# Estimating & Costing -1

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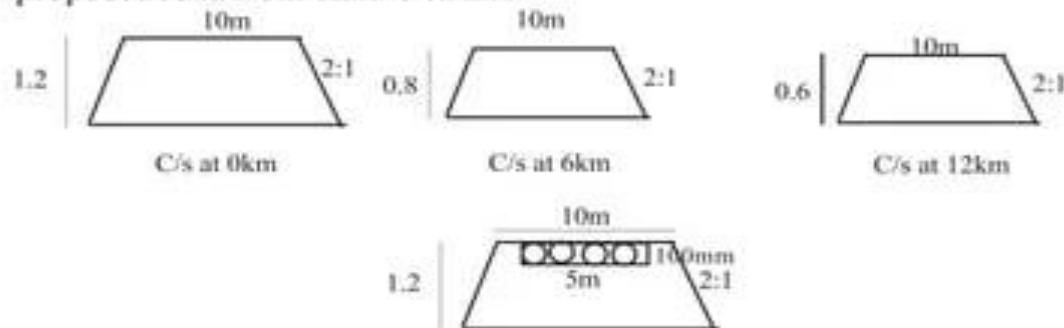
# DETAILED ESTIMATES

## A) Gravel Road

A gravel road comprising of a gravel of thickness 100mm compacted thickness and compacted by hand roller. A gravel is placed over an earthern formation which is compacted by a 2 tonne roller.

The estimate of gravel road consists of determining the folloiwng quantities.

i) Earth work excavation and depositing on bank and compaction
ii) collection of gravel
iii) spreading compacting gravel to OMC

**Example 8.1:-** Find the estamation of a gravel road for the fig shown below. for a proposed road from 0km to 12km.

10m
1.2          2:1
C/s at 0km

10m
0.8          2:1
C/s at 6km

10m
0.6          2:1
C/s at 12km

10m
1.2     5m      2:1      100mm

| S.No. | Particulars of Items | No. | L | B | H | Q | Explanation |
|-------|----------------------|-----|---|---|---|---|-------------|
| 1 | a) Earth work excavation and depositing on bark with an intial lead and lift of soil for formation and filing of pits, not | | | | | | |

| | | No. | L | B | H | Q | |
|---|---|---|---|---|---|---|---|
| 2. | Collection of gravel including cost & conveyance etc complete 50% allowance is given for OMC compaction. | 1 | 1200 | 5.00 | 0.15 | 900m³ | |
| 3 | Spreading of gravel and watering | 1 | 1200 | 5.00 | --- | 6000m² | |
| 4. | Un forcean items @2% | | | | | L.S. | |
| 5. | Tools and plant @1% | | | | | L.S | |
| 6. | P.S. and continsecis @ 4% | | | | | L.S | |

## Cement concrete road

C.C. road is laid over an existing W.B.M road, In certain cases. It is laid over a prepared sub grade and a base course is provided. The concrete used for roads is M15 grade using 20mm H.B.G. metal while for base course a concrete of 1:4:8 using 40mm HBGmetal the stages of Estimations of a C.C.road is
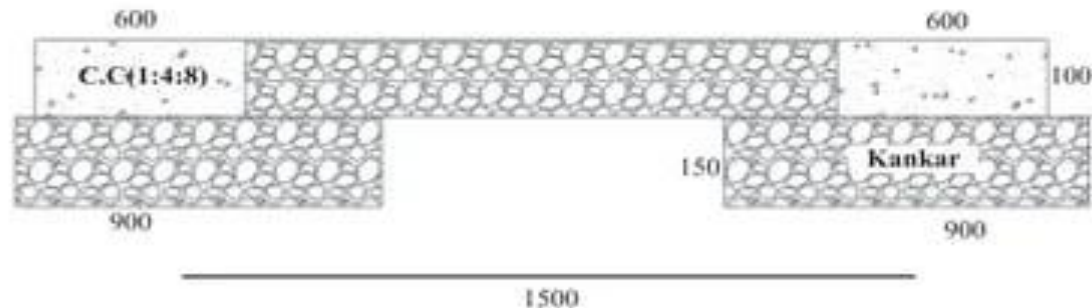
a) Earth work excavation and deposting on the bank

b) Cement concrete (1:4:8) for base course

c) Cement concrete (1:2:8) for wearing course.

**Example 8.2:-** Calculation for the estimation of a C.C.road for a length of 100m and width of C.C.road is 3.50m with 100mm thickness of earh layer.

| S.No. | Particulars of Items | No. | L | B | H | Q | Explanation |
|---|---|---|---|---|---|---|---|

## Detailed Estimates

**Example 8.3 :-** Prepare an estimate for 1 Km length of C.C. track or the fig shown below.



| S.No. | Particulars of Items | No. | L | B | H | Q | Explanation |
|-------|----------------------|-----|------|-----|-------|-------|-------------|
| 1 | C.C.(1:2:4) in tracks including laying | 2 | 1000 | 0.6 | 0.1 | 120m³ | |
| 2. | laying of kankar (for loose thickness increase with $33\frac{1}{3}$ %) | | | | | | |
| | a) in between C.C tracks | 1 | 1000 | 0.9 | 0.133 | 120 | |
| | b) under C.C.tracks | 2 | 1000 | 0.9 | 0.20 | 360 | |