

TRENCH EARTH

INLET DITCH 0-1.5m

$$\frac{A-A}{2} \times 4.1 + \frac{B-B}{2} \times 3.6 + \frac{C-C}{2} \times 2.5 + (2m \times 30m \times 0.6m) = 137.9 \text{ cm}$$

44.28      38.70      19.88      +      36.03

INLET DITCH OVER 1.5m

$$\frac{A-A}{2} \times 4.1 + \frac{B-B}{2} \times 2.5 = 3.3 \text{ cm} \times 1.5 = 5.0 \text{ cm}$$

2.05      +      1.25

OUTLET DITCH

2.9cm . 0.5 x 0.6 x 1.6 = 2.4 cm

INLET HEADWALL

3.1m(L) x 1.65m(W) x 1.0m(AVE D) = 5.1 cm

OUTLET HEADWALL

3.1m(L) x 1.65m(W) x 0.8m(AVE D) = 4.1 cm

TRENCH EARTH 0-1.5m (CULVERT)

From Inlet

$$\frac{0.8 \times 0.4}{2} \times 1.1 + \frac{0.4 \times 0.4}{2} \times 0.4 + \frac{0.4 \times 0.4}{2} \times 1.8 + \frac{1.5 \times 0.8}{2} \times 1.1 + \frac{0.8 \times 0.6}{2} \times 2.2 \times 2.04 = 39.0 \text{ cm}$$

CULVERT OVER 1.5m

$$\frac{1.0 \times 0.4}{2} \times 4.6 + \frac{0.4 \times 0.4}{2} \times 3.4 + \frac{0.4 \times 0.4}{2} \times 0.9 \times 2.04 = 5.2 \times 1.5 = 7.8 \text{ cm}$$

201.3 cm

SWS 1-29-7

GRANULAC BACKFILL FOR STRUCTURES

UNDER CULVERT

17.4m x 2.04m x 0.3m = 10.6 cm

TO TOP OF CULVERT

17.3m x 2.04m x 1.04m = 36.7 cm

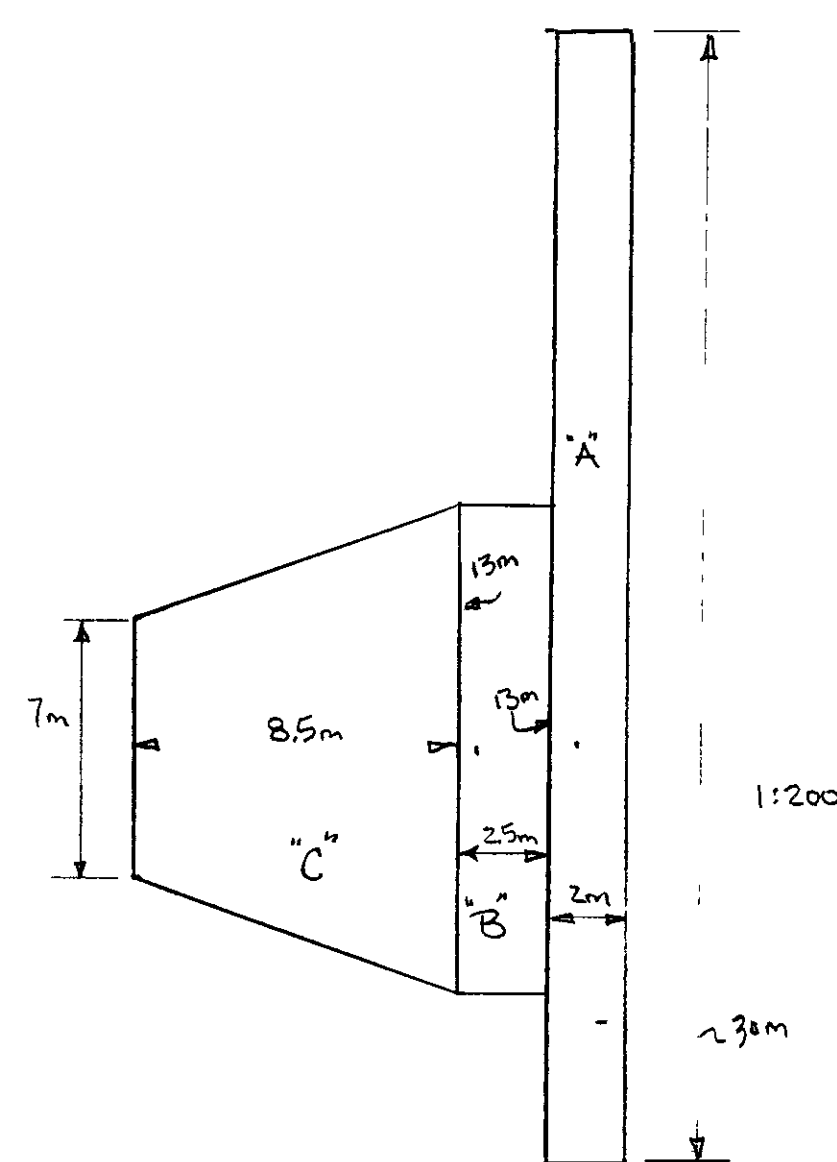
47.3 cm

EARTH BORROW

$\frac{15.4 + 11.8}{2} \times 2.04m \times 0.85m(d) \text{ (FIELD MEAS)} = 23.6 \text{ cm} \times 115 = 271 \text{ cm}$

SWS 1-22-7  
WRF 12-14-06

T. BK 2A, P. 60



STONE FILL TYPE II

A = 2m x 30m x 0.6m = 360 cm

B = 13m x 2.5m x 0.6m = 19.5 cm

C =  $\frac{7+13}{2} \times 8.5m \times 0.6m = 510 \text{ cm}$

FABRIC

8.2m x 0.6m = 4.9

$\frac{8.2+14.2}{2} \times 8.5m = 95.2$

2m x 31.2m = 62.4

31.2m x 0.6m = 18.7

18.2m x 0.6m = 10.9

192.15m

11.85m

203.95m

Say 204.5m

