

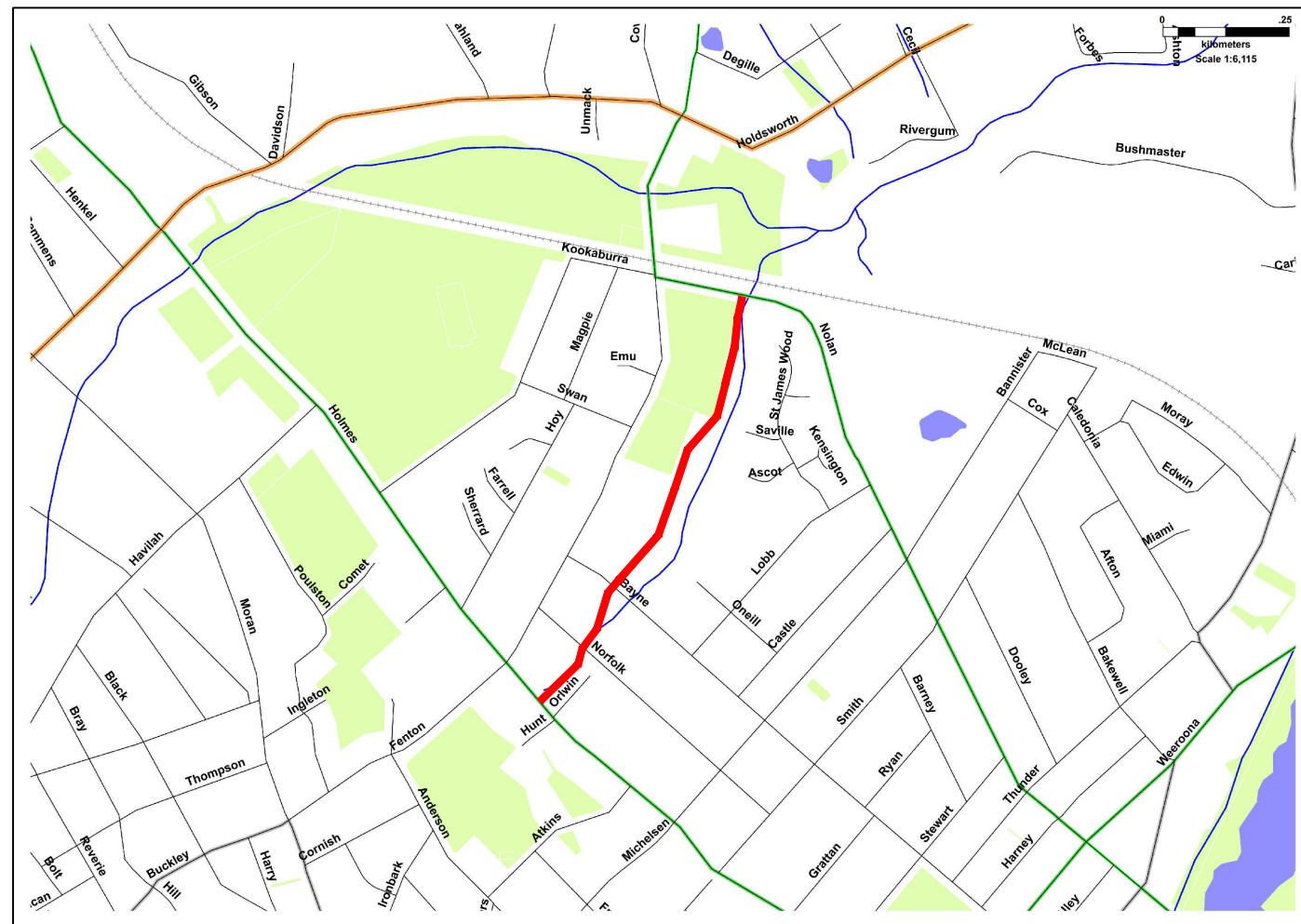
GB4328 IRONBARK GULLY TRAIL

Stage 1 - Holmes Rd to Nolan St

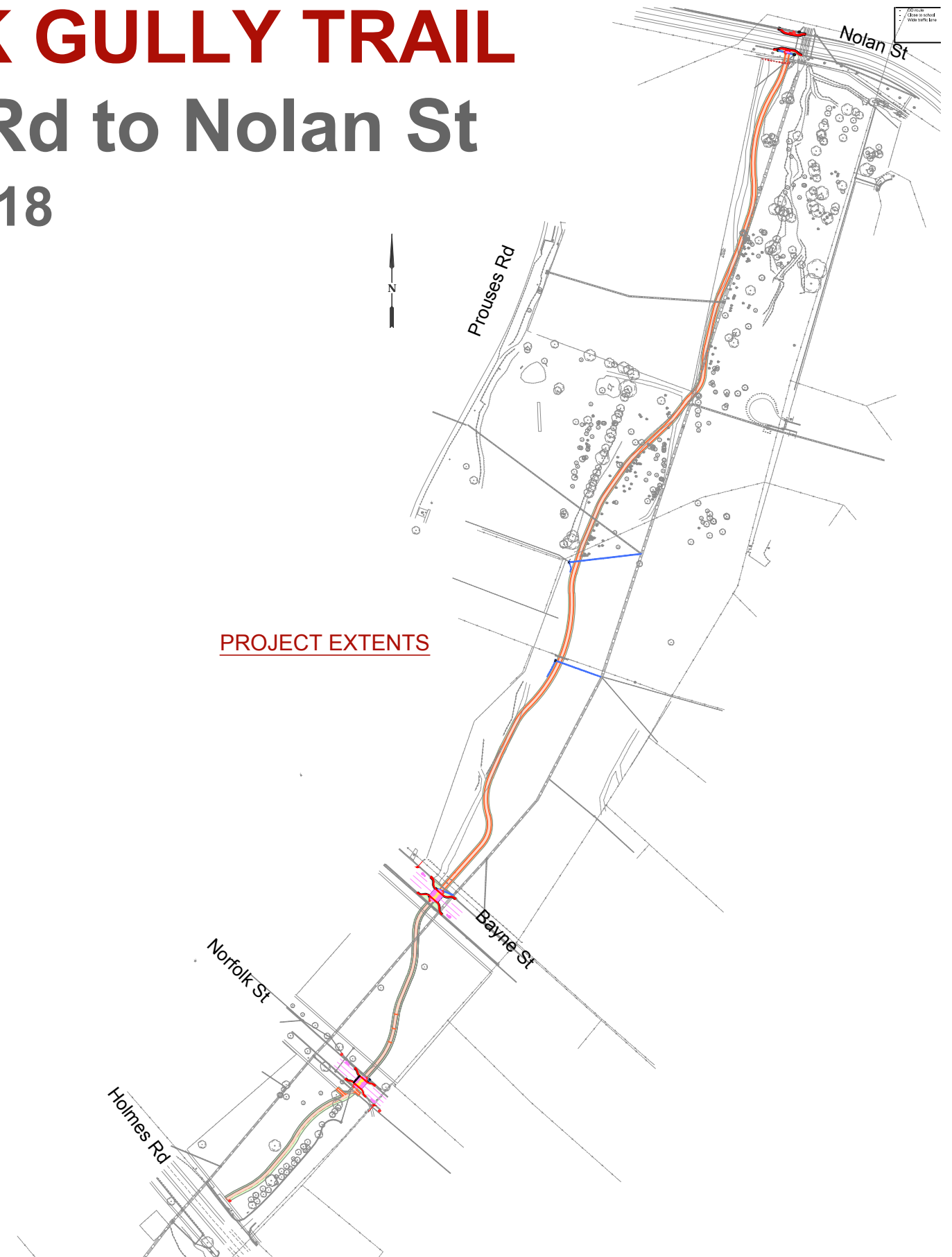
April 2018

DOCUMENT CONTROL					
PLAN	DESC.	13-6-18	12-7-18	8-7-19	xx/xx/xx
Set		Concept	Draft	Tender	Construction
		ISSUE	ISSUE	ISSUE	ISSUE
1	Title page	-	-	-	-
2	Project overview	-	-	-	-
3	Plan	-	-	-	-
4	Plan	-	-	-	-
5	Plan	-	-	-	-
6	Plan	-	-	-	-
7	Plan	-	-	-	-
8	Norfolk St crossing	-	-	-	-
9	Bayne St crossing	-	-	-	-
10	Nolan St crossing	-	-	-	-
11	Drainage details	-	-	-	-
12	Setout plan	-	-	-	-
13	Setout plan	-	-	-	-
14	Setout plan	-	-	-	-
15	Setout points	-	-	-	-

PROJECT LOCALITY



PROJECT EXTENTS



LEGEND

EXISTING			DESIGN		
	Power pole			Drainage pit	
	Light pole			Grated drainage pit	
	Storm water Pit			EKI drainage pit	
	Electricity Pit			Traffic sign	
	Telstra Pit			Guide post/Bollard	
	Water Valve			RRPM	
	Sewer manhole			Tree	
	Water Meter				
	Fenceline			Sawcut	
	Invert			Table Drain	
	Top of Bank			Storm Water pipe	
	Storm water pipe			Asphalt	
	Electricity			Conc. Footpath/Dwy	
	Telstra			Conc. Kerb	
	Water			Naturestrip	
	Sewer				
	Gas				

DOCUMENT CONTROL

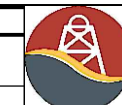
Document	Date
DRAFT	21-3-16
DRAFT Revision A	-
TENDER	-
TENDER Revision A	-
TENDER Revision B	-
CONSTRUCTION	-
CONSTRUCTION Revision A	-
AS CONSTRUCTED	-

AMENDMENTS

Approved	Date
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

SURVEY NOTES

Adrian Cummins	August 2015
Survey reference	AB 7949 - 15 - 01
Bearing Datum:	vide Strathfieldsaye PM1 & PM54
Height Datum:	vide Strathfieldsaye PM 1
MGA Coordinate Datum:	vide Strathfieldsaye PM1
Ground coords shown for all other features	



CITY OF GREATER BENDIGO

IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	Hamish Whytock	May 18	TENDER	-
Design	Nathan Sartori	June 18		
Checked	Ian Frost	July 18		
Approved	Githal Samaraweera	July 18		

GB4328 1 OF 15

1.0m width Kykuyu roll out grass

- 50mm Kykuyu turf
- 50mm Loamy sand
- Any additional fill shall be clean fill compacted to 95%SMDD

TYPICAL PATH SECTION

Setout provided to Back of footpath

Design Footpath

Construct new 2.5m wide concrete footpath as per design plans

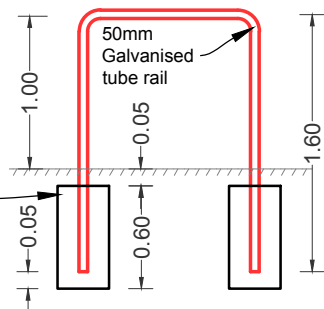
2.5% cross fall

1.0m width Kykuyu roll out grass

- 50mm Kykuyu turf
- 50mm Loamy sand
- Any additional fill shall be clean fill compacted to 95%SMDD

TYPICAL HOLDING RAIL DETAIL

1.00



300mm diam. 25MPa concrete footings. Set 50mm lower than surface as shown

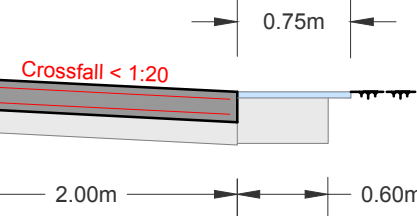
TYPICAL ROAD RAMP CROSSING SECTION

Adjacent pavement reinstatement:

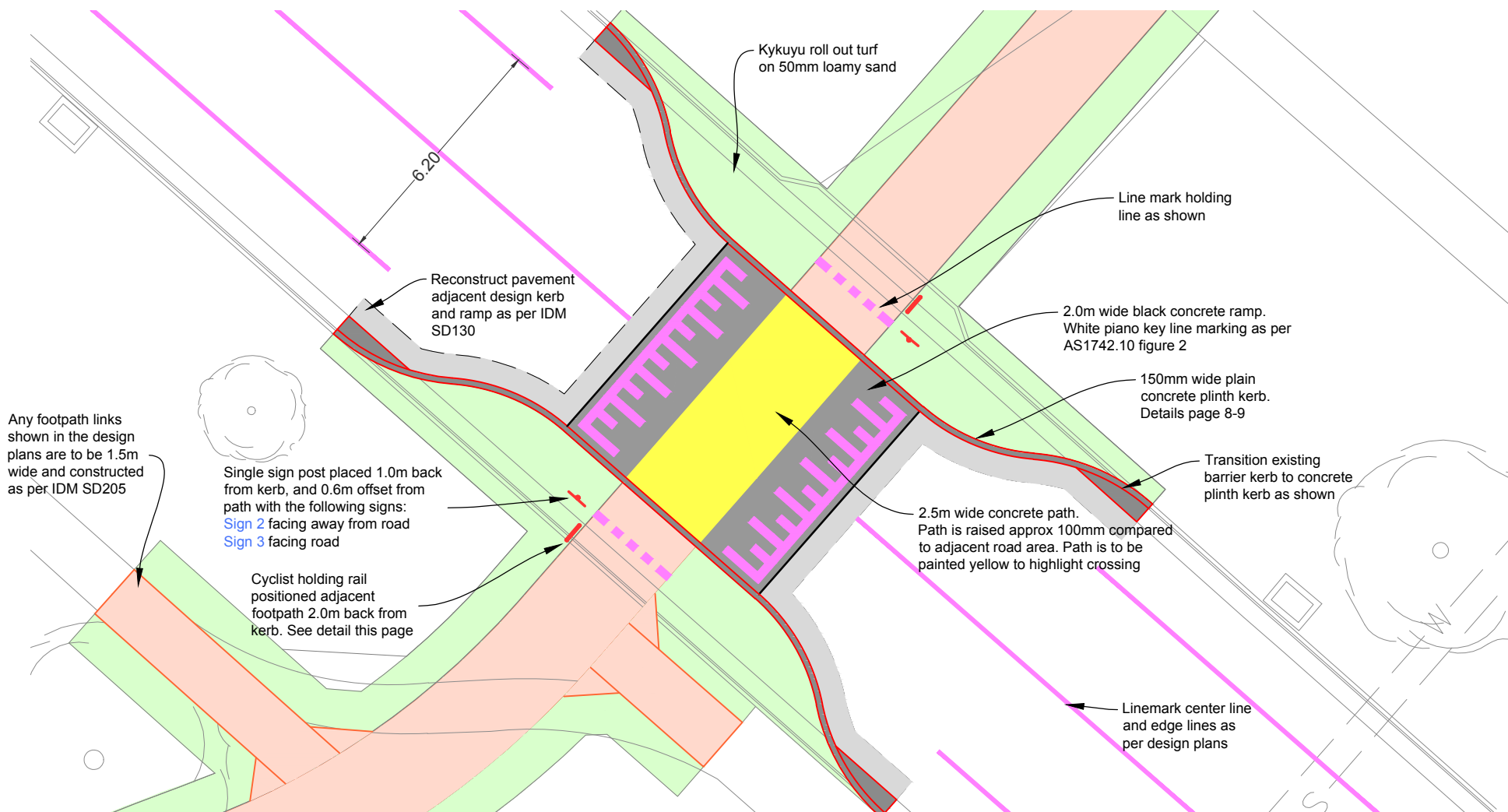
- 0.75m width 40mm depth Type N (10mm) asphalt
- Prime FCR before sealing
- 300mm depth CL1 FCR layed in two 150mm deep layers, each compacted to 98%MMDD
- Note 150mm seal overlap over pavement joint

Concrete Roadway ramp:

- 200mm thick, 32Mpa Black concrete, 2 layers SL82 with 50 cover top and bottom
- 150mm depth CL1 FCR (98%MMDD)
- Central footpath area to be painted with yellow long life paint (with silicon beads)



TYPICAL ROAD CROSSING DETAILS



FOOTPATH CONSTRUCTION NOTES

- Footpath to be constructed to IDM SD205 unless noted otherwise.
- An IDM SD210 expansion joint is to be constructed at any joins with existing footpath/driveways or bridges or where noted.
- IDM SD210 Expansion joints along any new sections of footpath are to be at a maximum separation of 14m centres as per IDM SD205.
- Tool joints are to be at 1.5m centers for 1.5m wide footpath, and 2.5m centres for 2.5m wide footpath, and are to be constructed as per IDM SD210 unless noted otherwise
- Batter work and associated top soiling is to be limited to 2.0m from design edge of the footpath. This width cannot be altered without consent from the superintendent.
- Plant and equipment is to be kept within the finished works area to avoid unnecessary damage to nature strips.
- Pedestrian crossings are to be as per IDM SD200
- All TGSIs are to be black fibre reinforced resin polymer, cast in place in accordance with AS1428 unless noted otherwise or by direction from the Superintendent
- Any residential mailboxes found to be in conflict with councils proposed assets (within the road reserve) shall be relocated to a position within the property in consultation with the resident. Should the mailbox be a brick or concrete structure, the mailbox shall be demolished, and consultation with the Superintendent shall be sought prior to reconstruction of a similar structure within the property.
- Once the works are completed, contractor must undertake a site walk with the superintendant to identify any hazards or level differences with the works area. Once the site walk is complete, the area may be opened to public use.
- All fill material is to be clean clay based soil, free of vegetative matter, and is to be approved by the superintendent prior to use
- All earthworks are to be in accordance with VicRoads Specification Section 204.

NOTES ON SERVICE AUTHORITY ASSETS WITHIN THE WORKS AREA

SERVICE AUTHORITY UNDERGROUND INFRASTRUCTURE

- The location of underground services has been derived from available information, and shown on the plans. However accuracy can not be guaranteed. All existing service information should therefore be treated as indicative only, and exact service locations must be arranged onsite prior to commencement of any excavation. The contractor will be held responsible for any damage cause to underground services.

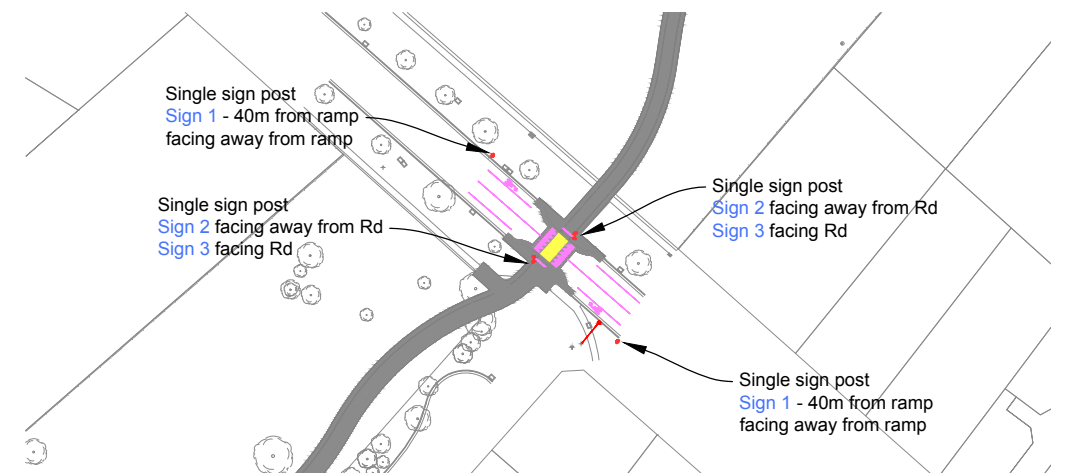
PIT LIDS and VALVE COVER LEVELS and LOCATION

- All service pits lids or valve covers within the works area are to be raised or lowered to match design surface level unless noted otherwise on the construction plans, or by approval from the superintendent.
- Any service authority marker posts found within the works area are to be relocated adjacent to their current position to a point 150mm offset from the nearest property boundary

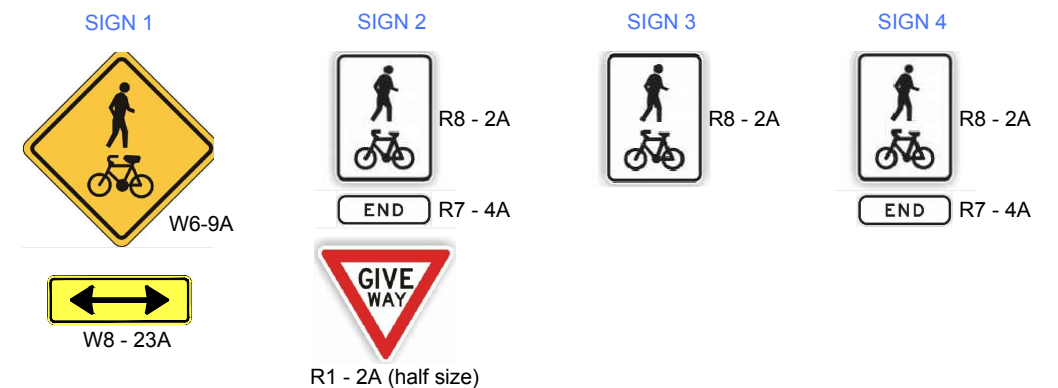
SERVICE AUTHORITY ASSET RENEWAL

- Any sewer pit covers and or water valve covers within the works are to be renewed to Coliban Water Standards unless noted otherwise
- PSM covers are to be renewed to CoGB standards using a 300x300mm galvanised steel checker plate flat cover
- All other valve covers or pits within the works area are not to be renewed unless noted otherwise on the construction plans, or by agreement with the superintendent.

TYPICAL ROAD CROSSING SIGNAGE



SIGNAGE LEGEND



ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

Footpath - Black Concrete IDM SD205	Ramp Concrete
- 125mm dpth conc. cent.SL72	- 200mm dpth conc. 2xSL82
- 50mm dpth CL3 FCR 90%MMDD	- 150mm dpth CL1 FCR 98%MMDD
	- Yellow permanent paint on surface

Ramp Concrete	Road Pavement reinstatement
- 200mm dpth black conc. 2xSL82	- 40mm depth Type N asphalt
- 150mm dpth CL1 FCR 98%MMDD	- 300mm CL1 FCR 98%MMDD

Naturestrip - Roll out turf grass	Concrete Kerb
- 50mm depth kykuyu rollout turf	- 150mm wide conc. plinth kerb
- 50mm depth loamy sand	- Details page 8-9

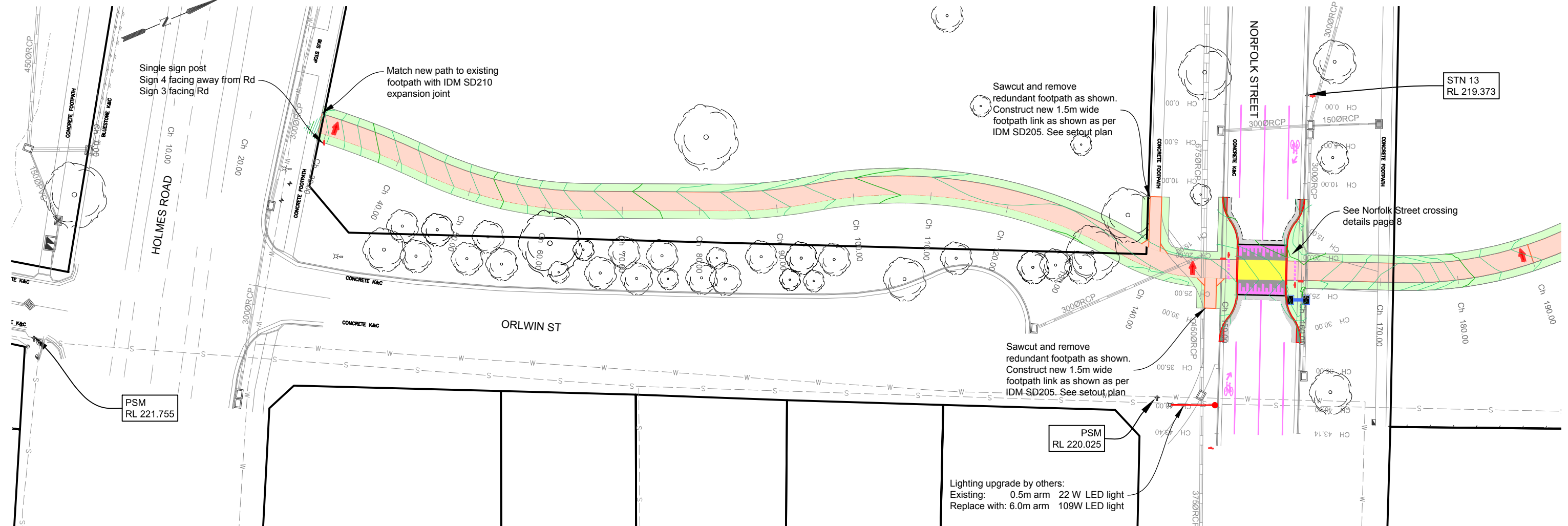


IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

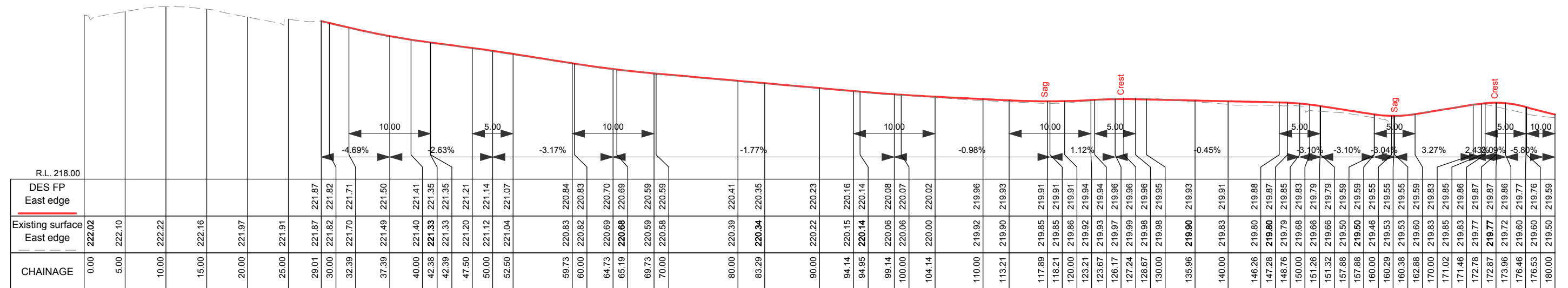
Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-		
Approved	Githal Samaraweera	-		

GB4328	2 OF 15
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Plan view rotated 50°0'0" for ease of readability
A3 Scale 1:500



	Ch 40.00	Ch 60.00	Ch 80.00	Ch 100.00	Ch 120.00	Ch 140.00	Ch 160.00	Ch 180.00
R.L. 220.65		R.L. 220.05	R.L. 219.65	R.L. 219.30	R.L. 219.15	R.L. 219.15	R.L. 218.75	R.L. 218.80
DES.	221.34 221.35 221.41 221.43	220.78 220.77 220.83 220.83	220.42 220.35 220.41 220.42	220.08 220.00 220.07 220.05	219.82 219.85 219.91 219.92	219.76 219.85 219.91 219.86	219.38 219.49 219.55 219.49	219.47 219.52 219.59 219.51
NS	221.32 221.34 221.35 221.40 221.43 221.46	220.77 220.78 220.79 220.82 220.83 220.86	220.41 220.42 220.42 220.39 220.42 220.47	220.09 220.08 220.07 220.06 220.05 220.05	219.82 219.82 219.83 219.86 219.92 220.02	219.72 219.76 219.78 219.83 219.86 220.01	219.44 219.38 219.40 219.46 219.49 219.62	219.46 219.47 219.48 219.50 219.51 219.52
OFFSETS	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50	-5.00 -3.50 -2.50 0.00 1.00 2.50
SCALES: H 1:300 V 1:100 (A3)								



LONGITUDINAL SECTION CH 0 - 180 A3 SCALES: H 1:500 V 1:100



ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

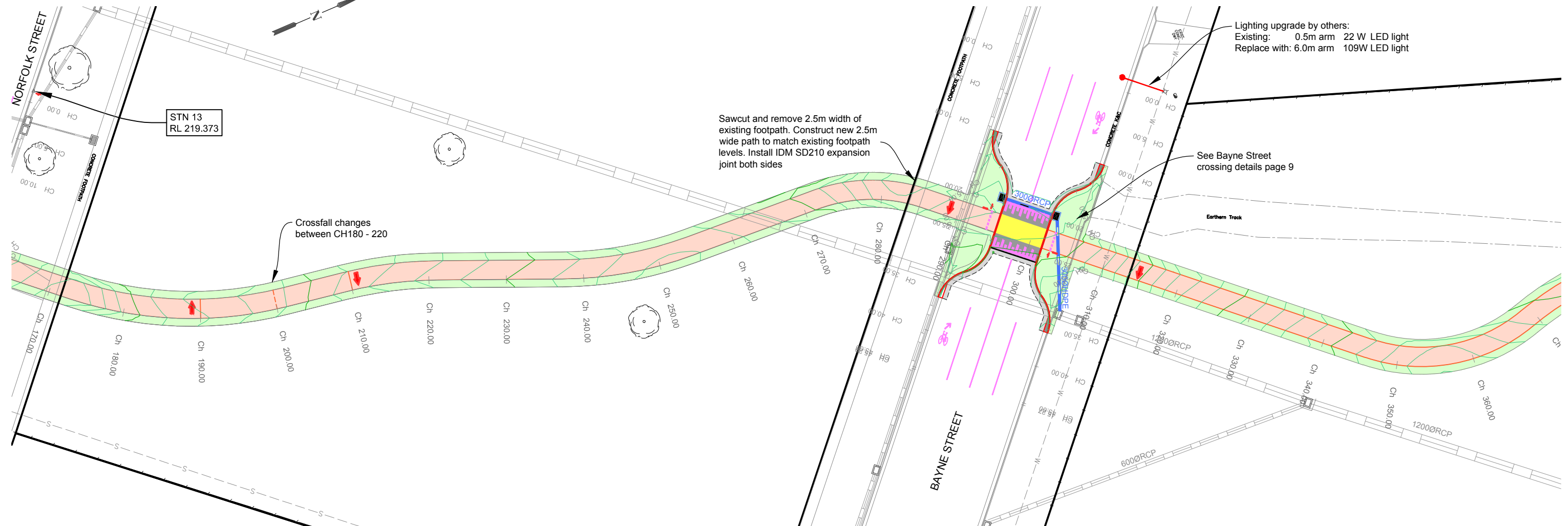
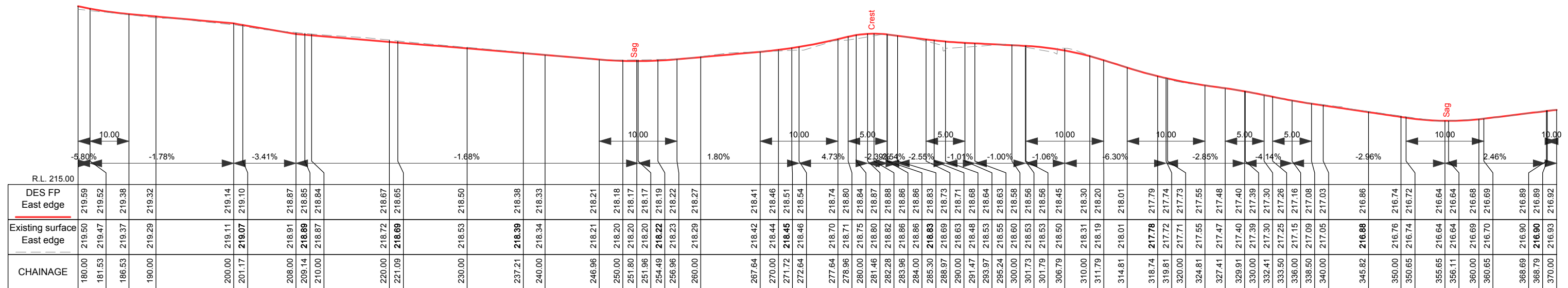
 Footpath - Black Concrete IDM SD205 - 125mm dpth conc. cent.SL72 - 50mm dpth CL3 FCR 90%MMDD	 Ramp Concrete - 200mm dpth conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD - Yellow permanent paint on surface	 Naturestrip - Roll out turf grass - 50mm depth kykyku rollout turf - 50mm depth loamy sand
 Ramp Concrete - 200mm dpth black conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD	 Road Pavement reinstatement - 40mm depth Type N asphalt - 300mm CL1 FCR 98%MMDD	 Concrete Kerb - 150mm wide conc. plinth kerb - Details page 8-9



IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-	GB4328	3 OF 15
Approved	Githai Samaraweera	-		

Plan view rotated 67°3'49" for ease of readability
A3 Scale 1:500

[illegible]

LONGITUDINAL SECTION CH 180-370 A3 SCALES: H 1:500 V 1:100



ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

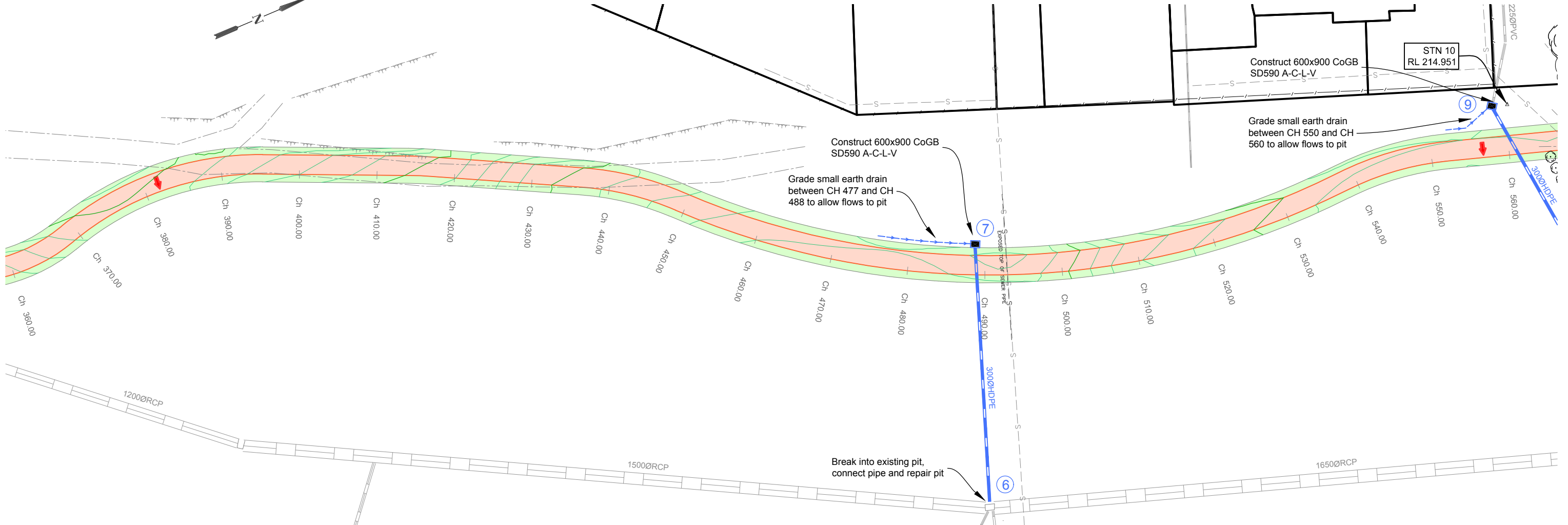
 Footpath - Black Concrete IDM SD205 - 125mm dpth conc. cent.SL72 - 50mm dpth CL3 FCR 90%MMDD	 Ramp Concrete - 200mm dpth conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD - Yellow permanent paint on surface	 Naturestrip - Roll out turf grass - 50mm depth kykyku rollout turf - 50mm depth loamy sand
 Ramp Concrete - 200mm dpth black conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD	 Road Pavement reinstatement - 40mm depth Type N asphalt - 300mm CL1 FCR 98%MMDD	 Concrete Kerb - 150mm wide conc. plinth kerb - Details page 8-9



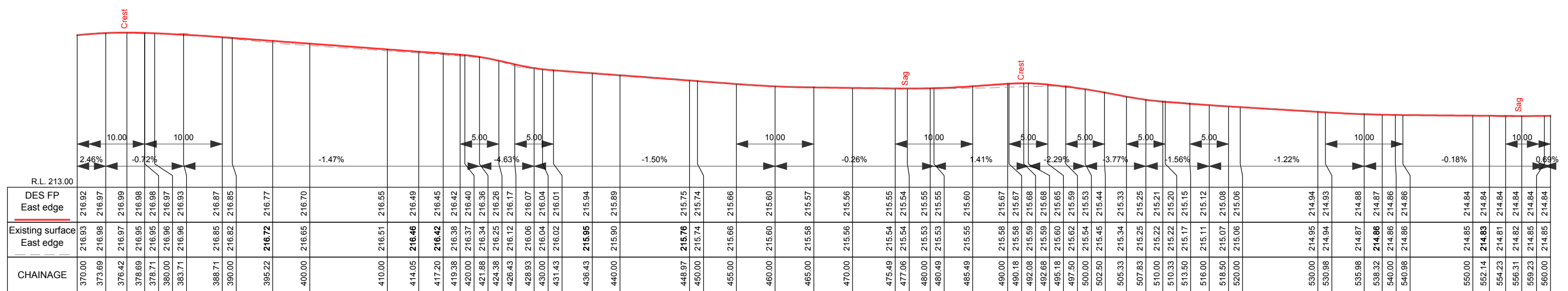
IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-		
Approved	Githal Samaraweera	-		
			GB4328	4 OF 15

Plan view rotated 67°3'49" for ease of readability
A3 Scale 1:500



DES.	NS	OFFSETS	Ch 380.00	Ch 400.00	Ch 420.00	Ch 440.00	Ch 460.00	Ch 480.00	Ch 500.00	Ch 520.00	Ch 540.00	Ch 560.00
R.L. 216.25	R.L. 216.00	R.L. 215.70	R.L. 215.20	R.L. 214.90	R.L. 214.85	R.L. 214.85	R.L. 214.35	R.L. 214.15	R.L. 214.15			
217.12	217.19	216.88	216.33	215.72	215.58	215.55	215.02	214.90	214.88	214.85	214.84	214.80
217.03	217.12	216.88	216.33	215.69	215.56	215.55	215.02	214.89	214.88	214.85	214.84	214.80
216.97	216.96	216.76	216.47	215.66	215.54	215.54	215.02	214.89	214.88	214.85	214.84	214.80
216.93	216.89	216.64	216.37	215.66	215.54	215.54	215.02	214.89	214.88	214.85	214.84	214.80
216.89	216.61	216.40	216.37	215.58	215.51	215.51	215.07	214.85	214.84	214.85	214.84	214.80
216.89	216.61	216.40	216.37	215.58	215.51	215.51	215.07	214.85	214.84	214.85	214.84	214.80



LONGITUDINAL SECTION CH 370-560 A3 SCALES: H 1:500 V 1:100

ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

Footpath - Black Concrete IDM SD205

- 125mm dph conc. cent SL72

- 50mm dph CL3 FCR 98%MMDD

Ramp Concrete

- 200mm dph black conc. 2xSL82

- 150mm dph CL1 FCR 98%MMDD

- 40mm depth Type N asphalt

- 150mm dph CL1 FCR 98%MMDD

Ramp Concrete

- 200mm dph black conc. 2xSL82

- 150mm dph CL1 FCR 98%MMDD

Ramp Concrete

- 200mm dph black conc. 2xSL82

- 150mm dph CL1 FCR 98%MMDD

Road Pavement reinstatement

- 40mm depth Type N asphalt

- 300mm CL1 FCR 98%MMDD

Naturestrip - Roll out turf grass

- 50mm depth kykuyu rollout turf

- 50mm depth loamy sand

Concrete Kerb

- 150mm wide conc. plinth kerb

- Details page 8-9

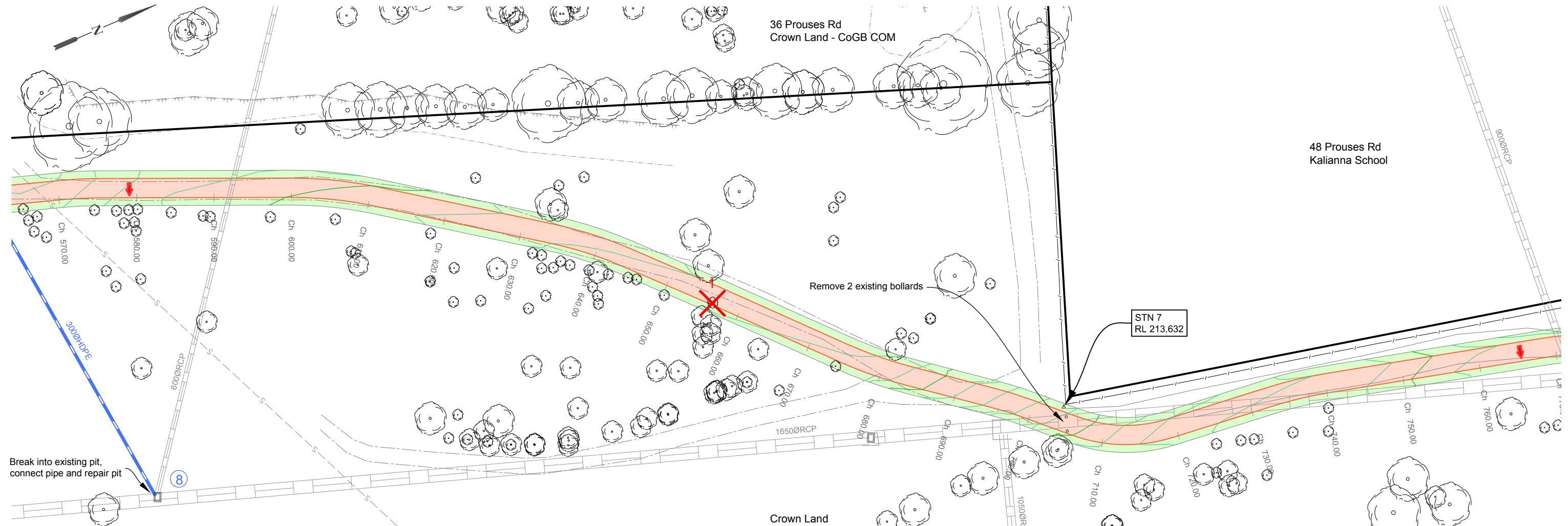
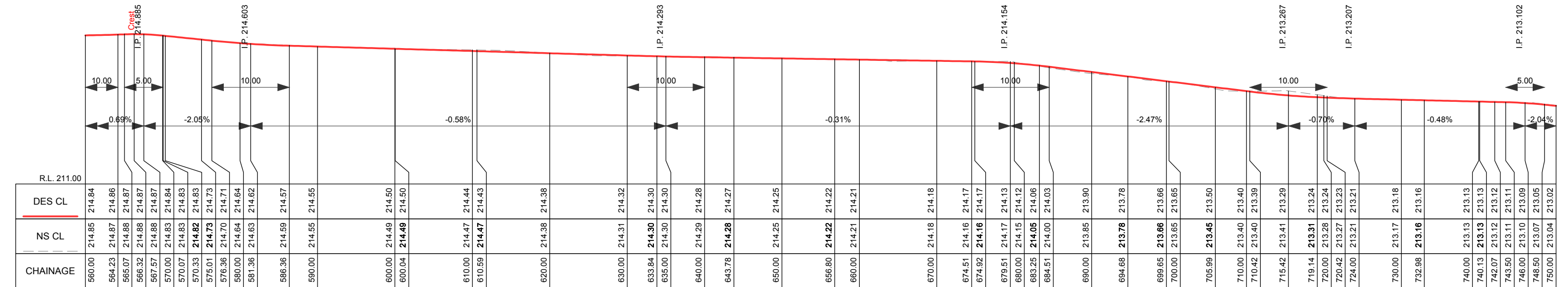
IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-		
Approved	Githal Samaraweera	-		

GB4328

5 OF 15

Plan view rotated 67°3'49" for ease of readability
A3 Scale 1:500

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LONGITUDINAL SECTION CH 560.000 To 750.000



ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

	Footpath - Black Concrete IDM SD205 - 125mm dpth conc. cent.SL72 - 50mm dpth CL3 FCR 90%MMDD		Ramp Concrete - 200mm dpth conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD - Yellow permanent paint on surface		Naturestrip - Roll out turf grass - 50mm depth kykyuu rollout turf - 50mm depth loamy sand
	Ramp Concrete - 200mm dpth black conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD		Road Pavement reinstatement - 40mm depth Type N asphalt - 300mm CL1 FCR 98%MMDD		Concrete Kerb - 150mm wide conc. plinth kerb - Details page 8-9



IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-		
Approved	Githal Samaraweera	-		
			GB4328	6 OF 15

MGA NORTH

STN 1
RL 211.786

STN 2
RL 211.595

DIRT VEHICLE TRACK

1650ØRCP

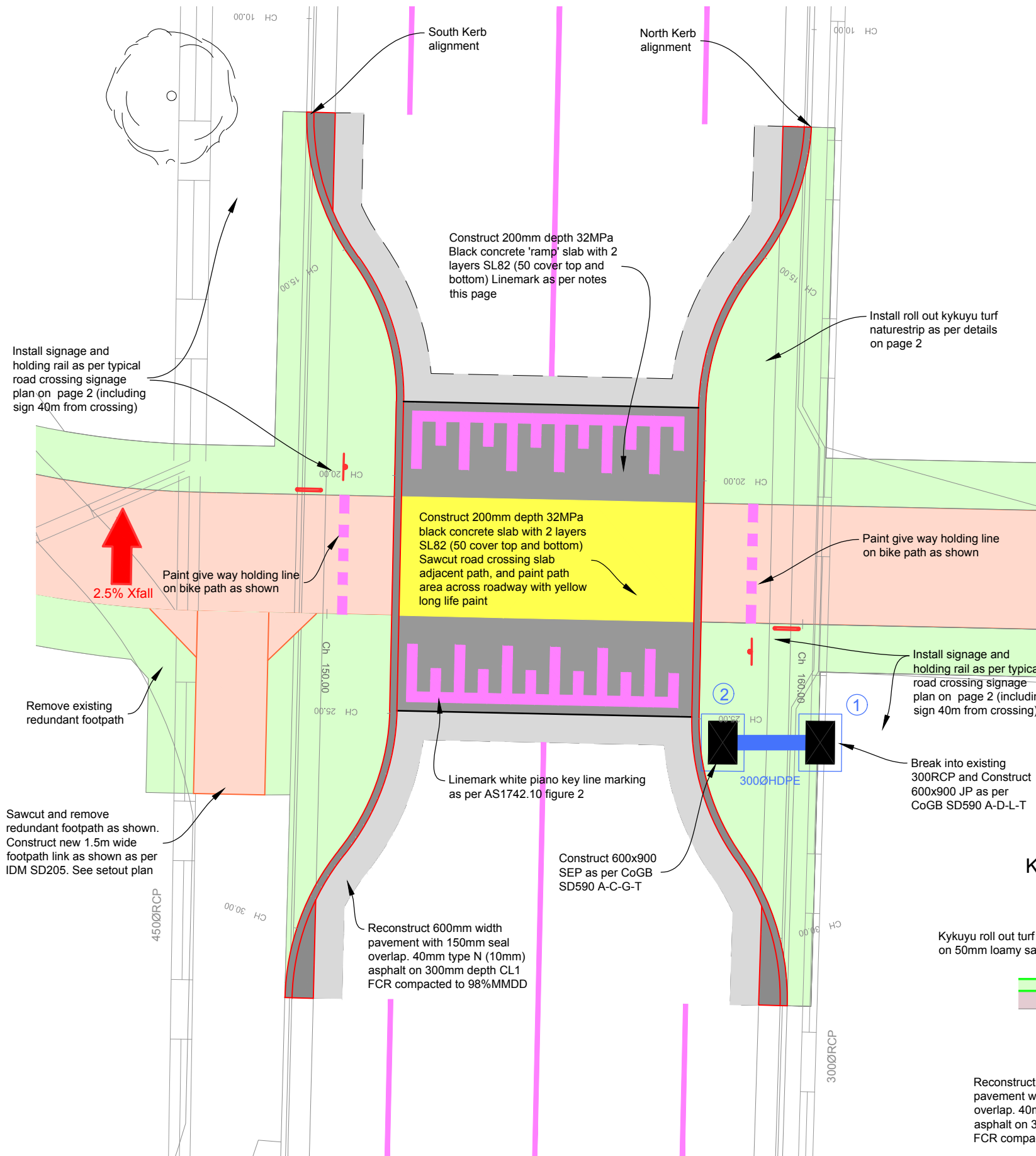
NOLAN STREET

3 x 120

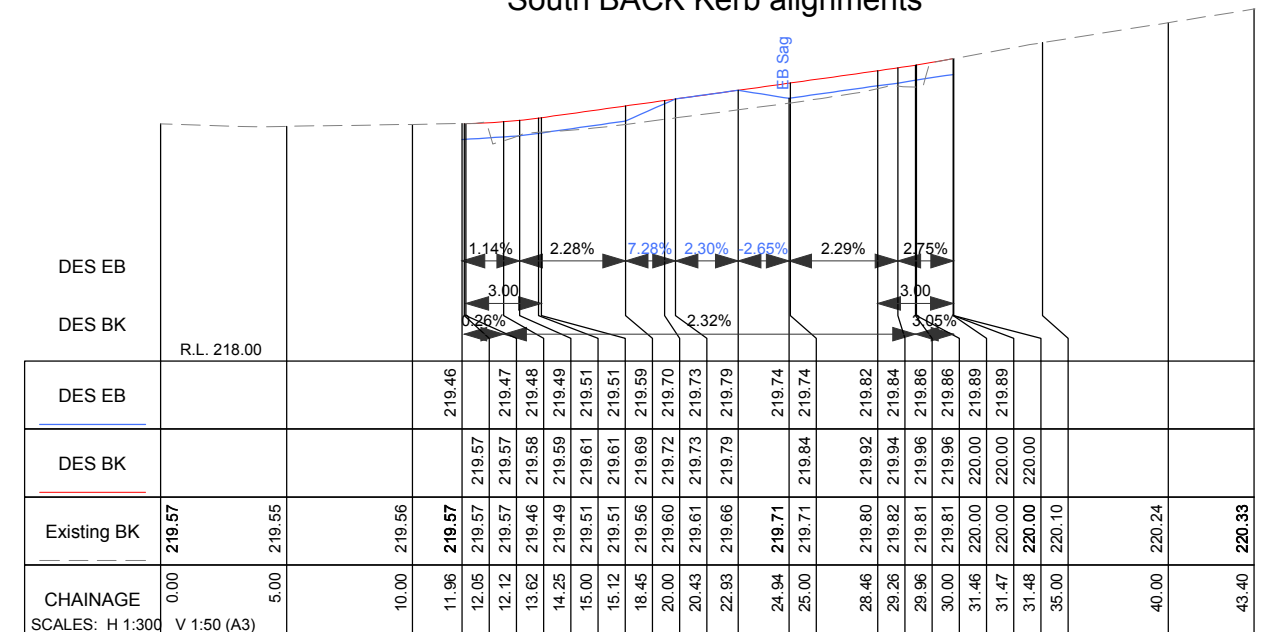
Ch 760.00 Ch 780.00 Ch 800.00 Ch 820.00 Ch 840.00 Ch 860.00 Ch 880.00 Ch 900.00 Ch 920.00 Ch 940.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

	ISSUE	APP'D	DATE	AMENDMENT	Footpath - Black Concrete IDM SD205 125mm dpth conc. cent.SL72 50mm dpth CL3 FCR 90%MMDD		Ramp Concrete 200mm dpth conc. 2xSL82 150mm dpth CL1 FCR 98%MMDD - Yellow permanent paint on surface		Naturestrip - Roll out turf grass 50mm depth kykuyu rollout turf 50mm depth loamy sand			IRONBARK GULLY TRAIL		Survey	-	-	TENDER	-
	D								Design	Nathan Sartori		-						
	C								Checked	Ian Frost		-						
	B								Approved	Githal Samaraweera		-						
	A								NORTH BENDIGO			GB4328		7	OF 15			
					Ramp Concrete 200mm dpth black conc. 2xSL82 150mm dpth CL1 FCR 98%MMDD	Road Pavement reinstatement 40mm depth Type N asphalt 300mm CL1 FCR 98%MMDD	Concrete Kerb 150mm wide conc. plinth kerb - Details page 8-9	SHARED PATH										

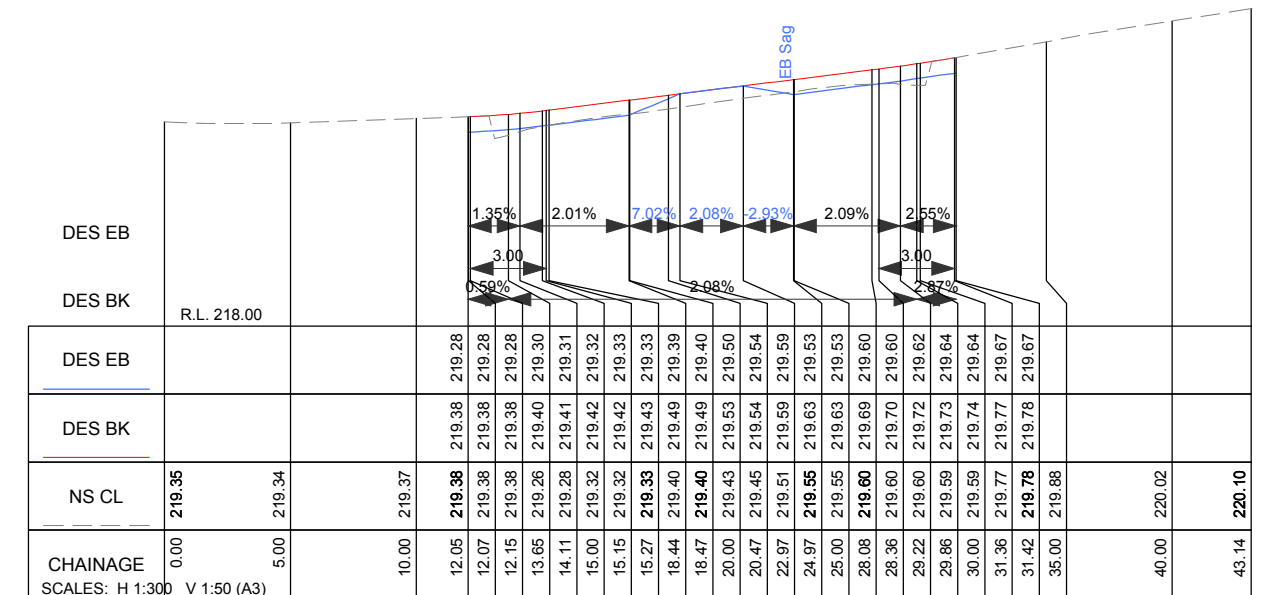
NORFOLK STREET CROSSING



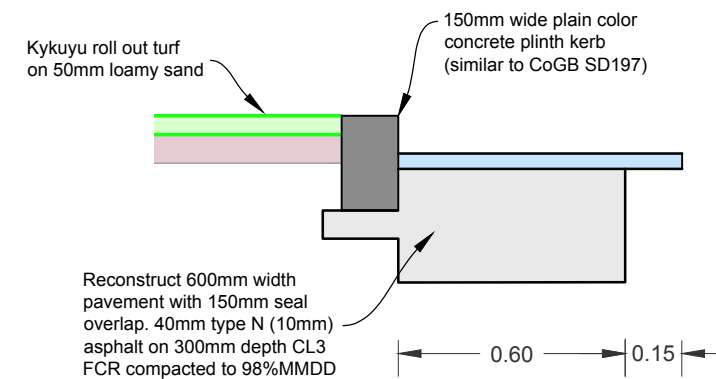
South BACK Kerb alignments



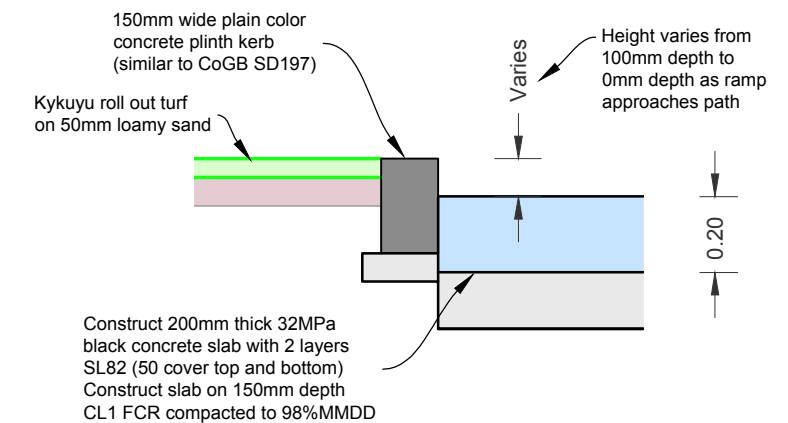
North BACK Kerb alignments



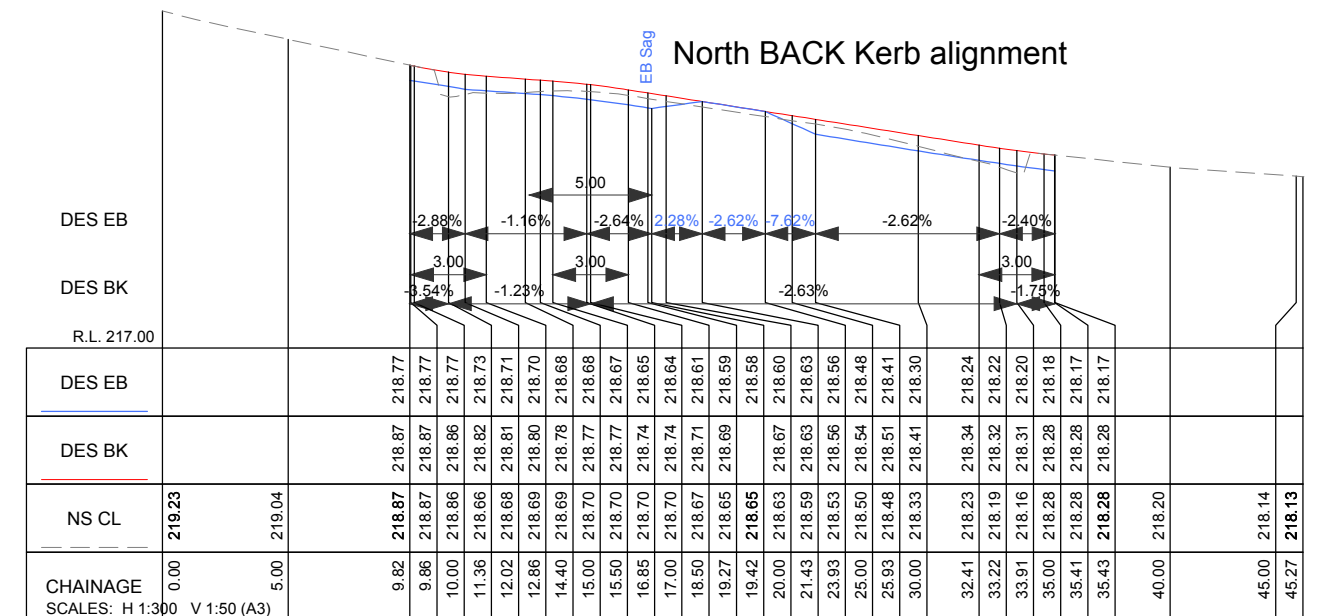
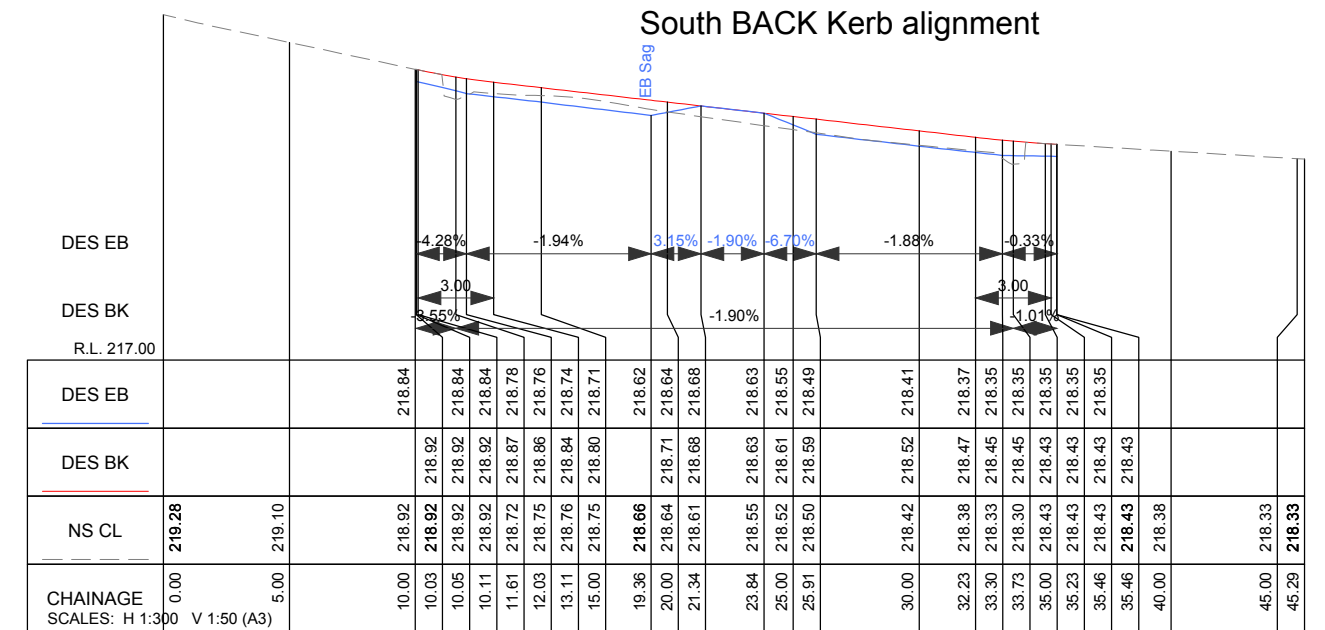
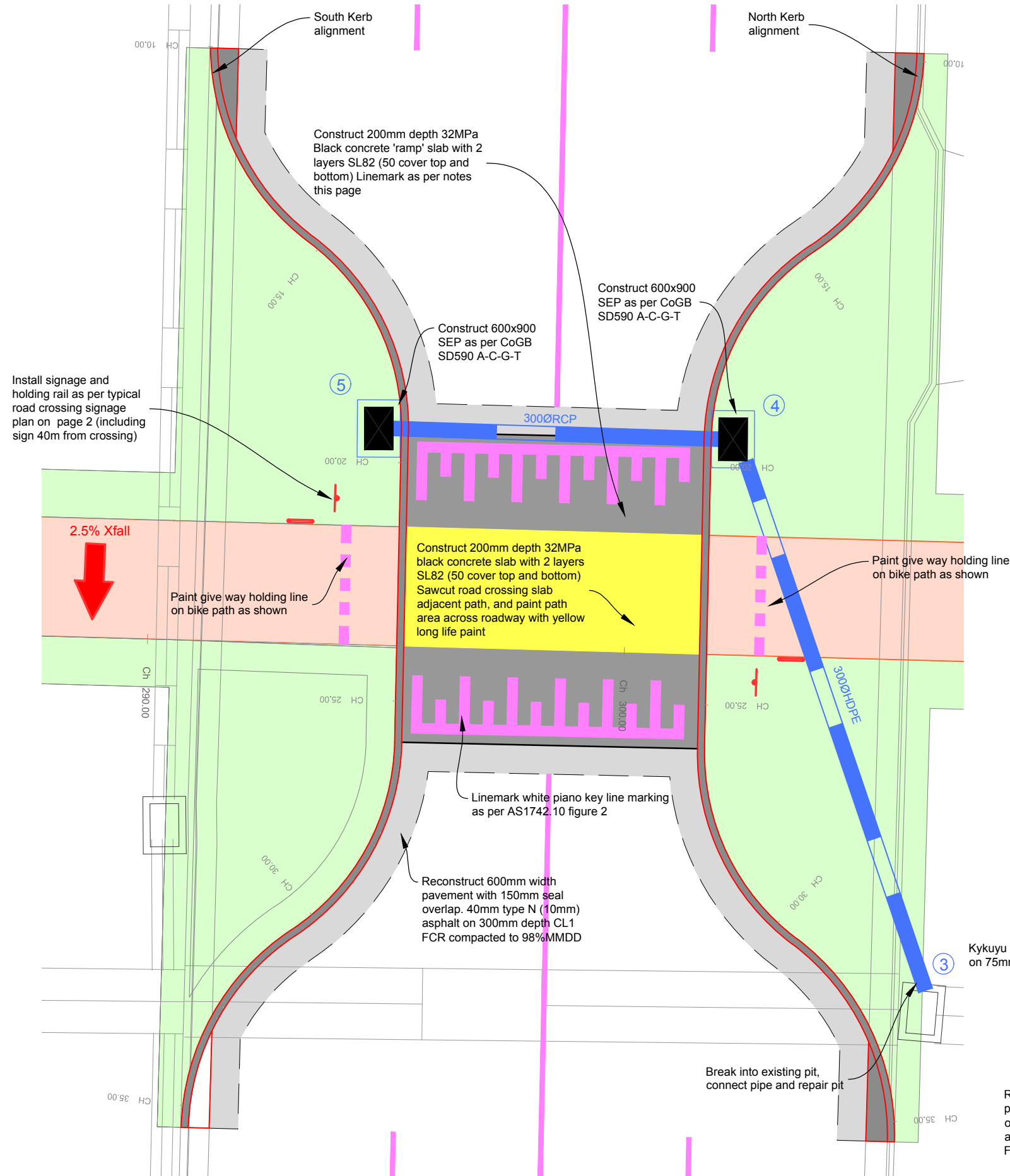
Kerb section adjacent Rd pavement



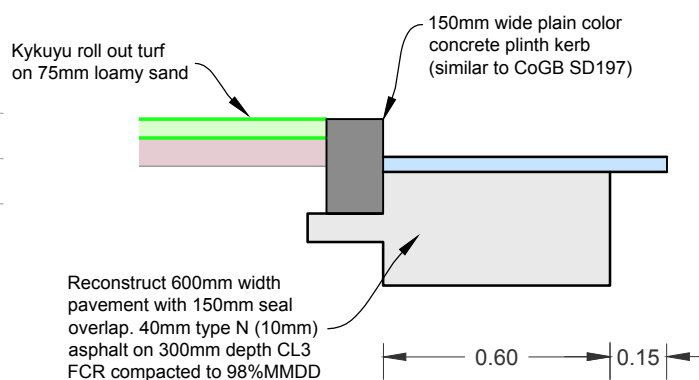
Kerb section adjacent Rd conc. ramp



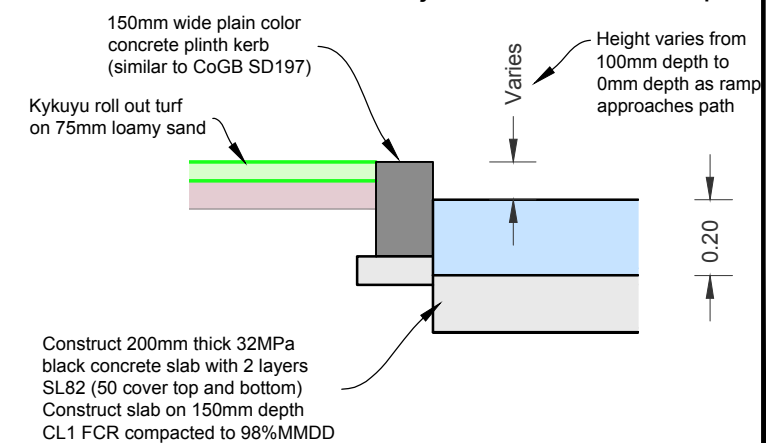
BAYNE STREET CROSSING



Kerb section adjacent Rd pavement



Kerb section adjacent Rd conc. ramp

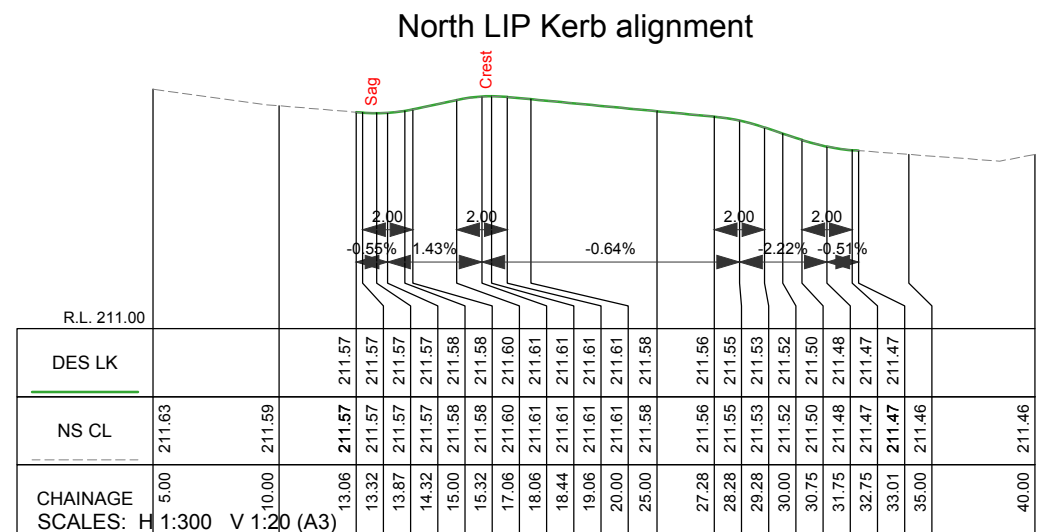
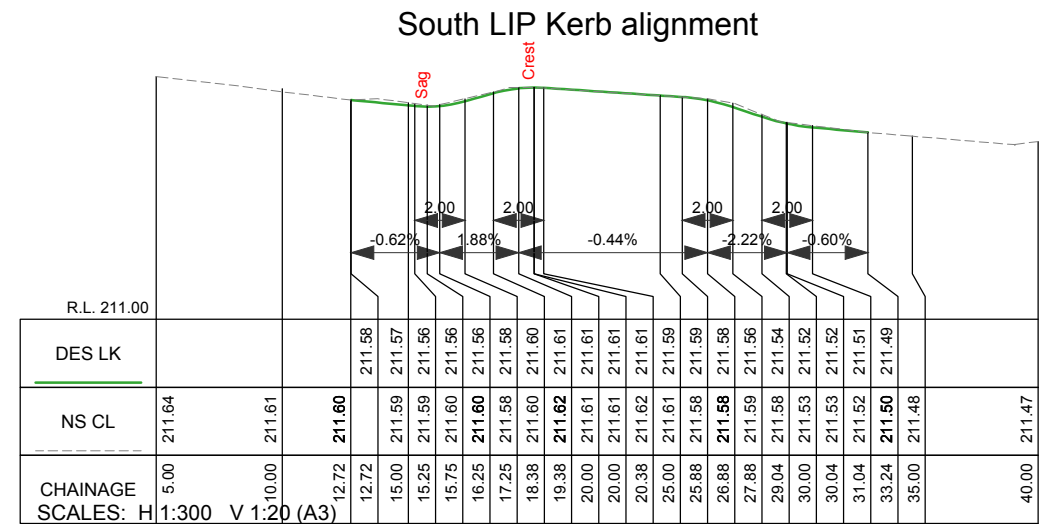


ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

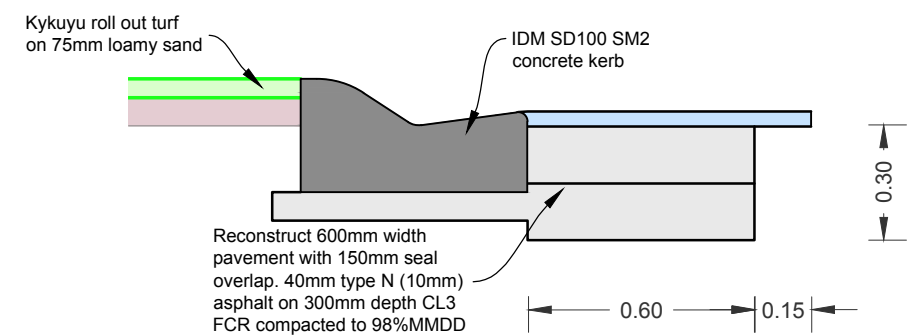
 Footpath - Black Concrete IDM SD205 - 125mm dpth conc. cent.SL72 - 50mm dpth CL3 FCR 90%MMDD	 Ramp Concrete - 200mm dpth conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD - Yellow permanent paint on surface	 Naturestrip - Roll out turf grass - 50mm depth kykyuu rollout turf - 50mm depth loamy sand
 Ramp Concrete - 200mm dpth black conc. 2xSL82 - 150mm dpth CL1 FCR 98%MMDD	 Road Pavement reinstatement - 40mm depth Type N asphalt - 300mm CL1 FCR 98%MMDD	 Concrete Kerb - 150mm wide conc. plinth kerb - Details page 8-9

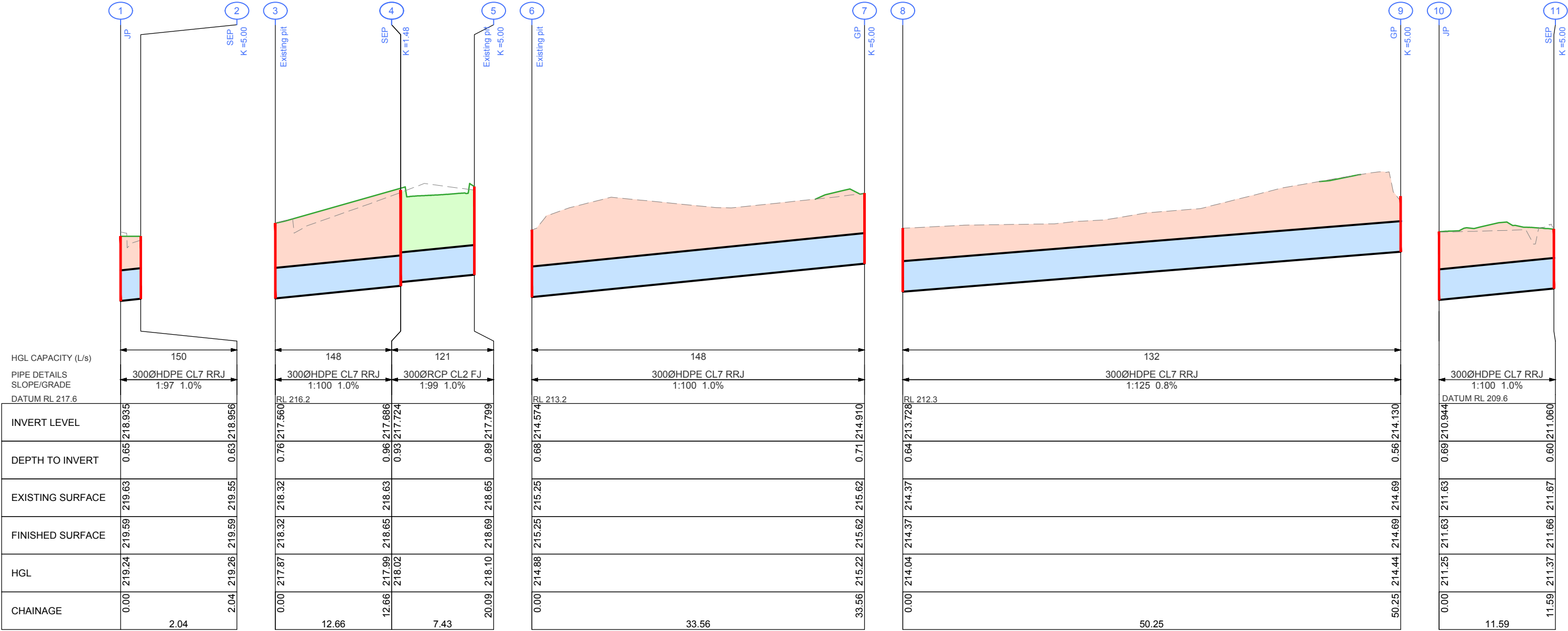


Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-	GB4328	9 OF 15
Approved	Githal Samaraweera	-		



Kerb section adjacent Rd pavement





DRAINAGE LONGITUDINAL SECTION
SCALES: HORIZONTAL 1:200 VERTICAL 1:20

Pit Schedule

Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Comment
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	
1	CoGB SD590 A-D-L-T	600	900			300	218.935	0.652	219.587	
2	CoGB SD590 A-C-G-T	600	900	300	218.956			0.631	219.587	
3	Existing JP					300	217.560			Break into pit, connect pipe, repair pit
4	CoGB SD590 A-C-G-T	600	900	300	217.686	300	217.724	0.964	218.650	
5	CoGB SD590 A-C-G-T	600	900	300	217.799			0.888	218.687	
6	Existing JP	600	900			300	214.574	0.677	215.251	Break into pit, connect pipe, repair pit
7	CoGB SD590 A-C-L-V	600	900	300	214.910			0.710	215.620	
8	Existing JP	600	900			300	214.728	0.640	214.368	Break into pit, connect pipe, repair pit
9	CoGB SD590 A-C-L-V	600	900	300	214.130			0.560	214.690	
10	Existing SEP	600	900	300		300	210.944	0.690	211.634	Break into existing pit and connect pipe. Convert pit from SEP to JP (reuse existing lid)
11	CoGB SD590 A-C-G-T	600	900	300	211.060			0.600	211.660	
12	CoGB SD590 A-C-G-T	600	900	300				0.550		Break into existing 300ØRCP pipe and construct pit
13	Existing SEP	600	900	300				0.550		Convert pit from SEP to JP. (reuse exiting lid)



ISSUE	APP'D	DATE	AMENDMENT
D			
C			
B			
A			

	= Existing pipe to remain		= CoGB SD390 backfill (behind kerb)
	= Design pipe		= CoGB SD391 backfill (under road)



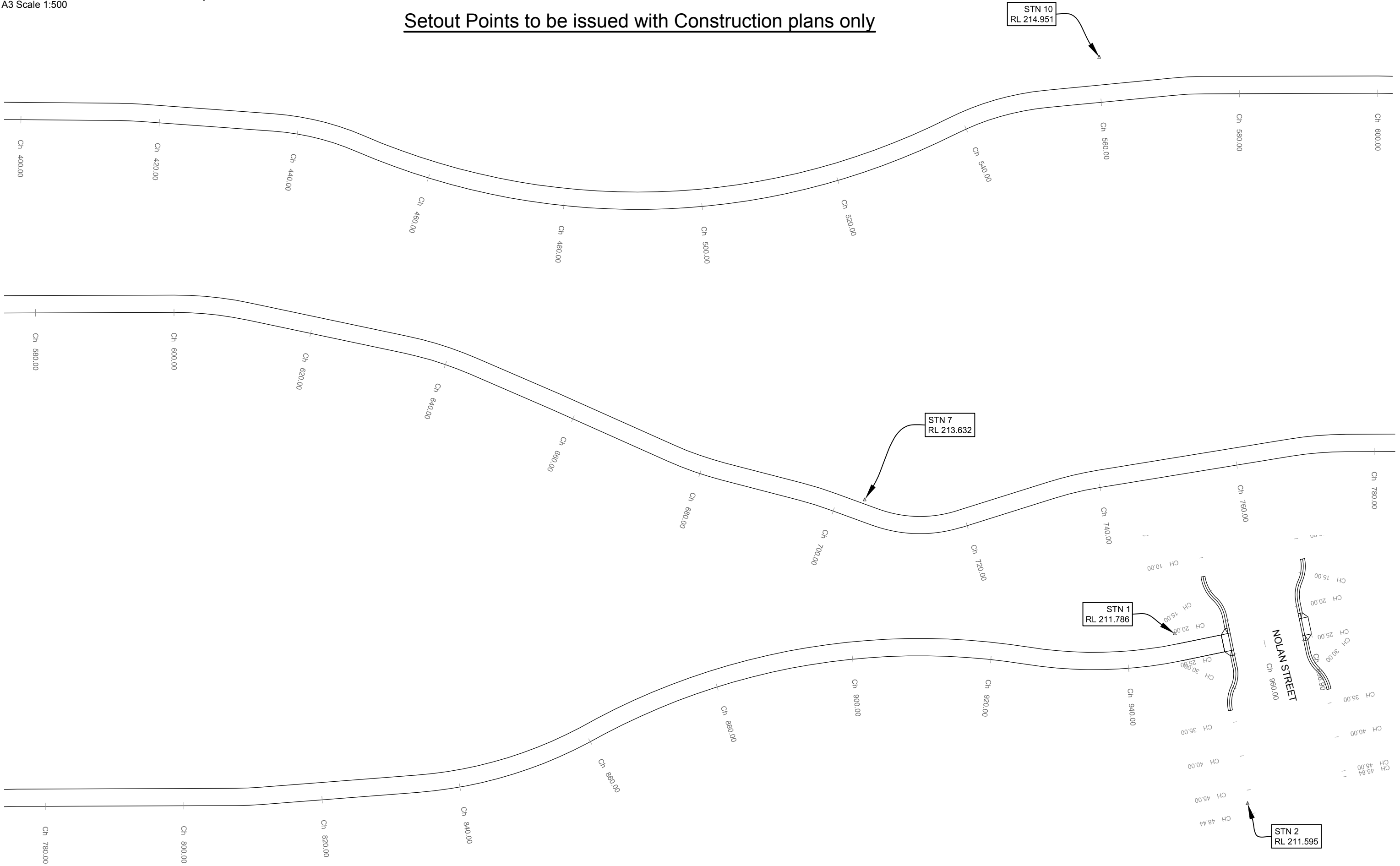
IRONBARK GULLY TRAIL
NORTH BENDIGO
SHARED PATH

Survey	-	-	TENDER	-
Design	Nathan Sartori	-		
Checked	Ian Frost	-		
Approved	Githal Samaraweera	-		
			GB4328	11 OF 15

Setout Points to be issued with Construction plans only

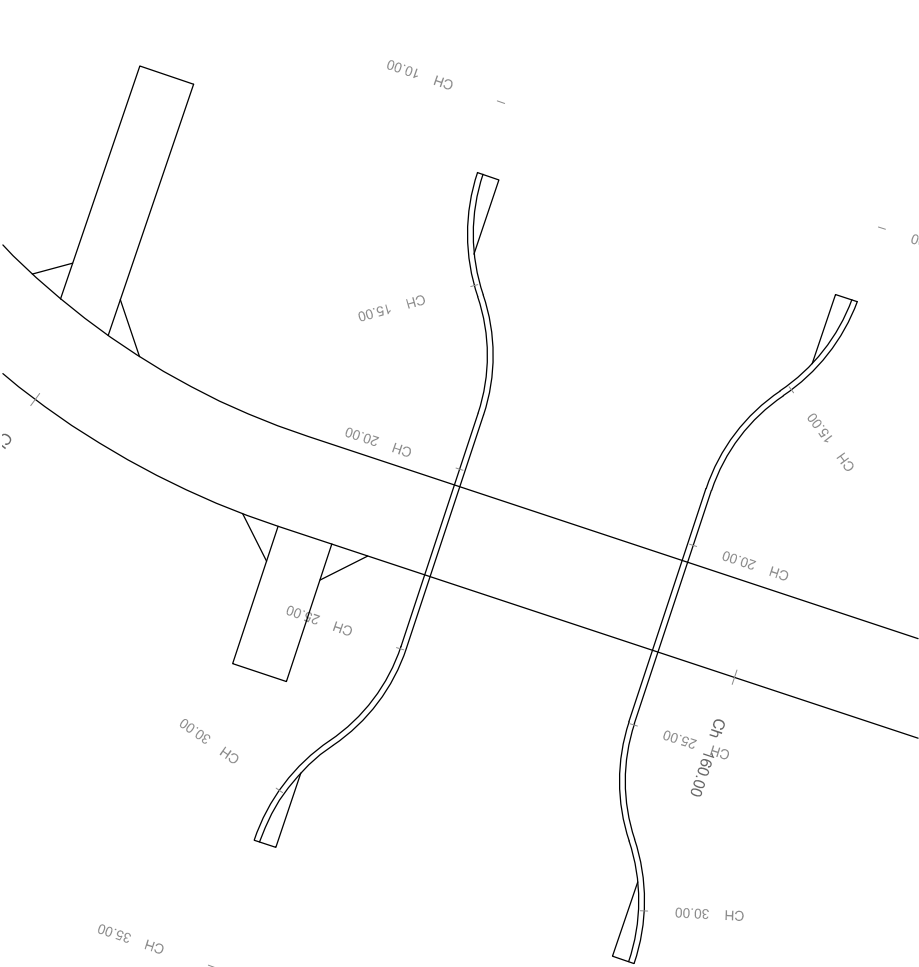


Setout Points to be issued with Construction plans only

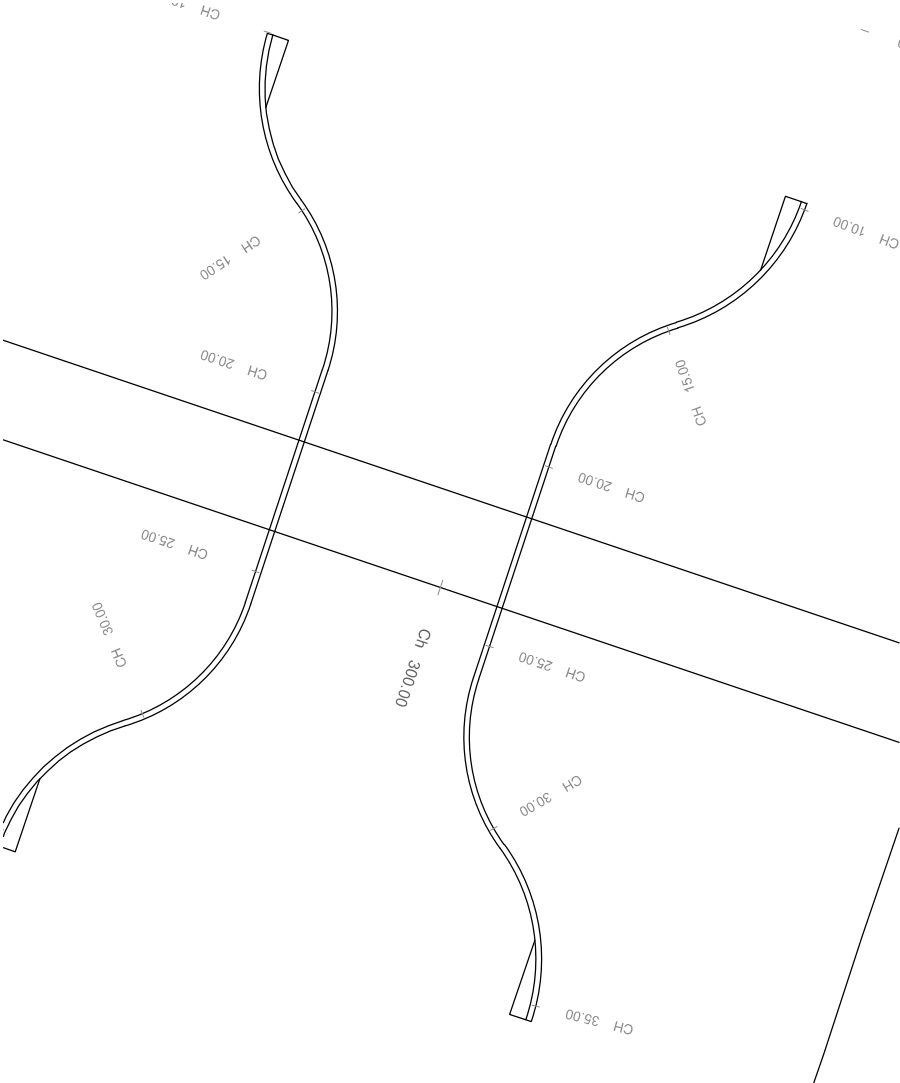


Setout Points to be issued with Construction plans only

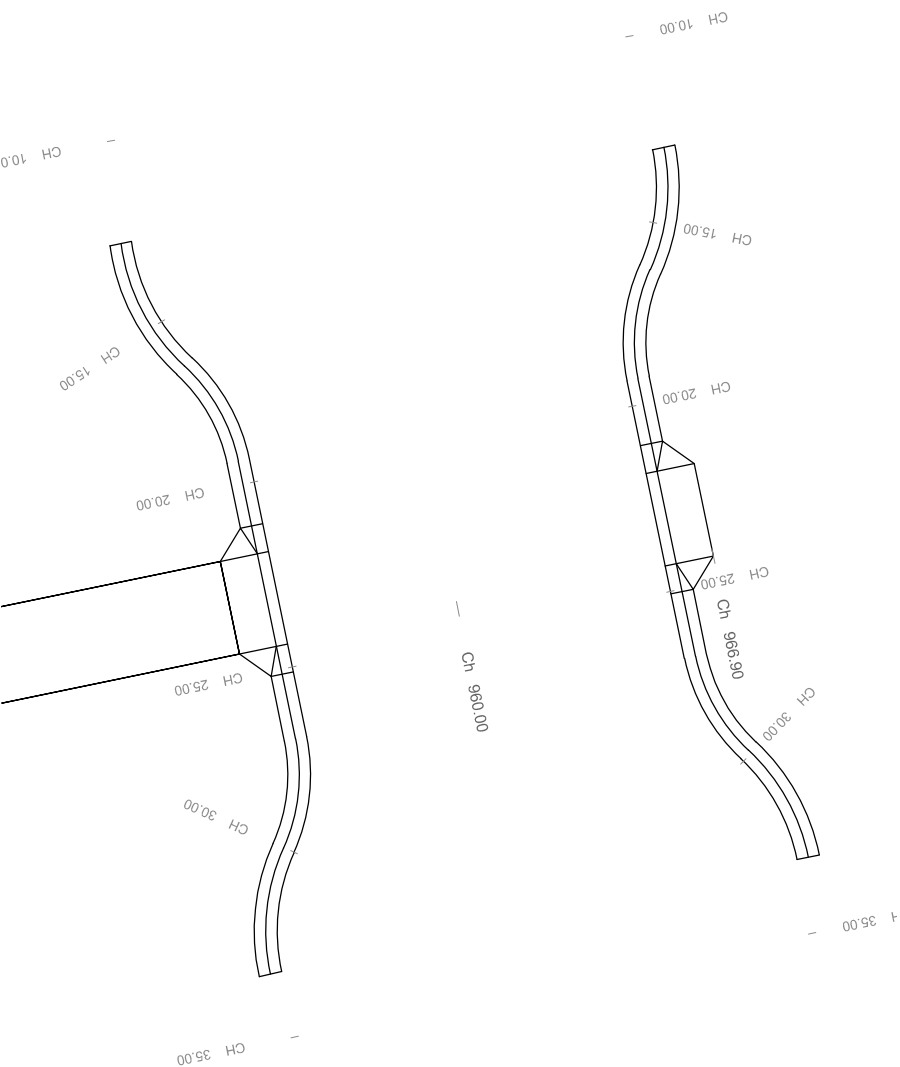
Norfolk Street Crossing



Bayne Street Crossing



Nolan Street Crossing



Setout Points to be issued with Construction plans only