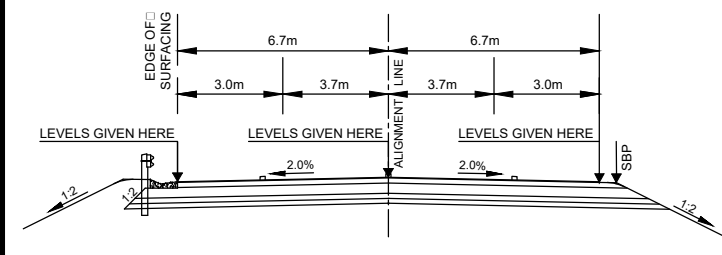


APPENDIX H

PRELIMINARY DESIGN DRAWINGS

NOTE:
ALL DIMENSIONS TO BE CHECKED ON SITE
BEFORE ANY WORK IS PUT IN HAND
REFER ANY DISCREPANCIES TO THE ENGINEER.



HORIZONTAL DESIGN SPEED : 100km/h
VERTICAL DESIGN SPEED : 100km/h
POSTED SPEED (Road Signs & Road Markings) : 120km/h

EXISTING ROAD LEVEL -----
LEFT EDGE -----
CENTRE LINE LEVEL -----
RIGHT EDGE -----

HOR. SCALE 1:1000
VER. SCALE 1:100

STAKE VALUE

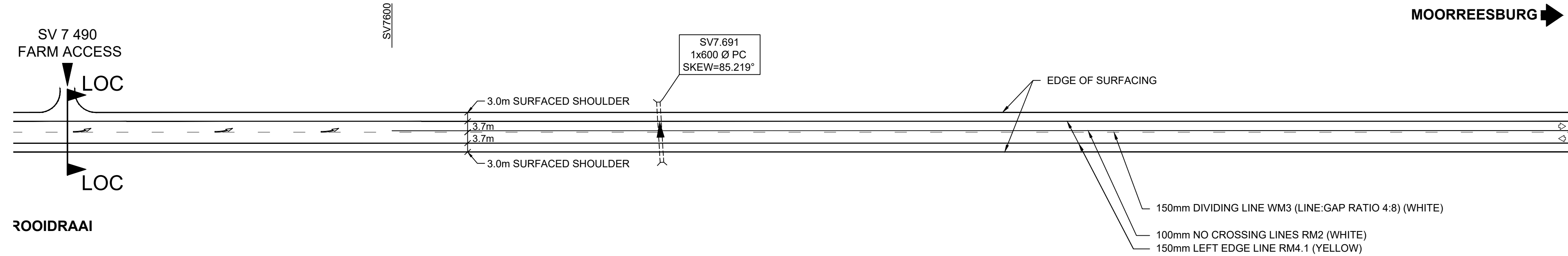
EXIST ROAD LEVELS ON ALIGNMENT

VERTICAL ALIGNMENT	DESIGN ROAD LEVELS	LEFT OFFSET
		LEFT EDGE
		CENTRE LINE
		RIGHT EDGE
		RIGHT OFFSET
	GRADES	

VERTICAL CURVES

SUPERELEVATION

HORIZONTAL CURVES



LOC
LOC

450 mm PC
IL = 279.968 m

600 mm PC
IL = 279.835 m

600 mm Pipe
IL = 289.244 m

Datum 286.0

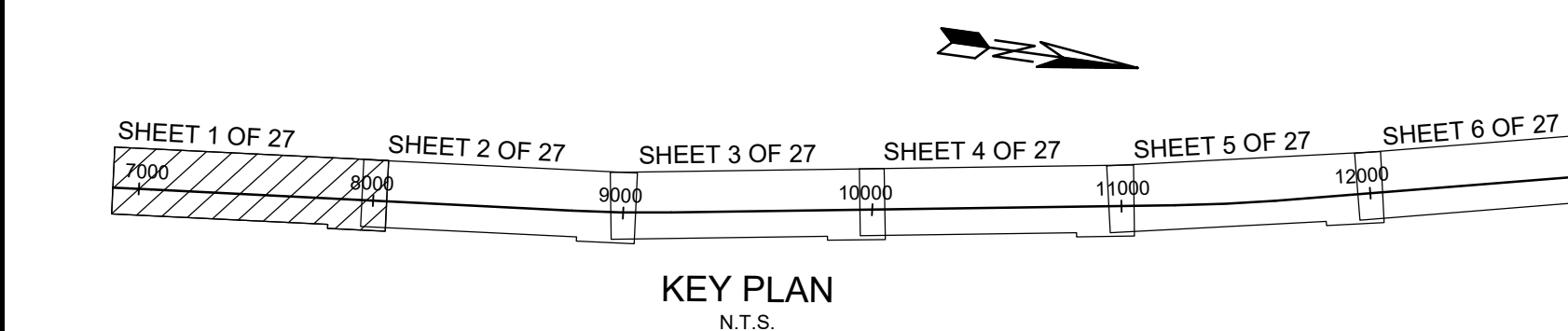
7600	6.70	287.401	287.535	287.401	-6.70	287.528	7600
7620	6.70	288.192	288.526	288.192	-6.70	288.520	7620
7640	6.70	288.984	289.118	288.984	-6.70	289.104	7640
7660	6.70	289.775	289.909	289.775	-6.70	289.762	7660
7680	6.70	290.564	290.698	290.564	-6.70	290.559	7680
7700	6.70	291.351	291.585	291.351	-6.70	291.155	7700
7720	6.70	292.139	292.600	291.886	-6.70	291.720	7720
7740	6.70	292.929	292.573	292.439	-6.70	292.512	7740
7760	6.70	293.719	293.084	292.950	-6.70	292.747	7760
7780	6.70	294.509	293.533	293.399	-6.70	293.202	7780
7800	6.70	295.299	293.920	293.786	-6.70	293.553	7800
7820	6.70	296.089	294.245	294.111	-6.70	293.898	7820
7840	6.70	296.879	294.508	294.374	-6.70	294.126	7840
7860	6.70	297.669	294.709	294.575	-6.70	294.248	7860
7880	6.70	298.459	294.848	294.714	-6.70	294.350	7880
7900	6.70	299.249	294.925	294.791	-6.70	294.378	7900
7920	6.70	299.999	294.940	294.806	-6.70	294.392	7920
7940	6.70	300.749	294.893	294.759	-6.70	294.385	7940
7960	6.70	301.499	294.785	294.651	-6.70	294.200	7960
7980	6.70	302.249	294.614	294.480	-6.70	293.960	7980
8000	6.70	302.999	294.381	294.247	-6.70	293.621	8000

3.952 %

343m VC
K=65

-2.9

Direction
174°55'35"



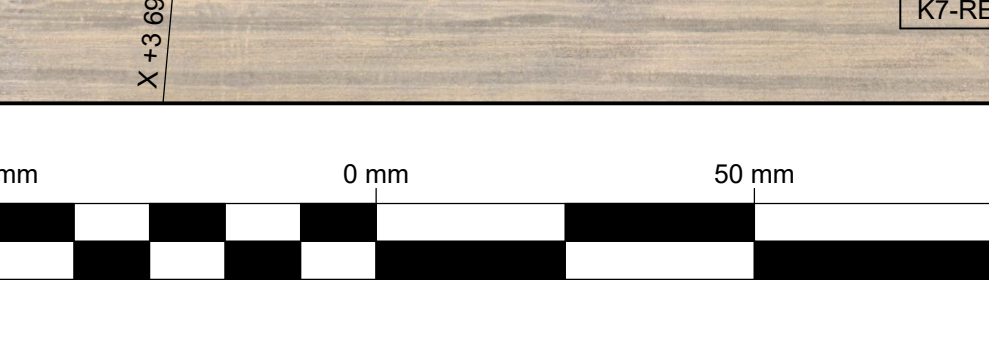
LEGEND		
EXISTING ROAD RESERVE	PROPOSED ROAD RESERVE	TELEPHONE LINE & POLE
GATE	FENCE	EXISTING ROAD SIGN
EXISTING GUARDRAIL	PROPOSED GUARDRAIL	NEW ROAD SIGN
POWER LINE & POLE		FARM / MINOR ACCESS
		MAJOR ACCESS
		PROPOSED ROAD WIDENING
		NEW CULVERT AND DIRECTION OF FLOW
		CUT SLOPE
		FILL SLOPE
		NEW GUARDRAIL

SURVEY CONTROL POINTS		
POINT	CO-ORDINATES WGS84 (Lo19°)	
NRB25-13	26907.84	3697436.27
NRB26-13	26913.50	3697197.42
NRB27-13	26919.10	3696857.947
NRB28-13	26924.70	3696518.339
NRB29-13	26930.30	3696178.731
NRB30-13	26935.90	3695839.123
NRB31-13	26941.50	3695500.515
NRB32-13	26947.10	3695161.907
NRB33-13	26952.70	3694823.299
NRB34-13	26958.30	3694484.691
NRB35-13	26963.90	3694145.083
NRB36-13	26969.50	3693806.475
NRB37-13	26975.10	3693467.867
NRB38-13	26980.70	3693129.259
NRB39-13	26986.30	3692790.651
NRB40-13	26991.90	3692452.043
NRB41-13	26997.50	3692113.435
NRB42-13	27003.10	3691774.827
NRB43-13	27008.70	3691436.219
NRB44-13	27014.30	3691097.611
NRB45-13	27019.90	3690759.003
NRB46-13	27025.50	3690420.395
NRB47-13	27031.10	3690081.787
NRB48-13	27036.70	3689743.179
NRB49-13	27042.30	3689404.571
NRB50-13	27047.90	3689065.963
NRB51-13	27053.50	3688727.355
NRB52-13	27059.10	3688388.747
NRB53-13	27064.70	3688050.139
NRB54-13	27070.30	3687711.531
NRB55-13	27075.90	3687372.923
NRB56-13	27081.50	3687034.315
NRB57-13	27087.10	3686695.707
NRB58-13	27092.70	3686357.099
NRB59-13	27098.30	3686018.491
NRB60-13	27103.90	3685679.883
NRB61-13	27109.50	3685341.275
NRB62-13	27115.10	3685002.667
NRB63-13	27120.70	3684664.059
NRB64-13	27126.30	3684325.451
NRB65-13	27131.90	3683986.843
NRB66-13	27137.50	3683648.235
NRB67-13	27143.10	3683309.627
NRB68-13	27148.70	3682971.019
NRB69-13	27154.30	3682632.411
NRB70-13	27159.90	3682293.803
NRB71-13	27165.50	3681955.195
NRB72-13	27171.10	3681616.587
NRB73-13	27176.70	3681277.979
NRB74-13	27182.30	3680939.371
NRB75-13	27187.90	3680600.763
NRB76-13	27193.50	3680262.155
NRB77-13	27199.10	3679923.547
NRB78-13	27204.70	3679584.939
NRB79-13	27210.30	3679246.331
NRB80-13	27215.90	3678907.723
NRB81-13	27221.50	3678569.115
NRB82-13	27227.10	3678230.507
NRB83-13	27232.70	3677891.899
NRB84-13	27238.30	3677553.291
NRB85-13	27243.90	3677214.683
NRB86-13	27249.50	3676876.075
NRB87-13	27255.10	3676537.467
NRB88-13	27260.70	3676198.859
NRB89-13	27266.30	3675860.251
NRB90-13	27271.90	3675521.643
NRB91-13	27277.50	3675183.035
NRB92-13	27283.10	3674844.427
NRB93-13	27288.70	3674505.819
NRB94-13	27294.30	3674167.211
NRB95-13	27299.90	3673828.603
NRB96-13	27305.50	3673490.005
NRB97-13	27311.10	3673151.397
NRB98-13	27316.70	3672812.789
NRB99-13	27322.30	3672474.181
NRB100-13	27327.90	3672135.573

NOTES		
1. ALL EXISTING FEATURES ARE GHOSTED.	2. BATTER SLOPES SHOWN ON STANDARD CROSS-SECTIONS AND AS DETERMINED ON SITE.	3. THE CONTRACTOR IS TO APPLY FOR ALL NECESSARY WAYLEAVES, PLANS AND PERMITS FROM THE VARIOUS SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. FARM/MINOR ACCESSES TO BE 5m WIDE (SEE TYPICAL DRAWINGS - ROADWORKS DRG. No. 4397-R-J-200-V1).	5. FINAL POSITIONS OF ACCESSES, SERVICE ROADS AND EIDGE BEAMS TO BE DETERMINED ON SITE.	6. EXISTING ROAD SIGNS TO BE REMOVED AND REPLACED WHERE REQUIRED.
7. WIRE FENCE GATES TO BE PROVIDED AT ALL FARM/MINOR ACCESSES.	8. STOCK PROOF FENCING TO BE PROVIDED ON ROAD RESERVE BOUNDARY 9 STRAND BARBED WIRE WITH STEEL STRAINING POSTS AND STEEL STANDARDS AND DROPPERS).	9. REFER TO 20m INTERVAL CROSS SECTIONS FOR LANDSCAPING AND FURTHER DRAINAGE DETAILS.
10. ALL ROADMARKING AS PER SARTSM AND STANDARD DRAWINGS.	11. THE LIVING OF OPEN TOE AND CUT-OFF DRAINS TO BE APPROVED BY ENGINEERS REPRESENTATIVE.	

PROPOSED ROAD RESERVE		
CO-ORDINATES WGS84 (Lo19°)	POINT	Y
K7-LN1	26977.125	3697058.216
K7-LN2	26982.737	3697223.537
K7-LN3	26988.349	3697388.858
K7-LN4	26993.961	3697554.179
K7-LN5	26999.573	3697719.500

EXISTING ROAD RESERVE		
CO-ORDINATES WGS84 (Lo19°)	POINT	Y
K7-LE1	26982.737	3697223.537
K7-LE2	26988.349	3697388.858
K7-LE3	26993.961	3697554.179
K7-LE4	26999.573	3697719.500
K7-LE5	27005.185	3697884.821



DRAFT FINAL DESIGN

CONSTRUCTION RECORD (AS-BUILT)		
WORKS CONTRACT ENGINEER		
Name	Prof. Reg. No.	Date
SANRAL PROJECT MANAGER		
Name	Prof. Reg. No.	Date
ORIGINAL VERSION		
No.	DATE	REVISION

JG AFRIKA		
CAPE TOWN		
14 CENTRAL SQUARE PINELANDS 7405		
P.O. BOX 3861 PINELANDS 7430		
Tel: +27 21 530-1800 Fax: +27 21 532-0950		
E-MAIL: cape@jgafrika.com		
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Daveng		
CONSULTING ENGINEERS		
7 Digital Avenue, Mabile Park, Kuls River, 7579		
Tel: +27 21 906 5602 Fax: +27 21 906 5603		
DESIGNED BY		
NAME	J GENTZ	
Prof. Reg. No.	20080319	
CHECKED BY		
NAME	DM MURPHY	
Prof. Reg. No.	950446	
DRAWN BY		
NAME	C BRAND	

CONSULTANT APPROVAL		
NAME	DM MURPHY	
Prof. Reg. No.	950446	
Date	17/05/2019	
HEAD OFFICE		
48 Tambotie Avenue		
Val de Grace		
Pretoria 0184		
PO Box 415		
Pretoria 0001		
South Africa		
Tel: (012) 844 8000		
SANRAL		
SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LTD		
BUILDING SOUTH AFRICA THROUGH BETTER ROADS		

WESTERN REGION		
1 Havenga Street		
Oakdale		
Bellville 7530		
Private Bag X19		
Bellville 7535		
Tel: (021) 957 4600		
ACCEPTANCE		
THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATSOEVER CAUSE OR HOWEVER ARISING		
for the SA NATIONAL ROADS AGENCY SOC LTD		
Date:		

THE IMPROVEMENT OF NATIONAL ROUTE 7, SECTION 2, BETWEEN ROODRAAI (km 7.49) AND MOORREESBURG (km 33.90)		
DRAWING NAME		
GENERAL ARRANGEMENT AND LONG-SECTION		
ROUTE 7, SECTION 2: SV 7 490 - SV 8 000		
SCALE : 1:1000		
SHEET 1 OF 27		

PROJECT NUMBER		
NRA N.007-020-2020/1F		
DRAWING LOCATION DATA		
ROUTE	START	END
SECTION	2	2
DRAWING km DISTANCE	7 600	8 000
DRAWING TYPE		
ROADS - LAYOUTS		
BRIDGE/STRUCTURE No.		
CONSULTANT DRAWING No.		
4397-10		
SANRAL DOCUMENT #		
VER		