

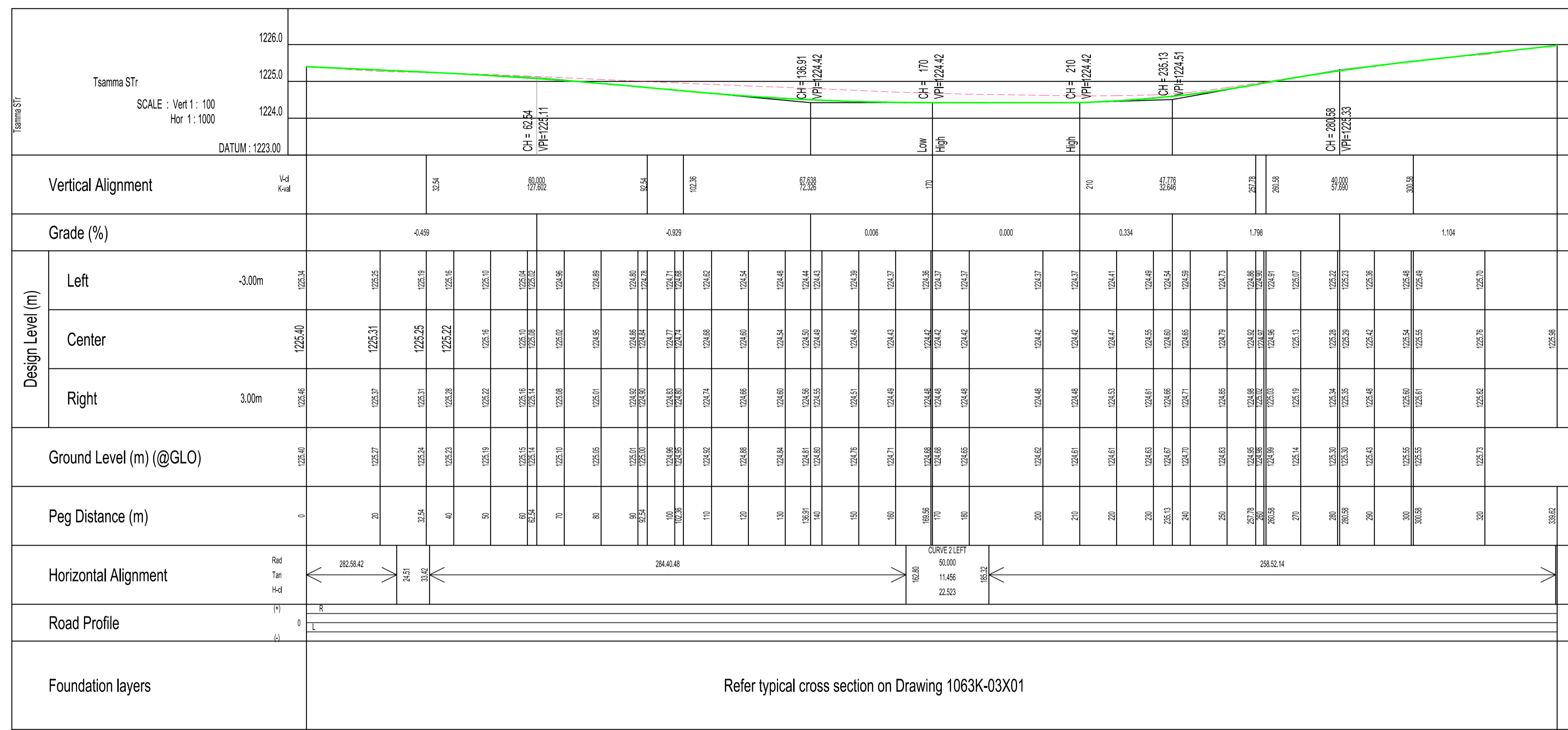
ANNEXURE C:

Road Layout Drawing

NOTES AND SPECIFICATIONS

- GENERAL**
- 1 ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
 - 2 ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)
 - 3 DO NOT SCALE FROM THESE DRAWINGS.
 - 4 ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
 - 5 ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD CTM DETAIL DRAWINGS.
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 - 10 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

- ROADS:**
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 - 2 TRAFFIC CONTROL MUST COMPLY WITH THE REQUIREMENTS OF THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL (THIRD EDITION).
 - 3 VERTICAL AND HORIZONTAL ALIGNMENT TO FOLLOW THE EXISTING ROAD SURFACE WITH A MINIMUM CROSS FALL OF 2% (IF APPLICABLE).
- STORMWATER**
- 1 MINIMUM PIPE DIAMETER TO BE 450mm.
 - 2 MINIMUM FALL TO BE 1:50.
 - 3 PIPE BEDDING TO BE CLASS B UNLESS OTHERWISE SPECIFIED.
 - 4 ALL EXCAVATIONS AND BEDDING MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE LAYING OF ANY PIPES.
 - 5 CLEAN EXISTING STORMWATER INLETS AND REPAIR WHERE NECESSARY (IF APPLICABLE).



HORIZONTAL ALIGNMENT DATA

Pino	Name	Y	X	Radius	Tr.In	Tr.Out	Defl.
1	Start	74295.497	2839036.133	-	-	-	-
2	PI 1	74267.268	2839042.639	300.00	0.00	0.00	Right
3	PI 2	74126.722	2839079.458	50.00	0.00	0.00	Left
4	PI 3	73964.488	2839047.538	-	-	-	-

VERTICAL ALIGNMENT DATA

Peg dist.	Elev.	BVc	EVc	CL	Grade(%)
0.000	1225.401	0.000	0.000	0.00	-0.459
62.539	1225.114	32.539	92.539	60.00	-0.929
136.910	1224.423	102.363	170.000	67.64	0.006
170.000	1224.425	170.000	170.000	0.00	0.000
210.000	1224.425	210.000	210.000	0.00	0.334
235.132	1224.509	210.000	257.776	47.78	1.798
280.580	1225.326	260.580	300.580	40.00	1.104
339.622	1225.978	339.622	339.622	0.00	0.000

TSAMMA ROAD LONG SECTION
SCALE 1:750

AMENDMENTS

NO.	DATE	APPROVED	DESCRIPTION	PREP.
1	JUN 2018		ISSUED FOR APPROVAL	
2	AUG 2018		ISSUED FOR APPROVAL	

DESIGNED BY
M RAMOSWANE

CHECKED BY
F.J. VAN RENSBURG

DATE
2017/07/22

PROJECT STATUS

PROJECT ENGINEER (CONSULTANT): F.J. VAN RENSBURG

PROJECT NO: 1063K

DATE: 2017/07/22

CONSULTANT DETAIL

Maitou Engineering & Construction
Unit 4, 5th Floor, 14 Escalonia Street, Montana Park, 0162

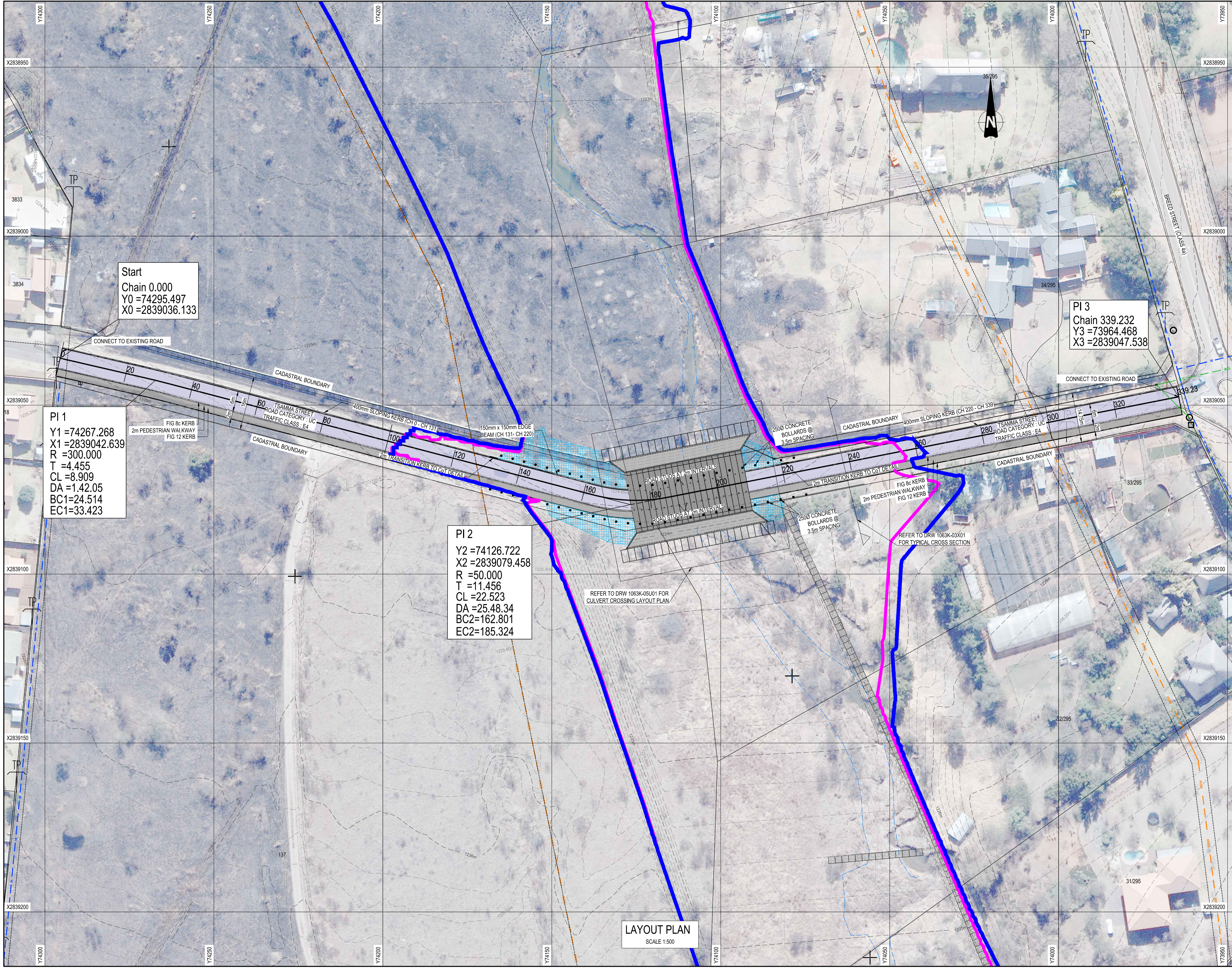
CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT

Executive Director: Ms. L. V. Kgogakhe-Phe

LOCATION OF PROJECT:
MONTANA SPRUIT CHANNEL IMPROVEMENT: PHASE 1

DESCRIPTION OF PROJECT:
TSAMMA STREET ROAD LONG SECTION

CONTRACT NO:	RTD01-2016/2017-TIDC	PROJECT NO:	1063K
DATE:	AUG 2018	SCALE:	1:750
DRAWING NO:	1063K-03L01	ORIGINAL PAPER SIZE:	A1
		SHEET NO:	1



Start
Chain 0.000
Y0 = 74295.497
X0 = 2839036.133

PI 1
Y1 = 74267.268
X1 = 2839042.639
R = 300.000
T = 4.455
CL = 8.909
DA = 1.42.05
BC1 = 24.514
EC1 = 33.423

PI 2
Y2 = 74126.722
X2 = 2839079.458
R = 50.000
T = 11.456
CL = 22.523
DA = 25.48.34
BC2 = 162.801
EC2 = 185.324

PI 3
Chain 339.232
Y3 = 73964.468
X3 = 2839047.538

LAYOUT PLAN
SCALE 1:500

NOTES AND SPECIFICATIONS

GENERAL

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- 10 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

ROADS:

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- 2 TRAFFIC CONTROL MUST COMPLY WITH THE REQUIREMENTS OF THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL, (THIRD EDITION).
- 3 VERTICAL AND HORIZONTAL ALIGNMENT TO FOLLOW THE EXISTING ROAD SURFACE, WITH A MINIMUM CROSS FALL OF 2% (IF APPLICABLE).

STORMWATER

- 1 MINIMUM PIPE DIAMETER TO BE 450mm.
- 2 MINIMUM FALL TO BE 1:50.
- 3 PIPE BEDDING TO BE CLASS B UNLESS OTHERWISE SPECIFIED.
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LEGEND

- AMOUR FLEX EROSION PROTECTION
- 150mm CONCRETE ROAD
- 60mm OBLONG BLOCKS
- 80mm INTERLOCKING BLOCKS

REFER TO DRW 1063K-03U1 FOR LONG SECTION
REFER TO DRW 1063K-03U3 FOR CROSS SECTIONS

AMENDMENTS				
NO.	DATE	APPROVED	DESCRIPTION	PREP.
A	AUG 2018		ISSUED FOR APPROVAL	
B	AUG 2018		ISSUED FOR APPROVAL	

DESIGNED BY: M RAMAKONGANE
DRAWN BY: M RAMAKONGANE
DESIGN CHECKED BY: F.J. VAN RENSBURG
CHECKED BY: D.J. CHALMERS

PROJECT STATUS

PROJECT ENGINEER (CONSULTANT): F.J. VAN RENSBURG
DATE: 2017/07/22
SIGNATURE AND PRINT NAME: [Signature]
DATE: [Date]

CONSULTANT DETAIL

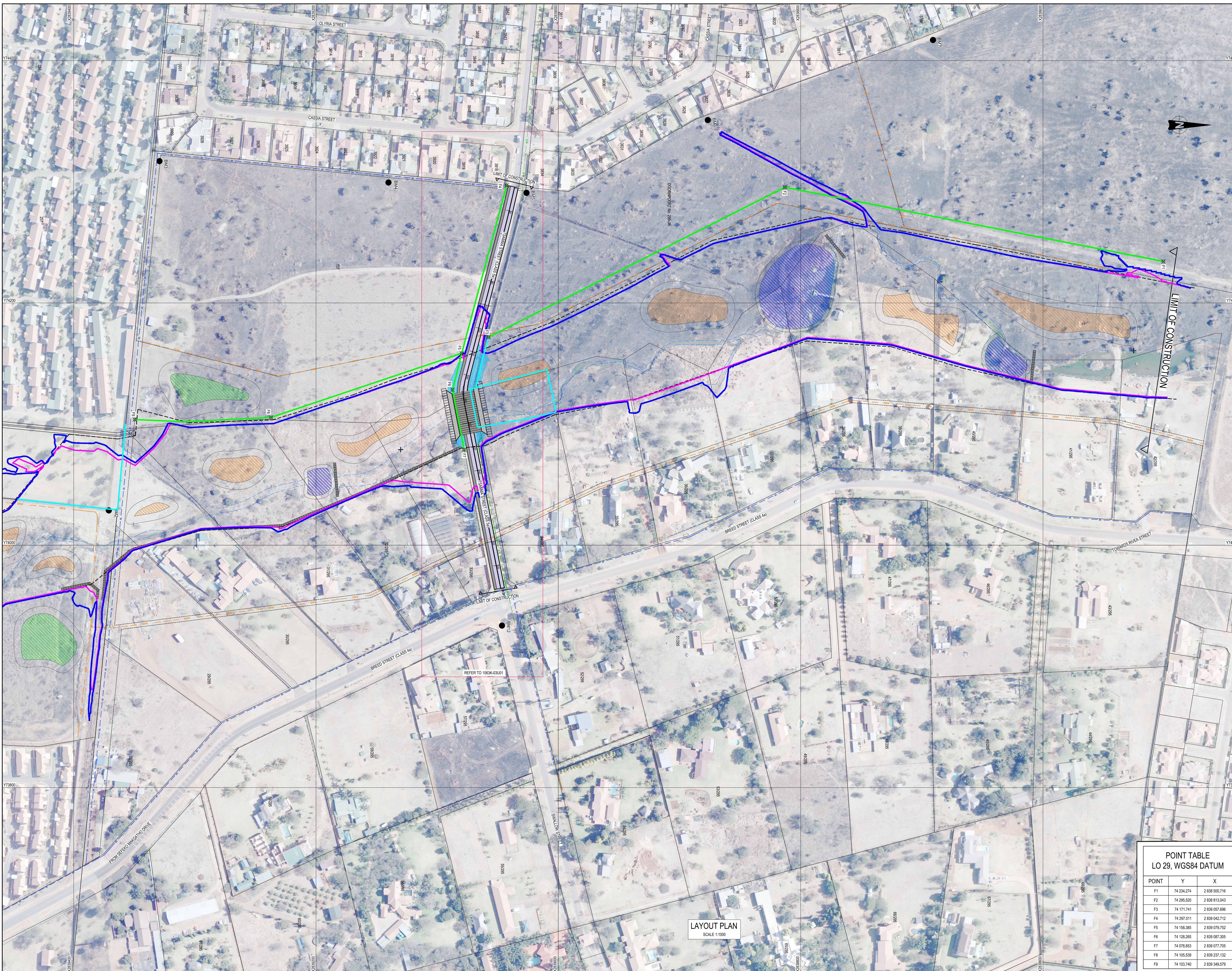
MITLOU
INCORPORATED IN SOUTH AFRICA
14 Eskom Street, Montana Park, Pretoria 0001
P.O. BOX 1409, PRETORIA 0001
Tel: +27 12 548 0196 Fax: +27 12 548 0208 email: info@mitlou.co.za

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT
Ms. Nava Pillay
ALDERS STRATEGIC EXECUTIVE DIRECTOR
P.O. BOX 1409, PRETORIA 0001
Ms. L. V. Kogelme-Phe
EXECUTIVE DIRECTOR
P.O. BOX 1409, PRETORIA 0001

MONTANA SPRUIT CHANNEL IMPROVEMENT: PHASE 1

TSAMMA STREET ROAD LAYOUT

CONTRACT NO.: RTD01-2016/2017-TIDC18 PROJECT NO.: 1063K
DATE: AUG 2018 SCALE: 1:500 ORIGINAL PAPER SIZE: A1
DRAWING NO.: 1063K-03U01 SHEET NO.: 1



NOTES AND SPECIFICATIONS

- GENERAL**
- 1 ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
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 - 10 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

- ROADS:**
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 - 3 VERTICAL AND HORIZONTAL ALIGNMENT TO FOLLOW THE EXISTING ROAD SURFACE, WITH A MINIMUM CROSS FALL OF 2% (IF APPLICABLE).

- STORMWATER**
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LEGEND

- CHANNEL IMPROVEMENT AREA
- NATURAL SPRUIT CHANNEL
- 1:100 YEAR FLOOD LINE
- 1:50 YEAR FLOOD LINE
- SHALLOW ATTENUATION INSIDE CHANNEL IMPROVEMENT
- SHALLOW ATTENUATION OUTSIDE CHANNEL IMPROVEMENT
- EXISTING POND/DAM TO BE KEPT
- RENO MATTRESS
- 180mm CONCRETE PAVEMENT
- 60mm OBLONG BLOCKS
- 80mm INTERLOCKING BLOCKS
- EXISTING SEWER PIPE
- EXISTING WATER PIPE
- EXISTING STORM WATER PIPE
- NEW FENCE
- EXISTING FENCE TO BE MOVED AND REINSTATED
- BENCH MARKS

AMENDMENTS

NR.	DATE	APPROVED	DESCRIPTION	PREP.
A	JUNE 2018		ISSUED FOR APPROVAL	
B	AUG 2018		ISSUED FOR APPROVAL	

DESIGNED BY M RAMONGANE	CHECKED BY M RAMONGANE
DESIGN CHECKED BY P.J. VAN RENSBURG	TECHNICAL INFORMATION MANAGER D.J. CHALMERS

PROJECT STATUS

PROJECT ENGINEER/CONSULTANT P.J. VAN RENSBURG	DATE 2017/07/12
INITIALS AND SURNAME P.J. VAN RENSBURG	SIGNATURE AND P. NO. [Signature]
INSPECTOR OF WORKS (CITY OF TSHWANE)	DATE

CONSULTANT DETAIL

Unit 4, 5th Floor, P.O. Box 10584, Lynn East, 0099
14 Eskom Street, P.O. Box 12 548 008
Montana Park, Pretoria, Fax: +27 12 548 008
email: info@mtou.co.za

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT

M. Nene Phiso
Acting STRATEGIC EXECUTIVE DIRECTOR

M. L. V. Kgatshane-Phiso
EXECUTIVE DIRECTOR

P.O. BOX 1409
PRETORIA
0001

DRAWING APPROVED BY EXECUTIVE DIRECTOR
M. L. V. Kgatshane-Phiso

LOCATION OF PROJECT
MONTANA SPRUIT CHANNEL IMPROVEMENT: PHASE 1

DESCRIPTION OF PROJECT
MONTANA SPRUIT FENCE LAYOUT

CONTRACT NO.: RTD01-2016/2018-T1DC18 PROJECT NO.: 1063K

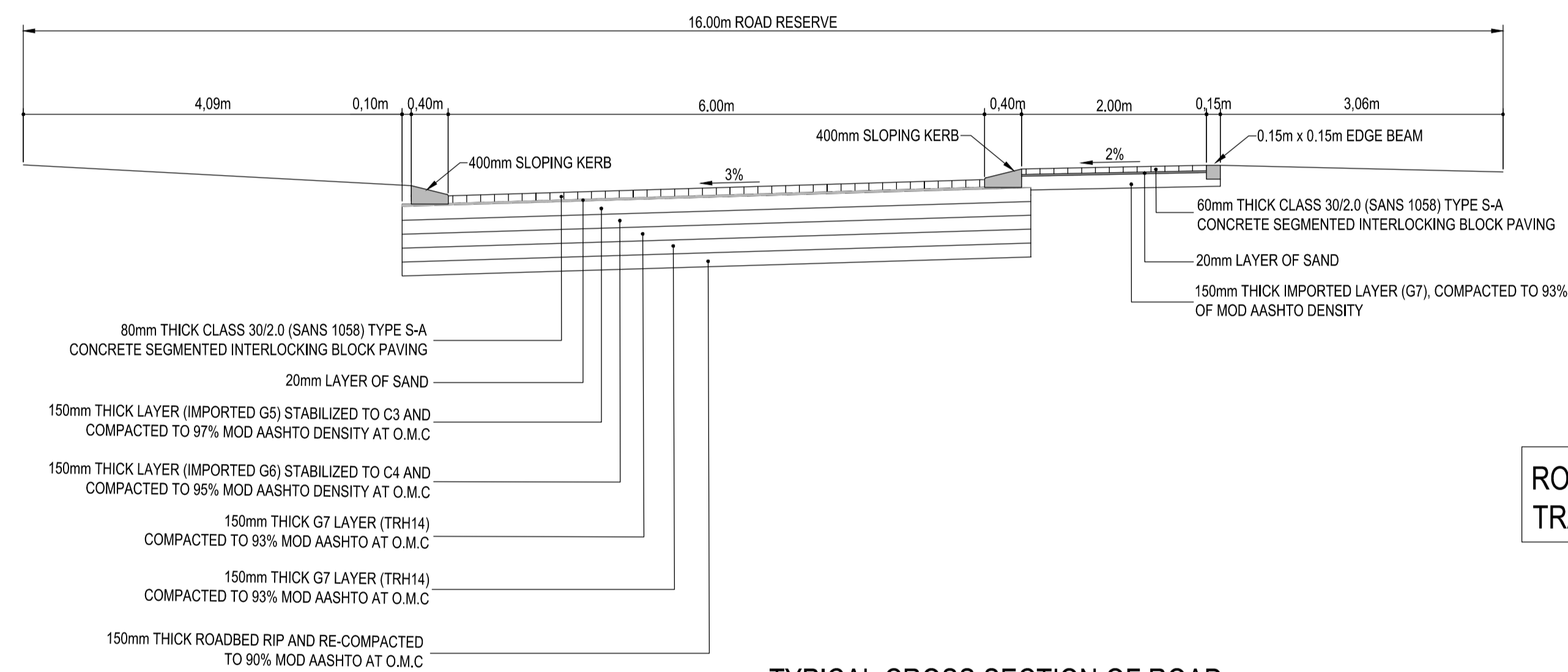
DATE: AUG 2018 SCALE: 1:1000 ORIGINAL PAPER SIZE: A1

DRAWING NO.: 1063K-03U05 SHEET NO.: 1

POINT TABLE
LO 29, WGS84 DATUM

POINT	Y	X
F1	74 234,274	2 838 500,716
F2	74 295,520	2 838 813,043
F3	74 171,741	2 838 057,896
F4	74 297,011	2 839 042,712
F5	74 158,385	2 839 078,752
F6	74 128,265	2 839 087,305
F7	74 078,853	2 839 077,705
F8	74 105,539	2 839 237,132
F9	74 103,740	2 839 340,579

LAYOUT PLAN
SCALE 1:1000



ROAD CATEGORY UC
TRAFFIC CLASSIFICATION E4 (UGT 2)

TYPICAL CROSS SECTION OF ROAD
SCALE 1:50

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AMENDMENTS				
NO.	DATE	APPROVED	DESCRIPTION	PAI
1	1 AUG 2018		ISSUED FOR APPROVAL	
2	1 AUG 2018		ISSUED FOR APPROVAL	

DESIGNED BY M RAMOHONGANE	CHECKED BY F.J. VAN RENSBURG	DATE 2017/07/22	DESCRIPTION INFRASTRUCTURE TECHNICAL INFORMATION
MANAGED BY M RAMOHONGANE	MANAGED BY D.J. CHALMERS	DATE 	

PROJECT STATUS	
CONCEPT DESIGN	ISSUED FOR APPROVAL
CONSTRUCTION DESIGN	ISSUED FOR APPROVAL
AS-BUILT	

PROJECT ENGINEER (CONSULTANT)
F. J. VAN RENSBURG
2017/07/22
DATE

INITIALS AND SURNAME
SIGNATURE AND IN NO. DATE

CONSULTANT DETAIL

ITOU CONSULTANTS ENGINEERS
Unit A, 4th Floor
14 Eccleston Street
Montclare Park
D152

P.O. Box 1409
PRETORIA
0001

P.O. Box 1584
Lynn East, 0039
Tel: +27 12 548 0796
Fax: +27 12 548 0209
email: info@itouv.co.za

**CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT**

M. Nava Pity
Acting STRATEGIC EXECUTIVE DIRECTOR

P.O. BOX 1409
PRETORIA
0001

Ms. L. V. Kegakhe-Phe
EXECUTIVE DIRECTOR

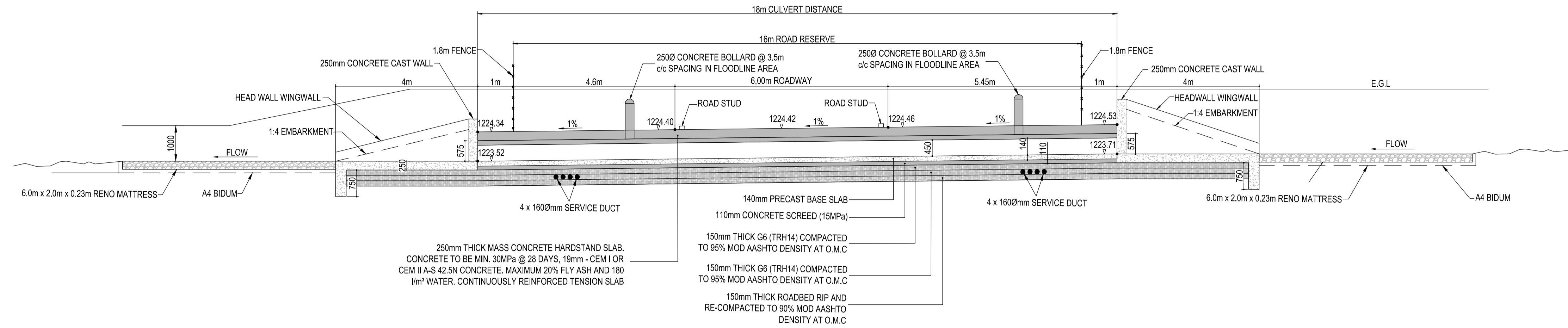
P.O. BOX 1409
PRETORIA
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DRAWING APPROVED BY EXECUTIVE DIRECTOR
Ms. L. V. Kegakhe-Phe

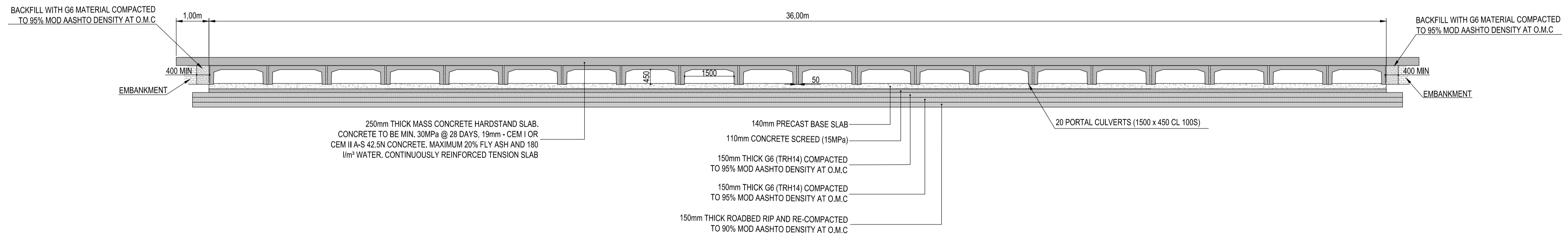
LOCATION OF PROJECT:
**MONTANA SPRUIT CHANNEL
IMPROVEMENT: PHASE 1**

DESCRIPTION OF PROJECT:
**TSAMMA STREET TYPICAL
ROAD CROSS SECTION**

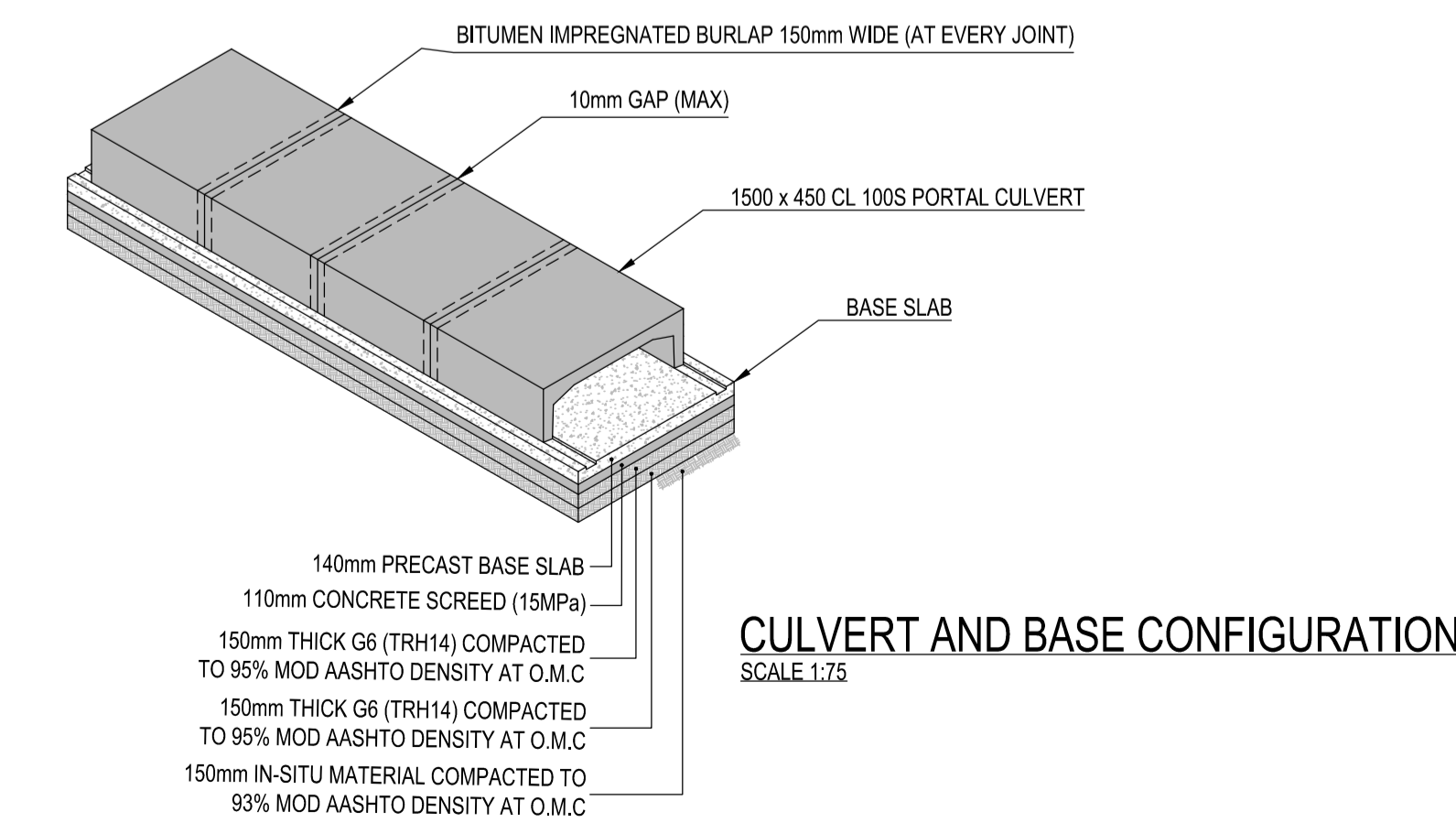
CONTRACT NO. RTD01-2016/2017-TIDC	PROJECT NO. 1063K
DATE AUG 2018	SCALE 1:50
DRAWING NO. 1063K-03X01	SHEET NO. 1
ORIGINAL PAPER SIZE A1	



CULVERT CROSSING DETAIL SECTION A-A
SCALE 1:75



CULVERT CROSSING DETAIL SECTION B-B
SCALE 1:75



CULVERT AND BASE CONFIGURATION
SCALE 1:75

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AMENDMENTS				
NO.	DATE	APPROVED	DESCRIPTION	PAK.
A	JUNE 2018		ISSUED FOR APPROVAL	
B	AUG 2018		ISSUED FOR APPROVAL	

DESIGNED BY M RAMOHONGANE	DESIGNED BY M RAMOHONGANE
CHECKED BY F.J. VAN RENSBURG	INFRASTRUCTURE TECHNICAL INFORMATION MANAGER D.J. CHALMERS

PROJECT STATUS			
CONCEPT	DESIGN	CONSTRUCTION	OPERATIONAL
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

PROJECT ENGINEER (CONSULTANT)
F.J. VAN RENSBURG 20170172

INITIALS AND SURNAME SIGNATURE AND P. No. DATE

CONSULTANT DETAIL

MILTOU CONSULTANTS
Unit 4 5th Floor
14 Escaltona Street
Midrand Park
1032

P.O. BOX 1036
Lynnemere, 2099
Tel: +27 12 545 6196
Fax: +27 12 545 6296
email: info@miltoou.co.za

CITY OF TSHWANE
ROADS AND TRANSPORT DEPARTMENT

M. Nene Phiso
Acting STRATEGIC EXECUTIVE DIRECTOR

M. L. V. Kgatsho-Phiso
EXECUTIVE DIRECTOR

P.O. BOX 1409
PRETORIA
0001

P.O. BOX 1405
PRETORIA
0001

DRAWING APPROVED BY EXECUTIVE DIRECTOR
M. L. V. Kgatsho-Phiso

DATE

LOCATION OF PROJECT:
MONTANA SPRUIT CHANNEL IMPROVEMENT: PHASE 1

DESCRIPTION OF PROJECT:
CULVERT DETAILING AND EMBANKMENT INSTALLATION

CONTRACT No. RTD01-2016/2017-TIDC	PROJECT No. 1063K
DATE AUG 2018	SCALE 1:75
ORIGINAL PAPER SIZE A1	SHEET NO. 1

DRAWING NO. 1063K-03X02

