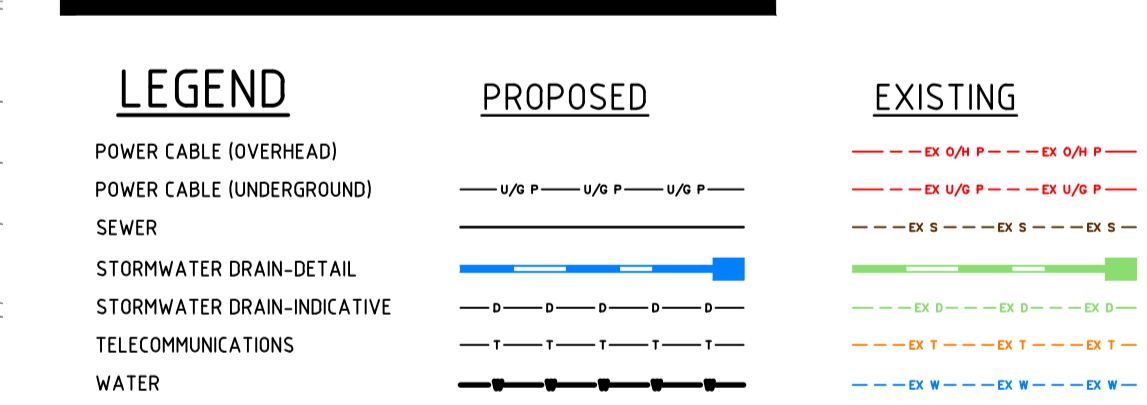


NOTE: UNDERGROUND SERVICES IN AREA OF CONSTRUCTION, CONTRACTOR TO LOCATE & DEPTH ALL SERVICES PRIOR TO CONSTRUCTION



Sheet List Table

Sheet Number	Sheet Title
C-01	LAYOUT PLAN & NOTES
C-02	DRAINAGE LAYOUT
C-03	CIVIL LAYOUT
C-04	PAVEMENT PLAN
C-05	SETOUT
C-10	NORTH KERB LONG SECTIONS
C-11	SOUTH KERB AND PIPE LONG SECTIONS
C-20	DETAILS

LAYOUT PLAN
SCALE 1:200

NOTE: TRENCH DEPTHS EXCEED 1.5m CONTRACTOR SHALL SUBMIT WORKSAFE FORM AND ENSURE APPROPRIATE BENCHING, SHORING OR SHIELDING ARE INSTALLED PRIOR TO COMMENCEMENT OF TRENCH WORK.

GENERAL

- G 1 These drawings are to be read in conjunction with the project specification.
- G 2 All dimensions are in meters, unless otherwise noted.
- G 3 All dimensions and reduced levels must be verified on site before commencement of any work. Any discrepancy shall be referred to the Design Engineer before proceeding with the work.
- G 4 All dimensions shown are to edge of road or face of wall unless otherwise shown. The CSE Group drawings shall not be scaled.
- G 5 All levels are to A.H.D. wide PM 165 RL 19.582. Survey by Joseph Land Surveying Pty Ltd Ref. #1555.
- G 6 Unless noted otherwise, underground service information is provided with a quality level 'C' (refer AS5488) and is based on Dial Before You Dig information and surface pit lid information only. There remains a high risk of damage to assets if relied upon. To avoid damage to underground assets the contractor shall verify by excavation the actual location of services prior to the commencement of construction.
- G 7 The contractor shall liaise directly with all service authorities and shall comply with all regulations concerned.
- G 8 All work within the road reserve shall be approved by the Municipal Council.
- G 9 All disturbed areas are to be made good upon completion of works.

PAVEMENTS

- P 1 All pavement layers including the subgrade shall be proof rolled as per Infrastructure Design Manual Clause 12.7.14 or VicRoads Standard Specification Section 173.
- P 2 Subgrade compaction testing to be undertaken as per Infrastructure Design Manual Clause 12.7.11.
- P 3 Sub base materials shall be 40mm nominal size class 3 fine crushed rock and compacted to 97% modified AASHO as per AS 1289 unless otherwise shown. Fine crushed rock material shall be placed and compacted in layers not exceeding 200mm compacted thickness.
- P 4 Base material shall be 20mm nominal size class 2 fine crushed rock and compacted to 98% modified AASHO as per AS 1289 unless otherwise shown. Fine crushed rock material shall be placed and compacted in layers not exceeding 150mm compacted thickness.
- P 5 Contractor shall provide for the superintendent to be present during all test rolling.

ASPHALT SURFACING

- A 1 Asphalt hot mix paving shall be generally laid in accordance with VicRoads standard specification '407 Hot Mix Asphalt' unless otherwise specified.
- A 2 A tack coat shall be applied to the application surface on which asphalt is to be placed unless the unsealed surface has been primed. The tack coat shall be applied to a clean, dry surface free of surface water. Appropriate measures shall be in place to prevent overspray on kerbs and adjacent pavement.
- A 3 Any tack coat not covered by asphalt shall be covered with clean grit or sand before the road is opened to traffic.
- A 4 Surface temperatures shall be above 10°C prior to placement of asphalt.
- A 5 Asphalt for typical use shall be a Size 10mm Dense Graded Asphalt Class 'H' mix with C320 binder or approved equivalent, unless noted otherwise.

LINEMARKING & SIGNS

- LS 1 All signs shall comply with AS1742 and AS1743.
- LS 2 Signs shall be fixed to galvanised posts securely with appropriate fittings.
- LS 3 Galvanised posts shall have post caps installed to prevent the storage of water.
- LS 4 Sign post foundations shall have a minimum compressive strength of 20MPa with 50mm cover to sign post. Auger holes shall be a minimum 200mm diameter and 600mm deep.
- LS 5 Linemarking paint shall be approved under the Australian Paint Approval Scheme (APAS). Paint shall comply with the requirements of AS 4049.1 for solvent-borne paint or AS/NZS 4049.3 for water-borne paint.
- LS 6 Linemarking shall consist of 2 coats of paint unless noted otherwise.
- LS 7 Where glass beads are specified, paint shall be intermixed with glass beads for use in long life material applications and shall conform to AS/NZS 2009 and the Australian Paint Approval Scheme (APAS) Specification 0042.
- LS 8 The road surface shall be clean and free of any debris or surface water prior to the application of paint.

CONCRETE

- C1 Minimum compressive strength shall be 25 Mpa at 28 days unless noted otherwise.

KERB & CHANNEL

- KC 1 Cross section details shall be as shown in Infrastructure Design Manual standard drawing No. SD 100
- KC 2 Construction joints shall be constructed at 2.50m spacings
- KC 3 75mm compacted layer of pavement material shall be placed under all kerb & channel
- Kc 4 No subsurface drains required

EARTHWORKS - GENERAL

- E 1 Unless otherwise noted all vegetation and topsoil containing organic matter shall be stripped to a minimum depth of 300mm under all pavement and building areas.
- E 2 All uncontrolled fill material shall be material approved by the Superintendent and the Council Engineer and compacted in 150mm maximum compacted thickness layers. Prior to the placement of any fill material under buildings or pavements the exposed subgrade shall be compacted to 95% modified AASHO (AS 1289). Any soft or unsuitable material in the subgrade shall be removed and replaced with approved granular fill material.
- E 4 It is the responsibility of the contractor to adequately drain the site during all stages of construction.
- E 5 All cut batters to be 1 in 5 and all fill batters to be 1 in 5 unless otherwise shown.
- E 6 Grade evenly between finished surface spot levels shown on drawings. Where finished levels are not shown the surface shall be graded smoothly so that it will drain, and to match existing surfaces or structures.

STORMWATER DRAINAGE

- SW 1 For excavations 1.5 m deep or deeper, the construction contractor shall submit a 'Notice of Intention to Commence Excavation Operations in Trenches, Shafts and Tunnels' form to Worksafe. This shall be done 3 days prior to commencing any excavations.
- SW 2 All stormwater pipes 150mm dia. and smaller shall be UPVC DWV class pipe. All stormwater pipes 225mm dia. and larger shall be reinforced concrete class 2 unless otherwise shown. Rubber ring joints shall be used under all pavements and building floor slabs.
- SW 3 Downpipes shall be connected to pits or stormwater pipes at a minimum grade of 1 in 100.
- SW 4 Pipe handling, trenching, laying, jointing & refilling is to be in accordance with the manufacturers recommendations.
- SW 5 Trenching backfill to be in accordance with IDM SD-310 and pipe/conduit/cable manufacturers specification.
- SW 6 All pit covers to be class 'D' if located in pavement and class 'B' if located in reserves unless specified. Refer to stormwater pit schedule for pit details and cover types.
- SW 7 Refer to Infrastructure Design Manual standard drawing No SD-420 for Junction pit details.
- SW 8 Refer to Infrastructure Design Manual standard drawing No SD-431 for side entry pit details.
- SW 9 Refer to Infrastructure Design Manual standard drawing No SD-455 for grated pit details.

REV.	DESCRIPTION	DATE
G	DETAILED DESIGN ISSUE	09/05/2024
F	REMOVE KERB ALONG BUILDING	27/03/2024
E	REVISED CARPARK & WATER TANKS LAYOUT	21/03/2024
D	AMENDED UNDERGROUND TANK SIZE & CARPARK AREA	19/02/2024
C	SWMP ISSUE	04/12/2023
B	PRELIMINARY REVISION	17/10/2023
A	PRELIMINARY ISSUED FOR COMMENT	07/09/2023

DESIGNED	PROJECT TITLE
SJB	EMMANUEL COLLEGE CRAWLEY STREET, WARRNAMBOOL
PL	
1:200	
OCT 2023	

APPROVED

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PROJECT TITLE
EMMANUEL COLLEGE
CRAWLEY STREET, WARRNAMBOOL

DRAWING TITLE
LAYOUT PLAN & NOTES

PROJECT No.
2023.197

SHEET C-01 **REV.** G



CIVIL LAYOUT PLAN
SCALE 1:200

NOTE: UNDERGROUND SERVICES IN AREA OF CONSTRUCTION, CONTRACTOR TO LOCATE & DEPTH ALL SERVICES PRIOR TO CONSTRUCTION

REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024


APPROVED
Scott Trotter,
Registered Professional Engineer, Victoria.
Civil Engineering PE 0000525
Date: ___/___/___

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DESIGNED	SJB
DRAWN	PL
SCALE	1:100
DATE	OCT 2023

PROJECT TITLE	EMMANUEL COLLEGE CRAWLEY STREET, WARRNAMBOOL
DRAWING TITLE	DRAINAGE LAYOUT

 NORTH	
PROJECT No.	2023.197
SHEET	C-02
REV.	A



CIVIL LAYOUT PLAN
SCALE 1:200

NOTE: UNDERGROUND SERVICES IN AREA OF CONSTRUCTION, CONTRACTOR TO LOCATE & DEPTH ALL SERVICES PRIOR TO CONSTRUCTION

REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024

APPROVED
Scott Trotter,
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_____ Date __/__/____

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DESIGNED	SJB
DRAWN	PL
SCALE	1:100
DATE	OCT 2023

PROJECT TITLE	EMMANUEL COLLEGE CRAWLEY STREET, WARRNAMBOOL
DRAWING TITLE	CIVIL LAYOUT & LEVELS

N
↑
NORTH

PROJECT No. **2023.197**

SHEET C-03 REV. A



SETOUT POINT TABLE					SETOUT POINT TABLE					SETOUT POINT TABLE					SETOUT POINT TABLE					
Point #	Easting	Northing	Level	Description	Point #	Easting	Northing	Level	Description	Point #	Easting	Northing	Level	Description	Point #	Easting	Northing	Level	Description	
1	628959.432	5752239.778	13.173		23	628970.007	5752248.687	12.007		44	628976.562	5752225.266	12.514		69	62894.0565	5752231.355	14.853		
2	628957.180	5752239.381	13.360		24	628970.680	5752248.275	11.954		45	628975.926	5752225.261	12.566							
3	628954.955	5752238.855	13.547		25	628974.924	5752249.227	11.486		46	628972.799	5752222.089	13.022							
4	628940.425	5752234.977	14.780		26	628975.931	5752244.739	11.552		51	628967.040	5752227.782	13.295							
5	628939.813	5752235.331	14.844		27	628971.414	5752243.725	12.050		52	628963.059	5752234.985	13.307							
7	628935.623	5752250.997	14.683		28	628970.881	5752242.634	12.130		53	628966.304	5752236.778	12.791							
8	628961.242	5752240.043	13.023		29	628971.887	5752241.954	12.067		54	628966.559	5752237.435	12.735							
9	628964.005	5752240.448	12.794		30	628979.824	5752243.469	11.513		55	628965.958	5752237.804	12.766							
10	628963.959	5752241.654	12.810		31	628981.558	5752240.771	11.469		56	628962.379	5752237.279	13.150							
11	628964.567	5752241.281	12.770		32	628975.932	5752239.698	11.855		57	628966.655	5752221.039	14.236							
12	628959.271	5752240.967	13.374		33	628974.282	5752238.419	11.973		58	628967.846	5752216.553	14.237							
13	628958.455	5752246.530	13.286		34	628974.345	5752236.334	12.090		59	628964.602	5752228.771	13.657							
14	628960.002	5752257.177	12.796		35	628975.041	5752235.064	12.088		60	628962.448	5752235.161	13.483							
15	628964.854	5752256.491	12.311		36	628975.447	5752234.783	12.063		61	628962.440	5752236.918	13.135							
16	628964.997	5752257.480	12.261		37	628975.915	5752234.942	12.006		62	628986.763	5752234.214	11.315							
17	628970.737	5752256.646	11.679		38	628978.906	5752237.976	11.536		63	628983.636	5752236.278	11.140							
18	628970.593	5752255.658	11.619		39	628984.034	5752232.925	11.608		64	628980.186	5752240.051	11.679							
19	628975.443	5752254.953	11.514		40	628980.911	5752229.755	11.873		65	628978.297	5752243.636	11.724							
20	628974.781	5752250.401	11.457		41	628980.916	5752229.118	11.914		66	628978.063	5752256.084	11.233							
21	628970.479	5752251.026	11.874		42	628981.308	5752228.732	11.910		67	628973.902	5752220.366	13.265							
22	628969.852	5752250.554	11.954		43	628977.236	5752224.602	12.500		68	628924.441	5752226.776	15.180							

NOTE:
 TJ - TOOL JOINT 4M MAX SPACING
 EJ - EXPANSION JOINT MAX SPACING 20M, REFER DETAIL

SETOUT
 SCALE 1:100

REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024

APPROVED
 Scott Trotter,
 Registered Professional Engineer, Victoria.
 Civil Engineering PE 0000525

_____ Date ___/___/___

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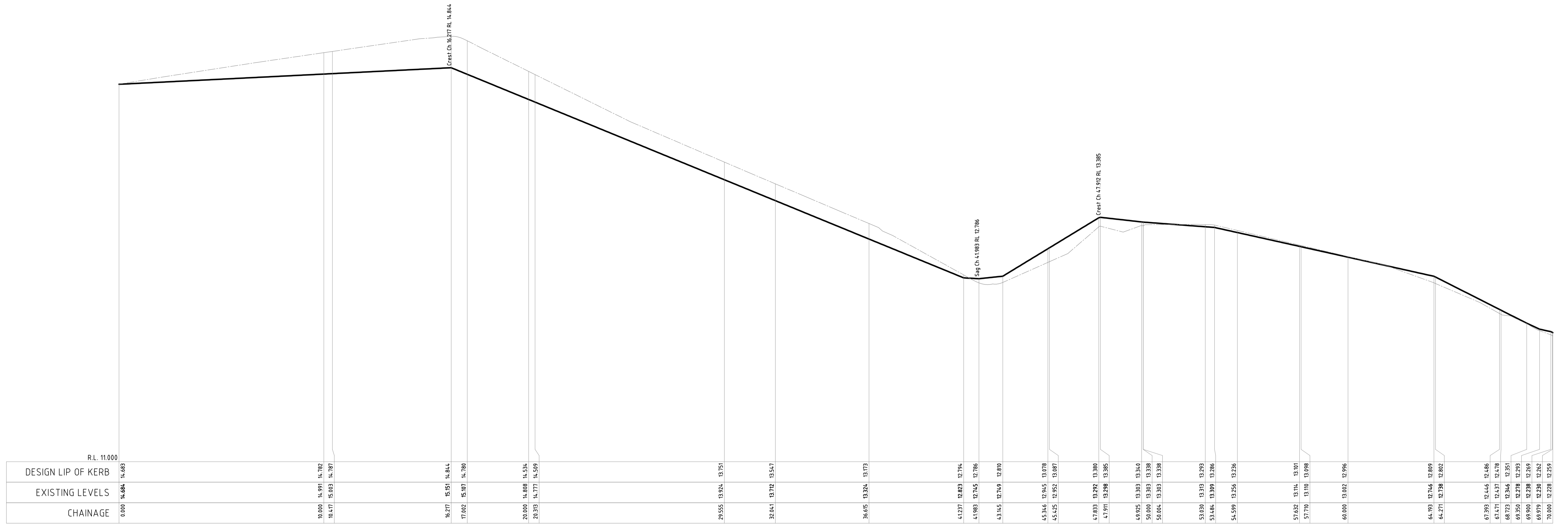
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SCALE	1:100
DATE	OCT 2023

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DRAWING TITLE	SETOUT

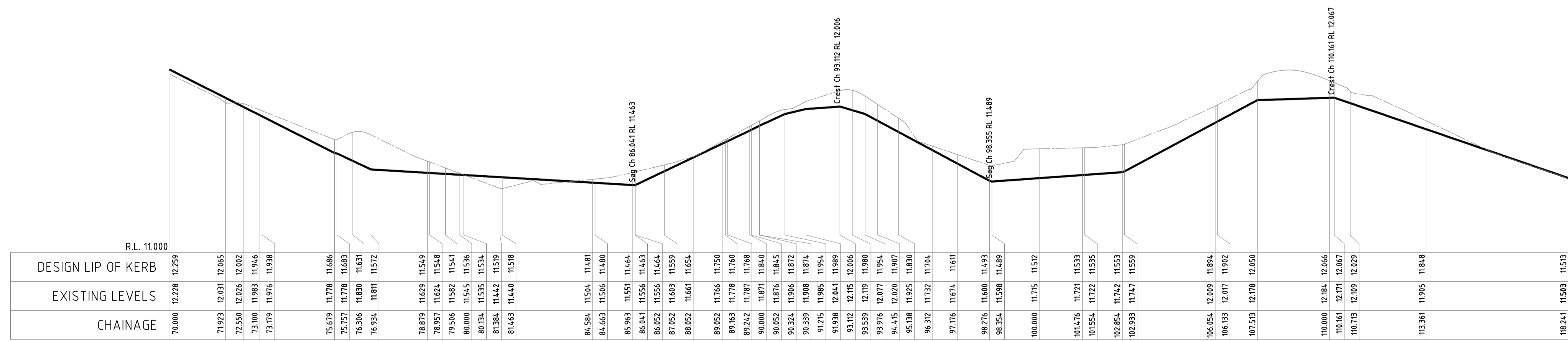
NORTH

PROJECT No. 2023.197

SHEET C-05 REV. A



Profile
Scales: Horizontal 1 in 100 Vertical 1 in 20



Profile
Scales: Horizontal 1 in 100 Vertical 1 in 20

NORTH KERB LONG SECTION CONT.

REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024

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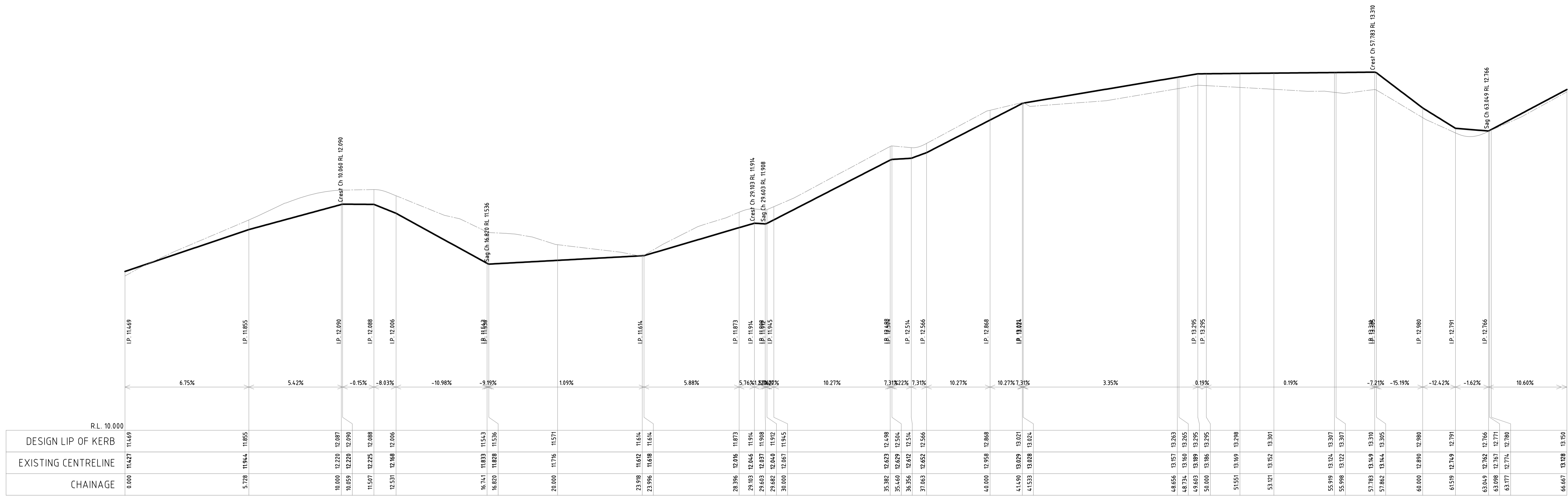
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SCALE	1:100
DATE	OCT 2023

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DRAWING TITLE	NORTH KERB LONG SECTIONS

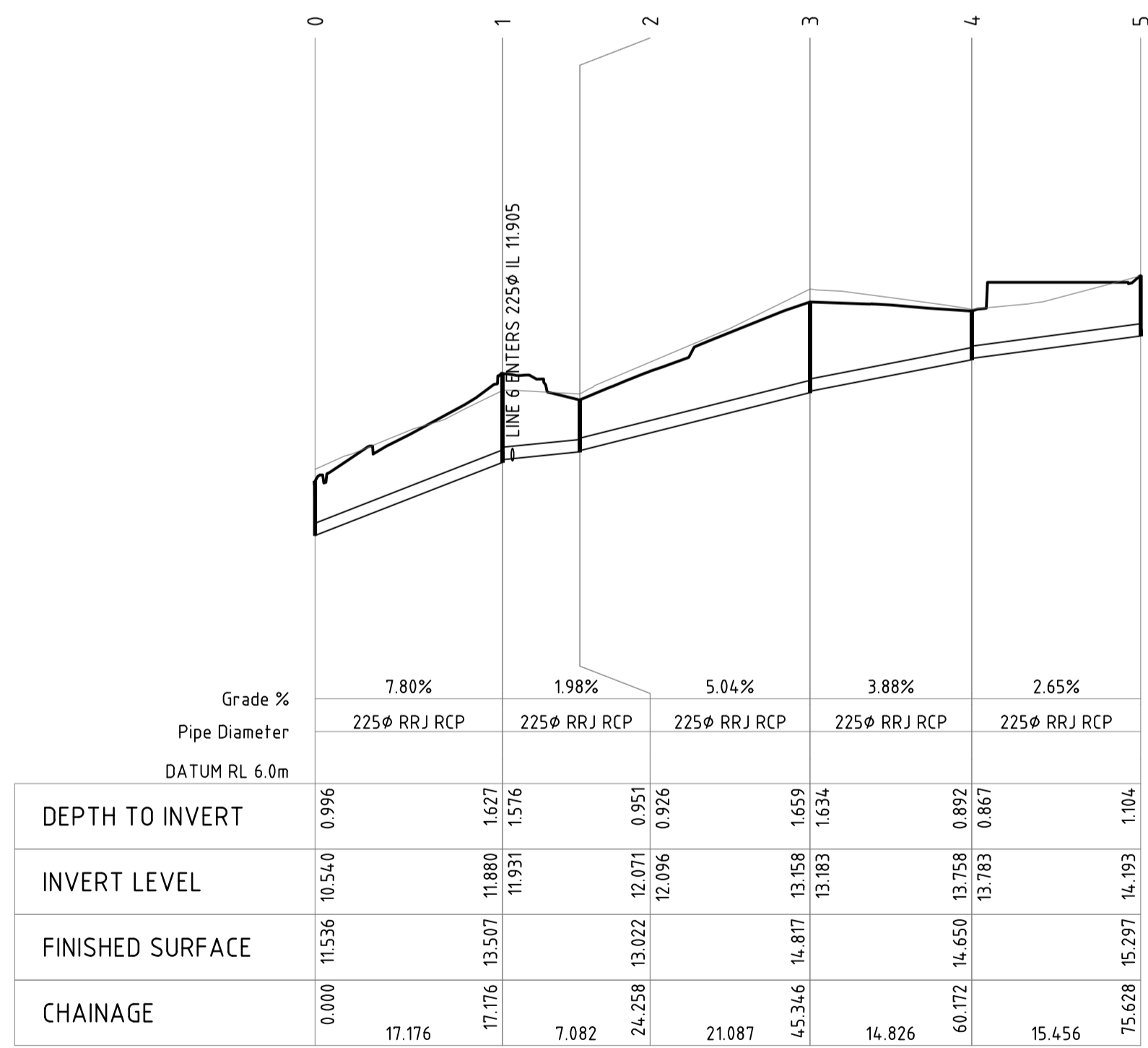
NORTH

PROJECT No. 2023.197

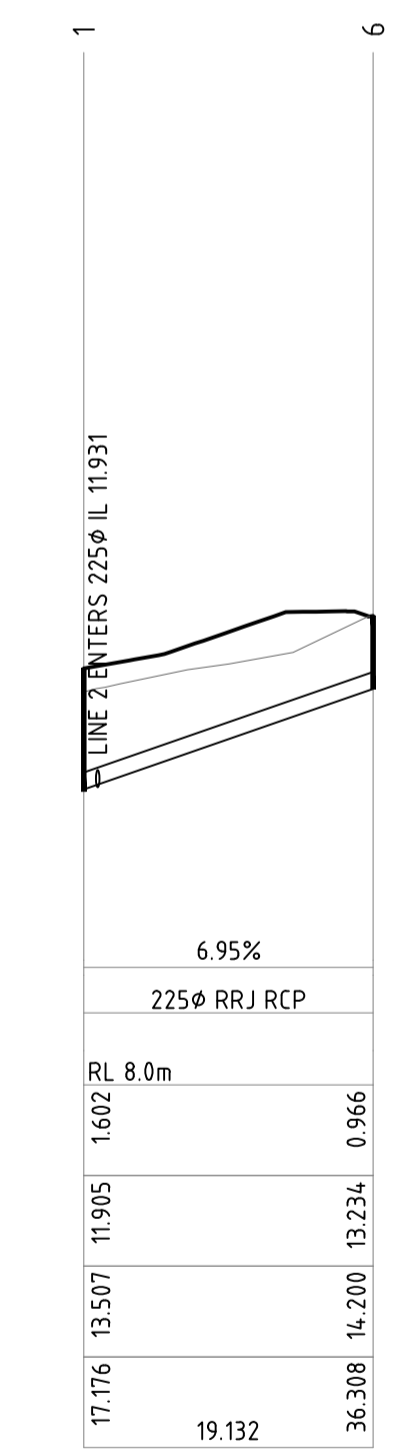
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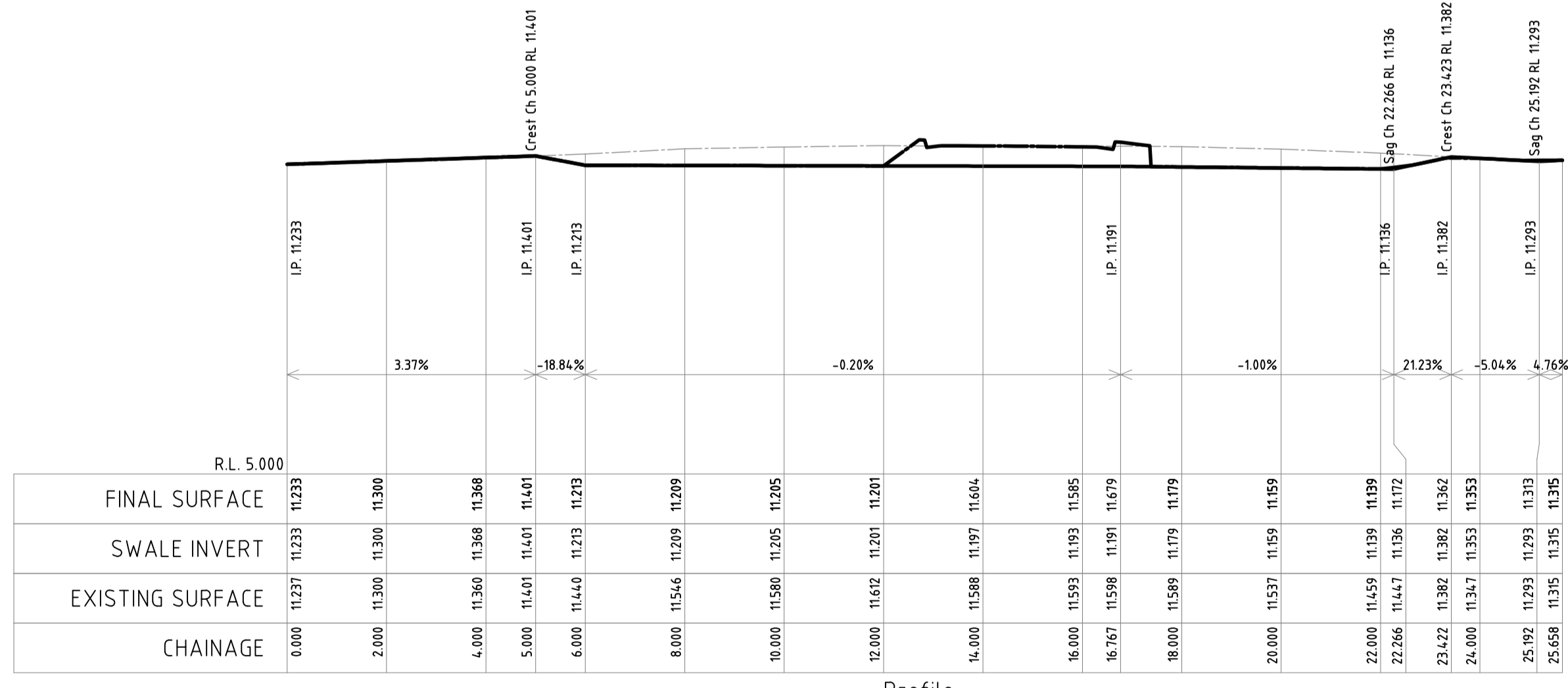
Profile
Scale: Horizontal 1 in 100 Vertical 1 in 20



LINE 1
SCALE: Horizontal 1500 Vertical 1:100



LINE 2
SCALE: Horizontal 1500 Vertical 1:100



Profile
Scales: Horizontal 1 in 100 Vertical 1 in 100

PIPE LONG SECTION

SWALE LONG SECTION

REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024

APPROVED

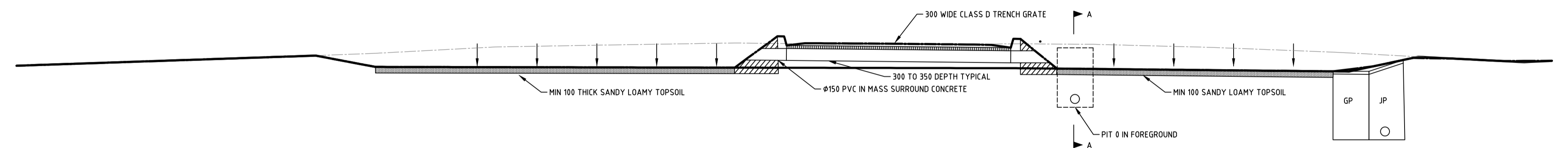
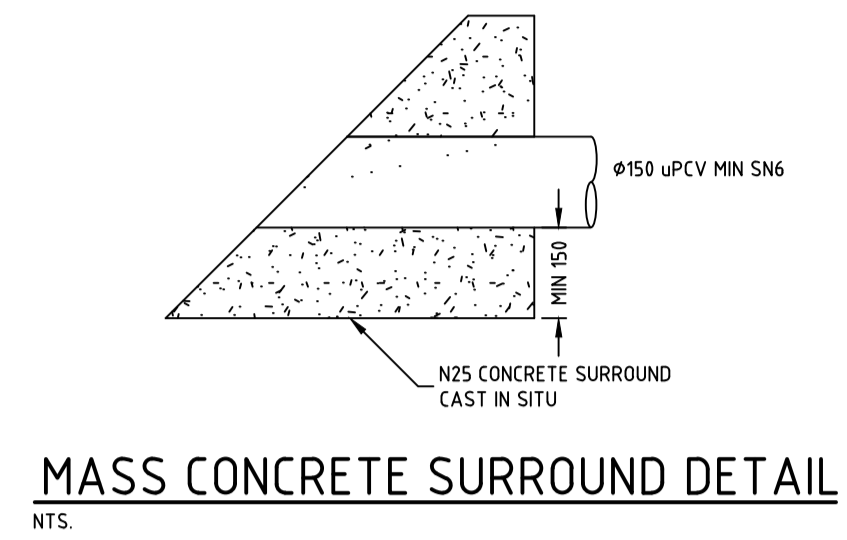


DESIGNED	SJB
DRAWN	PL
SCALE	1:100
DATE	OCT 2023

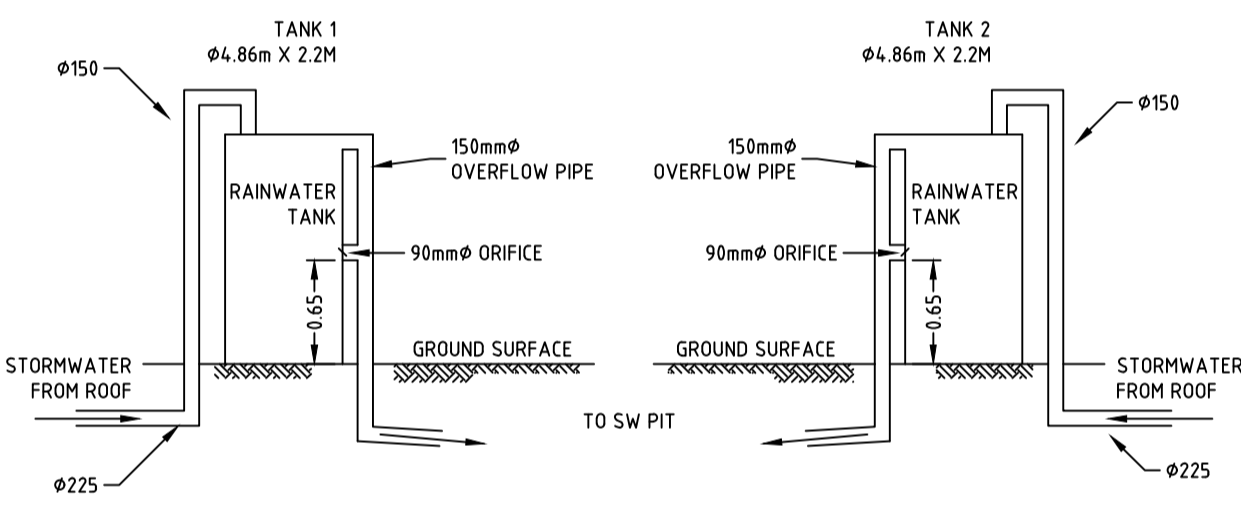
PROJECT TITLE	EMMANUEL COLLEGE CRAWLEY STREET, WARRNAMBOOL
DRAWING TITLE	SOUTH KERB AND PIPE LONG SECTIONS

NORTH	
PROJECT No.	2023.197
SHEET	C-11
REV.	A

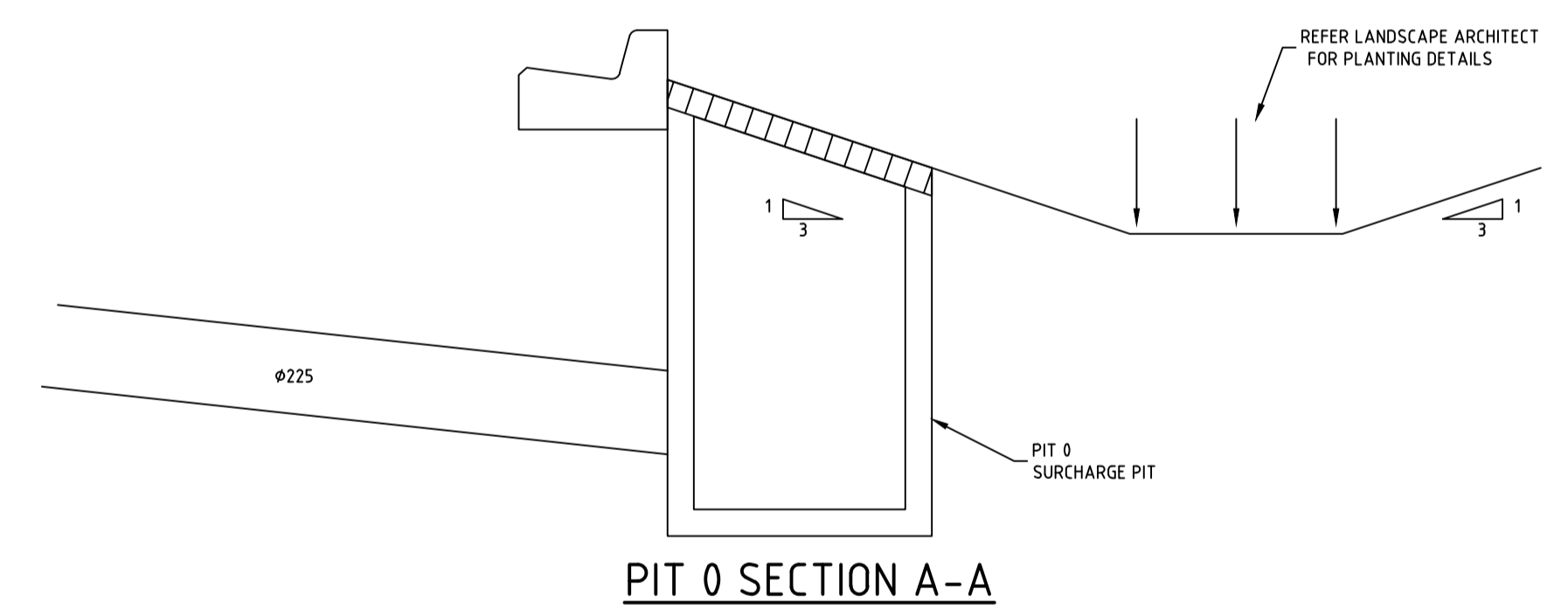
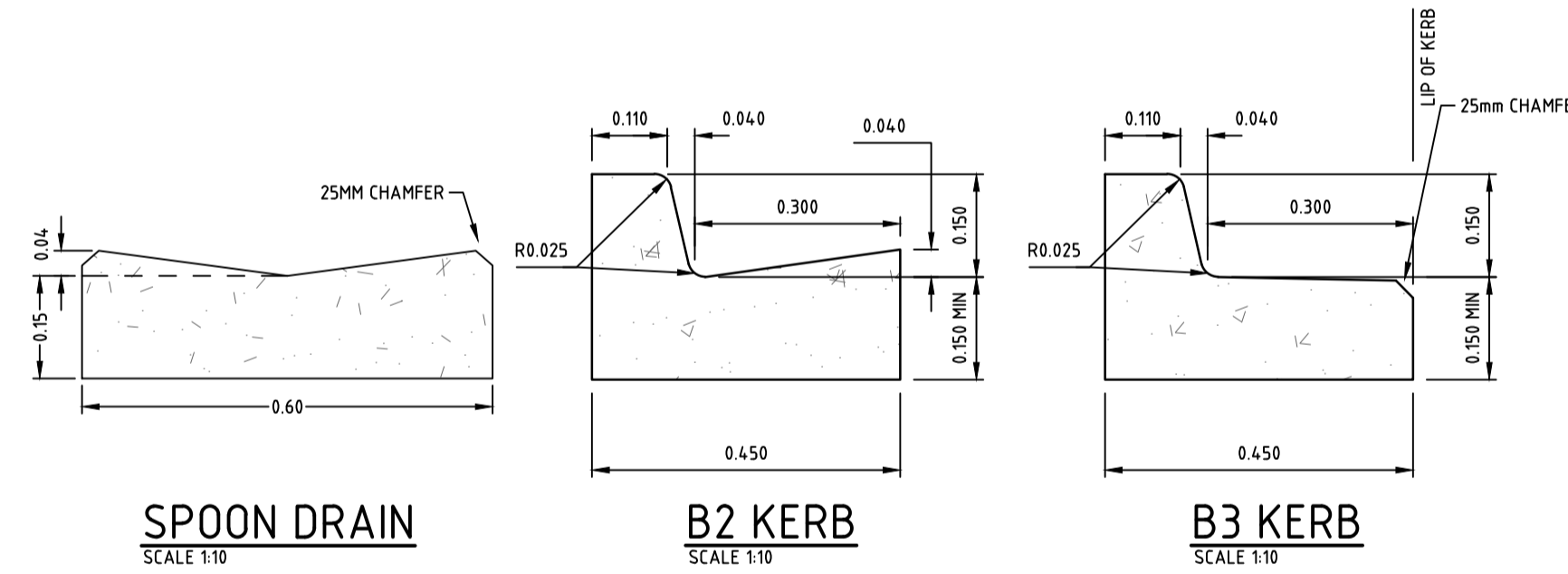
Pit Schedule - SW												
Pit No.	Pit Type	Pit Width	Pit Length	Outlet Diameter	Outlet Invert RL	Inlet Diameter	Inlet Invert RL	Pit Depth	Pit Lid Level	Easting	Northing	Comment
		(mm)	(mm)	(mm)	(m)	(mm)	(m)	(m)	(m)	(m)	(m)	
0	GP 600x600	600	600			225	10.540	0.996	11.536	628979.56	5752238.395	PIT LID TO MATCH SWALE SLOPE
1	GP 600x600	600	600	225	11.880	225	11.931	1.627	13.507	628963.17	5752233.229	CAN BE JP LID
2	GP 900x600	600	900	225	12.071	225	12.096	0.951	13.022	628961.25	5752240.044	
6	GP 600x600	600	600	225	13.234			0.966	14.200	628967.01	5752214.486	
3	JP 900x600	600	900	225	13.158	225	13.183	1.659	14.817	628940.51	5752236.203	
4	GP 900x600	600	900	225	13.758	225	13.783	0.892	14.650	628936.10	5752250.359	
5	GP 900x600	600	900	225	14.193			1.104	15.297	628923.83	5752259.754	EXISTING PIT
-	ORIFICE PIT	900	14.00	-	-	-	-	2.2	11.13	-	-	REFER DETAILS



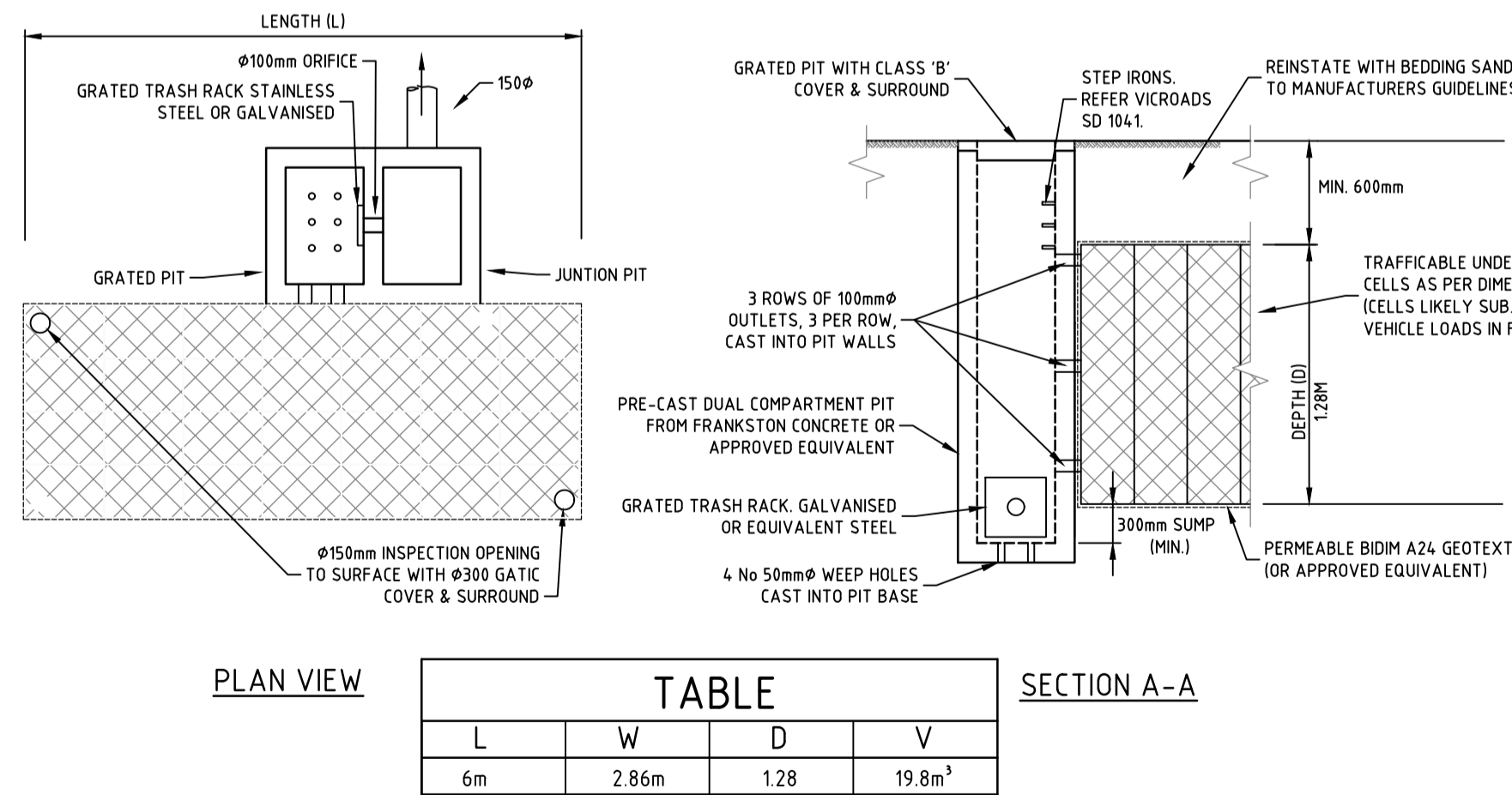
TYPICAL SWALE PROFILE



DETENTION TANK DETAIL
NTS.

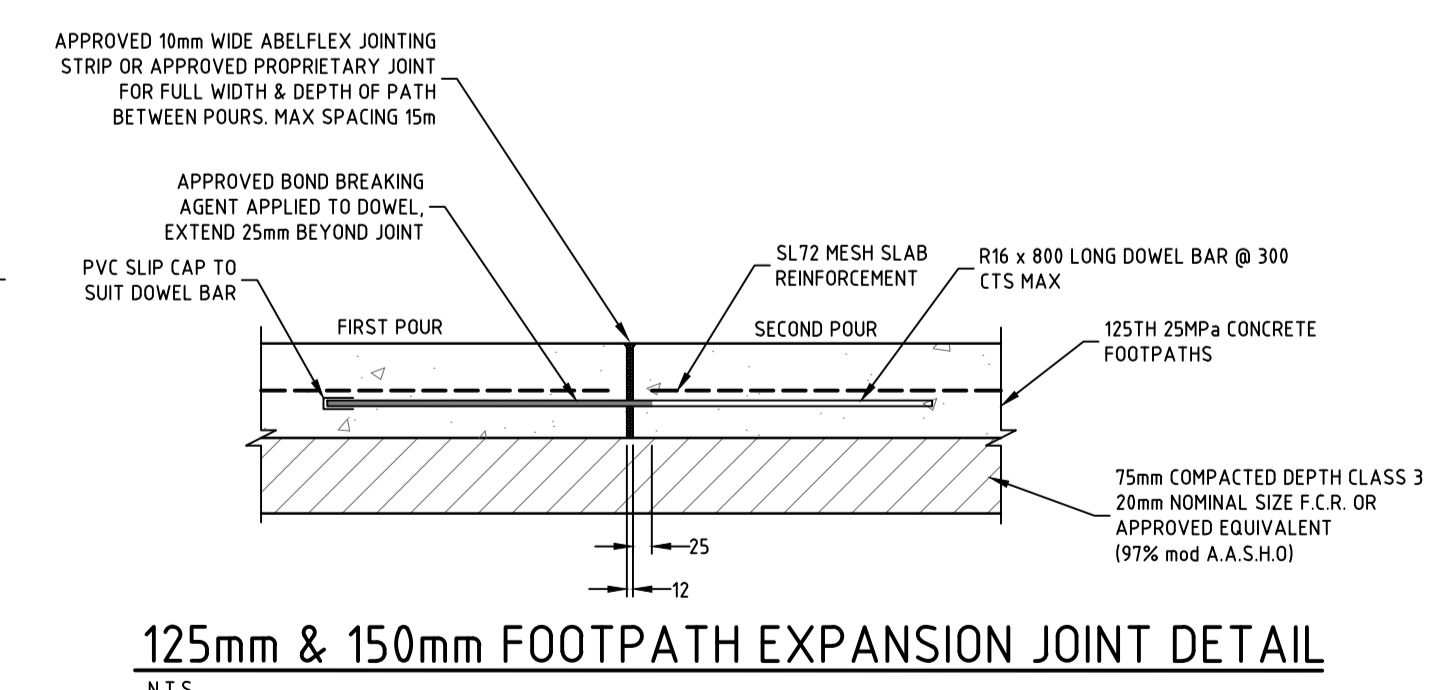
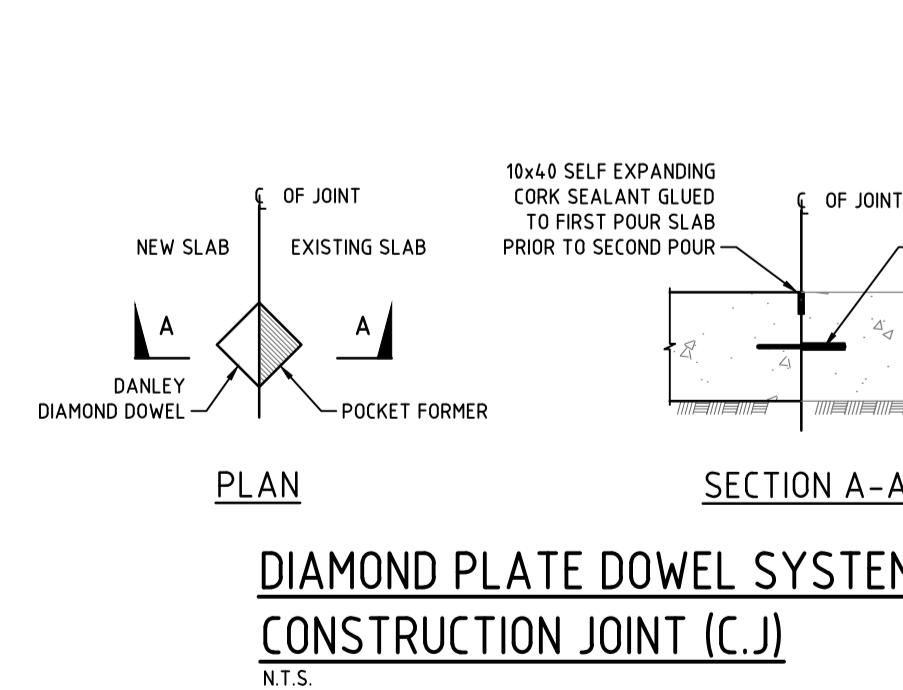


PIT 0 SECTION A-A



TYPICAL UNDERGROUND SOAKAGE TANK DETAILS (TRAFFICABLE)
SCALE: N.T.S.

TABLE			
L	W	D	V
6m	2.86m	1.28	19.8m ³



REV.	DESCRIPTION	DATE
A	DETAILED DESIGN ISSUE	09/05/2024

APPROVED

THE CSE GROUP
CONSULTING ENGINEERS

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DESIGNED: SJB
DRAWN: PL
SCALE: A1 1:100
DATE: OCT 2023

PROJECT TITLE: EMMANUEL COLLEGE CRAWLEY STREET, WARRNAMBOOL
DRAWING TITLE: DETAILS

NORTH
PROJECT No. 2023.197
SHEET C-20 REV. A