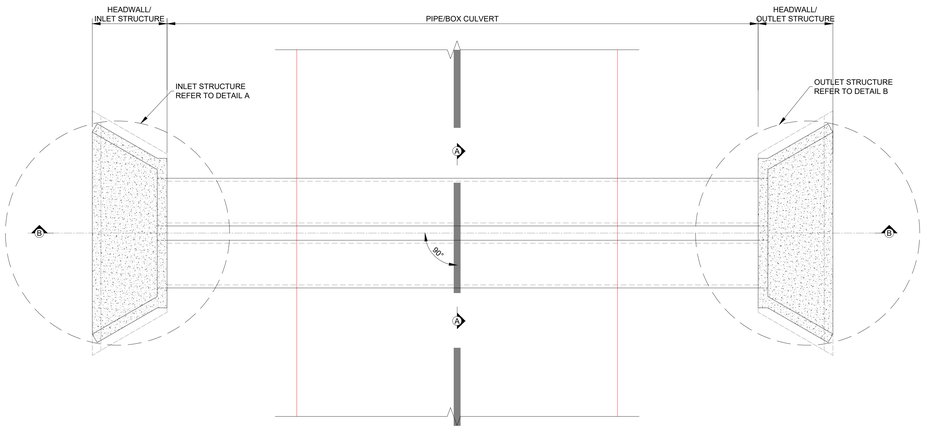
LEGEND:

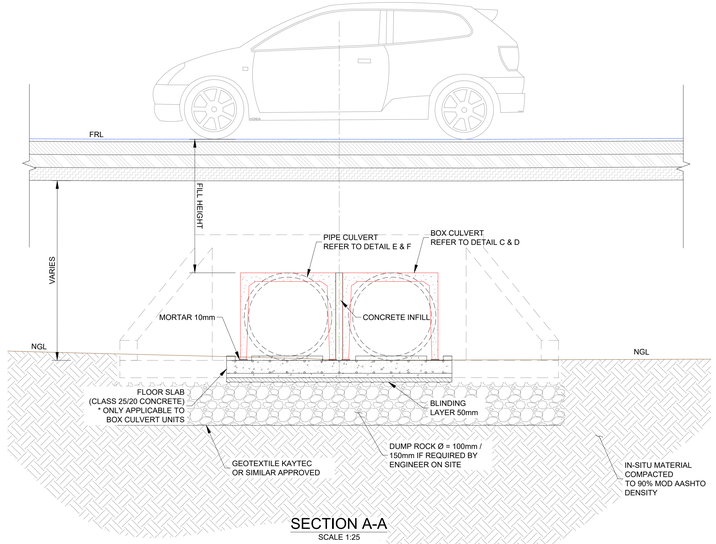
SETTING OUT NODE

NOTES:

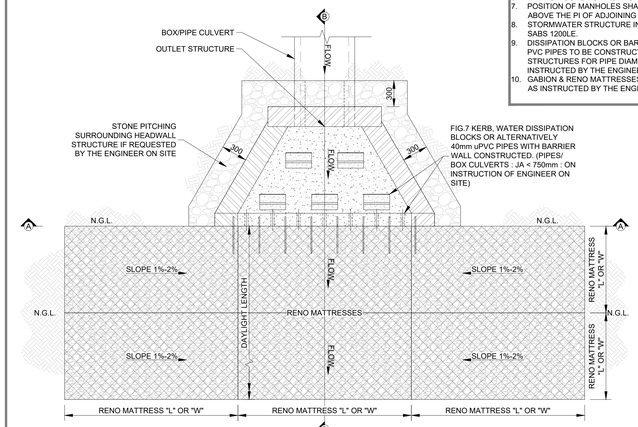
1. ALL CONCRETE FLOOR SLABS TO BE CLASS 25/20 MPa CONCRETE.
2. ALL CONCRETE BENCHING TO BE CLASS 20/13
3. ALL STORMWATER PIPES TO BE A MINIMUM NOMINAL DIAMETER OF 450mm.
4. ALL EXPOSED CONCRETE EDGES TO BE ROUNDED WITH A NOSING TOOL.
5. BLINDING LAYER TO BE A MINIMUM THICKNESS OF 50mm.
6. MINIMUM COVER OF REINFORCING TO BE 40mm.
7. POSITION OF MANHOLES SHALL BE DIRECTLY ABOVE THE PI OF ADJOINING STORMWATER PIPES.
8. STORMWATER STRUCTURE IN ACCORDANCE WITH SABS 1200LE.
9. DISSIPATION BLOCKS OR BARRIER WITH 40mm PVC PIPES TO BE CONSTRUCTED ON OUTLET STRUCTURES FOR PIPE DIAMETER >750mm Ø AS INSTRUCTED BY THE ENGINEER ON SITE.
10. GABION & RENO MATTRESSES MUST BE PLACED AS INSTRUCTED BY THE ENGINEER ON SITE.



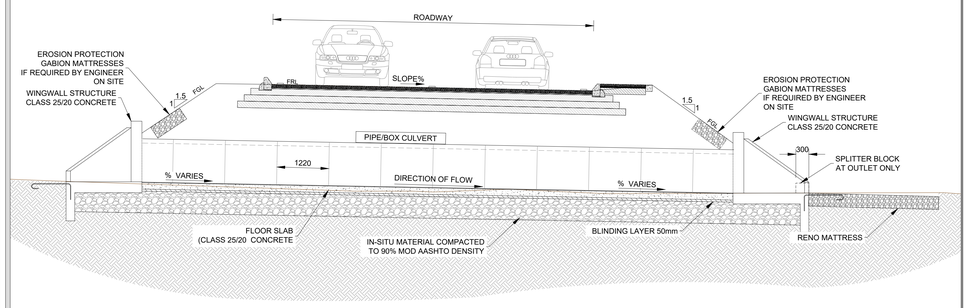

## PLAN LAYOUT : CULVERT
SCALE 1:50




## SECTION A-A
SCALE 1:25

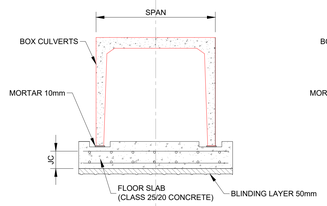



## EROSION PROTECTION: PLAN VIEW
SCALE 1:25

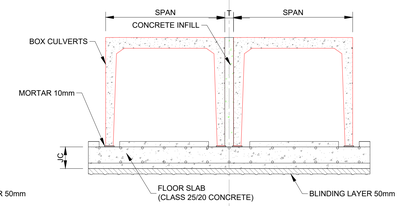



## SECTION A-A
SCALE 1:50

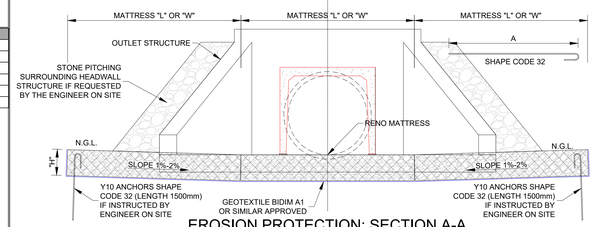
| SPAN | JC (mm) | t (mm) |
|---|---|---|
| 900 mm SPAN | 150 | 110 |
| 1200 mm SPAN | 160 | 125 |
| 1500 mm SPAN | 175 | 145 |
| 1800 mm SPAN | 190 | 150 |
| 2100 mm SPAN | 220 | 155 |
| 2400 mm SPAN | 260 | 170 |



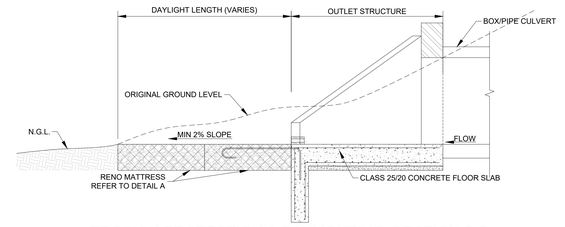

## DETAIL C:
## SINGLE BOX CULVERT UNIT
SCALE 1:20



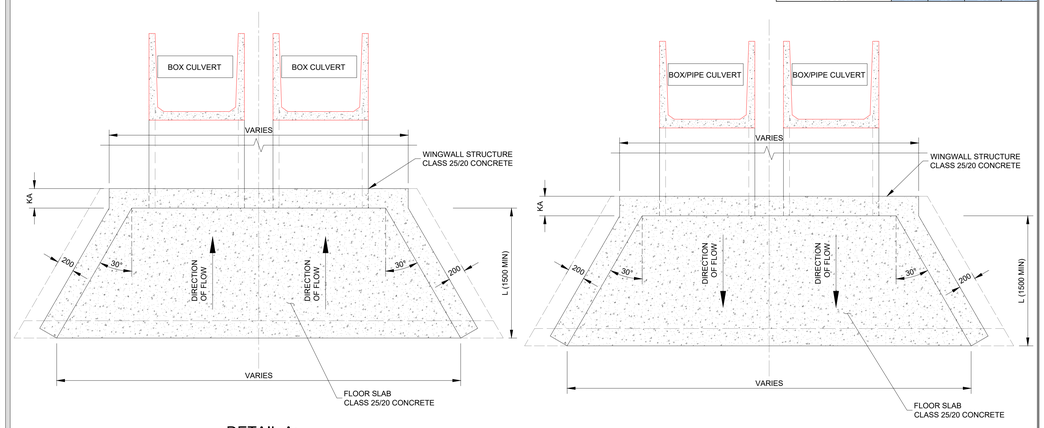

## DETAIL D:
## MULTIPLE BOX CULVERT UNITS
SCALE 1:20




## EROSION PROTECTION: SECTION A-A
SCALE 1:25



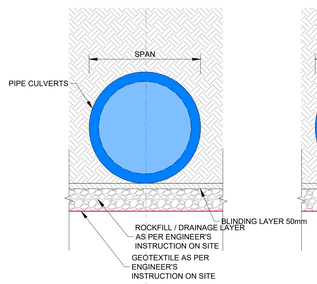

## EROSION PROTECTION & DAYLIGHTING: SECTION B-B
SCALE 1:25



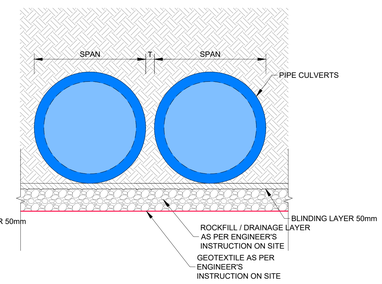

| VERTICAL HEIGHT OF CULVERTS | HB | HD | KA | JB |
|---|---|---|---|---|
| JA ≤ 900 | 150 | 150 | 225 | 300 |
| JA ≥ 900 | 250 | 150 | 250 | 400 |

## DETAIL A:
## INLET STRUCTURE
SCALE 1:25

## DETAIL B:
## OUTLET STRUCTURE
SCALE 1:25

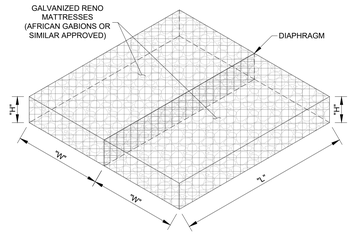



## DETAIL E:
## SINGLE PIPE CULVERT UNIT
SCALE 1:20




## DETAIL F:
## MULTIPLE PIPE CULVERT UNIT
SCALE 1:20

| TABLE 1: STANDARD RENO MATTRESS SIZES | | |
|---|---|---|
| "L" LENGTH (mm) | "W" WIDTH (mm) | "H" HEIGHT (mm) |
| 2000 | 1000 | 300 |
| 3000 | 1000 | 300 |
| 6000 | 2000 | 170 |
| 6000 | 2000 | 230 |
| 6000 | 2000 | 300 |




(REF FOLDER: X:\02 PROJECTS\3000\3500 - 3599\N3587EN - SHANGONI ROAD KNP\1 DESIGN PHASE\F DRAWINGS\TENDER\STORMWATER\EN3587SW TYPICALS.DWG)

| Rev | Date | By | Description |
|---|---|---|---|
| | | | |

AMENDMENTS

South African National Parks

TECHNICAL SERVICES DEPARTMENT
KRUGER NATIONAL PARK
DRAWING OFFICE (KNP)
Tel:(013) 735 3448

| | |
|---|---|
| DESIGNED BY | M. ELS |
| CHECKED BY | C.J SMIT |
| DRAWN BY | J. VAN DYK |
| CHECKED BY | C.J SMIT |

APPROVED BY

| HOD TECH SERVICES | SEN. MAN. CIVIL & BUILDING | SEN. MAN. ELECTRO & MECHANICAL | SEN. MAN. ROADS & MAINTENANCE | MAN. PLANNING & DESIGN | CLIENT |
|---|---|---|---|---|---|
| DATE: | DATE: | DATE: | DATE: | DATE: | DATE: |

SERVICE: STORMWATER

FOR TENDER PURPOSES

PROJECT: SHANGONI ROAD PH 1

TITLE: CUVLERTS : DETAILS - HEADWALLS & EROSION PROTECTION

| DATE | SCALE | CAD FILE NAME |
|---|---|---|
| APRIL 2024 | 1:1000 | EN3587SW TYPICALS.dwg |

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CONSULTANT DWG. NO.: EN/3587/SW/3/002

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