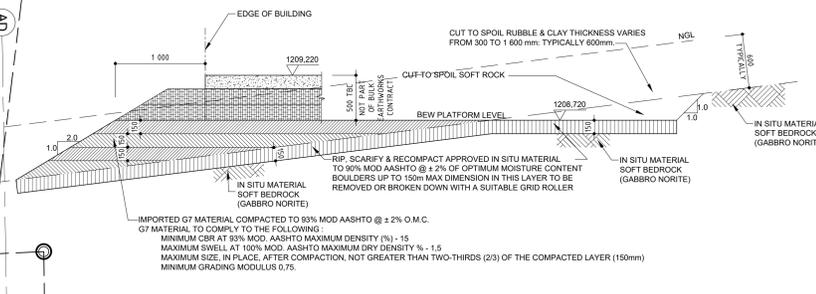
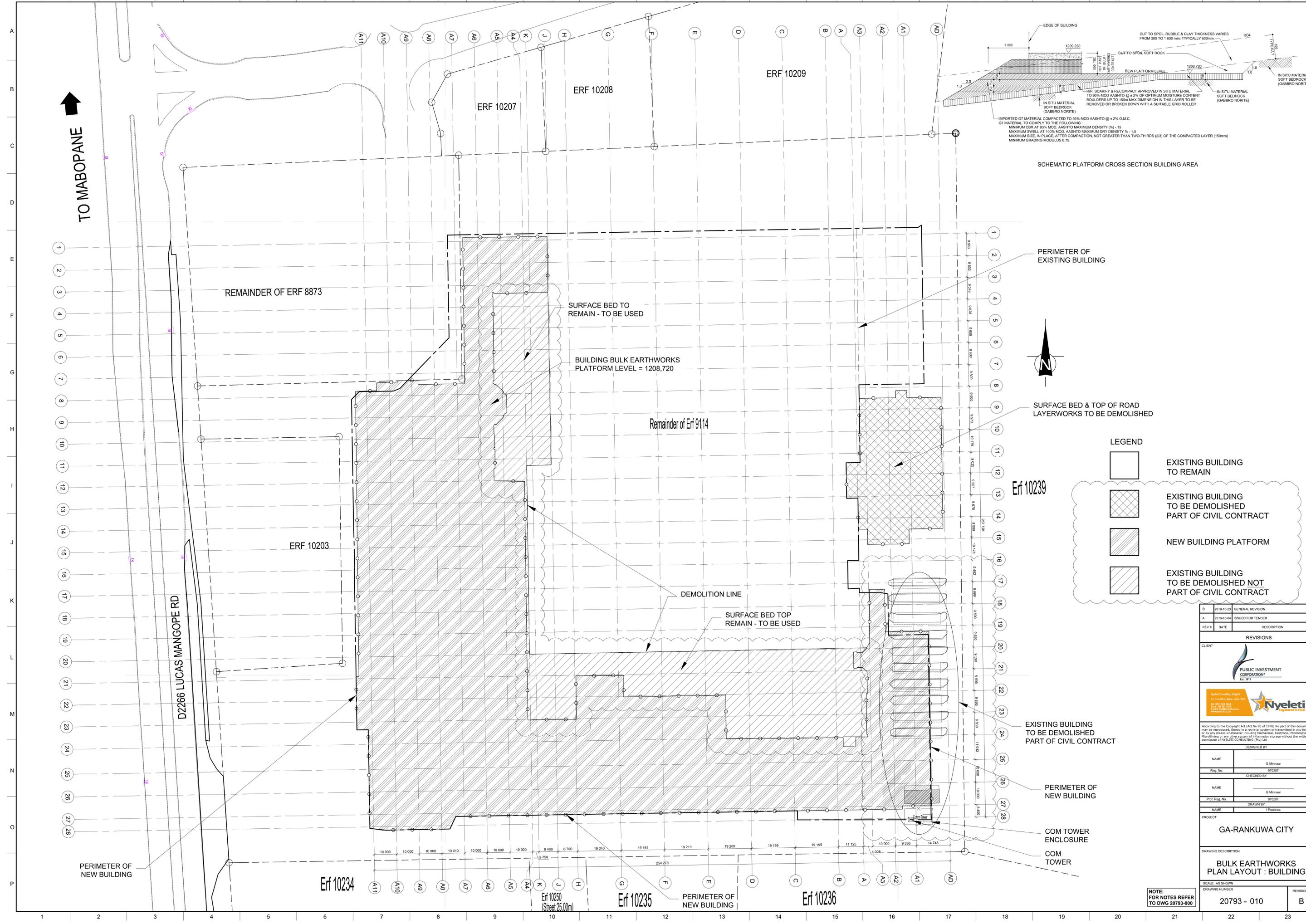


ISSUED FOR INFORMATION

REV #	DATE	ISSUED FOR TENDER	DESCRIPTION
REVISIONS			
CLIENT			
 			
DESIGNED BY			
G Minnar			
CHECKED BY			
G Minnar			
DRAWN BY			
I Pretorius			
PROJECT			
GA-RANKUWA CITY			
DRAWING DESCRIPTION			
SITE STORMWATER LAYOUT PLAN			
SCALE: AS SHOWN			
DRAWING NUMBER	20793 - 105		REVISION
			A

NOTE: FOR NOTES REFER TO DWG 20793-000



SCHEMATIC PLATFORM CROSS SECTION BUILDING AREA

PERIMETER OF EXISTING BUILDING



SURFACE BED & TOP OF ROAD LAYERWORKS TO BE DEMOLISHED

LEGEND

-  EXISTING BUILDING TO REMAIN
-  EXISTING BUILDING TO BE DEMOLISHED PART OF CIVIL CONTRACT
-  NEW BUILDING PLATFORM
-  EXISTING BUILDING TO BE DEMOLISHED NOT PART OF CIVIL CONTRACT

REVISION	DATE	DESCRIPTION
A	2019-10-04	ISSUED FOR TENDER

CLIENT	
	



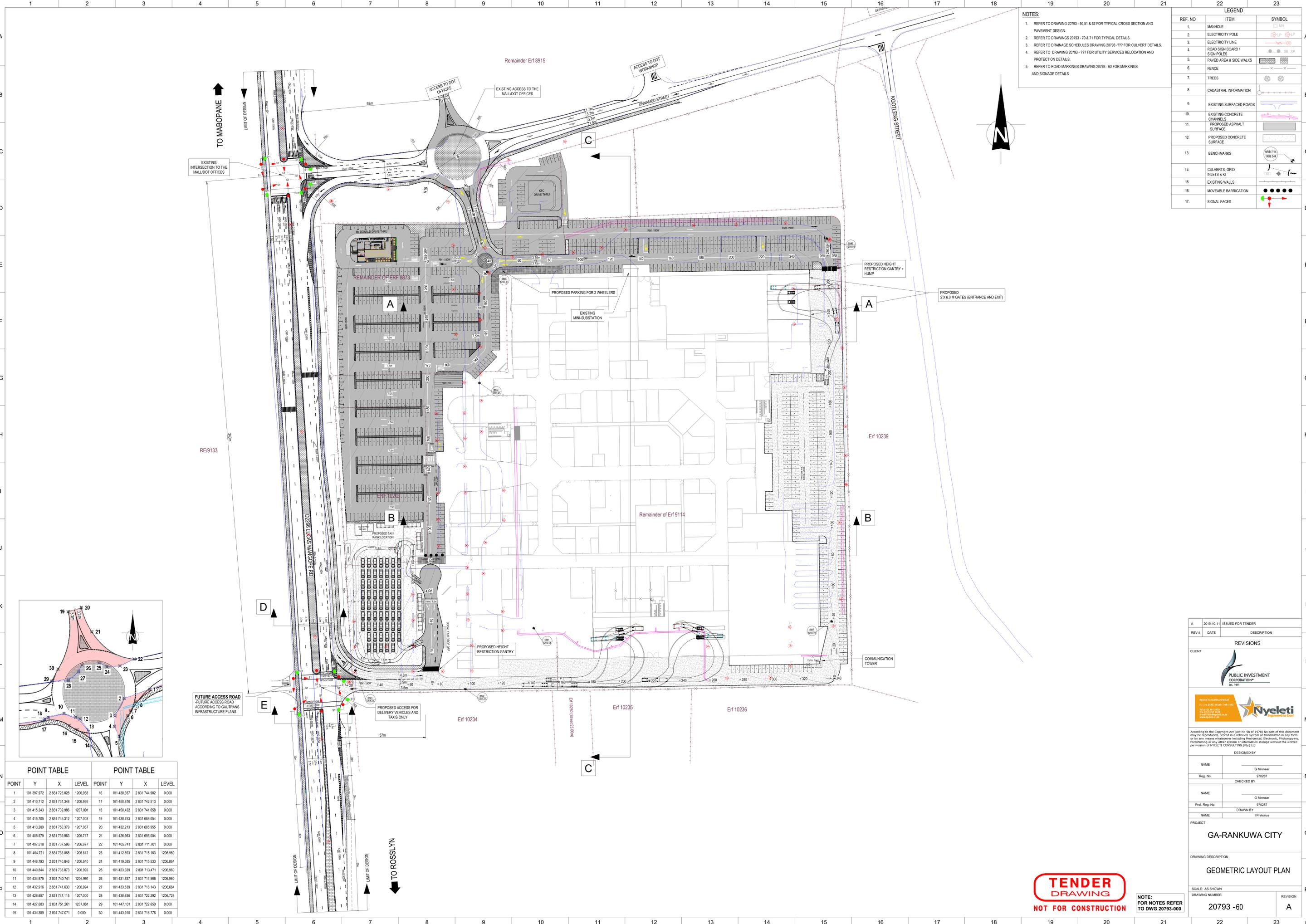
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DESIGNED BY	
NAME	G Mntsear
Reg. No.	970287
CHECKED BY	
NAME	G Mntsear
Prof. Reg. No.	970287
DRAWN BY	
NAME	I Pretorius

PROJECT	
GA-RANKUWA CITY	
DRAWING DESCRIPTION	
BULK EARTHWORKS PLAN LAYOUT : BUILDING	

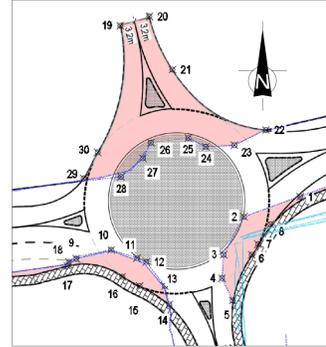
SCALE: AS SHOWN	DRAWING NUMBER	REVISION
	20793 - 010	B

NOTE:
FOR NOTES REFER
TO DWG 20793-000



- NOTES:**
- REFER TO DRAWING 20793 - 50.51 & 52 FOR TYPICAL CROSS SECTION AND PAVEMENT DESIGN.
 - REFER TO DRAWINGS 20793 - 70 & 71 FOR TYPICAL DETAILS.
 - REFER TO DRAWING SCHEDULES DRAWING 20793 - ??? FOR CULVERT DETAILS.
 - REFER TO DRAWING 20793 - ??? FOR UTILITY SERVICES RELOCATION AND PROTECTION DETAILS.
 - REFER TO ROAD MARKINGS DRAWING 20793 - 60 FOR MARKINGS AND SIGNAGE DETAILS.

REF. NO	ITEM	SYMBOL
1.	MANHOLE	MB
2.	ELECTRICITY POLE	LP
3.	ELECTRICITY LINE	LP-LP
4.	ROAD SIGN BOARD / SIGN POLES	SP, SB, SP
5.	PAVED AREA & SIDE WALKS	PAVED AREA & SIDE WALKS
6.	FENCE	FENCE
7.	TREES	TREES
8.	CADASTRAL INFORMATION	CADASTRAL INFORMATION
9.	EXISTING SURFACED ROADS	EXISTING SURFACED ROADS
10.	EXISTING CONCRETE CHANNELS	EXISTING CONCRETE CHANNELS
11.	PROPOSED ASPHALT SURFACE	PROPOSED ASPHALT SURFACE
12.	PROPOSED CONCRETE SURFACE	PROPOSED CONCRETE SURFACE
13.	BENCHMARKS	BENCHMARKS
14.	CULVERTS, GRID INLETS & KI	CULVERTS, GRID INLETS & KI
15.	EXISTING WALLS	EXISTING WALLS
16.	MOVEABLE BARRICADE	MOVEABLE BARRICADE
17.	SIGNAL FACES	SIGNAL FACES

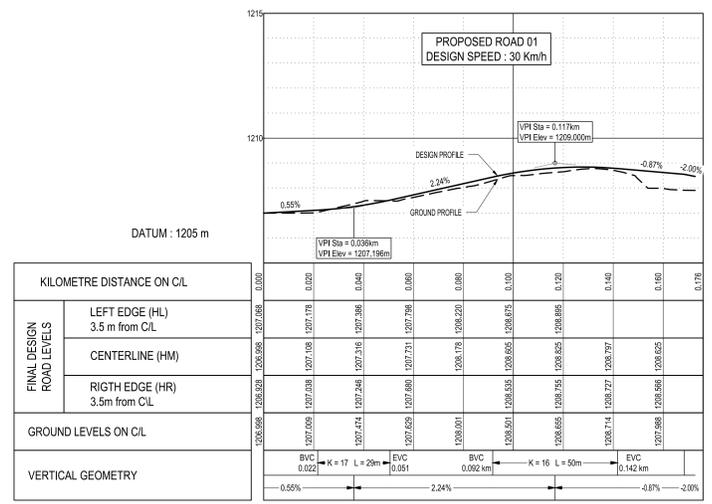
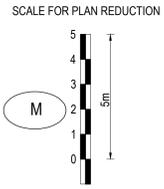
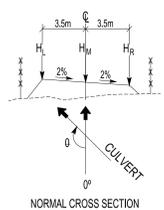


POINT TABLE				POINT TABLE			
POINT	Y	X	LEVEL	POINT	Y	X	LEVEL
1	101 397.972	2 831 728.828	1206.968	16	101 438.357	2 831 744.982	0.000
2	101 410.712	2 831 731.348	1206.965	17	101 450.816	2 831 742.513	0.000
3	101 415.343	2 831 739.996	1207.001	18	101 450.432	2 831 741.658	0.000
4	101 415.705	2 831 745.312	1207.003	19	101 438.753	2 831 688.054	0.000
5	101 413.289	2 831 750.379	1207.067	20	101 432.213	2 831 685.955	0.000
6	101 408.979	2 831 739.963	1206.717	21	101 426.993	2 831 698.004	0.000
7	101 407.518	2 831 737.596	1206.677	22	101 405.741	2 831 711.701	0.000
8	101 404.721	2 831 733.068	1206.812	23	101 412.893	2 831 715.163	1206.860
9	101 448.793	2 831 740.846	1206.840	24	101 419.385	2 831 715.533	1206.864
10	101 440.844	2 831 738.873	1206.952	25	101 423.339	2 831 713.471	1206.960
11	101 434.975	2 831 740.741	1206.991	26	101 431.837	2 831 714.566	1206.960
12	101 432.916	2 831 741.630	1206.994	27	101 433.939	2 831 718.143	1206.864
13	101 428.687	2 831 747.115	1207.000	28	101 438.636	2 831 722.292	1206.728
14	101 427.683	2 831 751.261	1207.061	29	101 447.101	2 831 722.850	0.000
15	101 434.389	2 831 747.071	0.000	30	101 443.910	2 831 716.776	0.000

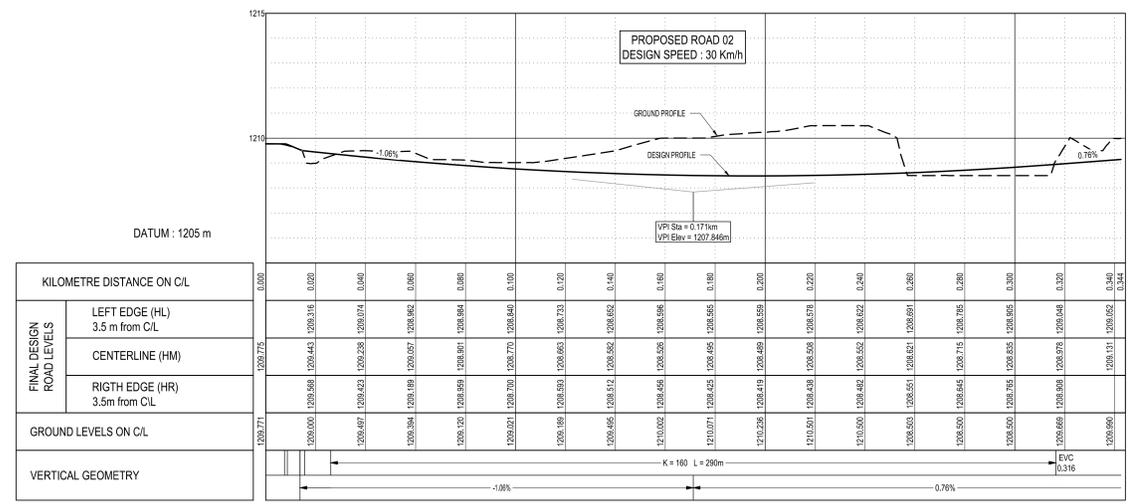
TENDER DRAWING
NOT FOR CONSTRUCTION

NOTE: FOR NOTES REFER TO DWG 20793-000

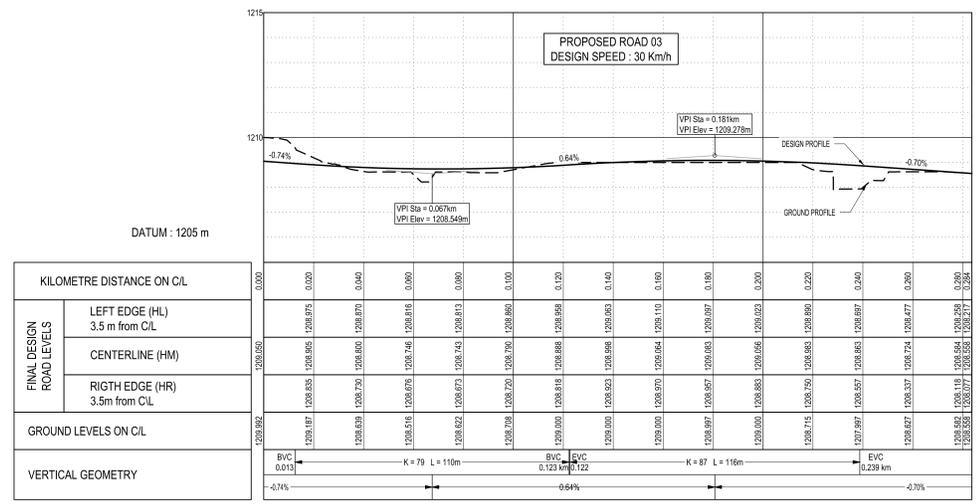
REV #	DATE	ISSUED FOR TENDER	DESCRIPTION
REVISIONS			
CLIENT			
 PUBLIC INVESTMENT CORPORATION			
 Nyeleti Engineered to Last			
<small>According to the Copyright Act (Act No 98 of 1978) No part of this document may be reproduced, stored in a retrieval system or transmitted in any form or by any means whatsoever including Mechanical, Electronic, Photocopying, Microfilming or any other system of information storage without the written permission of NYELETI CONSULTING (Pty) Ltd.</small>			
DESIGNED BY			
G Mnaar			
Reg. No. 970287			
CHECKED BY			
G Mnaar			
Prof. Reg. No. 970287			
DRAWN BY			
I Pretorius			
PROJECT			
GA-RANKUWA CITY			
DRAWING DESCRIPTION			
GEOMETRIC LAYOUT PLAN			
SCALE: AS SHOWN	DRAWING NUMBER	REVISION	
	20793 - 60	A	



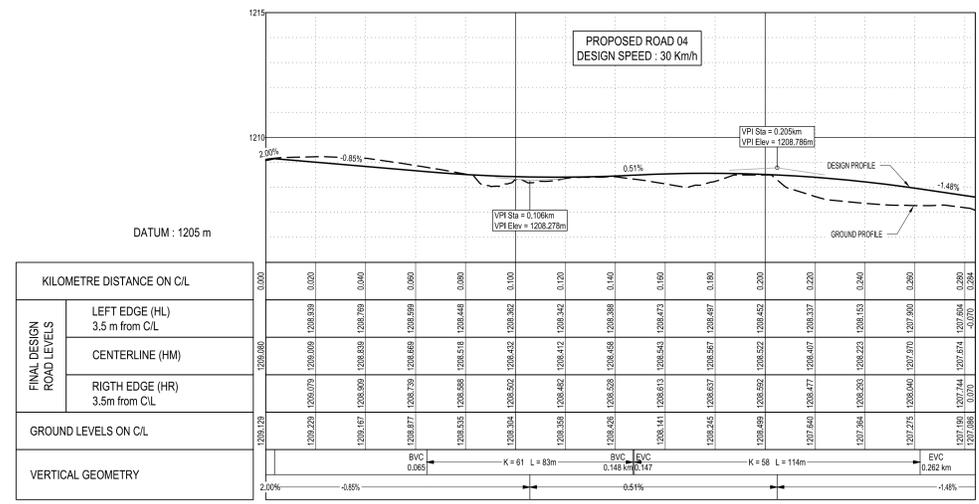
ROAD 01 LONGITUDINAL SECTION



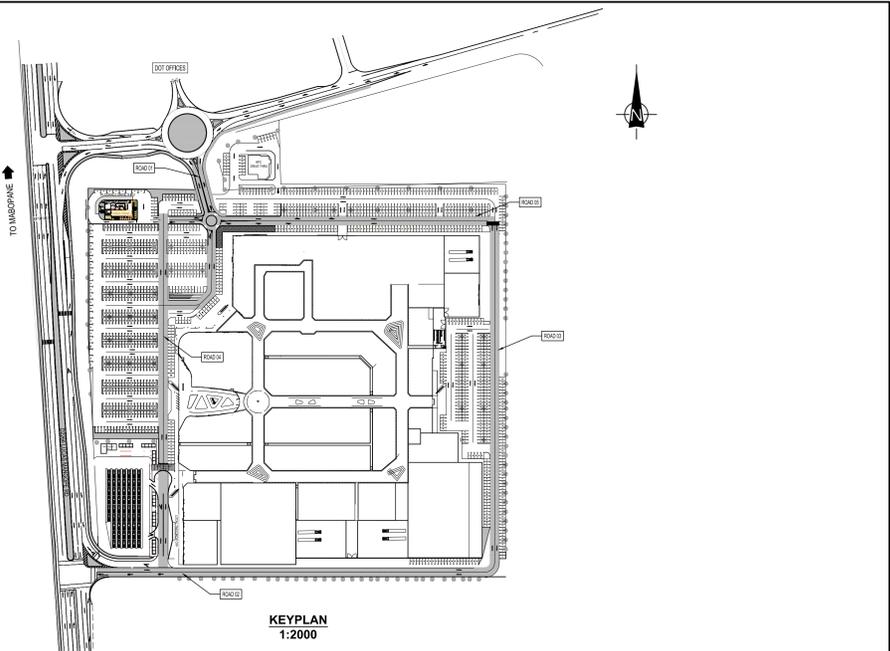
ROAD 02 LONGITUDINAL SECTION



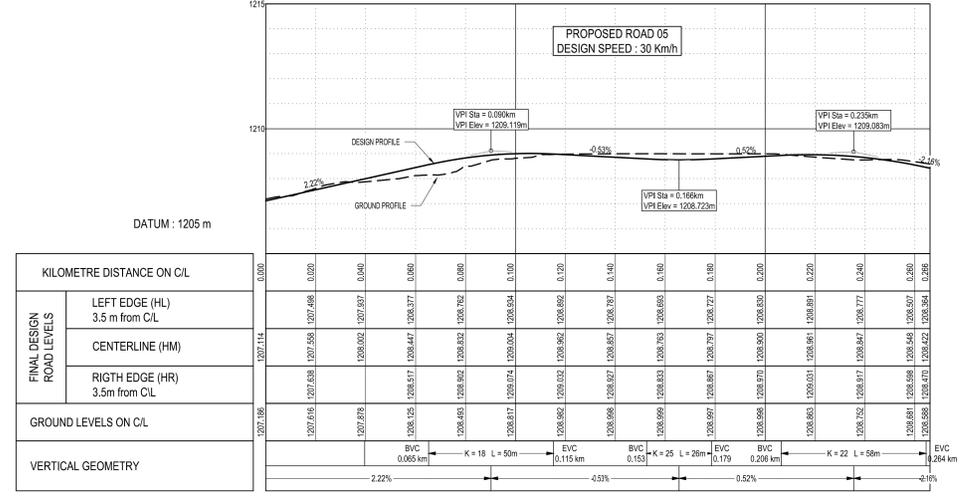
ROAD 03 LONGITUDINAL SECTION



ROAD 04 LONGITUDINAL SECTION



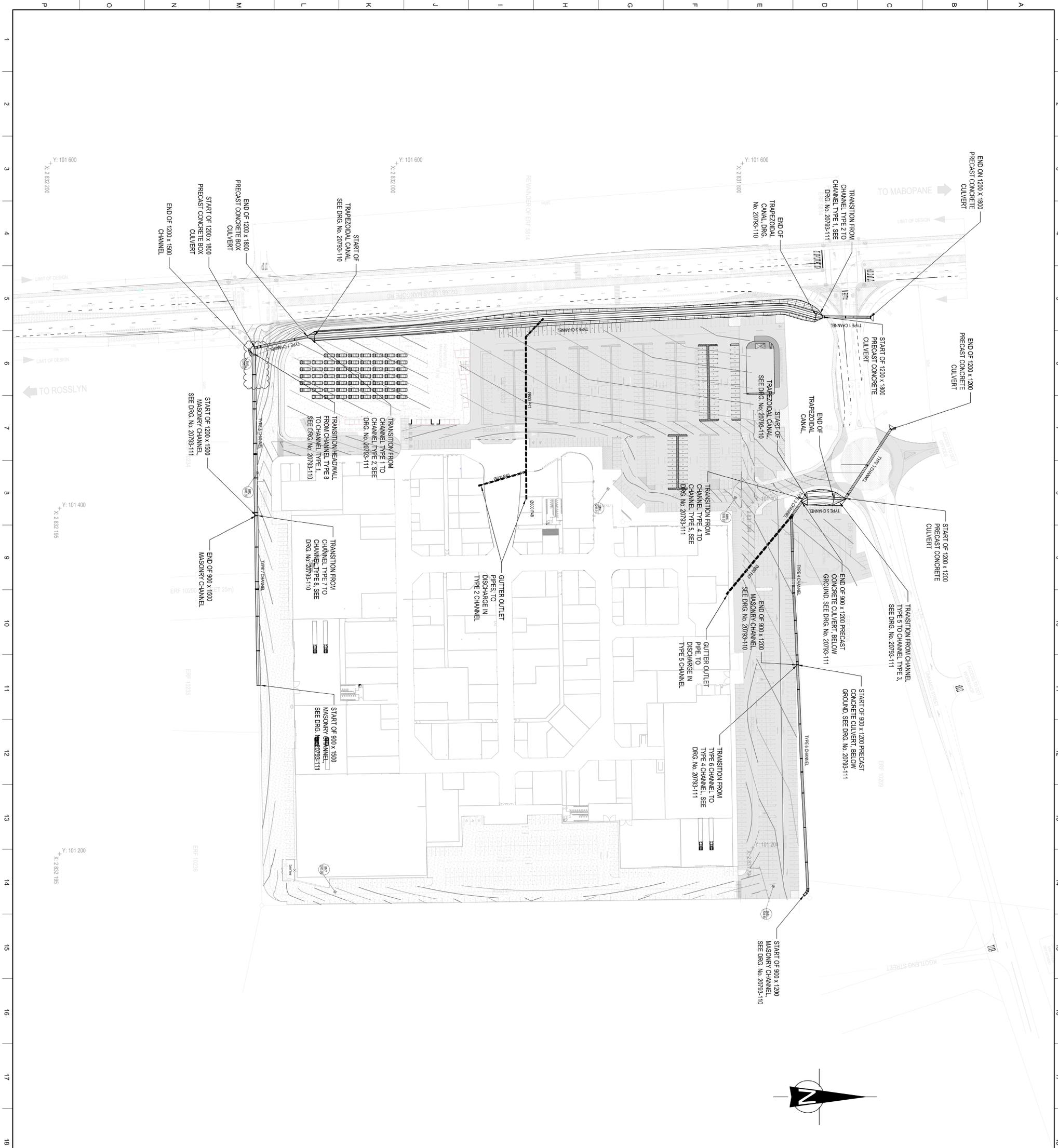
KEYPLAN 1:2000



ROAD 05 LONGITUDINAL SECTION

TENDER DRAWING
NOT FOR CONSTRUCTION

REV#	DATE	ISSUED FOR TENDER
REVISIONS		
CLIENT		
DESIGNED BY		
SK Maseko		
CHECKED BY		
SK Naicker		
DRAWN BY		
MD Mmamatho		
PROJECT		
GA-RANKUWA CITY		
DRAWING DESCRIPTION		
ROADS LONGITUDINAL SECTIONS		
SCALE	DRAWING NUMBER	REVISION
1:1000	20793-066	A



- NOTES**
1. REFER TO DRAWING 20793 - 501 & 52 FOR TYPICAL CROSS SECTION AND PRELIMINARY DESIGN
 2. REFER TO DRAWINGS 20793 - 71 & 71 FOR TYPICAL DETAILS
 3. REFER TO DRAWING SCHEDULES DRAWING 20793 - 77 FOR CULVERT DETAILS
 4. REFER TO DRAWING 20793 - 77 FOR UTILITY SERVICES REDUCTION AND PROTECTION DETAILS
 5. REFER TO ROAD MARKINGS DRAWING 20793 - 80 FOR MARKINGS AND SIGNAGE DETAILS

REF. NO	ITEM	SYMBOL
1.	MANHOLE	
2.	ELECTRICITY POLE	
3.	ELECTRICITY LINE	
4.	ROAD SIGN BOARD	
5.	PAVED AREAS & SIDE WALKS	
6.	FENCE	
7.	TREES	
8.	CASTLE/PROPAGATION	
9.	EXISTING SURFACED ROADS	
10.	EXISTING CONCRETE	
11.	PROPOSED ASPHALT SURFACE	
12.	PROPOSED CONCRETE SURFACE	
13.	BENCHMARKS	
14.	CULVERTS AND INLETS & KI	
15.	EXISTING WALLS	
16.	INDUSTRIAL EXTRACTOR	
17.	SIGNAL FACES	

TENDER DRAWING

NOTE: FOR NOTES REFER TO DWG 20793-000

REV	DATE	DESCRIPTION
A	2019-04-11	ISSUED FOR TENDER
B	2019-04-28	STORMWATER CHANNEL MARKED

CLIENT	REVISIONS
GA-RANKUWA CITY	

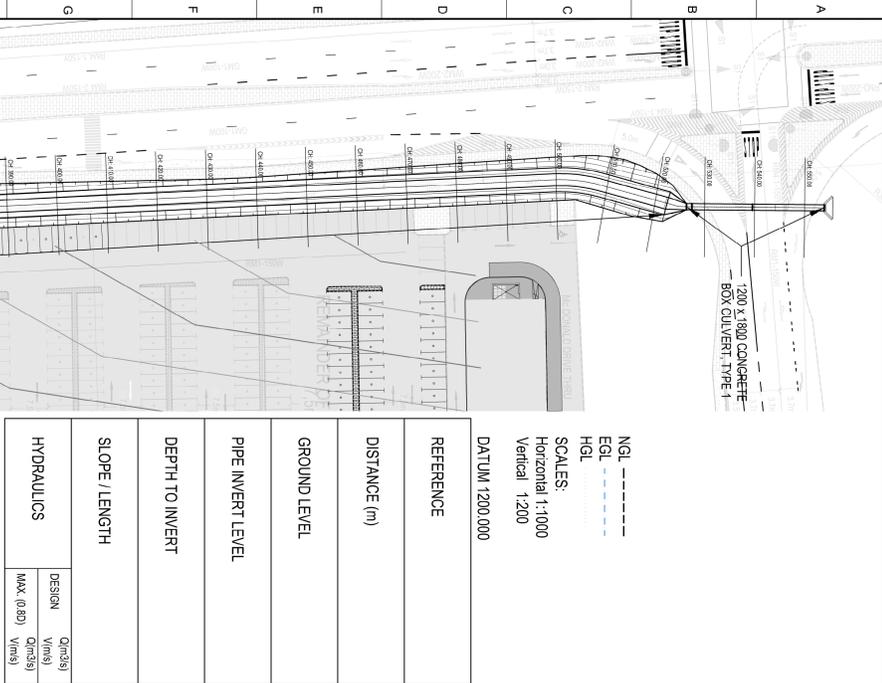
DESIGNED BY	Q. MATHUR
CHECKED BY	A. MATHUR
DRAWN BY	G. MATHUR
DATE	2019-04-11

PROJECT	GA-RANKUWA CITY
SCALE	AS SHOWN
DRAWING NUMBER	20793 - 105
REVISION	B



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23

A B C D E F G H I J K L M N O P



NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1200.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.685	1207.778	0.706	0.47%	278.4	0.79
	56.677	1208.484	1207.778	0.706	0.47%	278.4	0.8
	98.149	1208.589	1207.580	1.009	0.41%	274.6	1.28
	133.797	1208.884	1207.377	1.658	0.57%	175.0	1.1
	172.960	1209.470	1207.213	2.257	0.42%	129.3	1.1
	194.920	1209.134	1207.121	2.013	0.42%	129.3	1.45
	230.197	1208.769	1206.770	1.999	1.00%	110.1	6.28
	263.179	1208.553	1206.575	1.977	0.37%	127.2	1.8
	283.179	1208.000	1206.284	1.717	0.35%	127.2	6.53
	366.548	1208.284	1206.284	1.717	0.53%	127.2	2.8
	409.582	1207.944	1206.054	1.890	0.53%	127.2	7.31
	506.398	1206.952	1205.632	1.320	0.44%	129.4	7.80
	527.038	1206.688	1205.000	1.688	3.06%	52.7	8.12
	556.102	1206.549	1204.663	1.885	1.18%	108.4	5.67

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092	0.51%	1198.7	0.11
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.6
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.99

REF. NO	ITEM	SYMBOL
1	MANHOLE	
2	ELECTRICITY POLE	
3	ELECTRICITY LINE	
4	ROAD SIGN BOARD	
5	PAVED AREA SIDE MARKS	
6	FENCE	
7	TREES	
8	CASTLE WALL	
9	EXISTING ASPHALT SURFACE	
10	EXISTING CONCRETE SURFACE	
11	PROPOSED ASPHALT SURFACE	
12	PROPOSED CONCRETE SURFACE	
13	BENCHMARKS	
14	CHANGES AND NOTES IN EXISTING WALLS	
15	INDICATE EMBANKMENT	
17	SIGNAL PILES	

NOTES

- REFER TO DRAWING 20793 - 5011 & 5012 FOR TYPICAL CROSS SECTION AND PAVEMENT DESIGN
- REFER TO DRAWING 20793 - 11 & 11 FOR TYPICAL DETAILS
- REFER TO DRAWING SCHEDULES DRAWING 20793 FOR GULLY DETAILS
- REFER TO DRAWING 20793 FOR UTILITY SERVICES REDUCTION AND PROTECTION DETAILS
- REFER TO ROAD MARKING DRAWING 20793 - 60 FOR MARKINGS AND SIGNAGE DETAILS

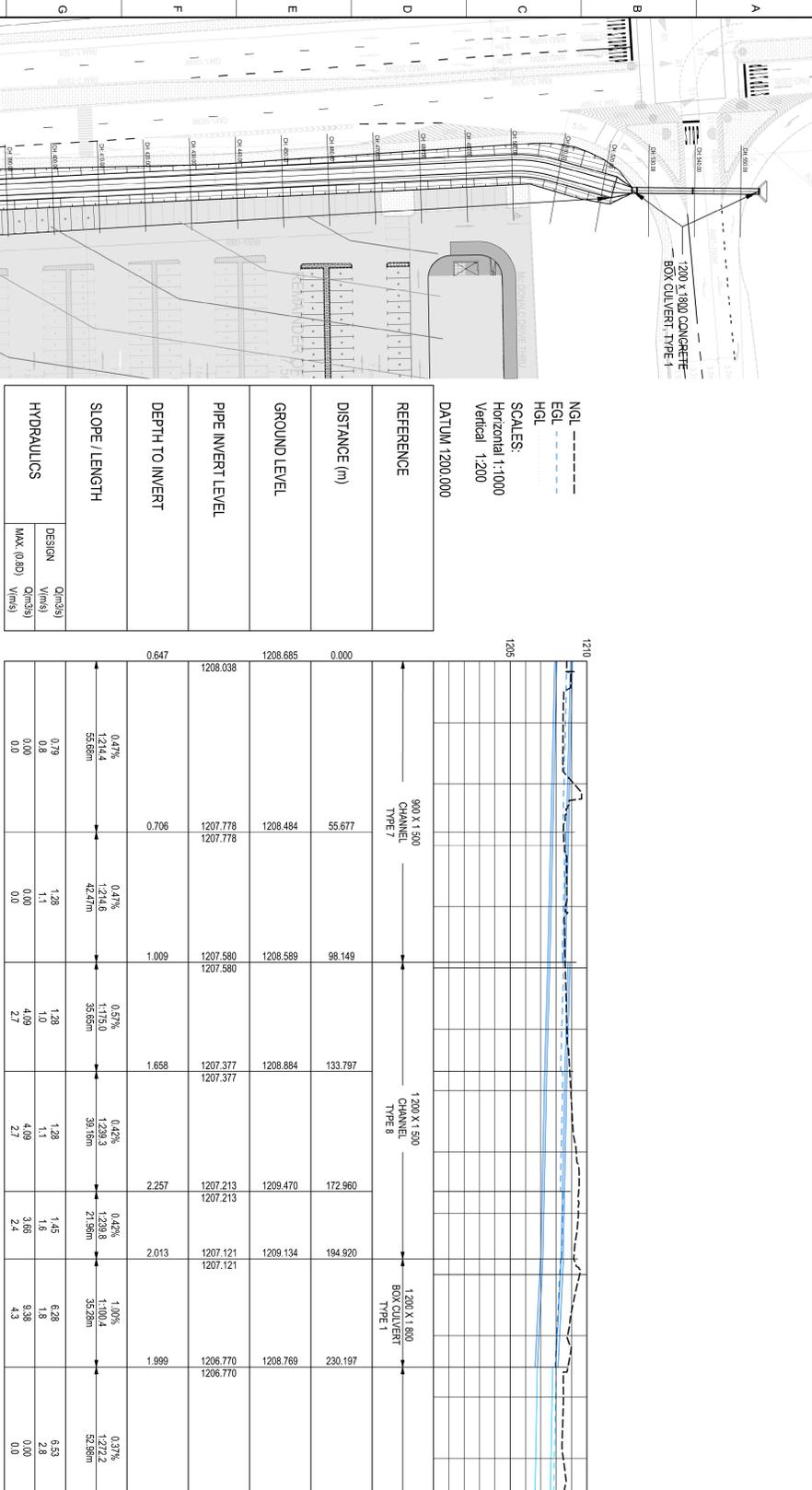
SW CHANNEL 1 LONGSECTION
FROM 0.000 TO 556.102

SW CHANNEL 1 LONGSECTION
FROM 0.000 TO 556.102

GUTTER B - TYPE 2 CHANNEL LONGSECTION
FROM 0.000 TO 121.303

GUTTER A - GUTTER B LONGSECTION
FROM 0.000 TO 15.923

GUTTER B - TYPE 2 CHANNEL LONGSECTION
FROM 0.000 TO 121.303



NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

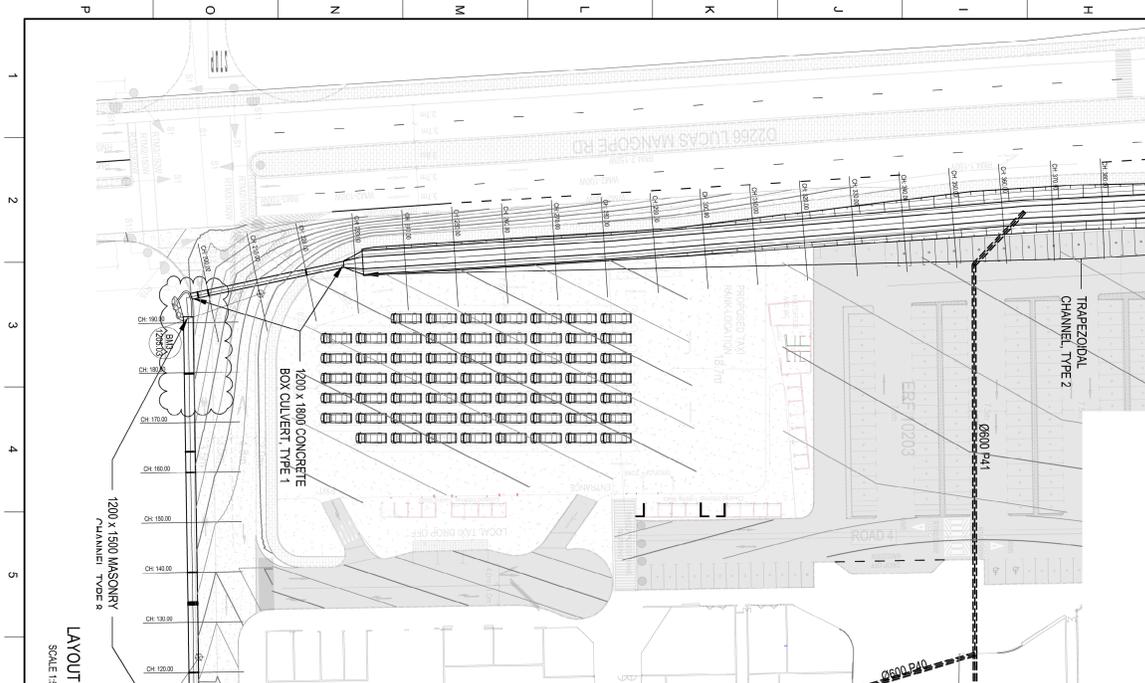
NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092	0.51%	1198.7	0.11
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.6
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.99

REF. NO	ITEM	SYMBOL
1	MANHOLE	
2	ELECTRICITY POLE	
3	ELECTRICITY LINE	
4	ROAD SIGN BOARD	
5	PAVED AREA SIDE MARKS	
6	FENCE	
7	TREES	
8	CASTLE WALL	
9	EXISTING ASPHALT SURFACE	
10	EXISTING CONCRETE SURFACE	
11	PROPOSED ASPHALT SURFACE	
12	PROPOSED CONCRETE SURFACE	
13	BENCHMARKS	
14	CHANGES AND NOTES IN EXISTING WALLS	
15	INDICATE EMBANKMENT	
17	SIGNAL PILES	



NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092	0.51%	1198.7	0.11
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.6
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.99

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

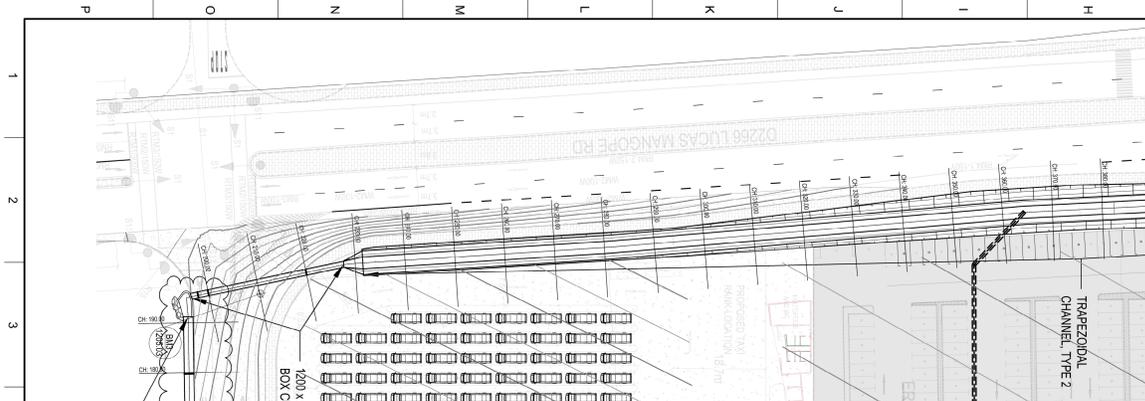
REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092	0.51%	1198.7	0.11
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.6
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.99



NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1200.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.685	1207.778	0.706	0.47%	278.4	0.79
	56.677	1208.484	1207.778	0.706	0.47%	278.4	0.8
	98.149	1208.589	1207.580	1.009	0.41%	274.6	1.28
	133.797	1208.884	1207.377	1.658	0.57%	175.0	1.1
	172.960	1209.470	1207.213	2.257	0.42%	129.3	1.1
	194.920	1209.134	1207.121	2.013	0.42%	129.3	1.45
	230.197	1208.769	1206.770	1.999	1.00%	110.1	6.28
	263.179	1208.553	1206.575	1.977	0.37%	127.2	1.8
	283.179	1208.000	1206.284	1.717	0.35%	127.2	6.53
	366.548	1208.284	1206.284	1.717	0.53%	127.2	2.8
	409.582	1207.944	1206.054	1.890	0.53%	127.2	7.31
	506.398	1206.952	1205.632	1.320	0.44%	129.4	7.80
	527.038	1206.688	1205.000	1.688	3.06%	52.7	8.12
	556.102	1206.549	1204.663	1.885	1.18%	108.4	5.67

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092	0.51%	1198.7	0.11
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.6
	15.923	1208.146	1206.829	1.316	1.18%	15.92m	0.99

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.473	1207.211	1.262	1.31%	176.2	0.16
	28.688	1208.146	1206.835	1.316	1.76%	28.69m	0.82
	106.706	1207.374	1206.332	1.042	0.64%	115.1	0.26
	121.303	1208.000	1206.284	1.717	0.33%	1304.0	1.3

NGI -----
EGL - - - - -
HGL _____

SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 1205.000

REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT	SLOPE / LENGTH		HYDRAULICS
					DESIGN Q(m ³ /s)	DESIGN V(m/s)	
	0.000	1208.002	1206.910	1.092</			

