




GA-SEGONYANA LOCAL MUNICIPALITY

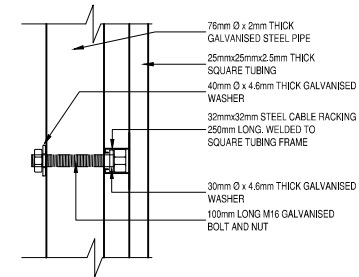
**GA-SEGONYANA LOCAL MUNICIPALITY RURAL ROADS
PROGRAMME - CONSTRUCTION OF RURAL ROADS**

**TENDER DRAWINGS
VOLUME 2**

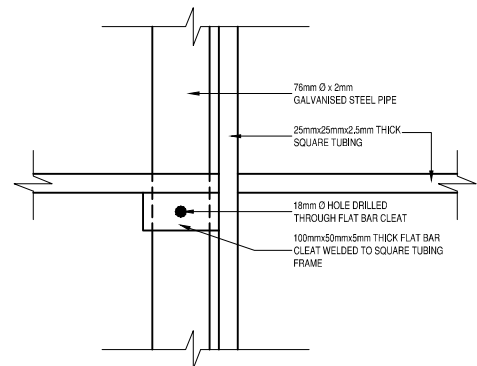
CONTRACT NUMBER: 22/2020-21

APRIL 2021

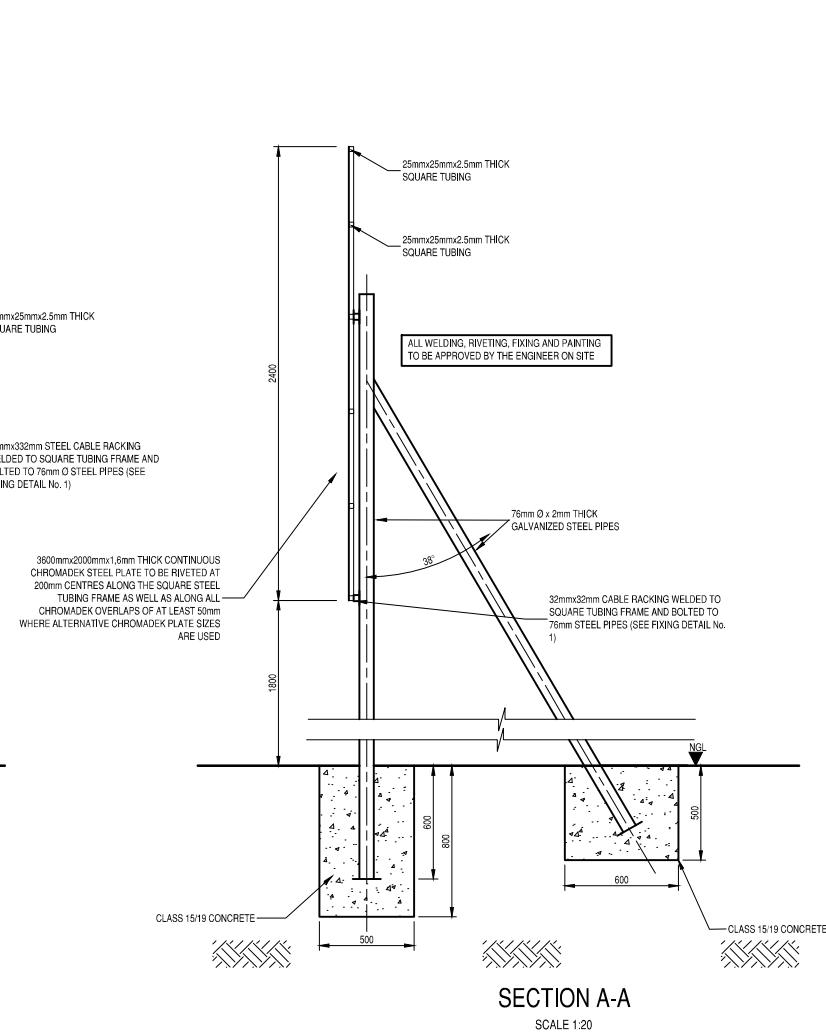
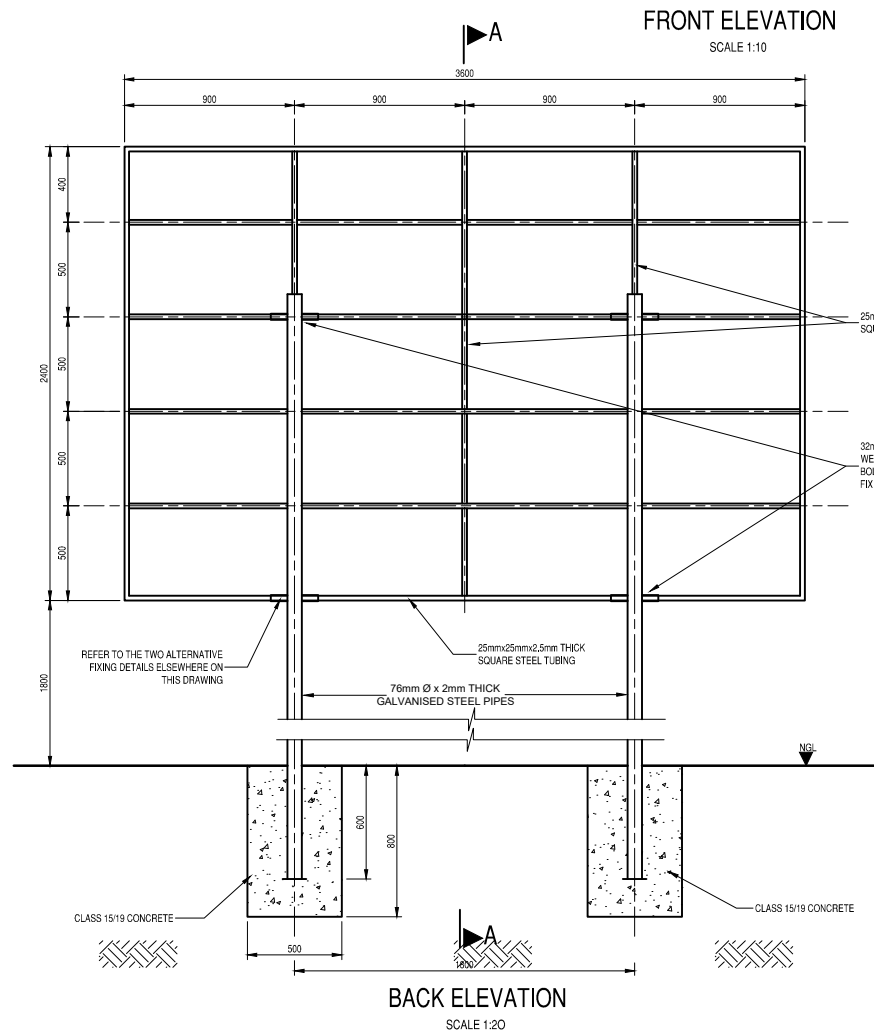
		GA-SEGONYANA LOCAL MUNICIPALITY	
PROJECT NAME: GA-SEGONYANA LOCAL MUNICIPALITY RURAL ROADS PROGRAMME - CONSTRUCTION OF RURAL ROADS			
CONTRACT NUMBER: 22/2020-21		PROJECT AMOUNT: -	
FUNDING AGENT			
CONSULTANTS (LOGO)		CONSULTING ENGINEERS CONSULTING ENGINEERS NAME	
CONTRACTOR (LOGO)		CONTRACTOR CONTRACTOR NAME	



FIXING DETAIL No. 1
SCALE 1:5



FIXING DETAIL No. 2
SCALE 1:5
ALTERNATIVE FIXING DETAILS



REVISIONS			
No.	DATE	BY	DESCRIPTION

- NOTES**
- Description in *italics* must be adjusted to suit project details.
 - Type face to be used shall be Helvetica Medium Colour of lettering AS INDICATED.
 - LETTERS TO BE CAPITALISED.
 - Background of board to be **WHITE**. All borders & lines to be **MIDDLE BLUE**. Colour for logos to be **AS PER RESPECTIVE**.
 - All paint used should match Ref. 290 Acrylic Road Sign Paint.
 - All lettering to be painted on. Stick-on labels will **NOT** be permitted.

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION

APPROVED: _____
ENGINEER: _____ DATE: _____
APPROVED: _____
CLIENT: _____ DATE: _____

PRINT ISSUED ON

	CLIENT GA-SEGONYANA LOCAL MUNICIPALITY
---	--

PROJECT
**GA-SEGONYANA LOCAL
MUNICIPALITY RURAL ROADS
PROGRAMME - CONSTRUCTION OF
RURAL ROADS**

IMPLEMENTING AGENT:
GA-SEGONYANA LM

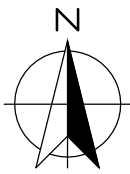
DRAWING TITLE
PROJECT NAME BOARD

DESIGN	DATE	DRAWN	DATE
-	APRIL 2021	-	APRIL 2021
SURVEYED	DATE	CHECKED	DATE
-	-	H. SMIT	APRIL 2021

SCALE as shown

DRAWING No.
2021-04-G/D/001

REVISION No.			
1.0			



NORTH WEST

JOE MOROLONG

JOHN TAOLE GAETSEWE
DISTRICT MUNICIPALITY

NALEDI

VRYBURG

SCHWEIZI

Mar

GAMAGARA

KURUMAN

GREATER TAUNG

TAUNG

Lekv

A HAIS

KATHU

DIBENG

**GA-SEGONYANA
LOCAL MUNICIPALITY**


CHRISTIANA

TSANTSABANE

NORTHERN CAPE

NOTES	APPROVED:
ENGINEER:	
DATE:	
CLIENT:	APPROVED:
DATE:	

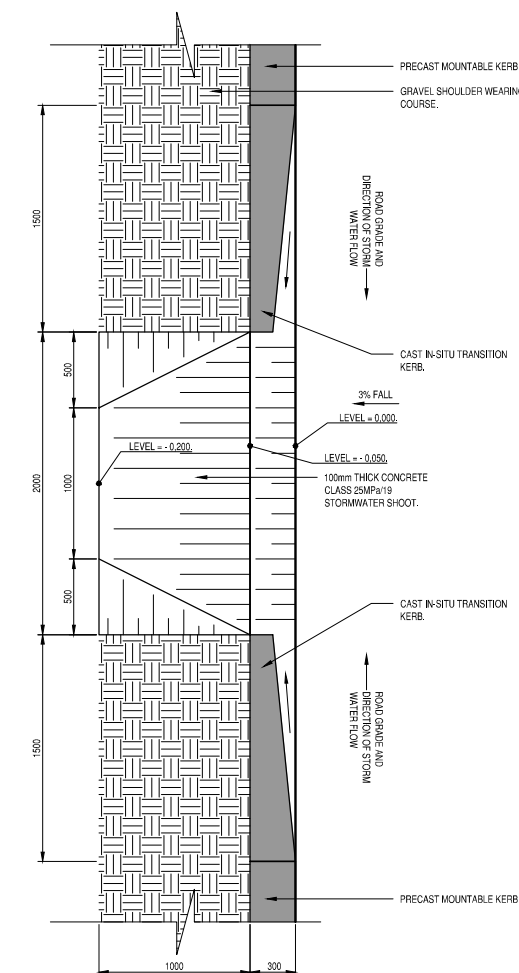
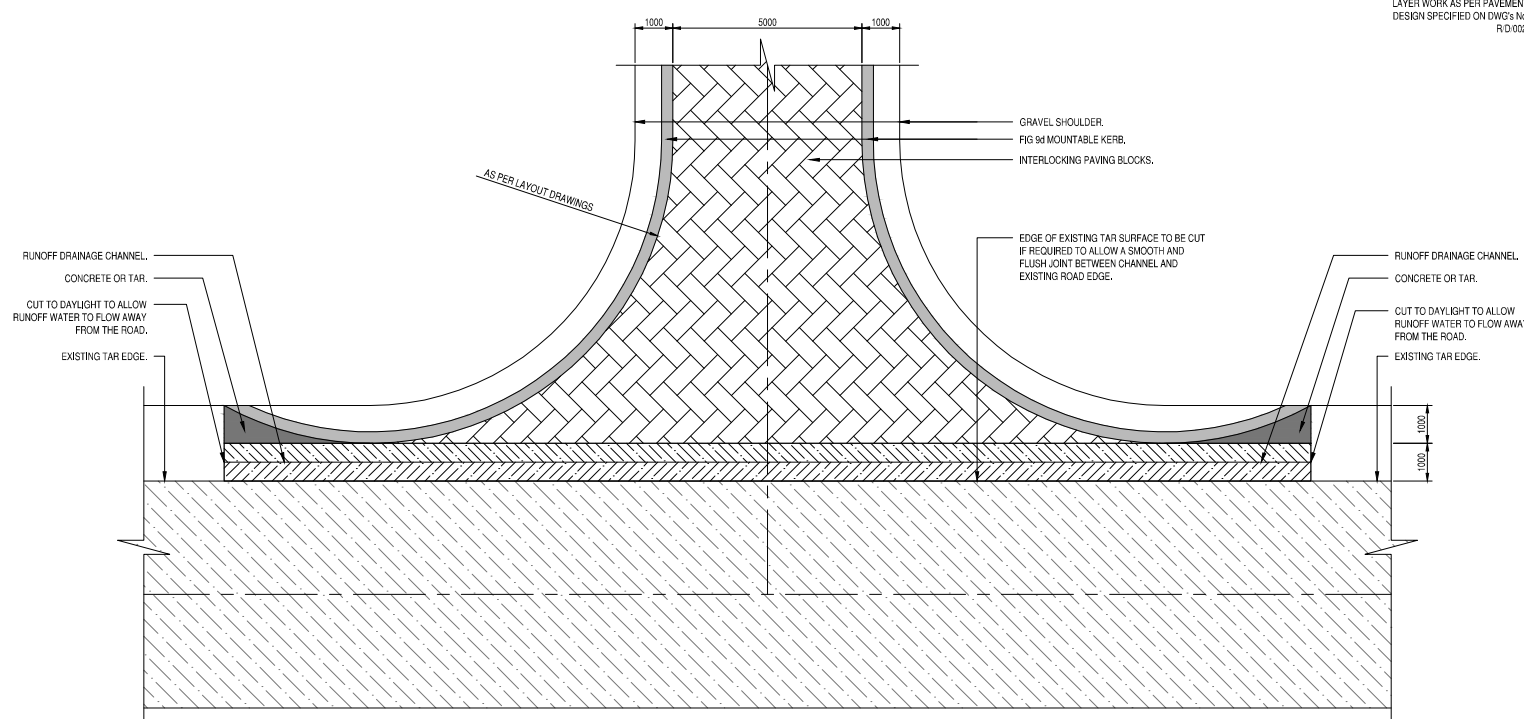
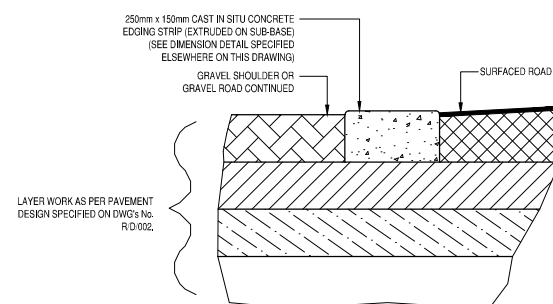
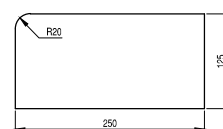
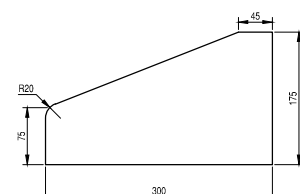
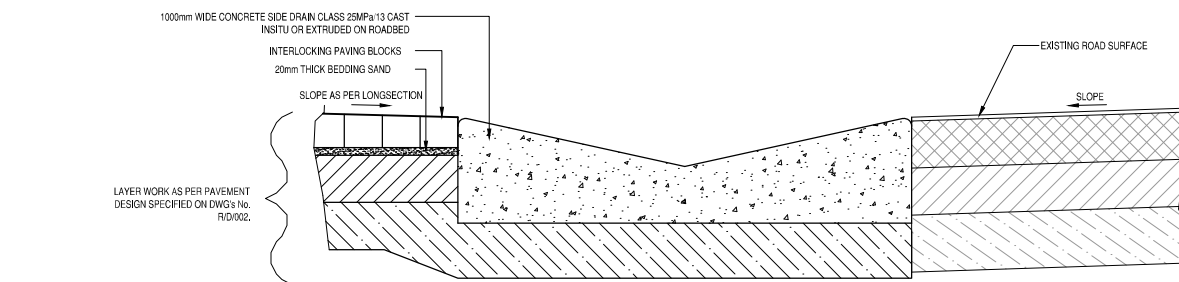
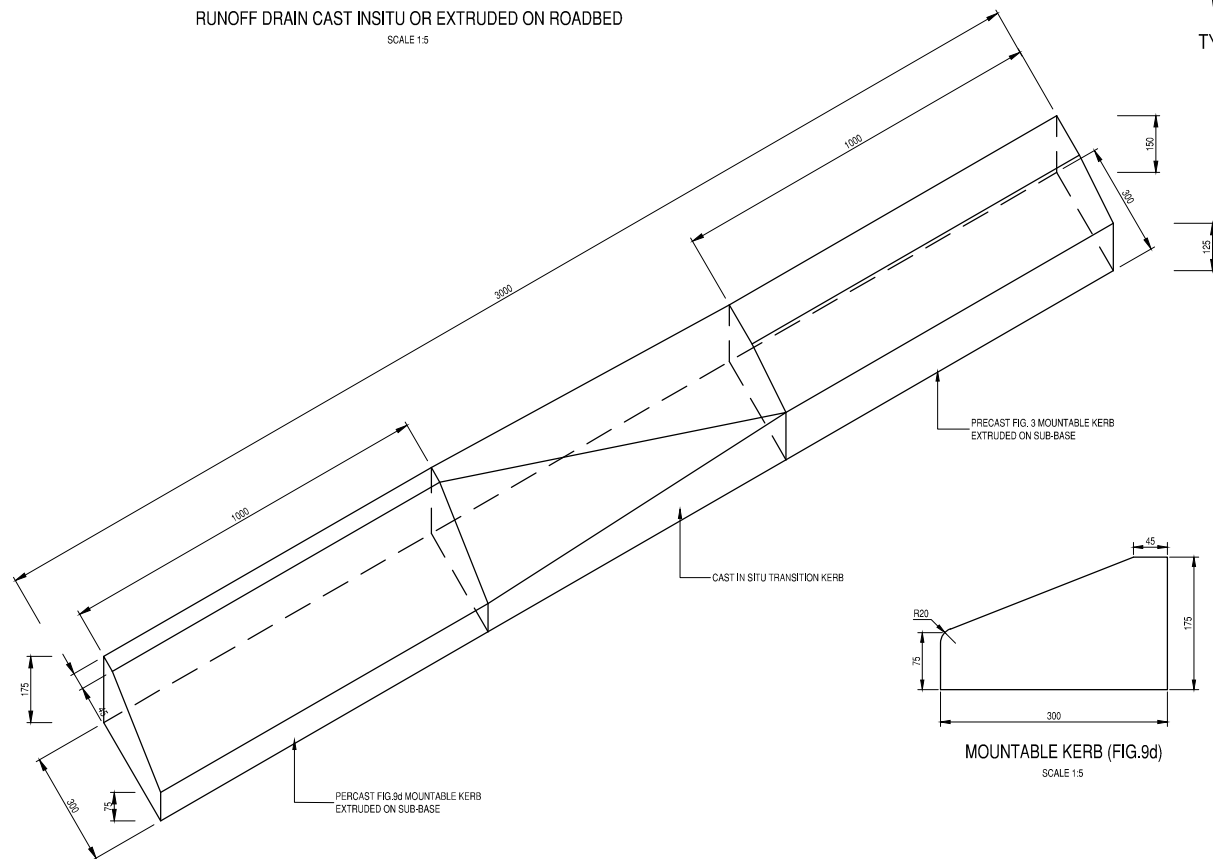
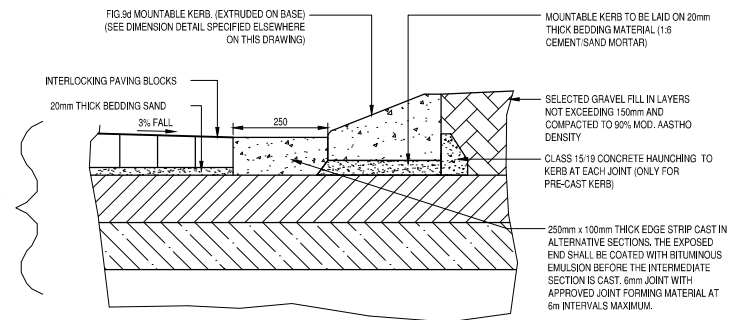
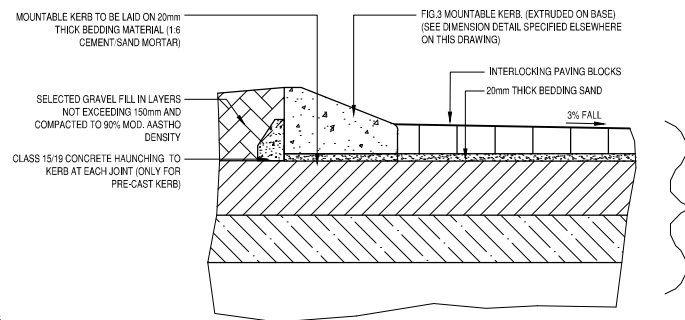
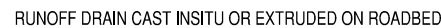
REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION

	CLIENT GA-SEGONYANA LOCAL MUNICIPALITY
	IMPLEMENTING AGENT GA-SEGONYANA LOCAL MUNICIPALITY

PROJECT GA-SEGONYANA LOCAL MUNICIPALITY RURAL ROADS PROGRAMME - CONSTRUCTION OF RURAL ROADS
DRAWING TITLE REGIONAL LOCALITY MAP

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION
SCALE: NTS			

DESIGN	DATE	DRAWN	DATE
-	-	-	-
SURVEYED	DATE	CHECKED	DATE
-	-	H. SMIT	APR 2021
DRAWING No. 2021-04-G/P/001			
REVISION No.			
1.0			



REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

1. ALL EXTRUDED CONCRETE KERBERING AND EDGE STRIPS SHALL BE CLASS 25/135 CONCRETE.
 2. FIGURE 8 MOUNTABLE KERB TO BE CONSTRUCTED ON THE DRAINAGE SIDE (LOW LEG) OF ALL SURFCEDED CROSSFALL ROADS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
 3. EDGING STRIP TO BE CONSTRUCTED ON THE NON DRAINAGE SIDE (HIGHER LEG) OF ALL SURFCEDED CROSSFALL ROADS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
 4. EDGING STRIP TO BE CONSTRUCTED ALONG THE TOTAL LENGTH OF THE BELLMOUTH OPENING AT ALL INTERSECTIONS WITH THE SURFCEDED ROADS AS INDICATED ON THE LAYOUT DRAWINGS.
- PRIOR TO THE CONSTRUCTION OF ANY EXTRUDED KERBERING OR EDGING STRIP AN APPROVED LAYOUT PLAN AND CROSS SECTION DESIGN MIX SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
6. THE STRENGTH OF ALL PRE-CAST CONCRETE KERBERING SHALL BE IN ACCORDANCE WITH TABLE 9.2

REFERENCE DRAWINGS

[illegible]

APPROVED: _____	
ENGINEER: _____	DATE: _____
APPROVED: _____	
CLIENT: _____	DATE: _____
PRINT ISSUED ON _____	



CLIENT

**GA-SEGONYANA
LOCAL MUNICIPALITY**

**GA-SEGONYANA LOCAL
MUNICIPALITY RURAL ROADS
PROGRAMME - CONSTRUCTION OF
RURAL ROADS**

IMPLEMENTING AGENT:
GA-SEGONYANA LM

DRAWING TITLE

TYPICAL KERBING DETAILS

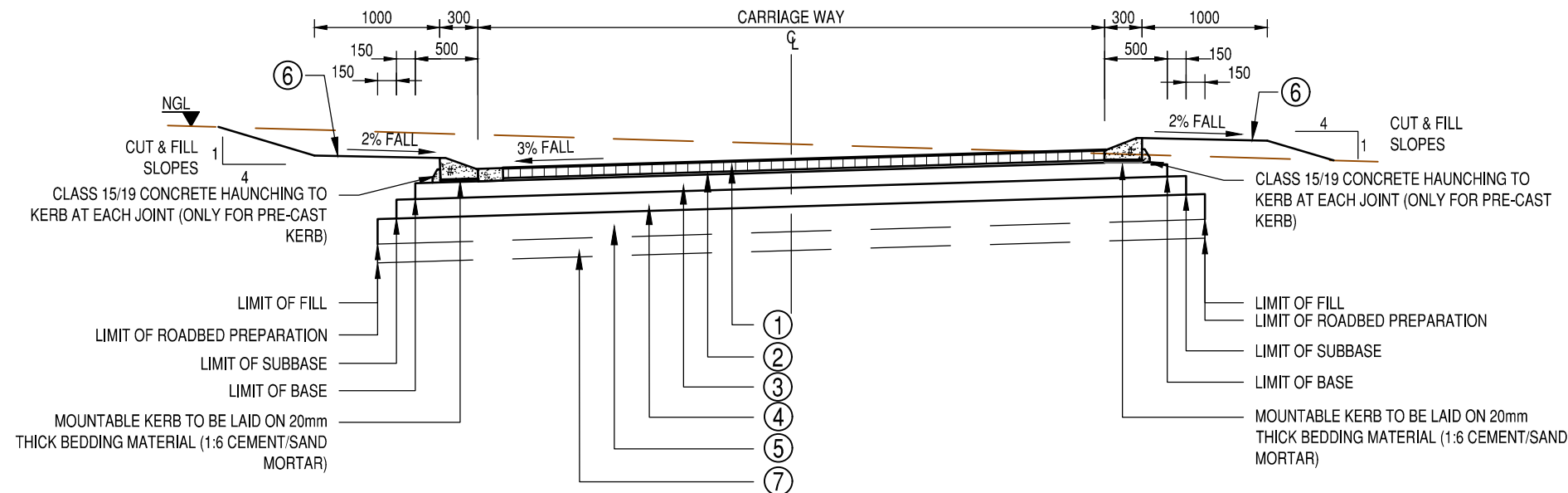
DESIGN -	DATE APRIL 2021	DRAWN -	DATE APRIL 2021
SURVEYED -	DATE -	CHECKED H. SMIT	DATE APRIL 2021

SCALE as shown

DRAWING No.

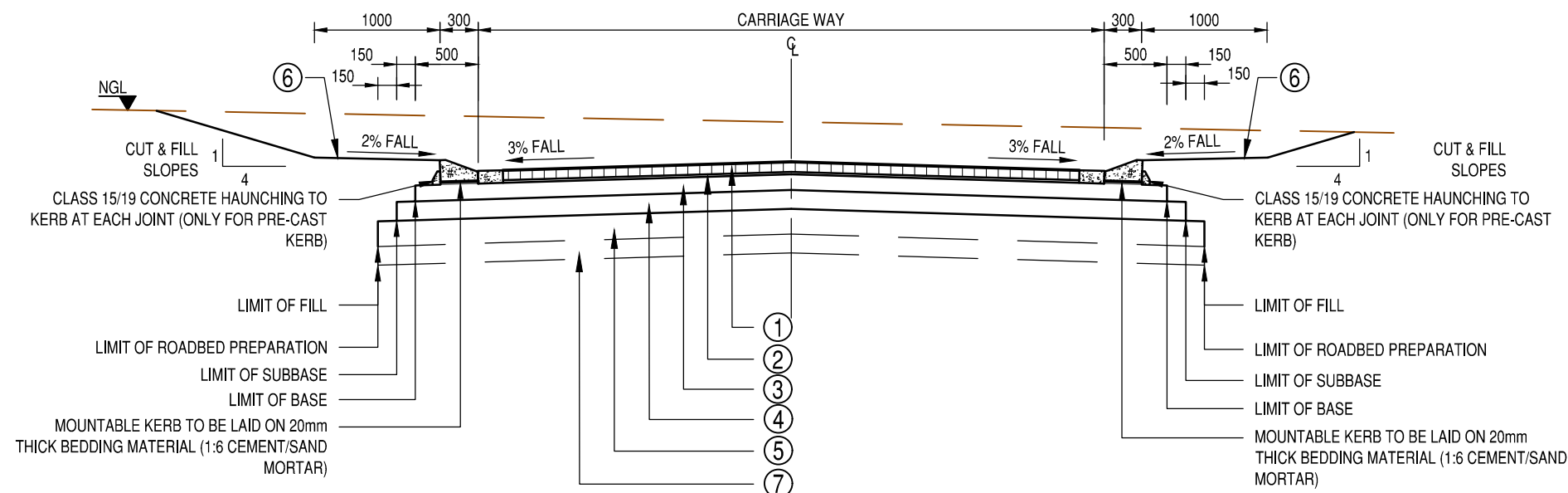
2021-04-R/D/001

REVISION No.							
1.0							



TYPICAL PAVEMENT DESIGN DETAIL CROSS-FALL ROAD

SCALE 1:50



TYPICAL PAVEMENT DESIGN DETAIL CAMBER ROAD

SCALE 1:50

NOTE:

1. PRIOR TO THE UNDERTAKING OF ANY VIBRATORY OR PAD FOOT ROLLING WITHIN THE ROAD FOUNDATION, AN ON SITE TRIAL SECTION SHALL BE PREPARED AND CONDUCTED IN ORDER TO ASCERTAIN THE AVERAGE NUMBER OF m.PASSES REQUIRED IN ORDER TO OBTAIN THE SPECIFIED COMPACTION EFFORT FOR THE ROADBED PREPARATION.
2. THE ENGINEER SHALL THEN INSTRUCT THE CONTRACTOR TO REMOVE AND SPOIL THE TOPSOIL AND HILLWASH OVERBURN TO WEARING COURSE DEPTH OR FERRICRETE LEVEL, WHERE REQUIRED WHICHEVER IS THE SHALLOWEST. ALL FERRICRETE MATERIAL SHALL BE CUT TO TEMPORARY STOCKPILE AS DETERMINED BY THE ENGINEER FOR LATER USE IN THE PAVEMENT STRUCTURE AND WEARING COURSE LAYER WORKS.
3. THE CONTRACTOR SHALL THEN APPLY THE NUMBER OF m.PASSES ORDERED BY THE ENGINEER, PERIODICALLY WATERING AND BLADING THE ROADBED FOUNDATION AREA TO ENSURE MAXIMUM WORKABILITY AND COMPACTION EFFICIENCY.
4. AFTER APPLYING THE VIBRATORY OR PAD FOOT ROLLING, CUT TO FILL OR BLADE TO WINDROW THE FERRICRETE PINNACLES, RIP, SCARIFY AND RECOMPACT ROADBED TO ABOVE SPECIFICATION WHERE REQUIRED.



LEGEND:

- a) REQUIREMENTS ARE GIVEN IN THE FOLLOWING ORDER:
LAYER THICKNESS/MATERIAL/CBR AND
MIN COMPACTION/MIN. GM/MAX. PI
- b) MIN. UNCONFINED COMPRESSIVE STRENGTH (UCS) IS
SHOWN IN MPa.
- c) MIN. DENSITY IS GIVEN AS % OF MAX MODIFIED
AASHTO DENSITY.
- d) SG = STABILIZED GRAVEL
NG = NATURAL GRAVEL
IS = IN SITU SOIL
PI = PLASTICITY INDEX
GM = GRADING MODULES
SBP = SHOULDER BREAK POINT
- e) # FIGURE 9d MOUNTABLE CONCRETE KERB (CLASS
25/13) EXTRUDED ON BASE
* FIGURE 3 MOUNTABLE CONCRETE KERB (CLASS
25/13) EXTRUDED ON SUBBASE
s 250mm WIDE x 100mm THICK EDGE STRIP CAST IN ALTERNATIVE
SECTIONS. THE EXPOSED END SHALL BE COATED WITH
BITUMINOUS EMULSION BEFORE THE INTERMEDIATE SECTION
IS CAST. 6mm JOINT WITH APPROVED JOINT FORMING
MATERIAL AT 6m INTERVALS MAXIMUM.

①	SEGMENTED PAVING SHAPE S-A (G-BLOCKS), CLASS 25, 60mm THICK
②	RIVER SAND 20 / RIVER SAND IMPORTED FROM COMMERCIAL SOURCE
③	BASE 125mm C4 MATERIAL COMPACTED TO 98% MOD AASHTO DENSITY.
④	SUBBASE 150mm G6 MATERIAL COMPACTED TO 95% MOD AASHTO DENSITY
⑤	ROADBED PREPARATION (REFER TO NOTES) VIBRATORY OR PAD FOOT ROLLING (NUMBER OF PASSES TO BE DETERMINED BY ENGINEER ON SITE) OR RIP SCARIFY AND RE-COMPACT 150/1S@90%
⑥	SHOULDER WEARING COURSE CUT TO FILL FROM ROAD FOR ACCOMMODATION OF TRAFFIC WHERE REQUIRED
⑦	FILL - ONLY WHERE REQUIRED FILL TO BE A MINIMUM OF G9 MATERIAL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICKNESS TO 90% MOD AASHTO DENSITY.

NOTES	APPROVED:
ENGINEER:	
DATE:	
CLIENT:	APPROVED:
DATE:	

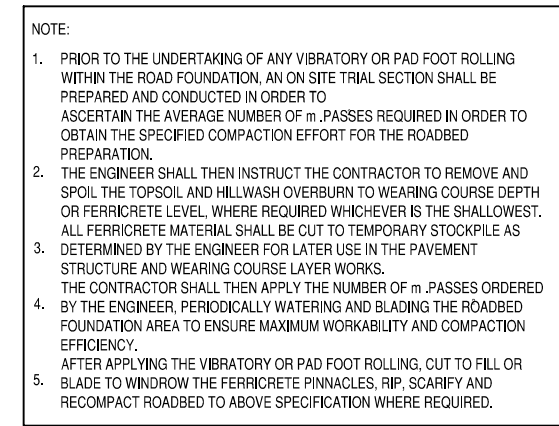
REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION

	CLIENT GA-SEGONYANA LOCAL MUNICIPALITY
	IMPLEMENTING AGENT GA-SEGONYANA LOCAL MUNICIPALITY

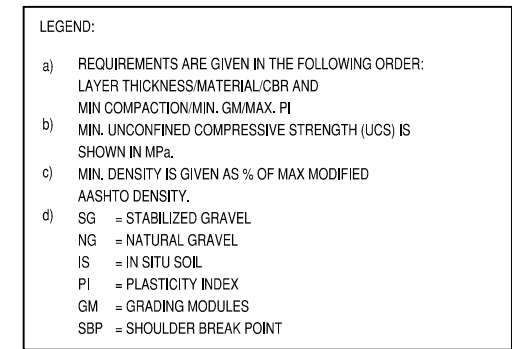
PROJECT GA-SEGONYANA LOCAL MUNICIPALITY RURAL ROADS PROGRAMME - CONSTRUCTION OF RURAL ROADS
DRAWING TITLE TYPICAL PAVEMENT DESIGN DETAIL FOR SURFACED ACCESS STREETS (PAVING BLOCK FINISH)

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION
SCALE: 1:50			

DESIGN -	DATE -	DRAWN -	DATE -
SURVEYED -	DATE -	CHECKED H. SMIT	DATE APR 2021
DRAWING No. 2021-04-R/D/002			
REVISION No.			
1.0			



SCALE 1:50



SCALE 1:50

DESIGN -	DATE -	DRAWN -	DATE -
SURVEYED -	DATE -	CHECKED H. SMIT	DATE APR 202
DRAWING No. 2021-04-R/D/003			
REVISION No.			
1.0			

ITEM No.	TYPE OF SIGN	SIGN. No.	DESCRIPTION	No.	ROADSIGN	LEGEND	SYMBOL	COLOUR		
								BORDER	LETTERS OR SYMBOL	BACKGROUND
1.	REGULATION CONTROL	R1	STOP SIGN	X		DIN 1451 STYLE "A"	LETTER: STOP	WHITE RETROREFLECTIVE	WHITE RETROREFLECTIVE	RED RETROREFLECTIVE
2.	REGULATION CONTROL	R2	YIELD SIGN (RIGHT)	X				OUTER BORDER: WHITE RETROREFLECTIVE INNER BORDER: RED RETROREFLECTIVE		WHITE RETROREFLECTIVE
3.	SYMBOLIC	W306	PEDESTRIAN CROSSING	X			PEDESTRIAN CROSSING	RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
4.	WARNING ROAD LAYOUT	W104 & W107 & W108	T-JUNCTION SIDE ROAD JUNCTION (LEFT) SIDE ROAD JUNCTION (RIGHT)	X X X			T-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
5.	WARNING ROAD LAYOUT	W101 & W102 & W103	CROSSROAD JUNCTION	X X X			+SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
6.	WARNING HAZARD MARKER	W401 & W402	DANGER PLATE DELINATOR PLATE	X X			DIAGONALS @ 45°	NO BORDER	RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
7.	WARNING HAZARD MARKER	W409	T-JUNCTION CHEVRON	X			ARROWS	NO BORDER	ARROWS: RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
8.	WARNING HAZARD MARKER	W410	DEAD END/ROAD CLOSED CHEVRON	X			ARROWS	NO BORDER	ARROWS: RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
9.	INFORMATION	IN4	SHARP RIGHT CURVE SHARP LEFT CURVE	X X			CURVE-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMI-MATT	WHITE RETROREFLECTIVE
10.	INFORMATION LOCATION	G02.11.1	STACK-TYPE DIRECTION SIGN	X		TYPE A	LETTER: Coligny & Ottosdal TYPE 1 ARROW	WHITE RETROREFLECTIVE	WHITE RETROREFLECTIVE ARROWS: RED RETROREFLECTIVE	GREEN RETROREFLECTIVE WHITE RETROREFLECTIVE
11.	INFORMATION LOCATION	G02	STACK-TYPE DIRECTION SIGN	X		TYPE A	LETTER: Coligny TYPE 1 ARROW	WHITE RETROREFLECTIVE	WHITE RETROREFLECTIVE	GREEN RETROREFLECTIVE

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- REFER TO DRAWING No. R/P/09## FOR ROAD SIGNAGE POSITION
- REFER TO DRAWING No. R/D/006 FOR POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS
- ALL ROAD MARKINGS AND ROAD SIGNS TO BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL
- ALL ROAD SIGNS TO BE PLACED AT A DEFLECTION ANGLE OF 93° WITH THE CENTRE LINE OF THE ROAD

REFERENCE DRAWINGS

PLAN Nr.	DESCRIPTION

APPROVED:

ENGINEER: _____ DATE: _____

APPROVED:

CLIENT: _____ DATE: _____

PRINT ISSUED ON

CLIENT

GA-SEGONYANA
LOCAL MUNICIPALITY

PROJECT

GA-SEGONYANA LOCAL MUNICIPALITY RURAL ROADS PROGRAMME - CONSTRUCTION OF RURAL ROADS

IMPLEMENTING AGENT:

GA-SEGONYANA LM

DRAWING TITLE

ROAD SIGNAGE SCHEDULE AND DETAILS

DESIGN	DATE	DRAWN	DATE
-	APRIL 2021	-	APRIL 2021
SURVEYED	DATE	CHECKED	DATE
-	-	H. SMIT	APRIL 2021

SCALE

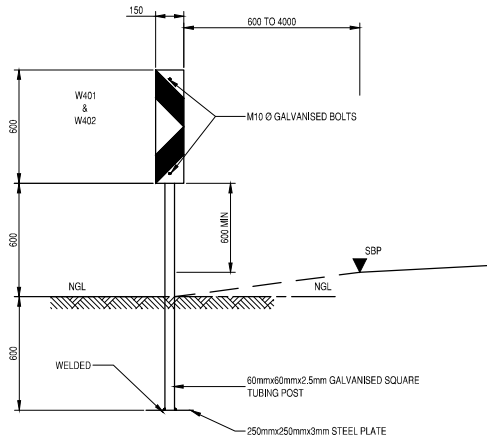
1:25

DRAWING No.

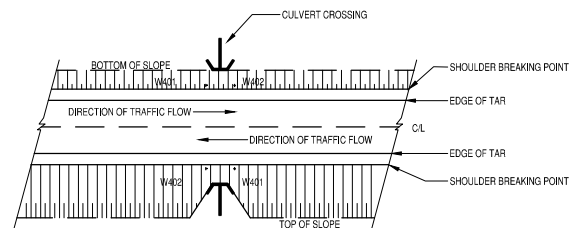
2021-04-R/D/004

REVISION No.	1.0						
--------------	-----	--	--	--	--	--	--

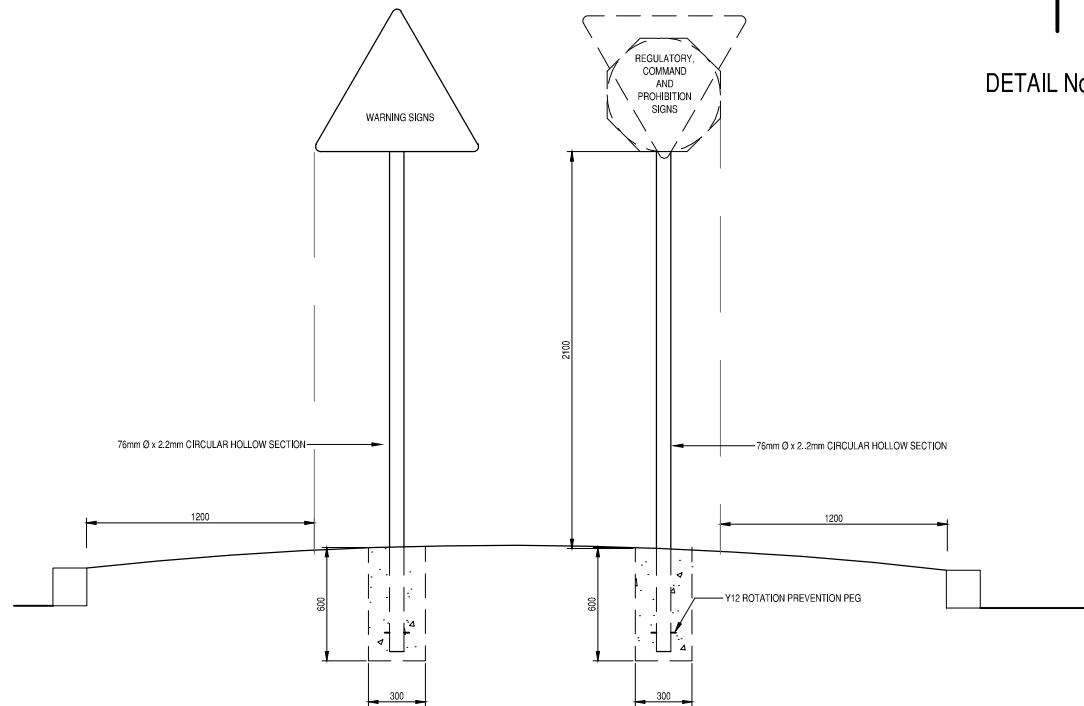
REVISION No.							
	1.0						



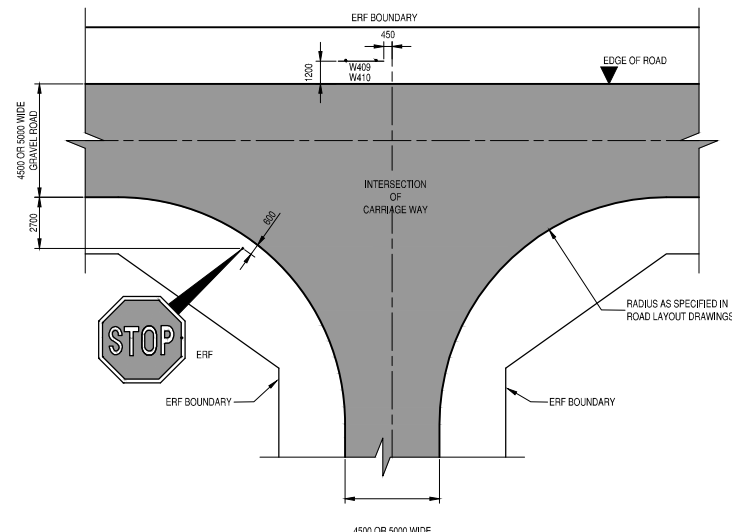
FRONT ELEVATION W401
SCALE 1:20



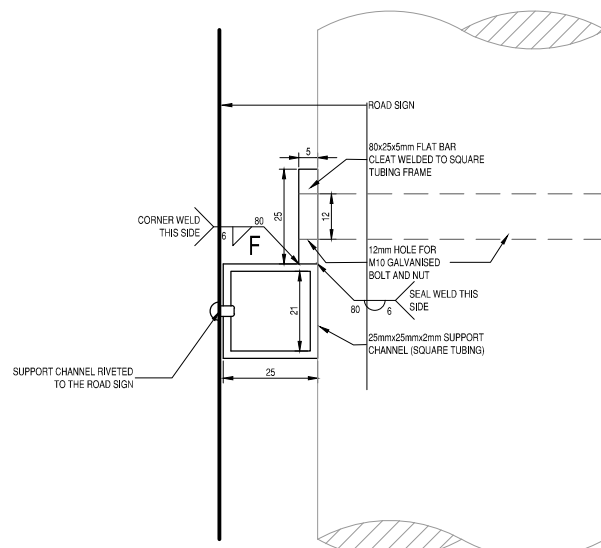
SIGN AT CULVERT
NTS



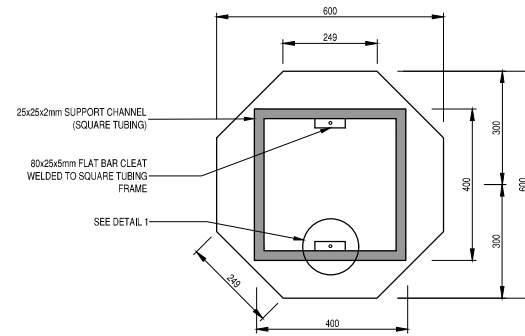
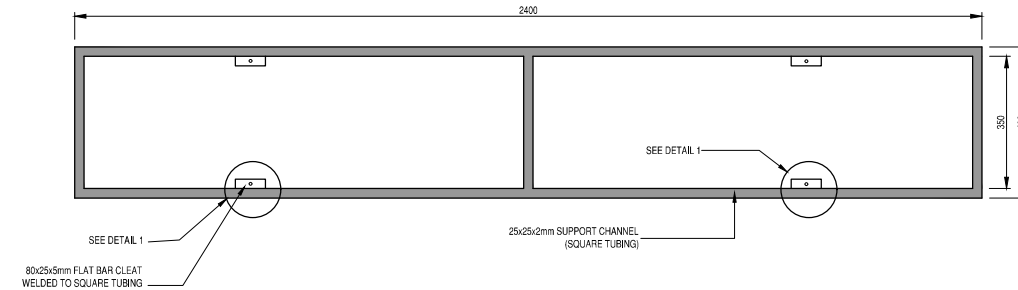
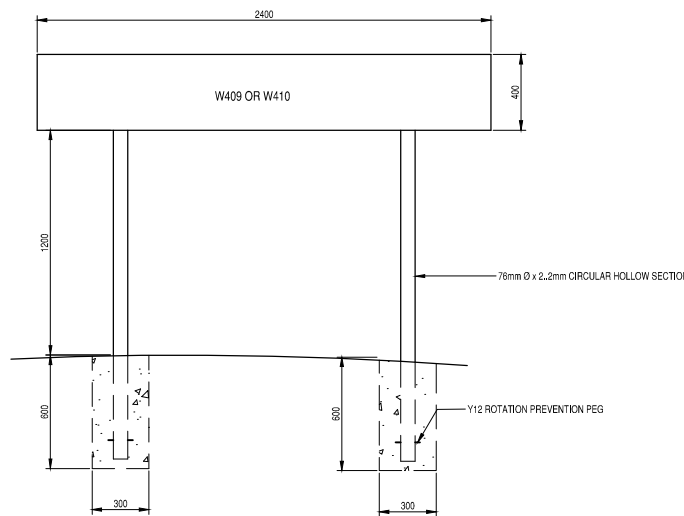
POSITIONING DETAILS
SCALE 1:20



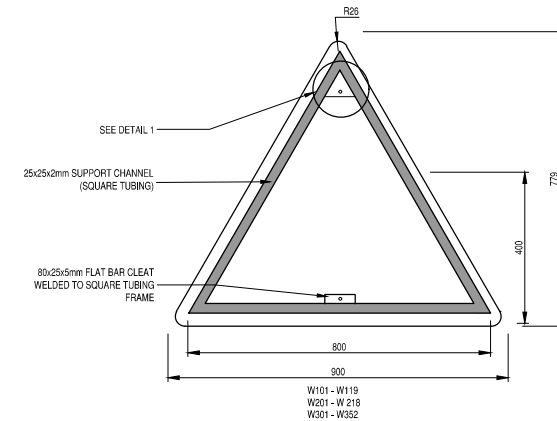
CHEVRON POSITION AT INTERSECTION
SCALE 1:200



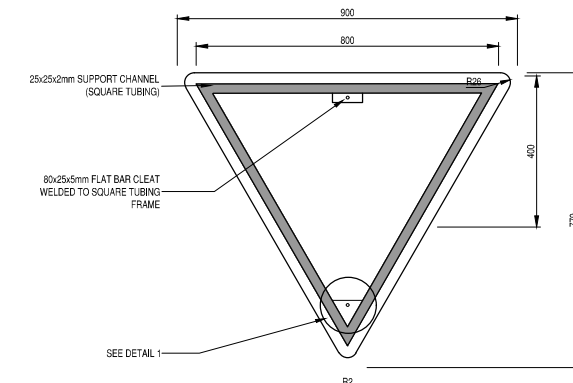
DETAIL No. 1 SECTIONAL ELEVATION
SCALE 1:1



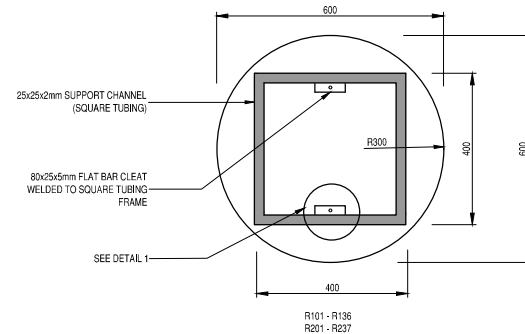
CONTROL SIGNS



ROAD LAYOUT AND SYMBOLIC SIGNS



CONTROL SIGN



COMMAND AND PROHIBITION SIGNS
FIXING AND SUPPORT DETAILS
SCALE 1:10

REVISIONS

No.	DATE	BY	DESCRIPTION

NOTES

- REFER TO DRAWING No. R/P/09## FOR ROAD SIGNAGE POSITION
- REFER TO DRAWING No. R/D/005 FOR ROAD MARKING DETAILS
- ALL ROAD MARKINGS AND ROAD SIGNS TO BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH THE SOUTH AFRICAN ROAD TRAFFIC SIGNS MANUAL
- ALL ROAD SIGNS TO BE PLACED AT A DEFLECTION ANGLE OF 93° WITH THE CENTER LINE OF THE ROAD
- M10 x 90mm GALVANISED BOLTS AND NUTS FOR FIXING ROAD SIGNS TO GALVANISED STEEL PIPES
- ALL ROAD SIGNS TO BE FIXED TO SQUARE TUBING SUPPORT CHANNEL BY MEANS OF 6mm Ø RIVETS AT A MAXIMUM SPACING OF 125mm c/c

REFERENCE DRAWINGS

PLAN No.	DESCRIPTION

APPROVED: ENGINEER: _____ DATE: _____

APPROVED: CLIENT: _____ DATE: _____

PRINT ISSUED ON



CLIENT
**GA-SEGONYANA
LOCAL MUNICIPALITY**

PROJECT
**GA-SEGONYANA LOCAL
MUNICIPALITY RURAL ROADS
PROGRAMME - CONSTRUCTION OF
RURAL ROADS**

IMPLEMENTING AGENT:
GA-SEGONYANA LM

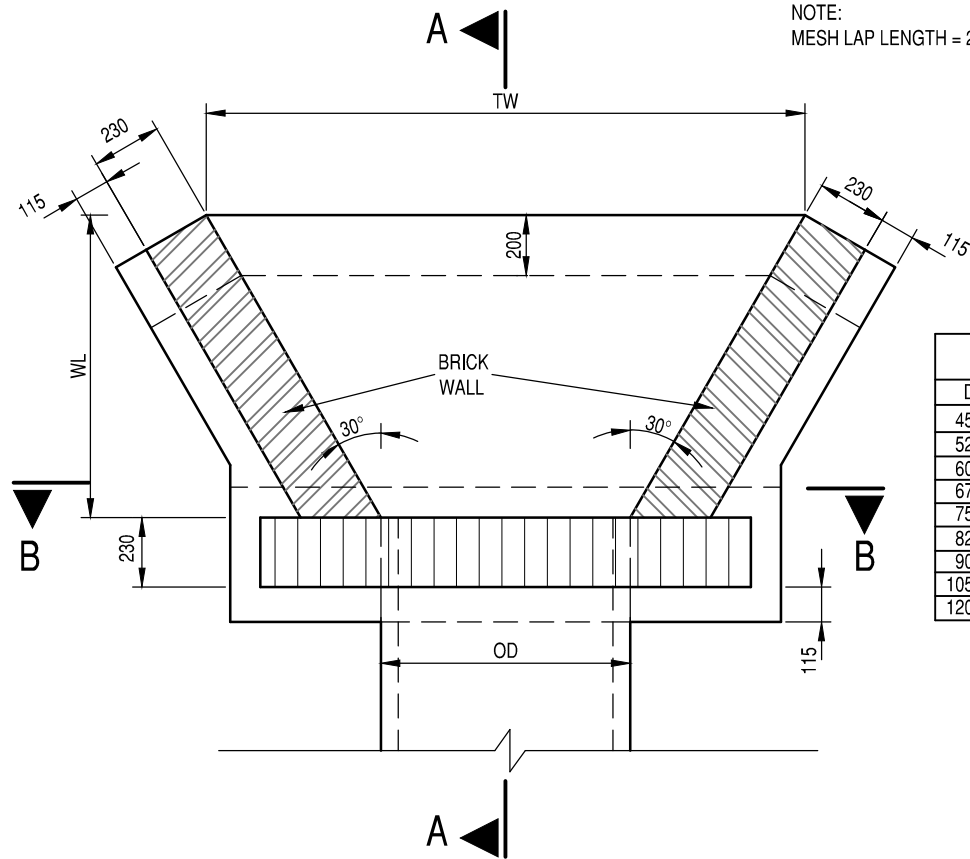
DRAWING TITLE
**POSITION OF SUPPORT
BRACKETS AND
INSTALLATION DETAILS
OF ROAD SIGNS**

DESIGN	DATE	DRAWN	DATE
-	APRIL 2021	-	APRIL 2021
SURVEYED	DATE	CHECKED	DATE
-	-	H. SMIT	APRIL 2021

SCALE as shown

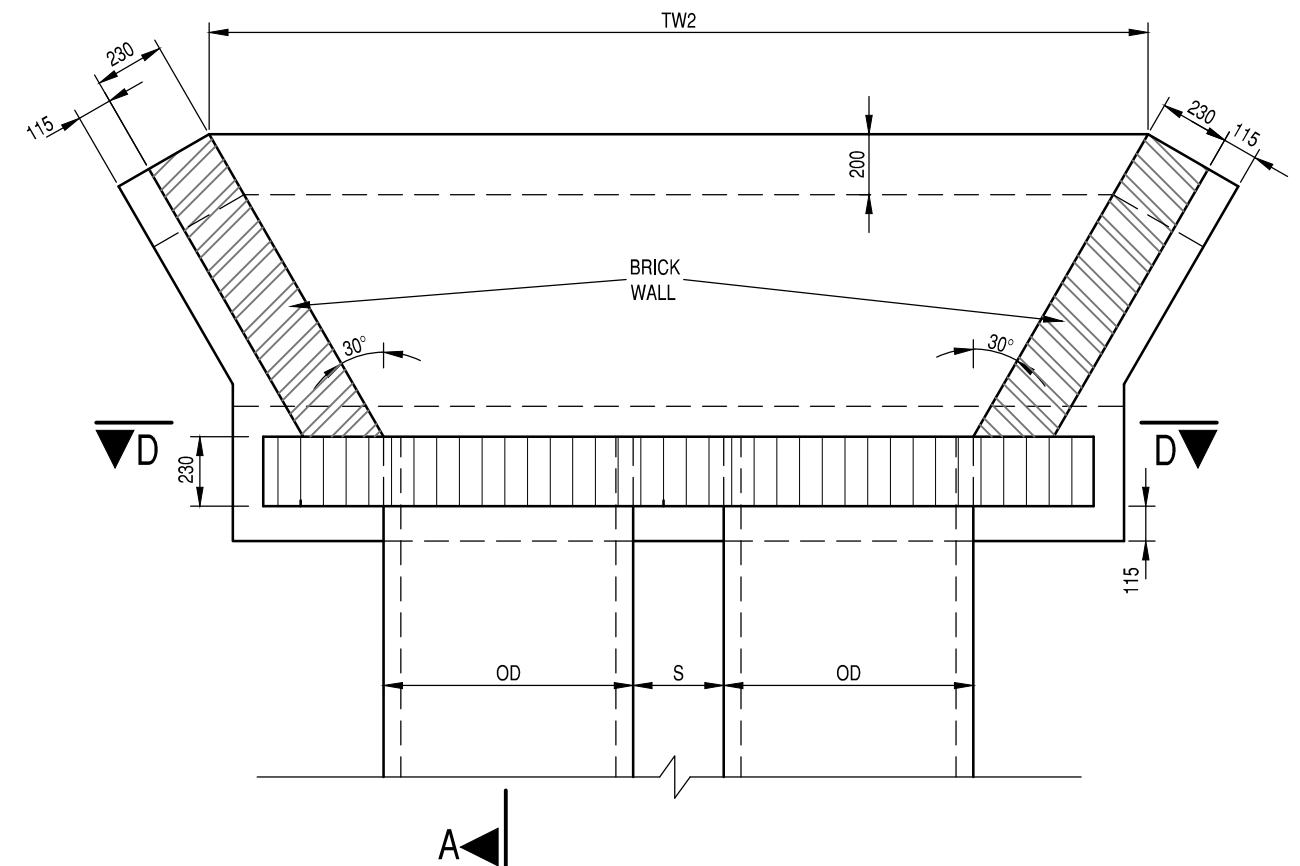
DRAWING No.
2021-04-R/D/006

REVISION No.							
1.0							



*WING WALL DETAIL IN A CHANNEL OR CUT APPLICATION

PIPE CULVERT STRUCTURE DIMENSIONS								
D	OD	HW	HW2	WL	TW	TW2	S	H
450Ø	533mm	1333	2166	900	1420	2250	300	890
525Ø	616mm	1416	2332	1000	1590	2500	300	970
600Ø	699mm	1499	2498	1100	1750	2750	300	1050
675Ø	787mm	1587	2774	1200	1930	3110	400	1140
750Ø	870mm	1670	2940	1300	2100	3360	400	1220
825Ø	946mm	1746	3092	1400	2250	3590	400	1300
900Ø	1029mm	1829	3358	1500	2410	3940	500	1400
1050Ø	1194mm	1994	3688	1700	2740	4440	500	1550
1200Ø	1359mm	2159	4018	1900	3070	4930	500	1710



DESIGN -	DATE -	DRAWN -	DATE -
SURVEYED -	DATE -	CHECKED H. SMIT	DATE APR 2021
DRAWING No. 2021-04-R/D/007			
REVISION No.			
1.0			