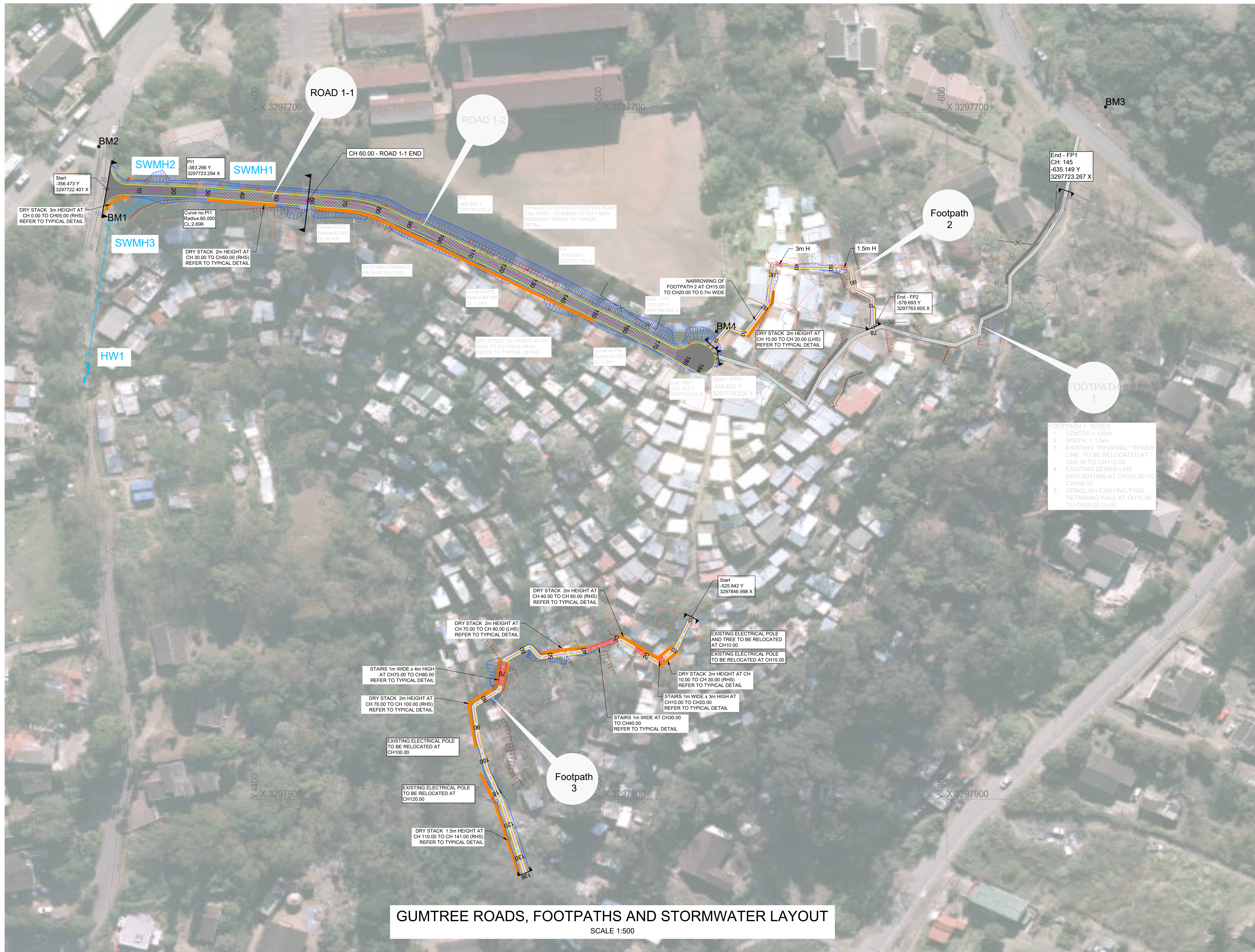
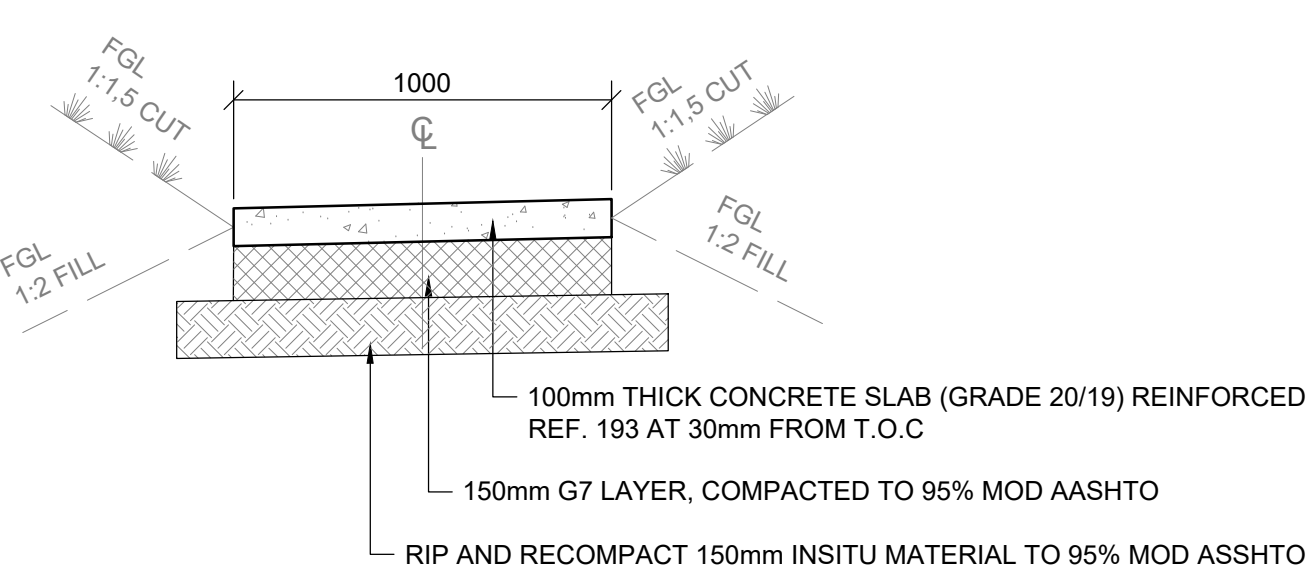
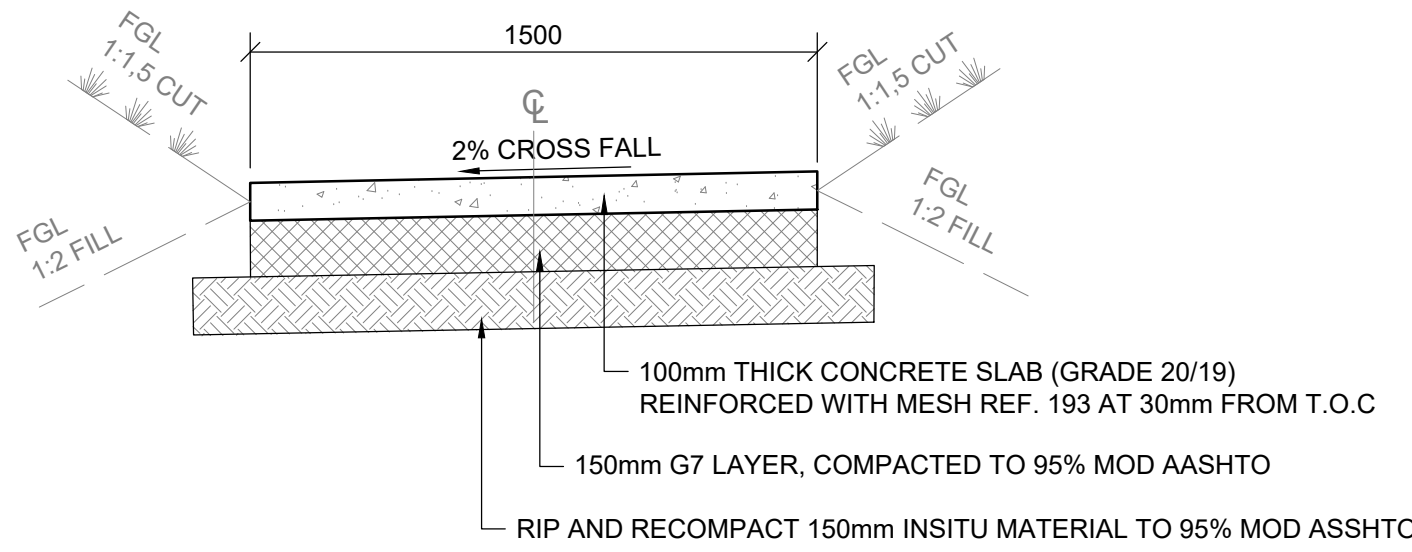




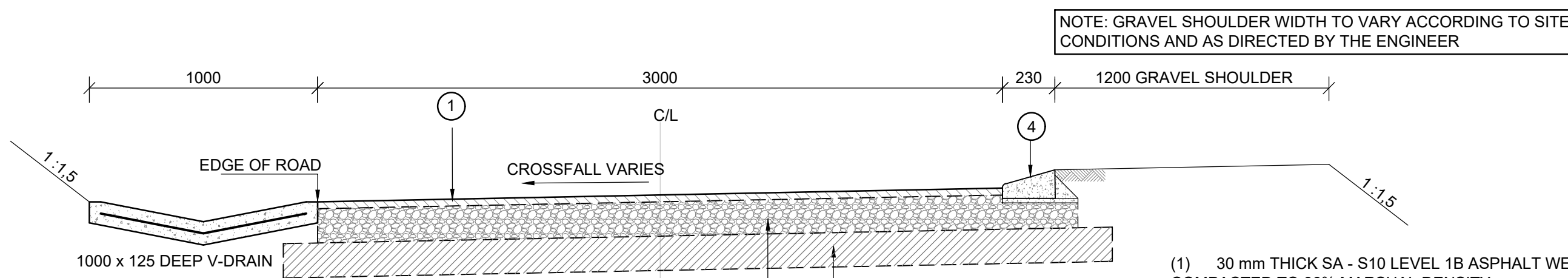
GUMTREE ROADS, FOOTPATHS AND STORMWATER LAYOUT
SCALE 1:500



TYPICAL 1000mm WIDE FOOTPATH CROSS SECTION TYPE B
(ONLY WHERE SPACE IS CONSTRAINED)
SCALE 1 : 20



TYPICAL 1500mm WIDE FOOTPATH CROSS SECTION TYPE A
SCALE 1 : 20



TYPICAL ROAD CROSS SECTION
SCALE 1 : 20

- NOTE: GRAVEL SHOULDER WIDTH TO VARY ACCORDING TO SITE CONDITIONS AND AS DIRECTED BY THE ENGINEER
- 30 mm THICK SA - S10 LEVEL 1B ASPHALT WEARING COURSE COMPACTED TO 96% MARSHAL DENSITY
 - EXCAVATE 150 mm OF INSITU MATERIAL, IMPORT G5 MATERIAL AND COMPACT TO 95% MOD AASHTO
 - RIP AND RECOMPACT 150 mm LAYER TO DN NO. 3.74 - 5.7 DENSITY, TRH 14 CLASSIFICATION FOR G5
 - PRECAST KERB TO SANS 927 (FIG 6)

LEGEND	
Existing Formal/Masonry buildings	[Symbol]
Existing Informal structures	[Symbol]
Existing Fence	[Symbol]
Existing Water Pipe	[Symbol]
Stream / Wet Areas	[Symbol]
Existing Embankment	[Symbol]
Existing Trees	[Symbol]
New Sewer Manhole	[Symbol]
Benchmark	[Symbol]
Powerline Pole	[Symbol]
Electrical Powerline	[Symbol]
Existing Gravel Road	[Symbol]
New Stormwater MHHW Pipe Crossing	[Symbol]
Limit of Construction	[Symbol]
Existing Catchpit / Manhole	[Symbol]
New Footpath	[Symbol]
New Stormwater Outlet	[Symbol]
New Precast Staircase	[Symbol]
New Drystack Retaining Wall	[Symbol]
New Subsoil Drain Pipe	[Symbol]

Footpath 2			
Position	SV	Y-Coord	X-Coord
Start	0	-532.25	3297702.3
BCC1	6.13	-536.27	3297702.60
PI9	6.13	-536.27	3297702.60
ECC1	6.13	-536.27	3297702.60
BCC2	11.59	-541.38	3297704.51
PI1	11.59	-541.38	3297704.51
ECC2	11.59	-541.38	3297704.51
BCC3	22.78	-548.01	3297755.49
PI2	22.78	-548.01	3297755.49
ECC3	22.78	-548.01	3297755.49
BCC4	34.22	-549.58	3297744.16
PI3	34.22	-549.58	3297744.16
ECC4	34.22	-549.58	3297744.16
BCC5	40.73	-556.01	3297745.03
PI4	40.73	-556.01	3297745.03
ECC5	40.73	-556.01	3297745.03
BCC6	50.52	-565.80	3297745.23
PI5	50.52	-565.80	3297745.23
ECC6	50.52	-565.80	3297745.23
BCC7	56.63	-571.91	3297745.27
PI6	56.63	-571.91	3297745.27
ECC7	56.63	-571.91	3297745.27
BCC8	63.04	-573.15	3297751.56
PI8	63.04	-573.15	3297751.56
ECC8	63.04	-573.15	3297751.56
BCC9	68.80	-578.31	3297754.12
PI7	68.80	-578.31	3297754.12
ECC9	68.80	-578.31	3297754.12
PI8	77.96	-578.65	3297763.27

Footpath 3			
Position	SV	Y-Coord	X-Coord
Start	0	-525.64	3297847.00
BCC1	24.96	-538.78	3297723.14
PI1	24.96	-538.78	3297723.14
ECC1	33.93	-587.74	3297723.65
PI6	71.60	-625.30	3297726.59
PI8	71.60	-625.30	3297726.59
ECC2	84.10	-637.32	3297729.76
BCC3	105.96	-657.15	3297738.07
PI8	115.06	-666.30	3297743.23
ECC3	126.16	-675.36	3297747.69
BCC4	160.61	-698.27	3297762.92
PI11	166.81	-511.83	3297765.66
ECC4	173.01	-517.28	3297768.60
PI13	184.41	-527.32	3297774.01

Footpath 3			
Position	SV	Y-Coord	X-Coord
Start	0	-525.64	3297847.00
BCC1	10.11	-521.29	3297856.08
PI1	10.11	-521.29	3297856.08
ECC1	10.11	-521.29	3297856.08
BCC2	15.98	-515.85	3297860.39
PI2	15.98	-515.85	3297860.39
ECC2	15.98	-515.85	3297860.39
BCC3	30.53	-504.25	3297863.39
PI3	30.53	-504.25	3297863.39
ECC3	30.53	-504.25	3297863.39
BCC4	41.24	-494.18	3297857.02
PI4	41.24	-494.18	3297857.02
ECC4	41.24	-494.18	3297857.02
BCC5	54.25	-481.29	3297858.75
PI13	54.25	-481.29	3297858.75
ECC5	54.25	-481.29	3297858.75
BCC6	58.48	-478.59	3297855.49
PI6	58.48	-478.59	3297855.49
ECC6	58.48	-478.59	3297855.49
BCC7	67.13	-471.02	3297859.70
PI6	67.13	-471.02	3297859.70
ECC7	67.13	-471.02	3297859.70
BCC8	75.73	-469.74	3297868.20
PI7	75.73	-469.74	3297868.20
ECC8	75.73	-469.74	3297868.20
BCC9	84.66	-462.13	3297872.87
PI8	84.66	-462.13	3297872.87
ECC9	84.66	-462.13	3297872.87
BCC10	94.37	-463.56	3297882.48
PI9	94.37	-463.56	3297882.48
ECC10	94.37	-463.56	3297882.48
BCC11	104.31	-466.27	3297892.04
PI10	104.31	-466.27	3297892.04
ECC11	104.31	-466.27	3297892.04
BCC12	114.24	-470.47	3297901.04
PI11	114.24	-470.47	3297901.04
ECC12	114.24	-470.47	3297901.04
BCC13	135.75	-477.12	3297921.50
PI12	135.75	-477.12	3297921.50
ECC13	135.75	-477.12	3297921.50

BENCHMARK LIST		SYSTEM WG31	
NAME	Y-Coord	X-Coord	DESCRIPTION
BM1	-355.299	3297728.004	75.511 10MMP ON TAR
BM2	-352.990	3297709.966	77.314 10MMP ON TAR
BM3	-646.216	3297698.468	42.267 NAIL ON TAR
BM4	-532.924	3297763.845	176.889 10MMP ON CONCRETE

Name	Node Type	Y-Coord	X-Coord	Cover	Inlet	Length	Depth	Slope	Type	Size
MH01	Side inlet	-392.78	3297721.80	72.05	71.05	27.35	1.00	1.00 %	1000 Concrete	450 mm
MH02	Blind Manhole	-365.73	3297725.82	73.29	70.78	11.67	2.51	1.00 %	1000 Concrete	450 mm
MH03	Blind Manhole	-356.07	3297732.36	74.14	70.66	38.42	3.48	3.12 %	1000 Concrete	450 mm
HW01	Headwall	-350.21	3297770.33	70.95	69.46	1.49				

NOTES

- GENERAL:
- PROVE ALL SERVICES PRIOR TO CONSTRUCTION.
 - ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE.
 - ALL SETTING OUT TO BE UNDERTAKEN BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
 - ALL SURVEY AND SETTING OUT DATA PROVIDED IS BASED ON (WGS 84).
 - ALL WORK AREAS TO BE REINSTATED (PREMIUM, CONCRETE, ETC.)
 - MUNICIPALITY TO EXECUTE ALL CONNECTIONS INTO MUNICIPAL LINES.
 - UNLESS OTHERWISE AGREED WITH ENGINEER, CONTRACTOR TO SUPPLY ENGINEER WITH RESULTS OF COMPACTION TESTS, AND WHEN APPLICABLE, PERCENTAGE STABILIZATION TESTS ON BACKFILL.
 - ALL WORKS IN ACCORDANCE WITH CITY OF DURBAN SPECIFICATIONS AND SANS 1200.
 - THE ENGINEER REQUIRES 24 HOURS NOTICE FOR ALL INSPECTIONS.

MATERIAL COMPLIANCE TESTING:

- RESULTS OF COMPACTION AND CBR TESTS ON INSITU SUB-BASE MATERIAL, AND FILLED SUB-BASE MATERIAL MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE THE UPPER LAYER WORKS ARE IMPORTED TO THE SITE AND PLACED.

FREQUENCY OF TESTS:

- CBR TESTS 1 PER 300M²
- COMPACTION TESTS 1 PER 200M² NOTE: COMPACTION TESTS WILL BE REQUIRED FOR EACH OF THE VARYING LAYER THAT IS IMPORTED AND COMPACTED IN PLACE.

RETAINING WALL:

- ALL LEVELS AND DIMENSIONS TO BE CHECKED ON SITE.
- ALL CONCRETE WORK IS TO COMPLY WITH SANS 1200G.
- CONCRETE GRADE - FOUNDATION 25/10
- ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CASTING OF CONCRETE.
- ALL REINFORCING BARS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CASTING OF CONCRETE.
- SIX CONCRETE CUBES TO BE TAKEN PER BATCH, THREE CUBES TO BE TESTED AT SEVEN DAYS, THE REMAINDER AT TWENTY EIGHT DAYS, THE RESULTS ARE TO BE FORWARDED TO THE ENGINEER FOR REVIEW AND APPROVAL.
- SET BOTTOM ROW OF BLOCKS IN WET CONCRETE.
- ALL BACKFILL TO BE COMPACTED TO 95% MOD AASHTO DENSITY.
- STORM WATER BEHIND THE TOP OF THE WALL TO BE MANAGED IN SUCH A MANNER AS TO PREVENT SCOUR BEHIND OR OVER-TOPPING OF THE WALL.

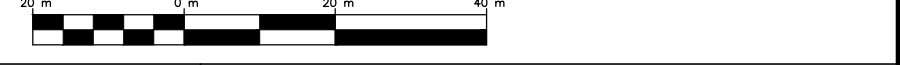
ROADS AND FOOTPATHS:

- ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS TO BE VERIFIED BY CONSULTANT AND CONTRACTORS ON SITE PRIOR TO CONSTRUCTION.
- THE PORTIONS OF ACCESS ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY DAYLIGHT REQUIREMENTS ARE TO BE DECIDED BY THE ENGINEER ON SITE.
- CONCRETE WEDGES ACCORDING TO CIVIL ENGINEERS DETAILS AND SPECIFICATIONS MAY BE USED IN PLACE OF SURFACED BELL MOUTHS FOR ACCESS SERVING SINGLE RESIDENTIAL PROPERTIES.
- EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED/LOCATED ON INSTRUCTION BY THE CIVIL ENGINEER.
- UNDERGROUND SERVICE CROSSINGS AND MARKERS ARE TO BE ACCORDING TO CIVIL ENGINEERS DETAILS AND SPECIFICATIONS.
- ALL NEW ROAD SIGNS AND ROAD MARKING REQUIREMENTS ARE TO CONFORM TO THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY ROAD TRAFFIC SIGNS MANUAL (SAD-RTSM).
- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH 'COLD' SPECIFICATIONS FOR ROAD AND BROOD WORK FOR STATE ROAD AUTHORITIES.
- NEW FILLS AND EXPOSED CUTS ARE TO BE TOP-SOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

STORMWATER:

- ALL STORMWATER PIPES ARE CLASS 1000 CONCRETE AND HD CL 34 UPVC PIPES.
- ALL STORMWATER CONCRETE PIPES TO COMPLY WITH SANS 677 STANDARDS.
- ALL UPVC PIPES TO COMPLY WITH SANS 966 STANDARDS.
- ALL JOINTS TO BE SPIGOT AND SOCKET TYPE.
- ALL STORMWATER PIPES TO BE LAID ON CLASS B BEDDING.
- ALL EXISTING DRAINAGE CULVERTS ARE TO BE INSPECTED, AND ANY FOUND IN UNSERVICEABLE CONDITION ARE TO BE REPLACED ON INSTRUCTION BY THE CIVIL ENGINEER.
- CULVERT INVERTS ARE TO BE DECIDED BY CIVIL ENGINEER ON SITE UNLESS SHOWN OTHERWISE. MIN. COVER = 600mm, MIN. SLOPE = 2%.

SCALE (mm)



No. REFERENCE DRAWINGS

REV	DESCRIPTION	BY	DATE
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P1	ISSUED FOR TENDER	Z.M	2023.05.30
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Professional person: S. S. PUTHI N. T. Engineering Registration: 201470135

CLIENT



PROJECT

ETHEKWINI INCREMENTAL SERVICES GUMTREE ROAD, KENVILLE, WARD 34

DETAILS

ROAD, PATHWAYS AND STORMWATER LAYOUT AND DETAILS



SUITE E55106 STRATHMORE PARK, 305 MUSGRAVE ROAD, MUSGRAVE, DURBAN
e-mail: admin@mapafrica.co.za
website: www.mapafrica.co.za
FAX (031) 3092929 TEL (031) 3095831

DESIGNED	Z.M	COPYRIGHT RESERVED	SCALES
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DRAWN	Z.M	AS SHOWN
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APPROVED	S.S	PL	DATE	2023.02.24
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DRAWING No: 557/GUMT-PH2/900 REV P1

FOR TENDER