

## INSPECTION REPORT OF C.E. (QC&D) HPPWD. U.S.CLUB. SHIMLA

- 1.1 Name of work: - C/o Mashobra Bhakhality Road km.0/0 to 18/360 (SH:-Improvement Cross Drainage, Metling & Tarring, V-Shape Drain & Road side parapets etc. in km. 0/0 to 18/360.
- 1.2 Type of work:- Up gradation Under CRF
- 1.3 Date o inspection:- 31-07-2012.
- 1.4 Name of inspecting Officer: - Er V.K Bhardwaj
- 1.5 Designation of inspecting officer:- Chief Engineer (QC&D)
- 1.6 (a) Tendered amount:- 5,71,48,923/-
- (b) Date of award: - 04-11-2012
- (c) Agreement No:- 1 of 2011-12
- 1.7 Stipulated date of Start:- 4-01-2012
- 1.8 Stipulated period of completion:- 18 months
- 1.9 Scope of Works

The work mainly includes metalling and tarring wherein provision of W.B.M Gr-1, Gr-II, Gr-III and surfacing of open graded premix carpet with seal coat has been taken. The provision of x- drainage, V-shape drain and parapets etc.has also been included.

### 2.1 Accompanying field Officers/Officials

1. Er.B.S.Chauhan Superintending Engineer, 4<sup>th</sup> Circle, HP PWD. Shimla.
2. Er.Mohammad Ayub Chaudhary, E.E.Theog Division. HP PWD, Theog.
3. Er.Mahesh Kanwar, A.E. Theog Sub Division, HP PWD.
4. Er.Sanjeev Sharma, J.E. Incharge.

### 2.2 Observations:-

The site was visited by the undersigned along with Er. Bhupesh Sharma Assistant Engineer (QC&D) & Sh. Harish Nandan Research Assistant (Material Testing Lab). Executive Engineer Theog intimated that work of laying of WBM Gr-I has been completed from km.0/0 to 8/0, however the inspection was carried out in a stretch of first 5.00 kms. and the observations are as under:-

1. No Lab, was found established at site of work.
2. No results of sub-grade compaction were supplied by the field staff & no quality control register was produced.

3. From km.0/0 to 5/0 pits were dug at different RDs. @ of 2 pits per kilometer for checking the thickness of the layer as well as compaction of the same. The thickness of W.B.M Gr-I layer was found to be on lesser side at some RD's as depicted in the table below:-

RD	Average thickness of Gr-I layer (mm.)	Thickness of Gr-I layer as per DPR	Remarks
0/075	100	100	The thickness of Gr-I layer is on lower side at 5 RDs as per column 2 hence below specifications
0/585	82	100	
1/315	69	100	
1/915	102	100	
2/540	92	100	
2/915	85	100	
3/495	110	100	
3/990	55	100	
4/420	116	100	
4/990	102	100	

The compaction was checked by volume of loose material extracted which was found to be adequate. The material was collected from different RDs for testing in the Central Material Testing Lab at Shimla and the results in respect of gradation and flakiness index are Annexed as Annexure-1. These results show that the material does not satisfy the gradation as well as flakiness index requirements. The material for screening and moorum was also not found to be satisfying the required specification as the Plastic Index value of the same has been found to be 8 to 10 against the permissible limit of 6.

4. It was observed that berms were not being filled and compacted along with laying of Gr-I layer.

### 2.3 Recommendations:-

1. It is recommended that the entire W.B.M Gr-I layer laid is required to be removed from site and re-laid afresh after proper gradation of the materials.
2. The berms should be filled and compacted along with laying of different layers for protection of pavement edges and maintaining X-slopes for proper drainage of water.

3. Katcha drain should be constructed side by side of c/o of the pavement layers.
4. The material for WBM Gr-I along with screening be stacked properly at site of work and got tested before laying.


~~sel~~  
Chief Engineer (QC&D),  
HP, PWD, Shimla -171001.  
13/2

No. PW-CE(QC&D) I.R. CE (QC)/12- 1057-61 Dt. 16/08/12.

**Copy forwarded to:-**

1. The Secretary (PW) to the Govt. of H.P. for information please.
2. The Chief Engineer (SZ) HP.P.W.D. Nirman Bhawan Shimla for information and necessary action.
3. The Superintending Engineer 4<sup>th</sup> Circle HP.P.W.D. Winter Field Shimla for information and necessary action.
4. The Executive Engineer Theog Division HP.P.WD. Theog for information and necessary action.
5. The Nodal Officer (I.T.) HP.P.W.D. for necessary action and for entering the report on departmental website.

DA:- As above.

  
Chief Engineer (QC&D)  
HP.PWD. Shimla-171001  
13/2

Annexure-1

HIMACHAL PRADESH  
PUBLIC WORKS DEPARTMENT  
CENTRAL MATERIAL TESTING LAB SHIMLA-1

Name of Sub-Division:- Assistant Engineer Theog Sub-Division, HPPWD, Theog

Name of Work :- C/o Mashobra Bekhalty Road km 0/0

Statement showing test results of course - aggregate for WBM Gr-I.

Sr, No	Description/Location KM	Gradation Analysis % by weight					Water Absorption	Impact Value.	Flakiness Index	Remarks.
		Specification								
		125mm	90mm	63mm	45mm	22.4mm				
		100	90-100	25-60	0-15	0-5	2% Max.	30% Max	35% Max.	
	Course Agg WBM Gr-I (90mm-45mm)									
1	0/075	100	100	97.6	63.2	30.8	0.85	25.2	28.9	The samples were collected during the inspection of C.E(QC&D). The Staff of Material Testing lab tested the samples in presence of J.E. concerned.
2	0/585	100	96.6	75.8	59.9	42.0	0.85	25.2	27.5	
3	2/540	100	92.1	59.8	41.8	18.1	0.85	25.0	11.6	
4	2/915	100	96.1	71.1	41.6	21.7	0.85	25.8	33.6	
5	3/495	100	81.4	56.7	43.0	19.8	0.85	25.0	29.2	
6	3/990	100	96.5	71.4	56.9	35.6	0.85	24.8	20.4	
7	4/090	100	100	67.6	43.9	25.9	0.85	25.7	50.1	
8	4/430	100	100	87.8	75.0	51.8	0.85	25.0	38.8	
9										
10	5/490	100	85.2	75.8	54.5	24.8	0.85	25.6	32.7	

*[Signature]*  
Research Asstt.

*[Signature]*  
Research Officer (Testing Lab)  
HP.PWD Shimla-171001.

*[Signature]*  
Executive Engineer (QC&D)  
HP.PWD Shimla-171001  
*[Signature]*