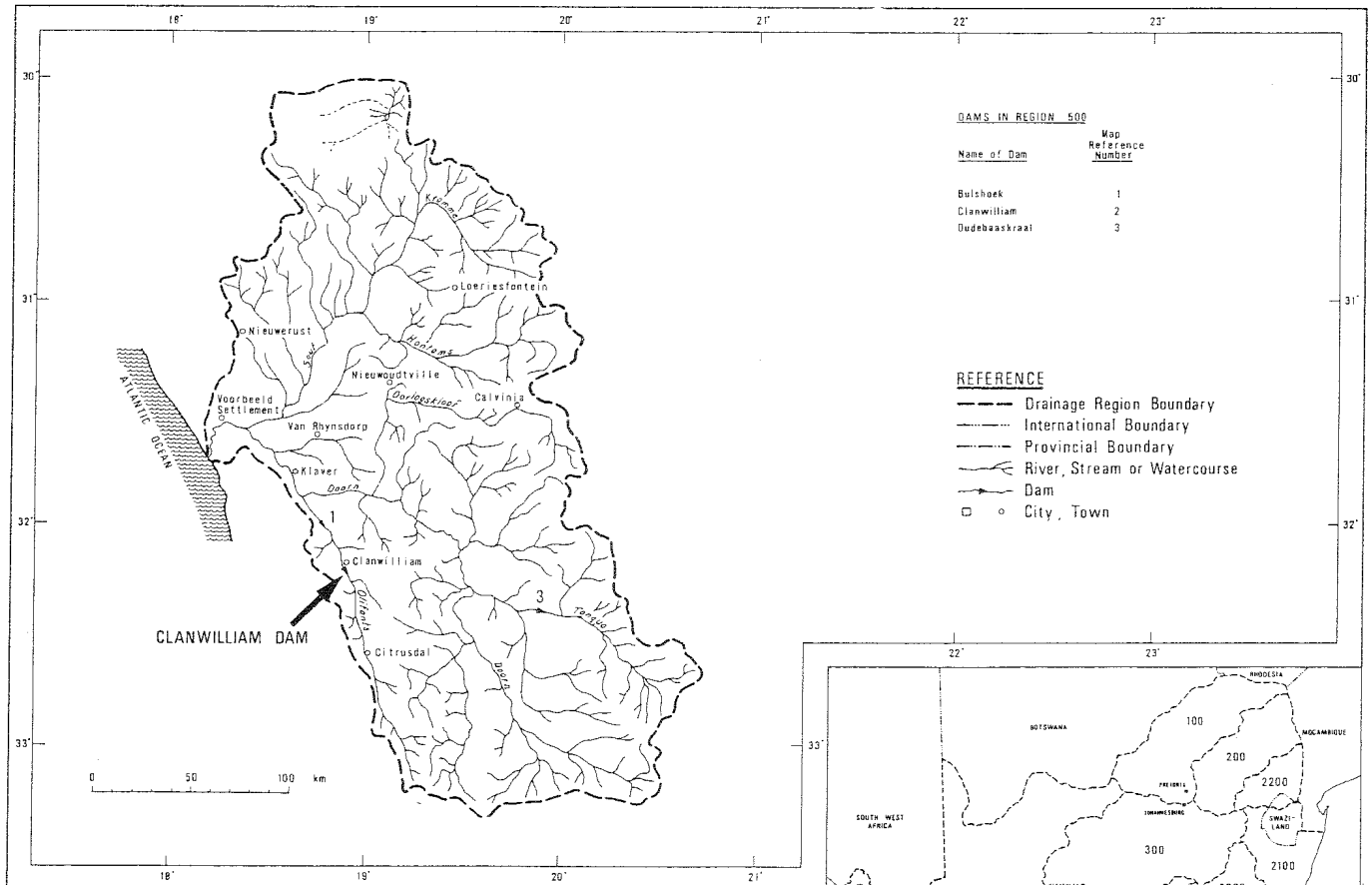
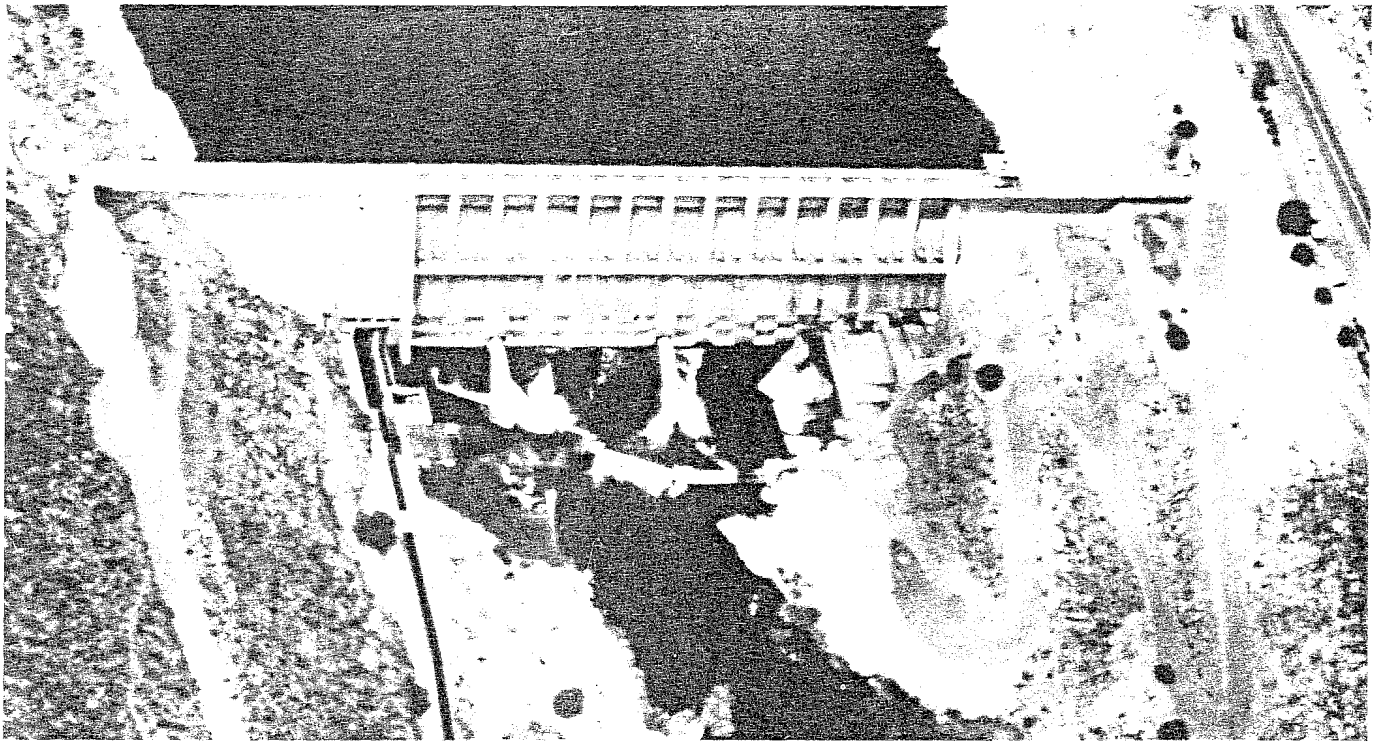
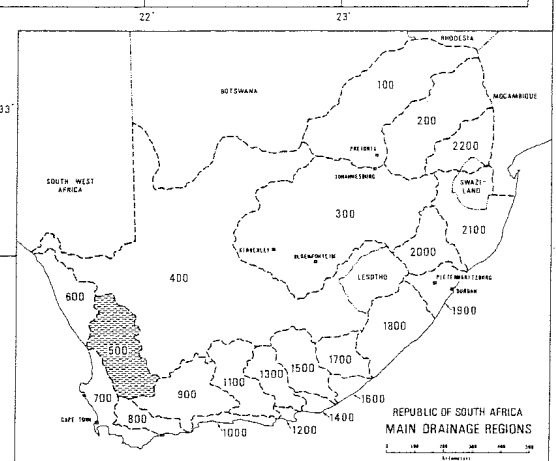


CLANWILLIAM DAM



DRAINAGE REGION 500



CLANWILLIAM

DATA

Year of completion.....	1935
River.....	Olifants
Nearest town.....	Clanwilliam
Province.....	Cape Province
Type.....	Concrete gravity
Height above lowest foundation.....	43 m
Length of crest.....	235 m
Volume content of dam.....	0,070 million m ³
Gross capacity of reservoir.....	127,970 million m ³
Purpose.....	Irrigation
Maximum discharge capacity of spillway.....	1 530 cumec
Type of spillway.....	Controlled
Owner.....	Department of Water Affairs
Engineering by.....	Department of Water Affairs
Constructed by.....	Department of Water Affairs

DESCRIPTION

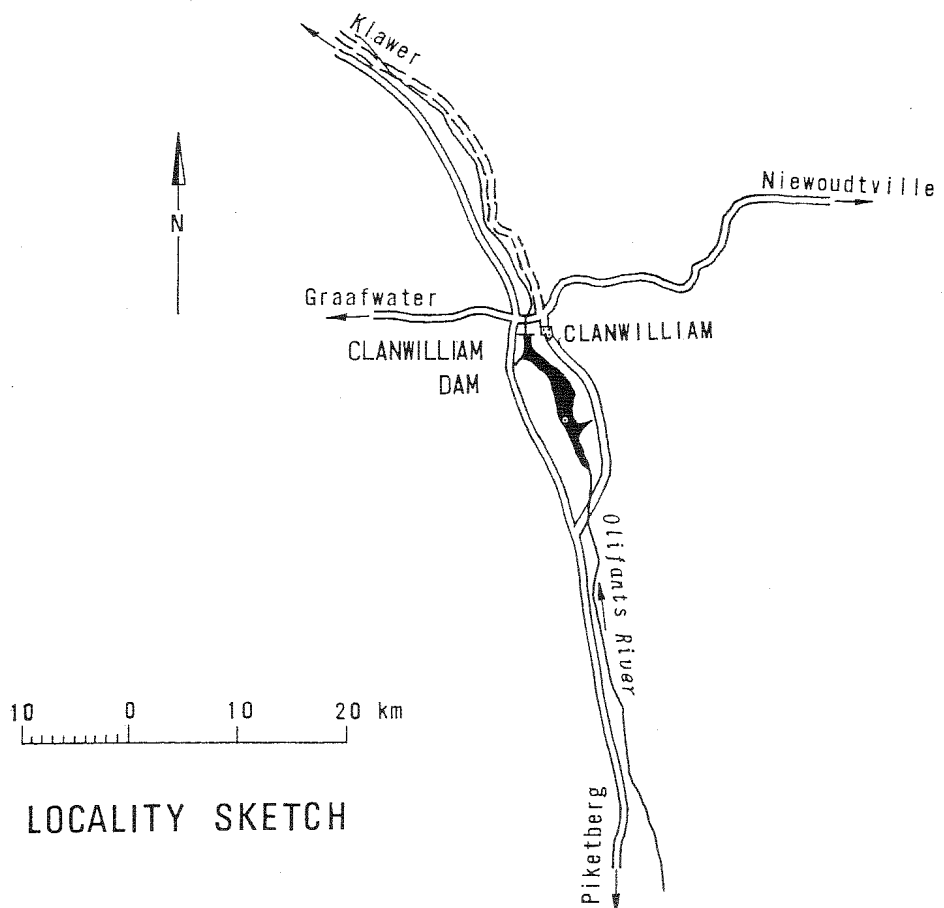
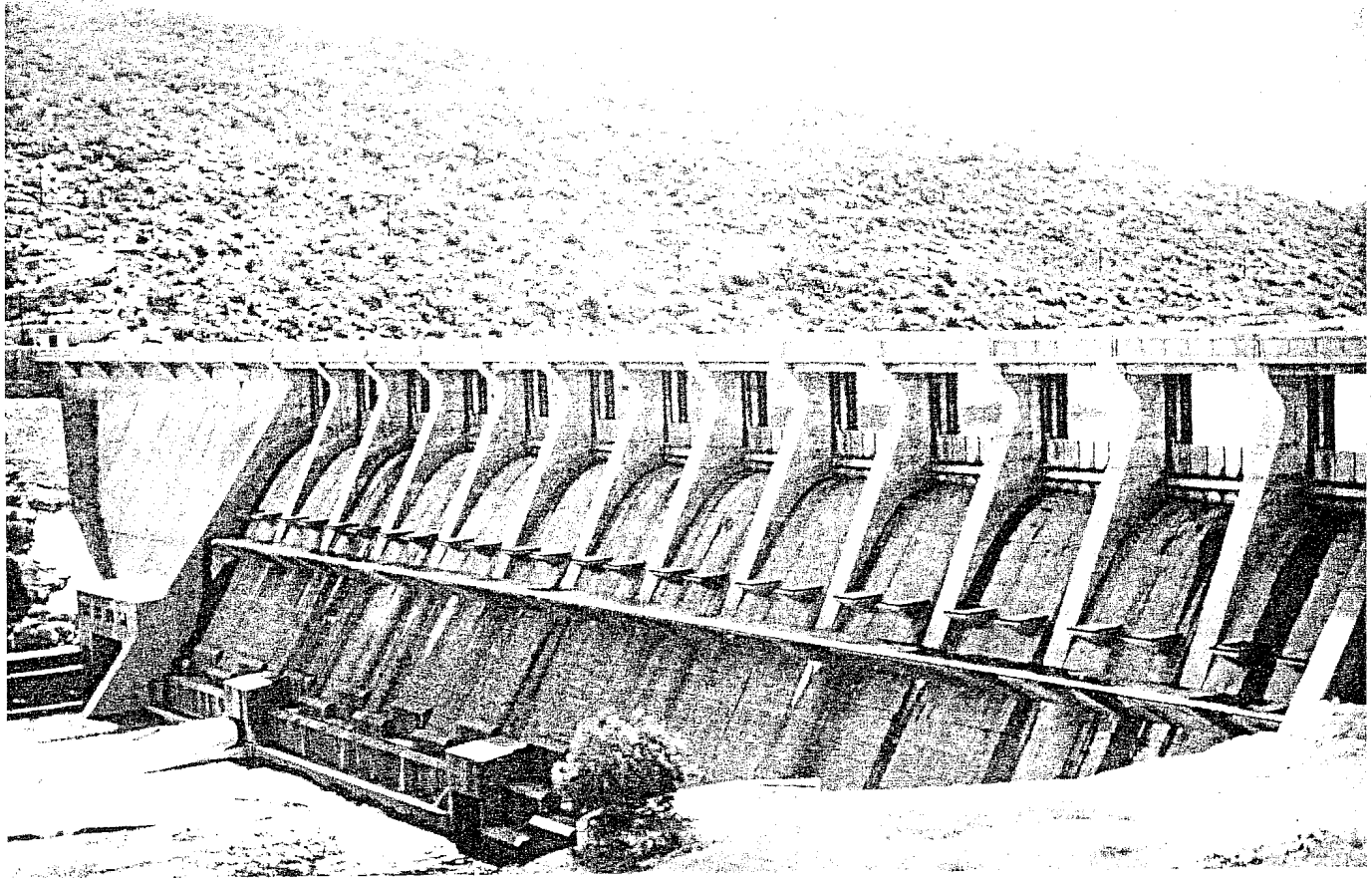
Clanwilliam Dam

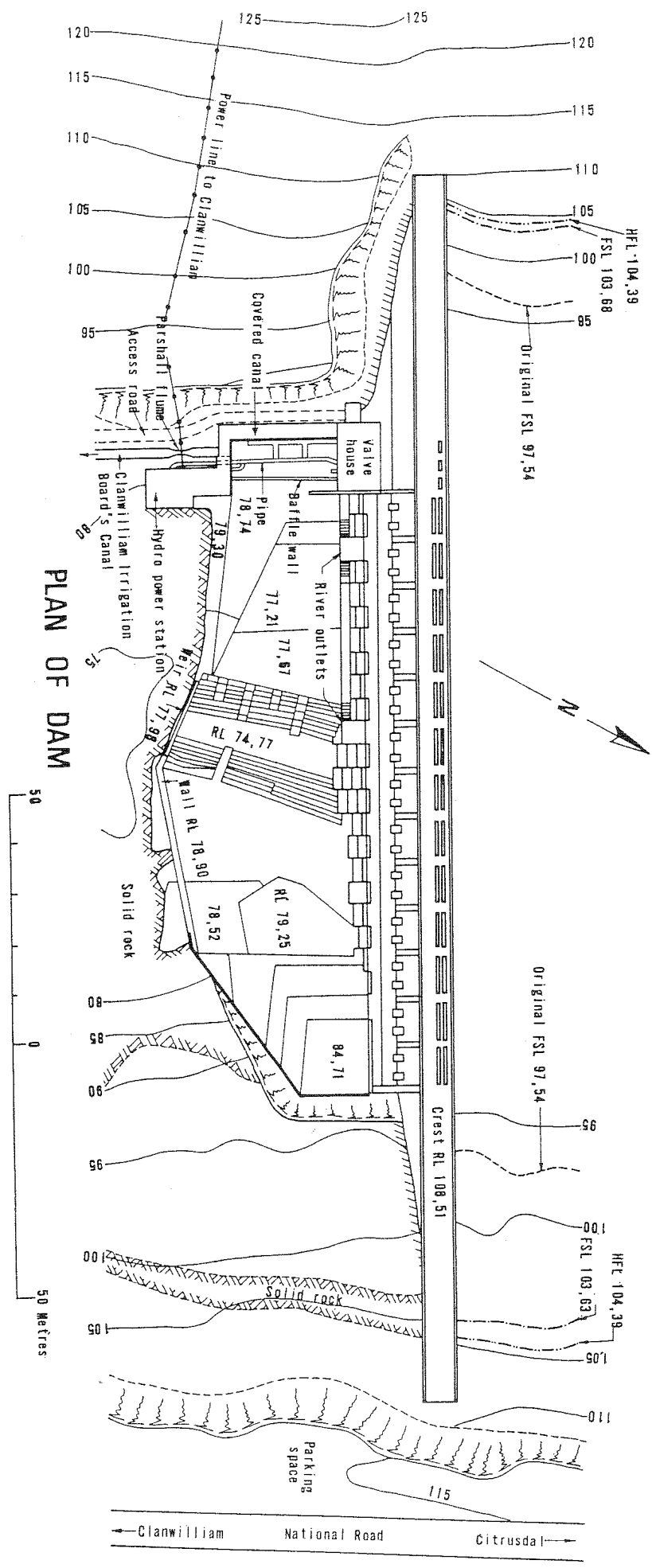
A scheme to irrigate about 8 500 ha of land along the reaches of the Olifants River, Van Rhynsdorp District, was completed in 1923. The scheme comprised a barrage, capacity 6,55 million m³, known as Bulshoek Dam, across the Olifants River about 26 km downstream of the town of Clanwilliam and a system of unlined canals extending down the Olifants Valley for about 80 km. Principal crops produced in the area are lucerne, winter cereals, grapes and fruit.

It was soon found that the Olifants River, although perennial, could not supply sufficient water for the scheduled irrigation area during the critical summer months. In 1935 the Clanwilliam Dam, capacity 69,86 million m³, was built on the Olifants River 2 km from the town of Clanwilliam to augment supplies to the area served by Bulshoek, which by then had increased to 9114 ha and also to bring an additional area, about 460 ha, close to Clanwilliam under irrigation. The canals below Bulshoek were also improved, in some cases lined, to reduce losses.

In spite of the additional storage and canal improvements periodic shortages were still experienced and in 1962 it was decided to raise Clanwilliam Dam by 6,10 m, thus increasing the net capacity of the dam to 128 million m³.

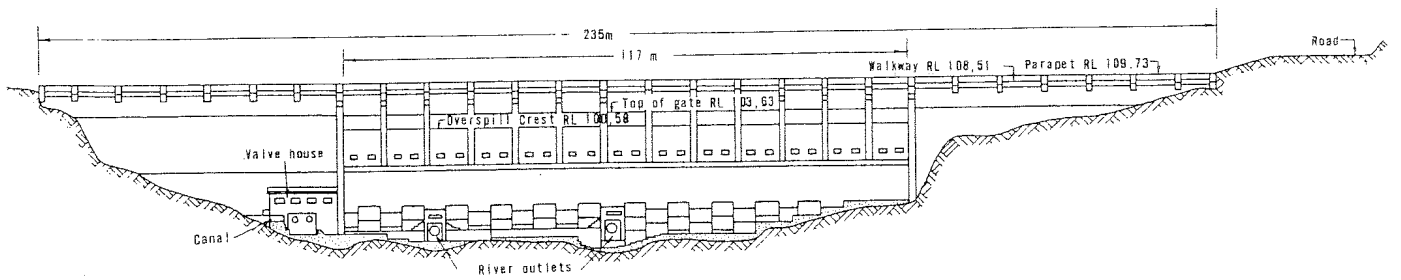
The original dam was a mass gravity concrete structure with a centrally situated overspill section, 117 m long. During the raising of 1962–1966 the overspill crest was increased in length, re-modeled and raised by the addition of 3,05 m of mass concrete to the top of the crest and the installation of 13 crest gates, each 7,77 m wide by 3,05 m high. The non-overspill flanks were raised 4,88 m by means of mass concrete. A bridge superstructure was built across the dam to give access for the operation of the gates. For stability, the dam is tied to its foundations by means of post-tensioned cables positioned along the centre line of the dam, spaced from 1,52 m in the middle section to 3,05 m on the flanks.



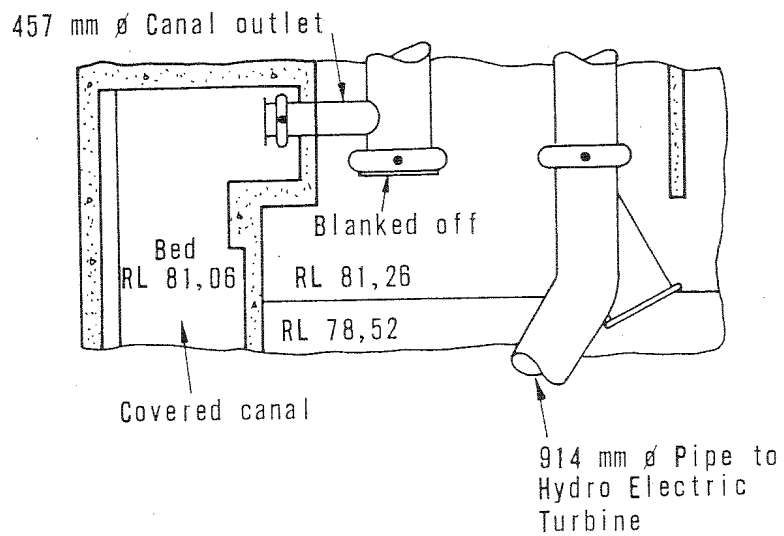
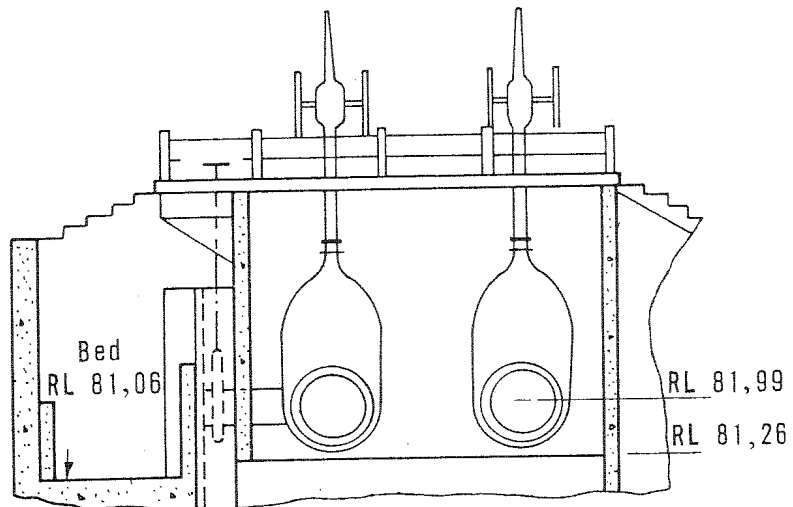


PLAN OF DAM

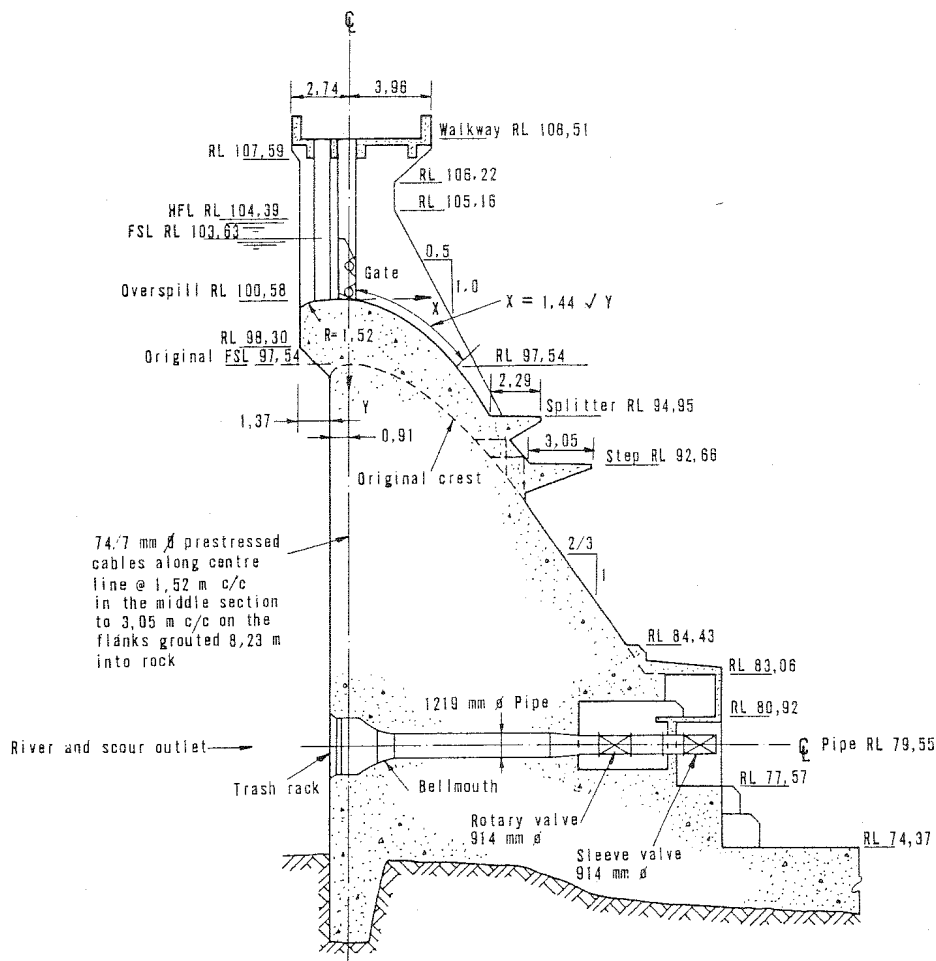
← Clanwilliam National Road Citrusdal →



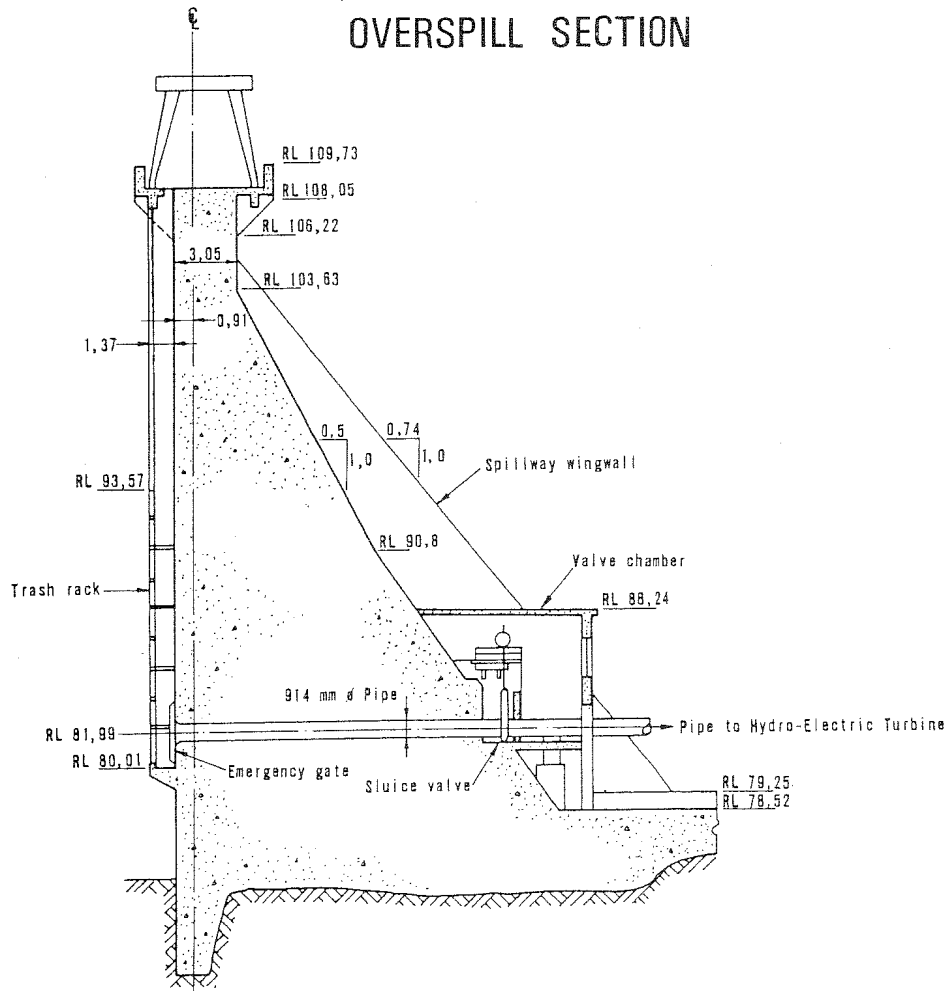
DOWNSTREAM ELEVATION



VALVE CHAMBER



OVERSPILL SECTION



SECTION: NON OVERSPILL