

EROSION PROTECTION AT STORMWATER OUTLET STRUCTURE

GUIDELINE FLOW VELOCITY (m/s)	PROTECTION MEASURE
$V < 1.5$	FIELD GRASS
$1.5 V < 3.5$	GRASS SODS
$3.5 < V < 6.5$	GABION MATRESS (300mm)
$6.58 < V < 8$	GABIONS (500mm MIN)

NOTES:


- GABION BOXES AND RENO MATTRESSES (MACCAFERRI SA OR SIMILAR APPROVED) DIMENSIONS, SPECIFICATIONS AND ASSEMBLY DETAILS AS PER MANUFACTURERS REQUIREMENTS.
- FOR GRASS, STONE PITCHING, CONCRETE AND STILLING BASIN EROSION PROTECTIVE MEASURES REFER TO CHAPTER 7 OF THE ROAD DRAINAGE MANUAL, 6TH EDITION, 2013.

LEGEND:

ID: INSIDE DIAMETER OF PIPE CULVERT
H: HEIGHT OF PORTAL CULVERT
DHFL: DESIGN HIGH FLOOD LEVEL
TWL: TAIL WATER LEVEL

FOR TENDER

(FOR TENDER PURPOSES ONLY)

				CONSTRUCTION RECORD (AS-BUILT)		DESIGNED BY		CONSULTANT APPROVAL		HEAD OFFICE		SANRAL		EASTERN REGION		ACCEPTANCE		PROJECT DESCRIPTION		PROJECT NUMBER		N.002-300-2020/1					
				WORKS CONTRACT ENGINEER		NAME		NAME		48 Tambotie Avenue				58 Van Eck Place		THIS ACCEPTANCE IS FOR PROCEDURAL AND ADMINISTRATIVE REVIEW PURPOSES ONLY AND DOES NOT ATTRACT LEGAL LIABILITY OR LIABILITY OF ANY KIND FROM WHATEVER CAUSE OR HOWEVER ARISING		THE CONSTRUCTION OF PAVEMENT AND SETTLEMENT REPAIRS ON NATIONAL ROUTE 2, SECTION 30 FROM BUSHVELD RETREAT FARM (km47.0) TO HLUHLUWE INTERCHANGE (km 55.0)		DRAWING LOCATION DATA		START		END			
				Prof. Reg. No.		Prof. Reg. No.		Pretoria		Pietermaritzburg				SECTION 30												SECTION 30	
				Date		Date		0184		3201				km 47.0												km 55.0	
				SANRAL PROJECT MANAGER		NAME		NAME		PO Box 415		PO Box 100410		ROAD SURFACE DRAINAGE		ROADWORKS: DRAINAGE											
						Prof. Reg. No.		Prof. Reg. No.		Pretoria 0001		Scottsville		STONE PITCHING AND GABIONS		for the SA NATIONAL ROADS AGENCY SOC LTD.		BRIDGE/STRUCTURE No.		N/A							
						Date		Date		South Africa		3209		SHEET 3 OF 3				CONSULTANT DRAWING No.		TP2113-T-082							
										Tel: (033) 392 8100		Tel: (033) 392 8100						SCALE : N. T. S		SHEET 23		OF 26					