

TRENCH EARTH
 DI 0-1.5m
 $4.5m \times 1.5m = 6.8cm$
 DI Over 1.5m
 $4.5m \times 0.85m = 3.8cm \times 1.5 = 5.7cm$

CULVERT
 From DI 0-1.5m
 $(1.5 \times 1.3) + \left(\frac{1.5 \times 0.6}{2} \times 1.9\right) + \left(\frac{0.72 \times 0.3}{2} \times 1.6\right) \times 1.72m = 33.8cm$

Over 1.5m
 $\left(\frac{0.9 \times 0.6}{2} \times 1.4\right) + \left(\frac{0.2 \times 0.3}{2} \times 4.3\right) + \left(\frac{1.86 \times 0.4}{2} \times 5.3\right) + \left(\frac{0.22 \times 0.1}{2} \times 1.1\right) \times 1.72 = 52cm \times 1.5 = 7.8cm$

Stone Fill Exc.
 $\left(\frac{0.9 \times 0.6}{2} \times 2.4\right) \times 0.9m(w) = 1.6cm$
 $\underline{\underline{55.7cm}}$

GRANULAR BACKFILL FOR STRUCTURES
 DI
 $3.05m \times 1m = 6cm$

CULVERT
 $15.3m \times 1.72m \times 0.72m = 18.9cm$
 $\underline{\underline{249cm}}$

EARTH BORROW
 $13.6m(ave L) \times 1.72m(w) \times 1.2m(ave D) = 28.1cm \times 1.15 = 32.3cm$

WRF ^{sws} 1-22-7
 12-14-06
 T. BK ZA, Pg 72

