PART B - LABOUR BASED RESHAPING

METHOD B: MAJOR RESHAPING

6. MAINTENANCE METHOD

6.1 PRELIMINARY TASKS (as necessary)

- Recruit or inform local work force.
- Set up temporary site camp for supervisor.
- Set up water supply arrangements.
- Plan payment arrangements.
- The worksheet will indicate the location and extent of the work to be carried out, along with the time required for the job.
PART B - LABOUR BASED RESHAPING

METHOD B: MAJOR RESHAPING

6.2 TEMPORARY SIGNPOSTING

When working on a low traffic volume road open to traffic, the signs and safety equipment should be deployed as shown in paragraph 4.2 of Part D (Page II - 179).

When closing the road and providing a diversion, the signs and safety equipment should be deployed as shown in paragraph 4.2 of Part E (Page II - 243).

On low-traffic roads, the Maintenance Engineer may approve the use of a simpler system of traffic control.
PART B - LABOUR BASED RESHAPING

METHOD B: MAJOR RESHAPING

6.3 EXECUTION OF THE WORK

The Method comprises the following steps:

♦ SETTING OUT
♦ EXCAVATION OF DITCH AND SLOPE
♦ EXCAVATION OF BACKSLOPE
♦ CAMBER FORMATION AND FINAL COMPACTION
PART B - LABOUR BASED RESHAPING

METHOD B: MAJOR RESHAPING

SETTING OUT

m The PROFILE method of setting out enables a smooth vertical alignment to be re-established on a severely deteriorated road surface.

a The alignment will consist of straight gradients and vertical curves.

The centre line of the road is pegged every 10 metres.

m A ranging rod is fixed at each 10 metre peg. Each ranging rod is fitted with a profile board. The profile board can slide up and down the ranging rod and be clamped at any height.
SETTING OUT A GRADIENT

STEP 1
SET FIRST AND LAST PROFILES AT 1m ABOVE REQUIRED
FINISHED ROAD LEVEL, INTERMEDIATE PROFILES RESTING ON
GROUND

STEP 2
RAISE INTERMEDIATE PROFILES TO LINE OF SIGHT. CHECK
THAT EARTHWORKS ARE ACCEPTABLE, IF NOT SELECT OTHER
STARTING POINTS AND REPEAT

STEP 3
PLACE NEW CENTRE LINE PEGS AT EACH RANGE Rod WITH
TOPS AT 1m BELOW THE PROFILE BOARDS - THIS IS THE
FINISHED ROAD CENTRE LINE LEVEL.
PART B - LABOUR BASED REHAPINI

METHOD B: MAJOR REHAPING

Setting out is arranged in sections of 60 to 100 metres, which approximate to either straight gradients or vertical curves.
SETTING OUT A VERTICAL CURVE

Profiles should be adjusted until the difference in alignment (6) between any three consecutive profiles is constant. A smooth vertical curve will then be established. Check 6 with a tape measure.

6 should not be more than 100m (the depth of a standard profile board).

When the curve is acceptable, place new centre line pegs at each ranging rod with tops at 1m below the profile boards - this is the finished road centre line level.
PART B - LABOUR BASED RESHAPING

METHOD B: MAJOR RESHAPING

Check that the amount of earthworks at each centre line (finished level) peg is acceptable, or repeat the procedure using different assumptions.
METHOD B: MAJOR RESHAPING

Once the centre line level pegs are fixed, set out the pegs for the edge of the roadway and both sides of the ditch using the tape measure, camber board and spirit level for the required road cross section.

Pegs should be driven in to the required finished cross section level, or a fixed height above.
METHOD B: MAJOR RESHAPING

EXCAVATE DITCH AND SLOPE

m Material is excavated from the ditch and slope area and used to form the camber until the required shape of ditch and slope is achieved.

Check shape with the ditch and slope template, and spirit level.

m If too much material is excavated discard the surplus material well beyond the side drain.

m If the filling placed is greater than 15 cm deep, then it is preferable to spread and compact the fill material with rakes and hand rammers or a hand/animal drawn roller in 15-20 cm layers.
EXCAVATE BACKSLOPE

If insufficient material is excavated to form the camber, dig additional material from the backslope or from beyond the side drain.
PART B - LABOUR BASED

METHOD B: MAJOR

CAMBER FORMATION AND FINAL COMPACTION

m  Continue adding material to the camber to achieve the required profile after compaction.

n  Stringlines stretched directly and diagonally across the running surface between the setting out pegs can be used to check the shape.

n  Compact the fill material to the final profile, preferably using a hand or animal drawn roller.
6.4 COMPLETION AND REMOVAL OF TEMPORARY SIGNS

On completion of the work the temporary signs and safety equipment are removed as described in Parts D (Pages II - 193 and II - 195) or E (Pages II - 257 and II -259) as applicable.
TYPICAL WORK REPORT

RESHAPING

Work Report No: . . . . . . . . . . . . . . . . . Date: . . . . . . . . . . . . . .

District: . . . . . . . . . . . . . . . . . . . . . . . Gang: . . . . . . . .. . . .

Zone: .......................................................... Road No:

Section: . . . . . . . . . . . . . from km .......... to km

QUANTITY OF WORK ACHIEVED:
Reshaping: .............................................. m

WEATHER CONDITIONS

Sunny ☐ Cloudy ☐ Rain U

MANPOWER USED: . . . . . . . . . . . . . . .

COMMENTS ......................

Foreman: . . . .
6.5 WORK REPORT The report must be filled in each day, detailing the work carried out, the resources used.