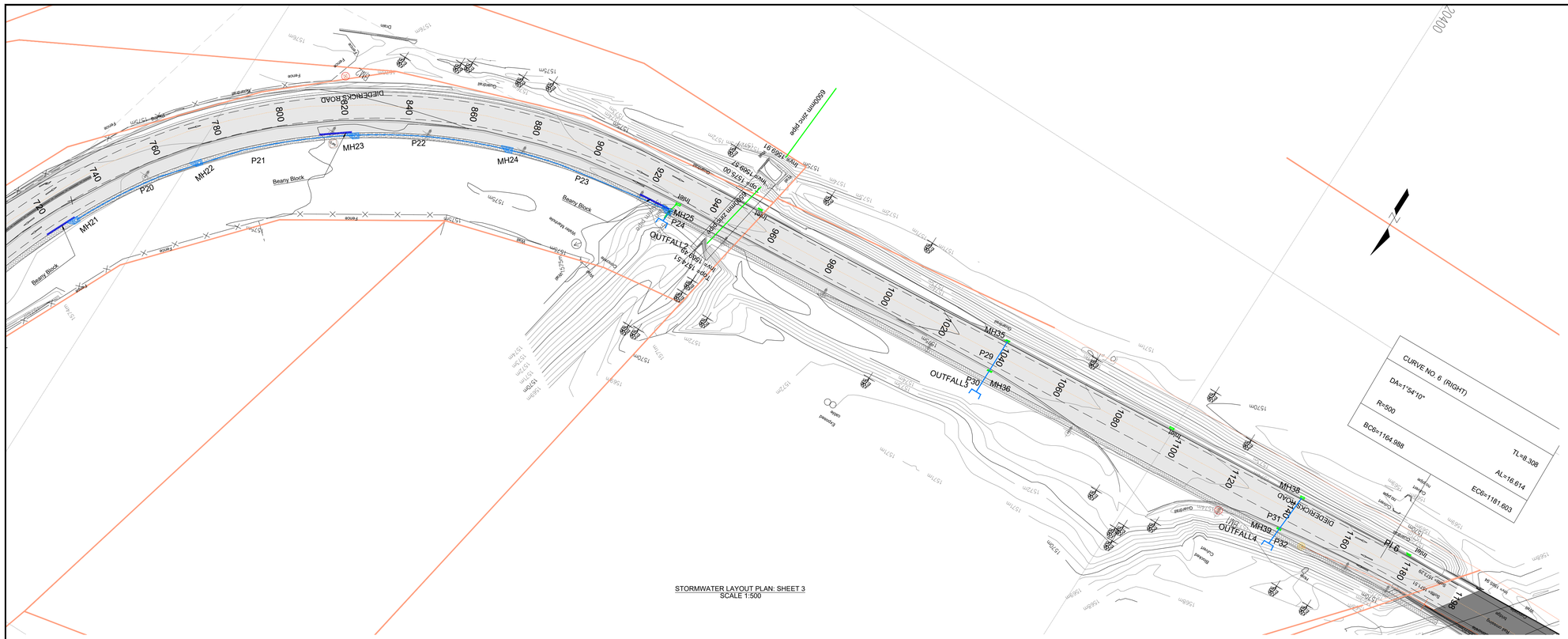
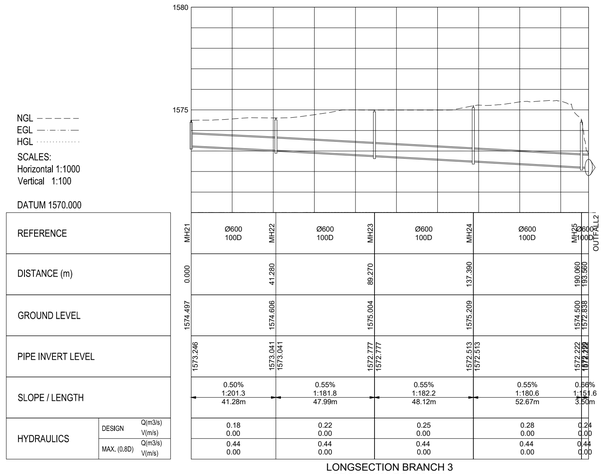


STORMWATER LAYOUT PLAN: SHEET 3
SCALE 1:500

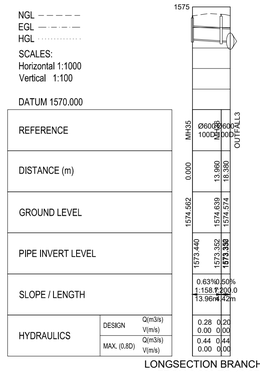
PIPE LIST-Diedericks Road					
PIPE NAME	START INVERT LEVEL	END INVERT LEVEL	3D LENGTH TO INSIDE EDGES	SLOPE	DIAMETER AND CLASS
P20	1573.246	1573.041	40.284	0.497%	600mm Class 100D
P21	1573.041	1572.777	46.998	0.550%	600mm Class 100D
P22	1572.777	1572.513	47.128	0.549%	600mm Class 100D
P23	1572.513	1572.222	51.679	0.554%	600mm Class 100D
P24	1572.222	1572.199	2.507	0.659%	600mm Class 100D
P29	1573.440	1573.352	12.962	0.630%	600mm Class 100D
P30	1573.352	1573.330	3.421	0.500%	600mm Class 100D
P31	1572.404	1572.330	12.426	0.555%	600mm Class 100D
P32	1572.330	1572.249	2.636	2.221%	600mm Class 100D

STRUCTURE LIST-Diedericks Road						
STRUCTURE NAME	Y	X	RIM ELEVATION	SUMP ELEVATION SUMP DEPTH	INVERT ELEVATION	MATERIAL
MH21	-20 719.026	2 863 916.231	1574.497	1573.246 1.250	P20-INV OUT 1573.246	Concrete
MH22	-20 696.963	2 863 951.121	1574.606	1573.041 1.564	P20-INV IN 1573.041 P21-INV OUT 1573.041	Concrete Concrete
MH23	-20 661.255	2 863 983.188	1575.004	1572.777 2.227	P21-INV IN 1572.777 P22-INV OUT 1572.777	Concrete Concrete
MH24	-20 618.769	2 864 005.791	1575.209	1572.513 2.696	P22-INV IN 1572.513 P23-INV OUT 1572.513	Concrete Concrete
MH25	-20 567.140	2 864 016.231	1574.500	1572.222 2.278	P23-INV IN 1572.222 P24-INV OUT 1572.222	Concrete Concrete
MH27	-20 787.459	2 863 675.522	1577.114	1575.444 1.671	P25-INV OUT 1575.444	Concrete
MH29	-20 798.509	2 863 574.562	1578.312	1576.930 1.382	P26-INV OUT 1576.930	Concrete
MH31	-20 830.801	2 863 462.279	1579.500	1578.310 1.190	P27-INV OUT 1578.310	Concrete
MH33	-20 889.326	2 863 289.652	1579.504	1578.274 1.230	P28-INV OUT 1578.274	Concrete
MH35	-20 457.781	2 864 038.482	1574.562	1573.440 1.123	P29-INV OUT 1573.440	Concrete
MH36	-20 457.621	2 864 024.525	1574.639	1573.352 1.287	P29-INV IN 1573.352 P30-INV OUT 1573.352	Concrete Concrete
MH38	-20 355.432	2 864 046.099	1573.538	1572.404 1.134	P31-INV OUT 1572.404	Concrete
MH39	-20 356.280	2 864 032.704	1573.513	1572.330 1.184	P31-INV IN 1572.330 P32-INV OUT 1572.330	Concrete Concrete
OUTFALL2	-20 567.202	2 864 012.729	1572.941	1572.199 0.742	P24-INV IN 1572.199	Concrete
OUTFALL3	-20 457.587	2 864 020.108	1574.574	1573.330 1.245	P30-INV IN 1573.330	Concrete
OUTFALL4	-20 356.498	2 864 029.091	1573.199	1572.249 0.950	P32-INV IN 1572.249	Concrete

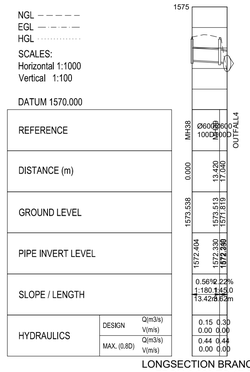
LEGEND	DESCRIPTION
	PROPOSED STORMWATER (600-900)mmØ
	PROPOSED STORMWATER CATCHPIT
	EXISTING MANHOLES AND STORMWATER
	ROAD BANKS
	CADASTRAL BOUNDARIES
	PROPORSED HEADWALL



LONGSECTION BRANCH 3
FROM 0.000 TO 193.574



LONGSECTION BRANCH 3.1
FROM 0.000 TO 18.375



LONGSECTION BRANCH 3.2
FROM 0.000 TO 17.042

1. All workmanship to be in accordance with the relevant project specification as included in the contract document.
2. All existing services whether indicated or not, on the drawing are to be treated as live. the contractor is to make the necessary allowances to deal with the services affected by the proposed works in accordance with the various services affected by the proposed work so that the necessary alterations can be made to the drawings without affecting the progress on the works.
3. All levels, dimensions and setting out details to be verified by Consultant and Contractors on site prior to construction.
4. All existing drainage culverts are to be inspected, and any found in unserviceable condition are to be replaced unless shown otherwise.
5. Culvert inverts are to be' decided by Engineer on site unless shown otherwise. Min. cover = 600mm, min. slope = 2%.
6. Pipe culverts are to be laid in class 'c' bedding in accordance with SD 0401 with depressed inlet and headwalls as per SD 0405A and SD 0406. Min dia = 450mm for minor access roads and access bell-mouths, and min dia = 600mm for major road cross drainage.
7. For erosion control stone pitching is recommended at chute outlet and culvert inlets & outlets (5m^2 each).
8. Earth berms are to be constructed at culvert inlets to direct storm-water into culverts where necessary.
9. Rock bolsters are to be placed across the invert of drains susceptible to erosion for every 2m vertical drop .
10. Grassed/Concrete lined V-drains as per SD 0601/3 & 4 are recommended for shallow cuttings of depth less than 5m measured at a point 6m from edge of carriageway. Concrete lined 1 OOOV - drains as per SD 0601/2 are recommended for deep cuttings of depth greater than 5m measured at a point 6m from edge of carriageway.
11. Where surface runoff is toward the road, catch-water banks are to be provided to divert storm-water to major cross drainage structures.
12. The positions of accesses are to be determined in consultation with the local community. Daylighting requirements are to be decided by the Engineer on site. Concrete wedges as per SD 0303 may be used in place of surfaced bell-mouths for accesses serving single residential properties.
13. Guardrails are to be installed in accordance with SD 1101 and SD 1102 where fill embankments exceed 3m in height or where hazardous obstructions cannot be removed. Approach end must be buried type.
14. Existing road signs, services and fencing affected by construction are to be removed/relocated where necessary.
15. Underground service crossings and markers are to be in accordance with SD 1001 - 3.
16. All new road signs and road marking requirements are to conform to the Southern African Development Community Road Traffic Signs Manual (SADC - RTSM).
17. All work is to be carried out in accordance with "COLTO Specifications for Road and Bridge Works for State Road Authorities."
18. All survey and setting out data provided is based on (WGS 84 Lo.31) .
19. New fills and exposed cuttings are to be top-soiled and vegetated immediately after Construction to prevent erosion.

DATE	STATUS	REV	REVISION DESCRIPTION

REFERENCE DRAWING No.	REFERENCE DRAWING TITLE

NOTES:

		SIGNATURE
DESIGNED BY	M.TSHUMA	N/A
DRAWN BY	Z.BIYELA	N/A
DESIGN CHECKED	T.ZUMA	N/A
DRAWING CHECKED	M.TSHUMA	N/A
Pr TECH/ Pr ENGINEER APPROVAL		
NAME	T.ZUMA	SIGNATURE
DATE		PROFESSIONAL REG No. 201170074

ENGINEER:
MAFAHLENI ENGINEERS AND PROJECT MANAGERS
49 Ferreira Street
Nelspruit
1200
DEPARTMENT
CIVIL

CLIENT:
Emalahleni Local Municipality
EMALAHLENI MUNICIPALITY
P.O. Box 3
Emalahleni
1035

PROJECT TITLE
PROPOSED REHABILITATION OF BEATTY & DIEDERICKS

DRAWING TITLE
STORMWATER LAYOUT PLAN AND LONGITUDINAL SECTION: SHEET 3 CH 0.680 - CH 1.198

DRAWING STATUS DESCRIPTION:
D=DEVELOPMENT T=TENDER P=PLANNING
C=CONSTRUCTION A=AS BUILT

SCALE	SHEET	SHEET SIZE
1:500	4OF4	A1

MAFAHLENI ENGINEERS DRAWING NUMBER

ME PROJECT DESCRIPTION	DISCIPLINE	NUMBER	STATUS	REV
EMAL- 2024 - RDS -		013	T	00