



REMOVE EXISTING 610 MM RCP @ 10+420
 WIDTH OF REMOVAL TRENCH = 1.610 M
 LENGTH 22 M (MEASURED IN FIELD BY D.C.R.) 6-2-04

Vol = $22 \times 1.610 \times 1.50 = 53.13$
 $= \left[\frac{1.8 \times 3.5}{2} + \frac{1.4 \times 3.9}{2} + \frac{10.2 \times (1.0 + 1.4)}{2} \right] \times 1.610 \times 1.5 = 39.46$
 16.34 m^3 12.24 92.59 cm ITEM 204.20

- COMPUTE TRENCH EXCAVATION FOR NEW PIPE
- ① $2.75 \times \frac{0.45 + 0.45}{2} (1.85) = 2.54$
 - ② $21.0 \times \frac{0.48 + 0.75}{2} (1.85) = 27.79$
 - ③ $1.4 \times \frac{0.18 + 1.50}{2} (1.85) = 3.17$
 - ④ $36.3 \times 1.50 (1.85) = 36.33$
 - ⑤ $2.15 \times \frac{0.6 + 1.5}{2} (1.85) = 4.18$
 - ⑥ $2.30 \times \frac{0.6 + 0.6}{2} (1.85) = 2.78$
 - ⑦ $5.9 \times 2.15 (1.85) (1.5) = 16.78$
 - ⑧ $10.2 \times \frac{2.55 + 1.65}{2} (1.85) (1.5) = 52.36$
 - ⑨ $7.3 \times 1.45 (1.85) (1.5) = 9.84$

See Drainage Summary sheet

Total TE $\frac{188.1}{72.6} = 259.7$ $\frac{175.76 \text{ CM}}{1.5} = 117.17$ $\frac{139.7}{1.5} = 93.13$

To Final Drainage Summary sheet

175.76 CM ITEM 204.20 TRENCH EXCAVATION

Handover = $40 \text{ m} \times 1.85 \text{ m} \times 1.5 \text{ m} = 110.25 \text{ m}^3$ ITEM 02-01-09
 Stone for 1.5 m x 1.5 m x 1.5 m = 2.25 m^3 ITEM 02-02-05
 Stone for 1.5 m x 1.5 m x 1.5 m = 7.9 m^3 ITEM 02-02-05
 Stone for 1.5 m x 1.5 m x 1.5 m = 180.2 m^3 ITEM 02-02-05
 BUA 12-23-05

GRAVELLY BACKFILL FOR STRUCTURES

COMPUTE FROM 2' BELOW PIPE TO 6" OVER PIPE

LENGTH OF TRENCH = 50 M

HEIGHT OF TRENCH = $610 + 750 + 150 = 1.510 \text{ M}$

WIDTH = 1.85 M

VOLUME = $1.51 \times 50 \times 1.85 = 139.73 \text{ CM}$ ITEM 204.30
 Sq 139.7