



# GA-SEGONYANA LOCAL MUNICIPALITY

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

### TENDER DRAWINGS VOLUME 2

CONTRACT NUMBER: 06/2024-24

APRIL 2024



**EXPANDED PUBLIC WORKS PROGRAMME**  
Creating opportunities towards human fulfilment

VERSION	DRAWING NUMBER	DRAWING DESCRIPTION
1.0	2024-03-G/A/001	PROJECT DRAWING INDEX
1.0	2024-03-G/D/001	PROJECT NAME BOARD
1.0	2024-03-G/P/001	REGIONAL LOCALITY MAP
1.0	2024-03-R/D/001	TYPICAL KERBING DETAILS
1.0	2024-03-R/D/002	TYPICAL PAVEMENT DESIGN DETAIL FOR SURFACED ACCESS STREETS (PAVING BLOCK FINISH)
1.0	2024-03-R/D/003	TYPICAL PAVEMENT DESIGN DETAIL FOR SURFACED ACCESS STREETS (BITUMEN FINISH)
1.0	2024-03-R/D/004	ROAD SIGNAGE SCHEDULE AND DETAILS
1.0	2024-03-R/D/005	ROAD MARKING DETAILS
1.0	2024-03-R/D/006	POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS
1.0	2024-03-R/D/007	TYPICAL PORTAL CULVERT DETAILS

**REVISIONS**

No.	DATE	BY	DESCRIPTION

**NOTES**

**REFERENCE DRAWINGS**

PLAN No.	DESCRIPTION

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

CLIENT: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT ISSUED ON \_\_\_\_\_

	CLIENT
	<b>GA-SEGONYANA LOCAL MUNICIPALITY</b>

PROJECT

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

IMPLEMENTING AGENT:

**GA-SEGONYANA LM**

DRAWING TITLE

**PROJECT DRAWING INDEX**

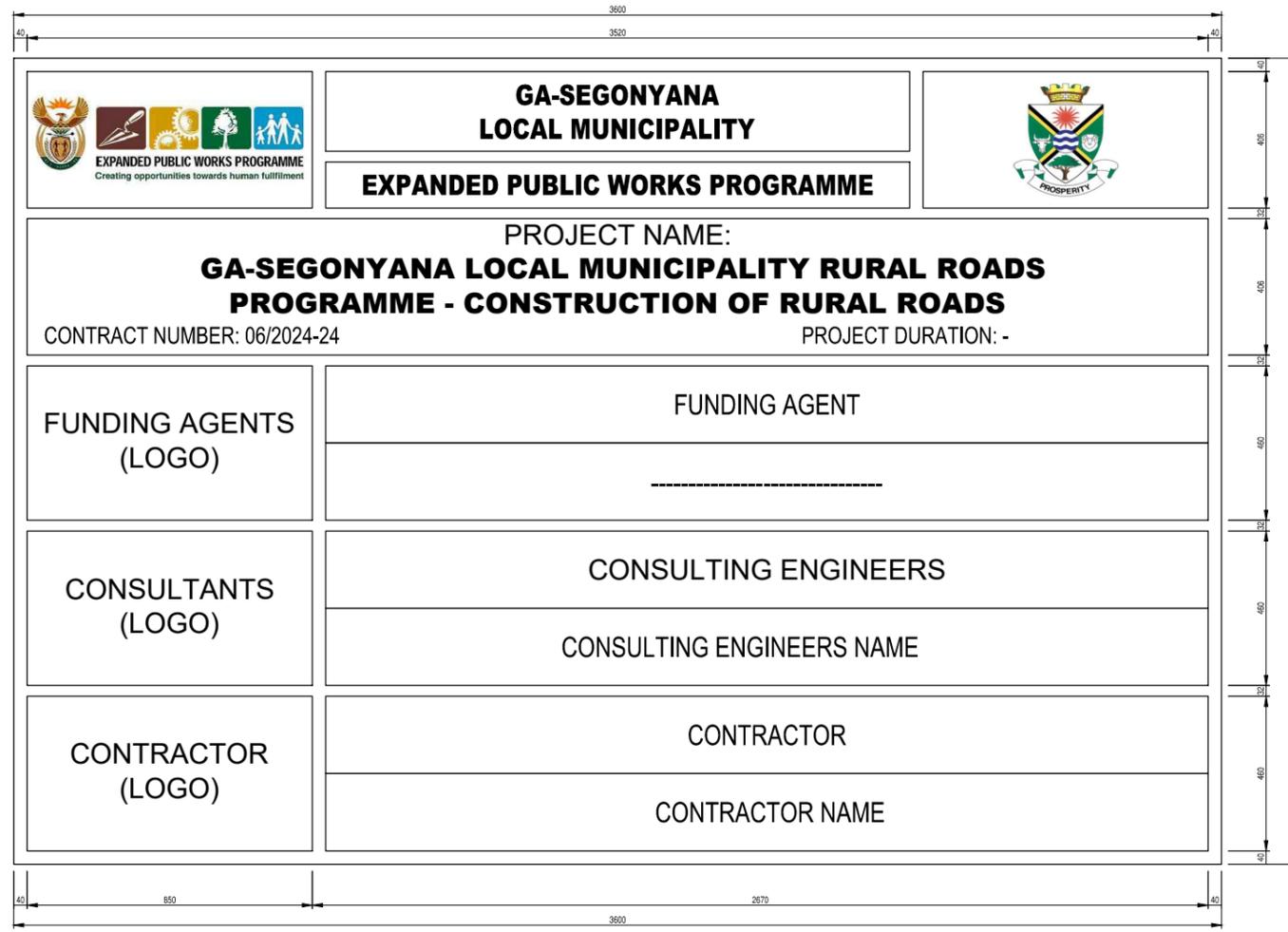
DESIGN	DATE	DRAWN	DATE
	APRIL 2024		APRIL 2024
SURVEYED	DATE	CHECKED	DATE
			APRIL 2024

SCALE                      NTS

DRAWING No.

**2024-03-G/A/001**

REVISION No.							
1.0							



**GA-SEGONYANA  
LOCAL MUNICIPALITY**

**EXPANDED PUBLIC WORKS PROGRAMME**

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

CONTRACT NUMBER: 06/2024-24

PROJECT DURATION: -

FUNDING AGENTS  
(LOGO)

FUNDING AGENT

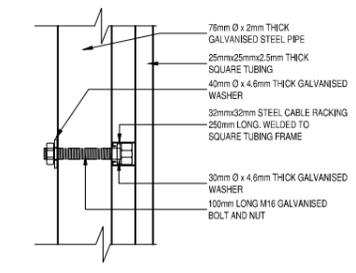
CONSULTANTS  
(LOGO)

CONSULTING ENGINEERS  
CONSULTING ENGINEERS NAME

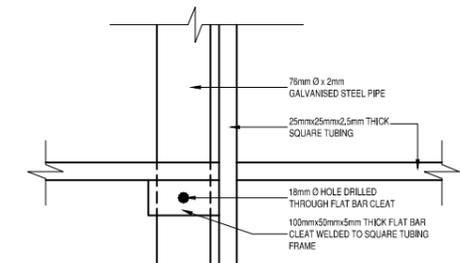
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CONTRACTOR  
CONTRACTOR NAME

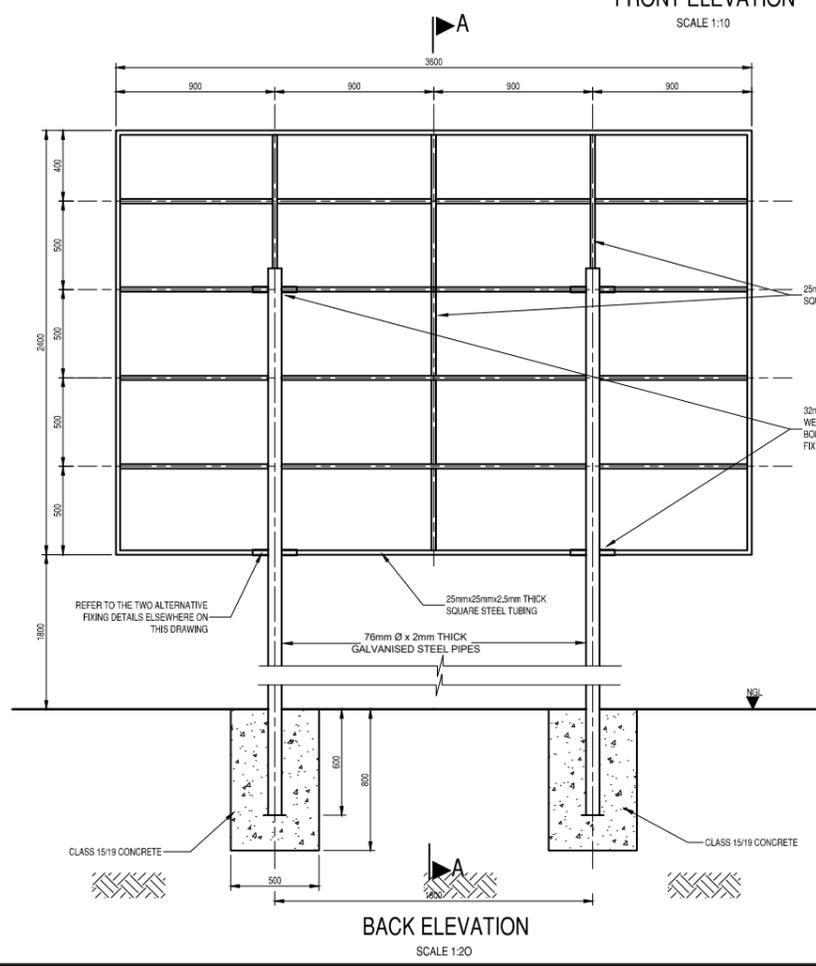
FRONT ELEVATION  
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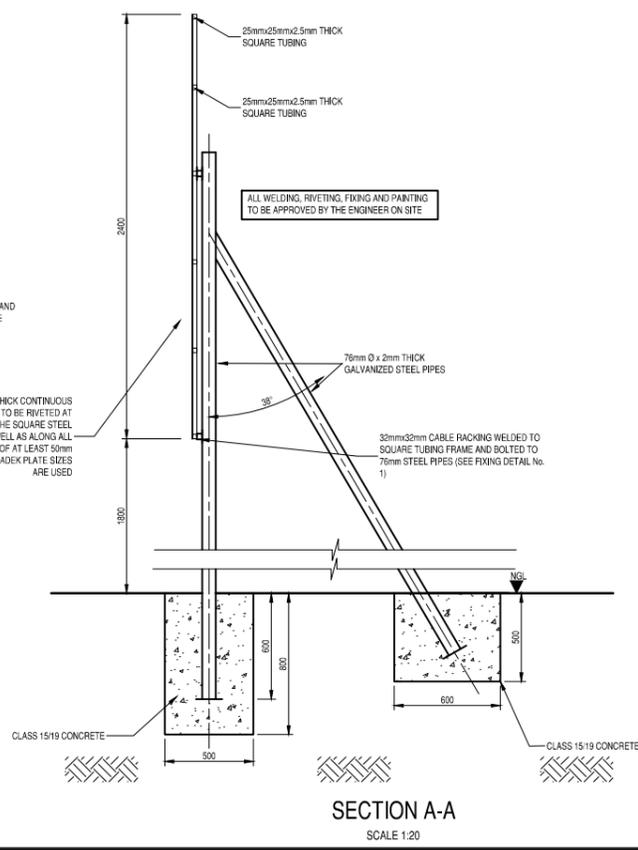
FIXING DETAIL No. 1  
SCALE 1:5



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



BACK ELEVATION  
SCALE 1:20



SECTION A-A  
SCALE 1:20

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 No.	DESCRIPTION

APPROVED:  
ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_  
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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 2024		APRIL 2024
SURVEYED	DATE	CHECKED	DATE
			APRIL 2024

SCALE as shown

DRAWING No.  
**2024-03-G/D/001**

REVISION No.					
1.0					



NORTH WEST

JOE MOROLONG

JOHN TAOLE GAETSEWE  
DISTRICT MUNICIPALITY

NALEDI

VRYBURG

SCHWEIZER

Mar

GAMAGARA

KURUMAN

GREATER TAUNG

TAUNG

Lekv

HAIS

**GA-SEGONYANA  
LOCAL MUNICIPALITY**

DIBENG

KATHU

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**

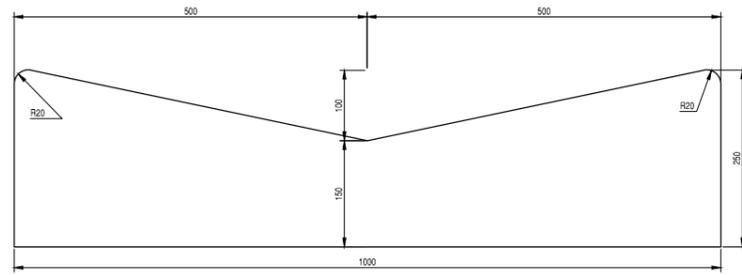
PROJECT  
**GA-SEGONYANA LOCAL MUNICIPALITY RURAL  
ROADS PROGRAMME - CONSTRUCTION OF  
RURAL ROADS**

DRAWING TITLE  
**REGIONAL LOCALITY MAP**

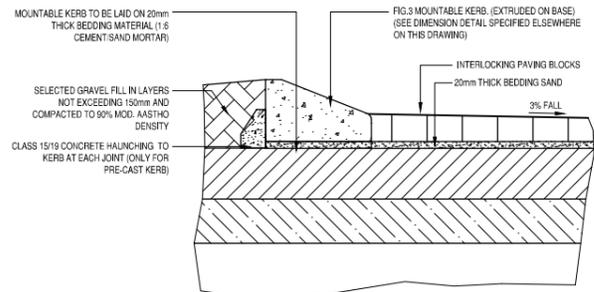
PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION

SCALE: NTS

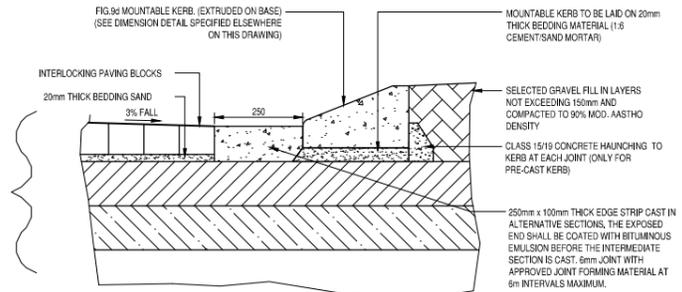
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SURVEYED	DATE	CHECKED	DATE
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DRAWING No. 2024-03-G/P/001			
REVISION No.			
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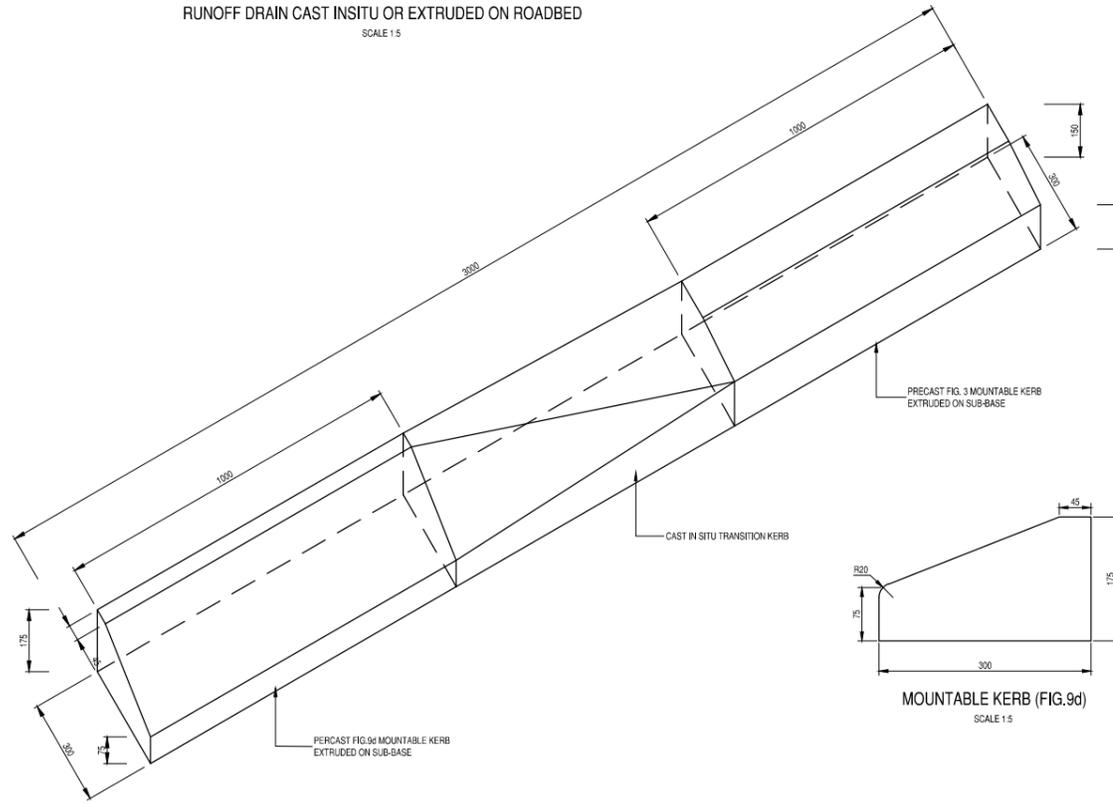
RUNOFF DRAIN CAST INSITU OR EXTRUDED ON ROADBED  
SCALE 1:5



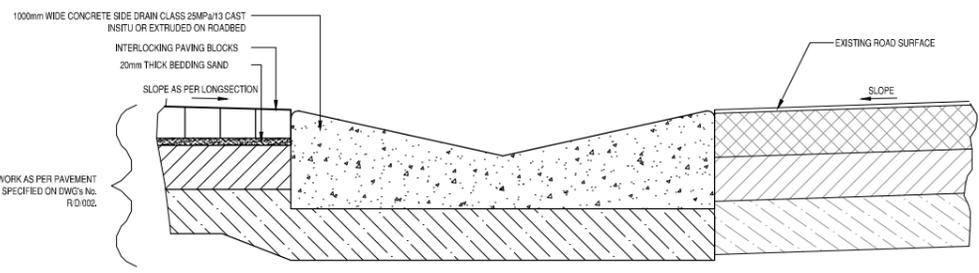
TYPICAL SECTION THROUGH FIG. 3d MOUNTABLE KERB FOR CROSS-FALL SURFACE  
SCALE 1:10



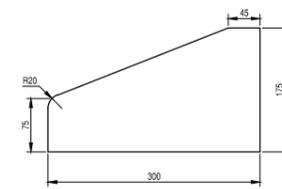
TYPICAL SECTION THROUGH FIG. 9d MOUNTABLE KERB  
SCALE 1:10



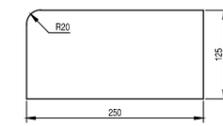
TRANSITION FROM MOUNTABLE FIG. 9d KERB TO MOUNTABLE FIG. 3 KERB  
SCALE 1:10



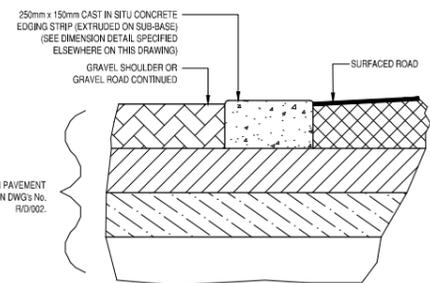
TYPICAL RUNOFF DRAIN SECTION AT INTERSECTION CONNECTION  
SCALE 1:10



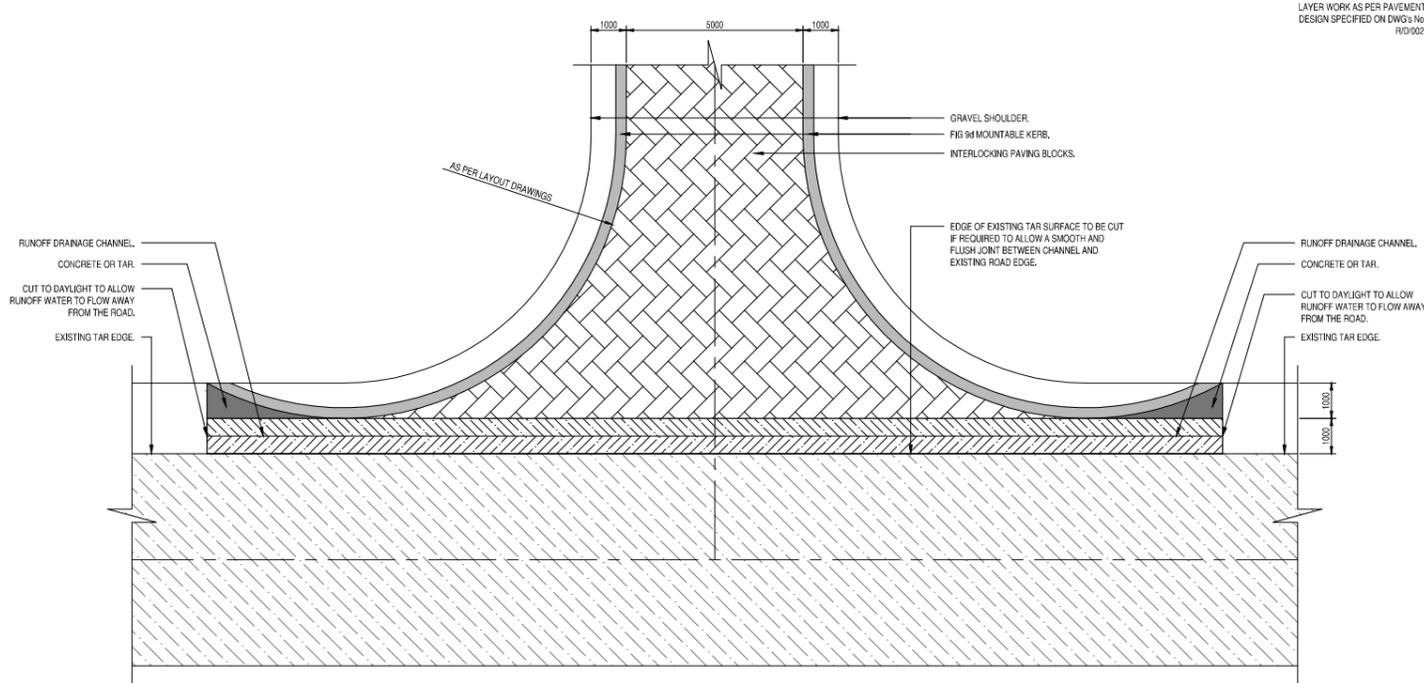
MOUNTABLE KERB (FIG. 9d)  
SCALE 1:5



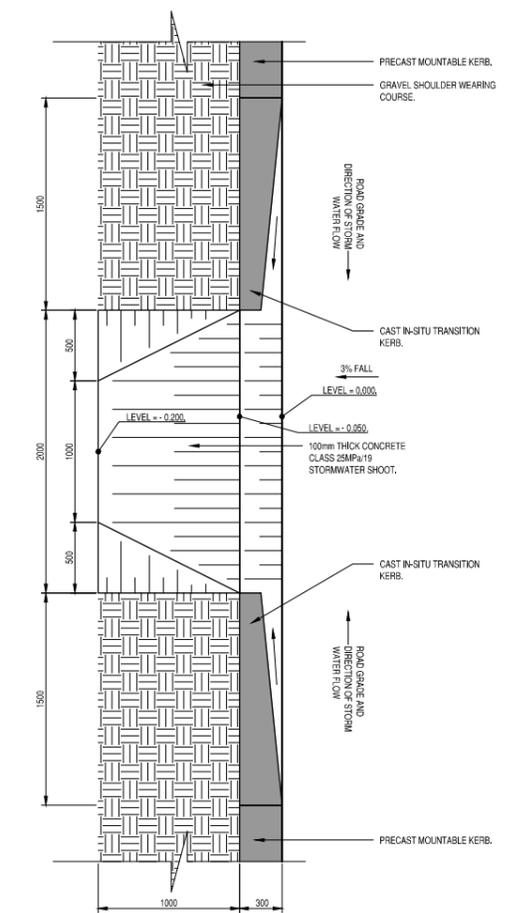
EDGE KERB (FIG. 13)  
SCALE 1:5



TYPICAL SECTION THROUGH EDGING KERB  
SCALE 1:10



TYPICAL BELLMOUTH DETAIL  
SCALE 1:100



TYPICAL STORM WATER KERB OUTLET DETAIL  
SCALE 1:25

REVISIONS				
No.	DATE	BY	DESCRIPTION	

- NOTES**
- ALL EXTRUDED CONCRETE KERBING AND EDGE STRIPS SHALL BE CLASS 25/13 CONCRETE.
  - FIGURE 8 MOUNTABLE KERB TO BE CONSTRUCTED ON THE DRAINAGE SIDE (LOW LEG) OF ALL THE SURFACED CROSSFALL ROADS, UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
  - EDGING STRIP TO BE CONSTRUCTED ON THE NON DRAINAGE SIDE (HIGHER LEG) OF ALL THE SURFACED CROSSFALL ROADS UNLESS OTHERWISE SPECIFIED OR INDICATED ON THE LAYOUT DRAWINGS.
  - EDGING STRIP TO BE CONSTRUCTED ALONG THE TOTAL LENGTH OF THE BELLMOUTH OPENING AT ALL INTERSECTIONS WITH THE SURFACED ROADS AS INDICATED ON THE LAYOUT DRAWINGS.
  - PRIOR TO THE CONSTRUCTION OF ANY EXTRUDED KERBING OR EDGE STRIP AN APPROPRIATELY CERTIFIED LABORATORY TESTED DESIGN MIX SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL.
  - THE STRENGTH OF ALL PRE-CAST CONCRETE KERBING SHALL BE IN TERMS OF SABS 927.

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**

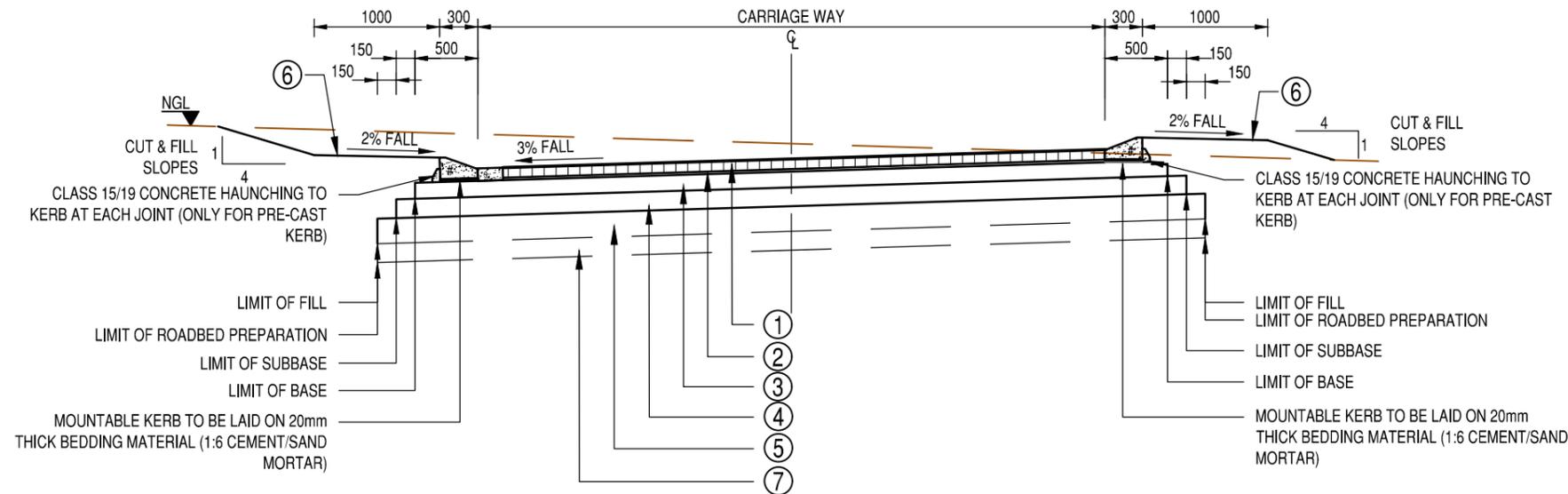
DRAWING TITLE  
**TYPICAL KERBING DETAILS**

DESIGN	DATE	DRAWN	DATE
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SURVEYED	DATE	CHECKED	DATE
			APRIL 2024

SCALE as shown

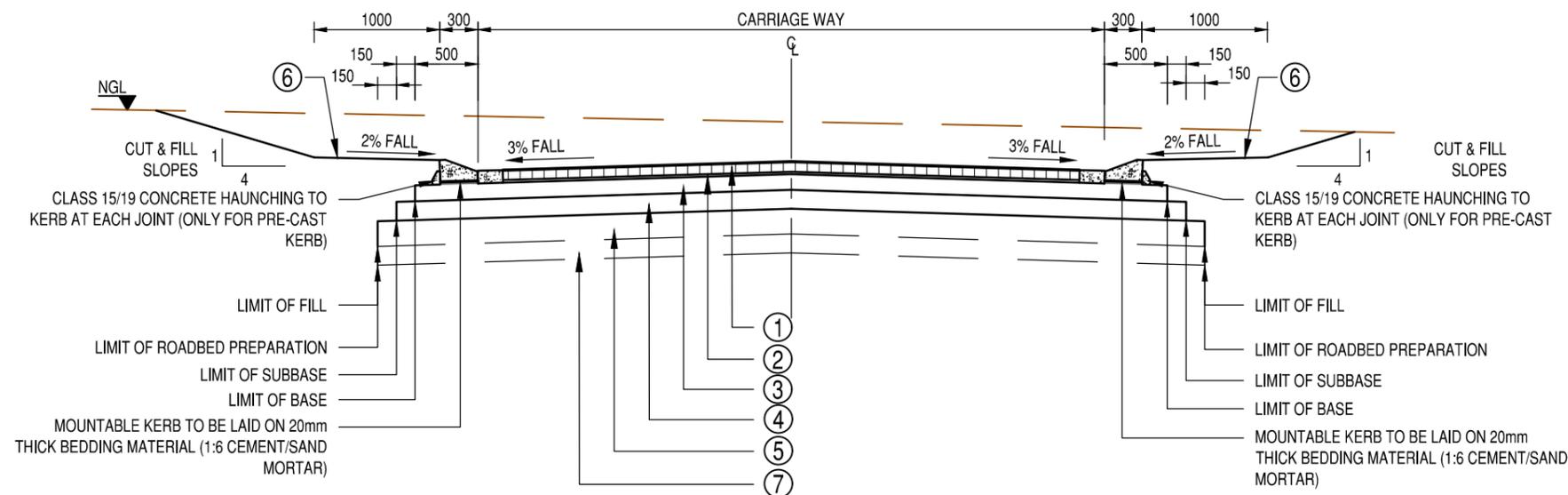
DRAWING No.  
**2024-03-R/D/001**

REVISION No.				
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**TYPICAL PAVEMENT DESIGN DETAIL  
CROSS-FALL ROAD**

SCALE 1:50



**TYPICAL PAVEMENT DESIGN DETAIL  
CAMBER ROAD**

SCALE 1:50

- NOTE:
- 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.
  - 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.
  - 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.
  - 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:
- REQUIREMENTS ARE GIVEN IN THE FOLLOWING ORDER:  
LAYER THICKNESS/MATERIAL/CBR AND  
MIN COMPACTION/MIN. GM/MAX. PI
  - MIN. UNCONFINED COMPRESSIVE STRENGTH (UCS) IS SHOWN IN MPa.
  - MIN. DENSITY IS GIVEN AS % OF MAX MODIFIED AASHTO DENSITY.
  - SG = STABILIZED GRAVEL  
NG = NATURAL GRAVEL  
IS = IN SITU SOIL  
PI = PLASTICITY INDEX  
GM = GRADING MODULES  
SBP = SHOULDER BREAK POINT
  - # FIGURE 9d MOUNTABLE CONCRETE KERB (CLASS 25/13) EXTRUDED ON BASE  
\* FIGURE 3 MOUNTABLE CONCRETE KERB (CLASS 25/13) EXTRUDED ON SUBBASE  
§ 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<br>SHAPE S-A (G-BLOCKS), CLASS 25, 60mm THICK  |
| ② | RIVER SAND<br>20 / RIVER SAND<br>IMPORTED FROM COMMERCIAL SOURCE  |
| ③ | BASE<br>125mm C4 MATERIAL COMPACTED TO 98% MOD AASHTO DENSITY.  |
| ④ | SUBBASE<br>150mm G6 MATERIAL COMPACTED TO 95% MOD AASHTO DENSITY  |
| ⑤ | ROADBED PREPARATION (REFER TO NOTES)<br>VIBRATORY OR PAD FOOT ROLLING (NUMBER OF PASSES TO BE DETERMINED BY ENGINEER ON SITE)<br>OR<br>RIP SCARIFY AND RE-COMPACT 150AS@90% |
| ⑥ | SHOULDER WEARING COURSE<br>CUT TO FILL FROM ROAD FOR ACCOMMODATION OF TRAFFIC WHERE REQUIRED  |
| ⑦ | FILL - ONLY WHERE REQUIRED<br>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:	
APPROVED:	
CLIENT:	
DATE:	

REFERENCE DRAWINGS	
PLAN Nr.	DESCRIPTION


CLIENT  
**GA-SEGONYANA LOCAL MUNICIPALITY**

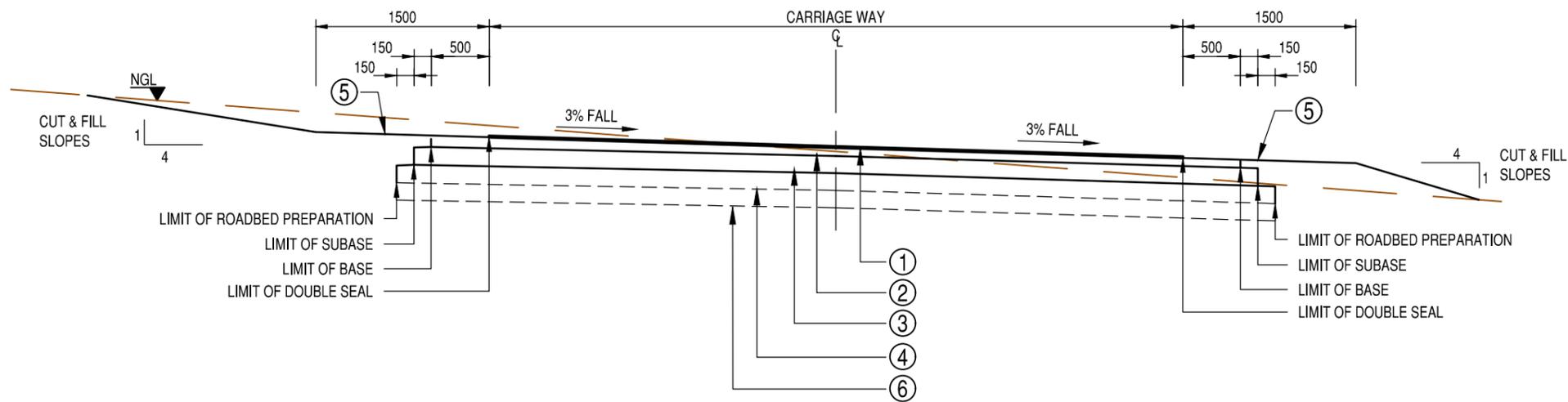
IMPLEMENTING AGENT  
**GA-SEGONYANA LOCAL MUNICIPALITY**

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)**

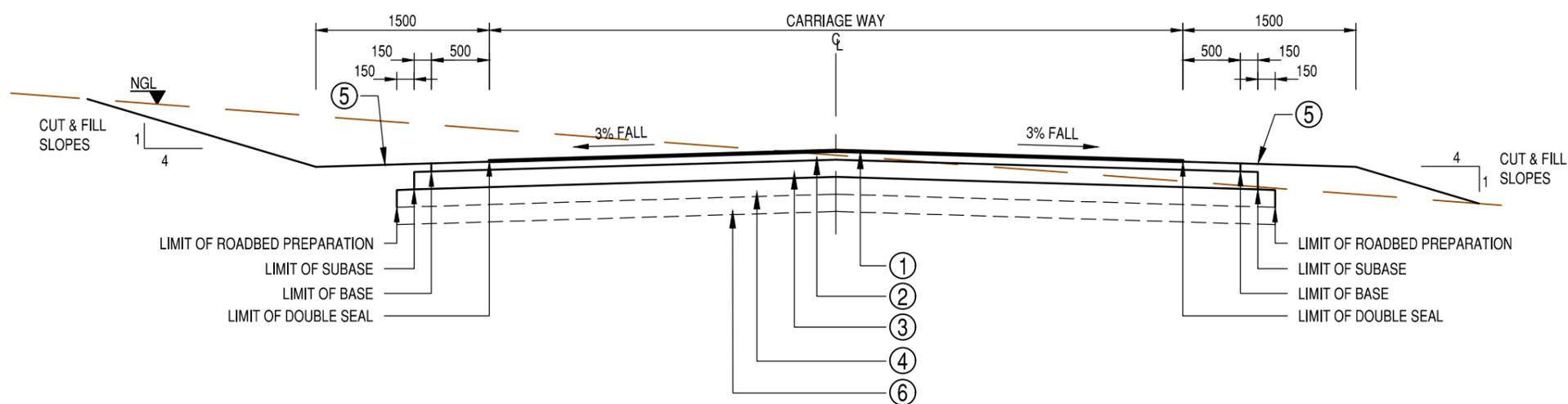
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REVISIONS			
No.	DATE	BY	DESCRIPTION
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DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE
DRAWING No. 2024-03-R/D/002			
REVISION No.			
1.0			



**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. GMMAX. 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

- |   |  |
|---|--|
| ① | DOUBLE SEAL 13.2/6.7 USING 80/100 PENETRATION GRADE BITUMEN  |
| ② | BASE 125mm C4 MATERIAL COMPACTED TO 98% MOD AASHTO DENSITY.  |
| ③ | SUBBASE 150mm G6 MATERIAL COMPACTED TO 95% MOD AASHTO DENSITY  |
| ④ | ROADBED PREPARATION (REFER TO NOTES) VIBRATORY OR PAD FOOT ROLLING (NUMBER OF PASSES TO BE DETERMINED BY ENGINEER ON SITE) OR RIP SCARIFY AND RECOMPACT 150/IS@90% |
| ⑤ | SHOULDER WEARING COURSE CUT TO FILL FROM ROAD FOR ACCOMMODATION OF TRAFFIC WHERE REQUIRED.   |
| ⑥ | 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  
ENGINEER: \_\_\_\_\_  
DATE: \_\_\_\_\_  
  
APPROVED: \_\_\_\_\_  
CLIENT: \_\_\_\_\_  
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 (BITUMEN FINISH)**

PRINT ISSUED ON

REVISIONS			
No.	DATE	BY	DESCRIPTION

SCALE: 1:50

DESIGN	DATE	DRAWN	DATE
-	-	-	-
SURVEYED	DATE	CHECKED	DATE
-	-	-	APR 2024
<b>DRAWING No. 2024-03-R/D/003</b>			
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 SEMIMATT	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 SEMIMATT	WHITE RETROREFLECTIVE
5.	WARNING ROAD LAYOUT	W101 & W102 & W103	CROSSROAD JUNCTION	X X X			+SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMIMATT	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 ENDROAD CLOSED CHEVRON	X			ARROWS	NO BORDER	ARROWS: RED RETROREFLECTIVE	WHITE RETROREFLECTIVE
9.	INFORMATION	#14	SHARP RIGHT CURVE SHARP LEFT CURVE	X X			CURVE-SYMBOL	TRIANGLE: RED RETROREFLECTIVE	BLACK SEMIMATT	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 No.	DESCRIPTION

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 ENGINEER: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CLIENT: \_\_\_\_\_

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

IMPLEMENTING AGENT:  
**GA-SEGONYANA LM**

DRAWING TITLE  
**ROAD SIGNAGE SCHEDULE AND DETAILS**

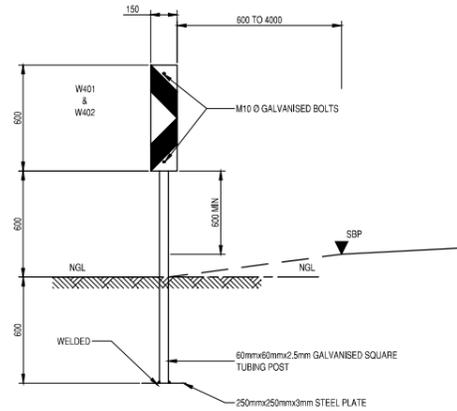
DESIGN	DATE	DRAWN	DATE
-	APRIL 2024	-	APRIL 2024
SURVEYED	DATE	CHECKED	DATE
-	-	-	APRIL 2024

SCALE: 1:25

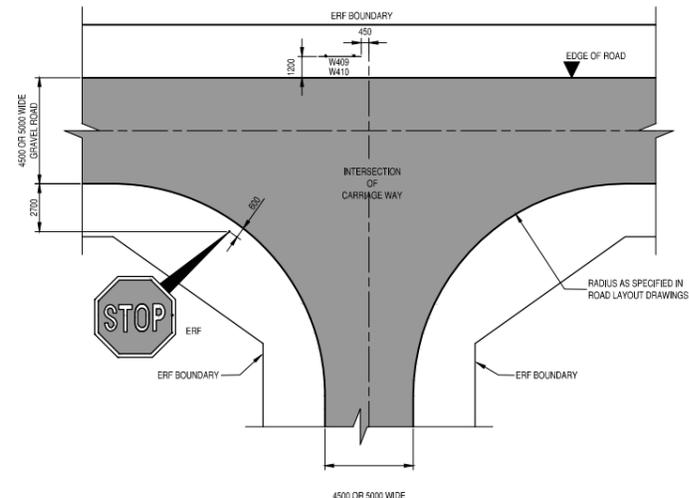
DRAWING No.  
**2024-03-R/D/004**

REVISION No.					
1.0					

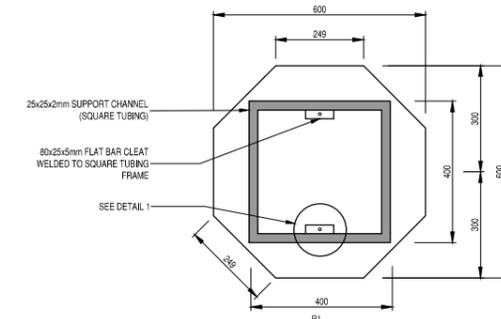
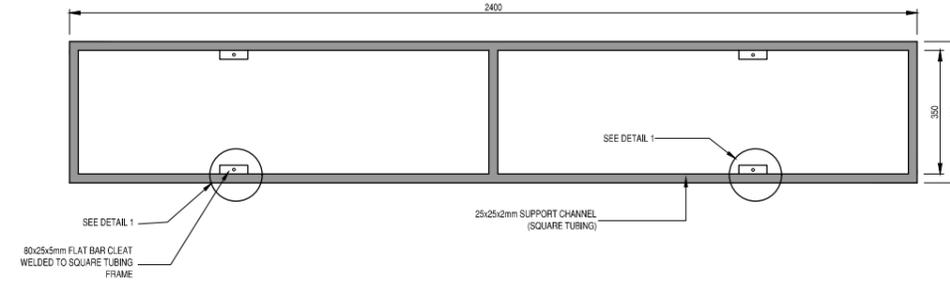




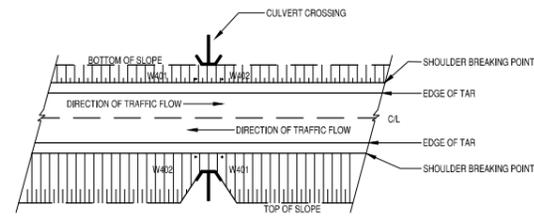
FRONT ELEVATION W401  
SCALE 1:20



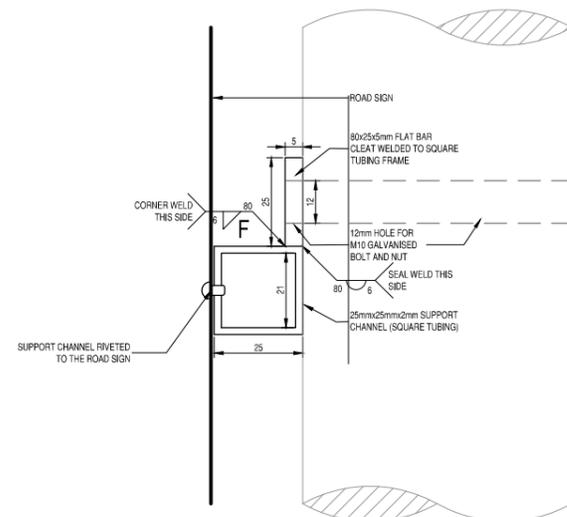
CHEVRON POSITION AT INTERSECTION  
SCALE 1:200



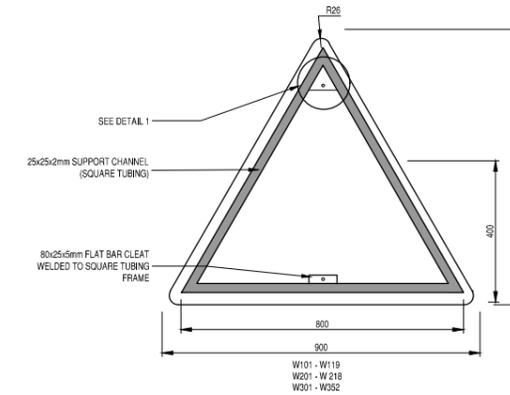
CONTROL SIGNS



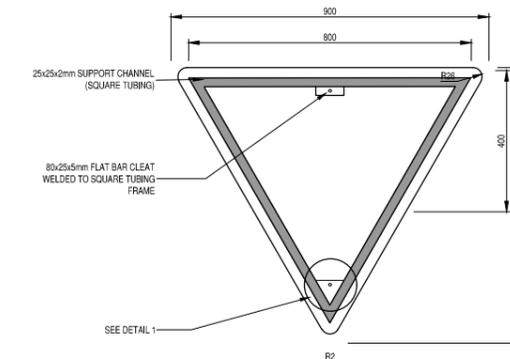
SIGN AT CULVERT  
NTS



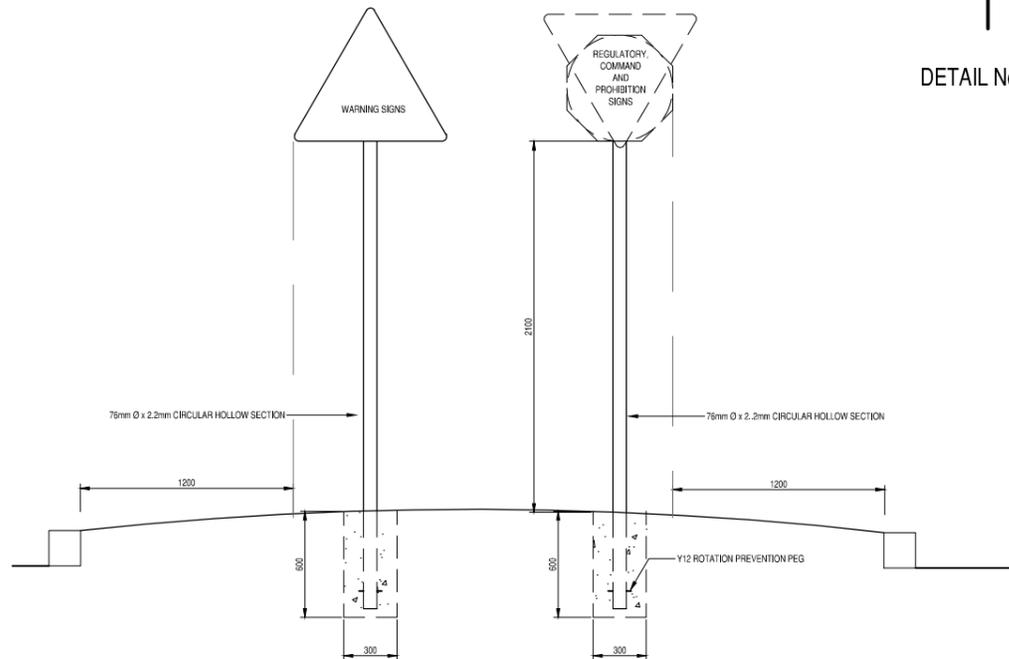
DETAIL No. 1 SECTIONAL ELEVATION  
SCALE 1:1



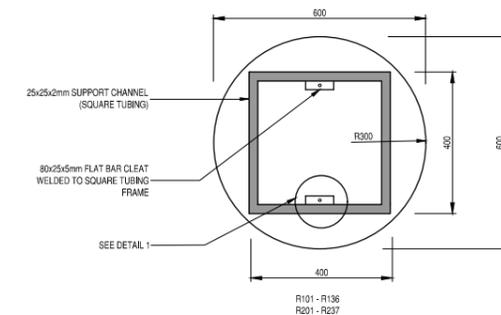
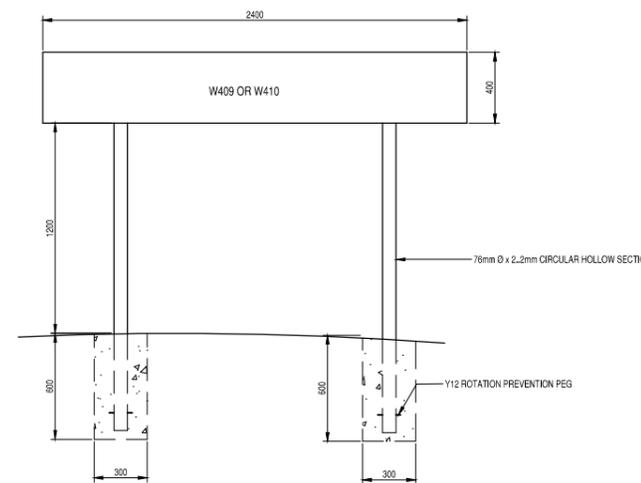
ROAD LAYOUT AND SYMBOLIC SIGNS



CONTROL SIGN



POSITIONING DETAILS  
SCALE 1:20



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:	DATE:
ENGINEER:	DATE:
APPROVED:	DATE:
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**

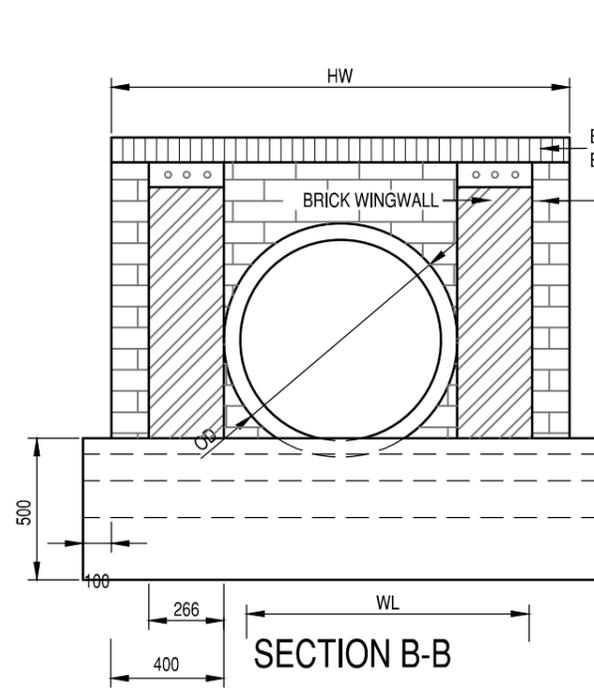
DRAWING TITLE  
**POSITION OF SUPPORT BRACKETS AND INSTALLATION DETAILS OF ROAD SIGNS**

DESIGN	DATE	DRAWN	DATE
	APRIL 2024		APRIL 2024
SURVEYED	DATE	CHECKED	DATE
			APRIL 2024

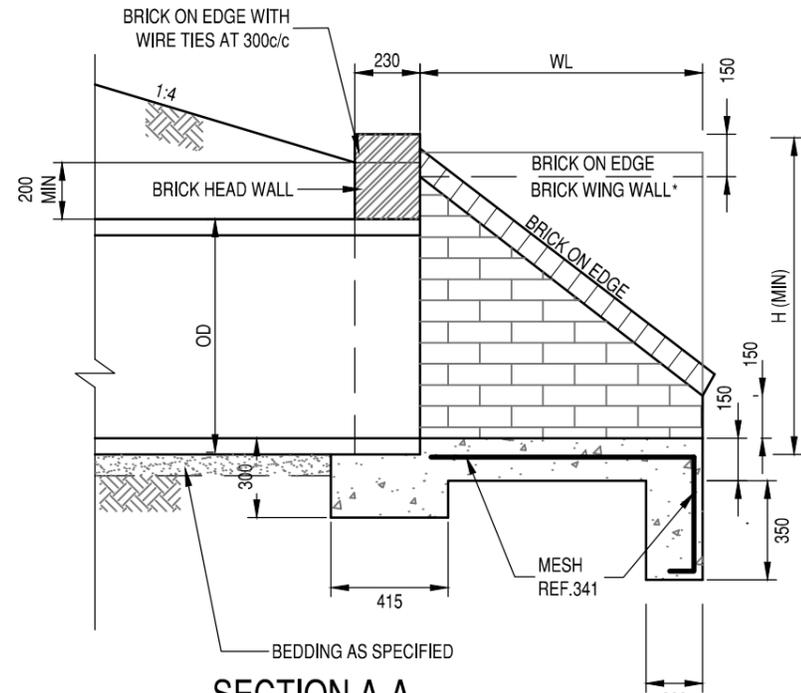
SCALE as shown

DRAWING No.  
**2024-03-R/D/006**

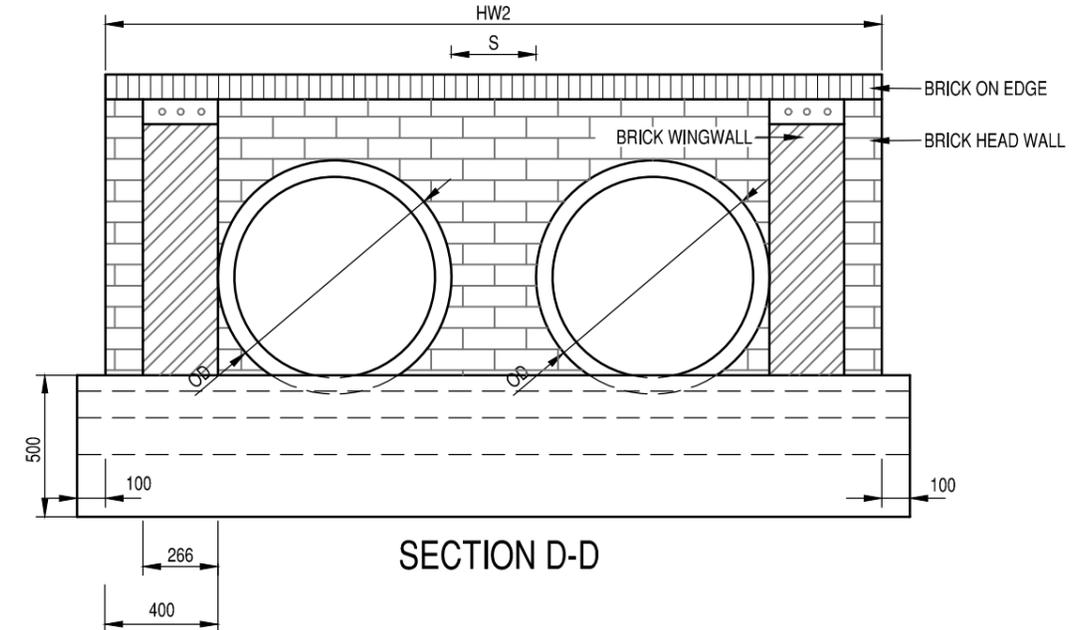
REVISION No.					
1.0					



SECTION B-B

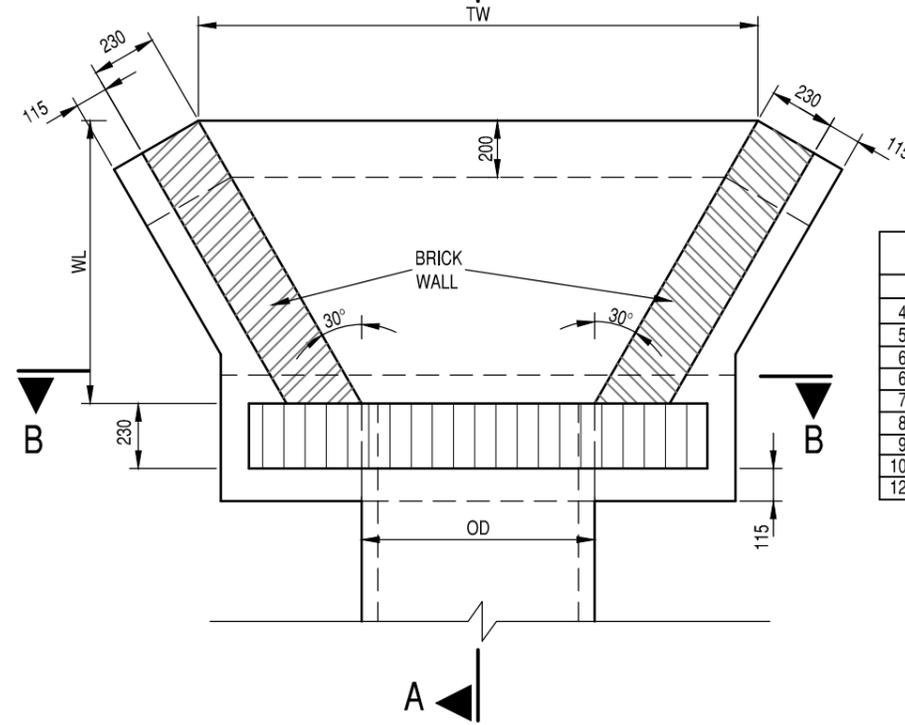


SECTION A-A



SECTION D-D

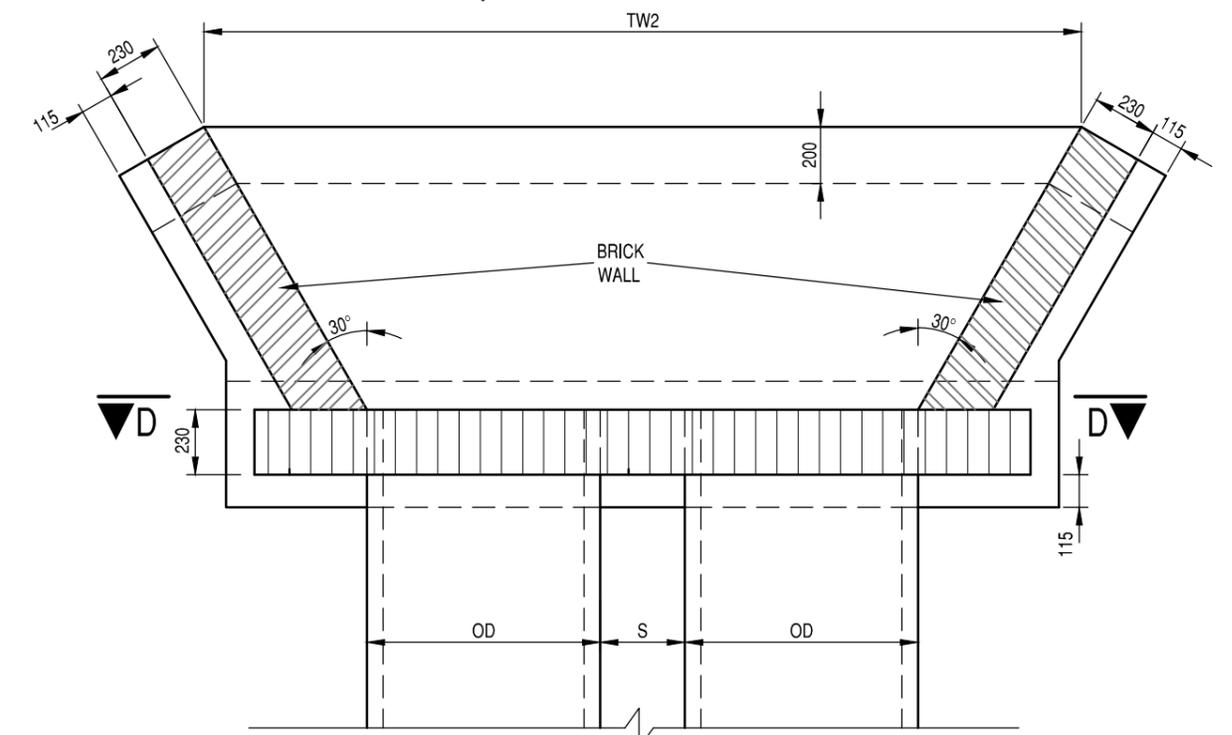
NOTE:  
MESH LAP LENGTH = 2 ROWS.



TYPICAL PIPE CULVERT DETAILS

\*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



TYPICAL MULTIPLE PIPE CULVERT

NOTES  
ENGINEER: \_\_\_\_\_  
DATE: \_\_\_\_\_  
  
APPROVED: \_\_\_\_\_  
CLIENT: \_\_\_\_\_  
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 PIPE CULVERT END-STRUCTURE DETAILS**

PRINT ISSUED ON			
REVISIONS			
No.	DATE	BY	DESCRIPTION

SCALE: 1:25

DESIGN	DATE	DRAWN	DATE
SURVEYED	DATE	CHECKED	DATE

DRAWING No. **2024-03-R/D/007**  
REVISION No. \_\_\_\_\_  
1.0