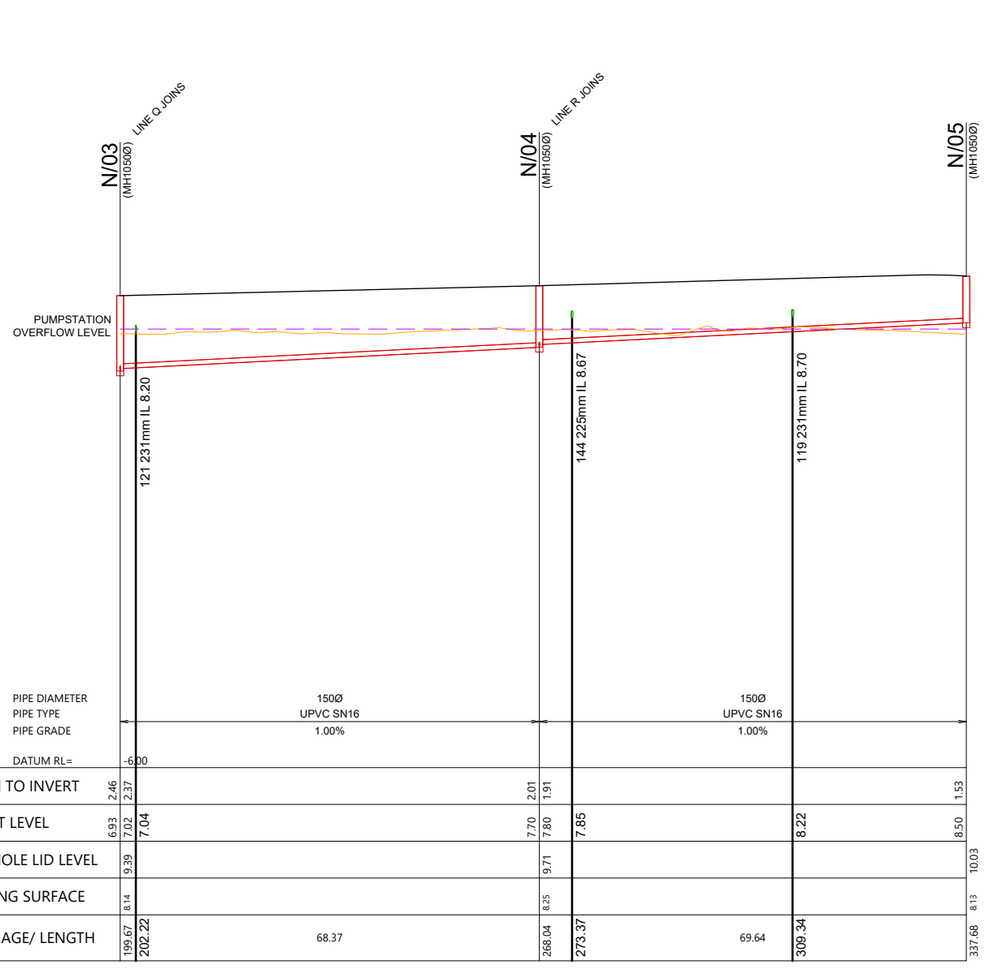
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

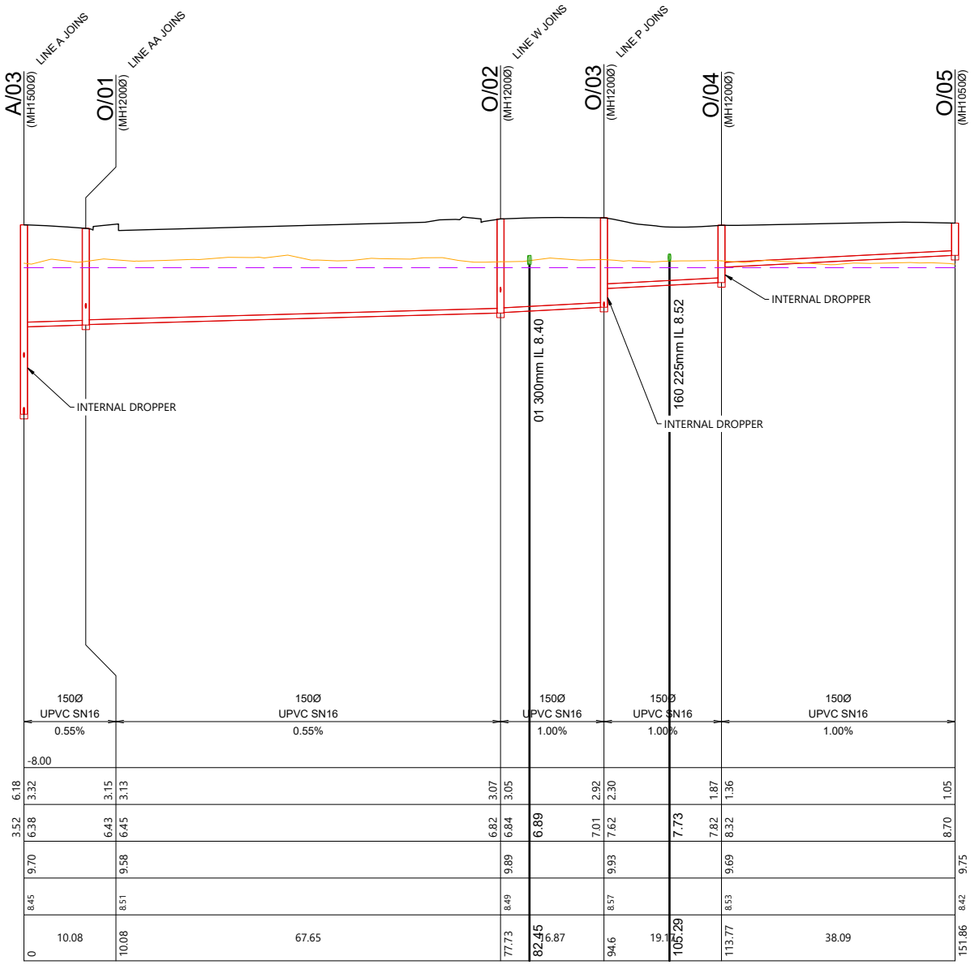
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- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

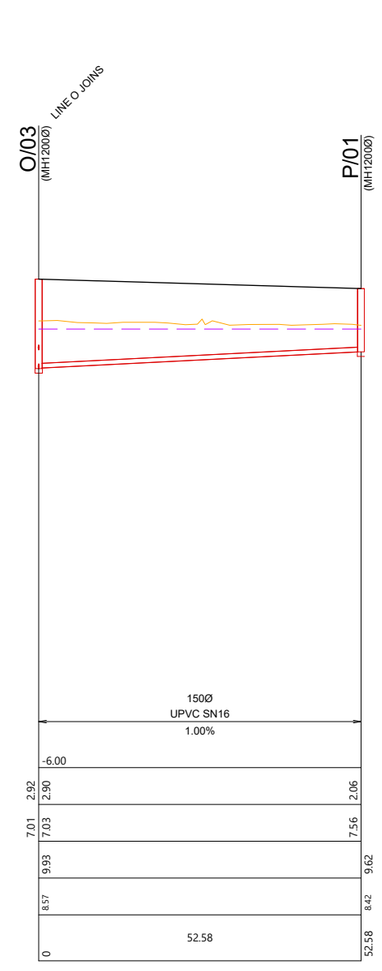
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2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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P

SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 13

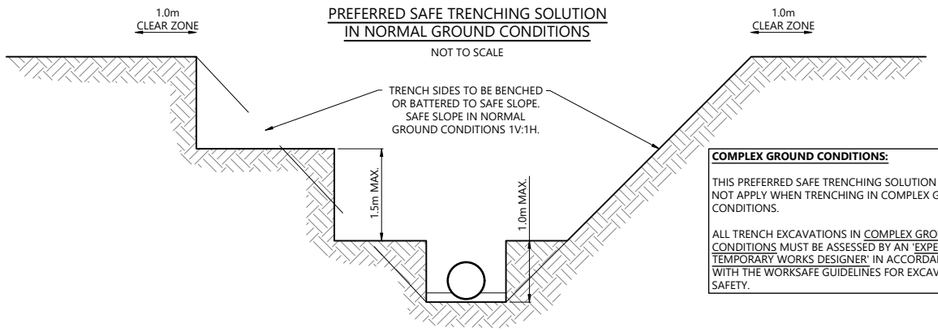
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SCALE	H 1:1000 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4512-DR	

Plot Date: 12:29:34 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

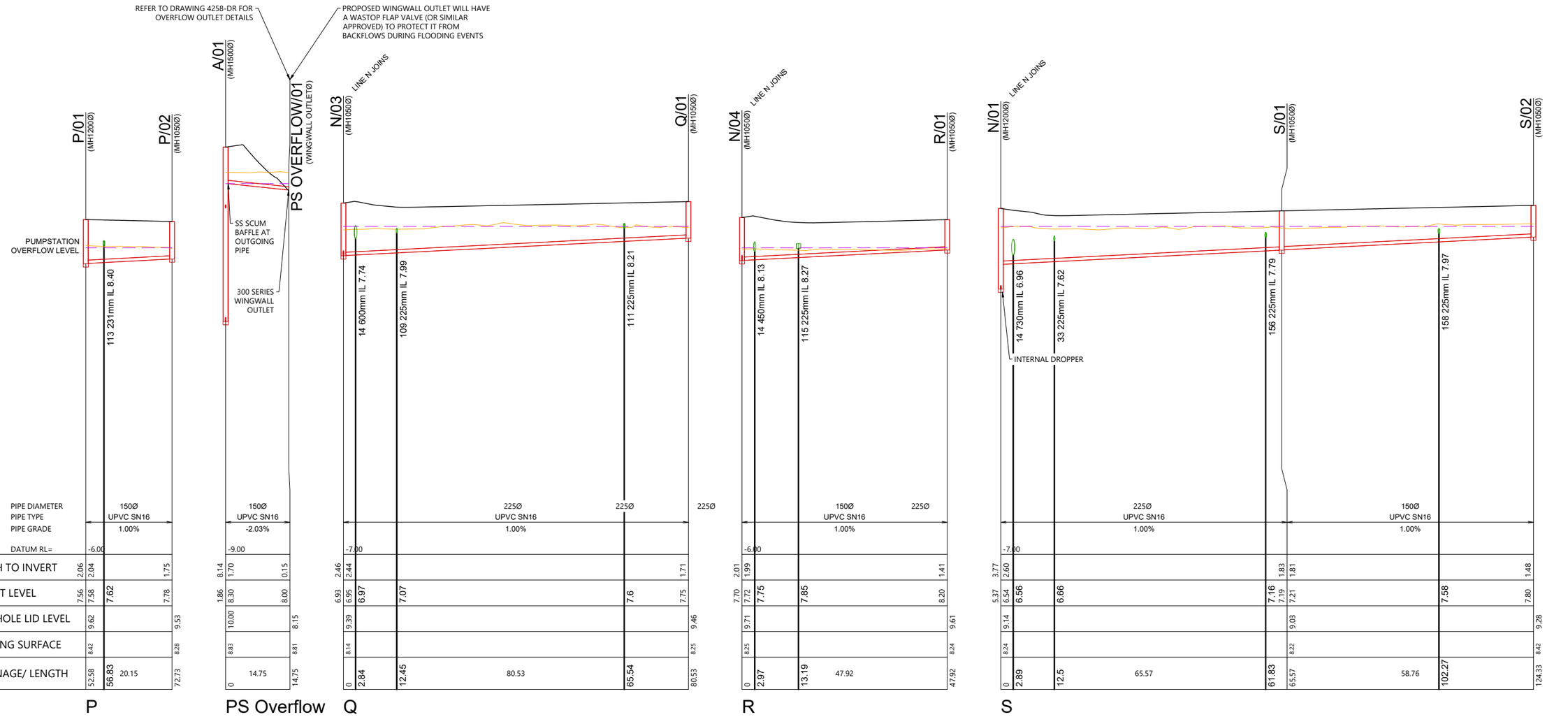
SAFE TRENCHING NOTES:

1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
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- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 14

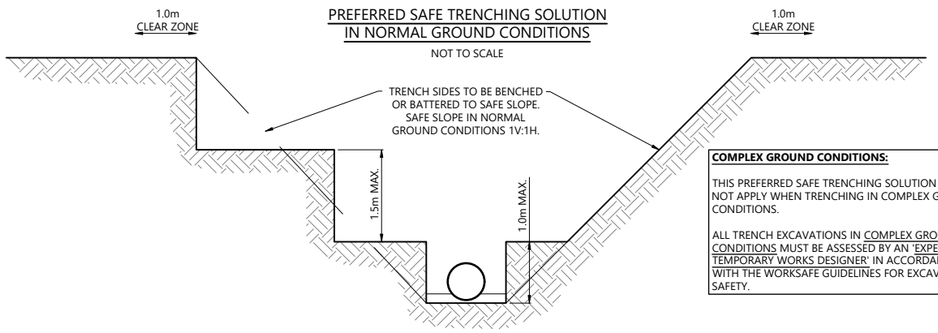
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COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4513-DR	

Plot Date: 12:29:35 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_2260\00 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

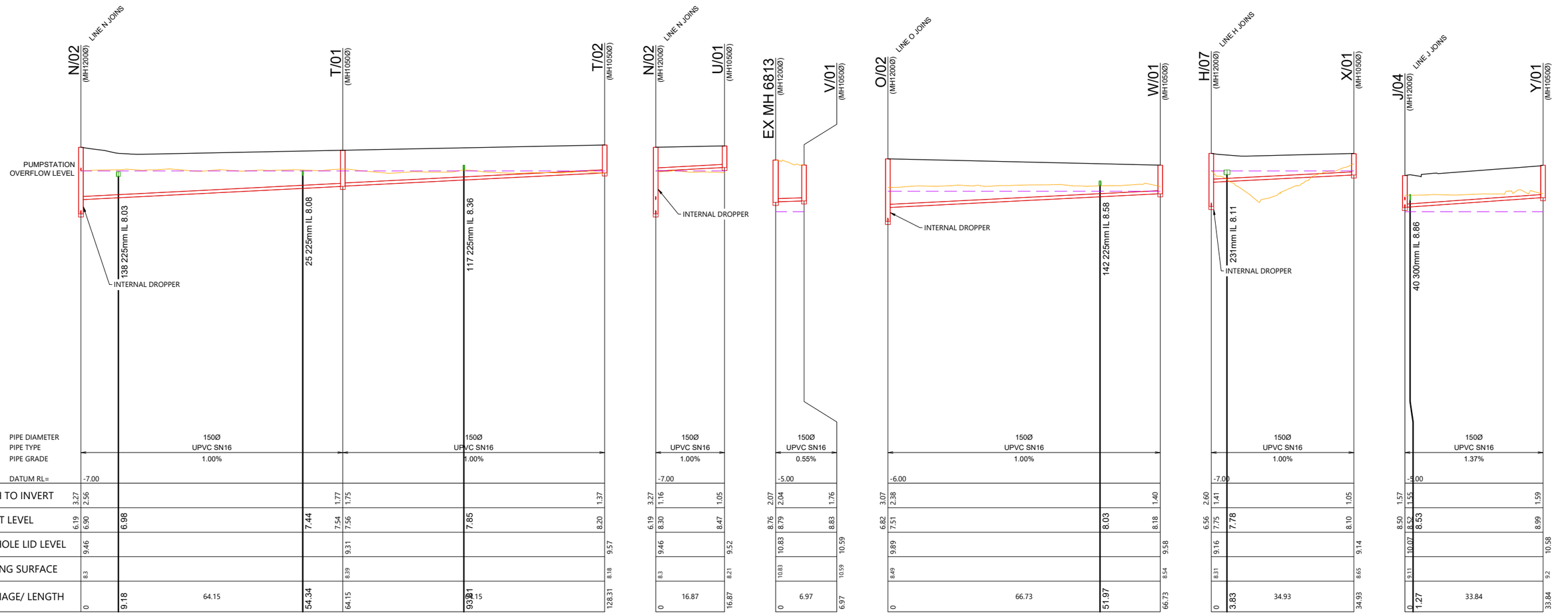
SAFE TRENCHING NOTES:

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- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
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5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10
SCALE | 1:1000 @A3 | 1:500 @A1|
SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
AUCKLAND 1023
+64 9 308 9229
WOODS.CO.NZ

CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 15

STATUS	ISSUED FOR CONSENT	REV
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COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4514-DR	

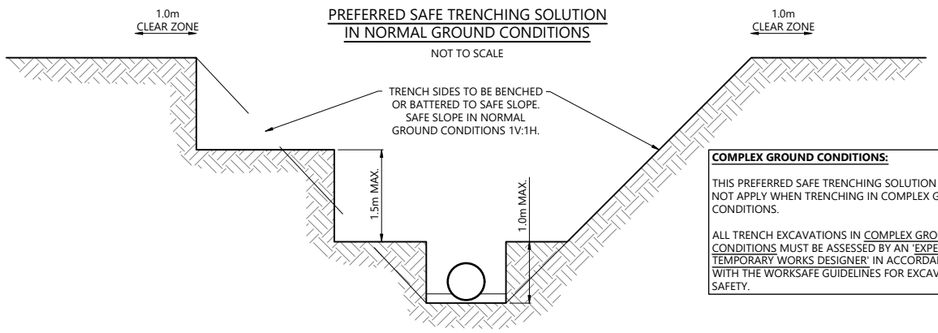
WOODS EST.1970

Plot Date: 12:29:35 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

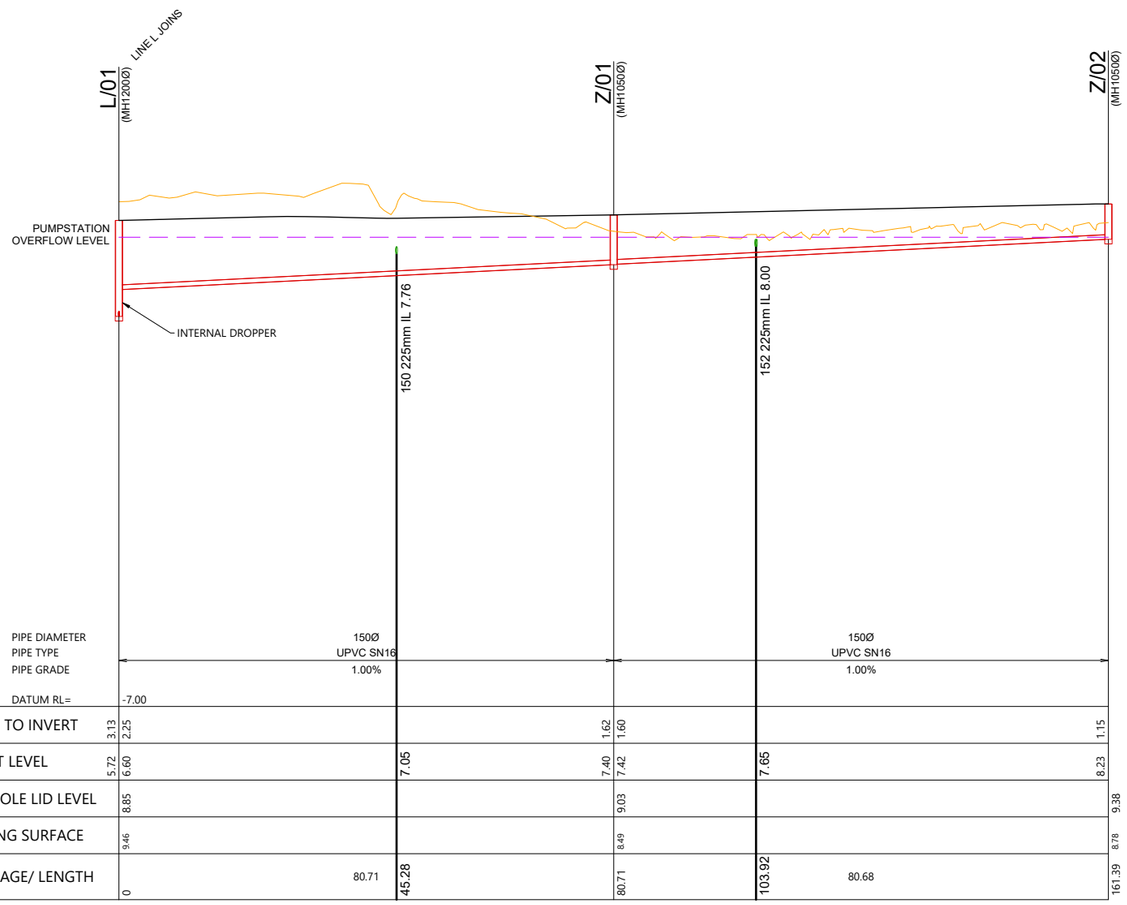
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SCALEBAR (m)
HOR. 0 10 20 50
VERT. 2 4 10

SCALE | 1:1000 @A3 | 1:500 @A1|

SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DESIGNED	GP
				DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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CDL LAND NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - SHEET 16

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:1000 V 1:200 @ A3	1
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4515-DR	

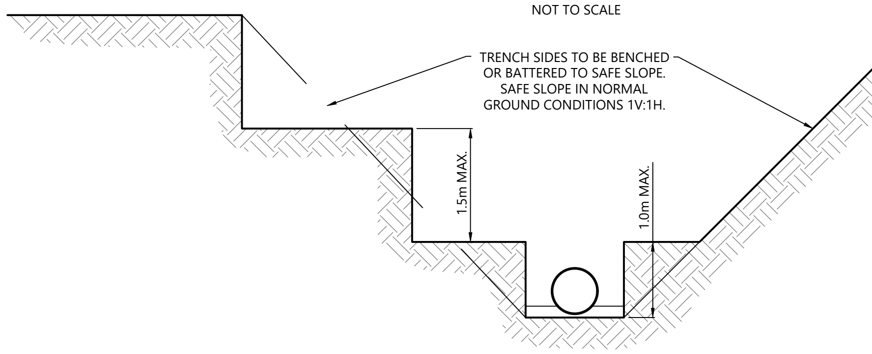
WOODS EST.1970

Plot Date: 12:29:36 pm,30 September 2026, NEDV

File: C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG

PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS

NOT TO SCALE



COMPLEX GROUND CONDITIONS:

THIS PREFERRED SAFE TRENCHING SOLUTION DOES NOT APPLY WHEN TRENCHING IN COMPLEX GROUND CONDITIONS.

ALL TRENCH EXCAVATIONS IN COMPLEX GROUND CONDITIONS MUST BE ASSESSED BY AN 'EXPERIENCED TEMPORARY WORKS DESIGNER' IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.

SAFE TRENCHING NOTES:

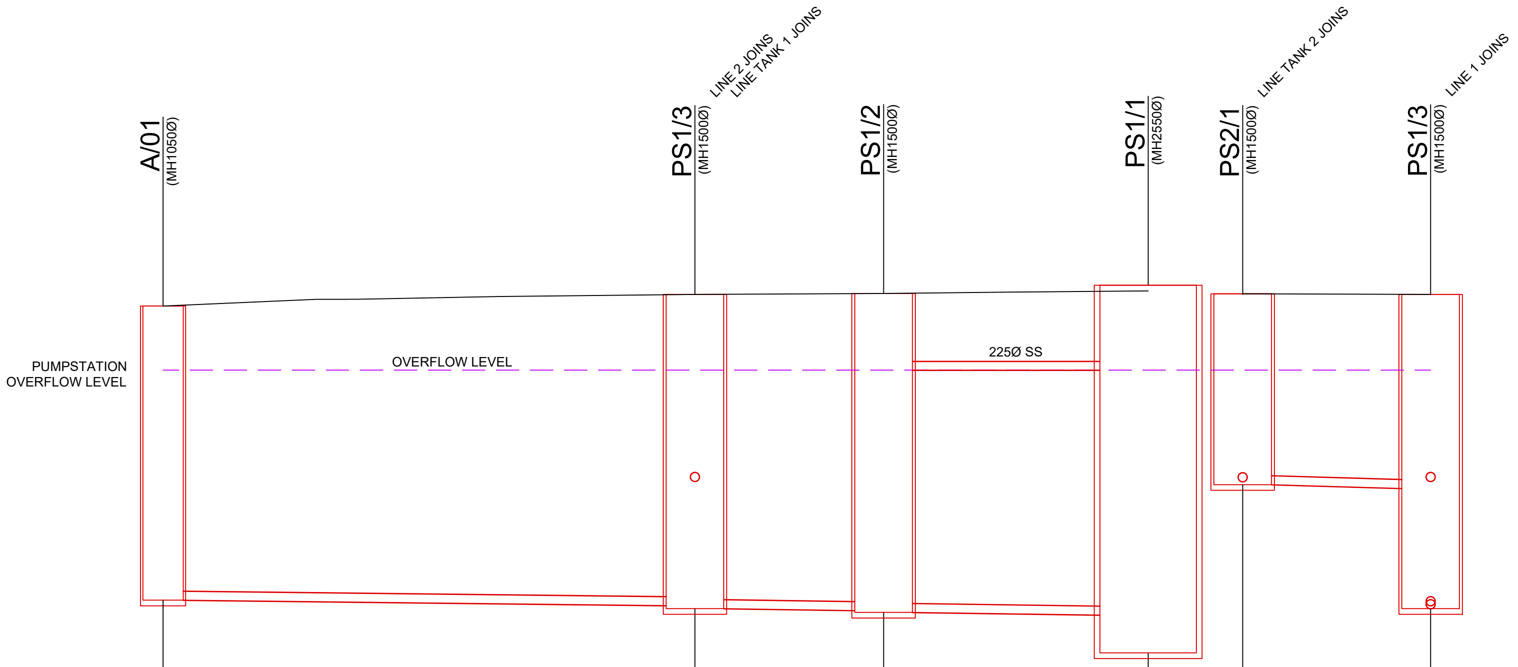
1. THIS DIAGRAM SHOWS THE PREFERRED SAFE TRENCHING SOLUTION IN NORMAL GROUND CONDITIONS.
2. ALL TRENCH EXCAVATIONS MUST BE ASSESSED BY A 'COMPETENT PERSON' ON SITE IN ACCORDANCE WITH THE WORKSAFE GUIDELINES FOR EXCAVATION SAFETY.
3. IF THE PREFERRED TRENCHING SOLUTION IS NOT IMPLEMENTED THE CONTRACTOR MUST PROVIDE RECORDS OF THE SAFE TRENCHING ASSESSMENT COMPLETED BY THE 'COMPETENT PERSON'.
4. TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES SETOUT THE RECOMMENDED COMPETENCIES FOR THE 'COMPETENT PERSON'.
5. CONTRACTOR TO BE AWARE OF POTENTIAL FOR HIGH WATER TABLE LEVELS AND POTENTIAL FOR RUNNING SAND. DE-WATERING OF TRENCHES MAY BE NECESSARY.
6. GROUND CONDITIONS AS DEFINED IN TABLES 1 AND 2 OF THE WORKSAFE GUIDELINES:

- NORMAL GROUND CONDITIONS:
  GENERALLY FLAT OPEN GROUND, WITH LITTLE OR NO SURCHARGE LOADING, FAVOURABLE GROUND CONDITIONS, OFF SET FROM NEARBY STRUCTURES AND SENSITIVE INFRASTRUCTURE. GROUNDWATER CAN BE CONTROLLED WITH SIMPLE METHODS, SUCH AS A SUMP PUMP ARRANGEMENT.
- COMPLEX GROUND CONDITIONS:
  THE GROUND CONDITIONS INCLUDE VERY WEAK OR SENSITIVE SOILS, GROUNDWATER THAT REQUIRES SPECIALIST DEWATERING, OR LOCATIONS NEAR STRUCTURES AND SENSITIVE INFRASTRUCTURE. THESE CONDITIONS WOULD RESULT IN AN ELEVATED RISK WHEN CONSTRUCTING THE EXCAVATION.

WASTEWATER NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. FOR PIPE BEDDING DETAILS REFER TO STANDARD DETAIL SHEETS UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTIONS IN WHICH CASE SUCH NOTES TAKE PRECEDENCE.
3. WW PIPES TO BE 150MMØ UPVC SN16. UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
4. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.
5. ALL WW LOT CONNECTIONS TO BE 100MMØ. RAMPED RISERS ARE TO BE EXTENDED & CAPPED OFF 1.0M BELOW THE FINISHED GROUND SURFACE.
6. ALL MANHOLES TO BE 1050MMØ UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
7. THE CONTRACTOR IS TO PEG MANHOLES & CHECK FINISHED EARTHWORKS LEVELS (MH LID LEVELS) PRIOR TO ORDERING MANHOLES.
8. ALL MANHOLE LIDS IN THE CYCLEWAY SHOULD HAVE A CYCLIST FRIENDLY COVER.
9. PIPE GRADES ON THE LONG SECTIONS ARE CALCULATED FROM MANHOLE SIDE TO MANHOLE SIDE. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT LASER LEVELS ARE SET TO COMPENSATE FOR THIS.

WOODS Est.1970



PS 1

	A/01		PS1/3		PS1/2		PS1/1
PIPE DIAMETER		225Ø		225Ø		225Ø	
PIPE TYPE		UPVC SN16		UPVC SN16		UPVC SN16	
PIPE GRADE		1.00%		1.00%		1.00%	
DATUM RL=	-10.00						
DEPTH TO INVERT	8.20		8.63 8.71 5.13		8.79 8.84		9.12 10.12
INVERT LEVEL	1.79		1.67 1.59 5.17		1.54 1.49 8.30		1.42 0.42 8.30
MANHOLE LID LEVEL	9.99		10.30		10.33		10.54
CHAINAGE/ LENGTH	0	14.07	14.07	4.99	19.06	7	26.05

PS 2

	PS2/1		PS1/3
PIPE DIAMETER		225Ø	
PIPE TYPE		UPVC SN16	
PIPE GRADE		2.00%	
DEPTH TO INVERT	5.05		5.13 8.71 8.63
INVERT LEVEL	5.27		5.17 1.59 1.67
MANHOLE LID LEVEL	10.32		10.30
CHAINAGE/ LENGTH	0	4.97	4.97

SCALEBAR (m) HOR. 0 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|
VERT. 2 4 10 — SCALE | 1:200 @A3 | 1:100 @A1|

REVISION DETAILS		INT	DATE		
				SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	BP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	BP
				CHECKED	LZM/BLO
				APPROVED	BF

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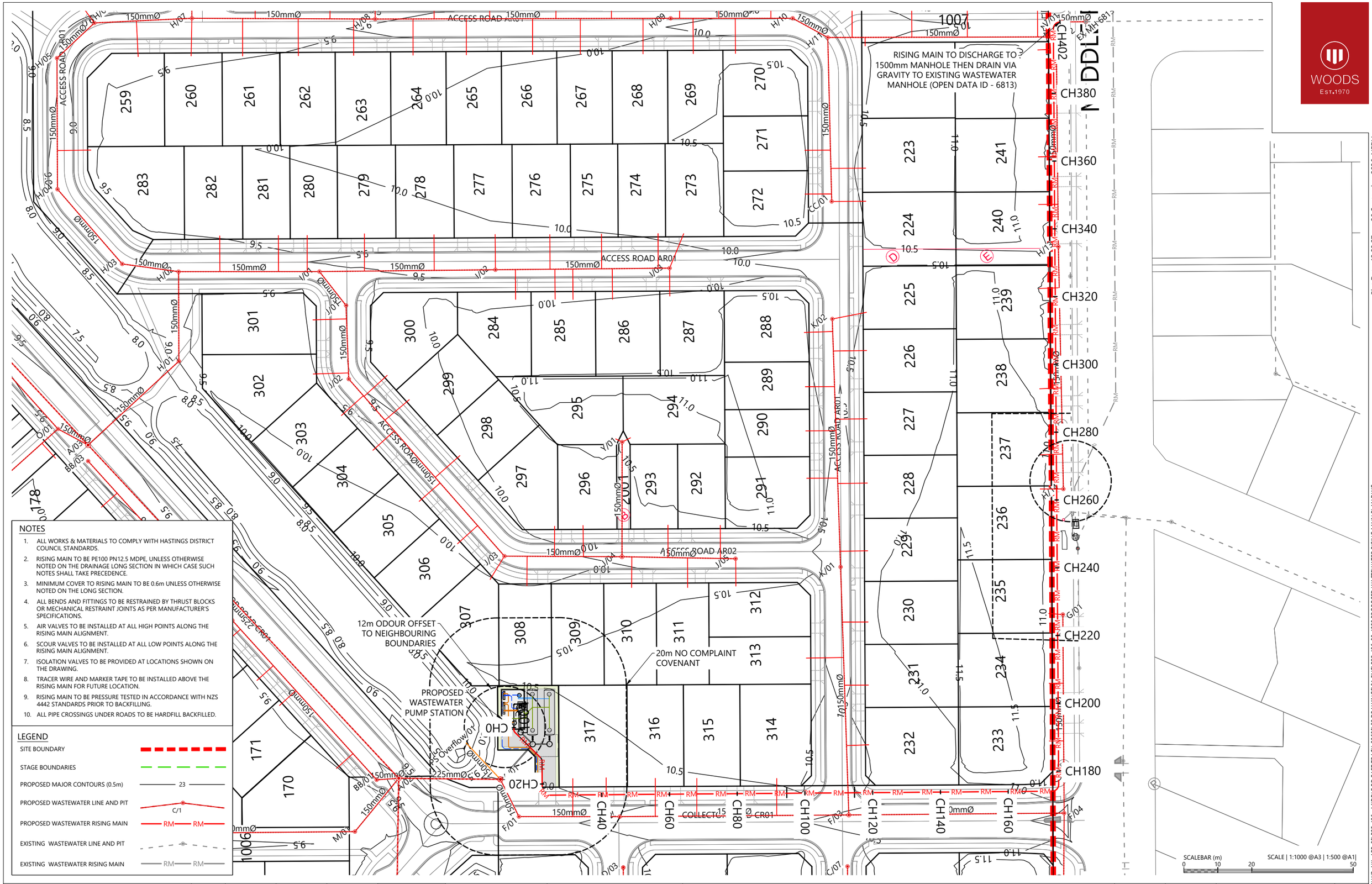
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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER LONGSECTION - WWPS

STATUS	ISSUED FOR CONSENT	REV
SCALE	H 1:200 V 1:200 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4520-DR	

Plot Date: 12:29:36 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4500 WASTEWATER LONGSECTIONS.DWG



NOTES

1. ALL WORKS & MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL STANDARDS.
2. RISING MAIN TO BE PE100 PN12.5 MDPE, UNLESS OTHERWISE NOTED ON THE DRAINAGE LONG SECTION IN WHICH CASE SUCH NOTES SHALL TAKE PRECEDENCE.
3. MINIMUM COVER TO RISING MAIN TO BE 0.6m UNLESS OTHERWISE NOTED ON THE LONG SECTION.
4. ALL BENDS AND FITTINGS TO BE RESTRAINED BY THRUST BLOCKS OR MECHANICAL RESTRAINT JOINTS AS PER MANUFACTURER'S SPECIFICATIONS.
5. AIR VALVES TO BE INSTALLED AT ALL HIGH POINTS ALONG THE RISING MAIN ALIGNMENT.
6. SCOUR VALVES TO BE INSTALLED AT ALL LOW POINTS ALONG THE RISING MAIN ALIGNMENT.
7. ISOLATION VALVES TO BE PROVIDED AT LOCATIONS SHOWN ON THE DRAWING.
8. TRACER WIRE AND MARKER TAPE TO BE INSTALLED ABOVE THE RISING MAIN FOR FUTURE LOCATION.
9. RISING MAIN TO BE PRESSURE TESTED IN ACCORDANCE WITH NZS 4442 STANDARDS PRIOR TO BACKFILLING.
10. ALL PIPE CROSSINGS UNDER ROADS TO BE HARDFILL BACKFILLED.

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARIES
- PROPOSED MAJOR CONTOURS (0.5m) — 23
- PROPOSED WASTEWATER LINE AND PIT — C/1
- PROPOSED WASTEWATER RISING MAIN — RM — RM
- EXISTING WASTEWATER LINE AND PIT
- EXISTING WASTEWATER RISING MAIN — RM — RM

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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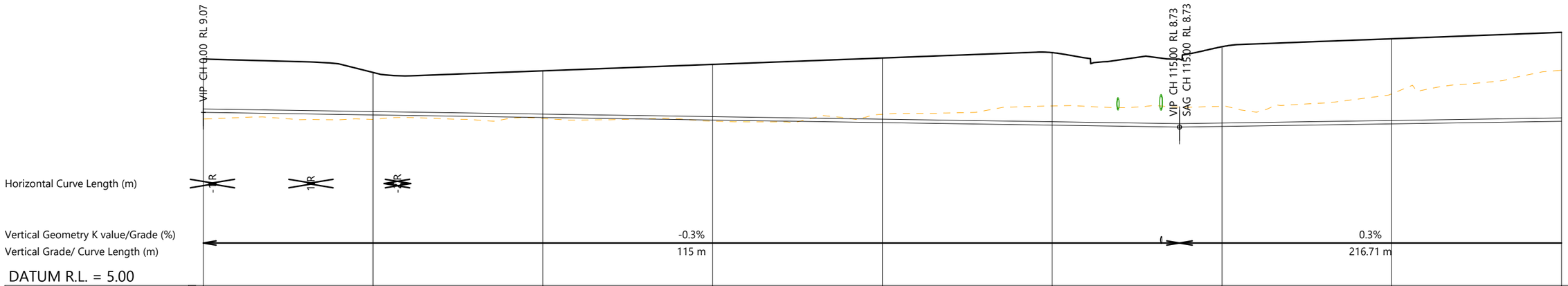
MIDDLE ROAD PROJECT

PROPOSED WASTEWATER RISING MAIN PLAN

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-4950-DR
REV	2

Plot Date: 12:29:37 pm,30 September 2026, NEDV

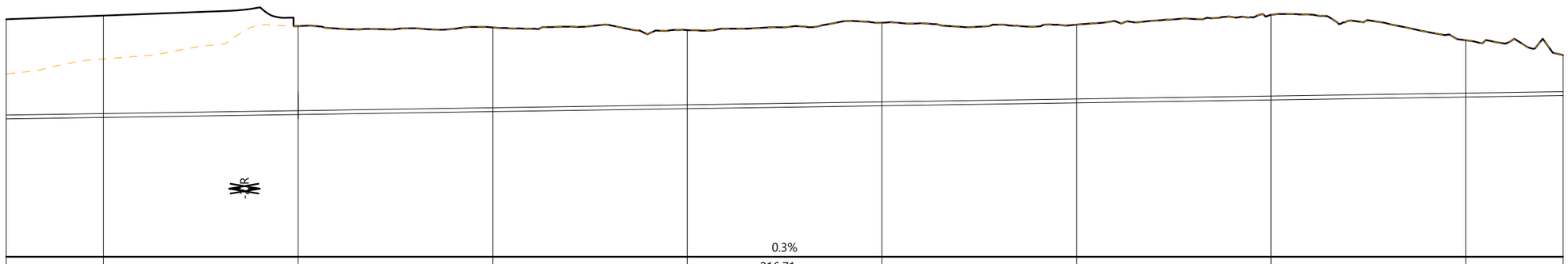
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DATUM R.L. = 5.00

Depth	0.157	0.104	0.022	0.025	-0.196	-0.453	-0.473	-0.707	-1.203
DESIGN SURFACE	10.34	10.01	10.05	10.20	10.36	10.48	10.62	10.81	10.96
PIPE DEPTH	-1.26	-1.00	-1.10	-1.31	-1.52	-1.71	-1.88	-2.00	-2.09
MAIN DESIGN LEVELS	9.07	9.01	8.95	8.89	8.83	8.77	8.74	8.80	8.86
CHAINAGE	0.00	20.00	40.00	60.00	80.00	100.00	120.00	140.00	160.00

RISING MAIN LONGITUDINAL SECTION (PART 1)



DATUM R.L. = 5.00

Depth	-0.927	-1.203	-1.82	-1.731	-1.615	-1.709	-1.609	-1.752	-1.167	-0.832
DESIGN SURFACE	10.88	10.96	10.74	10.72	10.66	10.81	10.77	10.98	10.45	10.15
PIPE DEPTH	-2.05	-2.09	-1.82	-1.73	-1.61	-1.71	-1.61	-1.75	-1.17	-0.83
MAIN DESIGN LEVELS	8.83	8.86	8.92	8.98	9.04	9.10	9.16	9.22	9.28	9.31
CHAINAGE	150.00	160.00	180.00	200.00	220.00	240.00	260.00	280.00	300.00	310.00

RISING MAIN LONGITUDINAL SECTION (PART 2)

SCALEBAR (m)
HOR. 0 5 10 25
VERT. 1 2 5
SCALE | 1:500 @A3 | 1:250 @A1|
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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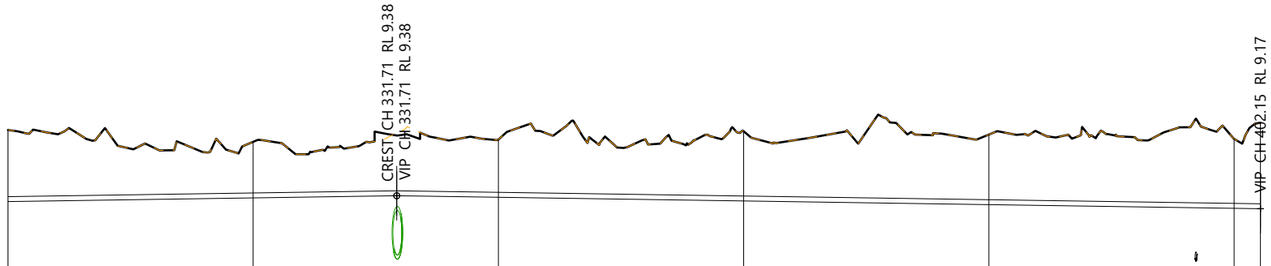
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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER RISINGMAIN LONGSECTION - SHEET 1

		REV
STATUS	ISSUED FOR CONSENT	
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4951-DR	

Plot Date: 12:29:38 pm,30 September 2026, NEDV
File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-4950 PROPOSED WASTEWATER RISING MAIN PLAN.DWG



DATUM R.L. = 5.00

Depth	-1.167		-0.914		-0.94		-1.135		-1.142		-1.132		-1.399						
DESIGN SURFACE	10.45		10.26		10.30		10.43		10.38		10.31		10.57						
PIPE DEPTH	-1.17		-0.91		-0.94		-1.14		-1.14		-1.13		-1.40						
MAIN DESIGN LEVELS	9.28		9.34		9.36		9.30		9.23		9.17		9.17						
CHAINAGE	300.00		320.00		340.00		360.00		380.00		400.00		402.15						

RISING MAIN LONGITUDINAL SECTION (PART 3)

SCALEBAR (m)
HOR. 0 5 10 25
VERT. 1 2 5

SCALE | 1:500 @A3 | 1:250 @A1|
SCALE | 1:100 @A3 | 1:50 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	KV	26/08/2026	DESIGNED	GP
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	KV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WASTEWATER RISINGMAIN LONGSECTION - SHEET 2

STATUS	ISSUED FOR CONSENT	REV
SCALE	AS SHOWN	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-4952-DR	

Plot Date: 12:29:38 pm,30 September 2026, NEDV

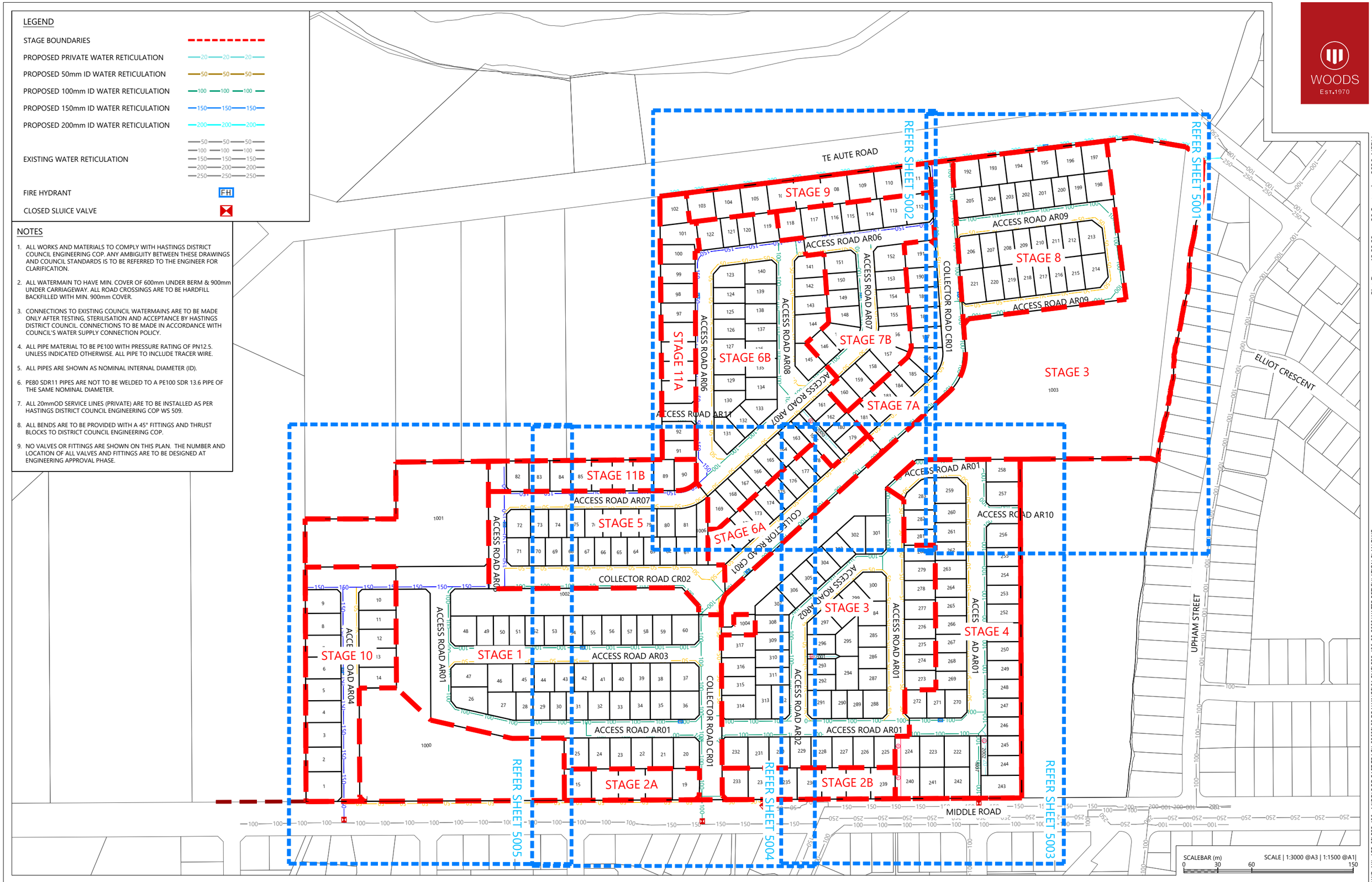
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LEGEND

- STAGE BOUNDARIES
- PROPOSED PRIVATE WATER RETICULATION — 20 — 20 — 20
- PROPOSED 50mm ID WATER RETICULATION — 50 — 50 — 50
- PROPOSED 100mm ID WATER RETICULATION — 100 — 100 — 100
- PROPOSED 150mm ID WATER RETICULATION — 150 — 150 — 150
- PROPOSED 200mm ID WATER RETICULATION — 200 — 200 — 200
- EXISTING WATER RETICULATION — 50 / 100 / 150 / 200 / 250
- FIRE HYDRANT — FH
- CLOSED SLUICE VALVE

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP. ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL WATERMAIN TO HAVE MIN. COVER OF 600mm UNDER BERM & 900mm UNDER CARRIAGEWAY. ALL ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED WITH MIN. 900mm COVER.
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY HASTINGS DISTRICT COUNCIL. CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S WATER SUPPLY CONNECTION POLICY.
4. ALL PIPE MATERIAL TO BE PE100 WITH PRESSURE RATING OF PN12.5. UNLESS INDICATED OTHERWISE. ALL PIPE TO INCLUDE TRACER WIRE.
5. ALL PIPES ARE SHOWN AS NOMINAL INTERNAL DIAMETER (ID).
6. PE80 SDR11 PIPES ARE NOT TO BE WELDED TO A PE100 SDR 13.6 PIPE OF THE SAME NOMINAL DIAMETER.
7. ALL 20mmOD SERVICE LINES (PRIVATE) ARE TO BE INSTALLED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP WS 509.
8. ALL BENDS ARE TO BE PROVIDED WITH A 45° FITTINGS AND THRUST BLOCKS TO DISTRICT COUNCIL ENGINEERING COP.
9. NO VALVES OR FITTINGS ARE SHOWN ON THIS PLAN. THE NUMBER AND LOCATION OF ALL VALVES AND FITTINGS ARE TO BE DESIGNED AT ENGINEERING APPROVAL PHASE.



REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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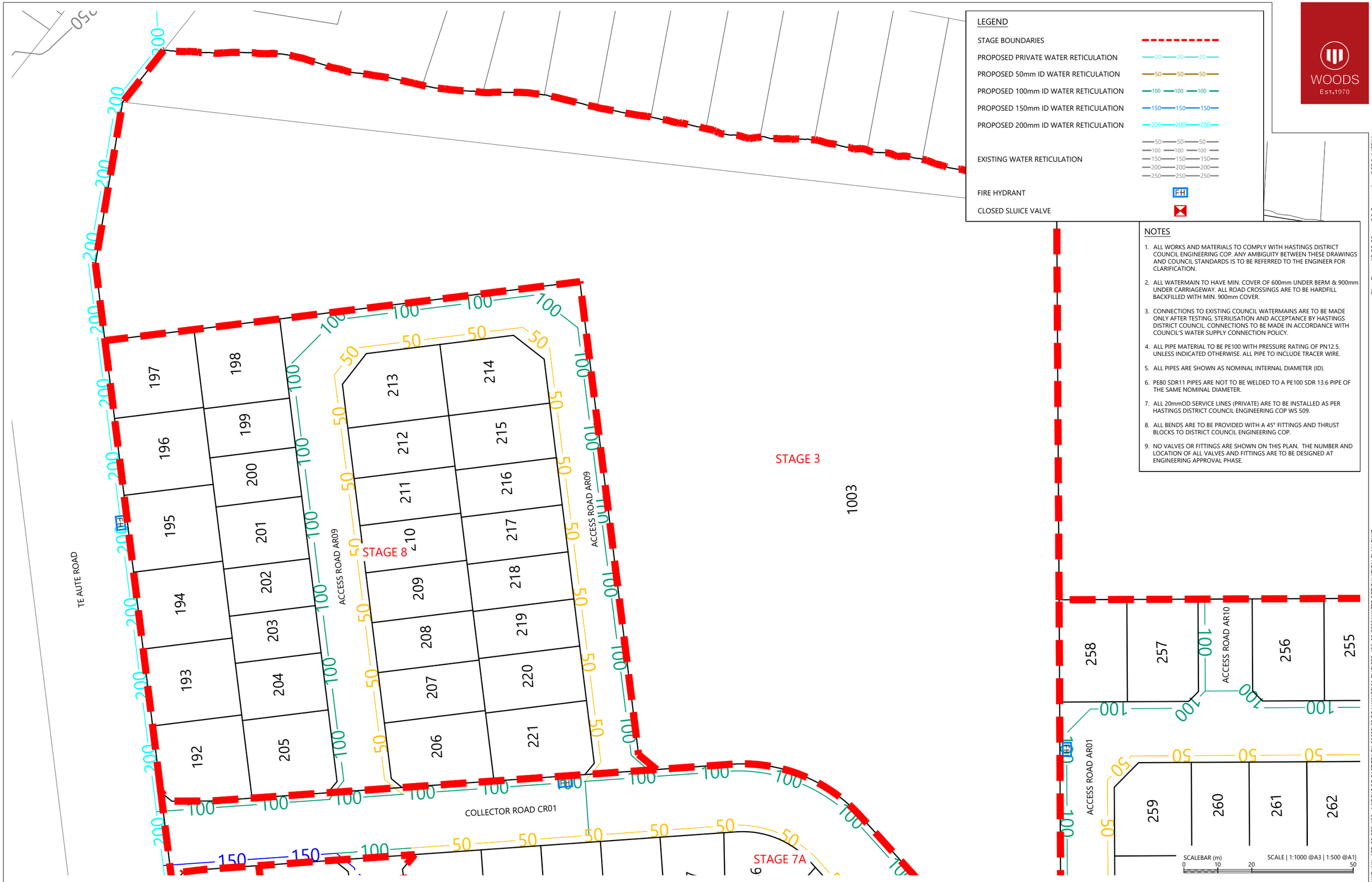
MIDDLE ROAD PROJECT

PROPOSED OVERALL WATER RETICULATION PLAN

STATUS	ISSUED FOR CONSENT
SCALE	1:3000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-5000-WR
REV	2

Plot Date: 12:29:39 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG



REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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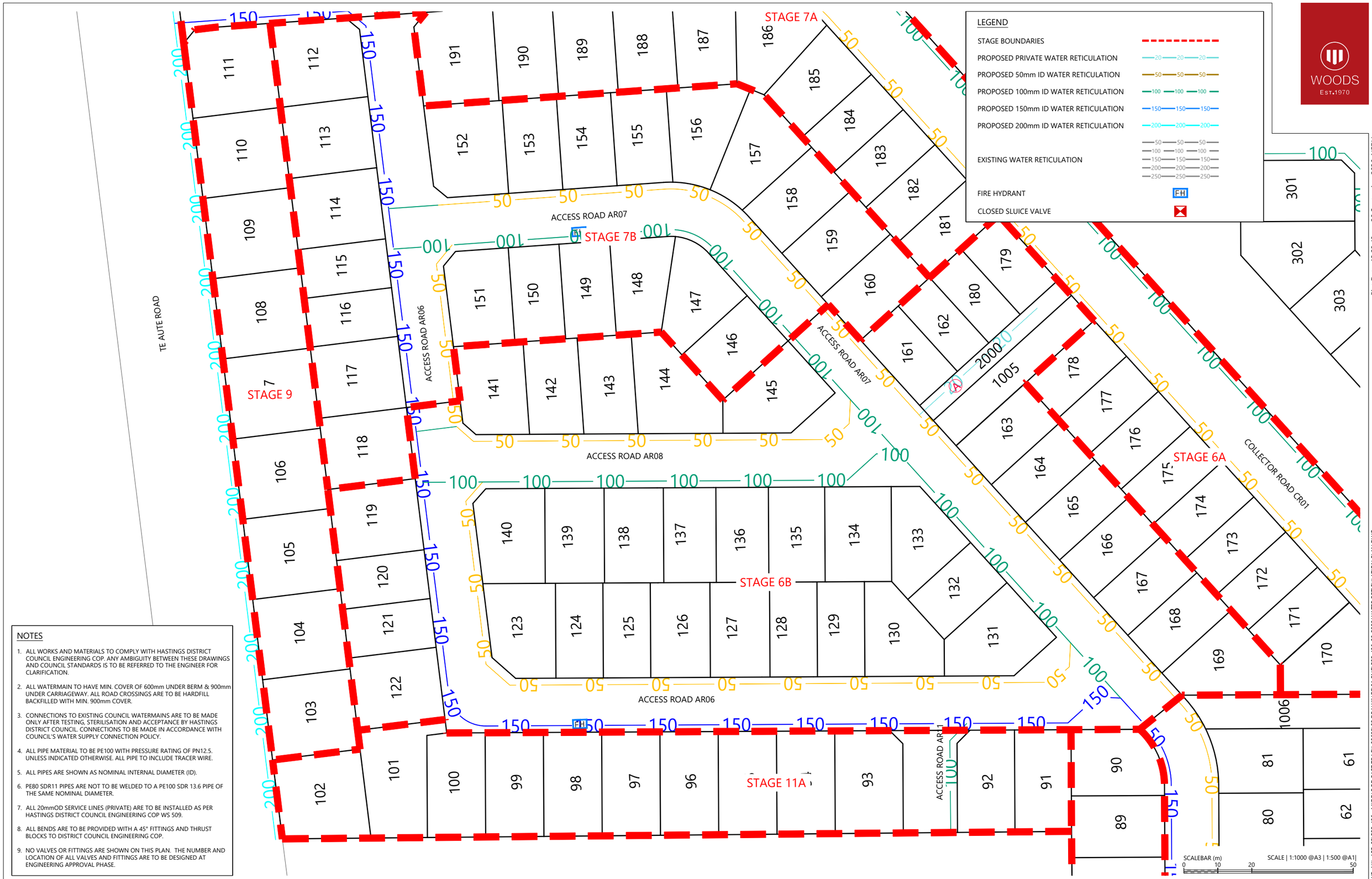
MIDDLE ROAD PROJECT

PROPOSED WATER RETICULATION PLAN - SHEET 1

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-5001-WR
REV	2

Plot Date: 12:29:39 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG



NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP. ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL WATERMAIN TO HAVE MIN. COVER OF 600mm UNDER BERM & 900mm UNDER CARRIAGEWAY. ALL ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED WITH MIN. 900mm COVER.
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY HASTINGS DISTRICT COUNCIL. CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S WATER SUPPLY CONNECTION POLICY.
4. ALL PIPE MATERIAL TO BE PE100 WITH PRESSURE RATING OF PN12.5. UNLESS INDICATED OTHERWISE. ALL PIPE TO INCLUDE TRACER WIRE.
5. ALL PIPES ARE SHOWN AS NOMINAL INTERNAL DIAMETER (ID).
6. PE80 SDR11 PIPES ARE NOT TO BE WELDED TO A PE100 SDR 13.6 PIPE OF THE SAME NOMINAL DIAMETER.
7. ALL 20mmOD SERVICE LINES (PRIVATE) ARE TO BE INSTALLED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP WS 509.
8. ALL BENDS ARE TO BE PROVIDED WITH A 45° FITTINGS AND THRUST BLOCKS TO DISTRICT COUNCIL ENGINEERING COP.
9. NO VALVES OR FITTINGS ARE SHOWN ON THIS PLAN. THE NUMBER AND LOCATION OF ALL VALVES AND FITTINGS ARE TO BE DESIGNED AT ENGINEERING APPROVAL PHASE.

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WATER RETICULATION PLAN - SHEET 2

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-5002-WR
REV	2

Plot Date: 12:29:40 pm,30 September 2026, NEDV

File: C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_226000\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG

WOODS
EST.1970

LEGEND

- STAGE BOUNDARIES
- PROPOSED PRIVATE WATER RETICULATION
- PROPOSED 50mm ID WATER RETICULATION
- PROPOSED 100mm ID WATER RETICULATION
- PROPOSED 150mm ID WATER RETICULATION
- PROPOSED 200mm ID WATER RETICULATION
- EXISTING WATER RETICULATION
- FIRE HYDRANT
- CLOSED SLUICE VALVE

STAGE 4

STAGE 3

STAGE 2B

STAGE 6A

ACCESS ROAD AR01

ACCESS ROAD AR02

ACCESS ROAD AR10

COLLECTOR RC

MIDDLE ROAD

SLUICE VALVE ON CONNECTION TO 150mm WATERMAIN IN MIDDLE ROAD TO BE CLOSED. PROPOSED DEVELOPMENT WILL NOT BE HYDRAULICALLY CONNECTED TO EXISTING MIDDLE ROAD NETWORK UNTIL PRESSURE IMBALANCE IS SOLVED BY HDC.

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP. ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL WATERMAIN TO HAVE MIN. COVER OF 600mm UNDER BERM & 900mm UNDER CARRIAGEWAY. ALL ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED WITH MIN. 900mm COVER.
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY HASTINGS DISTRICT COUNCIL. CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S WATER SUPPLY CONNECTION POLICY.
4. ALL PIPE MATERIAL TO BE PE100 WITH PRESSURE RATING OF PN12.5. UNLESS INDICATED OTHERWISE. ALL PIPE TO INCLUDE TRACER WIRE.
5. ALL PIPES ARE SHOWN AS NOMINAL INTERNAL DIAMETER (ID).
6. PE80 SDR11 PIPES ARE NOT TO BE WELDED TO A PE100 SDR 13.6 PIPE OF THE SAME NOMINAL DIAMETER.
7. ALL 20mmOD SERVICE LINES (PRIVATE) ARE TO BE INSTALLED AS PER HASTINGS DISTRICT COUNCIL ENGINEERING COP WS 509.
8. ALL BENDS ARE TO BE PROVIDED WITH A 45° FITTINGS AND THRUST BLOCKS TO DISTRICT COUNCIL ENGINEERING COP.
9. NO VALVES OR FITTINGS ARE SHOWN ON THIS PLAN. THE NUMBER AND LOCATION OF ALL VALVES AND FITTINGS ARE TO BE DESIGNED AT ENGINEERING APPROVAL PHASE.

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

BUILDING B, LEVEL 1
8 NUGENT ST, GRAFTON,
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WOODS.CO.NZ

CDL LAND
NEW ZEALAND LIMITED

MIDDLE ROAD PROJECT

PROPOSED WATER RETICULATION PLAN - SHEET 3

		REV
STATUS	ISSUED FOR CONSENT	2
SCALE	1:1000 @ A3	
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-5003-WR	

Plot Date: 12:29:40 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP- AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG

LEGEND

- STAGE BOUNDARIES
- PROPOSED PRIVATE WATER RETICULATION (20)
- PROPOSED 50mm ID WATER RETICULATION (50)
- PROPOSED 100mm ID WATER RETICULATION (100)
- PROPOSED 150mm ID WATER RETICULATION (150)
- PROPOSED 200mm ID WATER RETICULATION (200)
- EXISTING WATER RETICULATION (50, 100, 150, 200, 250)
- FIRE HYDRANT (FH)
- CLOSED SLUICE VALVE

STAGE 2B

STAGE 2A

STAGE 5

STAGE 11B

COLLECTOR ROAD CR01

ACCESS ROAD AR02

ACCESS ROAD AR07

COLLECTOR ROAD CR02

ACCESS ROAD AR03

ACCESS ROAD AR01

MIDDLE ROAD

SLUICE VALVE ON CONNECTION TO 50mm WATERMAIN IN MIDDLE ROAD TO BE CLOSED. PROPOSED DEVELOPMENT WILL NOT BE HYDRAULICALLY CONNECTED TO EXISTING MIDDLE ROAD NETWORK UNTIL PRESSURE IMBALANCE IS SOLVED BY HDC.

SLUICE VALVE ON CONNECTION TO 150mm WATERMAIN IN MIDDLE ROAD TO BE CLOSED. PROPOSED DEVELOPMENT WILL NOT BE HYDRAULICALLY CONNECTED TO EXISTING MIDDLE ROAD NETWORK UNTIL PRESSURE IMBALANCE IS SOLVED BY HDC.

NOTES

1. ALL WORKS AND MATERIALS TO COMPLY WITH HASTINGS DISTRICT COUNCIL ENGINEERING COP. ANY AMBIGUITY BETWEEN THESE DRAWINGS AND COUNCIL STANDARDS IS TO BE REFERRED TO THE ENGINEER FOR CLARIFICATION.
2. ALL WATERMAIN TO HAVE MIN. COVER OF 600mm UNDER BERM & 900mm UNDER CARRIAGEWAY. ALL ROAD CROSSINGS ARE TO BE HARDFILL BACKFILLED WITH MIN. 900mm COVER.
3. CONNECTIONS TO EXISTING COUNCIL WATERMAINS ARE TO BE MADE ONLY AFTER TESTING, STERILISATION AND ACCEPTANCE BY HASTINGS DISTRICT COUNCIL. CONNECTIONS TO BE MADE IN ACCORDANCE WITH COUNCIL'S WATER SUPPLY CONNECTION POLICY.
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SCALEBAR (m) 0 10 20 50 — SCALE | 1:1000 @A3 | 1:500 @A1|

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WATER RETICULATION PLAN - SHEET 4

STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-5004-WR
REV	2

Plot Date: 12:29:41 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG

ACCESS ROAD AR05

ACCESS ROAD AR01

ACCESS ROAD AR04

STAGE 1

STAGE 10

MIDDLE ROAD

SLUICE VALVE ON CONNECTION TO 100mm WATERMAIN IN MIDDLE ROAD TO BE CLOSED. PROPOSED DEVELOPMENT WILL NOT BE HYDRAULICALLY CONNECTED TO EXISTING MIDDLE ROAD NETWORK UNTIL PRESSURE IMBALANCE IS SOLVED BY HDC.

SCALEBAR (m) 0 10 20 50

SCALE | 1:1000 @A3 | 1:500 @A1|

Plot Date: 12:29:41 pm,30 September 2026, NEDV

File: C:\12DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5000 WATER RETICULATION PLAN.DWG

NOTES

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9. NO VALVES OR FITTINGS ARE SHOWN ON THIS PLAN. THE NUMBER AND LOCATION OF ALL VALVES AND FITTINGS ARE TO BE DESIGNED AT ENGINEERING APPROVAL PHASE.

LEGEND

- STAGE BOUNDARIES
- PROPOSED PRIVATE WATER RETICULATION
- PROPOSED 50mm ID WATER RETICULATION
- PROPOSED 100mm ID WATER RETICULATION
- PROPOSED 150mm ID WATER RETICULATION
- PROPOSED 200mm ID WATER RETICULATION
- EXISTING WATER RETICULATION
- FIRE HYDRANT
- CLOSED SLUICE VALVE

REVISION DETAILS		INT	DATE	SURVEYED	
1	ISSUED FOR COUNCIL COMMENT	NV	26/08/2026	DESIGNED	NV
2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

PROPOSED WATER RETICULATION PLAN - SHEET 5

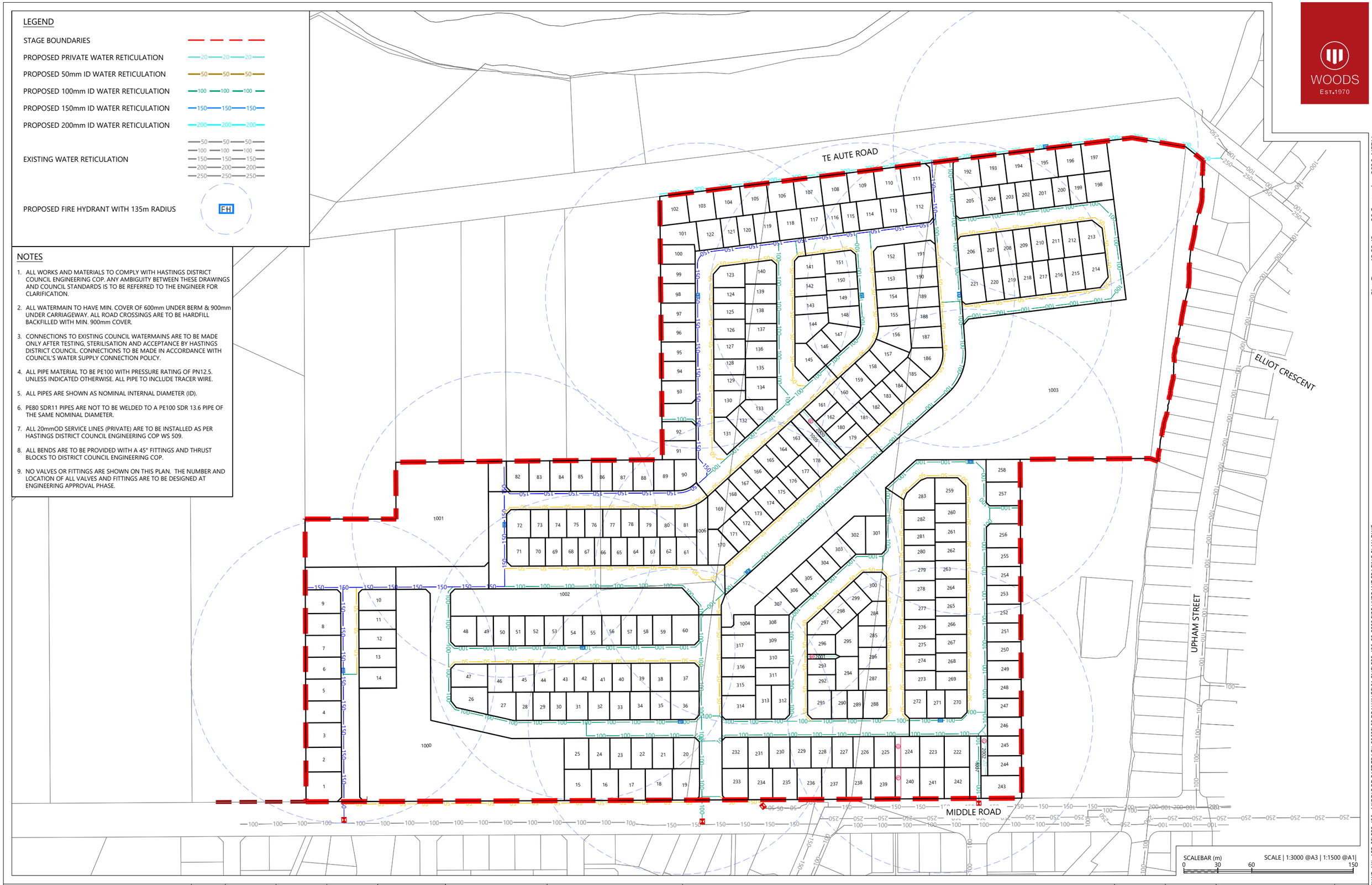
STATUS	ISSUED FOR CONSENT
SCALE	1:1000 @ A3
COUNCIL	HASTINGS DISTRICT
DWG NO	P25-496-00-5005-WR
REV	2

LEGEND

- STAGE BOUNDARIES
- PROPOSED PRIVATE WATER RETICULATION — 20 20 20
- PROPOSED 50mm ID WATER RETICULATION — 50 50 50
- PROPOSED 100mm ID WATER RETICULATION — 100 100 100
- PROPOSED 150mm ID WATER RETICULATION — 150 150 150
- PROPOSED 200mm ID WATER RETICULATION — 200 200 200
- EXISTING WATER RETICULATION — 50 50 50 / 100 100 100 / 150 150 150 / 200 200 200 / 250 250 250
- PROPOSED FIRE HYDRANT WITH 135m RADIUS — FH

NOTES

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REVISION DETAILS		INT	DATE	SURVEYED	
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2	ISSUED FOR FT SUBSTANTIVE CONSENT	NV	02/10/2026	DRAWN	NV
				CHECKED	LZM/BLO
				APPROVED	BF

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MIDDLE ROAD PROJECT

FIRE HYDRANT SPACING PLAN

STATUS	ISSUED FOR CONSENT	REV
SCALE	1:3000 @ A3	2
COUNCIL	HASTINGS DISTRICT	
DWG NO	P25-496-00-5500-WR	

Plot Date: 12:29:42 pm,30 September 2026, NEDV

File: C:\2DSYNERGY\DATA\WP-AKL-APP-02\P25-496 - MIDDLE RD FAST TRACK_22600\02 DRAWINGS\01 ENG\P25-496-00-5500 FIRE HYDRANT SPACING PLAN.DWG